ENTERED

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NMED
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Dear Mr. Kieling

Cannon AFB is pleased to submit the *"Site TU504 RFI Report"*. If you have any questions regarding this submittal, please contact Mr. Ronald A. Lancaster, Chief, Installation Management Flight at (575) 784-1146.

Sincerely

DOUGLAS W. GILPIN, Colonel, USAF

Attachment:
Site TU504 RFI Report

cc:
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AIR COMMANDOS

RCRA FACILITY INVESTIGATION AT TU504

CANNON AIR FORCE BASE
NEW MEXICO
RCRA PERMIT No. NM7572124454

Performance Based Remediation
Contract Number: FA8903-13-C-0008

Prepared for

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September 2016

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Acronyms and Abbreviations

°C	degrees Celsius
°F	degrees Fahrenheit
µg/L	micrograms per liter
AFB	Air Force Base
bgs	below ground surface
B.P.	before the present
BTEX	benzene, toluene, ethylbenzene, and total xylenes
CAC	Corrective Action Complete
CEC	cation exchange capacities
cm	centimeters
cm/sec	centimeters per second
CoC	chain of custody
DAF	dilution attenuation factor
DRO	diesel range organics
EMAX	EMAX Laboratories, Inc.
foc	fraction of organic carbon
FPM	FPM Remediations, Inc.
g/yr	grams per year
gal/ft	gallons per foot
gpm	gallons per minute
GRO	gasoline range organics
HI	Hazard Index
HQ	hazard quotient
IDW	investigation-derived waste
Keers	Keers Technical Services
km/hr	kilometers per hour
L/min	liters per minute
m^3/m	cubic meters per meter
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
msl	mean sea level

NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NMED	New Mexico Environment Department
ORO	oil range organics
PAH	polynuclear aromatic hydrocarbon
PID	photoionization detector
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RSL	Regional Screening Level
SC	clayey sand
SCEM	site conceptual exposure model
SCFS	Sample Collection Field Sheet
SM	silty sand
SSL	soil screening level
SVOC	semivolatile organic compound
TPH	total petroleum hydrocarbons
TRPH	total recoverable petroleum hydrocarbon
TU504	Hospital Abandoned Underground Storage Tank Site (ST-C504)
UCL	upper confidence limit
URS	URS Group, Inc.
USCS	Unified Soil Classification System
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
VISL	Vapor Intrusion Screening Levels
VLEACH	vadose zone leaching
VOC	volatile organic compound

1.1 AUTHORITY

URS Group, Inc. (URS), as a subcontractor to FPM Remediations, Inc. (FPM), has been contracted by the Air Force Civil Engineer Center under Contract Number FA8903-13-C-0008, Delivery Order 0001, to complete a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) at the Hospital Abandoned Underground Storage Tank (UST) Site (TU504) (ST-C504) at Cannon Air Force Base (AFB).

This RFI is being completed under the Environmental Restoration Program for Cannon AFB. The location of Cannon AFB is provided on (**Figure 1-1**). The location of TU504 at Cannon AFB is provided on **Figure 1-2**.

1.2 PURPOSE AND SCOPE

The purpose of this RFI is to evaluate the risks to human health and ecological receptors and evaluate the soil-to-groundwater pathway to determine the potential impacts to groundwater from existing soil contaminants. This RFI describes the fieldwork completed in accordance with the approved scope of work (FPM/URS 2015) at TU504. The scope of this RFI is as follows:

- Collect soil and soil vapor samples to evaluate soil gas concentrations and determine if samples exceed New Mexico Environment Department (NMED) vapor intrusion screening levels (VISLs). Results will be utilized to evaluate the vapor intrusion pathway in accordance with NMED Risk Assessment Guidance for Site Investigations and Remediation (NMED 2015a).
- Utilize soil vapor data and historical soil sampling results to complete a human health and ecological risk assessment.
- Utilize current and historical soil sampling results to evaluate the soil-to-groundwater pathway.

1.3 REPORT ORGANIZATION

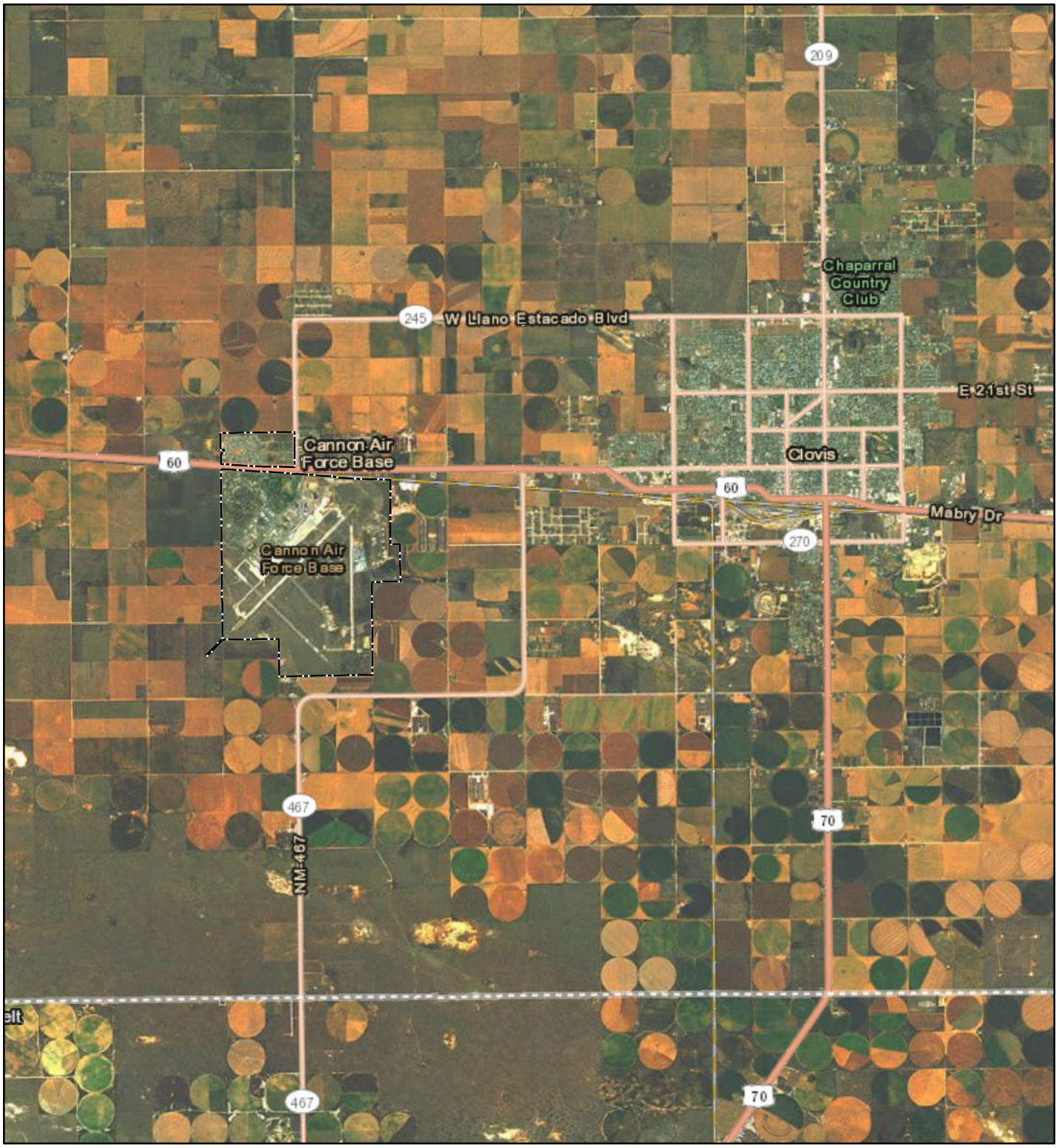
This report provides the facility and site descriptions, presents the project objectives and approach, describes the field sampling activities completed, presents the site investigation results, and provides summaries and recommendations for TU504. This report is organized as follows:

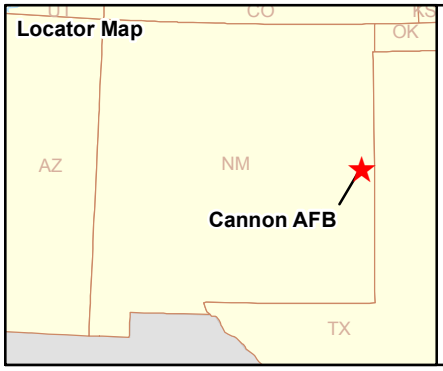
- **Section 1** provides an introduction, purpose and scope, and report organization.
- **Section 2** provides the overall facility description, site descriptions and background information, and results from previous investigations.
- **Section 3** provides the project objectives and approach.
- **Section 4** describes field sampling procedures used to complete the RFI field activities.
- **Section 5** provides investigation results and screening-level risk evaluations.
- **Section 6** provides a summary and recommendation for TU504.

- **Section 7** includes a list of the references used to produce this report.

The appendices contain the following information:

- **Appendix A** contains a copy of the NMED approval with modifications letter for the 12 Sites RFI Work Plan (NMED 2015c).
- **Appendix B** contains field documentation (i.e., boring logs and sample collection field sheets [SCFSs]).
- **Appendix C** contains the analytical data, laboratory results, field duplicate results, data reviews, qualified data table, and chain of custody (CoC).
- **Appendix D** contains investigation-derived waste (IDW) documentation (i.e., waste profile sheet, laboratory results, and disposal forms).
- **Appendix E** contains the data and tables utilized to complete the Human Health Risk Assessment.
- **Appendix F** contains the groundwater modeling data used to complete mixing zone and vadose zone leaching (VLEACH) groundwater models.





Legend

Base Boundary

N

10,000 5,000 0 10,000 Feet

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

Installation Location Map
Cannon Air Force Base, New Mexico

Drawn By:	Date:	Project No.	
DPG	3/7/2014	23446539	Figure 1-1
Checked By: MS	Revision: 0		

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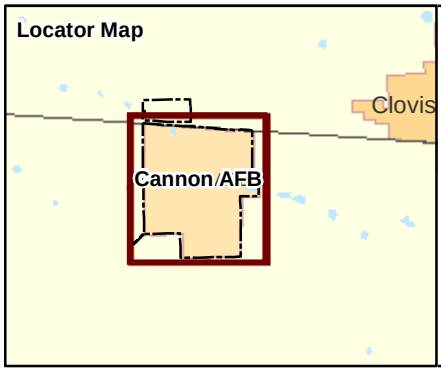
Locator Map



Legend

Base Boundary

Site Boundary

Site ID	Site Name
TU504	Hospital Abandoned USTs

N

2,000 1,000 0 2,000 Feet

Site Location Map
Cannon Air Force Base, New Mexico

Drawn By:	Date:	Project No.	
DPG	5/6/2016	23446539	Figure 1-2
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2.1 FACILITY DESCRIPTION

2.1.1 Setting – Physical Geography

Cannon AFB is situated in the Southern High Plains Physiographic Province in the Llano Estacado subprovince. The Llano Estacado is a nearly flat plain sloping gently (10 to 15 feet per mile) to the east and southeast. Elevations in the eastern New Mexico portion of the Llano Estacado exceed 4,000 feet above mean sea level (msl). In the vicinity of Cannon AFB, elevations range from 4,250 feet to 4,350 feet above msl.

The most prominent geomorphic features in the vicinity of Cannon AFB are blowouts and broad, widely spaced valleys. Less common landforms are relict sand dunes located along the northern side of the Portales Valley to the south of the Base. Relict dunes are not found on or near Cannon AFB.

Blowouts are broad, shallow depressions which form as the result of soil eroded by wind. Blowouts commonly collect surface runoff from small to moderate sized drainage areas. During periods of rainfall, runoff collects in blowouts to form ephemeral playa lakes. Playas have no external surface drainage. Water is lost by infiltration to the soil and evaporation; without recharge, playa lakes persist for only a few days or weeks. Three playas are located within the Base, and several more are found to the north and east of the Base.

Stream valleys tend to be fairly broad and widely spaced. Streams are ephemeral and drainages are poorly developed. No streams exist on or near Cannon AFB. Running Water Draw and Frio Draw (located about 10 and 20 miles, respectively, north of Cannon AFB) are the nearest streams. These are second-order streams. Both streams are very straight, flow southeast, and have rectilinear drainage patterns with short laterals (W-C 1991).

TU504 is in the northwestern portion of Cannon AFB, near the northern corner of the hospital (Building 1400), and adjacent to the access road behind the hospital. Directly above the UST, the surface consists of primarily bare soil, with the remaining areas covered by asphalt pavement. The site also includes several cooling towers, and several concrete pads (previously used for aboveground utilities). These aboveground utilities are inside a chain-link fence. The site is approximately 95 by 60 feet (approximately 0.13 acre), and is bordered by the hospital to the southeast, vehicle ports connected to the hospital to the southwest, and hospital driveways and parking areas to the north, east, and west.

2.1.2 Demographics and Land Use Near Cannon AFB

Cannon AFB is located just west of the City of Clovis, New Mexico, and just south of United States Highway 60/84 in a farming and ranching area. The majority of the land surrounding Cannon AFB is productive, irrigated farmland or grassland. The major crops are wheat, sorghum, sugar beets, corn, cotton, alfalfa, barley, and peanuts. The land is also used for cattle grazing, both beef and dairy. According to 2010 US census data (US Census 2010), the population of Clovis was 37,775 while the population of Cannon AFB was 2,245.

2.1.3 Climatology

The climate of east-central New Mexico is classified as tropical semi-arid, with summer temperature and precipitation maxima. Average monthly temperatures range from a January low of -3.9 degrees Celsius (°C) (25 degrees Fahrenheit [°F]) to a July high of 32.8°C (91°F) (US Climate Data 2013). Extreme daily temperatures range from a historical low of -24°C (-11°F) to a historical high of 41°C (106°F) (My Forecast 2013). Average monthly precipitation ranges from 1.2 centimeters (cm) (0.39 inches) in February to 8.7 cm (3.43 inches) in July (US Climate Data 2013). The maximum-recorded 24-hour rainfall was 12.2 cm (4.8 inches), which occurred in the month of August. Rainfall occurs on average eight days per month during the summer (My Forecast 2013). The mean annual precipitation is approximately 47 cm (18.51 inches) (US Climate Data 2013). The mean annual evapotranspiration rate is 285.9 cm per year (112.56 inches per year) (USEPA 2013a). Prevailing winds are from the southwest. Average wind speed is highest at an average of 23.34 kilometers per hour (km/hr) (14.5 miles per hour) during the month of April (USDA 2013).

The atmosphere around the area of Cannon AFB is generally well mixed. The seasonal and annual average mixing heights can vary from 400 meters in the morning to 4,000 meters in the afternoon. The afternoon mixing heights are typically greater during the spring and fall seasons. The morning mixing heights are usually low, due to nighttime heat loss from the ground, producing surface-based temperature inversions. After sunrise, these inversions break up and solar heating of the earth's surface causes vertical mixing in the atmosphere.

Dust is frequently entrained into the atmosphere in this region of the country because of gusty winds and the semiarid climate. The Texas Panhandle-eastern New Mexico area is considered the worst area in the United States for windblown dust. Occasionally, this windblown dust is of sufficient quantity to restrict visibility. Most of the seasonal dust storms occur in March and April, when the wind speeds are typically high (i.e., average 5 km/hr) (W-C 1991).

2.1.4 Geology

A generalized geologic section at Cannon AFB is shown on **Figure 2-1**. The near surface stratigraphic units of interest at Cannon AFB are the Late Miocene-Late Pliocene-age Ogallala Formation and the Early Triassic Dockum Group.

The Dockum Group consists of three formations. Stratigraphically, the lowest unit is the Santa Rosa Sandstone. Overlying the Santa Rosa Sandstone are the Chinle and Redonda Formations. The Chinle and Redonda Formations are composed mainly of red shales with lesser interbedded sands, and are known locally as "redbeds." The top of the Dockum Group is marked by an erosional nonconformity having relief of up to several hundred feet (Lee Wan 1990).

Overlying the Dockum Group redbeds is the Ogallala Formation. The Ogallala Formation extends from eastern New Mexico and Colorado into Texas, Oklahoma, Kansas, Nebraska, and South Dakota. Drillers' logs from Cannon AFB indicate that the Ogallala Formation varies from 360 feet to 415 feet in thickness. The incised upper surface of Triassic redbeds strongly influences Ogallala thickness. Paleo valleys in the post Triassic nonconformity are deep and

trend dominantly east to west. Ogallala thickness may vary significantly over short north to south distances (Lee Wan 1990).

The Ogallala Formation is erosionally truncated to the south along the abandoned Portales Valley, to the west along the Pecos River Valley, and to the north in a series of ephemeral stream valleys. The Ogallala Formation extends more than 125 miles to the east before terminating as an escarpment in Briscoe County, Texas. Springs and seeps are common along the erosional margins of the Ogallala.

The Ogallala Formation dips gently and monoclinally to the southeast in the vicinity of Cannon AFB. Data suggest that some quaternary warping may have occurred; however, most of these structures are located well to the northwest and southwest of Cannon AFB. No faults or buried structural lineaments are known to exist in the vicinity of Cannon AFB (Lee Wan 1990).

The Ogallala Formation is composed of unconsolidated poorly sorted gravel, sand, silts, and clays. The base of the Ogallala is generally marked by a gravel, cobble, and boulder deposit. This basal member contains sediments derived from igneous and sedimentary rocks transported from the mountains to the west. The Ogallala Formation was laid down as stream and overbank deposits formed within coalescing alluvial fans. These fans form a broad pediment along the eastern flank of the Rocky Mountains. As is typical of alluvial deposits, Ogallala internal stratigraphy varies vertically and horizontally over short distances.

Except where strongly cemented by calcium carbonate (caliche), the sediments of the Ogallala are loose and friable. Authigenic and allogenic clays are found as a trace to abundant matrix mineral. Five zones have been distinguished within the Ogallala of east central New Mexico on the basis of clay minerals. Smectites (montmorillonites) and attapulgite (with sepeotite) are the dominant clays throughout the Ogallala. Illite is a lesser, but persistent clay, as is kaolinite. Smectite is a swelling clay, causing deep cracks to form in dry surface soils. Smectite in particular and, to a lesser extent, attapulgite and illite, are clays with moderate to high cation exchange capacities (CEC). The formation as a whole should therefore have a relatively high CEC, which should inhibit the migration of charged contaminants, and especially ionic forms of metals (Lee Wan 1990).

Caliche is a major feature of the Ogallala Formation, occurring as nearly continuous to discontinuous layers throughout. Caliche is hard, white to pale tan on fresh surfaces, weathering to gray, and has a chalky appearance. Caliche forms as calcium carbonate, leached from overlying sediments, and precipitates in the pore space of the host sediments. Precipitation is caused by the evaporation of downward percolating water. The caliche may thus mark the position of ancient vadose zones. Radiocarbon dates for the upper “climax” caliche range from approximately 27,000 years before the present (B.P.) to approximately 42,000 years B.P. (Lee Wan 1990).

Caliche is relatively soluble in acidic water (i.e., water with a pH less than 7) or in waters containing dissolved carbon dioxide. The top surface of the uppermost or “climax” caliche in a fresh outcrop typically shows solution etching.

The Ogallala has numerous continuous to discontinuous caliche layers throughout its thickness. The climax caliche is pisolitic (i.e., consisting of spherical concentrically laminated aggregates 1 to 10 millimeters in diameter) (Lee Wan 1990). The pisolites are thought to have formed as the caliche was repeatedly chemically weathered and brecciated during Pleistocene pluvials (wet climate episodes) and later recemented during drier intervals. This upper caliche crops out around playas and the bounding escarpments of the Ogallala, and is locally termed "caprock." The climax caliche is typically 3 to 5 feet thick. Caliches that occur lower in the Ogallala are platy and harder. Caliche may be thin or absent below playas (W-C 1991).

2.1.5 Hydrogeology

The lower portion of the Ogallala Formation is the primary regional aquifer for both potable and irrigation water. No deeper aquifers are utilized in the vicinity of Cannon AFB. The Ogallala aquifer is part of the High Plains Aquifer that extends continuously from Wyoming and South Dakota into New Mexico and Texas. In east-central New Mexico, the Ogallala aquifer rests on Dockum Group redbeds, which serve as the basal confining layer. The Ogallala is a water table, or unconfined, aquifer. The Ogallala aquifer has a southeasterly regional gradient of about 17 feet per mile (0.0032 meters per meter, see **Figure 2-2**). Well yields vary from less than 1 gallon per minute (gpm) in thin silts and sands to 1,600 gpm in thick sands and gravels. Water quality is generally good, with hardness and fluorides being somewhat high (Lee Wan 1990).

Based on data from the 2012 base-wide sampling event, the depth to groundwater at Cannon AFB varies from 286 to 347 feet below ground surface (bgs) (FPM/URS 2015). Saturated thickness is influenced by the configuration of the erosional nonconformity surface marking the top of the Dockum Group. The local groundwater gradient is southeasterly at 7.5 feet per mile. Yields in tests of Cannon AFB water wells have ranged from 776 liters per minute (L/min) (205 gpm) to 4,353 L/min (1,150 gpm). Specific capacities range from 0.14 cubic meters per meter (m^3/m) (11.4 gallons per foot [gal/ft]) to 0.35 m^3/m (27.9 gal/ft) (Lee Wan 1990).

Rough estimates of hydraulic conductivity were calculated from well pump tests in water wells 5 and 9 (**Figure 2-3**) using the Theis equation. An estimate of hydraulic conductivity for water well 8 was based on water level recovery data using the Bouwer and Rice approach (Lee Wan 1990). The data used in these calculations were obtained to evaluate pump rates, efficiency, and well yield, and were not intended for use in calculating aquifer properties. The results of these calculations should therefore be considered as approximations.

Hydraulic conductivity values for water wells 5 and 9 were approximately 2.0E-03 centimeters per second (cm/sec). Calculations for water well 8 resulted in a hydraulic conductivity of 2.0E-02 cm/sec. In addition, slug testing of two monitoring wells (MW-O and MW-N) was completed by W-C in February 1995 (W-C 1995). The estimated hydraulic conductivities from these slug tests were both 3.0E-03 cm/sec. These estimates appear to be low when compared to published hydraulic conductivity data for sands and gravels. As reported in Lee Wan (1990), a groundwater flow velocity of about 4.5E+01 meters per year (1.5E+02 feet per year) has been estimated. This corresponds to a hydraulic conductivity of approximately 1.4E-04 cm/sec, which appears to be low when compared with published data (Freeze and Cherry 1979).

The presence of interstitial clays may account for both the variability and the low values of hydraulic conductivities. Boring logs from Cannon AFB projects and published reports (Lee Wan 1990) indicated that interstitial and interstratified clays are abundant in the Ogallala Formation.

Recharge to the Ogallala is primarily through precipitation. A recharge rate of 0.5 inches/year was calculated using the Theis equation; the recharge rate may be as much as 1.0 inches/year. Due to the high evapotranspiration rate and low precipitation, recharge is most likely limited to heavy rainfall events in which the infiltration capacity of the soil is exceeded and runoff occurs, or during cool months when precipitation exceeds evapotranspiration. Excess runoff flows to playas, and the presence of water in playas may allow deep percolation to the aquifer. The occurrence of this process is evidenced by the presence of clay deposits in, and thin or nonexistent caliche layers directly below, playas. Caliche is soluble in acidic rainwaters, and is leached over time to form percolation pathways (Lee Wan 1990).

Discharge from the Ogallala occurs through well pumping and springs along the eroded margins of the formation. Spring discharge does not occur on or near Cannon AFB. Domestic and irrigation water wells are common on and around the Base. However, the rate of discharge exceeds the rate of recharge. Water levels in the Ogallala have declined steadily from the 1930s to the present. A decline of 50 to 100 feet has been observed in the area around Clovis, New Mexico for the period from the 1930s to 1980. The largest area of water level decline exceeding 100 feet occurs south of the Canadian River extending from Curry County, New Mexico to Crosby County, Texas (Lee Wan 1990).

The dominant uses of groundwater in the Cannon AFB area are as potable and irrigation water. Numerous wells are found in the Cannon AFB area, most of which provide only irrigation water (**Figure 2-3**).

The Ogallala will continue to be used as the primary source of potable and irrigation water for eastern New Mexico. The New Mexico State Engineer designated Curry County as a Water Basin in 1989. This designation allows for regulation of water rights, usage, and well drilling (W-C 1991).

2.1.6 Soils

Soils in the vicinity of Cannon AFB are classified as silty sand (SM) to clayey sand (SC) under the Unified Soil Classification System (USCS), and as aridisols (calciorthids) under the Soil Conservation Service Comprehensive Soil Classification System. The following summary is based on the Soil Conservation Service Curry County Soil Survey (Lee Wan 1990).

The most common soil type on the Base is the Amarillo fine sandy loam, 0- to 2-percent slope phase (map symbol Ab on **Figure 2-4**). This soil consists of a thin sandy A horizon, well-defined clayey B1-3 horizons, with a calcic B3 horizon at depths below 40 inches. The calcic B3 horizon lies on a calcic C horizon, or on caliche. The Amarillo fine sandy loam is present on all relatively flat surfaces at the Base, but is also found on slopes associated with playas (map symbol Ac).

Clovis fine sandy loams, 0- to 2-percent slope phase (map symbol Cb) and 2- to 5-percent slope phase (map symbol Cc), are very similar to Amarillo fine sandy loams. In the Clovis soils, the depth to the calcic C horizon ranges from 28 to 56 inches. The depth to caliche exceeds 56 inches. Clovis and Amarillo fine sandy loams occur in close association.

In a few limited areas, particularly along the steeper slopes around playas, Mausker fine sandy loam, 0- to 2-percent slope phase (map symbol Ma), and 2- to 5-percent phase (map symbol M6) are found. Mausker fine sandy loams have no B horizons and are very calcareous. The calcic C horizon is within 2 feet of the surface.

The A and B horizons of Amarillo and Clovis fine sandy loams are rapidly to moderately permeable. Mausker fine sandy loam A and Ac horizons are rapidly permeable. Permeabilities in calcic B and C horizons are moderate (Lee Wan 1990).

2.1.7 Water Quality

The groundwater quality at Cannon AFB is generally good, with dissolved solids ranging from 2.50E+02 to 5.00E+02 milligrams per liter (mg/L) (Gutentag, et al. 1984) and fluorides ranging from 2.2E+00 to 2.7E+00 mg/L (William Matotan and Associates, Inc. 1985).

2.2 TU504 SITE DESCRIPTION

TU504 is in the northwestern portion of Cannon AFB, near the northern corner of the hospital (Building 1400), and adjacent to the access road behind the hospital. Directly above the UST, the surface consists of primarily bare soil, with the remaining areas covered by asphalt pavement. The site also includes several cooling towers, and several concrete pads (previously used for aboveground utilities). These aboveground utilities are inside a chain-link fence. The site is approximately 95 by 60 feet (approximately 0.13 acre), and is bordered by the hospital to the southeast, vehicle ports connected to the hospital to the southwest, and hospital driveways and parking areas to the north, east, and west.

Based on the Tank Closure Worksheet for UST 1400A, the 25,000-gallon diesel UST was abandoned in place on October 5, 1994. The UST was formerly associated with an emergency generator at the hospital. The UST is constructed of steel and its base is approximately 18 feet bgs (USGS 1995).

A ground-penetrating radar survey of the site was conducted as a part of a RCRA Facility Assessment (RFA) (URS 2014). The tank location was defined and the tank dimensions were determined to be 32 feet by 12 feet. Additionally, underground utility locations were marked.

2.3 PREVIOUS INVESTIGATION RESULTS

2.3.1 Subsurface Investigation of 25,000 gallon UST Report (Keers 1994a)

On August 17, 1994, Keers Technical Services (Keers) collected three subsurface soil samples adjacent to the UST at a depth of approximately 14 feet bgs (**Table 2-1**, **Table 2-2**, and

Figure 2-5). A maximum total recoverable petroleum hydrocarbon (TRPH) concentration of 2.80E+03 milligrams per kilogram (mg/kg) was detected at soil boring 94600-081794-01 on the north side of the UST. A concentration of 6.40E+02 mg/kg was also detected at soil boring 94600-081794-02 on the west-central side of the UST. The sample from soil boring 94600-081794-03 was nondetect (Keers 1994a).

2.3.2 Limited Subsurface Investigation for the Evaluation of Suspect Subsurface Contamination Report (Keers 1994b)

On September 22, 1994, Keers collected four soil samples around the UST from depths between 18 and 20 feet bgs (**Table 2-1**, **Table 2-2**, and **Figure 2-5**). Two samples were collected adjacent to the UST, and two were collected to the north and northeast of the UST. A maximum TRPH concentration of 8.20E+03 mg/kg was detected at soil boring 94600-092294-02 on the northwest side and adjacent to the UST. The three other samples collected were nondetect (Keers 1994b).

2.3.3 Investigation of Eight Underground Storage Tank Facilities on Cannon AFB and Melrose Bombing Range, New Mexico, Volume 1 (USGS 1995)

On April 12 and 14, 1995, the United States Geological Survey (USGS) advanced six soil borings and collected ten subsurface soil samples in order to verify the existence of contamination at this site (**Table 2-1**, **Table 2-2**, and **Figure 2-5**). Total petroleum hydrocarbons (TPH)-diesel range organics (DRO) was detected at five of the six soil borings. Soil boring CAFB-FAC1400-5 was sampled at 10 feet bgs and was found to be nondetect (result was from field screening only; sample was not submitted for laboratory analysis). The highest concentration of TPH-DRO was detected at CAFB-FAC1400-3 (adjacent to the west-central portion of the UST) at 18 to 20 feet bgs (9.90E+03 mg/kg). Results for soil borings CAFB-FAC1400-1 (southwest), CAFB-FAC1400-2 (east-central), and CAFB-FAC1400-4 (northeast) indicated that TPH-DRO contamination existed on all sides of the abandoned UST.

In July and August 1995, USGS further investigated soil boring location CAFB-FAC1400-3 using a Mobile B53 auger drilling rig. Results indicated that TPH-DRO contamination extended to 66 feet bgs. The highest concentration of TPH-DRO detected at CAFB-FAC1400-3 was at 50.5 feet bgs (1.10E+04 mg/kg). Additionally, a direct push rig was used to collect shallow samples (ranging from 19 to 26 feet bgs) at step out locations CAFB-FAC1400-7 (south–southeast), -8 (northeast), and -9 (northwest). These three locations were completed 10 to 25 feet from the UST to help further determine the horizontal extent of TPH-DRO contamination. Results indicated TPH-DRO contamination was present to the east and west but at significantly lower concentrations (ranging from 2.00E+01 mg/kg to 8.90E+02 mg/kg).

In December 1995, USGS again conducted additional sampling at soil boring location CAFBFAC1400-3. Results indicated that TPH-DRO contamination extended to 75 feet bgs (9.30E+03 mg/kg) but was not present (nondetect) at 83 and 91 to 92 feet bgs. Additionally, shallow soil samples (ranging from 23 to 26 feet bgs) were collected at step out locations to the west. The three step out locations were completed 10 to 15 feet to the west of previous soil boring CAFB-FAC1400-9. Results at soil borings CAFB-FAC1400-10 (west) and

CAFB-FAC1400-11 (northwest) were nondetect for TPH-DRO. A small detection of TPH-DRO (1.60E+01 mg/kg) was present at 24 to 26 feet bgs at soil boring CAFB-FAC1400-12 (north).

2.3.4 RFA at Eight Sites (URS 2014)

During the RFA, a total of 164 soil samples were collected from 16 boring locations with total depths ranging from 25 to 275 feet bgs (**Table 2-3**, **Table 2-4**, and **Figure 2-5**). Subsurface soil samples were collected using direct push or sonic drilling methods. TerraCore samples were collected immediately from the soil core (after opening the liner or extruding the sample) to avoid losing volatile contaminants. The remaining soil from the core was then mixed thoroughly in a stainless steel bowl to obtain a homogeneous soil sample. Following homogenization, samples for the remaining analytes were collected. Based on the method utilized, the results of the sampling are attributed to the entire 5 foot interval for all but the volatile organic compound (VOCs). The work plan indicated that VOC samples were collected from the top 1-foot interval of each sampling interval unless otherwise designated.

Soil samples were analyzed for TPH-DRO, TPH-oil range organics (ORO), benzene toluene, ethylbenzene, total xylenes (BTEX)+naphthalene, and polycyclic aromatic hydrocarbon (PAHs) (identified as site-related SVOCs [semivolatile organic compounds] in the 8 Sites RFA). The sample location, depths, analytical parameters and justification for the sampling locations are provided in **Table 2-3**. The location of all samples collected are presented on **Figure 2-5**. Only those analytes which identified at least one detection (a result exceeding the limit of quantification) are presented in **Table 2-4**. The complete analytical data set featuring the nondetects for all analytes not included in **Table 2-4** are presented in Appendix D of the RFA report (URS 2014).

PAHs were detected above the NMED residential soil screening levels (SSLs) only at SB08, from 0 to 5 feet bgs and from 10 to 15 feet bgs, however, samples collected from this boring at 15 to 20 feet bgs and 20 to 25 feet bgs were below the NMED residential SSLs. PAHs did not exceed the NMED industrial/occupational SSLs. PAHs exceeding the NMED residential SSLs were localized in the immediate vicinity of the UST; therefore, the extent of PAHs exceeding the NMED residential SSLs in soil were fully defined at site TU504.

The lateral extent of TPH-DRO exceeding the NMED residential SSLs appeared to be limited to the vicinity of the abandoned UST (extending outward up to 15 feet away from the UST). At vertical profile boring SB01, TPH-DRO concentrations began to consistently decline after 120 feet bgs. Samples collected from 195 to 275 feet bgs did not exceed the NMED residential SSLs. A 2-foot layer of cemented sandstone was encountered at 213 feet bgs at TU504. It is not known if this layer is continuous. Samples collected at 270 and 275 feet bgs were nondetect for TPH-DRO. TPH-DRO concentration did exceed the NMED industrial/occupational SSLs at the site.

TU504 is located in the northwestern portion of Cannon AFB, adjacent to the access road behind the hospital. The diesel UST was abandoned in place in 1994. The site currently contains primarily bare soil areas (0.05 acre), that appear to be regularly disturbed and contains no other vegetation that might serve as refuge or forage for birds or mammals. Because all but 0.05 acre

of the site is covered in pavement or building and the proximity of roadways and other adjacent buildings, the site is considered devoid of ecological habitat and lacking complete exposure pathways. Using NMED's Ecological Site Exclusion Checklist and Decision Tree, the site qualified for exclusion and no ecological assessment was warranted.

The RFA report concluded the following:

- The extents of TPH-DRO and PAHs in soil have been fully defined at site TU504.
- A baseline human health risk assessment (with vapor intrusion analysis) should be completed using the current data to determine if the site poses an unacceptable risk to potential receptors.
- Vadose zone modeling should be completed using the current data to determine if there is a potential for groundwater to be impacted at the site in the future.
- Further evaluation was recommended during the next phase of work (e.g., RFI).

Subsequent to the completion of the RFA report, it was determined by Cannon AFB personnel that site TU504 is listed on Table 2 of the current Cannon AFB RCRA permit as Area of Concern GG (Tank 1400).

An Approval with Modifications letter from NMED dated February 16, 2015 was received for the RFA at Eight Sites (NMED 2015b). The letter indicated the following:

- TU504 is currently listed on Table 2 (Corrective Action Complete [CAC] with Controls Status) of the RCRA permit.
- SVOCs and TPH-DRO contamination at TU504 have been characterized.
- Further evaluation will be completed under an RFI.

An Approval with Modifications letter from NMED dated December 30, 2015 (NMED 2015c) was received for the RCRA Facility Investigation at Twelve Sites – Revision 1 (FPM/URS 2015). This work plan includes TU504 and included the following modifications of the work plan:

- The vapor intrusion assessment must be completed in accordance with current NMED Risk Assessment Guidance Section 2.5.
- The results of the subsurface vapor sampling must be screened against NMED VISLs included in Table A-3 of the risk assessment guidance (NMED 2015a).
- PAHs must be carried forward through the risk assessment process by evaluating human health and ecological risks due to the exceedance of NMED residential SSLs at SB-08 from 0-5 and 10-15 feet bgs.

All modifications were addressed and the results of the investigation are presented in this RFI report.

TABLE 2-1
SUMMARY OF PREVIOUS SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Sample Location/ Identification	Depth Interval (feet bgs)	Sample Date	Source	TPH-DRO (USEPA 8015)	TRPH (USEPA 418.1)	Field Analysis (GC)	Note(s)
August 1994							
94600-081794-01	14	8/17/1994	Keers 1994a		X		
94600-081794-02	14	8/17/1994	Keers 1994a		X		
94600-081794-03	14	8/17/1994	Keers 1994a		X		
September 1994							
94600-092294-02	18-20	9/22/1994	Keers 1994b		X		
94600-092294-04	18-20	9/22/1994	Keers 1994b		X		
94600-092294-06	18-20	9/22/1994	Keers 1994b		X		
94600-092294-08	18-20	9/22/1994	Keers 1994b		X		
April 1995							
CAFB-FAC1400-01	14-16	4/12/1995	USGS 1995			X	Field screening only, result was nondetect
CAFB-FAC1400-01	16-18	4/12/1995	USGS 1995	X			
CAFB-FAC1400-02	18-20	4/12/1995	USGS 1995	X			
CAFB-FAC1400-03	18-20	4/12/1995	USGS 1995	X			
CAFB-FAC1400-03	22-24	4/12/1995	USGS 1995	X			
CAFB-FAC1400-04	17-19	4/12/1995	USGS 1995	X			
CAFB-FAC1400-04	20-22	4/12/1995	USGS 1995	X			
CAFB-FAC1400-05	10	4/14/1995	USGS 1995			X	Field screening only, result was nondetect
CAFB-FAC1400-06	9.5-11.5	4/14/1995	USGS 1995			X	Field screening only, result was nondetect
CAFB-FAC1400-06	20-22	4/14/1995	USGS 1995	X			
July 1995							
CAFB-FAC1400-07	19-20	7/2/1995	USGS 1995	X			
August 1995							
CAFB-FAC1400-03	36-37	8/28/1995	USGS 1995	X			Duplicate
CAFB-FAC1400-03	49.5-50.5	8/28/1995	USGS 1995	X			
CAFB-FAC1400-03	65-66	8/28/1995	USGS 1995	X			
CAFB-FAC1400-08	25-26	8/26/1995	USGS 1995	X			
CAFB-FAC1400-09	25-26	8/27/1995	USGS 1995	X			
December 1995							
CAFB-FAC1400-03	75	12/14/1995	USGS 1995	X			
CAFB-FAC1400-03	83	12/14/1995	USGS 1995	X			
CAFB-FAC1400-03	91-92	12/14/1995	USGS 1995	X			
CAFB-FAC1400-10	23-25	12/12/1995	USGS 1995	X			
CAFB-FAC1400-11	22-24	12/12/1995	USGS 1995	X			
CAFB-FAC1400-12	24-26	12/12/1995	USGS 1995	X			
			Totals	**19**	**7**	**3**	

Sources:
Keers Technical Services. 1994a. Subsurface Investigation 25,000 Gallon UST Cannon AFB.
Keers Technical Services. 1994b. Limited Subsurface Investigation for the Evaluation of Suspected Subsurface Contamination at Cannon AFB, Curry County, New Mexico.
United States Geological Survey. 1995. Investigation of Eight Underground Storage Tank Facilities on Cannon Air Force Base and Melrose Bombing Range, New Mexico.

Notes:
AFB = Air Force Base
bgs = below ground surface
DRO = diesel range organics
EPA = Environmental Protection Agency
GC = gas chromatograph
TPH = total petroleum hydrocarbons
TRPH = total recoverable petroleum hydrocarbons
USGS = United States Geological Survey
UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	94600-081794-01			94600-081794-02			94600-081794-03		
SAMPLE DEPTH (FEET BGS)				14			14			14		
DATE COLLECTED				August 17, 1994			August 17, 1994			August 17, 1994		
	Maximum	Frequency		Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	**2.80E+03**	2.00E+01		6.40E+02	2.00E+01		<	2.00E+01	U
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	NA			NA			NA		

Notes:

[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)

Results that exceed the corresponding screening guideline appear in boldface and are underlined.

< = not detected

AFB = Air Force Base

BGS = below ground surface

DRO = diesel range organics

GC/FID = Gas Chromatography/Flame Ionization Detector

ID = identification

mg/kg = milligrams per kilogram

NA = not analyzed

NE = none established

NMED = New Mexico Environment Department

Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved

Qual = qualifier

RL = reporting limit

TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

U = nondetect

UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID SAMPLE DEPTH (FEET BGS) DATE COLLECTED	Maximum	Frequency	NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	94600-092294-02 18-20 September 22, 1994			94600-092294-04 18-20 September 22, 1994			94600-092294-06 18-20 September 22, 1994		
				Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	**8.20E+03**	2.00E+01		<	2.00E+01	U	<	2.00E+01	U
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	NA			NA			NA		

Notes:

[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)

Results that exceed the corresponding screening guideline appear in boldface and are underlined.

< = not detected

AFB = Air Force Base

BGS = below ground surface

DRO = diesel range organics

GC/FID = Gas Chromatography/Flame Ionization Detector

ID = identification

mg/kg = milligrams per kilogram

NA = not analyzed

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Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved

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RL = reporting limit

TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

U = nondetect

UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID SAMPLE DEPTH (FEET BGS) DATE COLLECTED	Maximum	Frequency	NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	94600-092294-08 18-20 September 22, 1994			CAFB-FAC1400-01 16-18 April 12, 1995			CAFB-FAC1400-02 18-20 April 12, 1995		
				Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	<	2.00E+01	U	NA			NA		
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	NA			5.10E+01	8.00E+00	Q	**6.20E+03**	4.00E+02	

Notes:
[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)
Results that exceed the corresponding screening guideline appear in boldface and are underlined.
< = not detected
AFB = Air Force Base
BGS = below ground surface
DRO = diesel range organics
GC/FID = Gas Chromatography/Flame Ionization Detector
ID = identification
mg/kg = milligrams per kilogram
NA = not analyzed
NE = none established
NMED = New Mexico Environment Department
Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved
Qual = qualifier
RL = reporting limit
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TRPH = total recoverable petroleum hydrocarbons
U = nondetect
UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID SAMPLE DEPTH (FEET BGS) DATE COLLECTED	Maximum	Frequency	NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	CAFB-FAC1400-03 18-20 April 12, 1995			CAFB-FAC1400-03 22-24 April 12, 1995			CAFB-FAC1400-03 36-37 August 28, 1995		
				Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	NA			NA			NA		
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	**9.90E+03**	4.00E+02		3.70E+02	8.00E+00		**8.00E+03**	4.00E+02	

Notes:

[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)

Results that exceed the corresponding screening guideline appear in boldface and are underlined.

< = not detected

AFB = Air Force Base

BGS = below ground surface

DRO = diesel range organics

GC/FID = Gas Chromatography/Flame Ionization Detector

ID = identification

mg/kg = milligrams per kilogram

NA = not analyzed

NE = none established

NMED = New Mexico Environment Department

Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved

Qual = qualifier

RL = reporting limit

TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

U = nondetect

UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID SAMPLE DEPTH (FEET BGS) DATE COLLECTED	Maximum	Frequency	NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	CAFB-FAC1400-03 49.5-50.5 August 28, 1995			CAFB-FAC1400-03 65-66 August 28, 1995			CAFB-FAC1400-03 75 December 14, 1995		
				Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	NA			NA			NA		
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	**1.10E+04**	4.00E+02		**5.80E+03**	4.00E+02		**9.30E+03**	4.00E+02	

Notes:
[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)
Results that exceed the corresponding screening guideline appear in boldface and are underlined.
< = not detected
AFB = Air Force Base
BGS = below ground surface
DRO = diesel range organics
GC/FID = Gas Chromatography/Flame Ionization Detector
ID = identification
mg/kg = milligrams per kilogram
NA = not analyzed
NE = none established
NMED = New Mexico Environment Department
Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved
Qual = qualifier
RL = reporting limit
TPH = total petroleum hydrocarbons
TRPH = total recoverable petroleum hydrocarbons
U = nondetect
UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID SAMPLE DEPTH (FEET BGS) DATE COLLECTED	Maximum	Frequency	NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	CAFB-FAC1400-03 83 December 14, 1995			CAFB-FAC1400-03 91-92 December 14, 1995			CAFB-FAC1400-04 17-19 April 12, 1995		
				Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	NA			NA			NA		
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	<	4.00E+00	U	<	1.00E-01	U	1.60E+01	4.00E+00	Q

Notes:

[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)

Results that exceed the corresponding screening guideline appear in boldface and are underlined.

< = not detected

AFB = Air Force Base

BGS = below ground surface

DRO = diesel range organics

GC/FID = Gas Chromatography/Flame Ionization Detector

ID = identification

mg/kg = milligrams per kilogram

NA = not analyzed

NE = none established

NMED = New Mexico Environment Department

Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved

Qual = qualifier

RL = reporting limit

TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

U = nondetect

UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID SAMPLE DEPTH (FEET BGS) DATE COLLECTED	Maximum	Frequency	NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	CAFB-FAC1400-04 20-22 April 12, 1995			CAFB-FAC1400-06 20-22 April 14, 1995			CAFB-FAC1400-07 19-20 July 2, 1995		
				Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	NA			NA			NA		
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	**2.50E+03**	8.00E+01		5.20E+00	4.00E+00	Q	2.00E+01	4.00E+00	Q

Notes:
[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)
Results that exceed the corresponding screening guideline appear in boldface and are underlined.
< = not detected
AFB = Air Force Base
BGS = below ground surface
DRO = diesel range organics
GC/FID = Gas Chromatography/Flame Ionization Detector
ID = identification
mg/kg = milligrams per kilogram
NA = not analyzed
NE = none established
NMED = New Mexico Environment Department
Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved
Qual = qualifier
RL = reporting limit
TPH = total petroleum hydrocarbons
TRPH = total recoverable petroleum hydrocarbons
U = nondetect
UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID SAMPLE DEPTH (FEET BGS) DATE COLLECTED	Maximum	Frequency	NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	CAFB-FAC1400-08 25-26 August 26, 1995			CAFB-FAC1400-09 25-26 August 27, 1995			CAFB-FAC1400-10 23-25 December 12, 1995		
				Result	RL	Qual	Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	NA			NA			NA		
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	<	4.00E+00	U	8.90E+02	1.60E+01	Q	<	4.00E+00	U

Notes:

[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)

Results that exceed the corresponding screening guideline appear in boldface and are underlined.

< = not detected

AFB = Air Force Base

BGS = below ground surface

DRO = diesel range organics

GC/FID = Gas Chromatography/Flame Ionization Detector

ID = identification

mg/kg = milligrams per kilogram

NA = not analyzed

NE = none established

NMED = New Mexico Environment Department

Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved

Qual = qualifier

RL = reporting limit

TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

U = nondetect

UST = underground storage tank

TABLE 2-2
SUMMARY OF PREVIOUS ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID SAMPLE DEPTH (FEET BGS) DATE COLLECTED	Maximum	Frequency	NMED TPH Screening Guidelines[1] Residential Direct Exposure - Soil	CAFB-FAC1400-11 22-24 December 12, 1995			CAFB-FAC1400-12 24-26 December 12, 1995		
				Result	RL	Qual	Result	RL	Qual
TRPH (mg/kg)	8.20E+03	3 / 7	1.00E+03	NA			NA		
TPH-DRO (mg/kg)	1.10E+04	14 / 19	1.00E+03	<	4.00E+00	U	1.60E+01	4.00E+00	Q

Notes:

[1]Residential Direct Exposure for unknown oil screening guideline (Table 6-2) (NMED 2015a)

Results that exceed the corresponding screening guideline appear in boldface and are underlined.

< = not detected

AFB = Air Force Base

BGS = below ground surface

DRO = diesel range organics

GC/FID = Gas Chromatography/Flame Ionization Detector

ID = identification

mg/kg = milligrams per kilogram

NA = not analyzed

NE = none established

NMED = New Mexico Environment Department

Q = this sample has GC/FID characteristics for which reliable identification of a product could not be achieved

Qual = qualifier

RL = reporting limit

TPH = total petroleum hydrocarbons

TRPH = total recoverable petroleum hydrocarbons

U = nondetect

UST = underground storage tank

TABLE 2-3
SUMMARY OF RFA SOIL SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Sample Location Identification	Approximate Sample Depth Interval (feet bgs)	Sample Coordinates (Northing, Easting)[1]		Analytical Parameters						Technical Rationale
				TPH-DRO[2]	TPH-ORO[3]	BTEX + Naphthalene[4]	Site-Related SVOCs[5]	Field Duplicate Samples[6]	MS/MSD Samples[7]	
CA504-SB01	0-5	1238830.303	844711.606	X	X	X	X			Boring was advanced near the former location of CAFB-FAC1400-03 (located near the primary source of contamination - approximately 10 feet north of the center of the UST) in order to quantify the previously detected contamination at this location. Maximum previously detected concentration of TPH-DRO (11,000 mg/kg) at 49.5-50.5 feet bgs. Concentrations of TPH-DRO previously detected to 75.0 feet bgs.
	5-10			X	X	X	X			
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-23			X	X	X	X			
	23-25			X	X	X	X	X		
	25-30			X	X	X	X			
	30-35			X	X	X	X			
	35-40			X	X	X	X			
	40-45			X	X	X	X	X		
	45-50			X	X	X	X			
	50-55			X	X	X	X			
	55-60			X	X	X	X			
	60-65			X	X	X	X	X		
	65-70			X	X	X	X			
	70-75			X	X	X	X			
	75-80			X	X	X	X			
	80-85			X	X	X	X	X		
	85-90			X	X	X	X			
	90-95			X	X	X	X			
	95-100			X	X	X	X			
	100-105			X	X	X	X			
	105-110			X	X	X	X			
	110-115			X	X	X	X			
	115-120			X	X	X	X			
	120-125			X	X	X	X			
	125-130			X	X	X	X			
	130-135			X	X	X	X	X		
	135-140			X	X	X	X			
	140-145			X	X	X	X		X	
	145-150			X	X	X	X			
	150-155			X	X	X	X			

TABLE 2-3
SUMMARY OF RFA SOIL SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Sample Location Identification	Approximate Sample Depth Interval (feet bgs)	Sample Coordinates (Northing, Easting)[1]		Analytical Parameters						Technical Rationale
				TPH-DRO[2]	TPH-ORO[3]	BTEX + Naphthalene[4]	Site-Related SVOCs[5]	Field Duplicate Samples[6]	MS/MSD Samples[7]	
CA504-SB01	155-160	1238830.303	844711.606	X	X	X	X	X		Boring was advanced near the former location of CAFB-FAC1400-03 (located near the primary source of contamination - approximately 10 feet north of the center of the UST) in order to quantify the previously detected contamination at this location. Maximum previously detected concentration of TPH-DRO (11,000 mg/kg) at 49.5-50.5 feet bgs. Concentrations of TPH-DRO previously detected to 75.0 feet bgs.
	160-165			X	X	X	X			
	165-170			X	X	X	X			
	170-175			X	X	X	X			
	175-180			X	X	X	X		X	
	180-185			X	X	X	X			
	185-190			X	X	X	X			
	190-195			X	X	X	X			
	195-200			X	X	X	X			
	200-205			X	X	X	X			
	205-210			X	X	X	X			
	210-215			X	X	X	X			
	215-220			X	X	X	X			
	220-225			X	X	X	X			
	225-230			X	X	X	X			
	230-235			X	X	X	X			
	235-240			X	X	X	X	X		
	240-245			X	X	X	X			
	245-250			X	X	X	X			
	250-255			X	X	X	X			
	255-260			X	X	X	X			
	260-265			X	X	X	X			
	265-270			X	X	X	X			
	270-275			X	X	X	X			

TABLE 2-3
SUMMARY OF RFA SOIL SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Sample Location Identification	Approximate Sample Depth Interval (feet bgs)	Sample Coordinates (Northing, Easting)[1]		Analytical Parameters						Technical Rationale
				TPH-DRO[2]	TPH-ORO[3]	BTEX + Naphthalene[4]	Site-Related SVOCs[5]	Field Duplicate Samples[6]	MS/MSD Samples[7]	
CA504-SB02	0-5	1238836.586	844718.411	X	X	X	X			Boring was advanced near the northeastern end of the UST in order to further define the vertical extent of contamination at this location. Adjacent soil boring CAFB-FAC1400-04 had detections of TPH-DRO (2,500 mg/kg) at 22.0 feet bgs.
	5-10			X	X	X	X			
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X	X		
	25-30			X	X	X	X			
	30-35			X	X	X	X			
	35-40			X	X	X	X			
	40-45			X	X	X	X			
	45-50			X	X	X	X			
	50-55			X	X	X	X			
	55-60			X	X	X	X			
	60-65			X	X	X	X			
	65-70			X	X	X	X			
	70-75			X	X	X	X			
	75-80			X	X	X	X	X		
	80-85			X	X	X	X			
CA504-SB03	0-5	1238813.093	844719.474	X	X	X	X			Boring was advanced approximately 7 feet to the southeast of the center of the UST in order to further define the vertical extent of contamination at this location. Adjacent soil boring CAFB-FAC1400-02 had detections of TPH-DRO (6,200 mg/kg) at 20.0 feet bgs.
	5-10			X	X	X	X			
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X	X		
	25-30			X	X	X	X			
	30-35			X	X	X	X			
	35-40			X	X	X	X	X		
	40-45			X	X	X	X			
	45-50			X	X	X	X			
	50-52			X	X	X	X			

TABLE 2-3
SUMMARY OF RFA SOIL SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Sample Location Identification	Approximate Sample Depth Interval (feet bgs)	Sample Coordinates (Northing, Easting)[1]		Analytical Parameters						Technical Rationale
				TPH-DRO[2]	TPH-ORO[3]	BTEX + Naphthalene[4]	Site-Related SVOCs[5]	Field Duplicate Samples[6]	MS/MSD Samples[7]	
CA504-SB04	1-5	1238836.561	844705.925	X	X	X	X	X		Boring was advanced near the former location of CAFB-FAC1400-09 (approximately 8 feet northeast and 16 feet northwest of the center of the UST) in order to further define the vertical extent of contamination at this location. Maximum previously detected concentration of TPH-DRO (890 mg/kg) at 25-26 feet bgs.
	5-10			X	X	X	X			
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X			
	25-30			X	X	X	X			
	30-35			X	X	X	X			
	35-40			X	X	X	X			
	40-45			X	X	X	X			
	45-50			X	X	X	X			
CA504-SB05	1-5	1238808.944	844723.882	X	X	X	X			Boring was advanced approximately 14 feet to the southeast of the center of the UST in order to further define the horizontal extent of contamination to the southeast.
	5-10			X	X	X	X			
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X			
CA504-SB06	1-5	1238800.764	844716.35	X	X	X	X	X		Boring was advanced on the southeast side of the UST in order to define the horizontal extent of contamination identified in this area.
	5-10			X	X	X	X			
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X			
CA504-SB07	1-5	1238841.794	844734.062	X	X	X	X			Boring was advanced approximately 14 feet northeast of the northeast end of the UST in order to further define the horizontal extent of known contamination between the northeast end of the UST and previous soil boring CAFB-FAC1400-08 (previously nondetect).
	5-10			X	X	X	X			
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X			

TABLE 2-3
SUMMARY OF RFA SOIL SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Sample Location Identification	Approximate Sample Depth Interval (feet bgs)	Sample Coordinates (Northing, Easting)[1]		Analytical Parameters						Technical Rationale
				TPH-DRO[2]	TPH-ORO[3]	BTEX + Naphthalene[4]	Site-Related SVOCs[5]	Field Duplicate Samples[6]	MS/MSD Samples[7]	
CA504-SB08	0-5	1238813.282	844699.084	X	X	X	X			Borings were advanced near the southwestern end of the UST in order to determine if contamination is present in this area (previously interpreted as unimpacted).
	5-10			X	X	X	X		X	
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X			
CA504-SB09	1-5	1238803.011	844699.85	X	X	X	X			
	5-10			X	X	X	X		X	
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X			
CA504-SB10	0-5	1238805.257	844711.581	X	X	X	X			
	5-10			X	X	X	X		X	
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X			
	25-30			X	X	X	X			
	30-35			X	X	X	X			
	35-40			X	X	X	X			
	40-45			X	X	X	X			
	45-50			X	X	X	X			
	50-52			X	X	X	X			
CA504-SB11	1-5	1238797.337	844694.035	X	X	X	X			Borings were advanced near the southwestern end of the UST in order to determine if contamination is present in this area (previously interpreted as unimpacted).
	5-10			X	X	X	X		X	
	10-15			X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X		X	

TABLE 2-3
SUMMARY OF RFA SOIL SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Sample Location Identification	Approximate Sample Depth Interval (feet bgs)	Sample Coordinates (Northing, Easting)[1]		Analytical Parameters						Technical Rationale
				TPH-DRO[2]	TPH-ORO[3]	BTEX + Naphthalene[4]	Site-Related SVOCs[5]	Field Duplicate Samples[6]	MS/MSD Samples[7]	
CA504-SB12	10-15	1238843.613	844698.81	X	X	X	X			Borings were advanced on the northwest side of the UST in an attempt to determine the extent of the contamination identified in this area.
	15-20			X	X	X	X			
	20-25			X	X	X	X			
	25-30			X	X	X	X			
	30-35			X	X	X	X			
	35-40			X	X	X	X			
CA504-SB13	10-15	1238843.269	844711.173	X	X	X	X			
	15-20			X	X	X	X	X		
	20-25			X	X	X	X			
	25-30			X	X	X	X			
	30-35			X	X	X	X			
	35-40			X	X	X	X			
CA504-SB14	10-15	1238843.185	844720.746	X	X	X	X			
	15-20			X	X	X	X			
	20-25			X	X	X	X			
	25-30			X	X	X	X			
	30-35			X	X	X	X			
	35-40			X	X	X	X			
	40-45			X	X	X	X			
	45-47			X	X	X	X			
CA504-SB15	10-15	1238829.183	844698.744	X	X	X	X			
	15-20			X	X	X	X		X	
	20-24			X	X	X	X			
CA504-SB16	10-15	1238853.172	844720.955	X	X	X	X		X	Borings were advanced on the northwest side of the UST in an attempt to determine the extent of the contamination identified in this area.
	15-20			X	X	X	X	X		
	20-25			X	X	X	X	X		
	25-30			X	X	X	X	X		
	30-35			X	X	X	X			
	35-40			X	X	X	X			
Totals				**164**	**164**	**164**	**164**	**17**	**9**	

TABLE 2-3
SUMMARY OF RFA SOIL SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Sample Location Identification	Approximate Sample Depth Interval (feet bgs)	Sample Coordinates (Northing, Easting)[1]	Analytical Parameters						Technical Rationale
			TPH-DRO[2]	TPH-ORO[3]	BTEX + Naphthalene[4]	Site-Related SVOCs[5]	Field Duplicate Samples[6]	MS/MSD Samples[7]	

Notes:

[1]Horizontal coordinates are in New Mexico East State Plane, North American Datum of 1983.

[2]TPH-DRO analysis via USEPA Method 8015C

[3]TPH-ORO analysis via USEPA Method 8015C

[4]BTEX + naphthalene analysis via USEPA Method 8260B

[5]Site-related SVOCs analysis via USEPA Method 8270D

[6]Field duplicate samples was collected at a rate of 10% (1 per 10 samples collected) for laboratory analysis.

[7]MS/MSD samples was collected at a rate of 5% (1 per 20 samples collected) for laboratory analysis.

Laboratory analyses completed by EMAX Laboratories, Torrance, California

bgs = below ground surface

BTEX = benzene, toluene, ethylbenzene, total xylenes

mg/kg = milligrams per kilogram

MS/MSD = matrix spike/matrix spike duplicate

RCRA = Resource Conservation and Recovery Act

SVOC = semivolatile organic compound

TPH-DRO = total petroleum hydrocarbons-diesel range organics

TPH-ORO = total petroleum hydrocarbons-oil range organics

USEPA = United States Environmental Protection Agency

UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-005			CA504-SB01-010			CA504-SB01-015			CA504-SB01-020			CA504-SB01-023			CA504-SB01-025		
DATE COLLECTED							February 5, 2013			February 5, 2013			February 5, 2013			February 5, 2013			February 5, 2013			February 5, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	4.80E-03	U	<	6.20E-03	U	<	6.80E-03	U	<	5.40E-03	U	<	5.40E-03	U	<	5.30E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	9.70E-03	U	<	1.20E-02	U	<	1.40E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	4.80E-03	U	<	6.20E-03	U	<	6.80E-03	U	<	5.40E-03	U	<	5.40E-03	U	2.50E-03	5.30E-03	J
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	4.80E-03	U	<	6.20E-03	U	<	6.80E-03	U	<	5.40E-03	U	<	5.40E-03	U	<	5.30E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	4.80E-03	U	<	6.20E-03	U	<	6.80E-03	U	<	5.40E-03	U	<	5.40E-03	U	<	5.30E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	2.40E-02	1.10E-02		6.80E-03	1.10E-02	J	<	1.10E-02	U	3.20E-02	1.10E-02		2.00E-01	1.10E-02	J	5.00E-02	1.10E-02	J
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	2.90E-02	1.10E-02		3.80E-03	1.10E-02	J	<	1.10E-02	U	1.50E-02	1.10E-02		1.30E-01	1.10E-02	J	8.00E-02	1.10E-02	J
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	4.80E-02	1.10E-02		6.40E-03	1.10E-02	J	<	1.10E-02	U	1.30E-02	1.10E-02		2.30E-01	1.10E-02	J	1.20E-01	1.10E-02	J
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	1.40E-02	1.10E-02		<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	7.70E-02	1.10E-02	J	3.10E-02	1.10E-02	J
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	3.20E-02	1.10E-02		5.30E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	5.70E-01	1.10E-02	J	2.80E-01	1.10E-02	J
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	4.60E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	1.60E-02	1.10E-02	J	1.10E-02	1.10E-02	J
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	1.70E-02	1.10E-02		<	1.10E-02	U	<	1.10E-02	U	2.20E-02	1.10E-02		3.80E-02	1.10E-02	J	3.00E-02	1.10E-02	J
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	4.60E+00	1.10E+01	J	<	1.10E+01	U	<	1.10E+01	U	1.90E+02	1.10E+01		**3.40E+03**	1.10E+02		2.70E+03	1.10E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	1.80E+01	2.10E+01	J	1.50E+01	2.10E+01	J	<	2.30E+01	U	<	2.30E+01	U	<	2.20E+02	U	2.00E+01	2.10E+01	J

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-030			CA504-SB01-035			CA504-SB01-040			CA504-SB01-045			CA504-SB01-050			CA504-SB01-055		
DATE COLLECTED							February 5, 2013			February 5, 2013			February 5, 2013			February 5, 2013			February 5, 2013			February 5, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.10E-03	U	<	5.70E-03	UJ	<	5.70E-03	U	<	5.70E-03	U	<	6.00E-03	U	<	5.30E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.00E-02	U	<	1.10E-02	UJ	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	3.10E-02	5.10E-03		3.20E-02	5.70E-03	J	5.70E-03	5.70E-03	J	6.30E-03	5.70E-03	J	9.30E-03	6.00E-03	J	1.50E-02	5.30E-03	
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.10E-03	U	<	5.70E-03	UJ	<	5.70E-03	U	<	5.70E-03	U	<	6.00E-03	U	<	5.30E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.10E-03	U	<	5.70E-03	UJ	<	5.70E-03	U	<	5.70E-03	U	<	6.00E-03	U	<	5.30E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	1.60E-01	1.10E-02	J	1.00E-01	1.10E-02	J	1.60E-01	1.10E-02	J	2.00E-01	1.10E-02	J	1.90E-01	1.10E-02	J	1.80E-01	1.10E-02	J
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	3.70E-02	1.10E-02	J	2.80E-02	1.10E-02	J	4.00E-02	1.10E-02	J	5.30E-02	1.10E-02	J	5.20E-02	1.10E-02	J	5.60E-02	1.10E-02	J
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	6.00E-02	1.10E-02	J	7.70E-02	1.10E-02	J	6.30E-02	1.10E-02	J	9.20E-02	1.10E-02	J	7.80E-02	1.10E-02	J	9.70E-02	1.10E-02	J
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	2.00E-02	1.10E-02	J	<	1.10E-02	U	2.70E-02	1.10E-02	J	3.20E-02	1.10E-02	J	3.30E-02	1.10E-02	J	3.00E-02	1.10E-02	J
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	2.00E-01	1.10E-02	J	1.80E-01	1.10E-02	J	2.40E-01	1.10E-02	J	2.40E-01	1.10E-02	J	2.50E-01	1.10E-02	J	2.70E-01	1.10E-02	J
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	3.70E-03	1.10E-02	J	4.00E-03	1.10E-02	J	3.90E-03	1.10E-02	J	4.40E-03	1.10E-02	J	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	9.60E-03	1.10E-02	J	7.40E-03	1.10E-02	J	1.10E-02	1.10E-02	J	1.20E-02	1.10E-02	J	1.40E-02	1.10E-02	J	1.10E-02	1.10E-02	J
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	**3.15E+03**	5.30E+01		2.60E+03	1.10E+01		**4.00E+03**	1.10E+02		**4.90E+03**	1.10E+02		**4.90E+03**	1.10E+02		**6.00E+03**	1.10E+02	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+02	U	9.40E+00	2.10E+01	J	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-060			CA504-SB01-065			CA504-SB01-070			CA504-SB01-075			CA504-SB01-080			CA504-SB01-085		
DATE COLLECTED							February 5, 2013			February 5, 2013			February 5, 2013			February 5, 2013			February 6, 2013			February 6, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	6.20E-03	U	<	5.70E-03	U	<	5.40E-03	U	<	5.10E-03	U	<	4.90E-03	U	<	5.30E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	9.70E-03	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	6.20E-03	U	<	5.70E-03	U	<	5.40E-03	U	<	5.10E-03	U	<	4.90E-03	U	<	5.30E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	6.20E-03	U	<	5.70E-03	U	<	5.40E-03	U	<	5.10E-03	U	<	4.90E-03	U	<	5.30E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	6.20E-03	U	<	5.70E-03	U	<	5.40E-03	U	<	5.10E-03	U	<	4.90E-03	U	<	5.30E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	1.20E-01	1.00E-02		3.00E-02	1.00E-02		<	1.10E-02	U	1.40E-02	1.00E-02		3.40E-02	1.00E-02		1.80E-02	1.10E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	5.10E-02	1.00E-02		3.60E-02	1.00E-02		1.90E-02	1.10E-02		2.30E-02	1.00E-02		1.50E-02	1.00E-02		1.40E-02	1.10E-02	
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	7.90E-02	1.00E-02		4.60E-02	1.00E-02		2.10E-02	1.10E-02		2.70E-02	1.00E-02		1.50E-02	1.00E-02		1.50E-02	1.10E-02	
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	2.30E-02	1.00E-02		1.50E-02	1.00E-02		6.70E-03	1.10E-02	J	6.20E-03	1.00E-02	J	3.80E-03	1.00E-02	J	3.50E-03	1.10E-02	J
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	1.30E-01	1.00E-02		6.00E-02	1.00E-02		2.80E-02	1.10E-02		4.60E-02	1.00E-02		5.70E-02	1.00E-02		4.30E-02	1.10E-02	
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	7.60E-03	1.00E-02	J	6.40E-03	1.00E-02	J	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	1.70E-02	1.00E-02		1.30E-02	1.00E-02		7.30E-03	1.10E-02	J	7.50E-03	1.00E-02	J	5.30E-03	1.00E-02	J	5.10E-03	1.10E-02	J
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	**5.50E+03**	1.00E+02		**5.10E+03**	1.00E+02		**4.10E+03**	1.10E+02		**6.60E+03**	1.00E+02		**5.00E+03**	1.00E+02		**4.70E+03**	1.10E+02	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-090			CA504-SB01-095			CA504-SB01-100			CA504-SB01-105			CA504-SB01-110			CA504-SB01-115		
DATE COLLECTED							February 6, 2013			February 6, 2013			February 6, 2013			February 6, 2013			February 7, 2013			February 7, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.10E-03	U	<	5.10E-03	U	<	5.10E-03	UJ	<	5.10E-03	U	<	5.20E-03	U	2.80E-03	4.80E-03	J
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	UJ	<	1.00E-02	U	<	1.00E-02	U	2.30E-03	9.70E-03	J
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.10E-03	U	<	5.10E-03	U	<	5.10E-03	UJ	<	5.10E-03	U	3.10E-03	5.20E-03	J	1.10E-02	4.80E-03	J
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.10E-03	U	<	5.10E-03	U	<	5.10E-03	UJ	<	5.10E-03	U	<	5.20E-03	U	<	4.80E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.10E-03	U	<	5.10E-03	U	<	5.10E-03	UJ	<	5.10E-03	U	<	5.20E-03	U	<	4.80E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	1.30E-01	1.00E-02	
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	1.30E-02	1.00E-02		2.00E-02	1.00E-02		4.10E-02	1.10E-02		6.00E-02	1.10E-02		3.80E-02	1.10E-02		2.60E-02	1.00E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	1.00E-02	1.00E-02	J	1.00E-02	1.00E-02		1.70E-02	1.10E-02		1.60E-02	1.10E-02		8.40E-03	1.10E-02	J	5.00E-03	1.00E-02	J
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	9.00E-03	1.00E-02	J	9.20E-03	1.00E-02	J	2.00E-02	1.10E-02		2.50E-02	1.10E-02		1.50E-02	1.10E-02		7.50E-03	1.00E-02	J
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	4.20E-03	1.10E-02	J	5.90E-03	1.10E-02	J	<	1.10E-02	U	<	1.00E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	3.20E-02	1.00E-02		<	1.00E-02	U	6.90E-02	1.10E-02		1.00E-01	1.10E-02		6.80E-02	1.10E-02		4.20E-02	1.00E-02	
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	5.00E-03	1.10E-02	J	<	1.10E-02	U	<	1.00E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	4.30E-03	1.00E-02	J	4.40E-03	1.00E-02	J	6.20E-03	1.10E-02	J	7.00E-03	1.10E-02	J	<	1.10E-02	U	<	1.00E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	2.80E+03	1.00E+01		3.00E+03	1.00E+01		**6.20E+03**	1.10E+02		**7.50E+03**	1.10E+02		**6.30E+03**	1.10E+02		**3.90E+03**	1.00E+02	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.10E+01	U	<	2.20E+02	U	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

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1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
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RCRA = Resource Conservation and Recovery Act
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SSL = Soil Screening Level
U = nondetect
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UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID							CA504-SB01-120			CA504-SB01-125			CA504-SB01-130			CA504-SB01-135			CA504-SB01-140			CA504-SB01-145		
DATE COLLECTED							February 7, 2013			February 7, 2013			July 9, 2013			July 10, 2013			July 10, 2013			July 10, 2013		
	Maximum	Frequency	NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	1.30E-02	5.40E-03	J	2.00E-02	5.60E-03	J	4.40E-02	5.30E-03		1.60E-02	5.30E-03		4.10E-02	5.40E-03		8.40E-02	5.50E-06	J
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	2.60E-02	1.10E-02	J	7.60E-02	1.10E-02	J	2.10E-01	1.10E-02		7.30E-02	1.10E-02	J	2.10E-01	1.10E-02		3.90E-01	1.10E-02	J
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	2.00E-02	5.40E-03	J	4.30E-02	5.60E-03	J	2.50E-02	5.30E-03		7.60E-03	5.30E-03		2.10E-02	5.40E-03		1.40E-01	5.50E-03	J
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	6.30E-03	5.40E-03	J	3.50E-02	5.60E-03	J	1.20E-01	5.30E-03		4.20E-02	5.30E-03	J	1.20E-01	5.40E-03		2.20E-01	5.50E-03	J
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.40E-03	U	3.60E-03	5.60E-03	J	6.90E-03	5.30E-03		3.10E-03	5.30E-03	J	4.30E-03	5.40E-03	J	1.10E-02	5.50E-03	J
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	**7.10E-01**	1.00E-02		**5.30E-01**	1.00E-02		1.40E+00	1.00E-02		**1.10E+00**	1.10E-02		**1.50E+00**	1.00E-02		**6.90E+00**	5.10E-02	
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	2.70E-02	1.00E-02		2.70E-02	1.00E-02		2.90E-02	1.00E-02		1.70E-02	1.10E-02		1.90E-02	1.00E-02		1.60E-02	1.00E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	5.70E-03	1.00E-02	J	5.30E-03	1.00E-02	J	1.40E-02	1.00E-02		5.20E-03	1.10E-02	J	4.60E-03	1.00E-02	J	<	1.00E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	8.70E-03	1.00E-02	J	7.90E-03	1.00E-02	J	1.80E-02	1.00E-02		6.70E-03	1.10E-02	J	6.20E-03	1.00E-02	J	3.10E-03	1.00E-02	J
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	1.40E-02	1.00E-02		<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	4.40E-02	1.00E-02		4.30E-02	1.00E-02		4.10E-02	1.00E-02		3.30E-02	1.10E-02		3.80E-02	1.00E-02		2.80E-02	1.00E-02	
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	7.60E-03	1.00E-02	J	3.00E-03	1.10E-02	J	<	1.00E-02	U	<	1.00E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	8.20E-03	1.00E-02	J	3.30E-03	1.10E-02	J	<	1.00E-02	U	<	1.00E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	**4.40E+03**	1.00E+02		**4.30E+03**	1.00E+02		2.80E+03	1.00E+01		2.50E+03	1.10E+01		2.90E+03	1.00E+01		2.00E+03	1.00E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-150			CA504-SB01-155			CA504-SB01-160			CA504-SB01-165			CA504-SB01-170			CA504-SB01-175		
DATE COLLECTED							July 10, 2013			July 10, 2013			July 10, 2013			July 10, 2013			July 10, 2013			July 10, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	1.00E-02	5.70E-03		8.40E-02	5.10E-03		8.10E-02	5.70E-03	J	7.10E-02	5.80E-03	J	1.90E-01	5.30E-03	J	1.10E-01	5.10E-03	J
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	5.10E-02	1.10E-02		3.60E-01	1.00E-02		3.60E-01	1.10E-02	J	3.50E-01	1.20E-02	J	8.50E-01	1.10E-02	J	5.10E-01	1.00E-02	J
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	1.50E-01	5.70E-03		6.00E-02	5.10E-03		9.20E-02	5.70E-03	J	1.10E-01	5.80E-03	J	3.00E+00	2.70E-01	J	1.90E+00	2.80E-01	J
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	3.20E-02	5.70E-03		2.00E-01	5.10E-03		2.00E-01	5.70E-03	J	2.10E-01	5.80E-03	J	4.60E-01	5.30E-03	J	2.80E-01	5.10E-03	J
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.70E-03	U	1.40E-02	5.10E-03		1.10E-02	5.70E-03	J	4.60E-03	5.80E-03	J	2.30E-02	5.30E-03	J	1.30E-02	5.10E-03	J
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	**6.00E+00**	3.10E-02		**5.60E+00**	3.10E-02		**5.20E+00**	3.10E-02		**4.90E+00**	3.10E-02		**5.40E+00**	3.10E-02		**3.30E+00**	2.10E-02	
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	1.20E-02	1.00E-02		1.00E-02	1.00E-02		1.10E-02	1.00E-02		8.80E-03	1.00E-02	J	1.00E-02	1.00E-02	J	1.10E-02	1.00E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	2.30E-02	1.00E-02		1.50E-02	1.00E-02		1.30E-02	1.00E-02		2.00E-02	1.00E-02		2.10E-02	1.00E-02		9.80E-03	1.00E-02	J
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	1.60E+03	1.00E+01		1.50E+03	1.00E+01		1.50E+03	1.00E+01		1.50E+03	1.00E+01		1.40E+03	1.00E+01		9.10E+02	1.00E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U	<	2.00E+01	U	<	2.10E+01	U	<	2.10E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-180			CA504-SB01-185			CA504-SB01-190			CA504-SB01-195			CA504-SB01-200			CA504-SB01-205		
DATE COLLECTED							July 10, 2013			July 10, 2013			July 10, 2013			July 10, 2013			July 10, 2013			July 10, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	1.00E-01	5.00E-03	J	4.20E-02	5.00E-03	J	1.00E-01	5.10E-03	J	3.00E-02	5.50E-03	J	2.00E-02	5.80E-03	J	1.40E-02	5.10E-03	J
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	5.10E-01	1.00E-02	J	2.10E-01	1.00E-02	J	4.20E-01	1.00E-02	J	1.60E-01	1.10E-02	J	1.10E-01	1.20E-02	J	7.90E-02	1.00E-02	J
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	1.70E+00	2.60E-01	J	1.80E+00	2.50E-01	J	3.30E+00	2.30E-01	J	1.90E+00	2.60E-01	J	1.70E+00	2.50E-01	J	1.70E+00	2.60E-01	J
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	2.80E-01	5.00E-03	J	1.20E-01	5.00E-03	J	2.30E-01	5.10E-03	J	9.90E-02	5.50E-03	J	7.30E-02	5.80E-03	J	5.40E-02	5.10E-03	J
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	1.00E-02	5.00E-03	J	6.40E-03	5.00E-03	J	3.70E-02	5.10E-03	J	<	5.50E-03	UJ	<	5.80E+00	UJ	2.10E-03	5.10E-03	J
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	**3.60E+00**	3.10E-02		**2.70E+00**	1.00E-02		**3.80E+00**	2.00E-02		**3.40E+00**	1.00E-02		**3.50E+00**	2.10E-02		**3.30E+00**	1.00E-02	
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	1.00E-02	1.00E-02		1.10E-02	1.00E-02		1.20E-02	1.00E-02		1.10E-02	1.00E-02		1.30E-02	1.00E-02		1.30E-02	1.00E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	1.10E-02	1.00E-02		1.00E-02	1.00E-02		9.70E-03	1.00E-02	J	9.00E-03	1.00E-02	J	1.00E-02	1.00E-02	J	8.30E-03	1.00E-02	J
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	1.10E+03	1.00E+01		8.80E+02	1.00E+01		1.10E+03	1.00E+01		9.30E+02	1.00E+01		9.60E+02	1.00E+01		9.60E+02	1.00E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.00E+01	U	<	2.00E+01	U	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
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SSL = Soil Screening Level
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TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-210			CA504-SB01-215			CA504-SB01-220			CA504-SB01-225			CA504-SB01-230			CA504-SB01-235		
DATE COLLECTED							July 10, 2013			July 10, 2013			July 10, 2013			July 10, 2013			July 11, 2013			July 11, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	2.50E-02	5.00E-03	J	<	4.80E-03	U	<	4.60E-03	U	<	5.10E-03	U	<	5.10E-03	U	<	4.90E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	1.30E-01	1.00E-02	J	<	9.50E-03	U	<	9.20E-03	U	<	1.00E-02	U	<	1.00E-02	U	<	9.80E-03	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	1.70E+00	2.60E-01	J	1.30E-02	4.80E-03		2.60E-02	4.60E-03		6.30E-03	5.10E-03		1.10E-02	5.10E-03		7.00E-03	4.90E-03	
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	8.20E-02	5.00E-03	J	<	4.80E-03	U	<	4.60E-03	U	<	5.10E-03	U	<	5.10E-03	U	<	4.90E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	2.20E-03	5.00E-03	J	<	4.80E-03	U	<	4.60E-03	U	<	5.10E-03	U	<	5.10E-03	U	<	4.90E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	**2.20E+00**	1.00E-02		<	1.00E-02	U	9.40E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	9.80E-03	1.00E-02	J	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	6.40E-03	1.00E-02	J	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.00E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	7.80E+02	1.00E+01		8.70E+00	1.00E+01	J	3.30E+01	1.00E+01		7.40E+00	1.00E+01	J	5.10E+00	1.10E+01	J	3.50E+00	1.00E+01	J
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-240			CA504-SB01-245			CA504-SB01-250			CA504-SB01-255			CA504-SB01-260			CA504-SB01-265		
DATE COLLECTED							July 11, 2013			July 11, 2013			July 11, 2013			July 11, 2013			July 11, 2013			July 11, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	6.40E-03	U	<	5.20E-03	U	<	5.00E-03	U	<	5.20E-03	U	<	4.40E-03	U	<	5.30E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.30E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	8.90E-03	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	5.70E-03	6.40E-03	J	3.20E-03	5.20E-03	J	<	5.00E-03	U	<	5.20E-03	U	8.70E-03	4.40E-03		<	5.30E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	6.40E-03	U	<	5.20E-03	U	<	5.00E-03	U	<	5.20E-03	U	<	4.40E-03	U	<	5.30E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	6.40E-03	U	<	5.20E-03	U	<	5.00E-03	U	<	5.20E-03	U	<	4.40E-03	U	<	5.30E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	5.70E-03	1.10E-02	J	6.60E-03	1.10E-02	J
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	3.10E+00	1.00E+01	J	<	1.00E+01	U	<	1.00E+01	U	<	1.00E+01	U	4.10E+00	1.10E+01	J	3.10E+00	1.10E+01	J
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U	<	2.20E+01	U	<	2.10E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB01-270			CA504-SB01-275			CA504-SB02-005			CA504-SB02-010			CA504-SB02-015			CA504-SB02-020		
DATE COLLECTED							July 11, 2013			July 11, 2013			February 7, 2013			February 7, 2013			February 7, 2013			February 7, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.10E-03	U	<	5.00E-03	U	<	5.60E-03	U	<	6.30E-03	U	<	6.30E-03	U	<	5.60E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.30E-02	U	<	1.30E-02	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.10E-03	U	<	5.00E-03	U	<	5.60E-03	U	<	6.30E-03	U	<	6.30E-03	U	<	5.60E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.10E-03	U	<	5.00E-03	U	<	5.60E-03	U	<	6.30E-03	U	<	6.30E-03	U	<	5.60E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.10E-03	U	<	5.00E-03	U	<	5.60E-03	U	<	6.30E-03	U	<	6.30E-03	U	<	5.60E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	3.10E-03	1.00E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	6.30E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	5.50E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	5.50E-03	1.10E-02	J
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	8.80E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	9.10E-03	1.10E-02	J
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	4.50E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	1.40E-02	1.10E-02	
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	3.90E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	4.10E-03	1.10E-02	J
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+01	U	<	1.00E+01	U	7.60E+00	1.10E+01	J	9.50E+00	1.10E+01	J	<	1.10E+01	U	1.90E+02	1.10E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.10E+01	U	1.80E+01	2.10E+01	J	<	2.20E+01	U	<	2.30E+01	U	<	2.30E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID							CA504-SB02-025			CA504-SB02-030			CA504-SB02-035			CA504-SB02-040			CA504-SB02-045			CA504-SB02-050		
DATE COLLECTED							February 7, 2013			February 7, 2013			February 7, 2013			February 7, 2013			February 8, 2013			February 8, 2013		
	Maximum	Frequency	NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	7.30E-03	U	<	5.60E-03	U	<	5.30E-03	U	<	5.50E-03	U	<	6.10E-03	U	<	5.50E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.50E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	7.30E-03	U	<	5.60E-03	U	<	5.30E-03	U	<	5.50E-03	U	4.50E-03	6.10E-03	J	6.30E-03	5.50E-03	J
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	7.30E-03	U	<	5.60E-03	U	<	5.30E-03	U	<	5.50E-03	U	<	6.10E-03	U	<	5.50E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	7.30E-03	U	<	5.60E-03	U	<	5.30E-03	U	<	5.50E-03	U	<	6.10E-03	U	<	5.50E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	1.00E-01	1.10E-02		<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	3.10E-02	1.10E-02		4.60E-02	1.10E-02		4.60E-02	1.10E-02		1.60E-02	1.10E-02		2.60E-02	1.10E-02		3.70E-02	1.10E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	1.50E-02	1.10E-02		2.40E-02	1.10E-02		2.60E-02	1.10E-02		1.40E-02	1.10E-02		1.50E-02	1.10E-02		1.20E-02	1.10E-02	
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	1.90E-02	1.10E-02		2.90E-02	1.10E-02		2.80E-02	1.10E-02		1.50E-02	1.10E-02		1.60E-02	1.10E-02		1.20E-02	1.10E-02	
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	5.60E-03	1.10E-02	J	9.30E-03	1.10E-02	J	8.40E-03	1.10E-02	J	3.90E-03	1.10E-02	J	3.30E-03	1.10E-02	J	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	4.20E-02	1.10E-02		3.30E-02	1.10E-02		5.60E-02	1.10E-02		2.00E-02	1.10E-02		3.20E-02	1.10E-02		3.60E-02	1.10E-02	
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	3.40E-03	1.10E-02	J	4.90E-03	1.10E-02	J	4.50E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	2.10E+03	1.10E+01		**3.10E+03**	1.10E+01		**4.50E+03**	1.10E+02		**3.80E+03**	1.10E+02		**6.30E+03**	1.10E+02		**6.20E+03**	1.10E+02	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	5.40E+00	2.20E+01	J	5.30E+00	2.10E+01	J	<	2.10E+02	U	<	2.20E+02	U	<	2.10E+02	U	<	2.10E+02	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB02-055			CA504-SB02-060			CA504-SB02-065			CA504-SB02-070			CA504-SB02-075			CA504-SB02-080		
DATE COLLECTED							February 8, 2013			February 8, 2013			February 8, 2013			February 8, 2013			February 8, 2013			February 8, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	4.90E-03	U	<	5.30E-03	U	<	5.00E-03	U	<	5.10E-03	U	<	5.90E-03	U	<	5.20E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	5.50E-03	9.80E-03	J	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.20E-02	U	<	1.00E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	1.20E-02	4.90E-03	J	4.40E-03	5.30E-03	J	<	5.00E-03	U	<	5.10E-03	U	<	5.90E-03	U	<	5.20E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	4.60E-03	4.90E-03	J	<	5.30E-03	U	<	5.00E-03	U	<	5.10E-03	U	<	5.90E-03	U	<	5.20E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	4.90E-03	U	<	5.30E-03	U	<	5.00E-03	U	<	5.10E-03	U	<	5.90E-03	U	<	5.20E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	3.70E-02	1.10E-02		2.70E-02	1.10E-02		2.80E-02	1.10E-02		2.60E-02	1.00E-02		2.30E-02	1.10E-02		2.10E-02	1.10E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	1.60E-02	1.10E-02		1.20E-02	1.10E-02		7.80E-03	1.10E-02	J	6.40E-03	1.00E-02	J	4.60E-03	1.10E-02	J	4.00E-03	1.10E-02	J
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	1.30E-02	1.10E-02		9.40E-03	1.10E-02	J	5.20E-03	1.10E-02	J	3.70E-03	1.00E-02	J	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	2.80E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	8.40E-02	1.10E-02		6.90E-02	1.10E-02		<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	**8.70E+03**	1.10E+02		**6.90E+03**	1.10E+02		**5.30E+03**	1.10E+02		**5.70E+03**	1.00E+02		**4.90E+03**	1.10E+02		**4.40E+03**	1.10E+02	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U	<	2.10E+02	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB02-085			CA504-SB03-005			CA504-SB03-010			CA504-SB03-015			CA504-SB03-020			CA504-SB03-025		
DATE COLLECTED							February 8, 2013			February 12, 2013			February 12, 2013			February 12, 2013			February 12, 2013			February 12, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.50E-03	U	<	5.00E-03	U	<	5.30E-03	U	<	5.40E-03	U	<	6.20E-03	U	<	6.40E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.10E-02	U	<	9.90E-03	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.30E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.50E-03	U	<	5.00E-03	U	<	5.30E-03	U	<	5.40E-03	U	<	6.20E-03	U	<	6.40E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.50E-03	U	<	5.00E-03	U	<	5.30E-03	U	<	5.40E-03	U	<	6.20E-03	U	<	6.40E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.50E-03	U	<	5.00E-03	U	<	5.30E-03	U	<	5.40E-03	U	<	6.20E-03	U	<	6.40E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	3.00E-03	1.10E-02	J
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	2.10E-02	1.10E-02		6.90E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	4.30E-03	1.10E-02	J	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	7.00E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	1.20E-02	1.10E-02		1.20E-02	1.10E-02	
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	7.00E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	2.10E-02	1.10E-02		2.30E-02	1.10E-02	
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	5.10E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	2.30E-02	1.10E-02	
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	4.60E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	7.40E-02	1.10E-02		1.30E-02	1.10E-02	
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	**3.20E+03**	1.10E+02		<	1.00E+01	U	<	1.00E+01	U	5.40E+00	1.10E+01	J	8.20E+02	1.10E+01		8.40E+02	1.10E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+02	U	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+01	U	8.70E+00	2.20E+01	J	9.30E+00	2.30E+01	J

Notes:

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1.80E+02 Result exceeds DAF 20 SSL.
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1.80E+02 Result exceeds both the Residential and Industrial SSL.
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< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
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TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB03-030			CA504-SB03-035			CA504-SB03-040			CA504-SB03-045			CA504-SB03-050			CA504-SB03-052		
DATE COLLECTED							February 12, 2013			February 12, 2013			February 12, 2013			February 12, 2013			February 12, 2013			February 12, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.10E-03	U	<	5.80E-03	U	<	8.00E-03	U	<	5.60E-03	U	<	5.30E-03	U	<	6.50E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.00E-02	U	<	1.20E-02	U	<	1.60E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.30E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.10E-03	U	<	5.80E-03	U	<	8.00E-03	U	<	5.60E-03	U	2.50E-03	5.30E-03	J	<	6.50E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.10E-03	U	<	5.80E-03	U	<	8.00E-03	U	<	5.60E-03	U	<	5.30E-03	U	<	6.50E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.10E-03	U	<	5.80E-03	U	<	8.00E-03	U	<	5.60E-03	U	<	5.30E-03	U	<	6.50E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	1.50E-02	1.10E-02		2.50E-02	1.10E-02		4.00E-02	1.10E-02		5.10E-02	1.10E-02		1.10E-01	1.10E-02		1.10E-01	1.10E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	1.80E-02	1.10E-02		1.30E-02	1.10E-02		2.50E-02	1.10E-02		3.70E-02	1.10E-02		4.70E-02	1.10E-02		4.40E-02	1.10E-02	
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	2.40E-02	1.10E-02		1.80E-02	1.10E-02		3.80E-02	1.10E-02		6.00E-02	1.10E-02		7.00E-02	1.10E-02		6.50E-02	1.10E-02	
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	4.20E-03	1.10E-02	J	4.30E-03	1.10E-02	J	8.50E-03	1.10E-02	J	1.30E-02	1.10E-02		1.70E-02	1.10E-02		1.50E-02	1.10E-02	
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	4.00E-02	1.10E-02		4.30E-02	1.10E-02		6.80E-02	1.10E-02		7.90E-02	1.10E-02		1.40E-01	1.10E-02		1.30E-01	1.10E-02	
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	5.80E-03	1.10E-02	J	6.60E-03	1.10E-02	J	7.50E-03	1.10E-02	J	7.10E-03	1.10E-02	J
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	6.90E-03	1.10E-02	J	6.00E-03	1.10E-02	J	9.50E-03	1.10E-02	J	1.30E-02	1.10E-02		1.50E-02	1.10E-02		1.30E-02	1.10E-02	
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	2.50E+03	1.10E+01		2.40E+03	1.10E+01		**5.10E+03**	1.10E+02		**6.40E+03**	1.10E+02		**8.70E+03**	1.10E+02		**8.20E+03**	1.10E+02	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.10E+01	U	<	2.10E+02	U	<	2.20E+02	U	<	2.10E+02	U	<	2.20E+02	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

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1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB04-005			CA504-SB04-010			CA504-SB04-015			CA504-SB04-020			CA504-SB04-025			CA504-SB04-030		
DATE COLLECTED							February 10, 2013			February 10, 2013			February 10, 2013			February 10, 2013			February 10, 2013			February 10, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	6.90E-03	U	<	7.20E-03	U	<	5.30E-03	U	<	4.90E-03	U	<	5.70E-03	U	<	5.30E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.40E-02	U	<	1.40E-02	U	<	1.10E-02	U	<	9.70E-03	U	<	1.10E-02	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	6.90E-03	U	<	7.20E-03	U	<	5.30E-03	U	<	4.90E-03	U	<	5.70E-03	U	<	5.30E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	6.90E-03	U	<	7.20E-03	U	<	5.30E-03	U	<	4.90E-03	U	<	5.70E-03	U	<	5.30E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	6.90E-03	U	<	7.20E-03	U	<	5.30E-03	U	<	4.90E-03	U	<	5.70E-03	U	<	5.30E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	2.00E+01	1.10E+01		7.00E+02	1.10E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	6.60E+01	2.20E+01		<	2.20E+01	U	<	2.20E+01	U	<	2.20E+01	U	<	2.10E+01	U	<	2.10E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB04-035			CA504-SB04-040			CA504-SB04-045			CA504-SB04-050			CA504-SB05-005			CA504-SB05-010		
DATE COLLECTED							February 10, 2013			February 10, 2013			February 10, 2013			February 10, 2013			February 13, 2013			February 13, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.40E-03	U	<	7.10E-03	U	<	5.70E-03	U	<	5.20E-03	U	<	5.10E-03	U	<	6.80E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.10E-02	U	<	1.40E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.40E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.40E-03	U	<	7.10E-03	U	<	5.70E-03	U	<	5.20E-03	U	<	5.10E-03	U	<	6.80E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.40E-03	U	<	7.10E-03	U	<	5.70E-03	U	<	5.20E-03	U	<	5.10E-03	U	<	6.80E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.40E-03	U	<	7.10E-03	U	<	5.70E-03	U	<	5.20E-03	U	<	5.10E-03	U	<	6.80E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	2.60E-02	1.10E-02	J	<	1.10E-02	U	<	1.20E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	1.90E-02	1.10E-02	J	3.30E-02	1.10E-02	J	1.80E-02	1.10E-02	J	2.20E-02	1.10E-02	J	<	1.10E-02	U	<	1.20E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	2.40E-02	1.10E-02	J	5.20E-02	1.10E-02	J	2.40E-02	1.10E-02	J	3.30E-02	1.10E-02	J	2.80E-03	1.10E-02	J	<	1.20E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	5.30E-03	1.10E-02	J	1.60E-02	1.10E-02	J	8.60E-03	1.10E-02	J	9.00E-03	1.10E-02	J	<	1.10E-02	U	<	1.20E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	5.40E-02	1.10E-02	J	8.20E-02	1.10E-02	J	6.00E-02	1.10E-02	J	7.40E-02	1.10E-02	J	<	1.10E-02	U	<	1.20E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	5.80E-03	1.10E-02	J	7.90E-03	1.10E-02	J	5.80E-03	1.10E-02	J	4.40E-03	1.10E-02	J	<	1.10E-02	U	<	1.20E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	**3.70E+03**	5.30E+01		**5.00E+03**	5.30E+01		**3.80E+03**	5.40E+01		**5.20E+03**	5.30E+01		<	1.10E+01	U	<	1.20E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+02	U	<	1.10E+02	U	<	1.10E+02	U	<	1.10E+02	U	<	2.10E+01	U	<	2.30E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB05-015			CA504-SB05-020			CA504-SB05-025			CA504-SB06-005			CA504-SB06-010			CA504-SB06-015		
DATE COLLECTED							February 13, 2013			February 13, 2013			February 13, 2013			February 13, 2013			February 13, 2013			February 13, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	6.30E-03	U	<	6.60E-03	U	<	5.50E-03	U	<	5.30E-03	U	<	5.20E-03	U	<	5.90E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.30E-02	U	<	1.30E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.20E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	6.30E-03	U	<	6.60E-03	U	<	5.50E-03	U	<	5.30E-03	U	<	5.20E-03	U	<	5.90E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	6.30E-03	U	<	6.60E-03	U	<	5.50E-03	U	<	5.30E-03	U	<	5.20E-03	U	<	5.90E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	6.30E-03	U	<	6.60E-03	U	<	5.50E-03	U	<	5.30E-03	U	<	5.20E-03	U	<	5.90E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	1.50E-02	1.00E-02		<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	1.10E-02	1.00E-02		<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	1.50E-02	1.00E-02		<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	4.80E-03	1.00E-02	J	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	1.20E-02	1.00E-02		<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	4.70E-03	1.10E-02	J	6.00E-03	1.00E-02	J	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+01	U	<	1.10E+01	U	3.10E+01	1.10E+01		1.40E+01	1.00E+01		<	1.10E+01	U	<	1.10E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.20E+01	U	<	2.20E+01	U	<	2.20E+01	U	1.00E+02	2.10E+01		<	2.20E+01	U	<	2.20E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

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< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
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LOQ = limit of quantitation
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NMED = New Mexico Environment Department
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RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB06-020			CA504-SB06-025			CA504-SB07-005			CA504-SB07-010			CA504-SB07-015			CA504-SB07-020		
DATE COLLECTED							February 13, 2013			February 13, 2013			February 12, 2013			February 12, 2013			February 12, 2013			February 12, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.90E-03	U	<	5.50E-03	U	<	6.60E-03	U	<	4.80E-03	U	<	6.30E-03	U	<	5.90E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.20E-02	U	<	1.10E-02	U	<	1.30E-02	U	<	9.70E-03	U	<	1.30E-02	U	<	1.20E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.90E-03	U	<	5.50E-03	U	<	6.60E-03	U	<	4.80E-03	U	<	6.30E-03	U	<	5.90E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.90E-03	U	<	5.50E-03	U	<	6.60E-03	U	<	4.80E-03	U	<	6.30E-03	U	<	5.90E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.90E-03	U	<	5.50E-03	U	<	6.60E-03	U	<	4.80E-03	U	<	6.30E-03	U	<	5.90E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	1.20E-02	1.10E-02		<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	8.70E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	1.00E-02	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	3.70E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	1.00E-02	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	5.20E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.30E+01	U	<	2.20E+01	U	<	2.20E+01	U	<	2.20E+01	U	<	2.20E+01	U	<	2.30E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB07-025			CA504-SB08-005			CA504-SB08-010			CA504-SB08-015			CA504-SB08-020			CA504-SB08-025		
DATE COLLECTED							February 12, 2013			February 10, 2013			February 10, 2013			February 10, 2013			February 10, 2013			February 10, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.50E-03	U	<	5.20E-03	U	<	5.10E-03	U	<	5.20E-03	U	<	6.50E-03	U	<	5.80E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.30E-02	U	<	1.20E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.50E-03	U	<	5.20E-03	U	<	5.10E-03	U	<	5.20E-03	U	<	6.50E-03	U	<	5.80E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.50E-03	U	<	5.20E-03	U	<	5.10E-03	U	<	5.20E-03	U	<	6.50E-03	U	<	5.80E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	5.60E-03	5.50E-03		<	5.20E-03	U	<	5.10E-03	U	<	5.20E-03	U	<	6.50E-03	U	<	5.80E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	4.90E-03	1.00E-02	J	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	4.80E+00	5.10E-02		6.60E-02	1.00E-02	J	1.60E+00	1.00E-02		2.30E-02	1.10E-02		2.00E-02	1.10E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	2.10E+00	1.00E-02		2.00E-02	1.00E-02	J	7.00E-01	1.00E-02		7.90E-03	1.10E-02	J	7.10E-03	1.10E-02	J
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	3.40E+00	5.10E-02		1.40E-01	1.00E-02	J	1.20E+00	1.00E-02		1.40E-02	1.10E-02		1.20E-02	1.10E-02	
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	9.40E-01	1.00E-02		3.10E-02	1.00E-02	J	5.30E-01	1.00E-02		5.40E-03	1.10E-02	J	4.80E-03	1.10E-02	J
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	4.60E+00	5.10E-02		2.90E-01	1.00E-02	J	1.50E+00	1.00E-02		2.60E-02	1.10E-02		2.40E-02	1.10E-02	
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	2.20E-01	1.00E-02		<	1.00E-02	U	7.50E-02	1.00E-02		<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	7.00E-01	1.00E-02		1.10E-02	1.00E-02	J	2.40E-01	1.00E-02		3.60E-02	1.10E-02		4.40E-02	1.10E-02	
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	1.10E+01	1.10E+01		2.20E+01	1.00E+01		**3.05E+03**	2.10E+01		6.20E+02	1.00E+01		1.90E+02	1.10E+01		2.20E+02	1.10E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.20E+01	U	4.60E+01	2.00E+01		1.20E+01	4.20E+01	J	3.30E+01	2.10E+01		6.80E+00	2.30E+01	J	<	2.30E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB09-005			CA504-SB09-010			CA504-SB09-015			CA504-SB09-020			CA504-SB09-025			CA504-SB10-005		
DATE COLLECTED							February 11, 2013			February 11, 2013			February 11, 2013			February 11, 2013			February 11, 2013			February 11, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.10E-03	U	<	5.40E-03	U	<	6.60E-03	U	<	7.70E-03	U	<	5.50E-03	U	<	6.40E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.00E-02	U	<	1.10E-02	U	<	1.30E-02	U	<	1.50E-02	U	<	1.10E-02	U	<	1.30E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.10E-03	U	<	5.40E-03	U	<	6.60E-03	U	<	7.70E-03	U	<	5.50E-03	U	<	6.40E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.10E-03	U	<	5.40E-03	U	<	6.60E-03	U	<	7.70E-03	U	<	5.50E-03	U	<	6.40E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.10E-03	U	<	5.40E-03	U	<	6.60E-03	U	<	7.70E-03	U	<	5.50E-03	U	3.80E-03	6.40E-03	J
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	6.70E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	3.50E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	6.70E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	5.60E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.00E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.00E+01	U	<	1.00E+01	U	<	1.10E+01	U	5.90E+00	1.10E+01	J	<	1.10E+01	U	<	1.00E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	8.60E+00	2.10E+01	J	8.80E+00	2.10E+01	J	<	2.20E+01	U	<	2.30E+01	U	<	2.20E+01	U	5.90E+00	2.10E+01	J

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

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1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
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TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB10-010			CA504-SB10-015			CA504-SB10-020			CA504-SB10-025			CA504-SB10-030			CA504-SB10-035		
DATE COLLECTED							February 11, 2013			February 11, 2013			February 11, 2013			February 11, 2013			February 11, 2013			February 11, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.20E-03	U	<	5.20E-03	U	<	6.20E-03	U	<	6.50E-03	U	<	5.50E-03	U	<	5.40E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.20E-02	U	<	1.30E-02	U	<	1.10E-02	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.20E-03	U	<	5.20E-03	U	<	6.20E-03	U	<	6.50E-03	U	<	5.50E-03	U	<	5.40E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.20E-03	U	<	5.20E-03	U	<	6.20E-03	U	<	6.50E-03	U	<	5.50E-03	U	<	5.40E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.20E-03	U	<	5.20E-03	U	<	6.20E-03	U	<	6.50E-03	U	<	5.50E-03	U	<	5.40E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	1.80E-02	1.10E-02	J	8.90E-02	1.10E-02	J	8.80E-02	1.10E-02	J	5.40E-02	1.10E-02	J
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	3.50E-02	1.10E-02	J	5.80E-02	1.10E-02	J	7.70E-02	1.10E-02	J	3.90E-02	1.10E-02	J
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	4.50E-02	1.10E-02	J	1.50E-01	1.10E-02	J	9.00E-02	1.10E-02	J	4.40E-02	1.10E-02	J
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	7.20E-03	1.10E-02	J	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	1.70E-01	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	2.20E-02	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.00E-02	U	<	1.00E-02	U	1.00E-01	1.10E-02	J	4.30E-02	1.10E-02	J	3.10E-02	1.10E-02	J	2.30E-02	1.10E-02	J
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.00E+01	U	<	1.00E+01	U	1.40E+03	1.10E+01		1.50E+03	1.10E+01		2.70E+03	1.10E+01		2.10E+03	1.10E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	5.70E+00	2.10E+01	J	1.90E+01	2.20E+01	J	1.60E+01	2.20E+01	J	6.80E+00	2.20E+01	J	6.30E+00	2.10E+01	J

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB10-040			CA504-SB10-045			CA504-SB10-050			CA504-SB10-052			CA504-SB11-005			CA504-SB11-010		
DATE COLLECTED							February 11, 2013			February 11, 2013			February 11, 2013			February 11, 2013			February 8, 2013			February 8, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.60E-03	U	<	6.20E-03	U	<	6.60E-03	U	<	6.20E-03	U	<	4.80E-03	U	<	5.30E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.10E-02	U	<	1.20E-02	U	<	1.30E-02	U	<	1.20E-02	U	<	9.60E-03	U	<	1.10E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.60E-03	U	<	6.20E-03	U	<	6.60E-03	U	<	6.20E-03	U	<	4.80E-03	U	<	5.30E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.60E-03	U	<	6.20E-03	U	<	6.60E-03	U	<	6.20E-03	U	<	4.80E-03	U	<	5.30E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.60E-03	U	<	6.20E-03	U	<	6.60E-03	U	<	6.20E-03	U	<	4.80E-03	U	2.40E-03	5.30E-03	J
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	2.50E-02	1.10E-02	J	3.70E-02	1.10E-02	J	<	1.10E-02	U	3.20E-02	1.10E-02	J	<	1.10E-02	U	3.30E-03	1.10E-02	J
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	1.10E-02	1.10E-02	J	1.50E-02	1.10E-02	J	1.90E-02	1.10E-02	J	1.00E-02	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	1.40E-02	1.10E-02	J	1.30E-02	1.10E-02	J	3.00E-02	1.10E-02	J	1.10E-02	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	6.80E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	6.30E-02	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	3.10E-03	1.10E-02	J
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	7.50E-03	1.10E-02	J	7.40E-03	1.10E-02	J	5.80E-03	1.10E-02	J	4.50E-03	1.10E-02	J	<	1.10E-02	U	3.10E-03	1.10E-02	J
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	1.60E+03	1.10E+01		1.90E+03	1.10E+01		**3.50E+03**	2.10E+01		2.60E+03	1.10E+01		<	1.10E+01	U	<	1.10E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.10E+01	U	<	4.30E+01	U	<	2.10E+01	U	<	2.30E+01	U	<	2.30E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB11-015			CA504-SB11-020			CA504-SB11-025			CA504-SB12-015			CA504-SB12-020			CA504-SB12-025		
DATE COLLECTED							February 8, 2013			February 8, 2013			February 8, 2013			February 14, 2013			February 14, 2013			February 14, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	6.20E-03	U	<	7.40E-03	U	<	5.50E-03	U	<	7.40E-03	U	<	5.90E-03	U	<	5.20E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.20E-02	U	<	1.50E-02	U	<	1.10E-02	U	<	1.50E-02	U	<	1.20E-02	U	<	1.00E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	6.20E-03	U	<	7.40E-03	U	<	5.50E-03	U	<	7.40E-03	U	<	5.90E-03	U	<	5.20E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	6.20E-03	U	<	7.40E-03	U	<	5.50E-03	U	<	7.40E-03	U	<	5.90E-03	U	<	5.20E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	6.20E-03	U	<	7.40E-03	U	<	5.50E-03	U	<	7.40E-03	U	<	5.90E-03	U	<	5.20E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	4.90E+00	1.10E+01	J	<	1.10E+01	U	<	1.10E+01	U	<	1.20E+01	U	<	1.10E+01	U	<	1.10E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	9.50E+00	2.10E+01	J	<	2.20E+01	U	<	2.20E+01	U	<	2.40E+01	U	<	2.30E+01	U	<	2.20E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB12-030			CA504-SB12-035			CA504-SB12-040			CA504-SB13-015			CA504-SB13-020			CA504-SB13-025		
DATE COLLECTED							February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.40E-03	U	<	5.80E-03	U	<	5.60E-03	U	<	5.80E-03	U	<	5.70E-03	U	<	5.00E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	9.90E-03	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.40E-03	U	<	5.80E-03	U	<	5.60E-03	U	<	5.80E-03	U	<	5.70E-03	U	<	5.00E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.40E-03	U	<	5.80E-03	U	<	5.60E-03	U	<	5.80E-03	U	<	5.70E-03	U	<	5.00E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.40E-03	U	<	5.80E-03	U	<	5.60E-03	U	<	5.80E-03	U	<	5.70E-03	U	<	5.00E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.20E+01	U	<	2.20E+01	U	<	2.30E+01	U	<	2.30E+01	U	<	2.20E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB13-030			CA504-SB13-035			CA504-SB13-040			CA504-SB14-015			CA504-SB14-020			CA504-SB14-025		
DATE COLLECTED							February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.50E-03	U	<	6.20E-03	U	<	5.60E-03	U	<	6.30E-03	U	<	5.40E-03	U	<	4.90E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.10E-02	U	<	1.20E-02	U	<	1.10E-02	U	<	1.30E-02	U	<	1.10E-02	U	<	9.80E-03	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.50E-03	U	<	6.20E-03	U	<	5.60E-03	U	<	6.30E-03	U	<	5.40E-03	U	<	4.90E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.50E-03	U	<	6.20E-03	U	<	5.60E-03	U	<	6.30E-03	U	<	5.40E-03	U	<	4.90E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.50E-03	U	<	6.20E-03	U	<	5.60E-03	U	<	6.30E-03	U	<	5.40E-03	U	<	4.90E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	1.20E-02	1.10E-02	
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	5.30E+00	1.10E+01	J	4.90E+00	1.10E+01	J	4.40E+00	1.10E+01	J	<	1.10E+01	U	<	1.10E+01	U	2.40E+02	1.10E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.20E+01	U	<	2.20E+01	U	<	2.20E+01	U	<	2.30E+01	U	<	2.20E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB14-030			CA504-SB14-035			CA504-SB14-040			CA504-SB14-045			CA504-SB14-047			CA504-SB15-015		
DATE COLLECTED							February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013			February 14, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.70E-03	U	<	5.40E-03	U	<	5.30E-03	U	<	5.60E-03	U	<	5.60E-03	U	<	7.20E-03	U
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.40E-02	U
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.70E-03	U	<	5.40E-03	U	<	5.30E-03	U	<	5.60E-03	U	<	5.60E-03	U	<	7.20E-03	U
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.70E-03	U	<	5.40E-03	U	<	5.30E-03	U	<	5.60E-03	U	<	5.60E-03	U	<	7.20E-03	U
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.70E-03	U	<	5.40E-03	U	<	5.30E-03	U	<	5.60E-03	U	<	5.60E-03	U	<	7.20E-03	U
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	1.90E-02	1.10E-02		2.30E-02	1.10E-02		2.50E-02	1.10E-02		2.60E-02	1.10E-02		2.80E-02	1.10E-02		<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	5.40E-03	1.10E-02	J	8.70E-03	1.10E-02	J	8.90E-03	1.10E-02	J	8.20E-03	1.10E-02	J	1.00E-02	1.10E-02	J	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	4.50E-03	1.10E-02	J	6.70E-03	1.10E-02	J	6.00E-03	1.10E-02	J	5.60E-03	1.10E-02	J	8.20E-03	1.10E-02	J	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	3.90E-03	1.10E-02	J	4.70E-03	1.10E-02	J	5.00E-03	1.10E-02	J	4.00E-03	1.10E-02	J	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	1.40E+03	1.10E+01		**3.10E+03**	1.10E+01		**4.30E+03**	5.30E+01		**5.10E+03**	1.10E+02		**5.70E+03**	1.10E+02		<	1.10E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.10E+01	U	<	2.10E+01	U	<	1.10E+02	U	<	2.20E+02	U	<	2.20E+02	U	<	2.20E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB15-020			CA504-SB15-024			CA504-SB16-015			CA504-SB16-020			CA504-SB16-025			CA504-SB16-030		
DATE COLLECTED							February 14, 2013			February 14, 2013			February 15, 2013			February 15, 2013			February 15, 2013			February 15, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																								
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.20E-03	U	<	5.60E-03	U	<	6.50E-03	UJ	<	5.80E-03	UJ	<	4.80E-03	UJ	<	6.00E-03	UJ
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.00E-02	U	<	1.10E-02	U	<	1.30E-02	UJ	<	1.20E-02	UJ	<	9.70E-03	UJ	<	1.20E-02	UJ
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.20E-03	U	<	5.60E-03	U	<	6.50E-03	UJ	<	5.80E-03	UJ	<	4.80E-03	UJ	<	6.00E-03	UJ
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.20E-03	U	<	5.60E-03	U	<	6.50E-03	UJ	<	5.80E-03	UJ	<	4.80E-03	UJ	<	6.00E-03	UJ
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.20E-03	U	<	5.60E-03	U	<	6.50E-03	UJ	<	5.80E-03	UJ	<	4.80E-03	UJ	<	6.00E-03	UJ
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																								
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																								
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.20E+01	U	<	2.30E+01	U	<	2.20E+01	U	<	2.30E+01	U	<	2.20E+01	U	<	2.20E+01	U

Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.
--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank

TABLE 2-4
SUMMARY OF RFA ANALYTICAL DATA SCREENING RESULTS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

FIELD ID			NMED Residential SSL[1]	NMED Industrial SSL[1]	NMED DAF 20 SSL[1]	Ecological PAL[1]	CA504-SB16-035			CA504-SB16-040		
DATE COLLECTED							February 15, 2013			February 15, 2013		
	Maximum	Frequency					Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)												
Ethylbenzene	1.90E-01 J	20 / 164	7.51E+01	3.68E+02	2.62E-01	5.16E+00	<	5.60E-03	UJ	<	5.70E-03	UJ
m,p-Xylene (sum of isomers)	8.50E-01 J	21 / 164	7.64E+02	3.73E+03	2.98E+00	1.40E+00	<	1.10E-02	UJ	<	1.10E-02	UJ
Naphthalene	3.30E+00 J	41 / 164	4.97E+01	2.41E+02	8.23E-02	2.90E+01	<	5.60E-03	UJ	<	5.70E-03	UJ
o-Xylene (1,2-Dimethylbenzene)	4.60E-01 J	20 / 164	8.05E+02	3.94E+03	2.98E+00	1.40E+00	<	5.60E-03	UJ	<	5.70E-03	UJ
Toluene	3.70E-02 J	18 / 164	5.23E+03	6.13E+04	1.21E+01	2.30E+01	<	5.60E-03	UJ	<	5.70E-03	UJ
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)												
2-Methylnaphthalene	6.90E+00	27 / 164	3.60E+01	3.00E+03	1.90E-01	2.90E+01	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	86 / 164	1.53E+00	3.23E+01	1.82E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00	76 / 164	1.53E-01	3.23E+00	6.05E-01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	76 / 164	1.53E+00	3.21E+01	6.17E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	42 / 164	1.53E+01	3.23E+02	6.05E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	72 / 164	1.53E+02	3.23E+03	1.86E+02	1.10E+00	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01 J	20 / 164	1.53E-01	3.23E+00	6.11E+00	1.10E+00	<	1.10E-02	U	<	1.10E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01 J	61 / 164	1.53E+00	3.23E+01	2.01E+01	1.10E+00	<	1.10E-02	U	<	1.10E-02	U
PETROLEUM HYDROCARBONS (mg/kg)												
Diesel Range Organics	8.70E+03	108 / 164	1.00E+03	3.00E+03	---	--	<	1.10E+01	U	3.00E+01	1.10E+01	
Oil Range Organics	1.00E+02	24 / 164	1.00E+03	3.00E+03	---	--	<	2.20E+01	U	<	2.20E+01	U

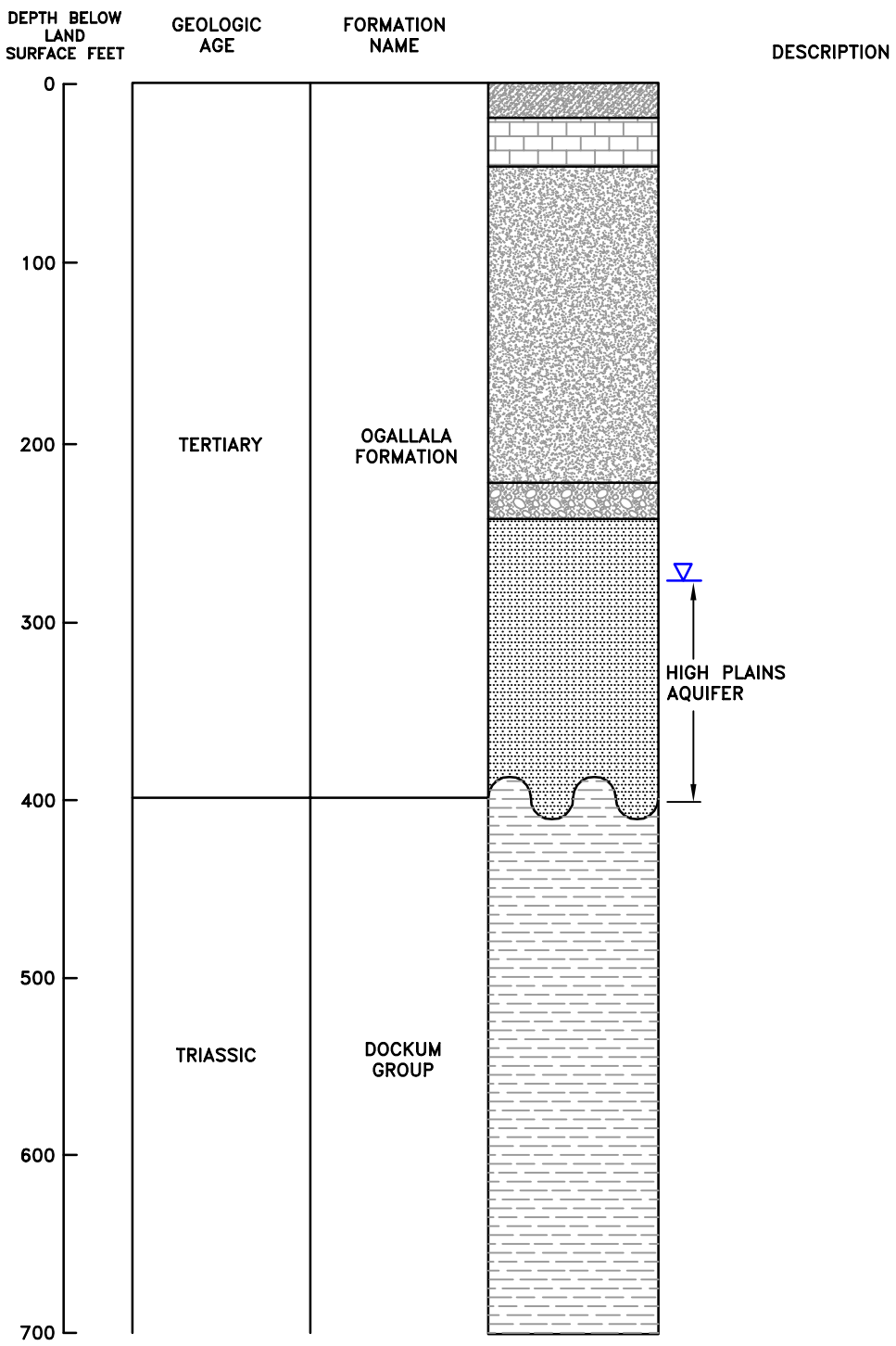
Notes:

Only those analytes which identified at least one detection above the LOQ are presented in this table. The complete analytical data set featuring the non detects for all analytes not included in this table are presented in the appendix of the RFA report (URS 2014).

[1]Screening value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015

1.80E+02 Result exceeds Residential SSL.
1.80E+02 Result exceeds DAF 20 SSL.
1.80E+02 Result exceeds both Residential and DAF 20 SSLs.
1.80E+02 Result exceeds both the Residential and Industrial SSL.

--- = screening value not established
< = not detected
DAF 20 = Dilution Attenuation Factor 20
ID = identification
J = estimated
LOQ = limit of quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
PAL = Project Action Limit
Qual = qualifier
RCRA = Resource Conservation and Recovery Act
RFA = RCRA Facility Assessment
SSL = Soil Screening Level
U = nondetect
UJ = Estimated Nondetect
UST = underground storage tank



LEGEND

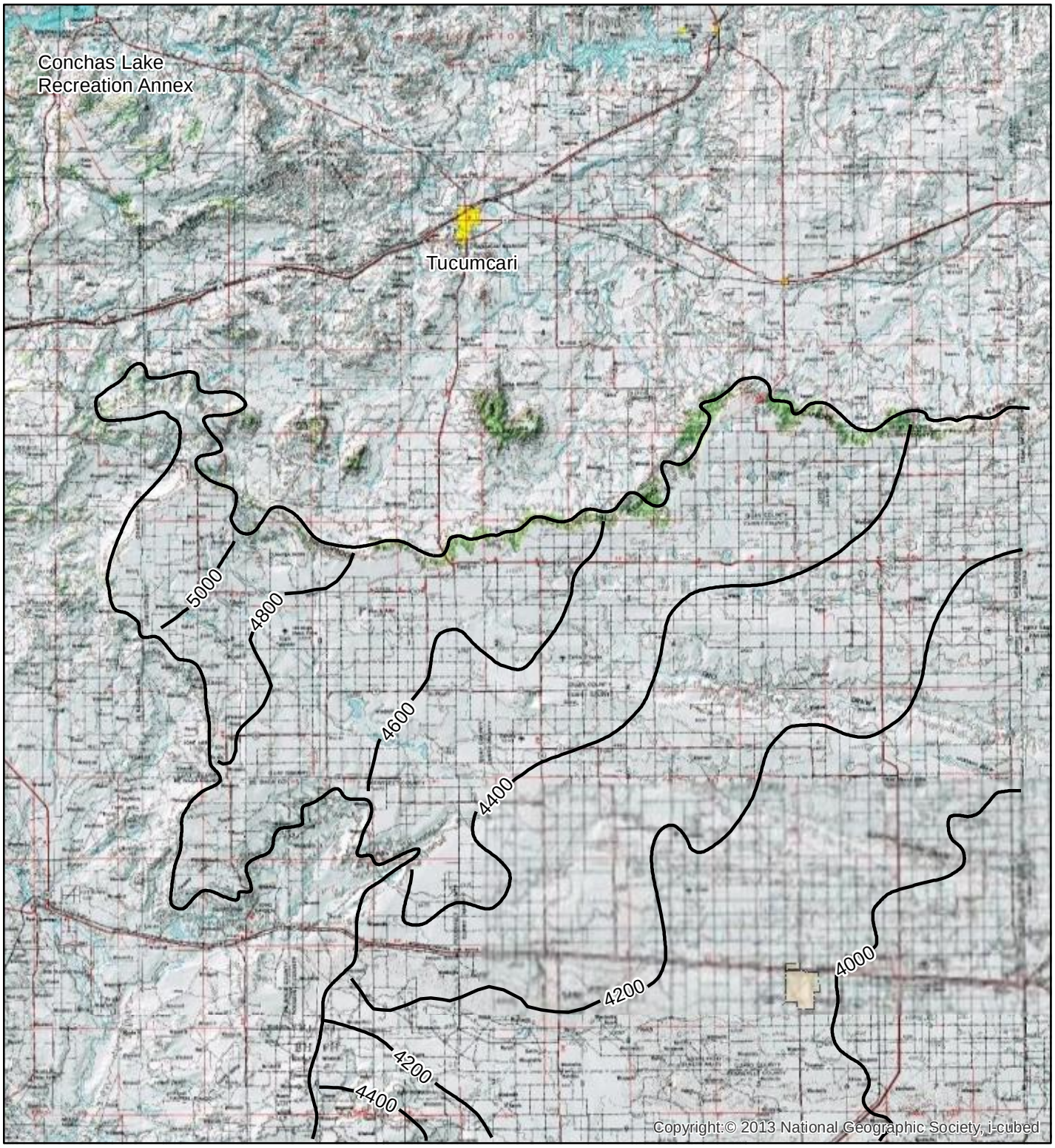
- SILTY SAND WITH CALICHE
- CALICHE
- SAND AND SILTY SAND
- SANDY GRAVEL
- SAND
- SANDSTONE (RED BEDS)
- LITHOLOGIC CONTACT
- EROSIONAL UNCONFORMITY
- WATER LEVEL

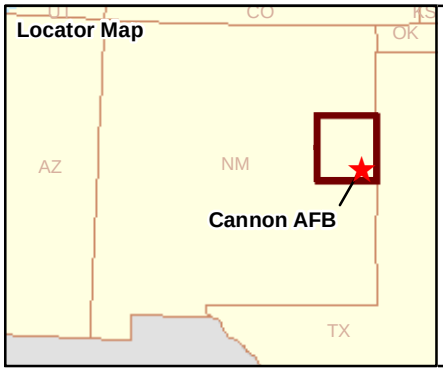
SOURCE: MODIFIED FROM GUTENTAG ET.AL., 1984

GENERALIZED GEOLOGIC STRATA AT CANNON AIR FORCE BASE
CANNON AIR FORCE BASE, NEW MEXICO

DRN. BY: DPG	DATE: 03/21/16	PROJECT NO. 23446539	FIG. NO. 2-1
CHK'D. BY: CSA	DATE: 03/21/16		

April 15, 2016 3:10:01 p.m.
Drawing: T:\CANNON\23446539\2-1.dwg





Legend

Base Boundary

Groundwater Contour
(feet above mean sea level)

Map projection: NAD83 State Plane Feet
New Mexico East (FIPS 3001)

N

10 5 0 10 Miles

Elevation and Configuration of the Water Table in the Region of Cannon Air Force Base

Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 4/15/2016	Project No. 23446539	Figure 2-2
Checked By: MS	Revision: 0		

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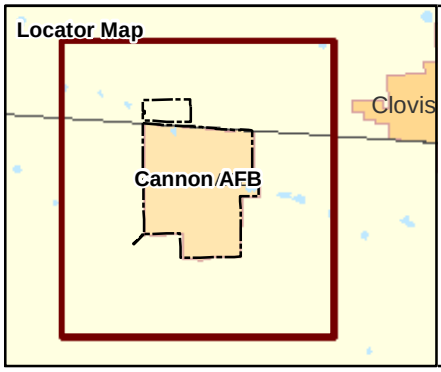

Legend

- Monitoring Well
- Private Water Well
- Base Water Well
- Base Boundary

Map projection: NAD83 State Plane Feet New Mexico, East (FIPS 3001)

N

4,000 2,000 0 4,000 Feet

Water Well Locations on and Near Cannon Air Force Base

Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 4/15/2016	Project No. 23446539	Figure 2-3
Checked By: MS	Revision: 0		

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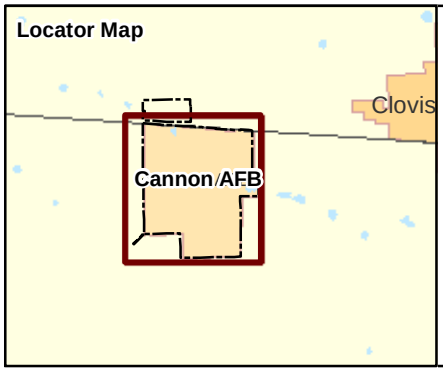
Locator Map



Legend

Base Boundary

in. = inches

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

N

2,000 1,000 0 2,000 Feet

Distribution of Soils by Type at Cannon Air Force Base

Cannon Air Force Base, New Mexico

Drawn By:	Date:	Project No.	
DPG	4/15/2016	23446539	Figure 2-4
Checked By:	Revision:		
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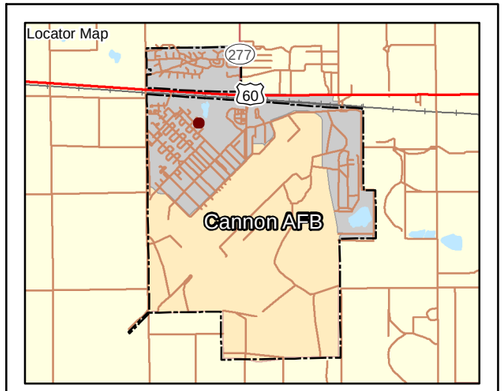

Legend

- Previous Soil Sample Locations (URS 2014)
- Previous Soil Sample Locations (USGS 1995)
- Previous Soil Sample Locations (Approximate) (Keers 1994)
- Site Boundary
- Base Boundary

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

N

10 5 0 10 Feet

Site Map With Previous Investigation Locations at TU504
Cannon Air Force Base,
New Mexico

Drawn By: DPG	Date: 5/23/2016	Project No: 23446539	Figure 2-5
Checked By: MS	Revision: 0		

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The following section presents the objective and approach of the RFI at TU504.

3.1 RFI OBJECTIVE

The overall objective of the RFI was to evaluate the vapor intrusion and soil-to-groundwater pathways at TU504. Sample locations and soil sample and soil gas sample parameters were presented in the Work Plan for RCRA Facility Investigations at Twelve Sites at Cannon Air Force Base (FPM/URS 2015). The work plan was reviewed and approved by NMED on December 30, 2015.

3.2 RFI APPROACH

The RFA conducted in 2014 indicated that the extent of TPH-DRO exceeding residential screening levels in the soil had been fully defined at site TU504. An approval letter from NMED dated February 16, 2015 was received for the RFA at Eight Sites (NMED 2015b). The sampling objectives for TU504 were developed based on the recommendations provided in the RFA and the NMED approval letter. It was determined that soil contamination at the site had been fully delineated, and further investigative sampling was to be limited to soil gas sampling.

The results of the sampling completed at TU504 was utilized to evaluate the vapor intrusion pathway in accordance with NMED Risk Assessment Guidance for Site Investigations and Remediation (NMED 2015a). Soil gas concentrations will be compared to NMED VISLs. If concentrations exceed VISLs, the vapor intrusion pathway will be evaluated based on multiple lines of evidence to support a conceptual site model. If concordance is reached with lines of evidence, decisions regarding the vapor intrusion pathway will be made. If concordance is not reached, additional sampling and/or lines of evidence may be required.

The soil-to-groundwater pathway was evaluated utilizing existing data from the RFA for soils at TU504. The evaluation was completed in accordance with NMED Risk Assessment Guidance for Site Investigations and Remediation (NMED 2015a).

3.3 DEVELOPMENT OF SITE CONCEPTUAL EXPOSURE MODELS

Site conceptual exposure model (SCEMs) identify chemical release sources and transport media, potential human or ecological receptors, and intake-mechanisms for each potential exposure pathway. An exposure pathway describes the means by which release, transport, and intake by receptor populations of chemical of potential concern occurs. An exposure pathway consists of four necessary elements:

- A source and transport mechanism of chemical release to the environment
- An environmental exposure medium for the released chemical (e.g., surface or subsurface soil)
- A point of potential human or ecological exposure to transported chemicals (e.g., a domestic drinking water well)

- A human or ecological intake mechanism (e.g., inhalation or ingestion) at the point of exposure

All four elements must be present for an exposure pathway to be complete and for chemical exposure to occur. In the SCEMs, potentially complete and significant pathways are denoted with solid lines.

Exposure pathways were evaluated with respect to potential chemical sources at TU504. Exposure pathways were considered to be potentially complete if there were chemical release and transport mechanisms and identified exposure points and receptors for that exposure pathway. Incomplete exposure pathways do not result in actual exposure to human or ecological receptors and, therefore, do not pose a potential risk. Minor, potentially complete pathways are those that could conceivably be complete and result in an exposure, but the resulting exposure would be at levels that would not pose a significant risk.

3.4 HUMAN HEALTH SCREENING-LEVEL EVALUATION METHODOLOGY

This section describes the approach used in the human health screening-level evaluation for TU504. A preliminary human health screening evaluation was conducted by comparing chemical concentrations found at the site with NMED human health SSLs and VISLs for residential exposure (NMED 2015a). Where SSLs were not available, results were compared with United States Environmental Protection Agency (USEPA) human health Regional Screening Level (RSLs) for residential exposure (USEPA 2015a). In addition, TPH data were compared to NMED TPH screening guidelines for residential exposure (NMED 2015a, Table 6-2).

TU504 is not utilized for residential purposes. Screening against residential screening criteria accounted for possible future changes in land use. The evaluation for TU504 is presented in **Section 5.4**.

3.4.1 Preliminary Site Conceptual Exposure Models

One of the first steps in formulating a risk assessment for a site is developing a SCEM to identify relevant exposure pathways and exposure scenarios (**Section 3.3**) (**Figure 3-1**). Three groups of human receptors were identified as potentially applicable to this site and evaluated in the risk screening:

- Current/future site worker (also referred to as an industrial/occupational worker)
- Future resident
- Current/future construction worker

The primary routes of exposure for these receptors evaluated in the risk screening included ingestion of contaminated soil, dermal contact with contaminated soil, and inhalation of airborne soil particulates and volatile emissions and vapor intrusion.

The residential scenario is considered to be protective of infrequent short-term exposures such as site visitors, trespassers, and recreational users (potential future pathway). Therefore, these short-term pathways are not specifically evaluated in the risk assessment.

There are no surface water bodies associated with TU504; therefore, direct exposure to surface water is considered an incomplete pathway. Groundwater is not readily accessible at the site due to the depth to groundwater (greater than 300 feet bgs). Additionally, the soil-to-groundwater pathway is considered to be limited based on the following lines of evidence:

- Cannon AFB is located in a semiarid environment with low rates of precipitation.
- The underlying Ogallala Formation contains fractured caliche layers and cemented soils that restrict, but do not prevent, vertical migration of contaminants.
- The presence of clay minerals throughout the formation attenuates contaminants by adsorption.

The soil-to-groundwater pathway is evaluated quantitatively in **Section 5.6.**

3.4.2 Target Risk Levels

Under the Comprehensive Environmental Response, Compensation, and Liability Act and RCRA (USEPA 1991), remedial action is generally warranted when cumulative cancer risk exceeds 1E-04 or noncancer hazard index (HI) exceeds 1. The range between 1E-06 and 1E-04 (1 in 1,000,000 to 1 in 10,000) is the risk management range for cancer risk. NMED SSLs are based on 1E-05 (1 in 100,000) target excess cancer risk per chemical or a target hazard quotient (HQ) of 1 for noncarcinogens per chemical. Exceeding NMED SSLs means further evaluation of chemical concentrations and exposure assumptions may be warranted.

3.4.3 Soil Exposure Intervals

NMED guidance (NMED 2015a) assumes residents could be exposed to surface and subsurface soils during home maintenance activities, yard work, landscaping, and outdoor play activities, and specify an exposure interval of 0 to 10 feet bgs be assumed. NMED guidance assumes construction workers are involved in digging, excavation, maintenance, and building construction projects and could be exposed to surface as well as subsurface soil. Therefore, a soil exposure interval of 0 to 10 feet bgs is considered appropriate for the construction worker. NMED guidance also assumes the industrial/occupational worker activities occur at or near the surface at not greater than 1 foot bgs. However, no surface (0 to 1 foot) data was collected for TU504; therefore, the industrial/commercial worker exposure interval for TU504 was defined as 0 to 5 feet bgs.

3.4.4 Screening Exposure Concentrations

In accordance with NMED guidance (NMED 2015a), the maximum detected concentration in the soil exposure interval applicable to each receptor was selected as the screening exposure concentration.

3.4.5 Cumulative Human Health Risk Screening

NMED guidance (NMED 2015a) indicates the potential cumulative risks and hazards should be evaluated in the screening evaluation to determine whether further evaluation may be necessary. Consistent with the guidance, human health risk screening was performed by comparing maximum chemical concentrations detected at the site with NMED human health SSLs. NMED guidance has published SSLs for a resident, industrial/occupational worker, and construction worker. In the absence of NMED SSLs, USEPA RSLs were used. RSLs with a cancer endpoint were adjusted to a target excess cancer risk of 1E-05.

SSLs for individual carcinogenic chemicals are based on a cancer risk of 1E-05. SSLs for individual noncarcinogenic chemicals are based on a HQ of 1. Cumulative site screening risks and hazards were calculated as follows:

$$Site\ Screening\ Risk = \left(\frac{C_1}{SSL_1} + \frac{C_2}{SSL_2} + \cdots \frac{C_i}{SSL_i}\right) x\ 10^{-5}$$

$$Site\ Screening\ Hazard\ Index\ (HI) = \left(\frac{C_1}{SSL_1} + \frac{C_2}{SSL_2} + \cdots \frac{C_i}{SSL_i}\right) x\ 1$$

Where:

$C_1 ... C_i$ = Screening exposure concentration for chemical "*1*" to chemical "*i*".

$SSL_1 … SSL_i$ = Soil screening level for chemical "*1*" to chemical "*i*" based on a SSL carcinogenic risk of 1E-05 or noncarcinogenic hazard of 1.

A cumulative risk of 1E-05 or less indicates the carcinogenic risks are acceptable and no further evaluation is warranted. A screening HI of 1 or less means noncarcinogenic effects are acceptable and no further evaluation is necessary.

3.4.6 Vapor Intrusion

Volatile organics having a Henry's Law constant greater than 1E-05 atmospheres–cubic meter/per mole and a molecular weight less than 200 grams/mole are considered relevant to evaluation of the vapor intrusion pathway (NMED 2015a). This pathway may be important if the VOC emissions are concentrated in indoor spaces of onsite buildings or buildings built in the future. NMED and USEPA have established VISLs (NMED 2015a; USEPA 2015b). Maximum detected soil gas concentrations were compared to the NMED VISLs (or USEPA VISLs if no NMED values were available). In addition to the screening comparison, a qualitative discussion of potential vapor intrusion is included in **Section 5.4** if volatile chemicals were detected in soil and soil vapor samples above screening levels. NMED guidance (NMED 2015a) recommends that if vapor intrusion into indoor air is a concern, additional analysis of this pathway may be necessary and the latest guidance on evaluating the vapor intrusion pathway should be consulted.

3.4.7 Evaluation of Petroleum Hydrocarbons

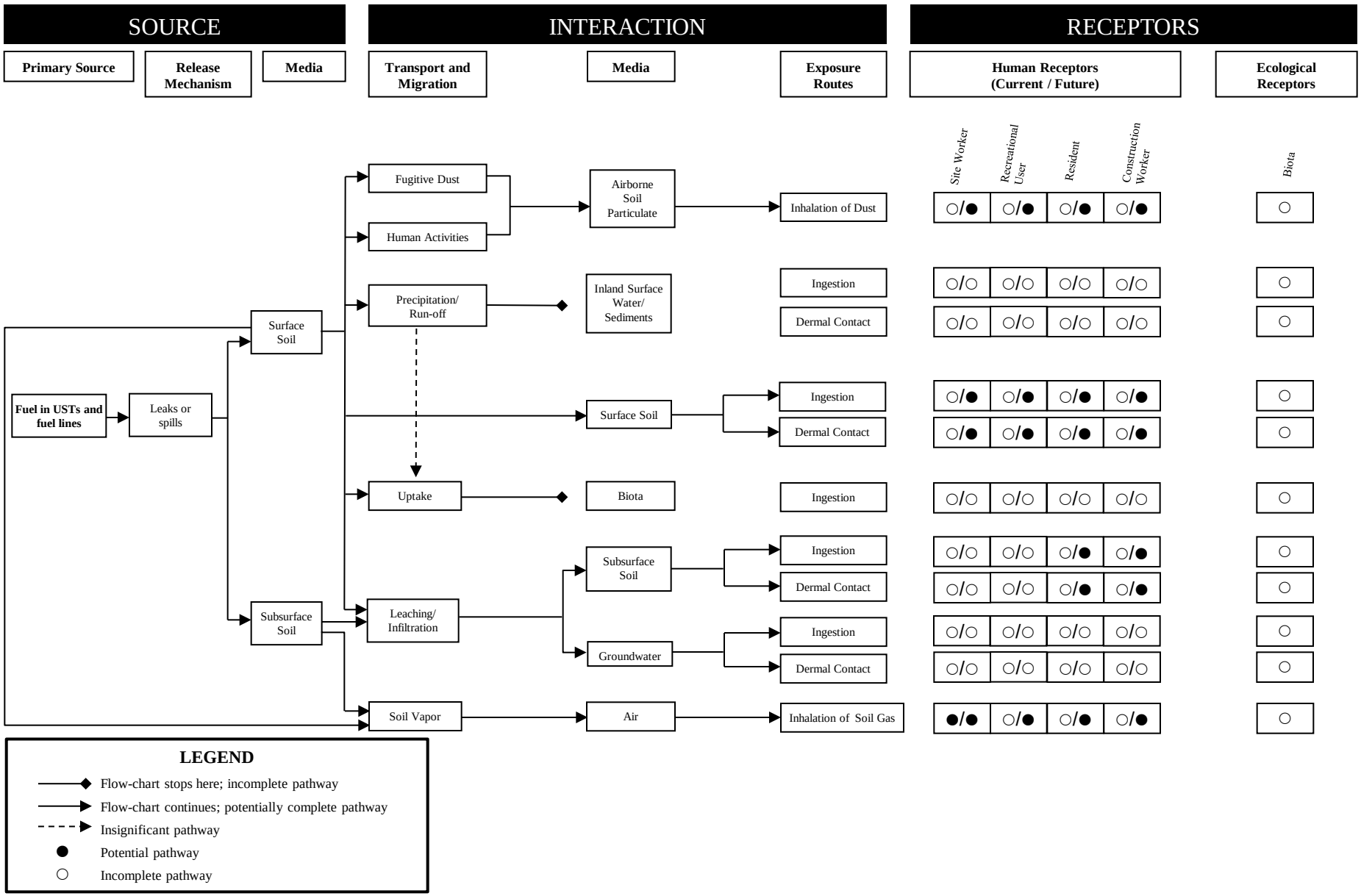
The SSLs adopted by NMED for petroleum hydrocarbons are screening guidelines for potential impacts to potable groundwater and are not necessarily risk-based values but may reflect a ceiling level (NMED 2015a). Petroleum hydrocarbons represent a complex mixture of compounds and the amount and types of constituent compounds differ between products. HQs are not calculated for petroleum hydrocarbons. For screening, the maximum detected concentration is presented simply as a comparison with the receptor-specific screening guideline. NMED guidance (NMED 2015a) provides screening guidelines for residential exposures and industrial exposures. Residential guidelines were used for residential receptors. Industrial guidelines were used for industrial/occupational and construction scenarios. Note that there are no NMED screening guidelines for gasoline range organics (GRO). Rather, NMED guidance refers to screening values that may comprise gasoline (such as BTEX). Therefore, detections of GROs were interpreted within the context of BTEX results.

Results of the petroleum hydrocarbon evaluation are presented in **Section 5.4**.

3.5 ECOLOGICAL SCREENING-LEVEL EVALUATION METHODOLOGY

A preliminary ecological evaluation was conducted in general accordance with NMED's Risk Assessment Guidance for Investigations and Remediation, Volume 2, Tier 1: Screening-Level Ecological Risk Assessment, Phase I, Scoping Assessment during the RFA completed for TU504 in 2014. Based on the absence of ecological habitat, potential receptors, and complete pathways, no further action regarding the ecological risk assessment was warranted for TU504.

FIGURE 3-1
PRELIMINARY SITE CONCEPTUAL EXPOSURE MODEL
HOSPITAL ABANDONED UST SITE (TU504)



This section summarizes the field activities completed for this RFI. Sample designations, sampling equipment and procedures, and sample handling and documentation procedures are described in this section. The RFI sample locations and analytical parameters were completed in accordance with the RFI work plan (FPM/URS 2015) that was reviewed and approved by NMED (NMED 2015c).

4.1 SAMPLING OVERVIEW

4.1.1 Soil Vapor Sampling

Three soil gas borings were completed at TU504 in order to assess the potential risk from vapor intrusion at the site (**Table 4-1** and **Figure 4-1)**. The soil gas samples collection points were located as follows:

- CA504-SG01 is located within 5 feet of CA504-SB01. Historical sampling indicates the vertical and horizontal extent of contamination is centered around this boring indicating it is the location of the release.
- CA504-SG02 is located within 5 feet of CA504-SB03 due to historical contamination identified at SB-03 and its close proximity to the UST.
- CA504-SG03 is located within 5 feet of the southwestern end of the former UST to assess potential contamination from the UST.

Soil gas samples were collected at five and ten feet bgs at CA504-SG01, CA504-SG02, and CA504-SG03. Samples were collected over an 8-hour time period using Summa canisters. All soil gas samples were analyzed for VOCs by USEPA Method TO-15 and for TPH-GRO by USEPA Method TO-3.

4.1.2 Soil Boring Samples

Soil samples were collected from soil gas borings CA504-SG01, CA504-SG02, and CA504-SG03 (**Table 4-2**) during the drilling and installation of soil vapor ports. Soil samples were collected from the 4-5 and 9-10 foot intervals. All samples were analyzed and evaluated for VOCs and SVOCs.

4.2 FIELD ACTIVITIES

The following sections describe the field activities completed including: utility locates, surveying, subsurface drilling and soil sampling, field screening and headspace analysis, photographic documentation, sample handling documentation and analysis, and IDW management. All field activities were completed in accordance with the approved RFI work plan (FPM/URS 2015 and NMED 2015c).

4.2.1 Utility Locates

Utility clearances were obtained prior to the start of field activities. Underground utilities were marked within the project area and were documented in the field logbook for future use.

4.2.2 Survey of Sampling Locations

Survey coordinates were recorded using a Trimble 6000 Series GeoExplorer XD hand-held global positioning system. Horizontal coordinates were surveyed to within 1 meter of actual locations using North American Datum of 1983.

4.2.3 Soil Sampling

Subsurface samples were collected using direct push drilling methods. Continuous soil samples were collected at all boring locations and began at the ground surface. Soil boring logs, including detailed soil descriptions of material encountered (using USCS) and field screening results for each sample collected, were completed and are included in **Appendix B**.

Discrete soil samples were collected from the designated soil intervals in the work plan, placed into laboratory-provided containers, and wrapped in protective packing material (i.e., foam liners and bubble packing). Soil SCFSs with a soil description in accordance with the USCS documenting the collection of each sample were completed, and are included in **Appendix B**.

4.2.4 Soil Vapor Sampling

Soil vapor samples were collected using 6 1-liter summa canisters. Continuous samples were collected at all boring locations from both 4-5 and 9-10 feet bgs. Soil Vapor SCFSs with beginning and ending vacuum pressures were completed for each sample. Vacuum pressure was not allowed to dip below -6.0 in mercury.

4.2.5 Field Screening and Headspace Analysis

Headspace analysis was measured using a 3000 photoionization detector (PID) with a 10.6-electron volt lamp. Headspace readings were recorded on boring logs and SCFSs. Prior to obtaining headspace readings, the PID was calibrated with isobutylene gas (100 parts per million). PID calibration was documented in the field logbook.

The results of headspace analysis were used to determine where additional sampling should take place. If signs of contamination (e.g., odor or elevated headspace readings) were present in the soil from the deepest planned interval at a boring location, then additional soil samples were collected at deeper intervals to identify the vertical extent of contamination at that location. If signs of contamination were present at a boring location, then to be determined or step-out borings were completed to determine the horizontal extent of contamination.

4.2.6 Sampling Handling, Documentation, and Analysis

The labeling, preservation, handling, shipping, documentation, and tracking procedures for all samples collected during this investigation at Cannon AFB are described in the following sub-sections. A summary of chemical analyses performed on the soil vapor and soil samples can be found in **Tables 4-1** and **4-2**.

4.2.6.1 Sample Handling

Samples were collected in laboratory provided containers. Sample identification labels were completed using waterproof ink and attached to each sample. Each sample was labeled with a unique code indicating the site number, sample location number, matrix identifier, and sample depth. Labels included the date and time of sample collection, analysis required, and samplers' initials. Sample labels were supplied by URS. Samples were placed in a cooler for overnight express carrier shipment to the laboratory. A completed and signed CoC was placed in the cooler. Soil samples were shipped to EMAX Laboratories, Inc. (EMAX) and soil vapor samples were shipped Eurofins Laboratories. Soil vapor samples were not placed on ice.

4.2.6.2 Field Documentation

Field observations and data were recorded using a pen with permanent waterproof ink in a permanently bound, weatherproof field logbook containing consecutively numbered pages, on boring logs, and on SCFSs. The information in the field logbook, on the boring logs, and on the SCFSs included, but was not limited to, the sample location, date and time of sample collection, sample identification code, description of samples (matrix sampled), sample depth, sampling methods, analytical methods, field observations, and personnel present. Each page in the field book was signed by the person making the entry at the end of the day. The SCFSs are provided in **Appendix C**.

4.2.6.3 Sample Chain-of-Custody

Information concerning the custody, transfer, handling, and shipping of samples was recorded on a CoC form. The sampler filled out the CoC form and kept the samples in his possession until he relinquished them to the delivery service (Federal Express). The completed CoCs can be found with the analytical data.

4.2.7 Investigation-Derived Waste

IDW generated by field activities included soil, decontamination water, personal protective equipment and disposable sampling supplies. These materials were disposed of as follows:

- Soil IDW generated during project field activities was containerized in a 55-gallon drum, and was temporarily stored in a designated lay down area at Cannon AFB. A composite IDW sample was collected and analyzed for TPH-GRO, TPH-DRO, TPH-ORO and waste characterization parameters (paint filter liquid test and Toxicity Characteristic Leaching Procedure for VOCs, SVOCs, metals, mercury, pesticides, and chlorinated herbicides) per the requirements of the Clovis Regional Landfill. Based on the results of the analyses, the

soil was characterized as nonhazardous and will be disposed of at the Clovis Regional Landfill. Laboratory results and other IDW documentation are provided in **Appendix D**.

- Decontamination water was containerized in a 55-gallon drum and was temporarily stored in a designated laydown area at Cannon AFB. An IDW grab sample was collected and was analyzed for waste characterization parameters. Based on the results of the analyses, the water was characterized as nonhazardous and will be disposed of in accordance with the approved work plan (URS/FPM 2015). Laboratory results and other IDW documentation are provided in **Appendix D**.
- Personal protective equipment and disposable sampling supplies were disposed of on the Base as solid waste in municipal waste dumpsters.

TABLE 4-1
SUMMARY OF SOIL VAPOR SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Soil Vapor Sample Location	Soil Vapor Sample Number	Sample Depth Interval (feet bgs)	Sample Collection Date	Analytical Parameters		Technical Rationale
				VOCs[1]	TPH-GRO[2]	
CA504-SG01	CA504-SG01-S-005	4.0-5.0	2/9/2016	X	X	Historical sampling indicates the vertical and horizontal extent of contamination is centered around this boring making it the location of the release.
	CA504-SG01-S-010	9.0-10.0	2/9/2016	X	X	
CA504-SG02	CA504-SG02-S-005	4.0-5.0	2/9/2016	X	X	CA504-SG02 was located within 5 feet of CA504-SB03 due to historical contamination identified at SB-03 and its close proximity to the UST.
	CA504-SG02-S-010	9.0-10.0	2/9/2016	X	X	
CA504-SG03	CA504-SG03-S-005	4.0-5.0	2/9/2016	X	X	CA504-SG03 was located within 5 feet of the southwestern end of the former UST to assess potential contamination from the UST.
	CA504-SG03-S-010	9.0-10.0	2/9/2016	X	X	
			Totals	**6**	**6**	

Notes:

[1]VOC analysis via USEPA Method TO-15

[2]SVOC analysis via USEPA Method TO-3

AFB = Air Force Base

bgs = below ground surface

TPH-GRO = total petroleum hydrocarbons-gasoline range organics

USEPA = United States Environmental Protection Agency

UST = Underground Storage Tank

VOC = volatile organic compound

X = sample collected

TABLE 4-2
SUMMARY OF SOIL SAMPLES FOR CHEMICAL ANALYSIS
HOSPITAL ABANDONED UST SITE (TU504)
CANNON AFB, NEW MEXICO

Soil Boring Location	Soil Sample Number	Sample Depth Interval (feet bgs)	Sample Collection Date	Analytical Parameters				Technical Rationale
				VOCs[1]	SVOCs[2]	Field Duplicate Samples[3]	MS/MSD Sample[4]	
CA504-SG01	CA504-SG01-S-005	4.0-5.0	2/5/2016	X	X			Soil samples were collected from depths of the soil gas samples to be utilized in the human health risk assessment.
	CA504-SG01-S-010	9.0-10.0	2/5/2016	X	X	X		
CA504-SG02	CA504-SG02-S-005	4.0-5.0	2/5/2016	X	X			
	CA504-SG02-S-010	9.0-10.0	2/5/2016	X	X	X		
CA504-SG03	CA504-SG03-S-005	4.0-5.0	2/5/2016	X	X			
	CA504-SG03-S-010	9.0-10.0	2/5/2016	X	X		X	
			Totals	**6**	**6**	**2**	**1**	

Notes:

[1]VOC analysis via USEPA Method 8260C

[2]SVOC analysis via USEPA Method 8270D

[3]Field duplicate samples were collected at a rate of 10% (1 per 10 samples collected) for laboratory analysis.

[4]MS/MSD samples were collected at a rate of 5% (1 per 20 samples collected) for laboratory analysis.

Laboratory analysis completed by EMAX Laboratories, Torrance, California

AFB = Air Force Base

bgs = below ground surface

MS/MSD = matrix spike/matrix spike duplicate

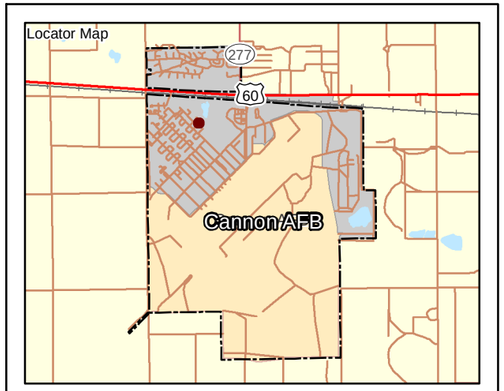
SVOC = semivolatile organic compound

USEPA = United States Environmental Protection Agency

UST = Underground Storage Tank

VOC = volatile organic compound

X = sample collected



Legend

- Soil Gas Boring Location
- Previous Soil Sample Locations
- Site Boundary
- Base Boundary

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

N

10 5 0 10 Feet

Soil Gas Sampling Locations at TU504
Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 5/23/2016	Project No: 23446539	Figure 4-1
Checked By: MS	Revision: 0		

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5.1 BORING LOGS

Geologic materials encountered during subsurface soil sampling were described by a geologist on boring logs, included in **Appendix B**. Borings were completed to 10 feet at each of the three soil gas borings. Geological materials encountered in the soil gas borings consisted of fill material (fill sand). Historically, geologic materials logged at this site consisted of fill material to depths of 4.5 to 16 feet bgs overlying native materials derived from or included in the Ogallala Formation. Native soils consisted of silts and sands. Discontinuous, sporadic, weathered caliche nodules were common at various depths throughout the sand.

5.2 SUMMARY OF ANALYTICAL RESULTS

A total of six soil vapor samples and six soil samples were collected for this investigation. Soil samples were collected and sent to EMAX and soil vapor samples were collected and sent to Eurofins to be analyzed for contaminants of concern, as described in **Section 4** of this report. **Table 5-1** shows the comparison of soil sample results to NMED residential SSLs and risk-based SSL for a dilution attenuation factor (DAF) of 20. **Table 5-2** shows the comparison of soil vapor sample results to NMED residential VISLs. The analytical results are shown on **Figures 5-1** and **5-2**. Results of laboratory analyses are documented in **Appendix C**.

5.2.1 Comparison to Residential Soil Screening Levels

A summary of the analytical results compared to NMED residential SSLs is as follows:

- **VOCs** – All VOCs were identified at concentrations below NMED residential SSLs.
- **SVOCs** – No SVOCs were detected in the soil samples collected.
- **PAHs** – All PAHs were detected at concentrations below NMED residential SSLs.

5.2.2 Comparison to Risk-based SSL for a DAF of 20

A summary of the analytical results when compared to the risk-based SSL for a DAF of 20 is as follows:

- **VOCs** – All VOCs were detected at concentrations below the NMED risk-based SSLs for a DAF of 20.
- **SVOCs** – No SVOCs were detected in the soil samples collected.
- **PAHs** – All PAHs were detected at concentrations below the NMED risk-based SSLs for a DAF of 20.

5.2.3 Comparison to Residential VISL

All VOC concentrations were below NMED residential VISLs. Petroleum hydrocarbons were identified with a maximum concentration of 3.50E+02 micrograms per cubic meter. No NMED VISL for petroleum hydrocarbons has been established. However, based on the concentrations

of VOCs identified, the petroleum hydrocarbons are not considered to represent a vapor intrusion concern.

5.3 DATA REVIEW AND VERIFICATION

The analytical data generated by EMAX and Eurofins were checked for accuracy, precision, representativeness, comparability, and completeness. The data review/verification process for this project consisted of data generation, reduction, and two levels of review.

5.4 HUMAN HEALTH SCREENING-LEVEL EVALUATION

The human health screening-level evaluation for TU504 was completed in accordance with the methodology presented in **Section 3.4**. The data set used in the risk screening was comprised of historical and current analytical results from samples collected from 0 to 10 feet bgs. Residents and construction workers were assumed to be exposed to the 0 to 10-foot interval. According to NMED guidance (NMED 2015a), site (commercial/industrial) workers are assumed to be exposed to the 0 to 1-foot interval. At TU504, no data was collected in the 0 to 1 foot interval; therefore, data from the 0 to 5-foot samples were used for this receptor group. The soil dataset used for the human health residential and construction worker screening evaluations is presented **Appendix E, Table E-1**. The soil dataset used for the human health site (commercial/industrial) worker screening evaluations is presented **Appendix E, Table E-2**.

5.4.1 Comparison of Site Data to Screening Criteria

The maximum detected soil concentrations for each dataset were compared to NMED Residential SSLs. The following compounds exceeded the residential screening criteria in the 0 to 10-foot exposure interval:

- Benzo(a)anthracene (maximum concentration – 4.80E+00 mg/kg; boring 8, 5-foot bgs; 1 of 28 samples exceeded the residential SSL [1.53E+00 mg/kg])
- Benzo(a)pyrene (maximum concentration – 2.10E+00 mg/kg, boring 8, 5-foot bgs; 1 of 28 samples exceeded the residential SSL [1.53E-01 mg/kg])
- Benzo(b)fluoranthene (maximum concentration – 3.40E+00 mg/kg; boring 8, 5-foot bgs; 1 of 28 samples exceeded the residential SSL [1.53E+00 mg/kg])
- Dibenz(a,h)anthracene (maximum concentration – 2.20E-01 mg/kg; boring 8, 5-foot bgs; 1 of 28 samples exceeded the residential SSL [1.53E-01 mg/kg])
- DRO – (maximum concentration – 3.05E+03 mg/kg; boring 8, 10-foot bgs; 1 of 22 samples exceeded the residential SSL [1.00E+03 mg/kg])

The screening comparison for the 0 to 10-foot exposure interval is shown in **Appendix E, Table E-3**.

The following compounds exceeded the residential screening criteria in the 0 to 5-foot exposure interval:

- Benzo(a)anthracene (maximum concentration – 4.80E+00 mg/kg; boring 8, 5-foot bgs; 1 of 14 samples exceeded the residential SSL [1.53E+00 mg/kg])
- Benzo(a)pyrene (maximum concentration – 2.10E+00 mg/kg, boring; 8, 5-foot bgs; 1 of 14 samples exceeded the residential SSL [1.53E-01 mg/kg])
- Benzo(b)fluoranthene (maximum concentration – 3.40E+00 mg/kg; boring 8, 5-foot bgs; 1 of 14 samples exceeded the residential SSL [1.53E+00 mg/kg])
- Dibenz(a,h)anthracene (maximum concentration – 2.20E-01 mg/kg; boring 8, 5-foot bgs; 1 of 14 samples exceeded the residential SSL [1.53E-01 mg/kg])

The screening comparison for the 0 to 5-foot exposure interval is shown in **Appendix E, Table E-4**.

5.4.2 Quantitative Risk Screening Evaluation

A quantitative screening evaluation was completed in accordance with the 2015 NMED risk assessment guidance (see **Section 3.4** for methodology). Results of the human health screening for TU504 based on maximum detected concentrations are summarized below. The detailed quantitative screening evaluation is provided in **Appendix E**, **Tables E-5** through **E-7** for the resident, construction worker, and site (commercial/industrial) worker, respectively.

Hospital Abandoned UST (TU504) Screening-Level Cumulative Risks and Hazard Indices for Soil		
Receptor Scenario	**Cumulative Site-Specific Screening Carcinogenic Risks**	**Screening Site-Specific Hazard Index**
Resident	2E-04	0.00003
Construction Worker	1E-06	0.000005
Site (Commercial/Industrial) Worker	1E-05	0.000002

PAHs are the primary chemicals of potential concern at TU504. The site-specific cancer risks for the site (commercial/industrial) worker and construction worker are within the risk management range of 1E-04 to 1E-06 (National Oil and Hazardous Substances Pollution Contingency Plan [NCP] 40 CFR 300.430) and do not exceed the NMED target cancer risk of 1E-05; therefore, soils at TU504 are unlikely to pose any unacceptable cancer risks to these two populations.

The HIs for all potential receptors are below the threshold value of 1. Based on this assessment, soils at TU504 are unlikely to pose any unacceptable adverse health effects to any exposed population. The risk evaluations for the construction worker and site worker are shown in **Appendix E, Tables E-6 and E-7,** respectively.

The site-specific cancer risks for the resident exceed the upper bound of 1E-04 and the NMED target cancer risk of 1E-05; therefore, soils at TU504 may pose unacceptable cancer risks to

residents. The primary contributor to the residential risk was benzo(a)pyrene with an estimated cancer risk of 1E-04. Additionally, benzo(a)anthracene, benzo(b)fluoranthene, and dibenz(a,h)anthracene contributed cancer risks of 1E-05 or greater. One boring (boring 8) contained the detected concentrations of the PAHs which exceeded the residential SSLs and results in unacceptable excess cancer risks for the resident. Recent data (February 2016) contain no detections above the residential screening levels. The risk evaluation for the resident are shown in **Appendix E, Table E-5**.

A review of the historical and current data within the typical exposure zone (0 to 10 feet bgs) indicate the extent of site-related PAHs exceeding the residential SSLs in soil has been fully defined at TU504. Site-related PAHs were detected above the residential SSLs only at SB08, from 0 to 5 feet bgs. However, samples collected from SB08 at 15 to 20 feet bgs and 20 to 25 feet bgs were below the residential SSLs. Site-related PAHs did not exceed the NMED industrial/occupational screening levels. Based on these results, site-related PAHs exceeding the residential SSLs are localized in the immediate vicinity of the UST.

5.4.3 Evaluation of Petroleum Hydrocarbons

In the 0 to 10-foot exposure interval, DRO was detected in 6 of 22 soil samples at concentrations ranging from 4.60E+00 mg/kg to 3.05E+03 mg/kg. Of the six detections, only one (3.05E+03 mg/kg) exceeded the residential screening guideline of 1.00E+03 mg/kg. This concentration also only slightly exceeded the commercial/industrial guideline of 3.00E+03 mg/kg. ORO was detected in 10 of 22 soil samples with a maximum concentration of 1.00E+02 mg/kg. None of the detected concentrations exceeded the residential (1.00E+03 mg/kg) or commercial/industrial (3.80E+03 mg/kg) SSLs. The maximum detected concentrations of DRO and ORO equated to a HQ of 3 for the resident and 1 for the construction worker. The quantitative evaluation is shown in **Appendix E, Table E-8**. Note: TPH HQ are not added to the individual constituent values because that would be counting TPH hazards twice; once for the individual constituents and once for the compound TPH.

In the 0 to 5-foot exposure interval, DRO was detected in 4 of 11 soil samples with a maximum concentration of 2.20E+01 mg/kg. The maximum concentration was below the residential SSL of 1.00E+03 mg/kg and the commercial/industrial SSL of 3.00E+03 mg/kg. ORO was detected in 7 of 11 soil samples with a maximum concentration of 1.00E+02 mg/kg. None of the detected concentrations exceeded the residential (1.00E+03 mg/kg) or commercial/industrial (3.80E+03 mg/kg) SSLs. The maximum detected concentrations of DRO and ORO equated to a HQ of 0.04 for the site worker. The quantitative evaluation is shown in **Appendix E, Table E-8**.

The exceeding DRO concentration was detected at the 10-foot depth. The surrounding soil samples were either nondetect for DRO or contained concentrations below the screening guidelines, indicating a small impacted area. Additionally, the soil samples were analyzed for VOCs, SVOCs, and PAHs. Toluene was detected in 4 of 28 samples and was below the residential and commercial/industrial SSLs. No other VOCS were detected in soil samples. Additionally, no SVOCs were detected in the soil samples. As indicated above, several PAHs were detected at concentrations above the screening criteria. Like DRO, the exceeding concentrations of PAHs were limited to SB08 and were detected in the 5-foot samples. The

PAHs correspond to the general location of the exceeding DRO location and reiterate the small impact area. Therefore, impacted soils at TU504 are generally limited to the shallower soils (i.e., 0 to 5-foot bgs). The cumulative risk for the site (commercial/industrial) worker does not exceed 1E-05 and the HI is below 1. The cumulative risk for the construction worker was estimated at 1E-06 and the HI was below 1. Therefore, DRO and corresponding PAHs do not pose unacceptable risks for the site (commercial/industrial) worker and construction worker which are the projected future users of the property.

5.4.4 Vapor Intrusion Pathway

Screening and quantitative evaluations were completed for the vapor intrusion pathway. The data set included soil gas samples collected from 5 and 10 feet bgs and is shown in **Appendix E, Table E-9**. Detected compounds included ethylbenzene, m,p-xylene, o-xylene, and toluene. All detected soil gas concentrations were below NMED Residential VISLs (NMED 2015a). The screening evaluation is shown in **Appendix E**, **Table E-10**. A quantitative screening evaluation was completed in accordance with the 2015 NMED risk assessment guidance (see **Section 3.4** for methodology). Maximum detected soil gas concentrations were used as the exposure point concentrations for calculating potential risk for the vapor intrusion pathway. Results of the human health vapor intrusion screening for TU504 are summarized in the table below. The detailed quantitative screening evaluation for vapor intrusion is provided in **Appendix E, Table E-11 and E-12**.

Hospital Abandoned UST (TU504) Screening-Level Cumulative Risks and Hazard Indices for Vapor Intrusion		
Receptor Scenario	**Cumulative Site-Specific Screening Carcinogenic Risks**	**Screening Site-Specific Hazard Index**
Resident	4E-07	0.03
Site (Commercial/Industrial) Worker	9E-08	0.01

The site-specific vapor intrusion cancer risks for the resident and site worker are below 1E-06 and below the NMED target cancer risk of 1E-05; therefore, the vapor intrusion pathway at TU504 is unlikely to pose any unacceptable cancer risks to these two populations.

The HIs were below the threshold value of 1. Based on this assessment, the vapor intrusion pathway at TU504 is unlikely to pose any unacceptable adverse health effects to any exposed population.

GRO was also detected (maximum 3.50E+02 micrograms per cubic meter). There are no NMED screening guidelines for GRO; therefore, in accordance with NMED guidance, GRO was evaluated based on constituents comprising gasoline (BTEX). None of the GRO constituents were detected at concentrations above screening levels and cumulative cancer risks and adverse health effects were below levels of concern. Therefore, GRO soil gas concentrations are not considered to pose unacceptable health issues at TU504. Soil at Cannon AFB is considered very hard (tight) making the transport of soil gas up through the soil column difficult. Due to the arid

environment at Cannon AFB, contamination has primarily been demonstrated to migrate in a vertical direction, rather than horizontal. The hospital is located approximately 20 feet southeast of TU504. Based on this contaminant transport model, no soil or soil vapor contamination is anticipated to have migrated beneath the hospital. Due to the location and concentrations of VOCs in soil gas and the soil type found at TU504, vapor intrusion is considered to be an insignificant pathway.

5.4.5 Refined Quantitative Risk Screening Evaluation For Soil

The use of maximum detected concentrations to evaluate site exposures is conservative because it assumes the receptor would be continuously exposed to the maximum concentration for the entirety of the exposure duration. However, exposures generally occur over a larger area with varying concentrations, and often include mixing of soil. Therefore, it is possible future receptors would not be exposed to maximum concentrations. To address this exposure uncertainty, the 95% upper confidence limit (UCL) was estimated for all chemicals with a minimum of eight samples and six detections using USEPA's statistical software ProUCL, version 5.0.00 (USEPA 2013b). The 95% UCLs for the 0 to 10-foot dataset were:

- Benzo(a)anthracene – 1.93E+00 mg/kg
- Benzo(a)pyrene – 5.68E-01 mg/kg
- Benzo(b)fluoranthene – 1.38E+00 mg/kg
- Chrysene – 1.88E+00 mg/kg
- Indeno(1,2,3-c,d)pyrene – 1.93E-01 mg/kg
- TPH-DRO – 7.51E-02 mg/kg
- TPH-ORO – 3.66E+01 mg/kg

The 95% UCLs for the 0 to 5-foot dataset are:

- Benzo(b)fluoranthene – 2.73E+00 mg/kg

The ProUCL input data and output for the datasets are provided in **Appendix E**.

The results of the refined human health screening for TU504 are summarized below. The detailed refined screening evaluation is provided in **Appendix E**, **Tables E-13** through **E-16** for the resident, construction worker, site (commercial/industrial) worker, and TPH, respectively.

Hospital Abandoned UST (TU504) Refined Screening-Level Cumulative Risks and Hazard Indices for Soil		
Receptor Scenario	**Cumulative Site-Specific Screening Carcinogenic Risks**	**Screening Site-Specific Hazard Index**
Resident	5E-05	0.00003
Construction Worker	3E-07	0.000005
Site (Commercial/Industrial) Worker	1E-05	0.000002

PAHs were the primary contributors to the refined cumulative risk estimates. The site-specific cancer risks for the site worker and construction worker were within or below the risk management range of 1E-04 to 1E-06 (NCP 40 CFR 300.430); therefore, soils at TU504 are unlikely to pose any unacceptable cancer risks to these two populations based on the 95% UCL concentrations. The cancer risks were also at or below the NMED target cancer risk of 1E-05.

The refined HIs for all potential receptors were below the threshold value of 1. Based on this assessment, 95% UCL soil concentrations at TU504 are unlikely to pose any unacceptable adverse health effects to any exposed population. The construction worker and site worker risk evaluations are shown in **Appendix E, Tables E-14** and **E-15**, respectively.

The refined cancer risks for the resident were estimated at 5E-05, which is within the USEPA risk management range of 1E-04 to 1E-06, but exceeds the NMED SSL target cancer risk of 1E-05. Therefore, even at the 95% UCL exposure concentration, soil at TU504 may pose unacceptable cancer risks under a residential land use scenario. Benzo(a)anthracene, benzo(a)pyrene, and dibenz(a,h)anthracene were the primary contributors to the cancer risks. The refined residential risk evaluation is shown in **Appendix E, Table E-13**.

The refined noncancer hazards for DRO and ORO ranged from 0.3 construction worker to 0.8 for the resident. Therefore, based on this assessment, 95% UCL soil concentrations for DRO and ORO at TU504 are unlikely to pose any unacceptable adverse health effects to any exposed population. The refined DRO/ORO risk evaluation is shown in **Appendix E, Table E-16**. The 95% UCL exposure scenario was not evaluated for the site (commercial/industrial) worker because no chemical in the 0 to 5-foot data set had eight or more detections.

5.4.6 Uncertainties

In order to address uncertainties related to the risk assessment, a discussion of the main sources of uncertainty in the exposure and risk calculations are presented below:

It is important to recognize the exposure assumptions used to derive the SSLs used to estimate risks for TU504 were based on a number of assumptions, and that these assumptions introduce uncertainty into the dose and risk estimates. Assumptions are required because of data gaps in

the understanding of the toxicity of chemicals and in the ability to estimate the true level of human exposure to chemicals. In most cases, these data gaps can be addressed through the use of intentionally conservative assumptions that are more likely to lead to an overestimate than an underestimate of risk. However, some data gaps may result in an underestimation of exposure and risk. Therefore, none of the risk estimates should be considered to be precise; rather, they should be thought of as approximations. It is important for risk managers and the public to take these uncertainties into account when interpreting the risk conclusions derived for this site.

The assumptions used to calculate the residential SSLs are conservative. Under the residential exposure, a person is assumed to be exposed to site soil concentrations for 24 hours per day, 350 days per year for 26 years (noncarcinogens) or 70 years (carcinogens). It is unlikely anyone would experience these exposure parameters at TU504; therefore, risks estimated based on the conservative SSLs may be overestimated.

Chemical concentrations used to evaluate potential site risks are based on the available environmental soil data. Environmental sampling is designed to identify and fully characterize the type and extent of contamination at a site. Therefore, environmental sampling is biased toward finding contamination and it is unlikely contaminant concentrations have been underestimated.

The use of maximum detected concentrations as exposure concentrations is conservative because it is unlikely anyone would be in contact with the maximum concentration for any of the assumed exposure durations. Similarly, the use of maximum concentrations in the 95% UCL evaluation for chemicals with less than 8 samples or 6 detections likely overestimates potential site risks.

Risk assessment is an uncertain process which requires both scientific data and science-based assumptions. Risk assessments are conducted to infer risks below the range of observable events in people and studies of laboratory animals. For example, regulatory agencies typically attempt to protect populations from exposure to doses of chemicals that may pose a cancer risk of one in one million or greater. It is virtually impossible to measure the impact of a one-in-one-million cancer risk on a population because one-third of that population is already expected to be diagnosed with cancer, even in the absence of a particular chemical exposure.

This risk assessment evaluated the toxicity or risk associated with individual chemicals and then combined them to estimate risk as it related to chemical mixtures. However, simply adding risks ignores potential synergistic or antagonistic interactions, as well as differences in target organ specificities and differences in mechanisms of action that could lead to either underestimation or overestimation of total risk.

Reasonable maximum exposure cancer risks are estimated by multiplying together a series of upper 95th percentile estimates of carcinogenicity, concentration, and exposure factors. This practice may overestimate the potential risks.

It is important to note that the HI is not linear. An HI of 100 does not mean the chances of non-cancer health effects are 100 times more likely to occur, or that effects are likely to be more

severe than an HI of 1. Rather, HIs greater than 1 simply indicate that non-cancer health effects are more likely to occur.

5.5 SITE CONCEPTUAL EXPOSURE MODEL (SCEM)

An SCEM was developed for TU504 based on historical site information, results of soil and soil gas sampling completed in 2016, and the human health risk assessment. The SCEM is presented on **Figure 5-3**.

TU504 is located in the northwestern portion of Cannon AFB, adjacent to the access road behind the hospital. The diesel UST was abandoned in place in 1994. The site currently contains primarily bare soil areas (0.05 acre) that appear to be regularly disturbed.

Soil contamination at TU504 is limited to the immediate vicinity of the abandoned UST, extending outward up to 15 feet in the north and northwest direction from the UST. The primary source was an abandoned in place 25,000-gallon diesel fuel UST. TPH-DRO and PAHs were the primary contaminants identified in the soils at TU504. Site-related SVOCs were detected above the residential SSL only at SB08 and primarily from the 0 to 5 feet interval. DRO was detected in one sample (SB08, 10-foot bgs) above the residential SSL and slightly above the industrial SSL. However, samples collected from this boring at 15 to 20 feet bgs and 20 to 25 feet bgs were below the residential SSLs. Site-related PAHs did not exceed the NMED industrial/occupational screening levels.

A quantitative screening evaluation was completed for residents, construction workers, and site (commercial/industrial) workers using maximum detected concentrations. The site-specific soil exposure excess cancer risks for receptors at TU504 ranged from 1E-06 for construction worker to 2E-04 for residents. Site worker excess cancer risk was 1E-05. The site worker and construction worker values are considered an acceptable level because they fall below the NMED target cancer risk of 1E-05. The hazard indices ranged from 0.000002 to 0.00003. These values do not exceed the NMED threshold value of 1. Based on the screening risk assessment using maximum detected concentrations, further evaluation for Site TU504 was warranted.

Based on the results of the initial quantitative screening evaluation, a refined quantitative screening evaluation was completed for residents, construction workers, site (commercial/industrial) workers using 95% UCL concentrations. The site-specific soil exposure excess cancer risks for the receptors ranged from 3E-07 for construction worker to5E-05 for residents. Site worker excess cancer risk was 1E-05. The site worker and construction worker values are considered an acceptable level because they do not exceed the NMED target cancer risk of 1E-05. The hazard indices ranged from 0.000002 to 0.00003. These values do not exceed the NMED threshold value of 1. The estimated residential cancer risk based on the 95% UCL was 5E-05, which exceeds the NMED target risk of 1E-05.

The site-specific vapor intrusion cancer risks for the resident and site (commercial/industrial) worker were within the risk management range of 1E-04 to 1E-06; therefore, the vapor intrusion pathway at TU504 is unlikely to pose any unacceptable cancer risks to these two populations. The HIs were below the threshold value of 1. Based on this assessment, the vapor intrusion

pathway at TU504 is unlikely to pose any unacceptable adverse health effects residents or site (commercial/industrial) workers.

There is no surface water located in the vicinity of the site; therefore, potential run-off and contamination of surface water is considered an incomplete pathway at TU504.

5.6 VADOSE ZONE MODELING

This section presents VLEACH groundwater modeling results for soil to groundwater pathways and conclusions. Data used to create the models can be found in **Appendix F**.

5.6.1 Vadose Zone Modeling Objectives

A one-dimensional vadose zone transport model was constructed for TU504 at Cannon AFB. This vadose zone transport model was developed to assist with the evaluation of potential groundwater impact from residual fuel contamination in the vadose zone beneath the site. Residual contaminants that exceeded DAF 20 SSL in subsurface soils were modeled. An evaluation of the available soil contaminants' analytical data indicated that naphthalene, 2-methylnaphthalene, benzo(a)anthracene and benzo(a)pyrene exceed the DAF 20 SSL and they should be considered for evaluating potential groundwater impact. These contaminants exhibit relatively high residual concentrations within the vadose zone beneath the site. For example, naphthalene was detected from 145 to 210 feet bgs at concentrations ranging from 0.1 to 3.3 mg/kg, which exceeds a DAF of 20.

5.6.2 Model Code

The computer code selected to model vadose zone contaminant transport beneath the site was VLEACH. VLEACH, a one-dimensional finite difference vadose zone leaching model, is a computer code for estimating the impact due to the mobilization and migration of a sorbed organic contaminant located in the vadose zone on the underlying groundwater resource. The model was initially developed by CH2M Hill for the USEPA, Region IX in 1990's. Since that time, the code has been utilized at numerous sites to assess the potential groundwater impacts from existing soil contaminants. Based on the information available, the uncertainty associated with site information, the relative complexity of the site, and the modeling objective, VLEACH was considered an appropriate model code. VLEACH version 2.2a (Islam 1996) was the version used for this effort. It has several updates to the original model code that make it more robust.

While VLEACH employs a number of assumptions, it can be useful in making assessments of the potential impacts of contaminants within the vadose zone and the underlying groundwater. VLEACH describes the movement of an organic contaminant within and between three different phases: (1) as a solute dissolved in water, (2) as a gas in the vapor phase, and (3) as an adsorbed compound in the solid phase. Equilibration between the phases occurs according to distribution coefficients defined by the user. In particular, VLEACH simulates vertical transport by advection in the liquid phase and by gaseous diffusion in the vapor phase. These processes are conceptualized as occurring in distinct, user-defined polygons that are vertically divided into a series of user-defined cells. However, within each polygon, homogeneous conditions are

assumed except for contaminant concentration, which can vary between layered cells. Hence, VLEACH can account for heterogeneities laterally but is limited when simulating vertical heterogeneity. This turns out not to be an issue at TU504 Site, because the CA504-SB01 boring log (included in **Appendix F**) indicates a sandy formation from near the ground surface to 275 below ground surface.

Initially, VLEACH calculates the equilibrium distribution of contaminant mass between the liquid, gas, and sorbed phases. Transport processes are then simulated. Liquid advective transport is calculated based on values defined by the user for infiltration and soil water content. The contaminant in the vapor phase migrates into or out of adjacent cells based on the calculated concentration gradients that exist between adjacent cells. After the mass is exchanged between the cells, the total mass in each cell is recalculated and re-equilibrated between the different phases. These steps are conducted for each user-defined time step.

The following assumptions are made in the development of VLEACH which should be taken into account whilst evaluating model results:

1. Linear isotherms describe the partitioning of the pollutant between the liquid, vapor, and soil phases. Local or instantaneous equilibrium between these phases is assumed within each cell.
2. The vadose zone is in a steady state condition with respect to water movement. More specifically, the moisture content profile within the vadose zone is constant. This assumption will rarely occur in the field, especially in heterogeneous formations.
3. Liquid phase dispersion is neglected. Hence, the migration of the contaminant will be simulated as plug flow (i.e., continuous flowing system). This assumption causes higher dissolved concentrations and lower travel time predictions than would likely occur.
4. The contaminant is not subjected to *in situ* degradation. Since organic contaminants generally undergo some degree of degradation in the vadose zone, this assumption results in conservative concentration values.
5. Homogeneous soil properties are assumed to occur within a particular polygon. However, initial contaminant concentrations in the soil phase can vary between cells. As indicated before, this assumption will not adversely impact the modeling results as the underlying formations are all composed of sand.
6. Volatilization from the soil boundaries is either completely unimpeded or completely restricted. This assumption may be significant depending upon the depth of investigation and the soil type. In particular, after a depth of 1 meter volatilization to the atmosphere will decrease significantly.

5.6.3 Model Input Parameters

This section is a brief summary of the modeling effort conducted for the site. It is intended to provide the model input parameters and to document the modeling results.

This model was developed using site-specific information whenever available. However, certain model parameters were estimated using values consistent with known site conditions and the

NMED's Risk Assessment Guidance for Investigations and Remediation, July 2015 (NMED 2015a). The results from this model are viewed as reasonable, keeping in mind however, the limitations and assumptions used to develop it. The following presents a summary of input parameters:

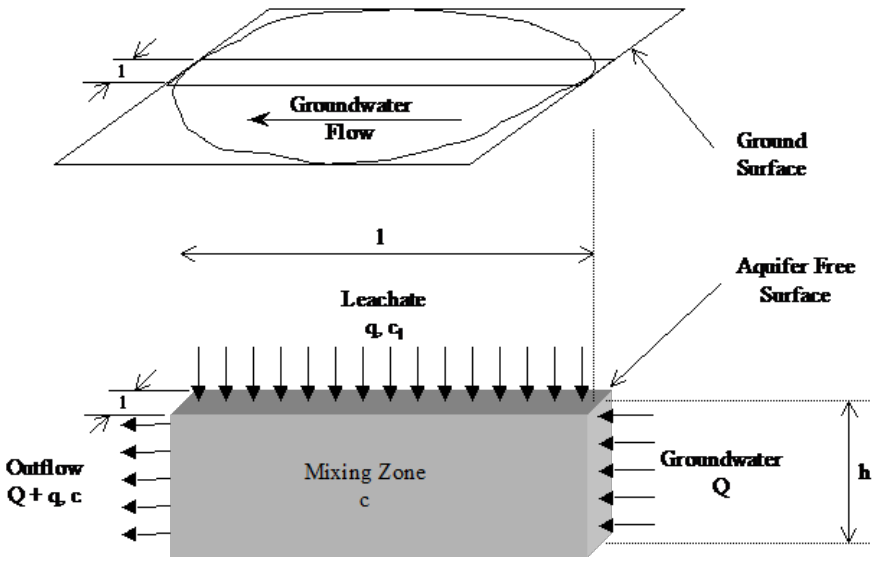
1. One Polygon, Model Area: 10 by 40 feet. This is consistent with a 25,000 gallon underground tank footprint.
2. The vadose zone underneath the site is a homogenous sand formation. Soil properties of the sand are as follows:
   a. Bulk density = 1.44 grams/milliliter (value consistent with 2006 NMED Soil Screening Guidance Technical Background Document, page 33)
   b. Porosity = 0.44 (from 2006 NMED Soil Screening Guidance Technical Background Document, page 33 - used default values for air filled porosity and volume water content, which equal to Porosity)
   c. Volumetric water content = 0.26 (from 2006 NMED Soil Screening Guidance Technical Background Document, page 33 - default value)
   d. Fraction of organic carbon (foc) = 0.0005 (from 2006 NMED Soil Screening Guidance Technical Background Document - lower limit chosen owing to sandy formation, page 33)
3. Chemical properties for naphthalene, benzo(a)anthracene and benzo(a)pyrene were taken from the NMED *Risk Assessment Guidance for Investigations and Remediation, July 2015* (NMED 2015a). Chemical properties for 2-methylnaphthalene were taken from values used at McClellan AFB documents as NMED Guidance did not include chemical properties for 2-methylnaphthalene. These chemical specific modeling parameters are listed in **Table 5-3**.
4. Initial concentrations in the vadose zone in terms of microgram/kilogram for each contaminant were assigned based on the analytical data provided from CA504-SB01.
5. Recharge or infiltration rate was assumed to be a conservative estimate of 0.083 feet per year. This number was taken from page 1-7 of the RCRA Facility Investigation at Twelve Sites Work Plan, Cannon AFB (FPM/URS 2015).

VLEACH predicts a leachate flux in grams per year (g/yr). In order to make use of the model output and help evaluate potential groundwater impact from the migrating residual contamination, this flux must be converted into a potential groundwater contaminant concentration.

5.6.4 Mixing Zone Model

A simple mixing cell model was constructed to calculate predicted groundwater concentrations. The following mixing zone model was constructed to calculate predicted groundwater concentrations The mixing zone model shown below assumes a completely mixed rectangular parallelepiped (box) that underlies the site. The box is oriented so that its horizontal length is parallel to the direction of groundwater flow under the modeled site. It is 1 meter wide, as deep as the mixing zone, and as long as the maximum site length in the direction of groundwater flow.

Using the maximum length instead of a site average results in a conservative groundwater concentration estimate. The mass balance for this box is written as:



$$V\frac{dc}{dt} = l \times c_l - (q+Q) \times c$$

$$Q = Kih$$

$$q = l \times I$$

Where:

$V =$ Volume; $l \times h$
$l =$ Site length in direction of groundwater flow
$h =$ Mixing depth (assumed to be 15 feet)
$c_l =$ Contaminant concentration in leachate
$c =$ Contaminant concentration in mixing zone
$t =$ Time
$I =$ Infiltration rate
$K =$ Aquifer hydraulic conductivity
$i =$ Groundwater gradient

Inputs to the mixing volume are clean water that enters from the upstream end and leachate that enters all along the upper surface. Groundwater inflow is calculated as the local groundwater velocity times the area of the end of the mixing volume ($Q = Kih$). The rate of leachate inflow to the top of the box is calculated as the net rainwater infiltration rate times the area of the top of the box ($q = l \times I$). The mass of contaminant flow in the leachate is equal to the flux from the bottom of the vadose zone model multiplied by the same area. Output is only on the downstream end and is equal to the sum of the infiltration rate and the groundwater inflow, and the contaminant mass outflow is equal to this outflow times the completely mixed box concentration. It allows no longitudinal or transverse dispersion or flow out the bottom of the mixing volume. These two assumptions also result in a conservative estimate. Longitudinal flow through the box

is based on local aquifer characteristics. The porosity is equal to the total porosity of the lowest soil layer in the vadose zone model.

The parameters used in the mixing model such as hydraulic conductivity, and groundwater gradient were taken from page 1-7 of the RCRA Facility Investigation at Twelve Sites Work Plan, Cannon AFB (FPM/URS 2015). Printouts of model input and output files are included in **Appendix F**.

Because specifics were not known with much certainty about the mass of contamination released at the sites and the timing of release(s), it was not possible to calibrate contaminant transport model for this effort. Initial contaminant distributions were developed using February 2013 analytical results that were collected from soil samples within borehole CA504-SB01. This location was selected based on a review of the data and the fact that it was a deep boring with samples taken down to the depth of 275 feet, a depth close to the groundwater surface.

5.6.5 Initial Conditions

The vertical distribution of the naphthalene, 2-methylnaphthalene, benzo(a)anthracene and benzo(a)pyrene soil concentrations from soil samples' analytical results within borehole CA504-SB01 were used as the initial contaminant profile for the model. Chemical-specific parameters for these contaminants were used from the NMED's Risk Assessment Guidance for Investigations and Remediation, July 2015 Table B-2: Physical and Chemical Properties (NMED 2015a). Soil-specific parameters were not readily available so they were estimated using values from the literature and other federal sites for the sediments identified in borehole log for CA504-SB01. The model upper and lower boundary conditions were set at 0 mg/L vapor, simulating no contaminant mass in the air above the site or in the groundwater beneath the vadose zone.

5.6.6 Model Limitations

The model was constructed to meet the project objectives (i.e., leachate concentration and mixing cell/zone concentration in the underlying aquifer). Any model, including this model, is a simplification of the natural environment and therefore has recognized limitations.

Biodegradation processes, although likely significant, were not included in this modeling effort. The model results, therefore, do not reflect destruction of the contaminants' mass related to biological processes. Consequently, the actual contaminant flux will be less than the model predictions because some biodegradation of fuel-related contaminants will likely occur at this site over time.

This model, as well as other vadose zone leaching models, is dependent on the accuracy of the input data. Some of the soil-specific parameters used in this model were estimated from realistic literature-based values due to limited site-specific data. The uncertainties associated with these assumptions must be kept in mind when using the model results to make decisions. Per the VLEACH manual, the predicted leachate concentrations are insensitive to changes in porosity, air diffusion coefficient, and Henry's constant. Conversely, VLEACH model is sensitive to changes in parameters such as soil moisture, foc and the soil organic carbon-water partition

coefficient. Some of the model uncertainty could be reduced if site-specific soil parameter values were available.

This model is not intended for use during detailed remedial design but is a screening tool for helping to evaluate potential adverse impact to groundwater. The limited objective of this evaluation, the lack of some certain site specific information that precluded model calibration (e.g., groundwater analytical results beneath the site) along with the total depth of some of the borings that did not show clean soils, must all be considered when evaluating the results of this modeling effort, because subsequent facts may become known that may make this document premature or inaccurate.

5.6.7 Model Results

As mentioned before, it was not possible to calibrate this model given the lack of specific contaminant release timing and mass. Also, no groundwater sample results directly beneath the site were available to independently check the model contaminants profile as predicted groundwater contamination. For example, if a contaminant has been reported in groundwater sample results from the site, a comparison between predicted and measured groundwater concentrations could be made to validate the model results.

As noted earlier, for leachate and groundwater concentrations calculations, a simplified mixing cell/zone model was used.

5.6.7.1 Naphthalene

The impact of naphthalene mass flux into groundwater in terms of g/yr is shown on **Figure 5-4**. The highest mass flux for naphthalene occurs in about 1,800 years from now and at a concentration of about 0.57 g/yr. This translates to a naphthalene concentration, in leachate, of about 600 microgram per liter (µg/L) and mixing zone groundwater concentration of about 8 microgram per liter (as shown in **Appendix F**). Concentrations of naphthalene would be below NMED groundwater screening levels for at least the next 400 years.

5.6.7.2 2-Methylnaphthalene

Similarly, the peak for the impact of 2-methylnaphthalene mass flux into groundwater in terms of g/yr is a little over one gram per year at about 3,500 years from now as shown on **Figure 5-5**. Using the mixing zone model, the highest predicted groundwater concentration for 2-methylnaphthalene in the mixing zone is about 15 µg/L in about 3500 years from now with a corresponding leachate concentration of about 1,100 µg/L.

5.6.7.3 Benzo(a)anthracene and Benzo(a)pyrene

Benzo(a)anthracene and benzo(a)pyrene groundwater concentrations in the aquifer are predicted to be essentially below detection limit over the next 4,000 years. The leachate and groundwater concentrations for these compounds are included in **Appendix F**.

As mentioned before, biodegradation was not included as a process in this modeling effort. Consequently, contaminant mass is not reduced due to biodegradation over the length of the model prediction. The model results are therefore very conservative (i.e., model predicts greater mass flux than probable flux) because biodegradation of fuel-related residual contaminants will likely occur at this site over time.

TABLE 5-1
SUMMARY OF ANALYTICAL DATA
SOIL SAMPLING FEBRUARY 2016
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			NMED Residential Soil (mg/kg)	NMED DAF 20 SSL (mg/kg)		CA504-SG01-S-005				CA504-SG01-S-010				CA504-SG01-S-210				CA504-SG02-S-005			
DATE COLLECTED						February 5, 2016				February 5, 2016				February 5, 2016				February 5, 2016			
	Maximum	Frequency			Source	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																					
Toluene	8.60E-04 J	3 / 8	5.23E+03	1.21E+01	NMED	5.30E-04	5.30E-04	5.30E-03	J	8.60E-04	5.50E-04	5.50E-03	J	<	1.10E-03	5.60E-03	U	<	9.90E-04	4.90E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																					
No semivolatile organic compounds detected.			---	---	---																
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																					
Benzo(a)anthracene	5.70E-03 J	1 / 8	1.53E+00	1.82E+00	NMED	<	1.10E-02	2.10E-02	U	5.70E-03	5.40E-03	2.10E-02	J	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U
Fluoranthene	1.30E-02 J	3 / 8	2.32E+03	8.00E+01	NMED	<	1.10E-02	2.10E-02	U	1.30E-02	5.40E-03	2.10E-02	J	7.20E-03	5.40E-03	2.10E-02	J	<	1.10E-02	2.20E-02	U
Pyrene	1.00E-02 J	3 / 8	1.74E+03	1.92E+02	NMED	<	1.10E-02	2.10E-02	U	1.00E-02	5.40E-03	2.10E-02	J	5.90E-03	5.40E-03	2.10E-02	J	<	1.10E-02	2.20E-02	U

NMED value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015.

Red result exceeds Residential Soil Limit
* DL value is shown if the detection is less than the LOQ
< = result is less than the LOD
--- = screening values not listed due to absence of detections for SVOCs
DAF = Dilution Attenuation Factor
DL = Detection Limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
Qual = Qualifier
SSL = Soil Screening Level
U = Nondetect

TABLE 5-1
SUMMARY OF ANALYTICAL DATA
SOIL SAMPLING FEBRUARY 2016
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			NMED Residential Soil (mg/kg)	NMED DAF 20 SSL (mg/kg)		CA504-SG02-S-010				CA504-SG02-S-210				CA504-SG03-S-005				CA504-SG03-S-010			
DATE COLLECTED						February 5, 2016				February 5, 2016				February 5, 2016				February 5, 2016			
	Maximum	Frequency			Source	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																					
Toluene	8.60E-04 J	3 / 8	5.23E+03	1.21E+01	NMED	<	1.10E-03	5.50E-03	U	6.60E-04	5.10E-04	5.10E-03	J	<	8.40E-04	4.20E-03	U	<	1.00E-03	5.20E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																					
No semivolatile organic compounds detected.			---	---	---																
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																					
Benzo(a)anthracene	5.70E-03 J	1 / 8	1.53E+00	1.82E+00	NMED	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Fluoranthene	1.30E-02 J	3 / 8	2.32E+03	8.00E+01	NMED	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	8.30E-03	5.40E-03	2.20E-02	J	<	1.10E-02	2.20E-02	U
Pyrene	1.00E-02 J	3 / 8	1.74E+03	1.92E+02	NMED	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	6.70E-03	5.40E-03	2.20E-02	J	<	1.10E-02	2.20E-02	U

NMED value from New Mexico Environment Department, Risk Assessment Guidance for Site Investigations and Remediation, Soil Screening Levels, Table A-1, July 2015.

Red result exceeds Residential Soil Limit
* DL value is shown if the detection is less than the LOQ
< = result is less than the LOD
--- = screening values not listed due to absence of detections for SVOCs
DAF = Dilution Attenuation Factor
DL = Detection Limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
NMED = New Mexico Environment Department
Qual = Qualifier
SSL = Soil Screening Level
U = Nondetect

TABLE 5-2
SUMMARY OF ANALYTICAL DATA
SOIL VAPOR SAMPLING FEBRUARY 2016
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			Residential Soil-gas Limit ($\mu g/m^3$)	CA504-SG01-005				CA504-SG01-010				CA504-SG02-005				CA504-SG02-010			
DATE COLLECTED				February 9, 2016				February 9, 2016				February 9, 2016				February 9, 2016			
	Maximum	Frequency		Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS ($\mu g/m^3$)																			
Ethylbenzene	5.00E+00	5 / 6	1.12E+02	5.00E+00	2.20E+00	4.40E+00		3.20E+00	1.10E+00	4.40E+00	J	<	1.90E+00	3.90E+00	U	1.80E+00	8.20E-01	4.20E+00	J
m,p-Xylene (sum of isomers)	2.30E+01	5 / 6	1.04E+03	2.30E+01	2.20E+00	4.40E+00		1.20E+01	2.20E+00	4.40E+00		<	1.90E+00	3.90E+00	U	5.00E+00	2.10E+00	4.20E+00	
o-Xylene (1,2-Dimethylbenzene)	9.00E+00	5 / 6	1.04E+03	9.00E+00	2.20E+00	4.40E+00		6.10E+00	2.20E+00	4.40E+00		<	1.90E+00	3.90E+00	U	1.70E+00	5.90E-01	4.20E+00	J
Toluene	1.70E+01	5 / 6	5.21E+04	4.90E+00	1.90E+00	3.80E+00		9.60E+00	1.90E+00	3.80E+00		<	1.70E+00	3.40E+00	U	1.30E+01	1.80E+00	3.60E+00	
PETROLEUM HYDROCARBONS ($\mu g/m^3$)																			
Gasoline Hydrocarbons	3.50E+02	6 / 6	---	3.30E+02	9.90E+01	2.00E+02		3.50E+02	9.90E+01	2.00E+02		2.90E+02	9.50E+01	2.00E+02		2.70E+02	9.50E+01	2.00E+02	

New Mexico Environment Department's Hazardous Waste Bureau and Groundwater Quality Bureau
Voluntary Remediation Program, Risk Assessment Guidance for Site Investigations and Remediation,Vapor Intrusion Screening Levels Residential Soil-gas, Table A-3, July 2015

Red results exceed the Residential Soil-gas Limit
--- = screening value not established
< = result is less than the LOD
* DL value is shown if the detection is less than the LOQ
$\mu g/m^3$ = microgram per cubic meter
DL = Detection Limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
NMED = New Mexico Environment Department
Qual = Qualifier
U = Nondetect

TABLE 5-2
SUMMARY OF ANALYTICAL DATA
SOIL VAPOR SAMPLING FEBRUARY 2016
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION DATE COLLECTED	Maximum	Frequency	Residential Soil-gas Limit ($\mu g/m^3$)	CA504-SG03-005 February 9, 2016 Result	DL/LOD*	LOQ	Qual	CA504-SG03-010 February 9, 2016 Result	DL/LOD*	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS ($\mu g/m^3$)											
Ethylbenzene	5.00E+00	5 / 6	1.12E+02	2.20E+00	1.10E+00	4.50E+00	J	1.80E+00	1.10E+00	4.20E+00	J
m,p-Xylene (sum of isomers)	2.30E+01	5 / 6	1.04E+03	5.00E+00	2.20E+00	4.50E+00		3.50E+00	1.10E+00	4.20E+00	J
o-Xylene (1,2-Dimethylbenzene)	9.00E+00	5 / 6	1.04E+03	2.80E+00	1.10E+00	4.50E+00	J	2.00E+00	1.00E+00	4.20E+00	J
Toluene	1.70E+01	5 / 6	5.21E+04	1.60E+01	1.90E+00	3.90E+00		1.70E+01	1.80E+00	3.70E+00	
PETROLEUM HYDROCARBONS ($\mu g/m^3$)											
Gasoline Hydrocarbons	3.50E+02	6 / 6	---	3.10E+02	1.00E+02	2.10E+02		2.20E+02	9.60E+01	2.00E+02	

New Mexico Environment Department's Hazardous Waste Bureau and Groundwater Quality Bureau
Voluntary Remediation Program, Risk Assessment Guidance for Site Investigations and Remediation,Vapor Intrusion Screening Levels Residential Soil-gas, Table A-3, July 2015

Red results exceed the Residential Soil-gas Limit
--- = screening value not established
< = result is less than the LOD
* DL value is shown if the detection is less than the LOQ
$\mu g/m^3$ = microgram per cubic meter
DL = Detection Limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
NMED = New Mexico Environment Department
Qual = Qualifier
U = Nondetect

TABLE 5-3
CHEMICAL SPECIFIC MODELING PARAMETERS
CANNON AFB, NEW MEXICO

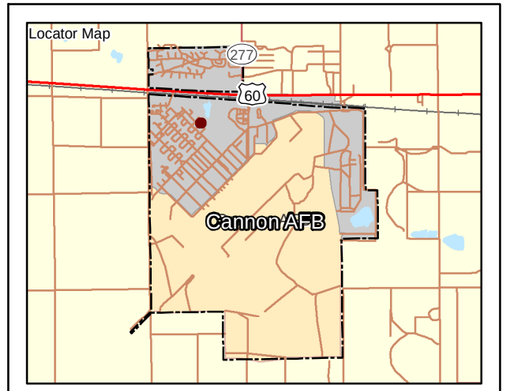
Contaminant	Solubility (mg/L water)	K_{oc} (cm^3/g)	Henry's Law Constant (unitless)	Molecular Weight (g/mol)	Air Diffusion Coefficient (m2/day)
Naphthalene	31	1540	0.018	128	0.5097
2-Methylnaphthalene	24.6	2811	0.01351	142	0.451
Benzo(a)anthracene	0.0094	177000	0.000492	228	0.44
Benzo(a)pyrene	0.00162	587000	0.0000187	250	0.3715

cm^3/g = cubic centimeters per gram
g/mol = gram per mole
K_{oc} = Organic Carbon Distribution Coefficient
m^2/day = square meters per day
mg/L = milligrams per liter

CA504-SG01		
Sample Depth (feet bgs)	4-5'	9-10'
VOLATILE ORGANIC COMPOUNDS (mg/kg)		
Toluene	5.30E-04	8.60E-04
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)		
Benzo(a)anthracene	ND	5.70E-03
Fluoranthene	ND	1.30E-02
Pyrene	ND	1.00E-02

CA504-SG02		
Sample Depth (feet bgs)	4-5'	9-10'
All Compounds	ND	ND

CA504-SG03		
Sample Depth (feet bgs)	4-5'	9-10'
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg)		
Fluoranthene	8.30E-03	ND
Pyrene	6.70E-03	ND



Legend

- Soil Gas Boring Location
- Previous Soil Sample Locations
- Site Boundary
- Base Boundary

Note:
All results are in mg/kg

bgs = below ground surface
mg/kg = milligrams per kilogram
ND = non detect

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

N

10 5 0 10 Feet

2016 Soil Sampling Results at TU504
Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 5/23/2016	Project No: 23446539	Figure 5-1
Checked By: MS	Revision: 0		

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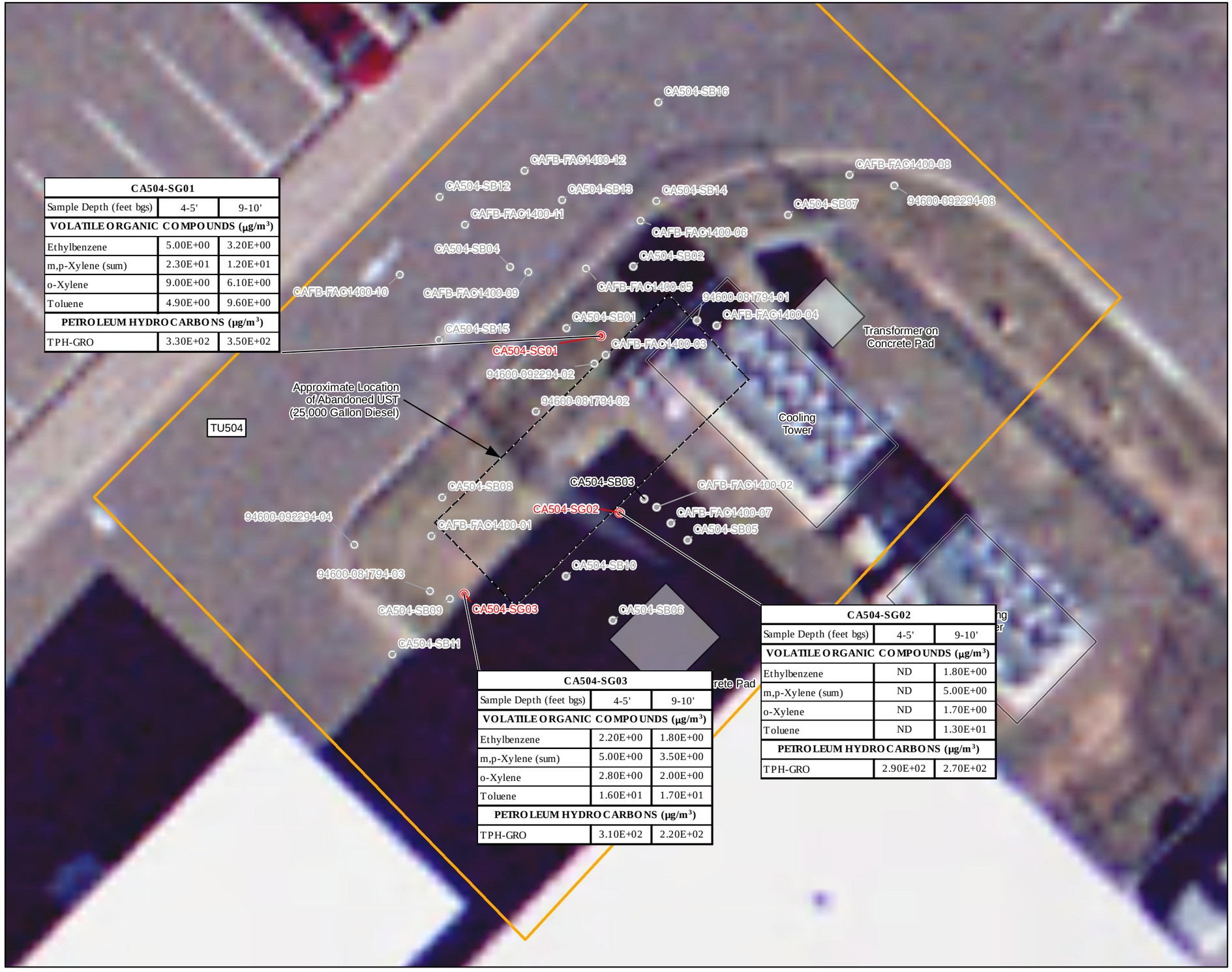
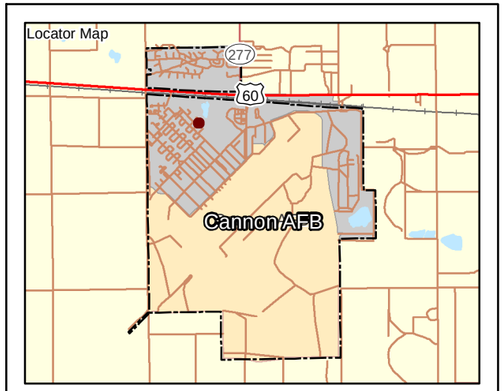


CA504-SG01		
Sample Depth (feet bgs)	4-5'	9-10'
VOLATILE ORGANIC COMPOUNDS (µg/m³)		
Ethylbenzene	5.00E+00	3.20E+00
m,p-Xylene (sum)	2.30E+01	1.20E+01
o-Xylene	9.00E+00	6.10E+00
Toluene	4.90E+00	9.60E+00
PETROLEUM HYDROCARBONS (µg/m³)		
TPH-GRO	3.30E+02	3.50E+02

CA504-SG03		
Sample Depth (feet bgs)	4-5'	9-10'
VOLATILE ORGANIC COMPOUNDS (µg/m³)		
Ethylbenzene	2.20E+00	1.80E+00
m,p-Xylene (sum)	5.00E+00	3.50E+00
o-Xylene	2.80E+00	2.00E+00
Toluene	1.60E+01	1.70E+01
PETROLEUM HYDROCARBONS (µg/m³)		
TPH-GRO	3.10E+02	2.20E+02

CA504-SG02		
Sample Depth (feet bgs)	4-5'	9-10'
VOLATILE ORGANIC COMPOUNDS (µg/m³)		
Ethylbenzene	ND	1.80E+00
m,p-Xylene (sum)	ND	5.00E+00
o-Xylene	ND	1.70E+00
Toluene	ND	1.30E+01
PETROLEUM HYDROCARBONS (µg/m³)		
TPH-GRO	2.90E+02	2.70E+02



Legend

- Soil Gas Boring Location
- Previous Soil Sample Locations
- Site Boundary
- Base Boundary

Note:
All results are in µg/m³

µg/m³ = micrograms per cubic meter
bgs = below ground surface
ND = non detect
TPH-GRO = total petroleum hydrocarbons-gasoline range organics

Map projection: NAD83 State Plane Feet New Mexico East (FIPS 3001)

N

10 5 0 10 Feet

2016 Soil Gas Sampling Results at TU504
Cannon Air Force Base, New Mexico

Drawn By: DPG	Date: 5/23/2016	Project No: 23446539	Figure 5-2
Checked By: MS	Revision: 0		

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FIGURE 5-3
SITE CONCEPTUAL EXPOSURE MODEL
HOSPITAL ABANDONED UST SITE (TU504)

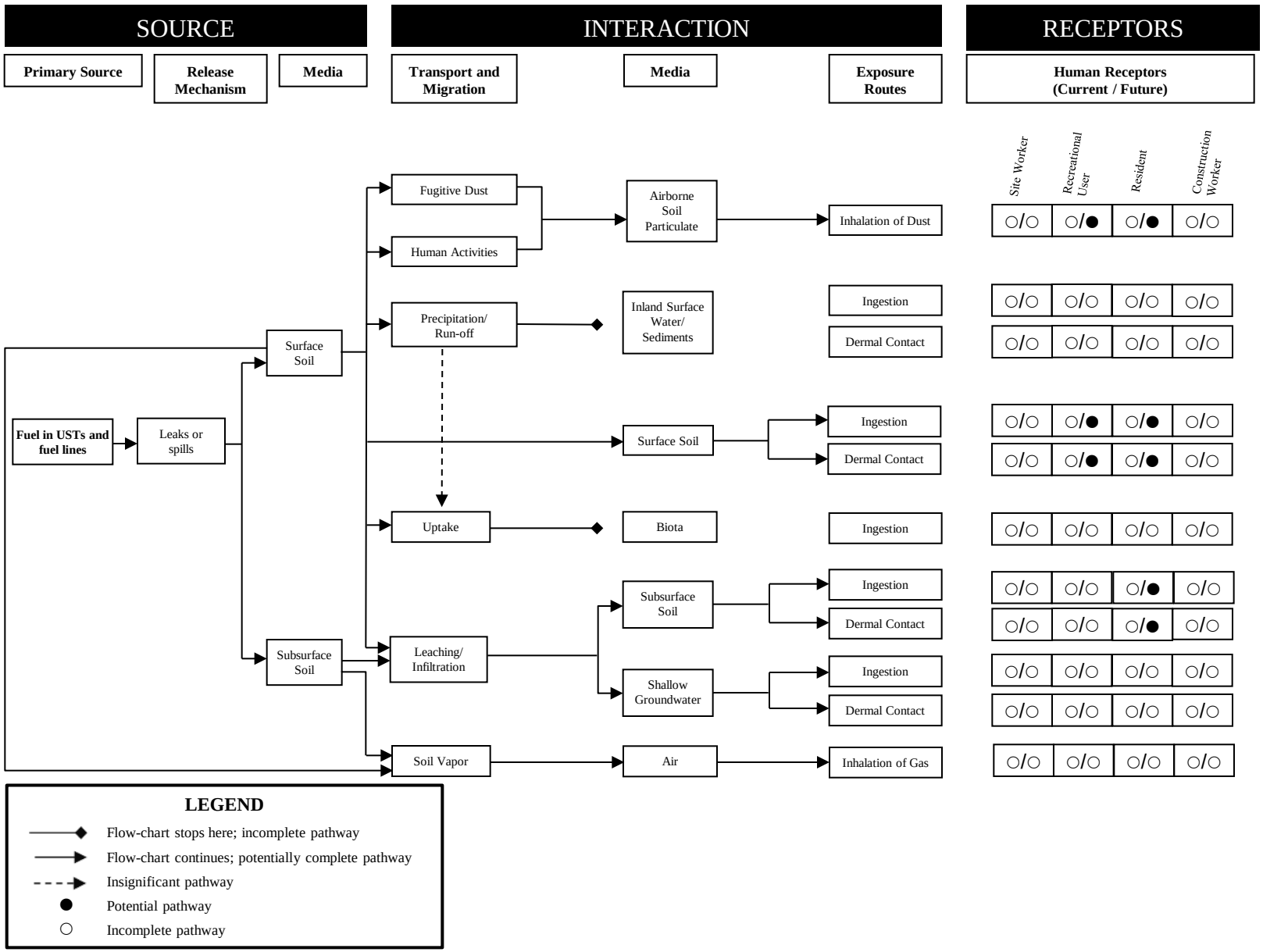


Figure 5-4
Groundwater Impact of Napthalene Over Time
Cannon AFB, New Mexico

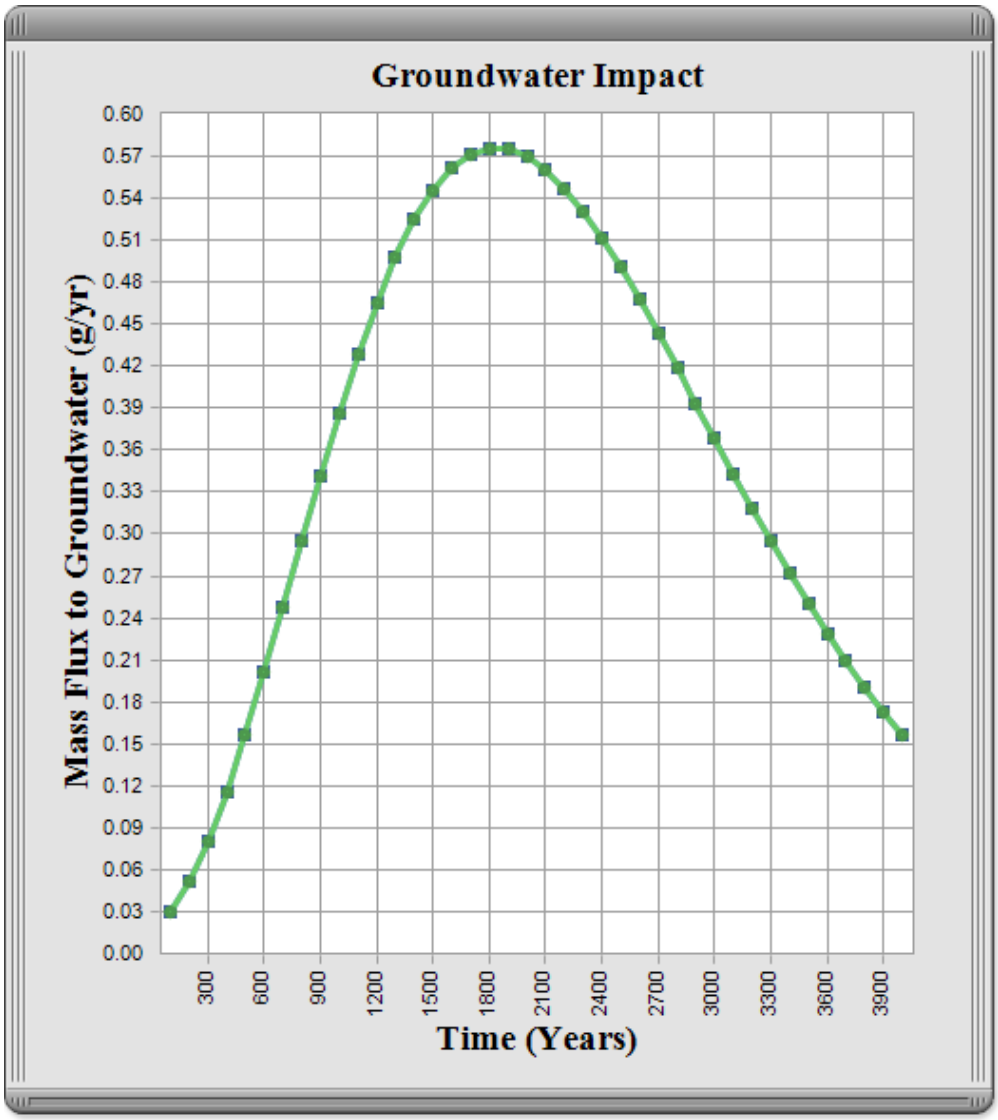
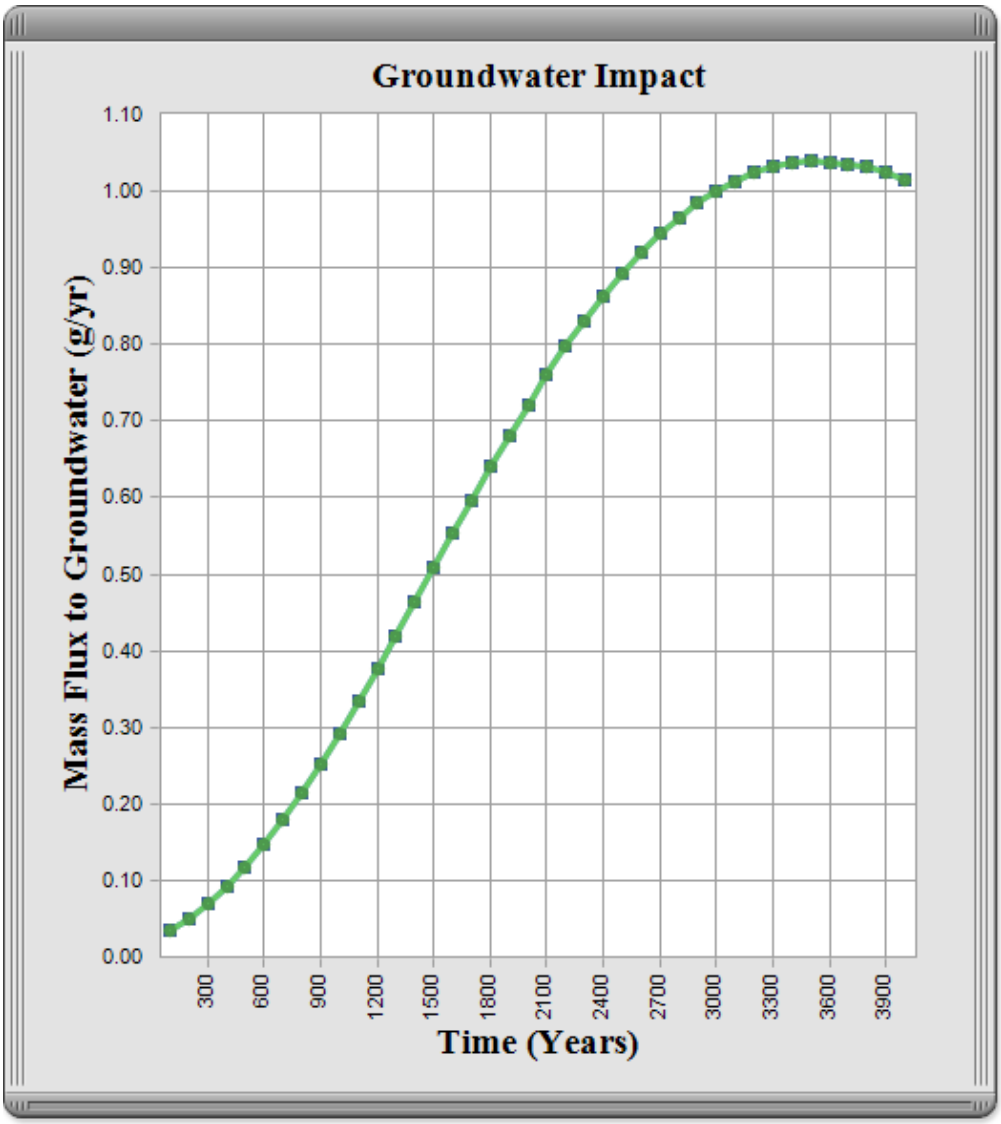


Figure 5-5
Groundwater Impact of 2-Methylnapthalene Over Time
Cannon AFB, New Mexico



6.1 SUMMARY

TU504 is in the northwestern portion of Cannon AFB, near the northern corner of the hospital (Building 1400), and adjacent to the access road behind the hospital. TU504 is the location of a 25,000-gallon diesel UST abandoned in place on October 5, 1994 (USGS 1995). The UST was formerly associated with an emergency generator at the hospital, is constructed of steel, and its base is approximately 18 feet bgs.

The nature and extent of soil contamination at TU504 was characterized in the RFA approved by NMED on February 16, 2015 (NMED 2015b). The approval letter indicated TU504 is currently listed on Table 2 of the RCRA permit. A human health risk assessment, vapor intrusion assessment, and an evaluation of the soil-to-groundwater pathway were completed for this RFI.

Soil and soil vapor samples were collected from depths of 4-5 feet bgs and 9-10 feet bgs from the soil vapor borings. All soil samples were analyzed for VOCs, SVOCs, and PAHs. None of the soil samples collected exceeded residential NMED SSLs. Soil gas samples were collected and analyzed for VOCs and petroleum hydrocarbons. None of the soil vapor samples exceeded residential NMED soil-gas limits.

Human health risks were evaluated using all current and historical soil and soil vapor sampling data for TU504. PAHs were the primary contributors to the refined cumulative risk estimates. The refined cancer risks for the resident were estimated at 5E-05, which is within the USEPA risk management range of 1E-04 to 1E-06, but exceeds the NMED SSL target cancer risk of 1E-05. Therefore, even at the 95% UCL exposure concentration, soil at TU504 may pose unacceptable cancer risks under a residential land use scenario.

The site-specific cancer risks for the site worker and construction worker were within or below the risk management range of 1E-04 to 1E-06; therefore, soils at TU504 are unlikely to pose any unacceptable cancer risks to these two populations based on the 95% UCL concentrations. The cancer risks were also at or below the NMED target cancer risk of 1E-05.

The refined HIs for all potential receptors were below the threshold value of 1.

The refined noncancer hazards for DRO and ORO ranged from 0.3 for the construction worker to 0.8 for the resident. Therefore, based on this assessment, 95% UCL soil concentrations for DRO and ORO at TU504 are unlikely to pose any unacceptable adverse health effects to any exposed population.

TPH-GRO contamination was evaluated based on constituents comprising gasoline (BTEX). None of the GRO constituents were detected at concentrations above residential NMED screening levels. Therefore, TPH-GRO soil gas concentrations are not considered to pose unacceptable health issues at TU504.

The site-specific vapor intrusion cancer risks for the resident and site (commercial/industrial) worker were below 1E-06; therefore, the vapor intrusion pathway at TU504 is unlikely to pose any unacceptable cancer risks to these two populations.

The HIs were below the threshold value of 1. Based on this assessment, the vapor intrusion pathway at TU504 is unlikely to pose any unacceptable adverse health effects to residents or site (commercial/industrial) workers.

The soil-to-groundwater pathway was evaluated using VLEACH. Based on the results of the modeling, impacts to groundwater would occur over an extended timeframe (thousands of years) but the concentrations of contaminants impacting the groundwater would be below current NMED groundwater screening levels for all chemicals except naphthalene. Concentrations of naphthalene would be below NMED groundwater screening levels for at least the next 400 years. Concentrations are predicted to exceed current groundwater screening levels in 500 years.

6.2 CONCLUSIONS AND RECOMMENDATIONS

The nature and extent of soil contamination has been delineated at TU504 based on the soil sampling completed during the RFA.

The soil-to-groundwater pathway at TU504 is considered to be incomplete based modeling which indicates soil contamination will not impact groundwater at concentrations that will exceed NMED groundwater screening levels for at least the next 400 years.

The vapor intrusion cancer risks for the resident and site worker are below 1E-06 and the HIs were below the threshold value of 1. Therefore, the vapor intrusion pathway at TU504 does not represent unacceptable cancer risks or adverse health effects for site receptors and this pathway is considered to be incomplete.

The human health risk assessment identified risks exceeding the NMED target cancer risk for residential receptors. The human health risks for industrial and construction workers at TU504 were below the NMED target cancer risk of 1E-05 and HIs threshold value of 1.

Based on the results of the risk assessment, TU504 cannot achieve CAC (corrective action complete) without Controls. Based on the current use of TU504, the absence of residential receptors, and the anticipated future use of the site (commercial), no further remedial action is required to be protective of human health. Therefore, TU504 should remain on Table 2 (CAC with Controls Status) of the RCRA permit.

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NEW MEXICO ENVIRONMENT DEPARTMENT

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JOHN A. SANCHEZ
Lieutenant Governor

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RYAN FLYNN
Secretary
BUTCH TONGATE
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

December 30, 2015

Colonel Douglas W. Gilpin
Commander, 27th Special Operations
Mission Support Group
110 E. Alison Avenue, Suite 1098
Cannon Air Force Base

RE: APPROVAL WITH MODIFICATIONS
RCRA FACILTY INVESTIGATION
AT TWELVE SITES-REVISION 1
CANNON AIR FORCE BASE, NEW MEXICO
NM7572124454
HWB-CAFB-14-007

Dear Colonel Gilpin:

The New Mexico Environment Department (NMED) has received Cannon Air Force Base's (Permittee) *RCRA Facility Investigation at Twelve Sites Work Plan, Revision 1* (WP), dated July 21, 2015 and received August 18, 2015. NMED has completed review and hereby approves the WP with the following modifications.

Comments:

1. **Section 2, Project/Task Organization, Page 2-1**

   NMED Comment: Based on recent personnel changes, update all pertinent site contacts, lines of authority and key personnel information in future submittals.

2. **Section 3.3, Critical Data, Page 3-5**

   Permittee's Statement: "Following USEPA guidelines (USEPA 2001, 2004), critical data must be from environmental media representing each major exposure pathway and must be 100-percent complete."

   NMED Comment: Sample preservation and holding times must be met for all submitted samples. Any critical analytical data submitted in support of an assessment may be rejected, if the Permittee does not meet project sample quality control objectives. Upon review of all submitted data, NMED will determine if qualified data is critical in nature. Any submitted data which is not defensible will be rejected, and the Permittee will be directed to resample.

3. **Section 3.6, Human Health Risk Assessment, Page 3-6**

   Permittee's Statement: "Potential human health impacts will be evaluated by comparing maximum chemical concentrations (above background) found at the site with NMED human health SSLs for residential exposure (NMED 2012). In addition, total petroleum hydrocarbons (TPH) data will be compared to NMED TPH screening guidelines for Potable Groundwater (GW-1) (found in Table 6-2 of the NMED risk assessment guidance) (NMED 2012)."

   NMED Comment: Soils analytical data for samples collected during the implementation of the RCRA Facility Investigation (RFI) must be screened utilizing the "NMED Risk Assessment Guidance for Site Investigations and Remediation" (RA Guidance) dated July 2015 (as updated). Appropriate soil screening levels (SSLs) for residential, industrial/occupational, and construction worker receptors are listed in Table A-1 of the RA Guidance. Total Petroleum Hydrocarbons (TPH) risk assessment guidance is presented in Section 6.0, TPH, with the appropriate SSLs presented in Table 6-2.

4. **Section 3.6.4, Comparison With Background, Page 3-8**

   Permittee's Statement: "The industrial worker and recreational user are only exposed to surface soils (0-1 feet); therefore, background comparisons for these receptors will be compared with surface background concentrations. As described previously, the residential and construction worker are exposed to soils from 0-10 feet; therefore, background levels for subsurface soils will be used for these receptors."

   NMED Comment: It should be noted that NMED does not have SSLs for recreational land use. Currently SSLs are only available for residential, construction worker, and industrial/occupational exposure.

5. **Section 3.6.7, Vapor Intrusion Risks, Page 3-9**

Permittee's Statement: "Vapor intrusion and inhalation of indoor air have been identified as a potentially complete pathway at TU504. The concentration of each chemical detected in near-slab samples at TU504 will be compared to the target shallow soil gas concentration corresponding to target indoor air concentration, assuming a soil gas to indoor air Attenuation Factor= 0.1 (Table 2b, USPEA 2002c). If the detected concentration of any chemical exceeds the screening value from Table 2b, then potential site risks will be estimated in a streamlined risk assessment using the Johnson and Ettinger Model (JEM)."

NMED Comment: The vapor intrusion assessment outlined in the RFI must be conducted in accordance with current NMED RA Guidance Section 2.5, Vapor Intrusion Screening Levels (VISLs). The results of the subsurface vapor sampling must be screened against NMED VISLs provided in Table A-3 of the RA Guidance.

6. **Section 3.7 Ecological Risk Assessment, Page 3-10**

NMED Comment: Any further ecological risk assessment implemented in the RFI must be conducted utilizing Volume 2 Screening-Level Ecological Risk of the NMED RA Guidance. Ecological Screening Levels (ESLs) and Toxicity Reference Values (TRVs) have been added to the guidance document. The Permittee must review the RA Guidance and conduct the ecological screening in accordance with any pertinent revisions.

7. **Section 4.2.4, Hospital Abandoned UST Site (TU504), RFA at Eight Sites (URS 2014b), Page 4-3**

NMED Comment: Polynuclear Aromatic Hydrocarbons (PAHs) appear to be in exceedance of the NMED residential SSLs at soil boring location SB-08 at 0-5 feet bgs and 10-15 feet bgs. Because the reported concentration in exceedance of the residential SSL at 0-5 feet bgs falls within the zone of influence for residential and ecological receptors (0-10 feet bgs) the Permittee must carry the identified PAH concentrations forward through the assessment process by evaluating human health and ecological risk.

8. **Section 7.3, Sampling Objectives (DA508), Page 7-3**

Permittee's Statement: "In addition to PAH, arsenic was identified exceeding residential screening levels in the soils at DA508. However, based on the low level arsenic detections (similar to background) and low frequency of other [Chemicals of Potential Concern] COPCs that are related to suspect contamination, the presence of arsenic appeared to be related to high background concentrations and was not indicative of a release. Therefore, no further evaluation of arsenic was warranted. If determined to be necessary, arsenic concentrations at DA508 will be compared to arsenic levels established by the background study that will be completed for Cannon AFB."

NMED Comment: Arsenic has been identified as a COPC that is above the NMED SSLs indicating risk to human health and the environment for the site. If the Permittee cannot demonstrate that reported arsenic concentrations are representative of regional background concentrations, arsenic must be included in the risk evaluation.

9. **Section 8.4, Sampling Locations, Frequencies and Analysis (SD022/SWMU 73), Page 8-3**

   NMED Comment: While the proposed sampling does appear to address the outstanding PAH concentration exceedance at sample location SB-05, additional assessment is required at SD022/SWMU 73. The NMED Approval letter for the RFA Work Plan dated November 16, 2012 specifically states that the proposed scope of work did not address the full potential extent of contamination. Sediments within the storm water ponding area were not sampled for potential COCs. Additional sampling and evaluation is required to determine the extent of contamination. Alternatively, the Permittee may amend the current proposed sampling program to include sampling of ponding area sediments, subsurface soils and surface water. Additional sampling also appears necessary along the perimeter of the ponding area.

   Additionally, as arsenic is in exceedance of residential SSLs at surface soil sample locations SB-01(4.5 mg/kg) and SB-02 (4.5 mg/kg), the Permittee must demonstrate that the concentrations are within the background levels established upon completion of the background study for arsenic proposed in Section 10 of the RFI WP. If it is not demonstrated that arsenic concentrations reflect regional background concentrations, the Permittee must carry arsenic through the risk assessment process.

10. **Section 9.3, Sampling Objectives (TA129), Page 9-3**

    Permittee's Statement: "If determined to be necessary, previously obtained arsenic concentrations at TA129 will be compared to arsenic levels established by the background study that will be completed for Cannon AFB".

    NMED Comment: The residential SSL and currently established background concentration for arsenic have been exceeded at 9 out of 10 boring locations at the 0-5 foot bgs sample interval at TA129 and must be further evaluated. If the proposed background study and statistical analysis are inconclusive, arsenic must be carried through the assessment process.

11. **Section 10, Outstanding Thallium Exceedances, Page 10-2 and 10-10**

    NMED Comment: In addition to arsenic, thallium was detected at concentrations greater than the residential SSL and facility specific background concentration at SWMU 6 (removed tank No. 129) and SWMU 102 (wastewater effluent discharge). Thallium must be carried through the risk assessment process.

12. Appendix A, Analytical Laboratory Information, Reference Limits and Evaluation Tables

NMED Comment: NMED SSLs and VISLs have been updated as of July 2015. The Permittee must ensure all laboratory procedures and detection limits conform to NMED and Environmental Protection Agency (EPA) guidance.

If you have any questions regarding this letter, please contact Gabriel Acevedo at (505) 476-6043.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
G. Acevedo, NMED HWB
B. Wear, NMED HWB
N. Dhawan, NMED HWB
B. Chavez, CAFB
R. Lancaster, CAFB
S. Kottkamp, CAFB

File: CAFB 2015, 12 Site Work Plan, Revision 1, Approval with Modifications

B.1 – Boring Logs

HTRW DRILLING LOG

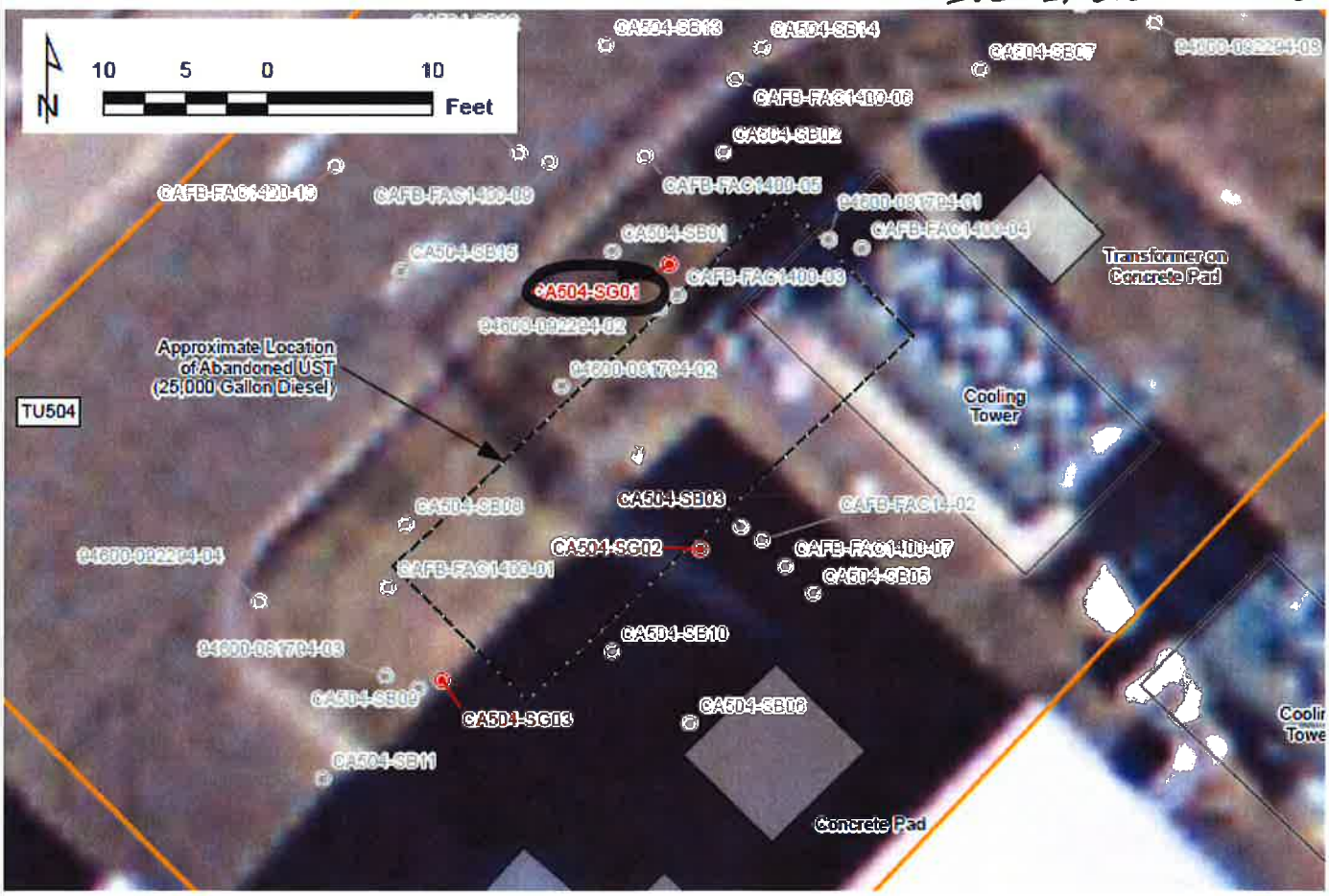
DISTRICT: FPM. Remediations, Inc./ 60425210.23446540.0032AB	HOLE NUMBER: CA504-SG01	
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF SHEETS 2
3. PROJECT: Cannon AFB PBR	4. LOCATION: Cannon AFB, Clovis, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig	6. MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, Geoprobe 2.5 inch OD Rods	8. HOLE LOCATION: Site TU504	
	9. SURFACE ELEVATION: 4313 Feet Above Mean Sea level	
	10. DATE STARTED: 2/5/2016	11. DATE COMPLETED: 2/5/2016
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: NOT Encountered	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: N/A	
14. TOTAL DEPTH OF HOLE: 10.0 Feet Below Ground Surface	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): N/A	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
N/A	—	—	N/A

20. SAMPLES FOR CHEMICAL	VOC	TPH-GRO/DRO/ORO	SVOCs	TAL Metals/PCBs	PAHs	21. TOTAL CORE RECOVERY
2 Samples	X	—	X	—	—	90 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Vapor Monitoring Point	—	—	Vapor Monitoring Point	[signature]

LOCATION SKETCH/COMMENTS SCALE: See Sketch Below



PROJECT	HOLE NO.
Cannon AFB PBR	CA504-SG01

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. CA508-SG01

PROJECT: Cannon AFB PBR

Inspector: Kyle Kloewer

SHEET 2 OF 2 SHEETS

ELEV. a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS d.	GEOTECH SAMPLE OR CORE BOX NO. e.	ANALYTICAL SAMPLE NO. f.	BLOW COUNTS g.	REMARKS h.
	0	GRASS		N/A		PP=Pocket Pen (Tons/FT²)	BKG = Background BGS = Below Ground Surface FS=Field Screening HS = Head Space Screening PPM=Parts Per Million ND=Non Detect R=Run (feet)/Recovery (feet)
		FILL SAND - Soft, moist, light Red to light Brown, fine grain	FS=ND				R=5 Feet Rec=5 Feet
	1						
	2		FS=ND				
	3	Becoming light Red					
	4		FS=ND HS=0.8 PPM		CA508-SG01-S-005		
	5						R=5 Feet Rec=4 Feet
	6	trace gravel up to 1/8 inch"					
	7						
	8						
	9		FS=ND HS=ND		CA508-SG01-S-010		plus duplicate CA508-SG01-S-210
	10	Bottom of Boring @ 10.0 Feet BGS					

Project: Cannon AFB PBR

HOLE NO. CA508-SG01

ENG FORM 5056-R, AUG 94

(Proponent: CECW-EG)

HTRW DRILLING LOG

DISTRICT: FPM. Remediations, Inc./ 60425210.23446540.0032AB	HOLE NUMBER: CA504-SG02	
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF SHEETS 2
3. PROJECT: Cannon AFB PBR	4. LOCATION: Cannon AFB, Clovis, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig	6. MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, Geoprobe 2.5 inch OD Rods	8. HOLE LOCATION: Site TU504	
	9. SURFACE ELEVATION: 4317 Feet Above Mean Sea level	
	10. DATE STARTED: 2/5/2016	11. DATE COMPLETED: 2/5/2016
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: NOT Encountered	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: N/A	
14. TOTAL DEPTH OF HOLE: 10.0 Feet Below Ground Surface	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): N/A	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
N/A	—	—	N/A

20. SAMPLES FOR CHEMICAL	VOC	TPH-GRO/DRO/ORO	SVOCs	TAL Metals/PCBs	PAHs	21. TOTAL CORE RECOVERY
2 Sample	X	—	X	—	—	85 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Vapor Monitoring Point	—	—	Vapor Monitoring Point	[signature]

LOCATION SKETCH/COMMENTS

SCALE: See sketch Below

PROJECT	HOLE NO.
Cannon AFB PBR	CA504-SG02

ENG FORM 5056-R, AUG 94

(Proponent: CECW-EG)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. CA508-S602

PROJECT: Cannon AFB PBR

Inspector: Kyle Kloewer

SHEET 2 OF 2 SHEETS

ELEV. a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS d.	GEOTECH SAMPLE OR CORE BOX NO. e.	ANALYTICAL SAMPLE NO. f.	BLOW COUNTS g.	REMARKS h.
	0	GRASS		N/A		PP=Pocket Pen (Tons/FT²)	BKG = Background BGS = Below Ground Surface FS=Field Screening HS = Head Space Screening PPM=Parts Per Million ND=Non Detect R=Run (feet)/Recovery (feet)
		Silty CLAY (CL) - Soft, moist, Dark Brown, low plastic, Some Silt. Root traces					R=5 Feet Rec=5 Feet ~~Ogallala~~ KK ~~Formation~~ KK
	1		FS=ND				
		FILL SAND - loose, moist Red, fine grain. trace gravel up to 1/8 inch					
	2		FS=ND				
	3						
	4		FS=ND HS=ND		CA508-S602-S-005	4 KK	
	5						R=5 Feet Rec=3.5 Feet
	6		FS=ND				
	7	Caliche nodules up to 1/8 inch					
	8		FS=ND				
	9		FS=ND HS=ND		CA508-S602-S-010	4 KK	plus Duplicate CA508-S602-S-210
	10	Bottom of Boring @ 10.0 Feet BGS					

Project: Cannon AFB PBR

HOLE NO. CA508-S602

ENG FORM 5056-R, AUG 94

(Proponent: CECW-EG)

HTRW DRILLING LOG

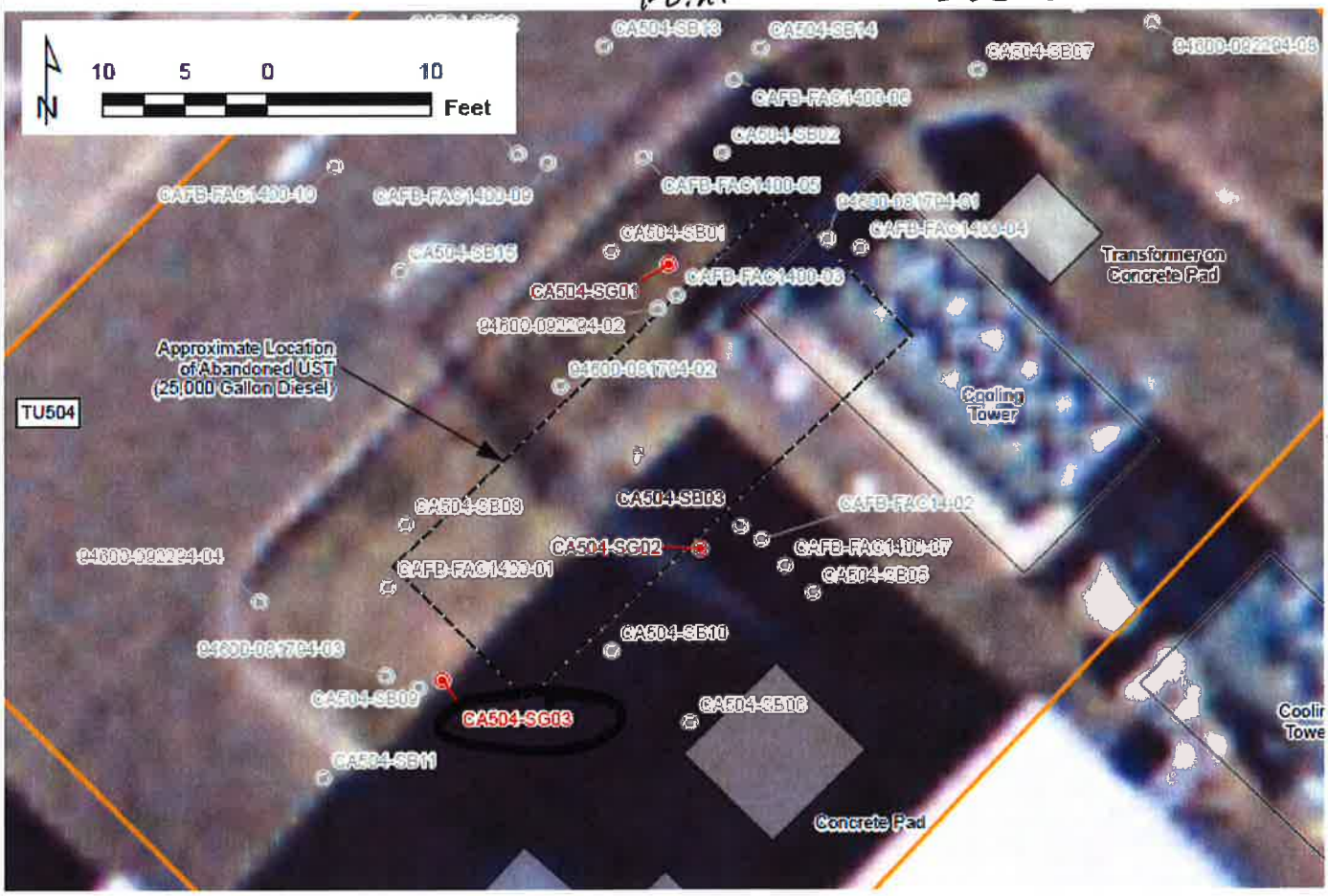
DISTRICT: FPM. Remediations, Inc./ 60425210.23446540.0032AB	HOLE NUMBER: CA504-SG03	
1. COMPANY NAME: URS Group, Inc.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services	SHEET 1 OF SHEETS 2
3. PROJECT: Cannon AFB PBR	4. LOCATION: Cannon AFB, Clovis, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig	6. MANUFACTURER'S DESIGNATION OF DRILL: Geoprobe 7822 DT	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 Foot, Geoprobe MC5 Macrocore Sampler; 5 Foot, Geoprobe 2.5 inch OD Rods	8. HOLE LOCATION: Site TU504	
	9. SURFACE ELEVATION: 4317 Feet Above Mean Sea level	
	10. DATE STARTED: 2/5/2016	11. DATE COMPLETED: 2/5/2016
12. OVERBURDEN THICKNESS: N/A	15. DEPTH GROUNDWATER ENCOUNTERED: NOT Encountered	
13. DEPTH DRILLED INTO ROCK: N/A	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING COMPLETED: N/A	
14. TOTAL DEPTH OF HOLE: 10.0 Feet Below Ground Surface	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): N/A	

18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
N/A	—	—	N/A

20. SAMPLES FOR CHEMICAL	VOC	TPH-GRO/DRO/ORO	SVOCs	TAL Metals/PCBs	PAHs	21. TOTAL CORE RECOVERY
2 Samples	X	—	X	—	—	100 %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Vapor Monitoring Point	—	—	VAPOR Monitoring Point	[signature]

LOCATION SKETCH/COMMENTS SCALE: See Sketch Below



PROJECT	HOLE NO.
Cannon AFB PBR	CA504-SG03

ENG FORM 5056-R, AUG 94 (Proponent: CECW-EG)

HTRW DRILLING LOG (CONTINUATION SHEET)

HOLE NO. CA504-S603

PROJECT: Cannon AFB PBR

Inspector: Kyle Kloewer

SHEET 2 OF 2 SHEETS

ELEV. a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS d.	GEOTECH SAMPLE OR CORE BOX NO. e.	ANALYTICAL SAMPLE NO. f.	BLOW COUNTS g.	REMARKS h.
	0	GRASS		N/A		PP=Pocket Pen (Tons/FT^2)	BKG = Background BGS = Below Ground Surface FS=Field Screening HS = Head Space Screening PPM=Parts Per Million ND=Non Detect R=Run (feet)/Recovery (feet)
		Silty CLAY (CL) - Soft, moist, Dark Brown to Black, Low plastic, Some Silt	FS=ND				R=5 Feet Rec=5 Feet
	1						
	2	FILL SAND - Soft, moist, Light Red to Light Brown, fine grain					
	3		FS=ND				
	4		FS=ND HS=1.2 PPM		CA504-S603-S-005		
	5						R=5 Feet Rec=5 Feet
	6						
	7		FS=ND				
	8						
	9		FS=ND		CA504-S603-S-010		plus MS/MSD
	10	Bottom of Boring @ 10.0 Feet BGS					

Project: Cannon AFB PBR

HOLE NO. CA504-S603

B.2 – Sample Collection Field Sheets

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** PROJECT NO. **23446540**

SAMPLE NO. CA504-SG01-S-005 BORING NO. CA504-SG01-~~S~~ VH

DATE/TIME COLLECTED: 2/5/16 1057 PERSONNEL: K. Kloewer

SAMPLE METHOD / DEPTH: direct push 4.0-5.0' J. Hoppmann

SAMPLE MEDIA: (SOIL) SEDIMENT SOIL GAS

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. NA

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. NA

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2x40 mL VOA	~~VA~~ NaSO4, 4°C	VOCs (8260C)
1x 40 mL VOA	MeOH, 4°C	↓
1x 4 oz jar	4°C	SVOCs (8270D)

PID MEASUREMENTS

Background	0.0 ppm
Breathing zone	0.0 ppm
Boring	0.0 ppm
Headspace	0.8 ppm

SAMPLE DESCRIPTION

DEPTH: 4.0-5.0' DESCRIPTION: Fill sand (SP), soft, moist, light red, fine grained

GENERAL COMMENTS

None

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** PROJECT NO. **23446540**

SAMPLE NO. CA504-SG01-S-010 BORING NO. CA504-SG01-~~S~~ VH

DATE/TIME COLLECTED: 2/5/16 1110 PERSONNEL: K. Kloewer

SAMPLE METHOD / DEPTH: direct push 9.0-10.0' J. Hoppmann

SAMPLE MEDIA: (SOIL) SEDIMENT SOIL GAS

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. NA

SAMPLE QC DUPLICATE: (YES) NO DUPLICATE SAMPLE NO. CA504-SG01-S-210

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
4 x 40 mL VOA	NaSO4, 4°C	VOCs (8260C)
2 x 40 mL VOA	MeOH, 4°C	⊥
2 x 4 oz jar	4°C	SVOCs (8270D)

PID MEASUREMENTS

Background	0.0 ppm
Breathing zone	0.0 ppm
Boring	0.0 ppm
Headspace	0.0 ppm

SAMPLE DESCRIPTION

DEPTH: 9.0-10.0' DESCRIPTION: Fill sand, soft, moist, light red, fine grained, trace gravel up to 1/8"

GENERAL COMMENTS

Field Duplicate collected at 1112

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR

PROJECT NO. 23446540

SAMPLE NO. CA504-SG02-S-005

BORING NO. CA504-SG02-S

DATE/TIME COLLECTED: 2/5/16 1233

PERSONNEL: K. Kloewer, J. Hoppmann

SAMPLE METHOD / DEPTH: direct push 4.0-5.0'

SAMPLE MEDIA: SOIL SEDIMENT SOIL GAS

SAMPLE QA SPLIT: YES NO

SPLIT SAMPLE NO. NA

SAMPLE QC DUPLICATE: YES NO

DUPLICATE SAMPLE NO. NA

MS/MSD REQUESTED: YES NO

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2 x 40 mL VOA	$NaSO_4$, 4°C	VOCs ~~(8260)~~ JA (8260C)
1 x 40 mL VOA	MeOH, 4°C	
1 x 4 oz jar	4°C	SVOCs (8270D)

PID MEASUREMENTS

Background	0.0 ppm
Breathing zone	0.0 ppm
Boring	0.0 ppm
Headspace	0.0 ppm

SAMPLE DESCRIPTION

DEPTH: 4.0-5.0'

DESCRIPTION: Fill Sand(SP), loose, moist, red, fine grained, trace gravel up to 1/8 inch.

GENERAL COMMENTS

None

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: Cannon AFB PBR

PROJECT NO. 23446540

SAMPLE NO. CA504-SG02-S-010

BORING NO. CA504-SG02-S-VH

DATE/TIME COLLECTED: 2/5/16 1244

PERSONNEL: K. Kloewer, J. Hoppmann

SAMPLE METHOD / DEPTH: direct push 9.0-10.0'

SAMPLE MEDIA: (SOIL) SEDIMENT SOIL GAS

SAMPLE QA SPLIT: YES (NO)

SPLIT SAMPLE NO. NA

SAMPLE QC DUPLICATE: (YES) NO

DUPLICATE SAMPLE NO. CA504-SG02-S-210

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
4x40 mL VOA	$NaSO_4$, 4°C	VOCs (8260C)
2x40 mL VOA	MeOH, 4°C	⊥
2x 4oz jar	4°C	SVOCs (8270D)

PID MEASUREMENTS

Background	0.0 ppm
Breathing zone	0.0 ppm
Boring	0.0 ppm
Headspace	0.0 ppm

SAMPLE DESCRIPTION

DEPTH: 9.0-10.0' DESCRIPTION: Fill sand (SP), loose, moist, red, fine grained, trace gravel up to 1/8 inch

GENERAL COMMENTS

Field Duplicate collected at 1246

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR**

PROJECT NO. **23446540**

SAMPLE NO. CA504-SG03-S-005 ~~CA504-SG03-005~~ JH

BORING NO. CA504-SG03-S JH

DATE/TIME COLLECTED: 2/5/16 1012

PERSONNEL: K. Kloewer, J. Hoppmann

SAMPLE METHOD / DEPTH: direct push 4.0-5.0'

SAMPLE MEDIA: (SOIL) SEDIMENT SOIL GAS

SAMPLE QA SPLIT: YES (NO)

SPLIT SAMPLE NO. NA

SAMPLE QC DUPLICATE: YES (NO)

DUPLICATE SAMPLE NO. NA

MS/MSD REQUESTED: YES (NO)

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
2x 40 mL VOA	$NaSO_4$, 4°C	VOCs (8260C)
1x 40 mL VOA,	MeOH, 4°C	⊥
1x 4 oz glass jar	4°C	SVOCS (8270D)

PID MEASUREMENTS

Background	0.0 ppm
Breathing zone	0.0 ppm
Boring	0.0 ppm
Headspace	1.2 ppm

SAMPLE DESCRIPTION

DEPTH: 4.0-5.0'

DESCRIPTION: Fill Sand (SP), soft, moist, light red to light brown, fine grained

GENERAL COMMENTS

None

SOIL SAMPLE COLLECTION FIELD SHEET

GENERAL INFORMATION

SITE NAME: **Cannon AFB PBR** PROJECT NO. **23446540**

SAMPLE NO. CA504-SG03-S-010 BORING NO. CA504-SG03

DATE/TIME COLLECTED: 2/5/16 1036 PERSONNEL: K. Kloewer, J. Hoppmann

SAMPLE METHOD / DEPTH: direct push 9.0-10.0'

SAMPLE MEDIA: (SOIL) SEDIMENT SOIL GAS

SAMPLE QA SPLIT: YES (NO) SPLIT SAMPLE NO. NA

SAMPLE QC DUPLICATE: YES (NO) DUPLICATE SAMPLE NO. NA

MS/MSD REQUESTED: (YES) NO

SAMPLE CONTAINERS, PRESERVATIVES, ANALYSIS

Sample Container	Preservative	Analysis Requested
4x 40 mL VOA	$NaSO_4$, 4°C	VOCs (8260C)
2x 40 mL VOA	MeOH, 4°C	↓
2x 4oz jar	4°C	SVOCs (8270D)

PID MEASUREMENTS

Background	0.0 ppm
Breathing zone	0.0 ppm
Boring	0.0 ppm
Headspace	0.0 ppm

SAMPLE DESCRIPTION

DEPTH: 9.0-10.0' DESCRIPTION: Fill Sand, soft, moist, light red to light brown, fine grained

GENERAL COMMENTS

MS/MSD CA504-SG03-S-110 taken at 1037

C.1 – Analytical Data – Soil Samples

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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

TO-15

INVENTORY SHEET

Work Order #: 1602253A

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Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	3/3/16
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1602253A

Work Order Summary

CLIENT:	Mr. Jeff Aust AECOM 12120 Shamrock Plaza Suite 300 Omaha, NE 68154	**BILL TO:**	Accounts Payable Austin AECOM P.O. BOX 203970 Austin, TX 78720-1088
PHONE:	(402) 952-2516	**P.O. #**	320236
FAX:	(402) 952-2591	**PROJECT #**	60425210.23446540.0032AB Cannon AFB
DATE RECEIVED:	02/11/2016	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	02/20/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	CA504-SG01-005	TO-15	10.0 "Hg	5 psi
01AA	CA504-SG01-005 Lab Duplicate	TO-15	10.0 "Hg	5 psi
02A	CA504-SG01-010	TO-15	10.0 "Hg	5 psi
03A	CA504-SG03-005	TO-15	10.5 "Hg	5 psi
04A	CA504-SG03-010	TO-15	9.5 "Hg	5 psi
05A	Lab Blank	TO-15	NA	NA
06A	CCV	TO-15	NA	NA
07A	LCS	TO-15	NA	NA
07AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 02/20/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
DoD QSM 4.2 TO-15
AECOM
Workorder# 1602253A

Four 6 Liter Summa Canister (100% Certified) samples were received on February 11, 2016. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Modifications to DoD QSM 4.2 requirements are listed in the table below.

Requirement	*TO-15 DoD QSM 4.2*	*ATL Modifications*
DoD QSM 4.2 Box 34 Calibration of surrogates	Quantification of surrogates requires a multi-point calibration.	Quantification achieved using a multipoint calibration at a single concentration, analogous to internal standards.
DoD QSM 4.2 Box 32 Second Source Standard	Second Source standard must be from a different manufacturer.	Second Source standard is from a different manufacturer or same manufacturer with different lot number.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified (0.2 ppbv for compounds reported at 0.5 ppbv and 0.8 ppbv for compounds reported at 2.0 ppbv) may be false positives.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Sample Extract Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
CA504-SG01-005	1602253A-01A	2/ 9/2016	2/11/2016	NA	8	2/17/2016	NA	Good
CA504-SG01-005 Lab D	1602253A-01AA	2/ 9/2016	2/11/2016	NA	8	2/17/2016	NA	Good
CA504-SG01-010	1602253A-02A	2/ 9/2016	2/11/2016	NA	8	2/17/2016	NA	Good
CA504-SG03-005	1602253A-03A	2/ 9/2016	2/11/2016	NA	8	2/17/2016	NA	Good
CA504-SG03-010	1602253A-04A	2/ 9/2016	2/11/2016	NA	8	2/17/2016	NA	Good
Lab Blank	1602253A-05A	NA	NA	NA	NA	2/17/2016	NA	Good
CCV	1602253A-06A	NA	NA	NA	NA	2/17/2016	NA	Good
LCS	1602253A-07A	NA	NA	NA	NA	2/17/2016	NA	Good
LCSD	1602253A-07AA	NA	NA	NA	NA	2/17/2016	NA	Good

Sample Results and Raw Data

EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

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Client ID:	CA504-SG01-005		
Lab ID:	1602253A-01A	**Date/Time Analyzed:**	2/17/16 04:44 PM
Date/Time Collected:	2/9/16 04:43 PM	**Dilution Factor:**	2.01
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msd3.i / 3021710

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.78	1.6	3.2	Not Detected U
Ethyl Benzene	100-41-4	1.1	2.2	4.4	5.0
m,p-Xylene	108-38-3	1.1	2.2	4.4	23
o-Xylene	95-47-6	1.1	2.2	4.4	9.0
Toluene	108-88-3	1.2	1.9	3.8	4.9

U = The analyte was not detected above the MDL.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	98
4-Bromofluorobenzene	460-00-4	74-122	101
Toluene-d8	2037-26-5	82-119	103

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021710.d
Lab Smp Id: 1602253A-01A
Inj Date : 17-FEB-2016 16:44
Operator : js Inst ID: msd3.i
Smp Info : 200ml 34321
Misc Info : 10.0 Hg->5 psi
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 1
Dil Factor: 2.01000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.01000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	168255	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	127145			49.26- 109.26	75.57
5.592	5.592 (1.000)	49	218388			111.17- 171.17	129.80
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	612786	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	89489			0.00- 45.05	14.60
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.935	8.934 (1.000)	117	502869	25.0000		80.00- 120.00	100.00
8.935	8.934 (1.000)	82	246589			22.62- 82.62	49.04
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	212843	24.5798	24.580	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	105519			21.51- 81.51	49.58

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.702	7.695 (1.190)	98	573041	25.7965	25.796	80.00- 120.00	100.00
7.702	7.695 (1.190)	70	61877			0.00- 41.20	10.80
7.702	7.695 (1.190)	100	368877			34.69- 94.69	64.37
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	321864	25.3234	25.323	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	326950			85.32- 145.32	101.58
9.923	9.916 (1.111)	176	316573			65.83- 125.83	98.36
147 Toluene					CAS #: 108-88-3		
7.760	7.753 (1.199)	91	16549	0.65211	1.311	80.00- 120.00	100.00
7.760	7.753 (1.199)	92	9272			28.22- 88.22	56.03
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	6275	0.57123	1.148	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	18930			269.16- 329.16	301.64
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	35315	2.59726	5.220	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	65375			163.98- 223.98	185.12
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	13211	1.03400	2.078	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	27618			172.26- 232.26	209.05

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INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021710.d
Lab Smp Id: 1602253A-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 10.0 Hg->5 psi

Calibration Date: 17-FEB-2016
Calibration Time: 11:28

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	168255	-4.32
123 1,4-Difluorobenze	669296	401578	937014	612786	-8.44
163 Chlorobenzene-d5	524176	314506	733846	502869	-4.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 18-Feb-2016 15:51

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 17feb16
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1602253A-01A
Level: LOW Operator: js
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 10.0 Hg->5 psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.580	98.32	79-128
$ 146 Toluene-d8	25.000	25.796	103.19	82-119
$ 177 4-Bromofluorobenze	25.000	25.323	101.29	74-122

Data File: /chem/msd3.i/17feb16.b/3021710.d

Date : 17-FEB-2016 16:44

Client ID:

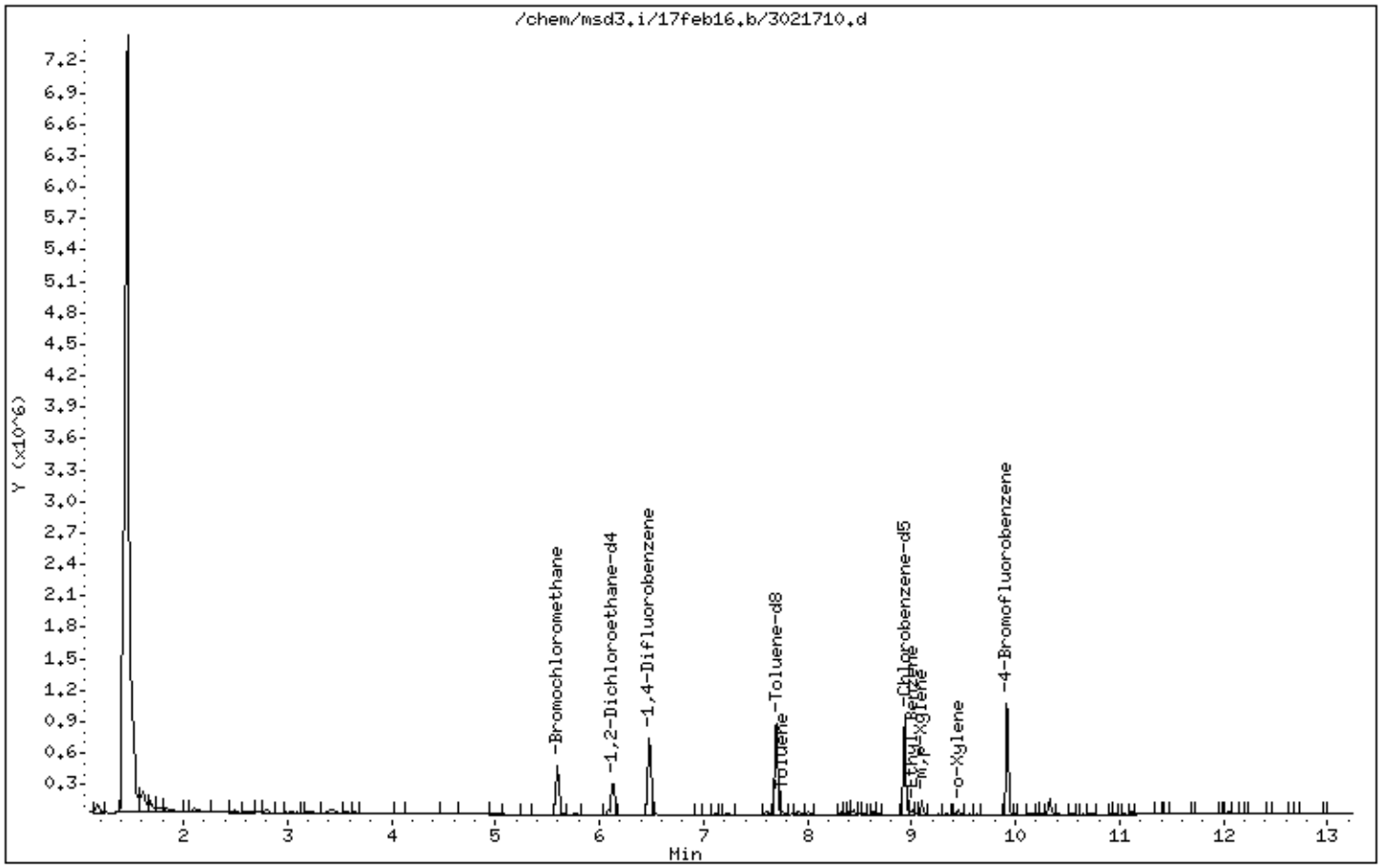
Instrument: msd3.i

Sample Info: 200ml 34321

Operator: js

Column phase: RTX-624

Column diameter: 0.25



Data File: /chem/msd3.i/17feb16.b/3021710.d

Date : 17-FEB-2016 16:44

Client ID:

Instrument: msd3.i

Sample Info: 200ml 34321

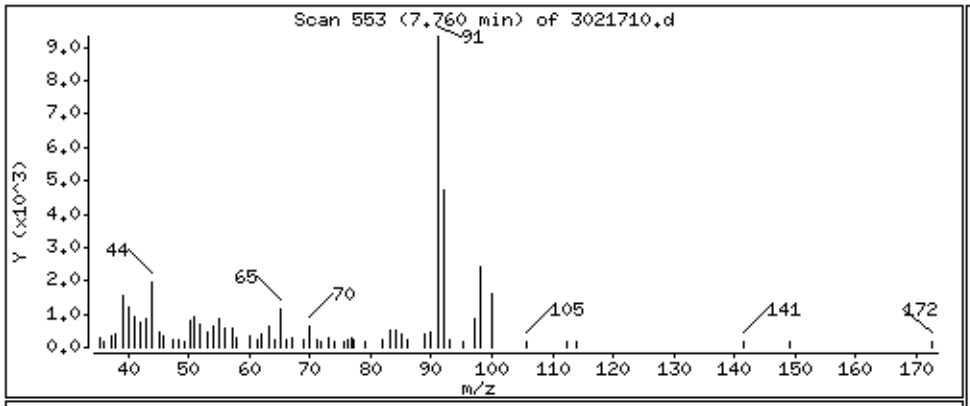
Operator: js

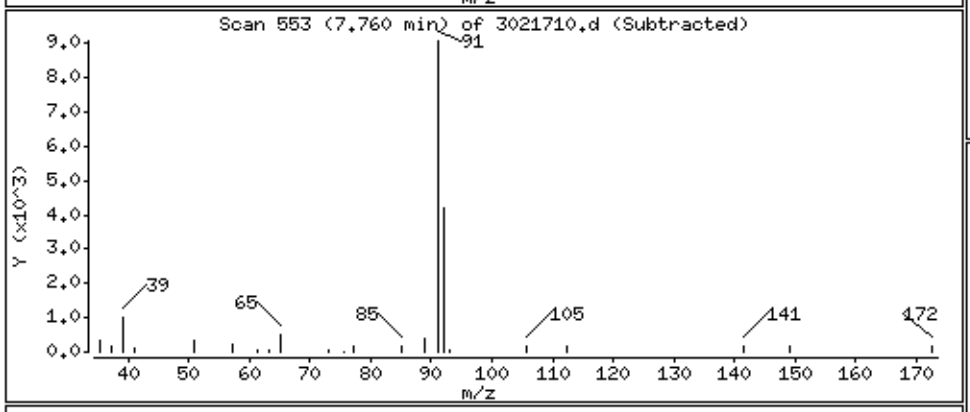
Column phase: RTX-624

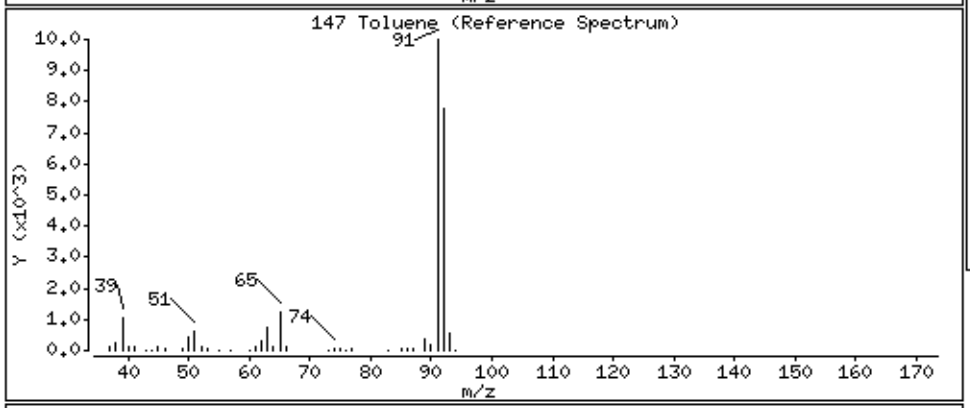
Column diameter: 0.25

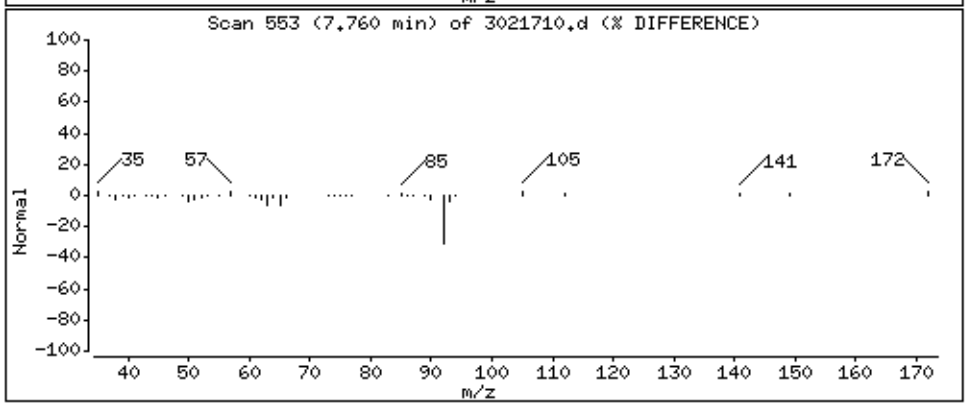
147 Toluene

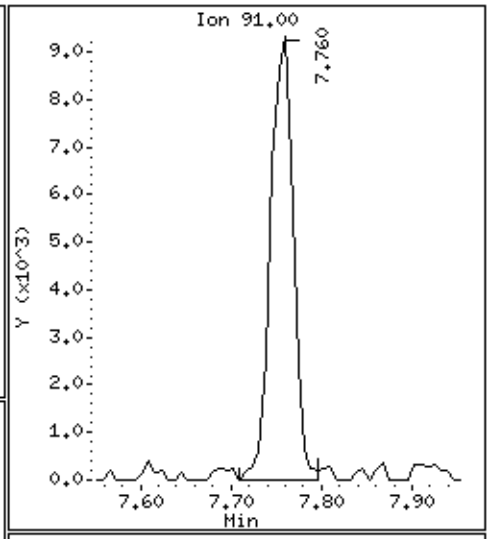
Concentration: 1.311 PPBV

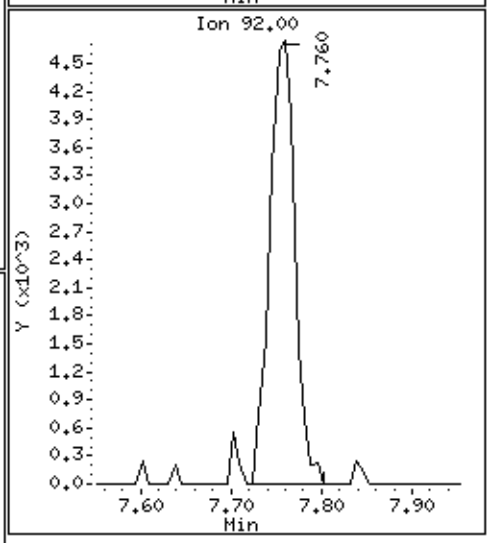












Data File: /chem/msd3.i/17feb16.b/3021710.d

Date : 17-FEB-2016 16:44

Client ID:

Instrument: msd3.i

Sample Info: 200ml 34321

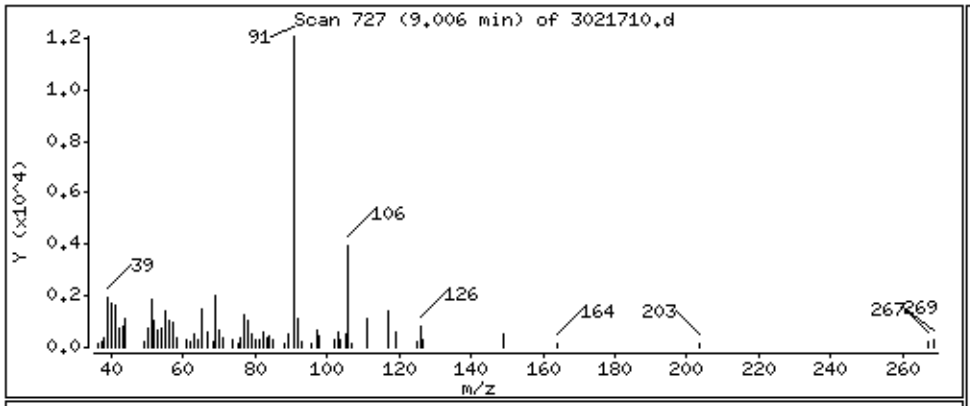
Operator: js

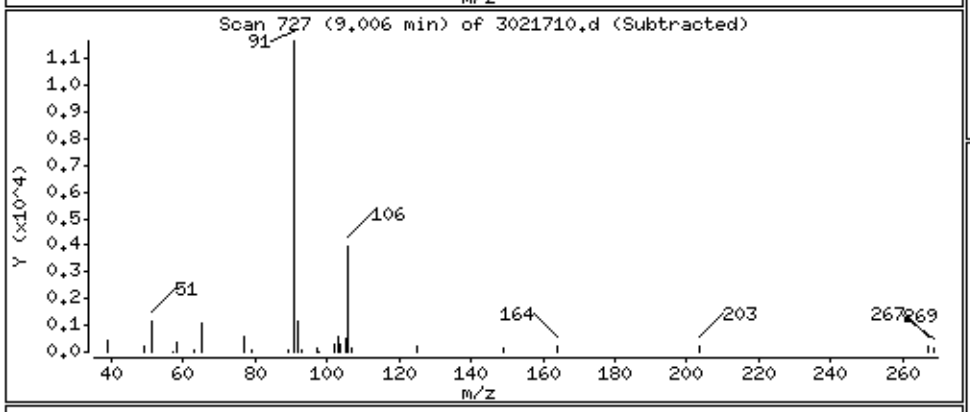
Column phase: RTX-624

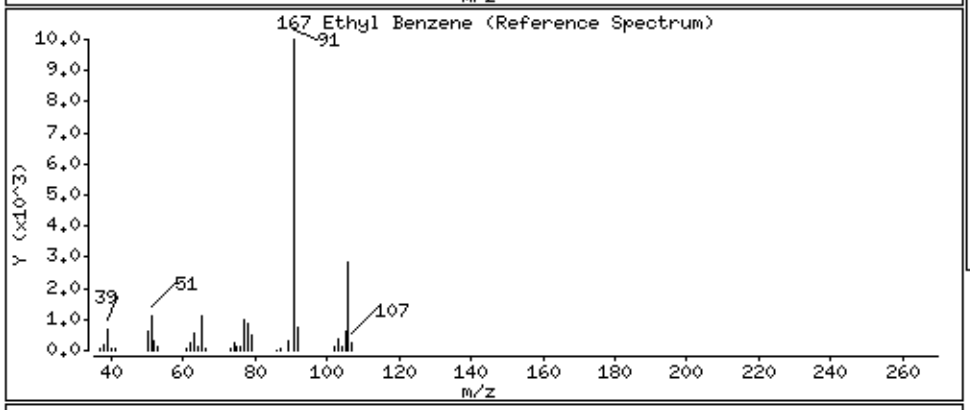
Column diameter: 0.25

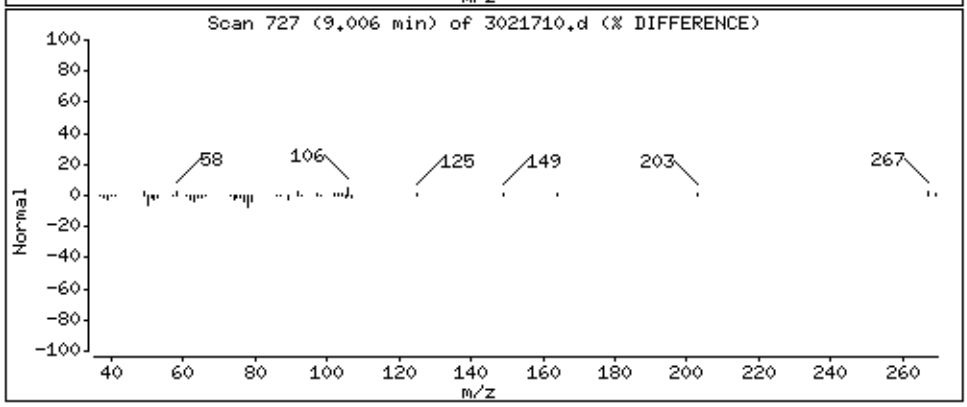
167 Ethyl Benzene

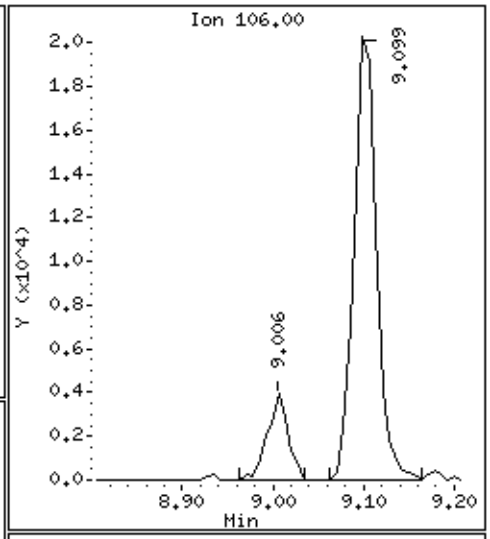
Concentration: 1.148 PPBV

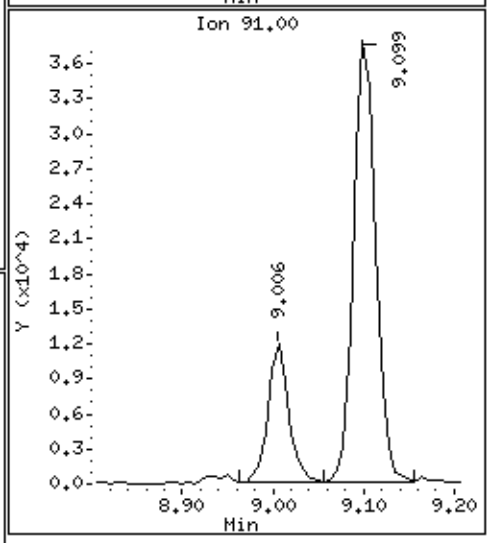












Data File: /chem/msd3.i/17feb16.b/3021710.d

Date : 17-FEB-2016 16:44

Client ID:

Instrument: msd3.i

Sample Info: 200ml 34321

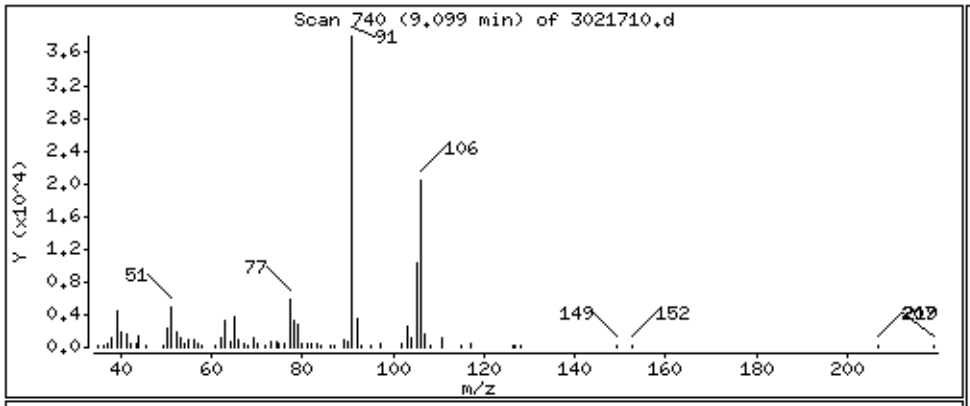
Operator: js

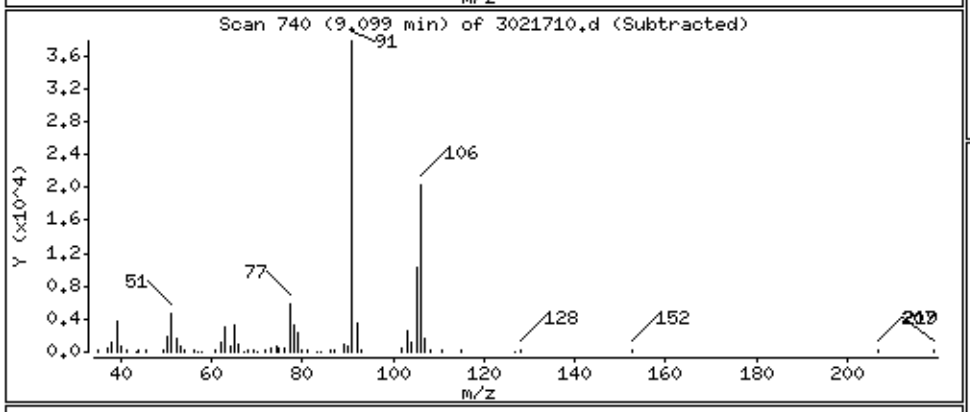
Column phase: RTX-624

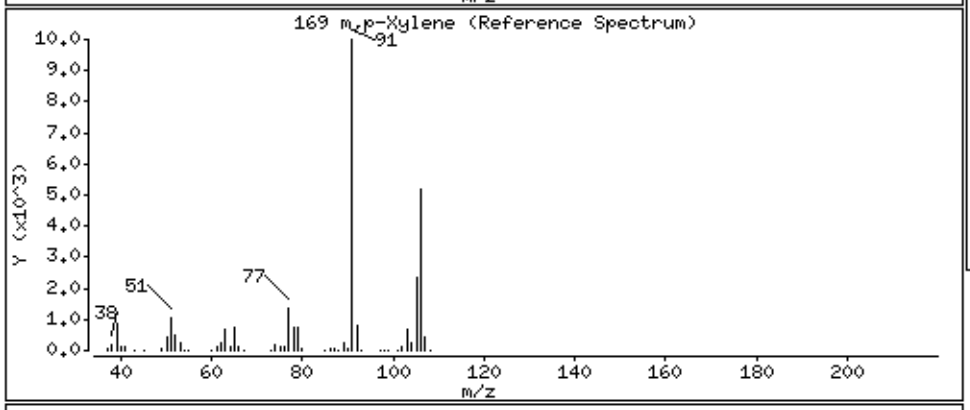
Column diameter: 0.25

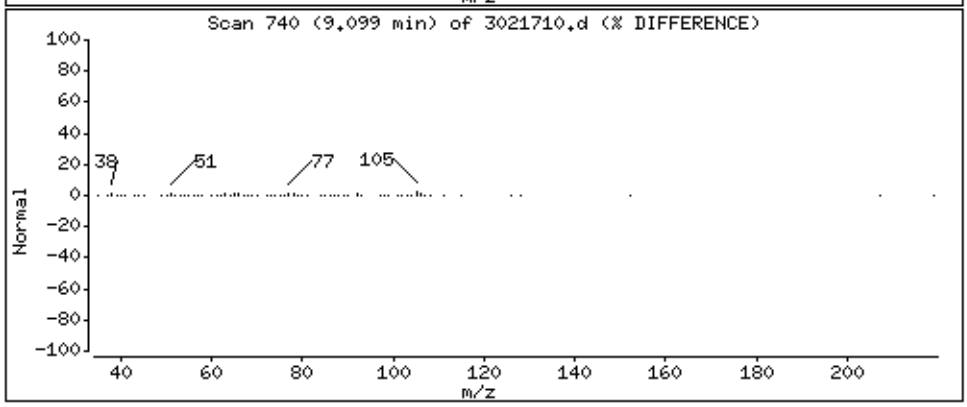
169 m,p-Xylene

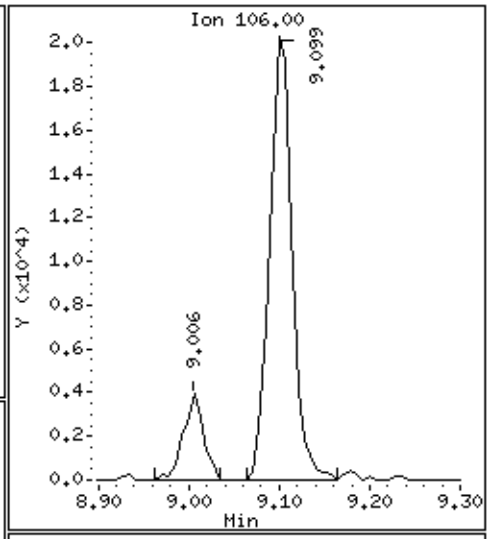
Concentration: 5.220 PPBV

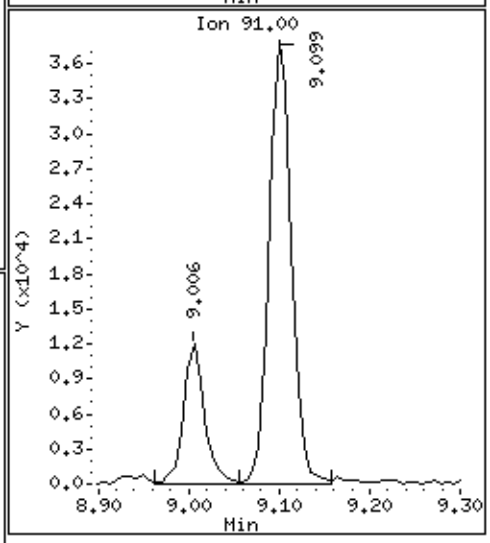












Data File: /chem/msd3.i/17feb16.b/3021710.d

Date : 17-FEB-2016 16:44

Client ID:

Instrument: msd3.i

Sample Info: 200ml 34321

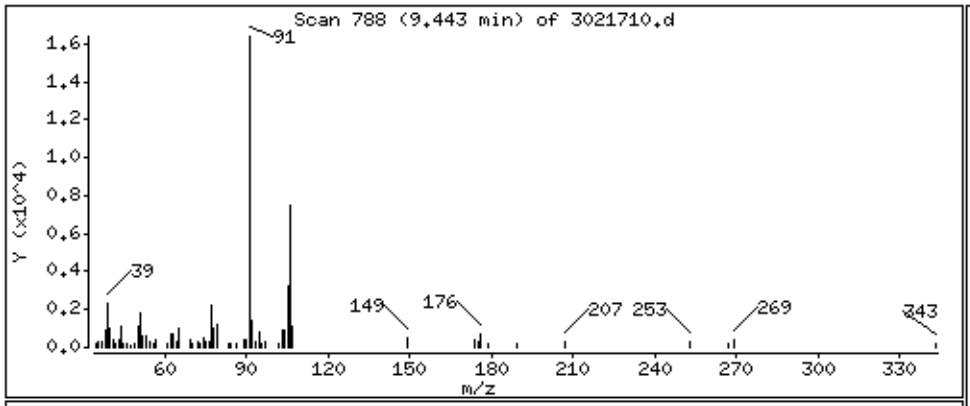
Operator: js

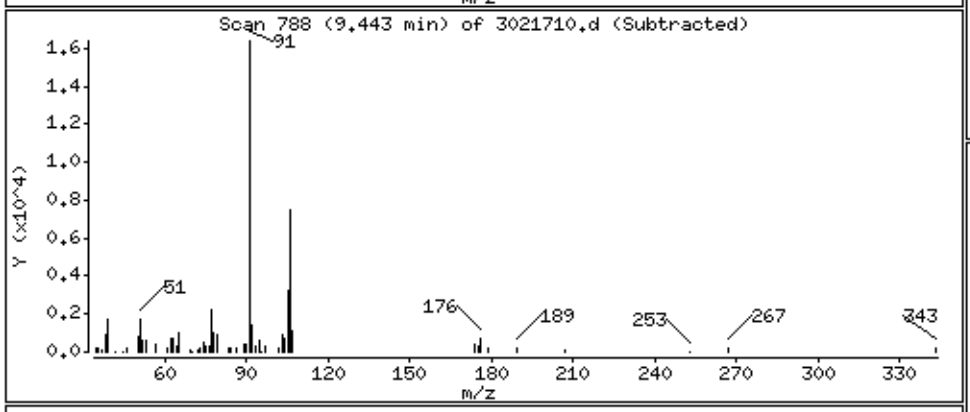
Column phase: RTX-624

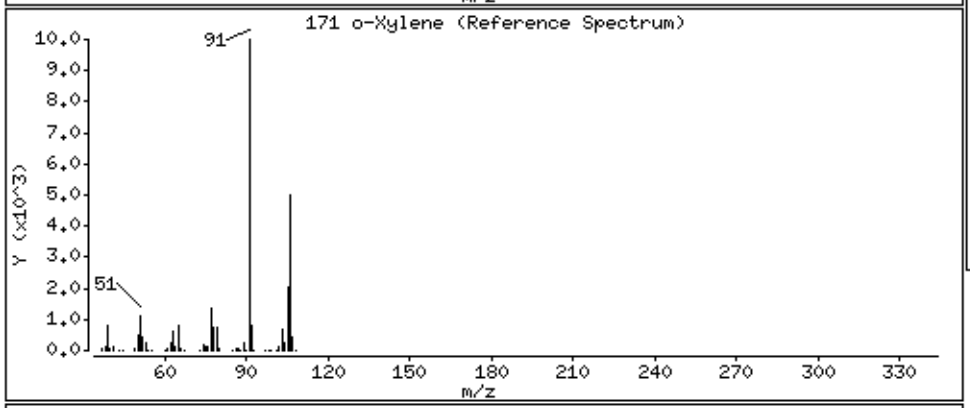
Column diameter: 0.25

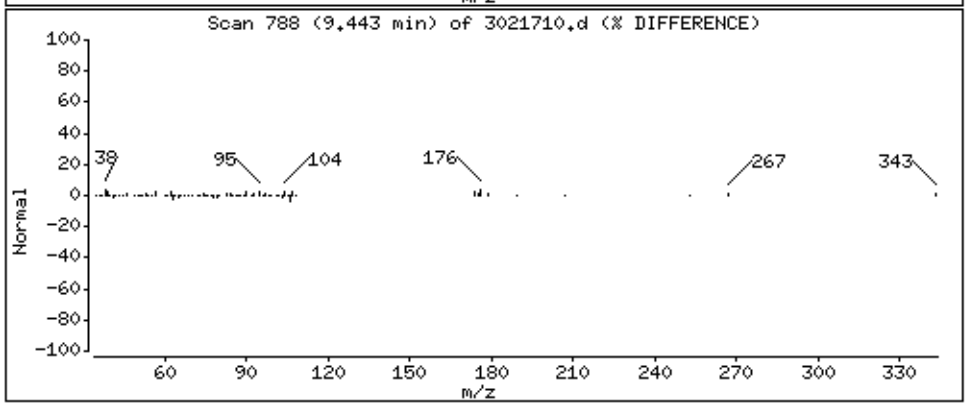
171 o-Xylene

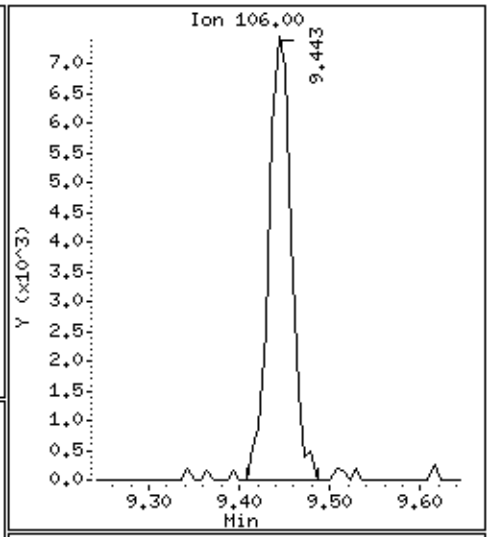
Concentration: 2.078 PPBV

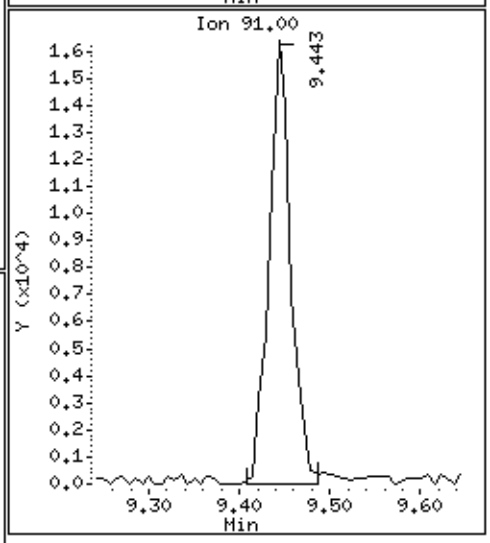












EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG01-005 Lab Duplicate		
Lab ID:	1602253A-01AA	**Date/Time Analyzed:**	2/17/16 05:10 PM
Date/Time Collected:	2/9/16 04:43 PM	**Dilution Factor:**	2.01
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msd3.i / 3021711

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.78	1.6	3.2	Not Detected U
Ethyl Benzene	100-41-4	1.1	2.2	4.4	5.4
m,p-Xylene	108-38-3	1.1	2.2	4.4	22
o-Xylene	95-47-6	1.1	2.2	4.4	9.5
Toluene	108-88-3	1.2	1.9	3.8	4.8

U = The analyte was not detected above the MDL.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	100
4-Bromofluorobenzene	460-00-4	74-122	104
Toluene-d8	2037-26-5	82-119	104

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021711.d
Lab Smp Id: 1602253A-01AA
Inj Date : 17-FEB-2016 17:10
Operator : js Inst ID: msd3.i
Smp Info : 200ml 34321
Misc Info : 10.0 Hg->5 psi
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 1
Dil Factor: 2.01000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.01000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	163519	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	128915			49.26- 109.26	78.84
5.592	5.592 (1.000)	49	216529			111.17- 171.17	132.42
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.488	6.474 (1.000)	114	607998	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	89278			0.00- 45.05	14.68
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	488074	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	248462			22.62- 82.62	50.91
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.138	6.124 (1.098)	65	210092	24.9649	24.965	80.00- 120.00	100.00
6.138	6.124 (1.098)	67	107319			21.51- 81.51	51.08

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.702	7.695 (1.187)	98	576310	26.1480	26.148	80.00- 120.00	100.00
7.695	7.695 (1.186)	70	59860			0.00- 41.20	10.39
7.702	7.695 (1.187)	100	367749			34.69- 94.69	63.81
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	319504	25.8997	25.900	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	327874			85.32- 145.32	102.62
9.916	9.916 (1.110)	176	307405			65.83- 125.83	96.21
147 Toluene					CAS #: 108-88-3		
7.760	7.753 (1.196)	91	16068	0.63816	1.283	80.00- 120.00	100.00
7.760	7.753 (1.196)	92	9627			28.22- 88.22	59.92
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	6662	0.62483	1.256	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	18012			269.16- 329.16	270.34
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	33526	2.54041	5.106	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	64425			163.98- 223.98	192.16
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	13541	1.09200	2.195	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	28589			172.26- 232.26	211.12

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021711.d
Lab Smp Id: 1602253A-01AA
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 10.0 Hg->5 psi

Calibration Date: 17-FEB-2016
Calibration Time: 11:28

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	163519	-7.01
123 1,4-Difluorobenze	669296	401578	937014	607998	-9.16
163 Chlorobenzene-d5	524176	314506	733846	488074	-6.89

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.49	0.22
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 18-Feb-2016 15:52

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 17feb16
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1602253A-01AA
Level: LOW Operator: js
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 10.0 Hg->5 psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.965	99.86	79-128
$ 146 Toluene-d8	25.000	26.148	104.59	82-119
$ 177 4-Bromofluorobenze	25.000	25.900	103.60	74-122

Data File: /chem/msd3.i/17feb16.b/3021711.d

Date : 17-FEB-2016 17:10

Client ID:

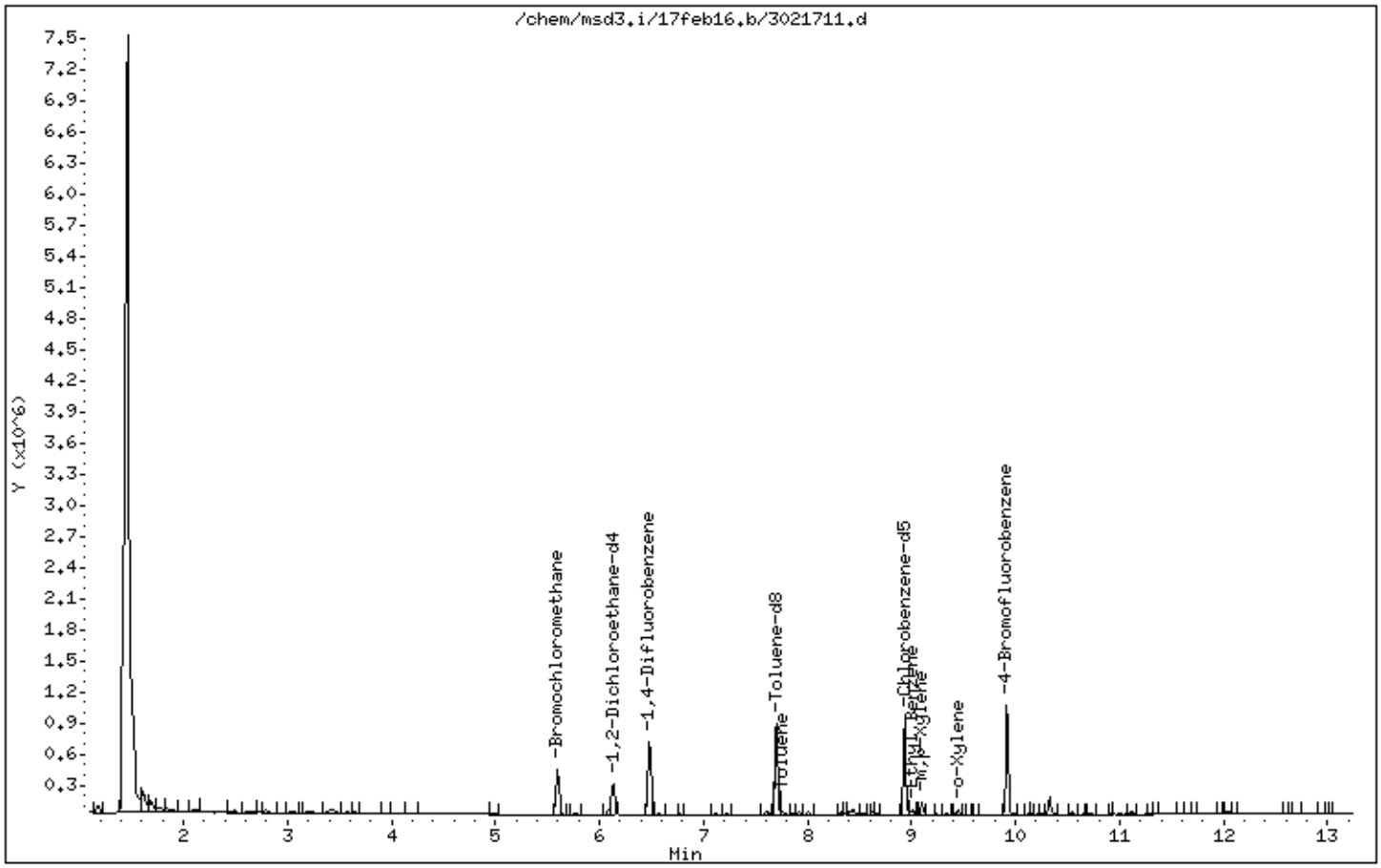
Instrument: msd3.i

Sample Info: 200ml 34321

Operator: js

Column phase: RTX-624

Column diameter: 0.25



Data File: /chem/msd3.i/17feb16.b/3021711.d

Date : 17-FEB-2016 17:10

Client ID:

Instrument: msd3.i

Sample Info: 200ml 34321

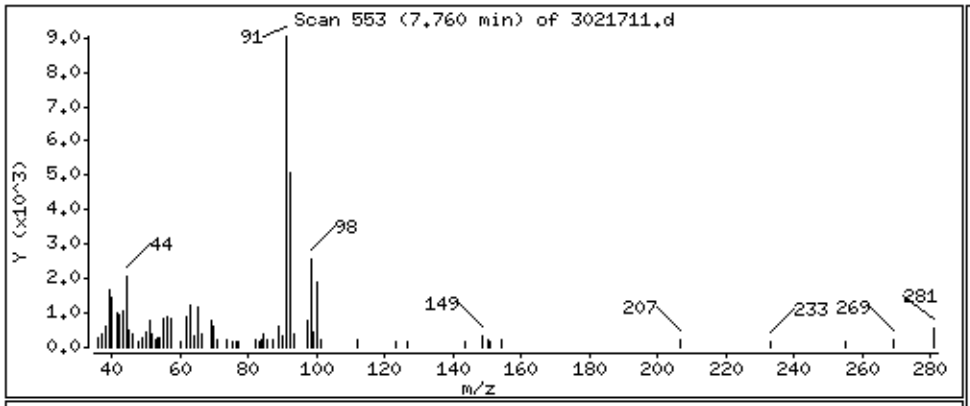
Operator: js

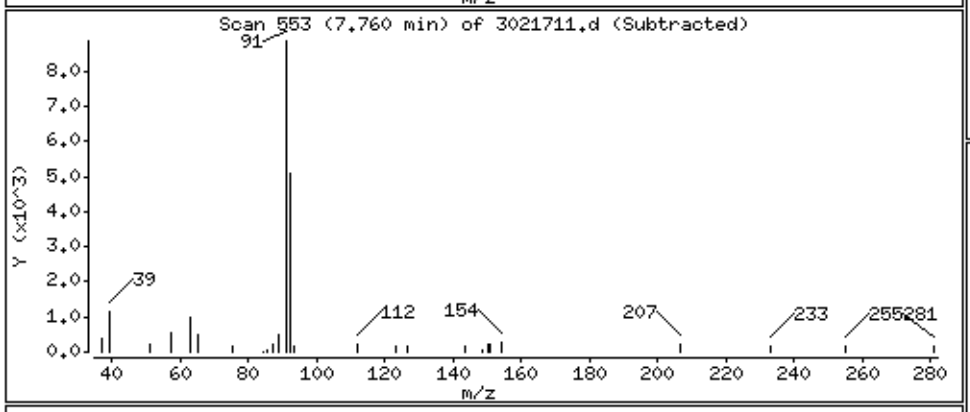
Column phase: RTX-624

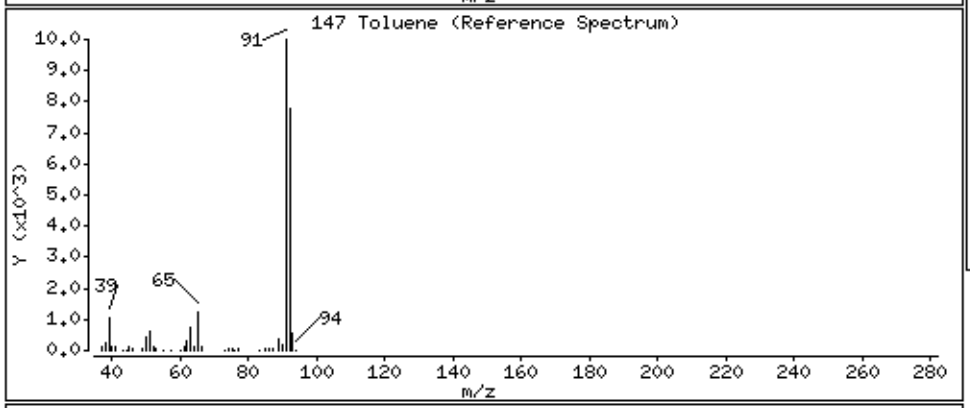
Column diameter: 0.25

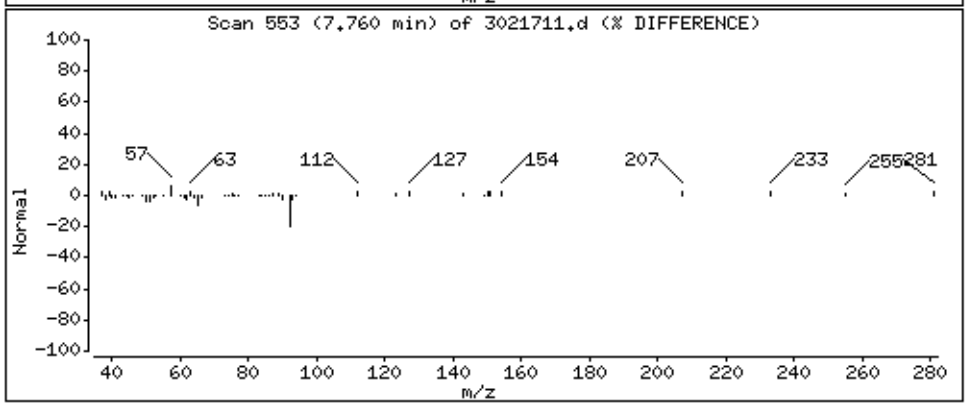
147 Toluene

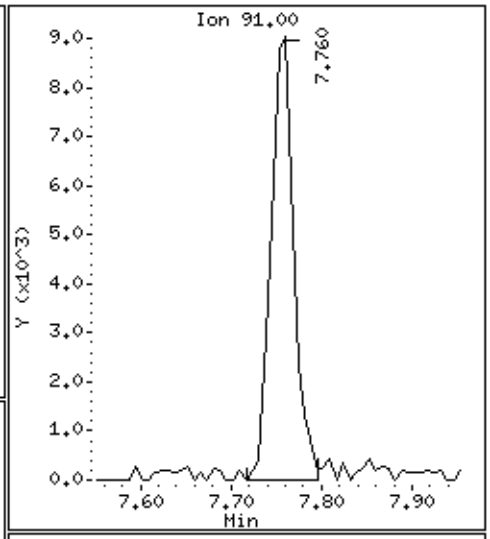
Concentration: 1.283 PPBV

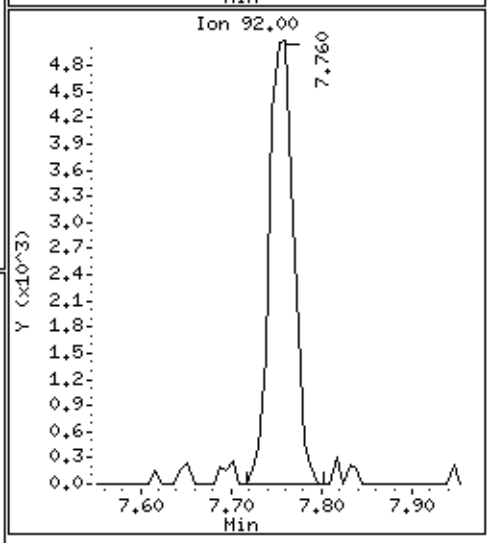












Data File: /chem/msd3.i/17feb16.b/3021711.d

Date : 17-FEB-2016 17:10

Client ID:

Instrument: msd3.i

Sample Info: 200ml 34321

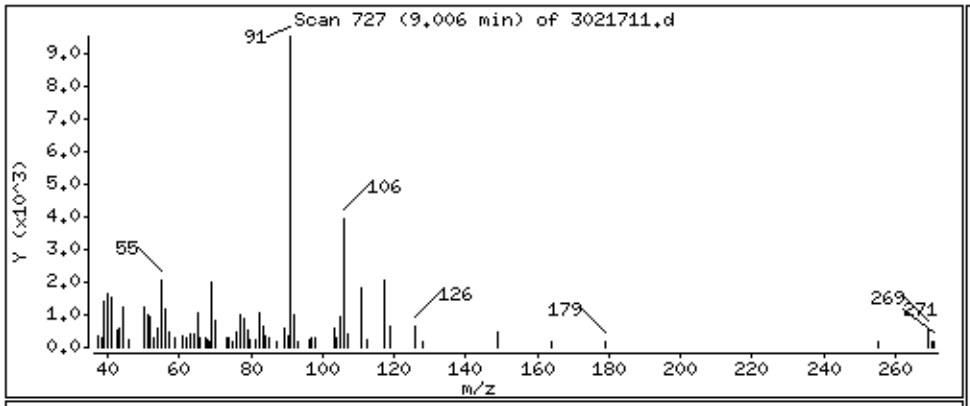
Operator: js

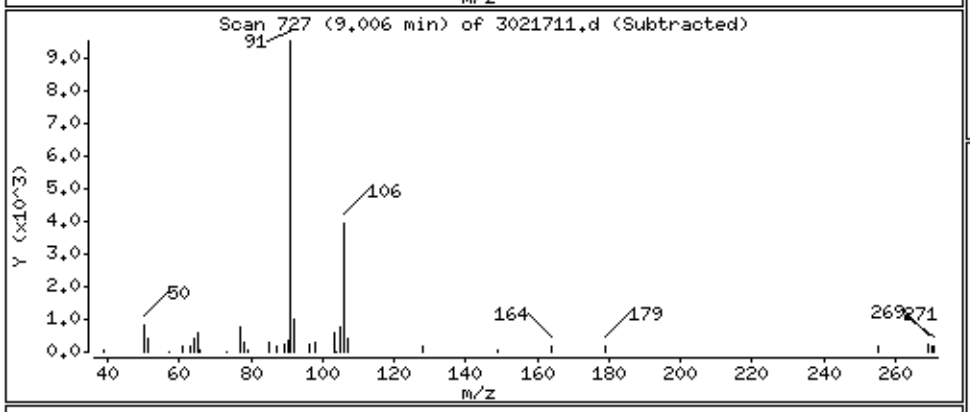
Column phase: RTX-624

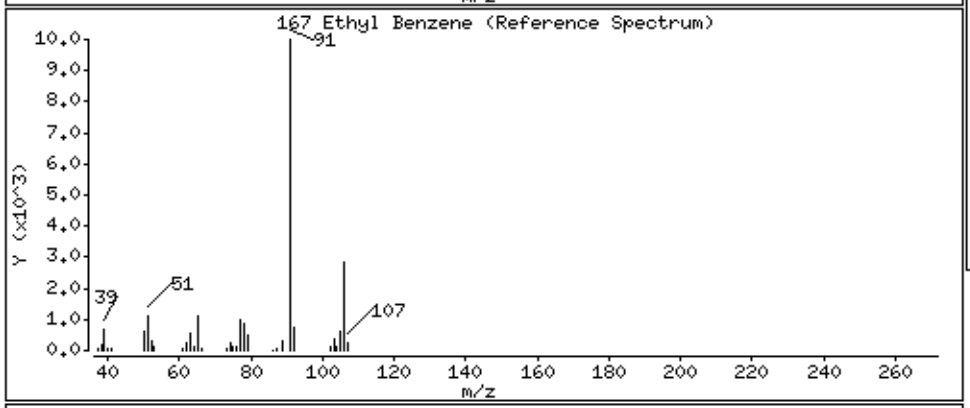
Column diameter: 0.25

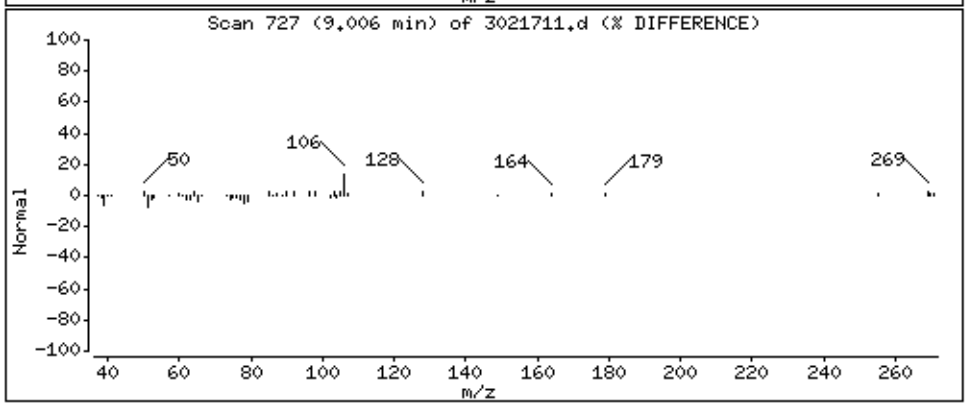
167 Ethyl Benzene

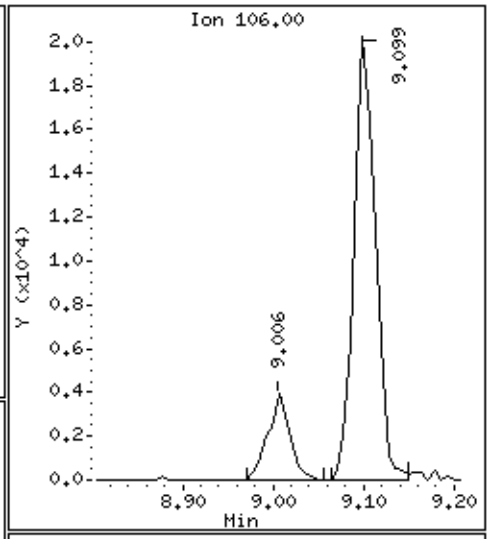
Concentration: 1.256 PPBV

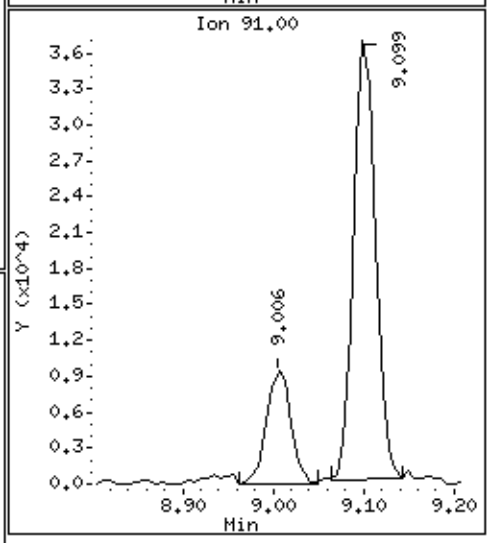












Data File: /chem/msd3.i/17feb16.b/3021711.d

Date : 17-FEB-2016 17:10

Client ID:

Instrument: msd3.i

Sample Info: 200ml 34321

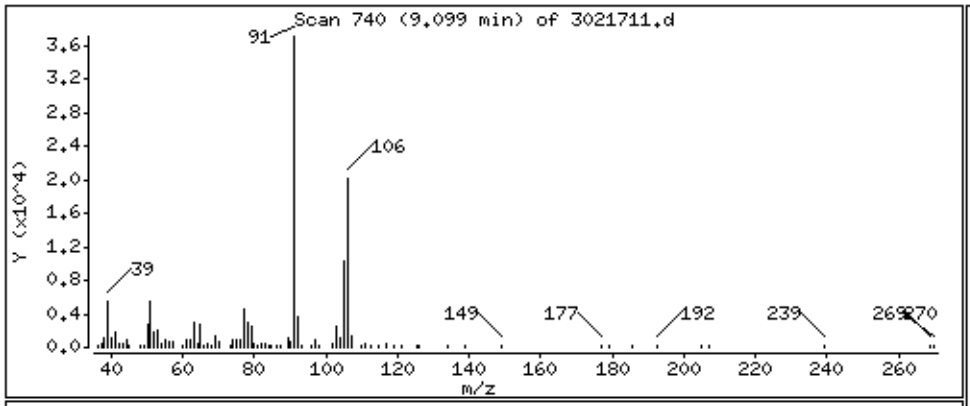
Operator: js

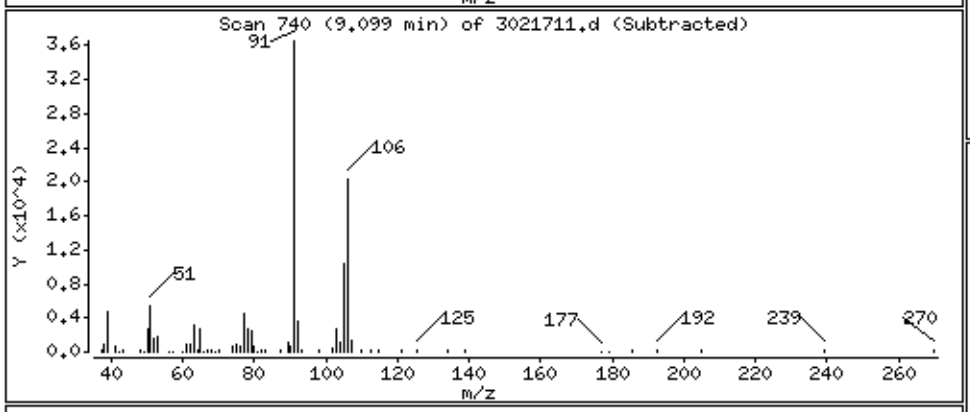
Column phase: RTX-624

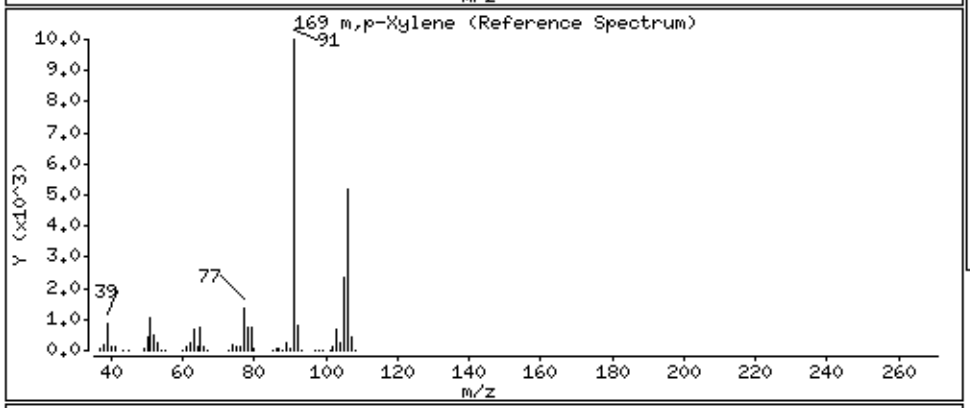
Column diameter: 0.25

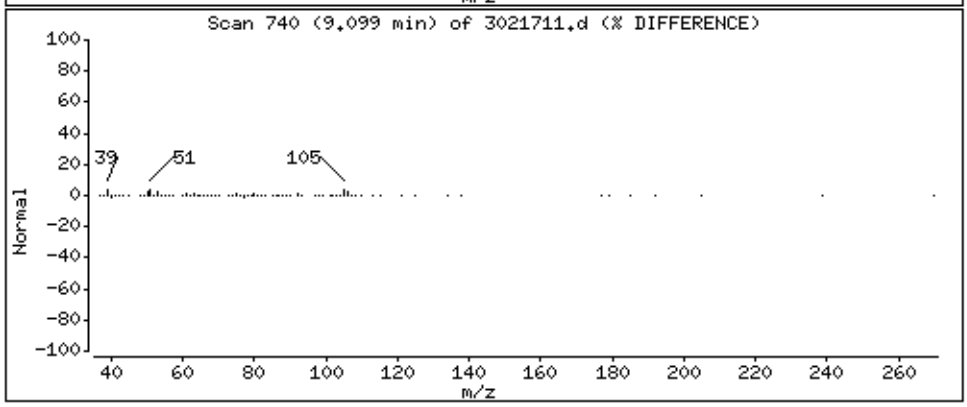
169 m,p-Xylene

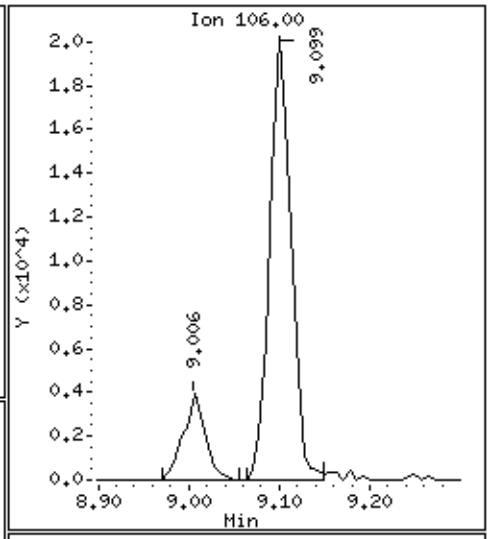
Concentration: 5.106 PPBV

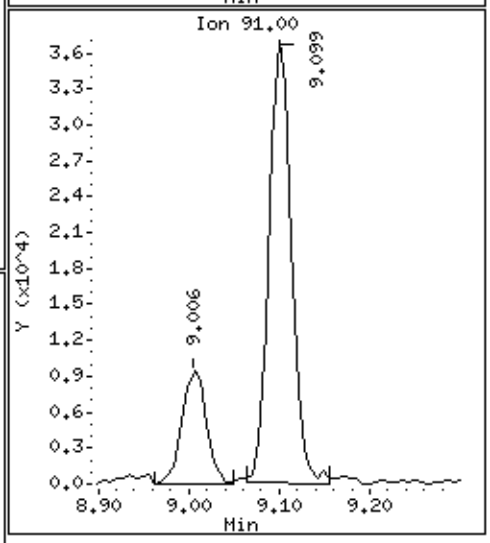












Data File: /chem/msd3.i/17feb16.b/3021711.d

Date : 17-FEB-2016 17:10

Client ID:

Instrument: msd3.i

Sample Info: 200ml 34321

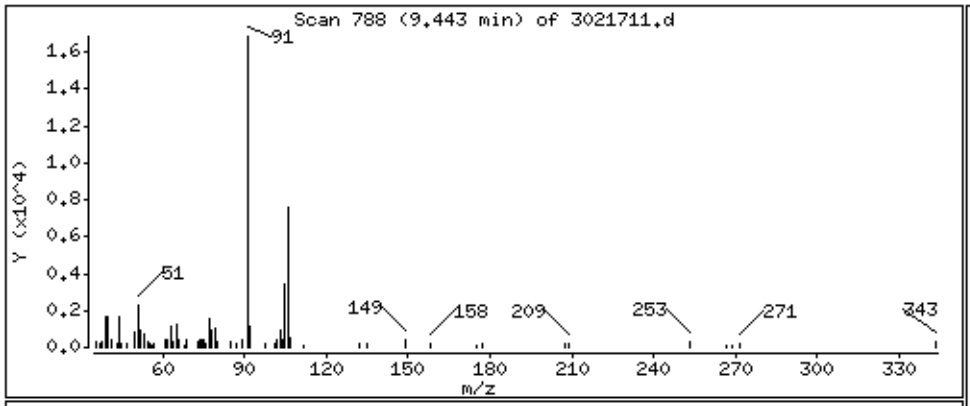
Operator: js

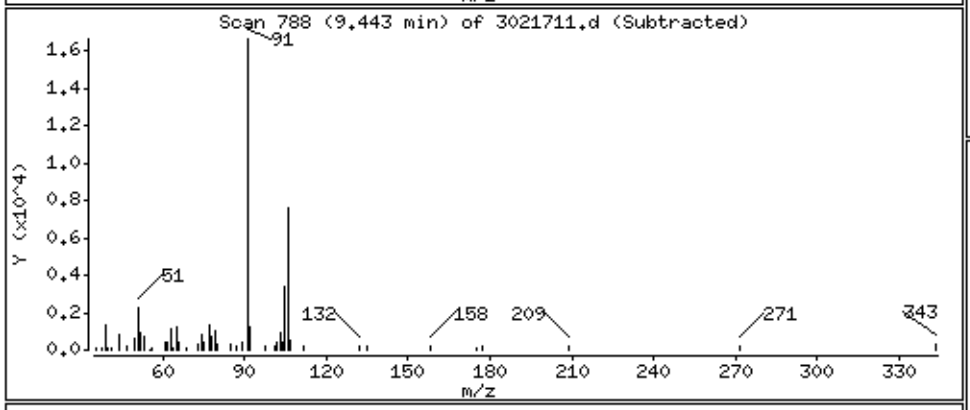
Column phase: RTX-624

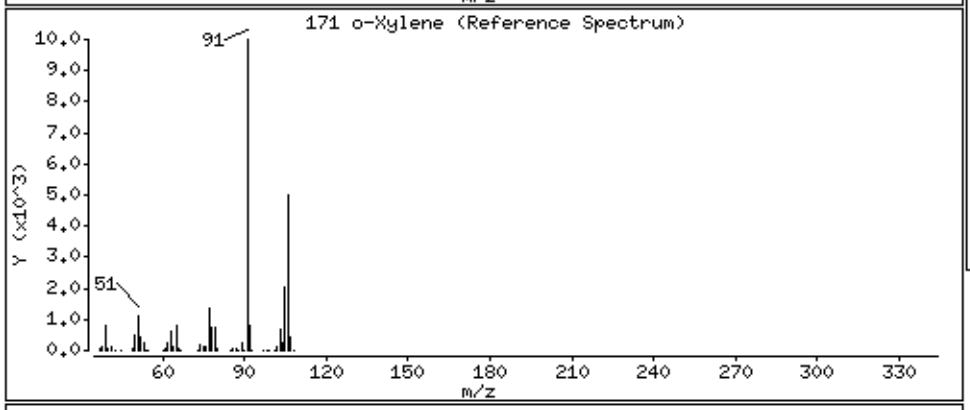
Column diameter: 0.25

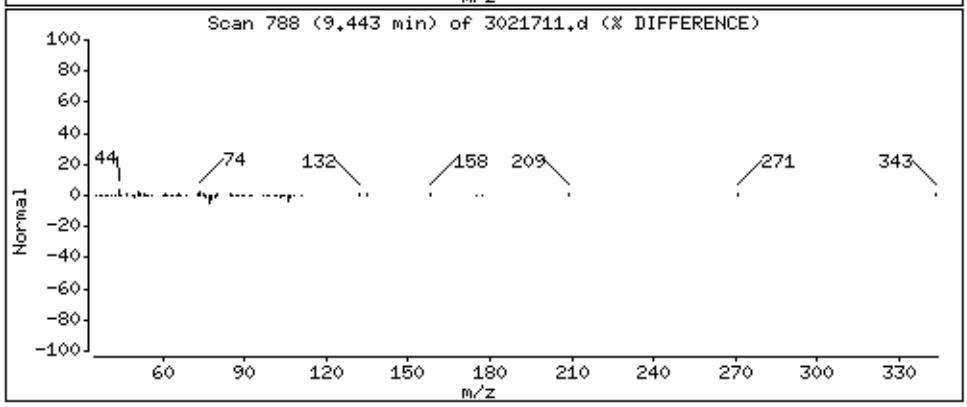
171 o-Xylene

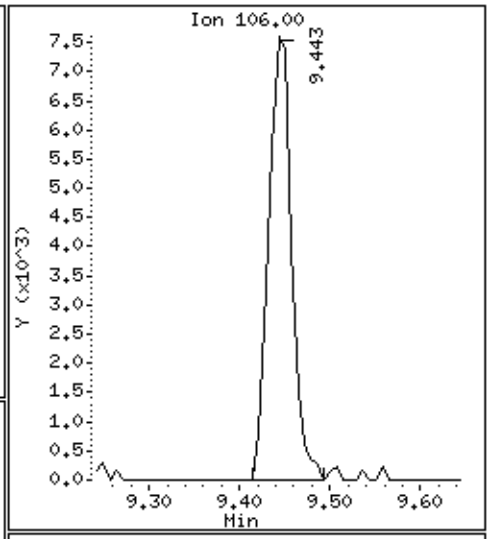
Concentration: 2.195 PPBV

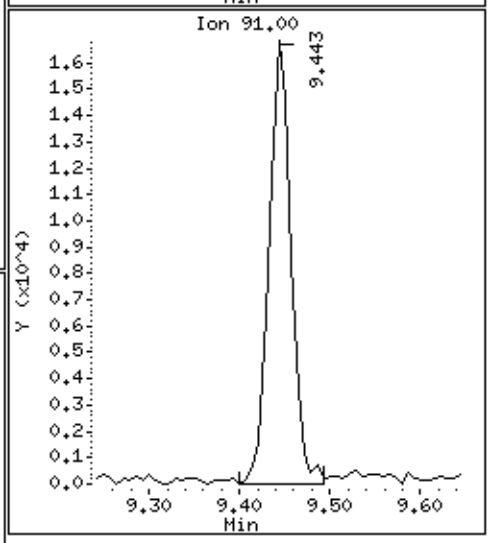












EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG01-010		
Lab ID:	1602253A-02A	**Date/Time Analyzed:**	2/17/16 05:36 PM
Date/Time Collected:	2/9/16 04:43 PM	**Dilution Factor:**	2.01
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msd3.i / 3021712

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.78	1.6	3.2	Not Detected U
Ethyl Benzene	100-41-4	1.1	2.2	4.4	3.3 J
m,p-Xylene	108-38-3	1.1	2.2	4.4	12
o-Xylene	95-47-6	1.1	2.2	4.4	6.1
Toluene	108-88-3	1.2	1.9	3.8	9.6

U = The analyte was not detected above the MDL.
J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	103
4-Bromofluorobenzene	460-00-4	74-122	103
Toluene-d8	2037-26-5	82-119	104

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021712.d
Lab Smp Id: 1602253A-02A
Inj Date : 17-FEB-2016 17:36
Operator : js Inst ID: msd3.i
Smp Info : 200ml 33531
Misc Info : 10.0 Hg->5 psi
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 2
Dil Factor: 2.01000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.01000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	161795	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	121042			49.26- 109.26	74.81
5.592	5.592 (1.000)	49	215975			111.17- 171.17	133.49
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.488	6.474 (1.000)	114	607312	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	87889			0.00- 45.05	14.47
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	492376	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	236522			22.62- 82.62	48.04
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.138	6.124 (1.098)	65	214282	25.7342	25.734	80.00- 120.00	100.00
6.138	6.124 (1.098)	67	107749			21.51- 81.51	50.28

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.702	7.695	(1.187)	98	572387	25.9993	25.999	80.00- 120.00	100.00
7.702	7.695	(1.187)	70	60580			0.00- 41.20	10.58
7.702	7.695	(1.187)	100	365866			34.69- 94.69	63.92
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.916	9.916	(1.110)	174	321468	25.8313	25.831	80.00- 120.00	100.00
9.916	9.916	(1.110)	95	334868			85.32- 145.32	104.17
9.916	9.916	(1.110)	176	306410			65.83- 125.83	95.32
147 Toluene						CAS #: 108-88-3		
7.753	7.753	(1.195)	91	31884	1.26769	2.548	80.00- 120.00	100.00
7.753	7.753	(1.195)	92	17910			28.22- 88.22	56.17
167 Ethyl Benzene						CAS #: 100-41-4		
9.006	9.006	(1.008)	106	4030	0.37467	0.7531	80.00- 120.00	100.00(a)
8.999	9.006	(1.007)	91	11098			269.16- 329.16	275.37
169 m,p-Xylene						CAS #: 108-38-3		
9.099	9.099	(1.018)	106	18580	1.39561	2.805	80.00- 120.00	100.00
9.099	9.099	(1.018)	91	37416			163.98- 223.98	201.37
171 o-Xylene						CAS #: 95-47-6		
9.443	9.443	(1.057)	106	8803	0.70371	1.414	80.00- 120.00	100.00
9.443	9.443	(1.057)	91	16761			172.26- 232.26	190.39

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021712.d
Lab Smp Id: 1602253A-02A
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 10.0 Hg->5 psi

Calibration Date: 17-FEB-2016
Calibration Time: 11:28

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	161795	-7.99
123 1,4-Difluorobenze	669296	401578	937014	607312	-9.26
163 Chlorobenzene-d5	524176	314506	733846	492376	-6.07

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.49	0.22
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 18-Feb-2016 15:52

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 17feb16
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1602253A-02A
Level: LOW Operator: js
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 10.0 Hg->5 psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	25.734	102.94	79-128
$ 146 Toluene-d8	25.000	25.999	104.00	82-119
$ 177 4-Bromofluorobenze	25.000	25.831	103.33	74-122

Data File: /chem/msd3.i/17feb16.b/3021712.d

Date : 17-FEB-2016 17:36

Client ID:

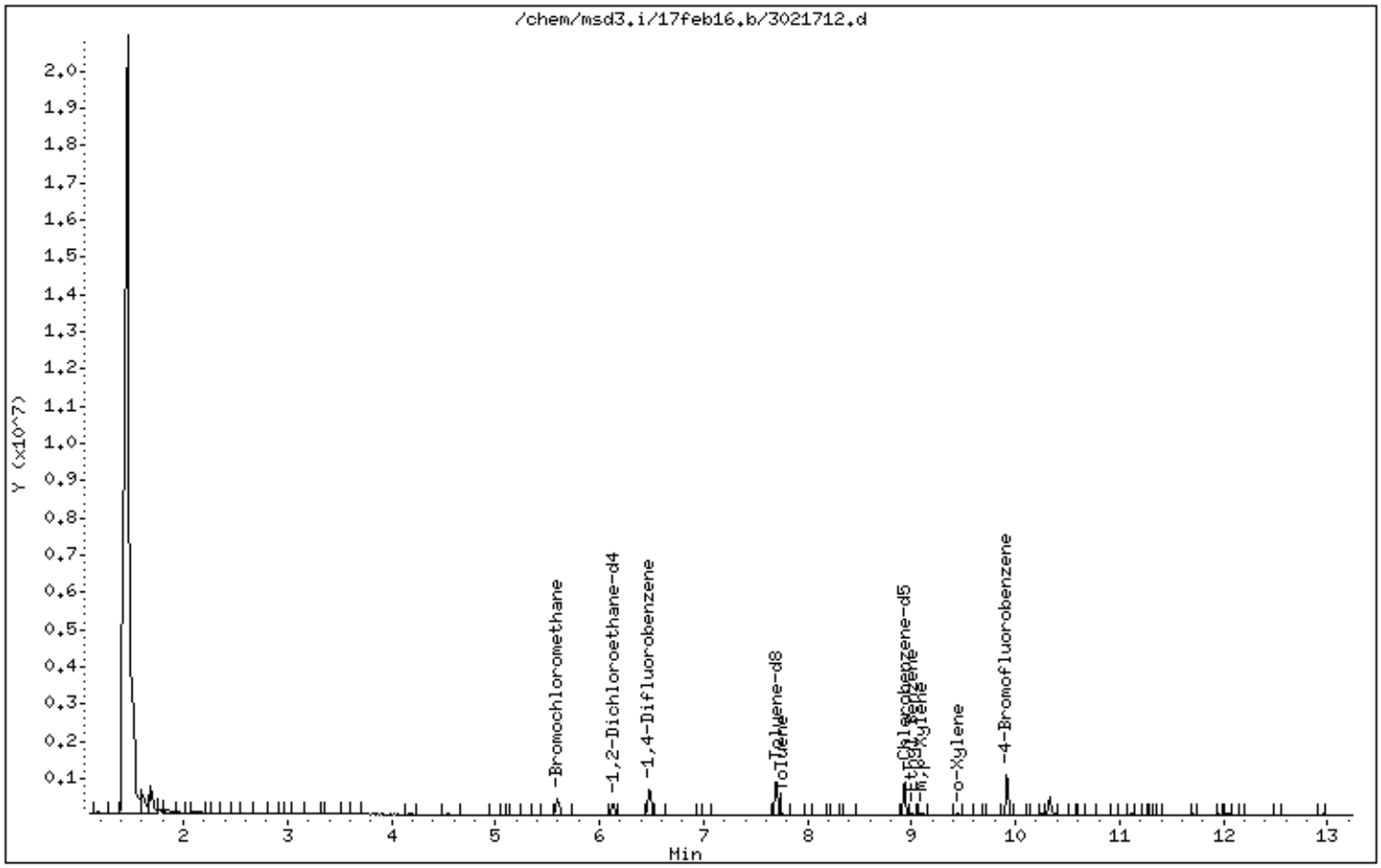
Instrument: msd3.i

Sample Info: 200ml 33531

Operator: js

Column phase: RTX-624

Column diameter: 0.25



Data File: /chem/msd3.i/17feb16.b/3021712.d

Date : 17-FEB-2016 17:36

Client ID:

Instrument: msd3.i

Sample Info: 200ml 33531

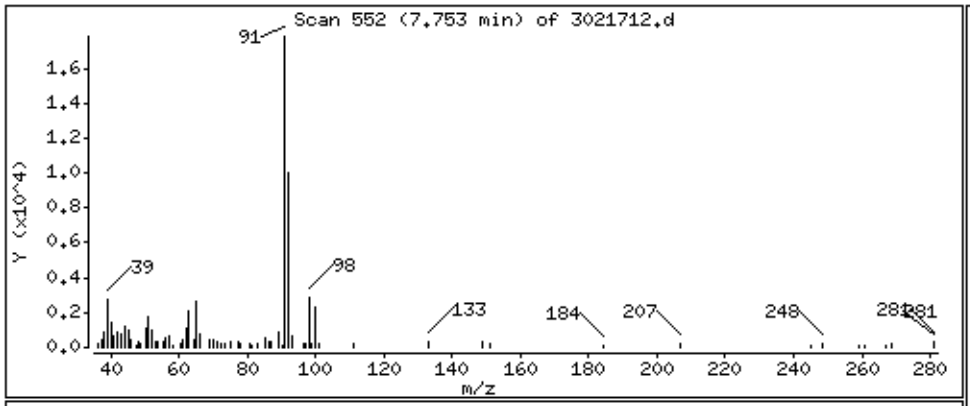
Operator: js

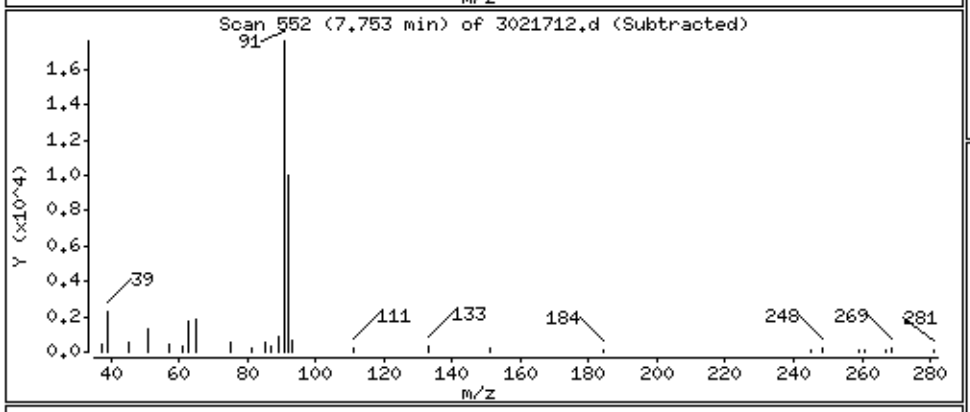
Column phase: RTX-624

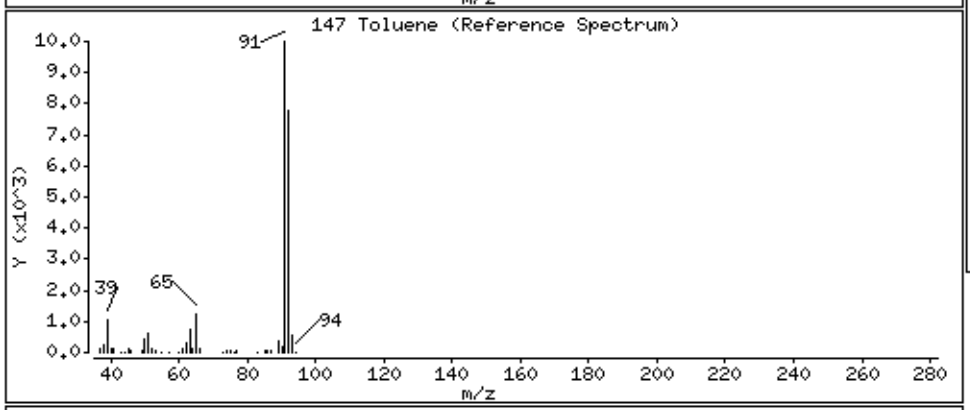
Column diameter: 0.25

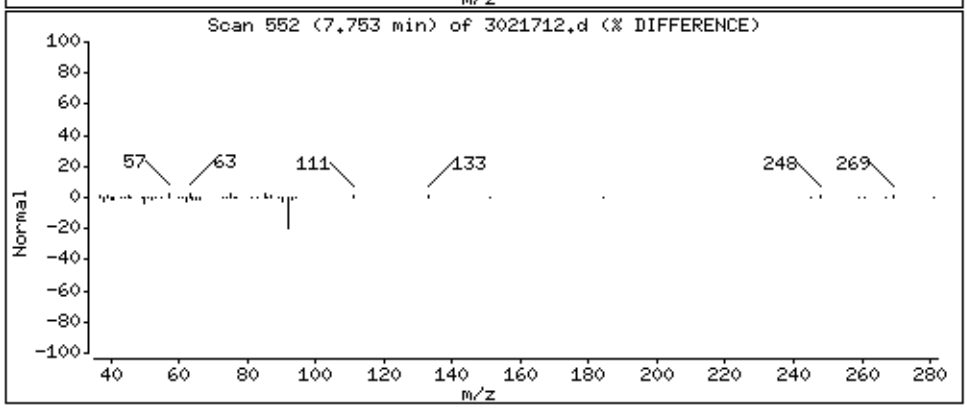
147 Toluene

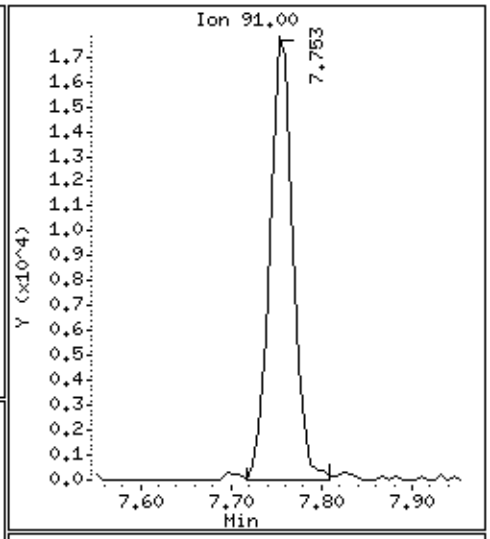
Concentration: 2.548 PPBV

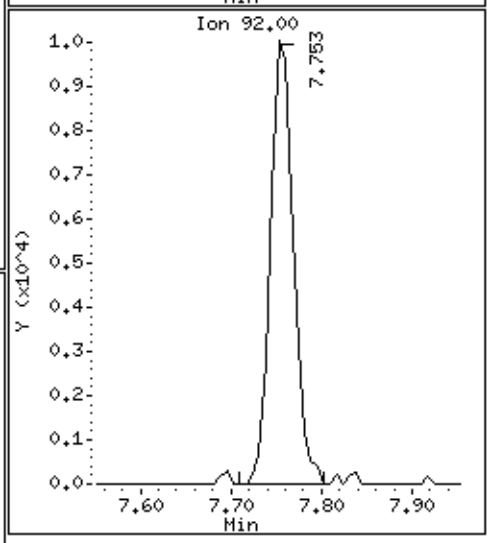












Data File: /chem/msd3.i/17feb16.b/3021712.d

Date : 17-FEB-2016 17:36

Client ID:

Instrument: msd3.i

Sample Info: 200ml 33531

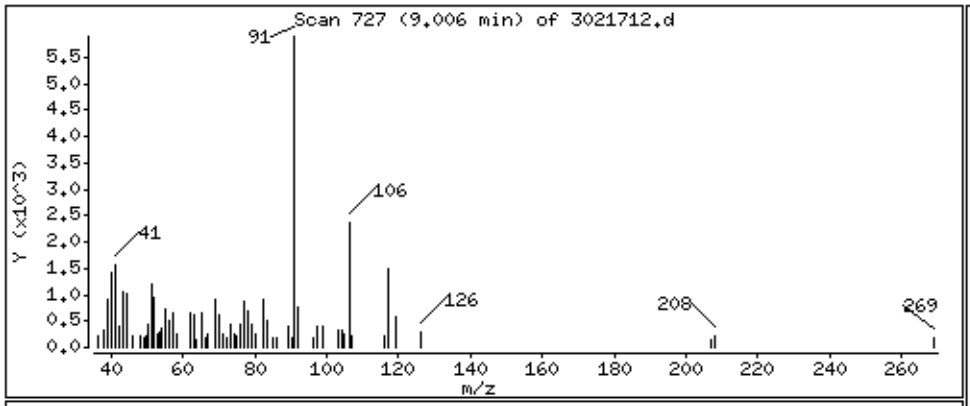
Operator: js

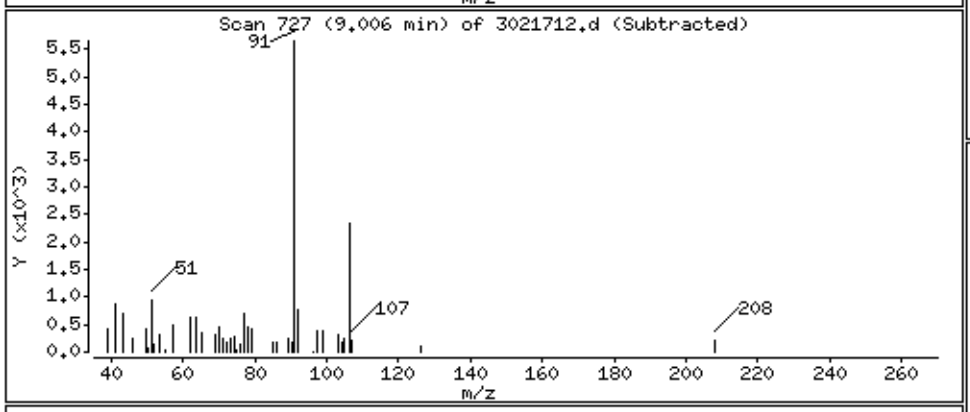
Column phase: RTX-624

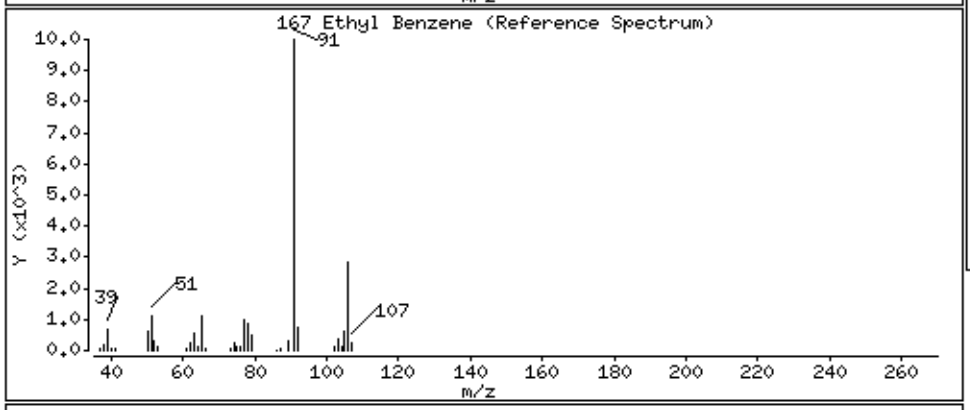
Column diameter: 0.25

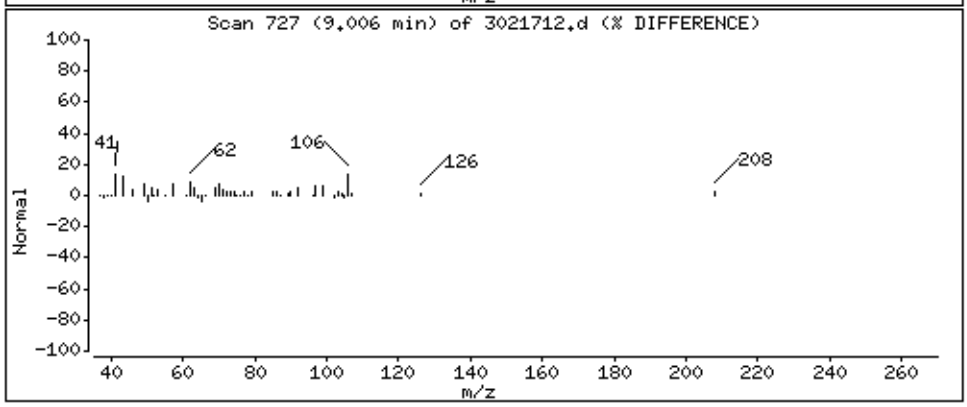
167 Ethyl Benzene

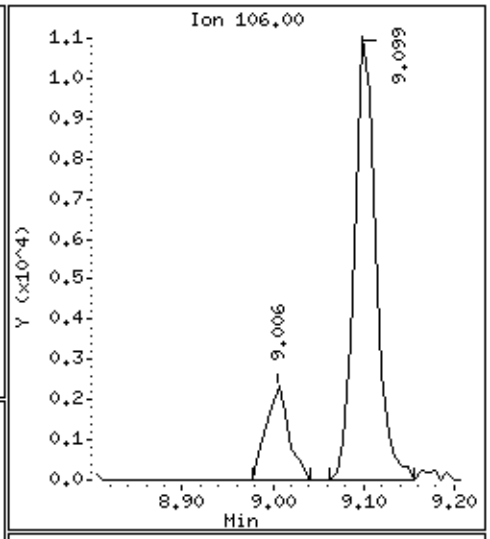
Concentration: 0.7531 PPBV

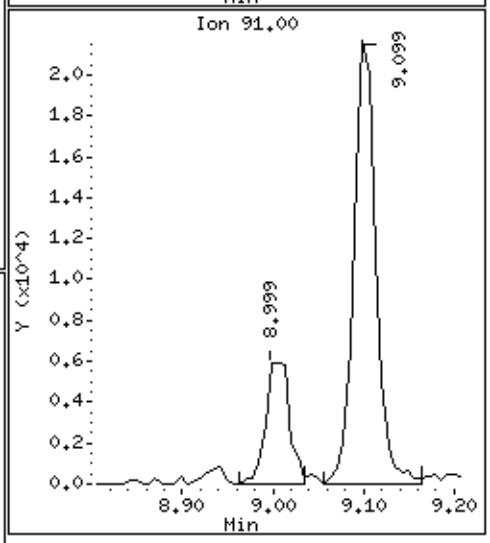












Data File: /chem/msd3.i/17feb16.b/3021712.d

Date : 17-FEB-2016 17:36

Client ID:

Instrument: msd3.i

Sample Info: 200ml 33531

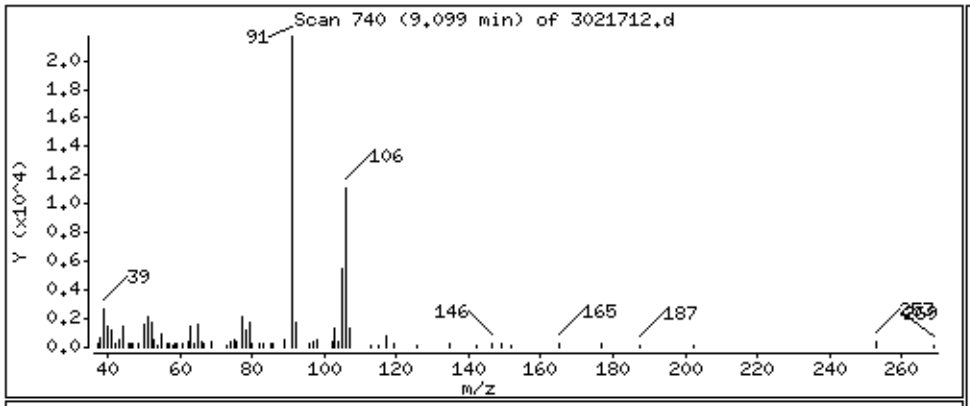
Operator: js

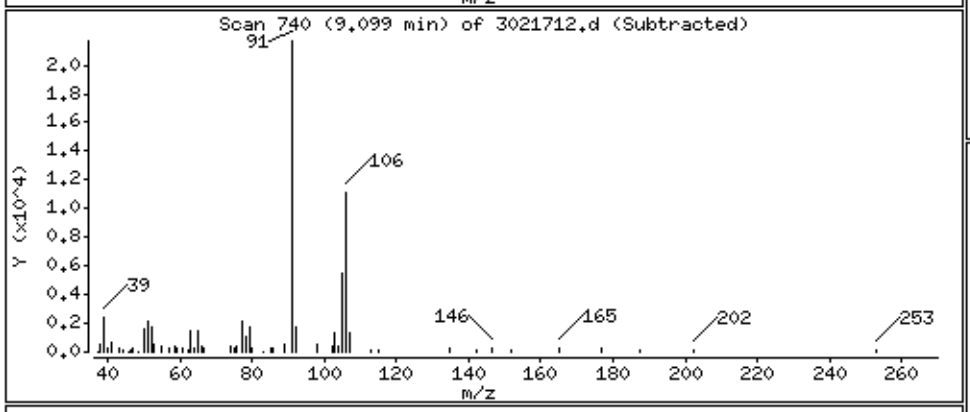
Column phase: RTX-624

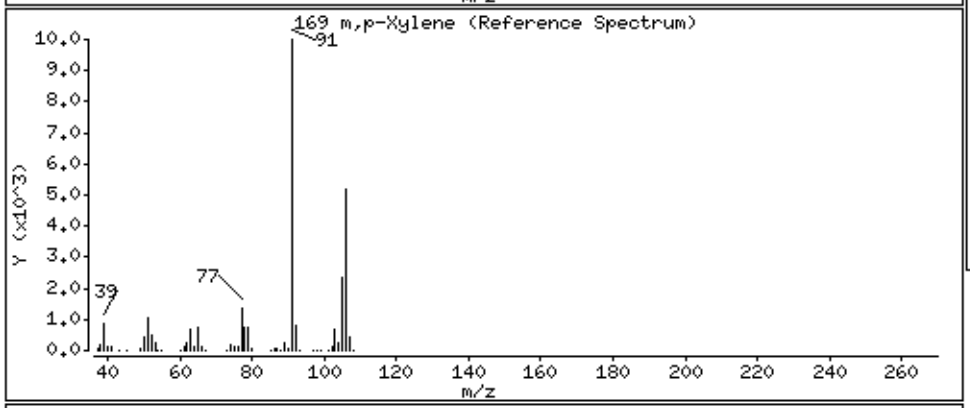
Column diameter: 0.25

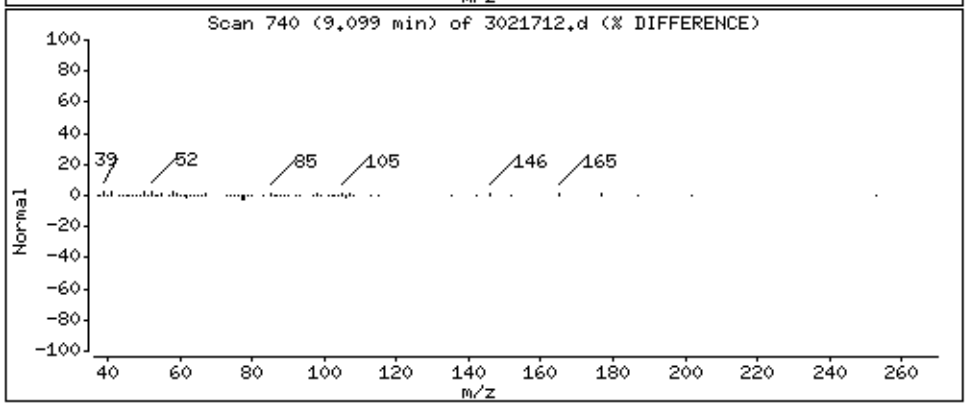
169 m,p-Xylene

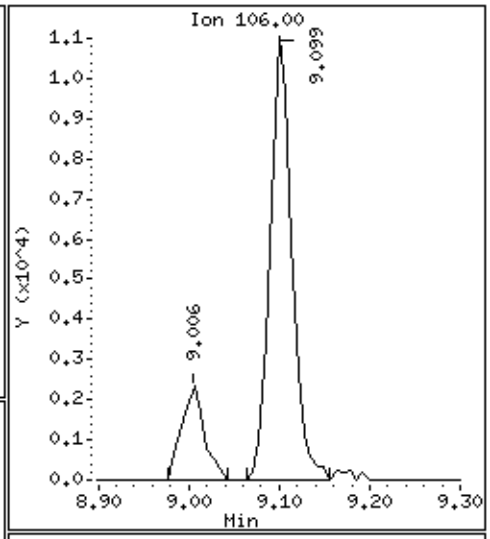
Concentration: 2.805 PPBV

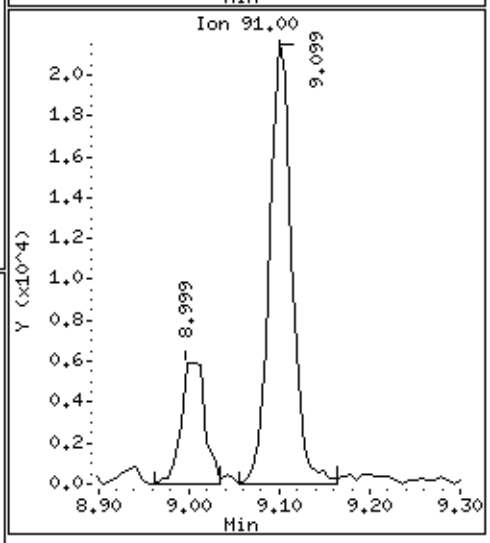












Data File: /chem/msd3.i/17feb16.b/3021712.d

Date : 17-FEB-2016 17:36

Client ID:

Instrument: msd3.i

Sample Info: 200ml 33531

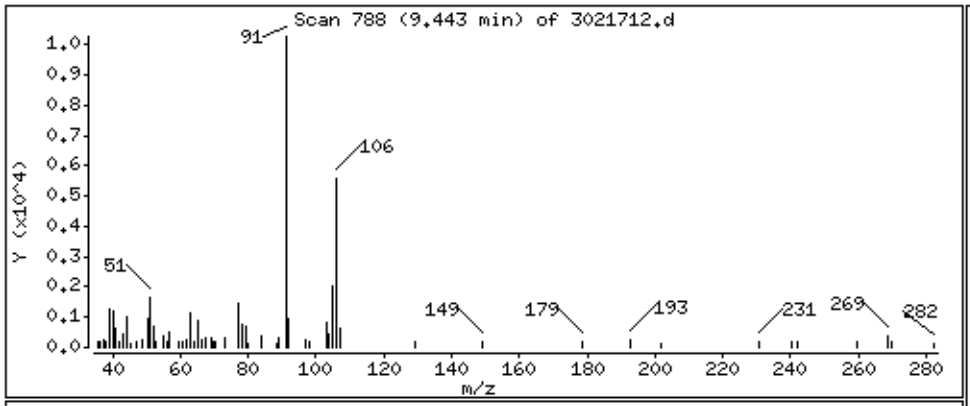
Operator: js

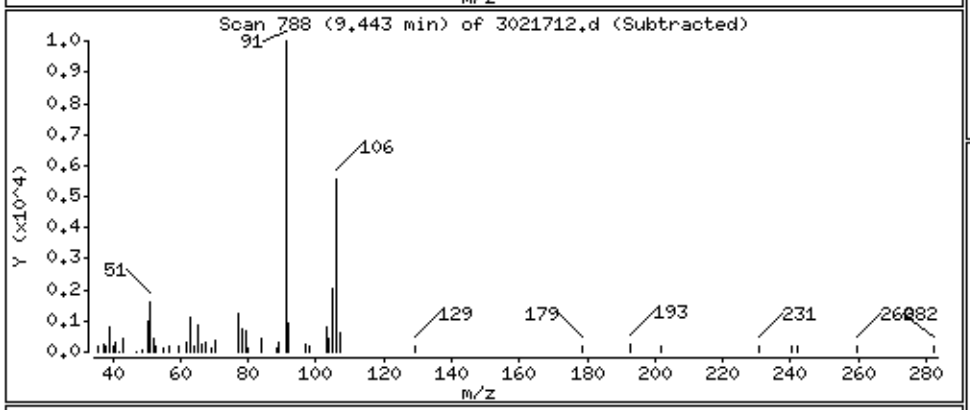
Column phase: RTX-624

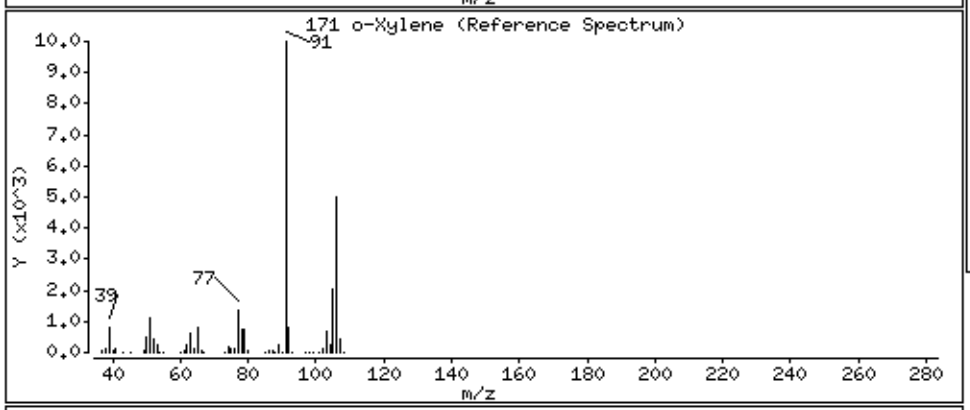
Column diameter: 0.25

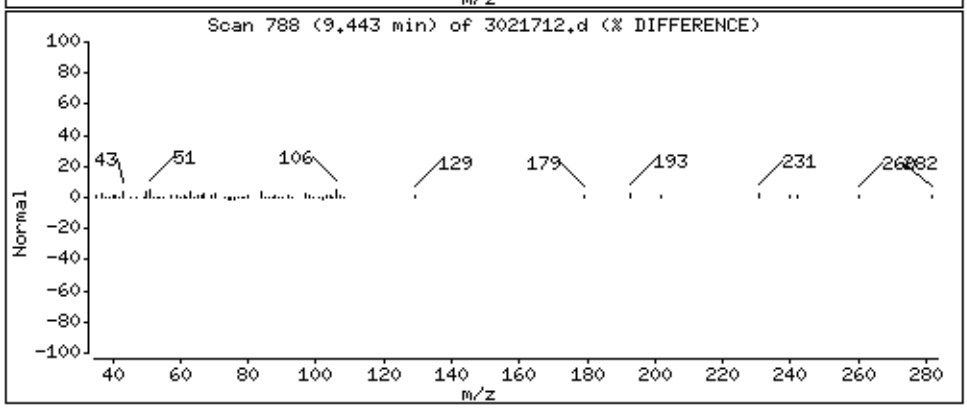
171 o-Xylene

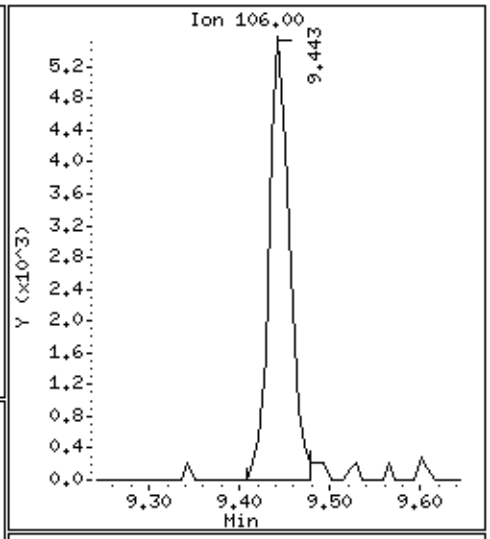
Concentration: 1.414 PPBV

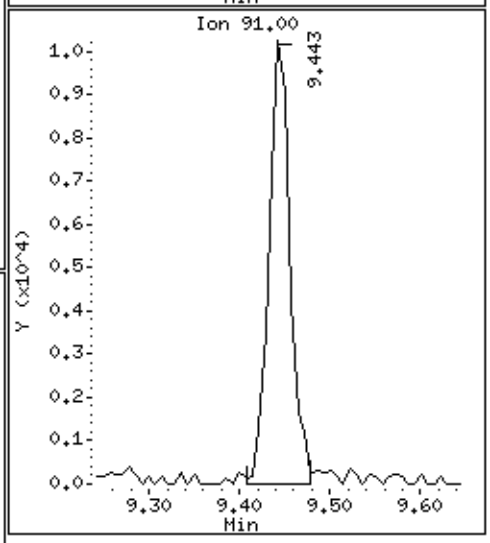












EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG03-005		
Lab ID:	1602253A-03A	**Date/Time Analyzed:**	2/17/16 06:03 PM
Date/Time Collected:	2/9/16 04:44 PM	**Dilution Factor:**	2.06
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msd3.i / 3021713

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.80	1.6	3.3	Not Detected U
Ethyl Benzene	100-41-4	1.1	2.2	4.5	2.2 J
m,p-Xylene	108-38-3	1.1	2.2	4.5	5.0
o-Xylene	95-47-6	1.1	2.2	4.5	2.8 J
Toluene	108-88-3	1.3	1.9	3.9	16

U = The analyte was not detected above the MDL.
J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	103
4-Bromofluorobenzene	460-00-4	74-122	103
Toluene-d8	2037-26-5	82-119	107

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021713.d
Lab Smp Id: 1602253A-03A
Inj Date : 17-FEB-2016 18:03
Operator : js Inst ID: msd3.i
Smp Info : 200ml 35148
Misc Info : 10.5 Hg->5 psi
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 3
Dil Factor: 2.06000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	2.06000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	162951	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	124628			49.26- 109.26	76.48
5.592	5.592 (1.000)	49	214719			111.17- 171.17	131.77
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.488	6.474 (1.000)	114	596704	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	86795			0.00- 45.05	14.55
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.935	8.934 (1.000)	117	485911	25.0000		80.00- 120.00	100.00
8.935	8.934 (1.000)	82	238395			22.62- 82.62	49.06
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.138	6.124 (1.098)	65	216537	25.8203	25.820	80.00- 120.00	100.00
6.138	6.124 (1.098)	67	106660			21.51- 81.51	49.26

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.703	7.695 (1.187)	98	578040	26.7229	26.723	80.00- 120.00	100.00
7.703	7.695 (1.187)	70	58636			0.00- 41.20	10.14
7.703	7.695 (1.187)	100	368033			34.69- 94.69	63.67
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.923	9.916 (1.111)	174	317556	25.8564	25.856	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	325212			85.32- 145.32	102.41
9.923	9.916 (1.111)	176	302351			65.83- 125.83	95.21
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.195)	91	49377	1.99813	4.116	80.00- 120.00	100.00
7.760	7.753 (1.196)	92	28002			28.22- 88.22	56.71
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	2608	0.24572	0.5062	80.00- 120.00	100.00(a)
9.006	9.006 (1.008)	91	8031			269.16- 329.16	307.87
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	7356	0.55987	1.153	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	14012			163.98- 223.98	190.49
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	3869	0.31345	0.6457	80.00- 120.00	100.00(a)
9.443	9.443 (1.057)	91	7245			172.26- 232.26	187.23

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021713.d
Lab Smp Id: 1602253A-03A
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 10.5 Hg->5 psi

Calibration Date: 17-FEB-2016
Calibration Time: 11:28

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	162951	-7.34
123 1,4-Difluorobenze	669296	401578	937014	596704	-10.85
163 Chlorobenzene-d5	524176	314506	733846	485911	-7.30

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.49	0.22
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 18-Feb-2016 15:52

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name: Client SDG: 17feb16
Sample Matrix: GAS Fraction: VOA
Lab Smp Id: 1602253A-03A
Level: LOW Operator: js
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 10.5 Hg->5 psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	25.820	103.28	79-128
$ 146 Toluene-d8	25.000	26.723	106.89	82-119
$ 177 4-Bromofluorobenze	25.000	25.856	103.43	74-122

Data File: /chem/msd3.i/17feb16.b/3021713.d

Date : 17-FEB-2016 18:03

Client ID:

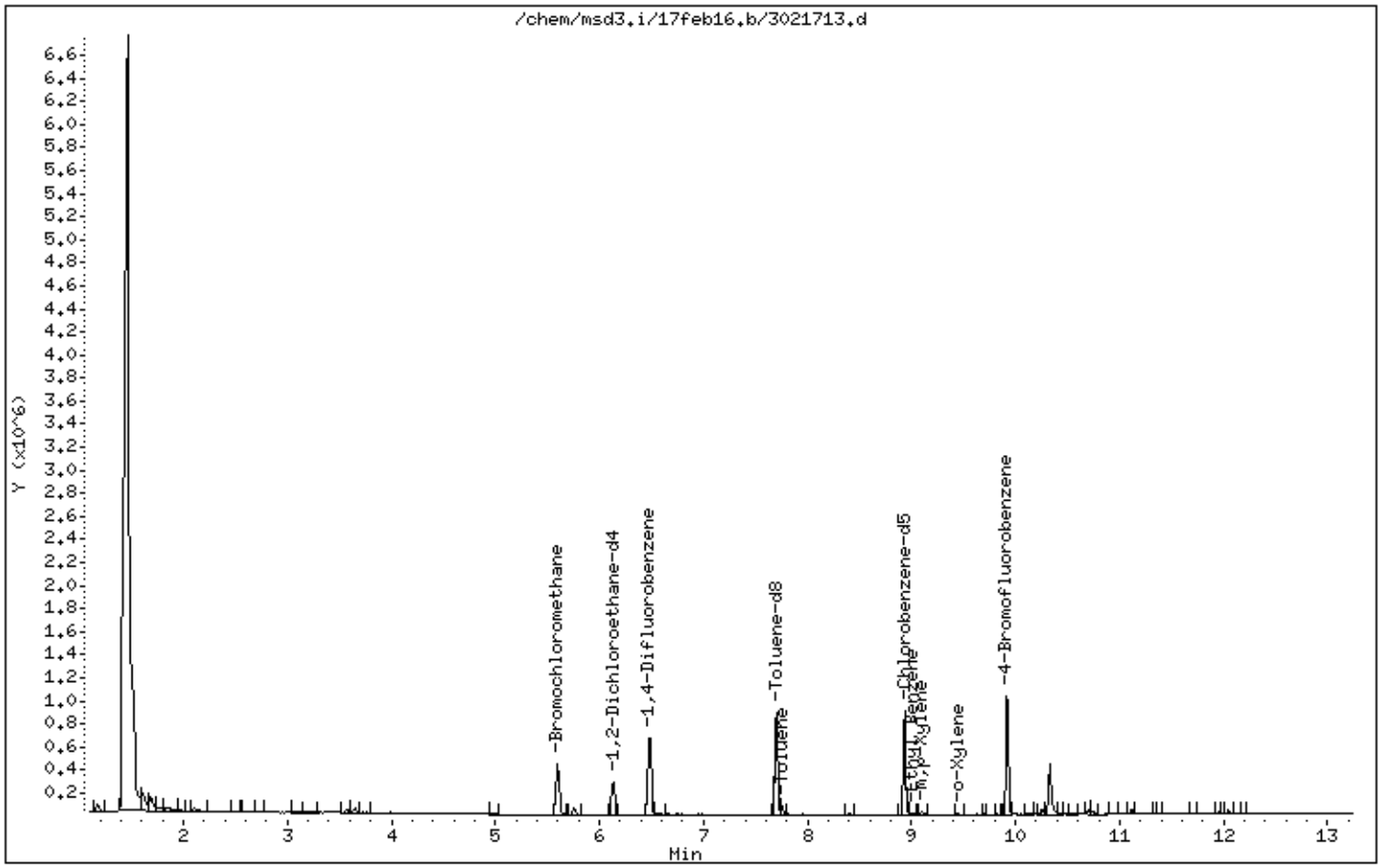
Instrument: msd3.i

Sample Info: 200ml 35148

Operator: js

Column phase: RTX-624

Column diameter: 0.25



Data File: /chem/msd3.i/17feb16.b/3021713.d

Date : 17-FEB-2016 18:03

Client ID:

Instrument: msd3.i

Sample Info: 200ml 35148

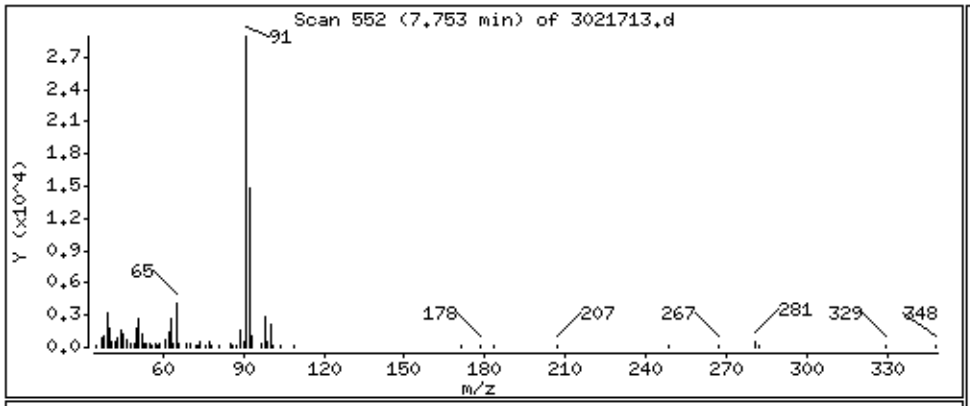
Operator: js

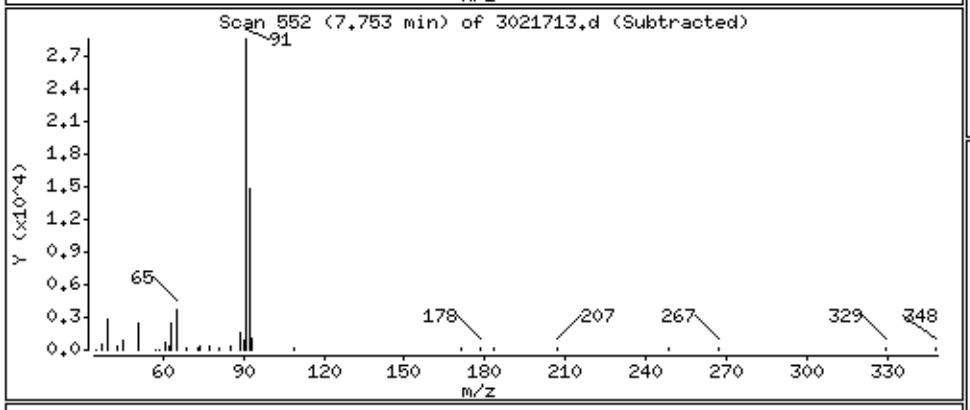
Column phase: RTX-624

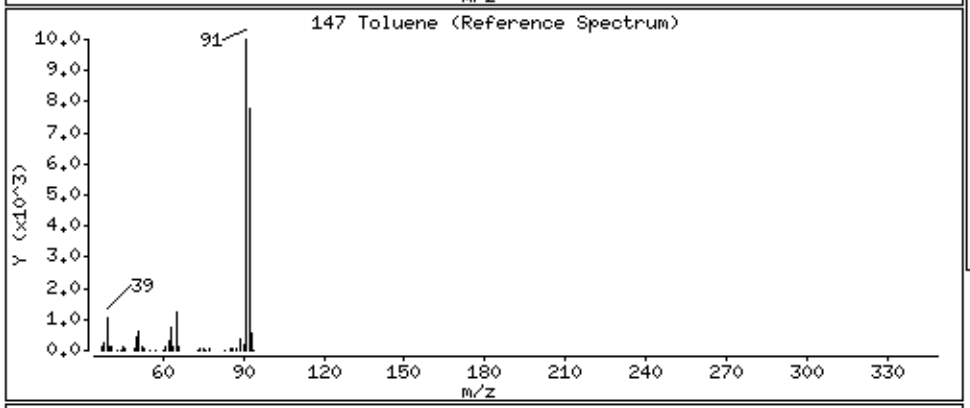
Column diameter: 0.25

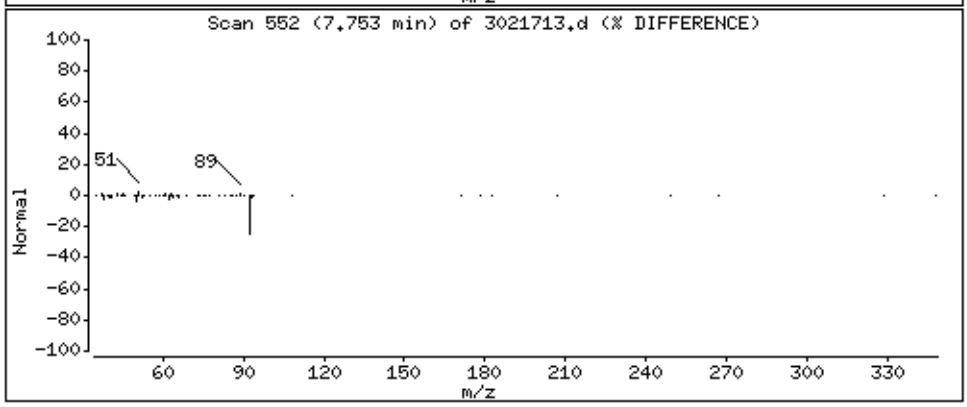
147 Toluene

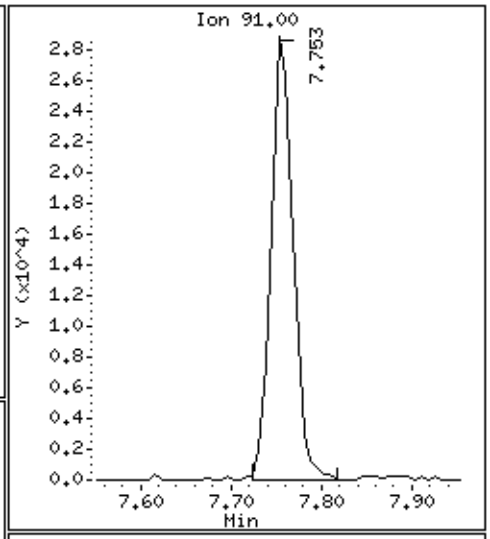
Concentration: 4.116 PPBV

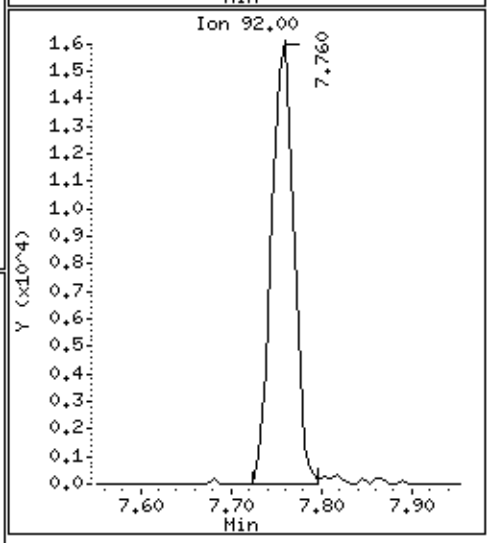












Data File: /chem/msd3.i/17feb16.b/3021713.d

Date : 17-FEB-2016 18:03

Client ID:

Instrument: msd3.i

Sample Info: 200ml 35148

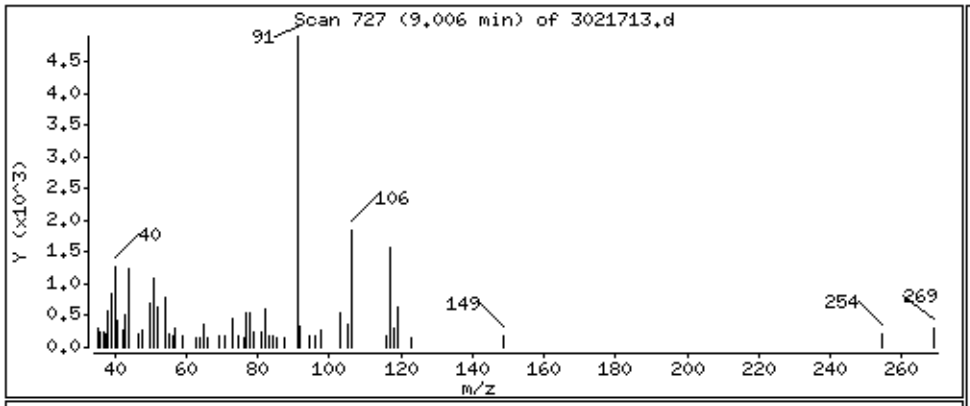
Operator: js

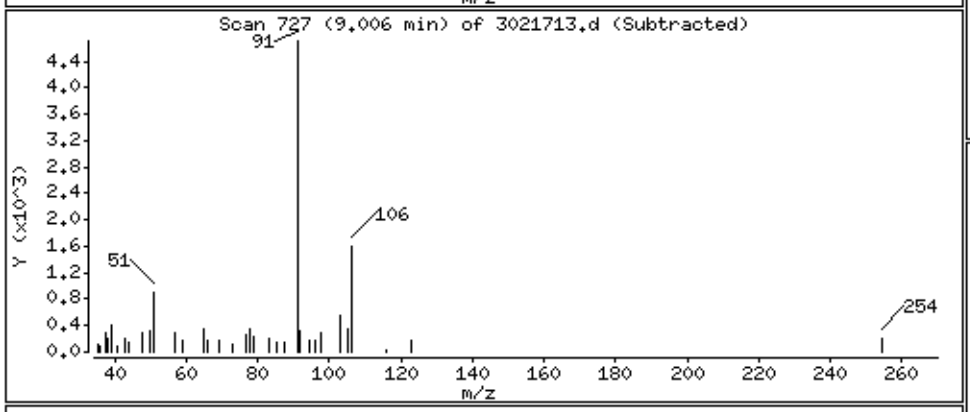
Column phase: RTX-624

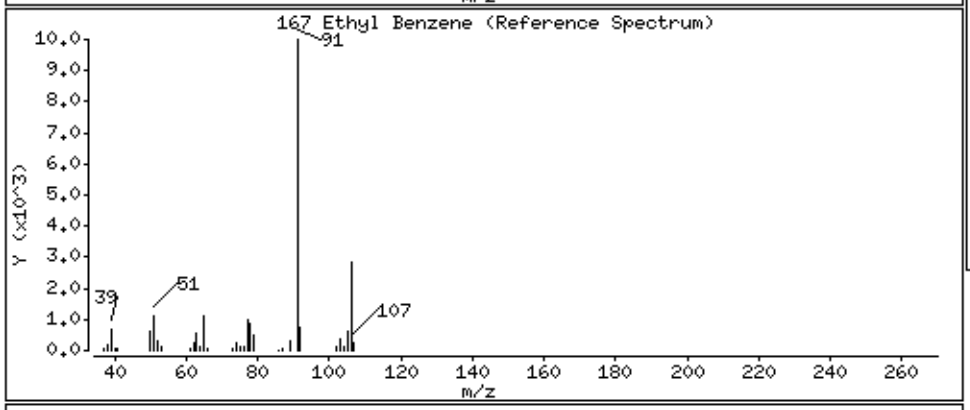
Column diameter: 0.25

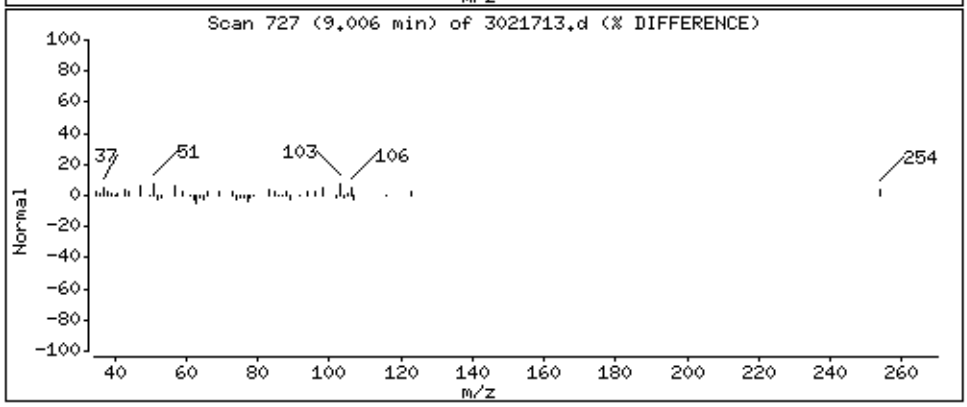
167 Ethyl Benzene

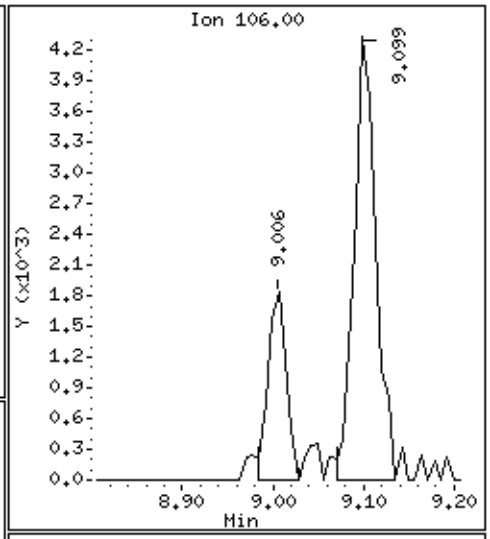
Concentration: 0.5062 PPBV

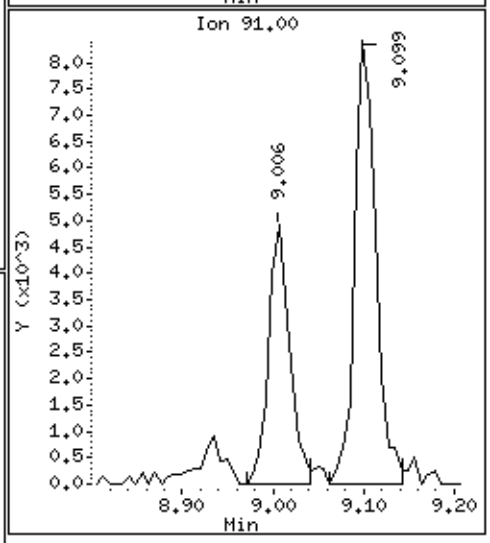












Data File: /chem/msd3.i/17feb16.b/3021713.d

Date : 17-FEB-2016 18:03

Client ID:

Instrument: msd3.i

Sample Info: 200ml 35148

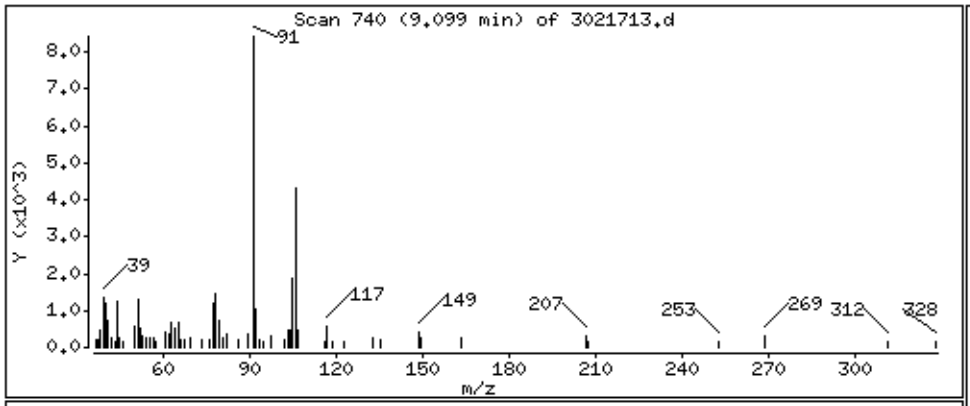
Operator: js

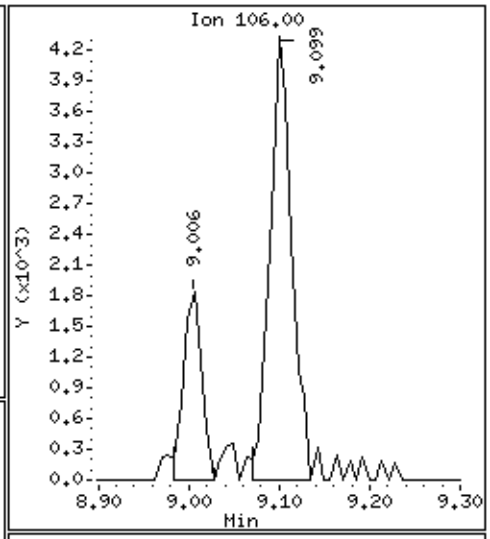
Column phase: RTX-624

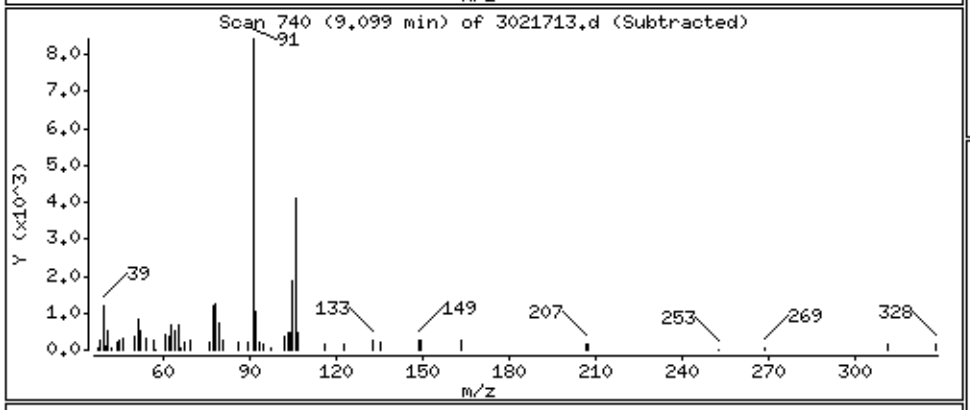
Column diameter: 0.25

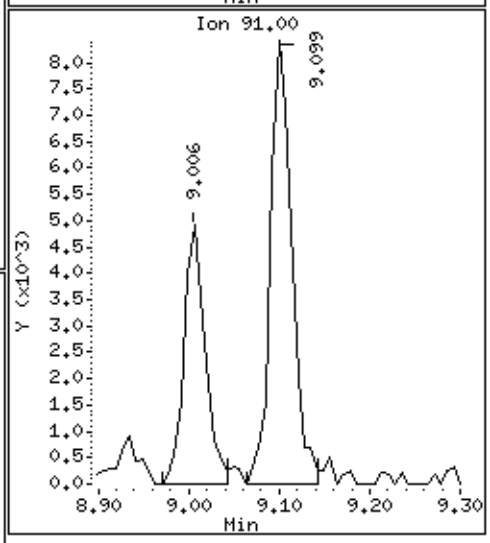
169 m,p-Xylene

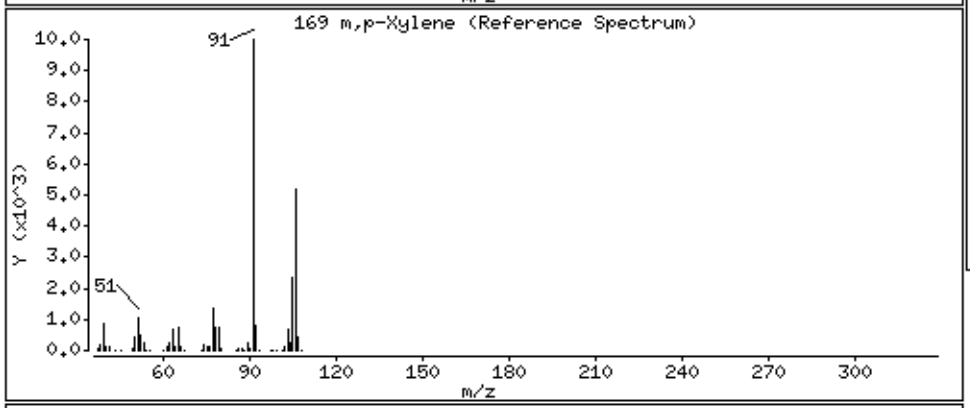
Concentration: 1.153 PPBV

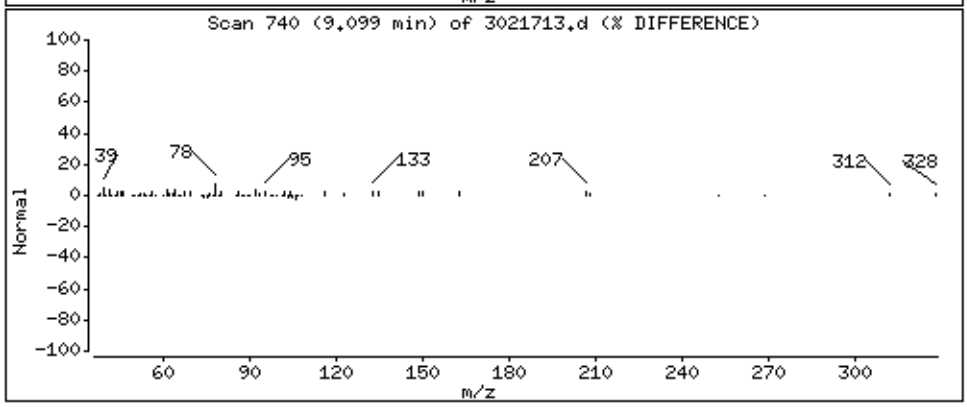












Data File: /chem/msd3.i/17feb16.b/3021713.d

Date : 17-FEB-2016 18:03

Client ID:

Instrument: msd3.i

Sample Info: 200ml 35148

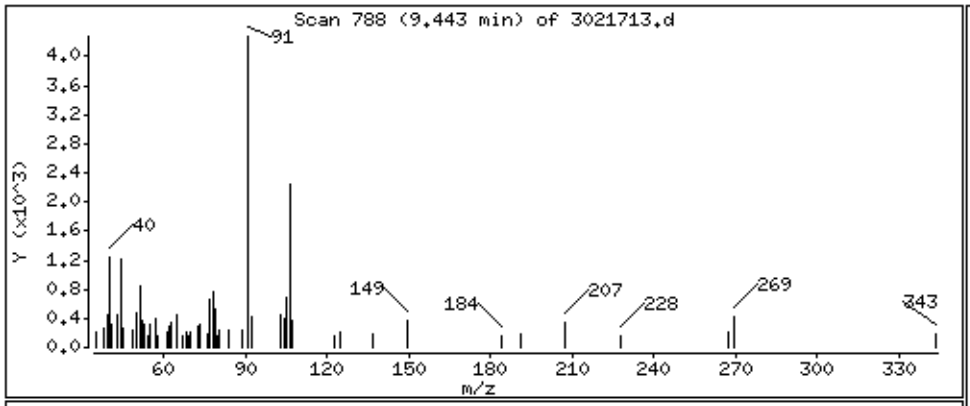
Operator: js

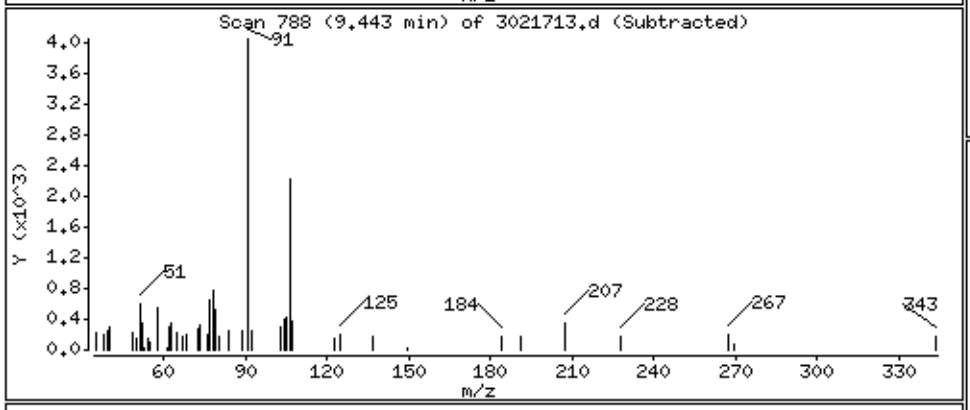
Column phase: RTX-624

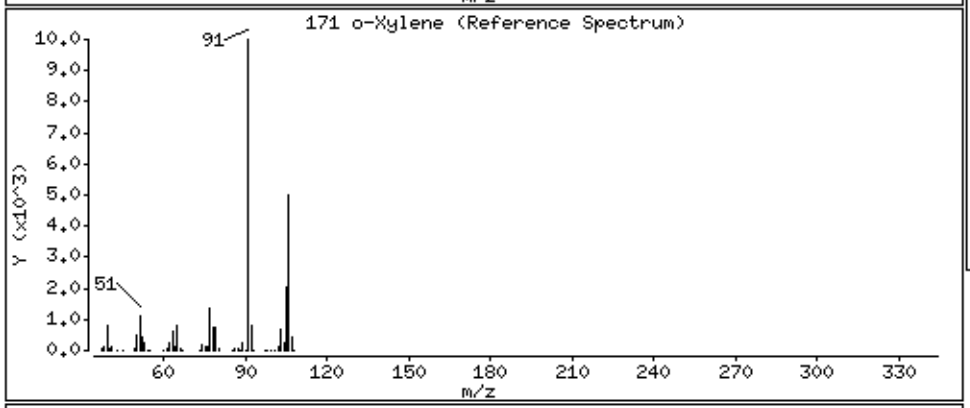
Column diameter: 0.25

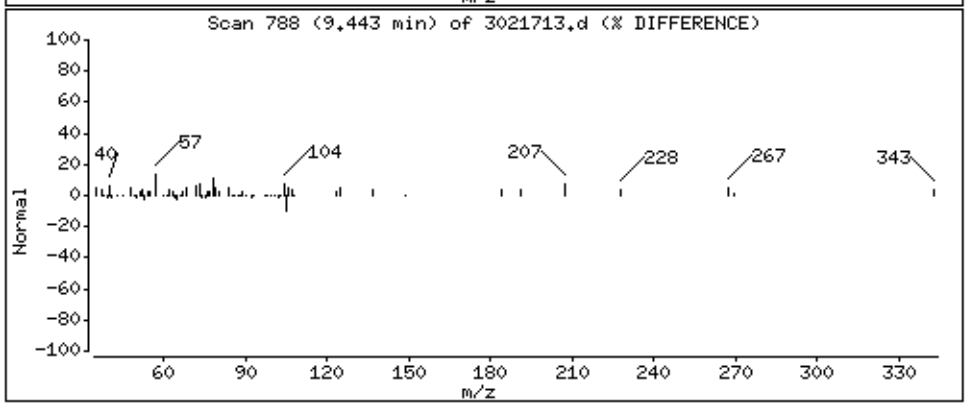
171 o-Xylene

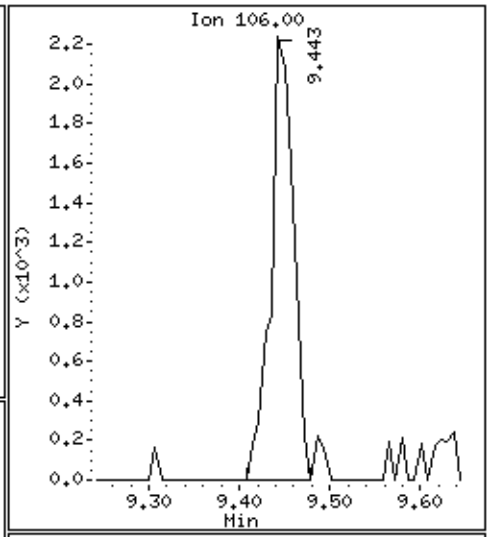
Concentration: 0.6457 PPBV

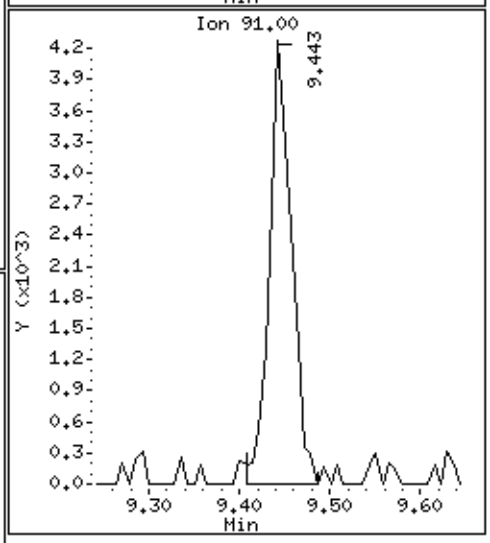












EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG03-010		
Lab ID:	1602253A-04A	**Date/Time Analyzed:**	2/17/16 06:29 PM
Date/Time Collected:	2/9/16 04:44 PM	**Dilution Factor:**	1.96
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msd3.i / 3021714

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.76	1.6	3.1	Not Detected U
Ethyl Benzene	100-41-4	1.1	2.1	4.2	1.8 J
m,p-Xylene	108-38-3	1.1	2.1	4.2	3.5 J
o-Xylene	95-47-6	1.1	2.1	4.2	2.0 J
Toluene	108-88-3	1.2	1.8	3.7	17

U = The analyte was not detected above the MDL.
J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	102
4-Bromofluorobenzene	460-00-4	74-122	105
Toluene-d8	2037-26-5	82-119	106

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021714.d
Lab Smp Id: 1602253A-04A
Inj Date : 17-FEB-2016 18:29
Operator : js Inst ID: msd3.i
Smp Info : 200ml 35266
Misc Info : 9.5 Hg->5 psi
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 4
Dil Factor: 1.96000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.96000	Dilution Factor

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane						CAS #: 74-97-5		
5.592	5.592	(1.000)	130	159881	25.0000		80.00- 120.00	100.00
5.592	5.592	(1.000)	128	124638			49.26- 109.26	77.96
5.592	5.592	(1.000)	49	213288			111.17- 171.17	133.40
* 123 1,4-Difluorobenzene						CAS #: 540-36-3		
6.488	6.474	(1.000)	114	594733	25.0000		80.00- 120.00	100.00
6.474	6.474	(1.000)	88	86580			0.00- 45.05	14.56
* 163 Chlorobenzene-d5						CAS #: 3114-55-4		
8.934	8.934	(1.000)	117	479682	25.0000		80.00- 120.00	100.00
8.934	8.934	(1.000)	82	236018			22.62- 82.62	49.20
$ 117 1,2-Dichloroethane-d4						CAS #: 17060-07-0		
6.138	6.124	(1.098)	65	210526	25.5856	25.586	80.00- 120.00	100.00
6.138	6.124	(1.098)	67	102150			21.51- 81.51	48.52

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.702	7.695	(1.187)	98	571264	26.4972	26.497	80.00- 120.00	100.00
7.702	7.695	(1.187)	70	61470			0.00- 41.20	10.76
7.702	7.695	(1.187)	100	360004			34.69- 94.69	63.02
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.923	9.916	(1.111)	174	319232	26.3304	26.330	80.00- 120.00	100.00
9.916	9.916	(1.110)	95	322133			85.32- 145.32	100.91
9.916	9.916	(1.110)	176	305736			65.83- 125.83	95.77
147 Toluene						CAS #: 108-88-3		
7.760	7.753	(1.196)	91	56639	2.29956	4.507	80.00- 120.00	100.00
7.760	7.753	(1.196)	92	32521			28.22- 88.22	57.42
167 Ethyl Benzene						CAS #: 100-41-4		
9.013	9.006	(1.009)	106	2252	0.21491	0.4212	80.00- 120.00	100.00(a)
9.006	9.006	(1.008)	91	7191			269.16- 329.16	319.31
169 m,p-Xylene						CAS #: 108-38-3		
9.099	9.099	(1.018)	106	5371	0.41413	0.8117	80.00- 120.00	100.00(a)
9.099	9.099	(1.018)	91	11556			163.98- 223.98	215.15
171 o-Xylene						CAS #: 95-47-6		
9.450	9.443	(1.058)	106	2907	0.23852	0.4675	80.00- 120.00	100.00(a)
9.450	9.443	(1.058)	91	7813			172.26- 232.26	268.80

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021714.d
Lab Smp Id: 1602253A-04A
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 9.5 Hg->5 psi

Calibration Date: 17-FEB-2016
Calibration Time: 11:28

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	159881	-9.08
123 1,4-Difluorobenze	669296	401578	937014	594733	-11.14
163 Chlorobenzene-d5	524176	314506	733846	479682	-8.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.49	0.21
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 18-Feb-2016 15:52

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602253A-04A
Level: LOW
Operator: js
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 9.5 Hg->5 psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	25.586	102.34	79-128
$ 146 Toluene-d8	25.000	26.497	105.99	82-119
$ 177 4-Bromofluorobenze	25.000	26.330	105.32	74-122

Data File: /chem/msd3.i/17feb16.b/3021714.d

Date : 17-FEB-2016 18:29

Client ID:

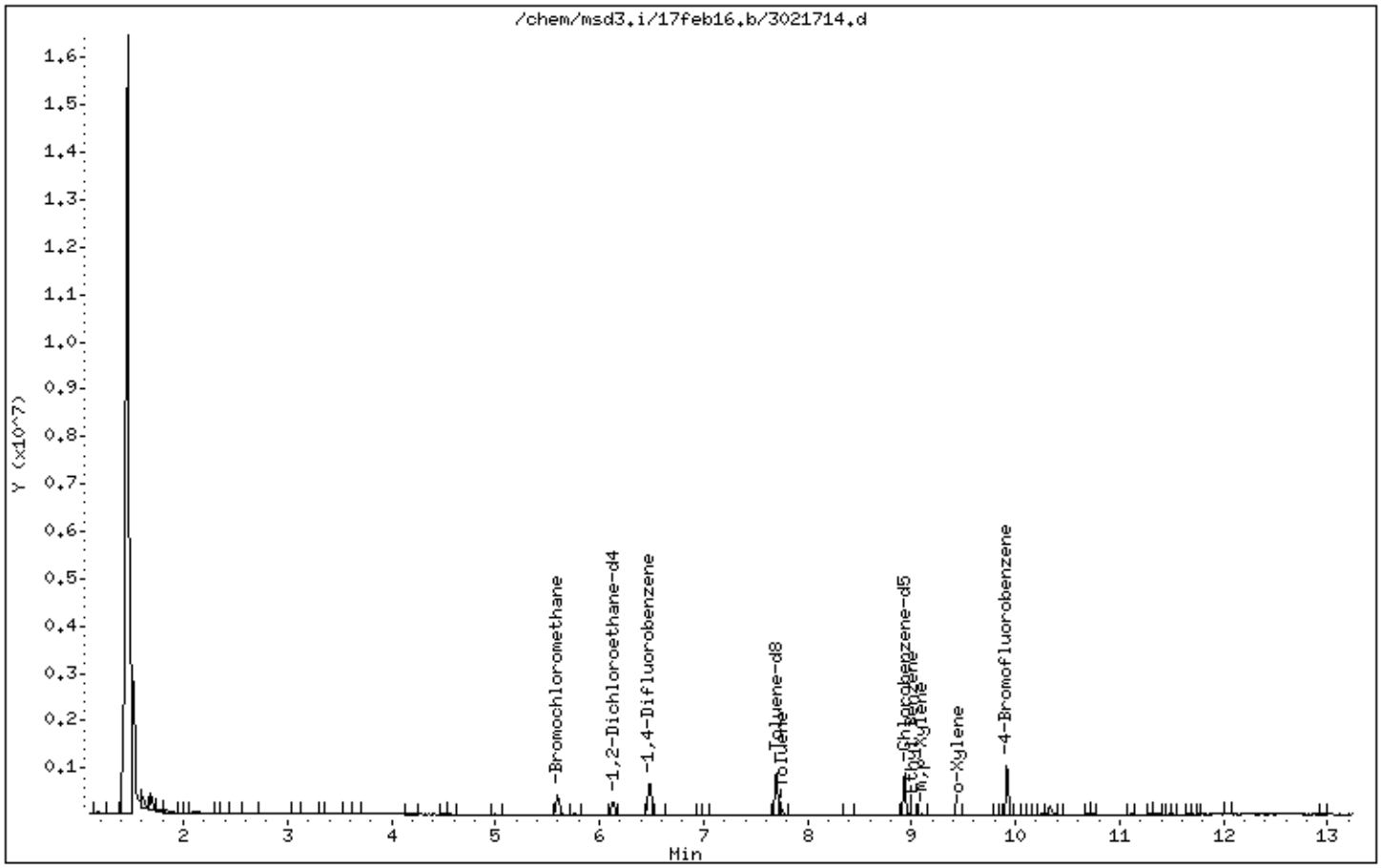
Instrument: msd3.i

Sample Info: 200ml 35266

Operator: js

Column phase: RTX-624

Column diameter: 0.25



Data File: /chem/msd3.i/17feb16.b/3021714.d

Date : 17-FEB-2016 18:29

Client ID:

Instrument: msd3.i

Sample Info: 200ml 35266

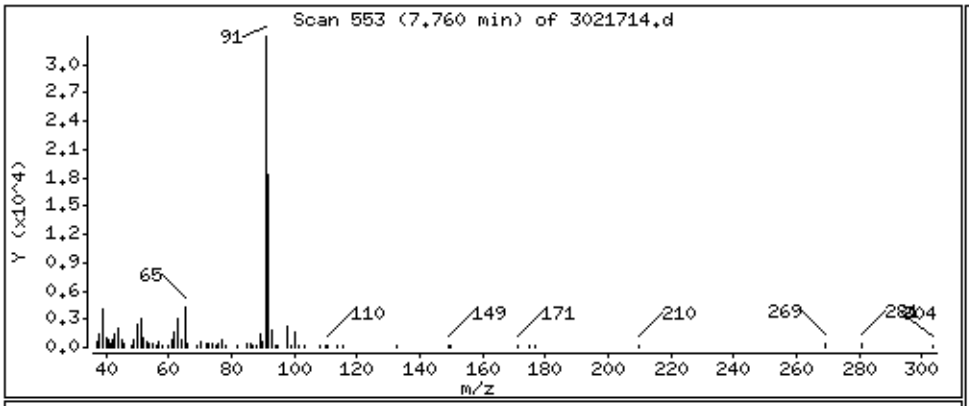
Operator: js

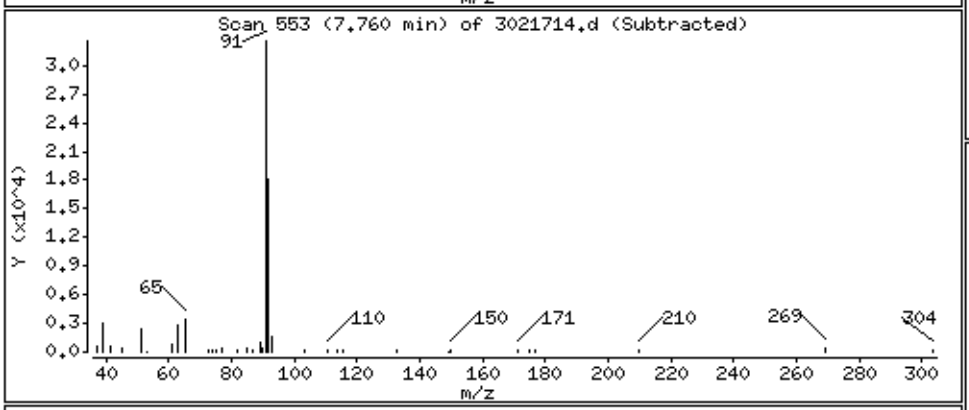
Column phase: RTX-624

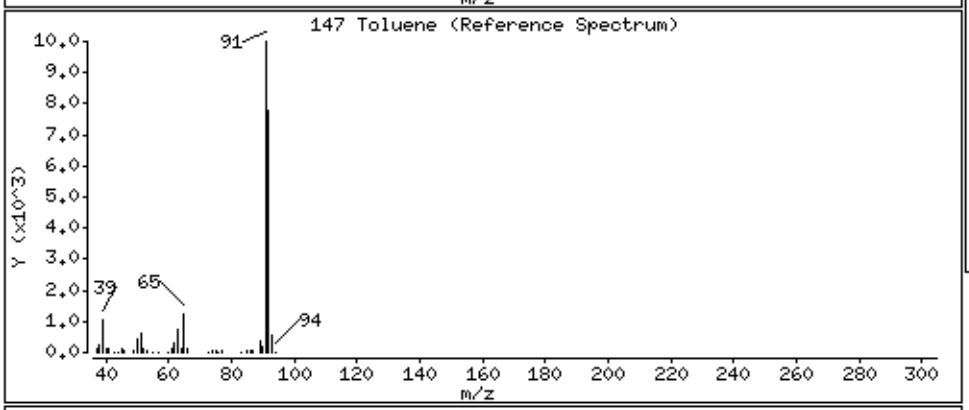
Column diameter: 0.25

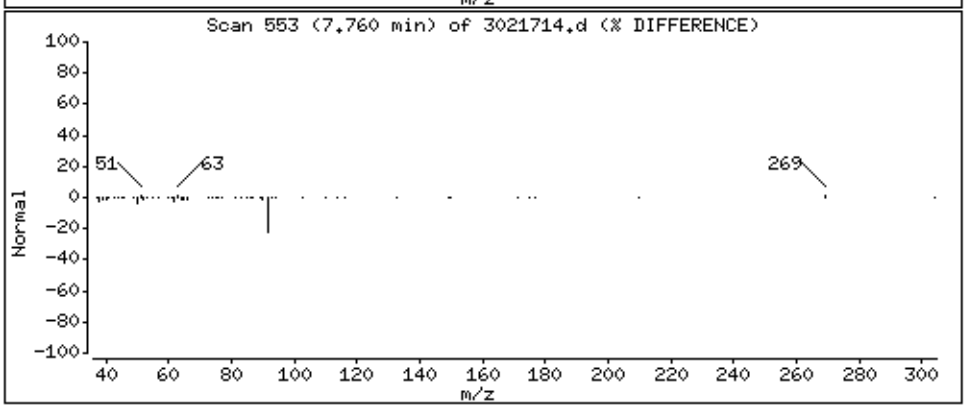
147 Toluene

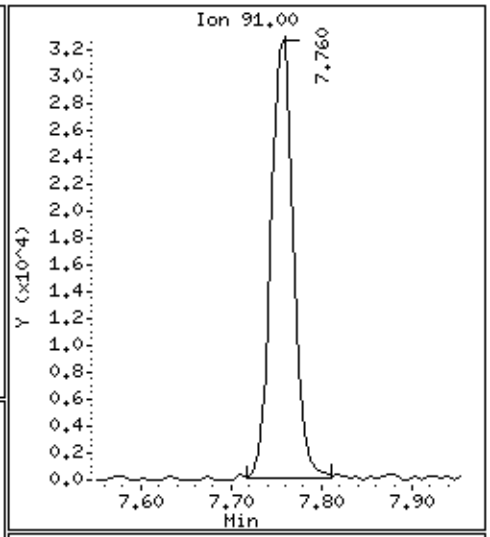
Concentration: 4.507 PPBV

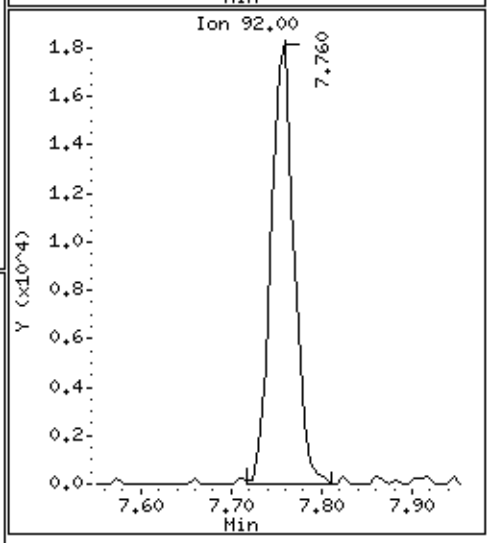












Data File: /chem/msd3.i/17feb16.b/3021714.d

Date : 17-FEB-2016 18:29

Client ID:

Instrument: msd3.i

Sample Info: 200ml 35266

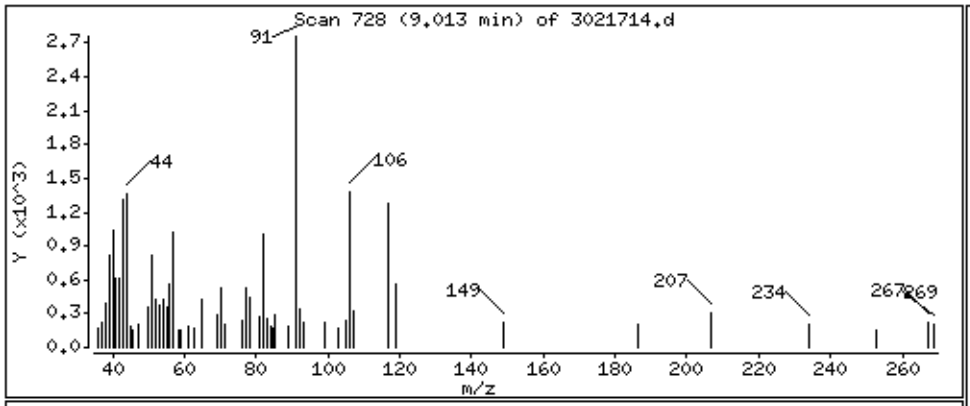
Operator: js

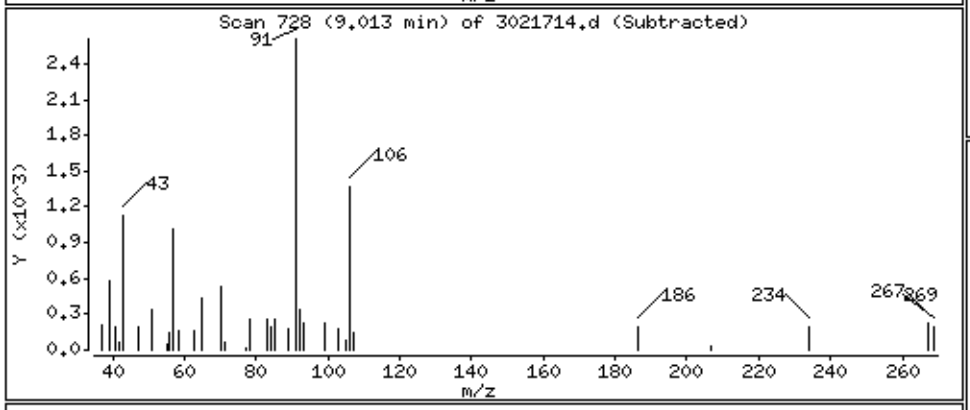
Column phase: RTX-624

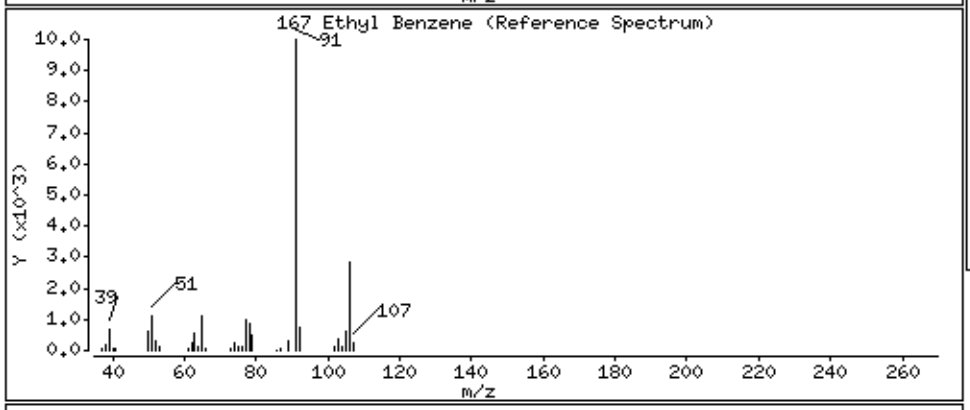
Column diameter: 0.25

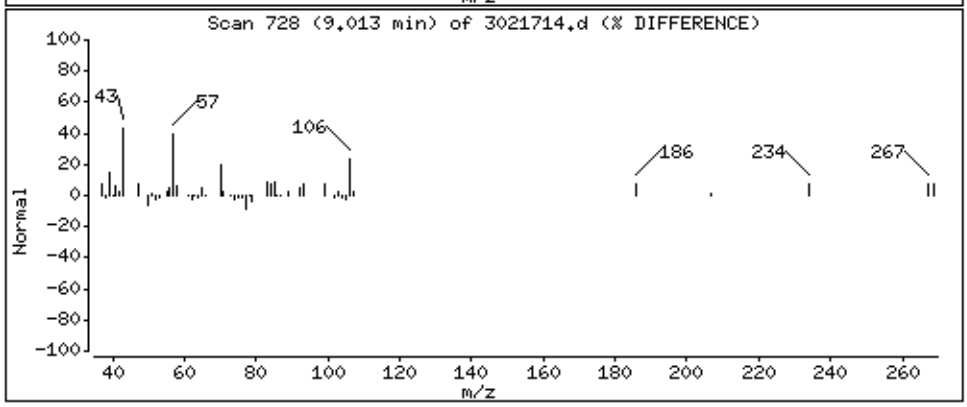
167 Ethyl Benzene

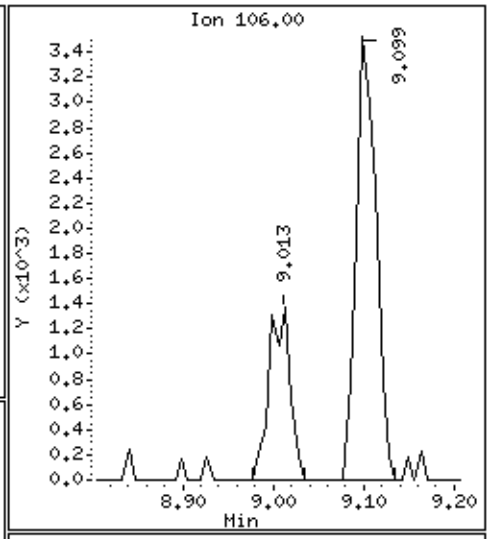
Concentration: 0.4212 PPBV

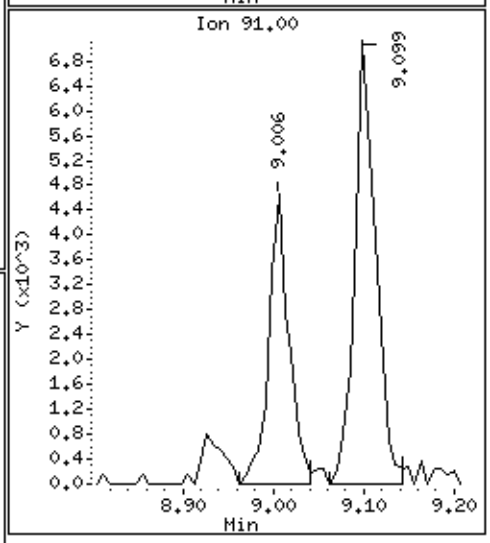












Data File: /chem/msd3.i/17feb16.b/3021714.d

Date : 17-FEB-2016 18:29

Client ID:

Instrument: msd3.i

Sample Info: 200ml 35266

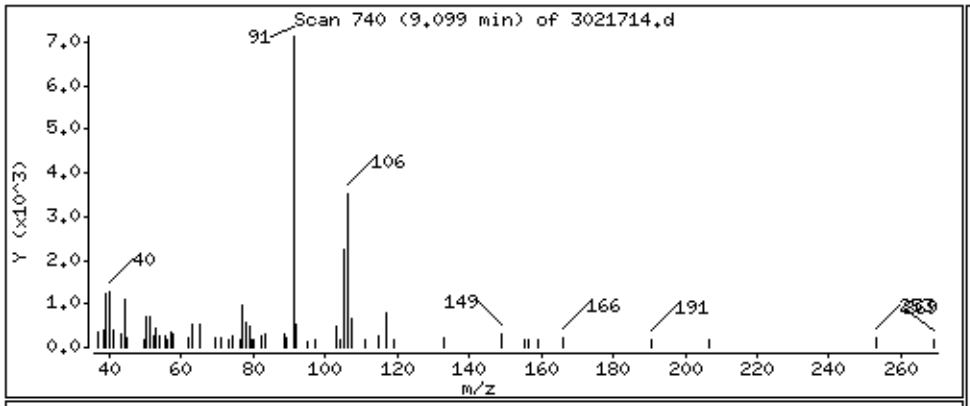
Operator: js

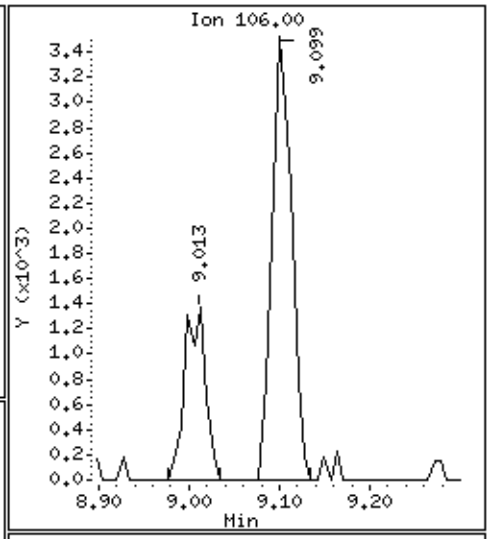
Column phase: RTX-624

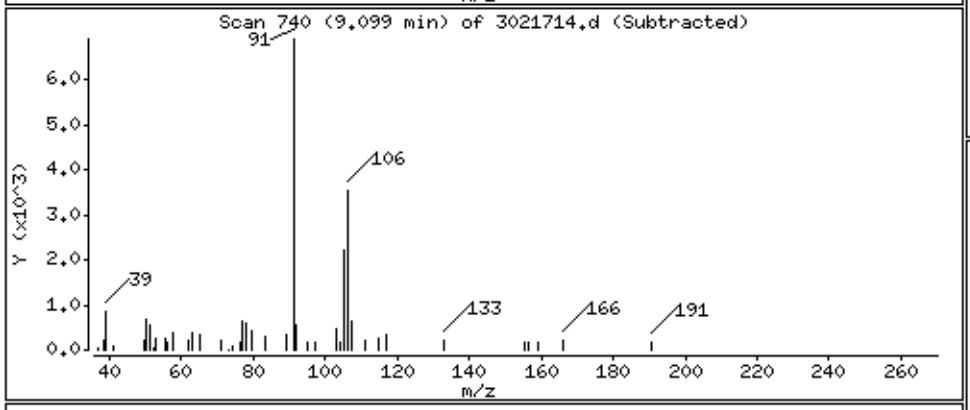
Column diameter: 0.25

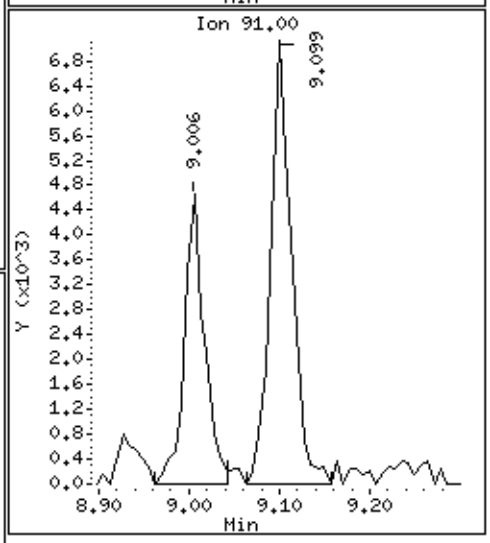
169 m,p-Xylene

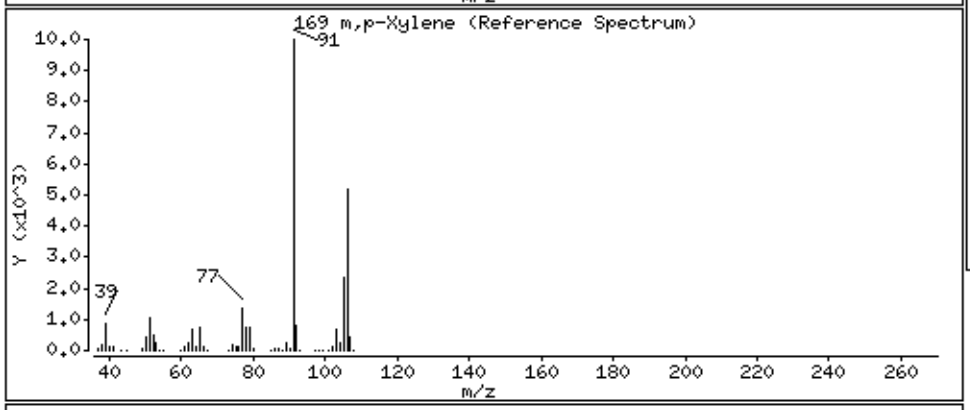
Concentration: 0.8117 PPBV

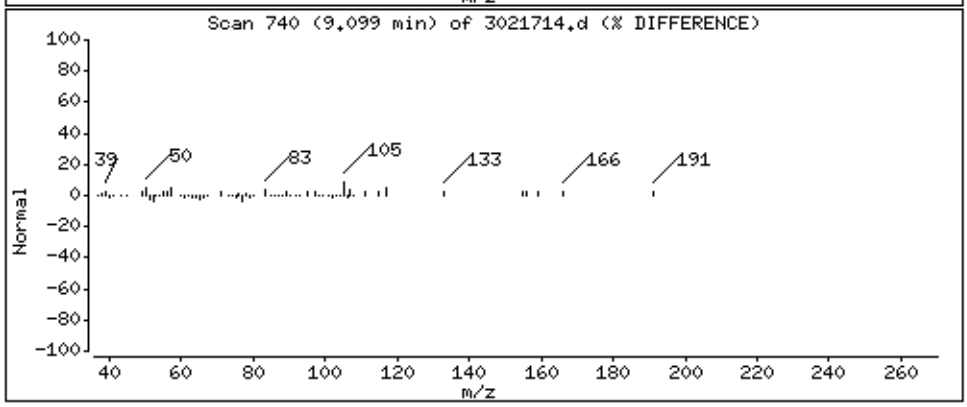












Data File: /chem/msd3.i/17feb16.b/3021714.d

Date : 17-FEB-2016 18:29

Client ID:

Instrument: msd3.i

Sample Info: 200ml 35266

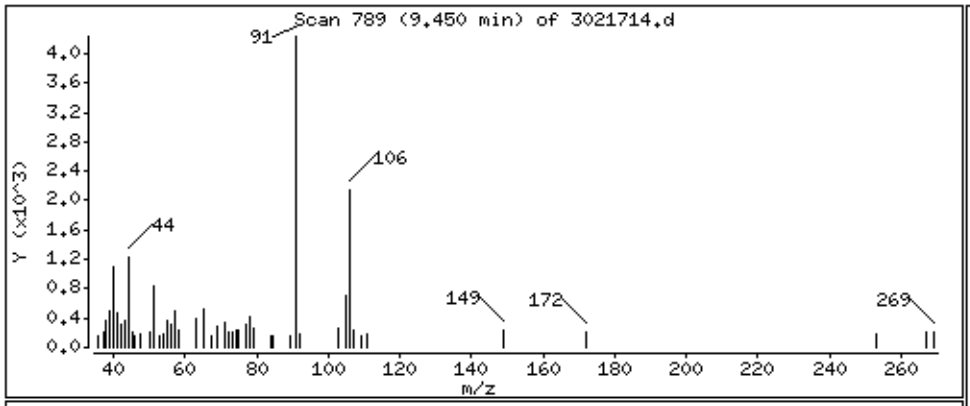
Operator: js

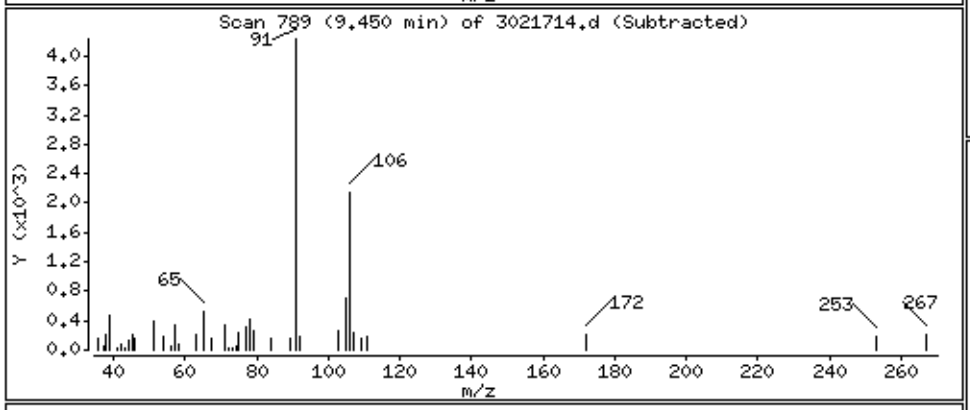
Column phase: RTX-624

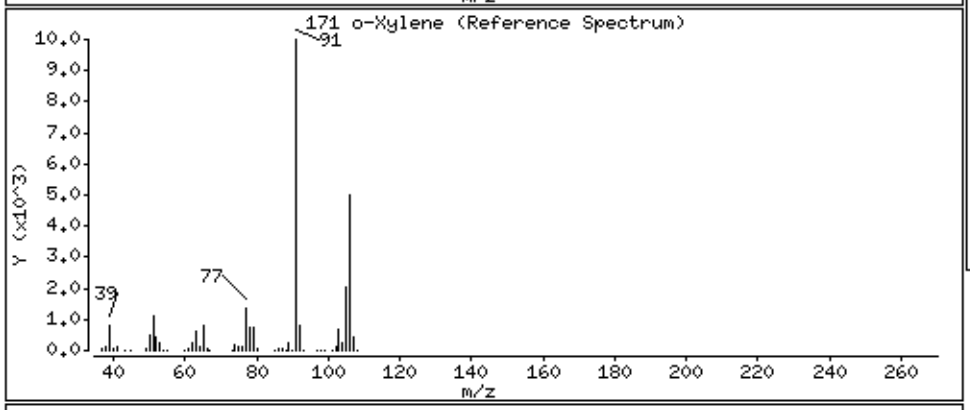
Column diameter: 0.25

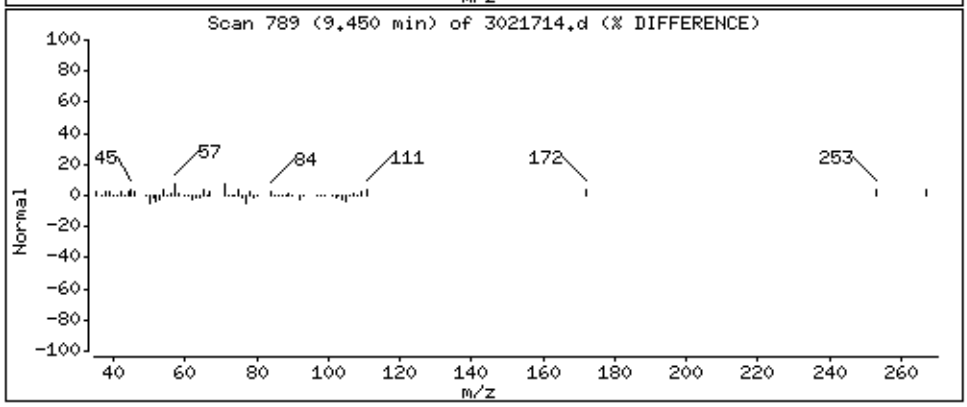
171 o-Xylene

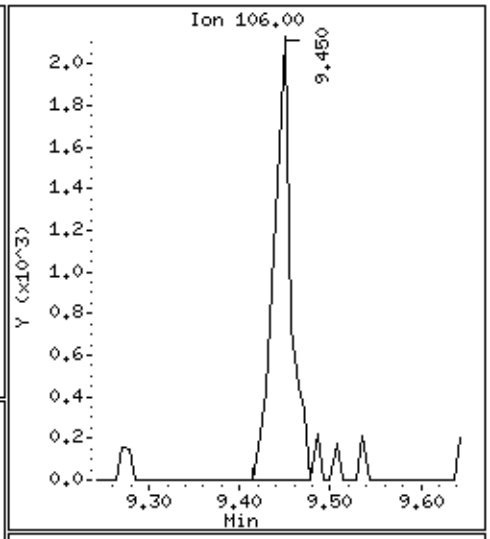
Concentration: 0.4675 PPBV

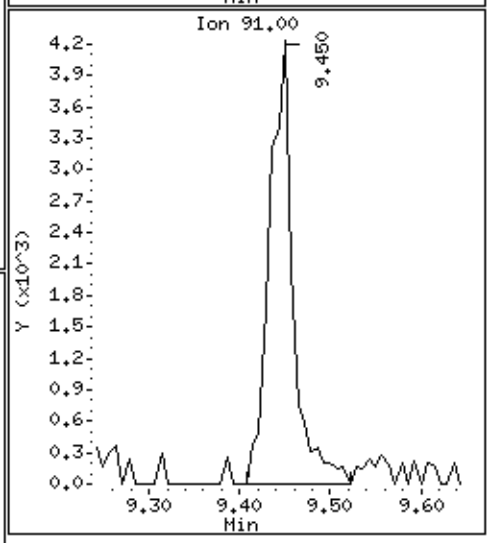












QC Results and Raw Data

EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	Lab Blank		
Lab ID:	1602253A-05A	**Date/Time Analyzed:**	2/17/16 03:12 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd3.i / 3021709d

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.39	0.80	1.6	Not Detected U
Ethyl Benzene	100-41-4	0.55	1.1	2.2	Not Detected U
m,p-Xylene	108-38-3	0.55	1.1	2.2	Not Detected U
o-Xylene	95-47-6	0.55	1.1	2.2	Not Detected U
Toluene	108-88-3	0.61	0.94	1.9	Not Detected U

U = The analyte was not detected above the MDL.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	102
4-Bromofluorobenzene	460-00-4	74-122	100
Toluene-d8	2037-26-5	82-119	103

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021709d.d
Lab Smp Id: lab blank Client Smp ID: lab blank
Inj Date : 17-FEB-2016 15:12
Operator : js Inst ID: msd3.i
Smp Info : 200mL #33555
Misc Info : Humid
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	167042	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	126574			49.26- 109.26	75.77
5.592	5.592 (1.000)	49	220587			111.17- 171.17	132.05
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	625367	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	88977			0.00- 45.05	14.23
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.935	8.934 (1.000)	117	499519	25.0000		80.00- 120.00	100.00
8.935	8.934 (1.000)	82	246200			22.62- 82.62	49.29
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	219308	25.5103	25.510	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	105776			21.51- 81.51	48.23

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.702	7.695	(1.190)	98	582077	25.6762	25.676	80.00- 120.00	100.00
7.695	7.695	(1.189)	70	60972			0.00- 41.20	10.48
7.702	7.695	(1.190)	100	371997			34.69- 94.69	63.91
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.923	9.916	(1.111)	174	314165	24.8834	24.883	80.00- 120.00	100.00
9.923	9.916	(1.111)	95	333423			85.32- 145.32	106.13
9.923	9.916	(1.111)	176	317553			65.83- 125.83	101.08

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021709d.d
Lab Smp Id: lab blank
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: Humid

Calibration Date: 17-FEB-2016
Calibration Time: 11:28
Client Smp ID: lab blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	167042	-5.01
123 1,4-Difluorobenze	669296	401578	937014	625367	-6.56
163 Chlorobenzene-d5	524176	314506	733846	499519	-4.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 17-Feb-2016 15:37

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: lab blank
Client Smp ID: lab blank
Level: LOW
Operator: js
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	25.510	102.04	79-128
$ 146 Toluene-d8	25.000	25.676	102.70	82-119
$ 177 4-Bromofluorobenze	25.000	24.883	99.53	74-122

Data File: /chem/msd3.i/17feb16.b/3021709d.d

Date : 17-FEB-2016 15:12

Client ID: lab blank

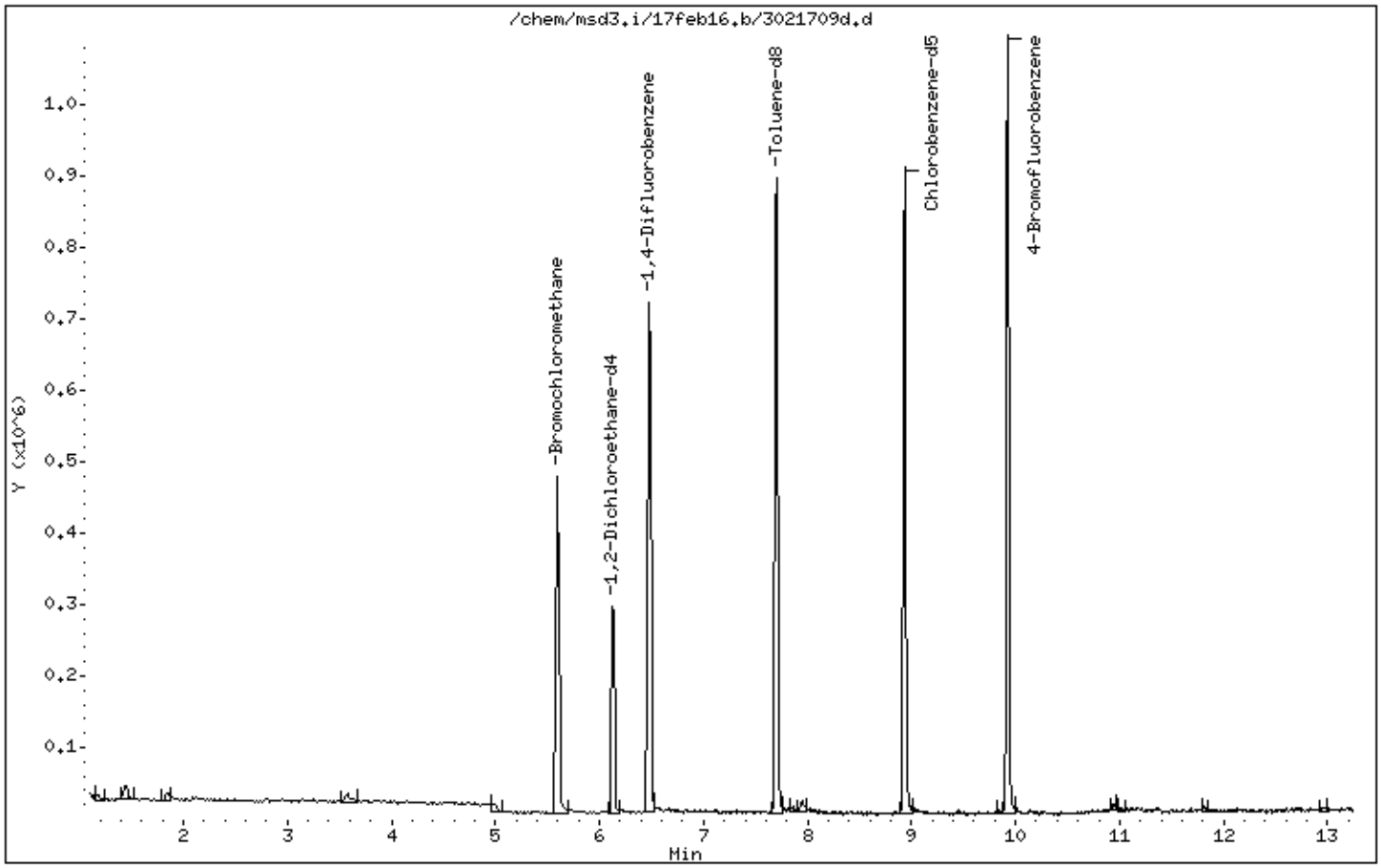
Instrument: msd3.i

Sample Info: 200mL #33555

Operator: js

Column phase: RTX-624

Column diameter: 0.25



LEVEL-IV VALIDATABLE

EPA METHOD TO-15 GC/MS FULL SCAN

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1602253A

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	CA504-SG01-005	98		103		101				0
02	CA504-SG01-005 Lab Duplicate	100		104		104				0
03	CA504-SG01-010	103		104		103				0
04	CA504-SG03-005	103		107		103				0
05	CA504-SG03-010	102		106		105				0
06	Lab Blank	102		103		100				0
07	CCV	101		102		103				0
08	LCS	102		104		103				0
09	LCSD	101		102		104				0
10										0
11										0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

1,2-Dichloroethane-d4 79 - 128
Toluene-d8 82 - 119
4-Bromofluorobenzene 74 - 122

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

EPA METHOD TO-15 GC/MS Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1602253A
Lab File ID:	3021702a.d	Date Analyzed:	02/17/2016
Instrument ID:	msd3.i	Time Analyzed:	11:28 AM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	524176		8.93		669296		6.47		175853		5.59	
	UPPER LIMIT	733846		09.26		937014		06.80		246194		05.92	
	LOWER LIMIT	314506		08.60		401578		06.14		105512		05.26	
	CLIENT SAMPLE NO												
01	CA504-SG01-005	502869		8.93		612786		6.47		168255		5.59	
02	CA504-SG01-005 Lab Duplicate	488074		8.93		607998		6.49		163519		5.59	
03	CA504-SG01-010	492376		8.93		607312		6.49		161795		5.59	
04	CA504-SG03-005	485911		8.93		596704		6.49		162951		5.59	
05	CA504-SG03-010	479682		8.93		594733		6.49		159881		5.59	
06	Lab Blank	499519		8.93		625367		6.47		167042		5.59	
07	CCV	524176		8.93		669296		6.47		175853		5.59	
08	LCS	538174		8.93		664965		6.47		173796		5.59	
09	LCSD	532021		8.93		678900		6.47		174571		5.59	
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: 3021711.d & 3021710.d

Lab Sample ID: 01A & 01AA

Dilution: 2.01 & 2.01

Client Sample ID: &

Date Analyzed: 2/17/16 & 2/17/16

		Original		Duplicate			Result Less Than
CAS Number	Compound	Amount	Flags	Amount	Flags	RPD	5X RL
71-43-2	Benzene	ND	U	ND	U	0	
100-41-4	Ethyl Benzene	1.148		1.256		9.0	Y
108-38-3	m,p-Xylene	5.22		5.106		2.2	
95-47-6	o-Xylene	2.078		2.195		5.5	Y
108-88-3	Toluene	1.311		1.283		2.2	Y

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: 3021704a.d & 3021703a.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 2/17/16 & 2/17/16

		Original		Duplicate			Result Less Than
CAS Number	Compound	Amount	Flags	Amount	Flags	RPD	5X RL
71-43-2	Benzene	101		100		1.0	
100-41-4	Ethyl Benzene	100		100		0	
108-38-3	m,p-Xylene	101		103		2.0	
95-47-6	o-Xylene	102		104		1.9	
108-88-3	Toluene	99		97		2.0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Calibration File Names:
Level 2: /chem/msd3.i/01feb16.b/3020111.d
Level 3: /chem/msd3.i/01feb16.b/3020112.d
Level 4: /chem/msd3.i/01feb16.b/3020113.d
Level 5: /chem/msd3.i/01feb16.b/3020114.d
Level 6: /chem/msd3.i/01feb16.b/3020115.d
Level 7: /chem/msd3.i/01feb16.b/3020116.d
Level 8: /chem/msd3.i/01feb16.b/3020117.d

Compound	0.50000 Level 2 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
9 Propylene	+++++ 0.88991	1.05405	1.13650	0.77585	0.89180	0.90185	0.94166	13.833
11 Freon 12	2.83351 2.56603	3.06339	3.40295	2.24800	2.63677	2.62803	2.76838	13.537
15 Freon 114	2.39168 2.07400	2.63631	2.84303	1.92283	2.12555	2.10798	2.30020	14.604
17 Chloromethane	+++++ 1.02174	1.32743	1.38317	0.97585	1.04174	1.06828	1.13637	15.237
23 Butane	+++++ 0.20829	0.34366	0.28682	0.20763	0.21928	0.21607	0.24696	22.692
25 Vinyl Chloride	1.20725 1.04478	1.31444	1.28169	0.92704	1.05968	1.06505	1.12856	12.562
26 1,3-Butadiene	1.25759 0.87088	1.12623	1.11022	0.83233	0.90896	0.89132	0.99965	16.301

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
29 Bromomethane	+++++ / 0.91742	1.05771	1.10266	0.79930	0.92832	0.93699	0.95707	11.352
30 Chloroethane	+++++ / 0.53666	0.72040	0.68578	0.47926	0.54197	0.54231	0.58440	16.356
31 Isopentane	+++++ / 1.37367	1.70241	1.76176	1.43479	1.44921	1.42192	1.52396	10.780
35 Freon 11	3.27509 / 2.76119	3.56873	3.75693	2.71942	2.90911	2.84924	3.11996	13.332
42 Ethanol	+++++ / 0.48736	0.57354	0.58294	0.40684	0.49210	0.49031	0.50551	12.850
49 Freon 113	2.73676 / 2.03082	2.52672	2.54802	2.23782	2.19333	2.10067	2.33916	11.316
50 1,1-Dichloroethene	1.20672 / 1.05111	1.35205	1.35805	0.90618	1.08104	1.08937	1.14922	14.429
52 Acetone	+++++ / 0.53085	0.75125	0.67225	0.45723	0.54329	0.55376	0.58477	18.294
56 Carbon Disulfide	+++++ / 2.82944	3.57130	3.70464	2.45786	2.86671	2.86478	3.04912	15.848
57 2-Propanol	+++++ / 2.18882	2.35144	2.49660	1.76389	2.17514	2.23288	2.20146	11.180

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
58 3-Chloropropene	+++++ / 0.45945	0.60350	0.56956	0.38258	0.46224	0.46876	0.49102	16.520
66 Methylene Chloride	1.73430 / 1.45716	1.73529	1.89579	1.22978	1.47020	1.47703	1.57136	14.408
71 tert-Butyl alcohol	+++++ / 2.30195	2.59843	2.86495	2.17202	2.31796	2.33225	2.43126	10.448
72 Methyl tert-butyl ether	2.97301 / 2.85533	3.28968	3.46675	2.93005	3.03241	2.94250	3.06996	7.264
73 trans-1,2-Dichloroethene	0.74968 / 0.70205	0.81254	0.87496	0.58054	0.71142	0.72049	0.73595	12.591
78 Hexane	2.06286 / 1.90565	2.14734	2.36039	1.67080	1.93080	1.92866	2.00093	10.848
82 1,1-Dichloroethane	2.00176 / 2.04062	2.29360	2.56058	1.69683	2.04138	2.08007	2.10212	12.722
83 Isopropyl ether	+++++ / 4.01462	4.61237	4.96193	3.86495	4.13534	4.06307	4.27538	9.846
86 Vinyl Acetate	+++++ / 0.27300	0.31491	0.33085	0.21315	0.26999	0.27507	0.27949	14.705
88 Ethyl-tert-butyl ether	+++++ / 3.69249	4.23238	4.48808	3.46030	3.75390	3.77104	3.89970	9.803

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
91 cis-1,2-Dichloroethene	0.78167	0.76843	0.89579	0.60436	0.72635	0.73701		
	0.74594						0.75137	11.467
92 2-Butanone	+++++	0.58213	0.62151	0.40978	0.49082	0.50713		
	0.50032						0.51861	14.353
99 Tetrahydrofuran	1.72145	1.38242	1.61767	1.08198	1.31785	1.36319		
	1.35489						1.40564	14.868
100 Chloroform	2.21206	2.51515	2.70068	1.79197	2.14244	2.18554		
	2.17813						2.24657	12.920
102 Cyclohexane	1.51797	1.44933	1.57314	1.29276	1.40003	1.38633		
	1.37347						1.42758	6.608
103 1,1,1-Trichloroethane	2.76770	2.70714	2.98332	2.36570	2.50803	2.45207		
	2.40044						2.59777	8.772
106 Carbon Tetrachloride	2.99189	3.00216	3.21824	2.54408	2.71689	2.67637		
	2.61601						2.82366	8.797
113 2,2,4-Trimethylpentane	6.23551	6.53646	7.24039	5.47211	6.22310	6.23090		
	6.15220						6.29867	8.357
116 Benzene	0.89639	0.87405	0.99211	0.70797	0.78633	0.79538		
	0.79641						0.83552	11.093
119 tert-Amyl methyl ether	+++++	0.23364	0.24028	0.19828	0.20608	0.20619		
	0.20383						0.21472	8.193

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Compound	0.50000 Level 2	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	200.000 Level 8	___ RRF	% RSD
120 1,2-Dichloroethane	0.43987	0.47869	0.53307	0.35749	0.41471	0.41297	0.40599	0.43469	13.046
121 Heptane	0.34563	0.30801	0.34939	0.29051	0.29346	0.28899	0.28677	0.30897	8.816
125 Trichloroethene	0.37934	0.41678	0.44904	0.31598	0.36014	0.36916	0.36908	0.37993	11.192
127 Methylcyclohexane	0.56883	0.53724	0.58543	0.47633	0.49262	0.49088	0.49264	0.52057	8.305
132 1,2-Dichloropropane	0.37948	0.36486	0.39839	0.29207	0.31266	0.31398	0.31644	0.33970	11.935
136 1,4-Dioxane	+++++	0.21436	0.24150	0.18278	0.18718	0.18883	0.19281	0.20124	11.237
138 Bromodichloromethane	0.61122	0.62717	0.72400	0.51927	0.57947	0.58960	0.60306	0.60768	10.163
144 cis-1,3-Dichloropropene	0.45902	0.49979	0.54270	0.41341	0.46396	0.48014	0.48696	0.47800	8.313
145 4-Methyl-2-pentanone	0.30403	0.26799	0.30670	0.24796	0.26657	0.26880	0.27306	0.27644	7.712
147 Toluene	1.09384	1.04145	1.20043	0.93076	0.98306	0.98734	1.01061	1.03536	8.576

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
150 trans-1,3-Dichloropropene	0.49444	0.55064	0.63284	0.47913	0.52775	0.53404		
	0.53902						0.53683	9.198
155 1,1,2-Trichloroethane	0.53280	0.48824	0.50938	0.40625	0.41996	0.42219		
	0.41991						0.45696	11.301
156 Tetrachloroethene	0.66541	0.73225	0.79878	0.64015	0.63911	0.63669		
	0.63774						0.67859	9.312
158 2-Hexanone	0.47802	0.43547	0.48082	0.41795	0.43580	0.43753		
	0.43926						0.44641	5.297
160 Dibromochloromethane	0.88030	0.90838	1.01870	0.81375	0.88014	0.86980		
	0.88151						0.89323	6.979
161 1,2-Dibromoethane (EDB)	0.76528	0.75408	0.80805	0.65464	0.68326	0.67543		
	0.67660						0.71676	8.132
165 Chlorobenzene	1.07431	1.14742	1.20058	0.99897	1.00483	0.99605		
	1.00530						1.06107	7.834
167 Ethyl Benzene	0.57417	0.55944	0.60437	0.52388	0.52548	0.51929		
	0.51677						0.54620	6.190
169 m,p-Xylene	0.69353	0.66013	0.75966	0.65576	0.65730	0.65048		
	0.65506						0.67599	5.858
171 o-Xylene	0.68909	0.59835	0.68319	0.62543	0.61126	0.61443		
	0.62466						0.63520	5.667

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
172 Styrene	0.92882 / 1.03846	0.95217	1.06240	0.97145	0.97606	0.98753	0.98813	4.762
174 Bromoform	0.81544 / 0.90545	0.84411	0.94923	0.86050	0.87285	0.87931	0.87527	4.930
175 Cumene	2.02645 / 1.98399	1.90722	2.17634	1.95733	1.94964	1.96901	1.99571	4.380
181 1,1,2,2-Tetrachloroethane	1.03776 / 0.87151	0.96675	1.03486	0.91456	0.90178	0.87574	0.94328	7.512
182 Propylbenzene	2.48542 / 2.12543	2.23850	2.42032	2.21586	2.16331	2.12811	2.25385	6.366
188 4-Ethyltoluene	0.67830 / 0.59241	0.63726	0.68264	0.62705	0.60790	0.60122	0.63240	5.721
190 1,3,5-Trimethylbenzene	0.82333 / 0.83216	0.86040	0.91428	0.85014	0.83701	0.82821	0.84936	3.695
196 1,2,4-Trimethylbenzene	1.64775 / 1.59634	1.57731	1.71840	1.60861	1.60381	1.59117	1.62049	2.987
208 1,3-Dichlorobenzene	1.17591 / 1.12270	1.28079	1.37590	1.19219	1.16259	1.13051	1.20580	7.577
209 1,4-Dichlorobenzene	1.27151 / 1.12924	1.33001	1.37071	1.19659	1.17393	1.13840	1.23005	7.736

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
212 alpha-Chlorotoluene	1.40231	1.36808	1.43054	1.39119	1.41048	1.42336		
	1.45170						1.41109	1.941
214 1,2-Dichlorobenzene	1.21663	1.29552	1.32629	1.12066	1.10073	1.08095		
	1.06923						1.17286	9.051
226 1,2,4-Trichlorobenzene	+++++	1.10260	1.23591	0.85776	0.92767	0.97363		
	0.95292						1.00841	13.606
227 Hexachlorobutadiene	+++++	0.86483	1.02505	0.67362	0.74613	0.77569		
	0.75968						0.80750	15.228
228 Naphthalene	+++++	3.30969	3.26014	1.80934	1.93414	2.01701		
	1.97610						2.38440	29.406
$ 117 1,2-Dichloroethane-d4	1.30606	1.34784	1.27516	1.26680	1.29396	1.30495		
	1.21161						1.28662	3.277
$ 146 Toluene-d8	0.89302	0.90263	0.90205	0.88839	0.91504	0.92192		
	0.92080						0.90627	1.466
$ 177 4-Bromofluorobenzene	0.63959	0.62749	0.61032	0.62943	0.64091	0.64191		
	0.63351						0.63188	1.751

Calibration History

Method : /chem/msd3.i/01feb16.b/316q0201a.m
Start Cal Date: 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 0.50000		
01-FEB-2016 17:07	AT12low	/chem/msd3.i/01feb16.b/3020111.d

Injection Date	Sublist	Calibration File
Cal Level: 3 , Cal Amount: 2.00000		
01-FEB-2016 17:31	AT12mdl	/chem/msd3.i/01feb16.b/3020112.d
29-DEC-2015 19:33	AT2crv	/chem/msd3.i/29dec15.b/3122913t.d

Injection Date	Sublist	Calibration File
Cal Level: 4 , Cal Amount: 5.00000		
01-FEB-2016 17:57	AT12mdl	/chem/msd3.i/01feb16.b/3020113.d

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 20.00000		
01-FEB-2016 18:21	AT12mdl	/chem/msd3.i/01feb16.b/3020114.d

Injection Date	Sublist	Calibration File
Cal Level: 6 , Cal Amount: 50.00000		
01-FEB-2016 18:46	AT12	/chem/msd3.i/01feb16.b/3020115.d
29-DEC-2015 19:56	AT2	/chem/msd3.i/29dec15.b/3122914t.d

Injection Date	Sublist	Calibration File
Cal Level: 7 , Cal Amount: 100.00000		
01-FEB-2016 19:10	AT12	/chem/msd3.i/01feb16.b/3020116.d

Injection Date	Sublist	Calibration File
Cal Level: 8 , Cal Amount: 200.00000		
01-FEB-2016 19:36	AT12	/chem/msd3.i/01feb16.b/3020117.d
29-DEC-2015 20:23	AT2crv	/chem/msd3.i/29dec15.b/3122915t.d

Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6

Ccal Level: 6 , Ccal Amount: 50.000		
01-FEB-2016 18:46	AT12	/chem/msd3.i/01feb16.b/3020115a.d
Ccal Level: 6 , Ccal Amount: 50.000		
01-FEB-2016 18:46	AT12	/chem/msd3.i/01feb16.b/3020115.d

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/29dec15.b/316q0201a.m
Cal Date : 02-Feb-2016 16:11 cbond
Curve Type : Average

Calibration File Names:
Level 2: /chem/msd3.i/01feb16.b/3020111.d
Level 3: /chem/msd3.i/01feb16.b/3020112.d
Level 4: /chem/msd3.i/01feb16.b/3020113.d
Level 5: /chem/msd3.i/01feb16.b/3020114.d
Level 6: /chem/msd3.i/01feb16.b/3020115.d
Level 7: /chem/msd3.i/01feb16.b/3020116.d
Level 8: /chem/msd3.i/01feb16.b/3020117.d

SM 2/3/16
TAR 2-3-16

Please see Calibration History page(s) for all the calibration files.

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD	
32 Vinyl Bromide	+++++ / 0.76311	0.86533	+++++	+++++	0.75975	+++++	0.79607	7.538	
36 1-Pentene	+++++ / 0.78125	0.94080	+++++	+++++	0.84127	+++++	0.85444	9.432	
44 Ethyl Ether	+++++ / 0.38371	0.45090	+++++	+++++	0.40456	+++++	0.41306	8.326	
53 Iodomethane	+++++ / 2.30304	1.12849	+++++	+++++	2.15048	+++++	1.86067	34.324	<-
61 Methyl Acetate	+++++ / 1.50502	3.26060	+++++	+++++	1.59963	+++++	2.12175	46.537	<-
63 Acetonitrile	+++++ / 1.35729	1.66771	+++++	+++++	1.35486	+++++	1.45996	12.324	
64 Cyclopentane	+++++ / 0.44492	0.48758	+++++	+++++	0.47144	+++++	0.46798	4.603	

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-DEC-2015 19:33
End Cal Date : 01-FEB-2016 19:36
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msd3.i/01feb16.b/316q0201a.m
Cal Date : 02-Feb-2016 16:06 troberts
Curve Type : Average

Please see Calibration History page(s) for all the calibration files.

Calibration File Names:
Level 2: /chem/msd3.i/01feb16.b/3020111.d
Level 3: /chem/msd3.i/01feb16.b/3020112.d
Level 4: /chem/msd3.i/01feb16.b/3020113.d
Level 5: /chem/msd3.i/01feb16.b/3020114.d
Level 6: /chem/msd3.i/01feb16.b/3020115.d
Level 7: /chem/msd3.i/01feb16.b/3020116.d
Level 8: /chem/msd3.i/01feb16.b/3020117.d

SB 2/3/16

TAR 2-2-16

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
9 Propylene	+++++ / 0.88991	1.05405	1.13650	0.77585	0.89180	0.90185	0.94166	13.833
11 Freon 12	2.83351 / 2.56603	3.06339	3.40295	2.24800	2.63677	2.62803	2.76838	13.537
15 Freon 114	2.39168 / 2.07400	2.63631	2.84303	1.92283	2.12555	2.10798	2.30020	14.604
17 Chloromethane	+++++ / 1.02174	1.32743	1.38317	0.97585	1.04174	1.06828	1.13637	15.237
23 Butane	+++++ / 0.20829	0.34366	0.28682	0.20763	0.21928	0.21607	0.24696	22.692
25 Vinyl Chloride	1.20725 / 1.04478	1.31444	1.28169	0.92704	1.05968	1.06505	1.12856	12.562
26 1,3-Butadiene	1.25759 / 0.87088	1.12623	1.11022	0.83233	0.90896	0.89132	0.99965	16.301

Initial Calibration Narrative

316Q0201A.m

A 7 point AT-12 initial calibration was analyzed on MSD-3 on 2/1/16.

ICAL: 0 out

AT-12 ICV: 0 out.
OK for DoD 4.2 & 5.0
File: 3020120; 50ml: #2759-108 (200ppbv→50ppbv); exp: 2/24/16

BFB tune file: 3020109, 3122909

3 Point Calibration for AT2 compounds on 12/29/15.
2 compounds out: No trans-1,4-Dichloro-2-butene and Methyl Acetate.

The MDL study was performed on 4/17/15.

MSD3

BFB Tune Verification: (180522/185511) * 1 00 = 97.31%

	2759-164	Exp. Date:	3/29/2016
BCM	190,939		
1,4-DFB	732,052		
CB-d5	594,100		

verified: gh

Method: 315q1119a.m

Method TO-15/TO-14

SOP# 6

Vacuum: NA

Surrogate# 2759-164 Exp. Date: 3/29/2016

Surrogate# NA Exp. Date: NA

Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time	Review Init	Comments
√	3122909	BFB Tune Check	2759-164	12	36ng	1.0ml	1.00	gh	gh	12/29/15	1721	gh	IS/surroagete remade, 2759-164, filament# 1, 1800EM
√	3122910	CCV	2759-73	13	50ppbv(200ppbv)	50ml	1.00	gh	gh	12/29/15	1806	gh	exp. 2/5/16; 2 out
√	3122911	LCS	2759-88A	14	50ppbv(100ppbv)	100ml	1.00	gh	gh	12/29/15	1830	gh	exp. 2/18/16;0 out
√	3122912	LCSD	2759-88A	14	50ppbv(100ppbv)	100ml	1.00	gh	gh	12/29/15	1854	gh	exp. 2/18/16;
√	3122913	I Cal Level #3	2759-155	1	2.0ppbv(5.0ppbv)	80ml	1.00	gh	gh	12/29/15	1933	gh	exp. 3/21/16 AT2
√	3122914	I Cal Level #6	2759-151	2	50ppbv(200ppbv)	50ml	1.00	gh	gh	12/29/15	1956	gh	exp.3/21/16 AT2
√	3122915	I Cal Level#8	2759-151	2	200ppbv(200ppbv)	200ml	1.00	gh	gh	12/29/15	2023	gh	

GH 12/29/15

MSD3

BFB Tune Verification: (184448/186666) * 100 = 98.81%			
	2759-202	Exp. Date:	4/25/2016
BCM	192,021		
1,4-DFB	729,739		
CB-d5	587,806		

Method TO-15/TO-14			
SOP# 6			
Vacuum:	NA		
Surrogate# 2759-202		Exp. Date:	4/25/2016
Surrogate#	NA	Exp. Date:	NA

verified: tar

Method: 316q0201a.m

Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time	Review Init	Comments
√	3020109	BFB Tune Check	2759-202	12	36ng	1.0mL	1.00	tar	tar	2/1/16	1523	tar/cb	exp. 4/25/16
√	3020110	System Blank	33555	12	Humid	200mL	1.00	gd	tar	2/1/16	1644	gd	
√	3020111	ICAL Level 2	2759-190	10	0.5ppbv(5.0ppbv)	20mL	1.00	gd	tar	2/1/16	1707	gd	exp. 4/6/16
√	3020112	ICAL Level 3	2759-190	10	2.0ppbv(5.0ppbv)	80mL	1.00	gd	tar	2/1/16	1731	gd	exp. 4/6/16
√	3020113	ICAL Level 4	2759-190	10	5.0ppbv(5.0ppbv)	200mL	1.00	gd	tar	2/1/16	1757	gd	exp. 4/6/16
√	3020114	ICAL Level 5	2759-210	13	20ppbv(200ppbv)	20mL	1.00	gd	tar	2/1/16	1821	gd	exp. 4/6/16
√	3020115	ICAL Level 6	2759-210	13	50ppbv(200ppbv)	50mL	1.00	gd	tar	2/1/16	1846	gd	exp. 4/6/16, CCV
√	3020116	ICAL Level 7	2759-210	13	100ppbv(200ppbv)	100mL	1.00	gd	tar	2/1/16	1910	gd	exp. 4/6/16
√	3020117	ICAL Level 8	2759-210	13	200ppbv(200ppbv)	200mL	1.00	gd	tar	2/1/16	1936	gd	exp. 4/6/16
x	3020118	System Blank	33555	12	Humid	200mL	1.00	gd	tar	2/1/16	2003	gd	
x	3020119	System Blank	33555	12	Humid	200mL	1.00	gd	tar	2/1/16	2029	gd	
√	3020120	ICV	2759-108	14	50ppbv(200ppbv)	50mL	1.00	gd	gd	2/1/16	2210	tar/cb	exp. 2/24/16

2/3/16

Modified EPA Methods TO-14A/TO-15
Internal Standard and Associated Target Compounds and Surrogates

Bromochloromethane
Target Compounds:
Freon 12
Freon 114
Chloromethane
Vinyl Chloride
1,3-Butadiene
Bromomethane
Chloroethane
Freon 11
Ethanol
Freon 113
1,1-Dichloroethene
Acetone
2-Propanol
Carbon Disulfide
3-Chloropropene
Methylene Chloride
Methyl tert-butyl ether
trans-1,2-Dichloroethene
Hexane
1,1-Dichloroethane
2-Butanone (Methyl Ethyl Ketone)
cis-1,2-Dichloroethene
Tetrahydrofuran
Chloroform
1,1,1-Trichloroethane
Cyclohexane
Carbon Tetrachloride
2,2,4-Trimethylpentane
Surrogates:
1,2-Dichloroethane-d4

1,4-Difluorobenzene
Target Compounds:
Benzene
1,2-Dichloroethane
Heptane
Trichloroethene
1,2-Dichloropropane
1,4-Dioxane
Bromodichloromethane
cis-1,3-Dichloropropene
4-Methyl-2-pentanone
Toluene
Surrogates:
Toluene-d8

Chlorobenzene-d5
Target Compounds:
trans-1,3-Dichloropropene
1,1,2-Trichloroethane
Tetrachloroethene
2-Hexanone
Dibromochloromethane
1,2-Dibromoethane (EDB)
Chlorobenzene
Ethyl Benzene
m,p-Xylene
o-Xylene
Styrene
Bromoform
Cumene
1,1,2,2-Tetrachloroethane
Propylbenzene
4-Ethyltoluene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
alpha-Chlorotoluene
1,2-Dichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene
Surrogates:
Bromofluorobenzene

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/01feb16.b/3020120.d
Lab Smp Id: ICV Client Smp ID: ICV
Inj Date : 01-FEB-2016 22:10
Operator : gd Inst ID: msd3.i
Smp Info : 50mL 2759-108
Misc Info : 50ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 02-Feb-2016 16:06 troberts Quant Type: ISTD
Cal Date : 01-FEB-2016 18:46 Cal File: 3020115.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	194599	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	149869			49.46- 109.46	77.01
5.592	5.592 (1.000)	49	254391			102.81- 162.81	130.73
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	748109	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	107610			0.00- 44.95	14.38
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	584657	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	288290			20.50- 80.50	49.31
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	244438	24.4071	24.407	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	132300			31.96- 91.96	54.12

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	657514	24.2451	24.245	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	69786			0.00- 40.93	10.61
7.695	7.695 (1.189)	100	419145			33.37- 93.37	63.75
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.923	9.916 (1.111)	174	374040	25.3117	25.312	80.00- 120.00	100.00
9.923	9.916 (1.111)	95	390348			76.06- 136.06	104.36
9.923	9.916 (1.111)	176	362611			66.45- 126.45	96.94
9 Propylene					CAS #: 115-07-1		
1.576	1.577 (0.282)	41	346475	47.2691	47.269	80.00- 120.00	100.00
1.576	1.577 (0.282)	42	234751			36.98- 96.98	67.75
1.576	1.577 (0.282)	39	254934			43.38- 103.38	73.58
11 Freon 12					CAS #: 75-71-8		
1.618	1.619 (0.289)	85	1076244	49.9441	49.944	80.00- 120.00	100.00
1.618	1.619 (0.289)	87	360848			2.66- 62.66	33.53
15 Freon 114					CAS #: 76-14-2		
1.744	1.744 (0.312)	135	872952	48.7556	48.756	80.00- 120.00	100.00
1.744	1.744 (0.312)	137	281377			2.25- 62.25	32.23
17 Chloromethane					CAS #: 74-87-3		
1.828	1.828 (0.327)	50	427228	48.2992	48.299	80.00- 120.00	100.00
1.828	1.828 (0.327)	52	140079			3.40- 63.40	32.79
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	89705	46.6649	46.665	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	732961			794.68- 854.68	817.08
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	435620	49.5887	49.589	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	140539			0.57- 60.57	32.26
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	348246	44.7547	44.755	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	358281			72.08- 132.08	102.88
29 Bromomethane					CAS #: 74-83-9		
2.332	2.346 (0.417)	94	379476	50.9380	50.938	80.00- 120.00	100.00
2.332	2.346 (0.417)	96	371199			69.29- 129.29	97.82
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	220951	48.5722	48.572	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	66588			1.32- 61.32	30.14

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.458	2.458 (0.440)	49	73951			2.24- 62.24	33.47
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	567499	47.8399	47.840	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	383376			37.04- 97.04	67.56
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	1172360	48.2738	48.274	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	758748			34.81- 94.81	64.72
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	198296	50.3942	50.394	80.00- 120.00	100.00
3.074	3.074 (0.550)	43	39380			0.00- 49.35	19.86
3.074	3.074 (0.550)	46	75041			7.41- 67.41	37.84
49 Freon 113					CAS #: 76-13-1		
3.381	3.382 (0.605)	151	842049	46.2463	46.246	80.00- 120.00	100.00
3.381	3.382 (0.605)	153	537445			33.74- 93.74	63.83
3.381	3.382 (0.605)	101	946277			82.76- 142.76	112.38
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.409	3.410 (0.610)	96	430554	48.1310	48.131	80.00- 120.00	100.00
3.409	3.410 (0.610)	98	272142			33.55- 93.55	63.21
3.409	3.410 (0.610)	61	750300			146.21- 206.21	174.26
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	211178	46.3940	46.394	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	720373			312.41- 372.41	341.12
56 Carbon Disulfide					CAS #: 75-15-0		
3.633	3.647 (0.650)	76	1002961	42.2580	42.258	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	860284	50.2030	50.203	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	175098			0.00- 49.76	20.35
3.731	3.731 (0.667)	59	32458			0.00- 33.56	3.77
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	173711	45.4496	45.450	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	598798			317.43- 377.43	344.71
66 Methylene Chloride					CAS #: 75-09-2		
4.053	4.053 (0.725)	49	582097	47.5902	47.590	80.00- 120.00	100.00
4.053	4.067 (0.725)	84	367517			32.46- 92.46	63.14
4.053	4.053 (0.725)	51	177577			0.08- 60.08	30.51

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	1151738	48.1970	48.197	80.00- 120.00	100.00
4.277	4.277 (0.765)	57	308574			0.00- 56.78	26.79
4.277	4.277 (0.765)	41	319195			0.00- 57.61	27.71
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	241352	42.1308	42.131	80.00- 120.00	100.00
4.291	4.305 (0.767)	61	593384			212.53- 272.53	245.86
4.305	4.305 (0.770)	96	385030			126.39- 186.39	159.53
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	762650	48.9659	48.966	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	491621			35.44- 95.44	64.46
4.501	4.501 (0.805)	86	100712			0.00- 43.37	13.21
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.781	4.781 (0.855)	63	788396	48.1821	48.182	80.00- 120.00	100.00
4.781	4.781 (0.855)	65	243431			0.52- 60.52	30.88
86 Vinyl Acetate					CAS #: 108-05-4		
4.823	4.823 (0.862)	86	102269	47.0079	47.008	80.00- 120.00	100.00
4.823	4.823 (0.862)	43	1315143			1358.75-1418.75	1285.96
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	309475	52.9144	52.914	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	482306			126.27- 186.27	155.85
5.354	5.368 (0.957)	61	675280			188.75- 248.75	218.20
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	192263	47.6267	47.627	80.00- 120.00	100.00
5.382	5.396 (0.962)	43	894137			453.83- 513.83	465.06
5.382	5.396 (0.962)	57	66006			8.29- 68.29	34.33
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	499246	45.6290	45.629	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	168871			2.73- 62.73	33.83
5.592	5.592 (1.000)	72	183169			4.10- 64.10	36.69
100 Chloroform					CAS #: 67-66-3		
5.648	5.648 (1.010)	83	832081	47.5823	47.582	80.00- 120.00	100.00
5.648	5.648 (1.010)	85	540993			36.02- 96.02	65.02
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	547143	49.2380	49.238	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	738772			105.03- 165.03	135.02
5.760	5.760 (1.030)	41	428371			51.08- 111.08	78.29

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	977530	48.3424	48.342	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	620995			33.79- 93.79	63.53
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.886	5.900 (1.053)	119	1037802	47.2173	47.217	80.00- 120.00	100.00
5.886	5.900 (1.053)	117	1084897			73.09- 133.09	104.54
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	2411882	49.1934	49.193	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	755711			1.97- 61.97	31.33
6.082	6.082 (1.088)	41	708571			0.00- 57.44	29.38
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	1148035	45.9170	45.917	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	261501			0.00- 52.26	22.78
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	609955	46.8919	46.892	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	194235			0.60- 60.60	31.84
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	429068	46.4078	46.408	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	867869			174.73- 234.73	202.27
6.250	6.250 (0.965)	57	479691			82.00- 142.00	111.80
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	535657	47.1149	47.115	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	622178			86.71- 146.71	116.15
6.678	6.678 (1.032)	97	357762			37.32- 97.32	66.79
127 Methylcyclohexane					CAS #: 108-87-2		
6.778	6.778 (1.047)	83	725447	46.5697	46.570	80.00- 120.00	100.00
6.778	6.778 (1.047)	98	353435			17.60- 77.60	48.72
6.778	6.778 (1.047)	55	687406			63.76- 123.76	94.76
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.914	6.915 (1.068)	63	464380	45.6830	45.683	80.00- 120.00	100.00
6.914	6.915 (1.068)	62	319349			38.31- 98.31	68.77
6.914	6.915 (1.068)	41	306022			34.93- 94.93	65.90
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	264645	43.9455	43.946	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	197812			45.98- 105.98	74.75
7.000	7.008 (1.081)	57	69971			0.00- 56.14	26.44

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	871796	47.9415	47.941	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	560540			33.86- 93.86	64.30
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	648433	45.3330	45.333	80.00- 120.00	100.00
7.516	7.516 (1.161)	77	197709			1.54- 61.54	30.49
7.516	7.516 (1.161)	39	429474			35.97- 95.97	66.23
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.624	7.624 (1.178)	58	374749	45.3010	45.301	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	1035490			244.45- 304.45	276.32
7.624	7.624 (1.178)	85	150871			10.30- 70.30	40.26
147 Toluene					CAS #: 108-88-3		
7.752	7.753 (1.198)	91	1403602	45.3032	45.303	80.00- 120.00	100.00
7.752	7.753 (1.198)	92	811802			26.66- 86.66	57.84
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	613234	48.8455	48.845	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	195237			1.19- 61.19	31.84
7.996	7.996 (0.895)	39	387854			32.42- 92.42	63.25
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	496183	46.4302	46.430	80.00- 120.00	100.00
8.154	8.147 (0.913)	99	302934			33.08- 93.08	61.05
8.154	8.154 (0.913)	83	408220			54.45- 114.45	82.27
156 Tetrachloroethene					CAS #: 127-18-4		
8.189	8.190 (0.917)	166	757760	47.7487	47.749	80.00- 120.00	100.00
8.189	8.190 (0.917)	129	569907			47.15- 107.15	75.21
8.189	8.190 (0.917)	131	559747			44.59- 104.59	73.87
158 2-Hexanone					CAS #: 591-78-6		
8.311	8.318 (0.930)	58	489942	46.9300	46.930	80.00- 120.00	100.00
8.311	8.311 (0.930)	43	968153			169.61- 229.61	197.61
8.318	8.318 (0.931)	100	93987			0.00- 49.56	19.18
160 Dibromochloromethane					CAS #: 124-48-1		
8.462	8.462 (0.947)	129	1013981	48.5409	48.541	80.00- 120.00	100.00
8.462	8.462 (0.947)	127	795093			46.73- 106.73	78.41
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.583	8.584 (0.961)	107	804779	48.0108	48.011	80.00- 120.00	100.00
8.583	8.584 (0.961)	109	755765			65.04- 125.04	93.91

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	1159015	46.7073	46.707	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	390243			3.14- 63.14	33.67
8.956	8.956 (1.002)	77	597762			21.05- 81.05	51.58
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	611492	47.8715	47.872	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	1812771			270.81- 330.81	296.45
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	765777	48.4397	48.440	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	1449964			160.16- 220.16	189.35
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	726681	48.9183	48.918	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	1443165			173.71- 233.71	198.60
172 Styrene					CAS #: 100-42-5		
9.464	9.465 (1.059)	104	1135182	49.1238	49.124	80.00- 120.00	100.00
9.464	9.465 (1.059)	78	560603			19.18- 79.18	49.38
174 Bromoform					CAS #: 75-25-2		
9.672	9.665 (1.083)	173	1337606	65.3470	65.347	80.00- 120.00	100.00
9.672	9.665 (1.083)	171	684135			20.89- 80.89	51.15
175 Cumene					CAS #: 98-82-8		
9.737	9.730 (1.090)	105	2261138	48.4471	48.447	80.00- 120.00	100.00
9.737	9.730 (1.090)	120	621187			0.00- 57.28	27.47
9.737	9.730 (1.090)	51	233702			0.00- 40.70	10.34
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.052	10.045 (1.125)	83	1041295	47.2032	47.203	80.00- 120.00	100.00
10.052	10.045 (1.125)	85	672060			34.67- 94.67	64.54
182 Propylbenzene					CAS #: 103-65-1		
10.080	10.073 (1.128)	91	2552027	48.4171	48.417	80.00- 120.00	100.00
10.080	10.073 (1.128)	120	653263			0.00- 55.53	25.60
10.080	10.073 (1.128)	105	96079			0.00- 33.85	3.76
188 4-Ethyltoluene					CAS #: 622-96-8		
10.174	10.167 (1.139)	120	708258	47.8896	47.890	80.00- 120.00	100.00
10.174	10.167 (1.139)	105	2252675			289.83- 349.83	318.06
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.224	10.217 (1.144)	120	965892	48.6267	48.627	80.00- 120.00	100.00
10.224	10.217 (1.144)	105	1951393			170.34- 230.34	202.03

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.553	10.546 (1.181)	105	1846043	48.7120	48.712	80.00- 120.00	100.00
10.553	10.546 (1.181)	120	864516			16.82- 76.82	46.83
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.847	10.833 (1.214)	146	1351798	47.9376	47.938	80.00- 120.00	100.00
10.847	10.840 (1.214)	148	855486			33.31- 93.31	63.29
10.847	10.833 (1.214)	111	516830			7.77- 67.77	38.23
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.926	10.919 (1.223)	146	1355353	47.1158	47.116	80.00- 120.00	100.00
10.926	10.919 (1.223)	148	866139			33.74- 93.74	63.91
10.926	10.919 (1.223)	111	496913			6.13- 66.13	36.66
212 alpha-Chlorotoluene					CAS #: 100-44-7		
11.047	11.033 (1.236)	91	1692256	51.2801	51.280	80.00- 120.00	100.00
11.047	11.033 (1.236)	126	410230			0.00- 53.92	24.24
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.262	11.248 (1.261)	146	1303564	47.5253	47.525	80.00- 120.00	100.00
11.262	11.248 (1.261)	148	813423			33.86- 93.86	62.40
11.255	11.248 (1.260)	111	498342			9.19- 69.19	38.23
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.695	12.674 (1.421)	180	1140239	48.3499	48.350	80.00- 120.00	100.00
12.695	12.674 (1.421)	182	1087820			67.73- 127.73	95.40
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.788	12.767 (1.431)	225	905388	47.9435	47.944	80.00- 120.00	100.00
12.788	12.767 (1.431)	223	567403			32.69- 92.69	62.67
228 Naphthalene					CAS #: 91-20-3		
12.982	12.953 (1.453)	128	249051	4.46629	4.466	80.00- 120.00	100.00
12.982	12.953 (1.453)	127	32544			0.00- 43.15	13.07

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3020120.d
Lab Smp Id: ICV
Analysis Type: VOA
Quant Type: ISTD
Operator: gd
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 01-FEB-2016
Calibration Time: 18:46
Client Smp ID: ICV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	192021	115213	268829	194599	1.34
123 1,4-Difluorobenze	729739	437843	1021635	748109	2.52
163 Chlorobenzene-d5	587806	352684	822928	584657	-0.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 03-Feb-2016 11:23

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 01feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: ICV
Client Smp ID: ICV
Level: LOW
Operator: gd
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AT12.sub
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	50.000	47.269	94.54	70-130
11 Freon 12	50.000	49.944	99.89	70-130
15 Freon 114	50.000	48.756	97.51	70-130
17 Chloromethane	50.000	48.299	96.60	70-130
23 Butane	50.000	46.665	93.33	70-130
25 Vinyl Chloride	50.000	49.589	99.18	70-130
26 1,3-Butadiene	50.000	44.755	89.51	70-130
29 Bromomethane	50.000	50.938	101.88	70-130
30 Chloroethane	50.000	48.572	97.14	70-130
31 Isopentane	50.000	47.840	95.68	70-130
35 Freon 11	50.000	48.274	96.55	70-130
42 Ethanol	50.000	50.394	100.79	70-130
49 Freon 113	50.000	46.246	92.49	70-130
50 1,1-Dichloroethene	50.000	48.131	96.26	70-130
52 Acetone	50.000	46.394	92.79	70-130
56 Carbon Disulfide	50.000	42.258	84.52	70-130
57 2-Propanol	50.000	50.203	100.41	70-130
58 3-Chloropropene	50.000	45.450	90.90	70-130
66 Methylene Chloride	50.000	47.590	95.18	70-130
72 Methyl tert-butyl	50.000	48.197	96.39	70-130
73 trans-1,2-Dichloro	42.500	42.131	99.13	70-130
78 Hexane	50.000	48.966	97.93	70-130
82 1,1-Dichloroethane	50.000	48.182	96.36	70-130
86 Vinyl Acetate	50.000	47.008	94.02	70-130
91 cis-1,2-Dichloroet	56.500	52.914	93.65	70-130
92 2-Butanone	50.000	47.627	95.25	70-130
99 Tetrahydrofuran	50.000	45.629	91.26	70-130
100 Chloroform	50.000	47.582	95.16	70-130
103 1,1,1-Trichloroeth	50.000	48.342	96.68	70-130
106 Carbon Tetrachlori	50.000	47.217	94.43	70-130
102 Cyclohexane	50.000	49.238	98.48	70-130
113 2,2,4-Trimethylpen	50.000	49.193	98.39	70-130
116 Benzene	50.000	45.917	91.83	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	50.000	46.892	93.78	70-130
121 Heptane	50.000	46.408	92.82	70-130
125 Trichloroethene	50.000	47.115	94.23	70-130
127 Methylcyclohexane	50.000	46.570	93.14	70-130
132 1,2-Dichloropropan	50.000	45.683	91.37	70-130
136 1,4-Dioxane	50.000	43.946	87.89	70-130
138 Bromodichlorometha	50.000	47.941	95.88	70-130
144 cis-1,3-Dichloropr	50.000	45.333	90.67	70-130
145 4-Methyl-2-pentano	50.000	45.301	90.60	70-130
147 Toluene	50.000	45.303	90.61	70-130
150 trans-1,3-Dichloro	50.000	48.845	97.69	70-130
155 1,1,2-Trichloroeth	50.000	46.430	92.86	70-130
156 Tetrachloroethene	50.000	47.749	95.50	70-130
158 2-Hexanone	50.000	46.930	93.86	70-130
160 Dibromochlorometha	50.000	48.541	97.08	70-130
161 1,2-Dibromoethane	50.000	48.011	96.02	70-130
165 Chlorobenzene	50.000	46.707	93.41	70-130
167 Ethyl Benzene	50.000	47.872	95.74	70-130
169 m,p-Xylene	50.000	48.440	96.88	70-130
171 o-Xylene	50.000	48.918	97.84	70-130
172 Styrene	50.000	49.124	98.25	70-130
174 Bromoform	65.000	65.347	100.53	70-130
175 Cumene	50.000	48.447	96.89	70-130
181 1,1,2,2-Tetrachlor	50.000	47.203	94.41	70-130
182 Propylbenzene	50.000	48.417	96.83	70-130
188 4-Ethyltoluene	50.000	47.890	95.78	70-130
190 1,3,5-Trimethylben	50.000	48.627	97.25	70-130
196 1,2,4-Trimethylben	50.000	48.712	97.42	70-130
208 1,3-Dichlorobenzen	50.000	47.938	95.88	70-130
209 1,4-Dichlorobenzen	50.000	47.116	94.23	70-130
212 alpha-Chlorotoluen	50.000	51.280	102.56	70-130
214 1,2-Dichlorobenzen	50.000	47.525	95.05	70-130
226 1,2,4-Trichloroben	50.000	48.350	96.70	70-130
227 Hexachlorobutadien	50.000	47.944	95.89	70-130
228 Naphthalene	5.000	4.466	89.33	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.407	97.63	70-130
$ 146 Toluene-d8	25.000	24.245	96.98	70-130
$ 177 4-Bromofluorobenze	25.000	25.312	101.25	70-130

Data File: /chem/msd3.i/01feb16.b/3020120.d

Date : 01-FEB-2016 22:10

Client ID: ICV

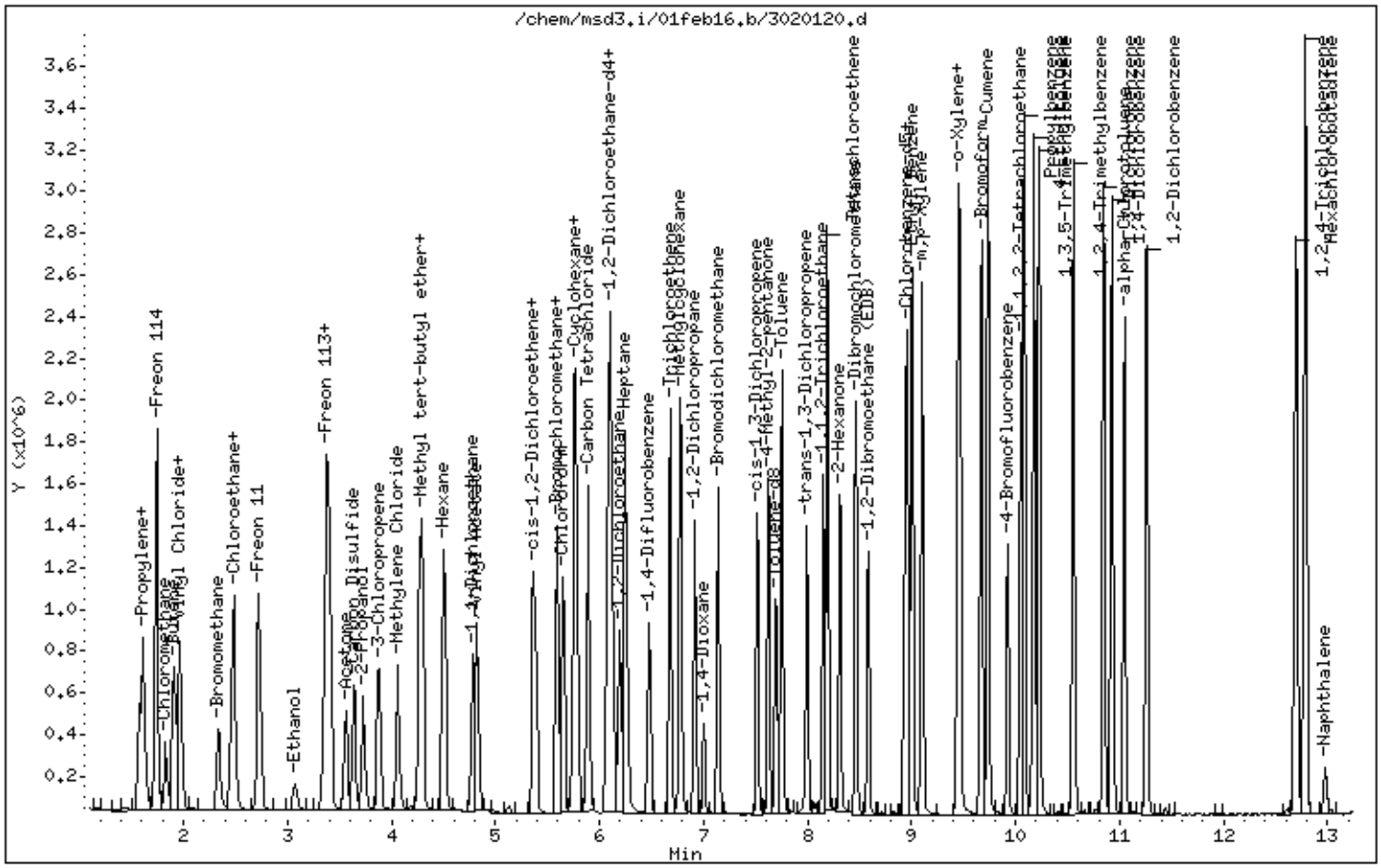
Instrument: msd3.i

Sample Info: 50mL 2759-108

Operator: gd

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/01feb16.b/3020111.d
Lab Smp Id: ICAL Level 2
Inj Date : 01-FEB-2016 17:07
Operator : tar Inst ID: msd3.i
Smp Info : 20mL 2759-190
Misc Info : 0.5ppbv(5.0ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 02-Feb-2016 15:37 troberts Quant Type: ISTD
Cal Date : 01-FEB-2016 17:07 Cal File: 3020111.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12low.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	190682	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	149246			49.46- 109.46	78.27
5.592	5.592 (1.000)	49	254359			102.81- 162.81	133.39
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	697131	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	105444			0.00- 44.95	15.13
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	551235	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	272873			20.50- 80.50	49.50
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	249042	25.0000	25.378	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	120815			31.96- 91.96	48.51

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	622554	25.0000	24.635	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	64653			0.00- 40.93	10.39
7.702	7.702 (1.190)	100	390155			33.37- 93.37	62.67
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	352565	25.0000	25.305	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	357370			76.06- 136.06	101.36
9.916	9.916 (1.110)	176	341243			66.45- 126.45	96.79
11 Freon 12					CAS #: 75-71-8		
1.605	1.605 (0.287)	85	10806	0.50000	0.5118	80.00- 120.00	100.00
1.605	1.605 (0.287)	87	4395			2.66- 62.66	40.67
15 Freon 114					CAS #: 76-14-2		
1.744	1.744 (0.312)	135	9121	0.50000	0.5199	80.00- 120.00	100.00
1.744	1.744 (0.312)	137	3041			2.25- 62.25	33.34
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	4604	0.50000	0.5349	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	2150			0.57- 60.57	46.70
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	4796	0.50000	0.6290	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	3982			72.08- 132.08	83.03
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	12490	0.50000	0.5249	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	8689			34.81- 94.81	69.57
49 Freon 113					CAS #: 76-13-1		
3.381	3.381 (0.605)	151	10437	0.50000	0.5850	80.00- 120.00	100.00
3.368	3.368 (0.602)	153	6469			33.74- 93.74	61.98
3.381	3.381 (0.605)	101	11235			82.76- 142.76	107.65
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.396	3.396 (0.607)	96	4602	0.50000	0.5250	80.00- 120.00	100.00
3.409	3.409 (0.610)	98	2932			33.55- 93.55	63.71
3.409	3.409 (0.610)	61	7713			146.21- 206.21	167.60
66 Methylene Chloride					CAS #: 75-09-2		
4.053	4.053 (0.725)	49	6614	0.50000	0.5518	80.00- 120.00	100.00(a)
4.067	4.067 (0.727)	84	3830			32.46- 92.46	57.91
4.053	4.053 (0.725)	51	2062			0.08- 60.08	31.18
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	11338	0.50000	0.4842	80.00- 120.00	100.00(a)

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   72 Methyl tert-butyl ether (continued)
  4.277   4.277 (0.765)    57      4005                     0.00-  56.78    35.32
  4.277   4.277 (0.765)    41      3578                     0.00-  57.61    31.56
-------------------------------------------------------------------------------
   73 trans-1,2-Dichloroethene                       CAS #: 156-60-5
  4.291   4.291 (0.767)    98      2859 0.50000   0.5093  80.00- 120.00   100.00
  4.305   4.305 (0.770)    61      7230                  212.53- 272.53   252.89
  4.305   4.305 (0.770)    96      4427                  126.39- 186.39   154.84
-------------------------------------------------------------------------------
   78 Hexane                                         CAS #: 110-54-3
  4.501   4.501 (0.805)    57      7867 0.50000   0.5155  80.00- 120.00   100.00
  4.501   4.501 (0.805)    43      7152                   35.44-  95.44    90.91
  4.501   4.501 (0.805)    86      1920                    0.00-  43.37    24.41
-------------------------------------------------------------------------------
   82 1,1-Dichloroethane                             CAS #: 75-34-3
  4.781   4.781 (0.855)    63      7634 0.50000   0.4761  80.00- 120.00   100.00(a)
  4.781   4.781 (0.855)    65      3162                    0.52-  60.52    41.42
-------------------------------------------------------------------------------
   91 cis-1,2-Dichloroethene                         CAS #: 156-59-2
  5.368   5.368 (0.960)    98      2981 0.50000   0.5202  80.00- 120.00   100.00
  5.368   5.368 (0.960)    96      4472                  126.27- 186.27   150.02
  5.354   5.354 (0.957)    61      5866                  188.75- 248.75   196.78
-------------------------------------------------------------------------------
   99 Tetrahydrofuran                                CAS #: 109-99-9
  5.606   5.606 (1.002)    42      6565 0.50000   0.6123  80.00- 120.00   100.00
  5.606   5.606 (1.002)    71      2186                    2.73-  62.73    33.30
  5.606   5.606 (1.002)    72      2050                    4.10-  64.10    31.23
-------------------------------------------------------------------------------
  100 Chloroform                                     CAS #: 67-66-3
  5.648   5.648 (1.010)    83      8436 0.50000   0.4923  80.00- 120.00   100.00(a)
  5.662   5.662 (1.012)    85      5198                   36.02-  96.02    61.62
-------------------------------------------------------------------------------
  102 Cyclohexane                                    CAS #: 110-82-7
  5.760   5.760 (1.030)    84      5789 0.50000   0.5317  80.00- 120.00   100.00
  5.760   5.760 (1.030)    56      7801                  105.03- 165.03   134.76
  5.760   5.760 (1.030)    41      6507                   51.08- 111.08   112.40
-------------------------------------------------------------------------------
  103 1,1,1-Trichloroethane                          CAS #: 71-55-6
  5.774   5.774 (1.033)    97     10555 0.50000   0.5327  80.00- 120.00   100.00
  5.774   5.774 (1.033)    99      6576                   33.79-  93.79    62.30
-------------------------------------------------------------------------------
  106 Carbon Tetrachloride                           CAS #: 56-23-5
  5.886   5.886 (1.053)   119     11410 0.50000   0.5298  80.00- 120.00   100.00
  5.886   5.886 (1.053)   117     12339                   73.09- 133.09   108.14
-------------------------------------------------------------------------------
  113 2,2,4-Trimethylpentane                         CAS #: 540-84-1
  6.082   6.082 (1.088)    57     23780 0.50000   0.4950  80.00- 120.00   100.00(a)
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane (continued)							
6.082	6.082 (1.088)	56	8593			1.97- 61.97	36.14
6.096	6.096 (1.090)	41	6712			0.00- 57.44	28.23
116 Benzene						CAS #: 71-43-2	
6.110	6.110 (0.944)	78	12498	0.50000	0.5364	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	3206			0.00- 52.26	25.65
120 1,2-Dichloroethane						CAS #: 107-06-2	
6.194	6.194 (0.957)	62	6133	0.50000	0.5060	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	2423			0.60- 60.60	39.51
121 Heptane						CAS #: 142-82-5	
6.250	6.250 (0.965)	71	4819	0.50000	0.5593	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	9340			174.73- 234.73	193.82
6.250	6.250 (0.965)	57	5798			82.00- 142.00	120.32
125 Trichloroethene						CAS #: 79-01-6	
6.685	6.685 (1.033)	95	5289	0.50000	0.4992	80.00- 120.00	100.00(a)
6.678	6.678 (1.032)	130	5953			86.71- 146.71	112.55
6.685	6.685 (1.033)	97	3384			37.32- 97.32	63.98
127 Methylcyclohexane						CAS #: 108-87-2	
6.778	6.778 (1.047)	83	7931	0.50000	0.5464	80.00- 120.00	100.00(a)
6.778	6.778 (1.047)	98	3788			17.60- 77.60	47.76
6.778	6.778 (1.047)	55	6871			63.76- 123.76	86.63
132 1,2-Dichloropropane						CAS #: 78-87-5	
6.922	6.922 (1.069)	63	5291	0.50000	0.5586	80.00- 120.00	100.00
6.922	6.922 (1.069)	62	4010			38.31- 98.31	75.79
6.914	6.914 (1.068)	41	2768			34.93- 94.93	52.32
138 Bromodichloromethane						CAS #: 75-27-4	
7.137	7.137 (1.102)	83	8522	0.50000	0.5029	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	5801			33.86- 93.86	68.07
144 cis-1,3-Dichloropropene						CAS #: 10061-01-5	
7.516	7.516 (1.161)	75	6400	0.50000	0.4802	80.00- 120.00	100.00(a)
7.516	7.516 (1.161)	77	2488			1.54- 61.54	38.88
7.516	7.516 (1.161)	39	5110			35.97- 95.97	79.84
145 4-Methyl-2-pentanone						CAS #: 108-10-1	
7.624	7.624 (1.178)	58	4239	0.50000	0.5499	80.00- 120.00	100.00
7.631	7.631 (1.179)	43	11464			244.45- 304.45	270.44
7.631	7.631 (1.179)	85	1687			10.30- 70.30	39.80

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  147 Toluene                                          CAS #: 108-88-3
  7.753   7.753 (1.198)    91     15251 0.50000   0.5282  80.00- 120.00   100.00
  7.760   7.760 (1.199)    92      9705                   26.66-  86.66    63.64
-------------------------------------------------------------------------------
  150 trans-1,3-Dichloropropene                        CAS #: 10061-02-6
  8.003   8.003 (0.896)    75      5451 0.50000   0.4605  80.00- 120.00   100.00(a)
  7.996   7.996 (0.895)    77      3326                    1.19-  61.19    61.02
  7.996   7.996 (0.895)    39      4197                   32.42-  92.42    77.00
-------------------------------------------------------------------------------
  155 1,1,2-Trichloroethane                            CAS #: 79-00-5
  8.154   8.154 (0.913)    97      5874 0.50000   0.5830  80.00- 120.00   100.00
  8.154   8.154 (0.913)    99      3100                   33.08-  93.08    52.77
  8.154   8.154 (0.913)    83      4285                   54.45- 114.45    72.95
-------------------------------------------------------------------------------
  156 Tetrachloroethene                                CAS #: 127-18-4
  8.197   8.197 (0.917)   166      7336 0.50000   0.4903  80.00- 120.00   100.00(a)
  8.189   8.189 (0.917)   129      6176                   47.15- 107.15    84.19
  8.189   8.189 (0.917)   131      5506                   44.59- 104.59    75.05
-------------------------------------------------------------------------------
  158 2-Hexanone                                       CAS #: 591-78-6
  8.311   8.311 (0.930)    58      5270 0.50000   0.5354  80.00- 120.00   100.00(a)
  8.318   8.318 (0.931)    43     10780                  169.61- 229.61   204.55
  8.318   8.318 (0.931)   100      1326                    0.00-  49.56    25.16
-------------------------------------------------------------------------------
  160 Dibromochloromethane                             CAS #: 124-48-1
  8.469   8.469 (0.948)   129      9705 0.50000   0.4928  80.00- 120.00   100.00(a)
  8.462   8.462 (0.947)   127      8245                   46.73- 106.73    84.96
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                          CAS #: 106-93-4
  8.583   8.583 (0.961)   107      8437 0.50000   0.5338  80.00- 120.00   100.00
  8.583   8.583 (0.961)   109      7502                   65.04- 125.04    88.92
-------------------------------------------------------------------------------
  165 Chlorobenzene                                    CAS #: 108-90-7
  8.963   8.963 (1.003)   112     11844 0.50000   0.5062  80.00- 120.00   100.00
  8.956   8.956 (1.002)   114      4476                    3.14-  63.14    37.79
  8.949   8.949 (1.002)    77      6979                   21.05-  81.05    58.92
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                    CAS #: 100-41-4
  9.006   9.006 (1.008)   106      6330 0.50000   0.5256  80.00- 120.00   100.00
  9.006   9.006 (1.008)    91     19007                  270.81- 330.81   300.27
-------------------------------------------------------------------------------
  169 m,p-Xylene                                       CAS #: 108-38-3
  9.099   9.099 (1.018)   106      7646 0.50000   0.5130  80.00- 120.00   100.00
  9.099   9.099 (1.018)    91     15770                  160.16- 220.16   206.25
-------------------------------------------------------------------------------
  171 o-Xylene                                         CAS #: 95-47-6
  9.443   9.443 (1.057)   106      7597 0.50000   0.5424  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
171 o-Xylene (continued)							
9.443	9.443 (1.057)	91	14665			173.71- 233.71	193.04
172 Styrene					CAS #: 100-42-5		
9.472	9.472 (1.060)	104	10240	0.50000	0.4700	80.00- 120.00	100.00(a)
9.465	9.465 (1.059)	78	5130			19.18- 79.18	50.10
174 Bromoform					CAS #: 75-25-2		
9.672	9.672 (1.083)	173	8990	0.50000	0.4658	80.00- 120.00	100.00(a)
9.665	9.665 (1.082)	171	4629			20.89- 80.89	51.49
175 Cumene					CAS #: 98-82-8		
9.730	9.730 (1.089)	105	22341	0.50000	0.5077	80.00- 120.00	100.00
9.730	9.730 (1.089)	120	6045			0.00- 57.28	27.06
9.737	9.737 (1.090)	51	2776			0.00- 40.70	12.43
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.045	10.045 (1.124)	83	11441	0.50000	0.5501	80.00- 120.00	100.00
10.038	10.038 (1.123)	85	6686			34.67- 94.67	58.44
182 Propylbenzene					CAS #: 103-65-1		
10.081	10.081 (1.128)	91	27401	0.50000	0.5514	80.00- 120.00	100.00
10.073	10.073 (1.127)	120	6457			0.00- 55.53	23.56
10.081	10.081 (1.128)	105	1085			0.00- 33.85	3.96
188 4-Ethyltoluene					CAS #: 622-96-8		
10.166	10.166 (1.138)	120	7478	0.50000	0.5363	80.00- 120.00	100.00
10.166	10.166 (1.138)	105	21335			289.83- 349.83	285.30
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.217	10.217 (1.143)	120	9077	0.50000	0.4847	80.00- 120.00	100.00(a)
10.217	10.217 (1.143)	105	19049			170.34- 230.34	209.86
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.546	10.546 (1.180)	105	18166	0.50000	0.5084	80.00- 120.00	100.00
10.546	10.546 (1.180)	120	8181			16.82- 76.82	45.03
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.833	10.833 (1.212)	146	12964	0.50000	0.4876	80.00- 120.00	100.00(a)
10.840	10.840 (1.213)	148	9430			33.31- 93.31	72.74
10.840	10.840 (1.213)	111	5364			7.77- 67.77	41.38
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.919	10.919 (1.222)	146	14018	0.50000	0.5168	80.00- 120.00	100.00
10.919	10.919 (1.222)	148	9383			33.74- 93.74	66.94
10.919	10.919 (1.222)	111	5639			6.13- 66.13	40.23

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
212 alpha-Chlorotoluene						CAS #: 100-44-7		
11.033	11.033	(1.235)	91	15460	0.50000	0.4969	80.00- 120.00	100.00(a)
11.033	11.033	(1.235)	126	3890			0.00- 53.92	25.16
214 1,2-Dichlorobenzene						CAS #: 95-50-1		
11.241	11.241	(1.258)	146	13413	0.50000	0.5186	80.00- 120.00	100.00
11.248	11.248	(1.259)	148	9772			33.86- 93.86	72.85
11.241	11.241	(1.258)	111	5528			9.19- 69.19	41.21

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3020111.d
Lab Smp Id: ICAL Level 2
Analysis Type: VOA
Quant Type: ISTD
Operator: tar
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 0.5ppbv(5.0ppbv)

Calibration Date: 01-FEB-2016
Calibration Time: 18:46

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	192021	115213	268829	190682	-0.70
123 1,4-Difluorobenze	729739	437843	1021635	697131	-4.47
163 Chlorobenzene-d5	587806	352684	822928	551235	-6.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/01feb16.b/3020111.d

Date : 01-FEB-2016 17:07

Client ID:

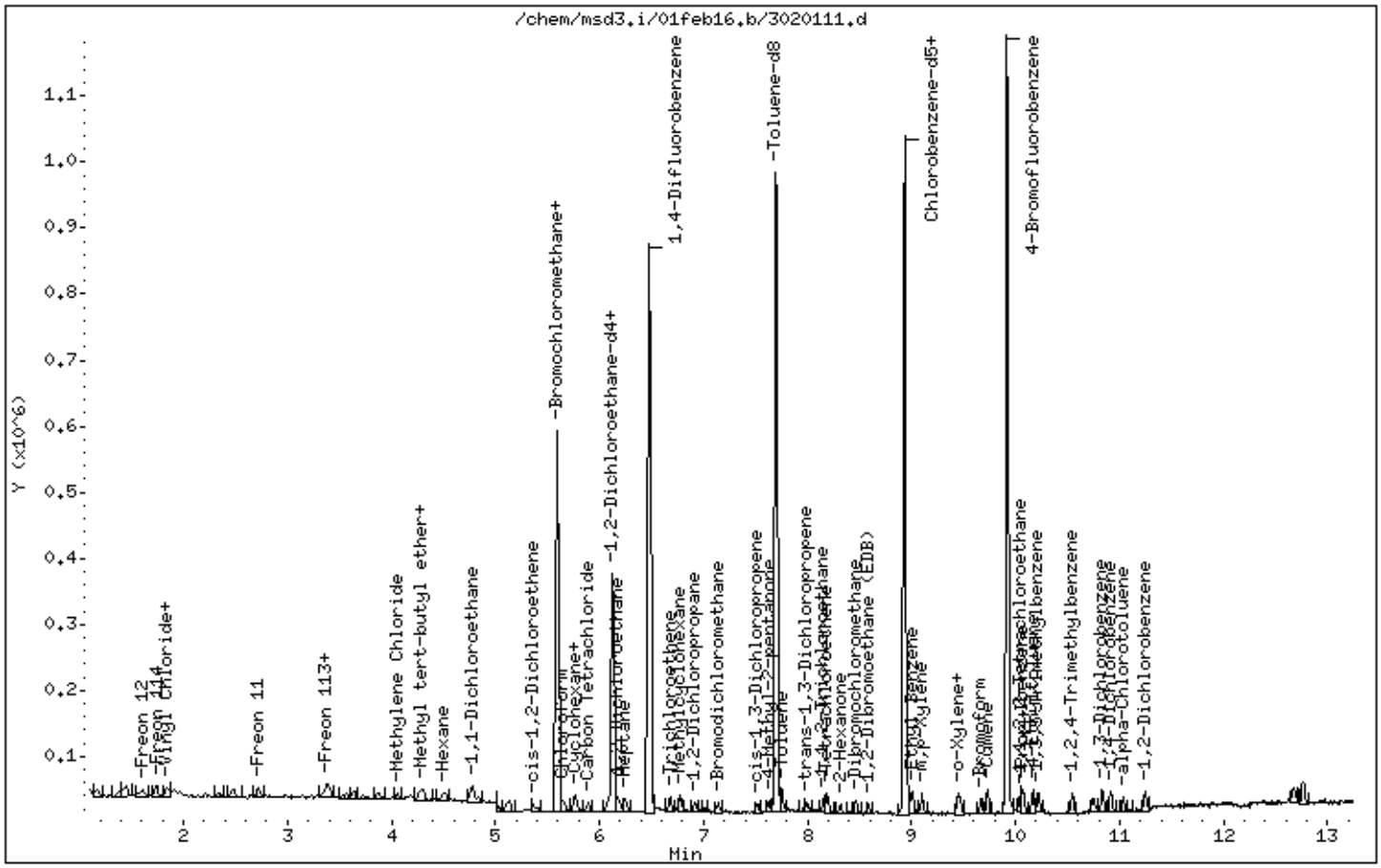
Instrument: msd3.i

Sample Info: 20mL 2759-190

Operator: tar

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/01feb16.b/3020112.d
Lab Smp Id: ICAL Level 3
Inj Date : 01-FEB-2016 17:31
Operator : tar Inst ID: msd3.i
Smp Info : 80mL 2759-190
Misc Info : 2.0ppbv(5.0ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 02-Feb-2016 15:37 troberts Quant Type: ISTD
Cal Date : 01-FEB-2016 17:31 Cal File: 3020112.d
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12mdl.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	184775	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	150526			49.46- 109.46	81.46
5.592	5.592 (1.000)	49	245764			102.81- 162.81	133.01
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	706226	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	105062			0.00- 44.95	14.88
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.935	8.935 (1.000)	117	566367	25.0000		80.00- 120.00	100.00
8.935	8.935 (1.000)	82	283536			20.50- 80.50	50.06
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	249047	25.0000	26.189	80.00- 120.00	100.00
6.138	6.138 (1.098)	67	120254			31.96- 91.96	48.29

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	637464	25.0000	24.900	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	66208			0.00- 40.93	10.39
7.695	7.695 (1.189)	100	399455			33.37- 93.37	62.66
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	355392	25.0000	24.826	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	361445			76.06- 136.06	101.70
9.916	9.916 (1.110)	176	344525			66.45- 126.45	96.94
9 Propylene					CAS #: 115-07-1		
1.577	1.577 (0.282)	41	15581	2.00000	2.239	80.00- 120.00	100.00
1.577	1.577 (0.282)	42	10180			36.98- 96.98	65.34
1.577	1.577 (0.282)	39	11151			43.38- 103.38	71.57
11 Freon 12					CAS #: 75-71-8		
1.619	1.619 (0.289)	85	45283	2.00000	2.213	80.00- 120.00	100.00
1.619	1.619 (0.289)	87	16384			2.66- 62.66	36.18
15 Freon 114					CAS #: 76-14-2		
1.745	1.745 (0.312)	135	38970	2.00000	2.292	80.00- 120.00	100.00
1.745	1.745 (0.312)	137	12084			2.25- 62.25	31.01
17 Chloromethane					CAS #: 74-87-3		
1.829	1.829 (0.327)	50	19622	2.00000	2.336	80.00- 120.00	100.00(a)
1.829	1.829 (0.327)	52	7022			3.40- 63.40	35.79
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	5080	2.00000	2.783	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	32555			794.68- 854.68	640.85
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	19430	2.00000	2.329	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	7922			0.57- 60.57	40.77
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	16648	2.00000	2.253	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	16406			72.08- 132.08	98.55
29 Bromomethane					CAS #: 74-83-9		
2.332	2.332 (0.417)	94	15635	2.00000	2.210	80.00- 120.00	100.00(a)
2.346	2.346 (0.420)	96	16695			69.29- 129.29	106.78
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	10649	2.00000	2.465	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	3402			1.32- 61.32	31.95

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.472	2.472 (0.442)	49	5006			2.24- 62.24	47.01
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	25165	2.00000	2.234	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	16875			37.04- 97.04	67.06
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	52753	2.00000	2.288	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	33203			34.81- 94.81	62.94
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	8478	2.00000	2.269	80.00- 120.00	100.00
3.088	3.088 (0.552)	43	1699			0.00- 49.35	20.04
3.088	3.088 (0.552)	46	2953			7.41- 67.41	34.83
49 Freon 113					CAS #: 76-13-1		
3.382	3.382 (0.605)	151	37350	2.00000	2.160	80.00- 120.00	100.00
3.382	3.382 (0.605)	153	23948			33.74- 93.74	64.12
3.382	3.382 (0.605)	101	43853			82.76- 142.76	117.41
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.410	3.410 (0.610)	96	19986	2.00000	2.353	80.00- 120.00	100.00
3.410	3.410 (0.610)	98	12593			33.55- 93.55	63.01
3.410	3.410 (0.610)	61	31822			146.21- 206.21	159.22
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	11105	2.00000	2.569	80.00- 120.00	100.00(a)
3.563	3.563 (0.637)	43	32695			312.41- 372.41	294.42
56 Carbon Disulfide					CAS #: 75-15-0		
3.647	3.647 (0.652)	76	52791	2.00000	2.342	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	34759	2.00000	2.136	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	6971			0.00- 49.76	20.06
3.731	3.731 (0.667)	59	2208			0.00- 33.56	6.35
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	8921	2.00000	2.458	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	26828			317.43- 377.43	300.73
66 Methylene Chloride					CAS #: 75-09-2		
4.053	4.053 (0.725)	49	25651	2.00000	2.209	80.00- 120.00	100.00(a)
4.067	4.067 (0.727)	84	17274			32.46- 92.46	67.34
4.053	4.053 (0.725)	51	8419			0.08- 60.08	32.82

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
4.179	4.179 (0.747)	59	38410	2.00000	2.138	80.00- 120.00	100.00
4.179	4.179 (0.747)	41	11977			0.00- 53.00	31.18
4.179	4.179 (0.747)	57	5299			0.00- 40.49	13.80
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	48628	2.00000	2.143	80.00- 120.00	100.00
4.277	4.277 (0.765)	57	14968			0.00- 56.78	30.78
4.277	4.277 (0.765)	41	15819			0.00- 57.61	32.53
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	12011	2.00000	2.208	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	30994			212.53- 272.53	258.05
4.305	4.305 (0.770)	96	19427			126.39- 186.39	161.74
78 Hexane					CAS #: 110-54-3		
4.515	4.515 (0.807)	57	31742	2.00000	2.146	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	22821			35.44- 95.44	71.90
4.515	4.515 (0.807)	86	4746			0.00- 43.37	14.95
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.781	4.781 (0.855)	63	33904	2.00000	2.182	80.00- 120.00	100.00
4.781	4.781 (0.855)	65	10450			0.52- 60.52	30.82
83 Isopropyl ether					CAS #: 108-20-3		
4.781	4.781 (0.855)	45	68180	2.00000	2.158	80.00- 120.00	100.00
4.781	4.781 (0.855)	87	16559			0.00- 53.15	24.29
4.781	4.781 (0.855)	59	8529			0.00- 41.07	12.51
86 Vinyl Acetate					CAS #: 108-05-4		
4.837	4.837 (0.865)	86	4655	2.00000	2.253	80.00- 120.00	100.00
4.837	4.837 (0.865)	43	52057			1358.75-1418.75	1118.30
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
5.131	5.131 (0.917)	59	62563	2.00000	2.171	80.00- 120.00	100.00
5.131	5.131 (0.917)	87	23142			7.24- 67.24	36.99
5.131	5.131 (0.917)	41	12700			0.00- 50.34	20.30
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	11359	2.00000	2.045	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	18128			126.27- 186.27	159.59
5.368	5.368 (0.960)	61	27364			188.75- 248.75	240.90
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	8605	2.00000	2.245	80.00- 120.00	100.00
5.396	5.396 (0.965)	43	40238			453.83- 513.83	467.61

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.396	5.396 (0.965)	57	3884			8.29- 68.29	45.14
99 Tetrahydrofuran					CAS #: 109-99-9		
5.606	5.606 (1.002)	42	20435	2.00000	1.967	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	7134			2.73- 62.73	34.91
5.606	5.606 (1.002)	72	8209			4.10- 64.10	40.17
100 Chloroform					CAS #: 67-66-3		
5.648	5.648 (1.010)	83	37179	2.00000	2.239	80.00- 120.00	100.00
5.648	5.648 (1.010)	85	23738			36.02- 96.02	63.85
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	21424	2.00000	2.030	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	29985			105.03- 165.03	139.96
5.760	5.760 (1.030)	41	18932			51.08- 111.08	88.37
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	40017	2.00000	2.084	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	27374			33.79- 93.79	68.41
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.900	5.900 (1.055)	119	44378	2.00000	2.126	80.00- 120.00	100.00
5.900	5.900 (1.055)	117	47816			73.09- 133.09	107.75
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	96622	2.00000	2.076	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	31789			1.97- 61.97	32.90
6.082	6.082 (1.088)	41	28151			0.00- 57.44	29.14
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	49382	2.00000	2.092	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	12867			0.00- 52.26	26.06
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.180	6.180 (0.955)	87	13200	2.00000	2.176	80.00- 120.00	100.00
6.180	6.180 (0.955)	73	49017			350.91- 410.91	371.34
6.180	6.180 (0.955)	55	17062			93.72- 153.72	129.26
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	27045	2.00000	2.202	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	8897			0.60- 60.60	32.90
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	17402	2.00000	1.994	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	35343			174.73- 234.73	203.10

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.250	6.250 (0.965)	57	19428			82.00- 142.00	111.64
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	23547	2.00000	2.194	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	26932			86.71- 146.71	114.38
6.678	6.678 (1.032)	97	16019			37.32- 97.32	68.03
127 Methylcyclohexane					CAS #: 108-87-2		
6.778	6.778 (1.047)	83	30353	2.00000	2.064	80.00- 120.00	100.00
6.778	6.778 (1.047)	98	15730			17.60- 77.60	51.82
6.778	6.778 (1.047)	55	28775			63.76- 123.76	94.80
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.922	6.922 (1.069)	63	20614	2.00000	2.148	80.00- 120.00	100.00
6.922	6.922 (1.069)	62	14232			38.31- 98.31	69.04
6.915	6.915 (1.068)	41	13811			34.93- 94.93	67.00
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	12111	2.00000	2.130	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	10083			45.98- 105.98	83.25
7.008	7.008 (1.082)	57	3380			0.00- 56.14	27.91
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	35434	2.00000	2.064	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	24575			33.86- 93.86	69.35
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	28237	2.00000	2.091	80.00- 120.00	100.00
7.523	7.523 (1.162)	77	10042			1.54- 61.54	35.56
7.516	7.516 (1.161)	39	19160			35.97- 95.97	67.85
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.631	7.631 (1.179)	58	15141	2.00000	1.939	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	42545			244.45- 304.45	280.99
7.624	7.624 (1.178)	85	6202			10.30- 70.30	40.96
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.198)	91	58840	2.00000	2.012	80.00- 120.00	100.00
7.760	7.760 (1.199)	92	33161			26.66- 86.66	56.36
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	24949	2.00000	2.051	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	8836			1.19- 61.19	35.42
7.996	7.996 (0.895)	39	17416			32.42- 92.42	69.81

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	22122	2.00000	2.137	80.00- 120.00	100.00
8.154	8.154 (0.913)	99	13844			33.08- 93.08	62.58
8.154	8.154 (0.913)	83	17541			54.45- 114.45	79.29
156 Tetrachloroethene					CAS #: 127-18-4		
8.190	8.190 (0.917)	166	33178	2.00000	2.158	80.00- 120.00	100.00
8.190	8.190 (0.917)	129	24742			47.15- 107.15	74.57
8.190	8.190 (0.917)	131	25668			44.59- 104.59	77.36
158 2-Hexanone					CAS #: 591-78-6		
8.319	8.319 (0.931)	58	19731	2.00000	1.951	80.00- 120.00	100.00(a)
8.319	8.319 (0.931)	43	39139			169.61- 229.61	198.36
8.319	8.319 (0.931)	100	3848			0.00- 49.56	19.50
160 Dibromochloromethane					CAS #: 124-48-1		
8.469	8.469 (0.948)	129	41158	2.00000	2.034	80.00- 120.00	100.00
8.469	8.469 (0.948)	127	32453			46.73- 106.73	78.85
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.584	8.584 (0.961)	107	34167	2.00000	2.104	80.00- 120.00	100.00
8.584	8.584 (0.961)	109	31698			65.04- 125.04	92.77
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	51989	2.00000	2.163	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	16825			3.14- 63.14	32.36
8.956	8.956 (1.002)	77	31842			21.05- 81.05	61.25
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	25348	2.00000	2.048	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	75277			270.81- 330.81	296.97
169 m,p-Xylene					CAS #: 108-38-3		
9.106	9.106 (1.019)	106	29910	2.00000	1.953	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	59112			160.16- 220.16	197.63
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	27111	2.00000	1.884	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	58222			173.71- 233.71	214.75
172 Styrene					CAS #: 100-42-5		
9.465	9.465 (1.059)	104	43142	2.00000	1.927	80.00- 120.00	100.00
9.465	9.465 (1.059)	78	23074			19.18- 79.18	53.48
174 Bromoform					CAS #: 75-25-2		
9.665	9.665 (1.082)	173	38246	2.00000	1.929	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.665	9.665 (1.082)	171	19940			20.89- 80.89	52.14
175 Cumene					CAS #: 98-82-8		
9.730	9.730 (1.089)	105	86415	2.00000	1.911	80.00- 120.00	100.00
9.730	9.730 (1.089)	120	23181			0.00- 57.28	26.83
9.730	9.730 (1.089)	51	10516			0.00- 40.70	12.17
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.045	10.045 (1.124)	83	43803	2.00000	2.050	80.00- 120.00	100.00
10.045	10.045 (1.124)	85	27678			34.67- 94.67	63.19
182 Propylbenzene					CAS #: 103-65-1		
10.073	10.073 (1.127)	91	101425	2.00000	1.986	80.00- 120.00	100.00
10.073	10.073 (1.127)	120	25911			0.00- 55.53	25.55
10.081	10.081 (1.128)	105	4355			0.00- 33.85	4.29
188 4-Ethyltoluene					CAS #: 622-96-8		
10.167	10.167 (1.138)	120	28874	2.00000	2.015	80.00- 120.00	100.00
10.167	10.167 (1.138)	105	88202			289.83- 349.83	305.47
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.217	10.217 (1.143)	120	38984	2.00000	2.026	80.00- 120.00	100.00
10.217	10.217 (1.143)	105	76826			170.34- 230.34	197.07
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.546	10.546 (1.180)	105	71467	2.00000	1.947	80.00- 120.00	100.00
10.546	10.546 (1.180)	120	33476			16.82- 76.82	46.84
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.833	10.833 (1.212)	146	58032	2.00000	2.124	80.00- 120.00	100.00
10.833	10.833 (1.212)	148	36828			33.31- 93.31	63.46
10.833	10.833 (1.212)	111	22290			7.77- 67.77	38.41
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.919	10.919 (1.222)	146	60262	2.00000	2.162	80.00- 120.00	100.00
10.919	10.919 (1.222)	148	37371			33.74- 93.74	62.01
10.919	10.919 (1.222)	111	21855			6.13- 66.13	36.27
212 alpha-Chlorotoluene					CAS #: 100-44-7		
11.033	11.033 (1.235)	91	61987	2.00000	1.939	80.00- 120.00	100.00
11.033	11.033 (1.235)	126	15375			0.00- 53.92	24.80
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.248	11.248 (1.259)	146	58699	2.00000	2.209	80.00- 120.00	100.00
11.241	11.241 (1.258)	148	36929			33.86- 93.86	62.91

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.241	11.241 (1.258)	111	22166			9.19- 69.19	37.76
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.674	12.674 (1.418)	180	49958	2.00000	2.187	80.00- 120.00	100.00
12.674	12.674 (1.418)	182	46760			67.73- 127.73	93.60
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.767	12.767 (1.429)	225	39185	2.00000	2.142	80.00- 120.00	100.00
12.760	12.760 (1.428)	223	26235			32.69- 92.69	66.95
228 Naphthalene					CAS #: 91-20-3		
12.953	12.953 (1.450)	128	14996	0.20000	0.2776	80.00- 120.00	100.00(a)
12.953	12.953 (1.450)	127	1626			0.00- 43.15	10.84

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 02-Feb-2016 15:37

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3020112.d
Lab Smp Id: ICAL Level 3
Analysis Type: VOA
Quant Type: ISTD
Operator: tar
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 2.0ppbv(5.0ppbv)

Calibration Date: 01-FEB-2016
Calibration Time: 18:46

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	192021	115213	268829	184775	-3.77
123 1,4-Difluorobenze	729739	437843	1021635	706226	-3.22
163 Chlorobenzene-d5	587806	352684	822928	566367	-3.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/01feb16.b/3020112.d

Date : 01-FEB-2016 17:31

Client ID:

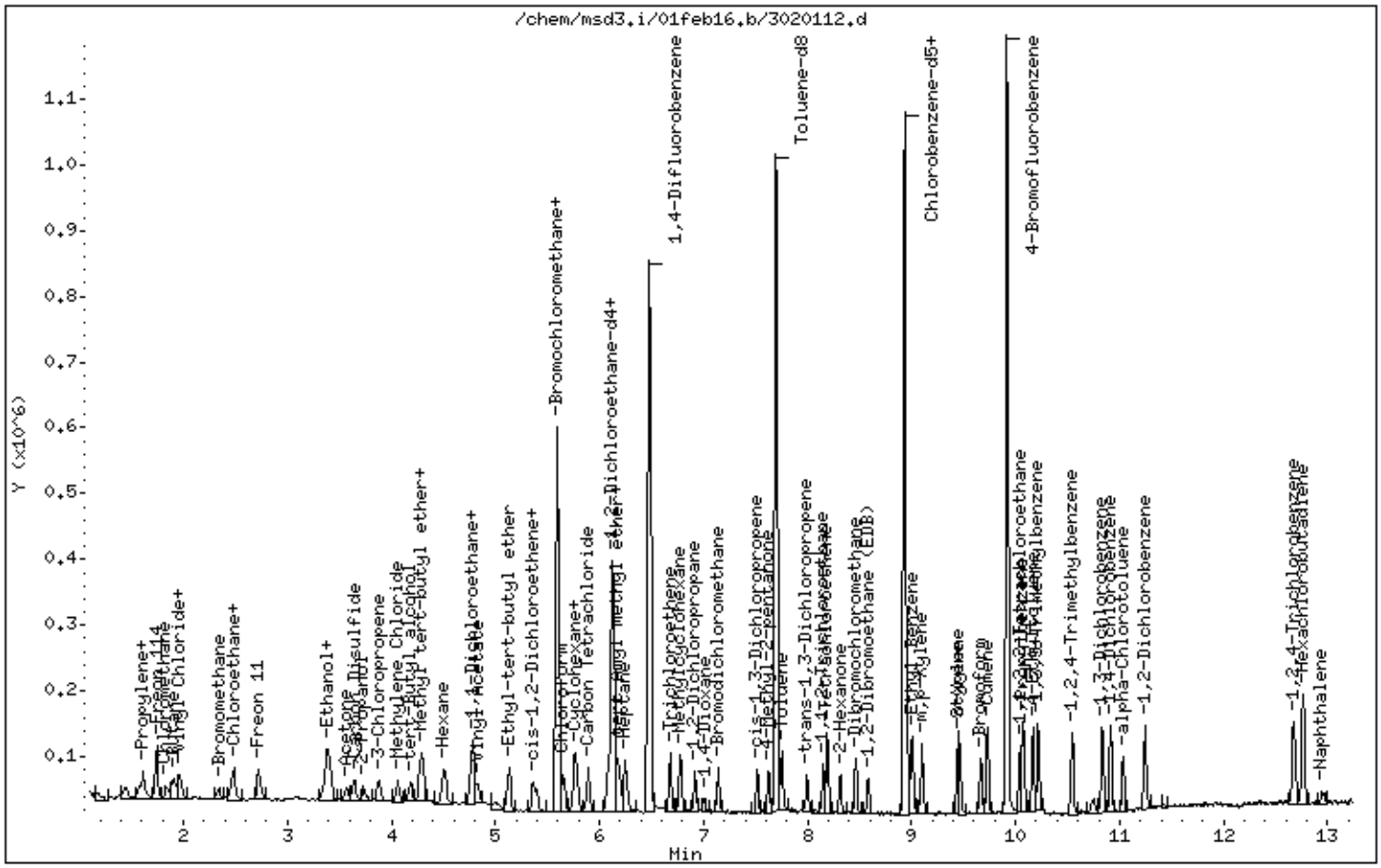
Instrument: msd3.i

Sample Info: 80mL 2759-190

Operator: tar

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/29dec15.b/3122913t.d
Lab Smp Id: I Cal Level #3
Inj Date : 29-DEC-2015 19:33
Operator : gh Inst ID: msd3.i
Smp Info : 80ml 2759-155
Misc Info : 2.0ppbv(5.0ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 03-Feb-2016 12:03 sblack Quant Type: ISTD
Cal Date : 01-FEB-2016 17:31 Cal File: 3020112.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT2crv.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
32 Vinyl Bromide					CAS #: 593-60-2		
2.682	2.682 (0.480)	106	13403	2.00000	2.174	0.00- 0.00	100.00
2.682	2.682 (0.480)	108	12303			0.00- 0.00	91.79
36 1-Pentene					CAS #: 109-67-1		
2.752	2.752 (0.492)	55	14572	2.00000	2.202	0.00- 0.00	100.00
2.738	2.738 (0.490)	42	17129			0.00- 0.00	117.55
44 Ethyl Ether					CAS #: 60-29-7		
3.130	3.130 (0.560)	74	6984	2.00000	2.183	0.00- 0.00	100.00(T)
3.130	3.130 (0.560)	59	11559			0.00- 0.00	165.51
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
3.619	3.619 (0.647)	142	17479	2.00000	1.213	0.00- 0.00	100.00(a)
3.619	3.619 (0.647)	127	7647			0.00- 0.00	43.75

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   61 Methyl Acetate                                CAS #: 79-20-9
  3.927   3.927 (0.702)    43     50503 2.00000    3.074   0.00-   0.00   100.00
  3.927   3.927 (0.702)    74      9418                     0.00-   0.00    18.65
-------------------------------------------------------------------------------
   63 Acetonitrile                                  CAS #: 75-05-8
  3.983   3.983 (0.712)    41     25831 2.00000    2.285   0.00-   0.00   100.00
  3.997   3.997 (0.715)    39     10613                     0.00-   0.00    41.09
  3.997   3.997 (0.715)    38      3297                     0.00-   0.00    12.76
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
  4.011   4.011 (0.717)    70      7552 2.00000    2.084   0.00-   0.00   100.00
  4.011   4.011 (0.717)    55     13256                     0.00-   0.00   175.53
-------------------------------------------------------------------------------
   74 Acrylonitrile                                 CAS #: 107-13-1
  4.403   4.403 (0.787)    52     10450 2.00000    2.088   0.00-   0.00   100.00
  4.403   4.403 (0.787)    53     17059                     0.00-   0.00   163.24
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
  4.445   4.445 (0.795)    55     12047 2.00000    2.135   0.00-   0.00   100.00
  4.445   4.445 (0.795)    41     17324                     0.00-   0.00   143.80
  4.445   4.445 (0.795)    84      4430                     0.00-   0.00    36.77
-------------------------------------------------------------------------------
   85 Chloroprene                                   CAS #: 126-99-8
  4.837   4.837 (0.865)    53     21313 2.00000    2.035   0.00-   0.00   100.00
  4.837   4.837 (0.865)    88      9739                     0.00-   0.00    45.70
  4.837   4.837 (0.865)    50      6015                     0.00-   0.00    28.22
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
  5.452   5.452 (0.975)    55     29769 2.00000    2.116   0.00-   0.00   100.00
  5.466   5.466 (0.977)    85      4358                     0.00-   0.00    14.64
  5.466   5.466 (0.977)    58      3015                     0.00-   0.00    10.13
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
  5.592   5.592 (1.000)   130    193611 25.0000            80.00- 120.00   100.00
  5.592   5.592 (1.000)   128    147497                    49.46- 109.46    76.18
  5.592   5.592 (1.000)    49    245891                   102.81- 162.81   127.00
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
  6.488   6.488 (1.000)   114    748381 25.0000            80.00- 120.00   100.00
  6.488   6.488 (1.000)    88    106107                     0.00-  44.95    14.18
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                CAS #: 140-88-5
  6.786   6.786 (0.759)    99      1579 2.00000    1.694   0.00-   0.00   100.00(a)
  6.778   6.778 (0.759)    45      4467                     0.00-   0.00   282.90
  6.778   6.778 (0.759)    55     33465                     0.00-   0.00  2119.38
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
131 2-Pentanone					CAS #: 107-87-9		
6.872	6.872 (0.769)	43	47446	2.00000	2.288	0.00- 0.00	100.00
6.879	6.879 (0.770)	58	4007			0.00- 0.00	8.45
6.879	6.879 (0.770)	86	7711			0.00- 0.00	16.25
134 Methyl Methacrylate					CAS #: 80-62-6		
6.972	6.972 (0.780)	41	21349	2.00000	2.021	0.00- 0.00	100.00
6.972	6.972 (0.780)	69	13865			0.00- 0.00	64.94
6.972	6.972 (0.780)	100	6484			0.00- 0.00	30.37
137 Dibromomethane					CAS #: 74-95-3		
7.029	7.029 (0.787)	174	20469	2.00000	2.045	0.00- 0.00	100.00
7.029	7.029 (0.787)	93	18961			0.00- 0.00	92.63
7.029	7.029 (0.787)	95	15001			0.00- 0.00	73.29
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.935	8.935 (1.000)	117	597011	25.0000		80.00- 120.00	100.00
8.935	8.935 (1.000)	82	293259			20.50- 80.50	49.12
184 trans-1,4-Dichloro-2-butene					CAS #: 110-57-6		
10.102	10.102 (1.131)	75	35990	2.00000	3.629	0.00- 0.00	100.00
10.102	10.102 (1.131)	89	6913			0.00- 0.00	19.21
10.102	10.102 (1.131)	53	10377			0.00- 0.00	28.83
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
10.761	10.761 (1.204)	93	42958	2.00000	2.338	0.00- 0.00	100.00
10.761	10.761 (1.204)	95	14251			0.00- 0.00	33.17
217 Hexachloroethane					CAS #: 67-72-1		
11.427	11.427 (1.279)	201	16052	2.00000	1.751	0.00- 0.00	100.00(a)
11.420	11.420 (1.278)	117	18660			0.00- 0.00	116.25
224 1,3,5-Trichlorobenzene					CAS #: 108-70-3		
12.065	12.065 (1.350)	180	41083	2.00000	1.865	0.00- 0.00	100.00(a)
12.065	12.065 (1.350)	182	38823			0.00- 0.00	94.50

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3122913t.d
Lab Smp Id: I Cal Level #3
Analysis Type: VOA
Quant Type: ISTD
Operator: gh
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 2.0ppbv(5.0ppbv)

Calibration Date: 29-DEC-2015
Calibration Time: 18:06

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190939	114563	267315	193611	1.40
123 1,4-Difluorobenze	732052	439231	1024873	748381	2.23
163 Chlorobenzene-d5	594100	356460	831740	597011	0.49

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.49	6.16	6.82	6.49	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/29dec15.b/3122913t.d

Date : 29-DEC-2015 19:33

Client ID:

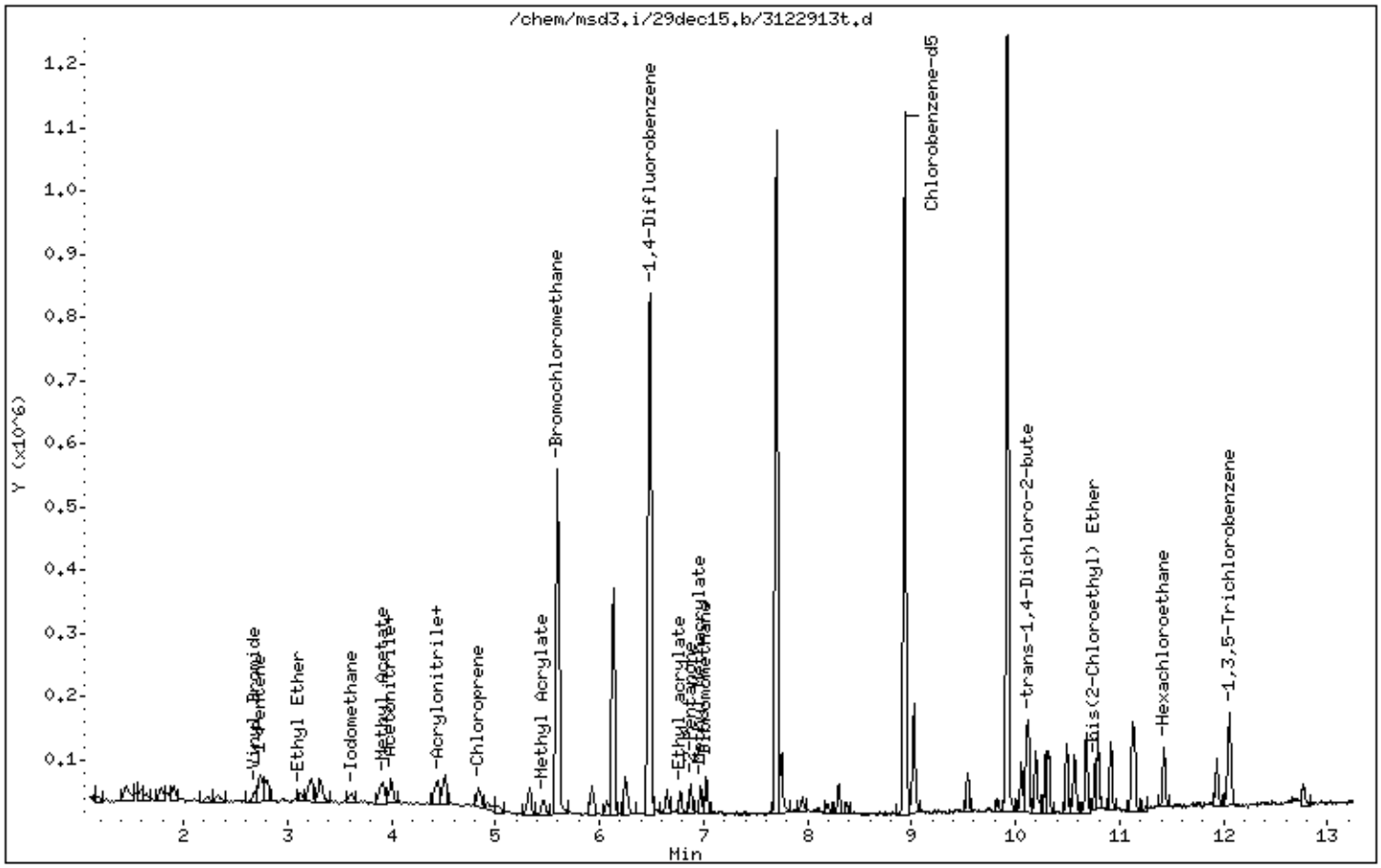
Instrument: msd3.i

Sample Info: 80ml 2759-155

Operator: gh

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/01feb16.b/3020113.d
Lab Smp Id: ICAL Level 4
Inj Date : 01-FEB-2016 17:57
Operator : tar Inst ID: msd3.i
Smp Info : 200mL 2759-190
Misc Info : 5.0ppbv(5.0ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 02-Feb-2016 15:37 troberts Quant Type: ISTD
Cal Date : 01-FEB-2016 17:57 Cal File: 3020113.d
Als bottle: 10 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12mdl.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	190295	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	149329			49.46- 109.46	78.47
5.592	5.592 (1.000)	49	251114			102.81- 162.81	131.96
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	723238	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	101308			0.00- 44.95	14.01
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	584116	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	288908			20.50- 80.50	49.46
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	242656	25.0000	24.777	80.00- 120.00	100.00
6.138	6.138 (1.098)	67	120753			31.96- 91.96	49.76

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.702	7.702 (1.190)	98	652397	25.0000	24.884	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	67283			0.00- 40.93	10.31
7.702	7.702 (1.190)	100	413488			33.37- 93.37	63.38
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	356499	25.0000	24.147	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	376938			76.06- 136.06	105.73
9.923	9.923 (1.111)	176	344593			66.45- 126.45	96.66
9 Propylene					CAS #: 115-07-1		
1.577	1.577 (0.282)	41	43254	5.00000	6.034	80.00- 120.00	100.00
1.577	1.577 (0.282)	42	26998			36.98- 96.98	62.42
1.577	1.577 (0.282)	39	30441			43.38- 103.38	70.38
11 Freon 12					CAS #: 75-71-8		
1.619	1.619 (0.289)	85	129513	5.00000	6.146	80.00- 120.00	100.00
1.619	1.619 (0.289)	87	42585			2.66- 62.66	32.88
15 Freon 114					CAS #: 76-14-2		
1.744	1.744 (0.312)	135	108203	5.00000	6.180	80.00- 120.00	100.00
1.744	1.744 (0.312)	137	34010			2.25- 62.25	31.43
17 Chloromethane					CAS #: 74-87-3		
1.828	1.828 (0.327)	50	52642	5.00000	6.086	80.00- 120.00	100.00
1.828	1.828 (0.327)	52	17209			3.40- 63.40	32.69
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	10916	5.00000	5.807	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	87551			794.68- 854.68	802.04
25 Vinyl Chloride					CAS #: 75-01-4		
1.954	1.954 (0.349)	62	48780	5.00000	5.678	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	17366			0.57- 60.57	35.60
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	42254	5.00000	5.553	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	43609			72.08- 132.08	103.21
29 Bromomethane					CAS #: 74-83-9		
2.346	2.346 (0.420)	94	41966	5.00000	5.761	80.00- 120.00	100.00
2.346	2.346 (0.420)	96	42671			69.29- 129.29	101.68
30 Chloroethane					CAS #: 75-00-3		
2.472	2.472 (0.442)	64	26100	5.00000	5.867	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	8352			1.32- 61.32	32.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.458	2.458 (0.440)	49	9333			2.24- 62.24	35.76
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	67051	5.00000	5.780	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	45670			37.04- 97.04	68.11
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	142985	5.00000	6.021	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	92146			34.81- 94.81	64.44
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	22186	5.00000	5.766	80.00- 120.00	100.00
3.088	3.088 (0.552)	43	4246			0.00- 49.35	19.14
3.088	3.088 (0.552)	46	9462			7.41- 67.41	42.65
49 Freon 113					CAS #: 76-13-1		
3.382	3.382 (0.605)	151	96975	5.00000	5.446	80.00- 120.00	100.00
3.382	3.382 (0.605)	153	65647			33.74- 93.74	67.69
3.382	3.382 (0.605)	101	112530			82.76- 142.76	116.04
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.410	3.410 (0.610)	96	51686	5.00000	5.908	80.00- 120.00	100.00
3.410	3.410 (0.610)	98	33246			33.55- 93.55	64.32
3.410	3.410 (0.610)	61	91437			146.21- 206.21	176.91
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	25585	5.00000	5.748	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	89599			312.41- 372.41	350.20
56 Carbon Disulfide					CAS #: 75-15-0		
3.647	3.647 (0.652)	76	140995	5.00000	6.075	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	95018	5.00000	5.670	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	22614			0.00- 49.76	23.80
3.731	3.731 (0.667)	59	4269			0.00- 33.56	4.49
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	21677	5.00000	5.800	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	73768			317.43- 377.43	340.31
66 Methylene Chloride					CAS #: 75-09-2		
4.067	4.067 (0.727)	49	72152	5.00000	6.032	80.00- 120.00	100.00
4.067	4.067 (0.727)	84	47503			32.46- 92.46	65.84
4.067	4.067 (0.727)	51	22843			0.08- 60.08	31.66

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
4.179	4.179 (0.747)	59	109037	5.00000	5.892	80.00- 120.00	100.00
4.179	4.179 (0.747)	41	25989			0.00- 53.00	23.84
4.179	4.179 (0.747)	57	12348			0.00- 40.49	11.32
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	131941	5.00000	5.646	80.00- 120.00	100.00
4.277	4.277 (0.765)	57	38629			0.00- 56.78	29.28
4.277	4.277 (0.765)	41	40028			0.00- 57.61	30.34
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	33300	5.00000	5.944	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	80112			212.53- 272.53	240.58
4.305	4.305 (0.770)	96	52918			126.39- 186.39	158.91
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	89834	5.00000	5.898	80.00- 120.00	100.00
4.515	4.515 (0.807)	43	58660			35.44- 95.44	65.30
4.515	4.515 (0.807)	86	12440			0.00- 43.37	13.85
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.781	4.781 (0.855)	63	97453	5.00000	6.090	80.00- 120.00	100.00
4.795	4.795 (0.857)	65	29555			0.52- 60.52	30.33
83 Isopropyl ether					CAS #: 108-20-3		
4.781	4.781 (0.855)	45	188846	5.00000	5.803	80.00- 120.00	100.00
4.781	4.781 (0.855)	87	44786			0.00- 53.15	23.72
4.781	4.781 (0.855)	59	21807			0.00- 41.07	11.55
86 Vinyl Acetate					CAS #: 108-05-4		
4.837	4.837 (0.865)	86	12592	5.00000	5.919	80.00- 120.00	100.00
4.837	4.837 (0.865)	43	165818			1358.75-1418.75	1316.85
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
5.131	5.131 (0.917)	59	170812	5.00000	5.754	80.00- 120.00	100.00
5.131	5.131 (0.917)	87	63283			7.24- 67.24	37.05
5.131	5.131 (0.917)	41	37213			0.00- 50.34	21.79
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	34093	5.00000	5.961	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	52347			126.27- 186.27	153.54
5.368	5.368 (0.960)	61	77245			188.75- 248.75	226.57
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	23654	5.00000	5.992	80.00- 120.00	100.00
5.396	5.396 (0.965)	43	106035			453.83- 513.83	448.28

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.396	5.396 (0.965)	57	8353			8.29- 68.29	35.31
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	61567	5.00000	5.754	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	19218			2.73- 62.73	31.21
5.592	5.592 (1.000)	72	23081			4.10- 64.10	37.49
100 Chloroform					CAS #: 67-66-3		
5.648	5.648 (1.010)	83	102785	5.00000	6.011	80.00- 120.00	100.00
5.648	5.648 (1.010)	85	68379			36.02- 96.02	66.53
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	59872	5.00000	5.510	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	82299			105.03- 165.03	137.46
5.760	5.760 (1.030)	41	49045			51.08- 111.08	81.92
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	113542	5.00000	5.742	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	75391			33.79- 93.79	66.40
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.900	5.900 (1.055)	119	122483	5.00000	5.699	80.00- 120.00	100.00
5.900	5.900 (1.055)	117	127733			73.09- 133.09	104.29
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	275562	5.00000	5.748	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	86914			1.97- 61.97	31.54
6.082	6.082 (1.088)	41	76298			0.00- 57.44	27.69
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	143507	5.00000	5.937	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	33632			0.00- 52.26	23.44
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.180	6.180 (0.955)	87	34756	5.00000	5.595	80.00- 120.00	100.00
6.180	6.180 (0.955)	73	136168			350.91- 410.91	391.78
6.180	6.180 (0.955)	55	41407			93.72- 153.72	119.14
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	77108	5.00000	6.132	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	23083			0.60- 60.60	29.94
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	50538	5.00000	5.654	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	103196			174.73- 234.73	204.19

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.250	6.250 (0.965)	57	56944			82.00- 142.00	112.68
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	64952	5.00000	5.909	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	72815			86.71- 146.71	112.11
6.678	6.678 (1.032)	97	43828			37.32- 97.32	67.48
127 Methylcyclohexane					CAS #: 108-87-2		
6.778	6.778 (1.047)	83	84681	5.00000	5.623	80.00- 120.00	100.00
6.778	6.778 (1.047)	98	39505			17.60- 77.60	46.65
6.778	6.778 (1.047)	55	78296			63.76- 123.76	92.46
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.922	6.922 (1.069)	63	57626	5.00000	5.864	80.00- 120.00	100.00
6.915	6.915 (1.068)	62	37059			38.31- 98.31	64.31
6.915	6.915 (1.068)	41	38591			34.93- 94.93	66.97
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	34933	5.00000	6.000	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	24091			45.98- 105.98	68.96
7.008	7.008 (1.082)	57	8556			0.00- 56.14	24.49
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	104725	5.00000	5.957	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	65642			33.86- 93.86	62.68
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	78500	5.00000	5.677	80.00- 120.00	100.00
7.516	7.516 (1.161)	77	25090			1.54- 61.54	31.96
7.516	7.516 (1.161)	39	51925			35.97- 95.97	66.15
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.631	7.631 (1.179)	58	44364	5.00000	5.547	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	115150			244.45- 304.45	259.56
7.624	7.624 (1.178)	85	17994			10.30- 70.30	40.56
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.198)	91	173639	5.00000	5.797	80.00- 120.00	100.00
7.753	7.753 (1.198)	92	95358			26.66- 86.66	54.92
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	73930	5.00000	5.894	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	23969			1.19- 61.19	32.42
7.996	7.996 (0.895)	39	47100			32.42- 92.42	63.71

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	59507	5.00000	5.574	80.00- 120.00	100.00
8.154	8.154 (0.913)	99	38112			33.08- 93.08	64.05
8.154	8.154 (0.913)	83	49787			54.45- 114.45	83.67
156 Tetrachloroethene					CAS #: 127-18-4		
8.190	8.190 (0.917)	166	93316	5.00000	5.886	80.00- 120.00	100.00
8.190	8.190 (0.917)	129	69961			47.15- 107.15	74.97
8.190	8.190 (0.917)	131	66283			44.59- 104.59	71.03
158 2-Hexanone					CAS #: 591-78-6		
8.318	8.318 (0.931)	58	56171	5.00000	5.385	80.00- 120.00	100.00
8.318	8.318 (0.931)	43	109433			169.61- 229.61	194.82
8.318	8.318 (0.931)	100	11547			0.00- 49.56	20.56
160 Dibromochloromethane					CAS #: 124-48-1		
8.469	8.469 (0.948)	129	119008	5.00000	5.702	80.00- 120.00	100.00
8.462	8.462 (0.947)	127	91957			46.73- 106.73	77.27
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.584	8.584 (0.961)	107	94399	5.00000	5.637	80.00- 120.00	100.00
8.584	8.584 (0.961)	109	91802			65.04- 125.04	97.25
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	140256	5.00000	5.657	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	47470			3.14- 63.14	33.85
8.956	8.956 (1.002)	77	77284			21.05- 81.05	55.10
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	70605	5.00000	5.532	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	208720			270.81- 330.81	295.62
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	88746	5.00000	5.619	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	161371			160.16- 220.16	181.83
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	79812	5.00000	5.378	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	158207			173.71- 233.71	198.22
172 Styrene					CAS #: 100-42-5		
9.465	9.465 (1.059)	104	124113	5.00000	5.376	80.00- 120.00	100.00
9.465	9.465 (1.059)	78	64445			19.18- 79.18	51.92
174 Bromoform					CAS #: 75-25-2		
9.665	9.665 (1.082)	173	110892	5.00000	5.422	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.665	9.665 (1.082)	171	57735			20.89- 80.89	52.06
175 Cumene					CAS #: 98-82-8		
9.730	9.730 (1.089)	105	254247	5.00000	5.452	80.00- 120.00	100.00
9.730	9.730 (1.089)	120	71530			0.00- 57.28	28.13
9.730	9.730 (1.089)	51	27553			0.00- 40.70	10.84
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.045	10.045 (1.124)	83	120896	5.00000	5.485	80.00- 120.00	100.00
10.045	10.045 (1.124)	85	78403			34.67- 94.67	64.85
182 Propylbenzene					CAS #: 103-65-1		
10.073	10.073 (1.127)	91	282750	5.00000	5.369	80.00- 120.00	100.00
10.073	10.073 (1.127)	120	70452			0.00- 55.53	24.92
10.073	10.073 (1.127)	105	11791			0.00- 33.85	4.17
188 4-Ethyltoluene					CAS #: 622-96-8		
10.167	10.167 (1.138)	120	79748	5.00000	5.397	80.00- 120.00	100.00
10.167	10.167 (1.138)	105	243429			289.83- 349.83	305.25
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.217	10.217 (1.143)	120	106809	5.00000	5.382	80.00- 120.00	100.00
10.217	10.217 (1.143)	105	216912			170.34- 230.34	203.08
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.546	10.546 (1.180)	105	200749	5.00000	5.302	80.00- 120.00	100.00
10.546	10.546 (1.180)	120	94279			16.82- 76.82	46.96
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.840	10.840 (1.213)	146	160737	5.00000	5.705	80.00- 120.00	100.00
10.840	10.840 (1.213)	148	103127			33.31- 93.31	64.16
10.833	10.833 (1.212)	111	59803			7.77- 67.77	37.21
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.919	10.919 (1.222)	146	160131	5.00000	5.572	80.00- 120.00	100.00
10.919	10.919 (1.222)	148	104557			33.74- 93.74	65.29
10.911	10.911 (1.221)	111	57927			6.13- 66.13	36.17
212 alpha-Chlorotoluene					CAS #: 100-44-7		
11.033	11.033 (1.235)	91	167120	5.00000	5.069	80.00- 120.00	100.00
11.033	11.033 (1.235)	126	41744			0.00- 53.92	24.98
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.248	11.248 (1.259)	146	154942	5.00000	5.654	80.00- 120.00	100.00
11.248	11.248 (1.259)	148	96756			33.86- 93.86	62.45

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.248	11.248 (1.259)	111	62242			9.19- 69.19	40.17
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.674	12.674 (1.419)	180	144383	5.00000	6.128	80.00- 120.00	100.00
12.674	12.674 (1.419)	182	142353			67.73- 127.73	98.59
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.767	12.767 (1.429)	225	119750	5.00000	6.347	80.00- 120.00	100.00
12.760	12.760 (1.428)	223	74006			32.69- 92.69	61.80
228 Naphthalene					CAS #: 91-20-3		
12.953	12.953 (1.450)	128	38086	0.50000	0.6836	80.00- 120.00	100.00(a)
12.953	12.953 (1.450)	127	5958			0.00- 43.15	15.64

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3020113.d
Lab Smp Id: ICAL Level 4
Analysis Type: VOA
Quant Type: ISTD
Operator: tar
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 5.0ppbv(5.0ppbv)

Calibration Date: 01-FEB-2016
Calibration Time: 18:46

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	192021	115213	268829	190295	-0.90
123 1,4-Difluorobenze	729739	437843	1021635	723238	-0.89
163 Chlorobenzene-d5	587806	352684	822928	584116	-0.63

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/01feb16.b/3020113.d

Date : 01-FEB-2016 17:57

Client ID:

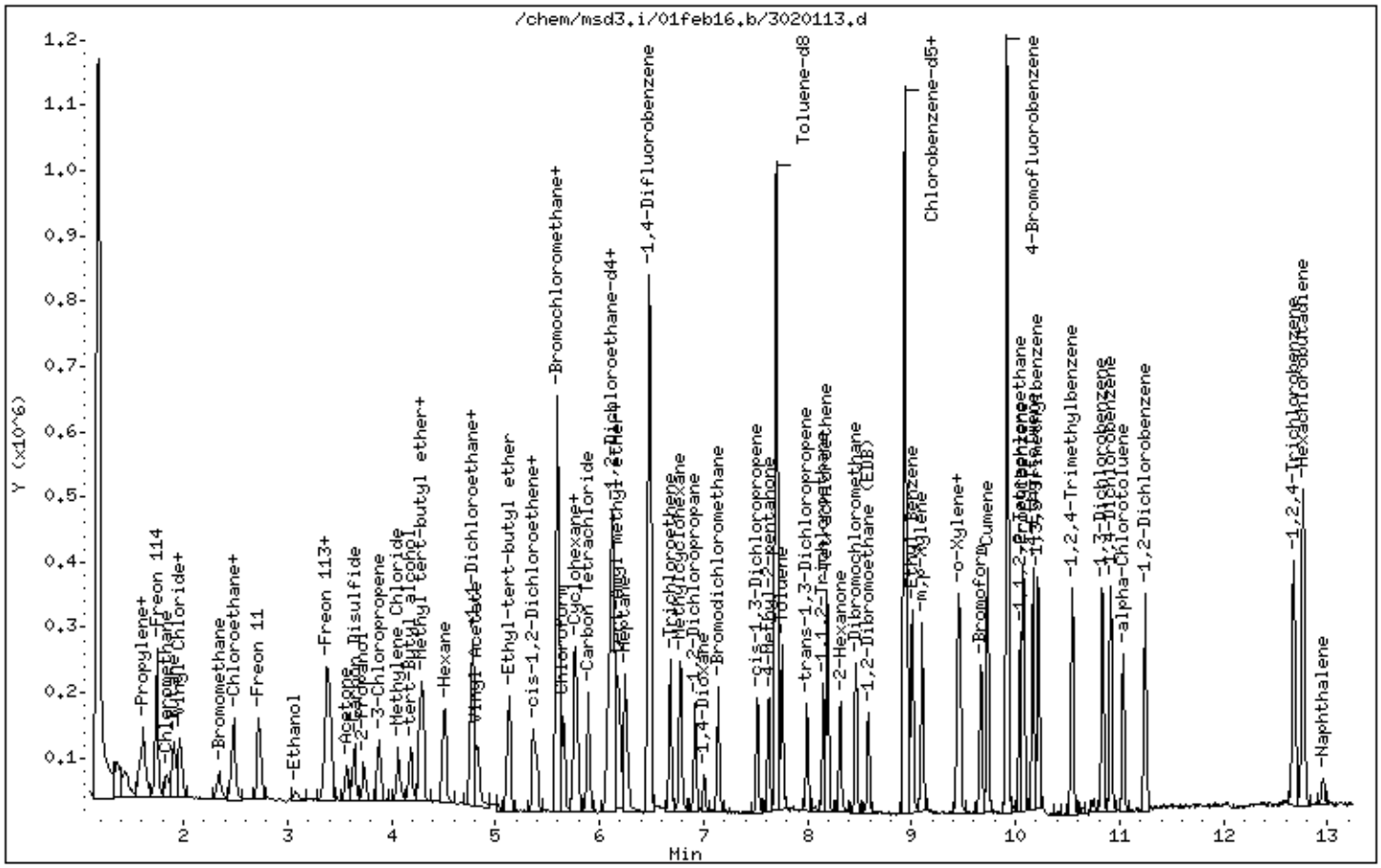
Instrument: msd3.i

Sample Info: 200mL 2759-190

Operator: tar

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/01feb16.b/3020114.d
Lab Smp Id: ICAL Level 5
Inj Date : 01-FEB-2016 18:21
Operator : tar Inst ID: msd3.i
Smp Info : 20mL 2759-210
Misc Info : 20ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 02-Feb-2016 15:37 troberts Quant Type: ISTD
Cal Date : 01-FEB-2016 18:21 Cal File: 3020114.d
Als bottle: 13 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12mdl.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	194066	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	148837			49.46- 109.46	76.69
5.592	5.592 (1.000)	49	256524			102.81- 162.81	132.18
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	699958	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	101937			0.00- 44.95	14.56
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	554255	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	276669			20.50- 80.50	49.92
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	245843	25.0000	24.615	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	125869			31.96- 91.96	51.20

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	621836	25.0000	24.507	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	67881			0.00- 40.93	10.92
7.695	7.695 (1.189)	100	406313			33.37- 93.37	65.34
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	348865	25.0000	24.903	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	377807			76.06- 136.06	108.30
9.916	9.916 (1.110)	176	346354			66.45- 126.45	99.28
9 Propylene					CAS #: 115-07-1		
1.576	1.576 (0.282)	41	120453	20.0000	16.478	80.00- 120.00	100.00
1.576	1.576 (0.282)	42	80757			36.98- 96.98	67.04
1.576	1.576 (0.282)	39	86720			43.38- 103.38	71.99
11 Freon 12					CAS #: 75-71-8		
1.604	1.604 (0.287)	85	349009	20.0000	16.240	80.00- 120.00	100.00
1.604	1.604 (0.287)	87	114843			2.66- 62.66	32.91
15 Freon 114					CAS #: 76-14-2		
1.744	1.744 (0.312)	135	298525	20.0000	16.719	80.00- 120.00	100.00
1.744	1.744 (0.312)	137	96150			2.25- 62.25	32.21
17 Chloromethane					CAS #: 74-87-3		
1.828	1.828 (0.327)	50	151504	20.0000	17.175	80.00- 120.00	100.00
1.828	1.828 (0.327)	52	51496			3.40- 63.40	33.99
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	32235	20.0000	16.815	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	253894			794.68- 854.68	787.63
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	143926	20.0000	16.429	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	44832			0.57- 60.57	31.15
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	129221	20.0000	16.652	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	131245			72.08- 132.08	101.57
29 Bromomethane					CAS #: 74-83-9		
2.332	2.332 (0.417)	94	124094	20.0000	16.703	80.00- 120.00	100.00
2.346	2.346 (0.420)	96	121184			69.29- 129.29	97.66
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	74406	20.0000	16.402	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	22632			1.32- 61.32	30.42

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.458	2.458 (0.440)	49	23647			2.24- 62.24	31.78
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	222755	20.0000	18.830	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	148660			37.04- 97.04	66.74
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	422198	20.0000	17.432	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	270806			34.81- 94.81	64.14
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	63163	20.0000	16.096	80.00- 120.00	100.00
3.074	3.074 (0.550)	43	12510			0.00- 49.35	19.81
3.060	3.060 (0.547)	46	22743			7.41- 67.41	36.01
49 Freon 113					CAS #: 76-13-1		
3.381	3.381 (0.605)	151	347428	20.0000	19.134	80.00- 120.00	100.00
3.381	3.381 (0.605)	153	216599			33.74- 93.74	62.34
3.381	3.381 (0.605)	101	386885			82.76- 142.76	111.36
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.409	3.409 (0.610)	96	140687	20.0000	15.770	80.00- 120.00	100.00
3.409	3.409 (0.610)	98	92412			33.55- 93.55	65.69
3.409	3.409 (0.610)	61	253342			146.21- 206.21	180.07
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	70987	20.0000	15.638	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	235914			312.41- 372.41	332.33
56 Carbon Disulfide					CAS #: 75-15-0		
3.633	3.633 (0.650)	76	381589	20.0000	16.122	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	273849	20.0000	16.025	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	56334			0.00- 49.76	20.57
3.731	3.731 (0.667)	59	10944			0.00- 33.56	4.00
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	59397	20.0000	15.583	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	200065			317.43- 377.43	336.83
66 Methylene Chloride					CAS #: 75-09-2		
4.053	4.053 (0.725)	49	190927	20.0000	15.652	80.00- 120.00	100.00
4.053	4.053 (0.725)	84	117381			32.46- 92.46	61.48
4.053	4.053 (0.725)	51	55478			0.08- 60.08	29.06

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
4.179	4.179 (0.747)	59	337212	20.0000	17.867	80.00- 120.00	100.00
4.179	4.179 (0.747)	41	80008			0.00- 53.00	23.73
4.179	4.179 (0.747)	57	36371			0.00- 40.49	10.79
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	454899	20.0000	19.088	80.00- 120.00	100.00
4.277	4.277 (0.765)	57	122207			0.00- 56.78	26.86
4.277	4.277 (0.765)	41	127163			0.00- 57.61	27.95
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	90130	20.0000	15.776	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	214643			212.53- 272.53	238.15
4.305	4.305 (0.770)	96	147349			126.39- 186.39	163.48
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	259396	20.0000	16.700	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	177051			35.44- 95.44	68.26
4.501	4.501 (0.805)	86	36095			0.00- 43.37	13.92
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.781	4.781 (0.855)	63	263438	20.0000	16.144	80.00- 120.00	100.00
4.781	4.781 (0.855)	65	81211			0.52- 60.52	30.83
83 Isopropyl ether					CAS #: 108-20-3		
4.767	4.767 (0.852)	45	600045	20.0000	18.080	80.00- 120.00	100.00
4.767	4.767 (0.852)	87	138568			0.00- 53.15	23.09
4.767	4.767 (0.852)	59	67086			0.00- 41.07	11.18
86 Vinyl Acetate					CAS #: 108-05-4		
4.837	4.837 (0.865)	86	33092	20.0000	15.252	80.00- 120.00	100.00
4.823	4.823 (0.862)	43	463701			1358.75-1418.75	1401.25
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
5.130	5.130 (0.917)	59	537221	20.0000	17.746	80.00- 120.00	100.00
5.130	5.130 (0.917)	87	197249			7.24- 67.24	36.72
5.130	5.130 (0.917)	41	108669			0.00- 50.34	20.23
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	93828	20.0000	16.087	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	141465			126.27- 186.27	150.77
5.354	5.354 (0.957)	61	197703			188.75- 248.75	210.71
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	63619	20.0000	15.803	80.00- 120.00	100.00
5.396	5.396 (0.965)	43	296524			453.83- 513.83	466.09

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.396	5.396 (0.965)	57	23850			8.29- 68.29	37.49
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	167980	20.0000	15.395	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	54435			2.73- 62.73	32.41
5.592	5.592 (1.000)	72	56336			4.10- 64.10	33.54
100 Chloroform					CAS #: 67-66-3		
5.648	5.648 (1.010)	83	278208	20.0000	15.953	80.00- 120.00	100.00
5.648	5.648 (1.010)	85	178970			36.02- 96.02	64.33
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	200705	20.0000	18.111	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	279082			105.03- 165.03	139.05
5.760	5.760 (1.030)	41	162763			51.08- 111.08	81.10
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	367281	20.0000	18.213	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	240823			33.79- 93.79	65.57
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.886	5.886 (1.053)	119	394975	20.0000	18.020	80.00- 120.00	100.00
5.886	5.886 (1.053)	117	408437			73.09- 133.09	103.41
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	849561	20.0000	17.375	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	257882			1.97- 61.97	30.35
6.082	6.082 (1.088)	41	234622			0.00- 57.44	27.62
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	396438	20.0000	16.947	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	90610			0.00- 52.26	22.86
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.180	6.180 (0.955)	87	111030	20.0000	18.469	80.00- 120.00	100.00
6.180	6.180 (0.955)	73	417927			350.91- 410.91	376.41
6.180	6.180 (0.955)	55	131912			93.72- 153.72	118.81
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	200184	20.0000	16.448	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	65387			0.60- 60.60	32.66
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	162675	20.0000	18.805	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	329493			174.73- 234.73	202.55

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.250	6.250 (0.965)	57	177919			82.00- 142.00	109.37
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	176939	20.0000	16.634	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	203641			86.71- 146.71	115.09
6.678	6.678 (1.032)	97	118443			37.32- 97.32	66.94
127 Methylcyclohexane					CAS #: 108-87-2		
6.778	6.778 (1.047)	83	266730	20.0000	18.300	80.00- 120.00	100.00
6.778	6.778 (1.047)	98	125694			17.60- 77.60	47.12
6.778	6.778 (1.047)	55	244679			63.76- 123.76	91.73
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.914	6.914 (1.068)	63	163552	20.0000	17.196	80.00- 120.00	100.00
6.914	6.914 (1.068)	62	111157			38.31- 98.31	67.96
6.914	6.914 (1.068)	41	110815			34.93- 94.93	67.76
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	102353	20.0000	18.165	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	73633			45.98- 105.98	71.94
7.000	7.000 (1.081)	57	26710			0.00- 56.14	26.10
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	290775	20.0000	17.090	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	183637			33.86- 93.86	63.15
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	231496	20.0000	17.298	80.00- 120.00	100.00
7.516	7.516 (1.161)	77	75715			1.54- 61.54	32.71
7.516	7.516 (1.161)	39	159231			35.97- 95.97	68.78
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.624	7.624 (1.178)	58	138847	20.0000	17.939	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	391877			244.45- 304.45	282.24
7.624	7.624 (1.178)	85	57700			10.30- 70.30	41.56
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.198)	91	521193	20.0000	17.979	80.00- 120.00	100.00
7.753	7.753 (1.198)	92	297238			26.66- 86.66	57.03
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	212446	20.0000	17.850	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	69115			1.19- 61.19	32.53
7.996	7.996 (0.895)	39	133745			32.42- 92.42	62.95

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	180133	20.0000	17.780	80.00- 120.00	100.00
8.154	8.154 (0.913)	99	113209			33.08- 93.08	62.85
8.154	8.154 (0.913)	83	151823			54.45- 114.45	84.28
156 Tetrachloroethene					CAS #: 127-18-4		
8.189	8.189 (0.917)	166	283847	20.0000	18.867	80.00- 120.00	100.00
8.189	8.189 (0.917)	129	212322			47.15- 107.15	74.80
8.189	8.189 (0.917)	131	210285			44.59- 104.59	74.08
158 2-Hexanone					CAS #: 591-78-6		
8.311	8.311 (0.930)	58	185320	20.0000	18.725	80.00- 120.00	100.00
8.311	8.311 (0.930)	43	371863			169.61- 229.61	200.66
8.311	8.311 (0.930)	100	34896			0.00- 49.56	18.83
160 Dibromochloromethane					CAS #: 124-48-1		
8.469	8.469 (0.948)	129	360822	20.0000	18.220	80.00- 120.00	100.00
8.469	8.469 (0.948)	127	287781			46.73- 106.73	79.76
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.583	8.583 (0.961)	107	290272	20.0000	18.267	80.00- 120.00	100.00
8.583	8.583 (0.961)	109	272242			65.04- 125.04	93.79
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	442946	20.0000	18.829	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	151461			3.14- 63.14	34.19
8.956	8.956 (1.002)	77	232650			21.05- 81.05	52.52
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	232292	20.0000	19.183	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	703352			270.81- 330.81	302.79
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	290768	20.0000	19.402	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	564838			160.16- 220.16	194.26
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	277319	20.0000	19.692	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	558224			173.71- 233.71	201.29
172 Styrene					CAS #: 100-42-5		
9.464	9.464 (1.059)	104	430746	20.0000	19.662	80.00- 120.00	100.00
9.464	9.464 (1.059)	78	208780			19.18- 79.18	48.47
174 Bromoform					CAS #: 75-25-2		
9.665	9.665 (1.082)	173	381548	20.0000	19.662	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.665	9.665 (1.082)	171	193693			20.89- 80.89	50.77
175 Cumene					CAS #: 98-82-8		
9.729	9.729 (1.089)	105	867886	20.0000	19.615	80.00- 120.00	100.00
9.729	9.729 (1.089)	120	239526			0.00- 57.28	27.60
9.729	9.729 (1.089)	51	95718			0.00- 40.70	11.03
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.045	10.045 (1.124)	83	405519	20.0000	19.391	80.00- 120.00	100.00
10.045	10.045 (1.124)	85	260820			34.67- 94.67	64.32
182 Propylbenzene					CAS #: 103-65-1		
10.073	10.073 (1.127)	91	982519	20.0000	19.663	80.00- 120.00	100.00
10.073	10.073 (1.127)	120	251075			0.00- 55.53	25.55
10.073	10.073 (1.127)	105	37956			0.00- 33.85	3.86
188 4-Ethyltoluene					CAS #: 622-96-8		
10.166	10.166 (1.138)	120	278036	20.0000	19.831	80.00- 120.00	100.00
10.166	10.166 (1.138)	105	883959			289.83- 349.83	317.93
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.217	10.217 (1.143)	120	376956	20.0000	20.018	80.00- 120.00	100.00
10.217	10.217 (1.143)	105	743553			170.34- 230.34	197.25
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.546	10.546 (1.180)	105	713263	20.0000	19.853	80.00- 120.00	100.00
10.546	10.546 (1.180)	120	338057			16.82- 76.82	47.40
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.833	10.833 (1.212)	146	528621	20.0000	19.774	80.00- 120.00	100.00
10.833	10.833 (1.212)	148	330047			33.31- 93.31	62.44
10.833	10.833 (1.212)	111	199591			7.77- 67.77	37.76
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.919	10.919 (1.222)	146	530571	20.0000	19.456	80.00- 120.00	100.00
10.919	10.919 (1.222)	148	343041			33.74- 93.74	64.66
10.911	10.911 (1.221)	111	190517			6.13- 66.13	35.91
212 alpha-Chlorotoluene					CAS #: 100-44-7		
11.033	11.033 (1.235)	91	616858	20.0000	19.718	80.00- 120.00	100.00
11.033	11.033 (1.235)	126	147317			0.00- 53.92	23.88
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.248	11.248 (1.259)	146	496907	20.0000	19.110	80.00- 120.00	100.00
11.248	11.248 (1.259)	148	318855			33.86- 93.86	64.17

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.248	11.248 (1.259)	111	199609			9.19- 69.19	40.17
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.674	12.674 (1.419)	180	380333	20.0000	17.012	80.00- 120.00	100.00
12.674	12.674 (1.419)	182	363341			67.73- 127.73	95.53
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.767	12.767 (1.429)	225	298687	20.0000	16.684	80.00- 120.00	100.00
12.767	12.767 (1.429)	223	188800			32.69- 92.69	63.21
228 Naphthalene					CAS #: 91-20-3		
12.953	12.953 (1.450)	128	80227	2.00000	1.518	80.00- 120.00	100.00(a)
12.953	12.953 (1.450)	127	11421			0.00- 43.15	14.24

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 02-Feb-2016 15:37

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3020114.d
Lab Smp Id: ICAL Level 5
Analysis Type: VOA
Quant Type: ISTD
Operator: tar
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 20ppbv(200ppbv)

Calibration Date: 01-FEB-2016
Calibration Time: 18:46

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	192021	115213	268829	194066	1.06
123 1,4-Difluorobenze	729739	437843	1021635	699958	-4.08
163 Chlorobenzene-d5	587806	352684	822928	554255	-5.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/01feb16.b/3020114.d

Date : 01-FEB-2016 18:21

Client ID:

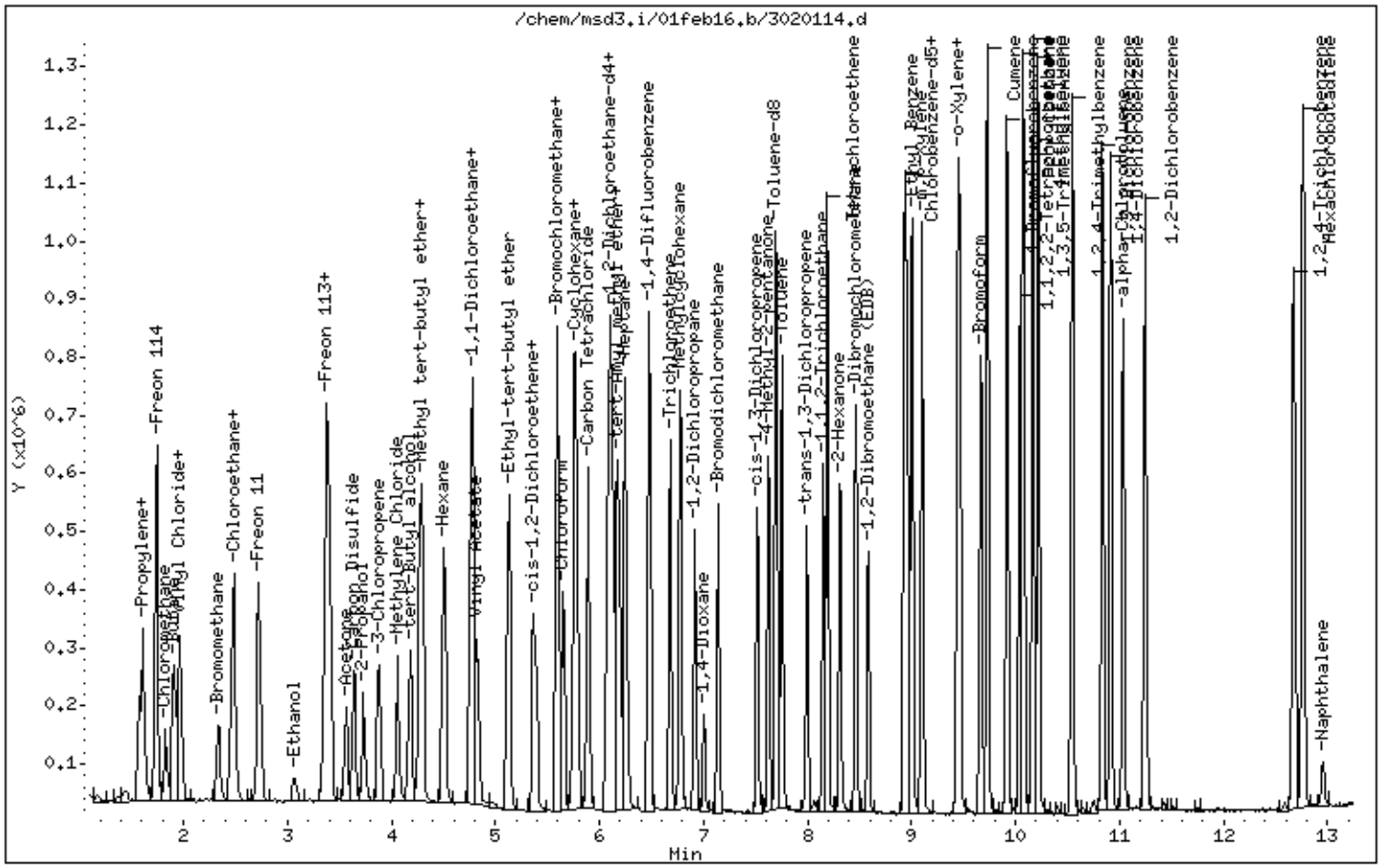
Instrument: msd3.i

Sample Info: 20mL 2759-210

Operator: tar

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/01feb16.b/3020115.d
Lab Smp Id: ICAL Level 6
Inj Date : 01-FEB-2016 18:46
Operator : tar Inst ID: msd3.i
Smp Info : 50mL 2759-210
Misc Info : 50ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 02-Feb-2016 16:06 troberts Quant Type: ISTD
Cal Date : 01-FEB-2016 18:46 Cal File: 3020115.d
Als bottle: 13 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	192021	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	152576			49.46- 109.46	79.46
5.592	5.592 (1.000)	49	255031			102.81- 162.81	132.81
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	729739	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	109065			0.00- 44.95	14.95
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	587806	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	296843			20.50- 80.50	50.50
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	248468	25.0000	25.142	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	153941			31.96- 91.96	61.96

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	667738	25.0000	25.242	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	73010			0.00- 40.93	10.93
7.695	7.695 (1.189)	100	423126			33.37- 93.37	63.37
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	376733	25.0000	25.357	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	399578			76.06- 136.06	106.06
9.916	9.916 (1.110)	176	363346			66.45- 126.45	96.45
9 Propylene					CAS #: 115-07-1		
1.577	1.577 (0.282)	41	342489	50.0000	47.352	80.00- 120.00	100.00
1.577	1.577 (0.282)	42	229406			36.98- 96.98	66.98
1.577	1.577 (0.282)	39	251325			43.38- 103.38	73.38
11 Freon 12					CAS #: 75-71-8		
1.619	1.619 (0.289)	85	1012631	50.0000	47.623	80.00- 120.00	100.00
1.619	1.619 (0.289)	87	330719			2.66- 62.66	32.66
15 Freon 114					CAS #: 76-14-2		
1.744	1.744 (0.312)	135	816302	50.0000	46.204	80.00- 120.00	100.00
1.744	1.744 (0.312)	137	263244			2.25- 62.25	32.25
17 Chloromethane					CAS #: 74-87-3		
1.828	1.828 (0.327)	50	400073	50.0000	45.836	80.00- 120.00	100.00
1.828	1.828 (0.327)	52	133618			3.40- 63.40	33.40
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	84214	50.0000	44.396	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	694497			794.68- 854.68	824.68
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	406960	50.0000	46.948	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	124398			0.57- 60.57	30.57
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	349079	50.0000	45.464	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	356357			72.08- 132.08	102.08
29 Bromomethane					CAS #: 74-83-9		
2.346	2.346 (0.420)	94	356514	50.0000	48.498	80.00- 120.00	100.00
2.346	2.346 (0.420)	96	353979			69.29- 129.29	99.29
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	208138	50.0000	46.370	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	65184			1.32- 61.32	31.32

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.458	2.458 (0.440)	49	67111			2.24- 62.24	32.24
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	556559	50.0000	47.548	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	373112			37.04- 97.04	67.04
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	1117222	50.0000	46.621	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	724022			34.81- 94.81	64.81
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	188987	50.0000	48.673	80.00- 120.00	100.00
3.074	3.074 (0.550)	43	36571			0.00- 49.35	19.35
3.074	3.074 (0.550)	46	70692			7.41- 67.41	37.41
49 Freon 113					CAS #: 76-13-1		
3.382	3.382 (0.605)	151	842329	50.0000	46.883	80.00- 120.00	100.00
3.382	3.382 (0.605)	153	536927			33.74- 93.74	63.74
3.382	3.382 (0.605)	101	949776			82.76- 142.76	112.76
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.410	3.410 (0.610)	96	415164	50.0000	47.034	80.00- 120.00	100.00
3.410	3.410 (0.610)	98	263832			33.55- 93.55	63.55
3.410	3.410 (0.610)	61	731569			146.21- 206.21	176.21
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	208647	50.0000	46.453	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	714438			312.41- 372.41	342.41
56 Carbon Disulfide					CAS #: 75-15-0		
3.647	3.647 (0.652)	76	1100937	50.0000	47.009	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	835345	50.0000	49.402	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	165054			0.00- 49.76	19.76
3.731	3.731 (0.667)	59	29723			0.00- 33.56	3.56
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	177520	50.0000	47.070	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	616749			317.43- 377.43	347.43
66 Methylene Chloride					CAS #: 75-09-2		
4.053	4.053 (0.725)	49	564617	50.0000	46.781	80.00- 120.00	100.00
4.067	4.067 (0.727)	84	352655			32.46- 92.46	62.46
4.053	4.053 (0.725)	51	169830			0.08- 60.08	30.08

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
4.179	4.179 (0.747)	59	890194	50.0000	47.670	80.00- 120.00	100.00
4.179	4.179 (0.747)	41	204745			0.00- 53.00	23.00
4.179	4.179 (0.747)	57	93403			0.00- 40.49	10.49
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	1164572	50.0000	49.388	80.00- 120.00	100.00
4.277	4.277 (0.765)	57	311841			0.00- 56.78	26.78
4.277	4.277 (0.765)	41	321546			0.00- 57.61	27.61
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	273216	50.0000	48.333	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	662625			212.53- 272.53	242.53
4.305	4.305 (0.770)	96	427294			126.39- 186.39	156.39
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	741508	50.0000	48.248	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	485253			35.44- 95.44	65.44
4.501	4.501 (0.805)	86	99124			0.00- 43.37	13.37
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.781	4.781 (0.855)	63	783976	50.0000	48.555	80.00- 120.00	100.00
4.781	4.781 (0.855)	65	239280			0.52- 60.52	30.52
83 Isopropyl ether					CAS #: 108-20-3		
4.767	4.767 (0.852)	45	1588145	50.0000	48.362	80.00- 120.00	100.00
4.781	4.781 (0.855)	87	367676			0.00- 53.15	23.15
4.767	4.767 (0.852)	59	175831			0.00- 41.07	11.07
86 Vinyl Acetate					CAS #: 108-05-4		
4.823	4.823 (0.862)	86	103686	50.0000	48.299	80.00- 120.00	100.00
4.823	4.823 (0.862)	43	1439944			1358.75-1418.75	1388.75
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
5.131	5.131 (0.917)	59	1441657	50.0000	48.131	80.00- 120.00	100.00
5.131	5.131 (0.917)	87	536930			7.24- 67.24	37.24
5.131	5.131 (0.917)	41	293281			0.00- 50.34	20.34
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	278950	50.0000	48.336	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	435923			126.27- 186.27	156.27
5.368	5.368 (0.960)	61	610196			188.75- 248.75	218.75
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	188495	50.0000	47.320	80.00- 120.00	100.00
5.396	5.396 (0.965)	43	912003			453.83- 513.83	483.83

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.396	5.396 (0.965)	57	72170			8.29- 68.29	38.29
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	506110	50.0000	46.877	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	165655			2.73- 62.73	32.73
5.592	5.592 (1.000)	72	172595			4.10- 64.10	34.10
100 Chloroform					CAS #: 67-66-3		
5.648	5.648 (1.010)	83	822787	50.0000	47.682	80.00- 120.00	100.00
5.648	5.648 (1.010)	85	543217			36.02- 96.02	66.02
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	537671	50.0000	49.035	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	726027			105.03- 165.03	135.03
5.760	5.760 (1.030)	41	435917			51.08- 111.08	81.08
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	963188	50.0000	48.273	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	614392			33.79- 93.79	63.79
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.900	5.900 (1.055)	119	1043401	50.0000	48.109	80.00- 120.00	100.00
5.900	5.900 (1.055)	117	1075593			73.09- 133.09	103.09
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	2389933	50.0000	49.400	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	764136			1.97- 61.97	31.97
6.082	6.082 (1.088)	41	655814			0.00- 57.44	27.44
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	1147625	50.0000	47.056	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	255484			0.00- 52.26	22.26
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.180	6.180 (0.955)	87	300769	50.0000	47.989	80.00- 120.00	100.00
6.180	6.180 (0.955)	73	1145653			350.91- 410.91	380.91
6.166	6.166 (0.952)	55	372117			93.72- 153.72	123.72
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	605262	50.0000	47.702	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	185204			0.60- 60.60	30.60
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	428304	50.0000	47.491	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	876885			174.73- 234.73	204.73

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.250	6.250 (0.965)	57	479686			82.00- 142.00	112.00
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	525615	50.0000	47.395	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	613452			86.71- 146.71	116.71
6.678	6.678 (1.032)	97	353839			37.32- 97.32	67.32
127 Methylcyclohexane					CAS #: 108-87-2		
6.778	6.778 (1.047)	83	718968	50.0000	47.316	80.00- 120.00	100.00
6.778	6.778 (1.047)	98	342216			17.60- 77.60	47.60
6.778	6.778 (1.047)	55	674105			63.76- 123.76	93.76
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.915	6.915 (1.068)	63	456316	50.0000	46.020	80.00- 120.00	100.00
6.915	6.915 (1.068)	62	311732			38.31- 98.31	68.31
6.915	6.915 (1.068)	41	296276			34.93- 94.93	64.93
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	273186	50.0000	46.506	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	207580			45.98- 105.98	75.98
7.008	7.008 (1.082)	57	71412			0.00- 56.14	26.14
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	845730	50.0000	47.679	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	540085			33.86- 93.86	63.86
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	677142	50.0000	48.532	80.00- 120.00	100.00
7.516	7.516 (1.161)	77	213595			1.54- 61.54	31.54
7.516	7.516 (1.161)	39	446687			35.97- 95.97	65.97
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.624	7.624 (1.178)	58	389054	50.0000	48.214	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	1067765			244.45- 304.45	274.45
7.624	7.624 (1.178)	85	156808			10.30- 70.30	40.30
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.198)	91	1434760	50.0000	47.475	80.00- 120.00	100.00
7.753	7.753 (1.198)	92	812922			26.66- 86.66	56.66
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	620429	50.0000	49.154	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	193519			1.19- 61.19	31.19
7.996	7.996 (0.895)	39	387276			32.42- 92.42	62.42

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	493710	50.0000	45.951	80.00- 120.00	100.00
8.147	8.147 (0.912)	99	311418			33.08- 93.08	63.08
8.154	8.154 (0.913)	83	416927			54.45- 114.45	84.45
156 Tetrachloroethene					CAS #: 127-18-4		
8.190	8.190 (0.917)	166	751343	50.0000	47.091	80.00- 120.00	100.00
8.190	8.190 (0.917)	129	579695			47.15- 107.15	77.15
8.190	8.190 (0.917)	131	560390			44.59- 104.59	74.59
158 2-Hexanone					CAS #: 591-78-6		
8.318	8.318 (0.931)	58	512337	50.0000	48.812	80.00- 120.00	100.00
8.311	8.311 (0.930)	43	1022685			169.61- 229.61	199.61
8.318	8.318 (0.931)	100	100213			0.00- 49.56	19.56
160 Dibromochloromethane					CAS #: 124-48-1		
8.462	8.462 (0.947)	129	1034698	50.0000	49.267	80.00- 120.00	100.00
8.462	8.462 (0.947)	127	793970			46.73- 106.73	76.73
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.584	8.584 (0.961)	107	803249	50.0000	47.663	80.00- 120.00	100.00
8.584	8.584 (0.961)	109	763429			65.04- 125.04	95.04
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	1181290	50.0000	47.350	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	391515			3.14- 63.14	33.14
8.956	8.956 (1.002)	77	603100			21.05- 81.05	51.05
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	617761	50.0000	48.103	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	1858312			270.81- 330.81	300.81
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	772727	50.0000	48.618	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	1469453			160.16- 220.16	190.16
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	718599	50.0000	48.115	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	1463875			173.71- 233.71	203.71
172 Styrene					CAS #: 100-42-5		
9.465	9.465 (1.059)	104	1147464	50.0000	49.389	80.00- 120.00	100.00
9.465	9.465 (1.059)	78	564341			19.18- 79.18	49.18
174 Bromoform					CAS #: 75-25-2		
9.665	9.665 (1.082)	173	1026133	50.0000	49.862	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.665	9.665 (1.082)	171	522173			20.89- 80.89	50.89
175 Cumene					CAS #: 98-82-8		
9.730	9.730 (1.089)	105	2292017	50.0000	48.846	80.00- 120.00	100.00
9.730	9.730 (1.089)	120	625190			0.00- 57.28	27.28
9.730	9.730 (1.089)	51	245191			0.00- 40.70	10.70
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.045	10.045 (1.124)	83	1060145	50.0000	47.800	80.00- 120.00	100.00
10.045	10.045 (1.124)	85	685544			34.67- 94.67	64.67
182 Propylbenzene					CAS #: 103-65-1		
10.073	10.073 (1.127)	91	2543216	50.0000	47.991	80.00- 120.00	100.00
10.073	10.073 (1.127)	120	649166			0.00- 55.53	25.53
10.073	10.073 (1.127)	105	97891			0.00- 33.85	3.85
188 4-Ethyltoluene					CAS #: 622-96-8		
10.167	10.167 (1.138)	120	714654	50.0000	48.063	80.00- 120.00	100.00
10.167	10.167 (1.138)	105	2285684			289.83- 349.83	319.83
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.217	10.217 (1.143)	120	983998	50.0000	49.273	80.00- 120.00	100.00
10.217	10.217 (1.143)	105	1971385			170.34- 230.34	200.34
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.546	10.546 (1.180)	105	1885457	50.0000	49.485	80.00- 120.00	100.00
10.546	10.546 (1.180)	120	882865			16.82- 76.82	46.82
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.833	10.833 (1.212)	146	1366749	50.0000	48.208	80.00- 120.00	100.00
10.840	10.840 (1.213)	148	865247			33.31- 93.31	63.31
10.833	10.833 (1.212)	111	516224			7.77- 67.77	37.77
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.919	10.919 (1.222)	146	1380081	50.0000	47.718	80.00- 120.00	100.00
10.919	10.919 (1.222)	148	879725			33.74- 93.74	63.74
10.919	10.919 (1.222)	111	498603			6.13- 66.13	36.13
212 alpha-Chlorotoluene					CAS #: 100-44-7		
11.033	11.033 (1.235)	91	1658180	50.0000	49.978	80.00- 120.00	100.00
11.033	11.033 (1.235)	126	396711			0.00- 53.92	23.92
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.248	11.248 (1.259)	146	1294032	50.0000	46.925	80.00- 120.00	100.00
11.248	11.248 (1.259)	148	826404			33.86- 93.86	63.86

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                                        AMOUNTS
                                     CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  214 1,2-Dichlorobenzene (continued)
 11.248  11.248 (1.259)   111    507142                     9.19-  69.19    39.19
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                        CAS #: 120-82-1
 12.674  12.674 (1.419)   180   1090582 50.0000   45.996  80.00- 120.00   100.00
 12.674  12.674 (1.419)   182   1065821                   67.73- 127.73    97.73
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                           CAS #: 87-68-3
 12.767  12.767 (1.429)   225    877154 50.0000   46.200  80.00- 120.00   100.00
 12.767  12.767 (1.429)   223    549881                   32.69-  92.69    62.69
-------------------------------------------------------------------------------
  228 Naphthalene                                   CAS #: 91-20-3
 12.953  12.953 (1.450)   128    227380 5.00000    4.056  80.00- 120.00   100.00
 12.953  12.953 (1.450)   127     29910                    0.00-  43.15    13.15
-------------------------------------------------------------------------------
```

Report Date: 02-Feb-2016 16:06

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3020115.d
Lab Smp Id: ICAL Level 6
Analysis Type: VOA
Quant Type: ISTD
Operator: tar
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 01-FEB-2016
Calibration Time: 18:46

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	192021	115213	268829	192021	0.00
123 1,4-Difluorobenze	729739	437843	1021635	729739	0.00
163 Chlorobenzene-d5	587806	352684	822928	587806	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/01feb16.b/3020115.d

Date : 01-FEB-2016 18:46

Client ID:

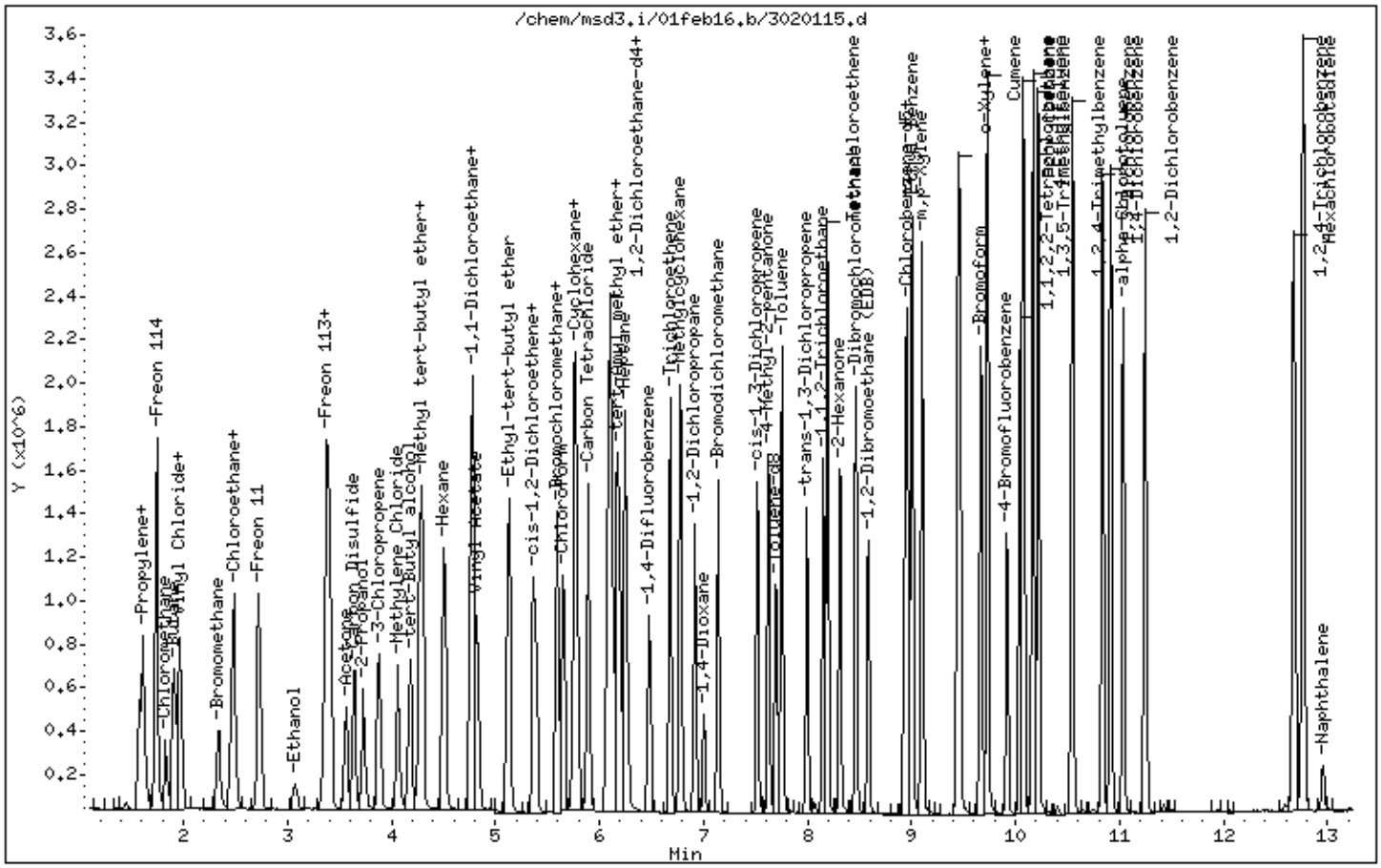
Instrument: msd3.i

Sample Info: 50mL 2759-210

Operator: tar

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/29dec15.b/3122914t.d
Lab Smp Id: I Cal Level #6
Inj Date : 29-DEC-2015 19:56
Operator : gh Inst ID: msd3.i
Smp Info : 50ml 2759-151
Misc Info : 50ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 03-Feb-2016 12:04 sblack Quant Type: ISTD
Cal Date : 01-FEB-2016 18:46 Cal File: 3020115.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT2.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
32 Vinyl Bromide					CAS #: 593-60-2		
2.682	2.682 (0.480)	106	317538	50.0000	47.719	0.00- 0.00	100.00
2.682	2.682 (0.480)	108	302448			0.00- 0.00	95.25
36 1-Pentene					CAS #: 109-67-1		
2.738	2.738 (0.490)	55	351608	50.0000	49.229	0.00- 0.00	100.00
2.738	2.738 (0.490)	42	459435			0.00- 0.00	130.67
44 Ethyl Ether					CAS #: 60-29-7		
3.130	3.130 (0.560)	74	169086	50.0000	48.971	0.00- 0.00	100.00(T)
3.130	3.130 (0.560)	59	272327			0.00- 0.00	161.06
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
3.619	3.619 (0.647)	142	898790	50.0000	57.788	0.00- 0.00	100.00
3.619	3.619 (0.647)	127	407146			0.00- 0.00	45.30

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
61 Methyl Acetate					CAS #: 79-20-9		
3.927	3.927 (0.702)	43	668561	50.0000	37.696	0.00- 0.00	100.00
3.927	3.927 (0.702)	74	119073			0.00- 0.00	17.81
63 Acetonitrile					CAS #: 75-05-8		
3.983	3.983 (0.712)	41	566262	50.0000	46.401	0.00- 0.00	100.00
3.997	3.997 (0.715)	39	248371			0.00- 0.00	43.86
3.983	3.983 (0.712)	38	65575			0.00- 0.00	11.58
64 Cyclopentane					CAS #: 287-92-3		
4.011	4.011 (0.717)	70	197037	50.0000	50.370	0.00- 0.00	100.00
4.011	4.011 (0.717)	55	300393			0.00- 0.00	152.46
74 Acrylonitrile					CAS #: 107-13-1		
4.403	4.403 (0.787)	52	262483	50.0000	48.603	0.00- 0.00	100.00
4.403	4.403 (0.787)	53	343472			0.00- 0.00	130.85
76 1-Hexene					CAS #: 592-41-6		
4.445	4.445 (0.795)	55	294507	50.0000	48.356	0.00- 0.00	100.00
4.445	4.445 (0.795)	41	456236			0.00- 0.00	154.92
4.445	4.445 (0.795)	84	98242			0.00- 0.00	33.36
85 Chloroprene					CAS #: 126-99-8		
4.837	4.837 (0.865)	53	562978	50.0000	49.794	0.00- 0.00	100.00
4.837	4.837 (0.865)	88	260161			0.00- 0.00	46.21
4.837	4.837 (0.865)	50	157990			0.00- 0.00	28.06
93 Methyl Acrylate					CAS #: 96-33-3		
5.452	5.452 (0.975)	55	738269	50.0000	48.618	0.00- 0.00	100.00
5.452	5.452 (0.975)	85	105652			0.00- 0.00	14.31
5.452	5.452 (0.975)	58	62729			0.00- 0.00	8.50
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	208974	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	161375			49.46- 109.46	77.22
5.592	5.592 (1.000)	49	267823			102.81- 162.81	128.16
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.488	6.488 (1.000)	114	784842	25.0000		80.00- 120.00	100.00
6.488	6.488 (1.000)	88	113747			0.00- 44.95	14.49
128 Ethyl acrylate					CAS #: 140-88-5		
6.778	6.778 (0.759)	99	51728	50.0000	52.208	0.00- 0.00	100.00
6.778	6.778 (0.759)	45	77221			0.00- 0.00	149.28
6.778	6.778 (0.759)	55	802413			0.00- 0.00	1551.22

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
131 2-Pentanone					CAS #: 107-87-9		
6.871	6.871 (0.769)	43	1013158	50.0000	45.963	0.00- 0.00	100.00
6.871	6.871 (0.769)	58	78340			0.00- 0.00	7.73
6.871	6.871 (0.769)	86	158635			0.00- 0.00	15.66
134 Methyl Methacrylate					CAS #: 80-62-6		
6.972	6.972 (0.780)	41	549068	50.0000	48.902	0.00- 0.00	100.00
6.972	6.972 (0.780)	69	355982			0.00- 0.00	64.83
6.972	6.972 (0.780)	100	143982			0.00- 0.00	26.22
137 Dibromomethane					CAS #: 74-95-3		
7.029	7.029 (0.787)	174	522161	50.0000	49.079	0.00- 0.00	100.00
7.029	7.029 (0.787)	93	454624			0.00- 0.00	87.07
7.029	7.029 (0.787)	95	375068			0.00- 0.00	71.83
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	634568	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	311304			20.50- 80.50	49.06
184 trans-1,4-Dichloro-2-butene					CAS #: 110-57-6		
10.102	10.102 (1.131)	75	307864	50.0000	29.205	0.00- 0.00	100.00
10.102	10.102 (1.131)	89	176623			0.00- 0.00	57.37
10.102	10.102 (1.131)	53	280591			0.00- 0.00	91.14
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
10.761	10.761 (1.204)	93	933716	50.0000	47.818	0.00- 0.00	100.00
10.761	10.761 (1.204)	95	299504			0.00- 0.00	32.08
217 Hexachloroethane					CAS #: 67-72-1		
11.427	11.427 (1.279)	201	509509	50.0000	52.285	0.00- 0.00	100.00
11.427	11.427 (1.279)	117	603293			0.00- 0.00	118.41
224 1,3,5-Trichlorobenzene					CAS #: 108-70-3		
12.057	12.057 (1.350)	180	1335892	50.0000	57.066	0.00- 0.00	100.00
12.057	12.057 (1.350)	182	1279774			0.00- 0.00	95.80

QC Flag Legend

T - Target compound detected outside RT window.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3122914t.d
Lab Smp Id: I Cal Level #6
Analysis Type: VOA
Quant Type: ISTD
Operator: gh
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 29-DEC-2015
Calibration Time: 19:56

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	208974	125384	292564	208974	0.00
123 1,4-Difluorobenze	784842	470905	1098779	784842	0.00
163 Chlorobenzene-d5	634568	380741	888395	634568	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.49	6.16	6.82	6.49	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/29dec15.b/3122914t.d

Date : 29-DEC-2015 19:56

Client ID:

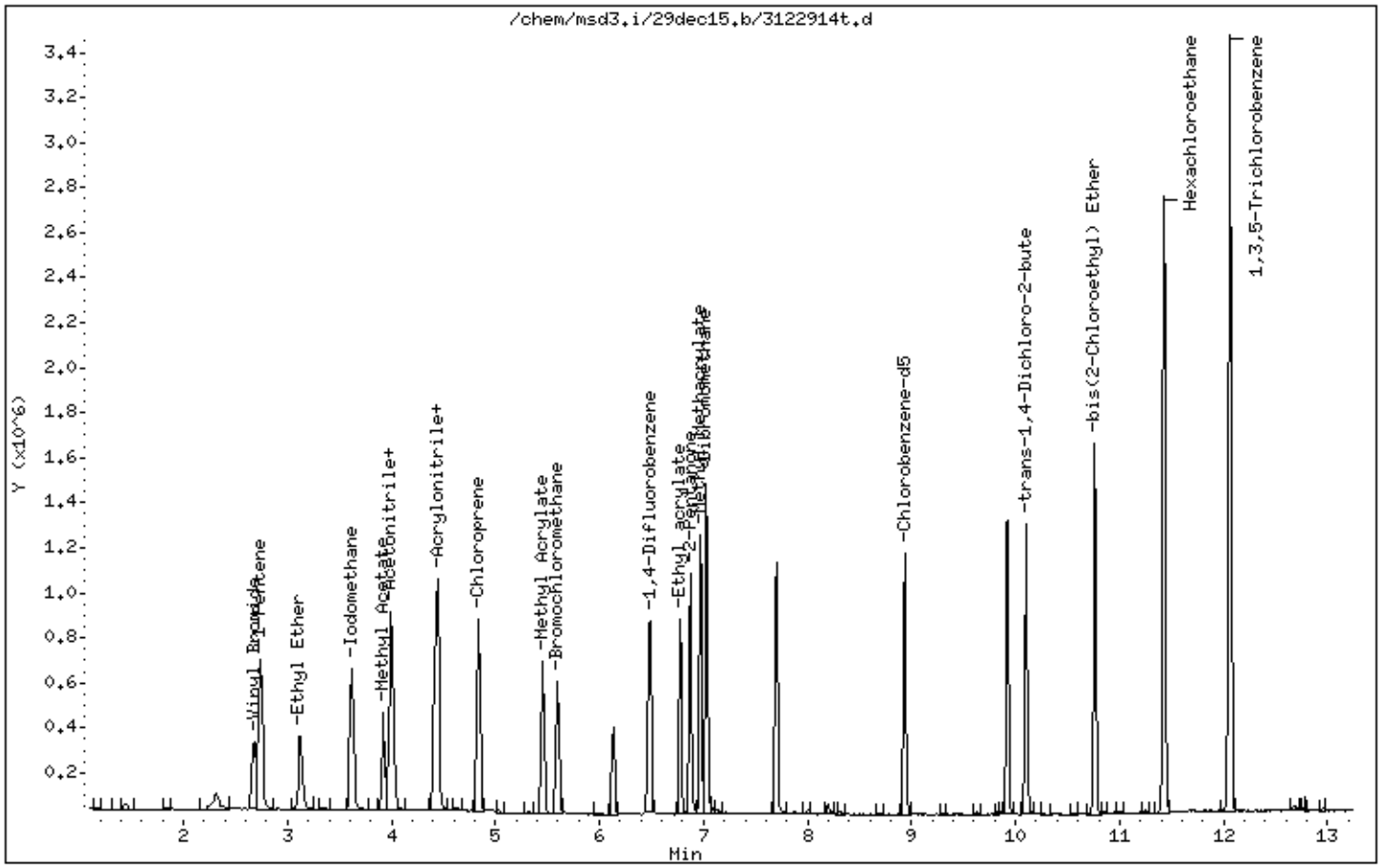
Instrument: msd3.i

Sample Info: 50ml 2759-151

Operator: gh

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/01feb16.b/3020116.d
Lab Smp Id: ICAL Level 7
Inj Date : 01-FEB-2016 19:10
Operator : tar Inst ID: msd3.i
Smp Info : 100mL 2759-210
Misc Info : 100ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 02-Feb-2016 15:37 troberts Quant Type: ISTD
Cal Date : 01-FEB-2016 19:10 Cal File: 3020116.d
Als bottle: 13 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	199441	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	157256			49.46- 109.46	78.85
5.592	5.592 (1.000)	49	267126			102.81- 162.81	133.94
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	762086	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	111876			0.00- 44.95	14.68
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.935	8.935 (1.000)	117	620685	25.0000		80.00- 120.00	100.00
8.935	8.935 (1.000)	82	313469			20.50- 80.50	50.50
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	260260	25.0000	25.356	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	152882			31.96- 91.96	58.74

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	702585	25.0000	25.432	80.00- 120.00	100.00
7.702	7.702 (1.190)	70	72999			0.00- 40.93	10.39
7.695	7.695 (1.189)	100	455253			33.37- 93.37	64.80
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	398424	25.0000	25.397	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	423657			76.06- 136.06	106.33
9.916	9.916 (1.110)	176	388717			66.45- 126.45	97.56
9 Propylene					CAS #: 115-07-1		
1.577	1.577 (0.282)	41	719462	100.000	95.772	80.00- 120.00	100.00
1.577	1.577 (0.282)	42	480095			36.98- 96.98	66.73
1.577	1.577 (0.282)	39	521070			43.38- 103.38	72.42
11 Freon 12					CAS #: 75-71-8		
1.619	1.619 (0.289)	85	2096545	100.000	94.930	80.00- 120.00	100.00
1.619	1.619 (0.289)	87	702054			2.66- 62.66	33.49
15 Freon 114					CAS #: 76-14-2		
1.745	1.745 (0.312)	135	1681674	100.000	91.644	80.00- 120.00	100.00
1.745	1.745 (0.312)	137	543864			2.25- 62.25	32.34
17 Chloromethane					CAS #: 74-87-3		
1.828	1.828 (0.327)	50	852236	100.000	94.008	80.00- 120.00	100.00
1.828	1.828 (0.327)	52	271028			3.40- 63.40	31.80
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	172375	100.000	87.493	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	1428679			794.68- 854.68	828.82
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	849655	100.000	94.372	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	261221			0.57- 60.57	30.74
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	711064	100.000	89.163	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	732454			72.08- 132.08	103.01
29 Bromomethane					CAS #: 74-83-9		
2.346	2.346 (0.420)	94	747496	100.000	97.902	80.00- 120.00	100.00
2.346	2.346 (0.420)	96	735406			69.29- 129.29	98.38
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	432637	100.000	92.799	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	133873			1.32- 61.32	30.94

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.458	2.458 (0.440)	49	138643			2.24- 62.24	32.05
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	1134357	100.000	93.304	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	742421			37.04- 97.04	65.45
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	2273025	100.000	91.323	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	1485369			34.81- 94.81	65.35
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	391153	100.000	96.993	80.00- 120.00	100.00
3.074	3.074 (0.550)	43	76926			0.00- 49.35	19.67
3.074	3.074 (0.550)	46	149643			7.41- 67.41	38.26
49 Freon 113					CAS #: 76-13-1		
3.382	3.382 (0.605)	151	1675840	100.000	89.804	80.00- 120.00	100.00
3.382	3.382 (0.605)	153	1086357			33.74- 93.74	64.82
3.382	3.382 (0.605)	101	1892329			82.76- 142.76	112.92
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.410	3.410 (0.610)	96	869059	100.000	94.792	80.00- 120.00	100.00
3.410	3.410 (0.610)	98	561529			33.55- 93.55	64.61
3.410	3.410 (0.610)	61	1524627			146.21- 206.21	175.43
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	441768	100.000	94.696	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	1483472			312.41- 372.41	335.80
56 Carbon Disulfide					CAS #: 75-15-0		
3.647	3.647 (0.652)	76	2285421	100.000	93.954	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	1781315	100.000	101.43	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	345035			0.00- 49.76	19.37
3.731	3.731 (0.667)	59	66516			0.00- 33.56	3.73
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	373961	100.000	95.467	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	1298315			317.43- 377.43	347.18
66 Methylene Chloride					CAS #: 75-09-2		
4.067	4.067 (0.727)	49	1178324	100.000	93.997	80.00- 120.00	100.00
4.067	4.067 (0.727)	84	738885			32.46- 92.46	62.71
4.067	4.067 (0.727)	51	354485			0.08- 60.08	30.08

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
4.179	4.179 (0.747)	59	1860585	100.000	95.928	80.00- 120.00	100.00
4.179	4.179 (0.747)	41	419987			0.00- 53.00	22.57
4.179	4.179 (0.747)	57	194236			0.00- 40.49	10.44
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	2347417	100.000	95.848	80.00- 120.00	100.00
4.277	4.277 (0.765)	57	633647			0.00- 56.78	26.99
4.277	4.277 (0.765)	41	643975			0.00- 57.61	27.43
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	574778	100.000	97.898	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	1378120			212.53- 272.53	239.77
4.305	4.305 (0.770)	96	894025			126.39- 186.39	155.54
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	1538612	100.000	96.388	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	1004926			35.44- 95.44	65.31
4.501	4.501 (0.805)	86	205212			0.00- 43.37	13.34
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.795	4.795 (0.857)	63	1659407	100.000	98.951	80.00- 120.00	100.00
4.795	4.795 (0.857)	65	509457			0.52- 60.52	30.70
83 Isopropyl ether					CAS #: 108-20-3		
4.767	4.767 (0.852)	45	3241370	100.000	95.034	80.00- 120.00	100.00
4.781	4.781 (0.855)	87	769231			0.00- 53.15	23.73
4.767	4.767 (0.852)	59	353538			0.00- 41.07	10.91
86 Vinyl Acetate					CAS #: 108-05-4		
4.823	4.823 (0.862)	86	219438	100.000	98.416	80.00- 120.00	100.00
4.823	4.823 (0.862)	43	3045182			1358.75-1418.75	1387.72
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
5.131	5.131 (0.917)	59	3008398	100.000	96.701	80.00- 120.00	100.00
5.131	5.131 (0.917)	87	1115595			7.24- 67.24	37.08
5.131	5.131 (0.917)	41	593686			0.00- 50.34	19.73
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	587961	100.000	98.090	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	927249			126.27- 186.27	157.71
5.368	5.368 (0.960)	61	1288159			188.75- 248.75	219.09
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	404571	100.000	97.786	80.00- 120.00	100.00
5.396	5.396 (0.965)	43	1949390			453.83- 513.83	481.84

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.396	5.396 (0.965)	57	149346			8.29- 68.29	36.91
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	1087507	100.000	96.980	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	352861			2.73- 62.73	32.45
5.592	5.592 (1.000)	72	365960			4.10- 64.10	33.65
100 Chloroform					CAS #: 67-66-3		
5.662	5.662 (1.012)	83	1743549	100.000	97.284	80.00- 120.00	100.00
5.662	5.662 (1.012)	85	1128786			36.02- 96.02	64.74
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	1105968	100.000	97.111	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	1506923			105.03- 165.03	136.25
5.760	5.760 (1.030)	41	879119			51.08- 111.08	79.49
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	1956177	100.000	94.391	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	1253589			33.79- 93.79	64.08
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.900	5.900 (1.055)	119	2135109	100.000	94.783	80.00- 120.00	100.00
5.900	5.900 (1.055)	117	2211093			73.09- 133.09	103.56
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	4970788	100.000	98.924	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	1578386			1.97- 61.97	31.75
6.082	6.082 (1.088)	41	1331661			0.00- 57.44	26.79
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	2424600	100.000	95.196	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	544710			0.00- 52.26	22.47
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.180	6.180 (0.955)	87	628544	100.000	96.030	80.00- 120.00	100.00
6.180	6.180 (0.955)	73	2424075			350.91- 410.91	385.67
6.166	6.166 (0.952)	55	749226			93.72- 153.72	119.20
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	1258872	100.000	95.004	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	390142			0.60- 60.60	30.99
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	880953	100.000	93.536	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	1824581			174.73- 234.73	207.11

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.250	6.250 (0.965)	57	992963			82.00- 142.00	112.71
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	1125336	100.000	97.166	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	1289135			86.71- 146.71	114.56
6.678	6.678 (1.032)	97	739464			37.32- 97.32	65.71
127 Methylcyclohexane					CAS #: 108-87-2		
6.778	6.778 (1.047)	83	1496361	100.000	94.296	80.00- 120.00	100.00
6.778	6.778 (1.047)	98	729886			17.60- 77.60	48.78
6.778	6.778 (1.047)	55	1413925			63.76- 123.76	94.49
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.922	6.922 (1.069)	63	957122	100.000	92.429	80.00- 120.00	100.00
6.922	6.922 (1.069)	62	659288			38.31- 98.31	68.88
6.915	6.915 (1.068)	41	618745			34.93- 94.93	64.65
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	575618	100.000	93.831	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	430011			45.98- 105.98	74.70
7.008	7.008 (1.082)	57	150497			0.00- 56.14	26.15
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	1797301	100.000	97.024	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	1152666			33.86- 93.86	64.13
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	1463628	100.000	100.45	80.00- 120.00	100.00
7.516	7.516 (1.161)	77	452201			1.54- 61.54	30.90
7.516	7.516 (1.161)	39	949398			35.97- 95.97	64.87
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.624	7.624 (1.178)	58	819397	100.000	97.235	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	2262890			244.45- 304.45	276.17
7.624	7.624 (1.178)	85	334685			10.30- 70.30	40.85
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.198)	91	3009760	100.000	95.362	80.00- 120.00	100.00
7.753	7.753 (1.198)	92	1714960			26.66- 86.66	56.98
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	1325889	100.000	99.480	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	422132			1.19- 61.19	31.84
7.996	7.996 (0.895)	39	809608			32.42- 92.42	61.06

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	1048181	100.000	92.390	80.00- 120.00	100.00
8.154	8.154 (0.913)	99	644510			33.08- 93.08	61.49
8.154	8.154 (0.913)	83	864114			54.45- 114.45	82.44
156 Tetrachloroethene					CAS #: 127-18-4		
8.190	8.190 (0.917)	166	1580745	100.000	93.826	80.00- 120.00	100.00
8.190	8.190 (0.917)	129	1209614			47.15- 107.15	76.52
8.190	8.190 (0.917)	131	1162930			44.59- 104.59	73.57
158 2-Hexanone					CAS #: 591-78-6		
8.311	8.311 (0.930)	58	1086283	100.000	98.012	80.00- 120.00	100.00
8.311	8.311 (0.930)	43	2170517			169.61- 229.61	199.81
8.311	8.311 (0.930)	100	210320			0.00- 49.56	19.36
160 Dibromochloromethane					CAS #: 124-48-1		
8.469	8.469 (0.948)	129	2159497	100.000	97.378	80.00- 120.00	100.00
8.469	8.469 (0.948)	127	1680336			46.73- 106.73	77.81
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.584	8.584 (0.961)	107	1676905	100.000	94.232	80.00- 120.00	100.00
8.584	8.584 (0.961)	109	1591365			65.04- 125.04	94.90
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	2472930	100.000	93.872	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	807525			3.14- 63.14	32.65
8.956	8.956 (1.002)	77	1262846			21.05- 81.05	51.07
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	1289259	100.000	95.073	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	3844275			270.81- 330.81	298.18
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	1614964	100.000	96.226	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	3112110			160.16- 220.16	192.70
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	1525474	100.000	96.730	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	3063661			173.71- 233.71	200.83
172 Styrene					CAS #: 100-42-5		
9.465	9.465 (1.059)	104	2451785	100.000	99.940	80.00- 120.00	100.00
9.465	9.465 (1.059)	78	1223246			19.18- 79.18	49.89
174 Bromoform					CAS #: 75-25-2		
9.665	9.665 (1.082)	173	2183086	100.000	100.46	80.00- 120.00	100.00

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  174 Bromoform (continued)
  9.665   9.665 (1.082)   171   1109945                    20.89-  80.89    50.84
-------------------------------------------------------------------------------
  175 Cumene                                        CAS #: 98-82-8
  9.730   9.730 (1.089)   105   4888552 100.000   98.662  80.00- 120.00   100.00
  9.730   9.730 (1.089)   120   1338603                     0.00-  57.28    27.38
  9.730   9.730 (1.089)    51    501258                     0.00-  40.70    10.25
-------------------------------------------------------------------------------
  181 1,1,2,2-Tetrachloroethane                     CAS #: 79-34-5
 10.045  10.045 (1.124)    83   2174232 100.000   92.840  80.00- 120.00   100.00
 10.045  10.045 (1.124)    85   1405086                    34.67-  94.67    64.62
-------------------------------------------------------------------------------
  182 Propylbenzene                                 CAS #: 103-65-1
 10.073  10.073 (1.127)    91   5283552 100.000   94.421  80.00- 120.00   100.00
 10.073  10.073 (1.127)   120   1341661                     0.00-  55.53    25.39
 10.073  10.073 (1.127)   105    204434                     0.00-  33.85     3.87
-------------------------------------------------------------------------------
  188 4-Ethyltoluene                                CAS #: 622-96-8
 10.167  10.167 (1.138)   120   1492672 100.000   95.070  80.00- 120.00   100.00
 10.167  10.167 (1.138)   105   4805259                   289.83- 349.83   321.92
-------------------------------------------------------------------------------
  190 1,3,5-Trimethylbenzene                        CAS #: 108-67-8
 10.217  10.217 (1.143)   120   2056234 100.000   97.510  80.00- 120.00   100.00
 10.217  10.217 (1.143)   105   4160485                   170.34- 230.34   202.34
-------------------------------------------------------------------------------
  196 1,2,4-Trimethylbenzene                        CAS #: 95-63-6
 10.546  10.546 (1.180)   105   3950465 100.000   98.191  80.00- 120.00   100.00
 10.546  10.546 (1.180)   120   1850987                    16.82-  76.82    46.85
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                           CAS #: 541-73-1
 10.833  10.833 (1.212)   146   2806769 100.000   93.756  80.00- 120.00   100.00
 10.840  10.840 (1.213)   148   1784812                    33.31-  93.31    63.59
 10.833  10.833 (1.212)   111   1069436                     7.77-  67.77    38.10
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                           CAS #: 106-46-7
 10.919  10.919 (1.222)   146   2826348 100.000   92.549  80.00- 120.00   100.00
 10.919  10.919 (1.222)   148   1798633                    33.74-  93.74    63.64
 10.919  10.919 (1.222)   111   1042572                     6.13-  66.13    36.89
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                           CAS #: 100-44-7
 11.033  11.033 (1.235)    91   3533828 100.000   100.87  80.00- 120.00   100.00
 11.033  11.033 (1.235)   126    843407                     0.00-  53.92    23.87
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                           CAS #: 95-50-1
 11.248  11.248 (1.259)   146   2683729 100.000   92.164  80.00- 120.00   100.00
 11.248  11.248 (1.259)   148   1708619                    33.86-  93.86    63.67
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RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.248	11.248 (1.259)	111	1058472			9.19- 69.19	39.44
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.674	12.674 (1.419)	180	2417262	100.000	96.550	80.00- 120.00	100.00
12.674	12.674 (1.419)	182	2300234			67.73- 127.73	95.16
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.767	12.767 (1.429)	225	1925845	100.000	96.061	80.00- 120.00	100.00
12.767	12.767 (1.429)	223	1218031			32.69- 92.69	63.25
228 Naphthalene					CAS #: 91-20-3		
12.953	12.953 (1.450)	128	500770	10.0000	8.459	80.00- 120.00	100.00
12.953	12.953 (1.450)	127	66388			0.00- 43.15	13.26

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3020116.d
Lab Smp Id: ICAL Level 7
Analysis Type: VOA
Quant Type: ISTD
Operator: tar
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 100ppbv(200ppbv)

Calibration Date: 01-FEB-2016
Calibration Time: 18:46

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	192021	115213	268829	199441	3.86
123 1,4-Difluorobenze	729739	437843	1021635	762086	4.43
163 Chlorobenzene-d5	587806	352684	822928	620685	5.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/01feb16.b/3020116.d

Date : 01-FEB-2016 19:10

Client ID:

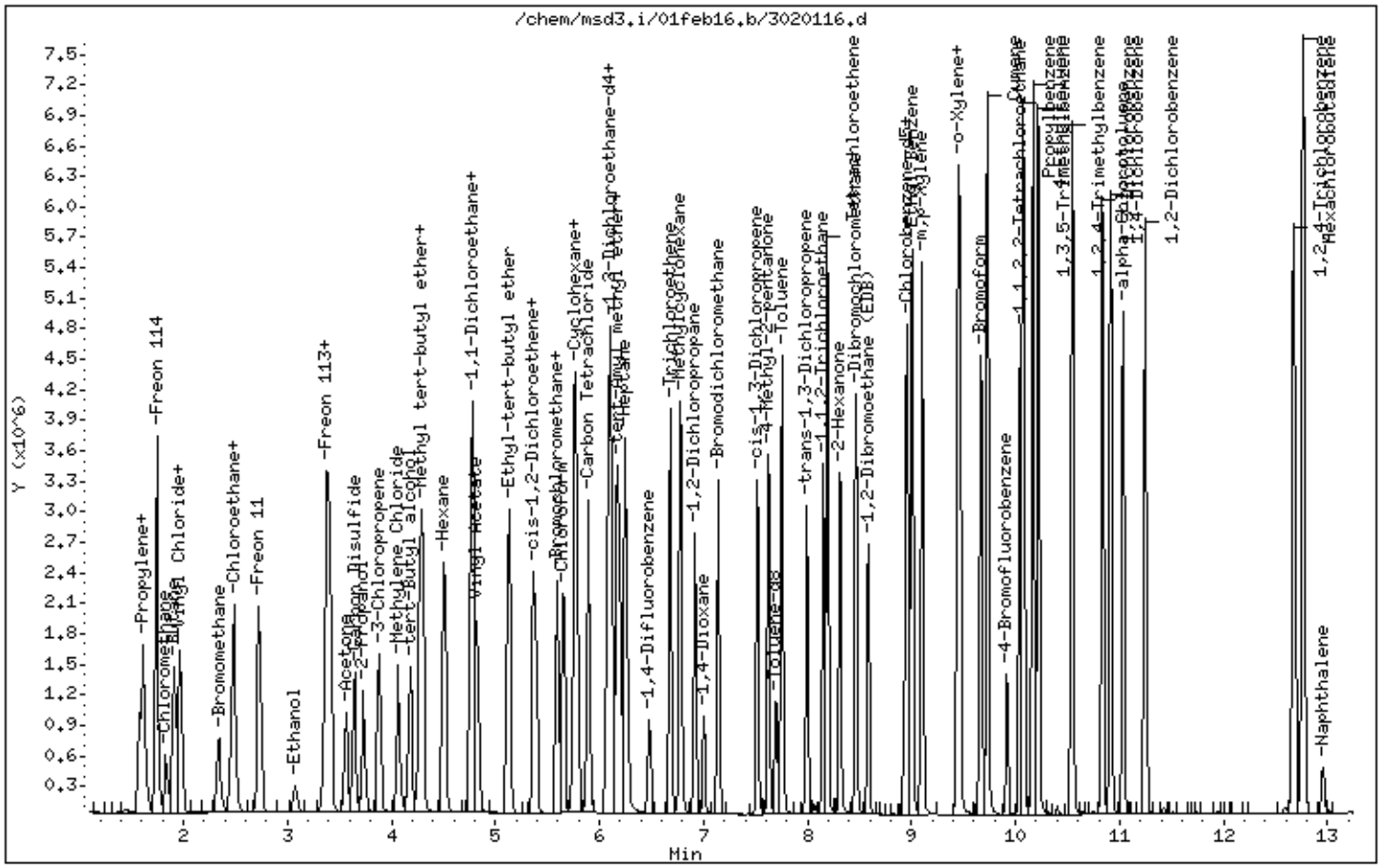
Instrument: msd3.i

Sample Info: 100mL 2759-210

Operator: tar

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/01feb16.b/3020117.d
Lab Smp Id: ICAL Level 8
Inj Date : 01-FEB-2016 19:36
Operator : tar Inst ID: msd3.i
Smp Info : 200mL 2759-210
Misc Info : 200ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 02-Feb-2016 15:37 troberts Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 13 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	209422	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	162973			49.46- 109.46	77.82
5.592	5.592 (1.000)	49	270583			102.81- 162.81	129.20
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.488	6.488 (1.000)	114	798010	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	116662			0.00- 44.95	14.62
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	656054	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	322209			20.50- 80.50	49.11
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.138	6.138 (1.098)	65	253737	25.0000	23.542	80.00- 120.00	100.00
6.138	6.138 (1.098)	67	155514			31.96- 91.96	61.29

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.702	7.702 (1.187)	98	734809	25.0000	25.401	80.00- 120.00	100.00
7.702	7.702 (1.187)	70	75835			0.00- 40.93	10.32
7.702	7.702 (1.187)	100	476847			33.37- 93.37	64.89
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.923	9.923 (1.111)	174	415618	25.0000	25.064	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	464949			76.06- 136.06	111.87
9.916	9.916 (1.110)	176	406146			66.45- 126.45	97.72
9 Propylene					CAS #: 115-07-1		
1.576	1.576 (0.282)	41	1490934	200.000	189.01	80.00- 120.00	100.00
1.576	1.576 (0.282)	42	995464			36.98- 96.98	66.77
1.576	1.576 (0.282)	39	1063241			43.38- 103.38	71.31
11 Freon 12					CAS #: 75-71-8		
1.618	1.618 (0.289)	85	4299064	200.000	185.38	80.00- 120.00	100.00
1.618	1.618 (0.289)	87	1429138			2.66- 62.66	33.24
15 Freon 114					CAS #: 76-14-2		
1.744	1.744 (0.312)	135	3474727	200.000	180.33	80.00- 120.00	100.00
1.744	1.744 (0.312)	137	1119430			2.25- 62.25	32.22
17 Chloromethane					CAS #: 74-87-3		
1.842	1.842 (0.329)	50	1711799	200.000	179.82	80.00- 120.00	100.00(A)
1.828	1.828 (0.327)	52	571330			3.40- 63.40	33.38
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	348970	200.000	168.69	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	2893102			794.68- 854.68	829.04
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	1750393	200.000	185.15	80.00- 120.00	100.00
1.954	1.954 (0.349)	64	538533			0.57- 60.57	30.77
26 1,3-Butadiene					CAS #: 106-99-0		
1.982	1.982 (0.354)	54	1459051	200.000	174.24	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	1502679			72.08- 132.08	102.99
29 Bromomethane					CAS #: 74-83-9		
2.346	2.346 (0.420)	94	1537030	200.000	191.72	80.00- 120.00	100.00
2.346	2.346 (0.420)	96	1499853			69.29- 129.29	97.58
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	899112	200.000	183.66	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	270914			1.32- 61.32	30.13

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.458	2.458 (0.440)	49	284070			2.24- 62.24	31.59
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	2301415	200.000	180.28	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	1527549			37.04- 97.04	66.37
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	4626031	200.000	177.00	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	2993411			34.81- 94.81	64.71
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	816509	200.000	192.82	80.00- 120.00	100.00
3.074	3.074 (0.550)	43	159140			0.00- 49.35	19.49
3.074	3.074 (0.550)	46	313582			7.41- 67.41	38.41
49 Freon 113					CAS #: 76-13-1		
3.381	3.381 (0.605)	151	3402382	200.000	173.64	80.00- 120.00	100.00
3.381	3.381 (0.605)	153	2184021			33.74- 93.74	64.19
3.381	3.381 (0.605)	101	3853807			82.76- 142.76	113.27
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.409	3.409 (0.610)	96	1761006	200.000	182.93	80.00- 120.00	100.00
3.409	3.409 (0.610)	98	1126535			33.55- 93.55	63.97
3.409	3.409 (0.610)	61	3100459			146.21- 206.21	176.06
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	889373	200.000	181.56	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	3026610			312.41- 372.41	340.31
56 Carbon Disulfide					CAS #: 75-15-0		
3.647	3.647 (0.652)	76	4740374	200.000	185.59	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	3667096	200.000	198.85	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	693336			0.00- 49.76	18.91
3.731	3.731 (0.667)	59	132545			0.00- 33.56	3.61
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	769752	200.000	187.14	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	2693735			317.43- 377.43	349.95
66 Methylene Chloride					CAS #: 75-09-2		
4.067	4.067 (0.727)	49	2441287	200.000	185.46	80.00- 120.00	100.00
4.067	4.067 (0.727)	84	1514378			32.46- 92.46	62.03
4.067	4.067 (0.727)	51	735411			0.08- 60.08	30.12

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
4.179	4.179 (0.747)	59	3856629	200.000	189.36	80.00- 120.00	100.00
4.179	4.179 (0.747)	41	855097			0.00- 53.00	22.17
4.179	4.179 (0.747)	57	407950			0.00- 40.49	10.58
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	4783747	200.000	186.02	80.00- 120.00	100.00
4.277	4.277 (0.765)	57	1288038			0.00- 56.78	26.93
4.277	4.277 (0.765)	41	1286047			0.00- 57.61	26.88
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	1176196	200.000	190.79	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	2847903			212.53- 272.53	242.13
4.305	4.305 (0.770)	96	1843151			126.39- 186.39	156.70
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	3192678	200.000	190.48	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	2084894			35.44- 95.44	65.30
4.501	4.501 (0.805)	86	424155			0.00- 43.37	13.29
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.795	4.795 (0.857)	63	3418814	200.000	194.15	80.00- 120.00	100.00
4.795	4.795 (0.857)	65	1045243			0.52- 60.52	30.57
83 Isopropyl ether					CAS #: 108-20-3		
4.767	4.767 (0.852)	45	6725996	200.000	187.80	80.00- 120.00	100.00
4.781	4.781 (0.855)	87	1577784			0.00- 53.15	23.46
4.767	4.767 (0.852)	59	718126			0.00- 41.07	10.68
86 Vinyl Acetate					CAS #: 108-05-4		
4.822	4.822 (0.862)	86	457377	200.000	195.35	80.00- 120.00	100.00
4.822	4.822 (0.862)	43	6331556			1358.75-1418.75	1384.32
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
5.130	5.130 (0.917)	59	6186303	200.000	189.37	80.00- 120.00	100.00
5.130	5.130 (0.917)	87	2297071			7.24- 67.24	37.13
5.130	5.130 (0.917)	41	1180934			0.00- 50.34	19.09
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	1249735	200.000	198.56	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	1943194			126.27- 186.27	155.49
5.368	5.368 (0.960)	61	2675617			188.75- 248.75	214.09
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	838232	200.000	192.95	80.00- 120.00	100.00
5.382	5.382 (0.962)	43	4066914			453.83- 513.83	485.18

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.396	5.396 (0.965)	57	313139			8.29- 68.29	37.36
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	2269953	200.000	192.78	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	741567			2.73- 62.73	32.67
5.592	5.592 (1.000)	72	771887			4.10- 64.10	34.00
100 Chloroform					CAS #: 67-66-3		
5.662	5.662 (1.012)	83	3649187	200.000	193.91	80.00- 120.00	100.00
5.662	5.662 (1.012)	85	2347507			36.02- 96.02	64.33
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	2301084	200.000	192.42	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	3115981			105.03- 165.03	135.41
5.760	5.760 (1.030)	41	1787128			51.08- 111.08	77.66
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	4021641	200.000	184.81	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	2568574			33.79- 93.79	63.87
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.900	5.900 (1.055)	119	4382798	200.000	185.29	80.00- 120.00	100.00
5.900	5.900 (1.055)	117	4565526			73.09- 133.09	104.17
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	10307255	200.000	195.35	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	3232857			1.97- 61.97	31.36
6.082	6.082 (1.088)	41	2727276			0.00- 57.44	26.46
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.942)	78	5084325	200.000	190.64	80.00- 120.00	100.00
6.110	6.110 (0.942)	77	1126565			0.00- 52.26	22.16
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.180	6.180 (0.953)	87	1301286	200.000	189.86	80.00- 120.00	100.00
6.180	6.180 (0.953)	73	5045476			350.91- 410.91	387.73
6.166	6.166 (0.950)	55	1547080			93.72- 153.72	118.89
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.955)	62	2591858	200.000	186.80	80.00- 120.00	100.00
6.194	6.194 (0.955)	64	803588			0.60- 60.60	31.00
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.963)	71	1830738	200.000	185.63	80.00- 120.00	100.00
6.250	6.250 (0.963)	43	3804704			174.73- 234.73	207.82

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.250	6.250 (0.963)	57	2071224			82.00- 142.00	113.14
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.029)	95	2356221	200.000	194.29	80.00- 120.00	100.00
6.678	6.678 (1.029)	130	2689377			86.71- 146.71	114.14
6.678	6.678 (1.029)	97	1566749			37.32- 97.32	66.49
127 Methylcyclohexane					CAS #: 108-87-2		
6.778	6.778 (1.045)	83	3145080	200.000	189.27	80.00- 120.00	100.00
6.778	6.778 (1.045)	98	1521208			17.60- 77.60	48.37
6.778	6.778 (1.045)	55	2941522			63.76- 123.76	93.53
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.921	6.921 (1.067)	63	2020204	200.000	186.31	80.00- 120.00	100.00
6.921	6.921 (1.067)	62	1373575			38.31- 98.31	67.99
6.914	6.914 (1.066)	41	1260914			34.93- 94.93	62.42
136 1,4-Dioxane					CAS #: 123-91-1		
7.007	7.007 (1.080)	88	1230896	200.000	191.61	80.00- 120.00	100.00
7.000	7.000 (1.079)	58	920335			45.98- 105.98	74.77
7.000	7.000 (1.079)	57	304172			0.00- 56.14	24.71
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.101)	83	3849962	200.000	198.48	80.00- 120.00	100.00
7.144	7.144 (1.101)	85	2447744			33.86- 93.86	63.58
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.159)	75	3108793	200.000	203.75	80.00- 120.00	100.00(A)
7.516	7.516 (1.159)	77	978117			1.54- 61.54	31.46
7.516	7.516 (1.159)	39	1989755			35.97- 95.97	64.00
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.623	7.623 (1.175)	58	1743219	200.000	197.55	80.00- 120.00	100.00
7.623	7.623 (1.175)	43	4813486			244.45- 304.45	276.13
7.623	7.623 (1.175)	85	699279			10.30- 70.30	40.11
147 Toluene					CAS #: 108-88-3		
7.752	7.752 (1.195)	91	6451834	200.000	195.22	80.00- 120.00	100.00
7.752	7.752 (1.195)	92	3701847			26.66- 86.66	57.38
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	2828996	200.000	200.81	80.00- 120.00	100.00(A)
7.996	7.996 (0.895)	77	894833			1.19- 61.19	31.63
7.996	7.996 (0.895)	39	1711966			32.42- 92.42	60.51

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	2203889	200.000	183.78	80.00- 120.00	100.00
8.154	8.154 (0.913)	99	1356541			33.08- 93.08	61.55
8.154	8.154 (0.913)	83	1813786			54.45- 114.45	82.30
156 Tetrachloroethene					CAS #: 127-18-4		
8.189	8.189 (0.917)	166	3347146	200.000	187.96	80.00- 120.00	100.00
8.189	8.189 (0.917)	129	2562800			47.15- 107.15	76.57
8.189	8.189 (0.917)	131	2465011			44.59- 104.59	73.65
158 2-Hexanone					CAS #: 591-78-6		
8.318	8.318 (0.931)	58	2305441	200.000	196.80	80.00- 120.00	100.00
8.318	8.318 (0.931)	43	4626761			169.61- 229.61	200.69
8.318	8.318 (0.931)	100	452122			0.00- 49.56	19.61
160 Dibromochloromethane					CAS #: 124-48-1		
8.469	8.469 (0.948)	129	4626543	200.000	197.38	80.00- 120.00	100.00
8.469	8.469 (0.948)	127	3581382			46.73- 106.73	77.41
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.583	8.583 (0.961)	107	3551107	200.000	188.79	80.00- 120.00	100.00
8.583	8.583 (0.961)	109	3375400			65.04- 125.04	95.05
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	5276264	200.000	189.49	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	1725056			3.14- 63.14	32.69
8.956	8.956 (1.002)	77	2652087			21.05- 81.05	50.26
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	2712240	200.000	189.22	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	8232913			270.81- 330.81	303.55
169 m,p-Xylene					CAS #: 108-38-3		
9.106	9.106 (1.019)	106	3438036	200.000	193.81	80.00- 120.00	100.00
9.106	9.106 (1.019)	91	6668861			160.16- 220.16	193.97
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	3278480	200.000	196.68	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	6612921			173.71- 233.71	201.71
172 Styrene					CAS #: 100-42-5		
9.464	9.464 (1.059)	104	5450269	200.000	210.19	80.00- 120.00	100.00(A)
9.464	9.464 (1.059)	78	2627656			19.18- 79.18	48.21
174 Bromoform					CAS #: 75-25-2		
9.665	9.665 (1.082)	173	4752202	200.000	206.90	80.00- 120.00	100.00(A)

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.665	9.665 (1.082)	171	2424044			20.89- 80.89	51.01
175 Cumene					CAS #: 98-82-8		
9.729	9.729 (1.089)	105	10412848	200.000	198.82	80.00- 120.00	100.00
9.729	9.729 (1.089)	120	2816560			0.00- 57.28	27.05
9.729	9.729 (1.089)	51	1068932			0.00- 40.70	10.27
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.045	10.045 (1.124)	83	4574067	200.000	184.78	80.00- 120.00	100.00
10.045	10.045 (1.124)	85	2937756			34.67- 94.67	64.23
182 Propylbenzene					CAS #: 103-65-1		
10.073	10.073 (1.127)	91	11155191	200.000	188.60	80.00- 120.00	100.00(A)
10.073	10.073 (1.127)	120	2791155			0.00- 55.53	25.02
10.073	10.073 (1.127)	105	427842			0.00- 33.85	3.84
188 4-Ethyltoluene					CAS #: 622-96-8		
10.166	10.166 (1.138)	120	3109226	200.000	187.35	80.00- 120.00	100.00
10.166	10.166 (1.138)	105	10141586			289.83- 349.83	326.18
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.224	10.224 (1.144)	120	4367550	200.000	195.95	80.00- 120.00	100.00
10.224	10.224 (1.144)	105	8863742			170.34- 230.34	202.95
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.546	10.546 (1.180)	105	8378286	200.000	197.02	80.00- 120.00	100.00
10.546	10.546 (1.180)	120	3906472			16.82- 76.82	46.63
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.840	10.840 (1.213)	146	5892400	200.000	186.22	80.00- 120.00	100.00
10.840	10.840 (1.213)	148	3755414			33.31- 93.31	63.73
10.832	10.832 (1.212)	111	2247901			7.77- 67.77	38.15
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.918	10.918 (1.222)	146	5926728	200.000	183.61	80.00- 120.00	100.00
10.918	10.918 (1.222)	148	3753526			33.74- 93.74	63.33
10.918	10.918 (1.222)	111	2166113			6.13- 66.13	36.55
212 alpha-Chlorotoluene					CAS #: 100-44-7		
11.033	11.033 (1.235)	91	7619160	200.000	205.76	80.00- 120.00	100.00(A)
11.033	11.033 (1.235)	126	1804376			0.00- 53.92	23.68
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.248	11.248 (1.259)	146	5611805	200.000	182.33	80.00- 120.00	100.00
11.248	11.248 (1.259)	148	3555229			33.86- 93.86	63.35

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.248	11.248 (1.259)	111	2201916			9.19- 69.19	39.24
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.673	12.673 (1.419)	180	5001338	200.000	188.99	80.00- 120.00	100.00
12.673	12.673 (1.419)	182	4802975			67.73- 127.73	96.03
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.767	12.767 (1.429)	225	3987155	200.000	188.16	80.00- 120.00	100.00
12.767	12.767 (1.429)	223	2498254			32.69- 92.69	62.66
228 Naphthalene					CAS #: 91-20-3		
12.953	12.953 (1.450)	128	1037144	20.0000	16.575	80.00- 120.00	100.00
12.953	12.953 (1.450)	127	133261			0.00- 43.15	12.85

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3020117.d
Lab Smp Id: ICAL Level 8
Analysis Type: VOA
Quant Type: ISTD
Operator: tar
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 200ppbv(200ppbv)

Calibration Date: 01-FEB-2016
Calibration Time: 18:46

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	192021	115213	268829	209422	9.06
123 1,4-Difluorobenze	729739	437843	1021635	798010	9.36
163 Chlorobenzene-d5	587806	352684	822928	656054	11.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.49	0.21
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/01feb16.b/3020117.d

Date : 01-FEB-2016 19:36

Client ID:

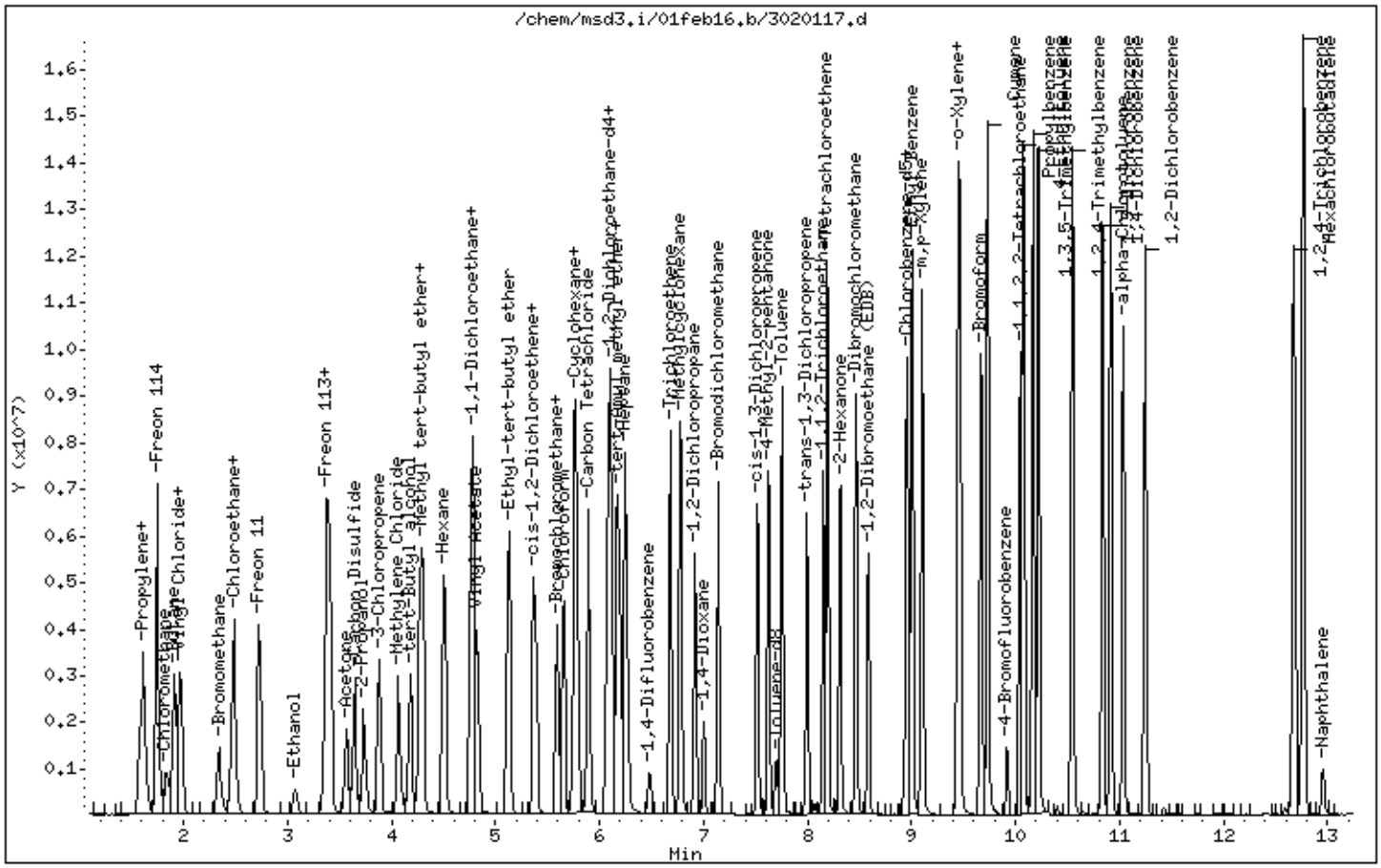
Instrument: msd3.i

Sample Info: 200mL 2759-210

Operator: tar

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/29dec15.b/3122915t.d
Lab Smp Id: I Cal Level#8
Inj Date : 29-DEC-2015 20:23
Operator : gh Inst ID: msd3.i
Smp Info : 200ml 2759-151
Misc Info : 200ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /chem/msd3.i/01feb16.b/316q0201a.m
Meth Date : 03-Feb-2016 12:03 sblack Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 2 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT2crv.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
32 Vinyl Bromide					CAS #: 593-60-2		
2.668	2.668 (0.477)	106	1450513	200.000	191.72	0.00- 0.00	100.00
2.668	2.668 (0.477)	108	1360764			0.00- 0.00	93.81
36 1-Pentene					CAS #: 109-67-1		
2.738	2.738 (0.490)	55	1484979	200.000	182.87	0.00- 0.00	100.00
2.724	2.724 (0.487)	42	2002877			0.00- 0.00	134.88
44 Ethyl Ether					CAS #: 60-29-7		
3.130	3.130 (0.560)	74	729356	200.000	185.79	0.00- 0.00	100.00(T)
3.130	3.130 (0.560)	59	1187986			0.00- 0.00	162.88
0.000	1.000 (0.000)	31	0			0.00- 0.00	0.00
53 Iodomethane					CAS #: 74-88-4		
3.619	3.619 (0.647)	142	4377574	200.000	247.55	0.00- 0.00	100.00(A)
3.619	3.619 (0.647)	127	1929078			0.00- 0.00	44.07

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

   61 Methyl Acetate                                CAS #: 79-20-9
  3.927   3.927 (0.702)    43   2860713 200.000   141.86   0.00-   0.00   100.00
  3.927   3.927 (0.702)    74    520052                     0.00-   0.00    18.18
-------------------------------------------------------------------------------
   63 Acetonitrile                                  CAS #: 75-05-8
  3.983   3.983 (0.712)    41   2579916 200.000   185.94   0.00-   0.00   100.00
  3.997   3.997 (0.715)    39   1069538                     0.00-   0.00    41.46
  3.983   3.983 (0.712)    38    289601                     0.00-   0.00    11.23
-------------------------------------------------------------------------------
   64 Cyclopentane                                  CAS #: 287-92-3
  3.997   3.997 (0.715)    70    845690 200.000   190.14   0.00-   0.00   100.00
  3.997   3.997 (0.715)    55   1341119                     0.00-   0.00   158.58
-------------------------------------------------------------------------------
   74 Acrylonitrile                                 CAS #: 107-13-1
  4.417   4.417 (0.790)    52   1208003 200.000   196.73   0.00-   0.00   100.00
  4.417   4.417 (0.790)    53   1608315                     0.00-   0.00   133.14
-------------------------------------------------------------------------------
   76 1-Hexene                                      CAS #: 592-41-6
  4.445   4.445 (0.795)    55   1336998 200.000   193.08   0.00-   0.00   100.00
  4.445   4.445 (0.795)    41   2077381                     0.00-   0.00   155.38
  4.445   4.445 (0.795)    84    458894                     0.00-   0.00    34.32
-------------------------------------------------------------------------------
   85 Chloroprene                                   CAS #: 126-99-8
  4.837   4.837 (0.865)    53   2536984 200.000   197.36   0.00-   0.00   100.00
  4.837   4.837 (0.865)    88   1197692                     0.00-   0.00    47.21
  4.837   4.837 (0.865)    50    697433                     0.00-   0.00    27.49
-------------------------------------------------------------------------------
   93 Methyl Acrylate                               CAS #: 96-33-3
  5.452   5.452 (0.975)    55   3348203 200.000   193.93   0.00-   0.00   100.00
  5.452   5.452 (0.975)    85    480006                     0.00-   0.00    14.34
  5.452   5.452 (0.975)    58    282025                     0.00-   0.00     8.42
-------------------------------------------------------------------------------
*  98 Bromochloromethane                           CAS #: 74-97-5
  5.592   5.592 (1.000)   130    237598 25.0000            80.00- 120.00   100.00
  5.592   5.592 (1.000)   128    184501                    49.46- 109.46    77.65
  5.592   5.592 (1.000)    49    309681                   102.81- 162.81   130.34
-------------------------------------------------------------------------------
* 123 1,4-Difluorobenzene                          CAS #: 540-36-3
  6.488   6.488 (1.000)   114    875577 25.0000            80.00- 120.00   100.00
  6.488   6.488 (1.000)    88    125926                     0.00-  44.95    14.38
-------------------------------------------------------------------------------
  128 Ethyl acrylate                                CAS #: 140-88-5
  6.778   6.778 (0.759)    99    239197 200.000   221.78   0.00-   0.00   100.00(A)
  6.778   6.778 (0.759)    45    341356                     0.00-   0.00   142.71
  6.778   6.778 (0.759)    55   3615191                     0.00-   0.00  1511.39
-------------------------------------------------------------------------------
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
131 2-Pentanone					CAS #: 107-87-9		
6.871	6.871 (0.769)	43	4495786	200.000	187.36	0.00- 0.00	100.00
6.871	6.871 (0.769)	58	335758			0.00- 0.00	7.47
6.871	6.871 (0.769)	86	698691			0.00- 0.00	15.54
134 Methyl Methacrylate					CAS #: 80-62-6		
6.972	6.972 (0.780)	41	2472385	200.000	202.29	0.00- 0.00	100.00(A)
6.972	6.972 (0.780)	69	1593232			0.00- 0.00	64.44
6.972	6.972 (0.780)	100	649255			0.00- 0.00	26.26
137 Dibromomethane					CAS #: 74-95-3		
7.029	7.029 (0.787)	174	2306882	200.000	199.19	0.00- 0.00	100.00
7.029	7.029 (0.787)	93	2051412			0.00- 0.00	88.93
7.029	7.029 (0.787)	95	1699032			0.00- 0.00	73.65
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	690763	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	331854			20.50- 80.50	48.04
184 trans-1,4-Dichloro-2-butene					CAS #: 110-57-6		
10.109	10.109 (1.131)	75	1380389	200.000	120.29	0.00- 0.00	100.00
10.109	10.109 (1.131)	89	791844			0.00- 0.00	57.36
10.109	10.109 (1.131)	53	1251872			0.00- 0.00	90.69
206 bis(2-Chloroethyl) Ether					CAS #: 111-44-4		
10.768	10.768 (1.205)	93	3717449	200.000	174.89	0.00- 0.00	100.00
10.775	10.775 (1.206)	95	1202731			0.00- 0.00	32.35
217 Hexachloroethane					CAS #: 67-72-1		
11.434	11.434 (1.280)	201	2288886	200.000	215.77	0.00- 0.00	100.00(A)
11.434	11.434 (1.280)	117	2697133			0.00- 0.00	117.84
224 1,3,5-Trichlorobenzene					CAS #: 108-70-3		
12.065	12.065 (1.350)	180	4719272	200.000	185.20	0.00- 0.00	100.00
12.065	12.065 (1.350)	182	4539840			0.00- 0.00	96.20

QC Flag Legend

T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3122915t.d
Lab Smp Id: I Cal Level#8
Analysis Type: VOA
Quant Type: ISTD
Operator: gh
Method File: /chem/msd3.i/01feb16.b/316q0201a.m
Misc Info: 200ppbv(200ppbv)

Calibration Date: 29-DEC-2015
Calibration Time: 18:06

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190939	114563	267315	237598	24.44
123 1,4-Difluorobenze	732052	439231	1024873	875577	19.61
163 Chlorobenzene-d5	594100	356460	831740	690763	16.27

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.49	6.16	6.82	6.49	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/29dec15.b/3122915t.d

Date : 29-DEC-2015 20:23

Client ID:

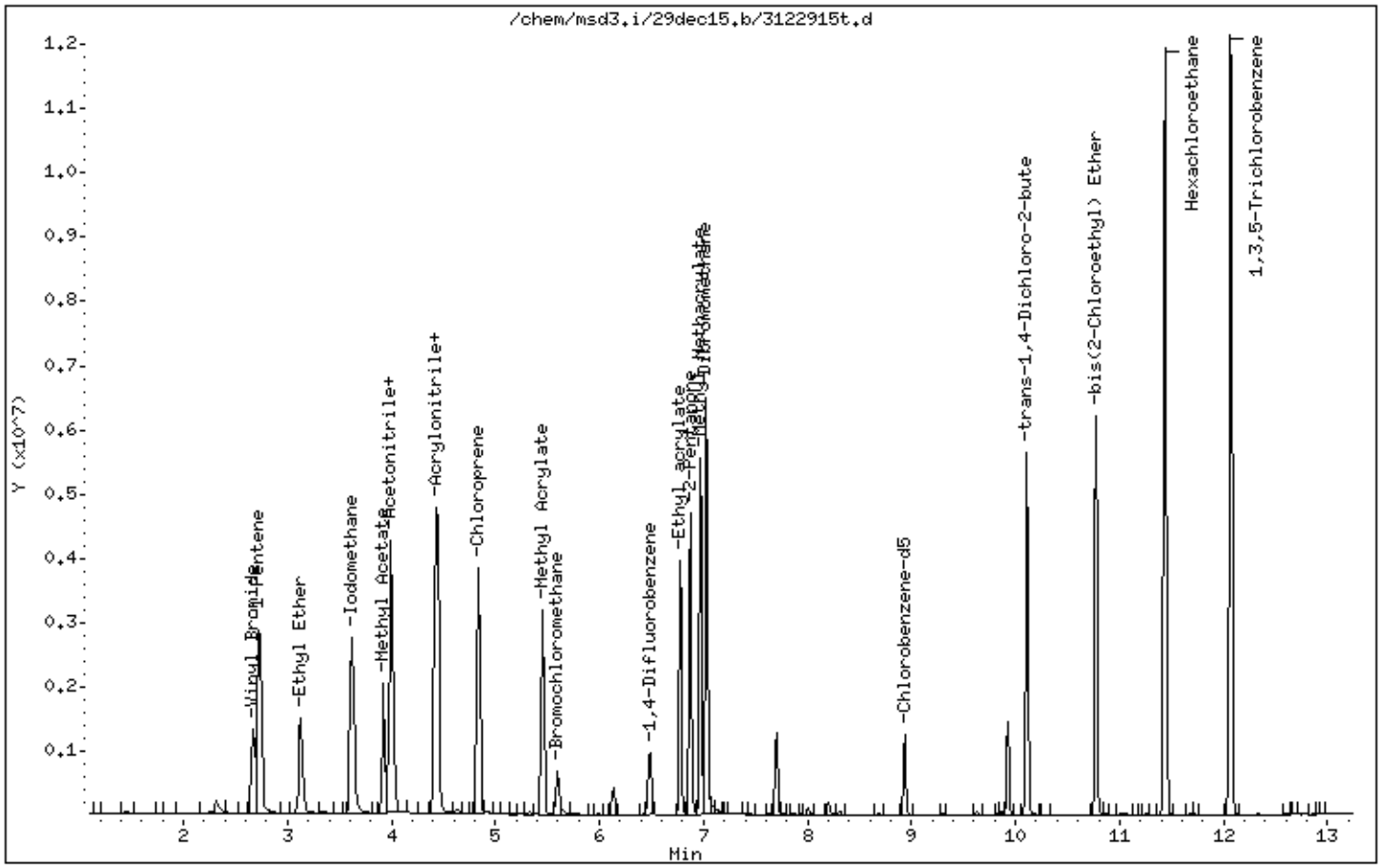
Instrument: msd3.i

Sample Info: 200ml 2759-151

Operator: gh

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics, Inc. 4Q 2015 TO14A/TO-15 QUAD Limit of Detections (LODs) Effective 01-01-16						
CAS #	Analyte	Molecular Weight (MW)	LOD (ppbv)	LOQ (ppbv)	LOD (ug/m3)	LOQ (ug/m3)
71-55-6	1,1,1-Trichloroethane	133.42	0.25	0.5	1.36421	2.72843
79-34-5	1,1,2,2-Tetrachloroethane	167.86	0.25	0.5	1.71636	3.43272
79-00-5	1,1,2-Trichloroethane	133.42	0.25	0.5	1.36421	2.72843
75-34-3	1,1-Dichloroethane	98.97	0.25	0.5	1.01196	2.02393
75-35-4	1,1-Dichloroethene	96.95	0.25	0.5	0.99131	1.98262
120-82-1	1,2,4-Trichlorobenzene	181.46	0.75	2	5.56626	14.84335
95-63-6	1,2,4-Trimethylbenzene	120.19	0.25	0.5	1.22894	2.45787
106-93-4	1,2-Dibromoethane (EDB)	187.88	0.25	0.5	1.92106	3.84213
95-50-1	1,2-Dichlorobenzene	147.01	0.25	0.5	1.50317	3.00634
107-06-2	1,2-Dichloroethane	98.96	0.25	0.5	1.01186	2.02372
78-87-5	1,2-Dichloropropane	112.99	0.25	0.5	1.15532	2.31063
108-67-8	1,3,5-Trimethylbenzene	120.19	0.25	0.5	1.22894	2.45787
106-99-0	1,3-Butadiene*	54.09	0.28357	0.5	0.62733	1.10613
541-73-1	1,3-Dichlorobenzene	147.01	0.25	0.5	1.50317	3.00634
106-46-7	1,4-Dichlorobenzene	147.01	0.25	0.5	1.50317	3.00634
123-91-1	1,4-Dioxane	88.11	0.75	2	2.70276	7.20736
540-84-1	2,2,4-Trimethylpentane	114.22	0.25	0.5	1.16789	2.33579
78-93-3	2-Butanone	72.11	0.75	2	2.21196	5.89857
591-78-6	2-Hexanone	100.16	0.75	2	3.07239	8.19305
67-63-0	2-Propanol	60.09	0.75	2	1.84325	4.91534
107-05-1	3-Chloropropene	76.53	0.75	2	2.34755	6.26012
622-96-8	4-Ethyltoluene	120.19	0.25	0.5	1.22894	2.45787
108-10-1	4-Methyl-2-pentanone	100.16	0.25	0.5	1.02413	2.04826
67-64-1	Acetone	58.08	0.75	5	1.7816	11.8773
100-44-7	alpha-Chlorotoluene	126.58	0.25	0.5	1.29427	2.58855
71-43-2	Benzene	78.11	0.25	0.5	0.79867	1.59734
75-27-4	Bromodichloromethane	163.83	0.25	0.5	1.67515	3.35031
75-25-2	Bromoform	252.77	0.25	0.5	2.58456	5.16912
74-83-9	Bromomethane	94.95	0.75	5	2.91258	19.41718
75-15-0	Carbon Disulfide	76.14	0.75	2	2.33558	6.22822
56-23-5	Carbon Tetrachloride	153.84	0.25	0.5	1.57301	3.14601
108-90-7	Chlorobenzene	112.56	0.25	0.5	1.15092	2.30184
75-00-3	Chloroethane	64.52	0.75	2	1.97914	5.27771
67-66-3	Chloroform	119.39	0.25	0.5	1.22076	2.44151
74-87-3	Chloromethane	50.49	0.75	5	1.54877	10.32515
156-59-2	cis-1,2-Dichloroethene	96.94	0.25	0.5	0.99121	1.98241
10061-01-5	cis-1,3-Dichloropropene	110.97	0.25	0.5	1.13466	2.26933
98-82-8	Cumene	120.19	0.25	0.5	1.22894	2.45787
110-82-7	Cyclohexane	84.16	0.25	0.5	0.86053	1.72106
124-48-1	Dibromochloromethane	208.28	0.25	0.5	2.12965	4.2593
64-17-5	Ethanol	46.07	0.75	2	1.41319	3.76851

100-41-4	Ethyl Benzene	106.16	0.25	0.5	1.08548	2.17096
75-69-4	Freon 11	137.38	0.25	0.5	1.4047	2.80941
76-13-1	Freon 113	187.39	0.25	0.5	1.91605	3.83211
76-14-2	Freon 114	170.93	0.25	0.5	1.74775	3.4955
75-71-8	Freon 12	120.92	0.25	0.5	1.2364	2.4728
142-82-5	Heptane	100.2	0.25	0.5	1.02454	2.04908
87-68-3	Hexachlorobutadiene	260.76	0.75	2	7.99877	21.33006
110-54-3	Hexane	86.17	0.25	0.5	0.88108	1.76217
108-38-3	m,p-Xylene	106.17	0.25	0.5	1.08558	2.17117
1634-04-4	Methyl tert-butyl ether	88.15	0.25	0.5	0.90133	1.80266
75-09-2	Methylene Chloride	84.94	0.75	5	2.60552	17.37014
91-20-3	Naphthalene	128.17	0.75	2	3.9316	10.48425
95-47-6	o-Xylene	106.17	0.25	0.5	1.08558	2.17117
103-65-1	Propylbenzene	120.19	0.25	0.5	1.22894	2.45787
115-07-1	Propylene	42.08	0.75	2	1.2908	3.44213
100-42-5	Styrene	104.14	0.25	0.5	1.06483	2.12965
127-18-4	Tetrachloroethene	165.85	0.25	0.5	1.69581	3.39162
109-99-9	Tetrahydrofuran	72.1	0.25	0.5	0.73722	1.47444
108-88-3	Toluene	92.13	0.25	0.5	0.94202	1.88405
156-60-5	trans-1,2-Dichloroethene	96.94	0.25	0.5	0.99121	1.98241
10061-02-6	trans-1,3-Dichloropropene	110.97	0.25	0.5	1.13466	2.26933
79-01-6	Trichloroethene	131.39	0.25	0.5	1.34346	2.68691
108-05-4	Vinyl Acetate	86.09	0.75	2	2.6408	7.04213
75-01-4	Vinyl Chloride	62.5	0.25	0.5	0.63906	1.27812

ppbv - part per billion by volume

Concentration (ug/m3) = Concentration (ppbv)*MW/24.45

Instrument ID - msd3.i file msd3.i/21dec15.b/3122112.d msd3.i/29dec15.b/3122925.d

*LOD was less then the MDL therefore was raised to equal the MDL value.

TO15 MDL (0.5ppbv)

MSD3
#2716-235 0.5ppbv (5.0ppbv)
exp. 6/4/15
Load volume: 20 ml

Report Date : 17-Apr-2015 21:48

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

MDL verification
#2716-235 0.25ppbv (5.0pp
Loaded at 10ml
File #3041724

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	3041705	3041706	3041707	3041708	3041709	3041710	3041711	3041712
INJ.DATE:	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015
INJ.TIME:	14:07	14:32	14:57	15:22	15:47	16:12	16:37	17:02

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (pptv)	ppbv(RL)
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
7 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
9 Propylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
11 Freon 12	✓ 538.62	✓ 548.04	✓ 547.11	✓ 534.09	✓ 567.64	✓ 558.35	✓ 663.15	✓ 563.52	✓ 565.07	✓ 41.31	✓ 123.85	0.5
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
15 Freon 114	✓ 553.28	✓ 517.11	✓ 521.70	✓ 527.51	✓ 517.26	✓ 508.95	✓ 625.02	✓ 509.75	✓ 535.07	✓ 38.96	✓ 116.79	0.5
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
17 Chloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Reviewer 1 _____ Date: 4/20/15
Reviewer 2 _____ Date: 4/21/15

$\bar{X} = 0.12$
$2\bar{X} = 0.24$

all 0.5ppbv compounds → Ratio of the mean recovered concentration and the

Report Date : 17-Apr-2015 21:48

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	~~ppbv~~ MDL	ppbv (Rx)
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
23 Butane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
25 Vinyl Chloride	535.70	538.44	510.22	549.29	549.65	489.91	599.57	529.27	537.76	32.11	96.28	0.5
26 1,3-Butadiene	552.17	841.81	673.85	623.00	540.93	614.36	598.98	664.70	638.73	94.59	283.57	0.5
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
29 Bromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
30 Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
31 Isopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
35 Freon 11	571.74	545.53	557.53	545.62	546.42	536.51	646.59	541.51	561.43	36.09	108.21	0.5
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (ppbv)	ppbv(RL)
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
42 Ethanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
43 1,2-Dichloro-1-fluoroe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
44 Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
46 Acrolein	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
48 Freon 123	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Freon 113	580.58	570.93	568.84	563.88	600.27	568.43	628.86	576.37	582.27	21.94	65.79	0.5
50 1,1-Dichloroethene	656.95	584.36	625.24	551.37	572.64	557.80	643.53	591.73	597.95	39.55	118.56	0.5
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
52 Acetone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
56 Carbon Disulfide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
57 2-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
58 3-Chloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
59 Cyclopentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	~~ppbv~~ MDL	ppbv (RL)
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
66 Methylene Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
71 tert-Butyl alcohol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
72 Methyl tert-butyl ethe	564.72	539.94	542.44	532.01	543.15	533.95	604.26	555.69	552.02	23.75	71.19	0.5
73 trans-1,2-Dichloroethe	551.02	552.00	556.38	521.35	541.41	510.03	610.09	544.38	548.33	29.66	88.92	0.5
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
78 Hexane	521.31	551.77	528.15	514.58	550.40	539.31	636.83	540.95	547.91	38.28	114.77	0.5
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
82 1,1-Dichloroethane	539.52	545.98	505.68	538.77	532.90	517.55	637.87	506.88	540.64	42.16	126.39	0.5
83 Isopropyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
84 1-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
86 Vinyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (ppbv)	ppbv(RL)
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
88 Ethyl-tert-butyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
90 2,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
91 cis-1,2-Dichloroethene	563.59	543.79	558.17	549.87	589.83	560.83	607.34	533.11	563.31	24.35	72.99	0.5
92 2-Butanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 98 Bromochloromethane	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00	
99 Tetrahydrofuran	520.94	482.13	494.65	522.92	532.28	493.16	594.38	485.47	515.74	36.91	110.66	0.5
100 Chloroform	558.42	549.26	538.19	532.45	533.23	539.93	665.90	518.08	554.43	46.59	139.69	0.5
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
102 Cyclohexane	565.39	558.32	594.02	549.50	559.79	564.71	656.87	547.75	574.54	36.18	108.47	0.5
103 1,1,1-Trichloroethane	592.82	563.61	562.69	557.66	572.42	551.50	655.10	573.45	578.66	33.32	99.88	0.5
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
106 Carbon Tetrachloride	569.12	536.06	531.38	558.34	541.35	520.09	649.02	523.69	553.63	41.98	125.86	0.5
107 1,1-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	ppbv MDL	ppbv(RL)
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
113 2,2,4-Trimethylpentane	499.10	485.74	521.34	502.15	508.25	480.22	565.31	487.12	506.15	27.39	82.12	0.5
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
115 Isobutanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
116 Benzene	563.64	545.53	559.29	534.15	562.49	548.18	663.53	553.97	566.35	40.48	121.35	0.5
$ 117 1,2-Dichloroethane-d4	23955.97	24175.61	23932.55	24266.52	24206.92	24212.69	23900.74	24185.57	24104.57	147.95	443.55	
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
119 tert-Amyl methyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
120 1,2-Dichloroethane	601.67	602.02	605.02	566.61	607.59	585.44	722.78	591.98	610.39	47.35	141.95	0.5
121 Heptane	590.91	587.92	581.93	549.42	601.56	542.92	695.39	561.57	588.95	47.77	143.21	0.5
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 123 1,4-Difluorobenzene	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00	
124 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
125 Trichloroethene	593.83	603.82	583.23	559.33	581.07	589.25	726.64	583.92	602.64	51.69	154.97	0.5
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
127 Methylcyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
128 Ethyl acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
131 2-Pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
132 1,2-Dichloropropane	578.92	590.84	548.11	551.48	575.45	565.01	684.63	548.39	580.36	44.94	134.74	0.5
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (ppbv)	ppbv(RL)
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
136 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
138 Bromodichloromethane	569.96	565.17	569.09	546.09	559.79	538.66	667.03	537.85	569.21	41.62	124.77	0.5
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
140 bis(chloromethyl) Ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
143 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
144 cis-1,3-Dichloropropen	536.03	494.85	503.17	513.38	520.50	501.31	628.65	500.09	524.75	44.06	132.09	0.5
145 4-Methyl-2-pentanone	560.28	549.68	529.66	509.45	553.51	532.13	578.27	522.87	541.98	22.41	67.19	0.5
$ 146 Toluene-d8	25309.47	25406.02	25149.95	25083.28	25089.74	25312.82	24892.04	25222.90	25183.28	164.13	492.06	
147 Toluene	540.87	558.56	566.12	519.77	539.19	562.96	694.29	542.44	565.52	54.20	162.49	0.5
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
150 trans-1,3-Dichloroprop	503.59	490.39	498.82	509.66	512.22	495.22	618.87	508.08	517.11	41.79	125.29	0.5
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
152 1-Chloro-2-Bromopropan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
155 1,1,2-Trichloroethane	542.53	578.02	574.66	527.13	541.51	521.86	703.51	554.94	568.02	58.34	174.91	0.5
156 Tetrachloroethene	582.47	562.63	568.86	556.12	589.58	590.40	740.35	575.08	595.69	59.73	179.06	0.5
157 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
158 2-Hexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	ppbv MDL	ppbv(RL)
159 Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
160 Dibromochloromethane	559.10	546.23	549.58	536.16	543.07	531.27	666.21	516.70	556.04	46.31	138.83	0.5
161 1,2-Dibromoethane (EDB	507.82	517.33	505.11	503.98	513.11	515.94	633.62	505.03	525.24	44.10	132.20	0.5
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 163 Chlorobenzene-d5	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00	
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
165 Chlorobenzene	541.03	516.42	537.71	502.87	532.33	516.93	657.89	526.35	541.44	48.70	146.00	0.5
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
167 Ethyl Benzene	525.50	537.74	526.51	516.40	534.83	520.58	645.68	533.73	542.62	42.28	126.74	0.5
168 1,1,1,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
169 m,p-Xylene	519.66	520.06	516.65	527.07	515.81	526.10	640.10	521.40	535.86	42.31	126.84	0.5
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
171 o-Xylene	530.29	526.98	533.99	507.45	522.45	505.70	638.33	528.44	536.71	42.36	126.99	0.5
172 Styrene	502.04	502.16	502.89	492.77	505.92	507.99	605.73	498.86	514.80	37.03	111.01	0.5
173 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
174 Bromoform	543.62	535.38	567.10	534.38	554.76	539.53	653.96	538.29	558.38	40.19	120.49	0.5
175 Cumene	540.21	547.27	539.73	510.54	532.66	511.06	631.16	527.52	542.52	38.22	114.60	0.5
176 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 177 4-Bromofluorobenzene	24643.91	24883.56	25105.24	24711.13	25011.35	24984.74	24557.07	24859.13	24844.52	191.94	575.42	
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
180 Bromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
181 1,1,2,2-Tetrachloroeth	532.02	538.53	527.77	523.45	550.27	542.36	626.32	545.94	548.33	32.80	98.34	0.5
182 Propylbenzene	541.27	534.57	520.59	513.42	542.61	523.85	620.53	520.30	539.64	34.34	102.95	0.5

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	ppbv MDL	ppbv(RL)
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
184 trans-1,4-Dichloro-2-b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
185 1,2,3-Trichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
187 Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
188 4-Ethyltoluene	558.64	518.85	520.96	511.23	548.42	529.63	634.06	517.79	542.45	48.45	121.28	0.5ppbv
189 2-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
190 1,3,5-Trimethylbenzene	601.06	582.42	554.75	531.08	554.58	537.96	611.23	531.53	563.08	31.46	94.31	0.5
191 4-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
195 tert-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
196 1,2,4-Trimethylbenzene	587.83	577.09	562.75	531.47	553.81	536.92	609.93	530.32	561.27	28.84	86.45	0.5
197 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
203 sec-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	ppbv (RL)
206 bis(2-Chloroethyl) Eth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
207 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
208 1,3-Dichlorobenzene	546.10	557.13	553.06	547.66	567.86	537.96	649.09	548.57	563.43	35.70	107.04	0.5
209 1,4-Dichlorobenzene	546.89	550.50	558.90	539.37	548.36	545.30	636.20	543.44	558.62	31.86	95.52	0.5
210 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
212 alpha-Chlorotoluene	482.22	501.31	477.64	503.29	479.86	481.56	569.11	487.33	497.79	30.41	91.17	0.5
213 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
214 1,2-Dichlorobenzene	555.22	554.19	569.37	534.94	551.07	530.83	636.03	560.14	561.47	32.66	97.91	0.5
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
216 4-Ethyl-1,2-dimethylbe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
220 1,2,4,5-tetramethylben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
221 1,2-Dibromo-3-chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
226 1,2,4-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
227 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
228 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
235 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
236 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 238 Chlorobutane (Total)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
241 Total Volatile Hydroca	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
242 TPH reference to Hexan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
243 TPH reference to Hepta	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
244 TPH reference to Gasol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
245 TPH reference MinералS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
246 TPH reference to Stodd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
247 TVOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
248 TVOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
249 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
250 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
251 NMOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
252 NMOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
253 NMOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
255 C4 - C5 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
256 C5 - C6 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
257 C6 - C7 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
258 C7 - C8 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
259 C8 - C9 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
260 C9 - C10 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
261 C10+ Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
262 C5 - C6 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
263 C6-C8 Aliphatic ref He	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
264 C8-C10 Aliphatic ref D	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
265 C10-C12 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
267 C8-C10 Aromatic ref 1,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
269 C10-C12 Aromatic 1,2,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
270 C10-C12 Aromatic Naph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

TO15MDL-MSD3
(2.0ppbv) #2716-235 2.0ppbv(5.0
exp.614115
Load volume 80m
Page 1

Report Date : 17-Apr-2015 22:18

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

MDL verification
#2716-235 0.4ppbv (5.0pp
exp.614115 Load volume: 1L
file#3041725

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	3041713	3041714	3041715	3041716	3041717	3041718	3041719	3041720
INJ.DATE:	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015	17-APR-2015
INJ.TIME:	17:27	17:53	18:18	18:43	19:09	19:34	19:59	20:25

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL (pptv)	ppbv (RL)
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
7 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
9 Propylene	1990.95	2039.18	2015.56	1989.93	2065.83	1994.59	1991.39	2015.27	2012.84	27.55	82.59	2.0
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
11 Freon 12	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
15 Freon 114	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
17 Chloromethane	2396.77	2417.28	2212.32	2392.58	2383.09	2472.71	2423.49	2401.88	2387.52	76.04	227.95	5.0

Reviewer 1 [signature] Date: 4/20/15
Reviewer 2 [signature] Date: 4/21/15

$\bar{x}$ 0.19 ppbv
$2\bar{x}$ = 0.37

See narrative → Ratio of the mean recovered concentration and

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

ppbv ppbv(RL)

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
23 Butane	2419.34	2474.99	2283.50	2539.99	2407.42	2478.04	2450.04	2252.52	2413.23	98.68	295.85	2.0
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
25 Vinyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
26 1,3-Butadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
29 Bromomethane	2158.71	2160.70	2041.11	2002.74	2090.70	2075.68	2190.69	2067.93	2098.53	65.44	196.18	5.0
30 Chloroethane	2020.61	2295.56	2138.98	2159.85	2145.77	2132.96	2195.47	2121.79	2151.37	76.81	230.29	2.0
31 Isopentane	2056.24	2096.89	1971.65	2028.87	2057.17	1964.28	2009.65	2030.05	2026.85	44.66	133.89	2.0
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
35 Freon 11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	~~ppbv~~ MDL	ppbv(RL)
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
42 Ethanol	1961.62	1977.61	2178.60	2459.37	2526.09	2217.50	1958.51	2423.92	2212.90	235.37	705.62	2.0
43 1,2-Dichloro-1-fluoroe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
44 Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
46 Acrolein	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
48 Freon 123	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Freon 113	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
50 1,1-Dichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
52 Acetone	2111.95	2195.70	2093.91	2112.42	2179.38	2086.04	2122.72	2182.85	2135.62	43.46	130.28	5.0
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
56 Carbon Disulfide	2065.89	2094.79	2061.58	2045.64	2088.17	2039.55	2118.13	2053.02	2070.85	27.13	81.33	2.0
57 2-Propanol	1936.41	2047.91	1912.51	1948.18	2043.87	2030.53	1979.89	2003.99	1987.91	51.80	155.31	2.0
58 3-Chloropropene	1962.81	1981.49	2008.77	1966.90	2073.55	1899.94	1970.99	2022.97	1985.93	50.86	152.47	2.0
59 Cyclopentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	~~ppb~~ MDL	ppbv
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
66 Methylene Chloride	2003.17	2128.08	1996.23	2139.74	2145.73	1971.65	2103.72	2131.64	2077.49	73.72	221.01	2.0
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
71 tert-Butyl alcohol	1959.05	1999.63	1911.54	1967.31	1960.46	1934.13	2005.89	1957.17	1961.90	31.00	92.95	2.0
72 Methyl tert-butyl ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
73 trans-1,2-Dichloroethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
78 Hexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
82 1,1-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
83 Isopropyl ether	1986.59	1928.23	1924.80	1969.89	1907.94	1856.53	1956.44	1906.54	1929.62	41.33	123.90	2.0
84 1-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
86 Vinyl Acetate	2111.49	2064.14	1935.77	2003.24	1980.58	1962.72	2059.59	1981.64	2012.40	59.89	179.54	2.0

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	ppbv MDL	ppbv (RL)
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
88 Ethyl-tert-butyl ether	1912.12	1953.44	1903.75	1899.99	1926.73	1888.49	1941.61	1925.25	1918.92	21.94	65.76	2.0
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
90 2,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
91 cis-1,2-Dichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
92 2-Butanone	1927.95	2045.82	1853.92	1950.14	1926.48	1908.82	1959.59	1927.36	1937.51	54.12	162.26	2.0
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 98 Bromochloromethane	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00	
99 Tetrahydrofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
100 Chloroform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
102 Cyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
103 1,1,1-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
106 Carbon Tetrachloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
107 1,1-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	ppbv	ppbv(RL)
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
113 2,2,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
115 Isobutanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
116 Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
$ 117 1,2-Dichloroethane-d4	24224.07	24411.01	23926.98	24369.05	24462.58	23950.24	24818.67	24541.44	24338.00	299.17	896.91	4/16/15 2.0	
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
119 tert-Amyl methyl ether	1991.17	2017.55	1966.74	1963.70	2058.91	1937.13	2049.09	2050.88	2004.39	46.41	139.14	2.0	
120 1,2-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
121 Heptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
* 123 1,4-Difluorobenzene	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00		
124 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
125 Trichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
127 Methylcyclohexane	1724.91	1762.32	1868.21	1813.61	1821.18	1744.27	2305.06	2302.96	1917.81	242.74	727.74	2.0	
128 Ethyl acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
131 2-Pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
132 1,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++		

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
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Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	~~ppbv~~ MDL	ppbv
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
136 1,4-Dioxane	1954.33	2048.31	1995.45	2003.84	2041.22	1893.50	1987.43	2045.71	1996.22	52.96	158.76	2.0
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
138 Bromodichloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
140 bis(chloromethyl) Ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
143 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
144 cis-1,3-Dichloropropen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
145 4-Methyl-2-pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 146 Toluene-d8	24785.20	25100.64	24805.36	24833.94	24944.93	24257.87	24791.15	25198.86	24839.74	281.13	842.82	
147 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
150 trans-1,3-Dichloroprop	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
152 1-Chloro-2-Bromopropan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
155 1,1,2-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
156 Tetrachloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
157 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
158 2-Hexanone	1847.95	1906.74	1860.16	1849.71	1823.65	1872.58	1841.06	1849.54	1856.42	24.73	74.14	2.0

Eurofins Air Toxics Inc.
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Method File: /chem/msd3.i/17apr15.b/315q0416a.m
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Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
159 Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
160 Dibromochloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
161 1,2-Dibromoethane (EDB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
* 163 Chlorobenzene-d5	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
165 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
167 Ethyl Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
168 1,1,1,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
169 m,p-Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
171 o-Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
172 Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
173 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
174 Bromoform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
175 Cumene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
176 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 177 4-Bromofluorobenzene	25233.10	24772.13	24880.75	24751.84	24993.60	25083.73	25063.54	25033.68	24976.55	164.70	493.78
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
180 Bromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
181 1,1,2,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
182 Propylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
184 trans-1,4-Dichloro-2-b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
185 1,2,3-Trichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
187 Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
188 4-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
189 2-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
190 1,3,5-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
191 4-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
195 tert-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
196 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
197 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
203 sec-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

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Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

ppbv ppbv (RL)

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
206 bis(2-Chloroethyl) Eth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
207 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
208 1,3-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
209 1,4-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
210 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
212 alpha-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
213 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
214 1,2-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
216 4-Ethyl-1,2-dimethylbe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
220 1,2,4,5-tetramethylben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
221 1,2-Dibromo-3-chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
226 1,2,4-Trichlorobenzene	2451.15	2452.30	2399.17	2384.47	2419.24	2454.26	2418.67	2401.42	2422.58	27.20	81.54	2.0
227 Hexachlorobutadiene	2485.53	2488.78	2479.17	2459.51	2448.17	2499.50	2433.86	2439.60	2466.76	24.73	74.14	2.0
228 Naphthalene	232.01	235.84	229.49	232.82	232.72	242.75	233.19	235.41	234.28	3.95	11.84	1.0
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

	Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
	230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	235 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	236 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M	238 Chlorobutane (Total)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	241 Total Volatile Hydroca	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	242 TPH reference to Hexan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	243 TPH reference to Hepta	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	244 TPH reference to Gasol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	245 TPH reference Minerals	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	246 TPH reference to Stodd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	247 TVOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	248 TVOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	249 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	250 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	251 NMOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	252 NMOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	253 NMOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	255 C4 - C5 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	256 C5 - C6 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msd3.i/17apr15.b/315q0416a.m
Batch File: /chem/msd3.i/17apr15.b
Inst ID: msd3.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
257 C6 - C7 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
258 C7 - C8 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
259 C8 - C9 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
260 C9 - C10 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
261 C10+ Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
262 C5 - C6 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
263 C6-C8 Aliphatic ref He	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
264 C8-C10 Aliphatic ref D	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
265 C10-C12 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
267 C8-C10 Aromatic ref 1,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
269 C10-C12 Aromatic 1,2,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
270 C10-C12 Aromatic Naph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	CCV		
Lab ID:	1602253A-06A	**Date/Time Analyzed:**	2/17/16 11:28 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd3.i / 3021702a

Compound	CAS#	%Recovery
Benzene	71-43-2	98
Ethyl Benzene	100-41-4	100
m,p-Xylene	108-38-3	103
o-Xylene	95-47-6	101
Toluene	108-88-3	98

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	101
4-Bromofluorobenzene	460-00-4	74-122	103
Toluene-d8	2037-26-5	82-119	102

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd3.i Injection Date: 17-FEB-2016 11:28
Lab File ID: 3021702a.d Init. Cal. Date(s): 29-DEC-2015 01-FEB-2016
Analysis Type: AIR Init. Cal. Times: 19:33 19:36
Lab Sample ID: CCV Quant Type: ISTD
Method: /var/chem/msd3.i/17feb16.b/316q0201a.m

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 117 1,2-Dichloroethane-d4	1.28662	1.30052	0.010	-1.08027	30.00000	Averaged
$ 146 Toluene-d8	0.90627	0.92216	0.010	-1.75382	30.00000	Averaged
$ 177 4-Bromofluorobenzene	0.63188	0.65005	0.010	-2.87534	30.00000	Averaged
9 Propylene	0.94166	0.96720	0.010	-2.71190	40.00000	Averaged
11 Freon 12	2.76838	2.83522	0.010	-2.41438	30.00000	Averaged
35 Freon 11	3.11996	3.13377	0.010	-0.44275	30.00000	Averaged
15 Freon 114	2.30020	2.28201	0.010	0.79072	30.00000	Averaged
17 Chloromethane	1.13637	1.17343	0.010	-3.26131	30.00000	Averaged
23 Butane	0.24696	0.23850	0.010	3.42537	40.00000	Averaged
25 Vinyl Chloride	1.12856	1.15894	0.010	-2.69193	30.00000	Averaged
26 1,3-Butadiene	0.99965	0.93281	0.010	6.68585	30.00000	Averaged
29 Bromomethane	0.95707	0.98586	0.010	-3.00887	30.00000	Averaged
30 Chloroethane	0.58440	0.59551	0.010	-1.90246	30.00000	Averaged
31 Isopentane	1.52396	1.54578	0.010	-1.43189	40.00000	Averaged
42 Ethanol	0.50551	0.51633	0.010	-2.13890	30.00000	Averaged
49 Freon 113	2.33916	2.25921	0.010	3.41804	30.00000	Averaged
50 1,1-Dichloroethene	1.14922	1.18182	0.010	-2.83670	30.00000	Averaged
52 Acetone	0.58477	0.59056	0.010	-0.98955	30.00000	Averaged
56 Carbon Disulfide	3.04912	3.08197	0.010	-1.07725	30.00000	Averaged
57 2-Propanol	2.20146	2.35693	0.010	-7.06197	30.00000	Averaged
58 3-Chloropropene	0.49102	0.48993	0.010	0.22100	30.00000	Averaged
66 Methylene Chloride	1.57136	1.59070	0.010	-1.23020	30.00000	Averaged
72 Methyl tert-butyl ether	3.06996	3.17173	0.010	-3.31497	30.00000	Averaged
73 trans-1,2-Dichloroethene	0.73595	0.76407	0.010	-3.82009	30.00000	Averaged
78 Hexane	2.00093	2.02923	0.010	-1.41473	30.00000	Averaged
83 Isopropyl ether	4.27538	4.27984	0.010	-0.10437	40.00000	Averaged
82 1,1-Dichloroethane	2.10212	2.20005	0.010	-4.65859	30.00000	Averaged
86 Vinyl Acetate	0.27949	0.27299	0.010	2.32842	40.00000	Averaged
91 cis-1,2-Dichloroethene	0.75137	0.75517	0.010	-0.50678	30.00000	Averaged
92 2-Butanone	0.51861	0.52154	0.010	-0.56478	30.00000	Averaged
99 Tetrahydrofuran	1.40564	1.39488	0.010	0.76565	30.00000	Averaged
100 Chloroform	2.24657	2.28728	0.010	-1.81208	30.00000	Averaged
102 Cyclohexane	1.42758	1.42594	0.010	0.11482	30.00000	Averaged
103 1,1,1-Trichloroethane	2.59777	2.60870	0.010	-0.42088	30.00000	Averaged
106 Carbon Tetrachloride	2.82366	2.78860	0.010	1.24180	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msd3.i Injection Date: 17-FEB-2016 11:28
Lab File ID: 3021702a.d Init. Cal. Date(s): 29-DEC-2015 01-FEB-2016
Analysis Type: AIR Init. Cal. Times: 19:33 19:36
Lab Sample ID: CCV Quant Type: ISTD
Method: /var/chem/msd3.i/17feb16.b/316q0201a.m

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
113 2,2,4-Trimethylpentane	6.29867	6.29110	0.010	0.12012	30.00000	Averaged
116 Benzene	0.83552	0.82177	0.010	1.64518	30.00000	Averaged
120 1,2-Dichloroethane	0.43469	0.43324	0.010	0.33369	30.00000	Averaged
121 Heptane	0.30897	0.30044	0.010	2.75792	30.00000	Averaged
125 Trichloroethene	0.37993	0.37835	0.010	0.41721	30.00000	Averaged
132 1,2-Dichloropropane	0.33970	0.32878	0.010	3.21497	30.00000	Averaged
136 1,4-Dioxane	0.20124	0.19908	0.010	1.07478	30.00000	Averaged
138 Bromodichloromethane	0.60768	0.60612	0.010	0.25695	30.00000	Averaged
144 cis-1,3-Dichloropropene	0.47800	0.48562	0.010	-1.59535	30.00000	Averaged
145 4-Methyl-2-pentanone	0.27644	0.26784	0.010	3.11270	30.00000	Averaged
147 Toluene	1.03536	1.01162	0.010	2.29278	30.00000	Averaged
150 trans-1,3-Dichloropropene	0.53683	0.56814	0.010	-5.83078	30.00000	Averaged
155 1,1,2-Trichloroethane	0.45696	0.45440	0.010	0.56072	30.00000	Averaged
156 Tetrachloroethene	0.67859	0.68581	0.010	-1.06370	30.00000	Averaged
158 2-Hexanone	0.44641	0.45416	0.010	-1.73711	30.00000	Averaged
160 Dibromochloromethane	0.89323	0.92645	0.010	-3.71910	30.00000	Averaged
161 1,2-Dibromoethane (EDB)	0.71676	0.72954	0.010	-1.78237	30.00000	Averaged
165 Chlorobenzene	1.06107	1.06729	0.010	-0.58651	30.00000	Averaged
167 Ethyl Benzene	0.54620	0.54731	0.010	-0.20277	30.00000	Averaged
169 m,p-Xylene	0.67599	0.69700	0.010	-3.10764	30.00000	Averaged
171 o-Xylene	0.63520	0.64380	0.010	-1.35301	30.00000	Averaged
172 Styrene	0.98813	1.02160	0.010	-3.38761	30.00000	Averaged
174 Bromoform	0.87527	0.93651	0.010	-6.99669	30.00000	Averaged
175 Cumene	1.99571	2.07206	0.010	-3.82556	30.00000	Averaged
181 1,1,2,2-Tetrachloroethane	0.94328	0.95718	0.010	-1.47351	30.00000	Averaged
182 Propylbenzene	2.25385	2.29162	0.010	-1.67595	30.00000	Averaged
188 4-Ethyltoluene	0.63240	0.64680	0.010	-2.27835	30.00000	Averaged
190 1,3,5-Trimethylbenzene	0.84936	0.87895	0.010	-3.48301	30.00000	Averaged
196 1,2,4-Trimethylbenzene	1.62049	1.67292	0.010	-3.23552	30.00000	Averaged
208 1,3-Dichlorobenzene	1.20580	1.21187	0.010	-0.50334	30.00000	Averaged
209 1,4-Dichlorobenzene	1.23005	1.22069	0.010	0.76129	30.00000	Averaged
212 alpha-Chlorotoluene	1.41109	1.48004	0.010	-4.88615	30.00000	Averaged
214 1,2-Dichlorobenzene	1.17286	1.15991	0.010	1.10462	30.00000	Averaged
226 1,2,4-Trichlorobenzene	1.00841	1.04127	0.010	-3.25795	30.00000	Averaged
227 Hexachlorobutadiene	0.80750	0.83394	0.010	-3.27456	30.00000	Averaged
228 Naphthalene	2.38440	2.09866	0.010	11.98405	40.00000	Averaged

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021702a.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 17-FEB-2016 11:28
Operator : js Inst ID: msd3.i
Smp Info : 50ml #2759-210
Misc Info : 50ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 13 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Cont062616.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	175853	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	133145			49.26- 109.26	75.71
5.592	5.592 (1.000)	49	232955			111.17- 171.17	132.47
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	669296	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	94762			0.00- 45.05	14.16
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	524176	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	265254			22.62- 82.62	50.60
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	228701	25.0000	25.270	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	123251			21.51- 81.51	53.89

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	617198	25.0000	25.438	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	65101			0.00- 41.20	10.55
7.695	7.695 (1.189)	100	398588			34.69- 94.69	64.58
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	340741	25.0000	25.719	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	370257			85.32- 145.32	108.66
9.916	9.916 (1.110)	176	338386			65.83- 125.83	99.31
9 Propylene					CAS #: 115-07-1		
1.577	1.577 (0.282)	41	340169	50.0000	51.356	80.00- 120.00	100.00
1.577	1.577 (0.282)	42	228699			36.91- 96.91	67.23
1.577	1.577 (0.282)	39	252937			45.64- 105.64	74.36
11 Freon 12					CAS #: 75-71-8		
1.619	1.619 (0.289)	85	997165	50.0000	51.207	80.00- 120.00	100.00
1.619	1.619 (0.289)	87	333221			3.93- 63.93	33.42
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	1102167	50.0000	50.221	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	709840			34.90- 94.90	64.40
15 Freon 114					CAS #: 76-14-2		
1.744	1.744 (0.312)	135	802597	50.0000	49.605	80.00- 120.00	100.00
1.744	1.744 (0.312)	137	259839			2.42- 62.42	32.37
17 Chloromethane					CAS #: 74-87-3		
1.828	1.828 (0.327)	50	412702	50.0000	51.631	80.00- 120.00	100.00
1.828	1.828 (0.327)	52	139934			3.71- 63.71	33.91
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	83882	50.0000	48.287	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	676598			788.54- 848.54	806.61
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	407606	50.0000	51.346	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	121880			1.59- 61.59	29.90
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	328076	50.0000	46.657	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	350938			81.92- 141.92	106.97
29 Bromomethane					CAS #: 74-83-9		
2.346	2.346 (0.420)	94	346734	50.0000	51.504	80.00- 120.00	100.00
2.346	2.346 (0.420)	96	337146			69.03- 129.03	97.23

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	209446	50.0000	50.951	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	61360			1.03- 61.03	29.30
2.458	2.458 (0.440)	49	66276			3.62- 63.62	31.64
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	543661	50.0000	50.716	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	348449			34.70- 94.70	64.09
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	181595	50.0000	51.069	80.00- 120.00	100.00
3.074	3.074 (0.550)	43	38962			0.00- 51.00	21.46
3.074	3.074 (0.550)	46	68818			9.12- 69.12	37.90
49 Freon 113					CAS #: 76-13-1		
3.382	3.382 (0.605)	151	794577	50.0000	48.291	80.00- 120.00	100.00
3.382	3.382 (0.605)	153	504619			33.55- 93.55	63.51
3.382	3.382 (0.605)	101	896117			84.75- 144.75	112.78
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.410	3.410 (0.610)	96	415652	50.0000	51.418	80.00- 120.00	100.00
3.410	3.410 (0.610)	98	264284			33.50- 93.50	63.58
3.410	3.410 (0.610)	61	727712			146.74- 206.74	175.08
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	207703	50.0000	50.495	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	730374			321.44- 381.44	351.64
56 Carbon Disulfide					CAS #: 75-15-0		
3.647	3.647 (0.652)	76	1083947	50.0000	50.539	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	828946	50.0000	53.531	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	169483			0.00- 48.95	20.45
3.731	3.731 (0.667)	59	31652			0.00- 33.87	3.82
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	172312	50.0000	49.889	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	611086			320.29- 380.29	354.64
66 Methylene Chloride					CAS #: 75-09-2		
4.067	4.067 (0.727)	49	559457	50.0000	50.615	80.00- 120.00	100.00
4.067	4.067 (0.727)	84	347621			33.50- 93.50	62.14
4.067	4.067 (0.727)	51	173239			0.00- 59.33	30.97
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	1115516	50.0000	51.657	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether (continued)							
4.277	4.277 (0.765)	57	297248			0.00- 56.71	26.65
4.277	4.277 (0.765)	41	306857			0.00- 56.93	27.51
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	268727	50.0000	51.910	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	646391			217.55- 277.55	240.54
4.305	4.305 (0.770)	96	419530			130.08- 190.08	156.12
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	713694	50.0000	50.707	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	473469			36.12- 96.12	66.34
4.501	4.501 (0.805)	86	95001			0.00- 43.41	13.31
83 Isopropyl ether					CAS #: 108-20-3		
4.767	4.767 (0.852)	45	1505246	50.0000	50.052	80.00- 120.00	100.00
4.767	4.767 (0.852)	87	354998			0.00- 53.38	23.58
4.767	4.767 (0.852)	59	159664			0.00- 40.80	10.61
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.781	4.781 (0.855)	63	773771	50.0000	52.329	80.00- 120.00	100.00
4.781	4.781 (0.855)	65	238526			0.73- 60.73	30.83
86 Vinyl Acetate					CAS #: 108-05-4		
4.823	4.823 (0.862)	86	96011	50.0000	48.836	80.00- 120.00	100.00
4.823	4.823 (0.862)	43	1365670			1276.40-1336.40	1422.41
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	265599	50.0000	50.253	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	430010			129.76- 189.76	161.90
5.368	5.368 (0.960)	61	598757			191.29- 251.29	225.44
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	183430	50.0000	50.282	80.00- 120.00	100.00
5.382	5.382 (0.962)	43	890077			462.67- 522.67	485.24
5.396	5.396 (0.965)	57	69147			6.29- 66.29	37.70
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	490586	50.0000	49.617	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	161164			2.43- 62.43	32.85
5.592	5.592 (1.000)	72	169087			4.48- 64.48	34.47
100 Chloroform					CAS #: 67-66-3		
5.648	5.648 (1.010)	83	804449	50.0000	50.906	80.00- 120.00	100.00
5.648	5.648 (1.010)	85	518737			33.93- 93.93	64.48

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	501511	50.0000	49.942	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	689645			105.44- 165.44	137.51
5.760	5.760 (1.030)	41	406627			51.19- 111.19	81.08
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	917497	50.0000	50.210	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	580501			34.10- 94.10	63.27
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.886	5.886 (1.053)	119	980767	50.0000	49.379	80.00- 120.00	100.00
5.886	5.886 (1.053)	117	1020981			74.78- 134.78	104.10
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	2212619	50.0000	49.940	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	689547			2.10- 62.10	31.16
6.082	6.082 (1.088)	41	638095			0.00- 57.58	28.84
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	1100019	50.0000	49.177	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	251237			0.00- 52.66	22.84
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	579925	50.0000	49.833	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	188151			1.31- 61.31	32.44
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	402173	50.0000	48.621	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	826558			178.18- 238.18	205.52
6.250	6.250 (0.965)	57	437457			89.69- 149.69	108.77
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	506450	50.0000	49.791	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	579139			81.77- 141.77	114.35
6.678	6.678 (1.032)	97	337986			36.55- 96.55	66.74
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.914	6.914 (1.068)	63	440099	50.0000	48.392	80.00- 120.00	100.00
6.914	6.914 (1.068)	62	300476			39.53- 99.53	68.27
6.914	6.914 (1.068)	41	286387			36.04- 96.04	65.07
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	266489	50.0000	49.463	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	196350			46.60- 106.60	73.68
7.008	7.008 (1.082)	57	67229			0.00- 55.93	25.23

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	811352	50.0000	49.872	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	521977			34.60- 94.60	64.33
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	650051	50.0000	50.798	80.00- 120.00	100.00
7.516	7.516 (1.161)	77	203857			1.35- 61.35	31.36
7.516	7.516 (1.161)	39	435373			38.26- 98.26	66.98
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.624	7.624 (1.178)	58	358528	50.0000	48.444	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	1000771			250.18- 310.18	279.13
7.624	7.624 (1.178)	85	144329			10.61- 70.61	40.26
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.198)	91	1354144	50.0000	48.854	80.00- 120.00	100.00
7.753	7.753 (1.198)	92	773925			28.22- 88.22	57.15
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	595607	50.0000	52.915	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	188042			1.86- 61.86	31.57
7.996	7.996 (0.895)	39	372899			34.12- 94.12	62.61
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	476371	50.0000	49.720	80.00- 120.00	100.00
8.154	8.154 (0.913)	99	298703			32.39- 92.39	62.70
8.154	8.154 (0.913)	83	392137			53.64- 113.64	82.32
156 Tetrachloroethene					CAS #: 127-18-4		
8.190	8.190 (0.917)	166	718971	50.0000	50.532	80.00- 120.00	100.00
8.190	8.190 (0.917)	129	552219			45.19- 105.19	76.81
8.190	8.190 (0.917)	131	536630			42.71- 102.71	74.64
158 2-Hexanone					CAS #: 591-78-6		
8.318	8.318 (0.931)	58	476123	50.0000	50.868	80.00- 120.00	100.00
8.311	8.311 (0.930)	43	964090			171.66- 231.66	202.49
8.318	8.318 (0.931)	100	93980			0.00- 49.22	19.74
160 Dibromochloromethane					CAS #: 124-48-1		
8.469	8.469 (0.948)	129	971241	50.0000	51.860	80.00- 120.00	100.00
8.462	8.462 (0.947)	127	747705			47.90- 107.90	76.98
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.583	8.583 (0.961)	107	764814	50.0000	50.891	80.00- 120.00	100.00
8.583	8.583 (0.961)	109	724193			64.35- 124.35	94.69

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	1118896	50.0000	50.293	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	370566			2.67- 62.67	33.12
8.956	8.956 (1.002)	77	571365			25.12- 85.12	51.07
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	573772	50.0000	50.101	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	1729832			269.16- 329.16	301.48
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	730697	50.0000	51.554	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	1390069			163.98- 223.98	190.24
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	674924	50.0000	50.676	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	1374813			172.26- 232.26	203.70
172 Styrene					CAS #: 100-42-5		
9.465	9.465 (1.059)	104	1070997	50.0000	51.694	80.00- 120.00	100.00
9.465	9.465 (1.059)	78	530928			19.84- 79.84	49.57
174 Bromoform					CAS #: 75-25-2		
9.665	9.665 (1.082)	173	981791	50.0000	53.498	80.00- 120.00	100.00
9.665	9.665 (1.082)	171	491426			21.28- 81.28	50.05
175 Cumene					CAS #: 98-82-8		
9.730	9.730 (1.089)	105	2172247	50.0000	51.913	80.00- 120.00	100.00
9.730	9.730 (1.089)	120	586841			0.00- 57.41	27.02
9.730	9.730 (1.089)	51	225485			0.00- 40.59	10.38
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.045	10.045 (1.124)	83	1003462	50.0000	50.737	80.00- 120.00	100.00
10.045	10.045 (1.124)	85	645033			34.81- 94.81	64.28
182 Propylbenzene					CAS #: 103-65-1		
10.073	10.073 (1.127)	91	2402429	50.0000	50.838	80.00- 120.00	100.00
10.073	10.073 (1.127)	120	603634			0.00- 54.95	25.13
10.073	10.073 (1.127)	105	89306			0.00- 33.79	3.72
188 4-Ethyltoluene					CAS #: 622-96-8		
10.166	10.166 (1.138)	120	678079	50.0000	51.139	80.00- 120.00	100.00
10.166	10.166 (1.138)	105	2166098			285.50- 345.50	319.45
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.217	10.217 (1.143)	120	921444	50.0000	51.742	80.00- 120.00	100.00
10.217	10.217 (1.143)	105	1843830			172.09- 232.09	200.10

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  196 1,2,4-Trimethylbenzene                          CAS #: 95-63-6
 10.546  10.546 (1.180)   105   1753805 50.0000   51.618  80.00- 120.00   100.00
 10.546  10.546 (1.180)   120    824968                   16.48-  76.48    47.04
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                             CAS #: 541-73-1
 10.833  10.833 (1.212)   146   1270463 50.0000   50.252  80.00- 120.00   100.00
 10.840  10.840 (1.213)   148    813956                   33.89-  93.89    64.07
 10.833  10.833 (1.212)   111    483187                    9.29-  69.29    38.03
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                             CAS #: 106-46-7
 10.919  10.919 (1.222)   146   1279713 50.0000   49.619  80.00- 120.00   100.00
 10.919  10.919 (1.222)   148    823012                   33.91-  93.91    64.31
 10.919  10.919 (1.222)   111    468746                    7.27-  67.27    36.63
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                             CAS #: 100-44-7
 11.033  11.033 (1.235)    91   1551605 50.0000   52.443  80.00- 120.00   100.00
 11.033  11.033 (1.235)   126    394849                    0.00-  53.77    25.45
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                             CAS #: 95-50-1
 11.248  11.248 (1.259)   146   1215989 50.0000   49.448  80.00- 120.00   100.00
 11.248  11.248 (1.259)   148    776837                   33.23-  93.23    63.89
 11.248  11.248 (1.259)   111    477337                   10.34-  70.34    39.26
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                          CAS #: 120-82-1
 12.674  12.674 (1.419)   180   1091615 50.0000   51.629  80.00- 120.00   100.00
 12.674  12.674 (1.419)   182   1048489                   65.44- 125.44    96.05
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                             CAS #: 87-68-3
 12.767  12.767 (1.429)   225    874267 50.0000   51.637  80.00- 120.00   100.00
 12.767  12.767 (1.429)   223    549871                   33.39-  93.39    62.90
-------------------------------------------------------------------------------
  228 Naphthalene                                     CAS #: 91-20-3
 12.953  12.953 (1.450)   128    220013 5.00000    4.401  80.00- 120.00   100.00
 12.953  12.953 (1.450)   127     29460                    0.00-  43.01    13.39
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Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021702a.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 17-FEB-2016
Calibration Time: 11:28
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	175853	0.00
123 1,4-Difluorobenze	669296	401578	937014	669296	0.00
163 Chlorobenzene-d5	524176	314506	733846	524176	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/17feb16.b/3021702a.d

Date : 17-FEB-2016 11:28

Client ID: CCV

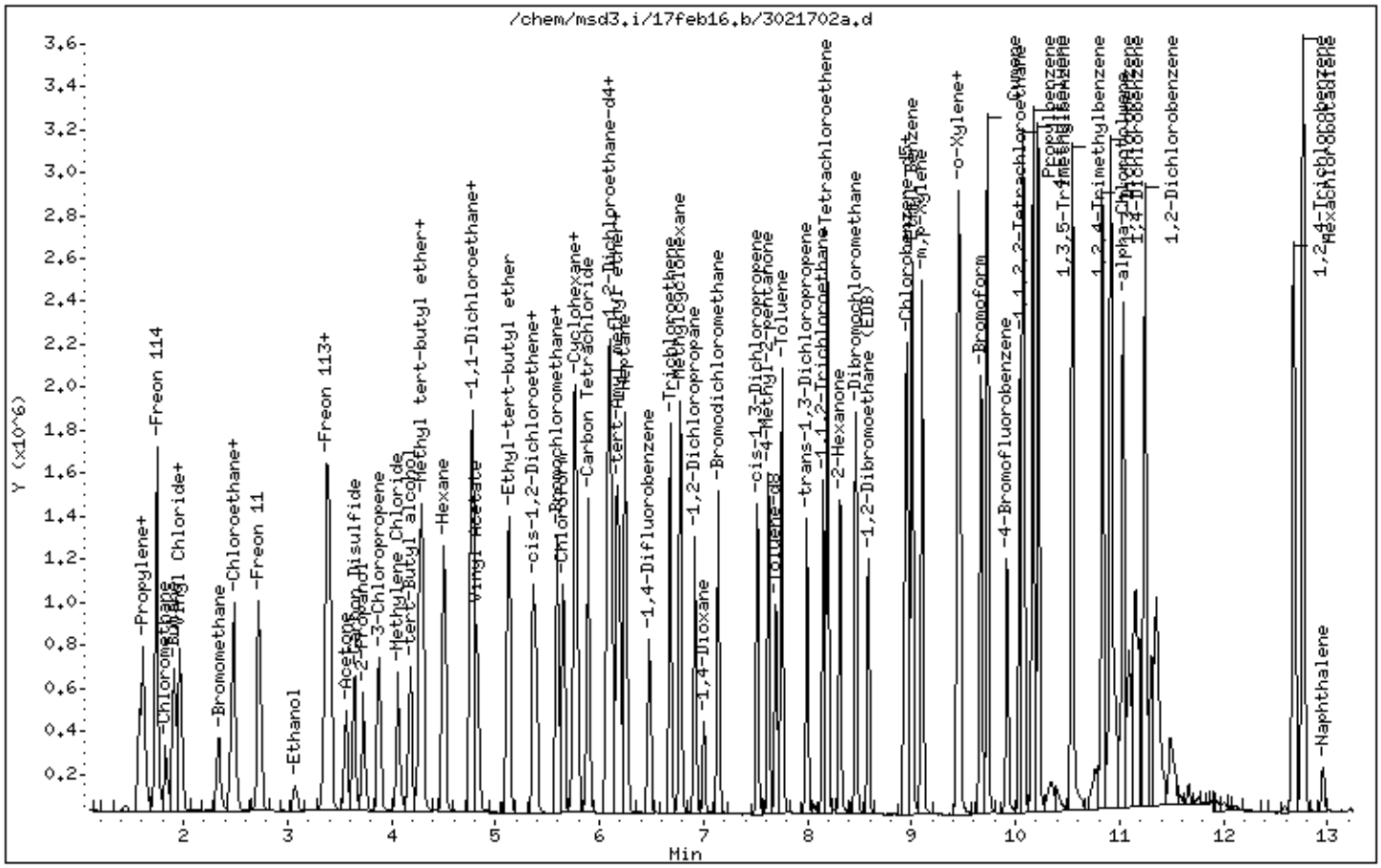
Instrument: msd3.i

Sample Info: 50ml #2759-210

Operator: js

Column phase: RTX-624

Column diameter: 0.25



EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	LCS		
Lab ID:	1602253A-07A	**Date/Time Analyzed:**	2/17/16 11:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd3.i / 3021703a

Compound	CAS#	%Recovery
Benzene	71-43-2	101
Ethyl Benzene	100-41-4	100
m,p-Xylene	108-38-3	101
o-Xylene	95-47-6	102
Toluene	108-88-3	99

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	102
4-Bromofluorobenzene	460-00-4	74-122	103
Toluene-d8	2037-26-5	82-119	104

* % Recovery is calculated using unrounded analytical results.

Report Date: 17-Feb-2016 15:25

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: js
Data Type: MS DATA
SampleType: LCS
SpikeList File: Cont_062616.spk
Quant Type: ISTD
Sublist File: Cont062616.sub
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	50.000	53.489	106.98	57-143
11 Freon 12	50.000	53.865	107.73	71-141
15 Freon 114	50.000	53.113	106.23	76-136
17 Chloromethane	50.000	52.974	105.95	49-152
23 Butane	50.000	49.767	99.53	51-147
25 Vinyl Chloride	50.000	53.930	107.86	60-143
26 1,3-Butadiene	50.000	48.126	96.25	59-133
29 Bromomethane	50.000	53.517	107.03	71-135
30 Chloroethane	50.000	53.433	106.87	70-139
31 Isopentane	50.000	51.231	102.46	63-140
35 Freon 11	50.000	52.078	104.16	71-139
42 Ethanol	50.000	54.459	108.92	62-144
49 Freon 113	50.000	48.782	97.56	68-127
50 1,1-Dichloroethene	50.000	52.031	104.06	66-132
52 Acetone	50.000	50.294	100.59	61-137
56 Carbon Disulfide	50.000	45.725	91.45	59-116
57 2-Propanol	50.000	55.498	111.00	68-145
58 3-Chloropropene	50.000	49.174	98.35	65-124
66 Methylene Chloride	50.000	52.042	104.08	65-141
72 Methyl tert-butyl	50.000	51.349	102.70	66-127
73 trans-1,2-Dichloro	42.500	45.948	108.11	61-116
78 Hexane	50.000	51.855	103.71	68-132
82 1,1-Dichloroethane	50.000	52.727	105.45	69-135
86 Vinyl Acetate	50.000	50.535	101.07	61-140
91 cis-1,2-Dichloroet	56.500	57.141	101.13	73-143
92 2-Butanone	50.000	51.248	102.50	67-134
99 Tetrahydrofuran	50.000	50.140	100.28	62-137
100 Chloroform	50.000	51.501	103.00	70-132
103 1,1,1-Trichloroeth	50.000	50.534	101.07	69-131
106 Carbon Tetrachlori	50.000	50.869	101.74	71-131
102 Cyclohexane	50.000	51.850	103.70	73-128
113 2,2,4-Trimethylpen	50.000	51.688	103.38	69-141
116 Benzene	50.000	50.701	101.40	69-135

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	50.000	50.966	101.93	65-143
121 Heptane	50.000	49.443	98.89	69-134
125 Trichloroethene	50.000	50.746	101.49	69-134
127 Methylcyclohexane	50.000	49.307	98.61	69-132
132 1,2-Dichloropropan	50.000	49.770	99.54	64-139
136 1,4-Dioxane	50.000	48.891	97.78	68-136
138 Bromodichlorometha	50.000	51.697	103.39	72-138
144 cis-1,3-Dichloropr	50.000	49.432	98.86	64-128
145 4-Methyl-2-pentano	50.000	49.327	98.65	62-146
147 Toluene	50.000	49.339	98.68	67-133
150 trans-1,3-Dichloro	50.000	51.611	103.22	70-136
155 1,1,2-Trichloroeth	50.000	48.435	96.87	71-131
156 Tetrachloroethene	50.000	48.972	97.94	69-130
158 2-Hexanone	50.000	49.914	99.83	64-153
160 Dibromochlorometha	50.000	51.767	103.53	71-136
161 1,2-Dibromoethane	50.000	51.080	102.16	73-133
165 Chlorobenzene	50.000	48.987	97.97	72-128
167 Ethyl Benzene	50.000	49.878	99.76	74-131
169 m,p-Xylene	50.000	50.640	101.28	76-134
171 o-Xylene	50.000	51.169	102.34	74-140
172 Styrene	50.000	52.073	104.15	70-147
174 Bromoform	65.000	69.730	107.28	71-138
175 Cumene	50.000	51.062	102.12	75-138
181 1,1,2,2-Tetrachlor	50.000	49.933	99.87	63-142
182 Propylbenzene	50.000	50.728	101.46	76-139
188 4-Ethyltoluene	50.000	50.584	101.17	71-141
190 1,3,5-Trimethylben	50.000	51.162	102.32	74-141
196 1,2,4-Trimethylben	50.000	51.654	103.31	70-143
208 1,3-Dichlorobenzen	50.000	49.959	99.92	73-136
209 1,4-Dichlorobenzen	50.000	49.017	98.03	73-137
212 alpha-Chlorotoluen	50.000	54.285	108.57	61-161
214 1,2-Dichlorobenzen	50.000	49.370	98.74	72-137
226 1,2,4-Trichloroben	50.000	53.014	106.03	56-159
227 Hexachlorobutadien	50.000	53.128	106.26	57-158
228 Naphthalene	5.000	5.068	101.36	20-169

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	25.644	102.58	79-128
$ 146 Toluene-d8	25.000	25.991	103.96	82-119
$ 177 4-Bromofluorobenze	25.000	25.801	103.20	74-122

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021703a.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 17-FEB-2016 11:53
Operator : js Inst ID: msd3.i
Smp Info : 50ml #2759-108
Misc Info : 50ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Cont062616.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	173796	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	133491			49.26- 109.26	76.81
5.592	5.592 (1.000)	49	233704			111.17- 171.17	134.47
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	664965	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	95542			0.00- 45.05	14.37
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.935	8.934 (1.000)	117	538174	25.0000		80.00- 120.00	100.00
8.935	8.934 (1.000)	82	265685			22.62- 82.62	49.37
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	229371	25.6441	25.644	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	119650			21.51- 81.51	52.16

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	626520	25.9909	25.991	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	66585			0.00- 41.20	10.63
7.695	7.695 (1.189)	100	392034			34.69- 94.69	62.57
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.916	9.916 (1.110)	174	350956	25.8008	25.801	80.00- 120.00	100.00
9.916	9.916 (1.110)	95	375566			85.32- 145.32	107.01
9.916	9.916 (1.110)	176	335202			65.83- 125.83	95.51
9 Propylene					CAS #: 115-07-1		
1.577	1.577 (0.282)	41	350151	53.4886	53.489	80.00- 120.00	100.00
1.577	1.577 (0.282)	42	222284			36.91- 96.91	63.48
1.577	1.577 (0.282)	39	246195			45.64- 105.64	70.31
11 Freon 12					CAS #: 75-71-8		
1.619	1.619 (0.289)	85	1036647	53.8648	53.865	80.00- 120.00	100.00
1.619	1.619 (0.289)	87	347135			3.93- 63.93	33.49
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	1129553	52.0784	52.078	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	723811			34.90- 94.90	64.08
15 Freon 114					CAS #: 76-14-2		
1.745	1.744 (0.312)	135	849304	53.1126	53.113	80.00- 120.00	100.00
1.745	1.744 (0.312)	137	275750			2.42- 62.42	32.47
17 Chloromethane					CAS #: 74-87-3		
1.829	1.828 (0.327)	50	418485	52.9738	52.974	80.00- 120.00	100.00
1.829	1.828 (0.327)	52	136080			3.71- 63.71	32.52
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	85442	49.7675	49.767	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	713533			788.54- 848.54	835.11
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	423109	53.9297	53.930	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	133232			1.59- 61.59	31.49
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	334450	48.1265	48.126	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	353408			81.92- 141.92	105.67
29 Bromomethane					CAS #: 74-83-9		
2.346	2.346 (0.420)	94	356067	53.5168	53.517	80.00- 120.00	100.00
2.346	2.346 (0.420)	96	348324			69.03- 129.03	97.83

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	217079	53.4331	53.433	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	66372			1.03- 61.03	30.58
2.458	2.458 (0.440)	49	70776			3.62- 63.62	32.60
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	542758	51.2310	51.231	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	361095			34.70- 94.70	66.53
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	191382	54.4588	54.459	80.00- 120.00	100.00
3.074	3.074 (0.550)	43	41353			0.00- 51.00	21.61
3.074	3.074 (0.550)	46	72950			9.12- 69.12	38.12
49 Freon 113					CAS #: 76-13-1		
3.382	3.382 (0.605)	151	793264	48.7818	48.782	80.00- 120.00	100.00
3.382	3.382 (0.605)	153	511355			33.55- 93.55	64.46
3.382	3.382 (0.605)	101	889964			84.75- 144.75	112.19
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.410	3.410 (0.610)	96	415687	52.0313	52.031	80.00- 120.00	100.00
3.410	3.410 (0.610)	98	263905			33.50- 93.50	63.49
3.410	3.410 (0.610)	61	720300			146.74- 206.74	173.28
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	204459	50.2944	50.294	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	704861			321.44- 381.44	344.74
56 Carbon Disulfide					CAS #: 75-15-0		
3.647	3.647 (0.652)	76	969235	45.7251	45.725	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	849350	55.4978	55.498	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	172752			0.00- 48.95	20.34
3.731	3.731 (0.667)	59	33086			0.00- 33.87	3.90
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	167855	49.1743	49.174	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	576825			320.29- 380.29	343.64
66 Methylene Chloride					CAS #: 75-09-2		
4.067	4.067 (0.727)	49	568500	52.0420	52.042	80.00- 120.00	100.00
4.067	4.067 (0.727)	84	355676			33.50- 93.50	62.56
4.067	4.067 (0.727)	51	173601			0.00- 59.33	30.54
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	1095877	51.3487	51.349	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether (continued)							
4.277	4.277 (0.765)	57	290861			0.00- 56.71	26.54
4.277	4.277 (0.765)	41	305202			0.00- 56.93	27.85
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	235079	45.9477	45.948	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	574786			217.55- 277.55	244.51
4.305	4.305 (0.770)	96	372245			130.08- 190.08	158.35
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	721308	51.8549	51.855	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	479372			36.12- 96.12	66.46
4.501	4.501 (0.805)	86	94747			0.00- 43.41	13.14
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.795	4.781 (0.857)	63	770530	52.7269	52.727	80.00- 120.00	100.00
4.795	4.781 (0.857)	65	241047			0.73- 60.73	31.28
86 Vinyl Acetate					CAS #: 108-05-4		
4.823	4.823 (0.862)	86	98190	50.5353	50.535	80.00- 120.00	100.00
4.823	4.823 (0.862)	43	1271256			1276.40-1336.40	1294.69
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	298468	57.1409	57.141	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	468661			129.76- 189.76	157.02
5.368	5.368 (0.960)	61	654798			191.29- 251.29	219.39
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	184764	51.2475	51.248	80.00- 120.00	100.00
5.396	5.382 (0.965)	43	887798			462.67- 522.67	480.50
5.396	5.396 (0.965)	57	66929			6.29- 66.29	36.22
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	489961	50.1405	50.140	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	160021			2.43- 62.43	32.66
5.592	5.592 (1.000)	72	161566			4.48- 64.48	32.98
100 Chloroform					CAS #: 67-66-3		
5.648	5.648 (1.010)	83	804332	51.5011	51.501	80.00- 120.00	100.00
5.648	5.648 (1.010)	85	526736			33.93- 93.93	65.49
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	514576	51.8502	51.850	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	696235			105.44- 165.44	135.30
5.760	5.760 (1.030)	41	414540			51.19- 111.19	80.56

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	912605	50.5338	50.534	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	583598			34.10- 94.10	63.95
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.900	5.886 (1.055)	119	998536	50.8688	50.869	80.00- 120.00	100.00
5.900	5.886 (1.055)	117	1024263			74.78- 134.78	102.58
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	2263259	51.6875	51.688	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	706908			2.10- 62.10	31.23
6.082	6.082 (1.088)	41	657421			0.00- 57.58	29.05
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	1126764	50.7012	50.701	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	249767			0.00- 52.66	22.17
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	589269	50.9659	50.966	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	185060			1.31- 61.31	31.41
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	406329	49.4434	49.443	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	827013			178.18- 238.18	203.53
6.250	6.250 (0.965)	57	434516			89.69- 149.69	106.94
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	512824	50.7464	50.746	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	587487			81.77- 141.77	114.56
6.678	6.678 (1.032)	97	342063			36.55- 96.55	66.70
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.915	6.914 (1.068)	63	449700	49.7703	49.770	80.00- 120.00	100.00
6.915	6.914 (1.068)	62	305871			39.53- 99.53	68.02
6.915	6.914 (1.068)	41	286980			36.04- 96.04	63.82
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	261705	48.8910	48.891	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	195334			46.60- 106.60	74.64
7.008	7.008 (1.082)	57	67281			0.00- 55.93	25.71
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	835613	51.6973	51.697	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	533026			34.60- 94.60	63.79
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	628486	49.4324	49.432	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
144 cis-1,3-Dichloropropene (continued)							
7.516	7.516 (1.161)	77	199107			1.35- 61.35	31.68
7.516	7.516 (1.161)	39	410821			38.26- 98.26	65.37
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.624	7.624 (1.178)	58	362704	49.3271	49.327	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	1000326			250.18- 310.18	275.80
7.624	7.624 (1.178)	85	144133			10.61- 70.61	39.74
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.198)	91	1358756	49.3393	49.339	80.00- 120.00	100.00
7.753	7.753 (1.198)	92	775863			28.22- 88.22	57.10
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	596439	51.6110	51.611	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	192097			1.86- 61.86	32.21
7.996	7.996 (0.895)	39	377163			34.12- 94.12	63.24
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	476455	48.4350	48.435	80.00- 120.00	100.00
8.154	8.154 (0.913)	99	294691			32.39- 92.39	61.85
8.154	8.154 (0.913)	83	397386			53.64- 113.64	83.40
156 Tetrachloroethene					CAS #: 127-18-4		
8.190	8.190 (0.917)	166	715388	48.9722	48.972	80.00- 120.00	100.00
8.190	8.190 (0.917)	129	565547			45.19- 105.19	79.05
8.190	8.190 (0.917)	131	543977			42.71- 102.71	76.04
158 2-Hexanone					CAS #: 591-78-6		
8.311	8.318 (0.930)	58	479664	49.9139	49.914	80.00- 120.00	100.00
8.311	8.311 (0.930)	43	970730			171.66- 231.66	202.38
8.319	8.318 (0.931)	100	96570			0.00- 49.22	20.13
160 Dibromochloromethane					CAS #: 124-48-1		
8.462	8.469 (0.947)	129	995394	51.7668	51.767	80.00- 120.00	100.00
8.462	8.462 (0.947)	127	766857			47.90- 107.90	77.04
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.584	8.583 (0.961)	107	788144	51.0795	51.080	80.00- 120.00	100.00
8.584	8.583 (0.961)	109	747453			64.35- 124.35	94.84
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	1118935	48.9868	48.987	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	373942			2.67- 62.67	33.42
8.956	8.956 (1.002)	77	575333			25.12- 85.12	51.42

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
167 Ethyl Benzene						CAS #: 100-41-4		
9.006	9.006	(1.008)	106	586466	49.8778	49.878	80.00- 120.00	100.00
9.006	9.006	(1.008)	91	1750388			269.16- 329.16	298.46
169 m,p-Xylene						CAS #: 108-38-3		
9.099	9.099	(1.018)	106	736918	50.6404	50.640	80.00- 120.00	100.00
9.099	9.099	(1.018)	91	1408595			163.98- 223.98	191.15
171 o-Xylene						CAS #: 95-47-6		
9.443	9.443	(1.057)	106	699677	51.1686	51.169	80.00- 120.00	100.00
9.443	9.443	(1.057)	91	1398177			172.26- 232.26	199.83
172 Styrene						CAS #: 100-42-5		
9.465	9.465	(1.059)	104	1107674	52.0735	52.073	80.00- 120.00	100.00
9.465	9.465	(1.059)	78	541692			19.84- 79.84	48.90
174 Bromoform						CAS #: 75-25-2		
9.665	9.665	(1.082)	173	1313853	69.7305	69.730	80.00- 120.00	100.00
9.665	9.665	(1.082)	171	673102			21.28- 81.28	51.23
175 Cumene						CAS #: 98-82-8		
9.730	9.730	(1.089)	105	2193699	51.0618	51.062	80.00- 120.00	100.00
9.730	9.730	(1.089)	120	606197			0.00- 57.41	27.63
9.730	9.730	(1.089)	51	234642			0.00- 40.59	10.70
181 1,1,2,2-Tetrachloroethane						CAS #: 79-34-5		
10.045	10.045	(1.124)	83	1013932	49.9327	49.933	80.00- 120.00	100.00
10.045	10.045	(1.124)	85	647399			34.81- 94.81	63.85
182 Propylbenzene						CAS #: 103-65-1		
10.073	10.073	(1.127)	91	2461233	50.7277	50.728	80.00- 120.00	100.00
10.073	10.073	(1.127)	120	624743			0.00- 54.95	25.38
10.073	10.073	(1.127)	105	92942			0.00- 33.79	3.78
188 4-Ethyltoluene						CAS #: 622-96-8		
10.167	10.166	(1.138)	120	688637	50.5846	50.584	80.00- 120.00	100.00
10.167	10.166	(1.138)	105	2175403			285.50- 345.50	315.90
190 1,3,5-Trimethylbenzene						CAS #: 108-67-8		
10.217	10.217	(1.143)	120	935455	51.1620	51.162	80.00- 120.00	100.00
10.217	10.217	(1.143)	105	1881457			172.09- 232.09	201.13
196 1,2,4-Trimethylbenzene						CAS #: 95-63-6		
10.546	10.546	(1.180)	105	1801916	51.6543	51.654	80.00- 120.00	100.00
10.546	10.546	(1.180)	120	844004			16.48- 76.48	46.84

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
208 1,3-Dichlorobenzene						CAS #: 541-73-1		
10.840	10.833	(1.213)	146	1296791	49.9589	49.959	80.00- 120.00	100.00
10.840	10.840	(1.213)	148	830928			33.89- 93.89	64.08
10.833	10.833	(1.212)	111	497823			9.29- 69.29	38.39
209 1,4-Dichlorobenzene						CAS #: 106-46-7		
10.919	10.919	(1.222)	146	1297942	49.0172	49.017	80.00- 120.00	100.00
10.919	10.919	(1.222)	148	826956			33.91- 93.91	63.71
10.919	10.919	(1.222)	111	475785			7.27- 67.27	36.66
212 alpha-Chlorotoluene						CAS #: 100-44-7		
11.033	11.033	(1.235)	91	1648981	54.2846	54.285	80.00- 120.00	100.00
11.033	11.033	(1.235)	126	403305			0.00- 53.77	24.46
214 1,2-Dichlorobenzene						CAS #: 95-50-1		
11.248	11.248	(1.259)	146	1246492	49.3697	49.370	80.00- 120.00	100.00
11.248	11.248	(1.259)	148	780999			33.23- 93.23	62.66
11.248	11.248	(1.259)	111	489063			10.34- 70.34	39.24
226 1,2,4-Trichlorobenzene						CAS #: 120-82-1		
12.674	12.674	(1.418)	180	1150828	53.0138	53.014	80.00- 120.00	100.00
12.674	12.674	(1.418)	182	1104750			65.44- 125.44	96.00
227 Hexachlorobutadiene						CAS #: 87-68-3		
12.767	12.767	(1.429)	225	923529	53.1281	53.128	80.00- 120.00	100.00
12.767	12.767	(1.429)	223	583380			33.39- 93.39	63.17
228 Naphthalene						CAS #: 91-20-3		
12.953	12.953	(1.450)	128	260136	5.06802	5.068	80.00- 120.00	100.00
12.953	12.953	(1.450)	127	33025			0.00- 43.01	12.70

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021703a.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 17-FEB-2016
Calibration Time: 11:28
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	173796	-1.17
123 1,4-Difluorobenze	669296	401578	937014	664965	-0.65
163 Chlorobenzene-d5	524176	314506	733846	538174	2.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/17feb16.b/3021703a.d

Date : 17-FEB-2016 11:53

Client ID: LCS

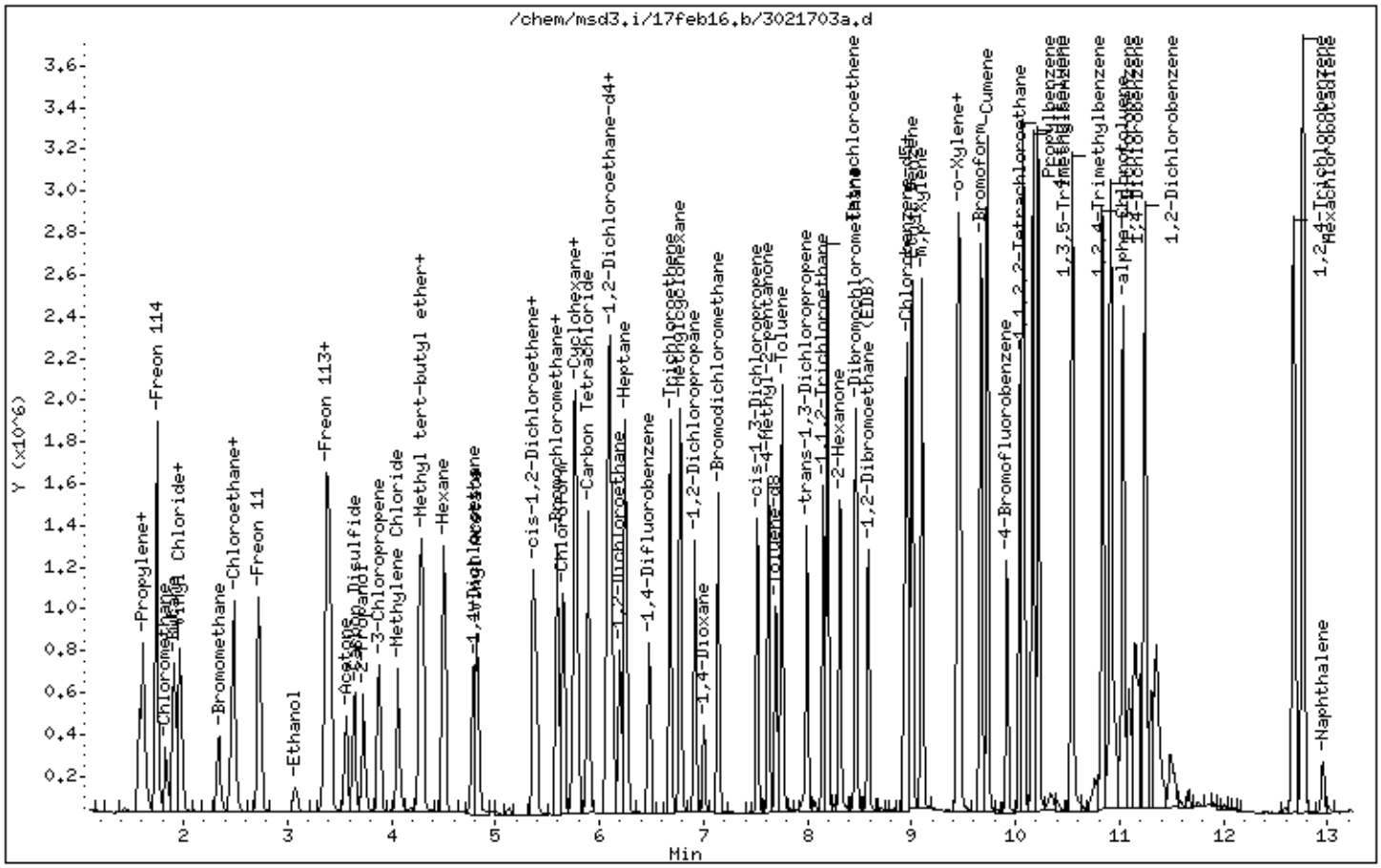
Instrument: msd3.i

Sample Info: 50ml #2759-108

Operator: js

Column phase: RTX-624

Column diameter: 0.25



EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	LCSD		
Lab ID:	1602253A-07AA	**Date/Time Analyzed:**	2/17/16 12:18 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msd3.i / 3021704a

Compound	CAS#	%Recovery
Benzene	71-43-2	100
Ethyl Benzene	100-41-4	100
m,p-Xylene	108-38-3	103
o-Xylene	95-47-6	104
Toluene	108-88-3	97

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	101
4-Bromofluorobenzene	460-00-4	74-122	104
Toluene-d8	2037-26-5	82-119	102

* % Recovery is calculated using unrounded analytical results.

Report Date: 17-Feb-2016 15:25

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCSD
Client Smp ID: LCSD
Level: LOW
Operator: js
Data Type: MS DATA
SampleType: LCSD
SpikeList File: Cont_062616.spk
Quant Type: ISTD
Sublist File: Cont062616.sub
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	50.000	52.544	105.09	57-143
11 Freon 12	50.000	53.943	107.89	71-141
15 Freon 114	50.000	53.052	106.10	76-136
17 Chloromethane	50.000	53.463	106.93	49-152
23 Butane	50.000	49.039	98.08	51-147
25 Vinyl Chloride	50.000	54.206	108.41	60-143
26 1,3-Butadiene	50.000	48.242	96.48	59-133
29 Bromomethane	50.000	52.222	104.44	71-135
30 Chloroethane	50.000	53.499	107.00	70-139
31 Isopentane	50.000	51.098	102.20	63-140
35 Freon 11	50.000	51.932	103.86	71-139
42 Ethanol	50.000	54.991	109.98	62-144
49 Freon 113	50.000	49.055	98.11	68-127
50 1,1-Dichloroethene	50.000	51.642	103.28	66-132
52 Acetone	50.000	51.371	102.74	61-137
56 Carbon Disulfide	50.000	45.541	91.08	59-116
57 2-Propanol	50.000	55.280	110.56	68-145
58 3-Chloropropene	50.000	49.008	98.02	65-124
66 Methylene Chloride	50.000	51.870	103.74	65-141
72 Methyl tert-butyl	50.000	51.291	102.58	66-127
73 trans-1,2-Dichloro	42.500	46.124	108.53	61-116
78 Hexane	50.000	51.970	103.94	68-132
82 1,1-Dichloroethane	50.000	53.426	106.85	69-135
86 Vinyl Acetate	50.000	52.074	104.15	61-140
91 cis-1,2-Dichloroet	56.500	58.183	102.98	73-143
92 2-Butanone	50.000	51.308	102.62	67-134
99 Tetrahydrofuran	50.000	50.544	101.09	62-137
100 Chloroform	50.000	51.693	103.39	70-132
103 1,1,1-Trichloroeth	50.000	50.270	100.54	69-131
106 Carbon Tetrachlori	50.000	50.521	101.04	71-131
102 Cyclohexane	50.000	51.760	103.52	73-128
113 2,2,4-Trimethylpen	50.000	52.270	104.54	69-141
116 Benzene	50.000	50.106	100.21	69-135

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	50.000	49.747	99.49	65-143
121 Heptane	50.000	48.912	97.82	69-134
125 Trichloroethene	50.000	50.283	100.57	69-134
127 Methylcyclohexane	50.000	47.990	95.98	69-132
132 1,2-Dichloropropan	50.000	48.327	96.65	64-139
136 1,4-Dioxane	50.000	47.257	94.51	68-136
138 Bromodichlorometha	50.000	51.460	102.92	72-138
144 cis-1,3-Dichloropr	50.000	48.281	96.56	64-128
145 4-Methyl-2-pentano	50.000	48.681	97.36	62-146
147 Toluene	50.000	48.395	96.79	67-133
150 trans-1,3-Dichloro	50.000	52.561	105.12	70-136
155 1,1,2-Trichloroeth	50.000	49.597	99.19	71-131
156 Tetrachloroethene	50.000	50.780	101.56	69-130
158 2-Hexanone	50.000	49.711	99.42	64-153
160 Dibromochlorometha	50.000	52.267	104.53	71-136
161 1,2-Dibromoethane	50.000	51.024	102.05	73-133
165 Chlorobenzene	50.000	49.801	99.60	72-128
167 Ethyl Benzene	50.000	50.079	100.16	74-131
169 m,p-Xylene	50.000	51.714	103.43	76-134
171 o-Xylene	50.000	52.184	104.37	74-140
172 Styrene	50.000	51.988	103.98	70-147
174 Bromoform	65.000	69.732	107.28	71-138
175 Cumene	50.000	51.713	103.43	75-138
181 1,1,2,2-Tetrachlor	50.000	50.476	100.95	63-142
182 Propylbenzene	50.000	51.305	102.61	76-139
188 4-Ethyltoluene	50.000	50.779	101.56	71-141
190 1,3,5-Trimethylben	50.000	52.069	104.14	74-141
196 1,2,4-Trimethylben	50.000	51.744	103.49	70-143
208 1,3-Dichlorobenzen	50.000	51.205	102.41	73-136
209 1,4-Dichlorobenzen	50.000	50.129	100.26	73-137
212 alpha-Chlorotoluen	50.000	55.663	111.33	61-161
214 1,2-Dichlorobenzen	50.000	50.750	101.50	72-137
226 1,2,4-Trichloroben	50.000	57.152	114.30	56-159
227 Hexachlorobutadien	50.000	56.855	113.71	57-158
228 Naphthalene	5.000	5.412	108.23	20-169

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	25.356	101.42	79-128
$ 146 Toluene-d8	25.000	25.410	101.64	82-119
$ 177 4-Bromofluorobenze	25.000	25.967	103.87	74-122

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED TO14A

Data file : /chem/msd3.i/17feb16.b/3021704a.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 17-FEB-2016 12:18
Operator : js Inst ID: msd3.i
Smp Info : 50ml #2759-108
Misc Info : 50ppbv(200ppbv)
Comment : STANDARD LEVEL - GC/MS
Method : /var/chem/msd3.i/17feb16.b/316q0201a.m
Meth Date : 17-Feb-2016 15:23 jscarbro Quant Type: ISTD
Cal Date : 01-FEB-2016 19:36 Cal File: 3020117.d
Als bottle: 14 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Cont062616.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.592	5.592 (1.000)	130	174571	25.0000		80.00- 120.00	100.00
5.592	5.592 (1.000)	128	136238			49.26- 109.26	78.04
5.592	5.592 (1.000)	49	227442			111.17- 171.17	130.29
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.474	6.474 (1.000)	114	678900	25.0000		80.00- 120.00	100.00
6.474	6.474 (1.000)	88	97480			0.00- 45.05	14.36
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.934	8.934 (1.000)	117	532021	25.0000		80.00- 120.00	100.00
8.934	8.934 (1.000)	82	265415			22.62- 82.62	49.89
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.124	6.124 (1.095)	65	227805	25.3559	25.356	80.00- 120.00	100.00
6.124	6.124 (1.095)	67	120939			21.51- 81.51	53.09

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.695	7.695 (1.189)	98	625357	25.4101	25.410	80.00- 120.00	100.00
7.695	7.695 (1.189)	70	66357			0.00- 41.20	10.61
7.695	7.695 (1.189)	100	406035			34.69- 94.69	64.93
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.923	9.916 (1.111)	174	349184	25.9675	25.967	80.00- 120.00	100.00
9.923	9.916 (1.111)	95	374530			85.32- 145.32	107.26
9.923	9.916 (1.111)	176	339866			65.83- 125.83	97.33
9 Propylene					CAS #: 115-07-1		
1.577	1.577 (0.282)	41	345498	52.5435	52.544	80.00- 120.00	100.00
1.577	1.577 (0.282)	42	229560			36.91- 96.91	66.44
1.577	1.577 (0.282)	39	249603			45.64- 105.64	72.24
11 Freon 12					CAS #: 75-71-8		
1.619	1.619 (0.289)	85	1042789	53.9434	53.943	80.00- 120.00	100.00
1.619	1.619 (0.289)	87	349357			3.93- 63.93	33.50
35 Freon 11					CAS #: 75-69-4		
2.724	2.724 (0.487)	101	1131409	51.9324	51.932	80.00- 120.00	100.00
2.724	2.724 (0.487)	103	736072			34.90- 94.90	65.06
15 Freon 114					CAS #: 76-14-2		
1.744	1.744 (0.312)	135	852119	53.0521	53.052	80.00- 120.00	100.00
1.744	1.744 (0.312)	137	269760			2.42- 62.42	31.66
17 Chloromethane					CAS #: 74-87-3		
1.828	1.828 (0.327)	50	424232	53.4629	53.463	80.00- 120.00	100.00
1.828	1.828 (0.327)	52	139398			3.71- 63.71	32.86
23 Butane					CAS #: 106-97-8		
1.912	1.912 (0.342)	58	84567	49.0391	49.039	80.00- 120.00	100.00
1.912	1.912 (0.342)	43	712671			788.54- 848.54	842.73
25 Vinyl Chloride					CAS #: 75-01-4		
1.940	1.940 (0.347)	62	427177	54.2065	54.206	80.00- 120.00	100.00
1.940	1.940 (0.347)	64	133189			1.59- 61.59	31.18
26 1,3-Butadiene					CAS #: 106-99-0		
1.968	1.968 (0.352)	54	336750	48.2423	48.242	80.00- 120.00	100.00
1.968	1.968 (0.352)	39	353278			81.92- 141.92	104.91
29 Bromomethane					CAS #: 74-83-9		
2.346	2.346 (0.420)	94	349002	52.2220	52.222	80.00- 120.00	100.00
2.346	2.346 (0.420)	96	350057			69.03- 129.03	100.30

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane					CAS #: 75-00-3		
2.458	2.458 (0.440)	64	218316	53.4990	53.499	80.00- 120.00	100.00
2.458	2.458 (0.440)	66	67612			1.03- 61.03	30.97
2.458	2.458 (0.440)	49	74424			3.62- 63.62	34.09
31 Isopentane					CAS #: 78-78-4		
2.486	2.486 (0.445)	43	543759	51.0976	51.098	80.00- 120.00	100.00
2.486	2.486 (0.445)	57	361668			34.70- 94.70	66.51
42 Ethanol					CAS #: 64-17-5		
3.074	3.074 (0.550)	45	194114	54.9910	54.991	80.00- 120.00	100.00
3.074	3.074 (0.550)	43	41575			0.00- 51.00	21.42
3.074	3.074 (0.550)	46	74680			9.12- 69.12	38.47
49 Freon 113					CAS #: 76-13-1		
3.381	3.382 (0.605)	151	801270	49.0554	49.055	80.00- 120.00	100.00
3.381	3.382 (0.605)	153	514310			33.55- 93.55	64.19
3.381	3.382 (0.605)	101	903329			84.75- 144.75	112.74
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.409	3.410 (0.610)	96	414414	51.6417	51.642	80.00- 120.00	100.00
3.409	3.410 (0.610)	98	262077			33.50- 93.50	63.24
3.409	3.410 (0.610)	61	741212			146.74- 206.74	178.86
52 Acetone					CAS #: 67-64-1		
3.563	3.563 (0.637)	58	209767	51.3711	51.371	80.00- 120.00	100.00
3.563	3.563 (0.637)	43	718309			321.44- 381.44	342.43
56 Carbon Disulfide					CAS #: 75-15-0		
3.647	3.647 (0.652)	76	969638	45.5410	45.541	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.731	3.731 (0.667)	45	849785	55.2797	55.280	80.00- 120.00	100.00
3.731	3.731 (0.667)	43	170174			0.00- 48.95	20.03
3.731	3.731 (0.667)	59	32726			0.00- 33.87	3.85
58 3-Chloropropene					CAS #: 107-05-1		
3.885	3.885 (0.695)	76	168032	49.0076	49.008	80.00- 120.00	100.00
3.885	3.885 (0.695)	41	584360			320.29- 380.29	347.77
66 Methylene Chloride					CAS #: 75-09-2		
4.067	4.067 (0.727)	49	569147	51.8699	51.870	80.00- 120.00	100.00
4.067	4.067 (0.727)	84	353904			33.50- 93.50	62.18
4.067	4.067 (0.727)	51	171339			0.00- 59.33	30.10
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.277	4.277 (0.765)	73	1099521	51.2907	51.291	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether (continued)							
4.277	4.277 (0.765)	57	292363			0.00- 56.71	26.59
4.277	4.277 (0.765)	41	304486			0.00- 56.93	27.69
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.305	4.305 (0.770)	98	237036	46.1245	46.124	80.00- 120.00	100.00
4.305	4.305 (0.770)	61	573872			217.55- 277.55	242.10
4.305	4.305 (0.770)	96	372647			130.08- 190.08	157.21
78 Hexane					CAS #: 110-54-3		
4.501	4.501 (0.805)	57	726141	51.9706	51.970	80.00- 120.00	100.00
4.501	4.501 (0.805)	43	475127			36.12- 96.12	65.43
4.501	4.501 (0.805)	86	100584			0.00- 43.41	13.85
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.795	4.781 (0.857)	63	784235	53.4265	53.426	80.00- 120.00	100.00
4.795	4.781 (0.857)	65	240735			0.73- 60.73	30.70
86 Vinyl Acetate					CAS #: 108-05-4		
4.823	4.823 (0.862)	86	101630	52.0735	52.074	80.00- 120.00	100.00
4.823	4.823 (0.862)	43	1289798			1276.40-1336.40	1269.11
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.368	5.368 (0.960)	98	305265	58.1827	58.183	80.00- 120.00	100.00
5.368	5.368 (0.960)	96	475218			129.76- 189.76	155.67
5.368	5.368 (0.960)	61	657771			191.29- 251.29	215.48
92 2-Butanone					CAS #: 78-93-3		
5.396	5.396 (0.965)	72	185807	51.3080	51.308	80.00- 120.00	100.00
5.396	5.382 (0.965)	43	892390			462.67- 522.67	480.28
5.396	5.396 (0.965)	57	71206			6.29- 66.29	38.32
99 Tetrahydrofuran					CAS #: 109-99-9		
5.592	5.592 (1.000)	42	496111	50.5444	50.544	80.00- 120.00	100.00
5.592	5.592 (1.000)	71	157022			2.43- 62.43	31.65
5.592	5.592 (1.000)	72	167336			4.48- 64.48	33.73
100 Chloroform					CAS #: 67-66-3		
5.662	5.648 (1.012)	83	810929	51.6929	51.693	80.00- 120.00	100.00
5.662	5.648 (1.012)	85	531079			33.93- 93.93	65.49
102 Cyclohexane					CAS #: 110-82-7		
5.760	5.760 (1.030)	84	515973	51.7601	51.760	80.00- 120.00	100.00
5.760	5.760 (1.030)	56	709374			105.44- 165.44	137.48
5.760	5.760 (1.030)	41	415613			51.19- 111.19	80.55

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.774	5.774 (1.033)	97	911890	50.2701	50.270	80.00- 120.00	100.00
5.774	5.774 (1.033)	99	589321			34.10- 94.10	64.63
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.900	5.886 (1.055)	119	996125	50.5206	50.521	80.00- 120.00	100.00
5.900	5.886 (1.055)	117	1042187			74.78- 134.78	104.62
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
6.082	6.082 (1.088)	57	2298992	52.2705	52.270	80.00- 120.00	100.00
6.082	6.082 (1.088)	56	710213			2.10- 62.10	30.89
6.082	6.082 (1.088)	41	658016			0.00- 57.58	28.62
116 Benzene					CAS #: 71-43-2		
6.110	6.110 (0.944)	78	1136873	50.1060	50.106	80.00- 120.00	100.00
6.110	6.110 (0.944)	77	254235			0.00- 52.66	22.36
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.194	6.194 (0.957)	62	587230	49.7470	49.747	80.00- 120.00	100.00
6.194	6.194 (0.957)	64	187181			1.31- 61.31	31.88
121 Heptane					CAS #: 142-82-5		
6.250	6.250 (0.965)	71	410385	48.9120	48.912	80.00- 120.00	100.00
6.250	6.250 (0.965)	43	835365			178.18- 238.18	203.56
6.250	6.250 (0.965)	57	435647			89.69- 149.69	106.16
125 Trichloroethene					CAS #: 79-01-6		
6.678	6.678 (1.032)	95	518786	50.2827	50.283	80.00- 120.00	100.00
6.678	6.678 (1.032)	130	594467			81.77- 141.77	114.59
6.678	6.678 (1.032)	97	346698			36.55- 96.55	66.83
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.914	6.914 (1.068)	63	445808	48.3268	48.327	80.00- 120.00	100.00
6.914	6.914 (1.068)	62	303992			39.53- 99.53	68.19
6.914	6.914 (1.068)	41	291482			36.04- 96.04	65.38
136 1,4-Dioxane					CAS #: 123-91-1		
7.008	7.008 (1.082)	88	258260	47.2571	47.257	80.00- 120.00	100.00
7.008	7.008 (1.082)	58	195622			46.60- 106.60	75.75
7.008	7.008 (1.082)	57	67097			0.00- 55.93	25.98
138 Bromodichloromethane					CAS #: 75-27-4		
7.144	7.144 (1.103)	83	849210	51.4601	51.460	80.00- 120.00	100.00
7.144	7.144 (1.103)	85	543812			34.60- 94.60	64.04
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.516	7.516 (1.161)	75	626707	48.2807	48.281	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
144 cis-1,3-Dichloropropene (continued)							
7.516	7.516 (1.161)	77	202617			1.35- 61.35	32.33
7.516	7.516 (1.161)	39	423084			38.26- 98.26	67.51
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.624	7.624 (1.178)	58	365453	48.6808	48.681	80.00- 120.00	100.00
7.624	7.624 (1.178)	43	993880			250.18- 310.18	271.96
7.624	7.624 (1.178)	85	144330			10.61- 70.61	39.49
147 Toluene					CAS #: 108-88-3		
7.753	7.753 (1.198)	91	1360683	48.3951	48.395	80.00- 120.00	100.00
7.753	7.753 (1.198)	92	777192			28.22- 88.22	57.12
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.996	7.996 (0.895)	75	600471	52.5609	52.561	80.00- 120.00	100.00
7.996	7.996 (0.895)	77	189391			1.86- 61.86	31.54
7.996	7.996 (0.895)	39	377002			34.12- 94.12	62.78
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.154	8.154 (0.913)	97	482312	49.5974	49.597	80.00- 120.00	100.00
8.154	8.154 (0.913)	99	298952			32.39- 92.39	61.98
8.154	8.154 (0.913)	83	402195			53.64- 113.64	83.39
156 Tetrachloroethene					CAS #: 127-18-4		
8.189	8.190 (0.917)	166	733309	50.7796	50.780	80.00- 120.00	100.00
8.189	8.190 (0.917)	129	554774			45.19- 105.19	75.65
8.189	8.190 (0.917)	131	539878			42.71- 102.71	73.62
158 2-Hexanone					CAS #: 591-78-6		
8.311	8.318 (0.930)	58	472255	49.7113	49.711	80.00- 120.00	100.00
8.311	8.311 (0.930)	43	960289			171.66- 231.66	203.34
8.318	8.318 (0.931)	100	92131			0.00- 49.22	19.51
160 Dibromochloromethane					CAS #: 124-48-1		
8.462	8.469 (0.947)	129	993520	52.2669	52.267	80.00- 120.00	100.00
8.462	8.462 (0.947)	127	761994			47.90- 107.90	76.70
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.583	8.583 (0.961)	107	778282	51.0237	51.024	80.00- 120.00	100.00
8.583	8.583 (0.961)	109	728388			64.35- 124.35	93.59
165 Chlorobenzene					CAS #: 108-90-7		
8.956	8.956 (1.002)	112	1124521	49.8008	49.801	80.00- 120.00	100.00
8.956	8.956 (1.002)	114	372058			2.67- 62.67	33.09
8.956	8.956 (1.002)	77	576871			25.12- 85.12	51.30

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
167 Ethyl Benzene					CAS #: 100-41-4		
9.006	9.006 (1.008)	106	582103	50.0793	50.079	80.00- 120.00	100.00
9.006	9.006 (1.008)	91	1746613			269.16- 329.16	300.05
169 m,p-Xylene					CAS #: 108-38-3		
9.099	9.099 (1.018)	106	743931	51.7136	51.714	80.00- 120.00	100.00
9.099	9.099 (1.018)	91	1401614			163.98- 223.98	188.41
171 o-Xylene					CAS #: 95-47-6		
9.443	9.443 (1.057)	106	705405	52.1842	52.184	80.00- 120.00	100.00
9.443	9.443 (1.057)	91	1404422			172.26- 232.26	199.09
172 Styrene					CAS #: 100-42-5		
9.464	9.465 (1.059)	104	1093217	51.9882	51.988	80.00- 120.00	100.00
9.464	9.465 (1.059)	78	541200			19.84- 79.84	49.51
174 Bromoform					CAS #: 75-25-2		
9.672	9.665 (1.083)	173	1298871	69.7326	69.732	80.00- 120.00	100.00
9.672	9.665 (1.083)	171	664175			21.28- 81.28	51.13
175 Cumene					CAS #: 98-82-8		
9.737	9.730 (1.090)	105	2196275	51.7131	51.713	80.00- 120.00	100.00
9.737	9.730 (1.090)	120	593041			0.00- 57.41	27.00
9.730	9.730 (1.089)	51	233615			0.00- 40.59	10.64
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
10.052	10.045 (1.125)	83	1013239	50.4757	50.476	80.00- 120.00	100.00
10.052	10.045 (1.125)	85	650006			34.81- 94.81	64.15
182 Propylbenzene					CAS #: 103-65-1		
10.081	10.073 (1.128)	91	2460776	51.3048	51.305	80.00- 120.00	100.00
10.081	10.073 (1.128)	120	622814			0.00- 54.95	25.31
10.081	10.073 (1.128)	105	93757			0.00- 33.79	3.81
188 4-Ethyltoluene					CAS #: 622-96-8		
10.174	10.166 (1.139)	120	683385	50.7794	50.779	80.00- 120.00	100.00
10.174	10.166 (1.139)	105	2183357			285.50- 345.50	319.49
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.224	10.217 (1.144)	120	941162	52.0694	52.069	80.00- 120.00	100.00
10.224	10.217 (1.144)	105	1862084			172.09- 232.09	197.85
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.553	10.546 (1.181)	105	1784426	51.7446	51.744	80.00- 120.00	100.00
10.553	10.546 (1.181)	120	837273			16.48- 76.48	46.92

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
208 1,3-Dichlorobenzene						CAS #: 541-73-1		
10.847	10.833	(1.214)	146	1313946	51.2052	51.205	80.00- 120.00	100.00
10.847	10.840	(1.214)	148	830746			33.89- 93.89	63.23
10.847	10.833	(1.214)	111	491142			9.29- 69.29	37.38
209 1,4-Dichlorobenzene						CAS #: 106-46-7		
10.926	10.919	(1.223)	146	1312217	50.1294	50.129	80.00- 120.00	100.00
10.926	10.919	(1.223)	148	829909			33.91- 93.91	63.24
10.926	10.919	(1.223)	111	480746			7.27- 67.27	36.64
212 alpha-Chlorotoluene						CAS #: 100-44-7		
11.048	11.033	(1.236)	91	1671510	55.6627	55.663	80.00- 120.00	100.00
11.048	11.033	(1.236)	126	409698			0.00- 53.77	24.51
214 1,2-Dichlorobenzene						CAS #: 95-50-1		
11.262	11.248	(1.261)	146	1266704	50.7504	50.750	80.00- 120.00	100.00
11.262	11.248	(1.261)	148	810505			33.23- 93.23	63.99
11.255	11.248	(1.260)	111	502827			10.34- 70.34	39.70
226 1,2,4-Trichlorobenzene						CAS #: 120-82-1		
12.695	12.674	(1.421)	180	1226485	57.1524	57.152	80.00- 120.00	100.00
12.695	12.674	(1.421)	182	1176443			65.44- 125.44	95.92
227 Hexachlorobutadiene						CAS #: 87-68-3		
12.788	12.767	(1.431)	225	977017	56.8551	56.855	80.00- 120.00	100.00
12.788	12.767	(1.431)	223	609653			33.39- 93.39	62.40
228 Naphthalene						CAS #: 91-20-3		
12.974	12.953	(1.452)	128	274593	5.41154	5.412	80.00- 120.00	100.00
12.974	12.953	(1.452)	127	37132			0.00- 43.01	13.52

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msd3.i
Lab File ID: 3021704a.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /var/chem/msd3.i/17feb16.b/316q0201a.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 17-FEB-2016
Calibration Time: 11:28
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	175853	105512	246194	174571	-0.73
123 1,4-Difluorobenze	669296	401578	937014	678900	1.43
163 Chlorobenzene-d5	524176	314506	733846	532021	1.50

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.59	5.26	5.92	5.59	0.00
123 1,4-Difluorobenze	6.47	6.14	6.80	6.47	0.00
163 Chlorobenzene-d5	8.93	8.60	9.26	8.93	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msd3.i/17feb16.b/3021704a.d

Date : 17-FEB-2016 12:18

Client ID: LCSD

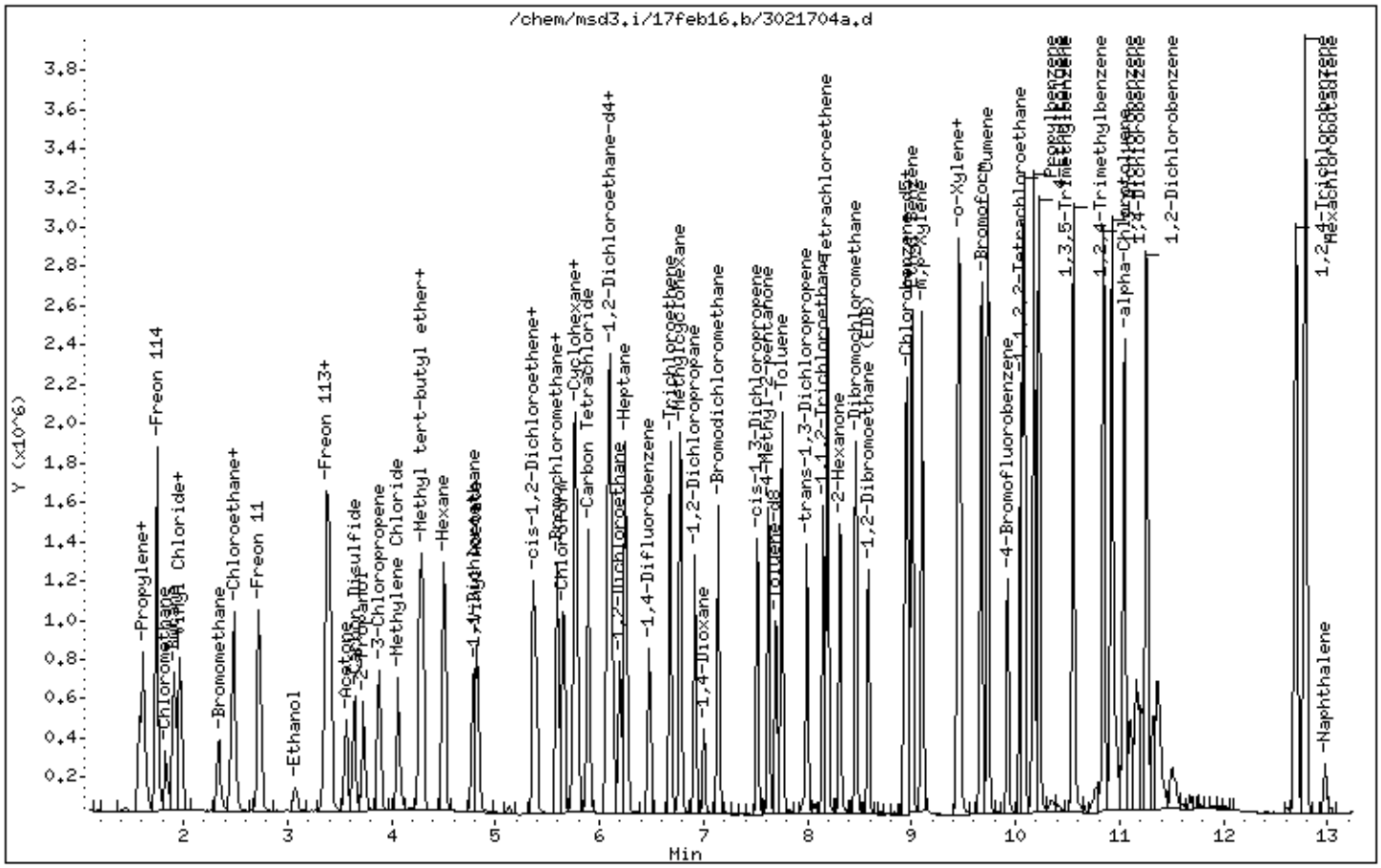
Instrument: msd3.i

Sample Info: 50ml #2759-108

Operator: js

Column phase: RTX-624

Column diameter: 0.25



MSD3

BFB Tune Verification: () * 100 = %			
	2759-235	Exp. Date:	5/8/2016
BCM	175,853		
1,4-DFB	669,296		
CB-d5	524,176		

Method TO-15/TO-14		
SOP# 6		
Vacuum:	NA	
Surrogate# 2759-235	Exp. Date:	5/8/2016
Surrogate# NA		NA

Verified: _____js_____

Method: 316q0201a.m

Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time	Review Init	Comments
√	3021701	BFB Tune Check	2759-235	12	36ng	1.0mL	1.00	js	js	2/17/16	1053	js	exp. 5/8/16
√	3021702	CCV	2759-210	13	50ppbv(200ppbv)	50mL	1.00	js	js	2/17/16	1128	js	exp. 4/6/16, 0 out
√	3021703	LCS	2759-108	14	50ppbv(200ppbv)	50mL	1.00	js	js	2/17/16	1153	js	exp. 2/24/16, 0 out
√	3021704	LCSD	2759-108	14	50ppbv(200ppbv)	50mL	1.00	js	js	2/17/16	1218	js	exp. 2/24/16,
√	3021705	Trap Bake	NA	NA	Bake	0ml	1.00	js	js	2/17/16	1241	js	
X	3021706	System Blank	33555	12	Humid	200ml	1.00	js	js	2/17/16	1330	js	
√	3021707	System Blank	33555	12	Humid	200ml	1.00	js	js	2/17/16	1409	js	
√	3021708	CCV sp	2759-205	11	50ppbv (200ppbv)	50ml	1.00	js	js	2/17/16	1445	js	VPH; exp. 4/25/16; 0 out
√	3021709	Lab Blank	33555	12	Humid	200mL	1.00	js	js	2/17/16	1512	js	
√	3021710	1602253-01A	34321	1	10.0 Hg->5 psi	200ml	2.01	gd	js	2/17/16	1644	gd	
√	3021711	1602253-01AA	34321	1	10.0 Hg->5 psi	200ml	2.01	gd	js	2/17/16	1710	gd	
√	3021712	1602253-02A	33531	2	10.0 Hg->5 psi	200ml	2.01	gd	js	2/17/16	1736	gd	
√	3021713	1602253-03A	35148	3	10.5 Hg->5 psi	200ml	2.06	gd	js	2/17/16	1803	gd	
√	3021714	1602253-04A	35266	4	9.5 Hg->5 psi	200ml	1.96	gd	js	2/17/16	1829	gd	
√	3021715	1602214-01A	9521	5	5.1 Hg->14.7 psi	200ml	2.41	gd	js	2/17/16	1855	gd	
√	3021716	1602260-01A	37696	6	5.5 Hg->14.6 psi	200ml	2.44	gd	js	2/17/16	1921	gd	
	~~3021717~~	~~System Blank~~	33555	~~12~~	~~Humid~~	~~200ml~~	~~1.00~~		~~gd~~	~~2/17/16~~			~~Not needed~~ for data evaluation, Okay to proceed
	3021718	1602260-02A	36544	7	4.5 Hg->14.8 psi	200ml	2.36		gd	2/17/16			
	3021719	1602260-03A	37341	8	4.7 Hg->14.9 psi	200ml	2.39		gd	2/17/16			
	3021720	1602260-04A	11427	9	3.9 Hg->15 psi	200ml	2.32		gd	2/17/16			
	3021721	1602260-05A	37743	1	4.1 Hg->14.9 psi	200ml	2.33		gd	2/17/16			
	3021722	1602260-06A	36503	2	4.5 Hg->14.9 psi	200ml	2.37		gd	2/17/16			
	3021723	1602260-07A	1L1922	3	4.3 Hg->15 psi	200ml	2.36		gd	2/17/16			
	3021724	1602260-08A	8015	4	4.3 Hg->15.2 psi	200ml	2.37		gd	2/17/16			
	3021725	1602260-09A	37317	5	5.5 Hg->15 psi	200ml	2.47		gd	2/17/16			
	3021726	1602260-10A	37844	6	4.1 Hg->15.1 psi	200ml	2.35		gd	2/17/16			
	3021727	1602260-11A	12356	11	4.1 Hg->14.8 psi	200ml	2.32		gd	2/17/16			

gd 2/17/16

Eurofins Air Toxics Inc.

Data file : /var/chem/msd3.i/29dec15.b/3122909.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 29-DEC-2015 17:21
Operator : gh Inst ID: msd3.i
Smp Info : 1.0ml #2759-161; BFB; BFB
Misc Info : 36ng
Comment :
Method : /var/chem/msd3.i/29dec15.b/bfb30.m
Meth Date : 29-Dec-2015 11:45 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
9.923	9.923	0.000	95	195605			100.00- 100.00	100.00
9.923	9.414	0.509	50	44269			8.00- 40.00	22.63
9.923	9.414	0.509	75	95256			30.00- 66.00	48.70
9.923	9.414	0.509	96	14183			5.00- 9.00	7.25
9.923	9.414	0.509	173	1862			0.00- 1.99	1.00
9.923	9.414	0.509	174	185511			50.01- 120.00	94.84
9.923	9.414	0.509	175	13283			4.00- 9.00	7.16
9.923	9.414	0.509	176	180522			93.00- 101.00	97.31
9.923	9.414	0.509	177	11472			5.00- 9.00	6.35

Data File: /var/chem/msd3.i/29dec15.b/3122909.d

Date : 29-DEC-2015 17:21

Client ID: BFB

Instrument: msd3.i

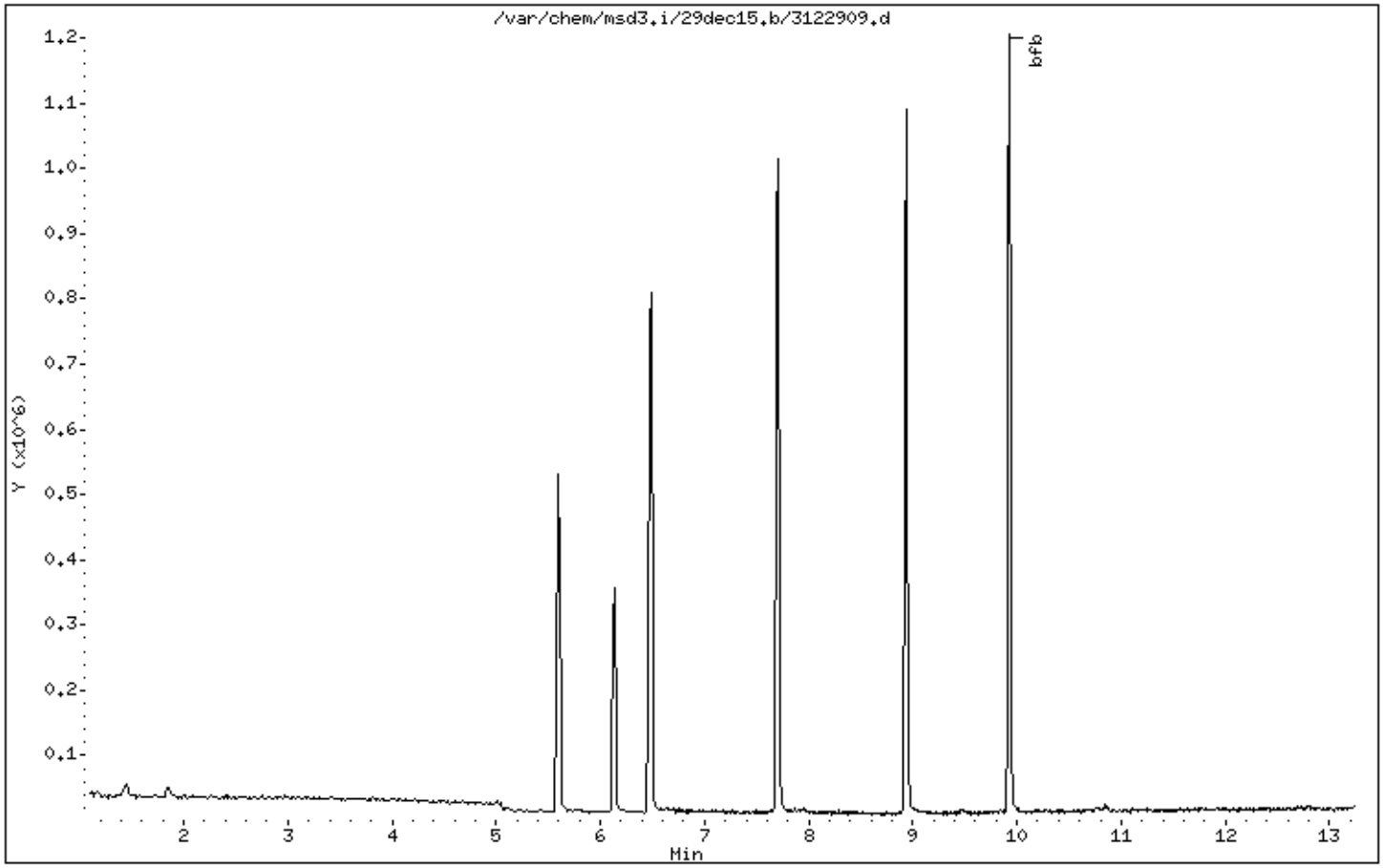
Sample Info: 1.0ml #2759-161; BFB; BFB

Volume Injected (uL): 1.0

Operator: gh

Column phase:

Column diameter: 2.00



Data File: /var/chem/msd3.i/29dec15.b/3122909.d

Date : 29-DEC-2015 17:21

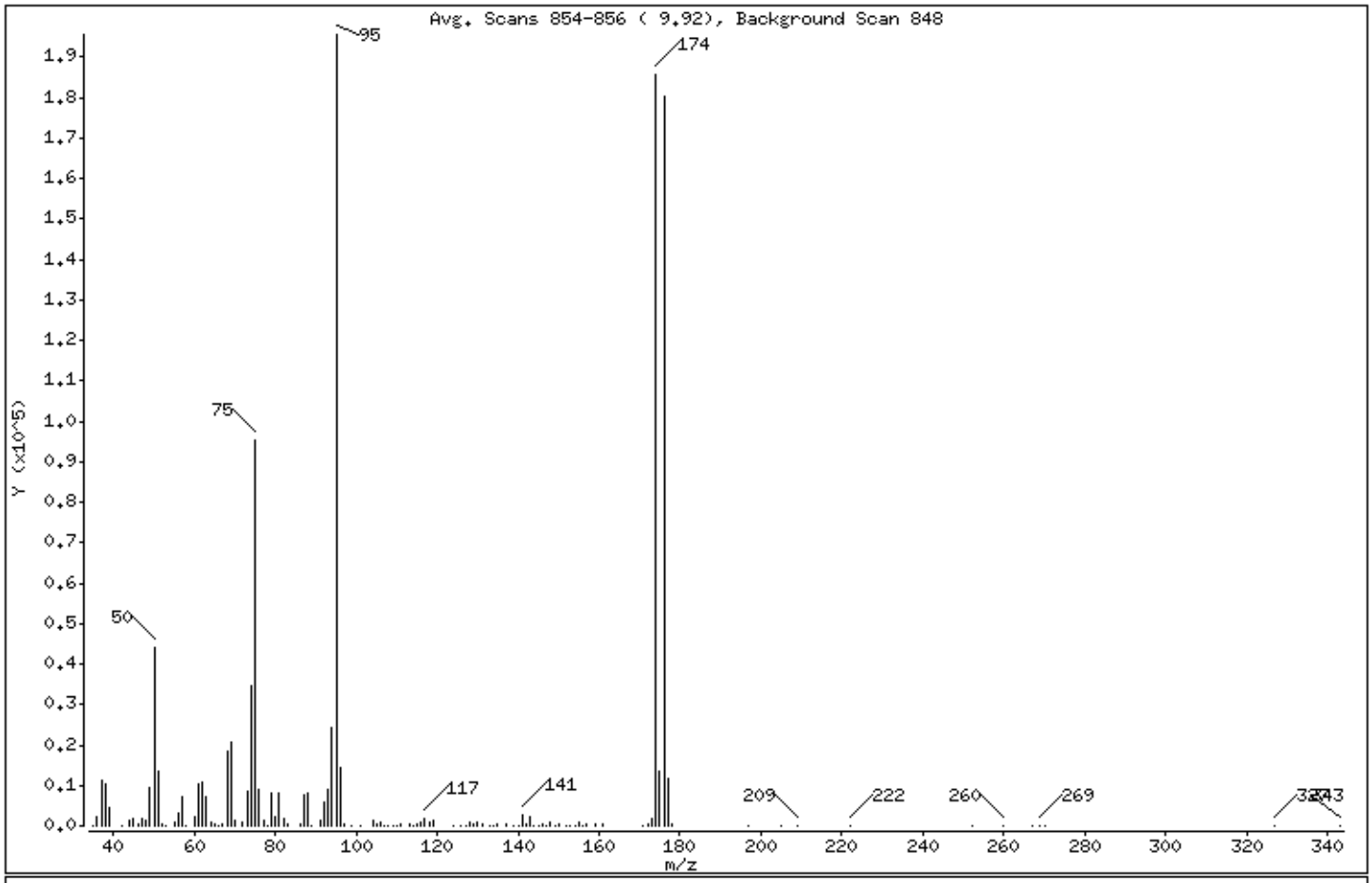
Client ID: BFB Instrument: msd3.i

Sample Info: 1.0ml #2759-161; BFB; BFB

Volume Injected (uL): 1.0 Operator: gh

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	22.63
75	30.00 - 66.00% of mass 95	48.70
96	5.00 - 9.00% of mass 95	7.25
173	Less than 1.99% of mass 174	0.95 (1.00)
174	50.01 - 120.00% of mass 95	94.84
175	4.00 - 9.00% of mass 174	6.79 (7.16)
176	93.00 - 101.00% of mass 174	92.29 (97.31)
177	5.00 - 9.00% of mass 176	5.86 (6.35)

Data File: /var/chem/msd3.i/29dec15.b/3122909.d

Date : 29-DEC-2015 17:21

Client ID: BFB

Instrument: msd3.i

Sample Info: 1.0ml #2759-161; BFB; BFB

Volume Injected (uL): 1.0

Operator: gh

Column phase:

Column diameter: 2.00

Data File: 3122909.d
Spectrum: Avg. Scans 854-856 (9.92), Background Scan 848
Location of Maximum: 95.00
Number of points: 121

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	51	72.00	1066	110.00	171	150.00	238
36.00	2275	73.00	8396	111.00	280	152.00	65
37.00	11397	74.00	34824	113.00	278	153.00	69
38.00	10522	75.00	95256	114.00	122	154.00	77
39.00	4283	76.00	8954	115.00	281	155.00	717
42.00	131	77.00	1526	116.00	1024	156.00	163
44.00	1310	78.00	132	117.00	1588	157.00	357
45.00	1998	79.00	8252	118.00	831	159.00	342
46.00	461	80.00	2083	119.00	1433	161.00	333
47.00	1874	81.00	7958	124.00	152	171.00	199
48.00	1375	82.00	1781	126.00	75	172.00	502
49.00	9350	83.00	360	127.00	73	173.00	1862
50.00	44264	86.00	237	128.00	754	174.00	185472
51.00	13465	87.00	7489	129.00	409	175.00	13283
52.00	545	88.00	8013	130.00	753	176.00	180480
53.00	57	89.00	82	131.00	388	177.00	11472
55.00	802	91.00	1156	133.00	43	178.00	440
56.00	2999	92.00	5905	134.00	50	197.00	78
57.00	7071	93.00	8982	135.00	409	205.00	73
58.00	178	94.00	24112	137.00	421	209.00	82
60.00	2137	95.00	195584	139.00	132	222.00	56
61.00	10280	96.00	14183	140.00	185	252.00	54
62.00	10922	97.00	463	141.00	2607	260.00	58
63.00	7390	99.00	58	142.00	468	267.00	161
64.00	779	101.00	64	143.00	2242	269.00	216
65.00	266	104.00	1135	144.00	66	270.00	169
66.00	150	105.00	233	145.00	74	327.00	62
67.00	449	106.00	1063	146.00	365	343.00	183
68.00	18608	107.00	199	147.00	221		
69.00	20888	108.00	87	148.00	728		
70.00	1153	109.00	78	149.00	211		

Eurofins Air Toxics Inc.

Data file : /chem/msd3.i/01feb16.b/3020109.d
Lab Smp Id: BFB Tune Check Client Smp ID: BFB
Inj Date : 01-FEB-2016 15:23
Operator : tar Inst ID: msd3.i
Smp Info : 1.0mL 2759-202
Misc Info : 36ng
Comment :
Method : /chem/msd3.i/01feb16.b/bfb30.m
Meth Date : 06-Jan-2016 09:57 jscarbro Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 12 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (PPBV)	TARGET RANGE	RATIO
1 bfb							CAS #: 460-00-4	
9.923	9.916	0.007	95	199232			100.00- 100.00	100.00
9.923	9.916	0.007	50	45482			8.00- 40.00	22.83
9.923	9.916	0.007	75	98986			30.00- 66.00	49.68
9.923	9.916	0.007	96	14195			5.00- 9.00	7.12
9.923	9.916	0.007	173	1831			0.00- 1.99	0.98
9.923	9.916	0.007	174	186666			50.01- 120.00	93.69
9.923	9.916	0.007	175	14825			4.00- 9.00	7.94
9.923	9.916	0.007	176	184448			93.00- 101.00	98.81
9.923	9.916	0.007	177	12791			5.00- 9.00	6.93

Data File: /chem/msd3.i/01feb16.b/3020109.d

Date : 01-FEB-2016 15:23

Client ID: BFB

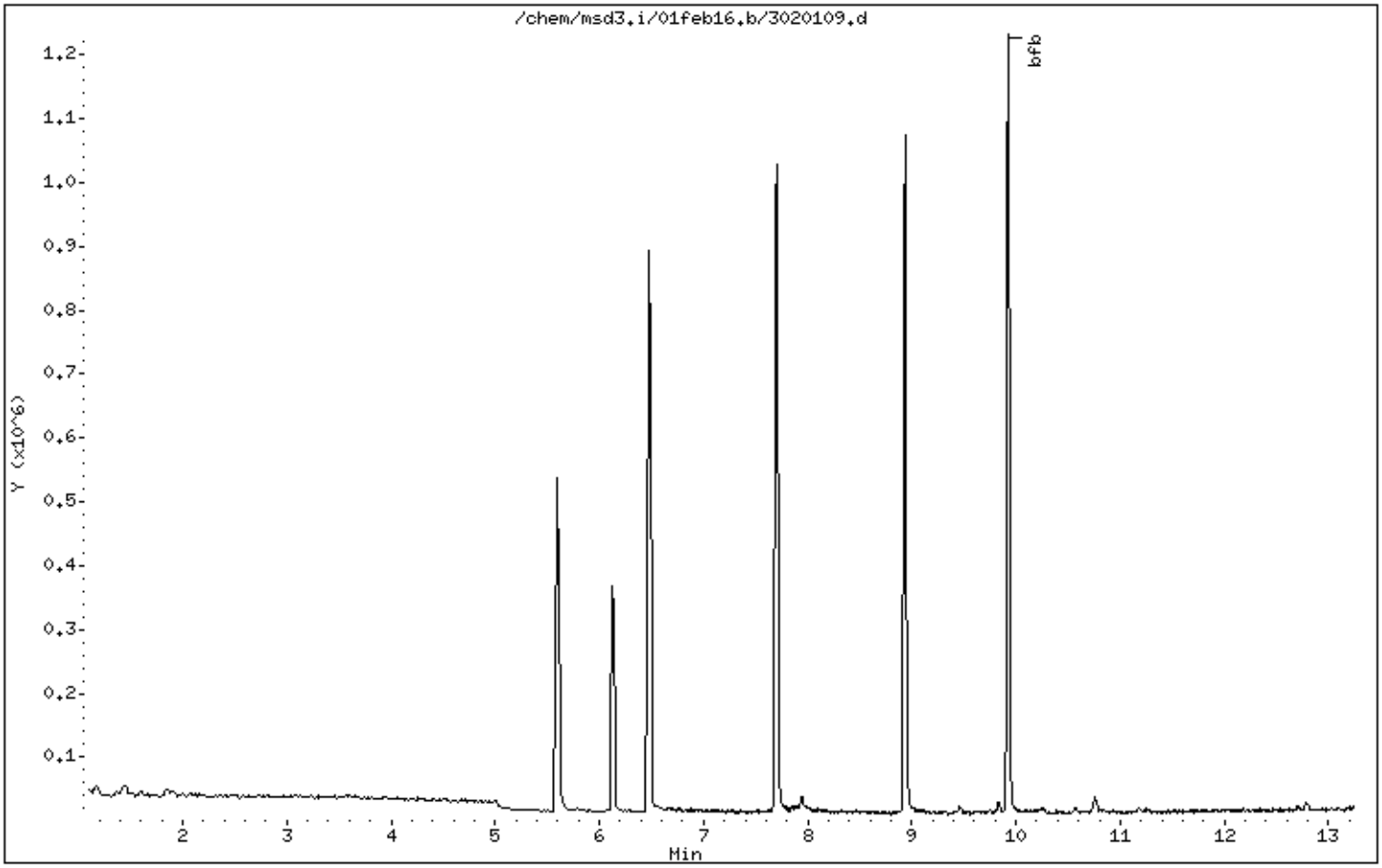
Instrument: msd3.i

Sample Info: 1.0mL 2759-202

Operator: tar

Column phase:

Column diameter: 2.00



Data File: /chem/msd3.i/01feb16.b/3020109.d

Date : 01-FEB-2016 15:23

Client ID: BFB

Instrument: msd3.i

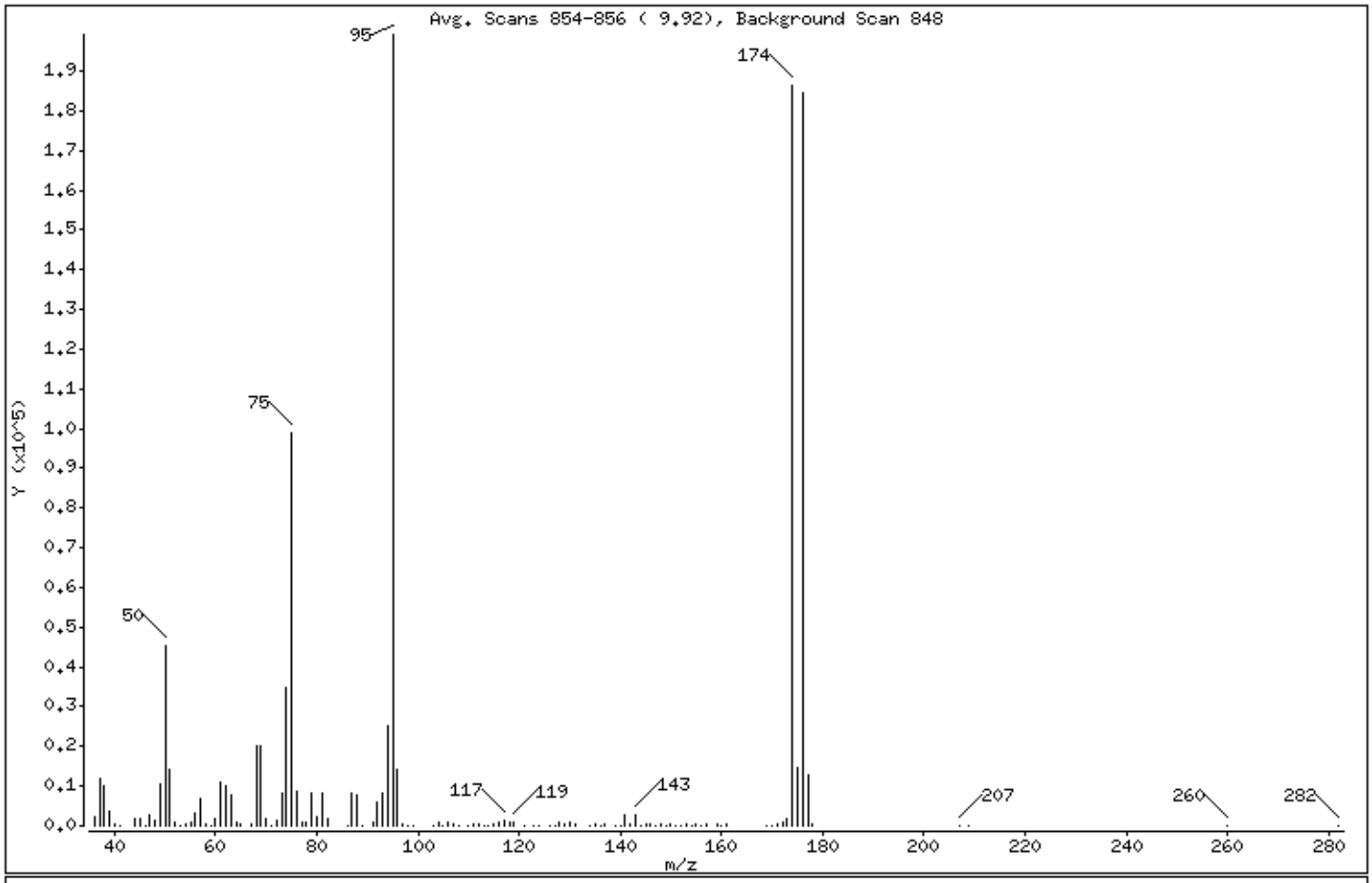
Sample Info: 1.0mL 2759-202

Operator: tar

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	22.83
75	30.00 - 66.00% of mass 95	49.68
96	5.00 - 9.00% of mass 95	7.12
173	Less than 1.99% of mass 174	0.92 (0.98)
174	50.01 - 120.00% of mass 95	93.69
175	4.00 - 9.00% of mass 174	7.44 (7.94)
176	93.00 - 101.00% of mass 174	92.58 (98.81)
177	5.00 - 9.00% of mass 176	6.42 (6.93)

Data File: /chem/msd3.i/01feb16.b/3020109.d

Date : 01-FEB-2016 15:23

Client ID: BFB

Instrument: msd3.i

Sample Info: 1.0mL 2759-202

Operator: tar

Column phase:

Column diameter: 2.00

Data File: 3020109.d
Spectrum: Avg. Scans 854-856 (9.92), Background Scan 848
Location of Maximum: 95.00
Number of points: 122

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2343	70.00	1852	108.00	87	146.00	390
37.00	11890	71.00	57	110.00	72	147.00	92
38.00	9930	72.00	1195	111.00	451	148.00	419
39.00	3641	73.00	8278	112.00	338	149.00	58
40.00	596	74.00	34792	113.00	212	150.00	250
41.00	120	75.00	98984	114.00	79	151.00	144
44.00	1703	76.00	8498	115.00	273	152.00	54
45.00	2005	77.00	962	116.00	1045	153.00	338
46.00	229	78.00	1031	117.00	1505	154.00	112
47.00	2581	79.00	8346	118.00	1009	155.00	676
48.00	1510	80.00	2336	119.00	1145	156.00	83
49.00	10402	81.00	8172	121.00	153	157.00	445
50.00	45480	82.00	1918	123.00	78	159.00	300
51.00	14414	86.00	192	124.00	73	160.00	51
52.00	695	87.00	8214	126.00	90	161.00	275
53.00	127	88.00	7673	127.00	89	169.00	198
54.00	256	89.00	117	128.00	957	170.00	96
55.00	769	91.00	975	129.00	569	171.00	248
56.00	3327	92.00	5944	130.00	954	172.00	689
57.00	6731	93.00	8448	131.00	446	173.00	1831
58.00	329	94.00	25008	134.00	59	174.00	186624
59.00	52	95.00	199232	135.00	539	175.00	14825
60.00	1790	96.00	14195	136.00	55	176.00	184448
61.00	11113	97.00	289	137.00	562	177.00	12791
62.00	10094	98.00	78	139.00	92	178.00	553
63.00	7783	99.00	58	140.00	52	207.00	171
64.00	811	103.00	80	141.00	2593	209.00	94
65.00	498	104.00	937	142.00	361	260.00	65
67.00	456	105.00	184	143.00	2733	282.00	103
68.00	19928	106.00	936	144.00	194		
69.00	20136	107.00	265	145.00	392		

Eurofins Air Toxics Inc.

Data file : /var/chem/msd3.i/17feb16.b/3021701.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 17-FEB-2016 10:53
Operator : js Inst ID: msd3.i
Smp Info : 1.0ml #2759-180; BFB; BFB
Misc Info : 36ng
Comment :
Method : /var/chem/msd3.i/17feb16.b/bfb30.m
Meth Date : 17-Feb-2016 11:14 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
9.923	9.916	0.007	95	179498			100.00- 100.00	100.00
9.923	9.916	0.007	50	40031			8.00- 40.00	22.30
9.923	9.916	0.007	75	89533			30.00- 66.00	49.88
9.923	9.916	0.007	96	12797			5.00- 9.00	7.13
9.923	9.916	0.007	173	1934			0.00- 1.99	1.12
9.923	9.916	0.007	174	172992			50.01- 120.00	96.38
9.923	9.916	0.007	175	12534			4.00- 9.00	7.25
9.923	9.916	0.007	176	168106			93.00- 101.00	97.18
9.923	9.916	0.007	177	10825			5.00- 9.00	6.44

Data File: /chem/msd3.i/17feb16.b/3021701.d

Date : 17-FEB-2016 10:53

Client ID: BFB

Instrument: msd3.i

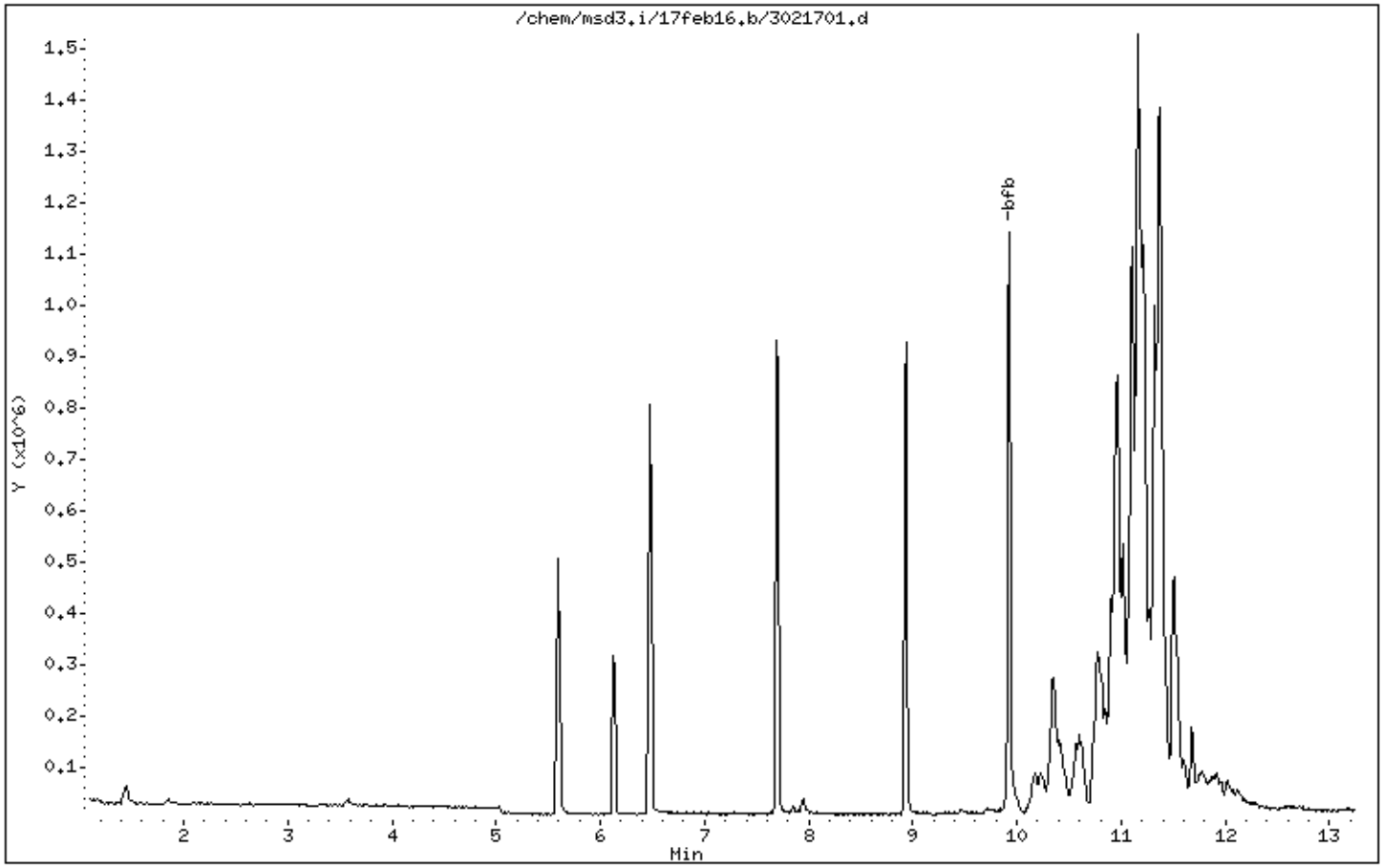
Sample Info: 1.0ml #2759-180; BFB; BFB

Volume Injected (uL): 1.0

Operator: js

Column phase:

Column diameter: 2.00



Data File: /chem/msd3.i/17feb16.b/3021701.d

Date : 17-FEB-2016 10:53

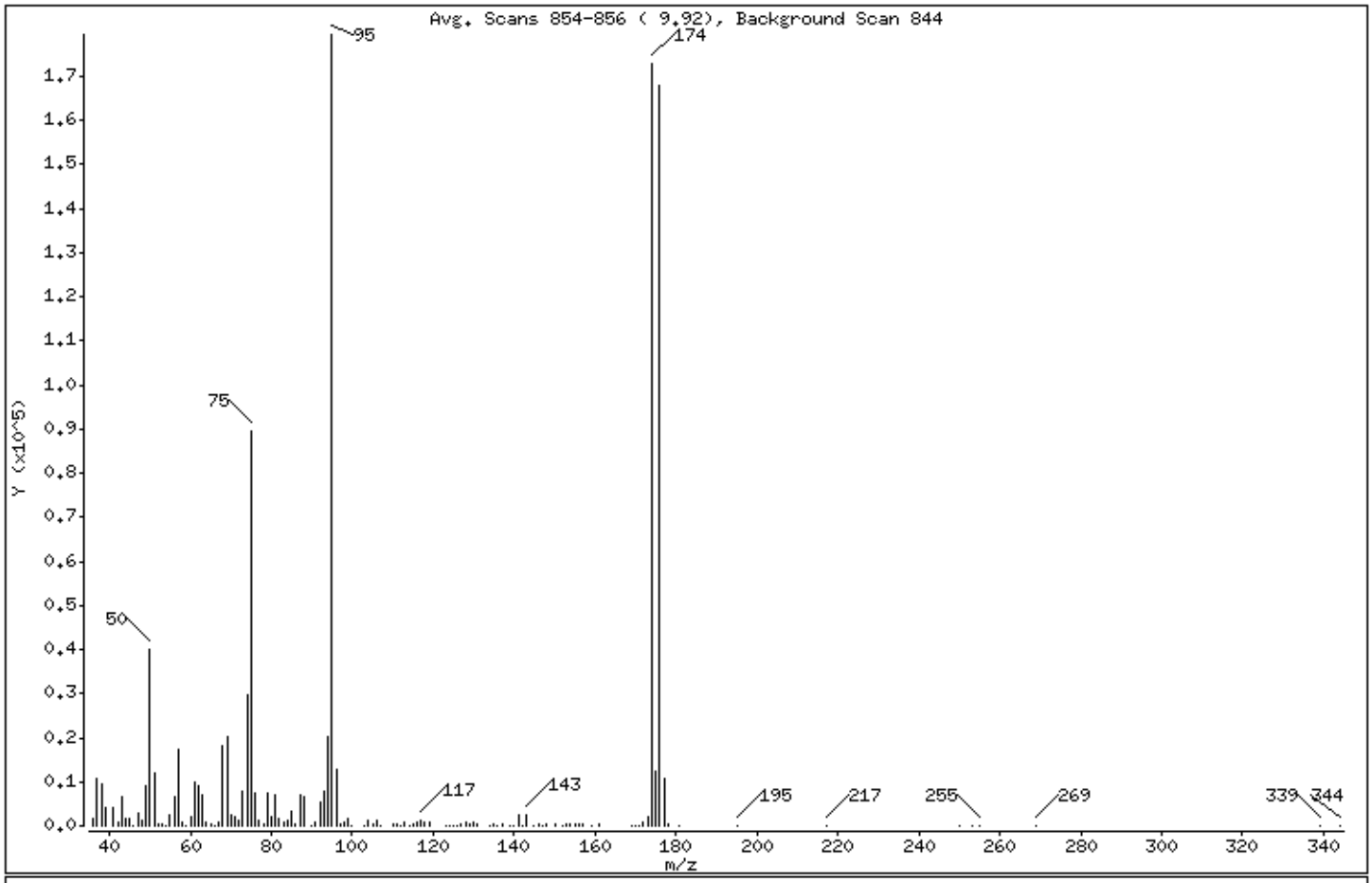
Client ID: BFB Instrument: msd3.i

Sample Info: 1.0ml #2759-180; BFB; BFB

Volume Injected (uL): 1.0 Operator: js

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	22.30
75	30.00 - 66.00% of mass 95	49.88
96	5.00 - 9.00% of mass 95	7.13
173	Less than 1.99% of mass 174	1.08 (1.12)
174	50.01 - 120.00% of mass 95	96.38
175	4.00 - 9.00% of mass 174	6.98 (7.25)
176	93.00 - 101.00% of mass 174	93.65 (97.18)
177	5.00 - 9.00% of mass 176	6.03 (6.44)

Data File: /chem/msd3.i/17feb16.b/3021701.d

Date : 17-FEB-2016 10:53

Client ID: BFB

Instrument: msd3.i

Sample Info: 1.0ml #2759-180; BFB; BFB

Volume Injected (uL): 1.0

Operator: js

Column phase:

Column diameter: 2.00

Data File: 3021701.d
Spectrum: Avg. Scans 854-856 (9.92), Background Scan 844
Location of Maximum: 95.00
Number of points: 128

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1701	70.00	2618	106.00	1113	148.00	502
37.00	10723	71.00	2260	107.00	9	150.00	240
38.00	9490	72.00	1157	110.00	252	152.00	61
39.00	4326	73.00	7850	111.00	352	153.00	276
41.00	3931	74.00	29528	112.00	153	154.00	222
42.00	735	75.00	89528	113.00	794	155.00	566
43.00	6555	76.00	7452	114.00	58	156.00	336
44.00	1840	77.00	1242	115.00	311	157.00	381
45.00	1667	78.00	597	116.00	663	159.00	117
46.00	140	79.00	7288	117.00	1429	161.00	270
47.00	2922	80.00	1885	118.00	753	169.00	110
48.00	1290	81.00	6830	119.00	770	170.00	65
49.00	8963	82.00	1684	123.00	62	171.00	205
50.00	40024	83.00	688	124.00	70	172.00	738
51.00	11910	84.00	1064	125.00	75	173.00	1934
52.00	548	85.00	3402	126.00	62	174.00	172992
53.00	554	86.00	325	127.00	425	175.00	12534
54.00	164	87.00	7090	128.00	935	176.00	168064
55.00	2664	88.00	6609	129.00	414	177.00	10825
56.00	6704	90.00	103	130.00	868	178.00	317
57.00	17192	91.00	641	131.00	231	181.00	51
58.00	620	92.00	5163	134.00	54	195.00	60
59.00	120	93.00	7905	135.00	560	217.00	64
60.00	2054	94.00	20320	136.00	81	250.00	52
61.00	9781	95.00	179456	137.00	322	253.00	6
62.00	8993	96.00	12797	139.00	68	255.00	53
63.00	7171	97.00	389	140.00	69	269.00	34
64.00	850	98.00	678	141.00	2393	339.00	51
65.00	557	99.00	1466	142.00	168	344.00	119
66.00	62	100.00	117	143.00	2437		
67.00	730	103.00	115	145.00	135		
68.00	18200	104.00	1153	146.00	293		
69.00	20128	105.00	306	147.00	148		

Shipping/ Receiving Documents

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics, Inc. (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Brian Whittaker at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Mike Sonderman
Collected by: (Print and Sign) Jessica Hoppmann / Jessica Hoppmann
Company: AECOM Email:
Address: 12120 Shamrock Plaza City: Omaha State: NE Zip: 68154
Phone: (402) 334-8181 Fax: (402) 334-1984

Project Info:
P.O. #:
Project #: 60425210.23446540.0032AB
Project Name: Cannon AFB

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	CA504-SG01-005	000001858	2/9/16	1643	TPH-GRO (TO-3) VOCs (TO-15)	-27.5	-6.8		
02A	CA504-SG01-~~005~~ 010	000003094		1643		-27.0	-6.9		
03A	CA504-SG03-005	000002306		1644		-27.1	-7.5		
04A	CA504-SG03-010	000002377		1644		-26.4	-6.0		

Jessica Hoppmann 2/10/16 2/9/16

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Jessica Hoppmann	2/10/16 1300	[illegible]	2/10/16 1020
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		NA	Good	Yes No None	1602253

Form 1293 rev.11

Air Toxics Ltd.

TO-14A/TO-15 QUAD SURR Control Limits (msd3, msd17, msda, msdj, msdp)

Effective Dates 12/26/15 - 06/26/16

Data Point Analysis Dates 06/25/15 - 12/25/15

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
1,2-Dichloroethane-d4	128	79	136	71	120	87
4-Bromofluorobenzene	122	74	130	65	114	82
Toluene-d8	119	82	125	76	113	88

Air Toxics Ltd.

TO-14A/TO-15 QUAD LCS Control Limits (msd3, msd17, msda, msdj, msdp)

Effective Dates 12/26/15 - 06/26/16

Data Point Analysis Dates 06/25/15 - 12/25/15

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
1,1,1-Trichloroethane	131	69	141	59	121	80
1,1,2,2-Tetrachloroethane	142	63	155	50	129	76
1,1,2-Trichloroethane	131	71	141	61	121	81
1,1-Dichloroethane	135	69	146	58	124	80
1,1-Dichloroethene	132	66	143	55	121	77
1,2,4-Trichlorobenzene	159	56	176	39	142	73
1,2,4-Trimethylbenzene	143	70	155	58	131	82
1,2-Dibromoethane (EDB)	133	73	143	63	123	83
1,2-Dichlorobenzene	137	72	148	61	126	83
1,2-Dichloroethane	143	65	156	52	130	78
1,2-Dichloropropane	139	64	151	52	126	77
1,3,5-Trimethylbenzene	141	74	153	63	130	85
1,3-Butadiene	133	59	145	47	120	71
1,3-Dichlorobenzene	136	73	147	62	126	83
1,4-Dichlorobenzene	137	73	148	62	127	83
1,4-Dioxane	136	68	147	57	125	80
2,2,4-Trimethylpentane	141	69	153	57	129	81
2-Butanone (Methyl Ethyl Ketone)	134	67	146	56	123	78
2-Hexanone	153	64	167	50	138	79
2-Propanol	145	68	158	55	132	81
3-Chloropropene	124	65	134	55	114	74
4-Ethyltoluene	141	71	153	59	130	83
4-Methyl-2-pentanone	146	62	160	47	132	76
Acetone	137	61	150	48	125	74
alpha-Chlorotoluene	161	61	178	44	144	77
Benzene	135	69	146	58	124	80
Bromodichloromethane	138	72	149	61	127	83
Bromoform	138	71	149	60	127	82
Bromomethane	135	71	145	60	124	82
Butane	147	51	163	35	131	67
Carbon Disulfide	116	59	126	50	107	69
Carbon Tetrachloride	131	71	141	61	121	81
Chlorobenzene	128	72	137	63	119	82
Chloroethane	139	70	151	59	128	82
Chloroform	132	70	142	60	121	81
Chloromethane	152	49	169	32	135	67
cis-1,2-Dichloroethene	143	73	154	62	131	85
cis-1,3-Dichloropropene	128	64	139	53	118	75
Cumene	138	75	148	64	127	85
Cyclohexane	128	73	137	63	118	82

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
Dibromochloromethane	136	71	147	60	125	82
Ethanol	144	62	157	49	130	76
Ethyl Benzene	131	74	141	65	122	84
Freon 11	139	71	150	59	128	82
Freon 113	127	68	137	59	117	78
Freon 114	136	76	146	66	126	86
Freon 12	141	71	153	60	130	83
Heptane	134	69	145	58	123	80
Hexachlorobutadiene	158	57	175	40	141	74
Hexane	132	68	142	57	121	78
Isopentane	140	63	153	50	127	76
m,p-Xylene	134	76	144	66	124	85
Methyl tert-butyl ether	127	66	137	56	117	76
Methylcyclohexane	132	69	142	58	121	79
Methylene Chloride	141	65	154	52	129	78
Naphthalene	169	20	196	-21	142	34
o-Xylene	140	74	151	63	129	85
Propylbenzene	139	76	150	65	128	86
Propylene	143	57	157	43	128	72
Styrene	147	70	160	57	134	83
Tetrachloroethene	130	69	140	59	120	80
Tetrahydrofuran	137	62	149	49	124	74
Toluene	133	67	144	56	122	78
trans-1,2-Dichloroethene	116	61	126	52	107	71
trans-1,3-Dichloropropene	136	70	147	58	125	81
Trichloroethene	134	69	145	58	123	80
Vinyl Acetate	140	61	154	47	127	74
Vinyl Chloride	143	60	157	46	129	74

Some control limits were <20% and/or >180%. Therefore default limits of 20% and/or 180% were used.

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SAMPLE RECEIPT SUMMARY

WORKORDER 1602253A

Client

Mr. Jeff Aust
AECOM
12120 Shamrock Plaza
Suite 300
Omaha, NE 68154

Sales Rep: N/A

Phone

(402) 952-2516

Fax

(402) 952-2591

Date Promised: 02/24/16
Date Completed: 2/23/16
Date Received: 2/11/16
PO#: 320236
Project#: 60425210.23446540.0032AB Cannon AFB
Total $: $ 480.00
Logged By: JCW

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	CA504-SG01-005	TO-15	2/9/2016	10.0 "Hg	$120.00
01AA	CA504-SG01-005 Lab Duplicate	TO-15	2/9/2016	10.0 "Hg	$0.00
02A	CA504-SG01-010	TO-15	2/9/2016	10.0 "Hg	$120.00
03A	CA504-SG03-005	TO-15	2/9/2016	10.5 "Hg	$120.00
04A	CA504-SG03-010	TO-15	2/9/2016	9.5 "Hg	$120.00
05A	Lab Blank	TO-15	NA	NA	$0.00
06A	CCV	TO-15	NA	NA	$0.00
07A	LCS	TO-15	NA	NA	$0.00
07AA	LCSD	TO-15	NA	NA	$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Cannon Air Force Base320236/19959

BILL TO: Accounts Payable Austin
AECOM
P.O. BOX 203970
Austin, TX 78720-1088

Analysis Code: TO-14A

REMARKS: VENDOR # 1568409

TERMS: NET 45

Reporting Method: TO-15 (Sh)-BTEX only

Other Records

DILUTION FACTORS

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Vacuum}} = \frac{\text{14.7 psi + Final Pressure (psi)}}{\text{14.7 psi - [(Initial Pressure ("Hg)) (14.7 psi / 30 "Hg)]}}$$

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{\text{14.7 psi + Final Pressure (psi)}}{\text{14.7 psi + Initial Pressure (psi)}}$$

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.5	1.36	1.71	2.05
1.0	1.39	1.74	2.09
1.5	1.41	1.77	2.13
2.0	1.44	1.80	2.16
2.5	1.46	1.83	2.20
3.0	1.49	1.87	2.24
3.5	1.52	1.90	2.29
4.0	1.55	1.94	2.33
4.5	1.58	1.98	2.38
5.0	1.61	2.02	2.42
5.5	1.64	2.06	2.47
6.0	1.68	2.10	2.53
6.5	1.71	2.15	2.58
7.0	1.75	2.19	2.64
7.5	1.79	2.24	2.69
8.0	1.83	2.29	2.76
8.5	1.87	2.34	2.82
9.0	1.91	2.40	2.89
9.5	1.96	2.46	2.96
10.0	2.01	2.52	3.03
10.5	2.06	2.59	3.11
11.0	2.12	2.65	3.19
11.5	2.17	2.72	3.28
12.0	2.23	2.80	3.37
12.5	2.30	2.88	3.46
13.0	2.36	2.97	3.57
13.5	2.44	3.06	3.67
14.0	2.51	3.15	3.79
14.5	2.59	3.25	3.91
15.0	2.68	3.36	4.04
15.5	2.77	3.48	4.18
16.0	2.87	3.60	4.33
16.5	2.98	3.73	4.49
17.0	3.09	3.88	4.66
17.5	3.22	4.03	4.85
18.0	3.35	4.20	5.05
18.5	3.50	4.38	5.27
19.0	3.65	4.58	5.51
19.5	3.83	4.80	5.77
20.0	4.02	5.04	6.06
20.5	4.23	5.31	6.38

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
21.0	4.47	5.60	6.73
21.5	4.73	5.93	7.13
22.0	5.03	6.30	7.58
22.5	5.36	6.72	8.08
23.0	5.74	7.20	8.66
23.5	6.19	7.76	9.32
24.0	6.70	8.40	10.10
24.5	7.31	9.17	11.02
25.0	8.04	10.08	12.12
25.5	8.93	11.20	13.47
26.0	10.05	12.60	15.15
26.5	11.49	14.40	17.32
27.0	13.40	16.80	20.20
27.5	16.08	20.16	24.24
28.0	20.10	25.20	30.31
28.5	26.80	33.61	40.41
29.0	40.20	50.41	60.61

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59

DILUTION FACTORS

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{14.7\text{ psi} + \text{Final Pressure (psi)}}{14.7\text{ psi} + \text{Initial Pressure (psi)}}$$

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59
4.2	1.04	1.31	1.57
4.4	1.03	1.29	1.55
4.6	1.02	1.28	1.54
4.8	1.01	1.27	1.52
5.0	1.00	1.25	1.51
5.2	NA	1.24	1.49
5.4	NA	1.23	1.48
5.6	NA	1.22	1.46
5.8	NA	1.20	1.45
6.0	NA	1.19	1.43
6.2	NA	1.18	1.42
6.4	NA	1.17	1.41
6.6	NA	1.16	1.39
6.8	NA	1.15	1.38
7.0	NA	1.14	1.37
7.2	NA	1.13	1.36
7.4	NA	1.12	1.34

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
7.6	NA	1.11	1.33
7.8	NA	1.10	1.32
8.0	NA	1.09	1.31
8.2	NA	1.08	1.30
8.4	NA	1.07	1.29
8.6	NA	1.06	1.27
8.8	NA	1.05	1.26
9.0	NA	1.04	1.25
9.2	NA	1.03	1.24
9.4	NA	1.02	1.23
9.6	NA	1.02	1.22
9.8	NA	1.01	1.21
10.0	NA	1.00	1.20
10.2	NA	NA	1.19
10.4	NA	NA	1.18
10.6	NA	NA	1.17
10.8	NA	NA	1.16
11.0	NA	NA	1.16
11.2	NA	NA	1.15
11.4	NA	NA	1.14
11.6	NA	NA	1.13
11.8	NA	NA	1.12
12.0	NA	NA	1.11
12.2	NA	NA	1.10
12.4	NA	NA	1.10
12.6	NA	NA	1.09
12.8	NA	NA	1.08
13.0	NA	NA	1.07
13.2	NA	NA	1.06
13.4	NA	NA	1.06
13.6	NA	NA	1.05
13.8	NA	NA	1.04
14.0	NA	NA	1.03
14.2	NA	NA	1.03
14.4	NA	NA	1.02
14.6	NA	NA	1.01
14.8	NA	NA	1.01

Compound Listing

TO-15 (Sh)-BTEX only

CAS Number	Compound	Detection Limit ppbv	Type
71-43-2	Benzene	0.50	
100-41-4	Ethyl Benzene	0.50	
108-88-3	Toluene	0.50	
108-38-3	m,p-Xylene	0.50	
95-47-6	o-Xylene	0.50	
17060-07-0	1,2-Dichloroethane-d4		
2037-26-5	Toluene-d8		
460-00-4	4-Bromofluorobenzene		

File Name: O:\Variances\Variances 2013\Signed Variance Tables 2013
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Item	Parameter	SOW	ATL SOP	Approval
1	DoD QSM Box 32 – Second Source Standards	Second Source standard must be from a different manufacturer.	Second Source standard is from a different manufacturer or same manufacturer different lot number.	
2	SOW#7	EDDs must be accompanied by a signature page indicating correct values and format.	Signature page is not included along with the EDD.	
3	SOW #12	The LOQ must be at least 2 times the DL.	In the majority of the cases, the LOQ meets this criterion; however, when evaluating over 60 compounds on multiple instruments, there may be an isolated case in which LOQ is not 2 times the DL. In all cases, the LOQ>DL.	
4	SOW#13	The laboratory shall provide copies of all SOPs upon request by URS.	SOPs are available on an as needed basis upon signing a NDA.	
5	SOW#16	Hardcopy and EDD must be delivered.	The laboratory provides report as a pdf format and EDD which can be downloaded from the Web portal. The QC Summary Package may not have the navigable functionality in the pdf format.	
6	SOW#17	Samples may be disposed after 7 days of URS receipt of an acceptable data package.	Summa canisters are reusable media and will be released for cleaning after analyses have been completed and reviewed against project requirements.	
7	Attachment A	Cooler receipt form	Summa canisters are not shipped via a cooler and a cooler receipt form is not applicable.	

I agree to terms and conditions

File Name: O:\Variances\
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Method Modifications

Table 1. Summary of Method Modifications for TO-3

Requirement	EPA Method TO-3	Eurofins Air Toxics Modifications
Sample Collection	In-line field method.	Collection of sample in specially treated canisters or alternative containers for transport to and analysis by an off-site laboratory.
Preparation of Standards	Levels achieved through dilution of gas mixture.	Levels achieved through loading various volumes of the gas mixture.
Initial Calibration Calculation	4-point calibration using a linear regression model.	5-point calibration using average Response Factor.
Initial Calibration Frequency	Weekly.	When daily calibration standard recovery is outside 75-125%, or upon significant changes to the procedure or instrumentation.
Daily Calibration Standard Frequency	Prior to sample analysis and every 4-6 hrs.	Prior to sample analysis.
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard.	40 CFR Pt. 136 App. B.
Sample preconcentration and moisture management	Cyrogenic preconcentrator with a Nafion dryer.	Multi-bed Sorbent system.

File Name: O:\Variances\
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Table 2. Summary of Method Modifications for ASTM D1946

Requirement	ASTM D1946	Eurofins Air Toxics Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum 3-point calibration curve is performed. Quantitation is based on a daily calibration standard, which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by AT are blended to a ≥ 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL. Linear range is defined by the calibration curve. Bags may be loaded by vacuum or by positive pressure.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25 % RPD. for detections >5 X's the RL

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Media Certification Report

Canister Number: 6L# 34321
Can#: 105499-34321
Date : 01/29/16 11:30
Data File: d012834.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Benzene	71-43-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
4-Bromofluorobenzene	460-00-4		98.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: ` 6L# 33531
Can#: 105499-33531
Date : 01/29/16 1:41
Data File: d012818.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Benzene	71-43-2	0.250	ND	ppbv
4-Bromofluorobenzene	460-00-4		96.00	% Recovery

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www.airtoxics.com
1-800-985-5955

Media Certification Report

Canister Number: 6L# 35148
Can#: 105499-35148
Date : 01/29/16 3:31
Data File: d012821.d

Name	CAS	Cert RL	Conc.	Units
Benzene	71-43-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
4-Bromofluorobenzene	460-00-4		96.00	% Recovery

eurofins | Air Toxics

Media Certification Report

Canister Number: 6L# 35266
Can#: 105499-35266
Date : 01/29/16 2:18
Data File: d012819.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Benzene	71-43-2	0.250	ND	ppbv
4-Bromofluorobenzene	460-00-4		98.00	% Recovery

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 11/11/15
Workorder # L6022539	Form F1.27	Revision #12	Revision Date: 11/11/15	Page 1 of 2

S1	S2	S3	S4	D	**Section 1 – Spec Out**				
					Initials/Instrument/Date	**S1:** MPB3 OK 2/17/16	**S2:**	**S3:**	**S4:**
✓	✓				Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
					Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
NA					Manual Integrations included and approved				
✓				✓	Chain of Custody verified for special comments (add comments below)				
✓					Non-standard Target sublist verified (MDL, LOD, RL, control limits, etc.)				

Profile, analyses, reporting, special notes and unusual circumstances:

j flag to MDL, QSM 4.2, blank = PRL, dup tank, ; OK

A1	A2	A3	A4	D	**Section 2 – Sample Analysis**				
					Initials/Date	**A1:** gd 2/17/16	**A2:**	**A3:**	**A4:**
✓				✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, and Canister #s Verified				
NA				NA	**a)** Tedlar Bag IDs verified against COC **b)** Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
✓				NA	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓					12/24 Hr clock time & Hold Time met for all samples				
✓				✓	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks.				
✓				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes: 01A-04A ok, 01A Dup

D1	D2	D3	D4	T	3T	**Section 3 – Target Data Reduction**	**Technical Review Needed? Circle one: Yes/No**		**T:**	
						Initials/Instrument/ Date	**D1:** AT 2/18/16	**D2:**	**D3:**	**D4:**
NA						CAR # *(if applicable)*				
✓						Spectra Verified *(documentation of spectral defense included if applicable)*				
NA						TICs resemble reference spectra/ TICs between sample dups. are consistent *(if applicable)*				
✓						Lab Narrative is correct				
NA						TPH/NMOC calculations complete and included in folder				

Special notes:

A	3T	**Section 4- Atlas Data Entry**	**Lumen verified and included in folder**	**Circle one: Yes/No**
		Initials/Date: AT 2/20/16	**3rd Tier:** *(needed only for DOD or per client request)* BT 2/23/16	
NA	NA	Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
NA	NA	Manually entered results are checked		
✓	✓	At least one result per sample is verified against Target quant sheets		
✓	✓	Appropriate data qualifier flags are applied		
✓	✓	Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Workorder # :				Reason for Reissue:
W	T	3T	Q	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	Tech Review (Initials/Date)	*3rd Tier Review ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	QA Review (Initials/Date)

Workorder # :				Reason for Reissue:
W	T	3T	Q	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	Tech Review (Initials/Date)	*3rd Tier Review ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	QA Review (Initials/Date)

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Not Applicable

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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Modified TO-3

INVENTORY SHEET

Work Order #: 1602253B

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b. Target Compound Raw Data		
-Internal Standard Area and Retention Time Summary		
-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
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Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	3/3/16
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1602253B

Work Order Summary

CLIENT:	Mr. Jeff Aust AECOM 12120 Shamrock Plaza Suite 300 Omaha, NE 68154	**BILL TO:**	Accounts Payable Austin AECOM P.O. BOX 203970 Austin, TX 78720-1088
PHONE:	(402) 952-2516	**P.O. #**	320236
FAX:	(402) 952-2591	**PROJECT #**	60425210.23446540.0032AB Cannon AFB
DATE RECEIVED:	02/11/2016	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	02/24/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	CA504-SG01-005	Modified TO-3	10.0 "Hg	5 psi
02A	CA504-SG01-010	Modified TO-3	10.0 "Hg	5 psi
03A	CA504-SG03-005	Modified TO-3	10.5 "Hg	5 psi
04A	CA504-SG03-010	Modified TO-3	9.5 "Hg	5 psi
04AA	CA504-SG03-010 Lab Duplicate	Modified TO-3	9.5 "Hg	5 psi
05A	Lab Blank	Modified TO-3	NA	NA
06A	LCS	Modified TO-3	NA	NA
06AA	LCSD	Modified TO-3	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 02/24/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
DoD QSM 4.2 TO-3
AECOM
Workorder# 1602253B

Four 6 Liter Summa Canister (100% Certified) samples were received on February 11, 2016. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The TPH results are calculated using the response of Gasoline. A molecular weight of 100 is used to convert the TPH ppmv result to ug/m3. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system.

Method modifications and DoD QSM 4.2 modification taken to run these samples are summarized in the table below. Specific project requirements may over-ride the listed modifications.

Requirement	***TO-3***	***ATL Modifications***
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch </= 20 samples.
EPA Method TO-3 - Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
EPA Method TO-3 - Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
EPA Method TO-3 - Moisture Control	Nafion system	Sorbent system
EPA Method TO-3 - Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
EPA Method TO-3 - Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture
EPA Method TO-3 - Sample Collection	In-line field method	Collection of sample in specially treated canisters or alternative inert containers for transport to and analysis by an off-site laboratory.
DoD QSM 4.2 Box 32 Second Source Standard	Second Source standard must be from a different manufacturer.	Second Source standard is from a different manufacturer or same manufacturer with different lot number.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit.

The hydrocarbon profile present in samples CA504-SG01-005, CA504-SG01-010, CA504-SG03-005, CA504-SG03-010 and CA504-SG03-010 Lab Duplicate did not resemble that of commercial gasoline. Results were calculated using the response factor derived from the current gasoline linear calibration.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Sample Extract Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
CA504-SG01-005	1602253B-01A	2/ 9/2016	2/11/2016	NA	14	2/23/2016	NA	Good
CA504-SG01-010	1602253B-02A	2/ 9/2016	2/11/2016	NA	14	2/23/2016	NA	Good
CA504-SG03-005	1602253B-03A	2/ 9/2016	2/11/2016	NA	14	2/23/2016	NA	Good
CA504-SG03-010	1602253B-04A	2/ 9/2016	2/11/2016	NA	14	2/23/2016	NA	Good
CA504-SG03-010 Lab D	1602253B-04AA	2/ 9/2016	2/11/2016	NA	14	2/23/2016	NA	Good
Lab Blank	1602253B-05A	NA	NA	NA	NA	2/23/2016	NA	Good
LCS	1602253B-06A	NA	NA	NA	NA	2/23/2016	NA	Good
LCSD	1602253B-06AA	NA	NA	NA	NA	2/23/2016	NA	Good

Sample Results and Raw Data

MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

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Client ID:	CA504-SG01-005		
Lab ID:	1602253B-01A	**Date/Time Analyzed:**	2/23/16 10:48 AM
Date/Time Collected:	2/9/16 04:43 PM	**Dilution Factor:**	2.01
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	gcd.i / d022304

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	33	99	200	330

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	96

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022304.d
Lab Smp Id: 1602253B-01A
Inj Date : 23-FEB-2016 10:48
Operator : ly Inst ID: gcd.i
Smp Info : 10.0"Hg>5psi
Misc Info : 200mL,34321;1602253B-01A;
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 2.01000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.726	11.717	0.009	4755009	0.12049	0.1205
S 7 TPH (Gas Range)	7.346-21.366			1026836	0.03994	0.08027

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602253B-01A
Level: LOW
Operator: ly
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 200mL,34321;1602253B-01A;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1205	96.39	45-148

Data File: /chem/gcd.i/23Feb2016.b/d022304.d

Date : 23-FEB-2016 10:48

Client ID:

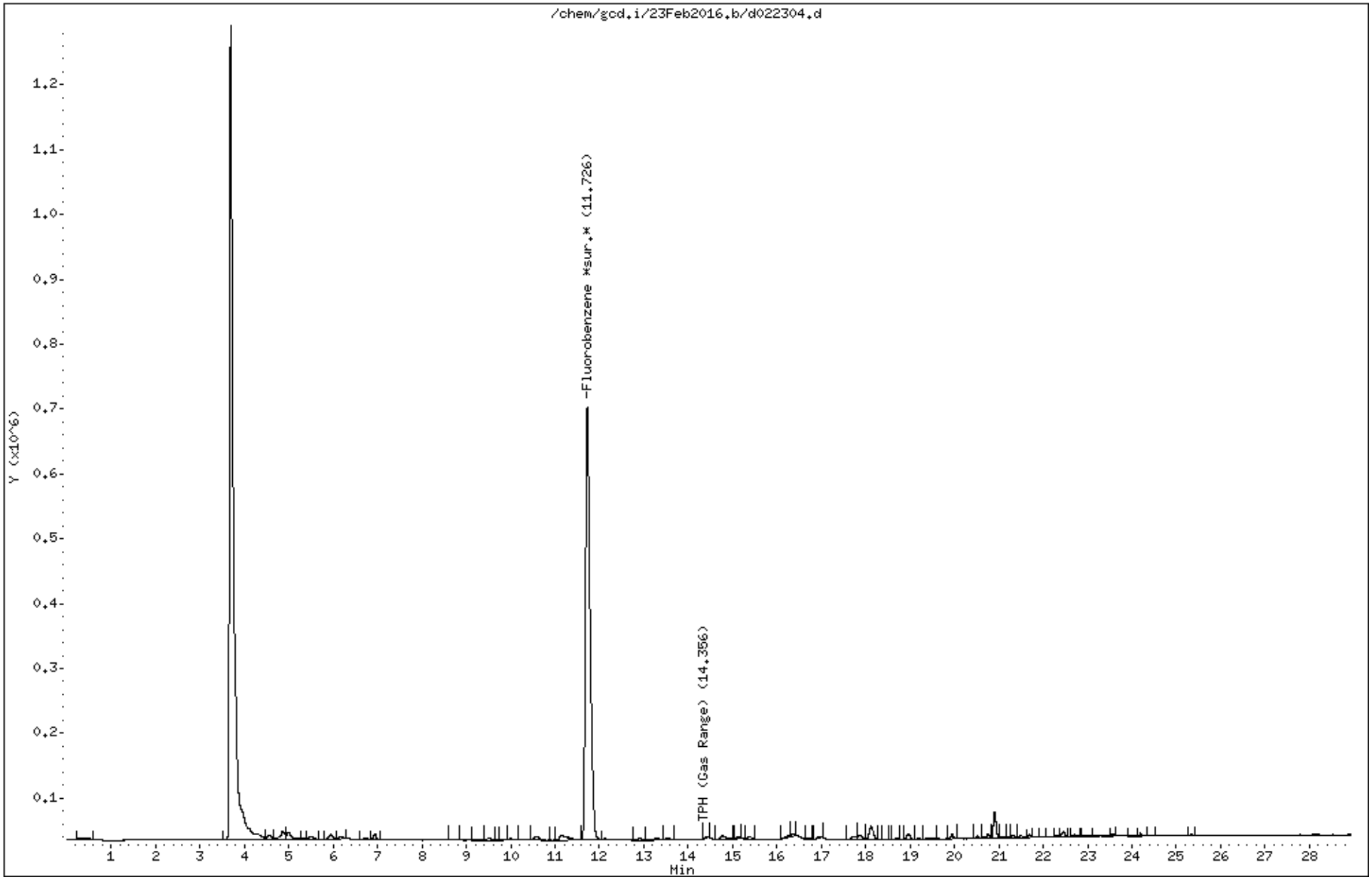
Sample Info: 10.0"Hg>5psi

Column phase:

Instrument: gcd.i

Operator: ly

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG01-010		
Lab ID:	1602253B-02A	**Date/Time Analyzed:**	2/23/16 11:21 AM
Date/Time Collected:	2/9/16 04:43 PM	**Dilution Factor:**	2.01
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	gcd.i / d022305

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	33	99	200	350

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	97

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022305.d
Lab Smp Id: 1602253B-02A
Inj Date : 23-FEB-2016 11:21
Operator : ly Inst ID: gcd.i
Smp Info : 10.0"Hg>5psi
Misc Info : 200mL,33531;1602253B-02A;
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 2.01000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.724	11.717	0.007	4789900	0.12138	0.1214
S 7 TPH (Gas Range)	7.346-21.366			1105489	0.04300	0.08642

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602253B-02A
Level: LOW
Operator: ly
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 200mL,33531;1602253B-02A;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1214	97.10	45-148

Data File: /chem/gcd.i/23Feb2016.b/d022305.d

Page 1

Date : 23-FEB-2016 11:21

Client ID:

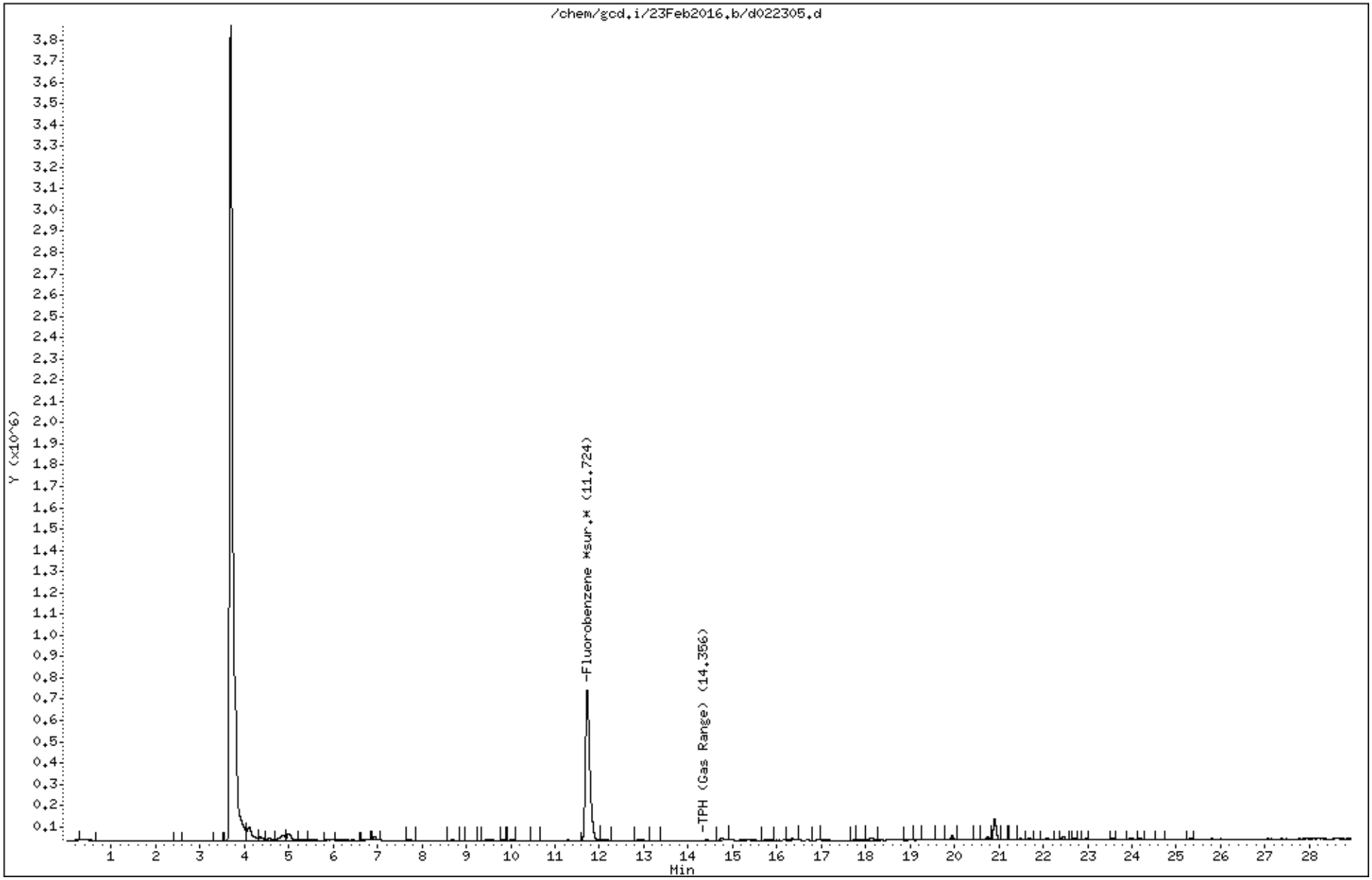
Instrument: gcd.i

Sample Info: 10.0"Hg>5psi

Operator: ly

Column phase:

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG03-005		
Lab ID:	1602253B-03A	**Date/Time Analyzed:**	2/23/16 11:54 AM
Date/Time Collected:	2/9/16 04:44 PM	**Dilution Factor:**	2.06
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	gcd.i / d022306

Compound	**CAS#**	**MDL (ug/m3)**	**LOD (ug/m3)**	**Rpt. Limit (ug/m3)**	**Amount (ug/m3)**
TPH (Gasoline Range)	9999-9999-208	34	100	210	310

Surrogates	**CAS#**	**Limits**	**%Recovery**
Fluorobenzene (FID)	462-06-602	45-148	97

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022306.d
Lab Smp Id: 1602253B-03A
Inj Date : 23-FEB-2016 11:54
Operator : ly Inst ID: gcd.i
Smp Info : 10.5"Hg>5psi
Misc Info : 200mL,35148;1602253B-03A;
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 2.06000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.727	11.717	0.010	4797193	0.12156	0.1216
S 7 TPH (Gas Range)	7.346-21.366			959346	0.03731	0.07686

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602253B-03A
Level: LOW
Operator: ly
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 200mL,35148;1602253B-03A;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1216	97.25	45-148

Data File: /chem/gcd.i/23Feb2016.b/d022306.d

Date : 23-FEB-2016 11:54

Client ID:

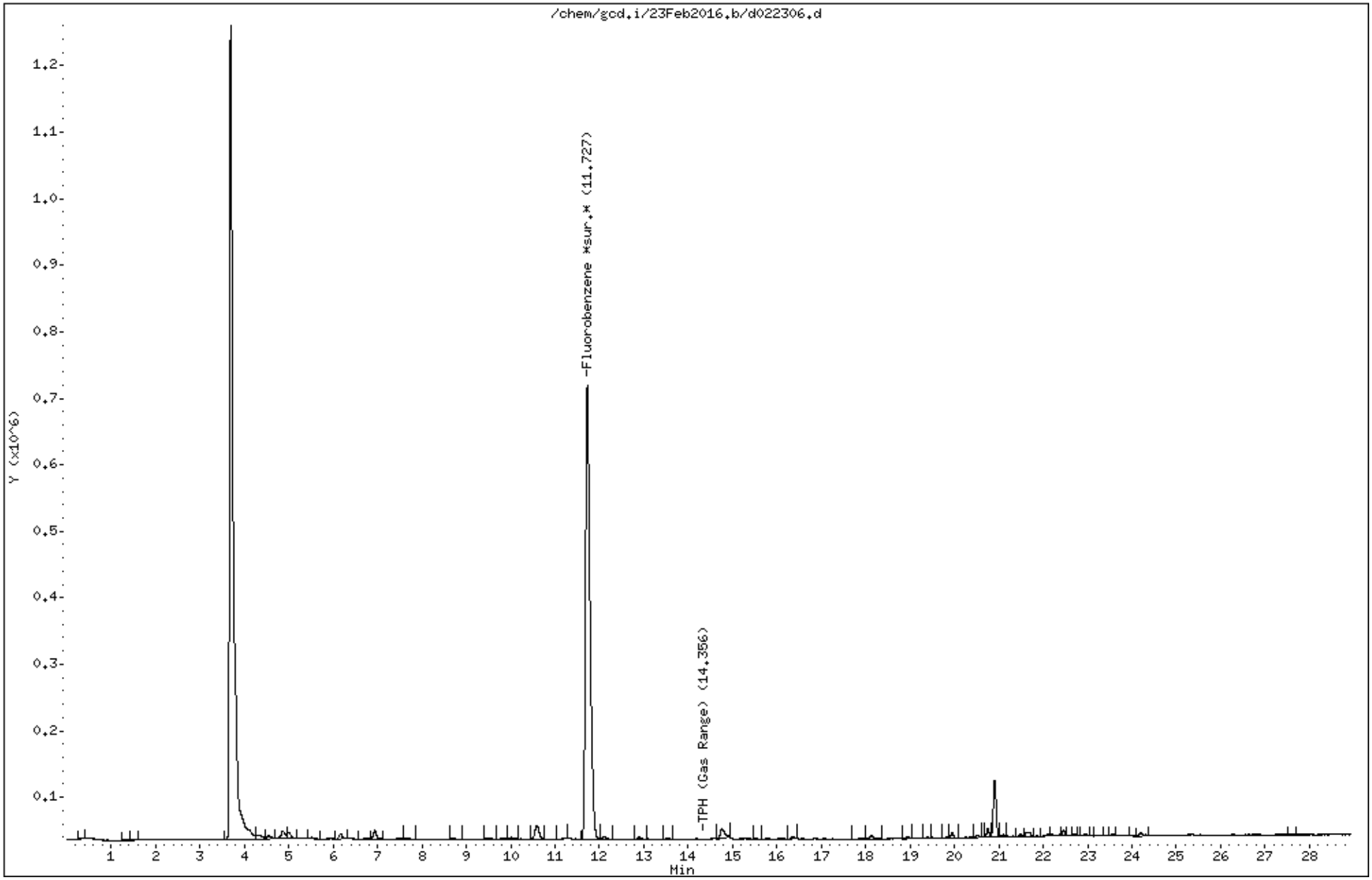
Instrument: gcd.i

Sample Info: 10.5"Hg>5psi

Operator: ly

Column phase:

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG03-010		
Lab ID:	1602253B-04A	**Date/Time Analyzed:**	2/23/16 12:36 PM
Date/Time Collected:	2/9/16 04:44 PM	**Dilution Factor:**	1.96
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	gcd.i / d022307

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	32	96	200	220

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	97

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022307.d
Lab Smp Id: 1602253B-04A
Inj Date : 23-FEB-2016 12:36
Operator : ly Inst ID: gcd.i
Smp Info : 9.5"Hg>5psi
Misc Info : 200mL,35266;1602253B-04A;
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 1.96000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.737	11.717	0.020	4806562	0.12180	0.1218
S 7 TPH (Gas Range)	7.346-21.366			701505	0.02728	0.05348

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602253B-04A
Level: LOW
Operator: ly
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 200mL,35266;1602253B-04A;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1218	97.44	45-148

Data File: /chem/gcd.i/23Feb2016.b/d022307.d

Date : 23-FEB-2016 12:36

Client ID:

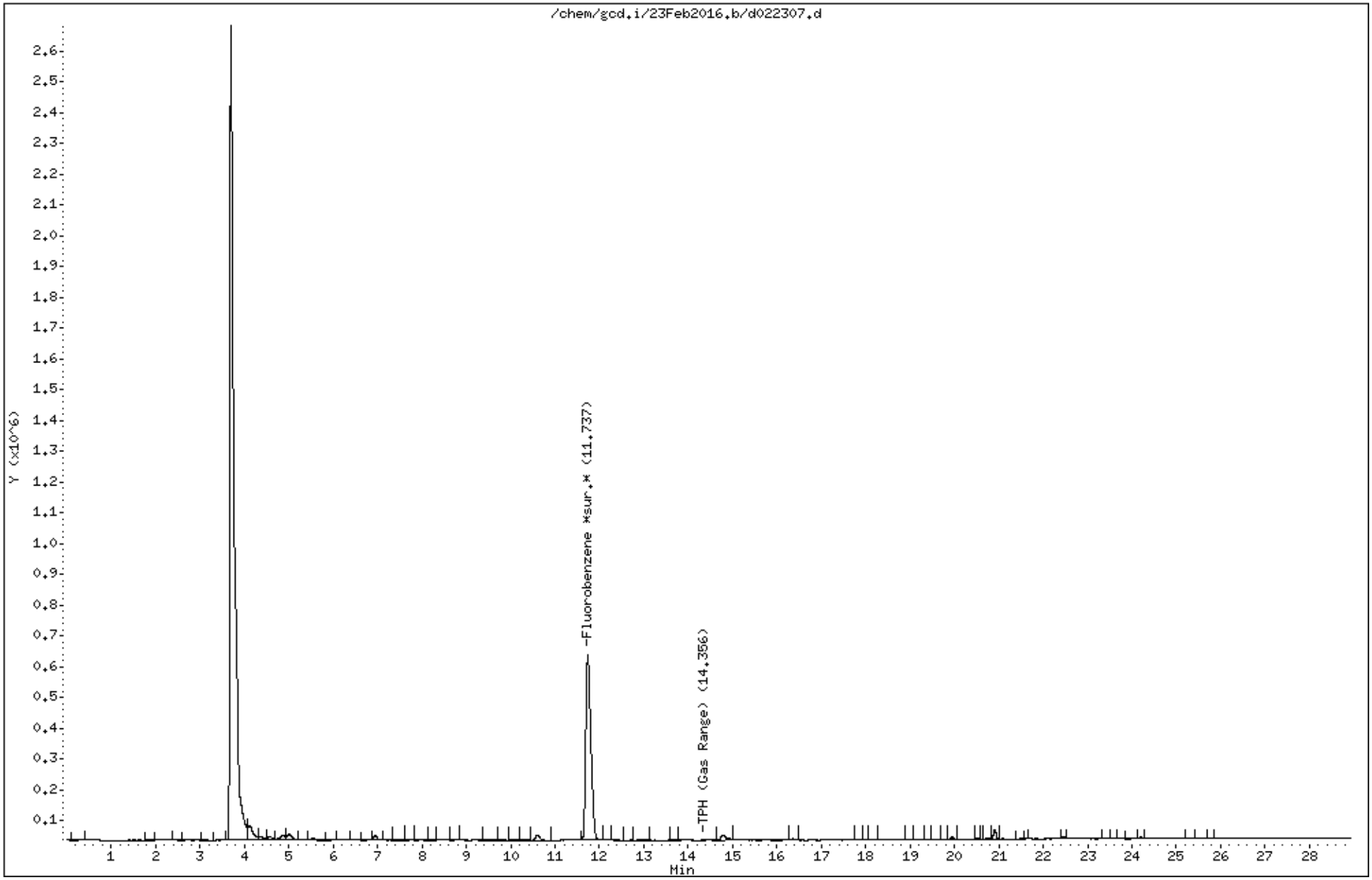
Instrument: gcd.i

Sample Info: 9.5"Hg>5psi

Operator: ly

Column phase:

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG03-010 Lab Duplicate		
Lab ID:	1602253B-04AA	**Date/Time Analyzed:**	2/23/16 01:38 PM
Date/Time Collected:	2/9/16 04:44 PM	**Dilution Factor:**	1.96
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	gcd.i / d022308

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	32	96	200	260

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	97

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022308.d
Lab Smp Id: 1602253B-04AA
Inj Date : 23-FEB-2016 13:38
Operator : ly Inst ID: gcd.i
Smp Info : 9.5"Hg>5psi
Misc Info : 200mL,35266;1602253B-04AA;
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 1.96000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.726	11.717	0.009	4784968	0.12125	0.1212
S 7 TPH (Gas Range)	7.346-21.366			839693	0.03266	0.06401

Report Date: 24-Feb-2016 15:24

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602253B-04AA
Level: LOW
Operator: ly
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 200mL,35266;1602253B-04AA;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1212	97.00	45-148

Data File: /chem/gcd.i/23Feb2016.b/d022308.d

Date : 23-FEB-2016 13:38

Client ID:

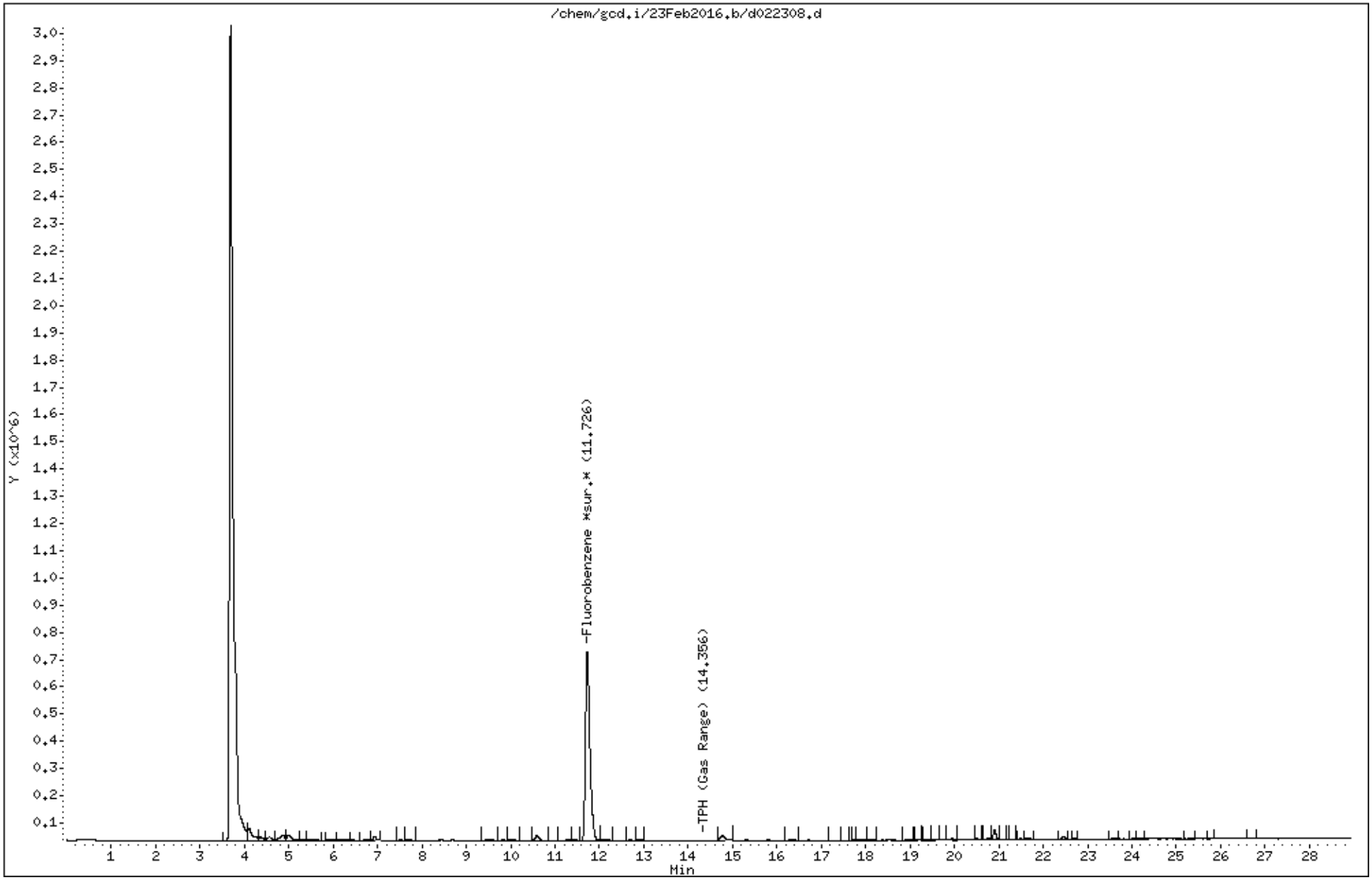
Instrument: gcd.i

Sample Info: 9.5"Hg>5psi

Operator: ly

Column phase:

Column diameter: 2.00



QC Results and Raw Data

MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

Client ID:	Lab Blank		
Lab ID:	1602253B-05A	**Date/Time Analyzed:**	2/23/16 09:44 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	gcd.i / d022303a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	16	49	100	Not Detected U

U = The analyte was not detected above the MDL.

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	97

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022303a.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 23-FEB-2016 09:44
Operator : ly Inst ID: gcd.i
Smp Info : Humid
Misc Info : 200mL,14867;Lab Blank;Lab Blank;
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.731	11.717	0.014	4792415	0.12144	0.1214
S 7 TPH (Gas Range)	Compound Not Detected.					

Report Date: 24-Feb-2016 15:22

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: ly
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 200mL,14867;Lab Blank;Lab Blank;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1214	97.15	45-148

Data File: /chem/gcd.i/23Feb2016.b/d022303a.d

Date : 23-FEB-2016 09:44

Client ID: Lab Blank

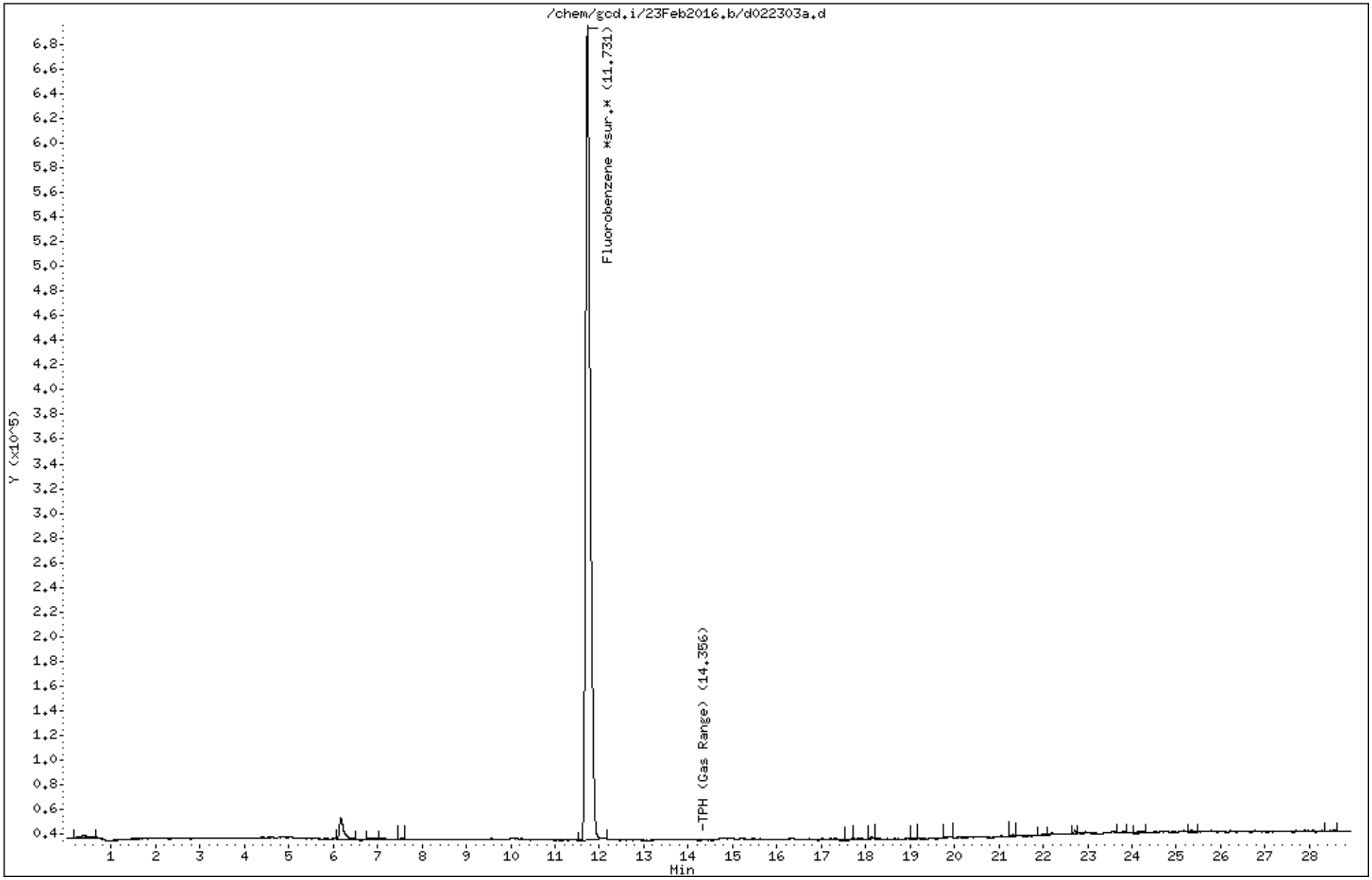
Instrument: gcd.i

Sample Info: Humid

Operator: ly

Column phase:

Column diameter: 2.00



LEVEL-IV VALIDATABLE

MODIFIED EPA METHOD TO-3 GC/FID

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1602253B

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY									
		Fluorobenzene (FID)	#		#		#		#	TOTAL OUT
01	CA504-SG01-005	96								0
02	CA504-SG01-010	97								0
03	CA504-SG03-005	97								0
04	CA504-SG03-010	97								0
05	CA504-SG03-010 Lab Duplicate	97								0
06	Lab Blank	97								0
07	LCS	106								0
08	LCSD	103								0
09										0
10										0
11										0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

Fluorobenzene (FID) 45 - 148

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: d022308.d & d022307.d

Lab Sample ID: 04A & 04AA

Dilution: 1.96 & 1.96

Client Sample ID: &

Date Analyzed: 2/23/16 & 2/23/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
9999-9999-208	TPH (Gasoline Range)	0.05348		0.06401		18	Y

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: d022311a.d & d022302a.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 2/23/16 & 2/23/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
9999-9999-208	TPH (Gasoline Range)	84		83		1.2	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUN-2015 08:34
End Cal Date : 21-SEP-2015 17:12
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/gcd.i/21Sep2015.b/d1530921.m
Cal Date : 22-Sep-2015 12:35 lyohanne
Curve Type : Average

Calibration File Names:
Level 1: /chem/gcd.i/21Sep2015.b/d092108.d
Level 2: /chem/gcd.i/21Sep2015.b/d092109.d
Level 3: /chem/gcd.i/21Sep2015.b/d092110.d
Level 4: /chem/gcd.i/21Sep2015.b/d092111.d
Level 5: /chem/gcd.i/21Sep2015.b/d092112.d

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	RRF	% RSD	
S 1 c2+ TO12(hept)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 2 c2+ TO12(hexane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 Hexane	40030000	37628480	42105095	40040543	39017140	39764252	4.122	
4 Heptane (hept)	29530400	30133140	41348580	42018357	41583728	36922841	17.553	
S 7 TPH (Gas Range)	18174360	25086220	24367260	28186843	32742284	25711393	20.815	
S 8 C2+ (gas)	28393240	36782404	34383368	38566571	44825575	36590232	16.388	
S 9 C2-C4 (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 10 C5+ (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 114 C2-C10(gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 128 C2-C10(gas100)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 11 TPH (JP4 Range)	37688642	43019358	43695391	49442406	48904099	44549979	10.826	
S 12 C2+(jp4)	45484403	46425444	47061935	53053694	52723131	48949721	7.438	
S 13 c2-c4 (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 14 c5+ (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 6 Fluorobenzene *sur.*	36054032	43534152	39412336	40671328	37645872	39463544	7.274	

Calibration History

Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Start Cal Date: 08-JUN-2015 08:34
End Cal Date : 21-SEP-2015 17:12

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.00000		
21-SEP-2015 14:11	surr	/chem/gcd.i/21Sep2015.b/d092108.d
08-JUN-2015 19:24	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060818.d
08-JUN-2015 13:26	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060810.d
08-JUN-2015 08:34	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060802.d

Cal Level: 2 , Cal Amount: 0.00000		
21-SEP-2015 14:42	surr	/chem/gcd.i/21Sep2015.b/d092109.d
08-JUN-2015 19:59	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060819.d
08-JUN-2015 14:02	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060811.d
08-JUN-2015 09:07	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060803.d

Cal Level: 3 , Cal Amount: 0.00000		
21-SEP-2015 15:12	surr	/chem/gcd.i/21Sep2015.b/d092110.d
08-JUN-2015 20:55	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060820.d
08-JUN-2015 14:35	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060812.d
08-JUN-2015 09:40	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060804.d

Cal Level: 4 , Cal Amount: 0.00000		
21-SEP-2015 15:48	surr	/chem/gcd.i/21Sep2015.b/d092111.d
08-JUN-2015 21:35	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060821.d
08-JUN-2015 15:19	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060813.d
08-JUN-2015 10:13	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060805.d

Cal Level: 5 , Cal Amount: 0.00000		
21-SEP-2015 17:12	surr	/chem/gcd.i/21Sep2015.b/d092112.d
08-JUN-2015 22:10	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060822.d
08-JUN-2015 16:10	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060814.d
08-JUN-2015 10:45	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060806.d

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUN-2015 08:34
End Cal Date : 21-SEP-2015 17:12
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/gcd.i/21Sep2015.b/d1530921.m
Cal Date : 22-Sep-2015 12:19 lyohanne
Curve Type : Average

Calibration File Names:
Level 1: /chem/gcd.i/21Sep2015.b/d092108.d
Level 2: /chem/gcd.i/21Sep2015.b/d092109.d
Level 3: /chem/gcd.i/21Sep2015.b/d092110.d
Level 4: /chem/gcd.i/21Sep2015.b/d092111.d
Level 5: /chem/gcd.i/21Sep2015.b/d092112.d

Please see Calibration History page(s) for all the calibration files.

gmw 9/28/15

ly 9/22/15

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	RRF	% RSD	
S 1 c2+ TO12(hept)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 2 c2+ TO12(hexane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 Hexane	40030000	37628480	42105095	40040543	39017140	39764252	4.122	
4 Heptane (hept)	29530400	30133140	41348580	42018357	41583728	36922841	17.553	
S 7 TPH (Gas Range)	18174360	25086220	24367260	28186843	32742284	25711393	20.815	
S 8 C2+ (gas)	28393240	36782404	34383368	38566571	44825575	36590232	16.388	
S 9 C2-C4 (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 10 C5+ (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 114 C2-C10(gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 128 C2-C10(gas100)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 11 TPH (JP4 Range)	37688642	43019358	43695391	49442406	48904099	44549979	10.826	
S 12 C2+(jp4)	45484403	46425444	47061935	53053694	52723131	48949721	7.438	
S 13 c2-c4 (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 14 c5+ (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 6 Fluorobenzene *sur.*	36054032	43534152	39412336	40671328	37645872	39463544	7.274	

Surrogate only

Eurofins Air Toxics, Inc. **GC-D** **Logbook #: 2738**

Method: TO-3 TO-12 (circle one) Surrogate ID#: 2516-193 Exp. Date: 12/8/15 Leak Check: Ly

	USE	File #	Sample Name/Client ID	Can #	Pressure	Amt	DF	Date	Time	Init	Comments
1	✓	D092107	System Blank	33543	Humid	200mL	1.00	9/21/15	1243	Ly	
2	✓	08	2516-167 MBTEX	34345	1.0ppmv → 0.001 ppmv	(50x) 10mL			1411		Level-1 Surrogate only
3	✓	09			1.0ppmv → 0.005ppmv	1.0mL			1442		-2
4	✓	10			1.0ppmv → 0.025ppmv	5.0mL			1512		-3 / CCV
5	✓	11			1.0ppmv → 0.13ppmv	25mL			1548	gd	-4
6	✓	12			1.0ppmv → 0.5 ppmv	100mL			1712		-5
7	✓	13	System Blank	NA	UHP N_2	500mL			1870		
8	✓	14	2516-190 MBTEX	34310	1.0ppmv → 0.05ppmv	10mL			1928		ICV / LCS
9	✓	15	2516-195 Gas	1620	100ppmv → 1.25ppmv	2.5mL			2015		CCV
10	✓	16	2516-164	22513					2058		LCS
11	✓	17	Lab Blank	33543	Humid	200mL			2144		
12	✓	18	1509166 -01A	1042	2.4"Hg → 15.4psi		2.23		2233	Ly	
13	✗	19	-02A	1L1503	13.7"Hg → 14.6psi	30mL	24.4	9/22/15	0849		Over diluted
14	✓	20	-02A			200mL	3.66		0937		
15	✓	21	1509156 -01A	35669	Ambient	4.0mL	117		1011		

Calculation Check: File ID: D092110 Compound: Benzene Initials: Ly

$$\text{Sample Amt} = \frac{\text{Area Counts Sample}}{\text{RF}} \times \text{Dilution Factor} = \frac{(3727061)}{(14960691)} \times (1.00) = \boxed{0.02491}$$

Reported Result: 0.02491

Reviewed by: Ly Date: 9/22/15

Eurofins Air Toxics, Inc. **GC-D** **Logbook #: 2644**

Method: TO-3 TO-12 (circle one) Surrogate ID#: 2516-152A Exp. Date: 8/26/15 **Leak Check:** gm

0040 of 0284

	USE	File #	Sample Name/Client ID	Can #	Pressure	Amt	DF	Date	Time	Init	Comments
1	✓	D060801	System Blank	UHP N_2	NA	50mL	1.00	6/8/15	0759	gm	System Blank
2	✓	02	2516-172 Gasoline	03946	100ppmv → 0.025ppmv	(100X) 5.0mL	1.00		0834		Level 1.
3	✓	03			100ppmv → 0.25ppmv	0.5mL			0907		Level 2.
4	✓	04			100ppmv → 2.5ppmv	5.0mL			0940		Level 3.
5	✓	05			100ppmv → 10 ppmv	20mL			1013		Level 4.
6	✓	06			100ppmv → 25 ppmv	50mL			1045		Level 5.
7	✓	07	System Blank	UHP N_2	NA	50mL			1127		System Blank
8	✓	08	2516-164 Gasoline	22513	100ppmv → 1.25 ppmv	2.5mL			1207		ICV
9	✓	09	System Blank	UHP N_2	NA	50mL			1254	gm	System Blank
10	✓	10	2516-150 B.P.	33907	50ppmv → 0.01ppmv	(100X) 4.0mL			1326		Level 1.
11	✓	11			50ppmv → 0.05ppmv	(100X) 20mL			1402		Level 2.
12	✓	12			50ppmv → 0.20	0.8mL			1435	gd	Level 3.
13	✓	13			50ppmv → 0.35 ppmv	1.4mL			1519		4
14	✓	14			50ppmv → 0.5 ppmv	2.0mL			1610		5
15	✓	15	System Blank	~~3604~~ UHP N_2	NA	50mL			1714 ~~1754~~		System Blank
	✓	16	2516-155 Heptane	36047	10.8ppmv → 0.2ppmv	4.0mL			1754		ICV

Calculation Check: File ID: D060808 Compound: TPH Gas Range Initials: gd

$$\text{Sample Amt} = \frac{\text{Area Counts Sample}}{\text{RF}} \times \text{Dilution Factor} = \frac{(29566802)}{(25711393)} \times (1.00) = \boxed{1.150}$$

Reported Result: 1.150

Reviewed by: gd Date: 6/11/15

Eurofins Air Toxics, Inc. **GC-D** **Logbook #: 2644**

Method: TO-3 TO-12 (circle one) Surrogate ID#: 2516-152A Exp. Date: 8/26/15 **Leak Check:** gd

	USE	File #	Sample Name/Client ID	Can #	Pressure	Amt	DF	Date	Time	Init	Comments
1	✓	D060817	System Blank	UHPN2	NA	50mL	1.00	6/8/15	1832	gd	
2	✓	18	2516-177 JP-4	05355	81ppmv – 0.0243ppmv	(100X) 6.0mL			1924		level - 1
3	✓	19			81ppmv – 0.243	0.6mL			1959		-2
4	✓	20			81ppmv – 2.02ppmv	5.0mL			2055		-3
5	✓	21			81ppmv – 8.10ppmv	20mL			2135		-4
6	✓	22			81ppmv – 20.2ppmv	50mL			2210		-5
7	✓	23	System Blank	UHPN2	NA	50mL			2247	gm	System Blank
8	✓	24	2516-124A JP-4	405	81ppmv → 2.0ppmv	5.0mL		6/9/15	0744		ICV
9											
10											
11											
12											
13											
14											
15								gd	6/11/15		

Calculation Check: File ID: D060824 Compound: JP-4 Range Initials: gd

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × Dilution Factor = $\frac{(83904060)}{(44549979)}$ × (1.00) = 1.883

Reported Result: 1.883

Reviewed by: gd Date: 6/11/15

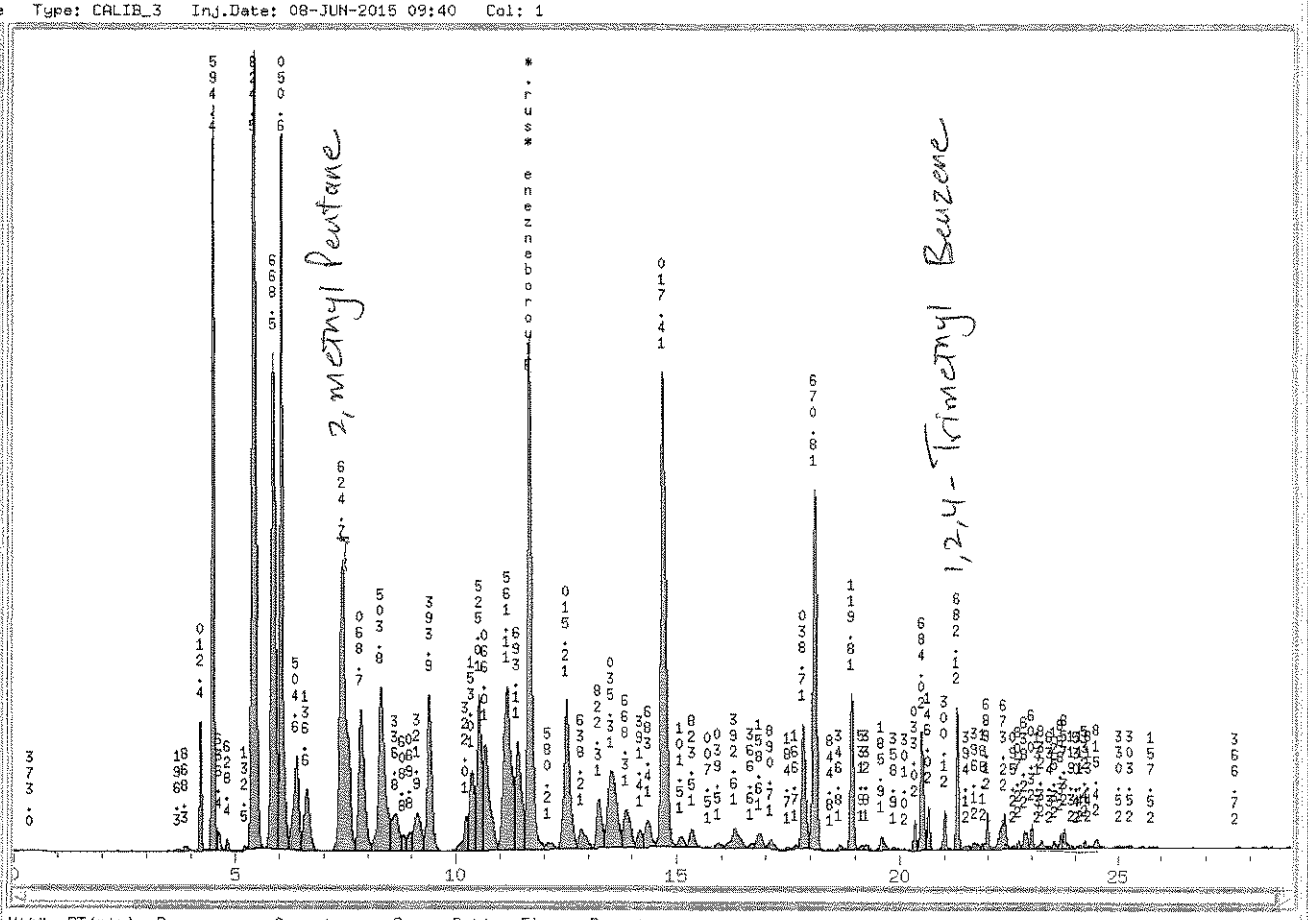
TargetReview: eeyore: 2516-172 Gasoline: /chem/gcd.i/08Jun2015.b/d060804.d

File Security Edit Display Process Help

Sample: 2516-172 Gasoline Type: CALIB_3 Inj.Date: 08-JUN-2015 09:40 Col: 1

I+ 6 Fluorobenzene
S+ 7 TPH (Gas Range
S+ 8 C2+ (gas)

d060804.d



Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	11.660	6353741	0.1376	0.1376	100		

- Mark Fluorobenzene *sur,* Undetected.

TPH(gas range): 7.426 -0.08 → 21.286 +0.08

7.346 → 21.366

gw
6/10/15

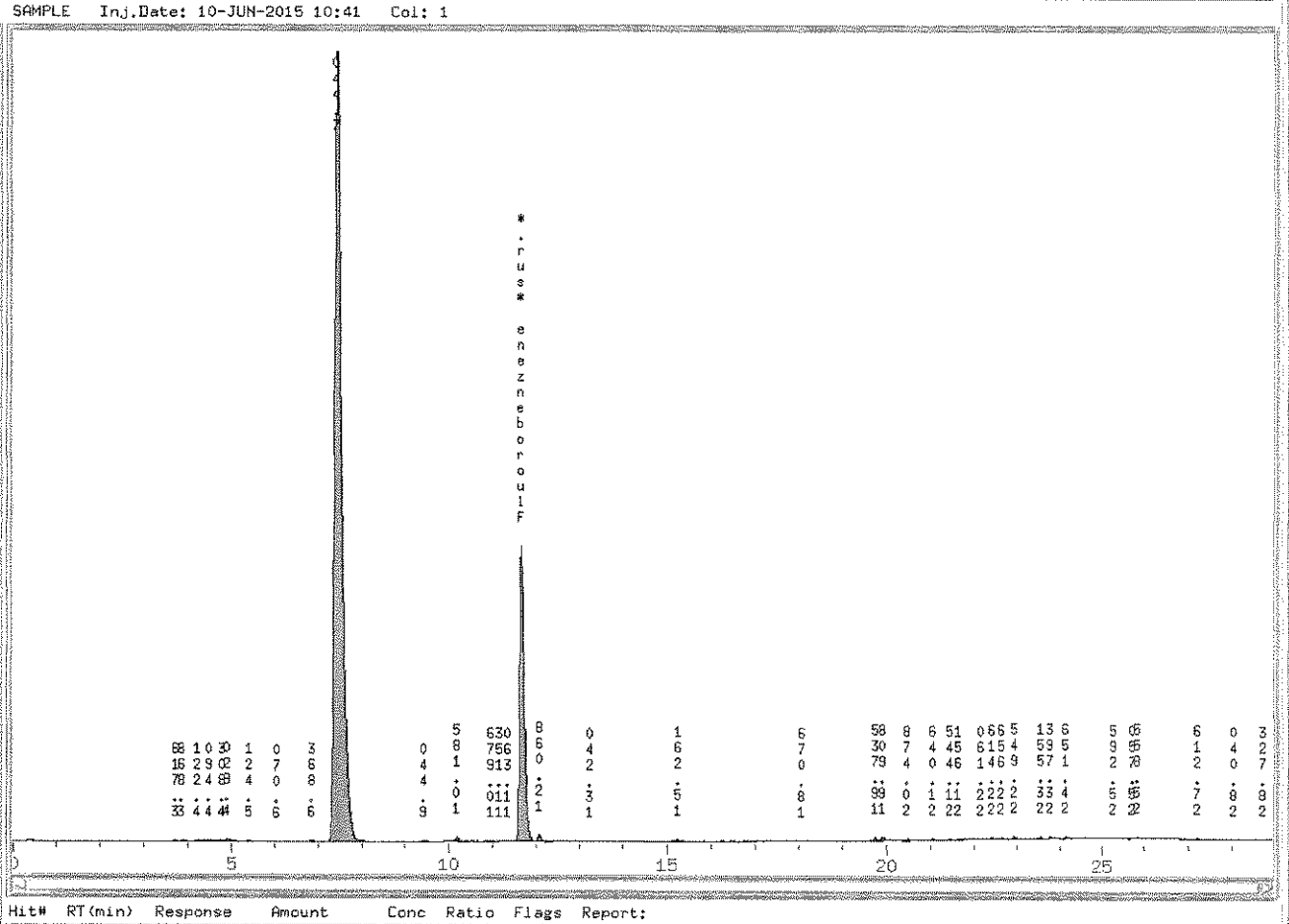
TargetReview: eeyore: 25687-117: /chem/gcd.i/10Jun2015.b/d060825.d

File Security Edit Display Process Help

Sample: 25687-117 Type: SAMPLE Inj.Date: 10-JUN-2015 10:41 Col: 1

3 Hexane
4 Heptane (hept)
*+ 6 Fluorobenzene

d060825.d



Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
—	Hexane	Undetected	(Expected RT: 8.348)				

2, methyl Pentane std.
for RT.

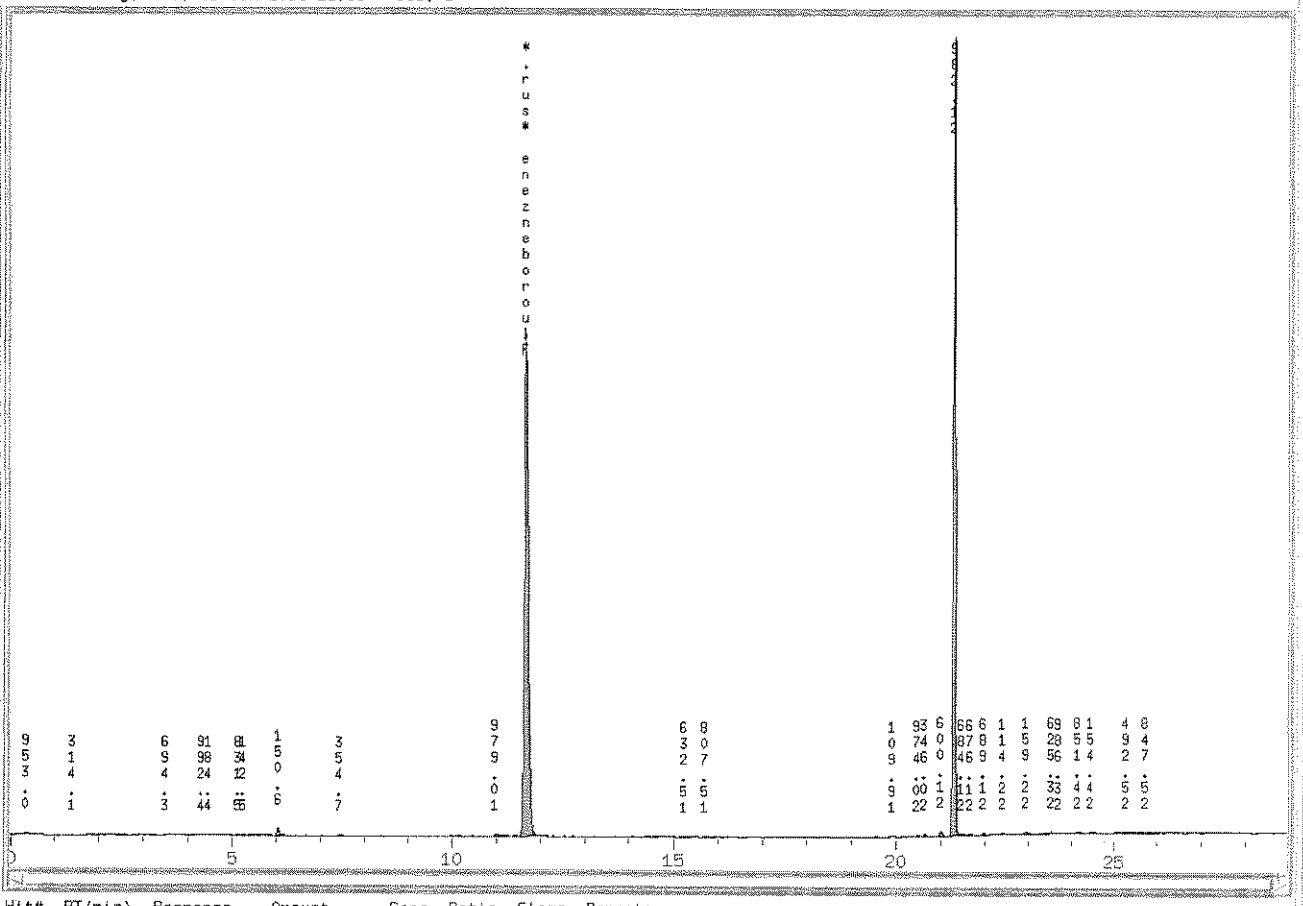
TargetReview: eeyore: 1,2,4-TMB: /chem/gcd.i/11Jun2015.b/d061117.d

File Search Edit Display Process Help

Sample: 1,2,4-TMB Type: SAMPLE Inj.Date: 11-JUN-2015 22:33 Col: 1

r+ 6 Fluorobenzene
S+ 7 TPH (Gas Range
S+ 8 C2+ (gas)
S+ 9 C2-C4 (gas)
S+ 114 C2-C10(gas)
S+ 10 C5+ (gas)

d061117.d



Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	11.664	4978190	0.1002	0.1002	100		

- Mark Fluorobenzene *sur,* Undetected.

1,2,4 Trimethyl Benzene Std.
for RT.

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060808.d
Lab Smp Id: 2516-164 Gasoline Client Smp ID: ICV
Inj Date : 08-JUN-2015 12:07
Operator : gm Inst ID: gcd.i
Smp Info : LCS
Misc Info : 2.5ml,22513;2516-164 Gasoline;LCS
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:35 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.672	11.696	-0.024	6394545	0.16204	0.1620
S 7 TPH (Gas Range)	7.346	21.366		29566802	1.14995	1.150
S 8 C2+ (gas)	3.643	29.000		40306497	1.10156	1.102

Report Date: 22-Sep-2015 12:35

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 08Jun2015
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-164 Gasoline
Client Smp ID: ICV
Level: LOW
Operator: gm
Data Type: GC DATA
SampleType: LCS
SpikeList File: 1.25ppmvGAS.spk
Quant Type: ESTD
Sublist File: TPH_C2+(Gas).sub
Method File: /chem/gcd.i/21Sep2015.b/d1530921.m
Misc Info: 2.5ml,22513;2516-164 Gasoline;LCS

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 7 TPH (Gas Range)	1.250	1.150	92.00	75-125
S 8 C2+ (gas)	1.250	1.102	88.13	75-125

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1620	129.63	75-150

Data File: /var/chem/gcd.i/21Sep2015.b/d060808.d

Date : 08-JUN-2015 12:07

Client ID: ICV

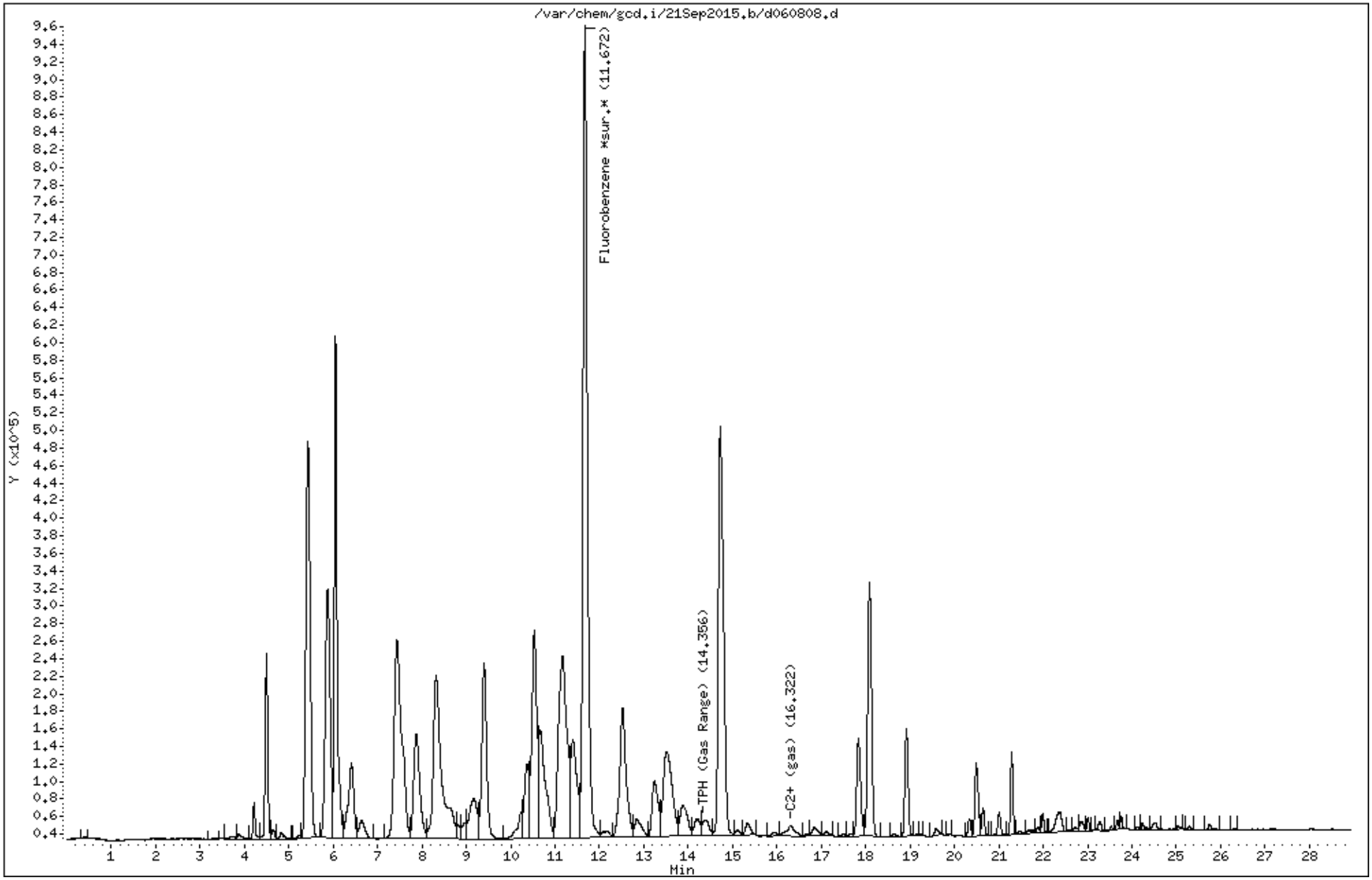
Instrument: gcd.i

Sample Info: LCS

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060816.d
Lab Smp Id: 2516-155 HepHex Client Smp ID: ICV
Inj Date : 08-JUN-2015 17:54
Operator : gd Inst ID: gcd.i
Smp Info : ICV
Misc Info : 4.0ml,36047;2516-155 HepHex;ICV
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:35 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: ICV
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
3 Hexane	8.311	8.348	-0.037	8237909	0.20717	0.2072
4 Heptane (hept)	11.406	11.446	-0.040	7803034	0.21133	0.2113
$ 6 Fluorobenzene *sur.*	11.668	11.696	-0.028	6297151	0.15957	0.1596

Report Date: 22-Sep-2015 12:35

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 08Jun2015
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-155 HepHex
Client Smp ID: ICV
Level: LOW
Operator: gd
Data Type: GC DATA
SampleType: ICV
SpikeList File: HepHexLCS.spk
Quant Type: ESTD
Sublist File: Hep_Hex.sub
Method File: /chem/gcd.i/21Sep2015.b/d1530921.m
Misc Info: 4.0ml,36047;2516-155 HepHex;ICV

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
3 Hexane	0.2100	0.2072	98.65	75-125
4 Heptane (hept)	0.2160	0.2113	97.84	75-125

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1596	127.66	75-150

Data File: /var/chem/gcd.i/21Sep2015.b/d060816.d

Date : 08-JUN-2015 17:54

Client ID: ICV

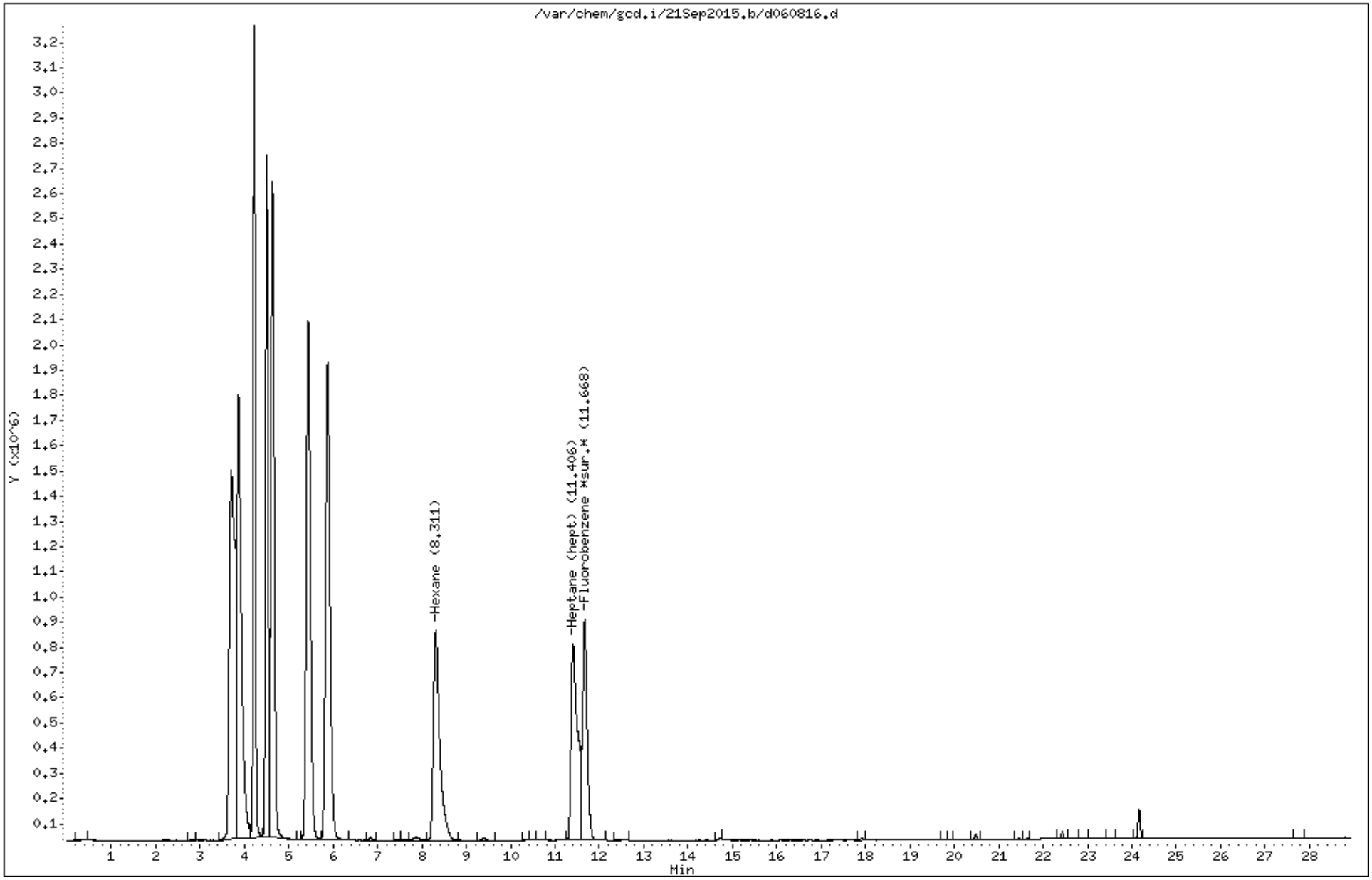
Instrument: gcd.i

Sample Info: ICV

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060824.d
Lab Smp Id: 2516-124A JP-4 Client Smp ID: ICV
Inj Date : 09-JUN-2015 07:44
Operator : gm Inst ID: gcd.i
Smp Info : ICV
Misc Info : 5.0ml,405;2516-124A JP-4;ICV
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:35 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.655	11.696	-0.041	5363659	0.13591	0.1359
S 11 TPH (JP4 Range)	8.233-22.508			83904060	1.88337	1.883
S 12 C2+(jp4)	3.643-29.000			91639253	1.87211	1.872

Report Date: 22-Sep-2015 12:35

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 09Jun2015
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-124A JP-4
Client Smp ID: ICV
Level: LOW
Operator: gm
Data Type: GC DATA
SampleType: LCS
SpikeList File: 2.0ppmvJP4.spk
Quant Type: ESTD
Sublist File: TPH_C2+(JP4).sub
Method File: /chem/gcd.i/21Sep2015.b/d1530921.m
Misc Info: 5.0ml,405;2516-124A JP-4;ICV

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 12 C2+(jp4)	2.020	1.872	92.68	75-125
S 11 TPH (JP4 Range)	2.020	1.883	93.24	75-125

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1359	108.73	75-150

Data File: /var/chem/gcd.i/21Sep2015.b/d060824.d

Date : 09-JUN-2015 07:44

Client ID: ICV

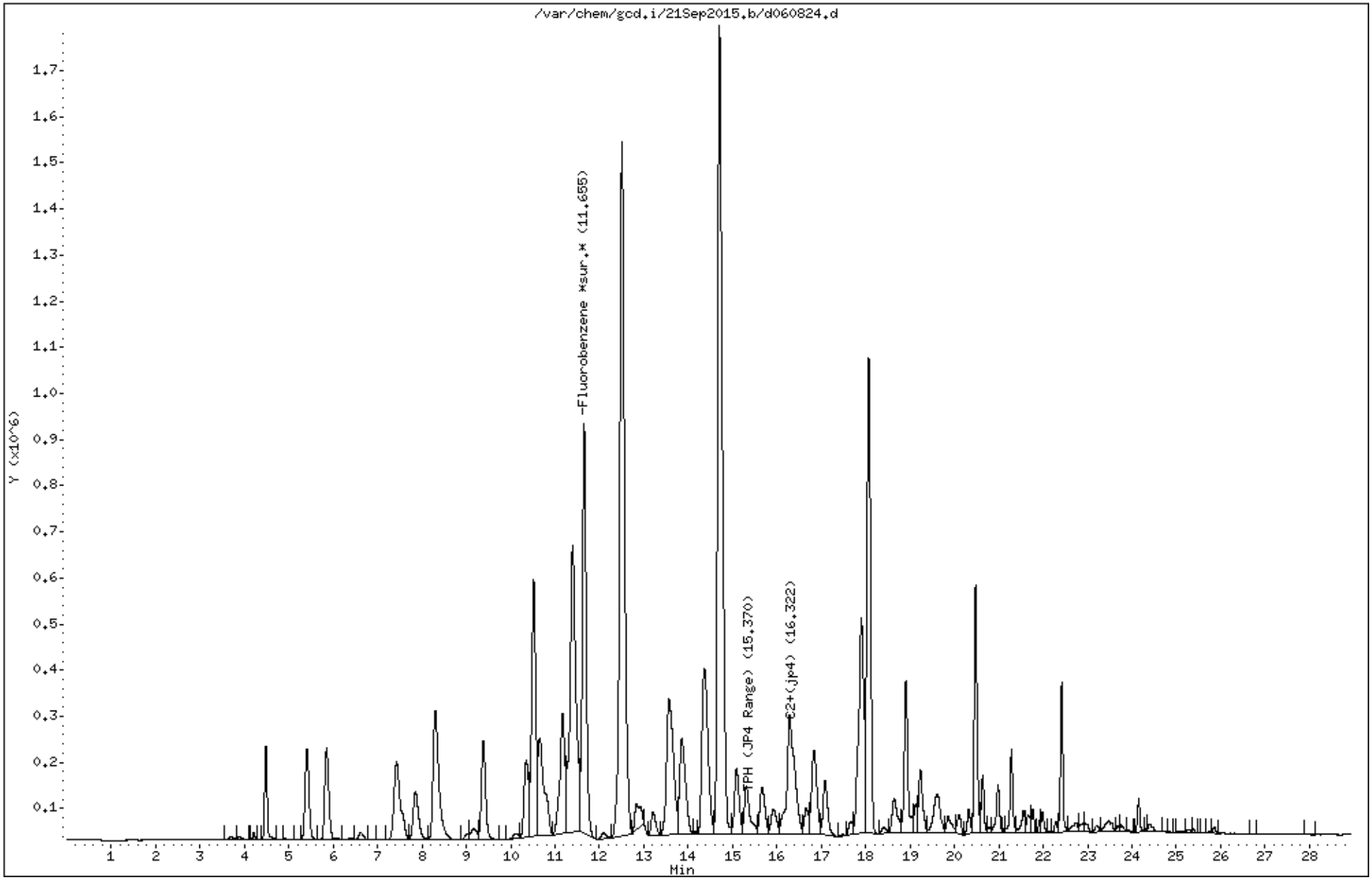
Instrument: gcd.i

Sample Info: ICV

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092108.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-1
Inj Date : 21-SEP-2015 14:11
Operator : ly Inst ID: gcd.i
Smp Info : 1.0ppmv>0.001ppmv
Misc Info : 10ml(50X),34310;2516-190 MBTEX;Level-1
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 14:11 Cal File: d092108.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.682	11.696	-0.014	4506754	0.12500	0.1064

Data File: /var/chem/gcd.i/21Sep2015.b/d092108.d

Date : 21-SEP-2015 14:11

Client ID: Level-1

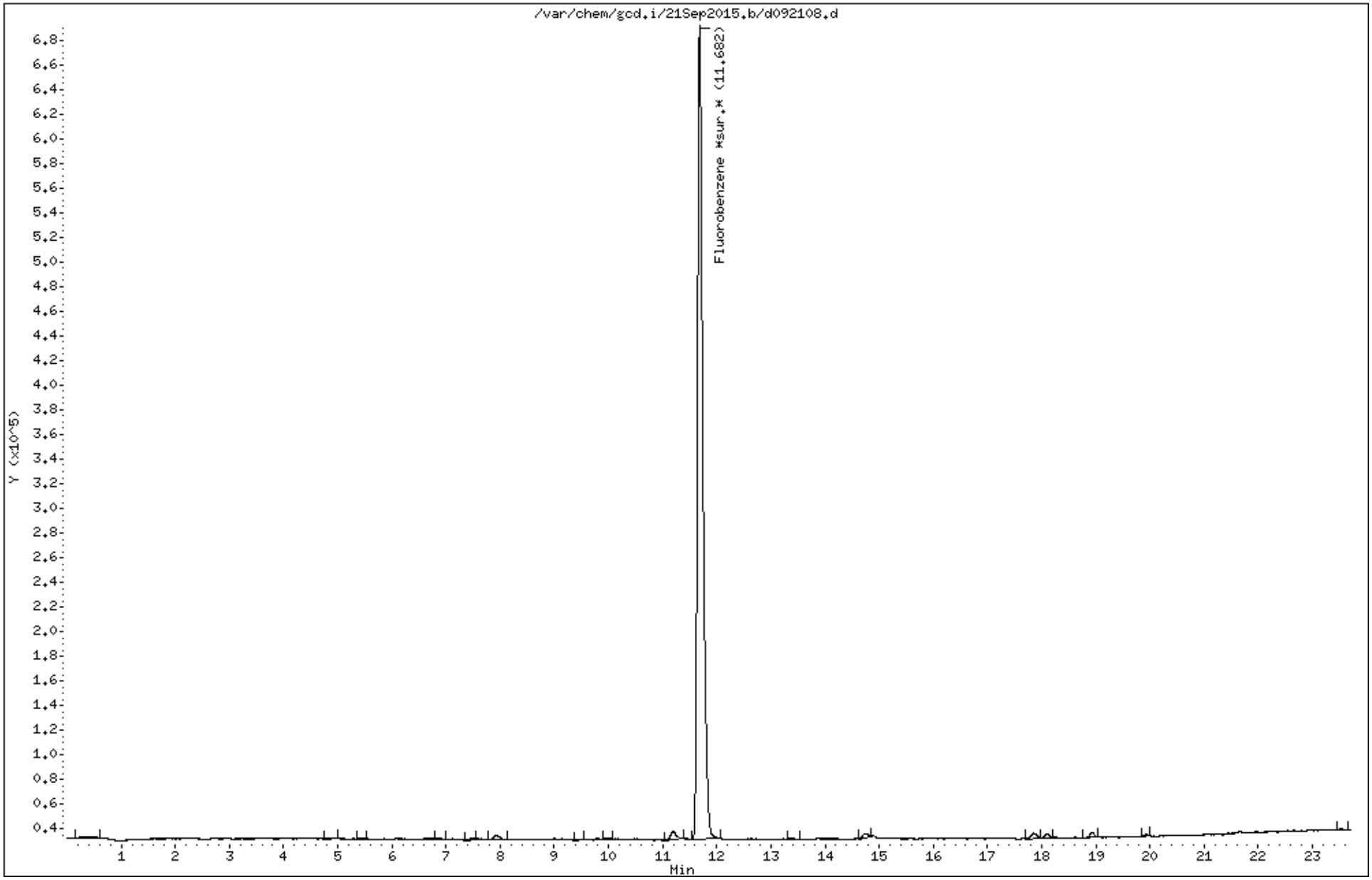
Instrument: gcd.i

Sample Info: 1.0ppmv>0.001ppmv

Operator: ly

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060818.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 1
Inj Date : 08-JUN-2015 19:24
Operator : gd Inst ID: gcd.i
Smp Info : Level 1
Misc Info : 6.0ml(100X),05355;2516-177 JP-4;Level 1
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 19:24 Cal File: d060818.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.679	11.696	-0.017	5182515	0.12500	0.1067
S 11 TPH (JP4 Range)	8.233-22.508			915834	0.02430	0.02430(a)
S 12 C2+(jp4)	3.643-29.000			1105271	0.02430	0.02430(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gcd.i/21Sep2015.b/d060818.d

Date : 08-JUN-2015 19:24

Client ID: Level 1

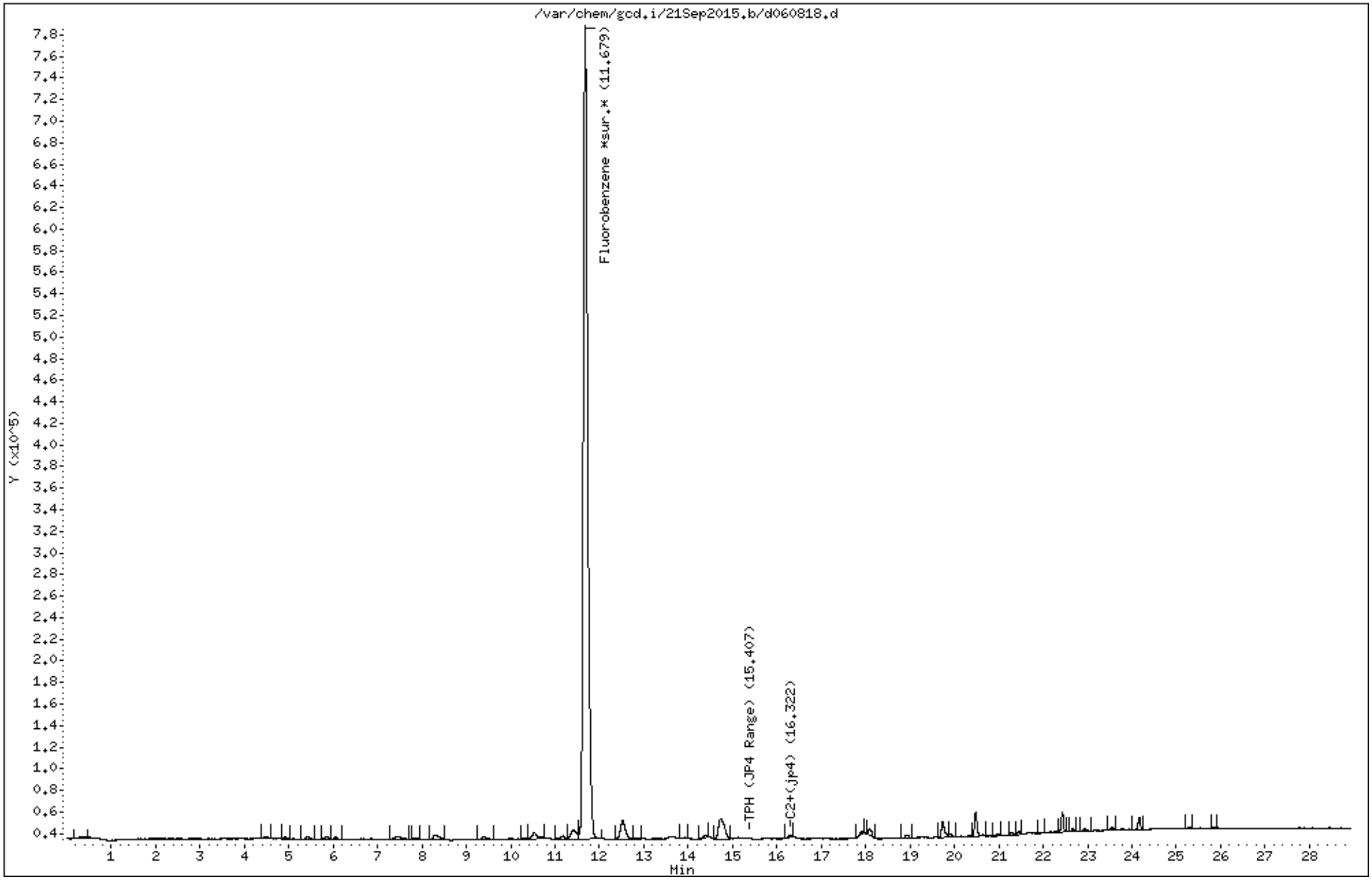
Instrument: gcd.i

Sample Info: Level 1

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060810.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 1
Inj Date : 08-JUN-2015 13:26
Operator : gm Inst ID: gcd.i
Smp Info : 50ppmv->0.01ppmv
Misc Info : (100x)4.0ml,33907;2516-150 B.P.;Level 1
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 13:26 Cal File: d060810.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.305	8.348	-0.043	400300	0.01000	0.01000(a)
4 Heptane (hept)	11.413	11.446	-0.033	295304	0.01000	0.01000(a)
$ 6 Fluorobenzene *sur.*	11.668	11.696	-0.028	5878502	0.12500	0.09644

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gcd.i/21Sep2015.b/d060810.d

Page 1

Date : 08-JUN-2015 13:26

Client ID: Level 1

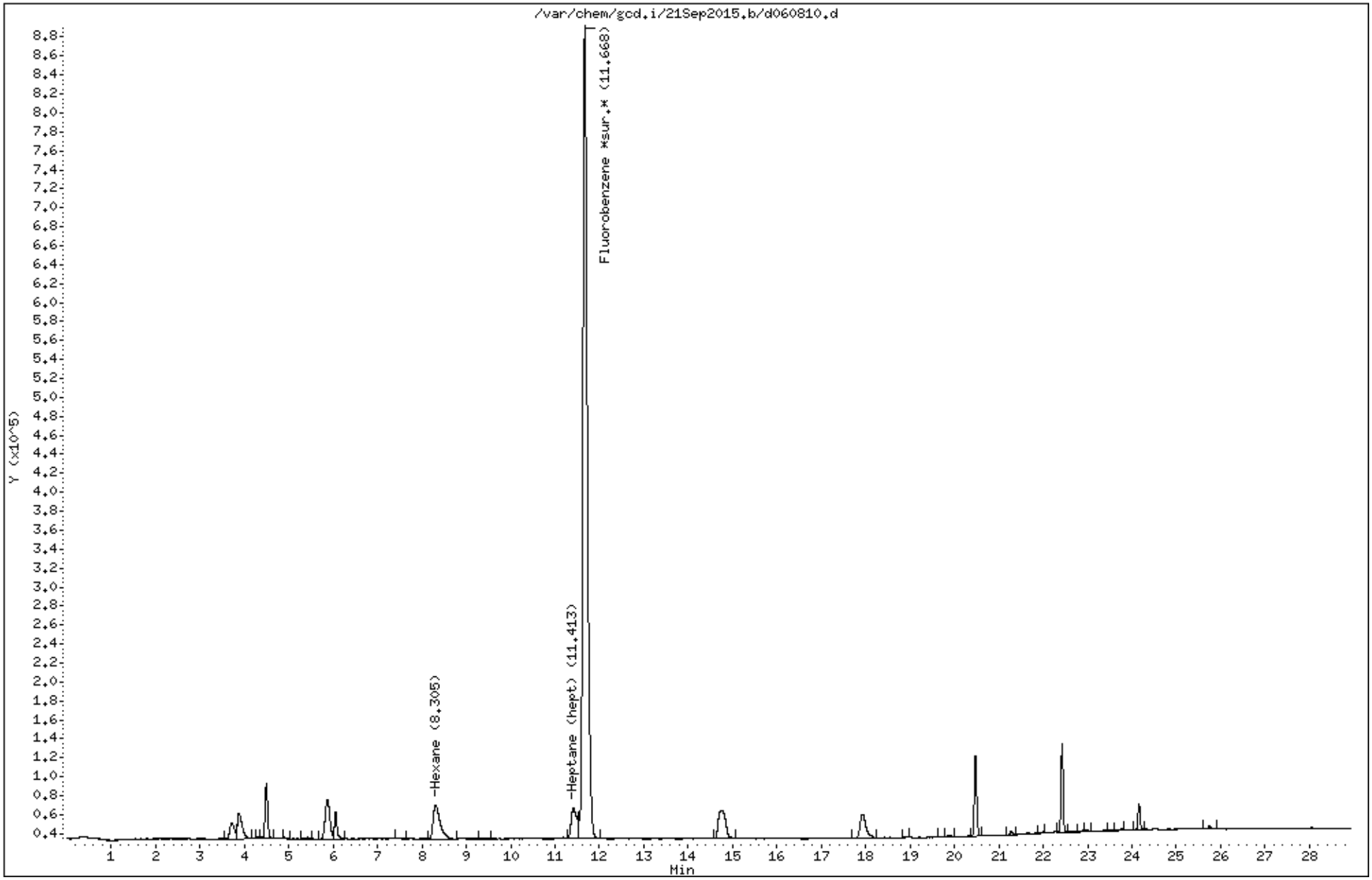
Instrument: gcd.i

Sample Info: 50ppmv->0.01ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060802.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 1
Inj Date : 08-JUN-2015 08:34
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->0.025ppmv
Misc Info : (100x)5.0ml,03946;2516-172 Gasoline;Level 1
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 08:34 Cal File: d060802.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.665	11.696	-0.031	5554527	0.12500	0.1250
S 7 TPH (Gas Range)	7.346	21.366		454359	0.02500	0.02500
S 8 C2+ (gas)	3.643	29.000		709831	0.02500	0.02500

Data File: /var/chem/gcd.i/21Sep2015.b/d060802.d

Date : 08-JUN-2015 08:34

Client ID: Level 1

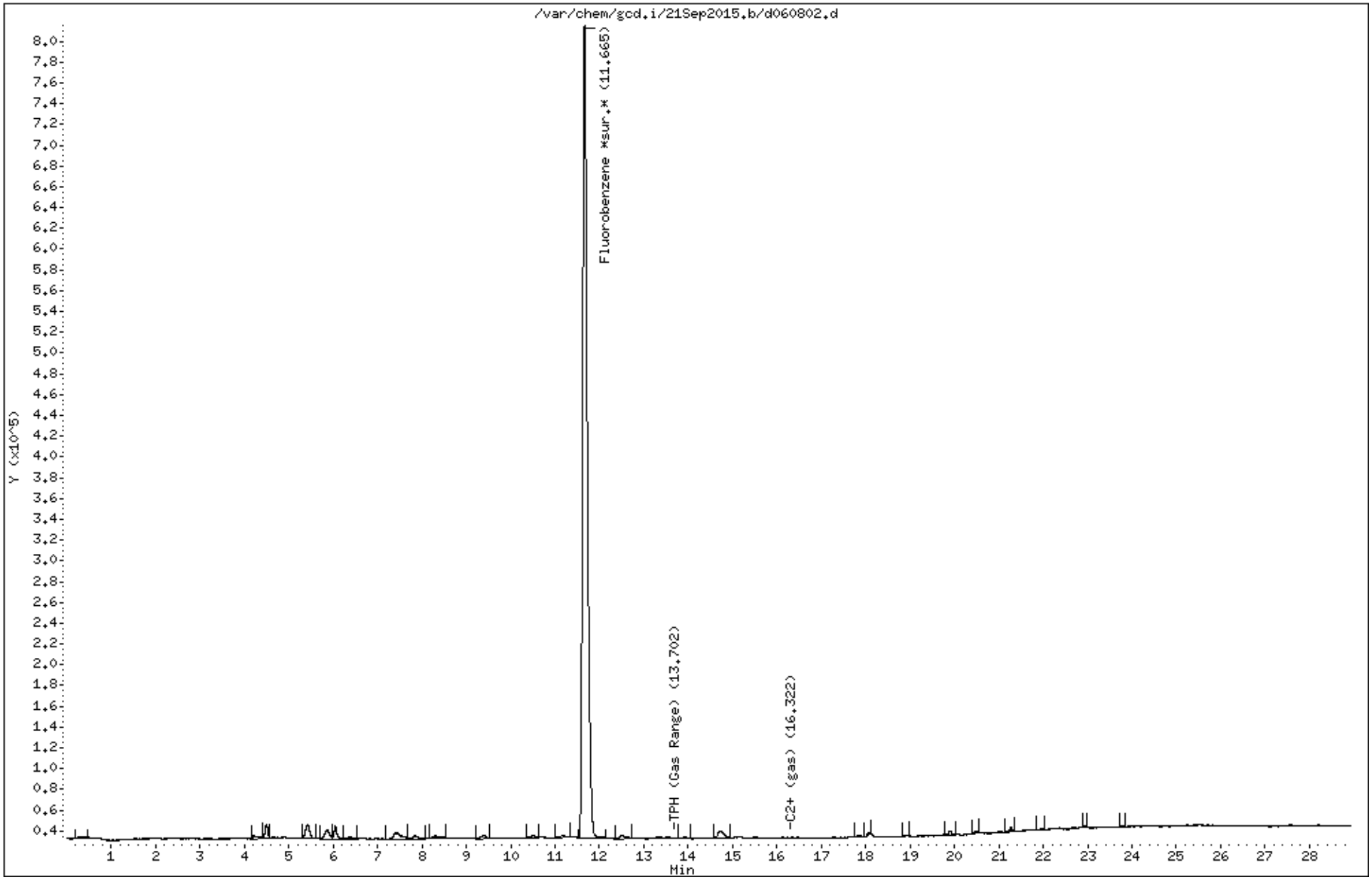
Instrument: gcd.i

Sample Info: 100ppmv->0.025ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092109.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-2
Inj Date : 21-SEP-2015 14:42
Operator : ly Inst ID: gcd.i
Smp Info : 1.0ppmv>0.005ppmv
Misc Info : 1.0ml,34310;2516-190 MBTEX;Level-2
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 14:42 Cal File: d092109.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.684	11.696	-0.012	5441769	0.12500	0.1276

Data File: /var/chem/gcd.i/21Sep2015.b/d092109.d

Page 1

Date : 21-SEP-2015 14:42

Client ID: Level-2

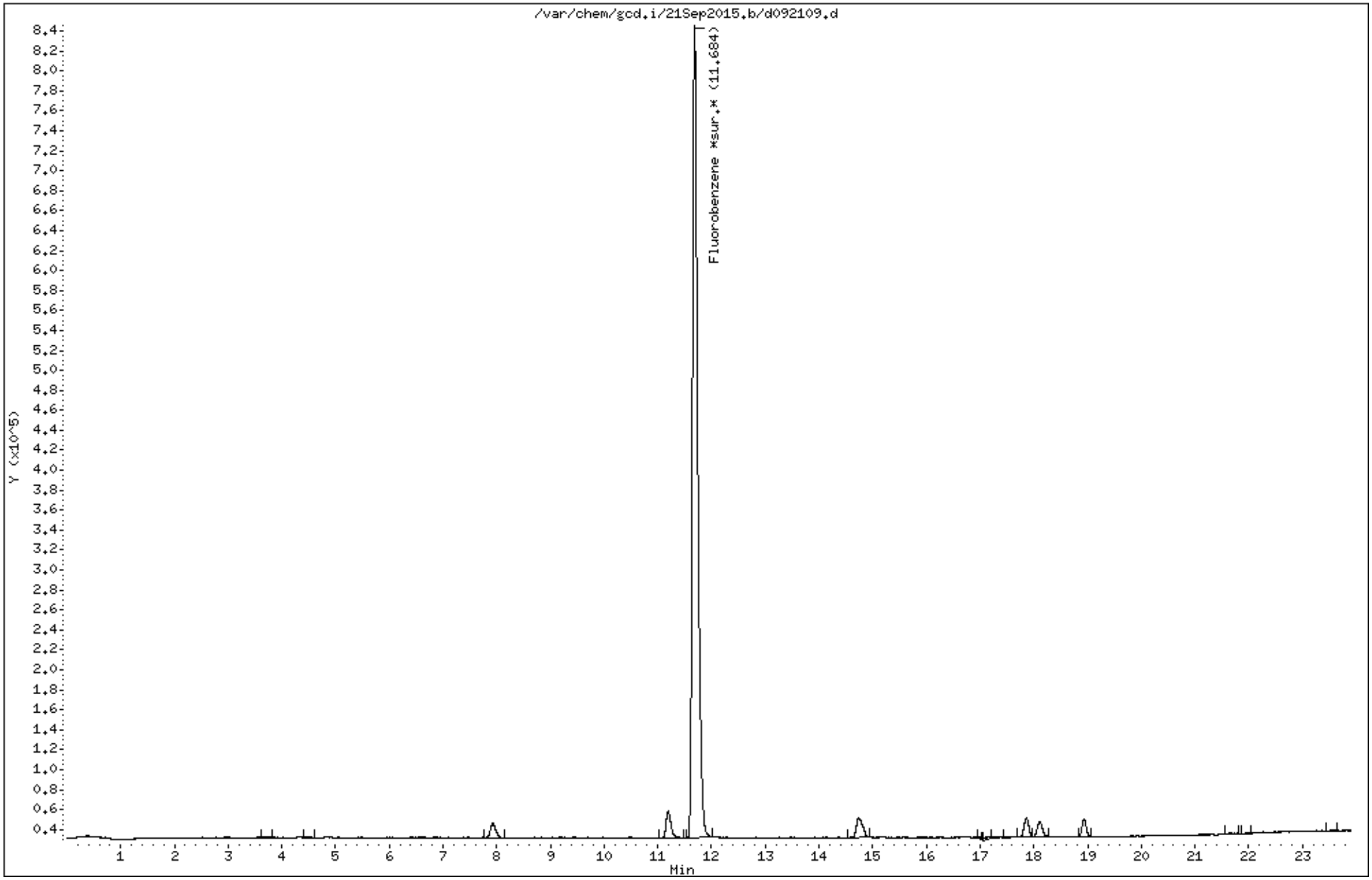
Instrument: gcd.i

Sample Info: 1.0ppmv>0.005ppmv

Operator: ly

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060819.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 2
Inj Date : 08-JUN-2015 19:59
Operator : gd Inst ID: gcd.i
Smp Info : Level 2
Misc Info : 0.6ml,05355;2516-177 JP-4;Level 2
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 19:59 Cal File: d060819.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.669	11.696	-0.027	5256334	0.12500	0.1114
S 11 TPH (JP4 Range)	8.233	22.508		10453704	0.24300	0.2590
S 12 C2+(jp4)	3.643	29.000		11281383	0.24300	0.2455

Data File: /var/chem/gcd.i/21Sep2015.b/d060819.d

Date : 08-JUN-2015 19:59

Client ID: Level 2

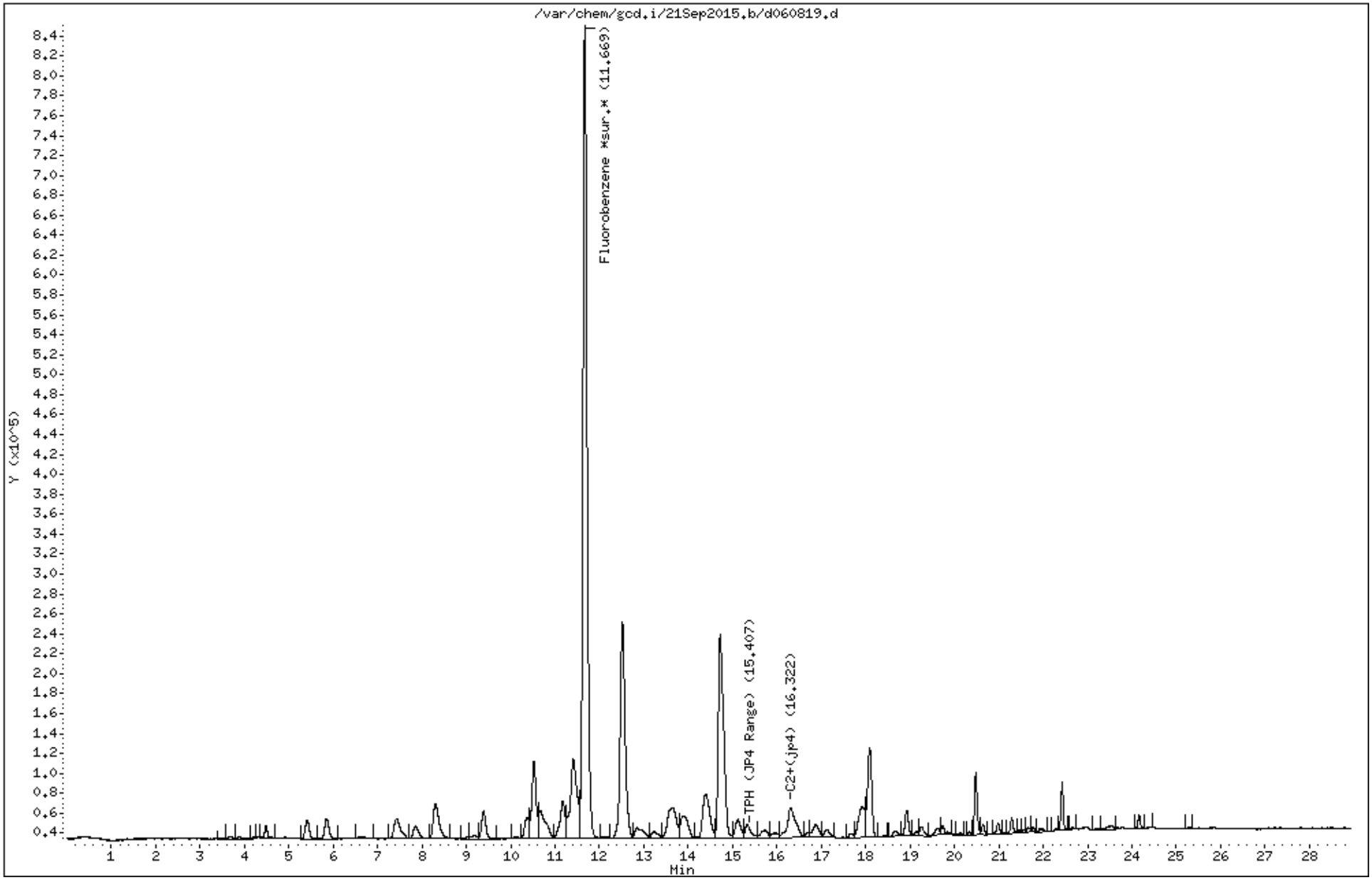
Instrument: gcd.i

Sample Info: Level 2

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060811.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 2
Inj Date : 08-JUN-2015 14:02
Operator : gm Inst ID: gcd.i
Smp Info : 50ppmv->0.05ppmv
Misc Info : (100x)20ml,33907;2516-150 B.P.;Level 2
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 14:02 Cal File: d060811.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.308	8.348	-0.040	1881424	0.05000	0.04845
4 Heptane (hept)	11.425	11.446	-0.021	1506657	0.05000	0.05050
$ 6 Fluorobenzene *sur.*	11.665	11.696	-0.031	6117582	0.12500	0.09900

Data File: /var/chem/gcd.i/21Sep2015.b/d060811.d

Date : 08-JUN-2015 14:02

Client ID: Level 2

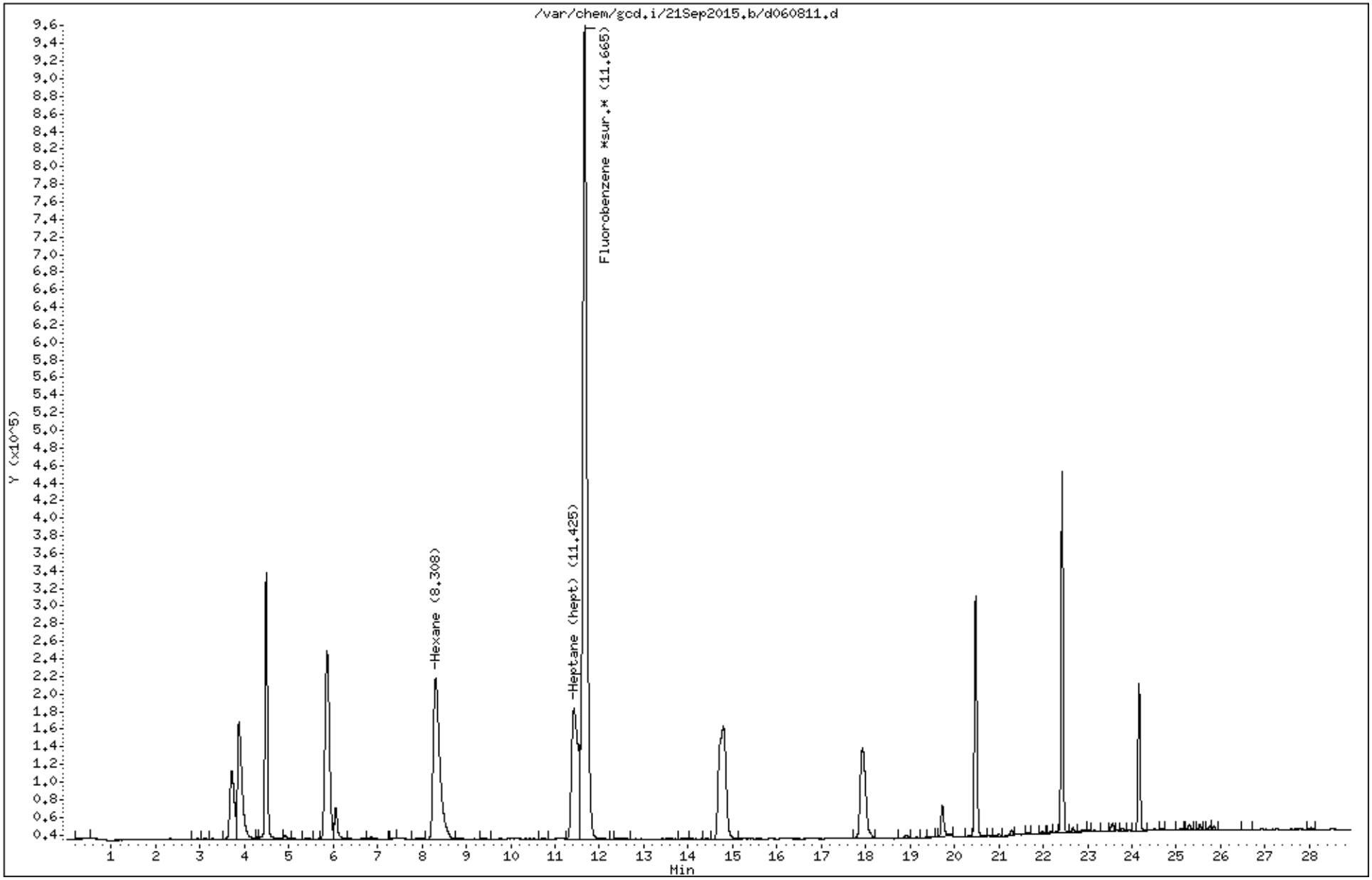
Instrument: gcd.i

Sample Info: 50ppmv->0.05ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060803.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 2
Inj Date : 08-JUN-2015 09:07
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->0.25ppmv
Misc Info : 0.5ml,03946;2516-172 Gasoline;Level 2
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 09:07 Cal File: d060803.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.656	11.696	-0.040	5594466	0.12500	0.1254
S 7 TPH (Gas Range)	7.346	-21.366		6271555	0.25000	0.2899
S 8 C2+ (gas)	3.643	-29.000		9195601	0.25000	0.2822

Data File: /var/chem/gcd.i/21Sep2015.b/d060803.d

Date : 08-JUN-2015 09:07

Client ID: Level 2

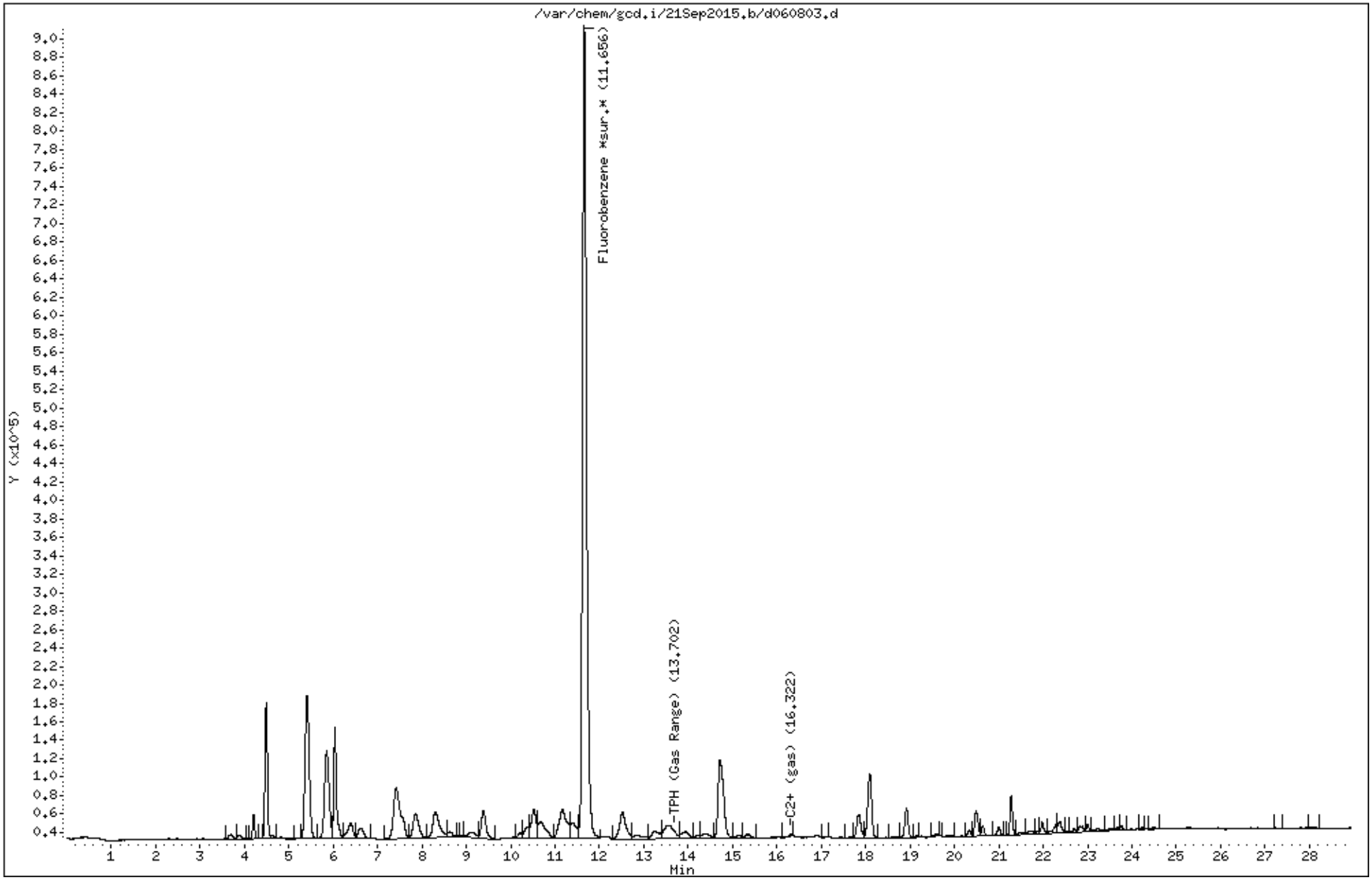
Instrument: gcd.i

Sample Info: 100ppmv->0.25ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092110.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-3
Inj Date : 21-SEP-2015 15:12
Operator : ly Inst ID: gcd.i
Smp Info : 1.0ppmv>0.025ppmv
Misc Info : 5.0ml,34310;2516-190 MBTEX;Level-3
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 15:12 Cal File: d092110.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.683	11.696	-0.013	4926542	0.12500	0.1174

Data File: /var/chem/gcd.i/21Sep2015.b/d092110.d

Page 1

Date : 21-SEP-2015 15:12

Client ID: Level-3

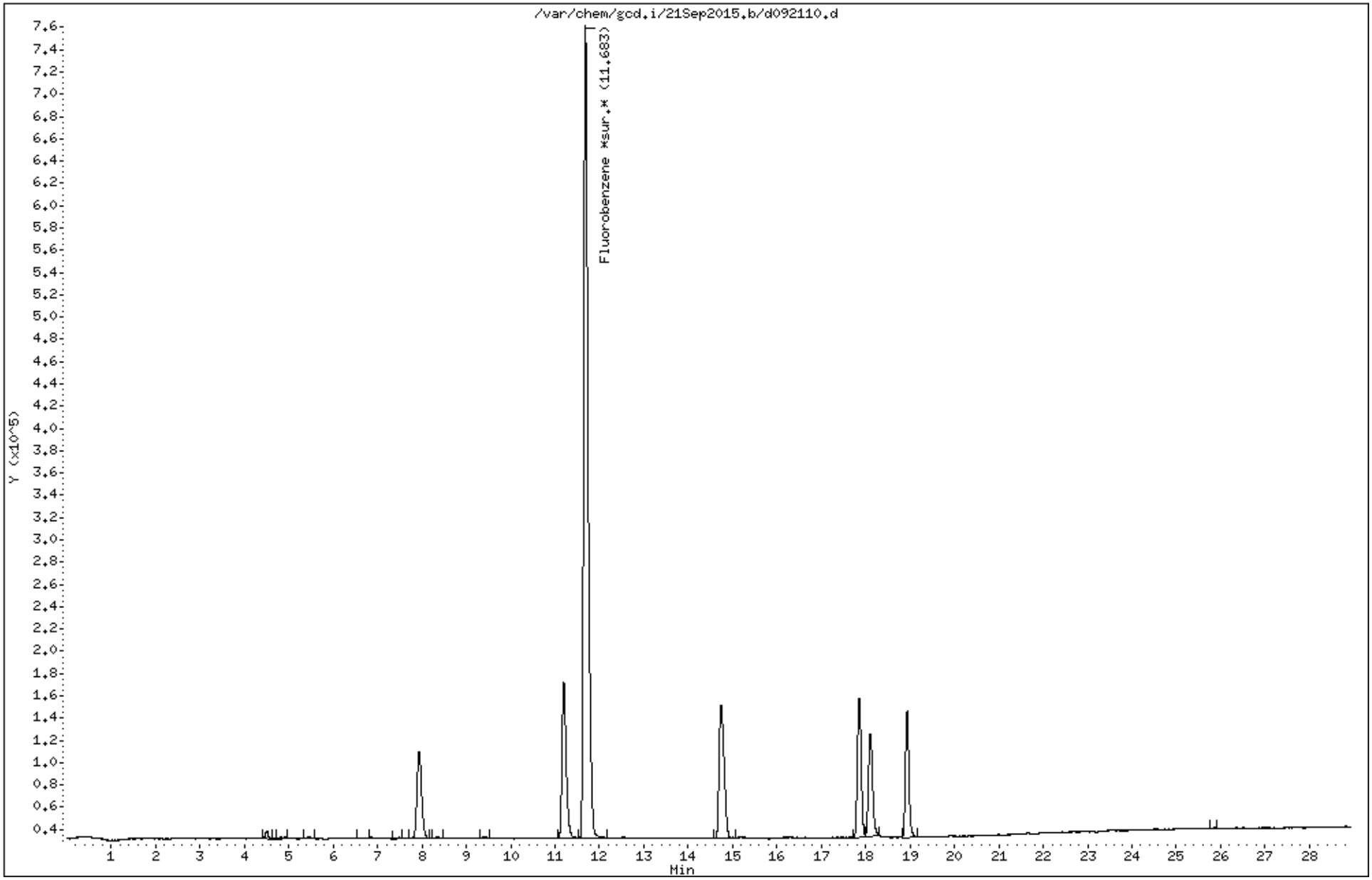
Instrument: gcd.i

Sample Info: 1.0ppmv>0.025ppmv

Operator: ly

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060820.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 3
Inj Date : 08-JUN-2015 20:55
Operator : gd Inst ID: gcd.i
Smp Info : Level 3
Misc Info : 5.0ml,05355;2516-177 JP-4;Level 3
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 20:55 Cal File: d060820.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.666	11.696	-0.030	5349547	0.12500	0.1192
S 11 TPH (JP4 Range)	8.233	22.508		88264690	2.02000	2.128
S 12 C2+(jp4)	3.643	29.000		95065108	2.02000	2.052

Data File: /var/chem/gcd.i/21Sep2015.b/d060820.d

Date : 08-JUN-2015 20:55

Client ID: Level 3

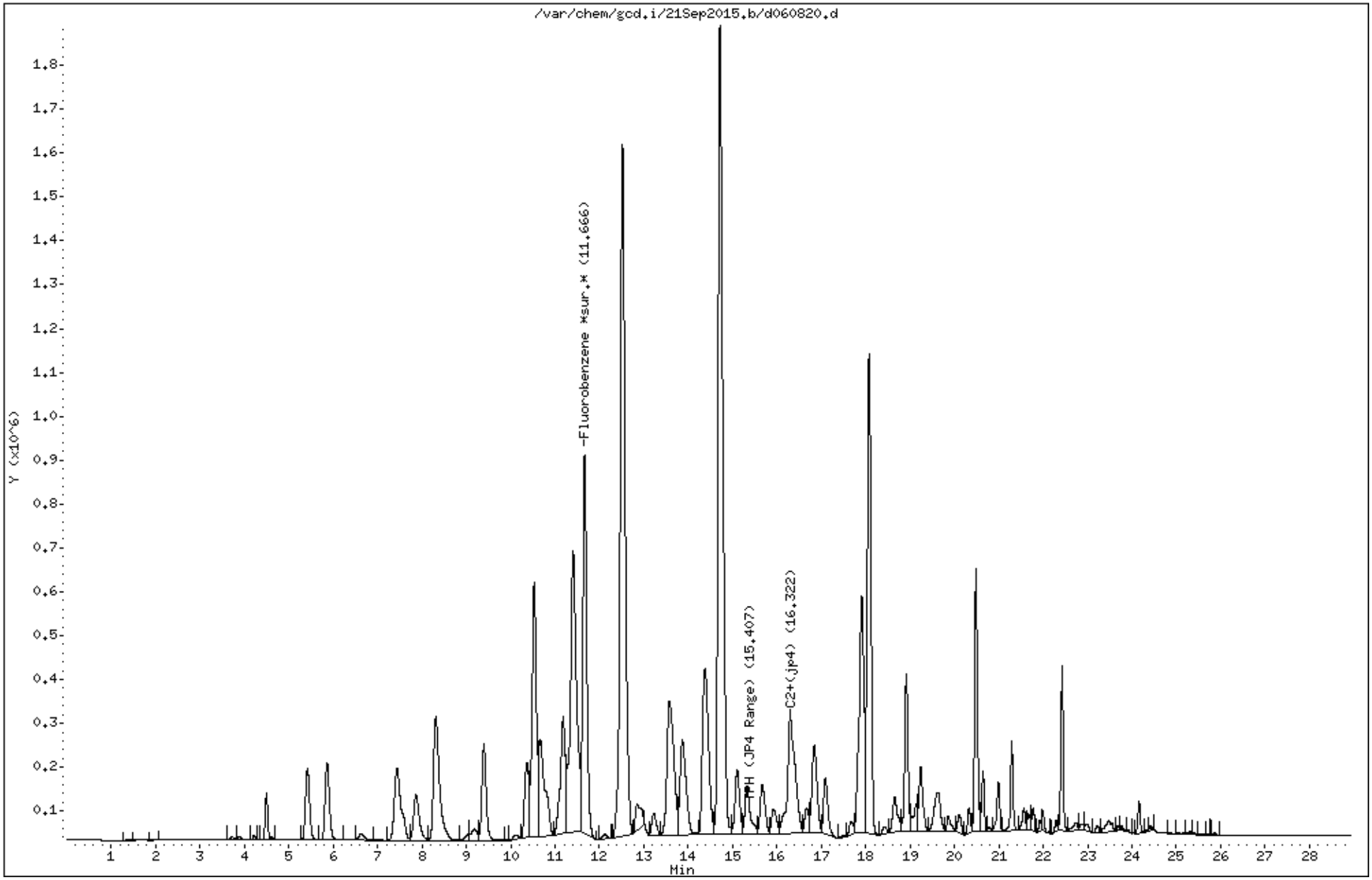
Instrument: gcd.i

Sample Info: Level 3

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060812.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 3
Inj Date : 08-JUN-2015 14:35
Operator : gm Inst ID: gcd.i
Smp Info : 50ppmv->0.20ppmv
Misc Info : 0.8ml,33907;2516-150 B.P.;Level 3
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 14:35 Cal File: d060812.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.319	8.348	-0.029	8421019	0.20000	0.2109
4 Heptane (hept)	11.416	11.446	-0.030	8269716	0.20000	0.2456
$ 6 Fluorobenzene *sur.*	11.669	11.696	-0.027	6778584	0.12500	0.1085

Data File: /var/chem/gcd.i/21Sep2015.b/d060812.d

Date : 08-JUN-2015 14:35

Client ID: Level 3

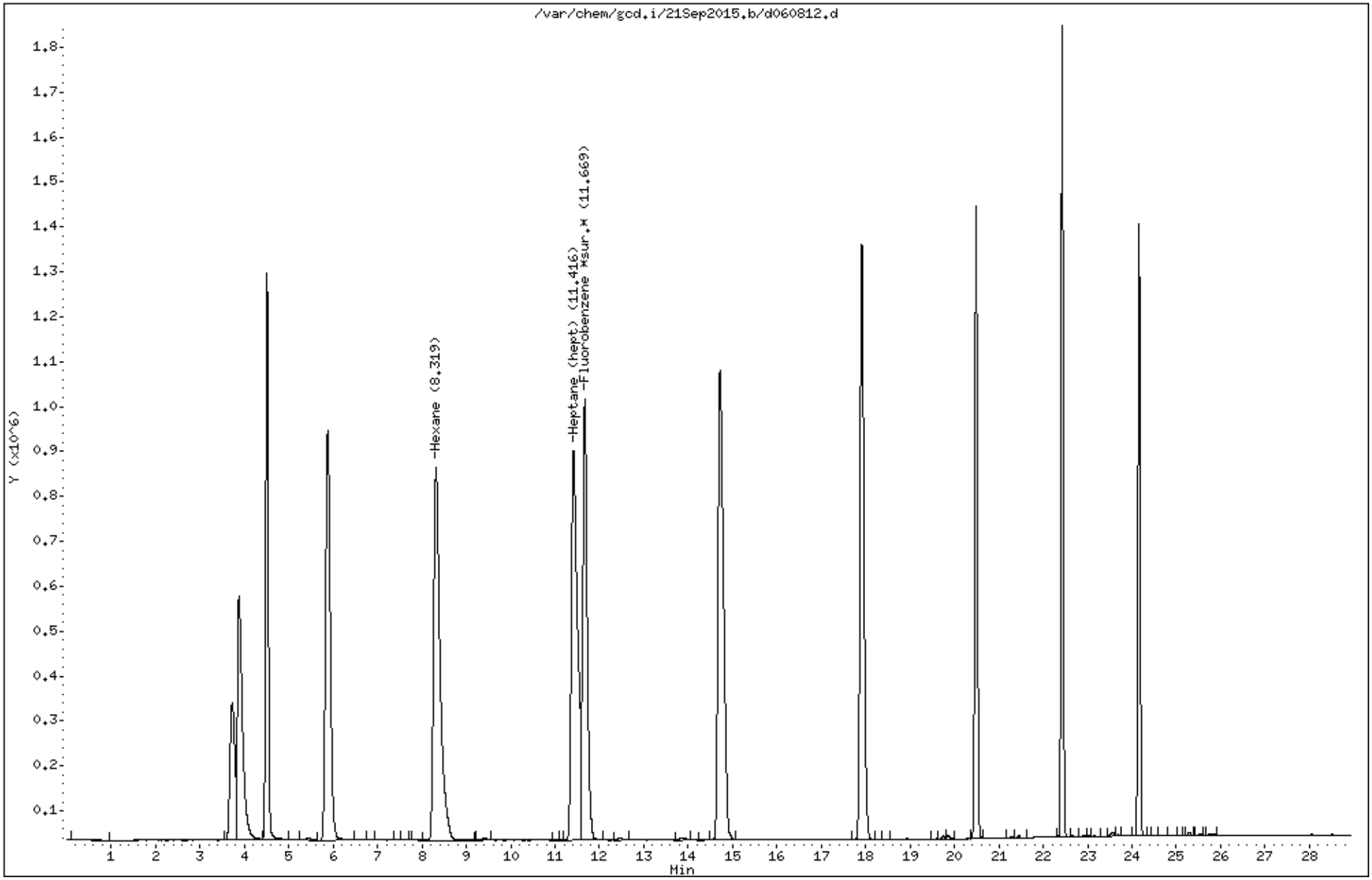
Instrument: gcd.i

Sample Info: 50ppmv->0.20ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060804.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 3
Inj Date : 08-JUN-2015 09:40
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->2.5ppmv
Misc Info : 5.0ml,03946;2516-172 Gasoline;Level 3
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 09:40 Cal File: d060804.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.660	11.696	-0.036	6353741	0.12500	0.1361
S 7 TPH (Gas Range)	7.346	21.366		60918149	2.50000	2.702
S 8 C2+ (gas)	3.643	29.000		85958420	2.50000	2.590

Data File: /var/chem/gcd.i/21Sep2015.b/d060804.d

Date : 08-JUN-2015 09:40

Client ID: Level 3

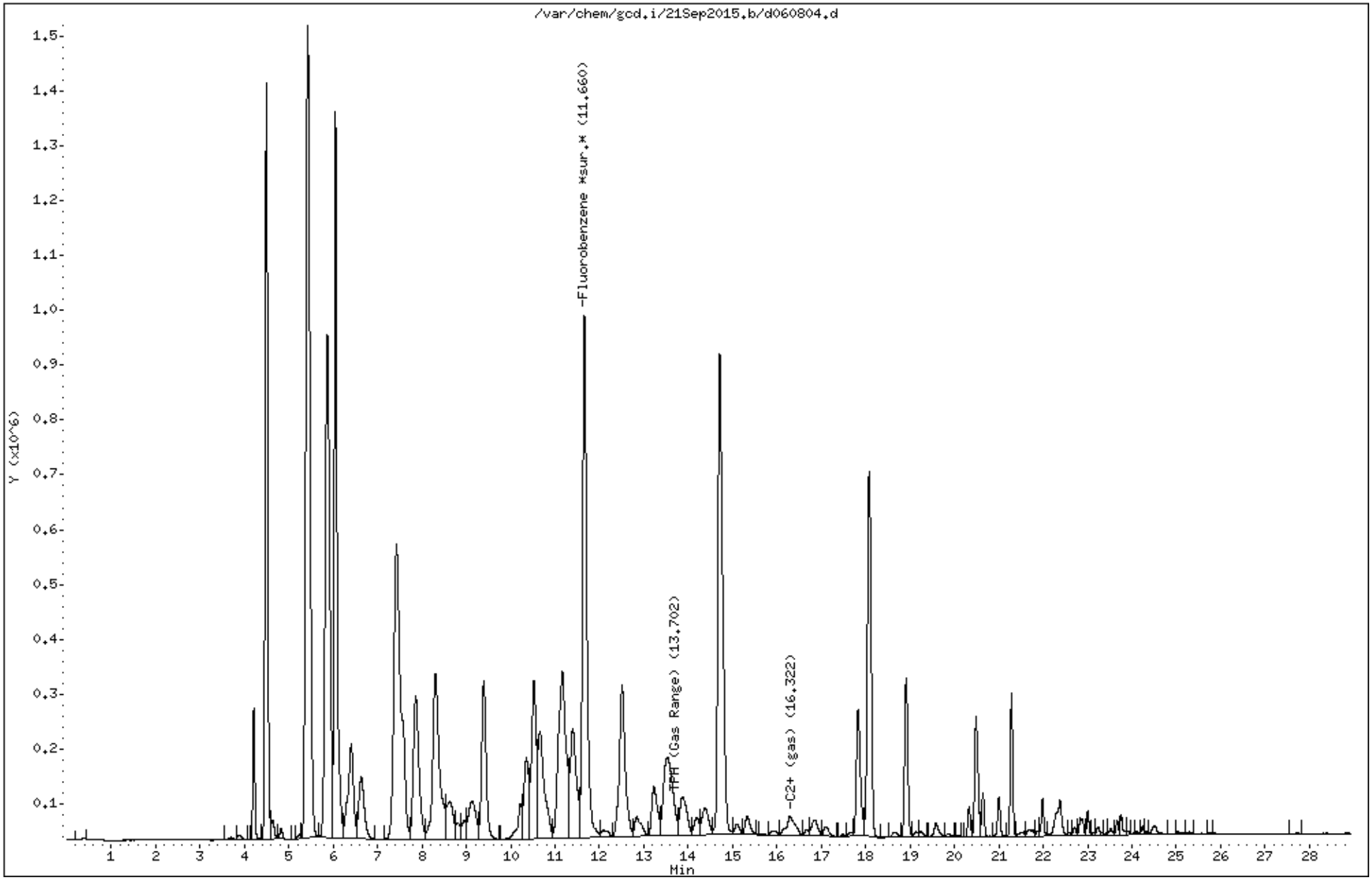
Instrument: gcd.i

Sample Info: 100ppmv->2.5ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092111.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-4
Inj Date : 21-SEP-2015 15:48
Operator : ly Inst ID: gcd.i
Smp Info : 1.0ppmv>0.13ppmv
Misc Info : 25ml,34345;2516-190 MBTEX;Level-4
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 15:48 Cal File: d092111.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.683	11.696	-0.013	5083916	0.12500	0.1255

Data File: /var/chem/gcd.i/21Sep2015.b/d092111.d

Page 1

Date : 21-SEP-2015 15:48

Client ID: Level-4

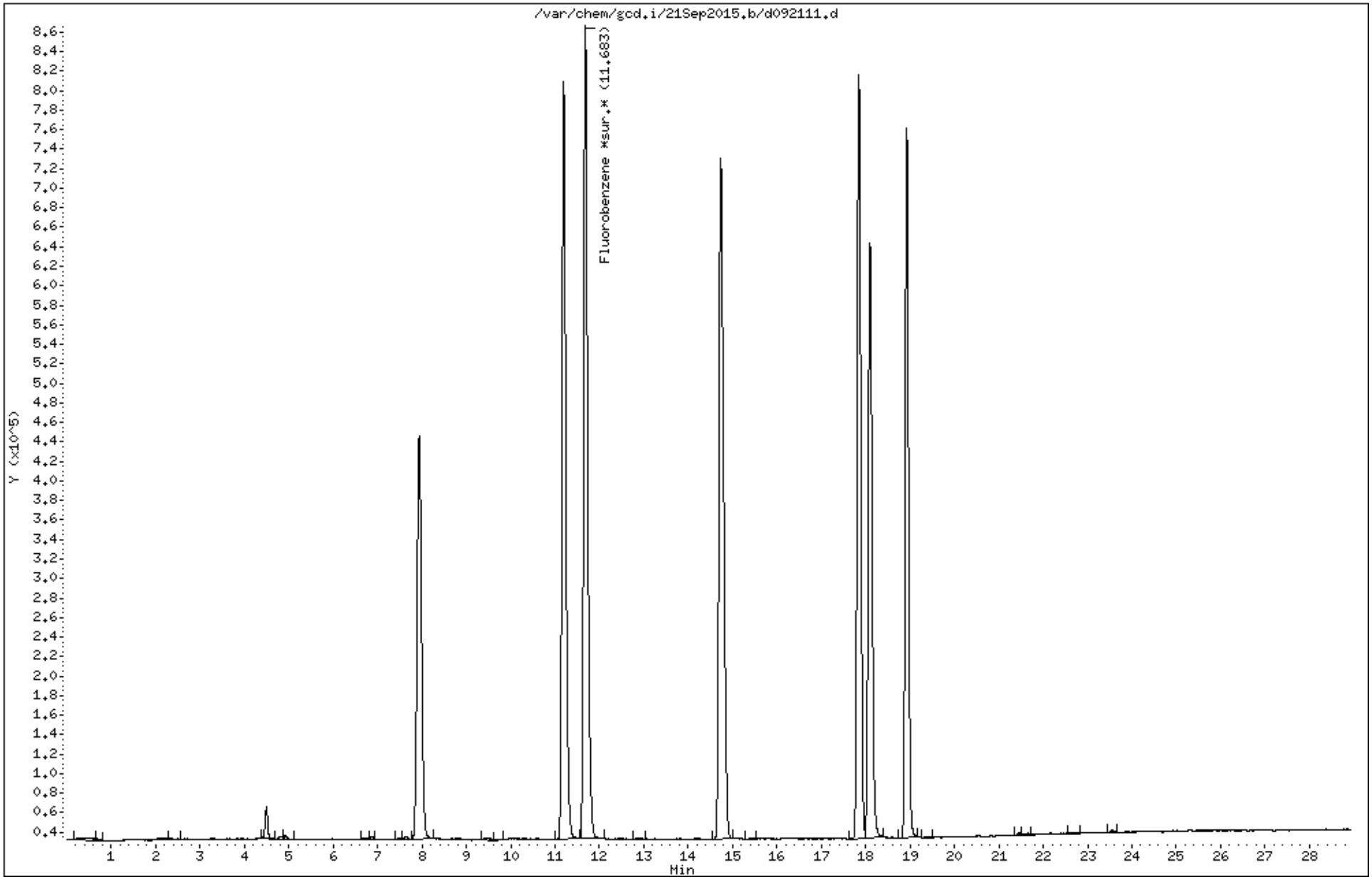
Instrument: gcd.i

Sample Info: 1.0ppmv>0.13ppmv

Operator: ly

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060821.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 4
Inj Date : 08-JUN-2015 21:35
Operator : gd Inst ID: gcd.i
Smp Info : Level 4
Misc Info : 20ml,05355;2516-177 JP-4;Level 4
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 21:35 Cal File: d060821.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.668	11.696	-0.028	5993149	0.12500	0.1339
S 11 TPH (JP4 Range)	8.233	22.508		400483487	8.10000	9.215
S 12 C2+(jp4)	3.643	29.000		429734922	8.10000	8.952

Data File: /var/chem/gcd.i/21Sep2015.b/d060821.d

Date : 08-JUN-2015 21:35

Client ID: Level 4

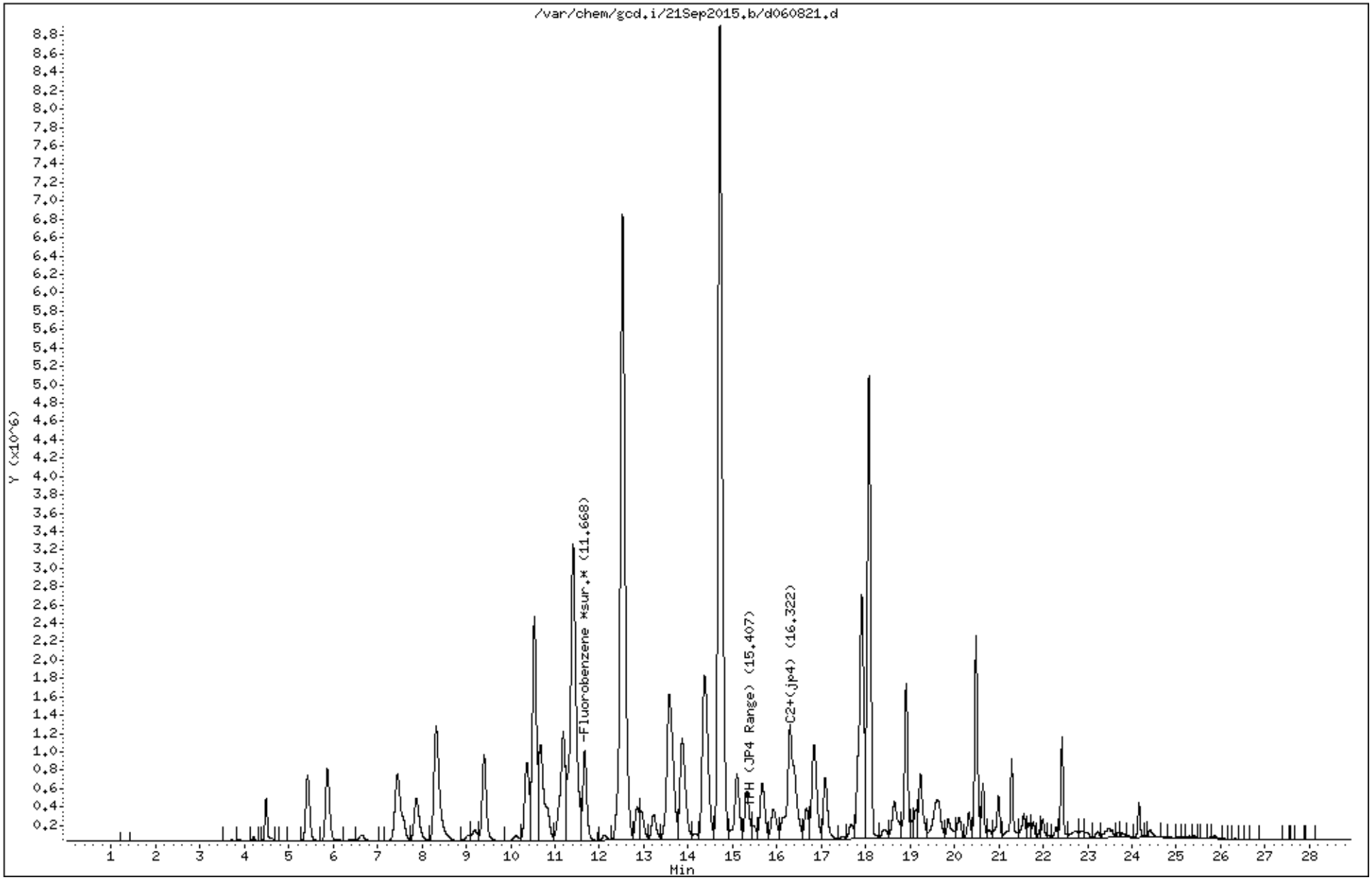
Instrument: gcd.i

Sample Info: Level 4

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060813.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 4
Inj Date : 08-JUN-2015 15:19
Operator : gm Inst ID: gcd.i
Smp Info : 50ppmv->0.35ppmv
Misc Info : 1.4ml,33907;2516-150 B.P.;Level 4
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 15:19 Cal File: d060813.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.306	8.348	-0.042	14014190	0.35000	0.3508
4 Heptane (hept)	11.408	11.446	-0.038	14706425	0.35000	0.4113
$ 6 Fluorobenzene *sur.*	11.663	11.696	-0.033	6075096	0.12500	0.1050

Data File: /var/chem/gcd.i/21Sep2015.b/d060813.d

Date : 08-JUN-2015 15:19

Client ID: Level 4

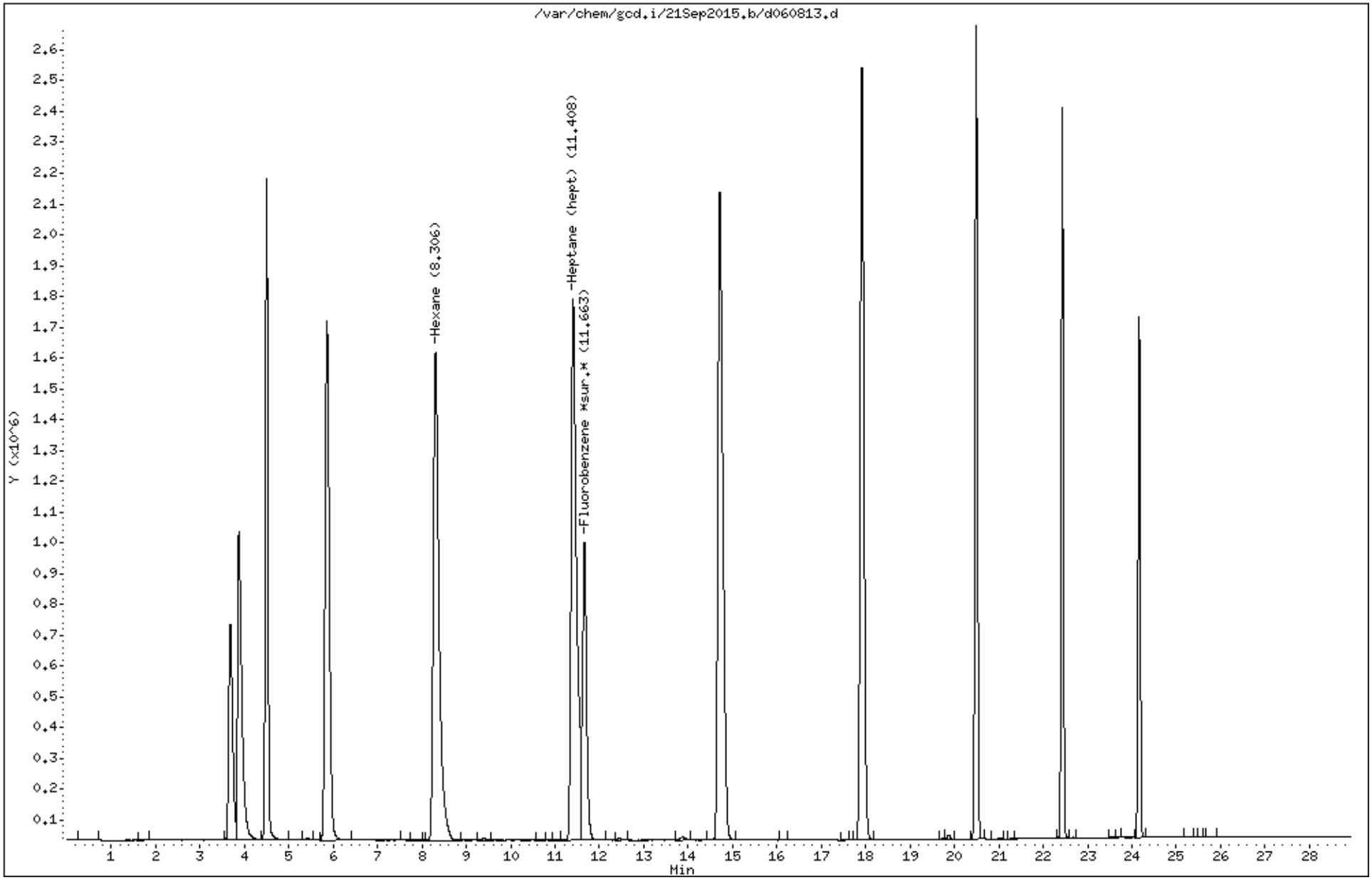
Sample Info: 50ppmv->0.35ppmv

Column phase:

Instrument: gcd.i

Operator: gm

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060805.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 4
Inj Date : 08-JUN-2015 10:13
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->10ppmv
Misc Info : 20ml,03946;2516-172 Gasoline;Level 4
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 10:13 Cal File: d060805.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.672	11.696	-0.024	8960396	0.12500	0.1693
S 7 TPH (Gas Range)	7.346	21.366		281868427	10.0000	11.77
S 8 C2+ (gas)	3.643	29.000		385665709	10.0000	11.17

Data File: /var/chem/gcd.i/21Sep2015.b/d060805.d

Date : 08-JUN-2015 10:13

Client ID: Level 4

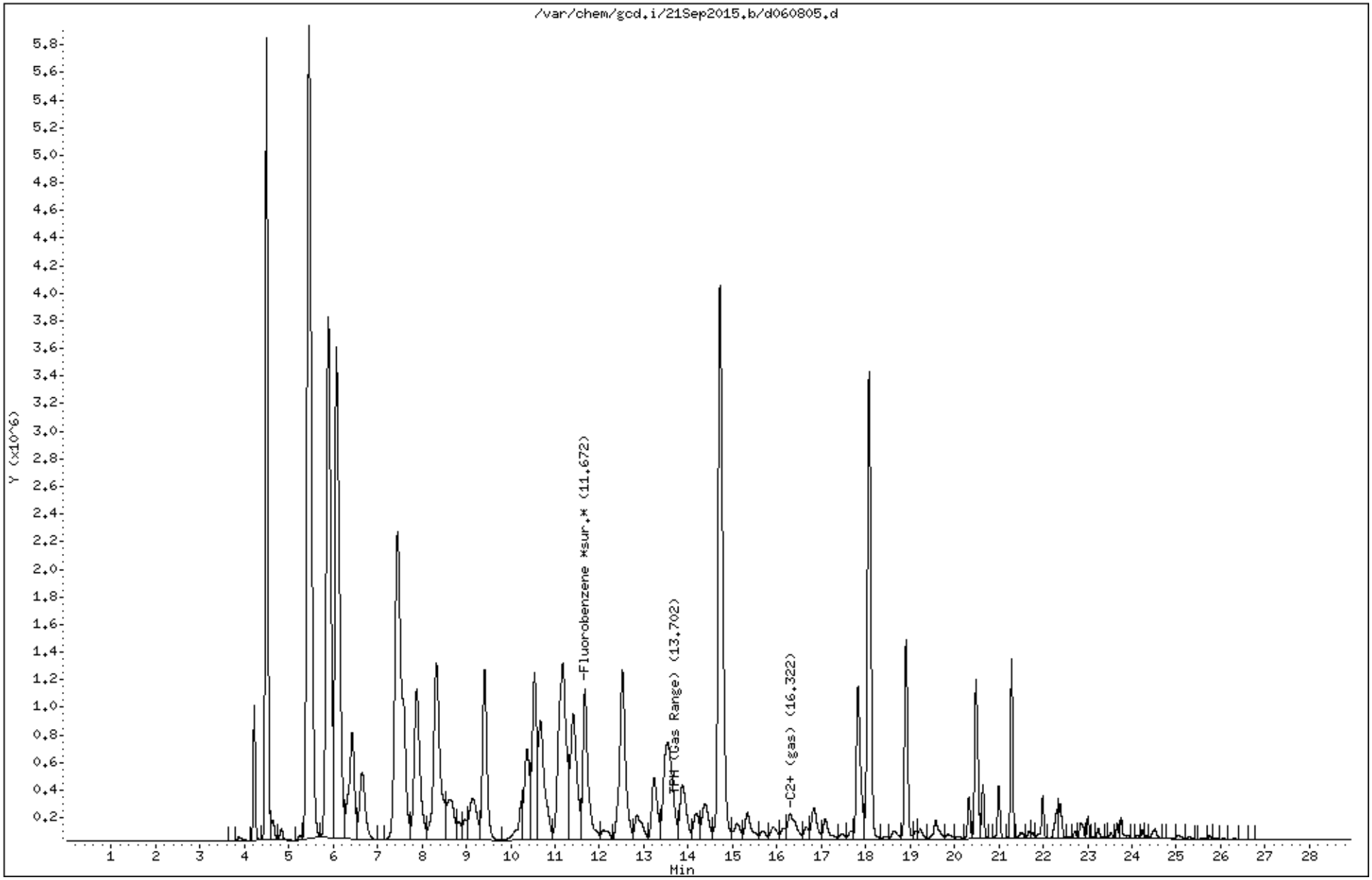
Instrument: gcd.i

Sample Info: 100ppmv->10ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092112.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-5
Inj Date : 21-SEP-2015 17:12
Operator : gd Inst ID: gcd.i
Smp Info : 1.0ppmv>0.5ppmv
Misc Info : 100ml,34345;2516-190 MBTEX;Level-5
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.682	11.696	-0.014	4705734	0.12500	0.1192

Data File: /chem/gcd.i/21Sep2015.b/d092112.d

Date : 21-SEP-2015 17:12

Client ID: Level-5

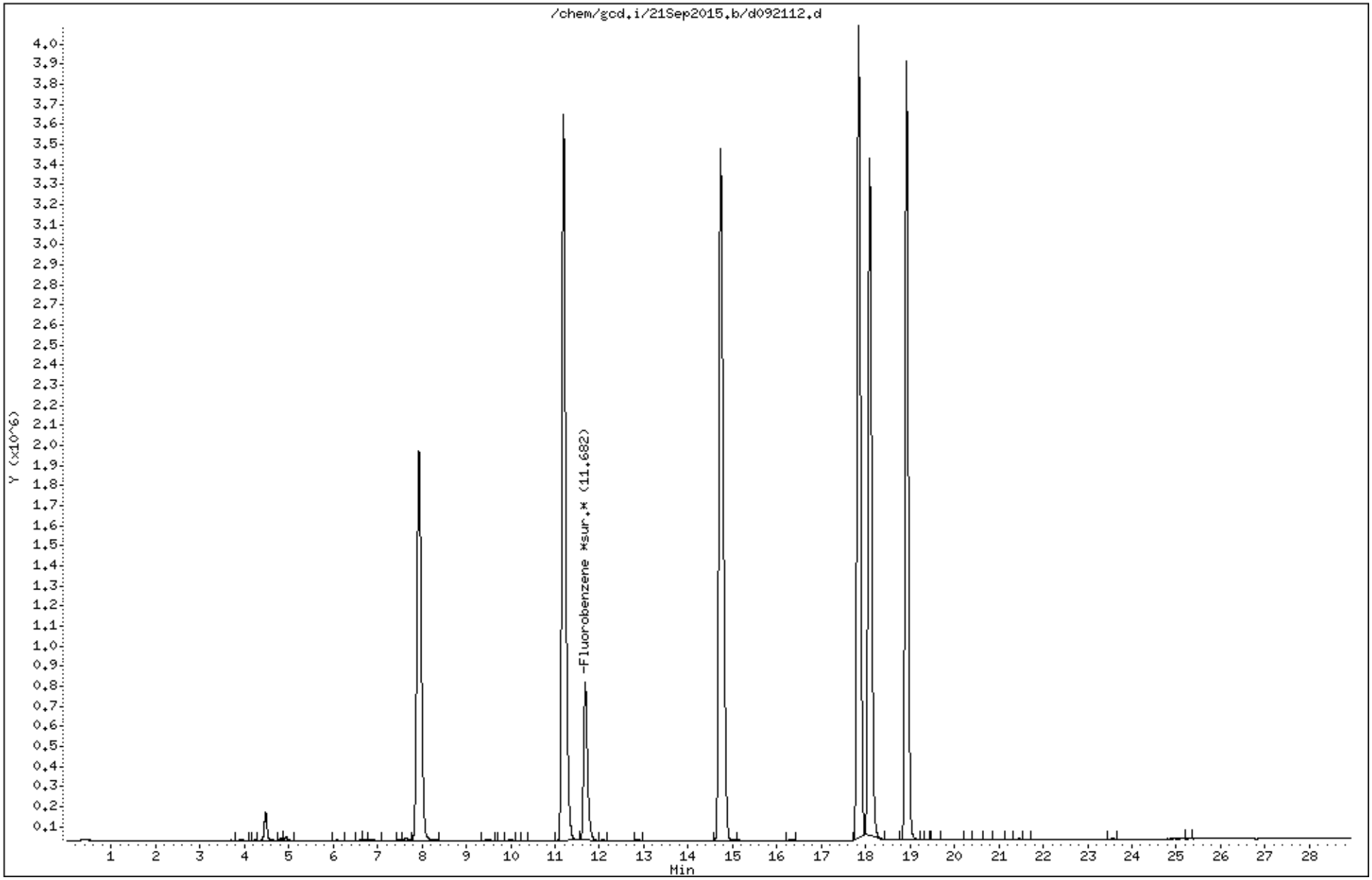
Instrument: gcd.i

Sample Info: 1.0ppmv>0.5ppmv

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060822.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 5
Inj Date : 08-JUN-2015 22:10
Operator : gd Inst ID: gcd.i
Smp Info : Level 5
Misc Info : 50ml,05355;2516-177 JP-4;Level 5
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 22:10 Cal File: d060822.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.673	11.696	-0.023	5355874	0.12500	0.1234
S 11 TPH (JP4 Range)	8.233	22.508		990308014	20.2500	22.23(A)
S 12 C2+(jp4)	3.643	29.000		1067643403	20.2500	21.81(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcd.i/21Sep2015.b/d060822.d

Date : 08-JUN-2015 22:10

Client ID: Level 5

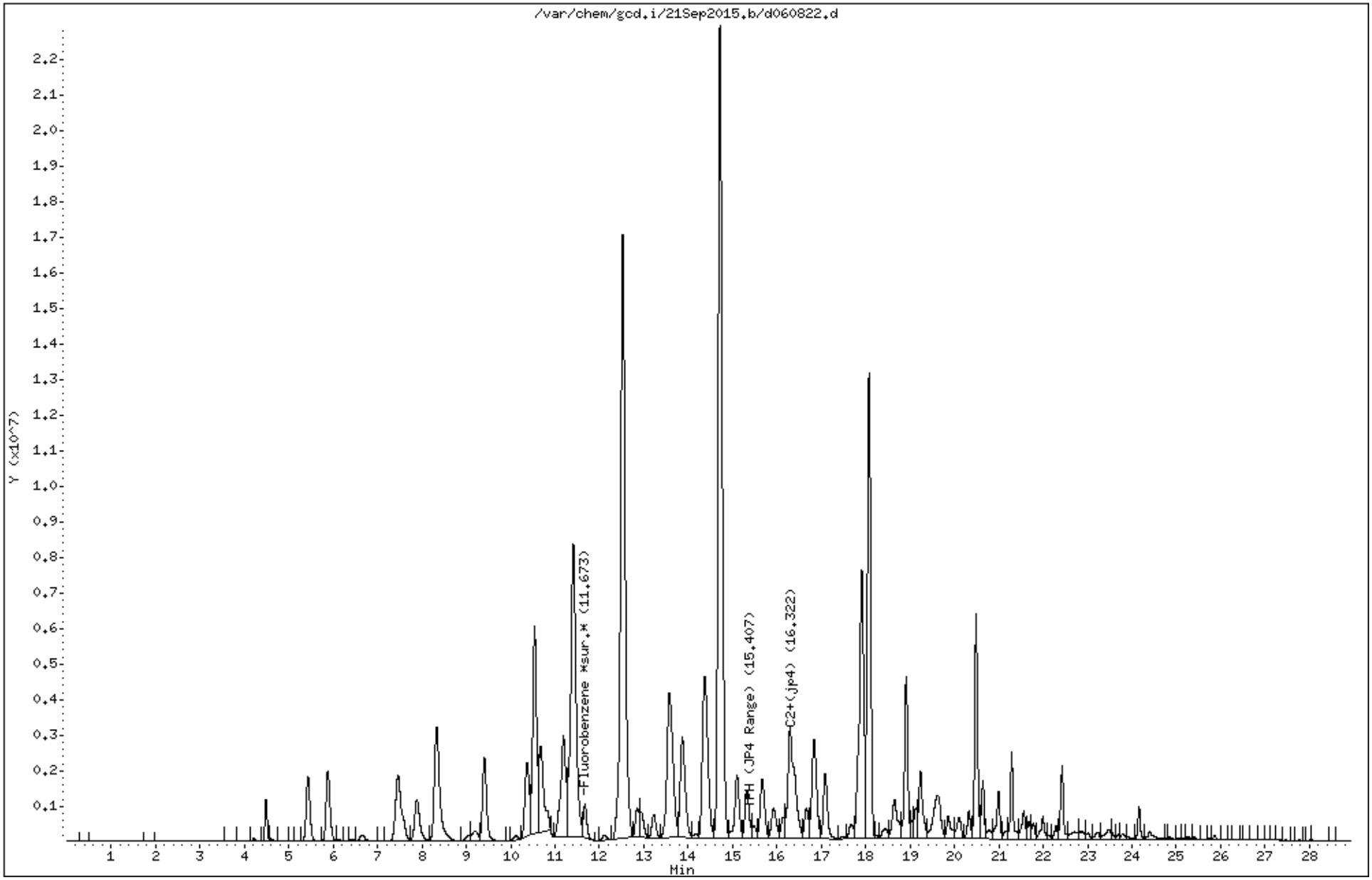
Instrument: gcd.i

Sample Info: Level 5

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060814.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 5
Inj Date : 08-JUN-2015 16:10
Operator : gd Inst ID: gcd.i
Smp Info : 50ppmv->0.50ppmv
Misc Info : 2.0ml,33907;2516-150 B.P.;Level 5
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 16:10 Cal File: d060814.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.314	8.348	-0.034	19508570	0.50000	0.4906
4 Heptane (hept)	11.412	11.446	-0.034	20791864	0.50000	0.5631
$ 6 Fluorobenzene *sur.*	11.666	11.696	-0.030	6190643	0.12500	0.1246

Data File: /var/chem/gcd.i/21Sep2015.b/d060814.d

Page 1

Date : 08-JUN-2015 16:10

Client ID: Level 5

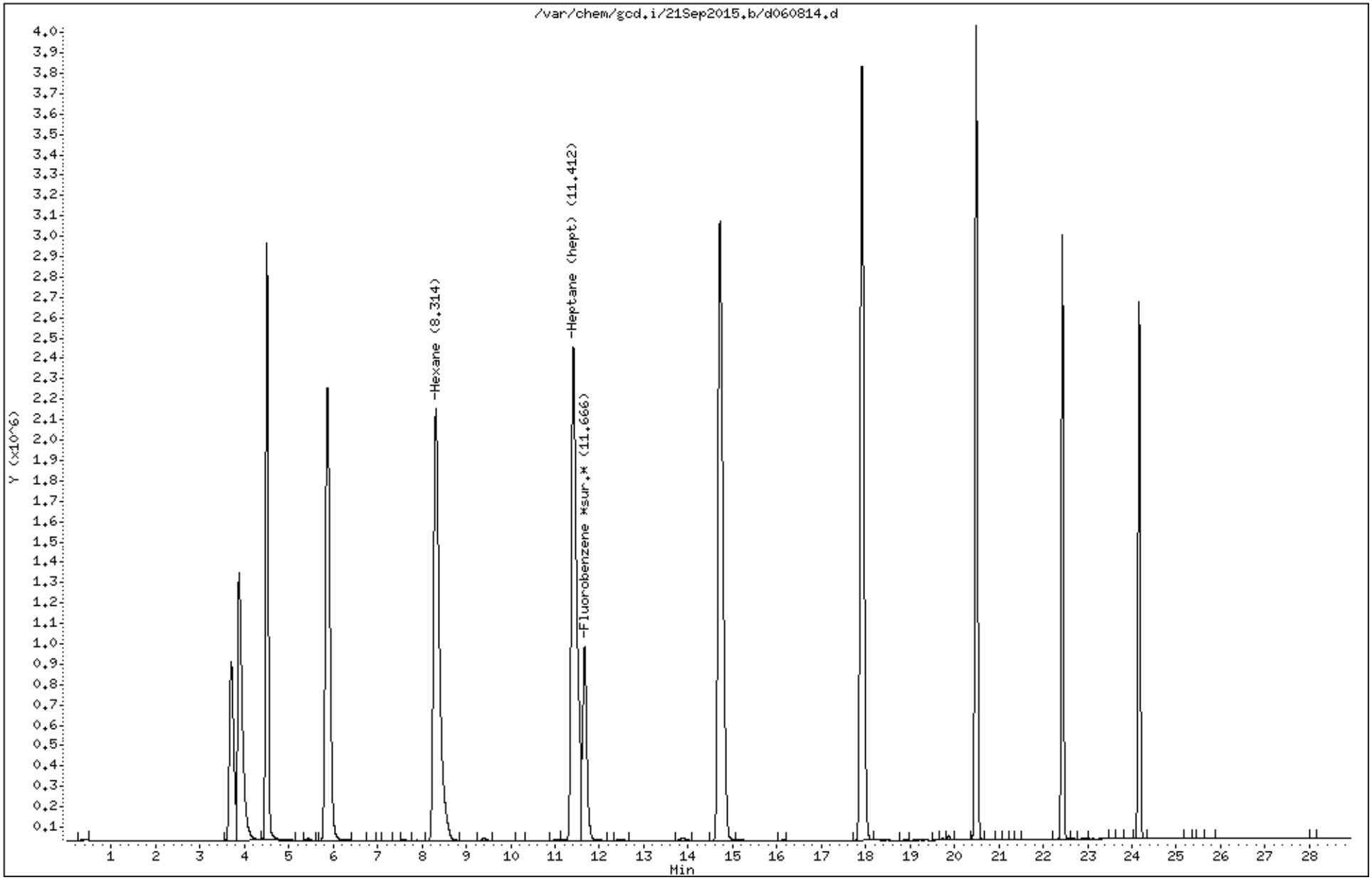
Instrument: gcd.i

Sample Info: 50ppmv->0.50ppmv

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060806.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 5
Inj Date : 08-JUN-2015 10:45
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->25ppmv
Misc Info : 50ml,03946;2516-172 Gasoline;Level 5
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 10:45 Cal File: d060806.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.660	11.696	-0.036	11310542	0.12500	0.1871
S 7 TPH (Gas Range)	7.346-	21.366		818557098	25.0000	31.84(A)
S 8 C2+ (gas)	3.643-	29.000		1120639377	25.0000	30.63(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcd.i/21Sep2015.b/d060806.d

Date : 08-JUN-2015 10:45

Client ID: Level 5

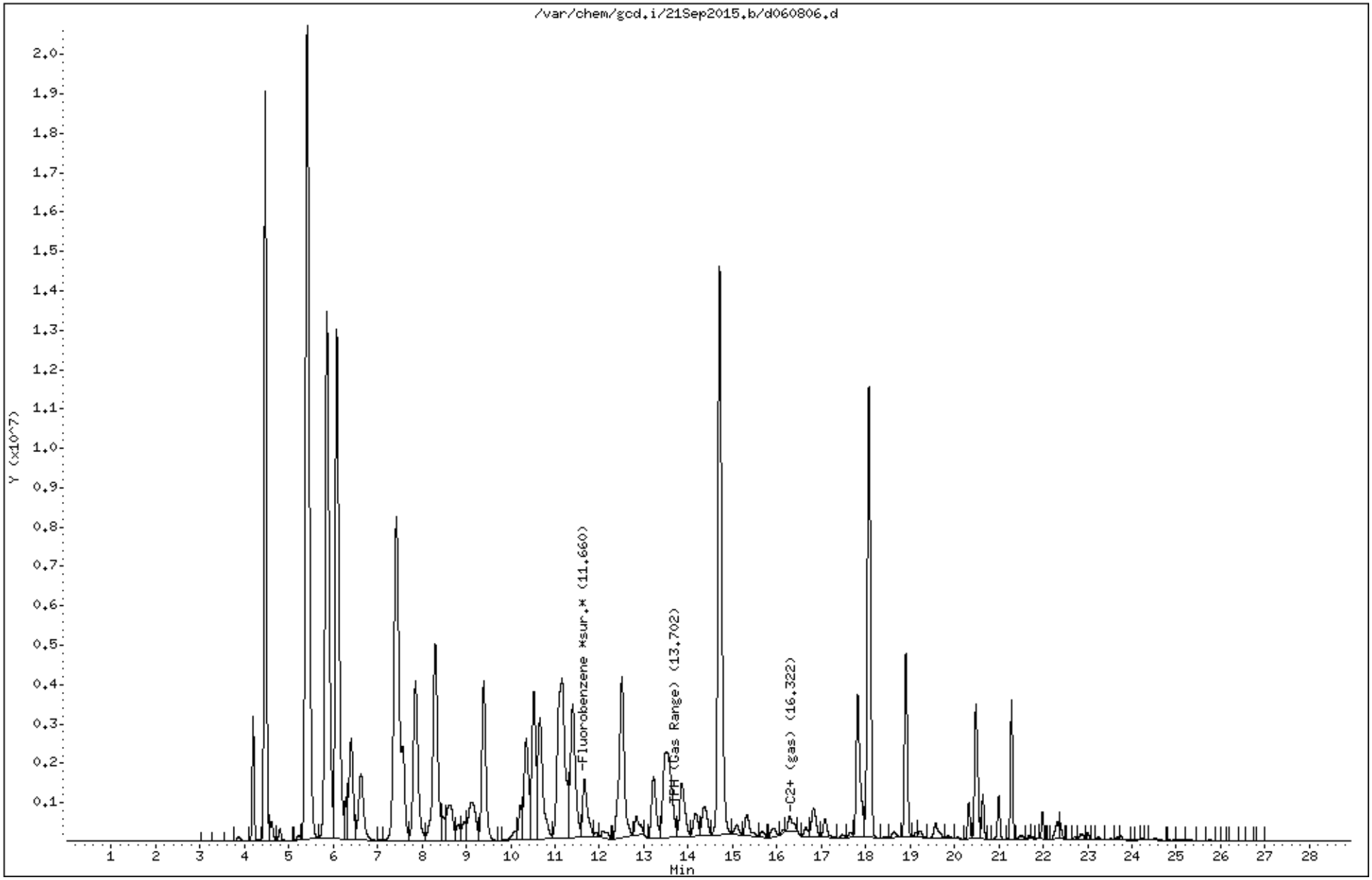
Instrument: gcd.i

Sample Info: 100ppmv->25ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics, Inc. 4Q 2015 TO-3 Limit of Detections (LODs) Effective 01-01-16				
CAS #	Analyte	Molecular Weight (MW)	LOD (ppmv)	LOQ (ppmv)
71-43-2	Benzene	78.1118	0.0006	0.001
100-41-4	Ethyl Benzene	106.165	0.0006	0.001
108-38-3	m,p-Xylene	106.165	0.0006	0.001
1634-04-4	Methyl tert-butyl ether	88.1482	0.0006	0.001
95-47-6	o-Xylene	106.165	0.0006	0.001
108-88-3	Toluene	92.1384	0.0006	0.001
9999-9999-015	Total Xylenes	100	0.0006	0.002
9999-9999-208	TPH (Gasoline Range)	100	0.012	0.025
9999-9999-013	TPH (C2+Hydrocarbons) ref. to Gasoline	100	0.012	0.025

Instrument ID - gcd.i file gcd.i/02Dec2015.b/d120203b.d gcd.i/03Dec2015.b/d120303.d

GC-D

TO-3 Gasoline MDL

Report Date : 10-Apr-2015 19:36

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /var/chem/gcd.i/10Apr2015.b/d1430606.m
Batch File: /chem/gcd.i/10Apr2015.b
Inst ID: gcd.i

(100x) 5.0ml of Std. 2516-133 were spiked to get a concentration of 0.025 ppmV.

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07
FILENAME:	d041003	d041004	d041005	d041006	d041007	d041008	d041009
INJ.DATE:	10-APR-2015	10-APR-2015	10-APR-2015	10-APR-2015	10-APR-2015	10-APR-2015	10-APR-2015
INJ.TIME:	13:57	15:00	15:49	16:40	17:15	17:51	18:28

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	AVG CONC	STD DEV	MDL ppbV	MDL (PPMV)
S 1 c2+ TO12(hept)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 2 c2+ TO12(hexane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
3 Hexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
4 Heptane (hept)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 6 Fluorobenzene *sur.*	0.12	0.11	0.11	0.10	0.11	0.10	0.11	0.11	0.01	0.02	surr
S 7 TPH (Gas Range)	21.85	20.55	19.29	18.31	21.62	20.94	19.69	20.32	1.29	4.05	0.00405
S 8 C2+ (gas)	27.28	28.96	26.10	20.88	24.41	26.67	26.27	25.80	2.56	8.06	0.00806
S 9 C2-C4 (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 10 C5+ (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 11a C2-C10(gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 12a C2-C10(gas100)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 11 TPH (JP4 Range)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 12 C2+(jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 13 c2-c4 (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 14 c5+ (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

RL: 0.025 PPMV

Reviewer 1 [signature] Date: 4/13/15
Reviewer 2 [signature] Date: 4/20/15

Eurofins Air Toxics Inc.

TARGET COMPOUNDS

Client Name:
Lab Smp Id: 2516-195 Gas
Sample Location:
Sample Date:
Sample Matrix: AIR
Analysis Type: VOA
Data Type: GC DATA
Misc Info: 5.0mL,1620;2516-195 Gas;CCV

Client SDG: 23Feb2016
Client Smp ID: CCV
Sample Point:
Date Received:
Quant Type: ESTD
Level: LOW
Operator: ly

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) PPMV	Q
9999-9999-208	TPH (Gas Range)	2.266	
9999-9999-013	C2+ (gas)	2.570	
462-06-602	Fluorobenzene *sur.*	0.1298	

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022301.d
Lab Smp Id: 2516-195 Gas Client Smp ID: CCV
Inj Date : 23-FEB-2016 08:18
Operator : ly Inst ID: gcd.i
Smp Info : CCV
Misc Info : 5.0mL,1620;2516-195 Gas;CCV
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.716	11.717	-0.001	5121297	0.12977	0.1298
S 7 TPH (Gas Range)	7.346	21.366		58273067	2.26643	2.266
S 8 C2+ (gas)	3.643	29.000		94039304	2.57007	2.570

Report Date: 23-Feb-2016 08:58

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-195 Gas
Client Smp ID: CCV
Level: LOW
Operator: ly
Data Type: GC DATA
SampleType: METHSPIKE
SpikeList File: 1.25ppmvGAS.spk
Quant Type: ESTD
Sublist File: TPH_C2+(Gas).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 5.0mL,1620;2516-195 Gas;CCV

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 7 TPH (Gas Range)	2.500	2.266	90.66	75-125
S 8 C2+ (gas)	2.500	2.570	102.80	75-125

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1298	103.82	75-150

Data File: /chem/gcd.i/23Feb2016.b/d022301.d

Date : 23-FEB-2016 08:18

Client ID: CCV

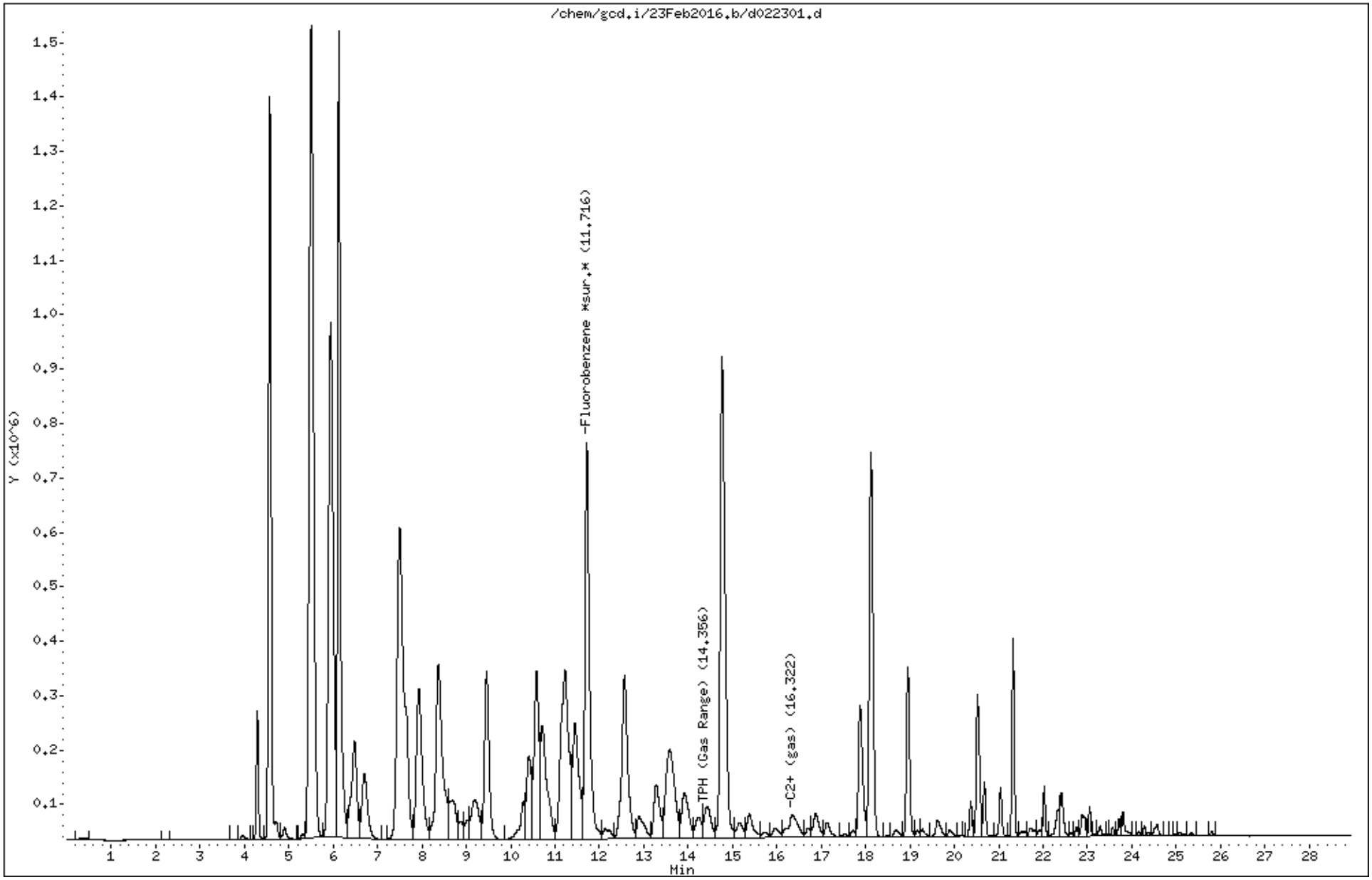
Sample Info: CCV

Column phase:

Instrument: gcd.i

Operator: ly

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	LCS		
Lab ID:	1602253B-06A	**Date/Time Analyzed:**	2/23/16 08:58 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	gcd.i / d022302a

Compound	**CAS#**	**%Recovery**
TPH (Gasoline Range)	9999-9999-208	84

Surrogates	**CAS#**	**Limits**	**%Recovery**
Fluorobenzene (FID)	462-06-602	45-148	106

* % Recovery is calculated using unrounded analytical results.

Report Date: 23-Feb-2016 17:10

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-202 Gas
Client Smp ID: LCS
Level: LOW
Operator: ly
Data Type: GC DATA
SampleType: LCS
SpikeList File: TPH(CL).spk
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 5.0mL,22513;2516-202 Gas;LCS

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 7 TPH (Gas Range)	2.500	2.092	83.70	68-107

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1325	106.02	45-148

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022302a.d
Lab Smp Id: 2516-202 Gas Client Smp ID: LCS
Inj Date : 23-FEB-2016 08:58
Operator : ly Inst ID: gcd.i
Smp Info : LCS
Misc Info : 5.0mL,22513;2516-202 Gas;LCS
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.721	11.717	0.004	5229775	0.13252	0.1325
S 7 TPH (Gas Range)	7.346-21.366			53797967	2.09238	2.092

Data File: /chem/gcd.i/23Feb2016.b/d022302a.d

Date : 23-FEB-2016 08:58

Client ID: LCS

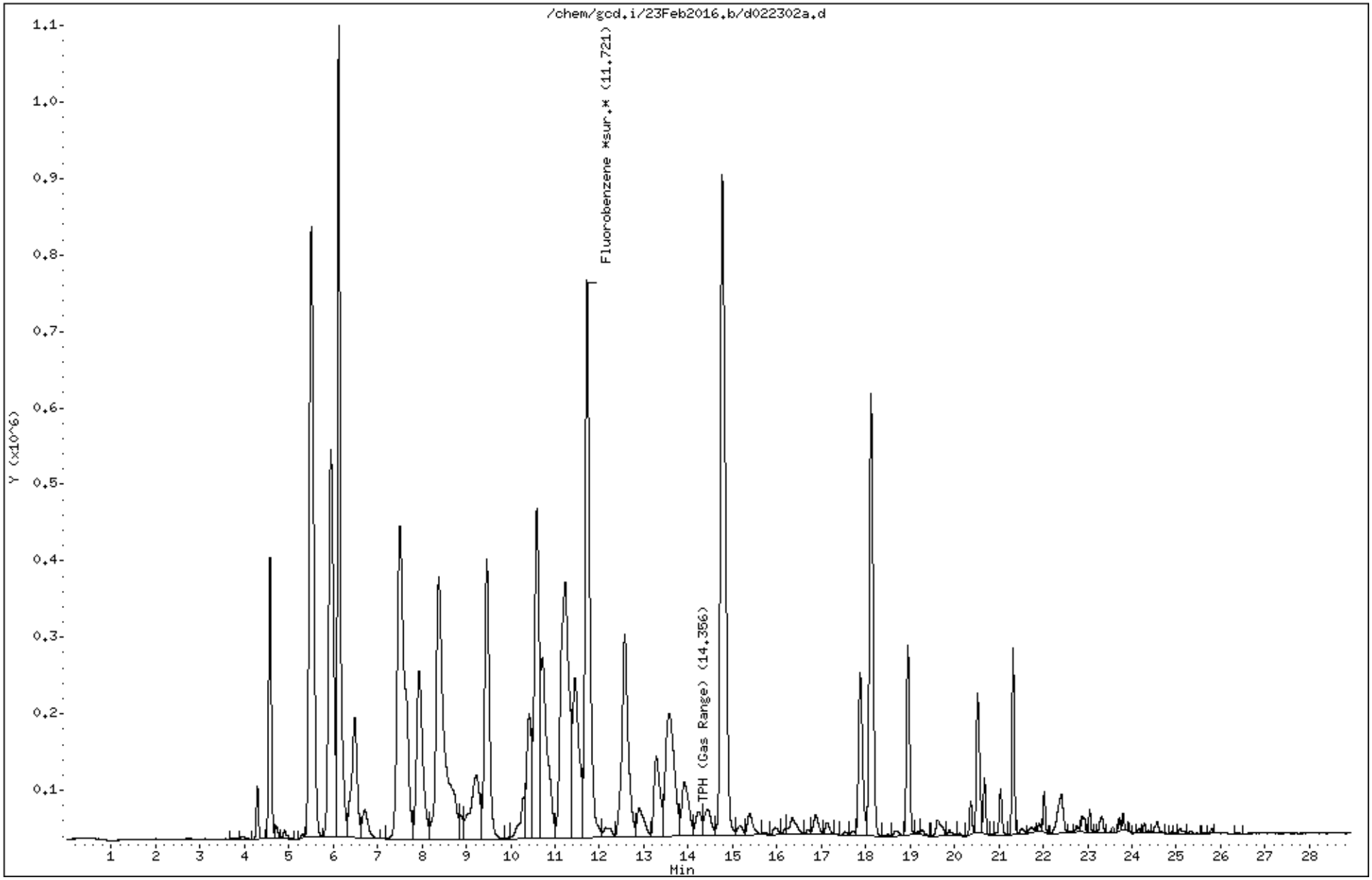
Sample Info: LCS

Column phase:

Instrument: gcd.i

Operator: ly

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	LCSD		
Lab ID:	1602253B-06AA	**Date/Time Analyzed:**	2/23/16 04:15 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	gcd.i / d022311a

Compound	**CAS#**	**%Recovery**
TPH (Gasoline Range)	9999-9999-208	83

Surrogates	**CAS#**	**Limits**	**%Recovery**
Fluorobenzene (FID)	462-06-602	45-148	103

* % Recovery is calculated using unrounded analytical results.

Report Date: 23-Feb-2016 17:10

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 23Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-202 Gasoline
Client Smp ID: LCSD
Level: LOW
Operator: gd
Data Type: GC DATA
SampleType: LCSD
SpikeList File: TPH(CL).spk
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /var/chem/gcd.i/23Feb2016.b/d1530921.m
Misc Info: 5.0mL,22513;2516-202 Gasoline;LCSD

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 7 TPH (Gas Range)	2.500	2.072	82.86	68-107

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1285	102.81	45-148

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/23Feb2016.b/d022311a.d
Lab Smp Id: 2516-202 Gasoline Client Smp ID: LCSD
Inj Date : 23-FEB-2016 16:15
Operator : gd Inst ID: gcd.i
Smp Info : LCSD
Misc Info : 5.0mL,22513;2516-202 Gasoline;LCSD
Comment :
Method : /var/chem/gcd.i/23Feb2016.b/d1530921.m
Meth Date : 23-Feb-2016 08:56 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.723	11.717	0.006	5071600	0.12851	0.1285
S 7 TPH (Gas Range)	7.346-21.366			53263052	2.07157	2.072

Data File: /chem/gcd.i/23Feb2016.b/d022311a.d

Date : 23-FEB-2016 16:15

Client ID: LCSD

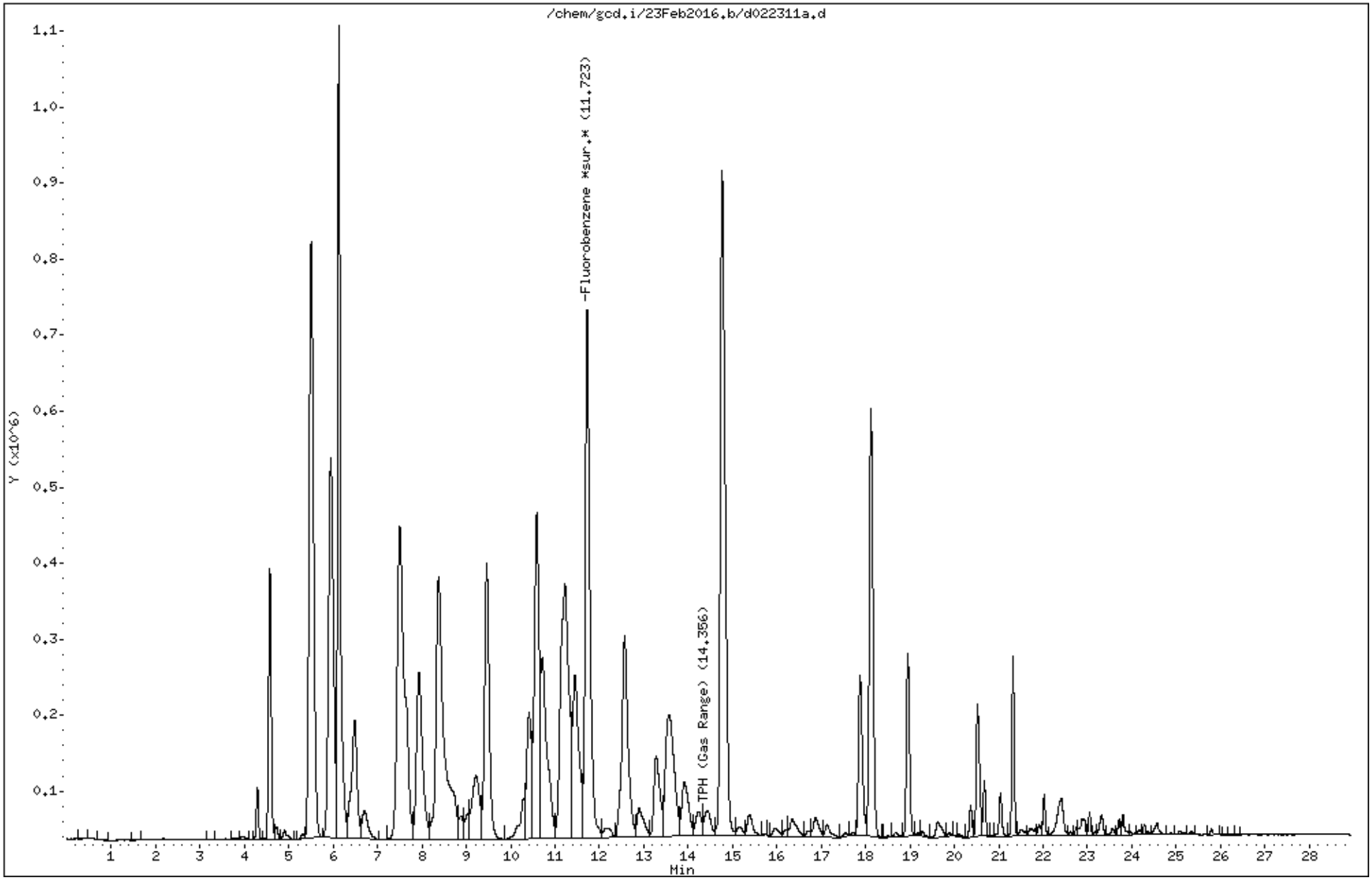
Instrument: gcd.i

Sample Info: LCSD

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics, Inc.

GC-D

Method: TO-3 TO-12 (circle one) Surrogate ID#: 2516-193B Exp. Date: 3/8/16 Leak Check: ly

USE	File #	Sample Name/Client ID	Can #	Pressure	Amt	DF	Date	Time	Init	Comments
✓	D022301	2516-195 Gasoline	1620	100 ppmv → 2.5 ppmv	5.0 ml	1.00	2/23/16	0818	~~08~~ ly	CCV, exp: 3/17/16
✓	02	2516-202 Gasoline	22513		↓			0858	ly	LCS, exp: 5/9/16
✓	03	Lab Blank	14867	Humid	200 ml	↓		0944		
✓	04	1602253B-01A	34321	10.0" Hg → 5 psi		2.01		1048		
✓	05	-02A	33531					1121		
✓	06	-03A	35148	10.5" Hg → 5 psi		2.06		1154		
✓	07	-04A	35266	9.5" Hg → 5 psi		1.96		1236		
✓	08	-04AD			↓			1338		Dup
✓	09	1602383B-01A	37399	10.4" Hg → 14.8 psi	50 ml	12.3		1453		
✓	10	-02A	37771	10.8" Hg → 14.2 psi	25 ml	25.0		1535	gd	
✓	11	2516-202 Gasoline	22513	100 ppmv → 2.5 ppmv	5.0 ml	1.00		1615	↓	LCSD
✗	D022312	1476-912, Butane	NA	Purity Check	1.0 ml	1.00		1703	MB	Purity check
✓	13				0.05 mL	1.00		1746	↓	↓
										gd 2/23/16

Calculation Check: File ID: D022301 Compound: TPH (gas range) Initials: ly

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × Dilution Factor = $\frac{(58273067)}{(25711393)}$ × (1.00) = 2.266

Reported Result:

Reviewed by: gd Date: 2/23/16

Shipping/ Receiving Documents

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics, Inc. (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Brian Whittaker at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Mike Sonderman
Collected by: (Print and Sign) Jessica Hoppmann / Jessica Hoppmann
Company: AECOM Email:
Address: 12120 Shamrock Plaza City: Omaha State: NE Zip: 68154
Phone: (402) 334-8181 Fax: (402) 334-1984

Project Info:
P.O. #:
Project #: 60425210.23446540.0032AB
Project Name: Cannon AFB

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	CA504-SG01-005	000001858	2/9/16	1643	TPH-GRO (TO-3) VOCs (TO-15)	-27.5	-6.8		
02A	CA504-SG01-~~005~~ 010	000003094		1643		-27.0	-6.9		
03A	CA504-SG03-005	000002306		1644		-27.1	-7.5		
04A	CA504-SG03-010	000002377		1644		-26.4	-6.0		

Jessica Hoppmann 2/10/16 2/9/16

Relinquished by: (signature)	Date/Time	Received by: (signature)	Date/Time
Jessica Hoppmann	2/10/16 1300	[illegible]	2/10/16 1020

Notes:

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		NA	Good	Yes No None	1602253

Form 1293 rev.11

Air Toxics Ltd.

TO-3 LCS Control Limits (gcd)

Effective Dates 09/26/15 - 03/26/16

Data Point Analysis Dates 03/25/15 - 09/25/15

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
Benzene	121	73	129	64	113	81
Ethyl Benzene	119	69	127	61	110	77
Heptane	122	77	129	69	114	84
Hexane	108	91	111	88	105	94
m,p-Xylene	116	73	123	66	109	80
Methyl tert-butyl ether	131	67	142	56	120	78
o-Xylene	124	72	133	64	115	81
Toluene	114	72	121	65	107	79
Total Xylenes	120	73	128	65	112	81
TPH (C2+ Hydrocarbons) ref. to Gasolin	102	66	107	61	96	72
TPH (Gasoline Range)	107	68	113	62	101	75

Air Toxics Ltd.

TO-3 SURR Control Limits (gcd)

Effective Dates 09/26/15 - 03/26/16

Data Point Analysis Dates 03/25/15 - 09/25/15

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
Fluorobenzene (FID)	148	45	165	28	131	62
Fluorobenzene (PID)	157	43	176	24	138	62

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SAMPLE RECEIPT SUMMARY

WORKORDER 1602253B

Client

Mr. Jeff Aust
AECOM
12120 Shamrock Plaza
Suite 300
Omaha, NE 68154

Sales Rep: N/A

Phone

(402) 952-2516

Fax

(402) 952-2591

Date Promised: 02/24/16
Date Completed: 2/24/16
Date Received: 2/11/16
PO#: 320236
Project#: 60425210.23446540.0032AB Cannon AFB
Total $: $ 200.00
Logged By: JCW

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	CA504-SG01-005	Modified TO-3	2/9/2016	10.0 "Hg	$50.00
02A	CA504-SG01-010	Modified TO-3	2/9/2016	10.0 "Hg	$50.00
03A	CA504-SG03-005	Modified TO-3	2/9/2016	10.5 "Hg	$50.00
04A	CA504-SG03-010	Modified TO-3	2/9/2016	9.5 "Hg	$50.00
04AA	CA504-SG03-010 Lab Duplicate	Modified TO-3	2/9/2016	9.5 "Hg	$0.00
05A	Lab Blank	Modified TO-3	NA	NA	$0.00
06A	LCS	Modified TO-3	NA	NA	$0.00
06AA	LCSD	Modified TO-3	NA	NA	$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Cannon Air Force Base320236/19959

BILL TO: Accounts Payable Austin
AECOM
P.O. BOX 203970
Austin, TX 78720-1088

Analysis Code: TO-3/12

REMARKS: VENDOR # 1568409

TERMS: NET 45

Reporting Method: Modified TO-3 (Sh)-TPHg only

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

Other Records

DILUTION FACTORS

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Vacuum}} = \frac{\text{14.7 psi + Final Pressure (psi)}}{\text{14.7 psi - [(Initial Pressure ("Hg)) (14.7 psi / 30 "Hg)]}}$$

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{\text{14.7 psi + Final Pressure (psi)}}{\text{14.7 psi + Initial Pressure (psi)}}$$

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.5	1.36	1.71	2.05
1.0	1.39	1.74	2.09
1.5	1.41	1.77	2.13
2.0	1.44	1.80	2.16
2.5	1.46	1.83	2.20
3.0	1.49	1.87	2.24
3.5	1.52	1.90	2.29
4.0	1.55	1.94	2.33
4.5	1.58	1.98	2.38
5.0	1.61	2.02	2.42
5.5	1.64	2.06	2.47
6.0	1.68	2.10	2.53
6.5	1.71	2.15	2.58
7.0	1.75	2.19	2.64
7.5	1.79	2.24	2.69
8.0	1.83	2.29	2.76
8.5	1.87	2.34	2.82
9.0	1.91	2.40	2.89
9.5	1.96	2.46	2.96
10.0	2.01	2.52	3.03
10.5	2.06	2.59	3.11
11.0	2.12	2.65	3.19
11.5	2.17	2.72	3.28
12.0	2.23	2.80	3.37
12.5	2.30	2.88	3.46
13.0	2.36	2.97	3.57
13.5	2.44	3.06	3.67
14.0	2.51	3.15	3.79
14.5	2.59	3.25	3.91
15.0	2.68	3.36	4.04
15.5	2.77	3.48	4.18
16.0	2.87	3.60	4.33
16.5	2.98	3.73	4.49
17.0	3.09	3.88	4.66
17.5	3.22	4.03	4.85
18.0	3.35	4.20	5.05
18.5	3.50	4.38	5.27
19.0	3.65	4.58	5.51
19.5	3.83	4.80	5.77
20.0	4.02	5.04	6.06
20.5	4.23	5.31	6.38

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
21.0	4.47	5.60	6.73
21.5	4.73	5.93	7.13
22.0	5.03	6.30	7.58
22.5	5.36	6.72	8.08
23.0	5.74	7.20	8.66
23.5	6.19	7.76	9.32
24.0	6.70	8.40	10.10
24.5	7.31	9.17	11.02
25.0	8.04	10.08	12.12
25.5	8.93	11.20	13.47
26.0	10.05	12.60	15.15
26.5	11.49	14.40	17.32
27.0	13.40	16.80	20.20
27.5	16.08	20.16	24.24
28.0	20.10	25.20	30.31
28.5	26.80	33.61	40.41
29.0	40.20	50.41	60.61

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59

DILUTION FACTORS

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{14.7\text{ psi} + \text{Final Pressure (psi)}}{14.7\text{ psi} + \text{Initial Pressure (psi)}}$$

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59
4.2	1.04	1.31	1.57
4.4	1.03	1.29	1.55
4.6	1.02	1.28	1.54
4.8	1.01	1.27	1.52
5.0	1.00	1.25	1.51
5.2	NA	1.24	1.49
5.4	NA	1.23	1.48
5.6	NA	1.22	1.46
5.8	NA	1.20	1.45
6.0	NA	1.19	1.43
6.2	NA	1.18	1.42
6.4	NA	1.17	1.41
6.6	NA	1.16	1.39
6.8	NA	1.15	1.38
7.0	NA	1.14	1.37
7.2	NA	1.13	1.36
7.4	NA	1.12	1.34

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
7.6	NA	1.11	1.33
7.8	NA	1.10	1.32
8.0	NA	1.09	1.31
8.2	NA	1.08	1.30
8.4	NA	1.07	1.29
8.6	NA	1.06	1.27
8.8	NA	1.05	1.26
9.0	NA	1.04	1.25
9.2	NA	1.03	1.24
9.4	NA	1.02	1.23
9.6	NA	1.02	1.22
9.8	NA	1.01	1.21
10.0	NA	1.00	1.20
10.2	NA	NA	1.19
10.4	NA	NA	1.18
10.6	NA	NA	1.17
10.8	NA	NA	1.16
11.0	NA	NA	1.16
11.2	NA	NA	1.15
11.4	NA	NA	1.14
11.6	NA	NA	1.13
11.8	NA	NA	1.12
12.0	NA	NA	1.11
12.2	NA	NA	1.10
12.4	NA	NA	1.10
12.6	NA	NA	1.09
12.8	NA	NA	1.08
13.0	NA	NA	1.07
13.2	NA	NA	1.06
13.4	NA	NA	1.06
13.6	NA	NA	1.05
13.8	NA	NA	1.04
14.0	NA	NA	1.03
14.2	NA	NA	1.03
14.4	NA	NA	1.02
14.6	NA	NA	1.01
14.8	NA	NA	1.01

Compound Listing

Modified TO-3 (Sh)-TPHg only

CAS Number	Compound	Detection Limit ppmv	Type
9999-9999-208	TPH (Gasoline Range)	0.025	
462-06-602	Fluorobenzene (FID)		

File Name: O:\Variances\Variances 2013\Signed Variance Tables 2013
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Item	Parameter	SOW	ATL SOP	Approval
1	DoD QSM Box 32 – Second Source Standards	Second Source standard must be from a different manufacturer.	Second Source standard is from a different manufacturer or same manufacturer different lot number.	
2	SOW#7	EDDs must be accompanied by a signature page indicating correct values and format.	Signature page is not included along with the EDD.	
3	SOW #12	The LOQ must be at least 2 times the DL.	In the majority of the cases, the LOQ meets this criterion; however, when evaluating over 60 compounds on multiple instruments, there may be an isolated case in which LOQ is not 2 times the DL. In all cases, the LOQ>DL.	
4	SOW#13	The laboratory shall provide copies of all SOPs upon request by URS.	SOPs are available on an as needed basis upon signing a NDA.	
5	SOW#16	Hardcopy and EDD must be delivered.	The laboratory provides report as a pdf format and EDD which can be downloaded from the Web portal. The QC Summary Package may not have the navigable functionality in the pdf format.	
6	SOW#17	Samples may be disposed after 7 days of URS receipt of an acceptable data package.	Summa canisters are reusable media and will be released for cleaning after analyses have been completed and reviewed against project requirements.	
7	Attachment A	Cooler receipt form	Summa canisters are not shipped via a cooler and a cooler receipt form is not applicable.	

I agree to terms and conditions

File Name: O:\Variances\
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Method Modifications

Table 1. Summary of Method Modifications for TO-3

Requirement	EPA Method TO-3	Eurofins Air Toxics Modifications
Sample Collection	In-line field method.	Collection of sample in specially treated canisters or alternative containers for transport to and analysis by an off-site laboratory.
Preparation of Standards	Levels achieved through dilution of gas mixture.	Levels achieved through loading various volumes of the gas mixture.
Initial Calibration Calculation	4-point calibration using a linear regression model.	5-point calibration using average Response Factor.
Initial Calibration Frequency	Weekly.	When daily calibration standard recovery is outside 75-125%, or upon significant changes to the procedure or instrumentation.
Daily Calibration Standard Frequency	Prior to sample analysis and every 4-6 hrs.	Prior to sample analysis.
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard.	40 CFR Pt. 136 App. B.
Sample preconcentration and moisture management	Cyrogenic preconcentrator with a Nafion dryer.	Multi-bed Sorbent system.

File Name: O:\Variances\
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Table 2. Summary of Method Modifications for ASTM D1946

Requirement	ASTM D1946	Eurofins Air Toxics Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum 3-point calibration curve is performed. Quantitation is based on a daily calibration standard, which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by AT are blended to a ≥ 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL. Linear range is defined by the calibration curve. Bags may be loaded by vacuum or by positive pressure.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25 % RPD. for detections >5 X's the RL

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 11/11/15
Workorder # 1602253B	Form F1.27	Revision #12	Revision Date: 11/11/15	Page 1 of 2

S1	S2	S3	S4	D	***Section 1* – Spec Out**				
					Initials/Instrument/Date LY GC-D	**S1:** 2/23/16	**S2:**	**S3:**	**S4:**
✓				■	Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
NA				■	Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
✓				■	Manual Integrations included and approved				
✓				✓	Chain of Custody verified for special comments (add comments below)				
✓				■	Non-standard Target sublist verified (MDL, LOD, RL, control limits, etc.)				

Profile, analyses, reporting, special notes and unusual circumstances:

– PRT

A1	A2	A3	A4	D	***Section 2* – Sample Analysis**				
					Initials/Date LY 2/23/16	**A1:**	**A2:**	**A3:**	**A4:**
✓				✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, and Canister #s Verified				
NA				NA	**a)** Tedlar Bag IDs verified against COC **b)** Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
✓				✓	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓				■	12/24 Hr clock time & Hold Time met for all samples				
✓				✓	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks.				
✓				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes:

D1	D2	D3	D4	T	3T	***Section 3* – Target Data Reduction**	**Technical Review Needed? Circle one: Yes/No**		**T:**	
						Initials/Instrument/ Date	**D1:** JM 2/24/16	**D2:**	**D3:**	**D4:**
NA	✓				■	CAR # *(if applicable)*				
	✓				■	Spectra Verified *(documentation of spectral defense included if applicable)*				
NA	✓				■	TICs resemble reference spectra/ TICs between sample dups. are consistent *(if applicable)*				
✓					✓	Lab Narrative is correct				
NA					■	TPH/NMOC calculations complete and included in folder				

Special notes:

A	3T	***Section 4*- Atlas Data Entry**	**Lumen verified and included in folder**	**Circle one: Yes/No**
		Initials/Date: JM 2/24/16	**3rd Tier:** *(needed only for DOD or per client request)* gd 2/24/16	
NA	NA	Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
✓	✓	Manually entered results are checked		
✓	✓	At least one result per sample is verified against Target quant sheets		
✓	✓	Appropriate data qualifier flags are applied		
✓	✓	Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Workorder # :				**Reason for Reissue:**
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Workorder # :				**Reason for Reissue:**
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Not Applicable

Cannon AFB Data Verification

Laboratory and SDGs#: Eurofins 1602253 A/B **URS Chemist: Jennifer Zorinsky**
Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

Sample Identification #	Date Collected	Date Received	Matrix	Analysis
CA504-SG01-005	2/9/2016	2/11/2016	Air	VOCs (TO-15), GRO (TO-3)
CA504-SG01-010	2/9/2016	2/11/2016	Air	VOCs (TO-15), GRO (TO-3)
CA504-SG03-005	2/9/2016	2/11/2016	Air	VOCs (TO-15), GRO (TO-3)
CA504-SG03-010	2/9/2016	2/11/2016	Air	VOCs (TO-15), GRO (TO-3)

1.0 Laboratory Case Narrative \ Cooler Receipt Form

Verification Criteria	Yes	No	N/A
Were any DoD QSM deviations noted in the laboratory case narrative?		X	
Were DoD QSM corrective actions followed if deviations were noted?			X
Were any issues noted in the cooler receipt form?		X	

The laboratory case narrative indicated that the hydrocarbon profile in samples CA504-SG01-005, CA504-SG01-010, CA504-SG03-005, and CA504-SG03-010 did not resemble commercial gasoline. No qualification of data was required.

The cooler receipt form indicated no problems or discrepancies were encountered.

2.0 Sample Documentation

Verification Criteria	Yes	No
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X	
Were all sample identifications (IDs) documented correctly on sample labels?	X	
Did samples listed on COCs match the sample labels?	X	
Were samples relinquished properly on the COC?	X	

3.0 Holding Time

Verification Criteria	Yes	No	N/A
Were all samples extracted/analyzed within holding time?	X		
Were samples outside holding time extracted/analyzed < 2x holding time?			X
Were samples outside holding time extracted/analyzed > 2x holding time?			X

4.0 Instrument Performance Check (Tuning)

Method TO-15 Instrument Tuning Criteria (Filename)	**3020109.D**		
Instrument:	**MSD 3**		
Date of Tuning:	**2/1/2016 15:23**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to initial and/ or daily calibration?	X		
Were all samples analyzed under an acceptable 24 hour clock tune?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: Eurofins 1602253 A/B **URS Chemist: Jennifer Zorinsky**
Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

Method TO-15 Instrument Tuning Criteria (Filename)	**3020109.D**		
Instrument:	**MSD 3**		
Date of Tuning:	**2/1/2016 15:23**		
	Yes	**No**	**N/A**
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of EPA Method TO-15?	X		

Method TO-15 Instrument Tuning Criteria (Filename)	**3021701.D**		
Instrument:	**MSD 3**		
Date of Tuning:	**02/17/2016 10:53**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to initial and/ or daily calibration?	X		
Were all samples analyzed under an acceptable 24 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of EPA Method TO-15?	X		

5.0 Initial Calibration

Method TO-15 Initial Calibration Criteria			
Instrument:	**MSD 3**		
Date of Calibration:	**2/1/2016**		
	Yes	**No**	**N/A**
Was at least a 5-point calibration completed for all analytes prior to sample analysis?	X		
Option 1: RSD for each analyte ≤ 30%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X

Method TO-3 (GRO) Initial Calibration Criteria			
Instrument:	**GC-D**		
Date of Calibration:	**6/8/2015**		
	Yes	**No**	**N/A**
Was at least a 5-point calibration completed for all analytes prior to sample analysis?	X		
Option 1: RSD for each analyte ≤ 30%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Cannon AFB Data Verification

Laboratory and SDGs#: Eurofins 1602253 A/B **URS Chemist: Jennifer Zorinsky**
Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

6.0 Initial Calibration Verification [(ICV) Second Source]

Method TO-15 ICV Criteria (Filename)	**3020120.D**		
Instrument:	**MSD 3**		
Date of Initial Calibration Verification:	**2/1/2016 22:10**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 30% of the expected value (initial source)?	X		

Method TO-3 ICV (GRO) Criteria (Filename)	**D060808.D**		
Instrument:	**GC-D**		
Date of Initial Calibration Verification:	**6/8/2015 12:07**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 30% of the expected value (initial source)?	X		

7.0 Continuing Calibration Verification (CCV)

Method TO-15 CCV Criteria (Filename)	**3021702A.D**		
Instrument:	**MSD 3**		
Date of Calibration Verification:	**2/17/2016 15:23**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 24 hours of analysis time?	X		
Were all project analytes within ± 30% of expected value from the ICAL?	X		

Method TO-3 (GRO) CCV Criteria (Filename)	**D022301.D**		
Instrument:	**GC-D**		
Date of Calibration Verification:	**2/23/2016 8:18**		
	Yes	**No**	**N/A**
Was the CCV analyzed prior to sample analysis and at the end of the analysis sequence?	X		
Were all project analytes within established retention time windows?	X		
Were all project analytes within ± 30% of expected value from the ICAL?	X		

8.0 Blank Samples

Blank Criteria	**Yes**	**No**	**N/A**
Was a method blank analyzed with every preparatory batch?	X		
Were analytes detected > ½ the LOQ and > 1/10 the amount measured in any sample or 1/10 the regulatory limit?		X	
Were target analytes detected in method, trip or calibration blanks?		X	

Cannon AFB Data Verification

Laboratory and SDGs#: Eurofins 1602253 A/B **URS Chemist: Jennifer Zorinsky**
Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

9.0 Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

LCS Criteria	Yes	No	N/A
Was an LCS/LCSD analyzed with every preparatory batch?	X		
Were LCS/LCSD recoveries/RPDs within acceptance criteria listed in the UFP-QAPP?	X		

10.0 Surrogates

Methods TO-15 and TO-3	Yes	No	N/A
Were surrogate spikes added to all field and QC samples?	X		
Were surrogate recoveries within acceptance criteria listed in the UFP-QAPP?	X		

11.0 Internal Standards (IS)

Method TO-15	Yes	No	N/A
Were internal standards spiked for all samples and standards?	X		
Were the internal standard areas within -50% to + 100% of the ICAL midpoint standard area?	X		
Were the retention times ± 10 seconds from the retention times of the midpoint standard of the ICAL?	X		

12.0 Matrix Duplicate

Matrix Duplicate (MD) Criteria	Yes	No	N/A
Were MD samples analyzed with every preparatory batch?	X		
Were MD samples collected for this SDG?	X		
Were MD RPDs within acceptance criteria listed in the UFP-QAPP?	X		

Sample CA504-SG01-005 was duplicated and analyzed for VOCs. Sample CA504-SG03-010 was duplicated and analyzed for TPH-GRO.

13.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	N/A
Were field duplicate samples collected for this SDG? (if yes, list below)		X	
Were parent sample / field duplicate RPDs ≤ 50% for soil analytes that had concentrations > 5x the LOQ.			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ			X

Cannon AFB Data Verification

Laboratory and SDGs#: Eurofins 1602253 A/B **URS Chemist: Jennifer Zorinsky**
Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

14.0 Sensitivity

Sensitivity Criteria	Yes	No	N/A
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		

15.0 Additional Qualifications

Additional Qualification Criteria	Yes	No	N/A
Were common laboratory contaminants detected?		X	
Were common laboratory contaminant concentrations < 2x the LOQ?			X
Was professional judgment used to qualify data (if yes, list below)?		X	

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Electronic Comprehensive Validation Package (eCVP)

eurofins | Air Toxics

COMPREHENSIVE VALIDATION PACKAGE

TO-15

INVENTORY SHEET

Work Order #: 1602250A

	Page Nos. From	Page Nos. To
1. Work Order Cover Page & Laboratory Narrative	1	5
a. Lumen Validation Report	--	--
2. Sample Results and Raw Data (Organized by Sample)	6	34
a. ATL Sample Results Form		
b. Target Compound Raw Data		
-Internal Standard Area and Retention Time Summary		
-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
3. QC Results and Raw Data		
a. Method Blank (Results+ Raw Data)	35	42
b. Surrogate Recover Summary Form (If Applicable)	43	43
c. Internal Standard Summary Form (If Applicable)	44	44
d. Duplicate Results Summary Sheet	45	46
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data	--	--
f. Initial Calibration Data (Summary Sheet + Raw Data)	47	280
g. MDL Study (If Applicable)	281	306
h. Continuing Calibration Verification Data (Summary Sheet	307	321
i. Second Source LCS(Summary + Raw Data)	322	347
j. Extraction Logs	--	--
k. Instrument Run Logs/Software Verification	348	348
l. GC/MS Tune (Results + Raw Data)	349	368
4. Shipping/Receiving Documents		
a. Login Receipt Summary Sheet	369	370
b. Chain-of-Custody Records	371	374
c. Sample Log-In Sheet	375	375
d. Misc Shipping/Receiving Records (list of individual records)		
Sample Receipt Discrepancy Report	--	--
5. Other Records (describe or list)		
a. Manual Spectral Defense	--	--
b. Manual Integrations	--	--
c. Manual Calculations	--	--
d. Canister Dilution Factors	376	378
e. Laboratory Corrective Action Request	--	--
f. CAS Number Reference	379	379
g. Variance Table	380	382
h. Canister Certification	383	384
i. Data Review Check Sheet	385	386

Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	3/3/16
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1602250A

Work Order Summary

CLIENT:	Mr. Jeff Aust AECOM 12120 Shamrock Plaza Suite 300 Omaha, NE 68154	**BILL TO:**	Accounts Payable Austin AECOM P.O. BOX 203970 Austin, TX 78720-1088
PHONE:	(402) 952-2516	**P.O. #**	320236
FAX:	(402) 952-2591	**PROJECT #**	60425210.23446540.0032AB Cannon AFB
DATE RECEIVED:	02/11/2016	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	02/23/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	CA504-SG02-010	TO-15	9.4 "Hg	4.9 psi
01AA	CA504-SG02-010 Lab Duplicate	TO-15	9.4 "Hg	4.9 psi
02A	CA504-SG02-005	TO-15	7.3 "Hg	5.1 psi
03A	Lab Blank	TO-15	NA	NA
04A	CCV	TO-15	NA	NA
05A	LCS	TO-15	NA	NA
05AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 02/23/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
DoD QSM 4.2 TO-15
AECOM
Workorder# 1602250A

Two 6 Liter Summa Canister (100% Certified) samples were received on February 11, 2016. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Modifications to DoD QSM 4.2 requirements are listed in the table below.

Requirement	*TO-15 DoD QSM 4.2*	*ATL Modifications*
DoD QSM 4.2 Box 34 Calibration of surrogates	Quantification of surrogates requires a multi-point calibration.	Quantification achieved using a multipoint calibration at a single concentration, analogous to internal standards.
DoD QSM 4.2 Box 32 Second Source Standard	Second Source standard must be from a different manufacturer.	Second Source standard is from a different manufacturer or same manufacturer with different lot number.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per client project requirements, the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit. Concentrations that are below the level at which the canister was certified (0.2 ppbv for compounds reported at 0.5 ppbv) may be false positives.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Sample Extract Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
CA504-SG02-010	1602250A-01A	2/ 9/2016	2/11/2016	NA	8	2/17/2016	NA	Good
CA504-SG02-010 Lab D	1602250A-01AA	2/ 9/2016	2/11/2016	NA	8	2/17/2016	NA	Good
CA504-SG02-005	1602250A-02A	2/ 9/2016	2/11/2016	NA	8	2/17/2016	NA	Good
Lab Blank	1602250A-03A	NA	NA	NA	NA	2/17/2016	NA	Good
CCV	1602250A-04A	NA	NA	NA	NA	2/17/2016	NA	Good
LCS	1602250A-05A	NA	NA	NA	NA	2/17/2016	NA	Good
LCSD	1602250A-05AA	NA	NA	NA	NA	2/17/2016	NA	Good

Sample Results and Raw Data

EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

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Client ID:	CA504-SG02-010		
Lab ID:	1602250A-01A	**Date/Time Analyzed:**	2/17/16 05:51 PM
Date/Time Collected:	2/9/16 03:27 PM	**Dilution Factor:**	1.94
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a021713

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.30	1.5	3.1	0.42 J
Ethyl Benzene	100-41-4	0.82	2.1	4.2	1.8 J
m,p-Xylene	108-38-3	0.77	2.1	4.2	5.0
o-Xylene	95-47-6	0.59	2.1	4.2	1.7 J
Toluene	108-88-3	0.82	1.8	3.6	13

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	97
4-Bromofluorobenzene	460-00-4	74-122	103
Toluene-d8	2037-26-5	82-119	96

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/17feb16.b/a021713.d
Lab Smp Id: 1602250A-01A
Inj Date : 17-FEB-2016 17:51
Operator : sab Inst ID: msda.i
Smp Info : 200mL 34401
Misc Info : 9.4 Hg->4.9 psi
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/17feb16.b/a15q1218f.m
Meth Date : 18-Feb-2016 09:21 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 5
Dil Factor: 1.94000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.94000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	169132	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	130203			47.82- 107.82	76.98
5.464	5.464 (1.000)	49	220436			110.78- 170.78	130.33
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	671654	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	96849			0.00- 45.54	14.42
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	626433	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	301434			20.41- 80.41	48.12
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.015	6.015 (1.101)	65	210811	24.2455	24.245	80.00- 120.00	100.00
6.015	6.015 (1.101)	67	107473			25.18- 85.18	50.98

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.620	7.613 (1.194)	98	651679	23.9179	23.918	80.00- 120.00	100.00
7.613	7.613 (1.193)	70	62995			0.00- 40.33	9.67
7.620	7.613 (1.194)	100	434094			36.65- 96.65	66.61
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.855	9.862 (1.111)	174	389425	25.7572	25.757	80.00- 120.00	100.00
9.855	9.862 (1.111)	95	434210			90.45- 150.45	111.50
9.855	9.862 (1.111)	176	384379			69.84- 129.84	98.70
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	950	0.06723	0.1304	80.00- 120.00	100.00(a)
5.994	5.994 (0.939)	77	134			0.00- 53.73	14.12
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	36336	1.73703	3.370	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	20985			28.59- 88.59	57.75
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.008)	106	2029	0.21905	0.4250	80.00- 120.00	100.00(a)
8.938	8.938 (1.008)	91	7288			275.74- 335.74	359.14
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.019)	106	6880	0.58866	1.142	80.00- 120.00	100.00
9.038	9.038 (1.019)	91	14932			168.00- 228.00	217.04
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.058)	106	2243	0.20327	0.3943	80.00- 120.00	100.00(a)
9.382	9.382 (1.058)	91	5783			180.86- 240.86	257.83

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 23-Feb-2016 09:36

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021713.d
Lab Smp Id: 1602250A-01A
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 9.4 Hg->4.9 psi

Calibration Date: 17-FEB-2016
Calibration Time: 12:45

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	163888	98333	229443	169132	3.20
123 1,4-Difluorobenze	679258	407555	950961	671654	-1.12
163 Chlorobenzene-d5	626147	375688	876606	626433	0.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 23-Feb-2016 09:36

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602250A-01A
Level: LOW
Operator: sab
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 9.4 Hg->4.9 psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.245	96.98	79-128
$ 146 Toluene-d8	25.000	23.918	95.67	82-119
$ 177 4-Bromofluorobenze	25.000	25.757	103.03	74-122

Data File: /chem/msda.i/17feb16.b/a021713.d

Date : 17-FEB-2016 17:51

Client ID:

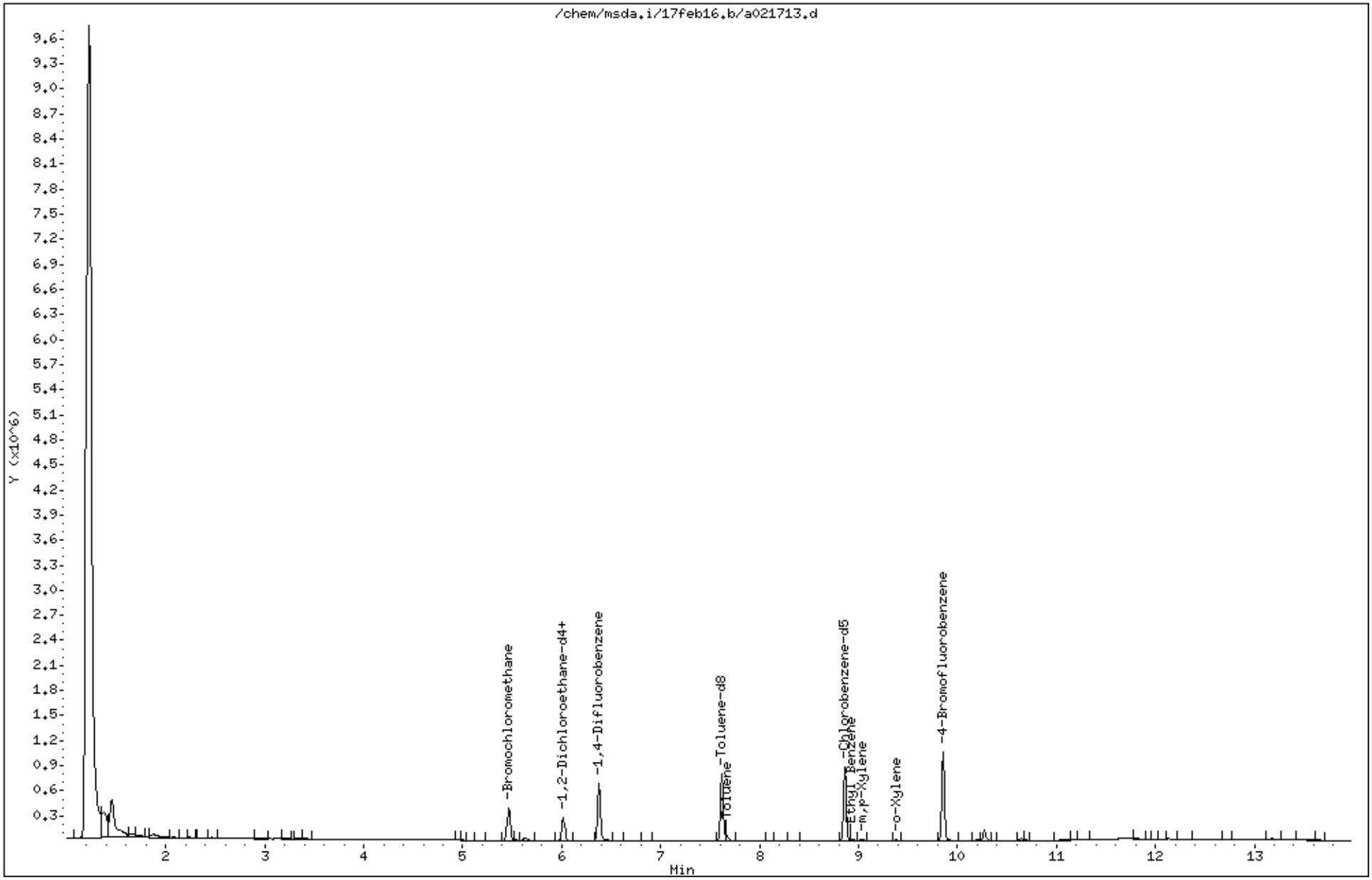
Instrument: msda.i

Sample Info: 200mL 34401

Operator: sab

Column phase: RTX-624

Column diameter: 0.25



Data File: /chem/msda.i/17feb16.b/a021713.d

Date : 17-FEB-2016 17:51

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

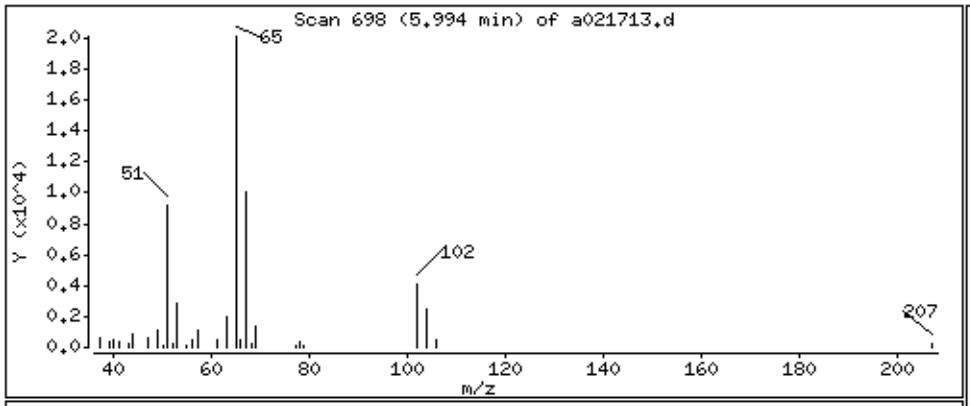
Operator: sab

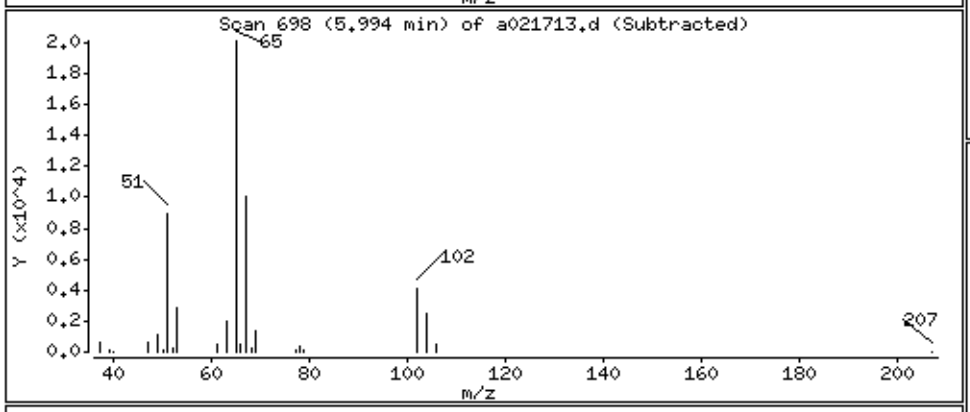
Column phase: RTX-624

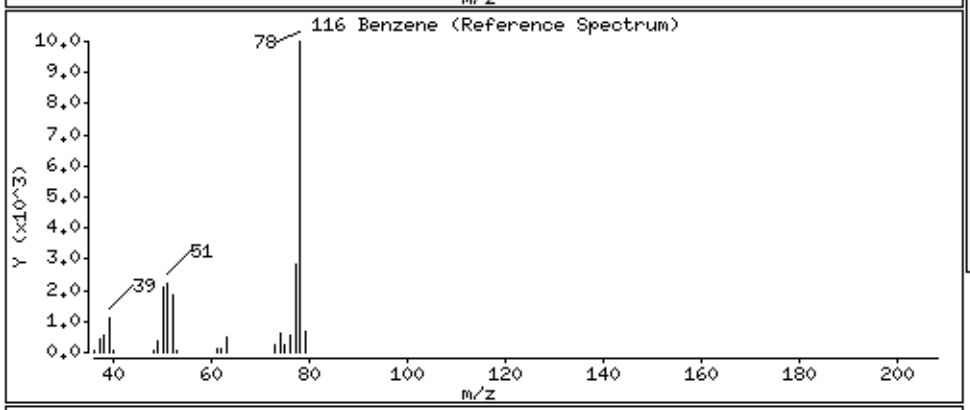
Column diameter: 0.25

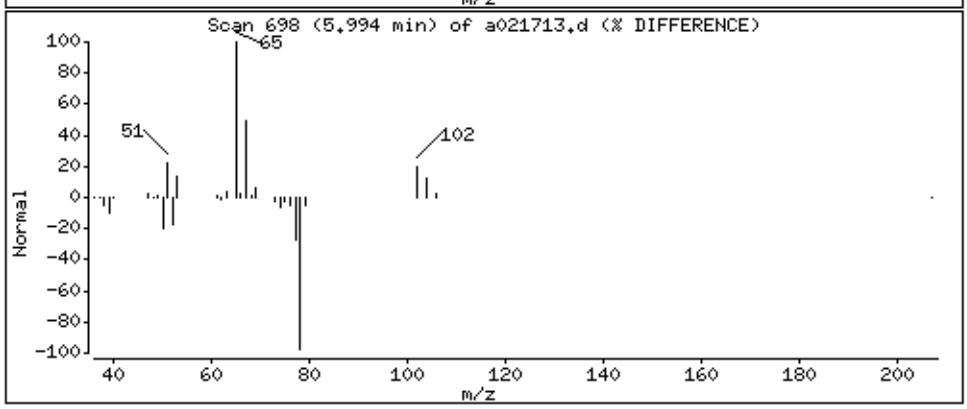
116 Benzene

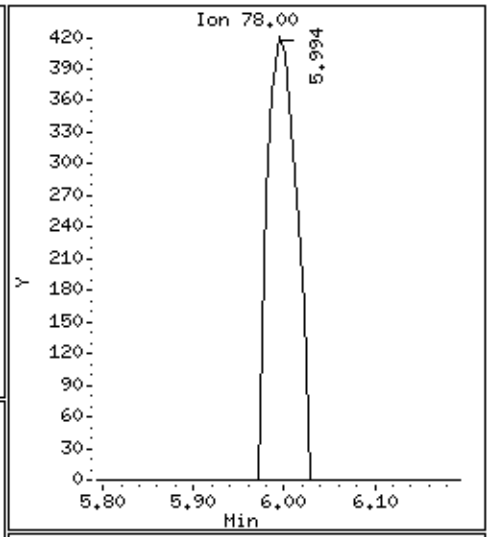
Concentration: 0.1304 PPBV

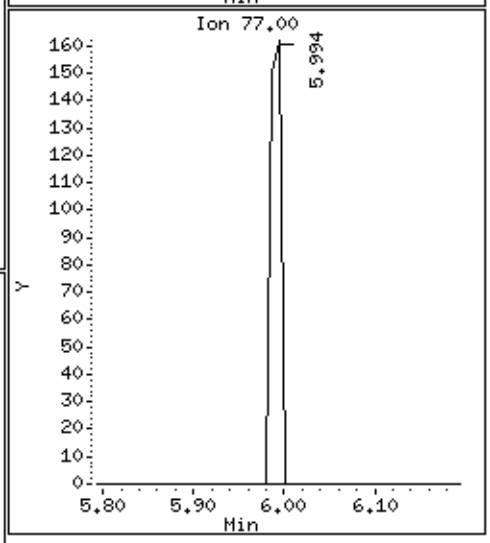












Data File: /chem/msda.i/17feb16.b/a021713.d

Date : 17-FEB-2016 17:51

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

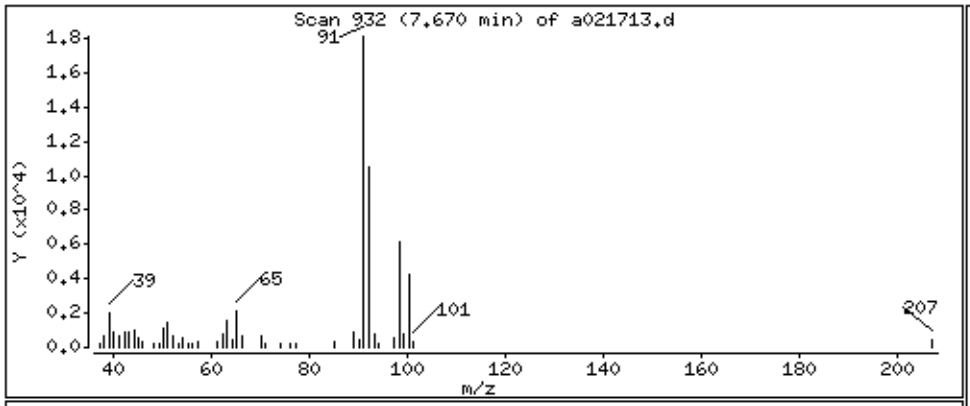
Operator: sab

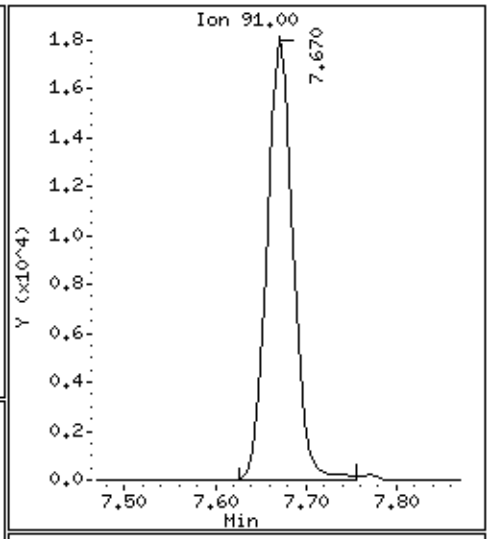
Column phase: RTX-624

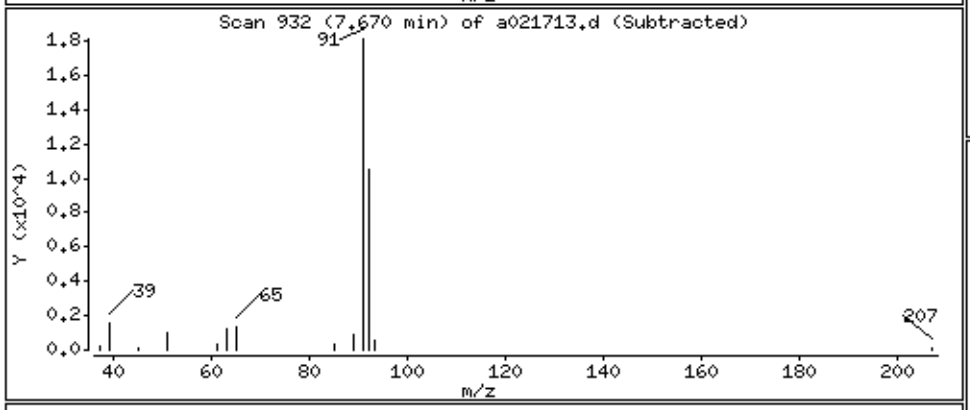
Column diameter: 0.25

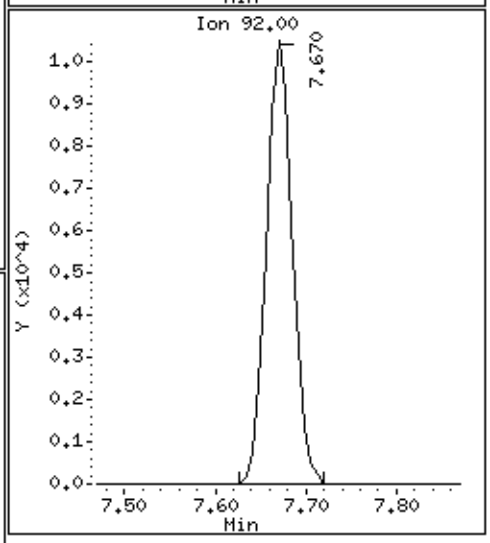
147 Toluene

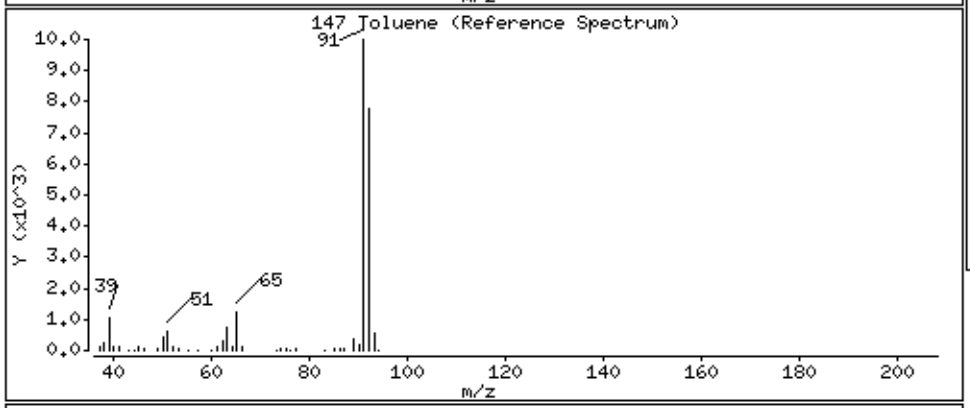
Concentration: 3.370 PPBV

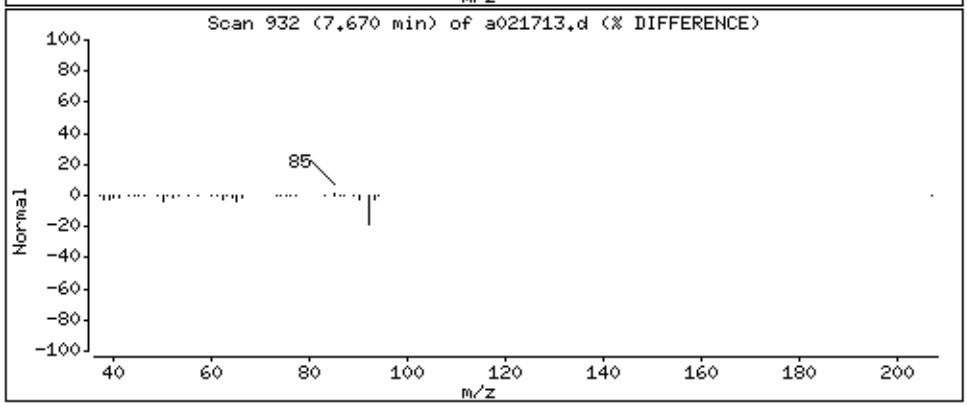












Data File: /chem/msda.i/17feb16.b/a021713.d

Date : 17-FEB-2016 17:51

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

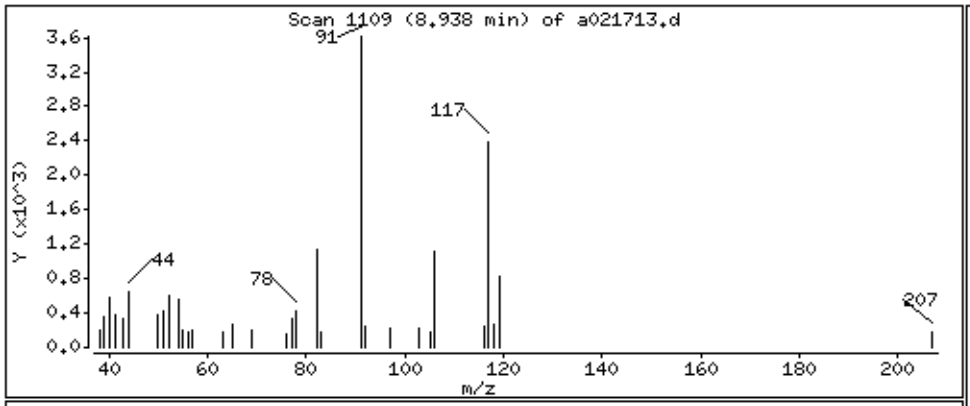
Operator: sab

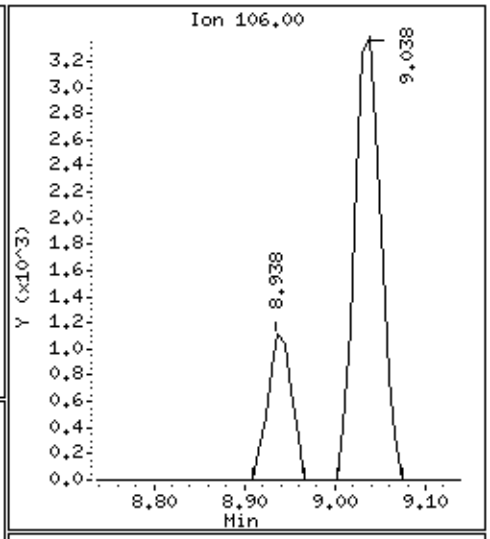
Column phase: RTX-624

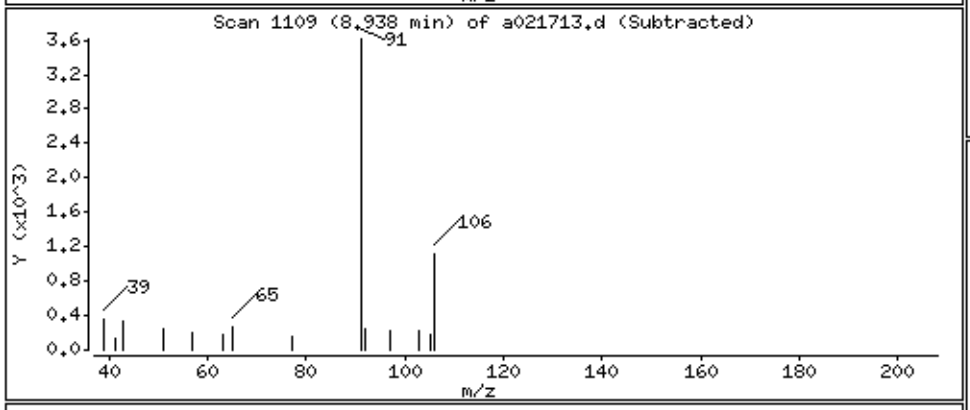
Column diameter: 0.25

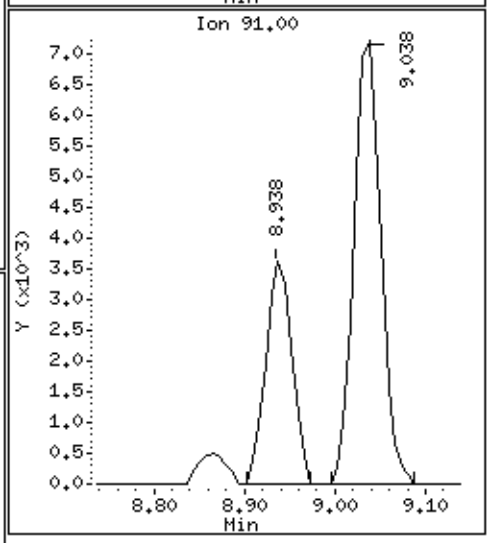
167 Ethyl Benzene

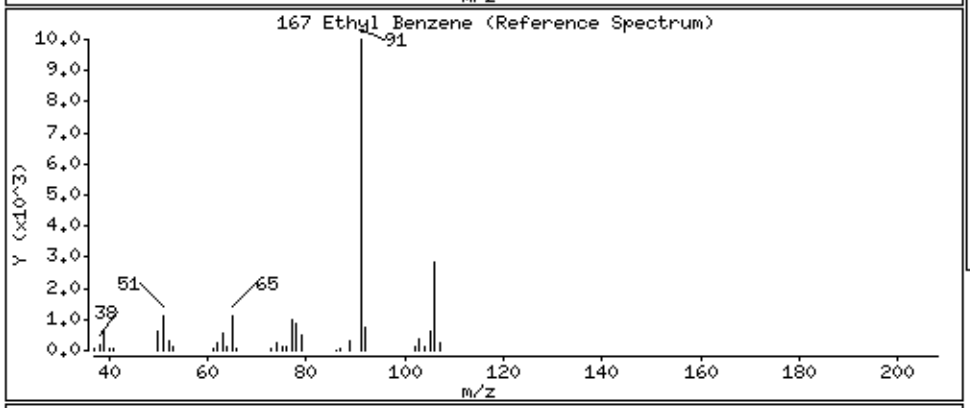
Concentration: 0.4250 PPBV

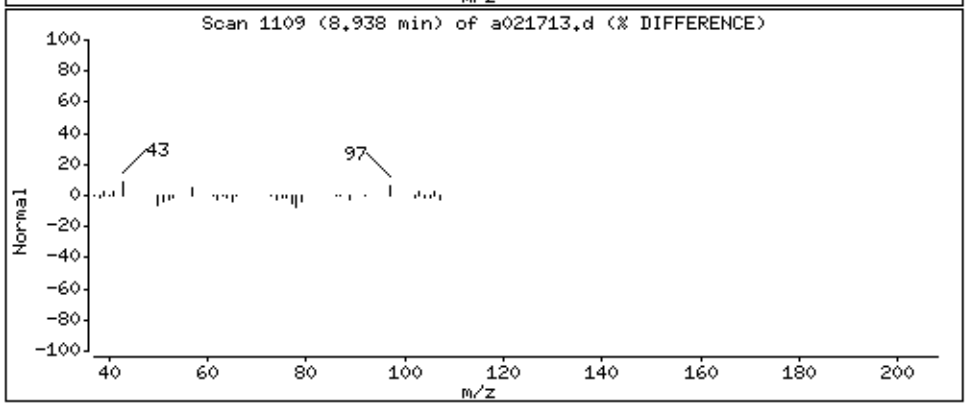












Data File: /chem/msda.i/17feb16.b/a021713.d

Date : 17-FEB-2016 17:51

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

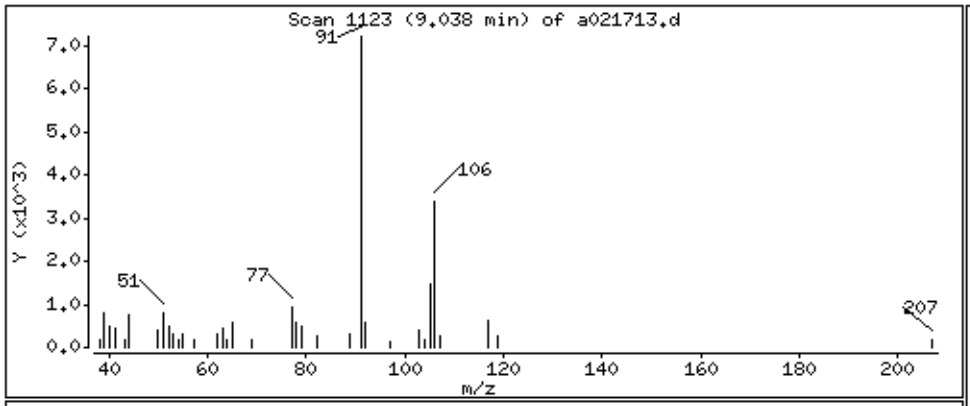
Operator: sab

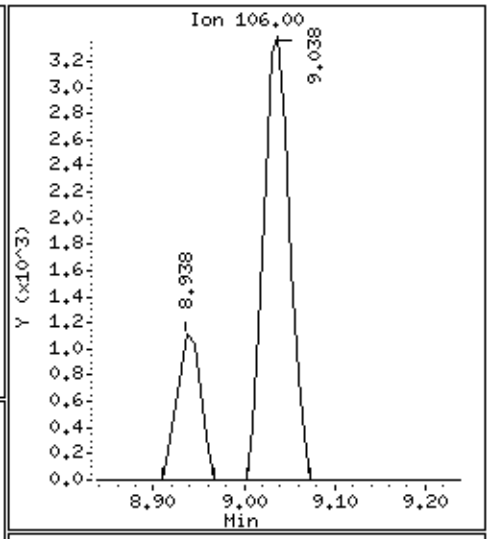
Column phase: RTX-624

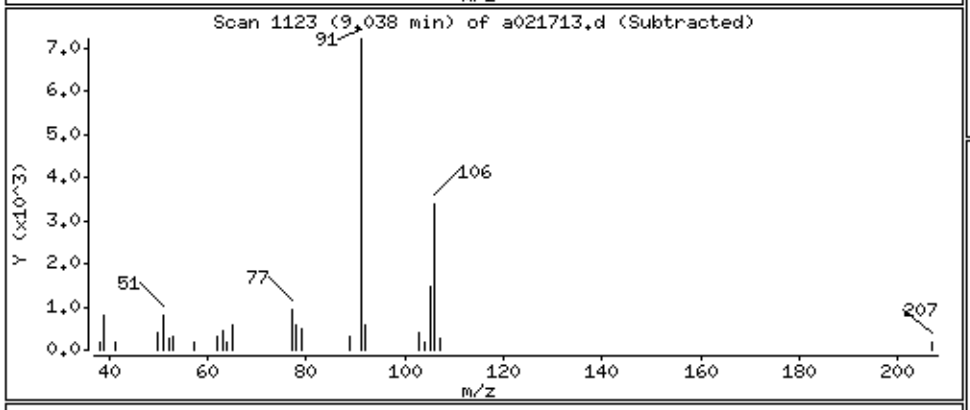
Column diameter: 0.25

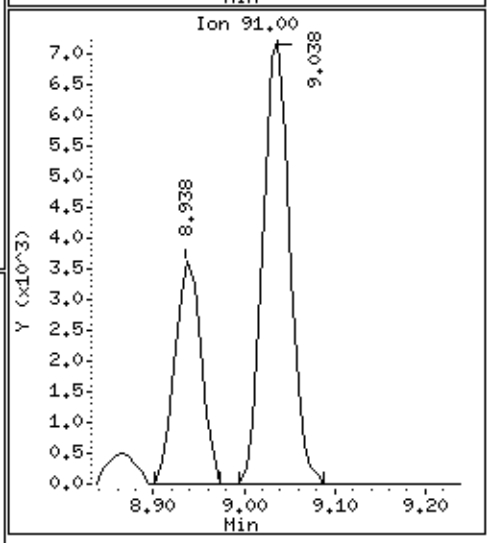
169 m,p-Xylene

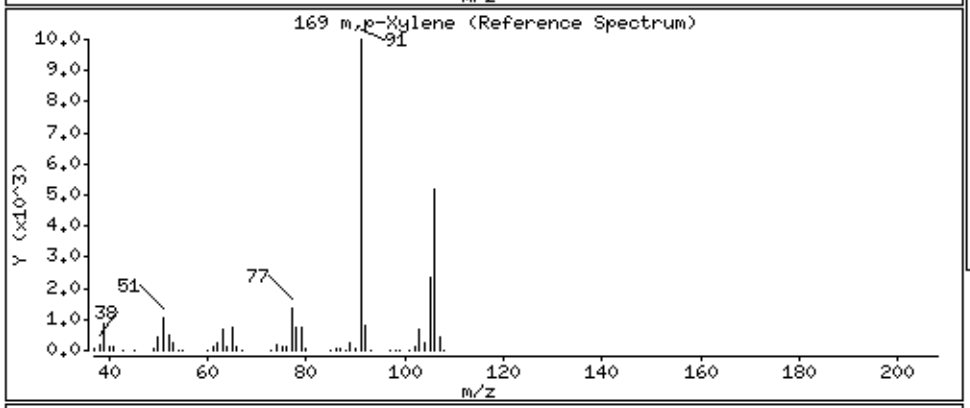
Concentration: 1.142 PPBV

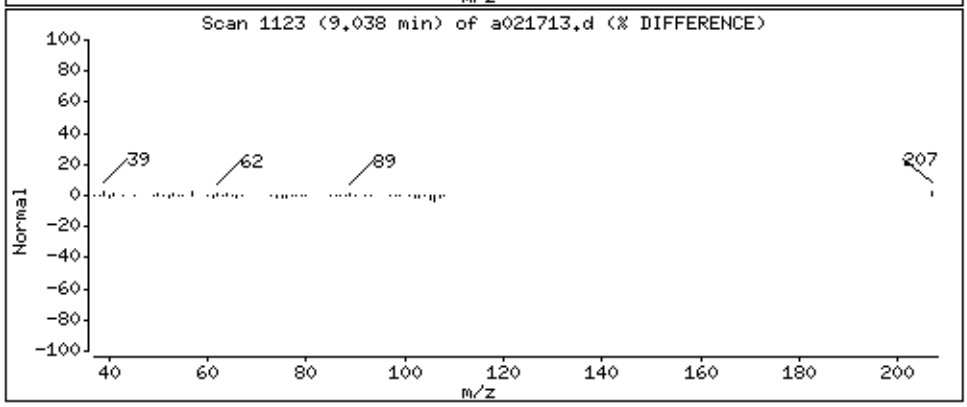












Data File: /chem/msda.i/17feb16.b/a021713.d

Date : 17-FEB-2016 17:51

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

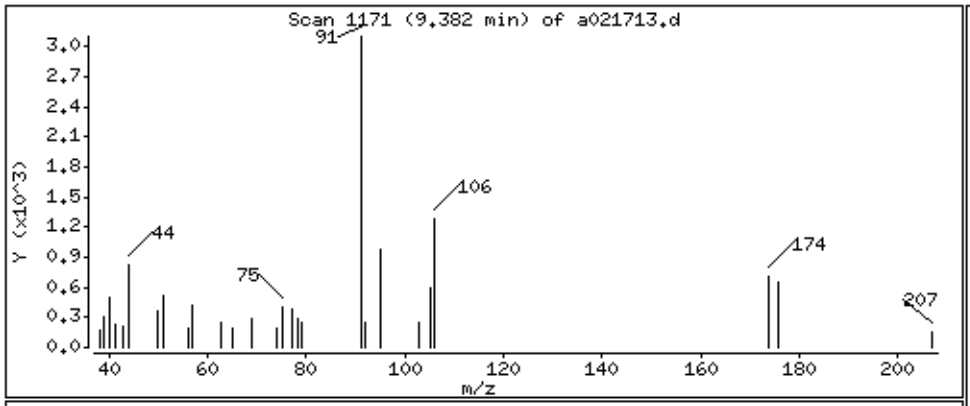
Operator: sab

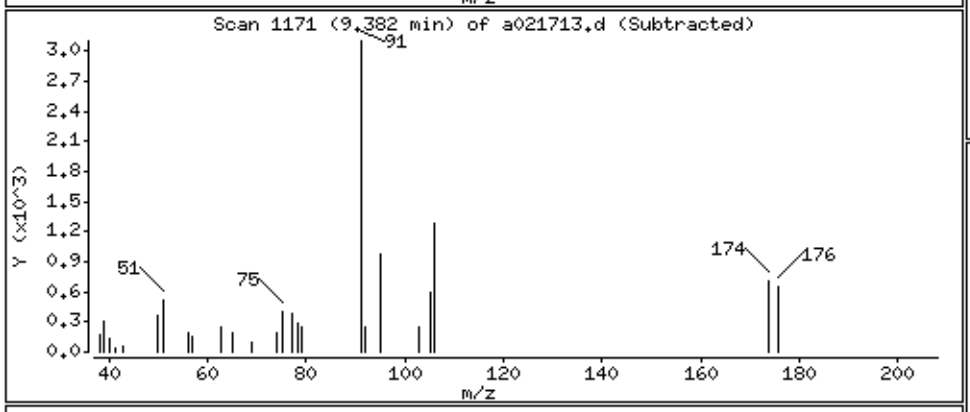
Column phase: RTX-624

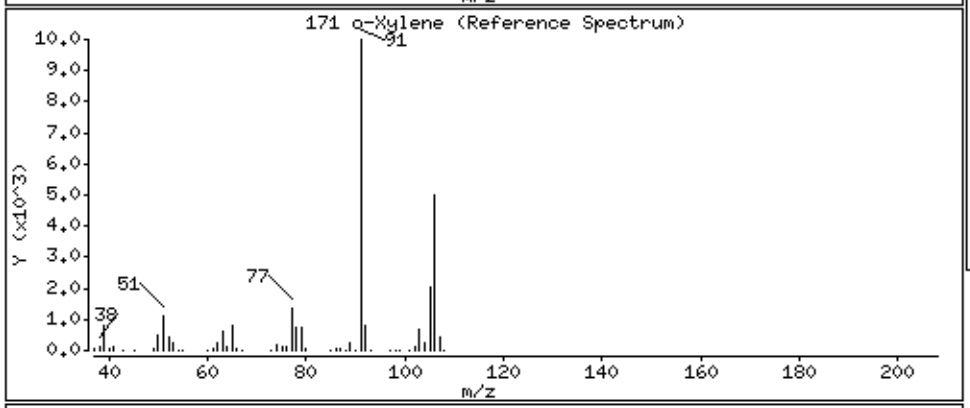
Column diameter: 0.25

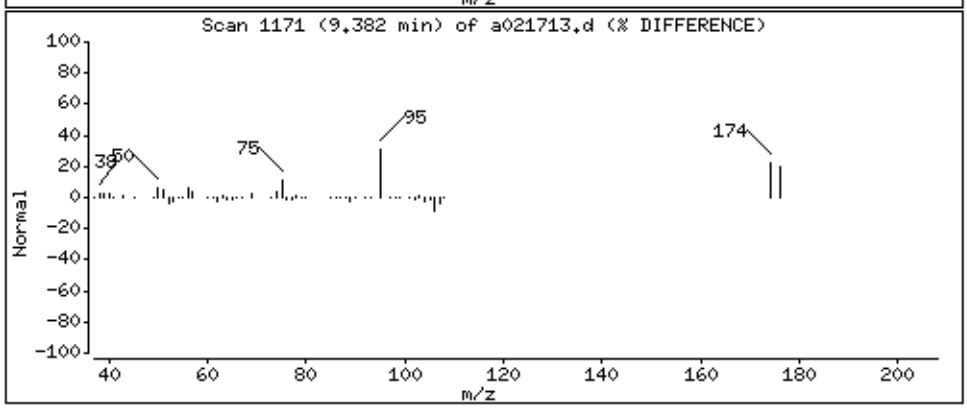
171 o-Xylene

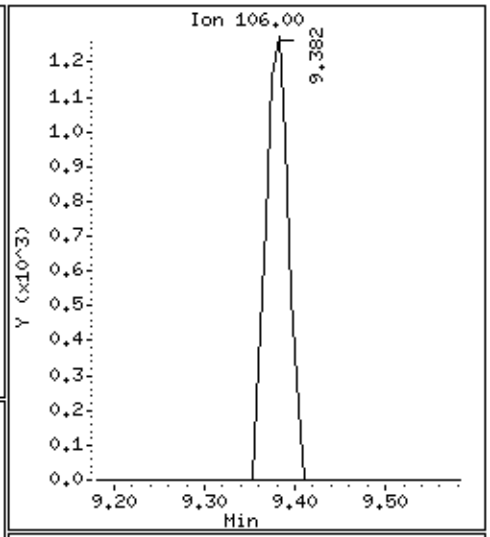
Concentration: 0.3943 PPBV

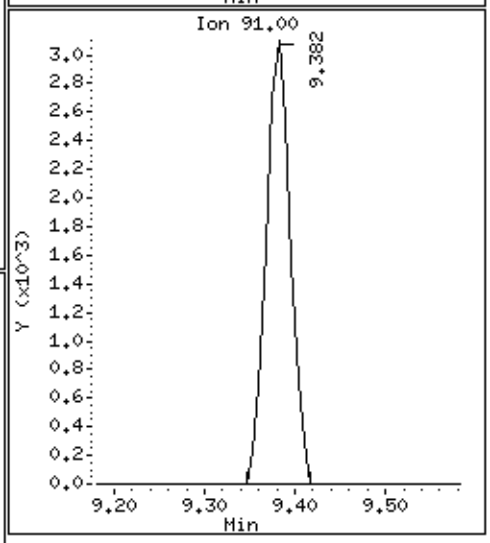












EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG02-010 Lab Duplicate		
Lab ID:	1602250A-01AA	**Date/Time Analyzed:**	2/17/16 06:17 PM
Date/Time Collected:	2/9/16 03:27 PM	**Dilution Factor:**	1.94
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a021714

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.30	1.5	3.1	0.68 J
Ethyl Benzene	100-41-4	0.82	2.1	4.2	2.1 J
m,p-Xylene	108-38-3	0.77	2.1	4.2	5.1
o-Xylene	95-47-6	0.59	2.1	4.2	1.9 J
Toluene	108-88-3	0.82	1.8	3.6	12

J = Estimated value.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	98
4-Bromofluorobenzene	460-00-4	74-122	102
Toluene-d8	2037-26-5	82-119	97

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/17feb16.b/a021714.d
Lab Smp Id: 1602250A-01AA
Inj Date : 17-FEB-2016 18:17
Operator : sab Inst ID: msda.i
Smp Info : 200mL 34401
Misc Info : 9.4 Hg->4.9 psi
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/17feb16.b/a15q1218f.m
Meth Date : 18-Feb-2016 09:21 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 5
Dil Factor: 1.94000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.94000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.471	5.464 (1.000)	130	166742	25.0000		80.00- 120.00	100.00
5.471	5.464 (1.000)	128	132313			47.82- 107.82	79.35
5.471	5.464 (1.000)	49	215413			110.78- 170.78	129.19
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	661031	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	99214			0.00- 45.54	15.01
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	628721	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	299822			20.41- 80.41	47.69
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.023	6.015 (1.101)	65	209684	24.4616	24.462	80.00- 120.00	100.00
6.023	6.015 (1.101)	67	108033			25.18- 85.18	51.52

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.620	7.613 (1.194)	98	649684	24.2278	24.228	80.00- 120.00	100.00
7.620	7.613 (1.194)	70	62576			0.00- 40.33	9.63
7.620	7.613 (1.194)	100	425816			36.65- 96.65	65.54
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	386878	25.4956	25.496	80.00- 120.00	100.00
9.862	9.862 (1.112)	95	425922			90.45- 150.45	110.09
9.862	9.862 (1.112)	176	378706			69.84- 129.84	97.89
116 Benzene					CAS #: 71-43-2		
6.008	5.994 (0.942)	78	1518	0.10920	0.2118	80.00- 120.00	100.00(a)
0.000	5.994 (0.000)	77	0			0.00- 53.73	0.00
147 Toluene					CAS #: 108-88-3		
7.677	7.670 (1.203)	91	35333	1.71620	3.329	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	21449			28.59- 88.59	60.71
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.008)	106	2354	0.25324	0.4913	80.00- 120.00	100.00(a)
8.938	8.938 (1.008)	91	7027			275.74- 335.74	298.43
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.019)	106	7080	0.60356	1.171	80.00- 120.00	100.00
9.038	9.038 (1.019)	91	14828			168.00- 228.00	209.43
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.058)	106	2488	0.22468	0.4359	80.00- 120.00	100.00(a)
9.382	9.382 (1.058)	91	5576			180.86- 240.86	224.08

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 23-Feb-2016 09:36

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021714.d
Lab Smp Id: 1602250A-01AA
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 9.4 Hg->4.9 psi

Calibration Date: 17-FEB-2016
Calibration Time: 12:45

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	163888	98333	229443	166742	1.74
123 1,4-Difluorobenze	679258	407555	950961	661031	-2.68
163 Chlorobenzene-d5	626147	375688	876606	628721	0.41

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.47	0.13
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 23-Feb-2016 09:36

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602250A-01AA
Level: LOW
Operator: sab
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 9.4 Hg->4.9 psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.462	97.85	79-128
$ 146 Toluene-d8	25.000	24.228	96.91	82-119
$ 177 4-Bromofluorobenze	25.000	25.496	101.98	74-122

Data File: /chem/msda.i/17feb16.b/a021714.d

Date : 17-FEB-2016 18:17

Client ID:

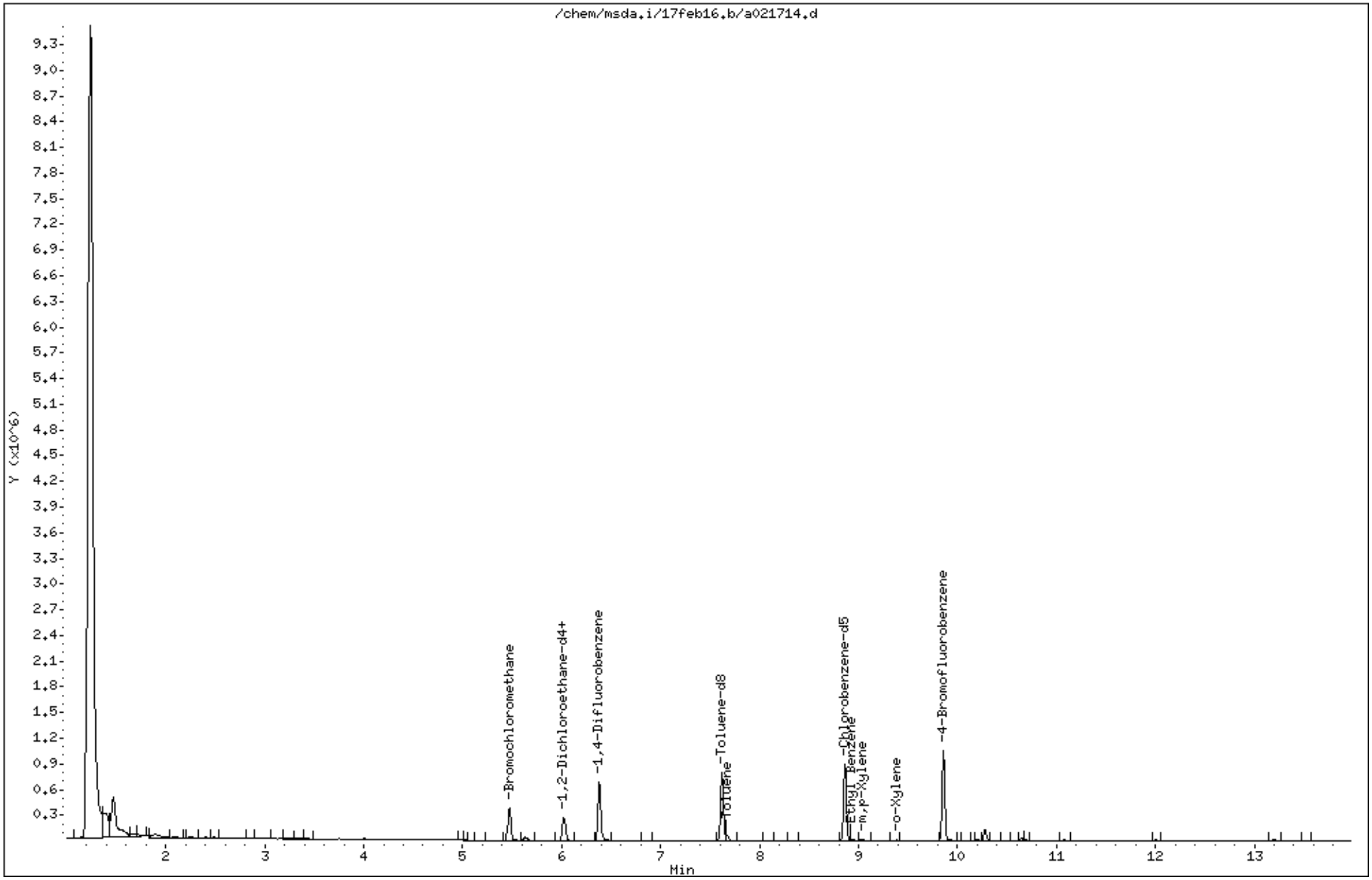
Instrument: msda.i

Sample Info: 200mL 34401

Operator: sab

Column phase: RTX-624

Column diameter: 0.25



Data File: /chem/msda.i/17feb16.b/a021714.d

Date : 17-FEB-2016 18:17

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

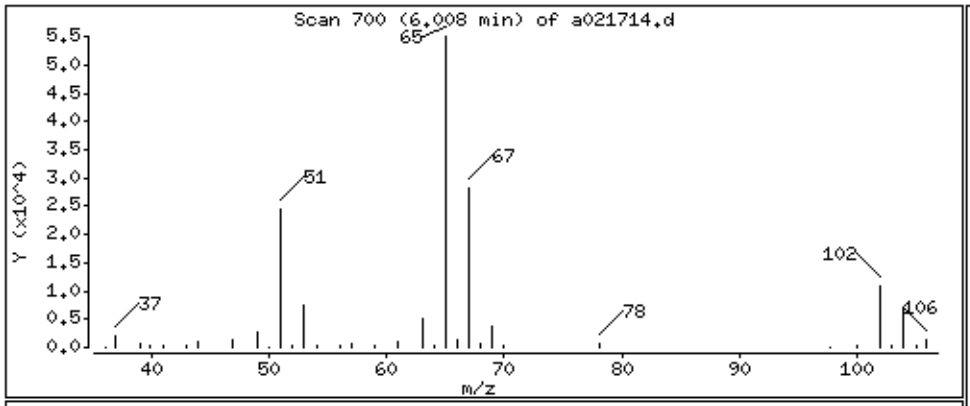
Operator: sab

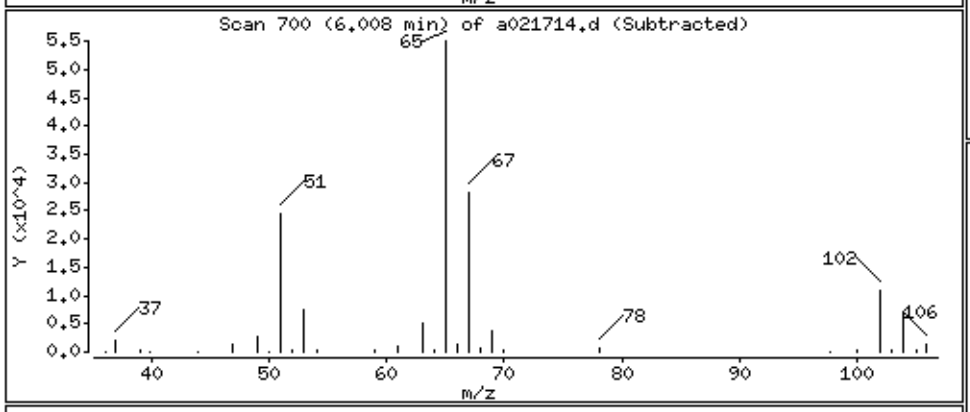
Column phase: RTX-624

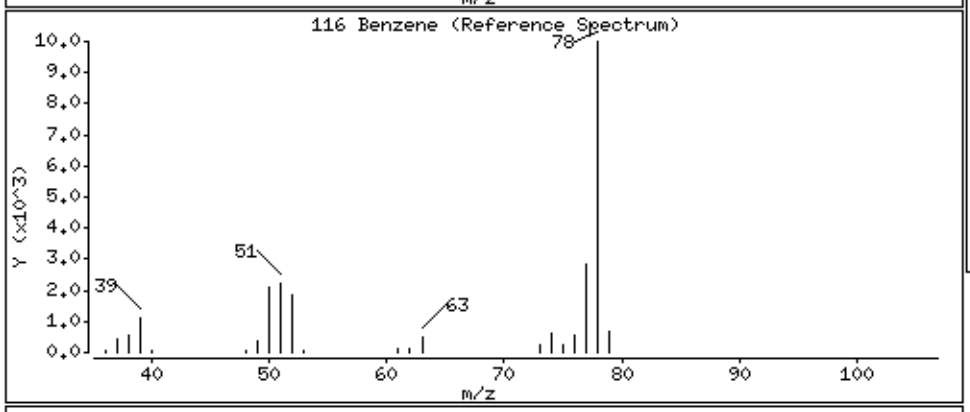
Column diameter: 0.25

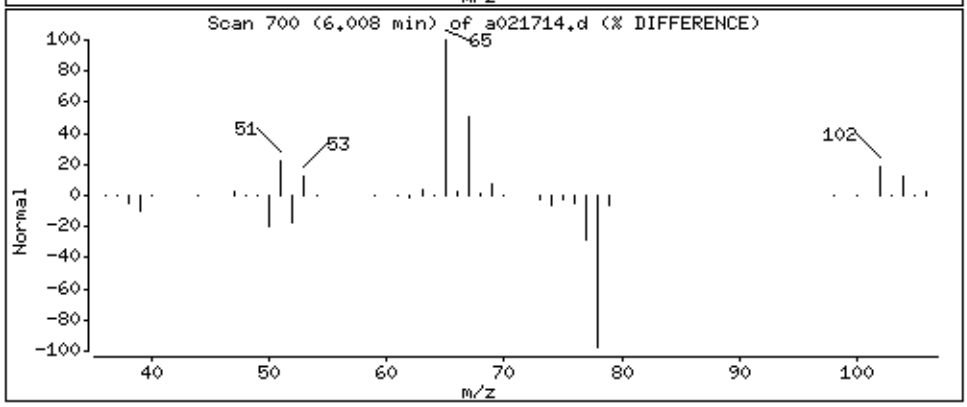
116 Benzene

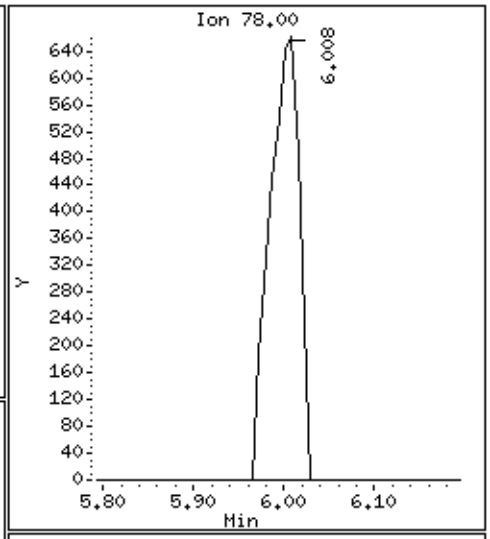
Concentration: 0.2118 PPBV

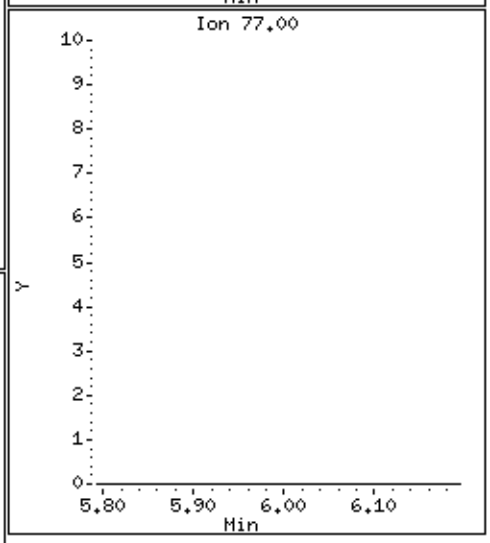












Data File: /chem/msda.i/17feb16.b/a021714.d

Date : 17-FEB-2016 18:17

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

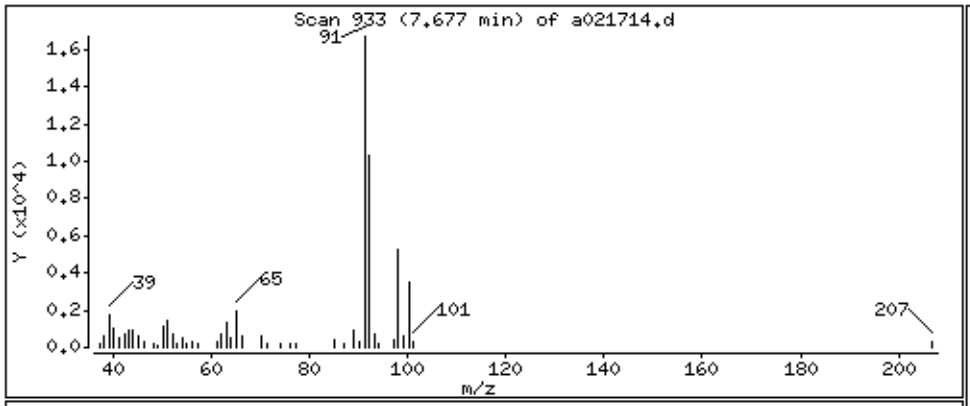
Operator: sab

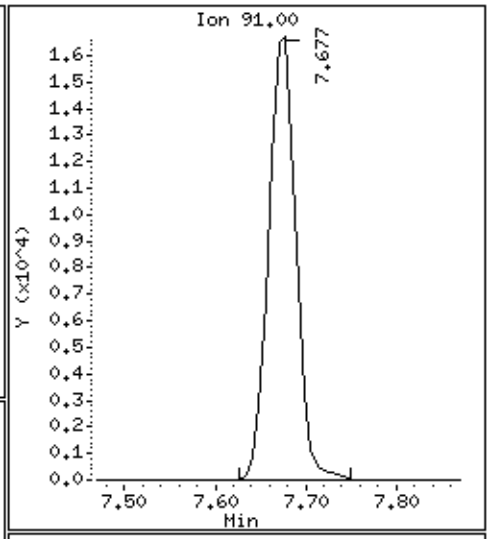
Column phase: RTX-624

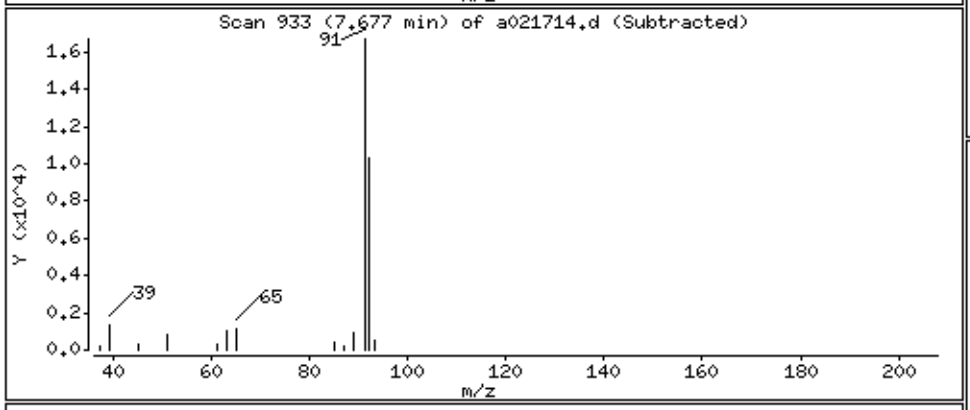
Column diameter: 0.25

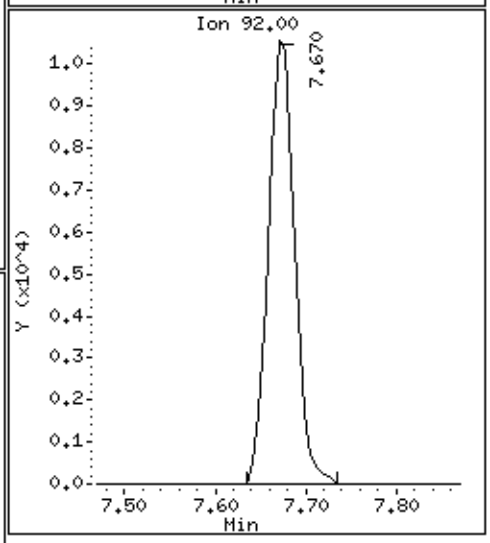
147 Toluene

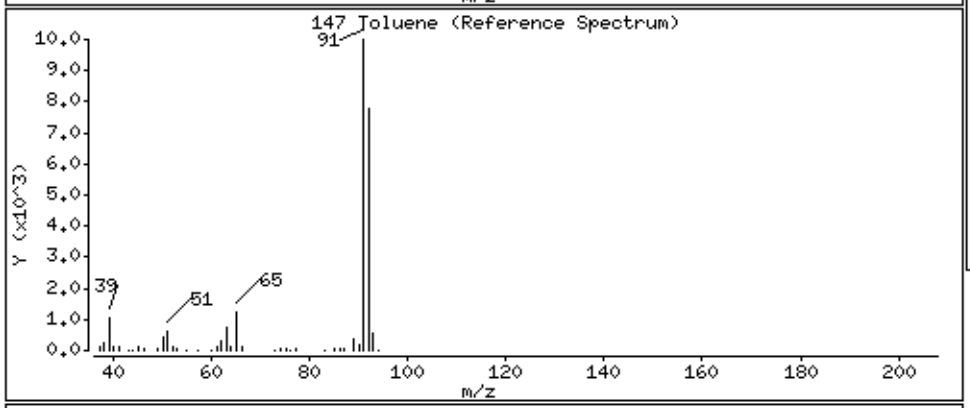
Concentration: 3.329 PPBV

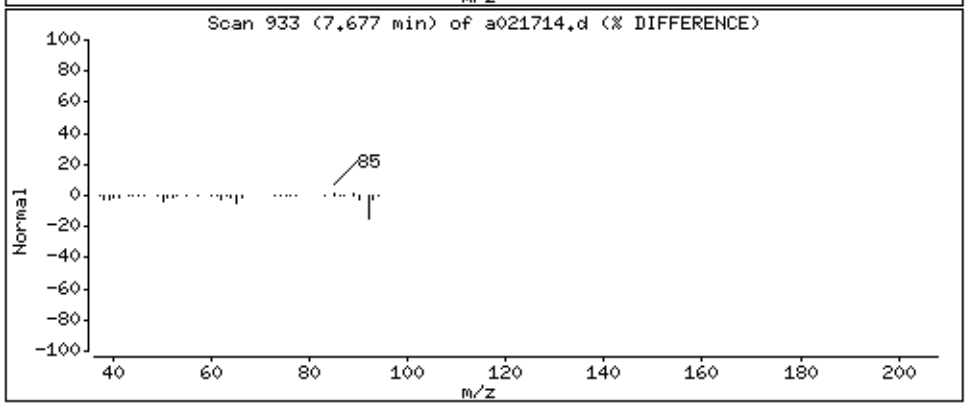












Data File: /chem/msda.i/17feb16.b/a021714.d

Date : 17-FEB-2016 18:17

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

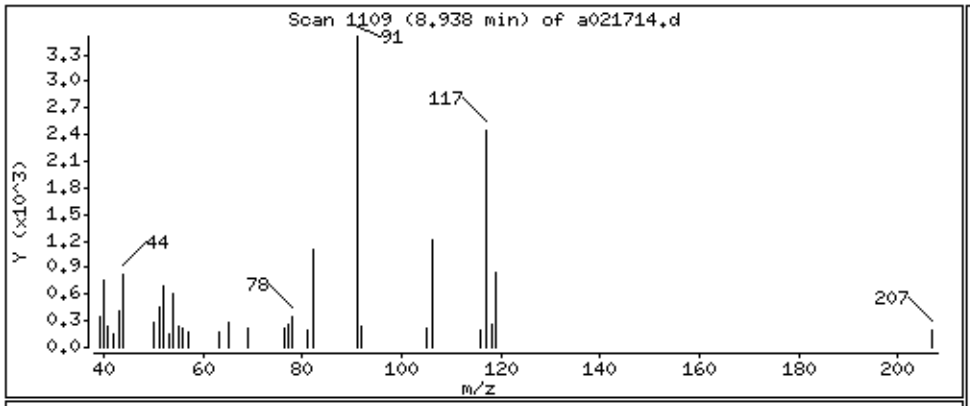
Operator: sab

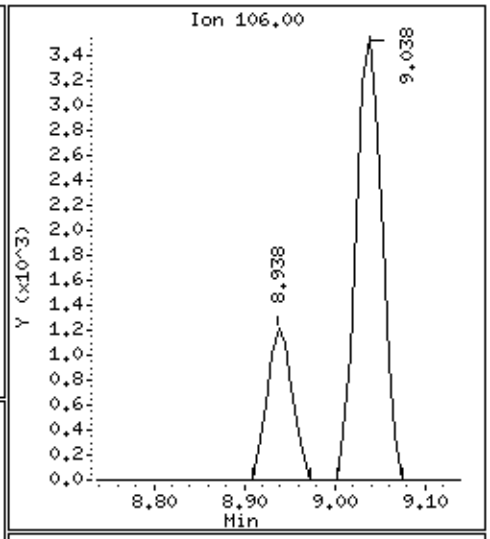
Column phase: RTX-624

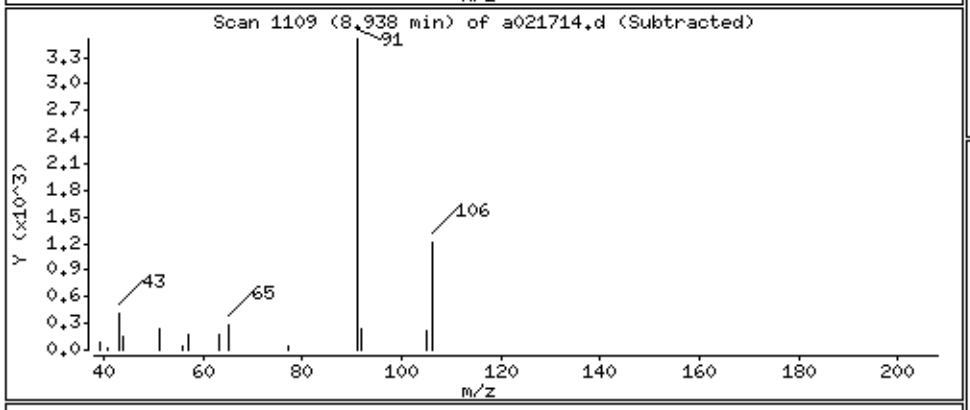
Column diameter: 0.25

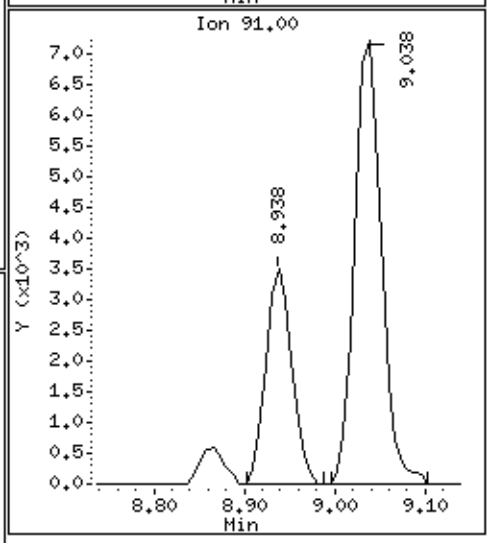
167 Ethyl Benzene

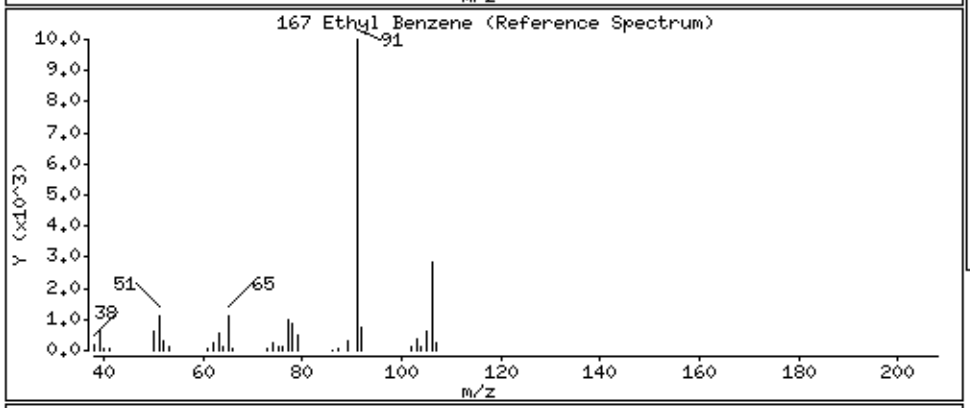
Concentration: 0.4913 PPBV

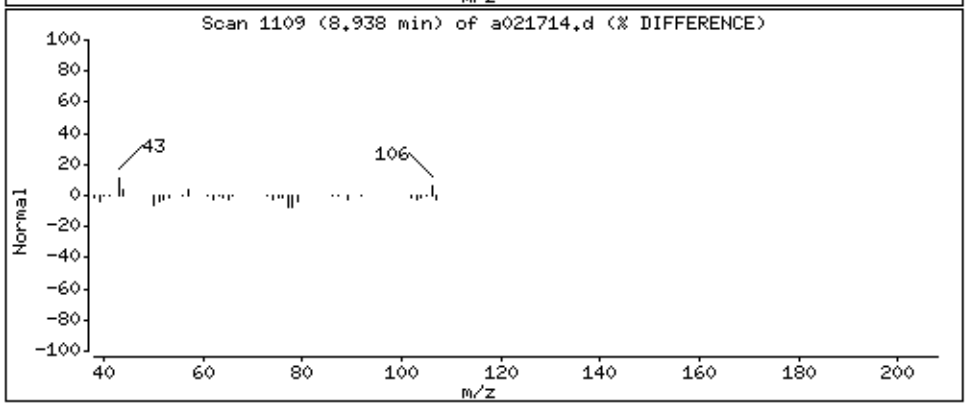












Data File: /chem/msda.i/17feb16.b/a021714.d

Date : 17-FEB-2016 18:17

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

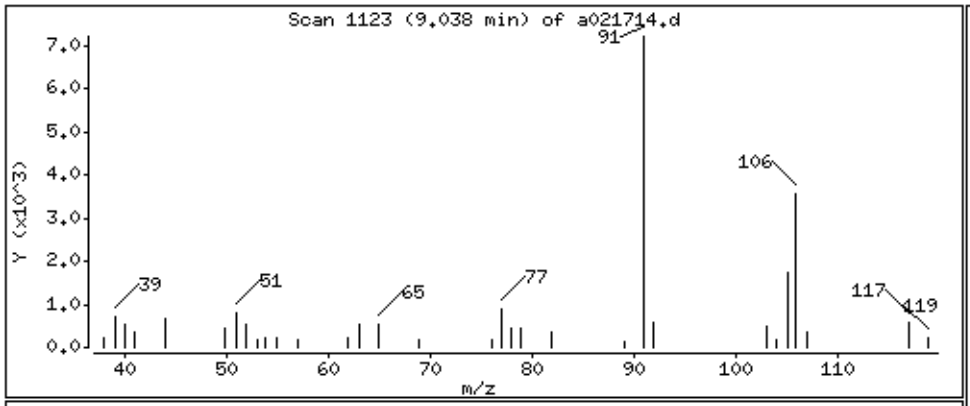
Operator: sab

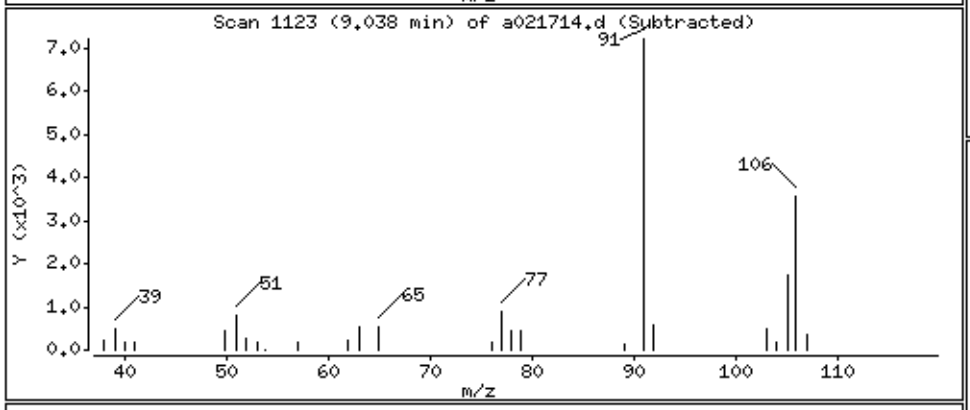
Column phase: RTX-624

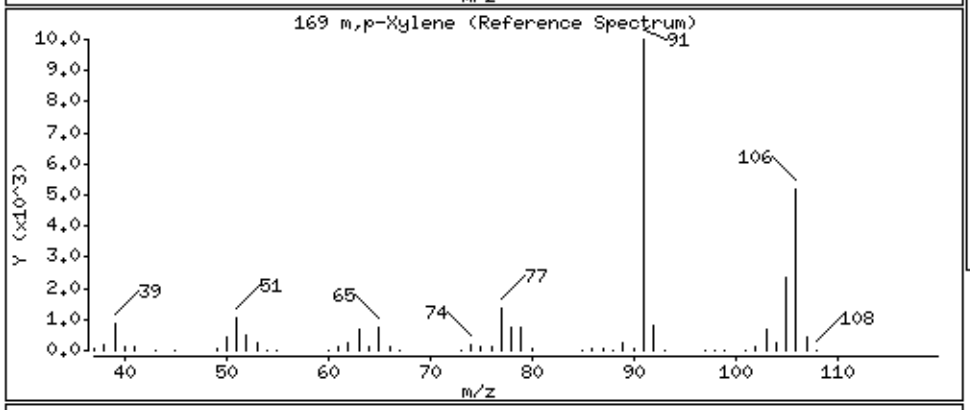
Column diameter: 0.25

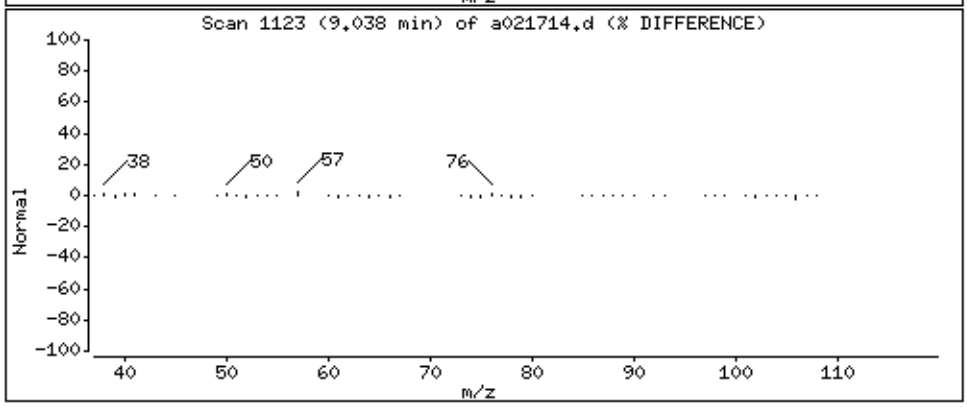
169 m,p-Xylene

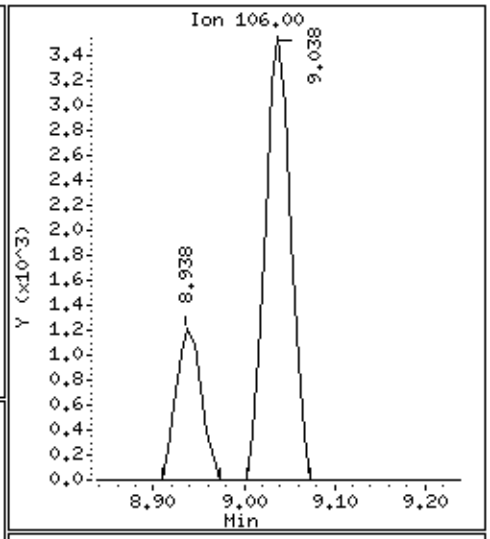
Concentration: 1.171 PPBV

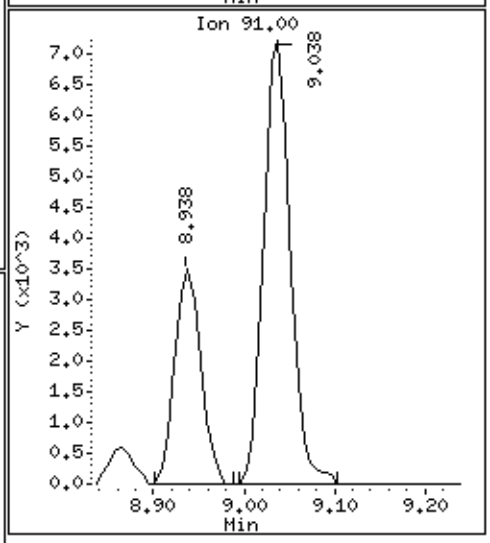












Data File: /chem/msda.i/17feb16.b/a021714.d

Date : 17-FEB-2016 18:17

Client ID:

Instrument: msda.i

Sample Info: 200mL 34401

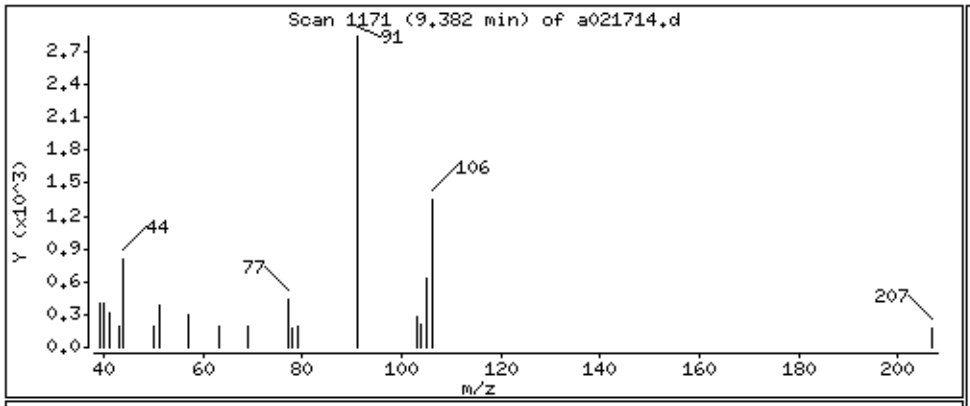
Operator: sab

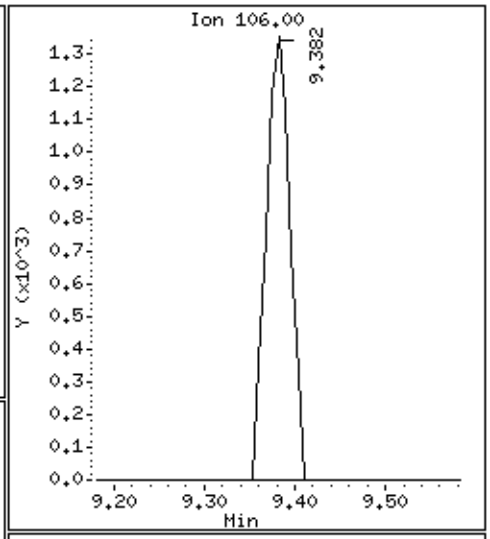
Column phase: RTX-624

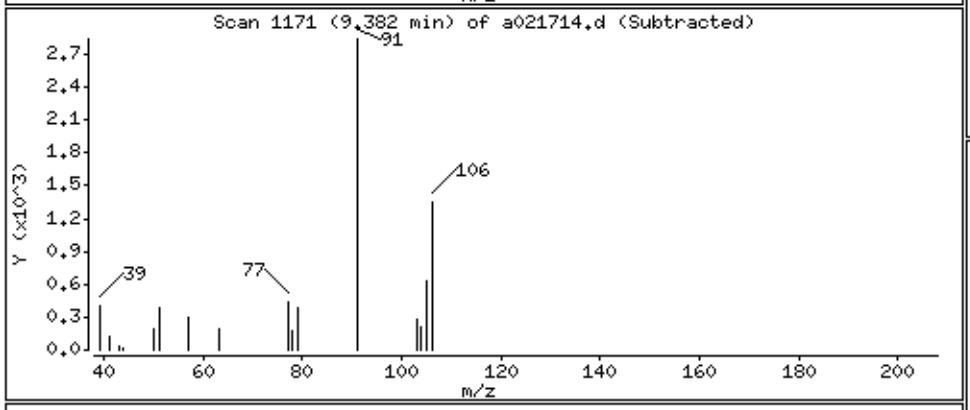
Column diameter: 0.25

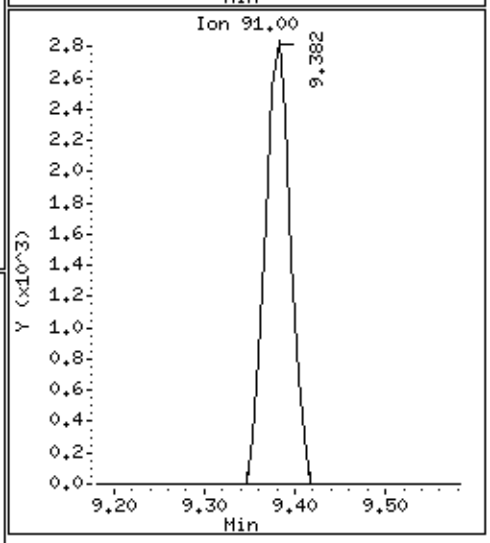
171 o-Xylene

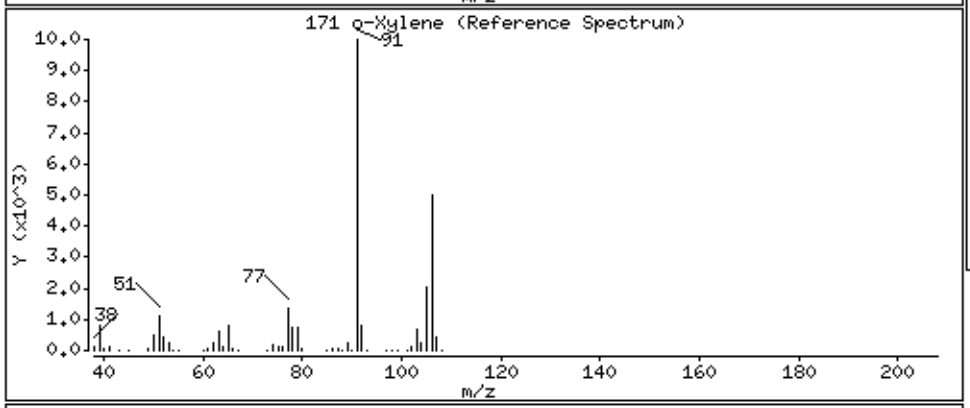
Concentration: 0.4359 PPBV

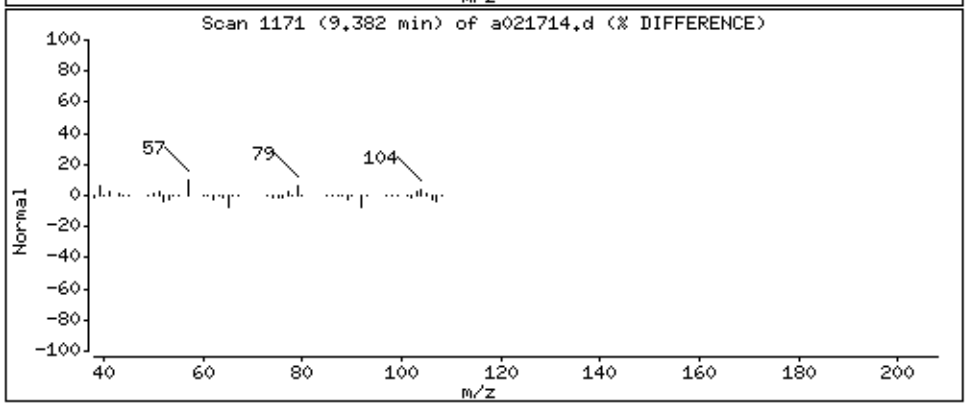












EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG02-005		
Lab ID:	1602250A-02A	**Date/Time Analyzed:**	2/17/16 06:52 PM
Date/Time Collected:	2/9/16 04:45 PM	**Dilution Factor:**	1.78
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	msda.i / a021715

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.27	1.4	2.8	Not Detected U
Ethyl Benzene	100-41-4	0.75	1.9	3.9	Not Detected U
m,p-Xylene	108-38-3	0.71	1.9	3.9	Not Detected U
o-Xylene	95-47-6	0.54	1.9	3.9	Not Detected U
Toluene	108-88-3	0.75	1.7	3.4	Not Detected U

U = The analyte was not detected above the MDL.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	97
4-Bromofluorobenzene	460-00-4	74-122	102
Toluene-d8	2037-26-5	82-119	96

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/17feb16.b/a021715.d
Lab Smp Id: 1602250A-02A
Inj Date : 17-FEB-2016 18:52
Operator : sab Inst ID: msda.i
Smp Info : 200mL 13658
Misc Info : 7.3 Hg->5.1 psi
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/17feb16.b/a15q1218f.m
Meth Date : 18-Feb-2016 09:21 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 6
Dil Factor: 1.78000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.78000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.471	5.464 (1.000)	130	167362	25.0000		80.00- 120.00	100.00
5.471	5.464 (1.000)	128	127286			47.82- 107.82	76.05
5.464	5.464 (1.000)	49	215494			110.78- 170.78	128.76
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	671780	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	97076			0.00- 45.54	14.45
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	619240	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	296298			20.41- 80.41	47.85
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.022	6.015 (1.101)	65	208263	24.2058	24.206	80.00- 120.00	100.00
6.022	6.015 (1.101)	67	105520			25.18- 85.18	50.67

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	CONCENTRATIONS FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.620	7.613	(1.194)	98	655598	24.0572	24.057	80.00- 120.00	100.00
7.620	7.613	(1.194)	70	64621			0.00- 40.33	9.86
7.620	7.613	(1.194)	100	425642			36.65- 96.65	64.92
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.862	9.862	(1.112)	174	382535	25.5953	25.595	80.00- 120.00	100.00
9.862	9.862	(1.112)	95	424470			90.45- 150.45	110.96
9.862	9.862	(1.112)	176	378730			69.84- 129.84	99.01

Report Date: 23-Feb-2016 09:37

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021715.d
Lab Smp Id: 1602250A-02A
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 7.3 Hg->5.1 psi

Calibration Date: 17-FEB-2016
Calibration Time: 12:45

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	163888	98333	229443	167362	2.12
123 1,4-Difluorobenze	679258	407555	950961	671780	-1.10
163 Chlorobenzene-d5	626147	375688	876606	619240	-1.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.47	0.13
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 23-Feb-2016 09:37

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602250A-02A
Level: LOW
Operator: sab
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 7.3 Hg->5.1 psi

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.206	96.82	79-128
$ 146 Toluene-d8	25.000	24.057	96.23	82-119
$ 177 4-Bromofluorobenze	25.000	25.595	102.38	74-122

Data File: /chem/msda.i/17feb16.b/a021715.d

Page 1

Date : 17-FEB-2016 18:52

Client ID:

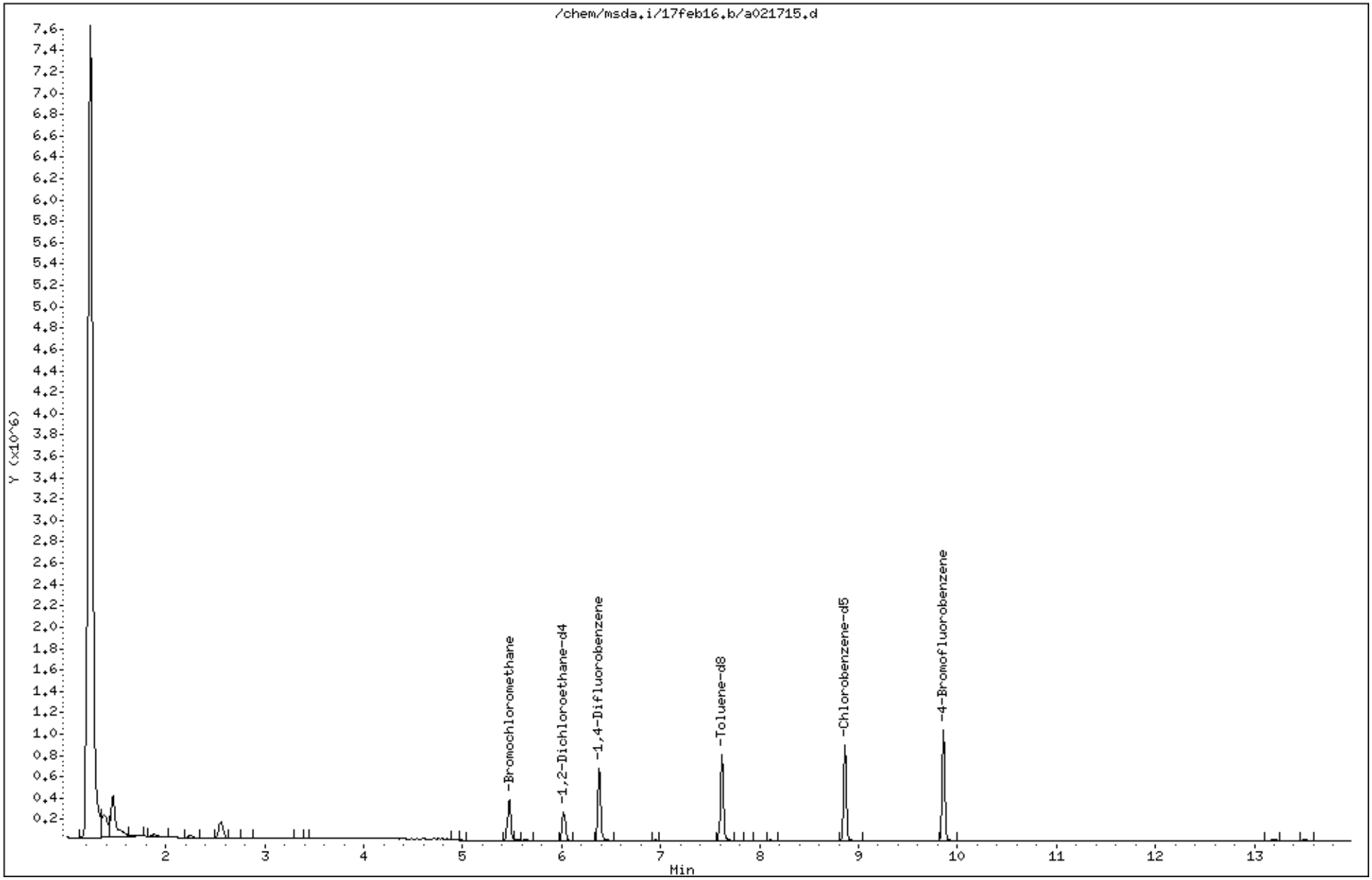
Instrument: msda.i

Sample Info: 200mL 13658

Operator: sab

Column phase: RTX-624

Column diameter: 0.25



QC Results and Raw Data

EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	Lab Blank		
Lab ID:	1602250A-03A	**Date/Time Analyzed:**	2/17/16 02:24 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a021708a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Benzene	71-43-2	0.15	0.80	1.6	0.22 J
Ethyl Benzene	100-41-4	0.42	1.1	2.2	Not Detected U
m,p-Xylene	108-38-3	0.40	1.1	2.2	Not Detected U
o-Xylene	95-47-6	0.30	1.1	2.2	Not Detected U
Toluene	108-88-3	0.42	0.94	1.9	Not Detected U

J = Estimated value.
U = The analyte was not detected above the MDL.
D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	97
4-Bromofluorobenzene	460-00-4	74-122	102
Toluene-d8	2037-26-5	82-119	96

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/17feb16.b/a021708a.d
Lab Smp Id: Lab Blank Client Smp ID: Lab Blank
Inj Date : 17-FEB-2016 14:24
Operator : sab Inst ID: msda.i
Smp Info : 200mL 36041
Misc Info : Humid
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/17feb16.b/a15q1218f.m
Meth Date : 17-Feb-2016 13:59 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AEC19959.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.471	5.464 (1.000)	130	171921	25.0000		80.00- 120.00	100.00
5.471	5.464 (1.000)	128	131772			47.82- 107.82	76.65
5.464	5.464 (1.000)	49	228376			110.78- 170.78	132.84
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	685939	25.0000		80.00- 120.00	100.00
6.381	6.373 (1.000)	88	100088			0.00- 45.54	14.59
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	627627	25.0000		80.00- 120.00	100.00
8.866	8.859 (1.000)	82	298571			20.41- 80.41	47.57
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.022	6.015 (1.101)	65	214186	24.2341	24.234	80.00- 120.00	100.00
6.022	6.015 (1.101)	67	108627			25.18- 85.18	50.72

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.620	7.613	(1.194)	98	664575	23.8832	23.883	80.00- 120.00	100.00
7.620	7.613	(1.194)	70	64588			0.00- 40.33	9.72
7.620	7.613	(1.194)	100	438193			36.65- 96.65	65.94
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.862	9.862	(1.112)	174	387156	25.5584	25.558	80.00- 120.00	100.00
9.862	9.862	(1.112)	95	433291			90.45- 150.45	111.92
9.862	9.862	(1.112)	176	382882			69.84- 129.84	98.90
116 Benzene						CAS #: 71-43-2		
5.994	5.994	(0.939)	78	971	0.06734	0.06734	80.00- 120.00	100.00(a)
6.001	5.994	(0.940)	77	274			0.00- 53.73	28.21

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021708a.d
Lab Smp Id: Lab Blank
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: Humid

Calibration Date: 17-FEB-2016
Calibration Time: 12:45
Client Smp ID: Lab Blank
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	163888	98333	229443	171921	4.90
123 1,4-Difluorobenze	679258	407555	950961	685939	0.98
163 Chlorobenzene-d5	626147	375688	876606	627627	0.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.47	0.13
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 17-Feb-2016 15:00

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: sab
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AEC19959.sub
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: Humid

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.234	96.94	79-128
$ 146 Toluene-d8	25.000	23.883	95.53	82-119
$ 177 4-Bromofluorobenze	25.000	25.558	102.23	74-122

Data File: /chem/msda.i/17feb16.b/a021708a.d

Date : 17-FEB-2016 14:24

Client ID: Lab Blank

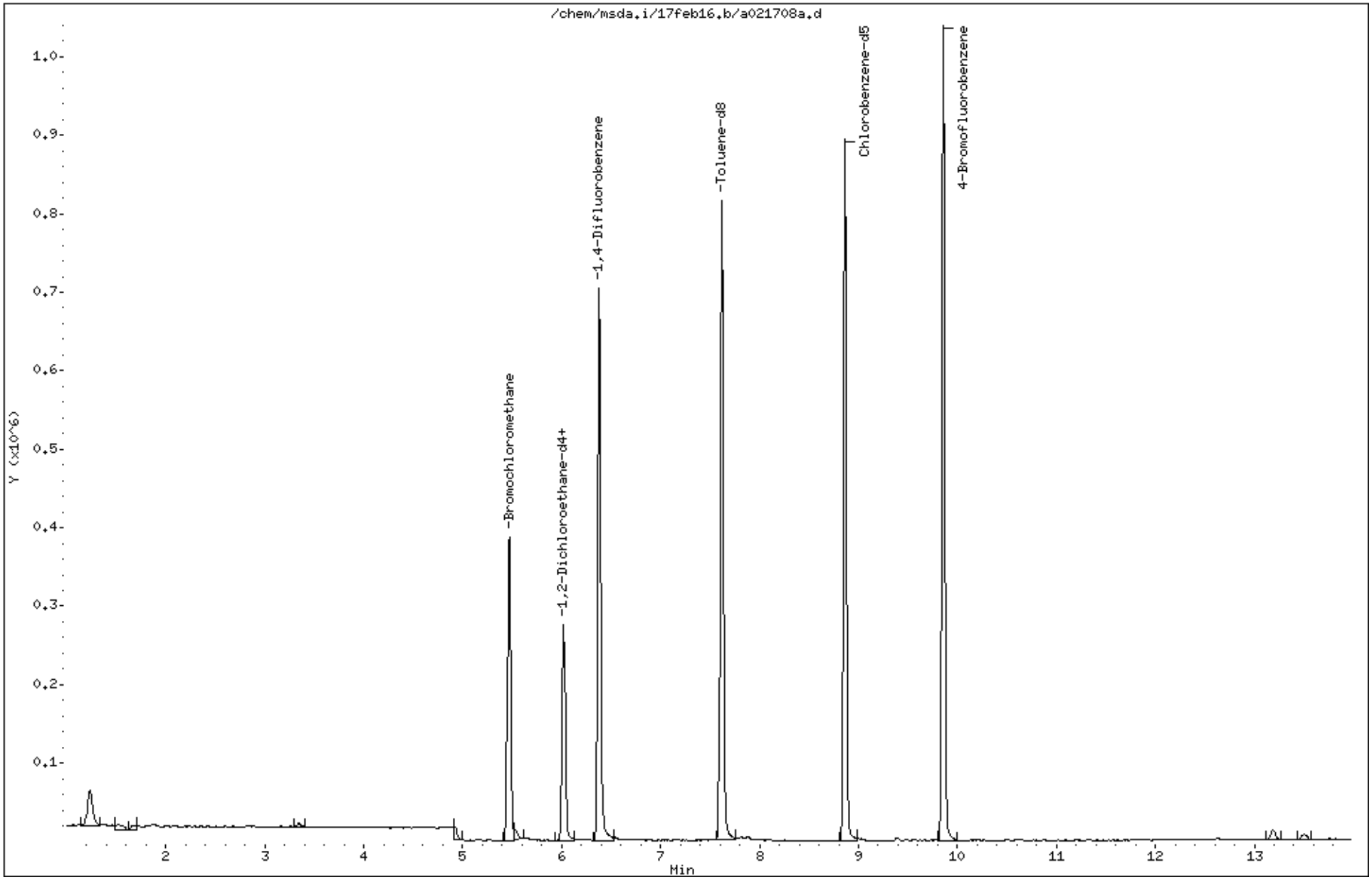
Sample Info: 200mL 36041

Column phase: RTX-624

Instrument: msda.i

Operator: sab

Column diameter: 0.25



Data File: /chem/msda.i/17feb16.b/a021708a.d

Date : 17-FEB-2016 14:24

Client ID: Lab Blank

Instrument: msda.i

Sample Info: 200mL 36041

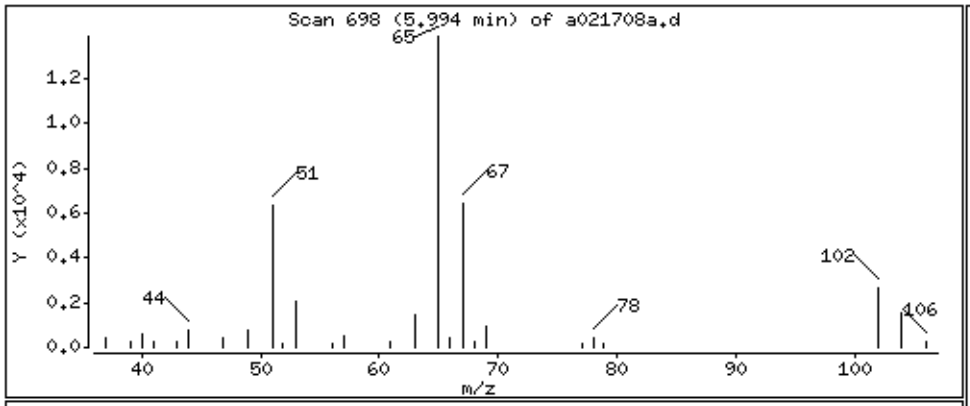
Operator: sab

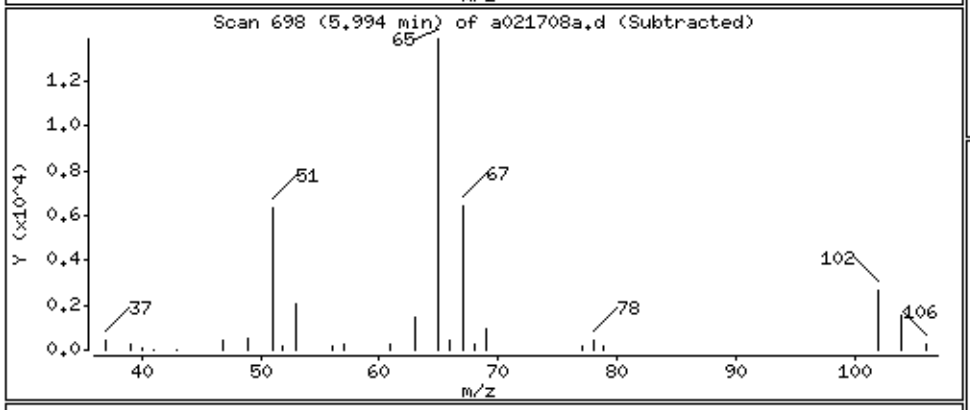
Column phase: RTX-624

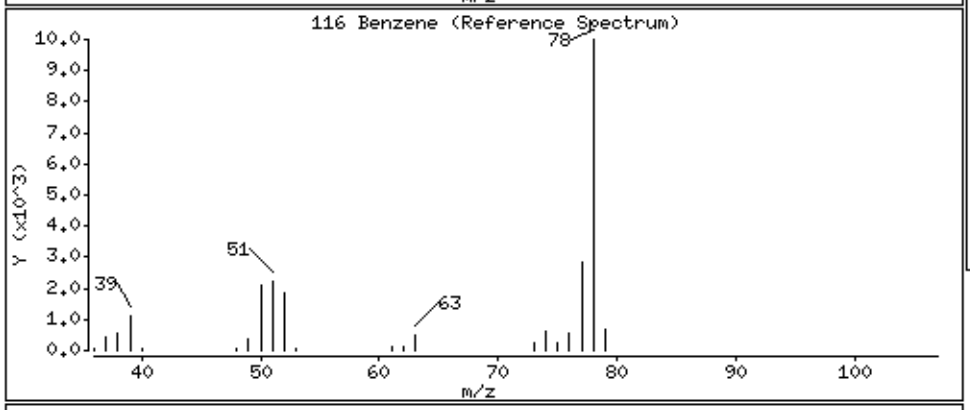
Column diameter: 0.25

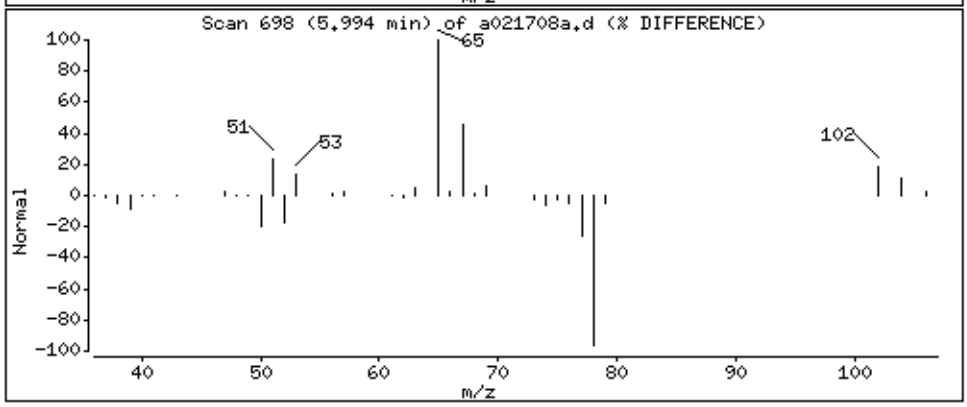
116 Benzene

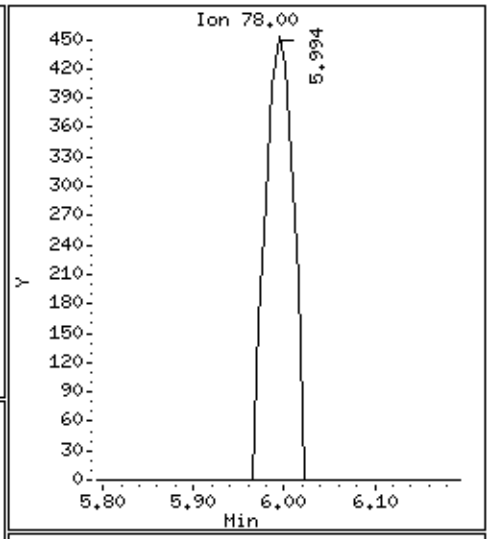
Concentration: 0.06734 PPBV

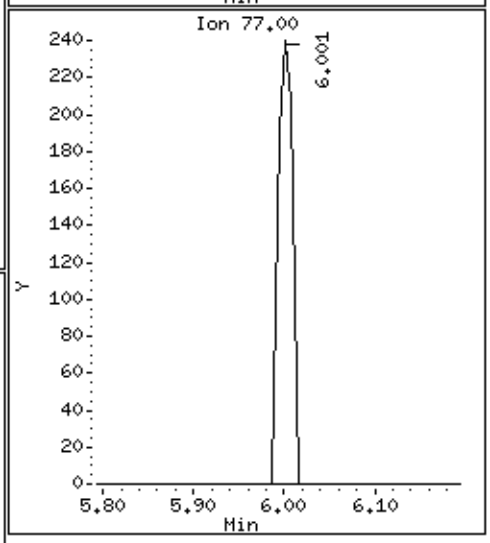












LEVEL-IV VALIDATABLE

EPA METHOD TO-15 GC/MS FULL SCAN

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1602250A

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		1,2-Dichloroethane-d4	#	Toluene-d8	#	4-Bromofluorobenzene	#		#	TOTAL OUT
01	CA504-SG02-010	97		96		103				0
02	CA504-SG02-010 Lab Duplicate	98		97		102				0
03	CA504-SG02-005	97		96		102				0
04	Lab Blank	97		96		102				0
05	CCV	98		97		103				0
06	LCS	96		96		104				0
07	LCSD	96		96		105				0
08										0
09										0
10										0
11										0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

1,2-Dichloroethane-d4 79 - 128
Toluene-d8 82 - 119
4-Bromofluorobenzene 74 - 122

* Designates values outside of QC limits

LEVEL-IV VALIDATABLE

EPA METHOD TO-15 GC/MS Full Scan

INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name:	AIR TOXICS, LTD	SDG No:	1602250A
Lab File ID:	a021705a.d	Date Analyzed:	02/17/2016
Instrument ID:	msda.i	Time Analyzed:	12:45 PM

		Chlorobenzene-d5 Area	#	RT	#	1,4-Difluorobenzene Area	#	RT	#	Bromochloromethane Area	#	RT	#
	24-HOUR STD	626147		8.87		679258		6.38		163888		5.46	
	UPPER LIMIT	876606		09.20		950961		06.71		229443		05.79	
	LOWER LIMIT	375688		08.54		407555		06.05		98333		05.13	
	CLIENT SAMPLE NO												
01	CA504-SG02-010	626433		8.87		671654		6.38		169132		5.46	
02	CA504-SG02-010 Lab Duplicate	628721		8.87		661031		6.38		166742		5.47	
03	CA504-SG02-005	619240		8.87		671780		6.38		167362		5.47	
04	Lab Blank	627627		8.87		685939		6.38		171921		5.47	
05	CCV	626147		8.87		679258		6.38		163888		5.46	
06	LCS	603480		8.87		674667		6.38		161695		5.46	
07	LCSD	611163		8.87		681193		6.38		163918		5.46	
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

'Area Upper Limit=+40% of internal standard area'
'Area Lower Limit=-40% of internal standard area'

RT Upper Limit=+0.33 minutes of internal standard RT
RT Lower Limit=-0.33 minutes of internal standard RT

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: a021714.d & a021713.d

Lab Sample ID: 01A & 01AA

Dilution: 1.94 & 1.94

Client Sample ID: &

Date Analyzed: 2/17/16 & 2/17/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
71-43-2	Benzene	0.1304		0.2118		-->48<--	Y
100-41-4	Ethyl Benzene	0.425		0.4913		14	Y
108-38-3	m,p-Xylene	1.142		1.171		2.5	Y
95-47-6	o-Xylene	0.3943		0.4359		10	Y
108-88-3	Toluene	3.37		3.329		1.2	Y

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: a021704c.d & a021703c.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 2/17/16 & 2/17/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
71-43-2	Benzene	92		93		1.1	
100-41-4	Ethyl Benzene	85		86		1.2	
108-38-3	m,p-Xylene	86		87		1.2	
95-47-6	o-Xylene	87		88		1.1	
108-88-3	Toluene	84		84		0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-DEC-2015 10:48
End Cal Date : 11-FEB-2016 16:16
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msda.i/11feb16.b/a15q1218f.m
Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Calibration File Names:
Level 2: /chem/msda.i/18dec15.b/a121802.d
Level 3: /chem/msda.i/27jan16.b/a012707.d
Level 4: /chem/msda.i/18dec15.b/a121804.d
Level 5: /chem/msda.i/18dec15.b/a121811.d
Level 6: /chem/msda.i/27jan16.b/a012708.d
Level 7: /chem/msda.i/18dec15.b/a121807.d
Level 8: /chem/msda.i/27jan16.b/a012709.d

Compound	0.50000 Level 2	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	200.000 Level 8	___ RRF	% RSD
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
6 Freon 143a	+++++	0.06091	+++++	+++++	0.05365	+++++	0.05004	0.05487	10.091
7 Freon 134a	+++++	0.16354	+++++	+++++	0.13985	+++++	0.13137	0.14492	11.506

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-DEC-2015 10:48
End Cal Date : 11-FEB-2016 16:16
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msda.i/11feb16.b/a15q1218f.m
Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
8 Propane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
9 Propylene	+++++ 0.51855	0.71193	0.64258	0.49050	0.49396	0.52105	0.56309	16.329
10 1,1-Difluoroethane	+++++ 0.07365	0.07578	+++++	+++++	0.07923	+++++	0.07622	3.690
11 Freon 12	1.96658 1.37942	1.72251	1.73832	1.34022	1.31785	1.38740	1.55033	16.491
12 Vinyl Fluoride	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
13 Chlorodifluoromethane	+++++ 0.03094	+++++	+++++	+++++	0.03354	+++++	0.03224	5.700
14 Ethylene Oxide	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 Freon 114	1.54864 1.15428	1.38988	1.42120	1.19068	1.11782	1.16273	1.28361	13.033
16 Freon 142b	+++++ 0.30624	0.37044	+++++	+++++	0.29941	+++++	0.32536	12.044
17 Chloromethane	+++++ 0.46699	0.63614	0.54838	0.46548	0.43950	0.44952	0.50100	15.295

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Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
18 Isobutane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Isobutylene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 2-Butene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 trans-2-butene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 1-Butene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
23 Butane	+++++ 0.11708	0.25314	0.19911	0.12475	0.11196	0.11578	0.15364	38.297
24 cis-2-Butene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 Vinyl Chloride	0.73641 0.56269	0.73909	0.70042	0.53364	0.53379	0.55772	0.62340	15.521
26 1,3-Butadiene	0.83166 0.49301	0.59162	0.62555	0.48635	0.47921	0.49708	0.57207	22.395
27 3-Methyl-1-butene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
28 Methanol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 Bromomethane	0.68360 / 0.46977	0.57754	0.58964	0.47166	0.44856	0.47179	0.53037	16.592
30 Chloroethane	+++++ / 0.27093	0.42546	0.37684	0.27892	0.27153	0.28320	0.31781	20.930
31 Isopentane	+++++ / 0.75679	0.99947	0.98398	0.83167	0.78193	0.76803	0.85365	12.895
32 Vinyl Bromide	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 2-Chloropropane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 Pentane	+++++ / 1.10842	1.16604	+++++	+++++	1.01924	+++++	1.09790	6.737
35 Freon 11	1.94681 / 1.55597	1.92743	1.95669	1.60090	1.50089	1.54772	1.71949	12.320
36 1-Pentene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 Dichlorofluoromethane	+++++ / 0.39997	0.42957	+++++	+++++	0.40225	+++++	0.41059	4.011

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Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
38 2,3-Dimethylbutane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Isoprene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
40 2-Methyl-2-butene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 trans-2-Pentene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42 Ethanol	+++++ 0.28123	0.37831	0.32183	0.27183	0.26514	0.28333	0.30028	14.322
43 1,2-Dichloro-1-fluoroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Ethyl Ether	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 cis-2-Pentene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Acrolein	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 Freon 123a	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
48 Freon 123	+++++ / 0.54624	0.54670	+++++	+++++	0.50966	+++++	0.53420	3.979
49 Freon 113	1.58428 / 1.12958	1.49242	1.39892	1.21425	1.10265	1.12733	1.29277	15.224
50 1,1-Dichloroethene	0.63047 / 0.36977	0.54068	0.49834	0.35249	0.36246	0.37313	0.44676	24.617
51 2,2-Dimethylbutane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 Acetone	+++++ / 0.31330	+++++	0.43764	0.30541	0.30062	0.32084	0.33556	17.159
53 Iodomethane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 Bromoethane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
55 4-Methyl-1-pentene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
56 Carbon Disulfide	+++++ / 1.60621	2.11753	2.01578	1.46250	1.54315	1.58060	1.72096	15.923
57 2-Propanol	+++++ / 1.28391	1.73461	1.58371	1.19103	1.24361	1.30787	1.39079	15.598

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Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
58 3-Chloropropene	+++++ / 0.29325	0.38851	0.33714	0.25551	0.24828	0.27085	0.29892	18.174
59 Cyclopentene	+++++ / 0.33171	0.31615	+++++	+++++	0.29108	+++++	0.31298	6.550
60 2-Methylpentane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Methyl Acetate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
62 3-Methylpentane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63 Acetonitrile	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
64 Cyclopentane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
65 1-Chloropropane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
66 Methylene Chloride	+++++ / 0.83494	1.06325	1.02610	0.80037	0.82208	0.84420	0.89849	12.776
67 2-Methyl-1-pentene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
68 2,4-Dimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
69 2,3-Dimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
70 tert-Butyl chloride	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 tert-Butyl alcohol	+++++ 1.33431	1.72284	1.70697	1.40246	1.32879	1.35396	1.47489	12.732
72 Methyl tert-butyl ether	2.09909 1.59631	2.15291	2.00998	1.67869	1.60687	1.61986	1.82339	13.806
73 trans-1,2-Dichloroethene	0.63695 0.40206	0.54808	0.50843	0.37846	0.37787	0.39379	0.46366	22.005
74 Acrylonitrile	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 trans-2-Hexene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 1-Hexene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
77 cis-2-Hexene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.50000 Level 2 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
78 Hexane	1.50166 1.11879	1.44617	1.41095	1.13194	1.08549	1.11548	1.25864	14.633
79 Methylcyclopentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
80 sec-Butyl chloride	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
81 2,3,4-Trimethylpentane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
82 1,1-Dichloroethane	1.46700 1.17762	1.48600	1.52377	1.15418	1.12942	1.19212	1.30430	13.622
83 Isopropyl ether	+++++ 2.59339	3.58460	3.34046	2.79688	2.60802	2.63872	2.92701	14.627
84 1-Propanol	+++++ 0.18656	0.12301	+++++	+++++	0.20229	+++++	0.17062	24.601
85 Chloroprene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
86 Vinyl Acetate	+++++ 0.16567	0.19677	0.21560	0.15486	0.15523	0.17057	0.17645	13.912
87 Butanal	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
88 Ethyl-tert-butyl ether	+++++ / 2.31516	2.96961	2.85438	2.41272	2.30423	2.34894	2.53417	11.733
89 Isobutyl chloride	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 2,2-Dichloropropane	+++++ / 0.48249	0.48445	+++++	+++++	0.44916	+++++	0.47203	4.202
91 cis-1,2-Dichloroethene	0.62464 / 0.46445	0.60487	0.53431	0.43891	0.44499	0.46403	0.51089	15.203
92 2-Butanone	+++++ / 0.31076	0.38975	0.41271	0.30707	0.30437	0.31623	0.34015	14.121
93 Methyl Acrylate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
94 Ethyl Acetate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
95 Methacrylonitrile	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 2-Chloropentane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 2-Butanol	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.50000 Level 2 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
99 Tetrahydrofuran	0.99204 0.94959	1.23269	1.17199	0.94669	0.92998	0.96254	1.02650	11.968
100 Chloroform	1.89627 1.35948	1.74457	1.74004	1.31514	1.32647	1.36935	1.53590	16.092
101 1-Bromopropane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 Cyclohexane	1.24960 0.85689	1.11970	1.05882	0.92102	0.84738	0.86578	0.98845	15.845
103 1,1,1-Trichloroethane	2.73409 1.49878	2.05696	1.84047	1.60968	1.50135	1.49997	1.82019	25.011
104 Chloroacetonitrile	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 n-Butylchloride	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Carbon Tetrachloride	2.15254 1.66789	2.11703	1.95609	1.75247	1.63949	1.62434	1.84426	12.360
107 1,1-Dichloropropene	+++++ 0.04375	0.03924	+++++	+++++	0.03902	+++++	0.04067	6.573
108 Thiophene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.50000 Level 2 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
109 2-Methylhexane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 3-Methylhexane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
111 Cyclohexene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
113 2,2,4-Trimethylpentane	4.93686 3.82361	4.19983	4.77717	3.91883	3.79962	3.86177	4.18824	11.411
114 1-Methoxy-2-propanol	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
115 Isobutanol	+++++ 0.19510	0.16838	+++++	+++++	0.25436	+++++	0.20595	21.369
116 Benzene	0.64641 0.46535	0.57604	0.58496	0.47333	0.46630	0.46976	0.52602	14.239
118 1-Heptene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
119 tert-Amyl methyl ether	+++++ 0.50501	0.63326	0.63105	0.53143	0.49463	0.50898	0.55073	11.659
120 1,2-Dichloroethane	0.27744 0.23349	0.29976	0.29208	0.22774	0.23558	0.23682	0.25756	12.019

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Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
121 Heptane	0.24686 / 0.16613	0.19248	0.20346	0.18474	0.17391	0.17015	0.19110	14.587
122 2,3-Dichloro-1-propene	##### / #####	#####	#####	#####	#####	#####	#####	#####
124 n-Butanol	##### / 0.42646	0.24112	#####	#####	0.47220	#####	0.37993	32.208
125 Trichloroethene	0.38871 / 0.24828	0.32050	0.31718	0.24549	0.24525	0.25368	0.28844	19.220
126 Bromodichloroethene	##### / #####	#####	#####	#####	#####	#####	#####	#####
127 Methylcyclohexane	2.49078 / 1.29902	1.81287	1.61497	1.41124	1.30569	1.30791	1.60607	27.104
128 Ethyl acrylate	##### / #####	#####	#####	#####	#####	#####	#####	#####
129 2-Methylheptane	##### / #####	#####	#####	#####	#####	#####	#####	#####
130 3-Methylheptane	##### / #####	#####	#####	#####	#####	#####	#####	#####
131 2-Pentanone	##### / #####	#####	#####	#####	#####	#####	#####	#####

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Compound	0.50000 Level 2 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
132 1,2-Dichloropropane	0.29343 0.20729	0.27548	0.26408	0.22082	0.21102	0.21223	0.24062	14.927
133 1-Bromo-2-Chloroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
134 Methyl Methacrylate	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
135 Diethyl Ketone	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
136 1,4-Dioxane	+++++ 0.12774	0.15739	0.16529	0.13540	0.12820	0.12849	0.14042	11.848
137 Dibromomethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
138 Bromodichloromethane	0.47110 0.39153	0.45164	0.48405	0.39004	0.38683	0.38924	0.42349	10.285
139 2-Nitropropane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
140 bis(chloromethyl) Ether	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
141 1-Octene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
142 Epichlorohydrin	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
143 2-Chloroethyl Vinyl Ether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
144 cis-1,3-Dichloropropene	0.42357 / 0.34504	0.41173	0.41191	0.35458	0.34384	0.34505	0.37653	9.840
145 4-Methyl-2-pentanone	0.32843 / 0.19505	0.25689	0.26000	0.21146	0.19786	0.19717	0.23527	21.106
147 Toluene	0.94846 / 0.67232	0.83563	0.86669	0.75202	0.68855	0.68677	0.77863	13.713
148 Octane	+++++ / 0.17971	0.21256	+++++	+++++	0.17640	+++++	0.18956	10.544
149 Vinyl Cyclohexene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
150 trans-1,3-Dichloropropene	0.39346 / 0.32373	0.40085	0.40253	0.33566	0.32208	0.32781	0.35802	10.789
151 Ethyl Methacrylate	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
152 1-Chloro-2-Bromopropane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-DEC-2015 10:48
End Cal Date : 11-FEB-2016 16:16
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msda.i/11feb16.b/a15q1218f.m
Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
153 1-Nitropropane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
154 Bromodichloroethane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
155 1,1,2-Trichloroethane	0.31005 0.25882	0.33306	0.32375	0.28279	0.26040	0.26119	0.29001	11.017
156 Tetrachloroethene	0.50889 0.38639	0.48464	0.49240	0.42128	0.38805	0.39661	0.43975	12.207
157 1,3-Dichloropropane	+++++ 0.22560	0.20699	+++++	+++++	0.19819	+++++	0.21026	6.656
158 2-Hexanone	+++++ 0.27963	0.37564	0.35307	0.29688	0.29031	0.28573	0.31354	12.884
159 Butyl Acetate	+++++ 0.04983	0.04176	+++++	+++++	0.04553	+++++	0.04571	8.842
160 Dibromochloromethane	0.71111 0.53410	0.68258	0.65011	0.56830	0.53280	0.54250	0.60307	12.624
161 1,2-Dibromoethane (EDB)	0.57306 0.43731	0.54103	0.54589	0.45838	0.43923	0.44097	0.49084	12.161
162 1-Nonene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-DEC-2015 10:48
End Cal Date : 11-FEB-2016 16:16
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msda.i/11feb16.b/a15q1218f.m
Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
164 1-Chlorohexane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
165 Chlorobenzene	0.81950 0.64115	0.82354	0.81526	0.71508	0.65957	0.65015	0.73204	11.626
166 Butyl Ether	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
167 Ethyl Benzene	0.44131 0.31473	0.41934	0.39757	0.36045	0.32921	0.32560	0.36974	13.550
168 1,1,1,2-Tetrachloroethane	+++++ 0.23925	0.23400	+++++	+++++	0.24665	+++++	0.23997	2.647
169 m,p-Xylene	0.54114 0.39632	0.52097	0.52632	0.45478	0.41537	0.41023	0.46645	13.261
170 Nonane	+++++ 0.46796	0.53695	+++++	+++++	0.44827	+++++	0.48439	9.614
171 o-Xylene	0.54639 0.37947	0.47745	0.47119	0.43011	0.38941	0.38904	0.44044	13.938
172 Styrene	0.79784 0.58313	0.76220	0.77984	0.66193	0.62290	0.60685	0.68781	13.072
173 2-Heptanone	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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INITIAL CALIBRATION DATA

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End Cal Date : 11-FEB-2016 16:16
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msda.i/11feb16.b/a15q1218f.m
Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
174 Bromoform	0.68775 0.54163	0.67911	0.66628	0.58810	0.54908	0.55138	0.60905	10.867
175 Cumene	1.68403 1.13928	1.53752	1.52816	1.34009	1.22177	1.18143	1.37604	15.218
176 Cyclohexanone	+++++ 0.30293	0.25055	+++++	+++++	0.37637	+++++	0.30995	20.392
178 1-Decene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
179 alpha-Pinene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
180 Bromobenzene	+++++ 0.28416	0.25640	+++++	+++++	0.28152	+++++	0.27403	5.591
181 1,1,2,2-Tetrachloroethane	0.73552 0.56338	0.73630	0.72140	0.63373	0.58980	0.58312	0.65189	11.833
182 Propylbenzene	1.85546 1.32634	1.72216	1.72307	1.49840	1.40548	1.37619	1.55816	13.262
183 1,4-Dichloro-2-Butene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
184 trans-1,4-Dichloro-2-butene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.

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Quant Method : ISTD
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Integrator : HP RTE
Method file : /chem/msda.i/11feb16.b/a15q1218f.m
Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
185 1,2,3-Trichloropropane	+++++ / 0.12748	0.12462	+++++	+++++	0.13375	+++++	0.12862	3.634
186 3-Ethyltoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
187 Decane	+++++ / 0.55110	0.62596	+++++	+++++	0.52215	+++++	0.56641	9.458
188 4-Ethyltoluene	0.53790 / 0.35629	0.48302	0.47226	0.41257	0.37313	0.39116	0.43233	15.424
189 2-Chlorotoluene	+++++ / 0.21815	0.19859	+++++	+++++	0.22013	+++++	0.21229	5.609
190 1,3,5-Trimethylbenzene	0.76139 / 0.50207	0.68340	0.65109	0.57889	0.52513	0.49537	0.59962	16.980
191 4-Chlorotoluene	+++++ / 0.22547	0.20156	+++++	+++++	0.22317	+++++	0.21674	6.086
192 beta-Pinene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
193 Diisobutyl Ketone	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
194 alpha Methyl Styrene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Quant Method : ISTD
Origin : Disabled
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Integrator : HP RTE
Method file : /chem/msda.i/11feb16.b/a15q1218f.m
Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
195 tert-Butylbenzene	+++++ / 0.66751	0.63282	+++++	+++++	0.68162	+++++	0.66065	3.801
196 1,2,4-Trimethylbenzene	0.64815 / 0.45718	0.60097	0.56783	0.51173	0.47992	0.47370	0.53421	13.589
197 Pentachloroethane	+++++ / 0.22195	0.22287	+++++	+++++	0.22827	+++++	0.22436	1.522
198 Limonene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
199 D-Limonene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
200 Benzaldehyde	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
201 Indan	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
202 Indene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
203 sec-Butylbenzene	+++++ / 0.21478	0.19598	+++++	+++++	0.21596	+++++	0.20891	5.367
204 Isobutylbenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Integrator : HP RTE
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Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
205 2-Ethyltoluene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
206 bis(2-Chloroethyl) Ether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
207 p-Cymene	+++++ / 0.90782	0.77552	+++++	+++++	0.90226	+++++	0.86187	8.682
208 1,3-Dichlorobenzene	1.00371 / 0.72946	0.94575	0.94836	0.78742	0.75536	0.74972	0.84568	13.637
209 1,4-Dichlorobenzene	1.02957 / 0.73072	0.97462	0.94640	0.78979	0.75456	0.75258	0.85404	14.610
210 1,2,3-Trimethylbenzene	+++++ / 0.34395	0.30210	+++++	+++++	0.34555	+++++	0.33054	7.453
211 1-Undecene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
212 alpha-Chlorotoluene	1.19971 / 0.91974	1.11711	1.13802	0.94612	0.93387	0.95032	1.02927	11.416
213 Butylbenzene	+++++ / 0.25196	0.19247	+++++	+++++	0.24528	+++++	0.22990	14.175
214 1,2-Dichlorobenzene	0.96822 / 0.68943	0.90005	0.89352	0.75285	0.72188	0.71456	0.80579	13.845

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Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
215 Undecane	+++++ / 0.67864	0.54015	+++++	+++++	0.54259	+++++	0.58713	13.500
216 4-Ethyl-1,2-dimethylbenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
217 Hexachloroethane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
218 1,3-Diethylbenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
219 1,4-Diethylbenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
220 1,2,4,5-tetramethylbenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
221 1,2-Dibromo-3-chloropropane	+++++ / 0.32886	0.24439	+++++	+++++	0.43924	+++++	0.33750	28.951
222 1-Dodecene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
223 Nitrobenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
224 1,3,5-Trichlorobenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.

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Quant Method : ISTD
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Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD	
225 Dodecane	+++++ / 0.59446	0.29298	+++++	+++++	0.29581	+++++	0.39442	43.925	<-
226 1,2,4-Trichlorobenzene	+++++ / 0.67584	0.77318	0.82583	0.71519	0.65939	0.68546	0.72248	8.934	
227 Hexachlorobutadiene	+++++ / 0.54671	0.67283	0.68903	0.60317	0.54416	0.55833	0.60237	10.734	
228 Naphthalene	+++++ / 1.38373	1.80070	1.66929	1.42409	1.29266	1.37894	1.49157	13.260	
229 1,2,3-Trichlorobenzene	+++++ / 0.38276	0.36763	+++++	+++++	0.29384	+++++	0.34808	13.669	
230 Tridecane	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
231 Quinoline	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
232 2-Methylnaphthalene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
233 1,3,5-Triethylbenzene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
234 Acenaphthylene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

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Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
235 Phenanthrene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
236 Anthracene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 237 1,2-Dichloroethene (Total)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 238 Chlorobutane (Total)	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 239 Total Xylene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
M 240 3 and 4-Ethyltoluene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
241 Total Volatile Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
242 TPH reference to Hexane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
243 TPH reference to Heptane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
244 TPH reference to Gasoline	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
245 TPH reference MineralSpirits	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
246 TPH reference to Stoddard	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
247 TVOC reference to Hexane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
248 TVOC reference to Heptane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
249 TVOC reference to Toluene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
250 TVOC reference to Toluene-d8	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
251 NMOC reference to Hexane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
252 NMOC reference to Heptane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
253 NMOC reference to Toluene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
254 C3 - C4 Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	___ RRF	% RSD
255 C4 - C5 Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
256 C5 - C6 Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
257 C6 - C7 Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
258 C7 - C8 Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
259 C8 - C9 Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
260 C9 - C10 Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
261 C10+ Hydrocarbons	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
262 C5 - C6 Aliphatic ref C5 + C6	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
263 C6-C8 Aliphatic ref Heptane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
264 C8-C10 Aliphatic ref Decane	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.

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Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
265 C10-C12 Aliphatic ref Dodecan	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
266 C8-C10 Aromatic	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
267 C8-C10 Aromatic ref 1,2,3-TMB	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
268 C10-C12 Aromatic	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
269 C10-C12 Aromatic 1,2,4,5-TMB	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
270 C10-C12 Aromatic Naphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 112 Benzene-d6	+++++ +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 117 1,2-Dichloroethane-d4	1.30640 1.27687	1.34254	1.28054	1.24823	1.26403	1.27789	1.28521	2.397
$ 146 Toluene-d8	1.00281 1.00565	0.99851	1.01578	1.02085	1.02657	1.02895	1.01416	1.185
$ 177 4-Bromofluorobenzene	0.60484 0.61324	0.59348	0.60220	0.60737	0.60512	0.59742	0.60338	1.077

Calibration History

Method : /chem/msda.i/11feb16.b/a15q1218f.m
Start Cal Date: 18-DEC-2015 10:48
End Cal Date : 11-FEB-2016 16:16

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 2 , Cal Amount: 0.50000		
18-DEC-2015 10:48	AT12low	/chem/msda.i/18dec15.b/a121802.d

Injection Date	Sublist	Calibration File
Cal Level: 3 , Cal Amount: 2.00000		
27-JAN-2016 15:09	BoilingPtcrv	/chem/msda.i/27jan16.b/a012707.d
31-DEC-2015 14:17	123TCB	/chem/msda.i/31dec15.b/a123111.d
11-FEB-2016 15:37	AT1	/chem/msda.i/11feb16.b/a021109.d
18-DEC-2015 11:25	AT12mdl	/chem/msda.i/18dec15.b/a121803.d

Injection Date	Sublist	Calibration File
Cal Level: 4 , Cal Amount: 5.00000		
18-DEC-2015 11:51	AT12mdl	/chem/msda.i/18dec15.b/a121804.d

Injection Date	Sublist	Calibration File
Cal Level: 5 , Cal Amount: 20.00000		
18-DEC-2015 15:43	AT12	/chem/msda.i/18dec15.b/a121811.d

Injection Date	Sublist	Calibration File
Cal Level: 6 , Cal Amount: 50.00000		
27-JAN-2016 16:01	BoilingPtcrv	/chem/msda.i/27jan16.b/a012708.d
31-DEC-2015 11:54	123TCB	/chem/msda.i/31dec15.b/a123106.d
11-FEB-2016 13:14	AT1	/chem/msda.i/11feb16.b/a021105.d
18-DEC-2015 12:53	AT12	/chem/msda.i/18dec15.b/a121806.d

Injection Date	Sublist	Calibration File
Cal Level: 7 , Cal Amount: 100.00000		
18-DEC-2015 13:31	AT12	/chem/msda.i/18dec15.b/a121807.d

Injection Date	Sublist	Calibration File
Cal Level: 8 , Cal Amount: 200.00000		

```
|27-JAN-2016 16:27 |BoilingPtcrv     |/chem/msda.i/27jan16.b/a012709.d        |
|31-DEC-2015 12:20 |123TCB           |/chem/msda.i/31dec15.b/a123107.d        |
|11-FEB-2016 16:16 |AT1              |/chem/msda.i/11feb16.b/a021110.d        |
|18-DEC-2015 13:57 |AT12             |/chem/msda.i/18dec15.b/a121808.d        |
+------------------+-----------------+----------------------------------------+


Continuing Calibration
Ccal Level Mode: GLOBAL LEVEL 6
+------------------+-----------------+----------------------------------------+
| Ccal Level: 6 , Ccal Amount: 50.000                                          |
+==============================================================================+
|11-FEB-2016 11:26 |AT12             |/chem/msda.i/11feb16.b/a021102.d        |
+------------------+-----------------+----------------------------------------+
| Ccal Level: 6 , Ccal Amount: 50.000                                          |
+==============================================================================+
|11-FEB-2016 13:14 |AT1              |/chem/msda.i/11feb16.b/a021105.d        |
+------------------+-----------------+----------------------------------------+
| Ccal Level: 6 , Ccal Amount: 50.000                                          |
+==============================================================================+
|11-FEB-2016 11:26 |Cntr062616       |/chem/msda.i/11feb16.b/a021102a.d       |
+------------------+-----------------+----------------------------------------+
```

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-DEC-2015 10:48
End Cal Date : 11-FEB-2016 16:16
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/msda.i/11feb16.b/a15q1218f.m
Cal Date : 11-Feb-2016 16:41 sblack
Curve Type : Average

SB 2/11/16

Calibration File Names:
Level 2: /chem/msda.i/18dec15.b/a121802.d
Level 3: /chem/msda.i/27jan16.b/a012707.d
Level 4: /chem/msda.i/18dec15.b/a121804.d
Level 5: /chem/msda.i/18dec15.b/a121811.d
Level 6: /chem/msda.i/27jan16.b/a012708.d
Level 7: /chem/msda.i/18dec15.b/a121807.d
Level 8: /chem/msda.i/27jan16.b/a012709.d

Please see Calibration History page(s) for all the calibration files.

Compound	0.50000 Level 2 / 200.000 Level 8	2.000 Level 3	5.000 Level 4	20.000 Level 5	50.000 Level 6	100.000 Level 7	RRF	% RSD
1 Dimethyl Ether	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 Freon 14	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Acetaldehyde	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
4 Hexafluoropropene	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
5 Freon 13	+++++ / +++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
6 Freon 143a	+++++ / 0.05004	0.06091	+++++	+++++	0.05365	+++++	0.05487	10.091
7 Freon 134a	+++++ / 0.13137	0.16354	+++++	+++++	0.13985	+++++	0.14492	11.506

Initial Calibration Narrative

A15Q1218F.m

A 7 point initial calibration was analyzed on MSD-A on 12/18/15 for TO-15 compounds.

ICAL - 0 out

Acetone curved from 5.0 -> 200ppbv.

ICV - 0 out.

ICV: File A121812; 100mL: #2759-106A (100ppbv); exp: 2/24/16.

0 out DoD and in-house control limits.

Tune Files:

A) A121801
B) A122801
C) A123101
D) A012701
E) A021101

~~A three (3) point initial calibration for the AT-1 specials were analyzed on 12/28/15. 0 out Freon 21 only curved at 50ppbv and 200ppbv.~~

A three (3) point initial calibration for 1,2,3 Trichlorobenzene was analyzed on 12/31/15

A three (3) point initial calibration for Boiling Point was analyzed on 1/27/16. One (1) out; Dodecane at 44% RSD.

A three (3) point initial calibration for the AT-1 specials was re-analyzed on 2/11/16. 0 out Freon 22 only curved at 50ppbv and 200ppbv.

The MDL study was performed on 4/22/15.

MSDA

BFB verification of 176/174 ratio: (173866/175168) * 100 = 99.26%			
IS/S Std.#:	2759-146	Exp. Date:	3/17/2016
BCM	158,121		
1,4-DFB	659,165		
CB-d5	629,706		

Method TO-15/TO-14	
SOP# 6	
Vacuum: NA	
Please check all standards	
Surrogate# 2759-146	Exp. Date: 3/17/2016
Surrogate# NA	Exp. Date: NA

Verified CCV vs ICAL mid-point (-40%):

Method: A15Q1218A.m

Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time Analyzed	Review Init	Comments
√	A121801	BFB Tune Check	2759-146	12	36ng	1.0mL	1.00	cb	cb	12/18/15	1014	cb	
√	A121802	I Cal Level #2	2759-148	1	0.5ppbv(5.0ppbv)	20ml	1.00	cb	cb	12/18/15	1048	cb	exp. 1/30/16
√	A121803	I Cal Level #3	2759-148	1	2.0ppbv(5.0ppbv)	80ml	1.00	cb	cb	12/18/15	1125	cb	exp. 1/30/16
√	A121804	I Cal Level #4	2759-45	1	5.0ppbv(5.0ppbv)	200ml	1.00	cb	cb	12/18/15	1151	cb	exp. 1/30/16
X	A121805	I Cal Level #5	2759-45	13	20ppbv(200ppbv)	20ml	1.00	cb	cb	12/18/15	1228	cb	exp. 1/30/16; Unity error - no IS or std loaded
√	A121806	I Cal Level #6	2759-45	13	50ppbv(200ppbv)	50ml	1.00	cb	cb	12/18/15	1253	cb	exp. 1/30/16; CCV
√	A121807	I Cal Level #7	2759-45	13	100ppbv(200ppbv)	100ml	1.00	cb	cb	12/18/15	1331	cb	exp. 1/30/16
√	A121808	I Cal Level #8	2759-45	13	200ppbv(200ppbv)	200ml	1.00	cb	cb	12/18/15	1357	cb	exp. 1/30/16
X	A121809	System Blank	36041	12	humid	200ml	1.00	ea	cb	12/18/15	1441	ea	
√	A121810	System Blank	36041	12	humid	200ml	1.00	ea	cb	12/18/15	1520	ea	
√	A121811	I Cal Level #5	2759-45	13	20ppbv(200ppbv)	20ml	1.00	ea	cb	12/18/15	1543	ea	exp. 2/24/16
√	A121812	ICV/LCS	2759-106A	14	50ppbv(100ppbv)	100ml	1.00	CB	ea	12/18/15	1649	CB	↓
~~√~~	~~A121813~~	~~LCSD~~	~~2759-106A~~	~~14~~	~~50ppbv(100ppbv)~~	~~100ml~~	1.00		ea	12/18/15			
√	A121814	Lab Blank	36041	12	humid	200ml	1.00		ea	12/18/15			
	A121815	~~1512299A-01A~~	~~6L1253~~	~~2~~	~~0.4 Hg->4.8 psi~~	200ml	1.34		ea	CB 12/19/15			

12/19/15

MSDA

BFB verification of 176/174 ratio: (195712/194944)*100=100.39%			
IS/S Std.#:	2759-146	Exp. Date:	3/17/2016
BCM	150,633		
1,4-DFB	647,124		
CB-d5	608,361		

Method TO-15/TO-14	
SOP# 6	
Vacuum: NA	
Please check all standards	
Surrogate# 2759-146	Exp. Date: 3/17/2016
Surrogate# NA	Exp. Date: NA

Verified CCV vs ICAL mid-point (-40%): gh

Method: A15Q1218B.m

Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time Analyzed	Review Init	Comments
√	A122801	BFB Tune Check	2759-146	12	36ng	1.0mL	1.00	js	js	12/28/15	1034	gh	APEX-1
√	A122802	CCV	2759-45	13	50ppbv (200ppbv)	50mL	1.00	gh	js	12/28/15	1150	gh	Exp. 1/30/16; 0 out
√	A122803	LCS	2759-106A	14	50ppbv (100ppbv)	100mL	1.00	gh	js	12/28/15	1228	gh	Exp. 2/24/16;
√	A122804	LCSD	2759-106A	14	50ppbv (100ppbv)	100mL	1.00	gh	js	12/28/15	1253	gh	Exp. 2/24/16.
√	A122805	I Cal Level #3	2759-102	2	2.0ppbv(5.0ppbv)	80ml	1.00	gh	gh	12/28/15	1553	gh	exp. 2/5/16
√	A122806	I Cal Level #6	2759-76	3	50ppbv(200ppbv)	50ml	1.00	gh	gh	12/28/15	1617	gh	exp.2/5/16
√	A122807	I Cal Level #8	2759-76	3	200ppbv(200ppbv0	200ml	1.00	gh	gh	12/28/15	1656	gh	

GH 12/28/15

MSDA

BFB verification of 176/174 ratio: (186090/184768)*100=100.72%			
IS/S Std.#:	2759-146	Exp. Date:	3/17/2016
BCM	149,213		
1,4-DFB	620,921		
CB-d5	612,512		

Method TO-15/TO-14	
SOP# 6	
Vacuum: NA	
Please check all standards	
Surrogate# 2759-146	Exp. Date: 3/17/2016
Surrogate# NA	Exp. Date: NA

Verified CCV vs ICAL mid-point (-40%): cb

Method: A15Q1218C.m

Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time Analyzed	Review Init	Comments
√	A123101	BFB Tune Check	2759-146	12	36ng	1.0mL	1.00	cb	cb	12/31/15	0905	cb	
√	A123102	CCV	2759-45	13	50ppbv (200ppbv)	50mL	1.00	cb	cb	12/31/15	0942	cb	exp. 1/30/16; 1 out
√	A123103	LCS	2759-106A	14	50ppbv (100ppbv)	100mL	1.00	cb	cb	12/31/15	1009	cb	exp. 2/24/16; 0 out
√	A123104	LCSD	2759-106A	14	50ppbv (100ppbv)	100mL	1.00	cb	cb	12/31/15	1036	cb	exp. 2/24/16.
X	A123105	ICAL Level 3	2759-165	1	0.5ppbv(2.0ppbv)	50mL	1.00	cb	cb	12/31/15	1117	cb	exp. 3/29/16; 1,2,3-TCB; wrong level
√	A123106	ICAL Level 6	2759-162	2	50ppbv(200ppbv)	50mL	1.00	cb	cb	12/31/15	1154	cb	exp. 3/29/16; 1,2,3-TCB, CCV
√	A123107	ICAL Level 8	2759-162	2	200ppbv(200ppbv)	200mL	1.00	cb	cb	12/31/15	1220	cb	exp. 3/29/16; 1,2,3-TCB
X	A123108	CCVsp	2759-76	3	50ppbv(200ppbv)	50mL	1.00	cb	cb	12/31/15	1249	cb	exp. 2/5/16; AT-1; Unity eoor, no IS or std loaded
√	A123109	LCSsp	2736-286	4	50ppbv(200ppbv)	50mL	1.00	cb	cb	12/31/15	1317	cb	exp. 1/1/16; AT-1
√	A123110	CCVsp	2759-76	3	50ppbv(200ppbv)	50mL	1.00	cb	cb	12/31/15	1344	cb	exp. 2/5/16; AT-1
√	A123111	ICAL Level 3	2759-165	1	2.0ppbv(2.0ppbv)	200mL	1.00	cb	cb	12/31/15	1417	cb	exp. 3/29/16; 1,2,3-TCB
√	A123112	LCSsp	2759-163	5	50ppbv(200ppbv)	50mL	1.00	cb	cb	12/31/15	1445	gh	exp. 3/29/16; 1,2,3-TCB
	A123113	Lab Blank	36041	12	humid	200mL	1.00		gh	12/31/15			

GH 12/31/15

MSDA

BFB verification of 176/174 ratio: (196501/200725)*100= 97.90%			
IS/S Std.#:	2759-146	Exp. Date:	3/17/2016
BCM			185,585
1,4-DFB			763,859
CB-d5			697,872

Method TO-15/TO-14	
SOP# 6	
Vacuum: NA	
Please check all standards	
Surrogate# 2759-146	Exp. Date: 3/17/2016
Surrogate# NA	Exp. Date: NA

Verified CCV vs ICAL mid-point (-40%): js

Method: A15Q1218D.m

Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time Analyzed	Review Init	Comments
√	A012701	BFB Tune Check	2759-146	12	36ng	1.0mL	1.00	js	js	01/27/16	1100	js	
X	A012702	CCV	2759-179	13	50ppbv (200ppbv)	50mL	1.00	js	js	01/27/16	1137	js	Exp. 4/6/16; no Iss
√	A012703	LCS	2759-107	14	50ppbv (200ppbv)	50mL	1.00	js	js	01/27/16	1202	js	Exp. 2/24/16; 0 out
√	A012704	LCSD	2759-107	14	50ppbv (200ppbv)	50mL	1.00	js	js	01/27/16	1239	js	Exp. 2/24/16. 0 out
√	A012705	CCV	2759-179	13	50ppbv (200ppbv)	50mL	1.00	js	js	01/27/16	1328	js	Exp. 4/6/16; 0 out
√	A012706	TPHg calib	2759-98	1	500ppbv (2500ppbv)	40mL	1.00	js	js	01/27/16	1419	js	Exp. 2/19/16
√	A012707	ICAL Level #3	2759-157	2	2.0ppbv (5.0ppbv)	80ml	1.00	js	js	01/27/16	1509	gd	exp. 2/20/16; Boiling Point
√	A012708	ICAL Level #6	2759-214	3	50ppbv (200ppbv)	50ml	1.00	gd	js	01/27/16	1601	gd	exp. 2/20/16; Boiling Point; CCV
√	A012709	ICAL Level #8	2759-214	3	200ppbv (200ppbv)	200ml	1.00	gd	js	01/27/16	1627	gd	exp. 2/20/16; Boiling Point
√	A012710	Lab Blank	36041	12	Humid	200mL	1.00	gd	js	01/27/16	1700	gd	
	A012711	1601298-02A	34092	1	4.7 Hg->14.8 psi	200mL	2.38		gd	01/27/16			
	A012712	1601321-04A	100188	2	4.5 Hg->14.9 psi	200mL	2.37		gd	01/27/16			
	A012713	1601321-05A	n2054	3	4.9 Hg->15 psi	200mL	2.41		gd	01/27/16			
	A012714	1601301-01A	34612	4	2 Hg->14.6 psi	200mL	2.14		gd	01/27/16			
	A012715	1601301-02A	37293	5	7.6 Hg->14.8 psi	200mL	2.69		gd	01/27/16			

gd 1/27/16

MSDA

BFB verification of 176/174 ratio: (63432/65032)*100=97.54%			
IS/S Std.#:	2759-146	Exp. Date:	3/17/2016
BCM			157,375
1,4-DFB			644,676
CB-d5			586,529

Method TO-15/TO-14			
SOP# 6			
Vacuum: NA			
Please check all standards			
Surrogate# 2759-146		Exp. Date:	3/17/2016
Surrogate# NA		Exp. Date:	NA

Verified CCV vs ICAL mid-point (-40%): sab

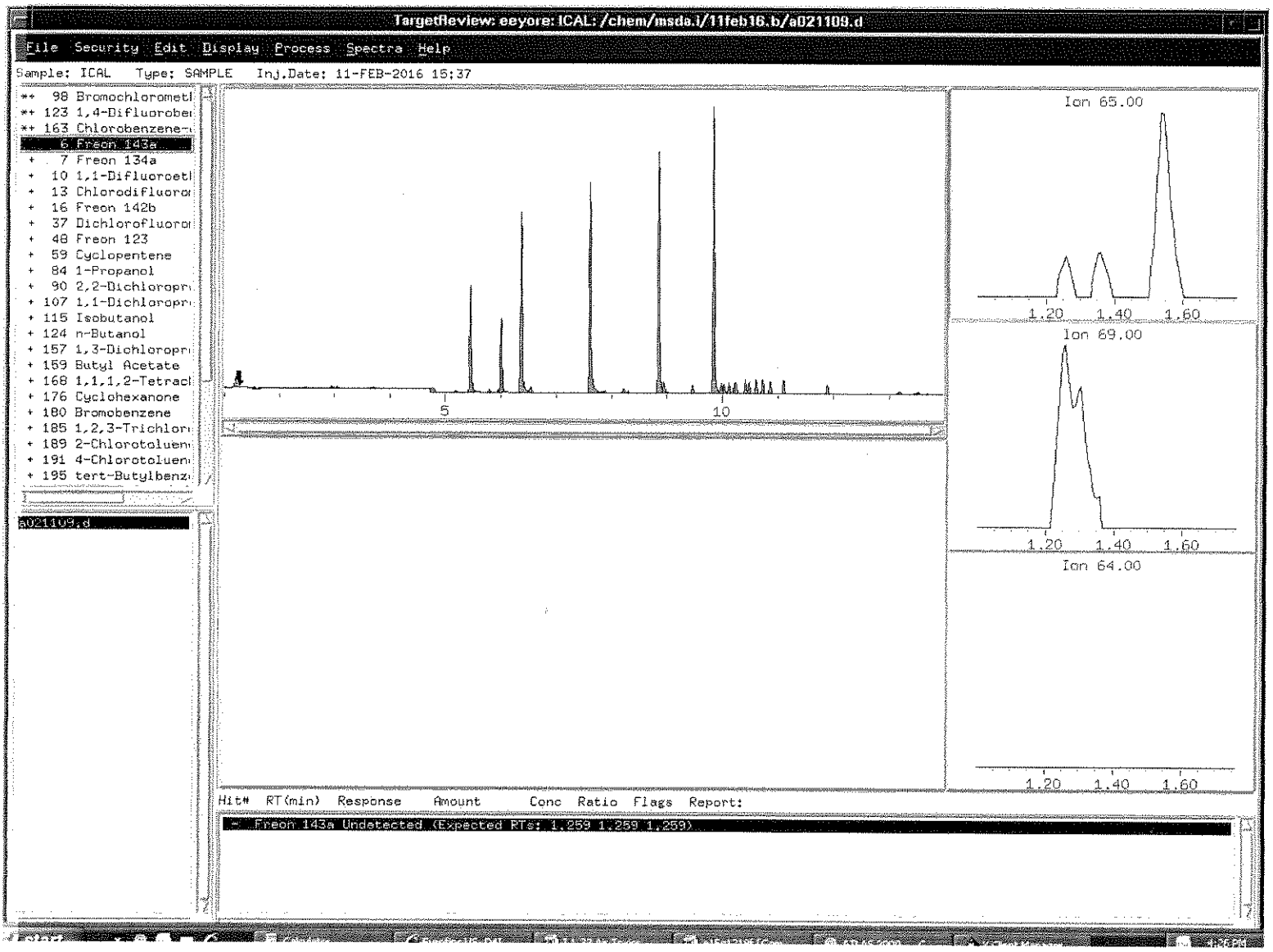
Method: A15Q12180.m

SB 2/11/16

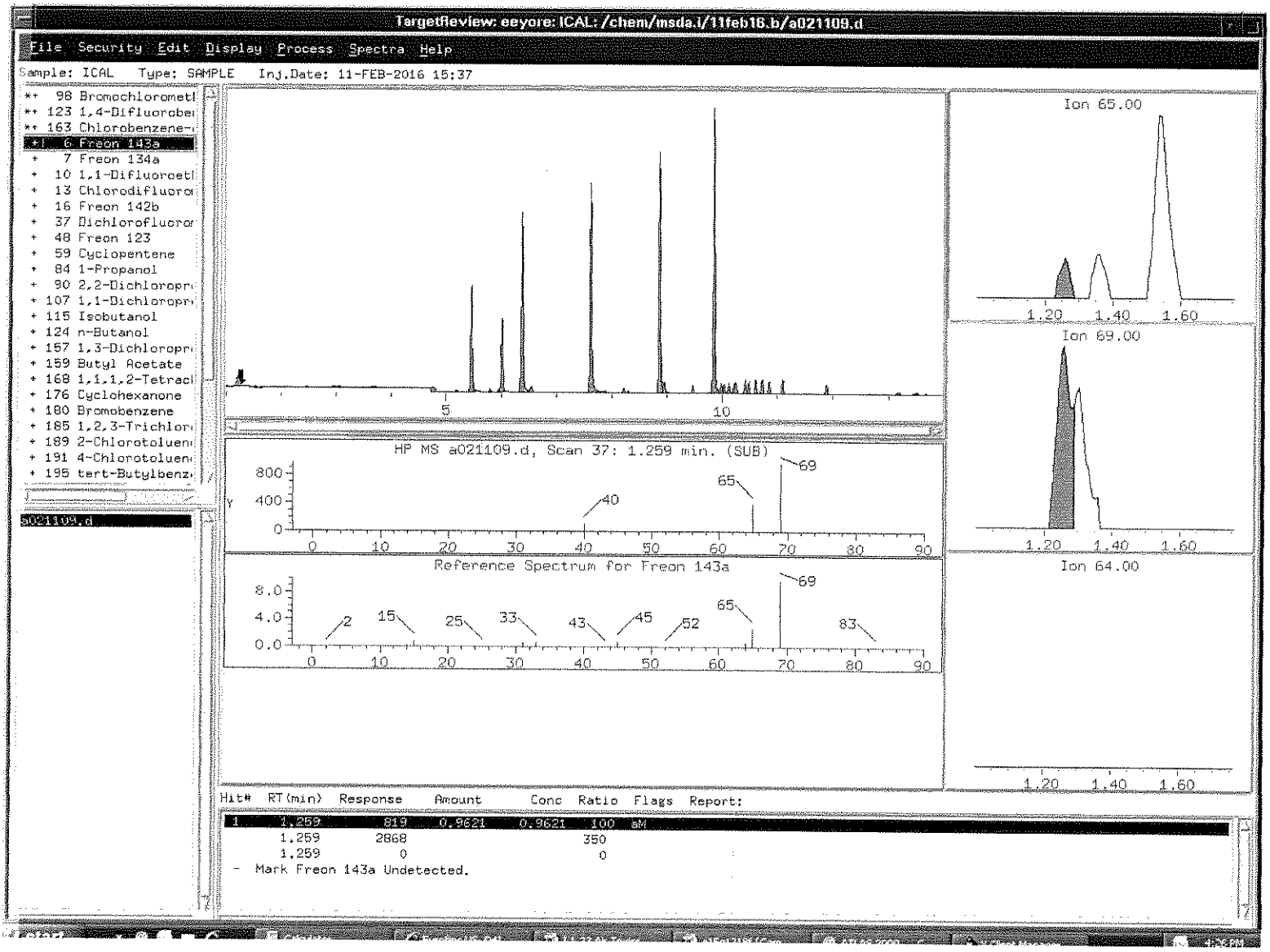
Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time Analyzed	Review Init	Comments
√	A021101	BFB Tune Check	2759-146	12	36ng	1.0mL	1.00	sab	sab	02/11/16	1041	sab	Exp: 3/17/16
√	A021102	CCV	2759-179	13	50ppbv (200ppbv)	50mL	1.00	sab	sab	02/11/16	1126	sab	Exp. 4/6/16; 1 out
√	A021103	LCS	2759-107A	14	50ppbv (100ppbv)	100mL	1.00	sab	sab	02/11/16	1204	sab	Exp. 2/24/16; 0 out
√	A021104	LCSD	2759-107A	14	50ppbv (100ppbv)	100mL	1.00	sab	sab	02/11/16	1230	sab	Exp. 2/24/16.
√	A021105	ICAL level 6	2759-231	1	50ppbv (200ppbv)	50ml	1.00	sab	sab	02/11/16	1314	sab	Exp: 5/5/16; AT-1; CCV
√	A021106	TPHg Validation	2759-145	2	50ppbv(100ppbv)	100ml	1.00	sab	sab	02/11/16	1352	sab	Exp: 3/17/16
?	A021107	TPHg re-cert	2759-96	3	500ppbv(2500ppbv)	40ml	1.00	sab	sab	02/11/16	1416	sab	Exp: 2/19/16
√	A021108	TPHg calib	2759-98	4	500ppbv(2500ppbv)	40ml	1.00	sab	sab	02/11/16	1453	sab	Exp: 2/19/16
√	A021109	ICAL level 3	2759-238	5	2.0ppbv(5.0ppbv)	80mL	1.00	sab	sab	02/11/16	1537	sab	Exp: 5/5/16; AT-1
√	A021110	ICAL level 8	2759-231	1	200ppbv (200ppbv)	200ml	1.00	sab	sab	02/11/16	1616	sab	Exp: 5/5/16; AT-1
	~~A021111~~	~~Lab Blank~~	~~36041~~	~~12~~	~~Humid~~	~~200mL~~	~~1.00~~						

SB 2/11/16

2/11/16


Targetfleview: eeyore: ICAL: /chem/msda.i/11feb16.b/a021109.d
File Security Edit Display Process Spectra Help
Sample: ICAL Type: SAMPLE Inj.Date: 11-FEB-2016 15:37
** 98 Bromochloromethi
** 123 1,4-Difluorobe
** 163 Chlorobenzene-
6 Freon 143a
+ 7 Freon 134a
+ 10 1,1-Difluoroeth
+ 13 Chlorodifluoro
+ 16 Freon 142b
+ 37 Dichlorofluoro
+ 48 Freon 123
+ 59 Cyclopentene
+ 84 1-Propanol
+ 90 2,2-Dichloropr
+ 107 1,1-Dichloropr
+ 115 Isobutanol
+ 124 n-Butanol
+ 157 1,3-Dichloropr
+ 159 Butyl Acetate
+ 168 1,1,1,2-Tetrac
+ 176 Cyclohexanone
+ 180 Bromobenzene
+ 185 1,2,3-Trichlor
+ 189 2-Chlorotoluen
+ 191 4-Chlorotoluen
+ 195 tert-Butylbenz
a021109.d
5
10
Ion 65.00
1.20 1.40 1.60
Ion 69.00
1.20 1.40 1.60
Ion 64.00
1.20 1.40 1.60
Hit# RT(min) Response Amount Conc Ratio Flags Report:
- Freon 143a Undetected (Expected RTs: 1.259 1.259 1.259)

Before



After 83 2/11/16 95 2/11/16

Correct Baseline	
Split Peak	
Merge Peak	
Zoom In	
Change Parameter	
System Peak Subtraction	
Peak Misidentified	✓
Corrected Peak Integration	

Modified EPA Methods TO-14A/TO-15
Internal Standard and Associated Target Compounds and Surrogates

Bromochloromethane
Target Compounds:
Freon 12
Freon 114
Chloromethane
Vinyl Chloride
1,3-Butadiene
Bromomethane
Chloroethane
Freon 11
Ethanol
Freon 113
1,1-Dichloroethene
Acetone
2-Propanol
Carbon Disulfide
3-Chloropropene
Methylene Chloride
Methyl tert-butyl ether
trans-1,2-Dichloroethene
Hexane
1,1-Dichloroethane
2-Butanone (Methyl Ethyl Ketone)
cis-1,2-Dichloroethene
Tetrahydrofuran
Chloroform
1,1,1-Trichloroethane
Cyclohexane
Carbon Tetrachloride
2,2,4-Trimethylpentane
Surrogates:
1,2-Dichloroethane-d4

1,4-Difluorobenzene
Target Compounds:
Benzene
1,2-Dichloroethane
Heptane
Trichloroethene
1,2-Dichloropropane
1,4-Dioxane
Bromodichloromethane
cis-1,3-Dichloropropene
4-Methyl-2-pentanone
Toluene
Surrogates:
Toluene-d8

Chlorobenzene-d5
Target Compounds:
trans-1,3-Dichloropropene
1,1,2-Trichloroethane
Tetrachloroethene
2-Hexanone
Dibromochloromethane
1,2-Dibromoethane (EDB)
Chlorobenzene
Ethyl Benzene
m,p-Xylene
o-Xylene
Styrene
Bromoform
Cumene
1,1,2,2-Tetrachloroethane
Propylbenzene
4-Ethyltoluene
1,3,5-Trimethylbenzene
1,2,4-Trimethylbenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
alpha-Chlorotoluene
1,2-Dichlorobenzene
1,2,4-Trichlorobenzene
Hexachlorobutadiene
Surrogates:
Bromofluorobenzene

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/18dec15.b/a121812.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 18-DEC-2015 16:49
Operator : EA Inst ID: msda.i
Smp Info : 100mL #2759-106A
Misc Info : 50ppbv (100ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/18dec15.b/a15q1218a.m
Meth Date : 18-Dec-2015 16:28 cbond Quant Type: ISTD
Cal Date : 18-DEC-2015 15:43 Cal File: a121811.d
Als bottle: 12 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	153397	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	119414			50.14- 110.14	77.85
5.464	5.464 (1.000)	49	216741			89.52- 149.52	141.29
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	661775	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	98552			0.00- 44.09	14.89
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	624188	25.0000		80.00- 120.00	100.00
8.866	8.859 (1.000)	82	309560			18.99- 78.99	49.59
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.015	6.015 (1.101)	65	196337	24.8972	24.897	80.00- 120.00	100.00
6.015	6.015 (1.101)	67	109002			27.46- 87.46	55.52

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.613	7.620 (1.193)	98	668773	24.9116	24.912	80.00- 120.00	100.00
7.613	7.613 (1.193)	70	66979			0.00- 39.98	10.02
7.613	7.620 (1.193)	100	449958			35.06- 95.06	67.28
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	374999	24.8922	24.892	80.00- 120.00	100.00
9.862	9.862 (1.112)	95	446882			81.96- 141.96	119.17
9.862	9.862 (1.112)	176	376620			69.27- 129.27	100.43
9 Propylene					CAS #: 115-07-1		
1.345	1.345 (0.246)	41	154567	44.7361	44.736	80.00- 120.00	100.00
1.345	1.345 (0.246)	42	102396			30.35- 90.35	66.25
1.345	1.345 (0.246)	39	111496			45.83- 105.83	72.13
11 Freon 12					CAS #: 75-71-8		
1.381	1.381 (0.253)	85	443510	46.6233	46.623	80.00- 120.00	100.00
1.381	1.381 (0.253)	87	142360			3.86- 63.86	32.10
15 Freon 114					CAS #: 76-14-2		
1.503	1.495 (0.275)	135	374039	47.4907	47.491	80.00- 120.00	100.00
1.503	1.503 (0.275)	137	117541			2.17- 62.17	31.42
17 Chloromethane					CAS #: 74-87-3		
1.581	1.574 (0.289)	50	137717	44.7992	44.799	80.00- 120.00	100.00
1.581	1.581 (0.289)	52	47798			3.81- 63.81	34.71
23 Butane					CAS #: 106-97-8		
1.667	1.660 (0.305)	58	39507	41.9085	41.908	80.00- 120.00	100.00
1.667	1.660 (0.305)	43	311714			852.26- 912.26	789.01
25 Vinyl Chloride					CAS #: 75-01-4		
1.703	1.703 (0.312)	62	177373	46.3711	46.371	80.00- 120.00	100.00
1.703	1.703 (0.312)	64	54715			2.11- 62.11	30.85
26 1,3-Butadiene					CAS #: 106-99-0		
1.732	1.725 (0.317)	54	150222	42.7966	42.796	80.00- 120.00	100.00
1.732	1.725 (0.317)	39	163771			91.36- 151.36	109.02
29 Bromomethane					CAS #: 74-83-9		
2.090	2.090 (0.383)	94	149202	45.8481	45.848	80.00- 120.00	100.00
2.090	2.083 (0.383)	96	146109			65.53- 125.53	97.93
30 Chloroethane					CAS #: 75-00-3		
2.212	2.205 (0.405)	64	91672	47.0096	47.010	80.00- 120.00	100.00
2.212	2.205 (0.405)	66	30091			1.56- 61.56	32.82

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.212	2.205 (0.405)	49	30595			2.82- 62.82	33.37
31 Isopentane					CAS #: 78-78-4		
2.233	2.233 (0.409)	43	248772	47.4949	47.495	80.00- 120.00	100.00
2.233	2.233 (0.409)	57	159390			33.11- 93.11	64.07
35 Freon 11					CAS #: 75-69-4		
2.463	2.462 (0.451)	101	503227	47.6966	47.697	80.00- 120.00	100.00
2.463	2.462 (0.451)	103	322617			36.26- 96.26	64.11
42 Ethanol					CAS #: 64-17-5		
2.799	2.792 (0.512)	45	92618	50.2685	50.268	80.00- 120.00	100.00
2.799	2.792 (0.512)	43	17179			0.00- 51.11	18.55
2.799	2.792 (0.512)	46	35556			5.41- 65.41	38.39
49 Freon 113					CAS #: 76-13-1		
3.136	3.136 (0.574)	151	349291	44.0340	44.034	80.00- 120.00	100.00
3.136	3.136 (0.574)	153	229292			33.62- 93.62	65.64
3.136	3.136 (0.574)	101	413197			86.92- 146.92	118.30
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.165	3.164 (0.579)	98	117860	42.9945	42.994	80.00- 120.00	100.00
3.165	3.164 (0.579)	96	184522			130.11- 190.11	156.56
3.165	3.164 (0.579)	61	316014			214.16- 274.16	268.13
52 Acetone					CAS #: 67-64-1		
3.322	3.329 (0.608)	58	95816	46.5361	46.536	80.00- 120.00	100.00
3.322	3.329 (0.608)	43	326879			339.93- 399.93	341.15
56 Carbon Disulfide					CAS #: 75-15-0		
3.401	3.401 (0.622)	76	442186	41.8752	41.875	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.501	3.501 (0.641)	45	426833	50.0173	50.017	80.00- 120.00	100.00
3.501	3.501 (0.641)	43	76939			0.00- 50.86	18.03
3.501	3.501 (0.641)	59	15127			0.00- 33.92	3.54
58 3-Chloropropene					CAS #: 107-05-1		
3.666	3.666 (0.671)	76	79042	43.0943	43.094	80.00- 120.00	100.00
3.666	3.666 (0.671)	41	291785			242.51- 302.51	369.15
66 Methylene Chloride					CAS #: 75-09-2		
3.852	3.852 (0.705)	49	273549	49.6188	49.619	80.00- 120.00	100.00
3.852	3.859 (0.705)	84	159896			44.88- 104.88	58.45
3.852	3.852 (0.705)	51	81654			0.26- 60.26	29.85

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.081	4.088 (0.747)	73	515987	46.1193	46.119	80.00- 120.00	100.00
4.081	4.088 (0.747)	57	139195			0.00- 52.10	26.98
4.081	4.088 (0.747)	41	141493			0.00- 55.29	27.42
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.110	4.110 (0.752)	98	110382	38.7989	38.799	80.00- 120.00	100.00
4.110	4.110 (0.752)	61	258114			179.30- 239.30	233.84
4.110	4.110 (0.752)	96	171896			125.13- 185.13	155.73
78 Hexane					CAS #: 110-54-3		
4.332	4.332 (0.793)	57	355275	46.0030	46.003	80.00- 120.00	100.00
4.332	4.325 (0.793)	43	239438			41.67- 101.67	67.40
4.332	4.332 (0.793)	86	49903			0.00- 47.08	14.05
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.626	4.626 (0.847)	63	382667	47.8153	47.815	80.00- 120.00	100.00
4.626	4.626 (0.847)	65	116440			2.15- 62.15	30.43
86 Vinyl Acetate					CAS #: 108-05-4		
4.669	4.669 (0.854)	86	52482	48.4742	48.474	80.00- 120.00	100.00
4.669	4.669 (0.854)	43	727922			1146.27-1206.27	1386.99
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.220	5.227 (0.955)	98	159448	50.8650	50.865	80.00- 120.00	100.00
5.220	5.227 (0.955)	96	257774			132.92- 192.92	161.67
5.220	5.227 (0.955)	61	352805			162.94- 222.94	221.27
92 2-Butanone					CAS #: 78-93-3		
5.256	5.256 (0.962)	72	99801	47.8177	47.818	80.00- 120.00	100.00
5.256	5.256 (0.962)	43	540872			435.31- 495.31	541.95
5.256	5.256 (0.962)	57	38321			6.33- 66.33	38.40
99 Tetrahydrofuran					CAS #: 109-99-9		
5.450	5.457 (0.997)	42	298000	47.3129	47.313	80.00- 120.00	100.00
5.450	5.457 (0.997)	71	89315			4.00- 64.00	29.97
5.450	5.457 (0.997)	72	90093			4.98- 64.98	30.23
100 Chloroform					CAS #: 67-66-3		
5.528	5.528 (1.012)	83	435824	46.2456	46.246	80.00- 120.00	100.00
5.528	5.528 (1.012)	85	288182			32.88- 92.88	66.12
102 Cyclohexane					CAS #: 110-82-7		
5.629	5.636 (1.030)	84	278273	45.8815	45.881	80.00- 120.00	100.00
5.629	5.629 (1.030)	56	411558			85.74- 145.74	147.90
5.629	5.629 (1.030)	41	239182			40.70- 100.70	85.95

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.657	5.657 (1.035)	97	477918	42.7918	42.792	80.00- 120.00	100.00
5.650	5.657 (1.034)	99	308973			34.96- 94.96	64.65
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.772	5.772 (1.056)	119	517406	45.7226	45.723	80.00- 120.00	100.00
5.772	5.772 (1.056)	117	547107			73.46- 133.46	105.74
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.972	5.972 (1.093)	57	1237345	48.1484	48.148	80.00- 120.00	100.00
5.972	5.972 (1.093)	56	395078			0.81- 60.81	31.93
5.972	5.972 (1.093)	41	352791			0.00- 59.37	28.51
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	632591	45.4307	45.431	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	149599			0.00- 54.32	23.65
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	318422	46.7043	46.704	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	102444			3.42- 63.42	32.17
121 Heptane					CAS #: 142-82-5		
6.144	6.144 (0.963)	71	230549	45.5750	45.575	80.00- 120.00	100.00
6.144	6.144 (0.963)	43	522872			159.38- 219.38	226.79
6.144	6.144 (0.963)	57	268959			66.74- 126.74	116.66
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	333961	43.7389	43.739	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	361787			81.36- 141.36	108.33
6.574	6.574 (1.030)	97	208622			35.96- 95.96	62.47
127 Methylcyclohexane					CAS #: 108-87-2		
6.674	6.674 (1.222)	83	415194	42.1318	42.132	80.00- 120.00	100.00
6.674	6.674 (1.222)	98	199344			17.22- 77.22	48.01
6.674	6.674 (1.222)	55	407529			47.73- 107.73	98.15
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.818	6.818 (1.068)	63	280753	44.0777	44.078	80.00- 120.00	100.00
6.818	6.818 (1.068)	62	201496			37.95- 97.95	71.77
6.818	6.818 (1.068)	41	172724			31.53- 91.53	61.52
136 1,4-Dioxane					CAS #: 123-91-1		
6.904	6.904 (1.082)	88	170779	45.9453	45.945	80.00- 120.00	100.00
6.904	6.904 (1.082)	58	143759			36.48- 96.48	84.18
6.904	6.904 (1.082)	57	43817			0.00- 51.40	25.66

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	530791	47.3487	47.349	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	353450			33.22- 93.22	66.59
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.434	7.434 (1.165)	75	431621	43.3044	43.304	80.00- 120.00	100.00
7.434	7.434 (1.165)	77	136724			1.47- 61.47	31.68
7.427	7.434 (1.164)	39	274073			29.40- 89.40	63.50
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.541	7.548 (1.182)	58	268856	43.1706	43.170	80.00- 120.00	100.00
7.541	7.541 (1.182)	43	762186			271.40- 331.40	283.49
7.541	7.548 (1.182)	85	109663			17.53- 77.53	40.79
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	924458	44.8522	44.852	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	541260			28.50- 88.50	58.55
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	411015	45.9809	45.981	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	127468			2.10- 62.10	31.01
7.914	7.914 (0.893)	39	248734			26.23- 86.23	60.52
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.071	8.071 (0.910)	97	334765	46.2333	46.233	80.00- 120.00	100.00
8.071	8.071 (0.910)	99	208373			32.92- 92.92	62.24
8.071	8.071 (0.910)	83	280496			54.28- 114.28	83.79
156 Tetrachloroethene					CAS #: 127-18-4		
8.114	8.114 (0.915)	166	502830	45.7971	45.797	80.00- 120.00	100.00
8.114	8.114 (0.915)	129	386959			48.80- 108.80	76.96
8.114	8.114 (0.915)	131	377702			45.42- 105.42	75.12
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	381834	48.7757	48.776	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	773174			187.23- 247.23	202.49
8.243	8.243 (0.930)	100	69567			0.00- 52.66	18.22
160 Dibromochloromethane					CAS #: 124-48-1		
8.394	8.386 (0.947)	129	684057	45.4305	45.430	80.00- 120.00	100.00
8.394	8.393 (0.947)	127	534925			47.09- 107.09	78.20
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	564565	46.0679	46.068	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	529838			66.32- 126.32	93.85

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
165 Chlorobenzene					CAS #: 108-90-7		
8.888	8.888 (1.002)	112	828568	45.3337	45.334	80.00- 120.00	100.00
8.888	8.888 (1.002)	114	265735			2.70- 62.70	32.07
8.888	8.888 (1.002)	77	440047			21.37- 81.37	53.11
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.008)	106	416521	45.1190	45.119	80.00- 120.00	100.00
8.938	8.938 (1.008)	91	1263223			272.85- 332.85	303.28
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.019)	106	523031	44.9107	44.911	80.00- 120.00	100.00
9.038	9.038 (1.019)	91	1035150			163.56- 223.56	197.91
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.058)	106	505133	45.9352	45.935	80.00- 120.00	100.00
9.382	9.382 (1.058)	91	1058202			174.33- 234.33	209.49
172 Styrene					CAS #: 100-42-5		
9.404	9.403 (1.061)	104	807841	47.0414	47.041	80.00- 120.00	100.00
9.404	9.403 (1.061)	78	397485			15.99- 75.99	49.20
174 Bromoform					CAS #: 75-25-2		
9.604	9.604 (1.083)	173	932695	61.3357	61.336	80.00- 120.00	100.00
9.604	9.604 (1.083)	171	483403			21.76- 81.76	51.83
175 Cumene					CAS #: 98-82-8		
9.676	9.676 (1.091)	105	1534589	44.6669	44.667	80.00- 120.00	100.00
9.676	9.676 (1.091)	120	426680			0.00- 57.69	27.80
9.676	9.668 (1.091)	51	167734			0.00- 39.15	10.93
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.991	9.991 (1.127)	83	751498	46.1718	46.172	80.00- 120.00	100.00
9.991	9.991 (1.127)	85	497066			34.63- 94.63	66.14
182 Propylbenzene					CAS #: 103-65-1		
10.020	10.019 (1.130)	91	1806338	46.4314	46.431	80.00- 120.00	100.00
10.027	10.019 (1.131)	120	443271			0.00- 55.38	24.54
10.020	10.019 (1.130)	105	65816			0.00- 33.88	3.64
188 4-Ethyltoluene					CAS #: 622-96-8		
10.120	10.120 (1.141)	120	473282	43.8456	43.846	80.00- 120.00	100.00
10.120	10.120 (1.141)	105	1586564			286.10- 346.10	335.23
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.170	10.170 (1.147)	120	666906	44.5465	44.546	80.00- 120.00	100.00
10.170	10.170 (1.147)	105	1300788			175.25- 235.25	195.05

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                                        CONCENTRATIONS
                                        ON-COL    FINAL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  196 1,2,4-Trimethylbenzene                          CAS #: 95-63-6
 10.499  10.499 (1.184)   120    601385 45.0883   45.088  80.00- 120.00   100.00
 10.499  10.499 (1.184)   105   1292852                  183.93- 243.93   214.98
-------------------------------------------------------------------------------
  208 1,3-Dichlorobenzene                             CAS #: 541-73-1
 10.786  10.786 (1.217)   146    941868 44.6074   44.607  80.00- 120.00   100.00
 10.786  10.786 (1.217)   148    602641                   34.97-  94.97    63.98
 10.786  10.786 (1.217)   111    374658                    9.00-  69.00    39.78
-------------------------------------------------------------------------------
  209 1,4-Dichlorobenzene                             CAS #: 106-46-7
 10.865  10.865 (1.225)   146    944551 44.2970   44.297  80.00- 120.00   100.00
 10.865  10.865 (1.225)   148    606767                   34.99-  94.99    64.24
 10.865  10.865 (1.225)   111    365849                    7.59-  67.59    38.73
-------------------------------------------------------------------------------
  212 alpha-Chlorotoluene                             CAS #: 100-44-7
 10.987  10.986 (1.239)    91   1233710 48.0074   48.007  80.00- 120.00   100.00
 10.987  10.986 (1.239)   126    295122                    0.00-  53.36    23.92
-------------------------------------------------------------------------------
  214 1,2-Dichlorobenzene                             CAS #: 95-50-1
 11.201  11.201 (1.263)   146    898420 44.6564   44.656  80.00- 120.00   100.00
 11.201  11.201 (1.263)   148    564923                   35.06-  95.06    62.88
 11.201  11.194 (1.263)   111    369565                   10.09-  70.09    41.13
-------------------------------------------------------------------------------
  226 1,2,4-Trichlorobenzene                          CAS #: 120-82-1
 12.627  12.627 (1.424)   180    788170 43.6935   43.694  80.00- 120.00   100.00
 12.627  12.627 (1.424)   182    747201                   65.09- 125.09    94.80
-------------------------------------------------------------------------------
  227 Hexachlorobutadiene                             CAS #: 87-68-3
 12.720  12.720 (1.435)   225    637325 42.3761   42.376  80.00- 120.00   100.00
 12.720  12.720 (1.435)   223    397762                   32.37-  92.37    62.41
-------------------------------------------------------------------------------
  228 Naphthalene                                     CAS #: 91-20-3
 12.906  12.906 (1.456)   128    175672 4.71719    4.717  80.00- 120.00   100.00
 12.906  12.906 (1.456)   127     22845                    0.00-  42.67    13.00
-------------------------------------------------------------------------------
```

Report Date: 18-Dec-2015 17:21

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a121812.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: EA
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 50ppbv (100ppbv)

Calibration Date: 18-DEC-2015
Calibration Time: 12:53
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	158121	94873	221369	153397	-2.99
123 1,4-Difluorobenze	659165	395499	922831	661775	0.40
163 Chlorobenzene-d5	629706	377824	881588	624188	-0.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.47	5.14	5.80	5.46	-0.13
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Report Date: 18-Dec-2015 17:21

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 18dec15
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: EA
Data Type: MS DATA
SampleType: LCS
SpikeList File: AT12Bromoform.spk
Quant Type: ISTD
Sublist File: AT12.sub
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 50ppbv (100ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	50.000	44.736	89.47	60-140
11 Freon 12	50.000	46.623	93.25	70-130
15 Freon 114	50.000	47.491	94.98	70-130
17 Chloromethane	50.000	44.799	89.60	70-130
23 Butane	50.000	41.908	83.82	60-140
25 Vinyl Chloride	50.000	46.371	92.74	70-130
26 1,3-Butadiene	50.000	42.796	85.59	70-130
29 Bromomethane	50.000	45.848	91.70	70-130
30 Chloroethane	50.000	47.010	94.02	70-130
31 Isopentane	50.000	47.495	94.99	60-140
35 Freon 11	50.000	47.697	95.39	70-130
42 Ethanol	50.000	50.268	100.54	70-130
49 Freon 113	50.000	44.034	88.07	70-130
50 1,1-Dichloroethene	50.000	42.994	85.99	70-130
52 Acetone	50.000	46.536	93.07	70-130
56 Carbon Disulfide	50.000	41.875	83.75	70-130
57 2-Propanol	50.000	50.017	100.03	70-130
58 3-Chloropropene	50.000	43.094	86.19	70-130
66 Methylene Chloride	50.000	49.619	99.24	70-130
72 Methyl tert-butyl	50.000	46.119	92.24	70-130
73 trans-1,2-Dichloro	42.500	38.799	91.29	70-130
78 Hexane	50.000	46.003	92.01	70-130
82 1,1-Dichloroethane	50.000	47.815	95.63	70-130
86 Vinyl Acetate	50.000	48.474	96.95	70-130
91 cis-1,2-Dichloroet	56.500	50.865	90.03	70-130
92 2-Butanone	50.000	47.818	95.64	70-130
99 Tetrahydrofuran	50.000	47.313	94.63	70-130
100 Chloroform	50.000	46.246	92.49	70-130
103 1,1,1-Trichloroeth	50.000	42.792	85.58	70-130
106 Carbon Tetrachlori	50.000	45.723	91.45	70-130
102 Cyclohexane	50.000	45.881	91.76	70-130
113 2,2,4-Trimethylpen	50.000	48.148	96.30	70-130
116 Benzene	50.000	45.431	90.86	70-130

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	50.000	46.704	93.41	70-130
121 Heptane	50.000	45.575	91.15	70-130
125 Trichloroethene	50.000	43.739	87.48	70-130
127 Methylcyclohexane	50.000	42.132	84.26	60-140
132 1,2-Dichloropropan	50.000	44.078	88.16	70-130
136 1,4-Dioxane	50.000	45.945	91.89	70-130
138 Bromodichlorometha	50.000	47.349	94.70	70-130
144 cis-1,3-Dichloropr	50.000	43.304	86.61	70-130
145 4-Methyl-2-pentano	50.000	43.170	86.34	70-130
147 Toluene	50.000	44.852	89.70	70-130
150 trans-1,3-Dichloro	50.000	45.981	91.96	70-130
155 1,1,2-Trichloroeth	50.000	46.233	92.47	70-130
156 Tetrachloroethene	50.000	45.797	91.59	70-130
158 2-Hexanone	50.000	48.776	97.55	70-130
160 Dibromochlorometha	50.000	45.430	90.86	70-130
161 1,2-Dibromoethane	50.000	46.068	92.14	70-130
165 Chlorobenzene	50.000	45.334	90.67	70-130
167 Ethyl Benzene	50.000	45.119	90.24	70-130
169 m,p-Xylene	50.000	44.911	89.82	70-130
171 o-Xylene	50.000	45.935	91.87	70-130
172 Styrene	50.000	47.041	94.08	70-130
174 Bromoform	65.000	61.336	94.36	70-130
175 Cumene	50.000	44.667	89.33	70-130
181 1,1,2,2-Tetrachlor	50.000	46.172	92.34	70-130
182 Propylbenzene	50.000	46.431	92.86	70-130
188 4-Ethyltoluene	50.000	43.846	87.69	70-130
190 1,3,5-Trimethylben	50.000	44.546	89.09	70-130
196 1,2,4-Trimethylben	50.000	45.088	90.18	70-130
208 1,3-Dichlorobenzen	50.000	44.607	89.21	70-130
209 1,4-Dichlorobenzen	50.000	44.297	88.59	70-130
212 alpha-Chlorotoluen	50.000	48.007	96.01	70-130
214 1,2-Dichlorobenzen	50.000	44.656	89.31	70-130
226 1,2,4-Trichloroben	50.000	43.694	87.39	70-130
227 Hexachlorobutadien	50.000	42.376	84.75	70-130
228 Naphthalene	5.000	4.717	94.34	60-140

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.897	99.59	70-130
$ 146 Toluene-d8	25.000	24.912	99.65	70-130
$ 177 4-Bromofluorobenze	25.000	24.892	99.57	70-130

Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

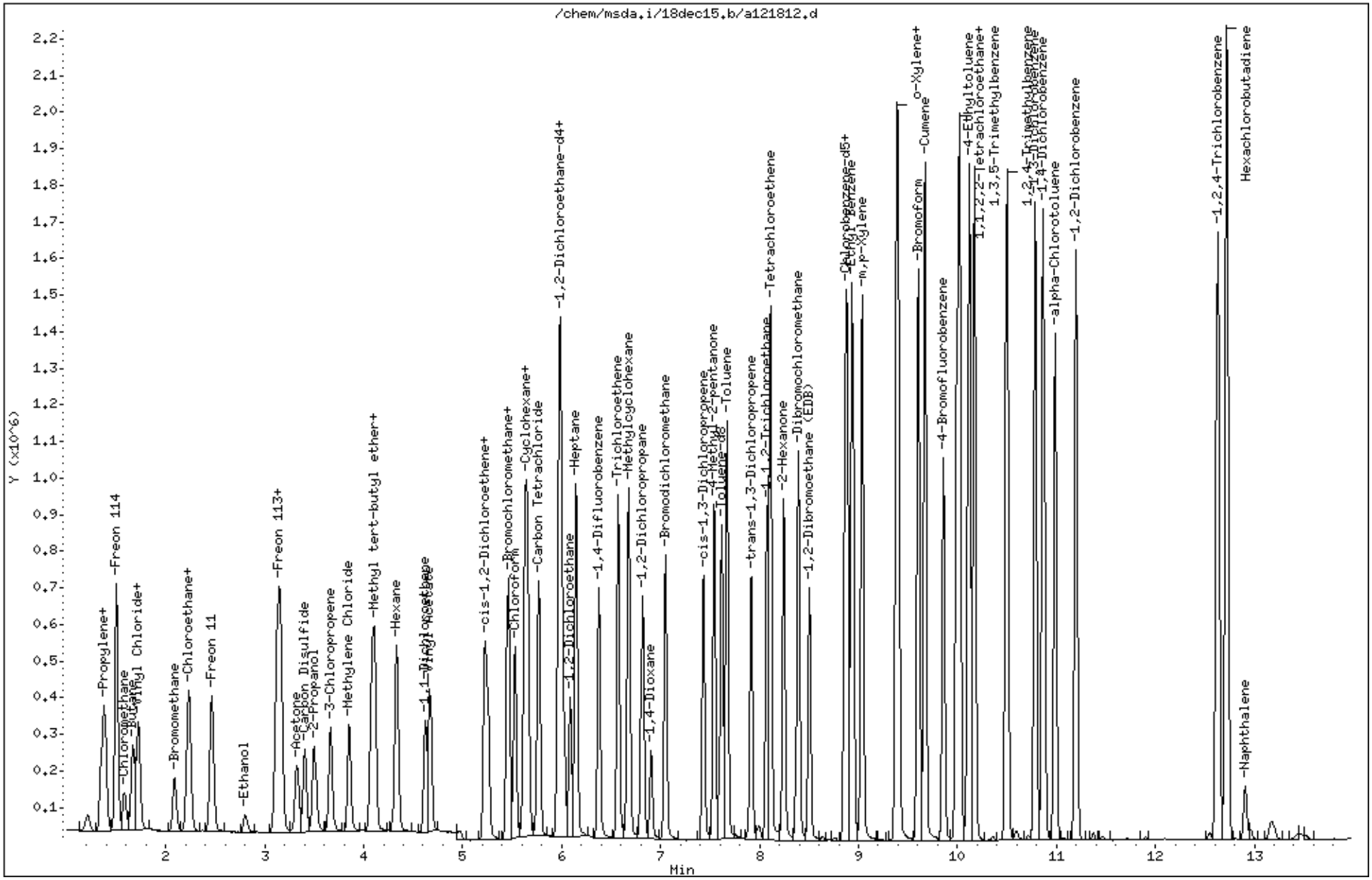
Sample Info: 100mL #2759-106A

Column phase: RTX-624

Instrument: msda.i

Operator: EA

Column diameter: 0.25



Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

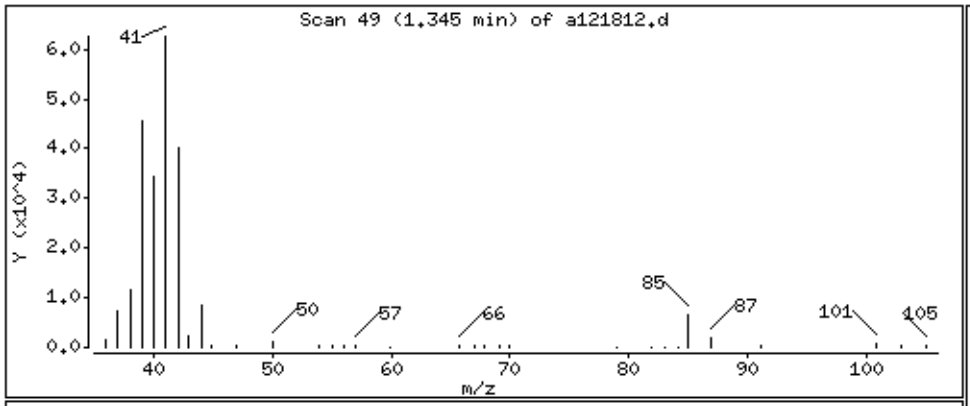
Operator: EA

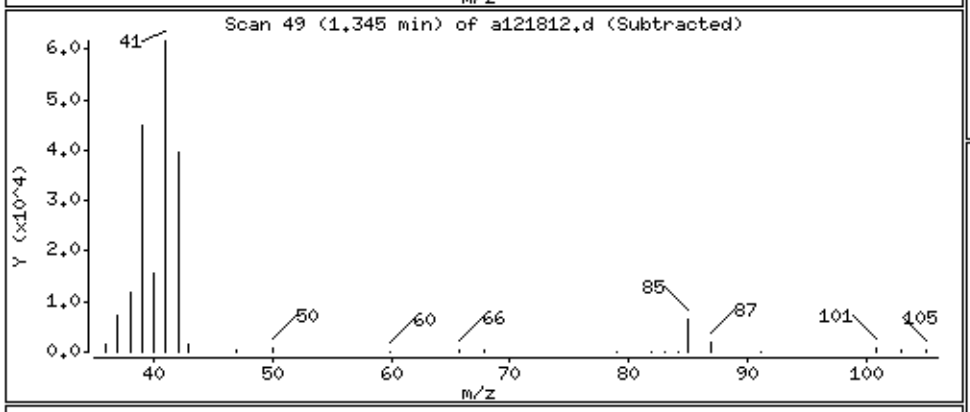
Column phase: RTX-624

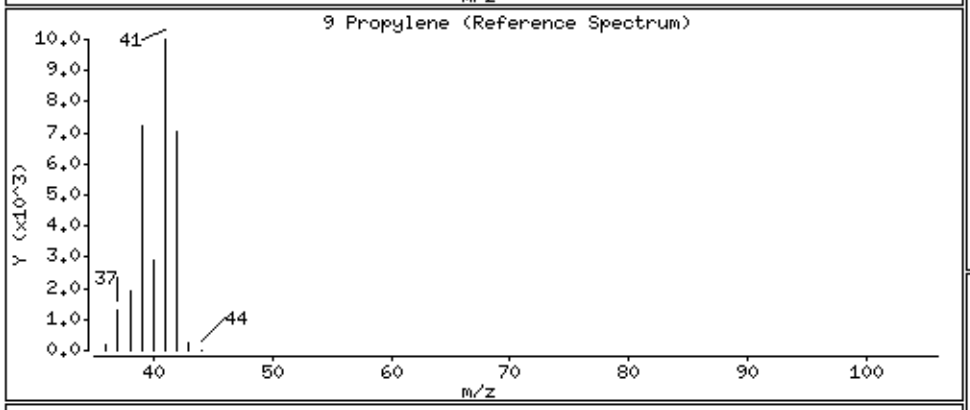
Column diameter: 0.25

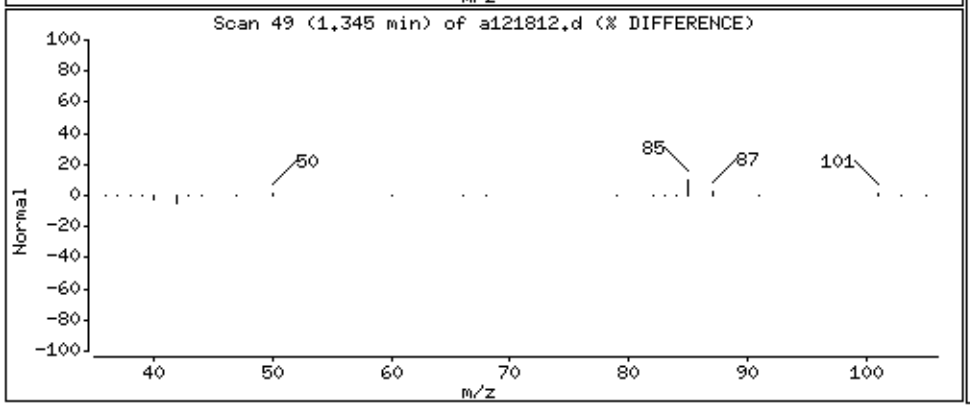
9 Propylene

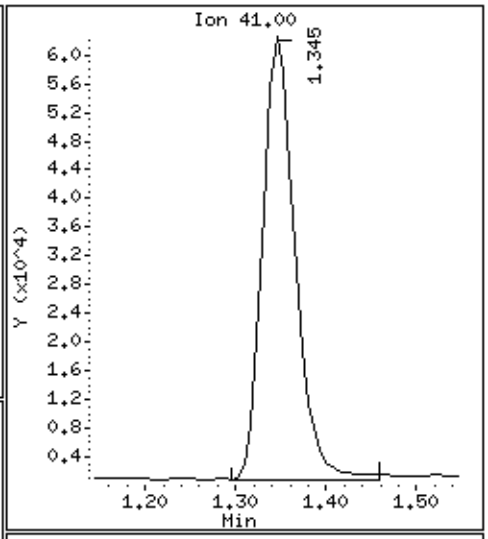
Concentration: 44.736 PPBV

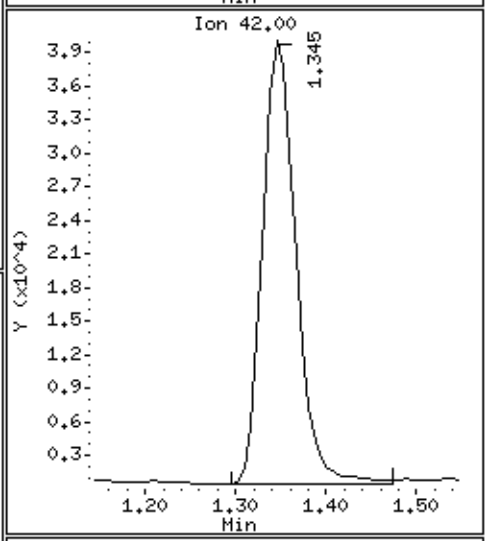


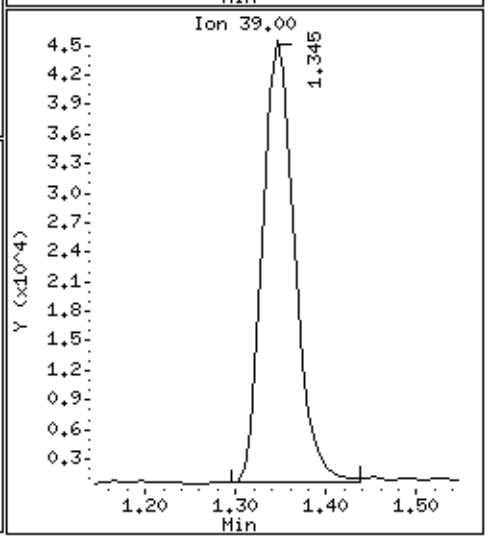












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

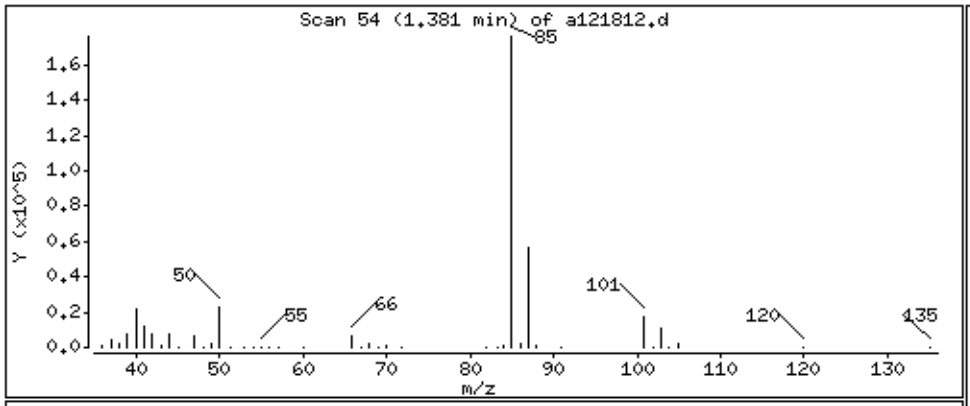
Operator: EA

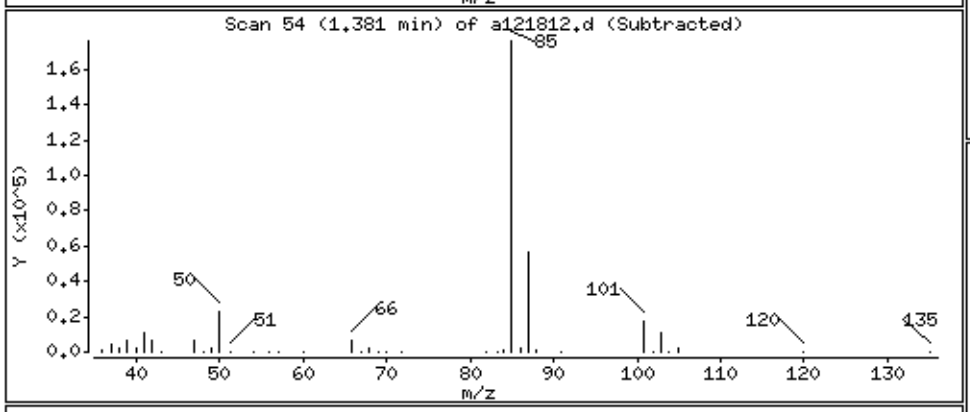
Column phase: RTX-624

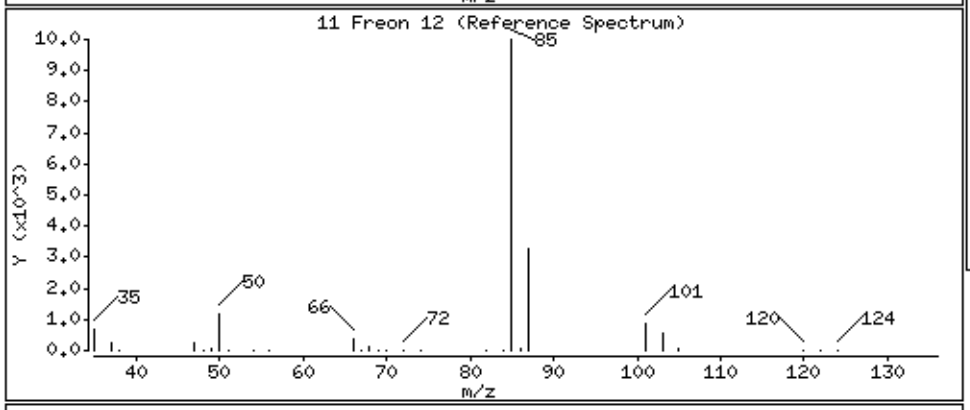
Column diameter: 0.25

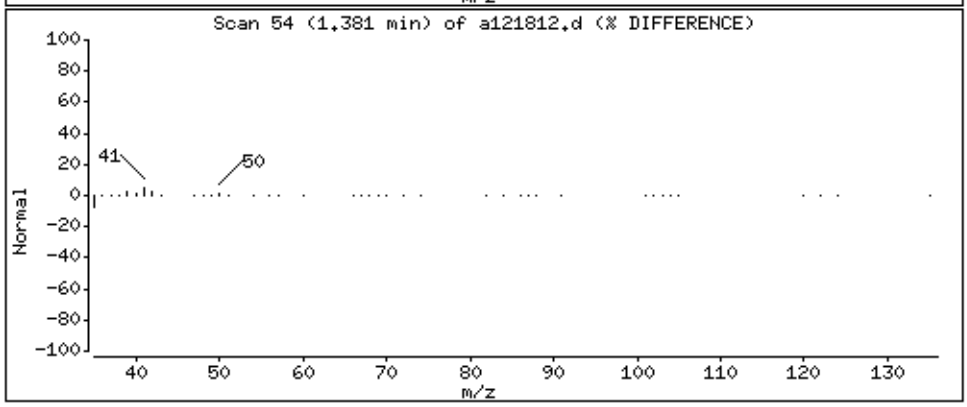
11 Freon 12

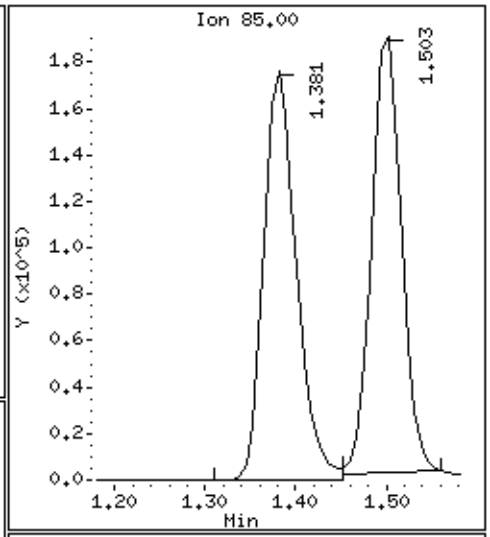
Concentration: 46.623 PPBV

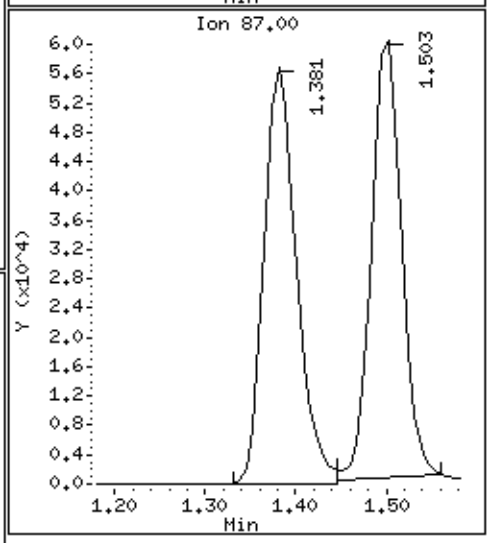












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

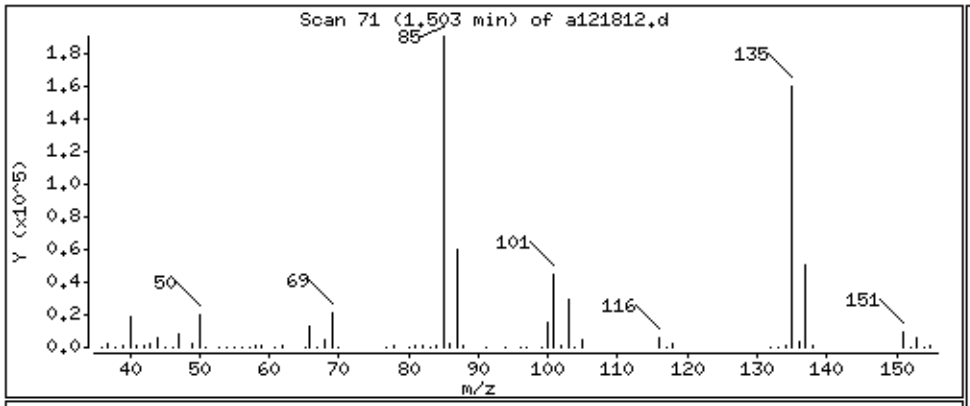
Operator: EA

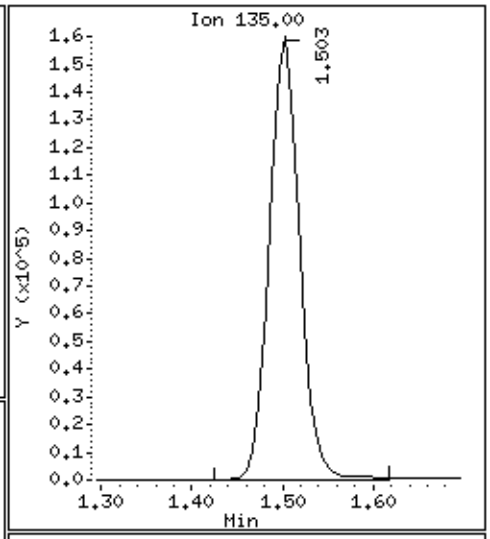
Column phase: RTX-624

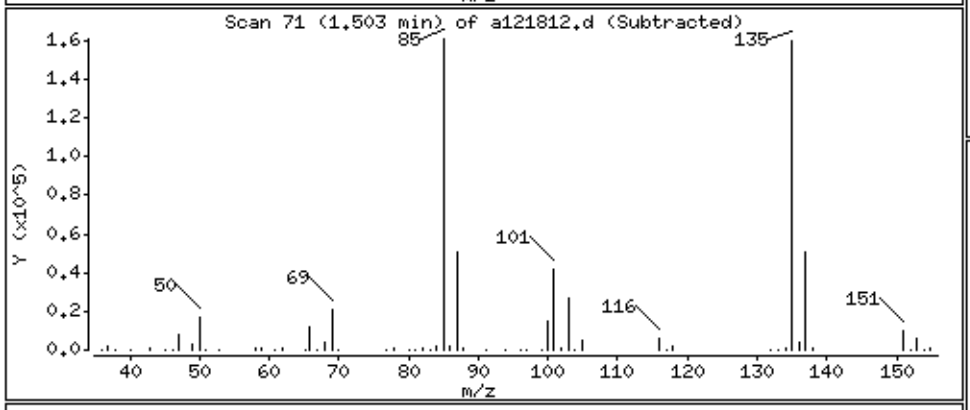
Column diameter: 0.25

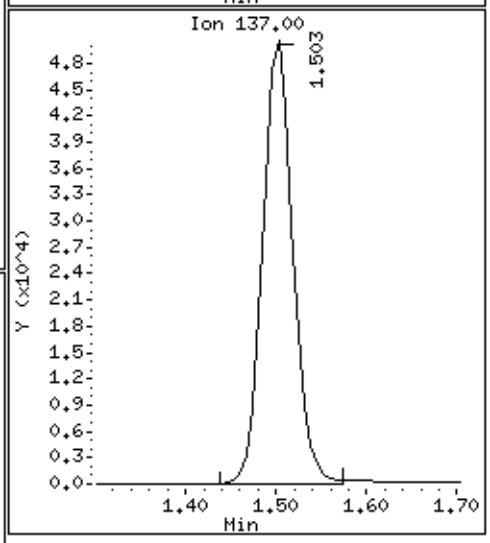
15 Freon 114

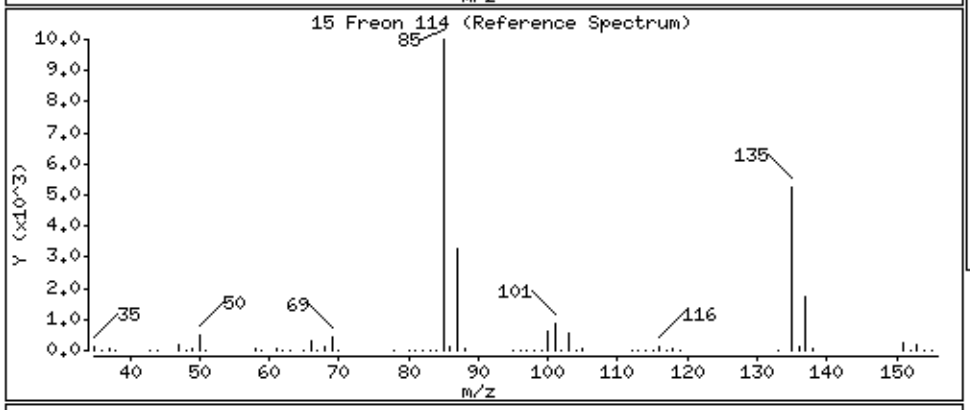
Concentration: 47.491 PPBV

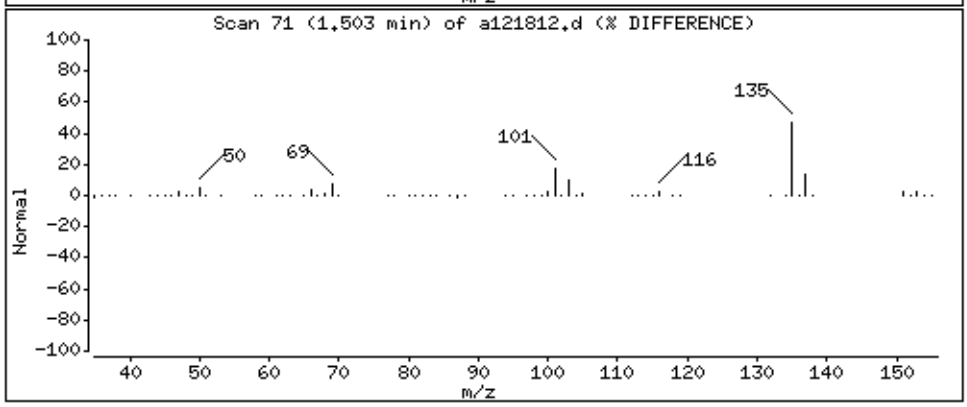












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

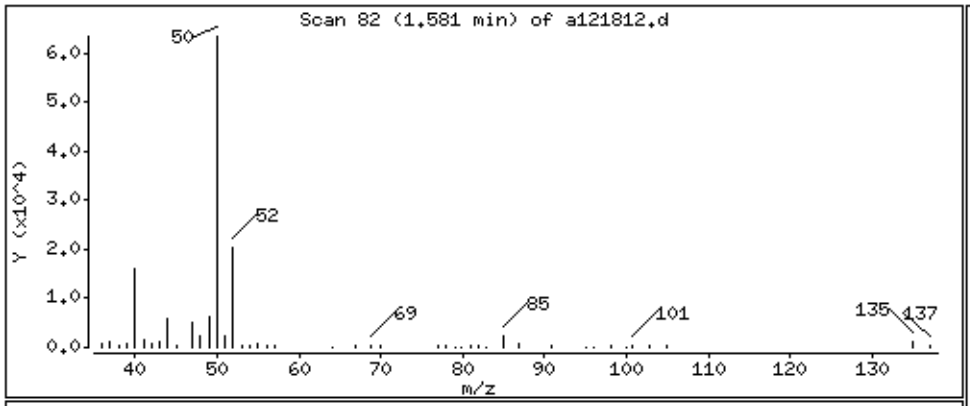
Operator: EA

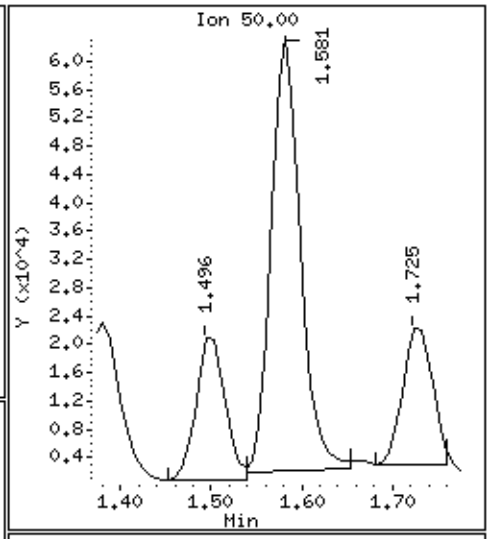
Column phase: RTX-624

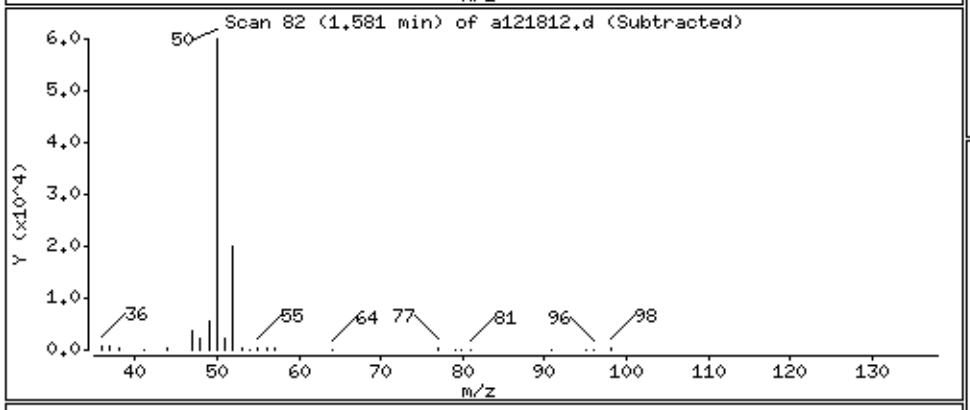
Column diameter: 0.25

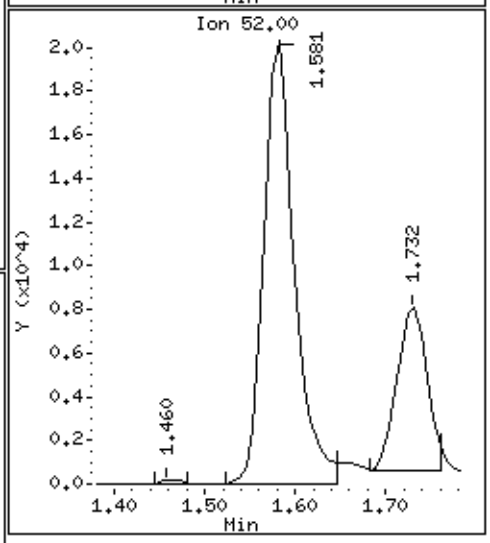
17 Chloromethane

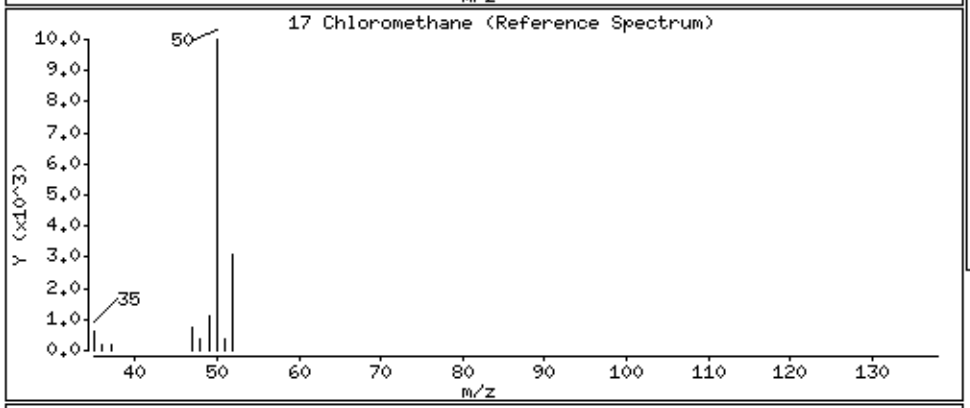
Concentration: 44.799 PPBV

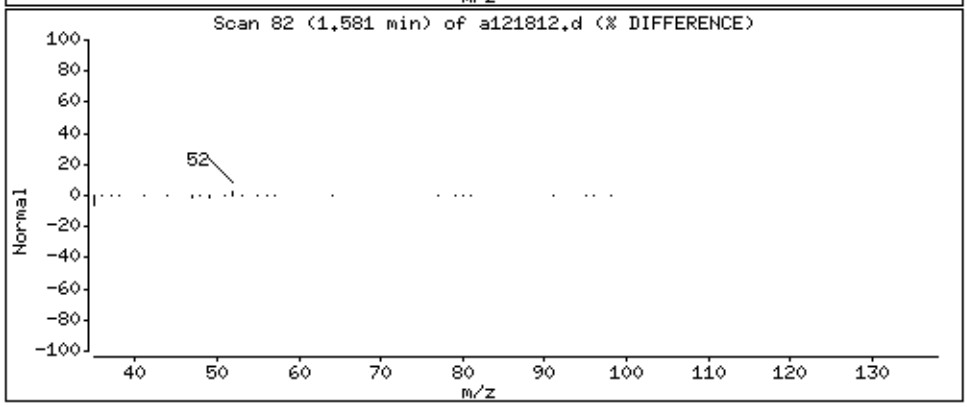












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

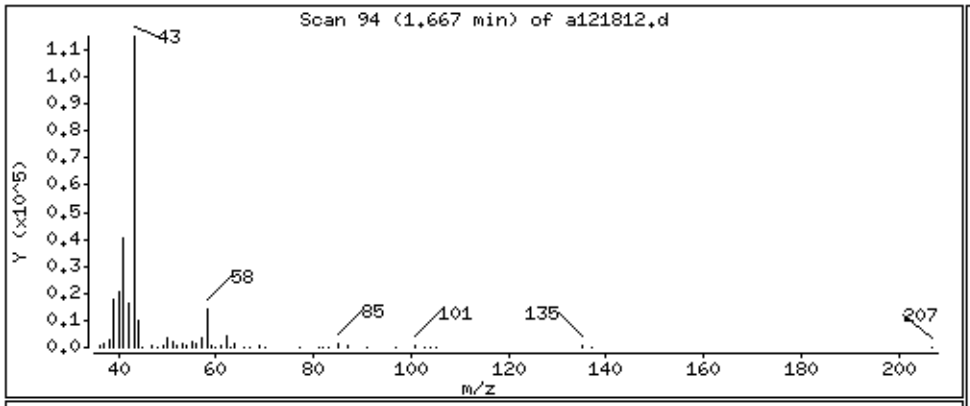
Operator: EA

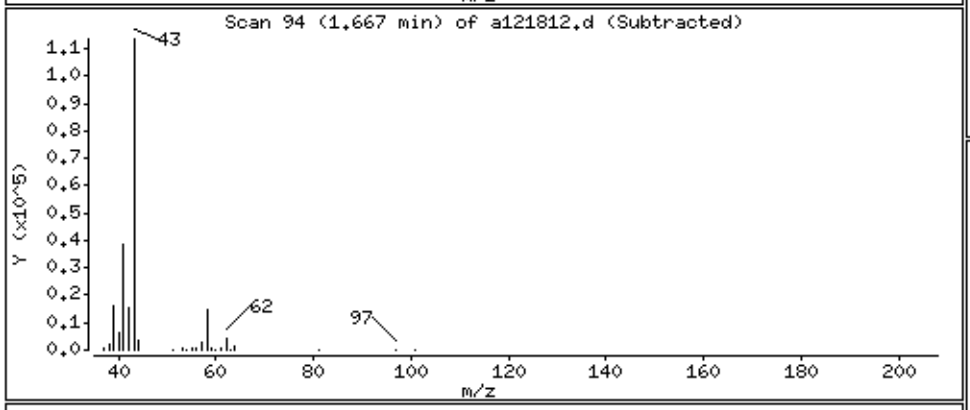
Column phase: RTX-624

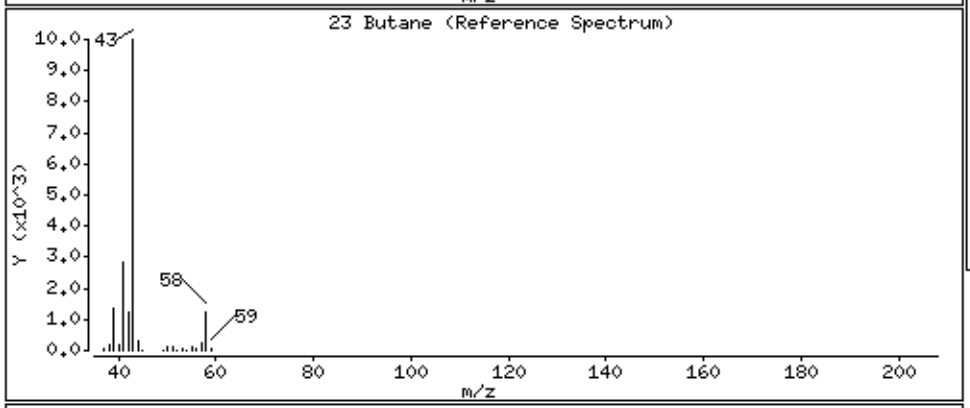
Column diameter: 0.25

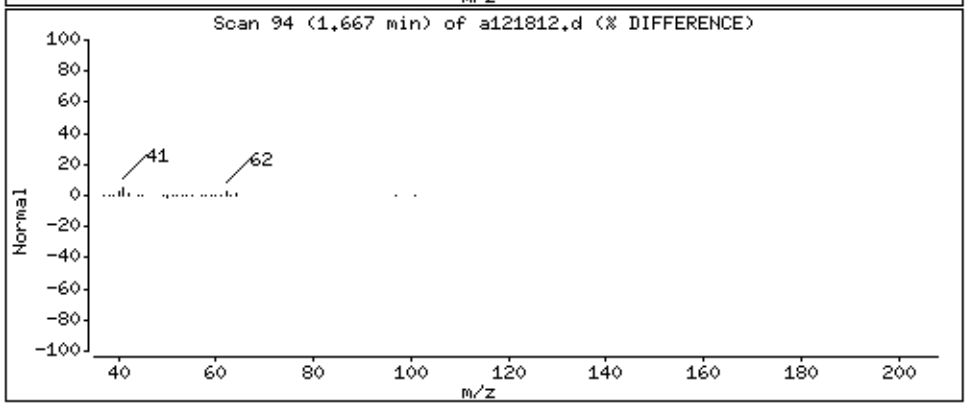
23 Butane

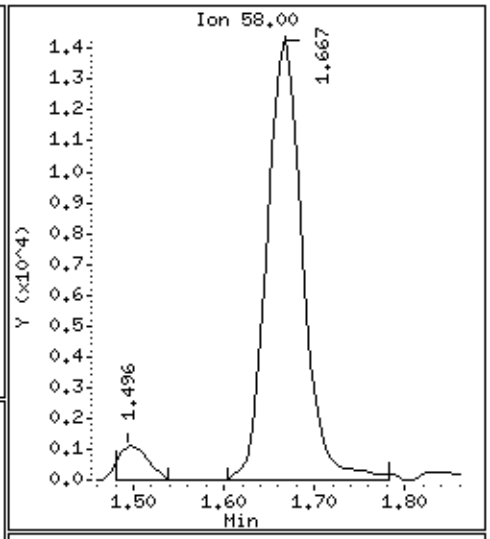
Concentration: 41.908 PPBV

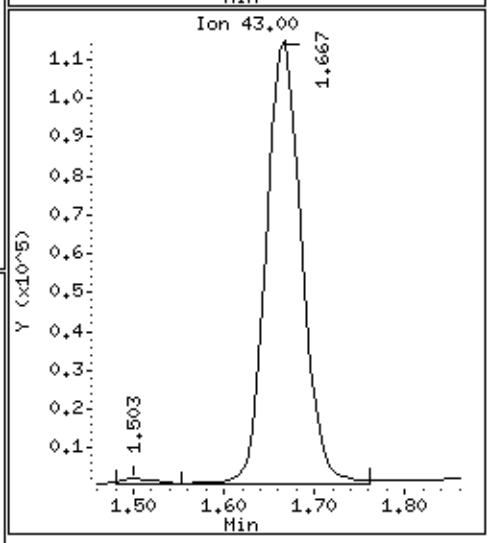












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

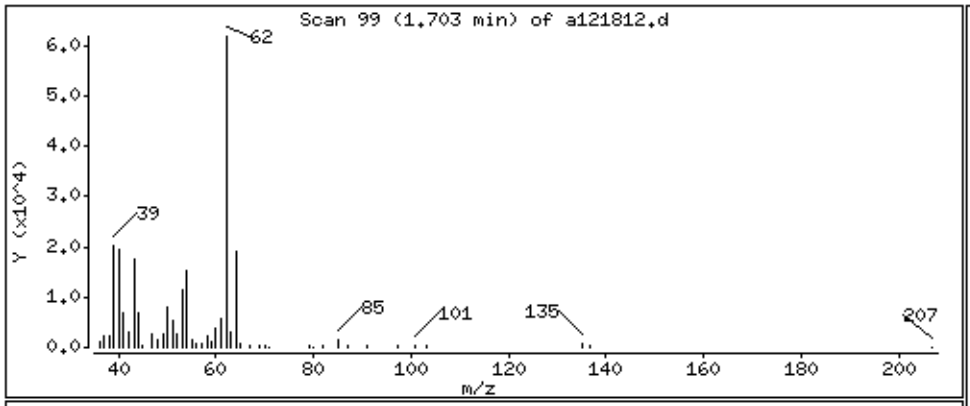
Operator: EA

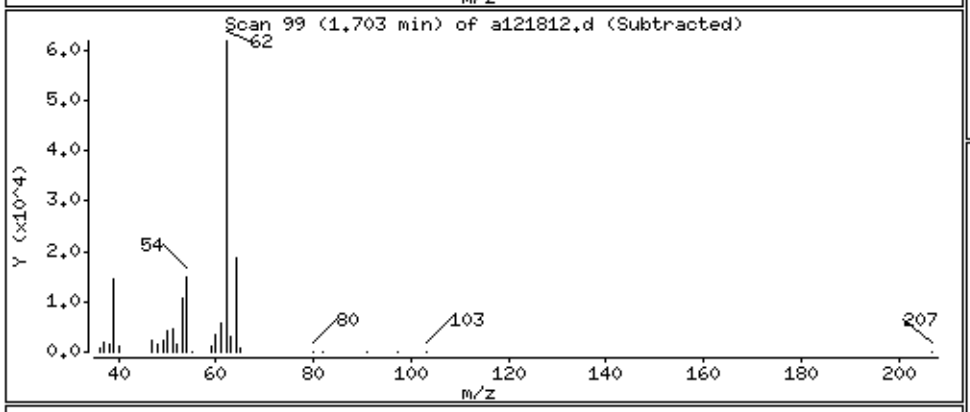
Column phase: RTX-624

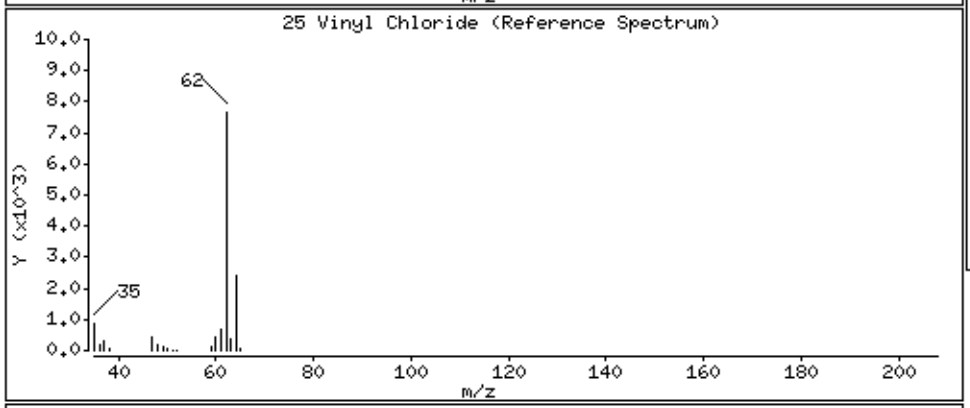
Column diameter: 0.25

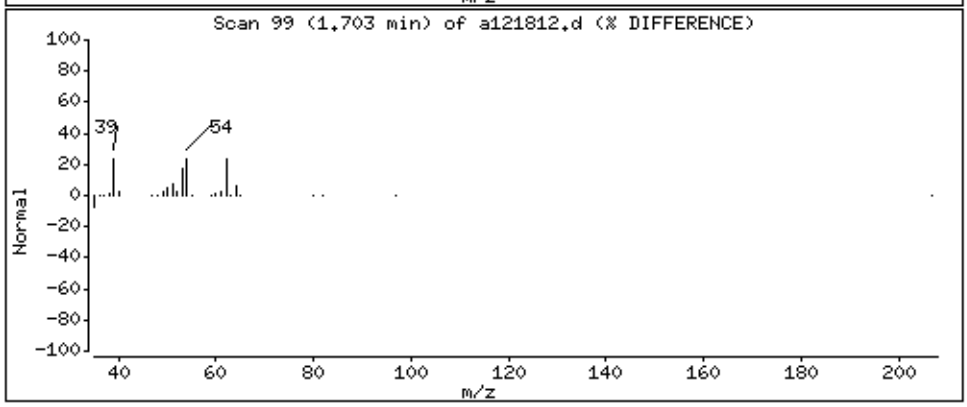
25 Vinyl Chloride

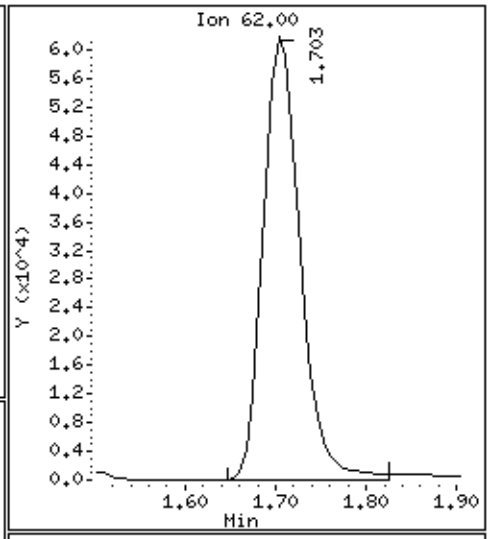
Concentration: 46.371 PPBV

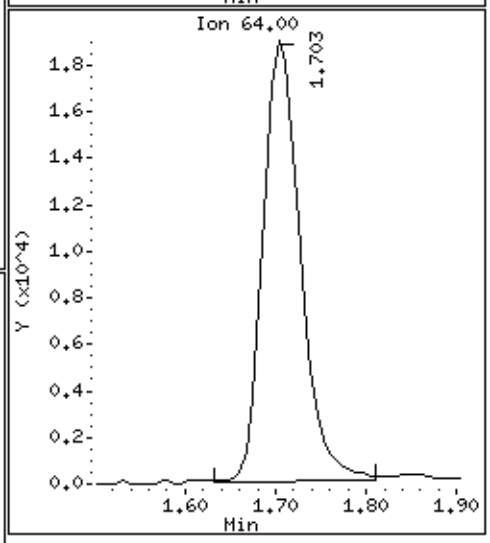












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

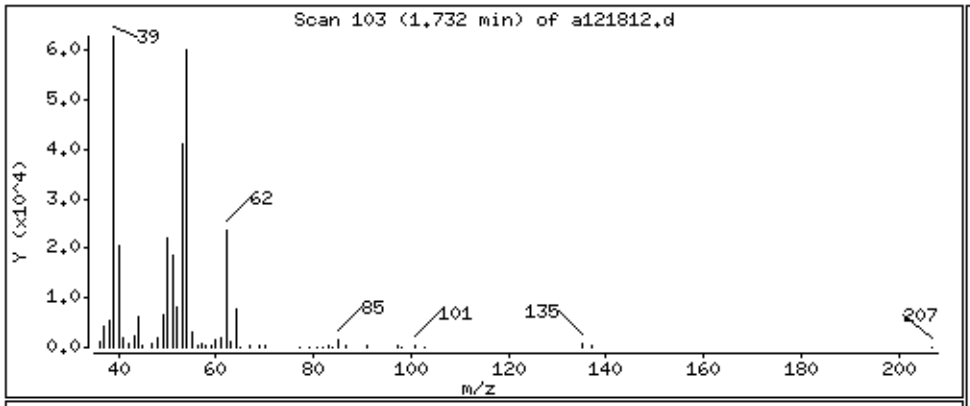
Operator: EA

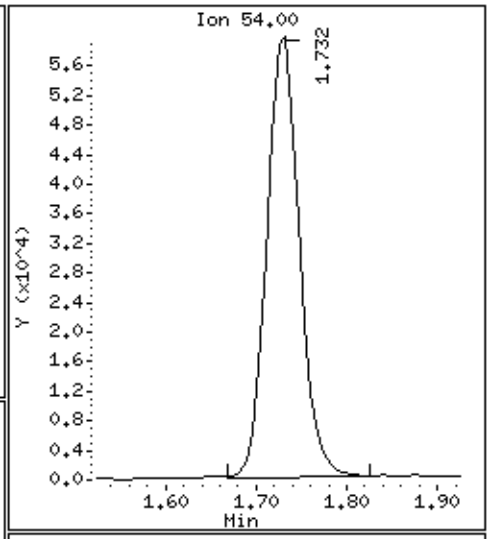
Column phase: RTX-624

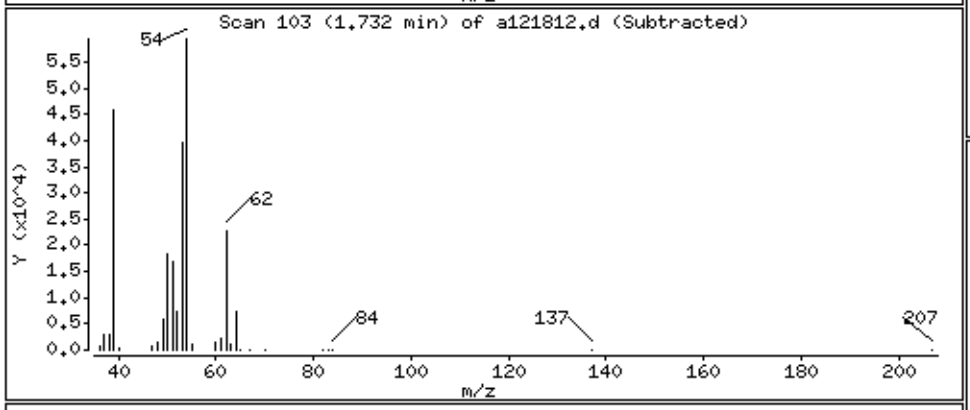
Column diameter: 0.25

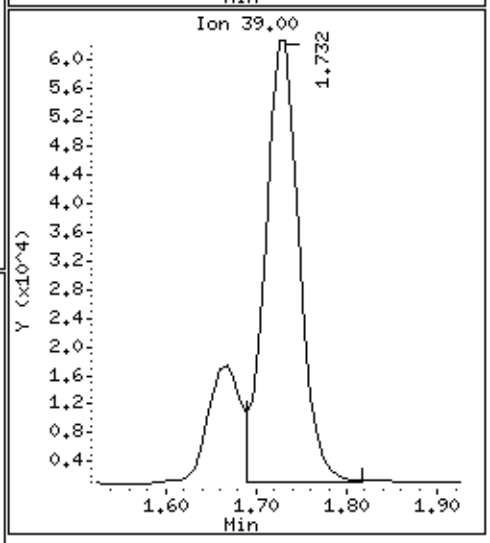
26 1,3-Butadiene

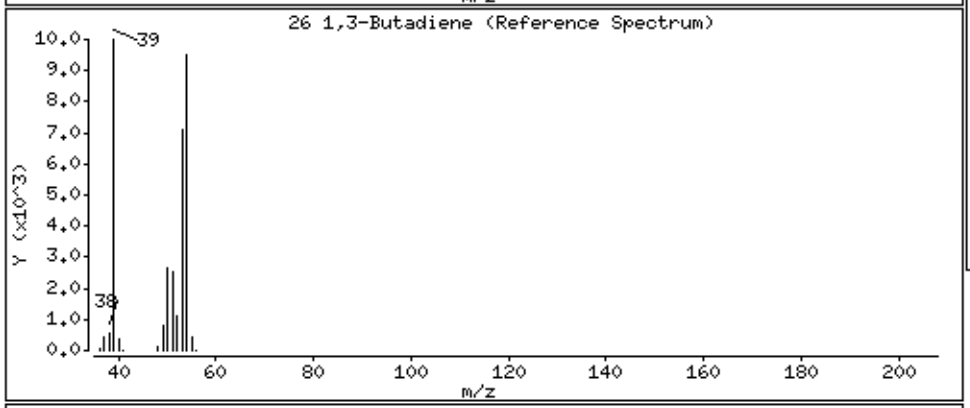
Concentration: 42.796 PPBV

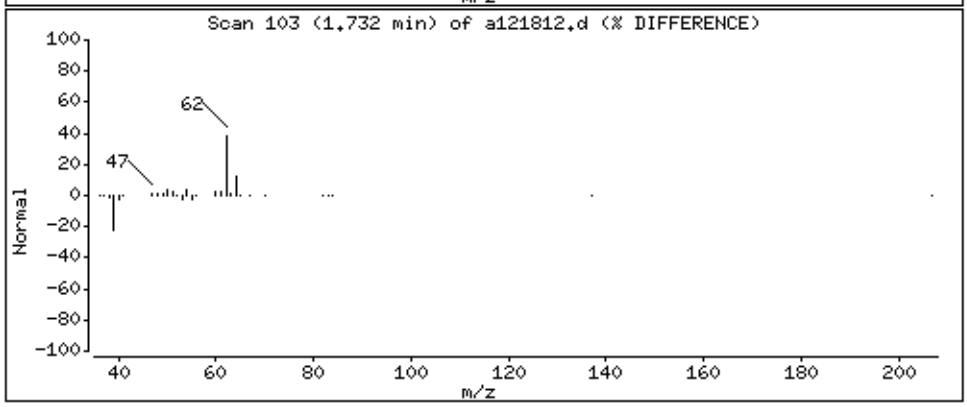












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

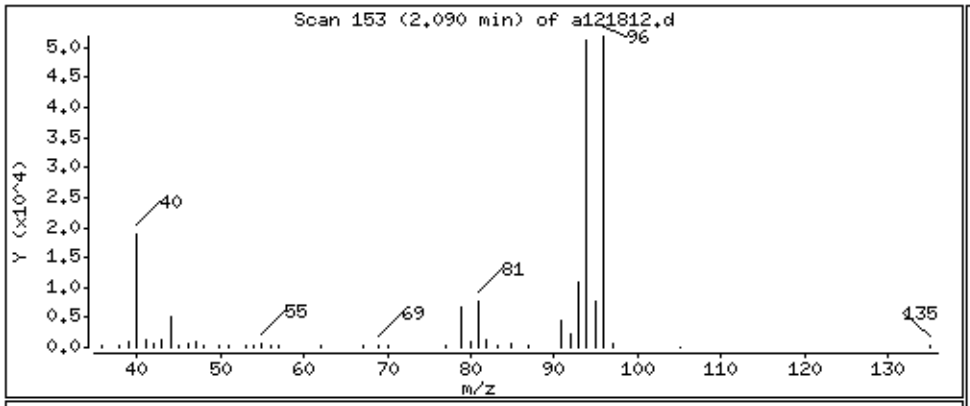
Operator: EA

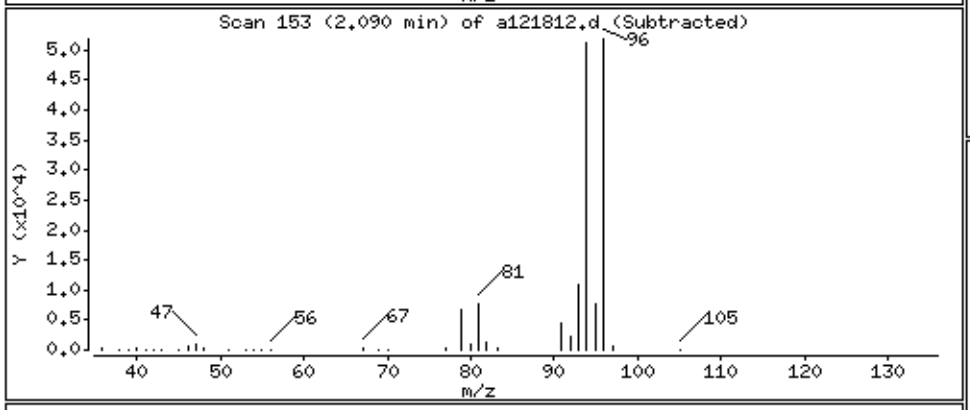
Column phase: RTX-624

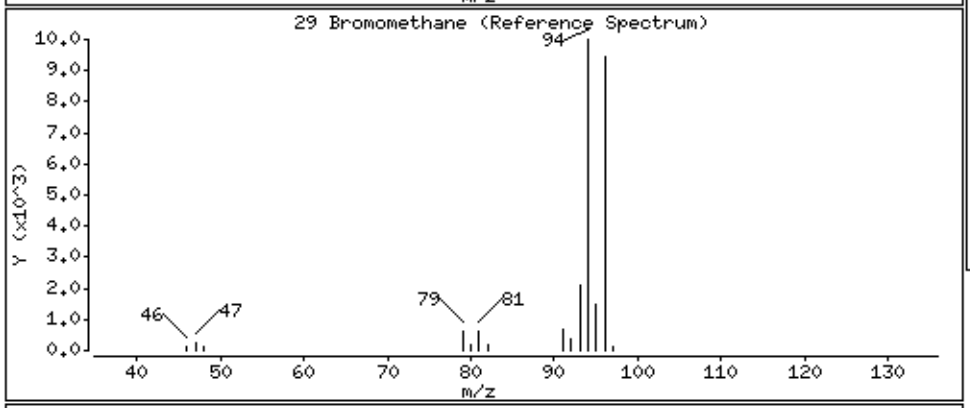
Column diameter: 0.25

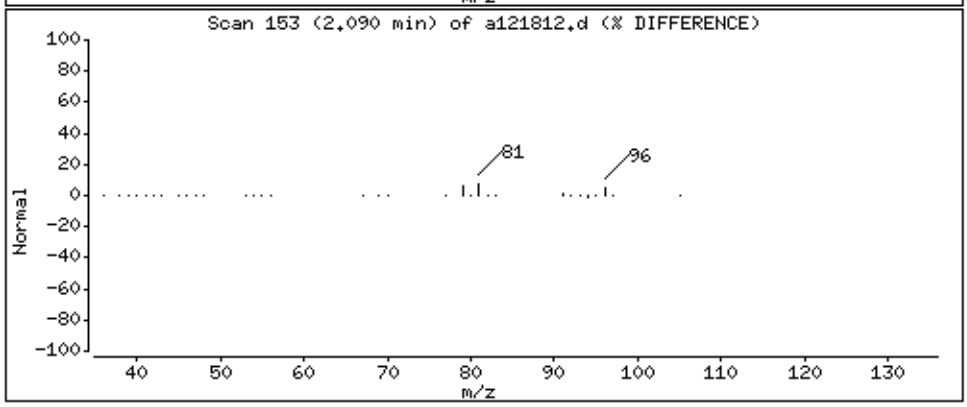
29 Bromomethane

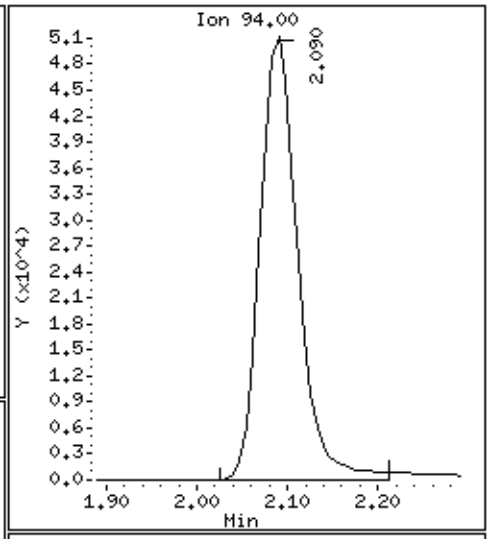
Concentration: 45.848 PPBV

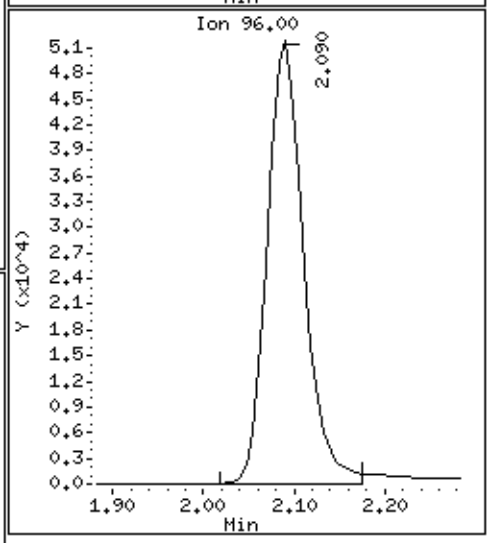












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

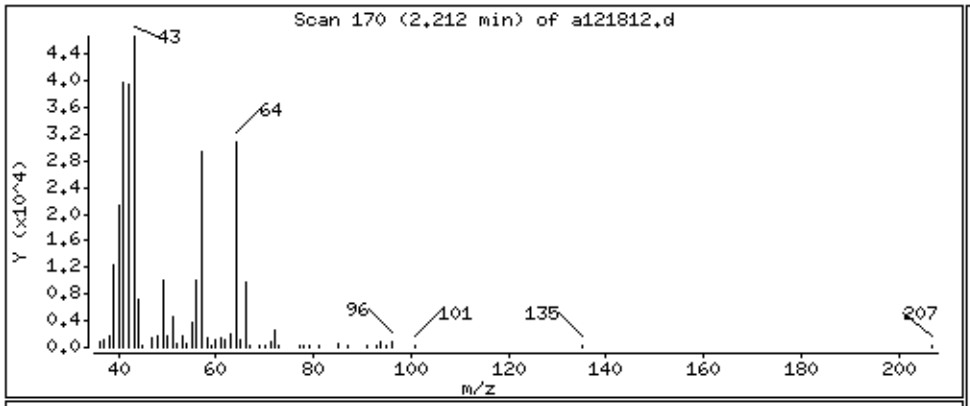
Operator: EA

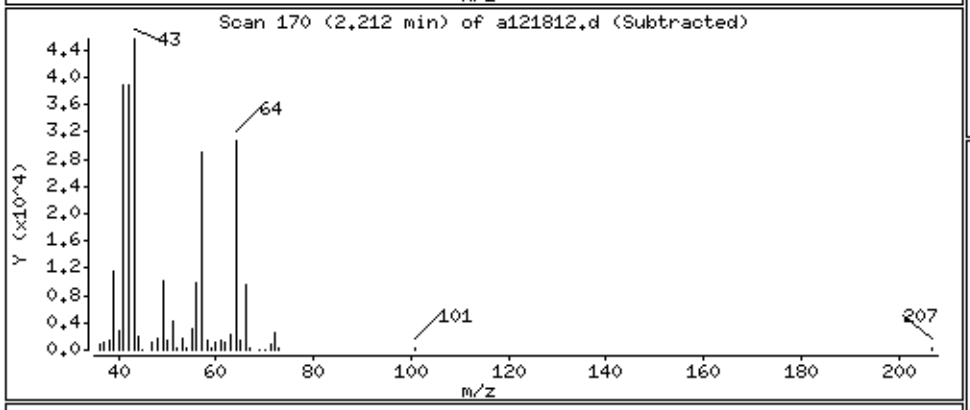
Column phase: RTX-624

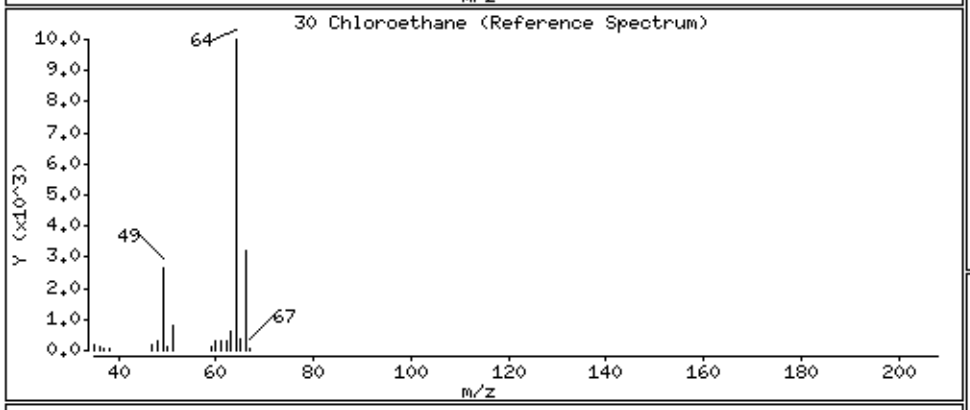
Column diameter: 0.25

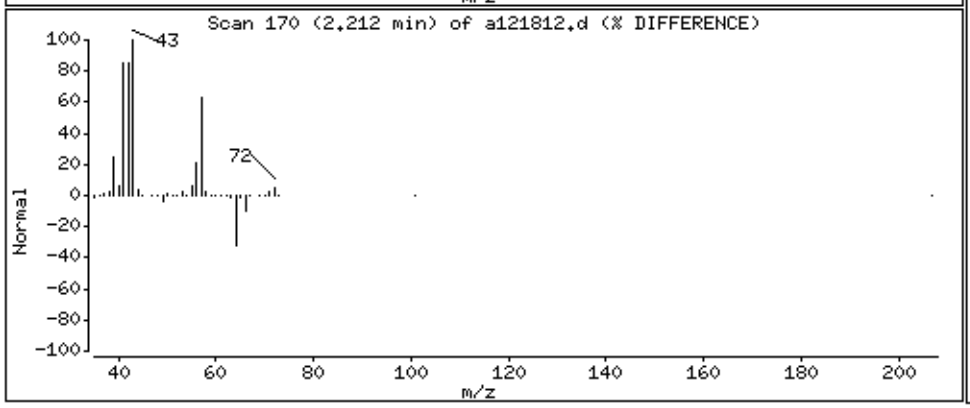
30 Chloroethane

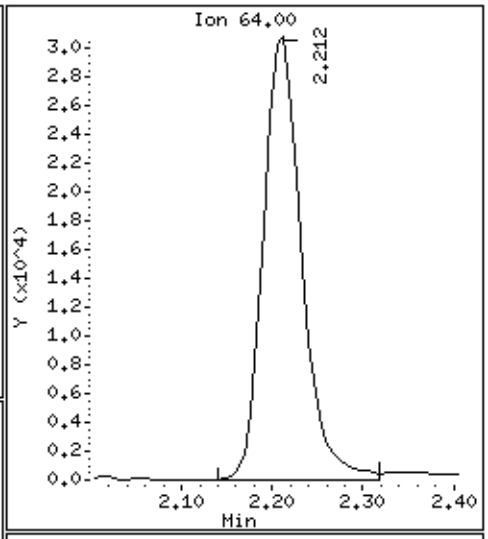
Concentration: 47.010 PPBV

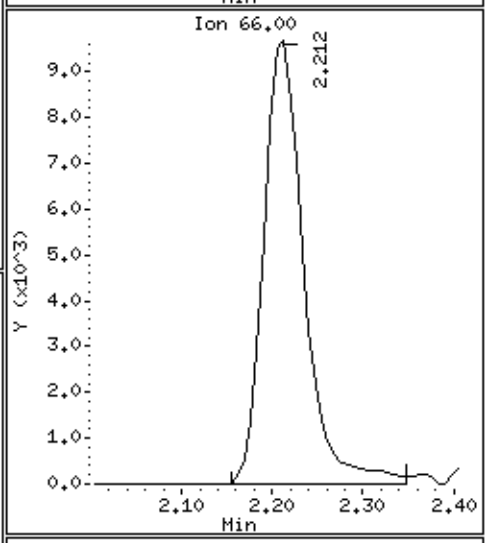


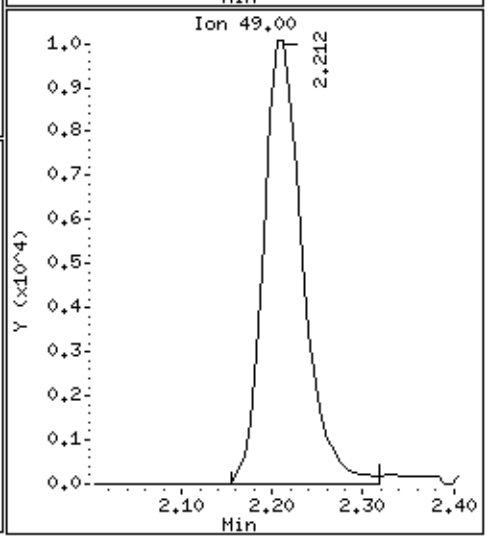












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

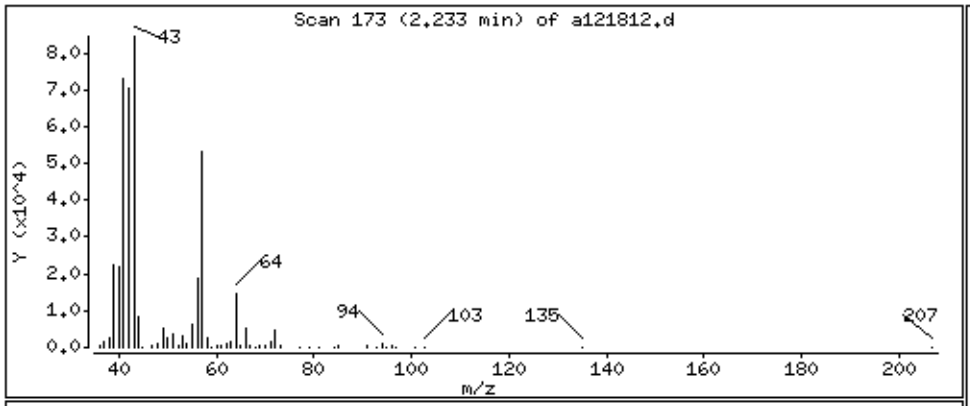
Operator: EA

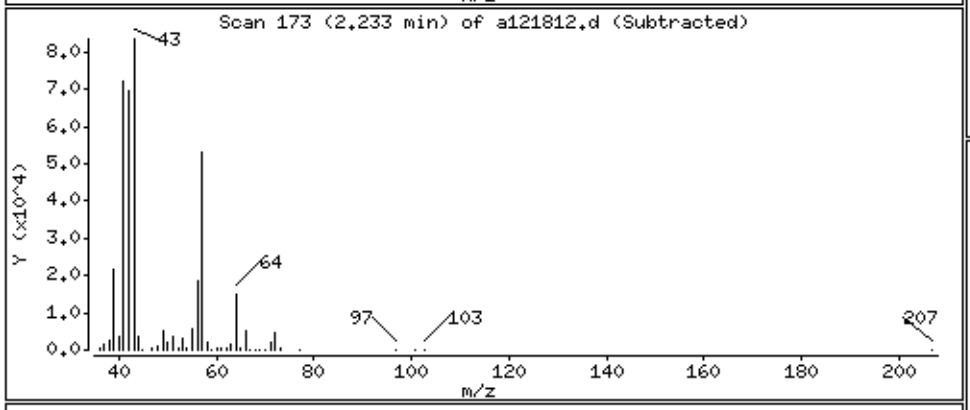
Column phase: RTX-624

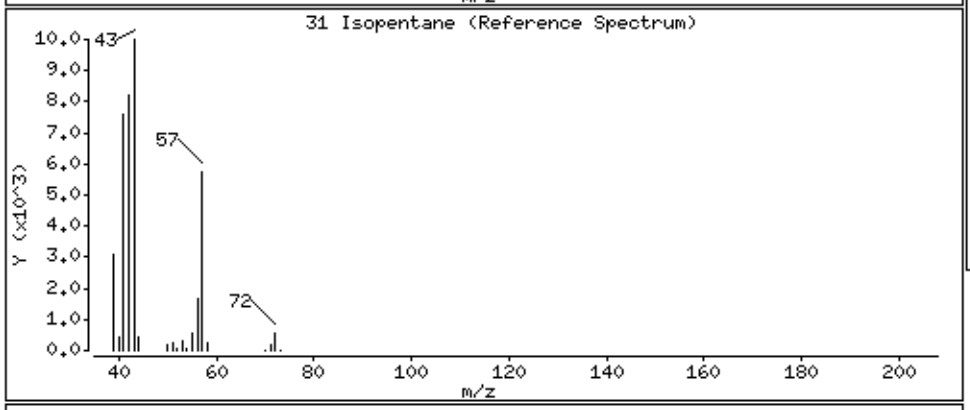
Column diameter: 0.25

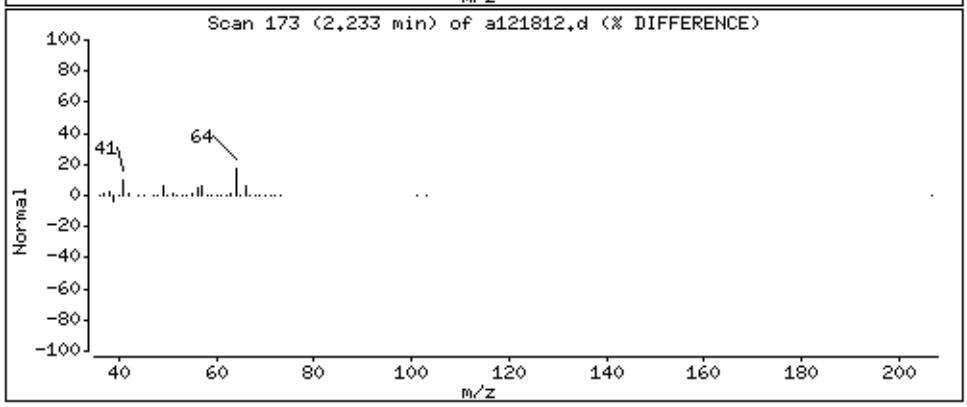
31 Isopentane

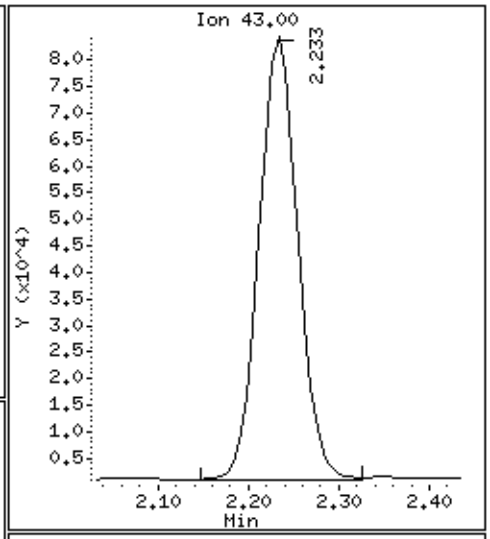
Concentration: 47.495 PPBV

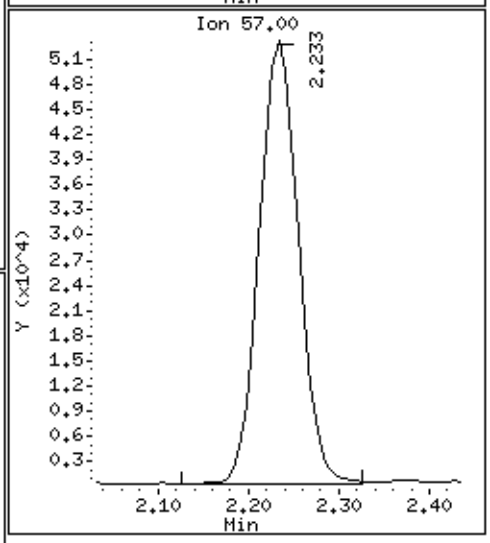












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

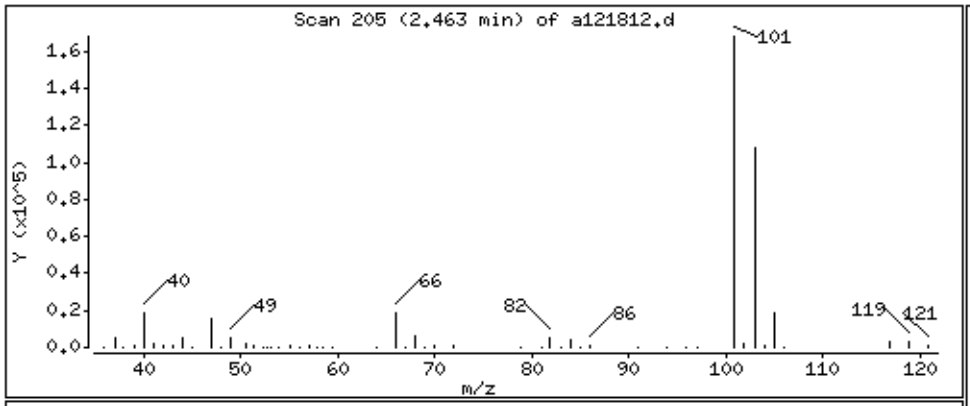
Operator: EA

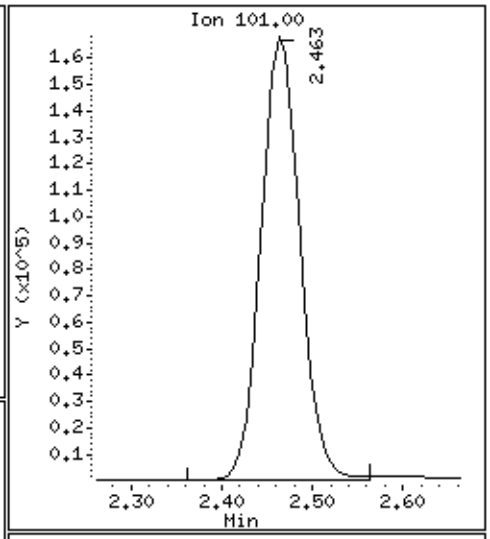
Column phase: RTX-624

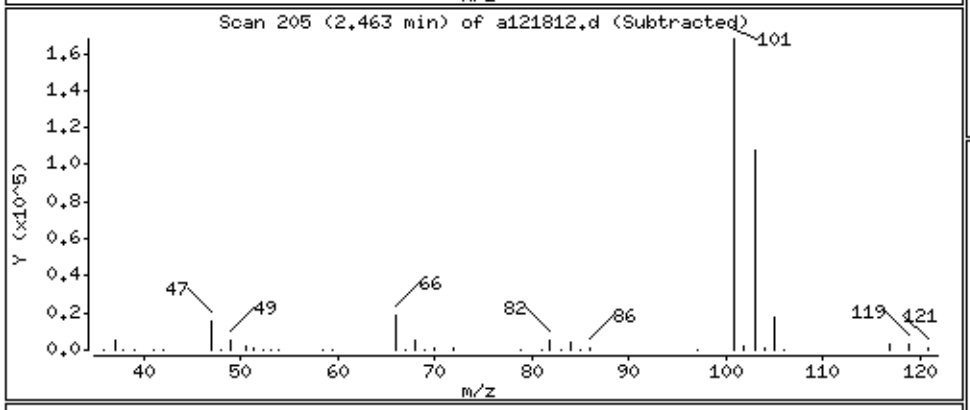
Column diameter: 0.25

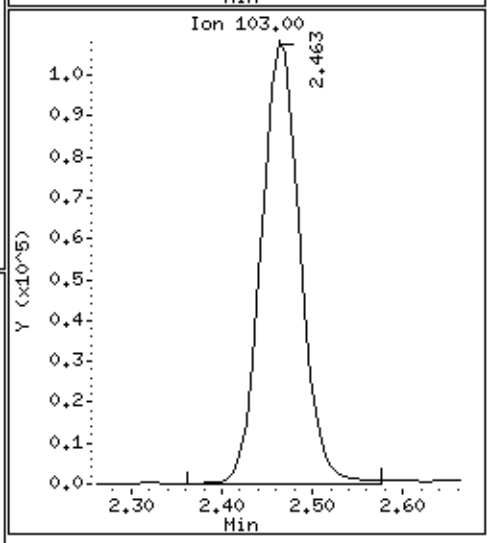
35 Freon 11

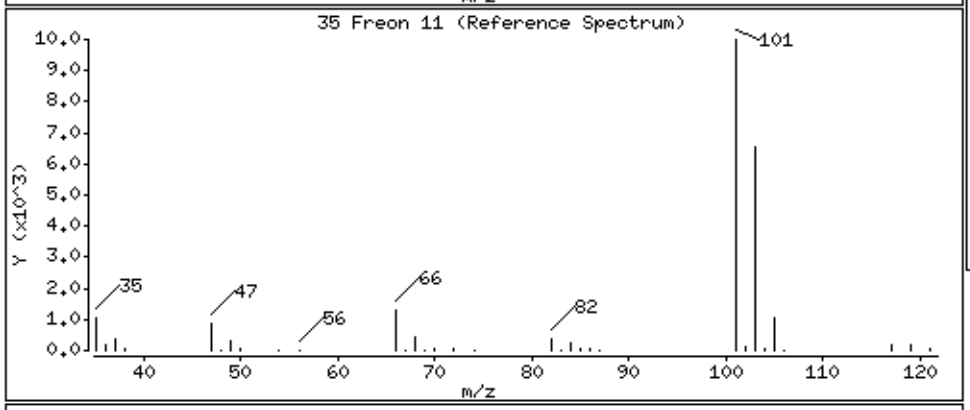
Concentration: 47.697 PPBV

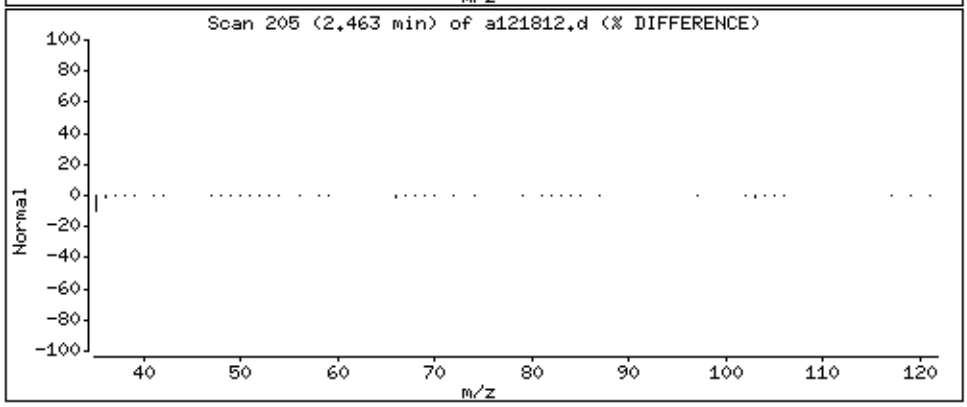












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

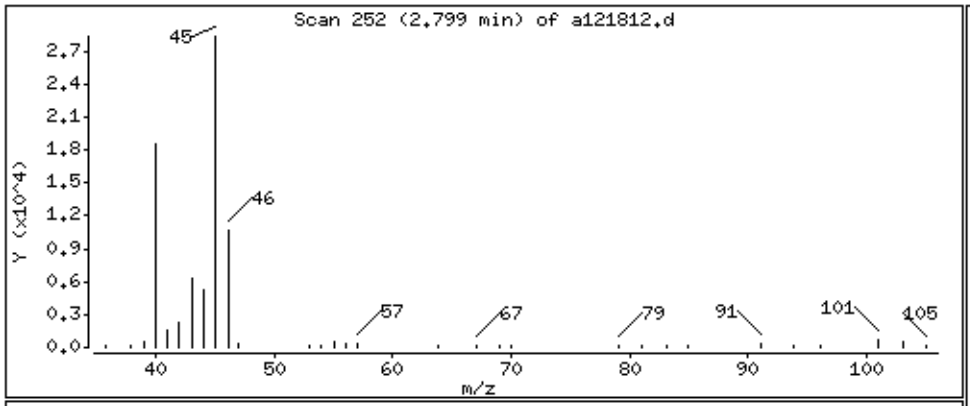
Operator: EA

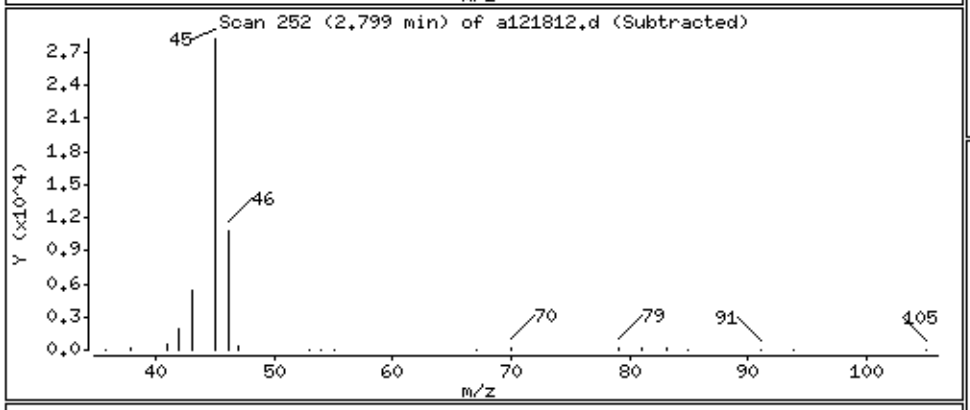
Column phase: RTX-624

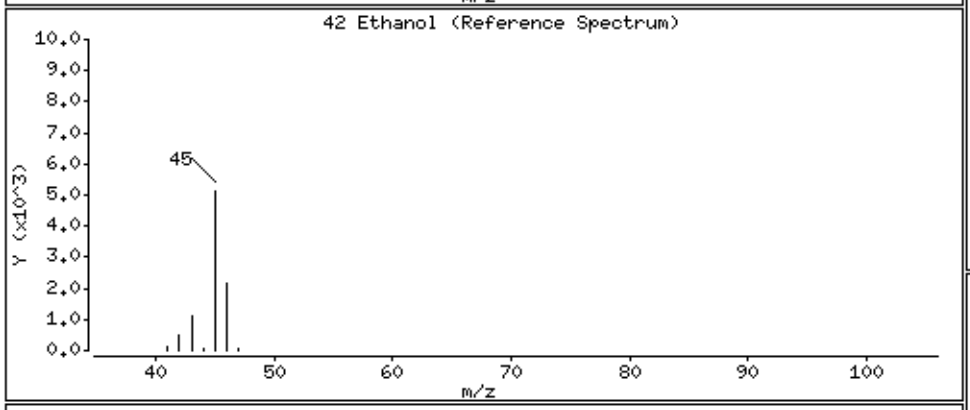
Column diameter: 0.25

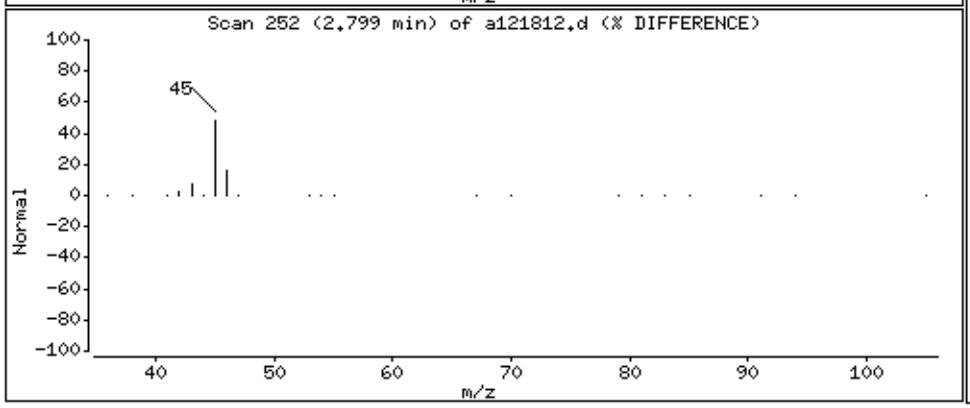
42 Ethanol

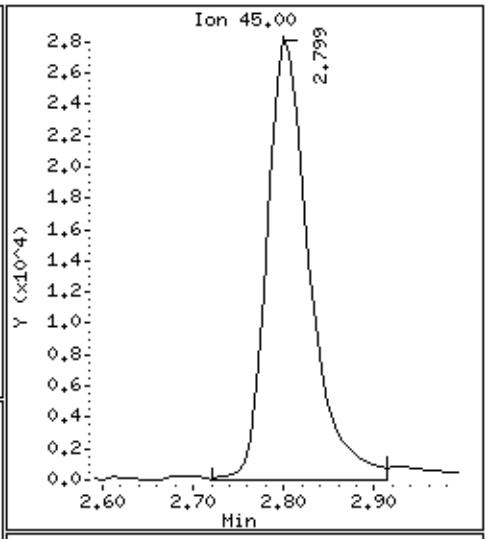
Concentration: 50.268 PPBV

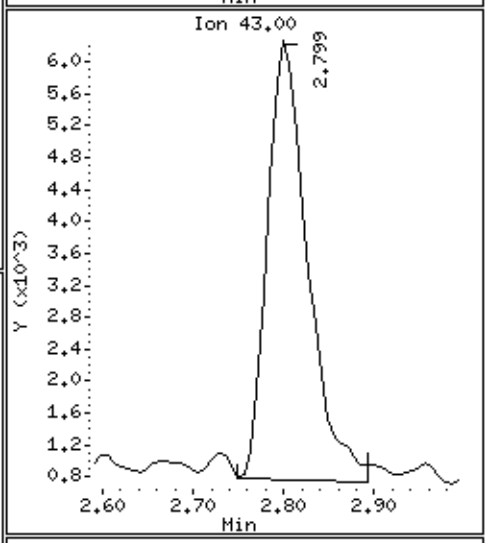


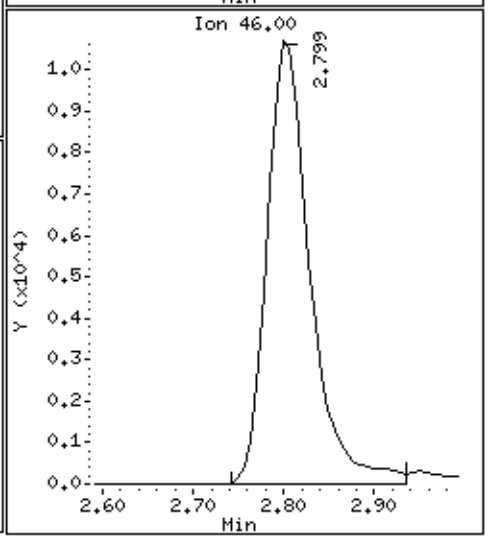












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

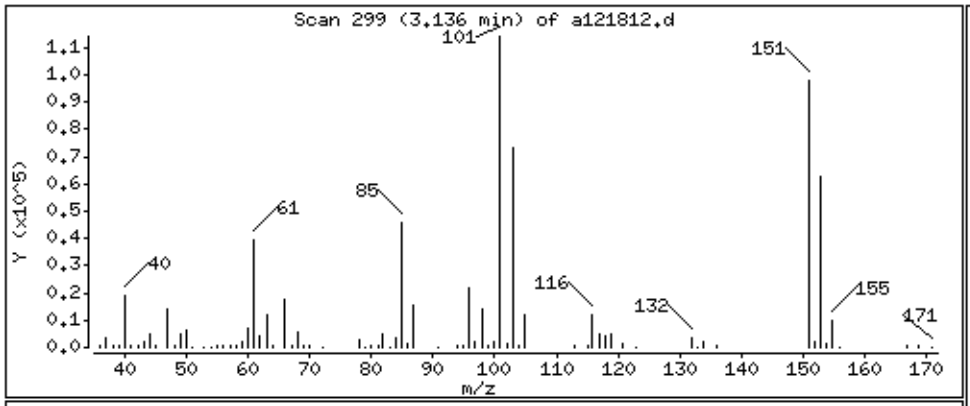
Operator: EA

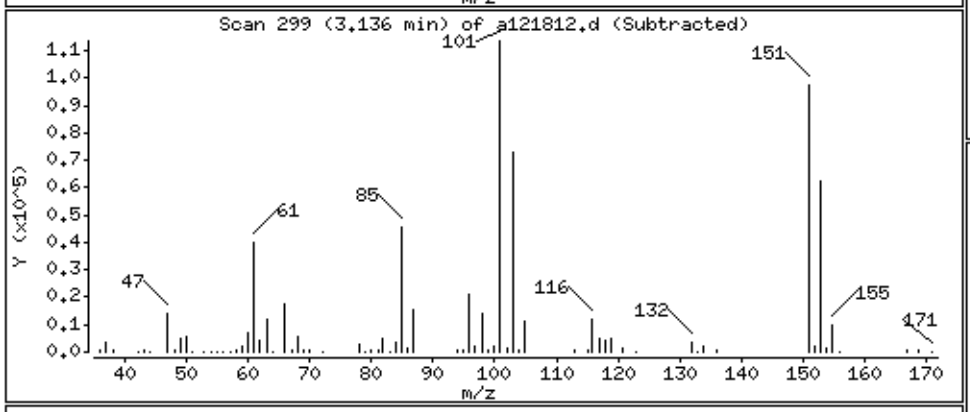
Column phase: RTX-624

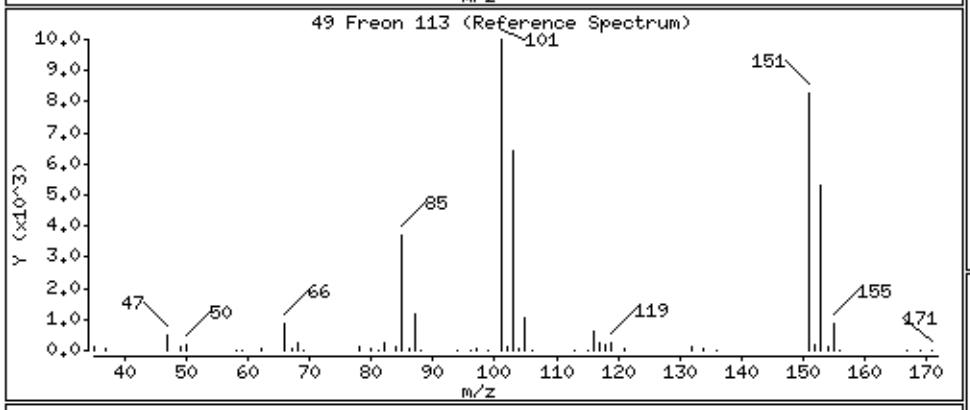
Column diameter: 0.25

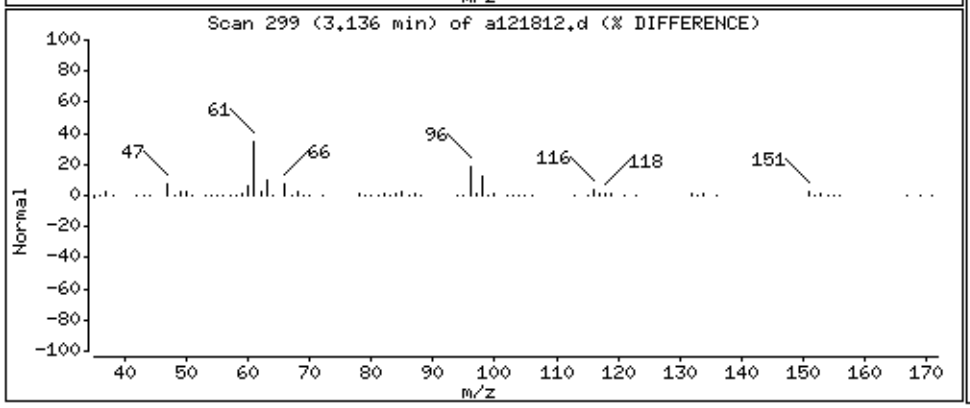
49 Freon 113

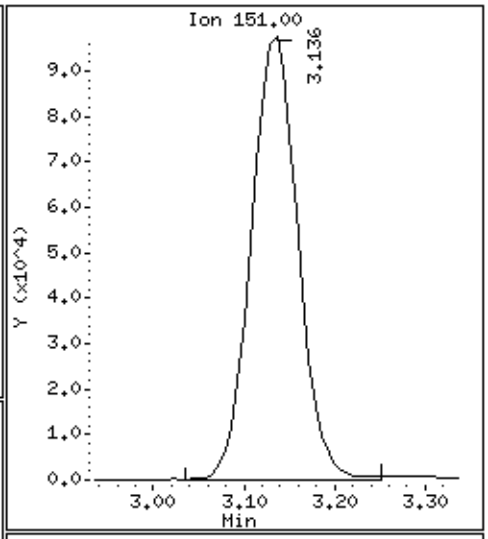
Concentration: 44.034 PPBV

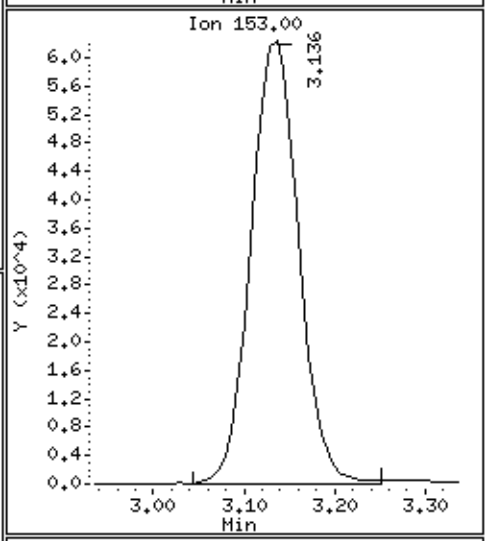


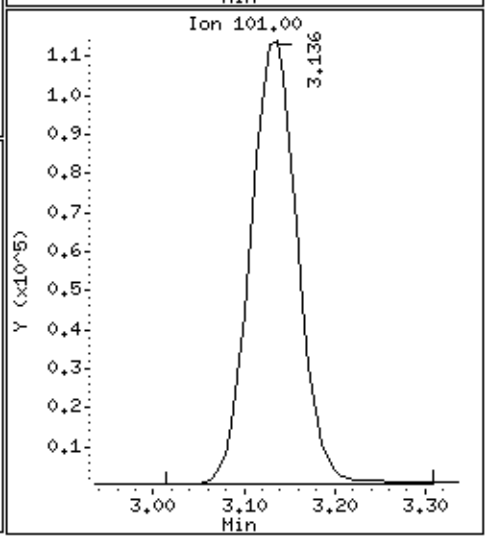












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

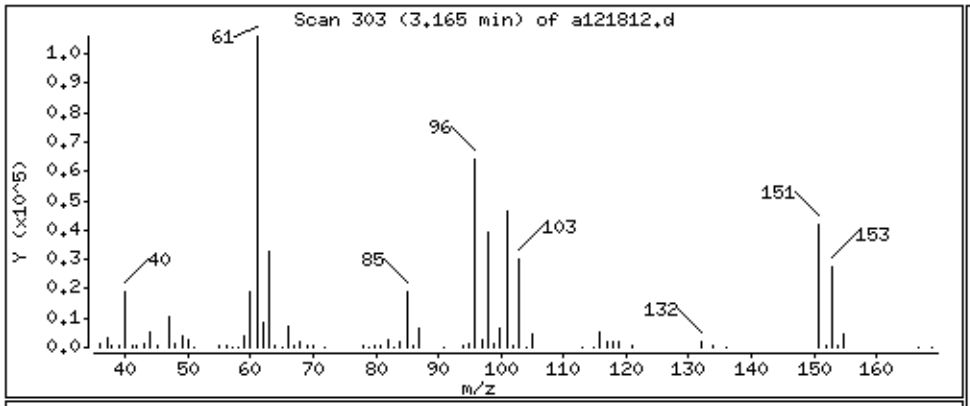
Operator: EA

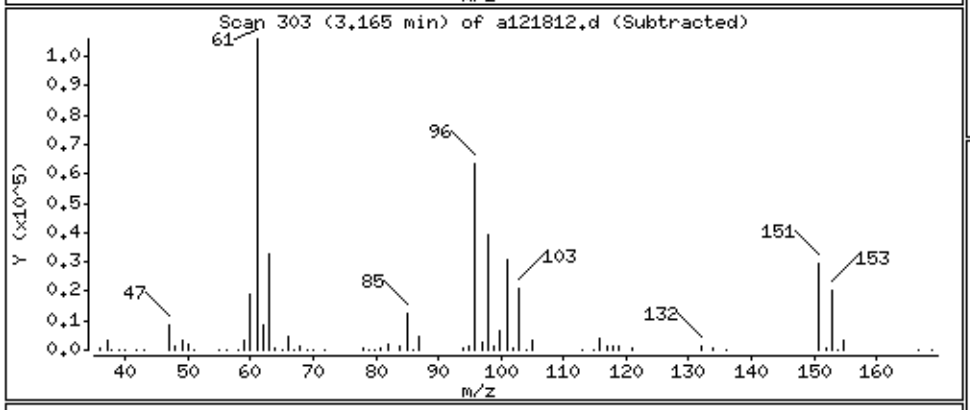
Column phase: RTX-624

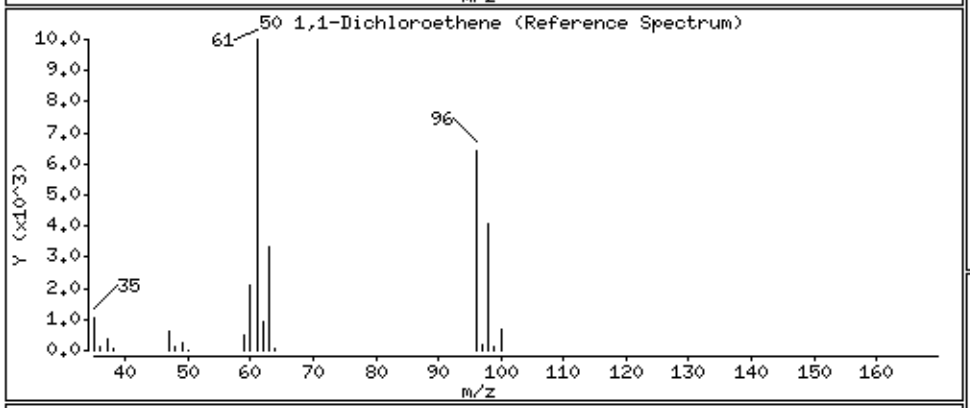
Column diameter: 0.25

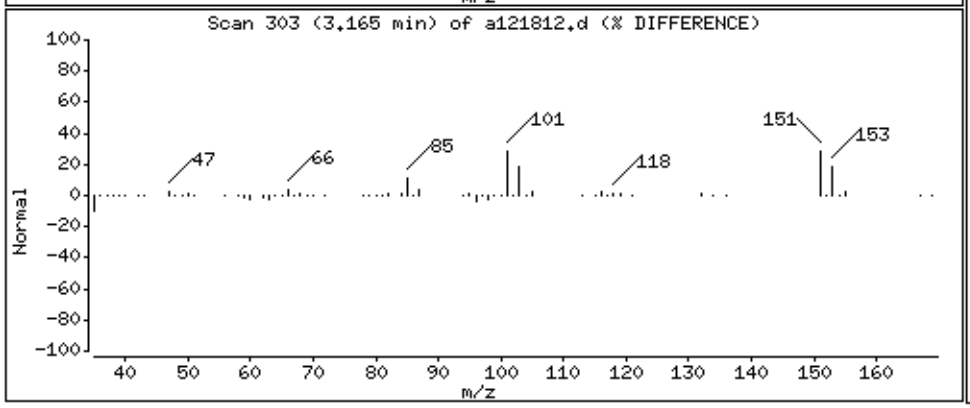
50 1,1-Dichloroethene

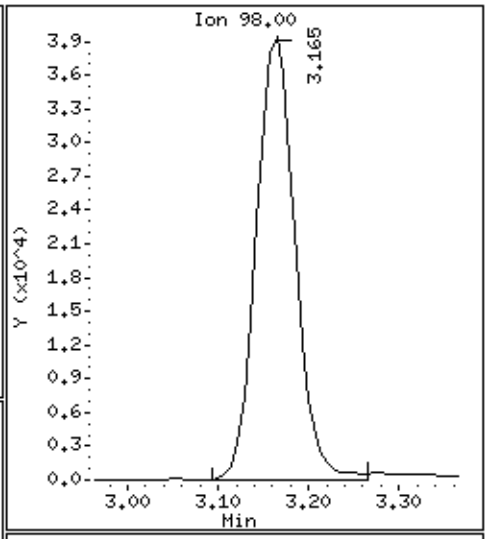
Concentration: 42.994 PPBV

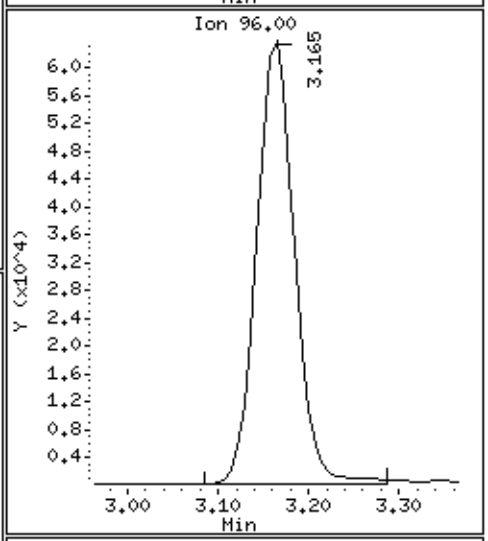


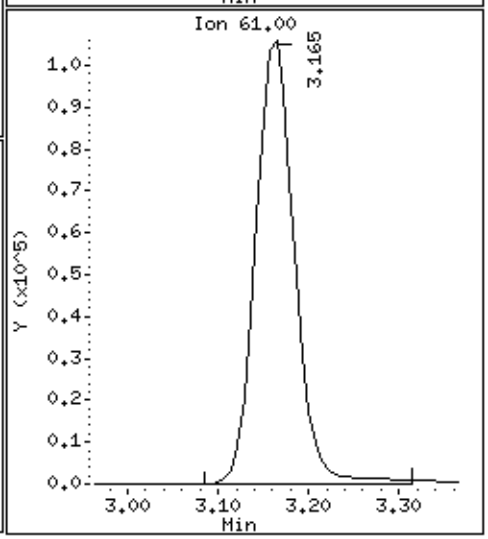












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

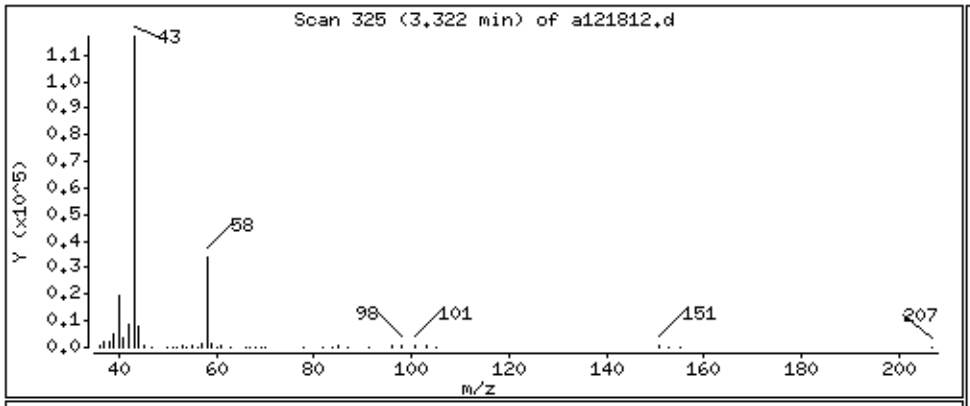
Operator: EA

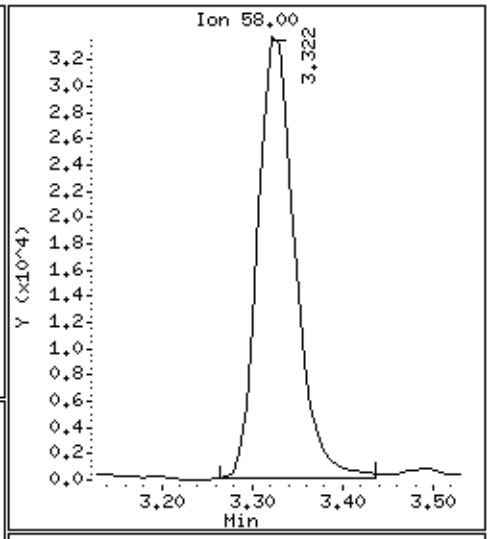
Column phase: RTX-624

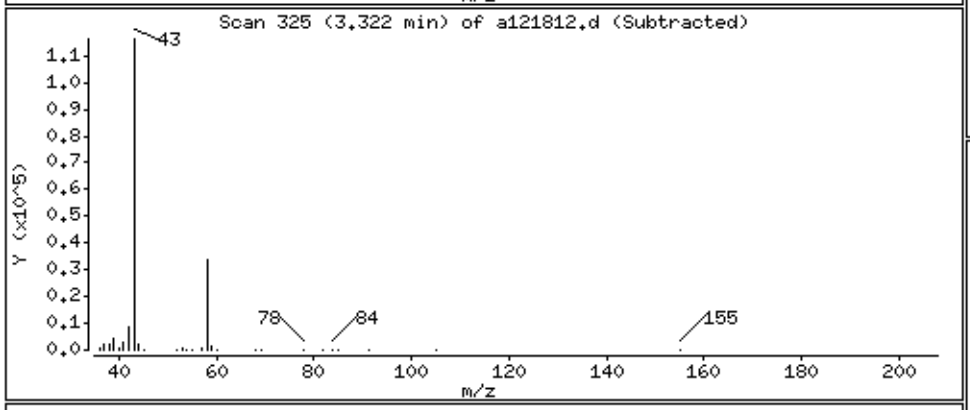
Column diameter: 0.25

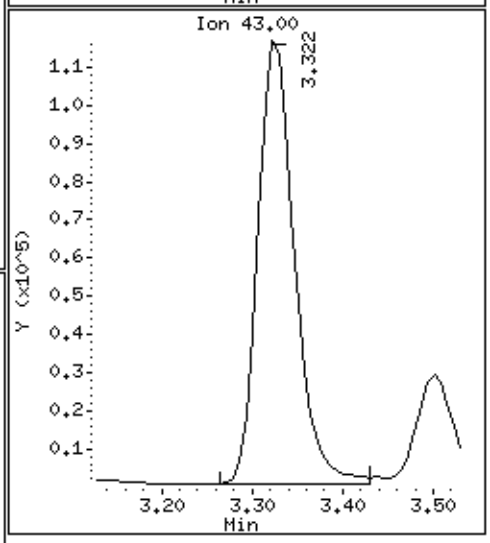
52 Acetone

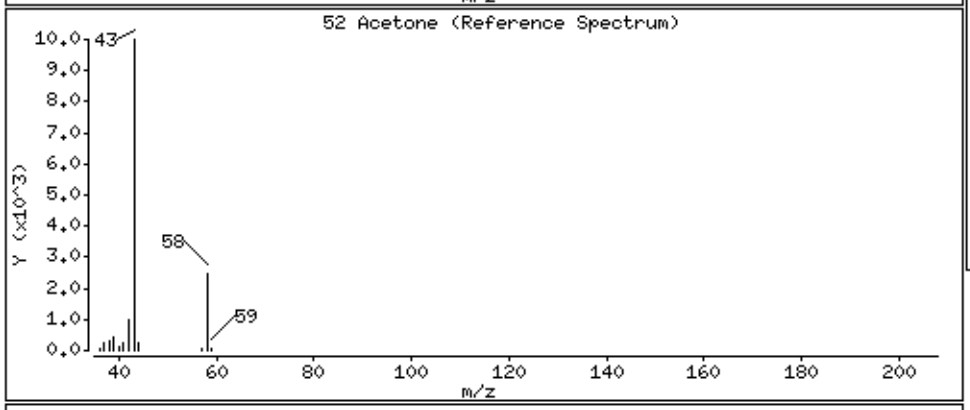
Concentration: 46.536 PPBV

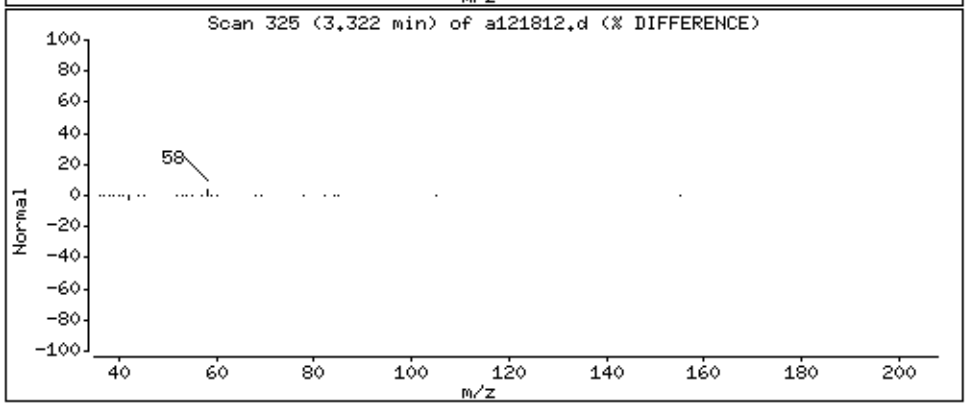












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

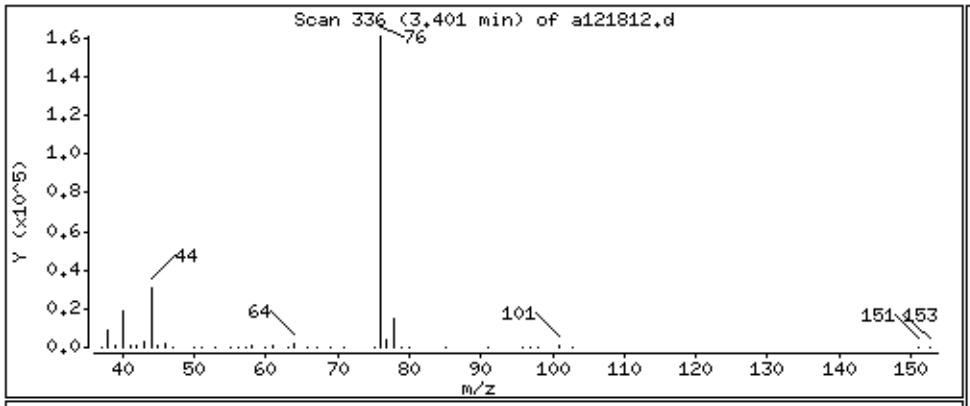
Operator: EA

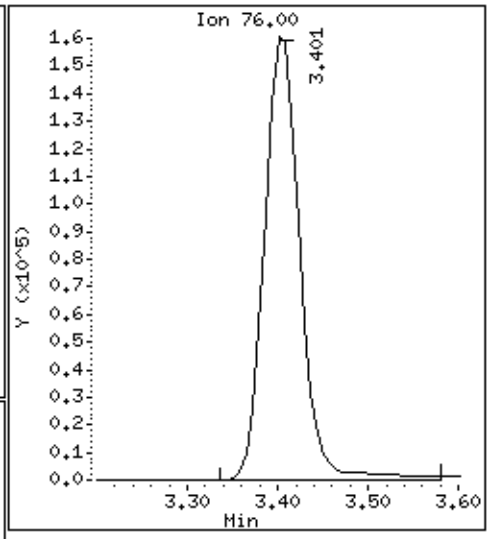
Column phase: RTX-624

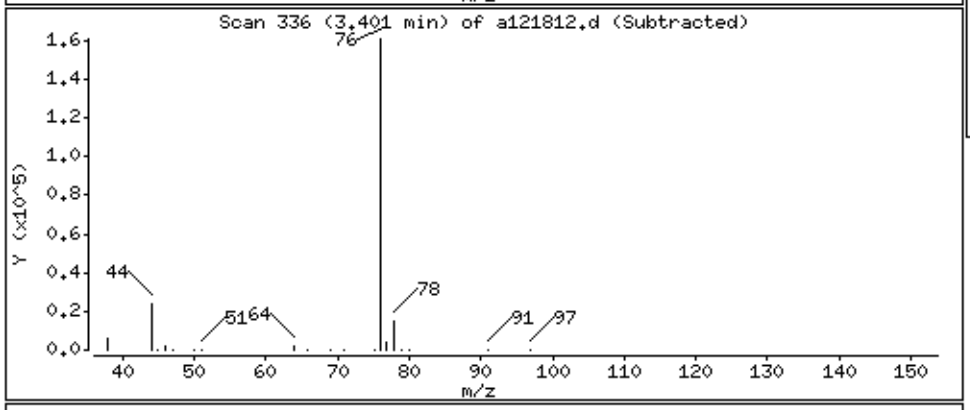
Column diameter: 0.25

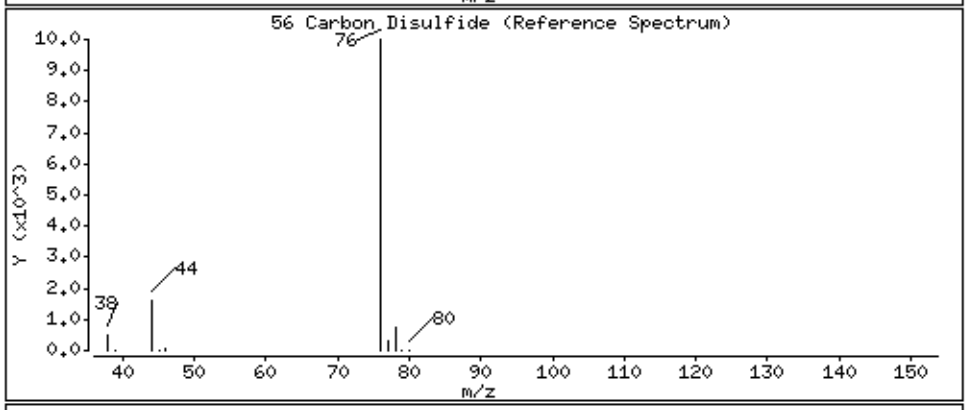
56 Carbon Disulfide

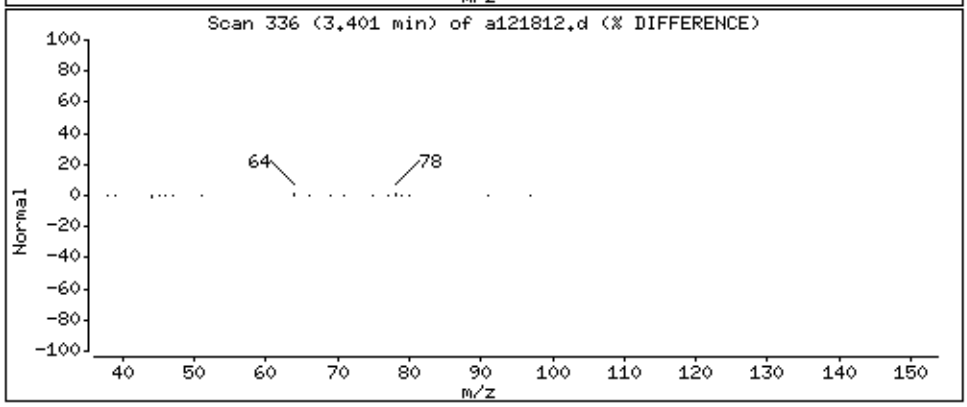
Concentration: 41.875 PPBV











Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

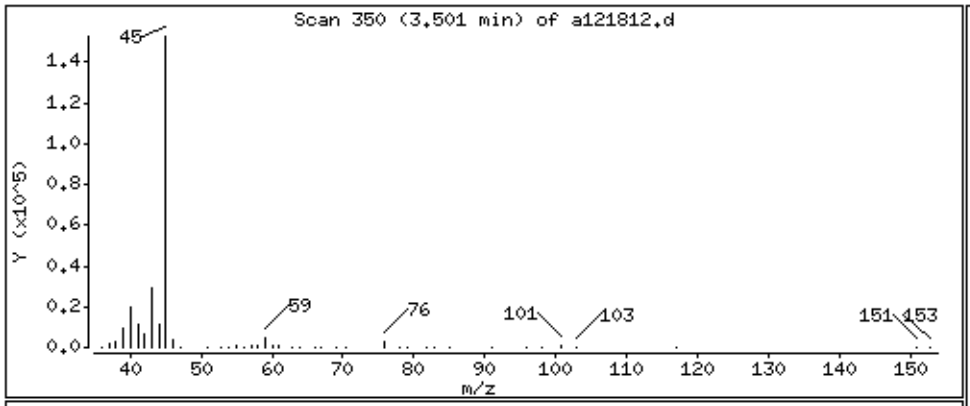
Operator: EA

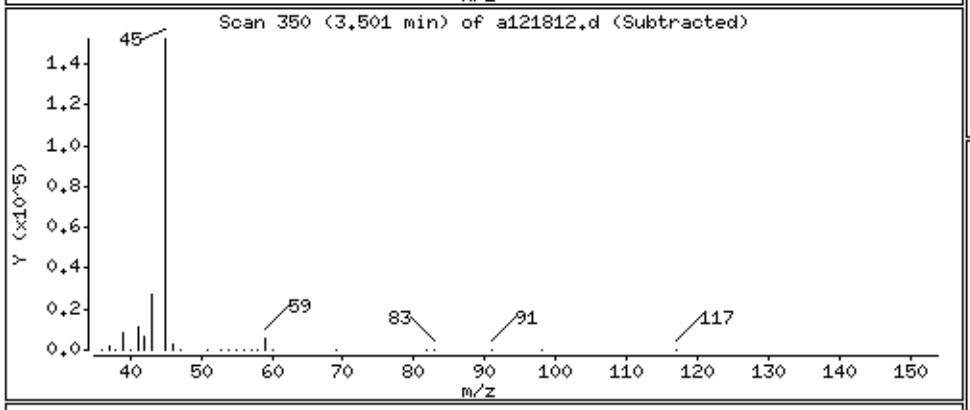
Column phase: RTX-624

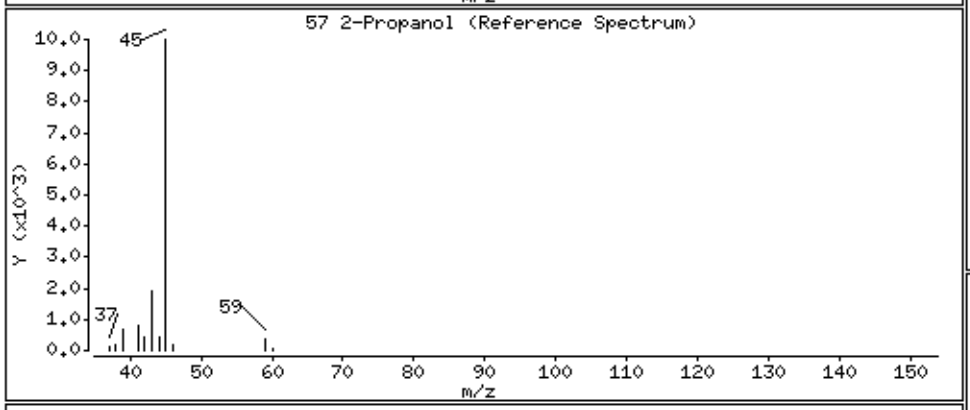
Column diameter: 0.25

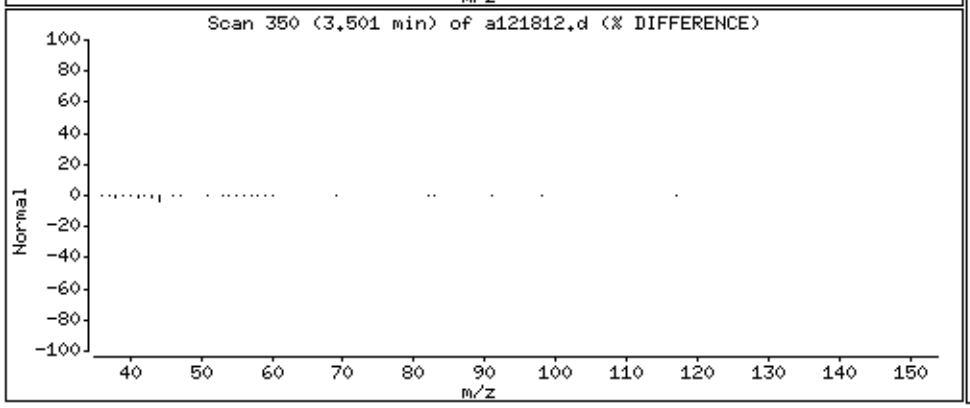
57 2-Propanol

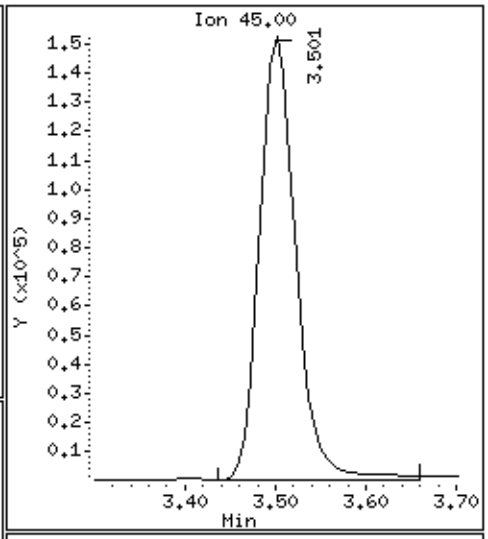
Concentration: 50.017 PPBV

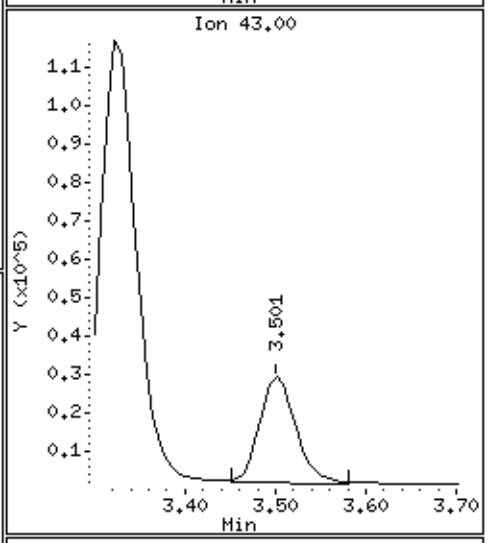


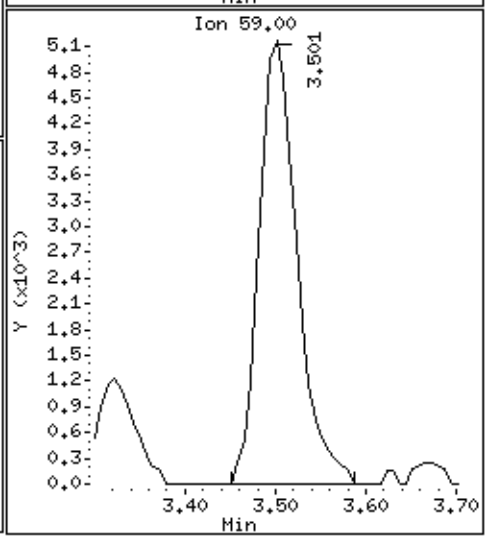












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

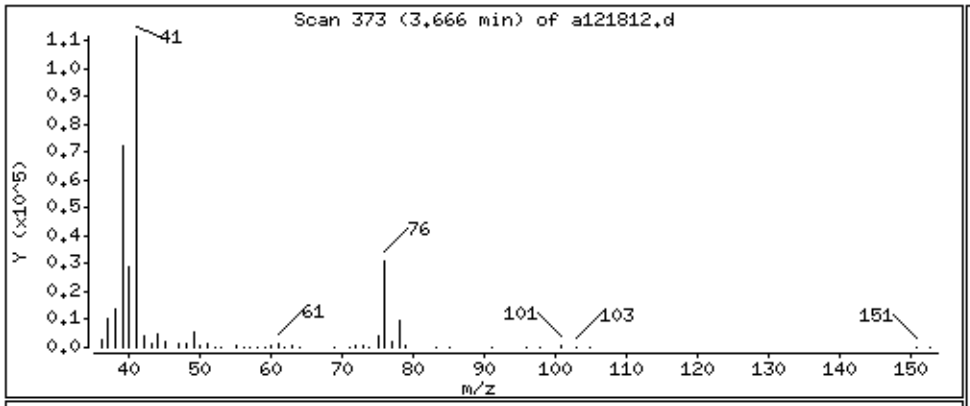
Operator: EA

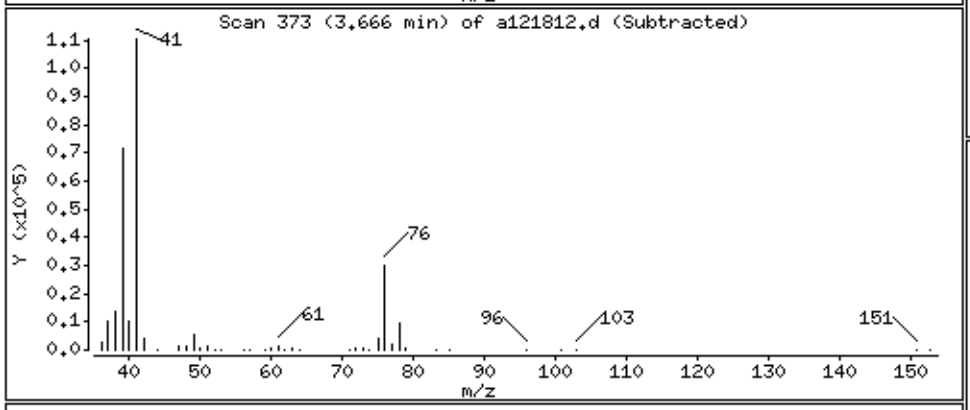
Column phase: RTX-624

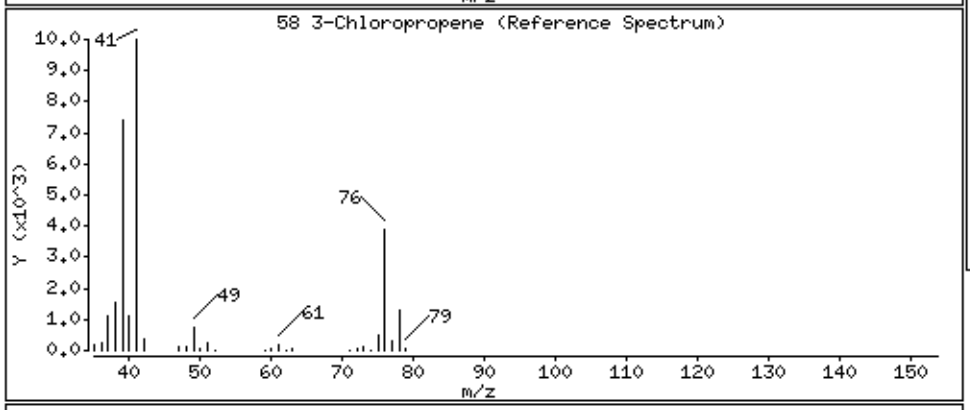
Column diameter: 0.25

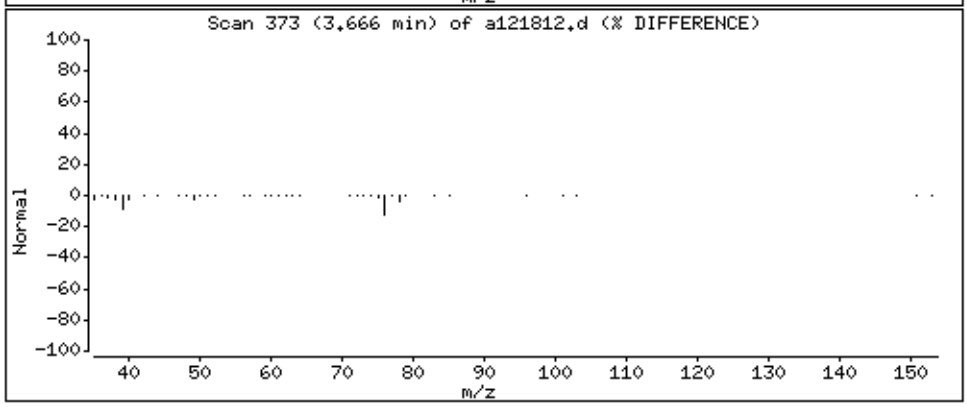
58 3-Chloropropene

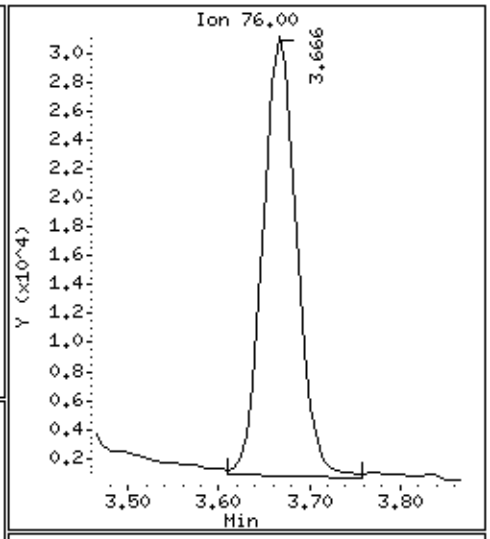
Concentration: 43.094 PPBV

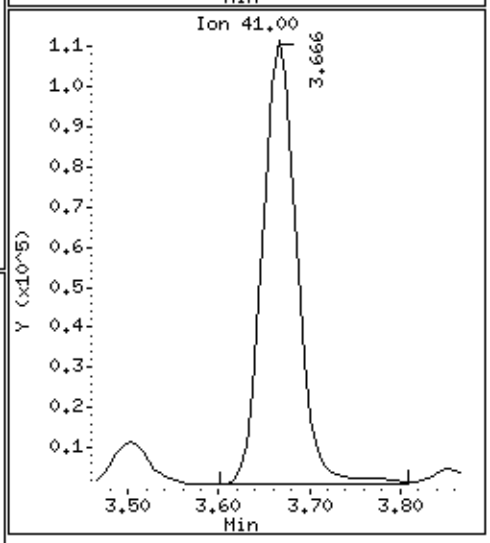












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

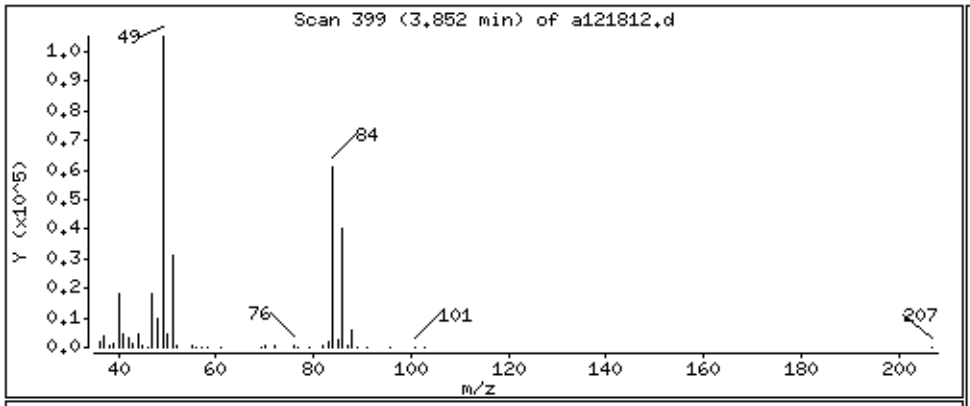
Operator: EA

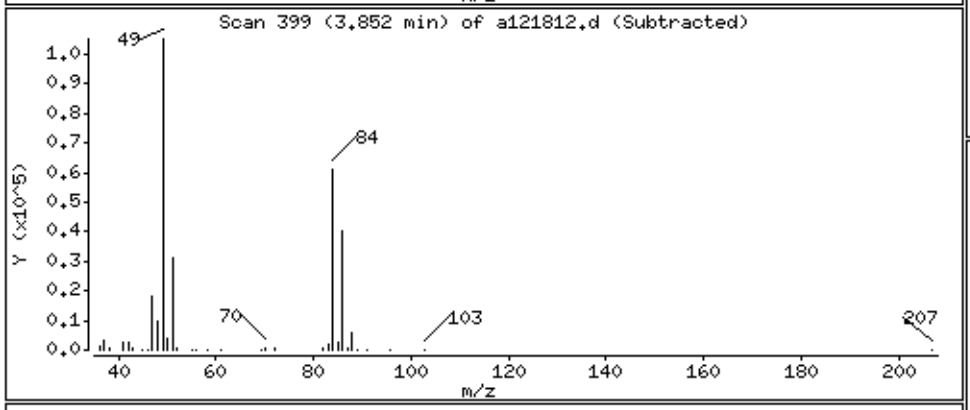
Column phase: RTX-624

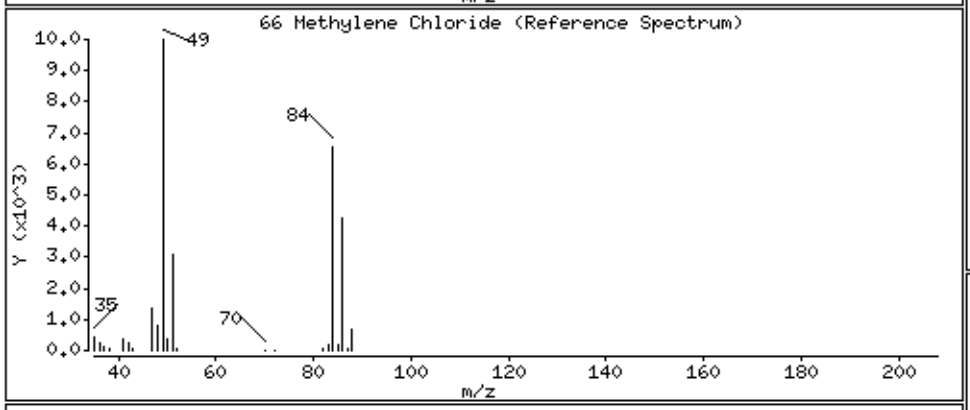
Column diameter: 0.25

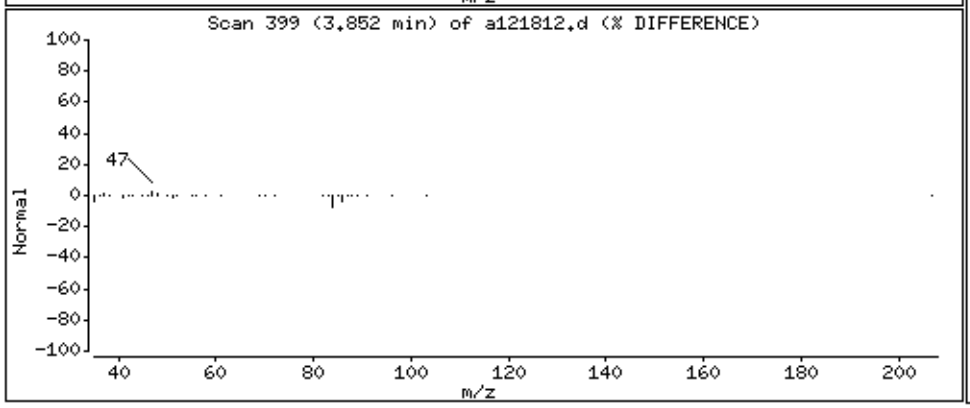
66 Methylene Chloride

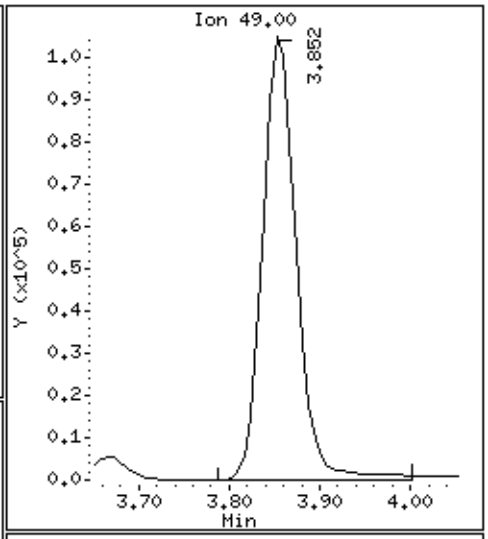
Concentration: 49.619 PPBV

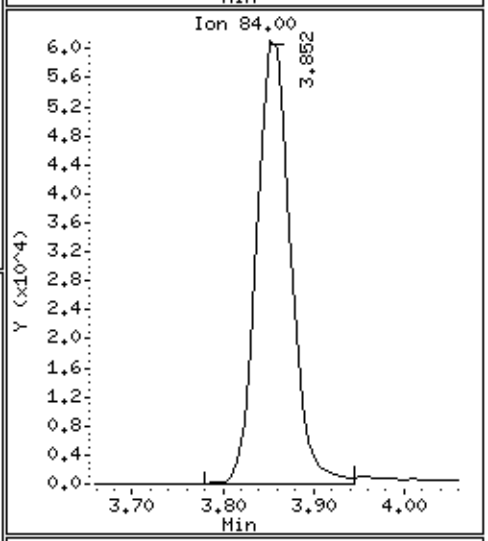


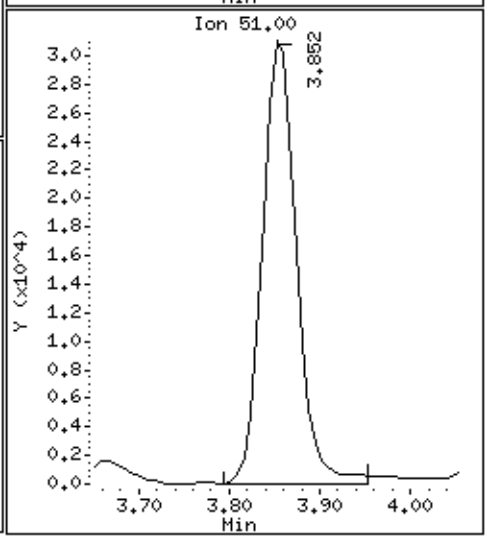












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

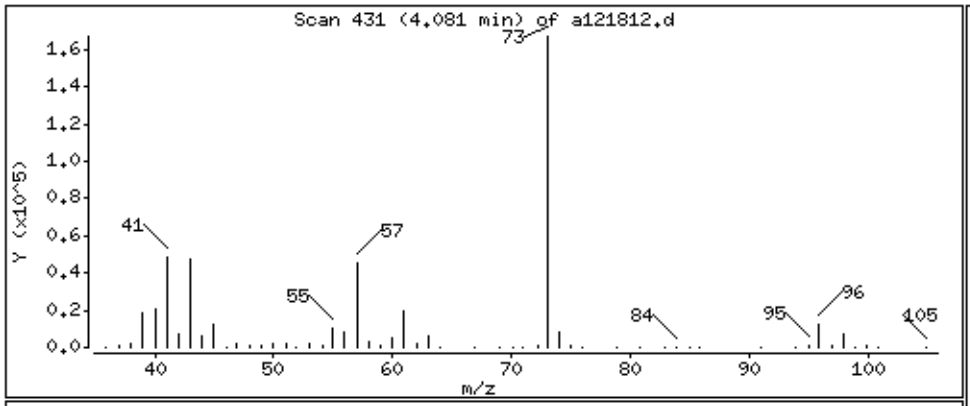
Operator: EA

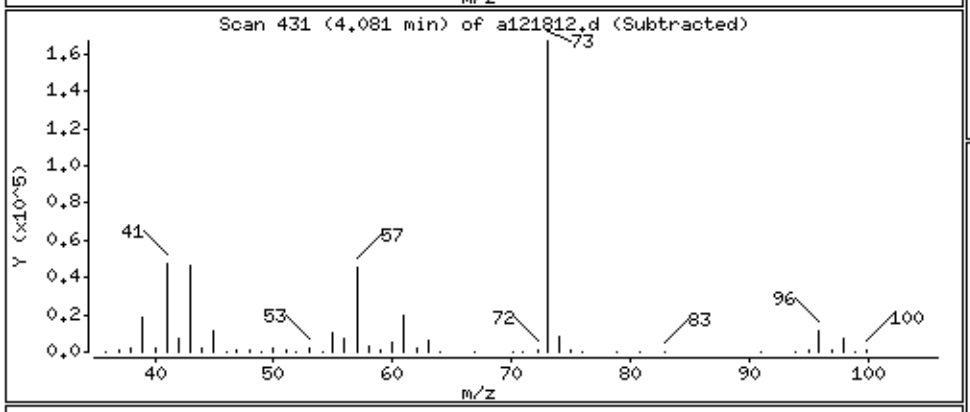
Column phase: RTX-624

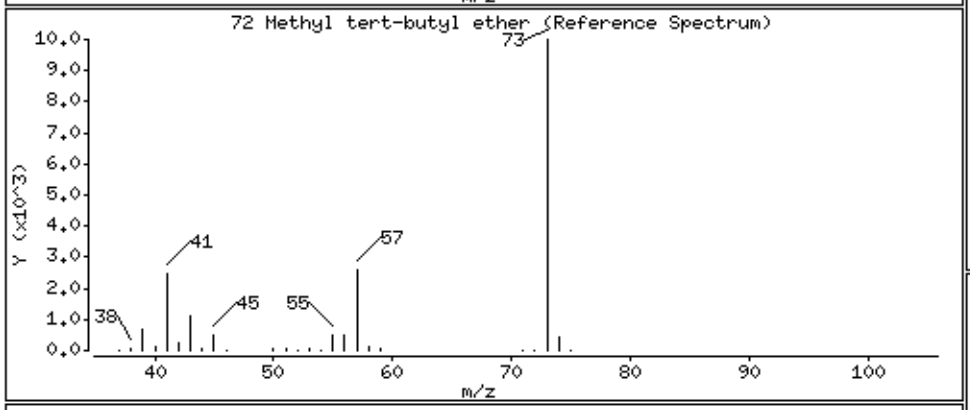
Column diameter: 0.25

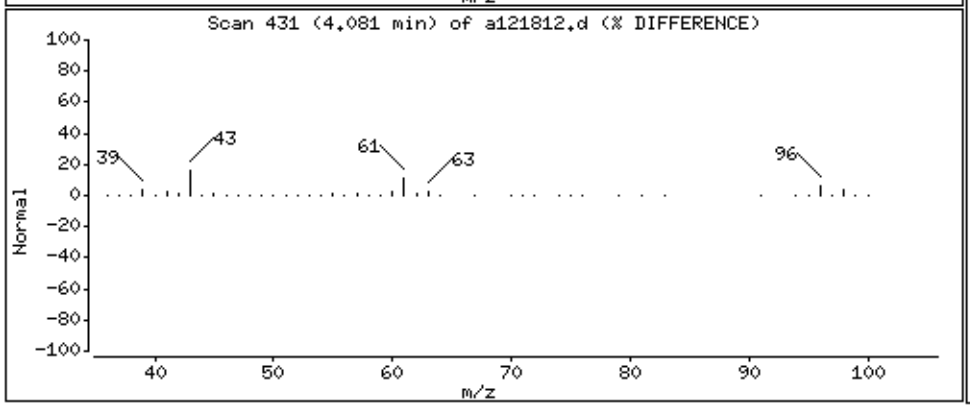
72 Methyl tert-butyl ether

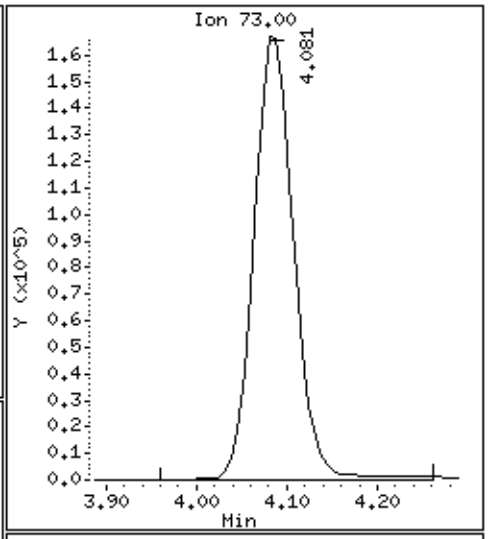
Concentration: 46.119 PPBV

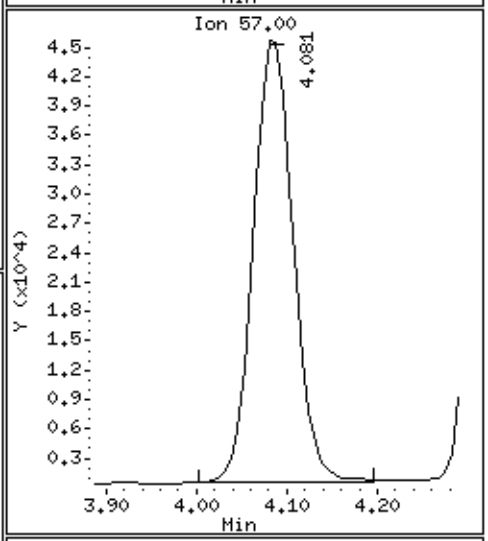


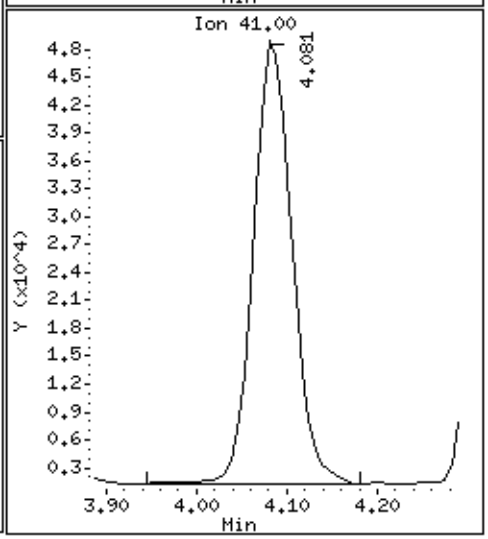












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

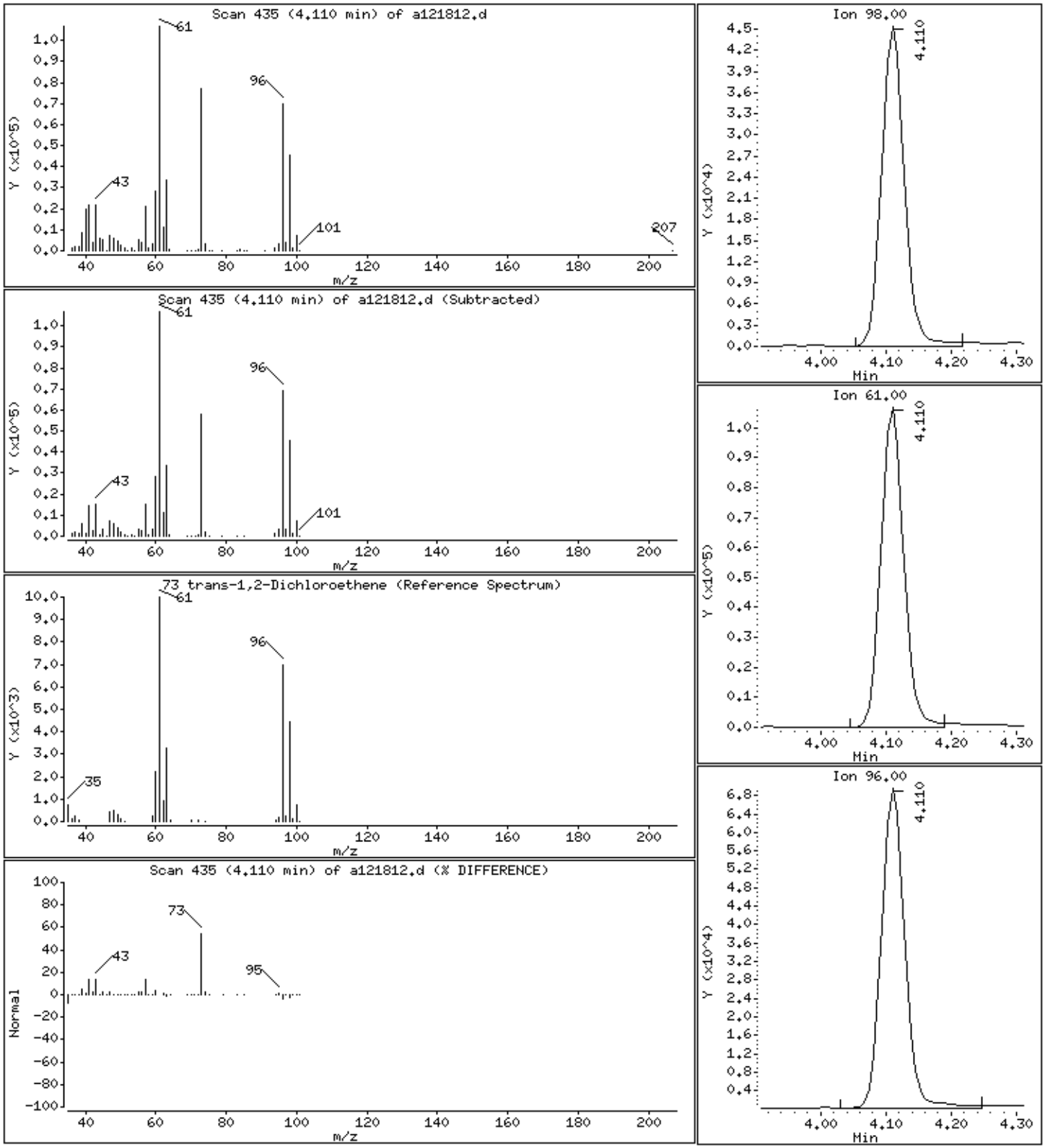
Operator: EA

Column phase: RTX-624

Column diameter: 0.25

73 trans-1,2-Dichloroethene

Concentration: 38.799 PPBV



Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

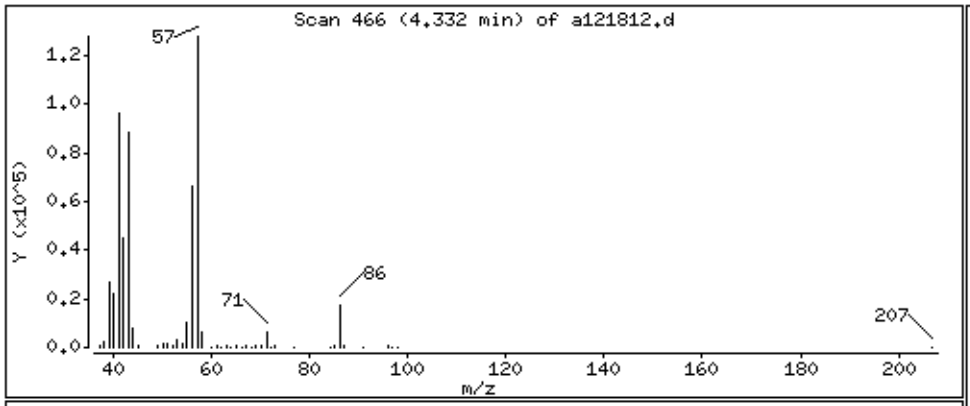
Operator: EA

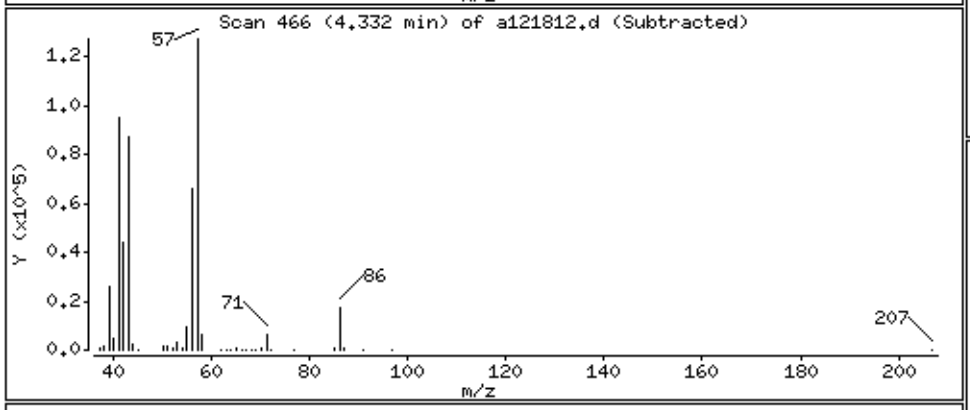
Column phase: RTX-624

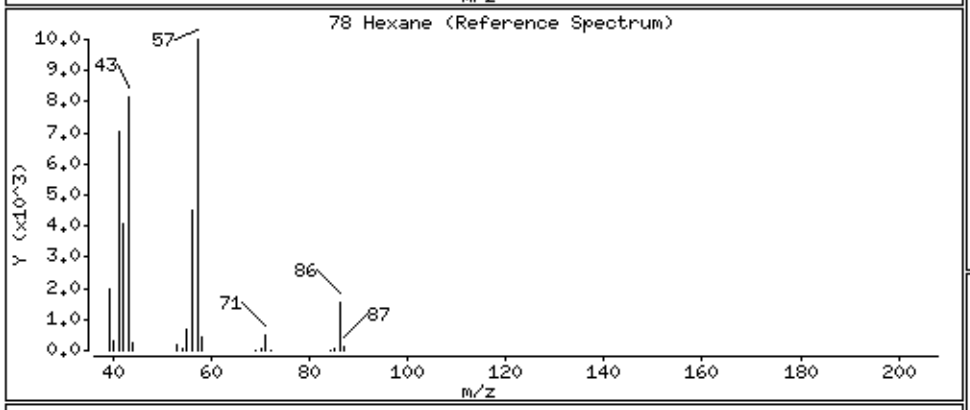
Column diameter: 0.25

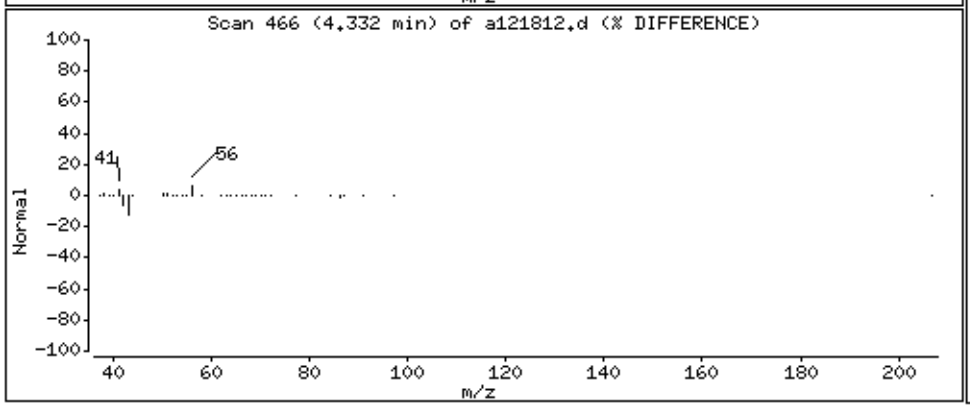
78 Hexane

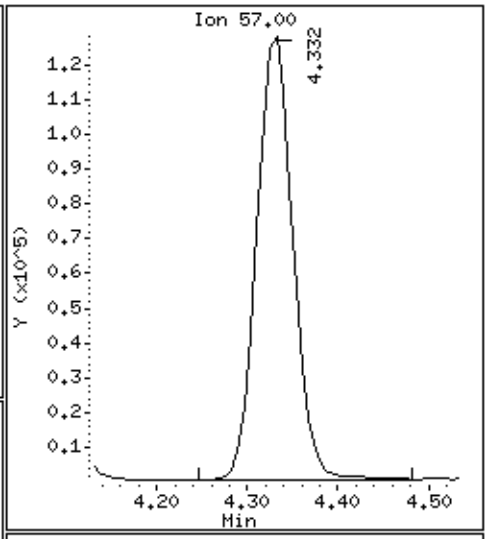
Concentration: 46.003 PPBV

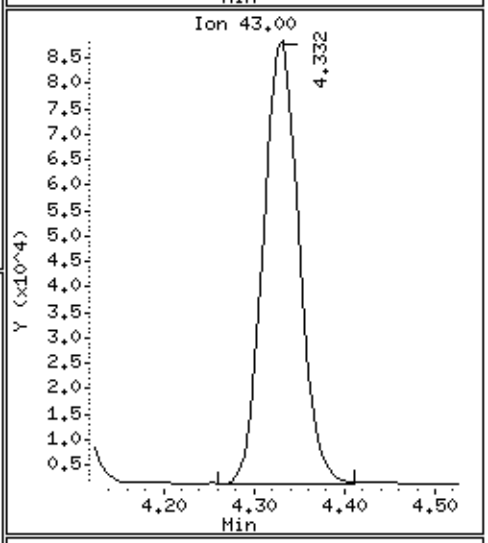


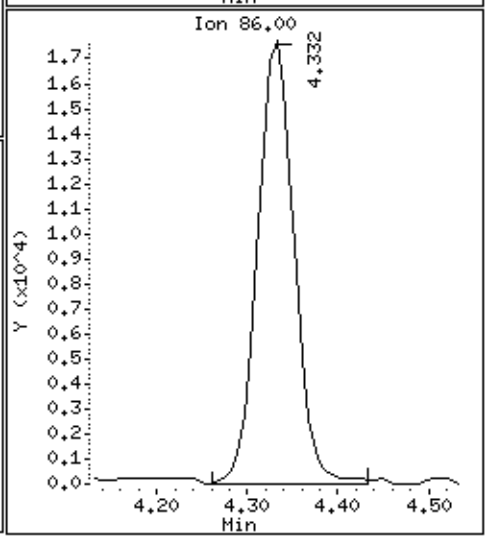












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

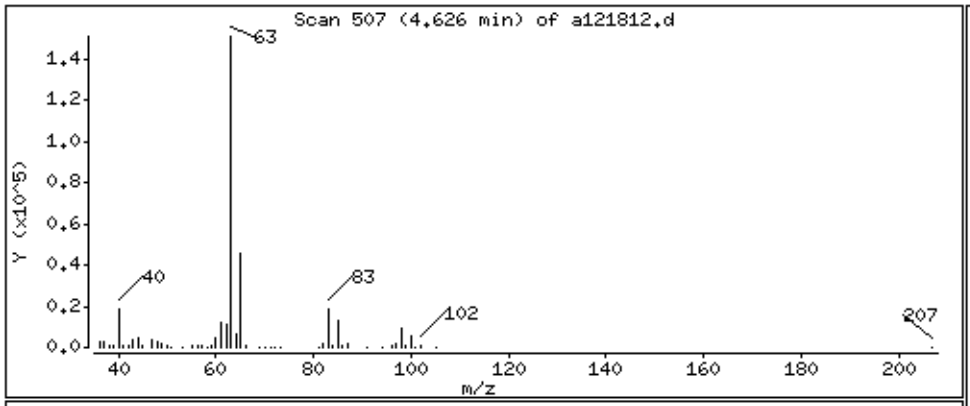
Operator: EA

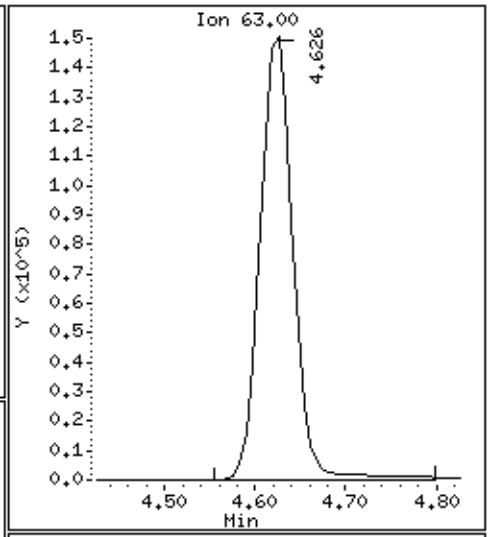
Column phase: RTX-624

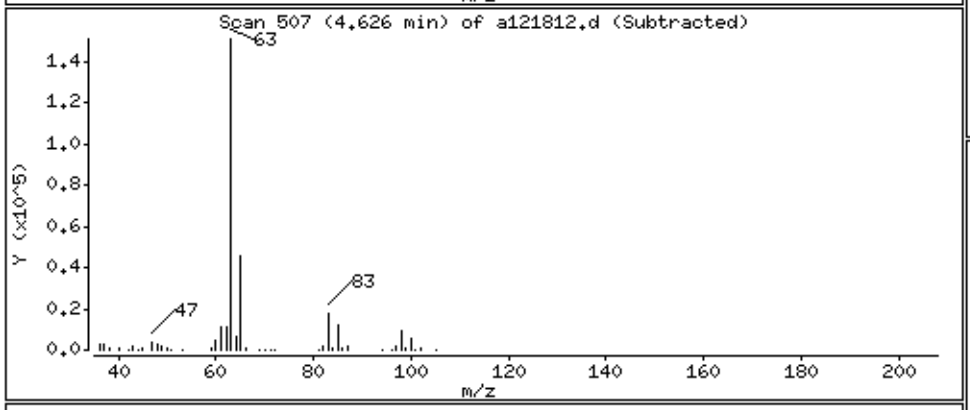
Column diameter: 0.25

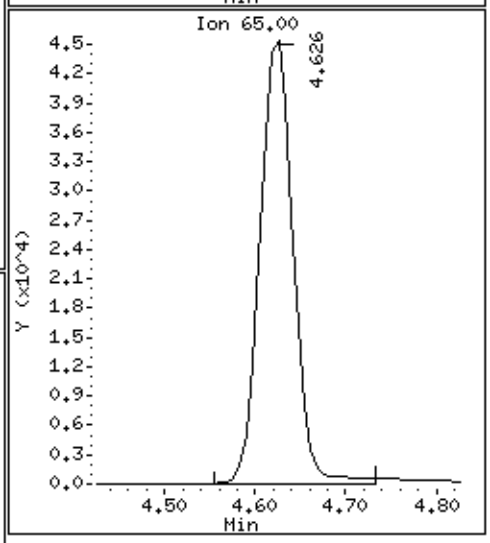
82 1,1-Dichloroethane

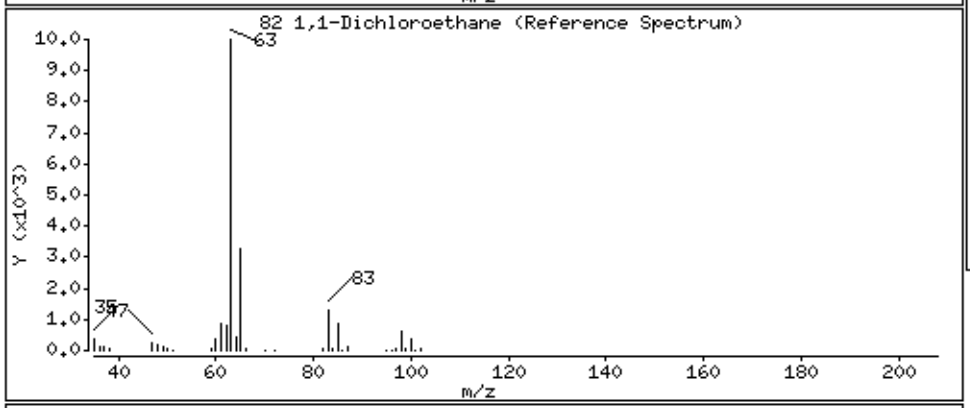
Concentration: 47.815 PPBV

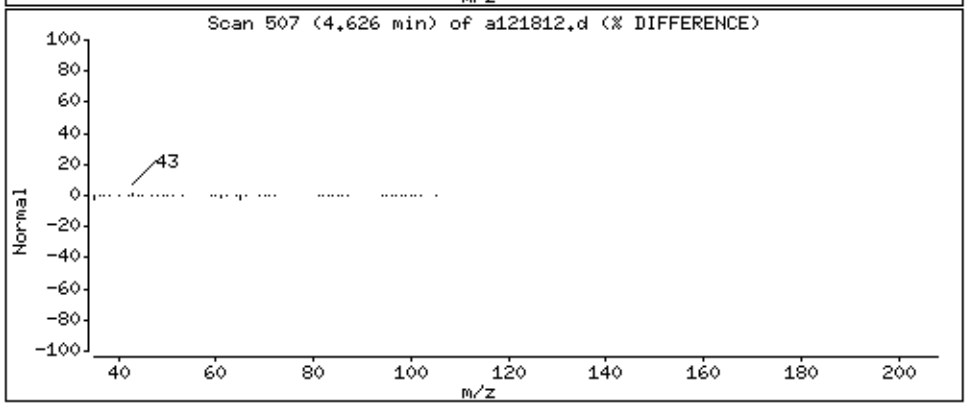












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

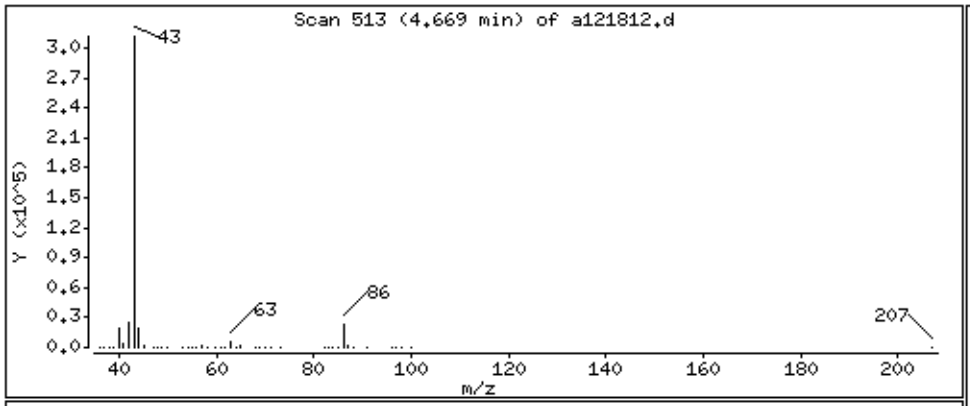
Operator: EA

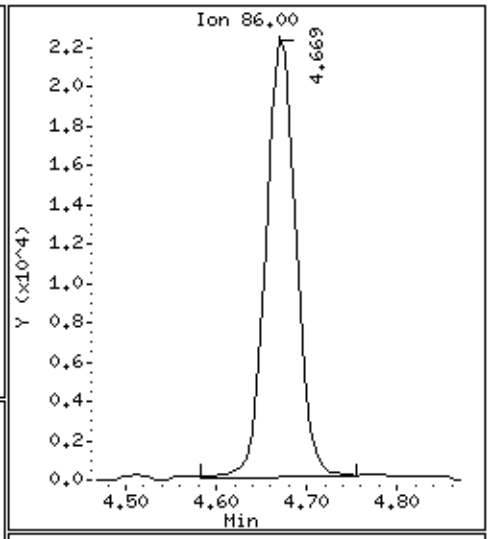
Column phase: RTX-624

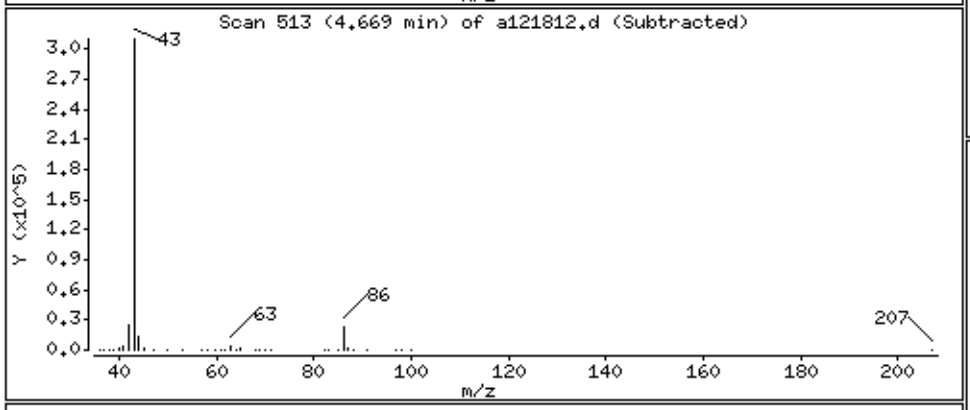
Column diameter: 0.25

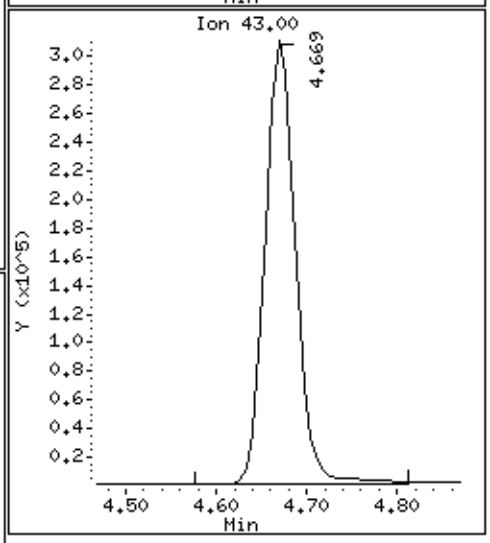
86 Vinyl Acetate

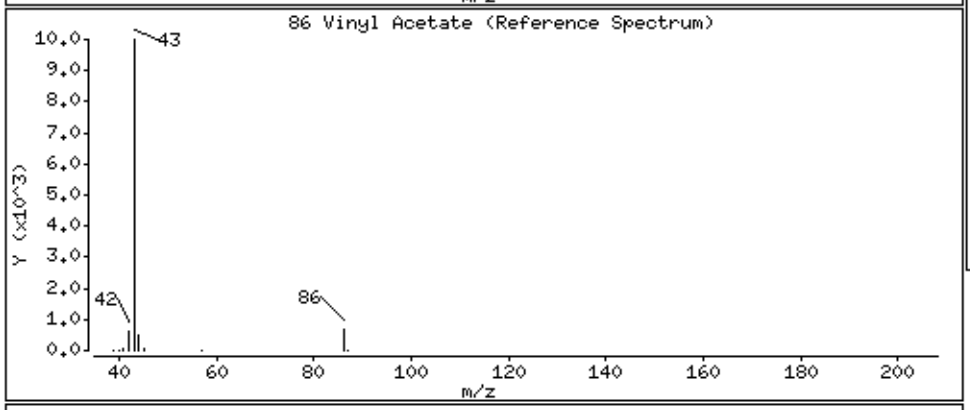
Concentration: 48.474 PPBV

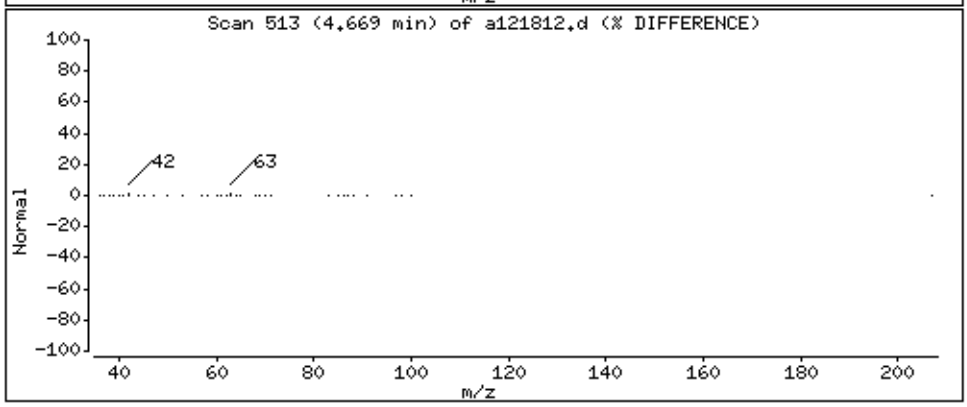












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

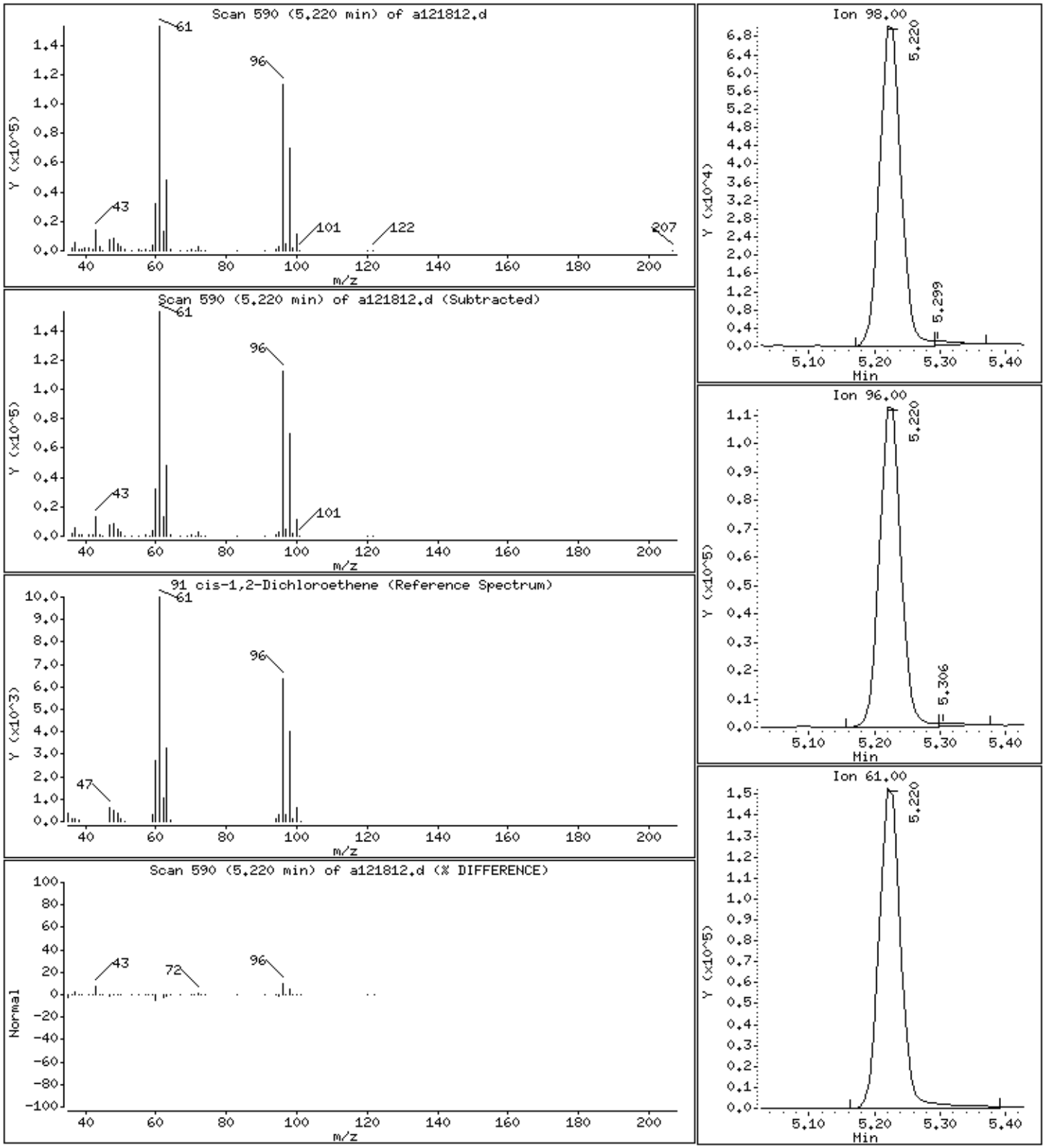
Operator: EA

Column phase: RTX-624

Column diameter: 0.25

91 cis-1,2-Dichloroethene

Concentration: 50.865 PPBV



Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

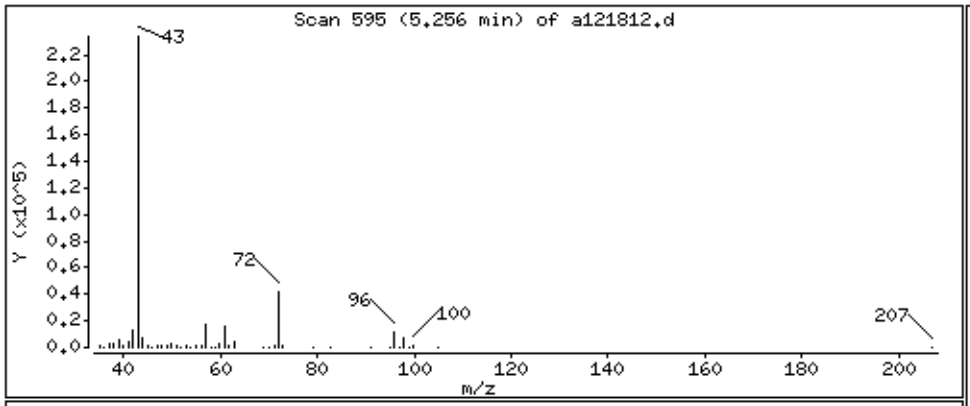
Operator: EA

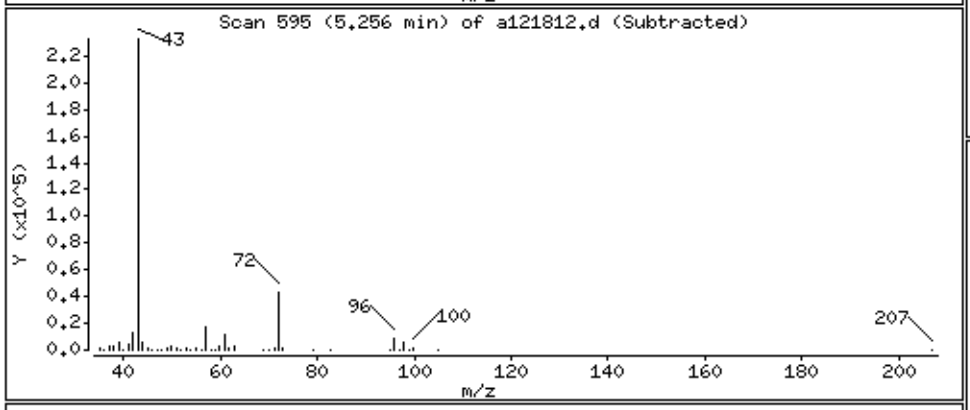
Column phase: RTX-624

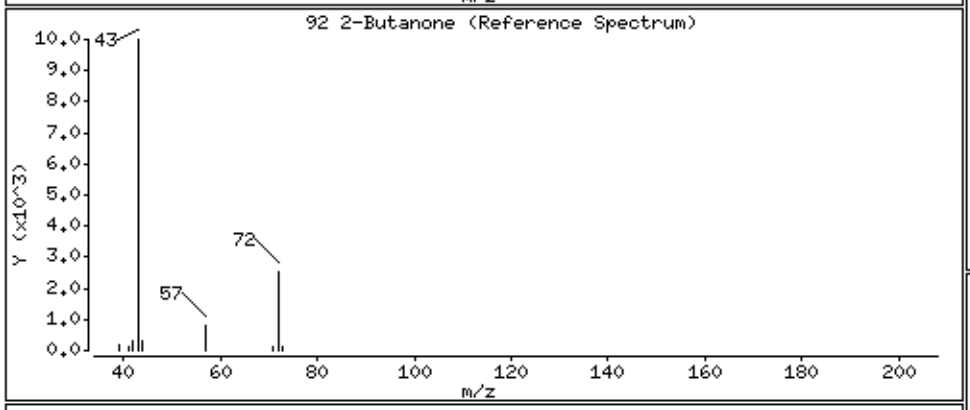
Column diameter: 0.25

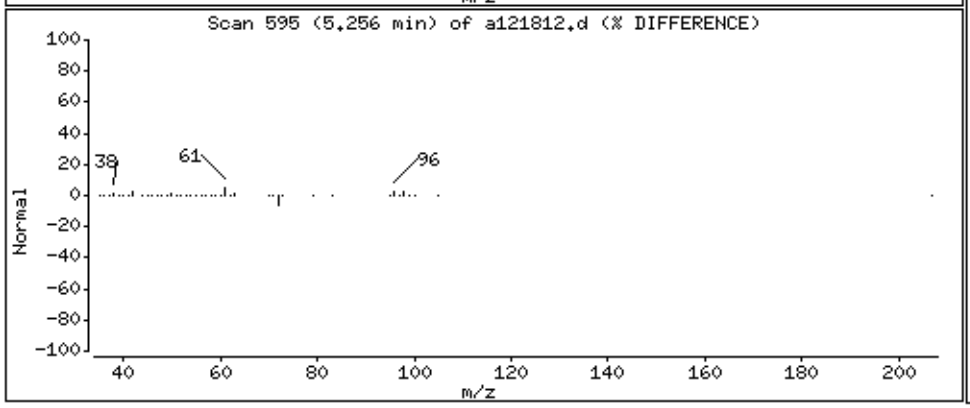
92 2-Butanone

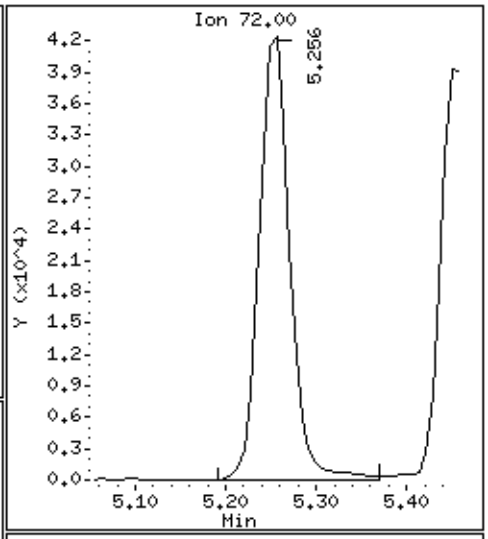
Concentration: 47.818 PPBV

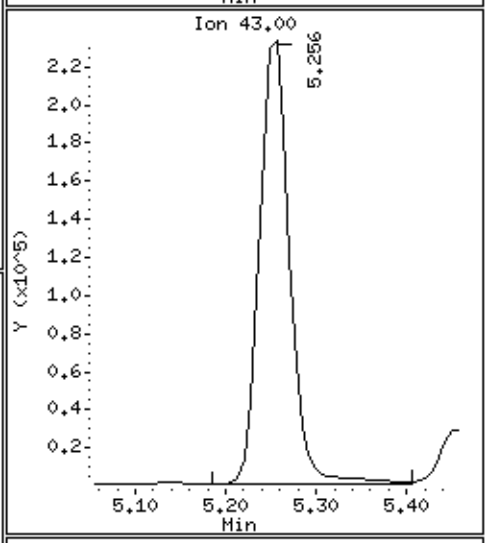


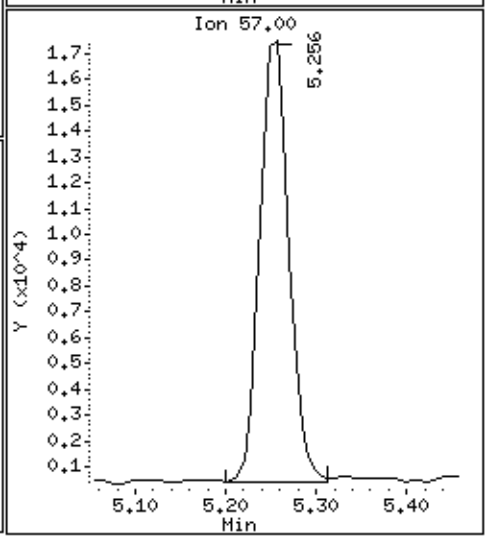












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

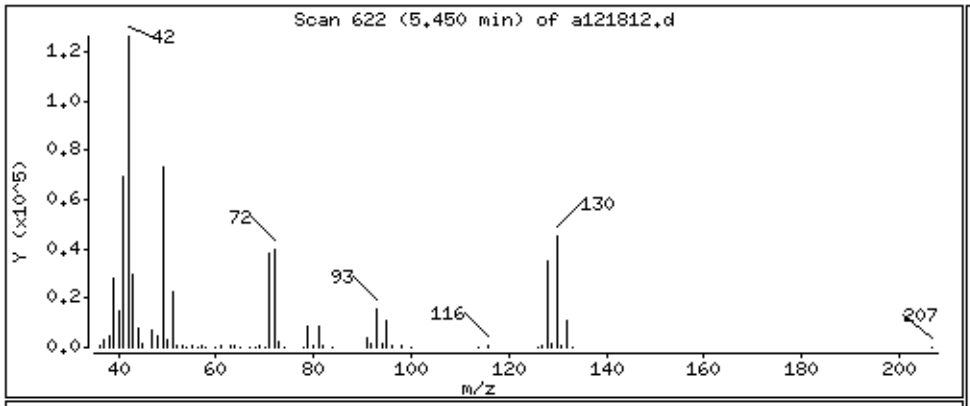
Operator: EA

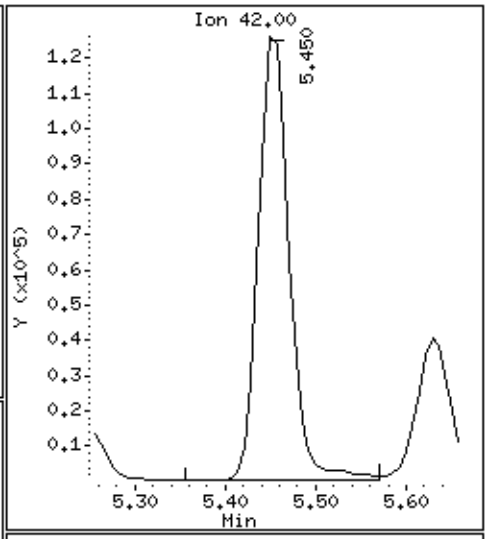
Column phase: RTX-624

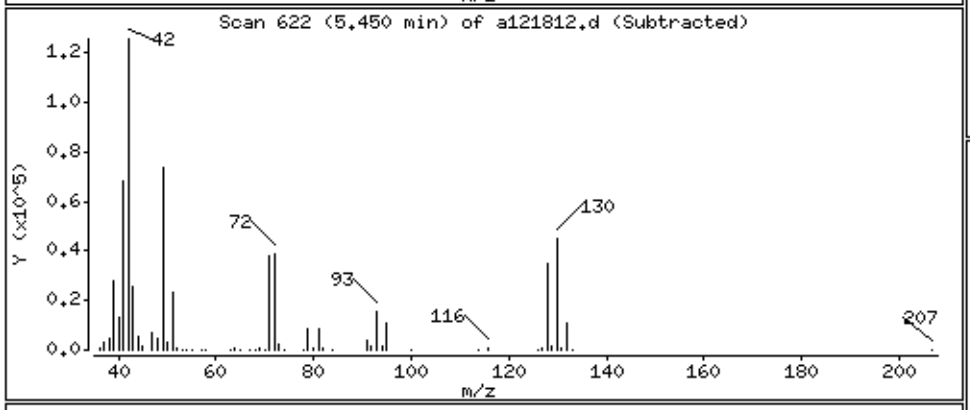
Column diameter: 0.25

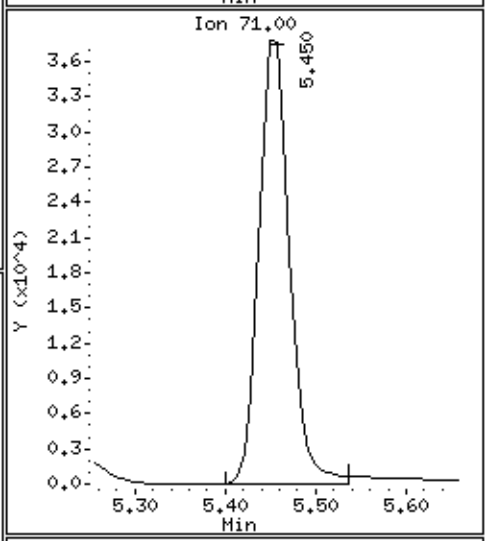
99 Tetrahydrofuran

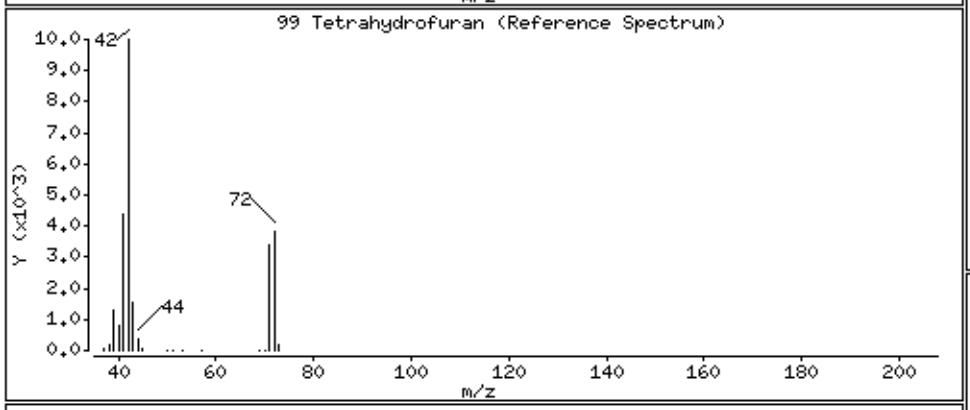
Concentration: 47.313 PPBV

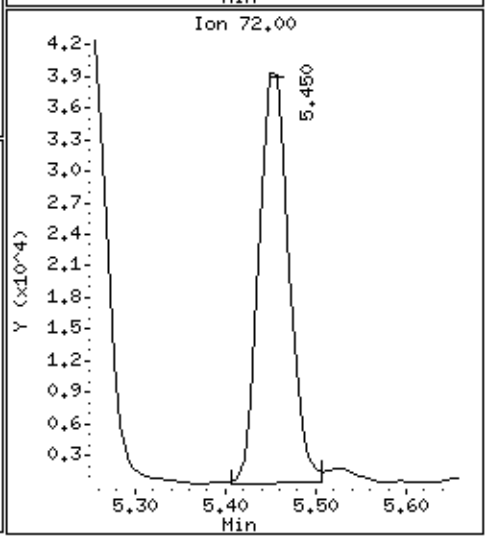


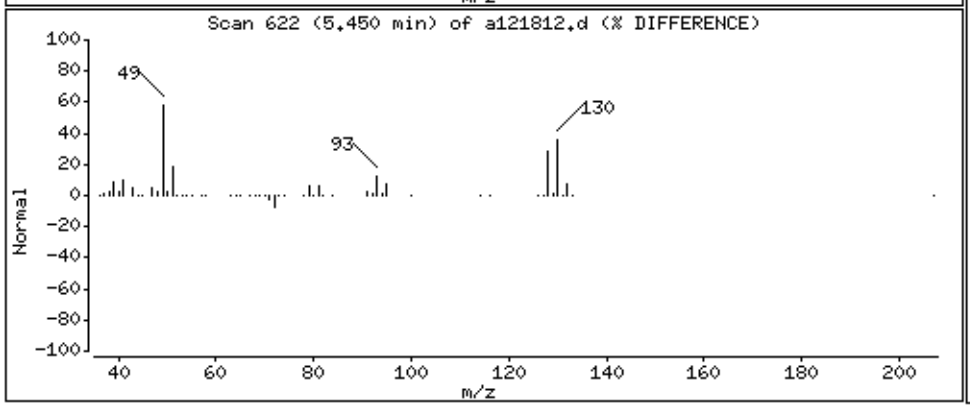












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

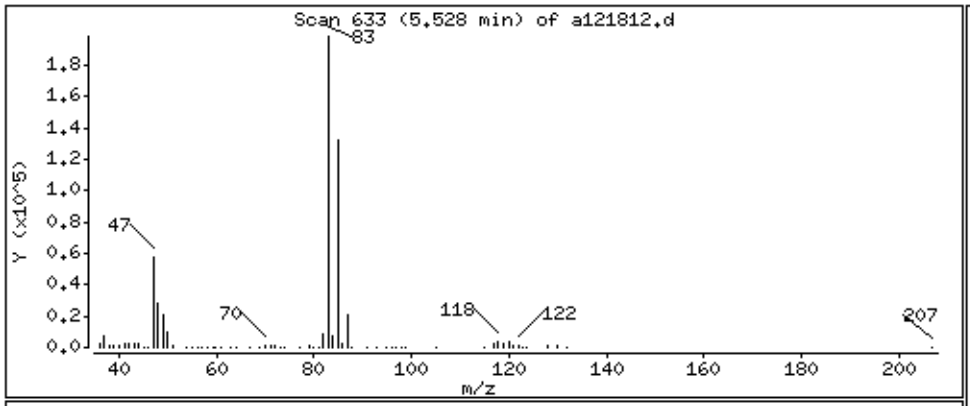
Operator: EA

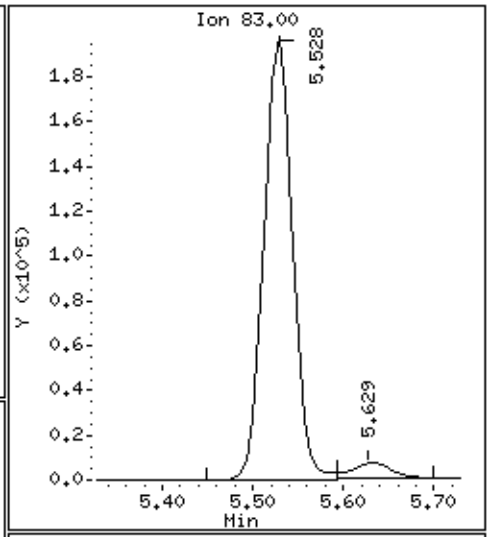
Column phase: RTX-624

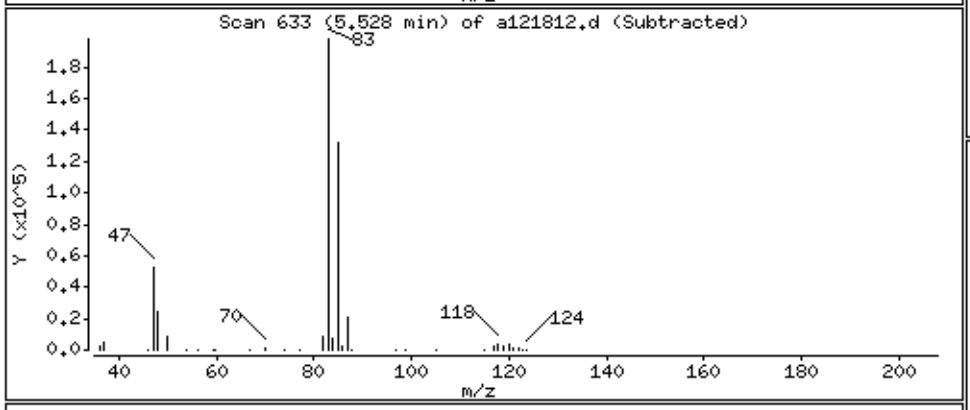
Column diameter: 0.25

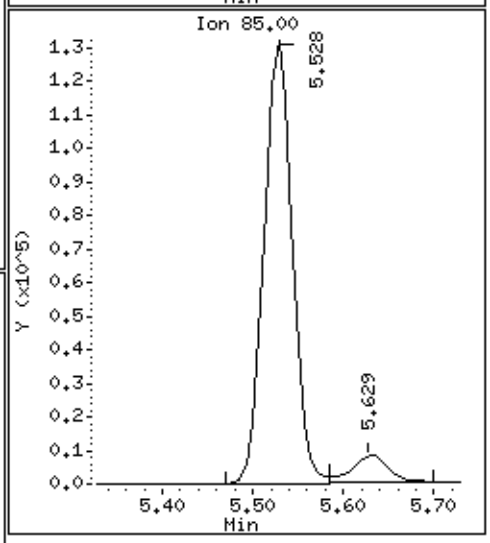
100 Chloroform

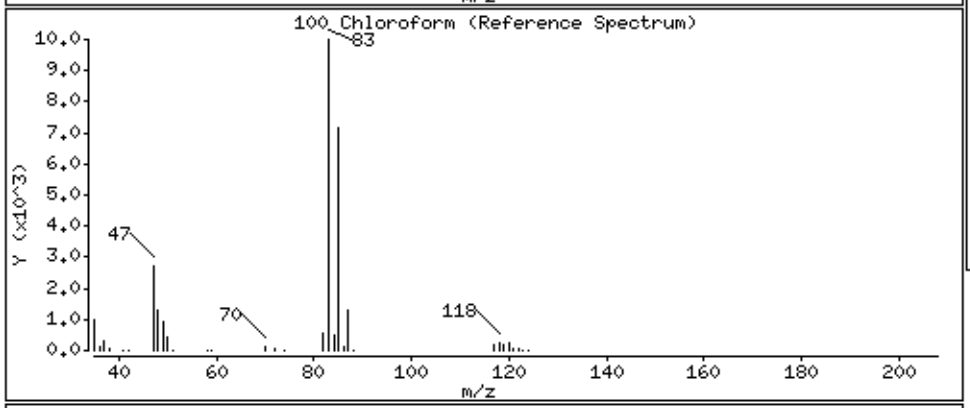
Concentration: 46.246 PPBV

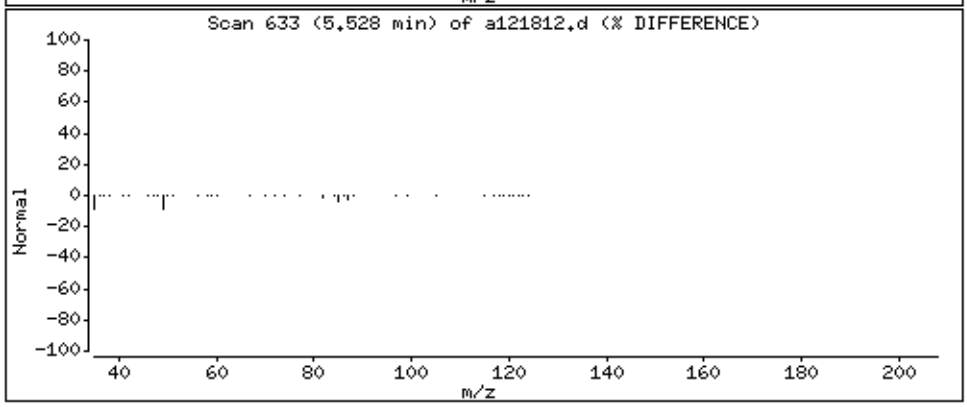












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

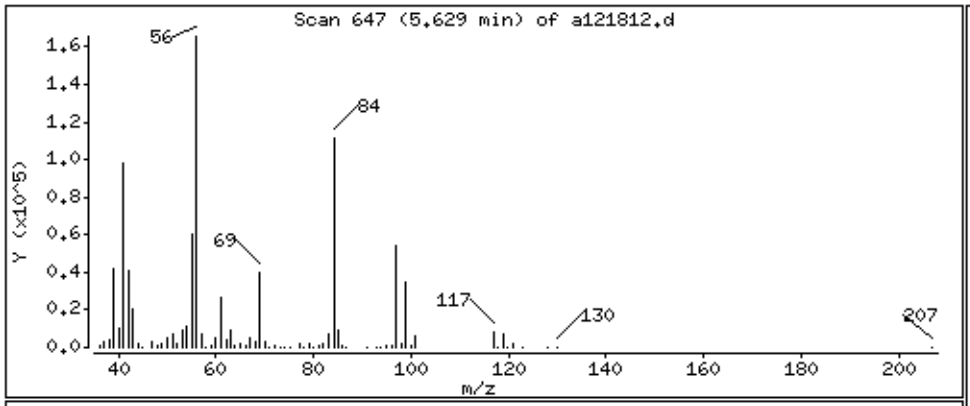
Operator: EA

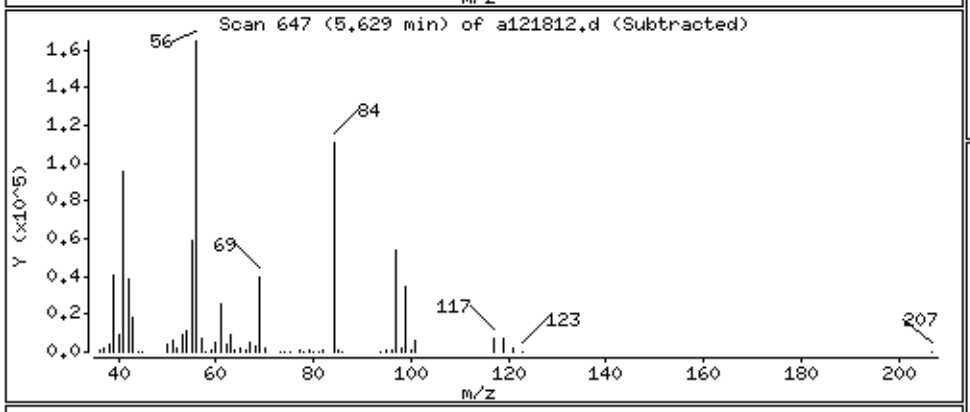
Column phase: RTX-624

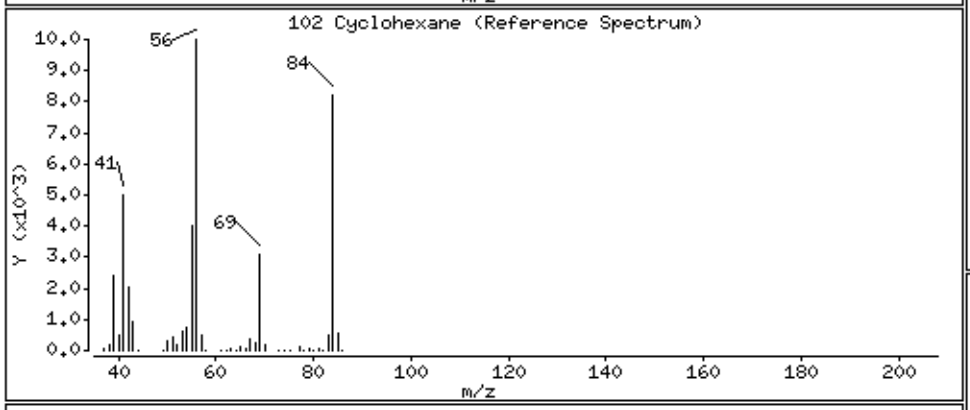
Column diameter: 0.25

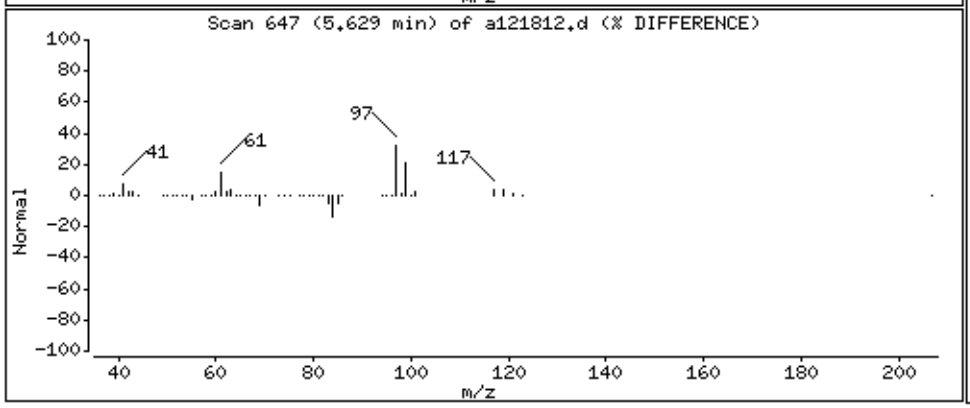
102 Cyclohexane

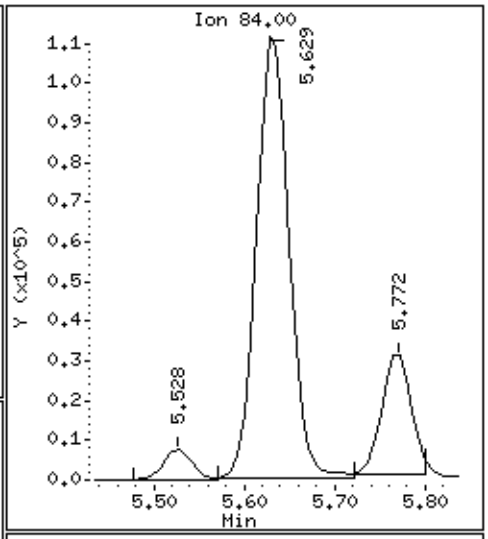
Concentration: 45.881 PPBV

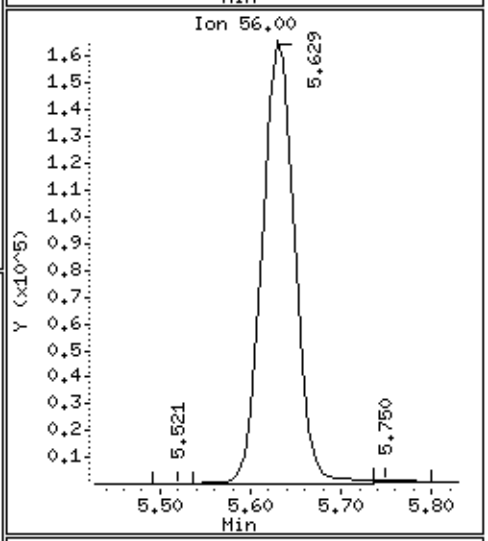


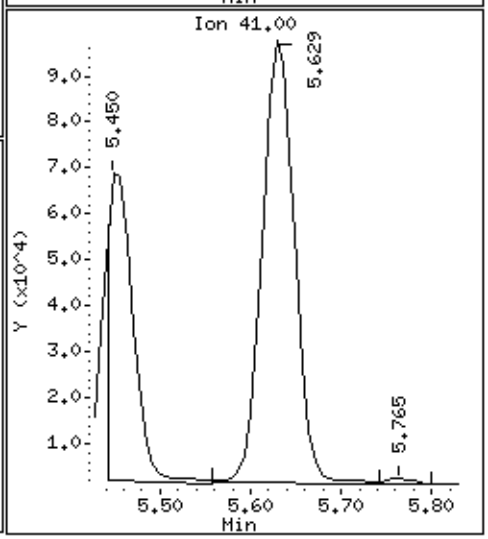












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

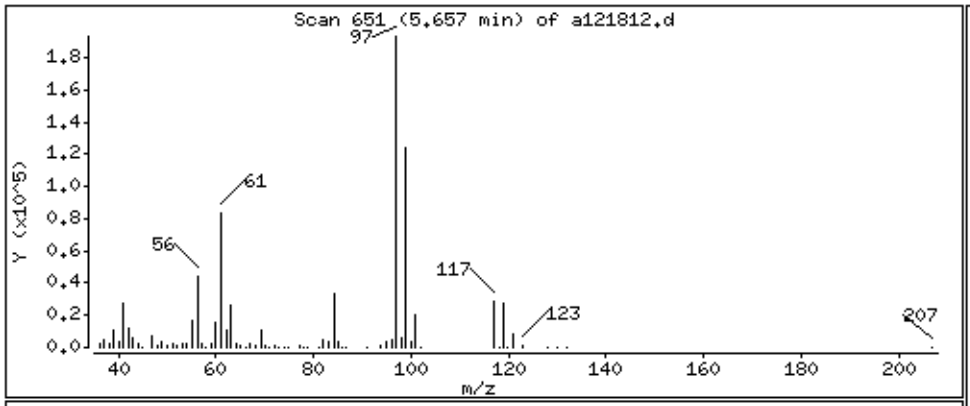
Operator: EA

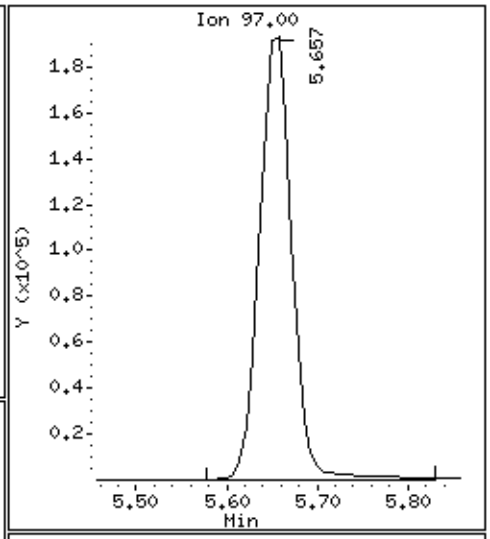
Column phase: RTX-624

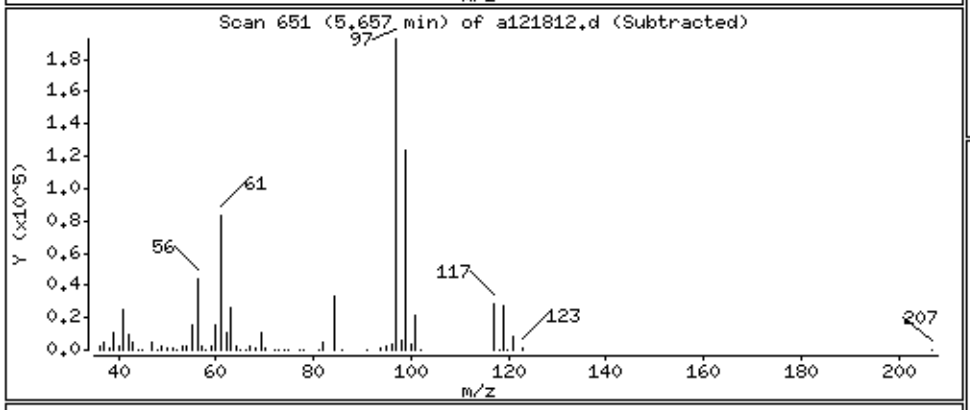
Column diameter: 0.25

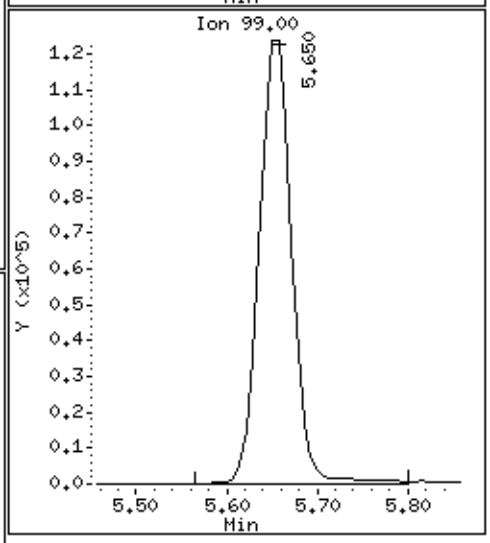
103 1,1,1-Trichloroethane

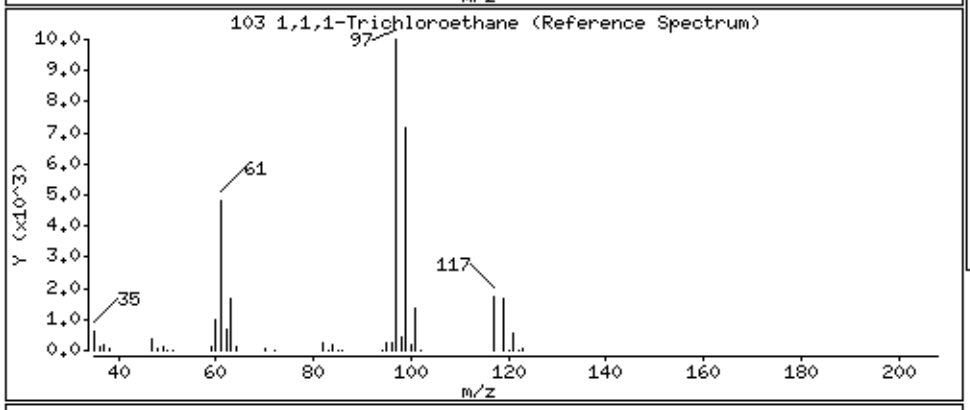
Concentration: 42.792 PPBV

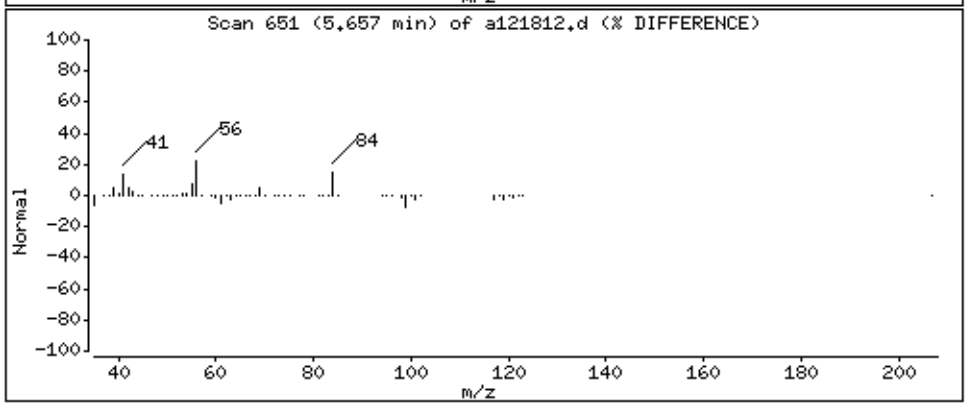












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

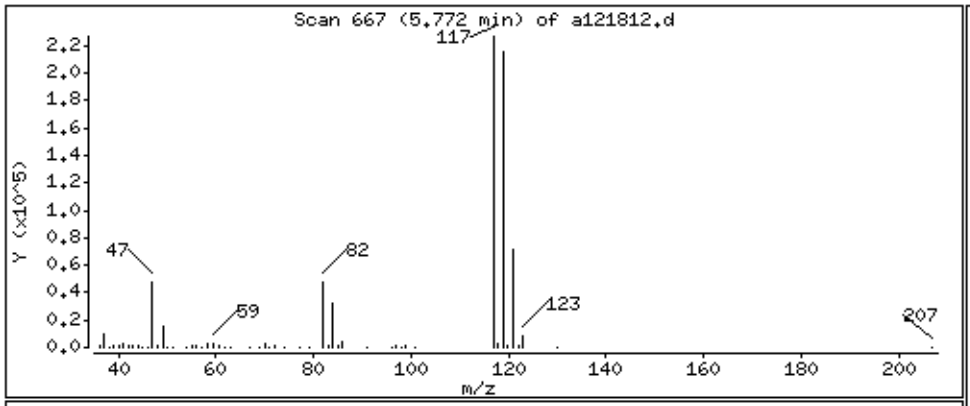
Operator: EA

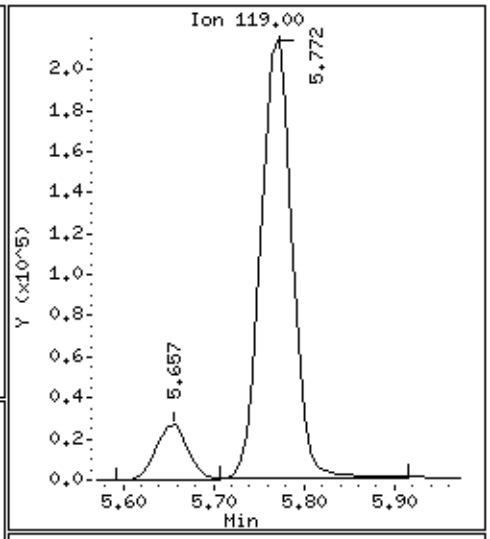
Column phase: RTX-624

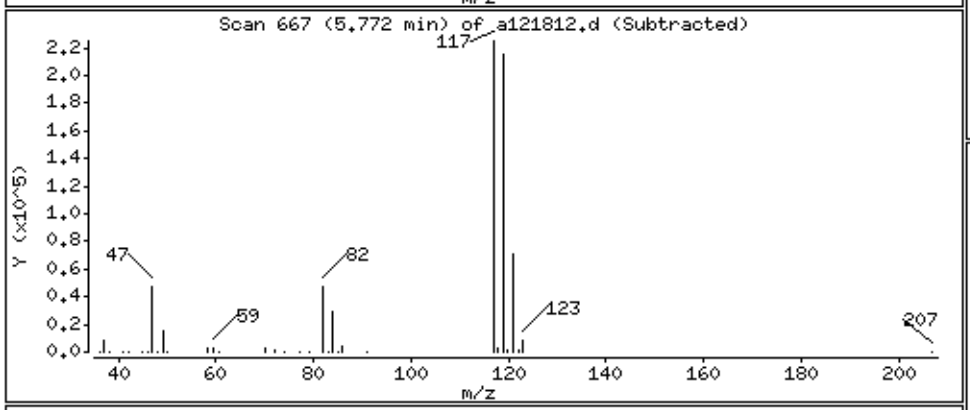
Column diameter: 0.25

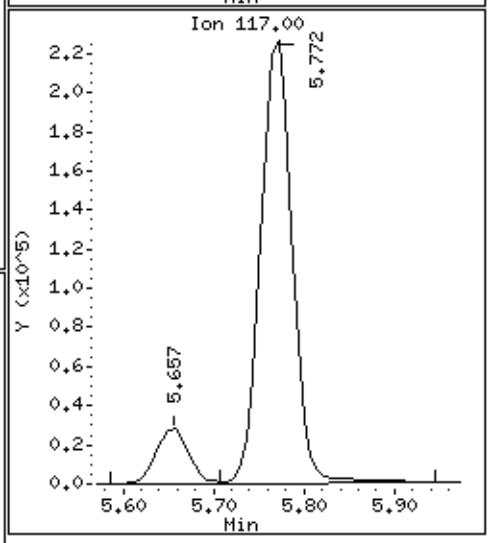
106 Carbon Tetrachloride

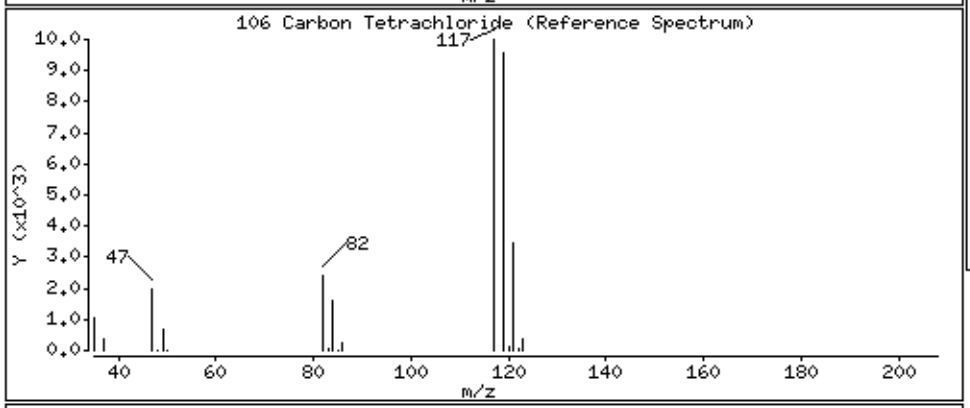
Concentration: 45.723 PPBV

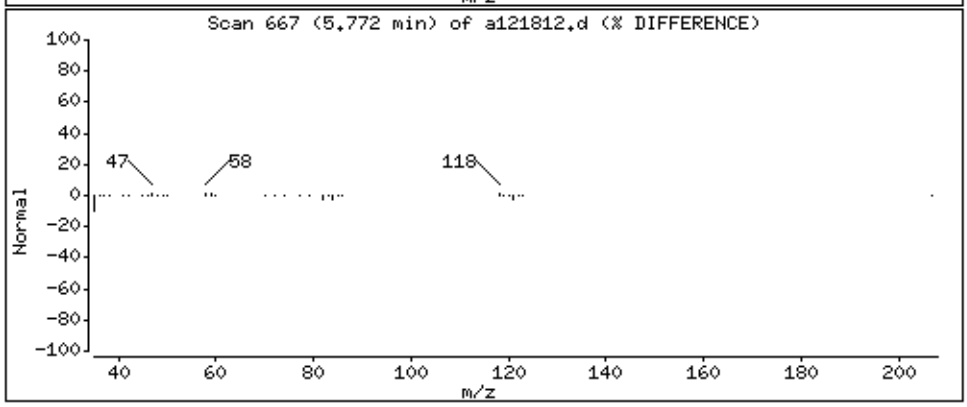












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

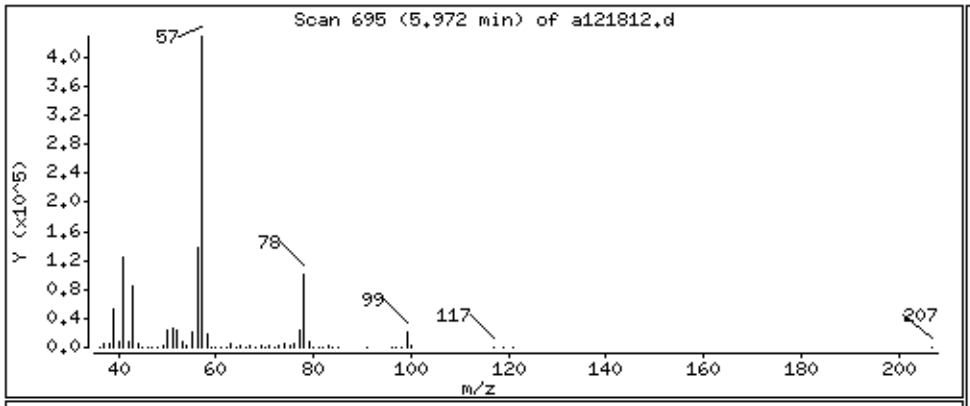
Operator: EA

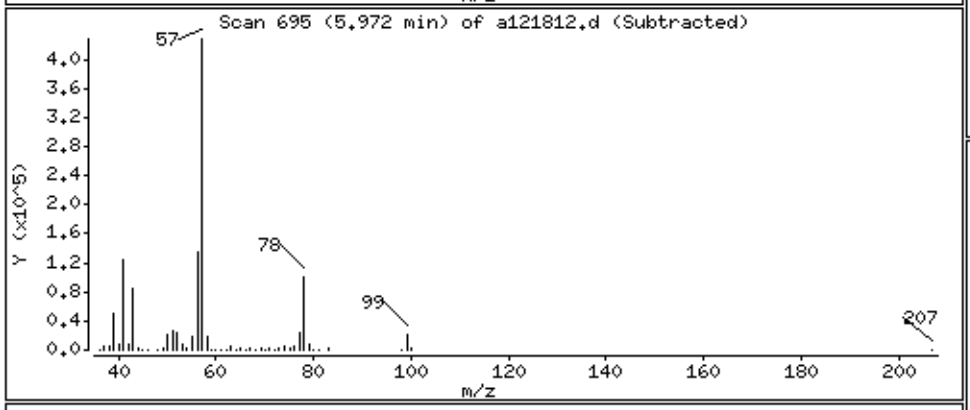
Column phase: RTX-624

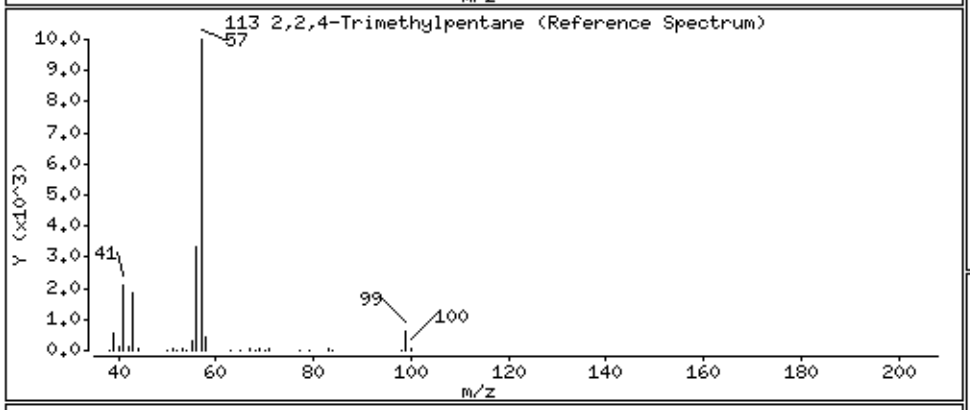
Column diameter: 0.25

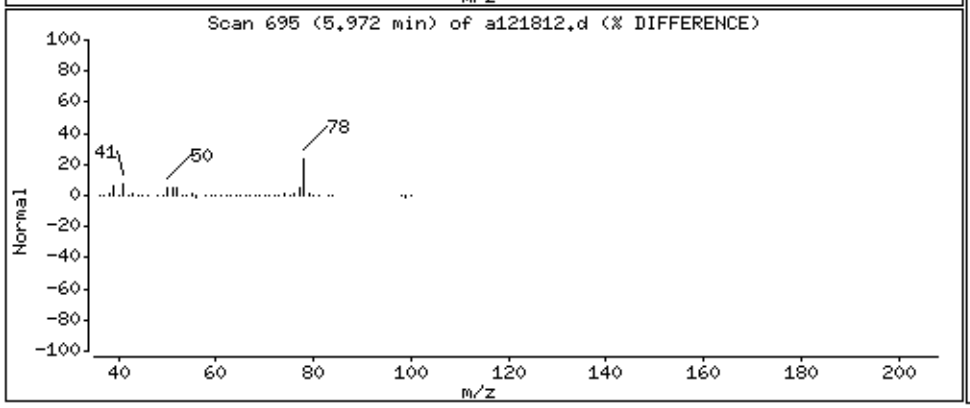
113 2,2,4-Trimethylpentane

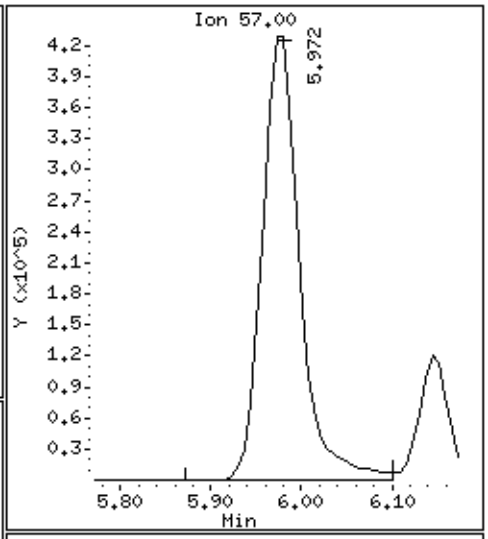
Concentration: 48.148 PPBV

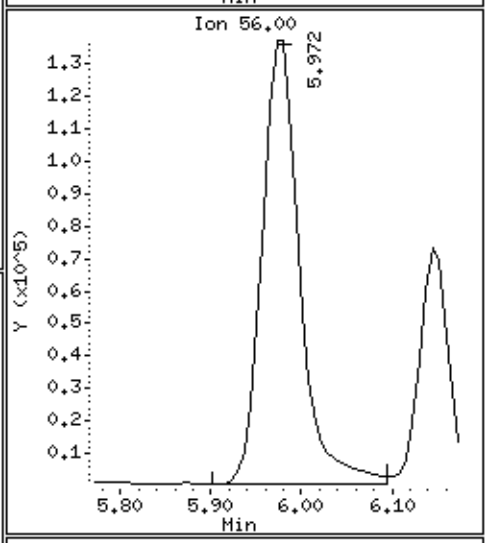


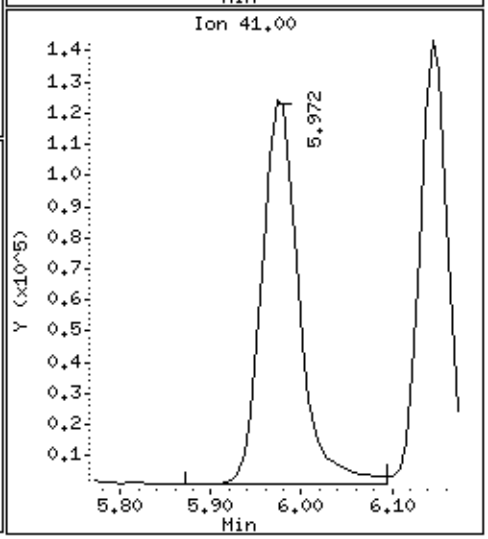












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

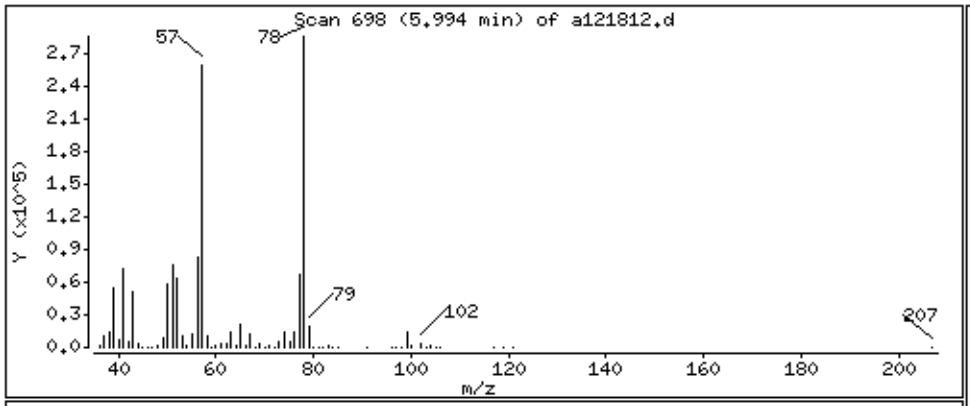
Operator: EA

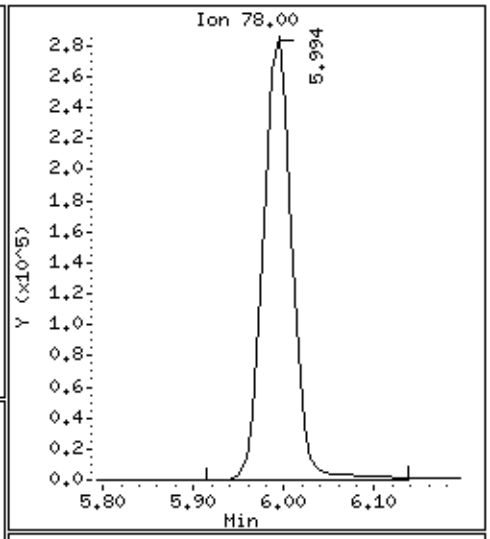
Column phase: RTX-624

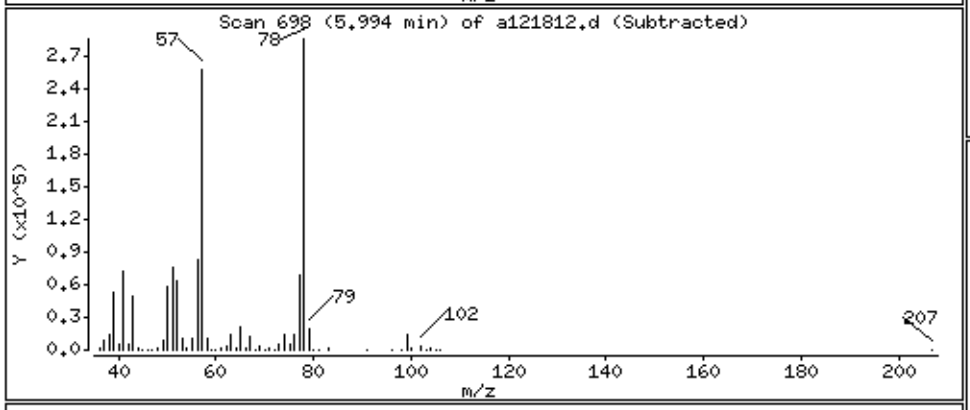
Column diameter: 0.25

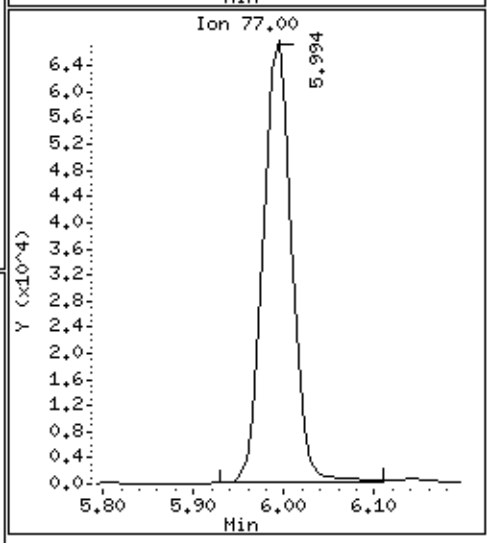
116 Benzene

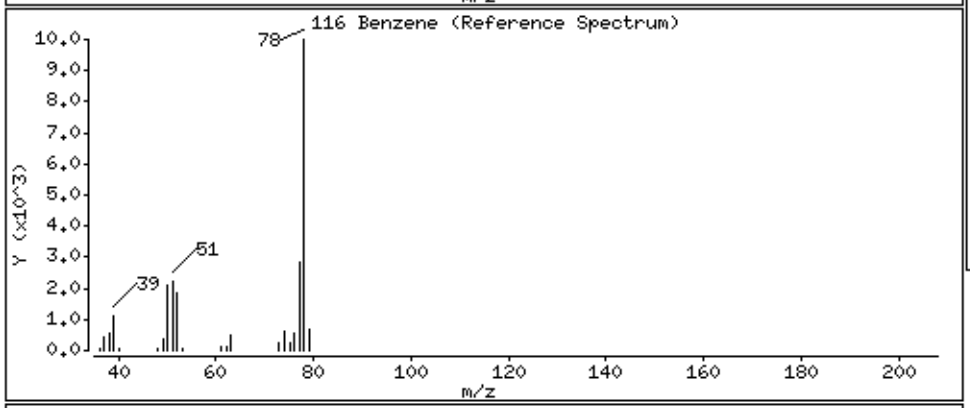
Concentration: 45.431 PPBV

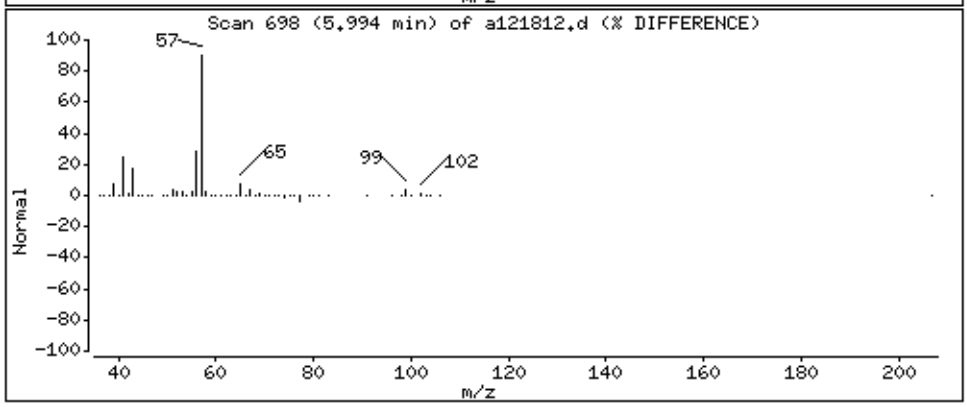












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

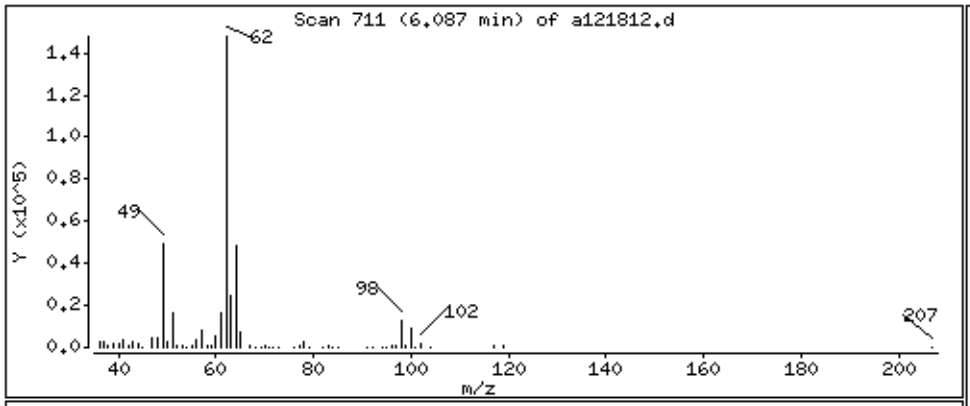
Operator: EA

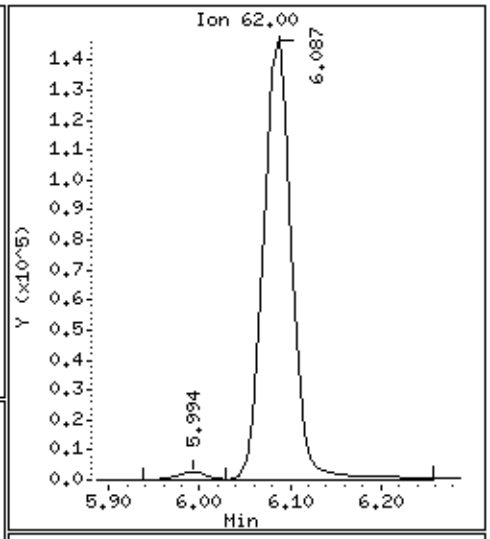
Column phase: RTX-624

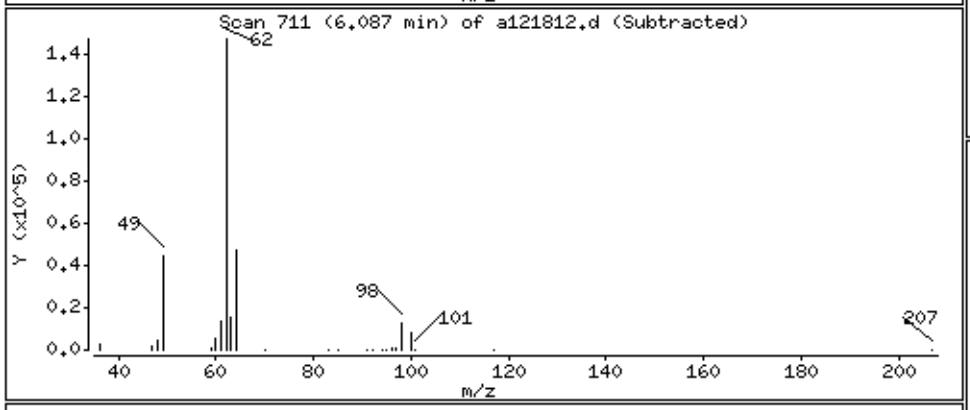
Column diameter: 0.25

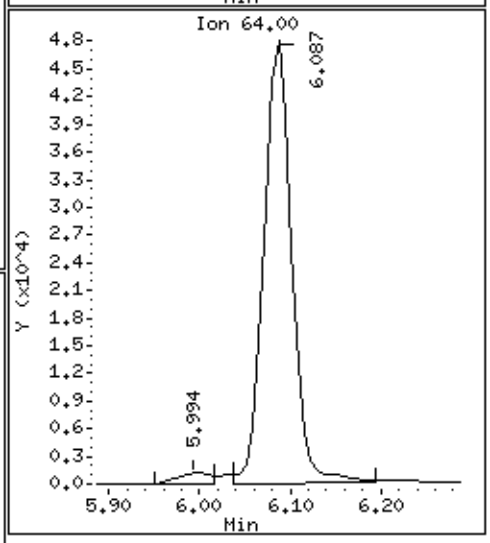
120 1,2-Dichloroethane

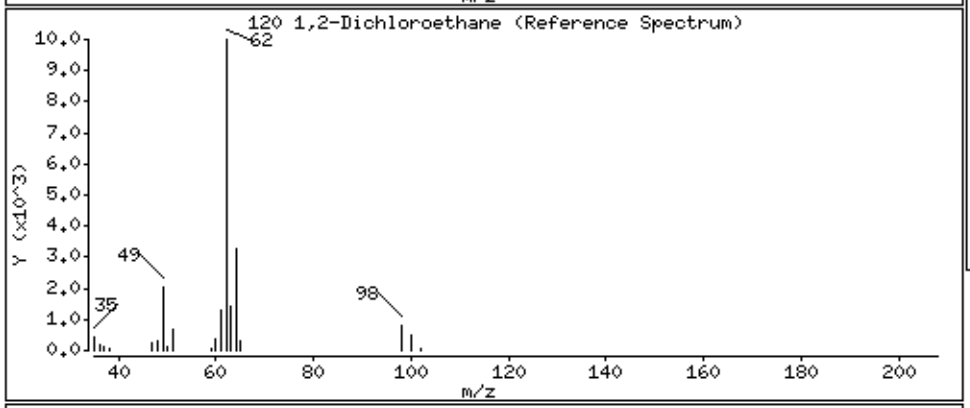
Concentration: 46.704 PPBV

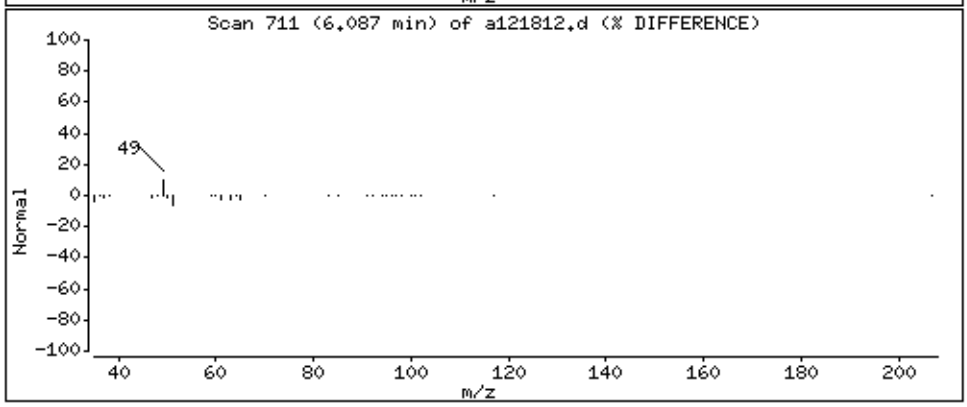












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

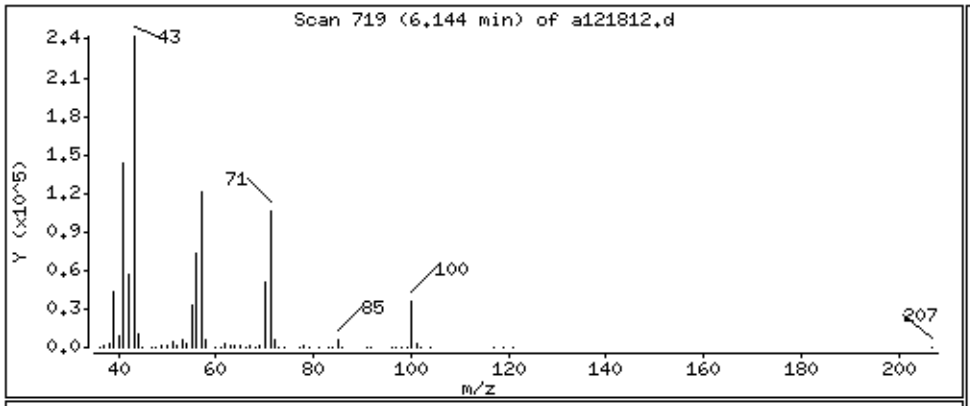
Operator: EA

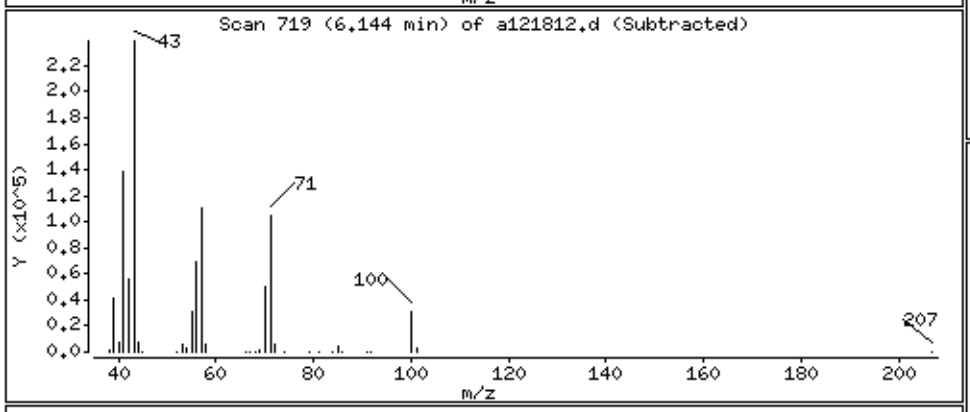
Column phase: RTX-624

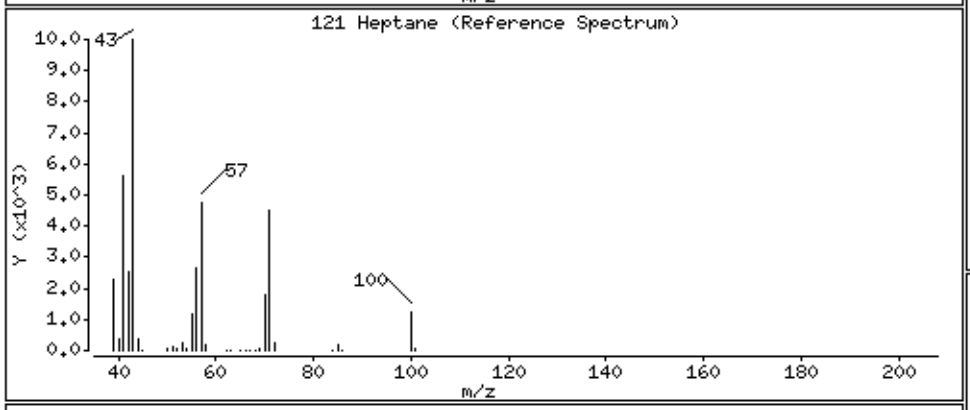
Column diameter: 0.25

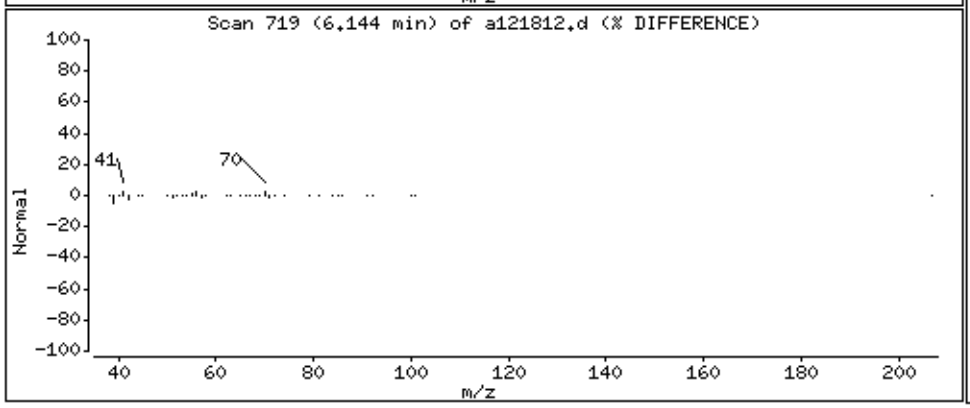
121 Heptane

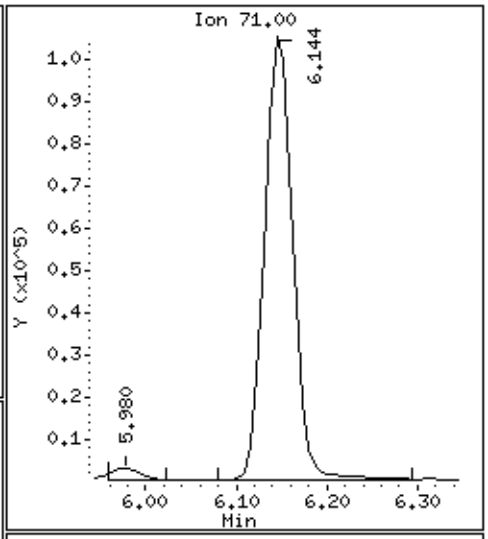
Concentration: 45.575 PPBV

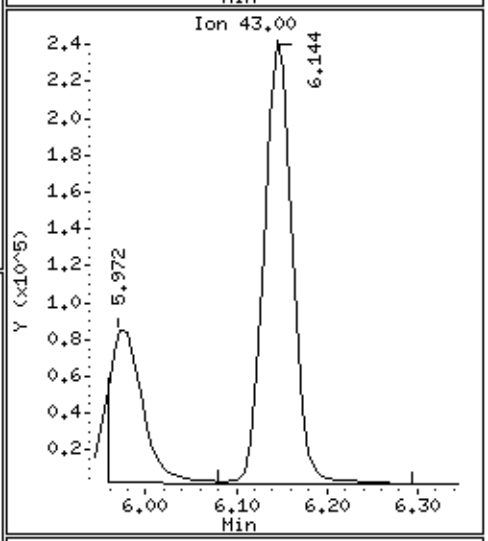


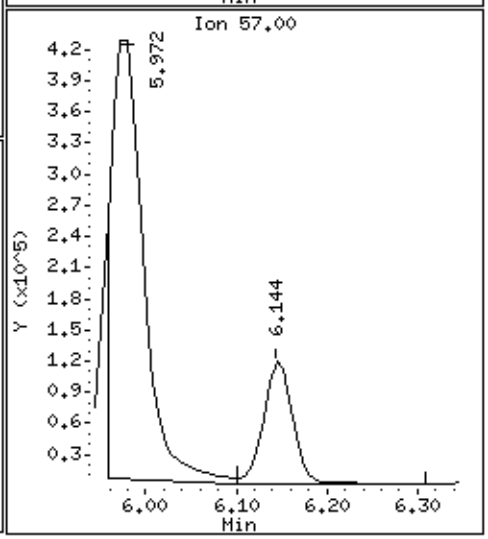












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

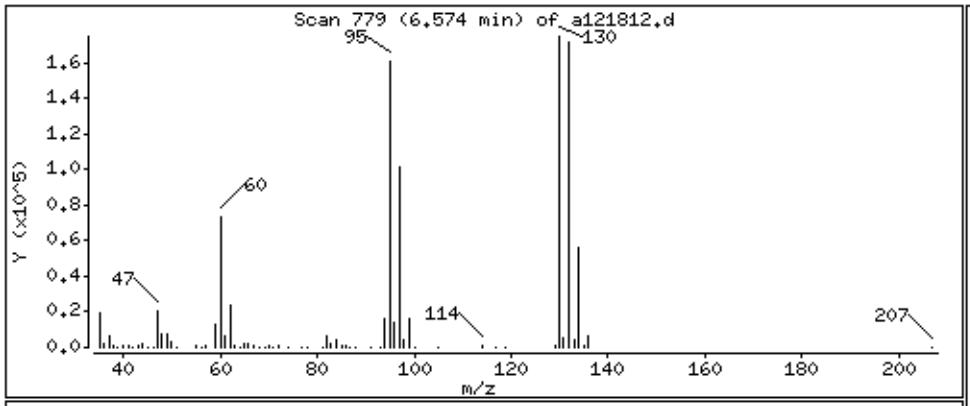
Operator: EA

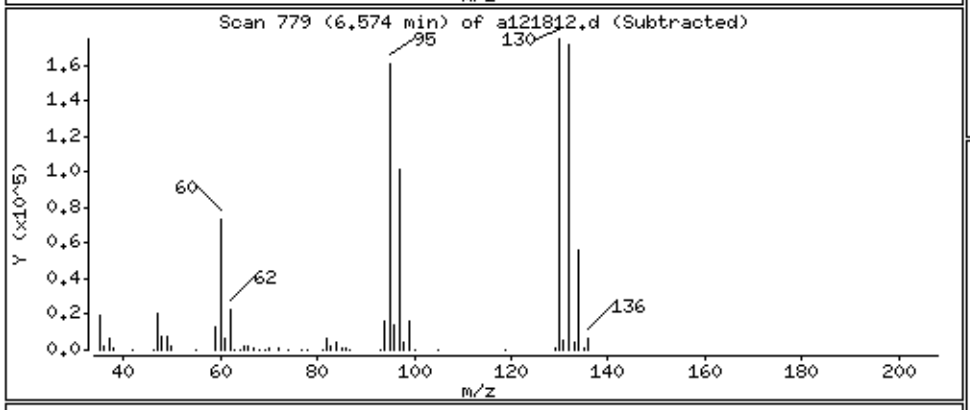
Column phase: RTX-624

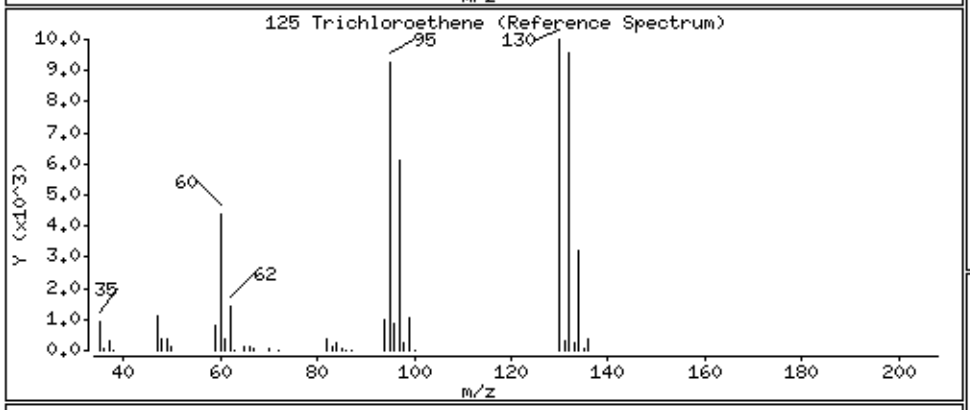
Column diameter: 0.25

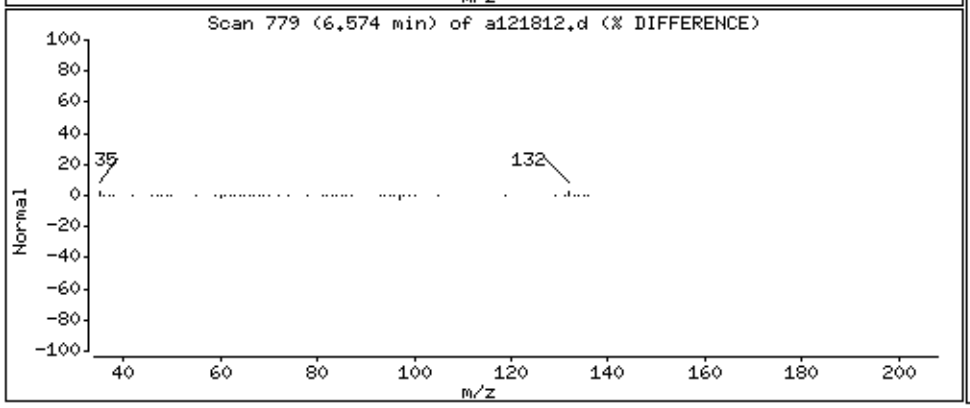
125 Trichloroethene

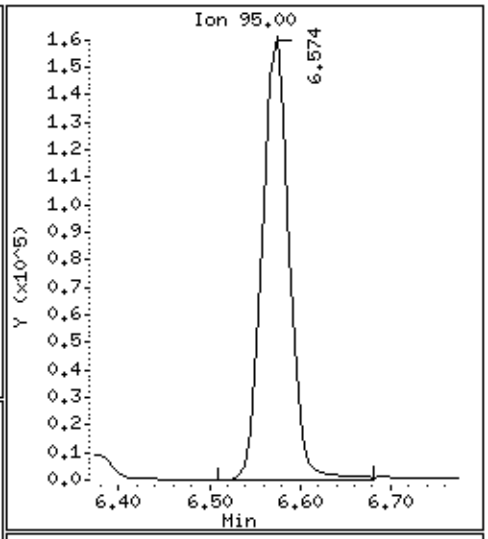
Concentration: 43.739 PPBV

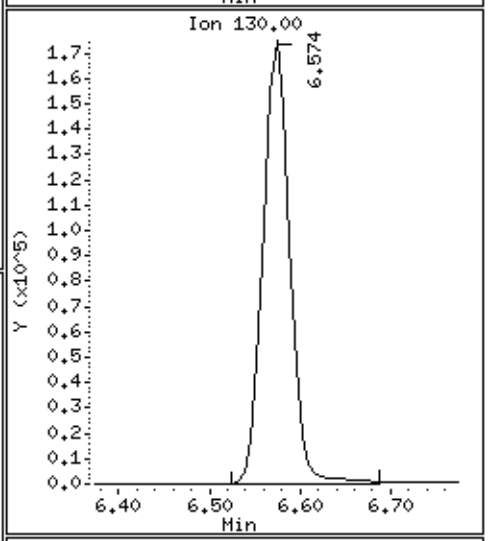


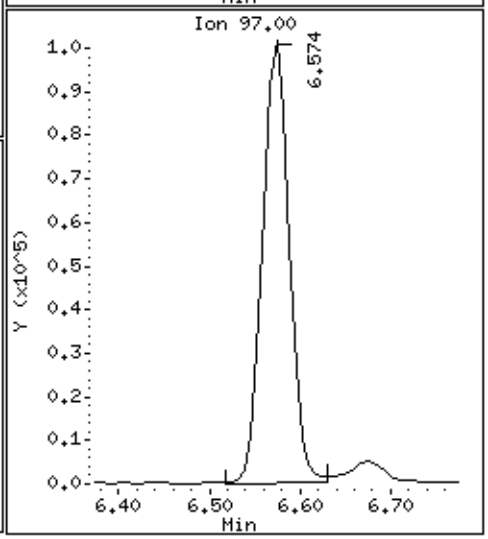












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

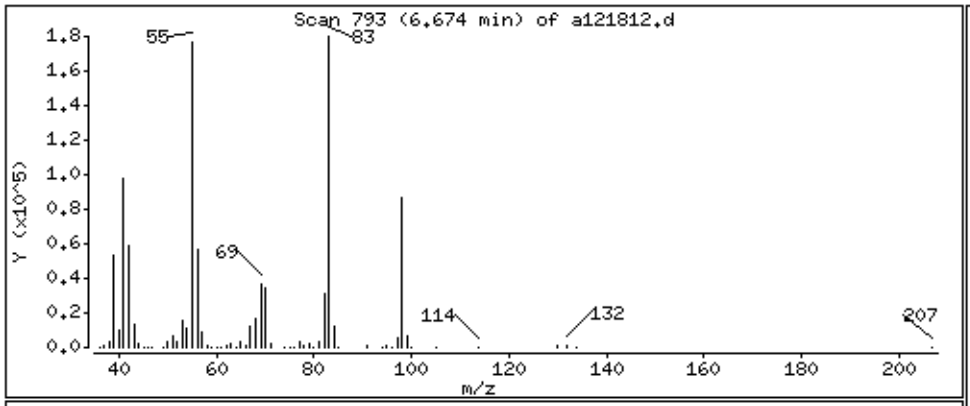
Operator: EA

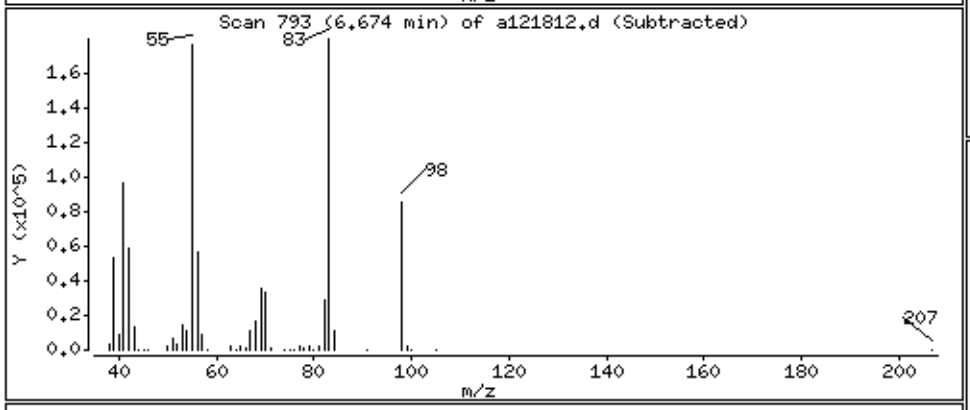
Column phase: RTX-624

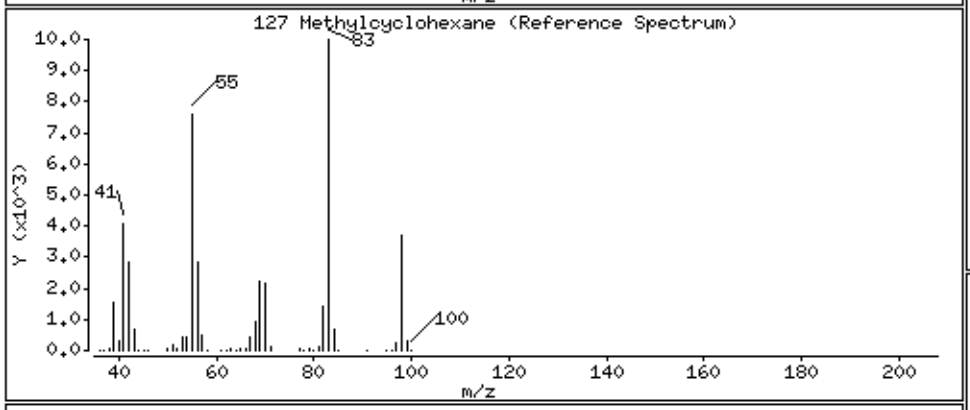
Column diameter: 0.25

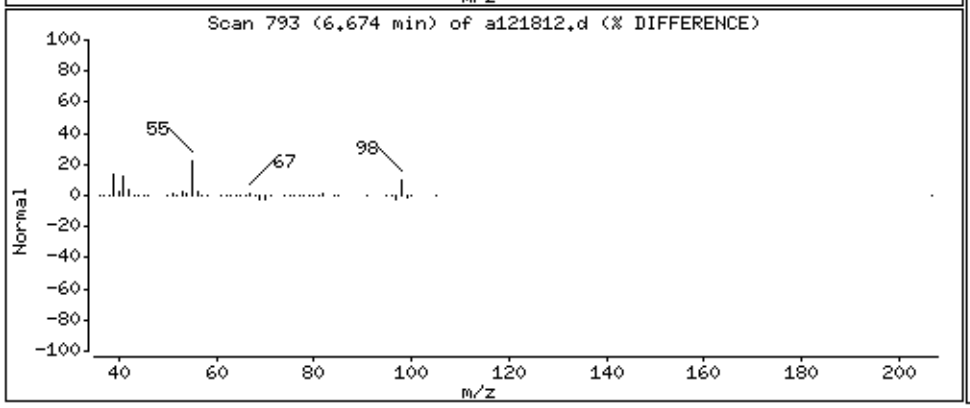
127 Methylcyclohexane

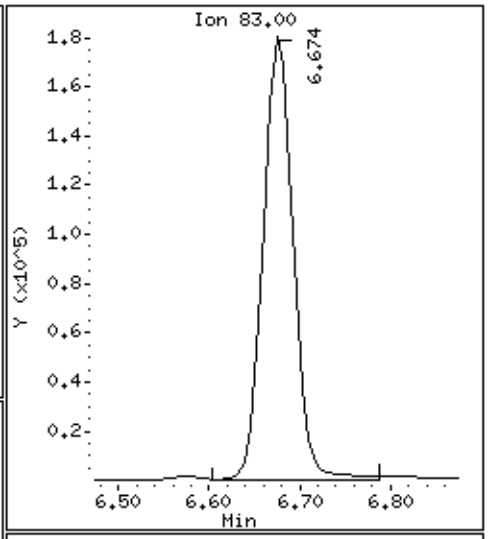
Concentration: 42.132 PPBV

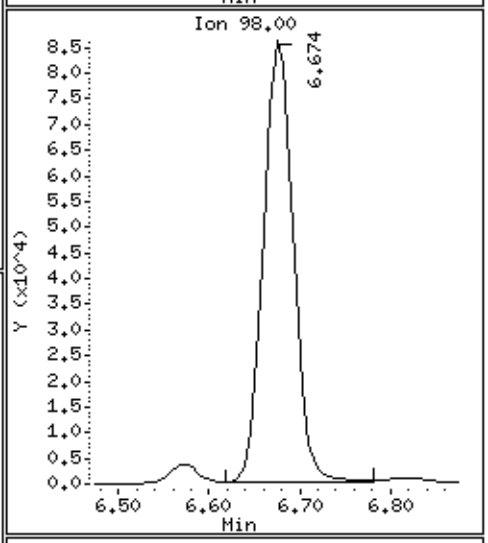


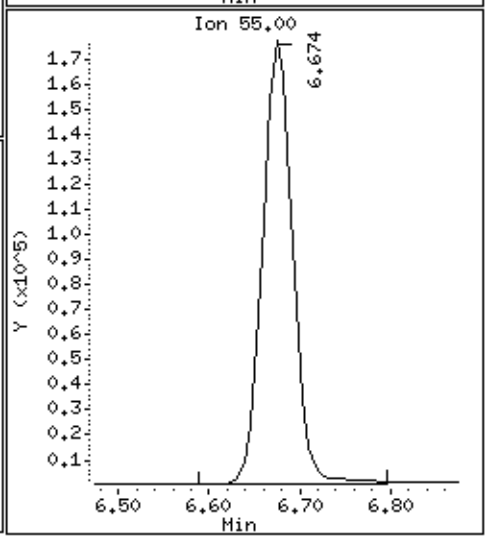












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

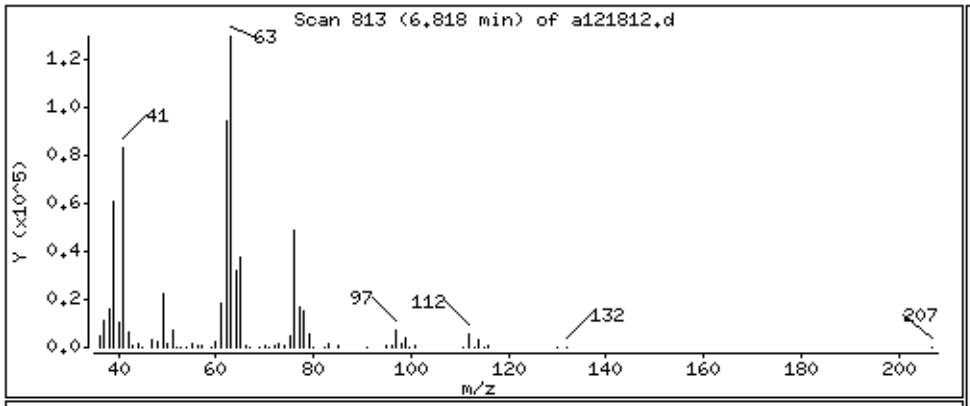
Operator: EA

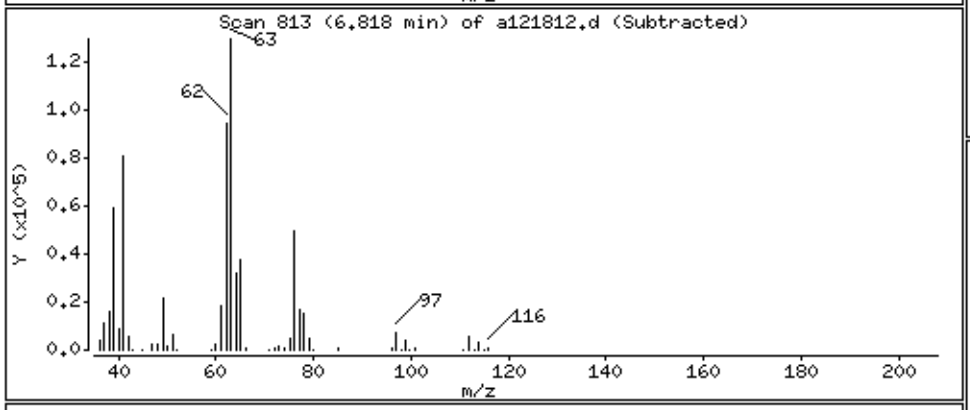
Column phase: RTX-624

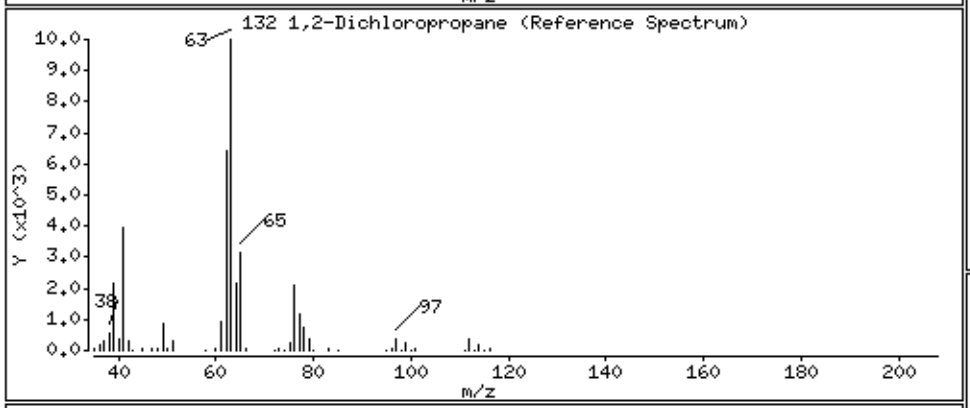
Column diameter: 0.25

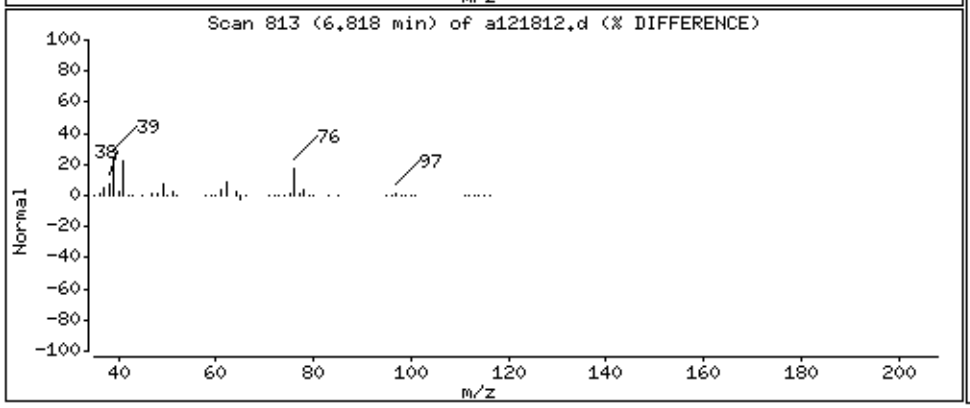
132 1,2-Dichloropropane

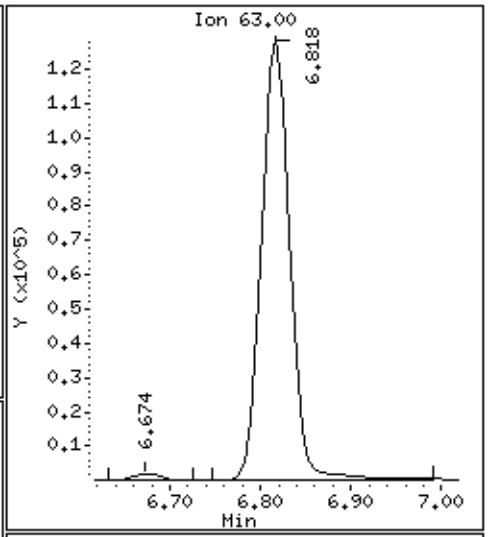
Concentration: 44.078 PPBV

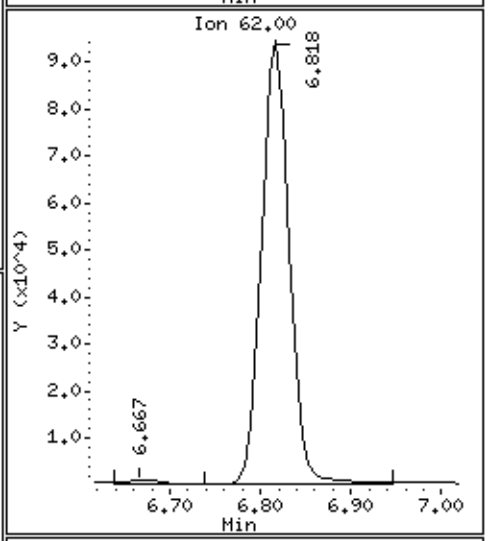


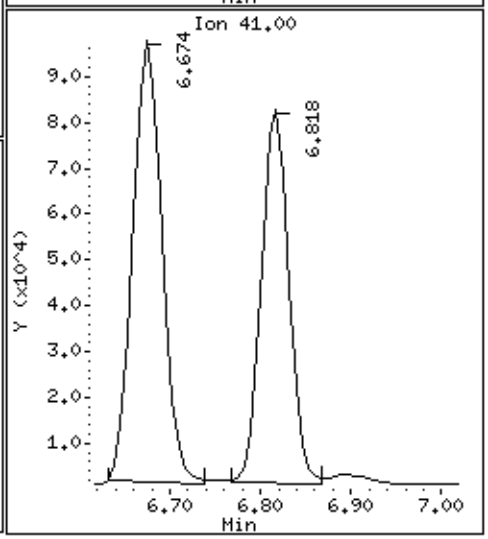












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

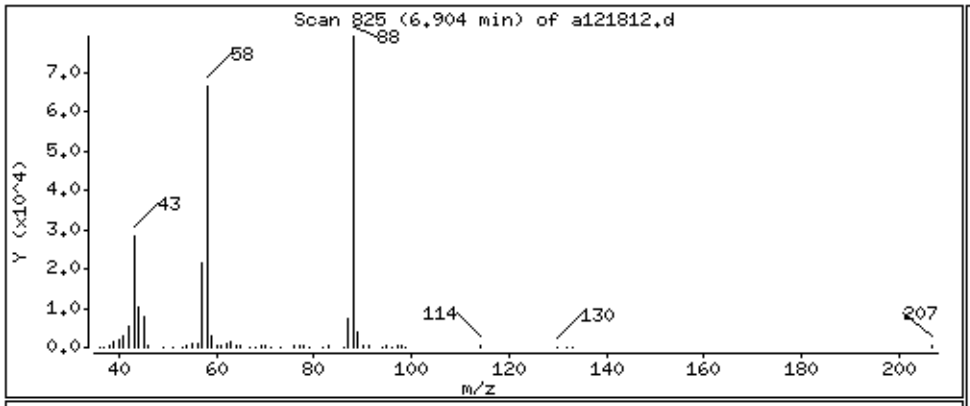
Operator: EA

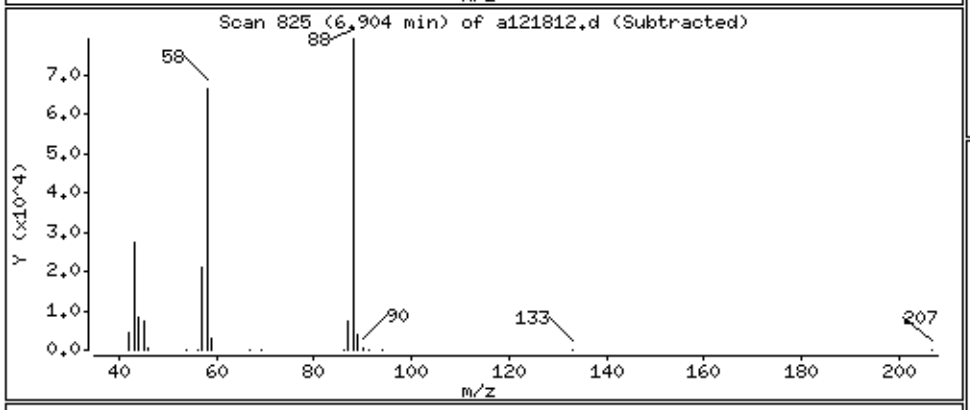
Column phase: RTX-624

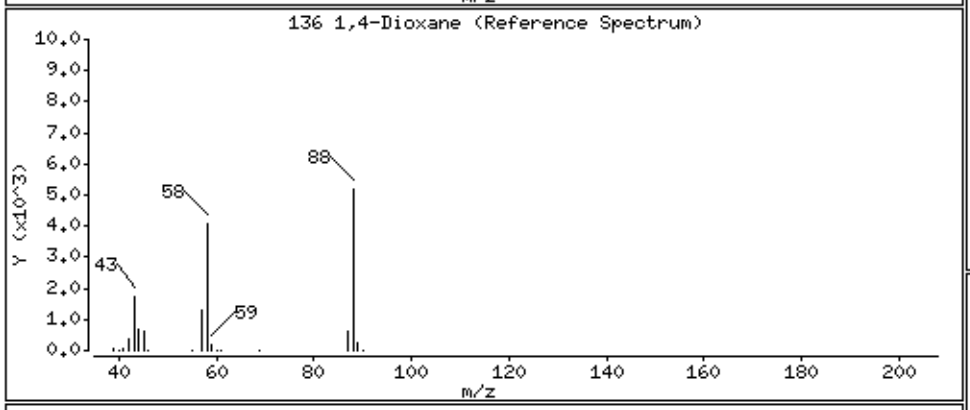
Column diameter: 0.25

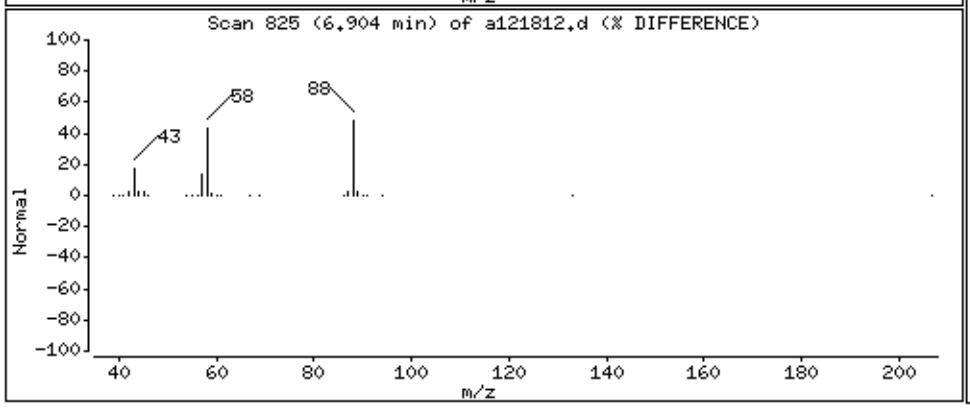
136 1,4-Dioxane

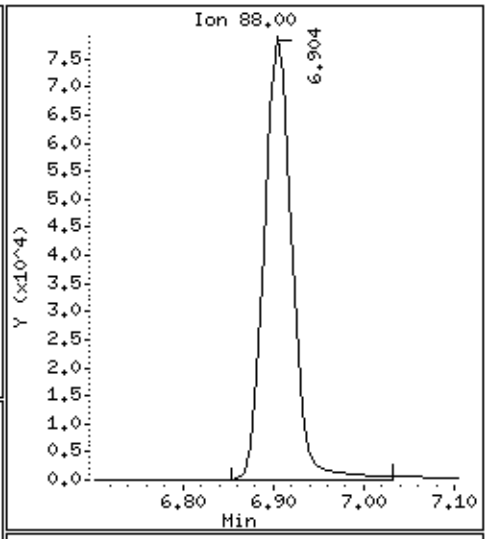
Concentration: 45.945 PPBV

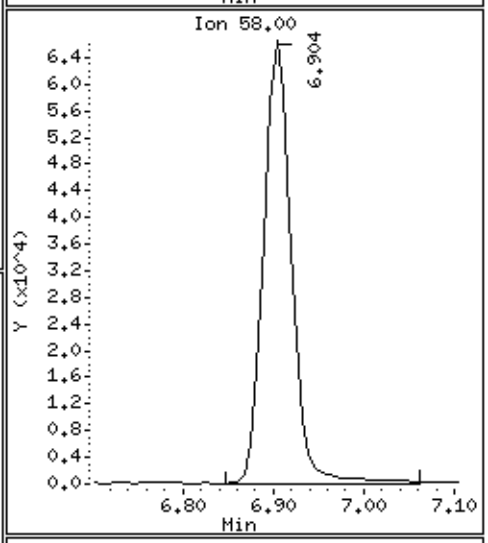


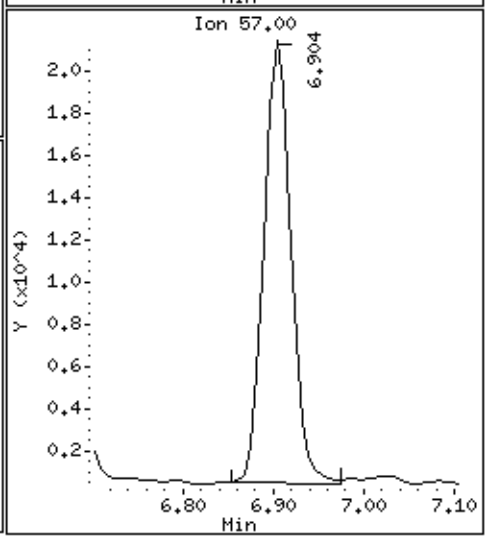












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

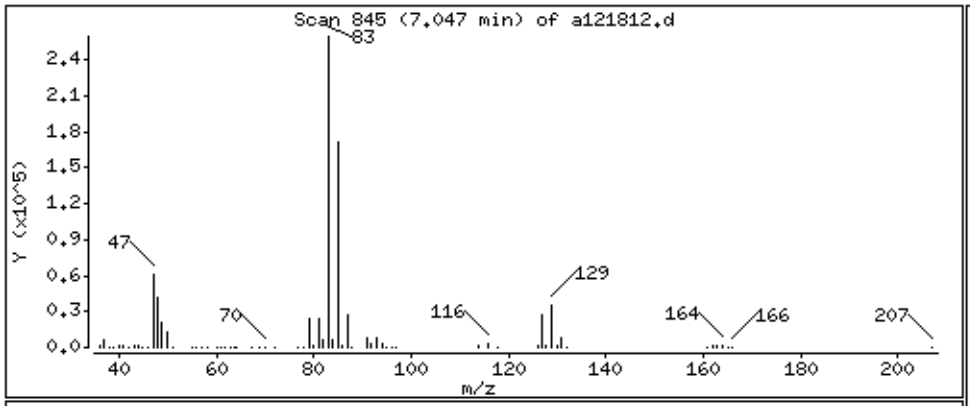
Operator: EA

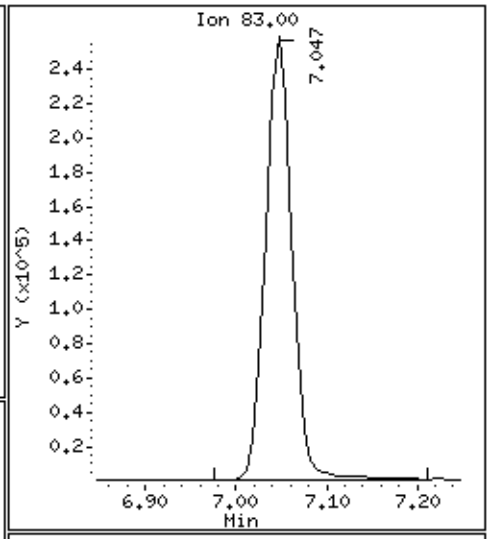
Column phase: RTX-624

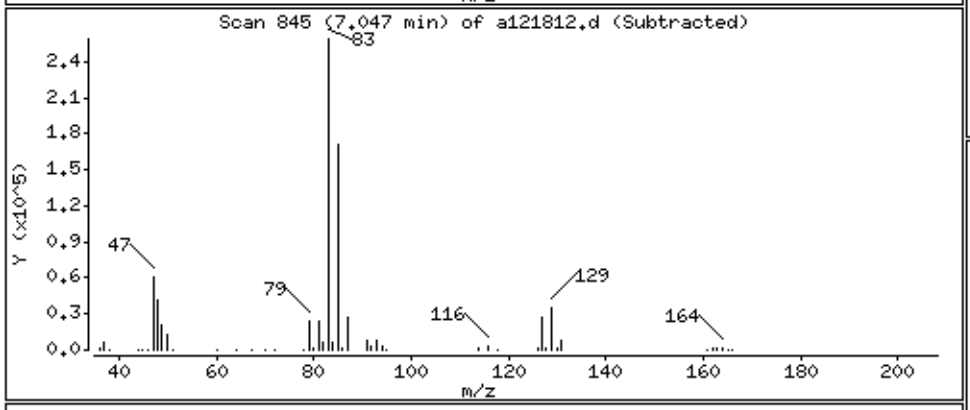
Column diameter: 0.25

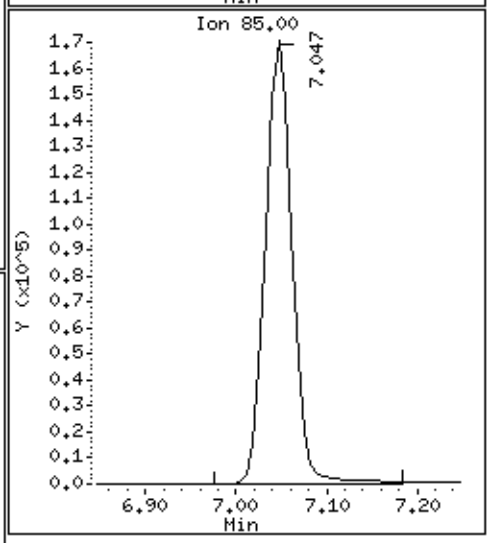
138 Bromodichloromethane

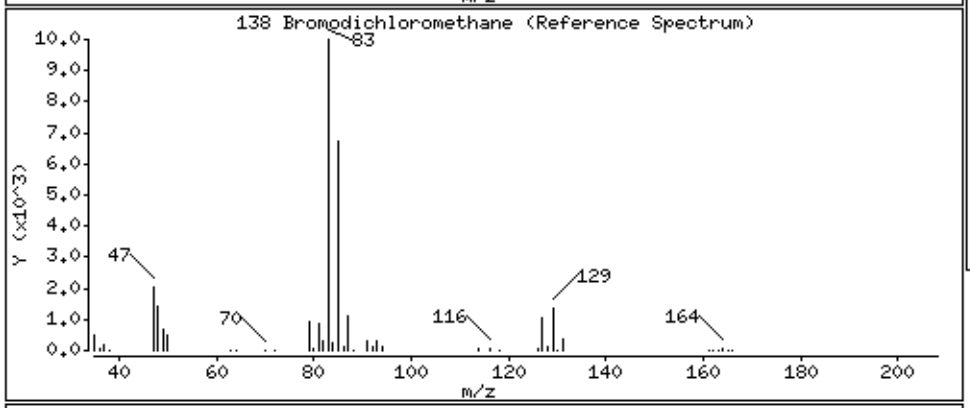
Concentration: 47.349 PPBV

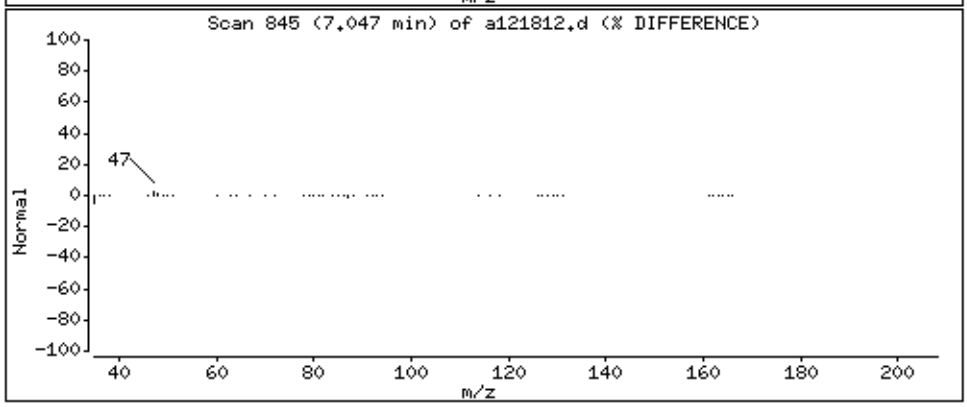












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

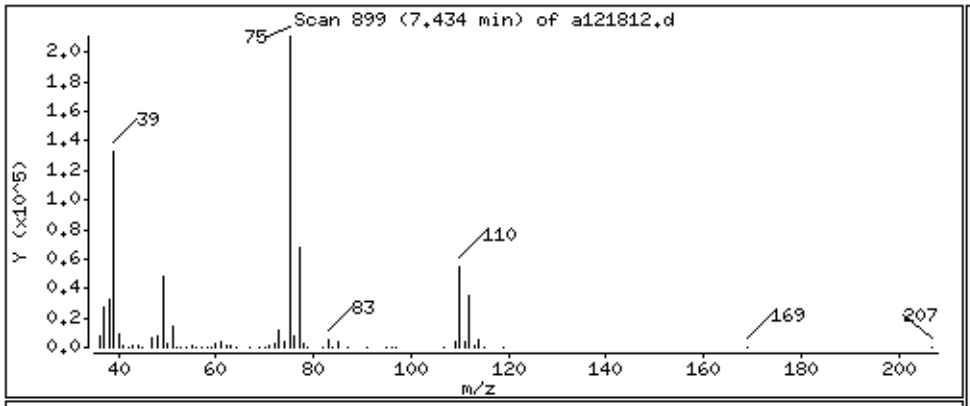
Operator: EA

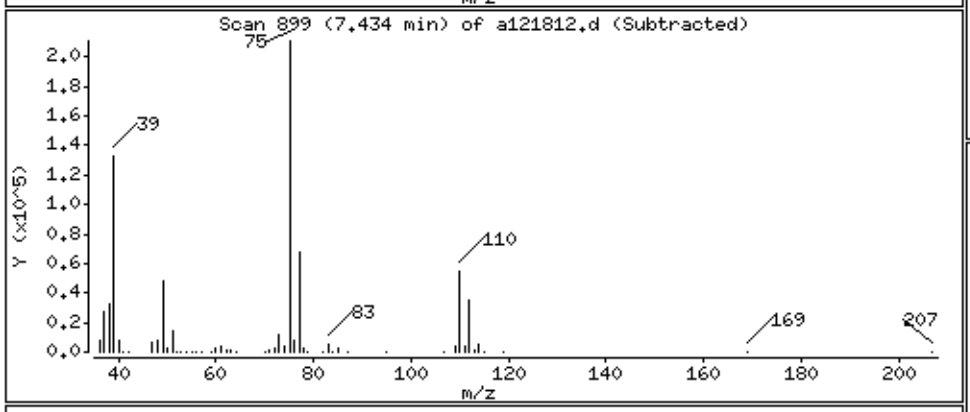
Column phase: RTX-624

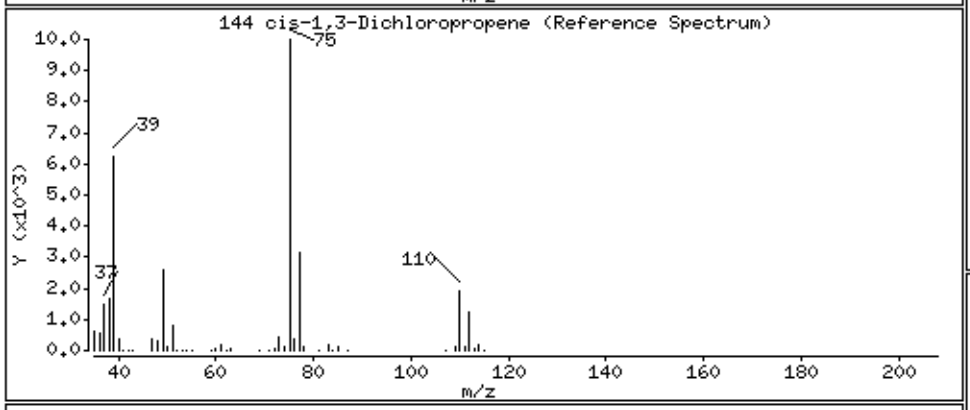
Column diameter: 0.25

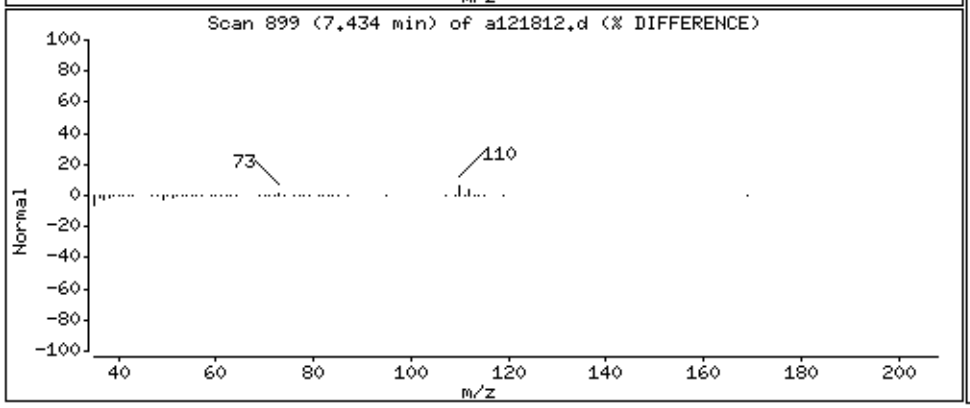
144 cis-1,3-Dichloropropene

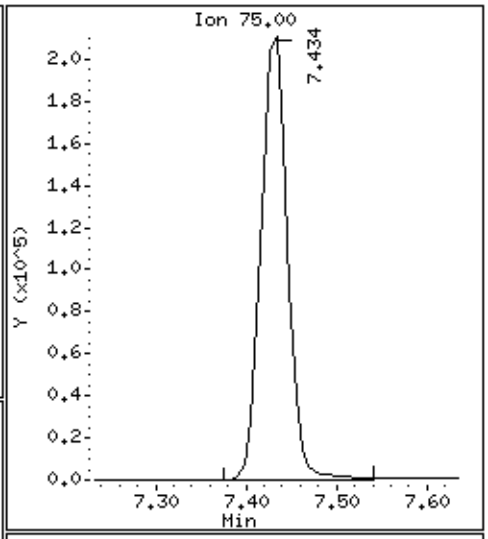
Concentration: 43.304 PPBV

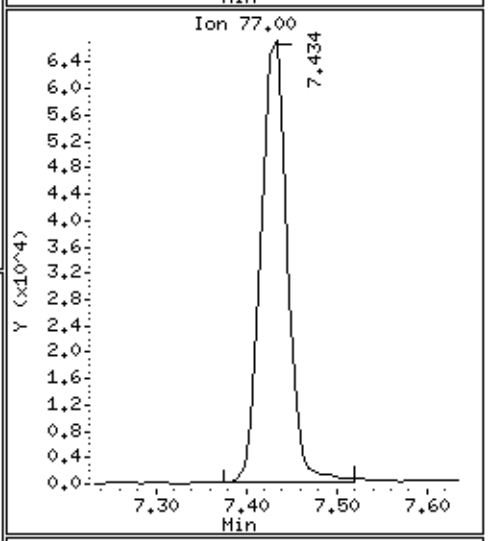


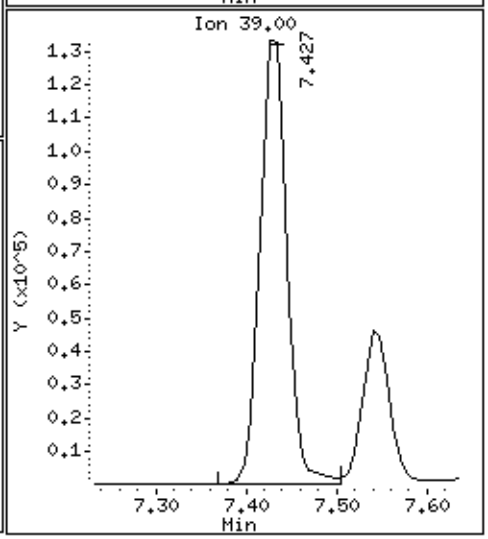












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

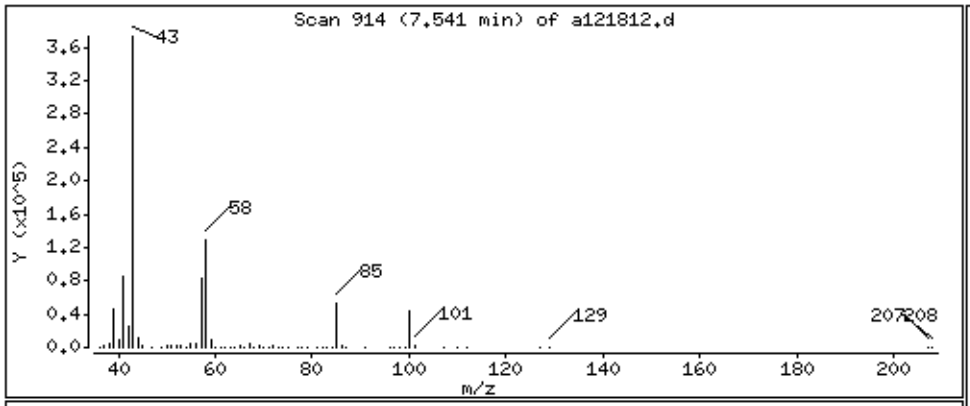
Operator: EA

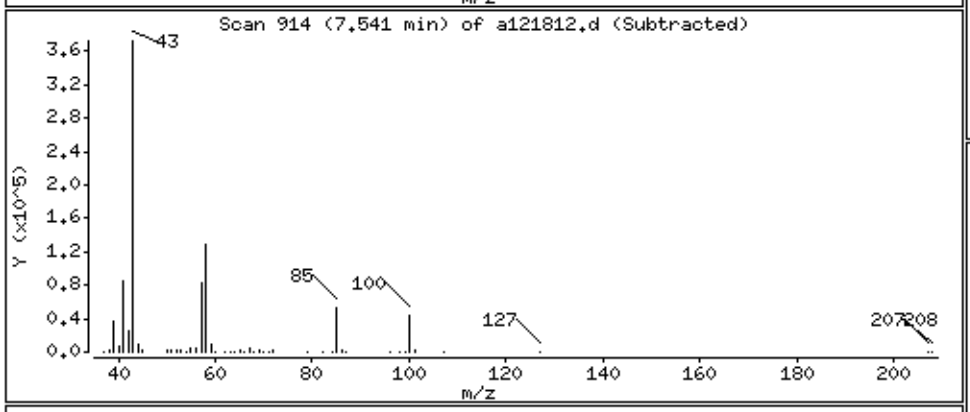
Column phase: RTX-624

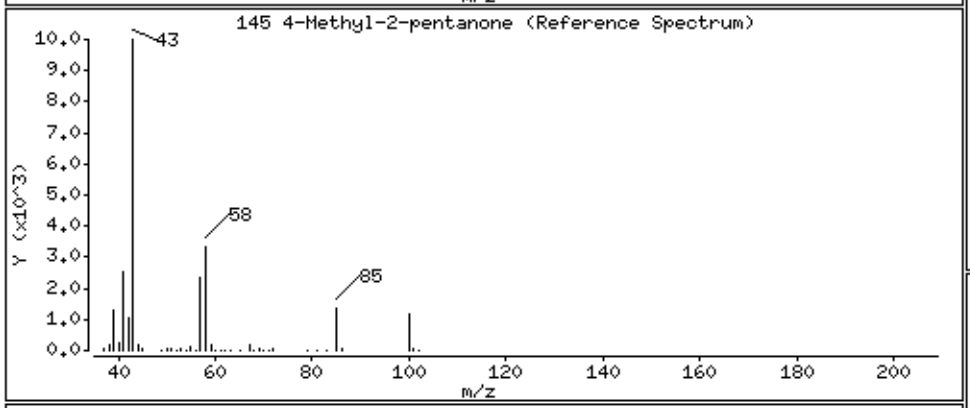
Column diameter: 0.25

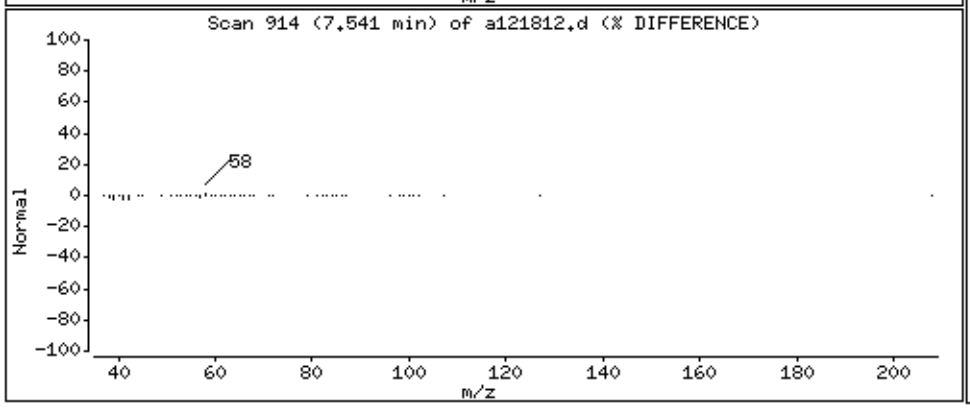
145 4-Methyl-2-pentanone

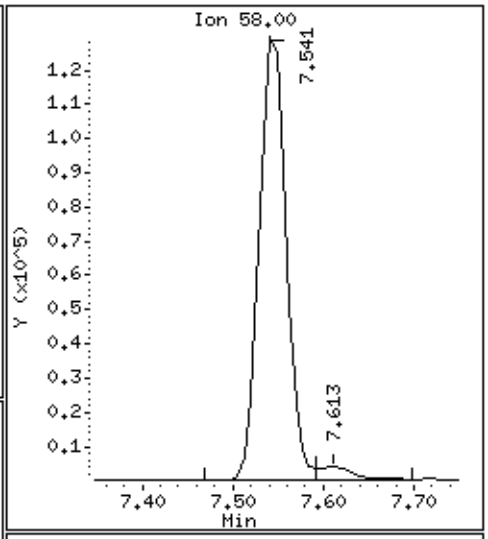
Concentration: 43.170 PPBV

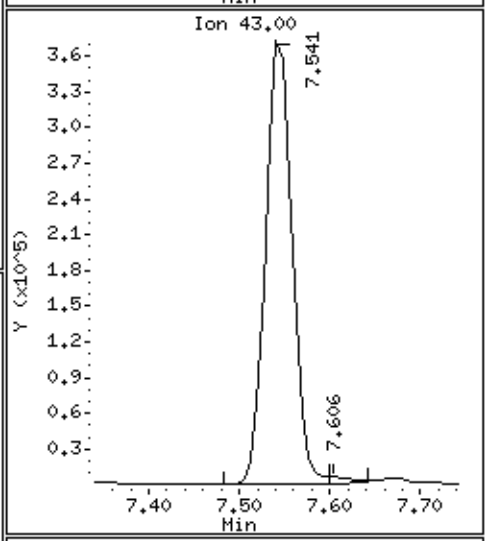


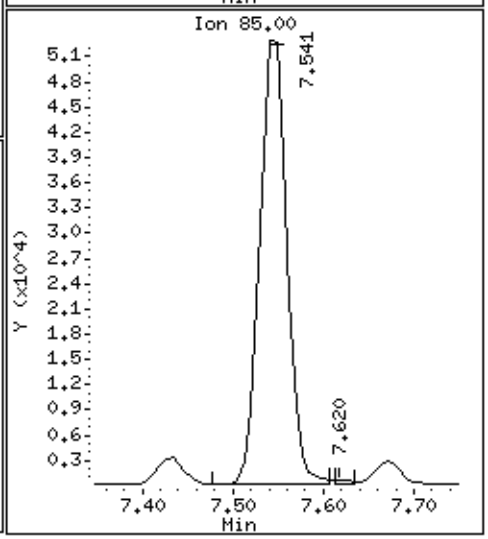












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

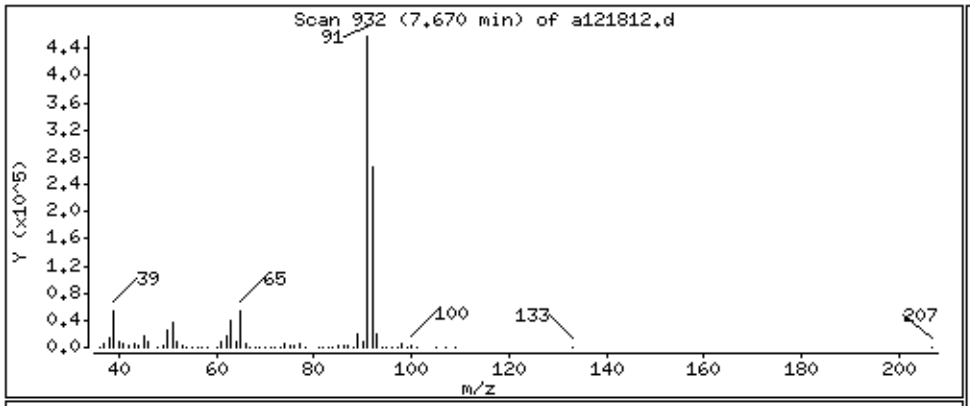
Operator: EA

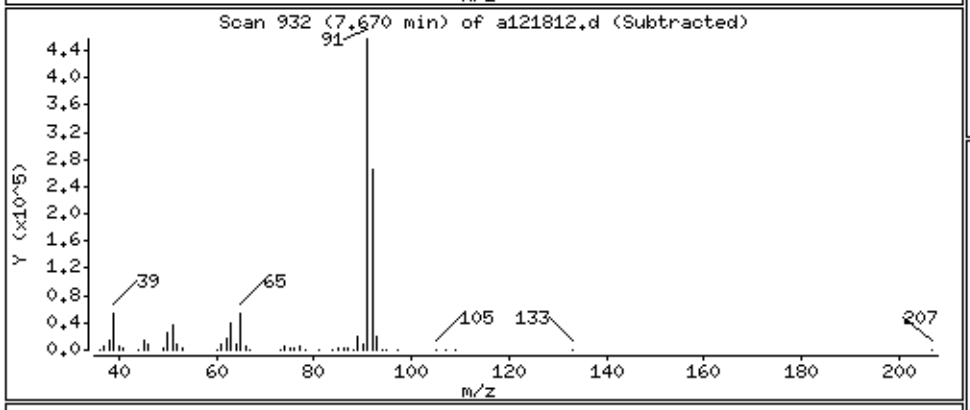
Column phase: RTX-624

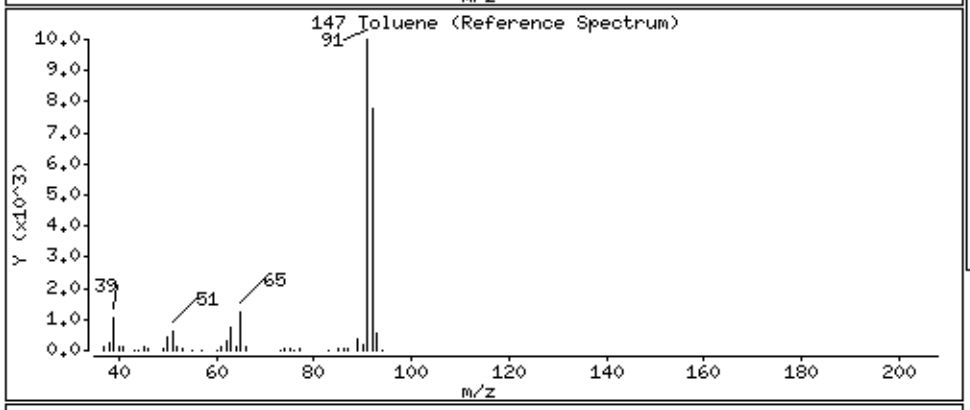
Column diameter: 0.25

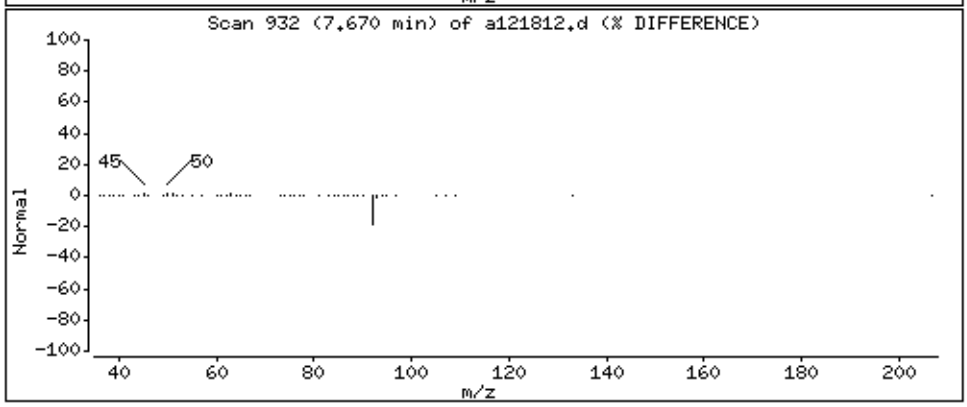
147 Toluene

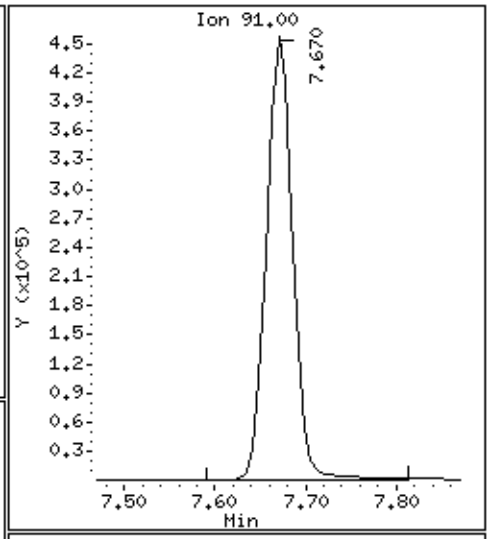
Concentration: 44.852 PPBV

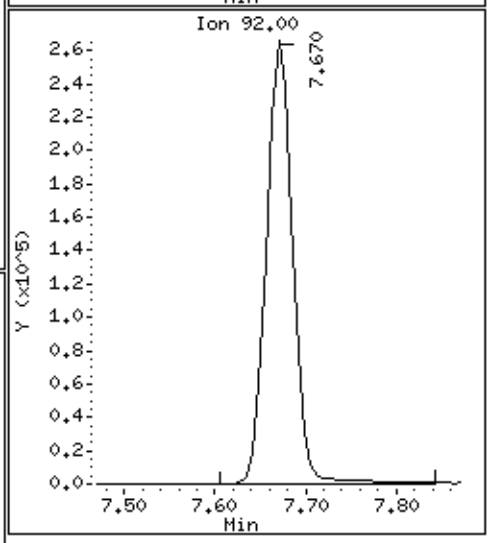












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

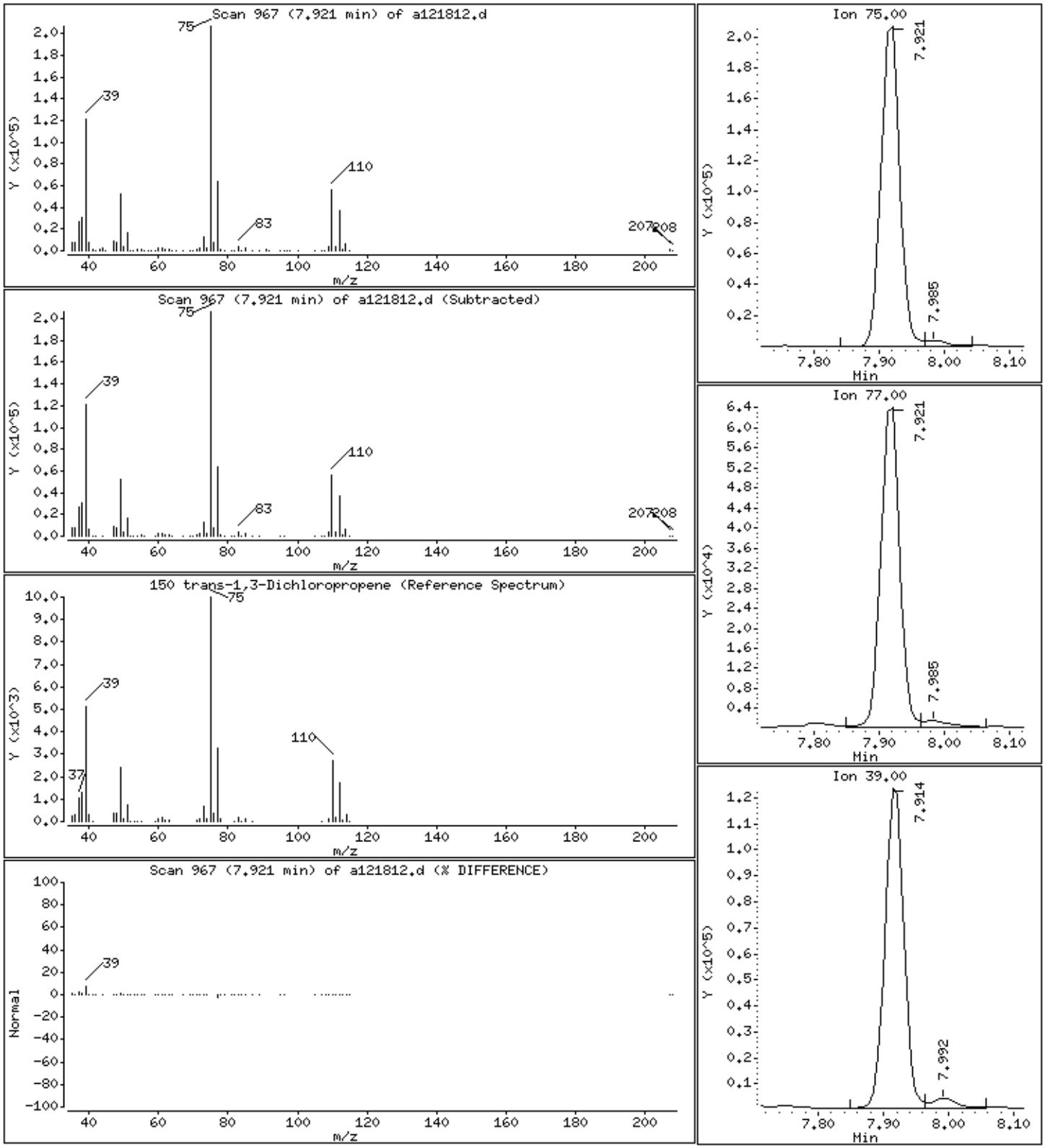
Operator: EA

Column phase: RTX-624

Column diameter: 0.25

150 trans-1,3-Dichloropropene

Concentration: 45.981 PPBV



Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

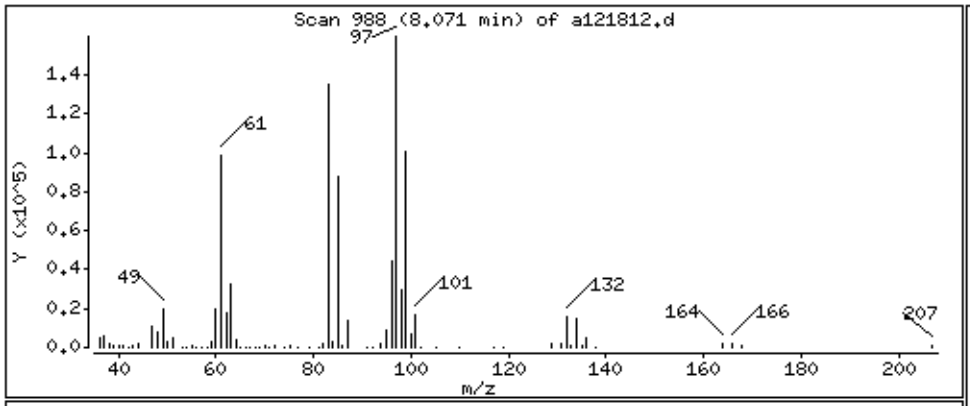
Operator: EA

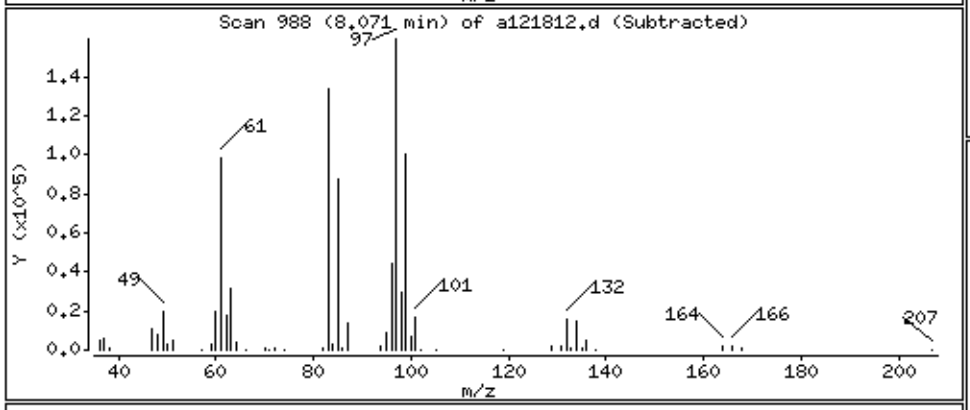
Column phase: RTX-624

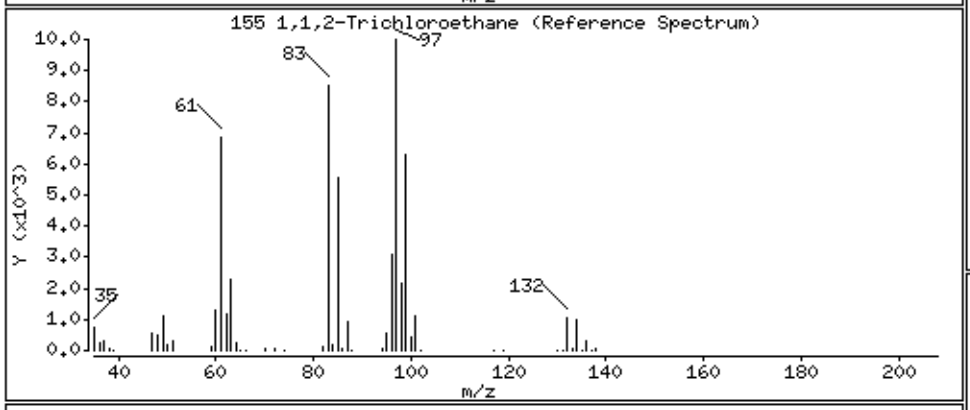
Column diameter: 0.25

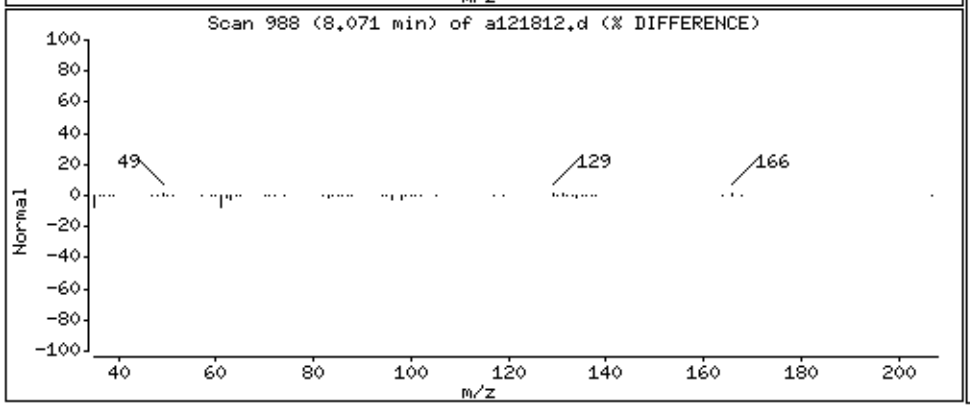
155 1,1,2-Trichloroethane

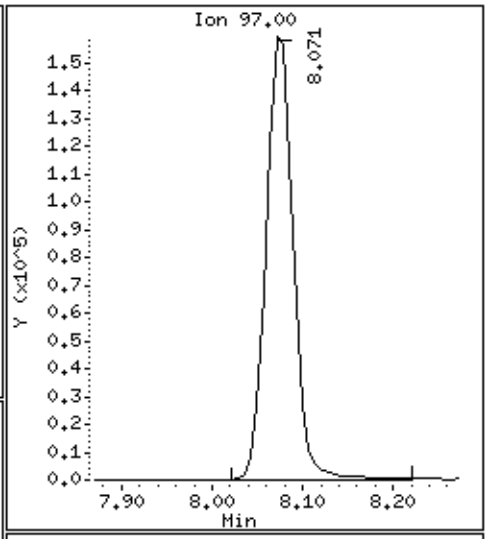
Concentration: 46.233 PPBV

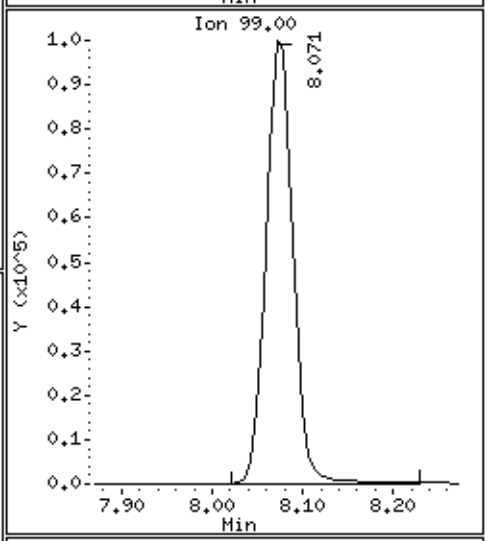


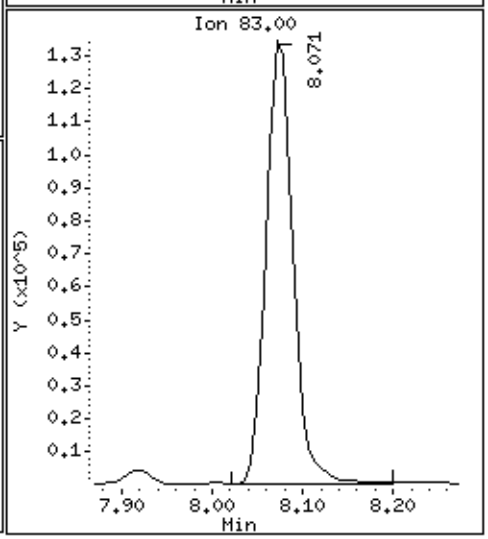












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

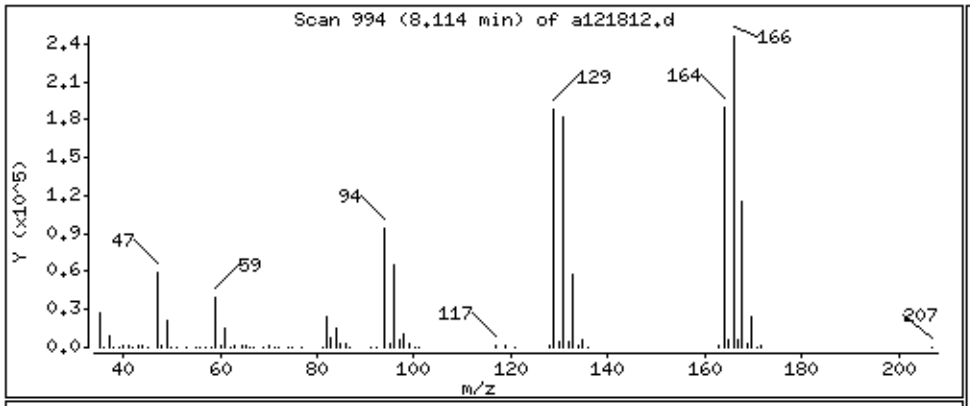
Operator: EA

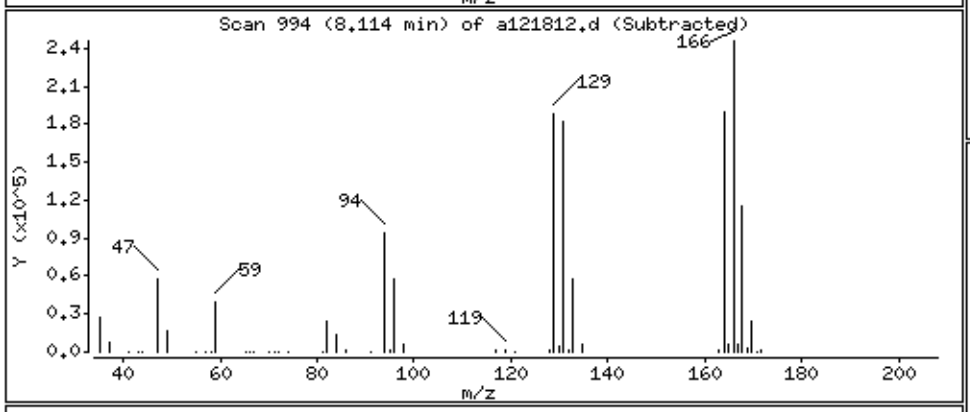
Column phase: RTX-624

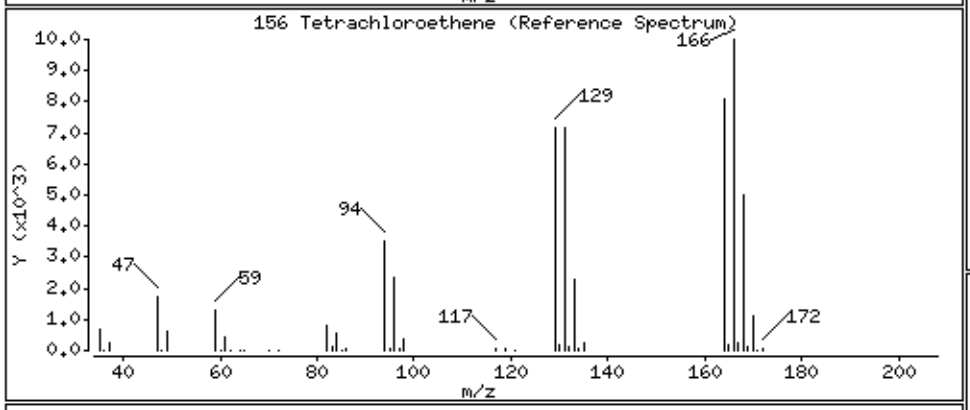
Column diameter: 0.25

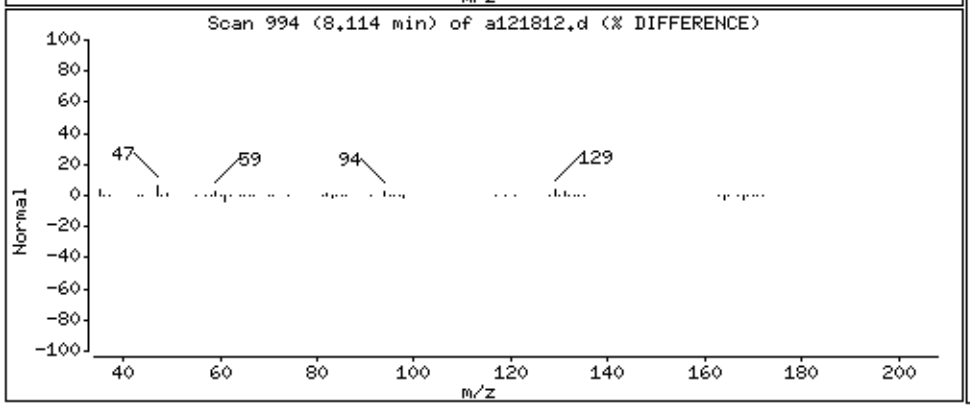
156 Tetrachloroethene

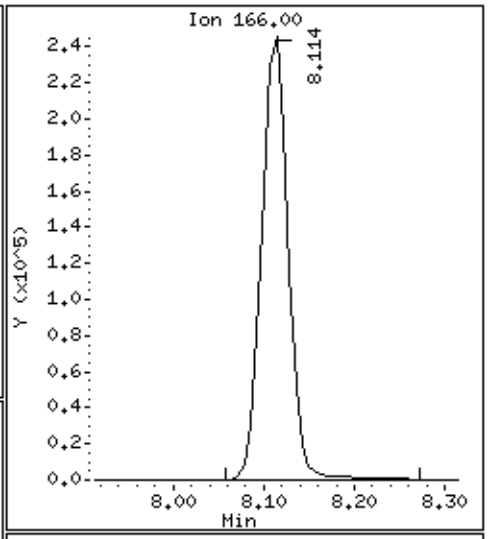
Concentration: 45.797 PPBV

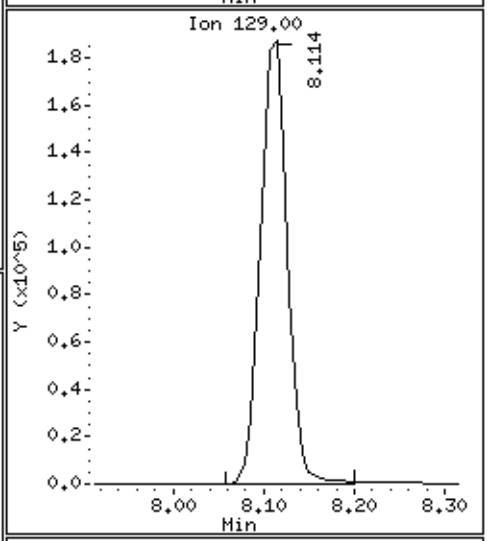


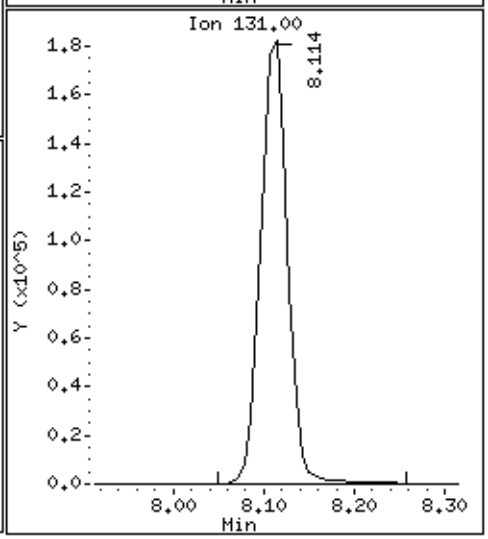












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

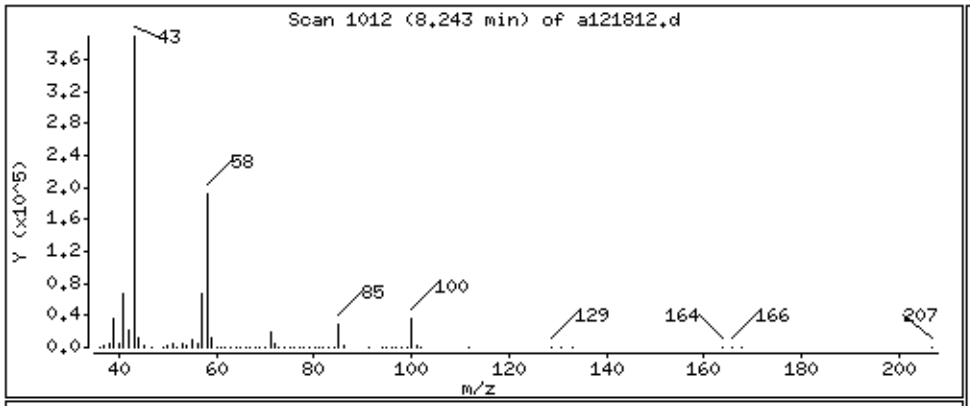
Operator: EA

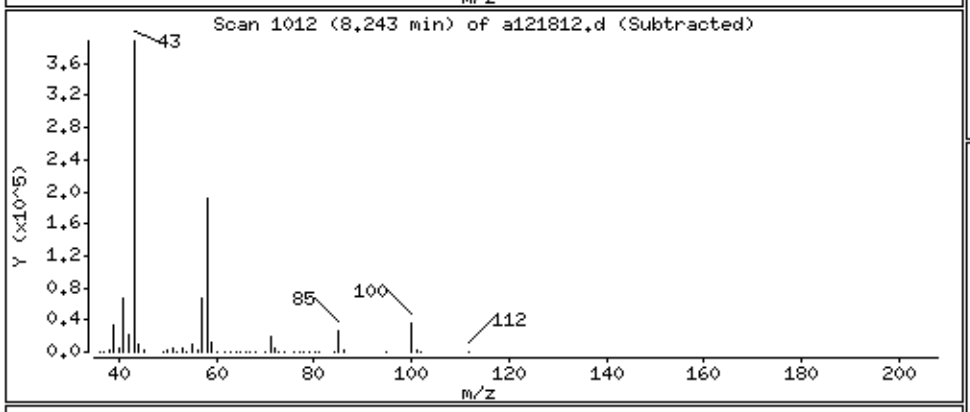
Column phase: RTX-624

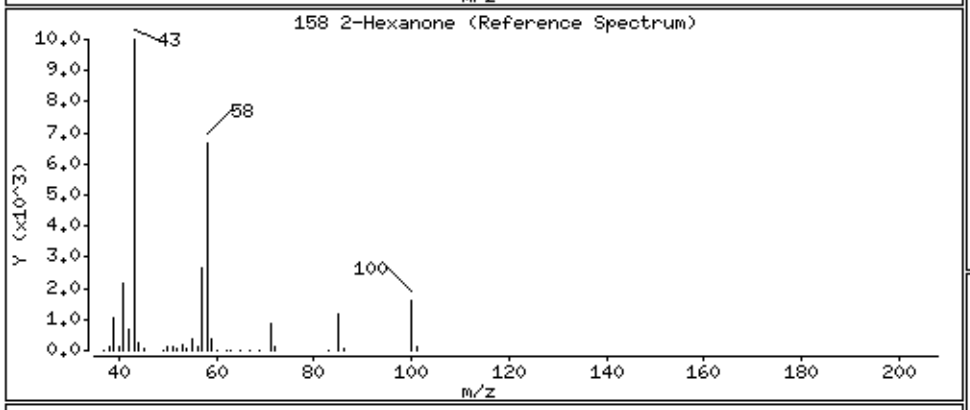
Column diameter: 0.25

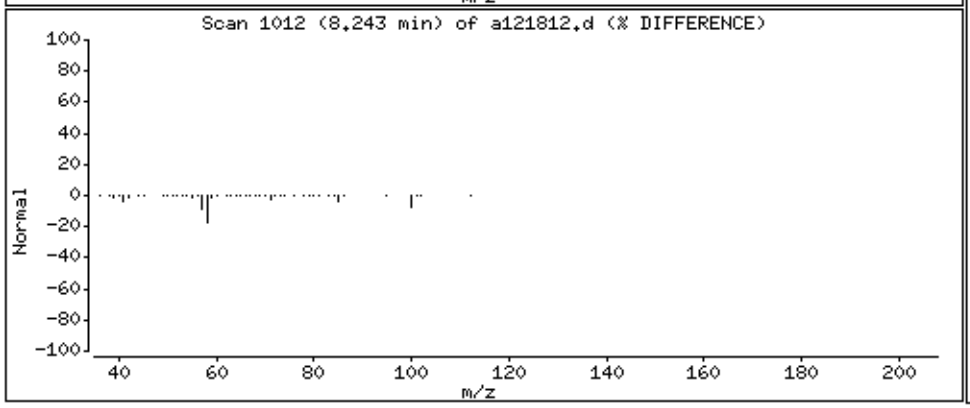
158 2-Hexanone

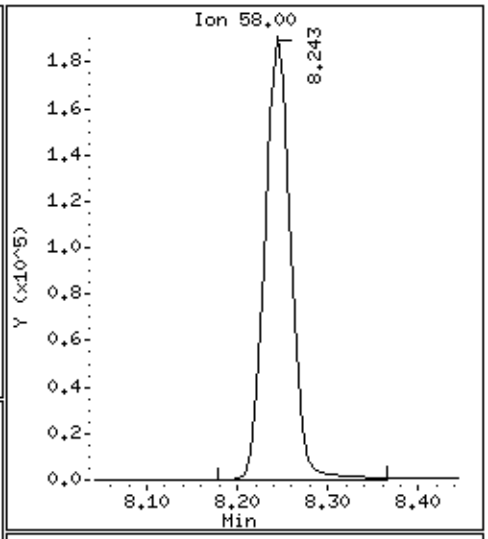
Concentration: 48.776 PPBV

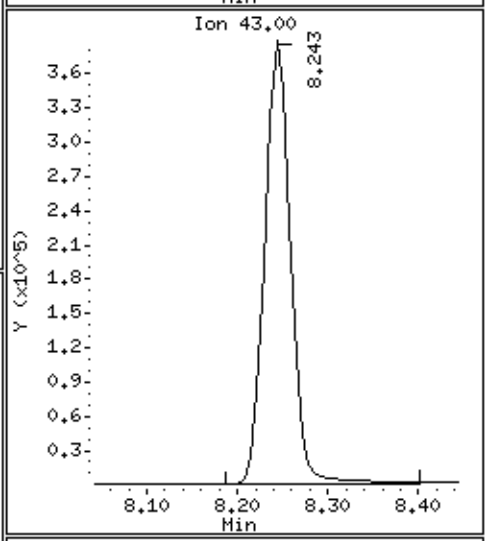


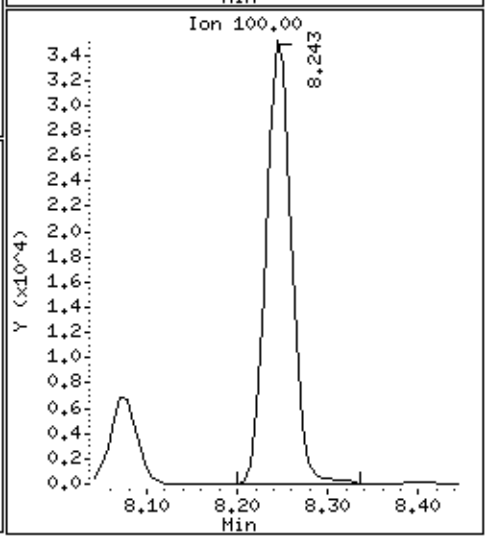












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

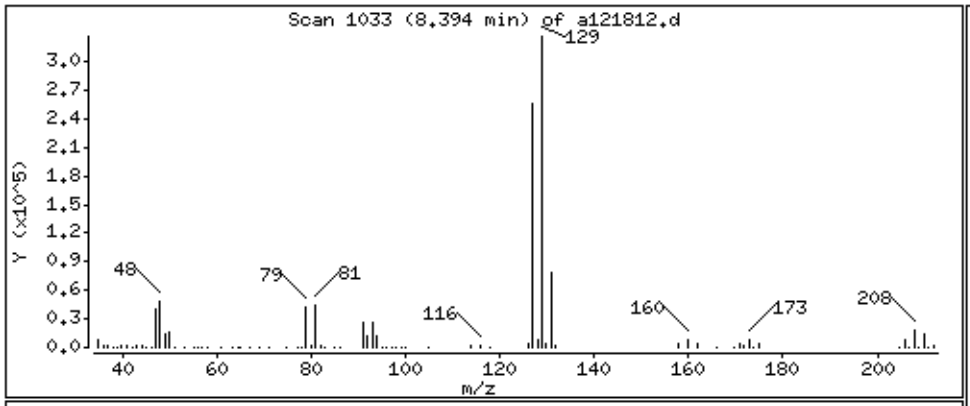
Operator: EA

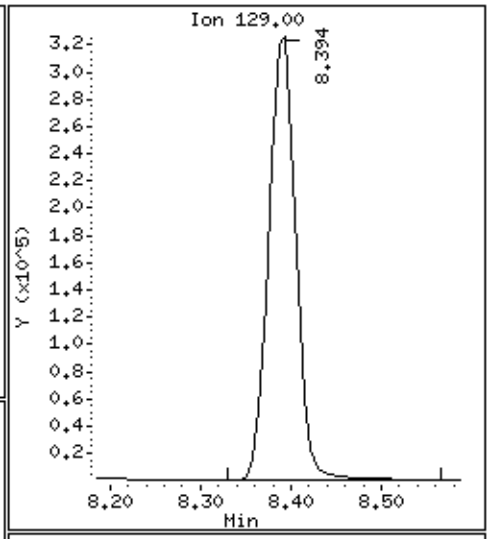
Column phase: RTX-624

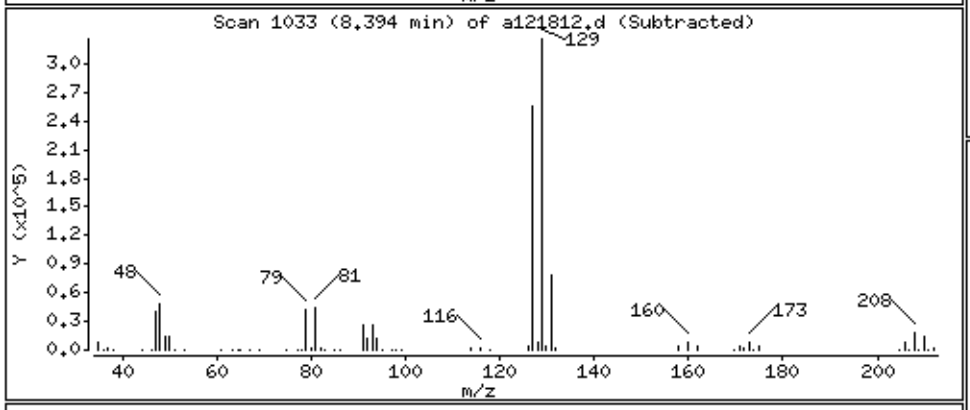
Column diameter: 0.25

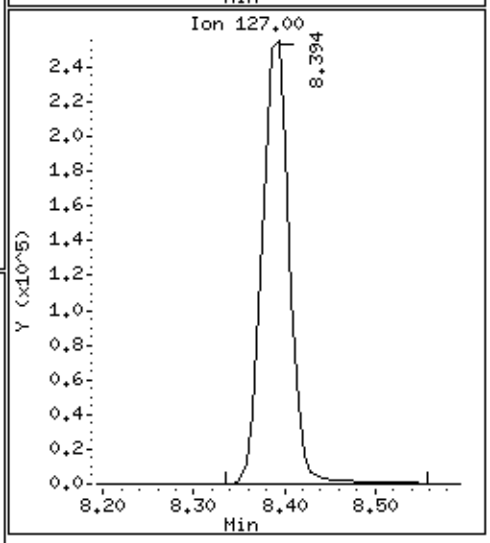
160 Dibromochloromethane

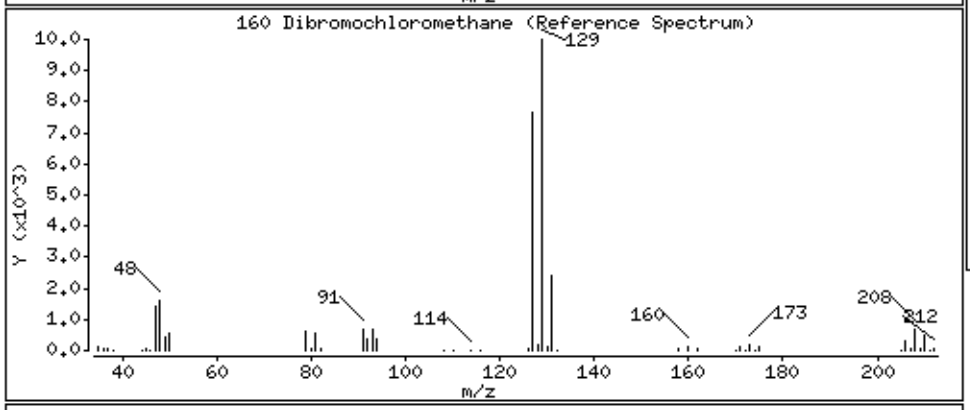
Concentration: 45.430 PPBV

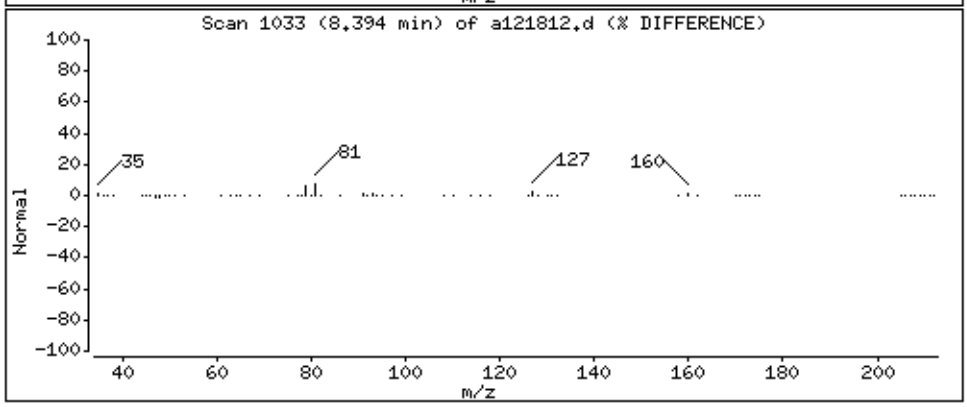












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

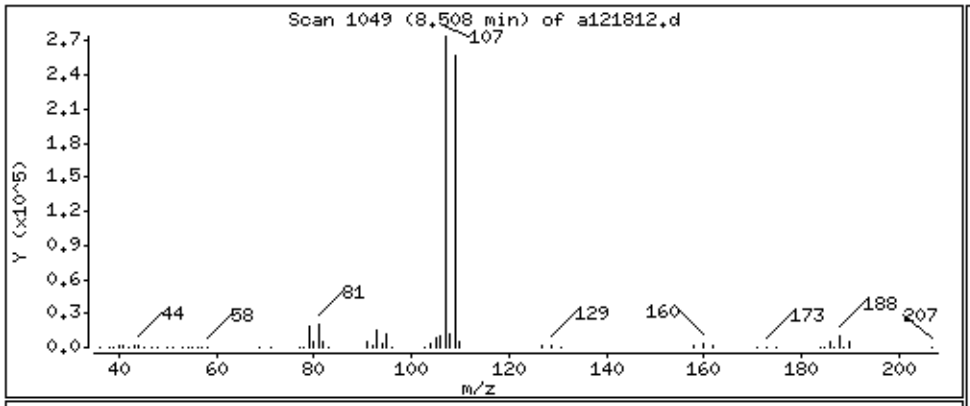
Operator: EA

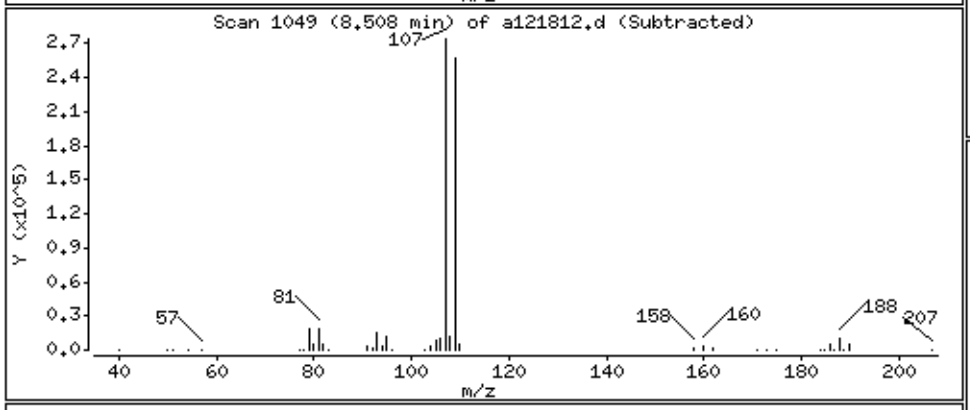
Column phase: RTX-624

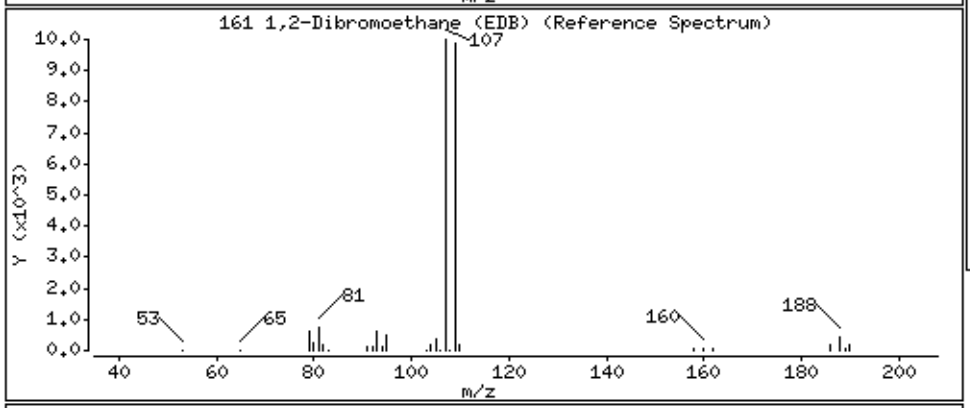
Column diameter: 0.25

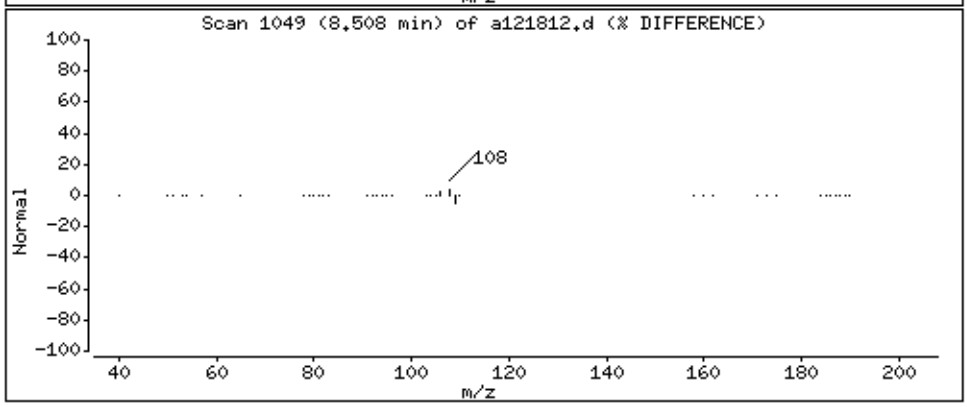
161 1,2-Dibromoethane (EDB)

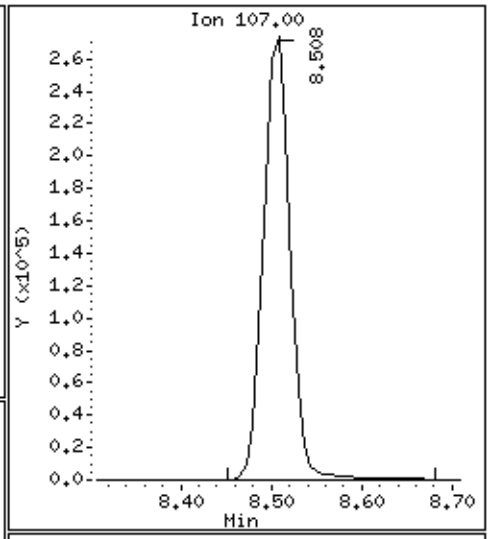
Concentration: 46.068 PPBV

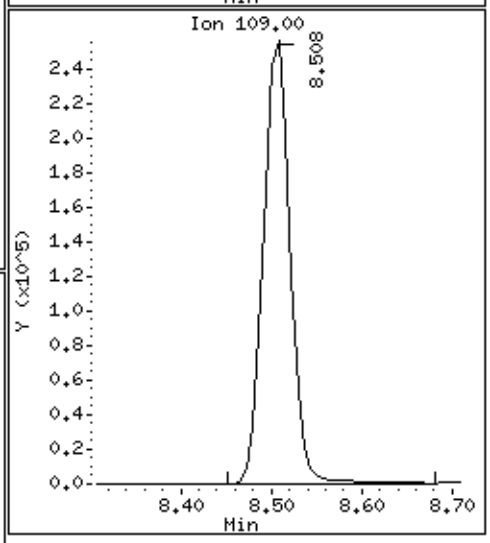












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

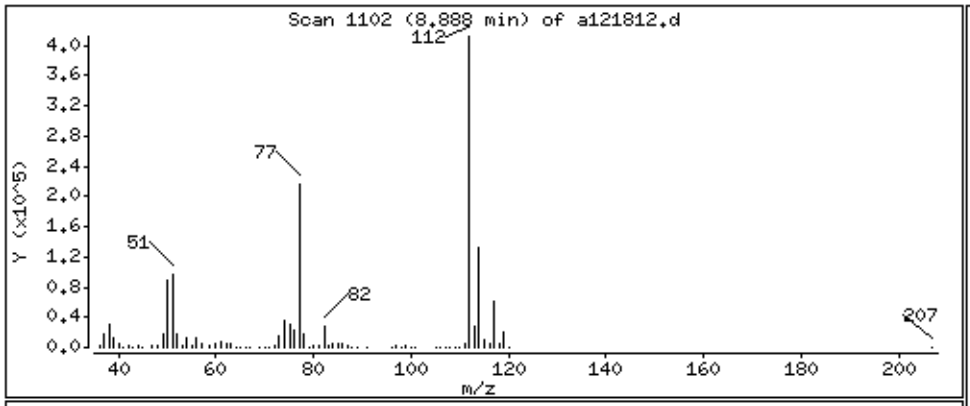
Operator: EA

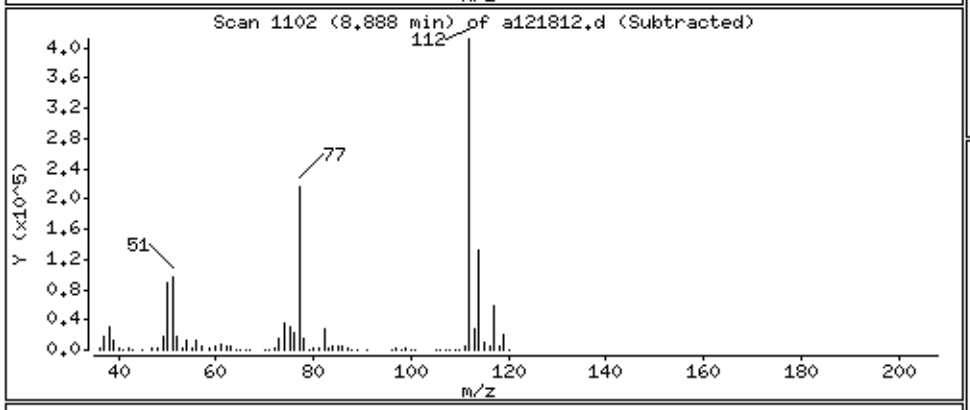
Column phase: RTX-624

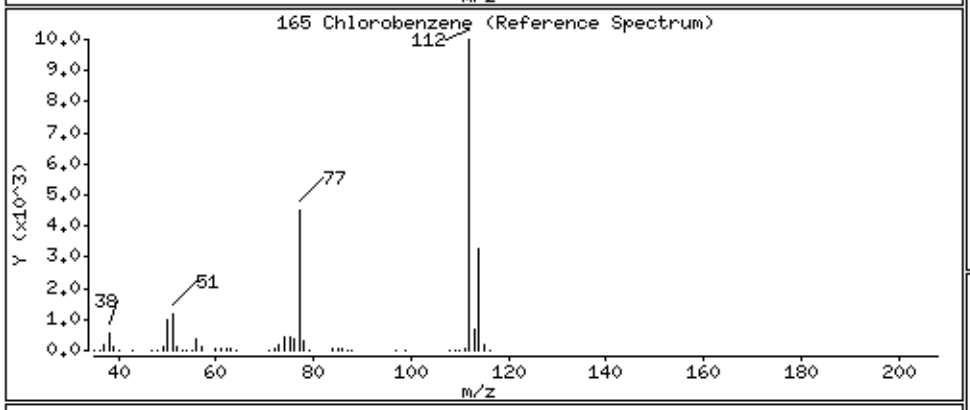
Column diameter: 0.25

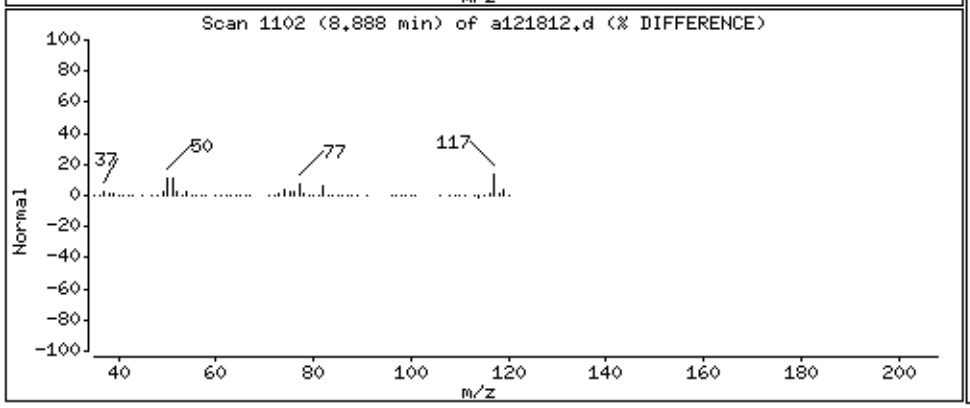
165 Chlorobenzene

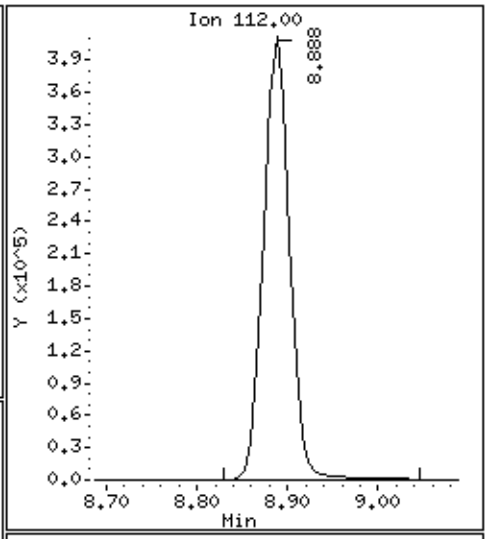
Concentration: 45.334 PPBV

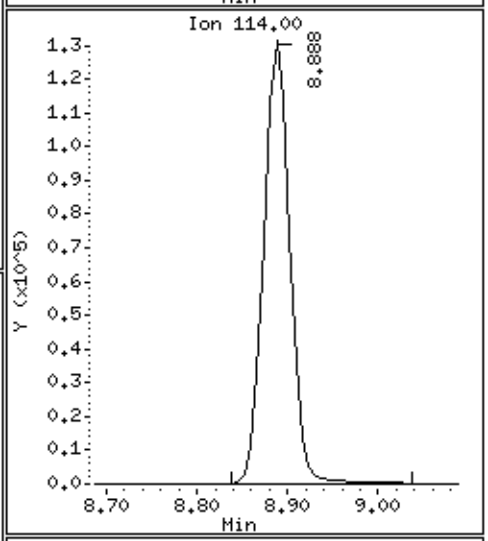


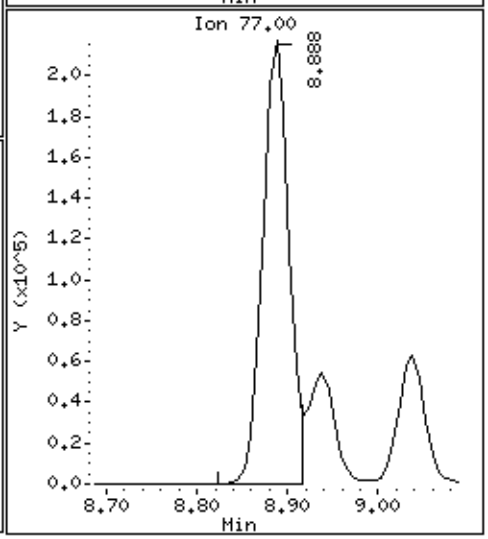












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

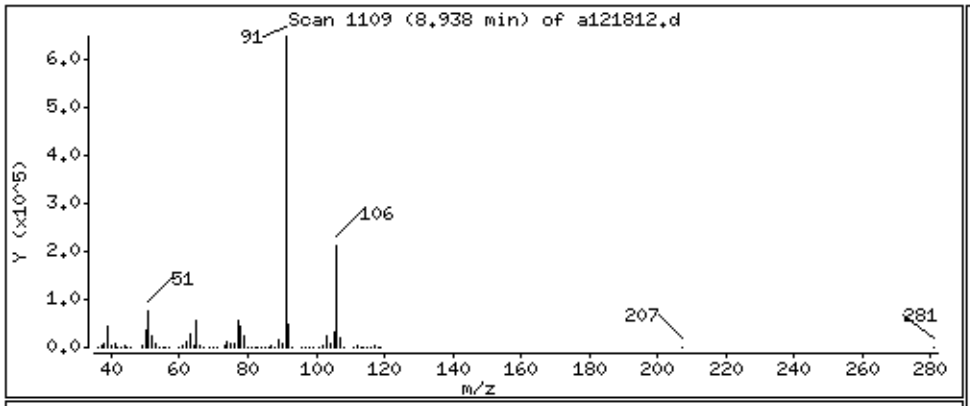
Operator: EA

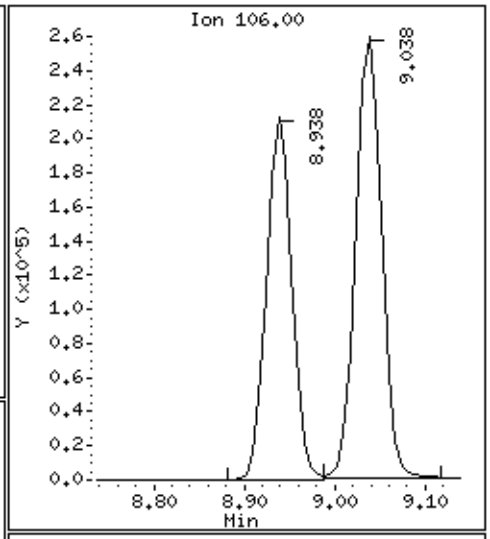
Column phase: RTX-624

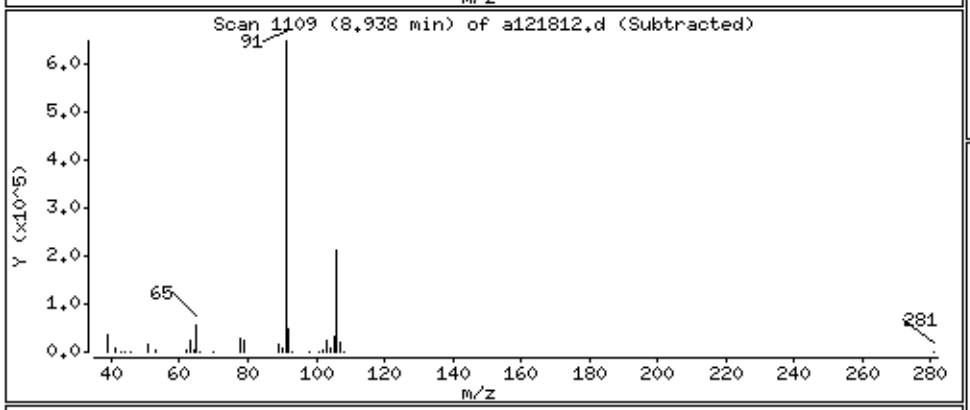
Column diameter: 0.25

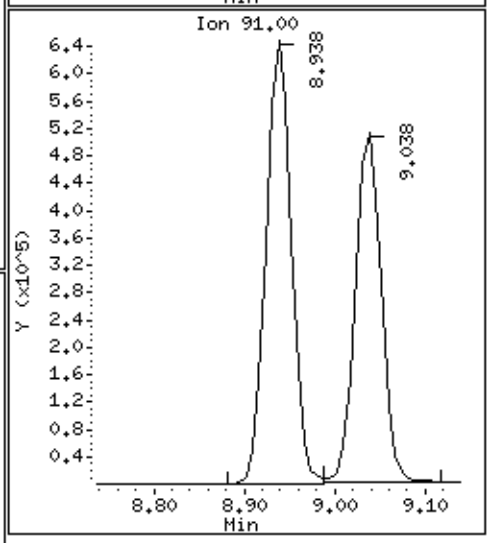
167 Ethyl Benzene

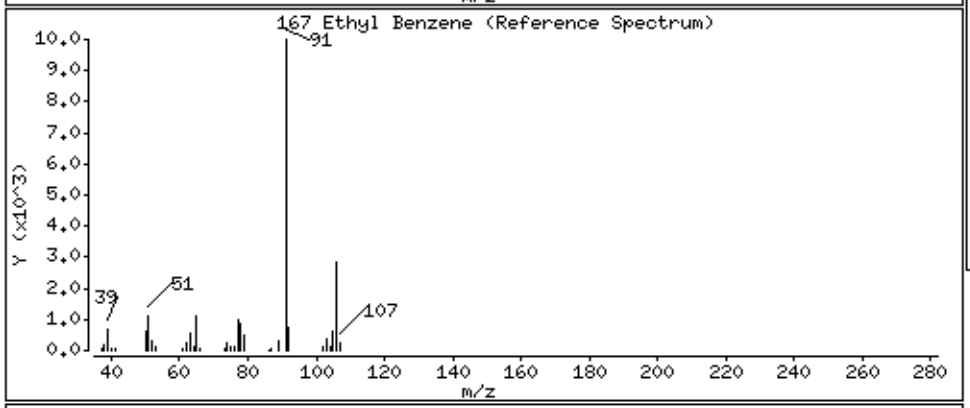
Concentration: 45.119 PPBV

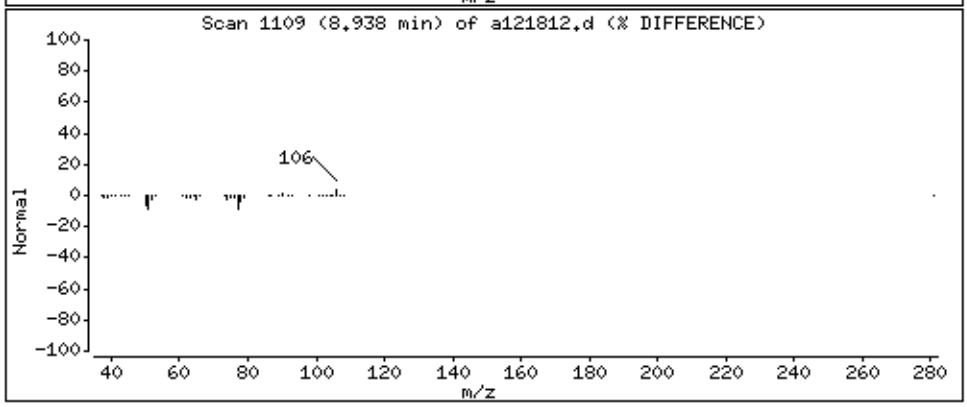












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

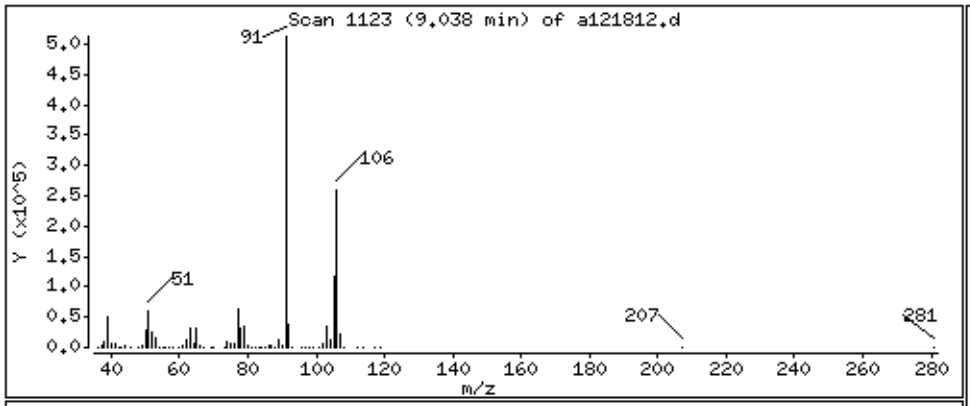
Operator: EA

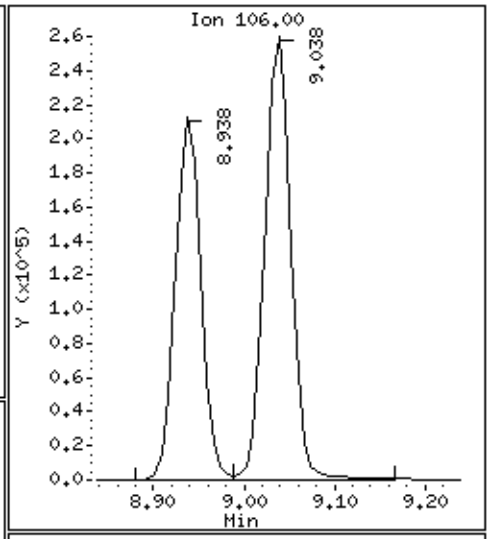
Column phase: RTX-624

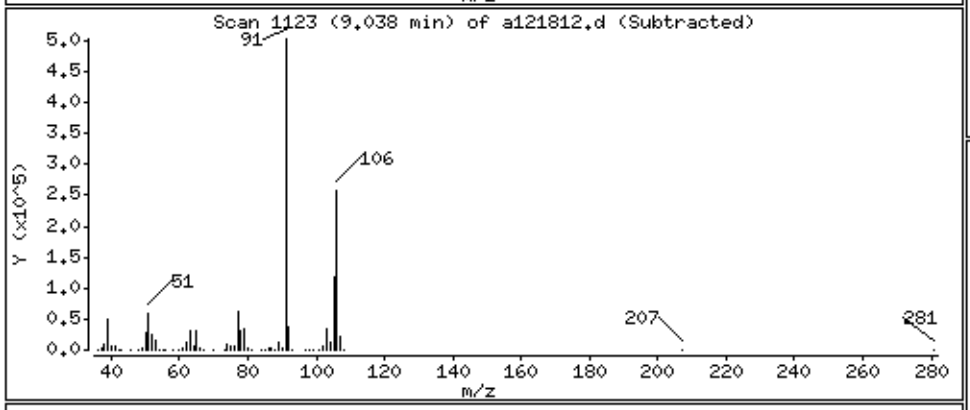
Column diameter: 0.25

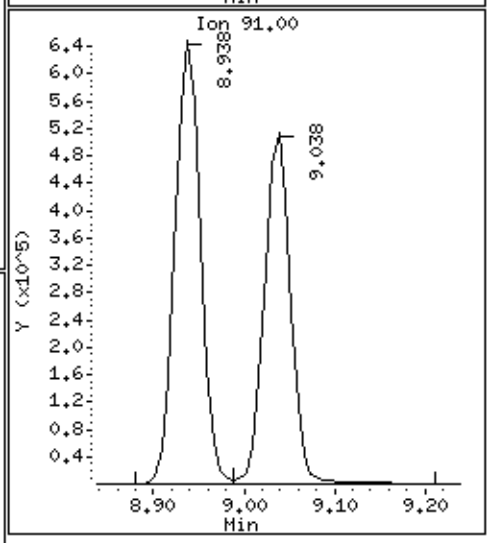
169 m,p-Xylene

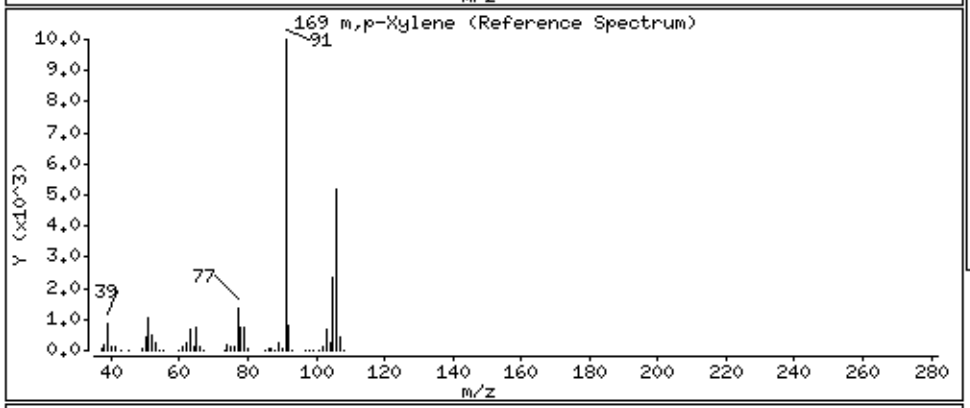
Concentration: 44.911 PPBV

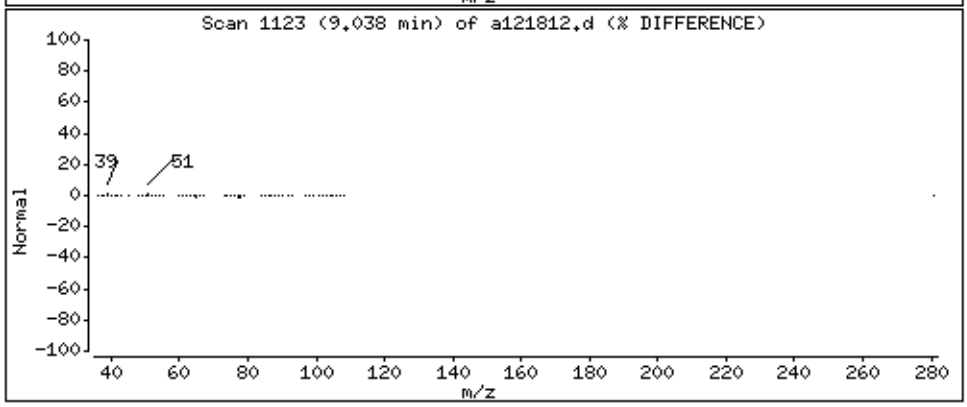












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

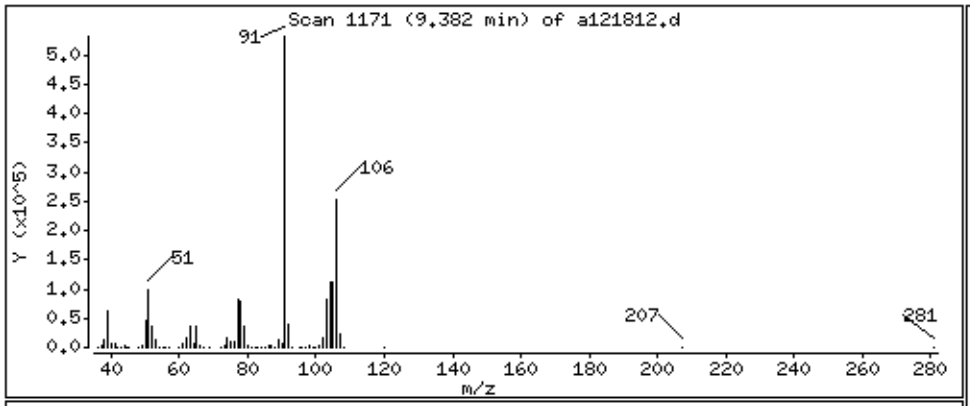
Operator: EA

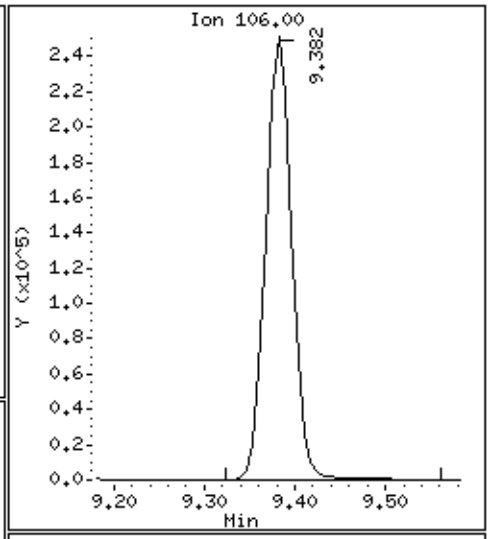
Column phase: RTX-624

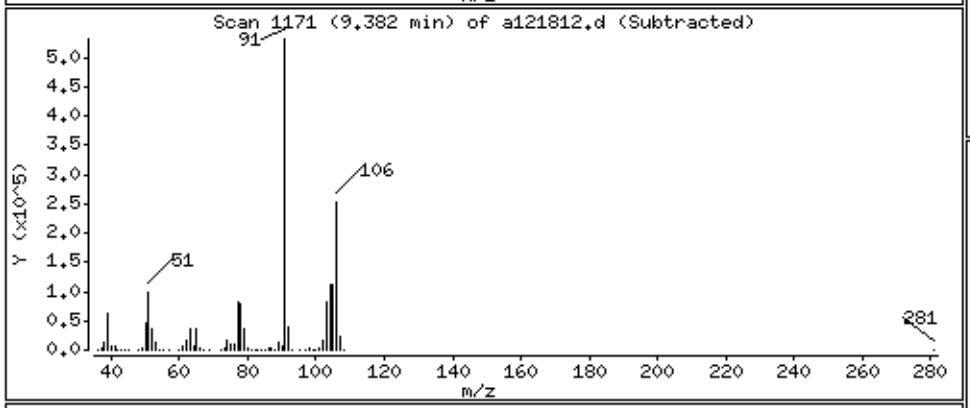
Column diameter: 0.25

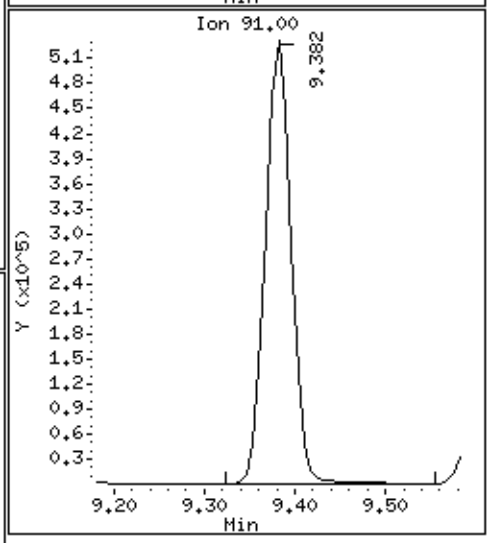
171 o-Xylene

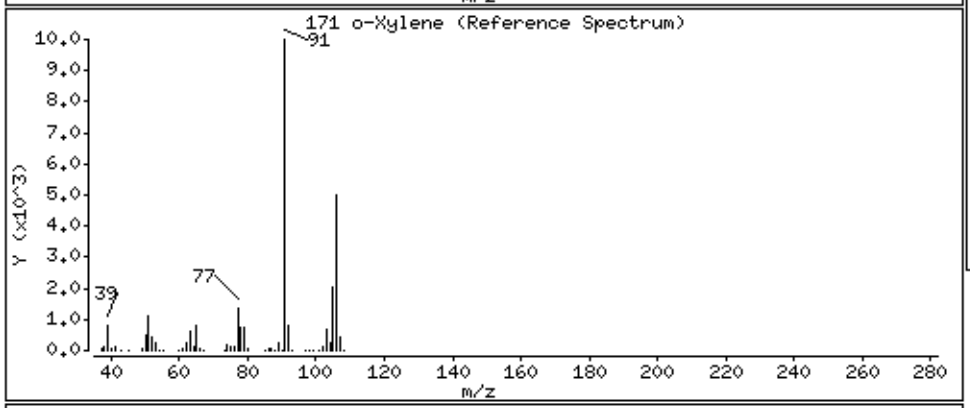
Concentration: 45.935 PPBV

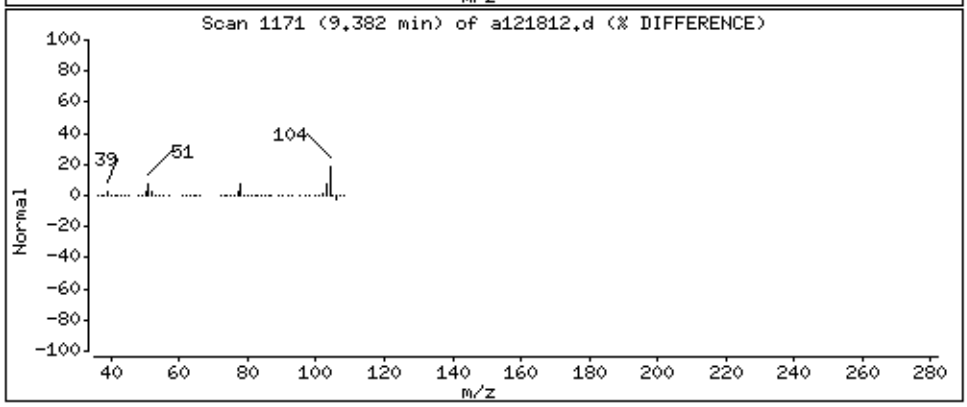












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

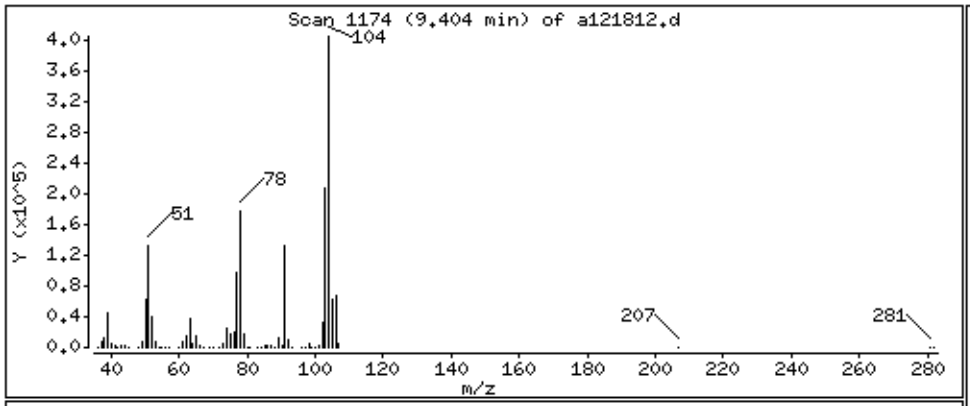
Operator: EA

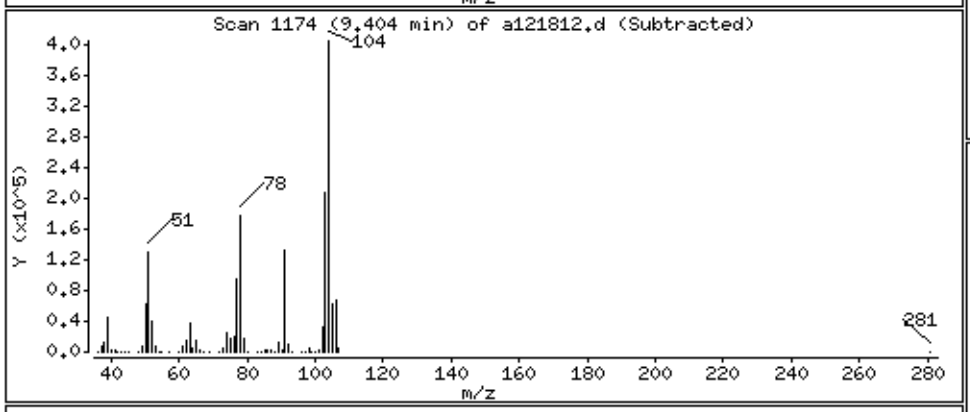
Column phase: RTX-624

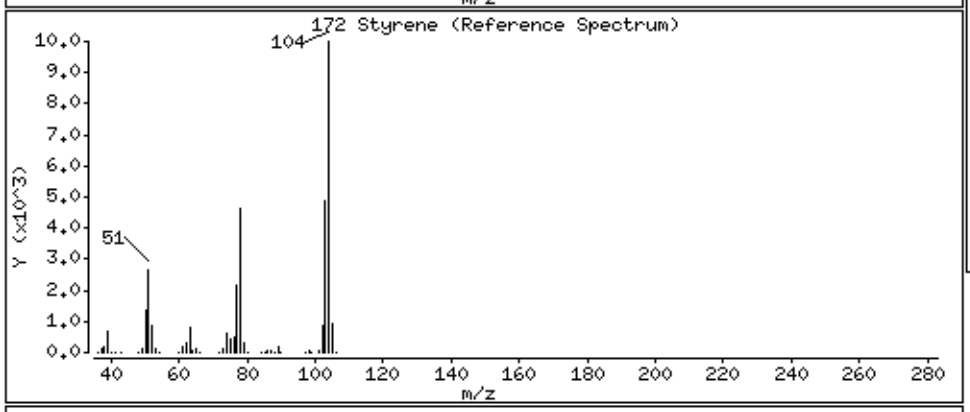
Column diameter: 0.25

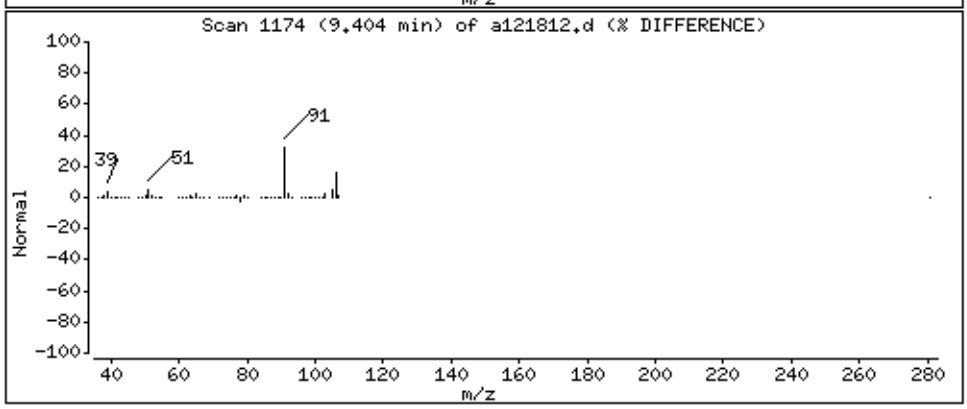
172 Styrene

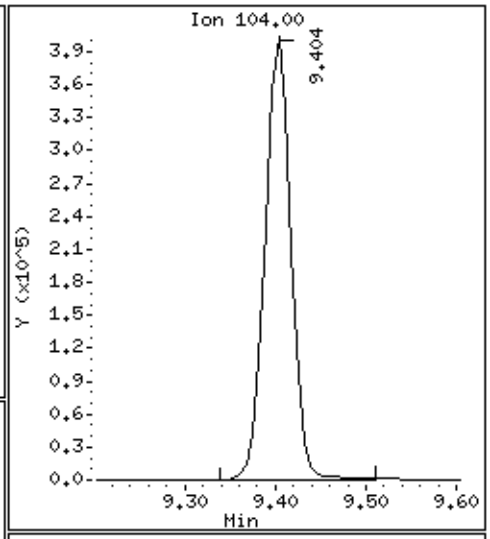
Concentration: 47.041 PPBV

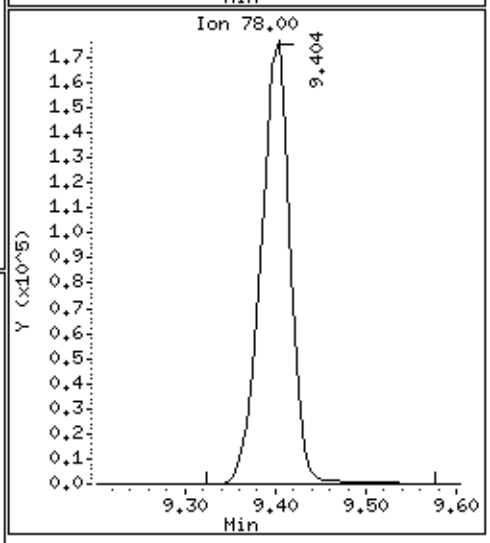












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

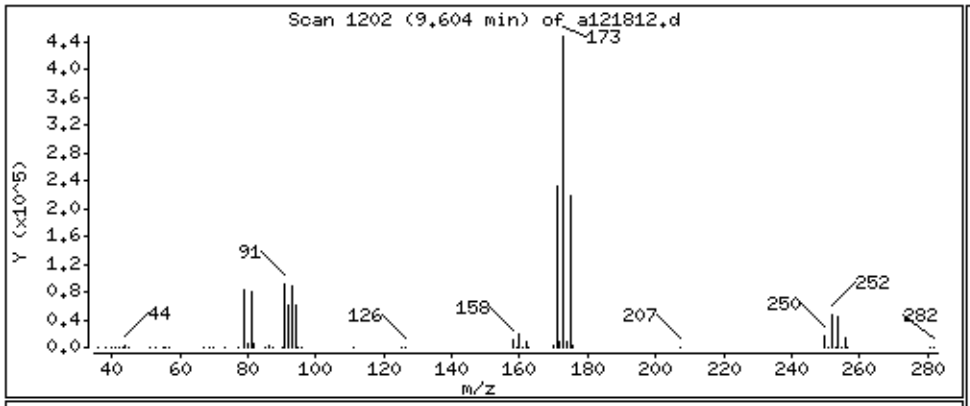
Operator: EA

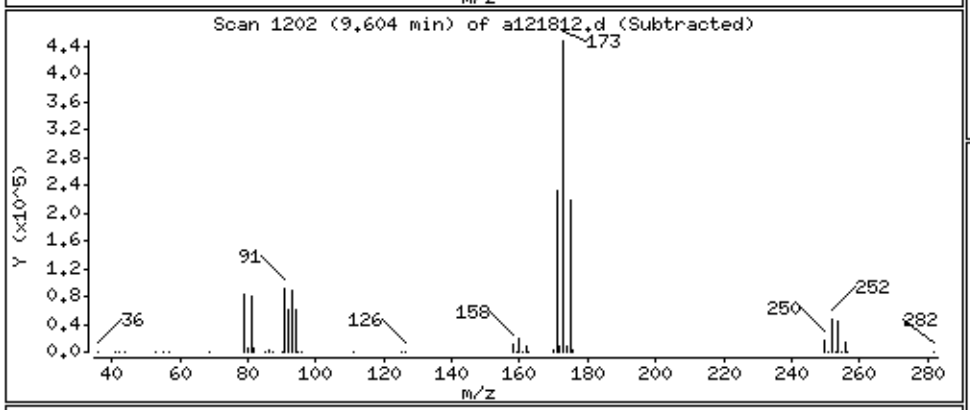
Column phase: RTX-624

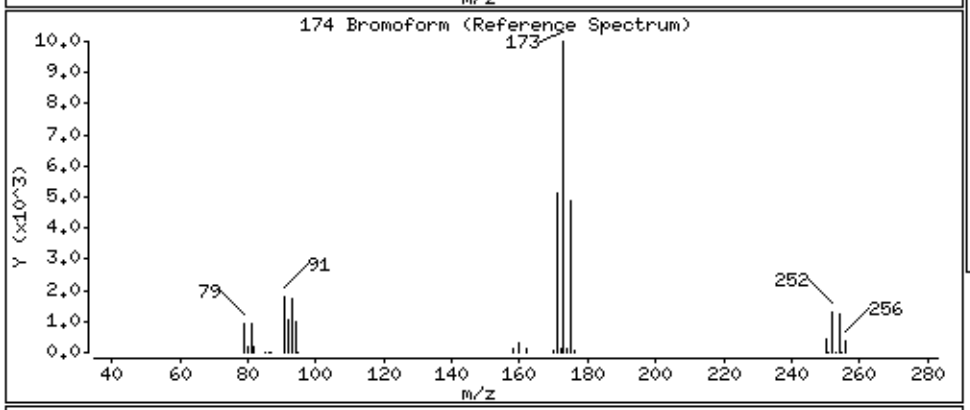
Column diameter: 0.25

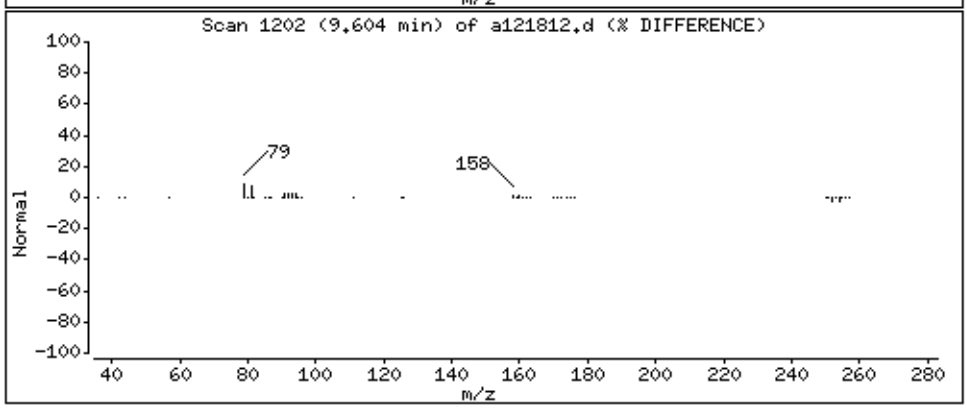
174 Bromoform

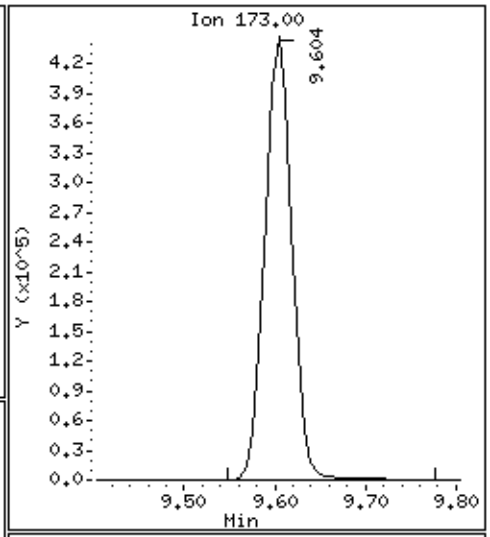
Concentration: 61.336 PPBV

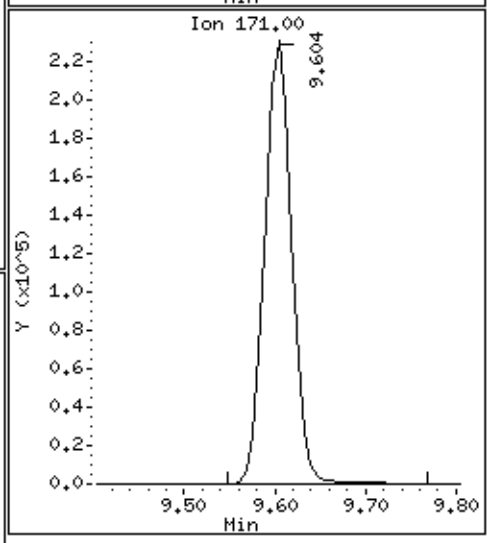












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

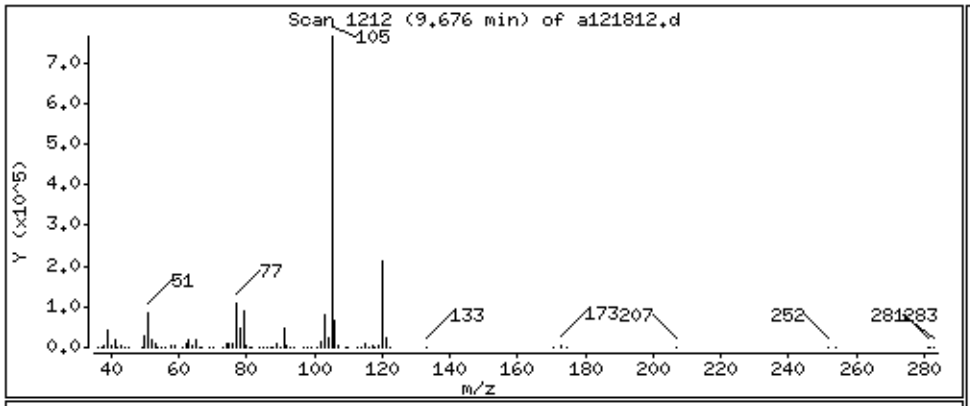
Operator: EA

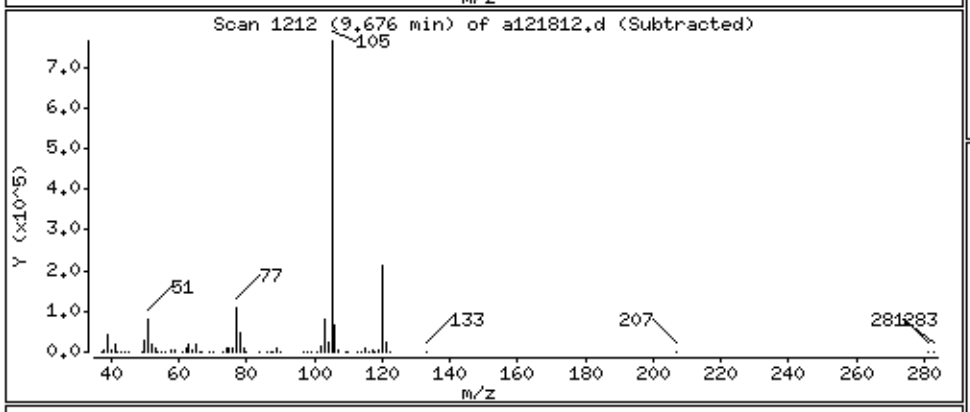
Column phase: RTX-624

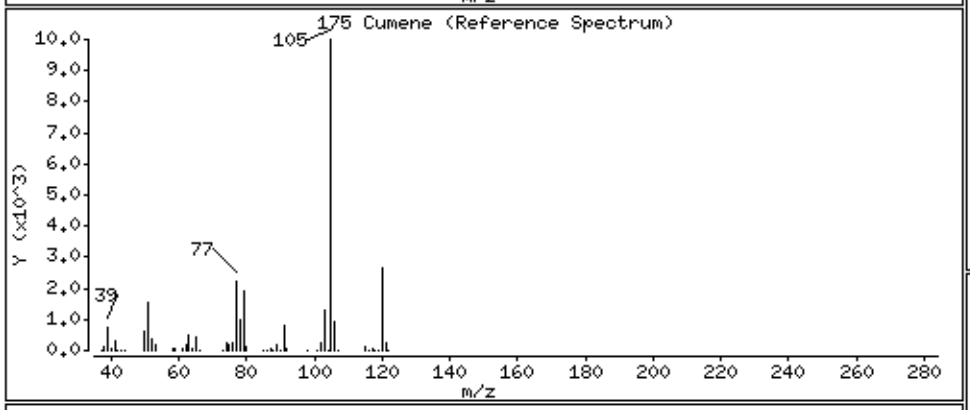
Column diameter: 0.25

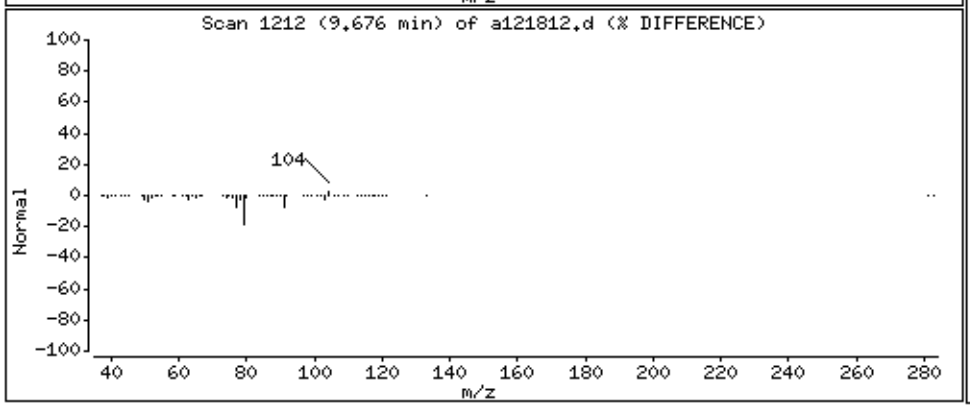
175 Cumene

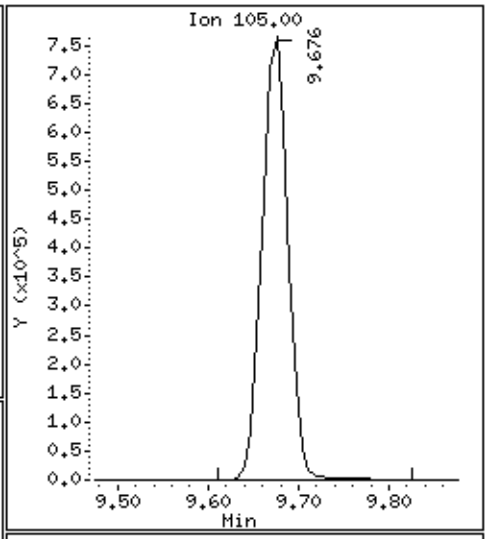
Concentration: 44.667 PPBV

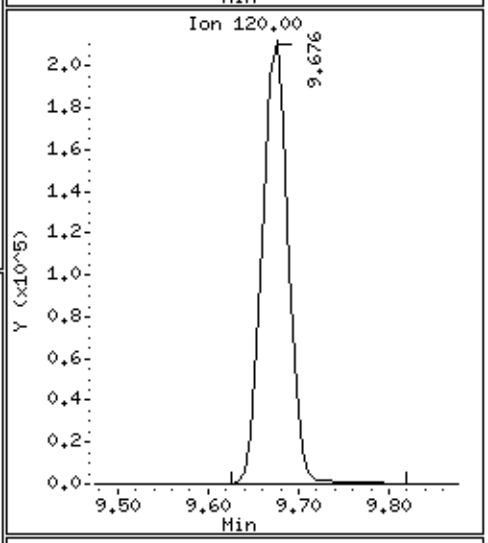


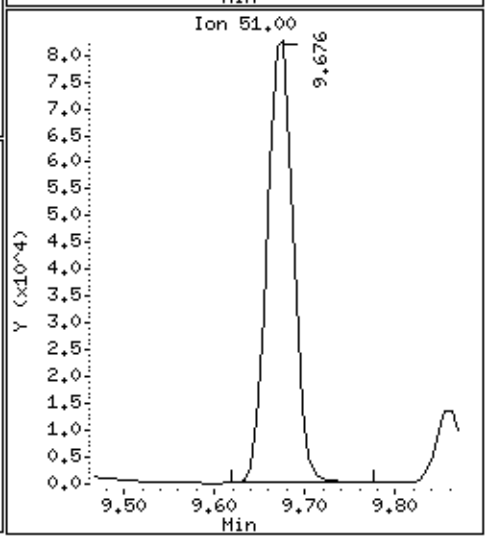












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

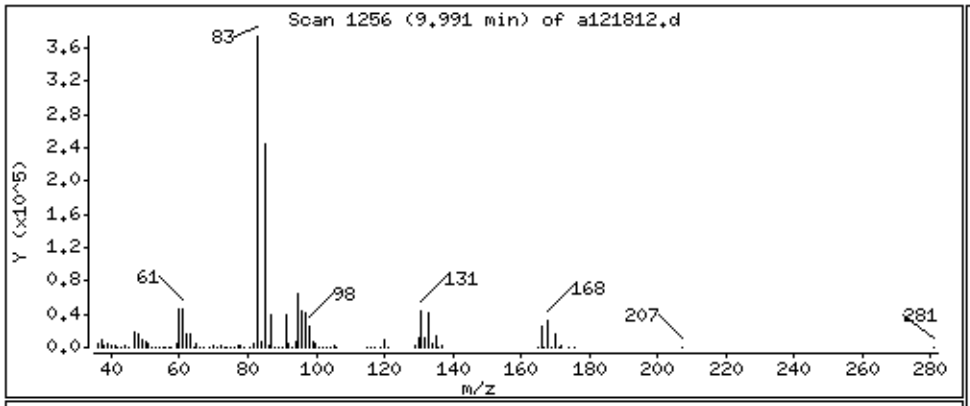
Operator: EA

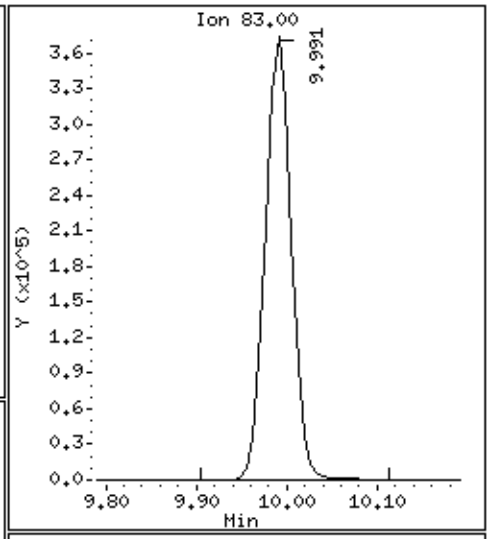
Column phase: RTX-624

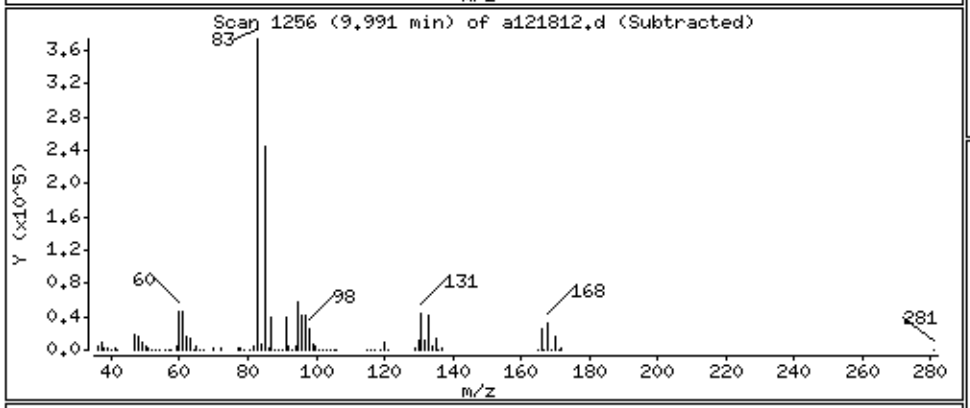
Column diameter: 0.25

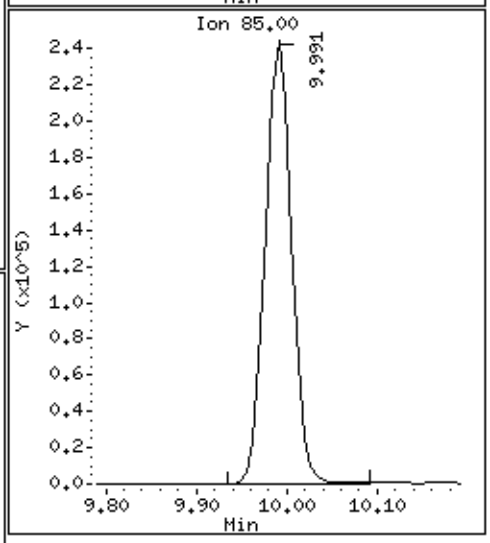
181 1,1,2,2-Tetrachloroethane

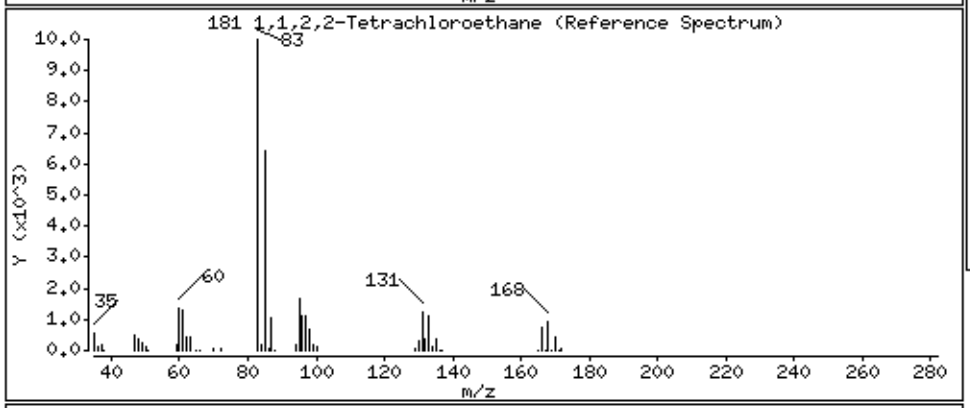
Concentration: 46.172 PPBV

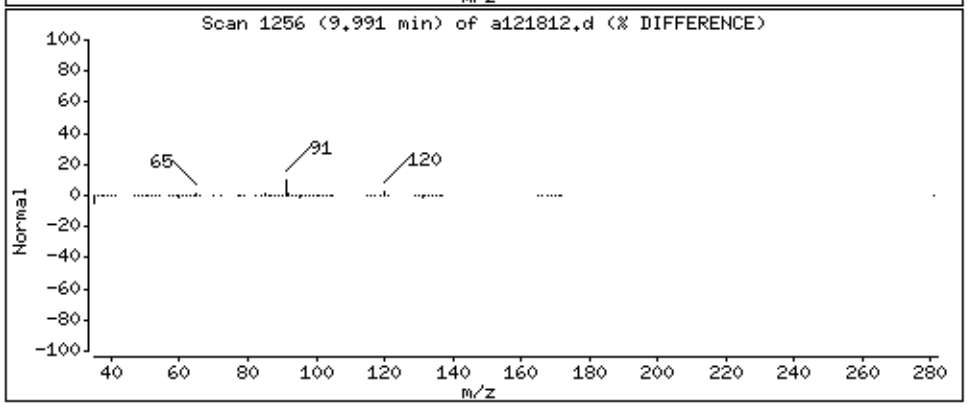












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

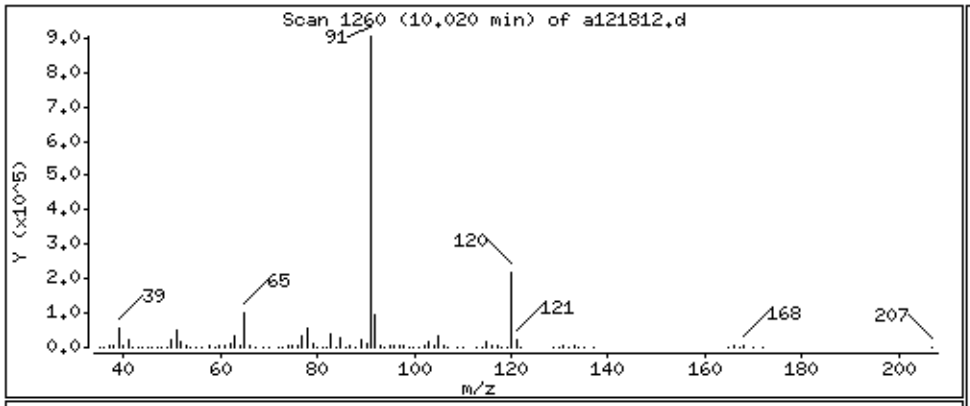
Operator: EA

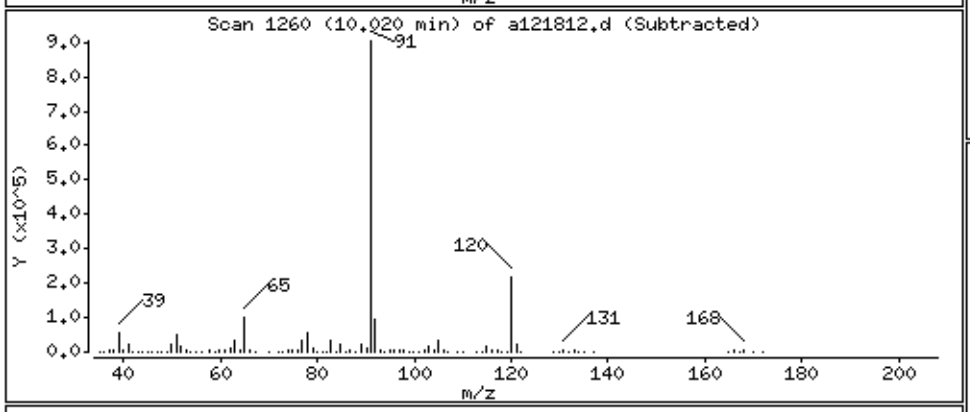
Column phase: RTX-624

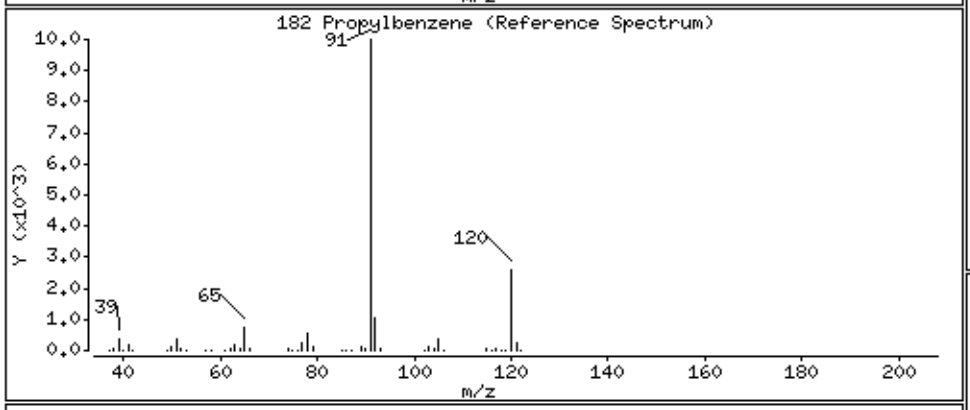
Column diameter: 0.25

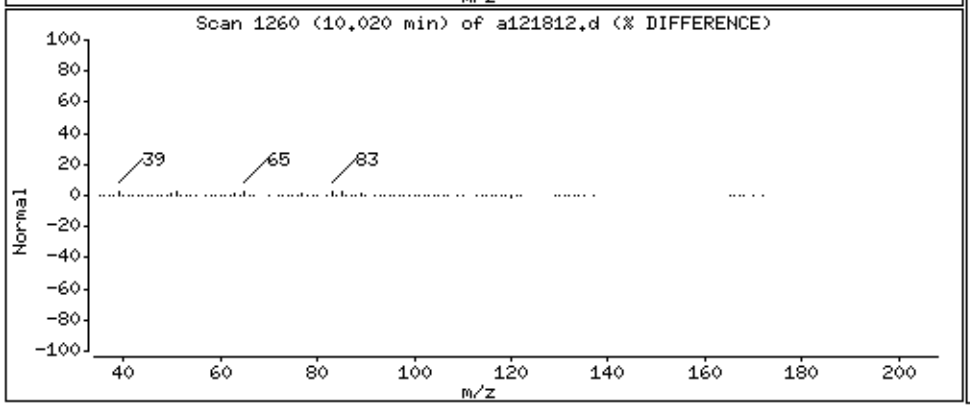
182 Propylbenzene

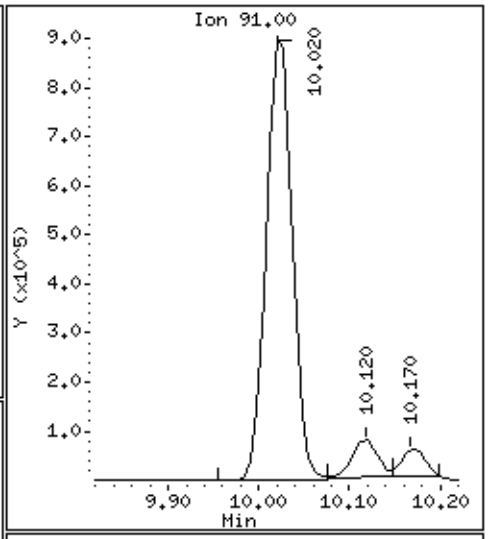
Concentration: 46.431 PPBV

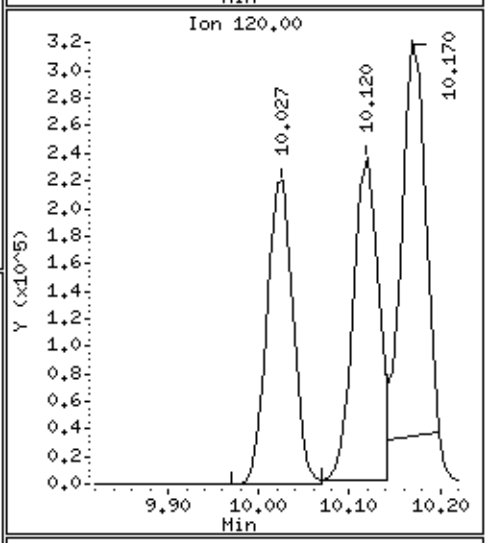


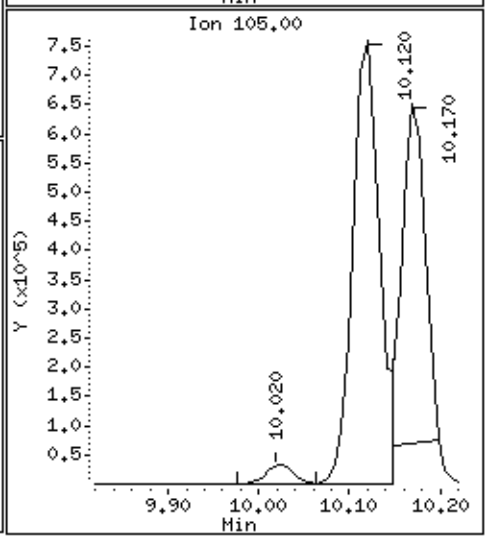












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

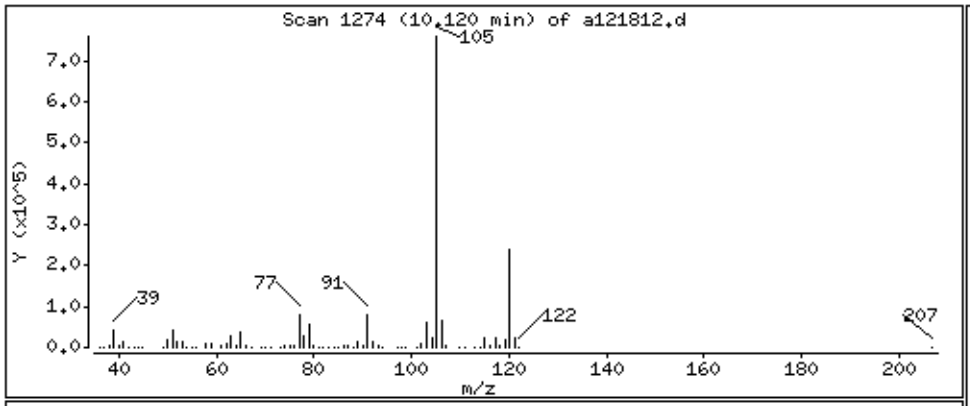
Operator: EA

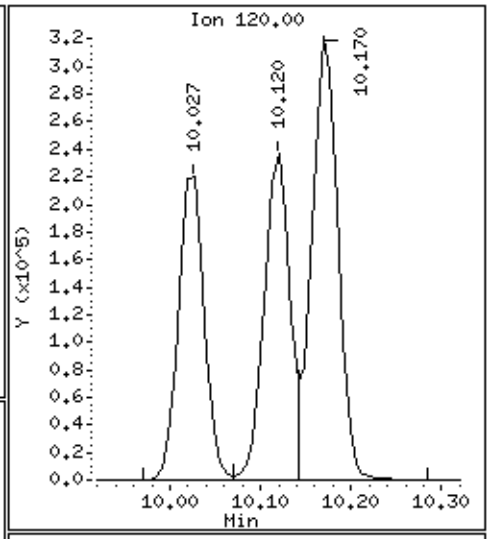
Column phase: RTX-624

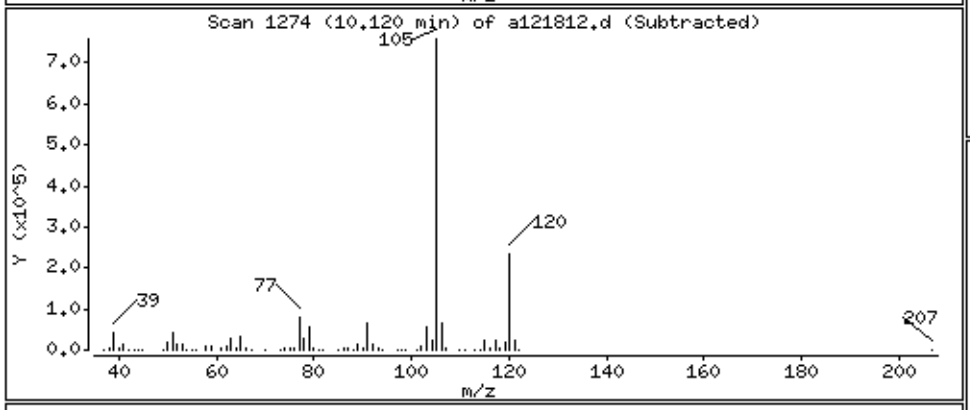
Column diameter: 0.25

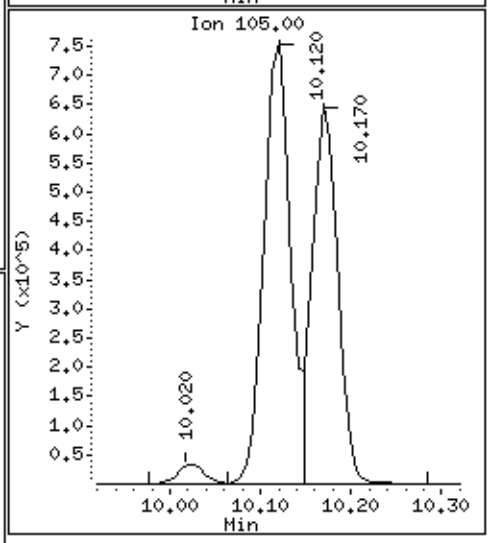
188 4-Ethyltoluene

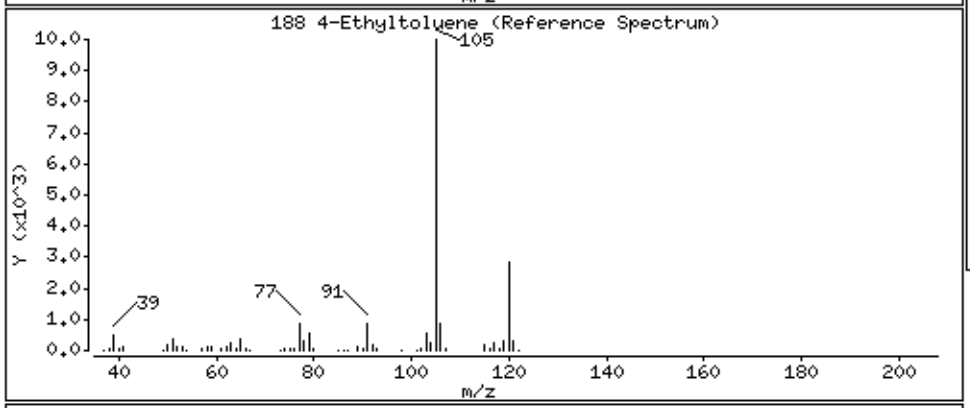
Concentration: 43.846 PPBV

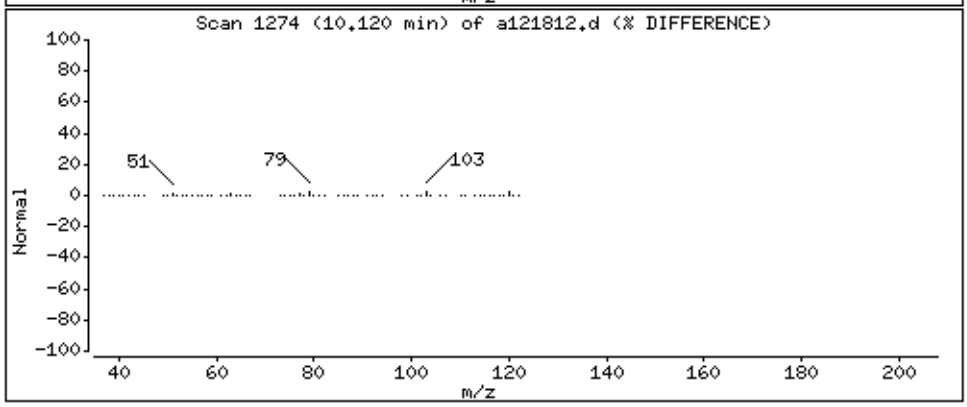












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

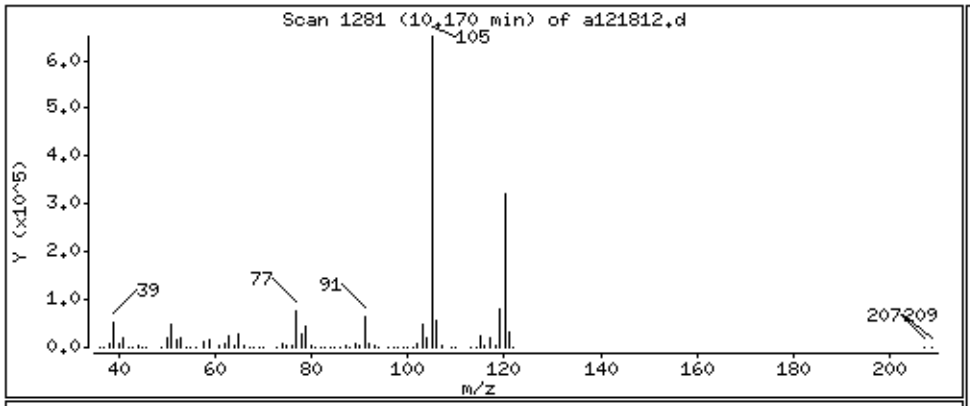
Operator: EA

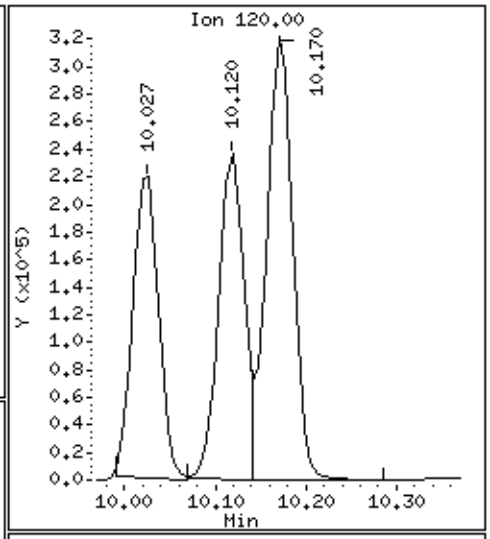
Column phase: RTX-624

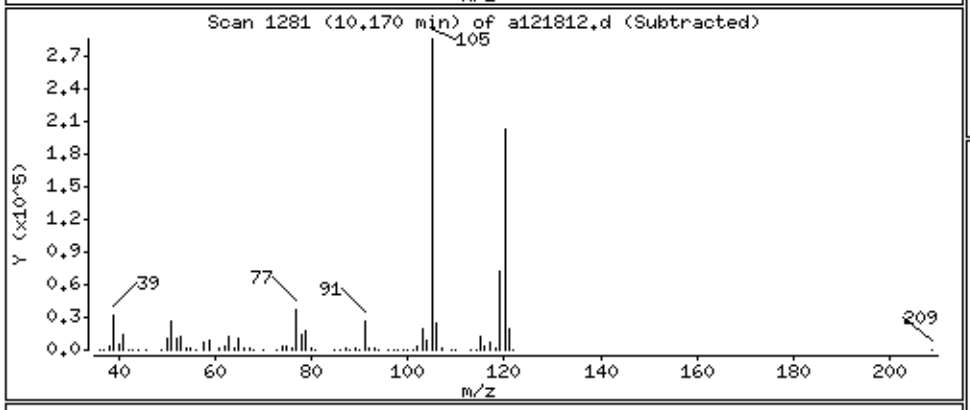
Column diameter: 0.25

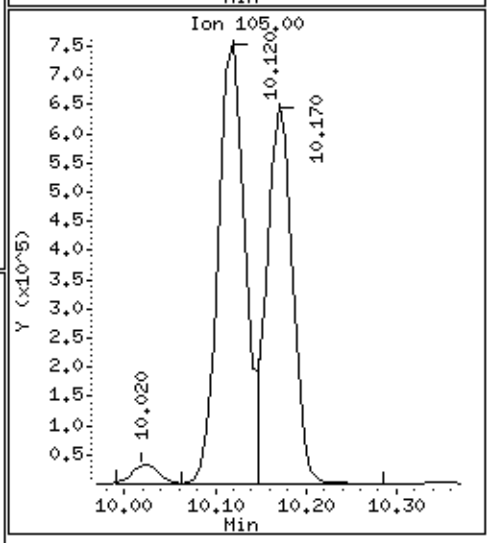
190 1,3,5-Trimethylbenzene

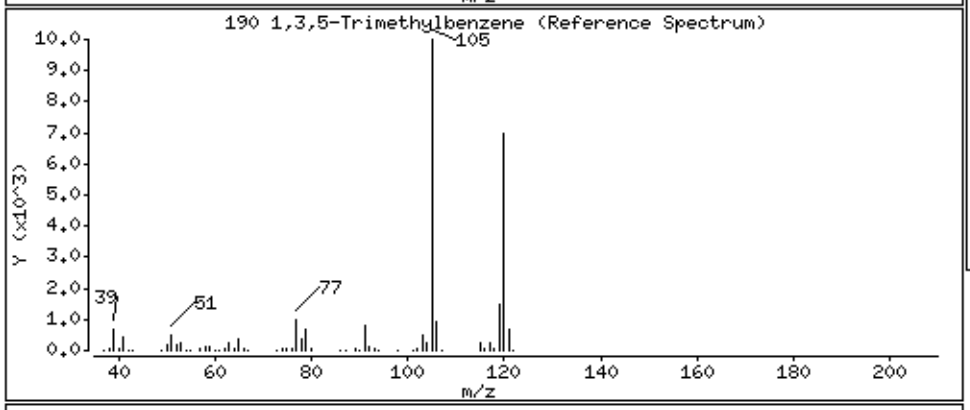
Concentration: 44.546 PPBV

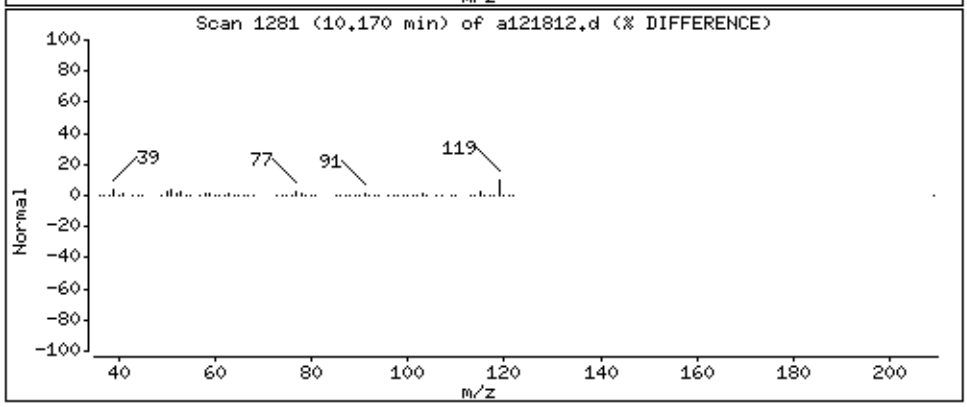












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

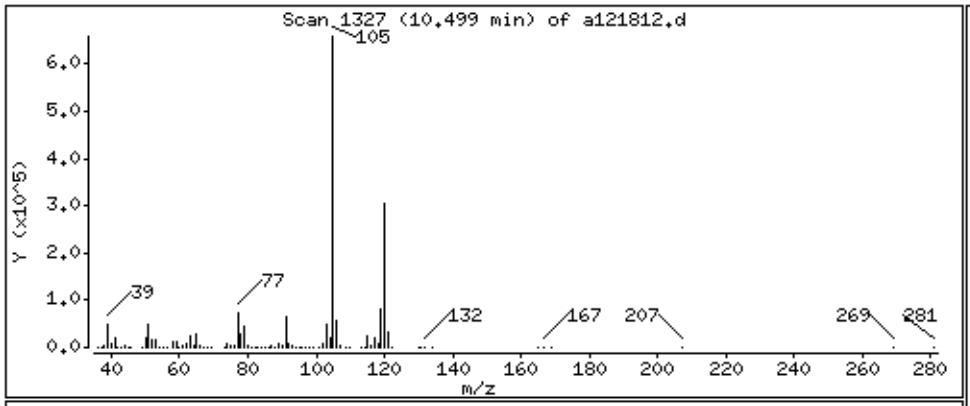
Operator: EA

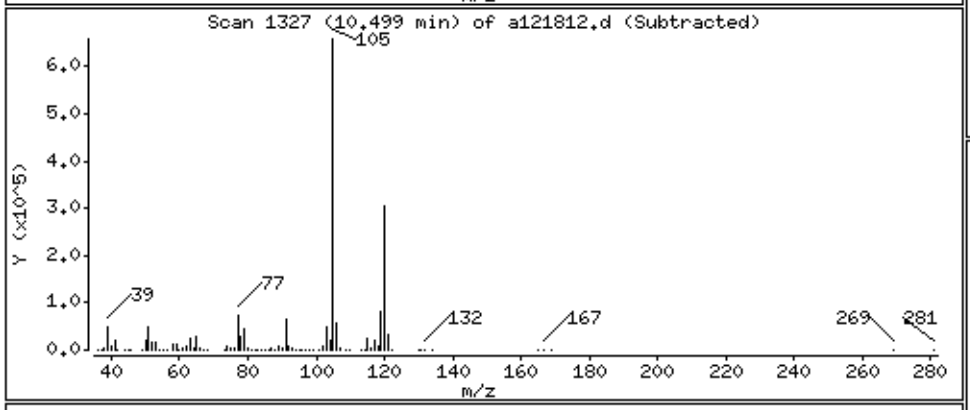
Column phase: RTX-624

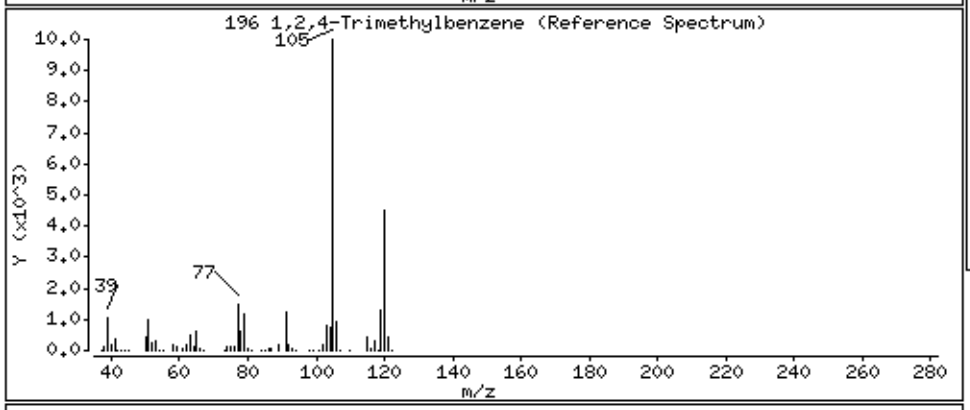
Column diameter: 0.25

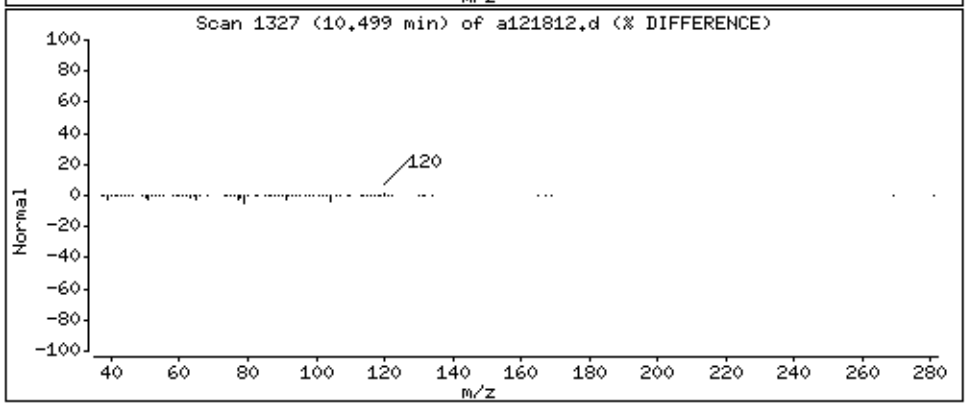
196 1,2,4-Trimethylbenzene

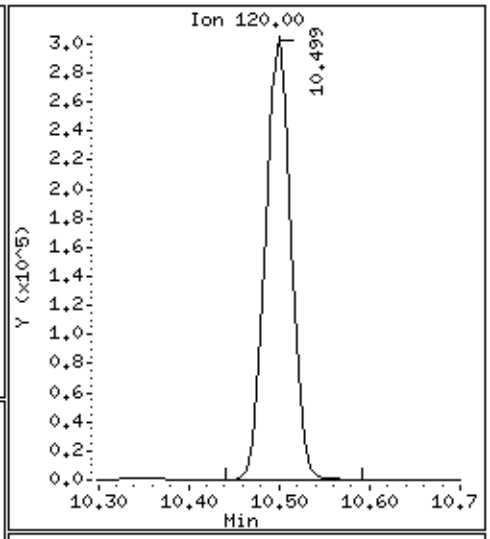
Concentration: 45.088 PPBV

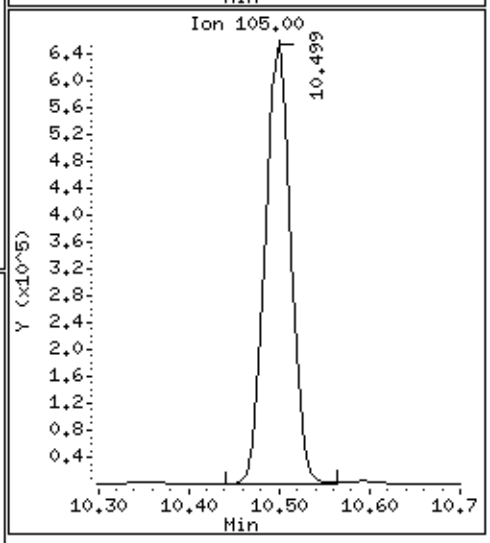












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

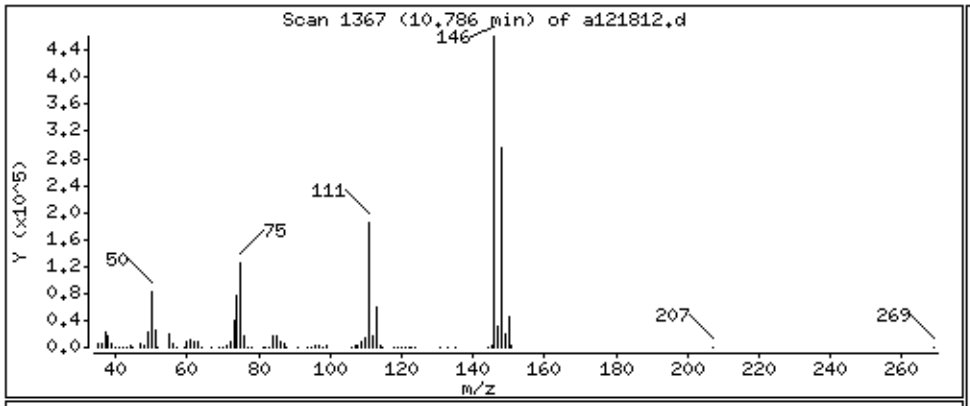
Operator: EA

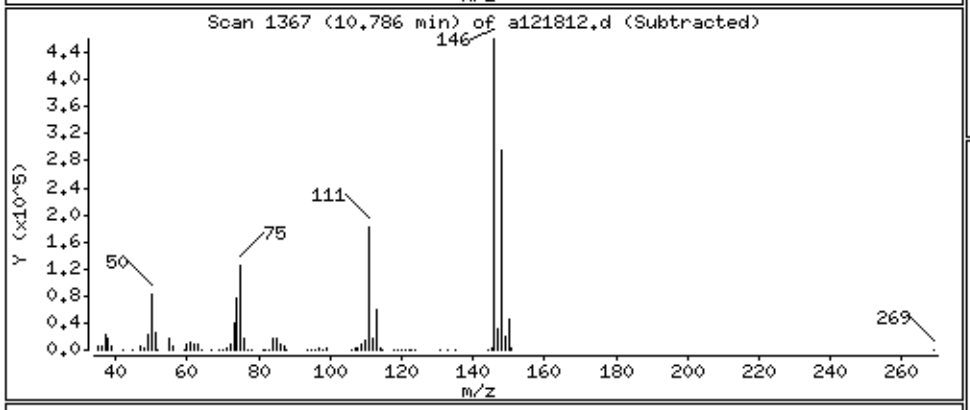
Column phase: RTX-624

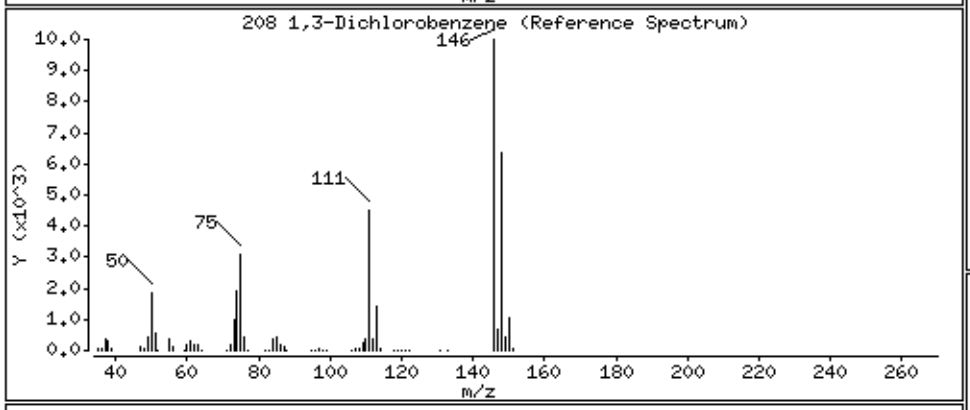
Column diameter: 0.25

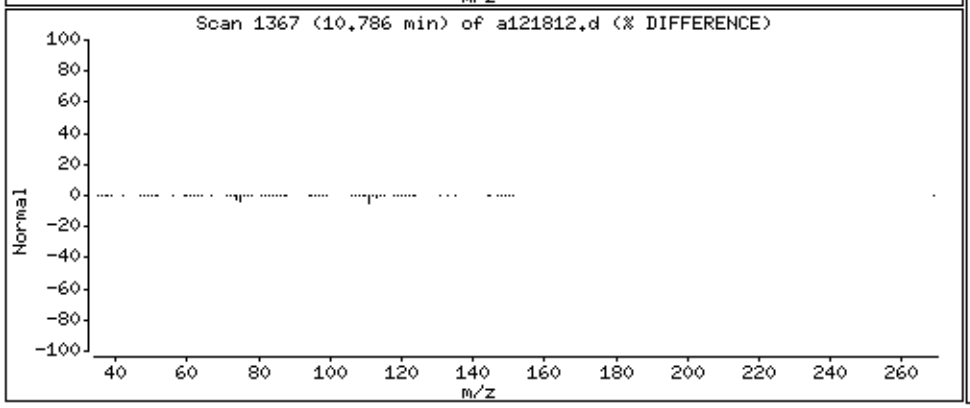
208 1,3-Dichlorobenzene

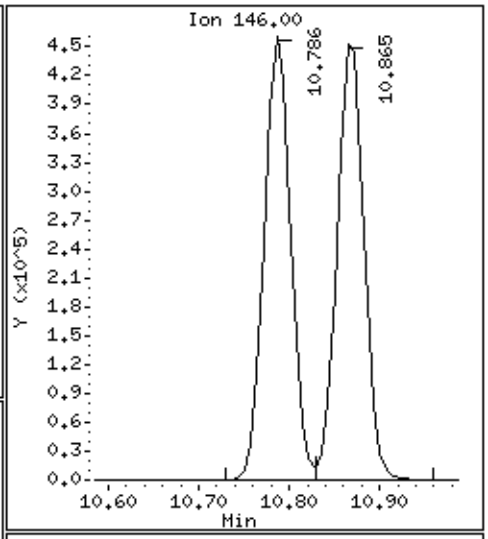
Concentration: 44.607 PPBV

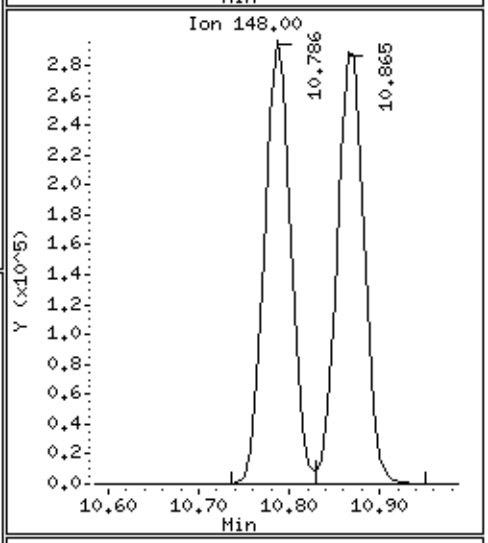


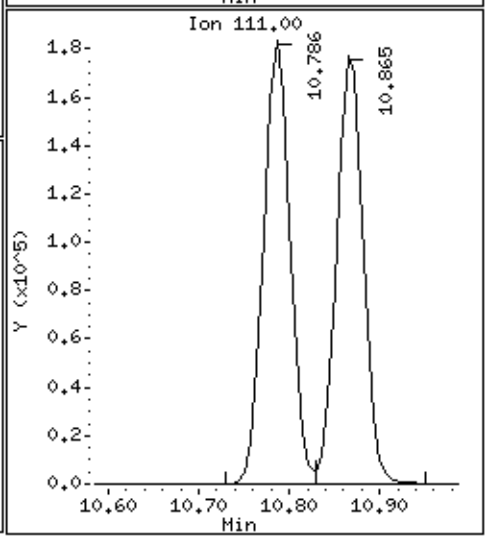












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

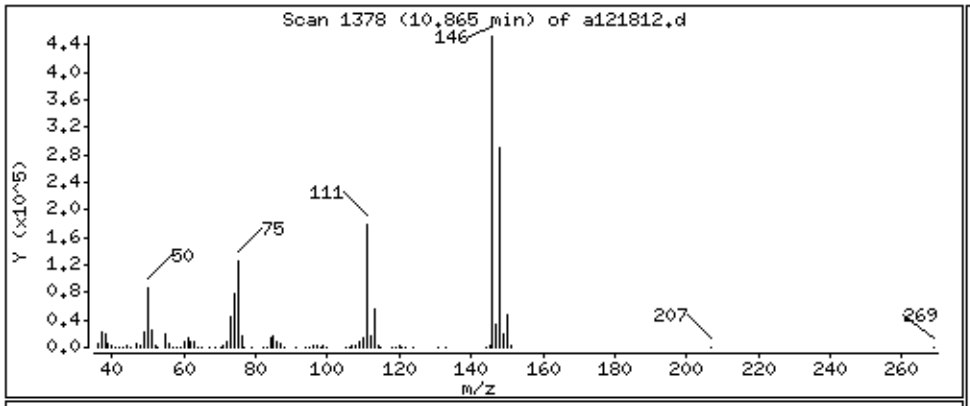
Operator: EA

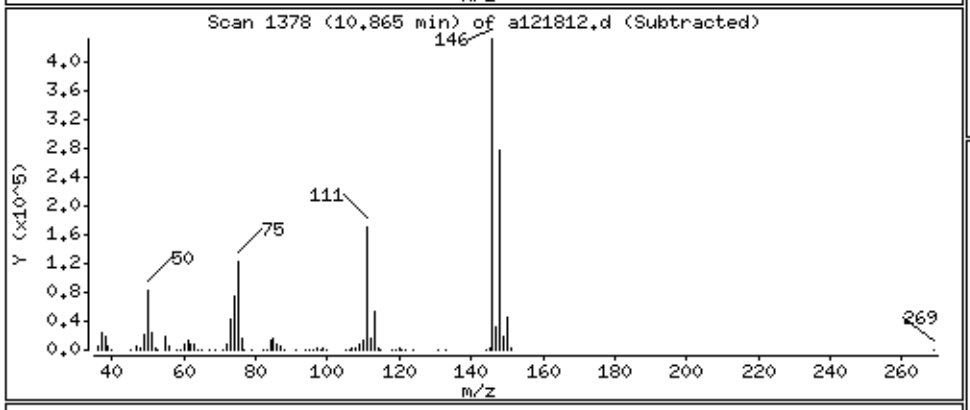
Column phase: RTX-624

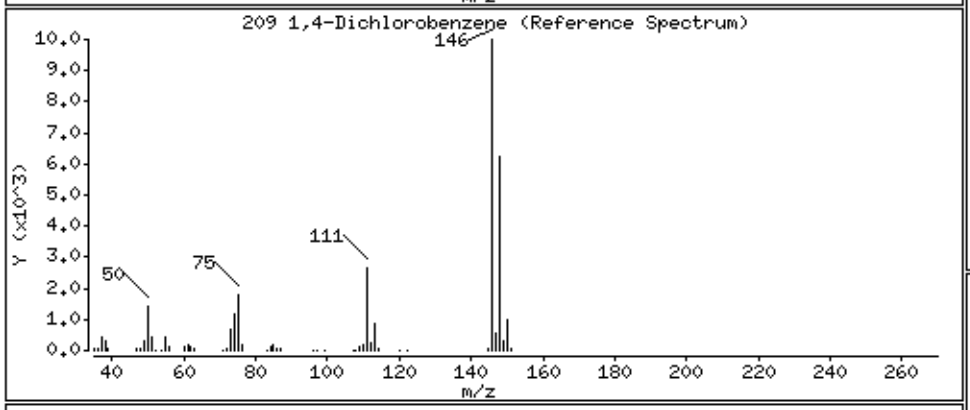
Column diameter: 0.25

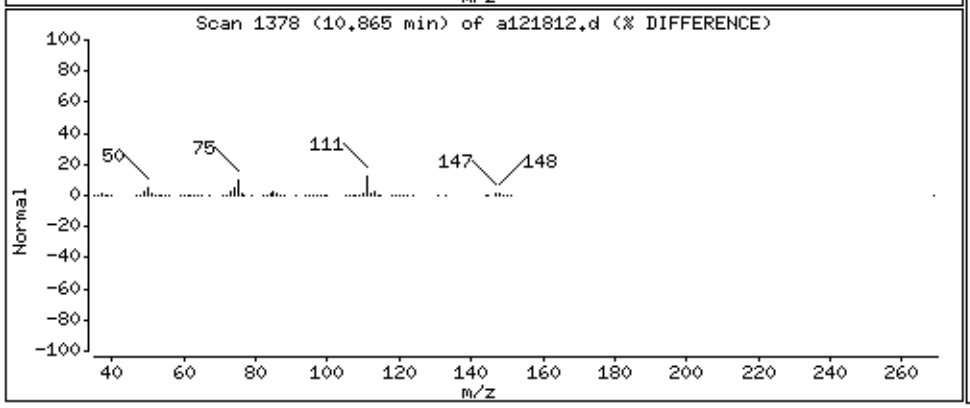
209 1,4-Dichlorobenzene

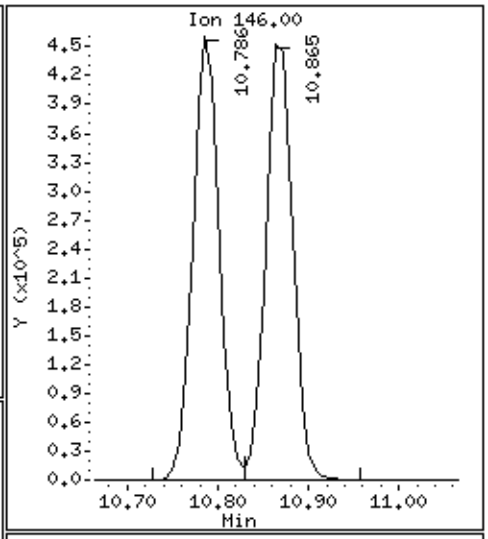
Concentration: 44.297 PPBV

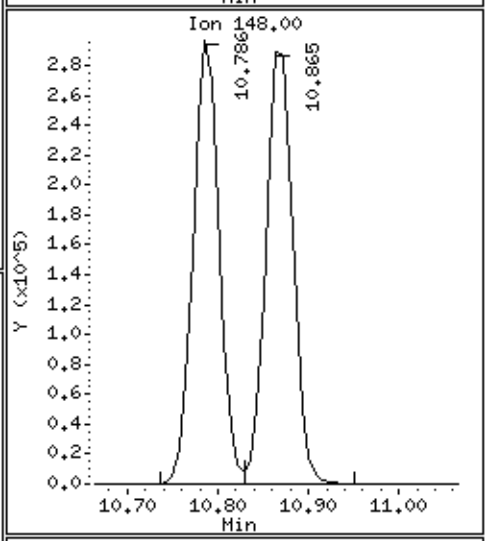


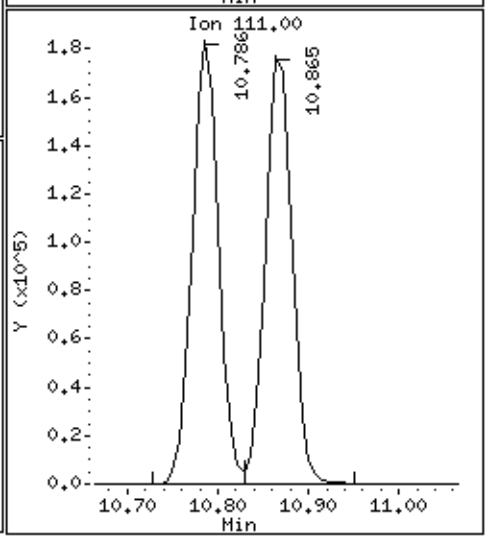












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

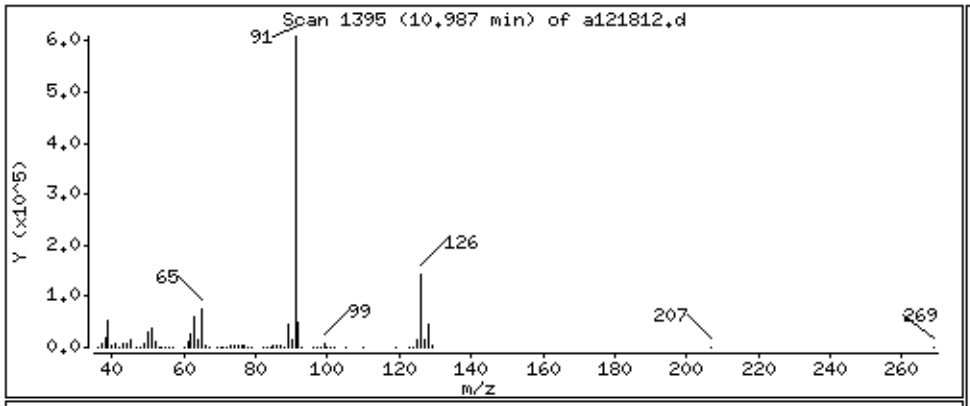
Operator: EA

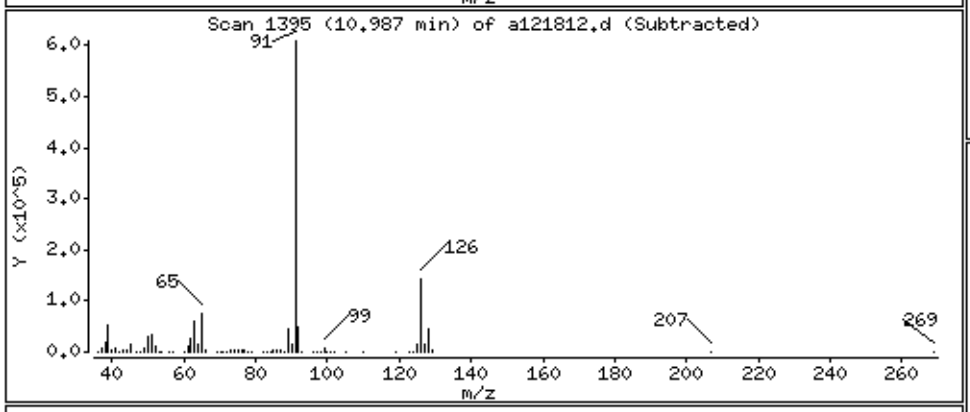
Column phase: RTX-624

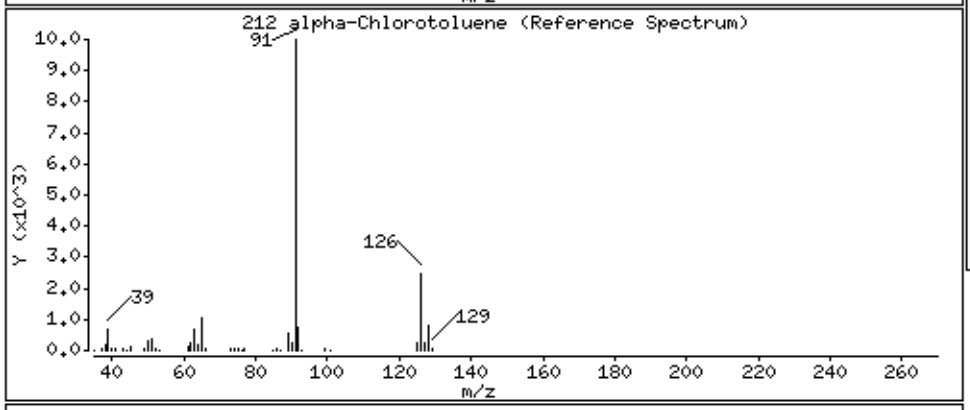
Column diameter: 0.25

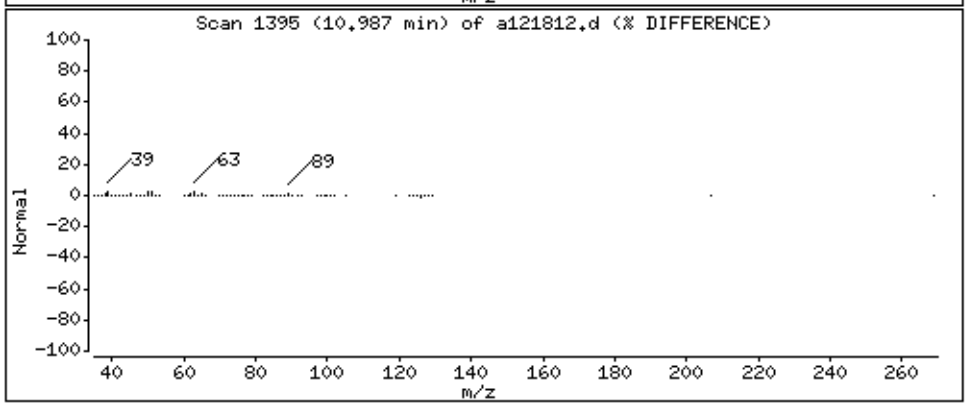
212 alpha-Chlorotoluene

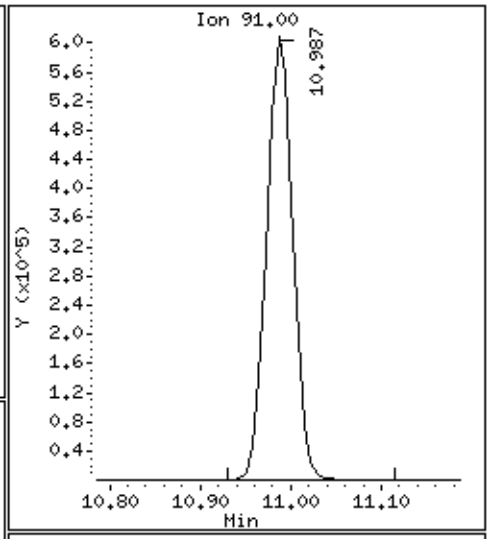
Concentration: 48.007 PPBV

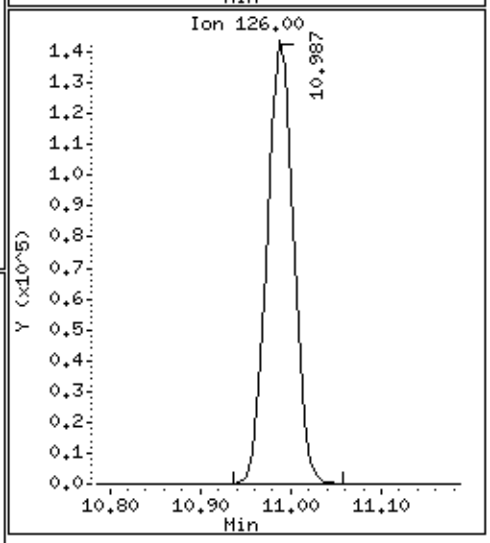












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

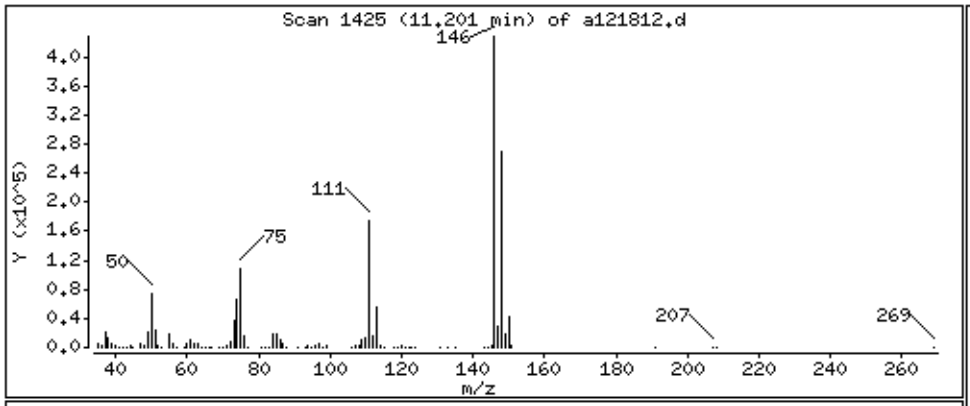
Operator: EA

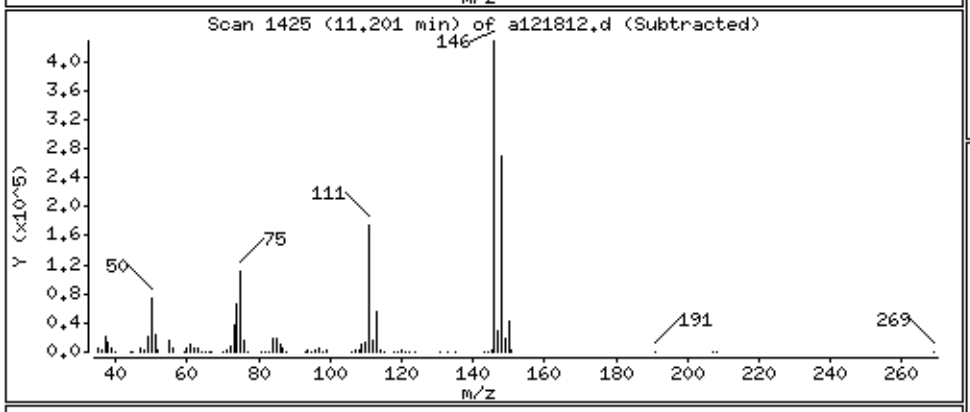
Column phase: RTX-624

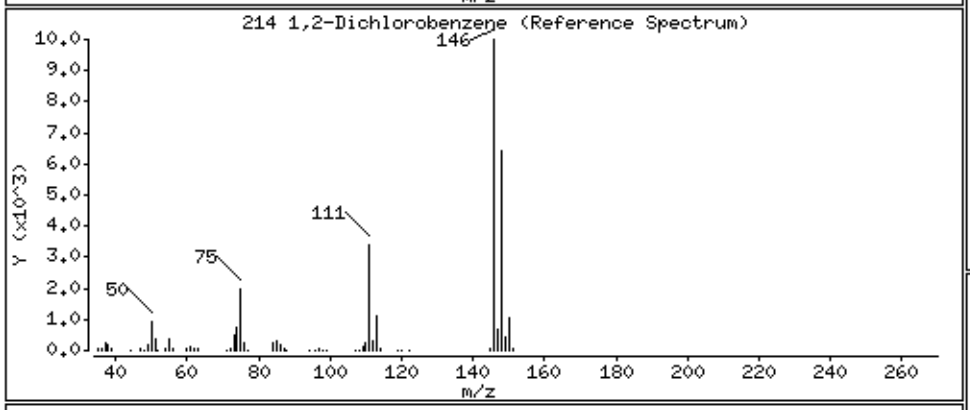
Column diameter: 0.25

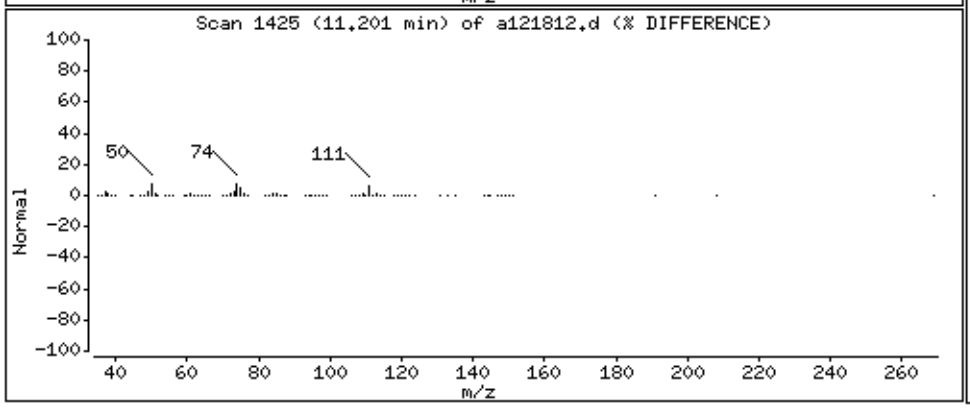
214 1,2-Dichlorobenzene

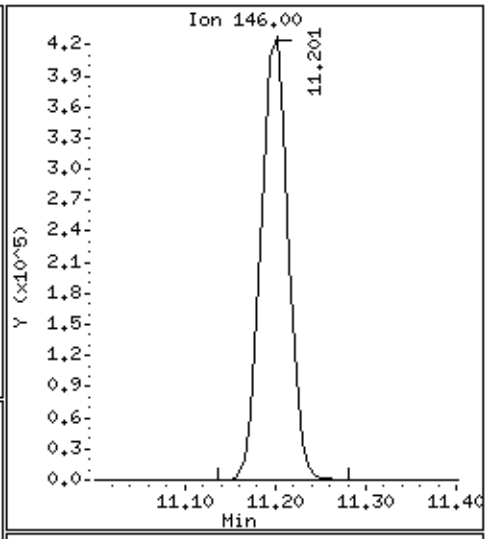
Concentration: 44.656 PPBV

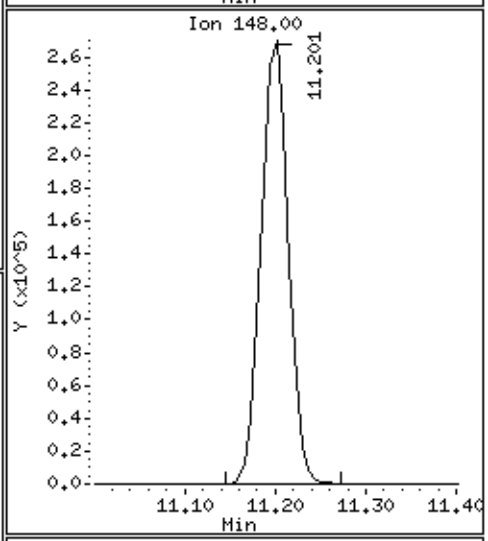


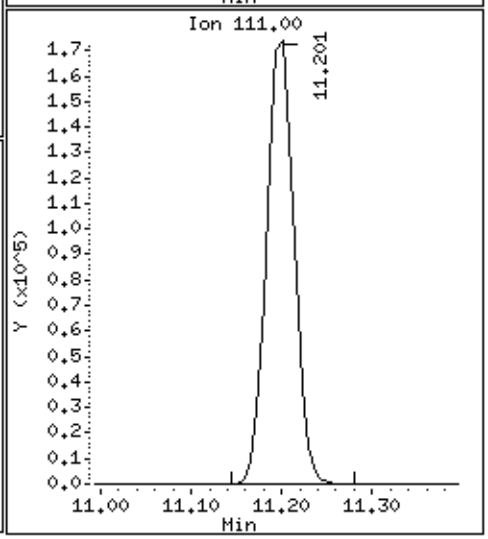












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

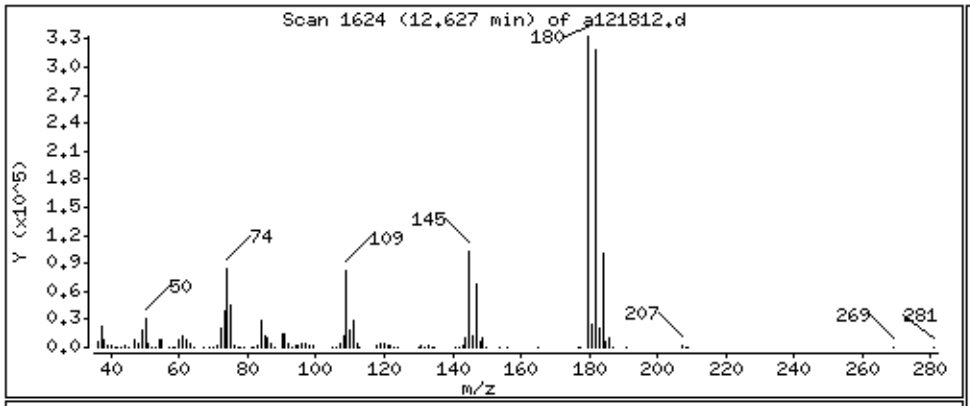
Operator: EA

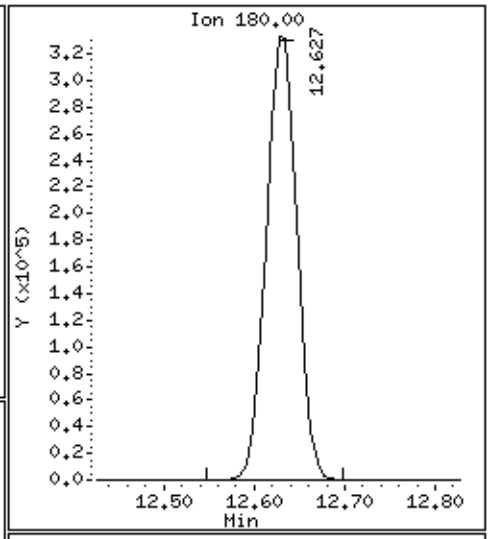
Column phase: RTX-624

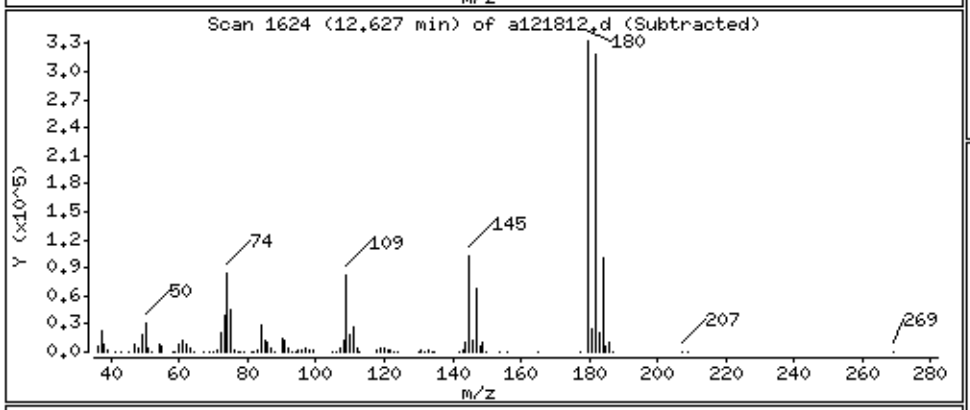
Column diameter: 0.25

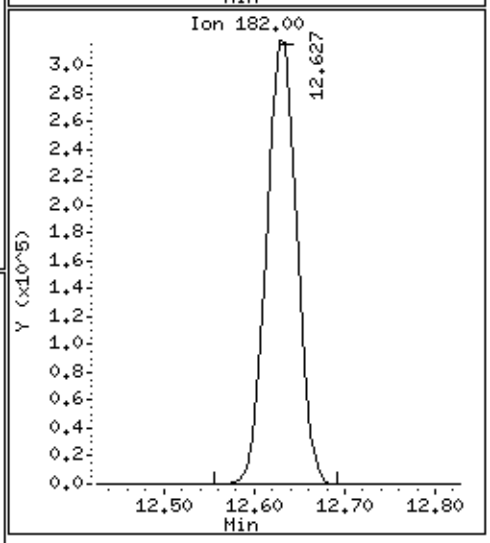
226 1,2,4-Trichlorobenzene

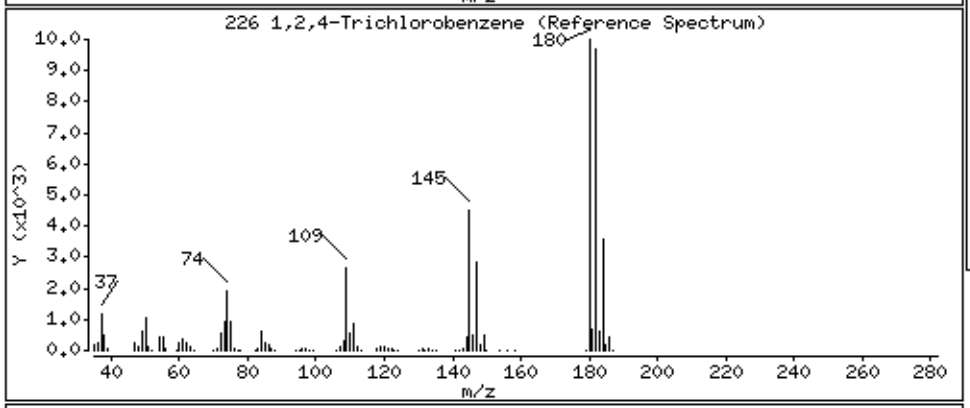
Concentration: 43.694 PPBV

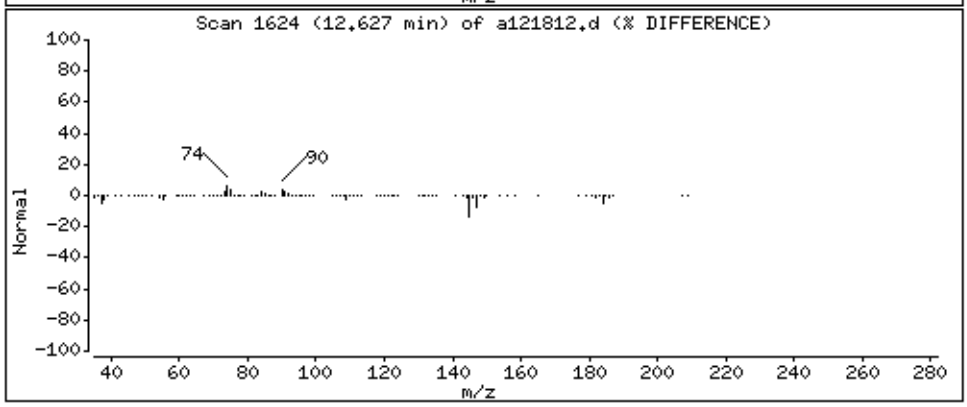












Data File: /chem/msda.i/18dec15.b/a121812.d

Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

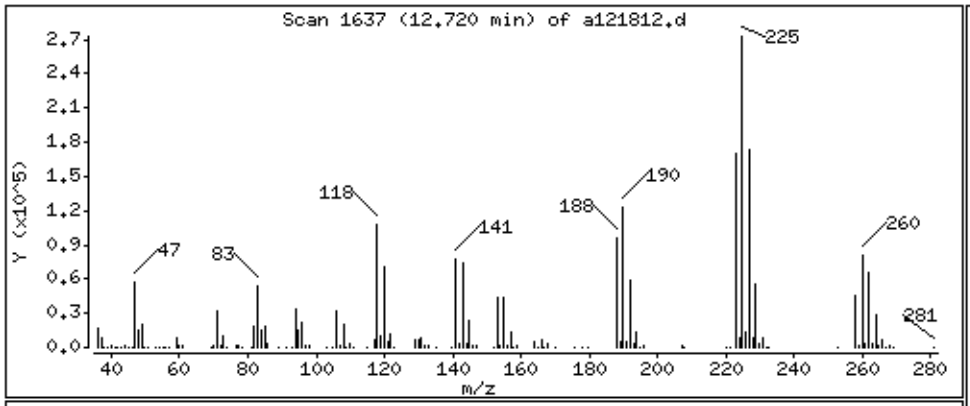
Operator: EA

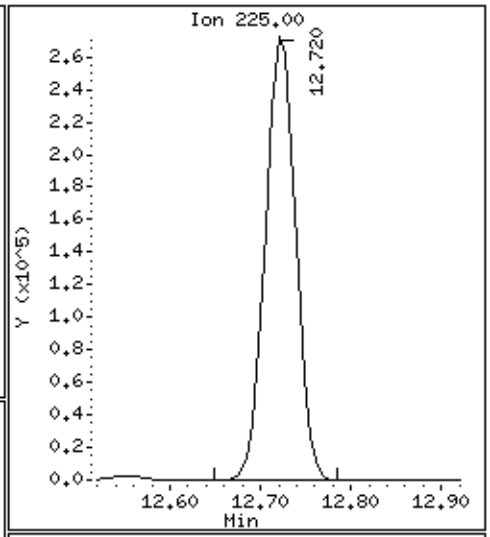
Column phase: RTX-624

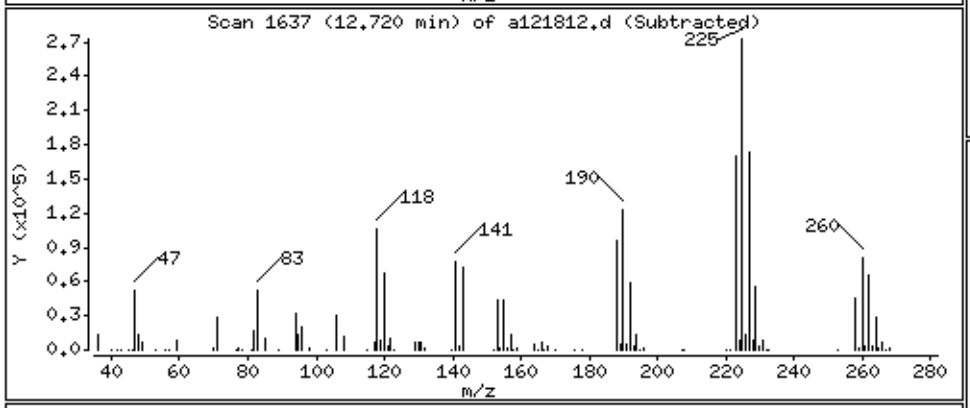
Column diameter: 0.25

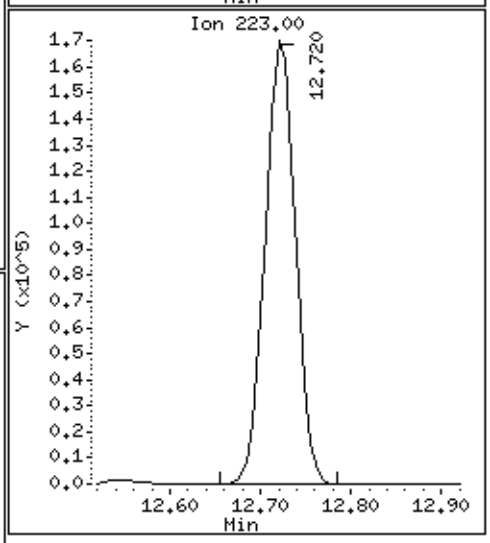
227 Hexachlorobutadiene

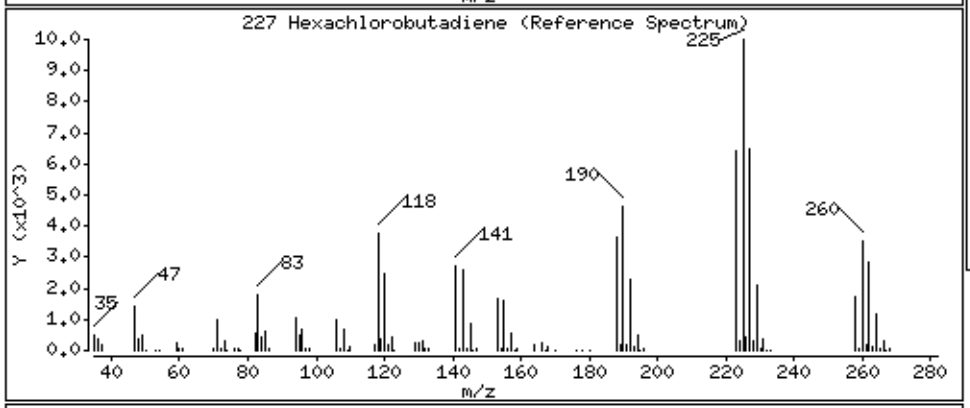
Concentration: 42.376 PPBV

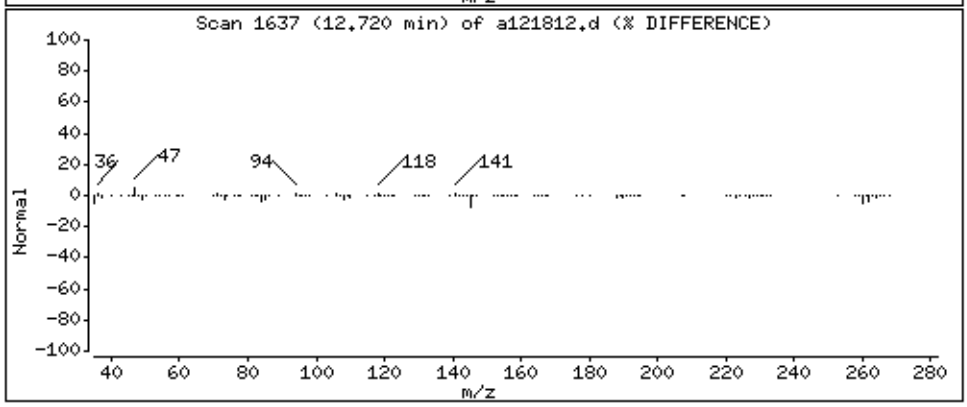












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Date : 18-DEC-2015 16:49

Client ID: LCS

Instrument: msda.i

Sample Info: 100mL #2759-106A

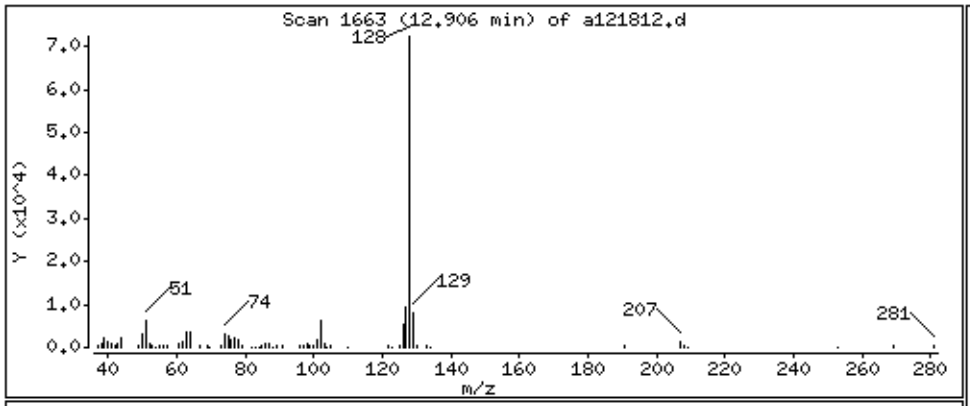
Operator: EA

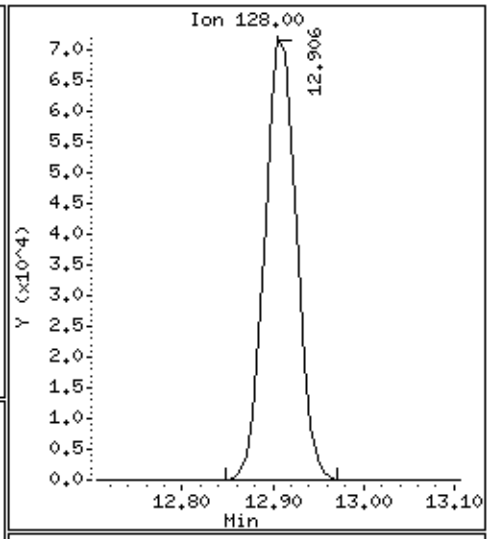
Column phase: RTX-624

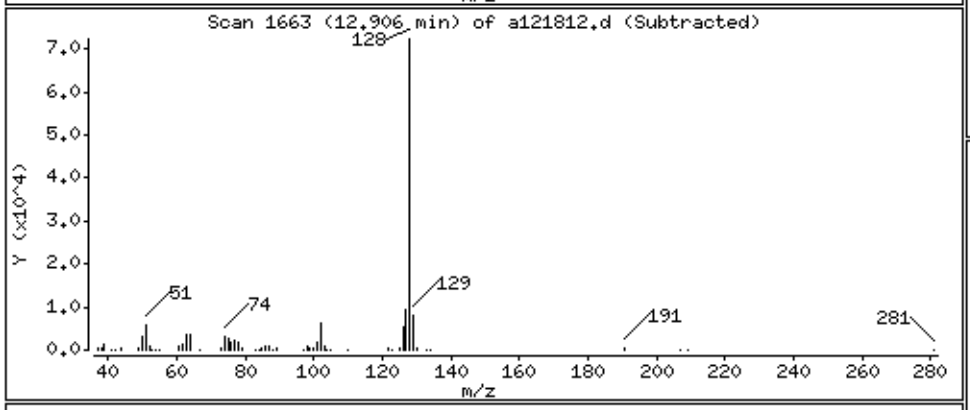
Column diameter: 0.25

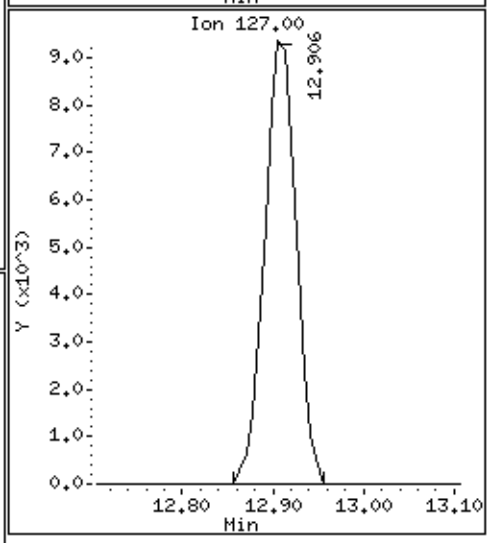
228 Naphthalene

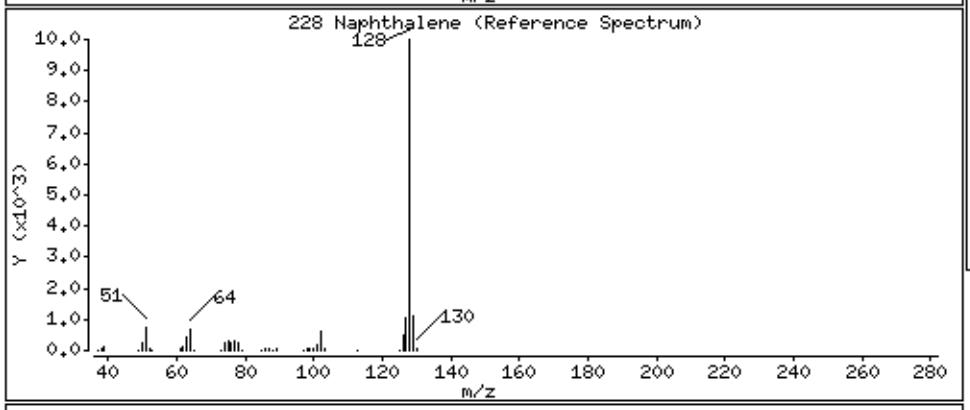
Concentration: 4.717 PPBV

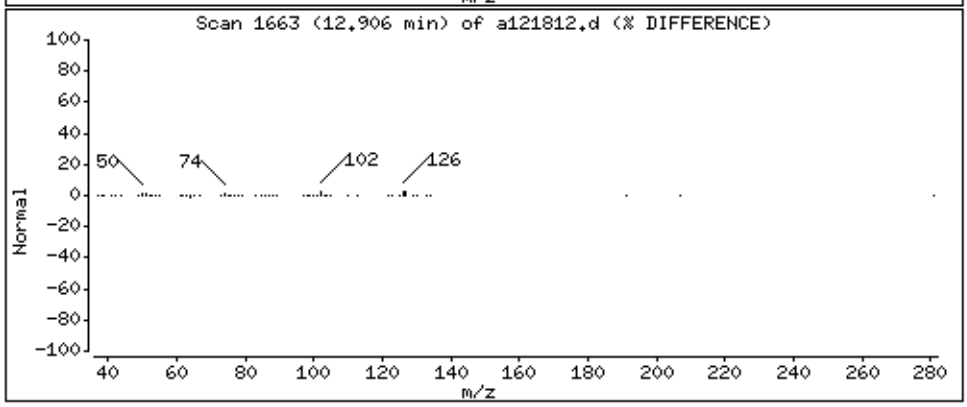












Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/18dec15.b/a121802.d
Lab Smp Id: ICAL Client Smp ID: Level 2
Inj Date : 18-DEC-2015 10:48
Operator : cb Inst ID: msda.i
Smp Info : 20mL #2759-148
Misc Info : 0.5ppbv (5.0ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/18dec15.b/a15q1218a.m
Meth Date : 19-Dec-2015 14:16 cbond Quant Type: ISTD
Cal Date : 18-DEC-2015 10:48 Cal File: a121802.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12low.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	154329	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	126136			47.82- 107.82	81.73
5.464	5.464 (1.000)	49	227090			110.78- 170.78	147.15
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	678521	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	103669			0.00- 45.54	15.28
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	618607	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	307475			20.41- 80.41	49.70
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.022	6.022 (1.102)	65	201615	25.0000	25.412	80.00- 120.00	100.00
6.022	6.022 (1.102)	67	102244			25.18- 85.18	50.71

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.620	7.620 (1.194)	98	680425	25.0000	24.720	80.00- 120.00	100.00
7.620	7.620 (1.194)	70	70394			0.00- 40.33	10.35
7.620	7.620 (1.194)	100	454073			36.65- 96.65	66.73
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	374159	25.0000	25.060	80.00- 120.00	100.00
9.862	9.862 (1.112)	95	446453			90.45- 150.45	119.32
9.862	9.862 (1.112)	176	367867			69.84- 129.84	98.32
11 Freon 12					CAS #: 75-71-8		
1.388	1.388 (0.254)	85	6070	0.50000	0.6342	80.00- 120.00	100.00
1.388	1.388 (0.254)	87	1723			2.85- 62.85	28.39
15 Freon 114					CAS #: 76-14-2		
1.510	1.510 (0.276)	135	4780	0.50000	0.6032	80.00- 120.00	100.00
1.510	1.510 (0.276)	137	1316			2.45- 62.45	27.53
25 Vinyl Chloride					CAS #: 75-01-4		
1.710	1.710 (0.313)	62	2273	0.50000	0.5906	80.00- 120.00	100.00
1.710	1.710 (0.313)	64	1166			0.57- 60.57	51.30
26 1,3-Butadiene					CAS #: 106-99-0		
1.739	1.739 (0.318)	54	2567	0.50000	0.7269	80.00- 120.00	100.00
1.739	1.739 (0.318)	39	2660			74.69- 134.69	103.62
29 Bromomethane					CAS #: 74-83-9		
2.097	2.097 (0.384)	94	2110	0.50000	0.6445	80.00- 120.00	100.00(a)
2.097	2.097 (0.384)	96	2723			68.21- 128.21	129.05
35 Freon 11					CAS #: 75-69-4		
2.470	2.470 (0.452)	101	6009	0.50000	0.5661	80.00- 120.00	100.00
2.477	2.477 (0.453)	103	4137			34.09- 94.09	68.85
49 Freon 113					CAS #: 76-13-1		
3.143	3.143 (0.575)	151	4890	0.50000	0.6127	80.00- 120.00	100.00
3.143	3.143 (0.575)	153	3588			35.78- 95.78	73.37
3.143	3.143 (0.575)	101	5785			88.30- 148.30	118.30
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.171	3.171 (0.580)	98	1946	0.50000	0.7056	80.00- 120.00	100.00
3.171	3.171 (0.580)	96	3443			122.92- 182.92	176.93
3.164	3.164 (0.579)	61	3482			232.20- 292.20	178.93
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.096	4.096 (0.750)	73	6479	0.50000	0.5756	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether (continued)							
4.096	4.096 (0.750)	57	2410			0.00- 57.40	37.20
4.088	4.088 (0.748)	41	2374			0.00- 57.39	36.64
73 trans-1,2-Dichloroethene						CAS #: 156-60-5	
4.117	4.117 (0.754)	98	1966	0.50000	0.6869	80.00- 120.00	100.00
4.117	4.117 (0.754)	61	3236			209.93- 269.93	164.60
4.110	4.110 (0.752)	96	3215			130.42- 190.42	163.53
78 Hexane						CAS #: 110-54-3	
4.332	4.332 (0.793)	57	4635	0.50000	0.5965	80.00- 120.00	100.00
4.332	4.332 (0.793)	43	3728			39.24- 99.24	80.43
4.339	4.339 (0.794)	86	634			0.00- 43.98	13.68
82 1,1-Dichloroethane						CAS #: 75-34-3	
4.626	4.626 (0.847)	63	4528	0.50000	0.5624	80.00- 120.00	100.00
4.633	4.633 (0.848)	65	1769			1.56- 61.56	39.07
91 cis-1,2-Dichloroethene						CAS #: 156-59-2	
5.227	5.227 (0.957)	98	1928	0.50000	0.6113	80.00- 120.00	100.00
5.227	5.227 (0.957)	96	3531			126.91- 186.91	183.14
5.227	5.227 (0.957)	61	3886			186.69- 246.69	201.56
99 Tetrahydrofuran						CAS #: 109-99-9	
5.464	5.464 (1.000)	42	3062	0.50000	0.4832	80.00- 120.00	100.00(a)
5.456	5.456 (0.999)	71	1340			0.53- 60.53	43.76
5.464	5.464 (1.000)	72	1258			0.16- 60.16	41.08
100 Chloroform						CAS #: 67-66-3	
5.535	5.535 (1.013)	83	5853	0.50000	0.6173	80.00- 120.00	100.00
5.528	5.528 (1.012)	85	3729			36.67- 96.67	63.71
102 Cyclohexane						CAS #: 110-82-7	
5.636	5.636 (1.031)	84	3857	0.50000	0.6321	80.00- 120.00	100.00
5.636	5.636 (1.031)	56	5995			121.50- 181.50	155.43
5.628	5.628 (1.030)	41	3373			54.13- 114.13	87.45
103 1,1,1-Trichloroethane						CAS #: 71-55-6	
5.657	5.657 (1.035)	97	8439	0.50000	0.7510	80.00- 120.00	100.00
5.657	5.657 (1.035)	99	4222			32.76- 92.76	50.03
106 Carbon Tetrachloride						CAS #: 56-23-5	
5.772	5.772 (1.056)	119	6644	0.50000	0.5836	80.00- 120.00	100.00
5.772	5.772 (1.056)	117	7456			73.53- 133.53	112.22
113 2,2,4-Trimethylpentane						CAS #: 540-84-1	
5.979	5.979 (1.094)	57	15238	0.50000	0.5894	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
113 2,2,4-Trimethylpentane (continued)							
5.979	5.979 (1.094)	56	5606			0.62- 60.62	36.79
5.979	5.979 (1.094)	41	4488			0.00- 56.92	29.45
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	8772	0.50000	0.6144	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	2185			0.00- 53.73	24.91
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	3765	0.50000	0.5386	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	1541			0.51- 60.51	40.93
121 Heptane					CAS #: 142-82-5		
6.144	6.144 (0.963)	71	3350	0.50000	0.6459	80.00- 120.00	100.00
6.144	6.144 (0.963)	43	7220			198.93- 258.93	215.52
6.151	6.151 (0.964)	57	3995			83.54- 143.54	119.25
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	5275	0.50000	0.6738	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	4882			79.66- 139.66	92.55
6.574	6.574 (1.030)	97	3558			34.04- 94.04	67.45
127 Methylcyclohexane					CAS #: 108-87-2		
6.674	6.674 (1.222)	83	7688	0.50000	0.7754	80.00- 120.00	100.00(a)
6.674	6.674 (1.222)	98	3450			18.10- 78.10	44.88
6.674	6.674 (1.222)	55	5886			66.76- 126.76	76.56
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.817	6.817 (1.068)	63	3982	0.50000	0.6097	80.00- 120.00	100.00
6.817	6.817 (1.068)	62	3134			39.78- 99.78	78.70
6.817	6.817 (1.068)	41	3282			32.16- 92.16	82.42
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	6393	0.50000	0.5562	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	4672			36.86- 96.86	73.08
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.433	7.433 (1.165)	75	5748	0.50000	0.5625	80.00- 120.00	100.00
7.433	7.433 (1.165)	77	2491			1.21- 61.21	43.34
7.433	7.433 (1.165)	39	4447			32.66- 92.66	77.37
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.548	7.548 (1.183)	58	4457	0.50000	0.6980	80.00- 120.00	100.00
7.548	7.548 (1.183)	43	9786			262.16- 322.16	219.56
7.548	7.548 (1.183)	85	1842			11.61- 71.61	41.33

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	12871	0.50000	0.6090	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	7484			28.59- 88.59	58.15
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	4868	0.50000	0.5495	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	2544			1.64- 61.64	52.26
7.921	7.921 (0.893)	39	3306			30.00- 90.00	67.91
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.078	8.078 (0.911)	97	3836	0.50000	0.5346	80.00- 120.00	100.00
8.078	8.078 (0.911)	99	2514			31.35- 91.35	65.54
8.078	8.078 (0.911)	83	4476			53.39- 113.39	116.68
156 Tetrachloroethene					CAS #: 127-18-4		
8.114	8.114 (0.915)	166	6296	0.50000	0.5786	80.00- 120.00	100.00
8.114	8.114 (0.915)	129	5306			48.51- 108.51	84.28
8.114	8.114 (0.915)	131	5338			45.21- 105.21	84.78
160 Dibromochloromethane					CAS #: 124-48-1		
8.393	8.393 (0.947)	129	8798	0.50000	0.5896	80.00- 120.00	100.00
8.393	8.393 (0.947)	127	6663			48.14- 108.14	75.73
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	7090	0.50000	0.5838	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	6553			62.49- 122.49	92.43
165 Chlorobenzene					CAS #: 108-90-7		
8.888	8.888 (1.002)	112	10139	0.50000	0.5597	80.00- 120.00	100.00
8.888	8.888 (1.002)	114	3253			1.55- 61.55	32.08
8.880	8.880 (1.002)	77	11002			23.72- 83.72	108.51
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.008)	106	5460	0.50000	0.5968	80.00- 120.00	100.00
8.938	8.938 (1.008)	91	16157			275.74- 335.74	295.92
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.019)	106	6695	0.50000	0.5801	80.00- 120.00	100.00
9.038	9.038 (1.019)	91	12385			168.00- 228.00	184.99
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.058)	106	6760	0.50000	0.6203	80.00- 120.00	100.00
9.382	9.382 (1.058)	91	14395			180.86- 240.86	212.94
172 Styrene					CAS #: 100-42-5		
9.403	9.403 (1.061)	104	9871	0.50000	0.5800	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
172 Styrene (continued)							
9.403	9.403 (1.061)	78	5307			18.40- 78.40	53.76
174 Bromoform					CAS #: 75-25-2		
9.604	9.604 (1.083)	173	8509	0.50000	0.5646	80.00- 120.00	100.00
9.604	9.604 (1.083)	171	4873			21.79- 81.79	57.27
175 Cumene					CAS #: 98-82-8		
9.676	9.676 (1.091)	105	20835	0.50000	0.6119	80.00- 120.00	100.00
9.676	9.676 (1.091)	120	5596			0.00- 57.35	26.86
9.676	9.676 (1.091)	51	2530			0.00- 41.41	12.14
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.991	9.991 (1.127)	83	9100	0.50000	0.5641	80.00- 120.00	100.00
9.991	9.991 (1.127)	85	6844			35.95- 95.95	75.21
182 Propylbenzene					CAS #: 103-65-1		
10.019	10.019 (1.130)	91	22956	0.50000	0.5954	80.00- 120.00	100.00
10.019	10.019 (1.130)	120	5668			0.00- 54.67	24.69
10.019	10.019 (1.130)	105	1605			0.00- 33.80	6.99
188 4-Ethyltoluene					CAS #: 622-96-8		
10.112	10.112 (1.141)	120	6655	0.50000	0.6221	80.00- 120.00	100.00
10.120	10.120 (1.141)	105	20245			291.69- 351.69	304.21
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.170	10.170 (1.147)	120	9420	0.50000	0.6349	80.00- 120.00	100.00
10.170	10.170 (1.147)	105	18745			176.78- 236.78	198.99
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.499	10.499 (1.184)	120	8019	0.50000	0.6066	80.00- 120.00	100.00
10.499	10.499 (1.184)	105	17620			184.15- 244.15	219.73
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.786	10.786 (1.217)	146	12418	0.50000	0.5934	80.00- 120.00	100.00
10.786	10.786 (1.217)	148	8033			34.28- 94.28	64.69
10.786	10.786 (1.217)	111	5576			10.08- 70.08	44.90
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.865	10.865 (1.225)	146	12738	0.50000	0.6028	80.00- 120.00	100.00
10.865	10.865 (1.225)	148	7891			34.75- 94.75	61.95
10.865	10.865 (1.225)	111	5431			8.94- 68.94	42.64
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.986	10.986 (1.239)	91	14843	0.50000	0.5828	80.00- 120.00	100.00
10.986	10.986 (1.239)	126	3540			0.00- 53.59	23.85

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene						CAS #: 95-50-1		
11.194	11.194	(1.263)	146	11979	0.50000	0.6008	80.00- 120.00	100.00
11.194	11.194	(1.263)	148	7414			33.27- 93.27	61.89
11.194	11.194	(1.263)	111	5638			11.15- 71.15	47.07

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a121802.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 0.5ppbv (5.0ppbv)

Calibration Date: 18-DEC-2015
Calibration Time: 12:53
Client Smp ID: Level 2
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	158121	94873	221369	154329	-2.40
123 1,4-Difluorobenze	659165	395499	922831	678521	2.94
163 Chlorobenzene-d5	629706	377824	881588	618607	-1.76

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.47	5.14	5.80	5.46	-0.13
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/18dec15.b/a121802.d

Date : 18-DEC-2015 10:48

Client ID: Level 2

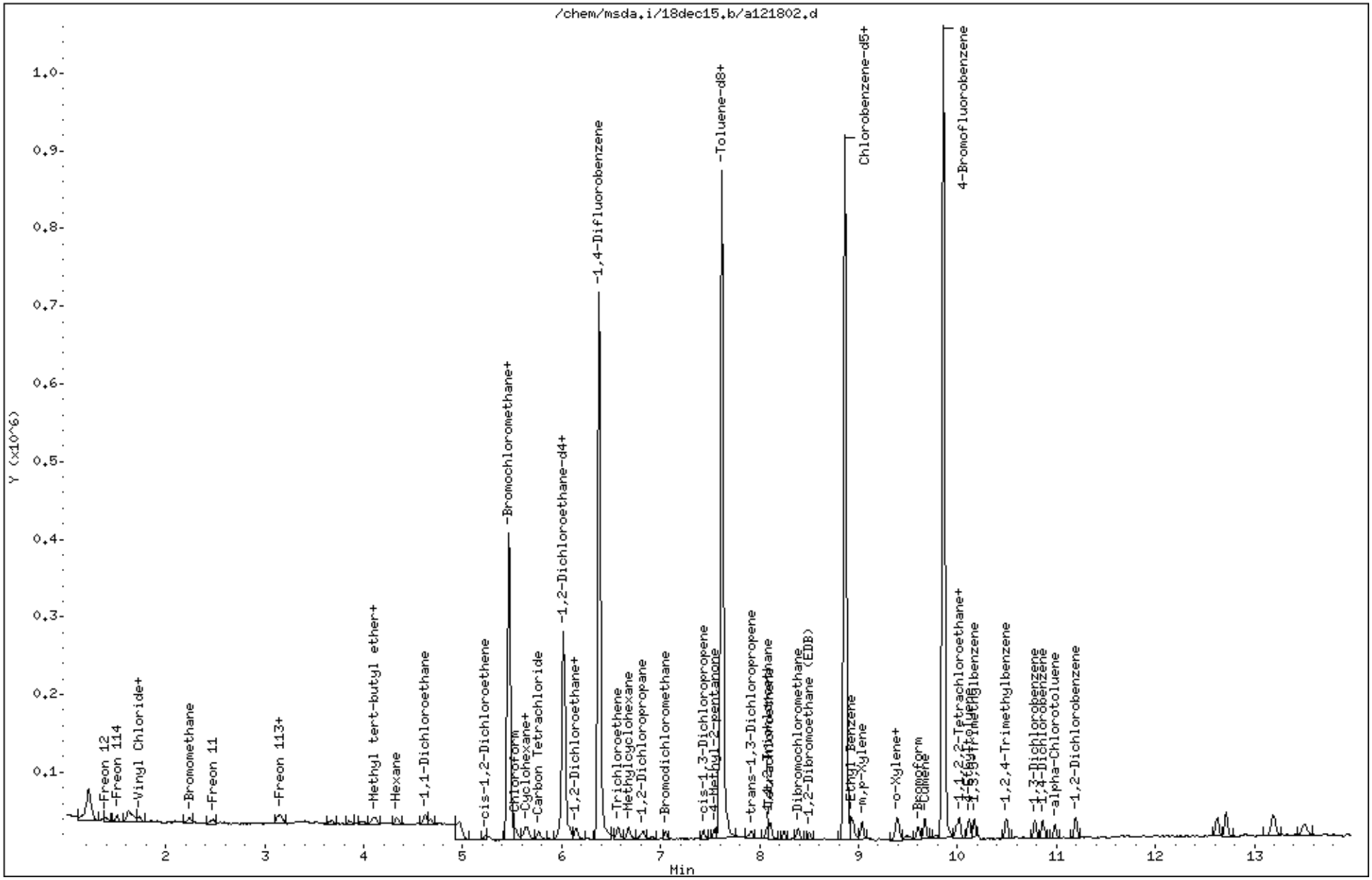
Sample Info: 20mL #2759-148

Column phase: RTX-624

Instrument: msda.i

Operator: cb

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/27jan16.b/a012707.d
Lab Smp Id: ICAL Level #3
Inj Date : 27-JAN-2016 15:09
Operator : js Inst ID: msda.i
Smp Info : 80ml 2759-157
Misc Info : 2.0ppbv (5.0ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/27jan16.b/a15q1218d.m
Meth Date : 27-Jan-2016 17:09 jscarbro Quant Type: ISTD
Cal Date : 27-JAN-2016 15:09 Cal File: a012707.d
Als bottle: 2 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BoilingPtcrv.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	193957	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	149611			47.82- 107.82	77.14
5.457	5.457 (1.000)	49	249871			110.78- 170.78	128.83
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.374	6.374 (1.000)	114	779082	25.0000		80.00- 120.00	100.00
6.374	6.374 (1.000)	88	113951			0.00- 45.54	14.63
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.859	8.859 (1.000)	117	715358	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	345981			20.41- 80.41	48.36
34 Pentane					CAS #: 109-66-0		
2.549	2.549 (0.466)	43	18093	2.00000	2.124	80.00- 120.00	100.00
2.549	2.549 (0.466)	57	3113			0.00- 43.57	17.21
2.556	2.556 (0.468)	72	1472			0.00- 39.05	8.14

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
148 Octane						CAS #: 111-65-9		
7.670	7.670	(1.203)	57	13248	2.00000	2.243	80.00- 120.00	100.00
7.670	7.670	(1.203)	85	13479			87.86- 147.86	101.74
7.670	7.670	(1.203)	43	29830			232.77- 292.77	225.17
170 Nonane						CAS #: 111-84-2		
8.952	8.952	(1.010)	43	30729	2.00000	2.217	80.00- 120.00	100.00
8.952	8.952	(1.010)	57	28671			48.41- 108.41	93.30
8.952	8.952	(1.010)	85	9999			4.10- 64.10	32.54
187 Decane						CAS #: 124-18-5		
10.070	10.070	(1.137)	57	35823	2.00000	2.210	80.00- 120.00	100.00
10.070	10.070	(1.137)	71	12309			10.00- 70.00	34.36
10.077	10.077	(1.137)	142	1849			0.00- 36.06	5.16
215 Undecane						CAS #: 1120-21-4		
11.080	11.080	(1.251)	57	30912	2.00000	1.840	80.00- 120.00	100.00(a)
11.080	11.080	(1.251)	43	26802			67.20- 127.20	86.70
225 Dodecane						CAS #: 112-40-3		
12.004	12.004	(1.355)	57	16767	2.00000	1.486	80.00- 120.00	100.00(a)
12.004	12.004	(1.355)	43	15115			63.85- 123.85	90.15

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 27-Jan-2016 17:09

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a012707.d
Lab Smp Id: ICAL Level #3
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /chem/msda.i/27jan16.b/a15q1218d.m
Misc Info: 2.0ppbv (5.0ppbv)

Calibration Date: 27-JAN-2016
Calibration Time: 13:28

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	185585	111351	259819	193957	4.51
123 1,4-Difluorobenze	763859	458315	1069403	779082	1.99
163 Chlorobenzene-d5	697872	418723	977021	715358	2.51

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.37	-0.11
163 Chlorobenzene-d5	8.87	8.54	9.20	8.86	-0.08

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/27jan16.b/a012707.d

Date : 27-JAN-2016 15:09

Client ID:

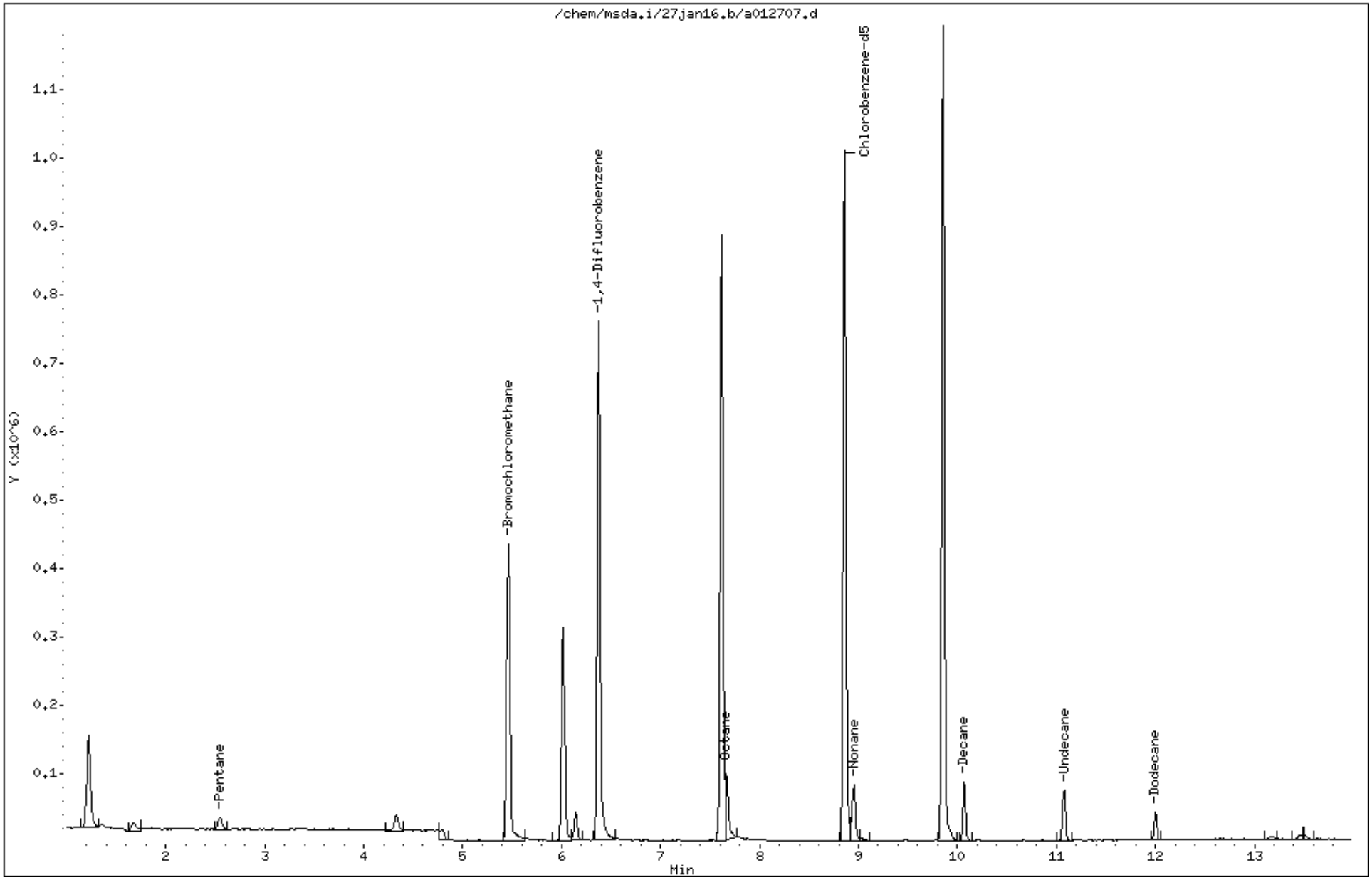
Sample Info: 80ml 2759-157

Column phase: RTX-624

Instrument: msda.i

Operator: js

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/31dec15.b/a123111.d
Lab Smp Id: ICAL Level 3
Inj Date : 31-DEC-2015 14:17
Operator : cb Inst ID: msda.i
Smp Info : 200mL 2759-165
Misc Info : 2.0ppbv(2.0ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/31dec15.b/a15q1218c.m
Meth Date : 31-Dec-2015 14:41 cbond Quant Type: ISTD
Cal Date : 31-DEC-2015 14:17 Cal File: a123111.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 123TCB.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	149033	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	117785			47.82- 107.82	79.03
5.464	5.464 (1.000)	49	232580			110.78- 170.78	156.06
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.380	6.380 (1.000)	114	627872	25.0000		80.00- 120.00	100.00
6.380	6.380 (1.000)	88	93520			0.00- 45.54	14.89
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	622707	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	303510			20.41- 80.41	48.74
229 1,2,3-Trichlorobenzene					CAS #: 87-61-6		
13.164	13.164 (1.485)	180	18314	2.00000	2.112	0.00- 0.00	100.00
13.164	13.164 (1.485)	182	16920			0.00- 0.00	92.39
13.164	13.164 (1.485)	145	6085			0.00- 0.00	33.23

Report Date: 31-Dec-2015 14:41

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a123111.d
Lab Smp Id: ICAL Level 3
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/31dec15.b/a15q1218c.m
Misc Info: 2.0ppbv(2.0ppbv)

Calibration Date: 31-DEC-2015
Calibration Time: 09:42

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	149213	89528	208898	149033	-0.12
123 1,4-Difluorobenze	620921	372553	869289	627872	1.12
163 Chlorobenzene-d5	612512	367507	857517	622707	1.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.13
123 1,4-Difluorobenze	6.37	6.04	6.70	6.38	0.11
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/31dec15.b/a123111.d

Date : 31-DEC-2015 14:17

Client ID:

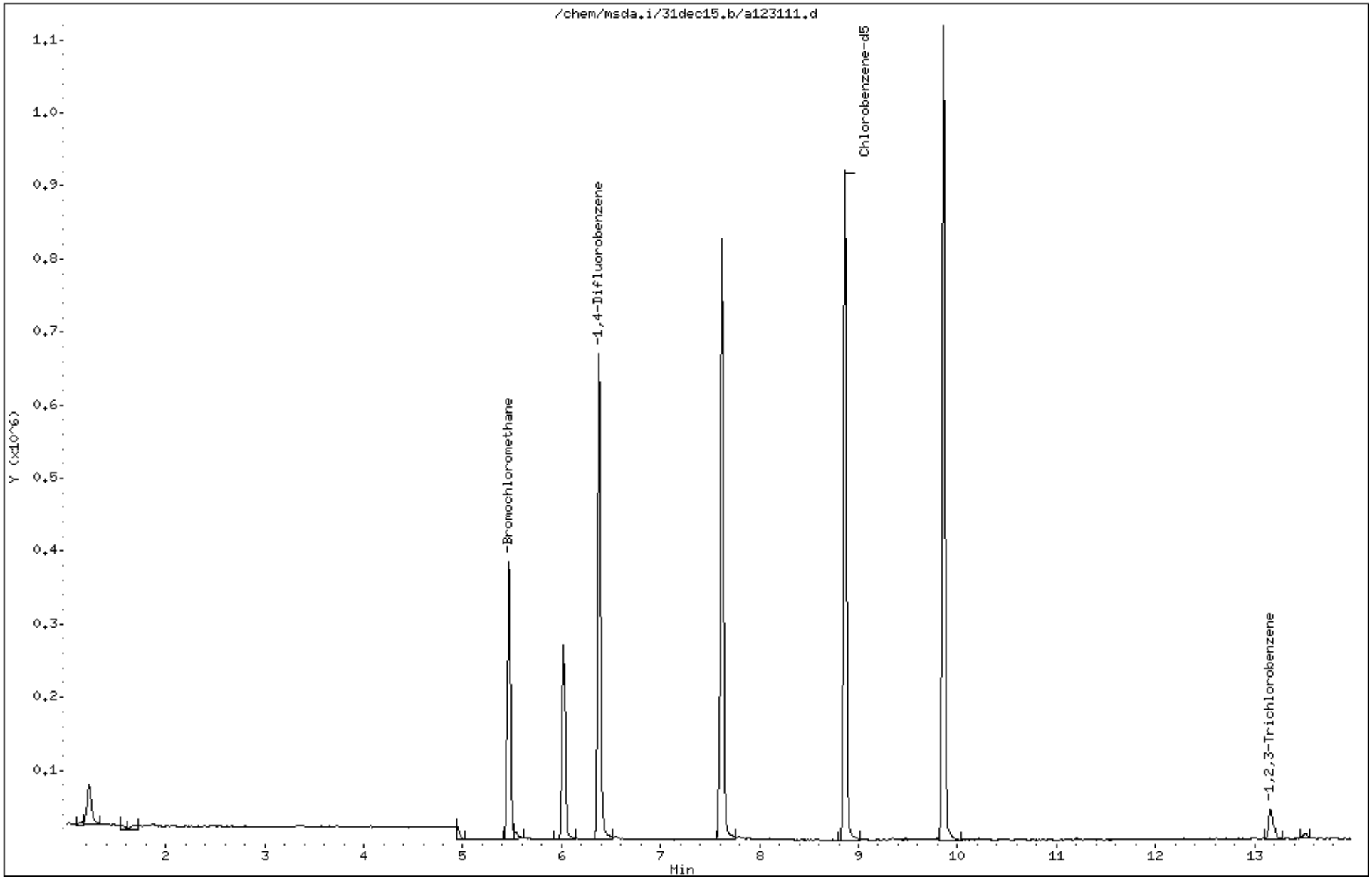
Sample Info: 200mL 2759-165

Column phase: RTX-624

Instrument: msda.i

Operator: cb

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/11feb16.b/a021109.d
Lab Smp Id: ICAL Client Smp ID: level 3
Inj Date : 11-FEB-2016 15:37
Operator : sab Inst ID: msda.i
Smp Info : 80mL 2759-238
Misc Info : 2.0ppbv(5.0ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/11feb16.b/a15q1218f.m
Meth Date : 11-Feb-2016 16:41 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 15:09 Cal File: a012707.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT1.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.457	5.457 (1.000)	130	168077	25.0000		80.00- 120.00	100.00
5.457	5.457 (1.000)	128	136406			47.82- 107.82	81.16
5.457	5.457 (1.000)	49	225906			110.78- 170.78	134.41
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.374	6.374 (1.000)	114	675035	25.0000		80.00- 120.00	100.00
6.374	6.374 (1.000)	88	95738			0.00- 45.54	14.18
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.859	8.859 (1.000)	117	617295	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	304782			20.41- 80.41	49.37
6 Freon 143a					CAS #: 420-46-2		
1.259	1.259 (0.231)	65	819	2.00000	1.323	0.00- 0.00	100.00(aM)
1.259	1.259 (0.231)	69	2867			0.00- 0.00	350.06
1.259	1.259 (0.231)	64	0			0.00- 0.00	0.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
7 Freon 134a					CAS #: 811-97-2		
1.302	1.302 (0.239)	83	2199	2.00000	1.463	80.00- 120.00	100.00(Ta)
1.302	1.302 (0.239)	69	1636			59.92- 119.92	74.40
0.000	1.000 (0.000)	63	0			0.00- 40.56	0.00
10 1,1-Difluoroethane					CAS #: 75-37-6		
1.359	1.359 (0.249)	65	1019	2.00000	1.316	80.00- 120.00	100.00(a)
1.359	1.359 (0.249)	51	2922			179.40- 239.40	286.75
1.359	1.359 (0.249)	47	218			27.30- 87.30	21.39
16 Freon 142b					CAS #: 75-68-3		
1.539	1.539 (0.282)	65	4981	2.00000	1.490	80.00- 120.00	100.00(a)
1.539	1.539 (0.282)	45	1261			0.00- 55.24	25.32
37 Dichlorofluoromethane					CAS #: 75-43-4		
2.463	2.463 (0.451)	67	5776	2.00000	1.499	80.00- 120.00	100.00(a)
2.463	2.463 (0.451)	69	1524			2.74- 62.74	26.39
48 Freon 123					CAS #: 306-83-2		
3.057	3.057 (0.560)	83	7351	2.00000	1.566	80.00- 120.00	100.00(a)
3.057	3.057 (0.560)	133	1641			0.00- 52.96	22.32
3.057	3.057 (0.560)	85	4971			35.25- 95.25	67.62
59 Cyclopentene					CAS #: 142-29-0		
3.673	3.673 (0.673)	67	4251	2.00000	1.454	0.00- 30.00	100.00(a)
3.673	3.673 (0.673)	68	1609			0.00- 30.00	37.85
3.673	3.673 (0.673)	53	1116			0.00- 30.00	26.25
84 1-Propanol					CAS #: 71-23-8		
4.762	4.762 (0.873)	42	1654	2.00000	1.674	0.00- 30.00	100.00(a)
4.755	4.755 (0.871)	59	1690			0.00- 30.00	102.18
4.755	4.755 (0.871)	41	1298			0.00- 30.00	78.48
90 2,2-Dichloropropane					CAS #: 594-20-7		
5.177	5.177 (0.949)	77	6514	2.00000	1.618	80.00- 120.00	100.00(a)
5.177	5.177 (0.949)	79	2098			3.00- 63.00	32.21
5.177	5.177 (0.949)	97	1637			0.00- 51.02	25.13
107 1,1-Dichloropropene					CAS #: 563-58-6		
5.801	5.801 (0.910)	110	2119	2.00000	1.610	80.00- 120.00	100.00(a)
5.801	5.801 (0.910)	75	5761			218.23- 278.23	271.87
115 Isobutanol					CAS #: 78-83-1		
5.951	5.951 (1.091)	39	2264	2.00000	1.804	0.00- 30.00	100.00(a)
5.951	5.951 (1.091)	41	7113			0.00- 30.00	314.18
5.951	5.951 (1.091)	43	8336			0.00- 30.00	368.20

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
124 n-Butanol					CAS #: 71-36-3		
6.538	6.538 (1.026)	56	13021	2.00000	1.558	80.00- 120.00	100.00(a)
6.538	6.538 (1.026)	41	9361			49.55- 109.55	71.89
6.538	6.538 (1.026)	43	8144			30.23- 90.23	62.55
157 1,3-Dichloropropane					CAS #: 142-28-9		
8.214	8.214 (1.289)	76	11178	2.00000	1.947	80.00- 120.00	100.00(a)
8.214	8.214 (1.289)	41	8028			33.24- 93.24	71.82
8.222	8.222 (1.290)	78	3423			0.79- 60.79	30.62
159 Butyl Acetate					CAS #: 123-86-4		
8.300	8.300 (1.302)	56	2255	2.00000	1.740	80.00- 120.00	100.00(a)
8.308	8.308 (1.303)	73	765			16.25- 76.25	33.92
8.300	8.300 (1.302)	43	6189			251.54- 311.54	274.46
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
8.952	8.952 (1.010)	131	11556	2.00000	1.951	80.00- 120.00	100.00(a)
8.952	8.952 (1.010)	117	22808			37.29- 97.29	197.37
8.952	8.952 (1.010)	95	4080			5.24- 65.24	35.31
176 Cyclohexanone					CAS #: 108-94-1		
9.840	9.840 (1.111)	55	12373	2.00000	1.797	0.00- 30.00	100.00(a)
9.840	9.840 (1.111)	98	4531			0.00- 30.00	36.62
9.840	9.840 (1.111)	42	7309			0.00- 30.00	59.07
180 Bromobenzene					CAS #: 108-86-1		
9.991	9.991 (1.128)	156	12662	2.00000	1.934	80.00- 120.00	100.00(a)
9.991	9.991 (1.128)	158	13443			68.50- 128.50	106.17
9.991	9.991 (1.128)	77	18183			107.36- 167.36	143.60
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
10.048	10.048 (1.134)	110	6154	2.00000	2.026	80.00- 120.00	100.00
10.041	10.041 (1.133)	75	15172			303.70- 363.70	246.54
10.041	10.041 (1.133)	61	4840			36.82- 96.82	78.65
189 2-Chlorotoluene					CAS #: 95-49-8		
10.134	10.134 (1.144)	126	9807	2.00000	1.928	80.00- 120.00	100.00(a)
10.134	10.134 (1.144)	91	27888			228.58- 288.58	284.37
10.134	10.134 (1.144)	65	2820			0.00- 51.86	28.75
191 4-Chlorotoluene					CAS #: 106-43-4		
10.234	10.234 (1.155)	126	9954	2.00000	1.936	80.00- 120.00	100.00(a)
10.234	10.234 (1.155)	91	28202			229.79- 289.79	283.32
10.234	10.234 (1.155)	63	3881			3.53- 63.53	38.99
195 tert-Butylbenzene					CAS #: 98-06-6		
10.442	10.442 (1.179)	119	31251	2.00000	1.984	80.00- 120.00	100.00(a)

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
195 tert-Butylbenzene (continued)							
10.442	10.442 (1.179)	134	8212			0.00- 54.90	26.28
10.442	10.442 (1.179)	91	20193			32.52- 92.52	64.62
197 Pentachloroethane					CAS #: 76-01-7		
10.514	10.514 (1.187)	167	11006	2.00000	2.075	0.00- 30.00	100.00
10.514	10.514 (1.187)	117	9759			0.00- 30.00	88.67
10.514	10.514 (1.187)	169	4860			0.00- 30.00	44.16
203 sec-Butylbenzene					CAS #: 135-98-8		
10.628	10.628 (1.200)	134	9678	2.00000	1.957	80.00- 120.00	100.00(a)
10.628	10.628 (1.200)	105	45457			440.25- 500.25	469.69
10.628	10.628 (1.200)	91	6944			40.86- 100.86	71.75
207 p-Cymene					CAS #: 99-87-6		
10.743	10.743 (1.213)	119	38298	2.00000	1.907	80.00- 120.00	100.00(a)
10.743	10.743 (1.213)	134	9798			0.00- 57.35	25.58
10.743	10.743 (1.213)	91	8636			0.00- 51.72	22.55
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
10.865	10.865 (1.226)	120	14919	2.00000	1.936	80.00- 120.00	100.00(a)
10.865	10.865 (1.226)	105	34387			199.87- 259.87	230.49
10.872	10.872 (1.227)	77	3860			0.00- 55.85	25.87
213 Butylbenzene					CAS #: 104-51-8		
11.094	11.094 (1.252)	134	9505	2.00000	1.791	80.00- 120.00	100.00(a)
11.094	11.094 (1.252)	91	36113			312.74- 372.74	379.94
11.094	11.094 (1.252)	92	17605			148.22- 208.22	185.22
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
11.889	11.889 (1.342)	157	12069	2.00000	1.533	80.00- 120.00	100.00(a)
11.882	11.882 (1.341)	75	10467			44.51- 104.51	86.73
11.882	11.882 (1.341)	155	9691			47.26- 107.26	80.30

QC Flag Legend

T - Target compound detected outside RT window.
a - Target compound detected but, quantitated amount
    Below Limit Of Quantitation(BLOQ).
M - Compound response manually integrated.

Report Date: 11-Feb-2016 16:41

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021109.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/11feb16.b/a15q1218f.m
Misc Info: 2.0ppbv(5.0ppbv)

Calibration Date: 11-FEB-2016
Calibration Time: 11:26
Client Smp ID: level 3
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	157375	94425	220325	168077	6.80
123 1,4-Difluorobenze	644676	386806	902546	675035	4.71
163 Chlorobenzene-d5	586529	351917	821141	617295	5.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	-0.13
123 1,4-Difluorobenze	6.38	6.05	6.71	6.37	-0.11
163 Chlorobenzene-d5	8.86	8.53	9.19	8.86	0.00

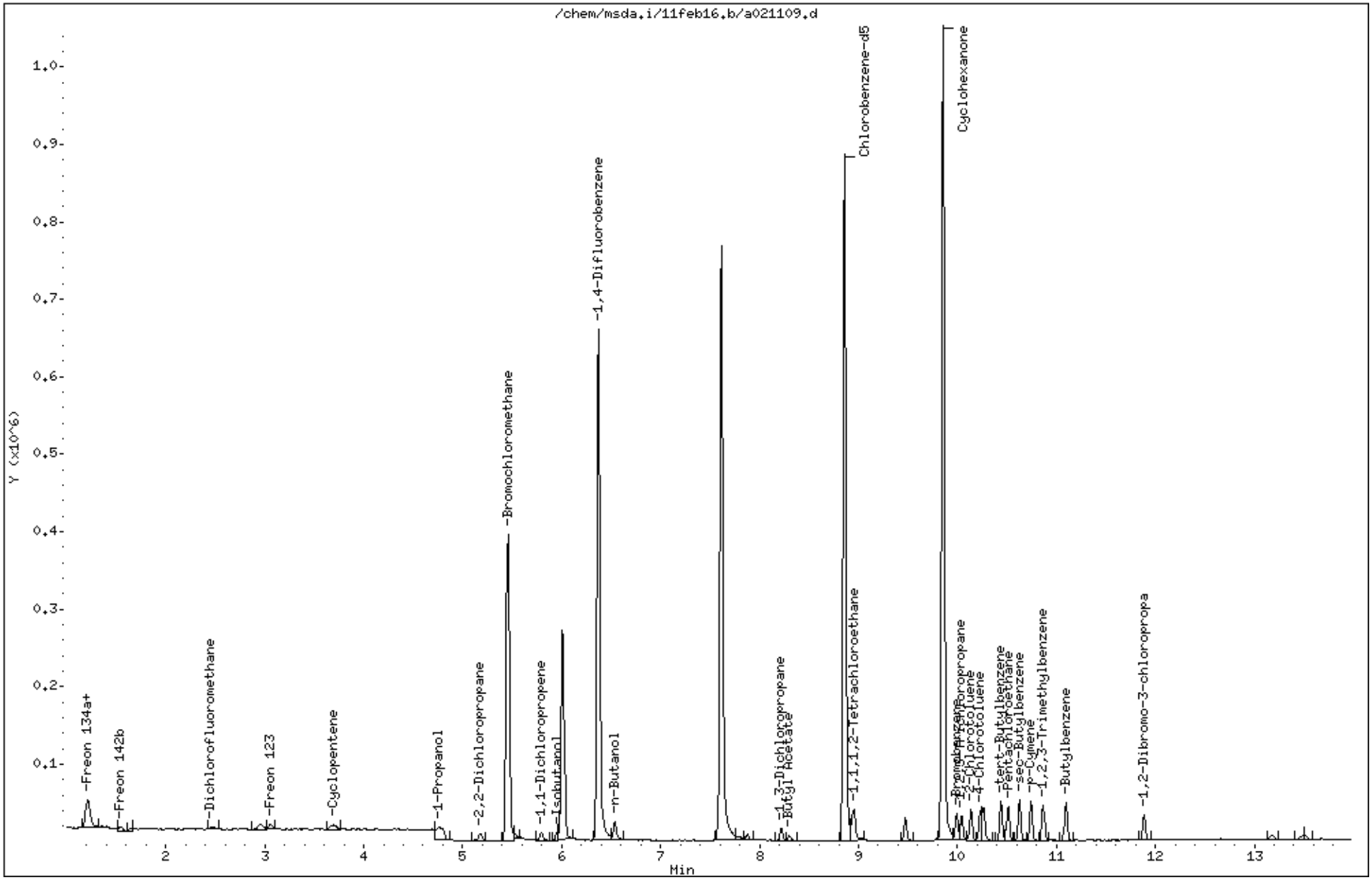
AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/11feb16.b/a021109.d
Date : 11-FEB-2016 15:37
Client ID: level 3
Sample Info: 80mL 2759-238

Column phase: RTX-624

Instrument: msda.i

Operator: sab
Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/18dec15.b/a121803.d
Lab Smp Id: ICAL Client Smp ID: Level 3
Inj Date : 18-DEC-2015 11:25
Operator : cb Inst ID: msda.i
Smp Info : 80mL #2759-148
Misc Info : 2.0ppbv (5.0ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/18dec15.b/a15q1218a.m
Meth Date : 19-Dec-2015 14:16 cbond Quant Type: ISTD
Cal Date : 18-DEC-2015 11:25 Cal File: a121803.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12mdl.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.456	5.456 (1.000)	130	151893	25.0000		80.00- 120.00	100.00
5.456	5.456 (1.000)	128	122612			47.82- 107.82	80.72
5.449	5.449 (1.000)	49	230911			110.78- 170.78	152.02
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.373	6.373 (1.000)	114	685800	25.0000		80.00- 120.00	100.00
6.373	6.373 (1.000)	88	104162			0.00- 45.54	15.19
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.859	8.859 (1.000)	117	623576	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	312437			20.41- 80.41	50.10
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.008	6.008 (1.101)	65	203922	25.0000	26.115	80.00- 120.00	100.00
6.008	6.008 (1.101)	67	103099			25.18- 85.18	50.56

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.612	7.612 (1.194)	98	684779	25.0000	24.614	80.00- 120.00	100.00
7.612	7.612 (1.194)	70	71804			0.00- 40.33	10.49
7.612	7.612 (1.194)	100	453561			36.65- 96.65	66.23
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.854	9.854 (1.112)	174	370078	25.0000	24.590	80.00- 120.00	100.00
9.854	9.854 (1.112)	95	448879			90.45- 150.45	121.29
9.854	9.854 (1.112)	176	369795			69.84- 129.84	99.92
9 Propylene					CAS #: 115-07-1		
1.338	1.338 (0.245)	41	8651	2.00000	2.529	80.00- 120.00	100.00
1.330	1.330 (0.244)	42	5492			36.39- 96.39	63.48
1.338	1.338 (0.245)	39	6872			42.19- 102.19	79.44
11 Freon 12					CAS #: 75-71-8		
1.366	1.366 (0.250)	85	20931	2.00000	2.222	80.00- 120.00	100.00
1.373	1.373 (0.252)	87	7140			2.85- 62.85	34.11
15 Freon 114					CAS #: 76-14-2		
1.488	1.488 (0.273)	135	16889	2.00000	2.166	80.00- 120.00	100.00
1.488	1.488 (0.273)	137	5137			2.45- 62.45	30.42
17 Chloromethane					CAS #: 74-87-3		
1.567	1.567 (0.287)	50	7730	2.00000	2.539	80.00- 120.00	100.00(a)
1.567	1.567 (0.287)	52	3934			6.16- 66.16	50.89
23 Butane					CAS #: 106-97-8		
1.653	1.653 (0.303)	58	3076	2.00000	3.295	80.00- 120.00	100.00
1.653	1.653 (0.303)	43	18409			842.59- 902.59	598.47
25 Vinyl Chloride					CAS #: 75-01-4		
1.689	1.689 (0.309)	62	8981	2.00000	2.371	80.00- 120.00	100.00
1.696	1.696 (0.311)	64	3375			0.57- 60.57	37.58
26 1,3-Butadiene					CAS #: 106-99-0		
1.717	1.717 (0.315)	54	7189	2.00000	2.068	80.00- 120.00	100.00
1.717	1.717 (0.315)	39	8628			74.69- 134.69	120.02
29 Bromomethane					CAS #: 74-83-9		
2.075	2.075 (0.380)	94	7018	2.00000	2.178	80.00- 120.00	100.00(a)
2.075	2.075 (0.380)	96	6763			68.21- 128.21	96.37
30 Chloroethane					CAS #: 75-00-3		
2.190	2.190 (0.401)	64	5170	2.00000	2.677	80.00- 120.00	100.00
2.190	2.190 (0.401)	66	1308			1.88- 61.88	25.30

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.190	2.190 (0.401)	49	1529			3.76- 63.76	29.57
31 Isopentane					CAS #: 78-78-4		
2.219	2.219 (0.407)	43	12145	2.00000	2.342	80.00- 120.00	100.00
2.219	2.219 (0.407)	57	8212			32.40- 92.40	67.62
35 Freon 11					CAS #: 75-69-4		
2.448	2.448 (0.449)	101	23421	2.00000	2.242	80.00- 120.00	100.00
2.455	2.455 (0.450)	103	15670			34.09- 94.09	66.91
42 Ethanol					CAS #: 64-17-5		
2.792	2.792 (0.512)	45	4597	2.00000	2.520	80.00- 120.00	100.00
2.785	2.785 (0.510)	43	459			0.00- 50.11	9.98
2.785	2.785 (0.510)	46	1502			10.10- 70.10	32.67
49 Freon 113					CAS #: 76-13-1		
3.114	3.114 (0.571)	151	18135	2.00000	2.309	80.00- 120.00	100.00
3.114	3.114 (0.571)	153	11499			35.78- 95.78	63.41
3.121	3.121 (0.572)	101	20682			88.30- 148.30	114.04
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.150	3.150 (0.577)	98	6570	2.00000	2.420	80.00- 120.00	100.00
3.150	3.150 (0.577)	96	9709			122.92- 182.92	147.78
3.150	3.150 (0.577)	61	15305			232.20- 292.20	232.95
52 Acetone					CAS #: 67-64-1		
3.315	3.315 (0.607)	58	5849	2.00000	2.869	80.00- 120.00	100.00(a)
3.315	3.315 (0.607)	43	19175			319.99- 379.99	327.83
56 Carbon Disulfide					CAS #: 75-15-0		
3.393	3.393 (0.622)	76	25731	2.00000	2.461	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.494	3.494 (0.640)	45	21078	2.00000	2.494	80.00- 120.00	100.00
3.494	3.494 (0.640)	43	3975			0.00- 47.66	18.86
3.501	3.501 (0.642)	59	859			0.00- 33.60	4.08
58 3-Chloropropene					CAS #: 107-05-1		
3.658	3.658 (0.670)	76	4721	2.00000	2.599	80.00- 120.00	100.00
3.651	3.651 (0.669)	41	15220			335.86- 395.86	322.39
66 Methylene Chloride					CAS #: 75-09-2		
3.838	3.838 (0.703)	49	12920	2.00000	2.367	80.00- 120.00	100.00(a)
3.838	3.838 (0.703)	84	8491			29.27- 89.27	65.72
3.838	3.838 (0.703)	51	4378			0.00- 59.81	33.89

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
3.974	3.974 (0.728)	59	20935	2.00000	2.336	80.00- 120.00	100.00
3.981	3.981 (0.730)	41	4139			0.00- 51.68	19.77
3.974	3.974 (0.728)	57	1972			0.00- 39.96	9.42
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.074	4.074 (0.747)	73	26161	2.00000	2.361	80.00- 120.00	100.00
4.074	4.074 (0.747)	57	7092			0.00- 57.40	27.11
4.074	4.074 (0.747)	41	7303			0.00- 57.39	27.92
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.095	4.095 (0.751)	98	6660	2.00000	2.364	80.00- 120.00	100.00
4.095	4.095 (0.751)	61	14115			209.93- 269.93	211.94
4.095	4.095 (0.751)	96	9605			130.42- 190.42	144.22
78 Hexane					CAS #: 110-54-3		
4.317	4.317 (0.791)	57	17573	2.00000	2.298	80.00- 120.00	100.00
4.317	4.317 (0.791)	43	13446			39.24- 99.24	76.52
4.317	4.317 (0.791)	86	2116			0.00- 43.98	12.04
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.611	4.611 (0.845)	63	18057	2.00000	2.279	80.00- 120.00	100.00
4.611	4.611 (0.845)	65	5738			1.56- 61.56	31.78
83 Isopropyl ether					CAS #: 108-20-3		
4.604	4.604 (0.844)	45	43558	2.00000	2.449	80.00- 120.00	100.00
4.604	4.604 (0.844)	87	8377			0.00- 51.47	19.23
4.611	4.611 (0.845)	59	4680			0.00- 39.84	10.74
86 Vinyl Acetate					CAS #: 108-05-4		
4.661	4.661 (0.854)	86	2391	2.00000	2.230	80.00- 120.00	100.00
4.661	4.661 (0.854)	43	33757			1404.95-1464.95	1411.84
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
4.976	4.976 (0.912)	59	36085	2.00000	2.344	80.00- 120.00	100.00
4.976	4.976 (0.912)	87	13190			5.59- 65.59	36.55
4.976	4.976 (0.912)	41	7730			0.00- 49.32	21.42
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.213	5.213 (0.955)	98	7350	2.00000	2.368	80.00- 120.00	100.00
5.213	5.213 (0.955)	96	12180			126.91- 186.91	165.71
5.213	5.213 (0.955)	61	15590			186.69- 246.69	212.11
92 2-Butanone					CAS #: 78-93-3		
5.249	5.249 (0.962)	72	4736	2.00000	2.292	80.00- 120.00	100.00
5.249	5.249 (0.962)	43	24621			510.66- 570.66	519.87

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.249	5.249 (0.962)	57	1835			8.91- 68.91	38.75
99 Tetrahydrofuran					CAS #: 109-99-9		
5.449	5.449 (0.999)	42	14979	2.00000	2.402	80.00- 120.00	100.00
5.449	5.449 (0.999)	71	5049			0.53- 60.53	33.71
5.449	5.449 (0.999)	72	4583			0.16- 60.16	30.60
100 Chloroform					CAS #: 67-66-3		
5.521	5.521 (1.012)	83	21199	2.00000	2.272	80.00- 120.00	100.00
5.521	5.521 (1.012)	85	15334			36.67- 96.67	72.33
102 Cyclohexane					CAS #: 110-82-7		
5.621	5.621 (1.030)	84	13606	2.00000	2.266	80.00- 120.00	100.00
5.621	5.621 (1.030)	56	20489			121.50- 181.50	150.59
5.621	5.621 (1.030)	41	12486			54.13- 114.13	91.77
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.643	5.643 (1.034)	97	24995	2.00000	2.260	80.00- 120.00	100.00
5.643	5.643 (1.034)	99	14638			32.76- 92.76	58.56
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.764	5.764 (1.056)	119	25725	2.00000	2.296	80.00- 120.00	100.00
5.764	5.764 (1.056)	117	26252			73.53- 133.53	102.05
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.965	5.965 (1.093)	57	51034	2.00000	2.006	80.00- 120.00	100.00
5.965	5.965 (1.093)	56	14731			0.62- 60.62	28.87
5.965	5.965 (1.093)	41	15014			0.00- 56.92	29.42
116 Benzene					CAS #: 71-43-2		
5.986	5.986 (0.939)	78	31604	2.00000	2.190	80.00- 120.00	100.00
5.986	5.986 (0.939)	77	9136			0.00- 53.73	28.91
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.058	6.058 (1.110)	87	7695	2.00000	2.300	80.00- 120.00	100.00
6.058	6.058 (1.110)	73	29663			352.05- 412.05	385.48
6.058	6.058 (1.110)	55	9213			86.74- 146.74	119.73
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.080	6.080 (0.954)	62	16446	2.00000	2.328	80.00- 120.00	100.00
6.080	6.080 (0.954)	64	5431			0.51- 60.51	33.02
121 Heptane					CAS #: 142-82-5		
6.137	6.137 (0.963)	71	10560	2.00000	2.014	80.00- 120.00	100.00
6.137	6.137 (0.963)	43	25810			198.93- 258.93	244.41

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.137	6.137 (0.963)	57	14901			83.54- 143.54	141.11
125 Trichloroethene					CAS #: 79-01-6		
6.567	6.567 (1.030)	95	17584	2.00000	2.222	80.00- 120.00	100.00
6.567	6.567 (1.030)	130	16763			79.66- 139.66	95.33
6.567	6.567 (1.030)	97	11217			34.04- 94.04	63.79
127 Methylcyclohexane					CAS #: 108-87-2		
6.667	6.667 (1.222)	83	22029	2.00000	2.258	80.00- 120.00	100.00
6.674	6.674 (1.223)	98	11512			18.10- 78.10	52.26
6.667	6.667 (1.222)	55	20667			66.76- 126.76	93.82
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.810	6.810 (1.069)	63	15114	2.00000	2.290	80.00- 120.00	100.00
6.810	6.810 (1.069)	62	10252			39.78- 99.78	67.83
6.810	6.810 (1.069)	41	9293			32.16- 92.16	61.49
136 1,4-Dioxane					CAS #: 123-91-1		
6.903	6.903 (1.083)	88	8635	2.00000	2.242	80.00- 120.00	100.00
6.903	6.903 (1.083)	58	8664			49.57- 109.57	100.34
6.903	6.903 (1.083)	57	2263			0.00- 55.12	26.21
138 Bromodichloromethane					CAS #: 75-27-4		
7.039	7.039 (1.105)	83	24779	2.00000	2.133	80.00- 120.00	100.00
7.039	7.039 (1.105)	85	17872			36.86- 96.86	72.13
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.426	7.426 (1.165)	75	22589	2.00000	2.187	80.00- 120.00	100.00
7.426	7.426 (1.165)	77	9027			1.21- 61.21	39.96
7.426	7.426 (1.165)	39	14279			32.66- 92.66	63.21
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.541	7.541 (1.183)	58	14094	2.00000	2.184	80.00- 120.00	100.00
7.541	7.541 (1.183)	43	37987			262.16- 322.16	269.53
7.541	7.541 (1.183)	85	6255			11.61- 71.61	44.38
147 Toluene					CAS #: 108-88-3		
7.663	7.663 (1.202)	91	45846	2.00000	2.146	80.00- 120.00	100.00
7.663	7.663 (1.202)	92	27143			28.59- 88.59	59.20
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.913	7.913 (0.893)	75	19997	2.00000	2.239	80.00- 120.00	100.00
7.913	7.913 (0.893)	77	7095			1.64- 61.64	35.48
7.913	7.913 (0.893)	39	12132			30.00- 90.00	60.67

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.071	8.071 (0.911)	97	16615	2.00000	2.297	80.00- 120.00	100.00
8.071	8.071 (0.911)	99	9186			31.35- 91.35	55.29
8.071	8.071 (0.911)	83	13339			53.39- 113.39	80.28
156 Tetrachloroethene					CAS #: 127-18-4		
8.107	8.107 (0.915)	166	24177	2.00000	2.204	80.00- 120.00	100.00
8.107	8.107 (0.915)	129	19066			48.51- 108.51	78.86
8.107	8.107 (0.915)	131	18051			45.21- 105.21	74.66
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	18739	2.00000	2.396	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	35821			171.14- 231.14	191.16
8.243	8.243 (0.930)	100	2989			0.00- 48.08	15.95
160 Dibromochloromethane					CAS #: 124-48-1		
8.386	8.386 (0.947)	129	34051	2.00000	2.264	80.00- 120.00	100.00
8.386	8.386 (0.947)	127	25959			48.14- 108.14	76.24
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.501	8.501 (0.960)	107	26990	2.00000	2.204	80.00- 120.00	100.00
8.501	8.501 (0.960)	109	25718			62.49- 122.49	95.29
165 Chlorobenzene					CAS #: 108-90-7		
8.880	8.880 (1.002)	112	41083	2.00000	2.250	80.00- 120.00	100.00
8.880	8.880 (1.002)	114	14037			1.55- 61.55	34.17
8.880	8.880 (1.002)	77	27128			23.72- 83.72	66.03
167 Ethyl Benzene					CAS #: 100-41-4		
8.930	8.930 (1.008)	106	20919	2.00000	2.268	80.00- 120.00	100.00
8.930	8.930 (1.008)	91	62052			275.74- 335.74	296.63
169 m,p-Xylene					CAS #: 108-38-3		
9.031	9.031 (1.019)	106	25989	2.00000	2.234	80.00- 120.00	100.00
9.031	9.031 (1.019)	91	50190			168.00- 228.00	193.12
171 o-Xylene					CAS #: 95-47-6		
9.375	9.375 (1.058)	106	23818	2.00000	2.168	80.00- 120.00	100.00
9.375	9.375 (1.058)	91	50689			180.86- 240.86	212.82
172 Styrene					CAS #: 100-42-5		
9.396	9.396 (1.061)	104	38023	2.00000	2.216	80.00- 120.00	100.00
9.396	9.396 (1.061)	78	18052			18.40- 78.40	47.48
174 Bromoform					CAS #: 75-25-2		
9.597	9.597 (1.083)	173	33878	2.00000	2.230	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.597	9.597 (1.083)	171	16816			21.79- 81.79	49.64
175 Cumene					CAS #: 98-82-8		
9.668	9.668 (1.091)	105	76701	2.00000	2.235	80.00- 120.00	100.00
9.668	9.668 (1.091)	120	20626			0.00- 57.35	26.89
9.668	9.668 (1.091)	51	8851			0.00- 41.41	11.54
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.983	9.983 (1.127)	83	36731	2.00000	2.259	80.00- 120.00	100.00
9.983	9.983 (1.127)	85	24877			35.95- 95.95	67.73
182 Propylbenzene					CAS #: 103-65-1		
10.012	10.012 (1.130)	91	85912	2.00000	2.210	80.00- 120.00	100.00
10.019	10.019 (1.131)	120	21642			0.00- 54.67	25.19
10.012	10.012 (1.130)	105	4203			0.00- 33.80	4.89
188 4-Ethyltoluene					CAS #: 622-96-8		
10.112	10.112 (1.141)	120	24096	2.00000	2.234	80.00- 120.00	100.00
10.112	10.112 (1.141)	105	75485			291.69- 351.69	313.27
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.162	10.162 (1.147)	120	34092	2.00000	2.279	80.00- 120.00	100.00
10.162	10.162 (1.147)	105	70457			176.78- 236.78	206.67
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.492	10.492 (1.184)	120	29980	2.00000	2.250	80.00- 120.00	100.00
10.492	10.492 (1.184)	105	63564			184.15- 244.15	212.02
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.779	10.779 (1.217)	146	47180	2.00000	2.237	80.00- 120.00	100.00
10.779	10.779 (1.217)	148	29444			34.28- 94.28	62.41
10.779	10.779 (1.217)	111	19671			10.08- 70.08	41.69
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.857	10.857 (1.226)	146	48620	2.00000	2.282	80.00- 120.00	100.00
10.857	10.857 (1.226)	148	28646			34.75- 94.75	58.92
10.857	10.857 (1.226)	111	18582			8.94- 68.94	38.22
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.979	10.979 (1.239)	91	55728	2.00000	2.171	80.00- 120.00	100.00
10.979	10.979 (1.239)	126	13152			0.00- 53.59	23.60
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.187	11.187 (1.263)	146	44900	2.00000	2.234	80.00- 120.00	100.00
11.187	11.187 (1.263)	148	29493			33.27- 93.27	65.69

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.187	11.187 (1.263)	111	19782			11.15- 71.15	44.06
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.612	12.612 (1.424)	180	38571	2.00000	2.140	80.00- 120.00	100.00
12.619	12.619 (1.425)	182	36843			63.48- 123.48	95.52
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.705	12.705 (1.434)	225	33565	2.00000	2.234	80.00- 120.00	100.00
12.705	12.705 (1.434)	223	21022			32.11- 92.11	62.63
228 Naphthalene					CAS #: 91-20-3		
12.892	12.892 (1.455)	128	8983	0.20000	0.2414	80.00- 120.00	100.00(a)
12.884	12.884 (1.454)	127	970			0.00- 43.17	10.80

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 19-Dec-2015 14:16

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a121803.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 2.0ppbv (5.0ppbv)

Calibration Date: 18-DEC-2015
Calibration Time: 12:53
Client Smp ID: Level 3
Level: LOW
Sample Type: AIR

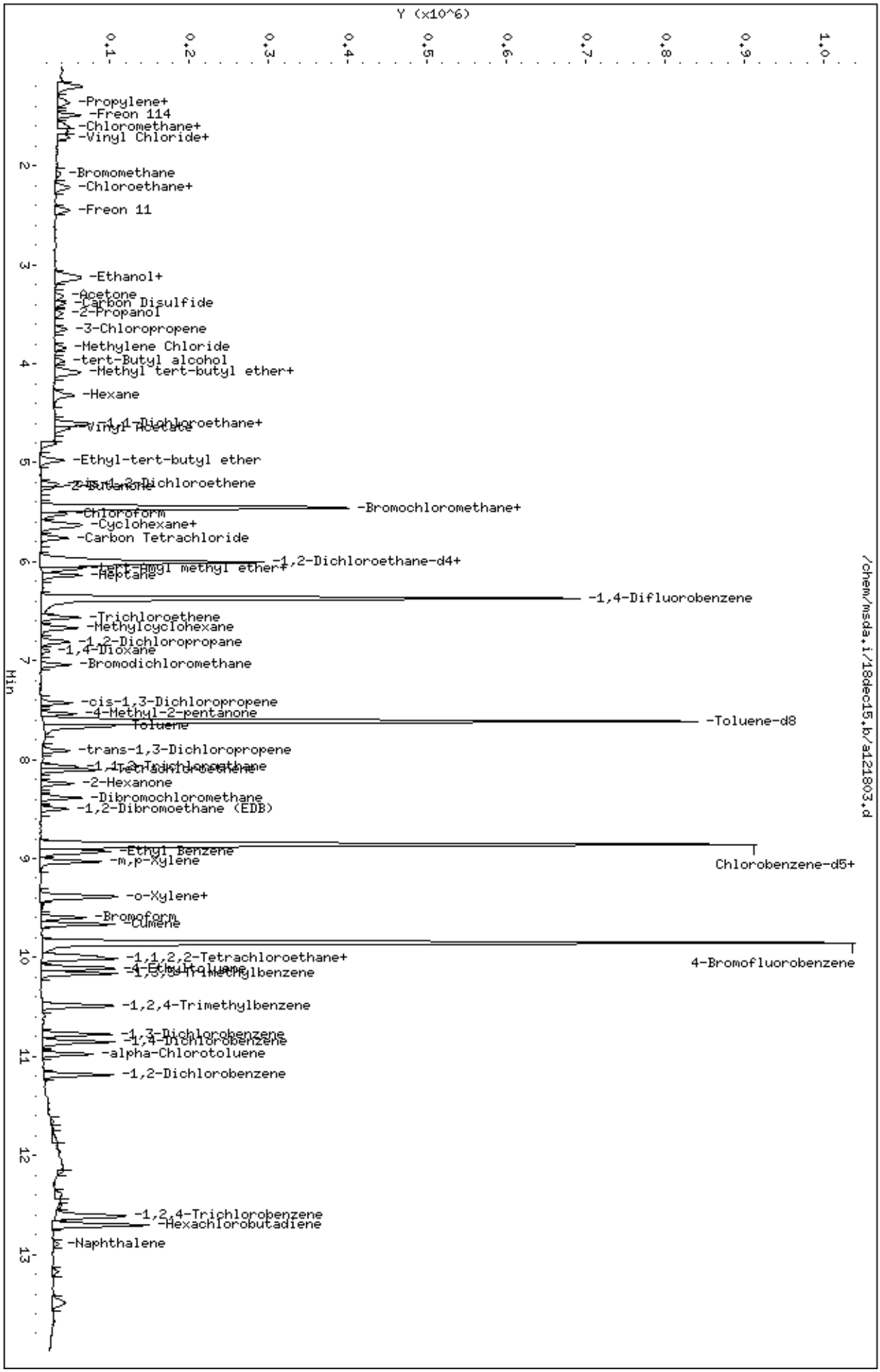
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	158121	94873	221369	151893	-3.94
123 1,4-Difluorobenze	659165	395499	922831	685800	4.04
163 Chlorobenzene-d5	629706	377824	881588	623576	-0.97

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.47	5.14	5.80	5.46	-0.27
123 1,4-Difluorobenze	6.38	6.05	6.71	6.37	-0.12
163 Chlorobenzene-d5	8.87	8.54	9.20	8.86	-0.08

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/18dec15.b/a121803.d
Date : 18-DEC-2015 11:25
Client ID: Level 3
Sample Info: 80mL #2759-148
Column phase: RTX-624

Instrument: msda.i
Operator: cb
Column diameter: 0.25



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Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/18dec15.b/a121804.d
Lab Smp Id: ICAL Client Smp ID: Level 4
Inj Date : 18-DEC-2015 11:51
Operator : cb Inst ID: msda.i
Smp Info : 200mL #2759-148
Misc Info : 5.0ppbv (5.0ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/18dec15.b/a15q1218a.m
Meth Date : 19-Dec-2015 14:16 cbond Quant Type: ISTD
Cal Date : 18-DEC-2015 11:51 Cal File: a121804.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12mdl.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	157071	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	126587			47.82- 107.82	80.59
5.464	5.464 (1.000)	49	220508			110.78- 170.78	140.39
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	684899	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	102376			0.00- 45.54	14.95
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	638774	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	319286			20.41- 80.41	49.98
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.022	6.022 (1.102)	65	201135	25.0000	24.909	80.00- 120.00	100.00
6.022	6.022 (1.102)	67	105376			25.18- 85.18	52.39

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.620	7.620 (1.194)	98	695704	25.0000	25.040	80.00- 120.00	100.00
7.613	7.613 (1.193)	70	72903			0.00- 40.33	10.48
7.620	7.620 (1.194)	100	457580			36.65- 96.65	65.77
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	384667	25.0000	24.951	80.00- 120.00	100.00
9.862	9.862 (1.112)	95	466359			90.45- 150.45	121.24
9.862	9.862 (1.112)	176	385587			69.84- 129.84	100.24
9 Propylene					CAS #: 115-07-1		
1.352	1.352 (0.247)	41	20186	5.00000	5.706	80.00- 120.00	100.00
1.352	1.352 (0.247)	42	13574			36.39- 96.39	67.24
1.352	1.352 (0.247)	39	15220			42.19- 102.19	75.40
11 Freon 12					CAS #: 75-71-8		
1.388	1.388 (0.254)	85	54608	5.00000	5.606	80.00- 120.00	100.00
1.388	1.388 (0.254)	87	17049			2.85- 62.85	31.22
15 Freon 114					CAS #: 76-14-2		
1.503	1.503 (0.275)	135	44646	5.00000	5.536	80.00- 120.00	100.00
1.503	1.503 (0.275)	137	14472			2.45- 62.45	32.41
17 Chloromethane					CAS #: 74-87-3		
1.588	1.588 (0.291)	50	17227	5.00000	5.473	80.00- 120.00	100.00
1.588	1.588 (0.291)	52	6993			6.16- 66.16	40.59
23 Butane					CAS #: 106-97-8		
1.667	1.667 (0.305)	58	6255	5.00000	6.480	80.00- 120.00	100.00
1.667	1.667 (0.305)	43	46246			842.59- 902.59	739.34
25 Vinyl Chloride					CAS #: 75-01-4		
1.710	1.710 (0.313)	62	22003	5.00000	5.618	80.00- 120.00	100.00
1.710	1.710 (0.313)	64	7223			0.57- 60.57	32.83
26 1,3-Butadiene					CAS #: 106-99-0		
1.732	1.732 (0.317)	54	19651	5.00000	5.467	80.00- 120.00	100.00
1.732	1.732 (0.317)	39	20767			74.69- 134.69	105.68
29 Bromomethane					CAS #: 74-83-9		
2.090	2.090 (0.382)	94	18523	5.00000	5.559	80.00- 120.00	100.00
2.097	2.097 (0.384)	96	16752			68.21- 128.21	90.44
30 Chloroethane					CAS #: 75-00-3		
2.212	2.212 (0.405)	64	11838	5.00000	5.928	80.00- 120.00	100.00
2.212	2.212 (0.405)	66	3400			1.88- 61.88	28.72

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.212	2.212 (0.405)	49	3990			3.76- 63.76	33.71
31 Isopentane					CAS #: 78-78-4		
2.240	2.240 (0.410)	43	30911	5.00000	5.763	80.00- 120.00	100.00
2.240	2.240 (0.410)	57	18570			32.40- 92.40	60.08
35 Freon 11					CAS #: 75-69-4		
2.470	2.470 (0.452)	101	61468	5.00000	5.690	80.00- 120.00	100.00
2.470	2.470 (0.452)	103	38819			34.09- 94.09	63.15
42 Ethanol					CAS #: 64-17-5		
2.813	2.813 (0.515)	45	10110	5.00000	5.359	80.00- 120.00	100.00
2.813	2.813 (0.515)	43	2332			0.00- 50.11	23.07
2.813	2.813 (0.515)	46	4434			10.10- 70.10	43.86
49 Freon 113					CAS #: 76-13-1		
3.136	3.136 (0.574)	151	43946	5.00000	5.410	80.00- 120.00	100.00
3.136	3.136 (0.574)	153	27737			35.78- 95.78	63.12
3.136	3.136 (0.574)	101	50258			88.30- 148.30	114.36
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.172	3.172 (0.580)	98	15655	5.00000	5.577	80.00- 120.00	100.00
3.172	3.172 (0.580)	96	22310			122.92- 182.92	142.51
3.164	3.164 (0.579)	61	39040			232.20- 292.20	249.38
52 Acetone					CAS #: 67-64-1		
3.336	3.336 (0.611)	58	13748	5.00000	6.521	80.00- 120.00	100.00
3.336	3.336 (0.611)	43	45769			319.99- 379.99	332.91
56 Carbon Disulfide					CAS #: 75-15-0		
3.408	3.408 (0.624)	76	63324	5.00000	5.856	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.508	3.508 (0.642)	45	49751	5.00000	5.694	80.00- 120.00	100.00
3.508	3.508 (0.642)	43	8309			0.00- 47.66	16.70
3.515	3.515 (0.643)	59	2074			0.00- 33.60	4.17
58 3-Chloropropene					CAS #: 107-05-1		
3.673	3.673 (0.672)	76	10591	5.00000	5.639	80.00- 120.00	100.00
3.673	3.673 (0.672)	41	37484			335.86- 395.86	353.92
66 Methylene Chloride					CAS #: 75-09-2		
3.859	3.859 (0.706)	49	32234	5.00000	5.710	80.00- 120.00	100.00
3.859	3.859 (0.706)	84	20617			29.27- 89.27	63.96
3.859	3.859 (0.706)	51	10922			0.00- 59.81	33.88

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
3.988	3.988 (0.730)	59	53623	5.00000	5.787	80.00- 120.00	100.00
3.988	3.988 (0.730)	41	11273			0.00- 51.68	21.02
3.988	3.988 (0.730)	57	5816			0.00- 39.96	10.85
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.088	4.088 (0.748)	73	63142	5.00000	5.512	80.00- 120.00	100.00
4.088	4.088 (0.748)	57	18380			0.00- 57.40	29.11
4.088	4.088 (0.748)	41	18384			0.00- 57.39	29.12
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.110	4.110 (0.752)	98	15972	5.00000	5.483	80.00- 120.00	100.00
4.117	4.117 (0.754)	61	38629			209.93- 269.93	241.85
4.117	4.117 (0.754)	96	24433			130.42- 190.42	152.97
78 Hexane					CAS #: 110-54-3		
4.332	4.332 (0.793)	57	44324	5.00000	5.605	80.00- 120.00	100.00
4.332	4.332 (0.793)	43	31288			39.24- 99.24	70.59
4.339	4.339 (0.794)	86	5831			0.00- 43.98	13.16
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.626	4.626 (0.847)	63	47868	5.00000	5.841	80.00- 120.00	100.00
4.626	4.626 (0.847)	65	14871			1.56- 61.56	31.07
83 Isopropyl ether					CAS #: 108-20-3		
4.618	4.618 (0.845)	45	104938	5.00000	5.706	80.00- 120.00	100.00
4.618	4.618 (0.845)	87	21745			0.00- 51.47	20.72
4.618	4.618 (0.845)	59	10731			0.00- 39.84	10.23
86 Vinyl Acetate					CAS #: 108-05-4		
4.676	4.676 (0.856)	86	6773	5.00000	6.109	80.00- 120.00	100.00
4.676	4.676 (0.856)	43	94039			1404.95-1464.95	1388.44
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
4.991	4.991 (0.913)	59	89668	5.00000	5.632	80.00- 120.00	100.00
4.991	4.991 (0.913)	87	31619			5.59- 65.59	35.26
4.991	4.991 (0.913)	41	19156			0.00- 49.32	21.36
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.227	5.227 (0.957)	98	16785	5.00000	5.229	80.00- 120.00	100.00
5.227	5.227 (0.957)	96	26597			126.91- 186.91	158.46
5.227	5.227 (0.957)	61	37231			186.69- 246.69	221.81
92 2-Butanone					CAS #: 78-93-3		
5.256	5.256 (0.962)	72	12965	5.00000	6.067	80.00- 120.00	100.00
5.256	5.256 (0.962)	43	66267			510.66- 570.66	511.12

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.256	5.256 (0.962)	57	4882			8.91- 68.91	37.66
99 Tetrahydrofuran					CAS #: 109-99-9		
5.457	5.457 (0.999)	42	36817	5.00000	5.709	80.00- 120.00	100.00
5.457	5.457 (0.999)	71	12203			0.53- 60.53	33.15
5.464	5.464 (1.000)	72	11985			0.16- 60.16	32.55
100 Chloroform					CAS #: 67-66-3		
5.528	5.528 (1.012)	83	54662	5.00000	5.664	80.00- 120.00	100.00
5.528	5.528 (1.012)	85	37367			36.67- 96.67	68.36
102 Cyclohexane					CAS #: 110-82-7		
5.636	5.636 (1.031)	84	33262	5.00000	5.356	80.00- 120.00	100.00
5.636	5.636 (1.031)	56	49806			121.50- 181.50	149.74
5.636	5.636 (1.031)	41	29672			54.13- 114.13	89.21
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.657	5.657 (1.035)	97	57817	5.00000	5.056	80.00- 120.00	100.00
5.657	5.657 (1.035)	99	37212			32.76- 92.76	64.36
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.772	5.772 (1.056)	119	61449	5.00000	5.303	80.00- 120.00	100.00
5.772	5.772 (1.056)	117	64907			73.53- 133.53	105.63
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.979	5.979 (1.094)	57	150071	5.00000	5.703	80.00- 120.00	100.00
5.979	5.979 (1.094)	56	51841			0.62- 60.62	34.54
5.979	5.979 (1.094)	41	41268			0.00- 56.92	27.50
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	80128	5.00000	5.560	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	20114			0.00- 53.73	25.10
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.065	6.065 (1.110)	87	19824	5.00000	5.729	80.00- 120.00	100.00
6.065	6.065 (1.110)	73	74442			352.05- 412.05	375.51
6.065	6.065 (1.110)	55	24136			86.74- 146.74	121.75
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	40009	5.00000	5.670	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	13588			0.51- 60.51	33.96
121 Heptane					CAS #: 142-82-5		
6.151	6.151 (0.964)	71	27870	5.00000	5.323	80.00- 120.00	100.00
6.151	6.151 (0.964)	43	62515			198.93- 258.93	224.31

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.151	6.151 (0.964)	57	31862			83.54- 143.54	114.32
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	43447	5.00000	5.498	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	43904			79.66- 139.66	101.05
6.574	6.574 (1.030)	97	27241			34.04- 94.04	62.70
127 Methylcyclohexane					CAS #: 108-87-2		
6.681	6.681 (1.223)	83	50733	5.00000	5.028	80.00- 120.00	100.00
6.681	6.681 (1.223)	98	25193			18.10- 78.10	49.66
6.674	6.674 (1.222)	55	50629			66.76- 126.76	99.80
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.818	6.818 (1.068)	63	36174	5.00000	5.488	80.00- 120.00	100.00
6.818	6.818 (1.068)	62	25729			39.78- 99.78	71.13
6.818	6.818 (1.068)	41	22220			32.16- 92.16	61.43
136 1,4-Dioxane					CAS #: 123-91-1		
6.911	6.911 (1.083)	88	22641	5.00000	5.886	80.00- 120.00	100.00
6.911	6.911 (1.083)	58	19629			49.57- 109.57	86.70
6.911	6.911 (1.083)	57	6145			0.00- 55.12	27.14
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	66305	5.00000	5.715	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	41577			36.86- 96.86	62.71
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.434	7.434 (1.165)	75	56423	5.00000	5.470	80.00- 120.00	100.00
7.434	7.434 (1.165)	77	18575			1.21- 61.21	32.92
7.434	7.434 (1.165)	39	35911			32.66- 92.66	63.65
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.548	7.548 (1.183)	58	35615	5.00000	5.526	80.00- 120.00	100.00
7.548	7.548 (1.183)	43	92668			262.16- 322.16	260.19
7.548	7.548 (1.183)	85	13225			11.61- 71.61	37.13
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	118719	5.00000	5.565	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	67071			28.59- 88.59	56.50
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	51425	5.00000	5.622	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	15663			1.64- 61.64	30.46
7.913	7.913 (0.893)	39	30470			30.00- 90.00	59.25

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.071	8.071 (0.910)	97	41360	5.00000	5.582	80.00- 120.00	100.00
8.078	8.078 (0.911)	99	25722			31.35- 91.35	62.19
8.071	8.071 (0.910)	83	33182			53.39- 113.39	80.23
156 Tetrachloroethene					CAS #: 127-18-4		
8.114	8.114 (0.915)	166	62907	5.00000	5.599	80.00- 120.00	100.00
8.114	8.114 (0.915)	129	49913			48.51- 108.51	79.34
8.114	8.114 (0.915)	131	45356			45.21- 105.21	72.10
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	45106	5.00000	5.630	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	94637			171.14- 231.14	209.81
8.243	8.243 (0.930)	100	8477			0.00- 48.08	18.79
160 Dibromochloromethane					CAS #: 124-48-1		
8.393	8.393 (0.947)	129	83055	5.00000	5.390	80.00- 120.00	100.00
8.393	8.393 (0.947)	127	64692			48.14- 108.14	77.89
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	69740	5.00000	5.561	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	65492			62.49- 122.49	93.91
165 Chlorobenzene					CAS #: 108-90-7		
8.888	8.888 (1.002)	112	104154	5.00000	5.568	80.00- 120.00	100.00
8.888	8.888 (1.002)	114	32402			1.55- 61.55	31.11
8.888	8.888 (1.002)	77	59771			23.72- 83.72	57.39
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.008)	106	50792	5.00000	5.376	80.00- 120.00	100.00
8.938	8.938 (1.008)	91	155731			275.74- 335.74	306.61
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.019)	106	67240	5.00000	5.642	80.00- 120.00	100.00
9.038	9.038 (1.019)	91	131155			168.00- 228.00	195.06
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.058)	106	60197	5.00000	5.349	80.00- 120.00	100.00
9.382	9.382 (1.058)	91	128335			180.86- 240.86	213.19
172 Styrene					CAS #: 100-42-5		
9.403	9.403 (1.061)	104	99628	5.00000	5.669	80.00- 120.00	100.00
9.403	9.403 (1.061)	78	47315			18.40- 78.40	47.49
174 Bromoform					CAS #: 75-25-2		
9.604	9.604 (1.083)	173	85120	5.00000	5.470	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.604	9.604 (1.083)	171	42495			21.79- 81.79	49.92
175 Cumene					CAS #: 98-82-8		
9.676	9.676 (1.091)	105	195230	5.00000	5.553	80.00- 120.00	100.00
9.676	9.676 (1.091)	120	52365			0.00- 57.35	26.82
9.668	9.668 (1.090)	51	23103			0.00- 41.41	11.83
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.991	9.991 (1.127)	83	92162	5.00000	5.533	80.00- 120.00	100.00
9.991	9.991 (1.127)	85	61140			35.95- 95.95	66.34
182 Propylbenzene					CAS #: 103-65-1		
10.019	10.019 (1.130)	91	220131	5.00000	5.529	80.00- 120.00	100.00
10.019	10.019 (1.130)	120	54314			0.00- 54.67	24.67
10.027	10.027 (1.131)	105	8580			0.00- 33.80	3.90
188 4-Ethyltoluene					CAS #: 622-96-8		
10.120	10.120 (1.141)	120	60333	5.00000	5.462	80.00- 120.00	100.00
10.120	10.120 (1.141)	105	192677			291.69- 351.69	319.36
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.170	10.170 (1.147)	120	83180	5.00000	5.429	80.00- 120.00	100.00
10.170	10.170 (1.147)	105	177268			176.78- 236.78	213.11
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.499	10.499 (1.184)	120	72543	5.00000	5.315	80.00- 120.00	100.00
10.499	10.499 (1.184)	105	161926			184.15- 244.15	223.21
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.786	10.786 (1.217)	146	121158	5.00000	5.607	80.00- 120.00	100.00
10.786	10.786 (1.217)	148	75149			34.28- 94.28	62.03
10.786	10.786 (1.217)	111	49071			10.08- 70.08	40.50
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.865	10.865 (1.225)	146	120907	5.00000	5.541	80.00- 120.00	100.00
10.865	10.865 (1.225)	148	78698			34.75- 94.75	65.09
10.865	10.865 (1.225)	111	47147			8.94- 68.94	38.99
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.986	10.986 (1.239)	91	145388	5.00000	5.528	80.00- 120.00	100.00
10.986	10.986 (1.239)	126	34621			0.00- 53.59	23.81
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.201	11.201 (1.263)	146	114152	5.00000	5.544	80.00- 120.00	100.00
11.201	11.201 (1.263)	148	74054			33.27- 93.27	64.87

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.194	11.194 (1.263)	111	48049			11.15- 71.15	42.09
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.627	12.627 (1.424)	180	105504	5.00000	5.715	80.00- 120.00	100.00
12.627	12.627 (1.424)	182	101230			63.48- 123.48	95.95
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.720	12.720 (1.435)	225	88027	5.00000	5.719	80.00- 120.00	100.00
12.720	12.720 (1.435)	223	56198			32.11- 92.11	63.84
228 Naphthalene					CAS #: 91-20-3		
12.906	12.906 (1.456)	128	21326	0.50000	0.5596	80.00- 120.00	100.00(a)
12.906	12.906 (1.456)	127	3273			0.00- 43.17	15.35

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a121804.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 5.0ppbv (5.0ppbv)

Calibration Date: 18-DEC-2015
Calibration Time: 12:53
Client Smp ID: Level 4
Level: LOW
Sample Type: AIR

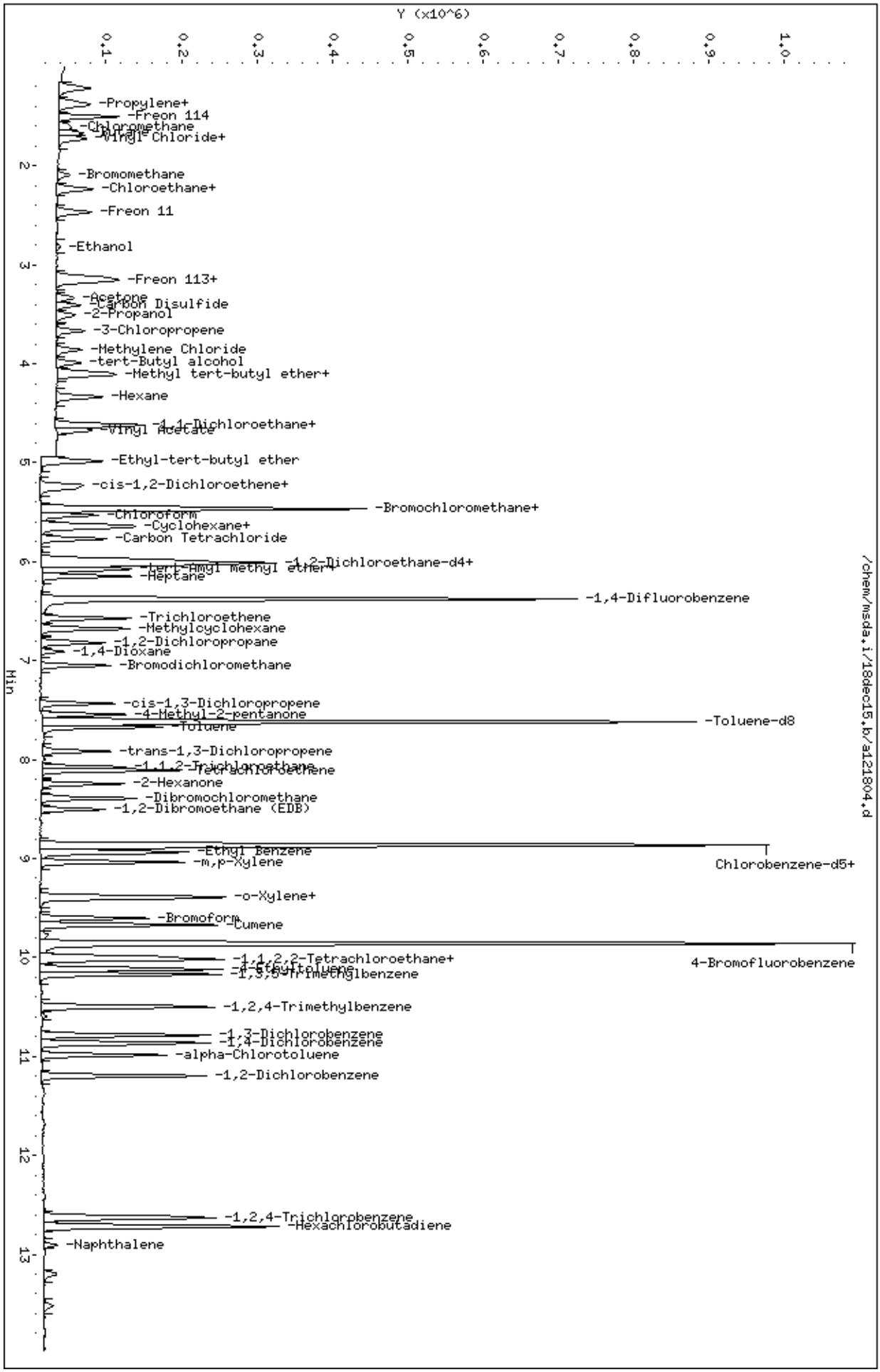
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	158121	94873	221369	157071	-0.66
123 1,4-Difluorobenze	659165	395499	922831	684899	3.90
163 Chlorobenzene-d5	629706	377824	881588	638774	1.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.47	5.14	5.80	5.46	-0.13
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/18dec15.b/a121804.d
Date : 18-DEC-2015 11:51
Client ID: Level 4
Sample Info: 200mL #2759-148
Column phase: RTX-624

Instrument: msda.i
Operator: cb
Column diameter: 0.25



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Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/18dec15.b/a121811.d
Lab Smp Id: ICAL Client Smp ID: Level 5
Inj Date : 18-DEC-2015 15:43
Operator : cb Inst ID: msda.i
Smp Info : 20mL #2759-45
Misc Info : 20ppbv (200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/18dec15.b/a15q1218a.m
Meth Date : 19-Dec-2015 14:16 cbond Quant Type: ISTD
Cal Date : 18-DEC-2015 15:43 Cal File: a121811.d
Als bottle: 12 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	159955	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	125509			47.82- 107.82	78.47
5.464	5.464 (1.000)	49	226080			110.78- 170.78	141.34
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	682943	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	101460			0.00- 45.54	14.86
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	649564	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	322528			20.41- 80.41	49.65
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.015	6.015 (1.101)	65	199660	25.0000	24.280	80.00- 120.00	100.00
6.015	6.015 (1.101)	67	110115			25.18- 85.18	55.15

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.620	7.620 (1.194)	98	697182	25.0000	25.165	80.00- 120.00	100.00
7.613	7.613 (1.193)	70	70124			0.00- 40.33	10.06
7.620	7.620 (1.194)	100	458564			36.65- 96.65	65.77
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	394523	25.0000	25.165	80.00- 120.00	100.00
9.862	9.862 (1.112)	95	474528			90.45- 150.45	120.28
9.862	9.862 (1.112)	176	395700			69.84- 129.84	100.30
9 Propylene					CAS #: 115-07-1		
1.345	1.345 (0.246)	41	62766	20.0000	17.421	80.00- 120.00	100.00
1.345	1.345 (0.246)	42	41587			36.39- 96.39	66.26
1.345	1.345 (0.246)	39	45843			42.19- 102.19	73.04
11 Freon 12					CAS #: 75-71-8		
1.381	1.381 (0.253)	85	171500	20.0000	17.290	80.00- 120.00	100.00
1.381	1.381 (0.253)	87	55542			2.85- 62.85	32.39
15 Freon 114					CAS #: 76-14-2		
1.495	1.495 (0.274)	135	152364	20.0000	18.552	80.00- 120.00	100.00
1.503	1.503 (0.275)	137	49246			2.45- 62.45	32.32
17 Chloromethane					CAS #: 74-87-3		
1.574	1.574 (0.288)	50	59565	20.0000	18.582	80.00- 120.00	100.00
1.581	1.581 (0.289)	52	22027			6.16- 66.16	36.98
23 Butane					CAS #: 106-97-8		
1.660	1.660 (0.304)	58	15964	20.0000	16.240	80.00- 120.00	100.00
1.660	1.660 (0.304)	43	124275			842.59- 902.59	778.47
25 Vinyl Chloride					CAS #: 75-01-4		
1.703	1.703 (0.312)	62	68287	20.0000	17.120	80.00- 120.00	100.00
1.703	1.703 (0.312)	64	21324			0.57- 60.57	31.23
26 1,3-Butadiene					CAS #: 106-99-0		
1.725	1.725 (0.316)	54	62235	20.0000	17.003	80.00- 120.00	100.00
1.725	1.725 (0.316)	39	65847			74.69- 134.69	105.80
29 Bromomethane					CAS #: 74-83-9		
2.090	2.090 (0.382)	94	60356	20.0000	17.786	80.00- 120.00	100.00
2.083	2.083 (0.381)	96	57312			68.21- 128.21	94.96
30 Chloroethane					CAS #: 75-00-3		
2.205	2.205 (0.403)	64	35692	20.0000	17.552	80.00- 120.00	100.00
2.205	2.205 (0.403)	66	11633			1.88- 61.88	32.59

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.205	2.205 (0.403)	49	11059			3.76- 63.76	30.98
31 Isopentane					CAS #: 78-78-4		
2.233	2.233 (0.409)	43	106424	20.0000	19.485	80.00- 120.00	100.00
2.233	2.233 (0.409)	57	68940			32.40- 92.40	64.78
35 Freon 11					CAS #: 75-69-4		
2.462	2.462 (0.451)	101	204857	20.0000	18.621	80.00- 120.00	100.00
2.462	2.462 (0.451)	103	130804			34.09- 94.09	63.85
42 Ethanol					CAS #: 64-17-5		
2.792	2.792 (0.511)	45	34784	20.0000	18.105	80.00- 120.00	100.00
2.792	2.792 (0.511)	43	7370			0.00- 50.11	21.19
2.792	2.792 (0.511)	46	13854			10.10- 70.10	39.83
49 Freon 113					CAS #: 76-13-1		
3.136	3.136 (0.574)	151	155380	20.0000	18.785	80.00- 120.00	100.00
3.136	3.136 (0.574)	153	101220			35.78- 95.78	65.14
3.136	3.136 (0.574)	101	185054			88.30- 148.30	119.10
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.164	3.164 (0.579)	98	45106	20.0000	15.780	80.00- 120.00	100.00
3.164	3.164 (0.579)	96	72047			122.92- 182.92	159.73
3.164	3.164 (0.579)	61	119369			232.20- 292.20	264.64
52 Acetone					CAS #: 67-64-1		
3.329	3.329 (0.609)	58	39081	20.0000	18.203	80.00- 120.00	100.00
3.329	3.329 (0.609)	43	130642			319.99- 379.99	334.29
56 Carbon Disulfide					CAS #: 75-15-0		
3.401	3.401 (0.622)	76	187147	20.0000	16.996	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.501	3.501 (0.641)	45	152409	20.0000	17.127	80.00- 120.00	100.00
3.501	3.501 (0.641)	43	28181			0.00- 47.66	18.49
3.501	3.501 (0.641)	59	6179			0.00- 33.60	4.05
58 3-Chloropropene					CAS #: 107-05-1		
3.666	3.666 (0.671)	76	32696	20.0000	17.095	80.00- 120.00	100.00
3.666	3.666 (0.671)	41	114330			335.86- 395.86	349.68
66 Methylene Chloride					CAS #: 75-09-2		
3.852	3.852 (0.705)	49	102418	20.0000	17.816	80.00- 120.00	100.00
3.859	3.859 (0.706)	84	61327			29.27- 89.27	59.88
3.852	3.852 (0.705)	51	31634			0.00- 59.81	30.89

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
3.988	3.988 (0.730)	59	179464	20.0000	19.018	80.00- 120.00	100.00
3.988	3.988 (0.730)	41	41204			0.00- 51.68	22.96
3.988	3.988 (0.730)	57	19712			0.00- 39.96	10.98
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.088	4.088 (0.748)	73	214812	20.0000	18.413	80.00- 120.00	100.00
4.088	4.088 (0.748)	57	58881			0.00- 57.40	27.41
4.088	4.088 (0.748)	41	60471			0.00- 57.39	28.15
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.110	4.110 (0.752)	98	48429	20.0000	16.325	80.00- 120.00	100.00
4.110	4.110 (0.752)	61	113820			209.93- 269.93	235.02
4.110	4.110 (0.752)	96	74475			130.42- 190.42	153.78
78 Hexane					CAS #: 110-54-3		
4.332	4.332 (0.793)	57	144847	20.0000	17.987	80.00- 120.00	100.00
4.325	4.325 (0.792)	43	101521			39.24- 99.24	70.09
4.332	4.332 (0.793)	86	20098			0.00- 43.98	13.88
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.626	4.626 (0.847)	63	147693	20.0000	17.698	80.00- 120.00	100.00
4.626	4.626 (0.847)	65	43450			1.56- 61.56	29.42
83 Isopropyl ether					CAS #: 108-20-3		
4.611	4.611 (0.844)	45	357900	20.0000	19.111	80.00- 120.00	100.00
4.611	4.611 (0.844)	87	76921			0.00- 51.47	21.49
4.611	4.611 (0.844)	59	36100			0.00- 39.84	10.09
86 Vinyl Acetate					CAS #: 108-05-4		
4.669	4.669 (0.854)	86	19817	20.0000	17.553	80.00- 120.00	100.00
4.669	4.669 (0.854)	43	275878			1404.95-1464.95	1392.13
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
4.984	4.984 (0.912)	59	308741	20.0000	19.041	80.00- 120.00	100.00
4.984	4.984 (0.912)	87	110287			5.59- 65.59	35.72
4.984	4.984 (0.912)	41	61170			0.00- 49.32	19.81
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.227	5.227 (0.957)	98	56165	20.0000	17.182	80.00- 120.00	100.00
5.227	5.227 (0.957)	96	85484			126.91- 186.91	152.20
5.227	5.227 (0.957)	61	121533			186.69- 246.69	216.39
92 2-Butanone					CAS #: 78-93-3		
5.256	5.256 (0.962)	72	39294	20.0000	18.055	80.00- 120.00	100.00
5.256	5.256 (0.962)	43	205654			510.66- 570.66	523.37

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.256	5.256 (0.962)	57	15315			8.91- 68.91	38.98
99 Tetrahydrofuran					CAS #: 109-99-9		
5.457	5.457 (0.999)	42	121142	20.0000	18.445	80.00- 120.00	100.00
5.457	5.457 (0.999)	71	35895			0.53- 60.53	29.63
5.457	5.457 (0.999)	72	35656			0.16- 60.16	29.43
100 Chloroform					CAS #: 67-66-3		
5.528	5.528 (1.012)	83	168291	20.0000	17.125	80.00- 120.00	100.00
5.528	5.528 (1.012)	85	113115			36.67- 96.67	67.21
102 Cyclohexane					CAS #: 110-82-7		
5.636	5.636 (1.031)	84	117857	20.0000	18.635	80.00- 120.00	100.00
5.629	5.629 (1.030)	56	175520			121.50- 181.50	148.93
5.629	5.629 (1.030)	41	100742			54.13- 114.13	85.48
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.657	5.657 (1.035)	97	205981	20.0000	17.687	80.00- 120.00	100.00
5.657	5.657 (1.035)	99	133423			32.76- 92.76	64.77
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.772	5.772 (1.056)	119	224253	20.0000	19.004	80.00- 120.00	100.00
5.772	5.772 (1.056)	117	234677			73.53- 133.53	104.65
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.972	5.972 (1.093)	57	501469	20.0000	18.713	80.00- 120.00	100.00
5.972	5.972 (1.093)	56	152084			0.62- 60.62	30.33
5.972	5.972 (1.093)	41	137191			0.00- 56.92	27.36
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	258607	20.0000	17.997	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	61451			0.00- 53.73	23.76
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.065	6.065 (1.110)	87	68004	20.0000	19.299	80.00- 120.00	100.00
6.065	6.065 (1.110)	73	252706			352.05- 412.05	371.60
6.065	6.065 (1.110)	55	78490			86.74- 146.74	115.42
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	124428	20.0000	17.685	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	39523			0.51- 60.51	31.76
121 Heptane					CAS #: 142-82-5		
6.144	6.144 (0.963)	71	100931	20.0000	19.334	80.00- 120.00	100.00
6.144	6.144 (0.963)	43	230183			198.93- 258.93	228.06

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.144	6.144 (0.963)	57	114137			83.54- 143.54	113.08
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	134125	20.0000	17.022	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	148253			79.66- 139.66	110.53
6.574	6.574 (1.030)	97	86369			34.04- 94.04	64.39
127 Methylcyclohexane					CAS #: 108-87-2		
6.674	6.674 (1.222)	83	180588	20.0000	17.574	80.00- 120.00	100.00
6.674	6.674 (1.222)	98	84554			18.10- 78.10	46.82
6.674	6.674 (1.222)	55	171376			66.76- 126.76	94.90
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.818	6.818 (1.068)	63	120647	20.0000	18.354	80.00- 120.00	100.00
6.818	6.818 (1.068)	62	82713			39.78- 99.78	68.56
6.818	6.818 (1.068)	41	73934			32.16- 92.16	61.28
136 1,4-Dioxane					CAS #: 123-91-1		
6.904	6.904 (1.082)	88	73977	20.0000	19.285	80.00- 120.00	100.00
6.904	6.904 (1.082)	58	59844			49.57- 109.57	80.90
6.904	6.904 (1.082)	57	17678			0.00- 55.12	23.90
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	213101	20.0000	18.420	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	141547			36.86- 96.86	66.42
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.434	7.434 (1.165)	75	193724	20.0000	18.834	80.00- 120.00	100.00
7.434	7.434 (1.165)	77	57561			1.21- 61.21	29.71
7.434	7.434 (1.165)	39	121197			32.66- 92.66	62.56
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.548	7.548 (1.183)	58	115531	20.0000	17.976	80.00- 120.00	100.00
7.541	7.541 (1.182)	43	329471			262.16- 322.16	285.18
7.548	7.548 (1.183)	85	46341			11.61- 71.61	40.11
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	410869	20.0000	19.316	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	233882			28.59- 88.59	56.92
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	174424	20.0000	18.751	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	54191			1.64- 61.64	31.07
7.914	7.914 (0.893)	39	107499			30.00- 90.00	61.63

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                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  155 1,1,2-Trichloroethane                          CAS #: 79-00-5
  8.071   8.071 (0.910)    97    146952 20.0000   19.502  80.00- 120.00   100.00
  8.071   8.071 (0.910)    99     87298                   31.35-  91.35    59.41
  8.071   8.071 (0.910)    83    120123                   53.39- 113.39    81.74
-------------------------------------------------------------------------------
  156 Tetrachloroethene                              CAS #: 127-18-4
  8.114   8.114 (0.915)   166    218921 20.0000   19.160  80.00- 120.00   100.00
  8.114   8.114 (0.915)   129    168060                   48.51- 108.51    76.77
  8.114   8.114 (0.915)   131    165820                   45.21- 105.21    75.74
-------------------------------------------------------------------------------
  158 2-Hexanone                                     CAS #: 591-78-6
  8.243   8.243 (0.930)    58    154275 20.0000   18.937  80.00- 120.00   100.00
  8.243   8.243 (0.930)    43    317073                  171.14- 231.14   205.52
  8.243   8.243 (0.930)   100     27517                    0.00-  48.08    17.84
-------------------------------------------------------------------------------
  160 Dibromochloromethane                           CAS #: 124-48-1
  8.386   8.386 (0.946)   129    295320 20.0000   18.847  80.00- 120.00   100.00
  8.393   8.393 (0.947)   127    226769                   48.14- 108.14    76.79
-------------------------------------------------------------------------------
  161 1,2-Dibromoethane (EDB)                        CAS #: 106-93-4
  8.508   8.508 (0.960)   107    238198 20.0000   18.677  80.00- 120.00   100.00
  8.508   8.508 (0.960)   109    222902                   62.49- 122.49    93.58
-------------------------------------------------------------------------------
  165 Chlorobenzene                                  CAS #: 108-90-7
  8.888   8.888 (1.002)   112    371590 20.0000   19.537  80.00- 120.00   100.00
  8.888   8.888 (1.002)   114    117833                    1.55-  61.55    31.71
  8.888   8.888 (1.002)    77    197899                   23.72-  83.72    53.26
-------------------------------------------------------------------------------
  167 Ethyl Benzene                                  CAS #: 100-41-4
  8.938   8.938 (1.008)   106    187307 20.0000   19.497  80.00- 120.00   100.00
  8.938   8.938 (1.008)    91    570281                  275.74- 335.74   304.46
-------------------------------------------------------------------------------
  169 m,p-Xylene                                     CAS #: 108-38-3
  9.038   9.038 (1.019)   106    236327 20.0000   19.500  80.00- 120.00   100.00
  9.038   9.038 (1.019)    91    468280                  168.00- 228.00   198.15
-------------------------------------------------------------------------------
  171 o-Xylene                                       CAS #: 95-47-6
  9.382   9.382 (1.058)   106    223507 20.0000   19.531  80.00- 120.00   100.00
  9.382   9.382 (1.058)    91    463999                  180.86- 240.86   207.60
-------------------------------------------------------------------------------
  172 Styrene                                        CAS #: 100-42-5
  9.403   9.403 (1.061)   104    343973 20.0000   19.247  80.00- 120.00   100.00
  9.403   9.403 (1.061)    78    168846                   18.40-  78.40    49.09
-------------------------------------------------------------------------------
  174 Bromoform                                      CAS #: 75-25-2
  9.604   9.604 (1.083)   173    305606 20.0000   19.312  80.00- 120.00   100.00
```

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.604	9.604 (1.083)	171	157914			21.79- 81.79	51.67
175 Cumene					CAS #: 98-82-8		
9.676	9.676 (1.091)	105	696381	20.0000	19.478	80.00- 120.00	100.00
9.676	9.676 (1.091)	120	189571			0.00- 57.35	27.22
9.668	9.668 (1.090)	51	77392			0.00- 41.41	11.11
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.991	9.991 (1.127)	83	329319	20.0000	19.443	80.00- 120.00	100.00
9.991	9.991 (1.127)	85	216277			35.95- 95.95	65.67
182 Propylbenzene					CAS #: 103-65-1		
10.019	10.019 (1.130)	91	778644	20.0000	19.233	80.00- 120.00	100.00
10.019	10.019 (1.130)	120	191356			0.00- 54.67	24.58
10.019	10.019 (1.130)	105	29483			0.00- 33.80	3.79
188 4-Ethyltoluene					CAS #: 622-96-8		
10.120	10.120 (1.141)	120	214392	20.0000	19.086	80.00- 120.00	100.00
10.120	10.120 (1.141)	105	677271			291.69- 351.69	315.90
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.170	10.170 (1.147)	120	300822	20.0000	19.309	80.00- 120.00	100.00
10.170	10.170 (1.147)	105	617174			176.78- 236.78	205.16
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.499	10.499 (1.184)	120	265921	20.0000	19.158	80.00- 120.00	100.00
10.499	10.499 (1.184)	105	571724			184.15- 244.15	215.00
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.786	10.786 (1.217)	146	409185	20.0000	18.622	80.00- 120.00	100.00
10.786	10.786 (1.217)	148	260257			34.28- 94.28	63.60
10.786	10.786 (1.217)	111	161582			10.08- 70.08	39.49
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.865	10.865 (1.225)	146	410415	20.0000	18.495	80.00- 120.00	100.00
10.865	10.865 (1.225)	148	262479			34.75- 94.75	63.95
10.865	10.865 (1.225)	111	160768			8.94- 68.94	39.17
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.986	10.986 (1.239)	91	491654	20.0000	18.384	80.00- 120.00	100.00
10.986	10.986 (1.239)	126	116038			0.00- 53.59	23.60
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.201	11.201 (1.263)	146	391221	20.0000	18.686	80.00- 120.00	100.00
11.201	11.201 (1.263)	148	250391			33.27- 93.27	64.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.194	11.194 (1.263)	111	162352			11.15- 71.15	41.50
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.627	12.627 (1.424)	180	371650	20.0000	19.798	80.00- 120.00	100.00
12.627	12.627 (1.424)	182	350034			63.48- 123.48	94.18
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.720	12.720 (1.435)	225	313437	20.0000	20.026	80.00- 120.00	100.00
12.720	12.720 (1.435)	223	198694			32.11- 92.11	63.39
228 Naphthalene					CAS #: 91-20-3		
12.906	12.906 (1.456)	128	74003	2.00000	1.910	80.00- 120.00	100.00
12.906	12.906 (1.456)	127	9357			0.00- 43.17	12.64

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a121811.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 20ppbv (200ppbv)

Calibration Date: 18-DEC-2015
Calibration Time: 12:53
Client Smp ID: Level 5
Level: LOW
Sample Type: AIR

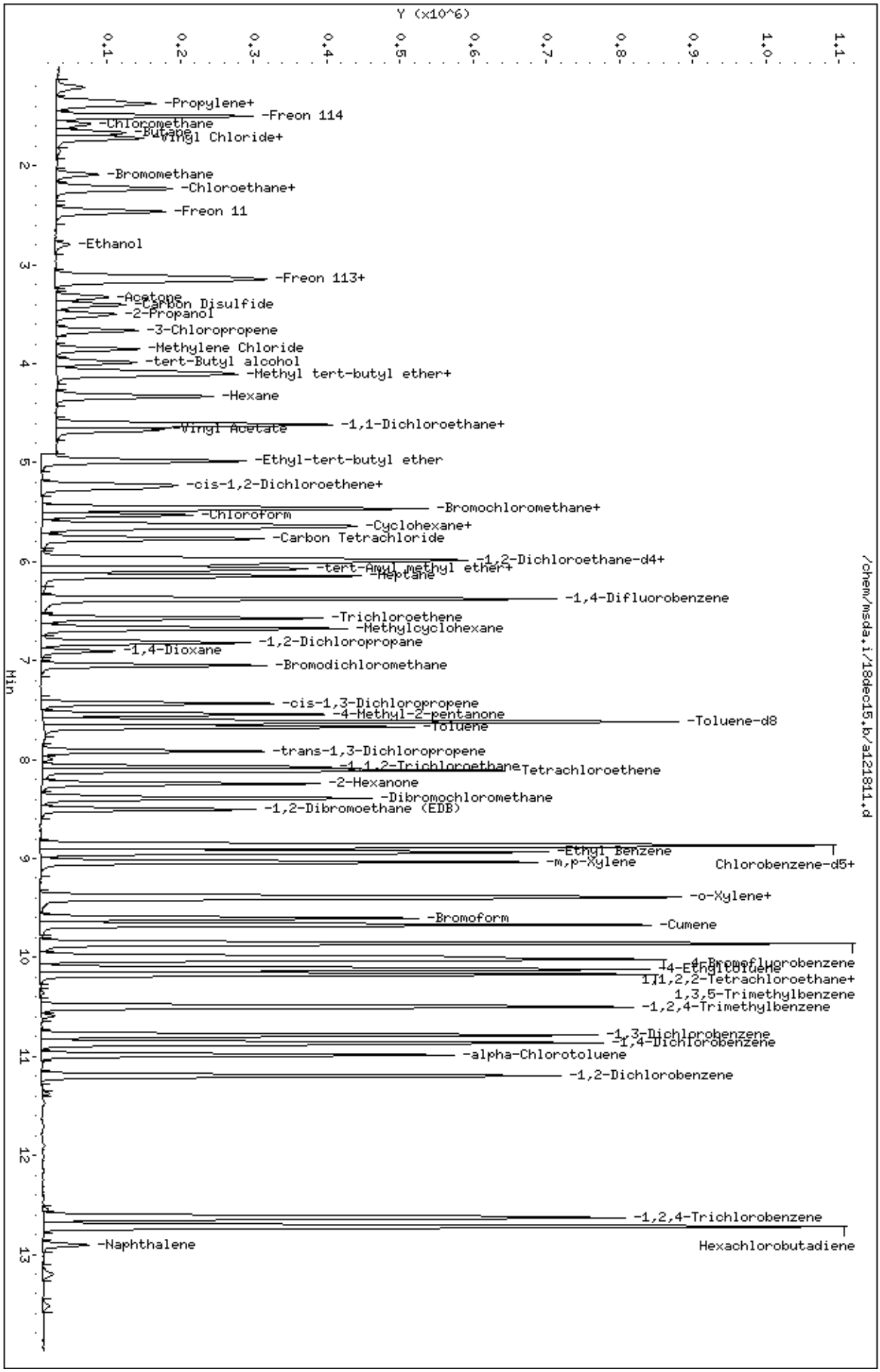
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	158121	94873	221369	159955	1.16
123 1,4-Difluorobenze	659165	395499	922831	682943	3.61
163 Chlorobenzene-d5	629706	377824	881588	649564	3.15

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.47	5.14	5.80	5.46	-0.13
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/18dec15.b/a121811.d
Date : 18-DEC-2015 15:43
Client ID: Level 5
Sample Info: 20mL #2759-45
Column phase: RTX-624

Instrument: msda.i
Operator: cb
Column diameter: 0.25



Column diameter: 0.25

Page 1

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/27jan16.b/a012708.d
Lab Smp Id: ICAL Level #6
Inj Date : 27-JAN-2016 16:01
Operator : js Inst ID: msda.i
Smp Info : 50ml 2759-214
Misc Info : 50ppbv (200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/27jan16.b/a15q1218d.m
Meth Date : 27-Jan-2016 17:09 jscarbro Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BoilingPtcrv.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	190618	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	145489			47.82- 107.82	76.32
5.464	5.464 (1.000)	49	239479			110.78- 170.78	125.63
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	762171	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	110093			0.00- 45.54	14.44
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	689084	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	336839			20.41- 80.41	48.88
34 Pentane					CAS #: 109-66-0		
2.555	2.555 (0.468)	43	388572	50.0000	46.418	80.00- 120.00	100.00
2.555	2.555 (0.468)	57	65177			0.00- 43.57	16.77
2.555	2.555 (0.468)	72	33808			0.00- 39.05	8.70

RT	EXP RT	(REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
148 Octane						CAS #: 111-65-9		
7.677	7.677	(1.203)	57	268900	50.0000	46.530	80.00- 120.00	100.00
7.677	7.677	(1.203)	85	271797			87.86- 147.86	101.08
7.677	7.677	(1.203)	43	627887			232.77- 292.77	233.50
170 Nonane						CAS #: 111-84-2		
8.959	8.959	(1.010)	43	617785	50.0000	46.271	80.00- 120.00	100.00
8.959	8.959	(1.010)	57	571518			48.41- 108.41	92.51
8.959	8.959	(1.010)	85	203039			4.10- 64.10	32.87
187 Decane						CAS #: 124-18-5		
10.069	10.069	(1.136)	57	719617	50.0000	46.094	80.00- 120.00	100.00
10.069	10.069	(1.136)	71	245180			10.00- 70.00	34.07
10.077	10.077	(1.137)	142	35225			0.00- 36.06	4.89
215 Undecane						CAS #: 1120-21-4		
11.072	11.072	(1.249)	57	747787	50.0000	46.207	80.00- 120.00	100.00
11.072	11.072	(1.249)	43	622655			67.20- 127.20	83.27
225 Dodecane						CAS #: 112-40-3		
11.996	11.996	(1.353)	57	407675	50.0000	37.500	80.00- 120.00	100.00
11.996	11.996	(1.353)	43	321710			63.85- 123.85	78.91

Report Date: 27-Jan-2016 17:09

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a012708.d
Lab Smp Id: ICAL Level #6
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /chem/msda.i/27jan16.b/a15q1218d.m
Misc Info: 50ppbv (200ppbv)

Calibration Date: 27-JAN-2016
Calibration Time: 16:01

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	190618	114371	266865	190618	0.00
123 1,4-Difluorobenze	762171	457303	1067039	762171	0.00
163 Chlorobenzene-d5	689084	413450	964718	689084	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/27jan16.b/a012708.d

Date : 27-JAN-2016 16:01

Client ID:

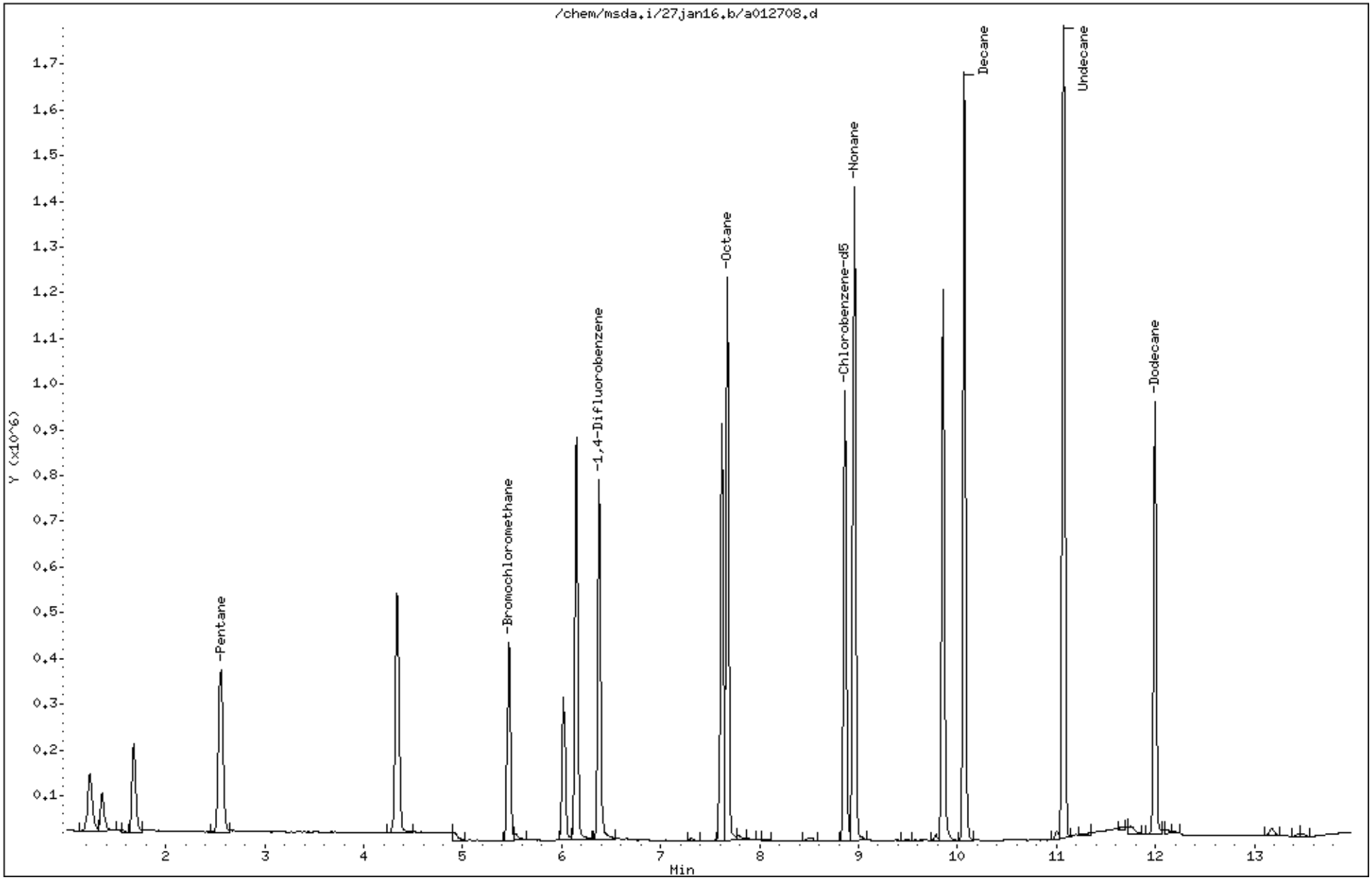
Sample Info: 50ml 2759-214

Column phase: RTX-624

Instrument: msda.i

Operator: js

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/31dec15.b/a123106.d
Lab Smp Id: ICAL Level 6
Inj Date : 31-DEC-2015 11:54
Operator : cb Inst ID: msda.i
Smp Info : 50mL 2759-162
Misc Info : 50ppbv(200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/31dec15.b/a15q1218c.m
Meth Date : 31-Dec-2015 12:49 cbond Quant Type: ISTD
Cal Date : 31-DEC-2015 11:54 Cal File: a123106.d
Als bottle: 2 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 123TCB.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	146157	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	116340			47.82- 107.82	79.60
5.464	5.464 (1.000)	49	231764			110.78- 170.78	158.57
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.380	6.380 (1.000)	114	633322	25.0000		80.00- 120.00	100.00
6.380	6.380 (1.000)	88	93847			0.00- 45.54	14.82
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	604821	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	300186			20.41- 80.41	49.63
229 1,2,3-Trichlorobenzene					CAS #: 87-61-6		
13.150	13.150 (1.483)	180	355437	50.0000	43.428	0.00- 0.00	100.00
13.150	13.150 (1.483)	182	343733			0.00- 0.00	96.71
13.150	13.150 (1.483)	145	117739			0.00- 0.00	33.13

Report Date: 31-Dec-2015 12:49

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a123106.d
Lab Smp Id: ICAL Level 6
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/31dec15.b/a15q1218c.m
Misc Info: 50ppbv(200ppbv)

Calibration Date: 31-DEC-2015
Calibration Time: 11:54

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	146157	87694	204620	146157	0.00
123 1,4-Difluorobenze	633322	379993	886651	633322	0.00
163 Chlorobenzene-d5	604821	362893	846749	604821	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/31dec15.b/a123106.d

Date : 31-DEC-2015 11:54

Client ID:

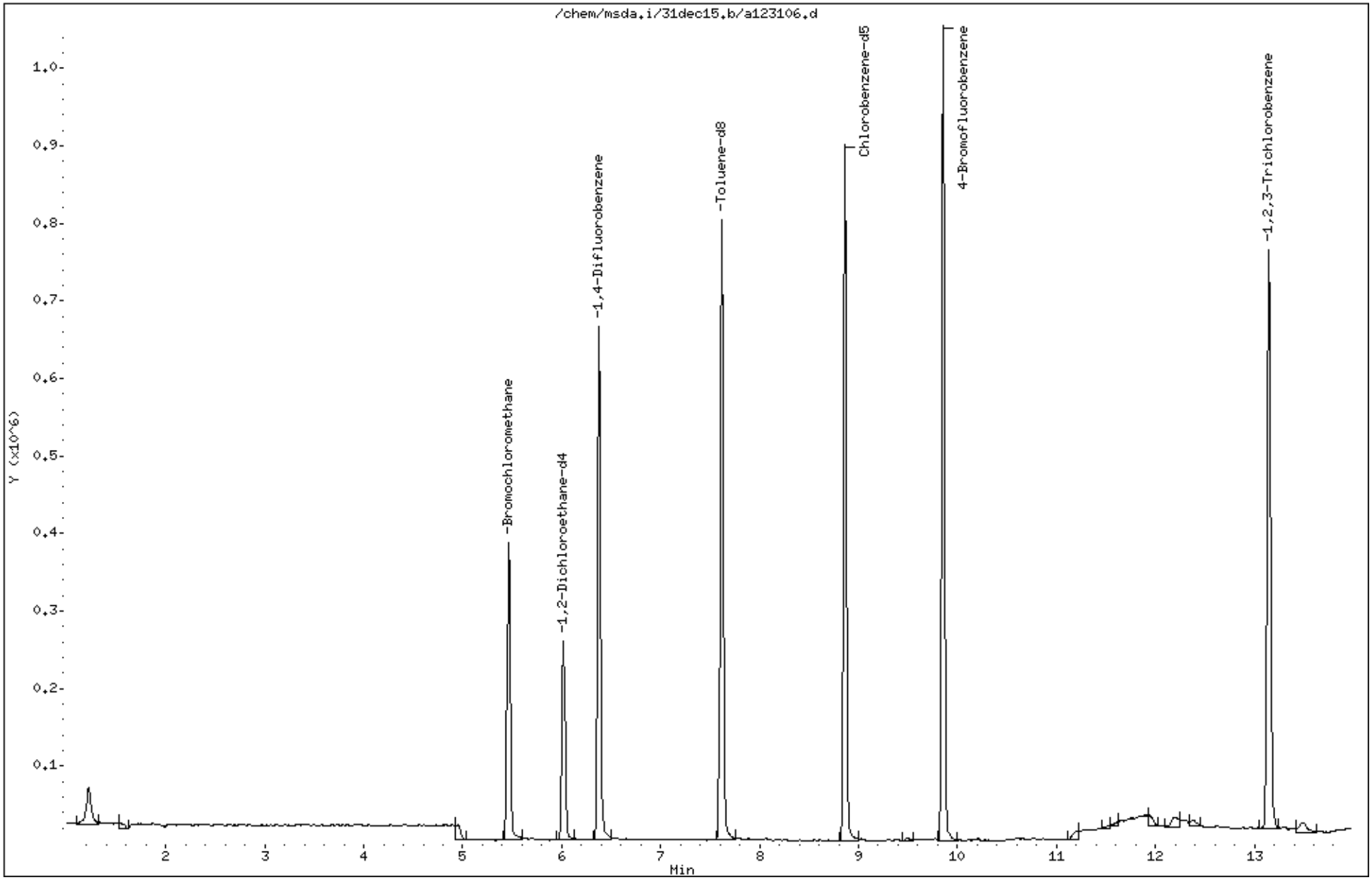
Sample Info: 50mL 2759-162

Column phase: RTX-624

Instrument: msda.i

Operator: cb

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/11feb16.b/a021105.d
Lab Smp Id: ICAL Client Smp ID: level 6
Inj Date : 11-FEB-2016 13:14
Operator : sab Inst ID: msda.i
Smp Info : 50ml 2759-231
Misc Info : 50ppbv (200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/11feb16.b/a15q1218f.m
Meth Date : 11-Feb-2016 16:41 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT1.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	170257	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	135819			47.82- 107.82	79.77
5.457	5.457 (1.000)	49	223524			110.78- 170.78	131.29
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.374	6.374 (1.000)	114	695250	25.0000		80.00- 120.00	100.00
6.374	6.374 (1.000)	88	101101			0.00- 45.54	14.54
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.859	8.859 (1.000)	117	627439	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	303853			20.41- 80.41	48.43
6 Freon 143a					CAS #: 420-46-2		
1.259	1.259 (0.230)	65	18268	50.0000	48.890	0.00- 0.00	100.00
1.252	1.252 (0.229)	69	52540			0.00- 0.00	287.61
1.259	1.259 (0.230)	64	4397			0.00- 0.00	24.07

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
7 Freon 134a					CAS #: 811-97-2		
1.309	1.309 (0.240)	83	47621	50.0000	48.251	80.00- 120.00	100.00
1.302	1.302 (0.238)	69	43061			59.92- 119.92	90.42
1.309	1.309 (0.240)	63	5918			0.00- 40.56	12.43
10 1,1-Difluoroethane					CAS #: 75-37-6		
1.359	1.359 (0.249)	65	26978	50.0000	51.972	80.00- 120.00	100.00
1.359	1.359 (0.249)	51	56073			179.40- 239.40	207.85
1.359	1.359 (0.249)	47	11090			27.30- 87.30	41.11
13 Chlorodifluoromethane					CAS #: 75-45-6		
1.410	1.410 (0.258)	67	11422	50.0000	52.015	80.00- 120.00	100.00
1.410	1.410 (0.258)	51	88056			630.90- 690.90	770.93
1.410	1.410 (0.258)	85	1521			0.00- 41.87	13.32
16 Freon 142b					CAS #: 75-68-3		
1.546	1.546 (0.283)	65	101954	50.0000	46.012	80.00- 120.00	100.00
1.546	1.546 (0.283)	45	26042			0.00- 55.24	25.54
37 Dichlorofluoromethane					CAS #: 75-43-4		
2.470	2.470 (0.452)	67	136973	50.0000	48.984	80.00- 120.00	100.00
2.470	2.470 (0.452)	69	43673			2.74- 62.74	31.88
48 Freon 123					CAS #: 306-83-2		
3.064	3.064 (0.561)	83	173546	50.0000	47.703	80.00- 120.00	100.00
3.064	3.064 (0.561)	133	41807			0.00- 52.96	24.09
3.064	3.064 (0.561)	85	114871			35.25- 95.25	66.19
59 Cyclopentene					CAS #: 142-29-0		
3.673	3.673 (0.672)	67	99116	50.0000	46.501	0.00- 30.00	100.00
3.673	3.673 (0.672)	68	36227			0.00- 30.00	36.55
3.673	3.673 (0.672)	53	23587			0.00- 30.00	23.80
84 1-Propanol					CAS #: 71-23-8		
4.755	4.755 (0.870)	42	68881	50.0000	59.280	0.00- 30.00	100.00
4.755	4.755 (0.870)	59	78926			0.00- 30.00	114.58
4.755	4.755 (0.870)	41	40833			0.00- 30.00	59.28
90 2,2-Dichloropropane					CAS #: 594-20-7		
5.185	5.185 (0.949)	77	152945	50.0000	47.577	80.00- 120.00	100.00
5.185	5.185 (0.949)	79	51357			3.00- 63.00	33.58
5.185	5.185 (0.949)	97	35886			0.00- 51.02	23.46
107 1,1-Dichloropropene					CAS #: 563-58-6		
5.801	5.801 (0.910)	110	54254	50.0000	47.968	80.00- 120.00	100.00
5.801	5.801 (0.910)	75	129647			218.23- 278.23	238.96

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
115 Isobutanol					CAS #: 78-83-1		
5.958	5.958 (1.090)	39	86614	50.0000	61.755	0.00- 30.00	100.00
5.958	5.958 (1.090)	41	264119			0.00- 30.00	304.94
5.958	5.958 (1.090)	43	360651			0.00- 30.00	416.39
124 n-Butanol					CAS #: 71-36-3		
6.538	6.538 (1.026)	56	656595	50.0000	62.144	80.00- 120.00	100.00
6.538	6.538 (1.026)	41	431022			49.55- 109.55	65.65
6.538	6.538 (1.026)	43	351499			30.23- 90.23	53.53
157 1,3-Dichloropropane					CAS #: 142-28-9		
8.222	8.222 (1.290)	76	275578	50.0000	47.129	80.00- 120.00	100.00
8.222	8.222 (1.290)	41	193134			33.24- 93.24	70.08
8.222	8.222 (1.290)	78	92090			0.79- 60.79	33.42
159 Butyl Acetate					CAS #: 123-86-4		
8.308	8.308 (1.303)	56	63307	50.0000	49.805	80.00- 120.00	100.00
8.308	8.308 (1.303)	73	21236			16.25- 76.25	33.54
8.308	8.308 (1.303)	43	147574			251.54- 311.54	233.11
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
8.952	8.952 (1.010)	131	309514	50.0000	51.392	80.00- 120.00	100.00
8.952	8.952 (1.010)	117	222730			37.29- 97.29	71.96
8.952	8.952 (1.010)	95	108273			5.24- 65.24	34.98
176 Cyclohexanone					CAS #: 108-94-1		
9.840	9.840 (1.111)	55	472300	50.0000	60.715	0.00- 30.00	100.00
9.840	9.840 (1.111)	98	188432			0.00- 30.00	39.90
9.840	9.840 (1.111)	42	302932			0.00- 30.00	64.14
180 Bromobenzene					CAS #: 108-86-1		
9.991	9.991 (1.128)	156	353276	50.0000	51.368	80.00- 120.00	100.00
9.998	9.998 (1.129)	158	344639			68.50- 128.50	97.56
9.991	9.991 (1.128)	77	477499			107.36- 167.36	135.16
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
10.048	10.048 (1.134)	110	167845	50.0000	51.997	80.00- 120.00	100.00
10.048	10.048 (1.134)	75	413722			303.70- 363.70	246.49
10.048	10.048 (1.134)	61	118642			36.82- 96.82	70.69
189 2-Chlorotoluene					CAS #: 95-49-8		
10.134	10.134 (1.144)	126	276236	50.0000	51.847	80.00- 120.00	100.00
10.134	10.134 (1.144)	91	716001			228.58- 288.58	259.20
10.134	10.134 (1.144)	65	67527			0.00- 51.86	24.45
191 4-Chlorotoluene					CAS #: 106-43-4		
10.234	10.234 (1.155)	126	280057	50.0000	51.485	80.00- 120.00	100.00

```
                                          AMOUNTS
                                       CAL-AMT   ON-COL
   RT   EXP RT (REL RT)  MASS  RESPONSE ( PPBV)  ( PPBV)   TARGET RANGE    RATIO
   ==   ====== ========  ====  ======== =======  =======   ============    =====

  191 4-Chlorotoluene (continued)
 10.234  10.234 (1.155)    91    741499                   229.79- 289.79   264.77
 10.234  10.234 (1.155)    63     97511                     3.53-  63.53    34.82
-------------------------------------------------------------------------------
  195 tert-Butylbenzene                                CAS #: 98-06-6
 10.442  10.442 (1.179)   119    855348 50.0000   51.587  80.00- 120.00   100.00
 10.442  10.442 (1.179)   134    217709                    0.00-  54.90    25.45
 10.442  10.442 (1.179)    91    521428                   32.52-  92.52    60.96
-------------------------------------------------------------------------------
  197 Pentachloroethane                                CAS #: 76-01-7
 10.514  10.514 (1.187)   167    286450 50.0000   50.871   0.00-  30.00   100.00
 10.514  10.514 (1.187)   117    275292                    0.00-  30.00    96.10
 10.514  10.514 (1.187)   169    136551                    0.00-  30.00    47.67
-------------------------------------------------------------------------------
  203 sec-Butylbenzene                                 CAS #: 135-98-8
 10.628  10.628 (1.200)   134    271009 50.0000   51.690  80.00- 120.00   100.00
 10.628  10.628 (1.200)   105   1265148                  440.25- 500.25   466.83
 10.628  10.628 (1.200)    91    186387                   40.86- 100.86    68.78
-------------------------------------------------------------------------------
  207 p-Cymene                                         CAS #: 99-87-6
 10.743  10.743 (1.213)   119   1132224 50.0000   52.343  80.00- 120.00   100.00
 10.743  10.743 (1.213)   134    313443                    0.00-  57.35    27.68
 10.743  10.743 (1.213)    91    242718                    0.00-  51.72    21.44
-------------------------------------------------------------------------------
  210 1,2,3-Trimethylbenzene                           CAS #: 526-73-8
 10.872  10.872 (1.227)   120    433625 50.0000   52.271  80.00- 120.00   100.00
 10.872  10.872 (1.227)   105    981764                  199.87- 259.87   226.41
 10.865  10.865 (1.226)    77    108370                    0.00-  55.85    24.99
-------------------------------------------------------------------------------
  213 Butylbenzene                                     CAS #: 104-51-8
 11.094  11.094 (1.252)   134    307795 50.0000   53.344  80.00- 120.00   100.00
 11.094  11.094 (1.252)    91   1041896                  312.74- 372.74   338.50
 11.094  11.094 (1.252)    92    551984                  148.22- 208.22   179.33
-------------------------------------------------------------------------------
  221 1,2-Dibromo-3-chloropropane                      CAS #: 96-12-8
 11.889  11.889 (1.342)   157    551187 50.0000   65.073  80.00- 120.00   100.00
 11.882  11.882 (1.341)    75    413526                   44.51- 104.51    75.02
 11.889  11.889 (1.342)   155    429267                   47.26- 107.26    77.88
-------------------------------------------------------------------------------
```

Report Date: 11-Feb-2016 16:41

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021105.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/11feb16.b/a15q1218f.m
Misc Info: 50ppbv (200ppbv)

Calibration Date: 11-FEB-2016
Calibration Time: 13:14
Client Smp ID: level 6
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	170257	102154	238360	170257	0.00
123 1,4-Difluorobenze	695250	417150	973350	695250	0.00
163 Chlorobenzene-d5	627439	376463	878415	627439	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.37	6.04	6.70	6.37	0.00
163 Chlorobenzene-d5	8.86	8.53	9.19	8.86	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/11feb16.b/a021105.d

Date : 11-FEB-2016 13:14

Client ID: level 6

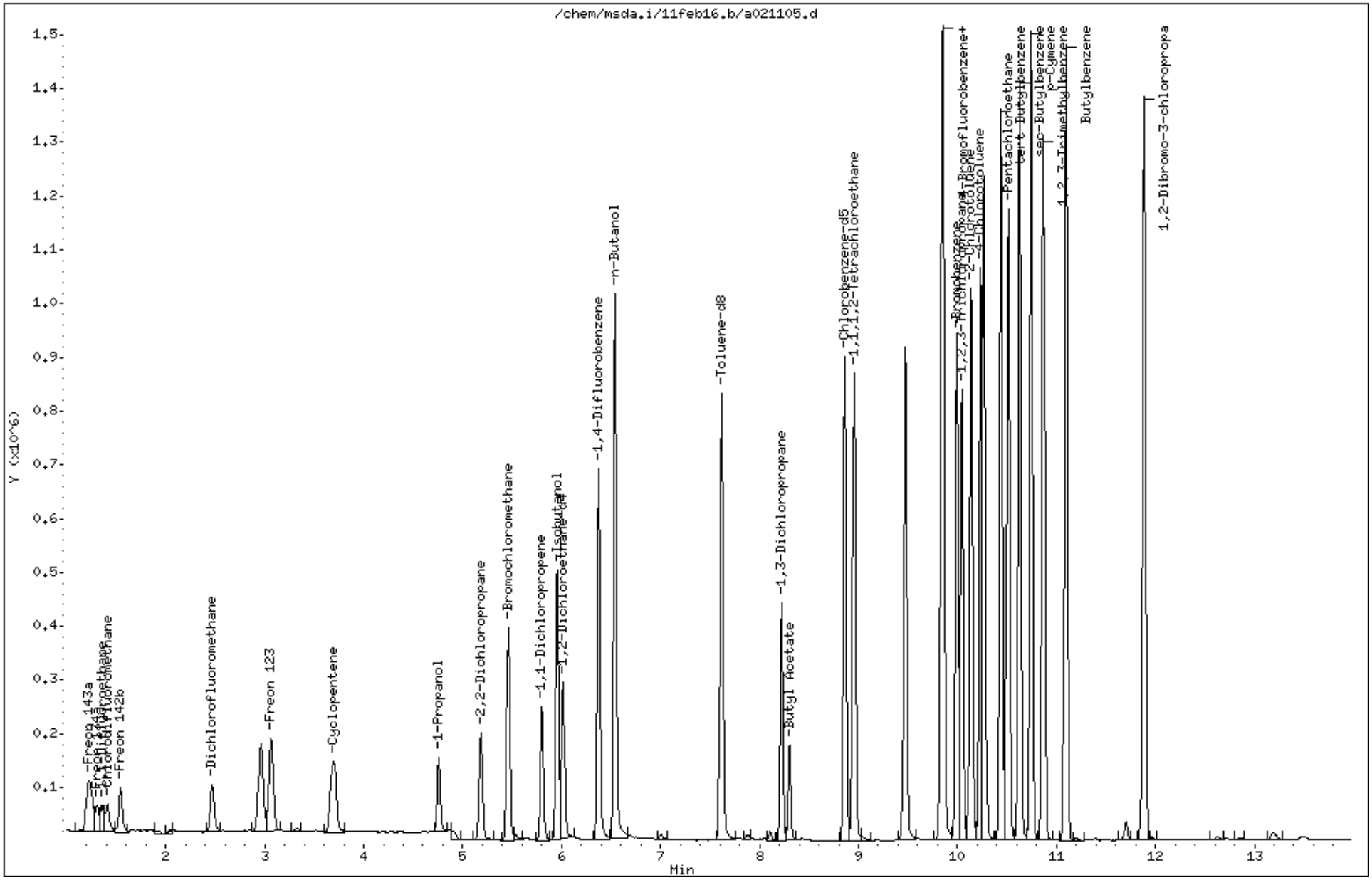
Sample Info: 50ml 2759-231

Column phase: RTX-624

Instrument: msda.i

Operator: sab

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/18dec15.b/a121806.d
Lab Smp Id: ICAL Client Smp ID: Level 6
Inj Date : 18-DEC-2015 12:53
Operator : cb Inst ID: msda.i
Smp Info : 50mL #2759-45
Misc Info : 50ppbv (200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/18dec15.b/a15q1218a.m
Meth Date : 19-Dec-2015 14:16 cbond Quant Type: ISTD
Cal Date : 18-DEC-2015 12:53 Cal File: a121806.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.471	5.471 (1.000)	130	158121	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	123057			47.82- 107.82	77.82
5.464	5.464 (1.000)	49	222603			110.78- 170.78	140.78
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	659165	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	102449			0.00- 45.54	15.54
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	629706	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	317433			20.41- 80.41	50.41
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.022	6.022 (1.101)	65	199870	25.0000	24.588	80.00- 120.00	100.00
6.022	6.022 (1.101)	67	110284			25.18- 85.18	55.18

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.620	7.620 (1.194)	98	676680	25.0000	25.306	80.00- 120.00	100.00
7.620	7.620 (1.194)	70	69905			0.00- 40.33	10.33
7.620	7.620 (1.194)	100	451014			36.65- 96.65	66.65
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	381046	25.0000	25.072	80.00- 120.00	100.00
9.862	9.862 (1.112)	95	458981			90.45- 150.45	120.45
9.862	9.862 (1.112)	176	380437			69.84- 129.84	99.84
9 Propylene					CAS #: 115-07-1		
1.352	1.352 (0.247)	41	156210	50.0000	43.861	80.00- 120.00	100.00
1.352	1.352 (0.247)	42	103715			36.39- 96.39	66.39
1.352	1.352 (0.247)	39	112773			42.19- 102.19	72.19
11 Freon 12					CAS #: 75-71-8		
1.388	1.388 (0.254)	85	416759	50.0000	42.502	80.00- 120.00	100.00
1.388	1.388 (0.254)	87	136912			2.85- 62.85	32.85
15 Freon 114					CAS #: 76-14-2		
1.510	1.510 (0.276)	135	353502	50.0000	43.542	80.00- 120.00	100.00
1.510	1.510 (0.276)	137	114705			2.45- 62.45	32.45
17 Chloromethane					CAS #: 74-87-3		
1.589	1.589 (0.290)	50	138987	50.0000	43.862	80.00- 120.00	100.00
1.589	1.589 (0.290)	52	50262			6.16- 66.16	36.16
23 Butane					CAS #: 106-97-8		
1.675	1.675 (0.306)	58	35406	50.0000	36.436	80.00- 120.00	100.00
1.675	1.675 (0.306)	43	308948			842.59- 902.59	872.59
25 Vinyl Chloride					CAS #: 75-01-4		
1.710	1.710 (0.313)	62	168808	50.0000	42.813	80.00- 120.00	100.00
1.710	1.710 (0.313)	64	51603			0.57- 60.57	30.57
26 1,3-Butadiene					CAS #: 106-99-0		
1.739	1.739 (0.318)	54	151546	50.0000	41.884	80.00- 120.00	100.00
1.739	1.739 (0.318)	39	158653			74.69- 134.69	104.69
29 Bromomethane					CAS #: 74-83-9		
2.097	2.097 (0.383)	94	141852	50.0000	42.287	80.00- 120.00	100.00
2.097	2.097 (0.383)	96	139319			68.21- 128.21	98.21
30 Chloroethane					CAS #: 75-00-3		
2.219	2.219 (0.406)	64	85870	50.0000	42.719	80.00- 120.00	100.00
2.219	2.219 (0.406)	66	27375			1.88- 61.88	31.88

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.219	2.219 (0.406)	49	28991			3.76- 63.76	33.76
31 Isopentane					CAS #: 78-78-4		
2.240	2.240 (0.410)	43	247278	50.0000	45.799	80.00- 120.00	100.00
2.240	2.240 (0.410)	57	154295			32.40- 92.40	62.40
35 Freon 11					CAS #: 75-69-4		
2.477	2.477 (0.453)	101	474646	50.0000	43.644	80.00- 120.00	100.00
2.477	2.477 (0.453)	103	304177			34.09- 94.09	64.09
42 Ethanol					CAS #: 64-17-5		
2.813	2.813 (0.514)	45	83847	50.0000	44.148	80.00- 120.00	100.00
2.813	2.813 (0.514)	43	16861			0.00- 50.11	20.11
2.813	2.813 (0.514)	46	33622			10.10- 70.10	40.10
49 Freon 113					CAS #: 76-13-1		
3.143	3.143 (0.574)	151	348704	50.0000	42.647	80.00- 120.00	100.00
3.143	3.143 (0.574)	153	229370			35.78- 95.78	65.78
3.143	3.143 (0.574)	101	412507			88.30- 148.30	118.30
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.172	3.172 (0.580)	98	114625	50.0000	40.565	80.00- 120.00	100.00
3.172	3.172 (0.580)	96	175280			122.92- 182.92	152.92
3.172	3.172 (0.580)	61	300546			232.20- 292.20	262.20
52 Acetone					CAS #: 67-64-1		
3.336	3.336 (0.610)	58	95068	50.0000	44.793	80.00- 120.00	100.00
3.336	3.336 (0.610)	43	332728			319.99- 379.99	349.99
56 Carbon Disulfide					CAS #: 75-15-0		
3.415	3.415 (0.624)	76	488010	50.0000	44.834	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.508	3.508 (0.641)	45	393281	50.0000	44.709	80.00- 120.00	100.00
3.508	3.508 (0.641)	43	69462			0.00- 47.66	17.66
3.508	3.508 (0.641)	59	14164			0.00- 33.60	3.60
58 3-Chloropropene					CAS #: 107-05-1		
3.673	3.673 (0.671)	76	78518	50.0000	41.530	80.00- 120.00	100.00
3.673	3.673 (0.671)	41	287269			335.86- 395.86	365.86
66 Methylene Chloride					CAS #: 75-09-2		
3.859	3.859 (0.705)	49	259976	50.0000	45.748	80.00- 120.00	100.00
3.859	3.859 (0.705)	84	154086			29.27- 89.27	59.27
3.866	3.866 (0.707)	51	77503			0.00- 59.81	29.81

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
3.988	3.988 (0.729)	59	420219	50.0000	45.047	80.00- 120.00	100.00
3.988	3.988 (0.729)	41	91121			0.00- 51.68	21.68
3.988	3.988 (0.729)	57	41871			0.00- 39.96	9.96
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.096	4.096 (0.749)	73	508161	50.0000	44.063	80.00- 120.00	100.00
4.096	4.096 (0.749)	57	139232			0.00- 57.40	27.40
4.096	4.096 (0.749)	41	139210			0.00- 57.39	27.39
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.117	4.117 (0.753)	98	119498	50.0000	40.748	80.00- 120.00	100.00
4.117	4.117 (0.753)	61	286707			209.93- 269.93	239.93
4.117	4.117 (0.753)	96	191697			130.42- 190.42	160.42
78 Hexane					CAS #: 110-54-3		
4.339	4.339 (0.793)	57	343278	50.0000	43.122	80.00- 120.00	100.00
4.339	4.339 (0.793)	43	237693			39.24- 99.24	69.24
4.339	4.339 (0.793)	86	47986			0.00- 43.98	13.98
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.633	4.633 (0.847)	63	357170	50.0000	43.296	80.00- 120.00	100.00
4.633	4.633 (0.847)	65	112705			1.56- 61.56	31.56
83 Isopropyl ether					CAS #: 108-20-3		
4.619	4.619 (0.844)	45	824767	50.0000	44.551	80.00- 120.00	100.00
4.619	4.619 (0.844)	87	177058			0.00- 51.47	21.47
4.619	4.619 (0.844)	59	81189			0.00- 39.84	9.84
86 Vinyl Acetate					CAS #: 108-05-4		
4.676	4.676 (0.855)	86	49090	50.0000	43.987	80.00- 120.00	100.00
4.676	4.676 (0.855)	43	704418			1404.95-1464.95	1434.95
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
4.991	4.991 (0.912)	59	728693	50.0000	45.463	80.00- 120.00	100.00
4.991	4.991 (0.912)	87	259374			5.59- 65.59	35.59
4.991	4.991 (0.912)	41	140799			0.00- 49.32	19.32
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.227	5.227 (0.955)	98	140723	50.0000	43.550	80.00- 120.00	100.00
5.227	5.227 (0.955)	96	220805			126.91- 186.91	156.91
5.227	5.227 (0.955)	61	304926			186.69- 246.69	216.69
92 2-Butanone					CAS #: 78-93-3		
5.256	5.256 (0.961)	72	96255	50.0000	44.741	80.00- 120.00	100.00
5.256	5.256 (0.961)	43	520408			510.66- 570.66	540.66

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.256	5.256 (0.961)	57	37454			8.91- 68.91	38.91
99 Tetrahydrofuran					CAS #: 109-99-9		
5.457	5.457 (0.997)	42	294098	50.0000	45.298	80.00- 120.00	100.00
5.457	5.457 (0.997)	71	89799			0.53- 60.53	30.53
5.457	5.457 (0.997)	72	88707			0.16- 60.16	30.16
100 Chloroform					CAS #: 67-66-3		
5.535	5.535 (1.012)	83	419485	50.0000	43.182	80.00- 120.00	100.00
5.535	5.535 (1.012)	85	279677			36.67- 96.67	66.67
102 Cyclohexane					CAS #: 110-82-7		
5.636	5.636 (1.030)	84	267977	50.0000	42.864	80.00- 120.00	100.00
5.636	5.636 (1.030)	56	405986			121.50- 181.50	151.50
5.636	5.636 (1.030)	41	225446			54.13- 114.13	84.13
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.657	5.657 (1.034)	97	474790	50.0000	41.242	80.00- 120.00	100.00
5.657	5.657 (1.034)	99	297971			32.76- 92.76	62.76
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.772	5.772 (1.055)	119	518475	50.0000	44.448	80.00- 120.00	100.00
5.772	5.772 (1.055)	117	536800			73.53- 133.53	103.53
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.979	5.979 (1.093)	57	1201600	50.0000	45.360	80.00- 120.00	100.00
5.979	5.979 (1.093)	56	367929			0.62- 60.62	30.62
5.979	5.979 (1.093)	41	323513			0.00- 56.92	26.92
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	614735	50.0000	44.323	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	145883			0.00- 53.73	23.73
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.065	6.065 (1.109)	87	156424	50.0000	44.907	80.00- 120.00	100.00
6.065	6.065 (1.109)	73	597622			352.05- 412.05	382.05
6.065	6.065 (1.109)	55	182605			86.74- 146.74	116.74
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	310572	50.0000	45.733	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	94752			0.51- 60.51	30.51
121 Heptane					CAS #: 142-82-5		
6.151	6.151 (0.964)	71	229265	50.0000	45.501	80.00- 120.00	100.00
6.151	6.151 (0.964)	43	524866			198.93- 258.93	228.93

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.151	6.151 (0.964)	57	260313			83.54- 143.54	113.54
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	323324	50.0000	42.513	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	354562			79.66- 139.66	109.66
6.574	6.574 (1.030)	97	207045			34.04- 94.04	64.04
127 Methylcyclohexane					CAS #: 108-87-2		
6.681	6.681 (1.221)	83	412915	50.0000	40.649	80.00- 120.00	100.00
6.681	6.681 (1.221)	98	198627			18.10- 78.10	48.10
6.674	6.674 (1.220)	55	399551			66.76- 126.76	96.76
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.818	6.818 (1.068)	63	278191	50.0000	43.848	80.00- 120.00	100.00
6.818	6.818 (1.068)	62	194122			39.78- 99.78	69.78
6.818	6.818 (1.068)	41	172922			32.16- 92.16	62.16
136 1,4-Dioxane					CAS #: 123-91-1		
6.911	6.911 (1.083)	88	169012	50.0000	45.650	80.00- 120.00	100.00
6.904	6.904 (1.082)	58	134479			49.57- 109.57	79.57
6.904	6.904 (1.082)	57	42457			0.00- 55.12	25.12
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	509976	50.0000	45.672	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	340976			36.86- 96.86	66.86
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.434	7.434 (1.165)	75	453300	50.0000	45.660	80.00- 120.00	100.00
7.434	7.434 (1.165)	77	141453			1.21- 61.21	31.21
7.434	7.434 (1.165)	39	284029			32.66- 92.66	62.66
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.548	7.548 (1.183)	58	260846	50.0000	42.050	80.00- 120.00	100.00
7.548	7.548 (1.183)	43	762088			262.16- 322.16	292.16
7.548	7.548 (1.183)	85	108548			11.61- 71.61	41.61
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	907737	50.0000	44.215	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	531883			28.59- 88.59	58.59
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	405634	50.0000	44.981	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	128324			1.64- 61.64	31.64
7.921	7.921 (0.893)	39	243369			30.00- 90.00	60.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.078	8.078 (0.911)	97	327949	50.0000	44.895	80.00- 120.00	100.00
8.078	8.078 (0.911)	99	201211			31.35- 91.35	61.35
8.078	8.078 (0.911)	83	273481			53.39- 113.39	83.39
156 Tetrachloroethene					CAS #: 127-18-4		
8.114	8.114 (0.915)	166	488716	50.0000	44.122	80.00- 120.00	100.00
8.114	8.114 (0.915)	129	383681			48.51- 108.51	78.51
8.114	8.114 (0.915)	131	367584			45.21- 105.21	75.21
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	365622	50.0000	46.295	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	735396			171.14- 231.14	201.14
8.243	8.243 (0.930)	100	66115			0.00- 48.08	18.08
160 Dibromochloromethane					CAS #: 124-48-1		
8.393	8.393 (0.947)	129	671021	50.0000	44.174	80.00- 120.00	100.00
8.393	8.393 (0.947)	127	524324			48.14- 108.14	78.14
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	553171	50.0000	44.743	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	511635			62.49- 122.49	92.49
165 Chlorobenzene					CAS #: 108-90-7		
8.888	8.888 (1.002)	112	830666	50.0000	45.050	80.00- 120.00	100.00
8.888	8.888 (1.002)	114	262090			1.55- 61.55	31.55
8.888	8.888 (1.002)	77	446271			23.72- 83.72	53.72
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.008)	106	414616	50.0000	44.519	80.00- 120.00	100.00
8.938	8.938 (1.008)	91	1267652			275.74- 335.74	305.74
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.019)	106	523122	50.0000	44.525	80.00- 120.00	100.00
9.038	9.038 (1.019)	91	1035776			168.00- 228.00	198.00
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.058)	106	490432	50.0000	44.208	80.00- 120.00	100.00
9.382	9.382 (1.058)	91	1034101			180.86- 240.86	210.86
172 Styrene					CAS #: 100-42-5		
9.403	9.403 (1.061)	104	784494	50.0000	45.282	80.00- 120.00	100.00
9.403	9.403 (1.061)	78	379657			18.40- 78.40	48.40
174 Bromoform					CAS #: 75-25-2		
9.604	9.604 (1.083)	173	691519	50.0000	45.077	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.604	9.604 (1.083)	171	358163			21.79- 81.79	51.79
175 Cumene					CAS #: 98-82-8		
9.676	9.676 (1.091)	105	1538707	50.0000	44.394	80.00- 120.00	100.00
9.676	9.676 (1.091)	120	420868			0.00- 57.35	27.35
9.676	9.676 (1.091)	51	175500			0.00- 41.41	11.41
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.991	9.991 (1.127)	83	742797	50.0000	45.237	80.00- 120.00	100.00
9.991	9.991 (1.127)	85	489890			35.95- 95.95	65.95
182 Propylbenzene					CAS #: 103-65-1		
10.019	10.019 (1.130)	91	1770077	50.0000	45.101	80.00- 120.00	100.00
10.019	10.019 (1.130)	120	436751			0.00- 54.67	24.67
10.019	10.019 (1.130)	105	67287			0.00- 33.80	3.80
188 4-Ethyltoluene					CAS #: 622-96-8		
10.120	10.120 (1.141)	120	469929	50.0000	43.154	80.00- 120.00	100.00
10.120	10.120 (1.141)	105	1511731			291.69- 351.69	321.69
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.170	10.170 (1.147)	120	661353	50.0000	43.788	80.00- 120.00	100.00
10.170	10.170 (1.147)	105	1367562			176.78- 236.78	206.78
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.499	10.499 (1.184)	120	604416	50.0000	44.918	80.00- 120.00	100.00
10.499	10.499 (1.184)	105	1294358			184.15- 244.15	214.15
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.786	10.786 (1.217)	146	951314	50.0000	44.660	80.00- 120.00	100.00
10.786	10.786 (1.217)	148	611465			34.28- 94.28	64.28
10.786	10.786 (1.217)	111	381327			10.08- 70.08	40.08
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.865	10.865 (1.225)	146	950308	50.0000	44.176	80.00- 120.00	100.00
10.865	10.865 (1.225)	148	615365			34.75- 94.75	64.75
10.865	10.865 (1.225)	111	370011			8.94- 68.94	38.94
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.986	10.986 (1.239)	91	1176131	50.0000	45.366	80.00- 120.00	100.00
10.986	10.986 (1.239)	126	277468			0.00- 53.59	23.59
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.201	11.201 (1.263)	146	909139	50.0000	44.793	80.00- 120.00	100.00
11.201	11.201 (1.263)	148	575175			33.27- 93.27	63.27

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.194	11.194 (1.263)	111	374082			11.15- 71.15	41.15
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.627	12.627 (1.424)	180	830448	50.0000	45.634	80.00- 120.00	100.00
12.627	12.627 (1.424)	182	776311			63.48- 123.48	93.48
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.720	12.720 (1.435)	225	685327	50.0000	45.168	80.00- 120.00	100.00
12.720	12.720 (1.435)	223	425664			32.11- 92.11	62.11
228 Naphthalene					CAS #: 91-20-3		
12.906	12.906 (1.456)	128	162799	5.00000	4.333	80.00- 120.00	100.00
12.906	12.906 (1.456)	127	21433			0.00- 43.17	13.17

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a121806.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 50ppbv (200ppbv)

Calibration Date: 18-DEC-2015
Calibration Time: 12:53
Client Smp ID: Level 6
Level: LOW
Sample Type: AIR

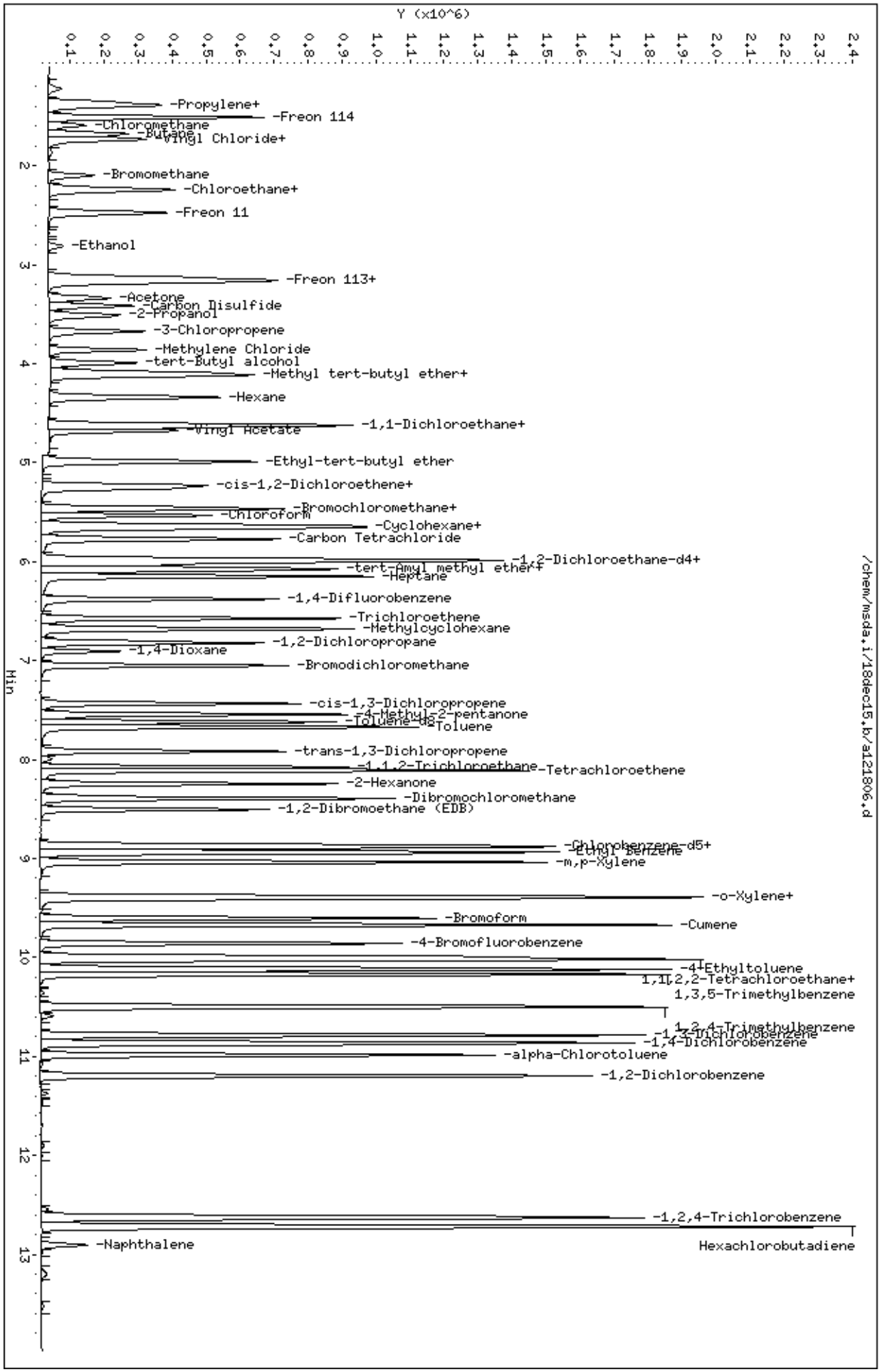
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	158121	94873	221369	158121	0.00
123 1,4-Difluorobenze	659165	395499	922831	659165	0.00
163 Chlorobenzene-d5	629706	377824	881588	629706	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.47	5.14	5.80	5.47	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/18dec15.b/a121806.d
Date : 18-DEC-2015 12:53
Client ID: Level 6
Sample Info: 50mL #2759-45
Column phase: RTX-624

Instrument: msda.i
Operator: cb
Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/18dec15.b/a121807.d
Lab Smp Id: ICAL Client Smp ID: Level 7
Inj Date : 18-DEC-2015 13:31
Operator : cb Inst ID: msda.i
Smp Info : 100mL #2759-45
Misc Info : 100ppbv (200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/18dec15.b/a15q1218a.m
Meth Date : 19-Dec-2015 14:16 cbond Quant Type: ISTD
Cal Date : 18-DEC-2015 13:31 Cal File: a121807.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.457	5.457 (1.000)	130	152427	25.0000		80.00- 120.00	100.00
5.457	5.457 (1.000)	128	118340			47.82- 107.82	77.64
5.457	5.457 (1.000)	49	215212			110.78- 170.78	141.19
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.374	6.374 (1.000)	114	640656	25.0000		80.00- 120.00	100.00
6.374	6.374 (1.000)	88	98392			0.00- 45.54	15.36
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.859	8.859 (1.000)	117	606254	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	305378			20.41- 80.41	50.37
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.015	6.015 (1.102)	65	194785	25.0000	24.858	80.00- 120.00	100.00
6.015	6.015 (1.102)	67	116456			25.18- 85.18	59.79

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.613	7.613 (1.194)	98	659204	25.0000	25.365	80.00- 120.00	100.00
7.613	7.613 (1.194)	70	65889			0.00- 40.33	10.00
7.613	7.613 (1.194)	100	436620			36.65- 96.65	66.23
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.855	9.855 (1.112)	174	362191	25.0000	24.753	80.00- 120.00	100.00
9.855	9.855 (1.112)	95	433013			90.45- 150.45	119.55
9.855	9.855 (1.112)	176	367030			69.84- 129.84	101.34
9 Propylene					CAS #: 115-07-1		
1.331	1.331 (0.244)	41	317691	100.000	92.534	80.00- 120.00	100.00
1.331	1.331 (0.244)	42	206395			36.39- 96.39	64.97
1.331	1.331 (0.244)	39	227510			42.19- 102.19	71.61
11 Freon 12					CAS #: 75-71-8		
1.367	1.367 (0.250)	85	845908	100.000	89.491	80.00- 120.00	100.00
1.367	1.367 (0.250)	87	272475			2.85- 62.85	32.21
15 Freon 114					CAS #: 76-14-2		
1.488	1.488 (0.273)	135	708928	100.000	90.583	80.00- 120.00	100.00
1.488	1.488 (0.273)	137	223887			2.45- 62.45	31.58
17 Chloromethane					CAS #: 74-87-3		
1.567	1.567 (0.287)	50	274078	100.000	89.725	80.00- 120.00	100.00
1.567	1.567 (0.287)	52	95371			6.16- 66.16	34.80
23 Butane					CAS #: 106-97-8		
1.653	1.653 (0.303)	58	70590	100.000	75.357	80.00- 120.00	100.00
1.653	1.653 (0.303)	43	598818			842.59- 902.59	848.30
25 Vinyl Chloride					CAS #: 75-01-4		
1.689	1.689 (0.310)	62	340046	100.000	89.465	80.00- 120.00	100.00
1.689	1.689 (0.310)	64	103081			0.57- 60.57	30.31
26 1,3-Butadiene					CAS #: 106-99-0		
1.718	1.718 (0.315)	54	303074	100.000	86.892	80.00- 120.00	100.00
1.718	1.718 (0.315)	39	318258			74.69- 134.69	105.01
29 Bromomethane					CAS #: 74-83-9		
2.076	2.076 (0.380)	94	287655	100.000	88.956	80.00- 120.00	100.00
2.076	2.076 (0.380)	96	284332			68.21- 128.21	98.84
30 Chloroethane					CAS #: 75-00-3		
2.198	2.198 (0.403)	64	172671	100.000	89.110	80.00- 120.00	100.00
2.198	2.198 (0.403)	66	53227			1.88- 61.88	30.83

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.198	2.198 (0.403)	49	56233			3.76- 63.76	32.57
31 Isopentane					CAS #: 78-78-4		
2.219	2.219 (0.407)	43	468277	100.000	89.971	80.00- 120.00	100.00
2.219	2.219 (0.407)	57	299246			32.40- 92.40	63.90
35 Freon 11					CAS #: 75-69-4		
2.455	2.455 (0.450)	101	943658	100.000	90.010	80.00- 120.00	100.00
2.455	2.455 (0.450)	103	612870			34.09- 94.09	64.95
42 Ethanol					CAS #: 64-17-5		
2.792	2.792 (0.512)	45	172749	100.000	94.356	80.00- 120.00	100.00
2.792	2.792 (0.512)	43	32486			0.00- 50.11	18.81
2.792	2.792 (0.512)	46	64919			10.10- 70.10	37.58
49 Freon 113					CAS #: 76-13-1		
3.122	3.122 (0.572)	151	687342	100.000	87.202	80.00- 120.00	100.00
3.122	3.122 (0.572)	153	450374			35.78- 95.78	65.52
3.122	3.122 (0.572)	101	803699			88.30- 148.30	116.93
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.150	3.150 (0.577)	98	227500	100.000	83.519	80.00- 120.00	100.00
3.150	3.150 (0.577)	96	361339			122.92- 182.92	158.83
3.150	3.150 (0.577)	61	606909			232.20- 292.20	266.77
52 Acetone					CAS #: 67-64-1		
3.315	3.315 (0.608)	58	195620	100.000	95.614	80.00- 120.00	100.00
3.315	3.315 (0.608)	43	671398			319.99- 379.99	343.22
56 Carbon Disulfide					CAS #: 75-15-0		
3.394	3.394 (0.622)	76	963703	100.000	91.844	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.494	3.494 (0.640)	45	797418	100.000	94.038	80.00- 120.00	100.00
3.494	3.494 (0.640)	43	144565			0.00- 47.66	18.13
3.494	3.494 (0.640)	59	28153			0.00- 33.60	3.53
58 3-Chloropropene					CAS #: 107-05-1		
3.659	3.659 (0.670)	76	165137	100.000	90.607	80.00- 120.00	100.00
3.659	3.659 (0.670)	41	580785			335.86- 395.86	351.70
66 Methylene Chloride					CAS #: 75-09-2		
3.845	3.845 (0.705)	49	514714	100.000	93.958	80.00- 120.00	100.00
3.845	3.845 (0.705)	84	308721			29.27- 89.27	59.98
3.845	3.845 (0.705)	51	153880			0.00- 59.81	29.90

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
3.974	3.974 (0.728)	59	825521	100.000	91.801	80.00- 120.00	100.00
3.974	3.974 (0.728)	41	180400			0.00- 51.68	21.85
3.974	3.974 (0.728)	57	83441			0.00- 39.96	10.11
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.074	4.074 (0.747)	73	987643	100.000	88.838	80.00- 120.00	100.00
4.074	4.074 (0.747)	57	268911			0.00- 57.40	27.23
4.074	4.074 (0.747)	41	274427			0.00- 57.39	27.79
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.103	4.103 (0.752)	98	240097	100.000	84.930	80.00- 120.00	100.00
4.103	4.103 (0.752)	61	582342			209.93- 269.93	242.54
4.103	4.103 (0.752)	96	378516			130.42- 190.42	157.65
78 Hexane					CAS #: 110-54-3		
4.325	4.325 (0.793)	57	680117	100.000	88.626	80.00- 120.00	100.00
4.325	4.325 (0.793)	43	463444			39.24- 99.24	68.14
4.325	4.325 (0.793)	86	96556			0.00- 43.98	14.20
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.619	4.619 (0.846)	63	726846	100.000	91.399	80.00- 120.00	100.00
4.619	4.619 (0.846)	65	216196			1.56- 61.56	29.74
83 Isopropyl ether					CAS #: 108-20-3		
4.604	4.604 (0.844)	45	1608851	100.000	90.151	80.00- 120.00	100.00
4.611	4.611 (0.845)	87	344524			0.00- 51.47	21.41
4.604	4.604 (0.844)	59	162280			0.00- 39.84	10.09
86 Vinyl Acetate					CAS #: 108-05-4		
4.662	4.662 (0.854)	86	104000	100.000	96.669	80.00- 120.00	100.00
4.662	4.662 (0.854)	43	1414276			1404.95-1464.95	1359.88
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
4.977	4.977 (0.912)	59	1432166	100.000	92.691	80.00- 120.00	100.00
4.977	4.977 (0.912)	87	511903			5.59- 65.59	35.74
4.977	4.977 (0.912)	41	274954			0.00- 49.32	19.20
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.220	5.220 (0.957)	98	282922	100.000	90.828	80.00- 120.00	100.00
5.220	5.220 (0.957)	96	447875			126.91- 186.91	158.30
5.220	5.220 (0.957)	61	611100			186.69- 246.69	216.00
92 2-Butanone					CAS #: 78-93-3		
5.249	5.249 (0.962)	72	192810	100.000	92.969	80.00- 120.00	100.00
5.249	5.249 (0.962)	43	1038022			510.66- 570.66	538.37

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.249	5.249 (0.962)	57	75316			8.91- 68.91	39.06
99 Tetrahydrofuran					CAS #: 109-99-9		
5.450	5.450 (0.999)	42	586868	100.000	93.769	80.00- 120.00	100.00
5.450	5.450 (0.999)	71	173593			0.53- 60.53	29.58
5.450	5.450 (0.999)	72	175143			0.16- 60.16	29.84
100 Chloroform					CAS #: 67-66-3		
5.521	5.521 (1.012)	83	834904	100.000	89.156	80.00- 120.00	100.00
5.521	5.521 (1.012)	85	557311			36.67- 96.67	66.75
102 Cyclohexane					CAS #: 110-82-7		
5.629	5.629 (1.032)	84	527870	100.000	87.589	80.00- 120.00	100.00
5.629	5.629 (1.032)	56	792746			121.50- 181.50	150.18
5.629	5.629 (1.032)	41	446974			54.13- 114.13	84.68
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.650	5.650 (1.035)	97	914546	100.000	82.408	80.00- 120.00	100.00
5.650	5.650 (1.035)	99	590518			32.76- 92.76	64.57
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.765	5.765 (1.056)	119	990374	100.000	88.075	80.00- 120.00	100.00
5.765	5.765 (1.056)	117	1044823			73.53- 133.53	105.50
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.972	5.972 (1.095)	57	2354550	100.000	92.205	80.00- 120.00	100.00
5.972	5.972 (1.095)	56	723367			0.62- 60.62	30.72
5.972	5.972 (1.095)	41	622998			0.00- 56.92	26.46
116 Benzene					CAS #: 71-43-2		
5.987	5.987 (0.939)	78	1203815	100.000	89.304	80.00- 120.00	100.00
5.987	5.987 (0.939)	77	286565			0.00- 53.73	23.80
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.058	6.058 (1.110)	87	310331	100.000	92.420	80.00- 120.00	100.00
6.058	6.058 (1.110)	73	1155826			352.05- 412.05	372.45
6.058	6.058 (1.110)	55	351033			86.74- 146.74	113.12
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.080	6.080 (0.954)	62	606879	100.000	91.948	80.00- 120.00	100.00
6.080	6.080 (0.954)	64	193846			0.51- 60.51	31.94
121 Heptane					CAS #: 142-82-5		
6.144	6.144 (0.964)	71	436027	100.000	89.035	80.00- 120.00	100.00
6.144	6.144 (0.964)	43	993212			198.93- 258.93	227.79

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.144	6.144 (0.964)	57	522762			83.54- 143.54	119.89
125 Trichloroethene					CAS #: 79-01-6		
6.567	6.567 (1.030)	95	650075	100.000	87.947	80.00- 120.00	100.00
6.574	6.574 (1.031)	130	705714			79.66- 139.66	108.56
6.567	6.567 (1.030)	97	405519			34.04- 94.04	62.38
127 Methylcyclohexane					CAS #: 108-87-2		
6.674	6.674 (1.223)	83	797442	100.000	81.435	80.00- 120.00	100.00
6.674	6.674 (1.223)	98	382970			18.10- 78.10	48.02
6.674	6.674 (1.223)	55	776877			66.76- 126.76	97.42
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.811	6.811 (1.069)	63	543857	100.000	88.199	80.00- 120.00	100.00
6.811	6.811 (1.069)	62	382939			39.78- 99.78	70.41
6.811	6.811 (1.069)	41	328623			32.16- 92.16	60.42
136 1,4-Dioxane					CAS #: 123-91-1		
6.904	6.904 (1.083)	88	329278	100.000	91.507	80.00- 120.00	100.00
6.904	6.904 (1.083)	58	269906			49.57- 109.57	81.97
6.904	6.904 (1.083)	57	85225			0.00- 55.12	25.88
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.106)	83	997488	100.000	91.913	80.00- 120.00	100.00
7.047	7.047 (1.106)	85	665640			36.86- 96.86	66.73
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.427	7.427 (1.165)	75	884243	100.000	91.640	80.00- 120.00	100.00
7.427	7.427 (1.165)	77	285601			1.21- 61.21	32.30
7.427	7.427 (1.165)	39	551369			32.66- 92.66	62.35
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.541	7.541 (1.183)	58	505280	100.000	83.808	80.00- 120.00	100.00
7.541	7.541 (1.183)	43	1435027			262.16- 322.16	284.01
7.541	7.541 (1.183)	85	200339			11.61- 71.61	39.65
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.203)	91	1759933	100.000	88.202	80.00- 120.00	100.00
7.670	7.670 (1.203)	92	1022245			28.59- 88.59	58.08
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.914	7.914 (0.893)	75	794955	100.000	91.564	80.00- 120.00	100.00
7.914	7.914 (0.893)	77	250880			1.64- 61.64	31.56
7.914	7.914 (0.893)	39	477241			30.00- 90.00	60.03

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.071	8.071 (0.911)	97	633400	100.000	90.064	80.00- 120.00	100.00
8.071	8.071 (0.911)	99	394780			31.35- 91.35	62.33
8.071	8.071 (0.911)	83	528879			53.39- 113.39	83.50
156 Tetrachloroethene					CAS #: 127-18-4		
8.107	8.107 (0.915)	166	961784	100.000	90.189	80.00- 120.00	100.00
8.107	8.107 (0.915)	129	743611			48.51- 108.51	77.32
8.107	8.107 (0.915)	131	714831			45.21- 105.21	74.32
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	692898	100.000	91.129	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	1406691			171.14- 231.14	203.02
8.243	8.243 (0.930)	100	129111			0.00- 48.08	18.63
160 Dibromochloromethane					CAS #: 124-48-1		
8.386	8.386 (0.947)	129	1315573	100.000	89.956	80.00- 120.00	100.00
8.386	8.386 (0.947)	127	1023416			48.14- 108.14	77.79
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	1069368	100.000	89.840	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	1011411			62.49- 122.49	94.58
165 Chlorobenzene					CAS #: 108-90-7		
8.888	8.888 (1.003)	112	1576633	100.000	88.814	80.00- 120.00	100.00
8.888	8.888 (1.003)	114	501892			1.55- 61.55	31.83
8.888	8.888 (1.003)	77	838186			23.72- 83.72	53.16
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.009)	106	789578	100.000	88.060	80.00- 120.00	100.00
8.938	8.938 (1.009)	91	2399517			275.74- 335.74	303.90
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.020)	106	994823	100.000	87.948	80.00- 120.00	100.00
9.038	9.038 (1.020)	91	1960996			168.00- 228.00	197.12
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.059)	106	943430	100.000	88.330	80.00- 120.00	100.00
9.382	9.382 (1.059)	91	1953811			180.86- 240.86	207.10
172 Styrene					CAS #: 100-42-5		
9.404	9.404 (1.061)	104	1471619	100.000	88.229	80.00- 120.00	100.00
9.396	9.396 (1.061)	78	704580			18.40- 78.40	47.88
174 Bromoform					CAS #: 75-25-2		
9.597	9.597 (1.083)	173	1337114	100.000	90.532	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.597	9.597 (1.083)	171	688098			21.79- 81.79	51.46
175 Cumene					CAS #: 98-82-8		
9.669	9.669 (1.091)	105	2864983	100.000	85.857	80.00- 120.00	100.00
9.669	9.669 (1.091)	120	793256			0.00- 57.35	27.69
9.669	9.669 (1.091)	51	318414			0.00- 41.41	11.11
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.984	9.984 (1.127)	83	1414066	100.000	89.450	80.00- 120.00	100.00
9.984	9.984 (1.127)	85	931296			35.95- 95.95	65.86
182 Propylbenzene					CAS #: 103-65-1		
10.020	10.020 (1.131)	91	3337287	100.000	88.322	80.00- 120.00	100.00
10.020	10.020 (1.131)	120	830904			0.00- 54.67	24.90
10.020	10.020 (1.131)	105	125247			0.00- 33.80	3.75
188 4-Ethyltoluene					CAS #: 622-96-8		
10.113	10.113 (1.141)	120	948573	100.000	90.477	80.00- 120.00	100.00
10.113	10.113 (1.141)	105	2997513			291.69- 351.69	316.00
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.163	10.163 (1.147)	120	1201271	100.000	82.613	80.00- 120.00	100.00
10.163	10.163 (1.147)	105	2465714			176.78- 236.78	205.26
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.492	10.492 (1.184)	120	1148726	100.000	88.672	80.00- 120.00	100.00
10.492	10.492 (1.184)	105	2448063			184.15- 244.15	213.11
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.779	10.779 (1.217)	146	1818088	100.000	88.653	80.00- 120.00	100.00
10.779	10.779 (1.217)	148	1164306			34.28- 94.28	64.04
10.779	10.779 (1.217)	111	734303			10.08- 70.08	40.39
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.858	10.858 (1.226)	146	1825018	100.000	88.120	80.00- 120.00	100.00
10.858	10.858 (1.226)	148	1164410			34.75- 94.75	63.80
10.858	10.858 (1.226)	111	697120			8.94- 68.94	38.20
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.979	10.979 (1.239)	91	2304551	100.000	92.330	80.00- 120.00	100.00
10.979	10.979 (1.239)	126	542350			0.00- 53.59	23.53
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.187	11.187 (1.263)	146	1732813	100.000	88.678	80.00- 120.00	100.00
11.187	11.187 (1.263)	148	1107122			33.27- 93.27	63.89

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.187	11.187 (1.263)	111	717382			11.15- 71.15	41.40
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.613	12.613 (1.424)	180	1662246	100.000	94.875	80.00- 120.00	100.00
12.613	12.613 (1.424)	182	1571745			63.48- 123.48	94.56
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.706	12.706 (1.434)	225	1353948	100.000	92.688	80.00- 120.00	100.00
12.706	12.706 (1.434)	223	845989			32.11- 92.11	62.48
228 Naphthalene					CAS #: 91-20-3		
12.892	12.892 (1.455)	128	334396	10.0000	9.245	80.00- 120.00	100.00
12.892	12.892 (1.455)	127	43490			0.00- 43.17	13.01

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a121807.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 100ppbv (200ppbv)

Calibration Date: 18-DEC-2015
Calibration Time: 12:53
Client Smp ID: Level 7
Level: LOW
Sample Type: AIR

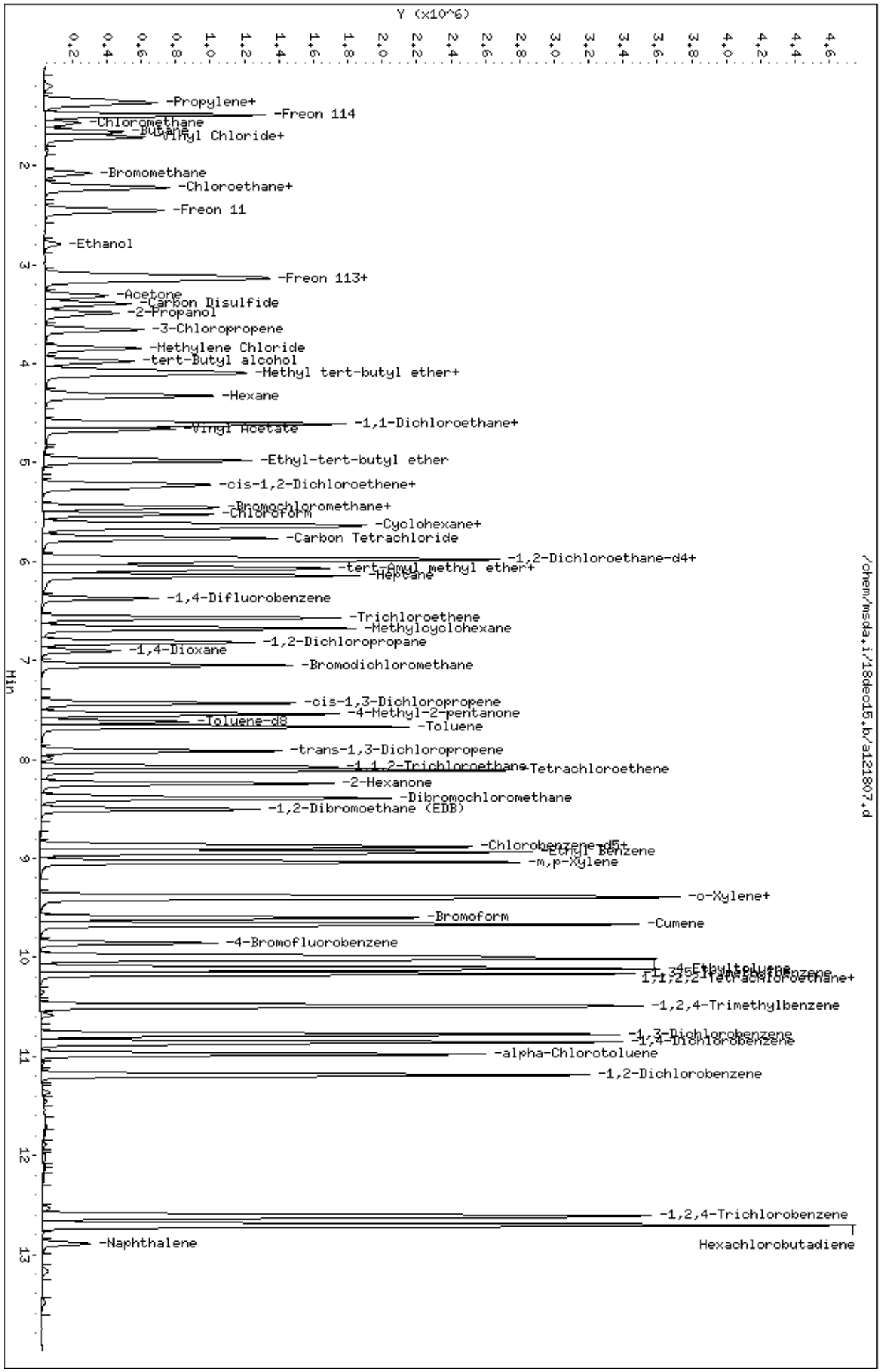
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	158121	94873	221369	152427	-3.60
123 1,4-Difluorobenze	659165	395499	922831	640656	-2.81
163 Chlorobenzene-d5	629706	377824	881588	606254	-3.72

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.47	5.14	5.80	5.46	-0.26
123 1,4-Difluorobenze	6.38	6.05	6.71	6.37	-0.11
163 Chlorobenzene-d5	8.87	8.54	9.20	8.86	-0.08

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/18dec15.b/a121807.d
Date : 18-DEC-2015 13:31
Client ID: Level 7
Sample Info: 100mL #2759-45
Column phase: RTX-624

Instrument: msda.i
Operator: cb
Column diameter: 0.25



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Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/27jan16.b/a012709.d
Lab Smp Id: ICAL Level #8
Inj Date : 27-JAN-2016 16:27
Operator : js Inst ID: msda.i
Smp Info : 200ml 2759-214
Misc Info : 200ppbv (200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/27jan16.b/a15q1218d.m
Meth Date : 27-Jan-2016 17:09 jscarbro Quant Type: ISTD
Cal Date : 27-JAN-2016 16:27 Cal File: a012709.d
Als bottle: 3 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: BoilingPtcrv.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	186904	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	148446			47.82- 107.82	79.42
5.464	5.464 (1.000)	49	242304			110.78- 170.78	129.64
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	764303	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	111999			0.00- 45.54	14.65
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	696969	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	336133			20.41- 80.41	48.23
34 Pentane					CAS #: 109-66-0		
2.541	2.541 (0.465)	43	1657346	200.000	201.92	80.00- 120.00	100.00(A)
2.548	2.548 (0.466)	57	272732			0.00- 43.57	16.46
2.548	2.548 (0.466)	72	145142			0.00- 39.05	8.76

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
148 Octane					CAS #: 111-65-9		
7.677	7.677 (1.203)	57	1098828	200.000	189.61	80.00- 120.00	100.00
7.677	7.677 (1.203)	85	1124757			87.86- 147.86	102.36
7.670	7.670 (1.202)	43	2537555			232.77- 292.77	230.93
170 Nonane					CAS #: 111-84-2		
8.959	8.959 (1.010)	43	2609235	200.000	193.22	80.00- 120.00	100.00
8.959	8.959 (1.010)	57	2438575			48.41- 108.41	93.46
8.959	8.959 (1.010)	85	869142			4.10- 64.10	33.31
187 Decane					CAS #: 124-18-5		
10.077	10.077 (1.137)	57	3072797	200.000	194.60	80.00- 120.00	100.00
10.077	10.077 (1.137)	71	1045635			10.00- 70.00	34.03
10.077	10.077 (1.137)	142	155790			0.00- 36.06	5.07
215 Undecane					CAS #: 1120-21-4		
11.079	11.079 (1.250)	57	3783945	200.000	231.17	80.00- 120.00	100.00(A)
11.079	11.079 (1.250)	43	3061782			67.20- 127.20	80.92
225 Dodecane					CAS #: 112-40-3		
12.011	12.011 (1.355)	57	3314565	200.000	301.44	80.00- 120.00	100.00(A)
12.011	12.011 (1.355)	43	2566671			63.85- 123.85	77.44

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a012709.d
Lab Smp Id: ICAL Level #8
Analysis Type: VOA
Quant Type: ISTD
Operator: js
Method File: /chem/msda.i/27jan16.b/a15q1218d.m
Misc Info: 200ppbv (200ppbv)

Calibration Date: 27-JAN-2016
Calibration Time: 13:28

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	185585	111351	259819	186904	0.71
123 1,4-Difluorobenze	763859	458315	1069403	764303	0.06
163 Chlorobenzene-d5	697872	418723	977021	696969	-0.13

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/27jan16.b/a012709.d

Date : 27-JAN-2016 16:27

Client ID:

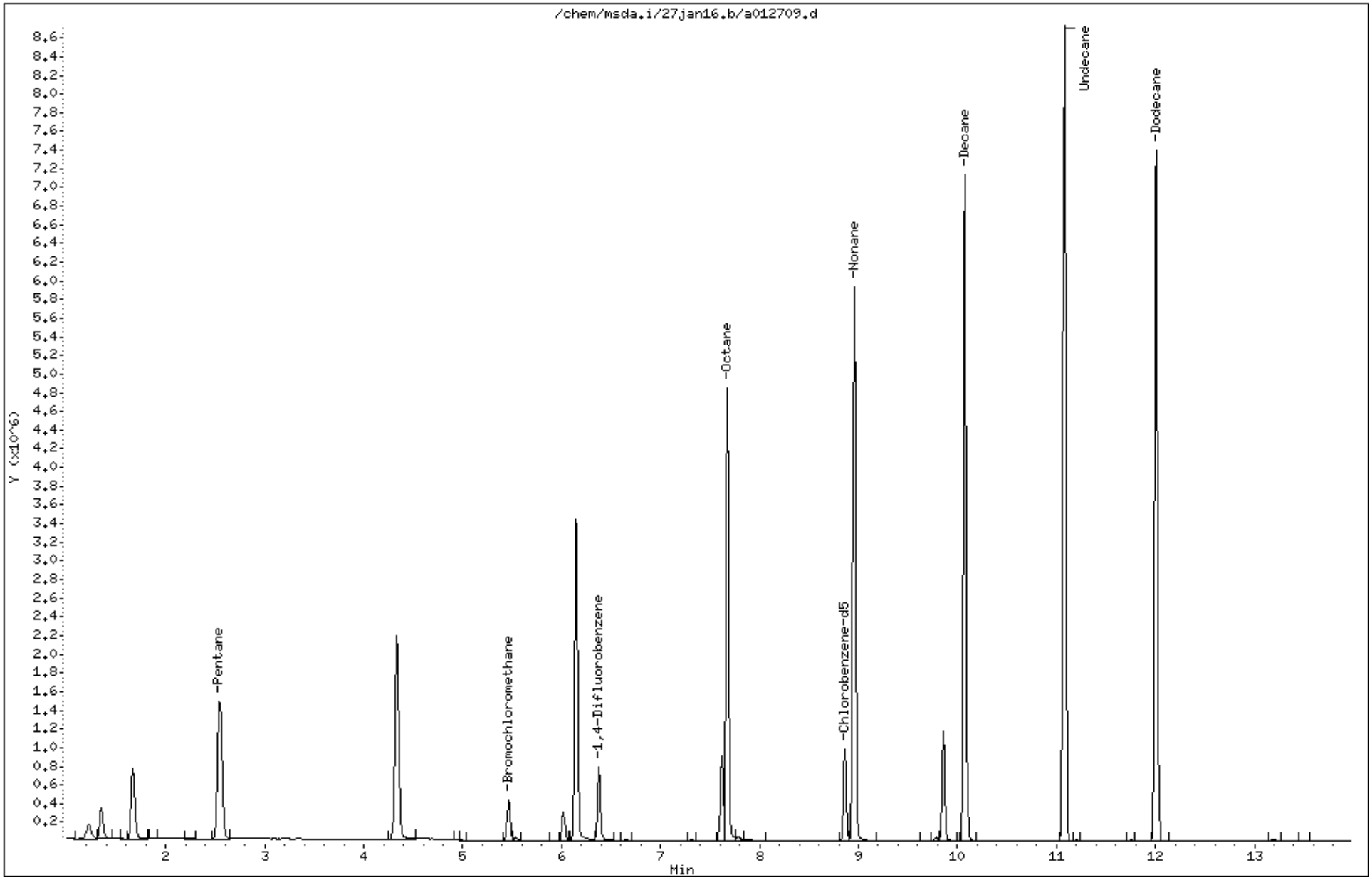
Instrument: msda.i

Sample Info: 200ml 2759-214

Operator: js

Column phase: RTX-624

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/31dec15.b/a123107.d
Lab Smp Id: ICAL Level 8
Inj Date : 31-DEC-2015 12:20
Operator : cb Inst ID: msda.i
Smp Info : 200mL 2759-162
Misc Info : 200ppbv(200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/31dec15.b/a15q1218c.m
Meth Date : 31-Dec-2015 12:49 cbond Quant Type: ISTD
Cal Date : 31-DEC-2015 12:20 Cal File: a123107.d
Als bottle: 2 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 123TCB.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	156881	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	117163			47.82- 107.82	74.68
5.464	5.464 (1.000)	49	230399			110.78- 170.78	146.86
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	626781	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	96716			0.00- 45.54	15.43
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	617506	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	299126			20.41- 80.41	48.44
229 1,2,3-Trichlorobenzene					CAS #: 87-61-6		
13.164	13.164 (1.485)	180	1890873	200.000	200.00	0.00- 0.00	100.00(A)
13.164	13.164 (1.485)	182	1799394			0.00- 0.00	95.16
13.164	13.164 (1.485)	145	631435			0.00- 0.00	33.39

QC Flag Legend

A - Target compound detected but, quantitated amount
exceeded maximum amount.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a123107.d
Lab Smp Id: ICAL Level 8
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/31dec15.b/a15q1218c.m
Misc Info: 200ppbv(200ppbv)

Calibration Date: 31-DEC-2015
Calibration Time: 09:42

Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	149213	89528	208898	156881	5.14
123 1,4-Difluorobenze	620921	372553	869289	626781	0.94
163 Chlorobenzene-d5	612512	367507	857517	617506	0.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.13
123 1,4-Difluorobenze	6.37	6.04	6.70	6.38	0.11
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/31dec15.b/a123107.d

Date : 31-DEC-2015 12:20

Client ID:

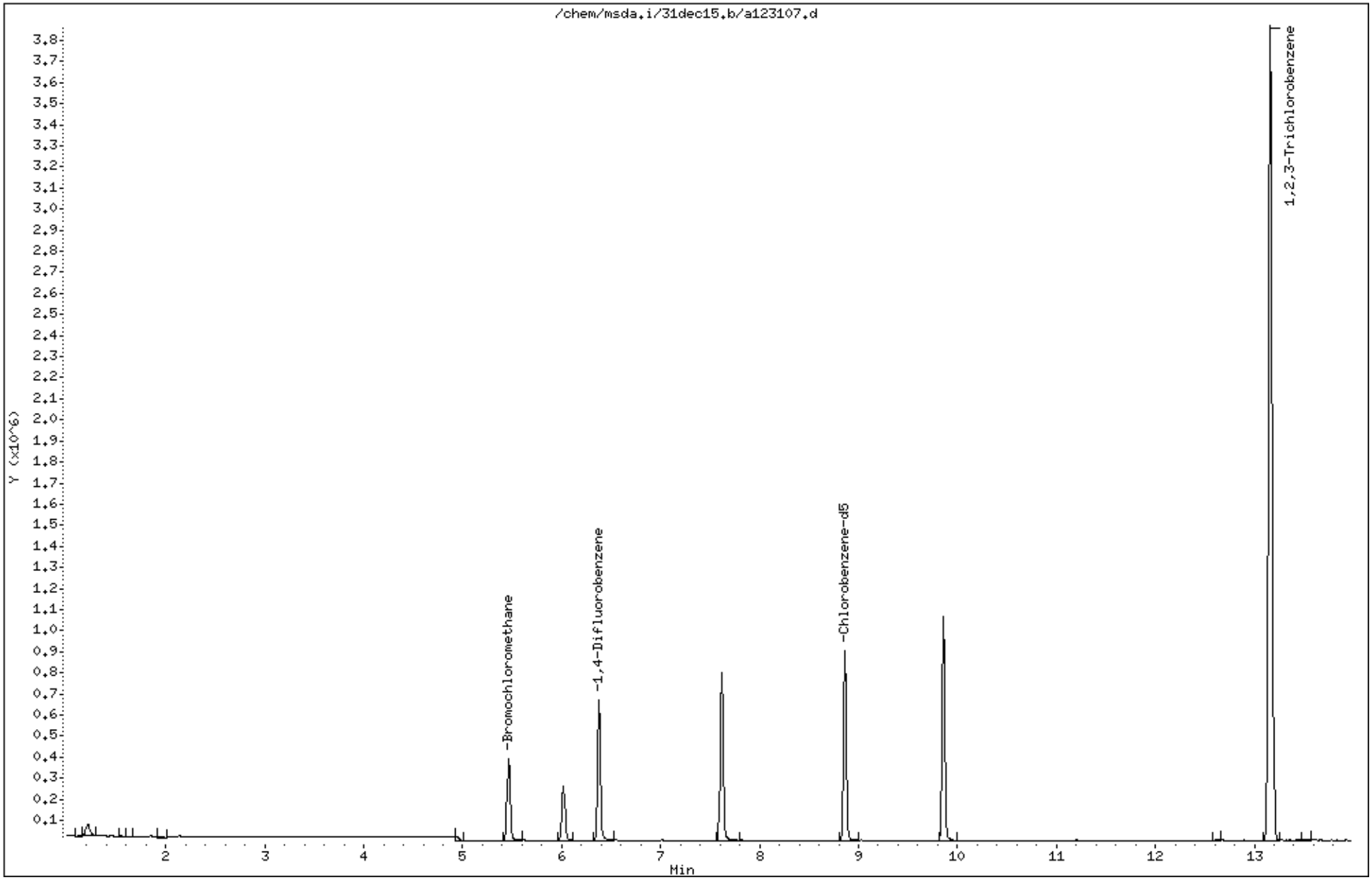
Sample Info: 200mL 2759-162

Column phase: RTX-624

Instrument: msda.i

Operator: cb

Column diameter: 0.25



Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/11feb16.b/a021110.d
Lab Smp Id: ICAL Client Smp ID: level 8
Inj Date : 11-FEB-2016 16:16
Operator : sab Inst ID: msda.i
Smp Info : 200ml 2759-231
Misc Info : 200ppbv (200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/11feb16.b/a15q1218f.m
Meth Date : 11-Feb-2016 16:41 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:27 Cal File: a012709.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT1.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	167515	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	131479			47.82- 107.82	78.49
5.464	5.464 (1.000)	49	230423			110.78- 170.78	137.55
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	680626	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	99659			0.00- 45.54	14.64
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	679765	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	328248			20.41- 80.41	48.29
6 Freon 143a					CAS #: 420-46-2		
1.273	1.273 (0.233)	65	67059	200.000	182.41	0.00- 0.00	100.00
1.273	1.273 (0.233)	69	198132			0.00- 0.00	295.46
1.273	1.273 (0.233)	64	17922			0.00- 0.00	26.73

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
7 Freon 134a					CAS #: 811-97-2		
1.324	1.324 (0.242)	83	176051	200.000	181.30	80.00- 120.00	100.00
1.324	1.324 (0.242)	69	158775			59.92- 119.92	90.19
1.324	1.324 (0.242)	63	24128			0.00- 40.56	13.71
10 1,1-Difluoroethane					CAS #: 75-37-6		
1.374	1.374 (0.251)	65	98704	200.000	193.26	80.00- 120.00	100.00
1.374	1.374 (0.251)	51	236090			179.40- 239.40	239.19
1.374	1.374 (0.251)	47	42126			27.30- 87.30	42.68
13 Chlorodifluoromethane					CAS #: 75-45-6		
1.424	1.424 (0.261)	67	41469	200.000	191.94	80.00- 120.00	100.00
1.424	1.424 (0.261)	51	344215			630.90- 690.90	830.05
1.424	1.424 (0.261)	85	4838			0.00- 41.87	11.67
16 Freon 142b					CAS #: 75-68-3		
1.553	1.553 (0.284)	65	410393	200.000	188.24	80.00- 120.00	100.00
1.553	1.553 (0.284)	45	105301			0.00- 55.24	25.66
37 Dichlorofluoromethane					CAS #: 75-43-4		
2.477	2.477 (0.453)	67	536002	200.000	194.82	80.00- 120.00	100.00
2.477	2.477 (0.453)	69	164755			2.74- 62.74	30.74
48 Freon 123					CAS #: 306-83-2		
3.071	3.071 (0.562)	83	732027	200.000	204.51	80.00- 120.00	100.00(A)
3.078	3.078 (0.563)	133	163952			0.00- 52.96	22.40
3.078	3.078 (0.563)	85	489123			35.25- 95.25	66.82
59 Cyclopentene					CAS #: 142-29-0		
3.680	3.680 (0.674)	67	444530	200.000	211.97	0.00- 30.00	100.00(A)
3.680	3.680 (0.674)	68	167973			0.00- 30.00	37.79
3.680	3.680 (0.674)	53	107162			0.00- 30.00	24.11
84 1-Propanol					CAS #: 71-23-8		
4.769	4.769 (0.873)	42	250014	200.000	218.69	0.00- 30.00	100.00(A)
4.769	4.769 (0.873)	59	310171			0.00- 30.00	124.06
4.769	4.769 (0.873)	41	152480			0.00- 30.00	60.99
90 2,2-Dichloropropane					CAS #: 594-20-7		
5.192	5.192 (0.950)	77	646595	200.000	204.43	80.00- 120.00	100.00(A)
5.192	5.192 (0.950)	79	214566			3.00- 63.00	33.18
5.192	5.192 (0.950)	97	148411			0.00- 51.02	22.95
107 1,1-Dichloropropene					CAS #: 563-58-6		
5.808	5.808 (0.910)	110	238242	200.000	215.17	80.00- 120.00	100.00(A)
5.808	5.808 (0.910)	75	584379			218.23- 278.23	245.29

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
115 Isobutanol					CAS #: 78-83-1		
5.958	5.958 (1.090)	39	261457	200.000	189.47	0.00- 30.00	100.00
5.958	5.958 (1.090)	41	821762			0.00- 30.00	314.30
5.958	5.958 (1.090)	43	1153990			0.00- 30.00	441.37
124 n-Butanol					CAS #: 71-36-3		
6.545	6.545 (1.026)	56	2322084	200.000	224.50	80.00- 120.00	100.00(A)
6.545	6.545 (1.026)	41	1533288			49.55- 109.55	66.03
6.545	6.545 (1.026)	43	1237623			30.23- 90.23	53.30
157 1,3-Dichloropropane					CAS #: 142-28-9		
8.222	8.222 (1.288)	76	1228388	200.000	214.59	80.00- 120.00	100.00(A)
8.222	8.222 (1.288)	41	848083			33.24- 93.24	69.04
8.222	8.222 (1.288)	78	405609			0.79- 60.79	33.02
159 Butyl Acetate					CAS #: 123-86-4		
8.307	8.307 (1.302)	56	271346	200.000	218.06	80.00- 120.00	100.00(A)
8.307	8.307 (1.302)	73	95441			16.25- 76.25	35.17
8.307	8.307 (1.302)	43	652357			251.54- 311.54	240.42
168 1,1,1,2-Tetrachloroethane					CAS #: 630-20-6		
8.959	8.959 (1.010)	131	1301056	200.000	199.40	80.00- 120.00	100.00
8.959	8.959 (1.010)	117	882796			37.29- 97.29	67.85
8.952	8.952 (1.010)	95	450826			5.24- 65.24	34.65
176 Cyclohexanone					CAS #: 108-94-1		
9.840	9.840 (1.110)	55	1647344	200.000	195.47	0.00- 30.00	100.00
9.840	9.840 (1.110)	98	656674			0.00- 30.00	39.86
9.840	9.840 (1.110)	42	1049684			0.00- 30.00	63.72
180 Bromobenzene					CAS #: 108-86-1		
9.991	9.991 (1.127)	156	1545279	200.000	207.39	80.00- 120.00	100.00(A)
9.991	9.991 (1.127)	158	1486810			68.50- 128.50	96.22
9.991	9.991 (1.127)	77	2080373			107.36- 167.36	134.63
185 1,2,3-Trichloropropane					CAS #: 96-18-4		
10.048	10.048 (1.133)	110	693252	200.000	198.23	80.00- 120.00	100.00
10.048	10.048 (1.133)	75	1693088			303.70- 363.70	244.22
10.048	10.048 (1.133)	61	492980			36.82- 96.82	71.11
189 2-Chlorotoluene					CAS #: 95-49-8		
10.134	10.134 (1.143)	126	1186317	200.000	205.52	80.00- 120.00	100.00(A)
10.134	10.134 (1.143)	91	3100408			228.58- 288.58	261.35
10.134	10.134 (1.143)	65	288027			0.00- 51.86	24.28
191 4-Chlorotoluene					CAS #: 106-43-4		
10.234	10.234 (1.154)	126	1226156	200.000	208.06	80.00- 120.00	100.00(A)

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
191 4-Chlorotoluene (continued)							
10.234	10.234 (1.154)	91	3250041			229.79- 289.79	265.06
10.234	10.234 (1.154)	63	415568			3.53- 63.53	33.89
195 tert-Butylbenzene					CAS #: 98-06-6		
10.442	10.442 (1.178)	119	3629975	200.000	202.08	80.00- 120.00	100.00(A)
10.442	10.442 (1.178)	134	913262			0.00- 54.90	25.16
10.442	10.442 (1.178)	91	2208809			32.52- 92.52	60.85
197 Pentachloroethane					CAS #: 76-01-7		
10.514	10.514 (1.186)	167	1206980	200.000	197.85	0.00- 30.00	100.00
10.514	10.514 (1.186)	117	1163412			0.00- 30.00	96.39
10.514	10.514 (1.186)	169	576313			0.00- 30.00	47.75
203 sec-Butylbenzene					CAS #: 135-98-8		
10.628	10.628 (1.199)	134	1167976	200.000	205.62	80.00- 120.00	100.00(A)
10.628	10.628 (1.199)	105	5365289			440.25- 500.25	459.37
10.628	10.628 (1.199)	91	797204			40.86- 100.86	68.26
207 p-Cymene					CAS #: 99-87-6		
10.743	10.743 (1.212)	119	4936858	200.000	210.66	80.00- 120.00	100.00(A)
10.743	10.743 (1.212)	134	1356495			0.00- 57.35	27.48
10.743	10.743 (1.212)	91	1042793			0.00- 51.72	21.12
210 1,2,3-Trimethylbenzene					CAS #: 526-73-8		
10.865	10.865 (1.225)	120	1870443	200.000	208.12	80.00- 120.00	100.00(A)
10.865	10.865 (1.225)	105	4217423			199.87- 259.87	225.48
10.865	10.865 (1.225)	77	458179			0.00- 55.85	24.50
213 Butylbenzene					CAS #: 104-51-8		
11.094	11.094 (1.251)	134	1370189	200.000	219.19	80.00- 120.00	100.00(A)
11.094	11.094 (1.251)	91	4520943			312.74- 372.74	329.95
11.094	11.094 (1.251)	92	2421636			148.22- 208.22	176.74
221 1,2-Dibromo-3-chloropropane					CAS #: 96-12-8		
11.882	11.882 (1.340)	157	1788369	200.000	194.88	80.00- 120.00	100.00
11.882	11.882 (1.340)	75	1337343			44.51- 104.51	74.78
11.882	11.882 (1.340)	155	1404171			47.26- 107.26	78.52

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021110.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/11feb16.b/a15q1218f.m
Misc Info: 200ppbv (200ppbv)

Calibration Date: 11-FEB-2016
Calibration Time: 11:26
Client Smp ID: level 8
Level: LOW
Sample Type: AIR

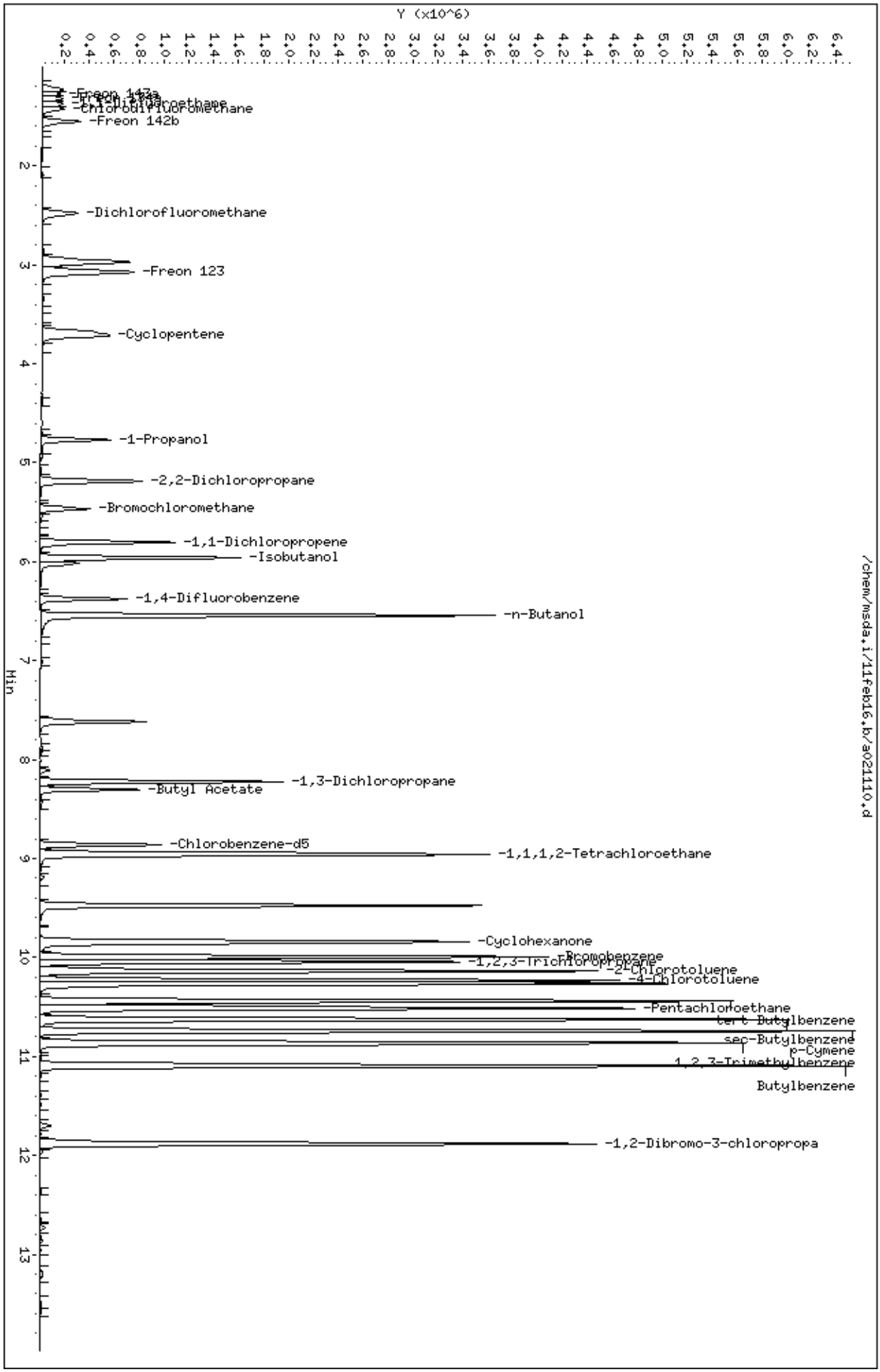
		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	157375	94425	220325	167515	6.44
123 1,4-Difluorobenze	644676	386806	902546	680626	5.58
163 Chlorobenzene-d5	586529	351917	821141	679765	15.90

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.86	8.53	9.19	8.87	0.08

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/11feb16.b/a021110.d
Date : 11-FEB-2016 16:16
Client ID: level 8
Sample Info: 200ml 2759-231
Column phase: RTX-624

Instrument: msda.i
Operator: sab
Column diameter: 0.25



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Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/18dec15.b/a121808.d
Lab Smp Id: ICAL Client Smp ID: Level 8
Inj Date : 18-DEC-2015 13:57
Operator : cb Inst ID: msda.i
Smp Info : 200mL #2759-45
Misc Info : 200ppbv (200ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/18dec15.b/a15q1218a.m
Meth Date : 19-Dec-2015 14:16 cbond Quant Type: ISTD
Cal Date : 18-DEC-2015 13:57 Cal File: a121808.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: AT12.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.471	5.471 (1.000)	130	150658	25.0000		80.00- 120.00	100.00
5.471	5.471 (1.000)	128	114048			47.82- 107.82	75.70
5.464	5.464 (1.000)	49	209258			110.78- 170.78	138.90
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	638278	25.0000		80.00- 120.00	100.00
6.381	6.381 (1.000)	88	97148			0.00- 45.54	15.22
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	600717	25.0000		80.00- 120.00	100.00
8.866	8.866 (1.000)	82	299863			20.41- 80.41	49.92
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.022	6.022 (1.101)	65	192371	25.0000	24.838	80.00- 120.00	100.00
6.022	6.022 (1.101)	67	134488			25.18- 85.18	69.91

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.620	7.620 (1.194)	98	641883	25.0000	24.790	80.00- 120.00	100.00
7.620	7.620 (1.194)	70	64418			0.00- 40.33	10.04
7.620	7.620 (1.194)	100	434957			36.65- 96.65	67.76
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	368386	25.0000	25.409	80.00- 120.00	100.00
9.862	9.862 (1.112)	95	429285			90.45- 150.45	116.53
9.862	9.862 (1.112)	176	363112			69.84- 129.84	98.57
9 Propylene					CAS #: 115-07-1		
1.352	1.352 (0.247)	41	624992	200.000	184.18	80.00- 120.00	100.00
1.352	1.352 (0.247)	42	409886			36.39- 96.39	65.58
1.352	1.352 (0.247)	39	446147			42.19- 102.19	71.38
11 Freon 12					CAS #: 75-71-8		
1.388	1.388 (0.254)	85	1662566	200.000	177.95	80.00- 120.00	100.00
1.388	1.388 (0.254)	87	541642			2.85- 62.85	32.58
15 Freon 114					CAS #: 76-14-2		
1.510	1.510 (0.276)	135	1391214	200.000	179.85	80.00- 120.00	100.00
1.510	1.510 (0.276)	137	451529			2.45- 62.45	32.46
17 Chloromethane					CAS #: 74-87-3		
1.596	1.596 (0.292)	50	562852	200.000	186.42	80.00- 120.00	100.00
1.596	1.596 (0.292)	52	185462			6.16- 66.16	32.95
23 Butane					CAS #: 106-97-8		
1.674	1.674 (0.306)	58	141111	200.000	152.41	80.00- 120.00	100.00
1.674	1.674 (0.306)	43	1174477			842.59- 902.59	832.31
25 Vinyl Chloride					CAS #: 75-01-4		
1.710	1.710 (0.313)	62	678191	200.000	180.52	80.00- 120.00	100.00
1.710	1.710 (0.313)	64	208221			0.57- 60.57	30.70
26 1,3-Butadiene					CAS #: 106-99-0		
1.739	1.739 (0.318)	54	594212	200.000	172.36	80.00- 120.00	100.00
1.739	1.739 (0.318)	39	623124			74.69- 134.69	104.87
29 Bromomethane					CAS #: 74-83-9		
2.097	2.097 (0.383)	94	566200	200.000	177.15	80.00- 120.00	100.00
2.097	2.097 (0.383)	96	549915			68.21- 128.21	97.12
30 Chloroethane					CAS #: 75-00-3		
2.219	2.219 (0.406)	64	326538	200.000	170.49	80.00- 120.00	100.00
2.219	2.219 (0.406)	66	102393			1.88- 61.88	31.36

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.219	2.219 (0.406)	49	106795			3.76- 63.76	32.71
31 Isopentane					CAS #: 78-78-4		
2.240	2.240 (0.410)	43	912132	200.000	177.31	80.00- 120.00	100.00
2.240	2.240 (0.410)	57	583147			32.40- 92.40	63.93
35 Freon 11					CAS #: 75-69-4		
2.477	2.477 (0.453)	101	1875357	200.000	180.98	80.00- 120.00	100.00
2.477	2.477 (0.453)	103	1212767			34.09- 94.09	64.67
42 Ethanol					CAS #: 64-17-5		
2.813	2.813 (0.514)	45	338959	200.000	187.32	80.00- 120.00	100.00
2.813	2.813 (0.514)	43	65170			0.00- 50.11	19.23
2.813	2.813 (0.514)	46	126845			10.10- 70.10	37.42
49 Freon 113					CAS #: 76-13-1		
3.143	3.143 (0.574)	151	1361443	200.000	174.75	80.00- 120.00	100.00
3.143	3.143 (0.574)	153	876493			35.78- 95.78	64.38
3.143	3.143 (0.574)	101	1581515			88.30- 148.30	116.16
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.172	3.172 (0.580)	98	445665	200.000	165.53	80.00- 120.00	100.00
3.172	3.172 (0.580)	96	708071			122.92- 182.92	158.88
3.172	3.172 (0.580)	61	1203984			232.20- 292.20	270.15
52 Acetone					CAS #: 67-64-1		
3.336	3.336 (0.610)	58	377610	200.000	186.73	80.00- 120.00	100.00
3.336	3.336 (0.610)	43	1298686			319.99- 379.99	343.92
56 Carbon Disulfide					CAS #: 75-15-0		
3.415	3.415 (0.624)	76	1935904	200.000	186.66	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.508	3.508 (0.641)	45	1547446	200.000	184.63	80.00- 120.00	100.00
3.508	3.508 (0.641)	43	276095			0.00- 47.66	17.84
3.508	3.508 (0.641)	59	54455			0.00- 33.60	3.52
58 3-Chloropropene					CAS #: 107-05-1		
3.673	3.673 (0.671)	76	353448	200.000	196.20	80.00- 120.00	100.00
3.673	3.673 (0.671)	41	1150245			335.86- 395.86	325.44
66 Methylene Chloride					CAS #: 75-09-2		
3.866	3.866 (0.707)	49	1006326	200.000	185.85	80.00- 120.00	100.00
3.866	3.866 (0.707)	84	606183			29.27- 89.27	60.24
3.866	3.866 (0.707)	51	295140			0.00- 59.81	29.33

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
3.988	3.988 (0.729)	59	1608190	200.000	180.94	80.00- 120.00	100.00
3.988	3.988 (0.729)	41	352724			0.00- 51.68	21.93
3.988	3.988 (0.729)	57	169052			0.00- 39.96	10.51
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.088	4.088 (0.747)	73	1923977	200.000	175.09	80.00- 120.00	100.00
4.088	4.088 (0.747)	57	517855			0.00- 57.40	26.92
4.088	4.088 (0.747)	41	527851			0.00- 57.39	27.44
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.117	4.117 (0.753)	98	484584	200.000	173.43	80.00- 120.00	100.00
4.117	4.117 (0.753)	61	1134393			209.93- 269.93	234.10
4.117	4.117 (0.753)	96	755925			130.42- 190.42	155.99
78 Hexane					CAS #: 110-54-3		
4.339	4.339 (0.793)	57	1348433	200.000	177.78	80.00- 120.00	100.00
4.339	4.339 (0.793)	43	912747			39.24- 99.24	67.69
4.339	4.339 (0.793)	86	180826			0.00- 43.98	13.41
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.633	4.633 (0.847)	63	1419346	200.000	180.58	80.00- 120.00	100.00
4.633	4.633 (0.847)	65	434495			1.56- 61.56	30.61
83 Isopropyl ether					CAS #: 108-20-3		
4.618	4.618 (0.844)	45	3125714	200.000	177.20	80.00- 120.00	100.00
4.618	4.618 (0.844)	87	662034			0.00- 51.47	21.18
4.618	4.618 (0.844)	59	308785			0.00- 39.84	9.88
86 Vinyl Acetate					CAS #: 108-05-4		
4.676	4.676 (0.855)	86	199672	200.000	187.78	80.00- 120.00	100.00
4.676	4.676 (0.855)	43	2866546			1404.95-1464.95	1435.63
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
4.991	4.991 (0.912)	59	2790373	200.000	182.72	80.00- 120.00	100.00
4.991	4.991 (0.912)	87	1006739			5.59- 65.59	36.08
4.991	4.991 (0.912)	41	533176			0.00- 49.32	19.11
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.227	5.227 (0.955)	98	559788	200.000	181.82	80.00- 120.00	100.00
5.227	5.227 (0.955)	96	877850			126.91- 186.91	156.82
5.227	5.227 (0.955)	61	1203092			186.69- 246.69	214.92
92 2-Butanone					CAS #: 78-93-3		
5.256	5.256 (0.961)	72	374546	200.000	182.72	80.00- 120.00	100.00
5.256	5.256 (0.961)	43	2030641			510.66- 570.66	542.16

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.256	5.256 (0.961)	57	157100			8.91- 68.91	41.94
99 Tetrahydrofuran					CAS #: 109-99-9		
5.457	5.457 (0.997)	42	1144512	200.000	185.02	80.00- 120.00	100.00
5.457	5.457 (0.997)	71	342640			0.53- 60.53	29.94
5.457	5.457 (0.997)	72	352770			0.16- 60.16	30.82
100 Chloroform					CAS #: 67-66-3		
5.535	5.535 (1.012)	83	1638529	200.000	177.03	80.00- 120.00	100.00
5.535	5.535 (1.012)	85	1107440			36.67- 96.67	67.59
102 Cyclohexane					CAS #: 110-82-7		
5.636	5.636 (1.030)	84	1032775	200.000	173.38	80.00- 120.00	100.00
5.636	5.636 (1.030)	56	1534804			121.50- 181.50	148.61
5.636	5.636 (1.030)	41	853894			54.13- 114.13	82.68
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.657	5.657 (1.034)	97	1806431	200.000	164.68	80.00- 120.00	100.00
5.657	5.657 (1.034)	99	1159540			32.76- 92.76	64.19
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.772	5.772 (1.055)	119	2010244	200.000	180.87	80.00- 120.00	100.00
5.772	5.772 (1.055)	117	2091170			73.53- 133.53	104.03
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.979	5.979 (1.093)	57	4608464	200.000	182.59	80.00- 120.00	100.00
5.979	5.979 (1.093)	56	1404736			0.62- 60.62	30.48
5.979	5.979 (1.093)	41	1223280			0.00- 56.92	26.54
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	2376184	200.000	176.93	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	551384			0.00- 53.73	23.20
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.065	6.065 (1.109)	87	608670	200.000	183.40	80.00- 120.00	100.00
6.065	6.065 (1.109)	73	2287464			352.05- 412.05	375.81
6.065	6.065 (1.109)	55	698925			86.74- 146.74	114.83
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	1192246	200.000	181.31	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	370615			0.51- 60.51	31.09
121 Heptane					CAS #: 142-82-5		
6.151	6.151 (0.964)	71	848297	200.000	173.86	80.00- 120.00	100.00
6.151	6.151 (0.964)	43	1927357			198.93- 258.93	227.20

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.151	6.151 (0.964)	57	1016714			83.54- 143.54	119.85
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	1267752	200.000	172.15	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	1384029			79.66- 139.66	109.17
6.574	6.574 (1.030)	97	807524			34.04- 94.04	63.70
127 Methylcyclohexane					CAS #: 108-87-2		
6.681	6.681 (1.221)	83	1565657	200.000	161.76	80.00- 120.00	100.00
6.681	6.681 (1.221)	98	741485			18.10- 78.10	47.36
6.681	6.681 (1.221)	55	1515152			66.76- 126.76	96.77
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.817	6.817 (1.068)	63	1058468	200.000	172.30	80.00- 120.00	100.00
6.817	6.817 (1.068)	62	760111			39.78- 99.78	71.81
6.817	6.817 (1.068)	41	646815			32.16- 92.16	61.11
136 1,4-Dioxane					CAS #: 123-91-1		
6.903	6.903 (1.082)	88	652255	200.000	181.94	80.00- 120.00	100.00
6.903	6.903 (1.082)	58	536700			49.57- 109.57	82.28
6.903	6.903 (1.082)	57	168230			0.00- 55.12	25.79
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	1999255	200.000	184.91	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	1340149			36.86- 96.86	67.03
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.434	7.434 (1.165)	75	1761832	200.000	183.27	80.00- 120.00	100.00
7.434	7.434 (1.165)	77	554663			1.21- 61.21	31.48
7.434	7.434 (1.165)	39	1090382			32.66- 92.66	61.89
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.548	7.548 (1.183)	58	995986	200.000	165.81	80.00- 120.00	100.00
7.548	7.548 (1.183)	43	2755233			262.16- 322.16	276.63
7.548	7.548 (1.183)	85	386872			11.61- 71.61	38.84
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	3433015	200.000	172.69	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	1977327			28.59- 88.59	57.60
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	1555745	200.000	180.84	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	497006			1.64- 61.64	31.95
7.921	7.921 (0.893)	39	931480			30.00- 90.00	59.87

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.078	8.078 (0.911)	97	1243806	200.000	178.49	80.00- 120.00	100.00
8.078	8.078 (0.911)	99	767862			31.35- 91.35	61.73
8.078	8.078 (0.911)	83	1047908			53.39- 113.39	84.25
156 Tetrachloroethene					CAS #: 127-18-4		
8.114	8.114 (0.915)	166	1856875	200.000	175.73	80.00- 120.00	100.00
8.114	8.114 (0.915)	129	1422777			48.51- 108.51	76.62
8.114	8.114 (0.915)	131	1387527			45.21- 105.21	74.72
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	1343811	200.000	178.37	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	2704339			171.14- 231.14	201.24
8.243	8.243 (0.930)	100	249623			0.00- 48.08	18.58
160 Dibromochloromethane					CAS #: 124-48-1		
8.393	8.393 (0.947)	129	2566735	200.000	177.12	80.00- 120.00	100.00
8.393	8.393 (0.947)	127	2007127			48.14- 108.14	78.20
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	2101612	200.000	178.19	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	1971161			62.49- 122.49	93.79
165 Chlorobenzene					CAS #: 108-90-7		
8.888	8.888 (1.002)	112	3081179	200.000	175.17	80.00- 120.00	100.00
8.888	8.888 (1.002)	114	991972			1.55- 61.55	32.19
8.888	8.888 (1.002)	77	1583499			23.72- 83.72	51.39
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.008)	106	1512502	200.000	170.24	80.00- 120.00	100.00
8.938	8.938 (1.008)	91	4575804			275.74- 335.74	302.53
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.019)	106	1904633	200.000	169.93	80.00- 120.00	100.00
9.038	9.038 (1.019)	91	3777498			168.00- 228.00	198.33
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.058)	106	1823649	200.000	172.32	80.00- 120.00	100.00
9.382	9.382 (1.058)	91	3734018			180.86- 240.86	204.76
172 Styrene					CAS #: 100-42-5		
9.403	9.403 (1.061)	104	2802379	200.000	169.56	80.00- 120.00	100.00
9.403	9.403 (1.061)	78	1353395			18.40- 78.40	48.29
174 Bromoform					CAS #: 75-25-2		
9.604	9.604 (1.083)	173	2602926	200.000	177.86	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.604	9.604 (1.083)	171	1351731			21.79- 81.79	51.93
175 Cumene					CAS #: 98-82-8		
9.676	9.676 (1.091)	105	5475091	200.000	165.59	80.00- 120.00	100.00
9.676	9.676 (1.091)	120	1526713			0.00- 57.35	27.88
9.676	9.676 (1.091)	51	595791			0.00- 41.41	10.88
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.991	9.991 (1.127)	83	2707474	200.000	172.84	80.00- 120.00	100.00
9.991	9.991 (1.127)	85	1805725			35.95- 95.95	66.69
182 Propylbenzene					CAS #: 103-65-1		
10.019	10.019 (1.130)	91	6374062	200.000	170.24	80.00- 120.00	100.00
10.027	10.027 (1.131)	120	1593223			0.00- 54.67	25.00
10.027	10.027 (1.131)	105	246145			0.00- 33.80	3.86
188 4-Ethyltoluene					CAS #: 622-96-8		
10.120	10.120 (1.141)	120	1712219	200.000	164.82	80.00- 120.00	100.00
10.120	10.120 (1.141)	105	5782891			291.69- 351.69	337.74
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.170	10.170 (1.147)	120	2412824	200.000	167.46	80.00- 120.00	100.00
10.170	10.170 (1.147)	105	4664881			176.78- 236.78	193.34
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.499	10.499 (1.184)	120	2197099	200.000	171.16	80.00- 120.00	100.00
10.499	10.499 (1.184)	105	4720517			184.15- 244.15	214.85
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.786	10.786 (1.217)	146	3505572	200.000	172.51	80.00- 120.00	100.00
10.786	10.786 (1.217)	148	2247181			34.28- 94.28	64.10
10.786	10.786 (1.217)	111	1407478			10.08- 70.08	40.15
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.865	10.865 (1.225)	146	3511653	200.000	171.12	80.00- 120.00	100.00
10.865	10.865 (1.225)	148	2242101			34.75- 94.75	63.85
10.865	10.865 (1.225)	111	1355162			8.94- 68.94	38.59
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.986	10.986 (1.239)	91	4420017	200.000	178.72	80.00- 120.00	100.00
10.986	10.986 (1.239)	126	1058719			0.00- 53.59	23.95
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.201	11.201 (1.263)	146	3313200	200.000	171.12	80.00- 120.00	100.00
11.201	11.201 (1.263)	148	2113099			33.27- 93.27	63.78

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.201	11.201 (1.263)	111	1369817			11.15- 71.15	41.34
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.627	12.627 (1.424)	180	3247912	200.000	187.09	80.00- 120.00	100.00
12.627	12.627 (1.424)	182	3133424			63.48- 123.48	96.48
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.720	12.720 (1.435)	225	2627338	200.000	181.52	80.00- 120.00	100.00
12.720	12.720 (1.435)	223	1652867			32.11- 92.11	62.91
228 Naphthalene					CAS #: 91-20-3		
12.906	12.906 (1.456)	128	664983	20.0000	18.554	80.00- 120.00	100.00
12.906	12.906 (1.456)	127	86445			0.00- 43.17	13.00

Report Date: 19-Dec-2015 14:16

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a121808.d
Lab Smp Id: ICAL
Analysis Type: VOA
Quant Type: ISTD
Operator: cb
Method File: /chem/msda.i/18dec15.b/a15q1218a.m
Misc Info: 200ppbv (200ppbv)

Calibration Date: 18-DEC-2015
Calibration Time: 12:53
Client Smp ID: Level 8
Level: LOW
Sample Type: AIR

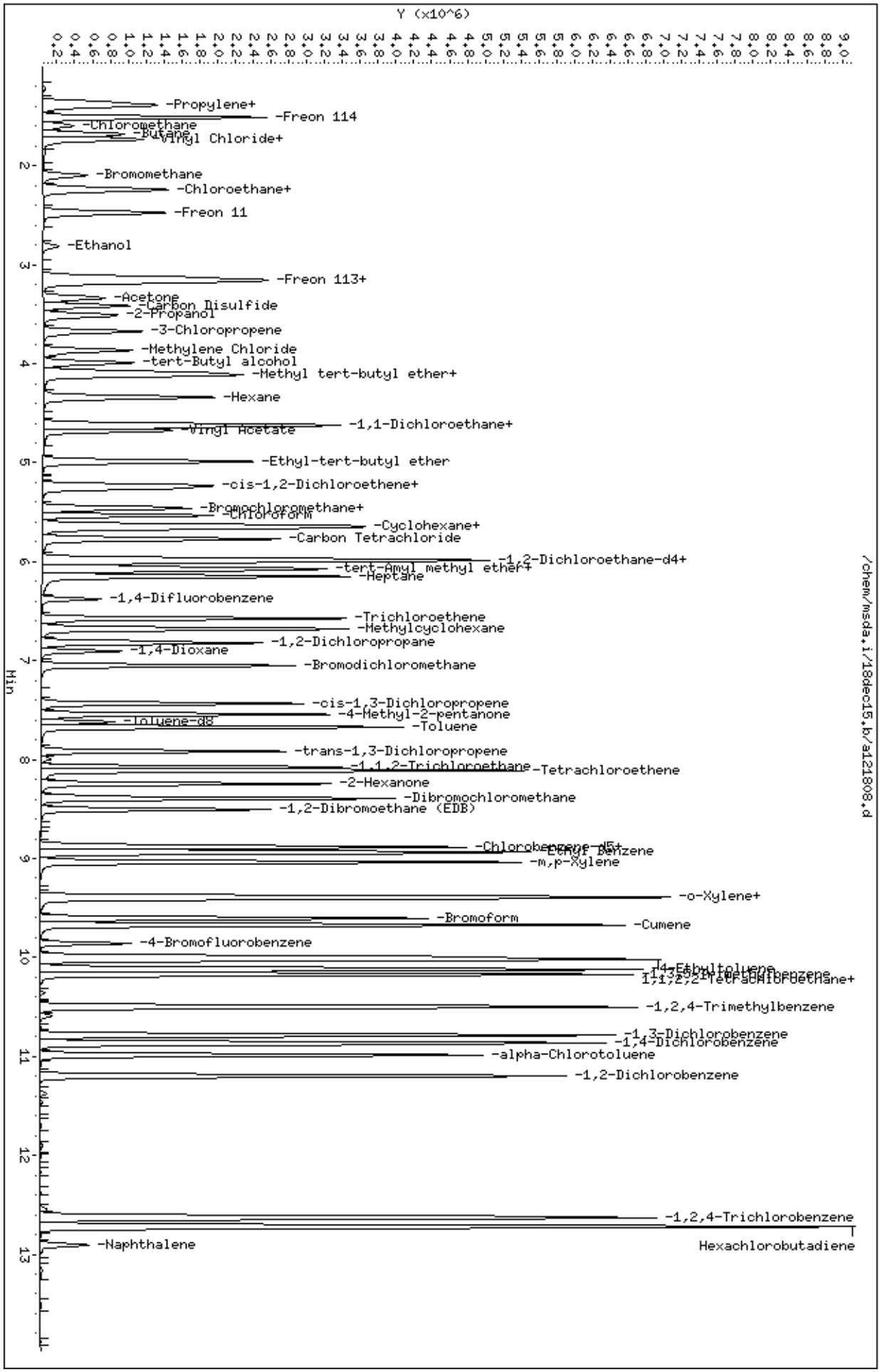
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	158121	94873	221369	150658	-4.72
123 1,4-Difluorobenze	659165	395499	922831	638278	-3.17
163 Chlorobenzene-d5	629706	377824	881588	600717	-4.60

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.47	5.14	5.80	5.47	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/18dec15.b/a121808.d
Date : 18-DEC-2015 13:57
Client ID: Level 8
Sample Info: 200mL #2759-45
Column phase: RTX-624

Instrument: msda.i
Operator: cb
Column diameter: 0.25



Page 1

Eurofins Air Toxics, Inc. 4Q 2015 TO-14A/TO-15 QUAD Limit of Detections (LODs) Effective 01-01-16						
CAS #	Analyte	Molecular Weight (MW)	LOD (ppbv)	LOQ (ppbv)	LOD (ug/m3)	LOQ (ug/m3)
71-55-6	1,1,1-Trichloroethane	133.42	0.25	0.5	1.36421	2.72843
79-34-5	1,1,2,2-Tetrachloroethane	167.86	0.25	0.5	1.71636	3.43272
79-00-5	1,1,2-Trichloroethane	133.42	0.25	0.5	1.36421	2.72843
75-34-3	1,1-Dichloroethane	98.97	0.25	0.5	1.01196	2.02393
75-35-4	1,1-Dichloroethene	96.95	0.25	0.5	0.99131	1.98262
120-82-1	1,2,4-Trichlorobenzene	181.46	0.75	2	5.56626	14.84335
95-63-6	1,2,4-Trimethylbenzene	120.19	0.25	0.5	1.22894	2.45787
106-93-4	1,2-Dibromoethane (EDB)	187.88	0.25	0.5	1.92106	3.84213
95-50-1	1,2-Dichlorobenzene	147.01	0.25	0.5	1.50317	3.00634
107-06-2	1,2-Dichloroethane	98.96	0.25	0.5	1.01186	2.02372
78-87-5	1,2-Dichloropropane	112.99	0.25	0.5	1.15532	2.31063
108-67-8	1,3,5-Trimethylbenzene	120.19	0.25	0.5	1.22894	2.45787
106-99-0	1,3-Butadiene*	54.09	0.25592	0.5	0.56616	1.10613
541-73-1	1,3-Dichlorobenzene	147.01	0.25	0.5	1.50317	3.00634
106-46-7	1,4-Dichlorobenzene	147.01	0.25	0.5	1.50317	3.00634
123-91-1	1,4-Dioxane	88.11	0.75	2	2.70276	7.20736
540-84-1	2,2,4-Trimethylpentane	114.22	0.25	0.5	1.16789	2.33579
78-93-3	2-Butanone	72.11	0.75	2	2.21196	5.89857
591-78-6	2-Hexanone	100.16	0.75	2	3.07239	8.19305
67-63-0	2-Propanol	60.09	0.75	2	1.84325	4.91534
107-05-1	3-Chloropropene	76.53	0.75	2	2.34755	6.26012
622-96-8	4-Ethyltoluene	120.19	0.25	0.5	1.22894	2.45787
108-10-1	4-Methyl-2-pentanone	100.16	0.25	0.5	1.02413	2.04826
67-64-1	Acetone	58.08	0.75	5	1.7816	11.8773
100-44-7	alpha-Chlorotoluene	126.58	0.25	0.5	1.29427	2.58855
71-43-2	Benzene	78.11	0.25	0.5	0.79867	1.59734
75-27-4	Bromodichloromethane	163.83	0.25	0.5	1.67515	3.35031
75-25-2	Bromoform	252.77	0.25	0.5	2.58456	5.16912
74-83-9	Bromomethane	94.95	0.75	5	2.91258	19.41718
75-15-0	Carbon Disulfide	76.14	0.75	2	2.33558	6.22822
56-23-5	Carbon Tetrachloride	153.84	0.25	0.5	1.57301	3.14601
108-90-7	Chlorobenzene	112.56	0.25	0.5	1.15092	2.30184
75-00-3	Chloroethane	64.52	0.75	2	1.97914	5.27771
67-66-3	Chloroform	119.39	0.25	0.5	1.22076	2.44151
74-87-3	Chloromethane	50.49	0.75	5	1.54877	10.32515
156-59-2	cis-1,2-Dichloroethene	96.94	0.25	0.5	0.99121	1.98241
10061-01-5	cis-1,3-Dichloropropene	110.97	0.25	0.5	1.13466	2.26933
98-82-8	Cumene	120.19	0.25	0.5	1.22894	2.45787
110-82-7	Cyclohexane	84.16	0.25	0.5	0.86053	1.72106
124-48-1	Dibromochloromethane	208.28	0.25	0.5	2.12965	4.2593
64-17-5	Ethanol*	46.07	0.80726	2	1.52108	3.76851

100-41-4	Ethyl Benzene	106.16	0.25	0.5	1.08548	2.17096
75-69-4	Freon 11	137.38	0.25	0.5	1.4047	2.80941
76-13-1	Freon 113	187.39	0.25	0.5	1.91605	3.83211
76-14-2	Freon 114	170.93	0.25	0.5	1.74775	3.4955
75-71-8	Freon 12	120.92	0.25	0.5	1.2364	2.4728
142-82-5	Heptane	100.2	0.25	0.5	1.02454	2.04908
87-68-3	Hexachlorobutadiene	260.76	0.75	2	7.99877	21.33006
110-54-3	Hexane*	86.17	0.26651	0.5	0.93927	1.76217
108-38-3	m,p-Xylene	106.17	0.25	0.5	1.08558	2.17117
1634-04-4	Methyl tert-butyl ether	88.15	0.25	0.5	0.90133	1.80266
75-09-2	Methylene Chloride	84.94	0.75	5	2.60552	17.37014
91-20-3	Naphthalene	128.17	0.75	2	3.9316	10.48425
95-47-6	o-Xylene	106.17	0.25	0.5	1.08558	2.17117
103-65-1	Propylbenzene	120.19	0.25	0.5	1.22894	2.45787
115-07-1	Propylene	42.08	0.75	2	1.2908	3.44213
100-42-5	Styrene	104.14	0.25	0.5	1.06483	2.12965
127-18-4	Tetrachloroethene	165.85	0.25	0.5	1.69581	3.39162
109-99-9	Tetrahydrofuran	72.1	0.25	0.5	0.73722	1.47444
108-88-3	Toluene	92.13	0.25	0.5	0.94202	1.88405
156-60-5	trans-1,2-Dichloroethene	96.94	0.25	0.5	0.99121	1.98241
10061-02-6	trans-1,3-Dichloropropene	110.97	0.25	0.5	1.13466	2.26933
79-01-6	Trichloroethene	131.39	0.25	0.5	1.34346	2.68691
108-05-4	Vinyl Acetate	86.09	1	2	3.52106	7.04213
75-01-4	Vinyl Chloride	62.5	0.25	0.5	0.63906	1.27812

ppbv - part per billion by volume

Concentration (ug/m3) = Concentration (ppbv)*MW/24.45

Instrument ID - msda.i file msda.i/21dec15.b/a122127.d msda.i/21dec15.b/a122128.d

*LOD was less then the MDL therefore was raised to equal the MDL value.

TO-15 4/22/15
MSD-A
0.5 ppbv RL
#2716-252A (2.5 ppbv)
40mL loaded

Report Date : 23-Apr-2015 09:25

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	a042213	a042214	a042215	a042216	a042217	a042218	a042219	a042220
INJ.DATE:	22-APR-2015	22-APR-2015	22-APR-2015	22-APR-2015	22-APR-2015	22-APR-2015	22-APR-2015	22-APR-2015
INJ.TIME:	17:34	18:11	18:35	19:13	19:36	20:14	20:37	21:14

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	ppbv RL
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
7 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
9 Propylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
11 Freon 12	483.84	549.92	536.71	553.79	560.09	568.97	475.22	530.23	532.35	34.89	104.59	500
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
15 Freon 114	525.34	553.95	502.50	548.61	484.89	507.54	490.54	489.65	512.89	26.93	80.72	500
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
17 Chloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

MDL Verification
@ 0.25 ppbv
#2716-252A (2.5ppbv)
20mL loaded

Reviewer 1 [signature] Date: 4/23/15
Reviewer 2 [signature] Date: 4/23/15

$\bar{X}$ = 94.25 pptv
= 0.09425 ppbv

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
23 Butane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
25 Vinyl Chloride	501.95	542.58	569.57	508.87	552.75	571.94	568.38	521.23	542.16	28.29	84.80	500 ↓
26 1,3-Butadiene	691.47	577.26	715.16	597.46	760.11	808.44	595.99	626.40	671.54	85.36	255.92	
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
29 Bromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
30 Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
31 Isopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
35 Freon 11	530.97	539.33	583.44	528.04	502.67	494.25	497.69	497.27	521.71	30.56	91.62	500
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
40 2-Methyl-2-butene	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
41 trans-2-Pentene	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
42 Ethanol	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
43 1,2-Dichloro-1-fluoroe	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
44 Ethyl Ether	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
45 cis-2-Pentene	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
46 Acrolein	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
47 Freon 123a	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
48 Freon 123	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
49 Freon 113	548.35	503.86	550.32	512.92	490.30	575.49	497.61	538.10	527.12	30.28	90.78	500
50 1,1-Dichloroethene	706.98	583.14	579.66	558.56	551.89	531.13	631.89	570.71	589.25	55.89	167.56	500
51 2,2-Dimethylbutane	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
52 Acetone	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
53 Iodomethane	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
54 Bromoethane	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
55 4-Methyl-1-pentene	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
56 Carbon Disulfide	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
57 2-Propanol	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
58 3-Chloropropene	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
59 Cyclopentene	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
60 2-Methylpentane	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
61 Methyl Acetate	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
62 3-Methylpentane	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	
63 Acetonitrile	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	*****	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
66 Methylene Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
71 tert-Butyl alcohol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
72 Methyl tert-butyl ethe	574.08	564.31	600.70	582.87	532.61	549.83	551.56	509.03	558.13	29.01	86.97	500
73 trans-1,2-Dichloroethe	655.47	615.26	563.94	645.06	619.42	564.52	511.81	577.49	594.12	48.23	144.59	↓
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
78 Hexane	669.10	488.50	679.64	517.95	734.77	582.24	526.69	636.63	604.44	88.90	266.51	500
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
82 1,1-Dichloroethane	556.41	575.79	507.87	500.10	544.13	494.62	505.36	579.52	532.58	35.09	105.19	500
83 Isopropyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
84 1-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
86 Vinyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
88 Ethyl-tert-butyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
90 2,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
91 cis-1,2-Dichloroethene	563.92	556.45	521.68	461.89	587.23	540.14	557.58	520.48	538.67	38.15	114.37	500
92 2-Butanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 98 Bromochloromethane	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00	
99 Tetrahydrofuran	540.87	493.03	594.99	611.71	557.65	551.46	523.05	452.01	540.60	51.88	155.55	500
100 Chloroform	540.06	538.11	513.16	540.39	580.82	527.98	505.92	531.15	534.70	22.52	67.51	↓
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
102 Cyclohexane	559.43	611.86	546.54	574.87	532.90	505.29	521.33	517.23	546.18	35.08	105.18	500
103 1,1,1-Trichloroethane	557.63	537.54	559.03	527.58	505.06	550.09	536.09	505.41	534.80	21.22	63.62	↓
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
106 Carbon Tetrachloride	534.63	497.20	532.76	562.89	551.38	497.65	527.54	523.56	528.45	23.05	69.09	500
107 1,1-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
113 2,2,4-Trimethylpentane	521.93	531.99	480.14	516.16	504.98	590.75	502.22	469.70	514.73	37.05	111.07	500
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
115 Isobutanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
116 Benzene	546.57	551.01	539.66	574.68	571.87	536.54	531.87	560.03	551.53	16.03	48.06	500
$ 117 1,2-Dichloroethane-d4	25214.43	24969.95	24888.28	25190.52	25369.82	25277.60	24747.03	24721.99	25047.45	248.64	745.43	
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
119 tert-Amyl methyl ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
120 1,2-Dichloroethane	509.39	504.56	533.64	516.41	520.26	530.98	526.27	574.84	527.04	21.78	65.29	500
121 Heptane	528.27	546.42	569.45	572.61	460.30	566.09	547.54	515.46	538.27	37.37	112.04	↓
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 123 1,4-Difluorobenzene	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00	
124 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
125 Trichloroethene	551.60	576.65	580.43	534.66	480.84	553.07	563.47	535.91	547.08	31.57	94.66	500
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
127 Methylcyclohexane	496.07	578.88	519.87	529.75	519.42	523.90	521.30	484.90	521.76	27.67	82.95	500
128 Ethyl acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
131 2-Pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
132 1,2-Dichloropropane	585.82	592.69	591.48	535.60	589.73	584.02	555.45	565.42	575.53	19.73	59.15	500
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
136 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
138 Bromodichloromethane	529.25	519.71	502.21	571.38	543.81	536.37	513.48	522.88	529.89	21.20	63.56	500
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
140 bis(chloromethyl) Ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
143 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
144 cis-1,3-Dichloropropen	511.58	516.62	530.11	565.40	456.86	474.74	504.03	506.03	508.17	32.97	98.86	500
145 4-Methyl-2-pentanone	534.15	567.07	566.96	535.43	485.77	553.84	586.72	617.04	555.87	39.19	117.48	↓
$ 146 Toluene-d8	24465.82	24716.08	24800.78	24588.62	24727.16	24965.94	24689.97	24640.92	24699.41	147.70	442.81	
147 Toluene	600.20	587.08	494.94	503.14	529.14	548.93	532.12	525.66	540.15	37.22	111.57	500
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
150 trans-1,3-Dichloroprop	579.71	492.20	550.75	583.00	493.00	550.44	504.79	559.91	539.22	37.37	112.04	500
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
152 1-Chloro-2-Bromopropan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
155 1,1,2-Trichloroethane	594.06	517.34	534.74	514.93	475.21	578.86	526.48	555.41	537.13	38.09	114.19	500
156 Tetrachloroethene	519.66	528.55	582.15	526.13	521.57	573.30	476.89	582.14	538.80	37.24	111.65	↓
157 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
158 2-Hexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
159 Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
160 Dibromochloromethane	480.06	534.85	472.32	518.64	517.43	518.87	491.95	510.79	505.61	21.76	65.24	500
161 1,2-Dibromoethane (EDB	511.53	528.77	464.41	486.04	502.20	555.40	493.86	472.11	501.79	29.97	89.85	↓
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 163 Chlorobenzene-d5	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00	
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
165 Chlorobenzene	496.77	552.56	488.38	530.81	457.10	545.31	541.22	523.55	516.96	33.17	99.44	500
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
167 Ethyl Benzene	542.40	486.20	489.43	491.58	468.62	550.54	474.32	534.05	504.64	32.42	97.18	500
168 1,1,1,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
169 m,p-Xylene	455.76	525.59	504.93	485.79	517.00	442.74	489.20	456.18	484.65	30.61	91.76	500
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
171 o-Xylene	455.10	465.82	493.57	524.69	462.44	472.43	492.61	463.39	478.76	23.27	69.76	500
172 Styrene	503.57	493.44	472.36	501.97	464.85	507.36	514.84	460.27	489.83	20.99	62.94	↓
173 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
174 Bromoform	499.10	515.45	472.43	494.35	457.16	504.85	532.71	496.36	496.55	23.54	70.57	500
175 Cumene	502.37	515.26	502.68	494.37	485.71	529.78	518.82	504.71	506.71	14.06	42.15	↓
176 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 177 4-Bromofluorobenzene	24150.78	24370.31	24391.67	24212.42	24166.17	24574.84	24250.90	24325.68	24305.35	141.20	423.33	
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
180 Bromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
181 1,1,2,2-Tetrachloroeth	526.00	536.87	531.83	540.35	486.88	480.38	509.11	519.89	516.41	22.54	67.58	500
182 Propylbenzene	562.50	497.11	483.44	506.84	466.39	501.45	510.25	507.54	504.44	27.70	83.05	↓

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
184 trans-1,4-Dichloro-2-b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
185 1,2,3-Trichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
187 Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
188 4-Ethyltoluene	582.70	534.42	508.34	538.39	507.78	553.11	457.07	503.56	520.67	37.32	111.89	500
189 2-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
190 1,3,5-Trimethylbenzene	475.76	508.37	500.24	473.01	454.41	498.18	483.12	493.84	485.87	17.70	53.06	500
191 4-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
195 tert-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
196 1,2,4-Trimethylbenzene	510.39	492.39	463.16	518.73	477.74	497.56	526.13	497.31	497.93	20.81	62.39	500
197 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
203 sec-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
206 bis(2-Chloroethyl) Eth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
207 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
208 1,3-Dichlorobenzene	487.13	540.00	506.16	495.73	502.15	493.21	504.61	498.31	503.41	16.05	48.12	500
209 1,4-Dichlorobenzene	493.96	521.16	506.73	556.75	528.68	524.02	501.41	509.60	517.78	19.68	59.01	↓
210 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
212 alpha-Chlorotoluene	496.99	502.23	503.35	505.33	475.34	505.94	515.69	467.86	496.59	16.40	49.17	500
213 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
214 1,2-Dichlorobenzene	501.11	514.25	497.62	471.57	501.30	500.57	487.35	502.44	497.03	12.62	37.84	500
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
216 4-Ethyl-1,2-dimethylbe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
220 1,2,4,5-tetramethylben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
221 1,2-Dibromo-3-chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
226 1,2,4-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
227 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
228 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
235 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
236 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
241 Total Volatile Hydroca	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
242 TPH reference to Hexan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
243 TPH reference to Hepta	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
244 TPH reference to Gasol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
245 TPH reference MineralS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
246 TPH reference to Stodd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
247 TVOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
248 TVOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
249 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
250 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
251 NMOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
252 NMOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
253 NMOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
255 C4 - C5 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
256 C5 - C6 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
257 C6 - C7 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
258 C7 - C8 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
259 C8 - C9 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
260 C9 - C10 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
261 C10+ Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
262 C5 - C6 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
263 C6-C8 Aliphatic ref He	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
264 C8-C10 Aliphatic ref D	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
265 C10-C12 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
267 C8-C10 Aromatic ref 1,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
269 C10-C12 Aromatic 1,2,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
270 C10-C12 Aromatic Naph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

TO-15 4/22/15
MSD-A
2.0 ppbv RL
2716-252A (2.5 ppbv)
160mL loaded

Report Date : 23-Apr-2015 09:34

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08
FILENAME:	a042221	a042222	a042223	a042224	a042225	a042226	a042227	a042228
INJ.DATE:	22-APR-2015	22-APR-2015	22-APR-2015	22-APR-2015	22-APR-2015	23-APR-2015	23-APR-2015	23-APR-2015
INJ.TIME:	21:40	22:19	22:44	23:23	23:48	00:30	00:55	01:35

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	ppbv RL
1 Dimethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
2 Freon 14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
3 Acetaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
4 Hexafluoropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
5 Freon 13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
6 Freon 143a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
7 Freon 134a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
8 Propane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
9 Propylene	1742.25	2120.16	1945.85	2009.35	1903.77	1893.54	1744.96	1884.22	1905.51	126.22	378.39	2000
10 1,1-Difluoroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
11 Freon 12	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
12 Vinyl Fluoride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
13 Chlorodifluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
14 Ethylene Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
15 Freon 114	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
16 Freon 142b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
17 Chloromethane	2385.36	2217.26	2268.87	2300.67	2217.06	2544.11	2160.49	1992.79	2260.82	161.75	484.92	5000

MDL Verification
@ 0.75 ppbv
# 2716-252A (2.5 ppbv)
60mL loaded

Reviewer 1 [signature] Date: 4/23/15
Reviewer 2 [signature] Date: 4/23/15

$\bar{X}$ = 290.05 pptv
= 0.29 ppbv

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
18 Isobutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
19 Isobutylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
20 2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
21 trans-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
22 1-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
23 Butane	2222.10	2410.71	2369.56	2148.47	2076.71	2611.19	1939.04	2439.46	2277.15	219.86	659.14	2000
24 cis-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
25 Vinyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
26 1,3-Butadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
27 3-Methyl-1-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
28 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
29 Bromomethane	1948.28	1866.70	1951.55	2028.73	1883.91	1940.82	1831.67	1725.03	1897.09	92.43	277.12	5000
30 Chloroethane	2044.23	2131.85	2262.88	2122.04	1918.60	2130.82	2004.76	2114.66	2091.23	102.59	307.55	2000
31 Isopentane	1845.10	1992.41	1942.06	2081.26	2067.97	2043.80	2082.80	2106.51	2020.24	89.02	266.89	↓
32 Vinyl Bromide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
33 2-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
34 Pentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
35 Freon 11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
36 1-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
37 Dichlorofluoromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
38 2,3-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
39 Isoprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
40 2-Methyl-2-butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
41 trans-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
42 Ethanol	2520.23	2379.01	2098.36	2707.28	2634.16	2775.54	2937.27	2348.13	2550.00	269.27	807.26	2000
43 1,2-Dichloro-1-fluoroe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
44 Ethyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
45 cis-2-Pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
46 Acrolein	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
47 Freon 123a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
48 Freon 123	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
49 Freon 113	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
50 1,1-Dichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
51 2,2-Dimethylbutane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
52 Acetone	2344.17	2285.61	2580.79	2460.68	2373.28	2280.04	2350.56	2397.17	2384.04	98.62	295.68	5000
53 Iodomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
54 Bromoethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
55 4-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
56 Carbon Disulfide	2167.39	2246.76	2146.28	2193.71	2255.13	2264.42	2220.80	2249.37	2217.98	44.15	132.38	2000
57 2-Propanol	2192.58	2102.03	2119.67	2339.91	2123.25	2287.58	1931.80	2057.62	2144.30	129.08	386.98	2000
58 3-Chloropropene	1972.13	1974.38	2075.76	2204.38	2060.32	2159.23	2239.57	2093.75	2097.44	98.68	295.84	↓
59 Cyclopentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
60 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
61 Methyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
62 3-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
63 Acetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
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Method File: /chem/msda.i/22apr15.b/a15q0422a.m
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Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
64 Cyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
65 1-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
66 Methylene Chloride	1982.63	2085.50	2083.60	2135.60	2051.19	2238.22	2071.47	2225.58	2109.27	87.02	260.89	5000
67 2-Methyl-1-pentene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
68 2,4-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
69 2,3-Dimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
70 tert-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
71 tert-Butyl alcohol	2063.86	2110.40	2061.33	1999.37	1968.26	2030.79	2122.63	2000.76	2044.87	54.84	164.42	2000
72 Methyl tert-butyl ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
73 trans-1,2-Dichloroethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
74 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
75 trans-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
76 1-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
77 cis-2-Hexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
78 Hexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
79 Methylcyclopentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
80 sec-Butyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
81 2,3,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
82 1,1-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
83 Isopropyl ether	2071.97	2113.56	2087.80	2106.49	2015.57	2075.76	2053.90	2078.38	2075.43	30.80	92.33	2000
84 1-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
85 Chloroprene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
86 Vinyl Acetate	2053.77	1905.42	1944.94	1902.73	2033.61	2009.88	1889.32	2131.94	1983.95	87.14	261.25	2000

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Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
87 Butanal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
88 Ethyl-tert-butyl ether	1980.38	1973.47	1986.57	2048.39	1955.62	2060.94	2008.01	2016.16	2003.69	36.86	110.51	2000
89 Isobutyl chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
90 2,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
91 cis-1,2-Dichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
92 2-Butanone	2030.24	2058.78	2097.14	1936.70	2110.79	2150.50	2186.69	2050.69	2077.69	77.34	231.88	2000
93 Methyl Acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
94 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
95 Methacrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
96 2-Chloropentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
97 2-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
* 98 Bromochloromethane	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00	
99 Tetrahydrofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
100 Chloroform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
101 1-Bromopropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
102 Cyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
103 1,1,1-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
104 Chloroacetonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
105 n-Butylchloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
106 Carbon Tetrachloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
107 1,1-Dichloropropene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
108 Thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
109 2-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
110 3-Methylhexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

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Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
111 Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 112 Benzene-d6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
113 2,2,4-Trimethylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
114 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
115 Isobutanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
116 Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 117 1,2-Dichloroethane-d4	25188.18	24704.89	24473.87	24956.31	24549.30	25256.61	24053.94	25280.75	24807.98	439.00	1316.13
118 1-Heptene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
119 tert-Amyl methyl ether	1932.38	1938.19	1877.19	1912.42	1770.15	2070.59	1850.08	1909.15	1907.52	85.58	256.57
120 1,2-Dichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
121 Heptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
122 2,3-Dichloro-1-propene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
* 123 1,4-Difluorobenzene	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00
124 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
125 Trichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
126 Bromodichloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
127 Methylcyclohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
128 Ethyl acrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
129 2-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
130 3-Methylheptane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
131 2-Pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
132 1,2-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
133 1-Bromo-2-Chloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
134 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

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Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
135 Diethyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
136 1,4-Dioxane	1993.70	2073.32	2131.41	1873.67	2117.89	2212.06	2072.06	1961.30	2054.43	107.24	321.50	2000
137 Dibromomethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
138 Bromodichloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
139 2-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
140 bis(chloromethyl) Ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
141 1-Octene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
142 Epichlorohydrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
143 2-Chloroethyl Vinyl Et	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
144 cis-1,3-Dichloropropen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
145 4-Methyl-2-pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 146 Toluene-d8	25045.87	24587.46	25028.94	24724.04	24746.17	24780.52	24731.64	24286.31	24791.37	246.41	738.72	
147 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
148 Octane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
149 Vinyl Cyclohexene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
150 trans-1,3-Dichloroprop	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
151 Ethyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
152 1-Chloro-2-Bromopropan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
153 1-Nitropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
154 Bromodichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
155 1,1,2-Trichloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
156 Tetrachloroethene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
157 1,3-Dichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
158 2-Hexanone	2009.17	1884.50	1834.65	1859.41	2016.46	1880.26	1980.71	1941.51	1925.83	70.64	211.78	2000

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Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
159 Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
160 Dibromochloromethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
161 1,2-Dibromoethane (EDB	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
162 1-Nonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
* 163 Chlorobenzene-d5	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	25000.00	0.00	0.00
164 1-Chlorohexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
165 Chlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
166 Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
167 Ethyl Benzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
168 1,1,1,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
169 m,p-Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
170 Nonane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
171 o-Xylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
172 Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
173 2-Heptanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
174 Bromoform	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
175 Cumene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
176 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 177 4-Bromofluorobenzene	24803.79	24357.63	24468.05	23997.60	24580.05	25121.84	25033.60	24117.72	24560.03	407.27	1221.01
178 1-Decene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
179 alpha-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
180 Bromobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
181 1,1,2,2-Tetrachloroeth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
182 Propylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
183 1,4-Dichloro-2-Butene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
184 trans-1,4-Dichloro-2-b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
185 1,2,3-Trichloropropane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
186 3-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
187 Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
188 4-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
189 2-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
190 1,3,5-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
191 4-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
192 beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
193 Diisobutyl Ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
194 alpha Methyl Styrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
195 tert-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
196 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
197 Pentachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
198 Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
199 D-Limonene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
200 Benzaldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
201 Indan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
202 Indene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
203 sec-Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
204 Isobutylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
205 2-Ethyltoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

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Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL	
206 bis(2-Chloroethyl) Eth	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
207 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
208 1,3-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
209 1,4-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
210 1,2,3-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
211 1-Undecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
212 alpha-Chlorotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
213 Butylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
214 1,2-Dichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
215 Undecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
216 4-Ethyl-1,2-dimethylbe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
217 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
218 1,3-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
219 1,4-Diethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
220 1,2,4,5-tetramethylben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
221 1,2-Dibromo-3-chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
222 1-Dodecene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
223 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
224 1,3,5-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
225 Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
226 1,2,4-Trichlorobenzene	2106.10	2086.52	2161.80	2107.44	2246.58	2306.27	2250.27	2102.51	2158.44	67.76	203.15	2000
227 Hexachlorobutadiene	2166.92	2084.35	2107.34	2217.75	2326.93	2247.97	2197.20	2195.64	2193.01	76.92	230.61	↓
228 Naphthalene	222.68	221.81	221.05	210.73	230.89	223.77	236.49	199.63	220.88	11.41	34.20	1000
229 1,2,3-Trichlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
230 Tridecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
231 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
232 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
233 1,3,5-Triethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
234 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
235 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
236 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
241 Total Volatile Hydroca	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
242 TPH reference to Hexan	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
243 TPH reference to Hepta	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
244 TPH reference to Gasol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
245 TPH reference MineralS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
246 TPH reference to Stodd	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
247 TVOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
248 TVOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
249 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
250 TVOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
251 NMOC reference to Hexa	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
252 NMOC reference to Hept	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
253 NMOC reference to Tolu	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
254 C3 - C4 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
255 C4 - C5 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
256 C5 - C6 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
257 C6 - C7 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /chem/msda.i/22apr15.b/a15q0422a.m
Batch File: /chem/msda.i/22apr15.b
Inst ID: msda.i

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	MDL08	AVG CONC	STD DEV	MDL
258 C7 - C8 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
259 C8 - C9 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
260 C9 - C10 Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
261 C10+ Hydrocarbons	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
262 C5 - C6 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
263 C6-C8 Aliphatic ref He	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
264 C8-C10 Aliphatic ref D	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
265 C10-C12 Aliphatic ref	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
266 C8-C10 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
267 C8-C10 Aromatic ref 1,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
268 C10-C12 Aromatic	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
269 C10-C12 Aromatic 1,2,	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
270 C10-C12 Aromatic Naph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	CCV		
Lab ID:	1602250A-04A	**Date/Time Analyzed:**	2/17/16 12:45 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a021705a

Compound	CAS#	%Recovery
Benzene	71-43-2	90
Ethyl Benzene	100-41-4	82
m,p-Xylene	108-38-3	81
o-Xylene	95-47-6	81
Toluene	108-88-3	82

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	98
4-Bromofluorobenzene	460-00-4	74-122	103
Toluene-d8	2037-26-5	82-119	97

Report Date: 17-Feb-2016 13:43

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msda.i Injection Date: 17-FEB-2016 12:45
Lab File ID: a021705a.d Init. Cal. Date(s): 18-DEC-2015 11-FEB-2016
Analysis Type: AIR Init. Cal. Times: 10:48 16:16
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msda.i/17feb16.b/a15q1218f.m

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 117 1,2-Dichloroethane-d4	1.28521	1.25718	0.010	2.18153	30.00000	Averaged
$ 146 Toluene-d8	1.01416	0.98632	0.010	2.74486	30.00000	Averaged
$ 177 4-Bromofluorobenzene	0.60338	0.62383	0.010	-3.38850	30.00000	Averaged
9 Propylene	0.56309	0.42441	0.010	24.62925	40.00000	Averaged
11 Freon 12	1.55033	1.27778	0.010	17.57998	30.00000	Averaged
15 Freon 114	1.28361	1.11433	0.010	13.18786	30.00000	Averaged
17 Chloromethane	0.50100	0.37633	0.010	24.88524	30.00000	Averaged
23 Butane	0.15364	0.11855	0.010	22.83717	40.00000	Averaged
25 Vinyl Chloride	0.62340	0.54627	0.010	12.37187	30.00000	Averaged
26 1,3-Butadiene	0.57207	0.48189	0.010	15.76355	30.00000	Averaged
29 Bromomethane	0.53037	0.47069	0.010	11.25141	30.00000	Averaged
30 Chloroethane	0.31781	0.28045	0.010	11.75635	30.00000	Averaged
31 Isopentane	0.85365	0.67263	0.010	21.20466	40.00000	Averaged
35 Freon 11	1.71949	1.44920	0.010	15.71912	30.00000	Averaged
42 Ethanol	0.30028	0.23893	0.010	20.43172	30.00000	Averaged
49 Freon 113	1.29277	1.09027	0.010	15.66419	30.00000	Averaged
50 1,1-Dichloroethene	0.44676	0.35867	0.010	19.71680	30.00000	Averaged
52 Acetone	0.33556	0.31630	0.010	5.74035	30.00000	Averaged
56 Carbon Disulfide	1.72096	1.53098	0.010	11.03945	30.00000	Averaged
57 2-Propanol	1.39079	1.03289	0.010	25.73363	30.00000	Averaged
58 3-Chloropropene	0.29892	0.25111	0.010	15.99537	30.00000	Averaged
66 Methylene Chloride	0.89849	0.74794	0.010	16.75566	30.00000	Averaged
71 tert-Butyl alcohol	1.47489	1.30789	0.010	11.32247	40.00000	Averaged
72 Methyl tert-butyl ether	1.82339	1.48205	0.010	18.72010	30.00000	Averaged
73 trans-1,2-Dichloroethene	0.46366	0.39717	0.010	14.33998	30.00000	Averaged
78 Hexane	1.25864	1.07532	0.010	14.56491	30.00000	Averaged
82 1,1-Dichloroethane	1.30430	1.20203	0.010	7.84115	30.00000	Averaged
83 Isopropyl ether	2.92701	2.30989	0.010	21.08354	40.00000	Averaged
86 Vinyl Acetate	0.17645	0.16211	0.010	8.12854	30.00000	Averaged
88 Ethyl-tert-butyl ether	2.53417	2.26819	0.010	10.49590	40.00000	Averaged
91 cis-1,2-Dichloroethene	0.51089	0.45468	0.010	11.00108	30.00000	Averaged
92 2-Butanone	0.34015	0.28972	0.010	14.82577	30.00000	Averaged
99 Tetrahydrofuran	1.02650	0.79134	0.010	22.90945	30.00000	Averaged
100 Chloroform	1.53590	1.34011	0.010	12.74792	30.00000	Averaged
102 Cyclohexane	0.98845	0.83913	0.010	15.10681	30.00000	Averaged
103 1,1,1-Trichloroethane	1.82019	1.43618	0.010	21.09703	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msda.i Injection Date: 17-FEB-2016 12:45
Lab File ID: a021705a.d Init. Cal. Date(s): 18-DEC-2015 11-FEB-2016
Analysis Type: AIR Init. Cal. Times: 10:48 16:16
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msda.i/17feb16.b/a15q1218f.m

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
106 Carbon Tetrachloride	1.84426	1.52442	0.010	17.34272	30.00000	Averaged
113 2,2,4-Trimethylpentane	4.18824	3.68177	0.010	12.09268	30.00000	Averaged
116 Benzene	0.52602	0.47566	0.010	9.57455	30.00000	Averaged
119 tert-Amyl methyl ether	0.55073	0.48044	0.010	12.76312	40.00000	Averaged
120 1,2-Dichloroethane	0.25756	0.22240	0.010	13.65246	30.00000	Averaged
121 Heptane	0.19110	0.16410	0.010	14.12998	30.00000	Averaged
125 Trichloroethene	0.28844	0.23261	0.010	19.35473	30.00000	Averaged
127 Methylcyclohexane	1.60607	1.23928	0.010	22.83773	30.00000	Averaged
132 1,2-Dichloropropane	0.24062	0.21093	0.010	12.33800	30.00000	Averaged
136 1,4-Dioxane	0.14042	0.11978	0.010	14.70080	30.00000	Averaged
138 Bromodichloromethane	0.42349	0.36898	0.010	12.87247	30.00000	Averaged
144 cis-1,3-Dichloropropene	0.37653	0.30824	0.010	18.13792	30.00000	Averaged
145 4-Methyl-2-pentanone	0.23527	0.17437	0.010	25.88603	30.00000	Averaged
147 Toluene	0.77863	0.64182	0.010	17.57074	30.00000	Averaged
150 trans-1,3-Dichloropropene	0.35802	0.29774	0.010	16.83681	30.00000	Averaged
155 1,1,2-Trichloroethane	0.29001	0.25127	0.010	13.35611	30.00000	Averaged
156 Tetrachloroethene	0.43975	0.37052	0.010	15.74255	30.00000	Averaged
158 2-Hexanone	0.31354	0.24914	0.010	20.54156	30.00000	Averaged
160 Dibromochloromethane	0.60307	0.50232	0.010	16.70689	30.00000	Averaged
161 1,2-Dibromoethane (EDB)	0.49084	0.41342	0.010	15.77288	30.00000	Averaged
165 Chlorobenzene	0.73204	0.60631	0.010	17.17413	30.00000	Averaged
167 Ethyl Benzene	0.36974	0.30168	0.010	18.40915	30.00000	Averaged
169 m,p-Xylene	0.46645	0.37947	0.010	18.64591	30.00000	Averaged
171 o-Xylene	0.44044	0.35556	0.010	19.27102	30.00000	Averaged
172 Styrene	0.68781	0.56437	0.010	17.94733	30.00000	Averaged
174 Bromoform	0.60905	0.50484	0.010	17.11054	30.00000	Averaged
175 Cumene	1.37604	1.10759	0.010	19.50896	30.00000	Averaged
181 1,1,2,2-Tetrachloroethane	0.65189	0.55358	0.010	15.08057	30.00000	Averaged
182 Propylbenzene	1.55816	1.26733	0.010	18.66472	30.00000	Averaged
188 4-Ethyltoluene	0.43233	0.35595	0.010	17.66853	30.00000	Averaged
190 1,3,5-Trimethylbenzene	0.59962	0.49096	0.010	18.12061	30.00000	Averaged
196 1,2,4-Trimethylbenzene	0.53421	0.43544	0.010	18.48961	30.00000	Averaged
208 1,3-Dichlorobenzene	0.84568	0.69699	0.010	17.58312	30.00000	Averaged
209 1,4-Dichlorobenzene	0.85404	0.69849	0.010	18.21304	30.00000	Averaged
212 alpha-Chlorotoluene	1.02927	0.79985	0.010	22.29009	30.00000	Averaged

Eurofins Air Toxics Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msda.i Injection Date: 17-FEB-2016 12:45
Lab File ID: a021705a.d Init. Cal. Date(s): 18-DEC-2015 11-FEB-2016
Analysis Type: AIR Init. Cal. Times: 10:48 16:16
Lab Sample ID: CCV Quant Type: ISTD
Method: /chem/msda.i/17feb16.b/a15q1218f.m

COMPOUND	RRF / AMOUNT	RF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
214 1,2-Dichlorobenzene	0.80579	0.66145	0.010	17.91217	30.00000	Averaged
226 1,2,4-Trichlorobenzene	0.72248	0.54685	0.010	24.30906	30.00000	Averaged
227 Hexachlorobutadiene	0.60237	0.42875	0.010	28.82236	30.00000	Averaged
228 Naphthalene	1.49157	1.22744	0.010	17.70844	40.00000	Averaged

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/17feb16.b/a021705a.d
Lab Smp Id: CCV Client Smp ID: CCV
Inj Date : 17-FEB-2016 12:45
Operator : sab Inst ID: msda.i
Smp Info : 100ml 2759-179A
Misc Info : 50ppbv (100ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/17feb16.b/a15q1218f.m
Meth Date : 17-Feb-2016 13:43 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Cntr062616.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	163888	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	131330			47.82- 107.82	80.13
5.464	5.464 (1.000)	49	211768			110.78- 170.78	129.22
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	679258	25.0000		80.00- 120.00	100.00
6.373	6.373 (1.000)	88	99844			0.00- 45.54	14.70
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	626147	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	297020			20.41- 80.41	47.44
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.015	6.015 (1.101)	65	206036	25.0000	24.455	80.00- 120.00	100.00
6.015	6.015 (1.101)	67	115570			25.18- 85.18	56.09

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.613	7.613 (1.193)	98	669967	25.0000	24.314	80.00- 120.00	100.00
7.613	7.613 (1.193)	70	66040			0.00- 40.33	9.86
7.613	7.613 (1.193)	100	437917			36.65- 96.65	65.36
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	390607	25.0000	25.847	80.00- 120.00	100.00
9.862	9.862 (1.112)	95	436469			90.45- 150.45	111.74
9.862	9.862 (1.112)	176	383825			69.84- 129.84	98.26
9 Propylene					CAS #: 115-07-1		
1.345	1.345 (0.246)	41	139111	50.0000	37.685	80.00- 120.00	100.00
1.345	1.345 (0.246)	42	96559			36.39- 96.39	69.41
1.345	1.345 (0.246)	39	96468			42.19- 102.19	69.35
11 Freon 12					CAS #: 75-71-8		
1.381	1.381 (0.253)	85	418826	50.0000	41.210	80.00- 120.00	100.00
1.381	1.381 (0.253)	87	142089			2.85- 62.85	33.93
15 Freon 114					CAS #: 76-14-2		
1.503	1.503 (0.275)	135	365249	50.0000	43.406	80.00- 120.00	100.00
1.503	1.503 (0.275)	137	117100			2.45- 62.45	32.06
17 Chloromethane					CAS #: 74-87-3		
1.581	1.581 (0.289)	50	123351	50.0000	37.557	80.00- 120.00	100.00
1.581	1.581 (0.289)	52	45036			6.16- 66.16	36.51
23 Butane					CAS #: 106-97-8		
1.667	1.667 (0.305)	58	38858	50.0000	38.581	80.00- 120.00	100.00
1.667	1.667 (0.305)	43	267683			842.59- 902.59	688.87
25 Vinyl Chloride					CAS #: 75-01-4		
1.703	1.703 (0.312)	62	179054	50.0000	43.814	80.00- 120.00	100.00
1.710	1.710 (0.313)	64	56383			0.57- 60.57	31.49
26 1,3-Butadiene					CAS #: 106-99-0		
1.732	1.732 (0.317)	54	157952	50.0000	42.118	80.00- 120.00	100.00
1.732	1.732 (0.317)	39	137697			74.69- 134.69	87.18
29 Bromomethane					CAS #: 74-83-9		
2.090	2.090 (0.382)	94	154282	50.0000	44.374	80.00- 120.00	100.00
2.090	2.090 (0.382)	96	148935			68.21- 128.21	96.53
30 Chloroethane					CAS #: 75-00-3		
2.212	2.212 (0.405)	64	91925	50.0000	44.122	80.00- 120.00	100.00
2.212	2.212 (0.405)	66	27703			1.88- 61.88	30.14

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.212	2.212 (0.405)	49	25908			3.76- 63.76	28.18
31 Isopentane					CAS #: 78-78-4		
2.233	2.233 (0.409)	43	220473	50.0000	39.398	80.00- 120.00	100.00
2.233	2.233 (0.409)	57	159930			32.40- 92.40	72.54
35 Freon 11					CAS #: 75-69-4		
2.462	2.462 (0.451)	101	475013	50.0000	42.140	80.00- 120.00	100.00
2.470	2.470 (0.452)	103	308376			34.09- 94.09	64.92
42 Ethanol					CAS #: 64-17-5		
2.806	2.806 (0.514)	45	78314	50.0000	39.784	80.00- 120.00	100.00
2.806	2.806 (0.514)	43	14234			0.00- 50.11	18.18
2.806	2.806 (0.514)	46	29883			10.10- 70.10	38.16
49 Freon 113					CAS #: 76-13-1		
3.136	3.136 (0.574)	151	357365	50.0000	42.168	80.00- 120.00	100.00
3.136	3.136 (0.574)	153	225709			35.78- 95.78	63.16
3.136	3.136 (0.574)	101	416489			88.30- 148.30	116.54
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.164	3.164 (0.579)	98	117565	50.0000	40.142	80.00- 120.00	100.00
3.164	3.164 (0.579)	96	185658			122.92- 182.92	157.92
3.164	3.164 (0.579)	61	311614			232.20- 292.20	265.06
52 Acetone					CAS #: 67-64-1		
3.329	3.329 (0.609)	58	103675	50.0000	47.130	80.00- 120.00	100.00
3.329	3.329 (0.609)	43	297248			319.99- 379.99	286.71
56 Carbon Disulfide					CAS #: 75-15-0		
3.408	3.408 (0.624)	76	501817	50.0000	44.480	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.501	3.501 (0.641)	45	338556	50.0000	37.133	80.00- 120.00	100.00
3.501	3.501 (0.641)	43	63959			0.00- 47.66	18.89
3.508	3.508 (0.642)	59	14415			0.00- 33.60	4.26
58 3-Chloropropene					CAS #: 107-05-1		
3.666	3.666 (0.671)	76	82308	50.0000	42.002	80.00- 120.00	100.00
3.666	3.666 (0.671)	41	253947			335.86- 395.86	308.53
66 Methylene Chloride					CAS #: 75-09-2		
3.852	3.852 (0.705)	49	245157	50.0000	41.622	80.00- 120.00	100.00
3.859	3.859 (0.706)	84	167947			29.27- 89.27	68.51
3.859	3.859 (0.706)	51	77795			0.00- 59.81	31.73

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
71 tert-Butyl alcohol					CAS #: 75-65-0		
3.981	3.981 (0.729)	59	428696	50.0000	44.339	80.00- 120.00	100.00
3.981	3.981 (0.729)	41	85234			0.00- 51.68	19.88
3.981	3.981 (0.729)	57	44296			0.00- 39.96	10.33
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.088	4.088 (0.748)	73	485780	50.0000	40.640	80.00- 120.00	100.00
4.081	4.081 (0.747)	57	136747			0.00- 57.40	28.15
4.088	4.088 (0.748)	41	121401			0.00- 57.39	24.99
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.110	4.110 (0.752)	98	130184	50.0000	42.830	80.00- 120.00	100.00
4.110	4.110 (0.752)	61	310096			209.93- 269.93	238.20
4.110	4.110 (0.752)	96	205048			130.42- 190.42	157.51
78 Hexane					CAS #: 110-54-3		
4.332	4.332 (0.793)	57	352464	50.0000	42.718	80.00- 120.00	100.00
4.332	4.332 (0.793)	43	216137			39.24- 99.24	61.32
4.332	4.332 (0.793)	86	46555			0.00- 43.98	13.21
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.626	4.626 (0.847)	63	393996	50.0000	46.079	80.00- 120.00	100.00
4.626	4.626 (0.847)	65	122635			1.56- 61.56	31.13
83 Isopropyl ether					CAS #: 108-20-3		
4.611	4.611 (0.844)	45	757128	50.0000	39.458	80.00- 120.00	100.00
4.611	4.611 (0.844)	87	182361			0.00- 51.47	24.09
4.611	4.611 (0.844)	59	88164			0.00- 39.84	11.64
86 Vinyl Acetate					CAS #: 108-05-4		
4.669	4.669 (0.854)	86	53135	50.0000	45.936	80.00- 120.00	100.00
4.669	4.669 (0.854)	43	645932			1404.95-1464.95	1215.64
88 Ethyl-tert-butyl ether					CAS #: 637-92-3		
4.984	4.984 (0.912)	59	743457	50.0000	44.752	80.00- 120.00	100.00
4.984	4.984 (0.912)	87	270462			5.59- 65.59	36.38
4.984	4.984 (0.912)	41	130176			0.00- 49.32	17.51
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.227	5.227 (0.957)	98	149034	50.0000	44.499	80.00- 120.00	100.00
5.227	5.227 (0.957)	96	235288			126.91- 186.91	157.88
5.220	5.220 (0.955)	61	325039			186.69- 246.69	218.10
92 2-Butanone					CAS #: 78-93-3		
5.256	5.256 (0.962)	72	94963	50.0000	42.587	80.00- 120.00	100.00
5.256	5.256 (0.962)	43	474944			510.66- 570.66	500.14

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
92 2-Butanone (continued)							
5.256	5.256 (0.962)	57	37159			8.91- 68.91	39.13
99 Tetrahydrofuran					CAS #: 109-99-9		
5.449	5.449 (0.997)	42	259381	50.0000	38.545	80.00- 120.00	100.00
5.449	5.449 (0.997)	71	88097			0.53- 60.53	33.96
5.457	5.457 (0.999)	72	88506			0.16- 60.16	34.12
100 Chloroform					CAS #: 67-66-3		
5.528	5.528 (1.012)	83	439255	50.0000	43.626	80.00- 120.00	100.00
5.528	5.528 (1.012)	85	282685			36.67- 96.67	64.36
102 Cyclohexane					CAS #: 110-82-7		
5.628	5.628 (1.030)	84	275047	50.0000	42.446	80.00- 120.00	100.00
5.628	5.628 (1.030)	56	391834			121.50- 181.50	142.46
5.628	5.628 (1.030)	41	198456			54.13- 114.13	72.15
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.650	5.650 (1.034)	97	470746	50.0000	39.451	80.00- 120.00	100.00
5.650	5.650 (1.034)	99	297836			32.76- 92.76	63.27
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.772	5.772 (1.056)	119	499668	50.0000	41.329	80.00- 120.00	100.00
5.772	5.772 (1.056)	117	515602			73.53- 133.53	103.19
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.972	5.972 (1.093)	57	1206796	50.0000	43.954	80.00- 120.00	100.00
5.972	5.972 (1.093)	56	366364			0.62- 60.62	30.36
5.972	5.972 (1.093)	41	271660			0.00- 56.92	22.51
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	646188	50.0000	45.213	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	143347			0.00- 53.73	22.18
119 tert-Amyl methyl ether					CAS #: 994-05-8		
6.065	6.065 (1.110)	87	157476	50.0000	43.618	80.00- 120.00	100.00
6.065	6.065 (1.110)	73	579217			352.05- 412.05	367.81
6.065	6.065 (1.110)	55	186380			86.74- 146.74	118.35
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	302128	50.0000	43.174	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	99915			0.51- 60.51	33.07
121 Heptane					CAS #: 142-82-5		
6.144	6.144 (0.963)	71	222932	50.0000	42.935	80.00- 120.00	100.00
6.144	6.144 (0.963)	43	445684			198.93- 258.93	199.92

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
121 Heptane (continued)							
6.144	6.144 (0.963)	57	268776			83.54- 143.54	120.56
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	316010	50.0000	40.323	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	353262			79.66- 139.66	111.79
6.574	6.574 (1.030)	97	203083			34.04- 94.04	64.26
127 Methylcyclohexane					CAS #: 108-87-2		
6.674	6.674 (1.222)	83	406206	50.0000	38.581	80.00- 120.00	100.00
6.674	6.674 (1.222)	98	191242			18.10- 78.10	47.08
6.674	6.674 (1.222)	55	377602			66.76- 126.76	92.96
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.817	6.817 (1.068)	63	286557	50.0000	43.831	80.00- 120.00	100.00
6.817	6.817 (1.068)	62	192203			39.78- 99.78	67.07
6.817	6.817 (1.068)	41	141000			32.16- 92.16	49.20
136 1,4-Dioxane					CAS #: 123-91-1		
6.903	6.903 (1.082)	88	162717	50.0000	42.650	80.00- 120.00	100.00
6.903	6.903 (1.082)	58	128615			49.57- 109.57	79.04
6.903	6.903 (1.082)	57	41285			0.00- 55.12	25.37
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	501263	50.0000	43.564	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	315009			36.86- 96.86	62.84
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.434	7.434 (1.165)	75	418743	50.0000	40.931	80.00- 120.00	100.00
7.434	7.434 (1.165)	77	134651			1.21- 61.21	32.16
7.426	7.426 (1.164)	39	228079			32.66- 92.66	54.47
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.541	7.541 (1.182)	58	236879	50.0000	37.057	80.00- 120.00	100.00
7.541	7.541 (1.182)	43	598360			262.16- 322.16	252.60
7.548	7.548 (1.183)	85	91085			11.61- 71.61	38.45
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	871926	50.0000	41.215	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	510786			28.59- 88.59	58.58
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	372857	50.0000	41.582	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	117689			1.64- 61.64	31.56
7.913	7.913 (0.893)	39	191431			30.00- 90.00	51.34

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.071	8.071 (0.910)	97	314669	50.0000	43.322	80.00- 120.00	100.00
8.071	8.071 (0.910)	99	195753			31.35- 91.35	62.21
8.071	8.071 (0.910)	83	268096			53.39- 113.39	85.20
156 Tetrachloroethene					CAS #: 127-18-4		
8.114	8.114 (0.915)	166	464005	50.0000	42.129	80.00- 120.00	100.00
8.114	8.114 (0.915)	129	356042			48.51- 108.51	76.73
8.114	8.114 (0.915)	131	345046			45.21- 105.21	74.36
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	311991	50.0000	39.729	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	557013			171.14- 231.14	178.53
8.243	8.243 (0.930)	100	57350			0.00- 48.08	18.38
160 Dibromochloromethane					CAS #: 124-48-1		
8.386	8.386 (0.946)	129	629050	50.0000	41.646	80.00- 120.00	100.00
8.386	8.386 (0.946)	127	487111			48.14- 108.14	77.44
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	517724	50.0000	42.114	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	495739			62.49- 122.49	95.75
165 Chlorobenzene					CAS #: 108-90-7		
8.888	8.888 (1.002)	112	759284	50.0000	41.413	80.00- 120.00	100.00
8.888	8.888 (1.002)	114	248523			1.55- 61.55	32.73
8.888	8.888 (1.002)	77	387066			23.72- 83.72	50.98
167 Ethyl Benzene					CAS #: 100-41-4		
8.938	8.938 (1.008)	106	377789	50.0000	40.795	80.00- 120.00	100.00
8.938	8.938 (1.008)	91	1147732			275.74- 335.74	303.80
169 m,p-Xylene					CAS #: 108-38-3		
9.038	9.038 (1.019)	106	475213	50.0000	40.677	80.00- 120.00	100.00
9.038	9.038 (1.019)	91	916595			168.00- 228.00	192.88
171 o-Xylene					CAS #: 95-47-6		
9.382	9.382 (1.058)	106	445267	50.0000	40.364	80.00- 120.00	100.00
9.382	9.382 (1.058)	91	912457			180.86- 240.86	204.92
172 Styrene					CAS #: 100-42-5		
9.403	9.403 (1.061)	104	706756	50.0000	41.026	80.00- 120.00	100.00
9.403	9.403 (1.061)	78	326644			18.40- 78.40	46.22
174 Bromoform					CAS #: 75-25-2		
9.604	9.604 (1.083)	173	632203	50.0000	41.445	80.00- 120.00	100.00

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
174 Bromoform (continued)							
9.604	9.604 (1.083)	171	323436			21.79- 81.79	51.16
175 Cumene					CAS #: 98-82-8		
9.676	9.676 (1.091)	105	1387027	50.0000	40.246	80.00- 120.00	100.00
9.676	9.676 (1.091)	120	390585			0.00- 57.35	28.16
9.668	9.668 (1.090)	51	143976			0.00- 41.41	10.38
181 1,1,2,2-Tetrachloroethane					CAS #: 79-34-5		
9.991	9.991 (1.127)	83	693249	50.0000	42.460	80.00- 120.00	100.00
9.991	9.991 (1.127)	85	450541			35.95- 95.95	64.99
182 Propylbenzene					CAS #: 103-65-1		
10.019	10.019 (1.130)	91	1587073	50.0000	40.668	80.00- 120.00	100.00
10.019	10.019 (1.130)	120	403720			0.00- 54.67	25.44
10.019	10.019 (1.130)	105	59434			0.00- 33.80	3.74
188 4-Ethyltoluene					CAS #: 622-96-8		
10.120	10.120 (1.141)	120	445749	50.0000	41.166	80.00- 120.00	100.00
10.120	10.120 (1.141)	105	1375177			291.69- 351.69	308.51
190 1,3,5-Trimethylbenzene					CAS #: 108-67-8		
10.170	10.170 (1.147)	120	614832	50.0000	40.940	80.00- 120.00	100.00
10.170	10.170 (1.147)	105	1230586			176.78- 236.78	200.15
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.499	10.499 (1.184)	120	545296	50.0000	40.755	80.00- 120.00	100.00
10.499	10.499 (1.184)	105	1145200			184.15- 244.15	210.01
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.786	10.786 (1.217)	146	872832	50.0000	41.208	80.00- 120.00	100.00
10.786	10.786 (1.217)	148	556307			34.28- 94.28	63.74
10.786	10.786 (1.217)	111	332639			10.08- 70.08	38.11
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.865	10.865 (1.225)	146	874714	50.0000	40.893	80.00- 120.00	100.00
10.865	10.865 (1.225)	148	566192			34.75- 94.75	64.73
10.865	10.865 (1.225)	111	321083			8.94- 68.94	36.71
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.986	10.986 (1.239)	91	1001642	50.0000	38.855	80.00- 120.00	100.00
10.986	10.986 (1.239)	126	239125			0.00- 53.59	23.87
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.194	11.194 (1.263)	146	828334	50.0000	41.044	80.00- 120.00	100.00
11.194	11.194 (1.263)	148	528338			33.27- 93.27	63.78

RT	EXP RT (REL RT)	MASS	RESPONSE	AMOUNTS CAL-AMT (PPBV)	AMOUNTS ON-COL (PPBV)	TARGET RANGE	RATIO
214 1,2-Dichlorobenzene (continued)							
11.194	11.194 (1.263)	111	327979			11.15- 71.15	39.60
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.627	12.627 (1.424)	180	684822	50.0000	37.845	80.00- 120.00	100.00
12.627	12.627 (1.424)	182	655663			63.48- 123.48	95.74
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.720	12.720 (1.435)	225	536926	50.0000	35.589	80.00- 120.00	100.00
12.720	12.720 (1.435)	223	332250			32.11- 92.11	61.88
228 Naphthalene					CAS #: 91-20-3		
12.906	12.906 (1.456)	128	153711	5.00000	4.114	80.00- 120.00	100.00
12.906	12.906 (1.456)	127	19299			0.00- 43.17	12.56

Report Date: 17-Feb-2016 13:43

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021705a.d
Lab Smp Id: CCV
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 50ppbv (100ppbv)

Calibration Date: 17-FEB-2016
Calibration Time: 12:45
Client Smp ID: CCV
Level: LOW
Sample Type: AIR

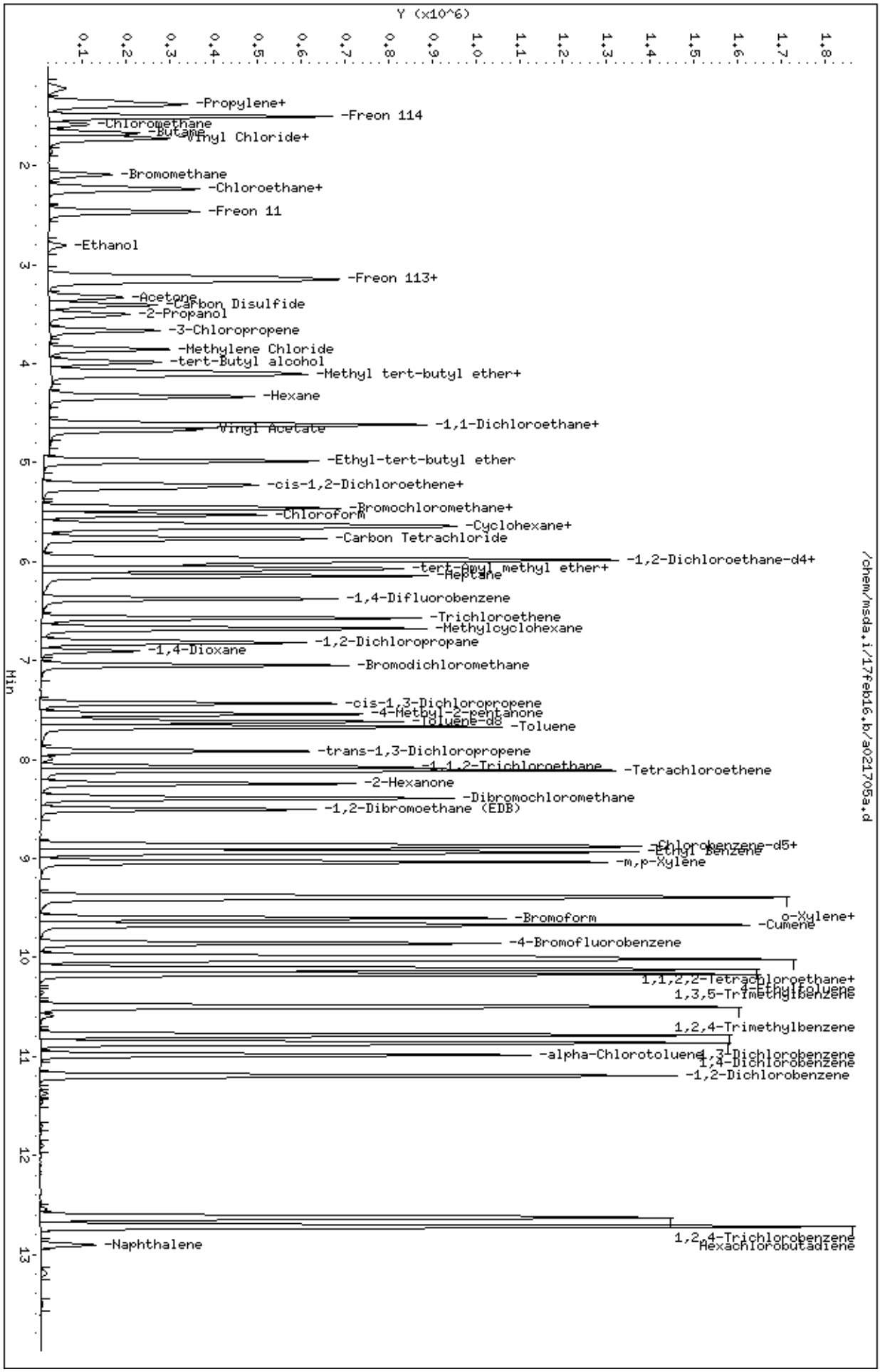
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	163888	98333	229443	163888	0.00
123 1,4-Difluorobenze	679258	407555	950961	679258	0.00
163 Chlorobenzene-d5	626147	375688	876606	626147	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/17feb16.b/a021705a.d
Date : 17-FEB-2016 12:45
Client ID: CCV
Sample Info: 100ml 2759-179A
Column phase: RTX-624

Instrument: msda.i
Operator: sab
Column diameter: 0.25



Page 1

EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	LCS		
Lab ID:	1602250A-05A	**Date/Time Analyzed:**	2/17/16 11:37 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a021703c

Compound	CAS#	%Recovery
Benzene	71-43-2	92
Ethyl Benzene	100-41-4	85
m,p-Xylene	108-38-3	86
o-Xylene	95-47-6	87
Toluene	108-88-3	84

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	96
4-Bromofluorobenzene	460-00-4	74-122	104
Toluene-d8	2037-26-5	82-119	96

* % Recovery is calculated using unrounded analytical results.

Report Date: 17-Feb-2016 13:44

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCS
Client Smp ID: LCS
Level: LOW
Operator: sab
Data Type: MS DATA
SampleType: LCS
SpikeList File: Cont062616.spk
Quant Type: ISTD
Sublist File: Cntr062616.sub
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 50ppbv (100ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	50.000	38.422	76.84	57-143
11 Freon 12	50.000	43.582	87.16	71-141
15 Freon 114	50.000	47.022	94.04	76-136
17 Chloromethane	50.000	39.103	78.21	49-152
23 Butane	50.000	40.001	80.00	51-147
25 Vinyl Chloride	50.000	46.663	93.33	60-143
26 1,3-Butadiene	50.000	41.745	83.49	59-133
29 Bromomethane	50.000	45.978	91.96	71-135
30 Chloroethane	50.000	49.348	98.70	70-139
31 Isopentane	50.000	40.538	81.08	63-140
35 Freon 11	50.000	44.878	89.76	71-139
42 Ethanol	50.000	41.824	83.65	62-144
49 Freon 113	50.000	43.814	87.63	68-127
50 1,1-Dichloroethene	50.000	41.245	82.49	66-132
52 Acetone	50.000	48.293	96.59	61-137
56 Carbon Disulfide	50.000	40.402	80.80	59-116
57 2-Propanol	50.000	40.023	80.05	68-145
58 3-Chloropropene	50.000	40.872	81.74	65-124
66 Methylene Chloride	50.000	43.136	86.27	65-141
72 Methyl tert-butyl	50.000	41.426	82.85	66-127
73 trans-1,2-Dichloro	50.000	38.776	77.55	61-116
78 Hexane	50.000	44.248	88.50	68-132
82 1,1-Dichloroethane	50.000	48.072	96.14	69-135
86 Vinyl Acetate	50.000	46.412	92.82	61-140
91 cis-1,2-Dichloroet	50.000	50.077	100.15	73-143
92 2-Butanone	50.000	44.363	88.73	67-134
99 Tetrahydrofuran	50.000	39.408	78.82	62-137
100 Chloroform	50.000	45.019	90.04	70-132
103 1,1,1-Trichloroeth	50.000	40.596	81.19	69-131
106 Carbon Tetrachlori	50.000	42.672	85.35	71-131
102 Cyclohexane	50.000	45.262	90.52	73-128
113 2,2,4-Trimethylpen	50.000	46.210	92.42	69-141
116 Benzene	50.000	46.180	92.36	69-135

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	50.000	44.711	89.42	65-143
121 Heptane	50.000	44.341	88.68	69-134
125 Trichloroethene	50.000	45.337	90.67	69-134
127 Methylcyclohexane	50.000	40.088	80.18	69-132
132 1,2-Dichloropropan	50.000	44.941	89.88	64-139
136 1,4-Dioxane	50.000	42.721	85.44	68-136
138 Bromodichlorometha	50.000	46.286	92.57	72-138
144 cis-1,3-Dichloropr	50.000	40.281	80.56	64-128
145 4-Methyl-2-pentano	50.000	38.447	76.89	62-146
147 Toluene	50.000	42.014	84.03	67-133
150 trans-1,3-Dichloro	50.000	43.574	87.15	70-136
155 1,1,2-Trichloroeth	50.000	45.883	91.77	71-131
156 Tetrachloroethene	50.000	44.810	89.62	69-130
158 2-Hexanone	50.000	43.475	86.95	64-153
160 Dibromochlorometha	50.000	44.296	88.59	71-136
161 1,2-Dibromoethane	50.000	44.668	89.34	73-133
165 Chlorobenzene	50.000	43.536	87.07	72-128
167 Ethyl Benzene	50.000	42.673	85.35	74-131
169 m,p-Xylene	50.000	42.758	85.52	76-134
171 o-Xylene	50.000	43.731	87.46	74-140
172 Styrene	50.000	41.535	83.07	70-147
174 Bromoform	65.000	57.896	89.07	71-138
175 Cumene	50.000	42.548	85.10	75-138
181 1,1,2,2-Tetrachlor	50.000	40.710	81.42	63-142
182 Propylbenzene	50.000	43.932	87.86	76-139
188 4-Ethyltoluene	50.000	41.827	83.65	71-141
190 1,3,5-Trimethylben	50.000	44.191	88.38	74-141
196 1,2,4-Trimethylben	50.000	42.679	85.36	70-143
208 1,3-Dichlorobenzen	50.000	43.893	87.79	73-136
209 1,4-Dichlorobenzen	50.000	42.744	85.49	73-137
212 alpha-Chlorotoluen	50.000	42.716	85.43	61-161
214 1,2-Dichlorobenzen	50.000	42.971	85.94	72-137
226 1,2,4-Trichloroben	50.000	43.443	86.89	56-159
227 Hexachlorobutadien	50.000	41.727	83.45	57-158
228 Naphthalene	5.000	4.324	86.47	20-169

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	24.038	96.15	79-128
$ 146 Toluene-d8	25.000	23.943	95.77	82-119
$ 177 4-Bromofluorobenze	25.000	25.958	103.83	74-122

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/17feb16.b/a021703c.d
Lab Smp Id: LCS Client Smp ID: LCS
Inj Date : 17-FEB-2016 11:37
Operator : sab Inst ID: msda.i
Smp Info : 100mL 2759-107A
Misc Info : 50ppbv (100ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/17feb16.b/a15q1218f.m
Meth Date : 17-Feb-2016 13:43 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 14 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Cntr062616.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	161695	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	128904			47.82- 107.82	79.72
5.464	5.464 (1.000)	49	208902			110.78- 170.78	129.20
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.381	6.381 (1.000)	114	674667	25.0000		80.00- 120.00	100.00
6.381	6.373 (1.000)	88	98003			0.00- 45.54	14.53
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	603480	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	288943			20.41- 80.41	47.88
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.015	6.015 (1.101)	65	199813	24.0377	24.038	80.00- 120.00	100.00
6.015	6.015 (1.101)	67	109879			25.18- 85.18	54.99

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8						CAS #: 2037-26-5		
7.613	7.613	(1.193)	98	655292	23.9430	23.943	80.00- 120.00	100.00
7.613	7.613	(1.193)	70	64975			0.00- 40.33	9.92
7.613	7.613	(1.193)	100	426866			36.65- 96.65	65.14
$ 177 4-Bromofluorobenzene						CAS #: 460-00-4		
9.855	9.862	(1.111)	174	378084	25.9582	25.958	80.00- 120.00	100.00
9.855	9.862	(1.111)	95	419854			90.45- 150.45	111.05
9.855	9.862	(1.111)	176	368087			69.84- 129.84	97.36
9 Propylene						CAS #: 115-07-1		
1.352	1.345	(0.247)	41	139932	38.4219	38.422	80.00- 120.00	100.00
1.352	1.345	(0.247)	42	93261			36.39- 96.39	66.65
1.352	1.345	(0.247)	39	98340			42.19- 102.19	70.28
11 Freon 12						CAS #: 75-71-8		
1.388	1.381	(0.254)	85	437010	43.5824	43.582	80.00- 120.00	100.00
1.388	1.381	(0.254)	87	148229			2.85- 62.85	33.92
15 Freon 114						CAS #: 76-14-2		
1.510	1.503	(0.276)	135	390379	47.0217	47.022	80.00- 120.00	100.00
1.510	1.503	(0.276)	137	124505			2.45- 62.45	31.89
17 Chloromethane						CAS #: 74-87-3		
1.589	1.581	(0.291)	50	126710	39.1034	39.103	80.00- 120.00	100.00
1.589	1.581	(0.291)	52	47231			6.16- 66.16	37.27
23 Butane						CAS #: 106-97-8		
1.674	1.667	(0.306)	58	39749	40.0013	40.001	80.00- 120.00	100.00
1.667	1.667	(0.305)	43	283486			842.59- 902.59	713.19
25 Vinyl Chloride						CAS #: 75-01-4		
1.710	1.703	(0.313)	62	188145	46.6630	46.663	80.00- 120.00	100.00
1.710	1.710	(0.313)	64	58541			0.57- 60.57	31.11
26 1,3-Butadiene						CAS #: 106-99-0		
1.732	1.732	(0.317)	54	154457	41.7449	41.745	80.00- 120.00	100.00
1.732	1.732	(0.317)	39	139311			74.69- 134.69	90.19
29 Bromomethane						CAS #: 74-83-9		
2.097	2.090	(0.384)	94	157720	45.9784	45.978	80.00- 120.00	100.00
2.097	2.090	(0.384)	96	151269			68.21- 128.21	95.91
30 Chloroethane						CAS #: 75-00-3		
2.219	2.212	(0.406)	64	101438	49.3482	49.348	80.00- 120.00	100.00
2.219	2.212	(0.406)	66	28290			1.88- 61.88	27.89

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.219	2.212 (0.406)	49	28710			3.76- 63.76	28.30
31 Isopentane					CAS #: 78-78-4		
2.240	2.233 (0.410)	43	223820	40.5382	40.538	80.00- 120.00	100.00
2.240	2.233 (0.410)	57	165403			32.40- 92.40	73.90
35 Freon 11					CAS #: 75-69-4		
2.470	2.462 (0.452)	101	499108	44.8785	44.878	80.00- 120.00	100.00
2.470	2.470 (0.452)	103	325071			34.09- 94.09	65.13
42 Ethanol					CAS #: 64-17-5		
2.806	2.806 (0.514)	45	81227	41.8236	41.824	80.00- 120.00	100.00
2.806	2.806 (0.514)	43	15687			0.00- 50.11	19.31
2.806	2.806 (0.514)	46	30561			10.10- 70.10	37.62
49 Freon 113					CAS #: 76-13-1		
3.136	3.136 (0.574)	151	366348	43.8142	43.814	80.00- 120.00	100.00
3.136	3.136 (0.574)	153	234518			35.78- 95.78	64.02
3.136	3.136 (0.574)	101	423283			88.30- 148.30	115.54
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.164	3.164 (0.579)	98	119180	41.2449	41.245	80.00- 120.00	100.00
3.164	3.164 (0.579)	96	191145			122.92- 182.92	160.38
3.164	3.164 (0.579)	61	320783			232.20- 292.20	269.16
52 Acetone					CAS #: 67-64-1		
3.329	3.329 (0.609)	58	104813	48.2934	48.293	80.00- 120.00	100.00
3.329	3.329 (0.609)	43	304953			319.99- 379.99	290.95
56 Carbon Disulfide					CAS #: 75-15-0		
3.408	3.408 (0.624)	76	449704	40.4017	40.402	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.508	3.501 (0.642)	45	360024	40.0234	40.023	80.00- 120.00	100.00
3.501	3.501 (0.641)	43	66729			0.00- 47.66	18.53
3.501	3.508 (0.641)	59	16004			0.00- 33.60	4.45
58 3-Chloropropene					CAS #: 107-05-1		
3.673	3.666 (0.672)	76	79022	40.8724	40.872	80.00- 120.00	100.00
3.673	3.666 (0.672)	41	249091			335.86- 395.86	315.22
66 Methylene Chloride					CAS #: 75-09-2		
3.859	3.852 (0.706)	49	250676	43.1364	43.136	80.00- 120.00	100.00
3.859	3.859 (0.706)	84	169406			29.27- 89.27	67.58
3.859	3.859 (0.706)	51	80077			0.00- 59.81	31.94

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.088	4.088 (0.748)	73	488550	41.4260	41.426	80.00- 120.00	100.00
4.088	4.081 (0.748)	57	144304			0.00- 57.40	29.54
4.088	4.088 (0.748)	41	126232			0.00- 57.39	25.84
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.117	4.110 (0.754)	98	116285	38.7762	38.776	80.00- 120.00	100.00
4.110	4.110 (0.752)	61	276087			209.93- 269.93	237.42
4.110	4.110 (0.752)	96	179338			130.42- 190.42	154.22
78 Hexane					CAS #: 110-54-3		
4.332	4.332 (0.793)	57	360208	44.2482	44.248	80.00- 120.00	100.00
4.332	4.332 (0.793)	43	220463			39.24- 99.24	61.20
4.332	4.332 (0.793)	86	47126			0.00- 43.98	13.08
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.626	4.626 (0.847)	63	405534	48.0721	48.072	80.00- 120.00	100.00
4.626	4.626 (0.847)	65	123300			1.56- 61.56	30.40
86 Vinyl Acetate					CAS #: 108-05-4		
4.676	4.669 (0.856)	86	52968	46.4124	46.412	80.00- 120.00	100.00
4.676	4.669 (0.856)	43	633333			1404.95-1464.95	1195.69
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.227	5.227 (0.957)	98	165471	50.0774	50.077	80.00- 120.00	100.00
5.227	5.227 (0.957)	96	263650			126.91- 186.91	159.33
5.227	5.220 (0.957)	61	365860			186.69- 246.69	221.10
92 2-Butanone					CAS #: 78-93-3		
5.256	5.256 (0.962)	72	97600	44.3633	44.363	80.00- 120.00	100.00
5.256	5.256 (0.962)	43	477750			510.66- 570.66	489.50
5.256	5.256 (0.962)	57	40562			8.91- 68.91	41.56
99 Tetrahydrofuran					CAS #: 109-99-9		
5.457	5.449 (0.999)	42	261639	39.4081	39.408	80.00- 120.00	100.00
5.457	5.449 (0.999)	71	88891			0.53- 60.53	33.97
5.457	5.457 (0.999)	72	89643			0.16- 60.16	34.26
100 Chloroform					CAS #: 67-66-3		
5.528	5.528 (1.012)	83	447217	45.0192	45.019	80.00- 120.00	100.00
5.528	5.528 (1.012)	85	288961			36.67- 96.67	64.61
102 Cyclohexane					CAS #: 110-82-7		
5.636	5.628 (1.031)	84	289364	45.2617	45.262	80.00- 120.00	100.00
5.628	5.628 (1.030)	56	402944			121.50- 181.50	139.25
5.628	5.628 (1.030)	41	202757			54.13- 114.13	70.07

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.657	5.650 (1.035)	97	477927	40.5965	40.596	80.00- 120.00	100.00
5.657	5.650 (1.035)	99	305734			32.76- 92.76	63.97
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.772	5.772 (1.056)	119	509012	42.6725	42.672	80.00- 120.00	100.00
5.772	5.772 (1.056)	117	519248			73.53- 133.53	102.01
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.972	5.972 (1.093)	57	1251771	46.2101	46.210	80.00- 120.00	100.00
5.972	5.972 (1.093)	56	394104			0.62- 60.62	31.48
5.972	5.972 (1.093)	41	296662			0.00- 56.92	23.70
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	655559	46.1805	46.180	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	148004			0.00- 53.73	22.58
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	310771	44.7110	44.711	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	100475			0.51- 60.51	32.33
121 Heptane					CAS #: 142-82-5		
6.144	6.144 (0.963)	71	228676	44.3410	44.341	80.00- 120.00	100.00
6.144	6.144 (0.963)	43	447286			198.93- 258.93	195.60
6.144	6.144 (0.963)	57	277305			83.54- 143.54	121.27
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	352909	45.3373	45.337	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	398400			79.66- 139.66	112.89
6.574	6.574 (1.030)	97	233159			34.04- 94.04	66.07
127 Methylcyclohexane					CAS #: 108-87-2		
6.674	6.674 (1.222)	83	416420	40.0877	40.088	80.00- 120.00	100.00
6.674	6.674 (1.222)	98	195594			18.10- 78.10	46.97
6.674	6.674 (1.222)	55	382095			66.76- 126.76	91.76
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.818	6.817 (1.068)	63	291829	44.9411	44.941	80.00- 120.00	100.00
6.818	6.817 (1.068)	62	197894			39.78- 99.78	67.81
6.818	6.817 (1.068)	41	147244			32.16- 92.16	50.46
136 1,4-Dioxane					CAS #: 123-91-1		
6.903	6.903 (1.082)	88	161887	42.7208	42.721	80.00- 120.00	100.00
6.903	6.903 (1.082)	58	127584			49.57- 109.57	78.81
6.903	6.903 (1.082)	57	40379			0.00- 55.12	24.94

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	528986	46.2860	46.286	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	328864			36.86- 96.86	62.17
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.434	7.434 (1.165)	75	409308	40.2810	40.281	80.00- 120.00	100.00
7.434	7.434 (1.165)	77	125334			1.21- 61.21	30.62
7.434	7.426 (1.165)	39	212728			32.66- 92.66	51.97
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.541	7.541 (1.182)	58	244102	38.4468	38.447	80.00- 120.00	100.00
7.541	7.541 (1.182)	43	608737			262.16- 322.16	249.38
7.548	7.548 (1.183)	85	92844			11.61- 71.61	38.03
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	882838	42.0144	42.014	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	519064			28.59- 88.59	58.79
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	376583	43.5746	43.574	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	117980			1.64- 61.64	31.33
7.913	7.913 (0.893)	39	197703			30.00- 90.00	52.50
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.071	8.071 (0.910)	97	321206	45.8829	45.883	80.00- 120.00	100.00
8.071	8.071 (0.910)	99	202230			31.35- 91.35	62.96
8.071	8.071 (0.910)	83	274611			53.39- 113.39	85.49
156 Tetrachloroethene					CAS #: 127-18-4		
8.114	8.114 (0.915)	166	475667	44.8097	44.810	80.00- 120.00	100.00
8.114	8.114 (0.915)	129	363978			48.51- 108.51	76.52
8.114	8.114 (0.915)	131	355205			45.21- 105.21	74.68
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	329046	43.4748	43.475	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	591773			171.14- 231.14	179.85
8.243	8.243 (0.930)	100	61186			0.00- 48.08	18.59
160 Dibromochloromethane					CAS #: 124-48-1		
8.393	8.386 (0.947)	129	644848	44.2960	44.296	80.00- 120.00	100.00
8.386	8.386 (0.946)	127	501156			48.14- 108.14	77.72
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	529244	44.6676	44.668	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	510510			62.49- 122.49	96.46

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
165 Chlorobenzene						CAS #: 108-90-7		
8.888	8.888	(1.002)	112	769314	43.5360	43.536	80.00- 120.00	100.00
8.888	8.888	(1.002)	114	250389			1.55- 61.55	32.55
8.888	8.888	(1.002)	77	387289			23.72- 83.72	50.34
167 Ethyl Benzene						CAS #: 100-41-4		
8.938	8.938	(1.008)	106	380870	42.6729	42.673	80.00- 120.00	100.00
8.938	8.938	(1.008)	91	1156135			275.74- 335.74	303.55
169 m,p-Xylene						CAS #: 108-38-3		
9.038	9.038	(1.019)	106	481439	42.7578	42.758	80.00- 120.00	100.00
9.038	9.038	(1.019)	91	939169			168.00- 228.00	195.08
171 o-Xylene						CAS #: 95-47-6		
9.382	9.382	(1.058)	106	464936	43.7306	43.731	80.00- 120.00	100.00
9.382	9.382	(1.058)	91	944462			180.86- 240.86	203.14
172 Styrene						CAS #: 100-42-5		
9.403	9.403	(1.061)	104	689614	41.5349	41.535	80.00- 120.00	100.00
9.396	9.403	(1.060)	78	332077			18.40- 78.40	48.15
174 Bromoform						CAS #: 75-25-2		
9.604	9.604	(1.083)	173	851178	57.8957	57.896	80.00- 120.00	100.00
9.604	9.604	(1.083)	171	439331			21.79- 81.79	51.61
175 Cumene						CAS #: 98-82-8		
9.668	9.676	(1.090)	105	1413309	42.5484	42.548	80.00- 120.00	100.00
9.668	9.676	(1.090)	120	393858			0.00- 57.35	27.87
9.668	9.668	(1.090)	51	145153			0.00- 41.41	10.27
181 1,1,2,2-Tetrachloroethane						CAS #: 79-34-5		
9.984	9.991	(1.126)	83	640626	40.7104	40.710	80.00- 120.00	100.00
9.984	9.991	(1.126)	85	416678			35.95- 95.95	65.04
182 Propylbenzene						CAS #: 103-65-1		
10.019	10.019	(1.130)	91	1652419	43.9325	43.932	80.00- 120.00	100.00
10.019	10.019	(1.130)	120	420368			0.00- 54.67	25.44
10.019	10.019	(1.130)	105	64711			0.00- 33.80	3.92
188 4-Ethyltoluene						CAS #: 622-96-8		
10.113	10.120	(1.141)	120	436513	41.8269	41.827	80.00- 120.00	100.00
10.113	10.120	(1.141)	105	1462416			291.69- 351.69	335.02
190 1,3,5-Trimethylbenzene						CAS #: 108-67-8		
10.163	10.170	(1.146)	120	639635	44.1910	44.191	80.00- 120.00	100.00
10.163	10.170	(1.146)	105	1194139			176.78- 236.78	186.69

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.492	10.499 (1.183)	120	550364	42.6790	42.679	80.00- 120.00	100.00
10.492	10.499 (1.183)	105	1156918			184.15- 244.15	210.21
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.779	10.786 (1.216)	146	896040	43.8931	43.893	80.00- 120.00	100.00
10.779	10.786 (1.216)	148	561801			34.28- 94.28	62.70
10.779	10.786 (1.216)	111	341506			10.08- 70.08	38.11
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.857	10.865 (1.225)	146	881202	42.7442	42.744	80.00- 120.00	100.00
10.857	10.865 (1.225)	148	562990			34.75- 94.75	63.89
10.857	10.865 (1.225)	111	323554			8.94- 68.94	36.72
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.979	10.986 (1.238)	91	1061306	42.7157	42.716	80.00- 120.00	100.00
10.979	10.986 (1.238)	126	247702			0.00- 53.59	23.34
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.187	11.194 (1.262)	146	835838	42.9713	42.971	80.00- 120.00	100.00
11.187	11.194 (1.262)	148	535698			33.27- 93.27	64.09
11.187	11.194 (1.262)	111	329938			11.15- 71.15	39.47
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.612	12.627 (1.423)	180	757653	43.4430	43.443	80.00- 120.00	100.00
12.612	12.627 (1.423)	182	719837			63.48- 123.48	95.01
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.706	12.720 (1.433)	225	606741	41.7269	41.727	80.00- 120.00	100.00
12.706	12.720 (1.433)	223	377769			32.11- 92.11	62.26
228 Naphthalene					CAS #: 91-20-3		
12.892	12.906 (1.454)	128	155670	4.32353	4.324	80.00- 120.00	100.00
12.892	12.906 (1.454)	127	21404			0.00- 43.17	13.75

Report Date: 17-Feb-2016 13:44

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021703c.d
Lab Smp Id: LCS
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 50ppbv (100ppbv)

Calibration Date: 17-FEB-2016
Calibration Time: 12:45
Client Smp ID: LCS
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	163888	98333	229443	161695	-1.34
123 1,4-Difluorobenze	679258	407555	950961	674667	-0.68
163 Chlorobenzene-d5	626147	375688	876606	603480	-3.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/17feb16.b/a021703c.d

Date : 17-FEB-2016 11:37

Client ID: LCS

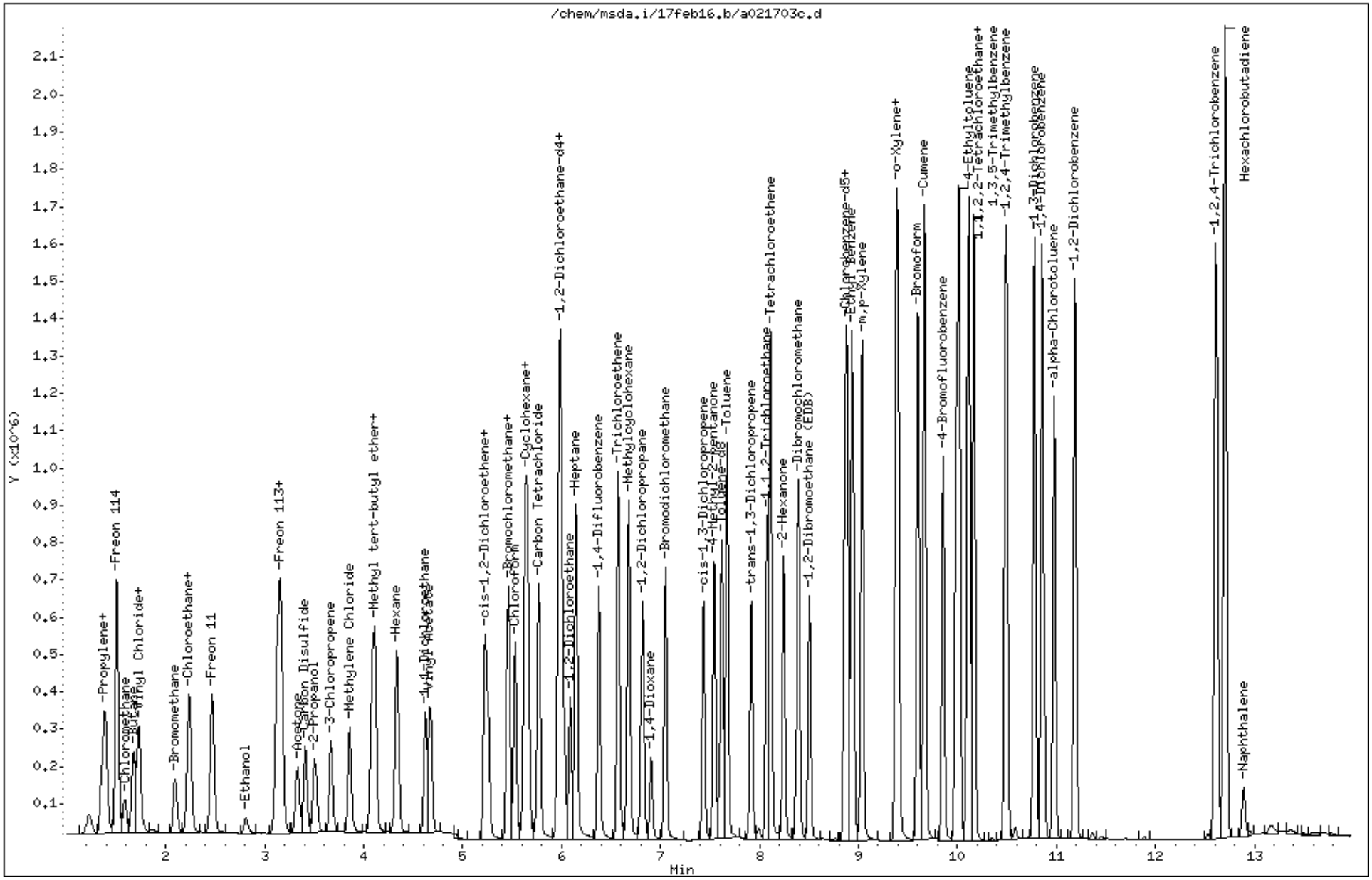
Sample Info: 100mL 2759-107A

Column phase: RTX-624

Instrument: msda.i

Operator: sab

Column diameter: 0.25



EPA METHOD TO-15 GC/MS FULL SCAN
Cannon AFB

eurofins | Air Toxics

Client ID:	LCSD		
Lab ID:	1602250A-05AA	**Date/Time Analyzed:**	2/17/16 12:03 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	msda.i / a021704c

Compound	CAS#	%Recovery
Benzene	71-43-2	93
Ethyl Benzene	100-41-4	86
m,p-Xylene	108-38-3	87
o-Xylene	95-47-6	88
Toluene	108-88-3	84

D: Analyte not within the DoD scope of accreditation.

Surrogates	CAS#	Limits	%Recovery
1,2-Dichloroethane-d4	17060-07-0	79-128	96
4-Bromofluorobenzene	460-00-4	74-122	105
Toluene-d8	2037-26-5	82-119	96

* % Recovery is calculated using unrounded analytical results.

Report Date: 17-Feb-2016 13:44

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 17feb16
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: LCSD
Client Smp ID: LCSD
Level: LOW
Operator: sab
Data Type: MS DATA
SampleType: LCSD
SpikeList File: Cont062616.spk
Quant Type: ISTD
Sublist File: Cntr062616.sub
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 50ppbv (100ppbv)

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
9 Propylene	50.000	38.569	77.14	57-143
11 Freon 12	50.000	43.516	87.03	71-141
15 Freon 114	50.000	46.213	92.43	76-136
17 Chloromethane	50.000	38.979	77.96	49-152
23 Butane	50.000	38.926	77.85	51-147
25 Vinyl Chloride	50.000	46.684	93.37	60-143
26 1,3-Butadiene	50.000	40.028	80.06	59-133
29 Bromomethane	50.000	44.523	89.05	71-135
30 Chloroethane	50.000	47.580	95.16	70-139
31 Isopentane	50.000	38.895	77.79	63-140
35 Freon 11	50.000	44.244	88.49	71-139
42 Ethanol	50.000	41.722	83.44	62-144
49 Freon 113	50.000	42.866	85.73	68-127
50 1,1-Dichloroethene	50.000	41.241	82.48	66-132
52 Acetone	50.000	47.770	95.54	61-137
56 Carbon Disulfide	50.000	40.199	80.40	59-116
57 2-Propanol	50.000	39.787	79.57	68-145
58 3-Chloropropene	50.000	39.359	78.72	65-124
66 Methylene Chloride	50.000	43.370	86.74	65-141
72 Methyl tert-butyl	50.000	41.244	82.49	66-127
73 trans-1,2-Dichloro	50.000	37.174	74.35	61-116
78 Hexane	50.000	44.175	88.35	68-132
82 1,1-Dichloroethane	50.000	47.615	95.23	69-135
86 Vinyl Acetate	50.000	47.380	94.76	61-140
91 cis-1,2-Dichloroet	50.000	51.690	103.38	73-143
92 2-Butanone	50.000	44.648	89.30	67-134
99 Tetrahydrofuran	50.000	39.183	78.37	62-137
100 Chloroform	50.000	44.745	89.49	70-132
103 1,1,1-Trichloroeth	50.000	39.446	78.89	69-131
106 Carbon Tetrachlori	50.000	42.887	85.77	71-131
102 Cyclohexane	50.000	44.716	89.43	73-128
113 2,2,4-Trimethylpen	50.000	45.763	91.53	69-141
116 Benzene	50.000	46.619	93.24	69-135

SPIKE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
120 1,2-Dichloroethane	50.000	44.985	89.97	65-143
121 Heptane	50.000	44.225	88.45	69-134
125 Trichloroethene	50.000	45.066	90.13	69-134
127 Methylcyclohexane	50.000	39.533	79.07	69-132
132 1,2-Dichloropropan	50.000	44.484	88.97	64-139
136 1,4-Dioxane	50.000	43.074	86.15	68-136
138 Bromodichlorometha	50.000	45.954	91.91	72-138
144 cis-1,3-Dichloropr	50.000	40.182	80.36	64-128
145 4-Methyl-2-pentano	50.000	38.702	77.40	62-146
147 Toluene	50.000	42.092	84.18	67-133
150 trans-1,3-Dichloro	50.000	43.725	87.45	70-136
155 1,1,2-Trichloroeth	50.000	45.629	91.26	71-131
156 Tetrachloroethene	50.000	44.631	89.26	69-130
158 2-Hexanone	50.000	43.399	86.80	64-153
160 Dibromochlorometha	50.000	44.371	88.74	71-136
161 1,2-Dibromoethane	50.000	44.438	88.88	73-133
165 Chlorobenzene	50.000	43.653	87.31	72-128
167 Ethyl Benzene	50.000	43.277	86.55	74-131
169 m,p-Xylene	50.000	43.444	86.89	76-134
171 o-Xylene	50.000	43.987	87.97	74-140
172 Styrene	50.000	41.910	83.82	70-147
174 Bromoform	65.000	57.717	88.80	71-138
175 Cumene	50.000	42.384	84.77	75-138
181 1,1,2,2-Tetrachlor	50.000	40.902	81.80	63-142
182 Propylbenzene	50.000	43.974	87.95	76-139
188 4-Ethyltoluene	50.000	44.045	88.09	71-141
190 1,3,5-Trimethylben	50.000	42.691	85.38	74-141
196 1,2,4-Trimethylben	50.000	43.487	86.97	70-143
208 1,3-Dichlorobenzen	50.000	43.521	87.04	73-136
209 1,4-Dichlorobenzen	50.000	43.372	86.74	73-137
212 alpha-Chlorotoluen	50.000	42.336	84.67	61-161
214 1,2-Dichlorobenzen	50.000	43.638	87.28	72-137
226 1,2,4-Trichloroben	50.000	46.271	92.54	56-159
227 Hexachlorobutadien	50.000	44.056	88.11	57-158
228 Naphthalene	5.000	4.597	91.95	20-169

SURROGATE COMPOUND	CONC ADDED PPBV	CONC RECOVERED PPBV	% RECOVERED	LIMITS
$ 117 1,2-Dichloroethane	25.000	23.967	95.87	79-128
$ 146 Toluene-d8	25.000	24.038	96.15	82-119
$ 177 4-Bromofluorobenze	25.000	26.275	105.10	74-122

Eurofins Air Toxics Inc.

EPA TO-15/MODIFIED EPA TO14A

Data file : /chem/msda.i/17feb16.b/a021704c.d
Lab Smp Id: LCSD Client Smp ID: LCSD
Inj Date : 17-FEB-2016 12:03
Operator : sab Inst ID: msda.i
Smp Info : 100mL 2759-107A
Misc Info : 50ppbv (100ppbv)
Comment : STANDARD LEVEL GC/MS
Method : /chem/msda.i/17feb16.b/a15q1218f.m
Meth Date : 17-Feb-2016 13:43 sblack Quant Type: ISTD
Cal Date : 27-JAN-2016 16:01 Cal File: a012708.d
Als bottle: 14 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: Cntr062616.sub
Target Version: 3.50 Sample Matrix: AIR
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
* 98 Bromochloromethane					CAS #: 74-97-5		
5.464	5.464 (1.000)	130	163918	25.0000		80.00- 120.00	100.00
5.464	5.464 (1.000)	128	130887			47.82- 107.82	79.85
5.464	5.464 (1.000)	49	212077			110.78- 170.78	129.38
* 123 1,4-Difluorobenzene					CAS #: 540-36-3		
6.380	6.381 (1.000)	114	681193	25.0000		80.00- 120.00	100.00
6.380	6.373 (1.000)	88	96540			0.00- 45.54	14.17
* 163 Chlorobenzene-d5					CAS #: 3114-55-4		
8.866	8.866 (1.000)	117	611163	25.0000		80.00- 120.00	100.00
8.859	8.859 (1.000)	82	297214			20.41- 80.41	48.63
$ 117 1,2-Dichloroethane-d4					CAS #: 17060-07-0		
6.022	6.015 (1.102)	65	201963	23.9668	23.967	80.00- 120.00	100.00
6.022	6.015 (1.102)	67	110509			25.18- 85.18	54.72

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
$ 146 Toluene-d8					CAS #: 2037-26-5		
7.620	7.613 (1.194)	98	664241	24.0375	24.038	80.00- 120.00	100.00
7.613	7.613 (1.193)	70	63542			0.00- 40.33	9.57
7.620	7.613 (1.194)	100	436524			36.65- 96.65	65.72
$ 177 4-Bromofluorobenzene					CAS #: 460-00-4		
9.862	9.862 (1.112)	174	387578	26.2755	26.275	80.00- 120.00	100.00
9.855	9.862 (1.111)	95	428218			90.45- 150.45	110.49
9.862	9.862 (1.112)	176	376257			69.84- 129.84	97.08
9 Propylene					CAS #: 115-07-1		
1.359	1.345 (0.249)	41	142399	38.5690	38.569	80.00- 120.00	100.00
1.352	1.345 (0.247)	42	94305			36.39- 96.39	66.23
1.352	1.345 (0.247)	39	99365			42.19- 102.19	69.78
11 Freon 12					CAS #: 75-71-8		
1.388	1.381 (0.254)	85	442341	43.5158	43.516	80.00- 120.00	100.00
1.388	1.381 (0.254)	87	146930			2.85- 62.85	33.22
15 Freon 114					CAS #: 76-14-2		
1.510	1.503 (0.276)	135	388942	46.2133	46.213	80.00- 120.00	100.00
1.510	1.503 (0.276)	137	124959			2.45- 62.45	32.13
17 Chloromethane					CAS #: 74-87-3		
1.588	1.581 (0.291)	50	128045	38.9795	38.979	80.00- 120.00	100.00
1.588	1.581 (0.291)	52	49135			6.16- 66.16	38.37
23 Butane					CAS #: 106-97-8		
1.674	1.667 (0.306)	58	39212	38.9258	38.926	80.00- 120.00	100.00
1.674	1.667 (0.306)	43	278490			842.59- 902.59	710.22
25 Vinyl Chloride					CAS #: 75-01-4		
1.717	1.703 (0.314)	62	190818	46.6841	46.684	80.00- 120.00	100.00
1.717	1.710 (0.314)	64	58200			0.57- 60.57	30.50
26 1,3-Butadiene					CAS #: 106-99-0		
1.739	1.732 (0.318)	54	150142	40.0283	40.028	80.00- 120.00	100.00
1.739	1.732 (0.318)	39	136534			74.69- 134.69	90.94
29 Bromomethane					CAS #: 74-83-9		
2.097	2.090 (0.384)	94	154829	44.5235	44.523	80.00- 120.00	100.00
2.097	2.090 (0.384)	96	150934			68.21- 128.21	97.48
30 Chloroethane					CAS #: 75-00-3		
2.219	2.212 (0.406)	64	99149	47.5805	47.580	80.00- 120.00	100.00
2.219	2.212 (0.406)	66	29432			1.88- 61.88	29.68

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
30 Chloroethane (continued)							
2.219	2.212 (0.406)	49	28060			3.76- 63.76	28.30
31 Isopentane					CAS #: 78-78-4		
2.240	2.233 (0.410)	43	217698	38.8947	38.895	80.00- 120.00	100.00
2.240	2.233 (0.410)	57	164103			32.40- 92.40	75.38
35 Freon 11					CAS #: 75-69-4		
2.477	2.462 (0.453)	101	498814	44.2438	44.244	80.00- 120.00	100.00
2.477	2.470 (0.453)	103	320110			34.09- 94.09	64.17
42 Ethanol					CAS #: 64-17-5		
2.813	2.806 (0.515)	45	82144	41.7222	41.722	80.00- 120.00	100.00
2.813	2.806 (0.515)	43	14540			0.00- 50.11	17.70
2.813	2.806 (0.515)	46	30837			10.10- 70.10	37.54
49 Freon 113					CAS #: 76-13-1		
3.143	3.136 (0.575)	151	363351	42.8664	42.866	80.00- 120.00	100.00
3.143	3.136 (0.575)	153	236906			35.78- 95.78	65.20
3.143	3.136 (0.575)	101	419936			88.30- 148.30	115.57
50 1,1-Dichloroethene					CAS #: 75-35-4		
3.171	3.164 (0.580)	98	120808	41.2413	41.241	80.00- 120.00	100.00
3.171	3.164 (0.580)	96	188612			122.92- 182.92	156.13
3.171	3.164 (0.580)	61	322564			232.20- 292.20	267.01
52 Acetone					CAS #: 67-64-1		
3.336	3.329 (0.611)	58	105102	47.7698	47.770	80.00- 120.00	100.00
3.336	3.329 (0.611)	43	297964			319.99- 379.99	283.50
56 Carbon Disulfide					CAS #: 75-15-0		
3.415	3.408 (0.625)	76	453596	40.1987	40.199	80.00- 120.00	100.00
57 2-Propanol					CAS #: 67-63-0		
3.508	3.501 (0.642)	45	362820	39.7872	39.787	80.00- 120.00	100.00
3.508	3.501 (0.642)	43	65754			0.00- 47.66	18.12
3.508	3.508 (0.642)	59	15364			0.00- 33.60	4.23
58 3-Chloropropene					CAS #: 107-05-1		
3.673	3.666 (0.672)	76	77143	39.3594	39.359	80.00- 120.00	100.00
3.673	3.666 (0.672)	41	245965			335.86- 395.86	318.84
66 Methylene Chloride					CAS #: 75-09-2		
3.866	3.852 (0.708)	49	255496	43.3696	43.370	80.00- 120.00	100.00
3.866	3.859 (0.708)	84	170766			29.27- 89.27	66.84
3.866	3.859 (0.708)	51	80044			0.00- 59.81	31.33

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
72 Methyl tert-butyl ether					CAS #: 1634-04-4		
4.096	4.088 (0.750)	73	493090	41.2440	41.244	80.00- 120.00	100.00
4.088	4.081 (0.748)	57	142461			0.00- 57.40	28.89
4.088	4.088 (0.748)	41	123671			0.00- 57.39	25.08
73 trans-1,2-Dichloroethene					CAS #: 156-60-5		
4.117	4.110 (0.754)	98	113012	37.1737	37.174	80.00- 120.00	100.00
4.117	4.110 (0.754)	61	278010			209.93- 269.93	246.00
4.117	4.110 (0.754)	96	184916			130.42- 190.42	163.63
78 Hexane					CAS #: 110-54-3		
4.339	4.332 (0.794)	57	364554	44.1747	44.175	80.00- 120.00	100.00
4.339	4.332 (0.794)	43	218026			39.24- 99.24	59.81
4.339	4.332 (0.794)	86	49185			0.00- 43.98	13.49
82 1,1-Dichloroethane					CAS #: 75-34-3		
4.626	4.626 (0.847)	63	407201	47.6151	47.615	80.00- 120.00	100.00
4.633	4.626 (0.848)	65	127509			1.56- 61.56	31.31
86 Vinyl Acetate					CAS #: 108-05-4		
4.676	4.669 (0.856)	86	54816	47.3803	47.380	80.00- 120.00	100.00
4.676	4.669 (0.856)	43	637547			1404.95-1464.95	1163.07
91 cis-1,2-Dichloroethene					CAS #: 156-59-2		
5.227	5.227 (0.957)	98	173149	51.6904	51.690	80.00- 120.00	100.00
5.227	5.227 (0.957)	96	275138			126.91- 186.91	158.90
5.227	5.220 (0.957)	61	368879			186.69- 246.69	213.04
92 2-Butanone					CAS #: 78-93-3		
5.256	5.256 (0.962)	72	99577	44.6481	44.648	80.00- 120.00	100.00
5.256	5.256 (0.962)	43	480771			510.66- 570.66	482.81
5.256	5.256 (0.962)	57	40718			8.91- 68.91	40.89
99 Tetrahydrofuran					CAS #: 109-99-9		
5.456	5.449 (0.999)	42	263721	39.1830	39.183	80.00- 120.00	100.00
5.456	5.449 (0.999)	71	89787			0.53- 60.53	34.05
5.456	5.457 (0.999)	72	90457			0.16- 60.16	34.30
100 Chloroform					CAS #: 67-66-3		
5.535	5.528 (1.013)	83	450604	44.7450	44.745	80.00- 120.00	100.00
5.528	5.528 (1.012)	85	293266			36.67- 96.67	65.08
102 Cyclohexane					CAS #: 110-82-7		
5.636	5.628 (1.031)	84	289808	44.7164	44.716	80.00- 120.00	100.00
5.636	5.628 (1.031)	56	416159			121.50- 181.50	143.60
5.636	5.628 (1.031)	41	203970			54.13- 114.13	70.38

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
103 1,1,1-Trichloroethane					CAS #: 71-55-6		
5.657	5.650 (1.035)	97	470762	39.4456	39.446	80.00- 120.00	100.00
5.657	5.650 (1.035)	99	305549			32.76- 92.76	64.91
106 Carbon Tetrachloride					CAS #: 56-23-5		
5.772	5.772 (1.056)	119	518601	42.8868	42.887	80.00- 120.00	100.00
5.772	5.772 (1.056)	117	527470			73.53- 133.53	101.71
113 2,2,4-Trimethylpentane					CAS #: 540-84-1		
5.979	5.972 (1.094)	57	1256700	45.7629	45.763	80.00- 120.00	100.00
5.979	5.972 (1.094)	56	398735			0.62- 60.62	31.73
5.979	5.972 (1.094)	41	302554			0.00- 56.92	24.08
116 Benzene					CAS #: 71-43-2		
5.994	5.994 (0.939)	78	668183	46.6189	46.619	80.00- 120.00	100.00
5.994	5.994 (0.939)	77	151859			0.00- 53.73	22.73
120 1,2-Dichloroethane					CAS #: 107-06-2		
6.087	6.087 (0.954)	62	315697	44.9846	44.985	80.00- 120.00	100.00
6.087	6.087 (0.954)	64	101002			0.51- 60.51	31.99
121 Heptane					CAS #: 142-82-5		
6.151	6.144 (0.964)	71	230286	44.2253	44.225	80.00- 120.00	100.00
6.151	6.144 (0.964)	43	455310			198.93- 258.93	197.72
6.151	6.144 (0.964)	57	279554			83.54- 143.54	121.39
125 Trichloroethene					CAS #: 79-01-6		
6.574	6.574 (1.030)	95	354190	45.0660	45.066	80.00- 120.00	100.00
6.574	6.574 (1.030)	130	401748			79.66- 139.66	113.43
6.574	6.574 (1.030)	97	234731			34.04- 94.04	66.27
127 Methylcyclohexane					CAS #: 108-87-2		
6.674	6.674 (1.222)	83	416305	39.5331	39.533	80.00- 120.00	100.00
6.674	6.674 (1.222)	98	196376			18.10- 78.10	47.17
6.674	6.674 (1.222)	55	387017			66.76- 126.76	92.96
132 1,2-Dichloropropane					CAS #: 78-87-5		
6.817	6.817 (1.068)	63	291655	44.4841	44.484	80.00- 120.00	100.00
6.817	6.817 (1.068)	62	200713			39.78- 99.78	68.82
6.817	6.817 (1.068)	41	148531			32.16- 92.16	50.93
136 1,4-Dioxane					CAS #: 123-91-1		
6.903	6.903 (1.082)	88	164804	43.0739	43.074	80.00- 120.00	100.00
6.903	6.903 (1.082)	58	128832			49.57- 109.57	78.17
6.903	6.903 (1.082)	57	42351			0.00- 55.12	25.70

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
138 Bromodichloromethane					CAS #: 75-27-4		
7.047	7.047 (1.104)	83	530275	45.9542	45.954	80.00- 120.00	100.00
7.047	7.047 (1.104)	85	335290			36.86- 96.86	63.23
144 cis-1,3-Dichloropropene					CAS #: 10061-01-5		
7.433	7.434 (1.165)	75	412249	40.1818	40.182	80.00- 120.00	100.00
7.433	7.434 (1.165)	77	130487			1.21- 61.21	31.65
7.433	7.426 (1.165)	39	219475			32.66- 92.66	53.24
145 4-Methyl-2-pentanone					CAS #: 108-10-1		
7.548	7.541 (1.183)	58	248101	38.7023	38.702	80.00- 120.00	100.00
7.548	7.541 (1.183)	43	620037			262.16- 322.16	249.91
7.548	7.548 (1.183)	85	93497			11.61- 71.61	37.69
147 Toluene					CAS #: 108-88-3		
7.670	7.670 (1.202)	91	893018	42.0917	42.092	80.00- 120.00	100.00
7.670	7.670 (1.202)	92	512800			28.59- 88.59	57.42
150 trans-1,3-Dichloropropene					CAS #: 10061-02-6		
7.921	7.921 (0.893)	75	382696	43.7252	43.725	80.00- 120.00	100.00
7.921	7.921 (0.893)	77	118605			1.64- 61.64	30.99
7.921	7.913 (0.893)	39	198607			30.00- 90.00	51.90
155 1,1,2-Trichloroethane					CAS #: 79-00-5		
8.071	8.071 (0.910)	97	323495	45.6290	45.629	80.00- 120.00	100.00
8.078	8.071 (0.911)	99	197947			31.35- 91.35	61.19
8.071	8.071 (0.910)	83	275527			53.39- 113.39	85.17
156 Tetrachloroethene					CAS #: 127-18-4		
8.114	8.114 (0.915)	166	479799	44.6308	44.631	80.00- 120.00	100.00
8.114	8.114 (0.915)	129	367386			48.51- 108.51	76.57
8.114	8.114 (0.915)	131	360322			45.21- 105.21	75.10
158 2-Hexanone					CAS #: 591-78-6		
8.243	8.243 (0.930)	58	332655	43.3992	43.399	80.00- 120.00	100.00
8.243	8.243 (0.930)	43	597625			171.14- 231.14	179.65
8.243	8.243 (0.930)	100	62043			0.00- 48.08	18.65
160 Dibromochloromethane					CAS #: 124-48-1		
8.393	8.386 (0.947)	129	654158	44.3707	44.371	80.00- 120.00	100.00
8.393	8.386 (0.947)	127	506956			48.14- 108.14	77.50
161 1,2-Dibromoethane (EDB)					CAS #: 106-93-4		
8.508	8.508 (0.960)	107	533233	44.4386	44.438	80.00- 120.00	100.00
8.508	8.508 (0.960)	109	513379			62.49- 122.49	96.28

RT	EXP RT	(REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
165 Chlorobenzene						CAS #: 108-90-7		
8.888	8.888	(1.002)	112	781201	43.6530	43.653	80.00- 120.00	100.00
8.888	8.888	(1.002)	114	253148			1.55- 61.55	32.40
8.888	8.888	(1.002)	77	396946			23.72- 83.72	50.81
167 Ethyl Benzene						CAS #: 100-41-4		
8.938	8.938	(1.008)	106	391183	43.2774	43.277	80.00- 120.00	100.00
8.938	8.938	(1.008)	91	1177122			275.74- 335.74	300.91
169 m,p-Xylene						CAS #: 108-38-3		
9.038	9.038	(1.019)	106	495398	43.4445	43.444	80.00- 120.00	100.00
9.038	9.038	(1.019)	91	947990			168.00- 228.00	191.36
171 o-Xylene						CAS #: 95-47-6		
9.382	9.382	(1.058)	106	473614	43.9868	43.987	80.00- 120.00	100.00
9.382	9.382	(1.058)	91	950753			180.86- 240.86	200.74
172 Styrene						CAS #: 100-42-5		
9.403	9.403	(1.061)	104	704701	41.9100	41.910	80.00- 120.00	100.00
9.403	9.403	(1.061)	78	336803			18.40- 78.40	47.79
174 Bromoform						CAS #: 75-25-2		
9.604	9.604	(1.083)	173	859357	57.7173	57.717	80.00- 120.00	100.00
9.604	9.604	(1.083)	171	443682			21.79- 81.79	51.63
175 Cumene						CAS #: 98-82-8		
9.675	9.676	(1.091)	105	1425765	42.3838	42.384	80.00- 120.00	100.00
9.675	9.676	(1.091)	120	398676			0.00- 57.35	27.96
9.668	9.668	(1.090)	51	146622			0.00- 41.41	10.28
181 1,1,2,2-Tetrachloroethane						CAS #: 79-34-5		
9.991	9.991	(1.127)	83	651828	40.9016	40.902	80.00- 120.00	100.00
9.991	9.991	(1.127)	85	426180			35.95- 95.95	65.38
182 Propylbenzene						CAS #: 103-65-1		
10.019	10.019	(1.130)	91	1675035	43.9739	43.974	80.00- 120.00	100.00
10.019	10.019	(1.130)	120	426428			0.00- 54.67	25.46
10.019	10.019	(1.130)	105	63061			0.00- 33.80	3.76
188 4-Ethyltoluene						CAS #: 622-96-8		
10.112	10.120	(1.141)	120	465514	44.0451	44.045	80.00- 120.00	100.00
10.112	10.120	(1.141)	105	1456016			291.69- 351.69	312.78
190 1,3,5-Trimethylbenzene						CAS #: 108-67-8		
10.170	10.170	(1.147)	120	625791	42.6910	42.691	80.00- 120.00	100.00
10.170	10.170	(1.147)	105	1256177			176.78- 236.78	200.73

RT	EXP RT (REL RT)	MASS	RESPONSE	CONCENTRATIONS ON-COL (PPBV)	FINAL (PPBV)	TARGET RANGE	RATIO
196 1,2,4-Trimethylbenzene					CAS #: 95-63-6		
10.499	10.499 (1.184)	120	567923	43.4870	43.487	80.00- 120.00	100.00
10.492	10.499 (1.183)	105	1194727			184.15- 244.15	210.37
208 1,3-Dichlorobenzene					CAS #: 541-73-1		
10.786	10.786 (1.217)	146	899758	43.5212	43.521	80.00- 120.00	100.00
10.786	10.786 (1.217)	148	577384			34.28- 94.28	64.17
10.786	10.786 (1.217)	111	344732			10.08- 70.08	38.31
209 1,4-Dichlorobenzene					CAS #: 106-46-7		
10.865	10.865 (1.225)	146	905535	43.3723	43.372	80.00- 120.00	100.00
10.865	10.865 (1.225)	148	580925			34.75- 94.75	64.15
10.865	10.865 (1.225)	111	333613			8.94- 68.94	36.84
212 alpha-Chlorotoluene					CAS #: 100-44-7		
10.986	10.986 (1.239)	91	1065264	42.3361	42.336	80.00- 120.00	100.00
10.986	10.986 (1.239)	126	251437			0.00- 53.59	23.60
214 1,2-Dichlorobenzene					CAS #: 95-50-1		
11.194	11.194 (1.263)	146	859621	43.6385	43.638	80.00- 120.00	100.00
11.194	11.194 (1.263)	148	550742			33.27- 93.27	64.07
11.194	11.194 (1.263)	111	338944			11.15- 71.15	39.43
226 1,2,4-Trichlorobenzene					CAS #: 120-82-1		
12.627	12.627 (1.424)	180	817248	46.2710	46.271	80.00- 120.00	100.00
12.627	12.627 (1.424)	182	777901			63.48- 123.48	95.19
227 Hexachlorobutadiene					CAS #: 87-68-3		
12.720	12.720 (1.435)	225	648759	44.0557	44.056	80.00- 120.00	100.00
12.720	12.720 (1.435)	223	406618			32.11- 92.11	62.68
228 Naphthalene					CAS #: 91-20-3		
12.906	12.906 (1.456)	128	167640	4.59745	4.597	80.00- 120.00	100.00
12.906	12.906 (1.456)	127	22133			0.00- 43.17	13.20

Report Date: 17-Feb-2016 13:44

Eurofins Air Toxics Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: msda.i
Lab File ID: a021704c.d
Lab Smp Id: LCSD
Analysis Type: VOA
Quant Type: ISTD
Operator: sab
Method File: /chem/msda.i/17feb16.b/a15q1218f.m
Misc Info: 50ppbv (100ppbv)

Calibration Date: 17-FEB-2016
Calibration Time: 12:45
Client Smp ID: LCSD
Level: LOW
Sample Type: AIR

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	163888	98333	229443	163918	0.02
123 1,4-Difluorobenze	679258	407555	950961	681193	0.28
163 Chlorobenzene-d5	626147	375688	876606	611163	-2.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
98 Bromochloromethan	5.46	5.13	5.79	5.46	0.00
123 1,4-Difluorobenze	6.38	6.05	6.71	6.38	0.00
163 Chlorobenzene-d5	8.87	8.54	9.20	8.87	0.00

AREA UPPER LIMIT = + 40% of internal standard area.
AREA LOWER LIMIT = - 40% of internal standard area.
RT UPPER LIMIT = + 0.33 minutes of internal standard RT.
RT LOWER LIMIT = - 0.33 minutes of internal standard RT.

Data File: /chem/msda.i/17feb16.b/a021704c.d

Date : 17-FEB-2016 12:03

Client ID: LCSD

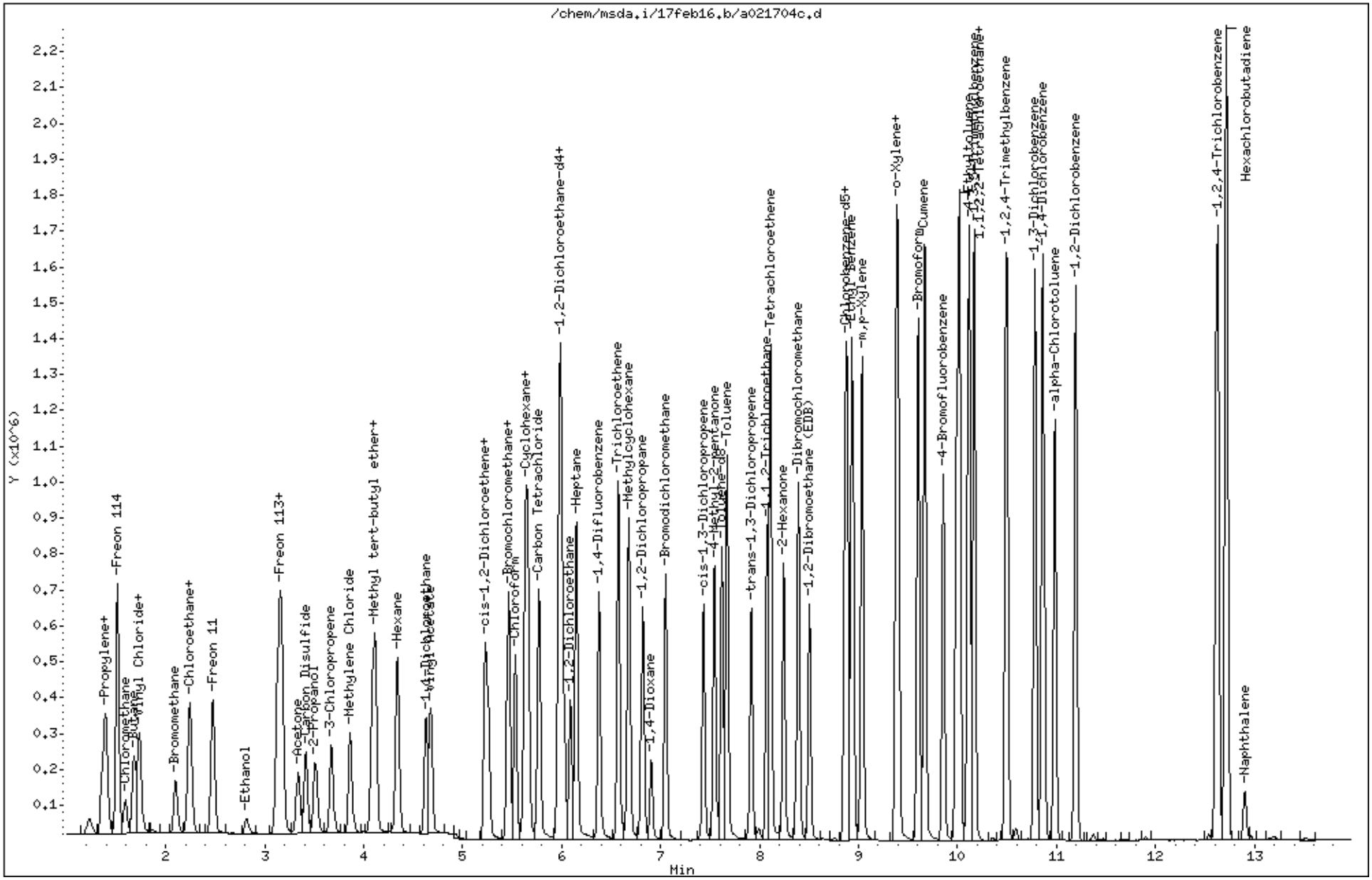
Sample Info: 100mL 2759-107A

Column phase: RTX-624

Instrument: msda.i

Operator: sab

Column diameter: 0.25



MSDA

BFB verification of 176/174 ratio: (175936/179690)*100=97.91%			
IS/S Std.#:	2759-146	Exp. Date:	3/17/2016
BCM			163,888
1,4-DFB			679,258
CB-d5			626,147

Method TO-15/TO-14			
SOP# 6			
Vacuum: NA			
Please check all standards			
Surrogate# 2759-146		Exp. Date:	3/17/2016
Surrogate# NA		Exp. Date:	NA

Verified CCV vs ICAL mid-point (-40%): sab

Method: A15Q1218F.m

Use	File #	Enter/Scan Sample IDs	Canister#	Cart Pos.	Pressure	Amount	DF	Verify Load	Loaded Init	Date Analyzed	Time Analyzed	Review Init	Comments
√	A021701	BFB Tune Check	2759-146	12	36ng	1.0mL	1.00	sab	sab	02/17/16	1032	sab	Exp: 3/17/16
X	A021702	CCV	2759-179A	13	50ppbv (100ppbv)	100mL	1.00	sab	sab	02/17/16	1059	sab	Exp. 4/6/16; 3 out >40%
√	A021703	LCS	2759-107A	14	50ppbv (100ppbv)	100mL	1.00	sab	sab	02/17/16	1137	sab	Exp. 2/24/16; 0 out "c"
√	A021704	LCSD	2759-107A	14	50ppbv (100ppbv)	100mL	1.00	sab	sab	02/17/16	1203	sab	Exp. 2/24/16. "c"
√	A021705	CCV	2759-179A	13	50ppbv (100ppbv)	100mL	1.00	sab	sab	02/17/16	1245	sab	Exp. 4/6/16; 0 out "a"
√	A021706	CCVsp	2759-231	1	50ppbv (200ppbv)	50ml	1.00	sab	sab	02/17/16	1322	sab	Exp: 5/5/16; AT-1; 3 out
√	A021707	TPHg calib	2759-98	2	500ppbv(2500ppbv)	40mL	1.00	sab	sab	02/17/16	1347	sab	Exp: 2/19/16
√	A021708	Lab Blank	36041	12	Humid	200mL	1.00	sab	sab	02/17/16	1424	sab	"a"
√	A021709	1602247-01A	36387	1	4.5 Hg->15 psi	200mL	2.38	ea	sab	02/17/16	1539	ea	
√	A021710	1602244-01A	35654	2	1.8 Hg->14.7 psi	200mL	2.13	ea	sab	02/17/16	1606	ea	
√	A021711	1602244-02A	35689	3	5.5 Hg->14.5 psi	200mL	2.43	ea	sab	02/17/16	1645	ea	
√	A021712	1602244-03A	37681	4	1.4 Hg->15.2 psi	200mL	2.13	ea	sab	02/17/16	1711	ea	
√	A021713	1602250A-01A	34401	5	9.4 Hg->4.9 psi	200mL	1.94	ea	sab	02/17/16	1751	ea	
√	A021714	1602250A-01AA	34401	5	9.4 Hg->4.9 psi	200mL	1.94	ea	sab	02/17/16	1817	ea	
√	A021715	1602250A-02A	13658	6	7.3 Hg->5.1 psi	200mL	1.78	ea	sab	02/17/16	1852	ea	
√	A021716	1602089A-01A	LC966cl	7	6.9 Hg->14.8 psi	200mL	2.61	ea	sab	02/17/16	1932	ea	
√	A021717	1602089A-01AA	LC966cl	7	6.9 Hg->14.8 psi	200mL	2.61	ea	sab	02/17/16	1958	ea	
√	A021718	1602089A-02A	LC050cl	8	8.4 Hg->14.9 psi	200mL	2.80	ea	sab	02/17/16	2028	ea	
√	A021719	1602089A-03A	LC223cl	9	3.5 Hg->14.8 psi	200mL	2.27	ea	sab	02/17/16	2058	ea	

2/16/17

Eurofins Air Toxics Inc.

Data file : /var/chem/msda.i/18dec15.b/a121801.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 18-DEC-2015 10:14
Operator : cb Inst ID: msda.i
Smp Info : 1.0mL# 2736-259; BFB Tune Check
Misc Info : 36ng
Comment :
Method : /var/chem/msda.i/18dec15.b/bfb60.m
Meth Date : 18-Dec-2015 10:37 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
9.753	9.862	-0.109	95	204789			100.00- 100.00	100.00
9.753	9.862	-0.109	50	42453			8.00- 40.00	20.73
9.753	9.862	-0.109	75	93682			30.00- 66.00	45.75
9.753	9.862	-0.109	96	13809			5.00- 9.00	6.74
9.753	9.862	-0.109	173	1684			0.00- 1.99	0.96
9.753	9.862	-0.109	174	175168			50.01- 120.00	85.54
9.753	9.862	-0.109	175	12953			4.00- 9.00	7.39
9.753	9.862	-0.109	176	173866			93.01- 100.99	99.26
9.753	9.862	-0.109	177	11107			5.00- 9.00	6.39

Data File: /var/chem/msda.i/18dec15.b/a121801.d

Date : 18-DEC-2015 10:14

Client ID: BFB

Instrument: msda.i

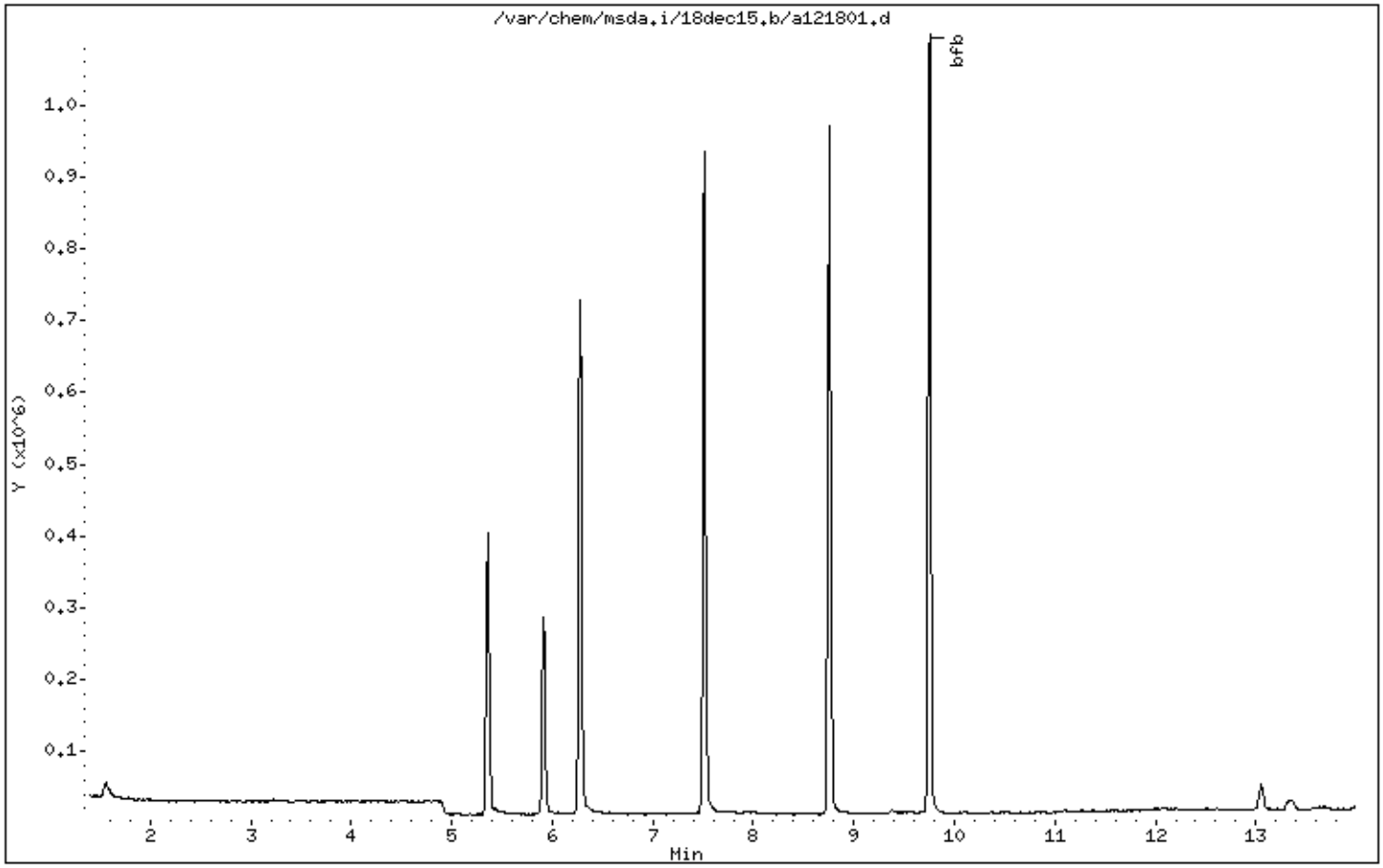
Sample Info: 1.0mL# 2736-259; BFB Tune Check

Volume Injected (uL): 1.0

Operator: cb

Column phase:

Column diameter: 2.00



Data File: /var/chem/msda.i/18dec15.b/a121801.d

Date : 18-DEC-2015 10:14

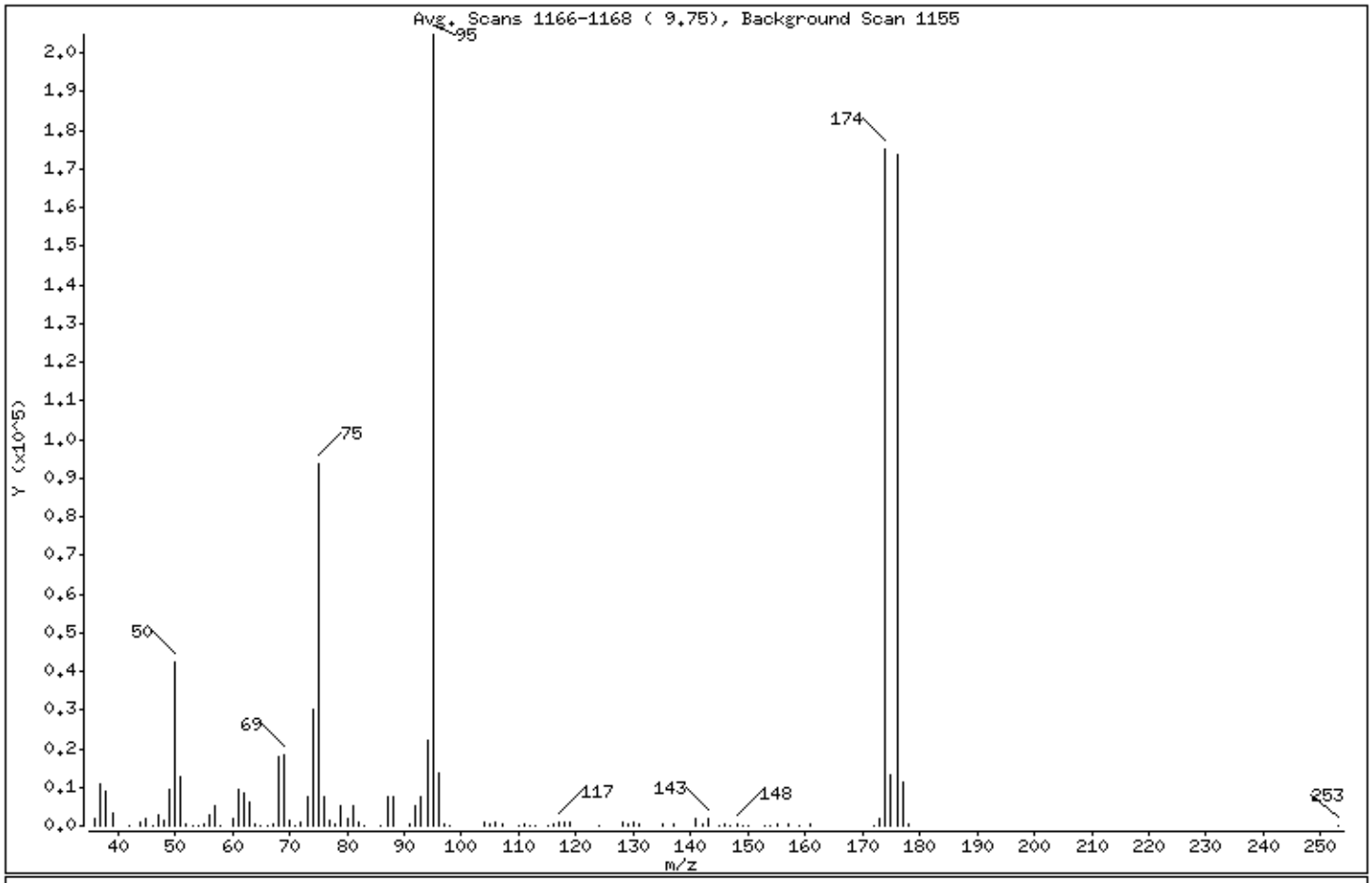
Client ID: BFB Instrument: msda.i

Sample Info: 1.0mL# 2736-259; BFB Tune Check

Volume Injected (uL): 1.0 Operator: cb

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.73
75	30.00 - 66.00% of mass 95	45.75
96	5.00 - 9.00% of mass 95	6.74
173	Less than 1.99% of mass 174	0.82 (0.96)
174	50.01 - 120.00% of mass 95	85.54
175	4.00 - 9.00% of mass 174	6.33 (7.39)
176	93.01 - 100.99% of mass 174	84.90 (99.26)
177	5.00 - 9.00% of mass 176	5.42 (6.39)

Data File: /var/chem/msda.i/18dec15.b/a121801.d

Date : 18-DEC-2015 10:14

Client ID: BFB

Instrument: msda.i

Sample Info: 1.0mL# 2736-259; BFB Tune Check

Volume Injected (uL): 1.0

Operator: cb

Column phase:

Column diameter: 2.00

Data File: a121801.d
Spectrum: Avg. Scans 1166-1168 (9.75), Background Scan 1155
Location of Maximum: 95.00
Number of points: 98

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1917	65.00	173	94.00	22200	141.00	1887
37.00	10685	66.00	50	95.00	204736	142.00	330
38.00	8970	67.00	380	96.00	13809	143.00	1894
39.00	3399	68.00	18080	97.00	624	145.00	217
42.00	90	69.00	18408	98.00	26	146.00	257
44.00	1077	70.00	1515	104.00	797	147.00	121
45.00	1680	71.00	150	105.00	462	148.00	472
46.00	107	72.00	939	106.00	838	149.00	199
47.00	2816	73.00	7762	107.00	315	150.00	214
48.00	1224	74.00	30056	110.00	113	153.00	168
49.00	9400	75.00	93680	111.00	239	154.00	109
50.00	42448	76.00	7746	112.00	192	155.00	471
51.00	12939	77.00	1296	113.00	106	157.00	357
52.00	538	78.00	669	115.00	102	159.00	234
53.00	57	79.00	5223	116.00	679	161.00	243
54.00	38	80.00	1699	117.00	1160	172.00	67
55.00	590	81.00	5031	118.00	741	173.00	1684
56.00	2886	82.00	1002	119.00	1064	174.00	175168
57.00	5134	83.00	33	124.00	175	175.00	12953
58.00	148	86.00	120	128.00	823	176.00	173824
60.00	1835	87.00	7596	129.00	341	177.00	11107
61.00	9278	88.00	7425	130.00	744	178.00	344
62.00	8585	91.00	675	131.00	381	253.00	57
63.00	6315	92.00	5389	135.00	544		
64.00	623	93.00	7610	137.00	343		

Eurofins Air Toxics Inc.

Data file : /var/chem/msda.i/31dec15.b/a123101.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 31-DEC-2015 09:05
Operator : cb Inst ID: msda.i
Smp Info : 1.0mL# 2759-146; BFB;BFB
Misc Info : 36ng
Comment :
Method : /var/chem/msda.i/31dec15.b/bfb60.m
Meth Date : 31-Dec-2015 09:26 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
9.753	9.862	-0.109	95	219861			100.00- 100.00	100.00
9.753	9.862	-0.109	50	47258			8.00- 40.00	21.49
9.753	9.862	-0.109	75	100437			30.00- 66.00	45.68
9.753	9.862	-0.109	96	13730			5.00- 9.00	6.24
9.753	9.862	-0.109	173	1729			0.00- 1.99	0.94
9.753	9.862	-0.109	174	184768			50.01- 120.00	84.04
9.753	9.862	-0.109	175	14091			4.00- 9.00	7.63
9.753	9.862	-0.109	176	186090			93.01- 100.99	100.72
9.753	9.862	-0.109	177	11721			5.00- 9.00	6.30

Data File: /var/chem/msda.i/31dec15.b/a123101.d

Date : 31-DEC-2015 09:05

Client ID: BFB

Instrument: msda.i

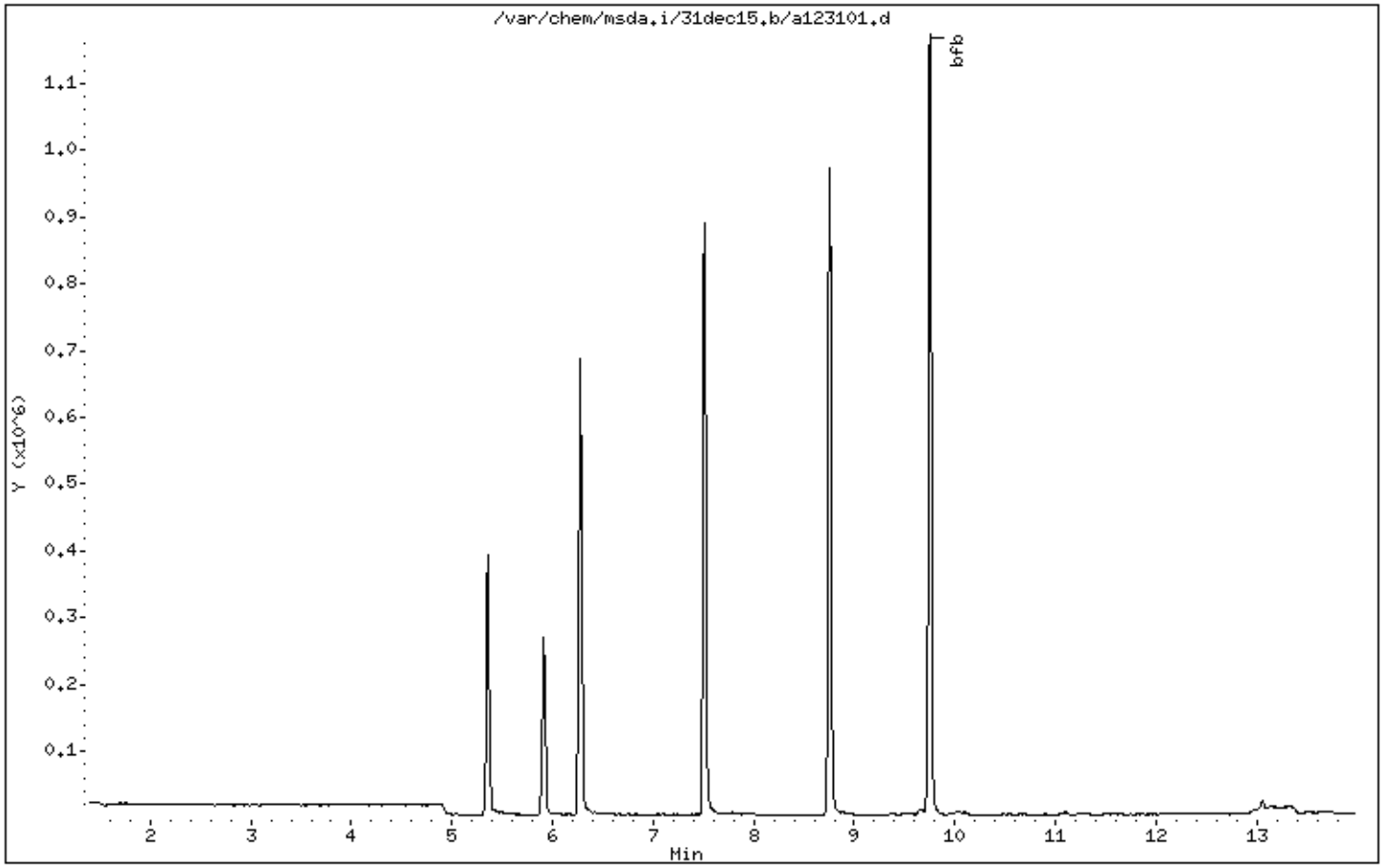
Sample Info: 1.0mL# 2759-146; BFB;BFB

Volume Injected (uL): 1.0

Operator: cb

Column phase:

Column diameter: 2.00



Data File: /var/chem/msda.i/31dec15.b/a123101.d

Date : 31-DEC-2015 09:05

Client ID: BFB

Instrument: msda.i

Sample Info: 1.0mL# 2759-146; BFB;BFB

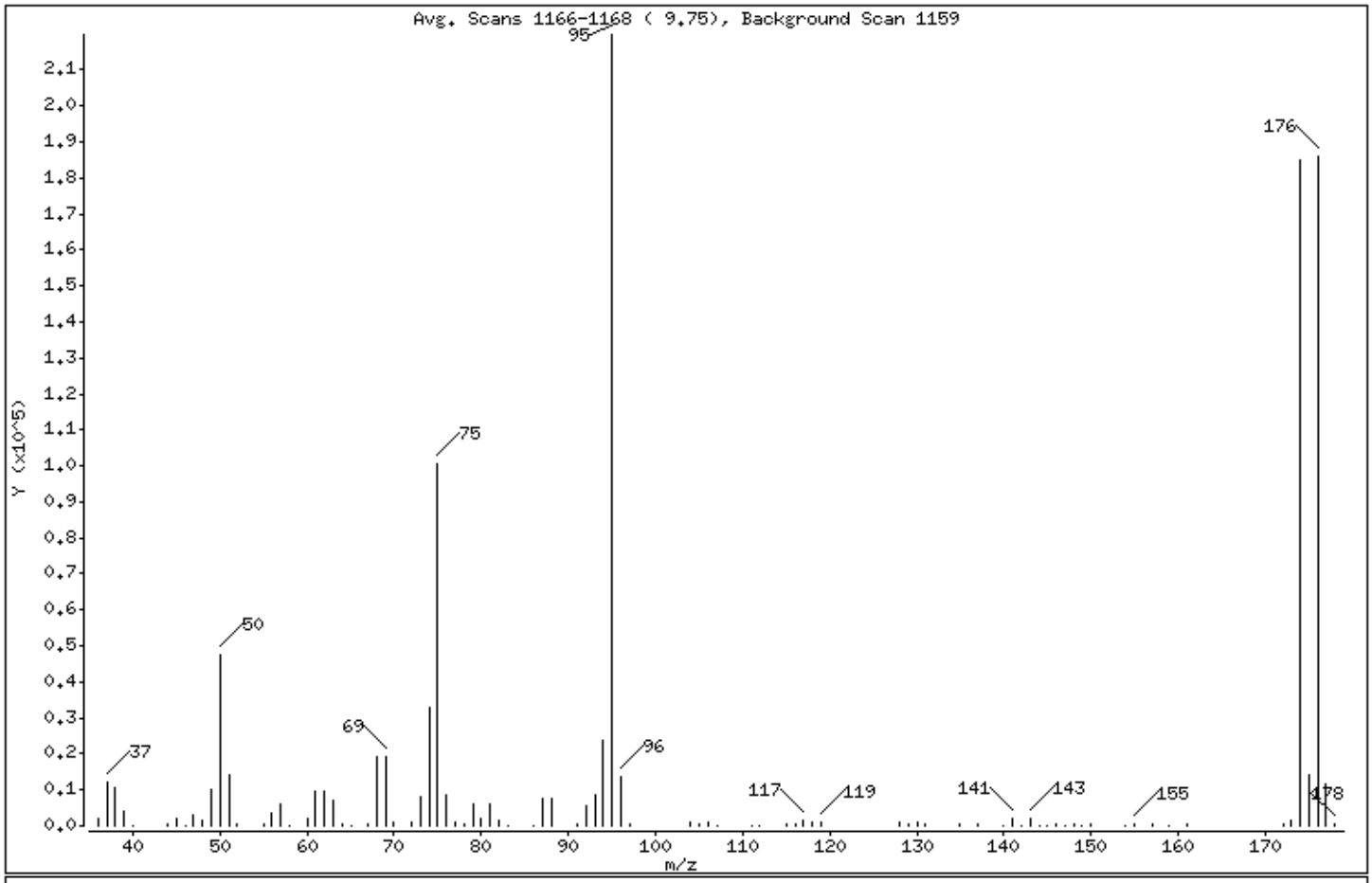
Volume Injected (uL): 1.0

Operator: cb

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	21.49
75	30.00 - 66.00% of mass 95	45.68
96	5.00 - 9.00% of mass 95	6.24
173	Less than 1.99% of mass 174	0.79 (0.94)
174	50.01 - 120.00% of mass 95	84.04
175	4.00 - 9.00% of mass 174	6.41 (7.63)
176	93.01 - 100.99% of mass 174	84.64 (100.72)
177	5.00 - 9.00% of mass 176	5.33 (6.30)

Data File: /var/chem/msda.i/31dec15.b/a123101.d

Date : 31-DEC-2015 09:05

Client ID: BFB

Instrument: msda.i

Sample Info: 1.0mL# 2759-146; BFB;BFB

Volume Injected (uL): 1.0

Operator: cb

Column phase:

Column diameter: 2.00

Data File: a123101.d
Spectrum: Avg. Scans 1166-1168 (9.75), Background Scan 1159
Location of Maximum: 95.00
Number of points: 90

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1923	65.00	135	94.00	23680	142.00	236
37.00	11934	67.00	477	95.00	219840	143.00	2206
38.00	10626	68.00	19296	96.00	13730	144.00	56
39.00	3904	69.00	19448	97.00	467	145.00	172
40.00	74	70.00	1175	104.00	842	146.00	323
44.00	257	72.00	903	105.00	365	147.00	113
45.00	1849	73.00	8030	106.00	958	148.00	561
46.00	113	74.00	32720	107.00	209	149.00	100
47.00	3259	75.00	100432	111.00	121	150.00	276
48.00	1661	76.00	8529	112.00	55	154.00	104
49.00	10054	77.00	1085	115.00	257	155.00	647
50.00	47256	78.00	712	116.00	689	157.00	395
51.00	14302	79.00	5853	117.00	1344	159.00	250
52.00	727	80.00	1864	118.00	867	161.00	298
55.00	523	81.00	6177	119.00	1159	172.00	358
56.00	3443	82.00	1448	128.00	857	173.00	1729
57.00	5960	83.00	186	129.00	391	174.00	184768
58.00	218	86.00	240	130.00	796	175.00	14091
60.00	1895	87.00	7385	131.00	293	176.00	186048
61.00	9510	88.00	7497	135.00	469	177.00	11721
62.00	9402	91.00	686	137.00	372	178.00	284
63.00	7078	92.00	5663	140.00	125		
64.00	724	93.00	8692	141.00	2070		

Eurofins Air Toxics Inc.

Data file : /var/chem/msda.i/27jan16.b/a012701.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 27-JAN-2016 11:00
Operator : js Inst ID: msda.i
Smp Info : 1.0mL# 2759-146; BFB; BFB
Misc Info : 36ng
Comment :
Method : /var/chem/msda.i/27jan16.b/bfb60.m
Meth Date : 27-Jan-2016 11:22 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 1 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
9.746	9.862	-0.116	95	236373			100.00- 100.00	100.00
9.746	9.862	-0.116	50	49677			8.00- 40.00	21.02
9.746	9.862	-0.116	75	109621			30.00- 66.00	46.38
9.746	9.862	-0.116	96	16529			5.00- 9.00	6.99
9.746	9.862	-0.116	173	1671			0.00- 1.99	0.83
9.746	9.862	-0.116	174	200725			50.01- 120.00	84.92
9.746	9.862	-0.116	175	15624			4.00- 9.00	7.78
9.746	9.862	-0.116	176	196501			93.01- 100.99	97.90
9.746	9.862	-0.116	177	13337			5.00- 9.00	6.79

Data File: /chem/msda.i/27jan16.b/a012701.d

Date : 27-JAN-2016 11:00

Client ID: BFB

Instrument: msda.i

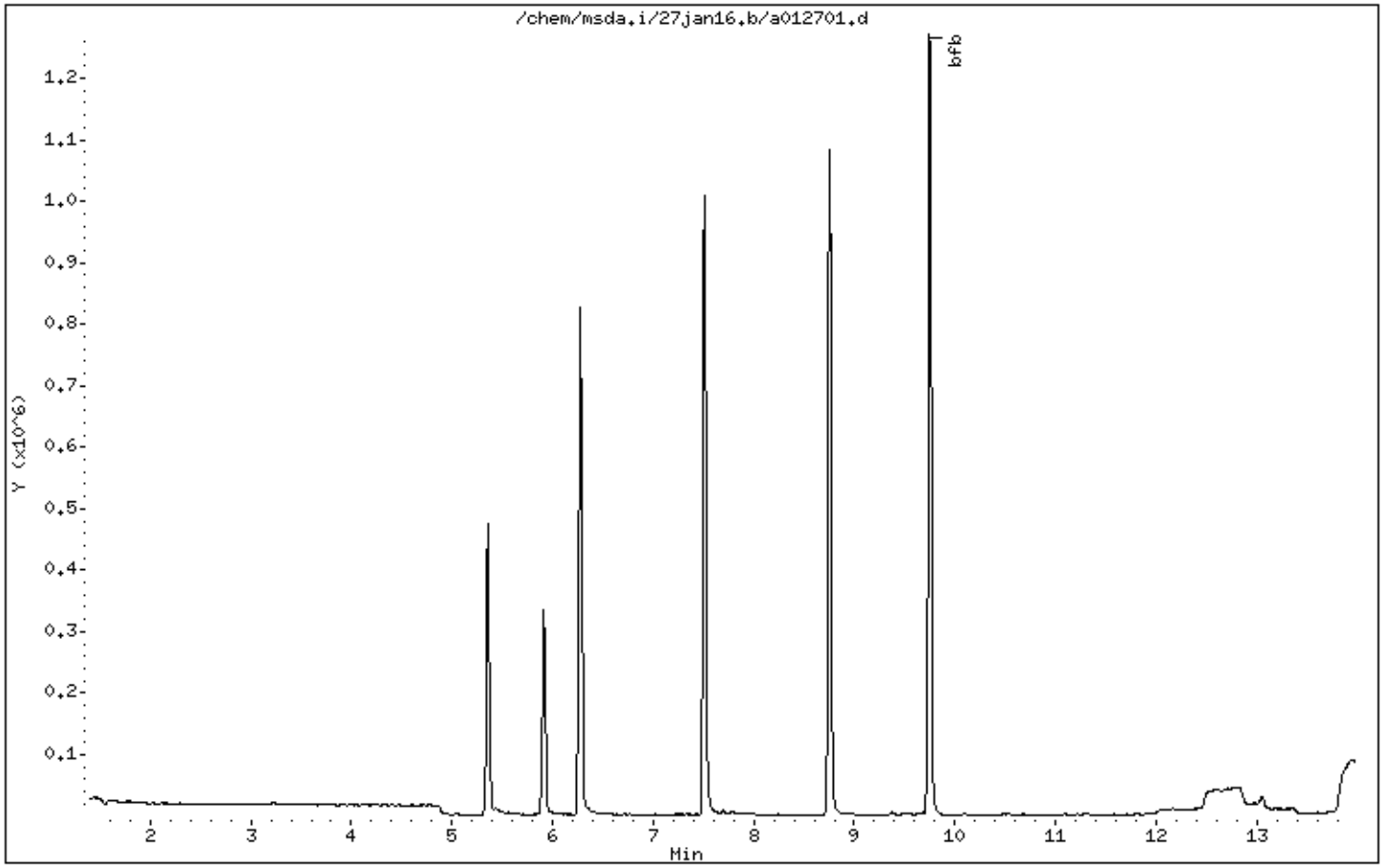
Sample Info: 1.0mL# 2759-146; BFB; BFB

Volume Injected (uL): 1.0

Operator: js

Column phase:

Column diameter: 2.00



Data File: /chem/msda.i/27jan16.b/a012701.d

Date : 27-JAN-2016 11:00

Client ID: BFB

Instrument: msda.i

Sample Info: 1.0mL# 2759-146; BFB; BFB

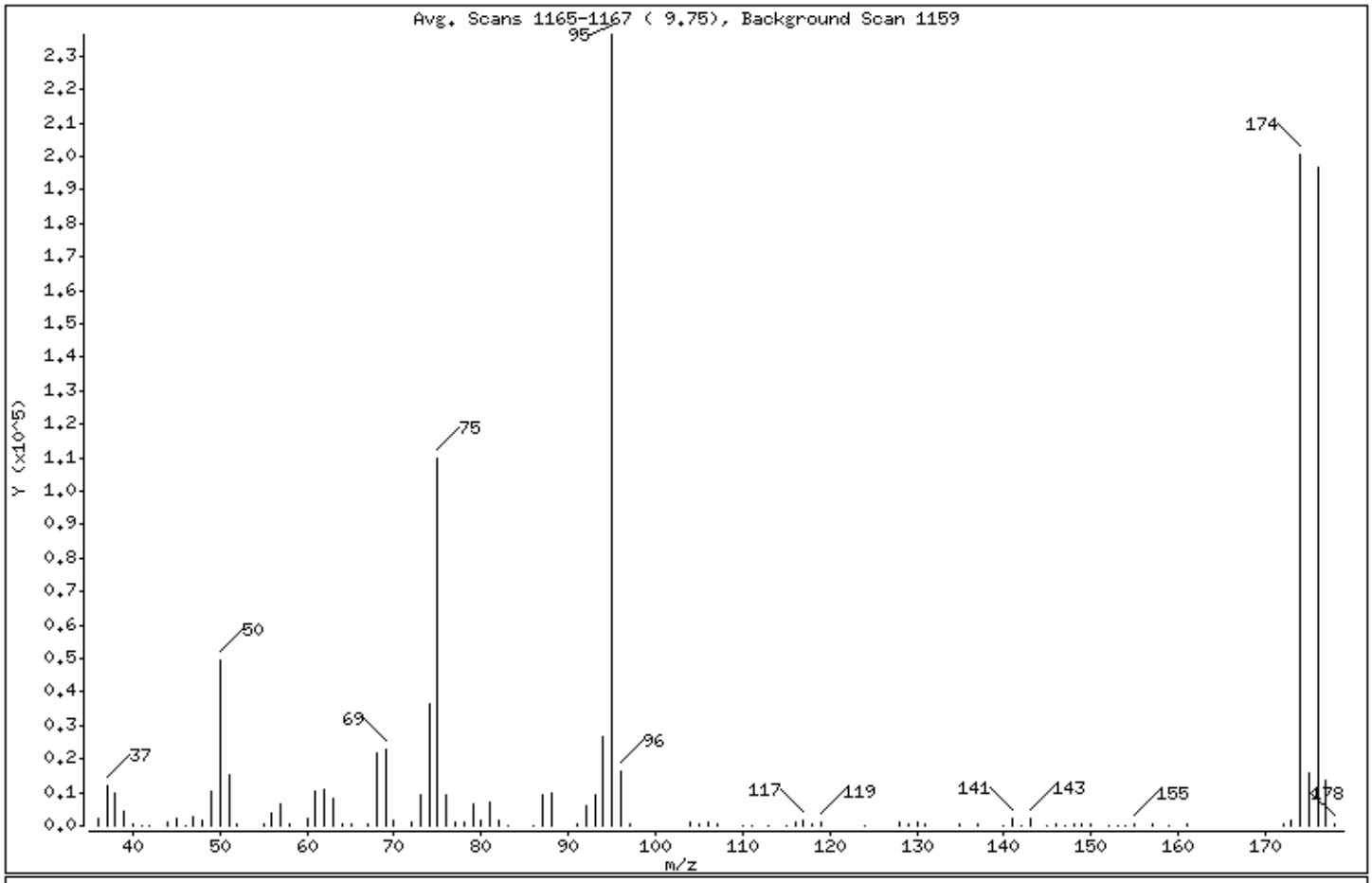
Volume Injected (uL): 1.0

Operator: js

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	21.02
75	30.00 - 66.00% of mass 95	46.38
96	5.00 - 9.00% of mass 95	6.99
173	Less than 1.99% of mass 174	0.71 (0.83)
174	50.01 - 120.00% of mass 95	84.92
175	4.00 - 9.00% of mass 174	6.61 (7.78)
176	93.01 - 100.99% of mass 174	83.13 (97.90)
177	5.00 - 9.00% of mass 176	5.64 (6.79)

Data File: /chem/msda.i/27jan16.b/a012701.d

Date : 27-JAN-2016 11:00

Client ID: BFB

Instrument: msda.i

Sample Info: 1.0mL# 2759-146; BFB; BFB

Volume Injected (uL): 1.0

Operator: js

Column phase:

Column diameter: 2.00

Data File: a012701.d
Spectrum: Avg. Scans 1165-1167 (9.75), Background Scan 1159
Location of Maximum: 95.00
Number of points: 95

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2107	64.00	728	94.00	26768	141.00	2090
37.00	12007	65.00	339	95.00	236352	142.00	251
38.00	9912	67.00	572	96.00	16528	143.00	2339
39.00	4143	68.00	21560	97.00	522	145.00	265
40.00	281	69.00	22608	104.00	951	146.00	286
41.00	55	70.00	1852	105.00	376	147.00	196
42.00	68	72.00	1234	106.00	1032	148.00	646
44.00	938	73.00	9162	107.00	282	149.00	280
45.00	2391	74.00	36664	110.00	121	150.00	284
46.00	201	75.00	109616	111.00	128	152.00	53
47.00	2877	76.00	9379	113.00	122	153.00	50
48.00	1507	77.00	1140	115.00	239	154.00	100
49.00	10581	78.00	914	116.00	1042	155.00	491
50.00	49672	79.00	6739	117.00	1388	157.00	415
51.00	15250	80.00	1749	118.00	784	159.00	226
52.00	575	81.00	6835	119.00	1157	161.00	329
55.00	763	82.00	1477	124.00	169	172.00	503
56.00	3881	83.00	160	128.00	861	173.00	1671
57.00	6606	86.00	225	129.00	445	174.00	200704
58.00	328	87.00	9403	130.00	923	175.00	15624
60.00	2383	88.00	9657	131.00	330	176.00	196480
61.00	10381	91.00	811	135.00	402	177.00	13337
62.00	10673	92.00	6081	137.00	366	178.00	355
63.00	8334	93.00	9252	140.00	112		

Eurofins Air Toxics Inc.

Data file : /chem/msda.i/11feb16.b/a021101.d
Lab Smp Id: BFB Client Smp ID: BFB
Inj Date : 11-FEB-2016 10:41
Operator : sab Inst ID: msda.i
Smp Info : 1.0mL 2759-146;BFB Tune Check
Misc Info : 36ng
Comment :
Method : /chem/msda.i/11feb16.b/bfb60.m
Meth Date : 23-Oct-2015 15:46 sblack Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 12 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
15.482	9.862	5.620	95	73386			100.00- 100.00	100.00
15.482	9.862	5.620	50	15043			8.00- 40.00	20.50
15.482	9.862	5.620	75	33872			30.00- 66.00	46.16
15.482	9.862	5.620	96	5325			5.00- 9.00	7.26
15.482	9.862	5.620	173	523			0.00- 1.99	0.80
15.482	9.862	5.620	174	65032			50.01- 120.00	88.62
15.482	9.862	5.620	175	4974			4.00- 9.00	7.65
15.482	9.862	5.620	176	63432			93.01- 100.99	97.54
15.482	9.862	5.620	177	3835			5.00- 9.00	6.05

Data File: /chem/msda.i/11feb16.b/a021101.d

Date : 11-FEB-2016 10:41

Client ID: BFB

Instrument: msda.i

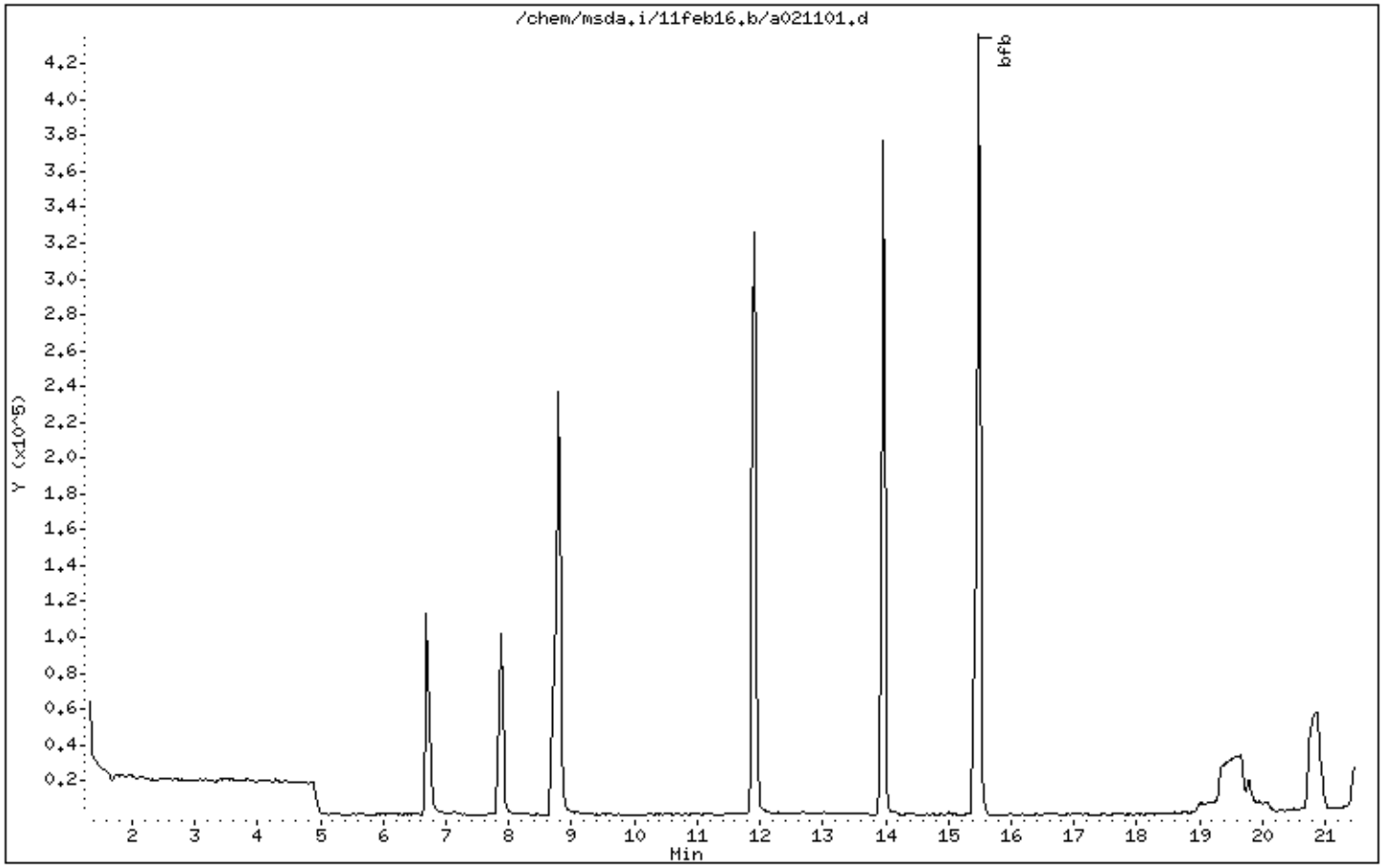
Sample Info: 1.0mL 2759-146;BFB Tune Check

Volume Injected (uL): 1.0

Operator: sab

Column phase:

Column diameter: 2.00



Data File: /chem/msda.i/11feb16.b/a021101.d

Date : 11-FEB-2016 10:41

Client ID: BFB

Instrument: msda.i

Sample Info: 1.0mL 2759-146;BFB Tune Check

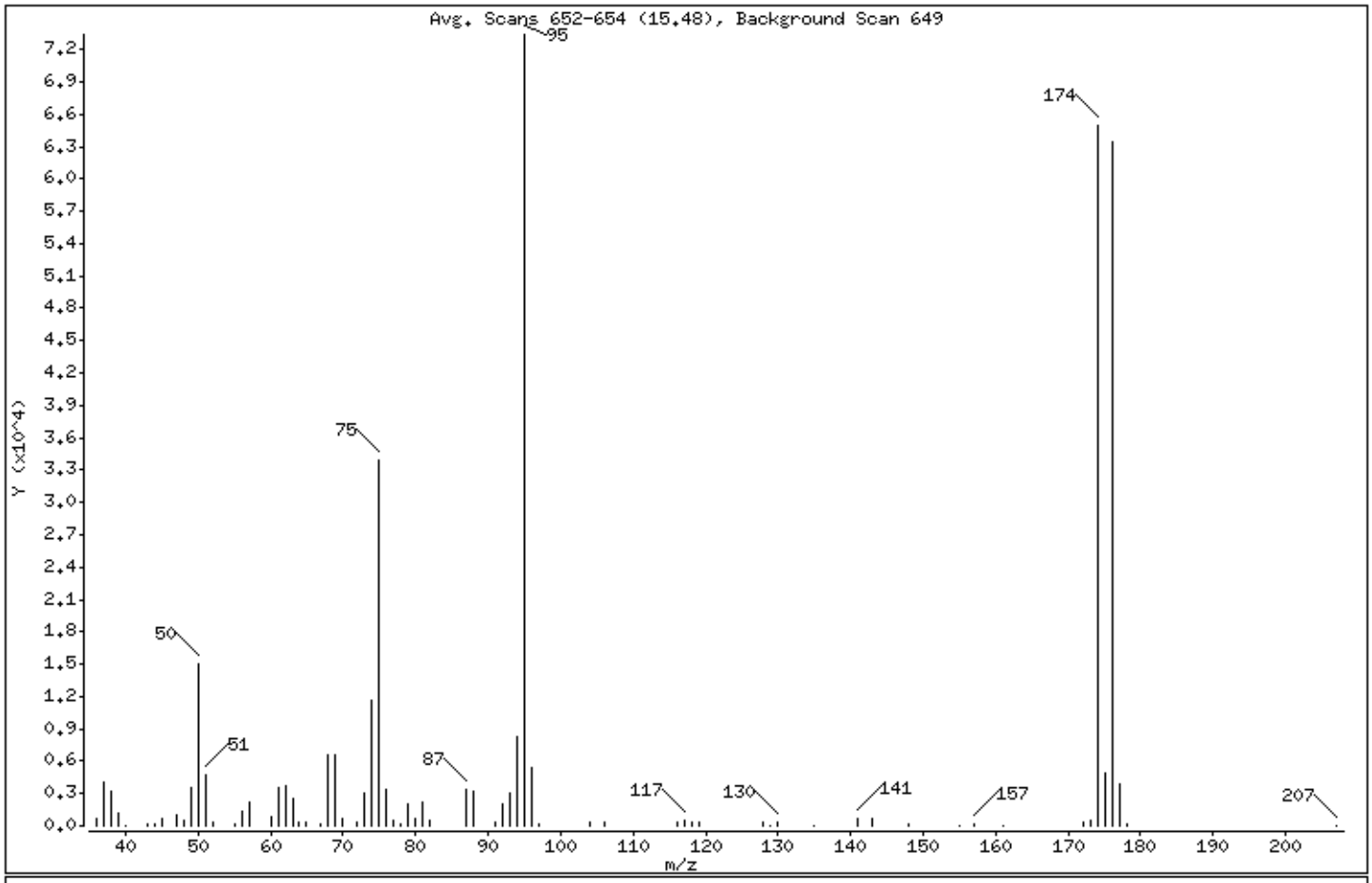
Volume Injected (uL): 1.0

Operator: sab

Column phase:

Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.50
75	30.00 - 66.00% of mass 95	46.16
96	5.00 - 9.00% of mass 95	7.26
173	Less than 1.99% of mass 174	0.71 (0.80)
174	50.01 - 120.00% of mass 95	88.62
175	4.00 - 9.00% of mass 174	6.78 (7.65)
176	93.01 - 100.99% of mass 174	86.44 (97.54)
177	5.00 - 9.00% of mass 176	5.23 (6.05)

Data File: /chem/msda.i/11feb16.b/a021101.d

Date : 11-FEB-2016 10:41

Client ID: BFB

Instrument: msda.i

Sample Info: 1.0mL 2759-146;BFB Tune Check

Volume Injected (uL): 1.0

Operator: sab

Column phase:

Column diameter: 2.00

Data File: a021101.d
Spectrum: Avg. Scans 652-654 (15.48), Background Scan 649
Location of Maximum: 95.00
Number of points: 71

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	649	61.00	3555	81.00	2170	129.00	50
37.00	4041	62.00	3748	82.00	458	130.00	299
38.00	3195	63.00	2589	87.00	3291	135.00	52
39.00	1203	64.00	262	88.00	3126	141.00	758
40.00	38	65.00	311	91.00	363	143.00	706
43.00	122	67.00	176	92.00	2009	148.00	112
44.00	154	68.00	6625	93.00	3027	155.00	52
45.00	723	69.00	6578	94.00	8303	157.00	114
47.00	945	70.00	612	95.00	73384	161.00	52
48.00	518	72.00	385	96.00	5325	172.00	328
49.00	3570	73.00	2997	97.00	122	173.00	523
50.00	15043	74.00	11609	104.00	335	174.00	65032
51.00	4668	75.00	33872	106.00	263	175.00	4974
52.00	266	76.00	3322	116.00	281	176.00	63432
55.00	213	77.00	429	117.00	444	177.00	3835
56.00	1331	78.00	242	118.00	317	178.00	192
57.00	2251	79.00	2054	119.00	360	207.00	13
60.00	814	80.00	604	128.00	297		

Eurofins Air Toxics Inc.

Data file : /var/chem/msda.i/17feb16.b/a021701.d
Lab Smp Id: Client Smp ID: BFB
Inj Date : 17-FEB-2016 10:23
Operator : sab Inst ID: msda.i
Smp Info : 1.0mL 2759-146;BFB Tune Check
Misc Info : 36ng
Comment :
Method : /var/chem/msda.i/17feb16.b/bfb60.m
Meth Date : 17-Feb-2016 10:44 Quant Type: ESTD
Cal Date : Cal File:
Als bottle: 12 QC Sample: BFB
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 3.50 Sample Matrix: WATER
Processing Host: eeyore

Concentration Formula: Amt * DF * Uf * Vf * Vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Uf	1.00000	ng unit correction factor
Vf	1.00000	Volumetric correction factor
Vi	1.00000	Injection Volume

Cpnd Variable Local Compound Variable

RT	EXP RT	DLT RT	MASS	RESPONSE	CONCENTRATIONS ON-COL (ug/L)	FINAL (ug/L)	TARGET RANGE	RATIO
1 bfb						CAS #: 460-00-4		
9.753	9.862	-0.109	95	201173			100.00- 100.00	100.00
9.753	9.862	-0.109	50	40586			8.00- 40.00	20.17
9.753	9.862	-0.109	75	91272			30.00- 66.00	45.37
9.753	9.862	-0.109	96	12920			5.00- 9.00	6.42
9.753	9.862	-0.109	173	1533			0.00- 1.99	0.85
9.753	9.862	-0.109	174	179690			50.01- 120.00	89.32
9.753	9.862	-0.109	175	12750			4.00- 9.00	7.10
9.753	9.862	-0.109	176	175936			93.01- 100.99	97.91
9.753	9.862	-0.109	177	11430			5.00- 9.00	6.50

Data File: /var/chem/msda.i/17feb16.b/a021701.d

Date : 17-FEB-2016 10:23

Client ID: BFB

Instrument: msda.i

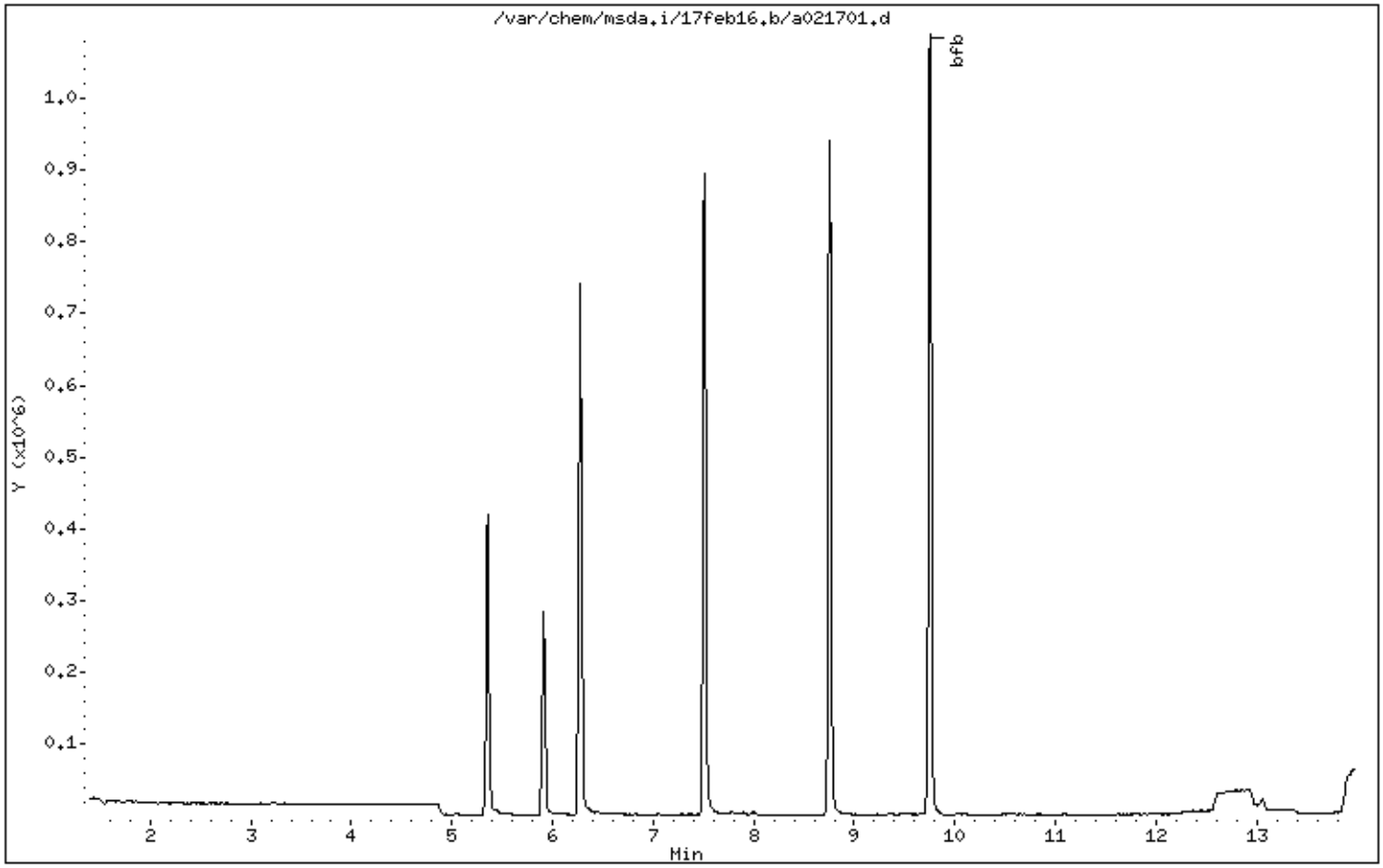
Sample Info: 1.0mL 2759-146;BFB Tune Check

Volume Injected (uL): 1.0

Operator: sab

Column phase:

Column diameter: 2.00



Data File: /var/chem/msda.i/17feb16.b/a021701.d

Date : 17-FEB-2016 10:23

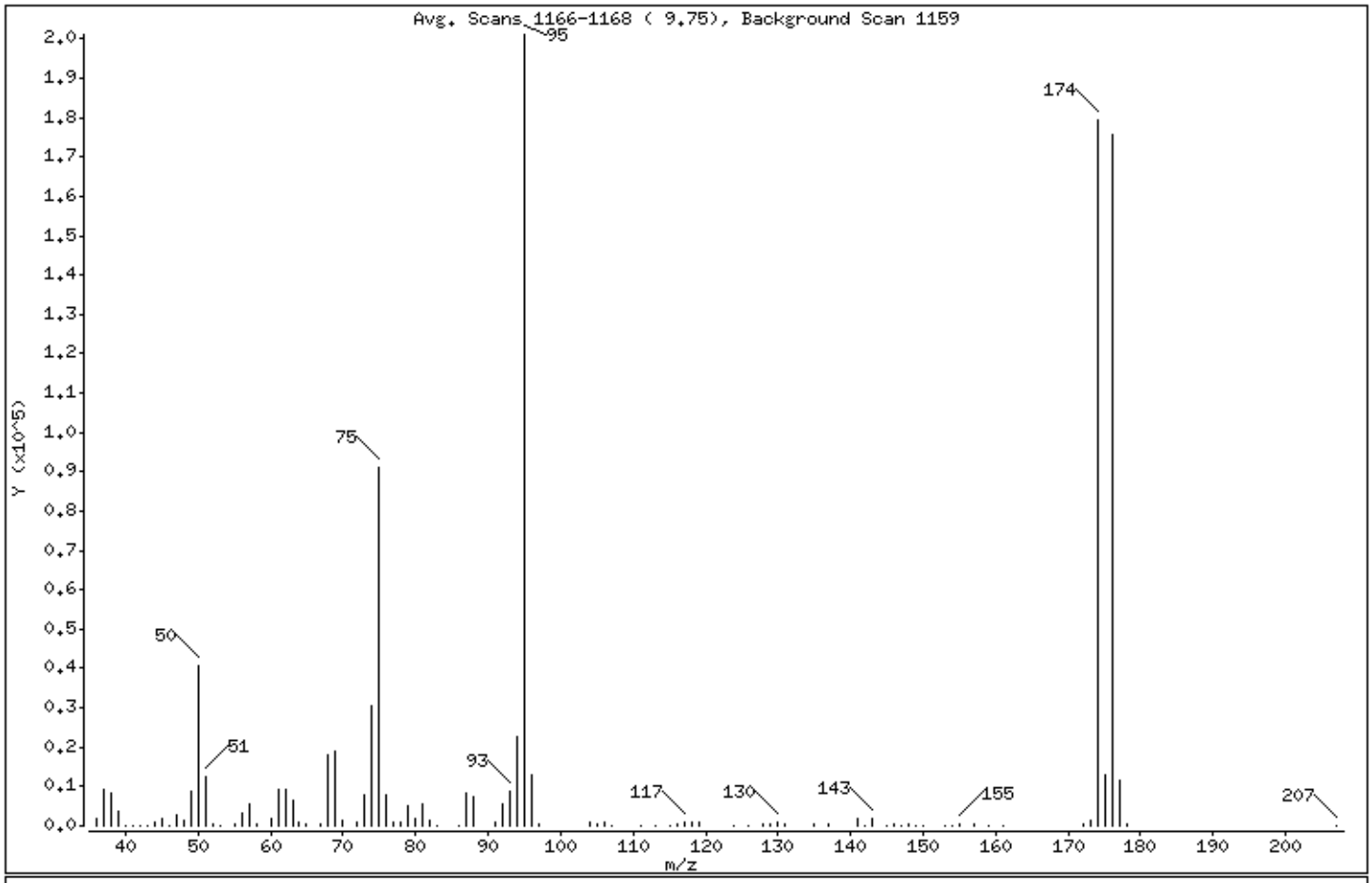
Client ID: BFB Instrument: msda.i

Sample Info: 1.0mL 2759-146;BFB Tune Check

Volume Injected (uL): 1.0 Operator: sab

Column phase: Column diameter: 2.00

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	8.00 - 40.00% of mass 95	20.17
75	30.00 - 66.00% of mass 95	45.37
96	5.00 - 9.00% of mass 95	6.42
173	Less than 1.99% of mass 174	0.76 (0.85)
174	50.01 - 120.00% of mass 95	89.32
175	4.00 - 9.00% of mass 174	6.34 (7.10)
176	93.01 - 100.99% of mass 174	87.46 (97.91)
177	5.00 - 9.00% of mass 176	5.68 (6.50)

Data File: /var/chem/msda.i/17feb16.b/a021701.d

Date : 17-FEB-2016 10:23

Client ID: BFB

Instrument: msda.i

Sample Info: 1.0mL 2759-146;BFB Tune Check

Volume Injected (uL): 1.0

Operator: sab

Column phase:

Column diameter: 2.00

Data File: a021701.d
Spectrum: Avg. Scans 1166-1168 (9.75), Background Scan 1159
Location of Maximum: 95.00
Number of points: 96

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1735	63.00	6493	94.00	22576	143.00	1858
37.00	9104	64.00	697	95.00	201152	145.00	227
38.00	8358	65.00	428	96.00	12920	146.00	398
39.00	3541	67.00	489	97.00	498	147.00	176
40.00	32	68.00	17912	104.00	792	148.00	463
41.00	188	69.00	18816	105.00	258	149.00	115
42.00	116	70.00	1365	106.00	898	150.00	160
43.00	30	72.00	934	107.00	219	153.00	120
44.00	876	73.00	7634	111.00	188	154.00	112
45.00	1796	74.00	30712	113.00	133	155.00	598
46.00	230	75.00	91272	115.00	160	157.00	389
47.00	2837	76.00	8026	116.00	641	159.00	223
48.00	1229	77.00	1122	117.00	1084	161.00	225
49.00	8839	78.00	809	118.00	702	172.00	612
50.00	40584	79.00	5285	119.00	923	173.00	1533
51.00	12603	80.00	1620	124.00	52	174.00	179648
52.00	546	81.00	5496	126.00	51	175.00	12750
53.00	59	82.00	1251	128.00	638	176.00	175936
55.00	565	83.00	127	129.00	366	177.00	11430
56.00	3271	86.00	211	130.00	761	178.00	281
57.00	5615	87.00	8195	131.00	398	207.00	30
58.00	268	88.00	7625	135.00	412		
60.00	1920	91.00	696	137.00	283		
61.00	9062	92.00	5540	141.00	1812		
62.00	9064	93.00	8572	142.00	206		

Shipping/ Receiving Documents

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics, Inc. (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Brian Whittaker at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

Project Manager: Mike Sonderman
Collected by: (Print and Sign) Jessica Hoppmann / Jessica Hoppmann
Company: AECOM Email:
Address: 12120 Shamrock Plaza City: Omaha State: NE Zip: 68154
Phone: (402) 334-8181 Fax: (402) 334-1984

Project Info:
P.O. #:
Project #: 60425210.23446540.0032AB
Project Name: Cannon AFB

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	CA504-SG02-010	34401	2/9/16	1527	TPH-GRO (TO-3), VOCs (TO-15)	-26.5	-6.0		
02A	CA504-SG02-005	13658	2/9/16	1645	↓	-28.2	-7.4		

Jessica Hoppmann 2/9/16

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Jessica Hoppmann 2/10/16 1300	[illegible] 2/10/16 1020
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time

Notes:
Two unused cannisters in same box

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		NA	Good SPR	Yes / No / None	1602250

2/10/16 side-to seal is open.

Form 1293 rev.11

Air Toxics Ltd.

TO-14A/TO-15 QUAD SURR Control Limits (msd3, msd17, msda, msdj, msdp)

Effective Dates 12/26/15 - 06/26/16

Data Point Analysis Dates 06/25/15 - 12/25/15

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
1,2-Dichloroethane-d4	128	79	136	71	120	87
4-Bromofluorobenzene	122	74	130	65	114	82
Toluene-d8	119	82	125	76	113	88

Air Toxics Ltd.

TO-14A/TO-15 QUAD LCS Control Limits (msd3, msd17, msda, msdj, msdp)

Effective Dates 12/26/15 - 06/26/16

Data Point Analysis Dates 06/25/15 - 12/25/15

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
1,1,1-Trichloroethane	131	69	141	59	121	80
1,1,2,2-Tetrachloroethane	142	63	155	50	129	76
1,1,2-Trichloroethane	131	71	141	61	121	81
1,1-Dichloroethane	135	69	146	58	124	80
1,1-Dichloroethene	132	66	143	55	121	77
1,2,4-Trichlorobenzene	159	56	176	39	142	73
1,2,4-Trimethylbenzene	143	70	155	58	131	82
1,2-Dibromoethane (EDB)	133	73	143	63	123	83
1,2-Dichlorobenzene	137	72	148	61	126	83
1,2-Dichloroethane	143	65	156	52	130	78
1,2-Dichloropropane	139	64	151	52	126	77
1,3,5-Trimethylbenzene	141	74	153	63	130	85
1,3-Butadiene	133	59	145	47	120	71
1,3-Dichlorobenzene	136	73	147	62	126	83
1,4-Dichlorobenzene	137	73	148	62	127	83
1,4-Dioxane	136	68	147	57	125	80
2,2,4-Trimethylpentane	141	69	153	57	129	81
2-Butanone (Methyl Ethyl Ketone)	134	67	146	56	123	78
2-Hexanone	153	64	167	50	138	79
2-Propanol	145	68	158	55	132	81
3-Chloropropene	124	65	134	55	114	74
4-Ethyltoluene	141	71	153	59	130	83
4-Methyl-2-pentanone	146	62	160	47	132	76
Acetone	137	61	150	48	125	74
alpha-Chlorotoluene	161	61	178	44	144	77
Benzene	135	69	146	58	124	80
Bromodichloromethane	138	72	149	61	127	83
Bromoform	138	71	149	60	127	82
Bromomethane	135	71	145	60	124	82
Butane	147	51	163	35	131	67
Carbon Disulfide	116	59	126	50	107	69
Carbon Tetrachloride	131	71	141	61	121	81
Chlorobenzene	128	72	137	63	119	82
Chloroethane	139	70	151	59	128	82
Chloroform	132	70	142	60	121	81
Chloromethane	152	49	169	32	135	67
cis-1,2-Dichloroethene	143	73	154	62	131	85
cis-1,3-Dichloropropene	128	64	139	53	118	75
Cumene	138	75	148	64	127	85
Cyclohexane	128	73	137	63	118	82

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
Dibromochloromethane	136	71	147	60	125	82
Ethanol	144	62	157	49	130	76
Ethyl Benzene	131	74	141	65	122	84
Freon 11	139	71	150	59	128	82
Freon 113	127	68	137	59	117	78
Freon 114	136	76	146	66	126	86
Freon 12	141	71	153	60	130	83
Heptane	134	69	145	58	123	80
Hexachlorobutadiene	158	57	175	40	141	74
Hexane	132	68	142	57	121	78
Isopentane	140	63	153	50	127	76
m,p-Xylene	134	76	144	66	124	85
Methyl tert-butyl ether	127	66	137	56	117	76
Methylcyclohexane	132	69	142	58	121	79
Methylene Chloride	141	65	154	52	129	78
Naphthalene	169	20	196	-21	142	34
o-Xylene	140	74	151	63	129	85
Propylbenzene	139	76	150	65	128	86
Propylene	143	57	157	43	128	72
Styrene	147	70	160	57	134	83
Tetrachloroethene	130	69	140	59	120	80
Tetrahydrofuran	137	62	149	49	124	74
Toluene	133	67	144	56	122	78
trans-1,2-Dichloroethene	116	61	126	52	107	71
trans-1,3-Dichloropropene	136	70	147	58	125	81
Trichloroethene	134	69	145	58	123	80
Vinyl Acetate	140	61	154	47	127	74
Vinyl Chloride	143	60	157	46	129	74

Some control limits were <20% and/or >180%. Therefore default limits of 20% and/or 180% were used.

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 1602250A

Client

Mr. Jeff Aust
AECOM
12120 Shamrock Plaza
Suite 300
Omaha, NE 68154

Sales Rep: N/A

Phone

(402) 952-2516

Fax

(402) 952-2591

Date Promised: 02/24/16
Date Completed: 2/23/16
Date Received: 2/11/16
PO#: 320236
Project#: 60425210.23446540.0032AB Cannon AFB
Total $: $ 240.00
Logged By: MH

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	CA504-SG02-010	TO-15	2/9/2016	9.4 "Hg	$120.00
01AA	CA504-SG02-010 Lab Duplicate	TO-15	2/9/2016	9.4 "Hg	$0.00
02A	CA504-SG02-005	TO-15	2/9/2016	7.3 "Hg	$120.00
03A	Lab Blank	TO-15	NA	NA	$0.00
04A	CCV	TO-15	NA	NA	$0.00
05A	LCS	TO-15	NA	NA	$0.00
05AA	LCSD	TO-15	NA	NA	$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Cannon Air Force Base320236/19959

BILL TO: Accounts Payable Austin
AECOM
P.O. BOX 203970
Austin, TX 78720-1088

Analysis Code: TO-14A

REMARKS: VENDOR # 1568409

TERMS: NET 45

Reporting Method: TO-15 (Sh)-BTEX only

Other Records

DILUTION FACTORS

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Vacuum}} = \frac{\text{14.7 psi + Final Pressure (psi)}}{\text{14.7 psi - [(Initial Pressure ("Hg)) (14.7 psi / 30 "Hg)]}}$$

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{\text{14.7 psi + Final Pressure (psi)}}{\text{14.7 psi + Initial Pressure (psi)}}$$

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.5	1.36	1.71	2.05
1.0	1.39	1.74	2.09
1.5	1.41	1.77	2.13
2.0	1.44	1.80	2.16
2.5	1.46	1.83	2.20
3.0	1.49	1.87	2.24
3.5	1.52	1.90	2.29
4.0	1.55	1.94	2.33
4.5	1.58	1.98	2.38
5.0	1.61	2.02	2.42
5.5	1.64	2.06	2.47
6.0	1.68	2.10	2.53
6.5	1.71	2.15	2.58
7.0	1.75	2.19	2.64
7.5	1.79	2.24	2.69
8.0	1.83	2.29	2.76
8.5	1.87	2.34	2.82
9.0	1.91	2.40	2.89
9.5	1.96	2.46	2.96
10.0	2.01	2.52	3.03
10.5	2.06	2.59	3.11
11.0	2.12	2.65	3.19
11.5	2.17	2.72	3.28
12.0	2.23	2.80	3.37
12.5	2.30	2.88	3.46
13.0	2.36	2.97	3.57
13.5	2.44	3.06	3.67
14.0	2.51	3.15	3.79
14.5	2.59	3.25	3.91
15.0	2.68	3.36	4.04
15.5	2.77	3.48	4.18
16.0	2.87	3.60	4.33
16.5	2.98	3.73	4.49
17.0	3.09	3.88	4.66
17.5	3.22	4.03	4.85
18.0	3.35	4.20	5.05
18.5	3.50	4.38	5.27
19.0	3.65	4.58	5.51
19.5	3.83	4.80	5.77
20.0	4.02	5.04	6.06
20.5	4.23	5.31	6.38

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
21.0	4.47	5.60	6.73
21.5	4.73	5.93	7.13
22.0	5.03	6.30	7.58
22.5	5.36	6.72	8.08
23.0	5.74	7.20	8.66
23.5	6.19	7.76	9.32
24.0	6.70	8.40	10.10
24.5	7.31	9.17	11.02
25.0	8.04	10.08	12.12
25.5	8.93	11.20	13.47
26.0	10.05	12.60	15.15
26.5	11.49	14.40	17.32
27.0	13.40	16.80	20.20
27.5	16.08	20.16	24.24
28.0	20.10	25.20	30.31
28.5	26.80	33.61	40.41
29.0	40.20	50.41	60.61

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59

DILUTION FACTORS

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{14.7\text{ psi} + \text{Final Pressure (psi)}}{14.7\text{ psi} + \text{Initial Pressure (psi)}}$$

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59
4.2	1.04	1.31	1.57
4.4	1.03	1.29	1.55
4.6	1.02	1.28	1.54
4.8	1.01	1.27	1.52
5.0	1.00	1.25	1.51
5.2	NA	1.24	1.49
5.4	NA	1.23	1.48
5.6	NA	1.22	1.46
5.8	NA	1.20	1.45
6.0	NA	1.19	1.43
6.2	NA	1.18	1.42
6.4	NA	1.17	1.41
6.6	NA	1.16	1.39
6.8	NA	1.15	1.38
7.0	NA	1.14	1.37
7.2	NA	1.13	1.36
7.4	NA	1.12	1.34

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
7.6	NA	1.11	1.33
7.8	NA	1.10	1.32
8.0	NA	1.09	1.31
8.2	NA	1.08	1.30
8.4	NA	1.07	1.29
8.6	NA	1.06	1.27
8.8	NA	1.05	1.26
9.0	NA	1.04	1.25
9.2	NA	1.03	1.24
9.4	NA	1.02	1.23
9.6	NA	1.02	1.22
9.8	NA	1.01	1.21
10.0	NA	1.00	1.20
10.2	NA	NA	1.19
10.4	NA	NA	1.18
10.6	NA	NA	1.17
10.8	NA	NA	1.16
11.0	NA	NA	1.16
11.2	NA	NA	1.15
11.4	NA	NA	1.14
11.6	NA	NA	1.13
11.8	NA	NA	1.12
12.0	NA	NA	1.11
12.2	NA	NA	1.10
12.4	NA	NA	1.10
12.6	NA	NA	1.09
12.8	NA	NA	1.08
13.0	NA	NA	1.07
13.2	NA	NA	1.06
13.4	NA	NA	1.06
13.6	NA	NA	1.05
13.8	NA	NA	1.04
14.0	NA	NA	1.03
14.2	NA	NA	1.03
14.4	NA	NA	1.02
14.6	NA	NA	1.01
14.8	NA	NA	1.01

Compound Listing

TO-15 (Sh)-BTEX only

CAS Number	Compound	Detection Limit ppbv	Type
71-43-2	Benzene	0.50	
100-41-4	Ethyl Benzene	0.50	
108-88-3	Toluene	0.50	
108-38-3	m,p-Xylene	0.50	
95-47-6	o-Xylene	0.50	
17060-07-0	1,2-Dichloroethane-d4		
2037-26-5	Toluene-d8		
460-00-4	4-Bromofluorobenzene		

File Name: O:\Variances\Variances 2013\Signed Variance Tables 2013
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Item	Parameter	SOW	ATL SOP	Approval
1	DoD QSM Box 32 – Second Source Standards	Second Source standard must be from a different manufacturer.	Second Source standard is from a different manufacturer or same manufacturer different lot number.	
2	SOW#7	EDDs must be accompanied by a signature page indicating correct values and format.	Signature page is not included along with the EDD.	
3	SOW #12	The LOQ must be at least 2 times the DL.	In the majority of the cases, the LOQ meets this criterion; however, when evaluating over 60 compounds on multiple instruments, there may be an isolated case in which LOQ is not 2 times the DL. In all cases, the LOQ>DL.	
4	SOW#13	The laboratory shall provide copies of all SOPs upon request by URS.	SOPs are available on an as needed basis upon signing a NDA.	
5	SOW#16	Hardcopy and EDD must be delivered.	The laboratory provides report as a pdf format and EDD which can be downloaded from the Web portal. The QC Summary Package may not have the navigable functionality in the pdf format.	
6	SOW#17	Samples may be disposed after 7 days of URS receipt of an acceptable data package.	Summa canisters are reusable media and will be released for cleaning after analyses have been completed and reviewed against project requirements.	
7	Attachment A	Cooler receipt form	Summa canisters are not shipped via a cooler and a cooler receipt form is not applicable.	

I agree to terms and conditions

File Name: O:\Variances\
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Method Modifications

Table 1. Summary of Method Modifications for TO-3

Requirement	EPA Method TO-3	Eurofins Air Toxics Modifications
Sample Collection	In-line field method.	Collection of sample in specially treated canisters or alternative containers for transport to and analysis by an off-site laboratory.
Preparation of Standards	Levels achieved through dilution of gas mixture.	Levels achieved through loading various volumes of the gas mixture.
Initial Calibration Calculation	4-point calibration using a linear regression model.	5-point calibration using average Response Factor.
Initial Calibration Frequency	Weekly.	When daily calibration standard recovery is outside 75-125%, or upon significant changes to the procedure or instrumentation.
Daily Calibration Standard Frequency	Prior to sample analysis and every 4-6 hrs.	Prior to sample analysis.
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard.	40 CFR Pt. 136 App. B.
Sample preconcentration and moisture management	Cyrogenic preconcentrator with a Nafion dryer.	Multi-bed Sorbent system.

File Name: O:\Variances\
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Table 2. Summary of Method Modifications for ASTM D1946

Requirement	ASTM D1946	Eurofins Air Toxics Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum 3-point calibration curve is performed. Quantitation is based on a daily calibration standard, which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by AT are blended to a ≥ 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL. Linear range is defined by the calibration curve. Bags may be loaded by vacuum or by positive pressure.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25 % RPD. for detections >5 X's the RL

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Media Certification Report

Canister Number: 6L# 34401w/Batch
Can#: 105499-34401
Date : 01/28/16 13:16
Data File: d012735.d

www.airtoxics.com
1-800-985-5955

Name	CAS	Cert RL	Conc.	Units
Benzene	71-43-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
4-Bromofluorobenzene	460-00-4		95.00	% Recovery

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www.airtoxics.com
1-800-985-5955

Media Certification Report

Canister Number: 6L# 13658
Can#: 105499-13658
Date : 01/27/16 22:04
Data File: d012711.d

Name	CAS	Cert RL	Conc.	Units
Benzene	71-43-2	0.250	ND	ppbv
Ethyl Benzene	100-41-4	0.250	ND	ppbv
m,p-Xylene	108-38-3	0.250	ND	ppbv
o-Xylene	95-47-6	0.250	ND	ppbv
Toluene	108-88-3	0.250	ND	ppbv
4-Bromofluorobenzene	460-00-4		100.00	% Recovery

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 11/11/15
Workorder # 1602244 SOA 83 2/17/16	Form F1.27	Revision #12	Revision Date: 11/11/15	Page 1 of 2

S1	S2	S3	S4	D	Section 1 – Spec Out				
					Initials/Instrument/Date	S1: 83/A/2-17-16	S2:	S3:	S4:
✓					Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
✓					Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
NA					Manual Integrations included and approved				
✓				✓	Chain of Custody verified for special comments (add comments below)				
NA					Non-standard Target sublist verified (MDL, LOD, RL, control limits, etc.)				

Profile, analyses, reporting, special notes and unusual circumstances:

S1: 8000T QC: Dup/Amb; JFlag MDL; 2½RL LB; In house cont; DOD42

A1	A2	A3	A4	D	Section 2 – Sample Analysis				
					Initials/Date	A1: AA 2/16/16	A2:	A3:	A4:
✓				✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, and Canister #s Verified				
NA				NA	a) Tedlar Bag IDs verified against COC b) Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
NA				✓	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓					12/24 Hr clock time & Hold Time met for all samples				
NA	✓			✓	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks. -01A/-01AA → ok <5xRL				
				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes: 01A 01AA full loads + 01AA

D1	D2	D3	D4	T	3T	Section 3 – Target Data Reduction	Technical Review Needed? Circle one: Yes/No		T:	
						Initials/Instrument/Date MSD-A	D1: HeB 2/23/16	D2:	D3:	D4:
NA						CAR # (if applicable)				
✓						Spectra Verified *(documentation of spectral defense included if applicable)*				
NA						TICs resemble reference spectra/ TICs between sample dups. are consistent *(if applicable)*				
✓					✓	Lab Narrative is correct				
NA						TPH/NMOC calculations complete and included in folder				

Special notes: all full loads

	A	3T	Section 4- Atlas Data Entry	Lumen verified and included in folder	Circle one: Yes/No
			Initials/Date: HeB 2/23/16	3rd Tier: *(needed only for DOD or per client request)*	
	NA	NA	Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
	NA	NA	Manually entered results are checked		
	✓	✓	At least one result per sample is verified against Target quant sheets		
	✓	✓	Appropriate data qualifier flags are applied		
	✓	✓	Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes: Surr/LCS/LCSD → in-house generated control limits QSM V4.2

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) *3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects*

Workorder # :				**Reason for Reissue:**
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Workorder # :				**Reason for Reissue:**
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Not Applicable

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Electronic Comprehensive Validation Package (eCVP)

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COMPREHENSIVE VALIDATION PACKAGE

Modified TO-3

INVENTORY SHEET

Work Order #: 1602250B

	Page Nos. From	Page Nos. To
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b. Target Compound Raw Data		
-Internal Standard Area and Retention Time Summary		
-Surrogate Recovery Summary (If Applicable)		
-Chromatogram(s) and Ion Profiles (If Applicable)		
3. QC Results and Raw Data		
a. Method Blank (Results+ Raw Data)	19	23
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c. Internal Standard Summary Form (If Applicable)	--	--
d. Duplicate Results Summary Sheet	25	26
e. Matrix Spike/Matrix Spike Duplicate (Results + Raw Data	--	--
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h. Continuing Calibration Verification Data (Summary Sheet	88	91
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j. Extraction Logs	--	--
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l. GC/MS Tune (Results + Raw Data)	--	--
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b. Chain-of-Custody Records	103	105
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5. Other Records (describe or list)		
a. Manual Spectral Defense	--	--
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d. Canister Dilution Factors	107	109
e. Laboratory Corrective Action Request	--	--
f. CAS Number Reference	110	110
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h. Canister Certification	--	--
i. Data Review Check Sheet	114	115

Comments:

Completed by:

Vera Belitsky	Vera Belitsky / Document Control	3/3/16
(Signature)	(Print Name & Title)	(Date)

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WORK ORDER #: 1602250B

Work Order Summary

CLIENT:	Mr. Jeff Aust AECOM 12120 Shamrock Plaza Suite 300 Omaha, NE 68154	**BILL TO:**	Accounts Payable Austin AECOM P.O. BOX 203970 Austin, TX 78720-1088
PHONE:	(402) 952-2516	**P.O. #**	320236
FAX:	(402) 952-2591	**PROJECT #**	60425210.23446540.0032AB Cannon AFB
DATE RECEIVED:	02/11/2016	**CONTACT:**	Brian Whittaker
DATE COMPLETED:	02/24/2016		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	CA504-SG02-010	Modified TO-3	9.4 "Hg	4.9 psi
01AA	CA504-SG02-010 Lab Duplicate	Modified TO-3	9.4 "Hg	4.9 psi
02A	CA504-SG02-005	Modified TO-3	7.3 "Hg	5.1 psi
03A	Lab Blank	Modified TO-3	NA	NA
04A	LCS	Modified TO-3	NA	NA
04AA	LCSD	Modified TO-3	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 02/24/16

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
DoD QSM 4.2 TO-3
AECOM
Workorder# 1602250B

Two 6 Liter Summa Canister (100% Certified) samples were received on February 11, 2016. The laboratory performed analysis for volatile organic compounds in air via modified EPA Method TO-3 using gas chromatography with flame ionization detection. The TPH results are calculated using the response of Gasoline. A molecular weight of 100 is used to convert the TPH ppmv result to ug/m3. The method involves concentrating up to 200 mL of sample. The concentrated aliquot is then dry purged to remove water vapor prior to entering the chromatographic system.

Method modifications and DoD QSM 4.2 modification taken to run these samples are summarized in the table below. Specific project requirements may over-ride the listed modifications.

Requirement	***TO-3***	***ATL Modifications***
Daily Calibration Standard Frequency	Prior to sample analysis and every 4 - 6 hrs	Prior to sample analysis and after the analytical batch </= 20 samples.
EPA Method TO-3 - Initial Calibration Calculation	4-point calibration using a linear regression model	5-point calibration using average Response Factor
EPA Method TO-3 - Initial Calibration Frequency	Weekly	When daily calibration standard recovery is outside 75 - 125 %, or upon significant changes to procedure or instrumentation
EPA Method TO-3 - Moisture Control	Nafion system	Sorbent system
EPA Method TO-3 - Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard	40 CFR Pt. 136 App. B
EPA Method TO-3 - Preparation of Standards	Levels achieved through dilution of gas mixture	Levels achieved through loading various volumes of the gas mixture
EPA Method TO-3 - Sample Collection	In-line field method	Collection of sample in specially treated canisters or alternative inert containers for transport to and analysis by an off-site laboratory.
DoD QSM 4.2 Box 32 Second Source Standard	Second Source standard must be from a different manufacturer.	Second Source standard is from a different manufacturer or same manufacturer with different lot number.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

As per project specific client request the laboratory has reported estimated values for target compound hits that are below the Reporting Limit but greater than the Method Detection Limit.

The hydrocarbon profile present in samples CA504-SG02-010, CA504-SG02-010 Lab Duplicate and CA504-SG02-005 did not resemble that of commercial gasoline. Results were calculated using the response factor derived from the current gasoline linear calibration.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:
B - Compound present in laboratory blank greater than reporting limit.
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the detection limit.
M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

Table 1

Client Sample ID	Lab Sample ID	Date Collected	Date Received	Date Extracted	Sample Holding Time (Days)	Sample Extract Date Analyzed	Sample Extract Holding Time (Days)	Sample Condition
CA504-SG02-010	1602250B-01A	2/ 9/2016	2/11/2016	NA	13	2/22/2016	NA	Good
CA504-SG02-010 Lab D	1602250B-01AA	2/ 9/2016	2/11/2016	NA	13	2/22/2016	NA	Good
CA504-SG02-005	1602250B-02A	2/ 9/2016	2/11/2016	NA	13	2/22/2016	NA	Good
Lab Blank	1602250B-03A	NA	NA	NA	NA	2/22/2016	NA	Good
LCS	1602250B-04A	NA	NA	NA	NA	2/22/2016	NA	Good
LCSD	1602250B-04AA	NA	NA	NA	NA	2/22/2016	NA	Good

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Sample Results and Raw Data

MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

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Client ID:	CA504-SG02-010		
Lab ID:	1602250B-01A	**Date/Time Analyzed:**	2/22/16 02:03 PM
Date/Time Collected:	2/9/16 03:27 PM	**Dilution Factor:**	1.94
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	gcd.i / d022208

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	32	95	200	270

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	97

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/22Feb2016.b/d022208.d
Lab Smp Id: 1602250B-01A
Inj Date : 22-FEB-2016 14:03
Operator : gm Inst ID: gcd.i
Smp Info : 9.4"Hg->4.9psi
Misc Info : 200mL,34401;1602250B-01A;
Comment :
Method : /chem/gcd.i/22Feb2016.b/d1530921.m
Meth Date : 22-Feb-2016 21:32 gdelacru Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 1.94000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.725	11.717	0.008	4782878	0.12120	0.1212
S 7 TPH (Gas Range)	7.346-21.366			864466	0.03362	0.06523

Report Date: 24-Feb-2016 14:23

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 22Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602250B-01A
Level: LOW
Operator: gm
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /chem/gcd.i/22Feb2016.b/d1530921.m
Misc Info: 200mL,34401;1602250B-01A;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1212	96.96	45-148

Data File: /chem/gcd.i/22Feb2016.b/d022208.d

Date : 22-FEB-2016 14:03

Client ID:

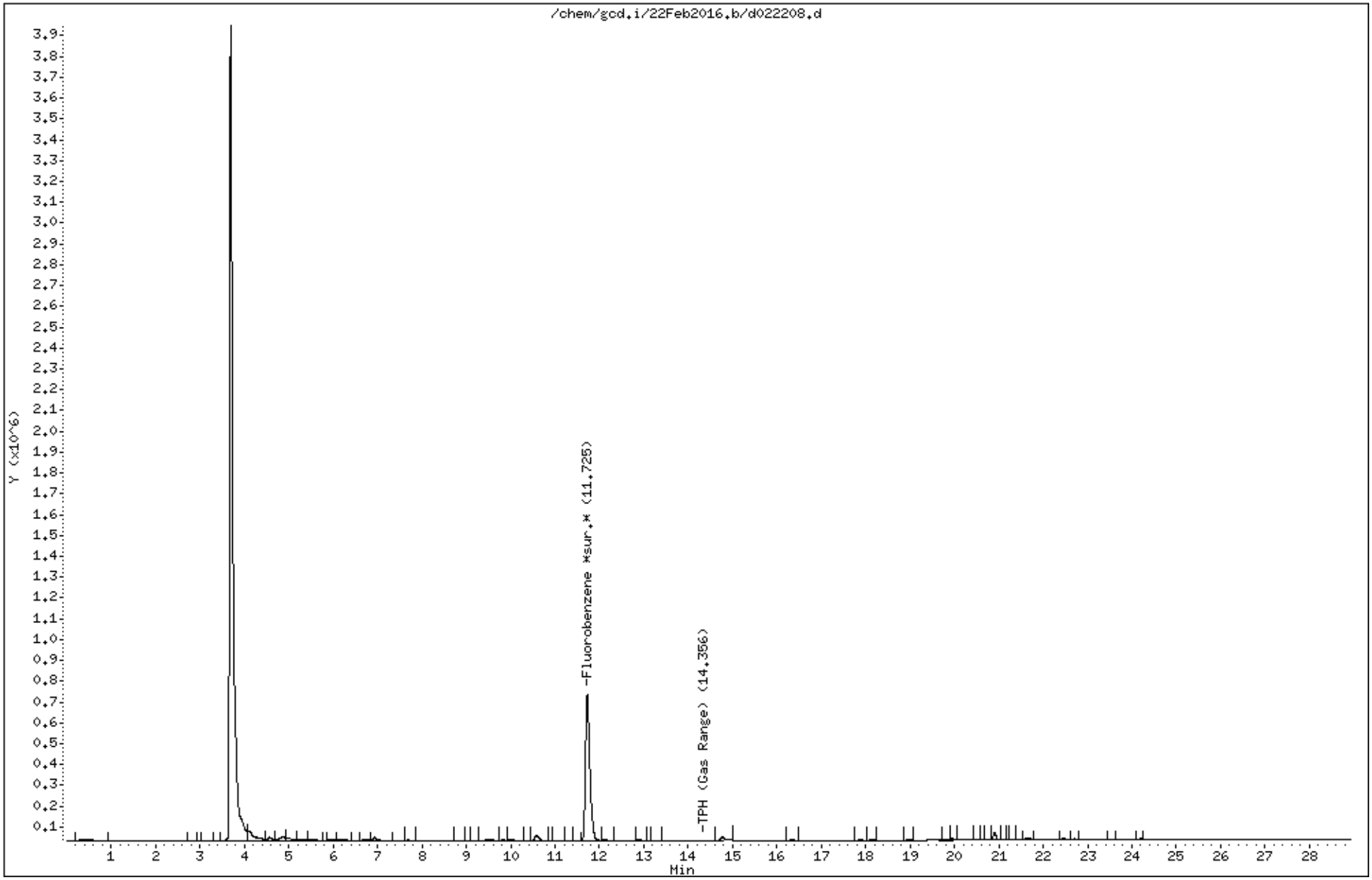
Instrument: gcd.i

Sample Info: 9.4"Hg->4.9psi

Operator: gm

Column phase:

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	CA504-SG02-010 Lab Duplicate		
Lab ID:	1602250B-01AA	**Date/Time Analyzed:**	2/22/16 02:51 PM
Date/Time Collected:	2/9/16 03:27 PM	**Dilution Factor:**	1.94
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	gcd.i / d022209

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	32	95	200	290

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	97

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/22Feb2016.b/d022209.d
Lab Smp Id: 1602250B-01AA
Inj Date : 22-FEB-2016 14:51
Operator : gd Inst ID: gcd.i
Smp Info : 9.4"Hg->4.9psi
Misc Info : 200mL,34401;1602250B-01AA;
Comment :
Method : /chem/gcd.i/22Feb2016.b/d1530921.m
Meth Date : 22-Feb-2016 21:32 gdelacru Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 1.94000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.729	11.717	0.012	4803014	0.12171	0.1217
S 7 TPH (Gas Range)	7.346-21.366			939091	0.03652	0.07086

Report Date: 24-Feb-2016 14:23

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 22Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602250B-01AA
Level: LOW
Operator: gd
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /chem/gcd.i/22Feb2016.b/d1530921.m
Misc Info: 200mL,34401;1602250B-01AA;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1217	97.37	45-148

Data File: /chem/gcd.i/22Feb2016.b/d022209.d

Date : 22-FEB-2016 14:51

Client ID:

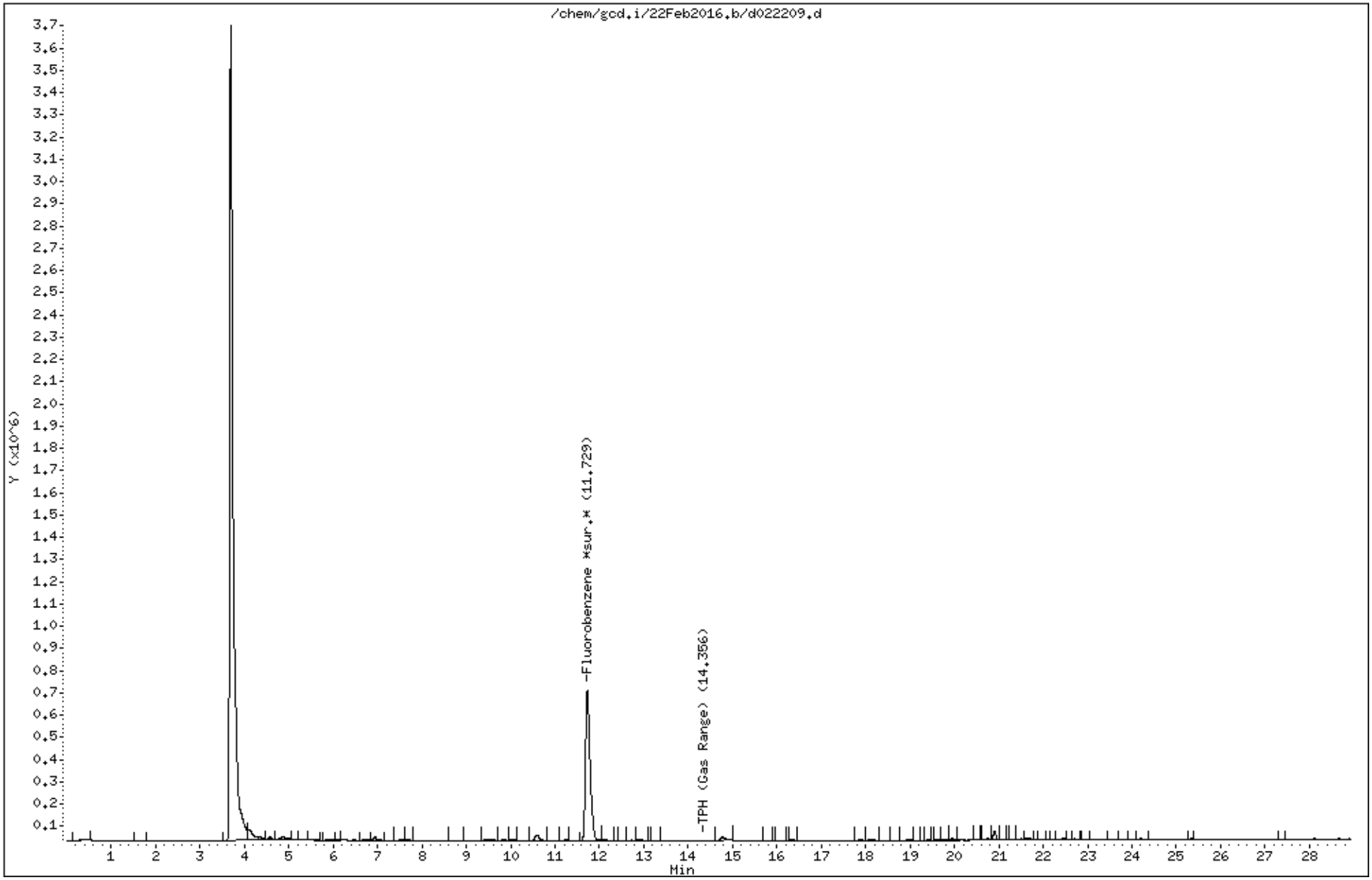
Instrument: gcd.i

Sample Info: 9.4"Hg->4.9psi

Operator: gd

Column phase:

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

Client ID:	CA504-SG02-005		
Lab ID:	1602250B-02A	**Date/Time Analyzed:**	2/22/16 03:36 PM
Date/Time Collected:	2/9/16 04:45 PM	**Dilution Factor:**	1.78
Media:	6 Liter Summa Canister (100% Certified)	**Instrument/Filename:**	gcd.i / d022210

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	29	87	180	45 J

J = Estimated value.

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	98

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/22Feb2016.b/d022210.d
Lab Smp Id: 1602250B-02A
Inj Date : 22-FEB-2016 15:36
Operator : gd Inst ID: gcd.i
Smp Info : 7.3"Hg->5.1psi
Misc Info : 200mL,13658;1602250B-02A;
Comment :
Method : /chem/gcd.i/22Feb2016.b/d1530921.m
Meth Date : 22-Feb-2016 21:32 gdelacru Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 1.78000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.731	11.717	0.014	4834808	0.12251	0.1225
S 7 TPH (Gas Range)	7.346-21.366			158990	0.00618	0.01101(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Report Date: 24-Feb-2016 14:23

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 22Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 1602250B-02A
Level: LOW
Operator: gd
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /chem/gcd.i/22Feb2016.b/d1530921.m
Misc Info: 200mL,13658;1602250B-02A;

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1225	98.01	45-148

Data File: /chem/gcd.i/22Feb2016.b/d022210.d

Date : 22-FEB-2016 15:36

Client ID:

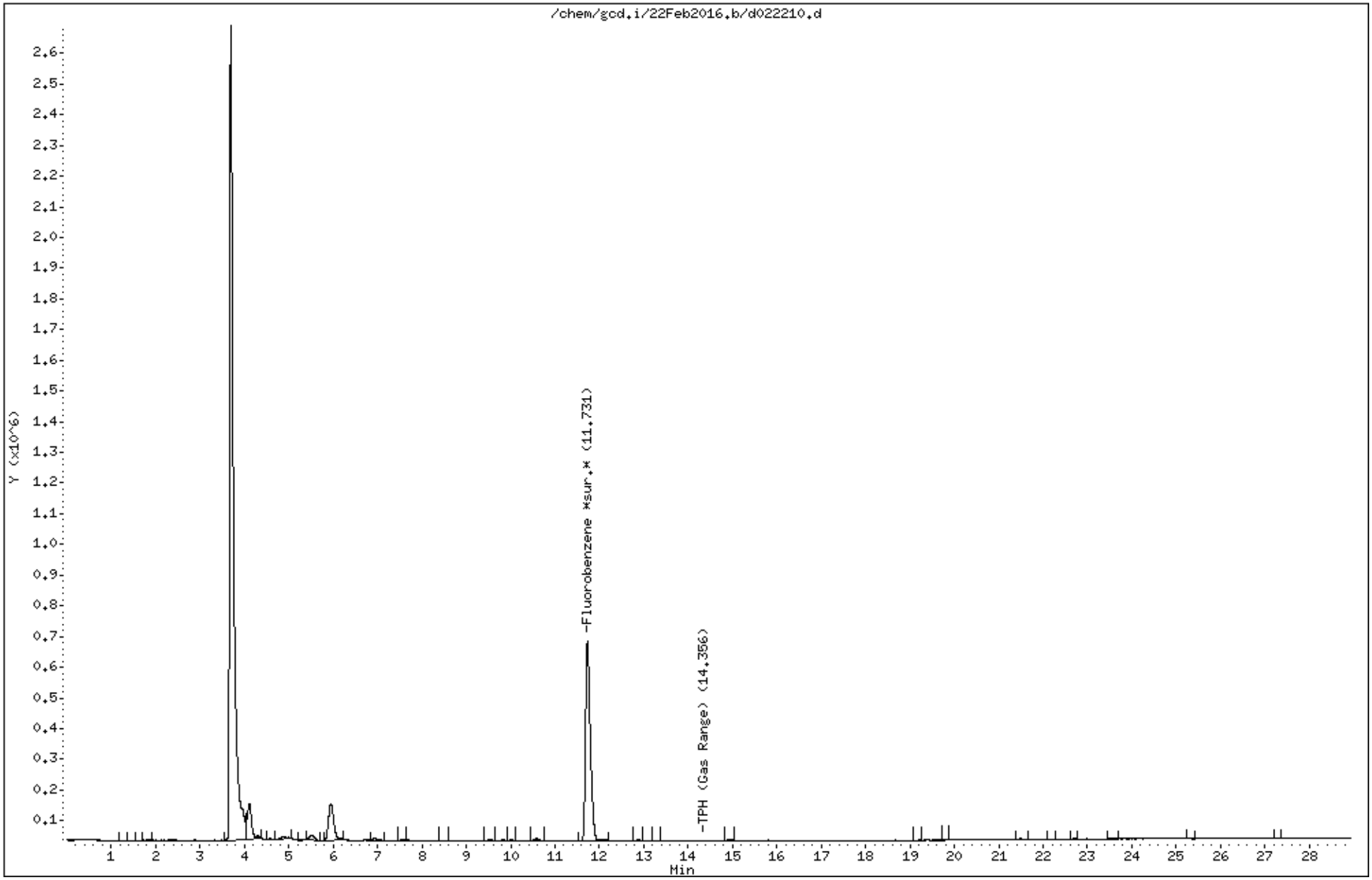
Instrument: gcd.i

Sample Info: 7.3"Hg->5.1psi

Operator: gd

Column phase:

Column diameter: 2.00



QC Results and Raw Data

MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	Lab Blank		
Lab ID:	1602250B-03A	**Date/Time Analyzed:**	2/22/16 11:33 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	gcd.i / d022205a

Compound	CAS#	MDL (ug/m3)	LOD (ug/m3)	Rpt. Limit (ug/m3)	Amount (ug/m3)
TPH (Gasoline Range)	9999-9999-208	16	49	100	Not Detected U

U = The analyte was not detected above the MDL.

Surrogates	CAS#	Limits	%Recovery
Fluorobenzene (FID)	462-06-602	45-148	97

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/22Feb2016.b/d022205a.d
Lab Smp Id: Humid Lab Blank Client Smp ID: Lab Blank
Inj Date : 22-FEB-2016 11:33
Operator : gm Inst ID: gcd.i
Smp Info : Lab Blank
Misc Info : 200mL,14867;Humid Lab Blank;Lab Blank
Comment :
Method : /chem/gcd.i/22Feb2016.b/d1530921.m
Meth Date : 22-Feb-2016 21:32 gdelacru Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.725	11.717	0.008	4782897	0.12120	0.1212
S 7 TPH (Gas Range)	Compound Not Detected.					

Report Date: 24-Feb-2016 14:22

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 22Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: Humid Lab Blank
Client Smp ID: Lab Blank
Level: LOW
Operator: gm
Data Type: GC DATA
SampleType: SAMPLE
SpikeList File:
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /chem/gcd.i/22Feb2016.b/d1530921.m
Misc Info: 200mL,14867;Humid Lab Blank;Lab Blank

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1212	96.96	45-148

Data File: /chem/gcd.i/22Feb2016.b/d022205a.d

Date : 22-FEB-2016 11:33

Client ID: Lab Blank

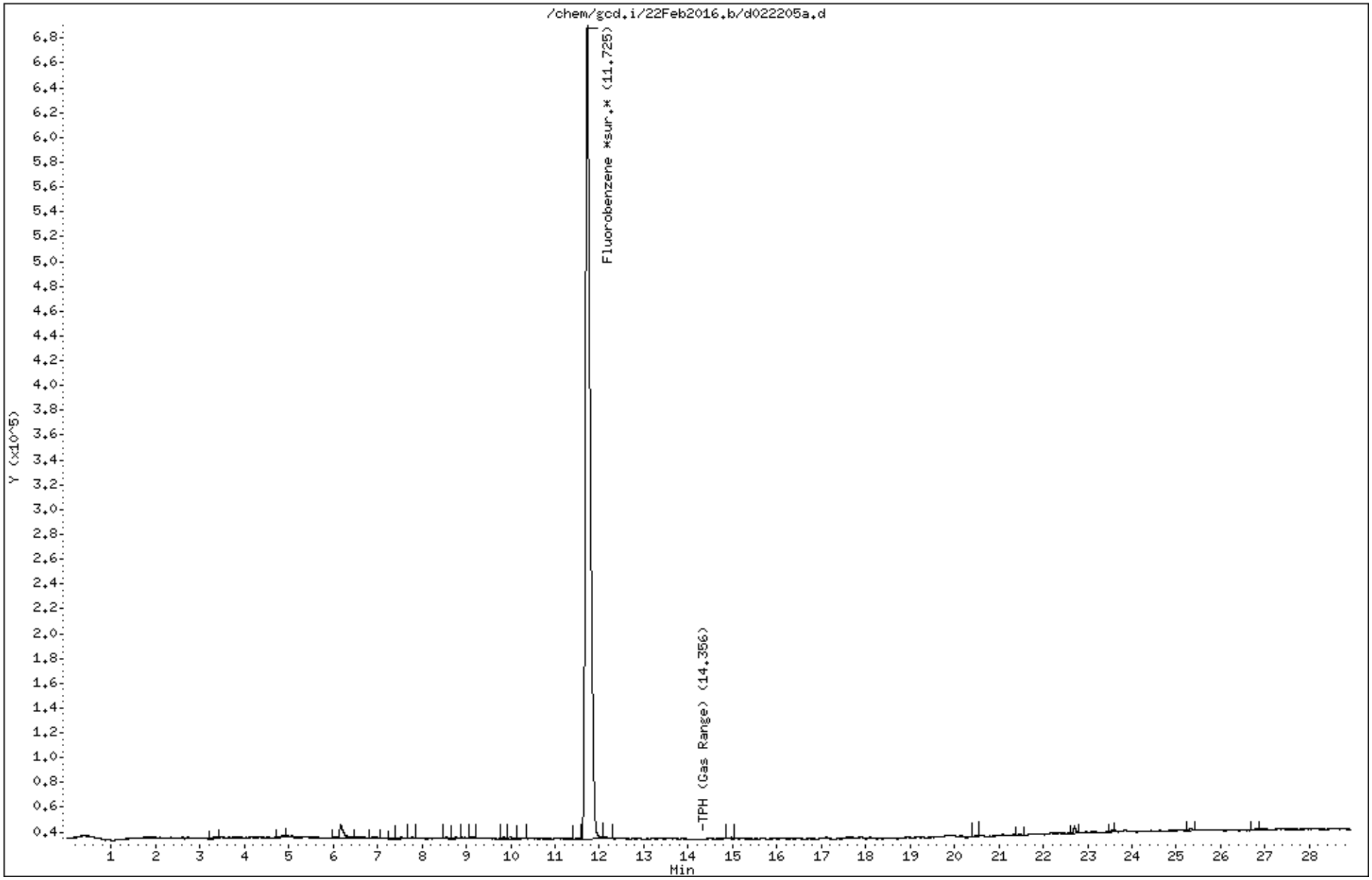
Instrument: gcd.i

Sample Info: Lab Blank

Operator: gm

Column phase:

Column diameter: 2.00



LEVEL-IV VALIDATABLE

MODIFIED EPA METHOD TO-3 GC/FID

SURROGATE RECOVERY FORM

Lab Name: AIR TOXICS LIMITED. SDG No.: 1602250B

	CLIENT SAMPLE NO.	SURROGATE % RECOVERY								
		Fluorobenzene (FID)	#		#		#		#	TOTAL OUT
01	CA504-SG02-010	97								0
02	CA504-SG02-010 Lab Duplicate	97								0
03	CA504-SG02-005	98								0
04	Lab Blank	97								0
05	LCS	103								0
06	LCSD	103								0
07										0
08										0
09										0
10										0
11										0
12										0
13										0
14										0
15										0
16										0
17										0
18										0
19										0
20										0
21										0
22										0
23										0
24										0

Surrogate Recovery Limits

Fluorobenzene (FID) 45 - 148

* Designates values outside of QC limits

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: d022209.d & d022208.d

Lab Sample ID: 01A & 01AA

Dilution: 1.94 & 1.94

Client Sample ID: &

Date Analyzed: 2/22/16 & 2/22/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
9999-9999-208	TPH (Gasoline Range)	0.06523		0.07086		8.3	Y

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

SAMPLE RESULTS/SAMPLE RESULTS DUPLICATE

Lab Name: Air Toxics Ltd.

Lab File ID: d022216a.d & d022202a.d

Lab Sample ID: &

Dilution: 1.00 & 1.00

Client Sample ID: LCS & LCSD

Date Analyzed: 2/22/16 & 2/22/16

CAS Number	Compound	Original Amount	Original Flags	Duplicate Amount	Duplicate Flags	RPD	Result Less Than 5X RL
9999-9999-208	TPH (Gasoline Range)	81		81		0	

Note: The results appearing in the Amount columns are the raw, unrounded numbers acquired from the instrument.

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUN-2015 08:34
End Cal Date : 21-SEP-2015 17:12
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/gcd.i/21Sep2015.b/d1530921.m
Cal Date : 22-Sep-2015 12:35 lyohanne
Curve Type : Average

Calibration File Names:
Level 1: /chem/gcd.i/21Sep2015.b/d092108.d
Level 2: /chem/gcd.i/21Sep2015.b/d092109.d
Level 3: /chem/gcd.i/21Sep2015.b/d092110.d
Level 4: /chem/gcd.i/21Sep2015.b/d092111.d
Level 5: /chem/gcd.i/21Sep2015.b/d092112.d

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	RRF	% RSD	
S 1 c2+ TO12(hept)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 2 c2+ TO12(hexane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 Hexane	40030000	37628480	42105095	40040543	39017140	39764252	4.122	
4 Heptane (hept)	29530400	30133140	41348580	42018357	41583728	36922841	17.553	
S 7 TPH (Gas Range)	18174360	25086220	24367260	28186843	32742284	25711393	20.815	
S 8 C2+ (gas)	28393240	36782404	34383368	38566571	44825575	36590232	16.388	
S 9 C2-C4 (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 10 C5+ (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 114 C2-C10(gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 128 C2-C10(gas100)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 11 TPH (JP4 Range)	37688642	43019358	43695391	49442406	48904099	44549979	10.826	
S 12 C2+(jp4)	45484403	46425444	47061935	53053694	52723131	48949721	7.438	
S 13 c2-c4 (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 14 c5+ (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 6 Fluorobenzene *sur.*	36054032	43534152	39412336	40671328	37645872	39463544	7.274	

Calibration History

Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Start Cal Date: 08-JUN-2015 08:34
End Cal Date : 21-SEP-2015 17:12

Initial Calibration

Injection Date	Sublist	Calibration File
Cal Level: 1 , Cal Amount: 0.00000		
21-SEP-2015 14:11	surr	/chem/gcd.i/21Sep2015.b/d092108.d
08-JUN-2015 19:24	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060818.d
08-JUN-2015 13:26	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060810.d
08-JUN-2015 08:34	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060802.d

Cal Level: 2 , Cal Amount: 0.00000		
21-SEP-2015 14:42	surr	/chem/gcd.i/21Sep2015.b/d092109.d
08-JUN-2015 19:59	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060819.d
08-JUN-2015 14:02	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060811.d
08-JUN-2015 09:07	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060803.d

Cal Level: 3 , Cal Amount: 0.00000		
21-SEP-2015 15:12	surr	/chem/gcd.i/21Sep2015.b/d092110.d
08-JUN-2015 20:55	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060820.d
08-JUN-2015 14:35	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060812.d
08-JUN-2015 09:40	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060804.d

Cal Level: 4 , Cal Amount: 0.00000		
21-SEP-2015 15:48	surr	/chem/gcd.i/21Sep2015.b/d092111.d
08-JUN-2015 21:35	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060821.d
08-JUN-2015 15:19	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060813.d
08-JUN-2015 10:13	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060805.d

Cal Level: 5 , Cal Amount: 0.00000		
21-SEP-2015 17:12	surr	/chem/gcd.i/21Sep2015.b/d092112.d
08-JUN-2015 22:10	TPH_C2+(JP4)	/chem/gcd.i/21Sep2015.b/d060822.d
08-JUN-2015 16:10	Hep_Hex	/chem/gcd.i/21Sep2015.b/d060814.d
08-JUN-2015 10:45	TPH_C2+(Gas)	/chem/gcd.i/21Sep2015.b/d060806.d

Eurofins Air Toxics Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUN-2015 08:34
End Cal Date : 21-SEP-2015 17:12
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem/gcd.i/21Sep2015.b/d1530921.m
Cal Date : 22-Sep-2015 12:19 lyohanne
Curve Type : Average

Calibration File Names:
Level 1: /chem/gcd.i/21Sep2015.b/d092108.d
Level 2: /chem/gcd.i/21Sep2015.b/d092109.d
Level 3: /chem/gcd.i/21Sep2015.b/d092110.d
Level 4: /chem/gcd.i/21Sep2015.b/d092111.d
Level 5: /chem/gcd.i/21Sep2015.b/d092112.d

Please see Calibration History page(s) for all the calibration files.

gmw 9/28/15

ly 9/22/15

	0.000e+00	0.000e+00	0.000e+00	0.000e+00	0.000e+00	___		
Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD	
S 1 c2+ TO12(hept)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 2 c2+ TO12(hexane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 Hexane	40030000	37628480	42105095	40040543	39017140	39764252	4.122	
4 Heptane (hept)	29530400	30133140	41348580	42018357	41583728	36922841	17.553	
S 7 TPH (Gas Range)	18174360	25086220	24367260	28186843	32742284	25711393	20.815	
S 8 C2+ (gas)	28393240	36782404	34383368	38566571	44825575	36590232	16.388	
S 9 C2-C4 (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 10 C5+ (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 114 C2-C10(gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 128 C2-C10(gas100)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
S 11 TPH (JP4 Range)	37688642	43019358	43695391	49442406	48904099	44549979	10.826	
S 12 C2+(jp4)	45484403	46425444	47061935	53053694	52723131	48949721	7.438	
S 13 c2-c4 (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
S 14 c5+ (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 6 Fluorobenzene *sur.*	36054032	43534152	39412336	40671328	37645872	39463544	7.274	

Surrogate only

Eurofins Air Toxics, Inc. **GC-D** **Logbook #: 2738**

Method: TO-3 TO-12 (circle one) Surrogate ID#: 2516-193 Exp. Date: 12/8/15 Leak Check: Ly

	USE	File #	Sample Name/Client ID	Can #	Pressure	Amt	DF	Date	Time	Init	Comments
1	✓	D092107	System Blank	33543	Humid	200mL	1.00	9/21/15	1243	Ly	
2	✓	08	2516-167 MBTEX	34345	1.0ppmv → 0.001 ppmv	(50x) 10mL			1411		Level-1 Surrogate only
3	✓	09			1.0ppmv → 0.005ppmv	1.0mL			1442		-2
4	✓	10			1.0ppmv → 0.025ppmv	5.0mL			1512		-3 / CCV
5	✓	11			1.0ppmv → 0.13ppmv	25mL			1548	gd	-4
6	✓	12			1.0ppmv → 0.5 ppmv	100mL			1712		-5
7	✓	13	System Blank	NA	UHP N_2	500mL			1870		
8	✓	14	2516-190 MBTEX	34310	1.0ppmv → 0.05ppmv	10mL			1928		ICV / LCS
9	✓	15	2516-195 Gas	1620	100ppmv → 1.25ppmv	2.5mL			2015		CCV
10	✓	16	2516-164	22513					2058		LCS
11	✓	17	Lab Blank	33543	Humid	200mL			2144		
12	✓	18	1509166 -01A	1042	2.4"Hg -15.4psi		2.23		2233	Ly	
13	✗	19	-02A	1L1503	13.7"Hg → 14.6psi	30mL	24.4	9/22/15	0849		Over diluted
14	✓	20	-02A			200mL	3.66		0937		
15	✓	21	1509156 -01A	35669	Ambient	4.0mL	117		1011		

Calculation Check: File ID: D092110 Compound: Benzene Initials: Ly

$$\text{Sample Amt} = \frac{\text{Area Counts Sample}}{\text{RF}} \times \text{Dilution Factor} = \frac{(3727061)}{(14960691)} \times (1.00) = \boxed{0.02491}$$

Reported Result: 0.02491

Reviewed by: Ly Date: 9/22/15

Eurofins Air Toxics, Inc. **GC-D** **Logbook #: 2644**

Method: TO-3 TO-12 (circle one) Surrogate ID#: 2516-152A Exp. Date: 8/26/15 **Leak Check:** gm

0032 of 0284

	USE	File #	Sample Name/Client ID	Can #	Pressure	Amt	DF	Date	Time	Init	Comments
1	✓	D060801	System Blank	UHP N_2	NA	50mL	1.00	6/8/15	0759	gm	System Blank
2	✓	02	2516-172 Gasoline	03946	100ppmv → 0.025ppmv	(100X) 5.0mL	1.00		0834		Level 1.
3	✓	03			100ppmv → 0.25ppmv	0.5mL			0907		Level 2.
4	✓	04			100ppmv → 2.5ppmv	5.0mL			0940		Level 3.
5	✓	05			100ppmv → 10 ppmv	20mL			1013		Level 4.
6	✓	06			100ppmv → 25 ppmv	50mL			1045		Level 5.
7	✓	07	System Blank	UHP N_2	NA	50mL			1127		System Blank
8	✓	08	2516-164 Gasoline	22513	100ppmv → 1.25 ppmv	2.5mL			1207		ICV
9	✓	09	System Blank	UHP N_2	NA	50mL			1254	gm	System Blank
10	✓	10	2516-150 B.P.	33907	50ppmv → 0.01ppmv	(100X) 4.0mL			1326		Level 1.
11	✓	11			50ppmv → 0.05ppmv	(100X) 20mL			1402		Level 2.
12	✓	12			50ppmv → 0.20	0.8mL			1435	gd	Level 3.
13	✓	13			50ppmv → 0.35 ppmv	1.4mL			1519		4
14	✓	14			50ppmv → 0.5 ppmv	2.0mL			1610		5
15	✓	15	System Blank	~~3604~~ UHP N_2	NA	50mL			1714 ~~1754~~		System Blank
	✓	16	2516-155 Heptane	36047	10.8ppmv → 0.2ppmv	4.0mL			1754		ICV

Calculation Check: File ID: D060808 Compound: TPH Gas Range Initials: gd

$$\text{Sample Amt} = \frac{\text{Area Counts Sample}}{\text{RF}} \times \text{Dilution Factor} = \frac{(29566802)}{(25711393)} \times (1.00) = \boxed{1.150}$$

Reported Result: 1.150

Reviewed by: gd Date: 6/11/15

Eurofins Air Toxics, Inc. **GC-D** **Logbook #: 2644**

Method: TO-3 TO-12 (circle one) Surrogate ID#: 2516-152A Exp. Date: 8/26/15 **Leak Check:** gd

	USE	File #	Sample Name/Client ID	Can #	Pressure	Amt	DF	Date	Time	Init	Comments
1	✓	D060817	System Blank	UHPN2	NA	50mL	1.00	6/8/15	1832	gd	
2	✓	18	2516-177 JP-4	05355	81ppmv – 0.0243ppmv	(100X) 6.0mL			1924		level - 1
3	✓	19			81ppmv – 0.243	0.6mL			1959		-2
4	✓	20			81ppmv – 2.02ppmv	5.0mL			2055		-3
5	✓	21			81ppmv – 8.10ppmv	20mL			2135		-4
6	✓	22			81ppmv – 20.2ppmv	50mL			2210		-5
7	✓	23	System Blank	UHPN2	NA	50mL			2247	gm	System Blank
8	✓	24	2516-124A JP-4	405	81ppmv → 2.0ppmv	5.0mL		6/9/15	0744		ICV
9											
10											
11											
12											
13											
14											
15								gd	6/11/15		

Calculation Check: File ID: D060824 Compound: JP-4 Range Initials: gd

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × Dilution Factor = $\frac{(83904060)}{(44549979)}$ × (1.00) = 1.883

Reported Result: 1.883

Reviewed by: gd Date: 6/11/15

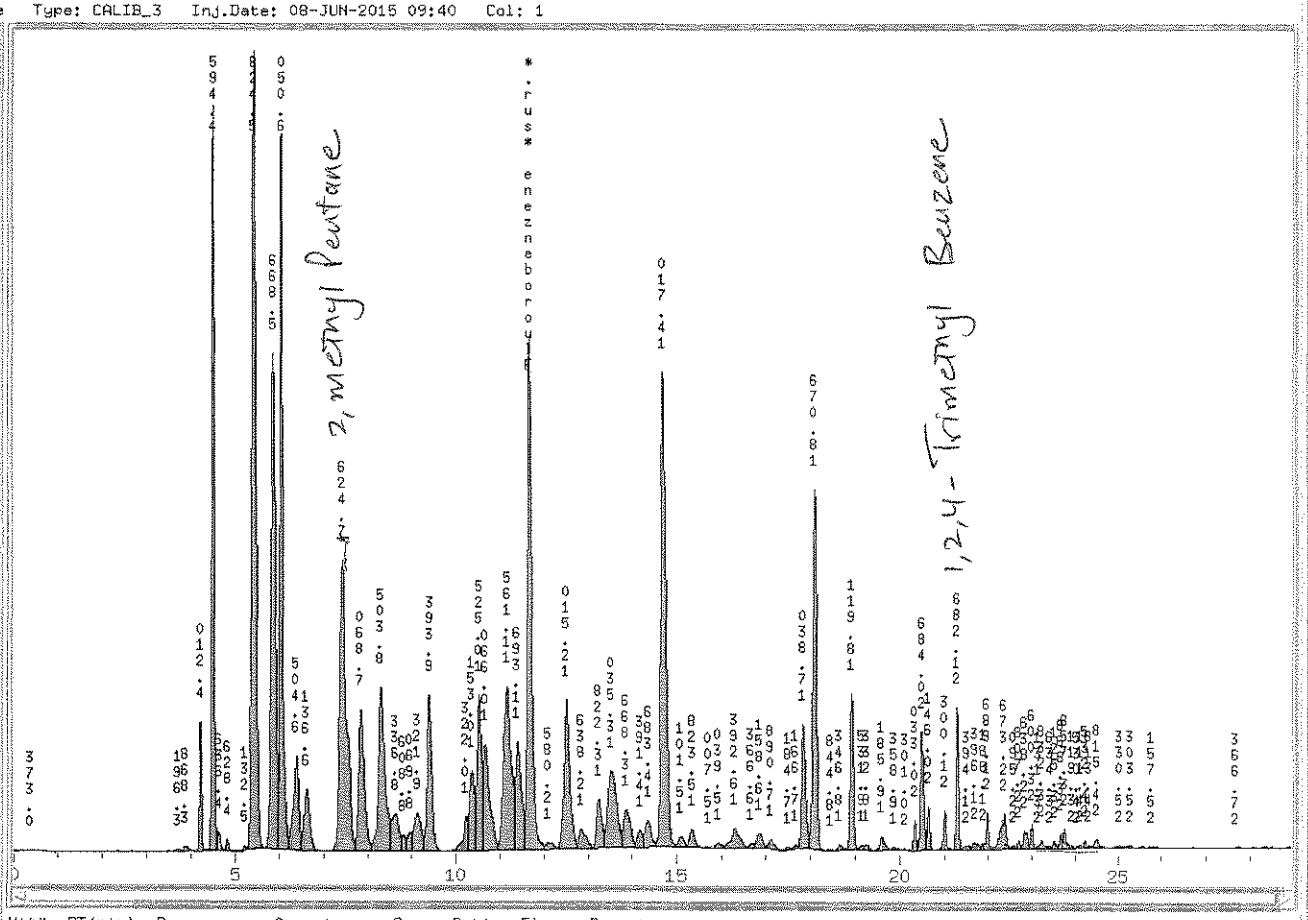
TargetReview: eeyore: 2516-172 Gasoline: /chem/gcd.i/08Jun2015.b/d060804.d

File Security Edit Display Process Help

Sample: 2516-172 Gasoline Type: CALIB_3 Inj.Date: 08-JUN-2015 09:40 Col: 1

I+ 6 Fluorobenzene
S+ 7 TPH (Gas Range
S+ 8 C2+ (gas)

d060804.d



Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	11.660	6353741	0.1376	0.1376	100		

- Mark Fluorobenzene *sur,* Undetected.

TPH(gas range): 7.426 -0.08 → 21.286 +0.08

7.346 → 21.366

gm
6/10/15

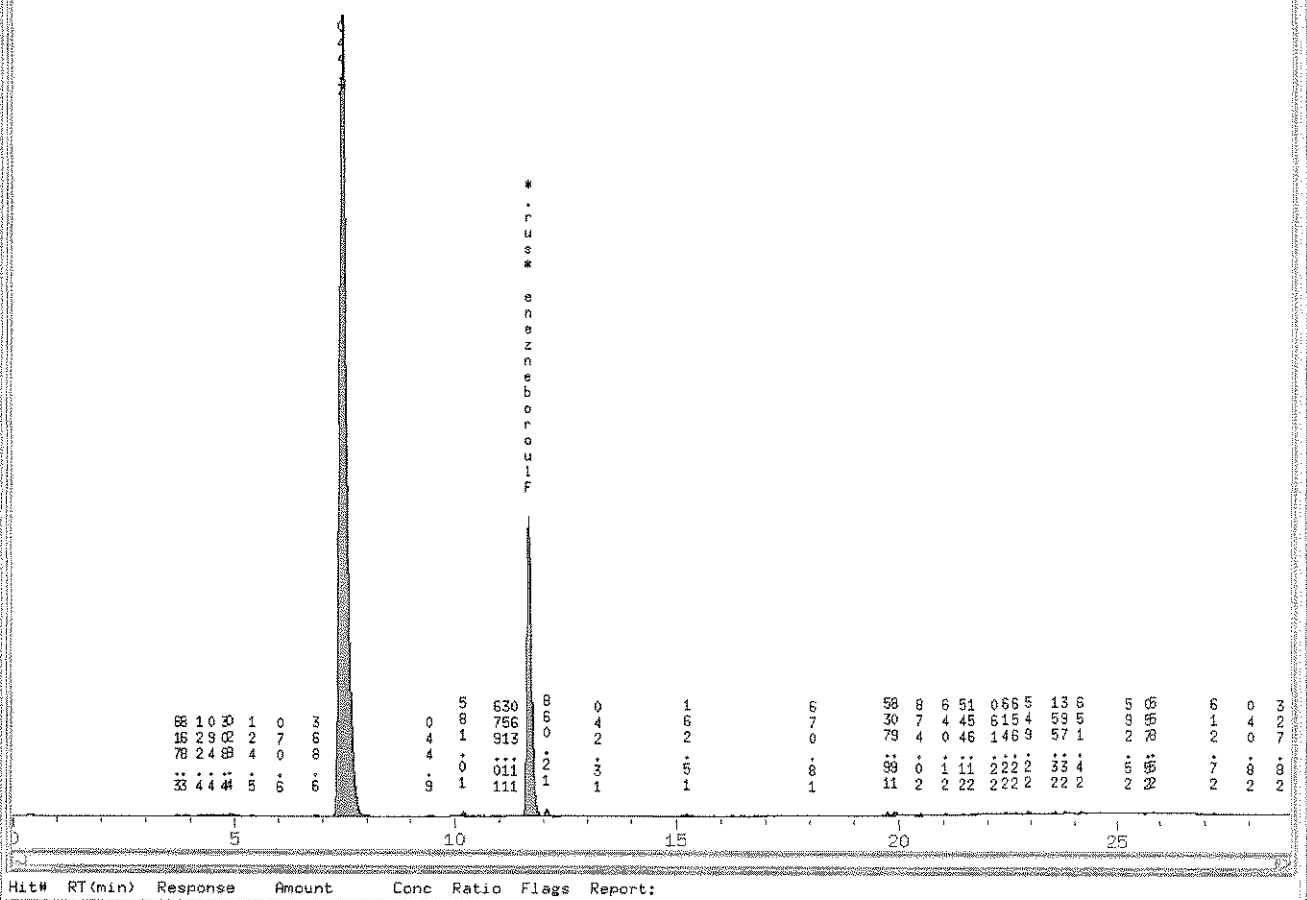
TargetReview: eeyore: 25687-117: /chem/gcd.i/10Jun2015.b/d060825.d

File Security Edit Display Process Help

Sample: 25687-117 Type: SAMPLE Inj.Date: 10-JUN-2015 10:41 Col: 1

3 Hexane
4 Heptane (hept)
*+ 6 Fluorobenzene

d060825.d



Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:

* Hexane Undetected (Expected RT: 8.348)

2, methyl Pentane std.
for RT.

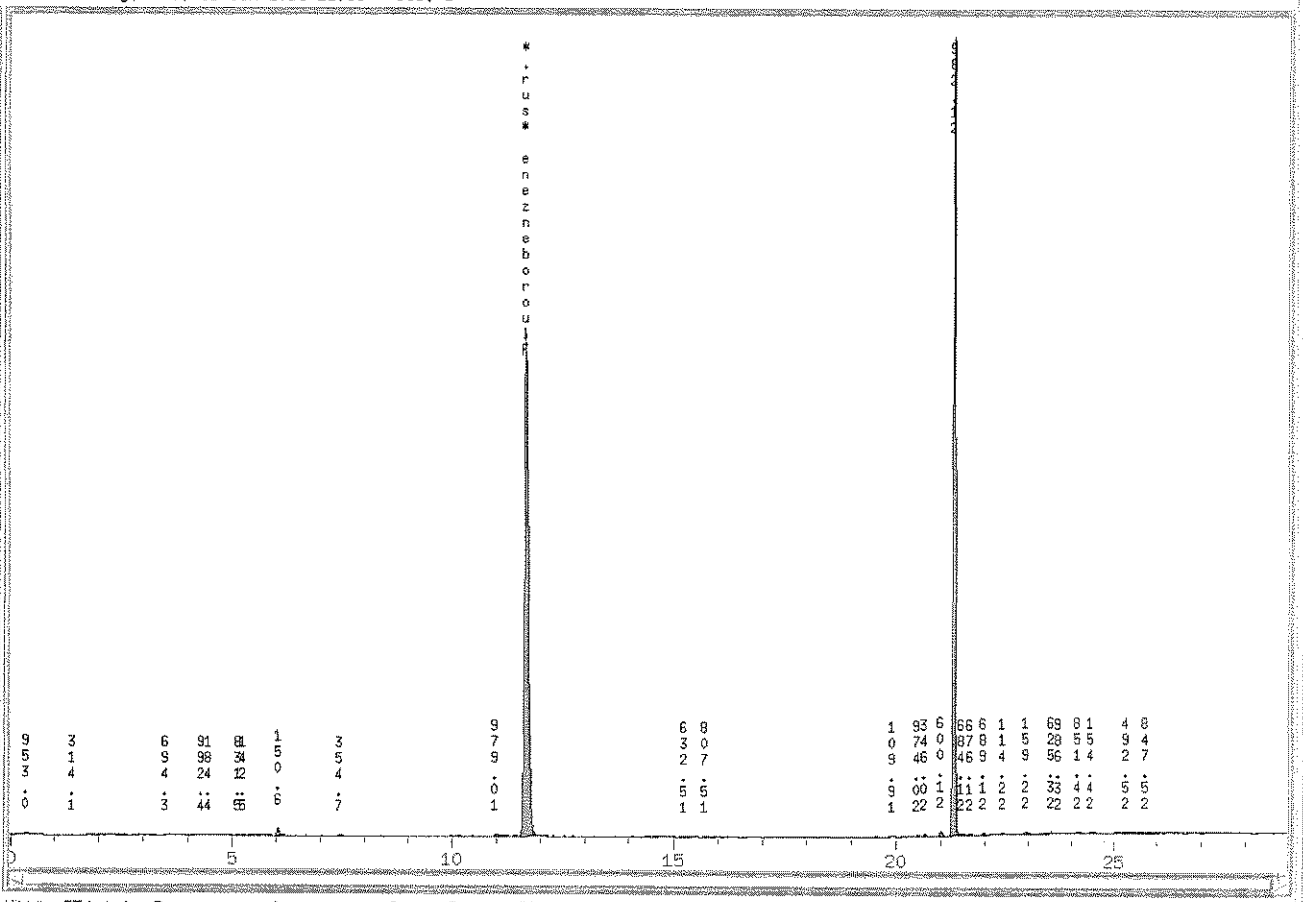
TargetReview: eeyore: 1,2,4-TMB: /chem/gcd.i/11Jun2015.b/d061117.d

File Search Edit Display Process Help

Sample: 1,2,4-TMB Type: SAMPLE Inj.Date: 11-JUN-2015 22:33 Col: 1

r+ 6 Fluorobenzene
S+ 7 TPH (Gas Range
S+ 8 C2+ (gas)
S+ 9 C2-C4 (gas)
S+ 114 C2-C10(gas)
S+ 10 C5+ (gas)

d061117.d



Hit#	RT(min)	Response	Amount	Conc	Ratio	Flags	Report:
1	11.664	4978190	0.1002	0.1002	100		

- Mark Fluorobenzene *sur,* Undetected.

1,2,4 Trimethyl Benzene Std.
for RT.

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060808.d
Lab Smp Id: 2516-164 Gasoline Client Smp ID: ICV
Inj Date : 08-JUN-2015 12:07
Operator : gm Inst ID: gcd.i
Smp Info : LCS
Misc Info : 2.5ml,22513;2516-164 Gasoline;LCS
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:35 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.672	11.696	-0.024	6394545	0.16204	0.1620
S 7 TPH (Gas Range)	7.346	21.366		29566802	1.14995	1.150
S 8 C2+ (gas)	3.643	29.000		40306497	1.10156	1.102

Report Date: 22-Sep-2015 12:35

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 08Jun2015
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-164 Gasoline
Client Smp ID: ICV
Level: LOW
Operator: gm
Data Type: GC DATA
SampleType: LCS
SpikeList File: 1.25ppmvGAS.spk
Quant Type: ESTD
Sublist File: TPH_C2+(Gas).sub
Method File: /chem/gcd.i/21Sep2015.b/d1530921.m
Misc Info: 2.5ml,22513;2516-164 Gasoline;LCS

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 7 TPH (Gas Range)	1.250	1.150	92.00	75-125
S 8 C2+ (gas)	1.250	1.102	88.13	75-125

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1620	129.63	75-150

Data File: /var/chem/gcd.i/21Sep2015.b/d060808.d

Date : 08-JUN-2015 12:07

Client ID: ICV

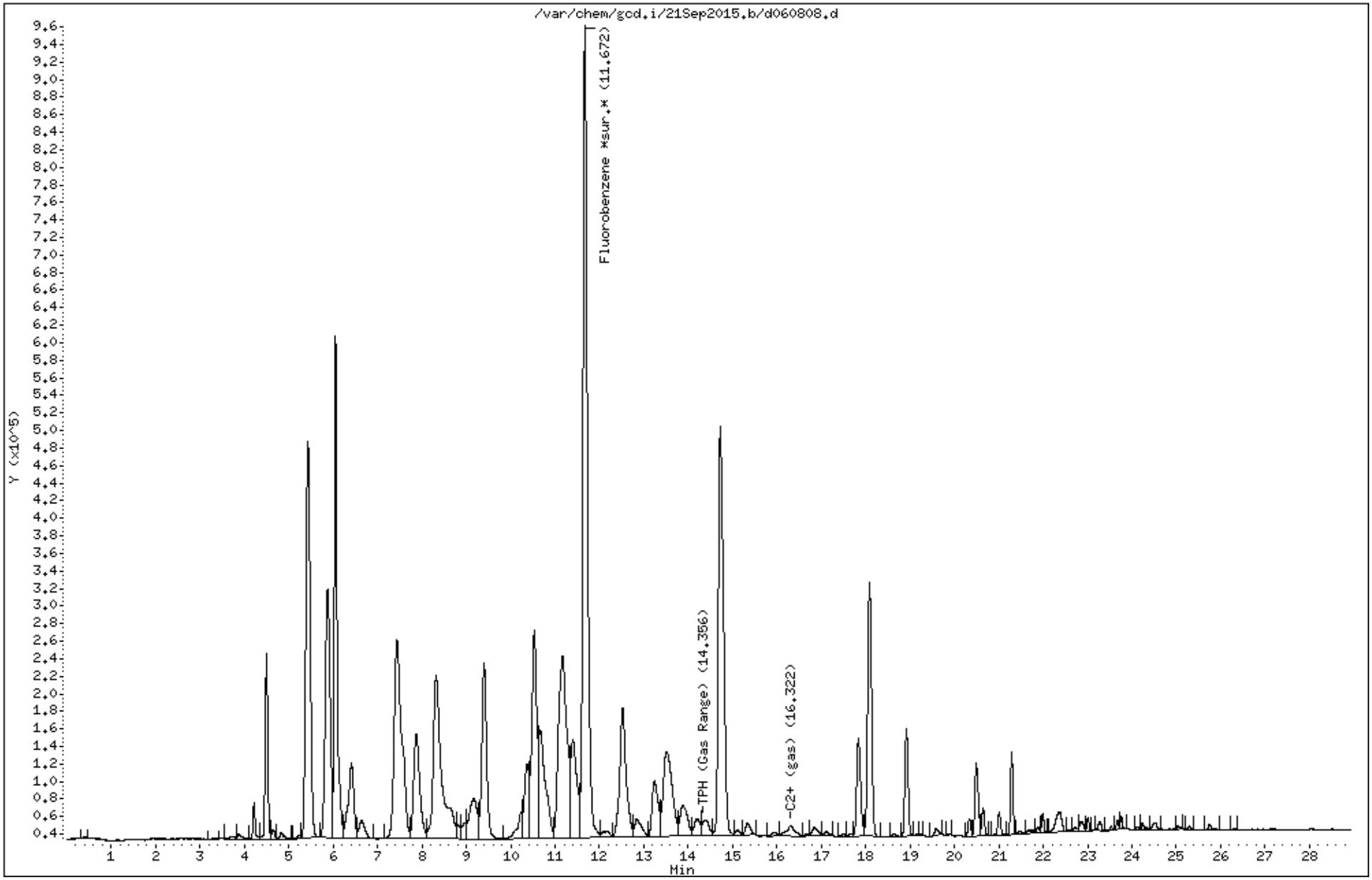
Instrument: gcd.i

Sample Info: LCS

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060816.d
Lab Smp Id: 2516-155 HepHex Client Smp ID: ICV
Inj Date : 08-JUN-2015 17:54
Operator : gd Inst ID: gcd.i
Smp Info : ICV
Misc Info : 4.0ml,36047;2516-155 HepHex;ICV
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:35 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: ICV
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
3 Hexane	8.311	8.348	-0.037	8237909	0.20717	0.2072
4 Heptane (hept)	11.406	11.446	-0.040	7803034	0.21133	0.2113
$ 6 Fluorobenzene *sur.*	11.668	11.696	-0.028	6297151	0.15957	0.1596

Report Date: 22-Sep-2015 12:35

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 08Jun2015
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-155 HepHex
Client Smp ID: ICV
Level: LOW
Operator: gd
Data Type: GC DATA
SampleType: ICV
SpikeList File: HepHexLCS.spk
Quant Type: ESTD
Sublist File: Hep_Hex.sub
Method File: /chem/gcd.i/21Sep2015.b/d1530921.m
Misc Info: 4.0ml,36047;2516-155 HepHex;ICV

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
3 Hexane	0.2100	0.2072	98.65	75-125
4 Heptane (hept)	0.2160	0.2113	97.84	75-125

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1596	127.66	75-150

Data File: /var/chem/gcd.i/21Sep2015.b/d060816.d

Date : 08-JUN-2015 17:54

Client ID: ICV

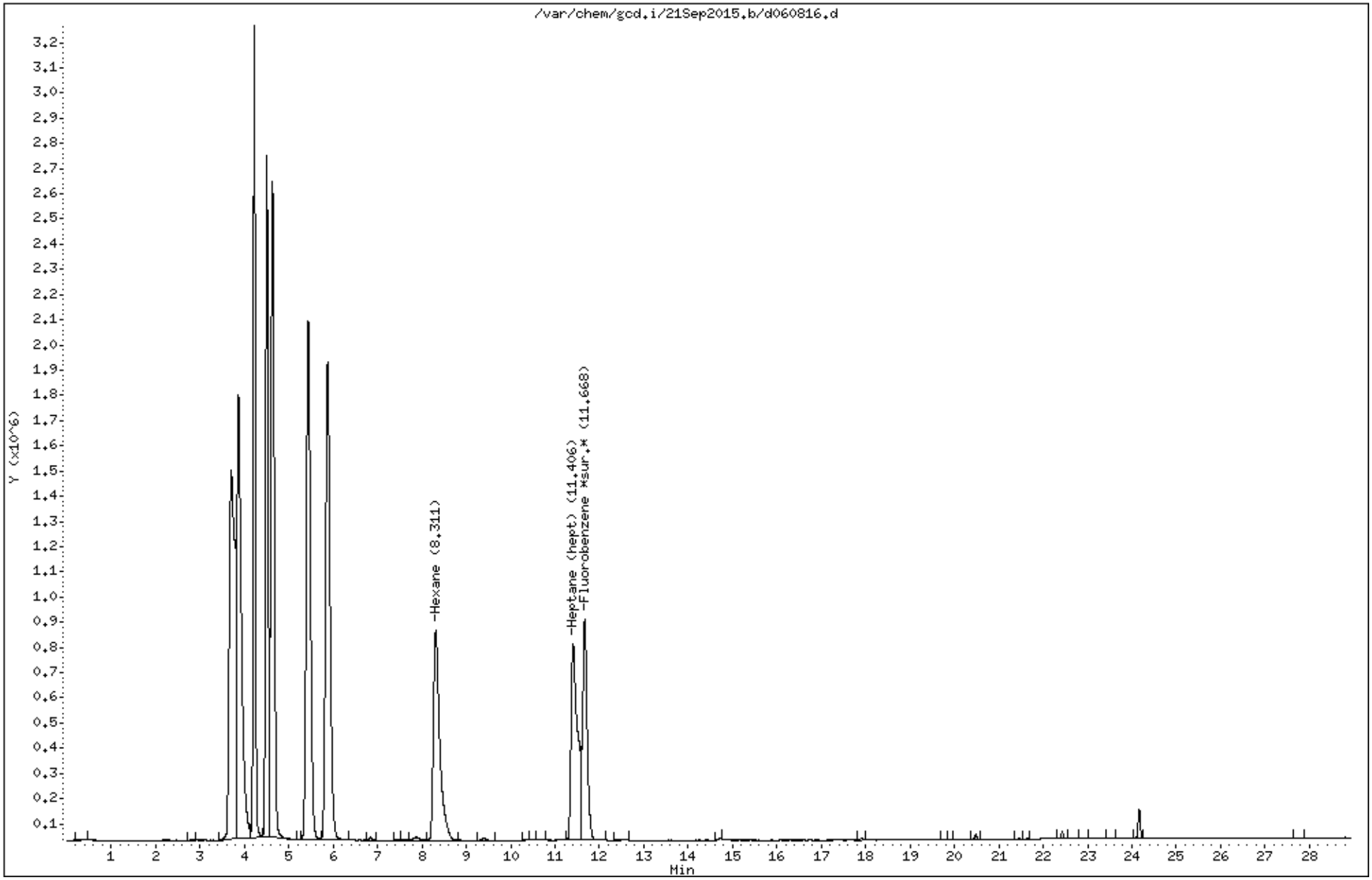
Instrument: gcd.i

Sample Info: ICV

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060824.d
Lab Smp Id: 2516-124A JP-4 Client Smp ID: ICV
Inj Date : 09-JUN-2015 07:44
Operator : gm Inst ID: gcd.i
Smp Info : ICV
Misc Info : 5.0ml,405;2516-124A JP-4;ICV
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:35 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.655	11.696	-0.041	5363659	0.13591	0.1359
S 11 TPH (JP4 Range)	8.233-22.508			83904060	1.88337	1.883
S 12 C2+(jp4)	3.643-29.000			91639253	1.87211	1.872

Report Date: 22-Sep-2015 12:35

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 09Jun2015
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-124A JP-4
Client Smp ID: ICV
Level: LOW
Operator: gm
Data Type: GC DATA
SampleType: LCS
SpikeList File: 2.0ppmvJP4.spk
Quant Type: ESTD
Sublist File: TPH_C2+(JP4).sub
Method File: /chem/gcd.i/21Sep2015.b/d1530921.m
Misc Info: 5.0ml,405;2516-124A JP-4;ICV

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 12 C2+(jp4)	2.020	1.872	92.68	75-125
S 11 TPH (JP4 Range)	2.020	1.883	93.24	75-125

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1359	108.73	75-150

Data File: /var/chem/gcd.i/21Sep2015.b/d060824.d

Page 1

Date : 09-JUN-2015 07:44

Client ID: ICV

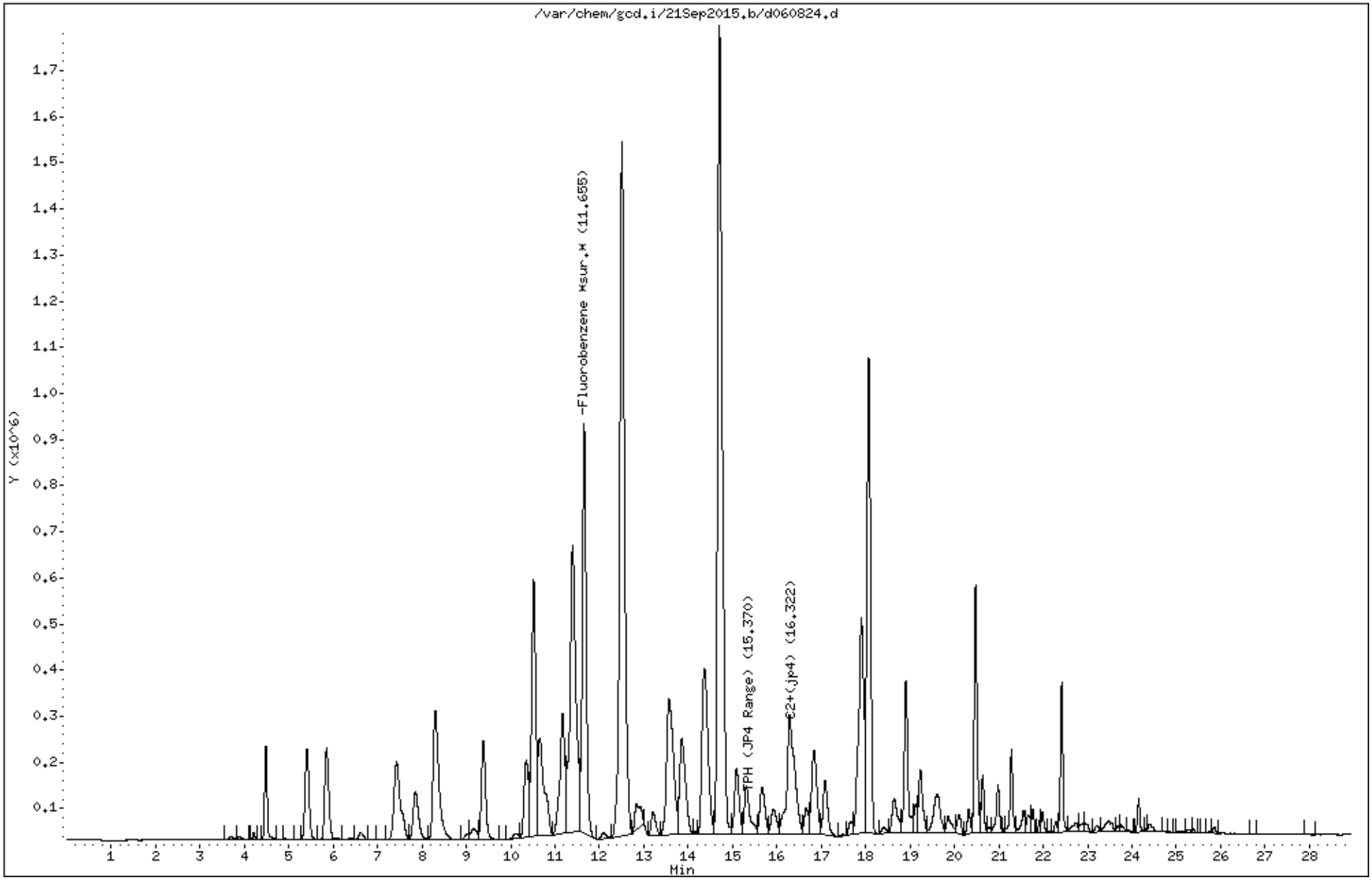
Instrument: gcd.i

Sample Info: ICV

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092108.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-1
Inj Date : 21-SEP-2015 14:11
Operator : ly Inst ID: gcd.i
Smp Info : 1.0ppmv>0.001ppmv
Misc Info : 10ml(50X),34310;2516-190 MBTEX;Level-1
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 14:11 Cal File: d092108.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.682	11.696	-0.014	4506754	0.12500	0.1064

Data File: /var/chem/gcd.i/21Sep2015.b/d092108.d

Date : 21-SEP-2015 14:11

Client ID: Level-1

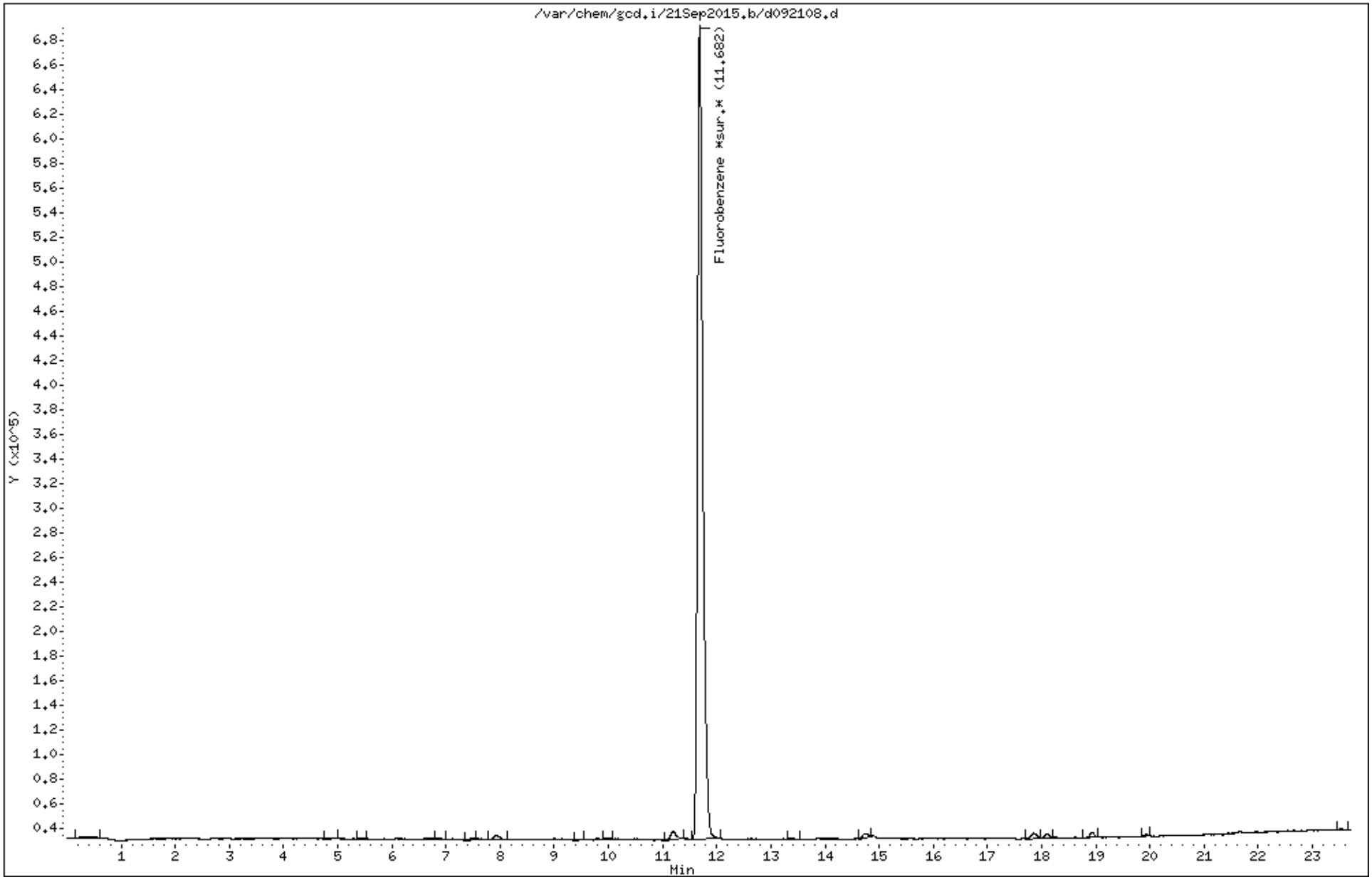
Instrument: gcd.i

Sample Info: 1.0ppmv>0.001ppmv

Operator: ly

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060818.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 1
Inj Date : 08-JUN-2015 19:24
Operator : gd Inst ID: gcd.i
Smp Info : Level 1
Misc Info : 6.0ml(100X),05355;2516-177 JP-4;Level 1
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 19:24 Cal File: d060818.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.679	11.696	-0.017	5182515	0.12500	0.1067
S 11 TPH (JP4 Range)	8.233	-22.508		915834	0.02430	0.02430(a)
S 12 C2+(jp4)	3.643	-29.000		1105271	0.02430	0.02430(a)

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gcd.i/21Sep2015.b/d060818.d

Date : 08-JUN-2015 19:24

Client ID: Level 1

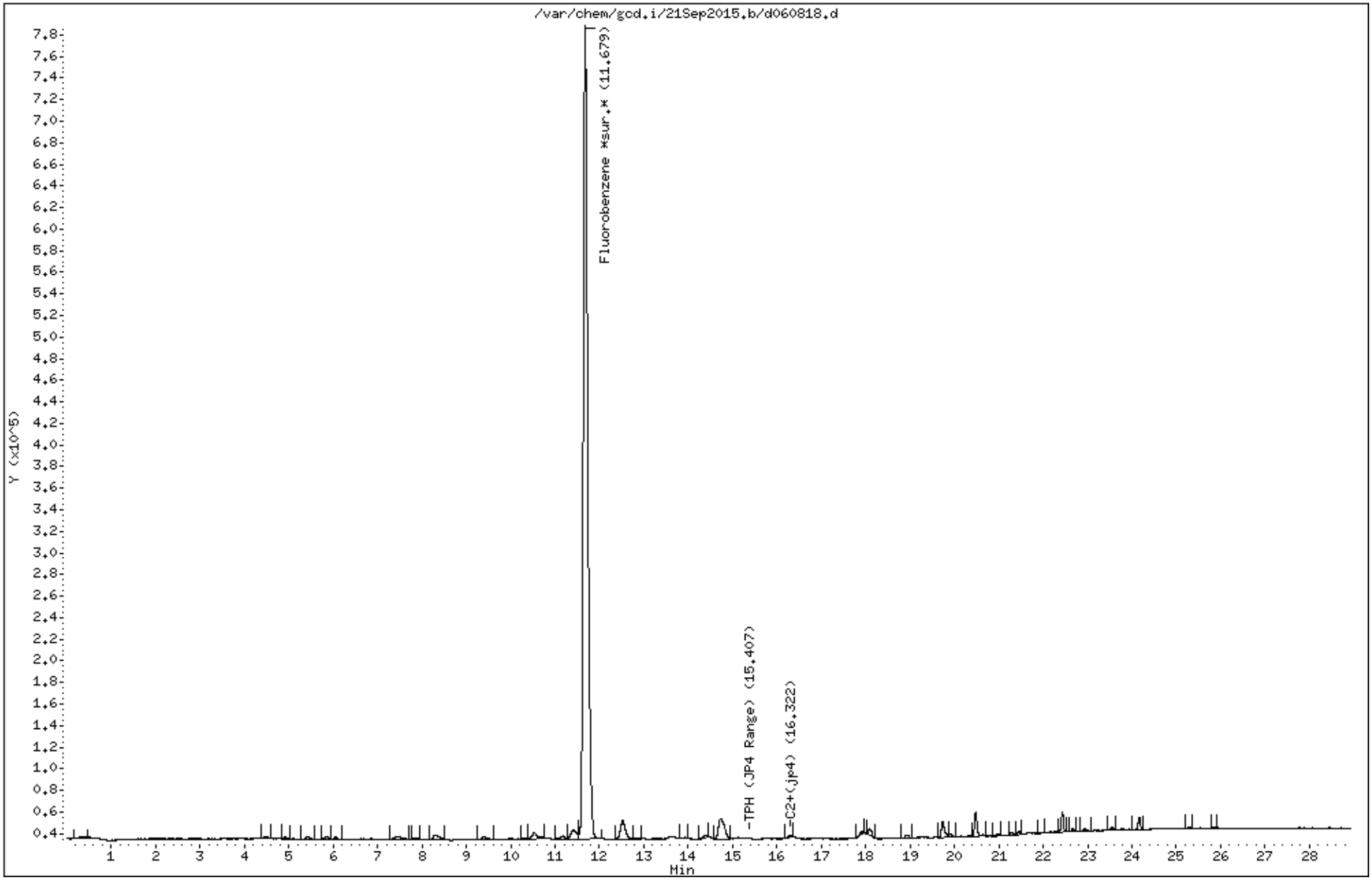
Instrument: gcd.i

Sample Info: Level 1

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060810.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 1
Inj Date : 08-JUN-2015 13:26
Operator : gm Inst ID: gcd.i
Smp Info : 50ppmv->0.01ppmv
Misc Info : (100x)4.0ml,33907;2516-150 B.P.;Level 1
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 13:26 Cal File: d060810.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.305	8.348	-0.043	400300	0.01000	0.01000(a)
4 Heptane (hept)	11.413	11.446	-0.033	295304	0.01000	0.01000(a)
$ 6 Fluorobenzene *sur.*	11.668	11.696	-0.028	5878502	0.12500	0.09644

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gcd.i/21Sep2015.b/d060810.d

Page 1

Date : 08-JUN-2015 13:26

Client ID: Level 1

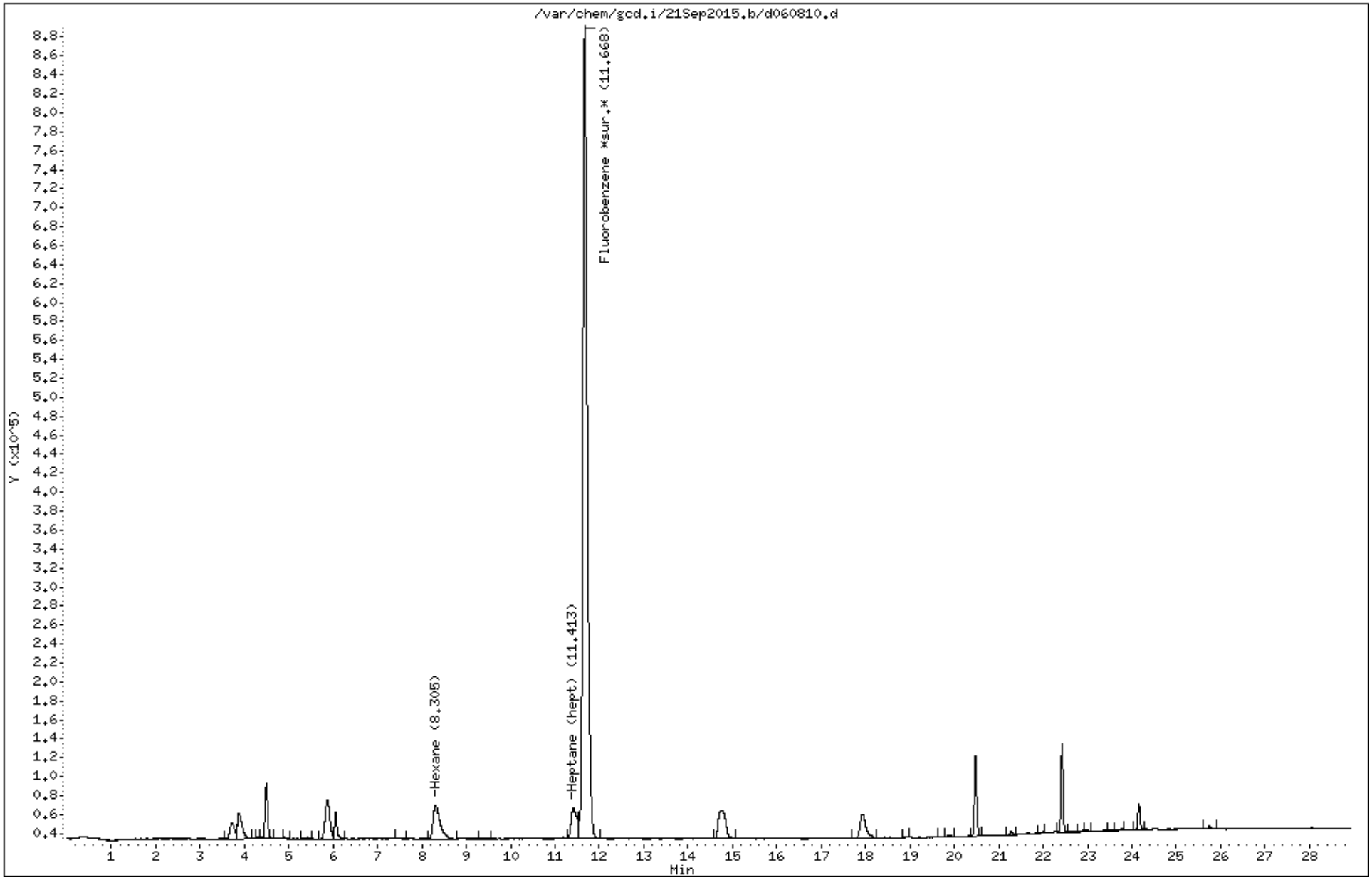
Instrument: gcd.i

Sample Info: 50ppmv->0.01ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060802.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 1
Inj Date : 08-JUN-2015 08:34
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->0.025ppmv
Misc Info : (100x)5.0ml,03946;2516-172 Gasoline;Level 1
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 08:34 Cal File: d060802.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.665	11.696	-0.031	5554527	0.12500	0.1250
S 7 TPH (Gas Range)	7.346	21.366		454359	0.02500	0.02500
S 8 C2+ (gas)	3.643	29.000		709831	0.02500	0.02500

Data File: /var/chem/gcd.i/21Sep2015.b/d060802.d

Date : 08-JUN-2015 08:34

Client ID: Level 1

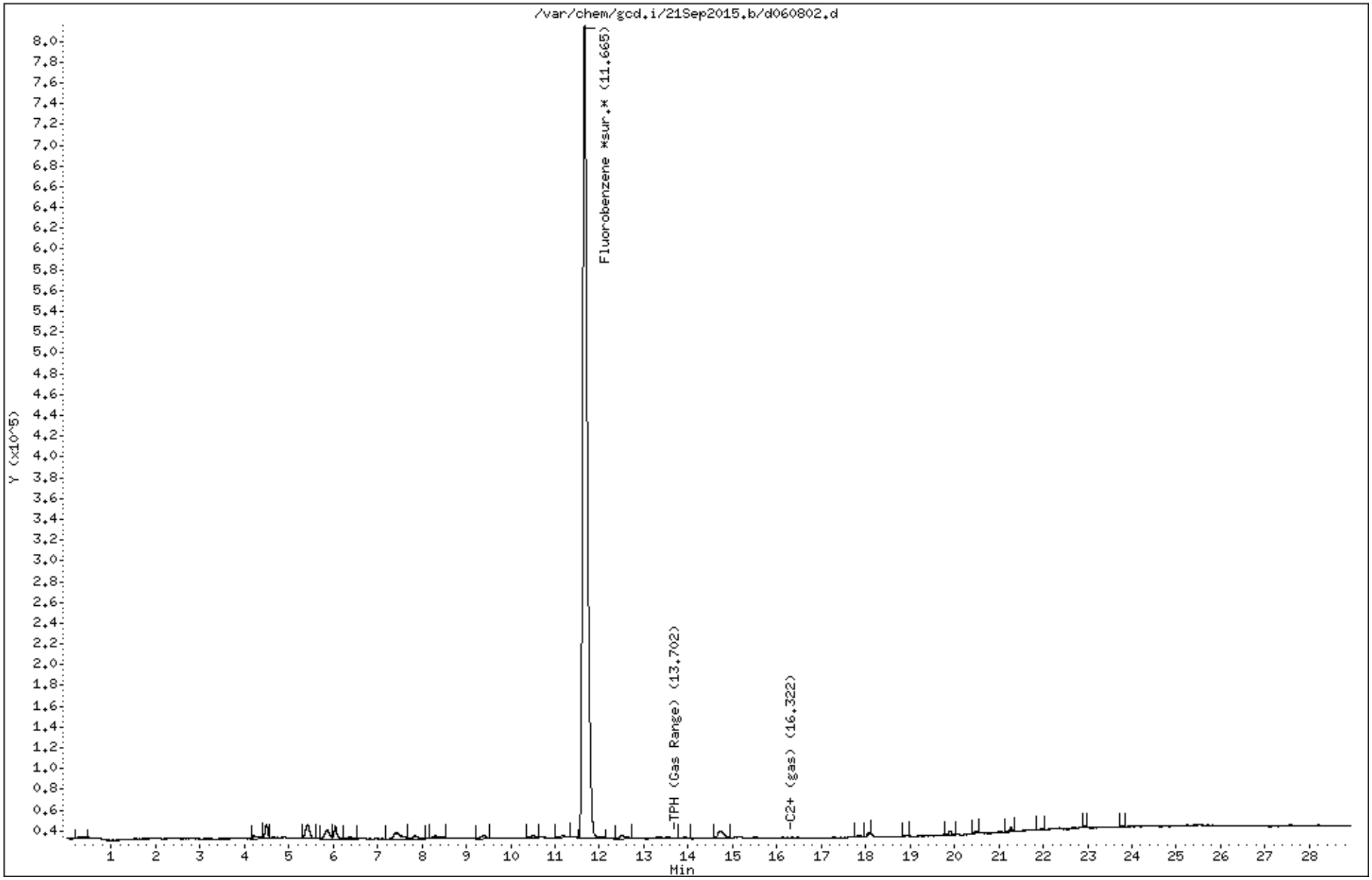
Instrument: gcd.i

Sample Info: 100ppmv->0.025ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092109.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-2
Inj Date : 21-SEP-2015 14:42
Operator : ly Inst ID: gcd.i
Smp Info : 1.0ppmv>0.005ppmv
Misc Info : 1.0ml,34310;2516-190 MBTEX;Level-2
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 14:42 Cal File: d092109.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.684	11.696	-0.012	5441769	0.12500	0.1276

Data File: /var/chem/gcd.i/21Sep2015.b/d092109.d

Page 1

Date : 21-SEP-2015 14:42

Client ID: Level-2

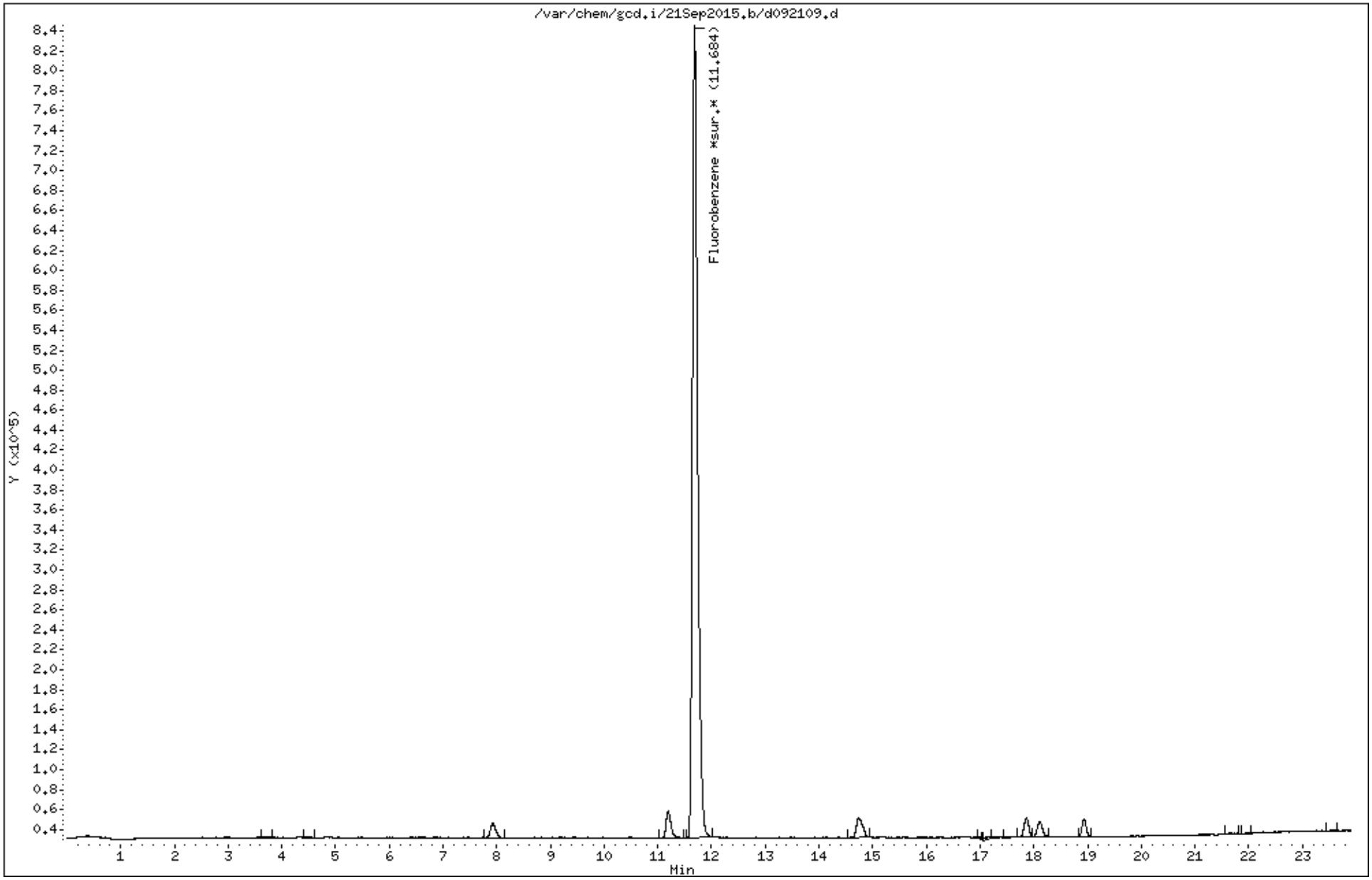
Instrument: gcd.i

Sample Info: 1.0ppmv>0.005ppmv

Operator: ly

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060819.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 2
Inj Date : 08-JUN-2015 19:59
Operator : gd Inst ID: gcd.i
Smp Info : Level 2
Misc Info : 0.6ml,05355;2516-177 JP-4;Level 2
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 19:59 Cal File: d060819.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.669	11.696	-0.027	5256334	0.12500	0.1114
S 11 TPH (JP4 Range)	8.233	22.508		10453704	0.24300	0.2590
S 12 C2+(jp4)	3.643	29.000		11281383	0.24300	0.2455

Data File: /var/chem/gcd.i/21Sep2015.b/d060819.d

Date : 08-JUN-2015 19:59

Client ID: Level 2

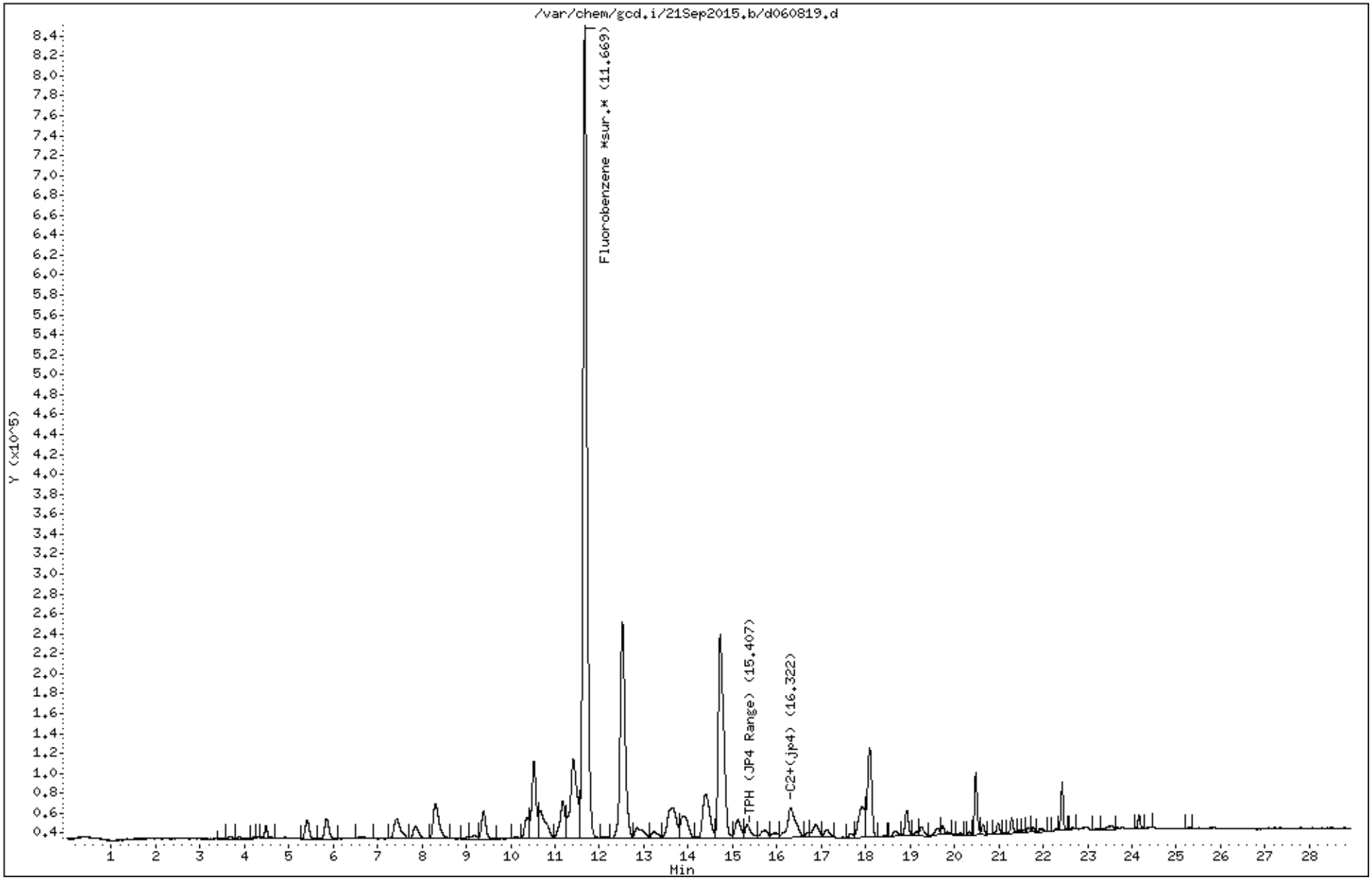
Instrument: gcd.i

Sample Info: Level 2

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060811.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 2
Inj Date : 08-JUN-2015 14:02
Operator : gm Inst ID: gcd.i
Smp Info : 50ppmv->0.05ppmv
Misc Info : (100x)20ml,33907;2516-150 B.P.;Level 2
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 14:02 Cal File: d060811.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.308	8.348	-0.040	1881424	0.05000	0.04845
4 Heptane (hept)	11.425	11.446	-0.021	1506657	0.05000	0.05050
$ 6 Fluorobenzene *sur.*	11.665	11.696	-0.031	6117582	0.12500	0.09900

Data File: /var/chem/gcd.i/21Sep2015.b/d060811.d

Page 1

Date : 08-JUN-2015 14:02

Client ID: Level 2

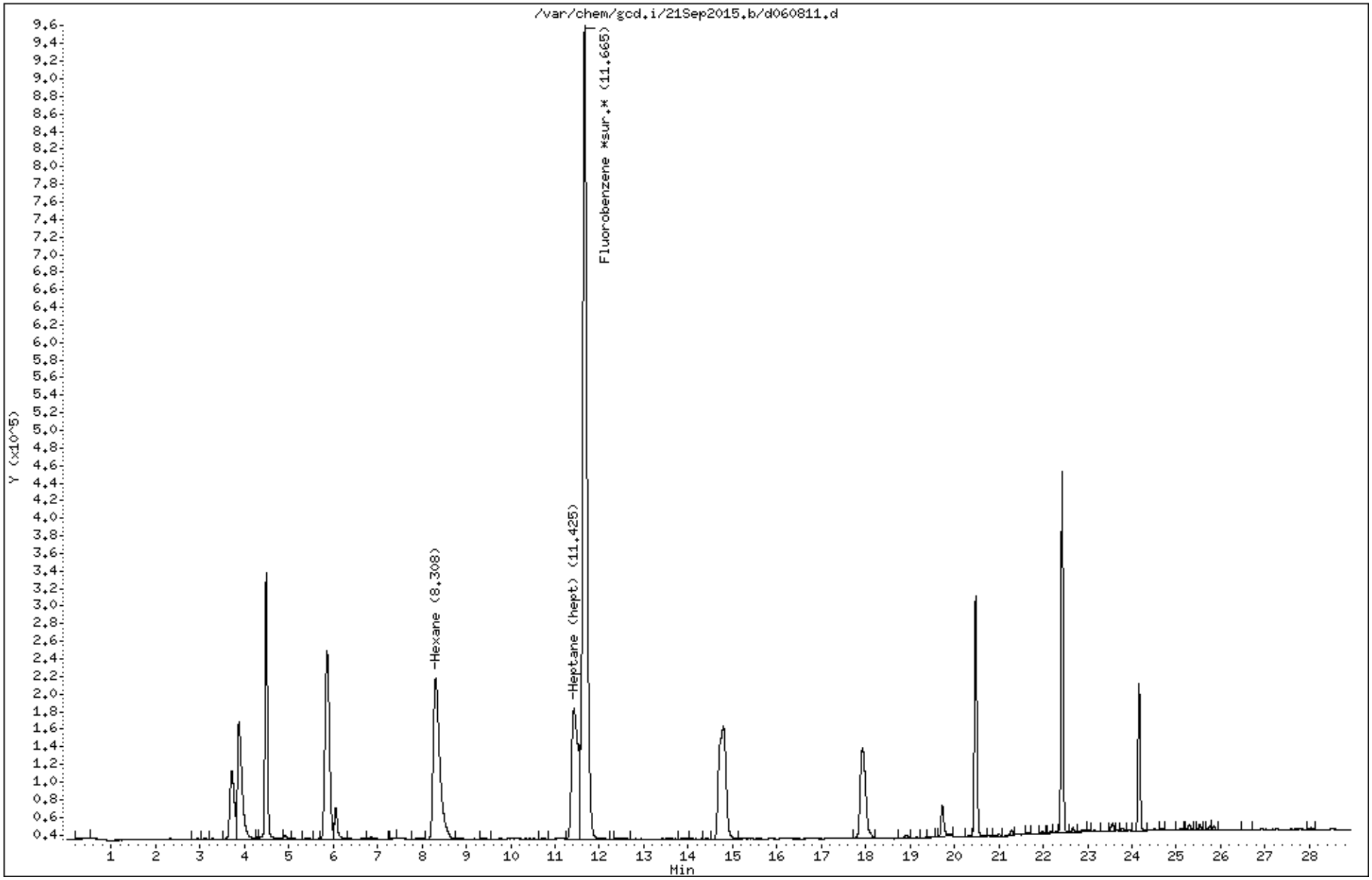
Instrument: gcd.i

Sample Info: 50ppmv->0.05ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060803.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 2
Inj Date : 08-JUN-2015 09:07
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->0.25ppmv
Misc Info : 0.5ml,03946;2516-172 Gasoline;Level 2
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 09:07 Cal File: d060803.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.656	11.696	-0.040	5594466	0.12500	0.1254
S 7 TPH (Gas Range)	7.346	-21.366		6271555	0.25000	0.2899
S 8 C2+ (gas)	3.643	-29.000		9195601	0.25000	0.2822

Data File: /var/chem/gcd.i/21Sep2015.b/d060803.d

Date : 08-JUN-2015 09:07

Client ID: Level 2

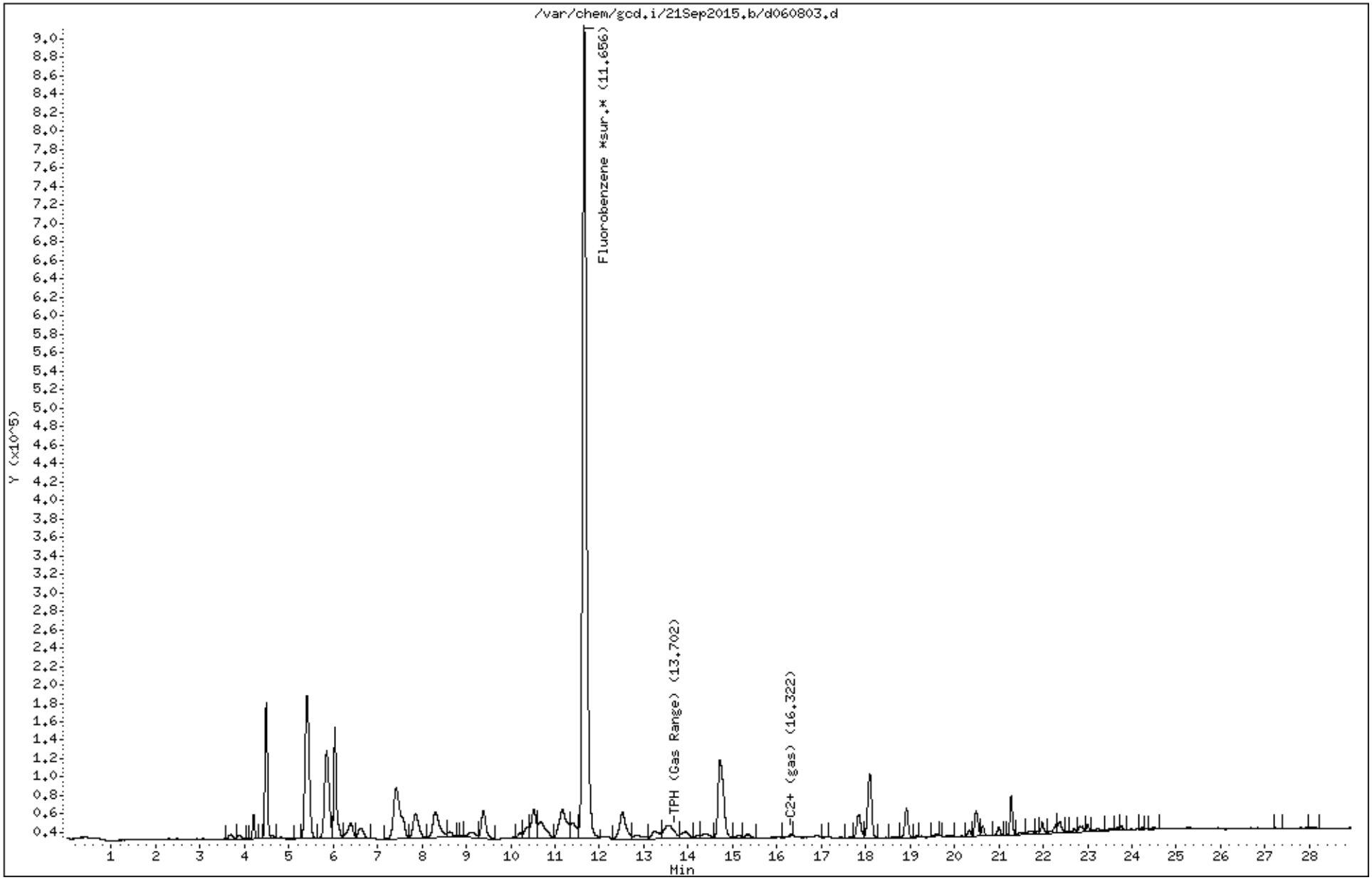
Instrument: gcd.i

Sample Info: 100ppmv->0.25ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092110.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-3
Inj Date : 21-SEP-2015 15:12
Operator : ly Inst ID: gcd.i
Smp Info : 1.0ppmv>0.025ppmv
Misc Info : 5.0ml,34310;2516-190 MBTEX;Level-3
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 15:12 Cal File: d092110.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.683	11.696	-0.013	4926542	0.12500	0.1174

Data File: /var/chem/gcd.i/21Sep2015.b/d092110.d

Page 1

Date : 21-SEP-2015 15:12

Client ID: Level-3

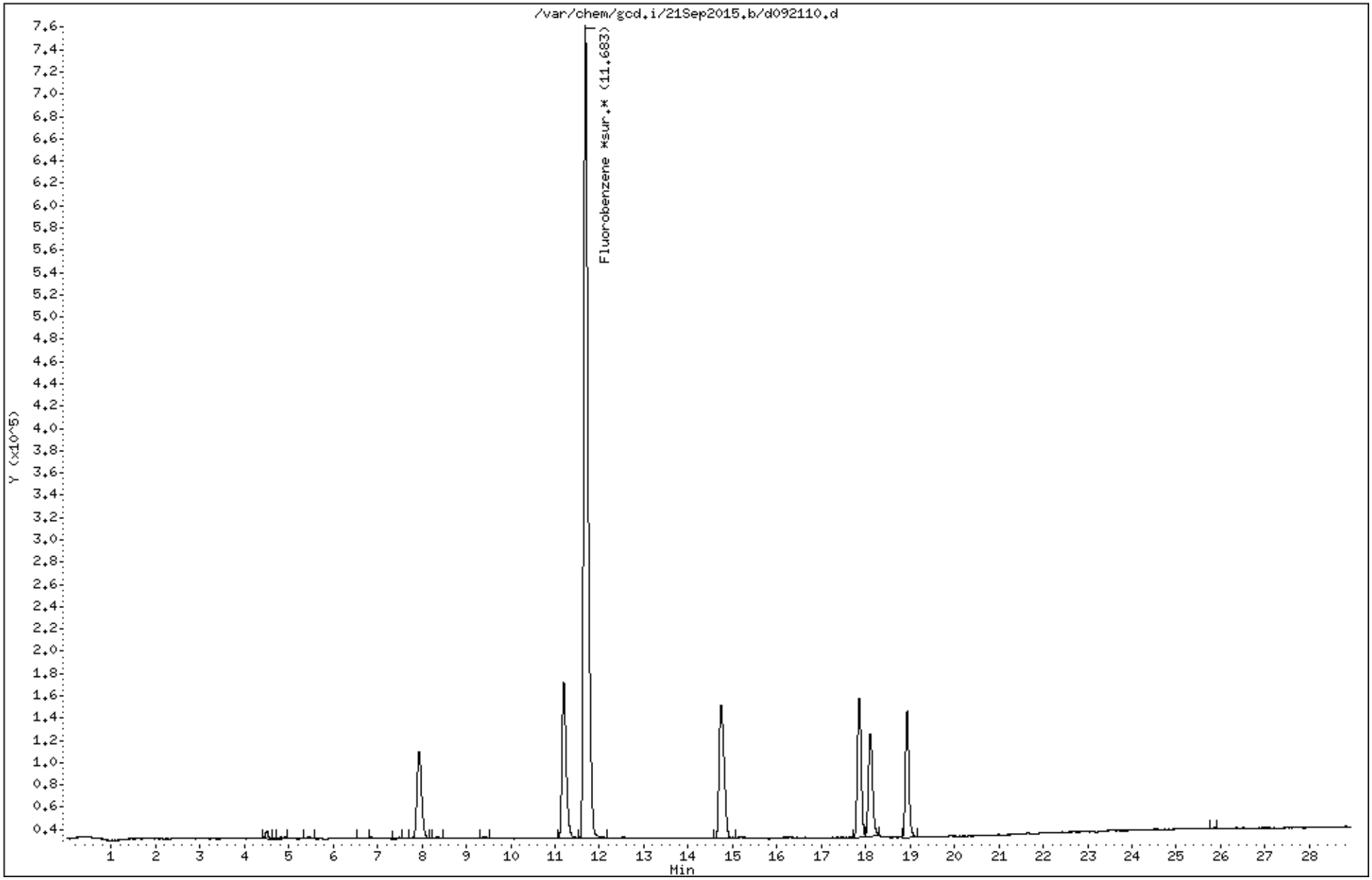
Instrument: gcd.i

Sample Info: 1.0ppmv>0.025ppmv

Operator: ly

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060820.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 3
Inj Date : 08-JUN-2015 20:55
Operator : gd Inst ID: gcd.i
Smp Info : Level 3
Misc Info : 5.0ml,05355;2516-177 JP-4;Level 3
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 20:55 Cal File: d060820.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.666	11.696	-0.030	5349547	0.12500	0.1192
S 11 TPH (JP4 Range)	8.233	22.508		88264690	2.02000	2.128
S 12 C2+(jp4)	3.643	29.000		95065108	2.02000	2.052

Data File: /var/chem/gcd.i/21Sep2015.b/d060820.d

Date : 08-JUN-2015 20:55

Client ID: Level 3

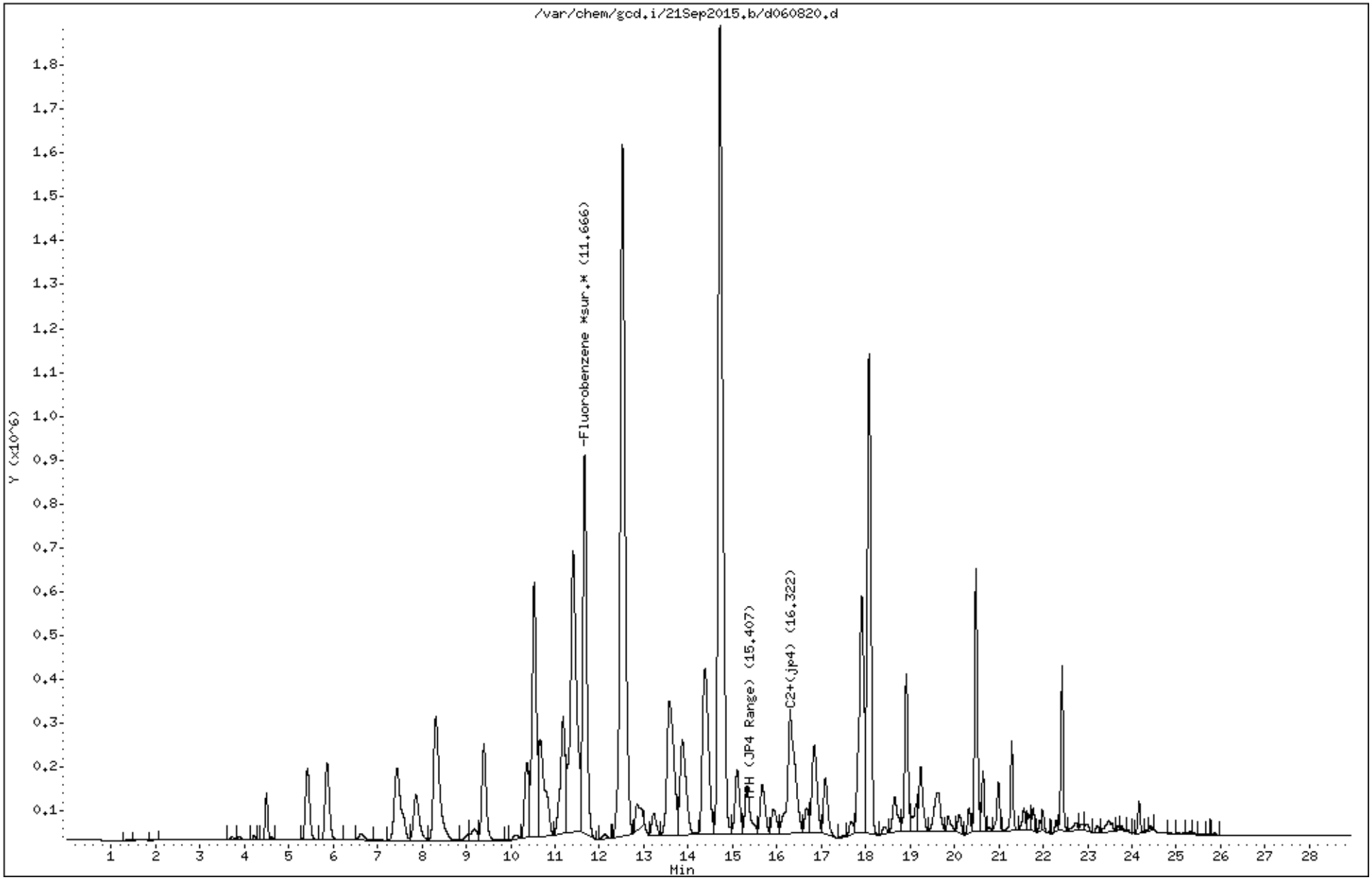
Instrument: gcd.i

Sample Info: Level 3

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060812.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 3
Inj Date : 08-JUN-2015 14:35
Operator : gm Inst ID: gcd.i
Smp Info : 50ppmv->0.20ppmv
Misc Info : 0.8ml,33907;2516-150 B.P.;Level 3
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 14:35 Cal File: d060812.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.319	8.348	-0.029	8421019	0.20000	0.2109
4 Heptane (hept)	11.416	11.446	-0.030	8269716	0.20000	0.2456
$ 6 Fluorobenzene *sur.*	11.669	11.696	-0.027	6778584	0.12500	0.1085

Data File: /var/chem/gcd.i/21Sep2015.b/d060812.d

Date : 08-JUN-2015 14:35

Client ID: Level 3

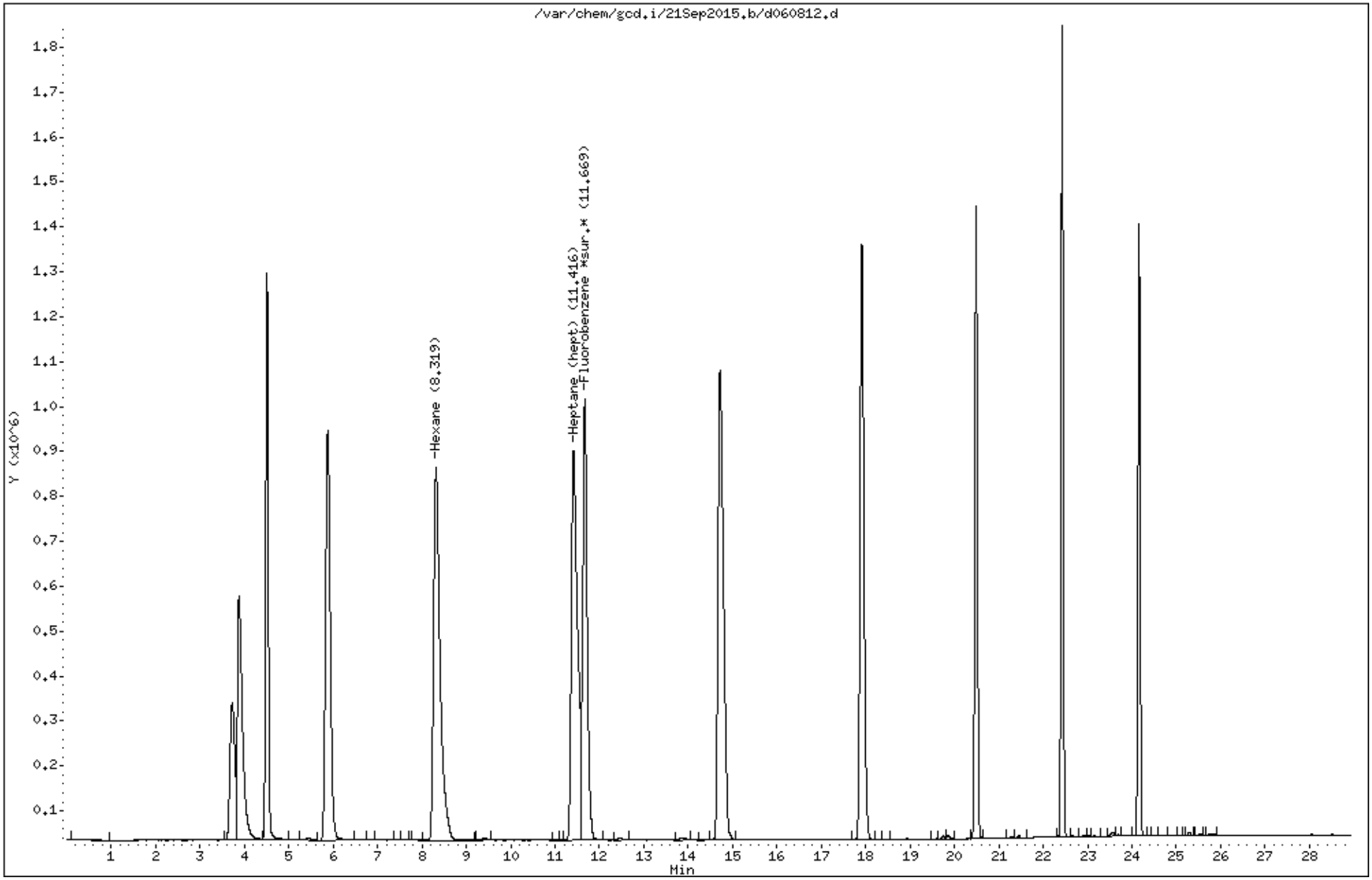
Instrument: gcd.i

Sample Info: 50ppmv->0.20ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060804.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 3
Inj Date : 08-JUN-2015 09:40
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->2.5ppmv
Misc Info : 5.0ml,03946;2516-172 Gasoline;Level 3
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 09:40 Cal File: d060804.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.660	11.696	-0.036	6353741	0.12500	0.1361
S 7 TPH (Gas Range)	7.346	21.366		60918149	2.50000	2.702
S 8 C2+ (gas)	3.643	29.000		85958420	2.50000	2.590

Data File: /var/chem/gcd.i/21Sep2015.b/d060804.d

Date : 08-JUN-2015 09:40

Client ID: Level 3

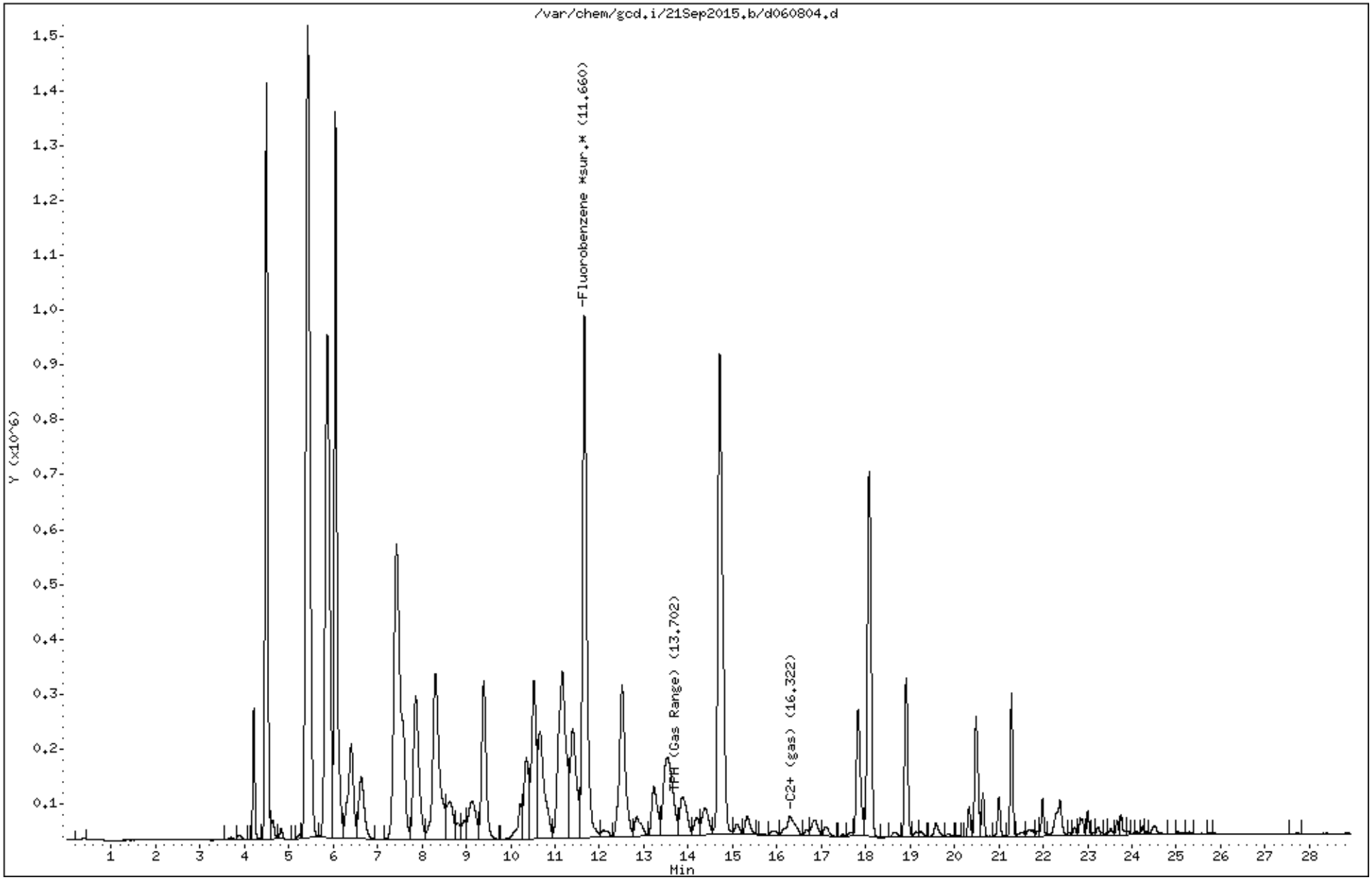
Instrument: gcd.i

Sample Info: 100ppmv->2.5ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092111.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-4
Inj Date : 21-SEP-2015 15:48
Operator : ly Inst ID: gcd.i
Smp Info : 1.0ppmv>0.13ppmv
Misc Info : 25ml,34345;2516-190 MBTEX;Level-4
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 15:48 Cal File: d092111.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.683	11.696	-0.013	5083916	0.12500	0.1255

Data File: /var/chem/gcd.i/21Sep2015.b/d092111.d

Page 1

Date : 21-SEP-2015 15:48

Client ID: Level-4

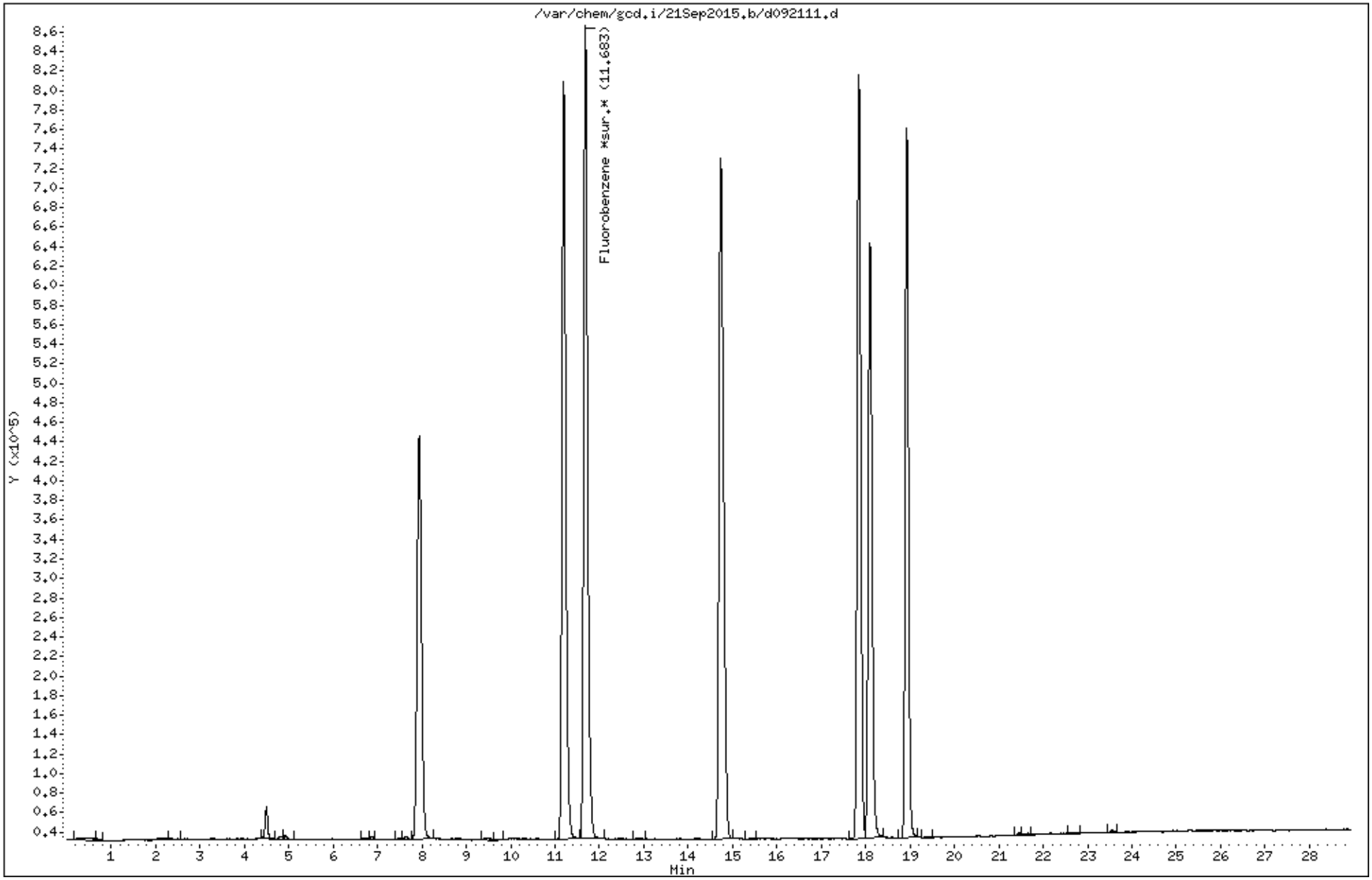
Instrument: gcd.i

Sample Info: 1.0ppmv>0.13ppmv

Operator: ly

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060821.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 4
Inj Date : 08-JUN-2015 21:35
Operator : gd Inst ID: gcd.i
Smp Info : Level 4
Misc Info : 20ml,05355;2516-177 JP-4;Level 4
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 21:35 Cal File: d060821.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.668	11.696	-0.028	5993149	0.12500	0.1339
S 11 TPH (JP4 Range)	8.233	22.508		400483487	8.10000	9.215
S 12 C2+(jp4)	3.643	29.000		429734922	8.10000	8.952

Data File: /var/chem/gcd.i/21Sep2015.b/d060821.d

Date : 08-JUN-2015 21:35

Client ID: Level 4

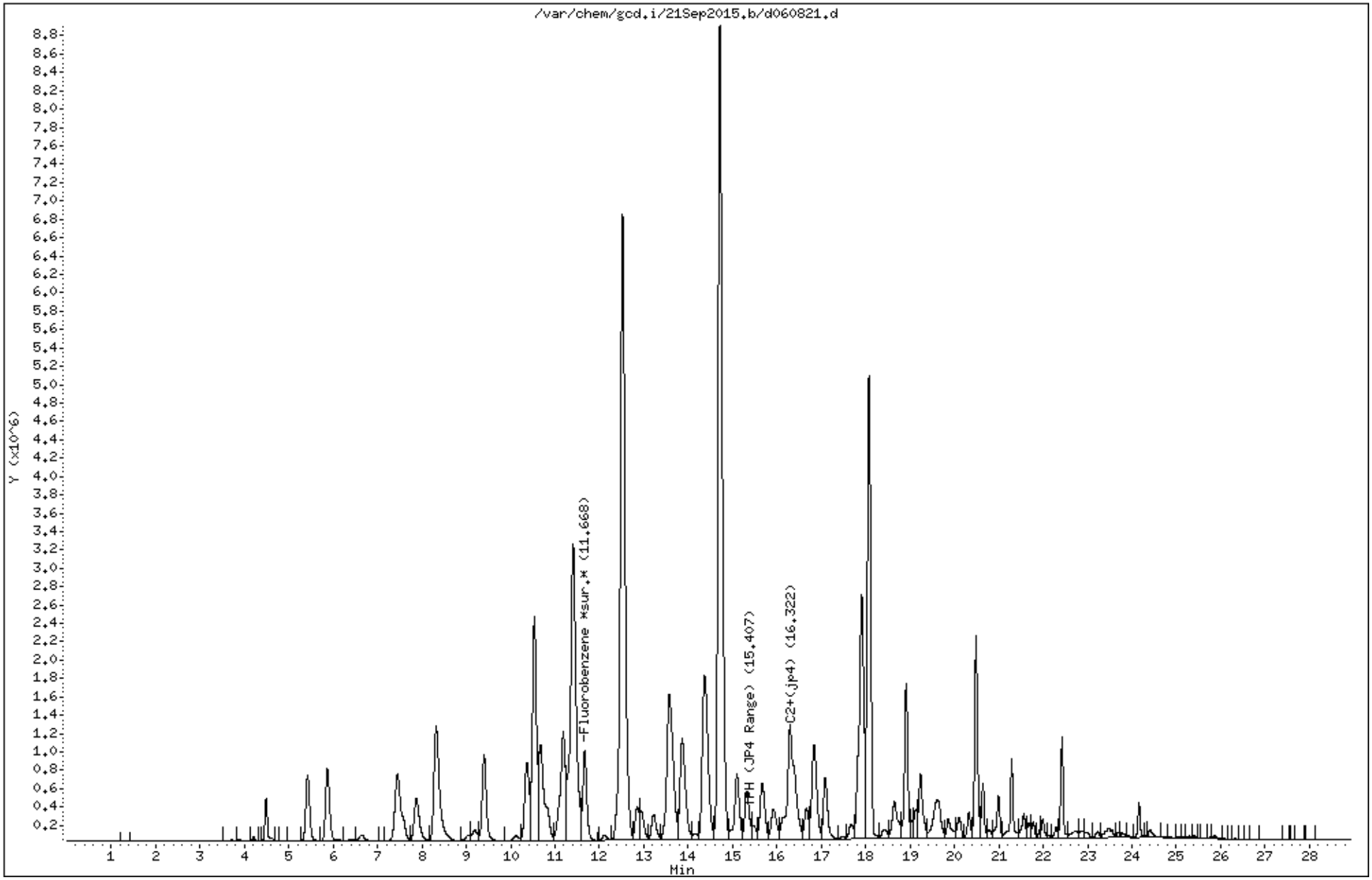
Instrument: gcd.i

Sample Info: Level 4

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060813.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 4
Inj Date : 08-JUN-2015 15:19
Operator : gm Inst ID: gcd.i
Smp Info : 50ppmv->0.35ppmv
Misc Info : 1.4ml,33907;2516-150 B.P.;Level 4
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 15:19 Cal File: d060813.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.306	8.348	-0.042	14014190	0.35000	0.3508
4 Heptane (hept)	11.408	11.446	-0.038	14706425	0.35000	0.4113
$ 6 Fluorobenzene *sur.*	11.663	11.696	-0.033	6075096	0.12500	0.1050

Data File: /var/chem/gcd.i/21Sep2015.b/d060813.d

Page 1

Date : 08-JUN-2015 15:19

Client ID: Level 4

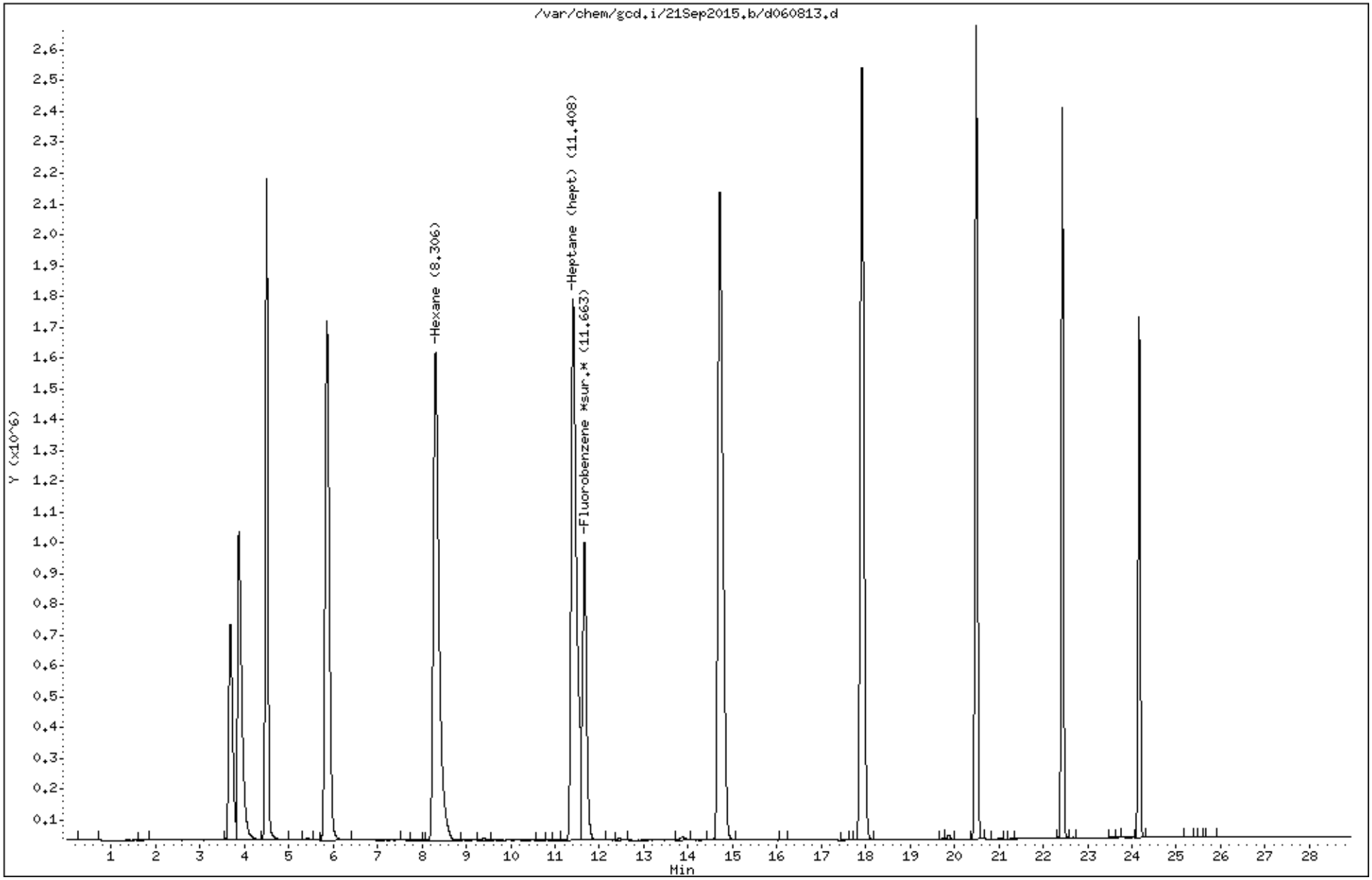
Instrument: gcd.i

Sample Info: 50ppmv->0.35ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060805.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 4
Inj Date : 08-JUN-2015 10:13
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->10ppmv
Misc Info : 20ml,03946;2516-172 Gasoline;Level 4
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 10:13 Cal File: d060805.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.672	11.696	-0.024	8960396	0.12500	0.1693
S 7 TPH (Gas Range)	7.346	21.366		281868427	10.0000	11.77
S 8 C2+ (gas)	3.643	29.000		385665709	10.0000	11.17

Data File: /var/chem/gcd.i/21Sep2015.b/d060805.d

Date : 08-JUN-2015 10:13

Client ID: Level 4

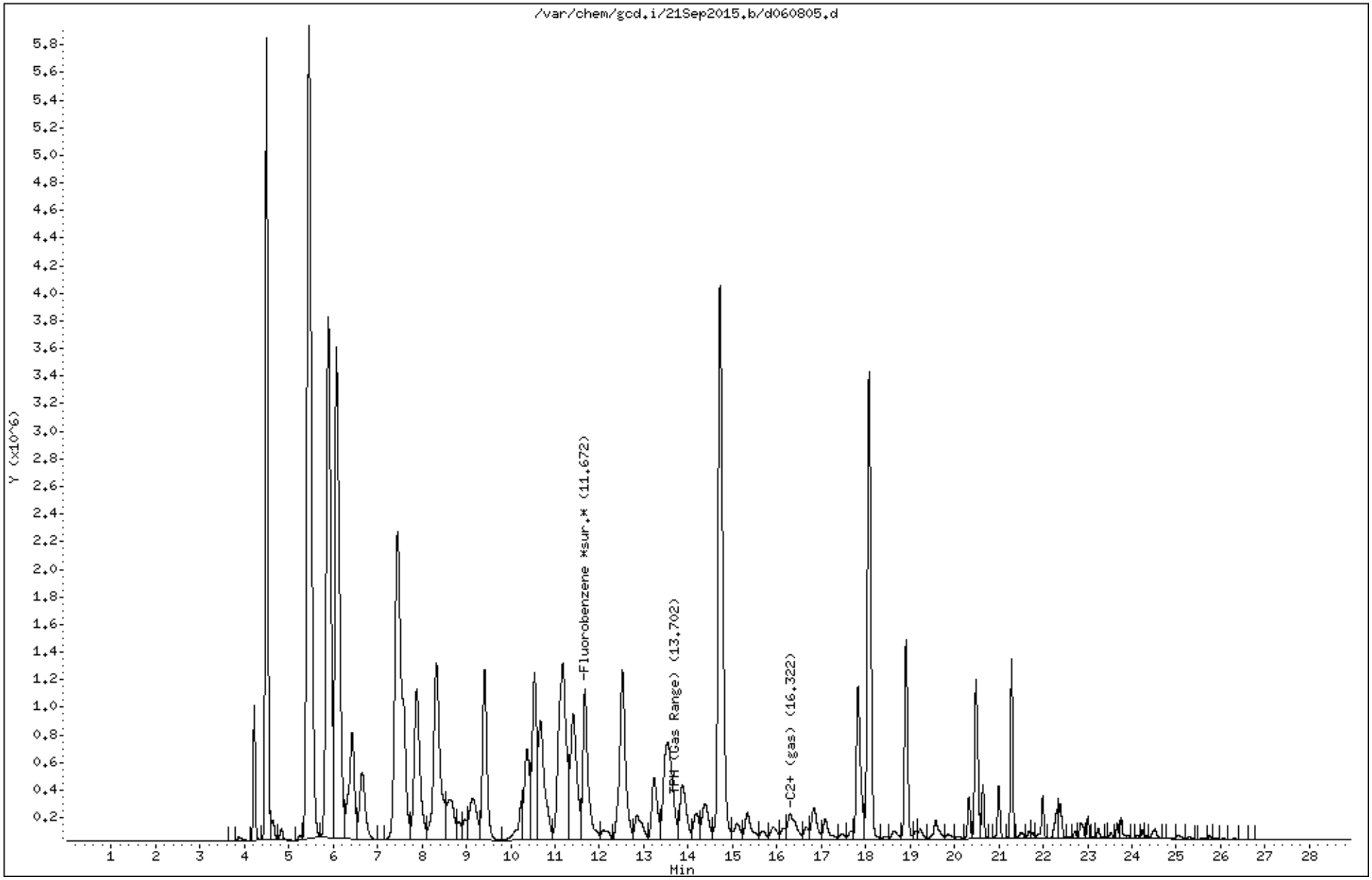
Instrument: gcd.i

Sample Info: 100ppmv->10ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d092112.d
Lab Smp Id: 2516-190 MBTEX Client Smp ID: Level-5
Inj Date : 21-SEP-2015 17:12
Operator : gd Inst ID: gcd.i
Smp Info : 1.0ppmv>0.5ppmv
Misc Info : 100ml,34345;2516-190 MBTEX;Level-5
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:19 lyohanne Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: surr.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.682	11.696	-0.014	4705734	0.12500	0.1192

Data File: /chem/gcd.i/21Sep2015.b/d092112.d

Date : 21-SEP-2015 17:12

Client ID: Level-5

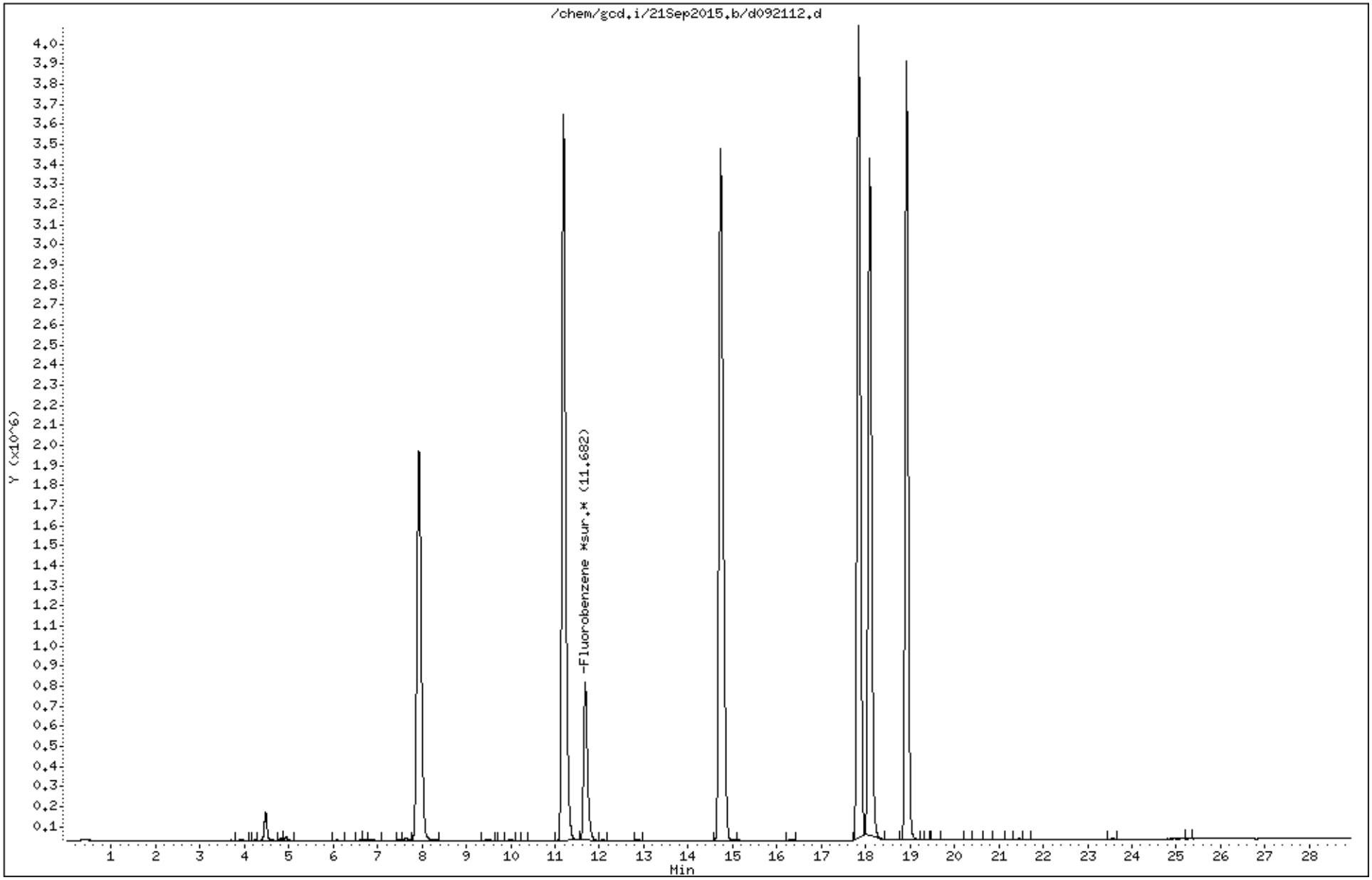
Instrument: gcd.i

Sample Info: 1.0ppmv>0.5ppmv

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060822.d
Lab Smp Id: 2516-177 JP-4 Client Smp ID: Level 5
Inj Date : 08-JUN-2015 22:10
Operator : gd Inst ID: gcd.i
Smp Info : Level 5
Misc Info : 50ml,05355;2516-177 JP-4;Level 5
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 22:10 Cal File: d060822.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(JP4).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.673	11.696	-0.023	5355874	0.12500	0.1234
S 11 TPH (JP4 Range)	8.233	22.508		990308014	20.2500	22.23(A)
S 12 C2+(jp4)	3.643	29.000		1067643403	20.2500	21.81(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcd.i/21Sep2015.b/d060822.d

Date : 08-JUN-2015 22:10

Client ID: Level 5

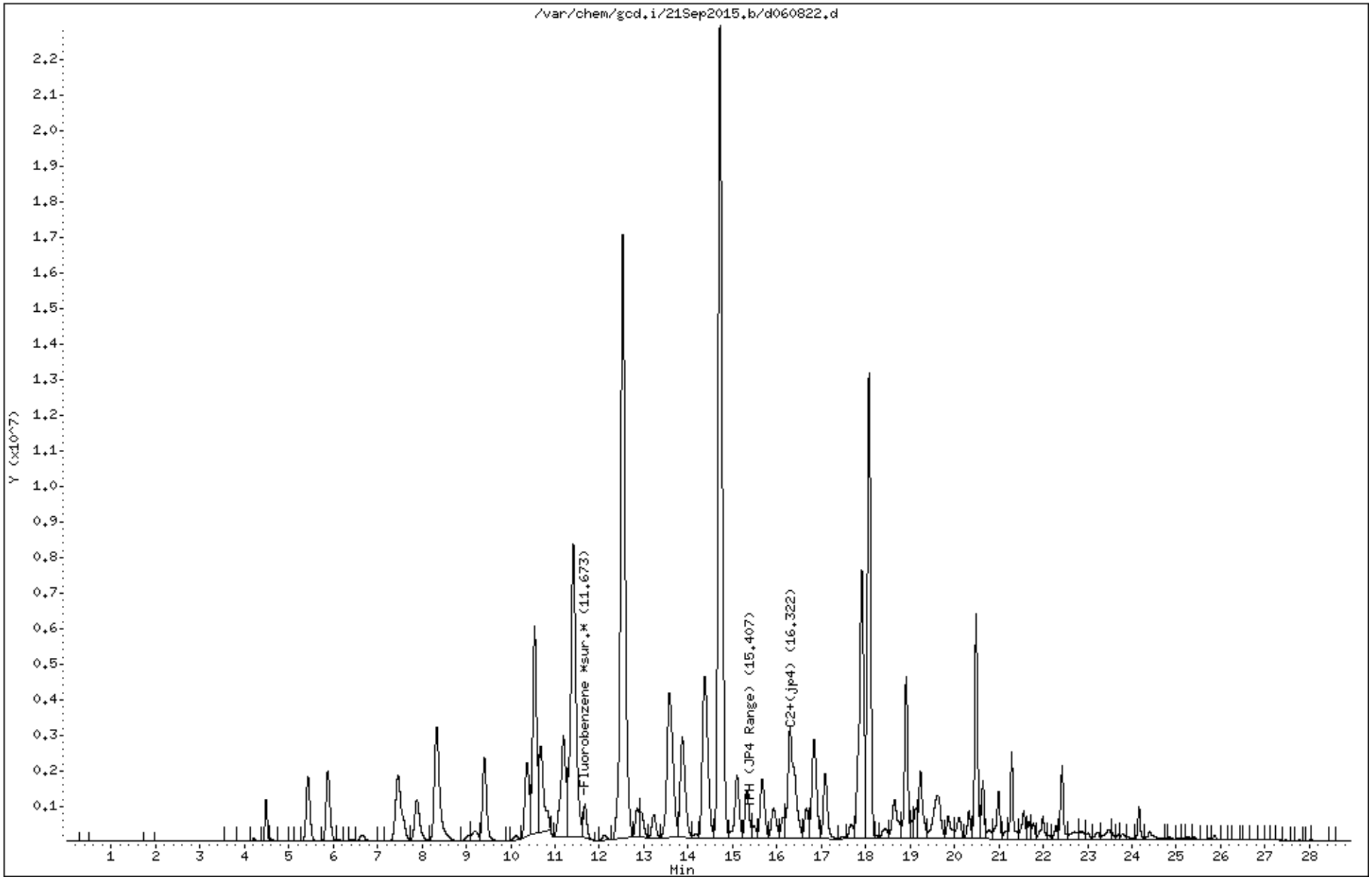
Instrument: gcd.i

Sample Info: Level 5

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060814.d
Lab Smp Id: 2516-150 B.P. Client Smp ID: Level 5
Inj Date : 08-JUN-2015 16:10
Operator : gd Inst ID: gcd.i
Smp Info : 50ppmv->0.50ppmv
Misc Info : 2.0ml,33907;2516-150 B.P.;Level 5
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 16:10 Cal File: d060814.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: Hep_Hex.sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
3 Hexane	8.314	8.348	-0.034	19508570	0.50000	0.4906
4 Heptane (hept)	11.412	11.446	-0.034	20791864	0.50000	0.5631
$ 6 Fluorobenzene *sur.*	11.666	11.696	-0.030	6190643	0.12500	0.1246

Data File: /var/chem/gcd.i/21Sep2015.b/d060814.d

Page 1

Date : 08-JUN-2015 16:10

Client ID: Level 5

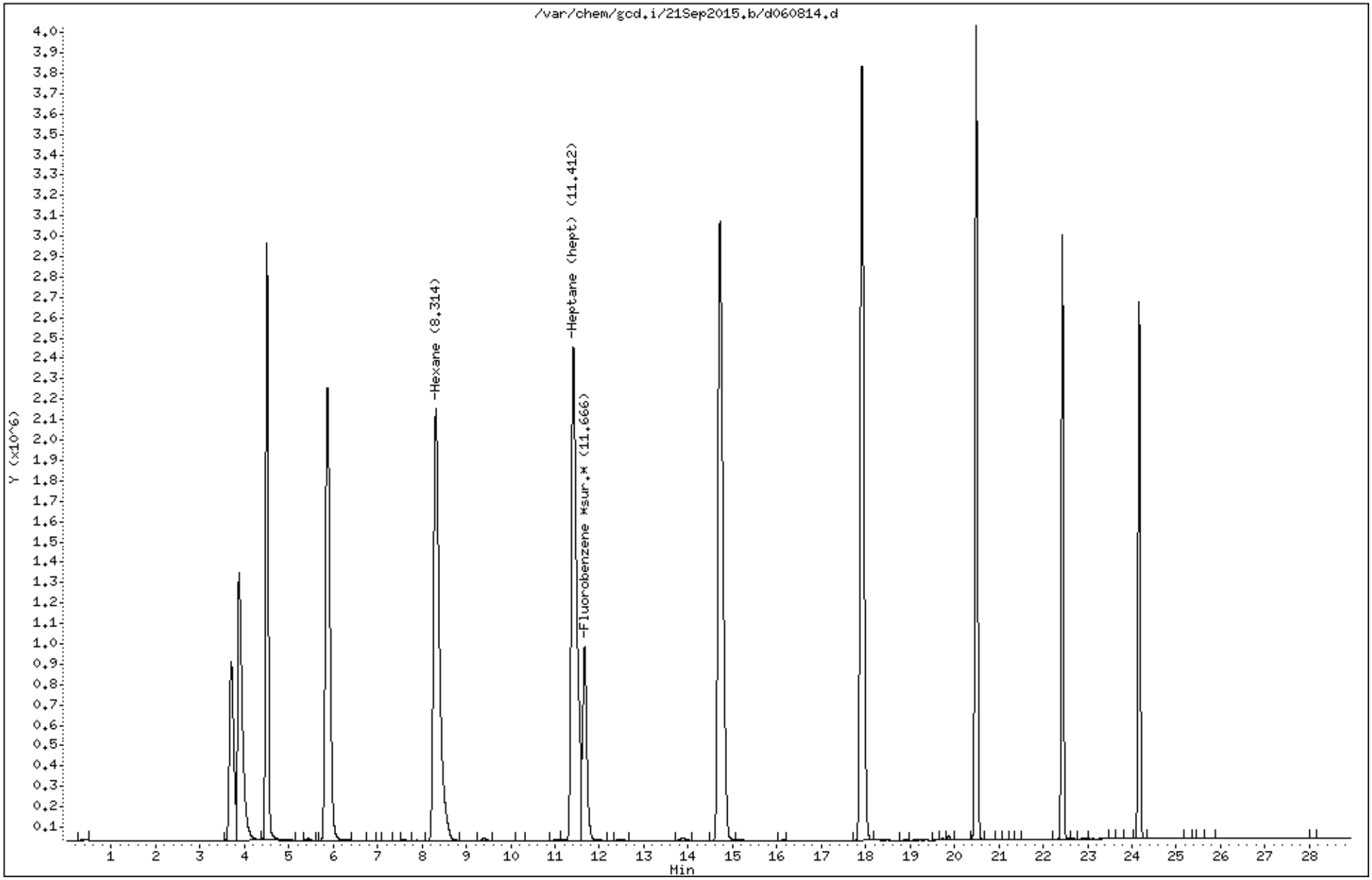
Instrument: gcd.i

Sample Info: 50ppmv->0.50ppmv

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/21Sep2015.b/d060806.d
Lab Smp Id: 2516-172 Gasoline Client Smp ID: Level 5
Inj Date : 08-JUN-2015 10:45
Operator : gm Inst ID: gcd.i
Smp Info : 100ppmv->25ppmv
Misc Info : 50ml,03946;2516-172 Gasoline;Level 5
Comment :
Method : /chem/gcd.i/21Sep2015.b/d1530921.m
Meth Date : 22-Sep-2015 12:14 lyohanne Quant Type: ESTD
Cal Date : 08-JUN-2015 10:45 Cal File: d060806.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (PPMV)	AMOUNTS ON-COL (PPMV)
$ 6 Fluorobenzene *sur.*	11.660	11.696	-0.036	11310542	0.12500	0.1871
S 7 TPH (Gas Range)	7.346	-21.366		818557098	25.0000	31.84(A)
S 8 C2+ (gas)	3.643	-29.000		1120639377	25.0000	30.63(A)

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcd.i/21Sep2015.b/d060806.d

Date : 08-JUN-2015 10:45

Client ID: Level 5

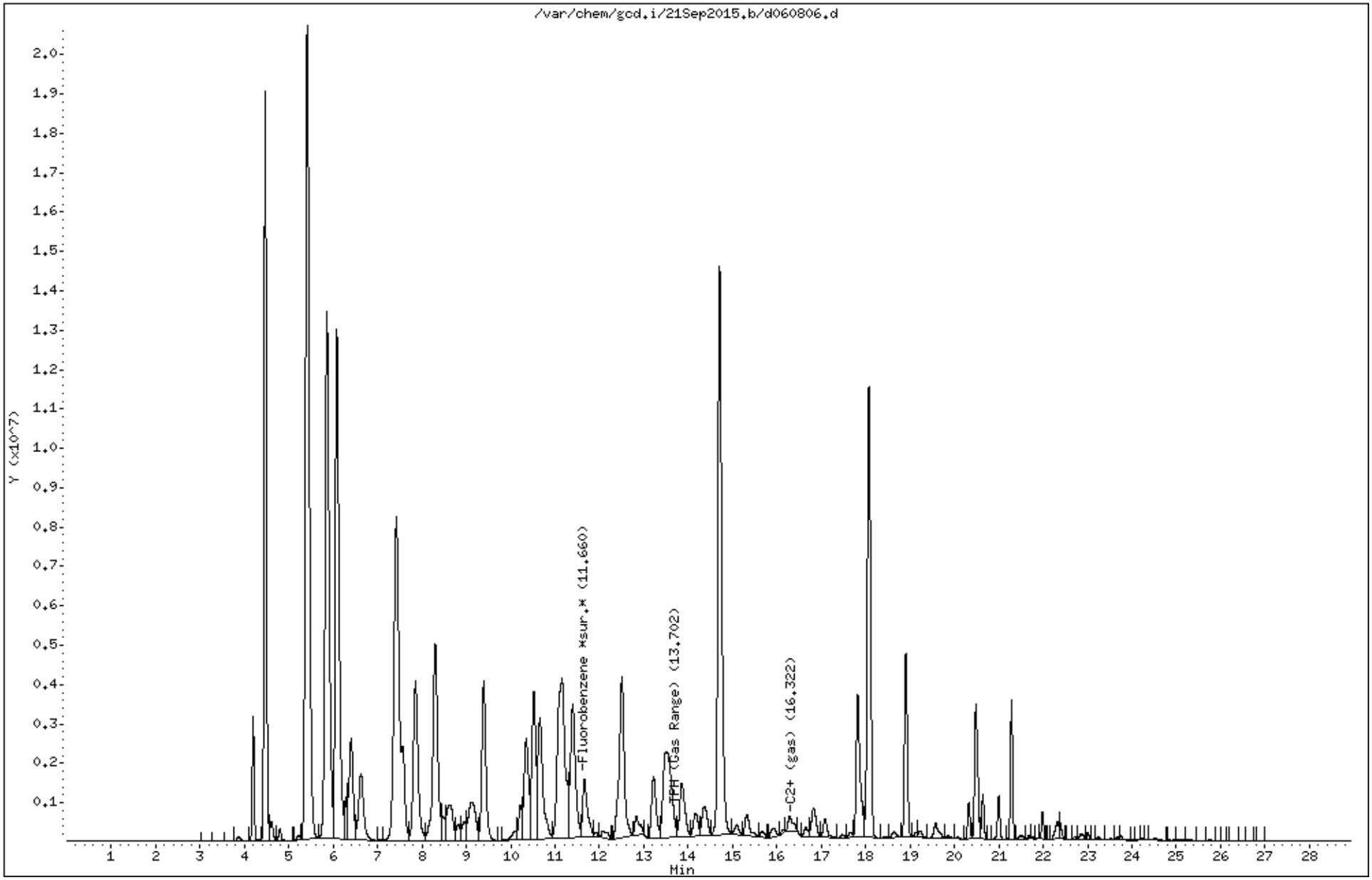
Instrument: gcd.i

Sample Info: 100ppmv->25ppmv

Operator: gm

Column phase:

Column diameter: 2.00



Eurofins Air Toxics, Inc. 4Q 2015 TO-3 Limit of Detections (LODs) Effective 01-01-16				
CAS #	Analyte	Molecular Weight (MW)	LOD (ppmv)	LOQ (ppmv)
71-43-2	Benzene	78.1118	0.0006	0.001
100-41-4	Ethyl Benzene	106.165	0.0006	0.001
108-38-3	m,p-Xylene	106.165	0.0006	0.001
1634-04-4	Methyl tert-butyl ether	88.1482	0.0006	0.001
95-47-6	o-Xylene	106.165	0.0006	0.001
108-88-3	Toluene	92.1384	0.0006	0.001
9999-9999-015	Total Xylenes	100	0.0006	0.002
9999-9999-208	TPH (Gasoline Range)	100	0.012	0.025
9999-9999-013	TPH (C2+Hydrocarbons) ref. to Gasoline	100	0.012	0.025

Instrument ID - gcd.i file gcd.i/02Dec2015.b/d120203b.d gcd.i/03Dec2015.b/d120303.d

GC-D

TO-3 Gasoline MDL

Report Date : 10-Apr-2015 19:36

Eurofins Air Toxics Inc.
METHOD DETECTION LIMIT SUMMARY REPORT

Method File: /var/chem/gcd.i/10Apr2015.b/d1430606.m
Batch File: /chem/gcd.i/10Apr2015.b
Inst ID: gcd.i

(100x) 5.0ml of Std. 2516-133 were spiked to get a concentration of 0.025 ppmV.

ID:	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07
FILENAME:	d041003	d041004	d041005	d041006	d041007	d041008	d041009
INJ.DATE:	10-APR-2015	10-APR-2015	10-APR-2015	10-APR-2015	10-APR-2015	10-APR-2015	10-APR-2015
INJ.TIME:	13:57	15:00	15:49	16:40	17:15	17:51	18:28

Compound	MDL01	MDL02	MDL03	MDL04	MDL05	MDL06	MDL07	AVG CONC	STD DEV	MDL ppbV	MDL (PPMV)
|S 1 c2+ TO12(hept)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|S 2 c2+ TO12(hexane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
| 3 Hexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
| 4 Heptane (hept)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|S 6 Fluorobenzene *sur.*	0.12	0.11	0.11	0.10	0.11	0.10	0.11	0.11	0.01	0.02	surr
|S 7 TPH (Gas Range)	21.85	20.55	19.29	18.31	21.62	20.94	19.65	20.32	1.29	4.05	0.00405
|S 8 C2+ (gas)	27.28	28.96	26.10	20.68	24.41	26.67	26.27	25.80	2.56	8.06	0.00806
|											
|S 9 C2-C4 (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|S 10 C5+ (gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|S 11a C2-C10(gas)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|S 12a C2-C10(gas100)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|S 11 TPH (JP4 Range)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|S 12 C2+(jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|S 13 c2-c4 (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
|											
|S 14 c5+ (jp4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	

RL: 0.025 ppmV

Reviewer 1 [signature] Date: 4/13/15
Reviewer 2 [signature] Date: 4/20/15

Eurofins Air Toxics Inc.

TARGET COMPOUNDS

Client Name:
Client SDG: 22Feb2016
Lab Smp Id: 2516-195 Gasoline
Client Smp ID: CCV
Sample Location:
Sample Point:
Sample Date:
Date Received:
Sample Matrix: AIR
Quant Type: ESTD
Analysis Type: VOA
Level: LOW
Data Type: GC DATA
Operator: gm
Misc Info: 5.0mL,1620;2516-195 Gasoline;CCV

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/KG) PPMV	Q
9999-9999-208	TPH (Gas Range)	2.091	
9999-9999-013	C2+ (gas)	2.374	
462-06-602	Fluorobenzene *sur.*	0.1400	

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/22Feb2016.b/d022201.d
Lab Smp Id: 2516-195 Gasoline Client Smp ID: CCV
Inj Date : 22-FEB-2016 09:21
Operator : gm Inst ID: gcd.i
Smp Info : CCV
Misc Info : 5.0mL,1620;2516-195 Gasoline;CCV
Comment :
Method : /var/chem/gcd.i/22Feb2016.b/d1530921.m
Meth Date : 22-Feb-2016 09:58 Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: METHSPIKE
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH_C2+(Gas).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.721	11.717	0.004	5523347	0.13996	0.1400
S 7 TPH (Gas Range)	7.346	21.366		53752793	2.09062	2.091
S 8 C2+ (gas)	3.643	29.000		86861294	2.37389	2.374

Report Date: 22-Feb-2016 09:59

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 22Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-195 Gasoline
Client Smp ID: CCV
Level: LOW
Operator: gm
Data Type: GC DATA
SampleType: METHSPIKE
SpikeList File: 1.25ppmvGAS.spk
Quant Type: ESTD
Sublist File: TPH_C2+(Gas).sub
Method File: /var/chem/gcd.i/22Feb2016.b/d1530921.m
Misc Info: 5.0mL,1620;2516-195 Gasoline;CCV

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 7 TPH (Gas Range)	2.500	2.091	83.62	75-125
S 8 C2+ (gas)	2.500	2.374	94.96	75-125

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1400	111.97	75-150

Data File: /chem/gcd.i/22Feb2016.b/d022201.d

Date : 22-FEB-2016 09:21

Client ID: CCV

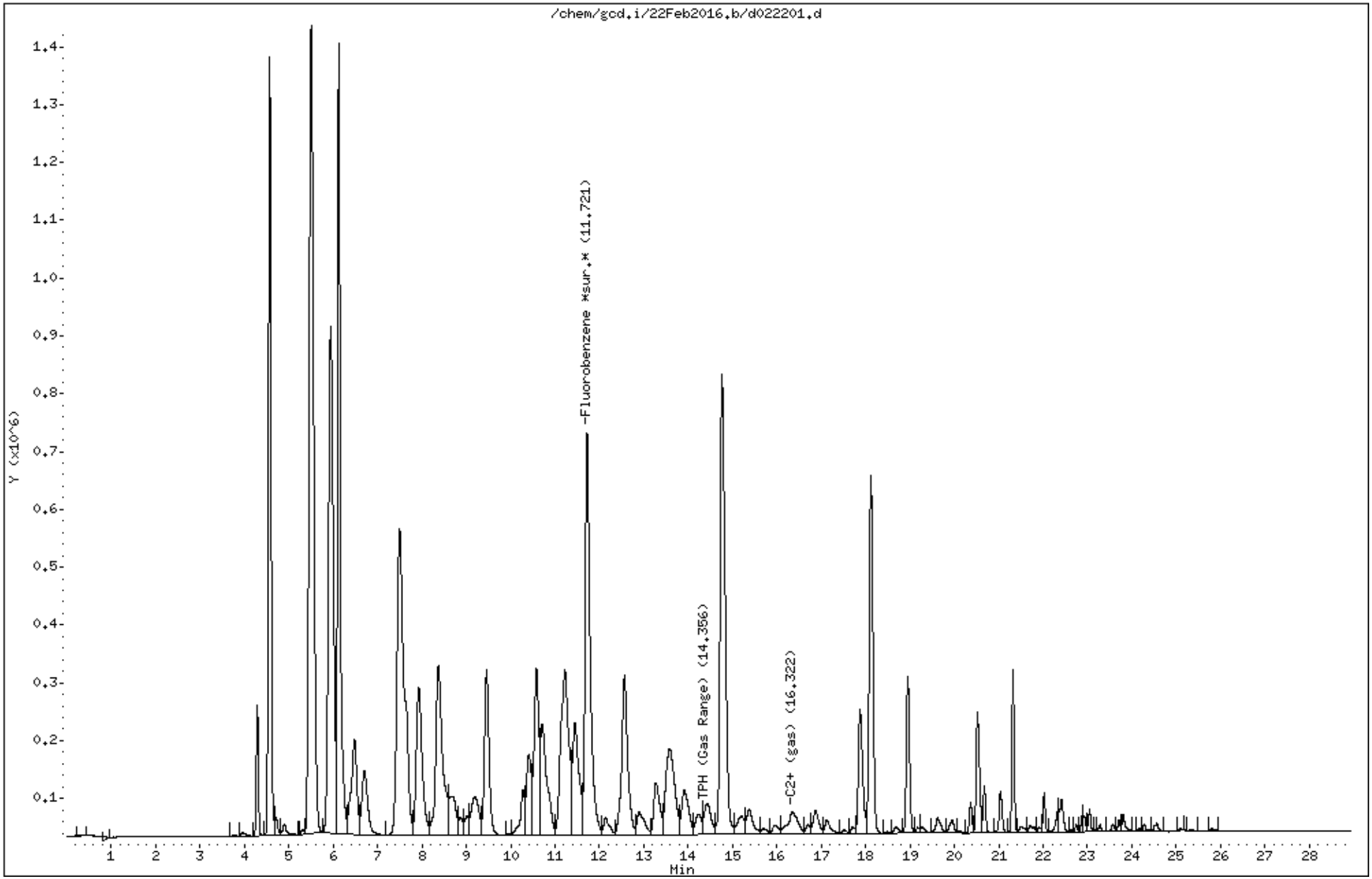
Sample Info: CCV

Column phase:

Instrument: gcd.i

Operator: gm

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	LCS		
Lab ID:	1602250B-04A	**Date/Time Analyzed:**	2/22/16 09:53 AM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	gcd.i / d022202a

Compound	**CAS#**	**%Recovery**
TPH (Gasoline Range)	9999-9999-208	81

Surrogates	**CAS#**	**Limits**	**%Recovery**
Fluorobenzene (FID)	462-06-602	45-148	103

* % Recovery is calculated using unrounded analytical results.

Report Date: 22-Feb-2016 21:33

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 22Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-202 Gasoline
Client Smp ID: LCS
Level: LOW
Operator: gm
Data Type: GC DATA
SampleType: LCS
SpikeList File: TPH(CL).spk
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /chem/gcd.i/22Feb2016.b/d1530921.m
Misc Info: 5.0mL,22513;2516-202 Gasoline;LCS

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 7 TPH (Gas Range)	2.500	2.017	80.70	68-107

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1288	103.07	45-148

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/22Feb2016.b/d022202a.d
Lab Smp Id: 2516-202 Gasoline Client Smp ID: LCS
Inj Date : 22-FEB-2016 09:53
Operator : gm Inst ID: gcd.i
Smp Info : LCS
Misc Info : 5.0mL,22513;2516-202 Gasoline;LCS
Comment :
Method : /chem/gcd.i/22Feb2016.b/d1530921.m
Meth Date : 22-Feb-2016 21:32 gdelacru Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.719	11.717	0.002	5084541	0.12884	0.1288
S 7 TPH (Gas Range)	7.346-21.366			51872611	2.01750	2.017

Data File: /chem/gcd.i/22Feb2016.b/d022202a.d

Date : 22-FEB-2016 09:53

Client ID: LCS

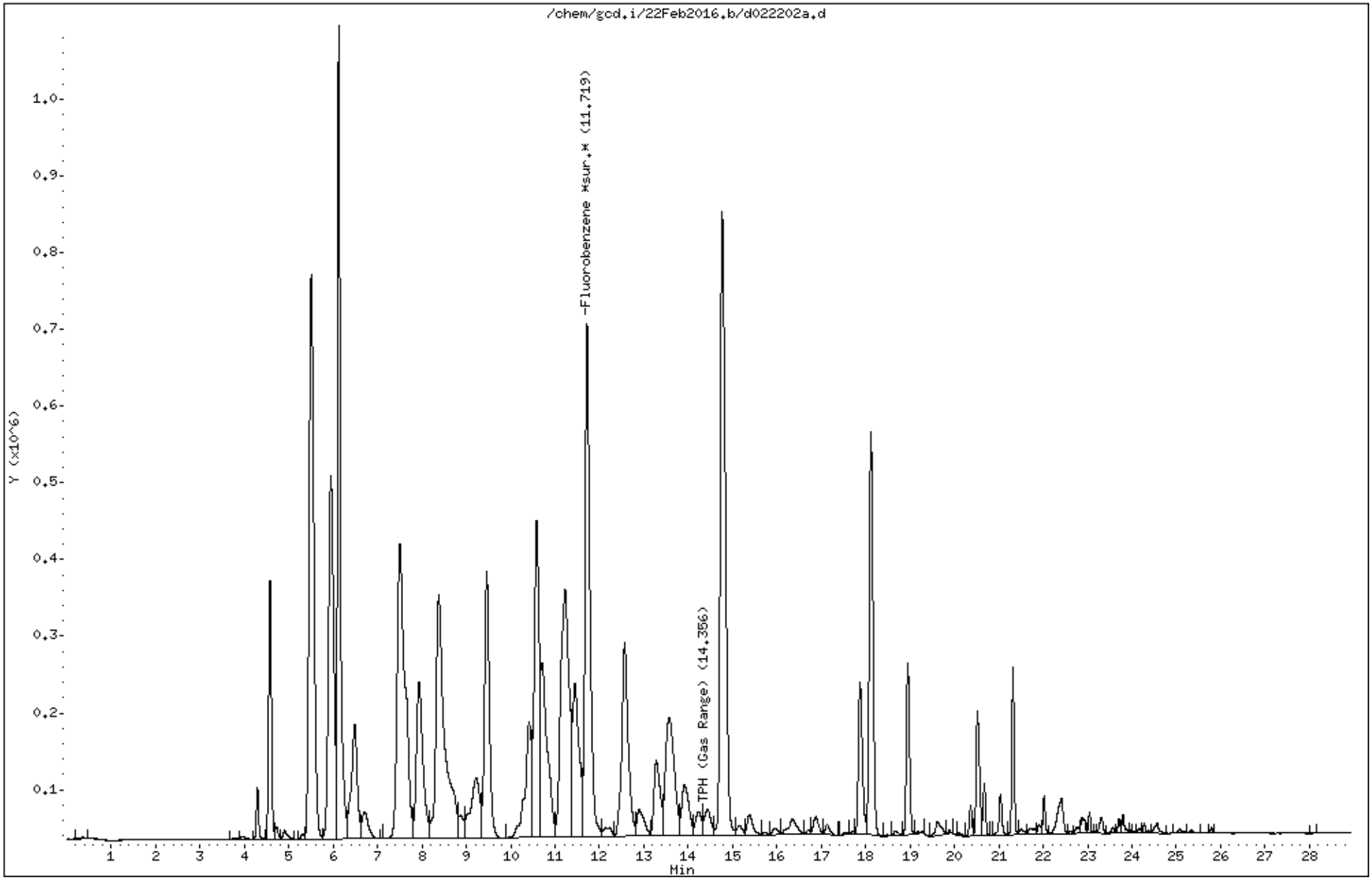
Instrument: gcd.i

Sample Info: LCS

Operator: gm

Column phase:

Column diameter: 2.00



MODIFIED EPA METHOD TO-3 GC/FID
Cannon AFB

eurofins | Air Toxics

Client ID:	LCSD		
Lab ID:	1602250B-04AA	**Date/Time Analyzed:**	2/22/16 08:25 PM
Date/Time Collected:	NA - Not Applicable	**Dilution Factor:**	1.00
Media:	NA - Not Applicable	**Instrument/Filename:**	gcd.i / d022216a

Compound	**CAS#**	**%Recovery**
TPH (Gasoline Range)	9999-9999-208	81

Surrogates	**CAS#**	**Limits**	**%Recovery**
Fluorobenzene (FID)	462-06-602	45-148	103

* % Recovery is calculated using unrounded analytical results.

Report Date: 22-Feb-2016 21:33

Eurofins Air Toxics Inc.

RECOVERY REPORT

Client Name:
Client SDG: 22Feb2016
Sample Matrix: GAS
Fraction: VOA
Lab Smp Id: 2516-202 gas
Client Smp ID: LCSD
Level: LOW
Operator: gd
Data Type: GC DATA
SampleType: LCSD
SpikeList File: TPH(CL).spk
Quant Type: ESTD
Sublist File: TPH(C.L.).sub
Method File: /chem/gcd.i/22Feb2016.b/d1530921.m
Misc Info: 5.0mL,22513;2516-202 gas;LCSD

SPIKE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
S 7 TPH (Gas Range)	2.500	2.017	80.66	68-107

SURROGATE COMPOUND	CONC ADDED PPMV	CONC RECOVERED PPMV	% RECOVERED	LIMITS
$ 6 Fluorobenzene *sur	0.1250	0.1285	102.81	45-148

Eurofins Air Toxics Inc.

Method TO-3/TO-12/TO-14A

Data file : /chem/gcd.i/22Feb2016.b/d022216a.d
Lab Smp Id: 2516-202 gas Client Smp ID: LCSD
Inj Date : 22-FEB-2016 20:25
Operator : gd Inst ID: gcd.i
Smp Info : LCSD
Misc Info : 5.0mL,22513;2516-202 gas;LCSD
Comment :
Method : /chem/gcd.i/22Feb2016.b/d1530921.m
Meth Date : 22-Feb-2016 21:32 gdelacru Quant Type: ESTD
Cal Date : 21-SEP-2015 17:12 Cal File: d092112.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: TPH(C.L.).sub
Target Version: 3.50
Processing Host: eeyore

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (PPMV)	FINAL (PPMV)
$ 6 Fluorobenzene *sur.*	11.719	11.717	0.002	5071673	0.12852	0.1285
S 7 TPH (Gas Range)	7.346-21.366			51849815	2.01661	2.017

Data File: /chem/gcd.i/22Feb2016.b/d022216a.d

Date : 22-FEB-2016 20:25

Client ID: LCSD

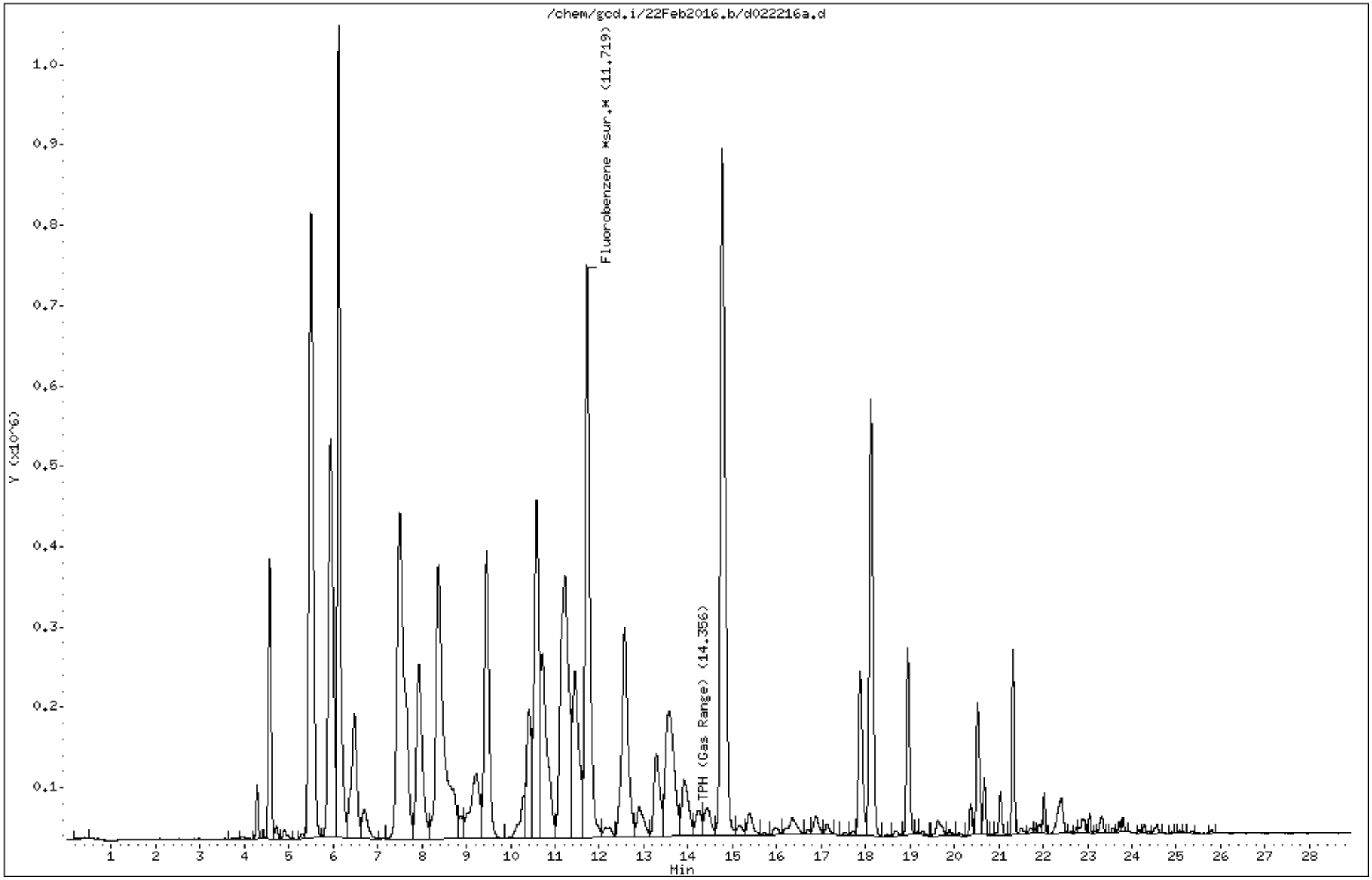
Instrument: gcd.i

Sample Info: LCSD

Operator: gd

Column phase:

Column diameter: 2.00



Eurofins Air Toxics, Inc. **GC-D** **Logbook #: 2738**

Method: TO-3 TO-12 (circle one) Surrogate ID#: 2516-193B Exp. Date: 3/8/16 Leak Check: gm

0100 of 0284

	USE	File #	Sample Name/Client ID	Can #	Pressure	Amt	DF	Date	Time	Init	Comments
1	✓	D022201	2516-195 Gasoline	1620	100 ppmv → 2.5 ppmv	5.0 mL	1.00	2/22/16	0921	gm	CCV, exp: 3/17/16
2	✓	02	2516-202 Gasoline	22513	↓	↓			0953		LCS, exp: 5/9/16
3	✓	03	2516-209 MBTEX	34345	1.0 ppmv → 0.05 ppmv	10 mL			1035		CCV, exp: 6/11/16
4	✓	04	2516-190 MBTEX	34310	↓	↓			1059		LCS, exp: 2/28/16
5	✓	05	Humid Lab Blank	14867	NA	200 mL	↓		1133	↓	Lab Blank
6	✓	06	1602367-01A	1L 1522	3.9" Hg → 15.6 psi	200 mL	2.37		1222	gm	
7	✓	07	↓ -02A	1L 1762	3.7" Hg → 15 psi	↓	2.30		1258	↓	
8	✓	08	1602250B-01A	34401	9.4" Hg → 4.9 psi	200 mL	1.94		1403	gd	
9	✓	09	-01AA						1451		
10	✓	10	-02A	13658	7.3 Hg - 5.1 psi		1.78		1536		
11	X	11	1602363 -02A	3997	3.3 Hg - 15.2 psi	10 mL	45.6		1630		over dil.
12	✓	12	-02A		↓	50 mL	9.12		1745		
13	X	13	-01A	37405	3.7 Hg - 15.1 psi	10 mL	46.2		1817		
14	✓	14	↓ -01A			175 mL	2.60		1900		
15	✓	15	2516-190 MBTEX	34310	1.0 ppmv - 0.05 ppmv	10 mL	1.00		1946		LCSD
✓	↓	16	2516-202 Gasoline	22513	100 ppmv - 2.5 ppmv	5.0 mL	1.00	↓	2025	↓	LCSD

Calculation Check: File ID: D022202 Compound: TPH (gas range) Initials: gm

Sample Amt = $\frac{\text{Area Counts Sample}}{\text{RF}}$ × Dilution Factor = $\frac{(5187261 1)}{(25711393)}$ × (1.00) = 2.017 ppmv

Reported Result: 2.017 ppmv

Reviewed by: gd Date: 2/22/16

Shipping/ Receiving Documents

Eurofins Air Toxics, Inc. Sample Receipt Confirmation Cover Page

Thank you for choosing Eurofins Air Toxics, Inc. (EATL). We have received your samples and have listed any Sample Receipt Descrepancies below.

In order to expedite analysis and reporting, please review the attached information for accuracy.

For corrections call: **Brian Whittaker at 916-985-1000**

EATL will proceed with the analysis as specified on the Chain of Custody (COC) and Sample Receipt Summary page.

Please note : The Sample Receipt Confirmation, including the total workorder charge, is subject to change upon secondary review. Our aim is to provide a confirmation to you in a timely manner. Sample Receipt Discrepancies, if any, may not include discrepancies regarding sample receipt pressure(s). Additionally, the COC will be provided with the final report.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 .FAX (916) 985-1020
Hours 6:30 A.M to 5:30 P.M. PST

eurofins | Air Toxics

Sample Transportation Notice
Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Air Toxics Limited assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630-4719
(916) 985-1000 FAX (916) 985-1020

Project Manager: Mike Sonderman
Collected by: (Print and Sign) Jessica Hoppmann / Jessica Hoppmann
Company: AECOM Email:
Address: 12120 Shamrock Plaza City: Omaha State: NE Zip: 68154
Phone: (402) 334-8181 Fax: (402) 334-1984

Project Info:
P.O. #:
Project #: 60425210.23446540.0032AB
Project Name: Cannon AFB

Turn Around Time:
☒ Normal
☐ Rush
specify

Lab Use Only
Pressurized by:
Date:
Pressurization Gas: N_2 He

Lab I.D.	Field Sample I.D. (Location)	Can #	Date of Collection	Time of Collection	Analyses Requested	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
01A	CA504-SG02-010	34401	2/9/16	1527	TPH-GRO (TO-3), VOCs (TO-15)	-26.5	-6.0		
02A	CA504-SG02-005	13658	2/9/16	1645	↓	-28.2	-7.4		

Jessica Hoppmann 2/9/16

Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Jessica Hoppmann 2/10/16 1300	[illegible] 2/10/16 1020
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time
Relinquished by: (signature) Date/Time	Received by: (signature) Date/Time

Notes:
Two unused cannisters in same box

Lab Use Only	Shipper Name	Air Bill #	Temp (°C)	Condition	Custody Seals Intact?	Work Order #
	FedEx		NA	Good SPR	Yes No None	1602250

2/10/16 Side-to Seal is open.

Form 1293 rev.11

Air Toxics Ltd.

TO-3 LCS Control Limits (gcd)

Effective Dates 09/26/15 - 03/26/16

Data Point Analysis Dates 03/25/15 - 09/25/15

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
Benzene	121	73	129	64	113	81
Ethyl Benzene	119	69	127	61	110	77
Heptane	122	77	129	69	114	84
Hexane	108	91	111	88	105	94
m,p-Xylene	116	73	123	66	109	80
Methyl tert-butyl ether	131	67	142	56	120	78
o-Xylene	124	72	133	64	115	81
Toluene	114	72	121	65	107	79
Total Xylenes	120	73	128	65	112	81
TPH (C2+ Hydrocarbons) ref. to Gasolin	102	66	107	61	96	72
TPH (Gasoline Range)	107	68	113	62	101	75

Air Toxics Ltd.

TO-3 SURR Control Limits (gcd)

Effective Dates 09/26/15 - 03/26/16

Data Point Analysis Dates 03/25/15 - 09/25/15

Compound Name	Upper Control Limit (%)	Lower Control Limit (%)	Upper ME Limit (%)	Lower ME Limit (%)	Upper Warning Limit (%)	Lower Warning Limit (%)
Fluorobenzene (FID)	148	45	165	28	131	62
Fluorobenzene (PID)	157	43	176	24	138	62

eurofins | Air Toxics

SAMPLE RECEIPT SUMMARY

WORKORDER 1602250B

Client

Mr. Jeff Aust
AECOM
12120 Shamrock Plaza
Suite 300
Omaha, NE 68154

Sales Rep: N/A

Phone

(402) 952-2516

Fax

(402) 952-2591

Date Promised: 02/24/16
Date Completed: 2/24/16
Date Received: 2/11/16
PO#: 320236
Project#: 60425210.23446540.0032AB Cannon AFB
Total $: $ 100.00
Logged By: MH

Fraction	Sample #	Analysis	Collected	Receipt Vac./Pres.	Amount$
01A	CA504-SG02-010	Modified TO-3	2/9/2016	9.4 "Hg	$50.00
01AA	CA504-SG02-010 Lab Duplicate	Modified TO-3	2/9/2016	9.4 "Hg	$0.00
02A	CA504-SG02-005	Modified TO-3	2/9/2016	7.3 "Hg	$50.00
03A	Lab Blank	Modified TO-3	NA	NA	$0.00
04A	LCS	Modified TO-3	NA	NA	$0.00
04AA	LCSD	Modified TO-3	NA	NA	$0.00

Note: Samples received after 3 P.M. PST are considered to be received on the following work day.
Atlas Project Name/Profile#: Cannon Air Force Base320236/19959

BILL TO: Accounts Payable Austin
AECOM
P.O. BOX 203970
Austin, TX 78720-1088

Analysis Code: TO-3/12

REMARKS: VENDOR # 1568409

TERMS: NET 45

Reporting Method: Modified TO-3 (Sh)-TPHg only

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

Other Records

DILUTION FACTORS

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Vacuum}} = \frac{\text{14.7 psi + Final Pressure (psi)}}{\text{14.7 psi - [(Initial Pressure ("Hg)) (14.7 psi / 30 "Hg)]}}$$

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{\text{14.7 psi + Final Pressure (psi)}}{\text{14.7 psi + Initial Pressure (psi)}}$$

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.5	1.36	1.71	2.05
1.0	1.39	1.74	2.09
1.5	1.41	1.77	2.13
2.0	1.44	1.80	2.16
2.5	1.46	1.83	2.20
3.0	1.49	1.87	2.24
3.5	1.52	1.90	2.29
4.0	1.55	1.94	2.33
4.5	1.58	1.98	2.38
5.0	1.61	2.02	2.42
5.5	1.64	2.06	2.47
6.0	1.68	2.10	2.53
6.5	1.71	2.15	2.58
7.0	1.75	2.19	2.64
7.5	1.79	2.24	2.69
8.0	1.83	2.29	2.76
8.5	1.87	2.34	2.82
9.0	1.91	2.40	2.89
9.5	1.96	2.46	2.96
10.0	2.01	2.52	3.03
10.5	2.06	2.59	3.11
11.0	2.12	2.65	3.19
11.5	2.17	2.72	3.28
12.0	2.23	2.80	3.37
12.5	2.30	2.88	3.46
13.0	2.36	2.97	3.57
13.5	2.44	3.06	3.67
14.0	2.51	3.15	3.79
14.5	2.59	3.25	3.91
15.0	2.68	3.36	4.04
15.5	2.77	3.48	4.18
16.0	2.87	3.60	4.33
16.5	2.98	3.73	4.49
17.0	3.09	3.88	4.66
17.5	3.22	4.03	4.85
18.0	3.35	4.20	5.05
18.5	3.50	4.38	5.27
19.0	3.65	4.58	5.51
19.5	3.83	4.80	5.77
20.0	4.02	5.04	6.06
20.5	4.23	5.31	6.38

Initial Vacuum ("Hg)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
21.0	4.47	5.60	6.73
21.5	4.73	5.93	7.13
22.0	5.03	6.30	7.58
22.5	5.36	6.72	8.08
23.0	5.74	7.20	8.66
23.5	6.19	7.76	9.32
24.0	6.70	8.40	10.10
24.5	7.31	9.17	11.02
25.0	8.04	10.08	12.12
25.5	8.93	11.20	13.47
26.0	10.05	12.60	15.15
26.5	11.49	14.40	17.32
27.0	13.40	16.80	20.20
27.5	16.08	20.16	24.24
28.0	20.10	25.20	30.31
28.5	26.80	33.61	40.41
29.0	40.20	50.41	60.61

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59

DILUTION FACTORS

$$\text{Dilution Factor} = \frac{\text{Final Pressure}}{\text{Initial Pressure}} = \frac{14.7\text{ psi} + \text{Final Pressure (psi)}}{14.7\text{ psi} + \text{Initial Pressure (psi)}}$$

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
0.0	1.34	1.68	2.02
0.2	1.32	1.66	1.99
0.4	1.30	1.64	1.97
0.6	1.29	1.61	1.94
0.8	1.27	1.59	1.92
1.0	1.25	1.57	1.89
1.2	1.24	1.55	1.87
1.4	1.22	1.53	1.84
1.6	1.21	1.52	1.82
1.8	1.19	1.50	1.80
2.0	1.18	1.48	1.78
2.2	1.17	1.46	1.76
2.4	1.15	1.44	1.74
2.6	1.14	1.43	1.72
2.8	1.13	1.41	1.70
3.0	1.11	1.40	1.68
3.2	1.10	1.38	1.66
3.4	1.09	1.36	1.64
3.6	1.08	1.35	1.62
3.8	1.06	1.34	1.61
4.0	1.05	1.32	1.59
4.2	1.04	1.31	1.57
4.4	1.03	1.29	1.55
4.6	1.02	1.28	1.54
4.8	1.01	1.27	1.52
5.0	1.00	1.25	1.51
5.2	NA	1.24	1.49
5.4	NA	1.23	1.48
5.6	NA	1.22	1.46
5.8	NA	1.20	1.45
6.0	NA	1.19	1.43
6.2	NA	1.18	1.42
6.4	NA	1.17	1.41
6.6	NA	1.16	1.39
6.8	NA	1.15	1.38
7.0	NA	1.14	1.37
7.2	NA	1.13	1.36
7.4	NA	1.12	1.34

Initial Pressure (psi)	**5 psi** Final Press. Dil. Factor	**10 psi** Final Press. Dil. Factor	**15 psi** Final Press. Dil. Factor
7.6	NA	1.11	1.33
7.8	NA	1.10	1.32
8.0	NA	1.09	1.31
8.2	NA	1.08	1.30
8.4	NA	1.07	1.29
8.6	NA	1.06	1.27
8.8	NA	1.05	1.26
9.0	NA	1.04	1.25
9.2	NA	1.03	1.24
9.4	NA	1.02	1.23
9.6	NA	1.02	1.22
9.8	NA	1.01	1.21
10.0	NA	1.00	1.20
10.2	NA	NA	1.19
10.4	NA	NA	1.18
10.6	NA	NA	1.17
10.8	NA	NA	1.16
11.0	NA	NA	1.16
11.2	NA	NA	1.15
11.4	NA	NA	1.14
11.6	NA	NA	1.13
11.8	NA	NA	1.12
12.0	NA	NA	1.11
12.2	NA	NA	1.10
12.4	NA	NA	1.10
12.6	NA	NA	1.09
12.8	NA	NA	1.08
13.0	NA	NA	1.07
13.2	NA	NA	1.06
13.4	NA	NA	1.06
13.6	NA	NA	1.05
13.8	NA	NA	1.04
14.0	NA	NA	1.03
14.2	NA	NA	1.03
14.4	NA	NA	1.02
14.6	NA	NA	1.01
14.8	NA	NA	1.01

Compound Listing

Modified TO-3 (Sh)-TPHg only

CAS Number	Compound	Detection Limit ppmv	Type
9999-9999-208	TPH (Gasoline Range)	0.025	
462-06-602	Fluorobenzene (FID)		

File Name: O:\Variances\Variances 2013\Signed Variance Tables 2013
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Item	Parameter	SOW	ATL SOP	Approval
1	DoD QSM Box 32 – Second Source Standards	Second Source standard must be from a different manufacturer.	Second Source standard is from a different manufacturer or same manufacturer different lot number.	
2	SOW#7	EDDs must be accompanied by a signature page indicating correct values and format.	Signature page is not included along with the EDD.	
3	SOW #12	The LOQ must be at least 2 times the DL.	In the majority of the cases, the LOQ meets this criterion; however, when evaluating over 60 compounds on multiple instruments, there may be an isolated case in which LOQ is not 2 times the DL. In all cases, the LOQ>DL.	
4	SOW#13	The laboratory shall provide copies of all SOPs upon request by URS.	SOPs are available on an as needed basis upon signing a NDA.	
5	SOW#16	Hardcopy and EDD must be delivered.	The laboratory provides report as a pdf format and EDD which can be downloaded from the Web portal. The QC Summary Package may not have the navigable functionality in the pdf format.	
6	SOW#17	Samples may be disposed after 7 days of URS receipt of an acceptable data package.	Summa canisters are reusable media and will be released for cleaning after analyses have been completed and reviewed against project requirements.	
7	Attachment A	Cooler receipt form	Summa canisters are not shipped via a cooler and a cooler receipt form is not applicable.	

I agree to terms and conditions

File Name: O:\Variances\
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Method Modifications

Table 1. Summary of Method Modifications for TO-3

Requirement	EPA Method TO-3	Eurofins Air Toxics Modifications
Sample Collection	In-line field method.	Collection of sample in specially treated canisters or alternative containers for transport to and analysis by an off-site laboratory.
Preparation of Standards	Levels achieved through dilution of gas mixture.	Levels achieved through loading various volumes of the gas mixture.
Initial Calibration Calculation	4-point calibration using a linear regression model.	5-point calibration using average Response Factor.
Initial Calibration Frequency	Weekly.	When daily calibration standard recovery is outside 75-125%, or upon significant changes to the procedure or instrumentation.
Daily Calibration Standard Frequency	Prior to sample analysis and every 4-6 hrs.	Prior to sample analysis.
Minimum Detection Limit (MDL)	Calculated using the equation DL = A+3.3S, where A is intercept of calibration line and S is the standard deviation of at least 3 reps of low level standard.	40 CFR Pt. 136 App. B.
Sample preconcentration and moisture management	Cyrogenic preconcentrator with a Nafion dryer.	Multi-bed Sorbent system.

File Name: O:\Variances\
Profile: TBD
Date: 04-07-13
Initials: HCH

Eurofins Air Toxics, Inc.
Proposal Deviation Requests

Documents Reviewed: DoD Quality Systems Manual Version 4.2 dated 10/25/10
Request for Proposal No. 73997 Statement of Work, Attachment A

Methods: TO-15, TO-3 and ASTM 1946

Table 2. Summary of Method Modifications for ASTM D1946

Requirement	ASTM D1946	Eurofins Air Toxics Modifications
Calibration	A single point calibration is performed using a reference standard closely matching the composition of the unknown.	A minimum 3-point calibration curve is performed. Quantitation is based on a daily calibration standard, which may or may not resemble the composition of the associated samples.
Reference Standard	The composition of any reference standard must be known to within 0.01 mol % for any component.	The standards used by AT are blended to a ≥ 95% accuracy.
Sample Injection Volume	Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL.	The sample container is connected directly to a fixed volume sample loop of 1.0 mL. Linear range is defined by the calibration curve. Bags may be loaded by vacuum or by positive pressure.
Normalization	Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%.	Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix.
Precision	Precision requirements established at each concentration level.	Duplicates should agree within 25 % RPD. for detections >5 X's the RL

Eurofins Air Toxics, Inc.	Data Review Checklist			Release Date: 11/11/15
Workorder # 1602250B	Form F1.27	Revision #12	Revision Date: 11/11/15	Page 1 of 2

S1	S2	S3	S4	D	***Section 1* – Spec Out** GC-D				
					Initials/Instrument/Date	**S1:** gl 2/22/16	**S2:**	**S3:**	**S4:**
✓				■	Project Identification (PID), Project Requirements Table (PRT), Daily QC and ICAL met Criteria				
NA				■	Lumen QC and ICAL evaluation (ref. SOP/Method) report initialed and in folder				
✓				■	Manual Integrations included and approved				
✓				✓	Chain of Custody verified for special comments (add comments below)				
NA				■	Non-standard Target sublist verified (MDL, LOD, RL, control limits, etc.)				

Profile, analyses, reporting, special notes and unusual circumstances:

A1	A2	A3	A4	D	***Section 2* – Sample Analysis**				
					Initials/Date	**A1:** gl 2/22/16	**A2:**	**A3:**	**A4:**
✓				✓	IS/Surr Recoveries, Dilution Factors, Load Volumes, leg(s) of instrument, Initial/Final Pressures, and Canister #s Verified				
NA				NA	**a)** Tedlar Bag IDs verified against COC **b)** Tedlar Bag ID confirmed with loading sequence/leg(s) of instrument				
✓				✓	Manual Integrations/Bag or Can Dilution Forms/Re-pressurization Forms/Bag-Can Transfer Forms present (circle all that apply)				
✓				■	12/24 Hr clock time & Hold Time met for all samples				
✓				✓	Re-analysis of sample(s) has been evaluated for comparability and/or sample(s) has/have been checked for trends (Inf/Eff), field dups/trip blanks.				
✓				✓	All runs have been evaluated for potential carry-over (TPHg/non-Target/over-range compounds/ etc.)				

Analytical and special notes: DIAA – Dup

D1	D2	D3	D4	T	3T	***Section 3* – Target Data Reduction**	**Technical Review Needed? Circle one: Yes/No**		**T:**	
						Initials/Instrument/ Date	**D1:** gm 2/24/16	**D2:**	**D3:**	**D4:**
NA					■	CAR # *(if applicable)*				
✓					■	Spectra Verified *(documentation of spectral defense included if applicable)*				
NA					■	TICs resemble reference spectra/ TICs between sample dups. are consistent *(if applicable)*				
					✓	Lab Narrative is correct				
NA					■	TPH/NMOC calculations complete and included in folder				

Special notes:

A	3T	***Section 4*- Atlas Data Entry**	**Lumen verified and included in folder**	**Circle one: Yes/No**
		Initials/Date: gm 2/24/16	**3rd Tier:** *(needed only for DOD or per client request)* gl 2/24/16	
NA	NA	Sample Discrepancy Report (SDR) complete and approved *(if applicable)*		
✓	✓	Manually entered results are checked		
✓	✓	At least one result per sample is verified against Target quant sheets		
✓	✓	Appropriate data qualifier flags are applied		
✓	✓	Final Invoice is correct/ Final PDF report, COC and EDD reviewed and correct		

Special Notes:

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Workorder # :				**Reason for Reissue:**
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Workorder # :				**Reason for Reissue:**
W	**T**	**3T**	**Q**	
				Reissue Request form Present
				Client or QA or Lab contact present with reason for reissue
				Review all affected data
				Report header has correct R1, R2 etc
				The Lab Narrative clearly explains the reissue (Date, Reason and whether client requested)
				Date for Reissue in Report Header matches date in Lab Narrative
				Check Project Profile for correct reporting instructions (multiple clients, # hardcopies, etc)
				Corrective Action issued - #
				The reissued workorder has been approved by QA Manager or a Technical Director

Additional Comments:

Write Up (Initials/Date)	**Tech Review** (Initials/Date)	***3rd Tier Review** ** 3rd Tier Report Review is for DoD & Client Specific projects only* (Initials/Date)	**QA Review** (Initials/Date)

Note (1) *Please check all the appropriate boxes. Indicate "NA" for any statement that doesn't apply*
Note (2) 3rd Tier Report Reviewer and Write Up Reviewer must be separate individuals for DoD & Client Specific Projects

Not Applicable

Cannon AFB Data Verification

Laboratory and SDGs#: Eurofins 1602250 A/B **URS Chemist: Jennifer Zorinsky**
Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

Sample Identification #	Date Collected	Date Received	Matrix	Analysis
CA504-SG02-010	2/9/2016	2/11/2016	Air	VOCs (TO-15), GRO (TO-3)
CA504-SG02-005	2/9/2016	2/11/2016	Air	VOCs (TO-15), GRO (TO-3)

1.0 Laboratory Case Narrative \ Cooler Receipt Form

Verification Criteria	Yes	No	N/A
Were any DoD QSM deviations noted in the laboratory case narrative?		X	
Were DoD QSM corrective actions followed if deviations were noted?			X
Were any issues noted in the cooler receipt form?		X	

The laboratory case narrative indicated that the hydrocarbon profile in samples CA504-SG02-010 and CA504-SG02-005 did not resemble commercial gasoline. No qualification of data was required. Although not indicated in the case narrative, benzene was detected in the method blank sample for VOCs at a level less than ½ the LOQ. This issue is addressed in Section 8.0.

The cooler receipt form indicated no problems or discrepancies were encountered.

2.0 Sample Documentation

Verification Criteria	Yes	No
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?	X	
Were all sample identifications (IDs) documented correctly on sample labels?	X	
Did samples listed on COCs match the sample labels?	X	
Were samples relinquished properly on the COC?	X	

3.0 Holding Time

Verification Criteria	Yes	No	N/A
Were all samples extracted/analyzed within holding time?	X		
Were samples outside holding time extracted/analyzed < 2x holding time?			X
Were samples outside holding time extracted/analyzed > 2x holding time?			X

4.0 Instrument Performance Check (Tuning)

Method TO-15 Instrument Tuning Criteria (Filename)	**A121801.D**		
Instrument:	**MSD A**		
Date of Tuning:	**12/18/2015 10:14**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to initial and/ or daily calibration?	X		
Were all samples analyzed under an acceptable 24 hour clock tune?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: Eurofins 1602250 A/B **URS Chemist: Jennifer Zorinsky**
Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

Method TO-15 Instrument Tuning Criteria (Filename)	**A121801.D**		
Instrument:	**MSD A**		
Date of Tuning:	**12/18/2015 10:14**		
	Yes	**No**	**N/A**
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of EPA Method TO-15?	X		

Method TO-15 Instrument Tuning Criteria (Filename)	**A021701.D**		
Instrument:	**MSD A**		
Date of Tuning:	**02/17/2016 10:32**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to initial and/ or daily calibration?	X		
Were all samples analyzed under an acceptable 24 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of EPA Method TO-15?	X		

5.0 Initial Calibration

Method TO-15 Initial Calibration Criteria			
Instrument:	**MSD A**		
Date of Calibration:	**12/18/2015**		
	Yes	**No**	**N/A**
Was at least a 5-point calibration completed for all analytes prior to sample analysis?	X		
Option 1: RSD for each analyte ≤ 30%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X

Method TO-3 (GRO) Initial Calibration Criteria			
Instrument:	**GC-D**		
Date of Calibration:	**6/8/2015**		
	Yes	**No**	**N/A**
Was at least a 5-point calibration completed for all analytes prior to sample analysis?	X		
Option 1: RSD for each analyte ≤ 30%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?			X
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Cannon AFB Data Verification

Laboratory and SDGs#: Eurofins 1602250 A/B **URS Chemist: Jennifer Zorinsky**
Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

6.0 Initial Calibration Verification [(ICV) Second Source]

Method TO-15 ICV Criteria (Filename)	**A121812.D**		
Instrument:	**MSD A**		
Date of Initial Calibration Verification:	**12/18/2015 16:49**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 30% of the expected value (initial source)?	X		

Method TO-3 ICV (GRO) Criteria (Filename)	**D060808.D**		
Instrument:	**GC-D**		
Date of Initial Calibration Verification:	**6/8/2015 12:07**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %difference (%D) for all analytes within ± 30% of the expected value (initial source)?	X		

7.0 Continuing Calibration Verification (CCV)

Method TO-15 CCV Criteria (Filename)	**A021705A.D**		
Instrument:	**MSD A**		
Date of Calibration Verification:	**2/17/2016 12:45**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 24 hours of analysis time?	X		
Were all project analytes within ± 30% of expected value from the ICAL?	X		

Method TO-3 (GRO) CCV Criteria (Filename)	**D022201.D**		
Instrument:	**GC-D**		
Date of Calibration Verification:	**2/22/2016 9:59**		
	Yes	**No**	**N/A**
Was the CCV analyzed prior to sample analysis and at the end of the analysis sequence?	X		
Were all project analytes within established retention time windows?	X		
Were all project analytes within ± 30% of expected value from the ICAL?	X		

8.0 Blank Samples

Blank Criteria	**Yes**	**No**	**N/A**
Was a method blank analyzed with every preparatory batch?	X		
Were analytes detected > ½ the LOQ and > 1/10 the amount measured in any sample or 1/10 the regulatory limit?	X		
Were target analytes detected in method, trip or calibration blanks?	X		

Cannon AFB Data Verification

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Date Verified: 3/4/2016 **URS ITR: Jeff Aust**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RCRA Facility Investigation at Twelve Sites (FPM/URS 2015)
Applicable Analytical Methods: TO-15 VOCs and TO-3 GRO

Blank ID	Parameter	Analyte	Concentration	LOQ	Units
A021708A	TO-15 VOCs	Benzene	0.22	1.6	ug/m^3

Results qualified based on blank contamination are listed in the following table. The benzene result for CA504-SG02-005 was nondetect and did not require qualification.

Field ID	Parameter	Analyte	New LOQ	Qualification
CA504-SG02-010	VOCs	Benzene	-	**U**

9.0 Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD)

LCS Criteria	Yes	No	N/A
Was an LCS/LCSD analyzed with every preparatory batch?	X		
Were LCS/LCSD recoveries/RPDs within acceptance criteria listed in the UFP-QAPP?	X		

10.0 Surrogates

Methods TO-15 and TO-3	Yes	No	N/A
Were surrogate spikes added to all field and QC samples?	X		
Were surrogate recoveries within acceptance criteria listed in the UFP-QAPP?	X		

11.0 Internal Standards (IS)

Method TO-15	Yes	No	N/A
Were internal standards spiked for all samples and standards?	X		
Were the internal standard areas within -50% to + 100% of the ICAL midpoint standard area?	X		
Were the retention times ± 10 seconds from the retention times of the midpoint standard of the ICAL?	X		

12.0 Matrix Duplicate

Matrix Duplicate (MD) Criteria	Yes	No	N/A
Were MD samples analyzed with every preparatory batch?	X		
Were MD samples collected for this SDG?	X		
Were MD RPDs within acceptance criteria listed in the UFP-QAPP?	X		

Sample CA504-SG02-010 was duplicated and analyzed for VOCs and TPH-GRO. The RPD for benzene was outside evaluation criteria. The results for benzene in the parent sample and the duplicate were less than 5x the LOQ; therefore, RPD evaluation and qualification was not

required.

13.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	N/A
Were field duplicate samples collected for this SDG? (if yes, list below)		X	
Were parent sample / field duplicate RPDs ≤ 50% for soil analytes that had concentrations > 5x the LOQ.			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ			X

14.0 Sensitivity

Sensitivity Criteria	Yes	No	N/A
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		

15.0 Additional Qualifications

Additional Qualification Criteria	Yes	No	N/A
Were common laboratory contaminants detected?		X	
Were common laboratory contaminant concentrations < 2x the LOQ?			X
Was professional judgment used to qualify data (if yes, list below)?		X	

C.2 – Analytical Data – Soil Vapor Samples

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 16B060 **URS Chemist: Steve Gragert**
Date Verified: 3/3/2016 **URS ITR: Jennifer Zorinsky (3/3/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RFI at Twelve Sites Cannon AFB (FPM/URS 2015)
Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

Sample Identification #	Date Collected	Date Received	Matrix	Analysis
CA504-SG03-S-005	2/5/2016	2/6/2016	Soil	VOCs (8260B), SVOCs (8270D), PAHs (8270D-SIM)
CA504-SG03-S-010	2/5/2016	2/6/2016	Soil	VOCs (8260B), SVOCs (8270D), PAHs (8270D-SIM)
CA504-SG01-S-005	2/5/2016	2/6/2016	Soil	VOCs (8260B), SVOCs (8270D), PAHs (8270D-SIM)
CA504-SG01-S-010	2/5/2016	2/6/2016	Soil	VOCs (8260B), SVOCs (8270D), PAHs (8270D-SIM)
CA504-SG01-S-210	2/5/2016	2/6/2016	Soil	VOCs (8260B), SVOCs (8270D), PAHs (8270D-SIM)
CA504-SG02-S-005	2/5/2016	2/6/2016	Soil	VOCs (8260B), SVOCs (8270D), PAHs (8270D-SIM)
CA504-SG02-S-010	2/5/2016	2/6/2016	Soil	VOCs (8260B), SVOCs (8270D), PAHs (8270D-SIM)
CA504-SG02-S-210	2/5/2016	2/6/2016	Soil	VOCs (8260B), SVOCs (8270D), PAHs (8270D-SIM)

1.0 Laboratory Case Narrative \ Cooler Receipt Form

Verification Criteria	Yes	No	N/A
Were any DoD-QSM deviations noted in the laboratory case narrative?	X		
Were DoD-QSM corrective actions followed if deviations were noted?	X		
Were any issues noted in the cooler receipt form?	X		

The laboratory case narrative indicated a VOC CCV %D was above evaluation criteria. A VOC MS recovery was outside evaluation criteria. These issues are discussed further in the appropriate sections below.

The cooler receipt form indicated sample CA504-SG03-S-110 was the MS/MSD volume for sample CA504-SG03-S-010. This issue is discussed in Section 2.0.

2.0 Sample Documentation

Verification Criteria	Yes	No
Were all samples documented correctly on the chain-of-custody (COC) and samples labels?		X
Were all sample identifications (IDs) documented correctly on sample labels?	X	
Did samples listed on COCs match the sample labels?	X	
Were samples relinquished properly on the COC?	X	

Sample CA504-SG03-S-110 was the MS/MSD volume for sample CA504-SG03-S-010. Per the URS chemist, sample CA504-SG03-S-110 was not analyzed as a sample. The sample volume was used for MS/MSD analysis. No qualification of data was required.

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 16B060 **URS Chemist: Steve Gragert**
Date Verified: 3/3/2016 **URS ITR: Jennifer Zorinsky (3/3/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RFI at Twelve Sites Cannon AFB (FPM/URS 2015)
Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

3.0 Holding Time

Verification Criteria	Yes	No	N/A
Were all samples extracted/analyzed within holding time?	X		
Were samples outside holding time extracted/analyzed < 2x holding time?			X
Were samples outside holding time extracted/analyzed > 2x holding time?			X

4.0 Instrument Performance Check (Tuning)

Method 8260B Instrument Tuning Criteria (Filename)	**RJP184**		
Instrument:	**02**		
Date of Tuning:	**10/14/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8260B Instrument Tuning Criteria (Filename)	**RJP197**		
Instrument:	**02**		
Date of Tuning:	**10/14/2015**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8260B Instrument Tuning Criteria (Filename)	**RBP186**		
Instrument:	**02**		
Date of Tuning:	**2/10/2016**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 4 of SW-846 Method 8260B?	X		

Method 8270D Instrument Tuning Criteria (Filename)	**RAH042**		
Instrument:	**E7**		
	1/14/2016		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 16B060 **URS Chemist: Steve Gragert**
Date Verified: 3/3/2016 **URS ITR: Jennifer Zorinsky (3/3/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RFI at Twelve Sites Cannon AFB (FPM/URS 2015)
Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

Method 8270D Instrument Tuning Criteria (Filename)	**RAH087**		
Instrument:	**E7**		
	1/19/2016		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Method 8270D Instrument Tuning Criteria (Filename)	**RBH132**		
Instrument:	**E7**		
	2/12/2016		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Method 8270D-SIM (PAHs) Instrument Tuning Criteria (Filename)	**RAH042**		
Instrument:	**E7**		
Date of Tuning:	**1/14/2016**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Method 8270D-SIM (PAHs) Instrument Tuning Criteria (Filename)	**RAH087**		
Instrument:	**E7**		
Date of Tuning:	**1/19/2016**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

Method 8270D-SIM (PAHs) Instrument Tuning Criteria (Filename)	**RBH132**		
Instrument:	**E7**		
Date of Tuning:	**2/12/2016**		
	Yes	**No**	**N/A**
Was instrument tuning completed prior to calibration?	X		
Were all samples analyzed under an acceptable 12 hour clock tune?	X		

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 16B060 **URS Chemist: Steve Gragert**
Date Verified: 3/3/2016 **URS ITR: Jennifer Zorinsky (3/3/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RFI at Twelve Sites Cannon AFB (FPM/URS 2015)
Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

Method 8270D-SIM (PAHs) Instrument Tuning Criteria (Filename)	**RBH132**		
Instrument:	**E7**		
Date of Tuning:	**2/12/2016**		
	Yes	**No**	**N/A**
Were ion relative abundances for each target mass within the required intensities limits listed in Table 3 of SW-846 Method 8270D?	X		

5.0 Initial Calibration

Method 8260B Initial Calibration Criteria			
Instrument:	**02**		
Date of Calibration:	**10/14/2015**		
	Yes	**No**	**N/A**
Are the average response factors (RFs) for SPCCs above the minimum DoD-QSM response factor? (VOCs - ≥ 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.)	X		
Are the RSDs for CCCs (1,1-Dichloroethene; Chloroform; 1,2-Dichloropropane; Toluene; Ethylbenzene and Vinyl Chloride) for VOCs ≤ 30%? and one option below?	X		
Option 1: RSD for each analyte ≤ 15%?	X		
Option 2: If linear least squares regression was used was the $r^2 \geq 0.99$?	X		
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Method 8270D Initial Calibration Criteria			
Instrument:	**E7**		
Date of Calibration:	**1/19/2016**		
	Yes	**No**	**N/A**
Are the average response factors (RFs) for SPCCs above the minimum DoD-QSM response factor? (SVOCs - ≥ 0.05 for N-nitroso-di-n-propylamine; hexachlorocyclopentadiene; 2,4-dinitrophenol and 4-nitrophenol)	X		
Are the RSDs for CCCs (Acenaphthene; 1,4-Dichlorobenzene; Hexachlorobutadiene; Diphenylamine; Di-n-octyl phthalate; Fluoranthene; Benzo(a)pyrene; 4-Chloro-3-methylphenol; 2,4-Dichlorophenol; 2-Nitrophenol; Phenol; Pentachlorophenol and 2,4,6-Trichlorophenol) for SVOCs ≤ 30%? and one option below?	X		
Option 1: RSD for each analyte ≤ 15%?	X		
Option 2: If linear least squares regression was used was the $r \geq 0.995$?	X		
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq 0.99$?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 16B060 **URS Chemist: Steve Gragert**
Date Verified: 3/3/2016 **URS ITR: Jennifer Zorinsky (3/3/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RFI at Twelve Sites Cannon AFB (FPM/URS 2015)
Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

Method 8270D-SIM (PAHs) Initial Calibration Criteria			
Instrument:	**E7**		
Date of Calibration:	**1/14/2016**		
	Yes	**No**	**N/A**
Does each PAH compound have a minimum response of 0.5?	X		
Did each PAH meet one of the options below:	X		
Option 1: RSD for each analyte ≤ 15%?	X		
Option 2: If linear least squares regression was used was the r ≥ 0.995?	X		
Option 3: If non-linear regression was used was the coefficient of determination $r^2 \geq$ 0.99?			X
If non-linear regression was used were 6 points used for second order and 7 points for third order?			X

6.0 Initial Calibration Verification [(ICV) Second Source]

Method 8260B ICV Criteria (Filename)	**RJP198**		
Instrument:	**02**		
Date of Initial Calibration Verification:	**10/14/2015**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8270D ICV Criteria (Filename)	**RAH091**		
Instrument:	**E7**		
Date of Initial Calibration Verification:	**2/12/2016**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 20% of the expected value (initial source)?	X		

Method 8270D-SIM (PAHs) ICV Criteria (Filename)	**RAH091**		
Instrument:	**E7**		
Date of Initial Calibration Verification:	**12/03/2014**		
	Yes	**No**	**N/A**
Was the ICV analyzed after each calibration?	X		
Was the ICV %D for all analytes within ± 20% of the expected value (initial source)?	X		

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Laboratory and SDGs#: EMAX 16B060 **URS Chemist: Steve Gragert**
Date Verified: 3/3/2016 **URS ITR: Jennifer Zorinsky (3/3/2016)**
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Applicable QAPP: Work Plan RFI at Twelve Sites Cannon AFB (FPM/URS 2015)
Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

7.0 Continuing Calibration Verification (CCV)

Method 8260B CCV Criteria (Filename)	**RBP187**		
Instrument:	**02**		
Date of Calibration Verification:	**2/10/2016**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Are the average response factors (RFs) for SPCCs above the minimum DoD QSM response factor? (VOCs - ≥ 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane, ≥ 0.1 for chloromethane, bromoform, and 1,1-dichloroethane.)	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?		X	

The n-propylbenzene CCV %D (-21.0%) was outside evaluation criteria. The calculated amount (60.511 ppb) was greater than the spiked amount (50 ppb) indicating a possible high bias. All associated n-propylbenzene were nondetect; therefore, no qualification of data was required.

Method 8270D CCV Criteria (Filename)	**RBH133**		
Instrument:	**E7**		
Date of Calibration Verification:	**2/12/2016**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Are the average response factors (RFs) for SPCCs above the minimum DoD QSM response factor? (SVOCs - ≥ 0.05 for N-nitroso-di-n-propylamine; hexachlorocyclopentadiene; 2,4-dinitrophenol and 4-nitrophenol)	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?	X		

Method 8270D-SIM CCV Criteria (Filename)	**RBH133**		
Instrument:	**E7**		
Date of Calibration Verification:	**2/12/2016**		
	Yes	**No**	**N/A**
Was the CCV analyzed daily before sample analysis?	X		
Was the CCV analyzed every 12 hours of analysis time?	X		
Was the CCV %D or %drift for all target compounds ≤ 20%?	X		

8.0 Blank Samples

Blank Criteria	**Yes**	**No**	**N/A**
Was a method blank analyzed with every preparatory batch?	X		
Were analytes detected > ½ the LOQ and > 1/10 the amount measured in any sample or 1/10 the regulatory limit?		X	
Were target analytes detected in method, trip or calibration blanks?		X	

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 16B060 **URS Chemist: Steve Gragert**
Date Verified: 3/3/2016 **URS ITR: Jennifer Zorinsky (3/3/2016)**
Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RFI at Twelve Sites Cannon AFB (FPM/URS 2015)
Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

9.0 Laboratory Control Sample (LCS)

LCS Criteria	Yes	No	N/A
Was an LCS analyzed with every preparatory batch?	X		
Were LCS recoveries within acceptance criteria listed in the UFP-QAPP?	X		

10.0 Surrogates

Methods 8260B/8015C Surrogate Criteria	Yes	No	N/A
Were surrogate spikes added to all field and QC samples?	X		
Were surrogate recoveries within acceptance criteria listed in the UFP-QAPP?	X		

11.0 Internal Standards (IS)

Methods 8260B/8270D/8270D-SIM Criteria	Yes	No	N/A
Were internal standards spiked for all samples and standards?	X		
Were VOC and SVOC internal standard areas within -50% to + 100% of the ICAL midpoint standard area?	X		
Were VOC and SVOC retention times ± 30 seconds from the retention times of the midpoint standard of the ICAL?	X		

12.0 Matrix Spike/Matrix Spike Duplicate

MS/MSD Criteria	Yes	No	N/A
Was a MS/MSD sample analyzed with every preparatory batch?	X		
Was a MS/MSD sample collected for this SDG?	X		
Were MS/MSD recoveries/RPDs within acceptance criteria listed in the UFP-QAPP?		X	

Sample CA504-SG03-S-010 was spiked and analyzed for VOCs, SVOCs, and PAHs. A vinyl chloride VOC MS recovery was outside evaluation criteria.

MS/MSD ID	Parameter	Analyte	MS/MSD Recovery	RPD	MS/MSD/RPD Criteria
CA504-SG03-S-010	VOCs	Vinyl chloride	**136**/116	16	60-125/30

All associated vinyl chloride data was nondetect; therefore, no qualification of data was required.

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Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

13.0 Field Duplicate Samples

Field Duplicate Criteria	Yes	No	N/A
Were field duplicate samples collected for this SDG? (if yes, list below)	X		
Were parent sample / field duplicate RPDs ≤ 50% for soil analytes that had concentrations > 5x the LOQ.			X
Were the differences between the parent sample / field duplicate < 2x the LOQ for analytes that had concentrations < 5x the LOQ	X		

Parent ID	Duplicate ID
CA504-SG01-S-010	CA504-SG01-S-210
CA504-SG02-S-010	CA504-SG02-S-210

14.0 Sensitivity

Sensitivity Criteria	Yes	No	N/A
Was the laboratory sensitivity consistent with project (QAPP) requirements?	X		
Did all analytes meet sensitivity requirements?	X		

DRO/ORO samples CAAT109-SB24-001 and CAAT109-SB26-001.5 were diluted prior to analysis due to dark colored extracts. DRO/ORO were detected in both samples; therefore, sensitivity was not affected.

15.0 Additional Qualifications

Additional Qualification Criteria	Yes	No	N/A
Were common laboratory contaminants detected?	X		
Were common laboratory contaminant concentrations < 2x the LOQ?	X		
Was professional judgment used to qualify data (if yes, list below)?	X		

Professional judgment was used to qualify the common laboratory contaminant methylene chloride detected at levels less than 2X the LOQ as nondetect. Also, USEPA Method 5035A states that acidification of certain soils with sodium bisulfate may produce a false positive acetone and/or 2-butanone artifact of 0.100-0.200 ppm, or more. Associated qualified data is listed in the table below.

Sample ID	Parameter	Analyte	New LOQ	Qualification
CA504-SG03-S-005	VOCs	2-Butanone	**-**	**U**
CA504-SG03-S-005	VOCs	Methylene chloride	**-**	**U**
CA504-SG03-S-005	VOCs	Acetone	**0.022**	**U**
CA504-SG03-S-010	VOCs	2-Butanone	**-**	**U**
CA504-SG03-S-010	VOCs	Methylene chloride	**-**	**U**
CA504-SG03-S-010	VOCs	Acetone	**0.038**	**U**

Cannon AFB Data Verification

Laboratory and SDGs#: EMAX 16B060 **URS Chemist: Steve Gragert**
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Guidance: DoD QSM, Version 4.2, Appendix F Tables (DoD, 2010)
Applicable QAPP: Work Plan RFI at Twelve Sites Cannon AFB (FPM/URS 2015)
Applicable Analytical Methods: 8260B, 8270D, and 8270D-SIM

Sample ID	Parameter	Analyte	New LOQ	Qualification
CA504-SG01-S-005	VOCs	2-Butanone	**-**	**U**
CA504-SG01-S-005	VOCs	Methylene chloride	**-**	**U**
CA504-SG01-S-005	VOCs	Acetone	**0.033**	**U**
CA504-SG01-S-010	VOCs	2-Butanone	**-**	**U**
CA504-SG01-S-010	VOCs	Methylene chloride	**-**	**U**
CA504-SG01-S-010	VOCs	Acetone	**0.041**	**U**
CA504-SG01-S-210	VOCs	2-Butanone	**-**	**U**
CA504-SG01-S-210	VOCs	Methylene chloride	**-**	**U**
CA504-SG02-S-210	VOCs	Acetone	**0.037**	**U**
CA504-SG02-S-005	VOCs	2-Butanone	**-**	**U**
CA504-SG02-S-005	VOCs	Acetone	**0.037**	**U**
CA504-SG02-S-010	VOCs	2-Butanone	**-**	**U**
CA504-SG02-S-010	VOCs	Acetone	**0.037**	**U**
CA504-SG02-S-210	VOCs	2-Butanone	**-**	**U**
CA504-SG02-S-210	VOCs	Acetone	**0.055**	**U**
CA504-SG02-S-210	VOCs	Methylene chloride	**-**	**U**

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **16B060**

I certify this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than that the conditions detailed in the report. Release of the data contained in this hardcopy data package and in the computer-readable data submitted in CD ROM has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **16B060**

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LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 02-24-2016
EMAX Batch No.: 16B060

Attn: Jeff Aust

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 02/06/16.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CA504-SG03-S-005	B060-01	02/05/16	SOIL	SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS PAHS BY 8270DSIM
CA504-SG03-S-010	B060-02	02/05/16	SOIL	SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS PAHS BY 8270DSIM
CA504-SG03-S-110	B060-03	02/05/16	SOIL	CANCELLED
CA504-SG01-S-005	B060-04	02/05/16	SOIL	SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS PAHS BY 8270DSIM
CA504-SG01-S-010	B060-05	02/05/16	SOIL	SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS PAHS BY 8270DSIM
CA504-SG01-S-210	B060-06	02/05/16	SOIL	SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS PAHS BY 8270DSIM
CA504-SG02-S-005	B060-07	02/05/16	SOIL	SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS PAHS BY 8270DSIM

Sample ID	Control #	Col Date	Matrix	Analysis
CA504-SG02-S-010	B060-08	02/05/16	SOIL	SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS PAHS BY 8270DSIM
CA504-SG02-S-210	B060-09	02/05/16	SOIL	SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS PAHS BY 8270DSIM
CA504-SG03-S-010MS	B060-02M	02/05/16	SOIL	PAHS BY 8270DSIM SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS
CA504-SG03-S-010MSD	B060-02S	02/05/16	SOIL	PAHS BY 8270DSIM SEMIVOLATILE ORGANICS BY GCMS VOLATILE ORGANICS BY GC/MS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number E871112
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B060

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

A total of eight (8) soil samples were received on 02/06/16 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5035A/8260B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. For this SDG, all project calibration requirements were satisfied except for: N-Propylbenzene was detected bias high(%D=21.0) in CCV(data file ID RBP187). However, note that N-Propylbenzene was not detected in any of the field samples. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. VS02B12B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in VS02B12L/VS02B12C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of MS/MSD was analyzed and the following was noted: B060-02M/S (CA504-SG03-S-010MS/MSD) - Percent recovery for Vinyl Chloride was not within MS QC limits. The rest of the analytes were in control. No reanalysis was performed due to insufficient sample volume received. However, analyte was not detected in the parent sample. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B060

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

A total of eight (8) soil samples were received on 02/06/16 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3550B/8270D and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There was one (1) CCV associated with this SDG. Target analytes in CCV(Datafile ID:RBH133) were within calibration acceptance criteria. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. SVB011SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in SVB011SL/SVB011SC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of MS/MSD was analyzed. B060-02M/S (CA504-SG03-S-010MS/MSD) - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B060

METHOD SW3550B/8270D SIM
PAHS BY GC/MS SIM

A total of eight (8) soil samples were received on 02/06/16 to be analyzed for PAHs by GC/MS SIM in accordance with Method SW3550B/8270D SIM and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There was one (1) CCV associated with this SDG. Target analytes in CCV(Datafile ID:RBH133) were within calibration acceptance criteria. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. SVB011SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in SVB011SL/SVB011SC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of MS/MSD was analyzed. B060-02M/S (CA504-SG03-S-010MS/MSD) - all analytes were within MS QC limits. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Reference Number: SM02.7.3

SAMPLE RECEIPT FORM 1

Type of Delivery	Airbill / Tracking Number	ECN 16B060
☑ Fedex ☐ UPS ☐ GSO ☐ Others	7823 2042 8481	Recipient Indra
☐ EMAX Courier ☐ Client Delivery		Date 2-06-16 Time 9:30

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☐ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note:

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☑ Custody Seal ☑ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☑ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen) ☑ Cooler 1 1.5 °C ☐ Cooler 2 ____ °C ☐ Cooler 3 ____ °C ☐ Cooler 4 ____ °C ☐ Cooler 5 ____ °C
☐ Cooler 6 ____ °C ☐ Cooler 7 ____ °C ☐ Cooler 8 ____ °C ☐ Cooler 9 ____ °C ☐ Cooler 10 ____ °C
Thermometer: A - S/N ____ FM 1/20/15 B - S/N 140252070 C - S/N 140252067 D - S/N 150555630

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY.

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1-9	1-36	D10		ok
				2/8/16

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS: ~~COC indicates MS/MSD on sample #3, but no extra volume was received.~~ initial

LEGEND:

☐ Continue to next page.

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in ____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in ____	D16	Preservation not indicated in ____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in ____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	____
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	____
D10	No initial/date on corrections in COC/label	D22	____	R10	____
D11	Container count mismatch COC vs received	D23	____	R11	____
D12	Container size mismatch COC vs received	D24	____	R12	____

REVIEWS:

Sample Labeling [signature] Date 2/08/16 [signature] 2/8/16

SRF [signature] Date 2/8/16

PM [signature] Date 2/8/16

ORIGIN ID:CVNA (402) 334-8181

ORIGIN ID:CVNA (402) 334-8181
KYLE KLOEWER
URS GCP
12120 SHAMROCK PLZ STE 100

OMAHA, NE 68154
UNITED STATES US

SHIP DATE: 05FEB16
ACTWGT: 45.00 LB
CAD: 006993959/SSFE1621
DIMS: 24x13x12 IN

BILL THIRD PARTY

TO **SAMPLE CUSTODIAN**
EMAX LABORATORIES
1835 W. 205TH ST

TORRANCE CA 90501

(310) 618-8889 REF:
INV:
PO: DEPT:

FedEx Express

TRK# 0201 **7823 2042 8481**

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO HHRA

90501
CA-US **LAX**

Andy Mai

From: Zorinsky, Jennifer [jennifer.zorinsky@aecom.com]
Sent: Wednesday, February 10, 2016 1:42 PM
To: Andy Mai
Subject: RE: Cannon; logins 16B060, 16B068, 16B069, 16B070
Attachments: Cannon SVOCs.pdf

Andy,

- Please log all samples in SDGs 16B060 and 16B068 in for PAHs also. We need the SVOCs and PAHs we have reported in the past (list attached).
- For 16B060, sample CA504-SG03-S-110 is not an actual sample. This is the MS/MSD volume for sample CA504-SG03-010. Please do not log CA504-SG03-S-110 in as a sample. Use the volume for CA504-SG03-S-110 as the MS/MSD volume for CA504-SG03-010. This is the case with all of the SDGs. I will send you a separate email with the changes needed for all SDGs. With this change, you should have enough sample for the MS/MSD analysis.
- 16B070, please remove the DRO/ORO for sample CA129-SB11-005. DRO/ORO was not requested for this sample.
- 16B070, Sample CA129-SB13-102 is not an actual sample. This is the MS/MSD volume for sample CA129-SB13-002. Please do not log CA129-SB13-102 in as a sample. Use the volume for CA129-SB13-102 as the MS/MSD volume for CA129-SB13-002.
- 16B070, Sample CA129-SB18-105 is not an actual sample. This is the MS/MSD volume for sample CA129-SB18-005. Please do not log CA129-SB18-105 in as a sample. Use the volume for CA129-SB18-105 as the MS/MSD volume for CA129-SB18-005.
- 16B070, Sample CA022-SS12-100.5 is not an actual sample. This is the MS/MSD volume for sample CA022-SS12-000.5. Please do not log CA022-SS12-100.5 in as a sample. Use the volume for CA022-SS12-100.5 as the MS/MSD volume for CA022-SS12-000.5.
- 16B070, Sample CA022-SS11-100.5 is not an actual sample. This is the MS/MSD volume for sample CA022-SS11-000.5. Please do not log CA022-SS11-100.5 in as a sample. Use the volume for CA022-SS11-100.5 as the MS/MSD volume for CA022-SS11-000.5.
- 16B069, Sample CA505-SB11-129 is not an actual sample. This is the MS/MSD volume for sample CA505-SB11-029. Please do not log CA505-SB11-129 in as a sample. Use the volume for CA505-SB11-129 as the MS/MSD volume for CA505-SB11-029.
- 16B069, Sample CA507-SS78-100.5 is not an actual sample. This is the MS/MSD volume for sample CA507-SS78-000.5. Please do not log CA507-SS78-100.5 in as a sample. Use the volume for CA507-SS78-100.5 as the MS/MSD volume for CA507-SS78-000.5.

Please call me with any questions.

Thanks
Jennifer

From: Andy Mai [mailto:AMai@emaxlabs.com]
Sent: Tuesday, February 09, 2016 9:36 PM
To: Zorinsky, Jennifer
Subject: Cannon; logins 16B060, 16B068, 16B069, 16B070

Hi Jennifer,

URS Corporation
12120 Shamrock Plaza, Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

16B060

Project Name: Cannon AFB
Project No.: 60425210.23446540.0032AB
Project Location: Clovis, NM
Project Manager: Mike Sonderman
Sampler(s): Kyle Kloewer / Jessica Hoppmann

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260C)	SVOCs (8270D)	Preservative / Remarks
1	2/5/16	1012		X	CA504-SG03-S-005	soil	2	40 mL VOA	X		$NaSO_4$, 4°C
				X			1		X		MeOH, 4°C
				X			1	4 oz jar		X	4°C
2		1036		X	CA504-SG03-S-010		2	40 mL VOA	X		$NaSO_4$, 4°C
				X			1		X		MeOH, 4°C
				X			1	4 oz jar		X	4°C
3 (2)		1037		X	CA504-SG03-S-110		2	40 mL VOA	X		$NaSO_4$, 4°C
2/5/16				X			1		X		MeOH, 4°C
				X			1	4 oz jar		X	4°C
4		1057		X	CA504-SG01-S-005		2	40 mL VOA	X		$NaSO_4$, 4°C
				X			1		X		MeOH, 4°C
				X			1	4 oz jar		X	4°C
5		1110		X	CA504-SG01-S-010		2	40 mL VOA	X		$NaSO_4$, 4°C
				X			1		X		MeOH, 4°C

MS/MSD

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: Jessica Hoppmann	2/5/16	1530	Method of Shipment: Fedex	
Received by:			Airbill No.:	
Relinquished by:			Lab Address: EMAX Laboratories, 1835 W. 205th St, Torrance, CA 90501	T=1.5°C
Received for Laboratory by:	2/6/16	0930		

P Drive/Office Administration/Chain of Custody Form (Nov 2012) White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

Cooler Custody Sealed

129989

URS Corporation
12120 Shamrock Plaza, Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

16B060

Project Name: Cannon AFB
Project No.: 60425210.23446540.0032AB
Project Location: Clovis, NM
Project Manager: Mike Sonderman
Sampler(s): Kyle Kloewer / Jessica Hoppmann

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	VOCs (8260C)	SVOCs (8270D)	Preservative / Remarks
5	2/5/16	1110		X	CA504-SG01-S-010	Soil	1	4 oz jar		X	4°C
6		1112		X	CA504-SG01-S-210		2	40 mL VOA	X		$NaSO_4$, 4°C
				X			1		X		MeOH, 4°C
				X			1	4 oz jar		X	4°C
7		1233		X	CA504-SG02-S-005		2	40 mL VOA	X		$NaSO_4$, 4°C
				X			1		X		MeOH, 4°C
				X			1	4 oz jar		X	4°C
8		1244		X	CA504-SG02-S-010		2	40 mL VOA	X		$NaSO_4$, 4°C
				X			1		X		MeOH, 4°C
				X			1	4 oz jar		X	4°C
9		1246		X	CA504-SG02-S-210		2	40 mL VOA	X		$NaSO_4$, 4°C
				X			1		X		MeOH, 4°C
				X			1	4 oz jar		X	4°C

Jessica Hoppmann 2/5/16

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: Jessica Hoppmann	2/5/16	1530	Method of Shipment: Fedex	
Received by:			Airbill No.:	
Relinquished by:			Lab Address: EMAX Laboratories 1835 W 205th St Torrance, CA 90501	
Received for Laboratory by:	2/6/16	0930		

129990

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B060
Instrument ID : T-002

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	VS02B12B	1	NA	02/10/1608:44	02/10/1608:44	RBP190	RJP190	VS02B12	Method Blank
LCS1S	VS02B12L	1	NA	02/10/1607:54	02/10/1607:54	RBP188	RJP190	VS02B12	Lab Control Sample (LCS)
LCD1S	VS02B12C	1	NA	02/10/1608:19	02/10/1608:19	RBP189	RJP190	VS02B12	LCS Duplicate
CA504-SG03-S-005	B060-01	0.78	7.6	02/10/1610:43	02/10/1610:43	RBP194	RJP190	VS02B12	Field Sample
CA504-SG03-S-010	B060-02	0.94	9.4	02/10/1611:33	02/10/1611:33	RBP196	RJP190	VS02B12	Field Sample
CA504-SG01-S-005	B060-04	1	5.5	02/10/1612:22	02/10/1612:22	RBP198	RJP190	VS02B12	Field Sample
CA504-SG01-S-010	B060-05	1.03	6.7	02/10/1612:47	02/10/1612:47	RBP199	RJP190	VS02B12	Field Sample
CA504-SG01-S-210	B060-06	1.04	6.8	02/10/1613:12	02/10/1613:12	RBP200	RJP190	VS02B12	Field Sample
CA504-SG02-S-005	B060-07	0.9	8.7	02/10/1613:37	02/10/1613:37	RBP201	RJP190	VS02B12	Field Sample
CA504-SG02-S-010	B060-08	1	8.4	02/10/1614:02	02/10/1614:02	RBP202	RJP190	VS02B12	Field Sample
CA504-SG02-S-210	B060-09	0.93	8.4	02/10/1614:26	02/10/1614:26	RBP203	RJP190	VS02B12	Field Sample
CA504-SG03-S-010MS	B060-02M	0.9	9.4	02/10/1614:51	02/10/1614:51	RBP204	RJP190	VS02B12	Matrix Spike Sample (MS)
CA504-SG03-S-010MSD	B060-02S	0.89	9.4	02/10/1615:16	02/10/1615:16	RBP205	RJP190	VS02B12	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
SEMI VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B060
Instrument ID : T-OE7

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	SVB011SB	1	NA	02/12/1610:27	02/11/1617:18	RBH135	RAH047	SVB011S	Method Blank
LCS1S	SVB011SL	1	NA	02/12/1610:46	02/11/1617:18	RBH136	RAH047	SVB011S	Lab Control Sample (LCS)
LCD1S	SVB011SC	1	NA	02/12/1611:05	02/11/1617:18	RBH137	RAH047	SVB011S	LCS Duplicate
CA504-SG03-S-010MS	B060-02M	1	9.4	02/12/1611:24	02/11/1617:18	RBH138	RAH047	SVB011S	Matrix Spike Sample (MS)
CA504-SG03-S-010MSD	B060-02S	1	9.4	02/12/1611:43	02/11/1617:18	RBH139	RAH047	SVB011S	MS Duplicate (MSD)
CA504-SG03-S-005	B060-01	1	7.6	02/12/1614:17	02/11/1617:18	RBH147	RAH047	SVB011S	Field Sample
CA504-SG03-S-010	B060-02	1	9.4	02/12/1614:36	02/11/1617:18	RBH148	RAH047	SVB011S	Field Sample
CA504-SG01-S-005	B060-04	1	5.5	02/12/1614:56	02/11/1617:18	RBH149	RAH047	SVB011S	Field Sample
CA504-SG01-S-010	B060-05	1	6.7	02/12/1615:15	02/11/1617:18	RBH150	RAH047	SVB011S	Field Sample
CA504-SG01-S-210	B060-06	1	6.8	02/12/1615:34	02/11/1617:18	RBH151	RAH047	SVB011S	Field Sample
CA504-SG02-S-005	B060-07	1	8.7	02/12/1615:53	02/11/1617:18	RBH152	RAH047	SVB011S	Field Sample
CA504-SG02-S-010	B060-08	1	8.4	02/12/1616:13	02/11/1617:18	RBH153	RAH047	SVB011S	Field Sample
CA504-SG02-S-210	B060-09	1	8.4	02/12/1616:32	02/11/1617:18	RBH154	RAH047	SVB011S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PAHs BY GC/MS SIM

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B060
Instrument ID : T-OE7

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	SVB011SB	1	NA	02/12/1610:27	02/11/1617:18	RBH135	RAH047	SVB011S	Method Blank
LCS1S	SVB011SL	1	NA	02/12/1610:46	02/11/1617:18	RBH136	RAH047	SVB011S	Lab Control Sample (LCS)
LCD1S	SVB011SC	1	NA	02/12/1611:05	02/11/1617:18	RBH137	RAH047	SVB011S	LCS Duplicate
CA504-SG03-S-010MS	B060-02M	1	9.4	02/12/1611:24	02/11/1617:18	RBH138	RAH047	SVB011S	Matrix Spike Sample (MS)
CA504-SG03-S-010MSD	B060-02S	1	9.4	02/12/1611:43	02/11/1617:18	RBH139	RAH047	SVB011S	MS Duplicate (MSD)
CA504-SG03-S-005	B060-01	1	7.6	02/12/1614:17	02/11/1617:18	RBH147	RAH047	SVB011S	Field Sample
CA504-SG03-S-010	B060-02	1	9.4	02/12/1614:36	02/11/1617:18	RBH148	RAH047	SVB011S	Field Sample
CA504-SG01-S-005	B060-04	1	5.5	02/12/1614:56	02/11/1617:18	RBH149	RAH047	SVB011S	Field Sample
CA504-SG01-S-010	B060-05	1	6.7	02/12/1615:15	02/11/1617:18	RBH150	RAH047	SVB011S	Field Sample
CA504-SG01-S-210	B060-06	1	6.8	02/12/1615:34	02/11/1617:18	RBH151	RAH047	SVB011S	Field Sample
CA504-SG02-S-005	B060-07	1	8.7	02/12/1615:53	02/11/1617:18	RBH152	RAH047	SVB011S	Field Sample
CA504-SG02-S-010	B060-08	1	8.4	02/12/1616:13	02/11/1617:18	RBH153	RAH047	SVB011S	Field Sample
CA504-SG02-S-210	B060-09	1	8.4	02/12/1616:32	02/11/1617:18	RBH154	RAH047	SVB011S	Field Sample

FN - Filename
% Moist - Percent Moisture

RESULTS SUMMARIES

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 10:43
Sample ID:	CA504-SG03-S-005	Date Analyzed:	02/10/16 10:43
Lab Samp ID:	B060-01	Dilution Factor:	0.78
Lab File ID:	RBP194	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	7.6
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1,1-TRICHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1,2,2-TETRACHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1,2-TRICHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1-DICHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1-DICHLOROETHENE	ND	0.0042	0.00042	0.00084
1,1-DICHLOROPROPENE	ND	0.0042	0.00042	0.00084
1,2,3-TRICHLOROBENZENE	ND	0.0042	0.00084	0.0017
1,2,4-TRICHLOROBENZENE	ND	0.0042	0.00084	0.0017
1,2,4-TRIMETHYLBENZENE	ND	0.0042	0.00046	0.0017
1,2-DIBROMOETHANE	ND	0.0042	0.00042	0.00084
1,2-DICHLOROBENZENE	ND	0.0042	0.00042	0.00084
1,2-DICHLOROETHANE	ND	0.0042	0.00042	0.00084
1,2-DICHLOROPROPANE	ND	0.0042	0.00042	0.00084
1,3,5-TRIMETHYLBENZENE	ND	0.0042	0.00050	0.0017
1,3-DICHLOROBENZENE	ND	0.0042	0.00044	0.00084
1,3-DICHLOROPROPANE	ND	0.0042	0.00042	0.00084
1,4-DICHLOROBENZENE	ND	0.0042	0.00042	0.00084
2,2-DICHLOROPROPANE	ND	0.0042	0.00084	0.0017
2-BUTANONE	0.0025J	0.0084	0.0021	0.0042
2-CHLOROTOLUENE	ND	0.0042	0.00069	0.00084
4-CHLOROTOLUENE	ND	0.0042	0.00057	0.00084
ACETONE	0.022	0.0084	0.0026	0.0042
BENZENE	ND	0.0042	0.00042	0.00084
BROMOBENZENE	ND	0.0042	0.00042	0.00084
BROMODICHLOROMETHANE	ND	0.0042	0.00042	0.00084
BROMOFORM	ND	0.0042	0.00084	0.0017
BROMOMETHANE	ND	0.0084	0.0015	0.0017
CARBON TETRACHLORIDE	ND	0.0042	0.00046	0.00084
CHLOROBENZENE	ND	0.0042	0.00042	0.00084
CHLOROETHANE	ND	0.0042	0.0011	0.0017
CHLOROFORM	ND	0.0042	0.00042	0.00084
CHLOROMETHANE	ND	0.0042	0.00084	0.0017
CIS-1,2-DICHLOROETHENE	ND	0.0042	0.00042	0.00084
CIS-1,3-DICHLOROPROPENE	ND	0.0042	0.00042	0.00084
DICHLORODIFLUOROMETHANE	ND	0.0042	0.0010	0.0017
ETHYLBENZENE	ND	0.0042	0.00042	0.00084
ISOPROPYLBENZENE	ND	0.0042	0.00054	0.0017
M/P-XYLENES	ND	0.0084	0.00084	0.0017
4-METHYL-2-PENTANONE	ND	0.0084	0.0024	0.0042
METHYLENE CHLORIDE	0.0018J	0.0084	0.00084	0.0017
METHYL TERT-BUTYL ETHER	ND	0.0042	0.00042	0.00084
NAPHTHALENE	ND	0.0084	0.00084	0.0017
N-BUTYLBENZENE	ND	0.0042	0.00059	0.00084
N-PROPYLBENZENE	ND	0.0042	0.00055	0.00084
O-XYLENE	ND	0.0042	0.00042	0.00084
SEC-BUTYLBENZENE	ND	0.0042	0.00057	0.00084
STYRENE	ND	0.0042	0.00042	0.00084
TETRACHLOROETHENE	ND	0.0042	0.00042	0.00084
TOLUENE	ND	0.0042	0.00042	0.00084
TRANS-1,2-DICHLOROETHENE	ND	0.0042	0.00042	0.00084
TRANS-1,3-DICHLOROPROPENE	ND	0.0042	0.00042	0.00084
TRICHLOROETHENE	ND	0.0042	0.00042	0.00084
TRICHLOROFLUOROMETHANE	ND	0.0042	0.00093	0.0017
VINYL CHLORIDE	ND	0.0042	0.0012	0.0017
XYLENES, TOTAL	ND	0.0084	0.00042	0.00084

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0382	0.04221	90.6	85-115
DIBROMOFLUOROMETHANE	0.0398	0.04221	94.3	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 11:33
Sample ID:	CA504-SG03-S-010	Date Analyzed:	02/10/16 11:33
Lab Samp ID:	B060-02	Dilution Factor:	0.94
Lab File ID:	RBP196	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	9.4
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0052	0.0010	0.0021
1,2,4-TRICHLOROBENZENE	ND	0.0052	0.0010	0.0021
1,2,4-TRIMETHYLBENZENE	ND	0.0052	0.00057	0.0021
1,2-DIBROMOETHANE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROBENZENE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROPROPANE	ND	0.0052	0.00052	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0052	0.00061	0.0021
1,3-DICHLOROBENZENE	ND	0.0052	0.00054	0.0010
1,3-DICHLOROPROPANE	ND	0.0052	0.00052	0.0010
1,4-DICHLOROBENZENE	ND	0.0052	0.00052	0.0010
2,2-DICHLOROPROPANE	ND	0.0052	0.0010	0.0021
2-BUTANONE	0.0037J	0.010	0.0026	0.0052
2-CHLOROTOLUENE	ND	0.0052	0.00085	0.0010
4-CHLOROTOLUENE	ND	0.0052	0.00070	0.0010
ACETONE	0.038	0.010	0.0032	0.0052
BENZENE	ND	0.0052	0.00052	0.0010
BROMOBENZENE	ND	0.0052	0.00052	0.0010
BROMODICHLOROMETHANE	ND	0.0052	0.00052	0.0010
BROMOFORM	ND	0.0052	0.0010	0.0021
BROMOMETHANE	ND	0.010	0.0019	0.0021
CARBON TETRACHLORIDE	ND	0.0052	0.00056	0.0010
CHLOROBENZENE	ND	0.0052	0.00052	0.0010
CHLOROETHANE	ND	0.0052	0.0013	0.0021
CHLOROFORM	ND	0.0052	0.00052	0.0010
CHLOROMETHANE	ND	0.0052	0.0010	0.0021
CIS-1,2-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0052	0.0012	0.0021
ETHYLBENZENE	ND	0.0052	0.00052	0.0010
ISOPROPYLBENZENE	ND	0.0052	0.00066	0.0021
M/P-XYLENES	ND	0.010	0.0010	0.0021
4-METHYL-2-PENTANONE	ND	0.010	0.0029	0.0052
METHYLENE CHLORIDE	0.0034J	0.010	0.0010	0.0021
METHYL TERT-BUTYL ETHER	ND	0.0052	0.00052	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0021
N-BUTYLBENZENE	ND	0.0052	0.00073	0.0010
N-PROPYLBENZENE	ND	0.0052	0.00067	0.0010
O-XYLENE	ND	0.0052	0.00052	0.0010
SEC-BUTYLBENZENE	ND	0.0052	0.00070	0.0010
STYRENE	ND	0.0052	0.00052	0.0010
TETRACHLOROETHENE	ND	0.0052	0.00052	0.0010
TOLUENE	ND	0.0052	0.00052	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
TRICHLOROETHENE	ND	0.0052	0.00052	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0052	0.0011	0.0021
VINYL CHLORIDE	ND	0.0052	0.0015	0.0021
XYLENES, TOTAL	ND	0.010	0.00052	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0471	0.05188	90.8	85-115
DIBROMOFLUOROMETHANE	0.0483	0.05188	93.1	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 12:22
Sample ID:	CA504-SG01-S-005	Date Analyzed:	02/10/16 12:22
Lab Samp ID:	B060-04	Dilution Factor:	1
Lab File ID:	RBP198	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	5.5
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0053	0.0011	0.0021
1,2,4-TRICHLOROBENZENE	ND	0.0053	0.0011	0.0021
1,2,4-TRIMETHYLBENZENE	ND	0.0053	0.00058	0.0021
1,2-DIBROMOETHANE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROBENZENE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROPROPANE	ND	0.0053	0.00053	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0053	0.00062	0.0021
1,3-DICHLOROBENZENE	ND	0.0053	0.00055	0.0011
1,3-DICHLOROPROPANE	ND	0.0053	0.00053	0.0011
1,4-DICHLOROBENZENE	ND	0.0053	0.00053	0.0011
2,2-DICHLOROPROPANE	ND	0.0053	0.0011	0.0021
2-BUTANONE	0.0033J	0.011	0.0026	0.0053
2-CHLOROTOLUENE	ND	0.0053	0.00087	0.0011
4-CHLOROTOLUENE	ND	0.0053	0.00071	0.0011
ACETONE	0.033	0.011	0.0033	0.0053
BENZENE	ND	0.0053	0.00053	0.0011
BROMOBENZENE	ND	0.0053	0.00053	0.0011
BROMODICHLOROMETHANE	ND	0.0053	0.00053	0.0011
BROMOFORM	ND	0.0053	0.0011	0.0021
BROMOMETHANE	ND	0.011	0.0019	0.0021
CARBON TETRACHLORIDE	ND	0.0053	0.00057	0.0011
CHLOROBENZENE	ND	0.0053	0.00053	0.0011
CHLOROETHANE	ND	0.0053	0.0014	0.0021
CHLOROFORM	ND	0.0053	0.00053	0.0011
CHLOROMETHANE	ND	0.0053	0.0011	0.0021
CIS-1,2-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0053	0.0013	0.0021
ETHYLBENZENE	ND	0.0053	0.00053	0.0011
ISOPROPYLBENZENE	ND	0.0053	0.00068	0.0021
M/P-XYLENES	ND	0.011	0.0011	0.0021
4-METHYL-2-PENTANONE	ND	0.011	0.0030	0.0053
METHYLENE CHLORIDE	0.0020J	0.011	0.0011	0.0021
METHYL TERT-BUTYL ETHER	ND	0.0053	0.00053	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0021
N-BUTYLBENZENE	ND	0.0053	0.00074	0.0011
N-PROPYLBENZENE	ND	0.0053	0.00069	0.0011
O-XYLENE	ND	0.0053	0.00053	0.0011
SEC-BUTYLBENZENE	ND	0.0053	0.00071	0.0011
STYRENE	ND	0.0053	0.00053	0.0011
TETRACHLOROETHENE	ND	0.0053	0.00053	0.0011
TOLUENE	0.00053J	0.0053	0.00053	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
TRICHLOROETHENE	ND	0.0053	0.00053	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0053	0.0012	0.0021
VINYL CHLORIDE	ND	0.0053	0.0015	0.0021
XYLENES, TOTAL	ND	0.011	0.00053	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0489	0.05291	92.5	85-115
DIBROMOFLUOROMETHANE	0.0491	0.05291	92.9	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 12:47
Sample ID:	CA504-SG01-S-010	Date Analyzed:	02/10/16 12:47
Lab Samp ID:	B060-05	Dilution Factor:	1.03
Lab File ID:	RBP199	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	6.7
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRIMETHYLBENZENE	ND	0.0055	0.00061	0.0022
1,2-DIBROMOETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0055	0.00065	0.0022
1,3-DICHLOROBENZENE	ND	0.0055	0.00057	0.0011
1,3-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,4-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
2,2-DICHLOROPROPANE	ND	0.0055	0.0011	0.0022
2-BUTANONE	0.0043J	0.011	0.0028	0.0055
2-CHLOROTOLUENE	ND	0.0055	0.00091	0.0011
4-CHLOROTOLUENE	ND	0.0055	0.00074	0.0011
ACETONE	0.041	0.011	0.0034	0.0055
BENZENE	ND	0.0055	0.00055	0.0011
BROMOBENZENE	ND	0.0055	0.00055	0.0011
BROMODICHLOROMETHANE	ND	0.0055	0.00055	0.0011
BROMOFORM	ND	0.0055	0.0011	0.0022
BROMOMETHANE	ND	0.011	0.0020	0.0022
CARBON TETRACHLORIDE	ND	0.0055	0.00060	0.0011
CHLOROBENZENE	ND	0.0055	0.00055	0.0011
CHLOROETHANE	ND	0.0055	0.0014	0.0022
CHLOROFORM	ND	0.0055	0.00055	0.0011
CHLOROMETHANE	ND	0.0055	0.0011	0.0022
CIS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0055	0.0013	0.0022
ETHYLBENZENE	ND	0.0055	0.00055	0.0011
ISOPROPYLBENZENE	ND	0.0055	0.00071	0.0022
M/P-XYLENES	ND	0.011	0.0011	0.0022
4-METHYL-2-PENTANONE	ND	0.011	0.0031	0.0055
METHYLENE CHLORIDE	0.0016J	0.011	0.0011	0.0022
METHYL TERT-BUTYL ETHER	ND	0.0055	0.00055	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0022
N-BUTYLBENZENE	ND	0.0055	0.00077	0.0011
N-PROPYLBENZENE	ND	0.0055	0.00072	0.0011
O-XYLENE	ND	0.0055	0.00055	0.0011
SEC-BUTYLBENZENE	ND	0.0055	0.00074	0.0011
STYRENE	ND	0.0055	0.00055	0.0011
TETRACHLOROETHENE	ND	0.0055	0.00055	0.0011
TOLUENE	0.00086J	0.0055	0.00055	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
TRICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0055	0.0012	0.0022
VINYL CHLORIDE	ND	0.0055	0.0015	0.0022
XYLENES, TOTAL	ND	0.011	0.00055	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0494	0.05520	89.5	85-115
DIBROMOFLUOROMETHANE	0.0520	0.05520	94.1	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 13:12
Sample ID:	CA504-SG01-S-210	Date Analyzed:	02/10/16 13:12
Lab Samp ID:	B060-06	Dilution Factor:	1.04
Lab File ID:	RBP200	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	6.8
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1-DICHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1-DICHLOROETHENE	ND	0.0056	0.00056	0.0011
1,1-DICHLOROPROPENE	ND	0.0056	0.00056	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0056	0.0011	0.0022
1,2,4-TRICHLOROBENZENE	ND	0.0056	0.0011	0.0022
1,2,4-TRIMETHYLBENZENE	ND	0.0056	0.00061	0.0022
1,2-DIBROMOETHANE	ND	0.0056	0.00056	0.0011
1,2-DICHLOROBENZENE	ND	0.0056	0.00056	0.0011
1,2-DICHLOROETHANE	ND	0.0056	0.00056	0.0011
1,2-DICHLOROPROPANE	ND	0.0056	0.00056	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0056	0.00066	0.0022
1,3-DICHLOROBENZENE	ND	0.0056	0.00058	0.0011
1,3-DICHLOROPROPANE	ND	0.0056	0.00056	0.0011
1,4-DICHLOROBENZENE	ND	0.0056	0.00056	0.0011
2,2-DICHLOROPROPANE	ND	0.0056	0.0011	0.0022
2-BUTANONE	0.0037J	0.011	0.0028	0.0056
2-CHLOROTOLUENE	ND	0.0056	0.00092	0.0011
4-CHLOROTOLUENE	ND	0.0056	0.00075	0.0011
ACETONE	0.037	0.011	0.0035	0.0056
BENZENE	ND	0.0056	0.00056	0.0011
BROMOBENZENE	ND	0.0056	0.00056	0.0011
BROMODICHLOROMETHANE	ND	0.0056	0.00056	0.0011
BROMOFORM	ND	0.0056	0.0011	0.0022
BROMOMETHANE	ND	0.011	0.0020	0.0022
CARBON TETRACHLORIDE	ND	0.0056	0.00060	0.0011
CHLOROBENZENE	ND	0.0056	0.00056	0.0011
CHLOROETHANE	ND	0.0056	0.0015	0.0022
CHLOROFORM	ND	0.0056	0.00056	0.0011
CHLOROMETHANE	ND	0.0056	0.0011	0.0022
CIS-1,2-DICHLOROETHENE	ND	0.0056	0.00056	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0056	0.00056	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0056	0.0013	0.0022
ETHYLBENZENE	ND	0.0056	0.00056	0.0011
ISOPROPYLBENZENE	ND	0.0056	0.00071	0.0022
M/P-XYLENES	ND	0.011	0.0011	0.0022
4-METHYL-2-PENTANONE	ND	0.011	0.0031	0.0056
METHYLENE CHLORIDE	0.0015J	0.011	0.0011	0.0022
METHYL TERT-BUTYL ETHER	ND	0.0056	0.00056	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0022
N-BUTYLBENZENE	ND	0.0056	0.00078	0.0011
N-PROPYLBENZENE	ND	0.0056	0.00073	0.0011
O-XYLENE	ND	0.0056	0.00056	0.0011
SEC-BUTYLBENZENE	ND	0.0056	0.00075	0.0011
STYRENE	ND	0.0056	0.00056	0.0011
TETRACHLOROETHENE	ND	0.0056	0.00056	0.0011
TOLUENE	ND	0.0056	0.00056	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0056	0.00056	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0056	0.00056	0.0011
TRICHLOROETHENE	ND	0.0056	0.00056	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0056	0.0012	0.0022
VINYL CHLORIDE	ND	0.0056	0.0016	0.0022
XYLENES, TOTAL	ND	0.011	0.00056	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0505	0.05579	90.5	85-115
DIBROMOFLUOROMETHANE	0.0523	0.05579	93.7	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 13:37
Sample ID:	CA504-SG02-S-005	Date Analyzed:	02/10/16 13:37
Lab Samp ID:	B060-07	Dilution Factor:	0.9
Lab File ID:	RBP201	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	8.7
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1,1-TRICHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1,2,2-TETRACHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1,2-TRICHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1-DICHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1-DICHLOROETHENE	ND	0.0049	0.00049	0.00099
1,1-DICHLOROPROPENE	ND	0.0049	0.00049	0.00099
1,2,3-TRICHLOROBENZENE	ND	0.0049	0.00099	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0049	0.00099	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0049	0.00054	0.0020
1,2-DIBROMOETHANE	ND	0.0049	0.00049	0.00099
1,2-DICHLOROBENZENE	ND	0.0049	0.00049	0.00099
1,2-DICHLOROETHANE	ND	0.0049	0.00049	0.00099
1,2-DICHLOROPROPANE	ND	0.0049	0.00049	0.00099
1,3,5-TRIMETHYLBENZENE	ND	0.0049	0.00058	0.0020
1,3-DICHLOROBENZENE	ND	0.0049	0.00051	0.00099
1,3-DICHLOROPROPANE	ND	0.0049	0.00049	0.00099
1,4-DICHLOROBENZENE	ND	0.0049	0.00049	0.00099
2,2-DICHLOROPROPANE	ND	0.0049	0.00099	0.0020
2-BUTANONE	0.0036J	0.0099	0.0025	0.0049
2-CHLOROTOLUENE	ND	0.0049	0.00081	0.00099
4-CHLOROTOLUENE	ND	0.0049	0.00066	0.00099
ACETONE	0.037	0.0099	0.0031	0.0049
BENZENE	ND	0.0049	0.00049	0.00099
BROMOBENZENE	ND	0.0049	0.00049	0.00099
BROMODICHLOROMETHANE	ND	0.0049	0.00049	0.00099
BROMOFORM	ND	0.0049	0.00099	0.0020
BROMOMETHANE	ND	0.0099	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0049	0.00053	0.00099
CHLOROBENZENE	ND	0.0049	0.00049	0.00099
CHLOROETHANE	ND	0.0049	0.0013	0.0020
CHLOROFORM	ND	0.0049	0.00049	0.00099
CHLOROMETHANE	ND	0.0049	0.00099	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0049	0.00049	0.00099
CIS-1,3-DICHLOROPROPENE	ND	0.0049	0.00049	0.00099
DICHLORODIFLUOROMETHANE	ND	0.0049	0.0012	0.0020
ETHYLBENZENE	ND	0.0049	0.00049	0.00099
ISOPROPYLBENZENE	ND	0.0049	0.00063	0.0020
M/P-XYLENES	ND	0.0099	0.00099	0.0020
4-METHYL-2-PENTANONE	ND	0.0099	0.0028	0.0049
METHYLENE CHLORIDE	ND	0.0099	0.00099	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0049	0.00049	0.00099
NAPHTHALENE	ND	0.0099	0.00099	0.0020
N-BUTYLBENZENE	ND	0.0049	0.00069	0.00099
N-PROPYLBENZENE	ND	0.0049	0.00064	0.00099
O-XYLENE	ND	0.0049	0.00049	0.00099
SEC-BUTYLBENZENE	ND	0.0049	0.00066	0.00099
STYRENE	ND	0.0049	0.00049	0.00099
TETRACHLOROETHENE	ND	0.0049	0.00049	0.00099
TOLUENE	ND	0.0049	0.00049	0.00099
TRANS-1,2-DICHLOROETHENE	ND	0.0049	0.00049	0.00099
TRANS-1,3-DICHLOROPROPENE	ND	0.0049	0.00049	0.00099
TRICHLOROETHENE	ND	0.0049	0.00049	0.00099
TRICHLOROFLUOROMETHANE	ND	0.0049	0.0011	0.0020
VINYL CHLORIDE	ND	0.0049	0.0014	0.0020
XYLENES, TOTAL	ND	0.0099	0.00049	0.00099

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0448	0.04929	90.9	85-115
DIBROMOFLUOROMETHANE	0.0469	0.04929	95.1	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 14:02
Sample ID:	CA504-SG02-S-010	Date Analyzed:	02/10/16 14:02
Lab Samp ID:	B060-08	Dilution Factor:	1
Lab File ID:	RBP202	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	8.4
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRIMETHYLBENZENE	ND	0.0055	0.00060	0.0022
1,2-DIBROMOETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0055	0.00064	0.0022
1,3-DICHLOROBENZENE	ND	0.0055	0.00057	0.0011
1,3-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,4-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
2,2-DICHLOROPROPANE	ND	0.0055	0.0011	0.0022
2-BUTANONE	0.0041J	0.011	0.0027	0.0055
2-CHLOROTOLUENE	ND	0.0055	0.00090	0.0011
4-CHLOROTOLUENE	ND	0.0055	0.00073	0.0011
ACETONE	0.037	0.011	0.0034	0.0055
BENZENE	ND	0.0055	0.00055	0.0011
BROMOBENZENE	ND	0.0055	0.00055	0.0011
BROMODICHLOROMETHANE	ND	0.0055	0.00055	0.0011
BROMOFORM	ND	0.0055	0.0011	0.0022
BROMOMETHANE	ND	0.011	0.0020	0.0022
CARBON TETRACHLORIDE	ND	0.0055	0.00059	0.0011
CHLOROBENZENE	ND	0.0055	0.00055	0.0011
CHLOROETHANE	ND	0.0055	0.0014	0.0022
CHLOROFORM	ND	0.0055	0.00055	0.0011
CHLOROMETHANE	ND	0.0055	0.0011	0.0022
CIS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0055	0.0013	0.0022
ETHYLBENZENE	ND	0.0055	0.00055	0.0011
ISOPROPYLBENZENE	ND	0.0055	0.00070	0.0022
M/P-XYLENES	ND	0.011	0.0011	0.0022
4-METHYL-2-PENTANONE	ND	0.011	0.0031	0.0055
METHYLENE CHLORIDE	ND	0.011	0.0011	0.0022
METHYL TERT-BUTYL ETHER	ND	0.0055	0.00055	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0022
N-BUTYLBENZENE	ND	0.0055	0.00076	0.0011
N-PROPYLBENZENE	ND	0.0055	0.00071	0.0011
O-XYLENE	ND	0.0055	0.00055	0.0011
SEC-BUTYLBENZENE	ND	0.0055	0.00073	0.0011
STYRENE	ND	0.0055	0.00055	0.0011
TETRACHLOROETHENE	ND	0.0055	0.00055	0.0011
TOLUENE	ND	0.0055	0.00055	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
TRICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0055	0.0012	0.0022
VINYL CHLORIDE	ND	0.0055	0.0015	0.0022
XYLENES, TOTAL	ND	0.011	0.00055	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0489	0.05459	89.6	85-115
DIBROMOFLUOROMETHANE	0.0521	0.05459	95.4	80-119

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 14:26
Sample ID:	CA504-SG02-S-210	Date Analyzed:	02/10/16 14:26
Lab Samp ID:	B060-09	Dilution Factor:	0.93
Lab File ID:	RBP203	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	8.4
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1-DICHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1-DICHLOROETHENE	ND	0.0051	0.00051	0.0010
1,1-DICHLOROPROPENE	ND	0.0051	0.00051	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0051	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0051	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0051	0.00056	0.0020
1,2-DIBROMOETHANE	ND	0.0051	0.00051	0.0010
1,2-DICHLOROBENZENE	ND	0.0051	0.00051	0.0010
1,2-DICHLOROETHANE	ND	0.0051	0.00051	0.0010
1,2-DICHLOROPROPANE	ND	0.0051	0.00051	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0051	0.00060	0.0020
1,3-DICHLOROBENZENE	ND	0.0051	0.00053	0.0010
1,3-DICHLOROPROPANE	ND	0.0051	0.00051	0.0010
1,4-DICHLOROBENZENE	ND	0.0051	0.00051	0.0010
2,2-DICHLOROPROPANE	ND	0.0051	0.0010	0.0020
2-BUTANONE	0.0048J	0.010	0.0025	0.0051
2-CHLOROTOLUENE	ND	0.0051	0.00083	0.0010
4-CHLOROTOLUENE	ND	0.0051	0.00068	0.0010
ACETONE	0.055	0.010	0.0031	0.0051
BENZENE	ND	0.0051	0.00051	0.0010
BROMOBENZENE	ND	0.0051	0.00051	0.0010
BROMODICHLOROMETHANE	ND	0.0051	0.00051	0.0010
BROMOFORM	ND	0.0051	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0051	0.00055	0.0010
CHLOROBENZENE	ND	0.0051	0.00051	0.0010
CHLOROETHANE	ND	0.0051	0.0013	0.0020
CHLOROFORM	ND	0.0051	0.00051	0.0010
CHLOROMETHANE	ND	0.0051	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0051	0.00051	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0051	0.00051	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0051	0.0012	0.0020
ETHYLBENZENE	ND	0.0051	0.00051	0.0010
ISOPROPYLBENZENE	ND	0.0051	0.00065	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0051
METHYLENE CHLORIDE	0.0011J	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0051	0.00051	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0051	0.00071	0.0010
N-PROPYLBENZENE	ND	0.0051	0.00066	0.0010
O-XYLENE	ND	0.0051	0.00051	0.0010
SEC-BUTYLBENZENE	ND	0.0051	0.00068	0.0010
STYRENE	ND	0.0051	0.00051	0.0010
TETRACHLOROETHENE	ND	0.0051	0.00051	0.0010
TOLUENE	0.00066J	0.0051	0.00051	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0051	0.00051	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0051	0.00051	0.0010
TRICHLOROETHENE	ND	0.0051	0.00051	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0051	0.0011	0.0020
VINYL CHLORIDE	ND	0.0051	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00051	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0458	0.05076	90.2	85-115
DIBROMOFLUOROMETHANE	0.0482	0.05076	94.9	80-119

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG03-S-005	Date Analyzed:	02/12/16 14:17
Lab Samp ID	: B060-01	Dilution Factor:	1
Lab File ID	: RBH147	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 7.6
Calib. Ref.:	RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.090	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.090	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.090	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.090	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.098	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.090	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.090	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.090	0.18
2,4-DINITROPHENOL	ND	0.72	0.093	0.18
2,4-DINITROTOLUENE	ND	0.36	0.090	0.18
2,6-DINITROTOLUENE	ND	0.36	0.090	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.090	0.18
2-CHLOROPHENOL	ND	0.36	0.090	0.18
2-METHYLPHENOL	ND	0.36	0.090	0.18
2-NITROANILINE	ND	0.36	0.090	0.18
2-NITROPHENOL	ND	0.36	0.090	0.18
3&4-METHYLPHENOL	ND	0.36	0.090	0.18
3-NITROANILINE	ND	0.36	0.090	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.72	0.090	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.097	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.090	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.090	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.11	0.18
BENZYL ALCOHOL	ND	0.36	0.090	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.090	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.090	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.090	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.12	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.090	0.18
CARBAZOLE	ND	0.36	0.096	0.18
DIBENZOFURAN	ND	0.36	0.090	0.18
DIETHYLPHTHALATE	ND	0.36	0.090	0.18
DIMETHYLPHTHALATE	ND	0.36	0.090	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.10	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.10	0.18
HEXACHLOROBENZENE	ND	0.36	0.090	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.090	0.18
HEXACHLOROETHANE	ND	0.36	0.090	0.18
ISOPHORONE	ND	0.36	0.090	0.18
NITROBENZENE	ND	0.36	0.090	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.090	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.090	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.17	0.18
PENTACHLOROPHENOL	ND	0.72	0.090	0.18
PHENOL	ND	0.36	0.090	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.51	2.165	69.7	35-125
2-FLUOROBIPHENYL	0.443	0.7215	61.4	45-105
2-FLUOROPHENOL	1.38	2.165	63.9	35-105
NITROBENZENE-D5	0.463	0.7215	64.2	35-100
TERPHENYL-D14	0.657	0.7215	91.1	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG03-S-010	Date Analyzed:	02/12/16 14:36
Lab Samp ID	: B060-02	Dilution Factor:	1
Lab File ID	: RBH148	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 9.4
Calib. Ref.	: RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.37	0.092	0.18
1,2-DICHLOROBENZENE	ND	0.37	0.092	0.18
1,3-DICHLOROBENZENE	ND	0.37	0.092	0.18
1,4-DICHLOROBENZENE	ND	0.37	0.092	0.18
2,4,5-TRICHLOROPHENOL	ND	0.37	0.10	0.18
2,4,6-TRICHLOROPHENOL	ND	0.37	0.092	0.18
2,4-DICHLOROPHENOL	ND	0.37	0.092	0.18
2,4-DIMETHYLPHENOL	ND	0.37	0.092	0.18
2,4-DINITROPHENOL	ND	0.74	0.095	0.18
2,4-DINITROTOLUENE	ND	0.37	0.092	0.18
2,6-DINITROTOLUENE	ND	0.37	0.092	0.18
2-CHLORONAPHTHALENE	ND	0.37	0.092	0.18
2-CHLOROPHENOL	ND	0.37	0.092	0.18
2-METHYLPHENOL	ND	0.37	0.092	0.18
2-NITROANILINE	ND	0.37	0.092	0.18
2-NITROPHENOL	ND	0.37	0.092	0.18
3&4-METHYLPHENOL	ND	0.37	0.092	0.18
3-NITROANILINE	ND	0.37	0.092	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.74	0.092	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.37	0.099	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.37	0.092	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.37	0.092	0.18
4-NITROANILINE	ND	0.37	0.13	0.18
4-NITROPHENOL	ND	0.37	0.12	0.18
BENZYL ALCOHOL	ND	0.37	0.092	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.37	0.092	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.37	0.092	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.37	0.092	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.37	0.13	0.18
BUTYLBENZYLPHTHALATE	ND	0.37	0.092	0.18
CARBAZOLE	ND	0.37	0.098	0.18
DIBENZOFURAN	ND	0.37	0.092	0.18
DIETHYLPHTHALATE	ND	0.37	0.092	0.18
DIMETHYLPHTHALATE	ND	0.37	0.092	0.18
DI-N-BUTYLPHTHALATE	ND	0.37	0.11	0.18
DI-N-OCTYLPHTHALATE	ND	0.37	0.11	0.18
HEXACHLOROBENZENE	ND	0.37	0.092	0.18
HEXACHLOROBUTADIENE	ND	0.37	0.092	0.18
HEXACHLOROETHANE	ND	0.37	0.092	0.18
ISOPHORONE	ND	0.37	0.092	0.18
NITROBENZENE	ND	0.37	0.092	0.18
N-NITROSODIMETHYLAMINE	ND	0.37	0.092	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.37	0.092	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.37	0.17	0.18
PENTACHLOROPHENOL	ND	0.74	0.092	0.18
PHENOL	ND	0.37	0.092	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.65	2.208	74.7	35-125
2-FLUOROBIPHENYL	0.479	0.7359	65.1	45-105
2-FLUOROPHENOL	1.50	2.208	67.8	35-105
NITROBENZENE-D5	0.503	0.7359	68.3	35-100
TERPHENYL-D14	0.684	0.7359	92.9	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG01-S-005	Date Analyzed:	02/12/16 14:56
Lab Samp ID	: B060-04	Dilution Factor:	1
Lab File ID	: RBH149	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 5.5
Calib. Ref.	: RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.35	0.088	0.18
1,2-DICHLOROBENZENE	ND	0.35	0.088	0.18
1,3-DICHLOROBENZENE	ND	0.35	0.088	0.18
1,4-DICHLOROBENZENE	ND	0.35	0.088	0.18
2,4,5-TRICHLOROPHENOL	ND	0.35	0.096	0.18
2,4,6-TRICHLOROPHENOL	ND	0.35	0.088	0.18
2,4-DICHLOROPHENOL	ND	0.35	0.088	0.18
2,4-DIMETHYLPHENOL	ND	0.35	0.088	0.18
2,4-DINITROPHENOL	ND	0.71	0.091	0.18
2,4-DINITROTOLUENE	ND	0.35	0.088	0.18
2,6-DINITROTOLUENE	ND	0.35	0.088	0.18
2-CHLORONAPHTHALENE	ND	0.35	0.088	0.18
2-CHLOROPHENOL	ND	0.35	0.088	0.18
2-METHYLPHENOL	ND	0.35	0.088	0.18
2-NITROANILINE	ND	0.35	0.088	0.18
2-NITROPHENOL	ND	0.35	0.088	0.18
3&4-METHYLPHENOL	ND	0.35	0.088	0.18
3-NITROANILINE	ND	0.35	0.088	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.71	0.088	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.35	0.095	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.35	0.088	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.35	0.088	0.18
4-NITROANILINE	ND	0.35	0.13	0.18
4-NITROPHENOL	ND	0.35	0.11	0.18
BENZYL ALCOHOL	ND	0.35	0.088	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.35	0.088	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.35	0.088	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.35	0.088	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.35	0.12	0.18
BUTYLBENZYLPHTHALATE	ND	0.35	0.088	0.18
CARBAZOLE	ND	0.35	0.094	0.18
DIBENZOFURAN	ND	0.35	0.088	0.18
DIETHYLPHTHALATE	ND	0.35	0.088	0.18
DIMETHYLPHTHALATE	ND	0.35	0.088	0.18
DI-N-BUTYLPHTHALATE	ND	0.35	0.10	0.18
DI-N-OCTYLPHTHALATE	ND	0.35	0.10	0.18
HEXACHLOROBENZENE	ND	0.35	0.088	0.18
HEXACHLOROBUTADIENE	ND	0.35	0.088	0.18
HEXACHLOROETHANE	ND	0.35	0.088	0.18
ISOPHORONE	ND	0.35	0.088	0.18
NITROBENZENE	ND	0.35	0.088	0.18
N-NITROSODIMETHYLAMINE	ND	0.35	0.088	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.35	0.088	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.35	0.16	0.18
PENTACHLOROPHENOL	ND	0.71	0.088	0.18
PHENOL	ND	0.35	0.088	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.46	2.116	69.2	35-125
2-FLUOROBIPHENYL	0.445	0.7055	63.1	45-105
2-FLUOROPHENOL	1.41	2.116	66.7	35-105
NITROBENZENE-D5	0.465	0.7055	65.9	35-100
TERPHENYL-D14	0.621	0.7055	88.0	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG01-S-010	Date Analyzed:	02/12/16 15:15
Lab Samp ID	: B060-05	Dilution Factor:	1
Lab File ID	: RBH150	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 6.7
Calib. Ref.	: RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.089	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.089	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.089	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.089	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.098	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.089	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.089	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.089	0.18
2,4-DINITROPHENOL	ND	0.71	0.092	0.18
2,4-DINITROTOLUENE	ND	0.36	0.089	0.18
2,6-DINITROTOLUENE	ND	0.36	0.089	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.089	0.18
2-CHLOROPHENOL	ND	0.36	0.089	0.18
2-METHYLPHENOL	ND	0.36	0.089	0.18
2-NITROANILINE	ND	0.36	0.089	0.18
2-NITROPHENOL	ND	0.36	0.089	0.18
3&4-METHYLPHENOL	ND	0.36	0.089	0.18
3-NITROANILINE	ND	0.36	0.089	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.71	0.089	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.096	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.089	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.089	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.11	0.18
BENZYL ALCOHOL	ND	0.36	0.089	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.089	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.089	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.089	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.12	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.089	0.18
CARBAZOLE	ND	0.36	0.095	0.18
DIBENZOFURAN	ND	0.36	0.089	0.18
DIETHYLPHTHALATE	ND	0.36	0.089	0.18
DIMETHYLPHTHALATE	ND	0.36	0.089	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.10	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.10	0.18
HEXACHLOROBENZENE	ND	0.36	0.089	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.089	0.18
HEXACHLOROETHANE	ND	0.36	0.089	0.18
ISOPHORONE	ND	0.36	0.089	0.18
NITROBENZENE	ND	0.36	0.089	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.089	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.089	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.16	0.18
PENTACHLOROPHENOL	ND	0.71	0.089	0.18
PHENOL	ND	0.36	0.089	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.53	2.144	71.3	35-125
2-FLUOROBIPHENYL	0.443	0.7146	62.0	45-105
2-FLUOROPHENOL	1.36	2.144	63.5	35-105
NITROBENZENE-D5	0.460	0.7146	64.4	35-100
TERPHENYL-D14	0.664	0.7146	92.9	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG01-S-210	Date Analyzed:	02/12/16 15:34
Lab Samp ID	: B060-06	Dilution Factor:	1
Lab File ID	: RBH151	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 6.8
Calib. Ref.:	RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.089	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.089	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.089	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.089	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.098	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.089	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.089	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.089	0.18
2,4-DINITROPHENOL	ND	0.72	0.092	0.18
2,4-DINITROTOLUENE	ND	0.36	0.089	0.18
2,6-DINITROTOLUENE	ND	0.36	0.089	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.089	0.18
2-CHLOROPHENOL	ND	0.36	0.089	0.18
2-METHYLPHENOL	ND	0.36	0.089	0.18
2-NITROANILINE	ND	0.36	0.089	0.18
2-NITROPHENOL	ND	0.36	0.089	0.18
3&4-METHYLPHENOL	ND	0.36	0.089	0.18
3-NITROANILINE	ND	0.36	0.089	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.72	0.089	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.097	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.089	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.089	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.11	0.18
BENZYL ALCOHOL	ND	0.36	0.089	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.089	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.089	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.089	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.12	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.089	0.18
CARBAZOLE	ND	0.36	0.095	0.18
DIBENZOFURAN	ND	0.36	0.089	0.18
DIETHYLPHTHALATE	ND	0.36	0.089	0.18
DIMETHYLPHTHALATE	ND	0.36	0.089	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.10	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.10	0.18
HEXACHLOROBENZENE	ND	0.36	0.089	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.089	0.18
HEXACHLOROETHANE	ND	0.36	0.089	0.18
ISOPHORONE	ND	0.36	0.089	0.18
NITROBENZENE	ND	0.36	0.089	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.089	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.089	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.16	0.18
PENTACHLOROPHENOL	ND	0.72	0.089	0.18
PHENOL	ND	0.36	0.089	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.61	2.146	74.8	35-125
2-FLUOROBIPHENYL	0.458	0.7153	64.0	45-105
2-FLUOROPHENOL	1.45	2.146	67.6	35-105
NITROBENZENE-D5	0.485	0.7153	67.8	35-100
TERPHENYL-D14	0.682	0.7153	95.4	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-005	Date Analyzed:	02/12/16 15:53
Lab Samp ID:	B060-07	Dilution Factor:	1
Lab File ID:	RBH152	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	8.7
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.091	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.091	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.10	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.091	0.18
2,4-DINITROPHENOL	ND	0.73	0.094	0.18
2,4-DINITROTOLUENE	ND	0.36	0.091	0.18
2,6-DINITROTOLUENE	ND	0.36	0.091	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.091	0.18
2-CHLOROPHENOL	ND	0.36	0.091	0.18
2-METHYLPHENOL	ND	0.36	0.091	0.18
2-NITROANILINE	ND	0.36	0.091	0.18
2-NITROPHENOL	ND	0.36	0.091	0.18
3&4-METHYLPHENOL	ND	0.36	0.091	0.18
3-NITROANILINE	ND	0.36	0.091	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.73	0.091	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.099	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.091	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.091	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.12	0.18
BENZYL ALCOHOL	ND	0.36	0.091	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.091	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.091	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.091	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.13	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.091	0.18
CARBAZOLE	ND	0.36	0.097	0.18
DIBENZOFURAN	ND	0.36	0.091	0.18
DIETHYLPHTHALATE	ND	0.36	0.091	0.18
DIMETHYLPHTHALATE	ND	0.36	0.091	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.11	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.11	0.18
HEXACHLOROBENZENE	ND	0.36	0.091	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.091	0.18
HEXACHLOROETHANE	ND	0.36	0.091	0.18
ISOPHORONE	ND	0.36	0.091	0.18
NITROBENZENE	ND	0.36	0.091	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.091	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.091	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.17	0.18
PENTACHLOROPHENOL	ND	0.73	0.091	0.18
PHENOL	ND	0.36	0.091	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.62	2.191	73.7	35-125
2-FLUOROBIPHENYL	0.489	0.7302	66.9	45-105
2-FLUOROPHENOL	1.47	2.191	67.1	35-105
NITROBENZENE-D5	0.503	0.7302	68.9	35-100
TERPHENYL-D14	0.684	0.7302	93.7	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-010	Date Analyzed:	02/12/16 16:13
Lab Samp ID:	B060-08	Dilution Factor:	1
Lab File ID:	RBH153	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	8.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.091	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.091	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.099	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.091	0.18
2,4-DINITROPHENOL	ND	0.73	0.094	0.18
2,4-DINITROTOLUENE	ND	0.36	0.091	0.18
2,6-DINITROTOLUENE	ND	0.36	0.091	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.091	0.18
2-CHLOROPHENOL	ND	0.36	0.091	0.18
2-METHYLPHENOL	ND	0.36	0.091	0.18
2-NITROANILINE	ND	0.36	0.091	0.18
2-NITROPHENOL	ND	0.36	0.091	0.18
3&4-METHYLPHENOL	ND	0.36	0.091	0.18
3-NITROANILINE	ND	0.36	0.091	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.73	0.091	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.098	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.091	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.091	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.12	0.18
BENZYL ALCOHOL	ND	0.36	0.091	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.091	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.091	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.091	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.13	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.091	0.18
CARBAZOLE	ND	0.36	0.097	0.18
DIBENZOFURAN	ND	0.36	0.091	0.18
DIETHYLPHTHALATE	ND	0.36	0.091	0.18
DIMETHYLPHTHALATE	ND	0.36	0.091	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.11	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.11	0.18
HEXACHLOROBENZENE	ND	0.36	0.091	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.091	0.18
HEXACHLOROETHANE	ND	0.36	0.091	0.18
ISOPHORONE	ND	0.36	0.091	0.18
NITROBENZENE	ND	0.36	0.091	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.091	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.091	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.17	0.18
PENTACHLOROPHENOL	ND	0.73	0.091	0.18
PHENOL	ND	0.36	0.091	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.60	2.183	73.5	35-125
2-FLUOROBIPHENYL	0.424	0.7278	58.2	45-105
2-FLUOROPHENOL	1.31	2.183	59.8	35-105
NITROBENZENE-D5	0.432	0.7278	59.4	35-100
TERPHENYL-D14	0.663	0.7278	91.1	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG02-S-210	Date Analyzed:	02/12/16 16:32
Lab Samp ID	: B060-09	Dilution Factor:	1
Lab File ID	: RBH154	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 8.4
Calib. Ref.	: RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.091	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.091	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.099	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.091	0.18
2,4-DINITROPHENOL	ND	0.73	0.094	0.18
2,4-DINITROTOLUENE	ND	0.36	0.091	0.18
2,6-DINITROTOLUENE	ND	0.36	0.091	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.091	0.18
2-CHLOROPHENOL	ND	0.36	0.091	0.18
2-METHYLPHENOL	ND	0.36	0.091	0.18
2-NITROANILINE	ND	0.36	0.091	0.18
2-NITROPHENOL	ND	0.36	0.091	0.18
3&4-METHYLPHENOL	ND	0.36	0.091	0.18
3-NITROANILINE	ND	0.36	0.091	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.73	0.091	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.098	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.091	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.091	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.12	0.18
BENZYL ALCOHOL	ND	0.36	0.091	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.091	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.091	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.091	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.13	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.091	0.18
CARBAZOLE	ND	0.36	0.097	0.18
DIBENZOFURAN	ND	0.36	0.091	0.18
DIETHYLPHTHALATE	ND	0.36	0.091	0.18
DIMETHYLPHTHALATE	ND	0.36	0.091	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.11	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.11	0.18
HEXACHLOROBENZENE	ND	0.36	0.091	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.091	0.18
HEXACHLOROETHANE	ND	0.36	0.091	0.18
ISOPHORONE	ND	0.36	0.091	0.18
NITROBENZENE	ND	0.36	0.091	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.091	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.091	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.17	0.18
PENTACHLOROPHENOL	ND	0.73	0.091	0.18
PHENOL	ND	0.36	0.091	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.57	2.183	71.8	35-125
2-FLUOROBIPHENYL	0.460	0.7278	63.2	45-105
2-FLUOROPHENOL	1.43	2.183	65.4	35-105
NITROBENZENE-D5	0.484	0.7278	66.4	35-100
TERPHENYL-D14	0.687	0.7278	94.4	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG03-S-005	Date Analyzed:	02/12/16 14:17
Lab Samp ID:	B060-01	Dilution Factor:	1
Lab File ID:	RBH147	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	7.6
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0054	0.011
ACENAPHTHENE	ND	0.022	0.0054	0.011
ACENAPHTHYLENE	ND	0.022	0.0054	0.011
ANTHRACENE	ND	0.022	0.0054	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0054	0.011
BENZO(A)PYRENE	ND	0.022	0.0054	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0054	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0054	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0054	0.011
CHRYSENE	ND	0.022	0.0054	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0054	0.011
FLUORANTHENE	0.0083J	0.022	0.0054	0.011
FLUORENE	ND	0.022	0.0054	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0054	0.011
NAPHTHALENE	ND	0.022	0.0054	0.011
PHENANTHRENE	ND	0.022	0.0054	0.011
PYRENE	0.0067J	0.022	0.0054	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.476	0.7215	66.0	45-105
NITROBENZENE-D5	0.495	0.7215	68.6	35-100
TERPHENYL-D14	0.660	0.7215	91.5	30-125

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG03-S-010	Date Analyzed:	02/12/16 14:36
Lab Samp ID:	B060-02	Dilution Factor:	1
Lab File ID:	RBH148	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	9.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0055	0.011
ACENAPHTHENE	ND	0.022	0.0055	0.011
ACENAPHTHYLENE	ND	0.022	0.0055	0.011
ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)PYRENE	ND	0.022	0.0055	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0055	0.011
CHRYSENE	ND	0.022	0.0055	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0055	0.011
FLUORANTHENE	ND	0.022	0.0055	0.011
FLUORENE	ND	0.022	0.0055	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0055	0.011
NAPHTHALENE	ND	0.022	0.0055	0.011
PHENANTHRENE	ND	0.022	0.0055	0.011
PYRENE	ND	0.022	0.0055	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.512	0.7359	69.6	45-105
NITROBENZENE-D5	0.534	0.7359	72.6	35-100
TERPHENYL-D14	0.695	0.7359	94.4	30-125

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG01-S-005	Date Analyzed:	02/12/16 14:56
Lab Samp ID:	B060-04	Dilution Factor:	1
Lab File ID:	RBH149	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	5.5
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.021	0.0053	0.011
ACENAPHTHENE	ND	0.021	0.0053	0.011
ACENAPHTHYLENE	ND	0.021	0.0053	0.011
ANTHRACENE	ND	0.021	0.0053	0.011
BENZO(A)ANTHRACENE	ND	0.021	0.0053	0.011
BENZO(A)PYRENE	ND	0.021	0.0053	0.011
BENZO(B)FLUORANTHENE	ND	0.021	0.0053	0.011
BENZO(K)FLUORANTHENE	ND	0.021	0.0053	0.011
BENZO(G,H,I)PERYLENE	ND	0.021	0.0053	0.011
CHRYSENE	ND	0.021	0.0053	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.021	0.0053	0.011
FLUORANTHENE	ND	0.021	0.0053	0.011
FLUORENE	ND	0.021	0.0053	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.021	0.0053	0.011
NAPHTHALENE	ND	0.021	0.0053	0.011
PHENANTHRENE	ND	0.021	0.0053	0.011
PYRENE	ND	0.021	0.0053	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.486	0.7055	68.8	45-105
NITROBENZENE-D5	0.504	0.7055	71.5	35-100
TERPHENYL-D14	0.621	0.7055	88.0	30-125

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG01-S-010	Date Analyzed:	02/12/16 15:15
Lab Samp ID:	B060-05	Dilution Factor:	1
Lab File ID:	RBH150	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	6.7
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.021	0.0054	0.011
ACENAPHTHENE	ND	0.021	0.0054	0.011
ACENAPHTHYLENE	ND	0.021	0.0054	0.011
ANTHRACENE	ND	0.021	0.0054	0.011
BENZO(A)ANTHRACENE	0.0057J	0.021	0.0054	0.011
BENZO(A)PYRENE	ND	0.021	0.0054	0.011
BENZO(B)FLUORANTHENE	ND	0.021	0.0054	0.011
BENZO(K)FLUORANTHENE	ND	0.021	0.0054	0.011
BENZO(G,H,I)PERYLENE	ND	0.021	0.0054	0.011
CHRYSENE	ND	0.021	0.0054	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.021	0.0054	0.011
FLUORANTHENE	0.013J	0.021	0.0054	0.011
FLUORENE	ND	0.021	0.0054	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.021	0.0054	0.011
NAPHTHALENE	ND	0.021	0.0054	0.011
PHENANTHRENE	ND	0.021	0.0054	0.011
PYRENE	0.010J	0.021	0.0054	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.478	0.7146	66.9	45-105
NITROBENZENE-D5	0.492	0.7146	68.8	35-100
TERPHENYL-D14	0.663	0.7146	92.7	30-125

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG01-S-210	Date Analyzed:	02/12/16 15:34
Lab Samp ID:	B060-06	Dilution Factor:	1
Lab File ID:	RBH151	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	6.8
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.021	0.0054	0.011
ACENAPHTHENE	ND	0.021	0.0054	0.011
ACENAPHTHYLENE	ND	0.021	0.0054	0.011
ANTHRACENE	ND	0.021	0.0054	0.011
BENZO(A)ANTHRACENE	ND	0.021	0.0054	0.011
BENZO(A)PYRENE	ND	0.021	0.0054	0.011
BENZO(B)FLUORANTHENE	ND	0.021	0.0054	0.011
BENZO(K)FLUORANTHENE	ND	0.021	0.0054	0.011
BENZO(G,H,I)PERYLENE	ND	0.021	0.0054	0.011
CHRYSENE	ND	0.021	0.0054	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.021	0.0054	0.011
FLUORANTHENE	0.0072J	0.021	0.0054	0.011
FLUORENE	ND	0.021	0.0054	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.021	0.0054	0.011
NAPHTHALENE	ND	0.021	0.0054	0.011
PHENANTHRENE	ND	0.021	0.0054	0.011
PYRENE	0.0059J	0.021	0.0054	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.495	0.7153	69.3	45-105
NITROBENZENE-D5	0.513	0.7153	71.7	35-100
TERPHENYL-D14	0.682	0.7153	95.3	30-125

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-005	Date Analyzed:	02/12/16 15:53
Lab Samp ID:	B060-07	Dilution Factor:	1
Lab File ID:	RBH152	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	8.7
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0055	0.011
ACENAPHTHENE	ND	0.022	0.0055	0.011
ACENAPHTHYLENE	ND	0.022	0.0055	0.011
ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)PYRENE	ND	0.022	0.0055	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0055	0.011
CHRYSENE	ND	0.022	0.0055	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0055	0.011
FLUORANTHENE	ND	0.022	0.0055	0.011
FLUORENE	ND	0.022	0.0055	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0055	0.011
NAPHTHALENE	ND	0.022	0.0055	0.011
PHENANTHRENE	ND	0.022	0.0055	0.011
PYRENE	ND	0.022	0.0055	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.519	0.7302	71.1	45-105
NITROBENZENE-D5	0.538	0.7302	73.6	35-100
TERPHENYL-D14	0.688	0.7302	94.3	30-125

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-010	Date Analyzed:	02/12/16 16:13
Lab Samp ID:	B060-08	Dilution Factor:	1
Lab File ID:	RBH153	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	8.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0055	0.011
ACENAPHTHENE	ND	0.022	0.0055	0.011
ACENAPHTHYLENE	ND	0.022	0.0055	0.011
ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)PYRENE	ND	0.022	0.0055	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0055	0.011
CHRYSENE	ND	0.022	0.0055	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0055	0.011
FLUORANTHENE	ND	0.022	0.0055	0.011
FLUORENE	ND	0.022	0.0055	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0055	0.011
NAPHTHALENE	ND	0.022	0.0055	0.011
PHENANTHRENE	ND	0.022	0.0055	0.011
PYRENE	ND	0.022	0.0055	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.457	0.7278	62.7	45-105
NITROBENZENE-D5	0.470	0.7278	64.5	35-100
TERPHENYL-D14	0.665	0.7278	91.4	30-125

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-210	Date Analyzed:	02/12/16 16:32
Lab Samp ID:	B060-09	Dilution Factor:	1
Lab File ID:	RBH154	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	8.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0055	0.011
ACENAPHTHENE	ND	0.022	0.0055	0.011
ACENAPHTHYLENE	ND	0.022	0.0055	0.011
ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)PYRENE	ND	0.022	0.0055	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0055	0.011
CHRYSENE	ND	0.022	0.0055	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0055	0.011
FLUORANTHENE	ND	0.022	0.0055	0.011
FLUORENE	ND	0.022	0.0055	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0055	0.011
NAPHTHALENE	ND	0.022	0.0055	0.011
PHENANTHRENE	ND	0.022	0.0055	0.011
PYRENE	ND	0.022	0.0055	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.499	0.7278	68.5	45-105
NITROBENZENE-D5	0.515	0.7278	70.8	35-100
TERPHENYL-D14	0.679	0.7278	93.2	30-125

QC SUMMARIES

METHOD BLANK

Method: 8260B

QC Measure: VS02B12B

Associated Samples:

CA504-SG03-S-005
CA504-SG03-S-010
CA504-SG01-S-005
CA504-SG01-S-010
CA504-SG01-S-210
CA504-SG02-S-005
CA504-SG02-S-010
CA504-SG02-S-210

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION	Date Collected: NA
Project : CANNON AFB PBR	Date Received: 02/10/16
Batch No. : 16B060	Date Extracted: 02/10/16 08:44
Sample ID: MBLK1S	Date Analyzed: 02/10/16 08:44
Lab Samp ID: VS02B12B	Dilution Factor: 1
Lab File ID: RBP190	Matrix : SOIL
Ext Btch ID: VS02B12	% Moisture : NA
Calib. Ref.: RJP190	Instrument ID : T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0050	0.00055	0.0020
1,2-DIBROMOETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0050	0.00059	0.0020
1,3-DICHLOROBENZENE	ND	0.0050	0.00052	0.0010
1,3-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,4-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
2,2-DICHLOROPROPANE	ND	0.0050	0.0010	0.0020
2-BUTANONE	ND	0.010	0.0025	0.0050
2-CHLOROTOLUENE	ND	0.0050	0.00082	0.0010
4-CHLOROTOLUENE	ND	0.0050	0.00067	0.0010
ACETONE	ND	0.010	0.0031	0.0050
BENZENE	ND	0.0050	0.00050	0.0010
BROMOBENZENE	ND	0.0050	0.00050	0.0010
BROMODICHLOROMETHANE	ND	0.0050	0.00050	0.0010
BROMOFORM	ND	0.0050	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0050	0.00054	0.0010
CHLOROBENZENE	ND	0.0050	0.00050	0.0010
CHLOROETHANE	ND	0.0050	0.0013	0.0020
CHLOROFORM	ND	0.0050	0.00050	0.0010
CHLOROMETHANE	ND	0.0050	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0050	0.0012	0.0020
ETHYLBENZENE	ND	0.0050	0.00050	0.0010
ISOPROPYLBENZENE	ND	0.0050	0.00064	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0050
METHYLENE CHLORIDE	ND	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0050	0.00050	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0050	0.00070	0.0010
N-PROPYLBENZENE	ND	0.0050	0.00065	0.0010
O-XYLENE	ND	0.0050	0.00050	0.0010
SEC-BUTYLBENZENE	ND	0.0050	0.00067	0.0010
STYRENE	ND	0.0050	0.00050	0.0010
TETRACHLOROETHENE	ND	0.0050	0.00050	0.0010
TOLUENE	ND	0.0050	0.00050	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
TRICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0050	0.0011	0.0020
VINYL CHLORIDE	ND	0.0050	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00050	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0452	0.05000	90.3	85-115
DIBROMOFLUOROMETHANE	0.0463	0.05000	92.5	80-119

Method: 8270D

QC Measure: SVB011SB

Associated Samples:

CA504-SG03-S-005
CA504-SG03-S-010
CA504-SG01-S-005
CA504-SG01-S-010
CA504-SG01-S-210
CA504-SG02-S-005
CA504-SG02-S-010
CA504-SG02-S-210

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	MBLK1S	Date Analyzed:	02/12/16 10:27
Lab Samp ID:	SVB011SB	Dilution Factor:	1
Lab File ID:	RBH135	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	NA
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.00	2.000	50.1	35-125
2-FLUOROBIPHENYL	0.350	0.6667	52.5	45-105
2-FLUOROPHENOL	1.04	2.000	51.9	35-105
NITROBENZENE-D5	0.364	0.6667	54.7	35-100
TERPHENYL-D14	0.519	0.6667	77.9	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Method: BNASIM

QC Measure: SVB011SB

Associated Samples:

CA504-SG03-S-005
CA504-SG03-S-010
CA504-SG01-S-005
CA504-SG01-S-010
CA504-SG01-S-210
CA504-SG02-S-005
CA504-SG02-S-010
CA504-SG02-S-210

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	MBLK1S	Date Analyzed:	02/12/16 10:27
Lab Samp ID:	SVB011SB	Dilution Factor:	1
Lab File ID:	RBH135	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	NA
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.020	0.0050	0.010
ACENAPHTHENE	ND	0.020	0.0050	0.010
ACENAPHTHYLENE	ND	0.020	0.0050	0.010
ANTHRACENE	ND	0.020	0.0050	0.010
BENZO(A)ANTHRACENE	ND	0.020	0.0050	0.010
BENZO(A)PYRENE	ND	0.020	0.0050	0.010
BENZO(B)FLUORANTHENE	ND	0.020	0.0050	0.010
BENZO(K)FLUORANTHENE	ND	0.020	0.0050	0.010
BENZO(G,H,I)PERYLENE	ND	0.020	0.0050	0.010
CHRYSENE	ND	0.020	0.0050	0.010
DIBENZ(A,H)ANTHRACENE	ND	0.020	0.0050	0.010
FLUORANTHENE	ND	0.020	0.0050	0.010
FLUORENE	ND	0.020	0.0050	0.010
INDENO(1,2,3-CD)PYRENE	ND	0.020	0.0050	0.010
NAPHTHALENE	ND	0.020	0.0050	0.010
PHENANTHRENE	ND	0.020	0.0050	0.010
PYRENE	ND	0.020	0.0050	0.010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.371	0.6667	55.7	45-105
NITROBENZENE-D5	0.386	0.6667	57.9	35-100
TERPHENYL-D14	0.542	0.6667	81.3	30-125

LCS/LCSD

Method: 8260B

QC Measure: VS02B12L

Associated Samples:

CA504-SG03-S-005
CA504-SG03-S-010
CA504-SG01-S-005
CA504-SG01-S-010
CA504-SG01-S-210
CA504-SG02-S-005
CA504-SG02-S-010
CA504-SG02-S-210

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW 5035A/8260B

MATRIX: SOIL % MOISTURE: NA

DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VS02B12B	VS02B12L	VS02B12C		
LAB FILE ID:	RBP190	RBP188	RBP189		
DATE EXTRACTED:	02/10/1608:44	02/10/1607:54	02/10/1608:19	DATE COLLECTED:	NA
DATE ANALYZED:	02/10/1608:44	02/10/1607:54	02/10/1608:19	DATE RECEIVED:	02/10/16
PREP. BATCH:	VS02B12	VS02B12	VS02B12		
CALIB. REF:	RJP190	RJP190	RJP190		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0500	0.0508	102	0.0500	0.0524	105	3	75-125	30
1,1,1-Trichloroethane	ND	0.0500	0.0464	93	0.0500	0.0493	99	6	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0516	103	0.0500	0.0540	108	5	55-130	30
1,1,2-Trichloroethane	ND	0.0500	0.0441	88	0.0500	0.0465	93	5	60-125	30
1,1-Dichloroethane	ND	0.0500	0.0463	93	0.0500	0.0495	99	7	75-125	30
1,1-Dichloroethene	ND	0.0500	0.0472	94	0.0500	0.0479	96	2	65-135	30
1,1-Dichloropropene	ND	0.0500	0.0434	87	0.0500	0.0466	93	7	70-135	30
1,2,3-Trichlorobenzene	ND	0.0500	0.0450	90	0.0500	0.0474	95	5	60-135	30
1,2,4-Trichlorobenzene	ND	0.0500	0.0474	95	0.0500	0.0489	98	3	65-130	30
1,2,4-Trimethylbenzene	ND	0.0500	0.0473	95	0.0500	0.0479	96	1	65-135	30
1,2-Dibromoethane	ND	0.0500	0.0449	90	0.0500	0.0480	96	7	70-125	30
1,2-Dichlorobenzene	ND	0.0500	0.0494	99	0.0500	0.0519	104	5	75-120	30
1,2-Dichloroethane	ND	0.0500	0.0493	99	0.0500	0.0513	103	4	70-135	30
1,2-Dichloropropane	ND	0.0500	0.0485	97	0.0500	0.0523	105	8	70-120	30
1,3,5-Trimethylbenzene	ND	0.0500	0.0494	99	0.0500	0.0494	99	0	65-135	30
1,3-Dichlorobenzene	ND	0.0500	0.0488	98	0.0500	0.0501	100	2	70-125	30
1,3-Dichloropropane	ND	0.0500	0.0437	87	0.0500	0.0465	93	6	75-125	30
1,4-Dichlorobenzene	ND	0.0500	0.0489	98	0.0500	0.0499	100	2	70-125	30
2,2-Dichloropropane	ND	0.0500	0.0486	97	0.0500	0.0539	108	10	65-135	30
2-Butanone	ND	0.250	0.242	97	0.250	0.252	101	4	30-160	30
2-Chlorotoluene	ND	0.0500	0.0535	107	0.0500	0.0523	105	2	70-130	30
4-Chlorotoluene	ND	0.0500	0.0498	100	0.0500	0.0533	107	7	75-125	30
Acetone	ND	0.250	0.239	96	0.250	0.252	101	5	20-160	30
Benzene	ND	0.0500	0.0486	97	0.0500	0.0502	100	3	75-125	30
Bromobenzene	ND	0.0500	0.0498	100	0.0500	0.0511	102	3	65-120	30
Bromodichloromethane	ND	0.0500	0.0508	102	0.0500	0.0552	110	8	70-130	30
Bromoform	ND	0.0500	0.0459	92	0.0500	0.0497	99	8	55-135	30
Bromomethane	ND	0.0500	0.0505	101	0.0500	0.0452	90	11	30-160	30
Carbon Tetrachloride	ND	0.0500	0.0459	92	0.0500	0.0491	98	7	65-135	30
Chlorobenzene	ND	0.0500	0.0489	98	0.0500	0.0509	102	4	75-125	30
Chloroethane	ND	0.0500	0.0525	105	0.0500	0.0463	93	13	40-155	30
Chloroform	ND	0.0500	0.0461	92	0.0500	0.0493	99	7	70-125	30
Chloromethane	ND	0.0500	0.0575	115	0.0500	0.0503	101	13	50-130	30
cis-1,2-Dichloroethene	ND	0.0500	0.0465	93	0.0500	0.0492	98	6	65-125	30
cis-1,3-Dichloropropene	ND	0.0500	0.0523	105	0.0500	0.0562	112	7	70-125	30
Dichlorodifluoromethane	ND	0.0500	0.0609	122	0.0500	0.0531	106	14	35-135	30
Ethylbenzene	ND	0.0500	0.0471	94	0.0500	0.0495	99	5	75-125	30
Isopropylbenzene	ND	0.0500	0.0522	104	0.0500	0.0528	106	1	75-130	30
m/p-Xylenes	ND	0.100	0.0981	98	0.100	0.0992	99	1	80-125	30
4-Methyl-2-Pentanone	ND	0.250	0.266	107	0.250	0.277	111	4	45-145	30
Methylene Chloride	ND	0.0500	0.0492	98	0.0500	0.0505	101	3	55-140	30
Methyl tert-butyl ether	ND	0.0500	0.0465	93	0.0500	0.0517	103	11	65-135	30
Naphthalene	ND	0.0500	0.0463	93	0.0500	0.0481	96	4	40-125	30
n-Butylbenzene	ND	0.0500	0.0482	96	0.0500	0.0495	99	3	65-135	30
n-Propylbenzene	ND	0.0500	0.0530	106	0.0500	0.0535	107	1	65-135	30
o-Xylene	ND	0.0500	0.0525	105	0.0500	0.0532	106	1	75-125	30
Sec-Butylbenzene	ND	0.0500	0.0472	94	0.0500	0.0469	94	1	65-130	30
Styrene	ND	0.0500	0.0527	105	0.0500	0.0538	108	2	75-125	30
Tetrachloroethene	ND	0.0500	0.0419	84	0.0500	0.0436	87	4	65-140	30
Toluene	ND	0.0500	0.0413	83	0.0500	0.0429	86	4	70-125	30
Trans-1,2-Dichloroethene	ND	0.0500	0.0448	90	0.0500	0.0468	94	4	65-135	30
Trans-1,3-Dichloropropene	ND	0.0500	0.0443	89	0.0500	0.0465	93	5	65-125	30
Trichloroethene	ND	0.0500	0.0475	95	0.0500	0.0496	99	4	75-125	30
Trichlorofluoromethane	ND	0.0500	0.0515	103	0.0500	0.0466	93	10	25-185	30
Vinyl Chloride	ND	0.0500	0.0565	113	0.0500	0.0492	98	14	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Toluene-d8	0.0500	0.0445	89	0.0500	0.0444	89	85-115
Dibromofluoromethane	0.0500	0.0461	92	0.0500	0.0480	96	80-119

Method: 8270D

QC Measure: SVB011SL

Associated Samples:

CA504-SG03-S-005
CA504-SG03-S-010
CA504-SG01-S-005
CA504-SG01-S-010
CA504-SG01-S-210
CA504-SG02-S-005
CA504-SG02-S-010
CA504-SG02-S-210

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW3550B/8270D

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVB011SB	SVB011SL	SVB011SC		
LAB FILE ID:	RBH135	RBH136	RBH137		
DATE EXTRACTED:	02/11/1617:18	02/11/1617:18	02/11/1617:18	DATE COLLECTED:	NA
DATE ANALYZED:	02/12/1610:27	02/12/1610:46	02/12/1611:05	DATE RECEIVED:	02/11/16
PREP. BATCH:	SVB011S	SVB011S	SVB011S		
CALIB. REF:	RAH047	RAH047	RAH047		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	1.33	0.849	64	1.33	0.863	65	2	45-110	30
1,2-Dichlorobenzene	ND	1.33	0.824	62	1.33	0.860	65	4	45-100	30
1,3-Dichlorobenzene	ND	1.33	0.803	60	1.33	0.840	63	5	40-100	30
1,4-Dichlorobenzene	ND	1.33	0.801	60	1.33	0.847	64	6	35-105	30
2,4,5-Trichlorophenol	ND	1.33	0.774	58	1.33	0.806	60	4	50-110	30
2,4,6-Trichlorophenol	ND	1.33	0.782	59	1.33	0.796	60	2	45-110	30
2,4-Dichlorophenol	ND	1.33	0.882	66	1.33	0.853	64	3	45-110	30
2,4-Dimethylphenol	ND	1.33	0.768	58	1.33	0.799	60	4	30-105	30
2,4-Dinitrophenol	ND	1.33	0.990	74	1.33	1.04	78	5	15-130	30
2,4-Dinitrotoluene	ND	1.33	1.10	82	1.33	1.11	83	1	50-115	30
2,6-Dinitrotoluene	ND	1.33	0.970	73	1.33	1.03	77	6	50-110	30
2-Chloronaphthalene	ND	1.33	0.821	62	1.33	0.858	64	4	45-105	30
2-Chlorophenol	ND	1.33	0.708	53	1.33	0.753	56	6	45-105	30
2-Methylphenol	ND	1.33	0.824	62	1.33	0.851	64	3	40-105	30
2-Nitroaniline	ND	1.33	0.834	63	1.33	0.856	64	3	45-120	30
2-Nitrophenol	ND	1.33	0.877	66	1.33	0.890	67	1	40-110	30
3&4-Methylphenol	ND	1.33	0.833	62	1.33	0.895	67	7	40-105	30
3-Nitroaniline	ND	1.33	0.919	69	1.33	0.958	72	4	25-110	30
4,6-Dinitro-2-Methylphenol	ND	1.33	1.15	86	1.33	1.23	92	7	30-135	30
4-Bromophenyl-phenylether	ND	1.33	0.913	69	1.33	0.950	71	4	45-115	30
4-Chloro-3-Methylphenol	ND	1.33	0.800	60	1.33	0.836	63	4	45-115	30
4-Chlorophenyl-phenylether	ND	1.33	0.901	68	1.33	0.905	68	0	45-110	30
4-Nitroaniline	ND	1.33	1.17	88	1.33	1.07	80	9	35-115	30
4-Nitrophenol	ND	1.33	0.819	61	1.33	0.830	62	1	15-140	30
Benzyl Alcohol	ND	1.33	0.825	62	1.33	0.887	67	7	20-125	30
bis(2-Chloroisopropyl)ether	ND	1.33	0.760	57	1.33	0.801	60	5	20-115	30
bis(2-Chloroethoxy)methane	ND	1.33	0.826	62	1.33	0.846	63	2	45-110	30
bis(2-Chloroethyl)ether	ND	1.33	0.793	59	1.33	0.850	64	7	40-105	30
bis(2-Ethylhexyl)phthalate	ND	1.33	1.15	87	1.33	1.14	86	1	45-125	30
Butylbenzylphthalate	ND	1.33	1.14	86	1.33	1.15	86	1	50-125	30
Carbazole	ND	1.33	1.06	79	1.33	1.07	81	2	45-115	30
Dibenzofuran	ND	1.33	0.837	63	1.33	0.856	64	2	50-105	30
Diethylphthalate	ND	1.33	1.05	78	1.33	1.06	79	1	50-115	30
Dimethylphthalate	ND	1.33	0.902	68	1.33	0.956	72	6	50-110	30
Di-n-butylphthalate	ND	1.33	1.10	83	1.33	1.09	82	1	55-110	30
Di-n-octylphthalate	ND	1.33	1.15	86	1.33	1.14	86	1	40-130	30
Hexachlorobenzene	ND	1.33	0.979	73	1.33	1.01	76	3	45-120	30
Hexachlorobutadiene	ND	1.33	0.830	62	1.33	0.866	65	4	40-115	30
Hexachloroethane	ND	1.33	0.946	71	1.33	0.834	63	13	35-110	30
Isophorone	ND	1.33	0.807	61	1.33	0.887	67	9	45-110	30
Nitrobenzene	ND	1.33	0.815	61	1.33	0.849	64	4	40-115	30
N-Nitrosodimethylamine	ND	1.33	0.836	63	1.33	0.853	64	2	20-115	30
n-Nitroso-di-n-propylamine	ND	1.33	0.839	63	1.33	0.848	64	1	40-115	30
n-Nitrosodiphenylamine	ND	1.33	0.925	69	1.33	0.966	72	4	50-115	30
Pentachlorophenol	ND	1.33	0.973	73	1.33	0.993	75	2	25-120	30
Phenol	ND	1.33	0.765	57	1.33	0.800	60	4	40-100	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	2.00	1.36	68	2.00	1.56	78	35-125
2-Fluorobiphenyl	0.667	0.356	53	0.667	0.396	59	45-105
2-Fluorophenol	2.00	1.07	53	2.00	1.24	62	35-105
Nitrobenzene-d5	0.667	0.376	56	0.667	0.420	63	35-100
Terphenyl-d14	0.667	0.546	82	0.667	0.581	87	30-125

Method: BNASIM

QC Measure: SVB011SL

Associated Samples:

CA504-SG03-S-005
CA504-SG03-S-010
CA504-SG01-S-005
CA504-SG01-S-010
CA504-SG01-S-210
CA504-SG02-S-005
CA504-SG02-S-010
CA504-SG02-S-210

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW3550B/8270D SIM

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVB011SB	SVB011SL	SVB011SC		
LAB FILE ID:	RBH135	RBH136	RBH137		
DATE EXTRACTED:	02/11/1617:18	02/11/1617:18	02/11/1617:18	DATE COLLECTED:	NA
DATE ANALYZED:	02/12/1610:27	02/12/1610:46	02/12/1611:05	DATE RECEIVED:	02/11/16
PREP. BATCH:	SVB011S	SVB011S	SVB011S		
CALIB. REF:	RAH047	RAH047	RAH047		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
2-Methylnaphthalene	ND	1.33	0.826	62	1.33	0.853	64	3	45-105	30
Acenaphthene	ND	1.33	0.857	64	1.33	0.885	66	3	45-110	30
Acenaphthylene	ND	1.33	0.873	66	1.33	0.907	68	4	45-105	30
Anthracene	ND	1.33	0.958	72	1.33	0.975	73	2	55-105	30
Benzo(a)anthracene	ND	1.33	1.11	83	1.33	1.10	82	1	50-110	30
Benzo(a)pyrene	ND	1.33	1.13	85	1.33	1.13	85	0	50-110	30
Benzo(b)fluoranthene	ND	1.33	1.12	84	1.33	1.14	85	2	45-115	30
Benzo(k)fluoranthene	ND	1.33	1.16	87	1.33	1.16	87	0	45-125	30
Benzo(g,h,i)perylene	ND	1.33	1.17	88	1.33	1.17	88	0	40-125	30
Chrysene	ND	1.33	1.11	83	1.33	1.10	83	1	55-110	30
Dibenz(a,h)anthracene	ND	1.33	1.16	87	1.33	1.16	87	0	40-125	30
Fluoranthene	ND	1.33	1.10	83	1.33	1.10	82	0	55-115	30
Fluorene	ND	1.33	0.899	67	1.33	0.921	69	2	50-110	30
Indeno(1,2,3-cd)pyrene	ND	1.33	1.11	83	1.33	1.11	83	0	40-120	30
Naphthalene	ND	1.33	0.870	65	1.33	0.894	67	3	40-105	30
Phenanthrene	ND	1.33	0.914	69	1.33	0.929	70	2	50-110	30
Pyrene	ND	1.33	1.11	83	1.33	1.10	83	0	45-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
2-Fluorobiphenyl	0.667	0.386	58	0.667	0.428	64	45-105
Nitrobenzene-d5	0.667	0.400	60	0.667	0.442	66	35-100
Terphenyl-d14	0.667	0.553	83	0.667	0.597	89	30-125

MS / MSD

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW 5035A/8260B

MATRIX:	SOIL			% MOISTURE:	9.4
DILUTION FACTOR:	0.94	0.9	0.89		
SAMPLE ID:	CA504-SG03-S-010				
LAB SAMP ID:	B060-02	B060-02M	B060-02S		
LAB FILE ID:	RBP196	RBP204	RBP205		
DATE EXTRACTED:	02/10/1611:33	02/10/1614:51	02/10/1615:16	DATE COLLECTED:	02/05/16
DATE ANALYZED:	02/10/1611:33	02/10/1614:51	02/10/1615:16	DATE RECEIVED:	02/06/16
PREP. BATCH:	VS02B12	VS02B12	VS02B12		
CALIB. REF:	RJP190	RJP190	RJP190		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0497	0.0526	106	0.0491	0.0527	107	1	75-125	30
1,1,1-Trichloroethane	ND	0.0497	0.0468	94	0.0491	0.0467	95	1	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0497	0.0575	116	0.0491	0.0595	121	4	55-130	30
1,1,2-Trichloroethane	ND	0.0497	0.0456	92	0.0491	0.0460	94	2	60-125	30
1,1-Dichloroethane	ND	0.0497	0.0493	99	0.0491	0.0467	95	4	75-125	30
1,1-Dichloroethene	ND	0.0497	0.0520	105	0.0491	0.0503	102	3	65-135	30
1,1-Dichloropropene	ND	0.0497	0.0464	93	0.0491	0.0442	90	3	70-135	30
1,2,3-Trichlorobenzene	ND	0.0497	0.0437	88	0.0491	0.0442	90	2	60-135	30
1,2,4-Trichlorobenzene	ND	0.0497	0.0472	95	0.0491	0.0470	96	1	65-130	30
1,2,4-Trimethylbenzene	ND	0.0497	0.0552	111	0.0491	0.0544	111	0	65-135	30
1,2-Dibromoethane	ND	0.0497	0.0478	96	0.0491	0.0483	98	2	70-125	30
1,2-Dichlorobenzene	ND	0.0497	0.0510	103	0.0491	0.0509	104	1	75-120	30
1,2-Dichloroethane	ND	0.0497	0.0516	104	0.0491	0.0505	103	1	70-135	30
1,2-Dichloropropane	ND	0.0497	0.0508	102	0.0491	0.0501	102	0	70-120	30
1,3,5-Trimethylbenzene	ND	0.0497	0.0558	112	0.0491	0.0560	114	2	65-135	30
1,3-Dichlorobenzene	ND	0.0497	0.0543	109	0.0491	0.0535	109	0	70-125	30
1,3-Dichloropropane	ND	0.0497	0.0462	93	0.0491	0.0457	93	0	75-125	30
1,4-Dichlorobenzene	ND	0.0497	0.0539	108	0.0491	0.0532	108	0	70-125	30
2,2-Dichloropropane	ND	0.0497	0.0529	107	0.0491	0.0502	102	5	65-135	30
2-Butanone	0.00372J	0.248	0.290	115	0.246	0.285	115	0	30-160	30
2-Chlorotoluene	ND	0.0497	0.0560	113	0.0491	0.0558	114	1	70-130	30
4-Chlorotoluene	ND	0.0497	0.0574	115	0.0491	0.0566	115	0	75-125	30
Acetone	0.0377	0.248	0.324	115	0.246	0.319	114	1	20-160	30
Benzene	ND	0.0497	0.0503	101	0.0491	0.0482	98	3	75-125	30
Bromobenzene	ND	0.0497	0.0537	108	0.0491	0.0539	110	2	65-120	30
Bromodichloromethane	ND	0.0497	0.0515	104	0.0491	0.0513	105	1	70-130	30
Bromoform	ND	0.0497	0.0497	100	0.0491	0.0513	105	5	55-135	30
Bromomethane	ND	0.0497	0.0501	101	0.0491	0.0446	91	10	30-160	30
Carbon Tetrachloride	ND	0.0497	0.0484	98	0.0491	0.0466	95	3	65-135	30
Chlorobenzene	ND	0.0497	0.0507	102	0.0491	0.0495	101	1	75-125	30
Chloroethane	ND	0.0497	0.0541	109	0.0491	0.0464	95	14	40-155	30
Chloroform	ND	0.0497	0.0486	98	0.0491	0.0476	97	1	70-125	30
Chloromethane	ND	0.0497	0.0615	124	0.0491	0.0522	106	16	50-130	30
cis-1,2-Dichloroethene	ND	0.0497	0.0478	96	0.0491	0.0470	96	0	65-125	30
cis-1,3-Dichloropropene	ND	0.0497	0.0535	108	0.0491	0.0528	107	1	70-125	30
Dichlorodifluoromethane	ND	0.0497	0.0673	135	0.0491	0.0579	118	13	35-135	30
Ethylbenzene	ND	0.0497	0.0497	100	0.0491	0.0491	100	0	75-125	30
Isopropylbenzene	ND	0.0497	0.0562	113	0.0491	0.0542	110	3	75-130	30
m/p-Xylenes	ND	0.0993	0.100	101	0.0982	0.0985	100	1	80-125	30
4-Methyl-2-Pentanone	ND	0.248	0.294	118	0.246	0.295	120	2	45-145	30
Methylene Chloride	0.00342J	0.0497	0.0532	100	0.0491	0.0512	97	3	55-140	30
Methyl tert-butyl ether	ND	0.0497	0.0473	95	0.0491	0.0479	97	2	65-135	30
Naphthalene	ND	0.0497	0.0442	89	0.0491	0.0456	93	4	40-125	30
n-Butylbenzene	ND	0.0497	0.0490	99	0.0491	0.0480	98	1	65-135	30
n-Propylbenzene	ND	0.0497	0.0574	116	0.0491	0.0569	116	0	65-135	30
o-Xylene	ND	0.0497	0.0550	111	0.0491	0.0533	108	3	75-125	30
Sec-Butylbenzene	ND	0.0497	0.0554	112	0.0491	0.0550	112	0	65-130	30
Styrene	ND	0.0497	0.0544	109	0.0491	0.0531	108	1	75-125	30
Tetrachloroethene	ND	0.0497	0.0426	86	0.0491	0.0426	87	1	65-140	30
Toluene	ND	0.0497	0.0426	86	0.0491	0.0426	87	1	70-125	30
Trans-1,2-Dichloroethene	ND	0.0497	0.0488	98	0.0491	0.0465	95	3	65-135	30
Trans-1,3-Dichloropropene	ND	0.0497	0.0454	91	0.0491	0.0458	93	2	65-125	30
Trichloroethene	ND	0.0497	0.0503	101	0.0491	0.0495	101	0	75-125	30
Trichlorofluoromethane	ND	0.0497	0.0562	113	0.0491	0.0486	99	13	25-185	30
Vinyl Chloride	ND	0.0497	0.0675	136*	0.0491	0.0571	116	16	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Toluene-d8	0.0497	0.0444	89	0.0491	0.0435	89	85-115
Dibromofluoromethane	0.0497	0.0472	95	0.0491	0.0465	95	80-119

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW3550B/8270D

MATRIX: SOIL % MOISTURE: 9.4

DILUTION FACTOR:	1	1	1
SAMPLE ID:	CA504-SG03-S-010		
LAB SAMP ID:	B060-02	B060-02M	B060-02S
LAB FILE ID:	RBH148	RBH138	RBH139
DATE EXTRACTED:	02/11/1617:18	02/11/1617:18	02/11/1617:18
DATE ANALYZED:	02/12/1614:36	02/12/1611:24	02/12/1611:43
PREP. BATCH:	SVB011S	SVB011S	SVB011S
CALIB. REF:	RAH047	RAH047	RAH047

DATE COLLECTED: 02/05/16
DATE RECEIVED: 02/06/16

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	1.47	1.04	71	1.47	1.02	69	2	45-110	30
1,2-Dichlorobenzene	ND	1.47	1.00	68	1.47	0.986	67	2	45-100	30
1,3-Dichlorobenzene	ND	1.47	0.990	67	1.47	0.996	68	1	40-100	30
1,4-Dichlorobenzene	ND	1.47	0.999	68	1.47	0.983	67	2	35-105	30
2,4,5-Trichlorophenol	ND	1.47	1.06	72	1.47	0.983	67	8	50-110	30
2,4,6-Trichlorophenol	ND	1.47	1.00	68	1.47	0.993	67	1	45-110	30
2,4-Dichlorophenol	ND	1.47	1.05	71	1.47	1.05	71	0	45-110	30
2,4-Dimethylphenol	ND	1.47	0.964	66	1.47	0.939	64	3	30-105	30
2,4-Dinitrophenol	ND	1.47	1.45	99	1.47	1.34	91	8	15-130	30
2,4-Dinitrotoluene	ND	1.47	1.27	86	1.47	1.25	85	1	50-115	30
2,6-Dinitrotoluene	ND	1.47	1.19	81	1.47	1.13	77	5	50-110	30
2-Chloronaphthalene	ND	1.47	1.01	69	1.47	0.983	67	3	45-105	30
2-Chlorophenol	ND	1.47	0.885	60	1.47	0.873	59	1	45-105	30
2-Methylphenol	ND	1.47	1.01	69	1.47	0.995	68	2	40-105	30
2-Nitroaniline	ND	1.47	1.02	69	1.47	1.00	68	2	45-120	30
2-Nitrophenol	ND	1.47	1.08	73	1.47	1.08	74	0	40-110	30
3&4-Methylphenol	ND	1.47	1.05	71	1.47	1.05	71	0	40-105	30
3-Nitroaniline	ND	1.47	1.13	77	1.47	1.08	73	5	25-110	30
4,6-Dinitro-2-Methylphenol	ND	1.47	1.39	95	1.47	1.50	102	7	30-135	30
4-Bromophenyl-phenylether	ND	1.47	1.14	77	1.47	1.11	76	3	45-115	30
4-Chloro-3-Methylphenol	ND	1.47	1.02	70	1.47	0.981	67	4	45-115	30
4-Chlorophenyl-phenylether	ND	1.47	1.08	73	1.47	1.05	71	3	45-110	30
4-Nitroaniline	ND	1.47	1.21	82	1.47	1.23	84	2	35-115	30
4-Nitrophenol	ND	1.47	1.09	74	1.47	1.15	78	5	15-140	30
Benzyl Alcohol	ND	1.47	1.03	70	1.47	1.03	70	0	20-125	30
bis(2-Chloroisopropyl)ether	ND	1.47	0.928	63	1.47	0.908	62	2	20-115	30
bis(2-Chloroethoxy)methane	ND	1.47	1.01	69	1.47	0.992	67	2	45-110	30
bis(2-Chloroethyl)ether	ND	1.47	0.970	66	1.47	0.964	66	1	40-105	30
bis(2-Ethylhexyl)phthalate	ND	1.47	1.37	93	1.47	1.34	91	2	45-125	30
Butylbenzylphthalate	ND	1.47	1.38	94	1.47	1.34	91	3	50-125	30
Carbazole	ND	1.47	1.29	87	1.47	1.27	86	1	45-115	30
Dibenzofuran	ND	1.47	1.04	70	1.47	1.00	68	4	50-105	30
Diethylphthalate	ND	1.47	1.24	84	1.47	1.19	81	4	50-115	30
Dimethylphthalate	ND	1.47	1.09	74	1.47	1.04	70	5	50-110	30
Di-n-butylphthalate	ND	1.47	1.30	88	1.47	1.31	89	1	55-110	30
Di-n-octylphthalate	ND	1.47	1.36	93	1.47	1.37	93	0	40-130	30
Hexachlorobenzene	ND	1.47	1.23	84	1.47	1.19	81	3	45-120	30
Hexachlorobutadiene	ND	1.47	1.01	69	1.47	0.994	68	2	40-115	30
Hexachloroethane	ND	1.47	1.01	68	1.47	0.984	67	2	35-110	30
Isophorone	ND	1.47	1.03	70	1.47	1.04	71	1	45-110	30
Nitrobenzene	ND	1.47	0.976	66	1.47	0.967	66	1	40-115	30
N-Nitrosodimethylamine	ND	1.47	0.978	66	1.47	1.00	68	3	20-115	30
n-Nitroso-di-n-propylamine	ND	1.47	1.04	71	1.47	1.01	69	2	40-115	30
n-Nitrosodiphenylamine	ND	1.47	1.02	69	1.47	1.10	75	8	50-115	30
Pentachlorophenol	ND	1.47	1.27	86	1.47	1.26	85	1	25-120	30
Phenol	ND	1.47	0.958	65	1.47	0.940	64	2	40-100	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	2.21	1.88	85	2.21	1.82	83	35-125
2-Fluorobiphenyl	0.736	0.470	64	0.736	0.442	60	45-105
2-Fluorophenol	2.21	1.44	65	2.21	1.39	63	35-105
Nitrobenzene-d5	0.736	0.485	66	0.736	0.474	64	35-100
Terphenyl-d14	0.736	0.700	95	0.736	0.672	91	30-125

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW3550B/8270D SIM

MATRIX:	SOIL			% MOISTURE:	9.4
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	CA504-SG03-S-010				
LAB SAMP ID:	B060-02	B060-02M	B060-02S		
LAB FILE ID:	RBH148	RBH138	RBH139		
DATE EXTRACTED:	02/11/1617:18	02/11/1617:18	02/11/1617:18	DATE COLLECTED:	02/05/16
DATE ANALYZED:	02/12/1614:36	02/12/1611:24	02/12/1611:43	DATE RECEIVED:	02/06/16
PREP. BATCH:	SVB011S	SVB011S	SVB011S		
CALIB. REF:	RAH047	RAH047	RAH047		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
2-Methylnaphthalene	ND	1.47	1.03	70	1.47	0.999	68	3	45-105	30
Acenaphthene	ND	1.47	1.08	73	1.47	1.03	70	5	45-110	30
Acenaphthylene	ND	1.47	1.10	75	1.47	1.06	72	4	45-105	30
Anthracene	ND	1.47	1.17	79	1.47	1.14	78	2	55-105	30
Benzo(a)anthracene	ND	1.47	1.30	88	1.47	1.28	87	2	50-110	30
Benzo(a)pyrene	ND	1.47	1.35	92	1.47	1.32	90	2	50-110	30
Benzo(b)fluoranthene	ND	1.47	1.37	93	1.47	1.34	91	2	45-115	30
Benzo(k)fluoranthene	ND	1.47	1.37	93	1.47	1.35	92	1	45-125	30
Benzo(g,h,i)perylene	ND	1.47	1.39	95	1.47	1.37	93	2	40-125	30
Chrysene	ND	1.47	1.29	88	1.47	1.30	88	0	55-110	30
Dibenz(a,h)anthracene	ND	1.47	1.38	94	1.47	1.35	92	2	40-125	30
Fluoranthene	ND	1.47	1.31	89	1.47	1.30	88	1	55-115	30
Fluorene	ND	1.47	1.13	77	1.47	1.07	73	5	50-110	30
Indeno(1,2,3-cd)pyrene	ND	1.47	1.32	89	1.47	1.29	88	2	40-120	30
Naphthalene	ND	1.47	1.07	73	1.47	1.03	70	3	40-105	30
Phenanthrene	ND	1.47	1.11	76	1.47	1.08	74	3	50-110	30
Pyrene	ND	1.47	1.31	89	1.47	1.30	88	1	45-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
2-Fluorobiphenyl	0.736	0.523	71	0.736	0.491	67	45-105
Nitrobenzene-d5	0.736	0.531	72	0.736	0.503	68	35-100
Terphenyl-d14	0.736	0.708	96	0.736	0.685	93	30-125

RAW DATA

VOLATILE ORGANICS

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 10:43
Sample ID:	CA504-SG03-S-005	Date Analyzed:	02/10/16 10:43
Lab Samp ID:	B060-01	Dilution Factor:	0.78
Lab File ID:	RBP194	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	7.6
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1,1-TRICHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1,2,2-TETRACHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1,2-TRICHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1-DICHLOROETHANE	ND	0.0042	0.00042	0.00084
1,1-DICHLOROETHENE	ND	0.0042	0.00042	0.00084
1,1-DICHLOROPROPENE	ND	0.0042	0.00042	0.00084
1,2,3-TRICHLOROBENZENE	ND	0.0042	0.00084	0.0017
1,2,4-TRICHLOROBENZENE	ND	0.0042	0.00084	0.0017
1,2,4-TRIMETHYLBENZENE	ND	0.0042	0.00046	0.0017
1,2-DIBROMOETHANE	ND	0.0042	0.00042	0.00084
1,2-DICHLOROBENZENE	ND	0.0042	0.00042	0.00084
1,2-DICHLOROETHANE	ND	0.0042	0.00042	0.00084
1,2-DICHLOROPROPANE	ND	0.0042	0.00042	0.00084
1,3,5-TRIMETHYLBENZENE	ND	0.0042	0.00050	0.0017
1,3-DICHLOROBENZENE	ND	0.0042	0.00044	0.00084
1,3-DICHLOROPROPANE	ND	0.0042	0.00042	0.00084
1,4-DICHLOROBENZENE	ND	0.0042	0.00042	0.00084
2,2-DICHLOROPROPANE	ND	0.0042	0.00084	0.0017
2-BUTANONE	0.0025J	0.0084	0.0021	0.0042
2-CHLOROTOLUENE	ND	0.0042	0.00069	0.00084
4-CHLOROTOLUENE	ND	0.0042	0.00057	0.00084
ACETONE	0.022	0.0084	0.0026	0.0042
BENZENE	ND	0.0042	0.00042	0.00084
BROMOBENZENE	ND	0.0042	0.00042	0.00084
BROMODICHLOROMETHANE	ND	0.0042	0.00042	0.00084
BROMOFORM	ND	0.0042	0.00084	0.0017
BROMOMETHANE	ND	0.0084	0.0015	0.0017
CARBON TETRACHLORIDE	ND	0.0042	0.00046	0.00084
CHLOROBENZENE	ND	0.0042	0.00042	0.00084
CHLOROETHANE	ND	0.0042	0.0011	0.0017
CHLOROFORM	ND	0.0042	0.00042	0.00084
CHLOROMETHANE	ND	0.0042	0.00084	0.0017
CIS-1,2-DICHLOROETHENE	ND	0.0042	0.00042	0.00084
CIS-1,3-DICHLOROPROPENE	ND	0.0042	0.00042	0.00084
DICHLORODIFLUOROMETHANE	ND	0.0042	0.0010	0.0017
ETHYLBENZENE	ND	0.0042	0.00042	0.00084
ISOPROPYLBENZENE	ND	0.0042	0.00054	0.0017
M/P-XYLENES	ND	0.0084	0.00084	0.0017
4-METHYL-2-PENTANONE	ND	0.0084	0.0024	0.0042
METHYLENE CHLORIDE	0.0018J	0.0084	0.00084	0.0017
METHYL TERT-BUTYL ETHER	ND	0.0042	0.00042	0.00084
NAPHTHALENE	ND	0.0084	0.00084	0.0017
N-BUTYLBENZENE	ND	0.0042	0.00059	0.00084
N-PROPYLBENZENE	ND	0.0042	0.00055	0.00084
O-XYLENE	ND	0.0042	0.00042	0.00084
SEC-BUTYLBENZENE	ND	0.0042	0.00057	0.00084
STYRENE	ND	0.0042	0.00042	0.00084
TETRACHLOROETHENE	ND	0.0042	0.00042	0.00084
TOLUENE	ND	0.0042	0.00042	0.00084
TRANS-1,2-DICHLOROETHENE	ND	0.0042	0.00042	0.00084
TRANS-1,3-DICHLOROPROPENE	ND	0.0042	0.00042	0.00084
TRICHLOROETHENE	ND	0.0042	0.00042	0.00084
TRICHLOROFLUOROMETHANE	ND	0.0042	0.00093	0.0017
VINYL CHLORIDE	ND	0.0042	0.0012	0.0017
XYLENES, TOTAL	ND	0.0084	0.00042	0.00084

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0382	0.04221	90.6	85-115
DIBROMOFLUOROMETHANE	0.0398	0.04221	94.3	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP194.D
Acq On : 10 Feb 2016 10:43 am
Sample : 16B060-01
Misc :
MS Integration Params: RTE.P
Quant Time: Feb 19 21:59 2016

Vial: 9
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	2507695	50.00	ug/l	-0.02
51) CHLOROBENZENE-D5	12.28	117	2355165	50.00	ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	807464	50.00	ug/l	-0.02
System Monitoring Compounds						
33) Dibromofluoromethane	6.37	111	722235	47.14	ug/l	-0.02
Spiked Amount 50.000			Recovery =	94.28%		
39) 1,2-Dichloroethane-d4	7.06	65	695839	49.63	ug/l	-0.02
Spiked Amount 50.000			Recovery =	99.26%		
52) Toluene-d8	9.86	98	2856664	45.30	ug/l	-0.02
Spiked Amount 50.000			Recovery =	90.60%		
73) 4-Bromofluorobenzene	14.36	95	1057270	57.55	ug/l	-0.02
Spiked Amount 50.000			Recovery =	115.10%		
Target Compounds						Qvalue
11) Acetone	3.47	43	161761	25.69	ug/l	93
17) Methylene chloride	4.20	49	100279	2.17	ug/l	97
27) 2-Butanone	5.64	43	34467	2.91	ug/l	94
32) Tetrahydrofuran	6.36	42	93987	13.55	ug/l	99

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

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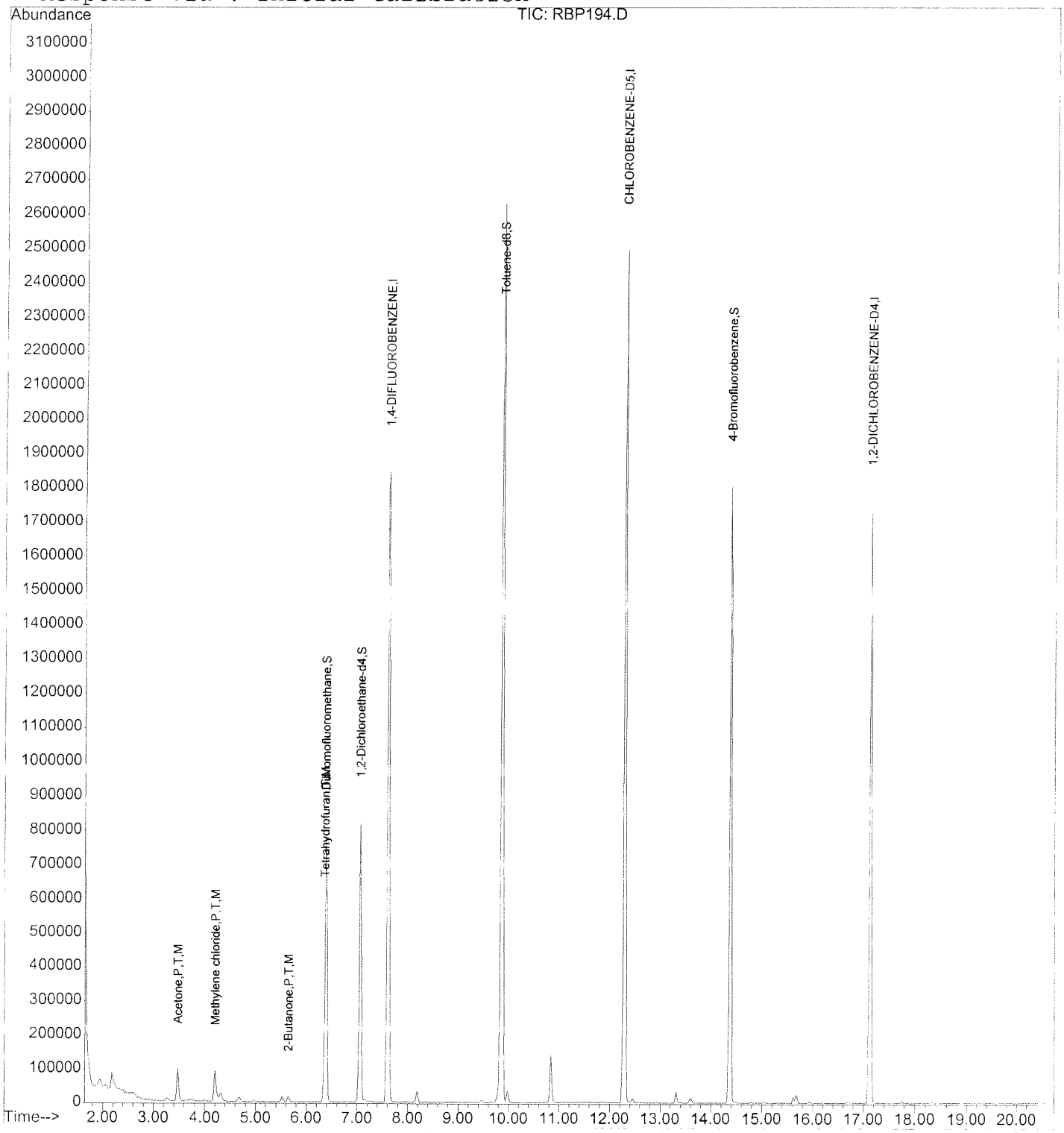
Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP194.D Vial: 9
Acq On : 10 Feb 2016 10:43 am Operator: CMendo
Sample : 16B060-01 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 21:59 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



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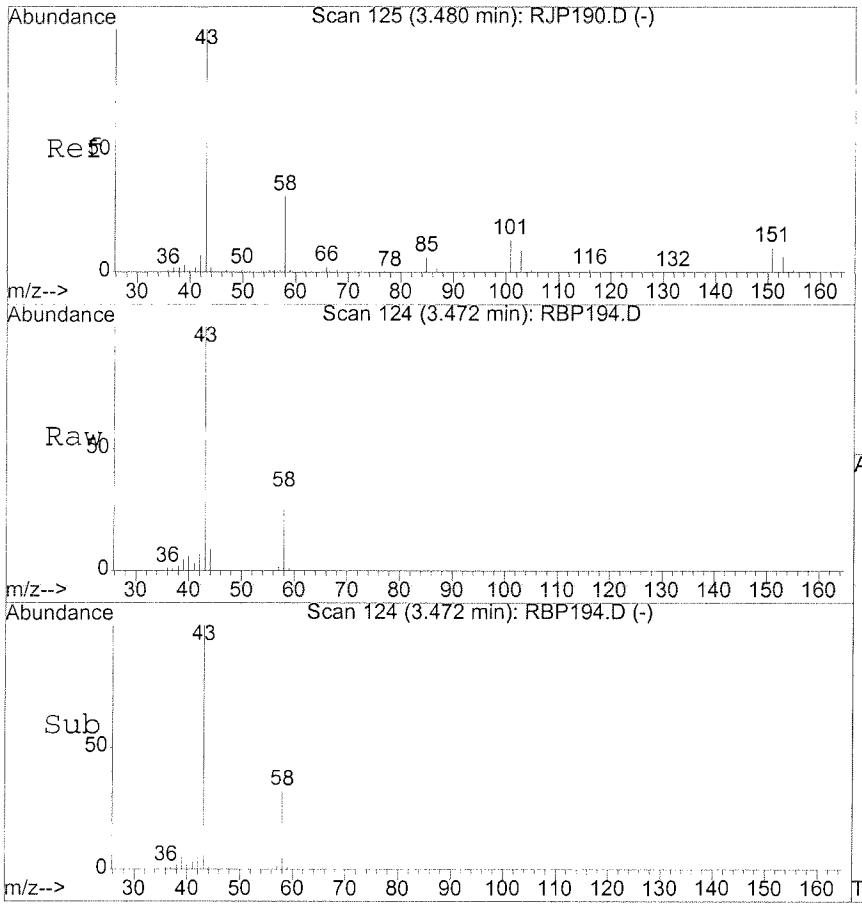
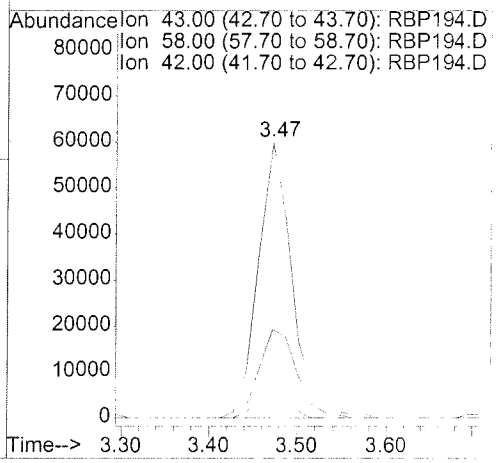
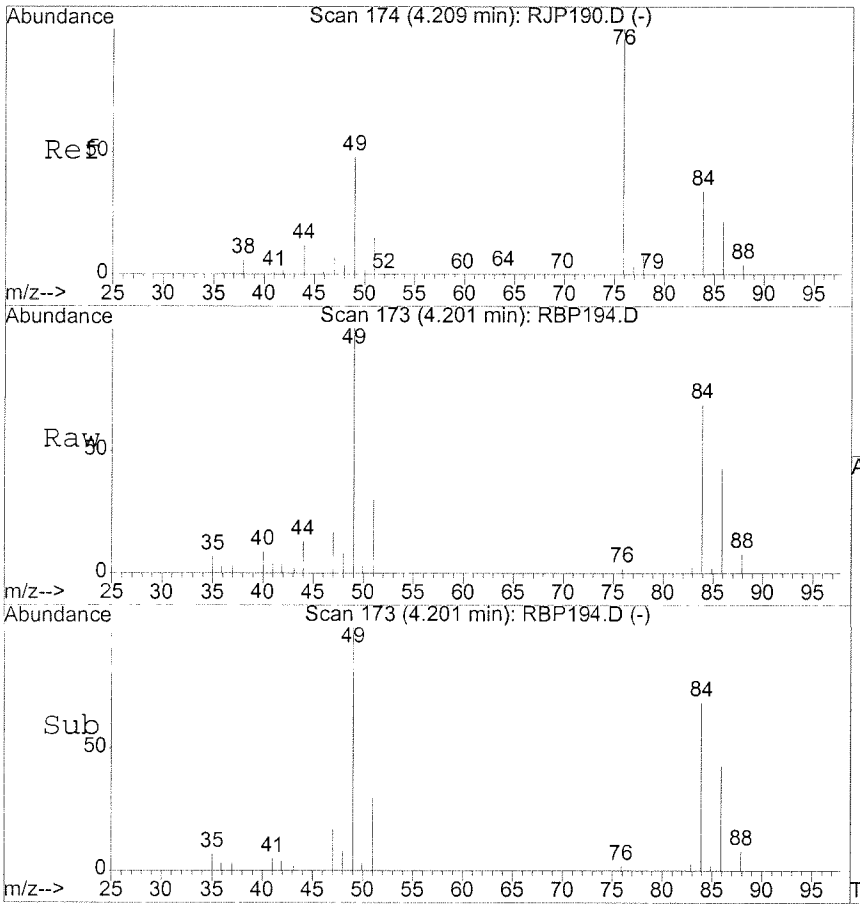


#11
Acetone
Concen: 25.69 ug/l
RT: 3.47 min Scan# 124
Delta R.T. -0.01 min
Lab File: RBP194.D
Acq: 10 Feb 2016 10:43 am

Tgt Ion: 43 Resp: 161761

Ion	Ratio	Lower	Upper
43	100		
58	35.6	0.7	60.7
42	7.4	0.0	37.6

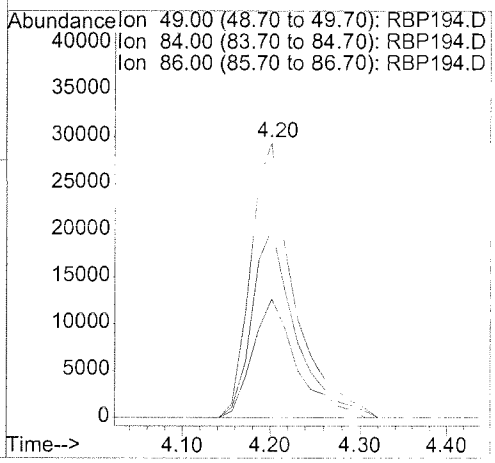


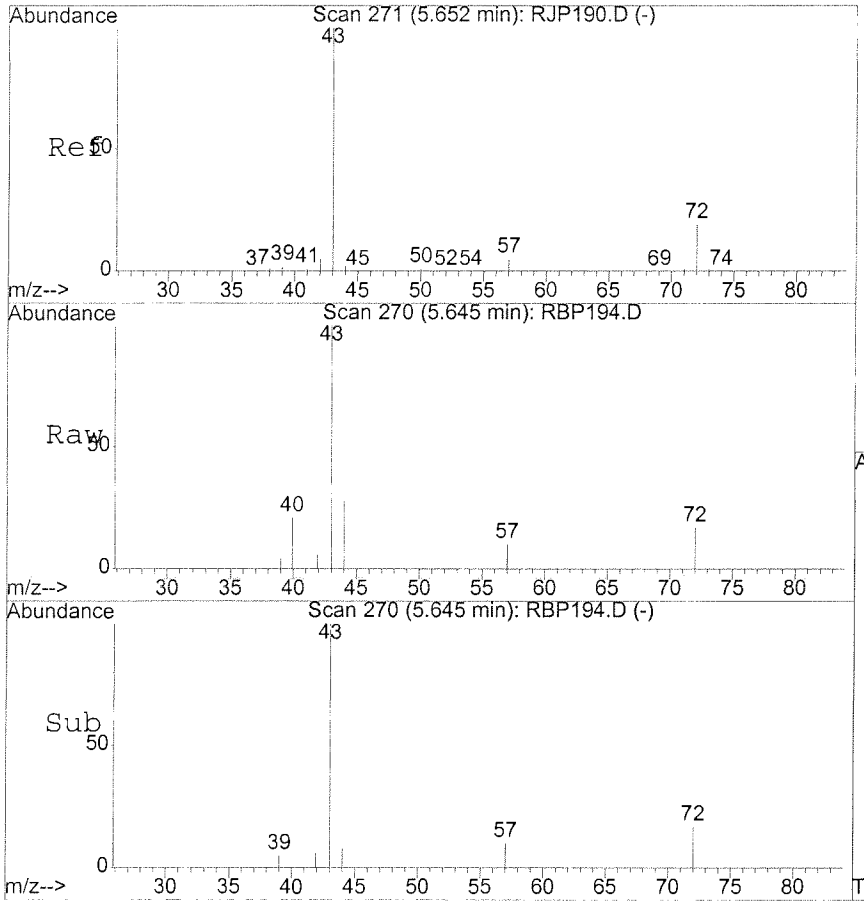


#17
Methylene chloride
Concen: 2.17 ug/l
RT: 4.20 min Scan# 173
Delta R.T. -0.01 min
Lab File: RBP194.D
Acq: 10 Feb 2016 10:43 am

Tgt Ion: 49 Resp: 100279

Ion	Ratio	Lower	Upper
49	100		
84	68.8	41.4	101.4
86	43.8	15.6	75.6

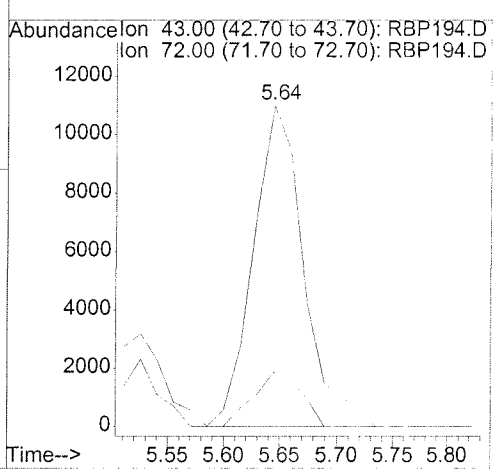


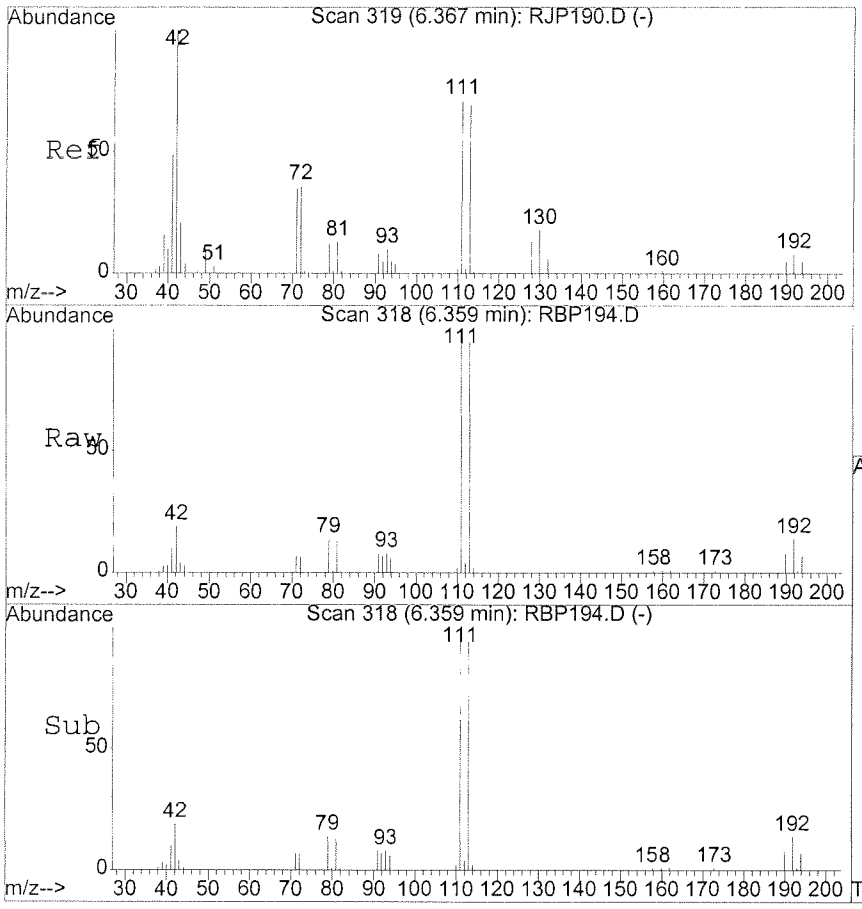


#27
2-Butanone
Concen: 2.91 ug/l
RT: 5.64 min Scan# 270
Delta R.T. -0.01 min
Lab File: RBP194.D
Acq: 10 Feb 2016 10:43 am

Tgt Ion: 43 Resp: 34467

Ion	Ratio	Lower	Upper
43	100		
72	16.1	0.0	48.8

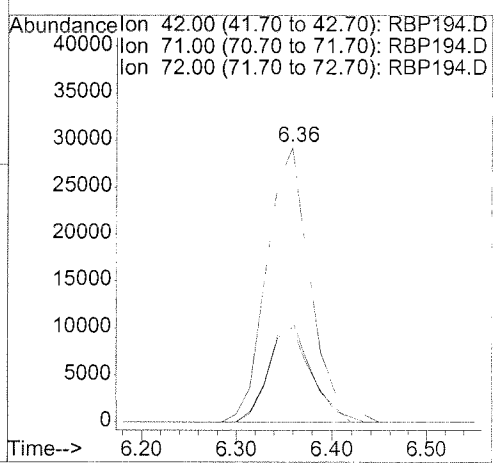




#32
Tetrahydrofuran
Concen: 13.55 ug/l
RT: 6.36 min Scan# 318
Delta R.T. -0.01 min
Lab File: RBP194.D
Acq: 10 Feb 2016 10:43 am

Tgt Ion: 42 Resp: 93987

Ion	Ratio	Lower	Upper
42	100		
71	33.5	5.0	65.0
72	35.0	5.2	65.2



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 11:33
Sample ID	: CA504-SG03-S-010	Date Analyzed:	02/10/16 11:33
Lab Samp ID	: B060-02	Dilution Factor:	0.94
Lab File ID	: RBP196	Matrix	: SOIL
Ext Btch ID	: VS02B12	% Moisture	: 9.4
Calib. Ref.	: RJP190	Instrument ID	: T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
1,1-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0052	0.0010	0.0021
1,2,4-TRICHLOROBENZENE	ND	0.0052	0.0010	0.0021
1,2,4-TRIMETHYLBENZENE	ND	0.0052	0.00057	0.0021
1,2-DIBROMOETHANE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROBENZENE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROETHANE	ND	0.0052	0.00052	0.0010
1,2-DICHLOROPROPANE	ND	0.0052	0.00052	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0052	0.00061	0.0021
1,3-DICHLOROBENZENE	ND	0.0052	0.00054	0.0010
1,3-DICHLOROPROPANE	ND	0.0052	0.00052	0.0010
1,4-DICHLOROBENZENE	ND	0.0052	0.00052	0.0010
2,2-DICHLOROPROPANE	ND	0.0052	0.0010	0.0021
2-BUTANONE	0.0037J	0.010	0.0026	0.0052
2-CHLOROTOLUENE	ND	0.0052	0.00085	0.0010
4-CHLOROTOLUENE	ND	0.0052	0.00070	0.0010
ACETONE	0.038	0.010	0.0032	0.0052
BENZENE	ND	0.0052	0.00052	0.0010
BROMOBENZENE	ND	0.0052	0.00052	0.0010
BROMODICHLOROMETHANE	ND	0.0052	0.00052	0.0010
BROMOFORM	ND	0.0052	0.0010	0.0021
BROMOMETHANE	ND	0.010	0.0019	0.0021
CARBON TETRACHLORIDE	ND	0.0052	0.00056	0.0010
CHLOROBENZENE	ND	0.0052	0.00052	0.0010
CHLOROETHANE	ND	0.0052	0.0013	0.0021
CHLOROFORM	ND	0.0052	0.00052	0.0010
CHLOROMETHANE	ND	0.0052	0.0010	0.0021
CIS-1,2-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0052	0.0012	0.0021
ETHYLBENZENE	ND	0.0052	0.00052	0.0010
ISOPROPYLBENZENE	ND	0.0052	0.00066	0.0021
M/P-XYLENES	ND	0.010	0.0010	0.0021
4-METHYL-2-PENTANONE	ND	0.010	0.0029	0.0052
METHYLENE CHLORIDE	0.0034J	0.010	0.0010	0.0021
METHYL TERT-BUTYL ETHER	ND	0.0052	0.00052	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0021
N-BUTYLBENZENE	ND	0.0052	0.00073	0.0010
N-PROPYLBENZENE	ND	0.0052	0.00067	0.0010
O-XYLENE	ND	0.0052	0.00052	0.0010
SEC-BUTYLBENZENE	ND	0.0052	0.00070	0.0010
STYRENE	ND	0.0052	0.00052	0.0010
TETRACHLOROETHENE	ND	0.0052	0.00052	0.0010
TOLUENE	ND	0.0052	0.00052	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0052	0.00052	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0052	0.00052	0.0010
TRICHLOROETHENE	ND	0.0052	0.00052	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0052	0.0011	0.0021
VINYL CHLORIDE	ND	0.0052	0.0015	0.0021
XYLENES, TOTAL	ND	0.010	0.00052	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0471	0.05188	90.8	85-115
DIBROMOFLUOROMETHANE	0.0483	0.05188	93.1	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP196.D
Acq On : 10 Feb 2016 11:33 am
Sample : 16B060-02
Misc :
MS Integration Params: RTE.P
Quant Time: Feb 11 6:55 2016

Vial: 11
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

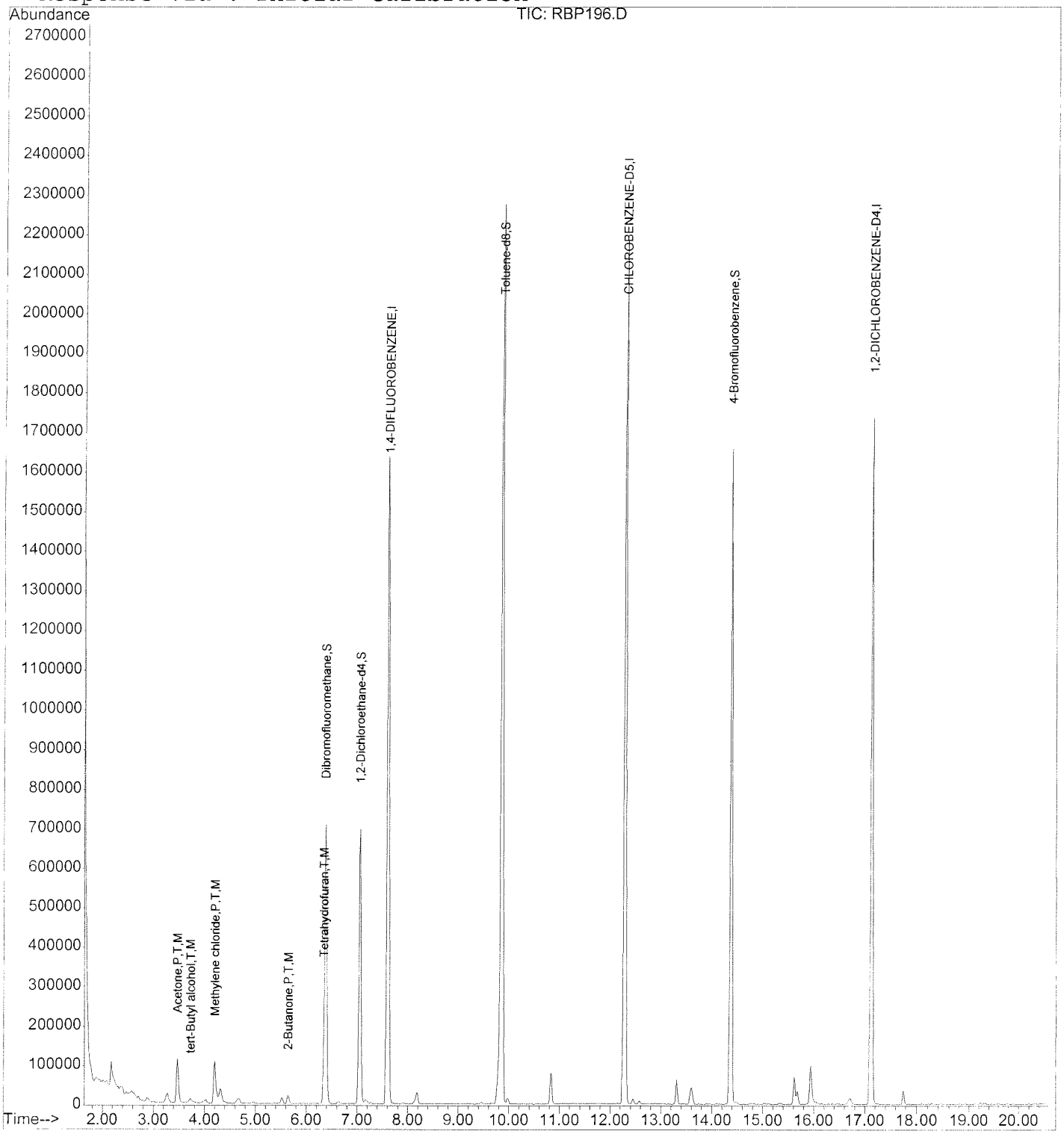
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	2217900	50.00	ug/l	-0.02
51) CHLOROBENZENE-D5	12.28	117	2069222	50.00	ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	800892	50.00	ug/l	-0.02
System Monitoring Compounds						
33) Dibromofluoromethane	6.37	111	630511	46.53	ug/l	-0.02
Spiked Amount 50.000			Recovery =	93.06%		
39) 1,2-Dichloroethane-d4	7.06	65	607216	48.97	ug/l	-0.02
Spiked Amount 50.000			Recovery =	97.94%		
52) Toluene-d8	9.86	98	2514564	45.39	ug/l	-0.02
Spiked Amount 50.000			Recovery =	90.78%		
73) 4-Bromofluorobenzene	14.36	95	948332	52.04	ug/l	-0.02
Spiked Amount 50.000			Recovery =	104.08%		
Target Compounds						Qvalue
11) Acetone	3.47	43	202283	36.33	ug/l	93
13) tert-Butyl alcohol	3.73	59	23191	10.04	ug/l	85
17) Methylene chloride	4.20	49	112289	3.30	ug/l	95
27) 2-Butanone	5.64	43	37623	3.59	ug/l	97
32) Tetrahydrofuran	6.34	42	120161	19.58	ug/l	95

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

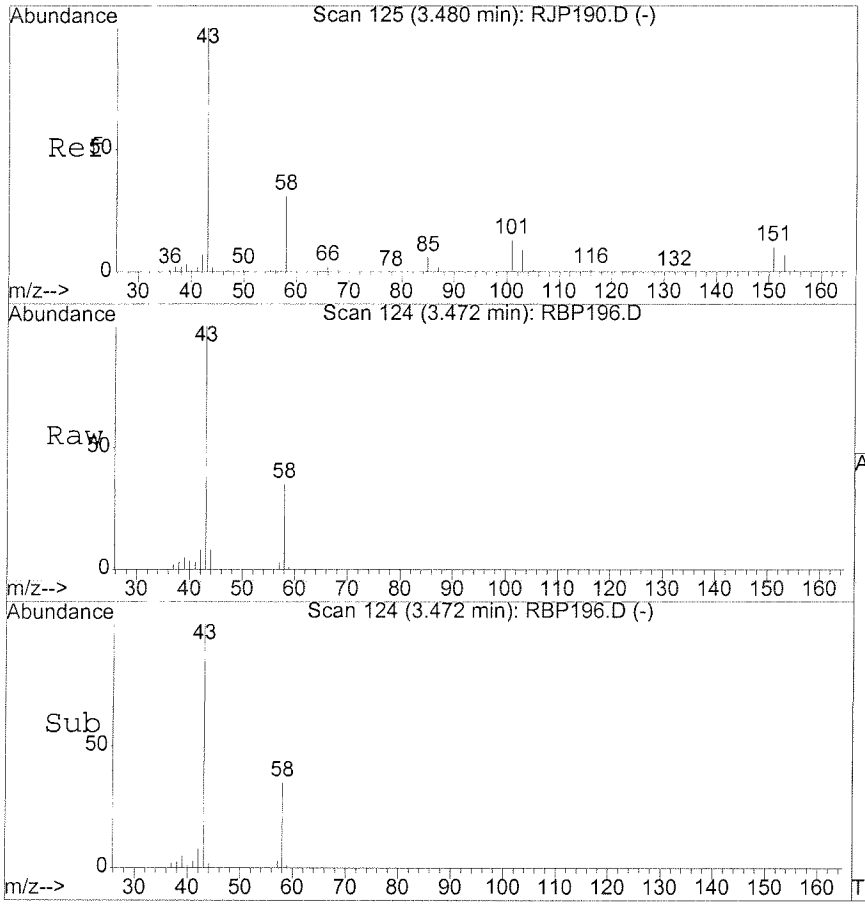
Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP196.D Vial: 11
Acq On : 10 Feb 2016 11:33 am Operator: CMendo
Sample : 16B060-02 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 11 6:55 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



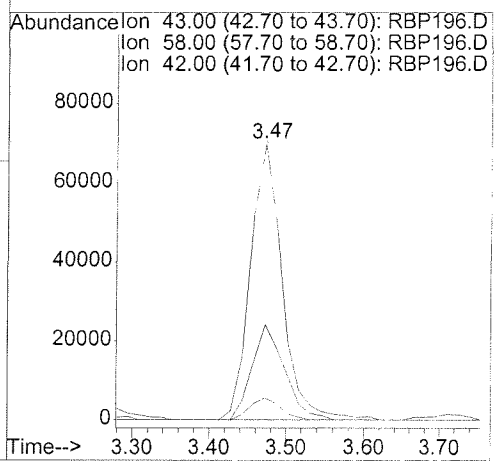
68

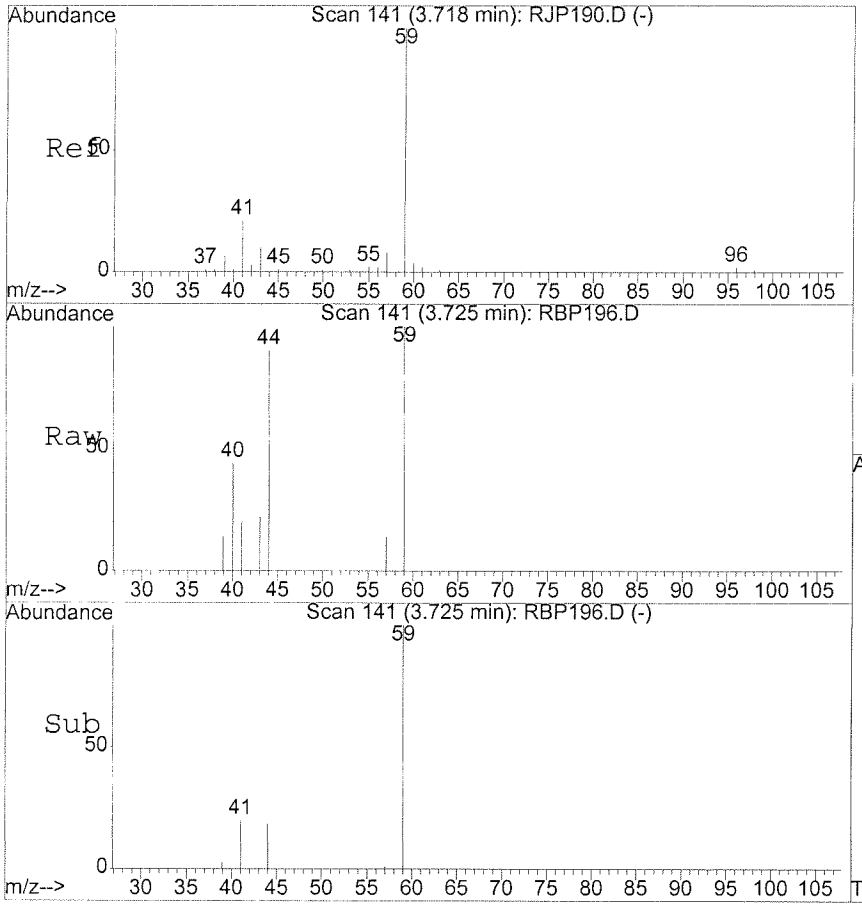


#11
Acetone
Concen: 36.33 ug/l
RT: 3.47 min Scan# 124
Delta R.T. -0.01 min
Lab File: RBP196.D
Acq: 10 Feb 2016 11:33 am

Tgt Ion: 43 Resp: 202283

Ion	Ratio	Lower	Upper
43	100		
58	35.3	0.7	60.7
42	7.6	0.0	37.6

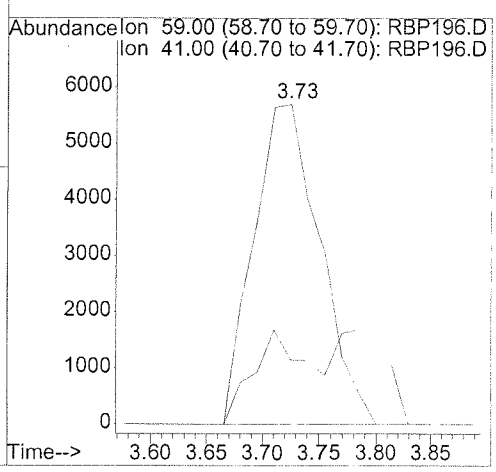


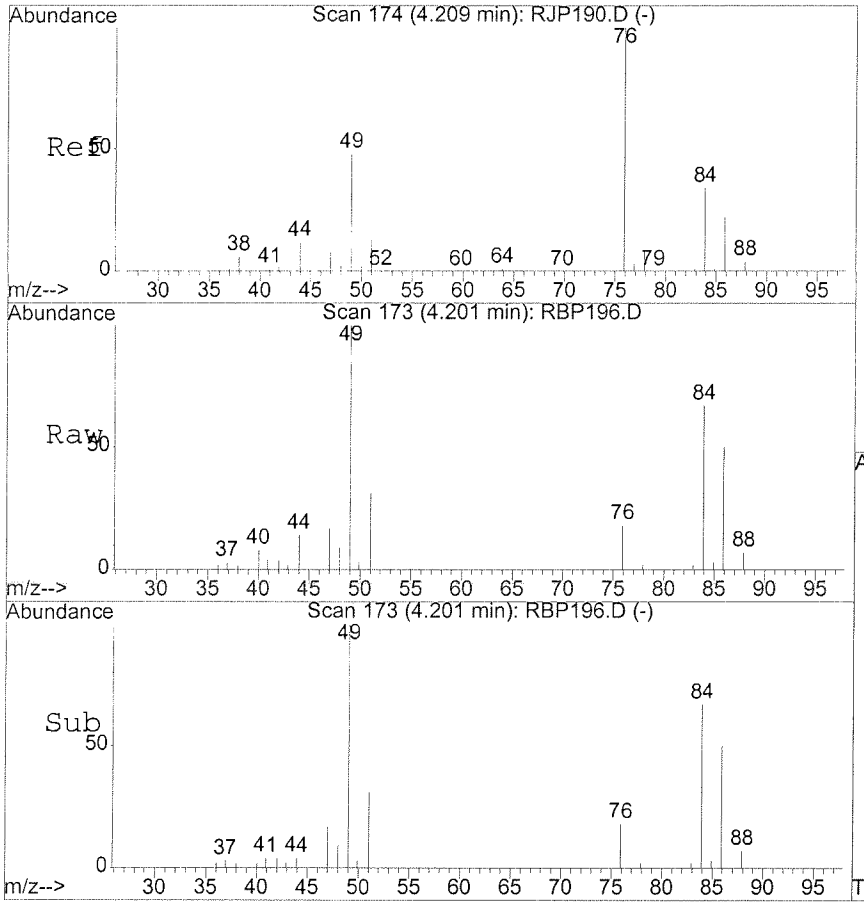


#13
tert-Butyl alcohol
Concen: 10.04 ug/l
RT: 3.73 min Scan# 141
Delta R.T. 0.01 min
Lab File: RBP196.D
Acq: 10 Feb 2016 11:33 am

Tgt Ion: 59 Resp: 23191

Ion	Ratio	Lower	Upper
59	100		
41	25.0	0.0	48.5

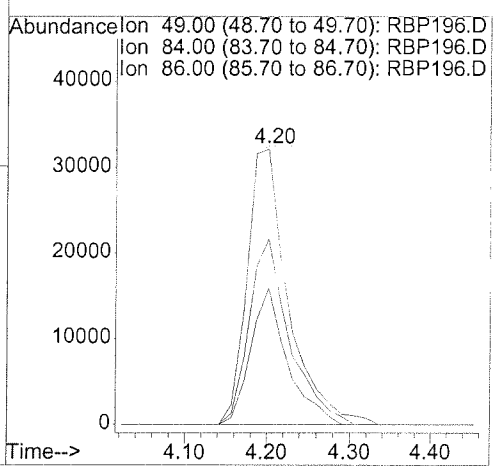


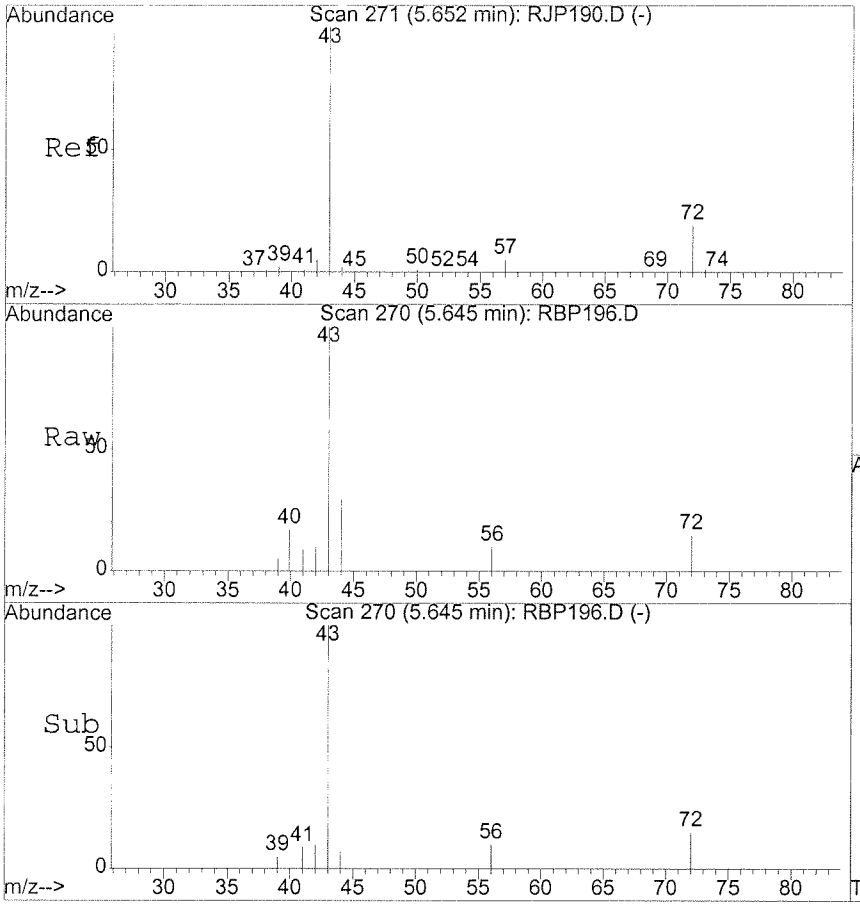


#17
Methylene chloride
Concen: 3.30 ug/l
RT: 4.20 min Scan# 173
Delta R.T. -0.01 min
Lab File: RBP196.D
Acq: 10 Feb 2016 11:33 am

Tgt Ion: 49 Resp: 112289

Ion	Ratio	Lower	Upper
49	100		
84	66.0	41.4	101.4
86	44.3	15.6	75.6

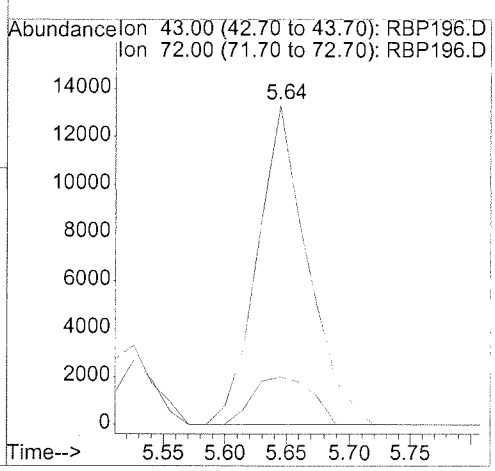


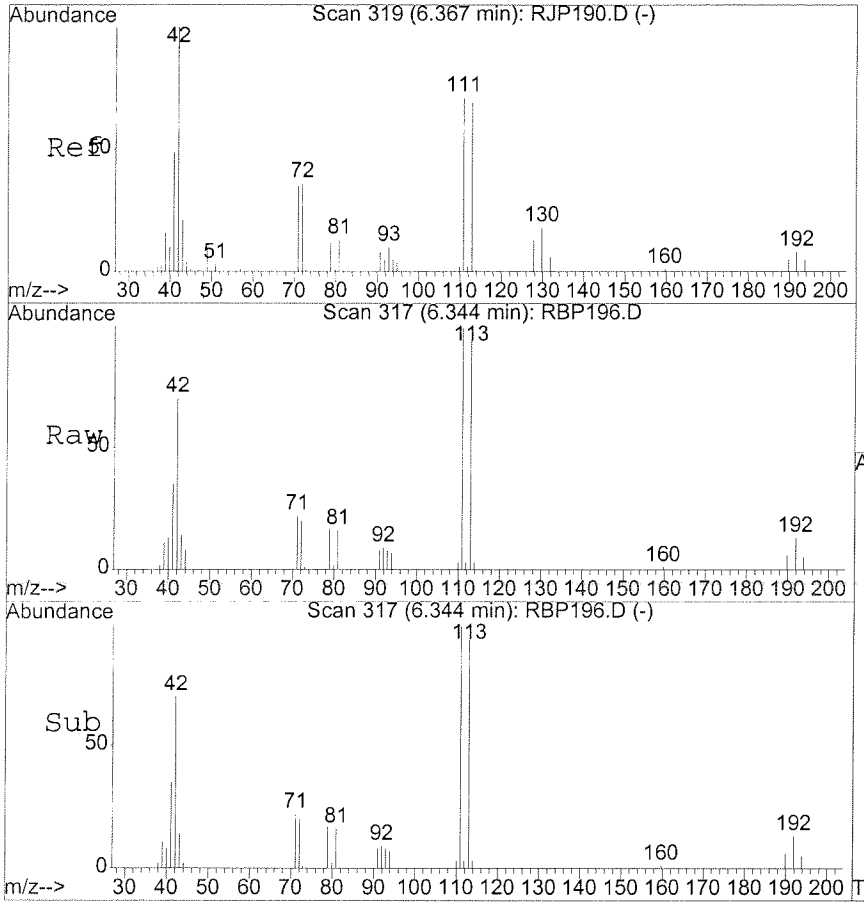


#27
2-Butanone
Concen: 3.59 ug/l
RT: 5.64 min Scan# 270
Delta R.T. -0.01 min
Lab File: RBP196.D
Acq: 10 Feb 2016 11:33 am

Tgt Ion: 43 Resp: 37623

Ion	Ratio	Lower	Upper
43	100		
72	17.5	0.0	48.8

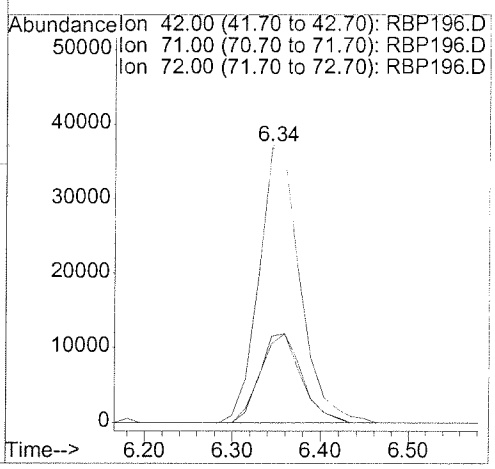




#32
Tetrahydrofuran
Concen: 19.58 ug/l
RT: 6.34 min Scan# 317
Delta R.T. -0.02 min
Lab File: RBP196.D
Acq: 10 Feb 2016 11:33 am

Tgt Ion: 42 Resp: 120161

Ion	Ratio	Lower	Upper
42	100		
71	33.2	5.0	65.0
72	31.4	5.2	65.2



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 12:22
Sample ID:	CA504-SG01-S-005	Date Analyzed:	02/10/16 12:22
Lab Samp ID:	B060-04	Dilution Factor:	1
Lab File ID:	RBP198	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	5.5
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
1,1-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0053	0.0011	0.0021
1,2,4-TRICHLOROBENZENE	ND	0.0053	0.0011	0.0021
1,2,4-TRIMETHYLBENZENE	ND	0.0053	0.00058	0.0021
1,2-DIBROMOETHANE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROBENZENE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROETHANE	ND	0.0053	0.00053	0.0011
1,2-DICHLOROPROPANE	ND	0.0053	0.00053	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0053	0.00062	0.0021
1,3-DICHLOROBENZENE	ND	0.0053	0.00055	0.0011
1,3-DICHLOROPROPANE	ND	0.0053	0.00053	0.0011
1,4-DICHLOROBENZENE	ND	0.0053	0.00053	0.0011
2,2-DICHLOROPROPANE	ND	0.0053	0.0011	0.0021
2-BUTANONE	0.0033J	0.011	0.0026	0.0053
2-CHLOROTOLUENE	ND	0.0053	0.00087	0.0011
4-CHLOROTOLUENE	ND	0.0053	0.00071	0.0011
ACETONE	0.033	0.011	0.0033	0.0053
BENZENE	ND	0.0053	0.00053	0.0011
BROMOBENZENE	ND	0.0053	0.00053	0.0011
BROMODICHLOROMETHANE	ND	0.0053	0.00053	0.0011
BROMOFORM	ND	0.0053	0.0011	0.0021
BROMOMETHANE	ND	0.011	0.0019	0.0021
CARBON TETRACHLORIDE	ND	0.0053	0.00057	0.0011
CHLOROBENZENE	ND	0.0053	0.00053	0.0011
CHLOROETHANE	ND	0.0053	0.0014	0.0021
CHLOROFORM	ND	0.0053	0.00053	0.0011
CHLOROMETHANE	ND	0.0053	0.0011	0.0021
CIS-1,2-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0053	0.0013	0.0021
ETHYLBENZENE	ND	0.0053	0.00053	0.0011
ISOPROPYLBENZENE	ND	0.0053	0.00068	0.0021
M/P-XYLENES	ND	0.011	0.0011	0.0021
4-METHYL-2-PENTANONE	ND	0.011	0.0030	0.0053
METHYLENE CHLORIDE	0.0020J	0.011	0.0011	0.0021
METHYL TERT-BUTYL ETHER	ND	0.0053	0.00053	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0021
N-BUTYLBENZENE	ND	0.0053	0.00074	0.0011
N-PROPYLBENZENE	ND	0.0053	0.00069	0.0011
O-XYLENE	ND	0.0053	0.00053	0.0011
SEC-BUTYLBENZENE	ND	0.0053	0.00071	0.0011
STYRENE	ND	0.0053	0.00053	0.0011
TETRACHLOROETHENE	ND	0.0053	0.00053	0.0011
TOLUENE	0.00053J	0.0053	0.00053	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0053	0.00053	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0053	0.00053	0.0011
TRICHLOROETHENE	ND	0.0053	0.00053	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0053	0.0012	0.0021
VINYL CHLORIDE	ND	0.0053	0.0015	0.0021
XYLENES, TOTAL	ND	0.011	0.00053	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0489	0.05291	92.5	85-115
DIBROMOFLUOROMETHANE	0.0491	0.05291	92.9	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP198.D
Acq On : 10 Feb 2016 12:22 pm
Sample : 16B060-04
Misc :
MS Integration Params: RTE.P
Quant Time: Feb 19 22:01 2016

Vial: 13
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

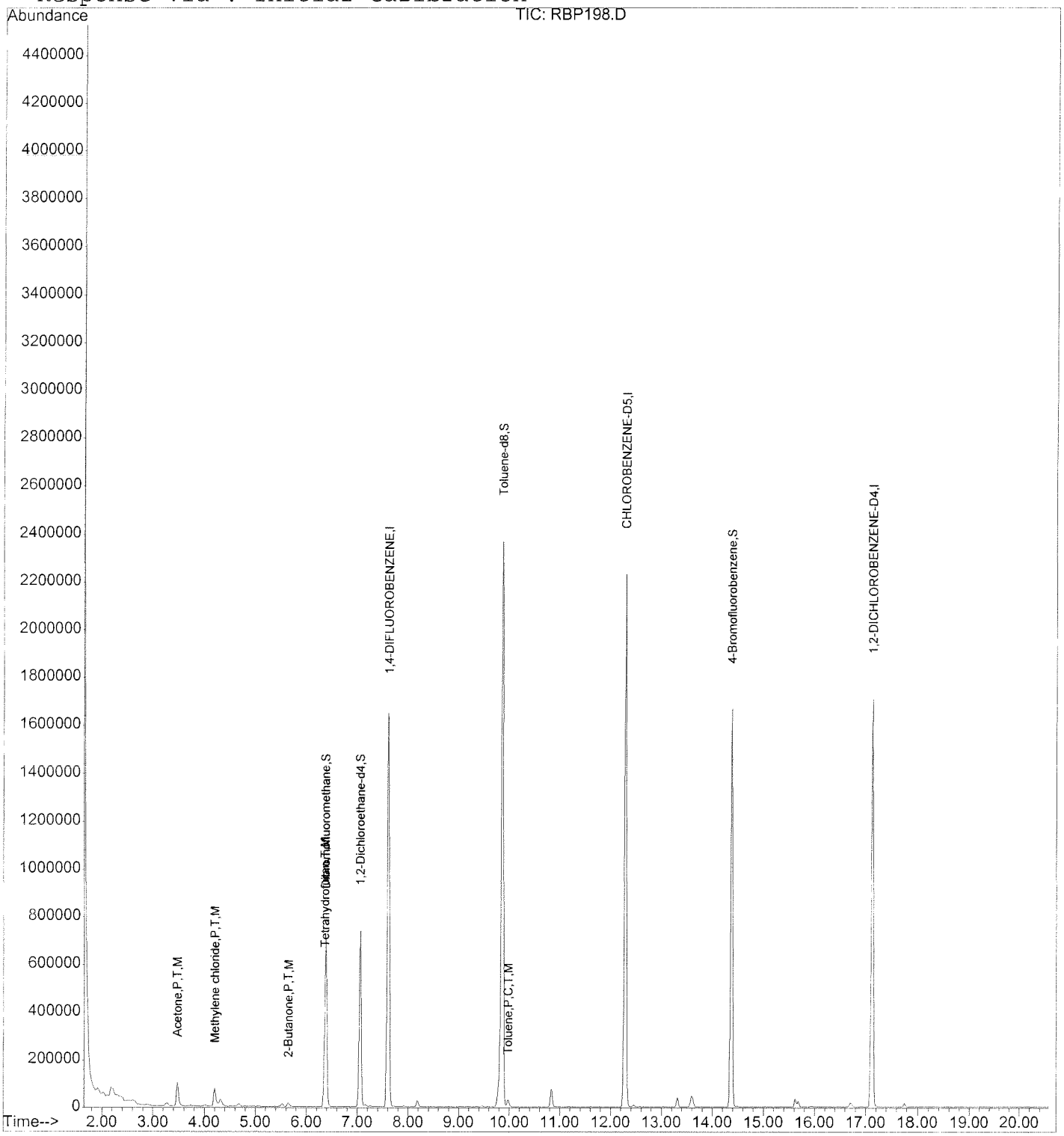
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	2285345	50.00 ug/l	-0.02
51) CHLOROBENZENE-D5	12.28	117	2076777	50.00 ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	784212	50.00 ug/l	-0.02
System Monitoring Compounds					
33) Dibromofluoromethane	6.37	111	648311	46.43 ug/l	-0.02
Spiked Amount 50.000			Recovery =	92.86%	
39) 1,2-Dichloroethane-d4	7.06	65	626986	49.07 ug/l	-0.02
Spiked Amount 50.000			Recovery =	98.14%	
52) Toluene-d8	9.86	98	2571735	46.25 ug/l	-0.02
Spiked Amount 50.000			Recovery =	92.50%	
73) 4-Bromofluorobenzene	14.36	95	966709	54.18 ug/l	-0.02
Spiked Amount 50.000			Recovery =	108.36%	
Target Compounds					Qvalue
11) Acetone	3.47	43	176589	30.78 ug/l	86
17) Methylene chloride	4.20	49	86152	1.93 ug/l	96
27) 2-Butanone	5.64	43	33443	3.10 ug/l	96
32) Tetrahydrofuran	6.36	42	91569	14.48 ug/l	97
53) Toluene	9.98	91	33872	0.50 ug/l	92

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP198.D Vial: 13
Acq On : 10 Feb 2016 12:22 pm Operator: CMendo
Sample : 16B060-04 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:01 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



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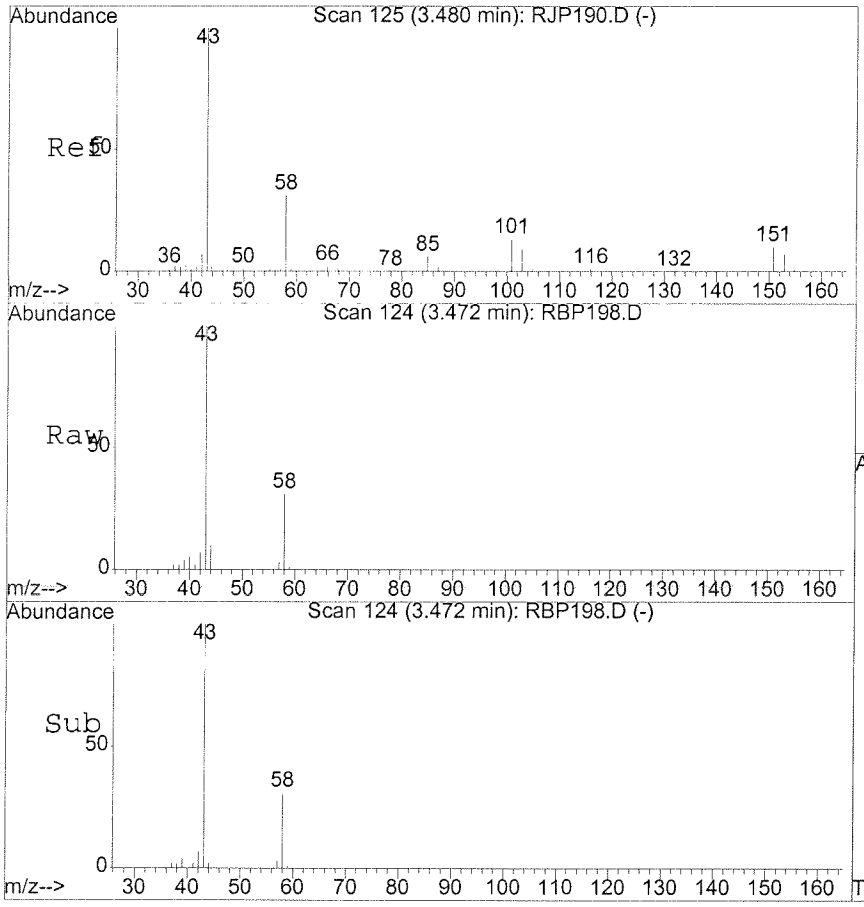
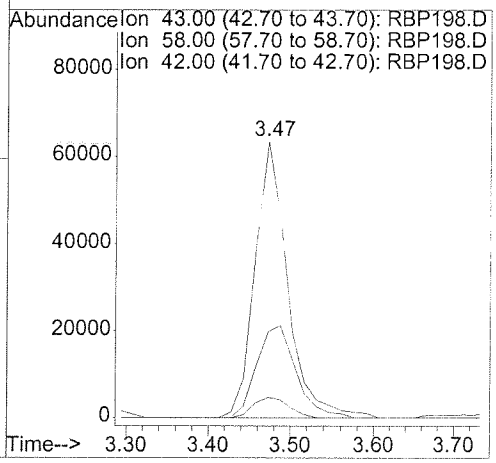
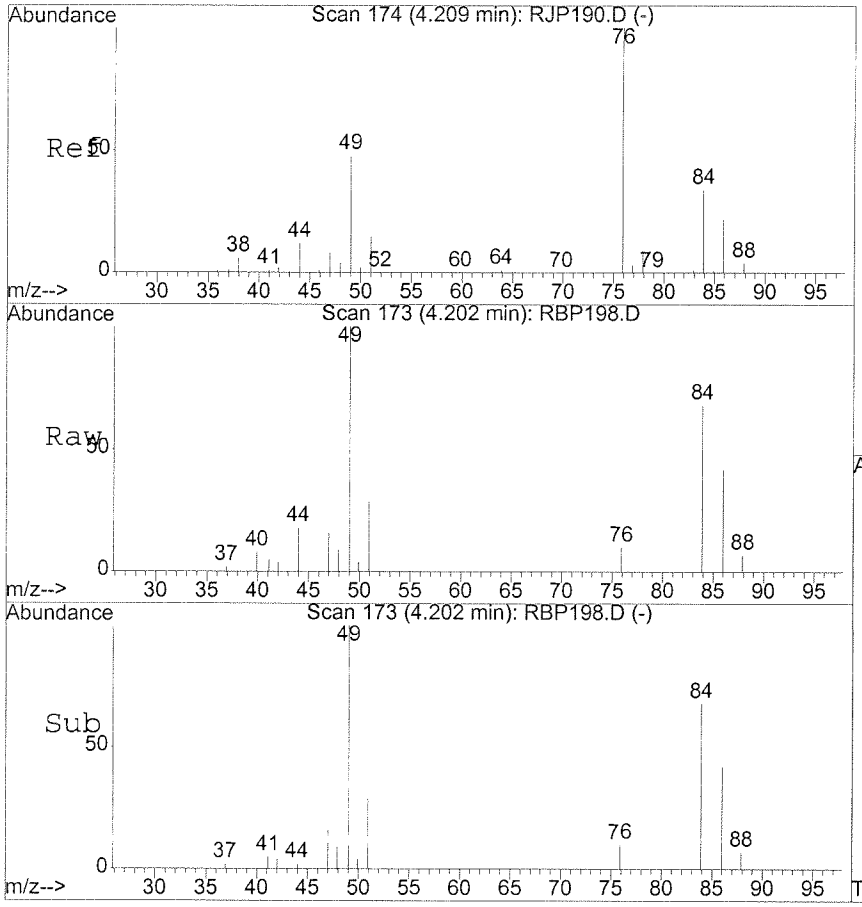


#11
Acetone
Concen: 30.78 ug/l
RT: 3.47 min Scan# 124
Delta R.T. -0.01 min
Lab File: RBP198.D
Acq: 10 Feb 2016 12:22 pm

Tgt Ion: 43 Resp: 176589

Ion	Ratio	Lower	Upper
43	100		
58	40.1	0.7	60.7
42	8.0	0.0	37.6

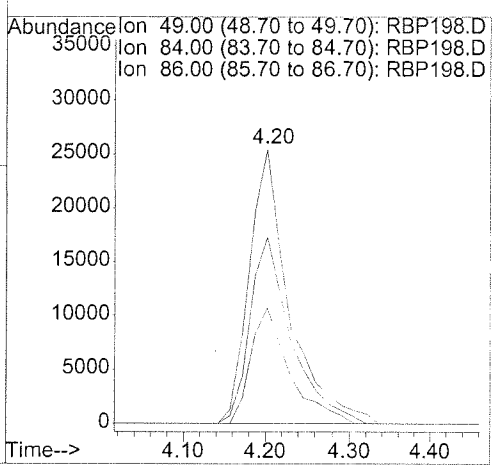


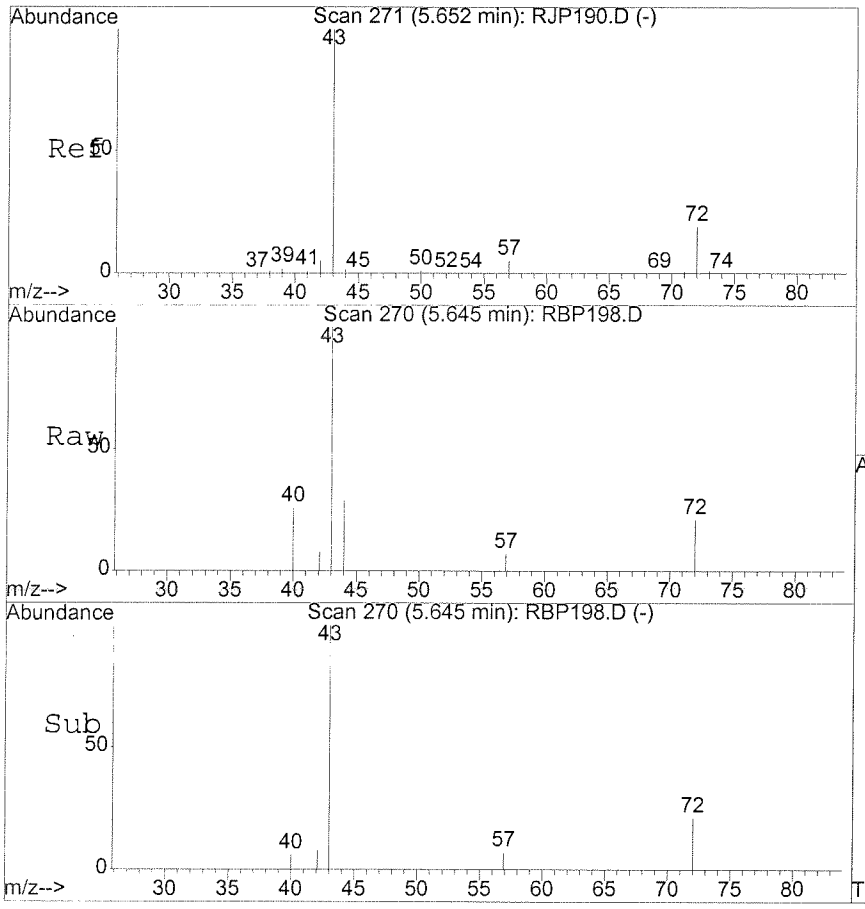


#17
Methylene chloride
Concen: 1.93 ug/l
RT: 4.20 min Scan# 173
Delta R.T. -0.01 min
Lab File: RBP198.D
Acq: 10 Feb 2016 12:22 pm

Tgt Ion: 49 Resp: 86152

Ion	Ratio	Lower	Upper
49	100		
84	70.0	41.4	101.4
86	40.9	15.6	75.6

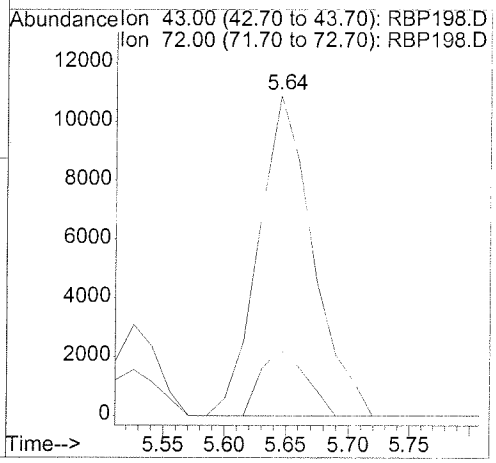


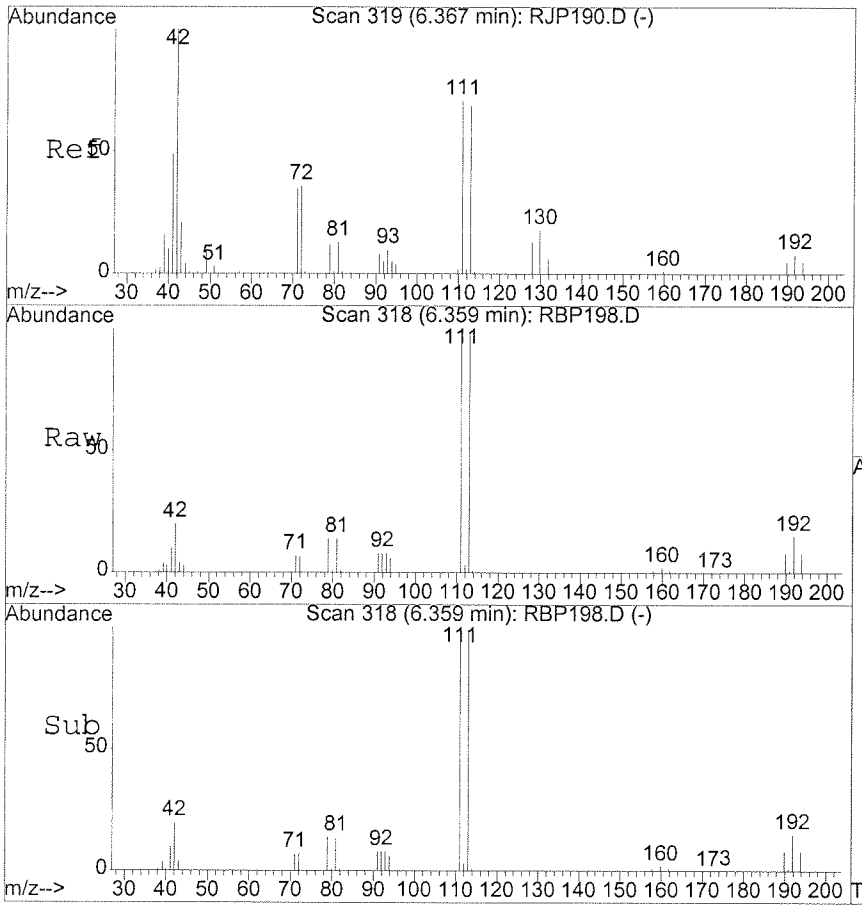


#27
2-Butanone
Concen: 3.10 ug/l
RT: 5.64 min Scan# 270
Delta R.T. -0.01 min
Lab File: RBP198.D
Acq: 10 Feb 2016 12:22 pm

Tgt Ion: 43 Resp: 33443

Ion	Ratio	Lower	Upper
43	100		
72	17.0	0.0	48.8

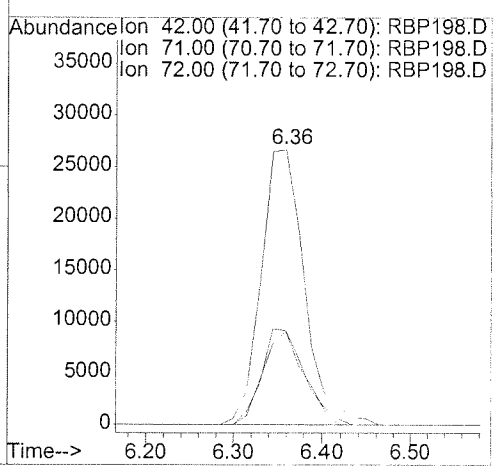


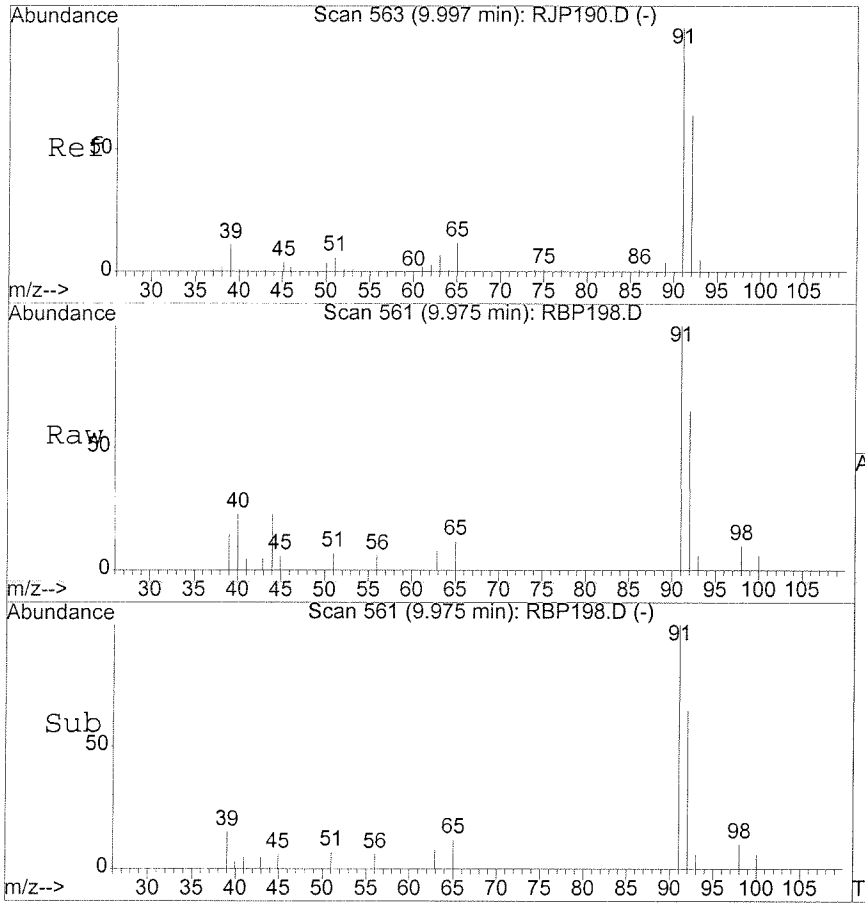


#32
Tetrahydrofuran
Concen: 14.48 ug/l
RT: 6.36 min Scan# 318
Delta R.T. -0.01 min
Lab File: RBP198.D
Acq: 10 Feb 2016 12:22 pm

Tgt Ion: 42 Resp: 91569

Ion	Ratio	Lower	Upper
42	100		
71	32.1	5.0	65.0
72	34.7	5.2	65.2

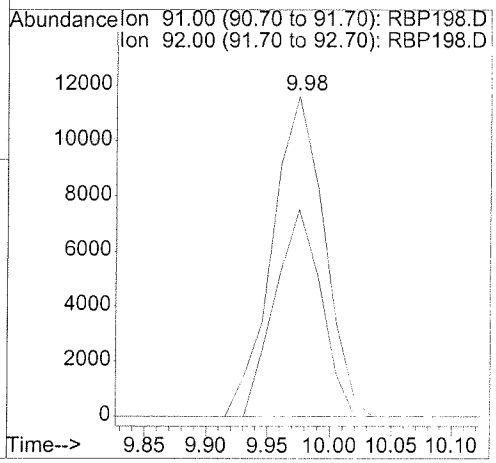




#53
Toluene
Concen: 0.50 ug/l
RT: 9.98 min Scan# 561
Delta R.T. -0.02 min
Lab File: RBP198.D
Acq: 10 Feb 2016 12:22 pm

Tgt Ion: 91 Resp: 33872

Ion	Ratio	Lower	Upper
91	100		
92	57.5	33.8	93.8



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 12:47
Sample ID:	CA504-SG01-S-010	Date Analyzed:	02/10/16 12:47
Lab Samp ID:	B060-05	Dilution Factor:	1.03
Lab File ID:	RBP199	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	6.7
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRIMETHYLBENZENE	ND	0.0055	0.00061	0.0022
1,2-DIBROMOETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0055	0.00065	0.0022
1,3-DICHLOROBENZENE	ND	0.0055	0.00057	0.0011
1,3-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,4-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
2,2-DICHLOROPROPANE	ND	0.0055	0.0011	0.0022
2-BUTANONE	0.0043J	0.011	0.0028	0.0055
2-CHLOROTOLUENE	ND	0.0055	0.00091	0.0011
4-CHLOROTOLUENE	ND	0.0055	0.00074	0.0011
ACETONE	0.041	0.011	0.0034	0.0055
BENZENE	ND	0.0055	0.00055	0.0011
BROMOBENZENE	ND	0.0055	0.00055	0.0011
BROMODICHLOROMETHANE	ND	0.0055	0.00055	0.0011
BROMOFORM	ND	0.0055	0.0011	0.0022
BROMOMETHANE	ND	0.011	0.0020	0.0022
CARBON TETRACHLORIDE	ND	0.0055	0.00060	0.0011
CHLOROBENZENE	ND	0.0055	0.00055	0.0011
CHLOROETHANE	ND	0.0055	0.0014	0.0022
CHLOROFORM	ND	0.0055	0.00055	0.0011
CHLOROMETHANE	ND	0.0055	0.0011	0.0022
CIS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0055	0.0013	0.0022
ETHYLBENZENE	ND	0.0055	0.00055	0.0011
ISOPROPYLBENZENE	ND	0.0055	0.00071	0.0022
M/P-XYLENES	ND	0.011	0.0011	0.0022
4-METHYL-2-PENTANONE	ND	0.011	0.0031	0.0055
METHYLENE CHLORIDE	0.0016J	0.011	0.0011	0.0022
METHYL TERT-BUTYL ETHER	ND	0.0055	0.00055	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0022
N-BUTYLBENZENE	ND	0.0055	0.00077	0.0011
N-PROPYLBENZENE	ND	0.0055	0.00072	0.0011
O-XYLENE	ND	0.0055	0.00055	0.0011
SEC-BUTYLBENZENE	ND	0.0055	0.00074	0.0011
STYRENE	ND	0.0055	0.00055	0.0011
TETRACHLOROETHENE	ND	0.0055	0.00055	0.0011
TOLUENE	0.00086J	0.0055	0.00055	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
TRICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0055	0.0012	0.0022
VINYL CHLORIDE	ND	0.0055	0.0015	0.0022
XYLENES, TOTAL	ND	0.011	0.00055	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0494	0.05520	89.5	85-115
DIBROMOFLUOROMETHANE	0.0520	0.05520	94.1	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP199.D
Acq On : 10 Feb 2016 12:47 pm
Sample : 16B060-05
Misc :
MS Integration Params: RTE.P
Quant Time: Feb 19 22:01 2016

Vial: 14
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

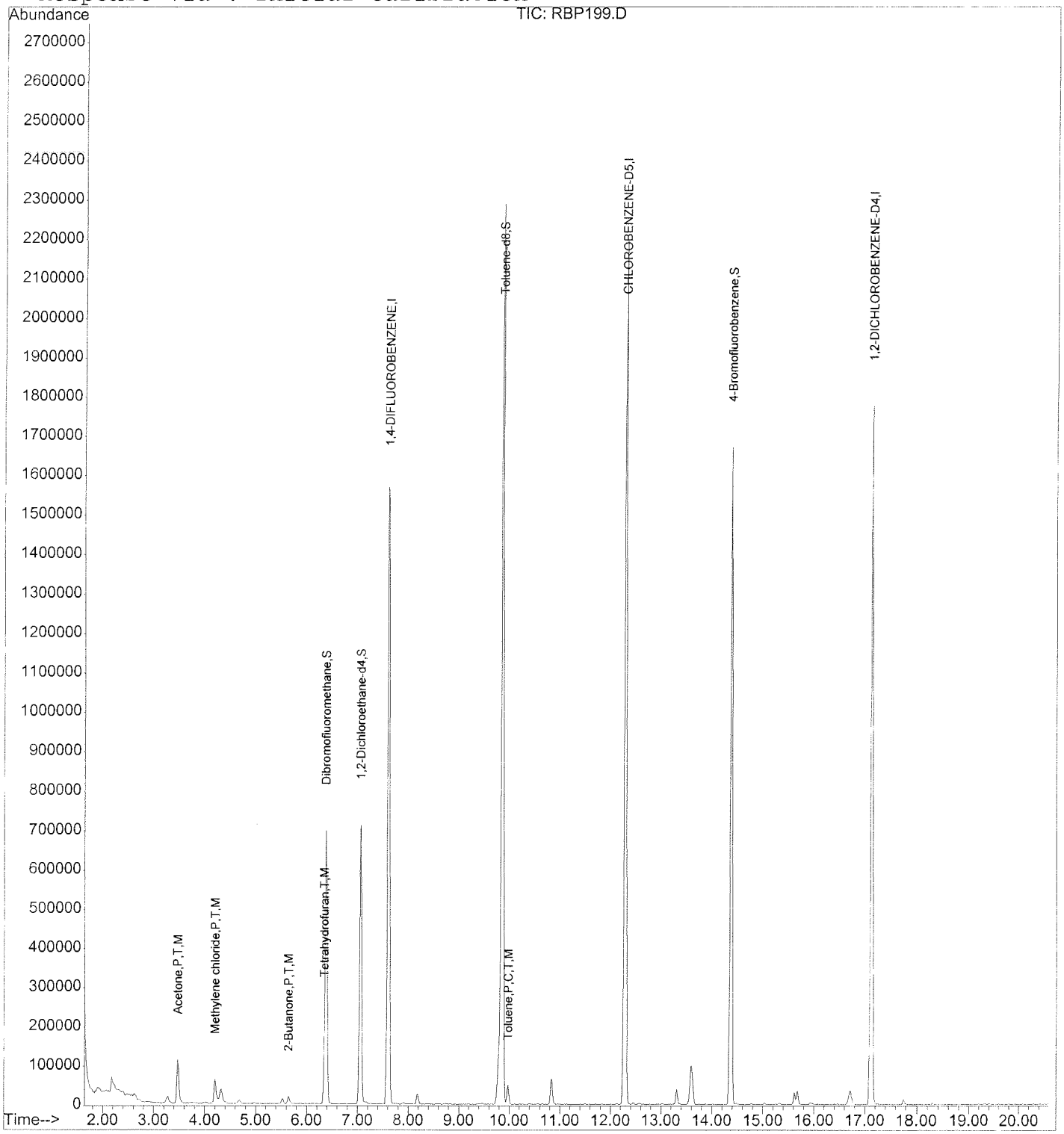
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	2168540	50.00 ug/l	-0.02
51) CHLOROBENZENE-D5	12.28	117	2034141	50.00 ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	835978	50.00 ug/l	-0.02
System Monitoring Compounds					
33) Dibromofluoromethane	6.37	111	623621	47.07 ug/l	-0.02
Spiked Amount 50.000			Recovery =	94.14%	
39) 1,2-Dichloroethane-d4	7.06	65	597559	49.29 ug/l	-0.02
Spiked Amount 50.000			Recovery =	98.58%	
52) Toluene-d8	9.86	98	2437066	44.75 ug/l	-0.02
Spiked Amount 50.000			Recovery =	89.50%	
73) 4-Bromofluorobenzene	14.36	95	957434	50.34 ug/l	-0.02
Spiked Amount 50.000			Recovery =	100.68%	
Target Compounds					Qvalue
11) Acetone	3.47	43	202022	37.11 ug/l	96
17) Methylene chloride	4.20	49	71654	1.44 ug/l	97
27) 2-Butanone	5.64	43	39767	3.88 ug/l	92
32) Tetrahydrofuran	6.34	42	97936	16.32 ug/l	97
53) Toluene	9.98	91	51630	0.78 ug/l	95

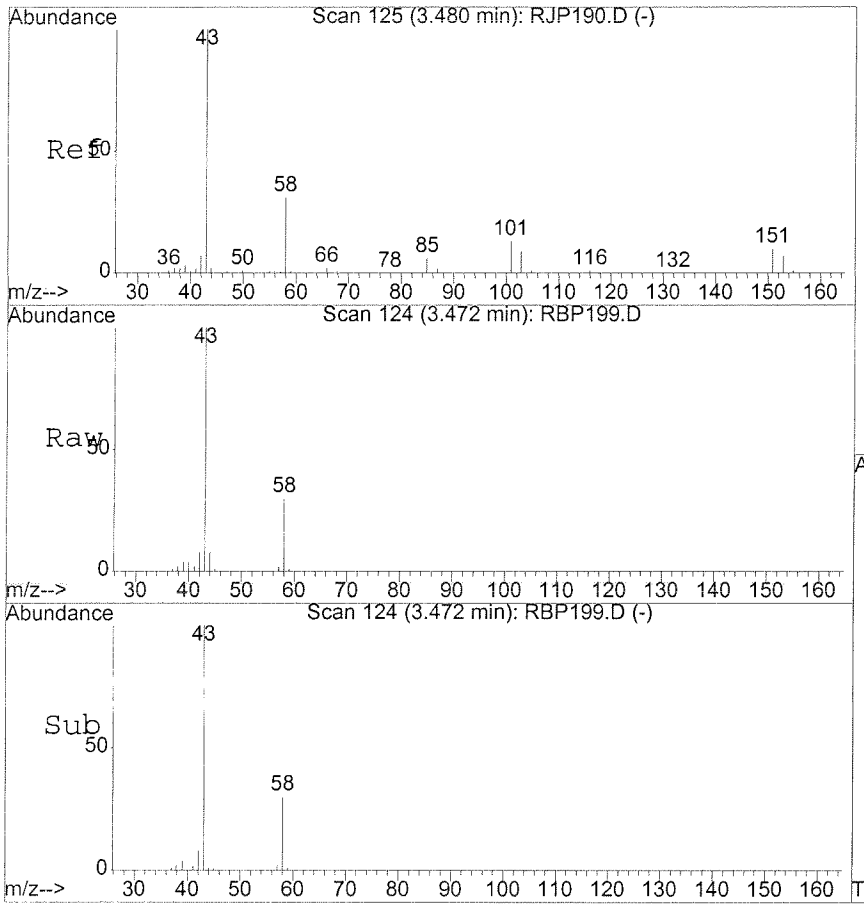
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP199.D Vial: 14
Acq On : 10 Feb 2016 12:47 pm Operator: CMendo
Sample : 16B060-05 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:01 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration

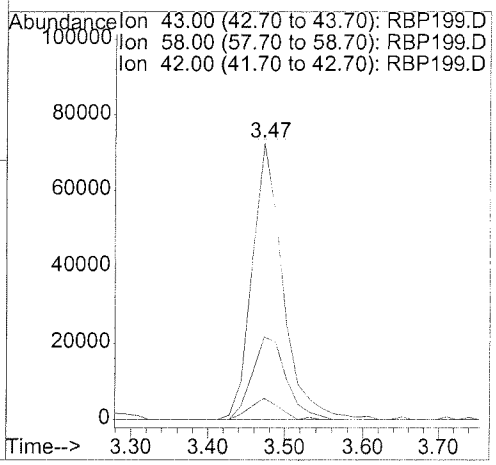


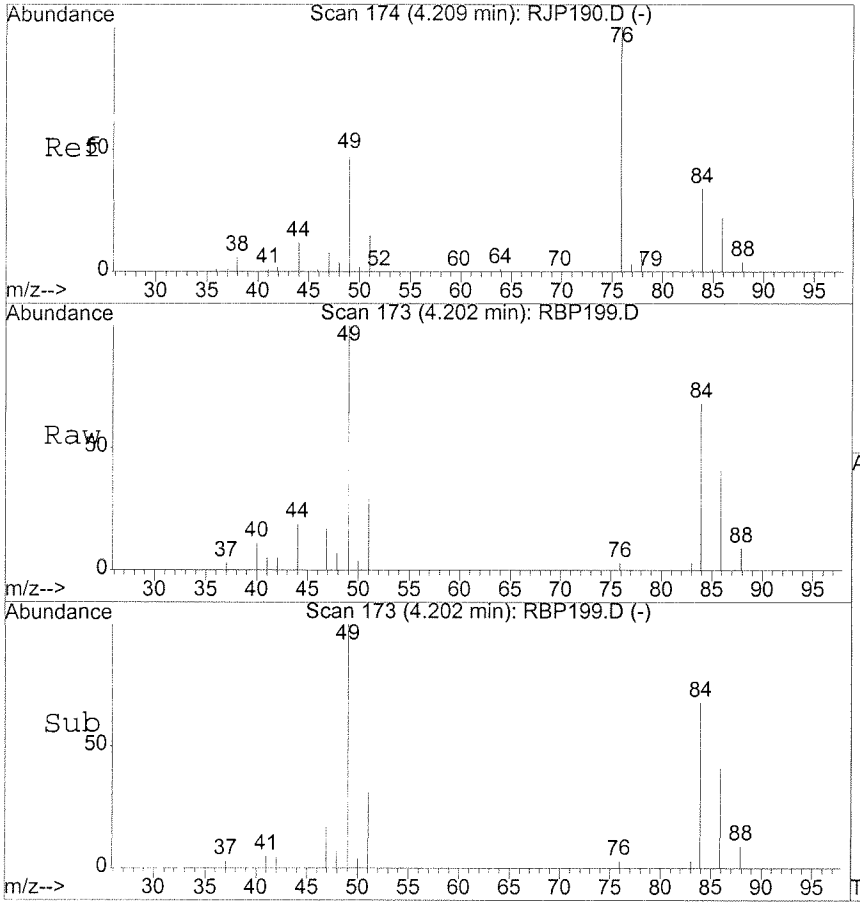


#11
Acetone
Concen: 37.11 ug/l
RT: 3.47 min Scan# 124
Delta R.T. -0.01 min
Lab File: RBP199.D
Acq: 10 Feb 2016 12:47 pm

Tgt Ion: 43 Resp: 202022

Ion	Ratio	Lower	Upper
43	100		
58	33.1	0.7	60.7
42	7.4	0.0	37.6

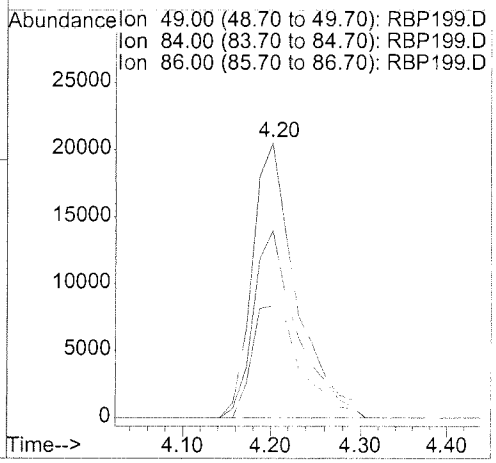


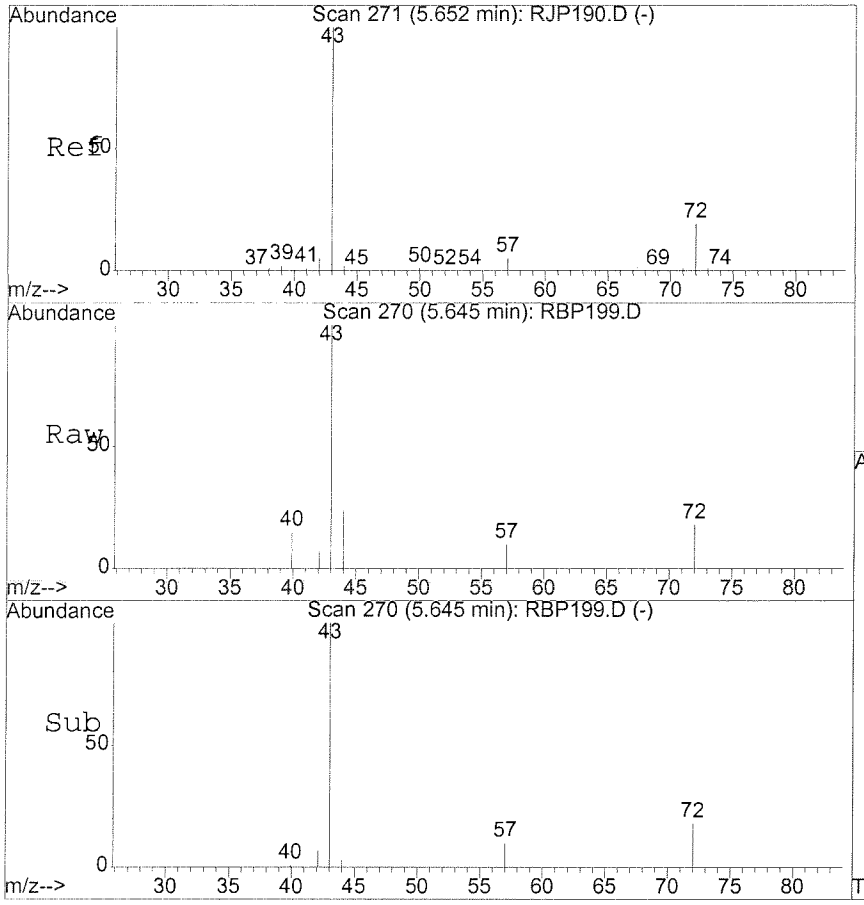


#17
Methylene chloride
Concen: 1.44 ug/l
RT: 4.20 min Scan# 173
Delta R.T. -0.01 min
Lab File: RBP199.D
Acq: 10 Feb 2016 12:47 pm

Tgt Ion: 49 Resp: 71654

Ion	Ratio	Lower	Upper
49	100		
84	67.5	41.4	101.4
86	44.8	15.6	75.6

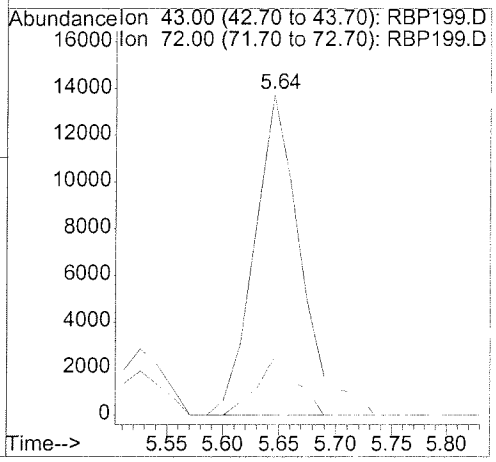


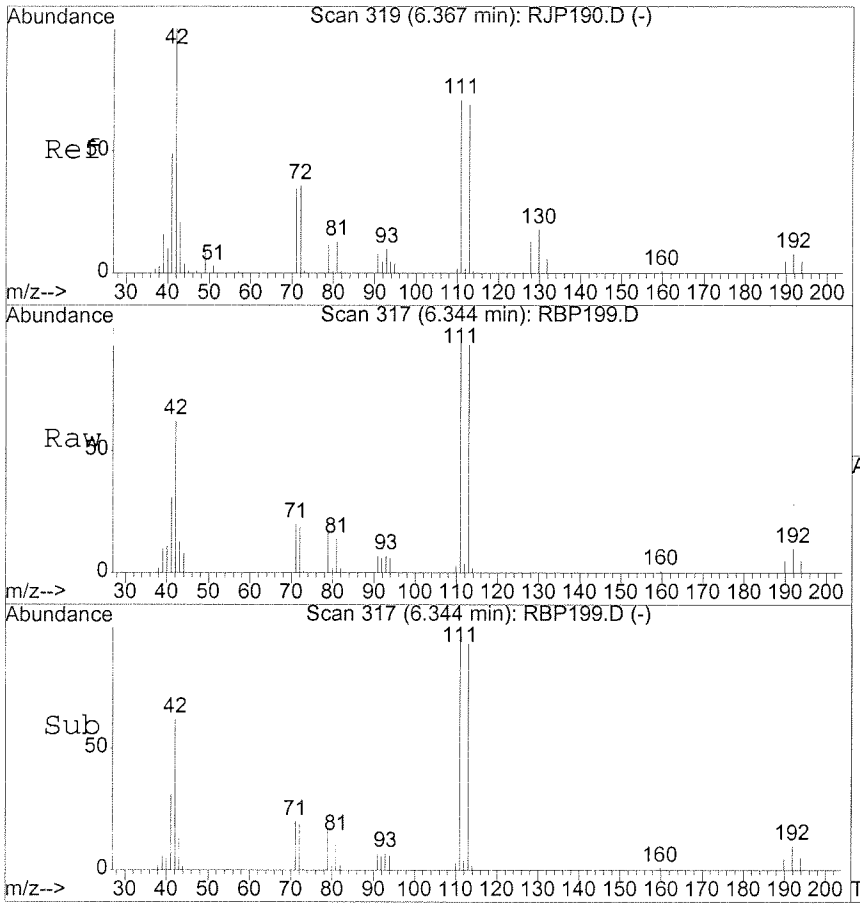


#27
2-Butanone
Concen: 3.88 ug/l
RT: 5.64 min Scan# 270
Delta R.T. -0.01 min
Lab File: RBP199.D
Acq: 10 Feb 2016 12:47 pm

Tgt Ion: 43 Resp: 39767

Ion	Ratio	Lower	Upper
43	100		
72	15.2	0.0	48.8

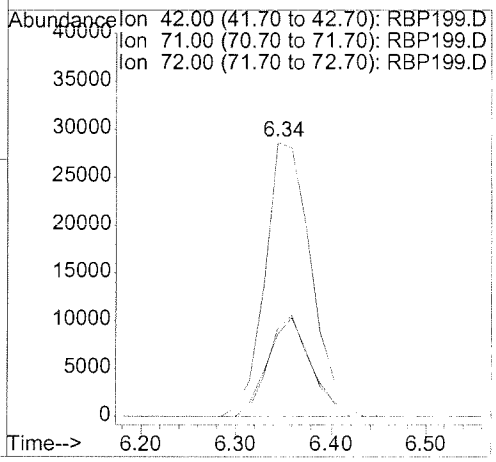


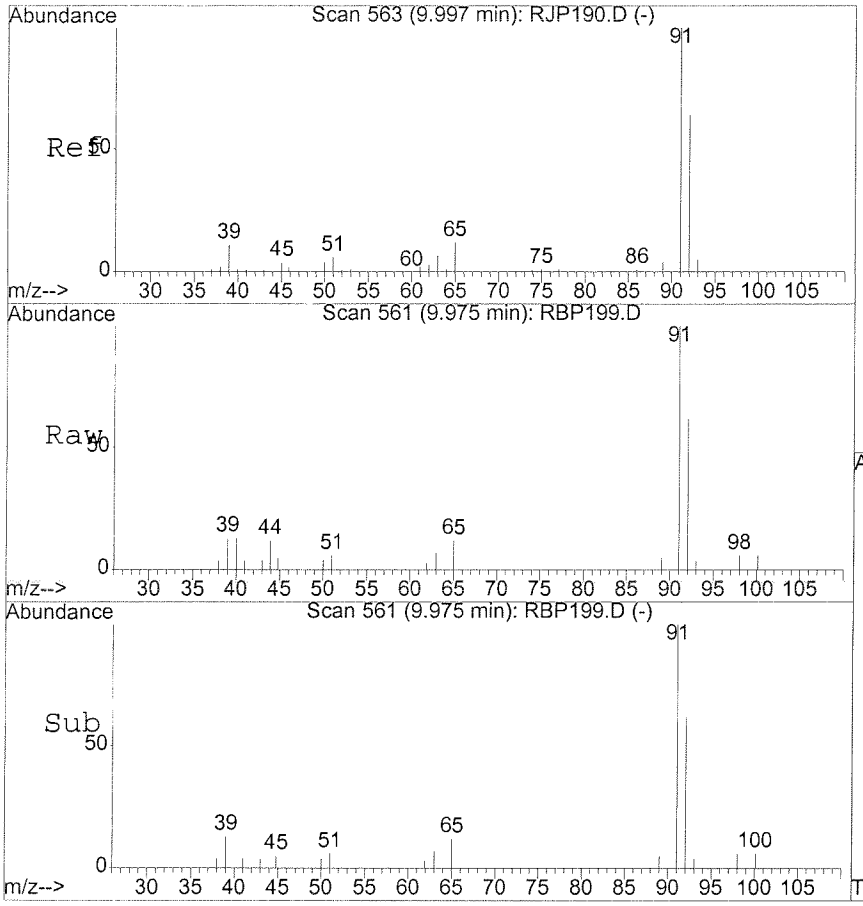


#32
Tetrahydrofuran
Concen: 16.32 ug/l
RT: 6.34 min Scan# 317
Delta R.T. -0.02 min
Lab File: RBP199.D
Acq: 10 Feb 2016 12:47 pm

Tgt Ion: 42 Resp: 97936

Ion	Ratio	Lower	Upper
42	100		
71	32.9	5.0	65.0
72	33.8	5.2	65.2

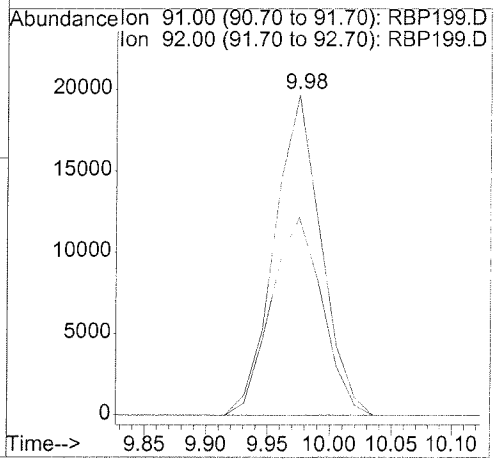




#53
Toluene
Concen: 0.78 ug/l
RT: 9.98 min Scan# 561
Delta R.T. -0.02 min
Lab File: RBP199.D
Acq: 10 Feb 2016 12:47 pm

Tgt Ion: 91 Resp: 51630

Ion	Ratio	Lower	Upper
91	100		
92	67.5	33.8	93.8



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 13:12
Sample ID:	CA504-SG01-S-210	Date Analyzed:	02/10/16 13:12
Lab Samp ID:	B060-06	Dilution Factor:	1.04
Lab File ID:	RBP200	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	6.8
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1-DICHLOROETHANE	ND	0.0056	0.00056	0.0011
1,1-DICHLOROETHENE	ND	0.0056	0.00056	0.0011
1,1-DICHLOROPROPENE	ND	0.0056	0.00056	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0056	0.0011	0.0022
1,2,4-TRICHLOROBENZENE	ND	0.0056	0.0011	0.0022
1,2,4-TRIMETHYLBENZENE	ND	0.0056	0.00061	0.0022
1,2-DIBROMOETHANE	ND	0.0056	0.00056	0.0011
1,2-DICHLOROBENZENE	ND	0.0056	0.00056	0.0011
1,2-DICHLOROETHANE	ND	0.0056	0.00056	0.0011
1,2-DICHLOROPROPANE	ND	0.0056	0.00056	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0056	0.00066	0.0022
1,3-DICHLOROBENZENE	ND	0.0056	0.00058	0.0011
1,3-DICHLOROPROPANE	ND	0.0056	0.00056	0.0011
1,4-DICHLOROBENZENE	ND	0.0056	0.00056	0.0011
2,2-DICHLOROPROPANE	ND	0.0056	0.0011	0.0022
2-BUTANONE	0.0037J	0.011	0.0028	0.0056
2-CHLOROTOLUENE	ND	0.0056	0.00092	0.0011
4-CHLOROTOLUENE	ND	0.0056	0.00075	0.0011
ACETONE	0.037	0.011	0.0035	0.0056
BENZENE	ND	0.0056	0.00056	0.0011
BROMOBENZENE	ND	0.0056	0.00056	0.0011
BROMODICHLOROMETHANE	ND	0.0056	0.00056	0.0011
BROMOFORM	ND	0.0056	0.0011	0.0022
BROMOMETHANE	ND	0.011	0.0020	0.0022
CARBON TETRACHLORIDE	ND	0.0056	0.00060	0.0011
CHLOROBENZENE	ND	0.0056	0.00056	0.0011
CHLOROETHANE	ND	0.0056	0.0015	0.0022
CHLOROFORM	ND	0.0056	0.00056	0.0011
CHLOROMETHANE	ND	0.0056	0.0011	0.0022
CIS-1,2-DICHLOROETHENE	ND	0.0056	0.00056	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0056	0.00056	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0056	0.0013	0.0022
ETHYLBENZENE	ND	0.0056	0.00056	0.0011
ISOPROPYLBENZENE	ND	0.0056	0.00071	0.0022
M/P-XYLENES	ND	0.011	0.0011	0.0022
4-METHYL-2-PENTANONE	ND	0.011	0.0031	0.0056
METHYLENE CHLORIDE	0.0015J	0.011	0.0011	0.0022
METHYL TERT-BUTYL ETHER	ND	0.0056	0.00056	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0022
N-BUTYLBENZENE	ND	0.0056	0.00078	0.0011
N-PROPYLBENZENE	ND	0.0056	0.00073	0.0011
O-XYLENE	ND	0.0056	0.00056	0.0011
SEC-BUTYLBENZENE	ND	0.0056	0.00075	0.0011
STYRENE	ND	0.0056	0.00056	0.0011
TETRACHLOROETHENE	ND	0.0056	0.00056	0.0011
TOLUENE	ND	0.0056	0.00056	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0056	0.00056	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0056	0.00056	0.0011
TRICHLOROETHENE	ND	0.0056	0.00056	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0056	0.0012	0.0022
VINYL CHLORIDE	ND	0.0056	0.0016	0.0022
XYLENES, TOTAL	ND	0.011	0.00056	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0505	0.05579	90.5	85-115
DIBROMOFLUOROMETHANE	0.0523	0.05579	93.7	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP200.D Vial: 15
Acq On : 10 Feb 2016 1:12 pm Operator: CMendo
Sample : 16B060-06 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:02 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

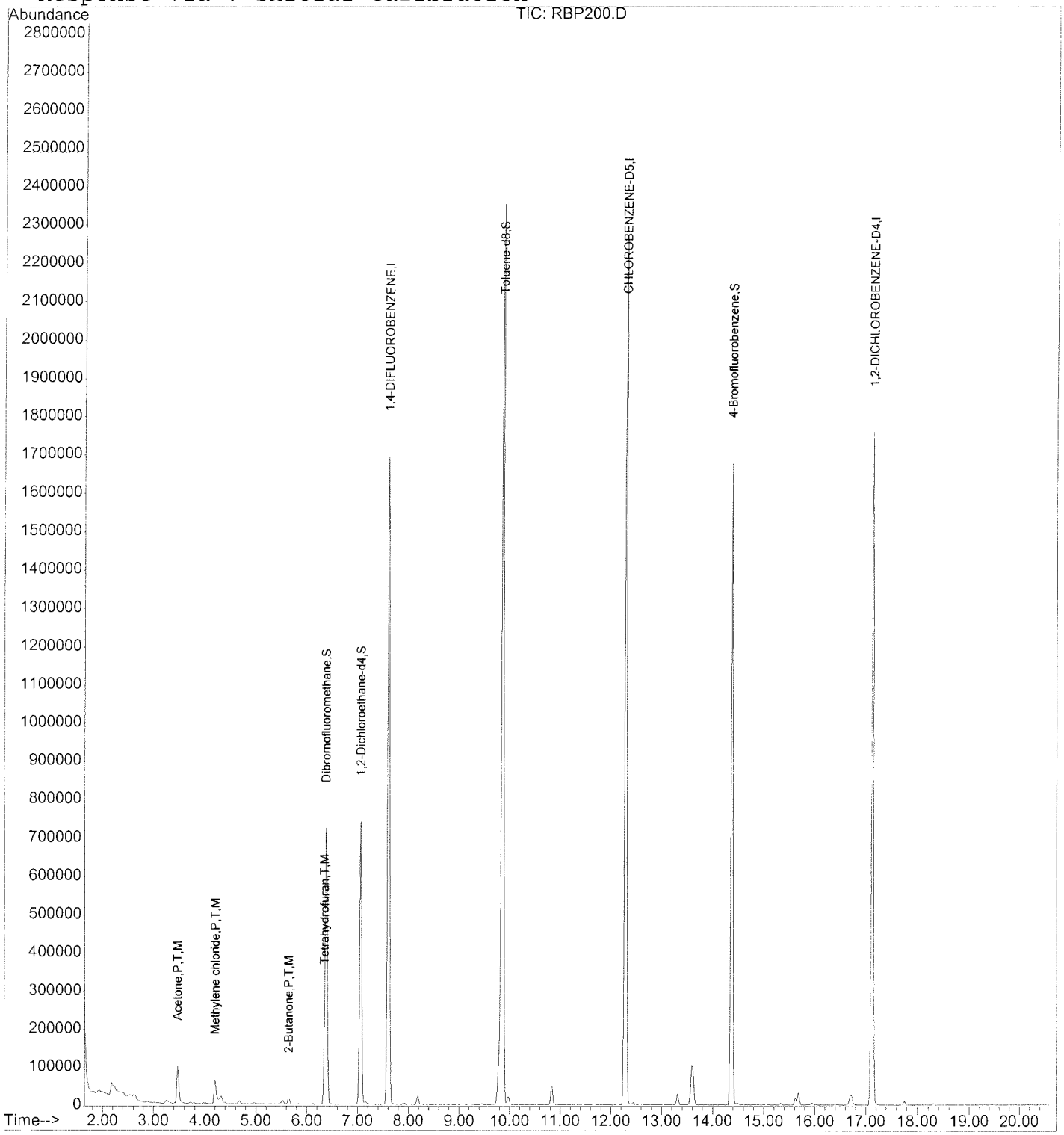
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.59	114	2270118	50.00	ug/l	-0.04
51) CHLOROBENZENE-D5	12.28	117	2090236	50.00	ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	813646	50.00	ug/l	-0.02
System Monitoring Compounds						
33) Dibromofluoromethane	6.37	111	649975	46.87	ug/l	-0.02
Spiked Amount 50.000			Recovery = 93.74%			
39) 1,2-Dichloroethane-d4	7.06	65	631475	49.76	ug/l	-0.02
Spiked Amount 50.000			Recovery = 99.52%			
52) Toluene-d8	9.86	98	2532996	45.26	ug/l	-0.02
Spiked Amount 50.000			Recovery = 90.52%			
73) 4-Bromofluorobenzene	14.36	95	961747	51.95	ug/l	-0.02
Spiked Amount 50.000			Recovery = 103.90%			
Target Compounds						Qvalue
11) Acetone	3.47	43	186552	32.73	ug/l	97
17) Methylene chloride	4.20	49	73478	1.37	ug/l	94
27) 2-Butanone	5.64	43	35446	3.30	ug/l	98
32) Tetrahydrofuran	6.34	42	117492	18.71	ug/l	95

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

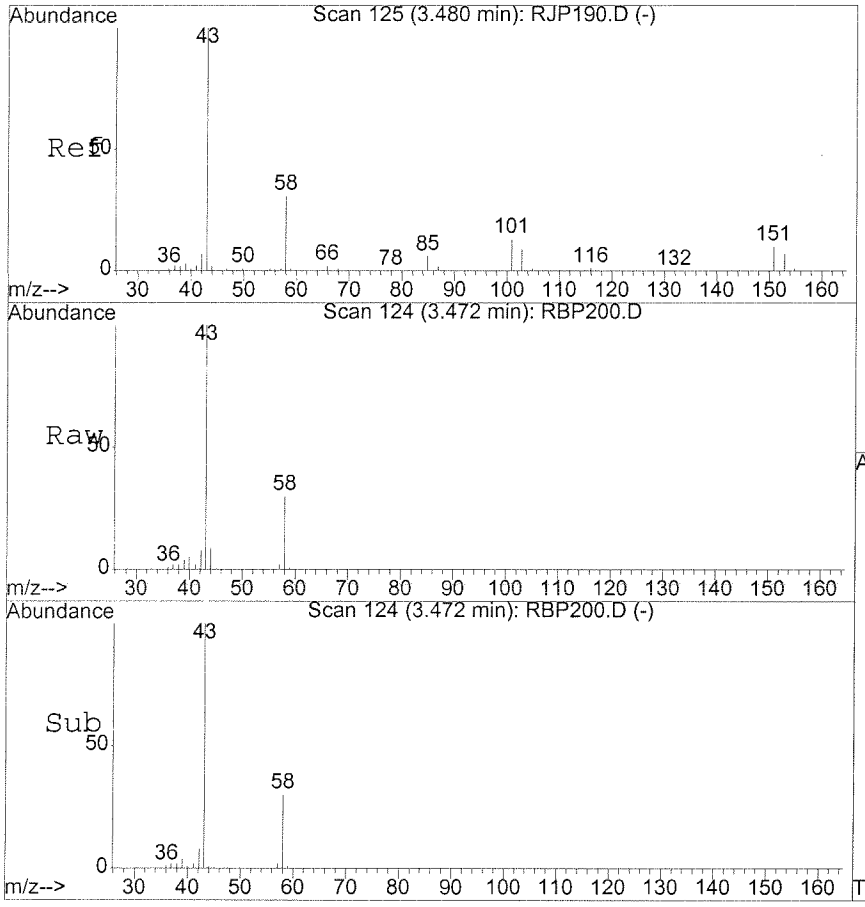
Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP200.D Vial: 15
Acq On : 10 Feb 2016 1:12 pm Operator: CMendo
Sample : 16B060-06 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:02 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



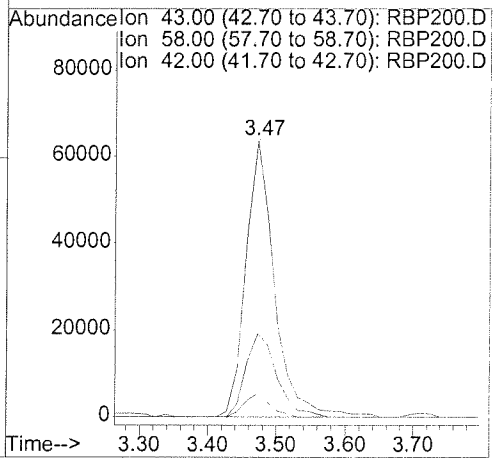
86

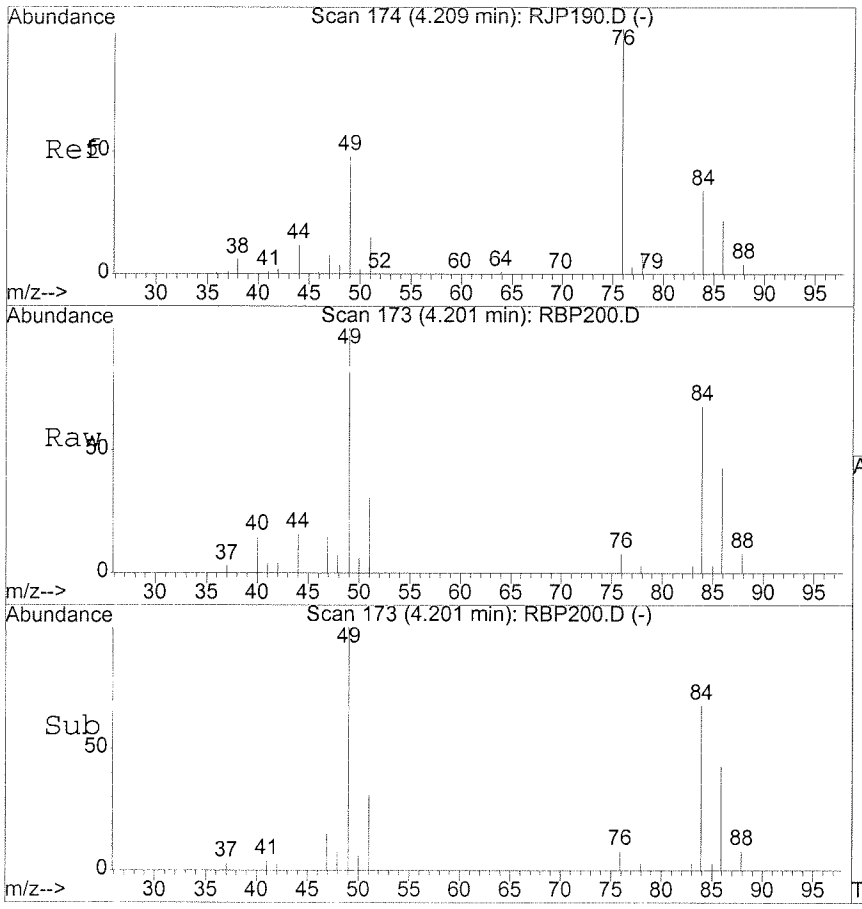


#11
Acetone
Concen: 32.73 ug/l
RT: 3.47 min Scan# 124
Delta R.T. -0.01 min
Lab File: RBP200.D
Acq: 10 Feb 2016 1:12 pm

Tgt Ion: 43 Resp: 186552

Ion	Ratio	Lower	Upper
43	100		
58	32.4	0.7	60.7
42	7.5	0.0	37.6

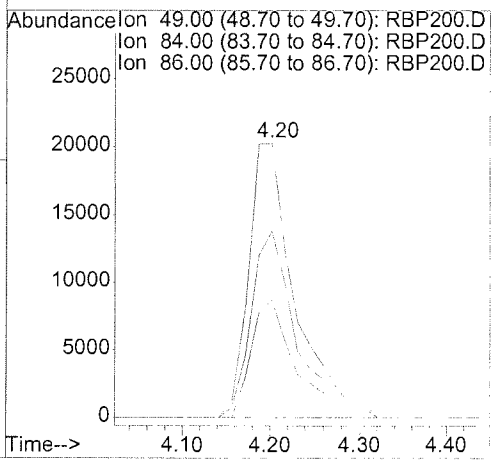


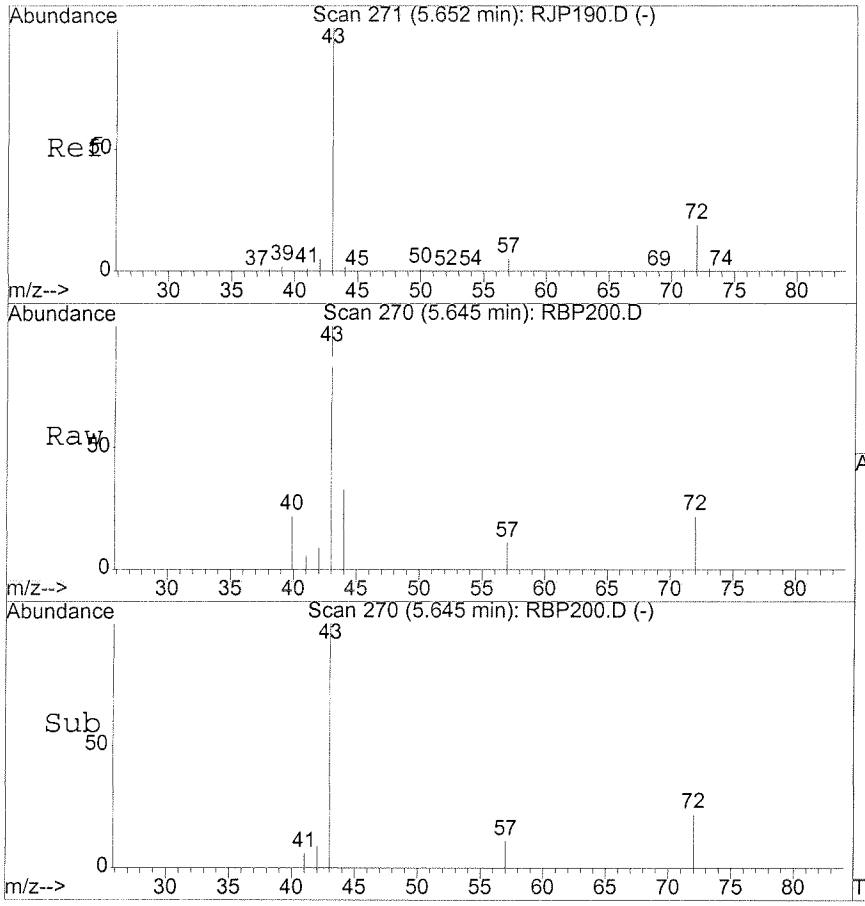


#17
Methylene chloride
Concen: 1.37 ug/l
RT: 4.20 min Scan# 173
Delta R.T. -0.01 min
Lab File: RBP200.D
Acq: 10 Feb 2016 1:12 pm

Tgt Ion: 49 Resp: 73478

Ion	Ratio	Lower	Upper
49	100		
84	67.8	41.4	101.4
86	40.7	15.6	75.6

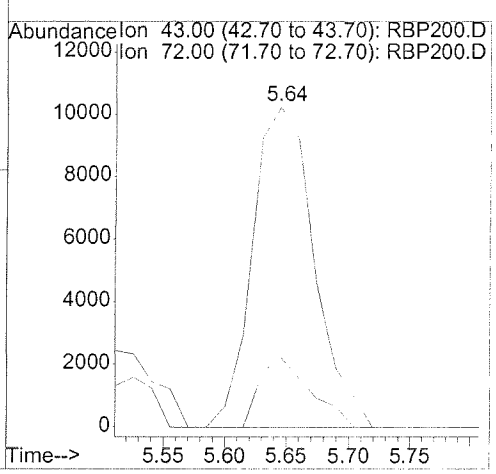


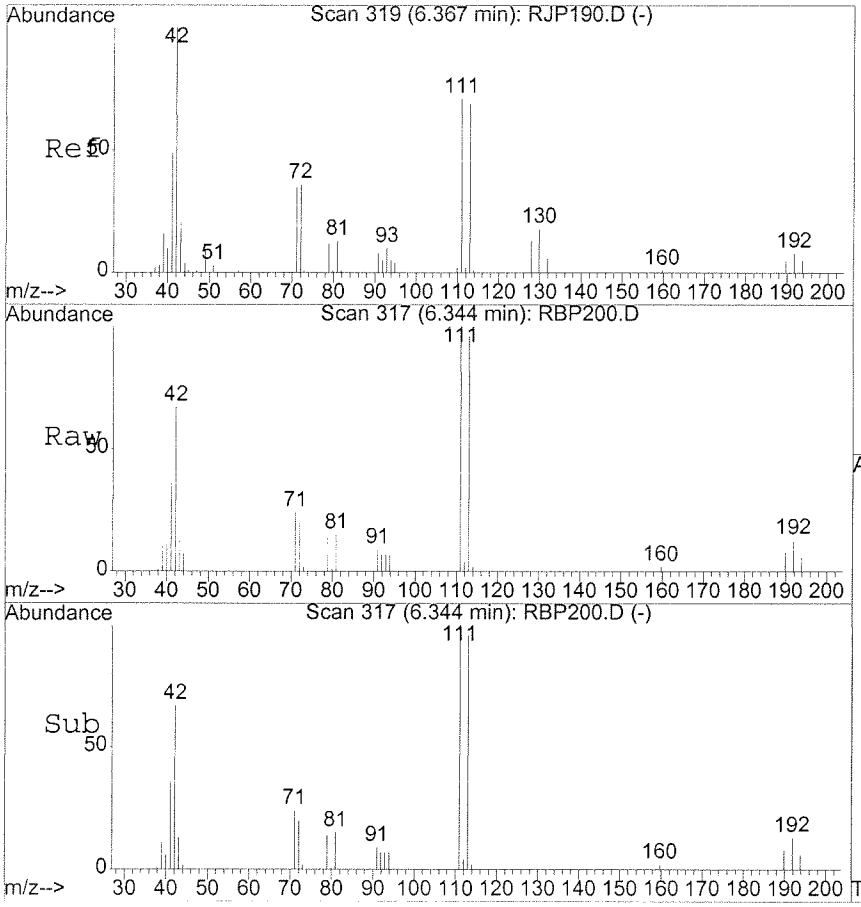


#27
2-Butanone
Concen: 3.30 ug/l
RT: 5.64 min Scan# 270
Delta R.T. -0.01 min
Lab File: RBP200.D
Acq: 10 Feb 2016 1:12 pm

Tgt Ion: 43 Resp: 35446

Ion	Ratio	Lower	Upper
43	100		
72	18.0	0.0	48.8

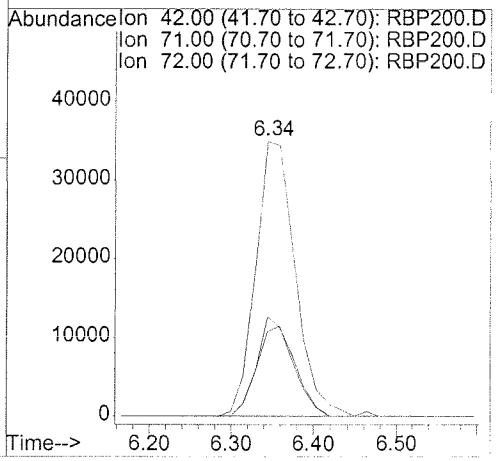




#32
Tetrahydrofuran
Concen: 18.71 ug/l
RT: 6.34 min Scan# 317
Delta R.T. -0.02 min
Lab File: RBP200.D
Acq: 10 Feb 2016 1:12 pm

Tgt Ion: 42 Resp: 117492

Ion	Ratio	Lower	Upper
42	100		
71	33.4	5.0	65.0
72	31.3	5.2	65.2



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 13:37
Sample ID:	CA504-SG02-S-005	Date Analyzed:	02/10/16 13:37
Lab Samp ID:	B060-07	Dilution Factor:	0.9
Lab File ID:	RBP201	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	8.7
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1,1-TRICHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1,2,2-TETRACHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1,2-TRICHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1-DICHLOROETHANE	ND	0.0049	0.00049	0.00099
1,1-DICHLOROETHENE	ND	0.0049	0.00049	0.00099
1,1-DICHLOROPROPENE	ND	0.0049	0.00049	0.00099
1,2,3-TRICHLOROBENZENE	ND	0.0049	0.00099	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0049	0.00099	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0049	0.00054	0.0020
1,2-DIBROMOETHANE	ND	0.0049	0.00049	0.00099
1,2-DICHLOROBENZENE	ND	0.0049	0.00049	0.00099
1,2-DICHLOROETHANE	ND	0.0049	0.00049	0.00099
1,2-DICHLOROPROPANE	ND	0.0049	0.00049	0.00099
1,3,5-TRIMETHYLBENZENE	ND	0.0049	0.00058	0.0020
1,3-DICHLOROBENZENE	ND	0.0049	0.00051	0.00099
1,3-DICHLOROPROPANE	ND	0.0049	0.00049	0.00099
1,4-DICHLOROBENZENE	ND	0.0049	0.00049	0.00099
2,2-DICHLOROPROPANE	ND	0.0049	0.00099	0.0020
2-BUTANONE	0.0036J	0.0099	0.0025	0.0049
2-CHLOROTOLUENE	ND	0.0049	0.00081	0.00099
4-CHLOROTOLUENE	ND	0.0049	0.00066	0.00099
ACETONE	0.037	0.0099	0.0031	0.0049
BENZENE	ND	0.0049	0.00049	0.00099
BROMOBENZENE	ND	0.0049	0.00049	0.00099
BROMODICHLOROMETHANE	ND	0.0049	0.00049	0.00099
BROMOFORM	ND	0.0049	0.00099	0.0020
BROMOMETHANE	ND	0.0099	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0049	0.00053	0.00099
CHLOROBENZENE	ND	0.0049	0.00049	0.00099
CHLOROETHANE	ND	0.0049	0.0013	0.0020
CHLOROFORM	ND	0.0049	0.00049	0.00099
CHLOROMETHANE	ND	0.0049	0.00099	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0049	0.00049	0.00099
CIS-1,3-DICHLOROPROPENE	ND	0.0049	0.00049	0.00099
DICHLORODIFLUOROMETHANE	ND	0.0049	0.0012	0.0020
ETHYLBENZENE	ND	0.0049	0.00049	0.00099
ISOPROPYLBENZENE	ND	0.0049	0.00063	0.0020
M/P-XYLENES	ND	0.0099	0.00099	0.0020
4-METHYL-2-PENTANONE	ND	0.0099	0.0028	0.0049
METHYLENE CHLORIDE	ND	0.0099	0.00099	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0049	0.00049	0.00099
NAPHTHALENE	ND	0.0099	0.00099	0.0020
N-BUTYLBENZENE	ND	0.0049	0.00069	0.00099
N-PROPYLBENZENE	ND	0.0049	0.00064	0.00099
O-XYLENE	ND	0.0049	0.00049	0.00099
SEC-BUTYLBENZENE	ND	0.0049	0.00066	0.00099
STYRENE	ND	0.0049	0.00049	0.00099
TETRACHLOROETHENE	ND	0.0049	0.00049	0.00099
TOLUENE	ND	0.0049	0.00049	0.00099
TRANS-1,2-DICHLOROETHENE	ND	0.0049	0.00049	0.00099
TRANS-1,3-DICHLOROPROPENE	ND	0.0049	0.00049	0.00099
TRICHLOROETHENE	ND	0.0049	0.00049	0.00099
TRICHLOROFLUOROMETHANE	ND	0.0049	0.0011	0.0020
VINYL CHLORIDE	ND	0.0049	0.0014	0.0020
XYLENES, TOTAL	ND	0.0099	0.00049	0.00099

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0448	0.04929	90.9	85-115
DIBROMOFLUOROMETHANE	0.0469	0.04929	95.1	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP201.D Vial: 16
Acq On : 10 Feb 2016 1:37 pm Operator: CMendo
Sample : 16B060-07 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:06 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

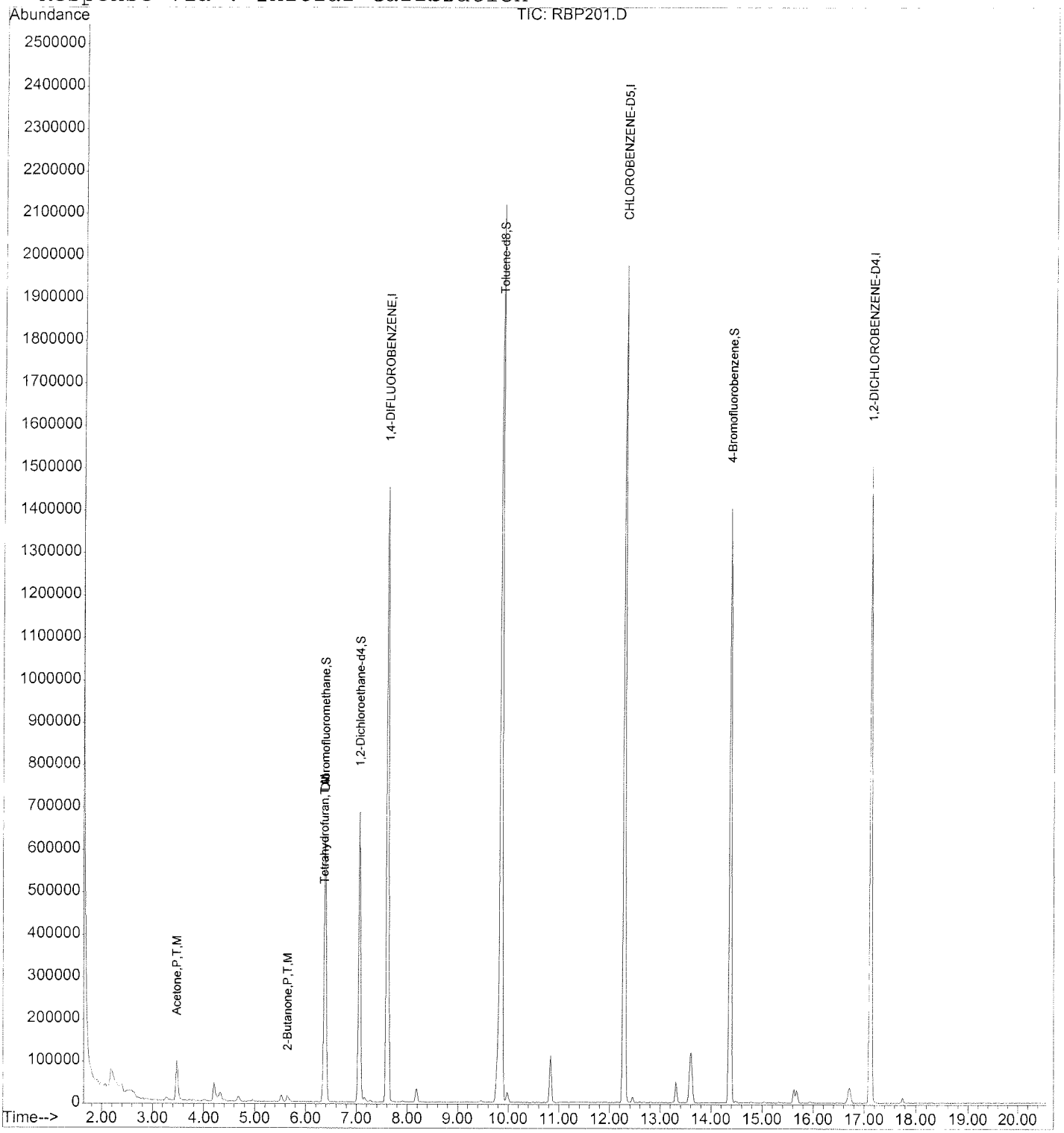
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	1977721	50.00 ug/l	-0.02
51) CHLOROBENZENE-D5	12.28	117	1846797	50.00 ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	704415	50.00 ug/l	-0.02
System Monitoring Compounds					
33) Dibromofluoromethane	6.37	111	574491	47.55 ug/l	-0.02
Spiked Amount 50.000			Recovery =	95.10%	
39) 1,2-Dichloroethane-d4	7.06	65	574549	51.96 ug/l	-0.02
Spiked Amount 50.000			Recovery =	103.92%	
52) Toluene-d8	9.85	98	2248524	45.47 ug/l	-0.02
Spiked Amount 50.000			Recovery =	90.94%	
73) 4-Bromofluorobenzene	14.36	95	842357	52.56 ug/l	-0.02
Spiked Amount 50.000			Recovery =	105.12%	
Target Compounds					Qvalue
11) Acetone	3.47	43	187886	37.84 ug/l	97
27) 2-Butanone	5.64	43	33925	3.63 ug/l	99
32) Tetrahydrofuran	6.36	42	87137	15.92 ug/l	99

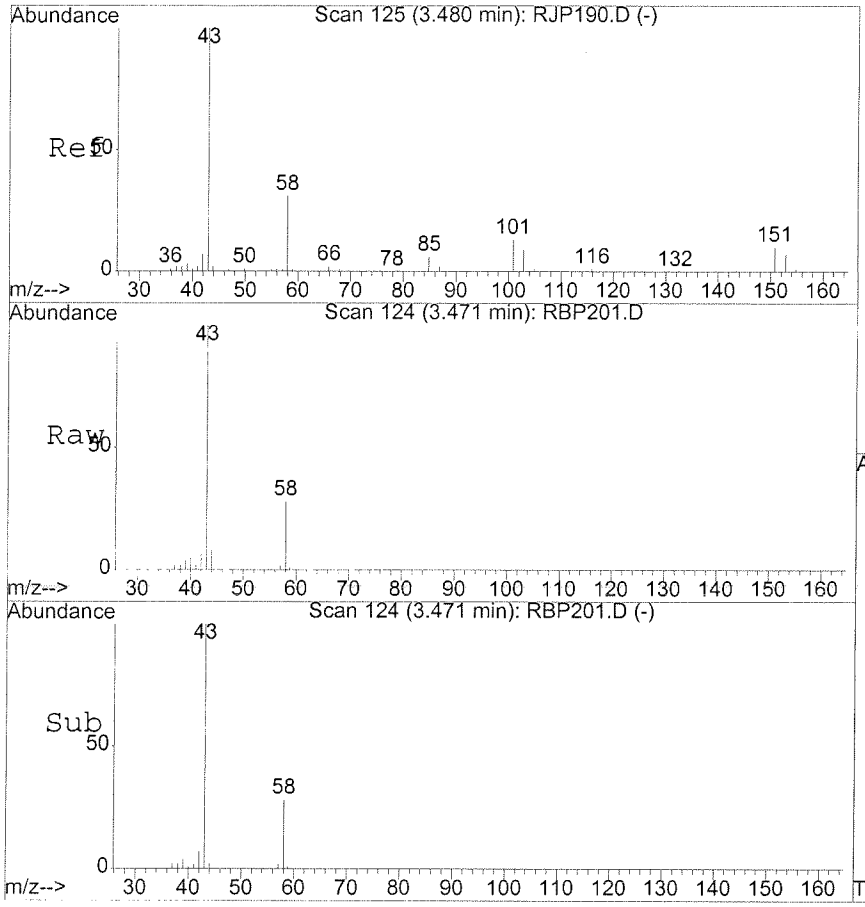
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP201.D Vial: 16
Acq On : 10 Feb 2016 1:37 pm Operator: CMendo
Sample : 16B060-07 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:06 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration

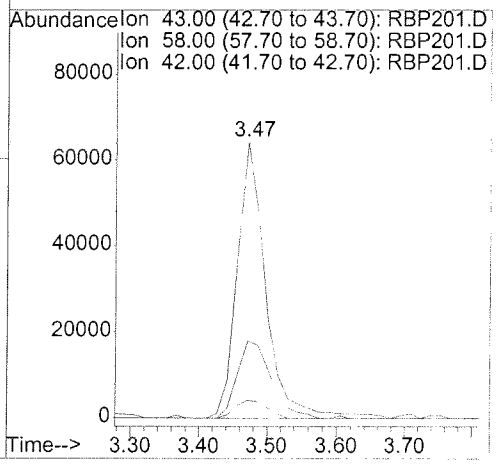


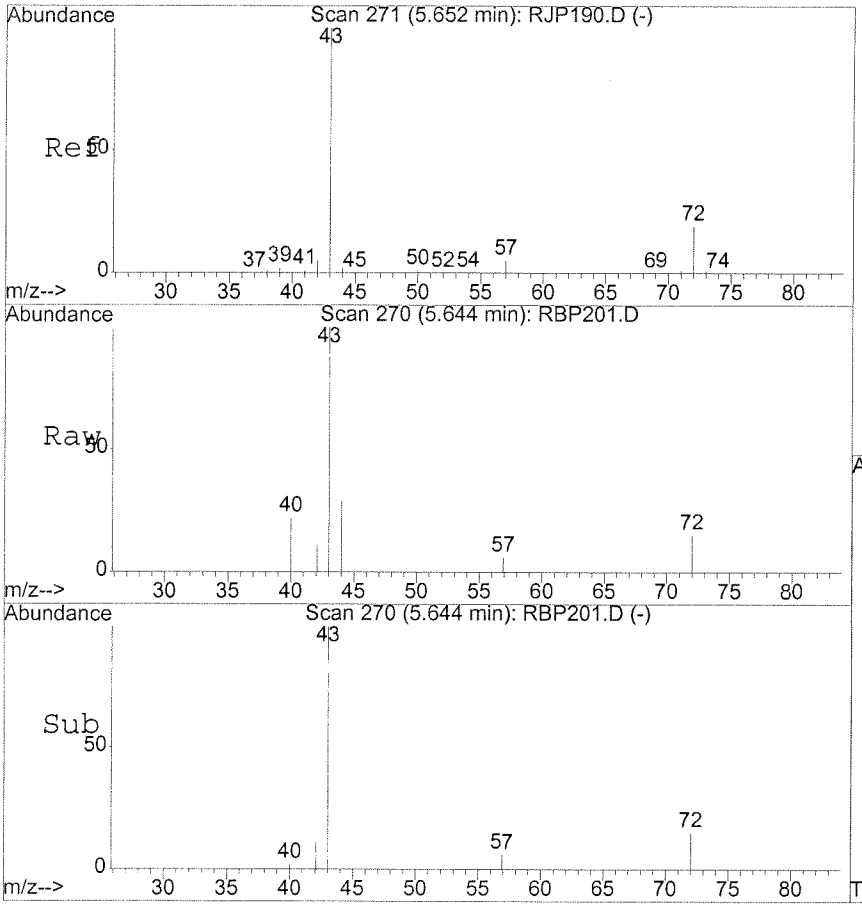


#11
Acetone
Concen: 37.84 ug/l
RT: 3.47 min Scan# 124
Delta R.T. -0.01 min
Lab File: RBP201.D
Acq: 10 Feb 2016 1:37 pm

Tgt Ion: 43 Resp: 187886

Ion	Ratio	Lower	Upper
43	100		
58	32.8	0.7	60.7
42	7.2	0.0	37.6

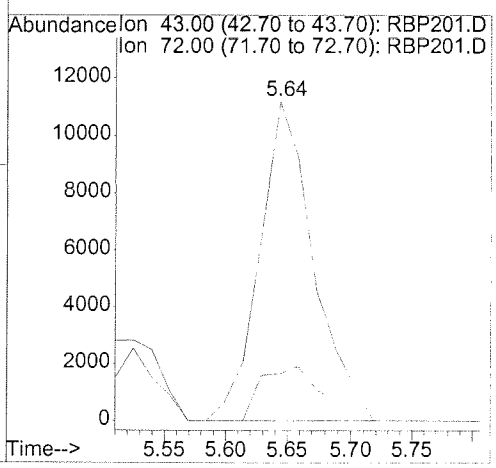


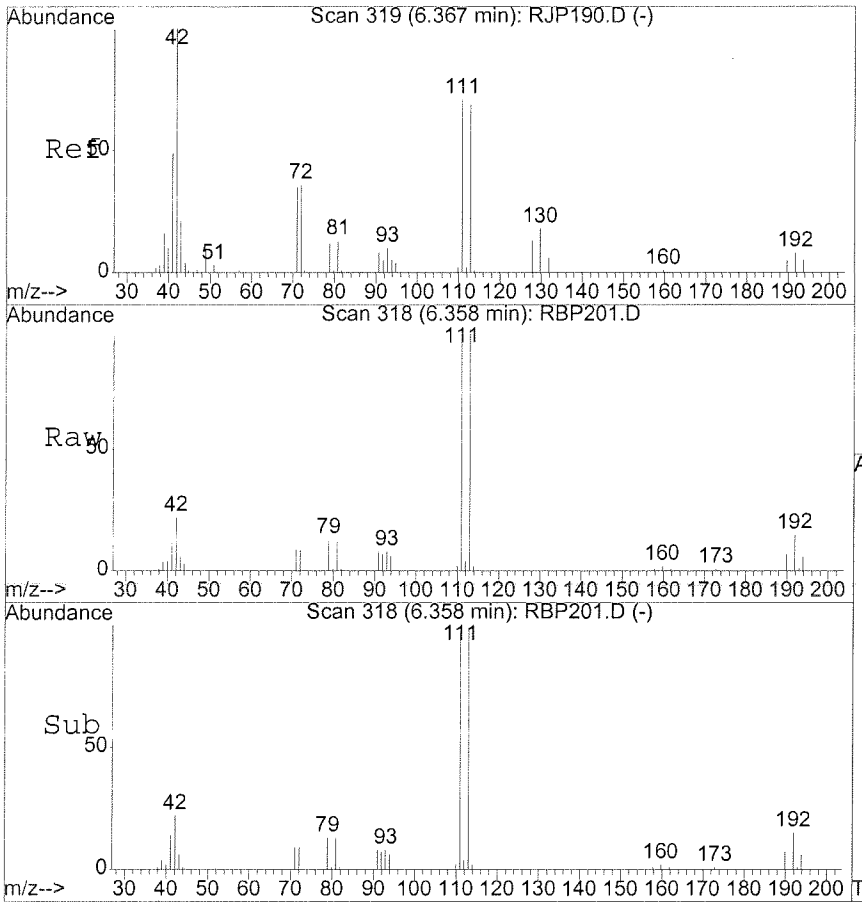


#27
2-Butanone
Concen: 3.63 ug/l
RT: 5.64 min Scan# 270
Delta R.T. -0.01 min
Lab File: RBP201.D
Acq: 10 Feb 2016 1:37 pm

Tgt Ion: 43 Resp: 33925

Ion	Ratio	Lower	Upper
43	100		
72	18.1	0.0	48.8

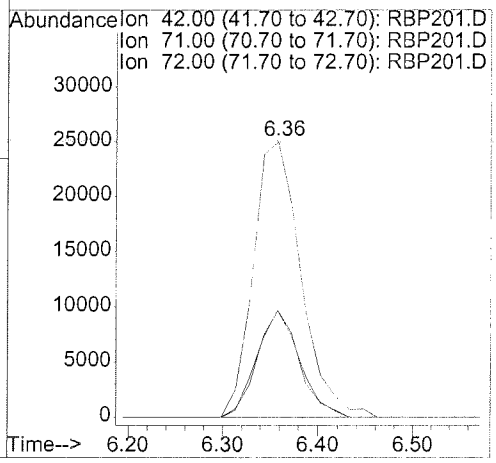




#32
Tetrahydrofuran
Concen: 15.92 ug/l
RT: 6.36 min Scan# 318
Delta R.T. -0.01 min
Lab File: RBP201.D
Acq: 10 Feb 2016 1:37 pm

Tgt Ion: 42 Resp: 87137

Ion	Ratio	Lower	Upper
42	100		
71	34.6	5.0	65.0
72	34.6	5.2	65.2



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 14:02
Sample ID:	CA504-SG02-S-010	Date Analyzed:	02/10/16 14:02
Lab Samp ID:	B060-08	Dilution Factor:	1
Lab File ID:	RBP202	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	8.4
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,1-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2,2-TETRACHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1,2-TRICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
1,1-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
1,2,3-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRICHLOROBENZENE	ND	0.0055	0.0011	0.0022
1,2,4-TRIMETHYLBENZENE	ND	0.0055	0.00060	0.0022
1,2-DIBROMOETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROETHANE	ND	0.0055	0.00055	0.0011
1,2-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,3,5-TRIMETHYLBENZENE	ND	0.0055	0.00064	0.0022
1,3-DICHLOROBENZENE	ND	0.0055	0.00057	0.0011
1,3-DICHLOROPROPANE	ND	0.0055	0.00055	0.0011
1,4-DICHLOROBENZENE	ND	0.0055	0.00055	0.0011
2,2-DICHLOROPROPANE	ND	0.0055	0.0011	0.0022
2-BUTANONE	0.0041J	0.011	0.0027	0.0055
2-CHLOROTOLUENE	ND	0.0055	0.00090	0.0011
4-CHLOROTOLUENE	ND	0.0055	0.00073	0.0011
ACETONE	0.037	0.011	0.0034	0.0055
BENZENE	ND	0.0055	0.00055	0.0011
BROMOBENZENE	ND	0.0055	0.00055	0.0011
BROMODICHLOROMETHANE	ND	0.0055	0.00055	0.0011
BROMOFORM	ND	0.0055	0.0011	0.0022
BROMOMETHANE	ND	0.011	0.0020	0.0022
CARBON TETRACHLORIDE	ND	0.0055	0.00059	0.0011
CHLOROBENZENE	ND	0.0055	0.00055	0.0011
CHLOROETHANE	ND	0.0055	0.0014	0.0022
CHLOROFORM	ND	0.0055	0.00055	0.0011
CHLOROMETHANE	ND	0.0055	0.0011	0.0022
CIS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
CIS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
DICHLORODIFLUOROMETHANE	ND	0.0055	0.0013	0.0022
ETHYLBENZENE	ND	0.0055	0.00055	0.0011
ISOPROPYLBENZENE	ND	0.0055	0.00070	0.0022
M/P-XYLENES	ND	0.011	0.0011	0.0022
4-METHYL-2-PENTANONE	ND	0.011	0.0031	0.0055
METHYLENE CHLORIDE	ND	0.011	0.0011	0.0022
METHYL TERT-BUTYL ETHER	ND	0.0055	0.00055	0.0011
NAPHTHALENE	ND	0.011	0.0011	0.0022
N-BUTYLBENZENE	ND	0.0055	0.00076	0.0011
N-PROPYLBENZENE	ND	0.0055	0.00071	0.0011
O-XYLENE	ND	0.0055	0.00055	0.0011
SEC-BUTYLBENZENE	ND	0.0055	0.00073	0.0011
STYRENE	ND	0.0055	0.00055	0.0011
TETRACHLOROETHENE	ND	0.0055	0.00055	0.0011
TOLUENE	ND	0.0055	0.00055	0.0011
TRANS-1,2-DICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRANS-1,3-DICHLOROPROPENE	ND	0.0055	0.00055	0.0011
TRICHLOROETHENE	ND	0.0055	0.00055	0.0011
TRICHLOROFLUOROMETHANE	ND	0.0055	0.0012	0.0022
VINYL CHLORIDE	ND	0.0055	0.0015	0.0022
XYLENES, TOTAL	ND	0.011	0.00055	0.0011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0489	0.05459	89.6	85-115
DIBROMOFLUOROMETHANE	0.0521	0.05459	95.4	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP202.D Vial: 17
Acq On : 10 Feb 2016 2:02 pm Operator: CMendo
Sample : 16B060-08 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:07 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

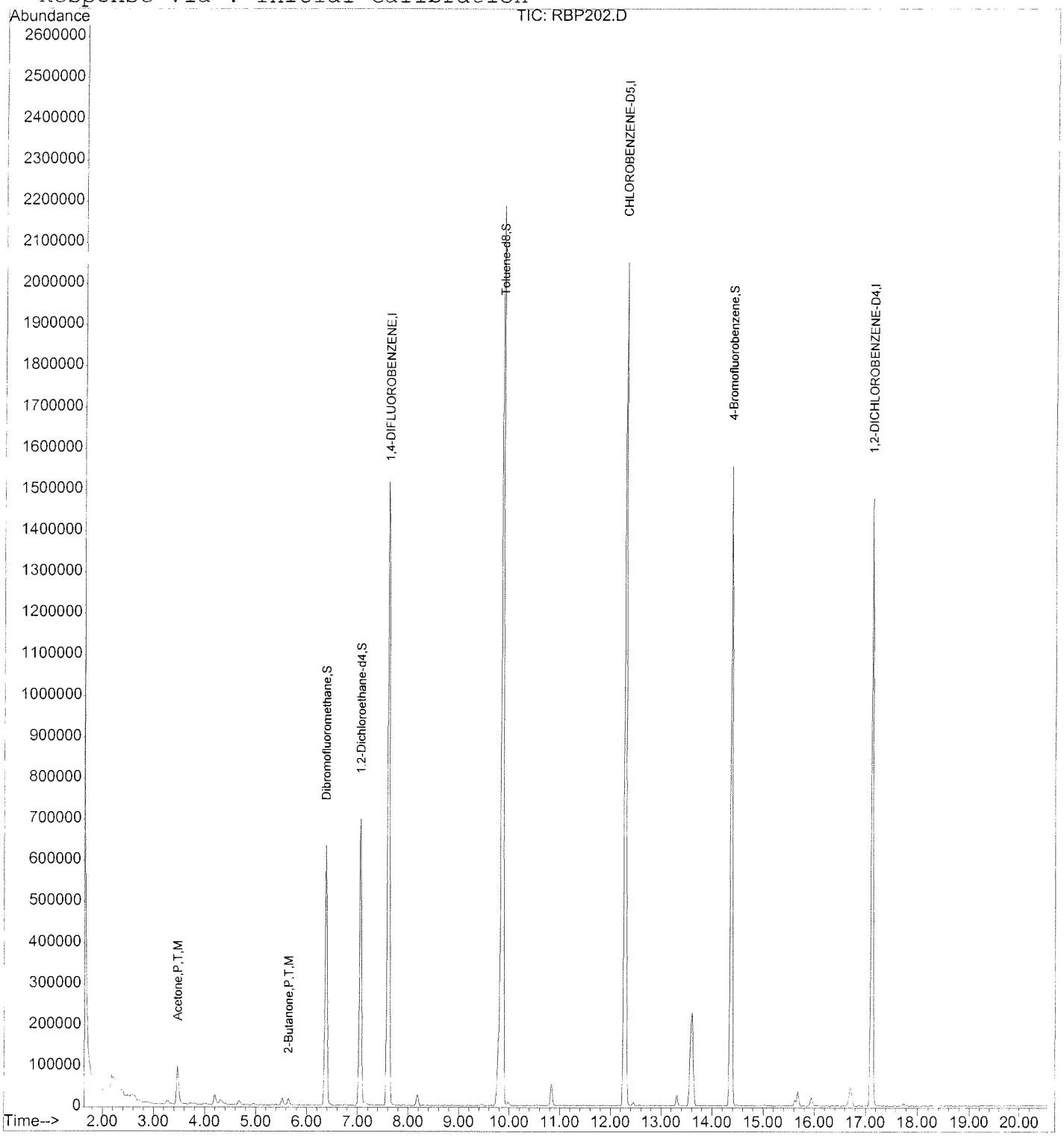
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	2078788	50.00	ug/l	-0.02
51) CHLOROBENZENE-D5	12.28	117	1961953	50.00	ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	692012	50.00	ug/l	-0.02
System Monitoring Compounds						
33) Dibromofluoromethane	6.37	111	606114	47.72	ug/l	-0.02
Spiked Amount 50.000			Recovery =	95.44%		
39) 1,2-Dichloroethane-d4	7.06	65	592665	51.00	ug/l	-0.02
Spiked Amount 50.000			Recovery =	102.00%		
52) Toluene-d8	9.86	98	2354626	44.82	ug/l	-0.02
Spiked Amount 50.000			Recovery =	89.64%		
73) 4-Bromofluorobenzene	14.36	95	886838	56.33	ug/l	-0.02
Spiked Amount 50.000			Recovery =	112.66%		
Target Compounds						Qvalue
11) Acetone	3.47	43	178263	34.16	ug/l	94
27) 2-Butanone	5.64	43	36586	3.72	ug/l	95

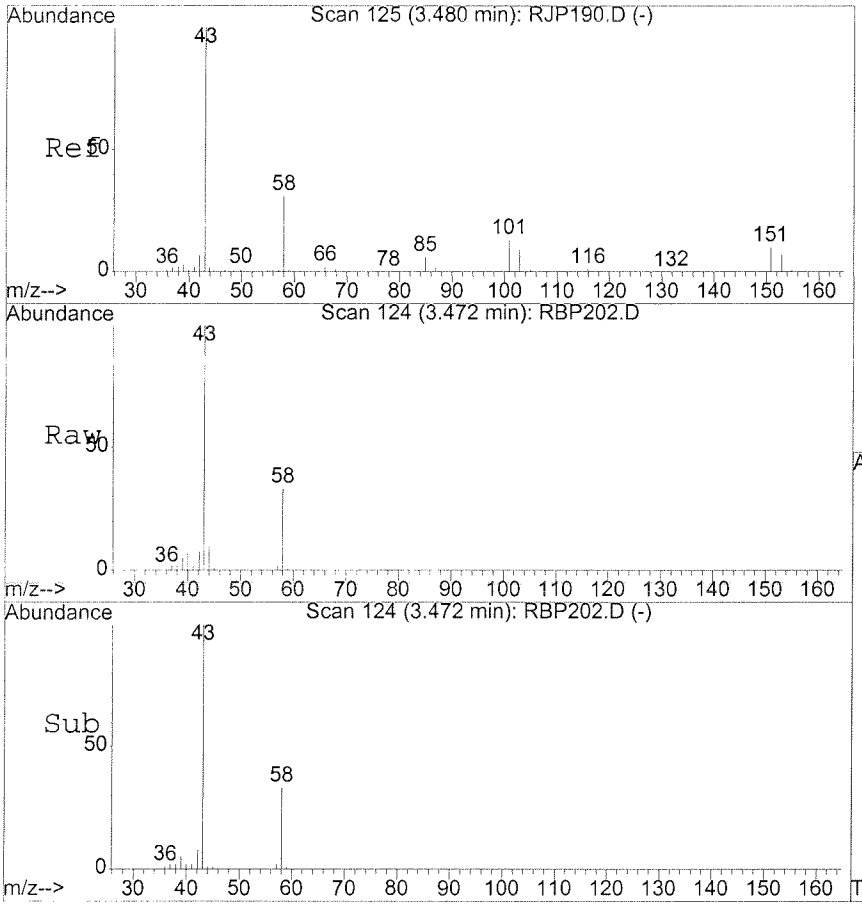
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP202.D Vial: 17
Acq On : 10 Feb 2016 2:02 pm Operator: CMendo
Sample : 16B060-08 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:07 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration

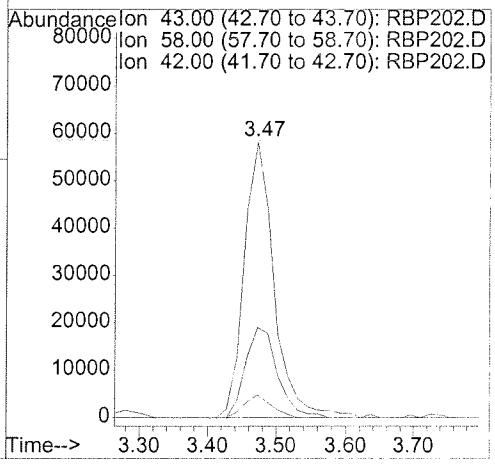


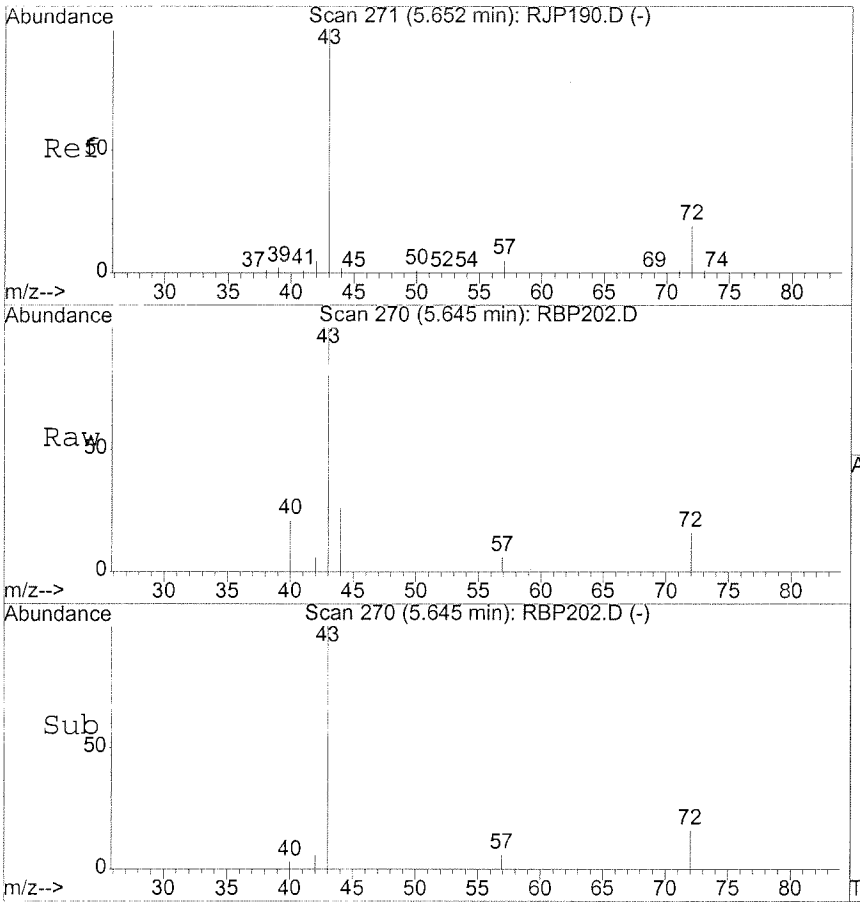


#11
Acetone
Concen: 34.16 ug/l
RT: 3.47 min Scan# 124
Delta R.T. -0.01 min
Lab File: RBP202.D
Acq: 10 Feb 2016 2:02 pm

Tgt Ion: 43 Resp: 178263

Ion	Ratio	Lower	Upper
43	100		
58	34.8	0.7	60.7
42	7.5	0.0	37.6

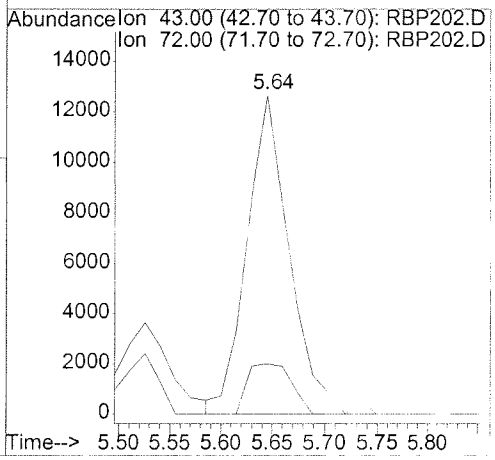




#27
2-Butanone
Concen: 3.72 ug/l
RT: 5.64 min Scan# 270
Delta R.T. -0.01 min
Lab File: RBP202.D
Acq: 10 Feb 2016 2:02 pm

Tgt Ion: 43 Resp: 36586

Ion	Ratio	Lower	Upper
43	100		
72	16.4	0.0	48.8



METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/10/16 14:26
Sample ID:	CA504-SG02-S-210	Date Analyzed:	02/10/16 14:26
Lab Samp ID:	B060-09	Dilution Factor:	0.93
Lab File ID:	RBP203	Matrix :	SOIL
Ext Btch ID:	VS02B12	% Moisture :	8.4
Calib. Ref.:	RJP190	Instrument ID :	T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1-DICHLOROETHANE	ND	0.0051	0.00051	0.0010
1,1-DICHLOROETHENE	ND	0.0051	0.00051	0.0010
1,1-DICHLOROPROPENE	ND	0.0051	0.00051	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0051	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0051	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0051	0.00056	0.0020
1,2-DIBROMOETHANE	ND	0.0051	0.00051	0.0010
1,2-DICHLOROBENZENE	ND	0.0051	0.00051	0.0010
1,2-DICHLOROETHANE	ND	0.0051	0.00051	0.0010
1,2-DICHLOROPROPANE	ND	0.0051	0.00051	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0051	0.00060	0.0020
1,3-DICHLOROBENZENE	ND	0.0051	0.00053	0.0010
1,3-DICHLOROPROPANE	ND	0.0051	0.00051	0.0010
1,4-DICHLOROBENZENE	ND	0.0051	0.00051	0.0010
2,2-DICHLOROPROPANE	ND	0.0051	0.0010	0.0020
2-BUTANONE	0.0048J	0.010	0.0025	0.0051
2-CHLOROTOLUENE	ND	0.0051	0.00083	0.0010
4-CHLOROTOLUENE	ND	0.0051	0.00068	0.0010
ACETONE	0.055	0.010	0.0031	0.0051
BENZENE	ND	0.0051	0.00051	0.0010
BROMOBENZENE	ND	0.0051	0.00051	0.0010
BROMODICHLOROMETHANE	ND	0.0051	0.00051	0.0010
BROMOFORM	ND	0.0051	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0051	0.00055	0.0010
CHLOROBENZENE	ND	0.0051	0.00051	0.0010
CHLOROETHANE	ND	0.0051	0.0013	0.0020
CHLOROFORM	ND	0.0051	0.00051	0.0010
CHLOROMETHANE	ND	0.0051	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0051	0.00051	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0051	0.00051	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0051	0.0012	0.0020
ETHYLBENZENE	ND	0.0051	0.00051	0.0010
ISOPROPYLBENZENE	ND	0.0051	0.00065	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0051
METHYLENE CHLORIDE	0.0011J	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0051	0.00051	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0051	0.00071	0.0010
N-PROPYLBENZENE	ND	0.0051	0.00066	0.0010
O-XYLENE	ND	0.0051	0.00051	0.0010
SEC-BUTYLBENZENE	ND	0.0051	0.00068	0.0010
STYRENE	ND	0.0051	0.00051	0.0010
TETRACHLOROETHENE	ND	0.0051	0.00051	0.0010
TOLUENE	0.00066J	0.0051	0.00051	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0051	0.00051	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0051	0.00051	0.0010
TRICHLOROETHENE	ND	0.0051	0.00051	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0051	0.0011	0.0020
VINYL CHLORIDE	ND	0.0051	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00051	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0458	0.05076	90.2	85-115
DIBROMOFLUOROMETHANE	0.0482	0.05076	94.9	80-119

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP203.D
Acq On : 10 Feb 2016 2:26 pm
Sample : 16B060-09
Misc :
MS Integration Params: RTE.P
Quant Time: Feb 19 22:08 2016

Vial: 18
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

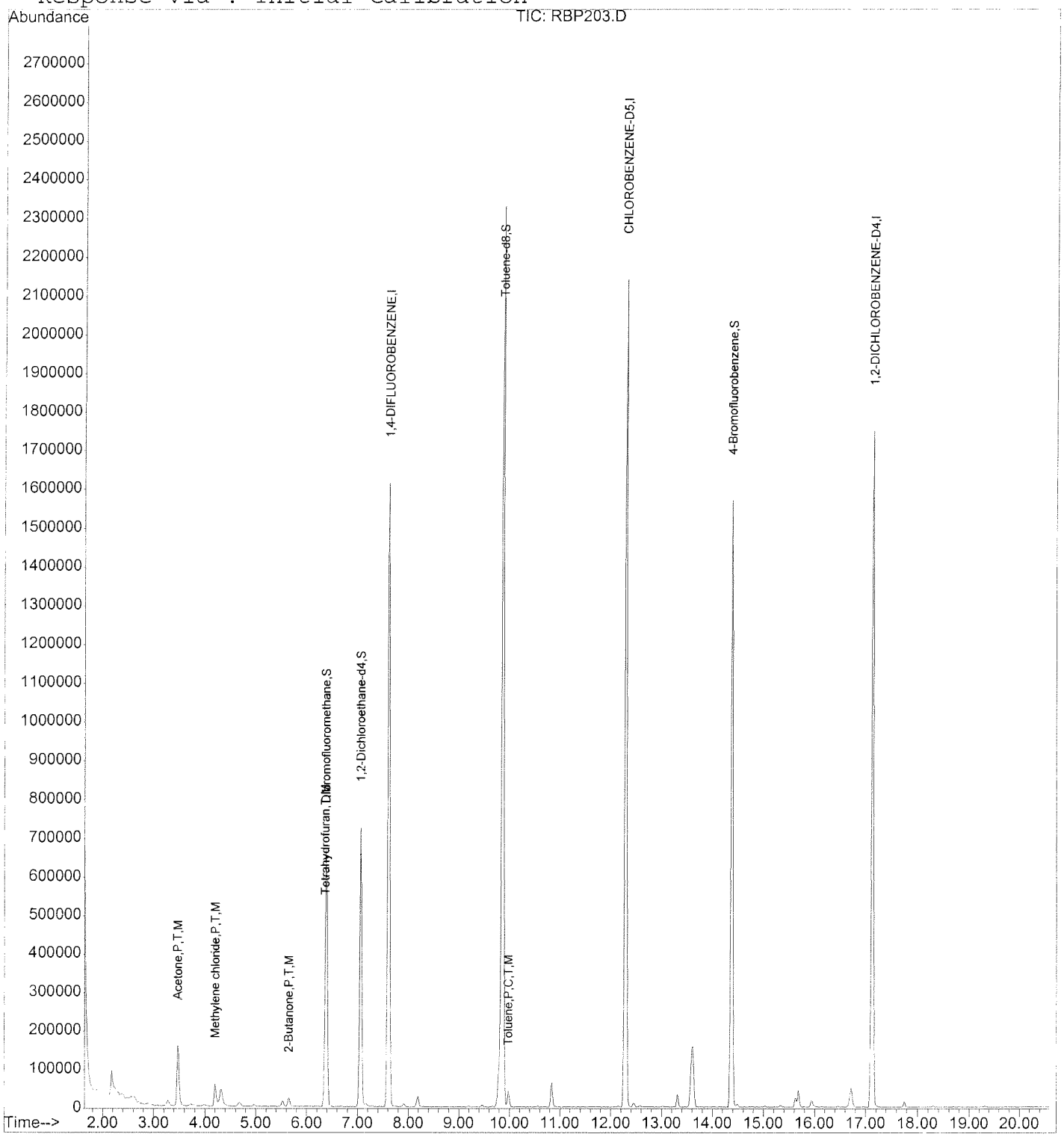
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	2161624	50.00 ug/l	-0.02
51) CHLOROBENZENE-D5	12.28	117	2026379	50.00 ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	816627	50.00 ug/l	-0.02
System Monitoring Compounds					
33) Dibromofluoromethane	6.37	111	626962	47.47 ug/l	-0.02
Spiked Amount 50.000			Recovery =	94.94%	
39) 1,2-Dichloroethane-d4	7.06	65	602919	49.89 ug/l	-0.02
Spiked Amount 50.000			Recovery =	99.78%	
52) Toluene-d8	9.86	98	2446655	45.10 ug/l	-0.02
Spiked Amount 50.000			Recovery =	90.20%	
73) 4-Bromofluorobenzene	14.36	95	927471	49.92 ug/l	-0.02
Spiked Amount 50.000			Recovery =	99.84%	
Target Compounds					Qvalue
11) Acetone	3.47	43	292954	53.98 ug/l	98
17) Methylene chloride	4.20	49	63981	1.07 ug/l	94
27) 2-Butanone	5.65	43	47851	4.68 ug/l	99
32) Tetrahydrofuran	6.36	42	98289	16.43 ug/l	99
53) Toluene	9.98	91	42561	0.65 ug/l	96

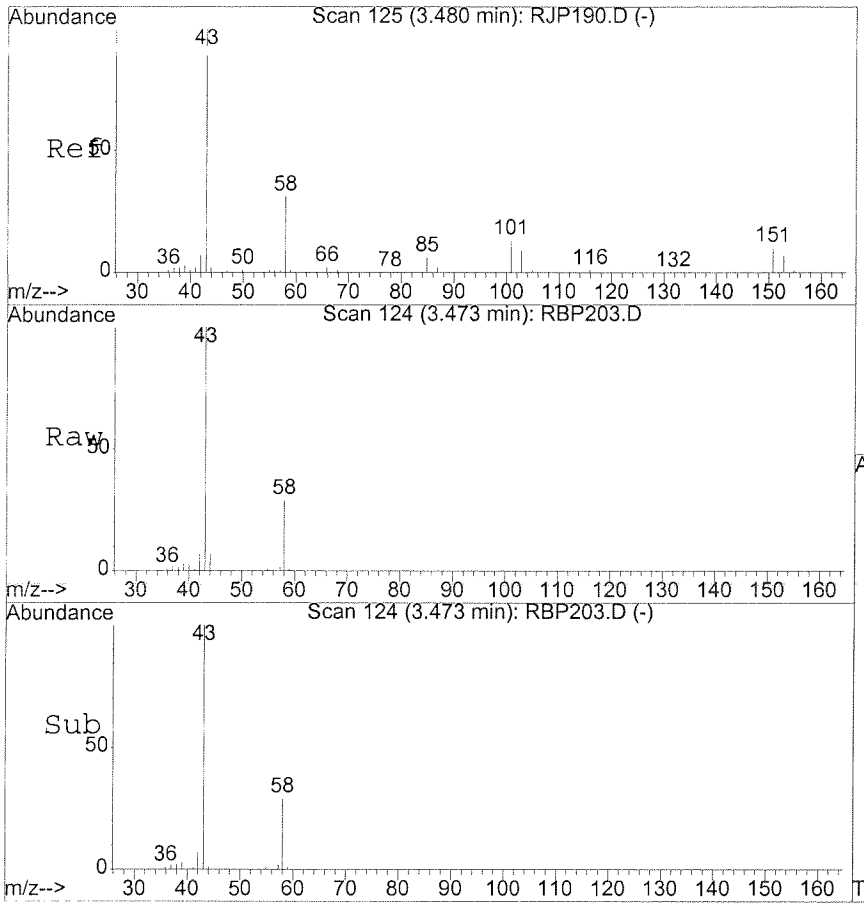
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP203.D Vial: 18
Acq On : 10 Feb 2016 2:26 pm Operator: CMendo
Sample : 16B060-09 Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 19 22:08 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration

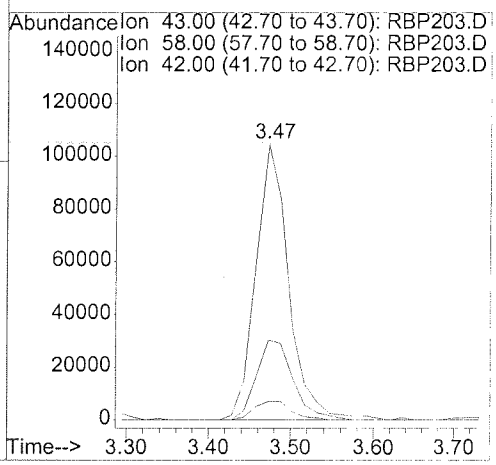


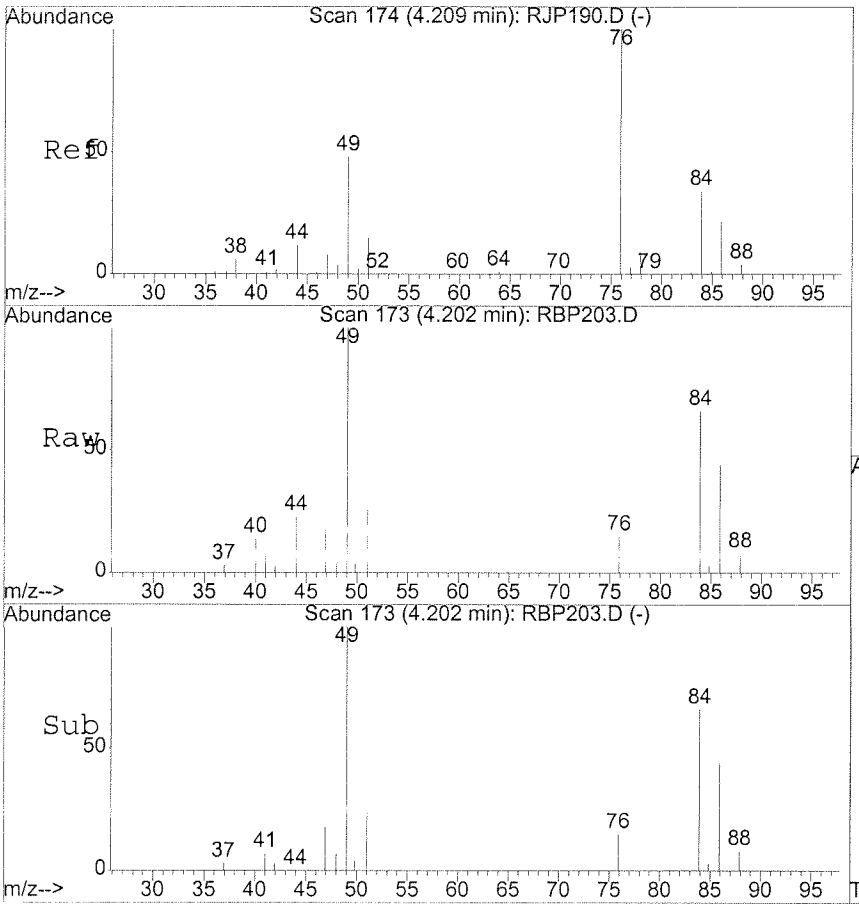


#11
Acetone
Concen: 53.98 ug/l
RT: 3.47 min Scan# 124
Delta R.T. -0.01 min
Lab File: RBP203.D
Acq: 10 Feb 2016 2:26 pm

Tgt Ion: 43 Resp: 292954

Ion	Ratio	Lower	Upper
43	100		
58	32.2	0.7	60.7
42	7.6	0.0	37.6

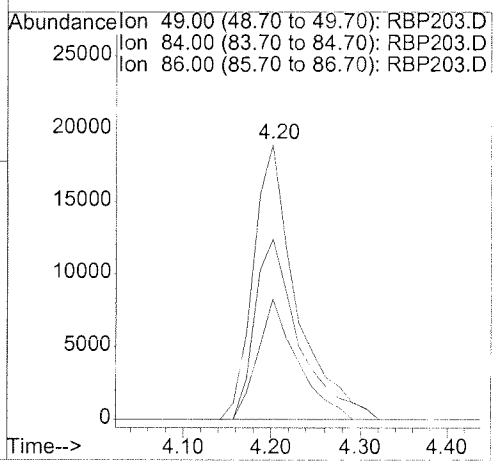


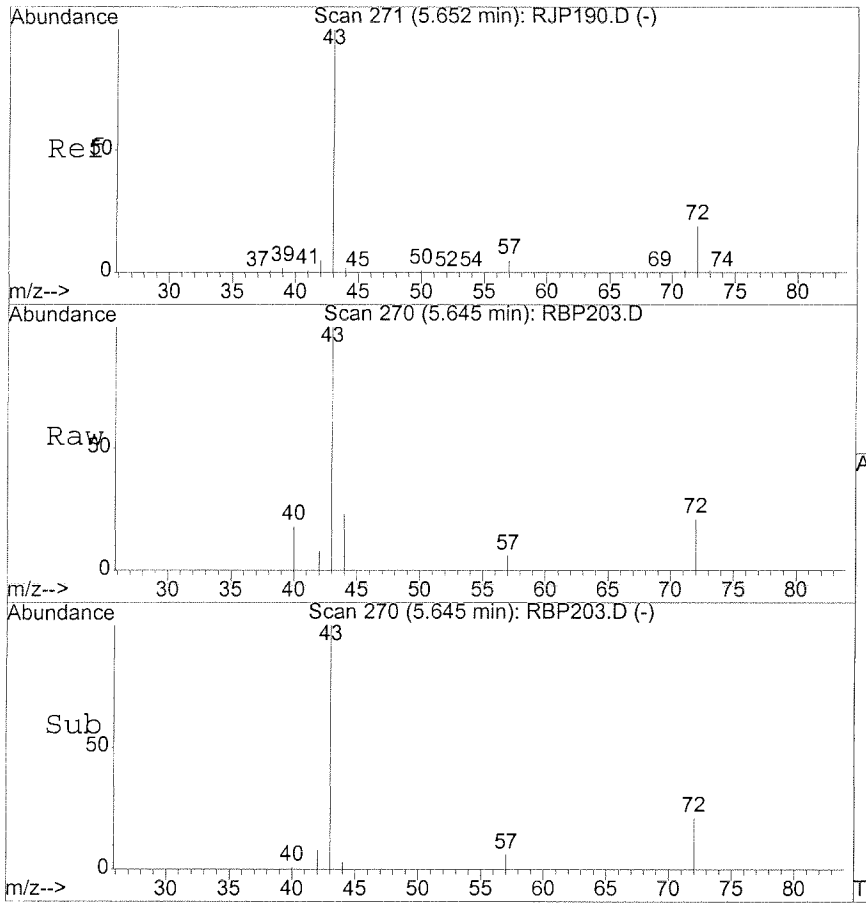


#17
Methylene chloride
Concen: 1.07 ug/l
RT: 4.20 min Scan# 173
Delta R.T. -0.01 min
Lab File: RBP203.D
Acq: 10 Feb 2016 2:26 pm

Tgt Ion: 49 Resp: 63981

Ion	Ratio	Lower	Upper
49	100		
84	67.6	41.4	101.4
86	40.5	15.6	75.6

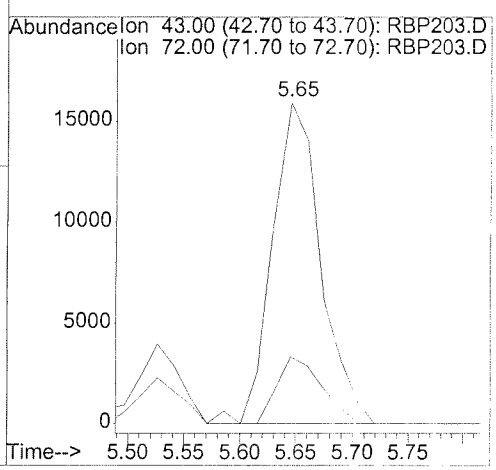


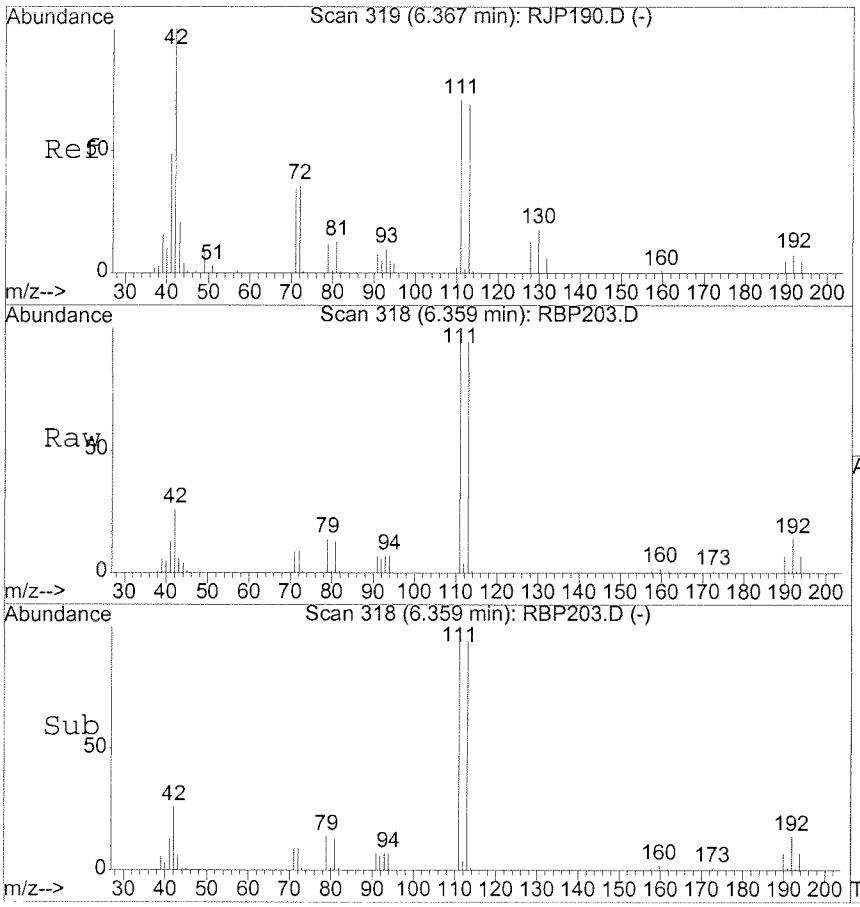


#27
2-Butanone
Concen: 4.68 ug/l
RT: 5.65 min Scan# 270
Delta R.T. -0.01 min
Lab File: RBP203.D
Acq: 10 Feb 2016 2:26 pm

Tgt Ion: 43 Resp: 47851

Ion	Ratio	Lower	Upper
43	100		
72	19.2	0.0	48.8

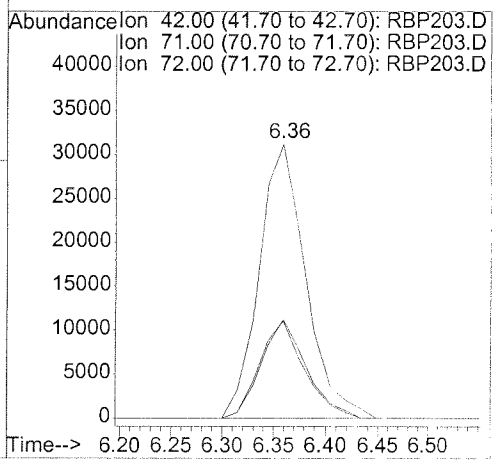


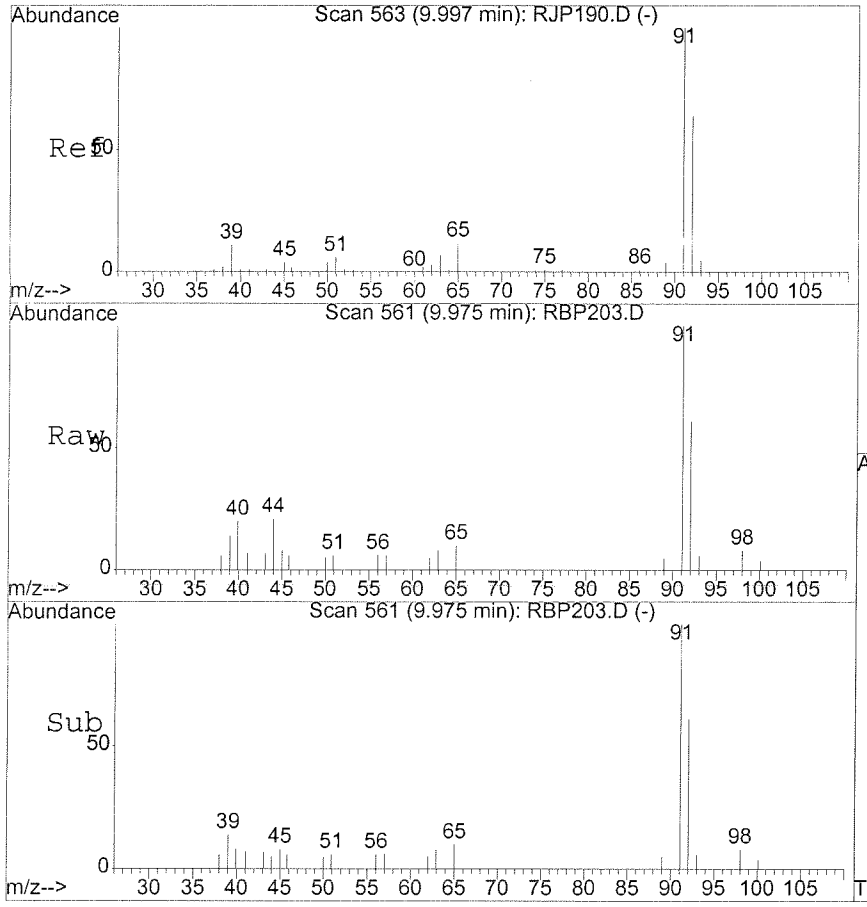


#32
Tetrahydrofuran
Concen: 16.43 ug/l
RT: 6.36 min Scan# 318
Delta R.T. -0.01 min
Lab File: RBP203.D
Acq: 10 Feb 2016 2:26 pm

Tgt Ion: 42 Resp: 98289

Ion	Ratio	Lower	Upper
42	100		
71	34.0	5.0	65.0
72	34.9	5.2	65.2

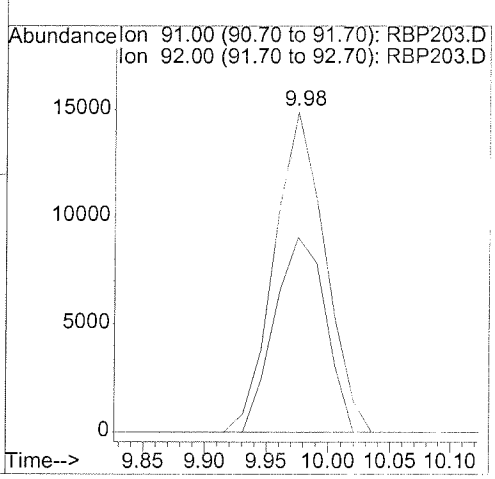




#53
Toluene
Concen: 0.65 ug/l
RT: 9.98 min Scan# 561
Delta R.T. -0.02 min
Lab File: RBP203.D
Acq: 10 Feb 2016 2:26 pm

Tgt Ion: 91 Resp: 42561

Ion	Ratio	Lower	Upper
91	100		
92	60.7	33.8	93.8



QC SUMMARIES

METHOD SW5035A/8260B
VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION	Date Collected: NA
Project : CANNON AFB PBR	Date Received: 02/10/16
Batch No. : 16B060	Date Extracted: 02/10/16 08:44
Sample ID: MBLK1S	Date Analyzed: 02/10/16 08:44
Lab Samp ID: VS02B12B	Dilution Factor: 1
Lab File ID: RBP190	Matrix : SOIL
Ext Btch ID: VS02B12	% Moisture : NA
Calib. Ref.: RJP190	Instrument ID : T-002

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,1,1,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,1-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2,2-TETRACHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1,2-TRICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
1,1-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
1,2,3-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRICHLOROBENZENE	ND	0.0050	0.0010	0.0020
1,2,4-TRIMETHYLBENZENE	ND	0.0050	0.00055	0.0020
1,2-DIBROMOETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROETHANE	ND	0.0050	0.00050	0.0010
1,2-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,3,5-TRIMETHYLBENZENE	ND	0.0050	0.00059	0.0020
1,3-DICHLOROBENZENE	ND	0.0050	0.00052	0.0010
1,3-DICHLOROPROPANE	ND	0.0050	0.00050	0.0010
1,4-DICHLOROBENZENE	ND	0.0050	0.00050	0.0010
2,2-DICHLOROPROPANE	ND	0.0050	0.0010	0.0020
2-BUTANONE	ND	0.010	0.0025	0.0050
2-CHLOROTOLUENE	ND	0.0050	0.00082	0.0010
4-CHLOROTOLUENE	ND	0.0050	0.00067	0.0010
ACETONE	ND	0.010	0.0031	0.0050
BENZENE	ND	0.0050	0.00050	0.0010
BROMOBENZENE	ND	0.0050	0.00050	0.0010
BROMODICHLOROMETHANE	ND	0.0050	0.00050	0.0010
BROMOFORM	ND	0.0050	0.0010	0.0020
BROMOMETHANE	ND	0.010	0.0018	0.0020
CARBON TETRACHLORIDE	ND	0.0050	0.00054	0.0010
CHLOROBENZENE	ND	0.0050	0.00050	0.0010
CHLOROETHANE	ND	0.0050	0.0013	0.0020
CHLOROFORM	ND	0.0050	0.00050	0.0010
CHLOROMETHANE	ND	0.0050	0.0010	0.0020
CIS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
CIS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
DICHLORODIFLUOROMETHANE	ND	0.0050	0.0012	0.0020
ETHYLBENZENE	ND	0.0050	0.00050	0.0010
ISOPROPYLBENZENE	ND	0.0050	0.00064	0.0020
M/P-XYLENES	ND	0.010	0.0010	0.0020
4-METHYL-2-PENTANONE	ND	0.010	0.0028	0.0050
METHYLENE CHLORIDE	ND	0.010	0.0010	0.0020
METHYL TERT-BUTYL ETHER	ND	0.0050	0.00050	0.0010
NAPHTHALENE	ND	0.010	0.0010	0.0020
N-BUTYLBENZENE	ND	0.0050	0.00070	0.0010
N-PROPYLBENZENE	ND	0.0050	0.00065	0.0010
O-XYLENE	ND	0.0050	0.00050	0.0010
SEC-BUTYLBENZENE	ND	0.0050	0.00067	0.0010
STYRENE	ND	0.0050	0.00050	0.0010
TETRACHLOROETHENE	ND	0.0050	0.00050	0.0010
TOLUENE	ND	0.0050	0.00050	0.0010
TRANS-1,2-DICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRANS-1,3-DICHLOROPROPENE	ND	0.0050	0.00050	0.0010
TRICHLOROETHENE	ND	0.0050	0.00050	0.0010
TRICHLOROFLUOROMETHANE	ND	0.0050	0.0011	0.0020
VINYL CHLORIDE	ND	0.0050	0.0014	0.0020
XYLENES, TOTAL	ND	0.010	0.00050	0.0010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TOLUENE-D8	0.0452	0.05000	90.3	85-115
DIBROMOFLUOROMETHANE	0.0463	0.05000	92.5	80-119

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW 5035A/8260B

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	VS02B12B	VS02B12L	VS02B12C		
LAB FILE ID:	RBP190	RBP188	RBP189		
DATE EXTRACTED:	02/10/1608:44	02/10/1607:54	02/10/1608:19	DATE COLLECTED:	NA
DATE ANALYZED:	02/10/1608:44	02/10/1607:54	02/10/1608:19	DATE RECEIVED:	02/10/16
PREP. BATCH:	VS02B12	VS02B12	VS02B12		
CALIB. REF:	RJP190	RJP190	RJP190		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0500	0.0508	102	0.0500	0.0524	105	3	75-125	30
1,1,1-Trichloroethane	ND	0.0500	0.0464	93	0.0500	0.0493	99	6	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0500	0.0516	103	0.0500	0.0540	108	5	55-130	30
1,1,2-Trichloroethane	ND	0.0500	0.0441	88	0.0500	0.0465	93	5	60-125	30
1,1-Dichloroethane	ND	0.0500	0.0463	93	0.0500	0.0495	99	7	75-125	30
1,1-Dichloroethene	ND	0.0500	0.0472	94	0.0500	0.0479	96	2	65-135	30
1,1-Dichloropropene	ND	0.0500	0.0434	87	0.0500	0.0466	93	7	70-135	30
1,2,3-Trichlorobenzene	ND	0.0500	0.0450	90	0.0500	0.0474	95	5	60-135	30
1,2,4-Trichlorobenzene	ND	0.0500	0.0474	95	0.0500	0.0489	98	3	65-130	30
1,2,4-Trimethylbenzene	ND	0.0500	0.0473	95	0.0500	0.0479	96	1	65-135	30
1,2-Dibromoethane	ND	0.0500	0.0449	90	0.0500	0.0480	96	7	70-125	30
1,2-Dichlorobenzene	ND	0.0500	0.0494	99	0.0500	0.0519	104	5	75-120	30
1,2-Dichloroethane	ND	0.0500	0.0493	99	0.0500	0.0513	103	4	70-135	30
1,2-Dichloropropane	ND	0.0500	0.0485	97	0.0500	0.0523	105	8	70-120	30
1,3,5-Trimethylbenzene	ND	0.0500	0.0494	99	0.0500	0.0494	99	0	65-135	30
1,3-Dichlorobenzene	ND	0.0500	0.0488	98	0.0500	0.0501	100	2	70-125	30
1,3-Dichloropropane	ND	0.0500	0.0437	87	0.0500	0.0465	93	6	75-125	30
1,4-Dichlorobenzene	ND	0.0500	0.0489	98	0.0500	0.0499	100	2	70-125	30
2,2-Dichloropropane	ND	0.0500	0.0486	97	0.0500	0.0539	108	10	65-135	30
2-Butanone	ND	0.250	0.242	97	0.250	0.252	101	4	30-160	30
2-Chlorotoluene	ND	0.0500	0.0535	107	0.0500	0.0523	105	2	70-130	30
4-Chlorotoluene	ND	0.0500	0.0498	100	0.0500	0.0533	107	7	75-125	30
Acetone	ND	0.250	0.239	96	0.250	0.252	101	5	20-160	30
Benzene	ND	0.0500	0.0486	97	0.0500	0.0502	100	3	75-125	30
Bromobenzene	ND	0.0500	0.0498	100	0.0500	0.0511	102	3	65-120	30
Bromodichloromethane	ND	0.0500	0.0508	102	0.0500	0.0552	110	8	70-130	30
Bromoform	ND	0.0500	0.0459	92	0.0500	0.0497	99	8	55-135	30
Bromomethane	ND	0.0500	0.0505	101	0.0500	0.0452	90	11	30-160	30
Carbon Tetrachloride	ND	0.0500	0.0459	92	0.0500	0.0491	98	7	65-135	30
Chlorobenzene	ND	0.0500	0.0489	98	0.0500	0.0509	102	4	75-125	30
Chloroethane	ND	0.0500	0.0525	105	0.0500	0.0463	93	13	40-155	30
Chloroform	ND	0.0500	0.0461	92	0.0500	0.0493	99	7	70-125	30
Chloromethane	ND	0.0500	0.0575	115	0.0500	0.0503	101	13	50-130	30
cis-1,2-Dichloroethene	ND	0.0500	0.0465	93	0.0500	0.0492	98	6	65-125	30
cis-1,3-Dichloropropene	ND	0.0500	0.0523	105	0.0500	0.0562	112	7	70-125	30
Dichlorodifluoromethane	ND	0.0500	0.0609	122	0.0500	0.0531	106	14	35-135	30
Ethylbenzene	ND	0.0500	0.0471	94	0.0500	0.0495	99	5	75-125	30
Isopropylbenzene	ND	0.0500	0.0522	104	0.0500	0.0528	106	1	75-130	30
m/p-Xylenes	ND	0.100	0.0981	98	0.100	0.0992	99	1	80-125	30
4-Methyl-2-Pentanone	ND	0.250	0.266	107	0.250	0.277	111	4	45-145	30
Methylene Chloride	ND	0.0500	0.0492	98	0.0500	0.0505	101	3	55-140	30
Methyl tert-butyl ether	ND	0.0500	0.0465	93	0.0500	0.0517	103	11	65-135	30
Naphthalene	ND	0.0500	0.0463	93	0.0500	0.0481	96	4	40-125	30
n-Butylbenzene	ND	0.0500	0.0482	96	0.0500	0.0495	99	3	65-135	30
n-Propylbenzene	ND	0.0500	0.0530	106	0.0500	0.0535	107	1	65-135	30
o-Xylene	ND	0.0500	0.0525	105	0.0500	0.0532	106	1	75-125	30
Sec-Butylbenzene	ND	0.0500	0.0472	94	0.0500	0.0469	94	1	65-130	30
Styrene	ND	0.0500	0.0527	105	0.0500	0.0538	108	2	75-125	30
Tetrachloroethene	ND	0.0500	0.0419	84	0.0500	0.0436	87	4	65-140	30
Toluene	ND	0.0500	0.0413	83	0.0500	0.0429	86	4	70-125	30
Trans-1,2-Dichloroethene	ND	0.0500	0.0448	90	0.0500	0.0468	94	4	65-135	30
Trans-1,3-Dichloropropene	ND	0.0500	0.0443	89	0.0500	0.0465	93	5	65-125	30
Trichloroethene	ND	0.0500	0.0475	95	0.0500	0.0496	99	4	75-125	30
Trichlorofluoromethane	ND	0.0500	0.0515	103	0.0500	0.0466	93	10	25-185	30
Vinyl Chloride	ND	0.0500	0.0565	113	0.0500	0.0492	98	14	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
Toluene-d8	0.0500	0.0445	89	0.0500	0.0444	89	85-115
Dibromofluoromethane	0.0500	0.0461	92	0.0500	0.0480	96	80-119

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW 5035A/8260B

MATRIX:	SOIL			% MOISTURE:	9.4
DILUTION FACTOR:	0.94	0.9	0.89		
SAMPLE ID:	CA504-SG03-S-010				
LAB SAMP ID:	B060-02	B060-02M	B060-02S		
LAB FILE ID:	RBP196	RBP204	RBP205		
DATE EXTRACTED:	02/10/1611:33	02/10/1614:51	02/10/1615:16	DATE COLLECTED:	02/05/16
DATE ANALYZED:	02/10/1611:33	02/10/1614:51	02/10/1615:16	DATE RECEIVED:	02/06/16
PREP. BATCH:	VS02B12	VS02B12	VS02B12		
CALIB. REF:	RJP190	RJP190	RJP190		

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,1,1,2-Tetrachloroethane	ND	0.0497	0.0526	106	0.0491	0.0527	107	1	75-125	30
1,1,1-Trichloroethane	ND	0.0497	0.0468	94	0.0491	0.0467	95	1	70-135	30
1,1,2,2-Tetrachloroethane	ND	0.0497	0.0575	116	0.0491	0.0595	121	4	55-130	30
1,1,2-Trichloroethane	ND	0.0497	0.0456	92	0.0491	0.0460	94	2	60-125	30
1,1-Dichloroethane	ND	0.0497	0.0493	99	0.0491	0.0467	95	4	75-125	30
1,1-Dichloroethene	ND	0.0497	0.0520	105	0.0491	0.0503	102	3	65-135	30
1,1-Dichloropropene	ND	0.0497	0.0464	93	0.0491	0.0442	90	3	70-135	30
1,2,3-Trichlorobenzene	ND	0.0497	0.0437	88	0.0491	0.0442	90	2	60-135	30
1,2,4-Trichlorobenzene	ND	0.0497	0.0472	95	0.0491	0.0470	96	1	65-130	30
1,2,4-Trimethylbenzene	ND	0.0497	0.0552	111	0.0491	0.0544	111	0	65-135	30
1,2-Dibromoethane	ND	0.0497	0.0478	96	0.0491	0.0483	98	2	70-125	30
1,2-Dichlorobenzene	ND	0.0497	0.0510	103	0.0491	0.0509	104	1	75-120	30
1,2-Dichloroethane	ND	0.0497	0.0516	104	0.0491	0.0505	103	1	70-135	30
1,2-Dichloropropane	ND	0.0497	0.0508	102	0.0491	0.0501	102	0	70-120	30
1,3,5-Trimethylbenzene	ND	0.0497	0.0558	112	0.0491	0.0560	114	2	65-135	30
1,3-Dichlorobenzene	ND	0.0497	0.0543	109	0.0491	0.0535	109	0	70-125	30
1,3-Dichloropropane	ND	0.0497	0.0462	93	0.0491	0.0457	93	0	75-125	30
1,4-Dichlorobenzene	ND	0.0497	0.0539	108	0.0491	0.0532	108	0	70-125	30
2,2-Dichloropropane	ND	0.0497	0.0529	107	0.0491	0.0502	102	5	65-135	30
2-Butanone	0.00372J	0.248	0.290	115	0.246	0.285	115	0	30-160	30
2-Chlorotoluene	ND	0.0497	0.0560	113	0.0491	0.0558	114	1	70-130	30
4-Chlorotoluene	ND	0.0497	0.0574	115	0.0491	0.0566	115	0	75-125	30
Acetone	0.0377	0.248	0.324	115	0.246	0.319	114	1	20-160	30
Benzene	ND	0.0497	0.0503	101	0.0491	0.0482	98	3	75-125	30
Bromobenzene	ND	0.0497	0.0537	108	0.0491	0.0539	110	2	65-120	30
Bromodichloromethane	ND	0.0497	0.0515	104	0.0491	0.0513	105	1	70-130	30
Bromoform	ND	0.0497	0.0497	100	0.0491	0.0513	105	5	55-135	30
Bromomethane	ND	0.0497	0.0501	101	0.0491	0.0446	91	10	30-160	30
Carbon Tetrachloride	ND	0.0497	0.0484	98	0.0491	0.0466	95	3	65-135	30
Chlorobenzene	ND	0.0497	0.0507	102	0.0491	0.0495	101	1	75-125	30
Chloroethane	ND	0.0497	0.0541	109	0.0491	0.0464	95	14	40-155	30
Chloroform	ND	0.0497	0.0486	98	0.0491	0.0476	97	1	70-125	30
Chloromethane	ND	0.0497	0.0615	124	0.0491	0.0522	106	16	50-130	30
cis-1,2-Dichloroethene	ND	0.0497	0.0478	96	0.0491	0.0470	96	0	65-125	30
cis-1,3-Dichloropropene	ND	0.0497	0.0535	108	0.0491	0.0528	107	1	70-125	30
Dichlorodifluoromethane	ND	0.0497	0.0673	135	0.0491	0.0579	118	13	35-135	30
Ethylbenzene	ND	0.0497	0.0497	100	0.0491	0.0491	100	0	75-125	30
Isopropylbenzene	ND	0.0497	0.0562	113	0.0491	0.0542	110	3	75-130	30
m/p-Xylenes	ND	0.0993	0.100	101	0.0982	0.0985	100	1	80-125	30
4-Methyl-2-Pentanone	ND	0.248	0.294	118	0.246	0.295	120	2	45-145	30
Methylene Chloride	0.00342J	0.0497	0.0532	100	0.0491	0.0512	97	3	55-140	30
Methyl tert-butyl ether	ND	0.0497	0.0473	95	0.0491	0.0479	97	2	65-135	30
Naphthalene	ND	0.0497	0.0442	89	0.0491	0.0456	93	4	40-125	30
n-Butylbenzene	ND	0.0497	0.0490	99	0.0491	0.0480	98	1	65-135	30
n-Propylbenzene	ND	0.0497	0.0574	116	0.0491	0.0569	116	0	65-135	30
o-Xylene	ND	0.0497	0.0550	111	0.0491	0.0533	108	3	75-125	30
Sec-Butylbenzene	ND	0.0497	0.0554	112	0.0491	0.0550	112	0	65-130	30
Styrene	ND	0.0497	0.0544	109	0.0491	0.0531	108	1	75-125	30
Tetrachloroethene	ND	0.0497	0.0426	86	0.0491	0.0426	87	1	65-140	30
Toluene	ND	0.0497	0.0426	86	0.0491	0.0426	87	1	70-125	30
Trans-1,2-Dichloroethene	ND	0.0497	0.0488	98	0.0491	0.0465	95	3	65-135	30
Trans-1,3-Dichloropropene	ND	0.0497	0.0454	91	0.0491	0.0458	93	2	65-125	30
Trichloroethene	ND	0.0497	0.0503	101	0.0491	0.0495	101	0	75-125	30
Trichlorofluoromethane	ND	0.0497	0.0562	113	0.0491	0.0486	99	13	25-185	30
Vinyl Chloride	ND	0.0497	0.0675	136*	0.0491	0.0571	116	16	60-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
Toluene-d8	0.0497	0.0444	89	0.0491	0.0435	89	85-115
Dibromofluoromethane	0.0497	0.0472	95	0.0491	0.0465	95	80-119

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP190.D Vial: 5
Acq On : 10 Feb 2016 8:44 am Operator: CMendo
Sample : VS02B12B 5.0g Inst : TO02
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:00 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	2492025	50.00	ug/l	-0.02
51) CHLOROBENZENE-D5	12.30	117	2322814	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.13	152	830398	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.39	111	704178	46.25	ug/l	0.00
Spiked Amount 50.000			Recovery = 92.50%			
39) 1,2-Dichloroethane-d4	7.06	65	631935	45.36	ug/l	-0.02
Spiked Amount 50.000			Recovery = 90.72%			
52) Toluene-d8	9.86	98	2808452	45.16	ug/l	0.02
Spiked Amount 50.000			Recovery = 90.32%			
73) 4-Bromofluorobenzene	14.38	95	1047897	55.46	ug/l	0.00
Spiked Amount 50.000			Recovery = 110.92%			

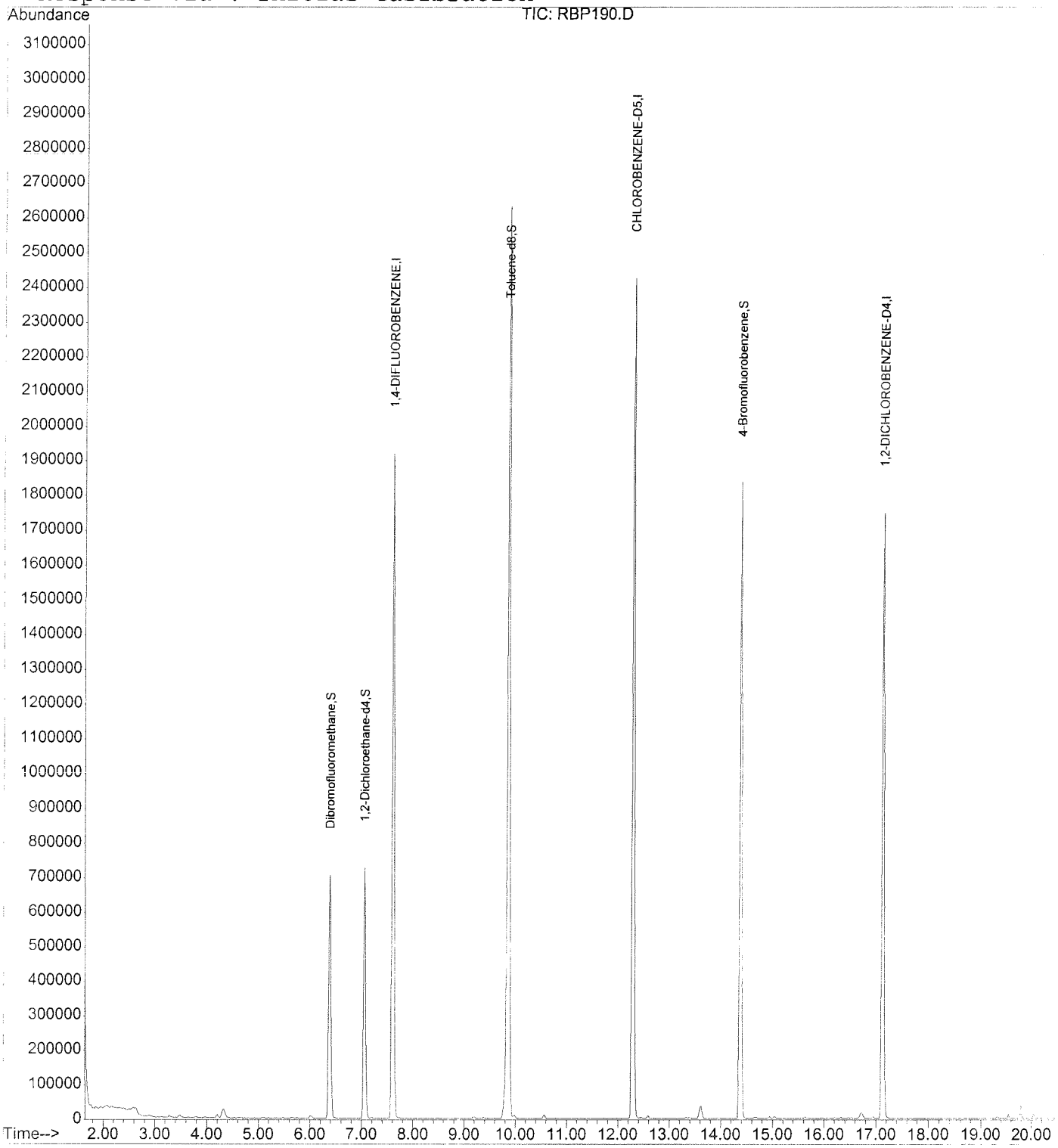
Target Compounds Qvalue

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP190.D Vial: 5
Acq On : 10 Feb 2016 8:44 am Operator: CMendo
Sample : VS02B12B 5.0g Inst : TO02
Misc : DF=1.0 MB Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:00 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP188.D Vial: 3
Acq On : 10 Feb 2016 7:54 am Operator: CMendo
Sample : VS02B12L 5.0g Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	2260441	50.00	ug/l	0.00
51) CHLOROBENZENE-D5	12.31	117	2181849	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.15	152	878603	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.39	111	636731	46.11	ug/l	0.00
Spiked Amount 50.000			Recovery = 92.22%			
39) 1,2-Dichloroethane-d4	7.07	65	612516	48.47	ug/l	0.00
Spiked Amount 50.000			Recovery = 96.94%			
52) Toluene-d8	9.87	98	2596836	44.45	ug/l	0.00
Spiked Amount 50.000			Recovery = 88.90%			
73) 4-Bromofluorobenzene	14.39	95	999606	50.01	ug/l	0.00
Spiked Amount 50.000			Recovery = 100.02%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.71	85	673511	60.88	ug/l	99
3) Chloromethane	1.97	50	1286934	57.46	ug/l	99
4) Vinyl chloride	2.07	62	851989	56.50	ug/l	99
5) Bromomethane	2.56	94	612392	50.51	ug/l	97
6) Chloroethane	2.67	64	627750	52.49	ug/l	97
7) Dichlorofluoromethane	2.70	67	1549892	56.11	ug/l	99
8) Trichlorofluoromethane	2.93	101	754264	51.47	ug/l	99
9) Acrolein	3.41	56	460660	219.62	ug/l	98
10) 1,1,2-Trichloro-1,2,2-trif	3.47	151	359559	47.75	ug/l	97
11) Acetone	3.49	43	1356886	239.10	ug/l	99
12) 1,1-Dichloroethene	3.63	61	1011499	47.16	ug/l	98
13) tert-Butyl alcohol	3.72	59	597339	253.71	ug/l #	1
14) Acetonitrile	3.80	41	1540966	558.62	ug/l	94
15) Iodomethane	4.01	142	876440	45.13	ug/l	98
17) Methylene chloride	4.21	49	1093480	49.18	ug/l	96
18) Carbon disulfide	4.21	76	3063654	55.73	ug/l	100
19) Acrylonitrile	4.36	53	1691488	240.89	ug/l	99
20) tert-Butyl methyl ether (M	4.39	73	2066150	46.46	ug/l	99
21) trans-1,2-Dichloroethene	4.57	61	1002705	44.81	ug/l	97
22) Isopropyl ether (DIPE)	4.97	45	3355569	45.90	ug/l	98
23) Vinyl acetate	5.12	43	1993687	41.73	ug/l	100
24) 1,1-Dichloroethane	5.11	63	1298039	46.28	ug/l	99
26) tert-Butyl ethyl ether (ET	5.49	59	2468014	44.54	ug/l	99
27) 2-Butanone	5.66	43	2586309	242.03	ug/l	99
28) 2,2-Dichloropropane	5.84	77	571167	48.58	ug/l	98
29) cis-1,2-Dichloroethene	5.90	96	836064	46.52	ug/l	96
30) Chloroform	6.10	83	1122559	46.12	ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP188.D Vial: 3
Acq On : 10 Feb 2016 7:54 am Operator: CMendo
Sample : VS02B12L 5.0g Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31)	Bromochloromethane	6.31	49	755842	47.64 ug/l	97
32)	Tetrahydrofuran	6.36	42	284845	45.55 ug/l	98
34)	1,1,1-Trichloroethane	6.64	97	722491	46.38 ug/l	99
36)	1,1-Dichloropropene	6.85	110	309948	43.43 ug/l	99
37)	Carbon tetrachloride	6.98	119	555572	45.90 ug/l	97
38)	tert-Amyl methyl ether (TA	7.01	87	429297	47.60 ug/l	97
40)	1,2-Dichloroethane	7.21	62	761722	49.33 ug/l	100
41)	Benzene	7.22	78	2896588	48.64 ug/l	100
42)	Trichloroethene	8.08	130	677294	47.47 ug/l	98
44)	1,2-Dichloropropane	8.34	63	732210	48.49 ug/l	98
45)	Bromodichloromethane	8.68	83	829506	50.82 ug/l	100
46)	1,4-Dioxane	8.72	88	173355	1080.92 ug/l	98
47)	Dibromomethane	8.75	93	437476	50.16 ug/l	97
49)	4-Methyl-2-pentanone	9.20	43	5726955	266.25 ug/l	99
50)	cis-1,3-Dichloropropene	9.51	75	1203331	52.30 ug/l	99
53)	Toluene	9.99	91	2925018	41.31 ug/l	99
54)	Ethyl methacrylate	10.30	69	1071700	42.75 ug/l	100
55)	trans-1,3-Dichloropropene	10.30	75	1028704	44.32 ug/l	98
56)	1,1,2-Trichloroethane	10.54	97	649607	44.13 ug/l	98
57)	2-Hexanone	10.55	43	4266065	234.69 ug/l	99
58)	1,3-Dichloropropane	10.94	76	1174726	43.71 ug/l	100
59)	Tetrachloroethene	11.03	164	579709	41.89 ug/l	99
60)	Dibromochloromethane	11.34	129	617367	45.38 ug/l	98
61)	1,2-Dibromoethane	11.67	107	675133	44.91 ug/l	97
62)	1-Chlorohexane	11.97	91	1251563	47.26 ug/l	98
63)	Chlorobenzene	12.37	112	2067737	48.94 ug/l	99
64)	1,1,1,2-Tetrachloroethane	12.44	131	664753	50.82 ug/l	99
65)	Ethylbenzene	12.47	91	3525810	47.07 ug/l	99
66)	m-Xylene & p-Xylene	12.59	91	5366614	98.07 ug/l	100
67)	o-Xylene	13.34	91	2806594	52.51 ug/l	99
68)	Styrene	13.40	104	2420729	52.66 ug/l	100
69)	Isopropylbenzene	13.96	105	3245052	52.20 ug/l	99
71)	Bromoform	13.96	173	477209	45.87 ug/l	98
72)	1,1,2,2-Tetrachloroethane	14.27	83	1097363	51.57 ug/l	100
74)	1,2,3-Trichloropropane	14.53	110	281720	50.43 ug/l	98
75)	trans-1,4-Dichloro-2-buten	14.68	53	308131	50.71 ug/l	98
76)	n-Propylbenzene	14.66	91	4460817	52.99 ug/l	99
77)	Bromobenzene	14.70	156	858674	49.81 ug/l	98
78)	1,3,5-Trimethylbenzene	14.94	105	2460558	49.42 ug/l	99
79)	2-Chlorotoluene	14.94	91	2733575	53.49 ug/l	100
80)	4-Chlorotoluene	15.05	91	2328469	49.81 ug/l	98

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP188.D Vial: 3
Acq On : 10 Feb 2016 7:54 am Operator: CMendo
Sample : VS02B12L 5.0g Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

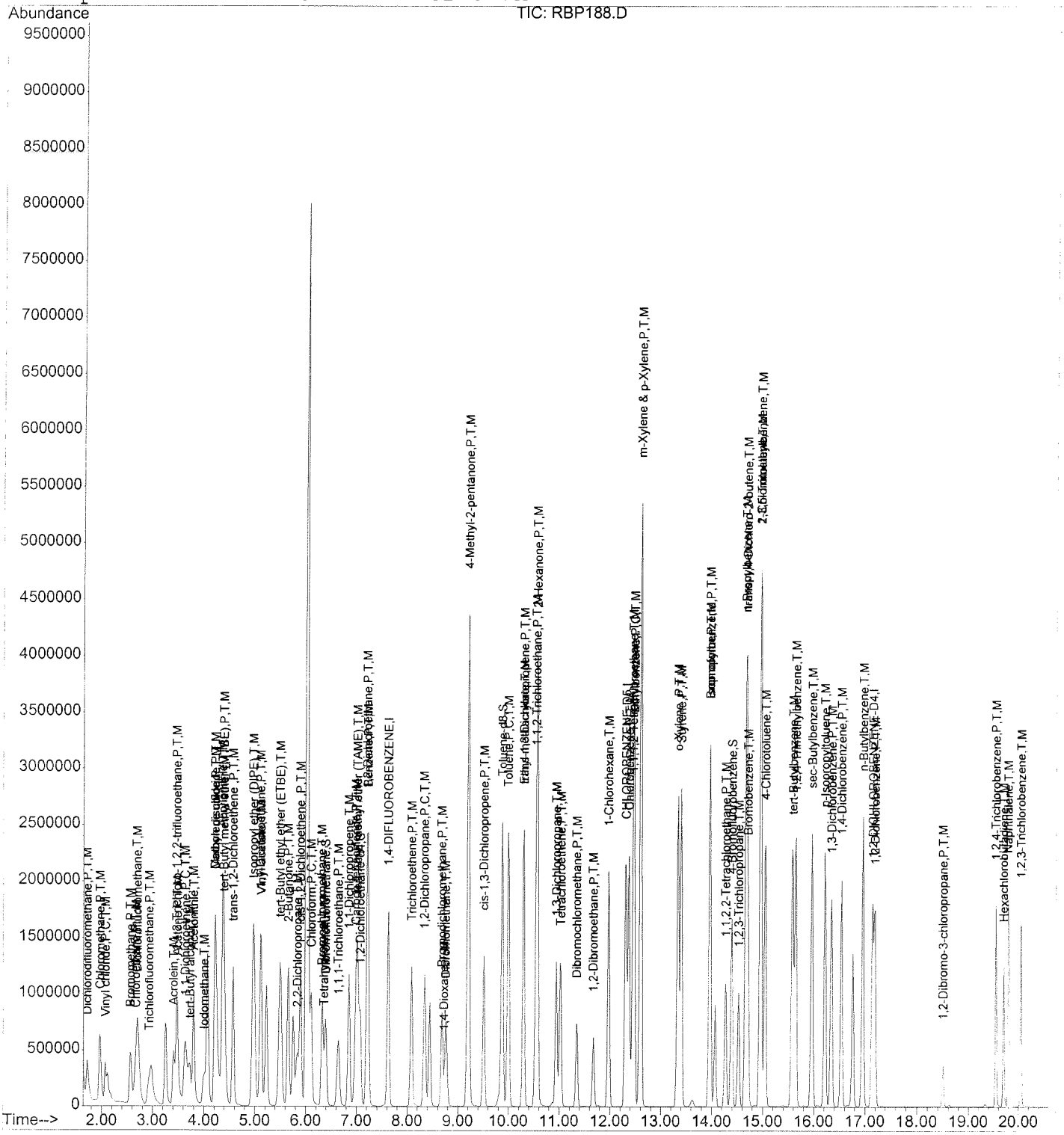
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81) tert-Butylbenzene	15.58	134	570719	52.49 ug/l	96
82) 1,2,4-Trimethylbenzene	15.64	105	2383672	47.28 ug/l	99
83) sec-Butylbenzene	15.95	105	3207500	47.18 ug/l	100
84) p-Isopropyltoluene	16.21	119	2380508	46.11 ug/l	100
85) 1,3-Dichlorobenzene	16.34	146	1412050	48.84 ug/l	99
87) 1,4-Dichlorobenzene	16.54	146	1428315	48.91 ug/l	100
88) n-Butylbenzene	16.95	91	2443847	48.21 ug/l	99
89) 1,2-Dichlorobenzene	17.19	146	1289485	49.41 ug/l	100
90) 1,2-Dibromo-3-chloropropan	18.50	157	148746	42.33 ug/l	97
91) 1,2,4-Trichlorobenzene	19.54	180	692038	47.41 ug/l	99
92) Hexachlorobutadiene	19.70	225	303317	45.16 ug/l	98
93) Naphthalene	19.79	128	1698823	46.26 ug/l	99
94) 1,2,3-Trichlorobenzene	20.05	180	572425	45.00 ug/l	99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP188.D Vial: 3
Acq On : 10 Feb 2016 7:54 am Operator: CMendo
Sample : VS02B12L 5.0g Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:01 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP189.D Vial: 4
Acq On : 10 Feb 2016 8:19 am Operator: CMendo
Sample : VS02B12C 5.0g Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	2344266	50.00	ug/l	-0.01
51) CHLOROBENZENE-D5	12.29	117	2301468	50.00	ug/l	-0.01
70) 1,2-DICHLOROBENZENE-D4	17.13	152	894082	50.00	ug/l	-0.01
System Monitoring Compounds						
33) Dibromofluoromethane	6.39	111	688146	48.05	ug/l	-0.01
Spiked Amount 50.000			Recovery = 96.10%			
39) 1,2-Dichloroethane-d4	7.07	65	648640	49.49	ug/l	-0.01
Spiked Amount 50.000			Recovery = 98.98%			
52) Toluene-d8	9.87	98	2736982	44.42	ug/l	-0.01
Spiked Amount 50.000			Recovery = 88.84%			
73) 4-Bromofluorobenzene	14.38	95	1007309	49.52	ug/l	-0.01
Spiked Amount 50.000			Recovery = 99.04%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.71	85	609220	53.10	ug/l	100
3) Chloromethane	1.97	50	1169156	50.33	ug/l	100
4) Vinyl chloride	2.07	62	768950	49.17	ug/l	100
5) Bromomethane	2.56	94	568363	45.20	ug/l	97
6) Chloroethane	2.67	64	574028	46.28	ug/l	95
7) Dichlorofluoromethane	2.71	67	1581255	55.20	ug/l	98
8) Trichlorofluoromethane	2.93	101	708713	46.64	ug/l	98
9) Acrolein	3.41	56	502972	231.21	ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	368525	47.19	ug/l	99
11) Acetone	3.47	43	1485301	252.37	ug/l	97
12) 1,1-Dichloroethene	3.62	61	1066134	47.93	ug/l	97
13) tert-Butyl alcohol	3.72	59	666842	273.11	ug/l #	1
14) Acetonitrile	3.80	41	1675520	585.68	ug/l	95
15) Iodomethane	3.99	142	930914	46.22	ug/l	98
17) Methylene chloride	4.20	49	1163749	50.52	ug/l	96
18) Carbon disulfide	4.21	76	3076150	53.95	ug/l	100
19) Acrylonitrile	4.36	53	1865865	256.22	ug/l	99
20) tert-Butyl methyl ether (M	4.39	73	2385920	51.73	ug/l	99
21) trans-1,2-Dichloroethene	4.57	61	1086112	46.81	ug/l	97
22) Isopropyl ether (DIPE)	4.97	45	3759841	49.60	ug/l	99
23) Vinyl acetate	5.11	43	2045096	41.28	ug/l	100
24) 1,1-Dichloroethane	5.11	63	1439145	49.47	ug/l	98
26) tert-Butyl ethyl ether (ET	5.49	59	2807226	48.85	ug/l	99
27) 2-Butanone	5.64	43	2791582	251.89	ug/l	99
28) 2,2-Dichloropropane	5.82	77	657037	53.89	ug/l	98
29) cis-1,2-Dichloroethene	5.89	96	916379	49.16	ug/l	96
30) Chloroform	6.10	83	1244577	49.30	ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP189.D Vial: 4
Acq On : 10 Feb 2016 8:19 am Operator: CMendo
Sample : VS02B12C 5.0g Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Bromochloromethane	6.31	49	842499	51.20 ug/l	96
32) Tetrahydrofuran	6.36	42	324213	49.99 ug/l	99
34) 1,1,1-Trichloroethane	6.62	97	796002	49.27 ug/l	99
36) 1,1-Dichloropropene	6.85	110	344535	46.55 ug/l	99
37) Carbon tetrachloride	6.98	119	616595	49.12 ug/l	97
38) tert-Amyl methyl ether (TA	7.01	87	495369	52.96 ug/l	96
40) 1,2-Dichloroethane	7.19	62	822020	51.33 ug/l	99
41) Benzene	7.20	78	3101635	50.22 ug/l	100
42) Trichloroethene	8.08	130	734652	49.65 ug/l	99
44) 1,2-Dichloropropane	8.34	63	818919	52.29 ug/l	99
45) Bromodichloromethane	8.68	83	934701	55.22 ug/l	99
46) 1,4-Dioxane	8.71	88	188330	1132.30 ug/l	98
47) Dibromomethane	8.75	93	496639	54.90 ug/l	97
49) 4-Methyl-2-pentanone	9.18	43	6188191	277.41 ug/l	99
50) cis-1,3-Dichloropropene	9.50	75	1340625	56.19 ug/l	99
53) Toluene	9.99	91	3204362	42.90 ug/l	99
54) Ethyl methacrylate	10.28	69	1178127	44.56 ug/l	99
55) trans-1,3-Dichloropropene	10.28	75	1138048	46.49 ug/l	98
56) 1,1,2-Trichloroethane	10.52	97	721626	46.47 ug/l	98
57) 2-Hexanone	10.55	43	4582399	238.99 ug/l	100
58) 1,3-Dichloropropane	10.94	76	1317032	46.45 ug/l	99
59) Tetrachloroethene	11.01	164	636940	43.63 ug/l	99
60) Dibromochloromethane	11.34	129	702740	48.97 ug/l	100
61) 1,2-Dibromoethane	11.67	107	760623	47.97 ug/l	99
62) 1-Chlorohexane	11.97	91	1379811	49.40 ug/l	99
63) Chlorobenzene	12.35	112	2269860	50.93 ug/l	99
64) 1,1,1,2-Tetrachloroethane	12.44	131	722518	52.36 ug/l	99
65) Ethylbenzene	12.46	91	3915207	49.55 ug/l	99
66) m-Xylene & p-Xylene	12.59	91	5723264	99.15 ug/l	100
67) o-Xylene	13.32	91	3001765	53.24 ug/l	100
68) Styrene	13.39	104	2610161	53.83 ug/l	100
69) Isopropylbenzene	13.96	105	3460122	52.77 ug/l	100
71) Bromoform	13.94	173	528209	49.66 ug/l	99
72) 1,1,2,2-Tetrachloroethane	14.26	83	1169161	53.99 ug/l	99
74) 1,2,3-Trichloropropane	14.53	110	299132	52.62 ug/l	97
75) trans-1,4-Dichloro-2-buten	14.66	53	314010	50.78 ug/l	99
76) n-Propylbenzene	14.66	91	4586809	53.54 ug/l	100
77) Bromobenzene	14.70	156	897065	51.13 ug/l	98
78) 1,3,5-Trimethylbenzene	14.94	105	2502339	49.39 ug/l	99
79) 2-Chlorotoluene	14.94	91	2719747	52.30 ug/l	99
80) 4-Chlorotoluene	15.03	91	2535359	53.30 ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP189.D Vial: 4
Acq On : 10 Feb 2016 8:19 am Operator: CMendo
Sample : VS02B12C 5.0g Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

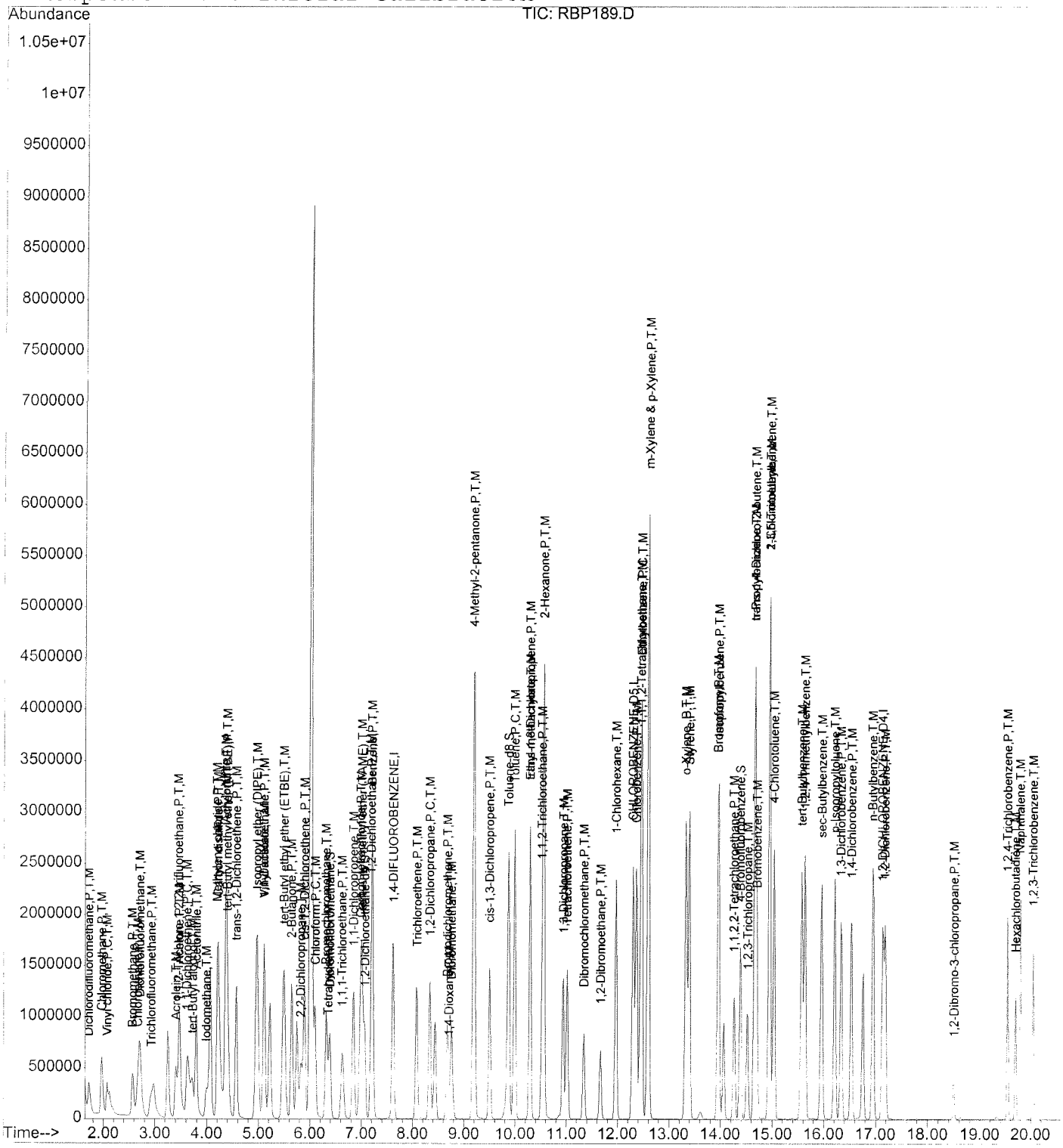
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81) tert-Butylbenzene	15.57	134	561199	50.72 ug/l	98
82) 1,2,4-Trimethylbenzene	15.63	105	2455370	47.86 ug/l	99
83) sec-Butylbenzene	15.95	105	3245300	46.91 ug/l	99
84) p-Isopropyltoluene	16.21	119	2456572	46.76 ug/l	99
85) 1,3-Dichlorobenzene	16.33	146	1473150	50.07 ug/l	99
87) 1,4-Dichlorobenzene	16.53	146	1481526	49.85 ug/l	99
88) n-Butylbenzene	16.94	91	2554171	49.52 ug/l	99
89) 1,2-Dichlorobenzene	17.17	146	1377653	51.88 ug/l	100
90) 1,2-Dibromo-3-chloropropan	18.50	157	163059	45.43 ug/l	97
91) 1,2,4-Trichlorobenzene	19.54	180	726605	48.91 ug/l	99
92) Hexachlorobutadiene	19.70	225	319747	46.78 ug/l	100
93) Naphthalene	19.79	128	1798613	48.13 ug/l	100
94) 1,2,3-Trichlorobenzene	20.05	180	613226	47.37 ug/l	99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP189.D Vial: 4
Acq On : 10 Feb 2016 8:19 am Operator: CMendo
Sample : VS02B12C 5.0g Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 14:01 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP204.D Vial: 19
Acq On : 10 Feb 2016 2:51 pm Operator: CMendo
Sample : 16B060-02M Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 11 6:53 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.61	114	1961394	50.00	ug/l	-0.02
51) CHLOROBENZENE-D5	12.28	117	1863708	50.00	ug/l	-0.02
70) 1,2-DICHLOROBENZENE-D4	17.12	152	775687	50.00	ug/l	-0.02
System Monitoring Compounds						
33) Dibromofluoromethane	6.37	111	568976	47.48	ug/l	-0.02
Spiked Amount 50.000			Recovery = 94.96%			
39) 1,2-Dichloroethane-d4	7.06	65	543269	49.54	ug/l	-0.02
Spiked Amount 50.000			Recovery = 99.08%			
52) Toluene-d8	9.86	98	2232473	44.74	ug/l	-0.02
Spiked Amount 50.000			Recovery = 89.48%			
73) 4-Bromofluorobenzene	14.36	95	896715	50.81	ug/l	-0.02
Spiked Amount 50.000			Recovery = 101.62%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.72	85	649913	67.70	ug/l	99
3) Chloromethane	1.95	50	1202381	61.87	ug/l	100
4) Vinyl chloride	2.09	62	888537	67.91	ug/l	100
5) Bromomethane	2.56	94	530694	50.44	ug/l	100
6) Chloroethane	2.65	64	565135	54.46	ug/l	96
7) Dichlorofluoromethane	2.70	67	1485958	62.00	ug/l	98
8) Trichlorofluoromethane	2.92	101	718716	56.53	ug/l	99
9) Acrolein	3.40	56	453946	249.41	ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	3.46	151	338076	51.74	ug/l	97
11) Acetone	3.47	43	1604510	325.84	ug/l	99
12) 1,1-Dichloroethene	3.62	61	974352	52.35	ug/l	96
13) tert-Butyl alcohol	3.71	59	619635	303.31	ug/l #	1
14) Acetonitrile	3.78	41	1451407	606.38	ug/l	93
15) Iodomethane	3.99	142	836445	49.63	ug/l	99
17) Methylene chloride	4.20	49	1028982	53.51	ug/l	95
18) Carbon disulfide	4.20	76	2757180	57.80	ug/l	100
19) Acrylonitrile	4.35	53	1774870	291.30	ug/l	99
20) tert-Butyl methyl ether (M	4.38	73	1836288	47.58	ug/l	100
21) trans-1,2-Dichloroethene	4.56	61	954507	49.16	ug/l	94
22) Isopropyl ether (DIPE)	4.96	45	2895643	45.65	ug/l	100
23) Vinyl acetate	5.11	43	1846822	44.55	ug/l	99
24) 1,1-Dichloroethane	5.09	63	1209036	49.68	ug/l	99
26) tert-Butyl ethyl ether (ET	5.48	59	2110412	43.90	ug/l	98
27) 2-Butanone	5.64	43	2705000	291.73	ug/l	100
28) 2,2-Dichloropropane	5.82	77	543531	53.28	ug/l	98
29) cis-1,2-Dichloroethene	5.88	96	750226	48.10	ug/l	94
30) Chloroform	6.09	83	1033702	48.94	ug/l	98

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP204.D Vial: 19
Acq On : 10 Feb 2016 2:51 pm Operator: CMendo
Sample : 16B060-02M Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 11 6:53 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Bromochloromethane	6.30	49	697815	50.69 ug/l	98
32) Tetrahydrofuran	6.34	42	423831	78.10 ug/l	96
34) 1,1,1-Trichloroethane	6.63	97	636753	47.11 ug/l	97
36) 1,1-Dichloropropene	6.84	110	289007	46.67 ug/l	100
37) Carbon tetrachloride	6.97	119	512118	48.77 ug/l	98
38) tert-Amyl methyl ether (TA	7.00	87	375923	48.03 ug/l	93
40) 1,2-Dichloroethane	7.18	62	696385	51.97 ug/l	98
41) Benzene	7.21	78	2614561	50.60 ug/l	99
42) Trichloroethene	8.07	130	627394	50.68 ug/l	96
44) 1,2-Dichloropropane	8.32	63	669393	51.09 ug/l	98
45) Bromodichloromethane	8.67	83	734398	51.85 ug/l	99
46) 1,4-Dioxane	8.70	88	159441	1145.74 ug/l	97
47) Dibromomethane	8.74	93	411336	54.35 ug/l	98
49) 4-Methyl-2-pentanone	9.19	43	5525962	296.08 ug/l	100
50) cis-1,3-Dichloropropene	9.48	75	1075962	53.90 ug/l	98
53) Toluene	9.98	91	2591859	42.86 ug/l	99
54) Ethyl methacrylate	10.27	69	978089	45.68 ug/l	100
55) trans-1,3-Dichloropropene	10.27	75	906727	45.74 ug/l	100
56) 1,1,2-Trichloroethane	10.51	97	577537	45.93 ug/l	99
57) 2-Hexanone	10.54	43	4137575	266.48 ug/l	100
58) 1,3-Dichloropropane	10.93	76	1068053	46.52 ug/l	99
59) Tetrachloroethene	11.00	164	506920	42.88 ug/l	96
60) Dibromochloromethane	11.33	129	557165	47.95 ug/l	100
61) 1,2-Dibromoethane	11.66	107	618331	48.15 ug/l	97
62) 1-Chlorohexane	11.95	91	1096944	48.50 ug/l	98
63) Chlorobenzene	12.34	112	1841339	51.02 ug/l	98
64) 1,1,1,2-Tetrachloroethane	12.43	131	591215	52.91 ug/l	99
65) Ethylbenzene	12.45	91	3201077	50.03 ug/l	99
66) m-Xylene & p-Xylene	12.58	91	4723479	101.05 ug/l	100
67) o-Xylene	13.31	91	2526705	55.34 ug/l	100
68) Styrene	13.38	104	2149425	54.74 ug/l	99
69) Isopropylbenzene	13.95	105	3004587	56.59 ug/l	100
71) Bromoform	13.93	173	461512	49.99 ug/l	98
72) 1,1,2,2-Tetrachloroethane	14.25	83	1088223	57.92 ug/l	98
74) 1,2,3-Trichloropropane	14.51	110	272170	55.19 ug/l	93
75) trans-1,4-Dichloro-2-buten	14.65	53	315100	58.73 ug/l	100
76) n-Propylbenzene	14.65	91	4292217	57.75 ug/l	100
77) Bromobenzene	14.69	156	822541	54.04 ug/l	96
78) 1,3,5-Trimethylbenzene	14.93	105	2470651	56.20 ug/l	99
79) 2-Chlorotoluene	14.93	91	2543936	56.38 ug/l	98
80) 4-Chlorotoluene	15.02	91	2383255	57.75 ug/l	98

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP204.D
Acq On : 10 Feb 2016 2:51 pm
Sample : 16B060-02M
Misc :
MS Integration Params: RTE.P
Quant Time: Feb 11 6:53 2016

Vial: 19
Operator: CMendo
Inst : TO02
Multiplr: 1.00

Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

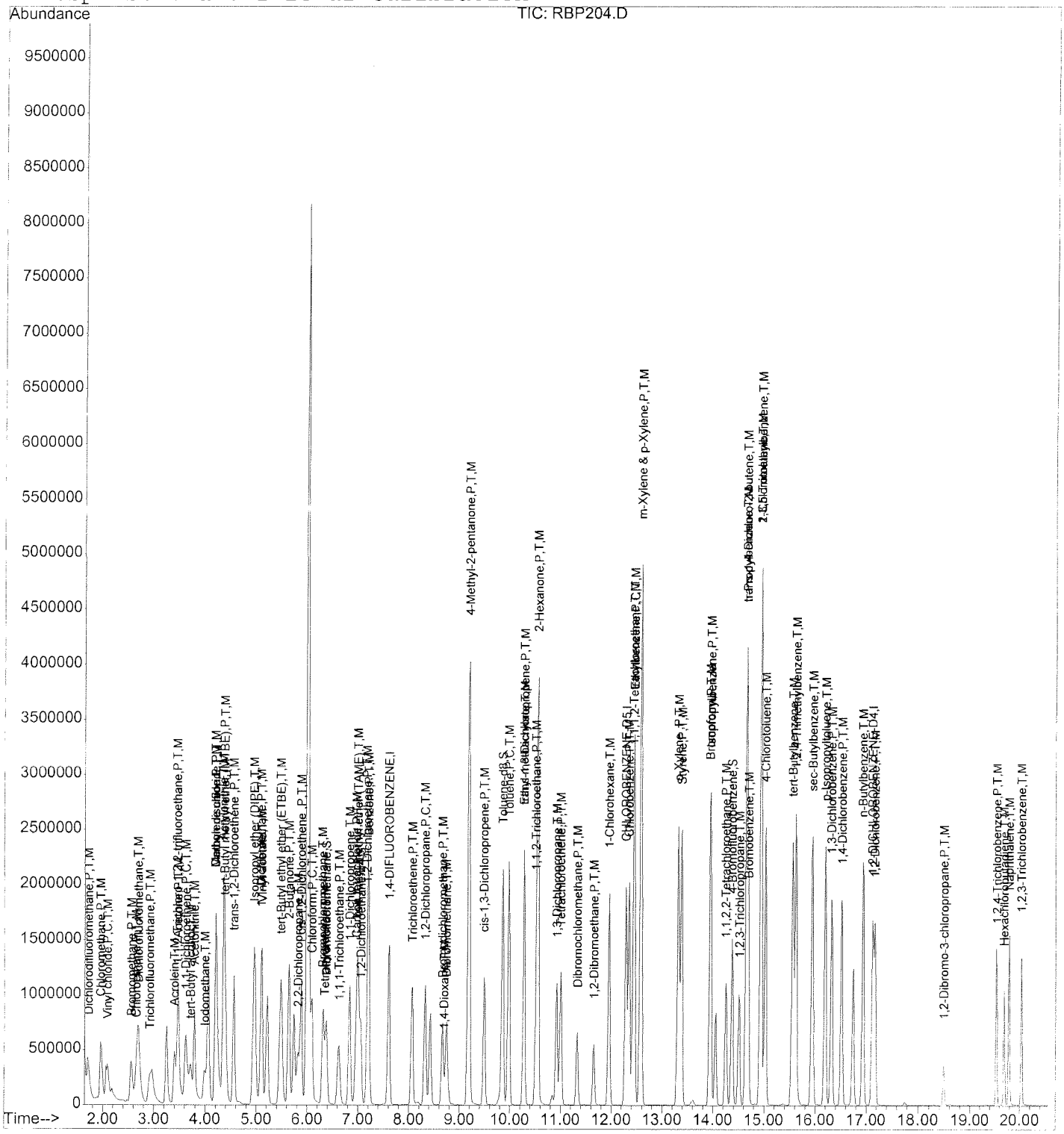
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81)	tert-Butylbenzene	15.56	134	578364	60.25 ug/l	95
82)	1,2,4-Trimethylbenzene	15.61	105	2474375	55.59 ug/l	98
83)	sec-Butylbenzene	15.94	105	3347592	55.77 ug/l	99
84)	p-Isopropyltoluene	16.20	119	2507513	55.01 ug/l	99
85)	1,3-Dichlorobenzene	16.31	146	1395727	54.68 ug/l	99
87)	1,4-Dichlorobenzene	16.52	146	1398452	54.24 ug/l	98
88)	n-Butylbenzene	16.92	91	2209541	49.38 ug/l	99
89)	1,2-Dichlorobenzene	17.16	146	1183755	51.38 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.49	157	158189	50.54 ug/l	99
91)	1,2,4-Trichlorobenzene	19.54	180	612982	47.56 ug/l	100
92)	Hexachlorobutadiene	19.69	225	259620	43.78 ug/l	100
93)	Naphthalene	19.80	128	1443611	44.52 ug/l	100
94)	1,2,3-Trichlorobenzene	20.03	180	493530	43.94 ug/l	99

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP204.D Vial: 19
Acq On : 10 Feb 2016 2:51 pm Operator: CMendo
Sample : 16B060-02M Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 11 6:53 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP205.D
Acq On : 10 Feb 2016 3:16 pm
Sample : 16B060-02S
Misc :
MS Integration Params: RTE.P
Quant Time: Feb 11 6:53 2016

Vial: 20
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.60	114	2064447	50.00	ug/l	-0.03
51) CHLOROBENZENE-D5	12.28	117	1957097	50.00	ug/l	-0.03
70) 1,2-DICHLOROBENZENE-D4	17.11	152	794916	50.00	ug/l	-0.03
System Monitoring Compounds						
33) Dibromofluoromethane	6.38	111	597626	47.38	ug/l	-0.01
Spiked Amount 50.000			Recovery = 94.76%			
39) 1,2-Dichloroethane-d4	7.05	65	565947	49.04	ug/l	-0.03
Spiked Amount 50.000			Recovery = 98.08%			
52) Toluene-d8	9.85	98	2320473	44.28	ug/l	-0.03
Spiked Amount 50.000			Recovery = 88.56%			
73) 4-Bromofluorobenzene	14.36	95	940259	51.99	ug/l	-0.03
Spiked Amount 50.000			Recovery = 103.98%			

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.71	85	595057	58.90	ug/l	99
3) Chloromethane	1.97	50	1086930	53.14	ug/l	100
4) Vinyl chloride	2.08	62	800472	58.12	ug/l	99
5) Bromomethane	2.56	94	502773	45.40	ug/l	96
6) Chloroethane	2.66	64	516292	47.27	ug/l	94
7) Dichlorofluoromethane	2.69	67	1511995	59.94	ug/l	97
8) Trichlorofluoromethane	2.92	101	662443	49.50	ug/l	99
9) Acrolein	3.39	56	451311	235.59	ug/l	100
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	341355	49.63	ug/l	99
11) Acetone	3.47	43	1681894	324.50	ug/l	99
12) 1,1-Dichloroethene	3.62	61	1002114	51.15	ug/l	97
13) tert-Butyl alcohol	3.72	59	694657	323.06	ug/l #	1
14) Acetonitrile	3.78	41	1520434	603.51	ug/l	93
15) Iodomethane	3.99	142	871035	49.10	ug/l	97
17) Methylene chloride	4.20	49	1055285	52.09	ug/l	96
18) Carbon disulfide	4.21	76	2709022	53.96	ug/l	99
19) Acrylonitrile	4.36	53	1841922	287.21	ug/l	100
20) tert-Butyl methyl ether (M	4.39	73	1979819	48.74	ug/l	99
21) trans-1,2-Dichloroethene	4.55	61	967935	47.37	ug/l	96
22) Isopropyl ether (DIPE)	4.96	45	3050858	45.70	ug/l	99
23) Vinyl acetate	5.10	43	1671527	38.31	ug/l	99
24) 1,1-Dichloroethane	5.10	63	1219035	47.59	ug/l	99
26) tert-Butyl ethyl ether (ET	5.48	59	2247705	44.42	ug/l	99
27) 2-Butanone	5.64	43	2834436	290.43	ug/l	100
28) 2,2-Dichloropropane	5.82	77	548567	51.09	ug/l	98
29) cis-1,2-Dichloroethene	5.88	96	785206	47.83	ug/l	96
30) Chloroform	6.09	83	1076510	48.42	ug/l	97

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP205.D Vial: 20
Acq On : 10 Feb 2016 3:16 pm Operator: CMendo
Sample : 16B060-02S Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 11 6:53 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31) Bromochloromethane	6.30	49	732512	50.55 ug/l	97
32) Tetrahydrofuran	6.34	42	422551	73.98 ug/l	98
34) 1,1,1-Trichloroethane	6.62	97	675694	47.49 ug/l	97
36) 1,1-Dichloropropene	6.83	110	293509	45.03 ug/l	100
37) Carbon tetrachloride	6.96	119	524743	47.47 ug/l	97
38) tert-Amyl methyl ether (TA	6.99	87	388209	47.13 ug/l	99
40) 1,2-Dichloroethane	7.19	62	725306	51.43 ug/l	99
41) Benzene	7.20	78	2671091	49.11 ug/l	100
42) Trichloroethene	8.07	130	657005	50.42 ug/l	95
44) 1,2-Dichloropropane	8.32	63	702891	50.97 ug/l	98
45) Bromodichloromethane	8.66	83	779001	52.26 ug/l	99
46) 1,4-Dioxane	8.71	88	163986	1119.58 ug/l	99
47) Dibromomethane	8.74	93	432390	54.28 ug/l	97
49) 4-Methyl-2-pentanone	9.18	43	5891664	299.92 ug/l	99
50) cis-1,3-Dichloropropene	9.48	75	1128728	53.72 ug/l	98
53) Toluene	9.97	91	2754666	43.37 ug/l	99
54) Ethyl methacrylate	10.27	69	1022415	45.47 ug/l	98
55) trans-1,3-Dichloropropene	10.27	75	970892	46.64 ug/l	97
56) 1,1,2-Trichloroethane	10.51	97	618420	46.83 ug/l	100
57) 2-Hexanone	10.54	43	4475448	274.48 ug/l	100
58) 1,3-Dichloropropane	10.92	76	1121255	46.51 ug/l	99
59) Tetrachloroethene	11.00	164	537677	43.32 ug/l	98
60) Dibromochloromethane	11.32	129	593880	48.67 ug/l	98
61) 1,2-Dibromoethane	11.65	107	663086	49.17 ug/l	100
62) 1-Chlorohexane	11.95	91	1162616	48.95 ug/l	99
63) Chlorobenzene	12.35	112	1909063	50.37 ug/l	98
64) 1,1,1,2-Tetrachloroethane	12.43	131	629784	53.67 ug/l	98
65) Ethylbenzene	12.44	91	3361856	50.03 ug/l	99
66) m-Xylene & p-Xylene	12.57	91	4921260	100.26 ug/l	100
67) o-Xylene	13.32	91	2600815	54.25 ug/l	100
68) Styrene	13.38	104	2228414	54.05 ug/l	100
69) Isopropylbenzene	13.94	105	3074639	55.14 ug/l	99
71) Bromoform	13.93	173	495528	52.25 ug/l	99
72) 1,1,2,2-Tetrachloroethane	14.24	83	1166104	60.56 ug/l	98
74) 1,2,3-Trichloropropane	14.51	110	295742	58.51 ug/l	93
75) trans-1,4-Dichloro-2-buten	14.64	53	323747	58.88 ug/l	99
76) n-Propylbenzene	14.64	91	4415338	57.97 ug/l	100
77) Bromobenzene	14.69	156	855474	54.85 ug/l	97
78) 1,3,5-Trimethylbenzene	14.93	105	2569191	57.03 ug/l	99
79) 2-Chlorotoluene	14.93	91	2626512	56.80 ug/l	98
80) 4-Chlorotoluene	15.02	91	2435364	57.58 ug/l	98

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP205.D
Acq On : 10 Feb 2016 3:16 pm
Sample : 16B060-02S
Misc :
MS Integration Params: RTE.P
Quant Time: Feb 11 6:53 2016

Vial: 20
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

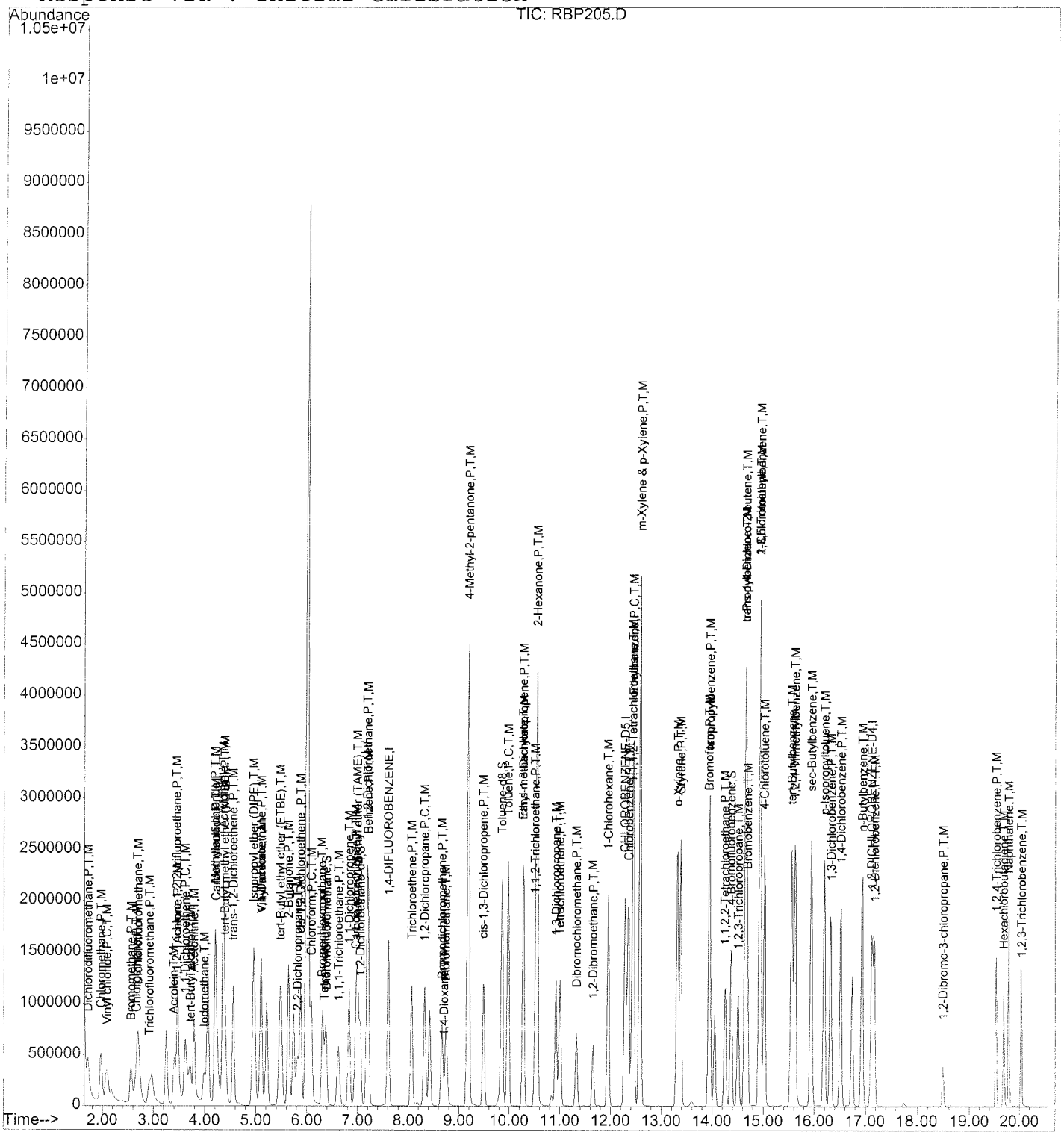
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81)	tert-Butylbenzene	15.55	134	600617	61.06 ug/l	93
82)	1,2,4-Trimethylbenzene	15.61	105	2527560	55.42 ug/l	98
83)	sec-Butylbenzene	15.94	105	3440926	55.94 ug/l	99
84)	p-Isopropyltoluene	16.19	119	2533319	54.23 ug/l	99
85)	1,3-Dichlorobenzene	16.32	146	1425105	54.48 ug/l	99
87)	1,4-Dichlorobenzene	16.52	146	1430664	54.15 ug/l	98
88)	n-Butylbenzene	16.93	91	2238497	48.81 ug/l	99
89)	1,2-Dichlorobenzene	17.17	146	1223163	51.81 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.48	157	164609	51.28 ug/l	98
91)	1,2,4-Trichlorobenzene	19.54	180	631860	47.84 ug/l	100
92)	Hexachlorobutadiene	19.69	225	271199	44.63 ug/l	97
93)	Naphthalene	19.79	128	1541731	46.40 ug/l	99
94)	1,2,3-Trichlorobenzene	20.04	180	517919	45.00 ug/l	97

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP205.D Vial: 20
Acq On : 10 Feb 2016 3:16 pm Operator: CMendo
Sample : 16B060-02S Inst : TO02
Misc : Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 11 6:53 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



INITIAL CALIBRATIONS

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJP184
Instrument ID: T002
GC Column:RTX502.2ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 16B060
BFB Injection Date : 10/14/15
BFB Injection Time : 09:11
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.52
75	30.0 - 60.0% of mass 95	40.12
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.69
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	83.36
175	5.0 - 9.0% of mass 174	5.77(6.9)1
176	95.0 - 101.0% of mass 174	79.82(95.8)1
177	5.0 - 9.0% of mass 176	5.52(6.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD01	V002J141	RJP185	10/14/15	09:50
2	VSTD02	V002J142	RJP186	10/14/15	10:22
3	VSTD04	V002J143	RJP187	10/14/15	11:01
4	VSTD010	V002J144	RJP188	10/14/15	11:48
5	VSTD020	V002J145	RJP189	10/14/15	12:26
6	VSTD050	V002J146	RJP190	10/14/15	13:00
7	VSTD100	V002J147	RJP191	10/14/15	13:31
8	VSTD200	V002J148	RJP192	10/14/15	13:56
9	VSTD300	V002J149	RJP193	10/14/15	14:28
10	VSTD500	V002J1410	RJP194	10/14/15	14:52

FORM V VOA OLM02.0

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :T002
Beginning DateTime :10/14/15 09:50
Spike Units :PPB
IC File :RJP190

Column Spec :RTX502.2 ID :0.25MM
Ending DateTime :10/14/15 14:52
HPChem Method :V002J14

	M IDX	Parameters	1 09:50 RJP185	2 10:22 RJP186	4 11:01 RJP187	10 11:48 RJP188	20 12:26 RJP189	50 13:00 RJP190	100 13:31 RJP191	200 13:56 RJP192	300 14:28 RJP193	500 14:52 RJP194	Av_RRF	%_RSD	Av_Rt_M
	1	1,4-DIFLUOROBENZENE	1	1	1	1	1	1	1	1	1	1	1	0	7.6228
	2	Dichlorodifluoromethane	------	0.230	0.222	0.241	0.245	0.241	0.267	0.246	0.270	0.241	0.245	6.35	1.7238
	3	Chloromethane	------	0.549	0.459	0.467	0.512	0.487	0.519	0.474	0.519	0.473	0.495	6.18	1.9586
	4	Vinyl chloride	------	0.361	0.343	0.359	0.375	0.354	0.362	0.292	0.293	0.262	0.334	12.09	2.0875
	5	Bromomethane	------	------	0.338	0.271	0.274	0.255	0.270	0.246	0.264	0.227	0.268	12.04	2.5619
	6	Chloroethane	------	0.254	0.248	0.255	0.275	0.266	0.285	0.265	0.281	0.252	0.265	5.05	2.6596
	7	Dichlorofluoromethane	0.546	0.595	0.605	0.611	0.695	0.571	0.673	0.601	0.644	0.568	0.611	7.71	2.6944
	8	Trichlorofluoromethane	------	0.292	0.302	0.317	0.340	0.331	0.357	0.326	0.352	0.300	0.324	7.17	2.9307
5	9	Acrolein	0.041	0.045	0.042	0.043	0.050	0.047	0.050	0.047	0.054	0.046	0.046	8.49	3.4057
	10	1,1,2-Trichloro-1,2,2-trifluoroethane	0.131	0.136	0.167	0.173	0.185	0.148	0.193	0.177	0.188	0.168	0.167	13.01	3.4488
5	11	Acetone	0.145	0.148	0.122	0.112	0.131	0.121	0.123	0.112	0.128	0.114	0.126	10.09	3.4801
	12	1,1-Dichloroethene	0.413	0.452	0.452	0.461	0.524	0.439	0.523	0.485	0.527	0.470	0.474	8.29	3.6378
5	13	tert-Butyl alcohol	------	0.049	0.045	0.047	0.059	0.052	0.057	0.053	0.057	0.049	0.052	9.70	3.7210
10	14	Acetonitrile	0.054	0.064	0.060	0.061	0.068	0.057	0.065	0.061	0.065	0.055	0.061	7.59	3.7941
	15	Iodomethane	0.371	0.401	0.405	0.432	0.483	0.418	0.475	0.440	0.465	0.406	0.430	8.45	4.0158
	16	Methyl Acetate	------	0.391	0.320	0.335	0.419	0.385	0.398	0.373	0.421	0.363	0.378	9.11	4.0302
	17	Methylene chloride	------	0.851	0.709	0.563	0.592	0.488	0.525	0.486	0.510	0.439	0.574	22.65	4.2137
	18	Carbon disulfide	------	------	1.290	1.216	1.273	1.192	1.291	1.139	1.255	1.071	1.216	6.48	4.2248
5	19	Acrylonitrile	0.144	0.168	0.144	0.143	0.168	0.156	0.161	0.149	0.169	0.152	0.155	6.79	4.3655
	20	tert-Butyl methyl ether (MTBE)	0.893	0.940	0.937	0.973	1.044	0.971	1.063	0.998	1.046	0.972	0.984	5.53	4.3952
	21	trans-1,2-Dichloroethene	0.436	0.467	0.479	0.477	0.543	0.467	0.531	0.512	0.545	0.492	0.495	7.41	4.5693
	22	Isopropyl ether (DIPE)	1.471	1.506	1.607	1.608	1.673	1.597	1.734	1.660	1.746	1.567	1.617	5.54	4.9711
	23	Vinyl acetate	------	1.013	0.984	0.981	1.111	1.094	1.112	1.079	1.144	0.991	1.057	6.06	5.1198
	24	1,1-Dichloroethane	0.547	0.555	0.582	0.623	0.687	0.590	0.674	0.644	0.682	0.620	0.620	8.29	5.1095
5	25	2-Butanol	------	0.053	0.044	0.042	0.052	0.050	0.051	0.049	0.054	0.044	0.049	9.05	5.3893
	26	tert-Butyl ethyl ether (ETBE)	1.065	1.152	1.195	1.211	1.287	1.226	1.283	1.238	1.324	1.275	1.226	6.20	5.4949
5	27	2-Butanone	0.233	0.260	0.222	0.209	0.256	0.238	0.241	0.224	0.249	0.230	0.236	6.79	5.6541
	28	2,2-Dichloropropane	------	0.250	0.273	0.264	0.298	0.242	0.285	0.254	0.256	0.219	0.260	9.02	5.8357
	29	cis-1,2-Dichloroethene	0.336	0.380	0.388	0.395	0.436	0.379	0.423	0.403	0.438	0.396	0.398	7.65	5.8981
	30	Chloroform	0.494	0.514	0.525	0.530	0.586	0.509	0.566	0.551	0.573	0.536	0.538	5.53	6.1065
	31	Bromochloromethane	0.291	0.330	0.342	0.337	0.395	0.341	0.375	0.366	0.374	0.358	0.351	8.32	6.3237
	32	Tetrahydrofuran	------	0.144	0.121	0.125	0.161	0.133	0.146	0.134	0.143	0.138	0.138	8.76	6.3631
	33	Dibromofluoromethane	------	0.314	0.267	0.296	0.304	0.308	0.315	0.315	0.320	0.310	0.305	5.23	6.3978
	34	1,1,1-Trichloroethane	0.303	0.316	0.339	0.348	0.394	0.318	0.377	0.353	0.361	0.338	0.345	8.22	6.6362
	35	Cyclohexane	------	0.489	0.463	0.493	0.500	0.472	0.511	0.472	0.503	0.468	0.486	3.57	6.6508
	36	1,1-Dichloropropene	0.139	0.142	0.155	0.158	0.176	0.143	0.169	0.165	0.170	0.162	0.158	8.23	6.8520
	37	Carbon tetrachloride	0.210	0.239	0.266	0.261	0.293	0.246	0.306	0.286	0.290	0.279	0.268	10.96	6.9829
	38	tert-Amyl methyl ether (TAME)	0.157	0.192	0.197	0.203	0.213	0.193	0.223	0.211	0.204	0.202	0.200	8.86	7.0157
	39	1,2-Dichloroethane-d4	------	0.274	0.236	0.287	0.286	0.285	0.291	0.288	0.285	0.284	0.280	6.14	7.0741
	40	1,2-Dichloroethane	0.307	0.332	0.339	0.332	0.377	0.328	0.364	0.350	0.346	0.342	0.342	5.65	7.2031
	41	Benzene	1.232	1.282	1.318	1.347	1.447	1.215	1.407	1.352	1.347	1.225	1.317	5.94	7.2195
	42	Trichloroethene	0.288	0.305	0.314	0.317	0.343	0.284	0.339	0.323	0.329	0.316	0.316	6.19	8.0855
	43	Methylcyclohexane	------	0.458	0.457	0.476	0.519	0.490	0.530	0.489	0.496	0.484	0.489	4.98	8.1670
	44	1,2-Dichloropropane	0.294	0.323	0.321	0.332	0.372	0.310	0.357	0.349	0.342	0.341	0.334	6.88	8.3459
	45	Bromodichloromethane	0.277	0.314	0.333	0.355	0.406	0.350	0.410	0.395	0.377	0.393	0.361	12.05	8.6852
20	46	1,4-Dioxane	0.003	0.003	0.004	0.004	0.005	0.004	0.004	0.004	0.003	0.003	0.004	13.06	8.7194
	47	Dibromomethane	0.152	0.179	0.177	0.190	0.226	0.190	0.213	0.208	0.192	0.202	0.193	10.79	8.7626
	48	2-Chloroethyl vinyl ether	------	------	------	------	------	------	------	------	------	------	0.000	0.00	0.0000

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5	49	4-Methyl-2-pentanone	0.438	0.512	0.454	0.446	0.538	0.493	0.509	0.460	0.433	------	0.476	7.98	9.2002
	50	cis-1,3-Dichloropropene	0.398	0.437	0.478	0.511	0.585	0.494	0.575	0.554	0.507	0.549	0.509	11.83	9.5096
	51	CHLOROBENZENE-D5	1	1	1	1	1	1	1	1	1	1	1	0	12.3071
	52	Toluene-d8	------	1.492	1.229	1.300	1.294	1.284	1.369	1.367	1.327	1.386	1.339	5.67	9.8765
	53	Toluene	1.541	1.598	1.619	1.642	1.731	1.409	1.743	1.666	1.685	1.591	1.623	6.03	9.9992
	54	Ethyl methacrylate	0.484	0.538	0.552	0.540	0.649	0.553	0.634	0.598	0.598	0.599	0.574	8.71	10.2982
	55	trans-1,3-Dichloropropene	0.409	0.457	0.493	0.486	0.593	0.513	0.603	0.580	0.584	0.600	0.532	13.01	10.2982
	56	1,1,2-Trichloroethane	0.323	0.315	0.325	0.325	0.379	0.310	0.366	0.345	0.335	0.350	0.337	6.67	10.5363
5	57	2-Hexanone	0.383	0.456	0.411	0.382	0.470	0.430	0.456	0.416	0.421	0.340	0.417	9.60	10.5676
	58	1,3-Dichloropropane	0.568	0.602	0.636	0.593	0.676	0.565	0.656	0.625	0.609	0.628	0.616	5.81	10.9485
	59	Tetrachloroethene	0.291	0.304	0.323	0.319	0.335	0.269	0.350	0.327	0.320	0.333	0.317	7.36	11.0259
	60	Dibromochloromethane	------	0.243	0.264	0.277	0.343	0.295	0.354	0.342	0.336	0.351	0.312	13.50	11.3530
	61	1,2-Dibromoethane	0.271	0.326	0.343	0.320	0.382	0.330	0.384	0.359	0.360	0.369	0.345	9.94	11.6791
	62	1-Chlorohexane	0.569	0.564	0.599	0.583	0.594	0.547	0.690	0.636	0.653	0.633	0.607	7.45	11.9782
	63	Chlorobenzene	0.926	0.946	0.979	0.964	1.032	0.846	1.044	0.987	0.981	0.977	0.968	5.73	12.3711
	64	1,1,1,2-Tetrachloroethane	0.242	0.287	0.283	0.296	0.334	0.272	0.338	0.318	0.317	0.312	0.300	9.89	12.4544
	65	Ethylbenzene	1.667	1.677	1.780	1.702	1.867	1.490	1.902	1.773	1.763	1.546	1.717	7.55	12.4708
2	66	m-Xylene & p-Xylene	1.231	1.224	1.290	1.222	1.327	1.072	1.379	1.280	1.260	------	1.254	6.82	12.6028
	67	o-Xylene	1.094	1.168	1.272	1.191	1.317	1.084	1.380	1.288	1.264	1.190	1.225	7.84	13.3383
	68	Styrene	0.926	0.982	1.027	1.038	1.147	0.950	1.215	1.133	1.090	1.027	1.053	8.74	13.4067
	69	Isopropylbenzene	1.324	1.360	1.440	1.424	1.540	1.232	1.649	1.503	1.467	1.305	1.425	8.68	13.9722
	70	1,2-DICHLOROBENZENE-D4	1	1	1	1	1	1	1	1	1	1	1	0	17.1417
	71	Bromoform	------	------	0.359	0.413	0.524	0.476	0.612	0.652	------	------	0.506	22.36	13.9573
	72	1,1,2,2-Tetrachloroethane	1.001	1.052	1.170	1.110	1.292	1.101	1.347	1.335	1.395	1.306	1.211	11.56	14.2728
	73	4-Bromofluorobenzene	------	1.201	0.968	1.046	1.051	1.086	1.168	1.244	1.272	1.203	1.138	9.11	14.3919
	74	1,2,3-Trichloropropane	0.276	0.244	0.304	0.296	0.347	0.294	0.349	0.352	0.370	0.347	0.318	12.75	14.5332
	75	trans-1,4-Dichloro-2-butene	------	------	0.267	0.286	0.372	0.308	0.384	0.379	0.406	0.365	0.346	14.82	14.6726
	76	n-Propylbenzene	4.285	4.258	4.511	4.406	4.933	4.037	5.387	5.493	5.797	4.800	4.791	12.48	14.6716
	77	Bromobenzene	0.844	0.882	0.941	0.905	0.991	0.841	1.081	1.107	1.162	1.057	0.981	11.76	14.7132
	78	1,3,5-Trimethylbenzene	2.542	2.565	2.697	2.654	2.970	2.448	3.199	3.105	3.267	2.888	2.834	10.35	14.9543
	79	2-Chlorotoluene	2.717	2.652	2.821	2.797	2.939	2.465	3.210	3.183	3.333	2.969	2.908	9.39	14.9558
	80	4-Chlorotoluene	2.444	2.373	2.593	2.502	2.777	2.278	2.843	2.933	3.073	2.786	2.660	9.80	15.0436
	81	tert-Butylbenzene	0.575	0.553	0.619	0.575	0.642	0.525	0.692	0.682	0.693	0.631	0.619	9.69	15.5808
	82	1,2,4-Trimethylbenzene	2.606	2.624	2.795	2.699	3.040	2.493	3.153	3.137	3.179	2.963	2.869	8.94	15.6432
	83	sec-Butylbenzene	3.612	3.582	3.816	3.674	4.055	3.326	4.293	4.124	4.266	3.941	3.869	8.29	15.9617
	84	p-Isopropyltoluene	2.698	2.749	2.953	2.812	3.119	2.523	3.294	3.137	3.064	3.034	2.938	8.07	16.2191
	85	1,3-Dichlorobenzene	1.617	1.512	1.658	1.587	1.723	1.422	1.810	1.727	1.713	1.687	1.645	6.96	16.3426
	86	1,2,3-Trimethylbenzene	------	2.407	2.407	2.581	2.628	2.641	2.754	2.723	2.725	2.671	2.615	4.96	16.4867
	87	1,4-Dichlorobenzene	1.595	1.588	1.651	1.584	1.783	1.463	1.824	1.729	1.732	1.670	1.662	6.53	16.5420
	88	n-Butylbenzene	2.650	2.692	2.928	2.750	3.148	2.532	3.214	3.002	2.903	3.027	2.885	7.74	16.9527
	89	1,2-Dichlorobenzene	1.342	1.488	1.461	1.463	1.586	1.288	1.624	1.555	1.526	1.517	1.485	7.01	17.1908
	90	1,2-Dibromo-3-chloropropane	------	------	0.133	0.146	0.198	0.170	0.215	0.197	0.210	0.215	0.185	17.25	18.5006
	91	1,2,4-Trichlorobenzene	0.749	0.784	0.814	0.769	0.914	0.724	0.928	0.795	0.867	0.962	0.831	9.88	19.5523
	92	Hexachlorobutadiene	0.336	0.356	0.382	0.369	0.416	0.331	0.425	0.359	0.391	0.455	0.382	10.51	19.7041
	93	Naphthalene	1.725	1.876	1.917	1.871	2.335	1.841	2.428	2.064	2.308	2.534	2.090	13.70	19.8053
	94	1,2,3-Trichlorobenzene	0.667	0.662	0.705	0.665	0.765	0.626	0.815	0.678	0.773	0.883	0.724	11.31	20.0478

Spike Amount = Nominal Amount * M

Ave_%RSD : 8.9 Max_%RSD : 22.6

Use Least Square Linear Regression with weighting factor of inverse concentration for comps with %_RSD > 15

Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
17	Methylene chloride	0.01947	0.47201	0.9973
71	Bromoform	-0.03397	0.62903	0.9957
90	1,2-Dibromo-3-chloropropane	-0.00924	0.21090	0.9988

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Compound List Report TO02

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
Total Cpnds : 94

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-DIFLUOROBENZENE	114	7.63	1.000	A	1	A	B
2	T	Dichlorodifluoromethane	85	1.72	0.226	A	1	A	B
3	T	Chloromethane	50	1.96	0.257	A	1	A	B
4	T	Vinyl chloride	62	2.10	0.275	A	1	A	B
5	T	Bromomethane	94	2.56	0.335	A	1	A	B
6	T	Chloroethane	64	2.66	0.349	A	2	A	B
7	T	Dichlorofluoromethane	67	2.69	0.353	A	1	A	B
8	T	Trichlorofluoromethane	101	2.93	0.384	A	1	A	B
9	T	Acrolein	56	3.41	0.446	A	1	A	B
10	T	1,1,2-Trichloro-1,2,2-trifluor	151	3.45	0.452	A	1	A	B
11	T	Acetone	43	3.48	0.456	A	2	A	B
12	T	1,1-Dichloroethene	61	3.64	0.477	A	2	A	B
13	T	tert-Butyl alcohol	59	3.72	0.487	A	1	A	B
14	T	Acetonitrile	41	3.79	0.497	A	2	A	B
15	T	Iodomethane	142	4.02	0.526	A	1	A	B
16	T	Methyl Acetate	43	4.03	0.528	A	1	A	B
17	T	Methylene chloride	49	4.21	0.551	L	2	A	B
18	T	Carbon disulfide	76	4.22	0.553	A	1	A	B
19	T	Acrylonitrile	53	4.37	0.573	A	2	A	B
20	T	tert-Butyl methyl ether (MTBE)	73	4.40	0.577	A	1	A	B
21	T	trans-1,2-Dichloroethene	61	4.57	0.598	A	2	A	B
22	T	Isopropyl ether (DIPE)	45	4.97	0.651	A	1	A	B
23	T	Vinyl acetate	43	5.12	0.670	A	1	A	B
24	T	1,1-Dichloroethane	63	5.12	0.670	A	2	A	B
25	T	2-Butanol	45	5.38	0.706	A	1	A	B
26	T	tert-Butyl ethyl ether (ETBE)	59	5.50	0.721	A	1	A	B
27	T	2-Butanone	43	5.65	0.741	A	1	A	B
28	T	2,2-Dichloropropane	77	5.83	0.764	A	2	A	B
29	T	cis-1,2-Dichloroethene	96	5.91	0.774	A	2	A	B
30	T	Chloroform	83	6.10	0.799	A	2	A	B
31	T	Bromochloromethane	49	6.32	0.828	A	2	A	B
32	T	Tetrahydrofuran	42	6.37	0.834	A	2	A	B
33	S	Dibromofluoromethane	111	6.40	0.838	A	1	A	B
34	T	1,1,1-Trichloroethane	97	6.63	0.869	A	2	A	B
35	T	Cyclohexane	56	6.65	0.871	A	2	A	B
36	T	1,1-Dichloropropene	110	6.86	0.899	A	1	A	B
37	T	Carbon tetrachloride	119	6.99	0.916	A	1	A	B
38	T	tert-Amyl methyl ether (TAME)	87	7.02	0.920	A	2	A	B
39	S	1,2-Dichloroethane-d4	65	7.08	0.928	A	1	A	B
40	T	1,2-Dichloroethane	62	7.20	0.943	A	1	A	B
41	T	Benzene	78	7.21	0.945	A	2	A	B
42	T	Trichloroethene	130	8.09	1.060	A	3	A	B
43	T	Methylcyclohexane	83	8.17	1.070	A	2	A	B
44	T	1,2-Dichloropropane	63	8.35	1.094	A	2	A	B
45	T	Bromodichloromethane	83	8.69	1.138	A	1	A	B
46	T	1,4-Dioxane	88	8.72	1.142	A	1	A	B
47	T	Dibromomethane	93	8.76	1.148	A	2	A	B
48	T	2-Chloroethyl vinyl ether	63	0.00	0.000	A	1	A	B
49	T	4-Methyl-2-pentanone	43	9.19	1.205	A	3	A	B
50	T	cis-1,3-Dichloropropene	75	9.51	1.246	A	3	A	B
51	I	CHLOROBENZENE-D5	117	12.30	1.000	A	2	A	B
52	S	Toluene-d8	98	9.88	0.803	A	1	A	B

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53	T	Toluene	91	10.00	0.813	A	1	A	B
54	T	Ethyl methacrylate	69	10.30	0.837	A	2	A	B
55	T	trans-1,3-Dichloropropene	75	10.30	0.837	A	2	A	B
56	T	1,1,2-Trichloroethane	97	10.53	0.856	A	3	A	B
57	T	2-Hexanone	43	10.56	0.858	A	2	A	B
58	T	1,3-Dichloropropane	76	10.95	0.890	A	1	A	B
59	T	Tetrachloroethene	164	11.02	0.896	A	3	A	B
60	T	Dibromochloromethane	129	11.35	0.923	A	1	A	B
61	T	1,2-Dibromoethane	107	11.68	0.949	A	1	A	B
62	T	1-Chlorohexane	91	11.98	0.973	A	3	A	B
63	T	Chlorobenzene	112	12.38	1.006	A	3	A	B
64	T	1,1,1,2-Tetrachloroethane	131	12.45	1.012	A	3	A	B
65	T	Ethylbenzene	91	12.47	1.013	A	1	A	B
66	T	m-Xylene & p-Xylene	91	12.60	1.024	A	1	A	B
67	T	o-Xylene	91	13.33	1.083	A	1	A	B
68	T	Styrene	104	13.40	1.089	A	2	A	B
69	T	Isopropylbenzene	105	13.97	1.135	A	3	A	B
70	I	1,2-DICHLOROBENZENE-D4	152	17.14	1.000	A	1	A	B
71	T	Bromoform	173	13.96	0.814	L	2	A	B
72	T	1,1,2,2-Tetrachloroethane	83	14.27	0.832	A	1	A	B
73	S	4-Bromofluorobenzene	95	14.39	0.839	A	2	A	B
74	T	1,2,3-Trichloropropane	110	14.54	0.848	A	1	A	B
75	T	trans-1,4-Dichloro-2-butene	53	14.67	0.856	A	1	A	B
76	T	n-Propylbenzene	91	14.67	0.856	A	2	A	B
77	T	Bromobenzene	156	14.71	0.858	A	2	A	B
78	T	1,3,5-Trimethylbenzene	105	14.95	0.872	A	2	A	B
79	T	2-Chlorotoluene	91	14.95	0.872	A	1	A	B
80	T	4-Chlorotoluene	91	15.04	0.878	A	1	A	B
81	T	tert-Butylbenzene	134	15.58	0.909	A	2	A	B
82	T	1,2,4-Trimethylbenzene	105	15.64	0.912	A	1	A	B
83	T	sec-Butylbenzene	105	15.96	0.931	A	1	A	B
84	T	p-Isopropyltoluene	119	16.22	0.946	A	2	A	B
85	T	1,3-Dichlorobenzene	146	16.34	0.953	A	2	A	B
86	T	1,2,3-Trimethylbenzene	105	16.48	0.962	A	2	A	B
87	T	1,4-Dichlorobenzene	146	16.54	0.965	A	2	A	B
88	T	n-Butylbenzene	91	16.95	0.989	A	2	A	B
89	T	1,2-Dichlorobenzene	146	17.18	1.003	A	2	A	B
90	T	1,2-Dibromo-3-chloropropane	157	18.51	1.080	L	2	A	B
91	T	1,2,4-Trichlorobenzene	180	19.55	1.141	A	2	A	B
92	T	Hexachlorobutadiene	225	19.70	1.149	A	2	A	B
93	T	Naphthalene	128	19.80	1.155	A	1	A	B
94	T	1,2,3-Trichlorobenzene	180	20.06	1.170	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

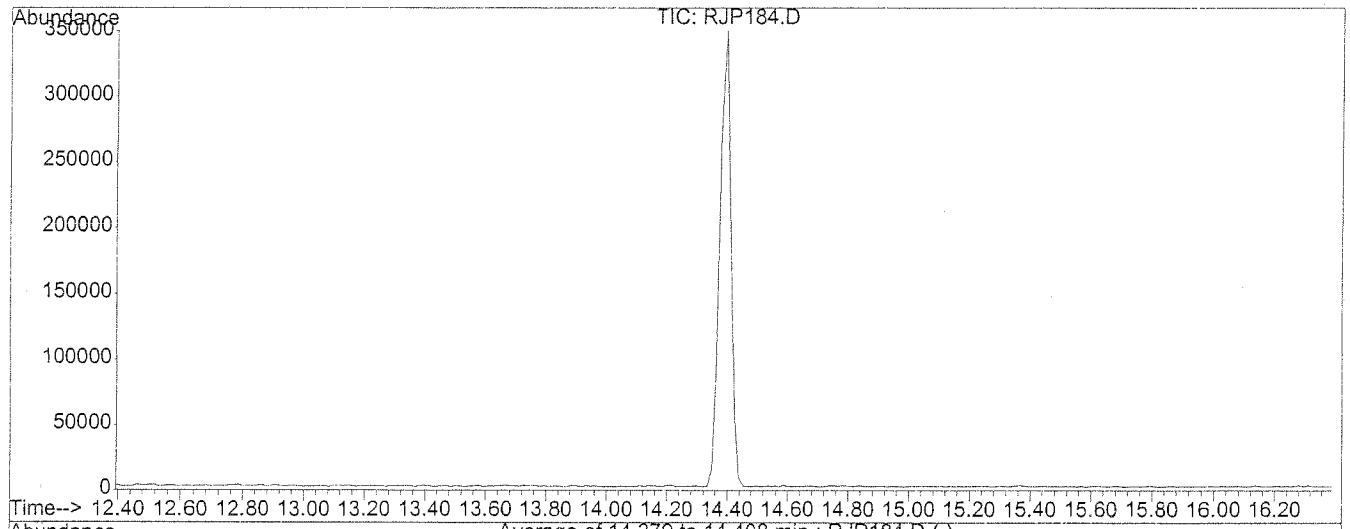
VO02J14.M Fri Oct 16 08:49:35 2015

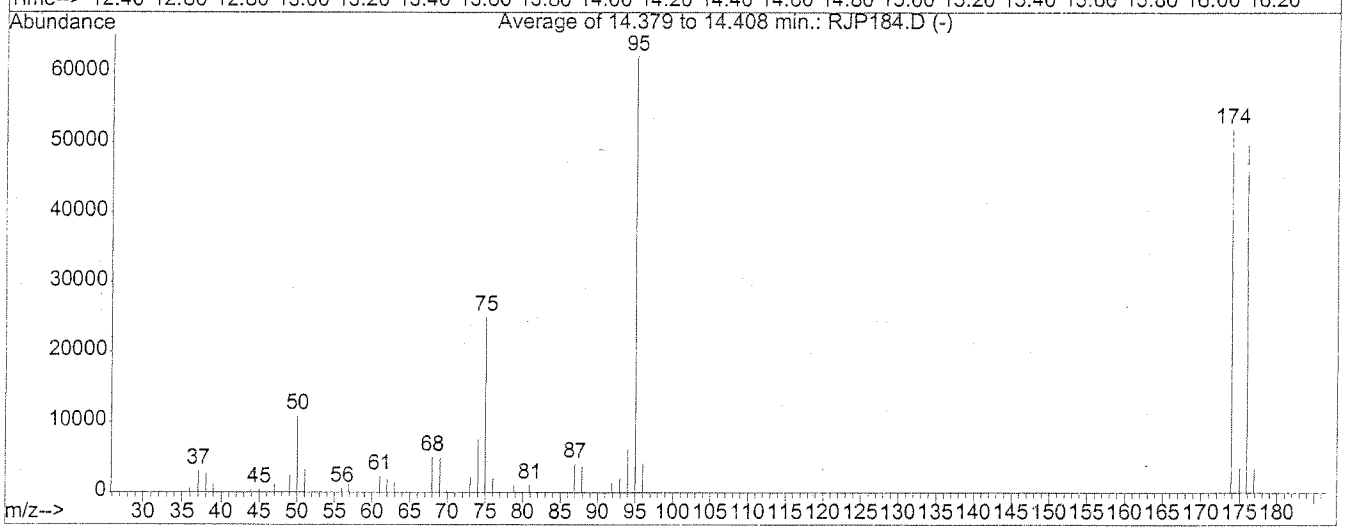
SL 10/19/15

BFB

Data File : D:\HPCHEM\1\DATA\15J14\RJP184.D
Acq On : 14 Oct 2015 9:11 am
Sample : BFB02J11
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL

Vial: 1
Operator: CMendo
Inst : TO02
Multiplr: 1.00





AutoFind: Scans 857, 858, 859; Background Corrected with Scan 852

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.5	10894	PASS
75	95	30	60	40.1	24947	PASS
95	95	100	100	100.0	62181	PASS
96	95	5	9	6.7	4159	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	83.4	51832	PASS
175	174	5	9	6.9	3589	PASS
176	174	95	101	95.8	49632	PASS
177	176	5	9	6.9	3435	PASS

RJP184.D VO02J14.M Fri Oct 16 08:34:36 2015 SA 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP185.D
Acq On : 14 Oct 2015 9:50 am
Sample : VO02J141
Misc : 1.0ppb 8260/5.0ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:34 2015

Vial: 2
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1848441	50.00 ug/l	-0.01
51) CHLOROBENZENE-D5	12.31	117	1454873	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.14	152	562303	50.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.40	111	6606	0.58 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.16%	
39) 1,2-Dichloroethane-d4	7.07	65	6546	0.63 ug/l	-0.01
Spiked Amount 50.000			Recovery	= 1.26%	
52) Toluene-d8	9.87	98	26963	0.69 ug/l	-0.01
Spiked Amount 50.000			Recovery	= 1.38%	
73) 4-Bromofluorobenzene	14.39	95	9893	0.77 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1.54%	
Target Compounds					Qvalue
3) Chloromethane	1.97	50	9928	0.54 ug/l	85
5) Bromomethane	2.56	94	24506	2.47 ug/l #	18
7) Dichlorofluoromethane	2.70	67	20195	0.89 ug/l	99
9) Acrolein	3.41	56	7515	4.38 ug/l	97
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	4826	0.78 ug/l	88
11) Acetone	3.48	43	26748	5.76 ug/l	98
12) 1,1-Dichloroethene	3.63	61	15251	0.87 ug/l	99
13) tert-Butyl alcohol	3.74	59	7374	3.83 ug/l	74
14) Acetonitrile	3.80	41	19895	8.82 ug/l	79
15) Iodomethane	4.00	142	13723	0.86 ug/l	93
16) Methyl Acetate	4.03	43	8361	0.60 ug/l #	62
18) Carbon disulfide	4.21	76	43946	0.98 ug/l	100
19) Acrylonitrile	4.36	53	26551	4.62 ug/l	98
20) tert-Butyl methyl ether (M	4.41	73	33017	0.91 ug/l	99
21) trans-1,2-Dichloroethene	4.57	61	16108	0.88 ug/l	98
22) Isopropyl ether (DIPE)	4.97	45	54380	0.91 ug/l	97
24) 1,1-Dichloroethane	5.11	63	20212	0.88 ug/l	92
25) 2-Butanol	5.40	45	5427	3.02 ug/l #	100
26) tert-Butyl ethyl ether (ET	5.49	59	39358	0.87 ug/l	96
27) 2-Butanone	5.66	43	43068	4.93 ug/l	99
28) 2,2-Dichloropropane	5.84	77	8139	0.85 ug/l #	62
29) cis-1,2-Dichloroethene	5.89	96	12422	0.85 ug/l	96
30) Chloroform	6.10	83	18274	0.92 ug/l	97
31) Bromochloromethane	6.33	49	10770	0.83 ug/l	95
32) Tetrahydrofuran	6.37	42	4990	0.98 ug/l #	40
34) 1,1,1-Trichloroethane	6.62	97	11185	0.88 ug/l	91
36) 1,1-Dichloropropene	6.85	110	5122	0.88 ug/l	86

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

SA 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP185.D Vial: 2
Acq On : 14 Oct 2015 9:50 am Operator: CMendo
Sample : VO02J141 Inst : TO02
Misc : 1.0ppb 8260/5.0ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:34 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit		Qvalue
37) Carbon tetrachloride	6.98	119	7757	0.78 ug/l		85
38) tert-Amyl methyl ether (TA	7.01	87	5802	0.79 ug/l	#	66
40) 1,2-Dichloroethane	7.20	62	11359	0.90 ug/l		92
41) Benzene	7.22	78	45563	0.94 ug/l		99
42) Trichloroethene	8.08	130	10633	0.91 ug/l		93
44) 1,2-Dichloropropane	8.34	63	10874	0.88 ug/l		99
45) Bromodichloromethane	8.68	83	10250	0.77 ug/l		94
46) 1,4-Dioxane	8.72	88	2129	16.23 ug/l		88
47) Dibromomethane	8.75	93	5631	0.79 ug/l		92
49) 4-Methyl-2-pentanone	9.20	43	80937	4.60 ug/l		99
50) cis-1,3-Dichloropropene	9.51	75	14702	0.78 ug/l		92
53) Toluene	10.00	91	44827	0.95 ug/l		99
54) Ethyl methacrylate	10.30	69	14083	0.84 ug/l		96
55) trans-1,3-Dichloropropene	10.30	75	11894	0.77 ug/l		89
56) 1,1,2-Trichloroethane	10.54	97	9407	0.96 ug/l		92
57) 2-Hexanone	10.57	43	55660	4.59 ug/l		98
58) 1,3-Dichloropropane	10.95	76	16527	0.92 ug/l		98
59) Tetrachloroethene	11.03	164	8470	0.92 ug/l		94
60) Dibromochloromethane	11.36	129	6471	0.71 ug/l		88
61) 1,2-Dibromoethane	11.68	107	7891	0.79 ug/l		91
62) 1-Chlorohexane	11.98	91	16550	0.94 ug/l		97
63) Chlorobenzene	12.37	112	26934	0.96 ug/l	#	85
64) 1,1,1,2-Tetrachloroethane	12.46	131	7056	0.81 ug/l		91
65) Ethylbenzene	12.47	91	48503	0.97 ug/l		97
66) m-Xylene & p-Xylene	12.61	91	71635	1.96 ug/l		98
67) o-Xylene	13.33	91	31824	0.89 ug/l		98
68) Styrene	13.41	104	26938	0.88 ug/l		96
69) Isopropylbenzene	13.97	105	38517	0.93 ug/l		97
71) Bromoform	13.96	173	3126	3.14 ug/l	#	60
72) 1,1,2,2-Tetrachloroethane	14.27	83	11262	0.83 ug/l		94
74) 1,2,3-Trichloropropane	14.53	110	3108	0.87 ug/l		100
75) trans-1,4-Dichloro-2-buten	14.67	53	2846	0.73 ug/l	#	36
76) n-Propylbenzene	14.67	91	48184	0.89 ug/l		99
77) Bromobenzene	14.72	156	9494	0.86 ug/l		97
78) 1,3,5-Trimethylbenzene	14.96	105	28583	0.90 ug/l		98
79) 2-Chlorotoluene	14.96	91	30550	0.93 ug/l		98
80) 4-Chlorotoluene	15.05	91	27490	0.92 ug/l		98
81) tert-Butylbenzene	15.58	134	6472	0.93 ug/l		96
82) 1,2,4-Trimethylbenzene	15.64	105	29303	0.91 ug/l		100
83) sec-Butylbenzene	15.95	105	40616	0.93 ug/l		97
84) p-Isopropyltoluene	16.22	119	30337	0.92 ug/l		95

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

SA 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP185.D Vial: 2
Acq On : 14 Oct 2015 9:50 am Operator: CMendo
Sample : VO02J141 Inst : TO02
Misc : 1.0ppb 8260/5.0ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:34 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
85)	1,3-Dichlorobenzene	16.34	146	18183	0.98 ug/l		94
86)	1,2,3-Trimethylbenzene	16.49	105	17834	0.61 ug/l	#	94
87)	1,4-Dichlorobenzene	16.53	146	17934	0.96 ug/l		96
88)	n-Butylbenzene	16.95	91	29805	0.92 ug/l		98
89)	1,2-Dichlorobenzene	17.19	146	15090	0.90 ug/l	#	62
90)	1,2-Dibromo-3-chloropropan	18.50	157	1178	2.69 ug/l	#	14
91)	1,2,4-Trichlorobenzene	19.55	180	8427	0.90 ug/l		96
92)	Hexachlorobutadiene	19.70	225	3783	0.88 ug/l		92
93)	Naphthalene	19.81	128	19400	0.83 ug/l		95
94)	1,2,3-Trichlorobenzene	20.05	180	7498	0.92 ug/l		93

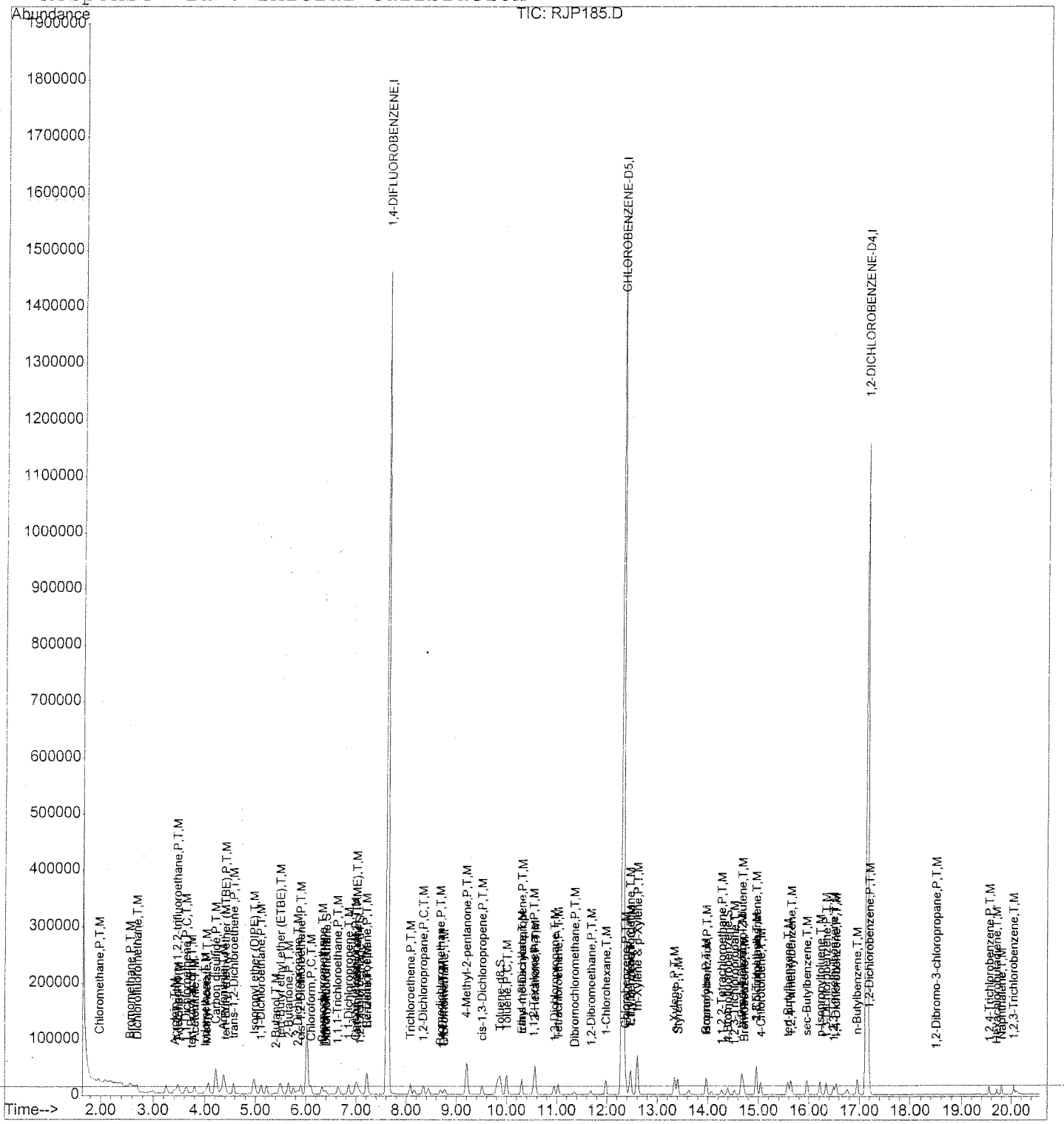
SU 10/19/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP185.D Vial: 2
Acq On : 14 Oct 2015 9:50 am Operator: CMendo
Sample : VO02J141 Inst : TO02
Misc : 1.0ppb 8260/5.0ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:34 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP186.D
Acq On : 14 Oct 2015 10:22 am
Sample : VO02J142
Misc : 2.0ppb 8260/10ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:31 2015

Vial: 3
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1646312	50.00 ug/l	0.00
51) CHLOROBENZENE-D5	12.31	117	1277696	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.13	152	525192	50.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.39	111	20687	2.06 ug/l	0.00
Spiked Amount 50.000			Recovery	= 4.12%	
39) 1,2-Dichloroethane-d4	7.07	65	18019	1.96 ug/l	0.00
Spiked Amount 50.000			Recovery	= 3.92%	
52) Toluene-d8	9.87	98	76256	2.23 ug/l	0.00
Spiked Amount 50.000			Recovery	= 4.46%	
73) 4-Bromofluorobenzene	14.39	95	25234	2.11 ug/l	0.00
Spiked Amount 50.000			Recovery	= 4.22%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.71	85	15160	1.88 ug/l	88
3) Chloromethane	1.95	50	36157	2.22 ug/l	94
4) Vinyl chloride	2.09	62	23755	2.16 ug/l	100
5) Bromomethane	2.56	94	30234	3.42 ug/l #	51
6) Chloroethane	2.65	64	16715	1.92 ug/l	93
7) Dichlorofluoromethane	2.70	67	39203	1.95 ug/l	93
8) Trichlorofluoromethane	2.92	101	19244	1.80 ug/l	93
9) Acrolein	3.40	56	14891	9.75 ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	3.44	151	8939	1.63 ug/l	100
11) Acetone	3.47	43	48733	11.79 ug/l	98
12) 1,1-Dichloroethene	3.63	61	29794	1.91 ug/l	94
13) tert-Butyl alcohol	3.72	59	15978	9.32 ug/l #	1
14) Acetonitrile	3.78	41	41962	20.89 ug/l	80
15) Iodomethane	4.01	142	26378	1.86 ug/l	98
16) Methyl Acetate	4.02	43	25730	2.07 ug/l	96
17) Methylene chloride	4.20	49	56025	1.54 ug/l	98
18) Carbon disulfide	4.21	76	138514	3.46 ug/l	99
19) Acrylonitrile	4.36	53	55347	10.82 ug/l	99
20) tert-Butyl methyl ether (M	4.39	73	61880	1.91 ug/l	96
21) trans-1,2-Dichloroethene	4.57	61	30731	1.89 ug/l	96
22) Isopropyl ether (DIPE)	4.97	45	99160	1.86 ug/l	97
23) Vinyl acetate	5.12	43	66690	1.92 ug/l	97
24) 1,1-Dichloroethane	5.11	63	36557	1.79 ug/l	98
25) 2-Butanol	5.39	45	17310	10.81 ug/l #	100
26) tert-Butyl ethyl ether (ET	5.49	59	75831	1.88 ug/l	98
27) 2-Butanone	5.64	43	85717	11.01 ug/l	98
~~28) 2,2-Dichloropropane~~	~~5.84~~	~~77~~	~~16445~~	~~1.92 ug/l~~	~~93~~

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

SC 10/19/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP186.D
Acq On : 14 Oct 2015 10:22 am
Sample : VO02J142
Misc : 2.0ppb 8260/10ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:31 2015

Vial: 3
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
29)	cis-1,2-Dichloroethene	5.90	96	25040	1.91 ug/l		98
30)	Chloroform	6.10	83	33877	1.91 ug/l		100
31)	Bromochloromethane	6.31	49	21708	1.88 ug/l		98
32)	Tetrahydrofuran	6.36	42	9486	2.08 ug/l		78
34)	1,1,1-Trichloroethane	6.63	97	20791	1.83 ug/l		98
35)	Cyclohexane	6.64	56	32193	2.01 ug/l		99
36)	1,1-Dichloropropene	6.85	110	9364	1.80 ug/l		99
37)	Carbon tetrachloride	6.98	119	15770	1.79 ug/l		99
38)	tert-Amyl methyl ether (TA	7.03	87	12665	1.93 ug/l	#	88
40)	1,2-Dichloroethane	7.21	62	21844	1.94 ug/l		98
41)	Benzene	7.22	78	84436	1.95 ug/l		99
42)	Trichloroethene	8.08	130	20054	1.93 ug/l		91
43)	Methylcyclohexane	8.16	83	30164	1.87 ug/l		96
44)	1,2-Dichloropropane	8.34	63	21290	1.94 ug/l		92
45)	Bromodichloromethane	8.68	83	20655	1.74 ug/l		97
46)	1,4-Dioxane	8.72	88	4454	38.13 ug/l		90
47)	Dibromomethane	8.75	93	11814	1.86 ug/l		95
49)	4-Methyl-2-pentanone	9.20	43	168502	10.76 ug/l		99
50)	cis-1,3-Dichloropropene	9.51	75	28770	1.72 ug/l		93
53)	Toluene	9.99	91	81692	1.97 ug/l		98
54)	Ethyl methacrylate	10.30	69	27482	1.87 ug/l		98
55)	trans-1,3-Dichloropropene	10.30	75	23373	1.72 ug/l		94
56)	1,1,2-Trichloroethane	10.54	97	16083	1.87 ug/l		96
57)	2-Hexanone	10.57	43	116518	10.95 ug/l		99
58)	1,3-Dichloropropane	10.94	76	30787	1.96 ug/l		99
59)	Tetrachloroethene	11.02	164	15525	1.92 ug/l		98
60)	Dibromochloromethane	11.34	129	12418	1.56 ug/l		99
61)	1,2-Dibromoethane	11.67	107	16682	1.89 ug/l		97
62)	1-Chlorohexane	11.97	91	28805	1.86 ug/l		97
63)	Chlorobenzene	12.37	112	48342	1.95 ug/l		88
64)	1,1,1,2-Tetrachloroethane	12.44	131	14671	1.92 ug/l		94
65)	Ethylbenzene	12.47	91	85688	1.95 ug/l		97
66)	m-Xylene & p-Xylene	12.59	91	125080	3.90 ug/l		100
67)	o-Xylene	13.34	91	59716	1.91 ug/l		100
68)	Styrene	13.40	104	50178	1.86 ug/l		98
69)	Isopropylbenzene	13.96	105	69529	1.91 ug/l		97
71)	Bromoform	13.95	173	7146	3.78 ug/l		86
72)	1,1,2,2-Tetrachloroethane	14.27	83	22097	1.74 ug/l		96
74)	1,2,3-Trichloropropane	14.53	110	5132	1.54 ug/l		100
75)	trans-1,4-Dichloro-2-buten	14.66	53	4407	1.21 ug/l		82
~~76)~~	~~n-Propylbenzene~~	~~14.66~~	~~91~~	~~89453~~	~~1.78 ug/l~~		~~99~~

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

SA 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP186.D
Acq On : 14 Oct 2015 10:22 am
Sample : VO02J142
Misc : 2.0ppb 8260/10ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:31 2015

Vial: 3
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77)	Bromobenzene	14.71	156	18533	1.80 ug/l	97
78)	1,3,5-Trimethylbenzene	14.94	105	53886	1.81 ug/l	99
79)	2-Chlorotoluene	14.96	91	55702	1.82 ug/l	98
80)	4-Chlorotoluene	15.03	91	49858	1.78 ug/l	95
81)	tert-Butylbenzene	15.58	134	11619	1.79 ug/l	100
82)	1,2,4-Trimethylbenzene	15.64	105	55133	1.83 ug/l	100
83)	sec-Butylbenzene	15.96	105	75260	1.85 ug/l	100
84)	p-Isopropyltoluene	16.21	119	57741	1.87 ug/l	99
85)	1,3-Dichlorobenzene	16.34	146	31767	1.84 ug/l	96
86)	1,2,3-Trimethylbenzene	16.48	105	50565	1.84 ug/l	97
87)	1,4-Dichlorobenzene	16.54	146	33362	1.91 ug/l	98
88)	n-Butylbenzene	16.95	91	56549	1.87 ug/l	99
89)	1,2-Dichlorobenzene	17.19	146	31258	2.00 ug/l	85
90)	1,2-Dibromo-3-chloropropan	18.50	157	2751	3.43 ug/l	93
91)	1,2,4-Trichlorobenzene	19.54	180	16474	1.89 ug/l	96
92)	Hexachlorobutadiene	19.71	225	7471	1.86 ug/l	90
93)	Naphthalene	19.79	128	39417	1.80 ug/l	98
94)	1,2,3-Trichlorobenzene	20.05	180	13916	1.83 ug/l	94

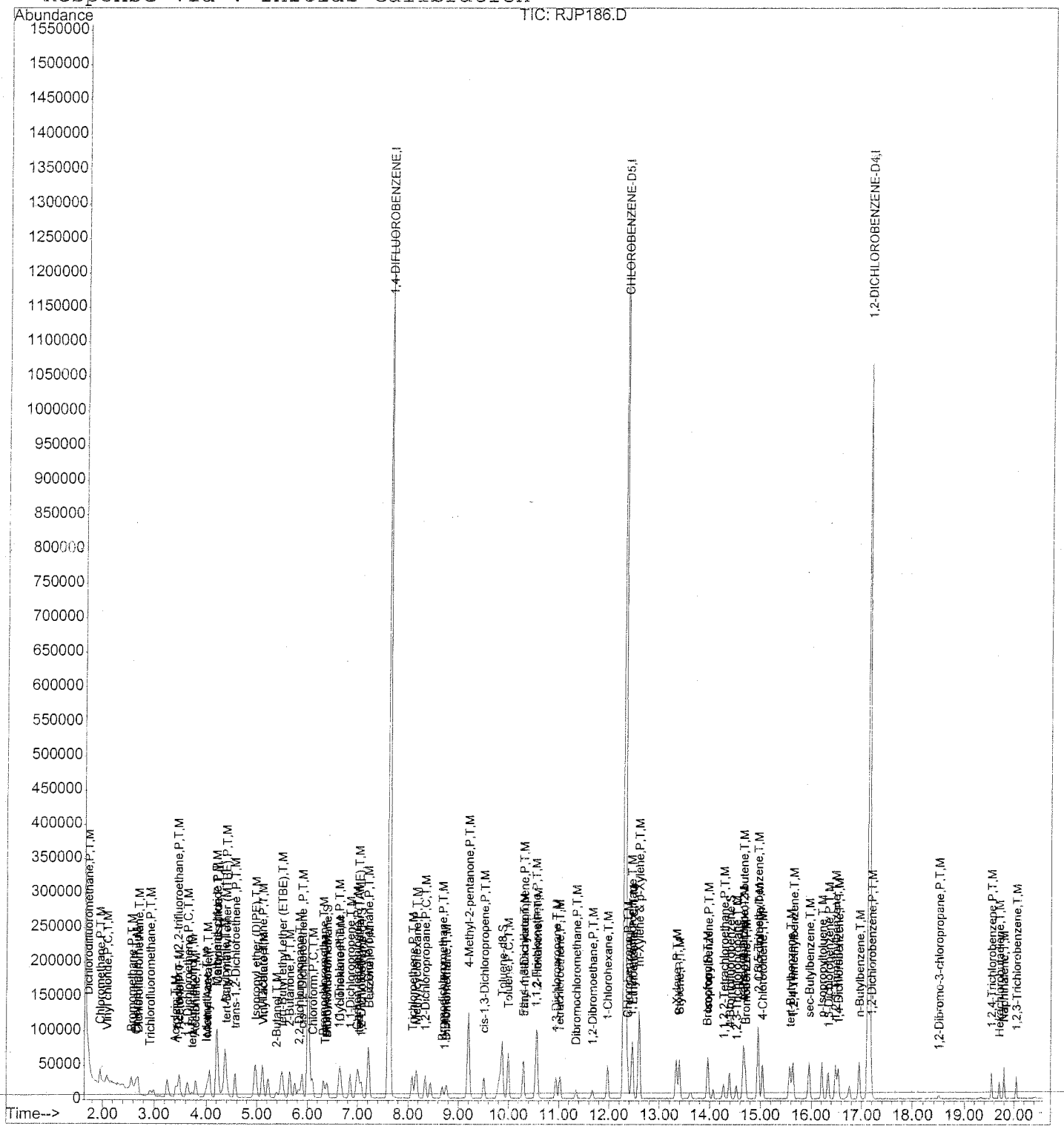
Sa 10/19/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP186.D Vial: 3
Acq On : 14 Oct 2015 10:22 am Operator: CMendo
Sample : VO02J142 Inst : TO02
Misc : 2.0ppb 8260/10ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:31 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



Su 10/19/15

141

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP187.D
Acq On : 14 Oct 2015 11:01 am
Sample : VO02J143
Misc : 4.0ppb 8260/20ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 4
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1809804	50.00	ug/l	-0.01
51) CHLOROBENZENE-D5	12.30	117	1439340	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.14	152	583773	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.40	111	38720	3.50	ug/l	0.00
Spiked Amount 50.000			Recovery	=	7.00%	
39) 1,2-Dichloroethane-d4	7.07	65	34106	3.37	ug/l	-0.01
Spiked Amount 50.000			Recovery	=	6.74%	
52) Toluene-d8	9.86	98	141523	3.67	ug/l	-0.01
Spiked Amount 50.000			Recovery	=	7.34%	
73) 4-Bromofluorobenzene	14.39	95	45189	3.40	ug/l	0.00
Spiked Amount 50.000			Recovery	=	6.80%	
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	32093	3.62	ug/l	97
3) Chloromethane	1.96	50	66459	3.71	ug/l	96
4) Vinyl chloride	2.10	62	49696	4.12	ug/l	97
5) Bromomethane	2.56	94	48961	5.04	ug/l	69
6) Chloroethane	2.66	64	35940	3.75	ug/l	92
7) Dichlorofluoromethane	2.69	67	87597	3.96	ug/l	100
8) Trichlorofluoromethane	2.93	101	43692	3.72	ug/l	100
9) Acrolein	3.41	56	30256	18.02	ug/l	98
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	24205	4.01	ug/l	98
11) Acetone	3.48	43	88643	19.51	ug/l	96
12) 1,1-Dichloroethene	3.63	61	65431	3.81	ug/l	98
13) tert-Butyl alcohol	3.72	59	32648	17.32	ug/l #	1
14) Acetonitrile	3.79	41	87557	39.64	ug/l	98
15) Iodomethane	4.02	142	58600	3.77	ug/l	99
16) Methyl Acetate	4.03	43	46398	3.39	ug/l	93
17) Methylene chloride	4.21	49	102630	3.94	ug/l	97
18) Carbon disulfide	4.22	76	186805	4.24	ug/l	98
19) Acrylonitrile	4.36	53	104475	18.58	ug/l	98
20) tert-Butyl methyl ether (M	4.39	73	135693	3.81	ug/l	100
21) trans-1,2-Dichloroethene	4.57	61	69300	3.87	ug/l	98
22) Isopropyl ether (DIPE)	4.97	45	232706	3.98	ug/l	97
23) Vinyl acetate	5.12	43	142497	3.73	ug/l	99
24) 1,1-Dichloroethane	5.10	63	84301	3.75	ug/l	99
25) 2-Butanol	5.39	45	31549	17.92	ug/l #	100
26) tert-Butyl ethyl ether (ET	5.49	59	172959	3.90	ug/l	98
27) 2-Butanone	5.65	43	160875	18.80	ug/l	98
28) 2,2-Dichloropropane	5.83	77	39536	4.20	ug/l	97

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

10/19/15

142

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP187.D
Acq On : 14 Oct 2015 11:01 am
Sample : VO02J143
Misc : 4.0ppb 8260/20ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 4
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	5.89	96	56225	3.91 ug/l	99
30)	Chloroform	6.10	83	75991	3.90 ug/l	99
31)	Bromochloromethane	6.32	49	49537	3.90 ug/l	98
32)	Tetrahydrofuran	6.37	42	17557	3.51 ug/l	97
34)	1,1,1-Trichloroethane	6.64	97	49010	3.93 ug/l	97
35)	Cyclohexane	6.65	56	67007	3.81 ug/l	97
36)	1,1-Dichloropropene	6.84	110	22512	3.94 ug/l	97
37)	Carbon tetrachloride	6.98	119	38582	3.98 ug/l	97
38)	tert-Amyl methyl ether (TA	7.01	87	28556	3.95 ug/l	99
40)	1,2-Dichloroethane	7.20	62	49059	3.97 ug/l	98
41)	Benzene	7.22	78	190832	4.00 ug/l	99
42)	Trichloroethene	8.08	130	45447	3.98 ug/l	97
43)	Methylcyclohexane	8.17	83	66213	3.74 ug/l	98
44)	1,2-Dichloropropane	8.35	63	46477	3.84 ug/l	93
45)	Bromodichloromethane	8.67	83	48258	3.69 ug/l	100
46)	1,4-Dioxane	8.72	88	10162	79.14 ug/l	98
47)	Dibromomethane	8.76	93	25627	3.67 ug/l	96
49)	4-Methyl-2-pentanone	9.19	43	328326	19.07 ug/l	100
50)	cis-1,3-Dichloropropene	9.51	75	69212	3.76 ug/l	99
53)	Toluene	10.00	91	186475	3.99 ug/l	99
54)	Ethyl methacrylate	10.30	69	63585	3.85 ug/l	96
55)	trans-1,3-Dichloropropene	10.30	75	56810	3.71 ug/l	96
56)	1,1,2-Trichloroethane	10.53	97	37368	3.85 ug/l	98
57)	2-Hexanone	10.56	43	236845	19.75 ug/l	98
58)	1,3-Dichloropropane	10.94	76	73207	4.13 ug/l	97
59)	Tetrachloroethene	11.03	164	37182	4.07 ug/l	99
60)	Dibromochloromethane	11.35	129	30454	3.39 ug/l	95
61)	1,2-Dibromoethane	11.68	107	39458	3.98 ug/l	97
62)	1-Chlorohexane	11.98	91	69027	3.95 ug/l	97
63)	Chlorobenzene	12.36	112	112702	4.04 ug/l	94
64)	1,1,1,2-Tetrachloroethane	12.45	131	32534	3.77 ug/l	95
65)	Ethylbenzene	12.47	91	204935	4.15 ug/l	97
66)	m-Xylene & p-Xylene	12.60	91	297191	8.23 ug/l	100
67)	o-Xylene	13.33	91	146464	4.15 ug/l	98
68)	Styrene	13.41	104	118256	3.90 ug/l	98
69)	Isopropylbenzene	13.97	105	165814	4.04 ug/l	99
71)	Bromoform	13.96	173	16762	4.98 ug/l	96
72)	1,1,2,2-Tetrachloroethane	14.27	83	54641	3.86 ug/l	99
74)	1,2,3-Trichloropropane	14.52	110	14219	3.83 ug/l	100
75)	trans-1,4-Dichloro-2-buten	14.67	53	12474	3.09 ug/l	86
76)	n-Propylbenzene	14.67	91	210661	3.77 ug/l	100

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

10/19/15

143

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP187.D
Acq On : 14 Oct 2015 11:01 am
Sample : VO02J143
Misc : 4.0ppb 8260/20ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 4
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77)	Bromobenzene	14.70	156	43932	3.84 ug/l	99
78)	1,3,5-Trimethylbenzene	14.95	105	125940	3.81 ug/l	99
79)	2-Chlorotoluene	14.95	91	131732	3.88 ug/l	99
80)	4-Chlorotoluene	15.04	91	121080	3.90 ug/l	98
81)	tert-Butylbenzene	15.58	134	28929	4.00 ug/l	96
82)	1,2,4-Trimethylbenzene	15.64	105	130545	3.90 ug/l	99
83)	sec-Butylbenzene	15.95	105	178233	3.95 ug/l	97
84)	p-Isopropyltoluene	16.22	119	137889	4.02 ug/l	98
85)	1,3-Dichlorobenzene	16.34	146	77420	4.03 ug/l	100
86)	1,2,3-Trimethylbenzene	16.49	105	112428	3.68 ug/l	99
87)	1,4-Dichlorobenzene	16.53	146	77097	3.97 ug/l	98
88)	n-Butylbenzene	16.95	91	136746	4.06 ug/l	97
89)	1,2-Dichlorobenzene	17.19	146	68229	3.93 ug/l	95
90)	1,2-Dibromo-3-chloropropan	18.50	157	6224	4.72 ug/l	94
91)	1,2,4-Trichlorobenzene	19.55	180	38025	3.92 ug/l	99
92)	Hexachlorobutadiene	19.70	225	17855	4.00 ug/l	97
93)	Naphthalene	19.80	128	89544	3.67 ug/l	100
94)	1,2,3-Trichlorobenzene	20.04	180	32912	3.89 ug/l	97

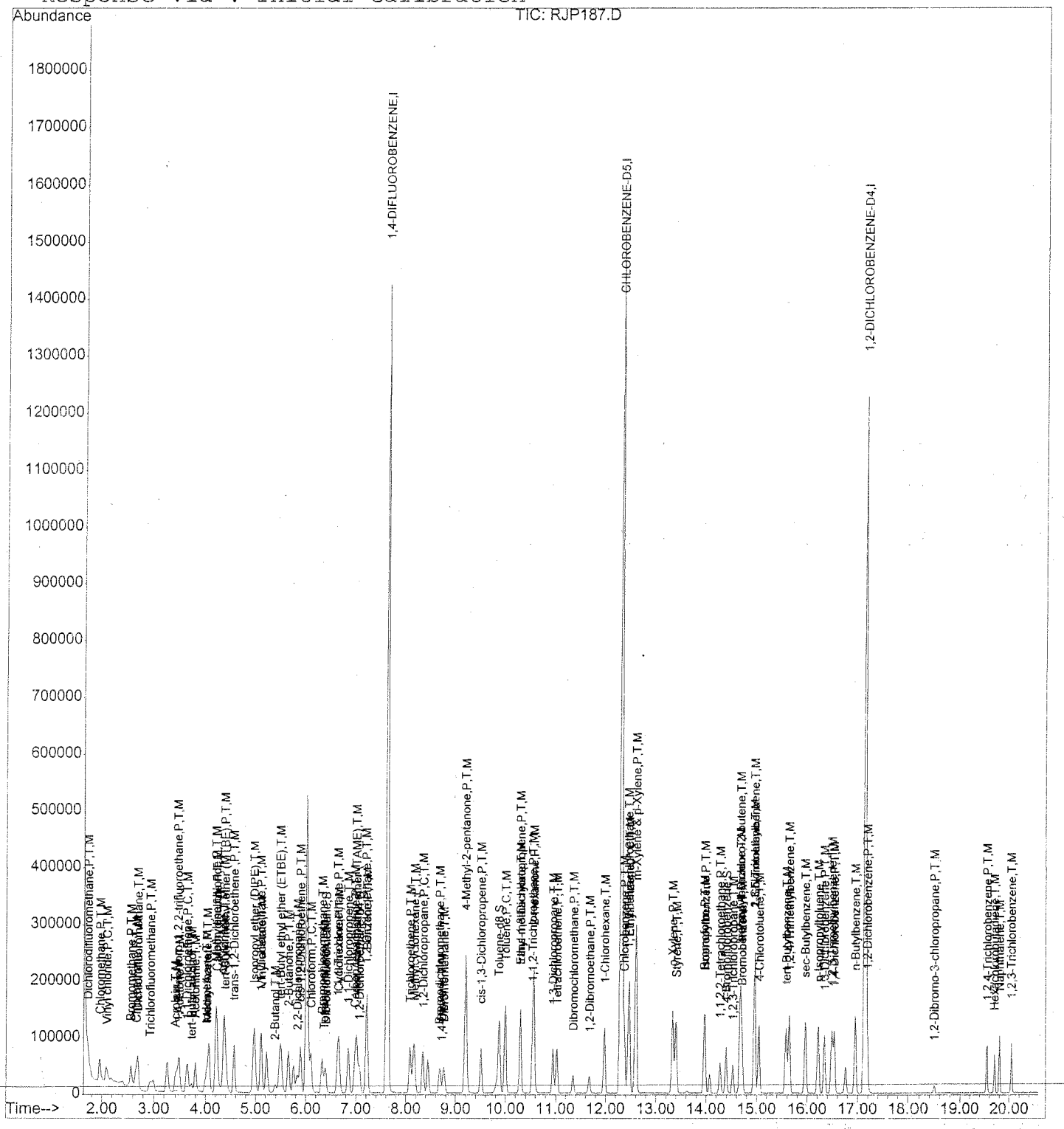
Su 10/9/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP187.D Vial: 4
Acq On : 14 Oct 2015 11:01 am Operator: CMendo
Sample : VO02J143 Inst : TO02
Misc : 4.0ppb 8260/20ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



SM 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP188.D
Acq On : 14 Oct 2015 11:48 am
Sample : VO02J144
Misc : 10ppb 8260/50ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 5
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1813934	50.00 ug/l	0.00
51) CHLOROBENZENE-D5	12.31	117	1474730	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.15	152	596093	50.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.40	111	107367	9.69 ug/l	0.00
Spiked Amount 50.000			Recovery =	19.38%	
39) 1,2-Dichloroethane-d4	7.07	65	104166	10.27 ug/l	0.00
Spiked Amount 50.000			Recovery =	20.54%	
52) Toluene-d8	9.88	98	383560	9.71 ug/l	0.00
Spiked Amount 50.000			Recovery =	19.42%	
73) 4-Bromofluorobenzene	14.39	95	124684	9.19 ug/l	0.00
Spiked Amount 50.000			Recovery =	18.38%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.73	85	87386	9.84 ug/l	95
3) Chloromethane	1.95	50	169379	9.42 ug/l	100
4) Vinyl chloride	2.09	62	130382	10.77 ug/l	96
5) Bromomethane	2.56	94	98153	10.09 ug/l	89
6) Chloroethane	2.67	64	92614	9.65 ug/l	96
7) Dichlorofluoromethane	2.70	67	221720	10.00 ug/l	100
8) Trichlorofluoromethane	2.93	101	115137	9.79 ug/l	98
9) Acrolein	3.41	56	78721	46.77 ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	3.44	151	62810	10.39 ug/l	96
11) Acetone	3.49	43	202802	44.53 ug/l	100
12) 1,1-Dichloroethene	3.63	61	167067	9.71 ug/l	99
13) tert-Butyl alcohol	3.72	59	85393	45.20 ug/l #	1
14) Acetonitrile	3.80	41	219601	99.20 ug/l	96
15) Iodomethane	4.02	142	156805	10.06 ug/l	98
16) Methyl Acetate	4.04	43	121684	8.87 ug/l	97
17) Methylene chloride	4.21	49	204373	9.87 ug/l	99
18) Carbon disulfide	4.23	76	441023	10.00 ug/l	99
19) Acrylonitrile	4.36	53	259792	46.10 ug/l	99
20) tert-Butyl methyl ether (M	4.39	73	353117	9.89 ug/l	100
21) trans-1,2-Dichloroethene	4.57	61	173108	9.64 ug/l	100
22) Isopropyl ether (DIPE)	4.97	45	583309	9.94 ug/l	100
23) Vinyl acetate	5.12	43	355925	9.28 ug/l	98
24) 1,1-Dichloroethane	5.11	63	226143	10.05 ug/l	99
25) 2-Butanol	5.39	45	75868	43.00 ug/l #	100
26) tert-Butyl ethyl ether (ET	5.49	59	439301	9.88 ug/l	100
27) 2-Butanone	5.66	43	379106	44.21 ug/l	99
~~28) 2,2-Dichloropropane~~	~~5.84~~	~~77~~	~~95643~~	~~10.14 ug/l~~	~~98~~

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

Sir 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP188.D
Acq On : 14 Oct 2015 11:48 am
Sample : VO02J144
Misc : 10ppb 8260/50ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 5
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	5.90	96	143209	9.93 ug/l	99
30)	Chloroform	6.10	83	192366	9.85 ug/l	99
31)	Bromochloromethane	6.33	49	122405	9.61 ug/l	97
32)	Tetrahydrofuran	6.37	42	45222	9.01 ug/l	99
34)	1,1,1-Trichloroethane	6.64	97	126418	10.11 ug/l	98
35)	Cyclohexane	6.65	56	178696	10.14 ug/l	99
36)	1,1-Dichloropropene	6.86	110	57166	9.98 ug/l	96
37)	Carbon tetrachloride	6.98	119	94560	9.74 ug/l	97
38)	tert-Amyl methyl ether (TA	7.01	87	73561	10.16 ug/l	98
40)	1,2-Dichloroethane	7.21	62	120395	9.72 ug/l	98
41)	Benzene	7.22	78	488791	10.23 ug/l	99
42)	Trichloroethene	8.08	130	114950	10.04 ug/l	98
43)	Methylcyclohexane	8.17	83	172735	9.74 ug/l	99
44)	1,2-Dichloropropane	8.35	63	120353	9.93 ug/l	98
45)	Bromodichloromethane	8.69	83	128859	9.84 ug/l	98
46)	1,4-Dioxane	8.72	88	26588	206.59 ug/l	95
47)	Dibromomethane	8.77	93	69054	9.87 ug/l	99
49)	4-Methyl-2-pentanone	9.20	43	808304	46.83 ug/l	100
50)	cis-1,3-Dichloropropene	9.51	75	185318	10.04 ug/l	99
53)	Toluene	10.00	91	484298	10.12 ug/l	100
54)	Ethyl methacrylate	10.30	69	159247	9.40 ug/l	98
55)	trans-1,3-Dichloropropene	10.30	75	143438	9.14 ug/l	96
56)	1,1,2-Trichloroethane	10.54	97	95965	9.64 ug/l	95
57)	2-Hexanone	10.57	43	562870	45.81 ug/l	100
58)	1,3-Dichloropropane	10.96	76	175041	9.63 ug/l	99
59)	Tetrachloroethene	11.03	164	94145	10.07 ug/l	98
60)	Dibromochloromethane	11.36	129	81837	8.90 ug/l	100
61)	1,2-Dibromoethane	11.68	107	94343	9.28 ug/l	97
62)	1-Chlorohexane	11.98	91	171870	9.60 ug/l	99
63)	Chlorobenzene	12.37	112	284404	9.96 ug/l	98
64)	1,1,1,2-Tetrachloroethane	12.46	131	87352	9.88 ug/l	98
65)	Ethylbenzene	12.47	91	502140	9.92 ug/l	100
66)	m-Xylene & p-Xylene	12.61	91	720921	19.49 ug/l	100
67)	o-Xylene	13.34	91	351312	9.72 ug/l	98
68)	Styrene	13.41	104	306039	9.85 ug/l	100
69)	Isopropylbenzene	13.98	105	420129	10.00 ug/l	99
71)	Bromoform	13.96	173	49223	9.26 ug/l	97
72)	1,1,2,2-Tetrachloroethane	14.27	83	132386	9.17 ug/l	99
74)	1,2,3-Trichloropropane	14.54	110	35317	9.32 ug/l	99
75)	trans-1,4-Dichloro-2-buten	14.68	53	34116	8.27 ug/l	96
76)	n-Propylbenzene	14.68	91	525254	9.20 ug/l	100

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

Sa 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP188.D Vial: 5
Acq On : 14 Oct 2015 11:48 am Operator: CMendo
Sample : VO02J144 Inst : TO02
Misc : 10ppb 8260/50ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77)	Bromobenzene	14.72	156	107877	9.22 ug/l	99
78)	1,3,5-Trimethylbenzene	14.96	105	316356	9.36 ug/l	99
79)	2-Chlorotoluene	14.96	91	333441	9.62 ug/l	98
80)	4-Chlorotoluene	15.05	91	298273	9.40 ug/l	100
81)	tert-Butylbenzene	15.58	134	68588	9.30 ug/l	98
82)	1,2,4-Trimethylbenzene	15.64	105	321773	9.41 ug/l	98
83)	sec-Butylbenzene	15.97	105	438006	9.50 ug/l	100
84)	p-Isopropyltoluene	16.22	119	335255	9.57 ug/l	99
85)	1,3-Dichlorobenzene	16.34	146	189150	9.64 ug/l	100
86)	1,2,3-Trimethylbenzene	16.49	105	307699	9.87 ug/l	99
87)	1,4-Dichlorobenzene	16.55	146	188891	9.53 ug/l	98
88)	n-Butylbenzene	16.95	91	327792	9.53 ug/l	99
89)	1,2-Dichlorobenzene	17.19	146	174474	9.85 ug/l	98
90)	1,2-Dibromo-3-chloropropan	18.50	157	17395	9.11 ug/l	95
91)	1,2,4-Trichlorobenzene	19.56	180	91629	9.25 ug/l	99
92)	Hexachlorobutadiene	19.71	225	44032	9.66 ug/l	96
93)	Naphthalene	19.81	128	223084	8.95 ug/l	100
94)	1,2,3-Trichlorobenzene	20.05	180	79278	9.19 ug/l	99

(#) = qualifier out of range (m) = manual integration
RJP188.D VO02J14.M Fri Oct 16 08:35:19 2015 10/19/15 Page 3

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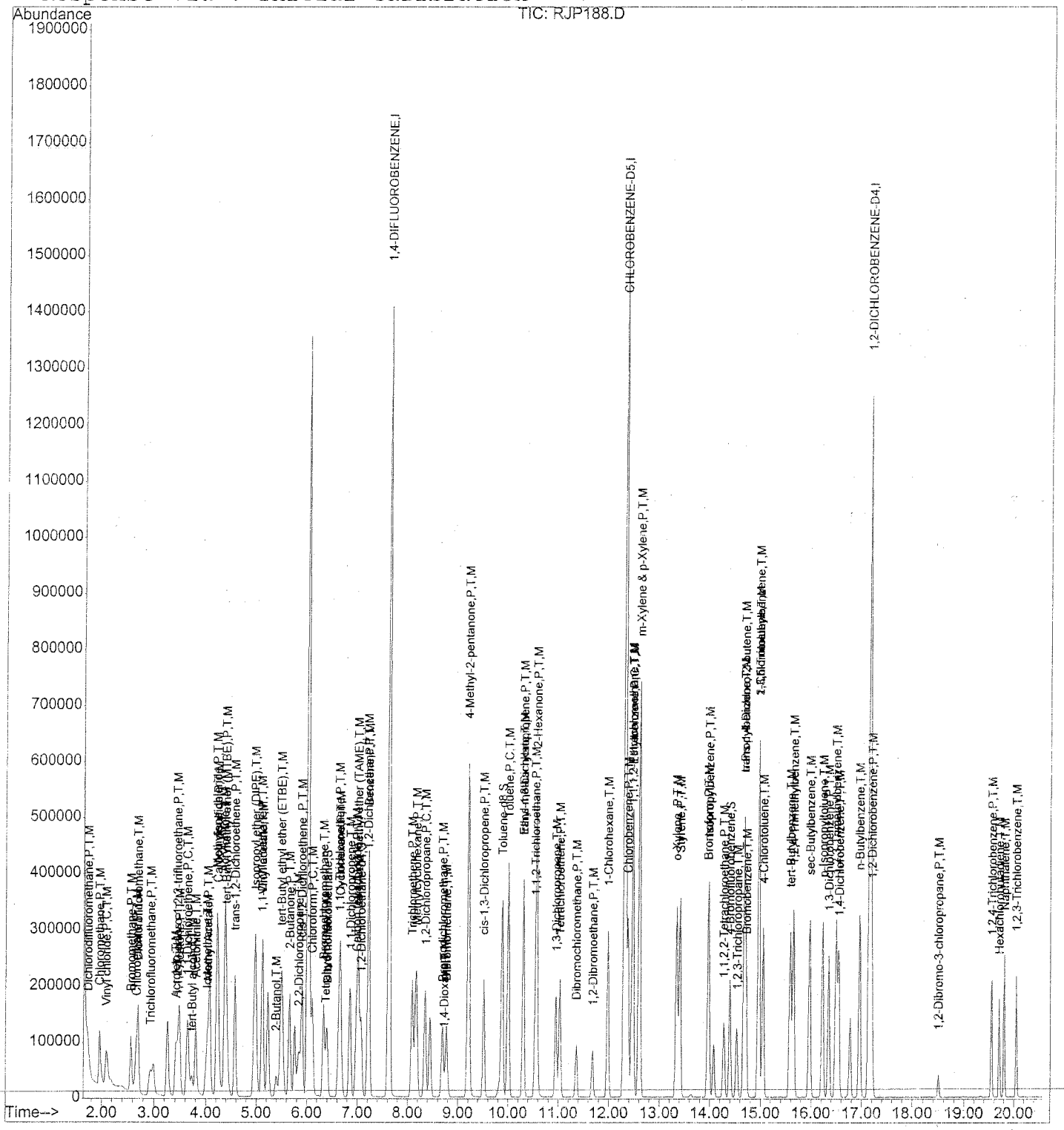
Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP188.D Vial: 5
Acq On : 14 Oct 2015 11:48 am Operator: CMendo
Sample : VO02J144 Inst : TO02
Misc : 10ppb 8260/50ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP189.D Vial: 6
Acq On : 14 Oct 2015 12:26 pm Operator: CMendo
Sample : VO02J145 Inst : TO02
Misc : 20ppb 8260/100ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.63	114	1813046	50.00	ug/l	0.00
51) CHLOROBENZENE-D5	12.30	117	1486014	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.14	152	604757	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.40	111	220381	19.90	ug/l	0.00
Spiked Amount 50.000			Recovery = 39.80%			
39) 1,2-Dichloroethane-d4	7.08	65	207561	20.48	ug/l	0.00
Spiked Amount 50.000			Recovery = 40.96%			
52) Toluene-d8	9.88	98	769334	19.34	ug/l	0.00
Spiked Amount 50.000			Recovery = 38.68%			
73) 4-Bromofluorobenzene	14.40	95	254350	18.49	ug/l	0.02
Spiked Amount 50.000			Recovery = 36.98%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.72	85	177746	20.03	ug/l	98
3) Chloromethane	1.96	50	371462	20.68	ug/l	99
4) Vinyl chloride	2.10	62	271952	22.48	ug/l	99
5) Bromomethane	2.57	94	199034	20.47	ug/l	95
6) Chloroethane	2.66	64	199193	20.77	ug/l	99
7) Dichlorofluoromethane	2.69	67	504144	22.76	ug/l	98
8) Trichlorofluoromethane	2.93	101	246495	20.97	ug/l	100
9) Acrolein	3.41	56	180388	107.22	ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	134232	22.22	ug/l	99
11) Acetone	3.48	43	475220	104.40	ug/l	99
12) 1,1-Dichloroethene	3.64	61	379707	22.07	ug/l	99
13) tert-Butyl alcohol	3.72	59	214881	113.79	ug/l	98
14) Acetonitrile	3.79	41	491391	222.09	ug/l	97
15) Iodomethane	4.02	142	350016	22.47	ug/l	100
16) Methyl Acetate	4.03	43	303676	22.14	ug/l	97
17) Methylene chloride	4.21	49	429655	23.04	ug/l	99
18) Carbon disulfide	4.22	76	923459	20.94	ug/l	100
19) Acrylonitrile	4.37	53	608666	108.07	ug/l	100
20) tert-Butyl methyl ether (M	4.40	73	756970	21.22	ug/l	100
21) trans-1,2-Dichloroethene	4.57	61	394061	21.96	ug/l	99
22) Isopropyl ether (DIPE)	4.97	45	1213391	20.70	ug/l	99
23) Vinyl acetate	5.12	43	805554	21.02	ug/l	100
24) 1,1-Dichloroethane	5.12	63	498452	22.16	ug/l	99
25) 2-Butanol	5.38	45	188669	106.98	ug/l #	100
26) tert-Butyl ethyl ether (ET	5.50	59	933185	21.00	ug/l	100
27) 2-Butanone	5.65	43	929682	108.47	ug/l	100
28) 2,2-Dichloropropane	5.85	77	216438	22.95	ug/l	99

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP189.D
Acq On : 14 Oct 2015 12:26 pm
Sample : VO02J145
Misc : 20ppb 8260/100ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 6
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	5.91	96	316521	21.96 ug/l	98
30) Chloroform	6.11	83	424871	21.76 ug/l	97
31) Bromochloromethane	6.32	49	286404	22.51 ug/l	99
32) Tetrahydrofuran	6.37	42	117089	23.34 ug/l	99
34) 1,1,1-Trichloroethane	6.65	97	285535	22.85 ug/l	99
35) Cyclohexane	6.65	56	362516	20.59 ug/l	100
36) 1,1-Dichloropropene	6.86	110	127591	22.29 ug/l	100
37) Carbon tetrachloride	6.99	119	212658	21.91 ug/l	97
38) tert-Amyl methyl ether (TA	7.02	87	154356	21.34 ug/l	99
40) 1,2-Dichloroethane	7.20	62	273107	22.05 ug/l	99
41) Benzene	7.23	78	1049050	21.96 ug/l	99
42) Trichloroethene	8.09	130	248691	21.73 ug/l	98
43) Methylcyclohexane	8.17	83	376195	21.22 ug/l	99
44) 1,2-Dichloropropane	8.35	63	269758	22.27 ug/l	99
45) Bromodichloromethane	8.69	83	294416	22.49 ug/l	99
46) 1,4-Dioxane	8.72	88	65832	511.77 ug/l	100
47) Dibromomethane	8.76	93	163927	23.43 ug/l	99
49) 4-Methyl-2-pentanone	9.21	43	1951534	113.12 ug/l	100
50) cis-1,3-Dichloropropene	9.51	75	424548	23.01 ug/l	99
53) Toluene	10.00	91	1028916	21.34 ug/l	100
54) Ethyl methacrylate	10.30	69	385797	22.60 ug/l	99
55) trans-1,3-Dichloropropene	10.30	75	352287	22.29 ug/l	99
56) 1,1,2-Trichloroethane	10.53	97	225448	22.49 ug/l	95
57) 2-Hexanone	10.56	43	1398316	112.95 ug/l	100
58) 1,3-Dichloropropane	10.95	76	401987	21.96 ug/l	98
59) Tetrachloroethene	11.02	164	199386	21.15 ug/l	100
60) Dibromochloromethane	11.35	129	203640	21.98 ug/l	99
61) 1,2-Dibromoethane	11.68	107	227204	22.19 ug/l	99
62) 1-Chlorohexane	11.98	91	353369	19.59 ug/l	99
63) Chlorobenzene	12.38	112	613217	21.31 ug/l	99
64) 1,1,1,2-Tetrachloroethane	12.45	131	198293	22.26 ug/l	100
65) Ethylbenzene	12.47	91	1109903	21.75 ug/l	100
66) m-Xylene & p-Xylene	12.60	91	1577189	42.32 ug/l	99
67) o-Xylene	13.35	91	782866	21.51 ug/l	99
68) Styrene	13.41	104	681620	21.77 ug/l	100
69) Isopropylbenzene	13.97	105	915658	21.63 ug/l	99
71) Bromoform	13.96	173	126744	19.36 ug/l	99
72) 1,1,2,2-Tetrachloroethane	14.28	83	312653	21.34 ug/l	97
74) 1,2,3-Trichloropropane	14.54	110	83826	21.80 ug/l	99
75) trans-1,4-Dichloro-2-buten	14.67	53	90001	21.52 ug/l	93
76) n-Propylbenzene	14.67	91	1193385	20.60 ug/l	100

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP189.D
Acq On : 14 Oct 2015 12:26 pm
Sample : VO02J145
Misc : 20ppb 8260/100ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 6
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77)	Bromobenzene	14.71	156	239738	20.20 ug/l	98
78)	1,3,5-Trimethylbenzene	14.95	105	718529	20.97 ug/l	99
79)	2-Chlorotoluene	14.95	91	710897	20.21 ug/l	98
80)	4-Chlorotoluene	15.04	91	671848	20.88 ug/l	97
81)	tert-Butylbenzene	15.58	134	155339	20.76 ug/l	98
82)	1,2,4-Trimethylbenzene	15.65	105	735423	21.19 ug/l	99
83)	sec-Butylbenzene	15.96	105	980812	20.96 ug/l	99
84)	p-Isopropyltoluene	16.22	119	754439	21.23 ug/l	99
85)	1,3-Dichlorobenzene	16.35	146	416718	20.94 ug/l	99
86)	1,2,3-Trimethylbenzene	16.49	105	635797	20.10 ug/l	99
87)	1,4-Dichlorobenzene	16.55	146	431416	21.46 ug/l	99
88)	n-Butylbenzene	16.96	91	761522	21.83 ug/l	99
89)	1,2-Dichlorobenzene	17.20	146	383657	21.36 ug/l	99
90)	1,2-Dibromo-3-chloropropan	18.51	157	47854	20.95 ug/l	96
91)	1,2,4-Trichlorobenzene	19.55	180	221206	22.01 ug/l	99
92)	Hexachlorobutadiene	19.71	225	100664	21.77 ug/l	99
93)	Naphthalene	19.80	128	564872	22.35 ug/l	99
94)	1,2,3-Trichlorobenzene	20.06	180	184998	21.13 ug/l	98

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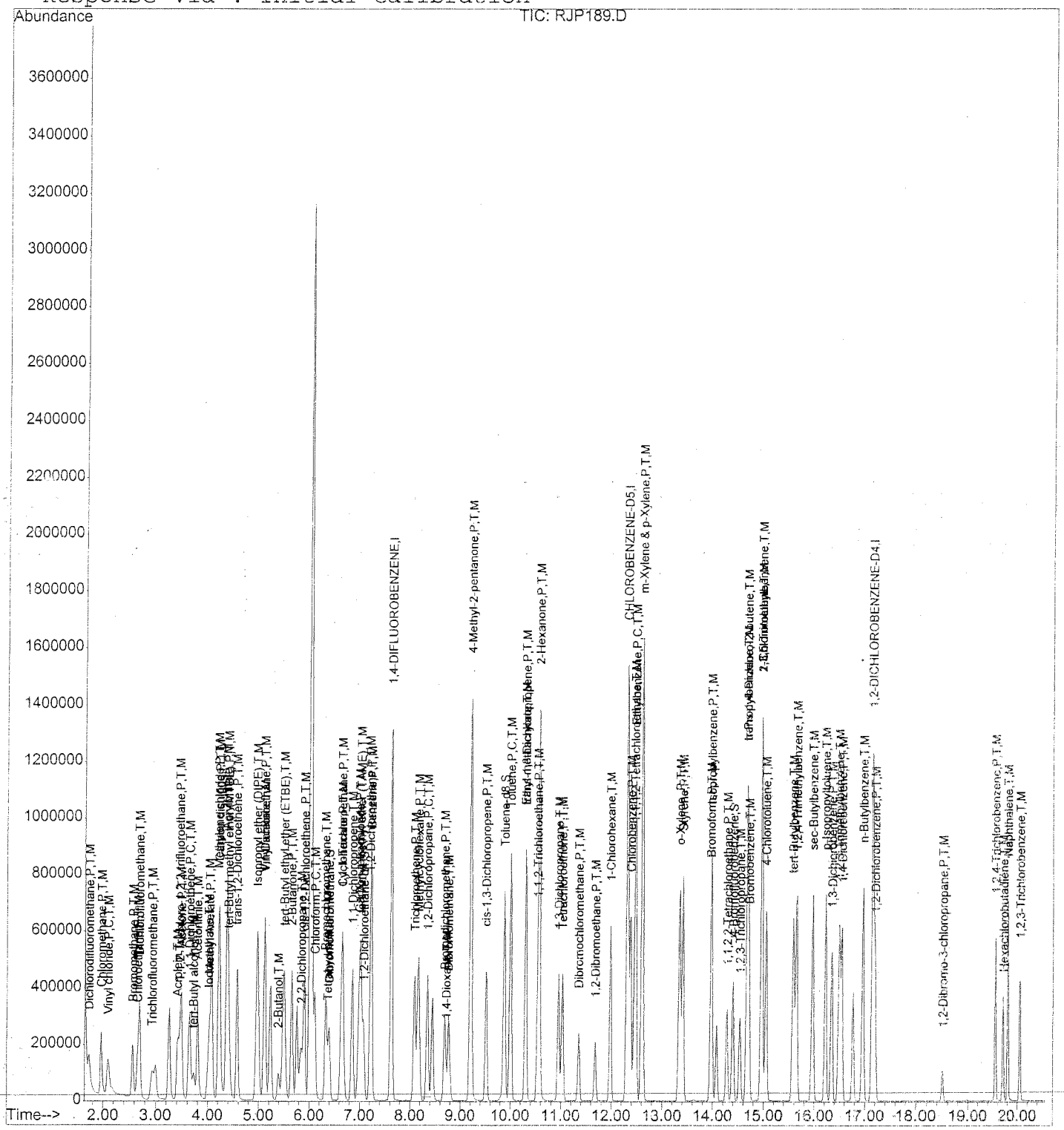
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP189.D Vial: 6
Acq On : 14 Oct 2015 12:26 pm Operator: CMendo
Sample : VO02J145 Inst : TO02
Misc : 20ppb 8260/100ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP190.D
Acq On : 14 Oct 2015 1:00 pm
Sample : VO02J146
Misc : 50ppb 8260/250ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 7
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.63	114	1842314	50.00	ug/l	0.00
51) CHLOROBENZENE-D5	12.30	117	1494656	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.14	152	596238	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.40	111	566729	50.35	ug/l	0.00
Spiked Amount 50.000			Recovery = 100.70%			
39) 1,2-Dichloroethane-d4	7.08	65	525158	50.99	ug/l	0.00
Spiked Amount 50.000			Recovery = 101.98%			
52) Toluene-d8	9.88	98	1918712	47.95	ug/l	0.00
Spiked Amount 50.000			Recovery = 95.90%			
73) 4-Bromofluorobenzene	14.39	95	647450	47.73	ug/l	0.00
Spiked Amount 50.000			Recovery = 95.46%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.72	85	443535	49.19	ug/l	100
3) Chloromethane	1.96	50	897331	49.16	ug/l	100
4) Vinyl chloride	2.10	62	652875	53.12	ug/l	100
5) Bromomethane	2.56	94	469100	47.47	ug/l	100
6) Chloroethane	2.66	64	490432	50.32	ug/l	100
7) Dichlorofluoromethane	2.69	67	1051209	46.70	ug/l	100
8) Trichlorofluoromethane	2.93	101	609736	51.05	ug/l	100
9) Acrolein	3.41	56	431694	252.52	ug/l	100
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	273212	44.51	ug/l	100
11) Acetone	3.48	43	1111465	240.30	ug/l	100
12) 1,1-Dichloroethene	3.64	61	808964	46.27	ug/l	100
13) tert-Butyl alcohol	3.72	59	482657	251.53	ug/l	100
14) Acetonitrile	3.79	41	1048390	466.31	ug/l	100
15) Iodomethane	4.02	142	769680	48.62	ug/l	100
16) Methyl Acetate	4.03	43	710209	50.95	ug/l	100
17) Methylene chloride	4.21	49	899955	49.68	ug/l	100
18) Carbon disulfide	4.22	76	2196927	49.03	ug/l	100
19) Acrylonitrile	4.37	53	1437608	251.20	ug/l	100
20) tert-Butyl methyl ether (M	4.40	73	1789752	49.37	ug/l	100
21) trans-1,2-Dichloroethene	4.57	61	860623	47.19	ug/l	100
22) Isopropyl ether (DIPE)	4.97	45	2941698	49.38	ug/l	100
23) Vinyl acetate	5.12	43	2015731	51.77	ug/l	100
24) 1,1-Dichloroethane	5.12	63	1086443	47.52	ug/l	100
25) 2-Butanol	5.38	45	456617	254.80	ug/l #	100
26) tert-Butyl ethyl ether (ET	5.50	59	2258934	50.02	ug/l	100
27) 2-Butanone	5.65	43	2193542	251.86	ug/l	100
28) 2,2-Dichloropropane	5.83	77	445795	46.52	ug/l	100

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP190.D Vial: 7
Acq On : 14 Oct 2015 1:00 pm Operator: CMendo
Sample : VO02J146 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	5.91	96	699102	47.72 ug/l	100
30)	Chloroform	6.10	83	937600	47.26 ug/l	100
31)	Bromochloromethane	6.32	49	629075	48.65 ug/l	100
32)	Tetrahydrofuran	6.37	42	245529	48.17 ug/l	100
34)	1,1,1-Trichloroethane	6.63	97	585399	46.11 ug/l	100
35)	Cyclohexane	6.65	56	869516	48.60 ug/l	100
36)	1,1-Dichloropropene	6.86	110	263076	45.23 ug/l	100
37)	Carbon tetrachloride	6.99	119	453633	45.99 ug/l	100
38)	tert-Amyl methyl ether (TA	7.02	87	355545	48.37 ug/l	100
40)	1,2-Dichloroethane	7.20	62	604982	48.07 ug/l	100
41)	Benzene	7.21	78	2238791	46.13 ug/l	100
42)	Trichloroethene	8.09	130	522658	44.94 ug/l	100
43)	Methylcyclohexane	8.17	83	902822	50.12 ug/l	100
44)	1,2-Dichloropropane	8.35	63	570569	46.36 ug/l	100
45)	Bromodichloromethane	8.69	83	645044	48.49 ug/l	100
46)	1,4-Dioxane	8.72	88	140340	1073.66 ug/l	100
47)	Dibromomethane	8.76	93	349145	49.11 ug/l	100
49)	4-Methyl-2-pentanone	9.19	43	4537598	258.84 ug/l	100
50)	cis-1,3-Dichloropropene	9.51	75	910856	48.57 ug/l	100
53)	Toluene	10.00	91	2106223	43.42 ug/l	100
54)	Ethyl methacrylate	10.30	69	826066	48.11 ug/l	100
55)	trans-1,3-Dichloropropene	10.30	75	766499	48.21 ug/l	100
56)	1,1,2-Trichloroethane	10.53	97	463981	46.01 ug/l	100
57)	2-Hexanone	10.56	43	3216224	258.28 ug/l	100
58)	1,3-Dichloropropane	10.95	76	844717	45.88 ug/l	100
59)	Tetrachloroethene	11.02	164	402763	42.49 ug/l	100
60)	Dibromochloromethane	11.35	129	441669	47.39 ug/l	100
61)	1,2-Dibromoethane	11.68	107	493697	47.94 ug/l	100
62)	1-Chlorohexane	11.98	91	816991	45.04 ug/l	100
63)	Chlorobenzene	12.38	112	1265064	43.71 ug/l	100
64)	1,1,1,2-Tetrachloroethane	12.45	131	405889	45.29 ug/l	100
65)	Ethylbenzene	12.47	91	2227517	43.41 ug/l	100
66)	m-Xylene & p-Xylene	12.60	91	3205425	85.51 ug/l	100
67)	o-Xylene	13.33	91	1619740	44.24 ug/l	100
68)	Styrene	13.40	104	1420062	45.10 ug/l	100
69)	Isopropylbenzene	13.97	105	1841801	43.25 ug/l	100
71)	Bromoform	13.96	173	283798	40.53 ug/l	100
72)	1,1,2,2-Tetrachloroethane	14.27	83	656650	45.47 ug/l	100
74)	1,2,3-Trichloropropane	14.54	110	175406	46.27 ug/l	100
75)	trans-1,4-Dichloro-2-buten	14.67	53	183555	44.51 ug/l	100
76)	n-Propylbenzene	14.67	91	2407183	42.14 ug/l	100

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

SU 10/19/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP190.D
Acq On : 14 Oct 2015 1:00 pm
Sample : VO02J146
Misc : 50ppb 8260/250ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 7
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77)	Bromobenzene	14.71	156	501626	42.88 ug/l	100
78)	1,3,5-Trimethylbenzene	14.95	105	1459887	43.21 ug/l	100
79)	2-Chlorotoluene	14.95	91	1469495	42.37 ug/l	100
80)	4-Chlorotoluene	15.04	91	1358508	42.82 ug/l	100
81)	tert-Butylbenzene	15.58	134	312899	42.41 ug/l	100
82)	1,2,4-Trimethylbenzene	15.64	105	1486354	43.45 ug/l	100
83)	sec-Butylbenzene	15.96	105	1983061	42.98 ug/l	100
84)	p-Isopropyltoluene	16.22	119	1504401	42.94 ug/l	100
85)	1,3-Dichlorobenzene	16.34	146	847742	43.21 ug/l	100
86)	1,2,3-Trimethylbenzene	16.49	105	1574734	50.50 ug/l	100
87)	1,4-Dichlorobenzene	16.54	146	872290	44.02 ug/l	100
88)	n-Butylbenzene	16.95	91	1509441	43.88 ug/l	100
89)	1,2-Dichlorobenzene	17.18	146	768086	43.37 ug/l	100
90)	1,2-Dibromo-3-chloropropan	18.51	157	101170	42.42 ug/l	100
91)	1,2,4-Trichlorobenzene	19.55	180	431764	43.58 ug/l	100
92)	Hexachlorobutadiene	19.70	225	197346	43.30 ug/l	100
93)	Naphthalene	19.80	128	1097898	44.05 ug/l	100
94)	1,2,3-Trichlorobenzene	20.06	180	373220	43.23 ug/l	100

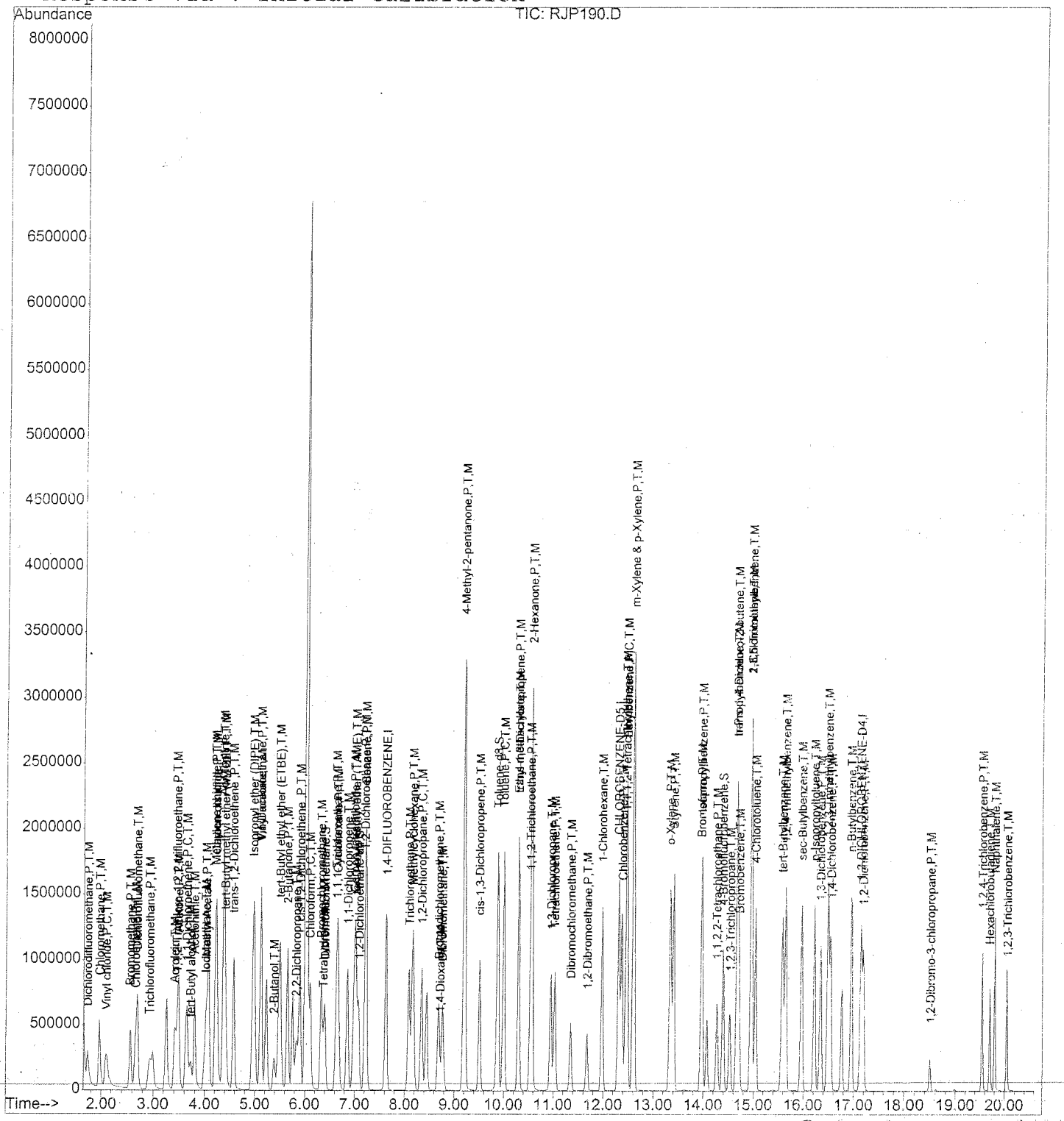
Sa 10/19/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP190.D Vial: 7
Acq On : 14 Oct 2015 1:00 pm Operator: CMendo
Sample : VO02J146 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



Sa 10/19/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP191.D
Acq On : 14 Oct 2015 1:31 pm
Sample : VO02J147
Misc : 100ppb 8260/500ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015

Vial: 8
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1598348	50.00	ug/l	-0.01
51) CHLOROBENZENE-D5	12.31	117	1271018	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.14	152	506047	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.40	111	1008139	103.24	ug/l	0.00
Spiked Amount 50.000			Recovery = 206.48%			
39) 1,2-Dichloroethane-d4	7.07	65	931534	104.25	ug/l	-0.01
Spiked Amount 50.000			Recovery = 208.50%			
52) Toluene-d8	9.87	98	3481302	102.30	ug/l	-0.01
Spiked Amount 50.000			Recovery = 204.60%			
73) 4-Bromofluorobenzene	14.39	95	1182084	102.67	ug/l	0.00
Spiked Amount 50.000			Recovery = 205.34%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	852916	109.03	ug/l	99
3) Chloromethane	1.95	50	1659581	104.79	ug/l	99
4) Vinyl chloride	2.11	62	1158278	108.63	ug/l	100
5) Bromomethane	2.56	94	863289	100.69	ug/l	100
6) Chloroethane	2.66	64	910917	107.72	ug/l	99
7) Dichlorofluoromethane	2.69	67	2149871	110.08	ug/l	99
8) Trichlorofluoromethane	2.93	101	1142094	110.23	ug/l	99
9) Acrolein	3.41	56	797195	537.49	ug/l	100
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	617592	115.98	ug/l	99
11) Acetone	3.48	43	1962276	489.00	ug/l	100
12) 1,1-Dichloroethene	3.63	61	1672067	110.24	ug/l	99
13) tert-Butyl alcohol	3.72	59	912116	547.89	ug/l #	1
14) Acetonitrile	3.79	41	2091933	1072.50	ug/l	94
15) Iodomethane	4.02	142	1520026	110.68	ug/l	99
16) Methyl Acetate	4.03	43	1271139	105.11	ug/l	98
17) Methylene chloride	4.21	49	1676855	109.07	ug/l	100
18) Carbon disulfide	4.23	76	4126320	106.15	ug/l	100
19) Acrylonitrile	4.36	53	2570290	517.66	ug/l	100
20) tert-Butyl methyl ether (M	4.39	73	3398274	108.06	ug/l	100
21) trans-1,2-Dichloroethene	4.57	61	1698390	107.35	ug/l	100
22) Isopropyl ether (DIPE)	4.97	45	5544344	107.27	ug/l	100
23) Vinyl acetate	5.12	43	3556189	105.28	ug/l	100
24) 1,1-Dichloroethane	5.10	63	2155105	108.66	ug/l	99
25) 2-Butanol	5.39	45	807335	519.28	ug/l	100
26) tert-Butyl ethyl ether (ET	5.49	59	4102917	104.73	ug/l	97
27) 2-Butanone	5.65	43	3855836	510.30	ug/l	99
28) 2,2-Dichloropropane	5.83	77	909832	109.44	ug/l	100

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

Sn 10/19/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP191.D Vial: 8
Acq On : 14 Oct 2015 1:31 pm Operator: CMendo
Sample : VO02J147 Inst : TO02
Misc : 100ppb 8260/500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	5.89	96	1352845	106.45 ug/l	99
30)	Chloroform	6.10	83	1809015	105.10 ug/l	99
31)	Bromochloromethane	6.32	49	1199333	106.91 ug/l	99
32)	Tetrahydrofuran	6.35	42	467211	105.65 ug/l	100
34)	1,1,1-Trichloroethane	6.64	97	1204806	109.38 ug/l	99
35)	Cyclohexane	6.65	56	1633185	105.21 ug/l	98
36)	1,1-Dichloropropene	6.84	110	541721	107.35 ug/l	98
37)	Carbon tetrachloride	6.98	119	979150	114.42 ug/l	99
38)	tert-Amyl methyl ether (TA	7.01	87	713246	111.83 ug/l	94
40)	1,2-Dichloroethane	7.20	62	1162795	106.49 ug/l	100
41)	Benzene	7.22	78	4496182	106.78 ug/l	100
42)	Trichloroethene	8.08	130	1082713	107.32 ug/l	99
43)	Methylcyclohexane	8.15	83	1693309	108.35 ug/l	99
44)	1,2-Dichloropropane	8.35	63	1140751	106.84 ug/l	99
45)	Bromodichloromethane	8.68	83	1310641	113.56 ug/l	100
46)	1,4-Dioxane	8.70	88	239516	2112.10 ug/l	99
47)	Dibromomethane	8.76	93	680332	110.31 ug/l	99
49)	4-Methyl-2-pentanone	9.20	43	8140940	535.27 ug/l	100
50)	cis-1,3-Dichloropropene	9.51	75	1837973	112.98 ug/l	99
53)	Toluene	10.00	91	4431237	107.43 ug/l	100
54)	Ethyl methacrylate	10.30	69	1611818	110.38 ug/l	99
55)	trans-1,3-Dichloropropene	10.30	75	1533747	113.44 ug/l	99
56)	1,1,2-Trichloroethane	10.54	97	931052	108.57 ug/l	98
57)	2-Hexanone	10.56	43	5791236	546.91 ug/l	100
58)	1,3-Dichloropropane	10.94	76	1668428	106.56 ug/l	100
59)	Tetrachloroethene	11.03	164	888582	110.22 ug/l	99
60)	Dibromochloromethane	11.35	129	898930	113.43 ug/l	99
61)	1,2-Dibromoethane	11.67	107	976410	111.49 ug/l	99
62)	1-Chlorohexane	11.98	91	1755245	113.79 ug/l	100
63)	Chlorobenzene	12.37	112	2654532	107.85 ug/l	99
64)	1,1,1,2-Tetrachloroethane	12.45	131	859315	112.76 ug/l	99
65)	Ethylbenzene	12.47	91	4834821	110.79 ug/l	99
66)	m-Xylene & p-Xylene	12.60	91	7013380	220.01 ug/l	99
67)	o-Xylene	13.33	91	3507950	112.67 ug/l	100
68)	Styrene	13.41	104	3089725	115.39 ug/l	99
69)	Isopropylbenzene	13.97	105	4192505	115.78 ug/l	100
71)	Bromoform	13.96	173	619469	100.00 ug/l	98
72)	1,1,2,2-Tetrachloroethane	14.27	83	1362843	111.19 ug/l	99
74)	1,2,3-Trichloropropane	14.52	110	353209	109.78 ug/l	97
75)	trans-1,4-Dichloro-2-buten	14.67	53	388446	110.98 ug/l	100
76)	n-Propylbenzene	14.67	91	5452275	112.45 ug/l	99

(#) = qualifier out of range (m) = manual integration
RJP191.D VO02J14.M Fri Oct 16 08:35:51 2015 Sa 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP191.D Vial: 8
Acq On : 14 Oct 2015 1:31 pm Operator: CMendo
Sample : VO02J147 Inst : TO02
Misc : 100ppb 8260/500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77) Bromobenzene	14.70	156	1094353	110.21 ug/l	99
78) 1,3,5-Trimethylbenzene	14.95	105	3238096	112.91 ug/l	99
79) 2-Chlorotoluene	14.95	91	3248738	110.37 ug/l	100
80) 4-Chlorotoluene	15.04	91	2877047	106.86 ug/l	100
81) tert-Butylbenzene	15.58	134	700052	111.79 ug/l	98
82) 1,2,4-Trimethylbenzene	15.64	105	3191021	109.90 ug/l	99
83) sec-Butylbenzene	15.95	105	4344937	110.96 ug/l	99
84) p-Isopropyltoluene	16.22	119	3334166	112.12 ug/l	100
85) 1,3-Dichlorobenzene	16.34	146	1831705	109.99 ug/l	99
86) 1,2,3-Trimethylbenzene	16.49	105	2787286	105.31 ug/l	99
87) 1,4-Dichlorobenzene	16.53	146	1845919	109.75 ug/l	99
88) n-Butylbenzene	16.95	91	3252642	111.41 ug/l	99
89) 1,2-Dichlorobenzene	17.19	146	1643706	109.36 ug/l	99
90) 1,2-Dibromo-3-chloropropan	18.50	157	217193	103.94 ug/l	99
91) 1,2,4-Trichlorobenzene	19.55	180	938856	111.66 ug/l	99
92) Hexachlorobutadiene	19.70	225	430348	111.25 ug/l	100
93) Naphthalene	19.81	128	2457659	116.19 ug/l	99
94) 1,2,3-Trichlorobenzene	20.04	180	824739	112.56 ug/l	100

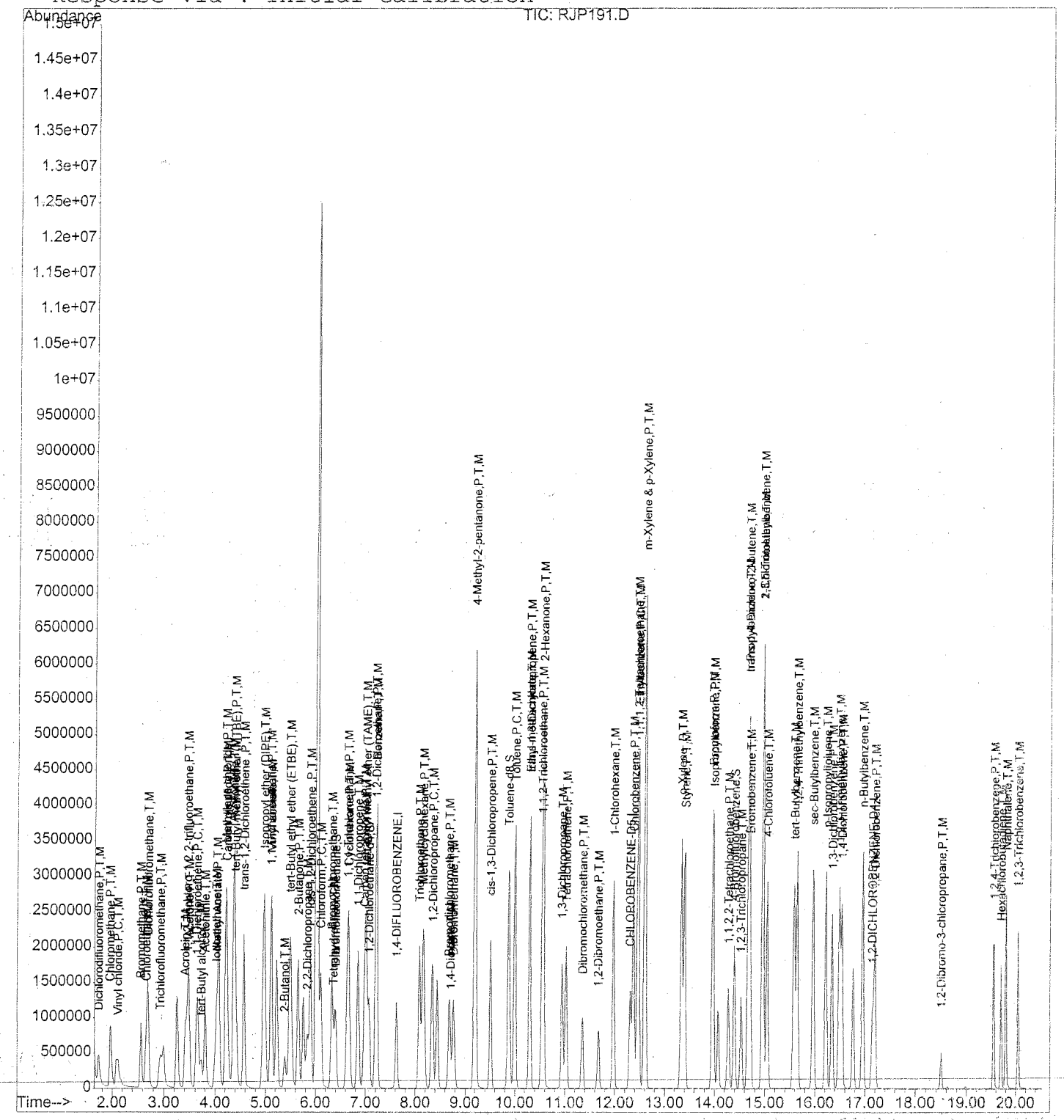
Su 10/19/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP191.D Vial: 8
Acq On : 14 Oct 2015 1:31 pm Operator: CMendo
Sample : VO02J147 Inst : TO02
Misc : 100ppb 8260/500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



SY 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP192.D Vial: 9
Acq On : 14 Oct 2015 1:56 pm Operator: CMendo
Sample : VO02J148 Inst : TO02
Misc : 200ppb 8260/1000ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1789522	50.00	ug/l	-0.01
51) CHLOROBENZENE-D5	12.31	117	1398736	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.14	152	495404	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.40	111	2254689	206.23	ug/l	0.00
Spiked Amount 50.000			Recovery = 412.46%			
39) 1,2-Dichloroethane-d4	7.07	65	2060569	205.97	ug/l	-0.01
Spiked Amount 50.000			Recovery = 411.94%			
52) Toluene-d8	9.88	98	7647347	204.20	ug/l	0.00
Spiked Amount 50.000			Recovery = 408.40%			
73) 4-Bromofluorobenzene	14.39	95	2464861	218.68	ug/l	0.00
Spiked Amount 50.000			Recovery = 437.36%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.73	85	1759343	200.88	ug/l	99
3) Chloromethane	1.96	50	3389486	191.16	ug/l	99
4) Vinyl chloride	2.07	62	2090732	175.13	ug/l	100
5) Bromomethane	2.56	94	1759389	183.29	ug/l	99
6) Chloroethane	2.66	64	1894432	200.09	ug/l	99
7) Dichlorofluoromethane	2.69	67	4302561	196.77	ug/l	99
8) Trichlorofluoromethane	2.93	101	2334511	201.24	ug/l	99
9) Acrolein	3.41	56	1675774	1009.15	ug/l	100
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	1265221	212.22	ug/l	99
11) Acetone	3.48	43	4025096	895.91	ug/l	99
12) 1,1-Dichloroethene	3.64	61	3469027	204.29	ug/l	100
13) tert-Butyl alcohol	3.72	59	1898454	1018.54	ug/l #	1
14) Acetonitrile	3.79	41	4394724	2012.40	ug/l	94
15) Iodomethane	4.02	142	3148736	204.78	ug/l	100
16) Methyl Acetate	4.03	43	2667490	197.02	ug/l	99
17) Methylene chloride	4.21	49	3482343	204.07	ug/l	100
18) Carbon disulfide	4.23	76	8154370	187.36	ug/l	100
19) Acrylonitrile	4.36	53	5319719	956.95	ug/l	100
20) tert-Butyl methyl ether (M	4.39	73	7144427	202.91	ug/l	100
21) trans-1,2-Dichloroethene	4.57	61	3665422	206.93	ug/l	99
22) Isopropyl ether (DIPE)	4.97	45	11884689	205.37	ug/l	100
23) Vinyl acetate	5.12	43	7726890	204.31	ug/l	100
24) 1,1-Dichloroethane	5.10	63	4609012	207.56	ug/l	99
25) 2-Butanol	5.39	45	1765576	1014.30	ug/l	100
26) tert-Butyl ethyl ether (ET	5.49	59	8864308	202.09	ug/l	98
27) 2-Butanone	5.65	43	8016056	947.54	ug/l	99
28) 2,2-Dichloropropane	5.83	77	1816066	195.11	ug/l	99

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

SA 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP192.D Vial: 9
Acq On : 14 Oct 2015 1:56 pm Operator: CMendo
Sample : VO02J148 Inst : TO02
Misc : 200ppb 8260/1000ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	5.89	96	2887776	202.95 ug/l	99
30) Chloroform	6.10	83	3946942	204.82 ug/l	100
31) Bromochloromethane	6.32	49	2617677	208.41 ug/l	100
32) Tetrahydrofuran	6.35	42	957093	193.31 ug/l	99
34) 1,1,1-Trichloroethane	6.64	97	2528124	205.00 ug/l	100
35) Cyclohexane	6.65	56	3382017	194.60 ug/l	98
36) 1,1-Dichloropropene	6.84	110	1179782	208.82 ug/l	100
37) Carbon tetrachloride	6.98	119	2047916	213.74 ug/l	99
38) tert-Amyl methyl ether (TA	7.01	87	1508851	211.31 ug/l	94
40) 1,2-Dichloroethane	7.20	62	2504813	204.88 ug/l	99
41) Benzene	7.22	78	9678517	205.30 ug/l	100
42) Trichloroethene	8.08	130	2309644	204.47 ug/l	99
43) Methylcyclohexane	8.17	83	3503455	200.24 ug/l	99
44) 1,2-Dichloropropane	8.35	63	2495833	208.78 ug/l	98
45) Bromodichloromethane	8.69	83	2829549	218.98 ug/l	100
46) 1,4-Dioxane	8.72	88	511011	4024.79 ug/l	100
47) Dibromomethane	8.76	93	1487712	215.45 ug/l	98
49) 4-Methyl-2-pentanone	9.20	43	16473950	967.45 ug/l	100
50) cis-1,3-Dichloropropene	9.51	75	3966972	217.79 ug/l	99
53) Toluene	10.00	91	9320850	205.35 ug/l	99
54) Ethyl methacrylate	10.30	69	3344538	208.12 ug/l	99
55) trans-1,3-Dichloropropene	10.30	75	3245974	218.17 ug/l	98
56) 1,1,2-Trichloroethane	10.53	97	1929206	204.42 ug/l	97
57) 2-Hexanone	10.56	43	11646335	999.42 ug/l	100
58) 1,3-Dichloropropane	10.95	76	3498757	203.05 ug/l	100
59) Tetrachloroethene	11.03	164	1832177	206.52 ug/l	100
60) Dibromochloromethane	11.35	129	1913715	219.43 ug/l	100
61) 1,2-Dibromoethane	11.68	107	2011336	208.70 ug/l	98
62) 1-Chlorohexane	11.98	91	3560980	209.77 ug/l	99
63) Chlorobenzene	12.36	112	5520739	203.83 ug/l	99
64) 1,1,1,2-Tetrachloroethane	12.45	131	1776823	211.87 ug/l	100
65) Ethylbenzene	12.47	91	9918354	206.53 ug/l	100
66) m-Xylene & p-Xylene	12.60	91	14326263	408.37 ug/l	100
67) o-Xylene	13.33	91	7208581	210.38 ug/l	100
68) Styrene	13.41	104	6337078	215.05 ug/l	100
69) Isopropylbenzene	13.97	105	8408849	211.01 ug/l	100
71) Bromoform	13.96	173	1291085	209.86 ug/l	99
72) 1,1,2,2-Tetrachloroethane	14.27	83	2645606	220.48 ug/l	98
74) 1,2,3-Trichloropropane	14.54	110	696825	221.22 ug/l	99
75) trans-1,4-Dichloro-2-buten	14.67	53	750842	219.13 ug/l	98
~~76) n-Propylbenzene~~	~~14.67~~	~~91~~	~~10885856~~	~~229.34 ug/l~~	~~99~~

(#) = qualifier out of range (m) = manual integration SU 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP192.D Vial: 9
Acq On : 14 Oct 2015 1:56 pm Operator: CMendo
Sample : VO02J148 Inst : TO02
Misc : 200ppb 8260/1000ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77) Bromobenzene	14.72	156	2192767	225.58 ug/l	99
78) 1,3,5-Trimethylbenzene	14.95	105	6152552	219.15 ug/l	99
79) 2-Chlorotoluene	14.95	91	6308031	218.90 ug/l	100
80) 4-Chlorotoluene	15.04	91	5811818	220.49 ug/l	100
81) tert-Butylbenzene	15.58	134	1350786	220.33 ug/l	96
82) 1,2,4-Trimethylbenzene	15.64	105	6217199	218.72 ug/l	100
83) sec-Butylbenzene	15.97	105	8172236	213.19 ug/l	100
84) p-Isopropyltoluene	16.22	119	6215935	213.52 ug/l	100
85) 1,3-Dichlorobenzene	16.34	146	3421287	209.86 ug/l	99
86) 1,2,3-Trimethylbenzene	16.49	105	5395219	208.22 ug/l	100
87) 1,4-Dichlorobenzene	16.55	146	3426422	208.09 ug/l	99
88) n-Butylbenzene	16.95	91	5948501	208.13 ug/l	99
89) 1,2-Dichlorobenzene	17.19	146	3081922	209.45 ug/l	100
90) 1,2-Dibromo-3-chloropropan	18.50	157	391102	189.36 ug/l	99
91) 1,2,4-Trichlorobenzene	19.55	180	1576016	191.47 ug/l	99
92) Hexachlorobutadiene	19.70	225	712367	188.11 ug/l	100
93) Naphthalene	19.80	128	4089651	197.49 ug/l	99
94) 1,2,3-Trichlorobenzene	20.04	180	1344469	187.43 ug/l	99

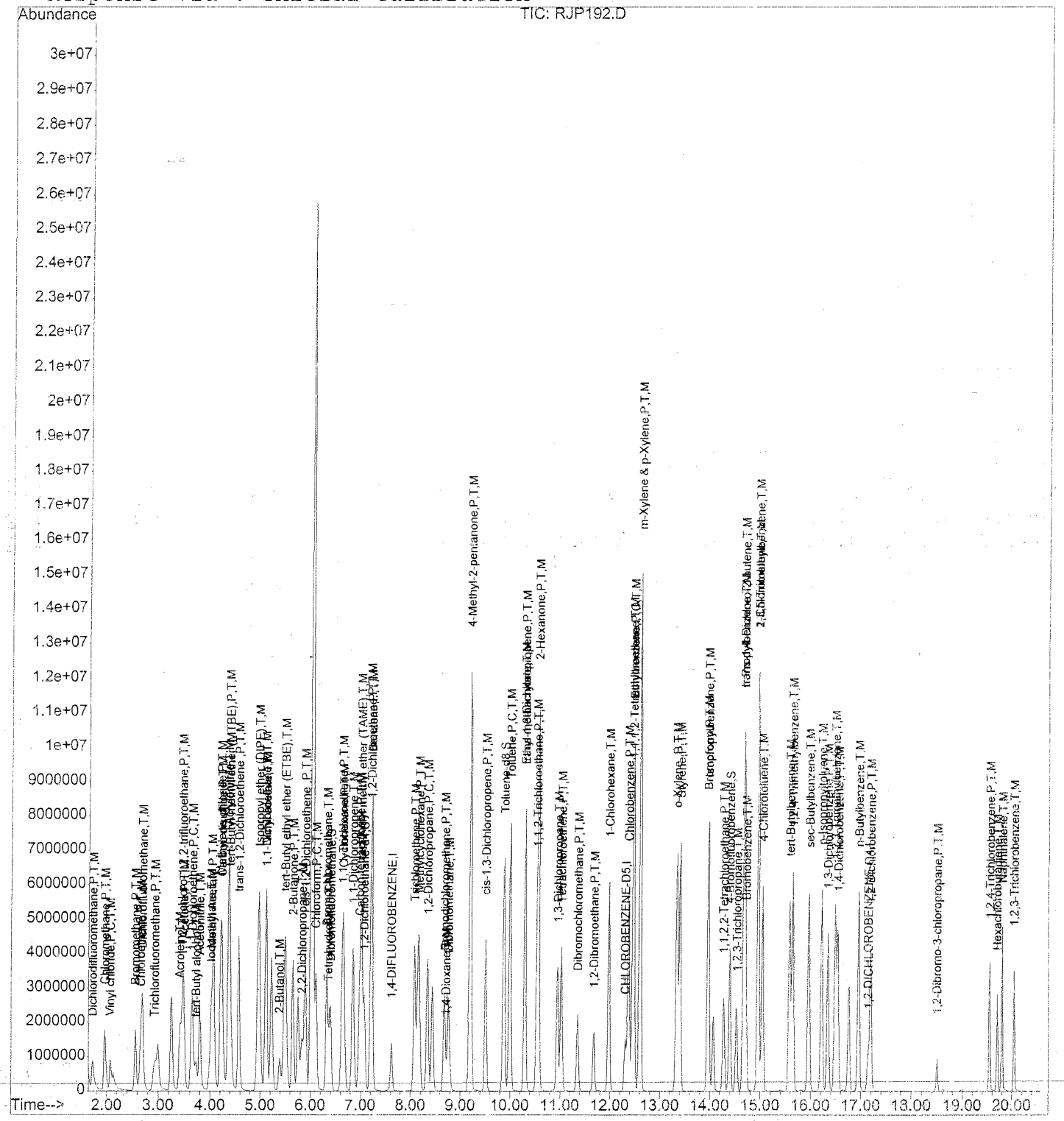
Sa 10/19/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP192.D Vial: 9
Acq On : 14 Oct 2015 1:56 pm Operator: CMendo
Sample : VO02J148 Inst : TO02
Misc : 200ppb 8260/1000ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:32 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



SA 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP193.D Vial: 10
Acq On : 14 Oct 2015 2:28 pm Operator: CMendo
Sample : VO02J149 Inst : TO02
Misc : 300ppb 8260/1500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:33 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1620844	50.00	ug/l	0.00
51) CHLOROBENZENE-D5	12.31	117	1177985	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.15	152	377284	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.40	111	3111703	314.24	ug/l	0.00
Spiked Amount 50.000			Recovery = 628.48%			
39) 1,2-Dichloroethane-d4	7.07	65	2769910	305.68	ug/l	0.00
Spiked Amount 50.000			Recovery = 611.36%			
52) Toluene-d8	9.88	98	9377454	297.32	ug/l	0.00
Spiked Amount 50.000			Recovery = 594.64%			
73) 4-Bromofluorobenzene	14.39	95	2878532	335.34	ug/l	0.00
Spiked Amount 50.000			Recovery = 670.68%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.72	85	2628758	331.39	ug/l	98
3) Chloromethane	1.95	50	5050106	314.46	ug/l	100
4) Vinyl chloride	2.07	62	2852681	263.82	ug/l	100
5) Bromomethane	2.56	94	2572218	295.86	ug/l	99
6) Chloroethane	2.65	64	2734598	318.89	ug/l	99
7) Dichlorofluoromethane	2.70	67	6262381	316.20	ug/l	100
8) Trichlorofluoromethane	2.94	101	3420885	325.57	ug/l	99
9) Acrolein	3.40	56	2604312	1731.53	ug/l	100
10) 1,1,2-Trichloro-1,2,2-trif	3.44	151	1824240	337.84	ug/l	98
11) Acetone	3.47	43	6202353	1524.19	ug/l	99
12) 1,1-Dichloroethene	3.64	61	5124822	333.21	ug/l	100
13) tert-Butyl alcohol	3.72	59	2795313	1655.79	ug/l #	1
14) Acetonitrile	3.80	41	6325401	3197.91	ug/l	93
15) Iodomethane	4.02	142	4524518	324.88	ug/l	100
16) Methyl Acetate	4.02	43	4093425	333.80	ug/l	100
17) Methylene chloride	4.22	49	4959216	322.05	ug/l	99
18) Carbon disulfide	4.22	76	12209360	309.73	ug/l	100
19) Acrylonitrile	4.36	53	8218232	1632.20	ug/l	100
20) tert-Butyl methyl ether (M	4.39	73	10171430	318.94	ug/l	100
21) trans-1,2-Dichloroethene	4.57	61	5296525	330.13	ug/l	99
22) Isopropyl ether (DIPE)	4.97	45	16978063	323.91	ug/l	100
23) Vinyl acetate	5.12	43	11125656	324.80	ug/l	100
24) 1,1-Dichloroethane	5.11	63	6630542	329.67	ug/l	100
25) 2-Butanol	5.39	45	2634427	1670.95	ug/l	100
26) tert-Butyl ethyl ether (ET	5.50	59	12880352	324.20	ug/l	100
27) 2-Butanone	5.66	43	12118184	1581.51	ug/l	100
28) 2,2-Dichloropropane	5.84	77	2489573	295.30	ug/l	98

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

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP193.D
Acq On : 14 Oct 2015 2:28 pm
Sample : VO02J149
Misc : 300ppb 8260/1500ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 16 8:33 2015

Vial: 10
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	5.90	96	4256660	330.28 ug/l	99
30)	Chloroform	6.12	83	5567736	318.99 ug/l	100
31)	Bromochloromethane	6.33	49	3635374	319.56 ug/l	99
32)	Tetrahydrofuran	6.36	42	1389493	309.85 ug/l	99
34)	1,1,1-Trichloroethane	6.64	97	3510664	314.30 ug/l	99
35)	Cyclohexane	6.66	56	4892174	310.79 ug/l	99
36)	1,1-Dichloropropene	6.85	110	1651225	322.68 ug/l	100
37)	Carbon tetrachloride	6.98	119	2818378	324.76 ug/l	98
38)	tert-Amyl methyl ether (TA	7.01	87	1988092	307.39 ug/l	94
40)	1,2-Dichloroethane	7.21	62	3364662	303.85 ug/l	98
41)	Benzene	7.22	78	13100991	306.81 ug/l	100
42)	Trichloroethene	8.08	130	3198052	312.58 ug/l	99
43)	Methylcyclohexane	8.17	83	4825959	304.53 ug/l	99
44)	1,2-Dichloropropane	8.35	63	3321459	306.76 ug/l	99
45)	Bromodichloromethane	8.69	83	3666125	313.25 ug/l	99
46)	1,4-Dioxane	8.72	88	662238	5758.68 ug/l	99
47)	Dibromomethane	8.77	93	1869590	298.92 ug/l	98
49)	4-Methyl-2-pentanone	9.22	43	21045405	1364.53 ug/l	98
50)	cis-1,3-Dichloropropene	9.51	75	4933920	299.07 ug/l	100
53)	Toluene	10.00	91	11907755	311.50 ug/l	99
54)	Ethyl methacrylate	10.30	69	4225644	312.23 ug/l	99
55)	trans-1,3-Dichloropropene	10.30	75	4124648	329.17 ug/l	98
56)	1,1,2-Trichloroethane	10.54	97	2368019	297.94 ug/l	98
57)	2-Hexanone	10.57	43	14870644	1515.25 ug/l	99
58)	1,3-Dichloropropane	10.96	76	4304101	296.60 ug/l	99
59)	Tetrachloroethene	11.03	164	2260094	302.49 ug/l	99
60)	Dibromochloromethane	11.36	129	2373841	323.20 ug/l	100
61)	1,2-Dibromoethane	11.69	107	2544850	313.54 ug/l	99
62)	1-Chlorohexane	11.98	91	4613269	322.68 ug/l	100
63)	Chlorobenzene	12.37	112	6934915	304.02 ug/l	98
64)	1,1,1,2-Tetrachloroethane	12.46	131	2240739	317.26 ug/l	99
65)	Ethylbenzene	12.47	91	12461830	308.12 ug/l	100
66)	m-Xylene & p-Xylene	12.61	91	17816839	603.04 ug/l	98
67)	o-Xylene	13.35	91	8933417	309.58 ug/l	100
68)	Styrene	13.41	104	7704616	310.46 ug/l	100
69)	Isopropylbenzene	13.98	105	10367788	308.92 ug/l	100
71)	Bromoform	13.96	173	1613212	342.58 ug/l	99
72)	1,1,2,2-Tetrachloroethane	14.27	83	3158480	345.63 ug/l	99
74)	1,2,3-Trichloropropane	14.54	110	836598	348.75 ug/l	100
75)	trans-1,4-Dichloro-2-buten	14.68	53	918926	352.14 ug/l	98
76)	n-Propylbenzene	14.68	91	13121951	362.99 ug/l	99

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

SA 10/19/15

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP193.D Vial: 10
Acq On : 14 Oct 2015 2:28 pm Operator: CMendo
Sample : VO02J149 Inst : TO02
Misc : 300ppb 8260/1500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:33 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77) Bromobenzene	14.72	156	2630375	355.32 ug/l	99
78) 1,3,5-Trimethylbenzene	14.96	105	7396208	345.93 ug/l	99
79) 2-Chlorotoluene	14.96	91	7545352	343.82 ug/l	97
80) 4-Chlorotoluene	15.05	91	6956870	346.57 ug/l	98
81) tert-Butylbenzene	15.58	134	1567823	335.80 ug/l	99
82) 1,2,4-Trimethylbenzene	15.66	105	7195402	332.38 ug/l	99
83) sec-Butylbenzene	15.97	105	9656157	330.76 ug/l	100
84) p-Isopropyltoluene	16.22	119	6934984	312.81 ug/l	100
85) 1,3-Dichlorobenzene	16.36	146	3878004	312.35 ug/l	99
86) 1,2,3-Trimethylbenzene	16.49	105	6167484	312.54 ug/l	100
87) 1,4-Dichlorobenzene	16.55	146	3919973	312.59 ug/l	99
88) n-Butylbenzene	16.97	91	6571799	301.93 ug/l	99
89) 1,2-Dichlorobenzene	17.21	146	3454184	308.24 ug/l	100
90) 1,2-Dibromo-3-chloropropan	18.50	157	474827	300.56 ug/l	99
91) 1,2,4-Trichlorobenzene	19.56	180	1963560	313.23 ug/l	99
92) Hexachlorobutadiene	19.71	225	886157	307.26 ug/l	99
93) Naphthalene	19.81	128	5223752	331.23 ug/l	99
94) 1,2,3-Trichlorobenzene	20.05	180	1750965	320.52 ug/l	99

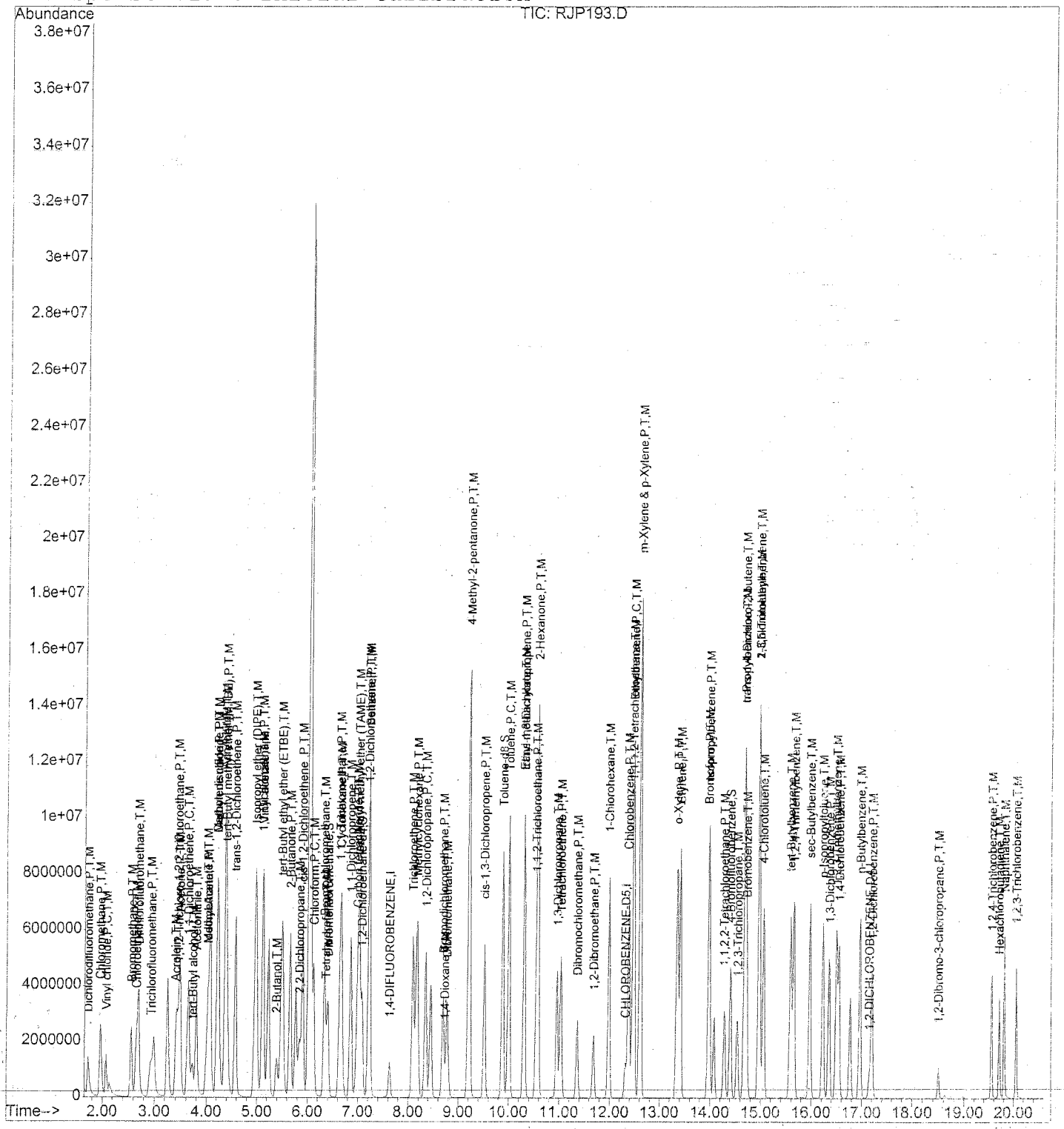
Sa 10/19/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP193.D Vial: 10
Acq On : 14 Oct 2015 2:28 pm Operator: CMendo
Sample : VO02J149 Inst : TO02
Misc : 300ppb 8260/1500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:33 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



Sa 10/19/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP194.D Vial: 11
Acq On : 14 Oct 2015 2:52 pm Operator: CMendo
Sample : VO02J1410 Inst : TO02
Misc : 500ppb 8260/2500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:33 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1805855	50.00 ug/l	0.00
51) CHLOROBENZENE-D5	12.31	117	1313494	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.15	152	422129	50.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.40	111	5596132	507.23 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1014.46%	
39) 1,2-Dichloroethane-d4	7.09	65	5129931	508.13 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1016.26%	
52) Toluene-d8	9.88	98	18202514	517.59 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1035.18%	
73) 4-Bromofluorobenzene	14.39	95	5077773	528.70 ug/l	0.00
Spiked Amount 50.000			Recovery	= 1057.40%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.73	85	4349280	492.11 ug/l	99
3) Chloromethane	1.97	50	8533157	476.90 ug/l	99
4) Vinyl chloride	2.07	62	4723253	392.06 ug/l	100
5) Bromomethane	2.56	94	4107656	424.06 ug/l	98
6) Chloroethane	2.65	64	4546482	475.87 ug/l	99
7) Dichlorofluoromethane	2.70	67	10263614	465.14 ug/l	99
8) Trichlorofluoromethane	2.93	101	5413427	462.42 ug/l	98
9) Acrolein	3.41	56	4156105	2480.18 ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	3.46	151	3037656	504.92 ug/l	99
11) Acetone	3.49	43	10278030	2267.00 ug/l	99
12) 1,1-Dichloroethene	3.65	61	8484150	495.11 ug/l	99
13) tert-Butyl alcohol	3.72	59	4401627	2340.16 ug/l #	1
14) Acetonitrile	3.80	41	9947680	4513.96 ug/l	94
15) Iodomethane	4.02	142	7338984	472.98 ug/l	99
16) Methyl Acetate	4.04	43	6547966	479.25 ug/l	99
17) Methylene chloride	4.24	49	7923492	462.73 ug/l	100
18) Carbon disulfide	4.23	76	19341168	440.38 ug/l	100
19) Acrylonitrile	4.38	53	13686106	2439.68 ug/l	100
20) tert-Butyl methyl ether (M	4.39	73	17557922	494.15 ug/l	99
21) trans-1,2-Dichloroethene	4.57	61	8893287	497.53 ug/l	97
22) Isopropyl ether (DIPE)	4.97	45	28297767	484.56 ug/l	99
23) Vinyl acetate	5.12	43	17900286	469.03 ug/l	100
24) 1,1-Dichloroethane	5.12	63	11195872	499.63 ug/l	99
25) 2-Butanol	5.40	45	3983706	2267.89 ug/l	100
26) tert-Butyl ethyl ether (ET	5.49	59	23022918	520.12 ug/l	99
27) 2-Butanone	5.66	43	20787704	2434.99 ug/l	98
28) 2,2-Dichloropropane	5.84	77	3962510	421.87 ug/l	98

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

10/19/15

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Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP194.D Vial: 11
Acq On : 14 Oct 2015 2:52 pm Operator: CMendo
Sample : VO02J1410 Inst : TO02
Misc : 500ppb 8260/2500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:33 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29)	cis-1,2-Dichloroethene	5.91	96	7153821	498.20 ug/l	99
30)	Chloroform	6.12	83	9677144	497.63 ug/l	99
31)	Bromochloromethane	6.33	49	6460441	509.71 ug/l	98
32)	Tetrahydrofuran	6.37	42	2484628	497.30 ug/l	100
34)	1,1,1-Trichloroethane	6.64	97	6101906	490.32 ug/l	99
35)	Cyclohexane	6.65	56	8446410	481.61 ug/l	99
36)	1,1-Dichloropropene	6.86	110	2924840	513.01 ug/l	99
37)	Carbon tetrachloride	6.98	119	5038340	521.09 ug/l	98
38)	tert-Amyl methyl ether (TA	7.03	87	3642181	505.45 ug/l	95
40)	1,2-Dichloroethane	7.21	62	6168931	500.02 ug/l	99
41)	Benzene	7.22	78	22116878	464.89 ug/l	97
42)	Trichloroethene	8.10	130	5713276	501.21 ug/l	99
43)	Methylcyclohexane	8.17	83	8742316	495.14 ug/l	100
44)	1,2-Dichloropropane	8.35	63	6160833	510.70 ug/l	97
45)	Bromodichloromethane	8.69	83	7088862	543.65 ug/l	100
46)	1,4-Dioxane	8.72	88	1073261	8376.70 ug/l	100
47)	Dibromomethane	8.77	93	3645047	523.09 ug/l	97
49)	4-Methyl-2-pentanone	9.21	43	28449791	1655.63 ug/l	81
50)	cis-1,3-Dichloropropene	9.51	75	9922092	539.81 ug/l	98
53)	Toluene	10.00	91	20898101	490.29 ug/l	94
54)	Ethyl methacrylate	10.30	69	7870492	521.55 ug/l	97
55)	trans-1,3-Dichloropropene	10.30	75	7883391	564.24 ug/l	96
56)	1,1,2-Trichloroethane	10.54	97	4595140	518.51 ug/l	97
57)	2-Hexanone	10.58	43	22355183	2042.88 ug/l	86
58)	1,3-Dichloropropane	10.96	76	8246723	509.65 ug/l	100
59)	Tetrachloroethene	11.03	164	4369333	524.47 ug/l	99
60)	Dibromochloromethane	11.36	129	4613356	563.31 ug/l	100
61)	1,2-Dibromoethane	11.68	107	4843949	535.23 ug/l	99
62)	1-Chlorohexane	11.98	91	8313254	521.49 ug/l	99
63)	Chlorobenzene	12.38	112	12836802	504.70 ug/l	98
64)	1,1,1,2-Tetrachloroethane	12.46	131	4095247	520.01 ug/l	99
65)	Ethylbenzene	12.47	91	20302640	450.20 ug/l	94
66)	m-Xylene & p-Xylene	12.61	91	24170748	733.70 ug/l	79
67)	o-Xylene	13.35	91	15632078	485.82 ug/l	100
68)	Styrene	13.41	104	13483252	487.25 ug/l	99
69)	Isopropylbenzene	13.98	105	17138359	457.98 ug/l	99
71)	Bromoform	13.96	173	2849682	539.30 ug/l	99
72)	1,1,2,2-Tetrachloroethane	14.27	83	5514520	539.34 ug/l	99
74)	1,2,3-Trichloropropane	14.54	110	1463940	545.44 ug/l	98
75)	trans-1,4-Dichloro-2-buten	14.68	53	1539975	527.45 ug/l	97
76)	n-Propylbenzene	14.68	91	20263308	501.00 ug/l	97

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP194.D Vial: 11
Acq On : 14 Oct 2015 2:52 pm Operator: CMendo
Sample : VO02J1410 Inst : TO02
Misc : 500ppb 8260/2500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:33 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77) Bromobenzene	14.72	156	4460481	538.52 ug/l	98
78) 1,3,5-Trimethylbenzene	14.96	105	12191214	509.62 ug/l	99
79) 2-Chlorotoluene	14.96	91	12531587	510.36 ug/l	100
80) 4-Chlorotoluene	15.05	91	11759732	523.60 ug/l	100
81) tert-Butylbenzene	15.58	134	2664899	510.14 ug/l	98
82) 1,2,4-Trimethylbenzene	15.64	105	12507701	516.39 ug/l	99
83) sec-Butylbenzene	15.97	105	16638065	509.38 ug/l	100
84) p-Isopropyltoluene	16.22	119	12806664	516.29 ug/l	99
85) 1,3-Dichlorobenzene	16.34	146	7120430	512.58 ug/l	99
86) 1,2,3-Trimethylbenzene	16.49	105	11273754	510.61 ug/l	99
87) 1,4-Dichlorobenzene	16.55	146	7049023	502.40 ug/l	99
88) n-Butylbenzene	16.95	91	12779316	524.75 ug/l	99
89) 1,2-Dichlorobenzene	17.19	146	6405184	510.86 ug/l	99
90) 1,2-Dibromo-3-chloropropan	18.50	157	909414	512.94 ug/l	98
91) 1,2,4-Trichlorobenzene	19.56	180	4062619	579.23 ug/l	99
92) Hexachlorobutadiene	19.70	225	1921623	595.50 ug/l	100
93) Naphthalene	19.81	128	10696828	606.22 ug/l	99
94) 1,2,3-Trichlorobenzene	20.05	180	3728506	610.01 ug/l	99

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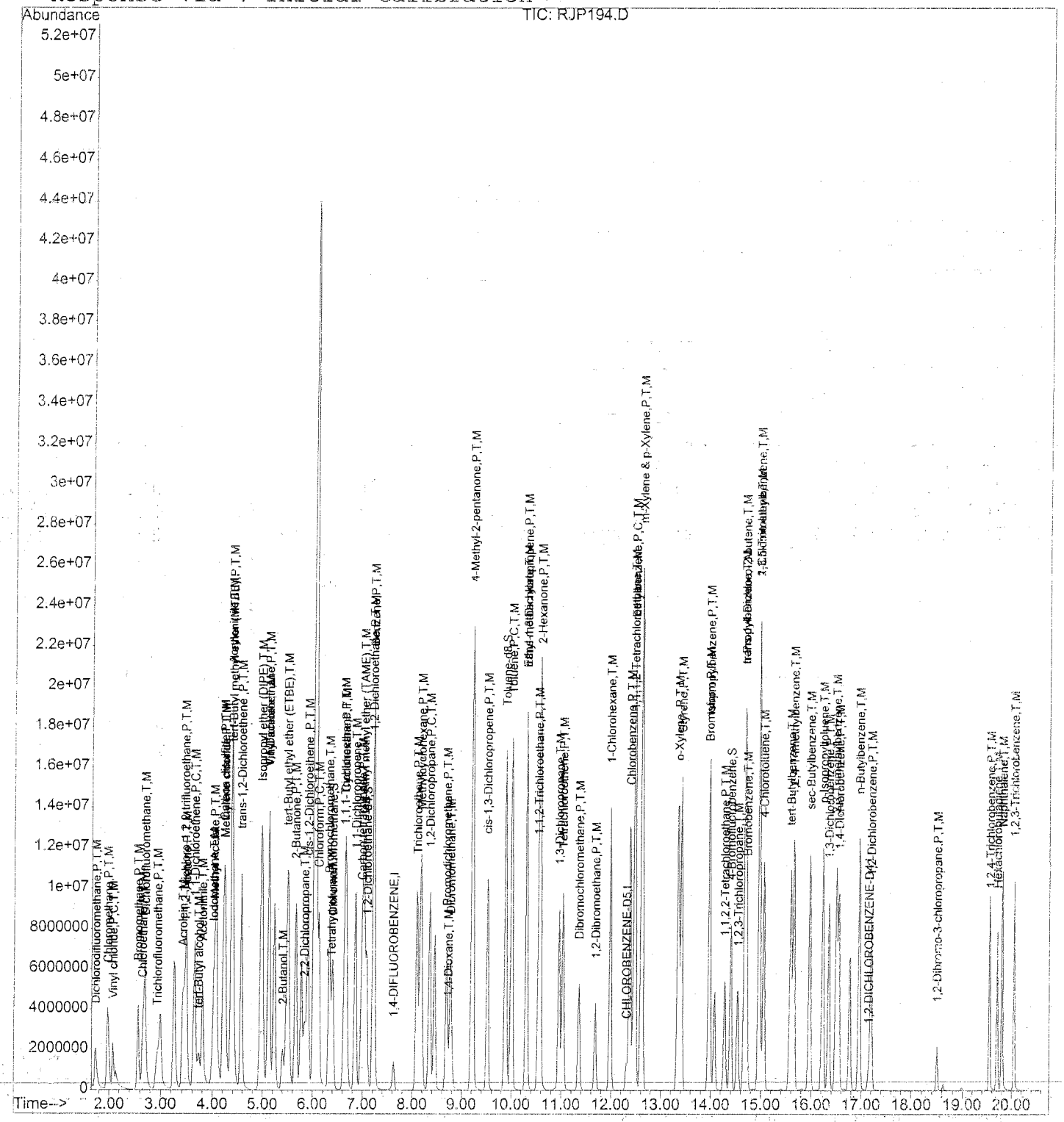
(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP194.D Vial: 11
Acq On : 14 Oct 2015 2:52 pm Operator: CMendo
Sample : VO02J1410 Inst : TO02
Misc : 500ppb 8260/2500ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 16 8:33 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



SA 10/19/15

SECOND SOURCE VERIFICATION

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RJP197
Instrument ID: T002
GC Column:RTX502.2ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 16B060
BFB Injection Date : 10/14/15
BFB Injection Time : 20:46
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	19.16
75	30.0 - 60.0% of mass 95	40.87
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.47
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	81.96
175	5.0 - 9.0% of mass 174	6.34(7.7)1
176	95.0 - 101.0% of mass 174	81.41(99.3)1
177	5.0 - 9.0% of mass 176	5.12(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	IV002J141	RJP198	10/14/15	21:19

FORM V VOA OLM02.0

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :TO02
IC_Beginning DateTime :10/14/15 09:50
Spike Amount :50 PPB
CC/CV File :RJP198
IC File :RJP190

Column Spec :RTX502.2 ID :0.25MM
IC_Ending DateTime :10/14/15 14:52
HPChem Method :VO02J14
Date_Time :10/14/15 21:19

M	IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
	1	1,4-DIFLUOROBENZENE	50.000	0	1779278	1	1	7.623	7.623	0				
	2	Dichlorodifluoromethane	50.813	1.6	442471	0.249	0.245	1.730	1.724	6.35				
	3	Chloromethane	50.118	0.2	883558	0.497	0.495	1.954	1.959	6.18				
	4	Vinyl chloride	53.869	7.7	639420	0.359	0.334	2.088	2.088	12.09				
	5	Bromomethane	48.153	-3.7	459577	0.258	0.268	2.564	2.562	12.04				
	6	Chloroethane	50.039	0.1	471045	0.265	0.265	2.668	2.660	5.05				
	7	Dichlorofluoromethane	50.322	0.6	1094043	0.615	0.611	2.698	2.694	7.71				
	8	Trichlorofluoromethane	52.435	4.9	604802	0.340	0.324	2.936	2.931	7.17				
5	9	Acrolein	266.687	6.7	440318	0.049	0.046	3.412	3.406	8.49				
	10	1,1,2-Trichloro-1,2,2-trifluoroethane	48.484	-3.0	287395	0.162	0.167	3.457	3.449	13.01				
5	11	Acetone	243.617	-2.6	1088245	0.122	0.126	3.471	3.480	10.09				
	12	1,1-Dichloroethene	50.275	0.5	848826	0.477	0.474	3.635	3.638	8.29				
5	13	tert-Butyl alcohol	267.397	7.0	495547	0.056	0.052	3.724	3.721	9.70				
10	14	Acetonitrile	532.711	6.5	1156688	0.065	0.061	3.799	3.794	7.59				
	15	Iodomethane	50.747	1.5	775828	0.436	0.430	4.007	4.016	8.45				
	16	Methyl Acetate	51.643	3.3	695202	0.391	0.378	4.037	4.030	9.11				
	17	Methylene chloride	51.032	2.1	891817	0.501	0.574	4.215	4.214	22.65	0.0195	0.4720		0.9973
	18	Carbon disulfide	48.897	-2.2	2115902	1.189	1.216	4.215	4.225	6.48				
5	19	Acrylonitrile	260.401	4.2	1439297	0.162	0.155	4.364	4.365	6.79				
	20	tert-Butyl methyl ether (MTBE)	51.204	2.4	1792599	1.007	0.984	4.394	4.395	5.53				
	21	trans-1,2-Dichloroethene	50.507	1.0	889522	0.500	0.495	4.573	4.569	7.41				
	22	Isopropyl ether (DIPE)	49.773	-0.5	2863880	1.610	1.617	4.974	4.971	5.54				
	23	Vinyl acetate	51.914	3.8	1952093	1.097	1.057	5.123	5.120	6.06				
	24	1,1-Dichloroethane	50.637	1.3	1117991	0.628	0.620	5.108	5.109	8.29				
5	25	2-Butanol	272.759	9.1	472068	0.053	0.049	5.391	5.389	9.05				
	26	tert-Butyl ethyl ether (ETBE)	51.391	2.8	2241291	1.260	1.226	5.495	5.495	6.20				
5	27	2-Butanone	251.001	0.4	2111273	0.237	0.236	5.659	5.654	6.79				
	28	2,2-Dichloropropane	50.088	0.2	463542	0.261	0.260	5.837	5.836	9.02				
	29	cis-1,2-Dichloroethene	49.605	-0.8	701800	0.394	0.398	5.897	5.898	7.65				
	30	Chloroform	49.326	-1.3	945112	0.531	0.538	6.105	6.107	5.53				
	31	Bromochloromethane	50.435	0.9	629842	0.354	0.351	6.328	6.324	8.32				
	32	Tetrahydrofuran	51.119	2.2	251645	0.141	0.138	6.358	6.363	8.76				
	33	Dibromofluoromethane	50.232	0.5	546037	0.307	0.305	6.403	6.398	5.23				
	34	1,1,1-Trichloroethane	49.628	-0.7	608516	0.342	0.345	6.641	6.636	8.22				
	35	Cyclohexane	48.846	-2.3	844041	0.474	0.486	6.656	6.651	3.57				
	36	1,1-Dichloropropene	49.231	-1.5	276551	0.155	0.158	6.849	6.852	8.23				
	37	Carbon tetrachloride	50.344	0.7	479610	0.270	0.268	6.983	6.983	10.96				
	38	tert-Amyl methyl ether (TAME)	50.896	1.8	361347	0.203	0.200	7.013	7.016	8.86				
	39	1,2-Dichloroethane-d4	50.507	1.0	502396	0.282	0.280	7.072	7.074	6.14				
	40	1,2-Dichloroethane	50.644	1.3	615612	0.346	0.343	7.206	7.203	5.65				
	41	Benzene	49.694	-0.6	2329344	1.309	1.317	7.221	7.220	5.94				
	42	Trichloroethene	48.593	-2.8	545760	0.307	0.316	8.084	8.085	6.19				
	43	Methylcyclohexane	50.687	1.4	881784	0.496	0.489	8.159	8.167	4.98				
	44	1,2-Dichloropropane	49.604	-0.8	589586	0.331	0.334	8.337	8.346	6.88				
	45	Bromodichloromethane	52.483	5.0	674281	0.379	0.361	8.679	8.685	12.05				
20	46	1,4-Dioxane	1082.558	8.3	136661	0.004	0.004	8.709	8.719	13.06				
	47	Dibromomethane	51.715	3.4	355063	0.200	0.193	8.769	8.763	10.79				
	48	2-Chloroethyl vinyl ether												
5	49	4-Methyl-2-pentanone	265.161	6.1	4489389	0.505	0.476	9.200	9.200	7.98				

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	50	cis-1,3-Dichloropropene	52.133	4.3	944136	0.531	0.509	9.513	9.510	11.83				
	51	CHLOROBENZENE-D5	50.000	0	1439242	1	1	12.310	12.307	0				
	52	Toluene-d8	48.938	-2.1	1885800	1.310	1.339	9.870	9.877	5.67				
	53	Toluene	47.808	-4.4	2232857	1.551	1.623	10.004	9.999	6.03				
	54	Ethyl methacrylate	51.460	2.9	850912	0.591	0.574	10.302	10.298	8.71				
	55	trans-1,3-Dichloropropene	52.073	4.1	797206	0.554	0.532	10.302	10.298	13.01				
	56	1,1,2-Trichloroethane	49.940	-0.1	484951	0.337	0.337	10.540	10.536	6.67				
5	57	2-Hexanone	267.099	6.8	3202681	0.445	0.417	10.569	10.568	9.60				
	58	1,3-Dichloropropane	49.424	-1.2	876287	0.609	0.616	10.941	10.948	5.81				
	59	Tetrachloroethene	47.045	-5.9	429457	0.298	0.317	11.031	11.026	7.36				
	60	Dibromochloromethane	51.705	3.4	463985	0.322	0.312	11.358	11.353	13.50				
	61	1,2-Dibromoethane	50.761	1.5	503382	0.350	0.345	11.670	11.679	9.94				
	62	1-Chlorohexane	48.771	-2.5	851903	0.592	0.607	11.983	11.978	7.45				
	63	Chlorobenzene	47.308	-5.4	1318466	0.916	0.968	12.370	12.371	5.73				
	64	1,1,1,2-Tetrachloroethane	49.644	-0.7	428388	0.298	0.300	12.459	12.454	9.89				
	65	Ethylbenzene	47.632	-4.7	2353715	1.635	1.717	12.474	12.471	7.55				
2	66	m-Xylene & p-Xylene	94.495	-5.5	3411021	1.185	1.254	12.608	12.603	6.82				
	67	o-Xylene	48.041	-3.9	1693783	1.177	1.225	13.337	13.338	7.84				
	68	Styrene	50.201	0.4	1522151	1.058	1.053	13.397	13.407	8.74				
	69	Isopropylbenzene	48.473	-3.1	1987617	1.381	1.425	13.962	13.972	8.68				
	70	1,2-DICHLOROBENZENE-D4	50.000	0	582294	1	1	17.146	17.142	0				
	71	Bromoform	47.185	-5.6	325878	0.560	0.506	13.962	13.957	22.36	-0.0340	0.6290		0.9957
	72	1,1,2,2-Tetrachloroethane	48.961	-2.1	690552	1.186	1.211	14.274	14.273	11.56				
	73	4-Bromofluorobenzene	48.375	-3.3	640881	1.101	1.138	14.394	14.392	9.11				
	74	1,2,3-Trichloropropane	48.697	-2.6	180291	0.310	0.318	14.528	14.533	12.75				
	75	trans-1,4-Dichloro-2-butene	49.111	-1.8	197795	0.340	0.346	14.676	14.673	14.82				
	76	n-Propylbenzene	46.084	-7.8	2571134	4.416	4.791	14.661	14.672	12.48				
	77	Bromobenzene	46.114	-7.8	526878	0.905	0.981	14.706	14.713	11.76				
	78	1,3,5-Trimethylbenzene	47.185	-5.6	1557053	2.674	2.834	14.959	14.954	10.35				
	79	2-Chlorotoluene	46.173	-7.7	1563923	2.686	2.908	14.959	14.956	9.39				
	80	4-Chlorotoluene	46.688	-6.6	1446435	2.484	2.660	15.048	15.044	9.80				
	81	tert-Butylbenzene	46.419	-7.2	334488	0.574	0.619	15.584	15.581	9.69				
	82	1,2,4-Trimethylbenzene	46.897	-6.2	1566881	2.691	2.869	15.644	15.643	8.94				
	83	sec-Butylbenzene	47.695	-4.6	2149001	3.691	3.869	15.956	15.962	8.29				
	84	p-Isopropyltoluene	48.297	-3.4	1652592	2.838	2.938	16.224	16.219	8.07				
	85	1,3-Dichlorobenzene	46.708	-6.6	895034	1.537	1.645	16.343	16.343	6.96				
	86	1,2,3-Trimethylbenzene	49.869	-0.3	1518823	2.608	2.615	16.492	16.487	4.96				
	87	1,4-Dichlorobenzene	47.438	-5.1	918117	1.577	1.662	16.536	16.542	6.53				
	88	n-Butylbenzene	48.229	-3.5	1620173	2.782	2.885	16.953	16.953	7.74				
	89	1,2-Dichlorobenzene	47.347	-5.3	818874	1.406	1.485	17.191	17.191	7.01				
	90	1,2-Dibromo-3-chloropropane	46.269	-7.5	108264	0.186	0.185	18.500	18.501	17.25	-0.0092	0.2109		0.9988
	91	1,2,4-Trichlorobenzene	48.724	-2.6	471403	0.810	0.831	19.542	19.552	9.88				
	92	Hexachlorobutadiene	48.164	-3.7	214392	0.368	0.382	19.706	19.704	10.51				
	93	Naphthalene	48.436	-3.1	1178925	2.025	2.090	19.810	19.805	13.70				
	94	1,2,3-Trichlorobenzene	46.783	-6.4	394438	0.677	0.724	20.048	20.048	11.31				

Spike Amount = Nominal Amount * M

SL
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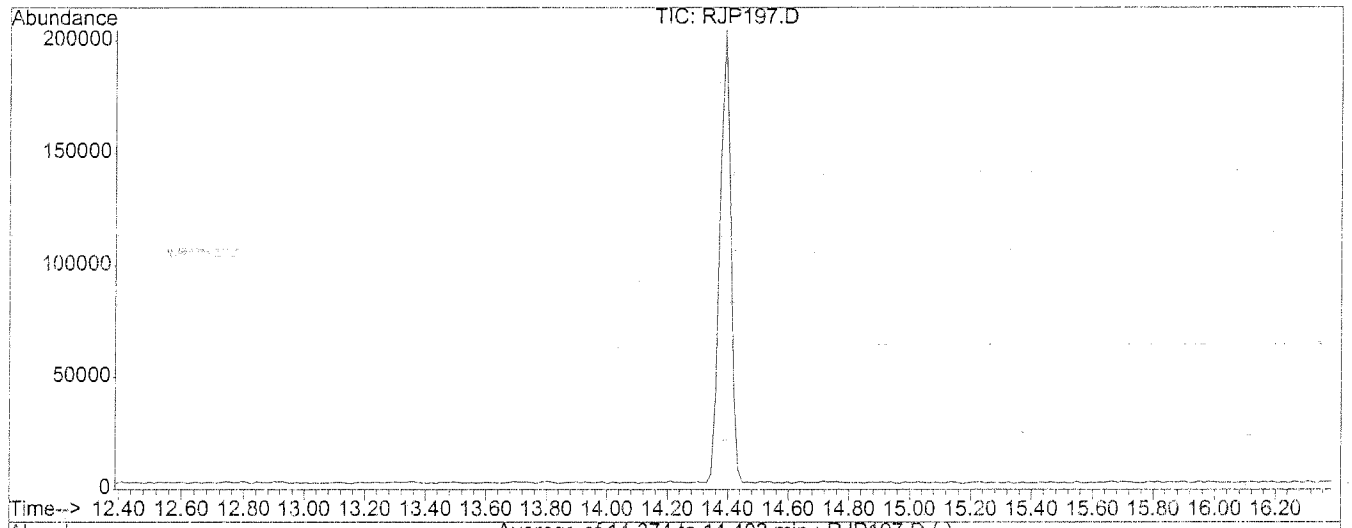
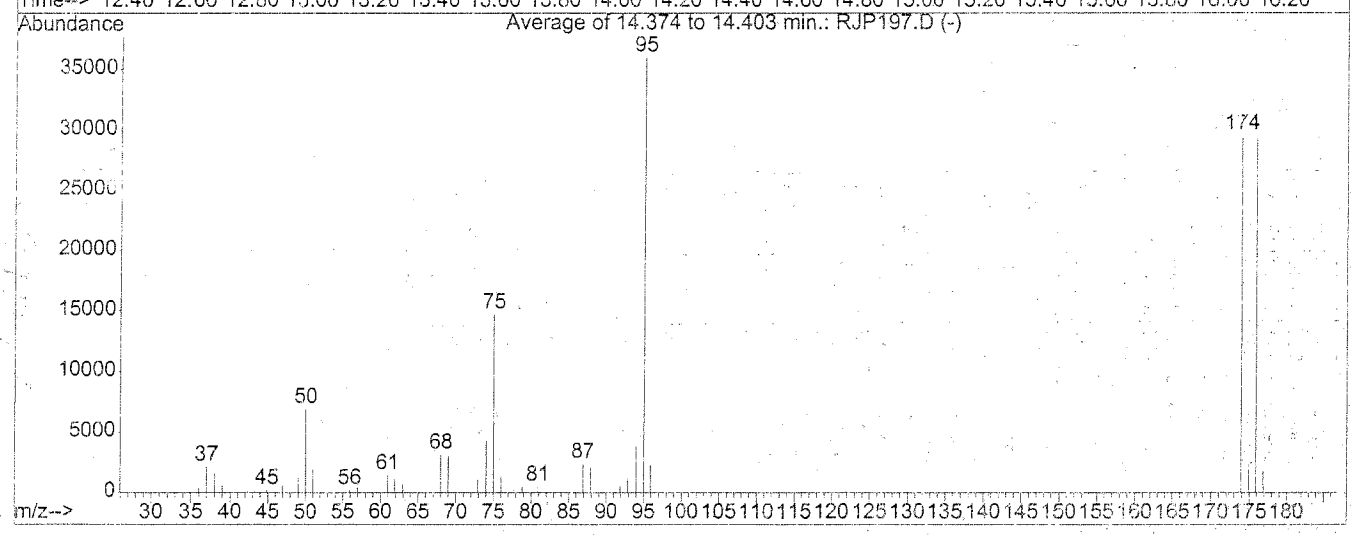
BFB

Data File : D:\HPCHEM\1\DATA\15J14\RJP197.D
Acq On : 14 Oct 2015 8:46 pm
Sample : BFB02J11
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL

Vial: 1
Operator: CMendo
Inst : TO02
Multiplr: 1.00





AutoFind: Scans 857, 858, 859; Background Corrected with Scan 852

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	19.2	6896	PASS
75	95	30	60	40.9	14706	PASS
95	95	100	100	100.0	35984	PASS
96	95	5	9	6.5	2329	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	82.0	29493	PASS
175	174	5	9	7.7	2280	PASS
176	174	95	101	99.3	29296	PASS
177	176	5	9	6.3	1842	PASS

RJP197.D VO02J14.M Fri Oct 16 08:36:47 2015

SU 10/19/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IVO02J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I 1,4-DIFLUOROBENZENE	50.000	50.000	0.0	97	0.00
2	P,T,M Dichlorodifluoromethane	50.000	50.812	-1.6	100	0.00
3	P,T,M Chloromethane	50.000	50.118	-0.2	98	0.00
4	P,C,T,M Vinyl chloride	50.000	53.869	-7.7	98	0.00
5	P,T,M Bromomethane	50.000	48.153	3.7	98	0.00
6	P,T,M Chloroethane	50.000	50.039	-0.1	96	0.00
7	T,M Dichlorofluoromethane	50.000	50.322	-0.6	104	0.00
8	P,T,M Trichlorofluoromethane	50.000	52.435	-4.9	99	0.00
9	T,M Acrolein	250.000	266.687	-6.7	102	0.00
10	P,T,M 1,1,2-Trichloro-1,2,2-trifl	50.000	48.484	3.0	105	0.00
11	P,T,M Acetone	250.000	243.617	2.6	98	0.00
12	P,C,T,M 1,1-Dichloroethene	50.000	50.275	-0.5	105	0.00
13	T,M tert-Butyl alcohol	250.000	267.397	-7.0	103	0.00
14	T,M Acetonitrile	500.000	532.711	-6.5	110	0.00
15	T,M Iodomethane	50.000	50.747	-1.5	101	0.00
16	P,T,M Methyl Acetate	50.000	51.643	-3.3	98	0.00
17	P,T,M Methylene chloride	50.000	51.032	-2.1	99	0.00
18	P,T,M Carbon disulfide	50.000	48.897	2.2	96	0.00
19	T,M Acrylonitrile	250.000	260.401	-4.2	100	0.00
20	P,T,M tert-Butyl methyl ether (MT	50.000	51.204	-2.4	100	0.00
21	P,T,M trans-1,2-Dichloroethene	50.000	50.507	-1.0	103	0.00
22	T,M Isopropyl ether (DIPE)	50.000	49.773	0.5	97	0.00
23	T,M Vinyl acetate	50.000	51.914	-3.8	97	0.00
24	P,T,M 1,1-Dichloroethane	50.000	50.637	-1.3	103	0.00
25	T,M 2-Butanol	250.000	272.759	-9.1	103	0.00
26	T,M tert-Butyl ethyl ether (ETB	50.000	51.391	-2.8	99	0.00
27	P,T,M 2-Butanone	250.000	251.001	-0.4	96	0.00
28	T,M 2,2-Dichloropropane	50.000	50.088	-0.2	104	0.00
29	P,T,M cis-1,2-Dichloroethene	50.000	49.605	0.8	100	0.00
30	P,C,T,M Chloroform	50.000	49.326	1.3	101	0.00
31	T,M Bromochloromethane	50.000	50.435	-0.9	100	0.00
32	T,M Tetrahydrofuran	50.000	51.119	-2.2	102	0.00
33	S Dibromofluoromethane	50.000	50.232	-0.5	96	0.00
34	P,T,M 1,1,1-Trichloroethane	50.000	49.628	0.7	104	0.00
35	P,T,M Cyclohexane	50.000	48.846	2.3	97	0.00
36	T,M 1,1-Dichloropropene	50.000	49.231	1.5	105	0.00
37	P,T,M Carbon tetrachloride	50.000	50.344	-0.7	106	0.00
38	T,M tert-Amyl methyl ether (TAM	50.000	50.896	-1.8	102	0.00
39	S 1,2-Dichloroethane-d4	50.000	50.507	-1.0	96	0.00
40	P,T,M 1,2-Dichloroethane	50.000	50.644	-1.3	102	0.00
41	P,T,M Benzene	50.000	49.693	0.6	104	0.00

(#) = Out of Range

SA 10/19/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IVO02J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	P,T,M Trichloroethene	50.000	48.593	2.8	104	0.00
43	P,T,M Methylcyclohexane	50.000	50.687	-1.4	98	0.00
44	P,C,T,M 1,2-Dichloropropane	50.000	49.604	0.8	103	0.00
45	P,T,M Bromodichloromethane	50.000	52.483	-5.0	105	0.00
46	T,M 1,4-Dioxane	1000.000	1082.558	-8.3	97	0.00
47	T,M Dibromomethane	50.000	51.715	-3.4	102	0.00
48	T,M 2-Chloroethyl vinyl ether	-1.000	0.000	0.0	0	0.00
49	P,T,M 4-Methyl-2-pentanone	250.000	265.161	-6.1	99	0.00
50	P,T,M cis-1,3-Dichloropropene	50.000	52.133	-4.3	104	0.00
51	I CHLOROBENZENE-D5	50.000	50.000	0.0	96	0.00
52	S Toluene-d8	50.000	48.938	2.1	98	0.00
53	P,C,T,M Toluene	50.000	47.808	4.4	106	0.00
54	T,M Ethyl methacrylate	50.000	51.460	-2.9	103	0.00
55	P,T,M trans-1,3-Dichloropropene	50.000	52.073	-4.1	104	0.00
56	P,T,M 1,1,2-Trichloroethane	50.000	49.940	0.1	105	0.00
57	P,T,M 2-Hexanone	250.000	267.099	-6.8	100	0.00
58	T,M 1,3-Dichloropropane	50.000	49.424	1.2	104	0.00
59	P,T,M Tetrachloroethene	50.000	47.045	5.9	107	0.00
60	P,T,M Dibromochloromethane	50.000	51.705	-3.4	105	0.00
61	P,T,M 1,2-Dibromoethane	50.000	50.761	-1.5	102	0.00
62	T,M 1-Chlorohexane	50.000	48.771	2.5	104	0.00
63	P,T,M Chlorobenzene	50.000	47.308	5.4	104	0.00
64	T,M 1,1,1,2-Tetrachloroethane	50.000	49.644	0.7	106	0.00
65	P,C,T,M Ethylbenzene	50.000	47.632	4.7	106	0.00
66	P,T,M m-Xylene & p-Xylene	100.000	94.495	5.5	106	0.00
67	P,T,M o-Xylene	50.000	48.041	3.9	105	0.00
68	P,T,M Styrene	50.000	50.201	-0.4	107	0.00
69	P,T,M Isopropylbenzene	50.000	48.473	3.1	108	0.00
70	I 1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	98	0.00
71	P,T,M Bromoform	50.000	47.185	5.6	115	0.00
72	P,T,M 1,1,2,2-Tetrachloroethane	50.000	48.961	2.1	105	0.00
73	S 4-Bromofluorobenzene	50.000	48.375	3.3	99	0.00
74	T,M 1,2,3-Trichloropropane	50.000	48.697	2.6	103	0.00
75	T,M trans-1,4-Dichloro-2-butene	50.000	49.111	1.8	108	0.00
76	T,M n-Propylbenzene	50.000	46.084	7.8	107	0.00
77	T,M Bromobenzene	50.000	46.114	7.8	105	0.00
78	T,M 1,3,5-Trimethylbenzene	50.000	47.185	5.6	107	0.00
79	T,M 2-Chlorotoluene	50.000	46.173	7.7	106	0.00
80	T,M 4-Chlorotoluene	50.000	46.688	6.6	106	0.00

(#) = Out of Range

Su 10/19/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IVO02J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	50.000	46.419	7.2	107	0.00
82	T,M	1,2,4-Trimethylbenzene	50.000	46.897	6.2	105	0.00
83	T,M	sec-Butylbenzene	50.000	47.695	4.6	108	0.00
84	T,M	p-Isopropyltoluene	50.000	48.297	3.4	110	0.00
85	P,T,M	1,3-Dichlorobenzene	50.000	46.708	6.6	106	0.00
86	T,M	1,2,3-Trimethylbenzene	50.000	49.869	0.3	96	0.00
87	P,T,M	1,4-Dichlorobenzene	50.000	47.438	5.1	105	0.00
88	T,M	n-Butylbenzene	50.000	48.229	3.5	107	0.00
89	P,T,M	1,2-Dichlorobenzene	50.000	47.347	5.3	107	0.00
90	P,T,M	1,2-Dibromo-3-chloropropane	50.000	46.269	7.5	107	0.00
91	P,T,M	1,2,4-Trichlorobenzene	50.000	48.724	2.6	109	0.00
92	T,M	Hexachlorobutadiene	50.000	48.164	3.7	109	0.00
93	T,M	Naphthalene	50.000	48.436	3.1	107	0.00
94	T,M	1,2,3-Trichlorobenzene	50.000	46.783	6.4	106	0.00

Sa 10/19/15

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IVO02J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I 1,4-DIFLUOROBENZENE	1.000	1.000	0.0	97	0.00
2	P,T,M Dichlorodifluoromethane	0.245	0.249	-1.6	100	0.00
3	P,T,M Chloromethane	0.495	0.497	-0.4	98	0.00
4	P,C,T,M Vinyl chloride	0.334	0.359	-7.5	98	0.00
5	P,T,M Bromomethane	0.268	0.258	3.7	98	0.00
6	P,T,M Chloroethane	0.265	0.265	0.0	96	0.00
7	T,M Dichlorofluoromethane	0.611	0.615	-0.7	104	0.00
8	P,T,M Trichlorofluoromethane	0.324	0.340	-4.9	99	0.00
9	T,M Acrolein	0.046	0.049	-6.5	102	0.00
10	P,T,M 1,1,2-Trichloro-1,2,2-trifl	0.167	0.162	3.0	105	0.00
11	P,T,M Acetone	0.126	0.122	3.2	98	0.00
12	P,C,T,M 1,1-Dichloroethene	0.474	0.477	-0.6	105	0.00
13	T,M tert-Butyl alcohol	0.052	0.056	-7.7	103	0.00
14	T,M Acetonitrile	0.061	0.065	-6.6	110	0.00
15	T,M Iodomethane	0.430	0.436	-1.4	101	0.00
16	P,T,M Methyl Acetate	0.378	0.391	-3.4	98	0.00
17	P,T,M Methylene chloride	0.574	0.501	12.7	99	0.00
18	P,T,M Carbon disulfide	1.216	1.189	2.2	96	0.00
19	T,M Acrylonitrile	0.155	0.162	-4.5	100	0.00
20	P,T,M tert-Butyl methyl ether (MT	0.984	1.007	-2.3	100	0.00
21	P,T,M trans-1,2-Dichloroethene	0.495	0.500	-1.0	103	0.00
22	T,M Isopropyl ether (DIPE)	1.617	1.610	0.4	97	0.00
23	T,M Vinyl acetate	1.057	1.097	-3.8	97	0.00
24	P,T,M 1,1-Dichloroethane	0.620	0.628	-1.3	103	0.00
25	T,M 2-Butanol	0.049	0.053	-8.2	103	0.00
26	T,M tert-Butyl ethyl ether (ETB	1.226	1.260	-2.8	99	0.00
27	P,T,M 2-Butanone	0.236	0.237	-0.4	96	0.00
28	T,M 2,2-Dichloropropane	0.260	0.261	-0.4	104	0.00
29	P,T,M cis-1,2-Dichloroethene	0.398	0.394	1.0	100	0.00
30	P,C,T,M Chloroform	0.538	0.531	1.3	101	0.00
31	T,M Bromochloromethane	0.351	0.354	-0.9	100	0.00
32	T,M Tetrahydrofuran	0.138	0.141	-2.2	102	0.00
33	S Dibromofluoromethane	0.305	0.307	-0.7	96	0.00
34	P,T,M 1,1,1-Trichloroethane	0.345	0.342	0.9	104	0.00
35	P,T,M Cyclohexane	0.486	0.474	2.5	97	0.00
36	T,M 1,1-Dichloropropene	0.158	0.155	1.9	105	0.00
37	P,T,M Carbon tetrachloride	0.268	0.270	-0.7	106	0.00
38	T,M tert-Amyl methyl ether (TAM	0.200	0.203	-1.5	102	0.00
39	S 1,2-Dichloroethane-d4	0.280	0.282	-0.7	96	0.00
40	P,T,M 1,2-Dichloroethane	0.342	0.346	-1.2	102	0.00
41	P,T,M Benzene	1.317	1.309	0.6	104	0.00

(#) = Out of Range

10/19/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IV002J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	P,T,M Trichloroethene	0.316	0.307	2.8	104	0.00
43	P,T,M Methylcyclohexane	0.489	0.496	-1.4	98	0.00
44	P,C,T,M 1,2-Dichloropropane	0.334	0.331	0.9	103	0.00
45	P,T,M Bromodichloromethane	0.361	0.379	-5.0	105	0.00
46	T,M 1,4-Dioxane	0.004	0.004	0.0	97	0.00
47	T,M Dibromomethane	0.193	0.200	-3.6	102	0.00
48	T,M 2-Chloroethyl vinyl ether	0.000	0.000	0.0	0#	0.00
49	P,T,M 4-Methyl-2-pentanone	0.476	0.505	-6.1	99	0.00
50	P,T,M cis-1,3-Dichloropropene	0.509	0.531	-4.3	104	0.00
51	I CHLOROBENZENE-D5	1.000	1.000	0.0	96	0.00
52	S Toluene-d8	1.339	1.310	2.2	98	0.00
53	P,C,T,M Toluene	1.623	1.551	4.4	106	0.00
54	T,M Ethyl methacrylate	0.574	0.591	-3.0	103	0.00
55	P,T,M trans-1,3-Dichloropropene	0.532	0.554	-4.1	104	0.00
56	P,T,M 1,1,2-Trichloroethane	0.337	0.337	0.0	105	0.00
57	P,T,M 2-Hexanone	0.417	0.445	-6.7	100	0.00
58	T,M 1,3-Dichloropropane	0.616	0.609	1.1	104	0.00
59	P,T,M Tetrachloroethene	0.317	0.298	6.0	107	0.00
60	P,T,M Dibromochloromethane	0.312	0.322	-3.2	105	0.00
61	P,T,M 1,2-Dibromoethane	0.345	0.350	-1.4	102	0.00
62	T,M 1-Chlorohexane	0.607	0.592	2.5	104	0.00
63	P,T,M Chlorobenzene	0.968	0.916	5.4	104	0.00
64	T,M 1,1,1,2-Tetrachloroethane	0.300	0.298	0.7	106	0.00
65	P,C,T,M Ethylbenzene	1.717	1.635	4.8	106	0.00
66	P,T,M m-Xylene & p-Xylene	1.254	1.185	5.5	106	0.00
67	P,T,M o-Xylene	1.225	1.177	3.9	105	0.00
68	P,T,M Styrene	1.053	1.058	-0.5	107	0.00
69	P,T,M Isopropylbenzene	1.425	1.381	3.1	108	0.00
70	I 1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	98	0.00
71	P,T,M Bromoform	0.506	0.560	-10.7	115	0.00
72	P,T,M 1,1,2,2-Tetrachloroethane	1.211	1.186	2.1	105	0.00
73	S 4-Bromofluorobenzene	1.138	1.101	3.3	99	0.00
74	T,M 1,2,3-Trichloropropane	0.318	0.310	2.5	103	0.00
75	T,M trans-1,4-Dichloro-2-butene	0.346	0.340	1.7	108	0.00
76	T,M n-Propylbenzene	4.791	4.416	7.8	107	0.00
77	T,M Bromobenzene	0.981	0.905	7.7	105	0.00
78	T,M 1,3,5-Trimethylbenzene	2.834	2.674	5.6	107	0.00
79	T,M 2-Chlorotoluene	2.908	2.686	7.6	106	0.00
80	T,M 4-Chlorotoluene	2.660	2.484	6.6	106	0.00

(#) = Out of Range

10/19/15

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IV002J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	0.619	0.574	7.3	107	0.00
82	T,M	1,2,4-Trimethylbenzene	2.869	2.691	6.2	105	0.00
83	T,M	sec-Butylbenzene	3.869	3.691	4.6	108	0.00
84	T,M	p-Isopropyltoluene	2.938	2.838	3.4	110	0.00
85	P,T,M	1,3-Dichlorobenzene	1.645	1.537	6.6	106	0.00
86	T,M	1,2,3-Trimethylbenzene	2.615	2.608	0.3	96	0.00
87	P,T,M	1,4-Dichlorobenzene	1.662	1.577	5.1	105	0.00
88	T,M	n-Butylbenzene	2.885	2.782	3.6	107	0.00
89	P,T,M	1,2-Dichlorobenzene	1.485	1.406	5.3	107	0.00
90	P,T,M	1,2-Dibromo-3-chloropropane	0.185	0.186	-0.5	107	0.00
91	P,T,M	1,2,4-Trichlorobenzene	0.831	0.810	2.5	109	0.00
92	T,M	Hexachlorobutadiene	0.382	0.368	3.7	109	0.00
93	T,M	Naphthalene	2.090	2.025	3.1	107	0.00
94	T,M	1,2,3-Trichlorobenzene	0.724	0.677	6.5	106	0.00

Sa 10/19/15

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IVO02J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 15 22:26 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	1779278	50.00 ug/l	0.00
51) CHLOROBENZENE-D5	12.31	117	1439242	50.00 ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.15	152	582294	50.00 ug/l	0.00
System Monitoring Compounds					
33) Dibromofluoromethane	6.40	111	546037	50.23 ug/l	0.00
Spiked Amount 50.000			Recovery =	100.46%	
39) 1,2-Dichloroethane-d4	7.07	65	502396	50.51 ug/l	0.00
Spiked Amount 50.000			Recovery =	101.02%	
52) Toluene-d8	9.87	98	1885800	48.94 ug/l	0.00
Spiked Amount 50.000			Recovery =	97.88%	
73) 4-Bromofluorobenzene	14.39	95	640881	48.37 ug/l	0.00
Spiked Amount 50.000			Recovery =	96.74%	
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.73	85	442471	50.81 ug/l	100
3) Chloromethane	1.95	50	883558	50.12 ug/l	99
4) Vinyl chloride	2.09	62	639420	53.87 ug/l	100
5) Bromomethane	2.56	94	459577	48.15 ug/l	99
6) Chloroethane	2.67	64	471045	50.04 ug/l	98
7) Dichlorofluoromethane	2.70	67	1094043	50.32 ug/l	99
8) Trichlorofluoromethane	2.94	101	604802	52.43 ug/l	100
9) Acrolein	3.41	56	440318	266.69 ug/l	99
10) 1,1,2-Trichloro-1,2,2-trif	3.46	151	287395	48.48 ug/l	98
11) Acetone	3.47	43	1088245	243.62 ug/l	98
12) 1,1-Dichloroethene	3.64	61	848826	50.27 ug/l	99
13) tert-Butyl alcohol	3.72	59	495547	267.40 ug/l #	1
14) Acetonitrile	3.80	41	1156688	532.71 ug/l	94
15) Iodomethane	4.01	142	775828	50.75 ug/l	99
16) Methyl Acetate	4.04	43	695202	51.64 ug/l	99
17) Methylene chloride	4.22	49	891817	51.03 ug/l	100
18) Carbon disulfide	4.22	76	2115902	48.90 ug/l	100
19) Acrylonitrile	4.36	53	1439297	260.40 ug/l	99
20) tert-Butyl methyl ether (M	4.39	73	1792599	51.20 ug/l	100
21) trans-1,2-Dichloroethene	4.57	61	889522	50.51 ug/l	99
22) Isopropyl ether (DIPE)	4.97	45	2863880	49.77 ug/l	100
23) Vinyl acetate	5.12	43	1952093	51.91 ug/l	100
24) 1,1-Dichloroethane	5.11	63	1117991	50.64 ug/l	99
25) 2-Butanol	5.39	45	472068	272.76 ug/l #	100
26) tert-Butyl ethyl ether (ET	5.50	59	2241291	51.39 ug/l	99
27) 2-Butanone	5.66	43	2111273	251.00 ug/l	100
28) 2,2-Dichloropropane	5.84	77	463542	50.09 ug/l	99

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

10/19/15

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D
Acq On : 14 Oct 2015 9:19 pm
Sample : IVO02J141
Misc : 50ppb 8260/250ppb KET-A-An-TBA
MS Integration Params: RTE.P
Quant Time: Oct 15 22:26 2015

Vial: 2
Operator: CMendo
Inst : TO02
Multiplr: 1.00
Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
29) cis-1,2-Dichloroethene	5.90	96	701800	49.60 ug/l	98
30) Chloroform	6.11	83	945112	49.33 ug/l	99
31) Bromochloromethane	6.33	49	629842	50.44 ug/l	100
32) Tetrahydrofuran	6.36	42	251645	51.12 ug/l	97
34) 1,1,1-Trichloroethane	6.64	97	608516	49.63 ug/l	99
35) Cyclohexane	6.66	56	844041	48.85 ug/l	99
36) 1,1-Dichloropropene	6.85	110	276551	49.23 ug/l	98
37) Carbon tetrachloride	6.98	119	479610	50.34 ug/l	99
38) tert-Amyl methyl ether (TA	7.01	87	361347	50.90 ug/l	99
40) 1,2-Dichloroethane	7.21	62	615612	50.64 ug/l	100
41) Benzene	7.22	78	2329344	49.69 ug/l	100
42) Trichloroethene	8.08	130	545760	48.59 ug/l	100
43) Methylcyclohexane	8.16	83	881784	50.69 ug/l	99
44) 1,2-Dichloropropane	8.34	63	589586	49.60 ug/l	99
45) Bromodichloromethane	8.68	83	674281	52.48 ug/l	99
46) 1,4-Dioxane	8.71	88	136661	1082.56 ug/l	98
47) Dibromomethane	8.77	93	355063	51.72 ug/l	98
49) 4-Methyl-2-pentanone	9.20	43	4489389	265.16 ug/l	100
50) cis-1,3-Dichloropropene	9.51	75	944136	52.13 ug/l	99
53) Toluene	10.00	91	2232857	47.81 ug/l	99
54) Ethyl methacrylate	10.30	69	850912	51.46 ug/l	99
55) trans-1,3-Dichloropropene	10.30	75	797206	52.07 ug/l	99
56) 1,1,2-Trichloroethane	10.54	97	484951	49.94 ug/l	99
57) 2-Hexanone	10.57	43	3202681	267.10 ug/l	99
58) 1,3-Dichloropropane	10.94	76	876287	49.42 ug/l	99
59) Tetrachloroethene	11.03	164	429457	47.05 ug/l	99
60) Dibromochloromethane	11.36	129	463985	51.70 ug/l	98
61) 1,2-Dibromoethane	11.67	107	503382	50.76 ug/l	99
62) 1-Chlorohexane	11.98	91	851903	48.77 ug/l	99
63) Chlorobenzene	12.37	112	1318466	47.31 ug/l	100
64) 1,1,1,2-Tetrachloroethane	12.46	131	428388	49.64 ug/l	100
65) Ethylbenzene	12.47	91	2353715	47.63 ug/l	99
66) m-Xylene & p-Xylene	12.61	91	3411021	94.49 ug/l	99
67) o-Xylene	13.34	91	1693783	48.04 ug/l	99
68) Styrene	13.40	104	1522151	50.20 ug/l	99
69) Isopropylbenzene	13.96	105	1987617	48.47 ug/l	99
71) Bromoform	13.96	173	325878	47.19 ug/l	98
72) 1,1,2,2-Tetrachloroethane	14.27	83	690552	48.96 ug/l	97
74) 1,2,3-Trichloropropane	14.53	110	180291	48.70 ug/l	96
75) trans-1,4-Dichloro-2-buten	14.68	53	197795	49.11 ug/l	99
76) n-Propylbenzene	14.66	91	2571134	46.08 ug/l	100

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

10/19/15

Quantitation Report (Not Reviewed)

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IVO02J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 15 22:26 2015 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
77) Bromobenzene	14.71	156	526878	46.11 ug/l	97
78) 1,3,5-Trimethylbenzene	14.96	105	1557053	47.18 ug/l	99
79) 2-Chlorotoluene	14.96	91	1563923	46.17 ug/l	99
80) 4-Chlorotoluene	15.05	91	1446435	46.69 ug/l	99
81) tert-Butylbenzene	15.58	134	334488	46.42 ug/l	100
82) 1,2,4-Trimethylbenzene	15.64	105	1566881	46.90 ug/l	100
83) sec-Butylbenzene	15.96	105	2149001	47.70 ug/l	100
84) p-Isopropyltoluene	16.22	119	1652592	48.30 ug/l	99
85) 1,3-Dichlorobenzene	16.34	146	895034	46.71 ug/l	99
86) 1,2,3-Trimethylbenzene	16.49	105	1518823	49.87 ug/l	98
87) 1,4-Dichlorobenzene	16.54	146	918117	47.44 ug/l	100
88) n-Butylbenzene	16.95	91	1620173	48.23 ug/l	100
89) 1,2-Dichlorobenzene	17.19	146	818874	47.35 ug/l	100
90) 1,2-Dibromo-3-chloropropan	18.50	157	108264	46.27 ug/l	98
91) 1,2,4-Trichlorobenzene	19.54	180	471403	48.72 ug/l	99
92) Hexachlorobutadiene	19.71	225	214392	48.16 ug/l	98
93) Naphthalene	19.81	128	1178925	48.44 ug/l	100
94) 1,2,3-Trichlorobenzene	20.05	180	394438	46.78 ug/l	99

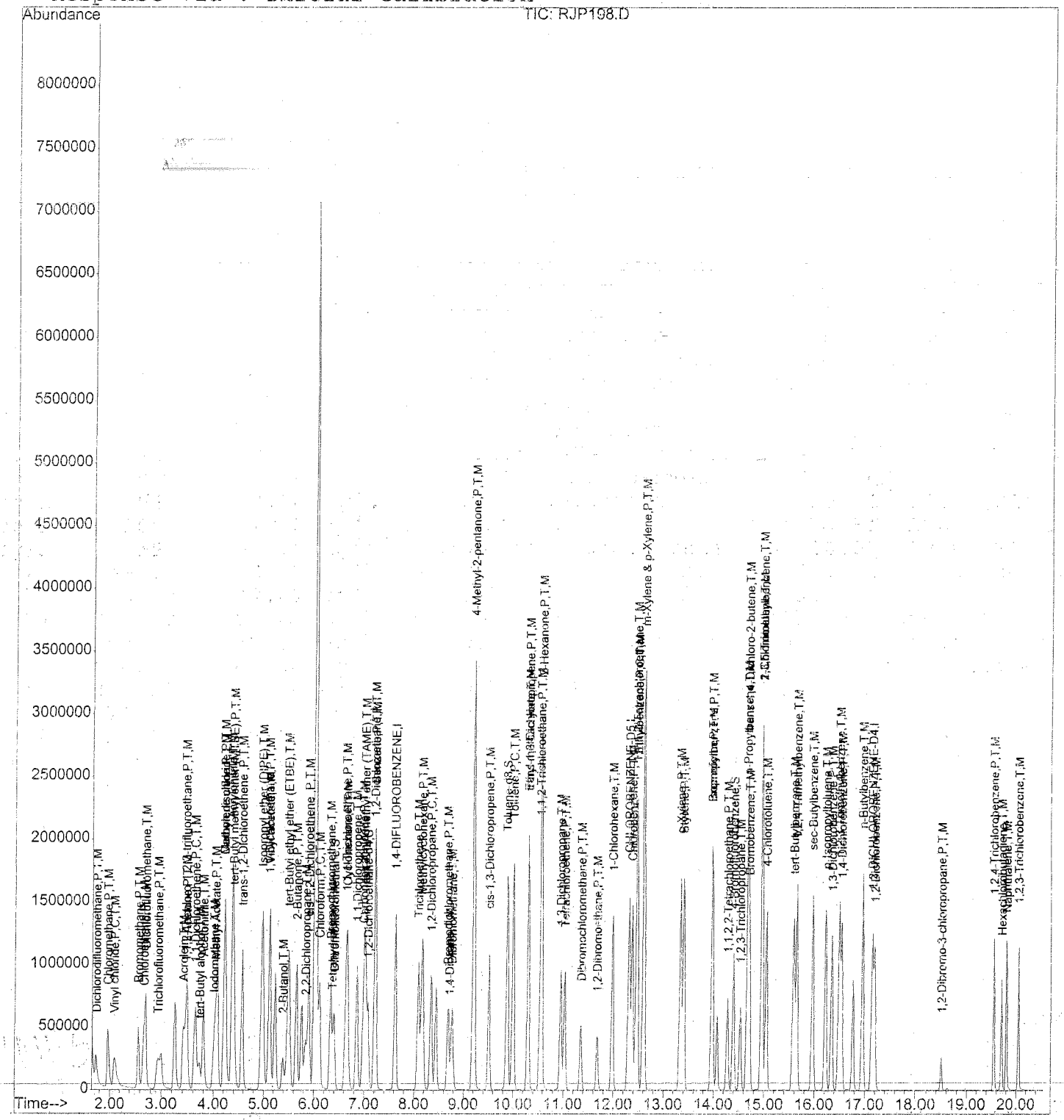
Sa 10/19/15

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\15J14\RJP198.D Vial: 2
Acq On : 14 Oct 2015 9:19 pm Operator: CMendo
Sample : IV002J141 Inst : TO02
Misc : 50ppb 8260/250ppb KET-A-An-TBA Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Oct 15 22:26 2015 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



SA 10/19/15

188

DAILY CALIBRATIONS

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: EMAX Inc
Lab Code: EMXT Case No.:
Lab File ID: RBP186
Instrument ID: T002
GC Column:RTX502.2ID:0.25mm (mm)

Contract: CANNON AFB PBR
SAS No.: SDG No.: 16B060
BFB Injection Date : 02/10/16
BFB Injection Time : 06:42
Heated Purge: (Y/N) Y

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.93
75	30.0 - 60.0% of mass 95	38.63
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.15
173	Less than 2.0% of mass 174	0.00(0.0)1
174	Greater than 50% of mass 95	81.23
175	5.0 - 9.0% of mass 174	6.14(7.6)1
176	95.0 - 101.0% of mass 174	78.68(96.9)1
177	5.0 - 9.0% of mass 176	4.96(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	VSTD050	CV002J1421	RBP187	02/10/16	07:15
2	MBLK1S	VS02B12B	RBP190	02/10/16	08:44
3	LCS1S	VS02B12L	RBP188	02/10/16	07:54
4	LCD1S	VS02B12C	RBP189	02/10/16	08:19
5	CA504-SG03-S-005	B060-01	RBP194	02/10/16	10:43
6	CA504-SG03-S-010	B060-02	RBP196	02/10/16	11:33
7	CA504-SG01-S-005	B060-04	RBP198	02/10/16	12:22
8	CA504-SG01-S-010	B060-05	RBP199	02/10/16	12:47
9	CA504-SG01-S-210	B060-06	RBP200	02/10/16	13:12
10	CA504-SG02-S-005	B060-07	RBP201	02/10/16	13:37
11	CA504-SG02-S-010	B060-08	RBP202	02/10/16	14:02
12	CA504-SG02-S-210	B060-09	RBP203	02/10/16	14:26
13	CA504-SG03-S-010MS	B060-02M	RBP204	02/10/16	14:51
14	CA504-SG03-S-010MSD	B060-02S	RBP205	02/10/16	15:16

FORM V VOA OLM02.0

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name : EMAX INC.
Lab Code : EMXT
Lab File ID : RJP190
Instrument ID: T002
GC Column : RTX502.2ID:0.25mm (mm)

Project : CANNON AFB PBR
SDG No. : 16B060
Date Analyzed : 10/14/15
Time Analyzed : 13:00
Heated Purge : Yes

		IS1(DBF)		IS2(CBZ)		IS3(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	1842314	7.63	1494656	12.30	596238	17.14
	UPPER LIMIT	3684628	8.13	2989312	12.80	1192476	17.64
	LOWER LIMIT	921157	7.13	747328	11.80	298119	16.64
	SAMPLE ID						
1	VSTD050	2388604	7.62	2287486	12.31	805148	17.14
2	MBLK1S	2492025	7.61	2322814	12.30	830398	17.13
3	LCS1S	2260441	7.62	2181849	12.31	878603	17.15
4	LCD1S	2344266	7.62	2301468	12.29	894082	17.13
5	CA504-SG03-S-005	2507695	7.61	2355165	12.28	807464	17.12
6	CA504-SG03-S-010	2217900	7.61	2069222	12.28	800892	17.12
7	CA504-SG01-S-005	2285345	7.61	2076777	12.28	784212	17.12
8	CA504-SG01-S-010	2168540	7.61	2034141	12.28	835978	17.12
9	CA504-SG01-S-210	2270118	7.59	2090236	12.28	813646	17.12
10	CA504-SG02-S-005	1977721	7.61	1846797	12.28	704415	17.12
11	CA504-SG02-S-010	2078788	7.61	1961953	12.28	692012	17.12
12	CA504-SG02-S-210	2161624	7.61	2026379	12.28	816627	17.12
13	CA504-SG03-S-010MS	1961394	7.61	1863708	12.28	775687	17.12
14	CA504-SG03-S-010MSD	2064447	7.60	1957097	12.28	794916	17.11

IS1 (DFB) = 1,4-Difluorobenzene
IS2 (CBZ) = Chlorobenzene-d5
IS3 (DCB) = 1,2-Dichlorobenzene-d4

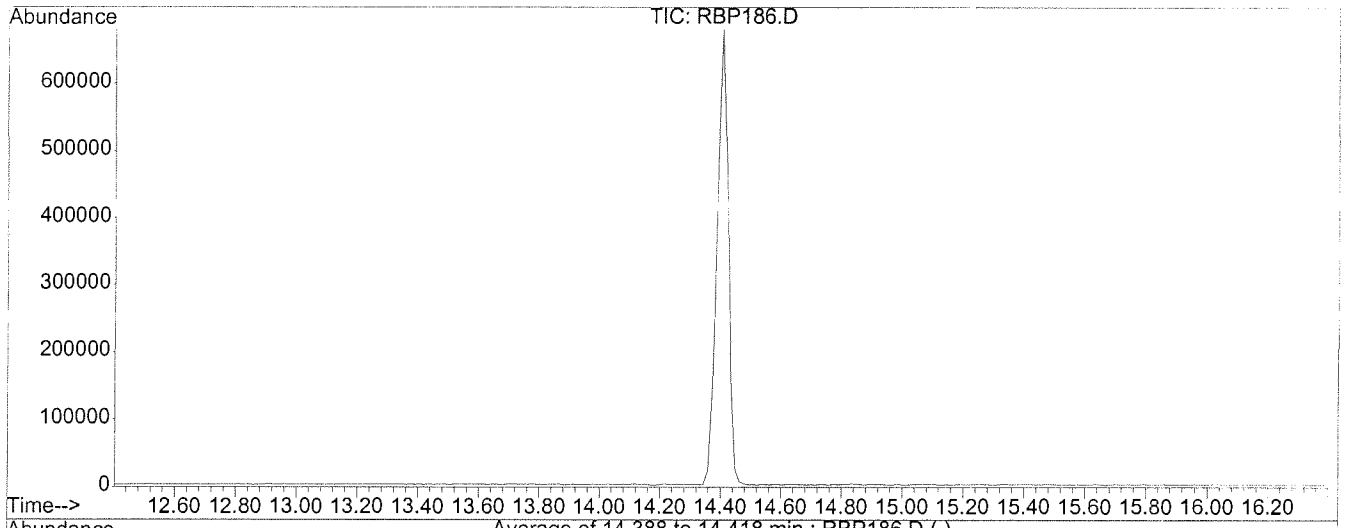
AREA UPPER LIMIT = + 100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = + 0.5 minutes (30 sec) of internal standard RT
RT LOWER LIMIT = - 0.5 minutes (30 sec) of internal standard RT

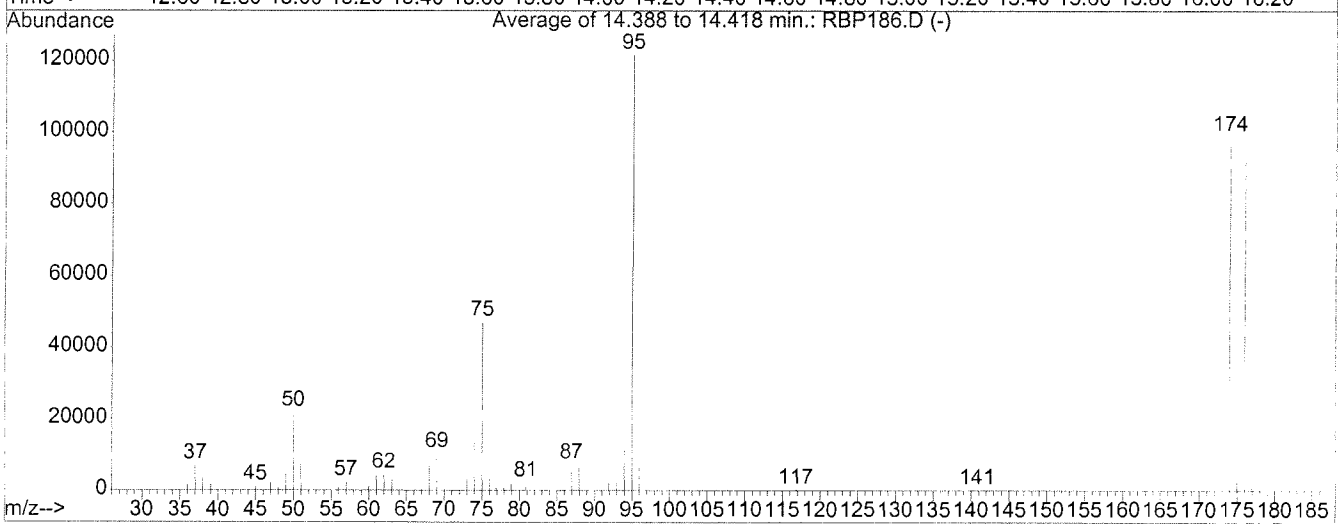
Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

BFB

Data File : D:\HPCHEM\1\DATA\16B10\RBP186.D
Acq On : 10 Feb 2016 6:42 am
Sample : BFB02B12
Misc : T/CHK
MS Integration Params: RTE.P
Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL

Vial: 1
Operator: CMendo
Inst : TO02
Multiplr: 1.00





AutoFind: Scans 858, 859, 860; Background Corrected with Scan 852

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	17.9	21831	PASS
75	95	30	60	38.6	47027	PASS
95	95	100	100	100.0	121733	PASS
96	95	5	9	6.2	7488	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	100	81.2	98883	PASS
175	174	5	9	7.6	7480	PASS
176	174	95	101	96.9	95784	PASS
177	176	5	9	6.3	6041	PASS

RBP186.D VO02J14.M Wed Feb 10 08:00:49 2016

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I 1,4-DIFLUOROBENZENE	50.000	50.000	0.0	130	-0.01
2	P,T,M Dichlorodifluoromethane	50.000	57.156	-14.3	151	-0.01
3	P,T,M Chloromethane	50.000	54.471	-8.9	144	0.00
4	P,C,T,M Vinyl chloride	50.000	54.425	-8.8	133	-0.03
5	P,T,M Bromomethane	50.000	46.252	7.5	126	0.02
6	P,T,M Chloroethane	50.000	50.873	-1.7	131	0.00
7	T,M Dichlorofluoromethane	50.000	53.870	-7.7	150	0.02
8	P,T,M Trichlorofluoromethane	50.000	50.256	-0.5	128	0.00
9	T,M Acrolein	250.000	226.760	9.3	116	0.00
10	P,T,M 1,1,2-Trichloro-1,2,2-trifl	50.000	45.024	10.0	131	0.00
11	P,T,M Acetone	250.000	252.104	-0.8	136	0.00
12	P,C,T,M 1,1-Dichloroethene	50.000	48.391	3.2	136	-0.01
13	T,M tert-Butyl alcohol	250.000	279.453	-11.8	144	0.00
14	T,M Acetonitrile	500.000	578.054	-15.6	161	0.00
15	T,M Iodomethane	50.000	45.061	9.9	120	-0.01
16	P,T,M Methyl Acetate	50.000	0.000	100.0#	0	-4.03#
17	P,T,M Methylene chloride	50.000	52.006	-4.0	135	0.00
18	P,T,M Carbon disulfide	50.000	54.201	-8.4	143	-0.01
19	T,M Acrylonitrile	250.000	260.116	-4.0	134	0.00
20	P,T,M tert-Butyl methyl ether (MT	50.000	52.779	-5.6	139	0.00
21	P,T,M trans-1,2-Dichloroethene	50.000	47.750	4.5	131	0.00
22	T,M Isopropyl ether (DIPE)	50.000	50.549	-1.1	133	0.00
23	T,M Vinyl acetate	50.000	45.626	8.7	114	0.00
24	P,T,M 1,1-Dichloroethane	50.000	49.725	0.5	136	0.00
25	T,M 2-Butanol	250.000	0.000	100.0#	0	-5.38#
26	T,M tert-Butyl ethyl ether (ETB	50.000	50.724	-1.4	131	-0.01
27	P,T,M 2-Butanone	250.000	254.982	-2.0	131	0.00
28	T,M 2,2-Dichloropropane	50.000	53.827	-7.7	150	0.00
29	P,T,M cis-1,2-Dichloroethene	50.000	50.157	-0.3	136	0.00
30	P,C,T,M Chloroform	50.000	50.091	-0.2	137	0.00
31	T,M Bromochloromethane	50.000	51.813	-3.6	138	0.00
32	T,M Tetrahydrofuran	50.000	50.006	-0.0	135	0.00
33	S Dibromofluoromethane	50.000	47.675	4.7	123	0.00
34	P,T,M 1,1,1-Trichloroethane	50.000	50.121	-0.2	141	0.00
35	P,T,M Cyclohexane	50.000	0.000	100.0#	0	-6.65#
36	T,M 1,1-Dichloropropene	50.000	48.387	3.2	139	0.00
37	P,T,M Carbon tetrachloride	50.000	50.220	-0.4	142	-0.01
38	T,M tert-Amyl methyl ether (TAM	50.000	52.753	-5.5	141	0.00
39	S 1,2-Dichloroethane-d4	50.000	49.585	0.8	126	-0.01
40	P,T,M 1,2-Dichloroethane	50.000	52.389	-4.8	141	0.00
41	P,T,M Benzene	50.000	51.522	-3.0	145	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
42	P,T,M Trichloroethene	50.000	51.520	-3.0	149	-0.01
43	P,T,M Methylcyclohexane	50.000	0.000	100.0#	0	-8.17#
44	P,C,T,M 1,2-Dichloropropane	50.000	52.536	-5.1	147	0.00
45	P,T,M Bromodichloromethane	50.000	54.832	-9.7	147	0.00
46	T,M 1,4-Dioxane	1000.000	1109.232	-10.9	134	0.00
47	T,M Dibromomethane	50.000	54.957	-9.9	145	0.00
48	T,M 2-Chloroethyl vinyl ether	-1.000	0.000	0.0	0	0.00
49	P,T,M 4-Methyl-2-pentanone	250.000	288.276	-15.3	144	0.00
50	P,T,M cis-1,3-Dichloropropene	50.000	55.966	-11.9	149	0.00
51	I CHLOROBENZENE-D5	50.000	50.000	0.0	153	0.00
52	S Toluene-d8	50.000	44.765	10.5	143	0.00
53	P,C,T,M Toluene	50.000	44.177	11.6	156	0.00
54	T,M Ethyl methacrylate	50.000	46.735	6.5	149	0.00
55	P,T,M trans-1,3-Dichloropropene	50.000	48.380	3.2	154	0.00
56	P,T,M 1,1,2-Trichloroethane	50.000	47.147	5.7	157	0.00
57	P,T,M 2-Hexanone	250.000	250.963	-0.4	149	0.00
58	T,M 1,3-Dichloropropane	50.000	48.018	4.0	160	0.00
59	P,T,M Tetrachloroethene	50.000	45.084	9.8	162	0.00
60	P,T,M Dibromochloromethane	50.000	50.020	-0.0	162	0.00
61	P,T,M 1,2-Dibromoethane	50.000	48.141	3.7	154	0.00
62	T,M 1-Chlorohexane	50.000	51.286	-2.6	174	0.00
63	P,T,M Chlorobenzene	50.000	52.019	-4.0	182	-0.01
64	T,M 1,1,1,2-Tetrachloroethane	50.000	55.096	-10.2	186	0.00
65	P,C,T,M Ethylbenzene	50.000	51.318	-2.6	181	0.00
66	P,T,M m-Xylene & p-Xylene	100.000	104.593	-4.6	187	0.00
67	P,T,M o-Xylene	50.000	55.087	-10.2	191	0.00
68	P,T,M Styrene	50.000	54.951	-9.9	186	0.00
69	P,T,M Isopropylbenzene	50.000	54.236	-8.5	192	0.00
70	I 1,2-DICHLOROBENZENE-D4	50.000	50.000	0.0	135	0.00
71	P,T,M Bromoform	50.000	55.221	-10.4	187	0.00
72	P,T,M 1,1,2,2-Tetrachloroethane	50.000	58.645	-17.3	174	0.00
73	S 4-Bromofluorobenzene	50.000	54.594	-9.2	154	0.00
74	T,M 1,2,3-Trichloropropane	50.000	57.869	-15.7	169	0.00
75	T,M trans-1,4-Dichloro-2-butene	50.000	59.169	-18.3	180	0.00
76	T,M n-Propylbenzene	50.000	60.511	-21.0#	194	0.00
77	T,M Bromobenzene	50.000	57.533	-15.1	181	0.00
78	T,M 1,3,5-Trimethylbenzene	50.000	54.374	-8.7	170	0.00
79	T,M 2-Chlorotoluene	50.000	58.505	-17.0	186	0.00
80	T,M 4-Chlorotoluene	50.000	58.820	-17.6	185	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	50.000	55.246	-10.5	176	0.00
82	T,M	1,2,4-Trimethylbenzene	50.000	51.409	-2.8	160	0.00
83	T,M	sec-Butylbenzene	50.000	51.152	-2.3	161	0.00
84	T,M	p-Isopropyltoluene	50.000	49.376	1.2	155	0.00
85	P,T,M	1,3-Dichlorobenzene	50.000	51.642	-3.3	161	0.00
86	T,M	1,2,3-Trimethylbenzene	50.000	0.000	100.0#	0	-16.48#
87	P,T,M	1,4-Dichlorobenzene	50.000	52.357	-4.7	161	0.00
88	T,M	n-Butylbenzene	50.000	51.741	-3.5	159	0.00
89	P,T,M	1,2-Dichlorobenzene	50.000	53.509	-7.0	167	0.00
90	P,T,M	1,2-Dibromo-3-chloropropane	50.000	46.474	7.1	149	-0.01
91	P,T,M	1,2,4-Trichlorobenzene	50.000	51.655	-3.3	160	0.00
92	T,M	Hexachlorobutadiene	50.000	49.461	1.1	154	0.00
93	T,M	Naphthalene	50.000	51.896	-3.8	159	0.00
94	T,M	1,2,3-Trichlorobenzene	50.000	50.619	-1.2	158	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I 1,4-DIFLUOROBENZENE	1.000	1.000	0.0	130	-0.01
2	P,T,M Dichlorodifluoromethane	0.245	0.280	-14.3	151	-0.01
3	P,T,M Chloromethane	0.495	0.540	-9.1	144	0.00
4	P,C,T,M Vinyl chloride	0.334	0.363	-8.7	133	-0.03
5	P,T,M Bromomethane	0.268	0.248	7.5	126	0.02
6	P,T,M Chloroethane	0.265	0.269	-1.5	131	0.00
7	T,M Dichlorofluoromethane	0.611	0.658	-7.7	150	0.02
8	P,T,M Trichlorofluoromethane	0.324	0.326	-0.6	128	0.00
9	T,M Acrolein	0.046	0.042	8.7	116	0.00
10	P,T,M 1,1,2-Trichloro-1,2,2-trifl	0.167	0.150	10.2	131	0.00
11	P,T,M Acetone	0.126	0.127	-0.8	136	0.00
12	P,C,T,M 1,1-Dichloroethene	0.474	0.459	3.2	136	-0.01
13	T,M tert-Butyl alcohol	0.052	0.058	-11.5	144	0.00
14	T,M Acetonitrile	0.061	0.071	-16.4	161	0.00
15	T,M Iodomethane	0.430	0.387	10.0	120	-0.01
16	P,T,M Methyl Acetate	0.378	0.000#	100.0#	0#	-4.03#
17	P,T,M Methylene chloride	0.574	0.510	11.1	135	0.00
18	P,T,M Carbon disulfide	1.216	1.318	-8.4	143	-0.01
19	T,M Acrylonitrile	0.155	0.162	-4.5	134	0.00
20	P,T,M tert-Butyl methyl ether (MT	0.984	1.038	-5.5	139	0.00
21	P,T,M trans-1,2-Dichloroethene	0.495	0.473	4.4	131	0.00
22	T,M Isopropyl ether (DIPE)	1.617	1.635	-1.1	133	0.00
23	T,M Vinyl acetate	1.057	0.964	8.8	114	0.00
24	P,T,M 1,1-Dichloroethane	0.620	0.617	0.5	136	0.00
25	T,M 2-Butanol	0.049	0.000	100.0#	0#	-5.38#
26	T,M tert-Butyl ethyl ether (ETB	1.226	1.243	-1.4	131	-0.01
27	P,T,M 2-Butanone	0.236	0.241	-2.1	131	0.00
28	T,M 2,2-Dichloropropane	0.260	0.280	-7.7	150	0.00
29	P,T,M cis-1,2-Dichloroethene	0.398	0.399	-0.3	136	0.00
30	P,C,T,M Chloroform	0.538	0.539	-0.2	137	0.00
31	T,M Bromochloromethane	0.351	0.364	-3.7	138	0.00
32	T,M Tetrahydrofuran	0.138	0.138	0.0	135	0.00
33	S Dibromofluoromethane	0.305	0.291	4.6	123	0.00
34	P,T,M 1,1,1-Trichloroethane	0.345	0.345	0.0	141	0.00
35	P,T,M Cyclohexane	0.486	0.000#	100.0#	0#	-6.65#
36	T,M 1,1-Dichloropropene	0.158	0.153	3.2	139	0.00
37	P,T,M Carbon tetrachloride	0.268	0.269	-0.4	142	-0.01
38	T,M tert-Amyl methyl ether (TAM	0.200	0.210	-5.0	141	0.00
39	S 1,2-Dichloroethane-d4	0.280	0.277	1.1	126	-0.01
40	P,T,M 1,2-Dichloroethane	0.342	0.358	-4.7	141	0.00
41	P,T,M Benzene	1.317	1.357	-3.0	145	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
42	P,T,M Trichloroethene	0.316	0.325	-2.8	149	-0.01
43	P,T,M Methylcyclohexane	0.489	0.000#	100.0#	0#	-8.17#
44	P,C,T,M 1,2-Dichloropropane	0.334	0.351	-5.1	147	0.00
45	P,T,M Bromodichloromethane	0.361	0.396	-9.7	147	0.00
46	T,M 1,4-Dioxane	0.004	0.004	0.0	134	0.00
47	T,M Dibromomethane	0.193	0.212	-9.8	145	0.00
48	T,M 2-Chloroethyl vinyl ether	0.000	0.000	0.0	0#	0.00
49	P,T,M 4-Methyl-2-pentanone	0.476	0.549	-15.3	144	0.00
50	P,T,M cis-1,3-Dichloropropene	0.509	0.570	-12.0	149	0.00
51	I CHLOROBENZENE-D5	1.000	1.000	0.0	153	0.00
52	S Toluene-d8	1.339	1.199	10.5	143	0.00
53	P,C,T,M Toluene	1.623	1.434	11.6	156	0.00
54	T,M Ethyl methacrylate	0.574	0.537	6.4	149	0.00
55	P,T,M trans-1,3-Dichloropropene	0.532	0.515	3.2	154	0.00
56	P,T,M 1,1,2-Trichloroethane	0.337	0.318	5.6	157	0.00
57	P,T,M 2-Hexanone	0.417	0.418	-0.2	149	0.00
58	T,M 1,3-Dichloropropane	0.616	0.592	3.9	160	0.00
59	P,T,M Tetrachloroethene	0.317	0.286	9.8	162	0.00
60	P,T,M Dibromochloromethane	0.312	0.312	0.0	162	0.00
61	P,T,M 1,2-Dibromoethane	0.345	0.332	3.8	154	0.00
62	T,M 1-Chlorohexane	0.607	0.622	-2.5	174	0.00
63	P,T,M Chlorobenzene	0.968	1.007	-4.0	182	-0.01
64	T,M 1,1,1,2-Tetrachloroethane	0.300	0.330	-10.0	186	0.00
65	P,C,T,M Ethylbenzene	1.717	1.762	-2.6	181	0.00
66	P,T,M m-Xylene & p-Xylene	1.254	1.312	-4.6	187	0.00
67	P,T,M o-Xylene	1.225	1.349	-10.1	191	0.00
68	P,T,M Styrene	1.053	1.158	-10.0	186	0.00
69	P,T,M Isopropylbenzene	1.425	1.545	-8.4	192	0.00
70	I 1,2-DICHLOROBENZENE-D4	1.000	1.000	0.0	135	0.00
71	P,T,M Bromoform	0.506	0.661	-30.6#	187	0.00
72	P,T,M 1,1,2,2-Tetrachloroethane	1.211	1.420	-17.3	174	0.00
73	S 4-Bromofluorobenzene	1.138	1.242	-9.1	154	0.00
74	T,M 1,2,3-Trichloropropane	0.318	0.368	-15.7	169	0.00
75	T,M trans-1,4-Dichloro-2-butene	0.346	0.409	-18.2	180	0.00
76	T,M n-Propylbenzene	4.791	5.798	-21.0#	194	0.00
77	T,M Bromobenzene	0.981	1.129	-15.1	181	0.00
78	T,M 1,3,5-Trimethylbenzene	2.834	3.081	-8.7	170	0.00
79	T,M 2-Chlorotoluene	2.908	3.403	-17.0	186	0.00
80	T,M 4-Chlorotoluene	2.660	3.130	-17.7	185	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.16min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
81	T,M	tert-Butylbenzene	0.619	0.684	-10.5	176	0.00
82	T,M	1,2,4-Trimethylbenzene	2.869	2.950	-2.8	160	0.00
83	T,M	sec-Butylbenzene	3.869	3.958	-2.3	161	0.00
84	T,M	p-Isopropyltoluene	2.938	2.901	1.3	155	0.00
85	P,T,M	1,3-Dichlorobenzene	1.645	1.699	-3.3	161	0.00
86	T,M	1,2,3-Trimethylbenzene	2.615	0.000	100.0#	0#	-16.48#
87	P,T,M	1,4-Dichlorobenzene	1.662	1.740	-4.7	161	0.00
88	T,M	n-Butylbenzene	2.885	2.985	-3.5	159	0.00
89	P,T,M	1,2-Dichlorobenzene	1.485	1.589	-7.0	167	0.00
90	P,T,M	1,2-Dibromo-3-chloropropane	0.185	0.187	-1.1	149	-0.01
91	P,T,M	1,2,4-Trichlorobenzene	0.831	0.858	-3.2	160	0.00
92	T,M	Hexachlorobutadiene	0.382	0.378	1.0	154	0.00
93	T,M	Naphthalene	2.090	2.169	-3.8	159	0.00
94	T,M	1,2,3-Trichlorobenzene	0.724	0.733	-1.2	158	0.00

CCM 2/10/16

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 8:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-DIFLUOROBENZENE	7.62	114	2388604	50.00	ug/l	-0.01
51) CHLOROBENZENE-D5	12.31	117	2287486	50.00	ug/l	0.00
70) 1,2-DICHLOROBENZENE-D4	17.14	152	805148	50.00	ug/l	0.00
System Monitoring Compounds						
33) Dibromofluoromethane	6.40	111	695722	47.68	ug/l	0.00
Spiked Amount 50.000			Recovery = 95.36%			
39) 1,2-Dichloroethane-d4	7.07	65	662136	49.58	ug/l	-0.01
Spiked Amount 50.000			Recovery = 99.16%			
52) Toluene-d8	9.88	98	2741682	44.77	ug/l	0.00
Spiked Amount 50.000			Recovery = 89.54%			
73) 4-Bromofluorobenzene	14.39	95	1000089	54.59	ug/l	0.00
Spiked Amount 50.000			Recovery = 109.18%			
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.71	85	668158	57.16	ug/l	99
3) Chloromethane	1.96	50	1289152	54.47	ug/l	99
4) Vinyl chloride	2.07	62	867259	54.43	ug/l	99
5) Bromomethane	2.57	94	592598	46.25	ug/l	99
6) Chloroethane	2.66	64	642893	50.87	ug/l	99
7) Dichlorofluoromethane	2.71	67	1572243	53.87	ug/l	99
8) Trichlorofluoromethane	2.93	101	778186	50.26	ug/l	99
9) Acrolein	3.41	56	502611	226.76	ug/l	98
10) 1,1,2-Trichloro-1,2,2-trif	3.45	151	358279	45.02	ug/l	97
11) Acetone	3.48	43	1511815	252.10	ug/l	97
12) 1,1-Dichloroethene	3.63	61	1096825	48.39	ug/l	97
13) tert-Butyl alcohol	3.72	59	695246	279.45	ug/l #	1
14) Acetonitrile	3.79	41	1684975	578.05	ug/l	94
15) Iodomethane	4.00	142	924815	45.06	ug/l	98
17) Methylene chloride	4.21	49	1219178	52.01	ug/l	96
18) Carbon disulfide	4.21	76	3148650	54.20	ug/l	100
19) Acrylonitrile	4.37	53	1930085	260.12	ug/l	99
20) tert-Butyl methyl ether (M	4.40	73	2480482	52.78	ug/l	99
21) trans-1,2-Dichloroethene	4.57	61	1128956	47.75	ug/l	97
22) Isopropyl ether (DIPE)	4.97	45	3904608	50.55	ug/l	98
23) Vinyl acetate	5.12	43	2303167	45.63	ug/l	100
24) 1,1-Dichloroethane	5.12	63	1473814	49.72	ug/l	99
26) tert-Butyl ethyl ether (ET	5.49	59	2969783	50.72	ug/l	99
27) 2-Butanone	5.65	43	2879253	254.98	ug/l	99
28) 2,2-Dichloropropane	5.83	77	668737	53.83	ug/l	98
29) cis-1,2-Dichloroethene	5.91	96	952633	50.16	ug/l	97
30) Chloroform	6.10	83	1288430	50.09	ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 8:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
31)	Bromochloromethane	6.32	49	868635	51.81 ug/l	95
32)	Tetrahydrofuran	6.37	42	330466	50.01 ug/l	97
34)	1,1,1-Trichloroethane	6.64	97	825028	50.12 ug/l	98
36)	1,1-Dichloropropene	6.86	110	364898	48.39 ug/l	99
37)	Carbon tetrachloride	6.98	119	642270	50.22 ug/l	98
38)	tert-Amyl methyl ether (TA	7.02	87	502790	52.75 ug/l	96
40)	1,2-Dichloroethane	7.20	62	854904	52.39 ug/l	99
41)	Benzene	7.22	78	3242111	51.52 ug/l	99
42)	Trichloroethene	8.08	130	776776	51.52 ug/l	97
44)	1,2-Dichloropropane	8.35	63	838280	52.54 ug/l	99
45)	Bromodichloromethane	8.69	83	945710	54.83 ug/l	99
46)	1,4-Dioxane	8.72	88	187982	1109.23 ug/l	96
47)	Dibromomethane	8.76	93	506540	54.96 ug/l	97
49)	4-Methyl-2-pentanone	9.20	43	6552177	288.28 ug/l	99
50)	cis-1,3-Dichloropropene	9.51	75	1360647	55.97 ug/l	98
53)	Toluene	10.00	91	3279296	44.18 ug/l	100
54)	Ethyl methacrylate	10.30	69	1228224	46.73 ug/l	99
55)	trans-1,3-Dichloropropene	10.30	75	1177198	48.38 ug/l	99
56)	1,1,2-Trichloroethane	10.54	97	727657	47.15 ug/l	98
57)	2-Hexanone	10.57	43	4782731	250.96 ug/l	100
58)	1,3-Dichloropropane	10.95	76	1353143	48.02 ug/l	100
59)	Tetrachloroethene	11.03	164	654104	45.08 ug/l	99
60)	Dibromochloromethane	11.35	129	713421	50.02 ug/l	100
61)	1,2-Dibromoethane	11.68	107	758765	48.14 ug/l	96
62)	1-Chlorohexane	11.98	91	1423802	51.29 ug/l	99
63)	Chlorobenzene	12.37	112	2304191	52.02 ug/l	100
64)	1,1,1,2-Tetrachloroethane	12.45	131	755640	55.10 ug/l	98
65)	Ethylbenzene	12.47	91	4030433	51.32 ug/l	98
66)	m-Xylene & p-Xylene	12.60	91	6000755	104.59 ug/l	100
67)	o-Xylene	13.33	91	3086844	55.09 ug/l	100
68)	Styrene	13.41	104	2648158	54.95 ug/l	100
69)	Isopropylbenzene	13.97	105	3534618	54.24 ug/l	99
71)	Bromoform	13.96	173	531997	55.22 ug/l	99
72)	1,1,2,2-Tetrachloroethane	14.27	83	1143688	58.64 ug/l	99
74)	1,2,3-Trichloropropane	14.54	110	296244	57.87 ug/l	96
75)	trans-1,4-Dichloro-2-buten	14.67	53	329505	59.17 ug/l	100
76)	n-Propylbenzene	14.67	91	4668123	60.51 ug/l	100
77)	Bromobenzene	14.72	156	908922	57.53 ug/l	97
78)	1,3,5-Trimethylbenzene	14.95	105	2480972	54.37 ug/l	98
79)	2-Chlorotoluene	14.95	91	2740011	58.50 ug/l	100
80)	4-Chlorotoluene	15.04	91	2519757	58.82 ug/l	99

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

Quantitation Report (QT Reviewed)

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 8:01 2016 Quant Results File: VO02J14.RES

Quant Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration
DataAcq Meth : VO02J14

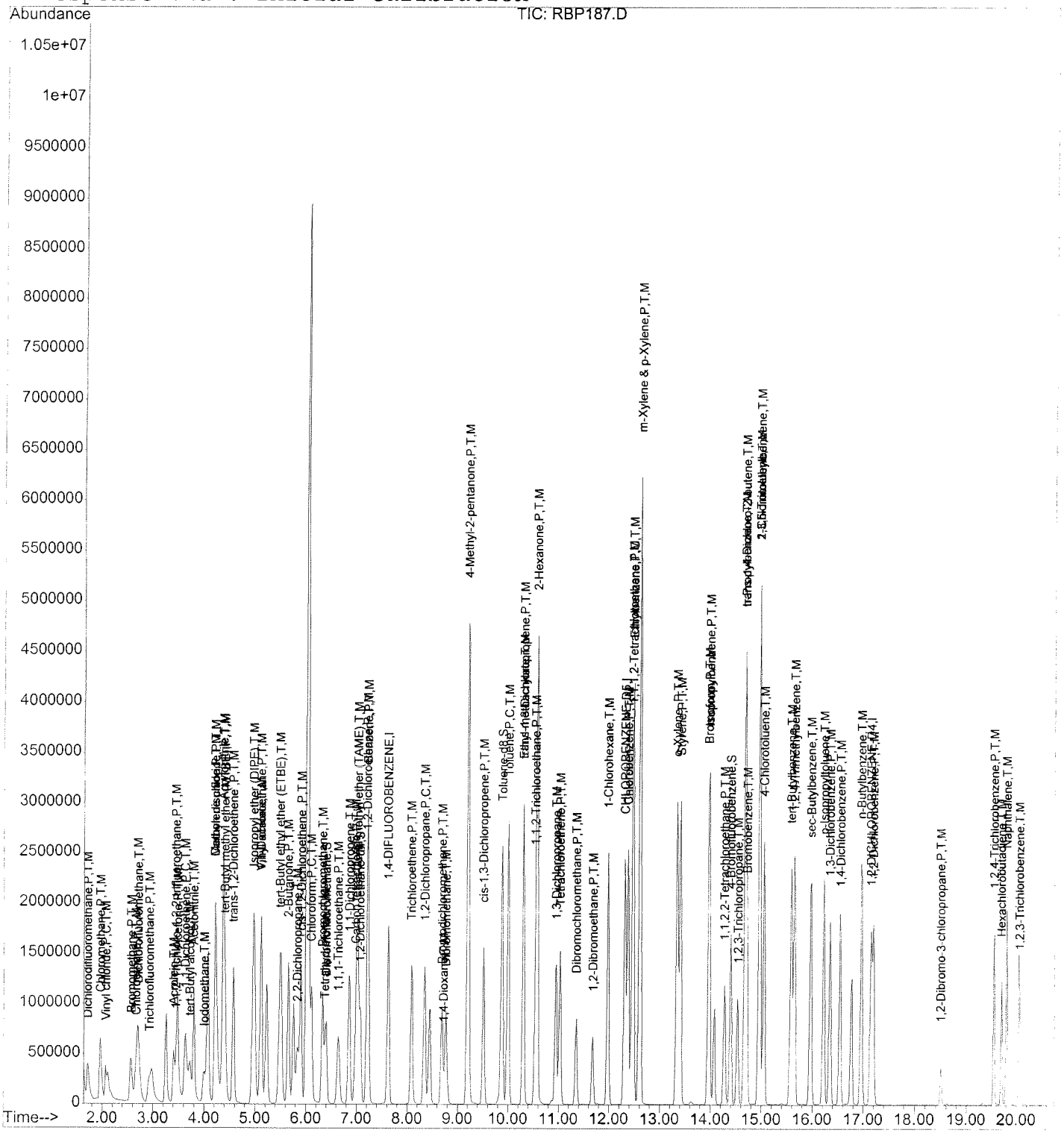
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
81) tert-Butylbenzene	15.58	134	550459	55.25 ug/l	97
82) 1,2,4-Trimethylbenzene	15.64	105	2375031	51.41 ug/l	100
83) sec-Butylbenzene	15.97	105	3186849	51.15 ug/l	99
84) p-Isopropyltoluene	16.22	119	2336078	49.38 ug/l	100
85) 1,3-Dichlorobenzene	16.34	146	1368305	51.64 ug/l	99
87) 1,4-Dichlorobenzene	16.55	146	1401141	52.36 ug/l	99
88) n-Butylbenzene	16.95	91	2403355	51.74 ug/l	100
89) 1,2-Dichlorobenzene	17.19	146	1279633	53.51 ug/l	100
90) 1,2-Dibromo-3-chloropropan	18.50	157	150395	46.47 ug/l	96
91) 1,2,4-Trichlorobenzene	19.55	180	691035	51.66 ug/l	100
92) Hexachlorobutadiene	19.70	225	304426	49.46 ug/l	99
93) Naphthalene	19.81	128	1746594	51.90 ug/l	99
94) 1,2,3-Trichlorobenzene	20.06	180	590123	50.62 ug/l	100

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

Quantitation Report

Data File : D:\HPCHEM\1\DATA\16B10\RBP187.D Vial: 2
Acq On : 10 Feb 2016 7:15 am Operator: CMendo
Sample : CVO02J1421 Inst : TO02
Misc : 50ppb 8260/250ppb TBA-Ket-A-An Multiplr: 1.00
MS Integration Params: RTE.P
Quant Time: Feb 10 8:01 2016 Quant Results File: VO02J14.RES

Method : D:\HPCHEM\1\METHODS\VO02J14.M (RTE Integrator)
Title : METHOD 8260 5.0mL
Last Update : Thu Oct 15 22:16:04 2015
Response via : Initial Calibration



ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 10/14/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A02-040

BATCH V0Ø2J146

Sample Prep ID	Data File Name	Lab Sample ID	* Sample Amount (µL)	DF	Matrix W pH <2	Matrix W Cl_2 <5ppm	Matrix S	Notes
01	RJP184	BFBØ2J11		1.0	NA	NA	NA	09:11
02	85	VOØ2J141	.02					1 5 ppb
03	86	2	.04					2 10
04	87	3	.08					4 20
05	88	4	.2					10 50
06	89	5	.4					20 100
07	90	6	1					50 250
08	91	7	2					100 500
09	92	8	4					200 CGM 10/14/15 1000
10	93	9	6					300 1500
11	94	10	10					500 2500 14:52
12	95	Rinse						
13	96							
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								
30								CGM 10/14/15

Instrument No.	02
INITIAL CALIBRATION REFERENCE	
DATE	10/14/15
ICAL ID	VOØ2J14

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
Gas DCC 052	SV1-24 - 98-01	*	250
4 Add'l DCC 123TMB	85-01		250
	99-02		250
	910-03		250
DCC Ket/Al/Am	99-01		1250 ~~250~~ CGM 10/14/15
DCC 8260	94-02		250
BFB	76-01	1	52
IS/SURR. IS SS	88-03	1	250
	89-01	*	250
ICV/LCS Gas 052			
ICV/LCS 123 TMB 3 Add'l			
ICV/LCS Ket/Al/Am 8260			
ICV/LCS 2BuOH			
Data File Folder	15J14		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		-10-20
Methanol		-10-23
$NaHSO_4$	SW1A-005-03-22	-21
Reagent Water	RWJ-14-001	
Sand	SW1A-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO02	

Comments: All ICAL and QC standards were prepared with 5.0g sand and 1.0g $NaHSO_4$.

☐ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 10/15/15 Disposed By: CGM

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EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 0 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 10/14/15 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A02-040

BATCH VC02J141

Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH <2	Matrix W Cl_2 <5ppm	Matrix S	Notes
01	RJP197	BFB02J12		1.0	NA	NA	NA	20:46
02	↓ 98	IV02J141		↓	↓	↓	↓	50 250 ppb 21:19
03								
04								
05								
06								
07								
08								
09								
10								
11								
12								
13								
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16								
17								
18								
19								
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21								
22								
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24								
25								
26								
27								
28								
29								
30								CGM 10/14/15

Instrument No.	02
INITIAL CALIBRATION REFERENCE	
DATE	10/14/15
ICAL ID	V02J14

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC			
DCC			
DCC			
DCC			
BFB	SV1-24-76-01	1	50
IS/SURR.	97-03	1	250
ICV/LCS GAS CS2	90-02	1	250
	91-01	1	250
ICV/LCS 3 123 TMB	97-01	1	250
	80-03	5	50
ICV/LCS 8260 Ketones/Alc	85-02	5	250
	93-02	5	50
ICV/LCS 2 EtOH	SV1-12-49-16	1.25	1000
Data File Folder	15J14		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		-10-20
Methanol		-10-23
$NaHSO_4$	SW1A-005-03-22	-21
Reagent Water	RW5-14-001	
Sand	SW1A-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO02	

Comments:

☐ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 10/15/15 Disposed By: CGM

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR VOLATILES

SOP ☑ EMAX-8260 Rev.No. 10 ☐ EMAX-8260C Rev. No. 1 ☐ EMAX-8260SIM Rev.No. 1 ☐ EMAX-M8260SIM Rev.No. 0 ☐ EMAX-TCPSIM Rev.No. 2 ☐ EMAX-624 Rev.No. 4

Start Date: 2/11/16 ☑ 5-mL Purge ☐ 10-mL Purge ☐ 25-mL Purge

Book #: A02-041

BATCH CV02J1421

Sample Prep ID	Data File Name	Lab Sample ID	Sample Amount	DF	Matrix W pH < 2	Matrix W Cl_2 < 5ppm	Matrix S	Notes
01	RBP186	BFB02B12						06:42
02	87	CV02J1421						
03	88	VS02B12L	5.0g	1.0				
04	89	C						
05	90	B						
06	91	Test						
07	92	16B049-09	☆	☆			✓	
08	93	10					✓	
09	94	16B060-01					✓	
10	95	16B049-04R					✓	
11	96	16B060-02					✓	
12	97	03R CGM 2/10/16					✓	
13	98	04					✓	
14	99	05					✓	
15	RBP100	06					✓	
16	01	07					✓	
17	02	08					✓	
18	03	09					✓	
19	04	02M					✓	1 analyte out, no more
20	05	02S					✓	sample available for RR
21	06	Rinse						
22	07	16B068-07	☆	☆			✓	
23	08	08					✓	
24	09	09					✓	
25	10	10					✓	17:20
26	11	Rinse						
27	12							
28	13							
29	14							
30	15							

CGM 2/10/16

Instrument No.	02
INITIAL CALIBRATION REFERENCE	
DATE	10/14/15
ICAL ID	V02J14

STANDARDS

NAME	ID	Amount (µl)	Conc. (mg/L)
DCC	SV1-26-16-03	1	
DCC	13-02	1	
DCC	23-03	5	
DCC	16-01	5	
BFB	29-01	1	50
IS/SURR.	13-01	1	250
ICV/LCS	19-01	1	
ICV/LCS	20-02	1	
ICV/LCS	22-01	5	
ICV/LCS	21-02	5	
Data File Folder	16B10		

	LOT #	Syringe Lot #
pH strip		MSV-01-02-23
Chlorine strip		-10-20
Methanol		-10-23
$NaHSO_4$	SWA-005-10-16	-21
Reagent Water	RW5-14-001	
Sand	SWA-005-11-20	

Electronic Data Archival Location	Date
HPCHEM_VOA/TO02	2/16/16

Comments:

☆ Refer to sample weight log

Analyzed By: CGM

Date Disposed: 2/11/16 Disposed By: CGM

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EXTRACTION LOGS

EMAX LABORATORIES, INC.

PRESERVATION LOG FOR VOLATILES

16VPB014

PrepBatchID	Lab Sample ID	W1 (g)	DateTime	Wf (g)	DateTime	ExpWs(g)	Ws(g)	PrepBFactor	Comments
16VPB01401	16B060-01	30.829	2/8/16 11:56	37.23	2/8/16 11:56	5	6.401	0.78	
16VPB01402	16B060-02	31.261	2/8/16 11:57	36.59	2/8/16 11:57	5	5.329	0.94	
16VPB01403	16B060-~~03~~ 02R	31.276	2/8/16 11:57	36.84	2/8/16 11:57	5	5.564	0.9	
16VPB01404	16B060-04	30.818	2/8/16 11:57	35.84	2/8/16 11:58	5	5.022	1	
16VPB01405	16B060-05	32.231	2/8/16 11:58	37.1	2/8/16 11:58	5	4.869	1.03	
16VPB01406	16B060-06	30.974	2/8/16 11:58	35.8	2/8/16 11:58	5	4.826	1.04	
16VPB01407	16B060-07	31.845	2/8/16 11:59	37.4	2/8/16 11:59	5	5.555	0.9	
16VPB01408	16B060-08	32.028	2/8/16 11:59	37.01	2/8/16 11:59	5	4.982	1	
16VPB01409	16B060-09	30.797	2/8/16 12:00	36.16	2/8/16 12:00	5	5.363	0.93	
16VPB01410	16B060-01R	31.969	2/8/16 12:00	38	2/8/16 12:00	5	6.031	0.83	
16VPB01411	16B060-02~~R~~M	31.01	2/8/16 12:00	36.59	2/8/16 12:01	5	5.58	0.9	
16VPB01412	16B060-~~03R~~ 025	31.161	2/8/16 12:01	36.75	2/8/16 12:01	5	5.589	0.89	
16VPB01413	16B060-04R	32.059	2/8/16 12:01	37.02	2/8/16 12:01	5	4.961	1.01	
16VPB01414	16B060-05R	31.771	2/8/16 12:01	36.8	2/8/16 12:02	5	5.029	0.99	
16VPB01415	16B060-06R	30.895	2/8/16 12:02	36.06	2/8/16 12:02	5	5.165	0.97	
16VPB01416	16B060-07R	31.672	2/8/16 12:02	36.78	2/8/16 12:02	5	5.108	0.98	
16VPB01417	16B060-08R	31.521	2/8/16 12:02	36.91	2/8/16 12:03	5	5.389	0.93	
16VPB01418	16B060-09R	31.45	2/8/16 12:03	36.78	2/8/16 12:03	5	5.33	0.94	

☑ EMAX-5035 Rev. 3 ☑ Balance Calibration Check performed prior to use Surrogate ID: Prepared By: RTorra

☐ Encore+$NaHSO_4 \cdot H_2O$ ☑ BalanceID 25451062 ☐ BalanceID 25650797 BlankSoil Lot#: Standard Added By: N/A

☐ Frozen Sample ☐ Pre-weighed vial w/ H2O NaHSO4H2O: LOT # 143424 Witnessed By: CMendo

☑ Pre-weighed vial w/ NaHSO4•H2O soln LOT# 0327101X Expected Ws(g): 5 Extract Rcvd By: CMendo

☐ Volumetric dispenser was checked with 5-ml volumetric flask Sample Location: VW07 Checked By: CMendo

W1=Weight of Vial + Stirrer+NaHSO4•H2O+Solvent Wf=W1 + 5ample

SEMI VOLATILE ORGANICS

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG03-S-005	Date Analyzed:	02/12/16 14:17
Lab Samp ID	: B060-01	Dilution Factor:	1
Lab File ID	: RBH147	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 7.6
Calib. Ref.	: RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.090	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.090	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.090	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.090	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.098	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.090	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.090	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.090	0.18
2,4-DINITROPHENOL	ND	0.72	0.093	0.18
2,4-DINITROTOLUENE	ND	0.36	0.090	0.18
2,6-DINITROTOLUENE	ND	0.36	0.090	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.090	0.18
2-CHLOROPHENOL	ND	0.36	0.090	0.18
2-METHYLPHENOL	ND	0.36	0.090	0.18
2-NITROANILINE	ND	0.36	0.090	0.18
2-NITROPHENOL	ND	0.36	0.090	0.18
3&4-METHYLPHENOL	ND	0.36	0.090	0.18
3-NITROANILINE	ND	0.36	0.090	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.72	0.090	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.097	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.090	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.090	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.11	0.18
BENZYL ALCOHOL	ND	0.36	0.090	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.090	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.090	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.090	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.12	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.090	0.18
CARBAZOLE	ND	0.36	0.096	0.18
DIBENZOFURAN	ND	0.36	0.090	0.18
DIETHYLPHTHALATE	ND	0.36	0.090	0.18
DIMETHYLPHTHALATE	ND	0.36	0.090	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.10	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.10	0.18
HEXACHLOROBENZENE	ND	0.36	0.090	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.090	0.18
HEXACHLOROETHANE	ND	0.36	0.090	0.18
ISOPHORONE	ND	0.36	0.090	0.18
NITROBENZENE	ND	0.36	0.090	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.090	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.090	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.17	0.18
PENTACHLOROPHENOL	ND	0.72	0.090	0.18
PHENOL	ND	0.36	0.090	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.51	2.165	69.7	35-125
2-FLUOROBIPHENYL	0.443	0.7215	61.4	45-105
2-FLUOROPHENOL	1.38	2.165	63.9	35-105
NITROBENZENE-D5	0.463	0.7215	64.2	35-100
TERPHENYL-D14	0.657	0.7215	91.1	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH147.D Vial: 17
Acq On : 12 Feb 2016 14:17 Operator: KVu
Sample : 16B060-01 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 08:27:57 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	435281	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1606498	40.00	ppm	0.00
41) Acenaphthene-d10	6.052	164	1010965	40.00	ppm	0.00
71) Phenanthrene-d10	7.795	188	1836445	40.00	ppm	0.00
87) Chrysene-d12	10.574	240	2103508	40.00	ppm	0.00
97) Perylene-d12	11.949	264	1777248	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	252070	19.16	ppm	0.00
Spiked Amount 30.000			Recovery	=	63.87%	
6) Phenol-d5	2.506	99	328190	19.61	ppm	0.00
Spiked Amount 30.000			Recovery	=	65.37%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	107105	6.42	ppm	0.00
Spiked Amount 10.000			Recovery	=	64.20%	
46) 2-Fluorobiphenyl	5.254	172	254327	6.14	ppm	0.00
Spiked Amount 10.000			Recovery	=	61.40%	
75) 2,4,6-Tribromophenol	6.993	330	114964	20.91	ppm	0.00
Spiked Amount 30.000			Recovery	=	69.70%	
90) Terphenyl-d14	9.505	244	411680	9.11	ppm	0.00
Spiked Amount 10.000			Recovery	=	91.10%	

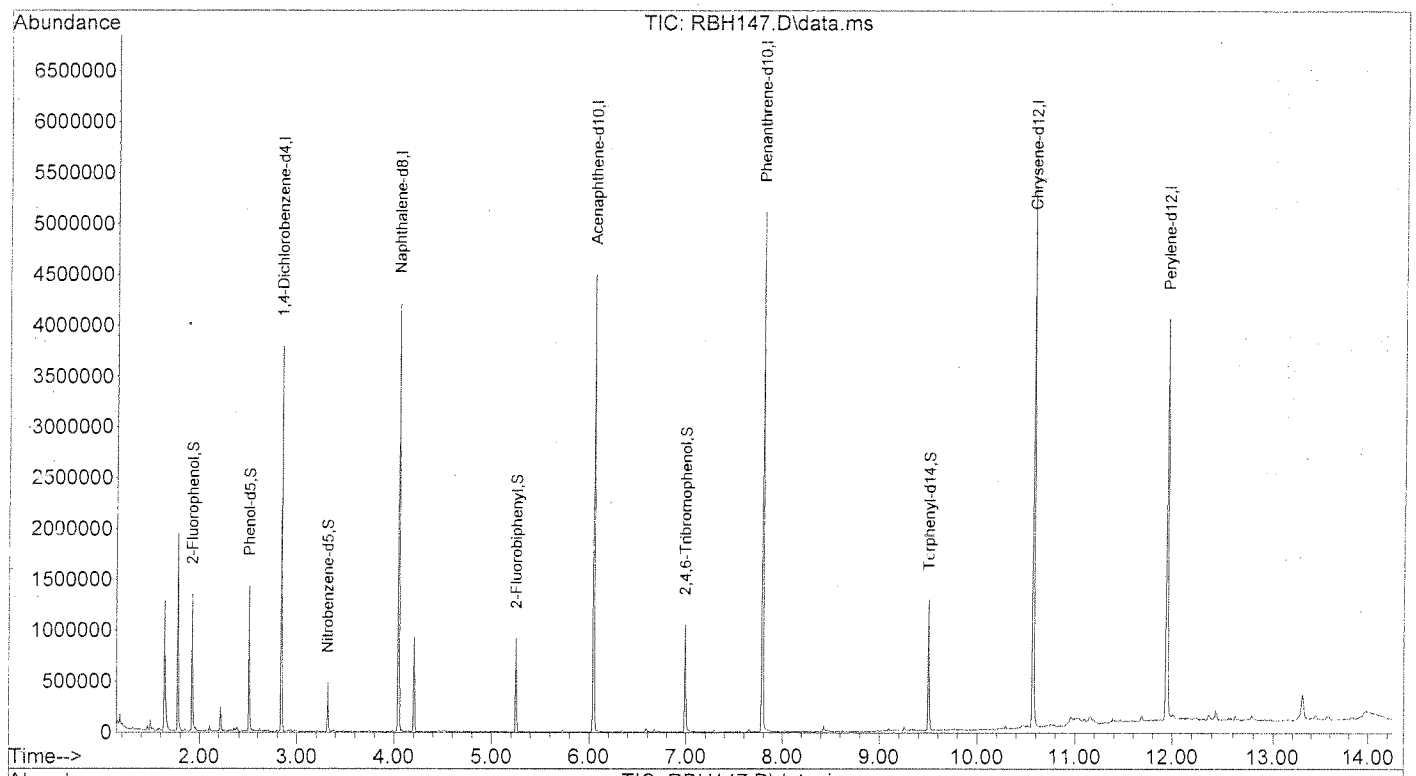
Target Compounds Qvalue

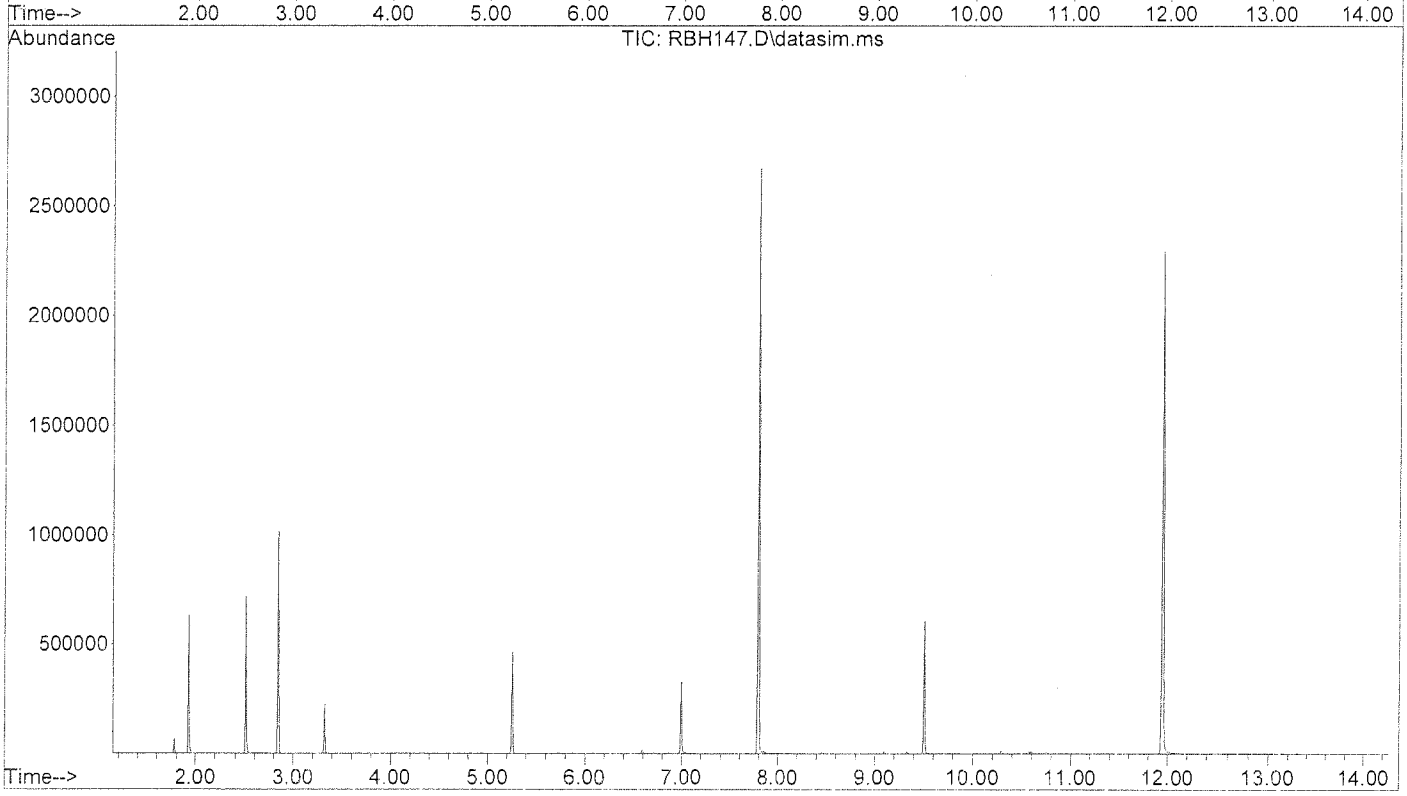
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH147.D
Acq On : 12 Feb 2016 14:17
Sample : 16B060-01
Misc :
Integrator: RTE
Quant Time: Feb 16 08:27:57 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 17
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG03-S-010	Date Analyzed:	02/12/16 14:36
Lab Samp ID:	B060-02	Dilution Factor:	1
Lab File ID:	RBH148	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	9.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.37	0.092	0.18
1,2-DICHLOROBENZENE	ND	0.37	0.092	0.18
1,3-DICHLOROBENZENE	ND	0.37	0.092	0.18
1,4-DICHLOROBENZENE	ND	0.37	0.092	0.18
2,4,5-TRICHLOROPHENOL	ND	0.37	0.10	0.18
2,4,6-TRICHLOROPHENOL	ND	0.37	0.092	0.18
2,4-DICHLOROPHENOL	ND	0.37	0.092	0.18
2,4-DIMETHYLPHENOL	ND	0.37	0.092	0.18
2,4-DINITROPHENOL	ND	0.74	0.095	0.18
2,4-DINITROTOLUENE	ND	0.37	0.092	0.18
2,6-DINITROTOLUENE	ND	0.37	0.092	0.18
2-CHLORONAPHTHALENE	ND	0.37	0.092	0.18
2-CHLOROPHENOL	ND	0.37	0.092	0.18
2-METHYLPHENOL	ND	0.37	0.092	0.18
2-NITROANILINE	ND	0.37	0.092	0.18
2-NITROPHENOL	ND	0.37	0.092	0.18
3&4-METHYLPHENOL	ND	0.37	0.092	0.18
3-NITROANILINE	ND	0.37	0.092	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.74	0.092	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.37	0.099	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.37	0.092	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.37	0.092	0.18
4-NITROANILINE	ND	0.37	0.13	0.18
4-NITROPHENOL	ND	0.37	0.12	0.18
BENZYL ALCOHOL	ND	0.37	0.092	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.37	0.092	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.37	0.092	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.37	0.092	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.37	0.13	0.18
BUTYLBENZYLPHTHALATE	ND	0.37	0.092	0.18
CARBAZOLE	ND	0.37	0.098	0.18
DIBENZOFURAN	ND	0.37	0.092	0.18
DIETHYLPHTHALATE	ND	0.37	0.092	0.18
DIMETHYLPHTHALATE	ND	0.37	0.092	0.18
DI-N-BUTYLPHTHALATE	ND	0.37	0.11	0.18
DI-N-OCTYLPHTHALATE	ND	0.37	0.11	0.18
HEXACHLOROBENZENE	ND	0.37	0.092	0.18
HEXACHLOROBUTADIENE	ND	0.37	0.092	0.18
HEXACHLOROETHANE	ND	0.37	0.092	0.18
ISOPHORONE	ND	0.37	0.092	0.18
NITROBENZENE	ND	0.37	0.092	0.18
N-NITROSODIMETHYLAMINE	ND	0.37	0.092	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.37	0.092	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.37	0.17	0.18
PENTACHLOROPHENOL	ND	0.74	0.092	0.18
PHENOL	ND	0.37	0.092	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.65	2.208	74.7	35-125
2-FLUOROBIPHENYL	0.479	0.7359	65.1	45-105
2-FLUOROPHENOL	1.50	2.208	67.8	35-105
NITROBENZENE-D5	0.503	0.7359	68.3	35-100
TERPHENYL-D14	0.684	0.7359	92.9	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH148.D
Acq On : 12 Feb 2016 14:36
Sample : 16B060-02
Misc :
Integrator: RTE
Quant Time: Feb 16 07:19:36 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 18
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	389577	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1452687	40.00	ppm	0.00
41) Acenaphthene-d10	6.052	164	916141	40.00	ppm	0.00
71) Phenanthrene-d10	7.795	188	1656734	40.00	ppm	0.00
87) Chrysene-d12	10.569	240	1890901	40.00	ppm	0.00
97) Perylene-d12	11.945	264	1618485	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	239414	20.33	ppm	0.00
Spiked Amount 30.000			Recovery	=	67.77%	
6) Phenol-d5	2.506	99	310787	20.75	ppm	0.00
Spiked Amount 30.000			Recovery	=	69.17%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	103029	6.83	ppm	0.00
Spiked Amount 10.000			Recovery	=	68.30%	
46) 2-Fluorobiphenyl	5.254	172	244349	6.51	ppm	0.00
Spiked Amount 10.000			Recovery	=	65.10%	
75) 2,4,6-Tribromophenol	6.993	330	111115	22.40	ppm	0.00
Spiked Amount 30.000			Recovery	=	74.67%	
90) Terphenyl-d14	9.505	244	377527	9.29	ppm	0.00
Spiked Amount 10.000			Recovery	=	92.90%	

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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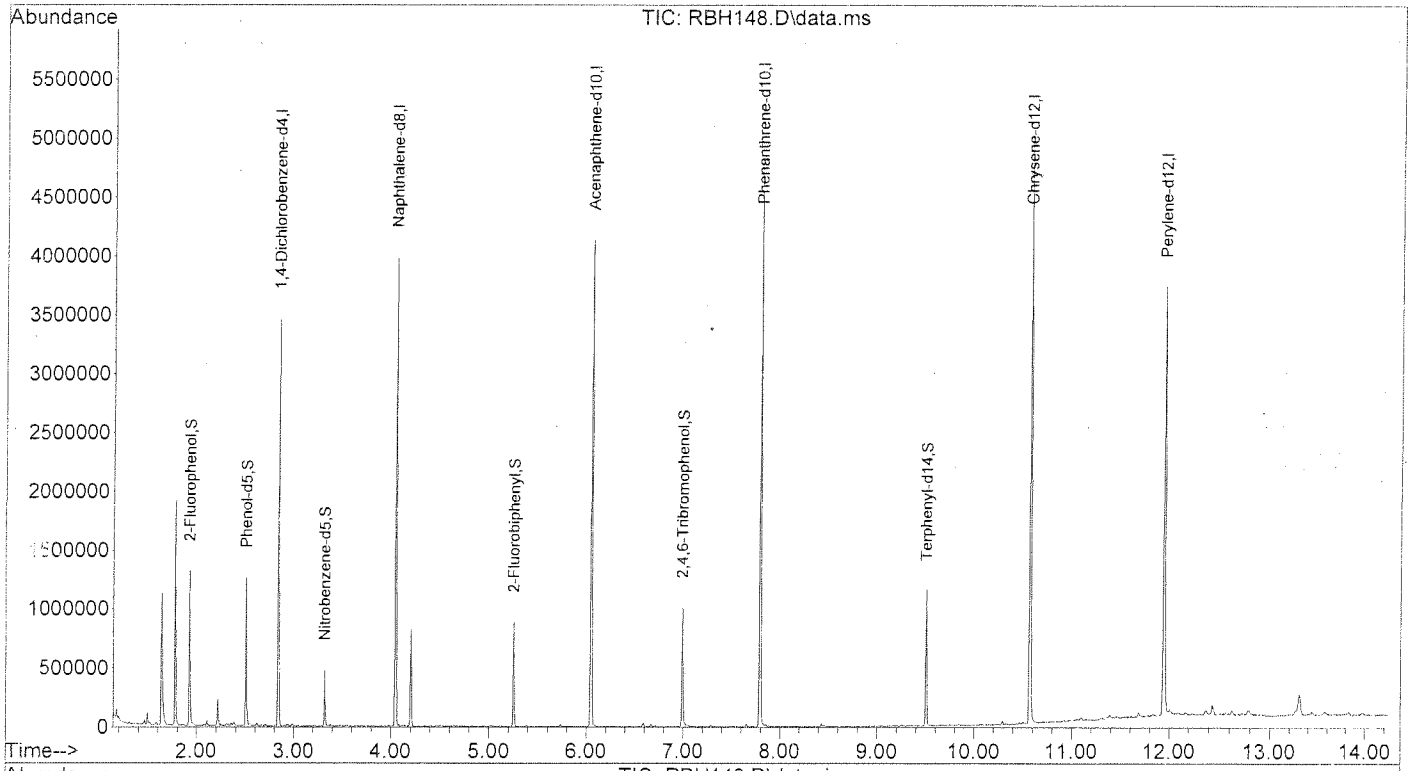
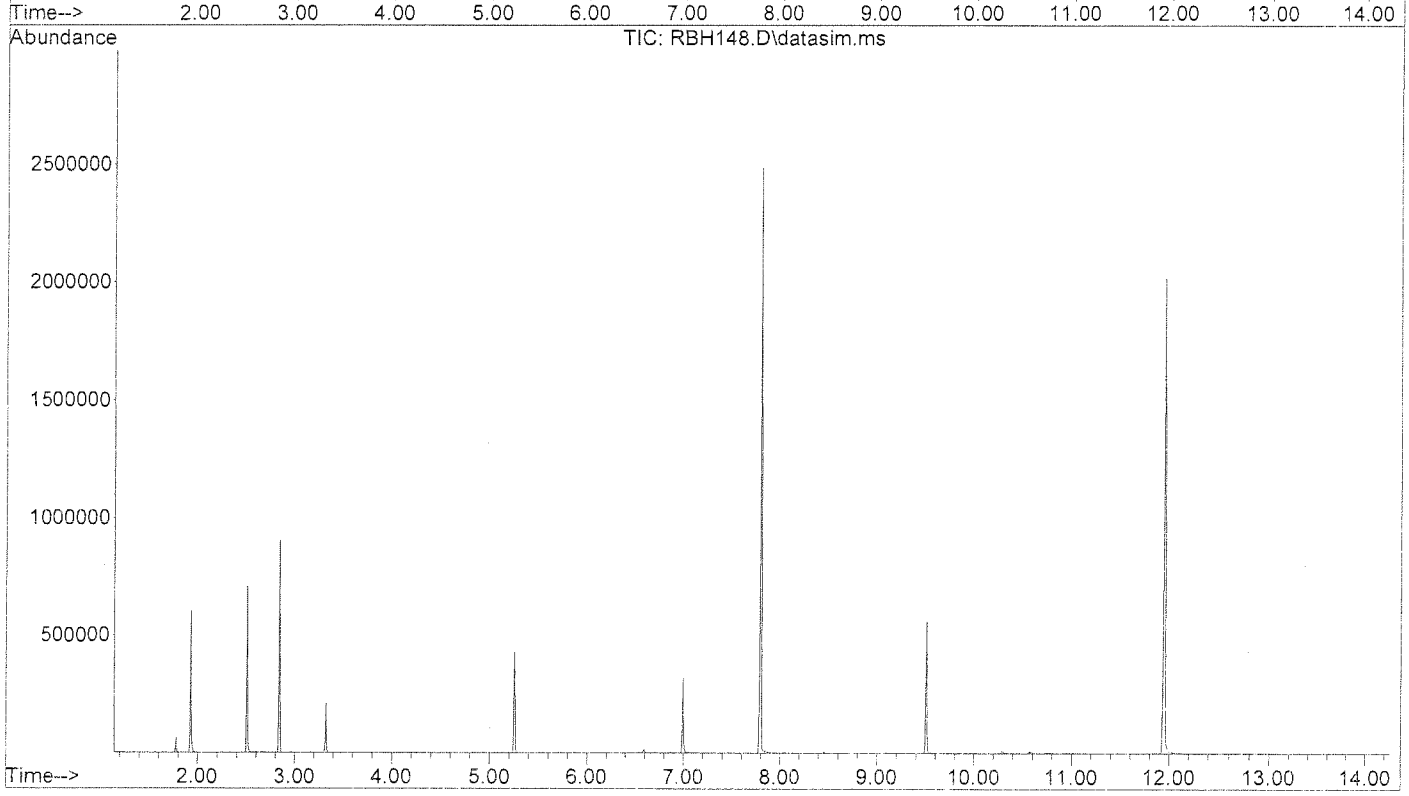
Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH148.D
Acq On : 12 Feb 2016 14:36
Sample : 16B060-02
Misc :
Integrator: RTE
Quant Time: Feb 16 07:19:36 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 18
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION	Date Collected: 02/05/16
Project : CANNON AFB PBR	Date Received: 02/06/16
Batch No. : 16B060	Date Extracted: 02/11/16 17:18
Sample ID: CA504-SG01-S-005	Date Analyzed: 02/12/16 14:56
Lab Samp ID: B060-04	Dilution Factor: 1
Lab File ID: RBH149	Matrix : SOIL
Ext Btch ID: SVB011S	% Moisture : 5.5
Calib. Ref.: RAH047	Instrument ID : T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.35	0.088	0.18
1,2-DICHLOROBENZENE	ND	0.35	0.088	0.18
1,3-DICHLOROBENZENE	ND	0.35	0.088	0.18
1,4-DICHLOROBENZENE	ND	0.35	0.088	0.18
2,4,5-TRICHLOROPHENOL	ND	0.35	0.096	0.18
2,4,6-TRICHLOROPHENOL	ND	0.35	0.088	0.18
2,4-DICHLOROPHENOL	ND	0.35	0.088	0.18
2,4-DIMETHYLPHENOL	ND	0.35	0.088	0.18
2,4-DINITROPHENOL	ND	0.71	0.091	0.18
2,4-DINITROTOLUENE	ND	0.35	0.088	0.18
2,6-DINITROTOLUENE	ND	0.35	0.088	0.18
2-CHLORONAPHTHALENE	ND	0.35	0.088	0.18
2-CHLOROPHENOL	ND	0.35	0.088	0.18
2-METHYLPHENOL	ND	0.35	0.088	0.18
2-NITROANILINE	ND	0.35	0.088	0.18
2-NITROPHENOL	ND	0.35	0.088	0.18
3&4-METHYLPHENOL	ND	0.35	0.088	0.18
3-NITROANILINE	ND	0.35	0.088	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.71	0.088	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.35	0.095	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.35	0.088	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.35	0.088	0.18
4-NITROANILINE	ND	0.35	0.13	0.18
4-NITROPHENOL	ND	0.35	0.11	0.18
BENZYL ALCOHOL	ND	0.35	0.088	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.35	0.088	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.35	0.088	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.35	0.088	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.35	0.12	0.18
BUTYLBENZYLPHTHALATE	ND	0.35	0.088	0.18
CARBAZOLE	ND	0.35	0.094	0.18
DIBENZOFURAN	ND	0.35	0.088	0.18
DIETHYLPHTHALATE	ND	0.35	0.088	0.18
DIMETHYLPHTHALATE	ND	0.35	0.088	0.18
DI-N-BUTYLPHTHALATE	ND	0.35	0.10	0.18
DI-N-OCTYLPHTHALATE	ND	0.35	0.10	0.18
HEXACHLOROBENZENE	ND	0.35	0.088	0.18
HEXACHLOROBUTADIENE	ND	0.35	0.088	0.18
HEXACHLOROETHANE	ND	0.35	0.088	0.18
ISOPHORONE	ND	0.35	0.088	0.18
NITROBENZENE	ND	0.35	0.088	0.18
N-NITROSODIMETHYLAMINE	ND	0.35	0.088	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.35	0.088	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.35	0.16	0.18
PENTACHLOROPHENOL	ND	0.71	0.088	0.18
PHENOL	ND	0.35	0.088	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.46	2.116	69.2	35-125
2-FLUOROBIPHENYL	0.445	0.7055	63.1	45-105
2-FLUOROPHENOL	1.41	2.116	66.7	35-105
NITROBENZENE-D5	0.465	0.7055	65.9	35-100
TERPHENYL-D14	0.621	0.7055	88.0	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH149.D
Vial: 19
Acq On : 12 Feb 2016 14:56
Operator: KVu
Sample : 16B060-04
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 07:19:40 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

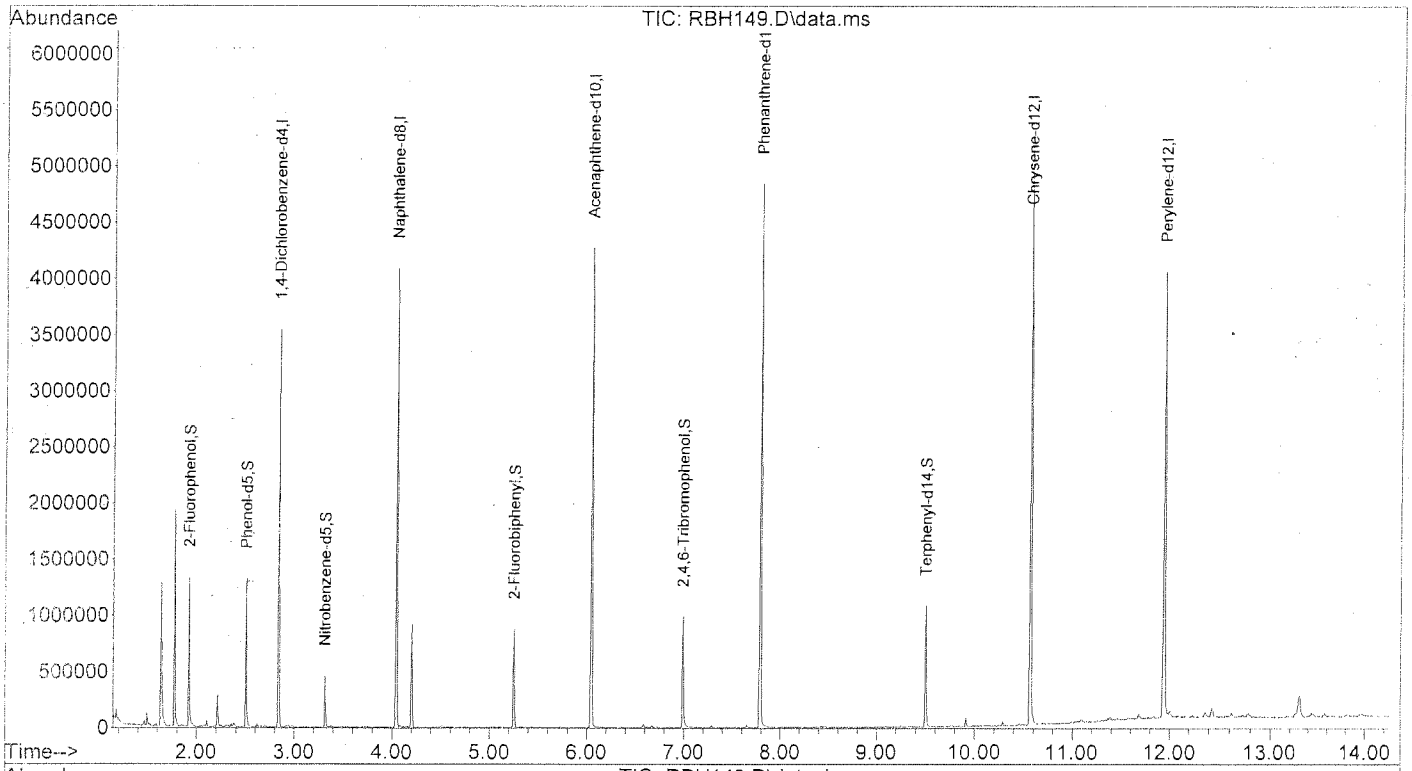
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	405539	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1512837	40.00	ppm	0.00
41) Acenaphthene-d10	6.047	164	949588	40.00	ppm	-0.01
71) Phenanthrene-d10	7.795	188	1712672	40.00	ppm	0.00
87) Chrysene-d12	10.569	240	1977298	40.00	ppm	0.00
97) Perylene-d12	11.945	264	1714018	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	245336	20.01	ppm	0.00
Spiked Amount 30.000			Recovery = 66.70%			
6) Phenol-d5	2.506	99	321755	20.64	ppm	0.00
Spiked Amount 30.000			Recovery = 68.80%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.321	82	103583	6.59	ppm	0.00
Spiked Amount 10.000			Recovery = 65.90%			
46) 2-Fluorobiphenyl	5.254	172	245282	6.31	ppm	0.00
Spiked Amount 10.000			Recovery = 63.10%			
75) 2,4,6-Tribromophenol	6.993	330	106387	20.75	ppm	0.00
Spiked Amount 30.000			Recovery = 69.17%			
90) Terphenyl-d14	9.505	244	373871	8.80	ppm	0.00
Spiked Amount 10.000			Recovery = 88.00%			

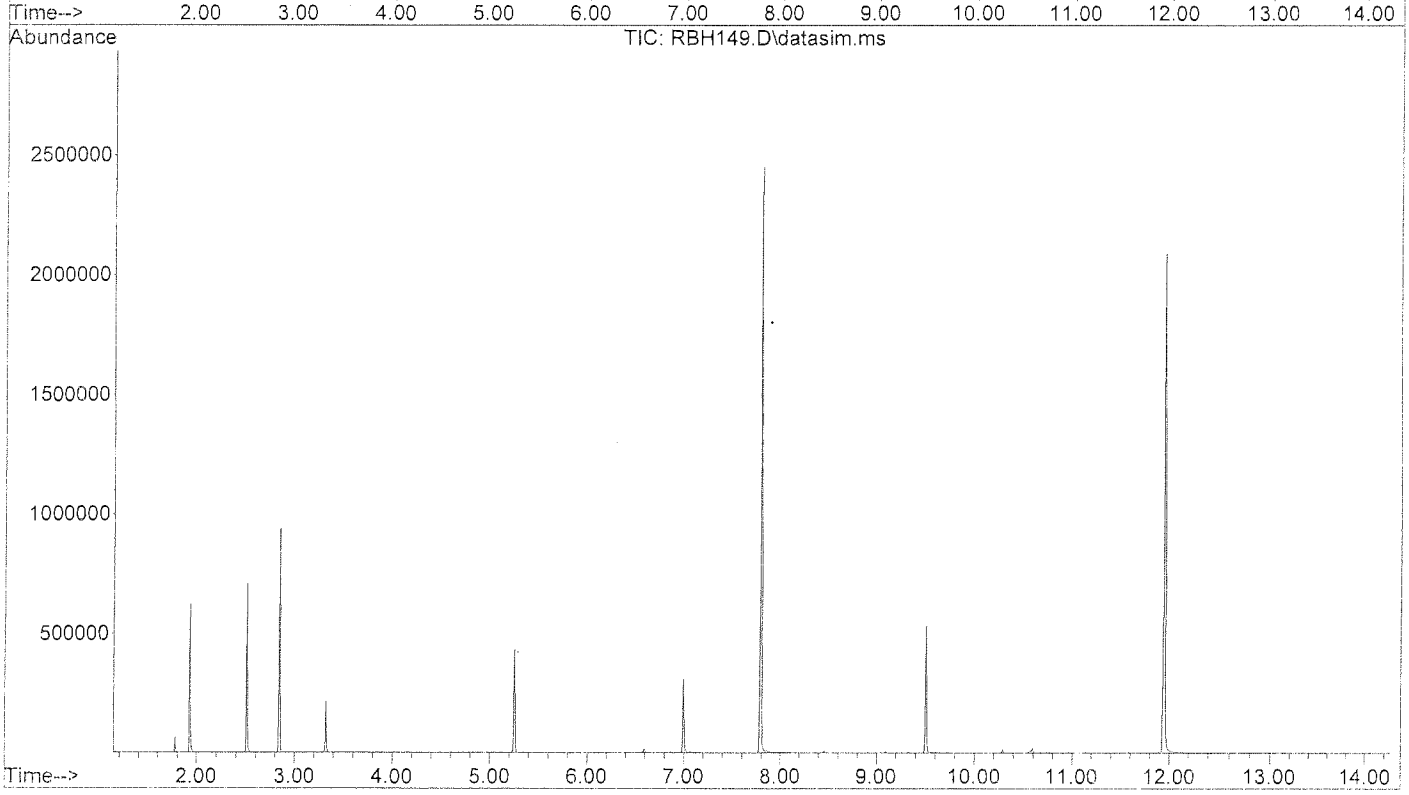
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH149.D
Vial: 19
Acq On : 12 Feb 2016 14:56
Operator: KVu
Sample : 16B060-04
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 07:19:40 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG01-S-010	Date Analyzed:	02/12/16 15:15
Lab Samp ID	: B060-05	Dilution Factor:	1
Lab File ID	: RBH150	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 6.7
Calib. Ref.	: RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.089	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.089	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.089	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.089	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.098	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.089	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.089	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.089	0.18
2,4-DINITROPHENOL	ND	0.71	0.092	0.18
2,4-DINITROTOLUENE	ND	0.36	0.089	0.18
2,6-DINITROTOLUENE	ND	0.36	0.089	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.089	0.18
2-CHLOROPHENOL	ND	0.36	0.089	0.18
2-METHYLPHENOL	ND	0.36	0.089	0.18
2-NITROANILINE	ND	0.36	0.089	0.18
2-NITROPHENOL	ND	0.36	0.089	0.18
3&4-METHYLPHENOL	ND	0.36	0.089	0.18
3-NITROANILINE	ND	0.36	0.089	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.71	0.089	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.096	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.089	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.089	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.11	0.18
BENZYL ALCOHOL	ND	0.36	0.089	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.089	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.089	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.089	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.12	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.089	0.18
CARBAZOLE	ND	0.36	0.095	0.18
DIBENZOFURAN	ND	0.36	0.089	0.18
DIETHYLPHTHALATE	ND	0.36	0.089	0.18
DIMETHYLPHTHALATE	ND	0.36	0.089	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.10	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.10	0.18
HEXACHLOROBENZENE	ND	0.36	0.089	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.089	0.18
HEXACHLOROETHANE	ND	0.36	0.089	0.18
ISOPHORONE	ND	0.36	0.089	0.18
NITROBENZENE	ND	0.36	0.089	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.089	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.089	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.16	0.18
PENTACHLOROPHENOL	ND	0.71	0.089	0.18
PHENOL	ND	0.36	0.089	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.53	2.144	71.3	35-125
2-FLUOROBIPHENYL	0.443	0.7146	62.0	45-105
2-FLUOROPHENOL	1.36	2.144	63.5	35-105
NITROBENZENE-D5	0.460	0.7146	64.4	35-100
TERPHENYL-D14	0.664	0.7146	92.9	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH150.D
Acq On : 12 Feb 2016 15:15
Sample : 16B060-05
Misc :
Integrator: RTE
Quant Time: Feb 16 07:19:44 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 20
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	406649	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1522049	40.00	ppm	0.00
41) Acenaphthene-d10	6.052	164	947406	40.00	ppm	0.00
71) Phenanthrene-d10	7.795	188	1726828	40.00	ppm	0.00
87) Chrysene-d12	10.569	240	1959024	40.00	ppm	0.00
97) Perylene-d12	11.945	264	1689453	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	234078	19.04	ppm	0.00
Spiked Amount 30.000			Recovery	=	63.47%	
6) Phenol-d5	2.506	99	310347	19.85	ppm	0.00
Spiked Amount 30.000			Recovery	=	66.17%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	101741	6.44	ppm	0.00
Spiked Amount 10.000			Recovery	=	64.40%	
46) 2-Fluorobiphenyl	5.254	172	240635	6.20	ppm	0.00
Spiked Amount 10.000			Recovery	=	62.00%	
75) 2,4,6-Tribromophenol	6.993	330	110560	21.38	ppm	0.00
Spiked Amount 30.000			Recovery	=	71.27%	
90) Terphenyl-d14	9.505	244	391188	9.29	ppm	0.00
Spiked Amount 10.000			Recovery	=	92.90%	

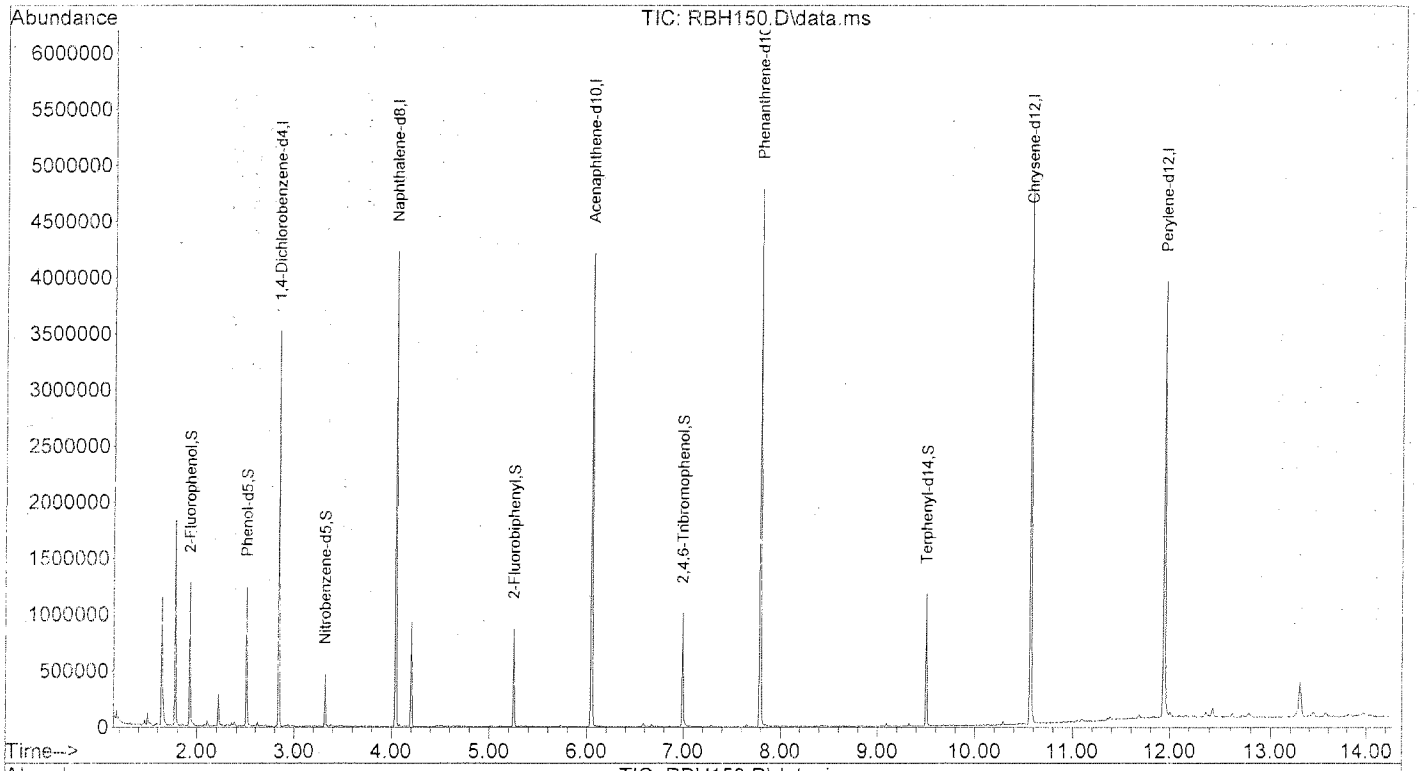
Target Compounds Qvalue

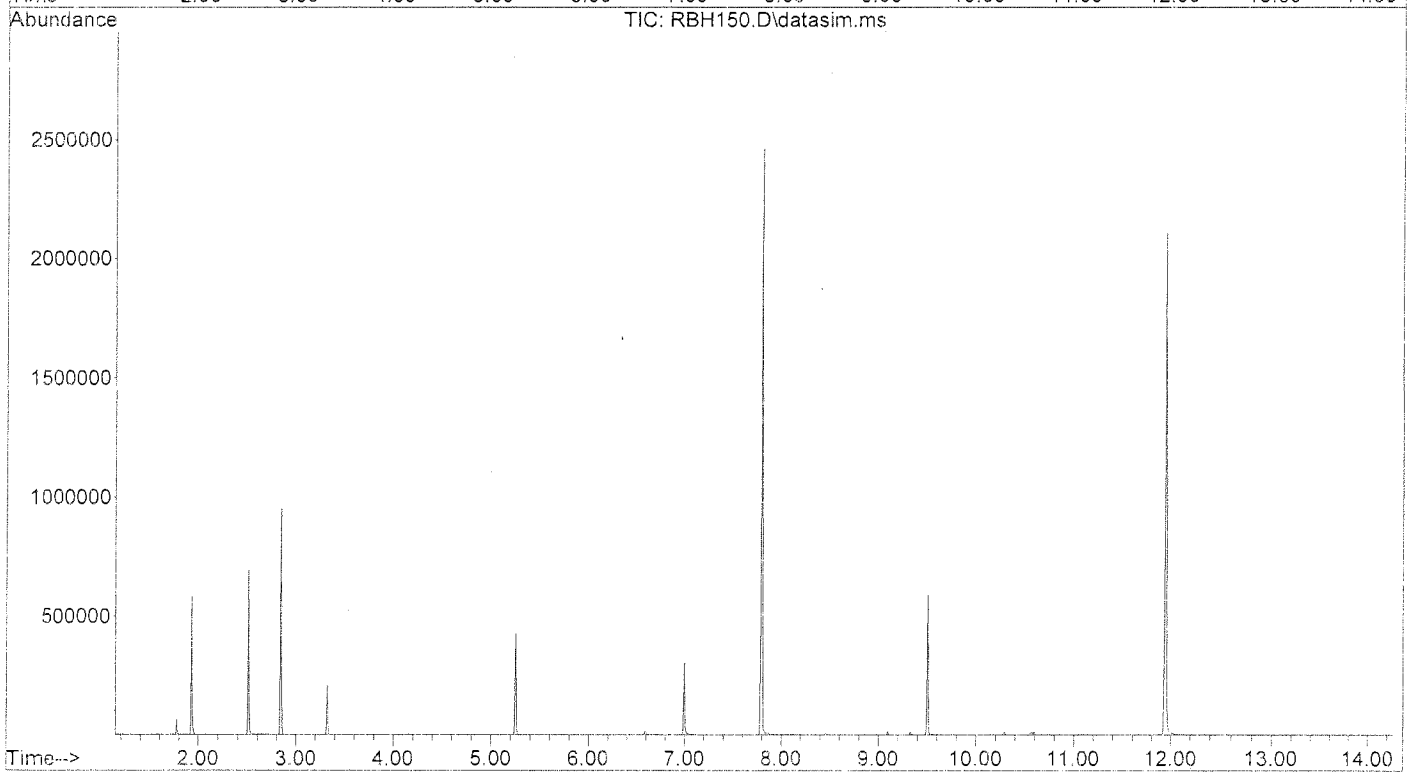
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH150.D
Acq On : 12 Feb 2016 15:15
Sample : 16B060-05
Misc :
Integrator: RTE
Quant Time: Feb 16 07:19:44 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 20
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG01-S-210	Date Analyzed:	02/12/16 15:34
Lab Samp ID:	B060-06	Dilution Factor:	1
Lab File ID:	RBH151	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	6.8
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.089	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.089	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.089	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.089	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.098	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.089	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.089	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.089	0.18
2,4-DINITROPHENOL	ND	0.72	0.092	0.18
2,4-DINITROTOLUENE	ND	0.36	0.089	0.18
2,6-DINITROTOLUENE	ND	0.36	0.089	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.089	0.18
2-CHLOROPHENOL	ND	0.36	0.089	0.18
2-METHYLPHENOL	ND	0.36	0.089	0.18
2-NITROANILINE	ND	0.36	0.089	0.18
2-NITROPHENOL	ND	0.36	0.089	0.18
3&4-METHYLPHENOL	ND	0.36	0.089	0.18
3-NITROANILINE	ND	0.36	0.089	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.72	0.089	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.097	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.089	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.089	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.11	0.18
BENZYL ALCOHOL	ND	0.36	0.089	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.089	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.089	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.089	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.12	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.089	0.18
CARBAZOLE	ND	0.36	0.095	0.18
DIBENZOFURAN	ND	0.36	0.089	0.18
DIETHYLPHTHALATE	ND	0.36	0.089	0.18
DIMETHYLPHTHALATE	ND	0.36	0.089	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.10	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.10	0.18
HEXACHLOROBENZENE	ND	0.36	0.089	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.089	0.18
HEXACHLOROETHANE	ND	0.36	0.089	0.18
ISOPHORONE	ND	0.36	0.089	0.18
NITROBENZENE	ND	0.36	0.089	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.089	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.089	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.16	0.18
PENTACHLOROPHENOL	ND	0.72	0.089	0.18
PHENOL	ND	0.36	0.089	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.61	2.146	74.8	35-125
2-FLUOROBIPHENYL	0.458	0.7153	64.0	45-105
2-FLUOROPHENOL	1.45	2.146	67.6	35-105
NITROBENZENE-D5	0.485	0.7153	67.8	35-100
TERPHENYL-D14	0.682	0.7153	95.4	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH151.D Vial: 21
Acq On : 12 Feb 2016 15:34 Operator: KVu
Sample : 16B060-06 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 08:29:08 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	384323	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1432199	40.00	ppm	0.00
41) Acenaphthene-d10	6.048	164	898294	40.00	ppm	-0.01
71) Phenanthrene-d10	7.795	188	1644977	40.00	ppm	0.00
87) Chrysene-d12	10.569	240	1888771	40.00	ppm	0.00
97) Perylene-d12	11.945	264	1632063	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	235526	20.27	ppm	0.00
Spiked Amount 30.000			Recovery	=	67.57%	
6) Phenol-d5	2.506	99	303019	20.51	ppm	0.00
Spiked Amount 30.000			Recovery	=	68.37%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	100811	6.78	ppm	0.00
Spiked Amount 10.000			Recovery	=	67.80%	
46) 2-Fluorobiphenyl	5.254	172	235477	6.40	ppm	0.00
Spiked Amount 10.000			Recovery	=	64.00%	
75) 2,4,6-Tribromophenol	6.993	330	110516	22.44	ppm	0.00
Spiked Amount 30.000			Recovery	=	74.80%	
90) Terphenyl-d14	9.501	244	387067	9.54	ppm	0.00
Spiked Amount 10.000			Recovery	=	95.40%	

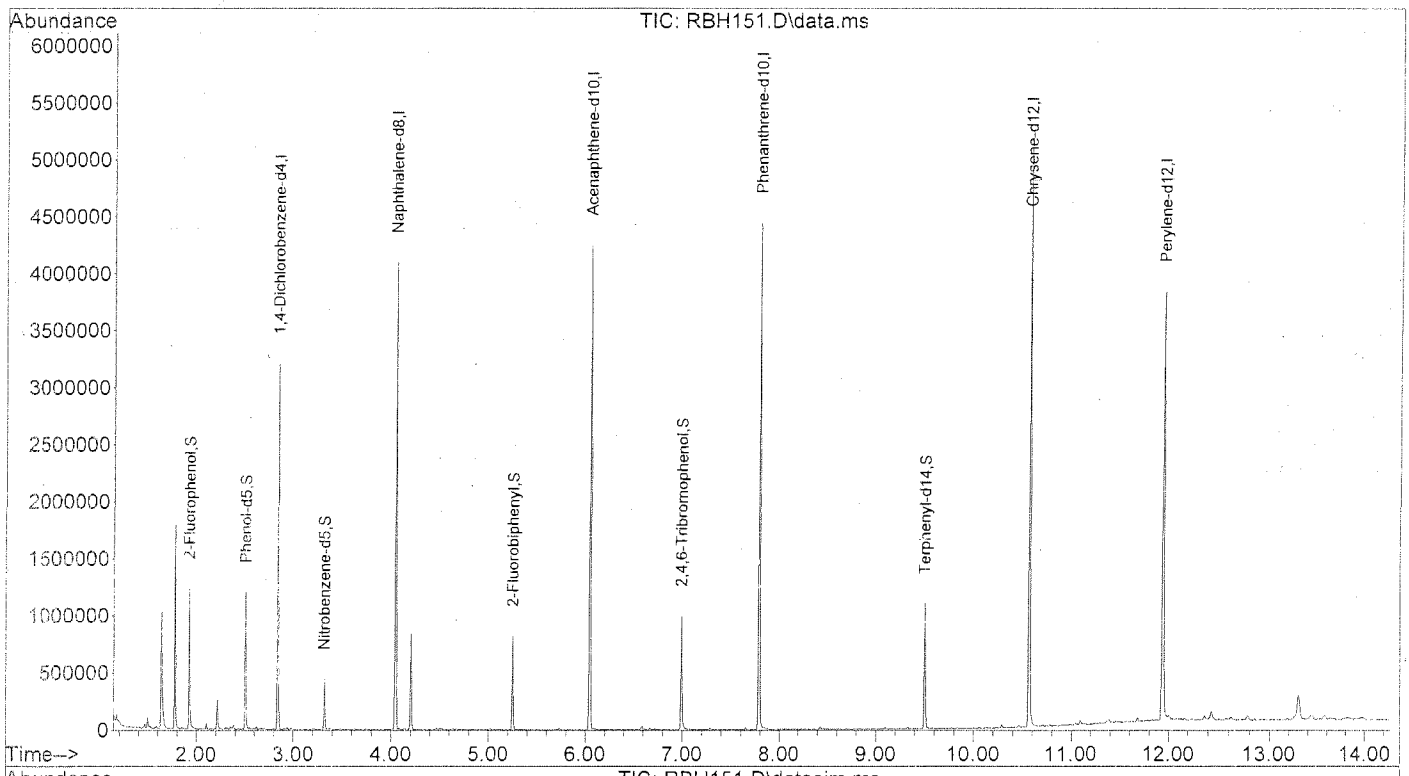
Target Compounds Qvalue

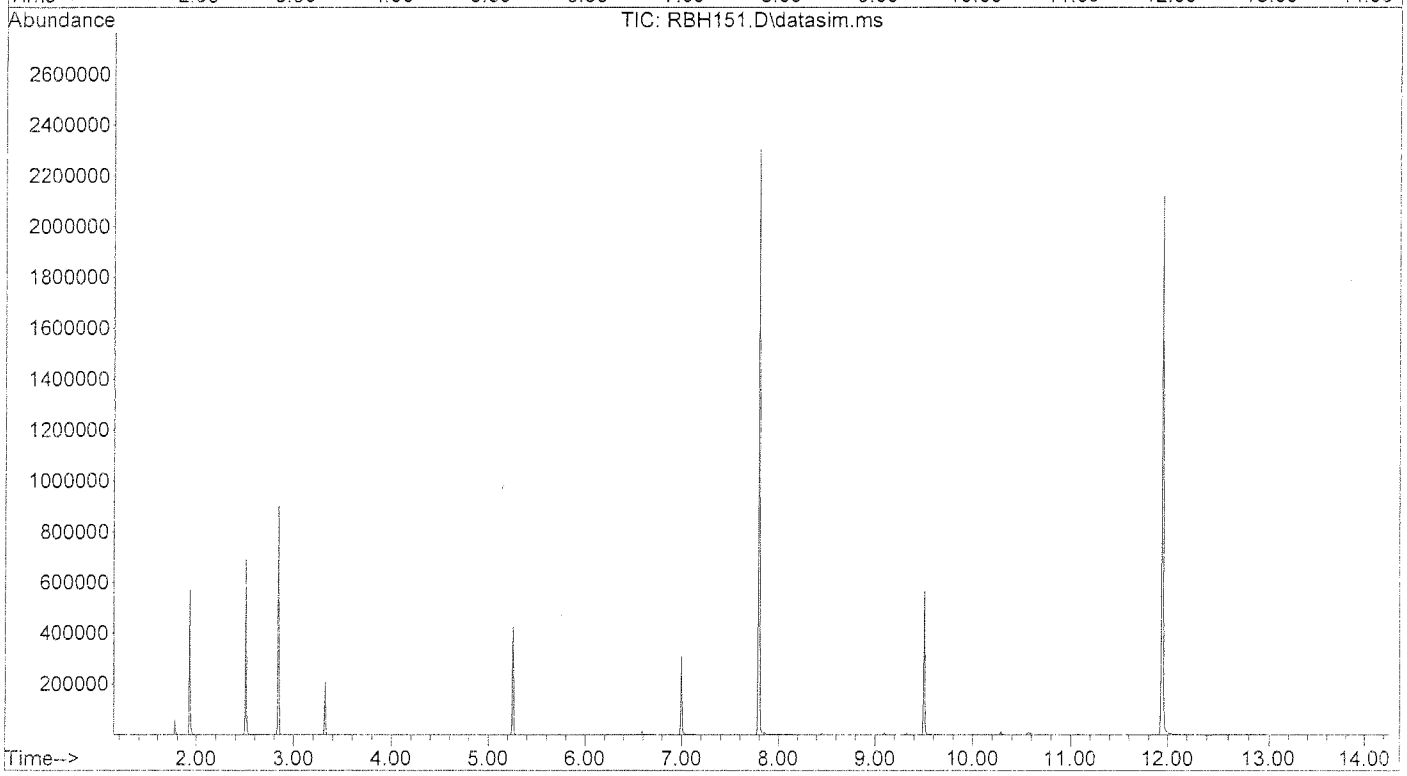
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH151.D
Acq On : 12 Feb 2016 15:34
Sample : 16B060-06
Misc :
Integrator: RTE
Quant Time: Feb 16 08:29:08 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 21
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-005	Date Analyzed:	02/12/16 15:53
Lab Samp ID:	B060-07	Dilution Factor:	1
Lab File ID:	RBH152	Matrix	: SOIL
Ext Btch ID:	SVB011S	% Moisture	: 8.7
Calib. Ref.:	RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.091	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.091	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.10	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.091	0.18
2,4-DINITROPHENOL	ND	0.73	0.094	0.18
2,4-DINITROTOLUENE	ND	0.36	0.091	0.18
2,6-DINITROTOLUENE	ND	0.36	0.091	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.091	0.18
2-CHLOROPHENOL	ND	0.36	0.091	0.18
2-METHYLPHENOL	ND	0.36	0.091	0.18
2-NITROANILINE	ND	0.36	0.091	0.18
2-NITROPHENOL	ND	0.36	0.091	0.18
3&4-METHYLPHENOL	ND	0.36	0.091	0.18
3-NITROANILINE	ND	0.36	0.091	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.73	0.091	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.099	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.091	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.091	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.12	0.18
BENZYL ALCOHOL	ND	0.36	0.091	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.091	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.091	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.091	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.13	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.091	0.18
CARBAZOLE	ND	0.36	0.097	0.18
DIBENZOFURAN	ND	0.36	0.091	0.18
DIETHYLPHTHALATE	ND	0.36	0.091	0.18
DIMETHYLPHTHALATE	ND	0.36	0.091	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.11	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.11	0.18
HEXACHLOROBENZENE	ND	0.36	0.091	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.091	0.18
HEXACHLOROETHANE	ND	0.36	0.091	0.18
ISOPHORONE	ND	0.36	0.091	0.18
NITROBENZENE	ND	0.36	0.091	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.091	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.091	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.17	0.18
PENTACHLOROPHENOL	ND	0.73	0.091	0.18
PHENOL	ND	0.36	0.091	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.62	2.191	73.7	35-125
2-FLUOROBIPHENYL	0.489	0.7302	66.9	45-105
2-FLUOROPHENOL	1.47	2.191	67.1	35-105
NITROBENZENE-D5	0.503	0.7302	68.9	35-100
TERPHENYL-D14	0.684	0.7302	93.7	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH152.D
Vial: 22
Acq On : 12 Feb 2016 15:53
Operator: KVu
Sample : 16B060-07
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 07:19:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	426556	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1561585	40.00	ppm	0.00
41) Acenaphthene-d10	6.052	164	985512	40.00	ppm	0.00
71) Phenanthrene-d10	7.795	188	1794893	40.00	ppm	0.00
87) Chrysene-d12	10.569	240	2052715	40.00	ppm	0.00
97) Perylene-d12	11.940	264	1777963	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	259385	20.12	ppm	0.00
Spiked Amount 30.000			Recovery = 67.07%			
6) Phenol-d5	2.506	99	348259	21.24	ppm	0.00
Spiked Amount 30.000			Recovery = 70.80%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.321	82	111770	6.89	ppm	0.00
Spiked Amount 10.000			Recovery = 68.90%			
46) 2-Fluorobiphenyl	5.254	172	270115	6.69	ppm	0.00
Spiked Amount 10.000			Recovery = 66.90%			
75) 2,4,6-Tribromophenol	6.993	330	118887	22.12	ppm	0.00
Spiked Amount 30.000			Recovery = 73.73%			
90) Terphenyl-d14	9.501	244	413195	9.37	ppm	0.00
Spiked Amount 10.000			Recovery = 93.70%			

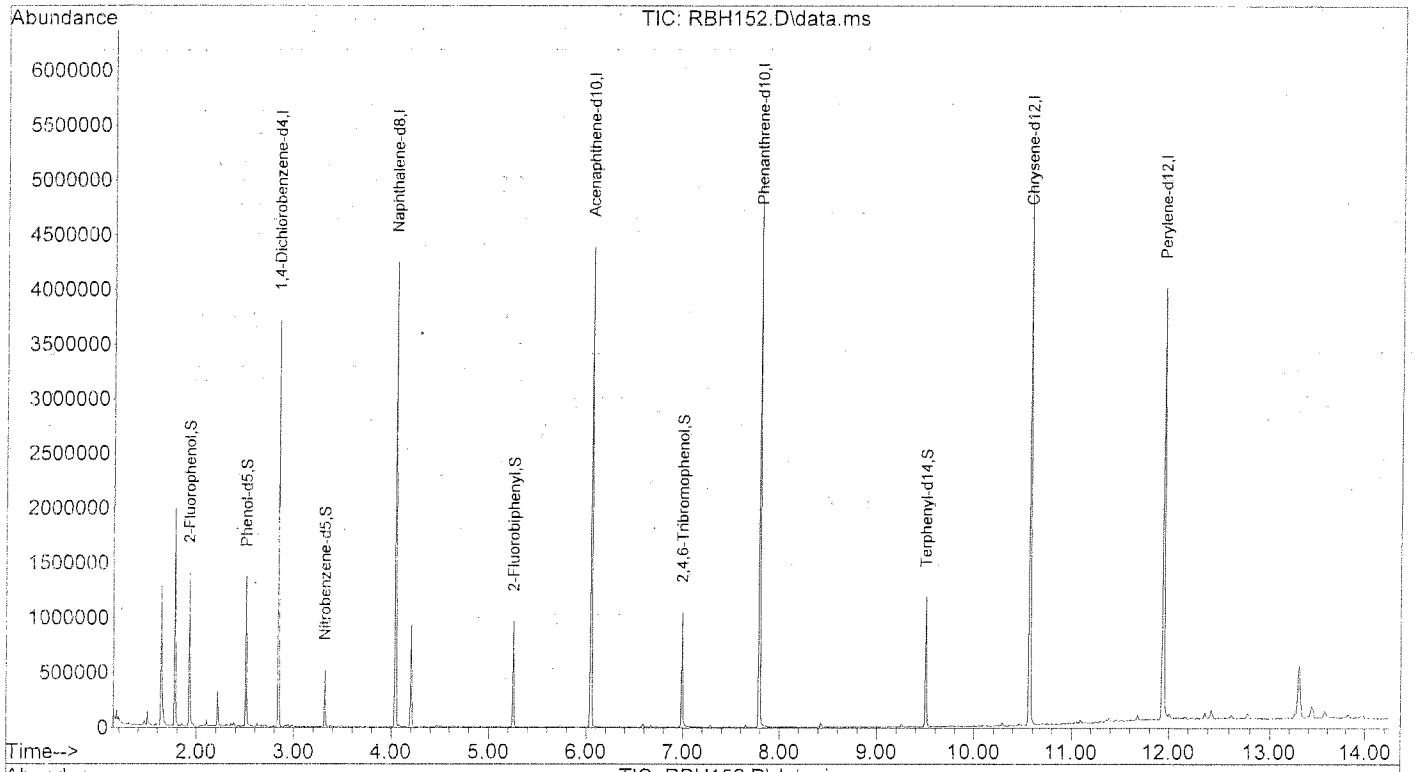
Target Compounds Qvalue

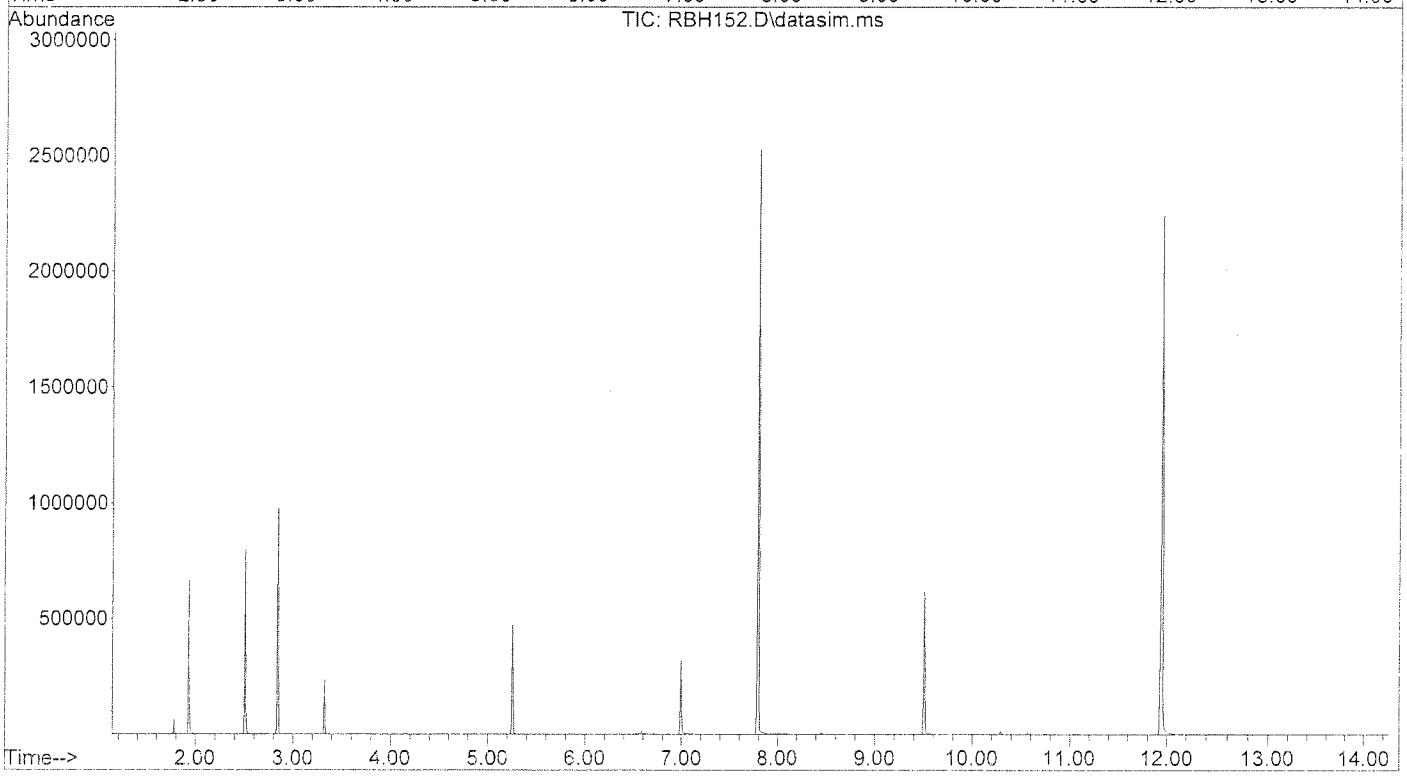
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH152.D
Acq On : 12 Feb 2016 15:53
Sample : 16B060-07
Misc :
Integrator: RTE
Quant Time: Feb 16 07:19:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 22
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-010	Date Analyzed:	02/12/16 16:13
Lab Samp ID:	B060-08	Dilution Factor:	1
Lab File ID:	RBH153	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	8.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.091	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.091	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.099	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.091	0.18
2,4-DINITROPHENOL	ND	0.73	0.094	0.18
2,4-DINITROTOLUENE	ND	0.36	0.091	0.18
2,6-DINITROTOLUENE	ND	0.36	0.091	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.091	0.18
2-CHLOROPHENOL	ND	0.36	0.091	0.18
2-METHYLPHENOL	ND	0.36	0.091	0.18
2-NITROANILINE	ND	0.36	0.091	0.18
2-NITROPHENOL	ND	0.36	0.091	0.18
3&4-METHYLPHENOL	ND	0.36	0.091	0.18
3-NITROANILINE	ND	0.36	0.091	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.73	0.091	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.098	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.091	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.091	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.12	0.18
BENZYL ALCOHOL	ND	0.36	0.091	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.091	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.091	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.091	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.13	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.091	0.18
CARBAZOLE	ND	0.36	0.097	0.18
DIBENZOFURAN	ND	0.36	0.091	0.18
DIETHYLPHTHALATE	ND	0.36	0.091	0.18
DIMETHYLPHTHALATE	ND	0.36	0.091	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.11	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.11	0.18
HEXACHLOROBENZENE	ND	0.36	0.091	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.091	0.18
HEXACHLOROETHANE	ND	0.36	0.091	0.18
ISOPHORONE	ND	0.36	0.091	0.18
NITROBENZENE	ND	0.36	0.091	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.091	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.091	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.17	0.18
PENTACHLOROPHENOL	ND	0.73	0.091	0.18
PHENOL	ND	0.36	0.091	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.60	2.183	73.5	35-125
2-FLUOROBIPHENYL	0.424	0.7278	58.2	45-105
2-FLUOROPHENOL	1.31	2.183	59.8	35-105
NITROBENZENE-D5	0.432	0.7278	59.4	35-100
TERPHENYL-D14	0.663	0.7278	91.1	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH153.D
Vial: 23
Acq On : 12 Feb 2016 16:13
Operator: KVu
Sample : 16B060-08
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 07:19:56 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.841	152	417729	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1580233	40.00	ppm	0.00
41) Acenaphthene-d10	6.052	164	980498	40.00	ppm	0.00
71) Phenanthrene-d10	7.794	188	1796557	40.00	ppm	0.00
87) Chrysene-d12	10.569	240	2044831	40.00	ppm	0.00
97) Perylene-d12	11.944	264	1766825	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	226491	17.94	ppm	0.00
Spiked Amount 30.000			Recovery	=	59.80%	
6) Phenol-d5	2.501	99	299214	18.63	ppm	0.00
Spiked Amount 30.000			Recovery	=	62.10%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	97398	5.94	ppm	0.00
Spiked Amount 10.000			Recovery	=	59.40%	
46) 2-Fluorobiphenyl	5.254	172	233884	5.82	ppm	0.00
Spiked Amount 10.000			Recovery	=	58.20%	
75) 2,4,6-Tribromophenol	6.993	330	118603	22.05	ppm	0.00
Spiked Amount 30.000			Recovery	=	73.50%	
90) Terphenyl-d14	9.505	244	400513	9.11	ppm	0.00
Spiked Amount 10.000			Recovery	=	91.10%	

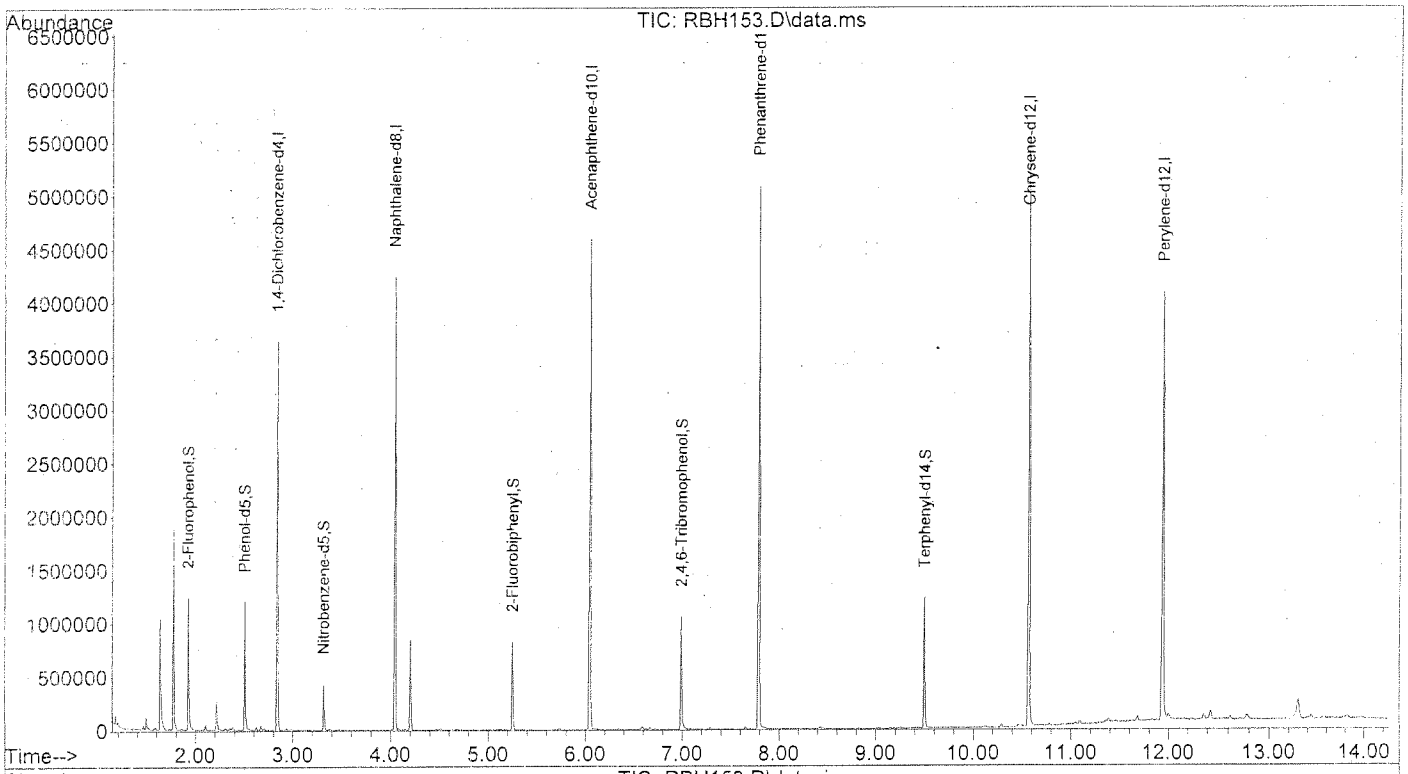
Target Compounds Qvalue

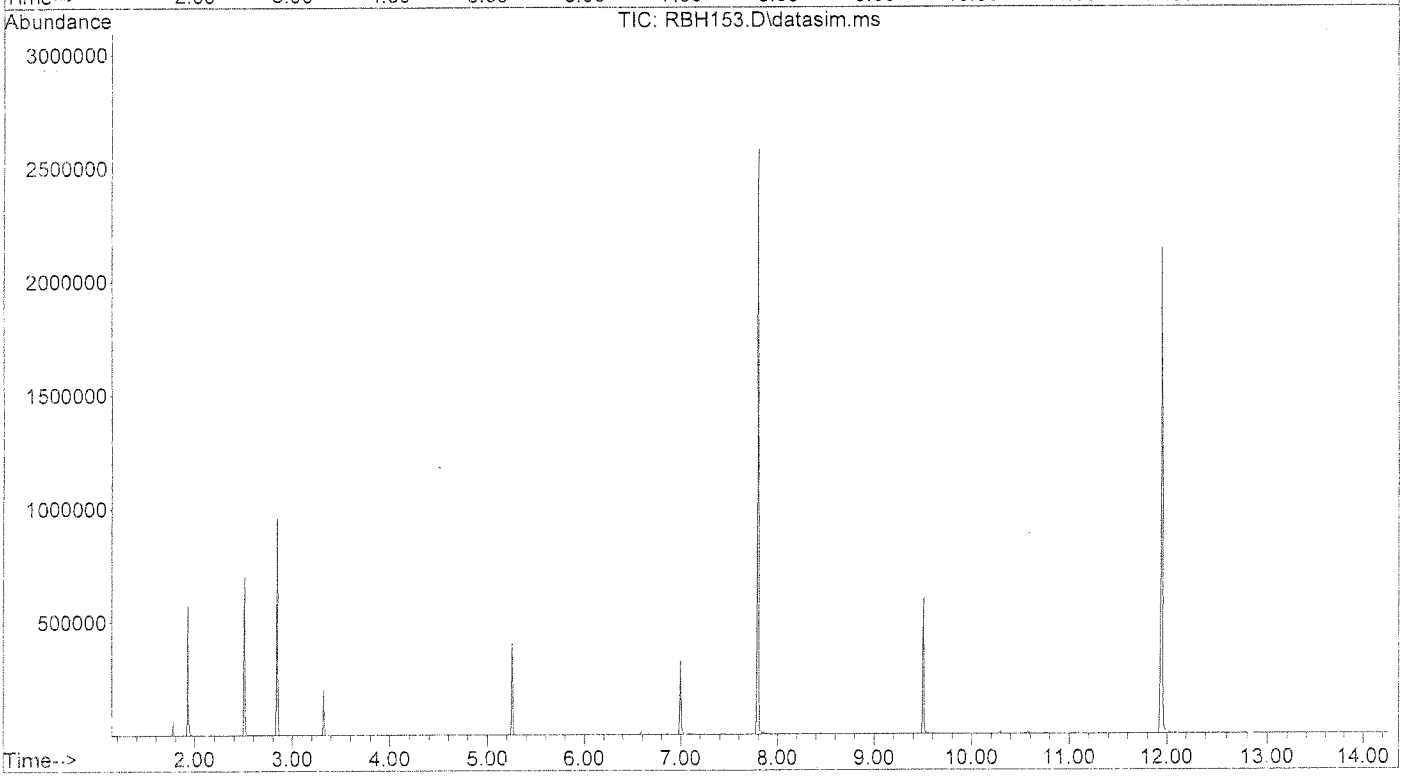
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH153.D
Acq On : 12 Feb 2016 16:13
Sample : 16B060-08
Misc :
Integrator: RTE
Quant Time: Feb 16 07:19:56 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 23
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-210	Date Analyzed:	02/12/16 16:32
Lab Samp ID:	B060-09	Dilution Factor:	1
Lab File ID:	RBH154	Matrix	: SOIL
Ext Btch ID:	SVB011S	% Moisture	: 8.4
Calib. Ref.:	RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.36	0.091	0.18
1,2-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,3-DICHLOROBENZENE	ND	0.36	0.091	0.18
1,4-DICHLOROBENZENE	ND	0.36	0.091	0.18
2,4,5-TRICHLOROPHENOL	ND	0.36	0.099	0.18
2,4,6-TRICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DICHLOROPHENOL	ND	0.36	0.091	0.18
2,4-DIMETHYLPHENOL	ND	0.36	0.091	0.18
2,4-DINITROPHENOL	ND	0.73	0.094	0.18
2,4-DINITROTOLUENE	ND	0.36	0.091	0.18
2,6-DINITROTOLUENE	ND	0.36	0.091	0.18
2-CHLORONAPHTHALENE	ND	0.36	0.091	0.18
2-CHLOROPHENOL	ND	0.36	0.091	0.18
2-METHYLPHENOL	ND	0.36	0.091	0.18
2-NITROANILINE	ND	0.36	0.091	0.18
2-NITROPHENOL	ND	0.36	0.091	0.18
3&4-METHYLPHENOL	ND	0.36	0.091	0.18
3-NITROANILINE	ND	0.36	0.091	0.18
4,6-DINITRO-2-METHYLPHENOL	ND	0.73	0.091	0.18
4-BROMOPHENYL-PHENYLETHER	ND	0.36	0.098	0.18
4-CHLORO-3-METHYLPHENOL	ND	0.36	0.091	0.18
4-CHLOROPHENYL-PHENYLETHER	ND	0.36	0.091	0.18
4-NITROANILINE	ND	0.36	0.13	0.18
4-NITROPHENOL	ND	0.36	0.12	0.18
BENZYL ALCOHOL	ND	0.36	0.091	0.18
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.36	0.091	0.18
BIS(2-CHLOROETHOXY)METHANE	ND	0.36	0.091	0.18
BIS(2-CHLOROETHYL)ETHER	ND	0.36	0.091	0.18
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.36	0.13	0.18
BUTYLBENZYLPHTHALATE	ND	0.36	0.091	0.18
CARBAZOLE	ND	0.36	0.097	0.18
DIBENZOFURAN	ND	0.36	0.091	0.18
DIETHYLPHTHALATE	ND	0.36	0.091	0.18
DIMETHYLPHTHALATE	ND	0.36	0.091	0.18
DI-N-BUTYLPHTHALATE	ND	0.36	0.11	0.18
DI-N-OCTYLPHTHALATE	ND	0.36	0.11	0.18
HEXACHLOROBENZENE	ND	0.36	0.091	0.18
HEXACHLOROBUTADIENE	ND	0.36	0.091	0.18
HEXACHLOROETHANE	ND	0.36	0.091	0.18
ISOPHORONE	ND	0.36	0.091	0.18
NITROBENZENE	ND	0.36	0.091	0.18
N-NITROSODIMETHYLAMINE	ND	0.36	0.091	0.18
N-NITROSO-DI-N-PROPYLAMINE	ND	0.36	0.091	0.18
N-NITROSODIPHENYLAMINE (1)	ND	0.36	0.17	0.18
PENTACHLOROPHENOL	ND	0.73	0.091	0.18
PHENOL	ND	0.36	0.091	0.18

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.57	2.183	71.8	35-125
2-FLUOROBIPHENYL	0.460	0.7278	63.2	45-105
2-FLUOROPHENOL	1.43	2.183	65.4	35-105
NITROBENZENE-D5	0.484	0.7278	66.4	35-100
TERPHENYL-D14	0.687	0.7278	94.4	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH154.D
Acq On : 12 Feb 2016 16:32
Sample : 16B060-09
Misc :
Integrator: RTE
Quant Time: Feb 16 07:20:00 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 24
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	408007	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1529350	40.00	ppm	0.00
41) Acenaphthene-d10	6.047	164	959229	40.00	ppm	-0.01
71) Phenanthrene-d10	7.795	188	1758405	40.00	ppm	0.00
87) Chrysene-d12	10.569	240	1992865	40.00	ppm	0.00
97) Perylene-d12	11.940	264	1718921	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	242165	19.63	ppm	0.00
Spiked Amount 30.000			Recovery = 65.43%			
6) Phenol-d5	2.501	99	322748	20.58	ppm	0.00
Spiked Amount 30.000			Recovery = 68.60%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.321	82	105516	6.64	ppm	0.00
Spiked Amount 10.000			Recovery = 66.40%			
46) 2-Fluorobiphenyl	5.254	172	248332	6.32	ppm	0.00
Spiked Amount 10.000			Recovery = 63.20%			
75) 2,4,6-Tribromophenol	6.993	330	113470	21.55	ppm	0.00
Spiked Amount 30.000			Recovery = 71.83%			
90) Terphenyl-d14	9.501	244	404154	9.44	ppm	0.00
Spiked Amount 10.000			Recovery = 94.40%			

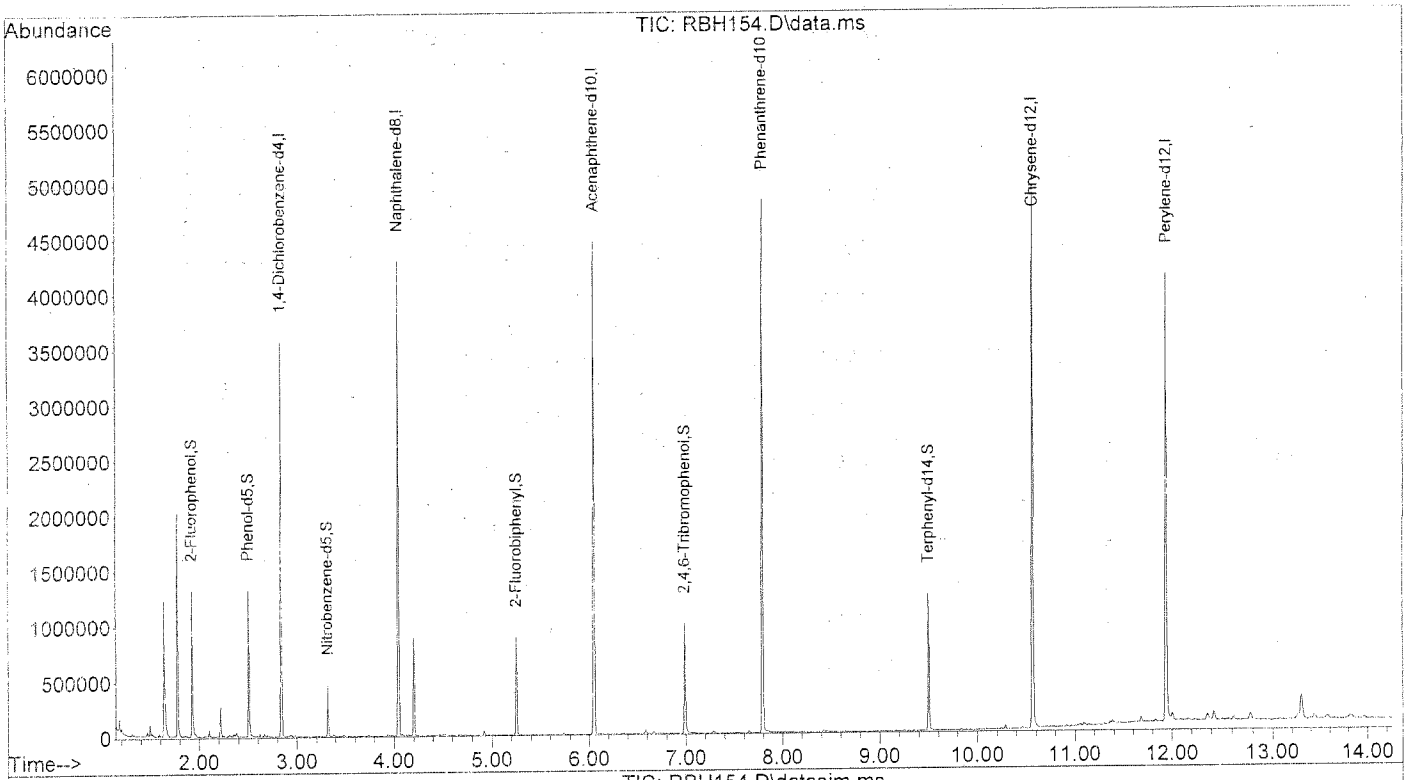
Target Compounds Qvalue

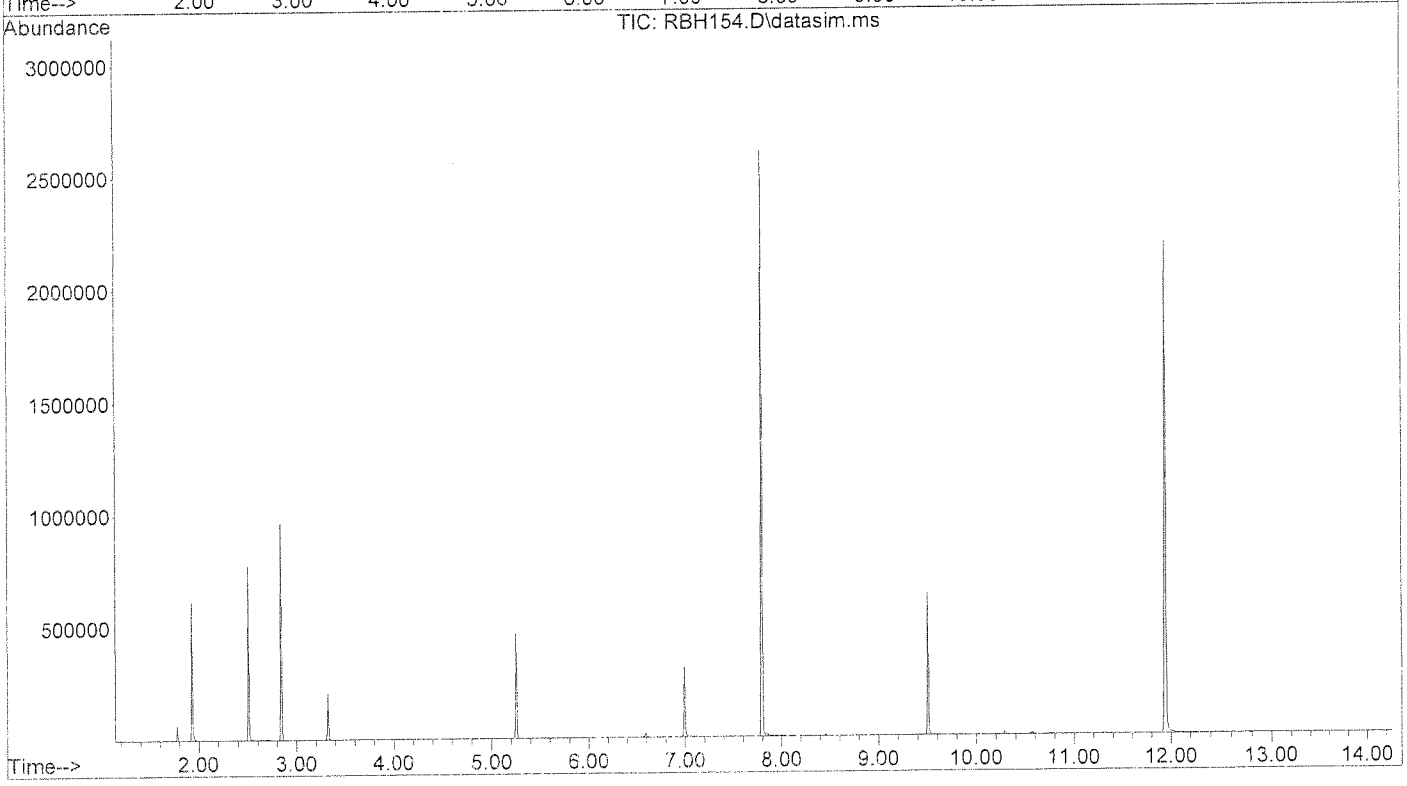
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH154.D
Acq On : 12 Feb 2016 16:32
Sample : 16B060-09
Misc :
Integrator: RTE
Quant Time: Feb 16 07:20:00 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 24
Operator: KVu
Inst : E7
Multiplr: 1.00





QC SUMMARIES

METHOD SW3550B/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	MBLK1S	Date Analyzed:	02/12/16 10:27
Lab Samp ID:	SVB011SB	Dilution Factor:	1
Lab File ID:	RBH135	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	NA
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
1,2,4-TRICHLOROBENZENE	ND	0.33	0.083	0.17
1,2-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,3-DICHLOROBENZENE	ND	0.33	0.083	0.17
1,4-DICHLOROBENZENE	ND	0.33	0.083	0.17
2,4,5-TRICHLOROPHENOL	ND	0.33	0.091	0.17
2,4,6-TRICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DICHLOROPHENOL	ND	0.33	0.083	0.17
2,4-DIMETHYLPHENOL	ND	0.33	0.083	0.17
2,4-DINITROPHENOL	ND	0.67	0.086	0.17
2,4-DINITROTOLUENE	ND	0.33	0.083	0.17
2,6-DINITROTOLUENE	ND	0.33	0.083	0.17
2-CHLORONAPHTHALENE	ND	0.33	0.083	0.17
2-CHLOROPHENOL	ND	0.33	0.083	0.17
2-METHYLPHENOL	ND	0.33	0.083	0.17
2-NITROANILINE	ND	0.33	0.083	0.17
2-NITROPHENOL	ND	0.33	0.083	0.17
3&4-METHYLPHENOL	ND	0.33	0.083	0.17
3-NITROANILINE	ND	0.33	0.083	0.17
4,6-DINITRO-2-METHYLPHENOL	ND	0.67	0.083	0.17
4-BROMOPHENYL-PHENYLETHER	ND	0.33	0.090	0.17
4-CHLORO-3-METHYLPHENOL	ND	0.33	0.083	0.17
4-CHLOROPHENYL-PHENYLETHER	ND	0.33	0.083	0.17
4-NITROANILINE	ND	0.33	0.12	0.17
4-NITROPHENOL	ND	0.33	0.11	0.17
BENZYL ALCOHOL	ND	0.33	0.083	0.17
BIS(2-CHLOROISOPROPYL)ETHER	ND	0.33	0.083	0.17
BIS(2-CHLOROETHOXY)METHANE	ND	0.33	0.083	0.17
BIS(2-CHLOROETHYL)ETHER	ND	0.33	0.083	0.17
BIS(2-ETHYLHEXYL)PHTHALATE	ND	0.33	0.12	0.17
BUTYLBENZYLPHTHALATE	ND	0.33	0.083	0.17
CARBAZOLE	ND	0.33	0.089	0.17
DIBENZOFURAN	ND	0.33	0.083	0.17
DIETHYLPHTHALATE	ND	0.33	0.083	0.17
DIMETHYLPHTHALATE	ND	0.33	0.083	0.17
DI-N-BUTYLPHTHALATE	ND	0.33	0.097	0.17
DI-N-OCTYLPHTHALATE	ND	0.33	0.097	0.17
HEXACHLOROBENZENE	ND	0.33	0.083	0.17
HEXACHLOROBUTADIENE	ND	0.33	0.083	0.17
HEXACHLOROETHANE	ND	0.33	0.083	0.17
ISOPHORONE	ND	0.33	0.083	0.17
NITROBENZENE	ND	0.33	0.083	0.17
N-NITROSODIMETHYLAMINE	ND	0.33	0.083	0.17
N-NITROSO-DI-N-PROPYLAMINE	ND	0.33	0.083	0.17
N-NITROSODIPHENYLAMINE (1)	ND	0.33	0.15	0.17
PENTACHLOROPHENOL	ND	0.67	0.083	0.17
PHENOL	ND	0.33	0.083	0.17

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	1.00	2.000	50.1	35-125
2-FLUOROBIPHENYL	0.350	0.6667	52.5	45-105
2-FLUOROPHENOL	1.04	2.000	51.9	35-105
NITROBENZENE-D5	0.364	0.6667	54.7	35-100
TERPHENYL-D14	0.519	0.6667	77.9	30-125

(1) n-Nitrosodiphenylamine: Cannot be separated from Diphenylamine

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW3550B/8270D

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVB011SB	SVB011SL	SVB011SC		
LAB FILE ID:	RBH135	RBH136	RBH137		
DATE EXTRACTED:	02/11/1617:18	02/11/1617:18	02/11/1617:18	DATE COLLECTED:	NA
DATE ANALYZED:	02/12/1610:27	02/12/1610:46	02/12/1611:05	DATE RECEIVED:	02/11/16
PREP. BATCH:	SVB011S	SVB011S	SVB011S		
CALIB. REF:	RAH047	RAH047	RAH047		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	1.33	0.849	64	1.33	0.863	65	2	45-110	30
1,2-Dichlorobenzene	ND	1.33	0.824	62	1.33	0.860	65	4	45-100	30
1,3-Dichlorobenzene	ND	1.33	0.803	60	1.33	0.840	63	5	40-100	30
1,4-Dichlorobenzene	ND	1.33	0.801	60	1.33	0.847	64	6	35-105	30
2,4,5-Trichlorophenol	ND	1.33	0.774	58	1.33	0.806	60	4	50-110	30
2,4,6-Trichlorophenol	ND	1.33	0.782	59	1.33	0.796	60	2	45-110	30
2,4-Dichlorophenol	ND	1.33	0.882	66	1.33	0.853	64	3	45-110	30
2,4-Dimethylphenol	ND	1.33	0.768	58	1.33	0.799	60	4	30-105	30
2,4-Dinitrophenol	ND	1.33	0.990	74	1.33	1.04	78	5	15-130	30
2,4-Dinitrotoluene	ND	1.33	1.10	82	1.33	1.11	83	1	50-115	30
2,6-Dinitrotoluene	ND	1.33	0.970	73	1.33	1.03	77	6	50-110	30
2-Chloronaphthalene	ND	1.33	0.821	62	1.33	0.858	64	4	45-105	30
2-Chlorophenol	ND	1.33	0.708	53	1.33	0.753	56	6	45-105	30
2-Methylphenol	ND	1.33	0.824	62	1.33	0.851	64	3	40-105	30
2-Nitroaniline	ND	1.33	0.834	63	1.33	0.856	64	3	45-120	30
2-Nitrophenol	ND	1.33	0.877	66	1.33	0.890	67	1	40-110	30
3&4-Methylphenol	ND	1.33	0.833	62	1.33	0.895	67	7	40-105	30
3-Nitroaniline	ND	1.33	0.919	69	1.33	0.958	72	4	25-110	30
4,6-Dinitro-2-Methylphenol	ND	1.33	1.15	86	1.33	1.23	92	7	30-135	30
4-Bromophenyl-phenylether	ND	1.33	0.913	69	1.33	0.950	71	4	45-115	30
4-Chloro-3-Methylphenol	ND	1.33	0.800	60	1.33	0.836	63	4	45-115	30
4-Chlorophenyl-phenylether	ND	1.33	0.901	68	1.33	0.905	68	0	45-110	30
4-Nitroaniline	ND	1.33	1.17	88	1.33	1.07	80	9	35-115	30
4-Nitrophenol	ND	1.33	0.819	61	1.33	0.830	62	1	15-140	30
Benzyl Alcohol	ND	1.33	0.825	62	1.33	0.887	67	7	20-125	30
bis(2-Chloroisopropyl)ether	ND	1.33	0.760	57	1.33	0.801	60	5	20-115	30
bis(2-Chloroethoxy)methane	ND	1.33	0.826	62	1.33	0.846	63	2	45-110	30
bis(2-Chloroethyl)ether	ND	1.33	0.793	59	1.33	0.850	64	7	40-105	30
bis(2-Ethylhexyl)phthalate	ND	1.33	1.15	87	1.33	1.14	86	1	45-125	30
Butylbenzylphthalate	ND	1.33	1.14	86	1.33	1.15	86	1	50-125	30
Carbazole	ND	1.33	1.06	79	1.33	1.07	81	2	45-115	30
Dibenzofuran	ND	1.33	0.837	63	1.33	0.856	64	2	50-105	30
Diethylphthalate	ND	1.33	1.05	78	1.33	1.06	79	1	50-115	30
Dimethylphthalate	ND	1.33	0.902	68	1.33	0.956	72	6	50-110	30
Di-n-butylphthalate	ND	1.33	1.10	83	1.33	1.09	82	1	55-110	30
Di-n-octylphthalate	ND	1.33	1.15	86	1.33	1.14	86	1	40-130	30
Hexachlorobenzene	ND	1.33	0.979	73	1.33	1.01	76	3	45-120	30
Hexachlorobutadiene	ND	1.33	0.830	62	1.33	0.866	65	4	40-115	30
Hexachloroethane	ND	1.33	0.946	71	1.33	0.834	63	13	35-110	30
Isophorone	ND	1.33	0.807	61	1.33	0.887	67	9	45-110	30
Nitrobenzene	ND	1.33	0.815	61	1.33	0.849	64	4	40-115	30
N-Nitrosodimethylamine	ND	1.33	0.836	63	1.33	0.853	64	2	20-115	30
n-Nitroso-di-n-propylamine	ND	1.33	0.839	63	1.33	0.848	64	1	40-115	30
n-Nitrosodiphenylamine	ND	1.33	0.925	69	1.33	0.966	72	4	50-115	30
Pentachlorophenol	ND	1.33	0.973	73	1.33	0.993	75	2	25-120	30
Phenol	ND	1.33	0.765	57	1.33	0.800	60	4	40-100	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	2.00	1.36	68	2.00	1.56	78	35-125
2-Fluorobiphenyl	0.667	0.356	53	0.667	0.396	59	45-105
2-Fluorophenol	2.00	1.07	53	2.00	1.24	62	35-105
Nitrobenzene-d5	0.667	0.376	56	0.667	0.420	63	35-100
Terphenyl-d14	0.667	0.546	82	0.667	0.581	87	30-125

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW3550B/8270D

MATRIX: SOIL % MOISTURE: 9.4

DILUTION FACTOR:	1	1	1
SAMPLE ID:	CA504-SG03-S-010		
LAB SAMP ID:	B060-02	B060-02M	B060-02S
LAB FILE ID:	RBH148	RBH138	RBH139
DATE EXTRACTED:	02/11/1617:18	02/11/1617:18	02/11/1617:18
DATE ANALYZED:	02/12/1614:36	02/12/1611:24	02/12/1611:43
PREP. BATCH:	SVB011S	SVB011S	SVB011S
CALIB. REF:	RAH047	RAH047	RAH047

DATE COLLECTED: 02/05/16
DATE RECEIVED: 02/06/16

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
1,2,4-Trichlorobenzene	ND	1.47	1.04	71	1.47	1.02	69	2	45-110	30
1,2-Dichlorobenzene	ND	1.47	1.00	68	1.47	0.986	67	2	45-100	30
1,3-Dichlorobenzene	ND	1.47	0.990	67	1.47	0.996	68	1	40-100	30
1,4-Dichlorobenzene	ND	1.47	0.999	68	1.47	0.983	67	2	35-105	30
2,4,5-Trichlorophenol	ND	1.47	1.06	72	1.47	0.983	67	8	50-110	30
2,4,6-Trichlorophenol	ND	1.47	1.00	68	1.47	0.993	67	1	45-110	30
2,4-Dichlorophenol	ND	1.47	1.05	71	1.47	1.05	71	0	45-110	30
2,4-Dimethylphenol	ND	1.47	0.964	66	1.47	0.939	64	3	30-105	30
2,4-Dinitrophenol	ND	1.47	1.45	99	1.47	1.34	91	8	15-130	30
2,4-Dinitrotoluene	ND	1.47	1.27	86	1.47	1.25	85	1	50-115	30
2,6-Dinitrotoluene	ND	1.47	1.19	81	1.47	1.13	77	5	50-110	30
2-Chloronaphthalene	ND	1.47	1.01	69	1.47	0.983	67	3	45-105	30
2-Chlorophenol	ND	1.47	0.885	60	1.47	0.873	59	1	45-105	30
2-Methylphenol	ND	1.47	1.01	69	1.47	0.995	68	2	40-105	30
2-Nitroaniline	ND	1.47	1.02	69	1.47	1.00	68	2	45-120	30
2-Nitrophenol	ND	1.47	1.08	73	1.47	1.08	74	0	40-110	30
3&4-Methylphenol	ND	1.47	1.05	71	1.47	1.05	71	0	40-105	30
3-Nitroaniline	ND	1.47	1.13	77	1.47	1.08	73	5	25-110	30
4,6-Dinitro-2-Methylphenol	ND	1.47	1.39	95	1.47	1.50	102	7	30-135	30
4-Bromophenyl-phenylether	ND	1.47	1.14	77	1.47	1.11	76	3	45-115	30
4-Chloro-3-Methylphenol	ND	1.47	1.02	70	1.47	0.981	67	4	45-115	30
4-Chlorophenyl-phenylether	ND	1.47	1.08	73	1.47	1.05	71	3	45-110	30
4-Nitroaniline	ND	1.47	1.21	82	1.47	1.23	84	2	35-115	30
4-Nitrophenol	ND	1.47	1.09	74	1.47	1.15	78	5	15-140	30
Benzyl Alcohol	ND	1.47	1.03	70	1.47	1.03	70	0	20-125	30
bis(2-Chloroisopropyl)ether	ND	1.47	0.928	63	1.47	0.908	62	2	20-115	30
bis(2-Chloroethoxy)methane	ND	1.47	1.01	69	1.47	0.992	67	2	45-110	30
bis(2-Chloroethyl)ether	ND	1.47	0.970	66	1.47	0.964	66	1	40-105	30
bis(2-Ethylhexyl)phthalate	ND	1.47	1.37	93	1.47	1.34	91	2	45-125	30
Butylbenzylphthalate	ND	1.47	1.38	94	1.47	1.34	91	3	50-125	30
Carbazole	ND	1.47	1.29	87	1.47	1.27	86	1	45-115	30
Dibenzofuran	ND	1.47	1.04	70	1.47	1.00	68	4	50-105	30
Diethylphthalate	ND	1.47	1.24	84	1.47	1.19	81	4	50-115	30
Dimethylphthalate	ND	1.47	1.09	74	1.47	1.04	70	5	50-110	30
Di-n-butylphthalate	ND	1.47	1.30	88	1.47	1.31	89	1	55-110	30
Di-n-octylphthalate	ND	1.47	1.36	93	1.47	1.37	93	0	40-130	30
Hexachlorobenzene	ND	1.47	1.23	84	1.47	1.19	81	3	45-120	30
Hexachlorobutadiene	ND	1.47	1.01	69	1.47	0.994	68	2	40-115	30
Hexachloroethane	ND	1.47	1.01	68	1.47	0.984	67	2	35-110	30
Isophorone	ND	1.47	1.03	70	1.47	1.04	71	1	45-110	30
Nitrobenzene	ND	1.47	0.976	66	1.47	0.967	66	1	40-115	30
N-Nitrosodimethylamine	ND	1.47	0.978	66	1.47	1.00	68	3	20-115	30
n-Nitroso-di-n-propylamine	ND	1.47	1.04	71	1.47	1.01	69	2	40-115	30
n-Nitrosodiphenylamine	ND	1.47	1.02	69	1.47	1.10	75	8	50-115	30
Pentachlorophenol	ND	1.47	1.27	86	1.47	1.26	85	1	25-120	30
Phenol	ND	1.47	0.958	65	1.47	0.940	64	2	40-100	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
2,4,6-Tribromophenol	2.21	1.88	85	2.21	1.82	83	35-125
2-Fluorobiphenyl	0.736	0.470	64	0.736	0.442	60	45-105
2-Fluorophenol	2.21	1.44	65	2.21	1.39	63	35-105
Nitrobenzene-d5	0.736	0.485	66	0.736	0.474	64	35-100
Terphenyl-d14	0.736	0.700	95	0.736	0.672	91	30-125

QC DATA

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH135.D
Acq On : 12 Feb 2016 10:27
Sample : SVB011SB
Misc :
Integrator: RTE
Quant Time: Feb 12 12:28:25 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 5
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.837	152	385902	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1431437	40.00	ppm	0.00
41) Acenaphthene-d10	6.047	164	887240	40.00	ppm	-0.01
71) Phenanthrene-d10	7.790	188	1618487	40.00	ppm	0.00
87) Chrysene-d12	10.569	240	1940278	40.00	ppm	0.00
97) Perylene-d12	11.940	264	1691612	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	181471	15.56	ppm	0.00
Spiked Amount 30.000			Recovery	=	51.87%	
6) Phenol-d5	2.501	99	241102	16.25	ppm	0.00
Spiked Amount 30.000			Recovery	=	54.17%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	81236	5.47	ppm	0.00
Spiked Amount 10.000			Recovery	=	54.70%	
46) 2-Fluorobiphenyl	5.254	172	190667	5.25	ppm	0.00
Spiked Amount 10.000			Recovery	=	52.50%	
75) 2,4,6-Tribromophenol	6.993	330	72784	15.02	ppm	0.00
Spiked Amount 30.000			Recovery	=	50.07%	
90) Terphenyl-d14	9.501	244	324775	7.79	ppm	0.00
Spiked Amount 10.000			Recovery	=	77.90%	

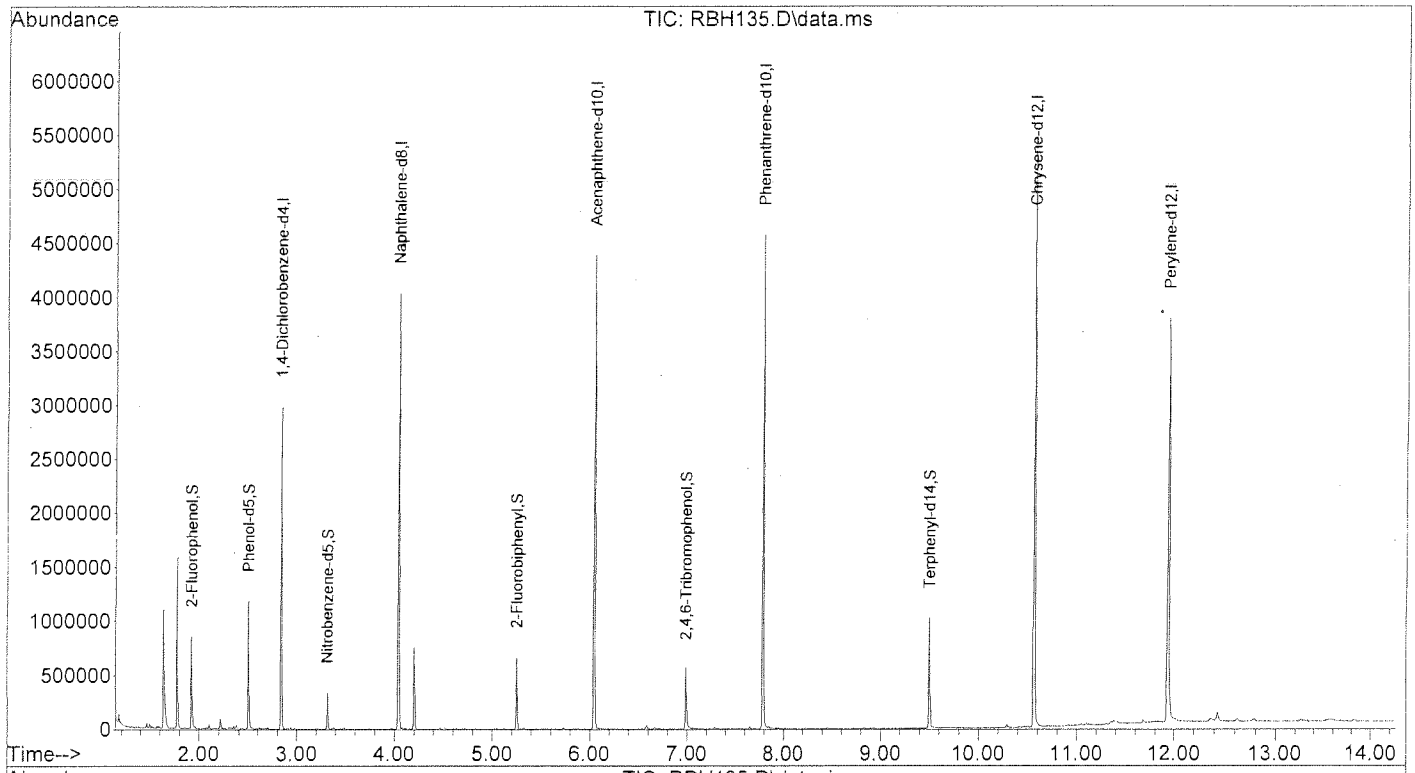
Target Compounds Qvalue

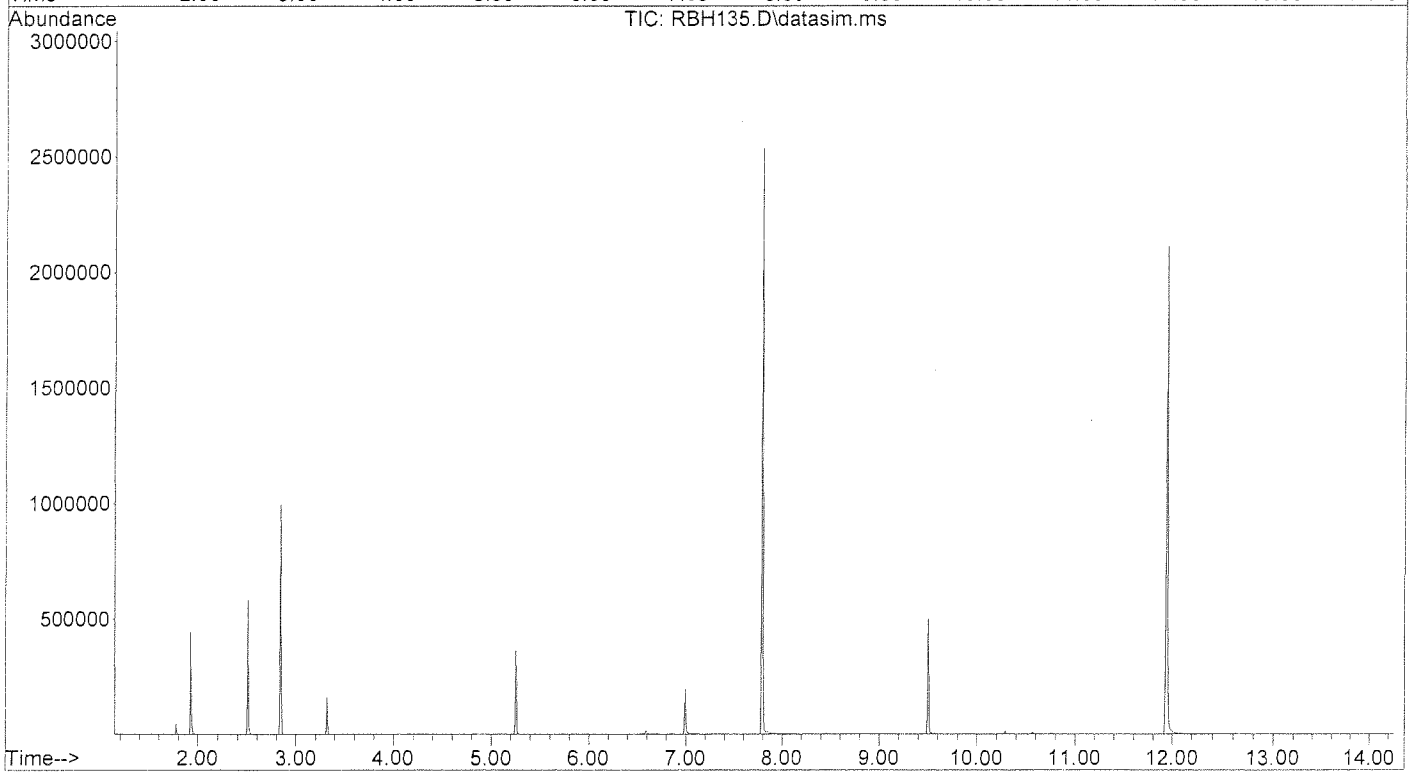
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH135.D
Acq On : 12 Feb 2016 10:27
Sample : SVB011SB
Misc :
Integrator: RTE
Quant Time: Feb 12 12:28:25 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 5
Operator: KVu
Inst : E7
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH136.D Vial: 6
Acq On : 12 Feb 2016 10:46 Operator: KVu
Sample : SVB011SL Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:31:53 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	434440	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1595047	40.00	ppm	0.00
41) Acenaphthene-d10	6.047	164	1022448	40.00	ppm	-0.01
71) Phenanthrene-d10	7.795	188	1922221	40.00	ppm	0.00
87) Chrysene-d12	10.574	240	2238784	40.00	ppm	0.00
97) Perylene-d12	11.949	264	1965770	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	210450	16.02	ppm	0.00
Spiked Amount 30.000			Recovery	=	53.40%	
6) Phenol-d5	2.501	99	283766	16.99	ppm	0.00
Spiked Amount 30.000			Recovery	=	56.63%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	93399	5.64	ppm	0.00
Spiked Amount 10.000			Recovery	=	56.40%	
46) 2-Fluorobiphenyl	5.254	172	223616	5.34	ppm	0.00
Spiked Amount 10.000			Recovery	=	53.40%	
75) 2,4,6-Tribromophenol	6.993	330	117541	20.42	ppm	0.00
Spiked Amount 30.000			Recovery	=	68.07%	
90) Terphenyl-d14	9.501	244	393788	8.18	ppm	0.00
Spiked Amount 10.000			Recovery	=	81.80%	
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.338	74	95591	12.53	ppm	97
4) Pyridine	1.362	79	29482	2.00	ppm	97
7) Phenol	2.511	94	195065	11.48	ppm	97
8) Aniline	2.574	93	247801	11.48	ppm	99
9) bis(2-chloroethyl)ether	2.605	93	147852	11.90	ppm	99
10) 2-Chlorophenol	2.668	128	167411	10.62	ppm	97
11) 1,3-Dichlorobenzene	2.794	146	213746	12.04	ppm	100
13) 1,4-Dichlorobenzene	2.851	146	223014	12.01	ppm	98
14) Benzyl alcohol	2.933	108	115841	12.38	ppm	97
15) 1,2-Dichlorobenzene	2.986	146	213102	12.36	ppm	100
16) 2-Methylphenol	3.014	107	144933	12.36	ppm	97
17) bis(2-chloroisopropyl)...	3.048	45	253048	11.41	ppm	97
18) 4-Methylphenol	3.149	107	186729	12.50	ppm	99
19) N-Nitroso-di-n-propyla...	3.168	70	125455	12.59	ppm	95
20) Hexachloroethane	3.288	117	98693	14.20	ppm	96
23) Nitrobenzene	3.340	77	203648	12.23	ppm	99
24) Isophorone	3.566	82	373480	12.11	ppm	92
25) 2-Nitrophenol	3.647	139	92185	13.16	ppm	94
26) 2,4-Dimethylphenol	3.671	107	182561	11.52	ppm	99
27) Benzoic acid	3.709	105	25938	2.91	ppm	91
28) bis(2-Chloroethoxy)met...	3.777	93	204815	12.38	ppm	99
29) 3,5-Dimethylphenol	3.805	107	216325	12.84	ppm	86
30) 2,4-Dichlorophenol	3.887	162	191873	13.23	ppm	97
31) 1,2,4-Trichlorobenzene	3.979	180	213234	12.74	ppm	98
32) 3,4-Dimethylphenol	3.983	107	235760	12.22	ppm	97
33) Naphthalene	4.070	128	551905	12.46	ppm	98
34) 4-Chloroaniline	4.119	127	221437	11.82	ppm	100
35) 2,6-Dichlorophenol	4.123	162	162950	12.01	ppm	98
36) Hexachlorobutadiene	4.196	225	146679	12.45	ppm	99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH136.D
Acq On : 12 Feb 2016 10:46
Sample : SVB011SL
Misc :
Integrator: RTE
Quant Time: Feb 12 12:31:53 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

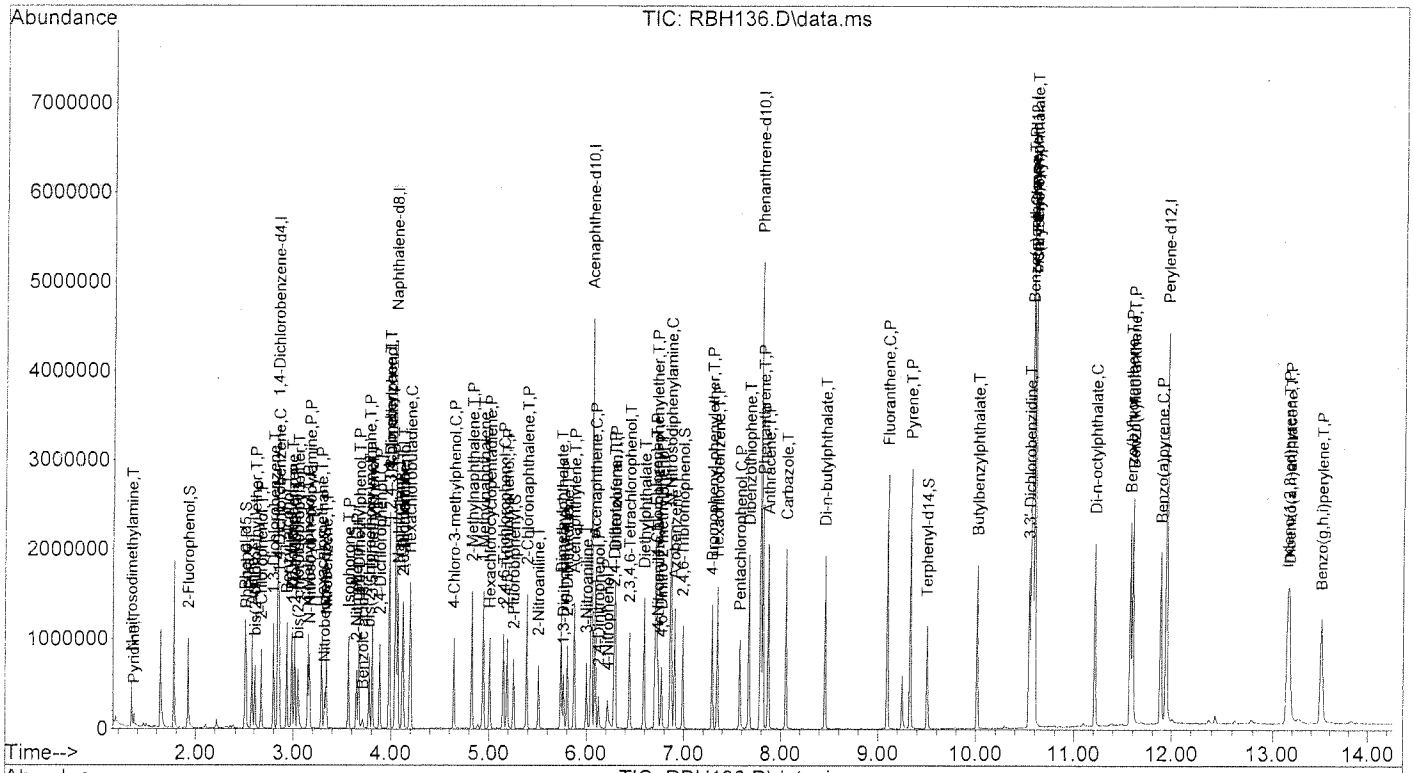
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38)	4-Chloro-3-methylphenol	4.644	107	150184	12.00	ppm		100
39)	2-Methylnaphthalene	4.826	142	415862	13.42	ppm		88
40)	1-Methylnaphthalene	4.941	142	345165	12.67	ppm		100
42)	Hexachlorocyclopentadiene	5.008	237	149430	10.27	ppm		98
44)	2,4,6-Trichlorophenol	5.148	196	132990	11.73	ppm		99
45)	2,4,5-Trichlorophenol	5.186	196	136701	11.62	ppm		99
49)	2-Chloronaphthalene	5.389	162	406216	12.31	ppm		100
50)	2-Nitroaniline	5.508	65	105499	12.51	ppm		99
53)	Dimethylphthalate	5.739	163	495822	13.52	ppm		99
54)	1,3-Dinitrobenzene	5.763	168	64591	14.30	ppm	#	71
55)	2,6-Dinitrotoluene	5.802	165	105260	14.56	ppm		94
57)	Acenaphthylene	5.874	152	595020	12.05	ppm		100
58)	3-Nitroaniline	5.999	138	95736	13.79	ppm		92
59)	Acenaphthene	6.086	153	421698	12.34	ppm		100
60)	2,4-Dinitrophenol	6.124	184	44037	14.85	ppm		92
61)	4-Nitrophenol	6.215	109	63963	12.28	ppm		100
62)	2,4-Dinitrotoluene	6.282	165	155307	16.48	ppm		90
63)	Dibenzofuran	6.292	168	597686	12.55	ppm		99
65)	2,3,4,6-Tetrachlorophenol	6.440	232	134752	12.93	ppm		99
67)	Diethylphthalate	6.592	149	563869	15.68	ppm		99
68)	Fluorene	6.710	166	462212	12.83	ppm		100
69)	4-Chlorophenyl-phenyle...	6.719	204	270350	13.51	ppm		99
70)	4-Nitroaniline	6.733	138	122135	17.55	ppm		89
72)	4,6-Dinitro-2-methylph...	6.771	198	94039	17.23	ppm		98
73)	N-Nitrosodiphenylamine	6.860	169	486814	13.88	ppm		92
74)	Azobenzene	6.908	77	442999	12.61	ppm		97
76)	4-Bromophenyl-phenylether	7.292	248	165600	13.70	ppm		93
77)	Hexachlorobenzene	7.348	284	197579	14.68	ppm		96
78)	Pentachlorophenol	7.580	266	110241	14.59	ppm		97
79)	Dibenzothiophene	7.674	184	753784	13.90	ppm		98
80)	Phenanthrene	7.817	178	829551	14.39	ppm		99
82)	Anthracene	7.872	178	843475	14.56	ppm		100
83)	Carbazole	8.057	167	724333	15.86	ppm		99
84)	Di-n-butylphthalate	8.455	149	951102	16.53	ppm		100
86)	Fluoranthene	9.097	202	1066575	16.63	ppm		99
89)	Pyrene	9.333	202	1109920	16.35	ppm		100
91)	Butylbenzylphthalate	10.015	149	403047	17.11	ppm		96
93)	3,3'-Dichlorobenzidine	10.540	252	367711	16.79	ppm		99
94)	Benzo(a)anthracene	10.564	228	1071434	16.65	ppm		98
95)	Chrysene	10.598	228	1065071	17.43	ppm		99
96)	bis(2-Ethylhexyl)phtha...	10.593	149	631316	17.32	ppm		99
98)	Di-n-octylphthalate	11.215	149	1010388	17.23	ppm		99
99)	Benzo(b)fluoranthene	11.575	252	1038829	17.51	ppm		96
100)	Benzo(k)fluoranthene	11.599	252	950637	16.02	ppm		97
102)	Benzo(a)pyrene	11.888	252	917603	16.15	ppm		100
104)	Indeno(1,2,3-cd)pyrene	13.152	276	981249	16.08	ppm		99
105)	Dibenzo(a,h)anthracene	13.172	278	854224	16.51	ppm		98
106)	Benzo(g,h,i)perylene	13.512	276	876857	16.88	ppm		99

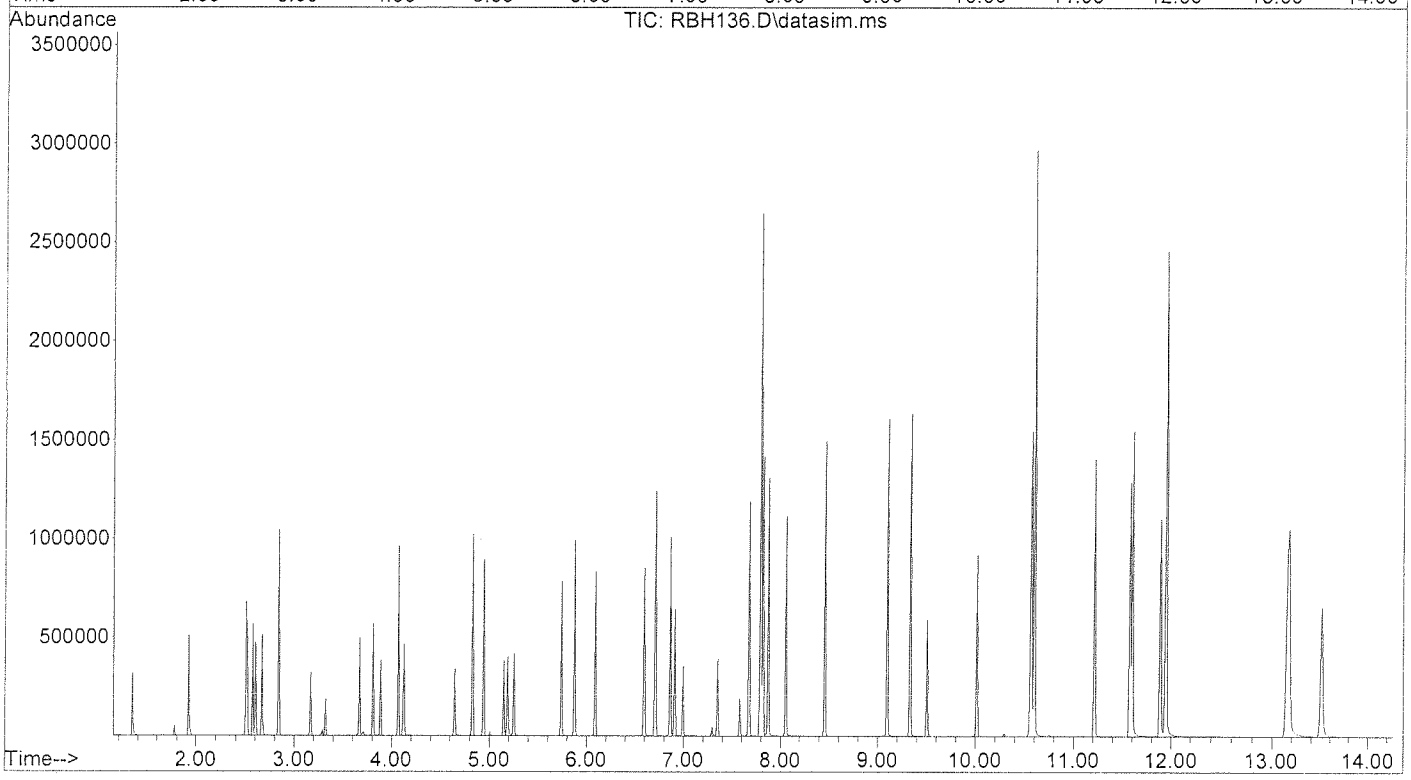
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH136.D
Acq On : 12 Feb 2016 10:46
Sample : SVB011SL
Misc :
Integrator: RTE
Quant Time: Feb 12 12:31:53 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH137.D Vial: 7
Acq On : 12 Feb 2016 11:05 Operator: KVu
Sample : SVB011SC Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:33:01 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	434283	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1627350	40.00	ppm	0.00
41) Acenaphthene-d10	6.047	164	1042526	40.00	ppm	-0.01
71) Phenanthrene-d10	7.795	188	1953804	40.00	ppm	0.00
87) Chrysene-d12	10.574	240	2280399	40.00	ppm	0.00
97) Perylene-d12	11.945	264	1985722	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	243589	18.55	ppm	0.00
Spiked Amount 30.000			Recovery	=	61.83%	
6) Phenol-d5	2.501	99	324173	19.42	ppm	0.00
Spiked Amount 30.000			Recovery	=	64.73%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	106507	6.30	ppm	0.00
Spiked Amount 10.000			Recovery	=	63.00%	
46) 2-Fluorobiphenyl	5.254	172	253856	5.94	ppm	0.00
Spiked Amount 10.000			Recovery	=	59.40%	
75) 2,4,6-Tribromophenol	6.993	330	136776	23.38	ppm	0.00
Spiked Amount 30.000			Recovery	=	77.93%	
90) Terphenyl-d14	9.501	244	427044	8.71	ppm	0.00
Spiked Amount 10.000			Recovery	=	87.10%	
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.338	74	97609	12.80	ppm	95
4) Pyridine	1.362	79	30461	2.07	ppm	99
7) Phenol	2.512	94	203965	12.01	ppm	95
8) Aniline	2.574	93	254399	11.79	ppm	98
9) bis(2-chloroethyl)ether	2.605	93	158442	12.75	ppm	99
10) 2-Chlorophenol	2.668	128	177916	11.29	ppm	96
11) 1,3-Dichlorobenzene	2.794	146	223583	12.60	ppm	100
13) 1,4-Dichlorobenzene	2.851	146	235810	12.70	ppm	97
14) Benzyl alcohol	2.933	108	124490	13.31	ppm	99
15) 1,2-Dichlorobenzene	2.986	146	222450	12.91	ppm	98
16) 2-Methylphenol	3.014	107	149638	12.77	ppm	99
17) bis(2-chloroisopropyl)...	3.048	45	266360	12.01	ppm	97
18) 4-Methylphenol	3.149	107	200566	13.43	ppm	97
19) N-Nitroso-di-n-propyla...	3.168	70	126736	12.72	ppm	98
20) Hexachloroethane	3.288	117	86911	12.51	ppm	95
23) Nitrobenzene	3.340	77	216463	12.74	ppm	98
24) Isophorone	3.566	82	418730	13.31	ppm	93
25) 2-Nitrophenol	3.647	139	95404	13.34	ppm	100
26) 2,4-Dimethylphenol	3.671	107	193892	11.99	ppm	97
27) Benzoic acid	3.714	105	37611	4.14	ppm	98
28) bis(2-Chloroethoxy)met...	3.777	93	214024	12.68	ppm	98
29) 3,5-Dimethylphenol	3.805	107	229443	13.35	ppm	85
30) 2,4-Dichlorophenol	3.887	162	189328	12.79	ppm	88
31) 1,2,4-Trichlorobenzene	3.984	180	221166	12.95	ppm	98
32) 3,4-Dimethylphenol	3.984	107	253310	12.87	ppm	99
33) Naphthalene	4.070	128	584273	12.93	ppm	99
34) 4-Chloroaniline	4.119	127	228159	11.94	ppm	100
35) 2,6-Dichlorophenol	4.123	162	174183	12.58	ppm	98
36) Hexachlorobutadiene	4.196	225	156028	12.98	ppm	99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH137.D
Acq On : 12 Feb 2016 11:05
Sample : SVB011SC
Misc :
Integrator: RTE
Quant Time: Feb 12 12:33:01 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

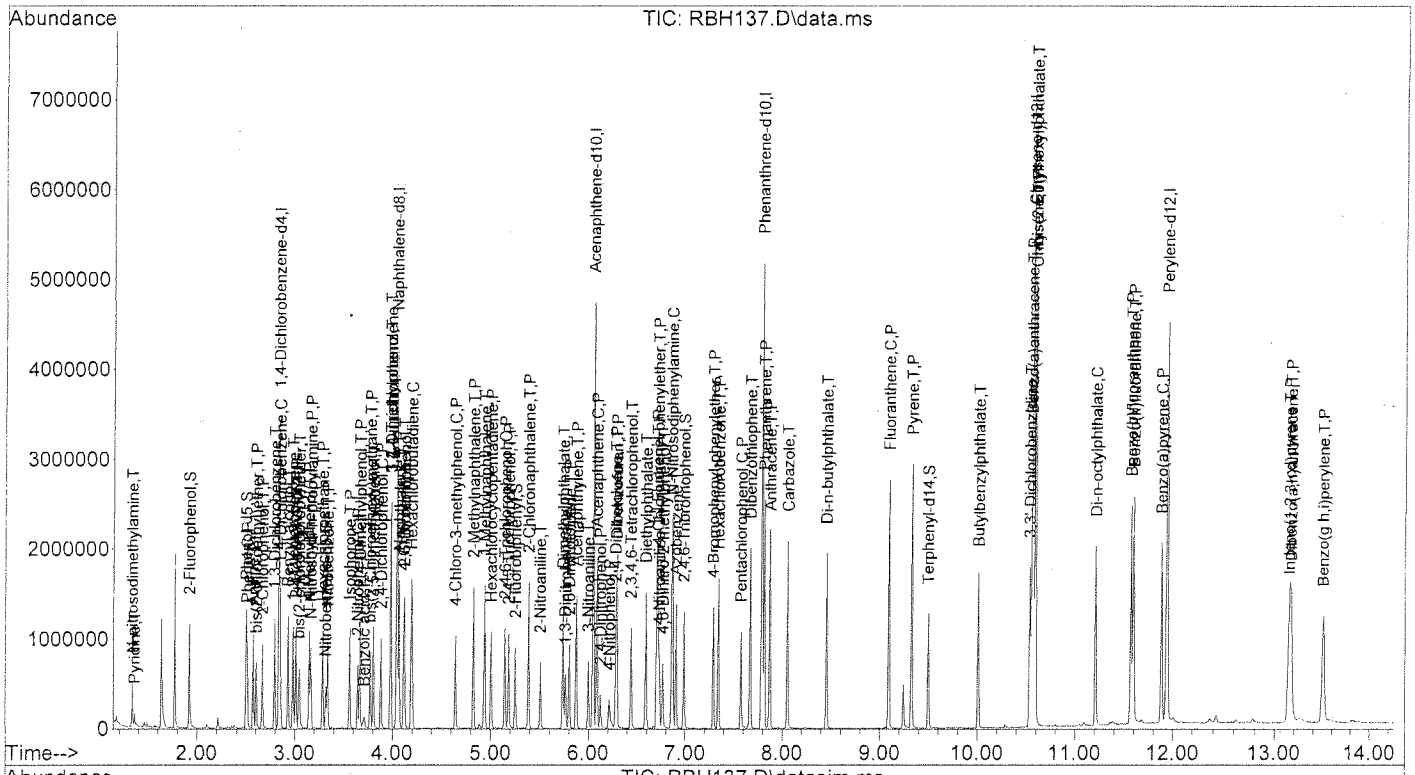
Vial: 7
Operator: KVu
Inst : E7
Multiplr: 1.00

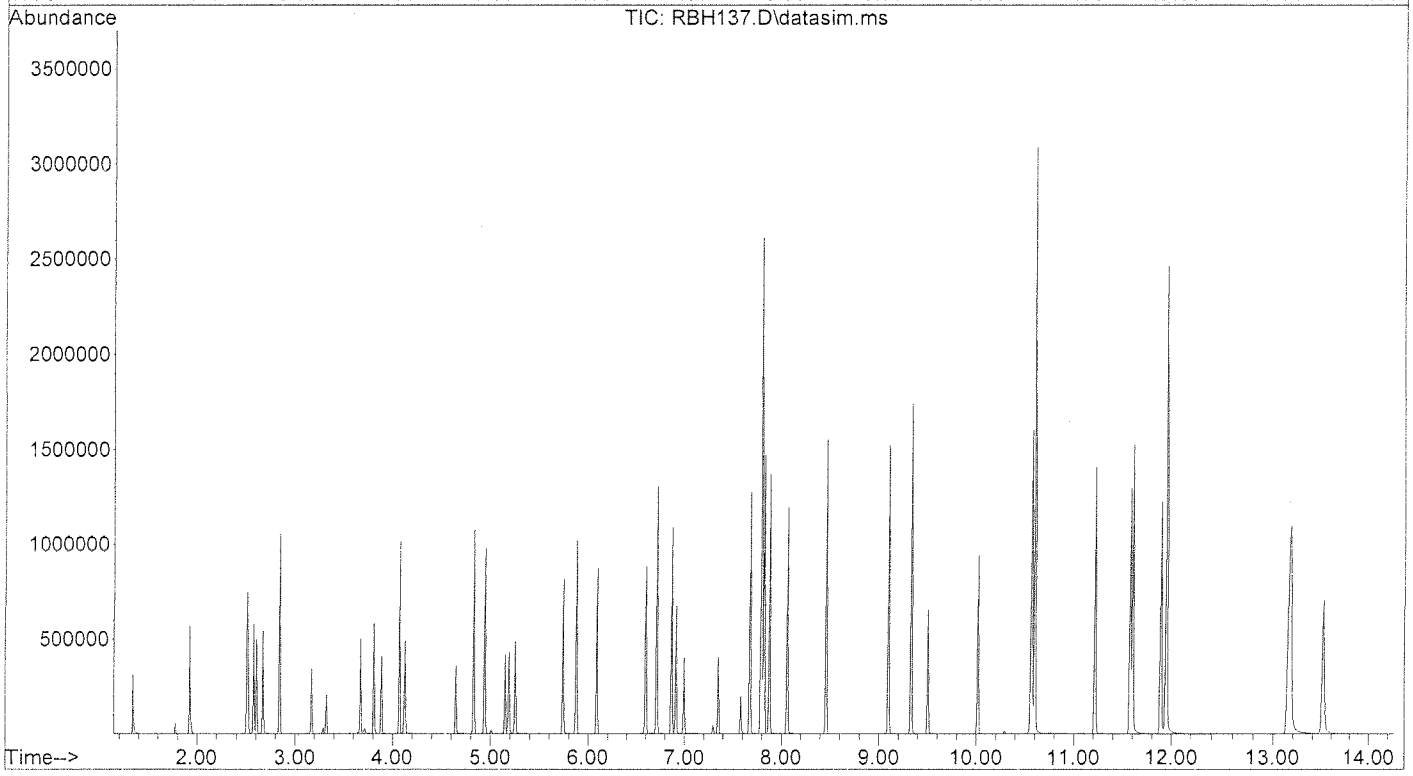
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38)	4-Chloro-3-methylphenol	4.644	107	160084	12.54	ppm		100
39)	2-Methylnaphthalene	4.826	142	389808	12.33	ppm		99
40)	1-Methylnaphthalene	4.941	142	364208	13.10	ppm		100
42)	Hexachlorocyclopentadiene	5.009	237	162937	10.99	ppm		98
44)	2,4,6-Trichlorophenol	5.148	196	137936	11.94	ppm		97
45)	2,4,5-Trichlorophenol	5.186	196	145064	12.09	ppm		98
49)	2-Chloronaphthalene	5.389	162	433093	12.87	ppm		98
50)	2-Nitroaniline	5.509	65	110502	12.85	ppm		95
53)	Dimethylphthalate	5.739	163	536106	14.34	ppm		100
54)	1,3-Dinitrobenzene	5.763	168	65882	14.31	ppm	#	75
55)	2,6-Dinitrotoluene	5.807	165	114195	15.49	ppm		94
57)	Acenaphthylene	5.879	152	630583	12.52	ppm		100
58)	3-Nitroaniline	6.000	138	101737	14.37	ppm		92
59)	Acenaphthene	6.086	153	444227	12.75	ppm		98
60)	2,4-Dinitrophenol	6.124	184	47642	15.60	ppm		93
61)	4-Nitrophenol	6.215	109	66131	12.45	ppm		94
62)	2,4-Dinitrotoluene	6.282	165	159771	16.62	ppm		91
63)	Dibenzofuran	6.292	168	623316	12.84	ppm		99
65)	2,3,4,6-Tetrachlorophenol	6.441	232	142619	13.42	ppm		98
67)	Diethylphthalate	6.593	149	580746	15.84	ppm		99
68)	Fluorene	6.710	166	492403	13.40	ppm		98
69)	4-Chlorophenyl-phenyle...	6.719	204	276896	13.57	ppm		100
70)	4-Nitroaniline	6.733	138	113837	16.05	ppm		91
72)	4,6-Dinitro-2-methylph...	6.771	198	103250	18.43	ppm		91
73)	N-Nitrosodiphenylamine	6.860	169	516616	14.49	ppm		99
74)	Azobenzene	6.908	77	458778	12.85	ppm		99
76)	4-Bromophenyl-phenylether	7.292	248	174968	14.24	ppm		97
77)	Hexachlorobenzene	7.348	284	207724	15.18	ppm		98
78)	Pentachlorophenol	7.580	266	114413	14.90	ppm		97
79)	Dibenzothiophene	7.674	184	851375	15.45	ppm		99
80)	Phenanthrene	7.817	178	854241	14.58	ppm		99
82)	Anthracene	7.876	178	865366	14.70	ppm		99
83)	Carbazole	8.058	167	748169	16.12	ppm		99
84)	Di-n-butylphthalate	8.455	149	958350	16.38	ppm		100
86)	Fluoranthene	9.097	202	1095979	16.81	ppm		99
89)	Pyrene	9.333	202	1164592	16.85	ppm		99
91)	Butylbenzylphthalate	10.015	149	414721	17.29	ppm		97
93)	3,3'-Dichlorobenzidine	10.540	252	373249	16.73	ppm		99
94)	Benzo(a)anthracene	10.559	228	1100634	16.79	ppm		99
95)	Chrysene	10.598	228	1088320	17.49	ppm		100
96)	bis(2-Ethylhexyl)phtha...	10.593	149	635219	17.11	ppm		100
98)	Di-n-octylphthalate	11.215	149	1014098	17.12	ppm		99
99)	Benzo(b)fluoranthene	11.575	252	971121	16.21	ppm		98
100)	Benzo(k)fluoranthene	11.599	252	1039521	17.34	ppm		100
102)	Benzo(a)pyrene	11.884	252	934017	16.27	ppm		100
104)	Indeno(1,2,3-cd)pyrene	13.153	276	993295	16.12	ppm		100
105)	Dibenzo(a,h)anthracene	13.172	278	870115	16.64	ppm		96
106)	Benzo(g,h,i)perylene	13.512	276	883797	16.84	ppm		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH137.D Vial: 7
Acq On : 12 Feb 2016 11:05 Operator: KVu
Sample : SVB011SC Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:33:01 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH138.D Vial: 8
Acq On : 12 Feb 2016 11:24 Operator: KVu
Sample : 16B060-02M Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:34:11 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.841	152	409228	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1510305	40.00	ppm	0.00
41) Acenaphthene-d10	6.047	164	970163	40.00	ppm	-0.01
71) Phenanthrene-d10	7.794	188	1802767	40.00	ppm	0.00
87) Chrysene-d12	10.574	240	2080103	40.00	ppm	0.00
97) Perylene-d12	11.944	264	1810264	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	241825	19.55	ppm	0.00
Spiked Amount 30.000			Recovery = 65.17%			
6) Phenol-d5	2.501	99	320104	20.35	ppm	0.00
Spiked Amount 30.000			Recovery = 67.83%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.321	82	103290	6.59	ppm	0.00
Spiked Amount 10.000			Recovery = 65.90%			
46) 2-Fluorobiphenyl	5.254	172	253877	6.39	ppm	0.00
Spiked Amount 10.000			Recovery = 63.90%			
75) 2,4,6-Tribromophenol	6.993	330	137890	25.55	ppm	0.00
Spiked Amount 30.000			Recovery = 85.17%			
90) Terphenyl-d14	9.501	244	425451	9.52	ppm	0.00
Spiked Amount 10.000			Recovery = 95.20%			
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.338	74	95513	13.29	ppm	99
4) Pyridine	1.362	79	153303	11.06	ppm	97
7) Phenol	2.511	94	208508	13.03	ppm	97
8) Aniline	2.574	93	257816	12.68	ppm	99
9) bis(2-chloroethyl)ether	2.605	93	154303	13.18	ppm	99
10) 2-Chlorophenol	2.668	128	178653	12.03	ppm	95
11) 1,3-Dichlorobenzene	2.793	146	224934	13.45	ppm	100
13) 1,4-Dichlorobenzene	2.856	146	237445	13.57	ppm	98
14) Benzyl alcohol	2.933	108	123760	14.04	ppm	97
15) 1,2-Dichlorobenzene	2.985	146	220984	13.61	ppm	96
16) 2-Methylphenol	3.014	107	151869	13.75	ppm	98
17) bis(2-chloroisopropyl)...	3.048	45	263513	12.61	ppm	96
18) 4-Methylphenol	3.148	107	200711	14.26	ppm	99
19) N-Nitroso-di-n-propyla...	3.168	70	132383	14.10	ppm	96
20) Hexachloroethane	3.287	117	89646	13.69	ppm	98
23) Nitrobenzene	3.340	77	209254	13.27	ppm	95
24) Isophorone	3.565	82	408423	13.99	ppm	90
25) 2-Nitrophenol	3.647	139	97274	14.66	ppm	98
26) 2,4-Dimethylphenol	3.671	107	196728	13.11	ppm	97
27) Benzoic acid	3.728	105	84377	10.00	ppm	94
28) bis(2-Chloroethoxy)met...	3.776	93	215592	13.77	ppm	99
29) 3,5-Dimethylphenol	3.810	107	225866	14.16	ppm	90
30) 2,4-Dichlorophenol	3.887	162	195235	14.22	ppm	91
31) 1,2,4-Trichlorobenzene	3.983	180	223910	14.13	ppm	98
32) 3,4-Dimethylphenol	3.983	107	257666	14.11	ppm	97
33) Naphthalene	4.070	128	591597	14.11	ppm	100
34) 4-Chloroaniline	4.118	127	234670	13.23	ppm	100
35) 2,6-Dichlorophenol	4.128	162	181173	14.10	ppm	98
36) Hexachlorobutadiene	4.196	225	152892	13.71	ppm	100

Quantitation Report (QT Reviewed)

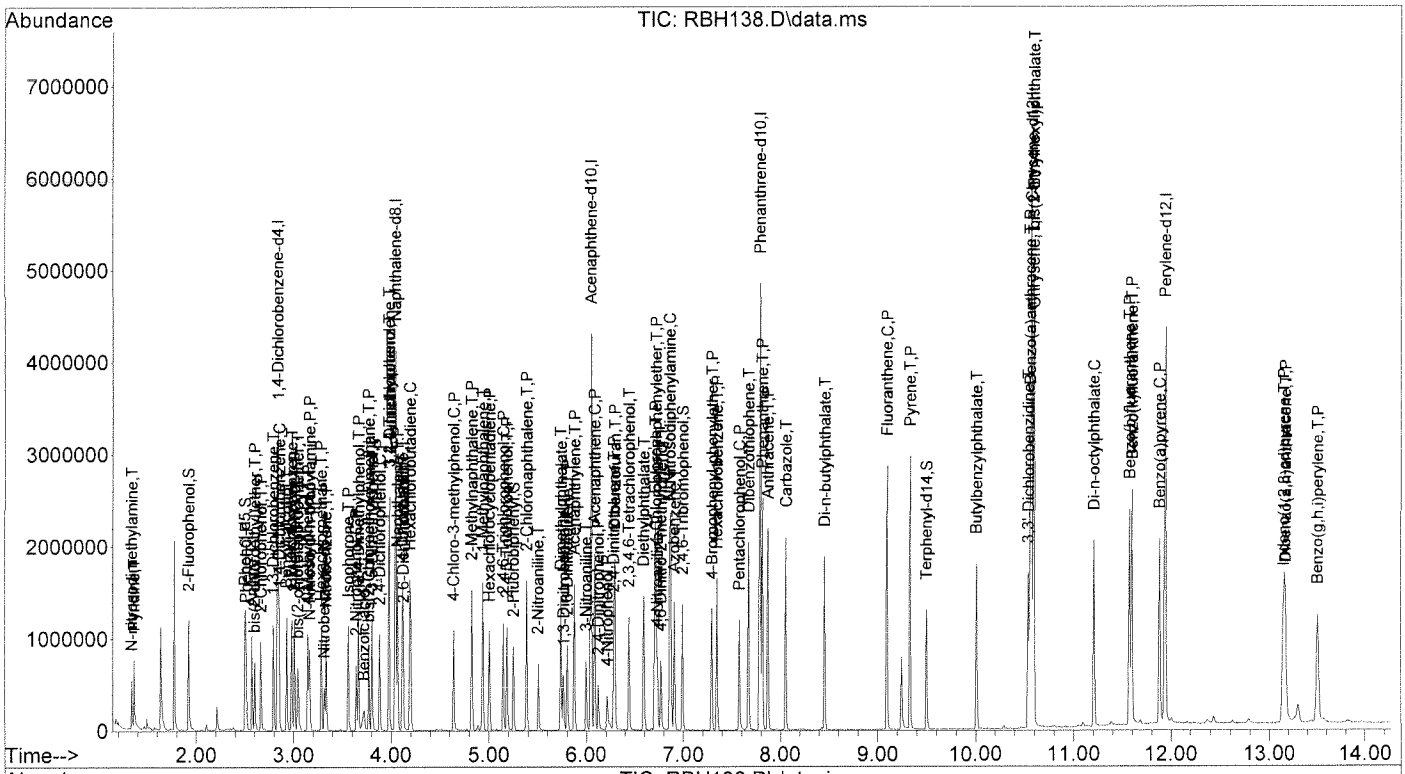
Data File : D:\DATA\16B12\RBH138.D Vial: 8
Acq On : 12 Feb 2016 11:24 Operator: KVu
Sample : 16B060-02M Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:34:11 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

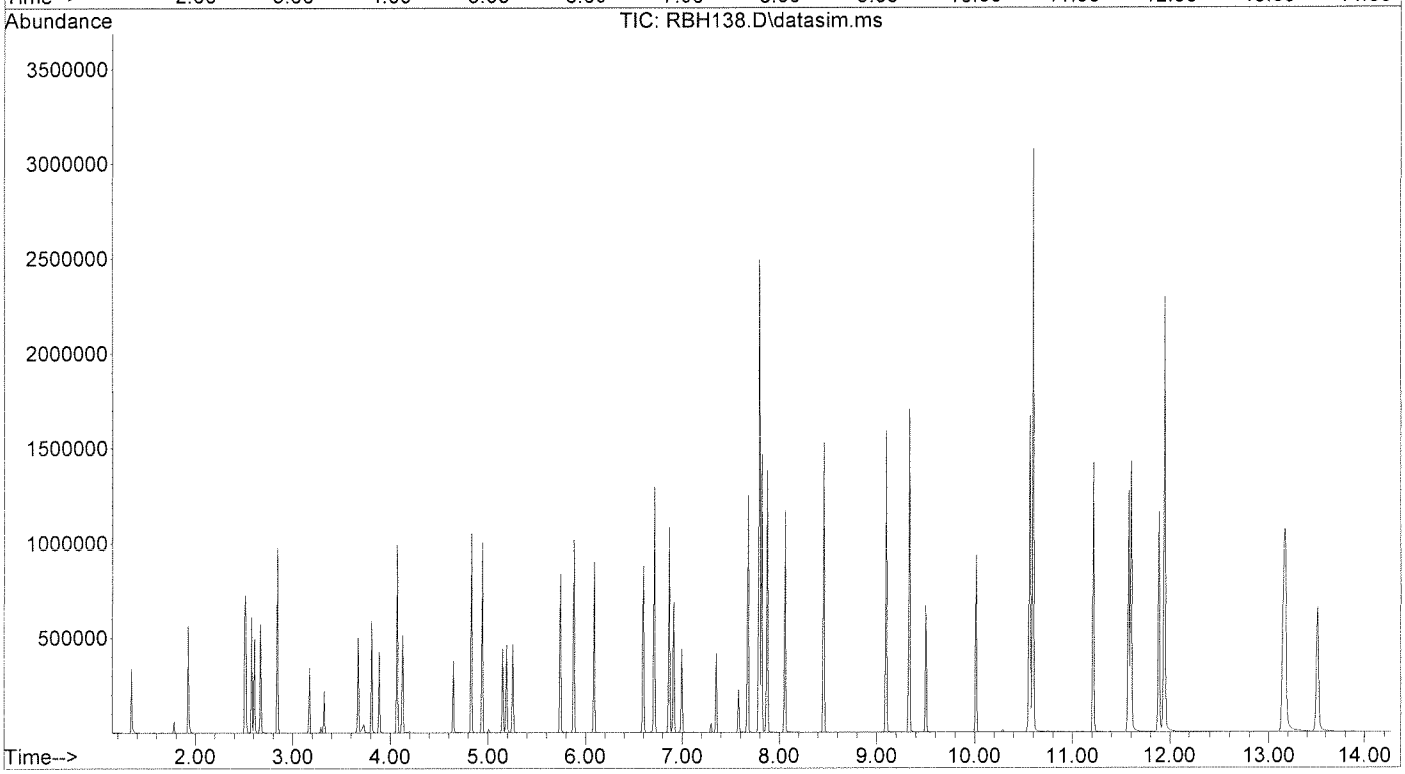
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38)	4-Chloro-3-methylphenol	4.644	107	164840	13.91	ppm		100
39)	2-Methylnaphthalene	4.826	142	387875	13.22	ppm		90
40)	1-Methylnaphthalene	4.941	142	367883	14.26	ppm		99
42)	Hexachlorocyclopentadiene	5.008	237	158873	11.51	ppm		99
44)	2,4,6-Trichlorophenol	5.147	196	146316	13.60	ppm		99
45)	2,4,5-Trichlorophenol	5.186	196	161542	14.47	ppm		98
49)	2-Chloronaphthalene	5.388	162	430947	13.76	ppm		99
50)	2-Nitroaniline	5.508	65	110973	13.86	ppm		95
53)	Dimethylphthalate	5.739	163	514737	14.80	ppm		99
54)	1,3-Dinitrobenzene	5.768	168	66131	15.44	ppm	#	73
55)	2,6-Dinitrotoluene	5.806	165	110627	16.12	ppm		96
57)	Acenaphthylene	5.879	152	641685	13.69	ppm		99
58)	3-Nitroaniline	5.999	138	101274	15.37	ppm		94
59)	Acenaphthene	6.086	153	451411	13.93	ppm		99
60)	2,4-Dinitrophenol	6.124	184	58402	19.75	ppm		92
61)	4-Nitrophenol	6.215	109	73540	14.88	ppm		93
62)	2,4-Dinitrotoluene	6.282	165	153965	17.21	ppm		95
63)	Dibenzofuran	6.292	168	636232	14.08	ppm		100
65)	2,3,4,6-Tetrachlorophenol	6.440	232	151191	15.29	ppm		99
67)	Diethylphthalate	6.592	149	573996	16.82	ppm		99
68)	Fluorene	6.709	166	498606	14.58	ppm		97
69)	4-Chlorophenyl-phenyle...	6.719	204	278335	14.66	ppm		100
70)	4-Nitroaniline	6.733	138	108630	16.45	ppm		98
72)	4,6-Dinitro-2-methylph...	6.770	198	98176	18.92	ppm		95
73)	N-Nitrosodiphenylamine	6.860	169	454374	13.81	ppm		86
74)	Azobenzene	6.908	77	466489	14.16	ppm		99
76)	4-Bromophenyl-phenylether	7.296	248	175584	15.49	ppm		97
77)	Hexachlorobenzene	7.348	284	210861	16.71	ppm		96
78)	Pentachlorophenol	7.579	266	122247	17.25	ppm		99
79)	Dibenzothiophene	7.674	184	862923	16.97	ppm		99
80)	Phenanthrene	7.817	178	857259	15.86	ppm		99
82)	Anthracene	7.872	178	864029	15.91	ppm		100
83)	Carbazole	8.057	167	749290	17.49	ppm		99
84)	Di-n-butylphthalate	8.459	149	954722	17.69	ppm		100
86)	Fluoranthene	9.097	202	1079327	17.95	ppm		98
89)	Pyrene	9.333	202	1131099	17.94	ppm		99
91)	Butylbenzylphthalate	10.010	149	409432	18.71	ppm		96
93)	3,3'-Dichlorobenzidine	10.540	252	365403	17.95	ppm		98
94)	Benzo(a)anthracene	10.559	228	1086288	18.17	ppm		99
95)	Chrysene	10.598	228	1045722	18.42	ppm		99
96)	bis(2-Ethylhexyl)phtha...	10.593	149	628761	18.56	ppm		98
98)	Di-n-octylphthalate	11.210	149	1001366	18.54	ppm		99
99)	Benzo(b)fluoranthene	11.575	252	957450	17.53	ppm		99
100)	Benzo(k)fluoranthene	11.599	252	1004673	18.38	ppm		100
102)	Benzo(a)pyrene	11.883	252	906702	17.33	ppm		99
104)	Indeno(1,2,3-cd)pyrene	13.152	276	988558	17.60	ppm		98
105)	Dibenzo(a,h)anthracene	13.172	278	857676	18.00	ppm		97
106)	Benzo(g,h,i)perylene	13.511	276	875357	18.30	ppm		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH138.D
Vial: 8
Acq On : 12 Feb 2016 11:24
Operator: KVu
Sample : 16B060-02M
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:34:11 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH139.D
Acq On : 12 Feb 2016 11:43
Sample : 16B060-02S
Misc :
Integrator: RTE
Quant Time: Feb 12 12:35:28 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	403429	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1513255	40.00	ppm	0.00
41) Acenaphthene-d10	6.048	164	973786	40.00	ppm	-0.01
71) Phenanthrene-d10	7.795	188	1798898	40.00	ppm	0.00
87) Chrysene-d12	10.574	240	2104207	40.00	ppm	0.00
97) Perylene-d12	11.945	264	1808833	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	230333	18.89	ppm	0.00
Spiked Amount 30.000			Recovery = 62.97%			
6) Phenol-d5	2.501	99	314073	20.25	ppm	0.00
Spiked Amount 30.000			Recovery = 67.50%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.321	82	101193	6.44	ppm	0.00
Spiked Amount 10.000			Recovery = 64.40%			
46) 2-Fluorobiphenyl	5.254	172	239829	6.01	ppm	0.00
Spiked Amount 10.000			Recovery = 60.10%			
75) 2,4,6-Tribromophenol	6.993	330	133495	24.79	ppm	0.00
Spiked Amount 30.000			Recovery = 82.63%			
90) Terphenyl-d14	9.501	244	412868	9.13	ppm	0.00
Spiked Amount 10.000			Recovery = 91.30%			
Target Compounds						Qvalue
3) N-nitrosodimethylamine	1.338	74	96693	13.65	ppm	95
4) Pyridine	1.362	79	149809	10.97	ppm	97
7) Phenol	2.512	94	201530	12.77	ppm	96
8) Aniline	2.574	93	254266	12.69	ppm	99
9) bis(2-chloroethyl)ether	2.606	93	151206	13.10	ppm	98
10) 2-Chlorophenol	2.668	128	173626	11.86	ppm	95
11) 1,3-Dichlorobenzene	2.794	146	223249	13.54	ppm	98
13) 1,4-Dichlorobenzene	2.851	146	230404	13.36	ppm	97
14) Benzyl alcohol	2.933	108	121850	14.02	ppm	96
15) 1,2-Dichlorobenzene	2.981	146	214525	13.40	ppm	96
16) 2-Methylphenol	3.015	107	147258	13.52	ppm	99
17) bis(2-chloroisopropyl)...	3.048	45	254101	12.33	ppm	96
18) 4-Methylphenol	3.149	107	198027	14.27	ppm	99
19) N-Nitroso-di-n-propyla...	3.168	70	127439	13.77	ppm	99
20) Hexachloroethane	3.288	117	86311	13.37	ppm	100
23) Nitrobenzene	3.341	77	207658	13.14	ppm	99
24) Isophorone	3.566	82	414853	14.18	ppm	95
25) 2-Nitrophenol	3.647	139	97900	14.73	ppm	93
26) 2,4-Dimethylphenol	3.671	107	191821	12.75	ppm	98
27) Benzoic acid	3.729	105	78965	9.34	ppm	96
28) bis(2-Chloroethoxy)met...	3.777	93	211582	13.48	ppm	100
29) 3,5-Dimethylphenol	3.805	107	227294	14.22	ppm	77
30) 2,4-Dichlorophenol	3.887	162	196154	14.26	ppm	98
31) 1,2,4-Trichlorobenzene	3.979	180	219491	13.82	ppm	100
32) 3,4-Dimethylphenol	3.984	107	244173	13.34	ppm	97
33) Naphthalene	4.066	128	564237	13.43	ppm	98
34) 4-Chloroaniline	4.119	127	226687	12.75	ppm	97
35) 2,6-Dichlorophenol	4.124	162	173001	13.44	ppm	97
36) Hexachlorobutadiene	4.196	225	150864	13.50	ppm	99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH139.D
Acq On : 12 Feb 2016 11:43
Sample : 16B060-02S
Misc :
Integrator: RTE
Quant Time: Feb 12 12:35:28 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

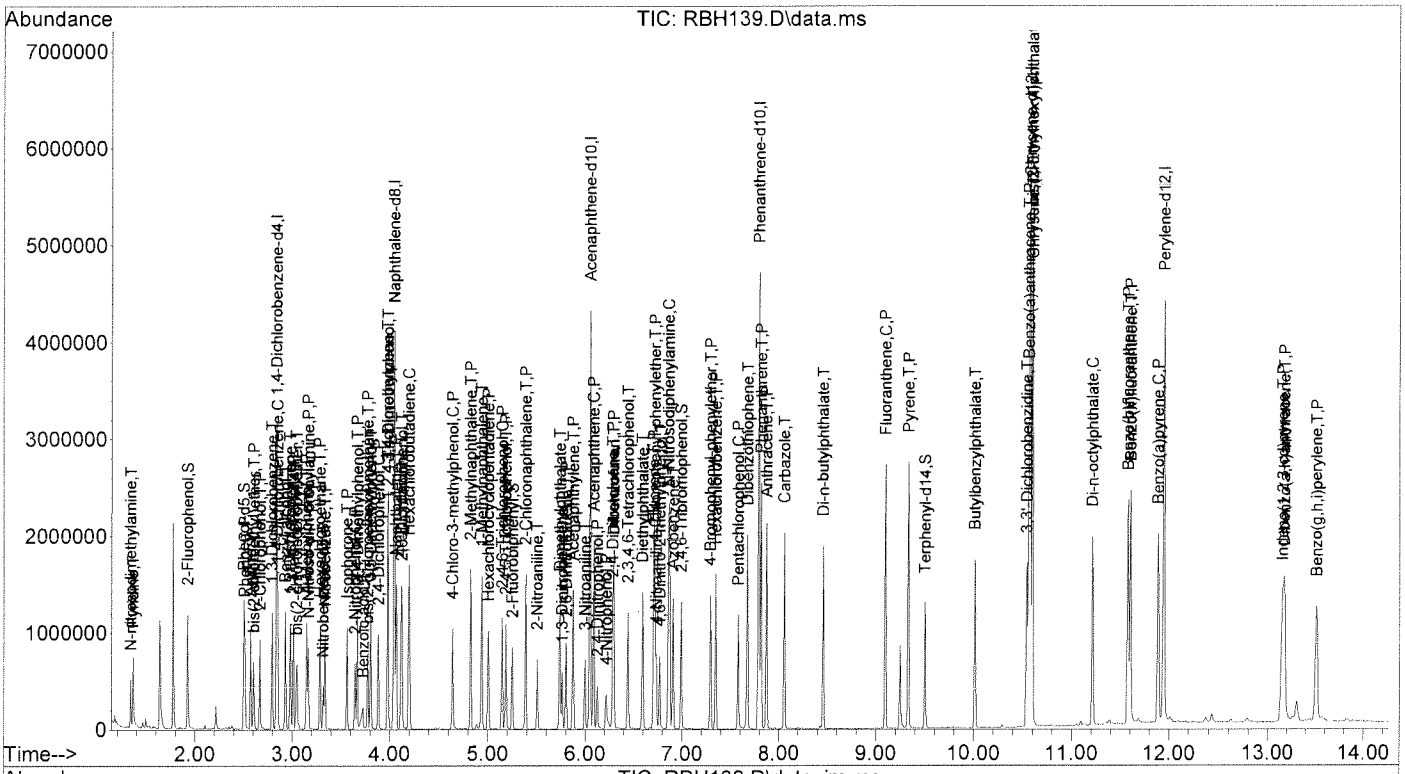
Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00

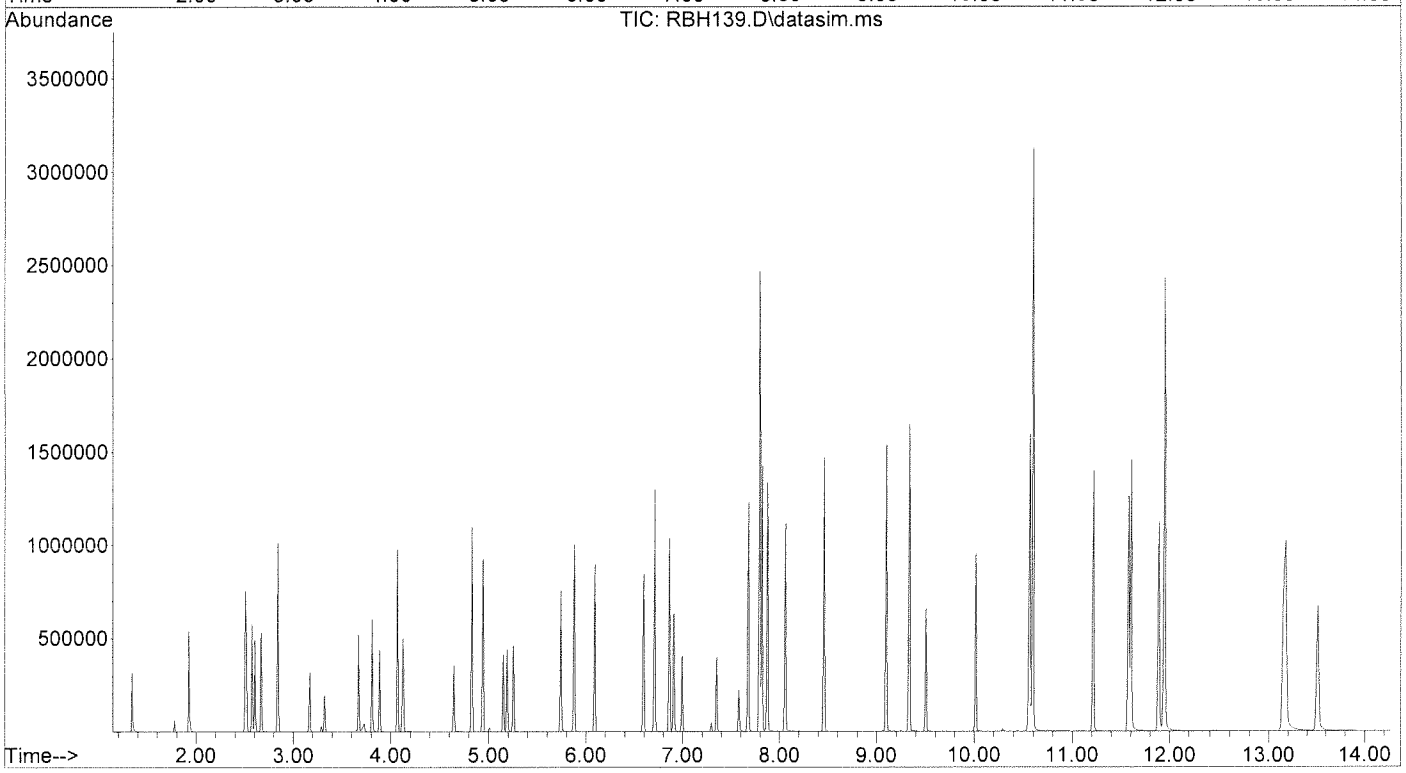
	Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
38)	4-Chloro-3-methylphenol	4.645	107	158262	13.33	ppm		100
39)	2-Methylnaphthalene	4.827	142	429413	14.60	ppm		98
40)	1-Methylnaphthalene	4.942	142	362984	14.04	ppm		100
42)	Hexachlorocyclopentadiene	5.009	237	158621	11.45	ppm		99
44)	2,4,6-Trichlorophenol	5.148	196	145711	13.50	ppm		100
45)	2,4,5-Trichlorophenol	5.187	196	149693	13.35	ppm		98
49)	2-Chloronaphthalene	5.389	162	420098	13.36	ppm		100
50)	2-Nitroaniline	5.509	65	109453	13.62	ppm		97
53)	Dimethylphthalate	5.739	163	492212	14.10	ppm		99
54)	1,3-Dinitrobenzene	5.764	168	65742	15.29	ppm	#	72
55)	2,6-Dinitrotoluene	5.807	165	106106	15.41	ppm		94
57)	Acenaphthylene	5.879	152	617807	13.13	ppm		100
58)	3-Nitroaniline	6.000	138	96944	14.66	ppm		95
59)	Acenaphthene	6.086	153	433182	13.31	ppm		99
60)	2,4-Dinitrophenol	6.124	184	53276	18.18	ppm		100
61)	4-Nitrophenol	6.215	109	77604	15.64	ppm		95
62)	2,4-Dinitrotoluene	6.282	165	152605	17.00	ppm		92
63)	Dibenzofuran	6.292	168	616266	13.59	ppm		98
65)	2,3,4,6-Tetrachlorophenol	6.441	232	150469	15.16	ppm		98
67)	Diethylphthalate	6.593	149	556286	16.24	ppm		98
68)	Fluorene	6.705	166	466998	13.61	ppm		99
69)	4-Chlorophenyl-phenyle...	6.719	204	272153	14.28	ppm		98
70)	4-Nitroaniline	6.733	138	110708	16.71	ppm		94
72)	4,6-Dinitro-2-methylph...	6.771	198	106222	20.32	ppm		92
73)	N-Nitrosodiphenylamine	6.861	169	492612	15.01	ppm		98
74)	Azobenzene	6.908	77	448567	13.64	ppm		98
76)	4-Bromophenyl-phenylether	7.292	248	170795	15.10	ppm		98
77)	Hexachlorobenzene	7.348	284	204269	16.22	ppm		96
78)	Pentachlorophenol	7.580	266	120697	17.07	ppm		96
79)	Dibenzothiophene	7.674	184	816682	16.09	ppm		100
80)	Phenanthrene	7.817	178	834148	15.47	ppm		99
82)	Anthracene	7.872	178	845866	15.61	ppm		99
83)	Carbazole	8.058	167	736875	17.24	ppm		99
84)	Di-n-butylphthalate	8.455	149	959617	17.82	ppm		98
86)	Fluoranthene	9.098	202	1063387	17.72	ppm		99
89)	Pyrene	9.334	202	1123638	17.61	ppm		99
91)	Butylbenzylphthalate	10.011	149	402359	18.18	ppm		98
93)	3,3'-Dichlorobenzidine	10.540	252	363597	17.66	ppm		100
94)	Benzo(a)anthracene	10.560	228	1073607	17.75	ppm		100
95)	Chrysene	10.599	228	1052852	18.33	ppm		100
96)	bis(2-Ethylhexyl)phtha...	10.594	149	625795	18.26	ppm		100
98)	Di-n-octylphthalate	11.210	149	1001435	18.56	ppm		100
99)	Benzo(b)fluoranthene	11.575	252	960720	17.60	ppm		100
100)	Benzo(k)fluoranthene	11.599	252	1002762	18.36	ppm		100
102)	Benzo(a)pyrene	11.884	252	908222	17.37	ppm		100
104)	Indeno(1,2,3-cd)pyrene	13.153	276	985190	17.55	ppm		98
105)	Dibenzo(a,h)anthracene	13.172	278	850074	17.85	ppm		98
106)	Benzo(g,h,i)perylene	13.512	276	861302	18.02	ppm		100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH139.D
Vial: 9
Acq On : 12 Feb 2016 11:43
Operator: KVu
Sample : 16B060-02S
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:35:28 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





INITIAL CALIBRATIONS

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH042
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
DFTPP Injection Date: 01/14/16
DFTPP Injection Time: 10:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	45.99
68	Less than 2% of mass 69	0.64(1.5)1
69	% of mass 198	41.99
70	Less than 2% of mass 69	0.19(0.4)1
127	10.0 - 80.0% of mass 198	45.23
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.36
275	10.0 - 60.0% of mass 198	24.32
365	Greater than 1.00% of mass 198	2.81
441	Present, but less than 24% of mass 442	10.41(15.4)2
442	Greater than 50% of mass 198	67.44
443	15.0 - 24.0% of mass 442	12.74(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD100	SVE7A141	RAH043	01/14/16	10:36
2	SSTD080	SVE7A142	RAH044	01/14/16	10:55
3	SSTD050	SVE7A143	RAH045	01/14/16	11:14
4	SSTD040	SVE7A144	RAH046	01/14/16	11:41
5	SSTD025	SVE7A145	RAH047	01/14/16	12:01
6	SSTD020	SVE7A146	RAH048	01/14/16	12:20
7	SSTD010	SVE7A147	RAH049	01/14/16	12:39
8	SSTD004	SVE7A148	RAH050	01/14/16	12:58

FORM V SV OLM03.0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project:ICAL
SDG No.:ICAL
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	432203	2.85	1600260	4.05	1008743	6.06
	UPPER LIMIT	864406	3.35	3200520	4.55	2017486	6.56
	LOWER LIMIT	216102	2.35	800130	3.55	504372	5.56
	SAMPLE ID						
1	SVE7A141	437216	2.85	1631813	4.05	973893	6.06
2	SVE7A142	443759	2.85	1635045	4.05	989082	6.06
3	SVE7A143	430357	2.85	1570701	4.05	982735	6.06
4	SVE7A144	458767	2.85	1706978	4.05	1080154	6.06
5	SVE7A146	433148	2.85	1595012	4.05	1012332	6.06
6	SVE7A147	425835	2.85	1541240	4.05	961674	6.06
7	SVE7A148	435318	2.85	1589228	4.05	970837	6.06

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-1 OLM02.0

RW 1-22-16

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project:ICAL
SDG No.:ICAL
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1833940	7.80	2122804	10.57	1842737	11.94
	UPPER LIMIT	3667880	8.30	4245608	11.07	3685474	12.44
	LOWER LIMIT	916970	7.30	1061402	10.07	921369	11.44
	SAMPLE ID						
1	SVE7A141	1801950	7.80	2042986	10.57	1775446	11.95
2	SVE7A142	1807442	7.80	2025897	10.57	1807539	11.94
3	SVE7A143	1797853	7.80	2155133	10.58	1857458	11.95
4	SVE7A144	1962589	7.80	2286681	10.58	1978631	11.95
5	SVE7A146	1825171	7.80	2089279	10.57	1795002	11.94
6	SVE7A147	1756016	7.80	2045356	10.57	1817105	11.94
7	SVE7A148	1751800	7.80	2020683	10.57	1781988	11.94

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-2 OLM02.0

mc 1-22-16

Quantitation Limit from Lowest Initial Calibration Concentration

Instrument ID :E7
Beginning DateTime :01/14/16 10:36
IC File :RAH047

Column Spec :ZB-SEMI ID :0.18MM
Ending DateTime :01/14/16 12:58
HPChem Method :SVE7A14

WATER Init. Vol. (ml) : 1000 Final Vol. (ml) : 1
SOIL Init. Weight (gm) : 30 Final Vol. (ml) : 1

IDX	Parameters	ON COL MG/L	WATER UG/L	SOIL MG/KG	R FILE
1	1,4-Dichlorobenzene-d4	IntSTD	IntSTD	IntSTD	IntSTD
2	1,4-Dioxane	4	4	.1333	RAH050
3	N-nitrosodimethylamine	4	4	.1333	RAH050
4	Pyridine	4	4	.1333	RAH050
5	2-Fluorophenol	4	4	.1333	RAH050
6	Phenol-d5	4	4	.1333	RAH050
7	Phenol	4	4	.1333	RAH050
8	Aniline	4	4	.1333	RAH050
9	bis(2-chloroethyl)ether	4	4	.1333	RAH050
10	2-Chlorophenol	4	4	.1333	RAH050
11	1,3-Dichlorobenzene	4	4	.1333	RAH050
12	1,2-Dichlorobenzene-d4	NA	NA	NA	NA
13	1,4-Dichlorobenzene	4	4	.1333	RAH050
14	Benzyl alcohol	4	4	.1333	RAH050
15	1,2-Dichlorobenzene	4	4	.1333	RAH050
16	2-Methylphenol	4	4	.1333	RAH050
17	bis(2-chloroisopropyl)ether	4	4	.1333	RAH050
18	4-Methylphenol	4	4	.1333	RAH050
19	N-Nitroso-di-n-propylamine	4	4	.1333	RAH050
20	Hexachloroethane	4	4	.1333	RAH050
21	Naphthalene-d8	IntSTD	IntSTD	IntSTD	IntSTD
22	Nitrobenzene-d5	4	4	.1333	RAH050
23	Nitrobenzene	4	4	.1333	RAH050
24	Isophorone	4	4	.1333	RAH050
25	2-Nitrophenol	4	4	.1333	RAH050
26	2,4-Dimethylphenol	4	4	.1333	RAH050
27	Benzoic acid	4	4	.1333	RAH050
28	bis(2-Chloroethoxy)methane	4	4	.1333	RAH050
29	3,5-Dimethylphenol	4	4	.1333	RAH050
30	2,4-Dichlorophenol	4	4	.1333	RAH050
31	1,2,4-Trichlorobenzene	4	4	.1333	RAH050
32	3,4-Dimethylphenol	4	4	.1333	RAH050
33	Naphthalene	4	4	.1333	RAH050
34	4-Chloroaniline	4	4	.1333	RAH050
35	2,6-Dichlorophenol	4	4	.1333	RAH050
36	Hexachlorobutadiene	4	4	.1333	RAH050
37	Hydroquinone	NA	NA	NA	NA
38	4-Chloro-3-methylphenol	4	4	.1333	RAH050
39	2-Methylnaphthalene	4	4	.1333	RAH050
40	1-Methylnaphthalene	4	4	.1333	RAH050
41	Acenaphthene-d10	IntSTD	IntSTD	IntSTD	IntSTD
42	Hexachlorocyclopentadiene	4	4	.1333	RAH050
43	2,3,5-Trichlorophenol	4	4	.1333	RAH050
44	2,4,6-Trichlorophenol	4	4	.1333	RAH050
45	2,4,5-Trichlorophenol	4	4	.1333	RAH050
46	2-Fluorobiphenyl	4	4	.1333	RAH050
47	2,3,4-Trichlorophenol	4	4	.1333	RAH050
48	Biphenyl	4	4	.1333	RAH050
49	2-Chloronaphthalene	4	4	.1333	RAH050
50	2-Nitroaniline	4	4	.1333	RAH050
51	2,6-Dimethylnaphthalene	4	4	.1333	RAH050
52	1,4-Dinitrobenzene	4	4	.1333	RAH050
53	Dimethylphthalate	4	4	.1333	RAH050
54	1,3-Dinitrobenzene	4	4	.1333	RAH050
55	2,6-Dinitrotoluene	4	4	.1333	RAH050
56	1,2-Dinitrobenzene	4	4	.1333	RAH050
57	Acenaphthylene	4	4	.1333	RAH050
58	3-Nitroaniline	4	4	.1333	RAH050
59	Acenaphthene	4	4	.1333	RAH050
60	2,4-Dinitrophenol	4	4	.1333	RAH050
61	4-Nitrophenol	4	4	.1333	RAH050
62	2,4-Dinitrotoluene	4	4	.1333	RAH050
63	Dibenzofuran	4	4	.1333	RAH050
64	2,3,5,6-Tetrachlorophenol	4	4	.1333	RAH050
65	2,3,4,6-Tetrachlorophenol	4	4	.1333	RAH050
66	2,3,5-Trimethylnaphthalene	4	4	.1333	RAH050
67	Diethylphthalate	4	4	.1333	RAH050
68	Fluorene	4	4	.1333	RAH050
69	4-Chlorophenyl-phenylether	4	4	.1333	RAH050
70	4-Nitroaniline	4	4	.1333	RAH050
71	Phenanthrene-d10	IntSTD	IntSTD	IntSTD	IntSTD
72	4,6-Dinitro-2-methylphenol	4	4	.1333	RAH050
73	N-Nitrosodiphenylamine	4	4	.1333	RAH050
74	Azobenzene	4	4	.1333	RAH050
75	2,4,6-Tribromophenol	4	4	.1333	RAH050
76	4-Bromophenyl-phenylether	4	4	.1333	RAH050
77	Hexachlorobenzene	4	4	.1333	RAH050
78	Pentachlorophenol	4	4	.1333	RAH050
79	Dibenzothiophene	4	4	.1333	RAH050
80	Phenanthrene	4	4	.1333	RAH050
81	Dinoseb	NA	NA	NA	NA
82	Anthracene	4	4	.1333	RAH050
83	Carbazole	4	4	.1333	RAH050
84	Di-n-butylphthalate	4	4	.1333	RAH050
85	1-Methylphenanthrene	4	4	.1333	RAH050
86	Fluoranthene	4	4	.1333	RAH050
87	Chrysene-d12	IntSTD	IntSTD	IntSTD	IntSTD
88	Benzidine	NA	NA	NA	NA
89	Pyrene	4	4	.1333	RAH050
90	Terphenyl-d14	4	4	.1333	RAH050
91	Butylbenzylphthalate	4	4	.1333	RAH050
92	bis(2-ethylhexyl)adipate	4	4	.1333	RAH050
93	3,3'-Dichlorobenzidine	4	4	.1333	RAH050
94	Benzo(a)anthracene	4	4	.1333	RAH050
95	Chrysene	4	4	.1333	RAH050
96	bis(2-Ethylhexyl)phthalate	4	4	.1333	RAH050
97	Perylene-d12	IntSTD	IntSTD	IntSTD	IntSTD
98	Di-n-octylphthalate	4	4	.1333	RAH050
99	Benzo(b)fluoranthene	4	4	.1333	RAH050
100	Benzo(k)fluoranthene	4	4	.1333	RAH050
101	Benzo(e)pyrene	4	4	.1333	RAH050
102	Benzo(a)pyrene	4	4	.1333	RAH050
103	Perylene	4	4	.1333	RAH050
104	Indeno(1,2,3-cd)pyrene	4	4	.1333	RAH050
105	Dibenzo(a,h)anthracene	4	4	.1333	RAH050
106	Benzo(g,h,i)perylene	4	4	.1333	RAH050

pu
1-22-16

Quantitation Limit from Lowest Initial Calibration Concentration

Instrument ID :E7 Column Spec :ZB-SEMI ID :0.18MM
Beginning DateTime :01/14/16 10:36 Ending DateTime :01/14/16 12:58
IC File :RAH047 HPChem Method :SVE7A14

WATER Init. Vol. (ml) : 1000 Final Vol. (ml) : 2
SOIL Init. Weight (gm) : 30 Final Vol. (ml) : 2

IDX	Parameters	ON COL MG/L	WATER UG/L	SOIL MG/KG	R FILE
1	1,4-Dichlorobenzene-d4	IntSTD	IntSTD	IntSTD	IntSTD
2	1,4-Dioxane	4	8	.2667	RAH050
3	N-nitrosodimethylamine	4	8	.2667	RAH050
4	Pyridine	4	8	.2667	RAH050
5	2-Fluorophenol	4	8	.2667	RAH050
6	Phenol-d5	4	8	.2667	RAH050
7	Phenol	4	8	.2667	RAH050
8	Aniline	4	8	.2667	RAH050
9	bis(2-chloroethyl)ether	4	8	.2667	RAH050
10	2-Chlorophenol	4	8	.2667	RAH050
11	1,3-Dichlorobenzene	4	8	.2667	RAH050
12	1,2-Dichlorobenzene-d4	NA	NA	NA	NA
13	1,4-Dichlorobenzene	4	8	.2667	RAH050
14	Benzyl alcohol	4	8	.2667	RAH050
15	1,2-Dichlorobenzene	4	8	.2667	RAH050
16	2-Methylphenol	4	8	.2667	RAH050
17	bis(2-chloroisopropyl)ether	4	8	.2667	RAH050
18	4-Methylphenol	4	8	.2667	RAH050
19	N-Nitroso-di-n-propylamine	4	8	.2667	RAH050
20	Hexachloroethane	4	8	.2667	RAH050
21	Naphthalene-d8	IntSTD	IntSTD	IntSTD	IntSTD
22	Nitrobenzene-d5	4	8	.2667	RAH050
23	Nitrobenzene	4	8	.2667	RAH050
24	Isophorone	4	8	.2667	RAH050
25	2-Nitrophenol	4	8	.2667	RAH050
26	2,4-Dimethylphenol	4	8	.2667	RAH050
27	Benzoic acid	4	8	.2667	RAH050
28	bis(2-Chloroethoxy)methane	4	8	.2667	RAH050
29	3,5-Dimethylphenol	4	8	.2667	RAH050
30	2,4-Dichlorophenol	4	8	.2667	RAH050
31	1,2,4-Trichlorobenzene	4	8	.2667	RAH050
32	3,4-Dimethylphenol	4	8	.2667	RAH050
33	Naphthalene	4	8	.2667	RAH050
34	4-Chloroaniline	4	8	.2667	RAH050
35	2,6-Dichlorophenol	4	8	.2667	RAH050
36	Hexachlorobutadiene	4	8	.2667	RAH050
37	Hydroquinone	NA	NA	NA	NA
38	4-Chloro-3-methylphenol	4	8	.2667	RAH050
39	2-Methylnaphthalene	4	8	.2667	RAH050
40	1-Methylnaphthalene	4	8	.2667	RAH050
41	Acenaphthene-d10	IntSTD	IntSTD	IntSTD	IntSTD
42	Hexachlorocyclopentadiene	4	8	.2667	RAH050
43	2,3,5-Trichlorophenol	4	8	.2667	RAH050
44	2,4,6-Trichlorophenol	4	8	.2667	RAH050
45	2,4,5-Trichlorophenol	4	8	.2667	RAH050
46	2-Fluorobiphenyl	4	8	.2667	RAH050
47	2,3,4-Trichlorophenol	4	8	.2667	RAH050
48	Biphenyl	4	8	.2667	RAH050
49	2-Chloronaphthalene	4	8	.2667	RAH050
50	2-Nitroaniline	4	8	.2667	RAH050
51	2,6-Dimethylnaphthalene	4	8	.2667	RAH050
52	1,4-Dinitrobenzene	4	8	.2667	RAH050
53	Dimethylphthalate	4	8	.2667	RAH050
54	1,3-Dinitrobenzene	4	8	.2667	RAH050
55	2,6-Dinitrotoluene	4	8	.2667	RAH050
56	1,2-Dinitrobenzene	4	8	.2667	RAH050
57	Acenaphthylene	4	8	.2667	RAH050
58	3-Nitroaniline	4	8	.2667	RAH050
59	Acenaphthene	4	8	.2667	RAH050
60	2,4-Dinitrophenol	4	8	.2667	RAH050
61	4-Nitrophenol	4	8	.2667	RAH050
62	2,4-Dinitrotoluene	4	8	.2667	RAH050
63	Dibenzofuran	4	8	.2667	RAH050
64	2,3,5,6-Tetrachlorophenol	4	8	.2667	RAH050
65	2,3,4,6-Tetrachlorophenol	4	8	.2667	RAH050
66	2,3,5-Trimethylnaphthalene	4	8	.2667	RAH050
67	Diethylphthalate	4	8	.2667	RAH050
68	Fluorene	4	8	.2667	RAH050
69	4-Chlorophenyl-phenylether	4	8	.2667	RAH050
70	4-Nitroaniline	4	8	.2667	RAH050
71	Phenanthrene-d10	IntSTD	IntSTD	IntSTD	IntSTD
72	4,6-Dinitro-2-methylphenol	4	8	.2667	RAH050
73	N-Nitrosodiphenylamine	4	8	.2667	RAH050
74	Azobenzene	4	8	.2667	RAH050
75	2,4,6-Tribromophenol	4	8	.2667	RAH050
76	4-Bromophenyl-phenylether	4	8	.2667	RAH050
77	Hexachlorobenzene	4	8	.2667	RAH050
78	Pentachlorophenol	4	8	.2667	RAH050
79	Dibenzothiophene	4	8	.2667	RAH050
80	Phenanthrene	4	8	.2667	RAH050
81	Dinoseb	NA	NA	NA	NA
82	Anthracene	4	8	.2667	RAH050
83	Carbazole	4	8	.2667	RAH050
84	Di-n-butylphthalate	4	8	.2667	RAH050
85	1-Methylphenanthrene	4	8	.2667	RAH050
86	Fluoranthene	4	8	.2667	RAH050
87	Chrysene-d12	IntSTD	IntSTD	IntSTD	IntSTD
88	Benzidine	NA	NA	NA	NA
89	Pyrene	4	8	.2667	RAH050
90	Terphenyl-d14	4	8	.2667	RAH050
91	Butylbenzylphthalate	4	8	.2667	RAH050
92	bis(2-ethylhexyl)adipate	4	8	.2667	RAH050
93	3,3'-Dichlorobenzidine	4	8	.2667	RAH050
94	Benzo(a)anthracene	4	8	.2667	RAH050
95	Chrysene	4	8	.2667	RAH050
96	bis(2-Ethylhexyl)phthalate	4	8	.2667	RAH050
97	Perylene-d12	IntSTD	IntSTD	IntSTD	IntSTD
98	Di-n-octylphthalate	4	8	.2667	RAH050
99	Benzo(b)fluoranthene	4	8	.2667	RAH050
100	Benzo(k)fluoranthene	4	8	.2667	RAH050
101	Benzo(e)pyrene	4	8	.2667	RAH050
102	Benzo(a)pyrene	4	8	.2667	RAH050
103	Perylene	4	8	.2667	RAH050
104	Indeno(1,2,3-cd)pyrene	4	8	.2667	RAH050
105	Dibenzo(a,h)anthracene	4	8	.2667	RAH050
106	Benzo(g,h,i)perylene	4	8	.2667	RAH050

m
1-22-16

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :E7
Beginning DateTime :01/14/16 10:36
Spike Units :PPM
IC File :RAH047

Column Spec :ZB-SEMI ID :0.18MM
Ending DateTime :01/14/16 12:58
HPChem Method :SVE7A14

IDX	Parameters	4 12:58 RAH050	10 12:39 RAH049	20 12:20 RAH048	25 12:01 RAH047	40 11:41 RAH046	50 11:14 RAH045	80 10:55 RAH044	100 10:36 RAH043	Av_RRF	%_RSD	Av_Rt_M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	0	2.8458
2	1,4-Dioxane	0.478	0.507	0.489	0.489	0.488	0.484	------	------	0.489	1.98	1.2338
3	N-nitrosodimethylamine	0.680	0.683	0.715	0.705	0.730	0.700	------	------	0.702	2.71	1.3439
4	Pyridine	1.363	1.325	1.363	1.395	1.406	1.387	1.264	1.332	1.354	3.43	1.3676
5	2-Fluorophenol	1.182	1.160	1.220	1.216	1.250	1.226	------	------	1.209	2.71	1.9279
6	Phenol-d5	1.474	1.505	1.525	1.559	1.572	1.591	------	------	1.538	2.88	2.5044
7	Phenol	1.492	1.456	1.581	1.625	1.613	1.622	------	------	1.565	4.66	2.5149
8	Aniline	1.916	1.910	1.974	2.025	2.077	2.020	------	------	1.987	3.32	2.5809
9	bis(2-chloroethyl)ether	1.117	1.119	1.132	1.180	1.169	1.149	------	------	1.144	2.29	2.6114
10	2-Chlorophenol	1.269	1.302	1.522	1.525	1.560	1.529	------	------	1.451	8.92	2.6722
11	1,3-Dichlorobenzene	1.597	1.552	1.647	1.656	1.700	1.656	------	------	1.635	3.18	2.8020
12	1,2-Dichlorobenzene-d4	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
13	1,4-Dichlorobenzene	1.671	1.677	1.720	1.724	1.763	1.705	------	------	1.710	1.98	2.8604
14	Benzyl alcohol	0.801	0.831	0.887	0.886	0.887	0.877	------	------	0.861	4.25	2.9395
15	1,2-Dichlorobenzene	1.523	1.517	1.602	1.640	1.641	1.602	------	------	1.587	3.46	2.9899
16	2-Methylphenol	1.013	1.051	1.080	1.098	1.129	1.107	------	------	1.080	3.88	3.0147
17	bis(2-chloroisopropyl)ether	1.983	1.976	2.040	2.107	2.121	2.028	------	------	2.043	2.98	3.0579
18	4-Methylphenol	1.286	1.334	1.401	1.397	1.432	1.402	------	------	1.376	3.94	3.1521
19	N-Nitroso-di-n-propylamine	0.921	0.875	0.907	0.924	0.952	0.927	------	------	0.918	2.81	3.1777
20	Hexachloroethane	0.623	0.626	0.628	0.654	0.662	0.647	------	------	0.640	2.56	3.2958
21	Naphthalene-d8	1	1	1	1	1	1	1	1	1	0	4.0539
22	Nitrobenzene-d5	0.393	0.400	0.419	0.427	0.428	0.425	------	------	0.415	3.63	3.3286
23	Nitrobenzene	0.394	0.406	0.421	0.430	0.429	0.427	------	------	0.418	3.48	3.3469
24	Isophorone	0.680	0.769	0.785	0.799	0.789	0.817	------	------	0.773	6.27	3.5755
25	2-Nitrophenol	0.141	0.171	0.182	0.186	0.189	0.185	------	------	0.176	10.37	3.6530
26	2,4-Dimethylphenol	0.368	0.394	0.398	0.406	0.407	0.413	------	------	0.398	4.02	3.6745
27	Benzoic acid	0.155	0.200	0.220	0.233	0.240	0.247	0.250	0.242	0.223	14.34	3.7650
28	bis(2-Chloroethoxy)methane	0.406	0.410	0.413	0.416	0.424	0.420	------	------	0.415	1.62	3.7847
29	3,5-Dimethylphenol	0.381	0.431	0.450	0.402	0.416	0.456	------	------	0.422	6.78	3.8119
30	2,4-Dichlorophenol	0.325	0.332	0.355	0.395	0.410	0.366	------	------	0.364	9.24	3.8888
31	1,2,4-Trichlorobenzene	0.391	0.409	0.423	0.429	0.433	0.433	------	------	0.420	3.92	3.9885
32	3,4-Dimethylphenol	0.447	0.462	0.488	0.500	0.502	0.504	------	------	0.484	4.95	3.9877
33	Naphthalene	1.056	1.085	1.108	1.137	1.141	1.137	------	------	1.111	3.10	4.0754
34	4-Chloroaniline	0.438	0.449	0.468	0.479	0.491	0.494	------	------	0.470	4.88	4.1252
35	2,6-Dichlorophenol	0.309	0.325	0.346	0.346	0.358	0.358	------	------	0.340	5.63	4.1317
36	Hexachlorobutadiene	0.277	0.288	0.299	0.302	0.302	0.303	------	------	0.295	3.57	4.2033
37	Hydroquinone	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
38	4-Chloro-3-methylphenol	0.283	0.296	0.321	0.325	0.330	0.328	------	------	0.314	6.21	4.6445
39	2-Methylnaphthalene	0.735	0.749	0.775	0.789	0.802	0.813	------	------	0.777	3.92	4.8370
40	1-Methylnaphthalene	0.645	0.660	0.685	0.701	0.705	0.702	------	------	0.683	3.67	4.9496
41	Acenaphthene-d10	1	1	1	1	1	1	1	1	1	0	6.0575
42	Hexachlorocyclopentadiene	0.528	0.538	0.572	0.588	0.596	0.592	------	------	0.569	5.17	5.0175
43	2,3,5-Trichlorophenol	0.375	0.370	0.397	0.413	0.432	0.428	------	------	0.403	6.56	5.0222
44	2,4,6-Trichlorophenol	0.418	0.417	0.443	0.455	0.460	0.468	------	------	0.443	4.86	5.1528
45	2,4,5-Trichlorophenol	0.418	0.435	0.463	0.474	0.483	0.489	------	------	0.460	6.14	5.1874
46	2-Fluorobiphenyl	1.556	1.542	1.577	1.612	1.641	1.902	------	------	1.638	8.19	5.2239
47	2,3,4-Trichlorophenol	0.357	0.359	0.415	0.385	0.395	0.459	------	------	0.395	9.75	5.2639
48	Biphenyl	1.547	1.524	1.557	1.600	1.612	1.639	------	------	1.580	2.79	5.3794
49	2-Chloronaphthalene	1.259	1.243	1.287	1.313	1.323	1.321	------	------	1.291	2.63	5.3978
50	2-Nitroaniline	0.309	0.302	0.335	0.341	0.347	0.347	------	------	0.330	5.91	5.5152
51	2,6-Dimethylnaphthalene	1.094	1.063	1.109	1.131	1.137	1.152	------	------	1.114	2.93	5.5632
52	1,4-Dinitrobenzene	0.116	0.130	0.153	0.150	0.160	0.157	------	------	0.144	11.97	5.6849
53	Dimethylphthalate	1.390	1.388	1.451	1.460	1.458	1.458	------	------	1.434	2.45	5.7532
54	1,3-Dinitrobenzene	0.152	0.173	0.180	0.185	0.185	0.185	------	------	0.177	7.41	5.7726
55	2,6-Dinitrotoluene	0.260	0.266	0.291	0.295	0.293	0.293	------	------	0.283	5.56	5.8144
56	1,2-Dinitrobenzene	0.106	0.108	0.113	0.115	0.119	0.117	------	------	0.113	4.50	5.8714
57	Acenaphthylene	1.867	1.857	1.923	1.969	1.983	1.996	------	------	1.932	3.11	5.8875
58	3-Nitroaniline	0.258	0.263	0.268	0.275	0.285	0.281	------	------	0.272	3.80	6.0062
59	Acenaphthene	1.327	1.294	1.323	1.361	1.359	1.355	------	------	1.336	1.99	6.0965
60	2,4-Dinitrophenol	0.066	0.094	0.113	0.125	0.134	0.135	------	------	0.111	24.40	6.1285
61	4-Nitrophenol	0.170	0.201	0.209	0.215	0.213	0.215	------	------	0.204	8.52	6.2012
62	2,4-Dinitrotoluene	0.329	0.352	0.377	0.377	0.384	0.393	------	------	0.369	6.44	6.2922
63	Dibenzofuran	1.795	1.796	1.846	1.905	1.904	1.929	------	------	1.862	3.14	6.3050
64	2,3,5,6-Tetrachlorophenol	0.301	0.310	0.329	0.344	0.349	0.355	------	------	0.331	6.53	6.3953
65	2,3,4,6-Tetrachlorophenol	0.353	0.385	0.402	0.410	0.472	0.423	------	------	0.408	9.77	6.4472
66	2,3,5-Trimethylnaphthalene	1.187	1.179	1.225	1.229	1.097	1.250	------	------	1.194	4.58	6.5521
67	Diethylphthalate	1.349	1.359	1.410	1.448	1.432	1.444	------	------	1.407	3.07	6.6060
68	Fluorene	1.316	1.350	1.405	1.445	1.458	1.486	------	------	1.410	4.68	6.7178
69	4-Chlorophenyl-phenylether	0.754	0.757	0.772	0.805	0.800	0.809	------	------	0.783	3.17	6.7287
70	4-Nitroaniline	0.254	0.261	0.274	0.274	0.289	0.282	------	------	0.272	4.72	6.7397
71	Phenanthrene-d10	1	1	1	1	1	1	1	1	1	0	7.7992
72	4,6-Dinitro-2-methylphenol	0.076	0.084	0.113	0.109	0.130	0.127	------	------	0.107	20.90	6.7787
73	N-Nitrosodiphenylamine	0.736	0.705	0.727	0.753	0.718	0.740	------	------	0.730	2.33	6.8698
74	Azobenzene	0.710	0.709	0.732	0.747	0.745	0.744	------	------	0.731	2.41	6.9172
75	2,4,6-Tribromophenol	0.104	0.113	0.125	0.123	0.127	0.127	------	------	0.120	7.80	6.9987
76	4-Bromophenyl-phenylether	0.248	0.241	0.254	0.258	0.251	0.257	------	------	0.251	2.46	7.3029
77	Hexachlorobenzene	0.278	0.271	0.279	0.284	0.281	0.287	------	------	0.280	2.02	7.3564
78	Pentachlorophenol	0.135	0.145	0.160	0.164	0.168	0.172	------	------	0.157	9.15	7.5800
79	Dibenzothiophene	1.069	1.033	1.076	1.182	1.192	1.218	------	------	1.128	6.89	7.6823
80	Phenanthrene	1.182	1.150	1.197	1.220	1.212	1.235	------	------	1.199	2.53	7.8255
81	Dinoseb	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
82	Anthracene	1.188	1.155	1.195	1.222	1.226	1.245	------	------	1.205	2.67	7.8809
83	Carbazole	0.942	0.923	0.952	0.950	0.956	0.978	------	------	0.950	1.89	8.0612
84	Di-n-butylphthalate	1.086	1.134	1.219	1.245	1.243	1.259	------	------	1.198	5.91	8.4676
85	1-Methylphenanthrene	0.855	0.831	0.867	0.883	0.877	0.900	------	------	0.869	2.77	8.4958
86	Fluoranthene	1.270	1.304	1.328	1.366	1.352	1.387	------	------	1.334	3.20	9.1013
87	Chrysene-d12	1	1	1	1	1	1	1	1	1	0	10.5744
88	Benzidine	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
89	Pyrene	1.185	1.176	1.225	1.241	1.223	1.227	------	------	1.213	2.14	9.3373
90	Terphenyl-d14	0.817	0.827	0.876	0.887	0.874	0.877	------	------	0.860	3.42	9.5101
91	Butylbenzylphthalate	0.364	0.400	0.435	0.439	0.444	0.443	------	------	0.421	7.25	10.0220
92	bis(2-ethylhexyl)adipate	0.292	0.315	0.342	0.352	0.352	0.355	------	------	0.335	7.63	10.1091
93	3,3'-Dichlorobenzidine	0.374	0.387	0.398	0.395	0.394	0.401	------	------	0.391	2.48	10.5419
94	Benzo(a)anthracene	1.137	1.112	1.150	1.159	1.168	1.173	------	------	1.150	1.97	10.5630
95	Chrysene	1.084	1.056	1.085	1.103	1.105	1.117	------	------	1.092	1.98	10.5986
96	bis(2-Ethylhexyl)phthalate	0.563	0.611	0.662	0.682	0.693	0.697	------	------	0.651	8.22	10.6051
97	Perylene-d12	1	1	1	1	1	1	1	1	1	0	11.9440
98	Di-n-octylphthalate	0.984	1.095	1.223	1.267	1.282	1.310	------	------	1.193	10.70	11.2246
99	Benzo(b)fluoranthene	1.089	1.207	1.213	1.266	1.211	1.255	------	------	1.207	5.21	11.5751
100	Benzo(k)fluoranthene	1.167	1.112	1.212	1.202	1.272	1.282	------	------	1.208	5.30	11.6001
101	Benzo(e)pyrene	1.047	1.065	1.116	1.131	1.132	1.146	------	------	1.106	3.67	11.8332
102	Benzo(a)pyrene	1.075	1.097	1.162	1.185	1.197	1.223	------	------	1.156	5.07	11.8871
103	Perylene	1.071	1.117	1.150	1.170	1.162	1.183	------	------	1.142	3.62	11.9700
104	Indeno(1,2,3-cd)pyrene	1.129	1.184	1.241	1.273	1.294	1.327	------	------	1.241	5.81	13.1525
105	Dibenzo(a,h)anthracene	0.999	0.990	1.057	1.068	1.088	1.116	------	------	1.053	4.71	13.1752
106	Benzo(g,h,i)perylene	0.989	1.021	1.065	1.082	1.075	1.111	------	------	1.057	4.21	13.5141

Ave_%RSD : 5.1 Max_%RSD : 24.4

Use Least Square Linear Regression with weighting factor of inverse concentration
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
60	2,4-Dinitrophenol	-0.00887	0.13990	0.9986
72	4,6-Dinitro-2-methylphenol	-0.00753	0.13107	0.9966

ru 1-22-16

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR(%REC)

Instrument ID :E7
Beginning DateTime :01/14/16 10:36
Spike Units :PPM
IC File :RAH047

Column Spec :ZB-SEMI ID :0.18MM
Ending DateTime :01/14/16 12:58
HPChem Method :SVE7A14

IDX	Parameters	4 12:58 RAH050	10 12:39 RAH049	20 12:20 RAH048	25 12:01 RAH047	40 11:41 RAH046	50 11:14 RAH045	80 10:55 RAH044	100 10:36 RAH043	AvDRec	% RSD	Av_Rt_M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	0	2.8458
2	1,4-Dioxane	98	104	100	100	100	99	------	------	1.2	1.98	1.2338
3	N-nitrosodimethylamine	97	97	102	100	104	100	------	------	2.1	2.71	1.3437
4	Pyridine	101	98	101	103	104	102	93	98	2.6	3.43	1.3676
5	2-Fluorophenol	98	96	101	101	103	101	------	------	2.1	2.71	1.9279
6	Phenol-d5	96	98	99	101	102	103	------	------	2.4	2.88	2.5044
7	Phenol	95	93	101	104	103	104	------	------	3.9	4.66	2.5149
8	Aniline	96	96	99	102	105	102	------	------	2.7	3.32	2.5809
9	bis(2-chloroethyl)ether	98	98	99	103	102	100	------	------	1.9	2.26	2.6114
10	2-Chlorophenol	87	90	105	105	108	105	------	------	7.6	8.92	2.6726
11	1,3-Dichlorobenzene	98	95	101	101	104	101	------	------	2.4	3.18	2.8020
12	1,2-Dichlorobenzene-d4	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
13	1,4-Dichlorobenzene	98	98	101	101	103	100	------	------	1.5	1.98	2.8604
14	Benzyl alcohol	93	97	103	103	103	102	------	------	3.5	4.25	2.9395
15	1,2-Dichlorobenzene	96	96	101	103	103	101	------	------	2.8	3.46	2.9899
16	2-Methylphenol	94	97	100	102	105	102	------	------	2.8	3.88	3.0147
17	bis(2-chloroisopropyl)ether	97	97	100	103	104	99	------	------	2.3	2.98	3.0179
18	4-Methylphenol	93	97	102	102	104	102	------	------	3.1	3.94	3.1221
19	N-Nitroso-di-n-propylamine	100	95	99	101	104	101	------	------	1.9	2.81	3.1777
20	Hexachloroethane	97	98	98	102	103	101	------	------	2.2	2.56	3.2958
21	Naphthalene-d8	1	1	1	1	1	1	1	1	1	0	4.0539
22	Nitrobenzene-d5	95	96	101	103	103	102	------	------	3.1	3.63	3.3286
23	Nitrobenzene	94	97	101	103	103	102	------	------	2.8	3.48	3.3469
24	Isophorone	88	99	102	103	102	106	------	------	4.2	6.27	3.5125
25	2-Nitrophenol	80	97	103	106	107	105	------	------	7.4	10.37	3.6530
26	2,4-Dimethylphenol	92	99	100	102	102	104	------	------	2.8	4.02	3.6745
27	Benzoic acid	70	90	99	104	108	111	112	109	10.7	14.34	3.7650
28	bis(2-Chloroethoxy)methane	98	99	100	100	102	101	------	------	1.2	1.62	3.7847
29	2,5-Dimethylphenol	90	102	107	95	99	108	------	------	5.5	6.78	3.8119
30	2,4-Dichlorophenol	89	91	98	109	113	101	------	------	7.3	9.24	3.8888
31	1,2,4-Trichlorobenzene	93	97	101	102	103	103	------	------	3.1	3.62	3.9885
32	3,4-Dimethylphenol	92	95	101	103	104	104	------	------	4	4.95	3.9877
33	Naphthalene	95	98	100	102	103	102	------	------	2.5	3.10	4.0754
34	4-Chloroaniline	93	96	100	102	104	105	------	------	3.9	4.88	4.1252
35	2,6-Dichlorophenol	91	96	102	102	105	105	------	------	4.6	5.63	4.1317
36	Hexachlorobutadiene	94	98	101	102	102	103	------	------	2.9	3.57	4.2033
37	Hydroquinone	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
38	4-Chloro-3-methylphenol	90	94	102	104	105	104	------	------	5.1	6.21	4.6445
39	2-Methylnaphthalene	95	96	100	102	103	105	------	------	3.1	3.92	4.8370
40	1-Methylnaphthalene	94	97	100	103	103	103	------	------	3	3.67	4.9426
41	Acenaphthene-d10	1	1	1	1	1	1	1	1	1	0	6.0575
42	Hexachlorocyclopentadiene	93	95	101	103	105	104	------	------	4.2	5.17	5.0175
43	2,3,5-Trichlorophenol	93	92	99	102	107	106	------	------	5.4	6.56	5.0222
44	2,4,6-Trichlorophenol	94	94	100	103	104	106	------	------	4	4.86	5.1528
45	2,4,5-Trichlorophenol	91	95	101	103	105	106	------	------	4.9	6.14	5.1874
46	2-Fluorobiphenyl	95	94	96	98	100	116	------	------	5.4	8.12	5.2633
47	2,3,4-Trichlorophenol	90	91	105	97	100	116	------	------	7.1	9.75	5.2639
48	Biphenyl	98	96	99	101	102	104	------	------	2.4	2.79	5.3794
49	2-Chloronaphthalene	98	96	100	102	102	102	------	------	2.2	2.63	5.3978
50	2-Nitroaniline	94	92	102	103	105	105	------	------	5	5.91	5.5152
51	2,6-Dimethylnaphthalene	98	95	100	102	102	103	------	------	2.3	2.93	5.5635
52	1,4-Dinitrobenzene	81	90	106	104	111	109	------	------	10	11.97	5.6876
53	Dimethylphthalate	97	97	101	102	102	102	------	------	2.1	2.45	5.7532
54	1,3-Dinitrobenzene	86	98	102	105	105	105	------	------	5.3	7.41	5.7726
55	2,6-Dinitrotoluene	92	94	103	104	104	104	------	------	4.7	5.56	5.8144
56	1,2-Dinitrobenzene	94	96	100	102	105	104	------	------	3.5	4.50	5.8714
57	Acenaphthylene	97	96	100	102	103	103	------	------	2.6	3.11	5.8875
58	3-Nitroaniline	95	97	99	101	105	103	------	------	3.2	3.80	6.0062
59	Acenaphthene	99	97	99	102	102	101	------	------	1.6	1.99	6.0965
60	2,4-Dinitrophenol	110	93	94	100	102	102	------	------	18.8	24.40	6.1285
61	4-Nitrophenol	83	99	102	105	104	105	------	------	6	8.52	6.2012
62	2,4-Dinitrotoluene	89	95	102	102	104	107	------	------	5.1	6.44	6.2922
63	Dibenzofuran	96	96	99	102	102	104	------	------	2.7	3.14	6.3050
64	2,3,5,6-Tetrachlorophenol	91	97	99	104	105	107	------	------	5.4	6.53	6.3953
65	2,3,4,6-Tetrachlorophenol	87	94	99	109	116	104	------	------	6.7	9.77	6.4472
66	2,3,5-Trimethylnaphthalene	99	99	103	103	92	105	------	------	3.4	4.58	6.5591
67	Diethylphthalate	96	97	100	103	102	103	------	------	2.5	3.07	6.6060
68	Fluorene	93	96	100	102	103	105	------	------	3.8	4.68	6.7178
69	4-Chlorophenyl-phenylether	96	97	99	103	102	103	------	------	2.8	3.17	6.7287
70	4-Nitroaniline	93	96	101	101	106	104	------	------	3.7	4.72	6.7397
71	Phenanthrene-d10	1	1	1	1	1	1	1	1	1	0	7.7992
72	4,6-Dinitro-2-methylphenol	115	87	98	93	105	102	------	------	16.4	20.90	6.7787
73	N-Nitrosodiphenylamine	101	97	100	103	98	101	------	------	1.8	2.33	6.8698
74	Azobenzene	97	97	100	102	102	102	------	------	2	2.41	6.9172
75	2,4,6-Tribromophenol	87	94	104	102	106	106	------	------	6.2	7.80	6.9987
76	4-Bromophenyl-phenylether	99	96	101	103	100	102	------	------	1.9	2.46	7.3029
77	Hexachlorobenzene	99	97	100	101	100	102	------	------	1.4	2.02	7.3564
78	Pentachlorophenol	86	92	102	104	107	110	------	------	7.4	9.15	7.5800
79	Dibenzothiophene	95	95	95	105	106	108	------	------	6.1	6.89	7.6823
80	Phenanthrene	99	96	100	102	101	103	------	------	1.9	2.53	7.8255
81	Dinoseb	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
82	Anthracene	99	96	99	101	102	103	------	------	2.1	2.67	7.8806
83	Carbazole	99	97	100	100	101	103	------	------	1.2	1.89	8.0612
84	Di-n-butylphthalate	91	95	102	104	104	105	------	------	4.9	5.91	8.4676
85	1-Methylphenanthrene	98	96	100	102	101	104	------	------	2.1	2.77	8.4958
86	Fluoranthene	95	98	100	102	101	104	------	------	2.5	3.20	8.1013
87	Chrysene-d12	1	1	1	1	1	1	1	1	1	0	10.5744
88	Benzidine	------	------	------	------	------	------	------	------	0.000	0.00	0.0000
89	Pyrene	98	97	101	102	101	101	------	------	1.8	2.14	9.3373
90	Terphenyl-d14	95	96	102	103	102	102	------	------	2.9	3.42	9.5101
91	Butylbenzylphthalate	86	95	103	104	105	105	------	------	6.1	7.65	10.0220
92	bis(2-ethylhexyl)adipate	87	94	102	105	105	106	------	------	6.2	7.63	10.1091
93	3,3'-Dichlorobenzidine	96	99	102	101	101	103	------	------	1.9	2.48	10.5419
94	Benzo(a)anthracene	99	97	100	101	102	102	------	------	1.5	1.97	10.5630
95	Chrysene	99	97	99	101	101	102	------	------	1.5	1.98	10.5986
96	bis(2-Ethylhexyl)phthalate	86	94	102	105	106	107	------	------	6.6	8.22	10.6051
97	Perylene-d12	1	1	1	1	1	1	1	1	1	0	11.9440
98	Di-n-octylphthalate	82	92	103	106	107	110	------	------	8.6	10.70	11.2246
99	Benzo(b)fluoranthene	90	100	100	105	100	104	------	------	3.2	5.21	11.5751
100	Benzo(k)fluoranthene	97	92	100	100	105	106	------	------	3.6	5.30	11.6001
101	Benzo(e)pyrene	95	96	101	102	102	104	------	------	3	3.67	11.8332
102	Benzo(a)pyrene	93	95	101	103	104	106	------	------	4.1	5.07	11.8871
103	Perylene	94	98	101	102	102	104	------	------	2.8	3.62	11.9700
104	Indeno(1,2,3-cd)pyrene	91	95	100	103	104	107	------	------	4.6	5.91	13.1525
105	Dibenzo(a,h)anthracene	95	94	100	101	103	106	------	------	3.7	4.71	13.1752
106	Benzo(g,h,i)perylene	94	97	101	102	102	105	------	------	3.3	4.21	13.5141

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Compound List Report E7

Method Path : C:\msdchem\1\METHODS\
Method File : SVE7A14.M
Title : SEMIVOLATILES
Last Update : Thu Jan 21 10:41:50 2016
Response Via : Initial Calibration

Total Cpnds : 106

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dichlorobenzene-d4	152	2.845	1.000	A	1	A	B
2	T	1,4-Dioxane	88	1.233	0.433	A	1	A	B
3	T	N-nitrosodimethylamine	74	1.343	0.472	A	1	A	B
4	T	Pyridine	79	1.367	0.480	A	1	A	B
5	S	2-Fluorophenol	112	1.927	0.677	A	1	A	B
6	S	Phenol-d5	99	2.506	0.881	A	1	A	B
7	C,P	Phenol	94	2.517	0.885	A	1	A	B
8	T	Aniline	93	2.579	0.907	A	1	A	B
9	T	bis(2-chloroethyl)ether	93	2.610	0.917	A	1	A	B
10	T	2-Chlorophenol	128	2.673	0.940	A	1	A	B
11	T	1,3-Dichlorobenzene	146	2.802	0.985	A	1	A	B
12	S	1,2-Dichlorobenzene-d4	152	2.989	1.051	A	1	A	B
13	C	1,4-Dichlorobenzene	146	2.860	1.005	A	1	A	B
14	T	Benzyl alcohol	108	2.941	1.034	A	1	A	B
15	T	1,2-Dichlorobenzene	146	2.989	1.051	A	1	A	B
16	T	2-Methylphenol	107	3.013	1.059	A	1	A	B
17	T	bis(2-chloroisopropyl)ether	45	3.056	1.074	A	1	A	B
18	T	4-Methylphenol	107	3.152	1.108	A	1	A	B
19	P,P	N-Nitroso-di-n-propylamine	70	3.176	1.116	A	1	A	B
20	T	Hexachloroethane	117	3.296	1.159	A	1	A	B
21	I	Naphthalene-d8	136	4.054	1.000	A	1	A	B
22	S	Nitrobenzene-d5	82	3.329	0.821	A	1	A	B
23	T	Nitrobenzene	77	3.348	0.826	A	1	A	B
24	T	Isophorone	82	3.574	0.882	A	1	A	B
25	C,P	2-Nitrophenol	139	3.655	0.902	A	1	A	B
26	T	2,4-Dimethylphenol	107	3.674	0.906	A	1	A	B
27	T	Benzoic acid	105	3.756	0.926	A	1	A	B
28	T	bis(2-Chloroethoxy)methane	93	3.785	0.934	A	1	A	B
29	T	3,5-Dimethylphenol	107	3.813	0.941	A	1	A	B
30	C,P	2,4-Dichlorophenol	162	3.890	0.960	A	1	A	B
31	T	1,2,4-Trichlorobenzene	180	3.987	0.983	A	1	A	B
32	T	3,4-Dimethylphenol	107	3.987	0.983	A	1	A	B
33	T	Naphthalene	128	4.074	1.005	A	1	A	B
34	T	4-Chloroaniline	127	4.127	1.018	A	1	A	B
35	T	2,6-Dichlorophenol	162	4.132	1.019	A	1	A	B
36	C	Hexachlorobutadiene	225	4.204	1.037	A	1	A	B
37	T	Hydroquinone	110	0.000	0.000	A	1	A	B
38	C,P	4-Chloro-3-methylphenol	107	4.643	1.145	A	1	A	B
39	T	2-Methylnaphthalene	142	4.839	1.194	A	1	A	B
40	T	1-Methylnaphthalene	142	4.950	1.221	A	1	A	B
41	I	Acenaphthene-d10	164	6.061	1.000	A	1	A	B
42	P	Hexachlorocyclopentadiene	237	5.017	0.828	A	1	A	B
43	T	2,3,5-Trichlorophenol	196	5.021	0.828	A	1	A	B
44	C,P	2,4,6-Trichlorophenol	196	5.151	0.850	A	1	A	B
45	T	2,4,5-Trichlorophenol	196	5.190	0.856	A	1	A	B
46	S	2-Fluorobiphenyl	172	5.262	0.868	A	1	A	B
47	T	2,3,4-Trichlorophenol	196	5.262	0.868	A	1	A	B
48	T	Biphenyl	154	5.378	0.887	A	1	A	B
49	T	2-Chloronaphthalene	162	5.397	0.890	A	1	A	B
50	T	2-Nitroaniline	65	5.517	0.910	A	1	A	B
51	T	2,6-Dimethylnaphthalene	156	5.565	0.918	A	1	A	B
52	T	1,4-Dinitrobenzene	168	5.685	0.938	A	1	A	B
53	T	Dimethylphthalate	163	5.752	0.949	A	1	A	B
54	T	1,3-Dinitrobenzene	168	5.772	0.952	A	1	A	B

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55	T	2,6-Dinitrotoluene	165	5.815	0.959	A		1	A	B
56	T	1,2-Dinitrobenzene	168	5.873	0.969	A		1	A	B
57	T	Acenaphthylene	152	5.887	0.971	A		1	A	B
58	T	3-Nitroaniline	138	6.008	0.991	A		1	A	B
59	C,P	Acenaphthene	153	6.099	1.006	A		1	A	B
60	P	2,4-Dinitrophenol	184	6.128	1.011	L	✓	1	A	B
61	P	4-Nitrophenol	109	6.204	1.024	A		1	A	B
62	T	2,4-Dinitrotoluene	165	6.291	1.038	A		1	A	B
63	T	Dibenzofuran	168	6.305	1.040	A		1	A	B
64	T	2,3,5,6-Tetrachlorophenol	230	6.396	1.055	A		1	A	B
65	T	2,3,4,6-Tetrachlorophenol	232	6.449	1.064	A		1	A	B
66	T	2,3,5-Trimethylnaphthalene	170	6.558	1.082	A		1	A	B
67	T	Diethylphthalate	149	6.605	1.090	A		1	A	B
68	T	Fluorene	166	6.718	1.108	A		1	A	B
69	T	4-Chlorophenyl-phenylether	204	6.727	1.110	A		1	A	B
70	T	4-Nitroaniline	138	6.741	1.112	A		1	A	B
71	I	Phenanthrene-d10	188	7.798	1.000	A		1	A	B
72	T	4,6-Dinitro-2-methylphenol	198	6.779	0.869	L	✓	1	A	B
73	C	N-Nitrosodiphenylamine	169	6.868	0.881	A		1	A	B
74	T	Azobenzene	77	6.916	0.887	A		1	A	B
75	S	2,4,6-Tribromophenol	330	6.996	0.897	A		1	A	B
76	T	4-Bromophenyl-phenylether	248	7.305	0.937	A		1	A	B
77	T	Hexachlorobenzene	284	7.357	0.943	A		1	A	B
78	C,P	Pentachlorophenol	266	7.579	0.972	A		1	A	B
79	T	Dibenzothiophene	184	7.682	0.985	A		1	A	B
80	T	Phenanthrene	178	7.826	1.004	A		1	A	B
81	T	Dinoseb	211	0.000	0.000	A		1	A	B
82	T	Anthracene	178	7.880	1.011	A		1	A	B
83	T	Carbazole	167	8.061	1.034	A		1	A	B
84	T	Di-n-butylphthalate	149	8.468	1.086	A		1	A	B
85	T	1-Methylphenanthrene	192	8.497	1.090	A		1	A	B
86	C,P	Fluoranthene	202	9.101	1.167	A		1	A	B
87	I	Chrysene-d12	240	10.573	1.000	A		1	A	B
88	T	Benzidine	184	0.000	0.000	A		1	A	B
89	T	Pyrene	202	9.337	0.883	A		1	A	B
90	S	Terphenyl-d14	244	9.509	0.899	A		1	A	B
91	T	Butylbenzylphthalate	149	10.023	0.948	A		1	A	B
92	T	bis(2-ethylhexyl)adipate	129	10.110	0.956	A		1	A	B
93	T	3,3'-Dichlorobenzidine	252	10.539	0.997	A		1	A	B
94	T	Benzo(a)anthracene	228	10.563	0.999	A		1	A	B
95	T	Chrysene	228	10.597	1.002	A		1	A	B
96	T	bis(2-Ethylhexyl)phthalate	149	10.607	1.003	A		1	A	B
97	I	Perylene-d12	264	11.944	1.000	A		1	A	B
98	C	Di-n-octylphthalate	149	11.223	0.940	A		1	A	B
99	T	Benzo(b)fluoranthene	252	11.574	0.969	A		1	A	B
100	T	Benzo(k)fluoranthene	252	11.603	0.971	A		1	A	B
101	T	Benzo(e)pyrene	252	11.832	0.991	A		1	A	B
102	C,P	Benzo(a)pyrene	252	11.888	0.995	A		1	A	B
103	T	Perylene	252	11.968	1.002	A		1	A	B
104	T	Indeno(1,2,3-cd)pyrene	276	13.153	1.101	A		1	A	B
105	T	Dibenzo(a,h)anthracene	278	13.172	1.103	A		1	A	B
106	T	Benzo(g,h,i)perylene	276	13.517	1.132	A		1	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

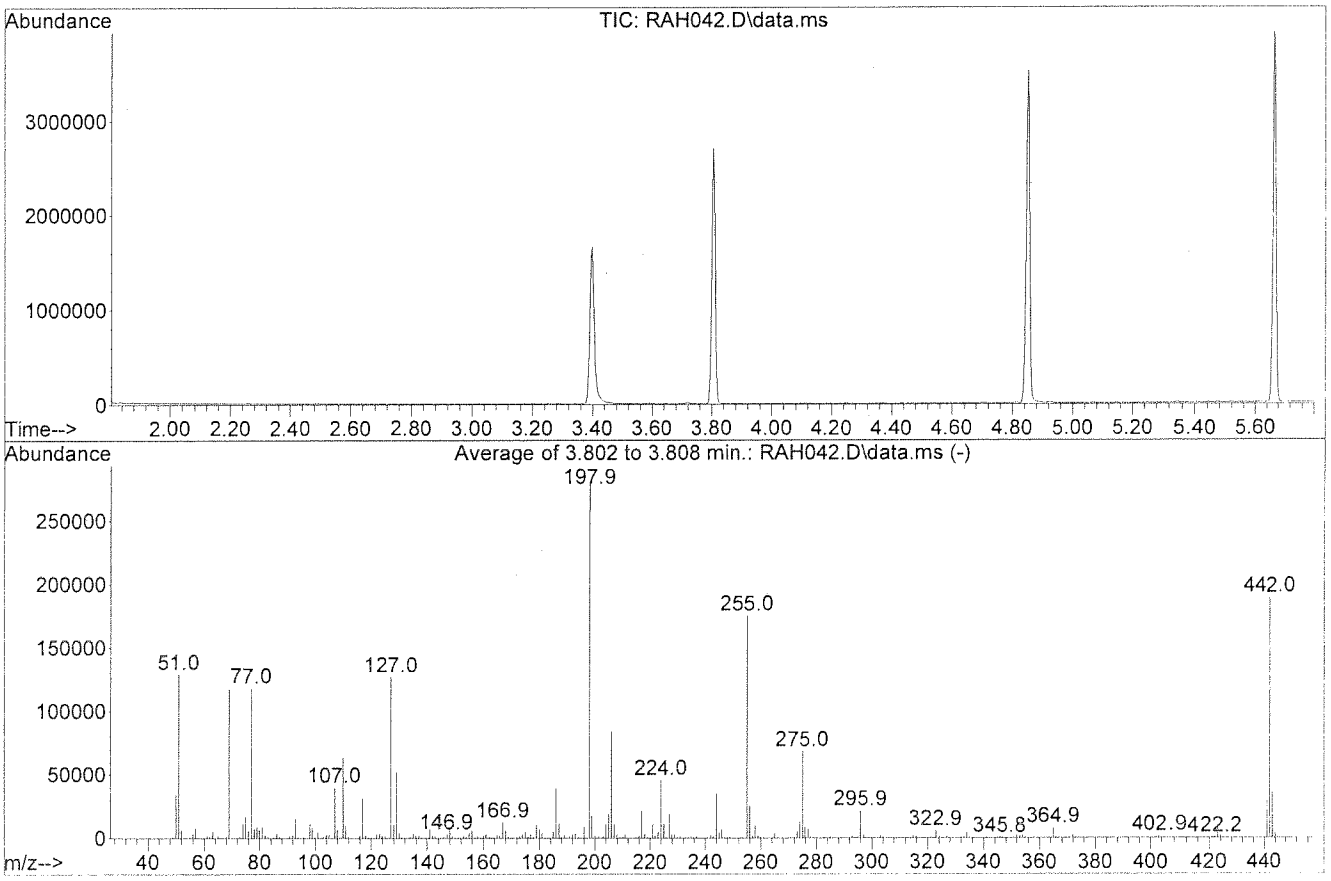
SVE7A14.M Thu Jan 21 10:44:08 2016

1-22-16

Data Path : D:\DATA\16A14\
Data File : RAH042.D
Acq On : 14 Jan 2016 10:14
Operator : KVu
Sample : DFTE7A1401
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP.M
Title : DFTPP
Last Update : Thu Jan 21 09:52:59 2016



AutoFind: Scans 787, 788, 789; Background Corrected with Scan 778

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.0	128963	PASS
68	69	0.00	2	1.5	1807	PASS
69	198	0.00	100	42.0	117741	PASS
70	69	0.00	2	0.4	518	PASS
127	198	40	60	45.2	126827	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	280384	PASS
199	198	5	9	6.4	17841	PASS
275	198	10	30	24.3	68176	PASS
365	198	1	100	2.8	7867	PASS
441	443	0.01	100	81.7	29203	PASS
442	198	40	100	67.4	189099	PASS
443	442	17	23	18.9	35736	PASS

1-22-16

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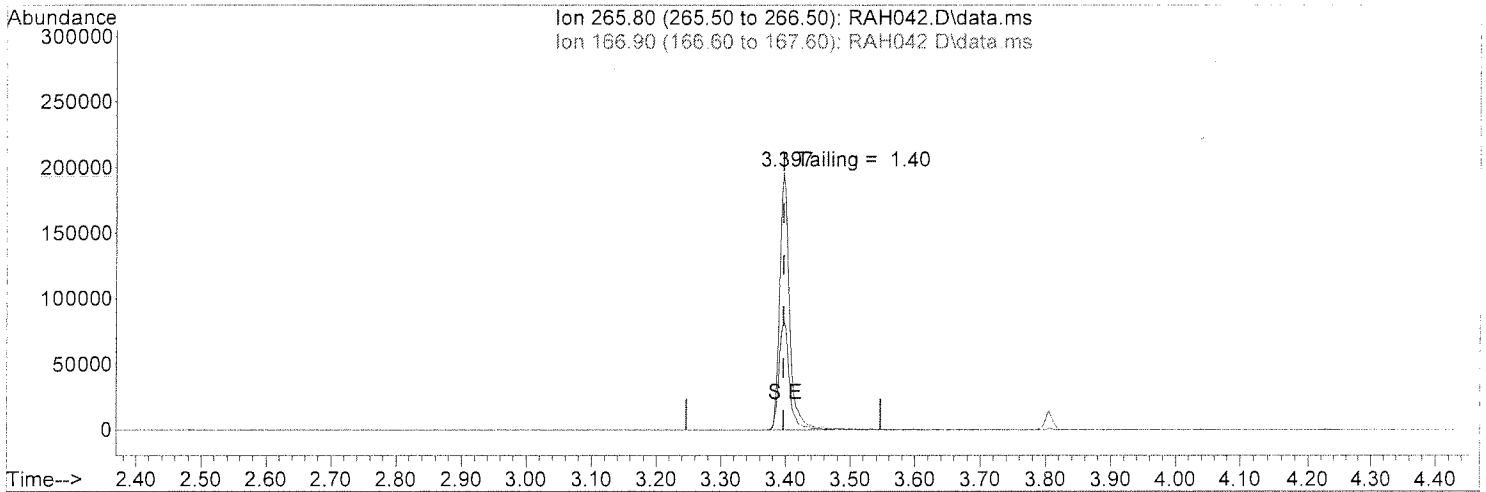
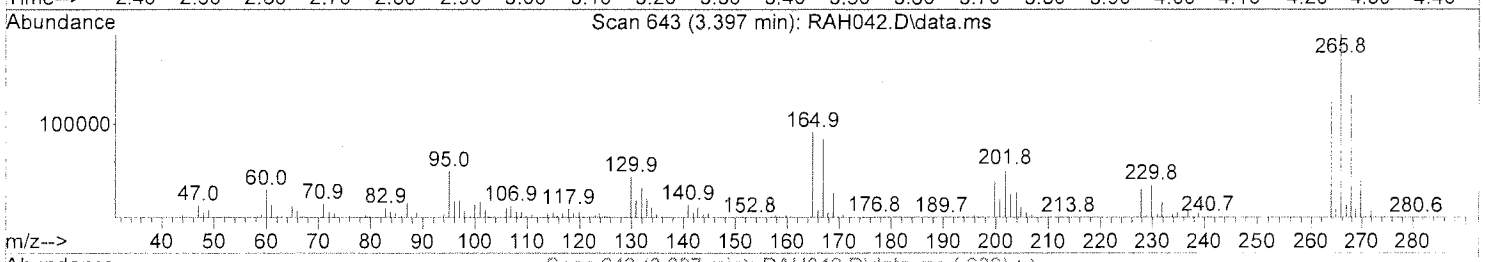
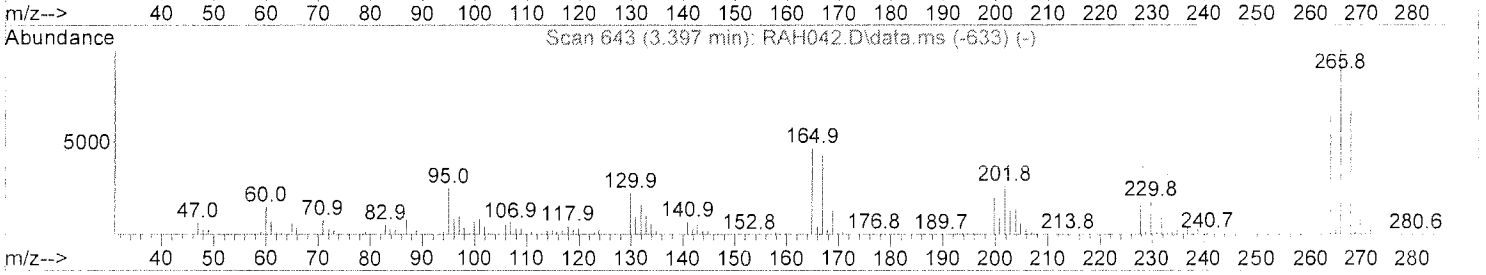
Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:54:17 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RAH042.D\data.ms

(1) Pentachlorophenol (T)

3.397min (-0.000) 50.00 ppm

response 205279

Ion	Exp%	Act%
265.80	100	100
166.90	44.50	44.54
0.00	0.00	0.00
0.00	0.00	0.00

pc 1-22-16

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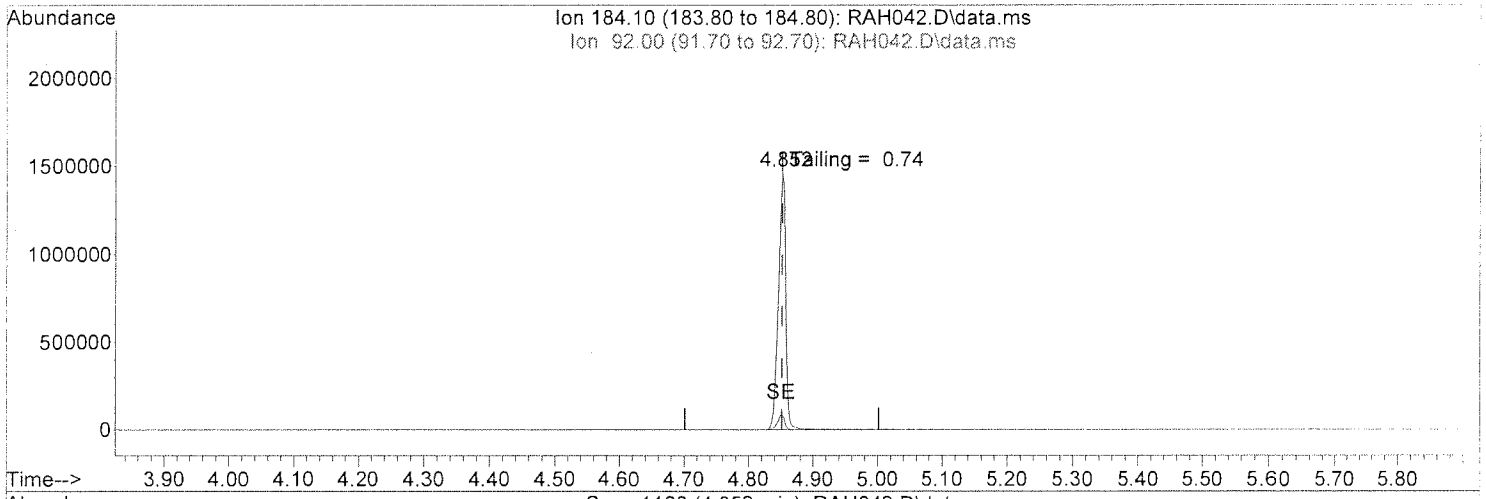
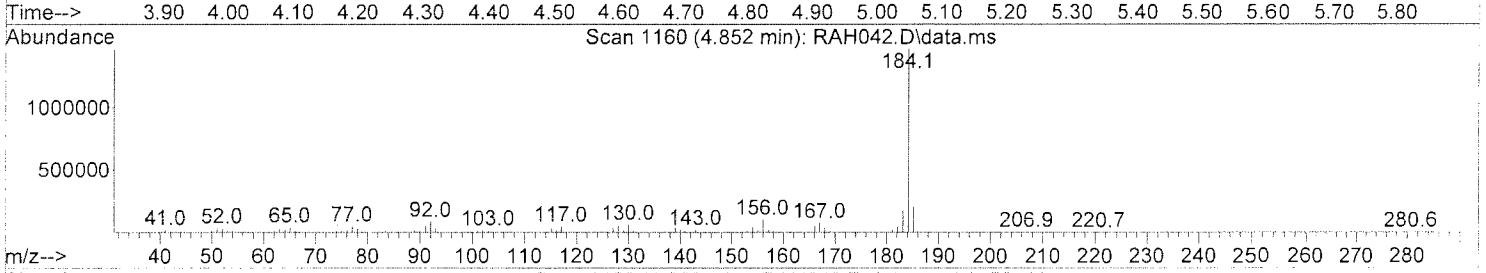
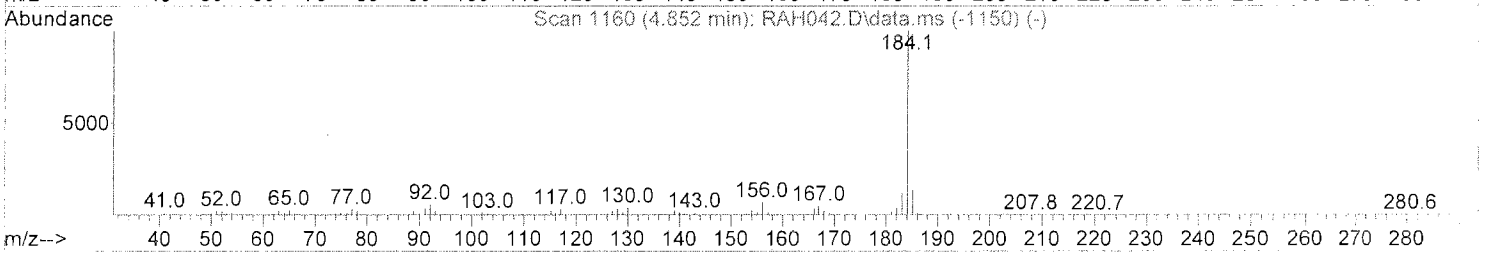
Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:54:17 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RAH042.D\data.ms

(3) Benzidine (T)

4.852min (0.000) 50.00 ppm

response 1197485

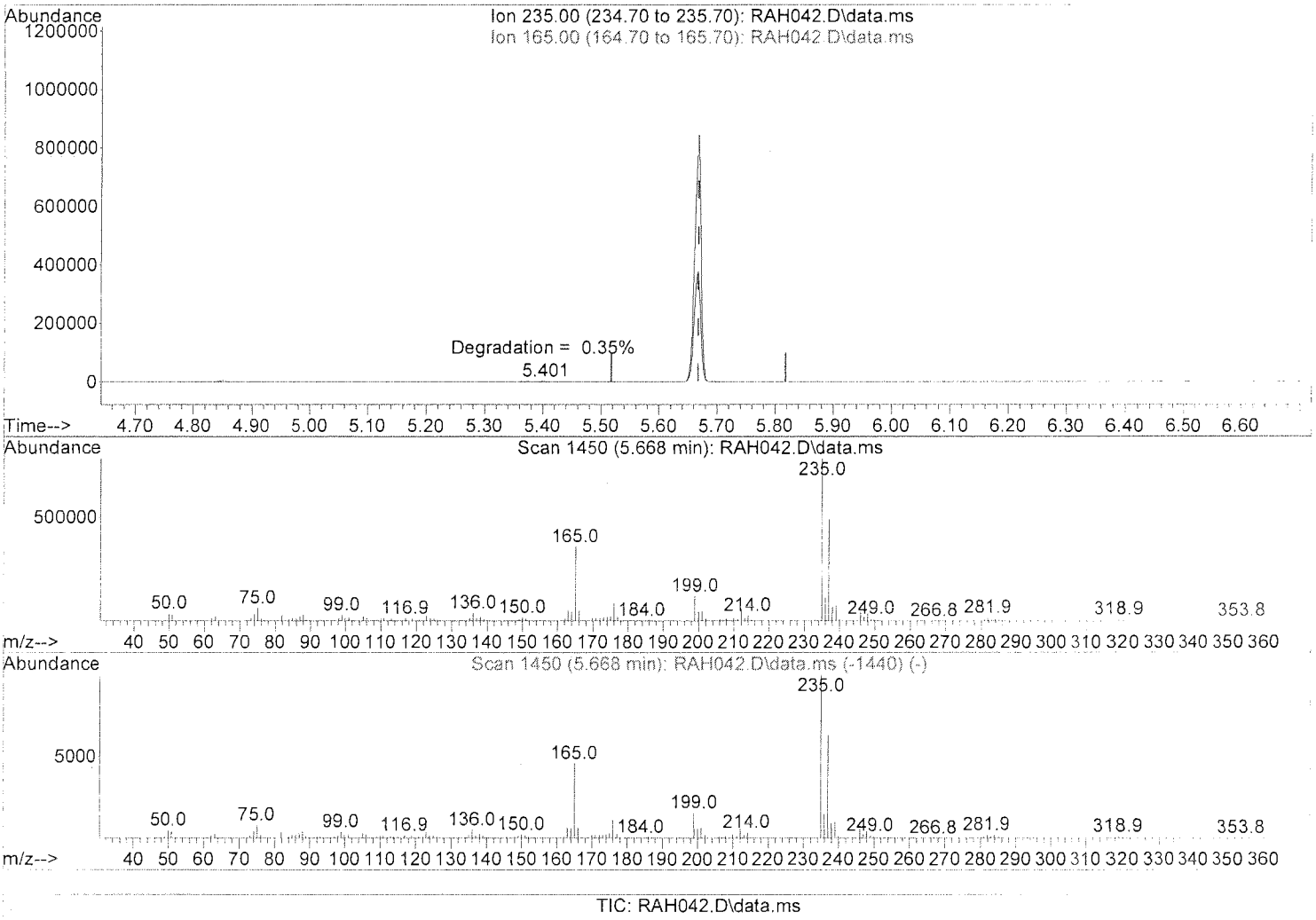
Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.84
0.00	0.00	0.00
0.00	0.00	0.00

RU 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:54:17 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



(6) DDT (T)

5.668min (0.000) 50.00 ppm

response 614216

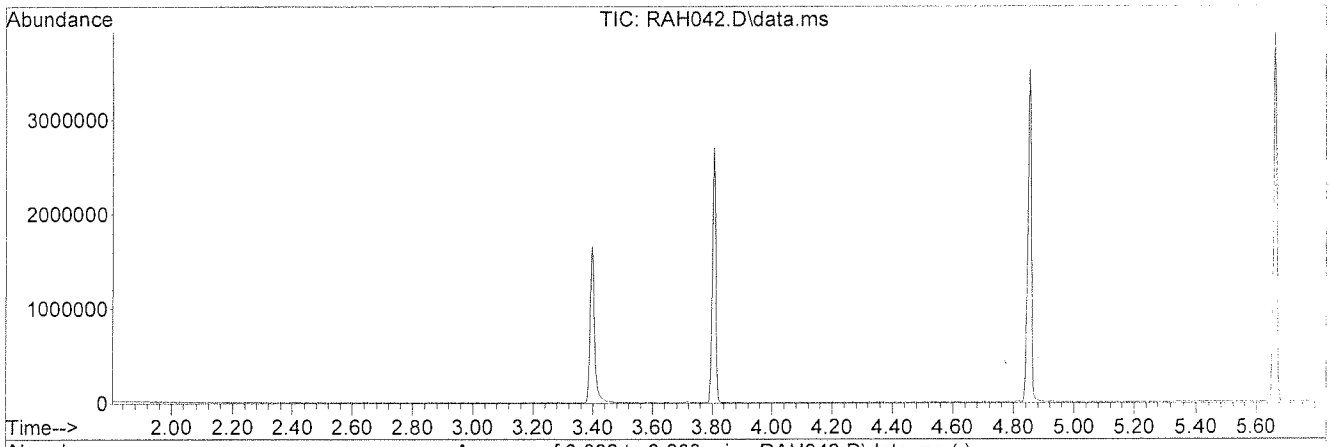
Ion	Exp%	Act%
235.00	100	100
165.00	47.10	47.06
0.00	0.00	0.00
0.00	0.00	0.00

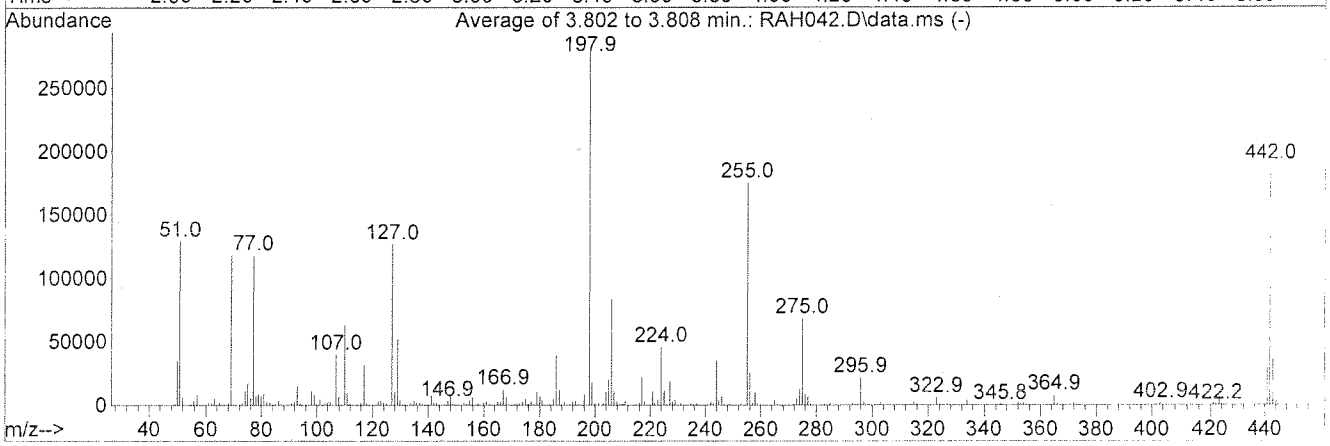
1-22-16

Data Path : D:\DATA\16A14\
Data File : RAH042.D
Acq On : 14 Jan 2016 10:14
Operator : KVu
Sample : DFTE7A1401
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p ✓

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Thu Jan 21 09:55:42 2016





AutoFind: Scans 787, 788, 789; Background Corrected with Scan 778

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	46.0	128963	PASS
68	69	0.00	2	1.5	1807	PASS
69	198	0.00	100	42.0	117741	PASS
70	69	0.00	2	0.4	518	PASS
127	198	10	80	45.2	126827	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	280384	PASS
199	198	5	9	6.4	17841	PASS
275	198	10	60	24.3	68176	PASS
365	198	1	100	2.8	7867	PASS
441	442	0.01	24	15.4	29203	PASS
442	198	50	100	67.4	189099	PASS
443	442	15	24	18.9	35736	PASS

ne 1-22-16

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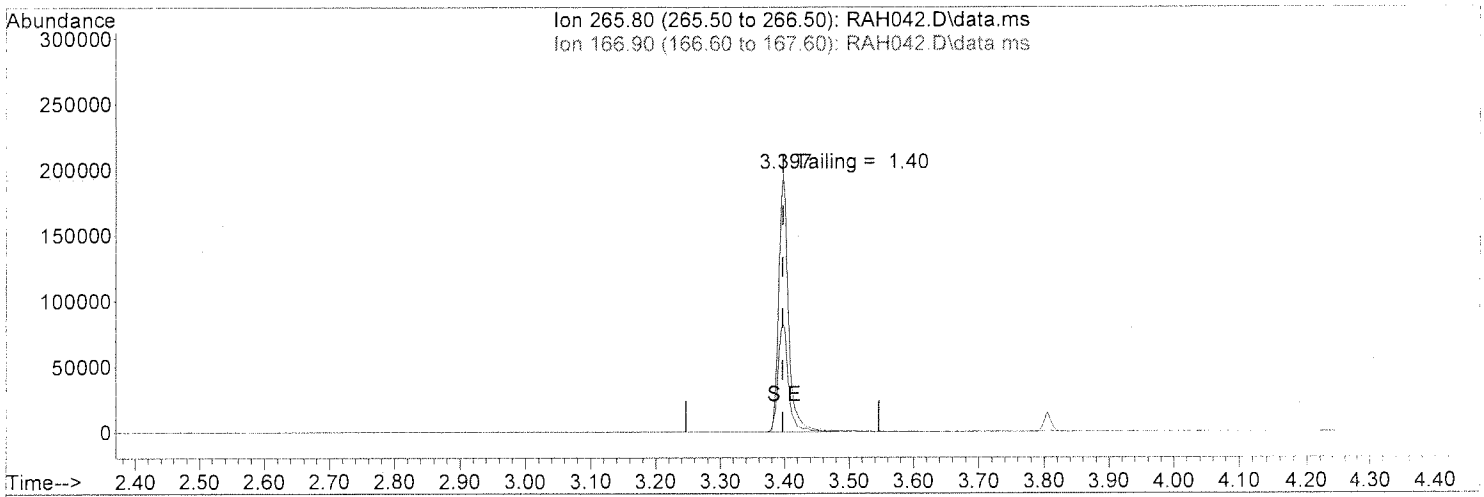
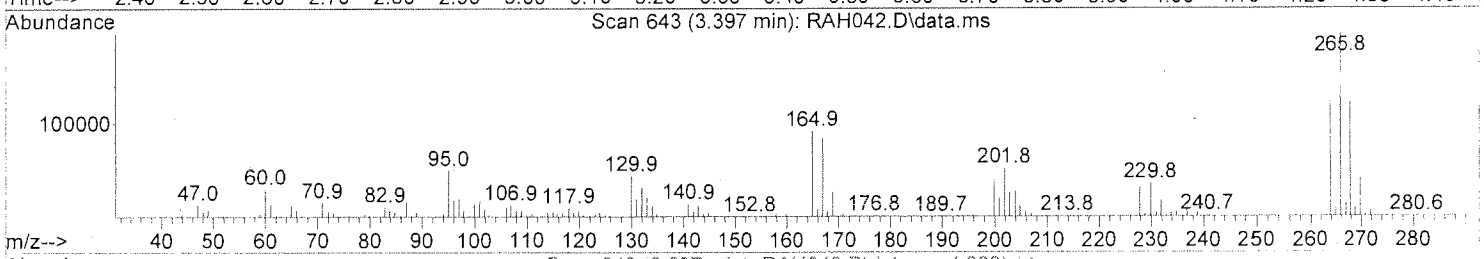
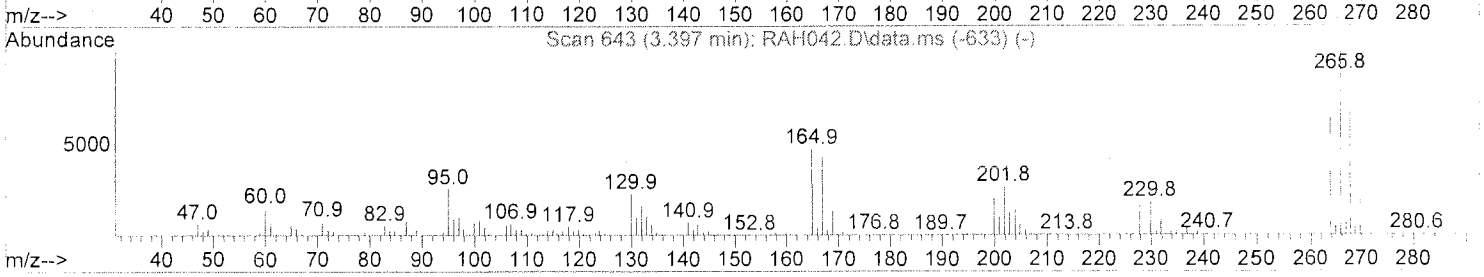
Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:55:44 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RAH042.D\data.ms

(1) Pentachlorophenol (T)

3.397min (-0.000) 50.00 ppm

response 205279

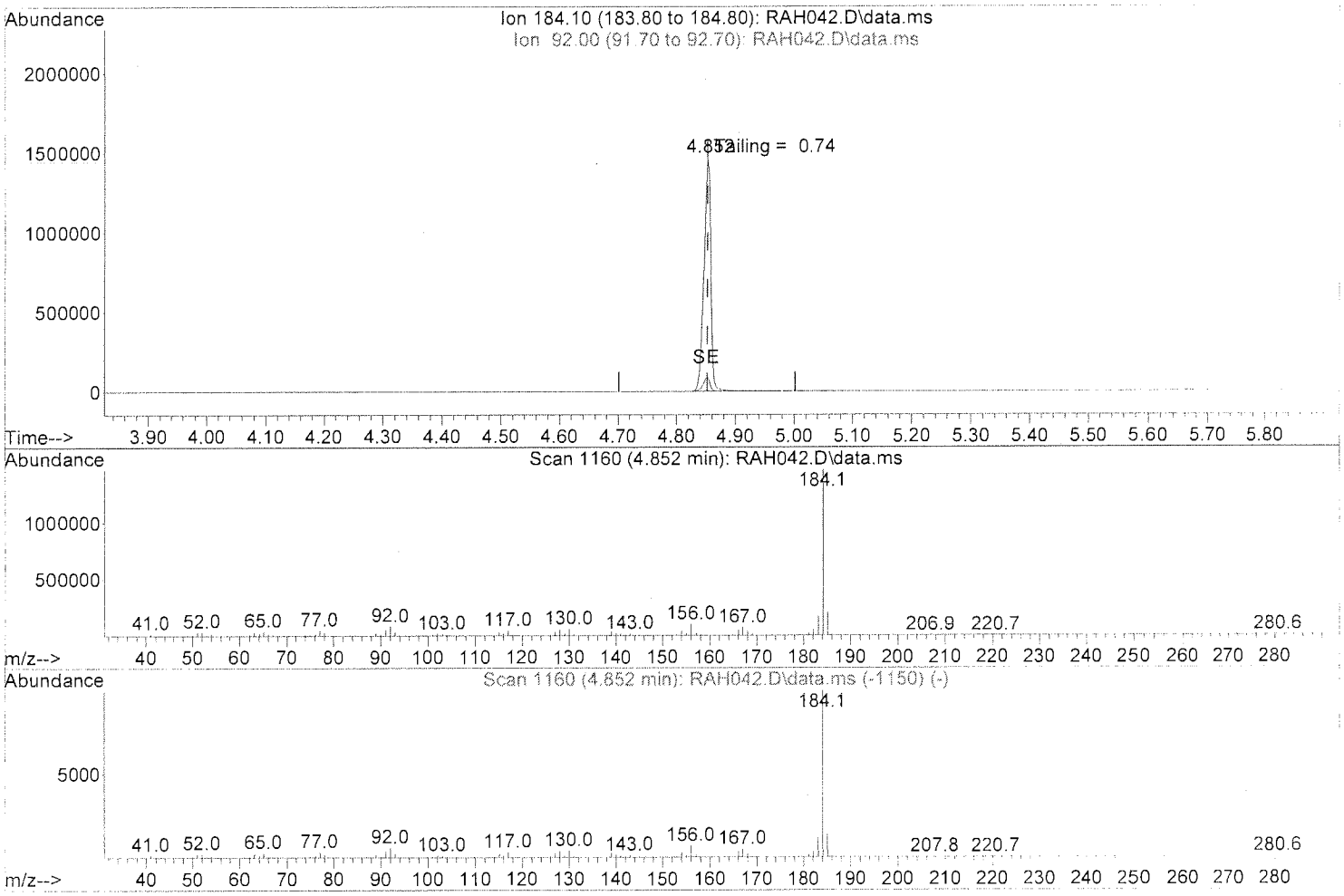
Ion	Exp%	Act%
265.80	100	100
166.90	44.50	44.54
0.00	0.00	0.00
0.00	0.00	0.00

m 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:55:44 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



(3) Benzidine (T)

4.852min (0.000) 50.00 ppm

response 1197485

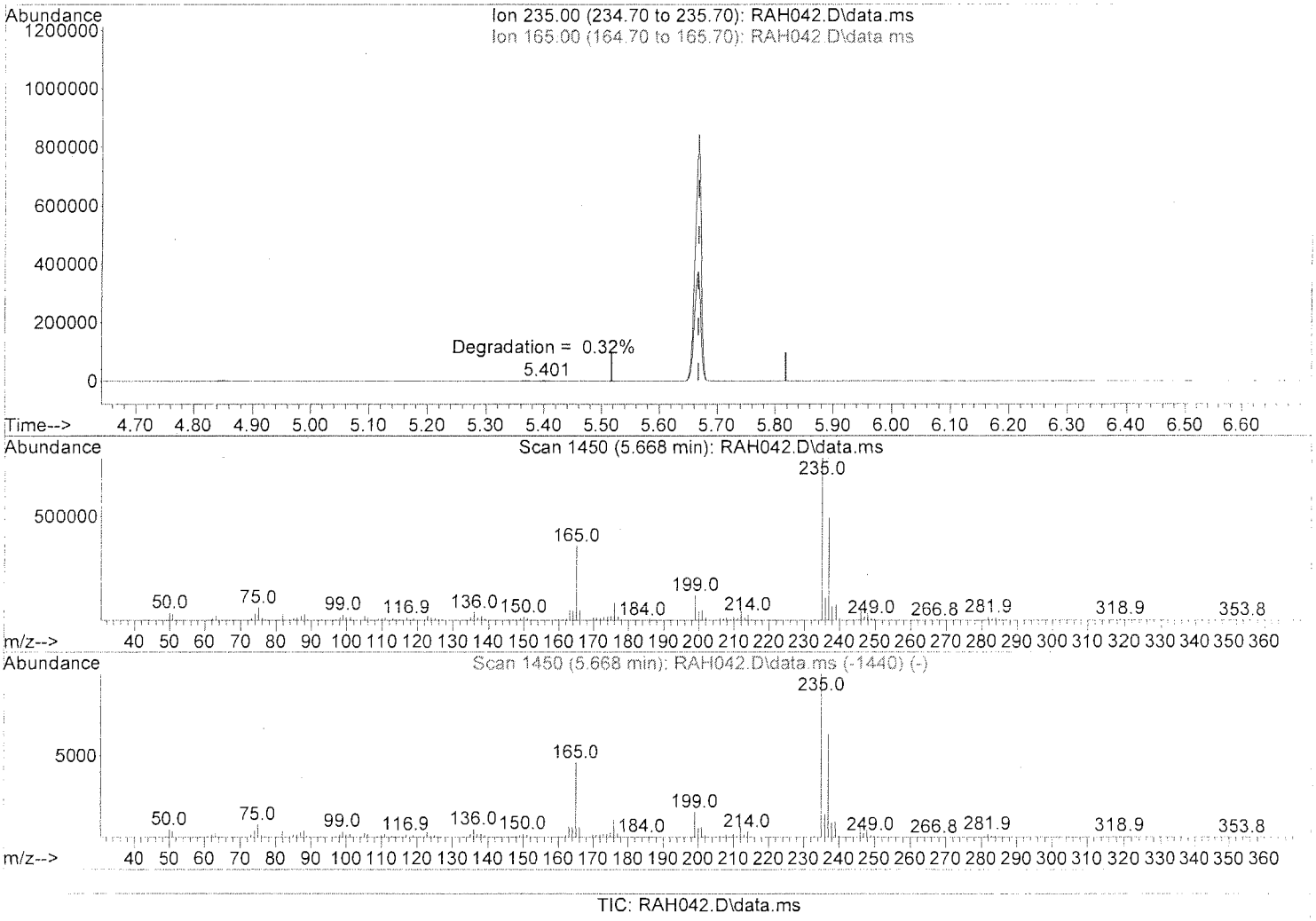
Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.84
0.00	0.00	0.00
0.00	0.00	0.00

1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:55:44 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



(6) DDT (T)

5.668min (0.000) 50.00 ppm

response 614216

Ion	Exp%	Act%
235.00	100	100
165.00	47.10	47.06
0.00	0.00	0.00
0.00	0.00	0.00

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH050.D
Acq On : 14 Jan 2016 12:58
Sample : SVE7A148
Misc : 4PPM
Integrator: RTE
Quant Time: Jan 21 10:53:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 10
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	435318	40.00	ppm	0.00
21) Naphthalene-d8	4.050	136	1589228	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	970837	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	1751800	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2020683	40.00	ppm	0.00
97) Perylene-d12	11.940	264	1781988	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	51448	3.91	ppm	0.00
Spiked Amount 30.000			Recovery	=	13.03%	
6) Phenol-d5	2.501	99	64156	3.83	ppm	0.00
Spiked Amount 30.000			Recovery	=	12.77%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.325	82	62534	3.79	ppm	0.00
Spiked Amount 10.000			Recovery	=	37.90%	
46) 2-Fluorobiphenyl	5.262	172	151062	3.80	ppm	0.00
Spiked Amount 10.000			Recovery	=	38.00%	
75) 2,4,6-Tribromophenol	6.996	330	18193	3.47	ppm	0.00
Spiked Amount 30.000			Recovery	=	11.57%	
90) Terphenyl-d14	9.509	244	165180	3.80	ppm	0.00
Spiked Amount 10.000			Recovery	=	38.00%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	20801	3.91	ppm	87
3) N-nitrosodimethylamine	1.343	74	29583	3.87	ppm	91
4) Pyridine	1.367	79	59320	4.02	ppm	99
7) Phenol	2.511	94	64933	3.81	ppm	99
8) Aniline	2.579	93	83400	3.86	ppm	97
9) bis(2-chloroethyl)ether	2.611	93	48622	3.90	ppm	96
10) 2-Chlorophenol	2.668	128	55237	3.50	ppm	99
11) 1,3-Dichlorobenzene	2.802	146	69535	3.91	ppm	99
13) 1,4-Dichlorobenzene	2.860	146	72754	3.91	ppm	97
14) Benzyl alcohol	2.936	108	34880	3.72	ppm	95
15) 1,2-Dichlorobenzene	2.989	146	66293	3.84	ppm	97
16) 2-Methylphenol	3.013	107	44081	3.75	ppm	97
17) bis(2-chloroisopropyl)...	3.056	45	86341	3.88	ppm	98
18) 4-Methylphenol	3.147	107	56001	3.74	ppm	96
19) N-Nitroso-di-n-propyla...	3.171	70	40096	4.02	ppm	97
20) Hexachloroethane	3.296	117	27142	3.90	ppm	100
23) Nitrobenzene	3.344	77	62617	3.77	ppm	98
24) Isophorone	3.569	82	108038	3.52	ppm	97
25) 2-Nitrophenol	3.651	139	22379	3.21	ppm	88
26) 2,4-Dimethylphenol	3.670	107	58441	3.70	ppm	92
27) Benzoic acid	3.699	105	24669	2.78	ppm	79
28) bis(2-Chloroethoxy)met...	3.780	93	64472	3.91	ppm	99
29) 3,5-Dimethylphenol	3.804	107	60524	3.61	ppm	86
30) 2,4-Dichlorophenol	3.886	162	51619	3.57	ppm	95
31) 1,2,4-Trichlorobenzene	3.987	180	62190	3.73	ppm	94
32) 3,4-Dimethylphenol	3.982	107	70984	3.69	ppm	98
33) Naphthalene	4.074	128	167895	3.80	ppm	97
34) 4-Chloroaniline	4.117	127	69536	3.73	ppm	99
35) 2,6-Dichlorophenol	4.127	162	49172	3.64	ppm	96

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH050.D
Acq On : 14 Jan 2016 12:58
Sample : SVE7A148
Misc : 4PPM
Integrator: RTE
Quant Time: Jan 21 10:53:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 10
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Hexachlorobutadiene	4.199	225	44046	3.75	ppm		94
38) 4-Chloro-3-methylphenol	4.643	107	44942	3.60	ppm		97
39) 2-Methylnaphthalene	4.835	142	116793	3.78	ppm		100
40) 1-Methylnaphthalene	4.945	142	102567	3.78	ppm		100
42) Hexachlorocyclopentadiene	5.017	237	51248	3.71	ppm		99
43) 2,3,5-Trichlorophenol	5.017	196	36382	3.72	ppm		99
44) 2,4,6-Trichlorophenol	5.151	196	40610	3.77	ppm		100
45) 2,4,5-Trichlorophenol	5.185	196	40583	3.63	ppm		96
47) 2,3,4-Trichlorophenol	5.262	196	34636	3.61	ppm		98
48) Biphenyl	5.378	154	150185	3.92	ppm		99
49) 2-Chloronaphthalene	5.392	162	122222	3.90	ppm		99
50) 2-Nitroaniline	5.507	65	30009	3.75	ppm		99
51) 2,6-Dimethylnaphthalene	5.560	156	106211	3.93	ppm		95
52) 1,4-Dinitrobenzene	5.680	168	11293	3.22	ppm		99
53) Dimethylphthalate	5.743	163	134981	3.88	ppm		99
54) 1,3-Dinitrobenzene	5.762	168	14725	3.43	ppm		90
55) 2,6-Dinitrotoluene	5.806	165	25249	3.68	ppm		98
56) 1,2-Dinitrobenzene	5.859	168	10281	3.75	ppm	#	76
57) Acenaphthylene	5.883	152	181223	3.86	ppm		99
58) 3-Nitroaniline	5.998	138	25089	3.80	ppm		96
59) Acenaphthene	6.089	153	128846	3.97	ppm		99
60) 2,4-Dinitrophenol	6.123	184	6363	4.41	ppm		93
61) 4-Nitrophenol	6.190	109	16507	3.34	ppm		92
62) 2,4-Dinitrotoluene	6.286	165	31924	3.57	ppm		98
63) Dibenzofuran	6.300	168	174288	3.86	ppm		98
64) 2,3,5,6-Tetrachlorophenol	6.391	230	29270	3.64	ppm		95
65) 2,3,4,6-Tetrachlorophenol	6.444	232	34269	3.46	ppm		98
66) 2,3,5-Trimethylnaphtha...	6.554	170	115269	3.98	ppm		99
67) Diethylphthalate	6.601	149	130988	3.84	ppm		100
68) Fluorene	6.713	166	127798	3.73	ppm		96
69) 4-Chlorophenyl-phenyle...	6.727	204	73167	3.85	ppm		97
70) 4-Nitroaniline	6.727	138	24681	3.74	ppm		96
72) 4,6-Dinitro-2-methylph...	6.769	198	13289	4.61	ppm		99
73) N-Nitrosodiphenylamine	6.864	169	128969	4.03	ppm		98
74) Azobenzene	6.911	77	124446	3.89	ppm		100
76) 4-Bromophenyl-phenylether	7.300	248	43469	3.95	ppm		97
77) Hexachlorobenzene	7.352	284	48681	3.97	ppm		97
78) Pentachlorophenol	7.579	266	23603	3.43	ppm		95
79) Dibenzothiophene	7.678	184	187280	3.79	ppm		96
80) Phenanthrene	7.821	178	207065	3.94	ppm		100
82) Anthracene	7.875	178	208137	3.94	ppm		100
83) Carbazole	8.057	167	164962	3.96	ppm		100
84) Di-n-butylphthalate	8.464	149	190201	3.63	ppm		98
85) 1-Methylphenanthrene	8.493	192	149711	3.93	ppm		100
86) Fluoranthene	9.097	202	222488	3.81	ppm		97
89) Pyrene	9.333	202	239359	3.91	ppm		99
91) Butylbenzylphthalate	10.018	149	73557	3.46	ppm		98
92) bis(2-ethylhexyl)adipate	10.105	129	58934	3.49	ppm		99
93) 3,3'-Dichlorobenzidine	10.539	252	75606	3.82	ppm		97
94) Benzo(a)anthracene	10.559	228	229768	3.96	ppm		99
95) Chrysene	10.593	228	218997	3.97	ppm		100
96) bis(2-Ethylhexyl)phtha...	10.603	149	113670	3.45	ppm		96
98) Di-n-octylphthalate	11.224	149	175265	3.30	ppm		100
99) Benzo(b)fluoranthene	11.569	252	194082	3.61	ppm		96

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH050.D
Vial: 10
Acq On : 14 Jan 2016 12:58
Operator: KVu
Sample : SVE7A148
Inst : E7
Misc : 4PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:53:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.593′	252	207986	3.87	ppm	91
101) Benzo(e)pyrene	11.828′	252	186506	3.78	ppm	98
102) Benzo(a)pyrene	11.879′	252	191479	3.72	ppm	98
103) Perylene	11.964′	252	190922	3.75	ppm	94
104) Indeno(1,2,3-cd)pyrene	13.138	276	201220	3.64	ppm	96
105) Dibenzo(a,h)anthracene	13.163	278	178030	3.79	ppm	98
106) Benzo(g,h,i)perylene	13.498	276	176197	3.74	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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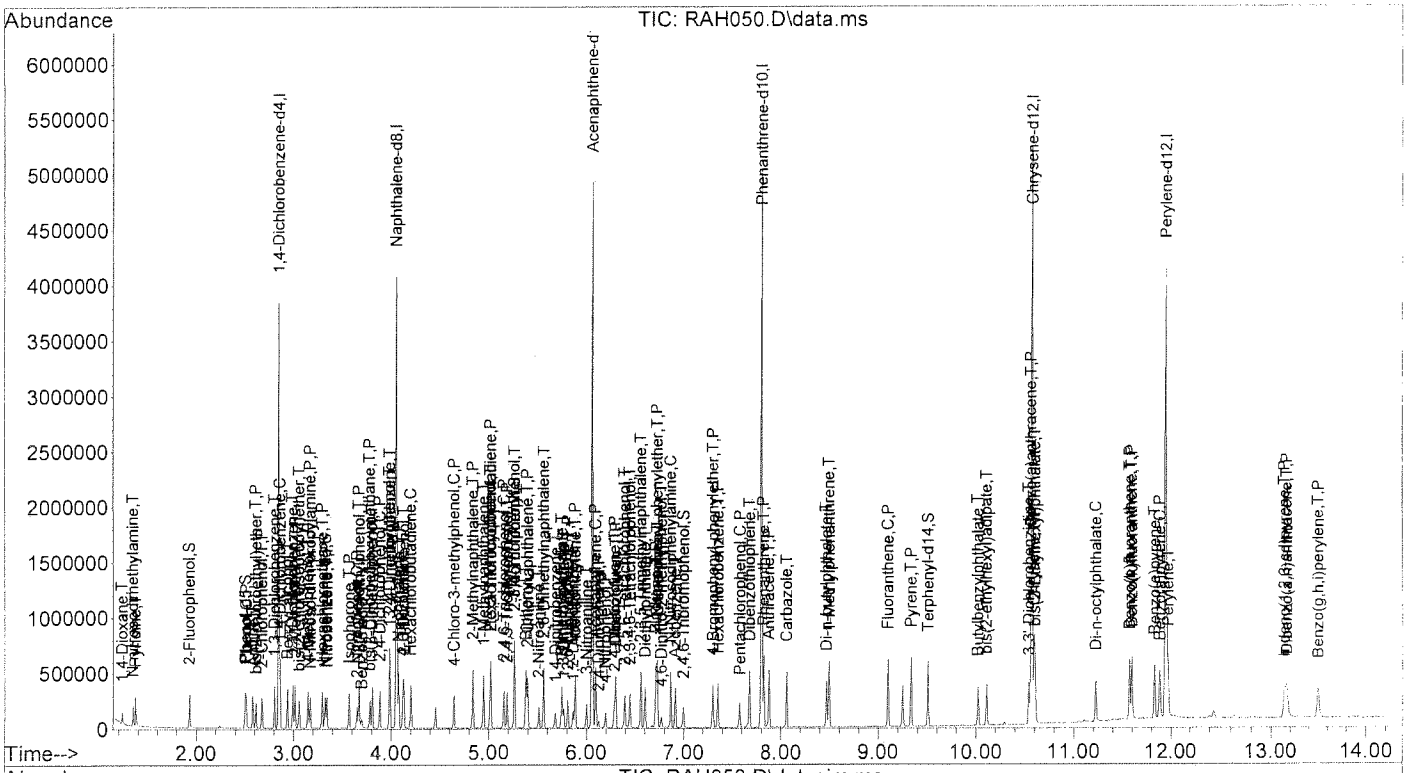
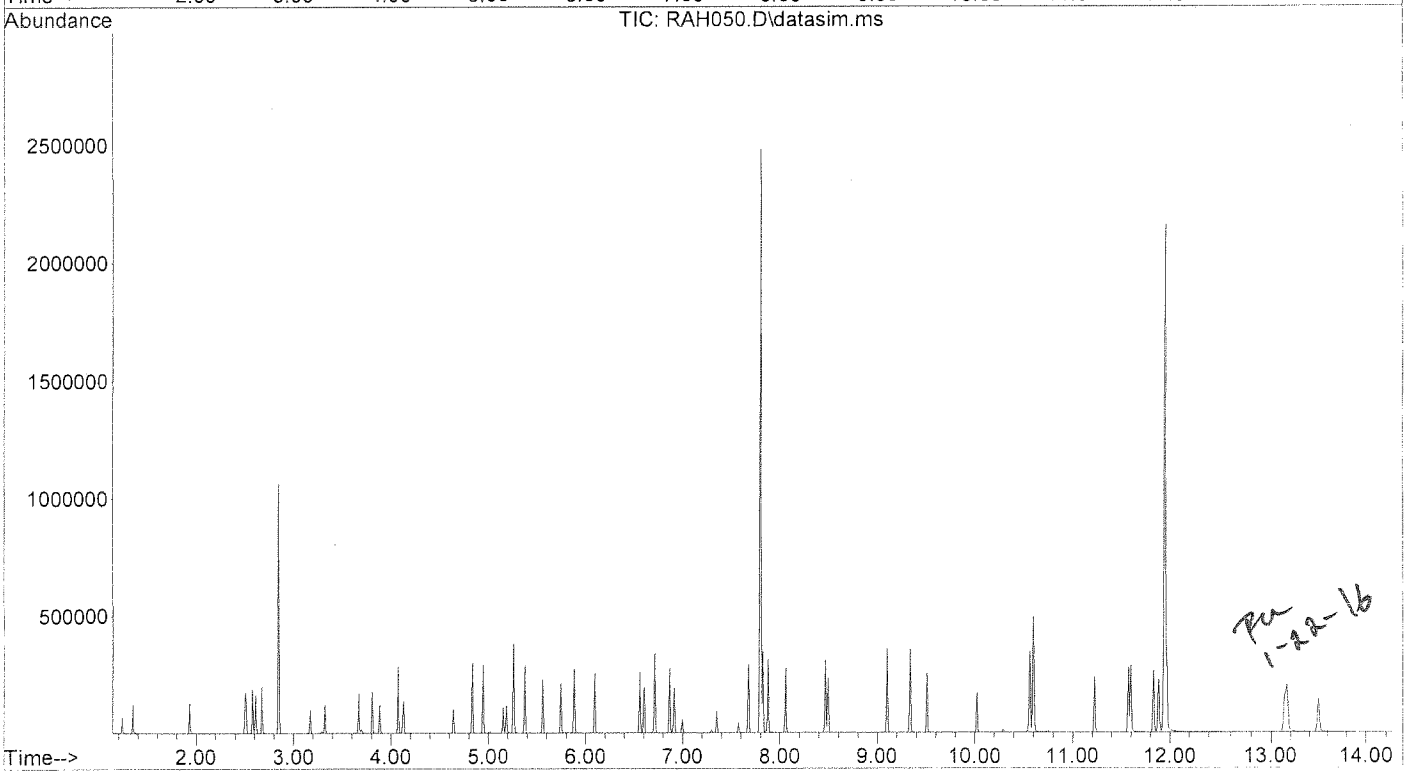
Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH050.D
Acq On : 14 Jan 2016 12:58
Sample : SVE7A148
Misc : 4PPM
Integrator: RTE
Quant Time: Jan 21 10:53:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 10
Operator: KVu
Inst : E7
Multiplr: 1.00





PW 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH049.D
Acq On : 14 Jan 2016 12:39
Sample : SVE7A147
Misc : 10PPM
Integrator: RTE
Quant Time: Jan 21 10:53:19 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	425835	40.00	ppm	0.00
21) Naphthalene-d8	4.054	136	1541240	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	961674	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	1756016	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2045356	40.00	ppm	0.00
97) Perylene-d12	11.940	264	1817105	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	123471	9.59	ppm	0.00
Spiked Amount 30.000			Recovery	=	31.97%	
6) Phenol-d5	2.501	99	160241	9.79	ppm	0.00
Spiked Amount 30.000			Recovery	=	32.63%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.325	82	153936	9.62	ppm	0.00
Spiked Amount 10.000			Recovery	=	96.20%	
46) 2-Fluorobiphenyl	5.262	172	370752	9.41	ppm	0.00
Spiked Amount 10.000			Recovery	=	94.10%	
75) 2,4,6-Tribromophenol	6.996	330	49680	9.45	ppm	0.00
Spiked Amount 30.000			Recovery	=	31.50%	
90) Terphenyl-d14	9.509	244	422915	9.62	ppm	0.00
Spiked Amount 10.000			Recovery	=	96.20%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	53948	10.36	ppm	96
3) N-nitrosodimethylamine	1.343	74	72754	9.73	ppm	100
4) Pyridine	1.367	79	141109	9.79	ppm	100
7) Phenol	2.511	94	155010	9.31	ppm	97
8) Aniline	2.579	93	203346	9.61	ppm	100
9) bis(2-chloroethyl)ether	2.610	93	119166	9.78	ppm	100
10) 2-Chlorophenol	2.673	128	138638	8.97	ppm	100
11) 1,3-Dichlorobenzene	2.802	146	165260	9.50	ppm	99
13) 1,4-Dichlorobenzene	2.860	146	178519	9.81	ppm	99
14) Benzyl alcohol	2.936	108	88450	9.64	ppm	100
15) 1,2-Dichlorobenzene	2.989	146	161541	9.56	ppm	96
16) 2-Methylphenol	3.013	107	111938	9.74	ppm	96
17) bis(2-chloroisopropyl)...	3.056	45	210380	9.67	ppm	98
18) 4-Methylphenol	3.147	107	142022	9.70	ppm	99
19) N-Nitroso-di-n-propyla...	3.171	70	93101	9.53	ppm	98
20) Hexachloroethane	3.296	117	66607	9.77	ppm	99
23) Nitrobenzene	3.344	77	156393	9.72	ppm	97
24) Isophorone	3.569	82	296483	9.95	ppm	99
25) 2-Nitrophenol	3.651	139	65828	9.72	ppm	98
26) 2,4-Dimethylphenol	3.670	107	151944	9.92	ppm	99
27) Benzoic acid	3.718	105	77013	8.95	ppm	91
28) bis(2-Chloroethoxy)met...	3.780	93	157849	9.88	ppm	98
29) 3,5-Dimethylphenol	3.809	107	165885	10.19	ppm	87
30) 2,4-Dichlorophenol	3.886	162	127988	9.13	ppm	89
31) 1,2,4-Trichlorobenzene	3.987	180	157756	9.76	ppm	100
32) 3,4-Dimethylphenol	3.982	107	177992	9.55	ppm	100
33) Naphthalene	4.074	128	418000	9.77	ppm	99
34) 4-Chloroaniline	4.122	127	172855	9.55	ppm	99
35) 2,6-Dichlorophenol	4.127	162	125383	9.56	ppm	99

1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH049.D
Vial: 9
Acq On : 14 Jan 2016 12:39
Operator: KVu
Sample : SVE7A147
Inst : E7
Misc : 10PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:53:19 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Hexachlorobutadiene	4.204	225	110990	9.75	ppm		99
38) 4-Chloro-3-methylphenol	4.643	107	114184	9.44	ppm		98
39) 2-Methylnaphthalene	4.835	142	288681	9.64	ppm		100
40) 1-Methylnaphthalene	4.945	142	254331	9.66	ppm		99
42) Hexachlorocyclopentadiene	5.017	237	129310	9.45	ppm		99
43) 2,3,5-Trichlorophenol	5.021	196	88934	9.19	ppm		99
44) 2,4,6-Trichlorophenol	5.151	196	100218	9.40	ppm		98
45) 2,4,5-Trichlorophenol	5.185	196	104482	9.44	ppm		97
47) 2,3,4-Trichlorophenol	5.262	196	86338	9.09	ppm		96
48) Biphenyl	5.378	154	366305	9.64	ppm		100
49) 2-Chloronaphthalene	5.397	162	298948	9.63	ppm		98
50) 2-Nitroaniline	5.512	65	72651	9.16	ppm		92
51) 2,6-Dimethylnaphthalene	5.560	156	255561	9.54	ppm		98
52) 1,4-Dinitrobenzene	5.680	168	31236	9.00	ppm		99
53) Dimethylphthalate	5.748	163	333732	9.68	ppm		100
54) 1,3-Dinitrobenzene	5.767	168	41594	9.79	ppm		100
55) 2,6-Dinitrotoluene	5.810	165	63848	9.39	ppm		98
56) 1,2-Dinitrobenzene	5.863	168	25973	9.56	ppm	#	83
57) Acenaphthylene	5.883	152	446409	9.61	ppm		100
58) 3-Nitroaniline	6.003	138	63183	9.67	ppm		97
59) Acenaphthene	6.094	153	311098	9.68	ppm		99
60) 2,4-Dinitrophenol	6.123	184	22587	9.25	ppm		96
61) 4-Nitrophenol	6.195	109	48261	9.85	ppm		95
62) 2,4-Dinitrotoluene	6.286	165	84711	9.55	ppm		98
63) Dibenzofuran	6.300	168	431776	9.64	ppm		99
64) 2,3,5,6-Tetrachlorophenol	6.391	230	74628	9.36	ppm		97
65) 2,3,4,6-Tetrachlorophenol	6.444	232	92619	9.45	ppm		99
66) 2,3,5-Trimethylnaphtha...	6.558	170	283503	9.87	ppm		100
67) Diethylphthalate	6.601	149	326728	9.66	ppm		99
68) Fluorene	6.713	166	324494	9.57	ppm		99
69) 4-Chlorophenyl-phenyle...	6.727	204	182027	9.67	ppm		98
70) 4-Nitroaniline	6.732	138	62716	9.58	ppm		99
72) 4,6-Dinitro-2-methylph...	6.774	198	36914	8.71	ppm		99
73) N-Nitrosodiphenylamine	6.863	169	309589	9.66	ppm		94
74) Azobenzene	6.916	77	311091	9.69	ppm		100
76) 4-Bromophenyl-phenylether	7.300	248	105857	9.59	ppm		96
77) Hexachlorobenzene	7.352	284	118911	9.67	ppm		99
78) Pentachlorophenol	7.578	266	63613	9.22	ppm		99
79) Dibenzothiophene	7.678	184	453482	9.15	ppm		97
80) Phenanthrene	7.821	178	504818	9.59	ppm		99
82) Anthracene	7.875	178	507140	9.59	ppm		99
83) Carbazole	8.057	167	405409	9.72	ppm		99
84) Di-n-butylphthalate	8.464	149	497908	9.47	ppm		100
85) 1-Methylphenanthrene	8.493	192	364681	9.56	ppm		99
86) Fluoranthene	9.097	202	572669	9.78	ppm		98
89) Pyrene	9.333	202	601488	9.70	ppm		99
91) Butylbenzylphthalate	10.019	149	204699	9.51	ppm		98
92) bis(2-ethylhexyl)adipate	10.106	129	161258	9.43	ppm		99
93) 3,3'-Dichlorobenzidine	10.539	252	197697	9.88	ppm		100
94) Benzo(a)anthracene	10.559	228	568495	9.67	ppm		100
95) Chrysene	10.593	228	539868	9.67	ppm		98
96) bis(2-Ethylhexyl)phtha...	10.603	149	312661	9.39	ppm		99
98) Di-n-octylphthalate	11.224	149	497394	9.17	ppm		100
99) Benzo(b)fluoranthene	11.569	252	548333	10.00	ppm		100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH049.D
Vial: 9
Acq On : 14 Jan 2016 12:39
Operator: KVu
Sample : SVE7A147
Inst : E7
Misc : 10PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:53:19 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

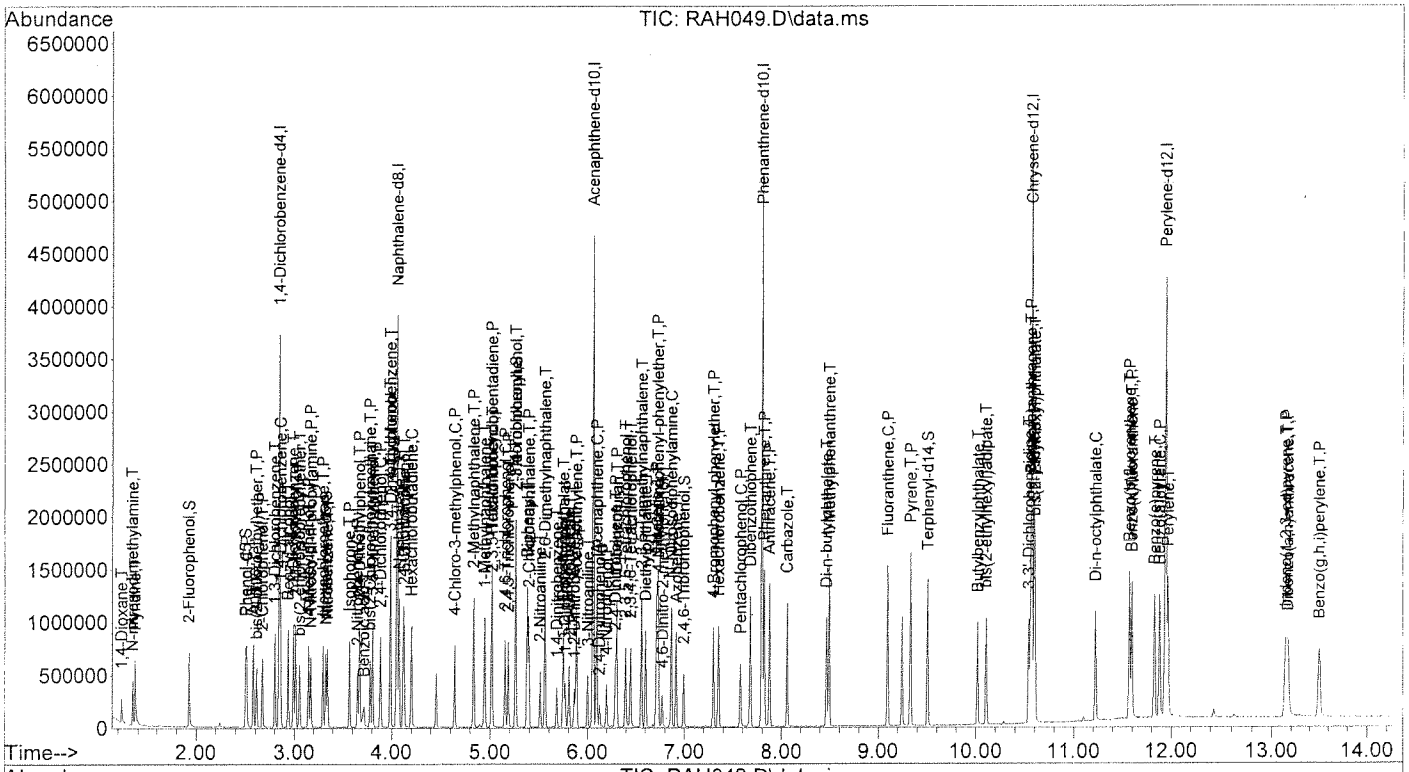
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.593	252	505128	9.21	ppm	99
101) Benzo(e)pyrene	11.828	252	483748	9.63	ppm	98
102) Benzo(a)pyrene	11.879	252	498266	9.49	ppm	99
103) Perylene	11.964	252	507427	9.78	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.143	276	538048	9.54	ppm	99
105) Dibenzo(a,h)anthracene	13.168	278	449784	9.40	ppm	97
106) Benzo(g,h,i)perylene	13.502	276	463638	9.66	ppm	98

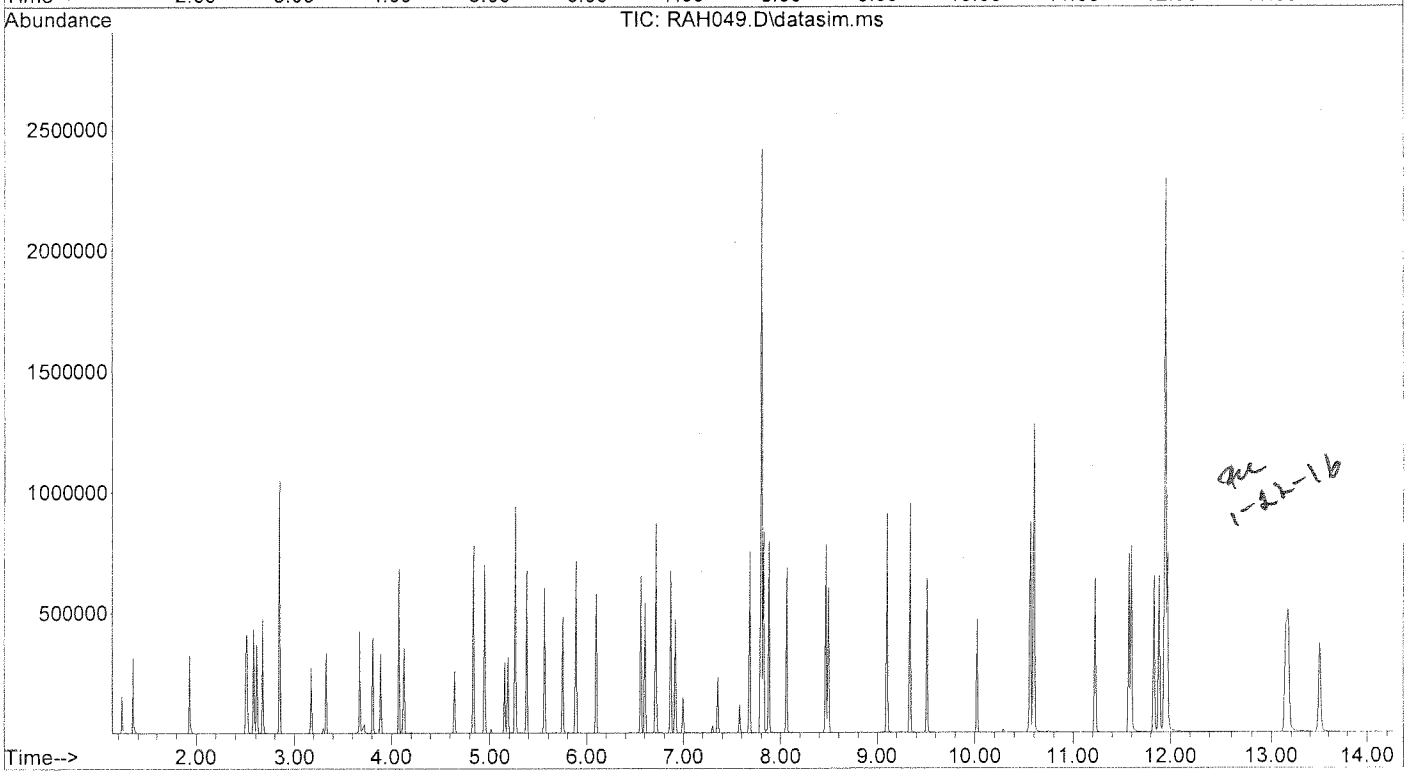
(#) = qualifier out of range (m) = manual integration (+) = signals summed

TM 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH049.D
Vial: 9
Acq On : 14 Jan 2016 12:39
Operator: KVu
Sample : SVE7A147
Inst : E7
Misc : 10PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:53:19 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH048.D
Acq On : 14 Jan 2016 12:20
Sample : SVE7A146
Misc : 20PPM
Integrator: RTE
Quant Time: Jan 21 10:52:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 8
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	433148	40.00	ppm	0.00
21) Naphthalene-d8	4.054	136	1595012	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	1012332	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	1825171	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2089279	40.00	ppm	0.00
97) Perylene-d12	11.940	264	1795002	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	264322	20.19	ppm	0.00
Spiked Amount 30.000			Recovery = 67.30%			
6) Phenol-d5	2.501	99	330383	19.84	ppm	0.00
Spiked Amount 30.000			Recovery = 66.13%			
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery = 0.00%			
22) Nitrobenzene-d5	3.329	82	333890	20.16	ppm	0.00
Spiked Amount 10.000			Recovery = 201.60%			
46) 2-Fluorobiphenyl	5.262	172	798243	19.25	ppm	0.00
Spiked Amount 10.000			Recovery = 192.50%			
75) 2,4,6-Tribromophenol	6.996	330	113876	20.84	ppm	0.00
Spiked Amount 30.000			Recovery = 69.47%			
90) Terphenyl-d14	9.509	244	914640	20.37	ppm	0.00
Spiked Amount 10.000			Recovery = 203.70%			
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	105915	20.00	ppm	100
3) N-nitrosodimethylamine	1.343	74	154796	20.36	ppm	99
4) Pyridine	1.367	79	295259	20.13	ppm	99
7) Phenol	2.511	94	342429	20.21	ppm	99
8) Aniline	2.579	93	427573	19.87	ppm	99
9) bis(2-chloroethyl)ether	2.610	93	245201	19.79	ppm	97
10) 2-Chlorophenol	2.673	128	329597	20.97	ppm	93
11) 1,3-Dichlorobenzene	2.802	146	356664	20.15	ppm	99
13) 1,4-Dichlorobenzene	2.860	146	372558	20.12	ppm	99
14) Benzyl alcohol	2.936	108	191995	20.58	ppm	99
15) 1,2-Dichlorobenzene	2.989	146	346879	20.18	ppm	97
16) 2-Methylphenol	3.013	107	233821	20.00	ppm	100
17) bis(2-chloroisopropyl)...	3.056	45	441813	19.97	ppm	99
18) 4-Methylphenol	3.152	107	303505	20.37	ppm	99
19) N-Nitroso-di-n-propyla...	3.176	70	196375	19.76	ppm	98
20) Hexachloroethane	3.296	117	136073	19.63	ppm	100
23) Nitrobenzene	3.344	77	336027	20.17	ppm	99
24) Isophorone	3.574	82	625925	20.30	ppm	99
25) 2-Nitrophenol	3.651	139	145485	20.76	ppm	99
26) 2,4-Dimethylphenol	3.675	107	317461	20.03	ppm	97
27) Benzoic acid	3.746	105	175534	19.71	ppm	99
28) bis(2-Chloroethoxy)met...	3.785	93	329372	19.91	ppm	99
29) 3,5-Dimethylphenol	3.809	107	358644	21.29	ppm	78
30) 2,4-Dichlorophenol	3.886	162	283275	19.53	ppm	79
31) 1,2,4-Trichlorobenzene	3.987	180	337137	20.14	ppm	98
32) 3,4-Dimethylphenol	3.987	107	389284	20.18	ppm	99
33) Naphthalene	4.074	128	883365	19.95	ppm	98
34) 4-Chloroaniline	4.122	127	373370	19.93	ppm	100
35) 2,6-Dichlorophenol	4.132	162	275558	20.31	ppm	99

mc 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH048.D
Acq On : 14 Jan 2016 12:20
Sample : SVE7A146
Misc : 20PPM
Integrator: RTE
Quant Time: Jan 21 10:52:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 8
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Hexachlorobutadiene	4.204	225	238664	20.26	ppm	100
38) 4-Chloro-3-methylphenol	4.643	107	255998	20.46	ppm	99
39) 2-Methylnaphthalene	4.835	142	618104	19.94	ppm	99
40) 1-Methylnaphthalene	4.950	142	546126	20.05	ppm	99
42) Hexachlorocyclopentadiene	5.017	237	289442	20.10	ppm	98
43) 2,3,5-Trichlorophenol	5.021	196	201145	19.75	ppm	98
44) 2,4,6-Trichlorophenol	5.151	196	224314	19.99	ppm	100
45) 2,4,5-Trichlorophenol	5.185	196	234568	20.13	ppm	98
47) 2,3,4-Trichlorophenol	5.262	196	210133	21.02	ppm	91
48) Biphenyl	5.378	154	788052	19.71	ppm	99
49) 2-Chloronaphthalene	5.397	162	651564	19.94	ppm	99
50) 2-Nitroaniline	5.512	65	169561	20.30	ppm	100
51) 2,6-Dimethylnaphthalene	5.560	156	561326	19.90	ppm	99
52) 1,4-Dinitrobenzene	5.685	168	77548	21.23	ppm	89
53) Dimethylphthalate	5.752	163	734313	20.23	ppm	99
54) 1,3-Dinitrobenzene	5.772	168	91345	20.43	ppm	99
55) 2,6-Dinitrotoluene	5.815	165	147093	20.54	ppm	100
56) 1,2-Dinitrobenzene	5.868	168	57199	20.00	ppm	99
57) Acenaphthylene	5.888	152	973350	19.90	ppm	100
58) 3-Nitroaniline	6.003	138	135772	19.75	ppm	99
59) Acenaphthene	6.094	153	669457	19.79	ppm	99
60) 2,4-Dinitrophenol	6.128	184	57305	18.72	ppm	98
61) 4-Nitrophenol	6.200	109	105945	20.54	ppm	99
62) 2,4-Dinitrotoluene	6.291	165	191016	20.47	ppm	97
63) Dibenzofuran	6.305	168	934415	19.82	ppm	98
64) 2,3,5,6-Tetrachlorophenol	6.396	230	166777	19.88	ppm	96
65) 2,3,4,6-Tetrachlorophenol	6.444	232	203724	19.74	ppm	99
66) 2,3,5-Trimethylnaphtha...	6.558	170	619886	20.51	ppm	98
67) Diethylphthalate	6.605	149	713864	20.05	ppm	100
68) Fluorene	6.718	166	711083	19.93	ppm	100
69) 4-Chlorophenyl-phenyle...	6.727	204	390747	19.73	ppm	98
70) 4-Nitroaniline	6.737	138	138597	20.12	ppm	99
72) 4,6-Dinitro-2-methylph...	6.774	198	103509	19.61	ppm	94
73) N-Nitrosodiphenylamine	6.868	169	663732	19.93	ppm	93
74) Azobenzene	6.916	77	667613	20.01	ppm	100
76) 4-Bromophenyl-phenylether	7.300	248	231697	20.19	ppm	100
77) Hexachlorobenzene	7.356	284	254347	19.90	ppm	99
78) Pentachlorophenol	7.578	266	145978	20.35	ppm	99
79) Dibenzothiophene	7.682	184	982369	19.08	ppm	98
80) Phenanthrene	7.826	178	1092062	19.96	ppm	99
82) Anthracene	7.880	178	1090289	19.83	ppm	99
83) Carbazole	8.061	167	869028	20.04	ppm	100
84) Di-n-butylphthalate	8.468	149	1112384	20.36	ppm	99
85) 1-Methylphenanthrene	8.492	192	791592	19.97	ppm	100
86) Fluoranthene	9.101	202	1211532	19.90	ppm	100
89) Pyrene	9.337	202	1279434	20.20	ppm	100
91) Butylbenzylphthalate	10.023	149	454816	20.69	ppm	99
92) bis(2-ethylhexyl)adipate	10.110	129	357719	20.47	ppm	99
93) 3,3'-Dichlorobenzidine	10.539	252	415264	20.31	ppm	100
94) Benzo(a)anthracene	10.564	228	1200999	20.00	ppm	100
95) Chrysene	10.598	228	1133913	19.89	ppm	99
96) bis(2-Ethylhexyl)phtha...	10.602	149	691552	20.33	ppm	100
98) Di-n-octylphthalate	11.224	149	1097629	20.50	ppm	99
99) Benzo(b)fluoranthene	11.574	252	1088928	20.11	ppm	100

m 1-22-16

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH048.D
Vial: 8
Acq On : 14 Jan 2016 12:20
Operator: KVu
Sample : SVE7A146
Inst : E7
Misc : 20PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:52:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

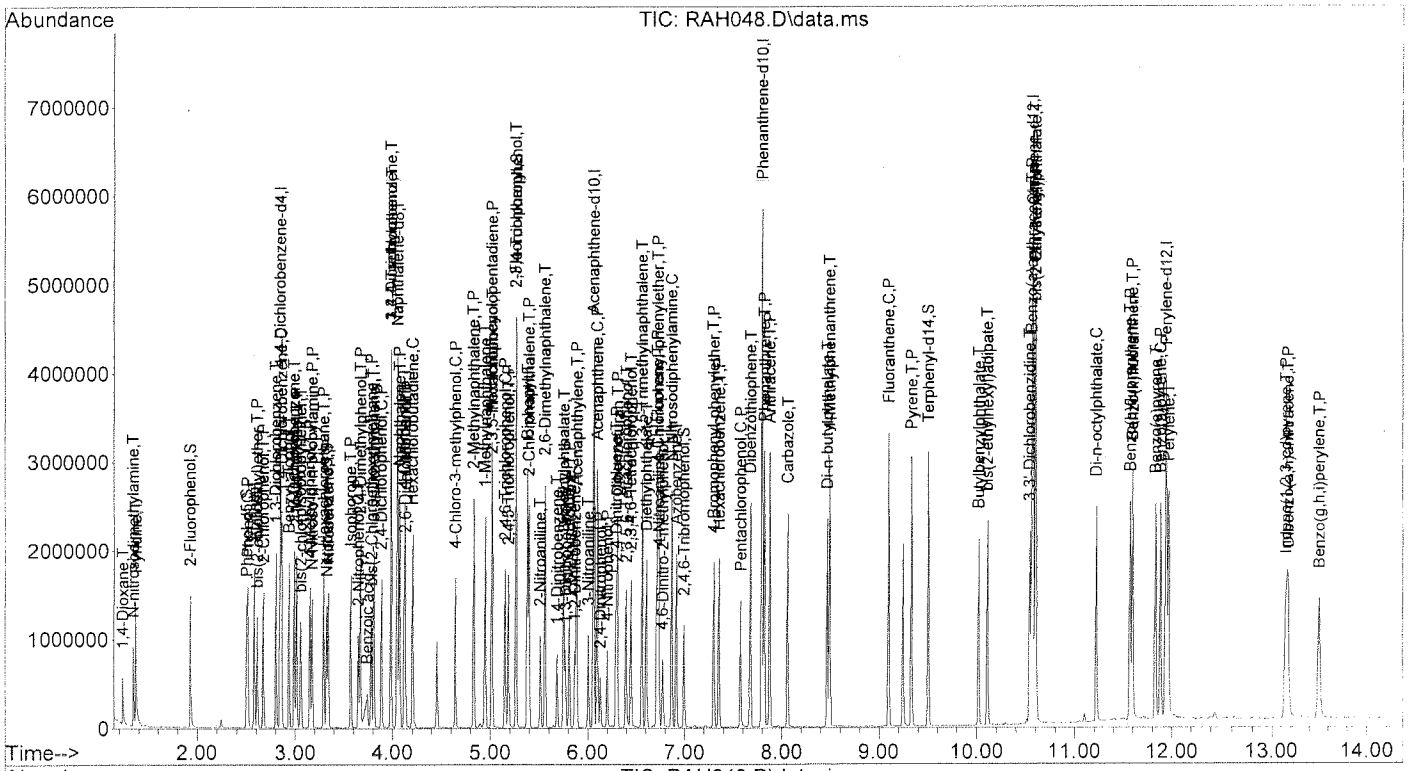
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.598	252	1087900	20.07	ppm	98
101) Benzo(e)pyrene	11.832	252	1002043	20.19	ppm	100
102) Benzo(a)pyrene	11.884	252	1042976	20.10	ppm	99
103) Perylene	11.968	252	1032461	20.14	ppm	97
104) Indeno(1,2,3-cd)pyrene	13.148	276	1113748	19.99	ppm	99
105) Dibenzo(a,h)anthracene	13.172	278	948800	20.08	ppm	97
106) Benzo(g,h,i)perylene	13.507	276	956143	20.16	ppm	98

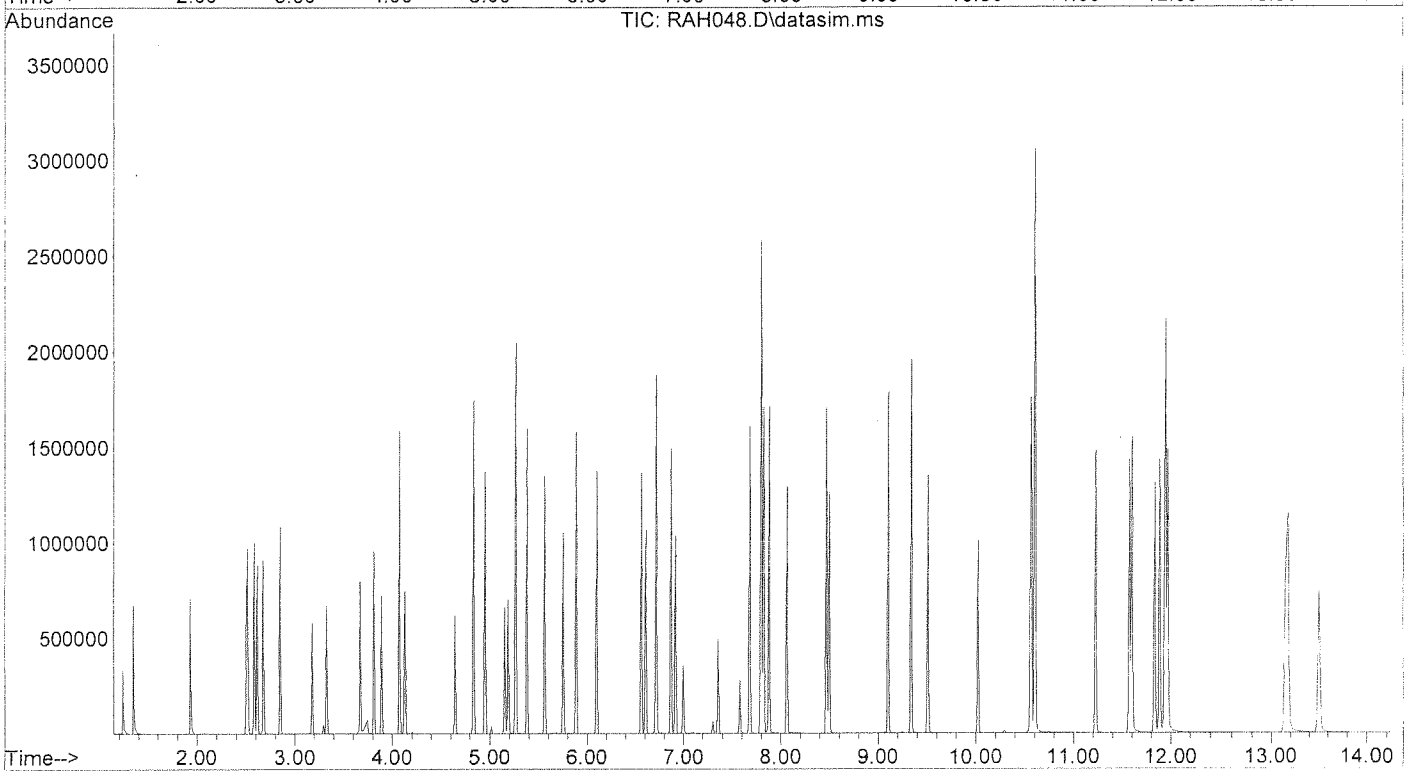
(#) = qualifier out of range (m) = manual integration (+) = signals summed

1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH048.D
Vial: 8
Acq On : 14 Jan 2016 12:20
Operator: KVu
Sample : SVE7A146
Inst : E7
Misc : 20PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:52:52 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





m 1-22-16

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH047.D
Acq On : 14 Jan 2016 12:01
Sample : SVE7A145
Misc : 25PPM
Integrator: RTE
Quant Time: Jan 21 10:48:50 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 7
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	432203	40.00	ppm	0.00
21) Naphthalene-d8	4.054	136	1600260	40.00	ppm	0.00
41) Acenaphthene-d10	6.061	164	1008743	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	1833940	40.00	ppm	0.00
87) Chrysene-d12	10.573	240	2122804	40.00	ppm	0.00
97) Perylene-d12	11.944	264	1842737	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	328531	25.14	ppm	0.00
Spiked Amount 30.000			Recovery	=	83.80%	
6) Phenol-d5	2.506	99	421008	25.34	ppm	0.00
Spiked Amount 30.000			Recovery	=	84.47%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.329	82	427077	25.70	ppm	0.00
Spiked Amount 10.000			Recovery	=	257.00%	
46) 2-Fluorobiphenyl	5.262	172	1016319	24.60	ppm	0.00
Spiked Amount 10.000			Recovery	=	246.00%	
75) 2,4,6-Tribromophenol	6.996	330	140589	25.60	ppm	0.00
Spiked Amount 30.000			Recovery	=	85.33%	
90) Terphenyl-d14	9.509	244	1176465	25.79	ppm	0.00
Spiked Amount 10.000			Recovery	=	257.90%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	132171	25.01	ppm	100
3) N-nitrosodimethylamine	1.343	74	190566	25.11	ppm	100
4) Pyridine	1.367	79	376712	25.74	ppm	100
7) Phenol	2.517	94	439022	25.97	ppm	100
8) Aniline	2.579	93	547128	25.48	ppm	100
9) bis(2-chloroethyl)ether	2.610	93	318840	25.78	ppm	100
10) 2-Chlorophenol	2.673	128	411944	26.27	ppm	100
11) 1,3-Dichlorobenzene	2.802	146	447197	25.32	ppm	100
13) 1,4-Dichlorobenzene	2.860	146	465585	25.20	ppm	100
14) Benzyl alcohol	2.941	108	239371	25.72	ppm	100
15) 1,2-Dichlorobenzene	2.989	146	442886	25.82	ppm	100
16) 2-Methylphenol	3.013	107	296649	25.43	ppm	100
17) bis(2-chloroisopropyl)...	3.056	45	569282	25.79	ppm	100
18) 4-Methylphenol	3.152	107	377502	25.40	ppm	100
19) N-Nitroso-di-n-propyla...	3.176	70	249531	25.17	ppm	100
20) Hexachloroethane	3.296	117	176688	25.55	ppm	100
23) Nitrobenzene	3.348	77	429633	25.71	ppm	100
24) Isophorone	3.574	82	799557	25.84	ppm	100
25) 2-Nitrophenol	3.655	139	186099	26.47	ppm	100
26) 2,4-Dimethylphenol	3.674	107	405916	25.52	ppm	100
27) Benzoic acid	3.756	105	232785	26.05	ppm	100
28) bis(2-Chloroethoxy)met...	3.785	93	416313	25.09	ppm	100
29) 3,5-Dimethylphenol	3.813	107	401791	23.77	ppm	100
30) 2,4-Dichlorophenol	3.890	162	394670	27.12	ppm	100
31) 1,2,4-Trichlorobenzene	3.987	180	429150	25.56	ppm	100
32) 3,4-Dimethylphenol	3.987	107	499607	25.82	ppm	100
33) Naphthalene	4.074	128	1137299	25.60	ppm	100
34) 4-Chloroaniline	4.127	127	479436	25.51	ppm	100
35) 2,6-Dichlorophenol	4.132	162	346416	25.45	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH047.D
Acq On : 14 Jan 2016 12:01
Sample : SVE7A145
Misc : 25PPM
Integrator: RTE
Quant Time: Jan 21 10:48:50 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 7
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Hexachlorobutadiene	4.204	225	302488	25.60	ppm	100
38) 4-Chloro-3-methylphenol	4.643	107	324577	25.85	ppm	100
39) 2-Methylnaphthalene	4.839	142	789227	25.38	ppm	100
40) 1-Methylnaphthalene	4.950	142	701323	25.66	ppm	100
42) Hexachlorocyclopentadiene	5.017	237	370877	25.84	ppm	100
43) 2,3,5-Trichlorophenol	5.021	196	260422	25.66	ppm	100
44) 2,4,6-Trichlorophenol	5.151	196	286602	25.63	ppm	100
45) 2,4,5-Trichlorophenol	5.190	196	299133	25.76	ppm	100
47) 2,3,4-Trichlorophenol	5.262	196	242674	24.36	ppm	100
48) Biphenyl	5.378	154	1008632	25.32	ppm	100
49) 2-Chloronaphthalene	5.397	162	827992	25.43	ppm	100
50) 2-Nitroaniline	5.517	65	214756	25.80	ppm	100
51) 2,6-Dimethylnaphthalene	5.565	156	713260	25.38	ppm	100
52) 1,4-Dinitrobenzene	5.685	168	94611	26.00	ppm	100
53) Dimethylphthalate	5.752	163	920703	25.45	ppm	100
54) 1,3-Dinitrobenzene	5.772	168	116359	26.12	ppm	100
55) 2,6-Dinitrotoluene	5.815	165	185980	26.07	ppm	100
56) 1,2-Dinitrobenzene	5.873	168	72594	25.48	ppm	100
57) Acenaphthylene	5.887	152	1241668	25.48	ppm	100
58) 3-Nitroaniline	6.008	138	173393	25.31	ppm	100
59) Acenaphthene	6.099	153	857939	25.46	ppm	100
60) 2,4-Dinitrophenol	6.128	184	79112	24.96	ppm	100
61) 4-Nitrophenol	6.204	109	135584	26.38	ppm	100
62) 2,4-Dinitrotoluene	6.291	165	237814	25.57	ppm	100
63) Dibenzofuran	6.305	168	1200858	25.57	ppm	100
64) 2,3,5,6-Tetrachlorophenol	6.396	230	216900	25.95	ppm	100
65) 2,3,4,6-Tetrachlorophenol	6.449	232	258493	25.14	ppm	100
66) 2,3,5-Trimethylnaphtha...	6.558	170	774573	25.71	ppm	100
67) Diethylphthalate	6.605	149	912970	25.73	ppm	100
68) Fluorene	6.718	166	910930	25.62	ppm	100
69) 4-Chlorophenyl-phenyle...	6.727	204	507478	25.71	ppm	100
70) 4-Nitroaniline	6.741	138	172467	25.12	ppm	100
72) 4,6-Dinitro-2-methylph...	6.779	198	125506	23.18	ppm	100
73) N-Nitrosodiphenylamine	6.868	169	863433	25.80	ppm	100
74) Azobenzene	6.916	77	856630	25.55	ppm	100
76) 4-Bromophenyl-phenylether	7.305	248	295171	25.60	ppm	100
77) Hexachlorobenzene	7.357	284	325971	25.39	ppm	100
78) Pentachlorophenol	7.579	266	188320	26.13	ppm	100
79) Dibenzothiophene	7.682	184	1354936	26.19	ppm	100
80) Phenanthrene	7.826	178	1398119	25.43	ppm	100
82) Anthracene	7.880	178	1400419	25.34	ppm	100
83) Carbazole	8.061	167	1089053	24.99	ppm	100
84) Di-n-butylphthalate	8.468	149	1427438	26.00	ppm	100
85) 1-Methylphenanthrene	8.497	192	1012536	25.42	ppm	100
86) Fluoranthene	9.101	202	1565322	25.59	ppm	100
89) Pyrene	9.337	202	1646337	25.58	ppm	100
91) Butylbenzylphthalate	10.023	149	581953	26.06	ppm	100
92) bis(2-ethylhexyl)adipate	10.110	129	466965	26.30	ppm	100
93) 3,3'-Dichlorobenzidine	10.539	252	523485	25.20	ppm	100
94) Benzo(a)anthracene	10.563	228	1538286	25.21	ppm	100
95) Chrysene	10.597	228	1462861	25.25	ppm	100
96) bis(2-Ethylhexyl)phtha...	10.607	149	905204	26.19	ppm	100
98) Di-n-octylphthalate	11.223	149	1458789	26.53	ppm	100
99) Benzo(b)fluoranthene	11.574	252	1458418	26.23	ppm	100

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH047.D
Vial: 7
Acq On : 14 Jan 2016 12:01
Operator: KVu
Sample : SVE7A145
Inst : E7
Misc : 25PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:48:50 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.603	252	1384513	24.88	ppm	100
101) Benzo(e)pyrene	11.832	252	1302989	25.57	ppm	100
102) Benzo(a)pyrene	11.888	252	1364734	25.62	ppm	100
103) Perylene	11.968	252	1347950	25.61	ppm	100
104) Indeno(1,2,3-cd)pyrene	13.153	276	1465911	25.63	ppm	100
105) Dibenzo(a,h)anthracene	13.172	278	1230476	25.36	ppm	100
106) Benzo(g,h,i)perylene	13.517	276	1246000	25.59	ppm	100

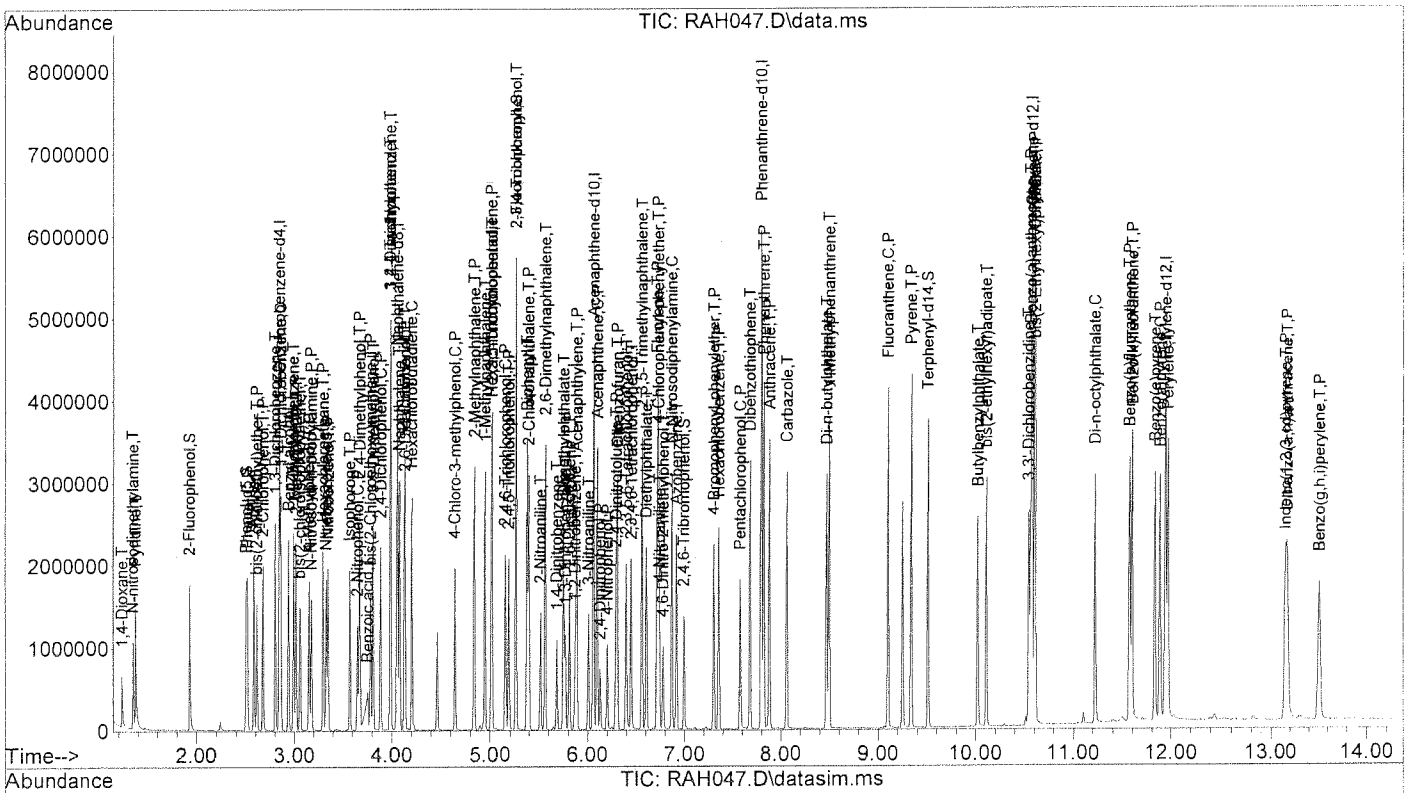
(#) = qualifier out of range (m) = manual integration (+) = signals summed

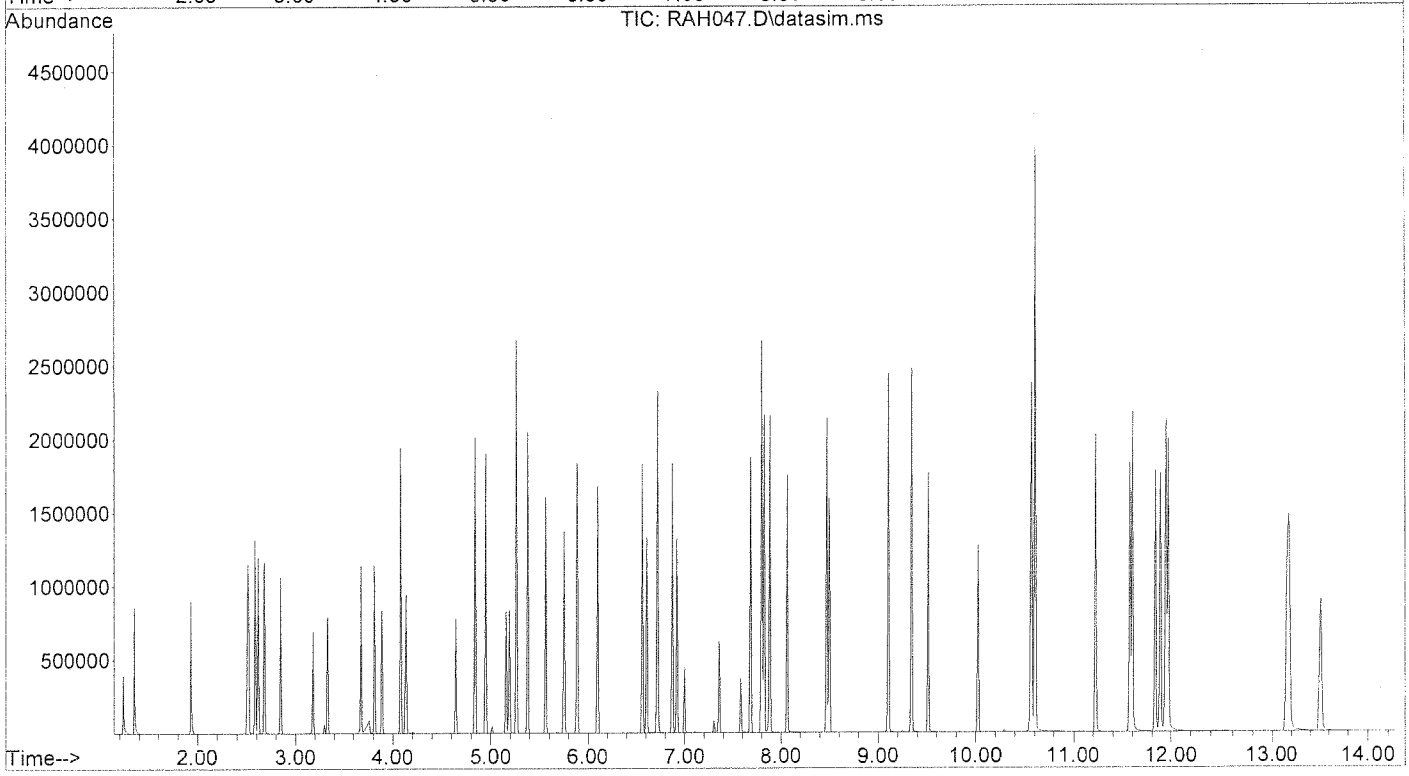
MC 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH047.D
Acq On : 14 Jan 2016 12:01
Sample : SVE7A145
Misc : 25PPM
Integrator: RTE
Quant Time: Jan 21 10:48:50 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 7
Operator: KVu
Inst : E7
Multiplr: 1.00





tu 1-22-16

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH046.D
Acq On : 14 Jan 2016 11:41
Sample : SVE7A144
Misc : 40PPM
Integrator: RTE
Quant Time: Jan 21 10:48:16 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	458767	40.00	ppm	0.00
21) Naphthalene-d8	4.054	136	1706978	40.00	ppm	0.00
41) Acenaphthene-d10	6.060	164	1080154	40.00	ppm	0.00
71) Phenanthrene-d10	7.803	188	1962589	40.00	ppm	0.00
87) Chrysene-d12	10.578	240	2286681	40.00	ppm	0.00
97) Perylene-d12	11.954	264	1978631	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	573684	41.37	ppm	0.00
Spiked Amount 30.000			Recovery	=	137.90%	
6) Phenol-d5	2.506	99	721397	40.90	ppm	0.00
Spiked Amount 30.000			Recovery	=	136.33%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.329	82	730887	41.24	ppm	0.00
Spiked Amount 10.000			Recovery	=	412.40%	
46) 2-Fluorobiphenyl	5.267	172	1772707	40.07	ppm	0.00
Spiked Amount 10.000			Recovery	=	400.70%	
75) 2,4,6-Tribromophenol	7.006	330	248839	42.35	ppm	0.00
Spiked Amount 30.000			Recovery	=	141.17%	
90) Terphenyl-d14	9.513	244	1998838	40.68	ppm	0.00
Spiked Amount 10.000			Recovery	=	406.80%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.233	88	223948	39.92	ppm	97
3) N-nitrosodimethylamine	1.343	74	334922	41.58	ppm	100
4) Pyridine	1.367	79	645177	41.53	ppm	99
7) Phenol	2.516	94	739821	41.22	ppm	99
8) Aniline	2.584	93	952845	41.81	ppm	98
9) bis(2-chloroethyl)ether	2.610	93	536274	40.86	ppm	98
10) 2-Chlorophenol	2.673	128	715557	42.99	ppm	98
11) 1,3-Dichlorobenzene	2.802	146	780115	41.61	ppm	99
13) 1,4-Dichlorobenzene	2.859	146	808846	41.24	ppm	99
14) Benzyl alcohol	2.941	108	406842	41.18	ppm	99
15) 1,2-Dichlorobenzene	2.989	146	752951	41.36	ppm	98
16) 2-Methylphenol	3.018	107	517872	41.83	ppm	98
17) bis(2-chloroisopropyl)...	3.061	45	973204	41.54	ppm	99
18) 4-Methylphenol	3.157	107	656969	41.64	ppm	99
19) N-Nitroso-di-n-propyla...	3.185	70	436910	41.52	ppm	96
20) Hexachloroethane	3.296	117	303639	41.36	ppm	99
23) Nitrobenzene	3.348	77	731671	41.05	ppm	99
24) Isophorone	3.583	82	1347001	40.82	ppm	100
25) 2-Nitrophenol	3.655	139	322382	42.99	ppm	96
26) 2,4-Dimethylphenol	3.679	107	693899	40.90	ppm	98
27) Benzoic acid	3.785	105	409951	43.00	ppm	97
28) bis(2-Chloroethoxy)met...	3.789	93	723413	40.87	ppm	99
29) 3,5-Dimethylphenol	3.818	107	710848	39.43	ppm	99
30) 2,4-Dichlorophenol	3.890	162	699167	45.05	ppm	93
31) 1,2,4-Trichlorobenzene	3.992	180	739026	41.26	ppm	99
32) 3,4-Dimethylphenol	3.992	107	857287	41.53	ppm	98
33) Naphthalene	4.078	128	1947946	41.10	ppm	99
34) 4-Chloroaniline	4.131	127	838084	41.80	ppm	100
35) 2,6-Dichlorophenol	4.136	162	610343	42.03	ppm	99

m 1-22-16

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH046.D
Vial: 6
Acq On : 14 Jan 2016 11:41
Operator: KVu
Sample : SVE7A144
Inst : E7
Misc : 40PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:48:16 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
36) Hexachlorobutadiene	4.204	225	516185	40.95	ppm	99
38) 4-Chloro-3-methylphenol	4.648	107	562904	42.04	ppm	100
39) 2-Methylnaphthalene	4.839	142	1368655	41.26	ppm	99
40) 1-Methylnaphthalene	4.954	142	1204005	41.30	ppm	100
42) Hexachlorocyclopentadiene	5.021	237	644115	41.91	ppm	100
43) 2,3,5-Trichlorophenol	5.026	196	466470	42.92	ppm	96
44) 2,4,6-Trichlorophenol	5.156	196	496863	41.50	ppm	99
45) 2,4,5-Trichlorophenol	5.190	196	521971	41.98	ppm	100
47) 2,3,4-Trichlorophenol	5.267	196	426608	39.99	ppm	93
48) Biphenyl	5.382	154	1741169	40.82	ppm	100
49) 2-Chloronaphthalene	5.402	162	1429374	40.99	ppm	100
50) 2-Nitroaniline	5.521	65	374457	42.02	ppm	99
51) 2,6-Dimethylnaphthalene	5.569	156	1228086	40.81	ppm	97
52) 1,4-Dinitrobenzene	5.690	168	172554	44.28	ppm	91
53) Dimethylphthalate	5.762	163	1575303	40.67	ppm	99
54) 1,3-Dinitrobenzene	5.781	168	199989	41.93	ppm	98
55) 2,6-Dinitrotoluene	5.820	165	316888	41.48	ppm	98
56) 1,2-Dinitrobenzene	5.882	168	128104	41.98	ppm	97
57) Acenaphthylene	5.892	152	2141518	41.04	ppm	100
58) 3-Nitroaniline	6.012	138	307657	41.94	ppm	98
59) Acenaphthene	6.103	153	1467981	40.68	ppm	100
60) 2,4-Dinitrophenol	6.137	184	145109	40.95	ppm	98
61) 4-Nitrophenol	6.209	109	229929	41.78	ppm	98
62) 2,4-Dinitrotoluene	6.300	165	415190	41.69	ppm	96
63) Dibenzofuran	6.310	168	2056552	40.89	ppm	99
64) 2,3,5,6-Tetrachlorophenol	6.401	230	376751	42.09	ppm	99
65) 2,3,4,6-Tetrachlorophenol	6.453	232	509973	46.32	ppm	99
66) 2,3,5-Trimethylnaphtha...	6.563	170	1184857	36.73	ppm	99
67) Diethylphthalate	6.614	149	1546693	40.70	ppm	99
68) Fluorene	6.722	166	1574354	41.35	ppm	100
69) 4-Chlorophenyl-phenyle...	6.732	204	863871	40.87	ppm	100
70) 4-Nitroaniline	6.750	138	311818	42.42	ppm	97
72) 4,6-Dinitro-2-methylph...	6.788	198	255145	41.97	ppm	93
73) N-Nitrosodiphenylamine	6.877	169	1408759	39.34	ppm	96
74) Azobenzene	6.925	77	1461215	40.73	ppm	100
76) 4-Bromophenyl-phenylether	7.309	248	493289	39.98	ppm	96
77) Hexachlorobenzene	7.361	284	552357	40.20	ppm	99
78) Pentachlorophenol	7.583	266	328737	42.62	ppm	98
79) Dibenzothiophene	7.687	184	2338724	42.24	ppm	100
80) Phenanthrene	7.830	178	2378927	40.43	ppm	100
82) Anthracene	7.889	178	2406603	40.70	ppm	100
83) Carbazole	8.066	167	1876802	40.25	ppm	100
84) Di-n-butylphthalate	8.473	149	2439242	41.51	ppm	100
85) 1-Methylphenanthrene	8.502	192	1721546	40.38	ppm	100
86) Fluoranthene	9.106	202	2652447	40.51	ppm	99
89) Pyrene	9.342	202	2795525	40.32	ppm	99
91) Butylbenzylphthalate	10.027	149	1014511	42.17	ppm	99
92) bis(2-ethylhexyl)adipate	10.114	129	803793	42.02	ppm	98
93) 3,3'-Dichlorobenzidine	10.549	252	901305	40.28	ppm	99
94) Benzo(a)anthracene	10.568	228	2671586	40.64	ppm	99
95) Chrysene	10.607	228	2527809	40.50	ppm	99
96) bis(2-Ethylhexyl)phtha...	10.612	149	1584966	42.57	ppm	99
98) Di-n-octylphthalate	11.228	149	2536921	42.98	ppm	100
99) Benzo(b)fluoranthene	11.584	252	2396252	40.14	ppm	100

m 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH046.D
Vial: 6
Acq On : 14 Jan 2016 11:41
Operator: KVu
Sample : SVE7A144
Inst : E7
Misc : 40PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:48:16 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) Benzo(k)fluoranthene	11.608	252	2516333	42.12 ppm	99
101) Benzo(e)pyrene	11.841	252	2239540	40.93 ppm	100
102) Benzo(a)pyrene	11.898	252	2367515	41.39 ppm	99
103) Perylene	11.982	252	2299164	40.69 ppm	98
104) Indeno(1,2,3-cd)pyrene	13.167	276	2559659	41.69 ppm	98
105) Dibenzo(a,h)anthracene	13.192	278	2153354	41.34 ppm	95
106) Benzo(g,h,i)perylene	13.531	276	2126845	40.68 ppm	99

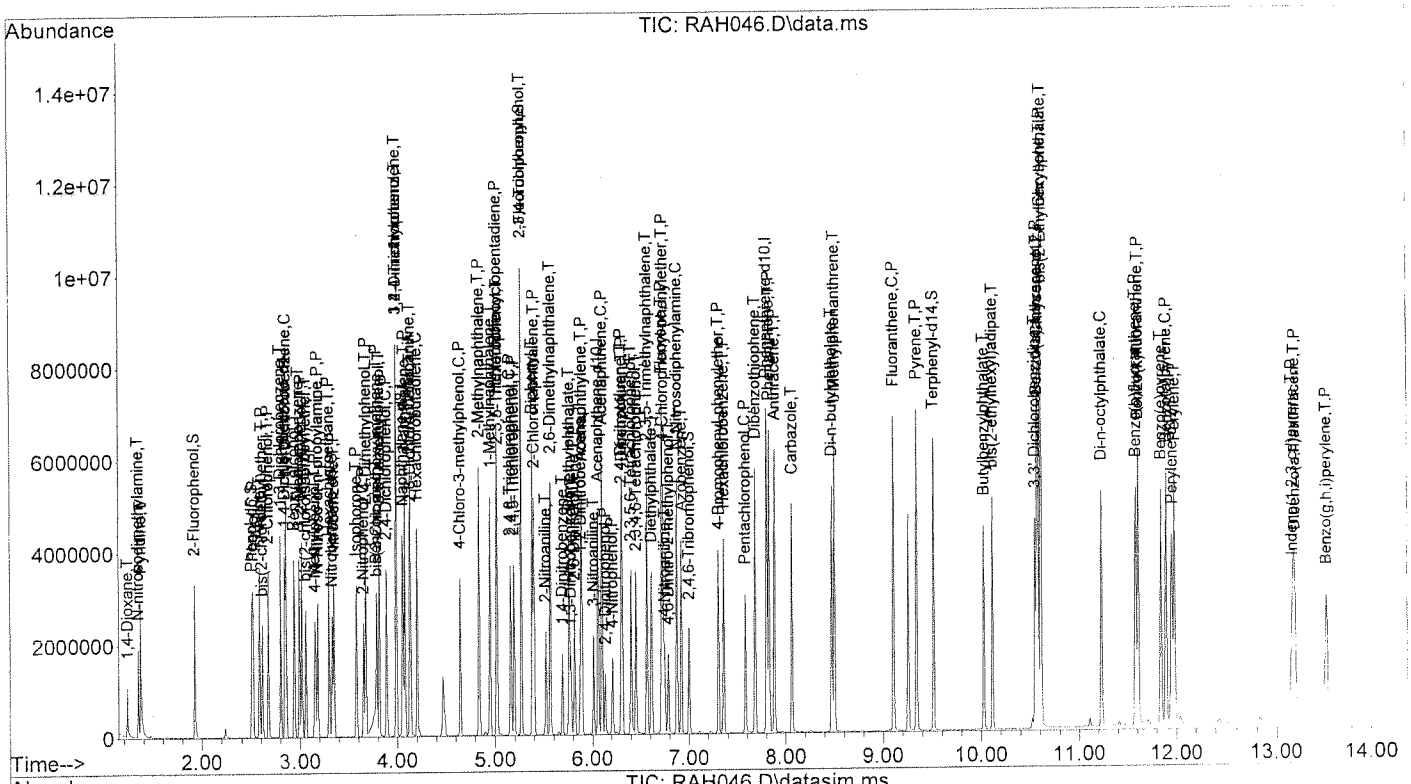
(#) = qualifier out of range (m) = manual integration (+) = signals summed

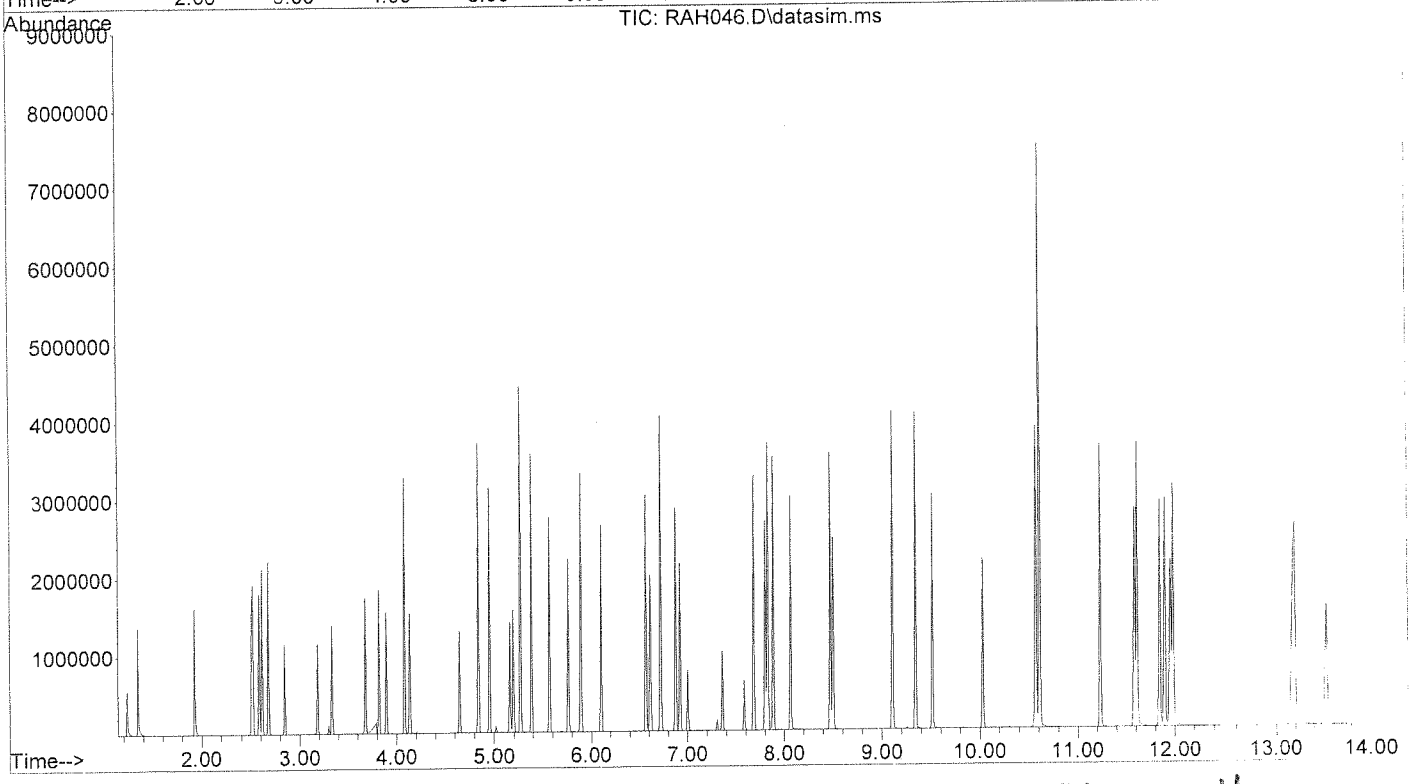
TM 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH046.D
Acq On : 14 Jan 2016 11:41
Sample : SVE7A144
Misc : 40PPM
Integrator: RTE
Quant Time: Jan 21 10:48:16 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00





pm 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH045.D
Acq On : 14 Jan 2016 11:14
Sample : SVE7A143
Misc : 50PPM
Integrator: RTE
Quant Time: Jan 21 10:46:17 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 5
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.850	152	430357	40.00	ppm	0.00
21) Naphthalene-d8	4.055	136	1570701	40.00	ppm	0.00
41) Acenaphthene-d10	6.061	164	982735	40.00	ppm	0.00
71) Phenanthrene-d10	7.802	188	1797853	40.00	ppm	0.00
87) Chrysene-d12	10.580	240	2155133	40.00	ppm	0.00
97) Perylene-d12	11.946	264	1857458	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.932	112	659791	50.71	ppm	0.00
Spiked Amount 30.000			Recovery	=	169.03%	
6) Phenol-d5	2.512	99	855875	51.73	ppm	0.00
Spiked Amount 30.000			Recovery	=	172.43%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.334	82	834515	51.17	ppm	0.00
Spiked Amount 10.000			Recovery	=	511.70%	
46) 2-Fluorobiphenyl	5.267	172	2336233	58.04	ppm	0.00
Spiked Amount 10.000			Recovery	=	580.40%	
75) 2,4,6-Tribromophenol	7.001	330	286112	53.15	ppm	0.00
Spiked Amount 30.000			Recovery	=	177.17%	
90) Terphenyl-d14	9.513	244	2361727	50.99	ppm	0.00
Spiked Amount 10.000			Recovery	=	509.90%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.238	88	260279	49.46	ppm	98
3) N-nitrosodimethylamine	1.348	74	376789	49.87	ppm	99
4) Pyridine	1.372	79	746386	51.22	ppm	100
7) Phenol	2.522	94	872351	51.82	ppm	100
8) Aniline	2.585	93	1086714	50.83	ppm	100
9) bis(2-chloroethyl)ether	2.616	93	617919	50.19	ppm	98
10) 2-Chlorophenol	2.673	128	822750	52.70	ppm	91
11) 1,3-Dichlorobenzene	2.802	146	890636	50.64	ppm	100
13) 1,4-Dichlorobenzene	2.864	146	917168	49.85	ppm	99
14) Benzyl alcohol	2.946	108	471873	50.91	ppm	99
15) 1,2-Dichlorobenzene	2.994	146	861666	50.45	ppm	97
16) 2-Methylphenol	3.018	107	595325	51.25	ppm	99
17) bis(2-chloroisopropyl)...	3.061	45	1090774	49.63	ppm	99
18) 4-Methylphenol	3.157	107	754357	50.97	ppm	99
19) N-Nitroso-di-n-propyla...	3.186	70	498520	50.50	ppm	96
20) Hexachloroethane	3.296	117	348200	50.56	ppm	100
23) Nitrobenzene	3.353	77	838022	51.09	ppm	100
24) Isophorone	3.584	82	1604849	52.85	ppm	93
25) 2-Nitrophenol	3.656	139	363979	52.75	ppm	99
26) 2,4-Dimethylphenol	3.680	107	810258	51.91	ppm	99
27) Benzoic acid	3.794	105	485623	55.36	ppm	97
28) bis(2-Chloroethoxy)met...	3.790	93	825360	50.67	ppm	99
29) 3,5-Dimethylphenol	3.818	107	894510	53.92	ppm	92
30) 2,4-Dichlorophenol	3.895	162	718456	50.30	ppm	94
31) 1,2,4-Trichlorobenzene	3.992	180	849630	51.55	ppm	98
32) 3,4-Dimethylphenol	3.997	107	989350	52.09	ppm	98
33) Naphthalene	4.079	128	2231582	51.17	ppm	99
34) 4-Chloroaniline	4.132	127	970553	52.61	ppm	99
35) 2,6-Dichlorophenol	4.137	162	701959	52.53	ppm	99

TM 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH045.D
Acq On : 14 Jan 2016 11:14
Sample : SVE7A143
Misc : 50PPM
Integrator: RTE
Quant Time: Jan 21 10:46:17 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 5
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
36) Hexachlorobutadiene	4.204	225	594530	51.26 ppm	99
38) 4-Chloro-3-methylphenol	4.648	107	644680	52.32 ppm	99
39) 2-Methylnaphthalene	4.840	142	1597090	52.33 ppm	98
40) 1-Methylnaphthalene	4.955	142	1379127	51.41 ppm	100
42) Hexachlorocyclopentadiene	5.017	237	727739	52.05 ppm	99
43) 2,3,5-Trichlorophenol	5.026	196	525909	53.18 ppm	97
44) 2,4,6-Trichlorophenol	5.156	196	574404	52.73 ppm	99
45) 2,4,5-Trichlorophenol	5.190	196	600499	53.09 ppm	99
47) 2,3,4-Trichlorophenol	5.267	196	564421	58.15 ppm	96
48) Biphenyl	5.383	154	2013708	51.88 ppm	100
49) 2-Chloronaphthalene	5.402	162	1622848	51.16 ppm	99
50) 2-Nitroaniline	5.522	65	425797	52.51 ppm	100
51) 2,6-Dimethylnaphthalene	5.565	156	1415453	51.70 ppm	99
52) 1,4-Dinitrobenzene	5.690	168	192391	54.26 ppm	94
53) Dimethylphthalate	5.762	163	1790959	50.82 ppm	99
54) 1,3-Dinitrobenzene	5.782	168	227284	52.37 ppm	99
55) 2,6-Dinitrotoluene	5.820	165	359754	51.76 ppm	100
56) 1,2-Dinitrobenzene	5.883	168	144093	51.90 ppm	100
57) Acenaphthylene	5.893	152	2452170	51.65 ppm	100
58) 3-Nitroaniline	6.013	138	344871	51.67 ppm	97
59) Acenaphthene	6.099	153	1664644	50.70 ppm	99
60) 2,4-Dinitrophenol	6.133	184	165592	50.71 ppm	97
61) 4-Nitrophenol	6.209	109	263761	52.68 ppm	100
62) 2,4-Dinitrotoluene	6.300	165	482289	53.23 ppm	96
63) Dibenzofuran	6.310	168	2369389	51.78 ppm	99
64) 2,3,5,6-Tetrachlorophenol	6.396	230	435756	53.51 ppm	99
65) 2,3,4,6-Tetrachlorophenol	6.449	232	520130	51.93 ppm	100
66) 2,3,5-Trimethylnaphtha...	6.563	170	1535730	52.33 ppm	100
67) Diethylphthalate	6.610	149	1774088	51.32 ppm	100
68) Fluorene	6.723	166	1825879	52.71 ppm	99
69) 4-Chlorophenyl-phenyle...	6.732	204	993391	51.66 ppm	99
70) 4-Nitroaniline	6.751	138	346581	51.82 ppm	98
72) 4,6-Dinitro-2-methylph...	6.788	198	286351	50.91 ppm	94
73) N-Nitrosodiphenylamine	6.878	169	1661940	50.66 ppm	96
74) Azobenzene	6.920	77	1672764	50.90 ppm	100
76) 4-Bromophenyl-phenylether	7.304	248	577494	51.09 ppm	98
77) Hexachlorobenzene	7.361	284	645123	51.25 ppm	98
78) Pentachlorophenol	7.583	266	386172	54.65 ppm	99
79) Dibenzothiophene	7.687	184	2737563	53.98 ppm	97
80) Phenanthrene	7.830	178	2775040	51.48 ppm	100
82) Anthracene	7.884	178	2797577	51.65 ppm	99
83) Carbazole	8.065	167	2198521	51.47 ppm	100
84) Di-n-butylphthalate	8.468	149	2829062	52.56 ppm	100
85) 1-Methylphenanthrene	8.497	192	2022118	51.78 ppm	99
86) Fluoranthene	9.106	202	3117607	51.98 ppm	99
89) Pyrene	9.342	202	3305837	50.60 ppm	100
91) Butylbenzylphthalate	10.022	149	1192880	52.61 ppm	99
92) bis(2-ethylhexyl)adipate	10.110	129	955035	52.98 ppm	98
93) 3,3'-Dichlorobenzidine	10.546	252	1080754	51.25 ppm	99
94) Benzo(a)anthracene	10.565	228	3159435	51.00 ppm	100
95) Chrysene	10.604	228	3009478	51.17 ppm	99
96) bis(2-Ethylhexyl)phtha...	10.604	149	1876369	53.47 ppm	100
98) Di-n-octylphthalate	11.225	149	3041726	54.89 ppm	99
99) Benzo(b)fluoranthene	11.580	252	2913144	51.98 ppm	100

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH045.D
Vial: 5
Acq On : 14 Jan 2016 11:14
Operator: KVu
Sample : SVE7A143
Inst : E7
Misc : 50PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:46:17 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

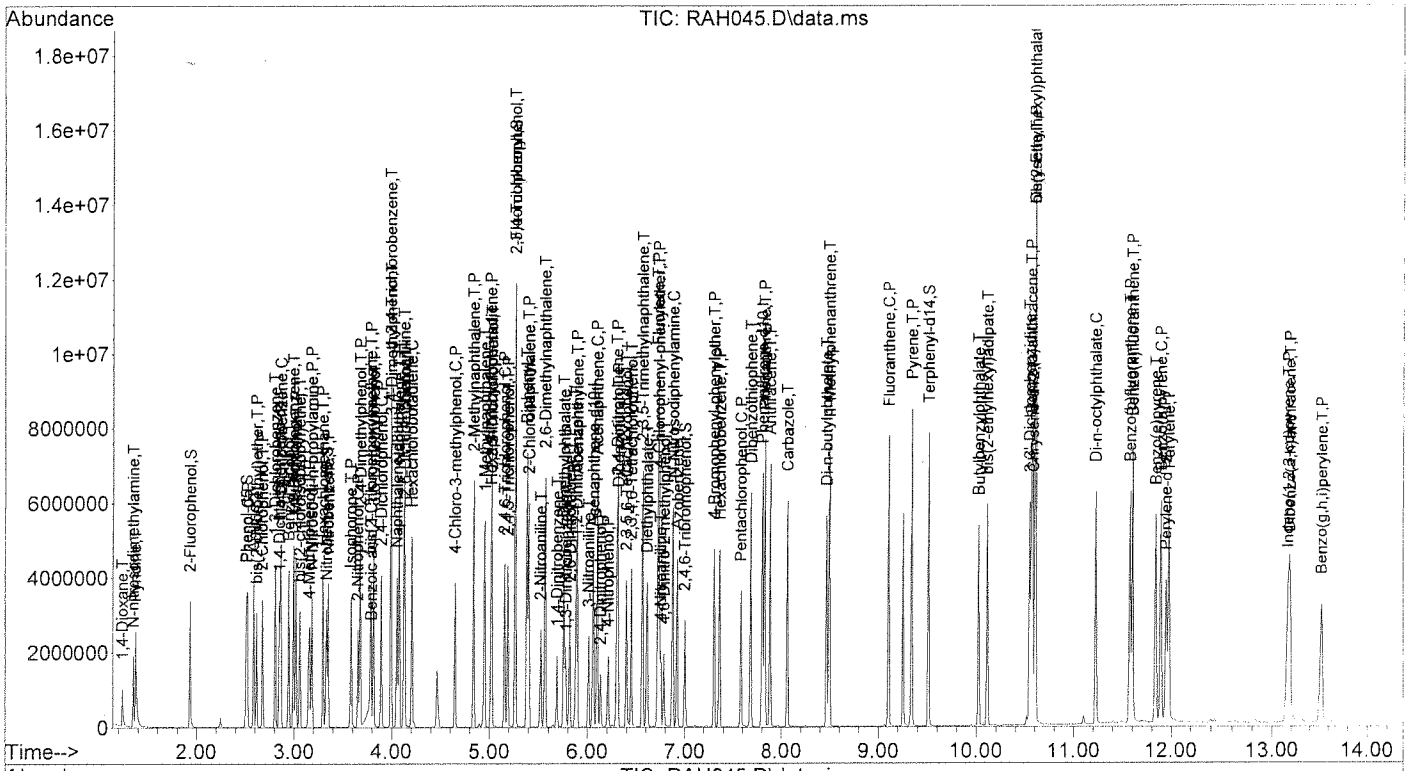
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.605	252	2976037	53.06	ppm	99
101) Benzo(e)pyrene	11.838	252	2661038	51.80	ppm	99
102) Benzo(a)pyrene	11.895	252	2840013	52.89	ppm	98
103) Perylene	11.974	252	2746299	51.77	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.165	276	3081260	53.45	ppm	99
105) Dibenzo(a,h)anthracene	13.185	278	2590407	52.97	ppm	97
106) Benzo(g,h,i)perylene	13.529	276	2579084	52.54	ppm	100

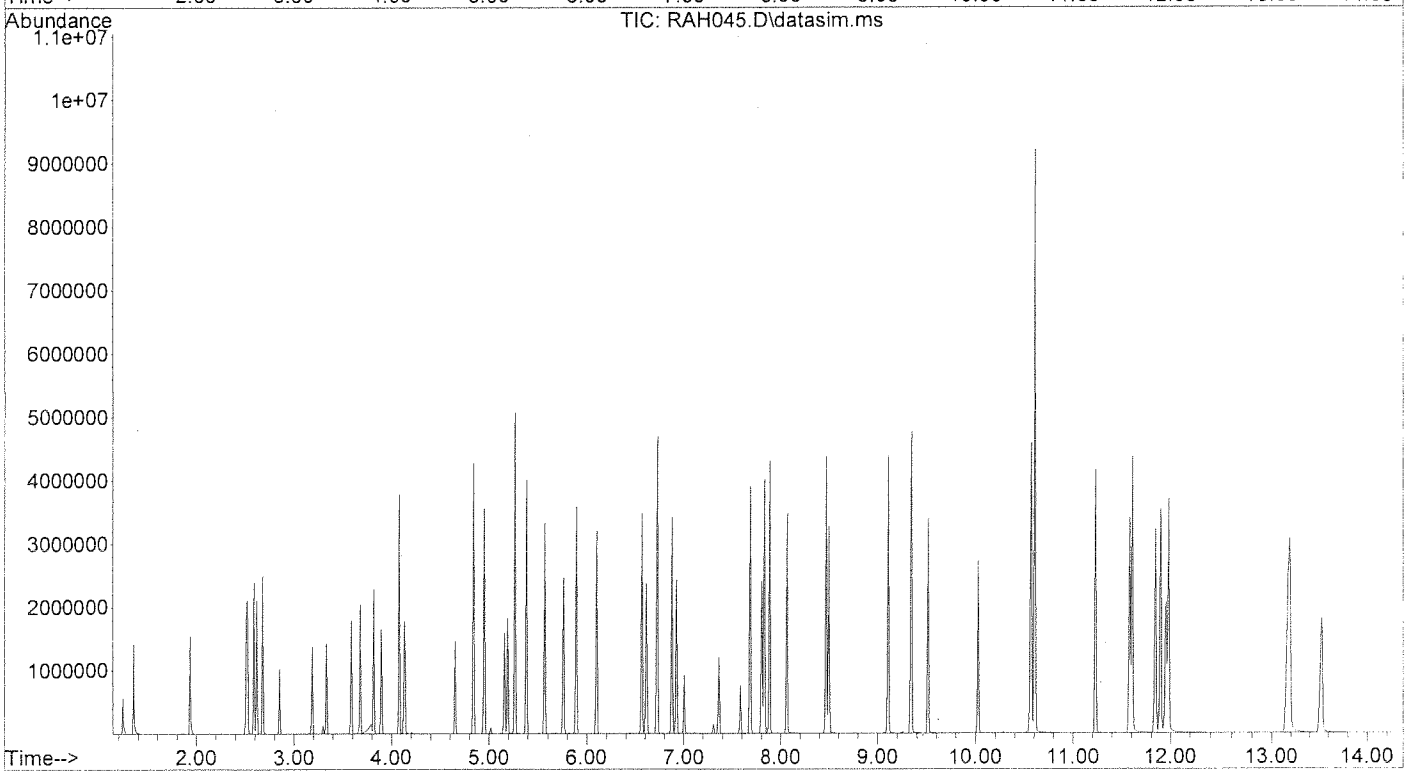
(#) = qualifier out of range (m) = manual integration (+) = signals summed

TW 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH045.D
Vial: 5
Acq On : 14 Jan 2016 11:14
Operator: KVu
Sample : SVE7A143
Inst : E7
Misc : 50PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:46:17 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





TW 1-22-16

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH044.D
Vial: 4
Acq On : 14 Jan 2016 10:55
Operator: KVu
Sample : SVE7A142
Inst : E7
Misc : 80PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:46:11 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	2.845	152	443759	40.00 ppm	0.00
21) Naphthalene-d8	4.055	136	1635045	40.00 ppm	0.00
41) Acenaphthene-d10	6.056	164	989082	40.00 ppm	0.00
71) Phenanthrene-d10	7.798	188	1807442	40.00 ppm	0.00
87) Chrysene-d12	10.570	240	2025897	40.00 ppm	0.00
97) Perylene-d12	11.941	264	1807539	40.00 ppm	0.00
System Monitoring Compounds					
5) 2-Fluorophenol	0.000	112	0	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
6) Phenol-d5	0.000	99	0	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
22) Nitrobenzene-d5	0.000	82	0d	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
46) 2-Fluorobiphenyl	0.000	172	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
75) 2,4,6-Tribromophenol	0.000	330	0	0.00 ppm	
Spiked Amount 30.000			Recovery	= 0.00%	
90) Terphenyl-d14	0.000	244	0	0.00 ppm	
Spiked Amount 10.000			Recovery	= 0.00%	
Target Compounds					Qvalue
4) Pyridine	1.367	79	1121498	74.64 ppm	99
27) Benzoic acid	3.804	105	816014	89.37 ppm	96

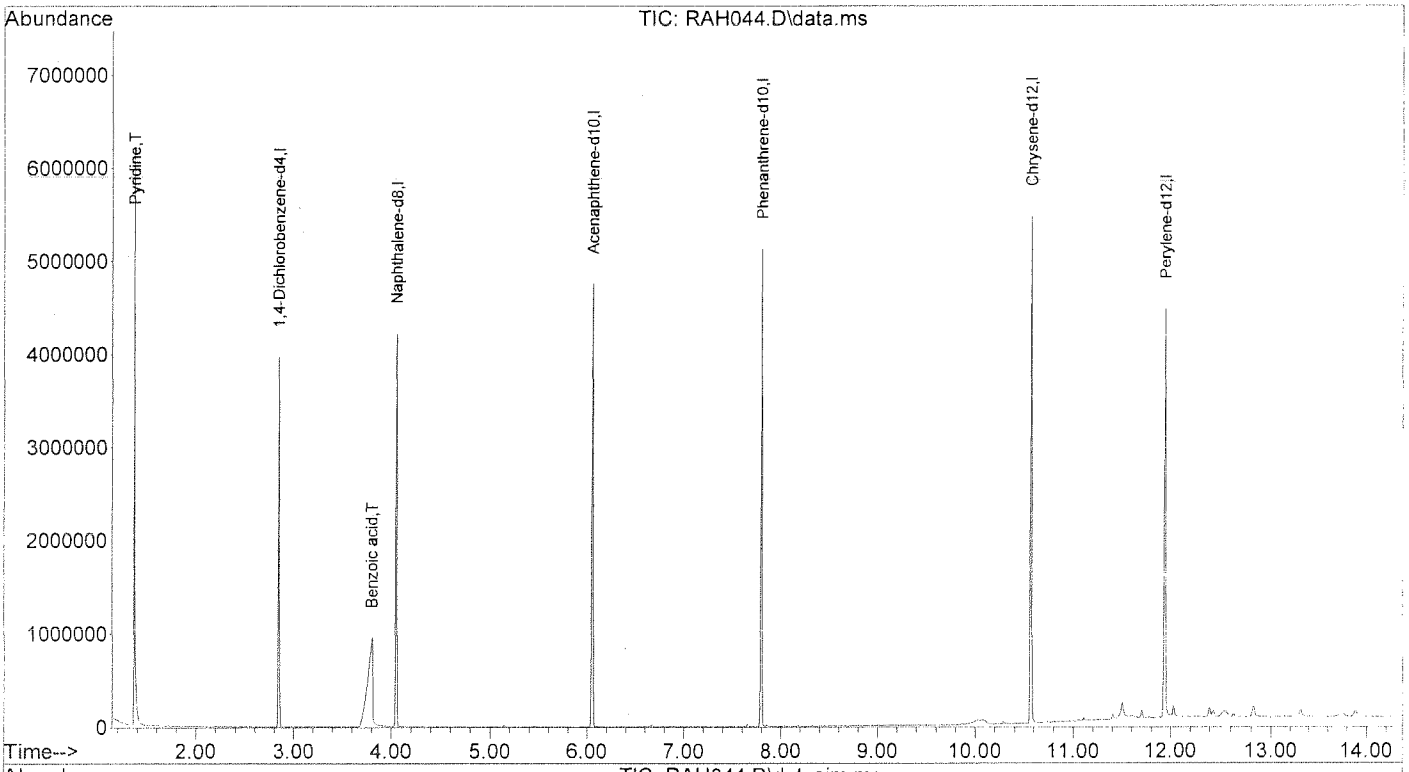
(#) = qualifier out of range (m) = manual integration (+) = signals summed

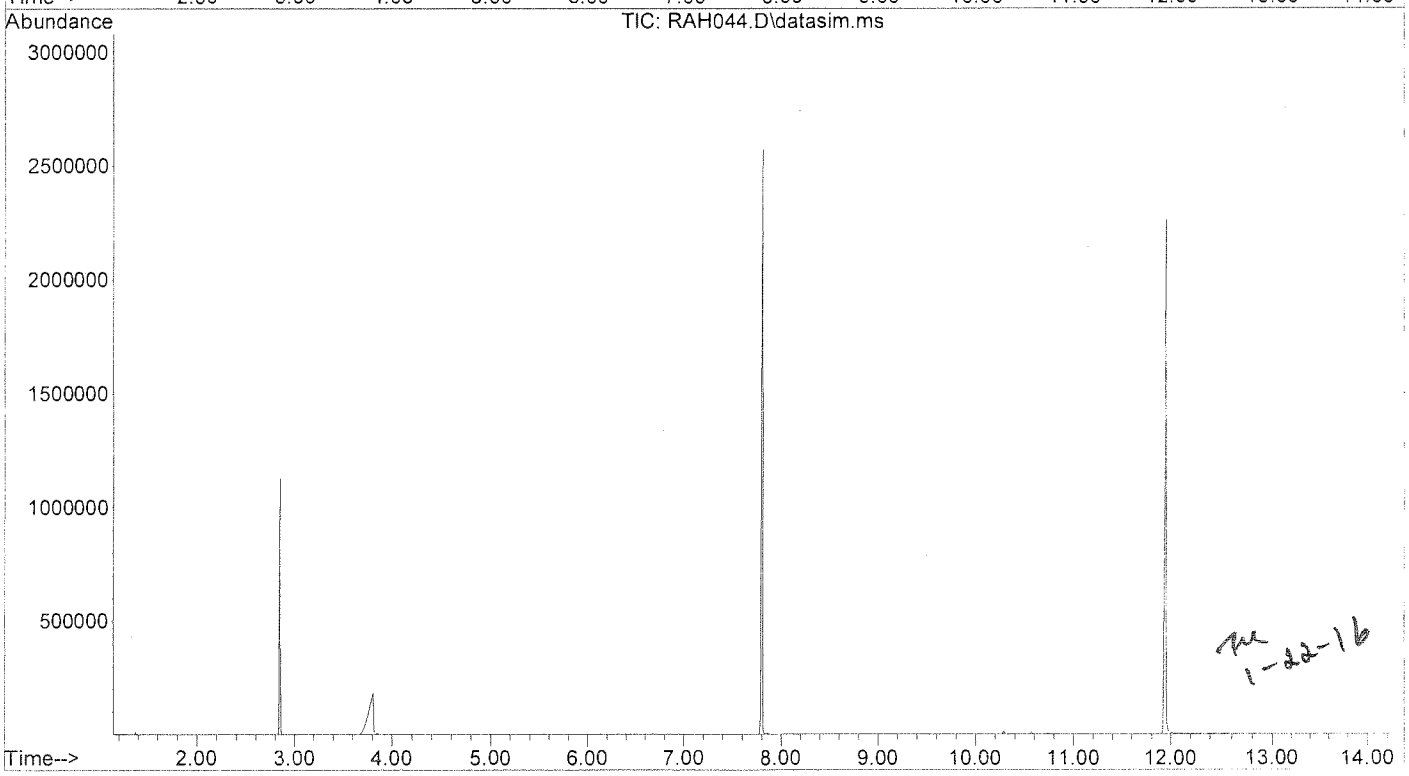
TM 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH044.D
Acq On : 14 Jan 2016 10:55
Sample : SVE7A142
Misc : 80PPM
Integrator: RTE
Quant Time: Jan 21 10:46:11 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 4
Operator: KVu
Inst : E7
Multiplr: 1.00





1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH043.D Vial: 3
Acq On : 14 Jan 2016 10:36 Operator: KVu
Sample : SVE7A141 Inst : E7
Misc : 100PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:45:12 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	437216	40.00	ppm	0.00
21) Naphthalene-d8	4.055	136	1631813	40.00	ppm	0.00
41) Acenaphthene-d10	6.056	164	973893	40.00	ppm	0.00
71) Phenanthrene-d10	7.798	188	1801950	40.00	ppm	0.00
87) Chrysene-d12	10.575	240	2042986	40.00	ppm	0.00
97) Perylene-d12	11.946	264	1775446	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	0.000	112	0	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
6) Phenol-d5	0.000	99	0d	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	0.000	82	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
46) 2-Fluorobiphenyl	0.000	172	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
75) 2,4,6-Tribromophenol	0.000	330	0	0.00	ppm	
Spiked Amount 30.000			Recovery	=	0.00%	
90) Terphenyl-d14	0.000	244	0d	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
Target Compounds						Qvalue
4) Pyridine	1.367	79	1455607	98.32	ppm	98
27) Benzoic acid	3.818	105	987493	108.36	ppm	95

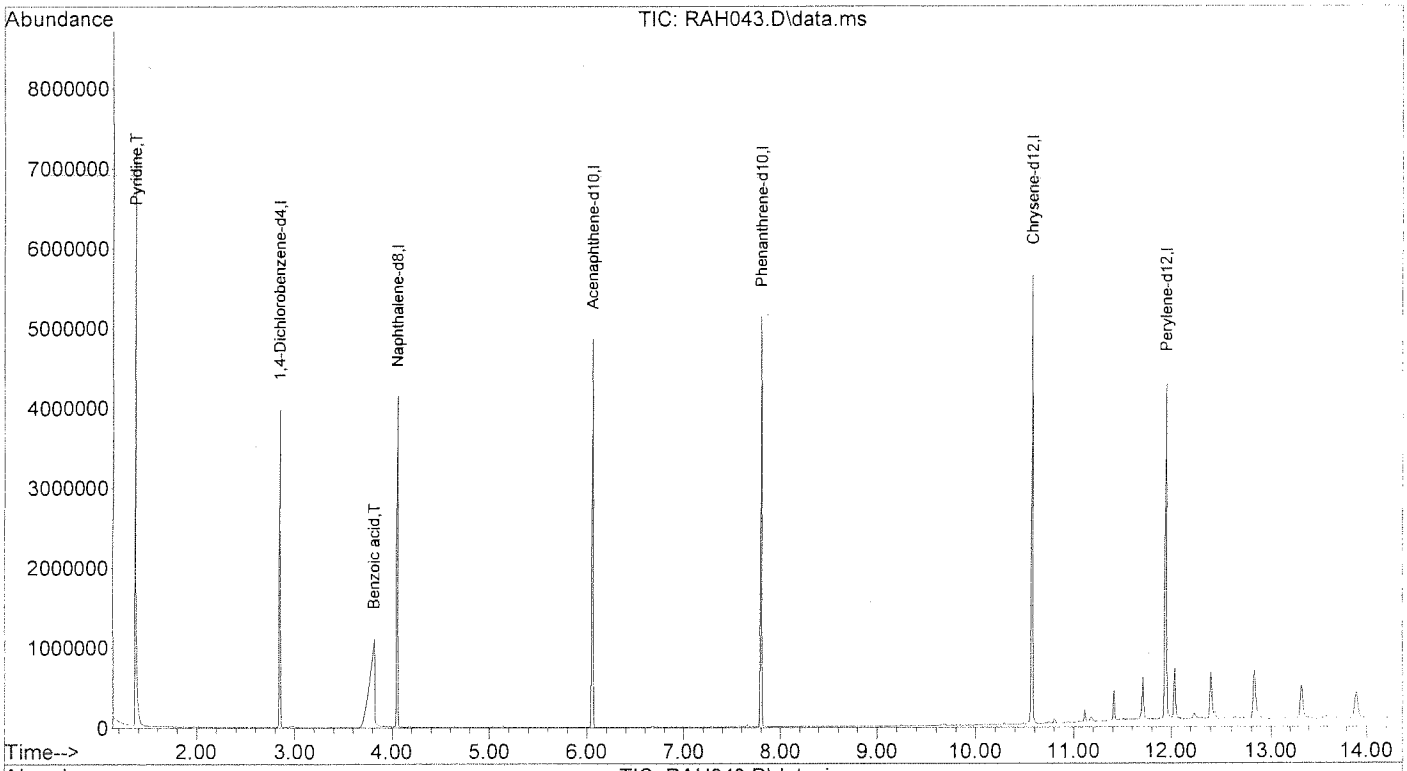
(#) = qualifier out of range (m) = manual integration (+) = signals summed

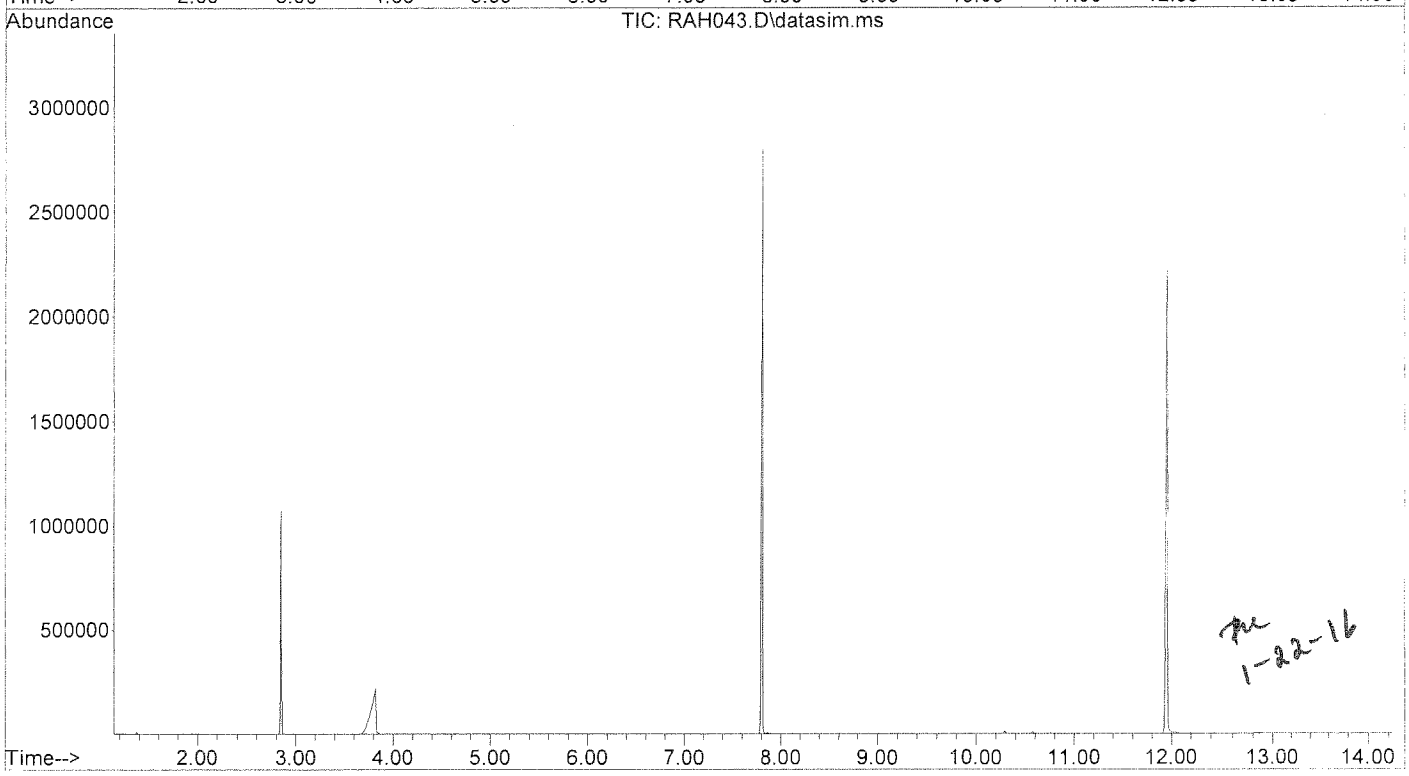
1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH043.D
Acq On : 14 Jan 2016 10:36
Sample : SVE7A141
Misc : 100PPM
Integrator: RTE
Quant Time: Jan 21 10:45:12 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00





1-22-16

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SECOND SOURCE VERIFICATION

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH087
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
DFTPP Injection Date: 01/19/16
DFTPP Injection Time: 08:26

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	45.21
68	Less than 2% of mass 69	0.79(1.9)1
69	% of mass 198	42.01
70	Less than 2% of mass 69	0.27(0.6)1
127	10.0 - 80.0% of mass 198	47.66
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.47
275	10.0 - 60.0% of mass 198	25.91
365	Greater than 1.00% of mass 198	2.97
441	Present, but less than 24% of mass 442	11.54(16.7)2
442	Greater than 50% of mass 198	69.04
443	15.0 - 24.0% of mass 442	13.47(19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD025	ISVE7A142	RAH091	01/19/16	09:55

FORM V SV OLM03.0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project:ICAL
SDG No.:ICAL
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	432203	2.85	1600260	4.05	1008743	6.06
	UPPER LIMIT	864406	3.35	3200520	4.55	2017486	6.56
	LOWER LIMIT	216102	2.35	800130	3.55	504372	5.56
	SAMPLE ID						
1	ISVE7A142	536443	2.85	1987702	4.05	1246179	6.06

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-1 OLM02.0

1-22-16

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project:ICAL
SDG No.:ICAL
Date Analyzed: 01/14/16
Time Analyzed: 12:01

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	1833940	7.80	2122804	10.57	1842737	11.94
UPPER LIMIT	3667880	8.30	4245608	11.07	3685474	12.44
LOWER LIMIT	916970	7.30	1061402	10.07	921369	11.44
SAMPLE ID						
1 ISVE7A142	2450832	7.80	3094300	10.57	2739804	11.95

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-2 OLM02.0

ne 1-22-16

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E7
IC Beginning DateTime :01/14/16 10:36
Spike Amount :25 PPM
CC/CV File :RAH091
IC File :RAH047

Column Spec :ZB-SEMI ID :0.18MM
IC Ending DateTime :01/14/16 12:58
HPChem Method :SVE7A14
Date_Time :01/19/16 09:55

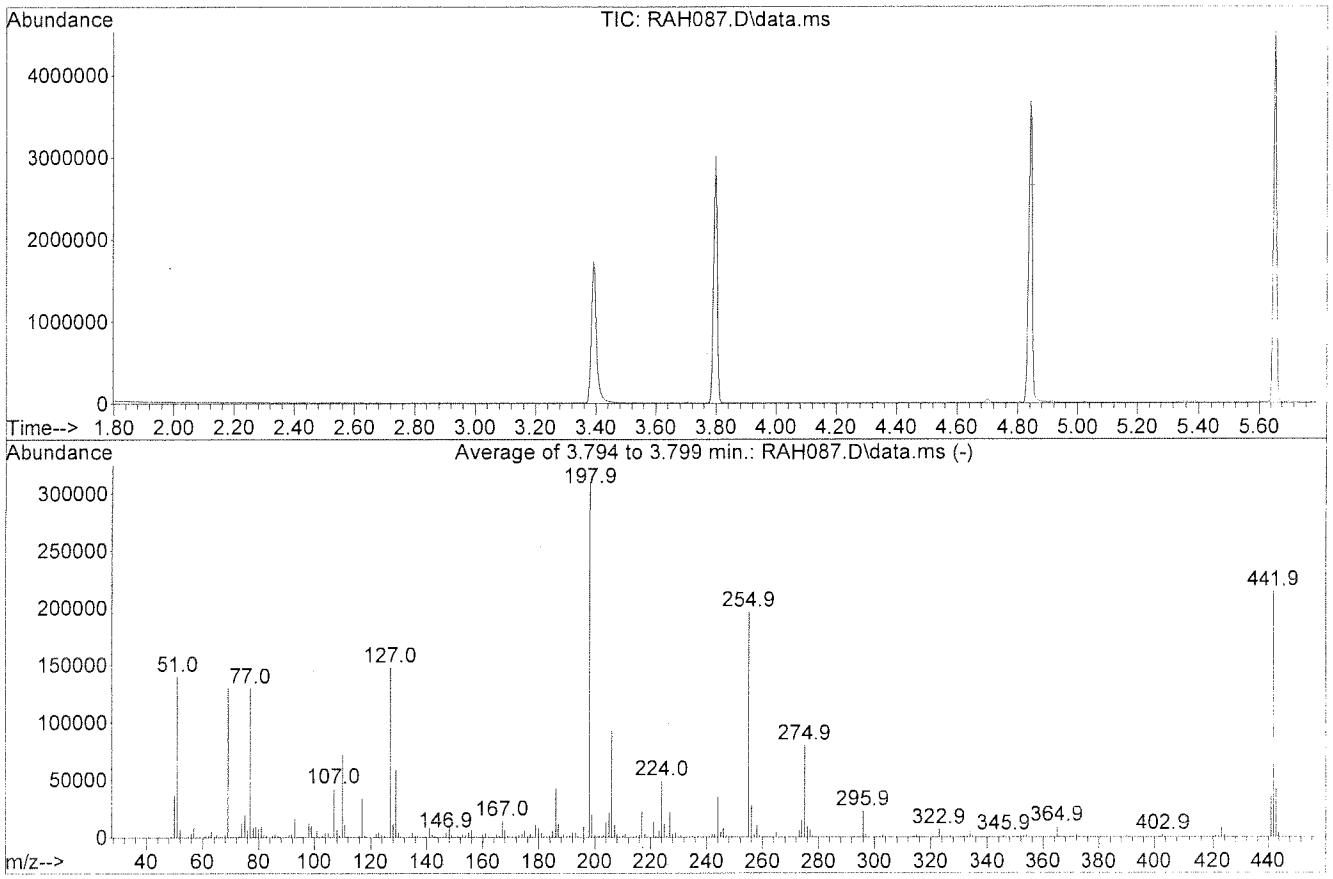
M IDX	Parameters	CC Con	CC% D	CC Resp	CCRRF	AVRRF	CC Rtm	AVRtm	% RSD	Co X0	Co X1	Co X2	Co Cor
1	1,4-Dichlorobenzene-d4	40.000	0	536443	1	1	2.846	2.846	0				
2	1,4-Dioxane	22.776	-8.9	149412	0.446	0.489	1.238	1.234	1.98				
3	N-nitrosodimethylamine	26.853	7.4	252910	0.754	0.702	1.348	1.347	2.71				
4	Pyridine	25.505	2.0	463275	1.382	1.354	1.377	1.368	3.43				
5	2-Fluorophenol	24.201	-3.2	392460	1.171	1.209	1.932	1.928	2.71				
6	Phenol-d5	23.231	-7.1	479092	1.429	1.538	2.506	2.504	2.88				
7	Phenol	24.177	-3.3	507337	1.513	1.525	2.517	2.515	4.66				
8	Aniline	24.100	-3.6	642261	1.916	1.987	2.579	2.581	3.32				
9	bis(2-chloroethyl)ether	24.849	-0.6	381371	1.137	1.144	2.611	2.611	3.36				
10	2-Chlorophenol	22.878	-8.5	445264	1.328	1.451	2.673	2.672	8.92				
11	1,3-Dichlorobenzene	25.347	1.4	555673	1.657	1.635	2.803	2.802	3.18				
12	1,2-Dichlorobenzene-d4												
13	1,4-Dichlorobenzene	24.832	-0.7	569481	1.699	1.710	2.861	2.860	1.98				
14	Benzyl alcohol	26.629	6.5	307652	0.918	0.861	2.938	2.940	4.25				
15	1,2-Dichlorobenzene	25.376	1.5	540227	1.611	1.587	2.990	2.990	3.46				
16	2-Methylphenol	24.643	-1.4	356784	1.064	1.080	3.019	3.015	3.88				
17	bis(2-chloroisopropyl)ether	25.038	0.2	685915	2.046	2.043	3.057	3.058	2.98				
18	4-Methylphenol	25.117	0.5	463367	1.382	1.376	3.153	3.152	3.94				
19	N-Nitroso-di-n-propylamine	23.790	-4.8	292738	0.873	0.918	3.177	3.178	2.81				
20	Hexachloroethane	25.363	1.5	217733	0.649	0.640	3.292	3.296	2.56				
21	Naphthalene-d8	40.000	0	1987702	1	1	4.051	4.054	0				
22	Nitrobenzene-d5	7.517	-9.8	155139	0.375	0.415	3.326	3.329	3.63				
23	Nitrobenzene	24.408	-2.4	506642	0.408	0.418	3.342	3.347	3.28				
24	Isophorone	24.461	-2.2	940022	0.757	0.773	3.575	3.576	6.27				
25	2-Nitrophenol	25.915	3.7	226305	0.182	0.176	3.652	3.653	10.37				
26	2,4-Dimethylphenol	24.173	-3.3	477521	0.384	0.398	3.676	3.674	4.02				
27	Benzoic acid	24.159	-3.3	265589	0.238	0.223	3.762	3.765	14.34				
28	bis(2-Chloroethoxy)methane	26.622	6.3	503806	0.406	0.415	3.781	3.785	1.62				
29	2,5-Dimethylphenol	24.442	-2.5	529286	0.425	0.422	3.815	3.812	6.78				
30	2,4-Dichlorophenol	26.164	4.7	426674	0.343	0.364	3.892	3.889	9.24				
31	1,2,4-Trichlorobenzene	23.607	-5.6	528711	0.426	0.420	3.888	3.889	3.65				
32	3,4-Dimethylphenol	25.350	1.4	611977	0.493	0.484	3.988	3.988	3.96				
33	Naphthalene	25.759	1.8	1351873	1.088	1.111	4.075	4.075	4.95				
34	4-Chloroaniline	24.495	-2.0	566186	0.456	0.470	4.123	4.125	3.10				
35	2,6-Dichlorophenol	24.251	-3.0	433629	0.349	0.340	4.133	4.132	4.88				
36	Hexachlorobutadiene	25.643	2.6	370946	0.299	0.295	4.201	4.203	5.63				
37	Hydroquinone	25.274	1.1						3.57				
38	4-Chloro-3-methylphenol	25.282	1.1	394236	0.317	0.314	4.644	4.644	6.21				
39	2-Methylnaphthalene	23.851	-4.6	921209	0.742	0.777	4.836	4.837	3.92				
40	1-Methylnaphthalene	25.466	1.9	864584	0.696	0.683	4.951	4.950	3.67				
41	Acenaphthene-d10	40.000	0	1246179	1	1	6.057	6.057	0				
42	Hexachlorocyclopentadiene	21.434	-14.3	380012	0.488	0.569	5.013	5.017	5.17				
43	2,3,5-Trichlorophenol	27.485	9.9	344671	0.443	0.403	5.023	5.022	6.56				
44	2,4,6-Trichlorophenol	25.855	3.4	357168	0.459	0.443	5.153	5.153	4.86				
45	2,4,5-Trichlorophenol	26.324	5.3	377606	0.485	0.460	5.191	5.187	6.14				
46	2-Fluorobiphenyl	6.955	-16.5	354972	1.368	1.638	5.259	5.264	8.10				
47	2,3,4-Trichlorophenol	28.237	16.9	359852	0.462	0.395	5.264	5.264	9.42				
48	Biphenyl	24.770	-1.0	1217610	1.563	1.580	5.379	5.379	2.79				
49	2-Chloronaphthalene	25.042	0.2	1007383	1.293	1.291	5.398	5.398	2.63				
50	2-Nitroaniline	27.879	11.5	286655	0.368	0.330	5.518	5.515	5.91				
51	2,6-Dimethylnaphthalene	25.484	1.9	884783	1.136	1.114	5.561	5.563	2.03				
52	1,4-Dinitrobenzene	29.960	19.8	134700	0.173	0.144	5.686	5.685	11.67				
53	Dimethylphthalate	26.724	6.9	1194163	1.533	1.434	5.753	5.753	7.45				
54	1,3-Dinitrobenzene	28.508	14.0	156891	0.201	0.177	5.773	5.773	7.41				
55	2,6-Dinitrotoluene	27.397	9.6	241473	0.310	0.283	5.816	5.814	5.56				
56	1,2-Dinitrobenzene	27.151	8.6	95581	0.123	0.113	5.874	5.871	4.50				
57	Acenaphthylene	25.211	0.8	1517790	1.949	1.932	5.889	5.887	3.11				
58	3-Nitroaniline	27.889	11.6	236055	0.303	0.272	6.009	6.006	3.80				
59	Acenaphthene	24.546	-1.8	1021994	1.312	1.336	6.095	6.096	1.99				
60	2,4-Dinitrophenol	25.704	2.8	100978	0.130	0.111	6.129	6.128	17.27	-0.0089	0.1399		0.9986
61	4-Nitrophenol	29.335	5.3	167198	0.215	0.204	6.210	6.201	24.40				
62	2,4-Dinitrotoluene	27.955	10.5	317394	0.408	0.369	6.292	6.292	8.52				
63	Dibenzofuran	25.329	1.3	1469676	1.887	1.862	6.301	6.305	6.44				
64	2,3,5,6-Tetrachlorophenol	26.045	4.2	268982	0.345	0.331	6.392	6.395	3.14				
65	2,3,4,6-Tetrachlorophenol	27.722	10.9	352131	0.452	0.408	6.445	6.447	6.53				
66	2,3,5-Trimethylnaphthalene	26.323	5.3	979570	1.258	1.194	6.560	6.559	9.77				
67	Diethylphthalate	27.541	10.2	1207345	1.550	1.407	6.606	6.606	4.59				
68	Fluorene	25.841	3.4	1135108	1.457	1.410	6.714	6.718	3.07				
69	4-Chlorophenyl-phenylether	24.932	-0.3	607740	0.780	0.783	6.728	6.729	4.68				
70	4-Nitroaniline	24.954	-0.2	253180	0.325	0.272	6.742	6.740	3.17				
71	Phenanthrene-d10	29.854	19.4				7.799	7.799	4.72				
72	4,6-Dinitro-2-methylphenol	40.000	0	2450832	1	1	7.799	7.799	0				
73	N-Nitrosodiphenylamine	27.415	9.7	201695	0.132	0.107	6.780	6.779	20.90	-0.0075	0.1311		0.9966
74	Azobenzene	23.439	-6.2	1048205	0.684	0.730	6.870	6.870	2.33				
75	2,4,6-Tribromophenol	23.873	-4.5	1069450	0.698	0.731	6.917	6.917	2.41				
76	4-Bromophenyl-phenylether	27.787	-0.9	181883	0.119	0.120	6.998	6.999	7.80				
77	Hexachlorobenzene	24.434	-2.3	376521	0.246	0.251	7.301	7.303	2.46				
78	Pentachlorophenol	24.198	-3.2	415636	0.271	0.280	7.353	7.356	2.02				
79	Dibenzothiophene	27.104	8.4	261069	0.170	0.157	7.584	7.580	9.15				
80	Phenanthrene	27.015	8.1	1867795	1.219	1.128	7.683	7.682	8.89				
81	Dinoseb	24.918	-0.3	1830878	1.195	1.199	7.826	7.826	2.53				
82	Anthracene	24.320	-2.7	1795848	1.172	1.205	7.880	7.881	2.67				
83	Carbazole	27.222	5.8	1539703	1.005	0.950	8.062	8.061	1.89				
84	Di-n-butylphthalate	29.442	17.8	2022083	1.320	1.198	8.464	8.468	5.91				
85	1-Methylphenanthrene	27.556	10.2	1324023	0.883	0.869	8.483	8.496	2.77				
86	Fluoranthene	25.418	1.7	1353123	0.883	0.869	8.493	8.501	3.20				
87	Chrysene-d12	25.892	3.6	2116941	1.382	1.334	9.102	9.101	3.20				
88	Benzidine	40.000	0	3094300	1	1	10.574	10.574	0				
89	Pyrene												
90	Terphenyl-d14	23.268	-6.9	2182825	1.129	1.213	9.338	9.337	2.14				
91	Butylbenzylphthalate	6.868	-17.6	456700	0.708	0.860	9.505	9.510	3.42				
92	bis(2-ethylhexyl)adipate	26.998	8.0	878836	0.454	0.421	10.019	10.022	7.65				
93	3,3'-Dichlorobenzidine	24.486	-2.1	633728	0.328	0.335	10.106	10.109	7.63				
94	Benzo(a)anthracene	23.925	-4.3	724329	0.375	0.391	10.240	10.242	2.48				
95	Chrysene	27.824	-0.7	2208113	1.142	1.150	10.564	10.563	1.97				
96	bis(2-Ethylhexyl)phthalate	25.219	0.9	2129785	1.101	1.092	10.598	10.599	1.98				
97	Perylene-d12	22.559	6.2	1338161	0.692	0.651	10.603	10.605	8.22				
98	Di-n-octylphthalate	40.000	0	2738804	1	1	11.946	11.944	0				
99	Benzo(b)fluoranthene	27.230	8.9	2525781	1.300	1.193	11.220	11.225	10.70				
100	Benzo(k)fluoranthene	24.223	-3.1	2002510	1.169	1.207	11.565	11.575	5.21				
101	Benzo(e)pyrene	25.111	0.4	2077413	1.213	1.208	11.599	11.600	5.30				
102	Benzo(a)pyrene	25.032	0.1	1896685	1.108	1.106	11.833	11.833	5.67				
103	Perylene	24.480	-2.1	1938917	1.132	1.156	11.889	11.887	5.07				
104	Indeno(1,2,3-cd)pyrene	24.067	-3.3	1961363	1.145	1.142	11.974	11.970	3.62				
105	Dibenzo(a,h)anthracene	25.032	0.1	2191330	1.258	1.241	13.154	13.153	5.91				
106	Benzo(g,h,i)perylene	25.336	1.3	2134230	1.238	1.243	13.173	13.175	4.71				
		24.658	-1.4	1778684	1.032	1.053	13.517	13.514	4.21				
		24.302	-2.8	1759536	1.028	1.057	13.518	13.514	4.21				

TK 1-22-16

Data Path : D:\DATA\16A19\
Data File : RAH087.D
Acq On : 19 Jan 2016 8:26
Operator : KVu
Sample : DFTE7A1403
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP.M
Title : DFTPP
Last Update : Thu Jan 21 09:52:59 2016



AutoFind: Scans 784, 785, 786; Background Corrected with Scan 775

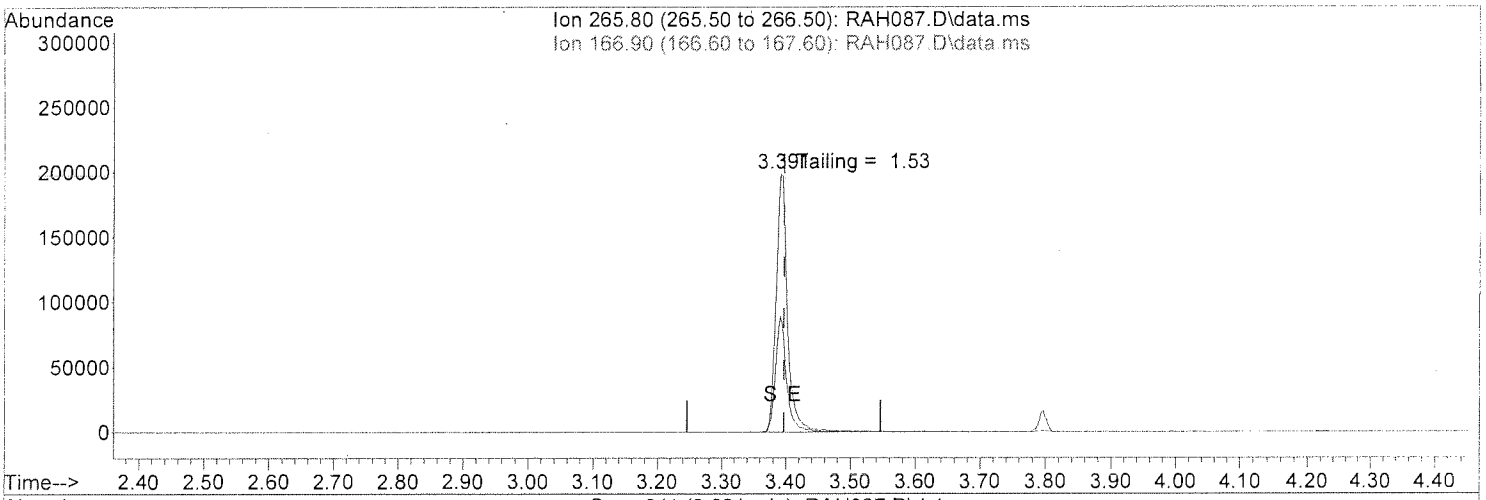
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.2	140289	PASS
68	69	0.00	2	1.9	2460	PASS
69	198	0.00	100	42.0	130373	PASS
70	69	0.00	2	0.6	843	PASS
127	198	40	60	47.7	147904	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	310315	PASS
199	198	5	9	6.5	20072	PASS
275	198	10	30	25.9	80408	PASS
365	198	1	100	3.0	9223	PASS
441	443	0.01	100	85.7	35824	PASS
442	198	40	100	69.0	214251	PASS
443	442	17	23	19.5	41811	PASS

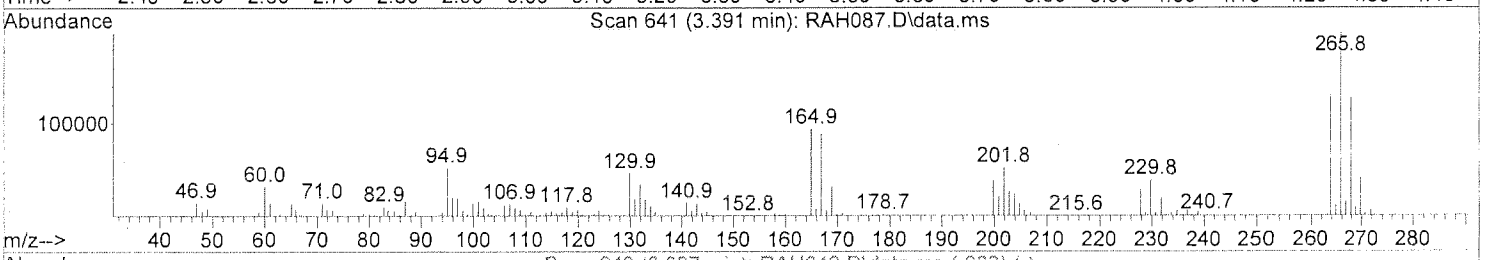
tw 1-22-16

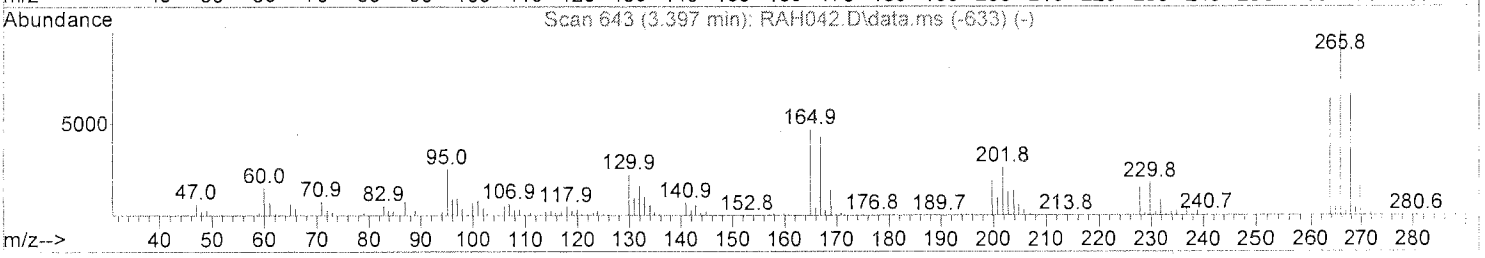
Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:06:44 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RAH087.D\data.ms

(1) Pentachlorophenol (T)

3.391min (-0.006) 59.14 ppm

response 242802

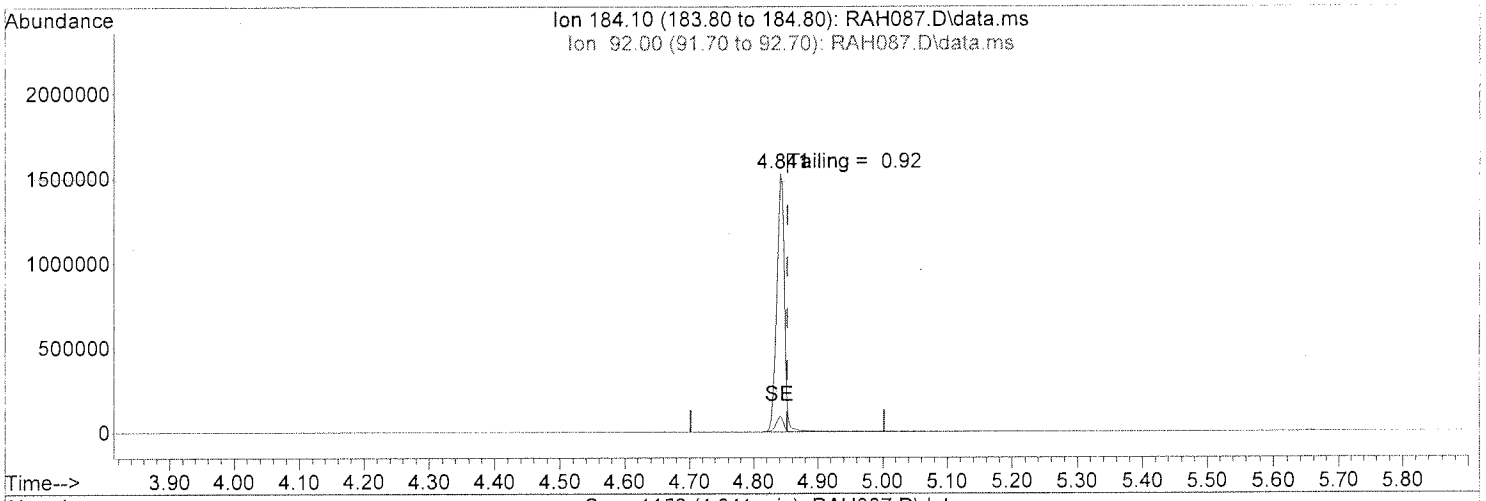
Ion	Exp%	Act%
265.80	100	100
166.90	44.50	43.45
0.00	0.00	0.00
0.00	0.00	0.00

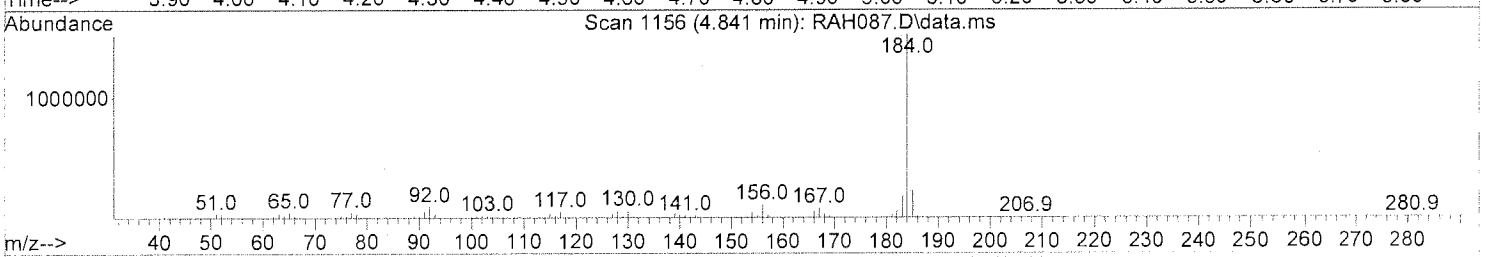
1-22-16

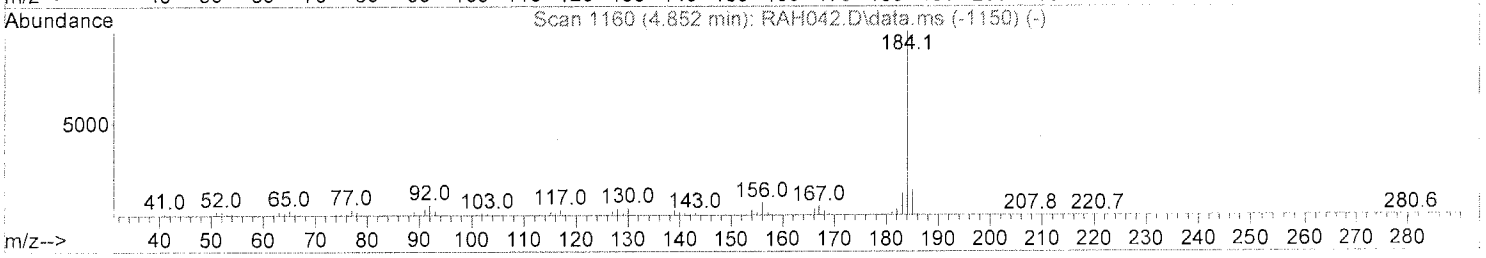
Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:06:44 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RAH087.D\data.ms

(3) Benzidine (T)

4.841min (-0.011) 52.63 ppm

response 1260369

Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.77
0.00	0.00	0.00
0.00	0.00	0.00

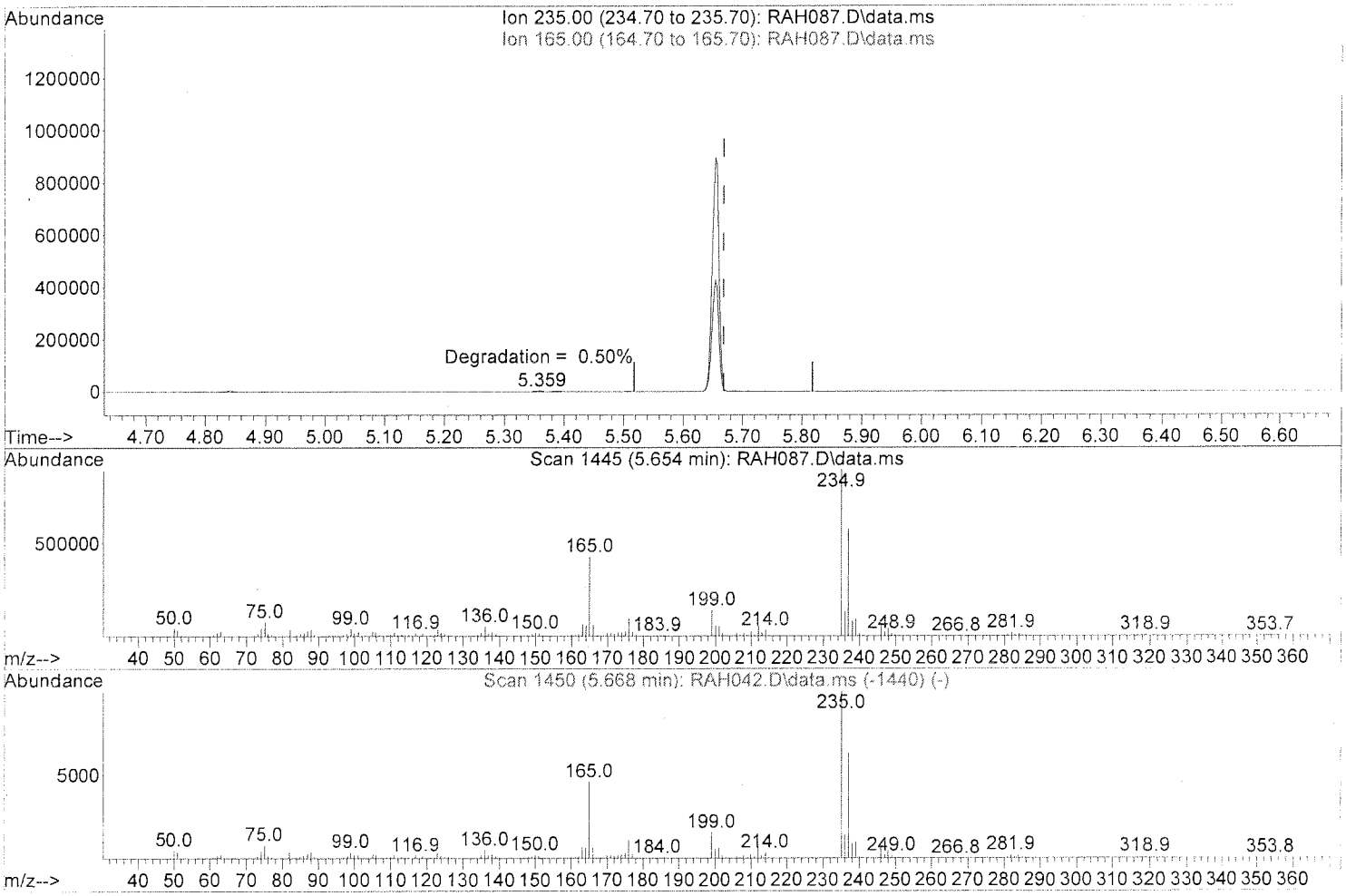
TK 1-22-16

286

Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:06:44 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH087.D\data.ms

(6) DDT (T)

5.654min (-0.014) 57.10 ppm

response 701410

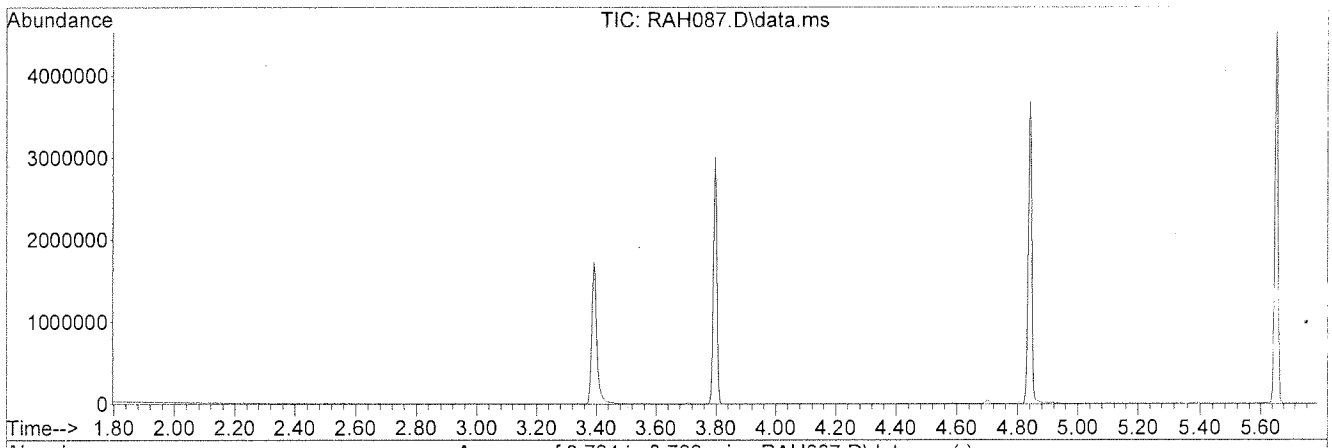
Ion	Exp%	Act%
235.00	100	100
165.00	47.10	47.54
0.00	0.00	0.00
0.00	0.00	0.00

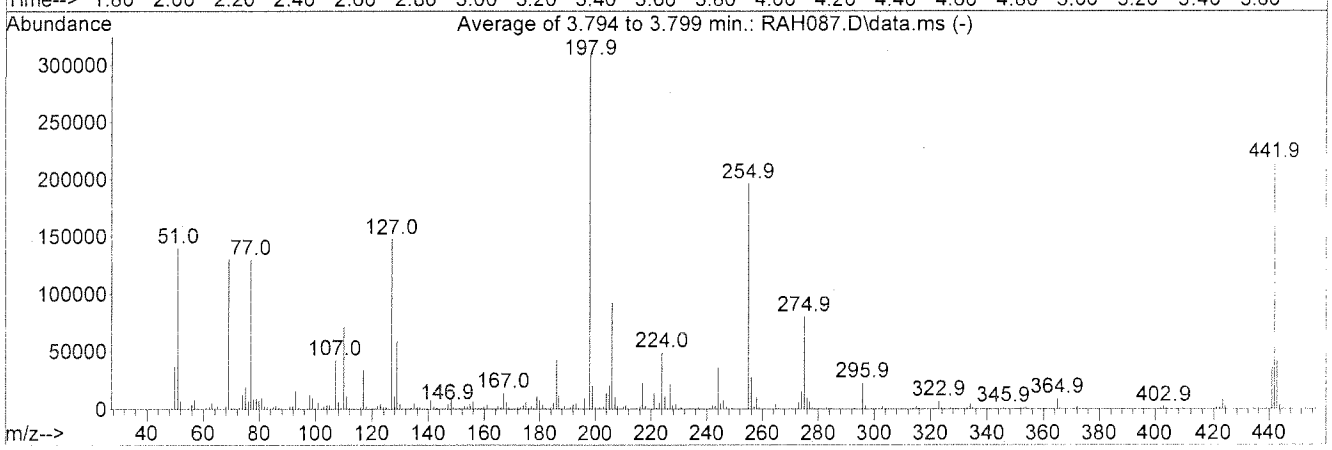
TW 1-22-16

Data Path : D:\DATA\16A19\
Data File : RAH087.D
Acq On : 19 Jan 2016 8:26
Operator : KVu
Sample : DFTE7A1403
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p ✓

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Thu Jan 21 09:55:42 2016





AutoFind: Scans 784, 785, 786; Background Corrected with Scan 775

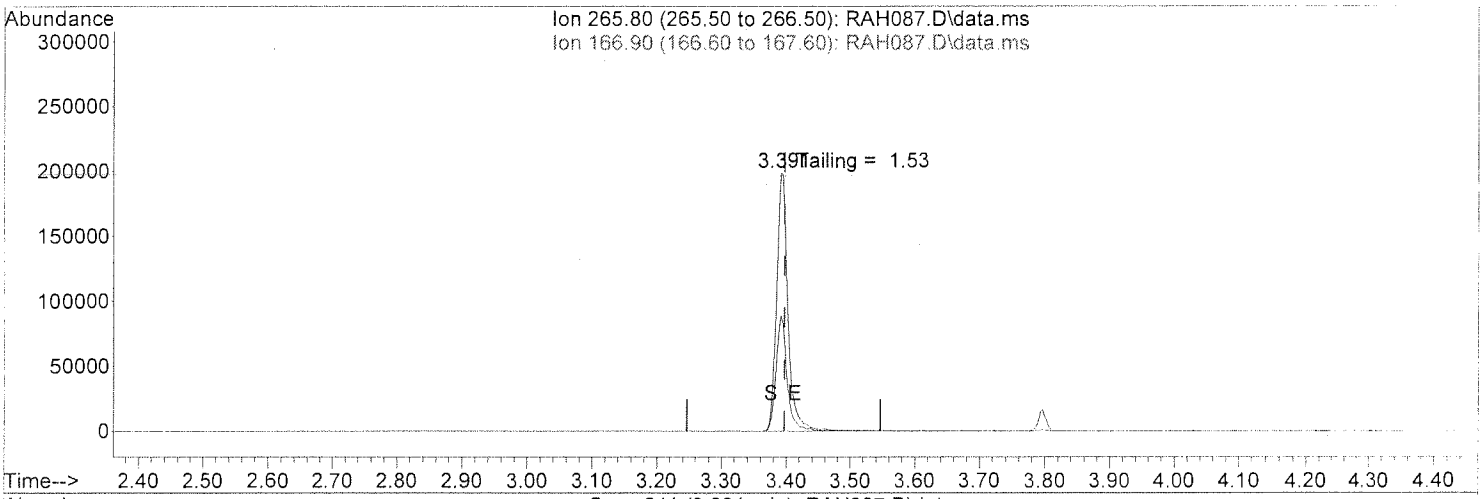
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	45.2	140289	PASS
68	69	0.00	2	1.9	2460	PASS
69	198	0.00	100	42.0	130373	PASS
70	69	0.00	2	0.6	843	PASS
127	198	10	80	47.7	147904	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	310315	PASS
199	198	5	9	6.5	20072	PASS
275	198	10	60	25.9	80408	PASS
365	198	1	100	3.0	9223	PASS
441	442	0.01	24	16.7	35824	PASS
442	198	50	100	69.0	214251	PASS
443	442	15	24	19.5	41811	PASS

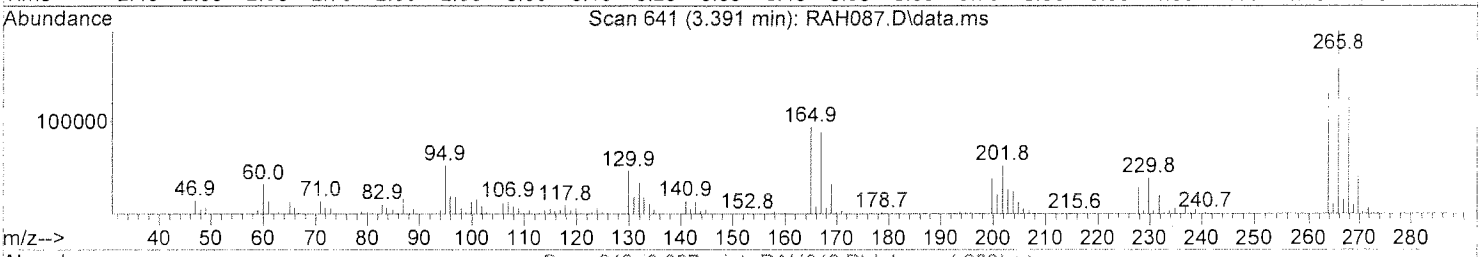
Th 1-21-16

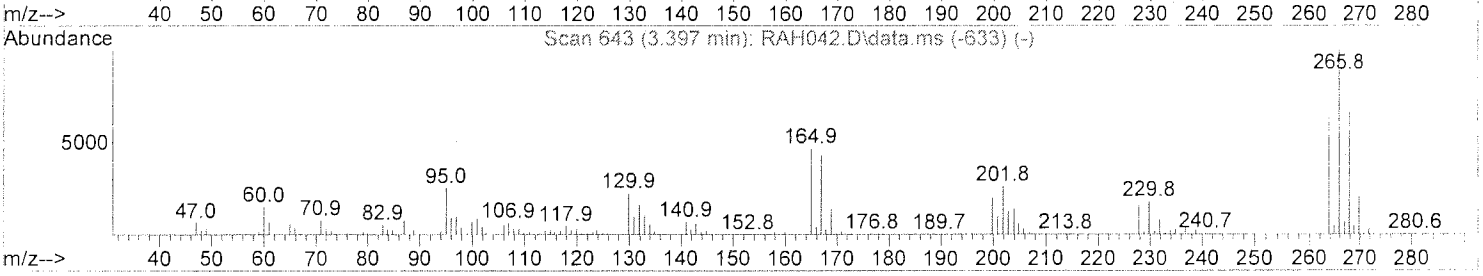
Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:07:25 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RAH087.D\data.ms

(1) Pentachlorophenol (T)

3.391min (-0.006) 59.14 ppm

response 242802

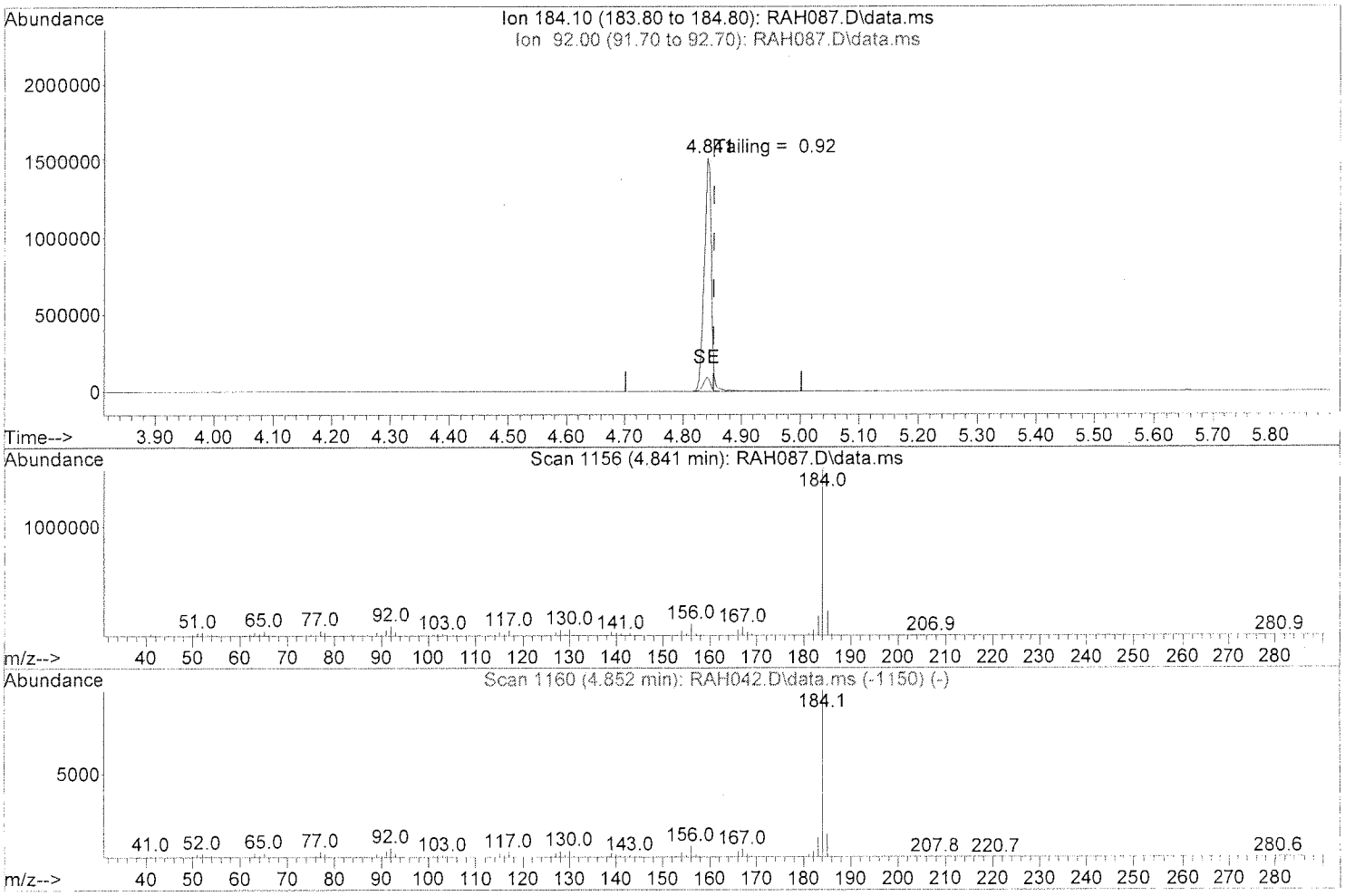
Ion	Exp%	Act%
265.80	100	100
166.90	44.50	43.45
0.00	0.00	0.00
0.00	0.00	0.00

TM 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:07:25 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH087.D\data.ms

(3) Benzidine (T)

4.841min (-0.011) 52.63 ppm

response 1260369

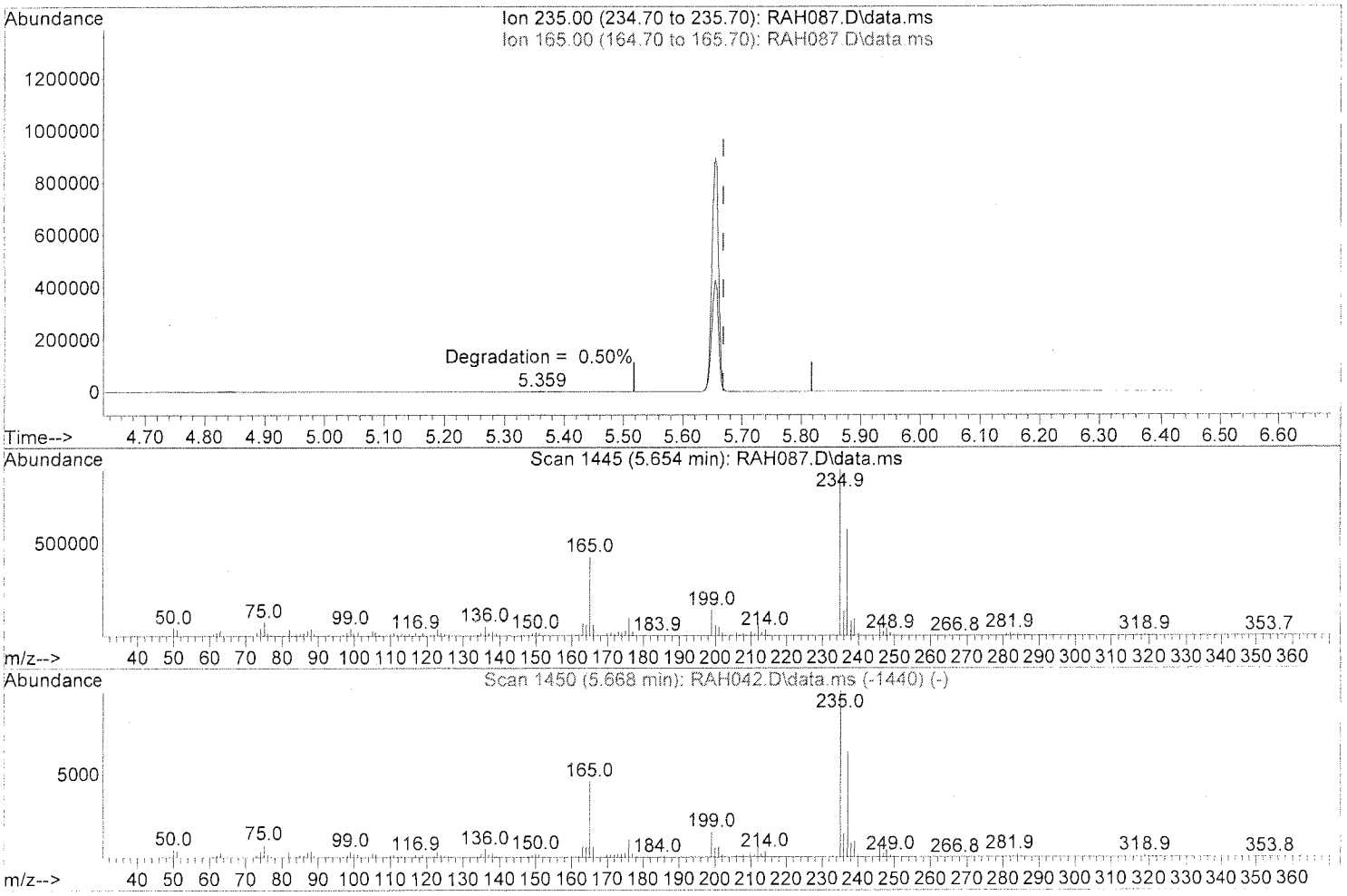
Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.77
0.00	0.00	0.00
0.00	0.00	0.00

TL 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:07:25 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



(6) DDT (T)

5.654min (-0.014) 57.10 ppm

response 701410

Ion	Exp%	Act%
235.00	100	100
165.00	47.10	47.54
0.00	0.00	0.00
0.00	0.00	0.00

TM 1-22-16

Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D
Acq On : 19 Jan 2016 9:55
Sample : ISVE7A142
Misc :
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	124	0.00
2	T	1,4-Dioxane	25.000	22.776	8.9	113	0.00
3	T	N-nitrosodimethylamine	25.000	26.853	-7.4	133	0.00
4	T	Pyridine	25.000	25.505	-2.0	123	0.00
5	S	2-Fluorophenol	25.000	24.201	3.2	119	0.00
6	S	Phenol-d5	25.000	23.231	7.1	114	0.00
7	C,P	Phenol	25.000	24.177	3.3	116	0.00
8	T	Aniline	25.000	24.100	3.6	117	0.00
9	T,P	bis(2-chloroethyl)ether	25.000	24.849	0.6	120	0.00
10	T,P	2-Chlorophenol	25.000	22.878	8.5	108	0.00
11	T	1,3-Dichlorobenzene	25.000	25.347	-1.4	124	0.00
12	S	1,2-Dichlorobenzene-d4	25.000	0.000	100.0#	0	-2.99#
13	C	1,4-Dichlorobenzene	25.000	24.832	0.7	122	0.00
14	T	Benzyl alcohol	25.000	26.630	-6.5	129	0.00
15	T	1,2-Dichlorobenzene	25.000	25.376	-1.5	122	0.00
16	T,P	2-Methylphenol	25.000	24.643	1.4	120	0.00
17	T	bis(2-chloroisopropyl)ether	25.000	25.038	-0.2	120	0.00
18	T,P	4-Methylphenol	25.000	25.117	-0.5	123	0.00
19	P,P	N-Nitroso-di-n-propylamine	25.000	23.790	4.8	117	0.00
20	T,P	Hexachloroethane	25.000	25.363	-1.5	123	0.00
21	I	Naphthalene-d8	40.000	40.000	0.0	124	0.00
22	S	Nitrobenzene-d5 8.333	~~25~~.000	7.517	9.8 ~~69~~.9#	~~36~~ 108	0.00
23	T,P	Nitrobenzene	25.000	24.408	2.4	118	0.00
24	T,P	Isophorone	25.000	24.461	2.2	118	0.00
25	C,P	2-Nitrophenol	25.000	25.915	-3.7	122	0.00
26	T,P	2,4-Dimethylphenol	25.000	24.173	3.3	118	0.00
27	T	Benzoic acid	25.000	26.629	-6.5	127	0.00
28	T,P	bis(2-Chloroethoxy)methane	25.000	24.442	2.2	121	0.00
29	T	3,5-Dimethylphenol	25.000	26.164	-4.7	137	0.00
30	C,P	2,4-Dichlorophenol	25.000	23.607	5.6	108	0.00
31	T	1,2,4-Trichlorobenzene	25.000	25.350	-1.4	123	0.00
32	T	3,4-Dimethylphenol	25.000	25.459	-1.8	122	0.00
33	T.P	Naphthalene	25.000	24.495	2.0	119	0.00
34	T	4-Chloroaniline	25.000	24.251	3.0	118	0.00
35	T	2,6-Dichlorophenol	25.000	25.643	-2.6	125	0.00
36	C	Hexachlorobutadiene	25.000	25.274	-1.1	123	0.00
37	T	Hydroquinone	25.000	0.000	100.0#	0	0.00
38	C,P	4-Chloro-3-methylphenol	25.000	25.282	-1.1	121	0.00
39	T,P	2-Methylnaphthalene	25.000	23.851	4.6	117	0.00
40	T	1-Methylnaphthalene	25.000	25.466	-1.9	123	0.00
41	I	Acenaphthene-d10	40.000	40.000	0.0	124	0.00
42	P	Hexachlorocyclopentadiene	25.000	21.434	14.3	102	0.00
43	T	2,3,5-Trichlorophenol	25.000	27.485	-9.9	132	0.00
44	C,P	2,4,6-Trichlorophenol	25.000	25.855	-3.4	125	0.00
45	T,P	2,4,5-Trichlorophenol	25.000	26.324	-5.3	126	0.00
46	S	2-Fluorobiphenyl 8.333	~~25~~.000	6.954	16.5 ~~72~~.2#	~~35~~ 105	0.00
47	T	2,3,4-Trichlorophenol	25.000	29.238	-17.0	148	0.00
48	T	Biphenyl	25.000	24.740	1.0	121	0.00

KV 1/21/16

1-22-16

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Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D
Acq On : 19 Jan 2016 9:55
Sample : ISVE7A142
Misc :
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T,P	2-Chloronaphthalene	25.000	25.042	-0.2	122	0.00
50	T	2-Nitroaniline	25.000	27.879	-11.5	133	0.00
51	T	2,6-Dimethylnaphthalene	25.000	25.484	-1.9	124	0.00
52	T	1,4-Dinitrobenzene	25.000	29.960	-19.8	142	0.00
53	T	Dimethylphthalate	25.000	26.724	-6.9	130	0.00
54	T	1,3-Dinitrobenzene	25.000	28.508	-14.0	135	0.00
55	T,P	2,6-Dinitrotoluene	25.000	27.397	-9.6	130	0.00
56	T	1,2-Dinitrobenzene	25.000	27.151	-8.6	132	0.00
57	T,P	Acenaphthylene	25.000	25.211	-0.8	122	0.00
58	T	3-Nitroaniline	25.000	27.889	-11.6	136	0.00
59	C,P	Acenaphthene	25.000	24.546	1.8	119	0.00
60	P	2,4-Dinitrophenol	25.000	25.704	-2.8	128	0.00
61	P	4-Nitrophenol	25.000	26.335	-5.3	123	0.00
62	T,P	2,4-Dinitrotoluene	25.000	27.625	-10.5	133	0.00
63	T,P	Dibenzofuran	25.000	25.329	-1.3	122	0.00
64	T	2,3,5,6-Tetrachlorophenol	25.000	26.045	-4.2	124	0.00
65	T	2,3,4,6-Tetrachlorophenol	25.000	27.723	-10.9	136	0.00
66	T	2,3,5-Trimethylnaphthalene	25.000	26.323	-5.3	126	0.00
67	T	Diethylphthalate	25.000	27.541	-10.2	132	0.00
68	T,P	Fluorene	25.000	25.841	-3.4	125	0.00
69	T,P	4-Chlorophenyl-phenylether	25.000	24.924	0.3	120	0.00
70	T	4-Nitroaniline	25.000	29.854	-19.4	147	0.00
71	I	Phenanthrene-d10	40.000	40.000	0.0	134	0.00
72	T	4,6-Dinitro-2-methylphenol	25.000	27.415	-9.7	161	0.00
73	C	N-Nitrosodiphenylamine	25.000	23.439	6.2	121	0.00
74	T	Azobenzene	25.000	23.873	4.5	125	0.00
75	S	2,4,6-Tribromophenol	25.000	24.787	0.9	129	0.00
76	T,P	4-Bromophenyl-phenylether	25.000	24.434	2.3	128	0.00
77	T,P	Hexachlorobenzene	25.000	24.198	3.2	127	0.00
78	C,P	Pentachlorophenol	25.000	27.104	-8.4	139	0.00
79	T	Dibenzothiophene	25.000	27.015	-8.1	138	0.00
80	T,P	Phenanthrene	25.000	24.918	0.3	131	0.00
81	T	Dinoseb	25.000	0.000	100.0#	0	0.00
82	T,P	Anthracene	25.000	24.321	2.7	128	0.00
83	T	Carbazole	25.000	26.442	-5.8	141	0.00
84	T	Di-n-butylphthalate	25.000	27.556	-10.2	142	0.00
85	T	1-Methylphenanthrene	25.000	25.418	-1.7	134	0.00
86	C,P	Fluoranthene	25.000	25.892	-3.6	135	0.00
87	I	Chrysene-d12	40.000	40.000	0.0	146	0.00
88	T	Benzidine	25.000	0.000	100.0#	0	0.00
89	T,P	Pyrene	25.000	23.268	6.9	133	0.00
90	S	Terphenyl-d14	8.333 ~~25.000~~	6.868	17.6 ~~72.5#~~	~~39~~ 117	0.00
91	T	Butylbenzylphthalate	25.000	26.998	-8.0	151	0.00
92	T	bis(2-ethylhexyl)adipate	25.000	24.486	2.1	136	0.00
93	T	3,3'-Dichlorobenzidine	25.000	23.925	4.3	138	0.00
94	T,P	Benzo(a)anthracene	25.000	24.824	0.7	144	0.00
95	T,P	Chrysene	25.000	25.219	-0.9	146	0.00
96	T	bis(2-Ethylhexyl)phthalate	25.000	26.559	-6.2	148	0.00

KL 1/21/16

KL 1-22-16

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Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D
Acq On : 19 Jan 2016 9:55
Sample : ISVE7A142
Misc :
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
97	I	Perylene-d12	40.000	40.000	0.0	149	0.00
98	C	Di-n-octylphthalate	25.000	27.230	-8.9	153	0.00
99	T,P	Benzo(b)fluoranthene	25.000	24.223	3.1	137	0.00
100	T,P	Benzo(k)fluoranthene	25.000	25.111	-0.4	150	0.00
101	T	Benzo(e)pyrene	25.000	25.032	-0.1	146	0.00
102	C,P	Benzo(a)pyrene	25.000	24.480	2.1	142	0.00
103	T	Perylene	25.000	25.067	-0.3	146	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	25.000	25.336	-1.3	147	0.00
105	T,P	Dibenzo(a,h)anthracene	25.000	24.658	1.4	145	0.00
106	T,P	Benzo(g,h,i)perylene	25.000	24.302	2.8	141	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

TM 1-22-16

Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D
Acq On : 19 Jan 2016 9:55
Sample : ISVE7A142
Misc :
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

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	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	124	0.00	
2	T	1,4-Dioxane	0.489	0.446	8.8	113	0.00	
3	T	N-nitrosodimethylamine	0.702	0.754	-7.4	133	0.00	
4	T	Pyridine	1.354	1.382	-2.1	123	0.00	
5	S	2-Fluorophenol	1.209	1.171	3.1	119	0.00	
6	S	Phenol-d5	1.538	1.429	7.1	114	0.00	
7	C,P	Phenol	1.565	1.513	3.3	116	0.00	
8	T	Aniline	1.987	1.916	3.6	117	0.00	
9	T,P	bis(2-chloroethyl)ether	1.144	1.137	0.6	120	0.00	
10	T,P	2-Chlorophenol	1.451	1.328	8.5	108	0.00	
11	T	1,3-Dichlorobenzene	1.635	1.657	-1.3	124	0.00	
12	S	1,2-Dichlorobenzene-d4	0.000	0.000#	0.0	0#	-2.99#	
13	C	1,4-Dichlorobenzene	1.710	1.699	0.6	122	0.00	
14	T	Benzyl alcohol	0.861	0.918	-6.6	129	0.00	
15	T	1,2-Dichlorobenzene	1.587	1.611	-1.5	122	0.00	
16	T,P	2-Methylphenol	1.080	1.064	1.5	120	0.00	
17	T	bis(2-chloroisopropyl)ether	2.043	2.046	-0.1	120	0.00	
18	T,P	4-Methylphenol	1.376	1.382	-0.4	123	0.00	
19	P,P	N-Nitroso-di-n-propylamine	0.918	0.873	4.9	117	0.00	
20	T,P	Hexachloroethane	0.640	0.649	-1.4	123	0.00	
21	I	Naphthalene-d8	1.000	1.000	0.0	124	0.00	
22	S	Nitrobenzene-d5 0.375	0.415	~~0.125~~	9.6 ~~69.9#~~	~~36#~~	0.00	108
23	T,P	Nitrobenzene	0.418	0.408	2.4	118	0.00	
24	T,P	Isophorone	0.773	0.757	2.1	118	0.00	
25	C,P	2-Nitrophenol	0.176	0.182	-3.4	122	0.00	
26	T,P	2,4-Dimethylphenol	0.398	0.384	3.5	118	0.00	
27	T	Benzoic acid	0.223	0.238	-6.7	127	0.00	
28	T,P	bis(2-Chloroethoxy)methane	0.415	0.406	2.2	121	0.00	
29	T	3,5-Dimethylphenol	0.422	0.442	-4.7	137	0.00	
30	C,P	2,4-Dichlorophenol	0.364	0.343	5.8	108	0.00	
31	T	1,2,4-Trichlorobenzene	0.420	0.426	-1.4	123	0.00	
32	T	3,4-Dimethylphenol	0.484	0.493	-1.9	122	0.00	
33	T.P	Naphthalene	1.111	1.088	2.1	119	0.00	
34	T	4-Chloroaniline	0.470	0.456	3.0	118	0.00	
35	T	2,6-Dichlorophenol	0.340	0.349	-2.6	125	0.00	
36	C	Hexachlorobutadiene	0.295	0.299	-1.4	123	0.00	KV
37	T	Hydroquinone	0.000	0.000#	0.0	0#	0.00	1/21/16
38	C,P	4-Chloro-3-methylphenol	0.314	0.317	-1.0	121	0.00	
39	T,P	2-Methylnaphthalene	0.777	0.742	4.5	117	0.00	
40	T	1-Methylnaphthalene	0.683	0.696	-1.9	123	0.00	
41	I	Acenaphthene-d10	1.000	1.000	0.0	124	0.00	
42	P	Hexachlorocyclopentadiene	0.569	0.488	14.2	102	0.00	
43	T	2,3,5-Trichlorophenol	0.403	0.443	-9.9	132	0.00	
44	C,P	2,4,6-Trichlorophenol	0.443	0.459	-3.6	125	0.00	
45	T,P	2,4,5-Trichlorophenol	0.460	0.485	-5.4	126	0.00	
46	S	2-Fluorobiphenyl 1.368	1.638	~~0.456~~	16.5 ~~72.2#~~	~~35#~~	0.00	105
47	T	2,3,4-Trichlorophenol	0.395	0.462	-17.0	148	0.00	
48	T	Biphenyl	1.580	1.563	1.1	121	0.00	

1-22-16

Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D Vial: 6
Acq On : 19 Jan 2016 9:55 Operator: KVu
Sample : ISVE7A142 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

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)
49	T,P	2-Chloronaphthalene	1.291	1.293	-0.2	122	0.00
50	T	2-Nitroaniline	0.330	0.368	-11.5	133	0.00
51	T	2,6-Dimethylnaphthalene	1.114	1.136	-2.0	124	0.00
52	T	1,4-Dinitrobenzene	0.144	0.173	-20.1#	142	0.00
53	T	Dimethylphthalate	1.434	1.533	-6.9	130	0.00
54	T	1,3-Dinitrobenzene	0.177	0.201	-13.6	135	0.00
55	T,P	2,6-Dinitrotoluene	0.283	0.310	-9.5	130	0.00
56	T	1,2-Dinitrobenzene	0.113	0.123	-8.8	132	0.00
57	T,P	Acenaphthylene	1.932	1.949	-0.9	122	0.00
58	T	3-Nitroaniline	0.272	0.303	-11.4	136	0.00
59	C,P	Acenaphthene	1.336	1.312	1.8	119	0.00
60	P	2,4-Dinitrophenol	0.111	0.130	-17.1	128	0.00
61	P	4-Nitrophenol	0.204	0.215	-5.4	123	0.00
62	T,P	2,4-Dinitrotoluene	0.369	0.408	-10.6	133	0.00
63	T,P	Dibenzofuran	1.862	1.887	-1.3	122	0.00
64	T	2,3,5,6-Tetrachlorophenol	0.331	0.345	-4.2	124	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.408	0.452	-10.8	136	0.00
66	T	2,3,5-Trimethylnaphthalene	1.194	1.258	-5.4	126	0.00
67	T	Diethylphthalate	1.407	1.550	-10.2	132	0.00
68	T,P	Fluorene	1.410	1.457	-3.3	125	0.00
69	T,P	4-Chlorophenyl-phenylether	0.783	0.780	0.4	120	0.00
70	T	4-Nitroaniline	0.272	0.325	-19.5	147	0.00
71	I	Phenanthrene-d10	1.000	1.000	0.0	134	0.00
72	T	4,6-Dinitro-2-methylphenol	0.107	0.132	-23.4#	161	0.00
73	C	N-Nitrosodiphenylamine	0.730	0.684	6.3	121	0.00
74	T	Azobenzene	0.731	0.698	4.5	125	0.00
75	S	2,4,6-Tribromophenol	0.120	0.119	0.8	129	0.00
76	T,P	4-Bromophenyl-phenylether	0.251	0.246	2.0	128	0.00
77	T,P	Hexachlorobenzene	0.280	0.271	3.2	127	0.00
78	C,P	Pentachlorophenol	0.157	0.170	-8.3	139	0.00
79	T	Dibenzothiophene	1.128	1.219	-8.1	138	0.00
80	T,P	Phenanthrene	1.199	1.195	0.3	131	0.00
81	T	Dinoseb	0.000	0.000#	0.0	0#	0.00
82	T,P	Anthracene	1.205	1.172	2.7	128	0.00
83	T	Carbazole	0.950	1.005	-5.8	141	0.00
84	T	Di-n-butylphthalate	1.198	1.320	-10.2	142	0.00
85	T	1-Methylphenanthrene	0.869	0.883	-1.6	134	0.00
86	C,P	Fluoranthene	1.334	1.382	-3.6	135	0.00
87	I	Chrysene-d12	1.000	1.000	0.0	146	0.00
88	T	Benzidine	0.000	0.000#	0.0	0#	0.00
89	T,P	Pyrene	1.213	1.129	6.9	133	0.00
90	S	Terphenyl-d14 0.708	0.860	~~0.236~~ 17.7	~~72.6#~~	~~39#~~	0.00 11.7
91	T	Butylbenzylphthalate	0.421	0.454	-7.8	151	0.00
92	T	bis(2-ethylhexyl)adipate	0.335	0.328	2.1	136	0.00
93	T	3,3'-Dichlorobenzidine	0.391	0.375	4.1	138	0.00
94	T,P	Benzo(a)anthracene	1.150	1.142	0.7	144	0.00
95	T,P	Chrysene	1.092	1.101	-0.8	146	0.00
96	T	bis(2-Ethylhexyl)phthalate	0.651	0.692	-6.3	148	0.00

KV 1/21/16

PW 1-22-16

316

Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D Vial: 6
Acq On : 19 Jan 2016 9:55 Operator: KVu
Sample : ISVE7A142 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

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)
97	I	Perylene-d12	1.000	1.000	0.0	149	0.00
98	C	Di-n-octylphthalate	1.193	1.300	-9.0	153	0.00
99	T,P	Benzo(b)fluoranthene	1.207	1.169	3.1	137	0.00
100	T,P	Benzo(k)fluoranthene	1.208	1.213	-0.4	150	0.00
101	T	Benzo(e)pyrene	1.106	1.108	-0.2	146	0.00
102	C,P	Benzo(a)pyrene	1.156	1.132	2.1	142	0.00
103	T	Perylene	1.142	1.145	-0.3	146	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	1.241	1.258	-1.4	147	0.00
105	T,P	Dibenzo(a,h)anthracene	1.053	1.039	1.3	145	0.00
106	T,P	Benzo(g,h,i)perylene	1.057	1.028	2.7	141	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

mc 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A19\RAH091.D
Acq On : 19 Jan 2016 9:55
Sample : ISVE7A142
Misc :
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.846	152	536443	40.00	ppm	0.00
21) Naphthalene-d8	4.051	136	1987702	40.00	ppm	0.00
41) Acenaphthene-d10	6.057	164	1246179	40.00	ppm	0.00
71) Phenanthrene-d10	7.799	188	2450832	40.00	ppm	0.00
87) Chrysene-d12	10.574	240	3094300	40.00	ppm	0.00
97) Perylene-d12	11.945	264	2739804	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.932	112	392460	24.20	ppm	0.00
Spiked Amount 30.000			Recovery	=	80.67%	
6) Phenol-d5	2.506	99	479092	23.23	ppm	0.00
Spiked Amount 30.000			Recovery	=	77.43%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.326	82	155139	7.52	ppm	0.00
Spiked Amount 10.000			Recovery	=	75.20%	
46) 2-Fluorobiphenyl	5.259	172	354972	6.95	ppm	0.00
Spiked Amount 10.000			Recovery	=	69.50%	
75) 2,4,6-Tribromophenol	6.998	330	181883	24.79	ppm	0.00
Spiked Amount 30.000			Recovery	=	82.63%	
90) Terphenyl-d14	9.505	244	456700	6.87	ppm	0.00
Spiked Amount 10.000			Recovery	=	68.70%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.238	88	149412	22.78	ppm	99
3) N-nitrosodimethylamine	1.348	74	252910	26.85	ppm	99
4) Pyridine	1.376	79	463275	25.51	ppm	100
7) Phenol	2.517	94	507337	24.18	ppm	99
8) Aniline	2.579	93	642261	24.10	ppm	99
9) bis(2-chloroethyl)ether	2.610	93	381371	24.85	ppm	99
10) 2-Chlorophenol	2.673	128	445264	22.88	ppm	94
11) 1,3-Dichlorobenzene	2.803	146	555673	25.35	ppm	99
13) 1,4-Dichlorobenzene	2.861	146	569481	24.83	ppm	98
14) Benzyl alcohol	2.938	108	307652	26.63	ppm	100
15) 1,2-Dichlorobenzene	2.990	146	540227	25.38	ppm	99
16) 2-Methylphenol	3.019	107	356784	24.64	ppm	97
17) bis(2-chloroisopropyl)...	3.058	45	685915	25.04	ppm	99
18) 4-Methylphenol	3.153	107	463367	25.12	ppm	99
19) N-Nitroso-di-n-propyla...	3.177	70	292738	23.79	ppm	100
20) Hexachloroethane	3.292	117	217733	25.36	ppm	99
23) Nitrobenzene	3.345	77	506642	24.41	ppm	100
24) Isophorone	3.575	82	940022	24.46	ppm	99
25) 2-Nitrophenol	3.652	139	226305	25.91	ppm	100
26) 2,4-Dimethylphenol	3.676	107	477521	24.17	ppm	98
27) Benzoic acid	3.762	105	295589	26.63	ppm	98
28) bis(2-Chloroethoxy)met...	3.781	93	503806	24.44	ppm	100
29) 3,5-Dimethylphenol	3.815	107	549286	26.16	ppm	87
30) 2,4-Dichlorophenol	3.892	162	426674	23.61	ppm	94
31) 1,2,4-Trichlorobenzene	3.988	180	528711	25.35	ppm	98
32) 3,4-Dimethylphenol	3.988	107	611977	25.46	ppm	98
33) Naphthalene	4.075	128	1351873	24.49	ppm	99
34) 4-Chloroaniline	4.123	127	566186	24.25	ppm	99
35) 2,6-Dichlorophenol	4.133	162	433628	25.64	ppm	99

1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A19\RAH091.D
Acq On : 19 Jan 2016 9:55
Sample : ISVE7A142
Misc :
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
36) Hexachlorobutadiene	4.200	225	370946	25.27 ppm	100
38) 4-Chloro-3-methylphenol	4.644	107	394236	25.28 ppm	100
39) 2-Methylnaphthalene	4.836	142	921209	23.85 ppm	99
40) 1-Methylnaphthalene	4.951	142	864584	25.47 ppm	99
42) Hexachlorocyclopentadiene	5.013	237	380012	21.43 ppm	99
43) 2,3,5-Trichlorophenol	5.023	196	344671	27.49 ppm	96
44) 2,4,6-Trichlorophenol	5.152	196	357168	25.85 ppm	99
45) 2,4,5-Trichlorophenol	5.191	196	377606	26.32 ppm	97
47) 2,3,4-Trichlorophenol	5.263	196	359852	29.24 ppm	98
48) Biphenyl	5.379	154	1217610	24.74 ppm	99
49) 2-Chloronaphthalene	5.398	162	1007383	25.04 ppm	99
50) 2-Nitroaniline	5.518	65	286655	27.88 ppm	99
51) 2,6-Dimethylnaphthalene	5.561	156	884783	25.48 ppm	96
52) 1,4-Dinitrobenzene	5.686	168	134700	29.96 ppm	88
53) Dimethylphthalate	5.754	163	1194163	26.72 ppm	99
54) 1,3-Dinitrobenzene	5.773	168	156891	28.51 ppm	98
55) 2,6-Dinitrotoluene	5.816	165	241473	27.40 ppm	97
56) 1,2-Dinitrobenzene	5.874	168	95581	27.15 ppm	98
57) Acenaphthylene	5.889	152	1517790	25.21 ppm	100
58) 3-Nitroaniline	6.009	138	236055	27.89 ppm	99
59) Acenaphthene	6.095	153	1021994	24.55 ppm	100
60) 2,4-Dinitrophenol	6.129	184	100978	25.70 ppm	97
61) 4-Nitrophenol	6.210	109	167198	26.34 ppm	100
62) 2,4-Dinitrotoluene	6.292	165	317394	27.62 ppm	95
63) Dibenzofuran	6.301	168	1469676	25.33 ppm	99
64) 2,3,5,6-Tetrachlorophenol	6.392	230	268982	26.05 ppm	97
65) 2,3,4,6-Tetrachlorophenol	6.445	232	352131	27.72 ppm	100
66) 2,3,5-Trimethylnaphtha...	6.559	170	979570	26.32 ppm	98
67) Diethylphthalate	6.606	149	1207345	27.54 ppm	100
68) Fluorene	6.714	166	1135108	25.84 ppm	100
69) 4-Chlorophenyl-phenyle...	6.728	204	607740	24.92 ppm	99
70) 4-Nitroaniline	6.742	138	253180	29.85 ppm	97
72) 4,6-Dinitro-2-methylph...	6.780	198	201695	27.41 ppm	98
73) N-Nitrosodiphenylamine	6.870	169	1048205	23.44 ppm	98
74) Azobenzene	6.917	77	1069450	23.87 ppm	100
76) 4-Bromophenyl-phenylether	7.301	248	376521	24.43 ppm	96
77) Hexachlorobenzene	7.353	284	415232	24.20 ppm	100
78) Pentachlorophenol	7.584	266	261069	27.10 ppm	99
79) Dibenzothiophene	7.683	184	1867795	27.02 ppm	98
80) Phenanthrene	7.826	178	1830878	24.92 ppm	100
82) Anthracene	7.881	178	1795848	24.32 ppm	100
83) Carbazole	8.062	167	1539703	26.44 ppm	99
84) Di-n-butylphthalate	8.464	149	2022093	27.56 ppm	100
85) 1-Methylphenanthrene	8.493	192	1353123	25.42 ppm	100
86) Fluoranthene	9.102	202	2116941	25.89 ppm	100
89) Pyrene	9.338	202	2182825	23.27 ppm	100
91) Butylbenzylphthalate	10.019	149	878836	27.00 ppm	99
92) bis(2-ethylhexyl)adipate	10.106	129	633728	24.49 ppm	99
93) 3,3'-Dichlorobenzidine	10.540	252	724329	23.92 ppm	99
94) Benzo(a)anthracene	10.564	228	2208113	24.82 ppm	100
95) Chrysene	10.598	228	2129785	25.22 ppm	99
96) bis(2-Ethylhexyl)phtha...	10.603	149	1338161	26.56 ppm	99
98) Di-n-octylphthalate	11.220	149	2225781	27.23 ppm	99
99) Benzo(b)fluoranthene	11.575	252	2002510	24.22 ppm	100

TW 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A19\RAH091.D Vial: 6
Acq On : 19 Jan 2016 9:55 Operator: KVu
Sample : ISVE7A142 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

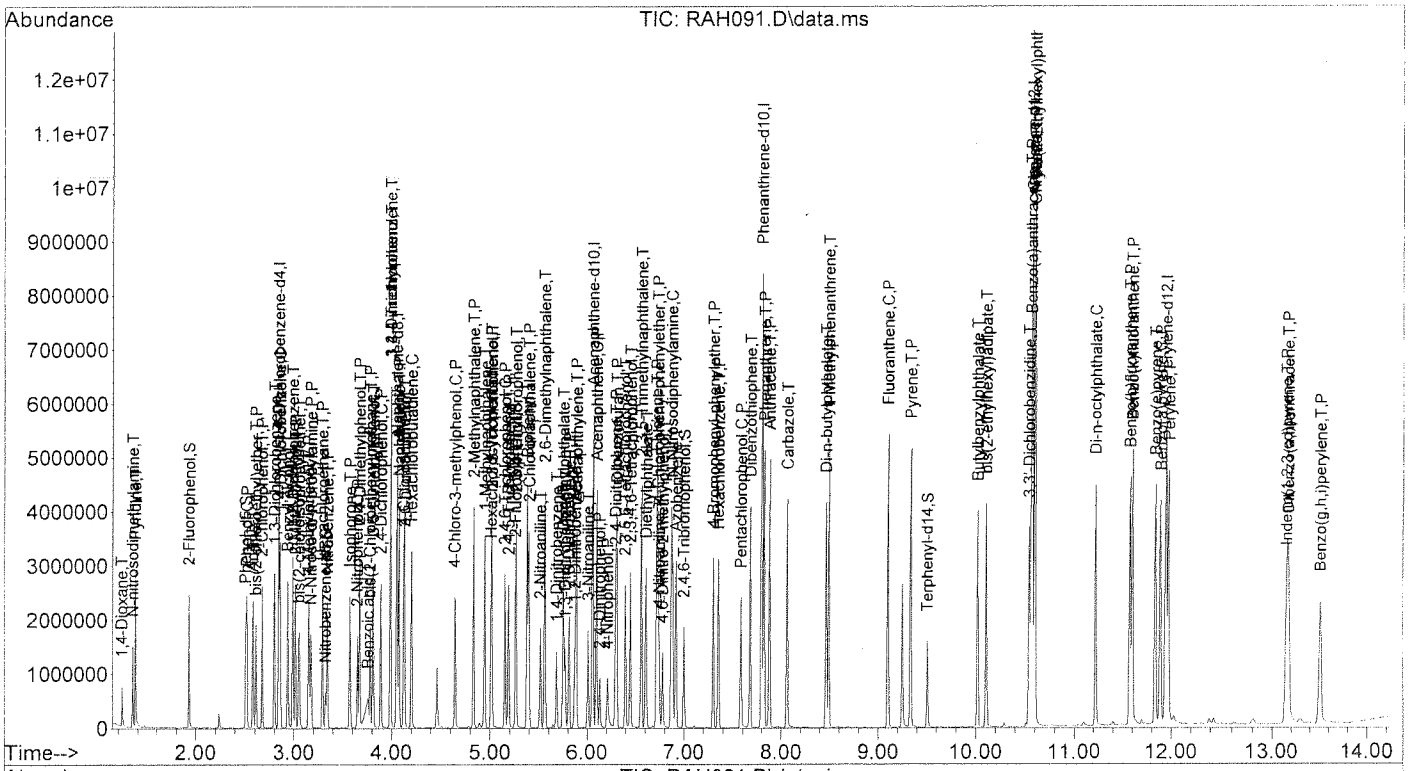
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
100) Benzo(k)fluoranthene	11.599	252	2077413	25.11 ppm	99
101) Benzo(e)pyrene	11.833	252	1896685	25.03 ppm	99
102) Benzo(a)pyrene	11.889	252	1938917	24.48 ppm	99
103) Perylene	11.974	252	1961363	25.07 ppm	100
104) Indeno(1,2,3-cd)pyrene	13.154	276	2154230	25.34 ppm	99
105) Dibenzo(a,h)anthracene	13.173	278	1778684	24.66 ppm	99
106) Benzo(g,h,i)perylene	13.518	276	1759536	24.30 ppm	100

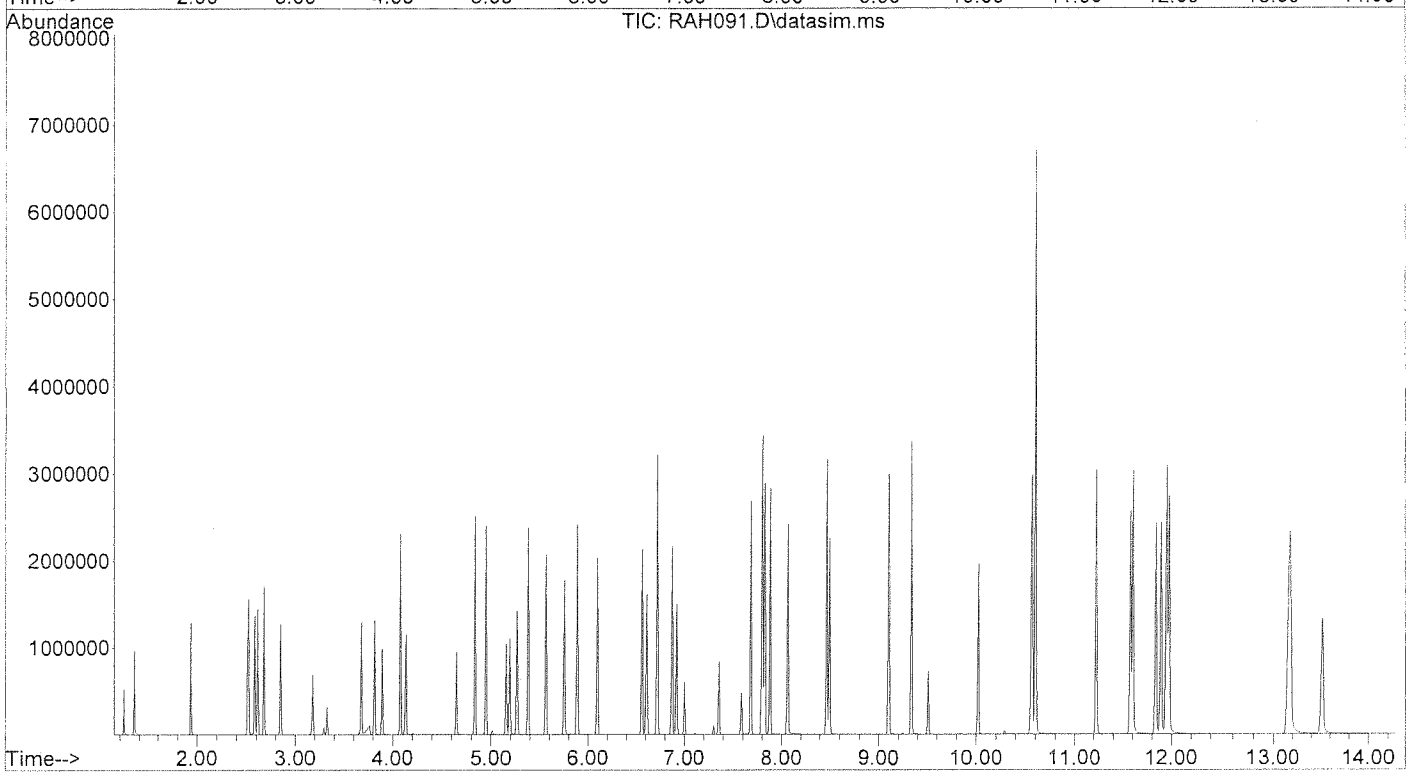
(#) = qualifier out of range (m) = manual integration (+) = signals summed

PM 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A19\RAH091.D
Vial: 6
Acq On : 19 Jan 2016 9:55
Operator: KVu
Sample : ISVE7A142
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 10:57:45 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





Tu 1-22-16

DAILY CALIBRATIONS

5B
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RBH132
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
DFTPP Injection Date: 02/12/16
DFTPP Injection Time: 08:40

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	43.87
68	Less than 2% of mass 69	0.75(1.9)1
69	% of mass 198	39.90
70	Less than 2% of mass 69	0.24(0.6)1
127	10.0 - 80.0% of mass 198	44.64
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	7.18
275	10.0 - 60.0% of mass 198	25.03
365	Greater than 1.00% of mass 198	2.97
441	Present, but less than 24% of mass 442	10.80(15.9)2
442	Greater than 50% of mass 198	67.73
443	15.0 - 24.0% of mass 442	12.78(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD025	CSVE7A1418	RBH133	02/12/16	09:49
2	MBLK1S	SVB011SB	RBH135	02/12/16	10:27
3	LCS1S	SVB011SL	RBH136	02/12/16	10:46
4	LCD1S	SVB011SC	RBH137	02/12/16	11:05
5	CA504-SG03-S-010MS	B060-02M	RBH138	02/12/16	11:24
6	CA504-SG03-S-010MSD	B060-02S	RBH139	02/12/16	11:43
7	CA504-SG03-S-005	B060-01	RBH147	02/12/16	14:17
8	CA504-SG03-S-010	B060-02	RBH148	02/12/16	14:36
9	CA504-SG01-S-005	B060-04	RBH149	02/12/16	14:56
10	CA504-SG01-S-010	B060-05	RBH150	02/12/16	15:15
11	CA504-SG01-S-210	B060-06	RBH151	02/12/16	15:34
12	CA504-SG02-S-005	B060-07	RBH152	02/12/16	15:53
13	CA504-SG02-S-010	B060-08	RBH153	02/12/16	16:13
14	CA504-SG02-S-210	B060-09	RBH154	02/12/16	16:32

FORM V SV OLM03.0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	432203	2.85	1600260	4.05	1008743	6.06
	UPPER LIMIT	864406	3.35	3200520	4.55	2017486	6.56
	LOWER LIMIT	216102	2.35	800130	3.55	504372	5.56
	SAMPLE ID						
1	SSTD025	399901	2.84	1499641	4.05	969712	6.05
2	MBLK1S	385902	2.84	1431437	4.05	887240	6.05
3	LCS1S	434440	2.84	1595047	4.05	1022448	6.05
4	LCD1S	434283	2.84	1627350	4.05	1042526	6.05
5	CA504-SG03-S-010MS	409228	2.84	1510305	4.05	970163	6.05
6	CA504-SG03-S-010MSD	403429	2.84	1513255	4.05	973786	6.05
7	CA504-SG03-S-005	435281	2.84	1606498	4.05	1010965	6.05
8	CA504-SG03-S-010	389577	2.84	1452687	4.05	916141	6.05
9	CA504-SG01-S-005	405539	2.84	1512837	4.05	949588	6.05
10	CA504-SG01-S-010	406649	2.84	1522049	4.05	947406	6.05
11	CA504-SG01-S-210	384323	2.84	1432199	4.05	898294	6.05
12	CA504-SG02-S-005	426556	2.84	1561585	4.05	985512	6.05
13	CA504-SG02-S-010	417729	2.84	1580233	4.05	980498	6.05
14	CA504-SG02-S-210	408007	2.84	1529350	4.05	959229	6.05

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	1833940	7.80	2122804	10.57	1842737	11.94
	UPPER LIMIT	3667880	8.30	4245608	11.07	3685474	12.44
	LOWER LIMIT	916970	7.30	1061402	10.07	921369	11.44
	SAMPLE ID						
1	SSTD025	1781067	7.79	2045867	10.57	1707574	11.94
2	MBLK1S	1618487	7.79	1940278	10.57	1691612	11.94
3	LCS1S	1922221	7.79	2238784	10.57	1965770	11.95
4	LCD1S	1953804	7.79	2280399	10.57	1985722	11.94
5	CA504-SG03-S-010MS	1802767	7.79	2080103	10.57	1810264	11.94
6	CA504-SG03-S-010MSD	1798898	7.79	2104207	10.57	1808833	11.94
7	CA504-SG03-S-005	1836445	7.79	2103508	10.57	1777248	11.95
8	CA504-SG03-S-010	1656734	7.79	1890901	10.57	1618485	11.94
9	CA504-SG01-S-005	1712672	7.79	1977298	10.57	1714018	11.94
10	CA504-SG01-S-010	1726828	7.79	1959024	10.57	1689453	11.94
11	CA504-SG01-S-210	1644977	7.79	1888771	10.57	1632063	11.94
12	CA504-SG02-S-005	1794893	7.79	2052715	10.57	1777963	11.94
13	CA504-SG02-S-010	1796557	7.79	2044831	10.57	1766825	11.94
14	CA504-SG02-S-210	1758405	7.79	1992865	10.57	1718921	11.94

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E7
IC Beginning DateTime :01/14/16 10:36
Spike Amount :25 PPM
CC/CV File :RBH133
IC File :RAH047

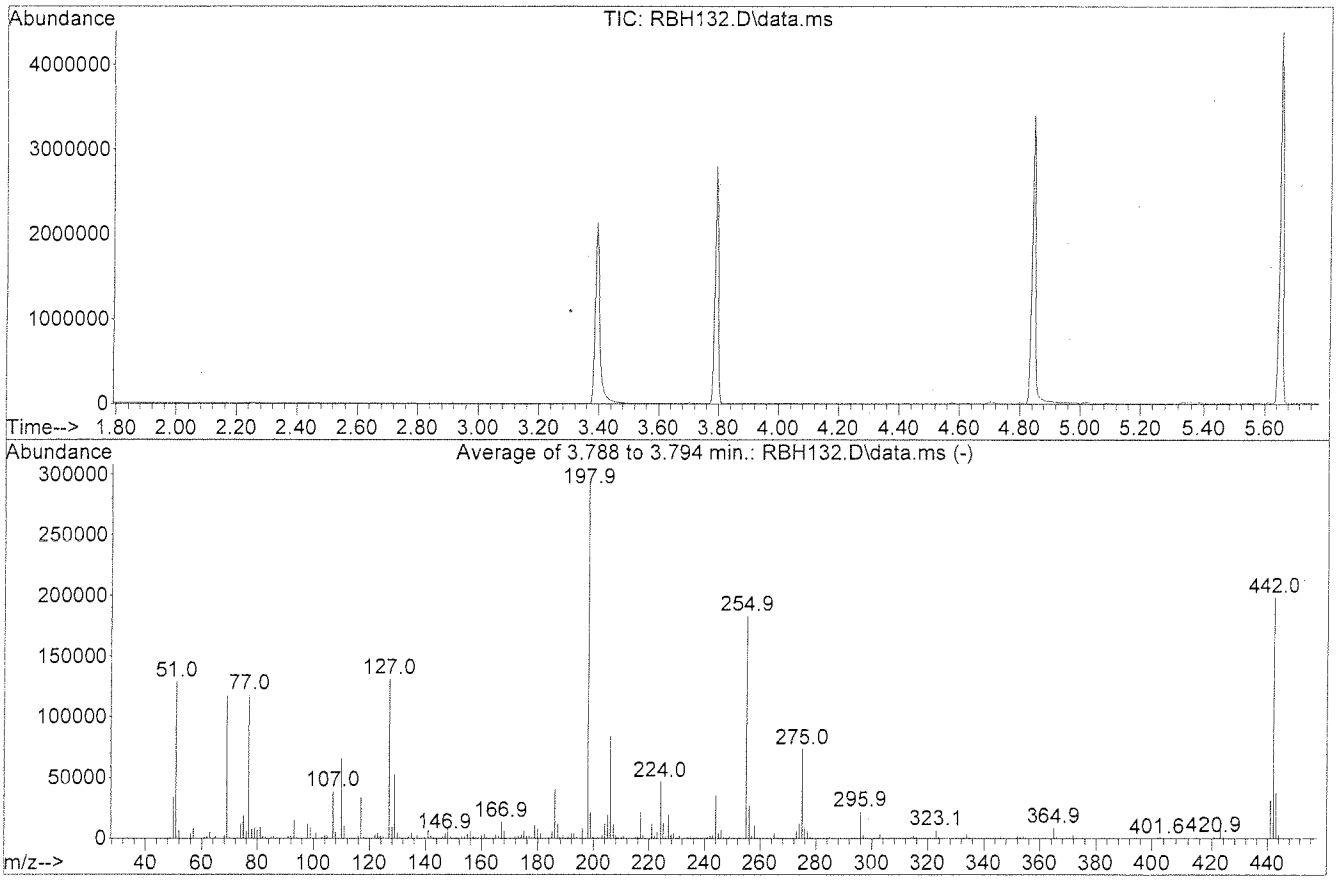
Column Spec :ZB-SEMI ID :0.18MM
IC Ending DateTime :01/14/16 12:58
HPChem Method :SVE7A14
Date_Time :02/12/16 09:49

M IDX	Parameters	CC_Con	CC% D	CC_Resp	CCRRF	AVRRF	CC_Rtm	AVRtm	% RSD	Co X0	Co X1	Co X2	Co Cor
1	1,4-Dichlorobenzene-d4	40.000	0	399901	1	1	2.842	2.846	0				
2	1,4-Dioxane	23.048	-7.8	112712	0.451	0.489	1.228	1.234	1.98				
3	N-nitrosodimethylamine	22.286	-10.9	156473	0.626	0.702	1.338	1.344	2.71				
4	Pyridine	22.353	-10.6	302670	1.211	1.354	1.362	1.368	3.43				
5	2-Fluorophenol	23.104	-7.6	279311	1.118	1.209	1.227	1.228	5.71				
6	Phenol-d5	23.079	-7.7	354812	1.420	1.538	2.506	2.504	2.88				
7	Phenol	22.976	-8.1	359412	1.438	1.565	2.517	2.515	4.66				
8	Aniline	22.575	-9.7	448476	1.794	1.987	2.574	2.581	3.32				
9	bis(2-chloroethyl)ether	22.922	-8.3	262251	1.049	1.144	2.605	2.611	2.29				
10	2-Chlorophenol	21.650	-13.4	314105	1.257	1.451	2.668	2.672	8.92				
11	1,3-Dichlorobenzene	23.322	-6.7	381153	1.525	1.635	2.794	2.802	3.18				
12	1,2-Dichlorobenzene-d4												
13	1,4-Dichlorobenzene	22.919	-8.3	391818	1.568	1.710	2.856	2.860	1.98				
14	Benzyl alcohol	23.001	-8.0	198096	0.793	0.861	2.938	2.940	4.25				
15	1,2-Dichlorobenzene	23.295	-6.8	369700	1.479	1.587	2.986	2.990	3.46				
16	2-Methylphenol	23.066	-7.7	248949	0.996	1.080	3.014	3.015	3.88				
17	bis(2-chloroisopropyl)ether	21.634	-13.5	441799	1.768	2.043	3.053	3.058	2.98				
18	4-Methylphenol	26.444	5.8	363685	1.455	1.376	3.154	3.152	3.94				
19	N-Nitroso-di-n-propylamine	23.310	-6.8	213825	0.856	0.918	3.173	3.178	5.81				
20	Hexachloroethane	27.057	8.2	173150	0.693	0.640	3.287	3.296	2.56				
21	Naphthalene-d8	40.000	0	1499641	1	1	4.046	4.054	0				
22	Nitrobenzene-d5	23.291	-6.8	362660	0.387	0.415	3.321	3.329	3.63				
23	Nitrobenzene	22.736	-9.1	356051	0.380	0.418	3.340	3.347	3.48				
24	Isophorone	23.236	-7.1	673692	0.719	0.773	3.570	3.576	6.27				
25	2-Nitrophenol	26.494	5.9	174356	0.186	0.176	3.647	3.653	10.37				
26	2,4-Dimethylphenol	22.732	-9.0	338898	0.362	0.398	3.671	3.674	4.02				
27	Benzoic acid	25.589	2.4	214304	0.229	0.223	3.757	3.765	14.34				
28	bis(2-Chloroethoxy)methane	22.854	-8.6	355402	0.379	0.415	3.776	3.785	1.62				
29	3,5-Dimethylphenol	23.828	-4.7	377411	0.403	0.422	3.810	3.812	6.78				
30	2,4-Dichlorophenol	22.984	-8.1	313412	0.334	0.364	3.887	3.889	9.24				
31	1,2,4-Trichlorobenzene	23.567	-5.7	370827	0.396	0.420	3.983	3.989	3.92				
32	3,4-Dimethylphenol	23.021	-7.9	417503	0.445	0.484	3.988	3.988	7.95				
33	Naphthalene	22.794	-8.8	949129	1.013	1.111	4.070	4.075	3.10				
34	4-Chloroaniline	22.922	-8.3	403757	0.431	0.470	4.119	4.125	4.88				
35	2,6-Dichlorophenol	23.877	-4.5	304630	0.325	0.340	4.128	4.132	5.63				
36	Hexachlorobutadiene	23.434	-6.3	259490	0.277	0.295	4.196	4.203	3.57				
37	Hydroquinone												
38	4-Chloro-3-methylphenol	23.966	-4.1	281949	0.301	0.314	4.644	4.644	6.21				
39	2-Methylnaphthalene	23.583	-5.7	687218	0.733	0.777	4.831	4.837	3.92				
40	1-Methylnaphthalene	23.599	-5.6	604458	0.645	0.683	4.941	4.950	3.67				
41	Acenaphthene-d10	40.000	0	969712	1	1	6.052	6.057	0				
42	Hexachlorocyclopentadiene	22.757	-9.0	313972	0.518	0.569	5.008	5.017	5.17				
43	2,3,5-Trichlorophenol	24.207	-3.2	236214	0.390	0.403	5.023	5.022	6.56				
44	2,4,6-Trichlorophenol	23.649	-5.4	254213	0.419	0.443	5.148	5.153	4.86				
45	2,4,5-Trichlorophenol	24.035	-3.9	268274	0.443	0.460	5.186	5.187	6.14				
46	2-Fluorobiphenyl	21.886	-12.5	869264	1.434	1.638	5.254	5.264	8.19				
47	2,3,4-Trichlorophenol	25.377	1.5	243047	0.401	0.395	5.264	5.264	8.75				
48	Biphenyl	23.038	-7.8	882299	1.456	1.580	5.374	5.379	5.72				
49	2-Chloronaphthalene	22.966	-8.1	718912	1.186	1.291	5.393	5.398	6.63				
50	2-Nitroaniline	23.194	-7.2	185578	0.306	0.330	5.513	5.515	5.91				
51	2,6-Dimethylnaphthalene	22.876	-8.5	618034	1.020	1.114	5.556	5.563	2.93				
52	1,4-Dinitrobenzene	28.196	12.8	98646	0.163	0.144	5.681	5.685	11.97				
53	Dimethylphthalate	23.147	-7.4	804885	1.328	1.434	5.744	5.753	2.45				
54	1,3-Dinitrobenzene	25.078	0.1	107136	0.177	0.177	5.768	5.773	7.41				
55	2,6-Dinitrotoluene	24.847	-0.6	170415	0.281	0.283	5.807	5.814	5.56				
56	1,2-Dinitrobenzene	25.187	0.7	68997	0.114	0.113	5.869	5.871	4.50				
57	Acenaphthylene	22.780	-8.9	1067208	1.761	1.932	5.879	5.887	3.11				
58	3-Nitroaniline	24.235	-3.1	159619	0.263	0.272	6.004	6.006	3.80				
59	Acenaphthene	22.936	-8.3	743109	1.226	1.336	6.091	6.096	1.99				
60	2,4-Dinitrophenol	26.882	19.5	92749	0.153	0.111	6.129	6.128	24.40	-0.0089	0.1399		0.9986
61	4-Nitrophenol	21.193	-15.2	104700	0.173	0.204	6.210	6.201	8.52				
62	2,4-Dinitrotoluene	24.770	-0.9	221453	0.365	0.369	6.287	6.292	6.44				
63	Dibenzofuran	23.061	-7.8	1041237	1.718	1.862	6.297	6.305	3.14				
64	2,3,5,6-Tetrachlorophenol	24.677	-1.3	198310	0.327	0.331	6.393	6.395	6.53				
65	2,3,4,6-Tetrachlorophenol	23.941	-4.2	236632	0.390	0.408	6.445	6.447	9.77				
66	2,3,5-Trimethylnaphthalene	23.734	-5.1	687270	1.134	1.194	6.550	6.559	4.58				
67	Diethylphthalate	23.231	-7.1	792475	1.308	1.407	6.597	6.606	3.07				
68	Fluorene	23.514	-5.9	803725	1.326	1.410	6.710	6.718	4.68				
69	4-Chlorophenyl-phenylether	23.091	-7.6	438136	0.723	0.783	6.719	6.729	5.17				
70	4-Nitroaniline	25.316	1.3	167065	0.276	0.272	6.738	6.740	4.72				
71	Phenanthrene-d10	40.000	0	1781067	1	1	7.794	7.799	0				
72	4,6-Dinitro-2-methylphenol	28.942	15.8	155489	0.140	0.107	6.775	6.779	20.90	-0.0075	0.1311		0.9966
73	N-Nitrosodiphenylamine	20.968	-16.1	681450	0.612	0.730	6.865	6.870	2.33				
74	Azobenzene	21.947	-12.2	714478	0.642	0.731	6.908	6.917	2.41				
75	2,4,6-Tribromophenol	25.245	2.5	132420	0.135	0.130	6.993	6.999	7.80				
76	4-Bromophenyl-phenylether	23.374	-6.2	261753	0.235	0.251	7.296	7.303	5.46				
77	Hexachlorobenzene	23.119	-7.5	288304	0.259	0.280	7.348	7.356	6.02				
78	Pentachlorophenol	24.194	-3.2	169351	0.152	0.157	7.580	7.580	9.15				
79	Dibenzothiophene	23.904	-4.4	1201043	1.079	1.128	7.674	7.682	6.89				
80	Phenanthrene	22.902	-8.4	1222914	1.099	1.199	7.817	7.826	2.53				
81	Dinoseb												
82	Anthracene	22.872	-8.5	1227372	1.103	1.205	7.876	7.881	2.67				
83	Carbazole	23.351	-6.6	988145	0.888	0.950	8.057	8.061	1.89				
84	Di-n-butylphthalate	23.015	-7.9	1227340	1.103	1.198	8.455	8.468	5.91				
85	1-Methylphenanthrene	23.015	-7.9	890374	0.800	0.869	8.488	8.496	2.77				
86	Fluoranthene	23.092	-7.6	1372086	1.233	1.334	9.097	9.101	3.20				
87	Chrysene-d12	40.000	0	2045867	1	1	10.574	10.574	0				
88	Benzidine												
89	Pyrene	23.282	-6.9	1444082	1.129	1.213	9.333	9.337	2.14				
90	Terphenyl-d14	23.226	-5.4	1039752	0.813	0.860	9.505	9.510	3.45				
91	Butylbenzylphthalate	24.572	-1.7	528856	0.414	0.421	10.015	10.022	7.65				
92	bis(2-ethylhexyl)adipate	23.903	-4.4	409034	0.320	0.335	10.093	10.109	7.63				
93	3,3'-Dichlorobenzidine	24.106	-3.6	482538	0.377	0.391	10.540	10.542	2.48				
94	Benzo(a)anthracene	23.208	-7.2	1364886	1.067	1.150	10.559	10.563	1.97				
95	Chrysene	23.160	-7.4	1293205	1.011	1.092	10.598	10.599	1.98				
96	bis(2-Ethylhexyl)phthalate	24.139	-3.4	804140	0.629	0.651	10.593	10.605	8.22				
97	Perylene-d12	40.000	0	1707574	1	1	11.944	11.944	0				
98	Di-n-octylphthalate	25.919	3.7	1320451	1.237	1.193	11.210	11.225	10.70				
99	Benzo(b)fluoranthene	23.554	-5.8	1213549	1.137	1.207	11.575	11.575	5.21				
100	Benzo(k)fluoranthene	25.085	0.3	1293392	1.212	1.208	11.599	11.600	5.30				
101	Benzo(e)pyrene	24.447	-2.2	1154454	1.082	1.106	11.836	11.833	3.67				
102	Benzo(a)pyrene	24.253	-3.0	1107235	1.122	1.156	11.888	11.887	5.07				
103	Perylene	24.075	-3.7	1173912	1.100	1.172	11.972	11.970	3.62				
104	Indeno(1,2,3-cd)pyrene	24.934	-0.3	1321314	1.238	1.241	13.152	13.153	5.91				
105	Dibenzo(a,h)anthracene	24.508	-2.0	1101809	1.032	1.053	13.172	13.175	4.71				
106	Benzo(g,h,i)perylene	24.763	-0.9	1117425	1.047	1.057	13.516	13.514	4.21				

Data Path : D:\DATA\16B12\
Data File : RBH132.D
Acq On : 12 Feb 2016 8:40
Operator : KVu
Sample : DFTE7A1418
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Thu Jan 21 09:55:42 2016



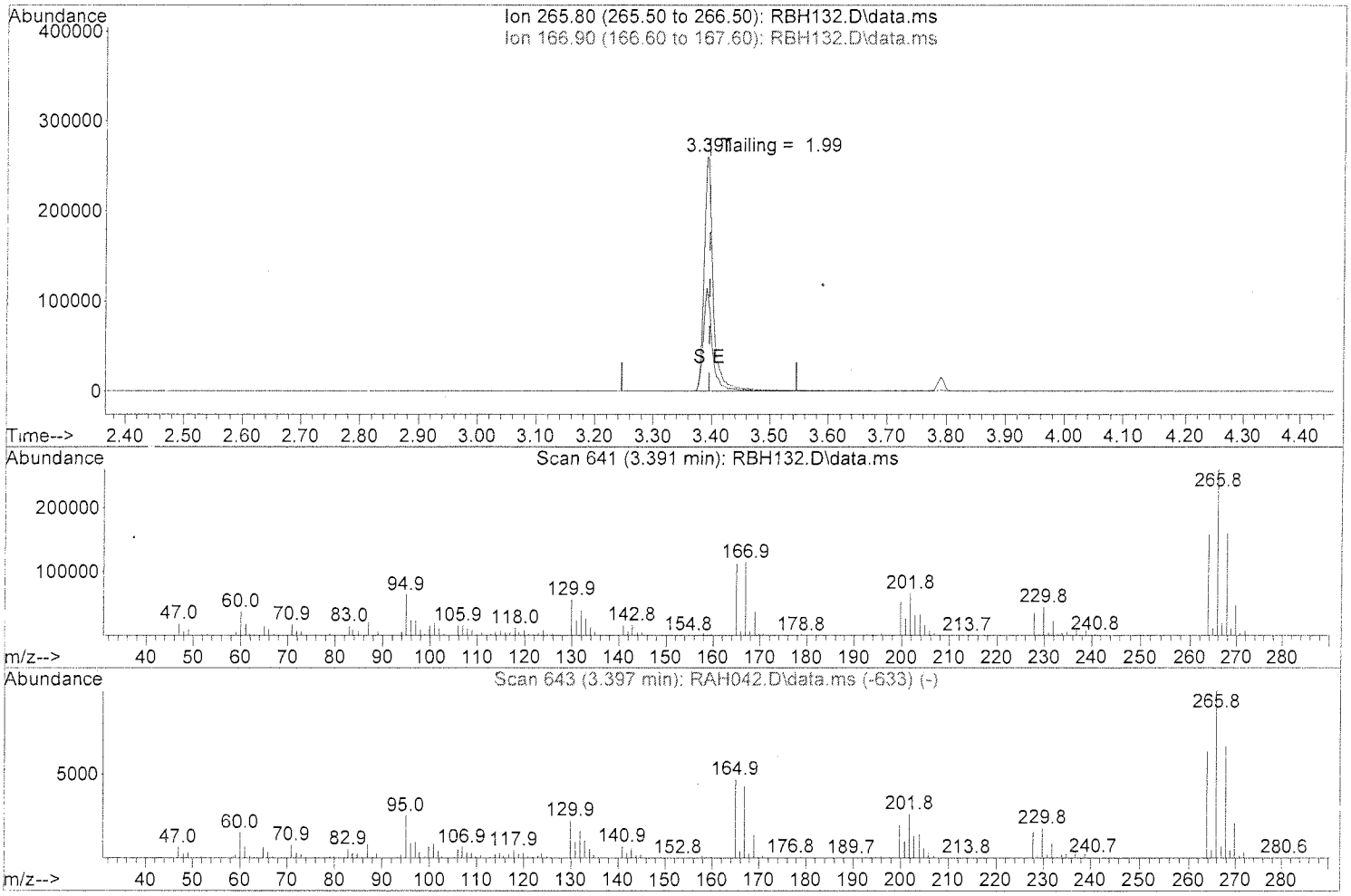
AutoFind: Scans 782, 783, 784; Background Corrected with Scan 773

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	43.9	128804	PASS
68	69	0.00	2	1.9	2216	PASS
69	198	0.00	100	39.9	117163	PASS
70	69	0.00	2	0.6	716	PASS
127	198	10	80	44.6	131080	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	293611	PASS
199	198	5	9	7.2	21091	PASS
275	198	10	60	25.0	73485	PASS
365	198	1	100	3.0	8708	PASS
441	442	0.01	24	15.9	31701	PASS
442	198	50	100	67.7	198869	PASS
443	442	15	24	18.9	37525	PASS

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH132.D
Acq On : 12 Feb 2016 8:40
Sample : DFTE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 11:17:01 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH132.D\data.ms

(1) Pentachlorophenol (T)

3.391min (-0.006) 68.12 ppm

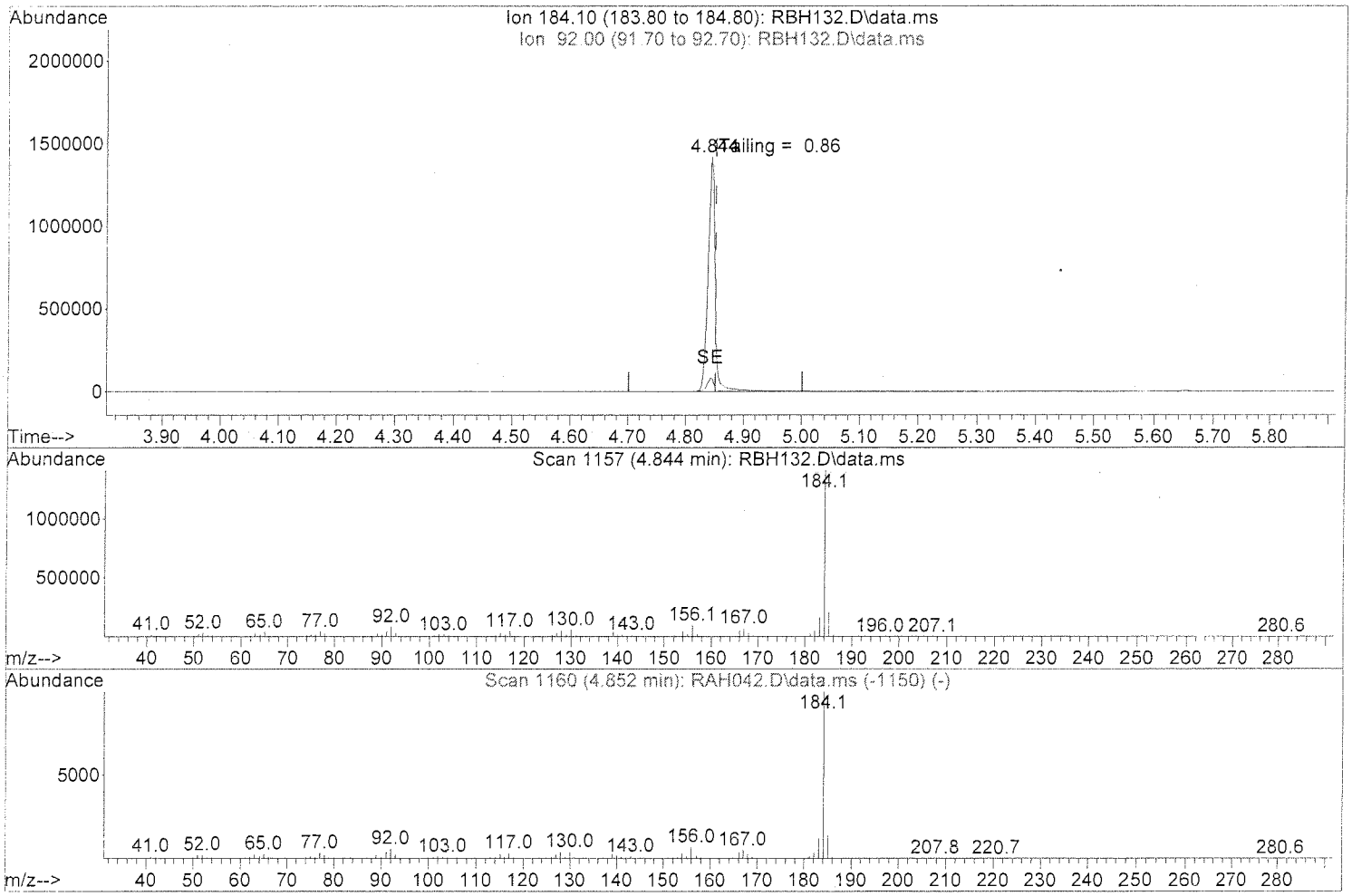
response 279654

Ion	Exp%	Act%
265.80	100	100
166.90	44.50	43.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH132.D
Acq On : 12 Feb 2016 8:40
Sample : DFTE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 11:17:01 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH132.D\data.ms

(3) Benzidine (T)

4.844min (-0.008) 51.00 ppm

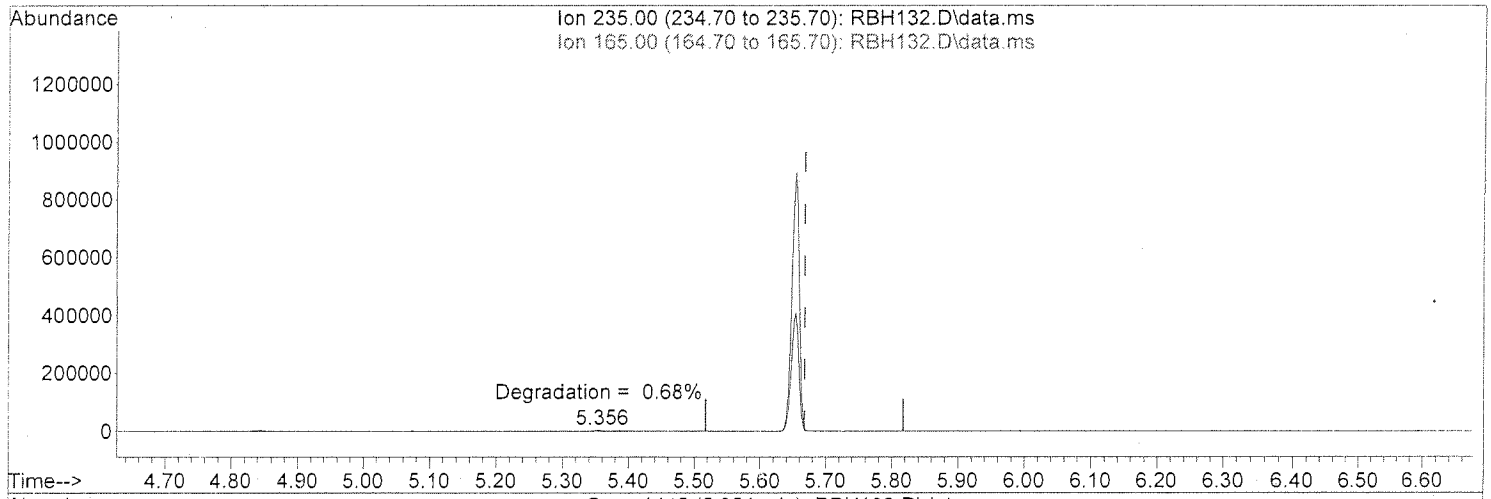
response 1221544

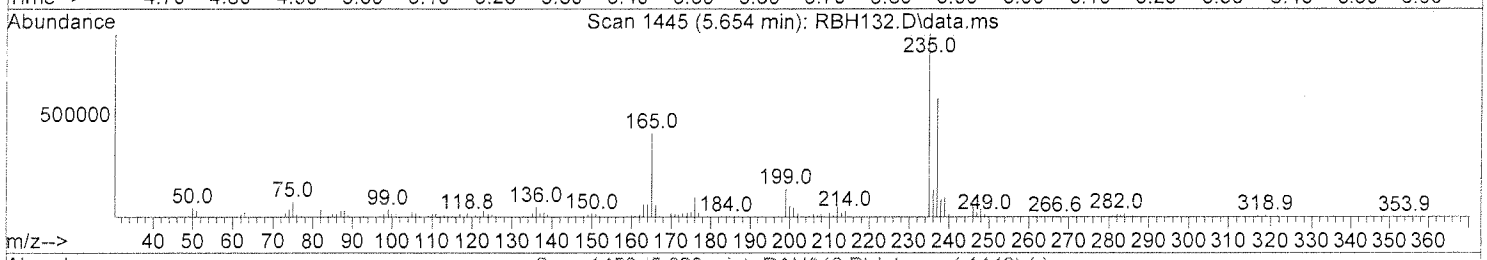
Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.58
0.00	0.00	0.00
0.00	0.00	0.00

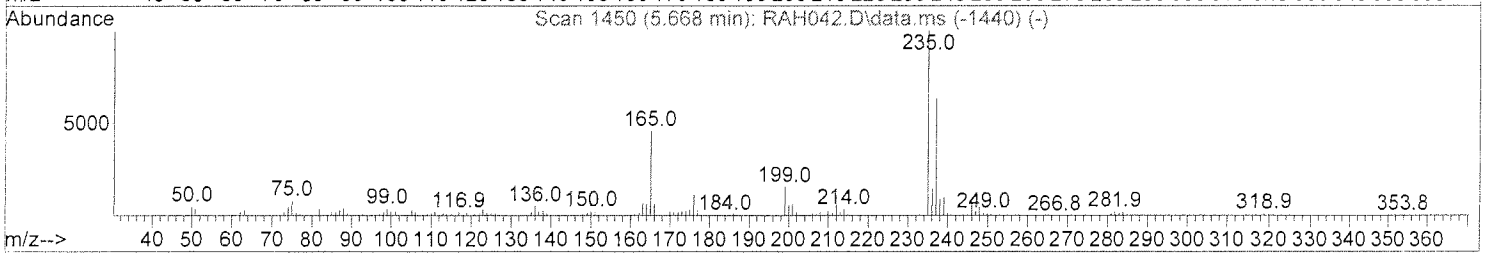
Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH132.D
Acq On : 12 Feb 2016 8:40
Sample : DFTE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 11:17:01 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RBH132.D\data.ms

(6) DDT (T)

5.654min (-0.014) 56.95 ppm

response 699561

Ion	Exp%	Act%
235.00	100	100
165.00	47.10	46.46
0.00	0.00	0.00
0.00	0.00	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D Vial: 3
Acq On : 12 Feb 2016 9:49 Operator: KVu
Sample : CSVE7A1418 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	93	0.00
2	T	1,4-Dioxane	25.000	23.048	7.8	85	0.00
3	T	N-nitrosodimethylamine	25.000	22.286	10.9	82	0.00
4	T	Pyridine	25.000	22.353	10.6	80	0.00
5	S	2-Fluorophenol	25.000	23.104	7.6	85	0.00
6	S	Phenol-d5	25.000	23.079	7.7	84	0.00
7	C,P	Phenol	25.000	22.975	8.1	82	0.00
8	T	Aniline	25.000	22.575	9.7	82	0.00
9	T,P	bis(2-chloroethyl)ether	25.000	22.922	8.3	82	0.00
10	T,P	2-Chlorophenol	25.000	21.650	13.4	76	0.00
11	T	1,3-Dichlorobenzene	25.000	23.322	6.7	85	0.00
12	S	1,2-Dichlorobenzene-d4	25.000	0.000	100.0#	0	-2.99#
13	C	1,4-Dichlorobenzene	25.000	22.919	8.3	84	0.00
14	T	Benzyl alcohol	25.000	23.001	8.0	83	0.00
15	T	1,2-Dichlorobenzene	25.000	23.295	6.8	83	0.00
16	T,P	2-Methylphenol	25.000	23.066	7.7	84	0.00
17	T	bis(2-chloroisopropyl)ether	25.000	21.634	13.5	78	0.00
18	T,P	4-Methylphenol	25.000	26.444	-5.8	96	0.00
19	P,P	N-Nitroso-di-n-propylamine	25.000	23.310	6.8	86	0.00
20	T,P	Hexachloroethane	25.000	27.057	-8.2	98	0.00
21	I	Naphthalene-d8	40.000	40.000	0.0	94	0.00
22	S	Nitrobenzene-d5	25.000	23.291	6.8	85	0.00
23	T,P	Nitrobenzene	25.000	22.736	9.1	83	0.00
24	T,P	Isophorone	25.000	23.236	7.1	84	0.00
25	C,P	2-Nitrophenol	25.000	26.464	-5.9	94	0.00
26	T,P	2,4-Dimethylphenol	25.000	22.739	9.0	83	0.00
27	T	Benzoic acid	25.000	25.589	-2.4	92	0.00
28	T,P	bis(2-Chloroethoxy)methane	25.000	22.854	8.6	85	0.00
29	T	3,5-Dimethylphenol	25.000	23.828	4.7	94	0.00
30	C,P	2,4-Dichlorophenol	25.000	22.984	8.1	79	0.00
31	T	1,2,4-Trichlorobenzene	25.000	23.567	5.7	86	0.00
32	T	3,4-Dimethylphenol	25.000	23.021	7.9	84	0.00
33	T.P	Naphthalene	25.000	22.794	8.8	83	0.00
34	T	4-Chloroaniline	25.000	22.922	8.3	84	0.00
35	T	2,6-Dichlorophenol	25.000	23.877	4.5	88	0.00
36	C	Hexachlorobutadiene	25.000	23.434	6.3	86	0.00
37	T	Hydroquinone	25.000	0.000	100.0#	0	0.00
38	C,P	4-Chloro-3-methylphenol	25.000	23.966	4.1	87	0.00
39	T,P	2-Methylnaphthalene	25.000	23.583	5.7	87	0.00
40	T	1-Methylnaphthalene	25.000	23.599	5.6	86	0.00
41	I	Acenaphthene-d10	40.000	40.000	0.0	96	0.00
42	P	Hexachlorocyclopentadiene	25.000	22.758	9.0	85	0.00
43	T	2,3,5-Trichlorophenol	25.000	24.207	3.2	91	0.00
44	C,P	2,4,6-Trichlorophenol	25.000	23.649	5.4	89	0.00
45	T,P	2,4,5-Trichlorophenol	25.000	24.034	3.9	90	0.00
46	S	2-Fluorobiphenyl	25.000	21.886	12.5	86	0.00
47	T	2,3,4-Trichlorophenol	25.000	25.377	-1.5	100	0.00
48	T	Biphenyl	25.000	23.038	7.8	87	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D Vial: 3
Acq On : 12 Feb 2016 9:49 Operator: KVu
Sample : CSVE7A1418 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T,P	2-Chloronaphthalene	25.000	22.966	8.1	87	0.00
50	T	2-Nitroaniline	25.000	23.194	7.2	86	0.00
51	T	2,6-Dimethylnaphthalene	25.000	22.876	8.5	87	0.00
52	T	1,4-Dinitrobenzene	25.000	28.196	-12.8	104	0.00
53	T	Dimethylphthalate	25.000	23.148	7.4	87	0.00
54	T	1,3-Dinitrobenzene	25.000	25.018	-0.1	92	0.00
55	T,P	2,6-Dinitrotoluene	25.000	24.847	0.6	92	0.00
56	T	1,2-Dinitrobenzene	25.000	25.187	-0.7	95	0.00
57	T,P	Acenaphthylene	25.000	22.780	8.9	86	0.00
58	T	3-Nitroaniline	25.000	24.235	3.1	92	0.00
59	C,P	Acenaphthene	25.000	22.936	8.3	87	0.00
60	P	2,4-Dinitrophenol	25.000	29.882	-19.5	117	0.00
61	P	4-Nitrophenol	25.000	21.193	15.2	77	0.00
62	T,P	2,4-Dinitrotoluene	25.000	24.770	0.9	93	0.00
63	T,P	Dibenzofuran	25.000	23.061	7.8	87	0.00
64	T	2,3,5,6-Tetrachlorophenol	25.000	24.677	1.3	91	0.00
65	T	2,3,4,6-Tetrachlorophenol	25.000	23.941	4.2	92	0.00
66	T	2,3,5-Trimethylnaphthalene	25.000	23.734	5.1	89	0.00
67	T	Diethylphthalate	25.000	23.231	7.1	87	0.00
68	T,P	Fluorene	25.000	23.514	5.9	88	0.00
69	T,P	4-Chlorophenyl-phenylether	25.000	23.091	7.6	86	0.00
70	T	4-Nitroaniline	25.000	25.316	-1.3	97	0.00
71	I	Phenanthrene-d10	40.000	40.000	0.0	97	0.00
72	T	4,6-Dinitro-2-methylphenol	25.000	28.942	-15.8	124	0.00
73	C	N-Nitrosodiphenylamine	25.000	20.968	16.1	79	0.00
74	T	Azobenzene	25.000	21.947	12.2	83	0.00
75	S	2,4,6-Tribromophenol	25.000	25.545	-2.2	97	0.00
76	T,P	4-Bromophenyl-phenylether	25.000	23.374	6.5	89	0.00
77	T,P	Hexachlorobenzene	25.000	23.119	7.5	88	0.00
78	C,P	Pentachlorophenol	25.000	24.193	3.2	90	0.00
79	T	Dibenzothiophene	25.000	23.904	4.4	89	0.00
80	T,P	Phenanthrene	25.000	22.902	8.4	87	0.00
81	T	Dinoseb	25.000	0.000	100.0#	0	0.00
82	T,P	Anthracene	25.000	22.872	8.5	88	0.00
83	T	Carbazole	25.000	23.352	6.6	91	0.00
84	T	Di-n-butylphthalate	25.000	23.015	7.9	86	-0.01
85	T	1-Methylphenanthrene	25.000	23.015	7.9	88	0.00
86	C,P	Fluoranthene	25.000	23.092	7.6	88	0.00
87	I	Chrysene-d12	40.000	40.000	0.0	96	0.00
88	T	Benzidine	25.000	0.000	100.0#	0	0.00
89	T,P	Pyrene	25.000	23.282	6.9	88	0.00
90	S	Terphenyl-d14	25.000	23.649	5.4	88	0.00
91	T	Butylbenzylphthalate	25.000	24.572	1.7	91	0.00
92	T	bis(2-ethylhexyl)adipate	25.000	23.903	4.4	88	-0.02
93	T	3,3'-Dichlorobenzidine	25.000	24.106	3.6	92	0.00
94	T,P	Benzo(a)anthracene	25.000	23.208	7.2	89	0.00
95	T,P	Chrysene	25.000	23.160	7.4	88	0.00
96	T	bis(2-Ethylhexyl)phthalate	25.000	24.139	3.4	89	-0.01

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D Vial: 3
Acq On : 12 Feb 2016 9:49 Operator: KVu
Sample : CSVE7A1418 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
97	I	Perylene-d12	40.000	40.000	0.0	93	0.00
98	C	Di-n-octylphthalate	25.000	25.919	-3.7	91	-0.01
99	T,P	Benzo(b)fluoranthene	25.000	23.554	5.8	83	0.00
100	T,P	Benzo(k)fluoranthene	25.000	25.085	-0.3	93	0.00
101	T	Benzo(e)pyrene	25.000	24.447	2.2	89	0.00
102	C,P	Benzo(a)pyrene	25.000	24.253	3.0	88	0.00
103	T	Perylene	25.000	24.073	3.7	87	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	25.000	24.934	0.3	90	0.00
105	T,P	Dibenzo(a,h)anthracene	25.000	24.508	2.0	90	0.00
106	T,P	Benzo(g,h,i)perylene	25.000	24.763	0.9	90	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D
Acq On : 12 Feb 2016 9:49
Sample : CSVE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

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	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	93	0.00
2	T	1,4-Dioxane	0.489	0.451	7.8	85	0.00
3	T	N-nitrosodimethylamine	0.702	0.626	10.8	82	0.00
4	T	Pyridine	1.354	1.211	10.6	80	0.00
5	S	2-Fluorophenol	1.209	1.118	7.5	85	0.00
6	S	Phenol-d5	1.538	1.420	7.7	84	0.00
7	C,P	Phenol	1.565	1.438	8.1	82	0.00
8	T	Aniline	1.987	1.794	9.7	82	0.00
9	T,P	bis(2-chloroethyl)ether	1.144	1.049	8.3	82	0.00
10	T,P	2-Chlorophenol	1.451	1.257	13.4	76	0.00
11	T	1,3-Dichlorobenzene	1.635	1.525	6.7	85	0.00
12	S	1,2-Dichlorobenzene-d4	0.000	0.000#	0.0	0#	-2.99#
13	C	1,4-Dichlorobenzene	1.710	1.568	8.3	84	0.00
14	T	Benzyl alcohol	0.861	0.793	7.9	83	0.00
15	T	1,2-Dichlorobenzene	1.587	1.479	6.8	83	0.00
16	T,P	2-Methylphenol	1.080	0.996	7.8	84	0.00
17	T	bis(2-chloroisopropyl)ether	2.043	1.768	13.5	78	0.00
18	T,P	4-Methylphenol	1.376	1.455	-5.7	96	0.00
19	P,P	N-Nitroso-di-n-propylamine	0.918	0.856	6.8	86	0.00
20	T,P	Hexachloroethane	0.640	0.693	-8.3	98	0.00
21	I	Naphthalene-d8	1.000	1.000	0.0	94	0.00
22	S	Nitrobenzene-d5	0.415	0.387	6.7	85	0.00
23	T,P	Nitrobenzene	0.418	0.380	9.1	83	0.00
24	T,P	Isophorone	0.773	0.719	7.0	84	0.00
25	C,P	2-Nitrophenol	0.176	0.186	-5.7	94	0.00
26	T,P	2,4-Dimethylphenol	0.398	0.362	9.0	83	0.00
27	T	Benzoic acid	0.223	0.229	-2.7	92	0.00
28	T,P	bis(2-Chloroethoxy)methane	0.415	0.379	8.7	85	0.00
29	T	3,5-Dimethylphenol	0.422	0.403	4.5	94	0.00
30	C,P	2,4-Dichlorophenol	0.364	0.334	8.2	79	0.00
31	T	1,2,4-Trichlorobenzene	0.420	0.396	5.7	86	0.00
32	T	3,4-Dimethylphenol	0.484	0.445	8.1	84	0.00
33	T.P	Naphthalene	1.111	1.013	8.8	83	0.00
34	T	4-Chloroaniline	0.470	0.431	8.3	84	0.00
35	T	2,6-Dichlorophenol	0.340	0.325	4.4	88	0.00
36	C	Hexachlorobutadiene	0.295	0.277	6.1	86	0.00
37	T	Hydroquinone	0.000	0.000#	0.0	0#	0.00
38	C,P	4-Chloro-3-methylphenol	0.314	0.301	4.1	87	0.00
39	T,P	2-Methylnaphthalene	0.777	0.733	5.7	87	0.00
40	T	1-Methylnaphthalene	0.683	0.645	5.6	86	0.00
41	I	Acenaphthene-d10	1.000	1.000	0.0	96	0.00
42	P	Hexachlorocyclopentadiene	0.569	0.518	9.0	85	0.00
43	T	2,3,5-Trichlorophenol	0.403	0.390	3.2	91	0.00
44	C,P	2,4,6-Trichlorophenol	0.443	0.419	5.4	89	0.00
45	T,P	2,4,5-Trichlorophenol	0.460	0.443	3.7	90	0.00
46	S	2-Fluorobiphenyl	1.638	1.434	12.5	86	0.00
47	T	2,3,4-Trichlorophenol	0.395	0.401	-1.5	100	0.00
48	T	Biphenyl	1.580	1.456	7.8	87	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D Vial: 3
Acq On : 12 Feb 2016 9:49 Operator: KVu
Sample : CSVE7A1418 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

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)
49	T,P	2-Chloronaphthalene	1.291	1.186	8.1	87	0.00
50	T	2-Nitroaniline	0.330	0.306	7.3	86	0.00
51	T	2,6-Dimethylnaphthalene	1.114	1.020	8.4	87	0.00
52	T	1,4-Dinitrobenzene	0.144	0.163	-13.2	104	0.00
53	T	Dimethylphthalate	1.434	1.328	7.4	87	0.00
54	T	1,3-Dinitrobenzene	0.177	0.177	0.0	92	0.00
55	T,P	2,6-Dinitrotoluene	0.283	0.281	0.7	92	0.00
56	T	1,2-Dinitrobenzene	0.113	0.114	-0.9	95	0.00
57	T,P	Acenaphthylene	1.932	1.761	8.9	86	0.00
58	T	3-Nitroaniline	0.272	0.263	3.3	92	0.00
59	C,P	Acenaphthene	1.336	1.226	8.2	87	0.00
60	P	2,4-Dinitrophenol	0.111	0.153	-37.8#	117	0.00
61	P	4-Nitrophenol	0.204	0.173	15.2	77	0.00
62	T,P	2,4-Dinitrotoluene	0.369	0.365	1.1	93	0.00
63	T,P	Dibenzofuran	1.862	1.718	7.7	87	0.00
64	T	2,3,5,6-Tetrachlorophenol	0.331	0.327	1.2	91	0.00
65	T	2,3,4,6-Tetrachlorophenol	0.408	0.390	4.4	92	0.00
66	T	2,3,5-Trimethylnaphthalene	1.194	1.134	5.0	89	0.00
67	T	Diethylphthalate	1.407	1.308	7.0	87	0.00
68	T,P	Fluorene	1.410	1.326	6.0	88	0.00
69	T,P	4-Chlorophenyl-phenylether	0.783	0.723	7.7	86	0.00
70	T	4-Nitroaniline	0.272	0.276	-1.5	97	0.00
71	I	Phenanthrene-d10	1.000	1.000	0.0	97	0.00
72	T	4,6-Dinitro-2-methylphenol	0.107	0.140	-30.8#	124	0.00
73	C	N-Nitrosodiphenylamine	0.730	0.612	16.2	79	0.00
74	T	Azobenzene	0.731	0.642	12.2	83	0.00
75	S	2,4,6-Tribromophenol	0.120	0.122	-1.7	97	0.00
76	T,P	4-Bromophenyl-phenylether	0.251	0.235	6.4	89	0.00
77	T,P	Hexachlorobenzene	0.280	0.259	7.5	88	0.00
78	C,P	Pentachlorophenol	0.157	0.152	3.2	90	0.00
79	T	Dibenzothiophene	1.128	1.079	4.3	89	0.00
80	T,P	Phenanthrene	1.199	1.099	8.3	87	0.00
81	T	Dinoseb	0.000	0.000#	0.0	0#	0.00
82	T,P	Anthracene	1.205	1.103	8.5	88	0.00
83	T	Carbazole	0.950	0.888	6.5	91	0.00
84	T	Di-n-butylphthalate	1.198	1.103	7.9	86	-0.01
85	T	1-Methylphenanthrene	0.869	0.800	7.9	88	0.00
86	C,P	Fluoranthene	1.334	1.233	7.6	88	0.00
87	I	Chrysene-d12	1.000	1.000	0.0	96	0.00
88	T	Benzidine	0.000	0.000#	0.0	0#	0.00
89	T,P	Pyrene	1.213	1.129	6.9	88	0.00
90	S	Terphenyl-d14	0.860	0.813	5.5	88	0.00
91	T	Butylbenzylphthalate	0.421	0.414	1.7	91	0.00
92	T	bis(2-ethylhexyl)adipate	0.335	0.320	4.5	88	-0.02
93	T	3,3'-Dichlorobenzidine	0.391	0.377	3.6	92	0.00
94	T,P	Benzo(a)anthracene	1.150	1.067	7.2	89	0.00
95	T,P	Chrysene	1.092	1.011	7.4	88	0.00
96	T	bis(2-Ethylhexyl)phthalate	0.651	0.629	3.4	89	-0.01

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D Vial: 3
Acq On : 12 Feb 2016 9:49 Operator: KVu
Sample : CSVE7A1418 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

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)
97	I	Perylene-d12	1.000	1.000	0.0	93	0.00
98	C	Di-n-octylphthalate	1.193	1.237	-3.7	91	-0.01
99	T,P	Benzo(b)fluoranthene	1.207	1.137	5.8	83	0.00
100	T,P	Benzo(k)fluoranthene	1.208	1.212	-0.3	93	0.00
101	T	Benzo(e)pyrene	1.106	1.082	2.2	89	0.00
102	C,P	Benzo(a)pyrene	1.156	1.122	2.9	88	0.00
103	T	Perylene	1.142	1.100	3.7	87	0.00
104	T,P	Indeno(1,2,3-cd)pyrene	1.241	1.238	0.2	90	0.00
105	T,P	Dibenzo(a,h)anthracene	1.053	1.032	2.0	90	0.00
106	T,P	Benzo(g,h,i)perylene	1.057	1.047	0.9	90	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH133.D
Acq On : 12 Feb 2016 9:49
Sample : CSVE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.842	152	399901	40.00	ppm	0.00
21) Naphthalene-d8	4.046	136	1499641	40.00	ppm	0.00
41) Acenaphthene-d10	6.052	164	969712	40.00	ppm	0.00
71) Phenanthrene-d10	7.794	188	1781067	40.00	ppm	0.00
87) Chrysene-d12	10.574	240	2045867	40.00	ppm	0.00
97) Perylene-d12	11.944	264	1707574	40.00	ppm	0.00
System Monitoring Compounds						
5) 2-Fluorophenol	1.927	112	279311	23.10	ppm	0.00
Spiked Amount 30.000			Recovery	=	77.00%	
6) Phenol-d5	2.506	99	354812	23.08	ppm	0.00
Spiked Amount 30.000			Recovery	=	76.93%	
12) 1,2-Dichlorobenzene-d4	0.000	152	0	0.00	ppm	
Spiked Amount 10.000			Recovery	=	0.00%	
22) Nitrobenzene-d5	3.321	82	362660	23.29	ppm	0.00
Spiked Amount 10.000			Recovery	=	232.90%	
46) 2-Fluorobiphenyl	5.254	172	869264	21.89	ppm	0.00
Spiked Amount 10.000			Recovery	=	218.90%	
75) 2,4,6-Tribromophenol	6.993	330	136220	25.55	ppm	0.00
Spiked Amount 30.000			Recovery	=	85.17%	
90) Terphenyl-d14	9.505	244	1039752	23.65	ppm	0.00
Spiked Amount 10.000			Recovery	=	236.50%	
Target Compounds						Qvalue
2) 1,4-Dioxane	1.228	88	112712	23.05	ppm	90
3) N-nitrosodimethylamine	1.338	74	156473	22.29	ppm	100
4) Pyridine	1.362	79	302670	22.35	ppm	94
7) Phenol	2.517	94	359412	22.98	ppm	99
8) Aniline	2.574	93	448476	22.57	ppm	99
9) bis(2-chloroethyl)ether	2.605	93	262251	22.92	ppm	98
10) 2-Chlorophenol	2.668	128	314105	21.65	ppm	95
11) 1,3-Dichlorobenzene	2.794	146	381153	23.32	ppm	100
13) 1,4-Dichlorobenzene	2.856	146	391818	22.92	ppm	96
14) Benzyl alcohol	2.938	108	198096	23.00	ppm	98
15) 1,2-Dichlorobenzene	2.986	146	369700	23.30	ppm	98
16) 2-Methylphenol	3.014	107	248949	23.07	ppm	96
17) bis(2-chloroisopropyl)...	3.053	45	441799	21.63	ppm	97
18) 4-Methylphenol	3.153	107	363685	26.44	ppm	90
19) N-Nitroso-di-n-propyla...	3.173	70	213825	23.31	ppm	95
20) Hexachloroethane	3.288	117	173150	27.06	ppm	93
23) Nitrobenzene	3.340	77	356051	22.74	ppm	98
24) Isophorone	3.570	82	673692	23.24	ppm	92
25) 2-Nitrophenol	3.647	139	174356	26.46	ppm	97
26) 2,4-Dimethylphenol	3.671	107	338898	22.74	ppm	98
27) Benzoic acid	3.757	105	214304	25.59	ppm	100
28) bis(2-Chloroethoxy)met...	3.776	93	355402	22.85	ppm	99
29) 3,5-Dimethylphenol	3.810	107	377411	23.83	ppm	90
30) 2,4-Dichlorophenol	3.887	162	313412	22.98	ppm	91
31) 1,2,4-Trichlorobenzene	3.983	180	370827	23.57	ppm	100
32) 3,4-Dimethylphenol	3.988	107	417503	23.02	ppm	98
33) Naphthalene	4.070	128	949129	22.79	ppm	98
34) 4-Chloroaniline	4.119	127	403757	22.92	ppm	99
35) 2,6-Dichlorophenol	4.128	162	304630	23.88	ppm	99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH133.D
Acq On : 12 Feb 2016 9:49
Sample : CSVE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
36) Hexachlorobutadiene	4.196	225	259490	23.43	ppm		100
38) 4-Chloro-3-methylphenol	4.644	107	281949	23.97	ppm		99
39) 2-Methylnaphthalene	4.831	142	687218	23.58	ppm		99
40) 1-Methylnaphthalene	4.941	142	604458	23.60	ppm		97
42) Hexachlorocyclopentadiene	5.008	237	313972	22.76	ppm		99
43) 2,3,5-Trichlorophenol	5.023	196	236214	24.21	ppm		95
44) 2,4,6-Trichlorophenol	5.148	196	254213	23.65	ppm		97
45) 2,4,5-Trichlorophenol	5.186	196	268274	24.03	ppm		100
47) 2,3,4-Trichlorophenol	5.264	196	243047	25.38	ppm		94
48) Biphenyl	5.374	154	882299	23.04	ppm		99
49) 2-Chloronaphthalene	5.393	162	718912	22.97	ppm		99
50) 2-Nitroaniline	5.513	65	185578	23.19	ppm		98
51) 2,6-Dimethylnaphthalene	5.556	156	618034	22.88	ppm		96
52) 1,4-Dinitrobenzene	5.681	168	98646	28.20	ppm		96
53) Dimethylphthalate	5.744	163	804885	23.15	ppm		99
54) 1,3-Dinitrobenzene	5.768	168	107136	25.02	ppm	#	69
55) 2,6-Dinitrotoluene	5.807	165	170415	24.85	ppm		93
56) 1,2-Dinitrobenzene	5.869	168	68997	25.19	ppm	#	86
57) Acenaphthylene	5.879	152	1067208	22.78	ppm		99
58) 3-Nitroaniline	6.004	138	159619	24.24	ppm		92
59) Acenaphthene	6.091	153	743109	22.94	ppm		100
60) 2,4-Dinitrophenol	6.129	184	92749	29.88	ppm		97
61) 4-Nitrophenol	6.210	109	104700	21.19	ppm		94
62) 2,4-Dinitrotoluene	6.287	165	221453	24.77	ppm		92
63) Dibenzofuran	6.297	168	1041237	23.06	ppm		100
64) 2,3,5,6-Tetrachlorophenol	6.393	230	198310	24.68	ppm		100
65) 2,3,4,6-Tetrachlorophenol	6.445	232	236632	23.94	ppm		100
66) 2,3,5-Trimethylnaphtha...	6.550	170	687270	23.73	ppm		99
67) Diethylphthalate	6.597	149	792475	23.23	ppm		99
68) Fluorene	6.710	166	803725	23.51	ppm		99
69) 4-Chlorophenyl-phenyle...	6.719	204	438136	23.09	ppm		100
70) 4-Nitroaniline	6.738	138	167065	25.32	ppm		89
72) 4,6-Dinitro-2-methylph...	6.775	198	155489	28.94	ppm		89
73) N-Nitrosodiphenylamine	6.865	169	681450	20.97	ppm		98
74) Azobenzene	6.908	77	714478	21.95	ppm		99
76) 4-Bromophenyl-phenylether	7.296	248	261753	23.37	ppm		99
77) Hexachlorobenzene	7.348	284	288304	23.12	ppm		97
78) Pentachlorophenol	7.580	266	169351	24.19	ppm		99
79) Dibenzothiophene	7.674	184	1201043	23.90	ppm		99
80) Phenanthrene	7.817	178	1222914	22.90	ppm		100
82) Anthracene	7.876	178	1227372	22.87	ppm		100
83) Carbazole	8.057	167	988145	23.35	ppm		99
84) Di-n-butylphthalate	8.455	149	1227340	23.02	ppm		99
85) 1-Methylphenanthrene	8.488	192	890374	23.01	ppm		99
86) Fluoranthene	9.097	202	1372086	23.09	ppm		99
89) Pyrene	9.333	202	1444082	23.28	ppm		99
91) Butylbenzylphthalate	10.015	149	528856	24.57	ppm		97
92) bis(2-ethylhexyl)adipate	10.093	129	409034	23.90	ppm		97
93) 3,3'-Dichlorobenzidine	10.540	252	482538	24.11	ppm		99
94) Benzo(a)anthracene	10.559	228	1364886	23.21	ppm		99
95) Chrysene	10.598	228	1293205	23.16	ppm		100
96) bis(2-Ethylhexyl)phtha...	10.593	149	804140	24.14	ppm		99
98) Di-n-octylphthalate	11.210	149	1320451	25.92	ppm		99
99) Benzo(b)fluoranthene	11.575	252	1213549	23.55	ppm		99

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH133.D
Acq On : 12 Feb 2016 9:49
Sample : CSVE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

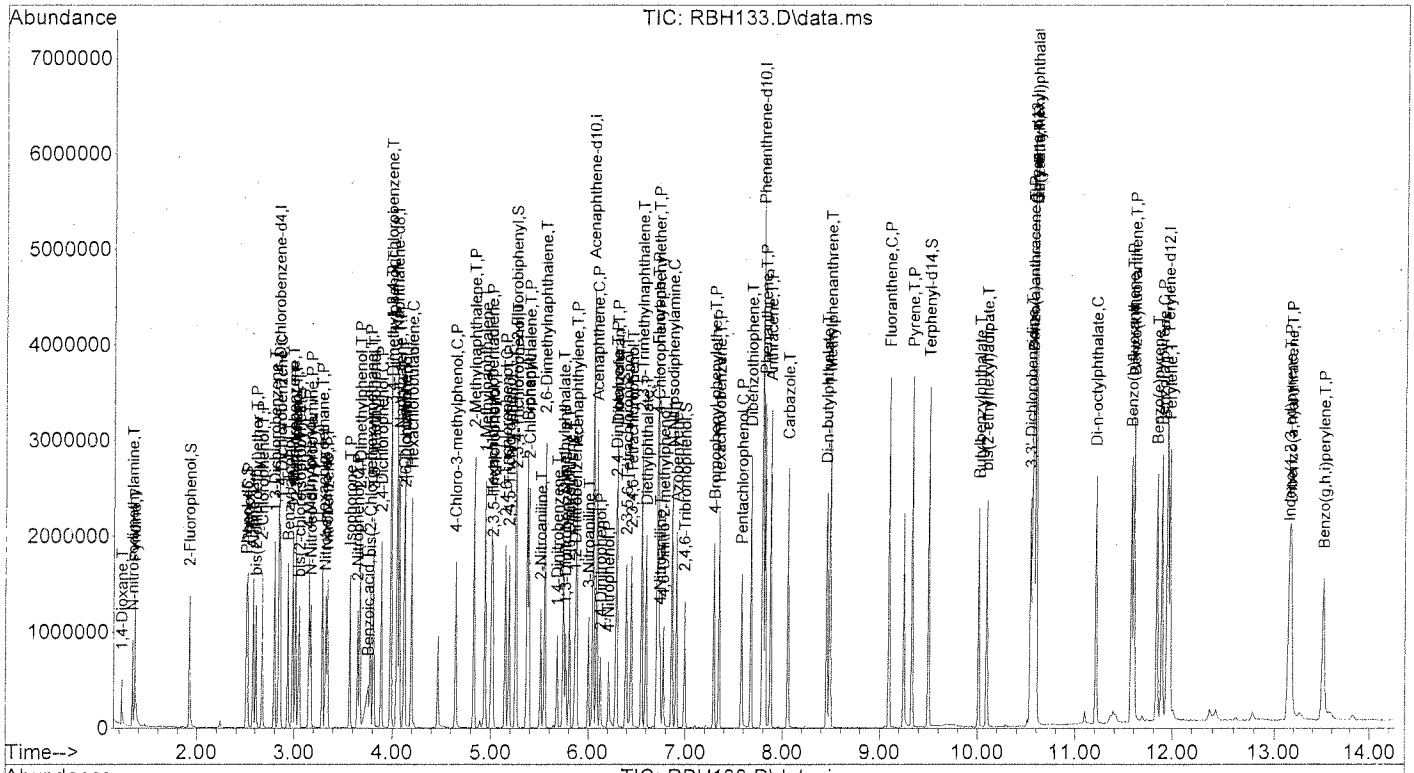
Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

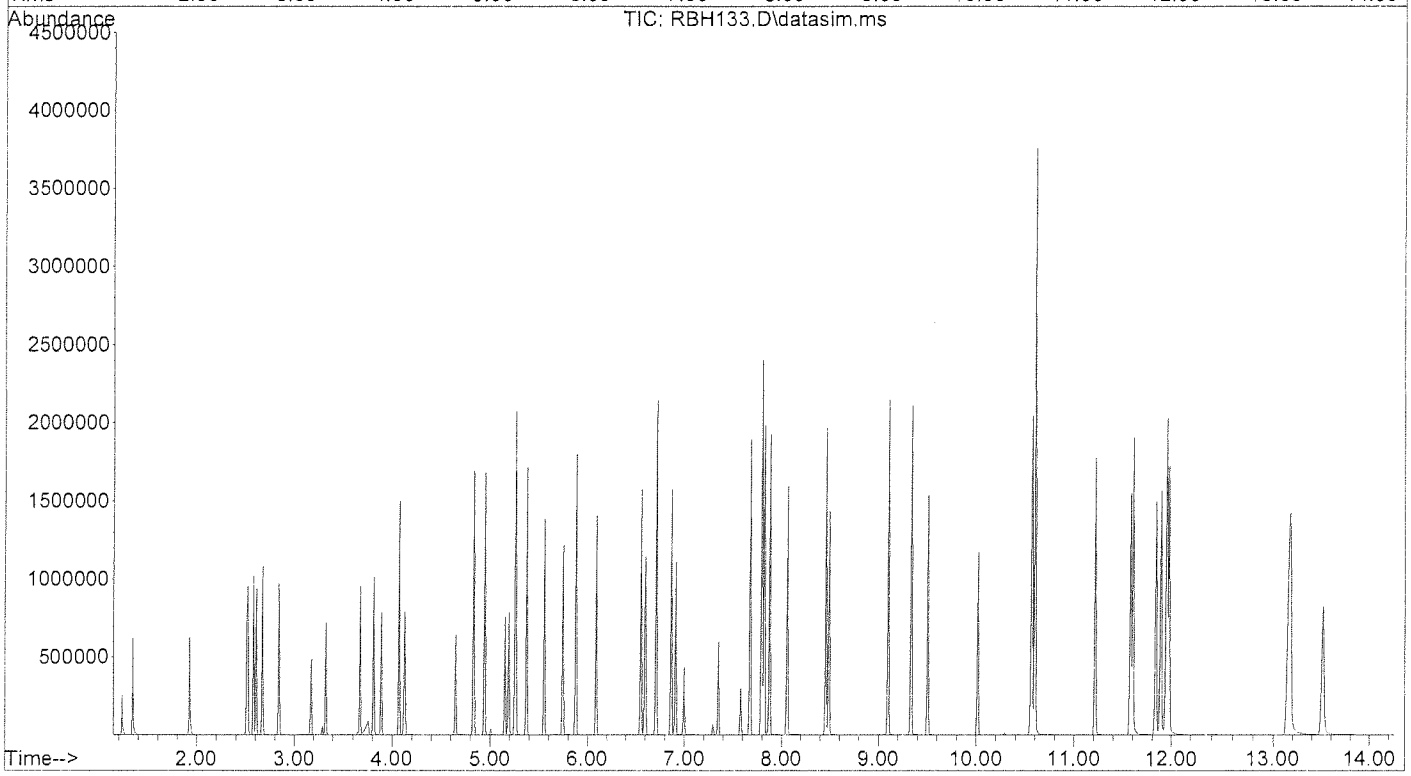
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
100) Benzo(k)fluoranthene	11.599	252	1293392	25.08	ppm	99
101) Benzo(e)pyrene	11.836	252	1154454	24.45	ppm	99
102) Benzo(a)pyrene	11.888	252	1197235	24.25	ppm	100
103) Perylene	11.972	252	1173912	24.07	ppm	99
104) Indeno(1,2,3-cd)pyrene	13.152	276	1321314	24.93	ppm	97
105) Dibenzo(a,h)anthracene	13.172	278	1101809	24.51	ppm	96
106) Benzo(g,h,i)perylene	13.516	276	1117425	24.76	ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH133.D
Vial: 3
Acq On : 12 Feb 2016 9:49
Operator: KVu
Sample : CSVE7A1418
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:29:48 2016
Quant Results File: SVE7A14.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14.M
Quant Title : SEMIVOLATILES
QLast Update : Thu Jan 21 10:41:50 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐

Book #: AE7-015

Method File: SVE7A145 Tune File: DFTPP Start Date/Time: 1/14/16 10:14 End Date/Time: 1/14/16 20:00

ANALYTICAL BATCH: SVE7A145

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
NA	RAH041	IBE7A1401	1			
	042	DFTE7A1401				
	043	SVE7A14 1				100ppm 8270
	044	2				80
	045	3				50
	046	4				40
	047	5				25
	048	6				20
	049	7				10
	050	8				4
	051	9				2
	052	10				0.5
	053	11				0.15
	054	12				0.075
	055	13				0.050
	056	ISVE7A141				ICV
	057	SVE7A14A1	1			100ppm Benzidie
	058	2				80
	059	3				50
	060	4				40
	061	5				25
	062	6				10
	063	7				4
	064	ISVE7A14A1				ICV
	065	SVE7A14A1	1			140ppm App9-add
	066	2				120
	067	3				100
	068	4				80
	069	5				50
	070	6				40
	071	7				20
	072	ISVE7A14C1				ICV

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	1/14/16
ICAL ID	SVE7A14/14A/14S/14C

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-17-03	50
INT. STD.	SS2B-12-12-03	2000
ICV 8270	SS2C-14-17-02	25
DCC/ICAL	SS2C-14-15-01	.05-50
BENZIDINE ICAL	SS2C-14-15-02	4-100
APP 9 Add ICV	SS2C-14-21-01	50
APP 9 ADD ICAL	SS2C-14-20-03	20-140
8270 ICAL	SS2C-14-15-03	80-100
Ben ICV	SS2C-14-17-01	25
Solvent	ID	
CH_2Cl_2	55219	
DATA FILE	16A14	

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-2 ☐

Comments:

Analyzed By: KV

Date Disposed: NA

Disposed By: NA

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE7-015

Method File: SVETA14S Tune File: DFTPP Start Date/Time: 1/19/16 8:26 End Date/Time: 1/19/16 20:15

ANALYTICAL BATCH: CSVETA1403

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RAH 086	IBETA1403				
	087	DFTETA1403				
	088	CSVETA14A03				Ben
	089	CSVETA14C03				Add
	090	CSVETA15B03				App9
	091	ISVETA142				ICV 8270-Sim
	092	CSVETA1403				8270-Sim
SVA003W	093	LOQ-03	1		X	3520-8270
	094	LOD-03				
	095	LOQ-04				35 Dimethy/
	096	LOQ-05				3520-Sim
	097	LOD-05				
	098	LOD-06				
	099	LOQ-07				3520-Ben
	100	LOD-07				
	101	LOQ-08				3520-Thalates
	102	LOD-08				
SVA012W	103	LOQ-24	1		X	3520-App9
	104	LOD-24				
	105	LOD-25				
	106	LOD-26				
	107	LOQ-27				3520-Add
	108	LOD-27				
SVA005S	109	LOQ-13	1	X		3550-App9
	110	LOQ-14				
	111	LOD-14				
	112	LOQ-15				3550-add
	113	LOQ-16				
	114	LOD-16				
	115	LOD-17				
SVA004S	116	LOQ-09	1	X		3550-Sim
	117	LOD-09				

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	1/14/16 - 1/15/16
ICAL ID	SVETA14/14A/14S/14C/15B

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-17-03	50
INT. STD.	SS2B-12-12-03	2000
ICV 8270	SS2C-14-17-02	25
DCC	SS2C-14-16-01	25
BENZIDINE	-16-02	
APP 9	-20-01	
APP 9 ADD	-20-03	50

Solvent	ID
CH_2Cl_2	55219
DATA FILE	16A19

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-2 ☐

Comments:

Analyzed By: KV

Date Disposed: NA

Disposed By: NA

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐

Book #: AE7-015

Method File: SVE7A14S Tune File: DFTPP Start Date/Time: 2/12/16 8:40 End Date/Time: 2/12/16 20:04

ANALYTICAL BATCH: GSVE7A1418

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RBH131	1BE7A1418				
	132	DFTE7A1418				
	133	CSVE7A1418				
	134	CSVE7A14A18				Benzidine
SVB011S	135 DJ 2/12/16	SVB0011SB	1	X		
	136	SVB011SL				
	137	↓ SC				
	138	16B060-02M				
	139	↓ -02S				
SVB009S	140	16B052-01M				
	141	-01S				
	142	-01				
	143	-03				
	144	-04				
	145	-05				
	146	↓ -06	↓			
SVB011S	147	16B060-01	1			
	148	-02				
	149	-04				
	150	-05				
	151	-06				
	152	-07				
	153	-08				
	154	↓ -09				
	155	16B068-01				
	156	-02				
	157	-03				
	158	-04				
	159	-05				
	160	-06				
	161	-07				
	162	-08				

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	1/14/16
ICAL ID	SVE7A14/14A/14S DJ 2/12/16

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-17-03	50
INT. STD.	SS2B-12-12-03	2000
ICV		
DCC	SS2C-14-16-01	25
BENZIDINE	↓ -16-02	25
APP 9		
APP 9 ADD		

Solvent	ID
CH_2Cl_2	55219
DATA FILE	16B12

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-2 ☐

Comments:

Analyzed By: KV / DJ

Date Disposed: 2/16/16

Disposed By: DJ

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE7-015

Method File: SVE7A14S Tune File: DFTPP Start Date/Time: 2/12/16 8:40 End Date/Time: 2/12/16 20:04

ANALYTICAL BATCH: CSVE7A1448

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
SVB011S	RBH163	16B068-09	1	X		
↓	↓ 164	↓ -10	↓	↓		
SVB009S	RBH 165	16B052-01N	1	X		
						DJ 2/12/16

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	1/14/16
ICAL ID	SVE7A14/14A/14S

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-17-03	50
INT. STD.	SS2B-12-12-03	2000
ICV		
DCC	SS2C-14-16-01	>5
BENZIDINE	↓ -16-02	>5
APP 9		
APP 9 ADD		

Solvent	ID
CH_2Cl_2	55219
DATA FILE	16B12

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7/	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-I ☐

Comments:

Analyzed By: KV / DJ

Date Disposed: 2/16/16

Disposed By: DJ

This page is checked during data review.

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
SEMIVOLATILES

SOP	Rev. #
☐ EMAX-3520	5
☐ EMAX-3540	2
☐ EMAX-3546	0
☑ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-625	1

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

☐ MS/MSD can not be extracted due to insufficient amount of samples

Comments:

Book #: ESV-089
Preparation Batch: SVB011S
Matrix: Soil
Micropipette ID: PE00-01 (1000 µL)
Micropipette ID: PE99A-01 (200 µL)

Standards	ID	Amount Added (ml)
Surrogate	SS2A-13-01-10	0.4
LCS/MS (Fall LBT)	SS2A-13-01-14	0.2
LCS/MS		
LCS/MS		
LCS/MS		

Reagent	Lot# / ID
CH_2Cl_2	151090508
Na_2SO_4	SWB-003-08-05
H_2SO_4	-
NaOH	-
Silica Sand	SWB-002-69-19
Silica Gel	-
Reagent Water	-
Residual Chlorine Strip	-
pH Strip	-
Filter Paper	96950284

Lab Sample ID	Sonicator #	Cell #	Concentrator #
SVB011→SB	4	N/A	4
-SL	6		4
-SO	6		4
B060→01	4		4
-02	4		4
-02M	6		4
-02S	6		3
-04	4		3
-05	6		3
-06	6		3
-07	4		3
-08	6		3
-09	6		1
B068→01	4		1
-02	6		1
-03	6		1
-04	4		1
-05	6		1
-06	6		2
-07	4		2
-08	6		2
-09	6		2
-10	4		2

TUNING	
Sonicator #	Reading
4	50%
6	60%

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1	35	35
2	35	35
3	35	35
4	35	35
5		
6		
8		

Thermometer ID = SVOC-T1

Prepared By: [illegible] Witnessed By: TW
Standard Added By: [illegible] Checked By: ML
Extract Received By: DJ 2/12/16 Location: SEO1 # 06
Disposed By: Disposed On:

FileID: SVB011S

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR SEMIVOLATILES

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
16SVB011S01	SVB0115B	30	g	2/11/16 11:56	2	30	2	1	
16SVB011S02	SVB011SL	30	g	2/11/16 11:56	2	30	2	1	
16SVB011S03	SVB011SC	30	g	2/11/16 11:56	2	30	2	1	
16SVB011S04	B060-01	30.02	g	2/11/16 11:58	2	30	2	1	clear
16SVB011S05	B060-02	30	g	2/11/16 11:58	2	30	2	1	clear
16SVB011S06	B060-02M	30	g	2/11/16 11:59	2	30	2	1	clear
16SVB011S07	B060-02S	30	g	2/11/16 11:59	2	30	2	1	clear
16SVB011S08	B060-04	30.01	g	2/11/16 12:00	2	30	2	1	clear
16SVB011S09	B060-05	30.03	g	2/11/16 12:00	2	30	2	1	clear
16SVB011S10	B060-06	30.03	g	2/11/16 12:02	2	30	2	1	clear
16SVB011S11	B060-07	30.01	g	2/11/16 12:02	2	30	2	1	clear
16SVB011S12	B060-08	30	g	2/11/16 12:04	2	30	2	1	clear
16SVB011S13	B060-09	30.01	g	2/11/16 12:04	2	30	2	1	clear
16SVB011S14	B068-01	30.01	g	2/11/16 12:06	2	30	2	1	yellow
16SVB011S15	B068-02	30	g	2/11/16 12:06	2	30	2	1	clear
16SVB011S16	B068-03	30	g	2/11/16 12:07	2	30	2	1	clear
16SVB011S17	B068-04	30.02	g	2/11/16 12:07	2	30	2	1	clear
16SVB011S18	B068-05	30.02	g	2/11/16 12:10	2	30	2	1	clear
16SVB011S19	B068-06	30.01	g	2/11/16 12:10	2	30	2	1	yellow
16SVB011S20	B068-07	30	g	2/11/16 12:11	2	30	2	1	slight yellow
16SVB011S21	B068-08	30	g	2/11/16 12:11	2	30	2	1	clear
16SVB011S22	B068-09	30.03	g	2/11/16 12:13	2	30	2	1	clear
16SVB011S23	B068-10	30.01	g	2/11/16 12:13	2	30	2	1	clear

Balance ID: 10304418. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 2/11/16 17:18 ☐ pHAdj(≤2) @

Prepared By: JVille

☑ Extraction Ended @ 2/11/16 20:01 ☐ pHAdj(≥11) @

Checked By: ML

Comments:

Date 02/11/16

SOP EMAX-3550 Rev. 4

PAH - SIM

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG03-S-005	Date Analyzed:	02/12/16 14:17
Lab Samp ID:	B060-01	Dilution Factor:	1
Lab File ID:	RBH147	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	7.6
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0054	0.011
ACENAPHTHENE	ND	0.022	0.0054	0.011
ACENAPHTHYLENE	ND	0.022	0.0054	0.011
ANTHRACENE	ND	0.022	0.0054	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0054	0.011
BENZO(A)PYRENE	ND	0.022	0.0054	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0054	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0054	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0054	0.011
CHRYSENE	ND	0.022	0.0054	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0054	0.011
FLUORANTHENE	0.0083J	0.022	0.0054	0.011
FLUORENE	ND	0.022	0.0054	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0054	0.011
NAPHTHALENE	ND	0.022	0.0054	0.011
PHENANTHRENE	ND	0.022	0.0054	0.011
PYRENE	0.0067J	0.022	0.0054	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.476	0.7215	66.0	45-105
NITROBENZENE-D5	0.495	0.7215	68.6	35-100
TERPHENYL-D14	0.660	0.7215	91.5	30-125

Quantitation Report (QT Reviewed)

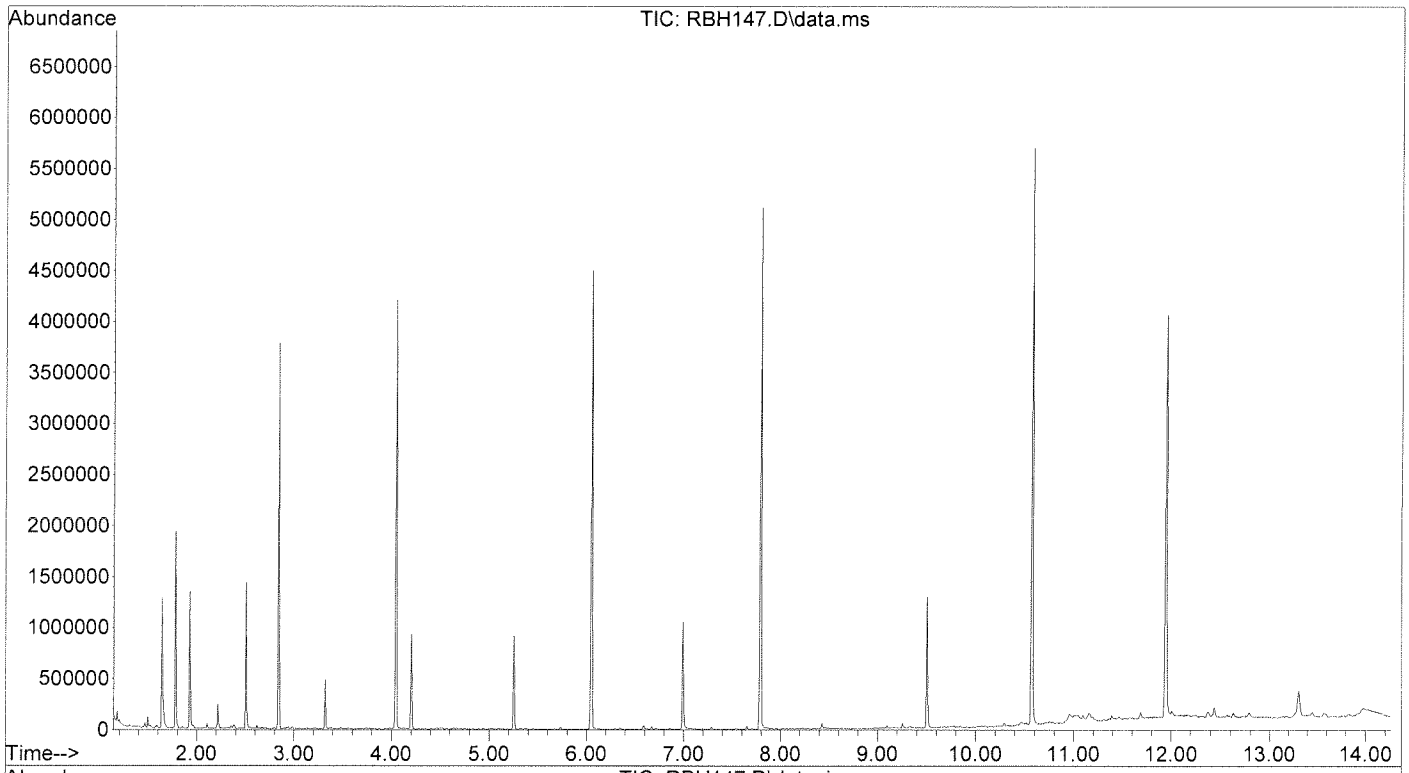
Data File : D:\DATA\16B12\RBH147.D Vial: 17
Acq On : 12 Feb 2016 14:17 Operator: KVu
Sample : 16B060-01 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 09:18:24 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

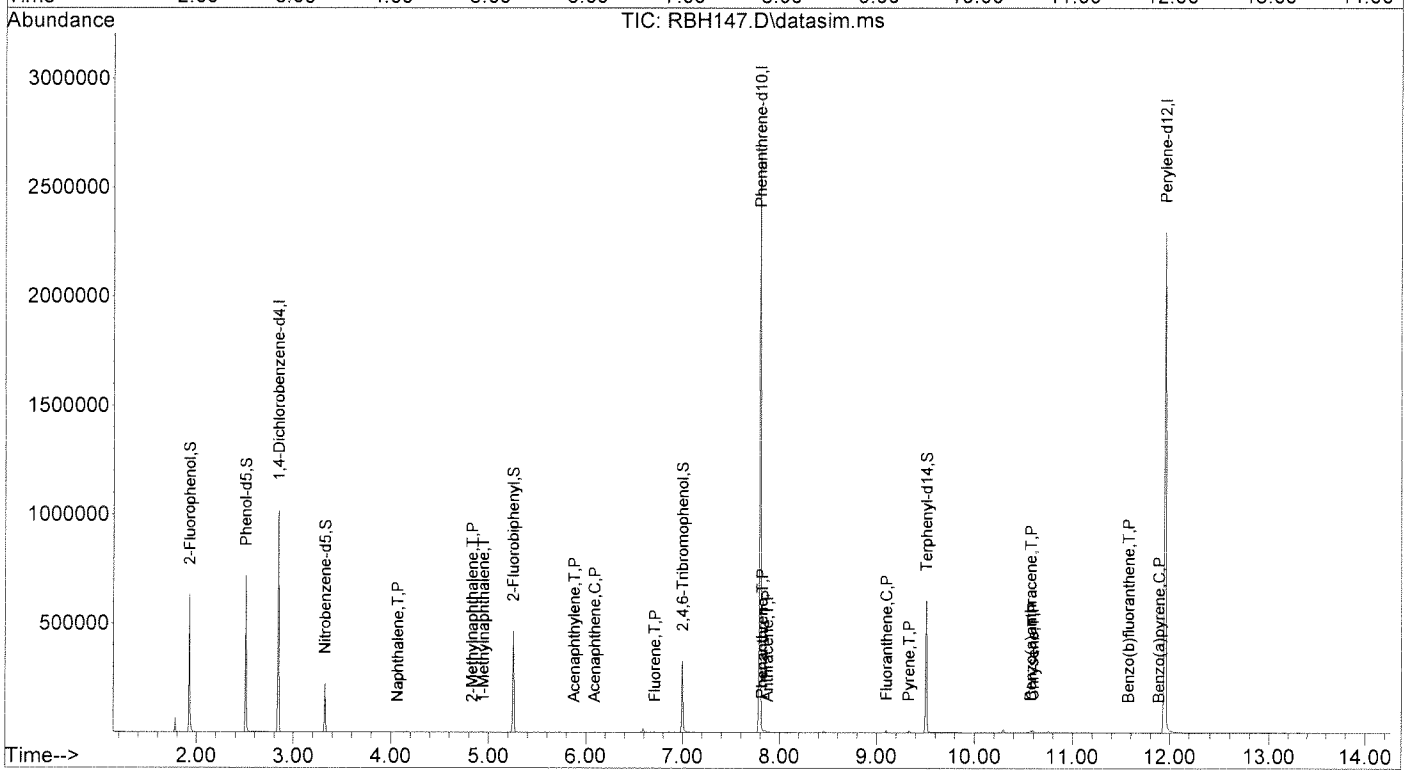
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	505494	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2208964	40.00	ppm	0.00
48) Perylene-d12	11.948	264	2293988	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	279580	19.96	ppm	0.00
Spiked Amount 30.000			Recovery	=	66.53%	
5) Phenol-d5	2.504	99	369065	21.08	ppm	0.00
Spiked Amount 30.000			Recovery	=	70.27%	
10) Nitrobenzene-d5	3.324	82	116301	6.86	ppm	0.00
Spiked Amount 10.000			Recovery	=	68.60%	
20) 2-Fluorobiphenyl	5.252	172	294605	6.60	ppm	-0.01
Spiked Amount 10.000			Recovery	=	66.00%	
32) 2,4,6-Tribromophenol	6.996	330	161866	20.82	ppm	0.00
Spiked Amount 30.000			Recovery	=	69.40%	
43) Terphenyl-d14	9.508	244	497738	9.15	ppm	0.00
Spiked Amount 10.000			Recovery	=	91.50%	
Target Compounds						Qvalue
13] Naphthalene	4.068	128	1992	0.04	ppm	98
15] 2-Methylnaphthalene	4.829	142	1167	0.03	ppm	77
16] 1-Methylnaphthalene	4.944	142	1029	0.03	ppm	99
24] Acenaphthylene	5.877	152	1493	0.03	ppm	100
25] Acenaphthene	6.089	153	1122	0.03	ppm	97
28] Fluorene	6.708	166	991	0.02	ppm	99
36] Phenanthrene	7.820	178	4011	0.06	ppm	95
37] Anthracene	7.874	178	1482	0.02	ppm	97
41] Fluoranthene	9.100	202	8645	0.12	ppm	100
42] Pyrene	9.331	202	7285	0.09	ppm	99
45] Benzo(a)anthracene	10.572	228	9521	0.05	ppm	82
46] Chrysene	10.597	228	2906	0.04	ppm	98
50] Benzo(b)fluoranthene	11.573	252	2237m ND	0.03	ppm	
53] Benzo(a)pyrene	11.887	252	1267	0.02	ppm	87

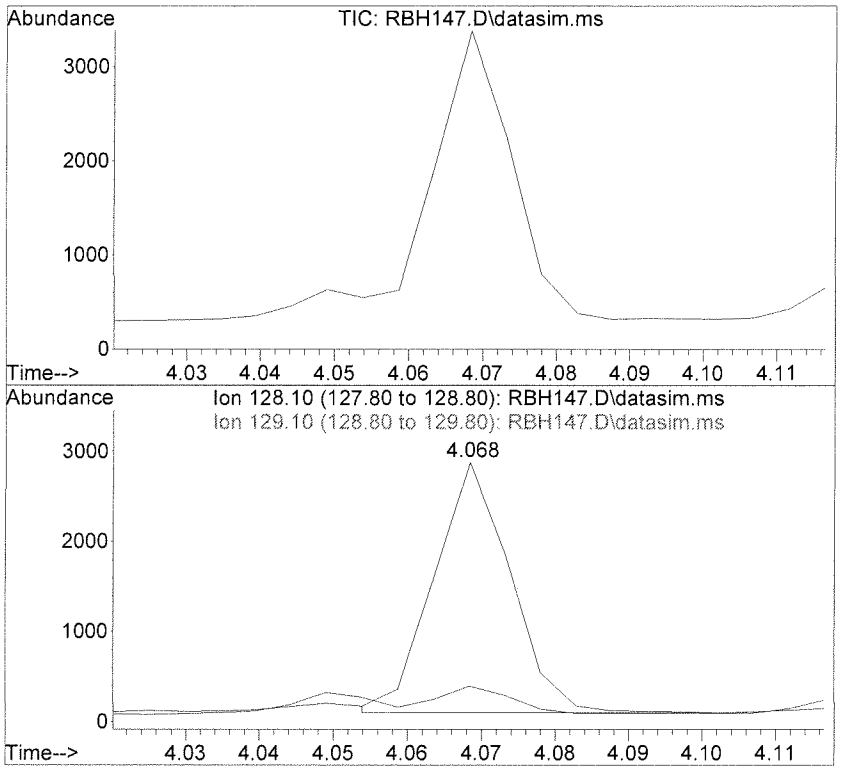
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH147.D Vial: 17
Acq On : 12 Feb 2016 14:17 Operator: KVu
Sample : 16B060-01 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 09:18:24 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M



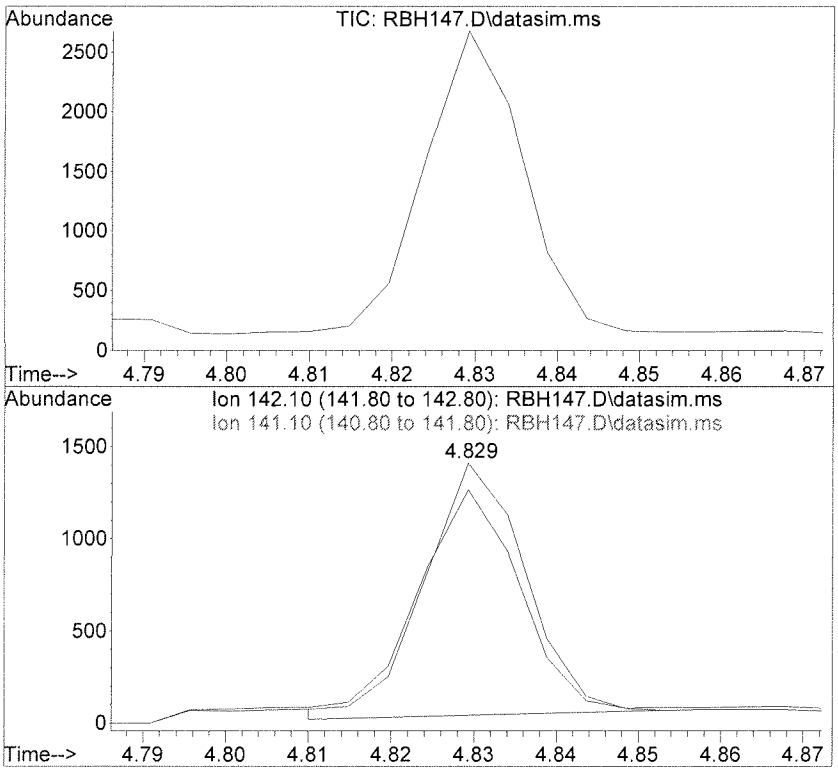




#13
Naphthalene
Concen: 0.04 ppm
RT: 4.068 min Scan# 607
Delta R.T. -0.009 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:128 Resp: 1992

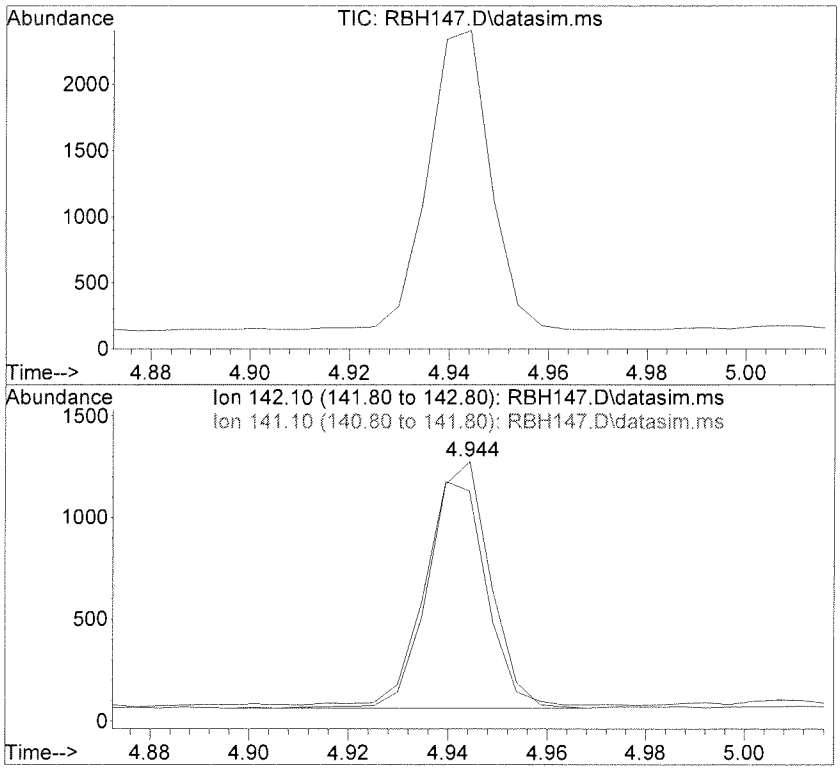
Ion	Ratio	Lower	Upper
128	100		
129	10.3	0.0	41.0



#15
2-Methylnaphthalene
Concen: 0.03 ppm
RT: 4.829 min Scan# 765
Delta R.T. -0.008 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:142 Resp: 1167

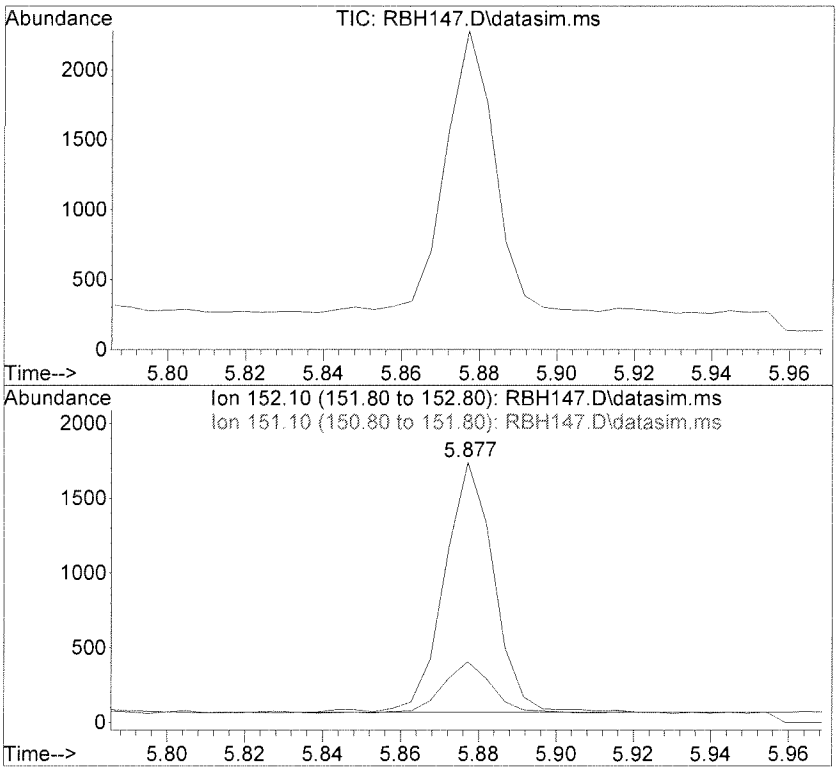
Ion	Ratio	Lower	Upper
142	100		
141	111.2	59.7	119.7



#16
1-Methylnaphthalene
Concen: 0.03 ppm
RT: 4.944 min Scan# 789
Delta R.T. -0.008 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:142 Resp: 1029

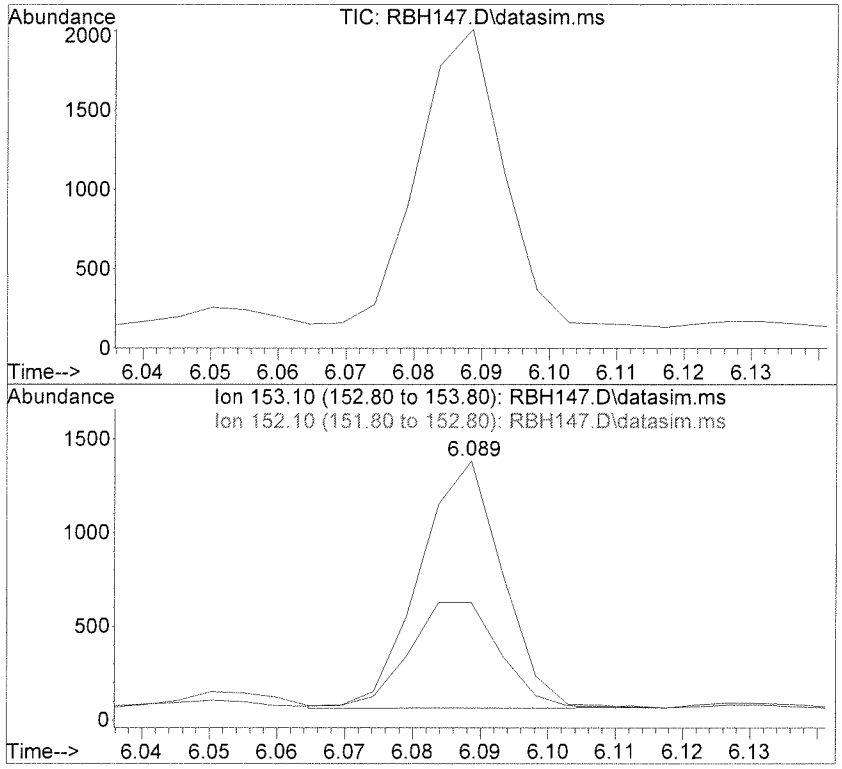
Ion	Ratio	Lower	Upper
142	100		
141	92.0	62.7	122.7



#24
Acenaphthylene
Concen: 0.03 ppm
RT: 5.877 min Scan# 983
Delta R.T. -0.008 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:152 Resp: 1493

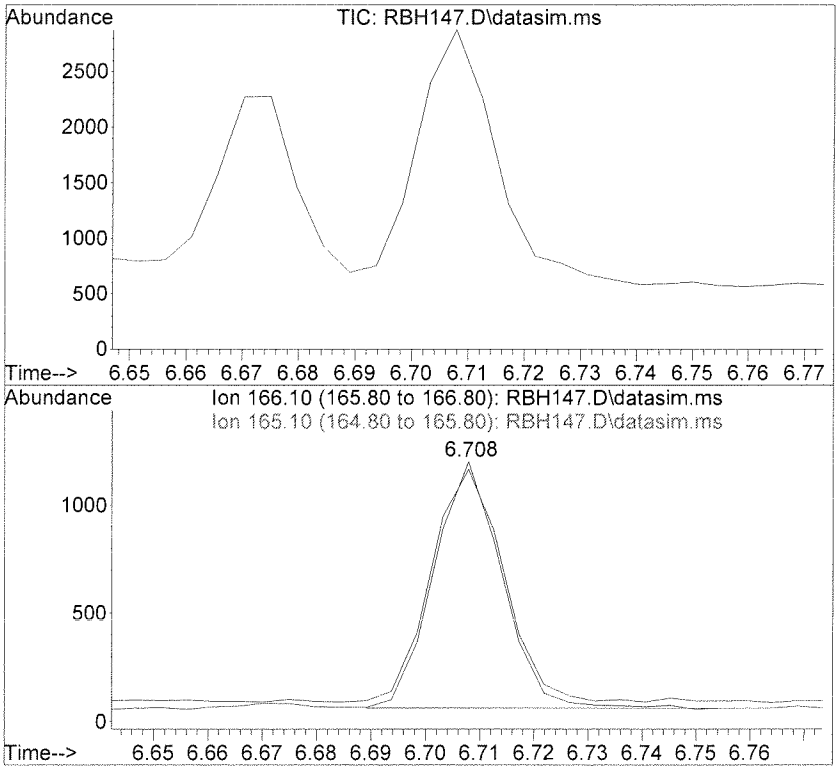
Ion	Ratio	Lower	Upper
152	100		
151	20.0	0.0	49.9



#25
Acenaphthene
Concen: 0.03 ppm
RT: 6.089 min Scan# 1027
Delta R.T. -0.008 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:153 Resp: 1122

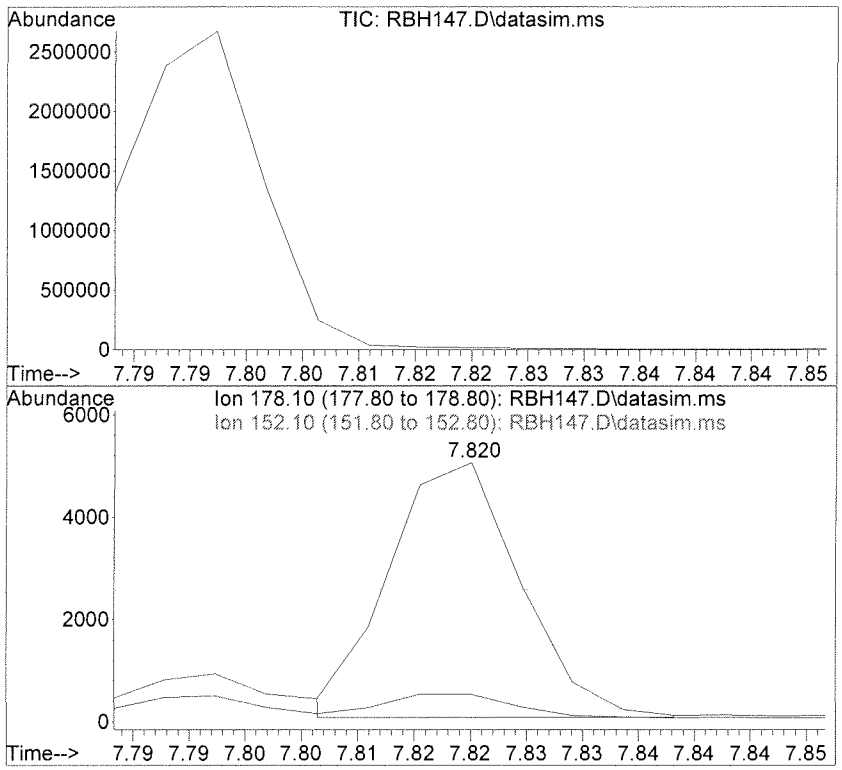
Ion	Ratio	Lower	Upper
153	100		
152	47.5	15.7	75.7



#28
Fluorene
Concen: 0.02 ppm
RT: 6.708 min Scan# 1157
Delta R.T. -0.013 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:166 Resp: 991

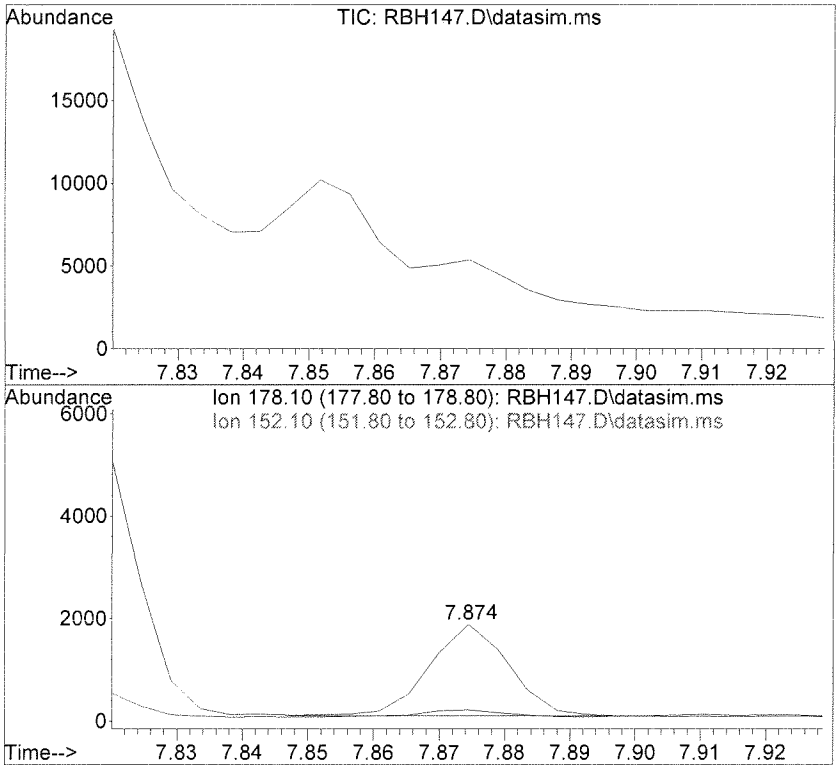
Ion	Ratio	Lower	Upper
166	100		
165	100.7	69.3	129.3



#36
Phenanthrene
Concen: 0.06 ppm
RT: 7.820 min Scan# 1393
Delta R.T. -0.008 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:178 Resp: 4011

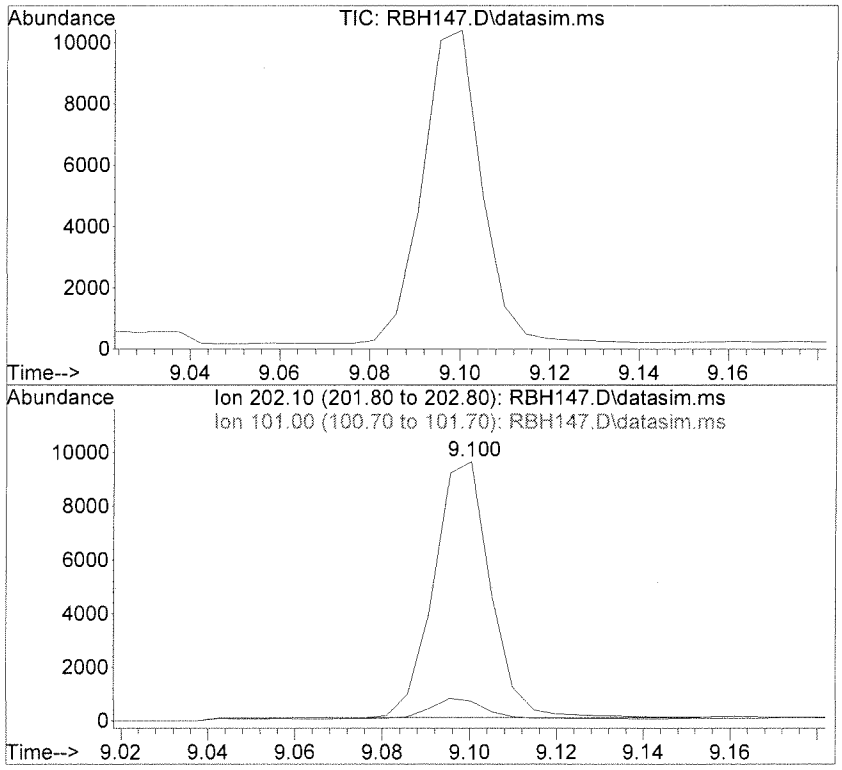
Ion	Ratio	Lower	Upper
178	100		
152	11.5	0.0	39.8



#37
Anthracene
Concen: 0.02 ppm
RT: 7.874 min Scan# 1405
Delta R.T. -0.009 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:178 Resp: 1482

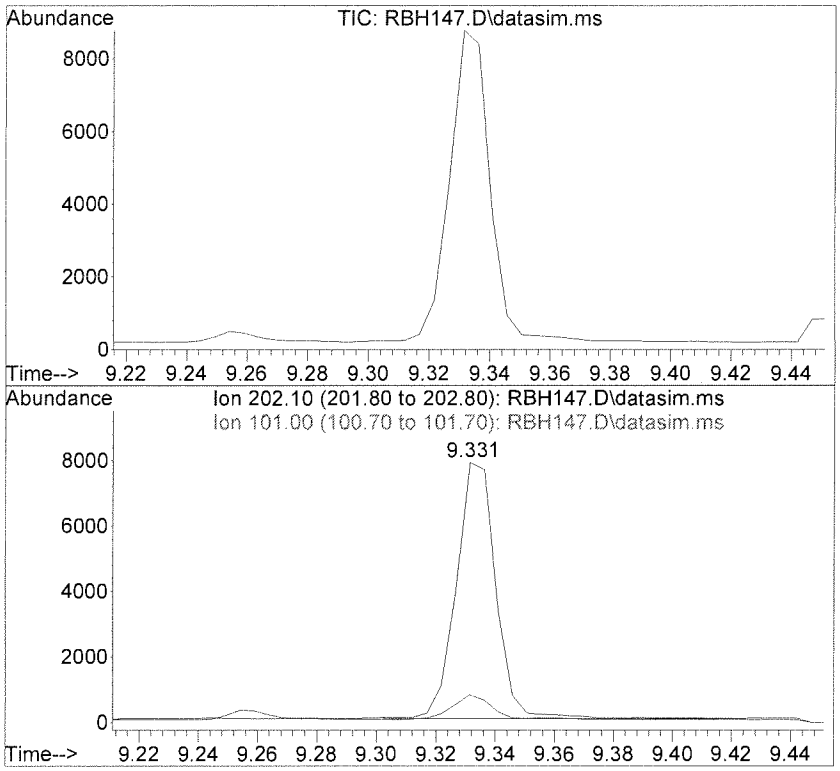
Ion	Ratio	Lower	Upper
178	100		
152	8.8	0.0	37.8



#41
Fluoranthene
Concen: 0.12 ppm
RT: 9.100 min Scan# 1666
Delta R.T. -0.004 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:202 Resp: 8645

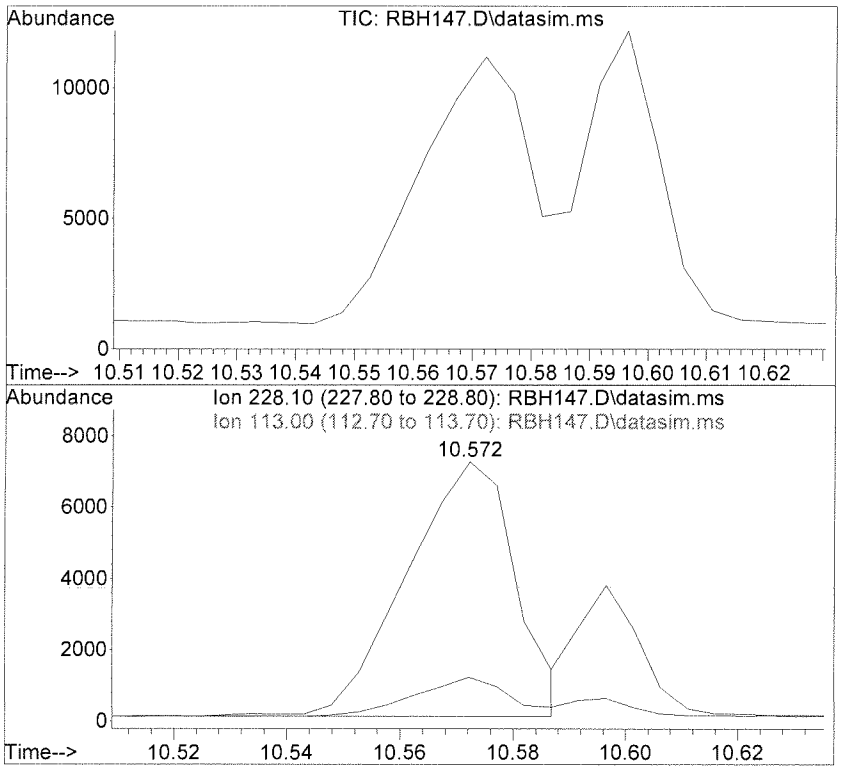
Ion	Ratio	Lower	Upper
202	100		
101	7.8	0.0	37.7



#42
Pyrene
Concen: 0.09 ppm
RT: 9.331 min Scan# 1714
Delta R.T. -0.009 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:202 Resp: 7285

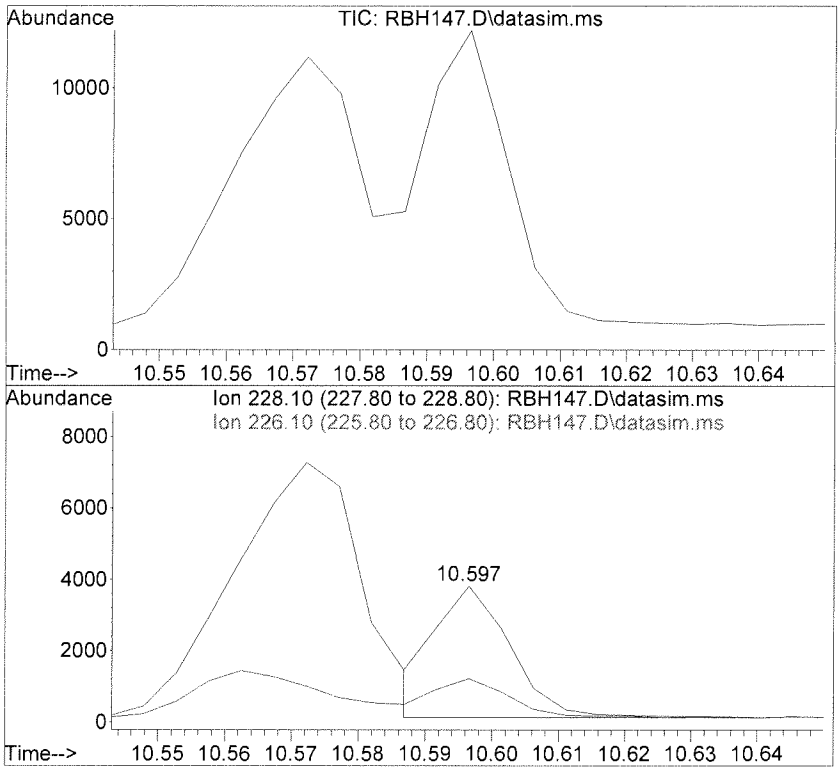
Ion	Ratio	Lower	Upper
202	100		
101	9.3	0.0	39.0



#45
Benzo(a)anthracene
Concen: 0.05 ppm
RT: 10.572 min Scan# 1994
Delta R.T. 0.006 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:228 Resp: 9521

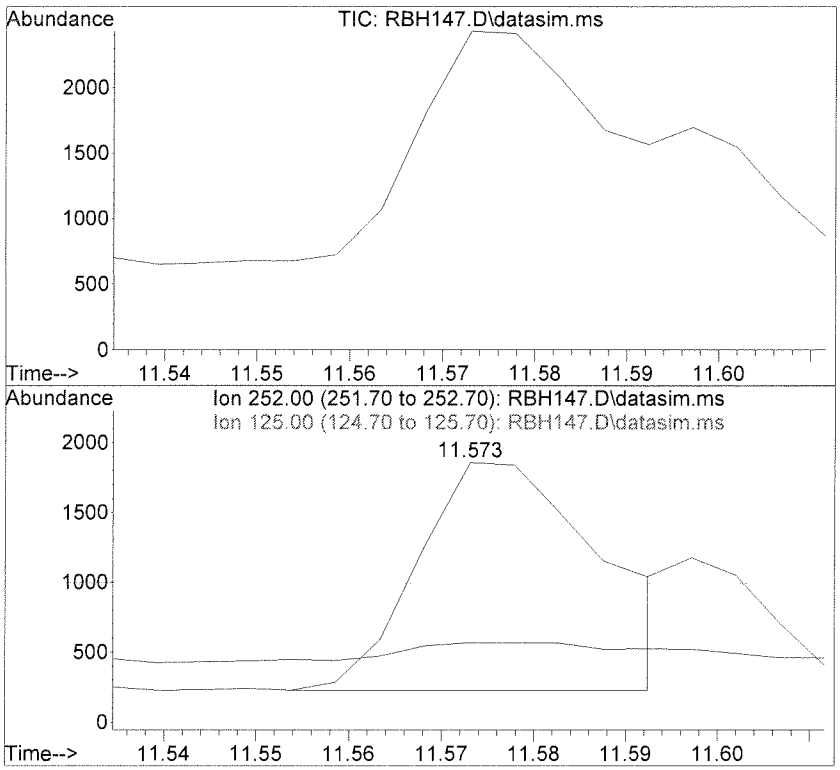
Ion	Ratio	Lower	Upper
228	100		
113	13.4	0.0	37.1



#46
Chrysene
Concen: 0.04 ppm
RT: 10.597 min Scan# 1999
Delta R.T. -0.003 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:228 Resp: 2906

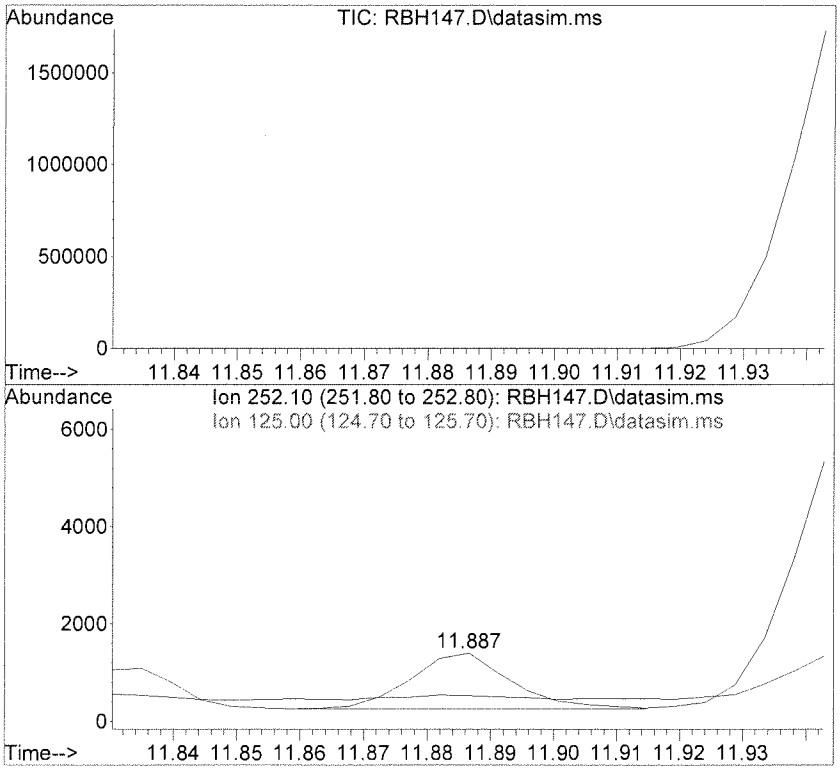
Ion	Ratio	Lower	Upper
228	100		
226	30.6	0.0	59.7



#50
Benzo(b)fluoranthene
Concen: 0.03 ppm m
RT: 11.573 min Scan# 2201
Delta R.T. -0.004 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

Tgt Ion:252 Resp: 2237

Ion	Ratio	Lower	Upper
252	100		
125	11.5	0.0	37.6



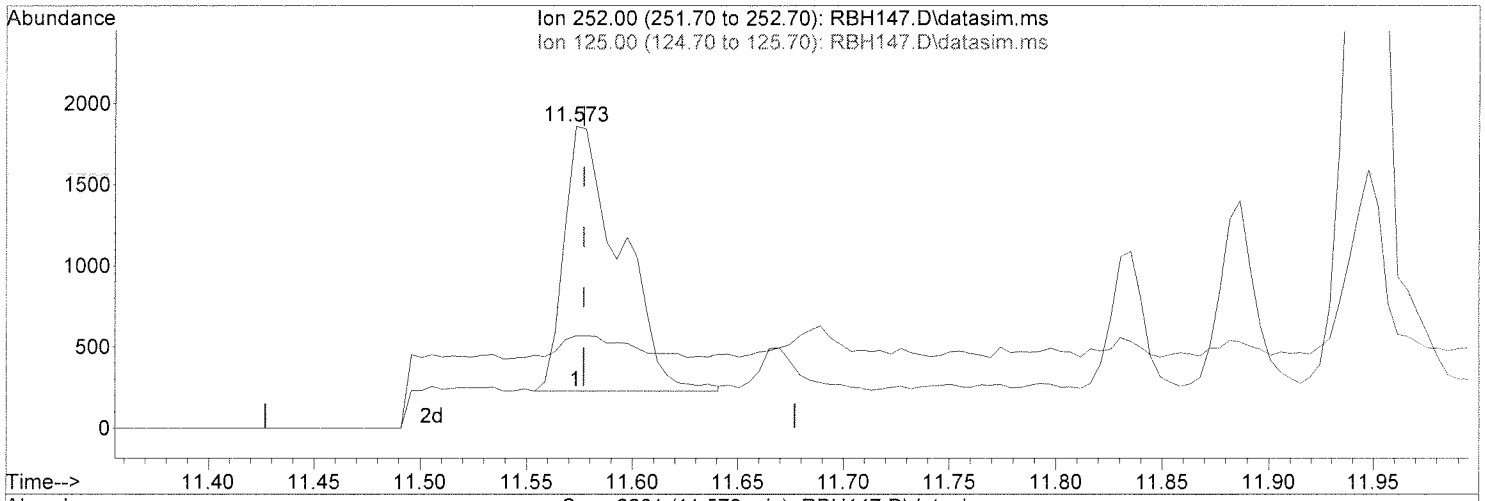
#53
Benzo(a)pyrene
Concen: 0.02 ppm
RT: 11.887 min Scan# 2267
Delta R.T. 0.001 min
Lab File: RBH147.D
Acq: 12 Feb 2016 14:17

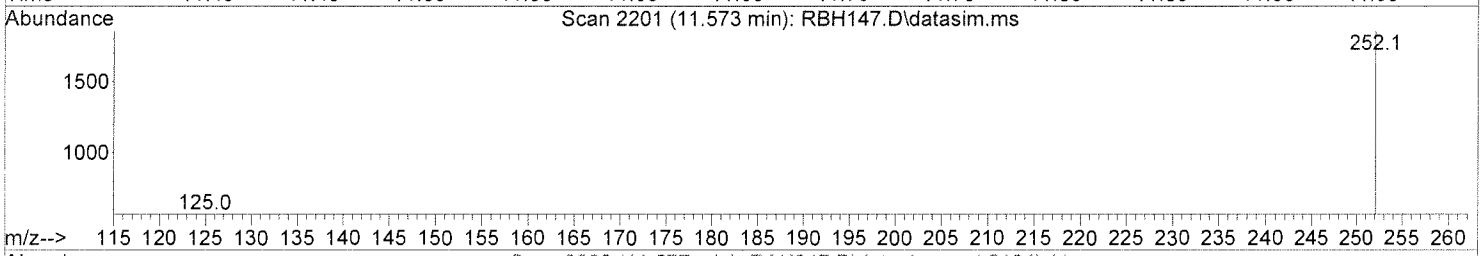
Tgt Ion:252 Resp: 1267

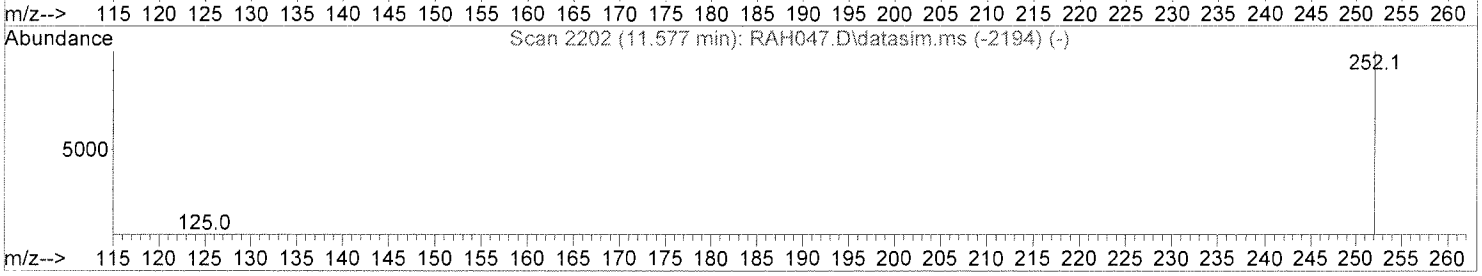
Ion	Ratio	Lower	Upper
252	100		
125	12.5	0.0	38.0

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH147.D
Vial: 17
Acq On : 12 Feb 2016 14:17
Operator: KVu
Sample : 16B060-01
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 09:17:08 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M







TIC: RBH147.D\data.ms

(50) Benzo(b)fluoranthene (T,P)

11.573min (-0.004) 0.05 ppm

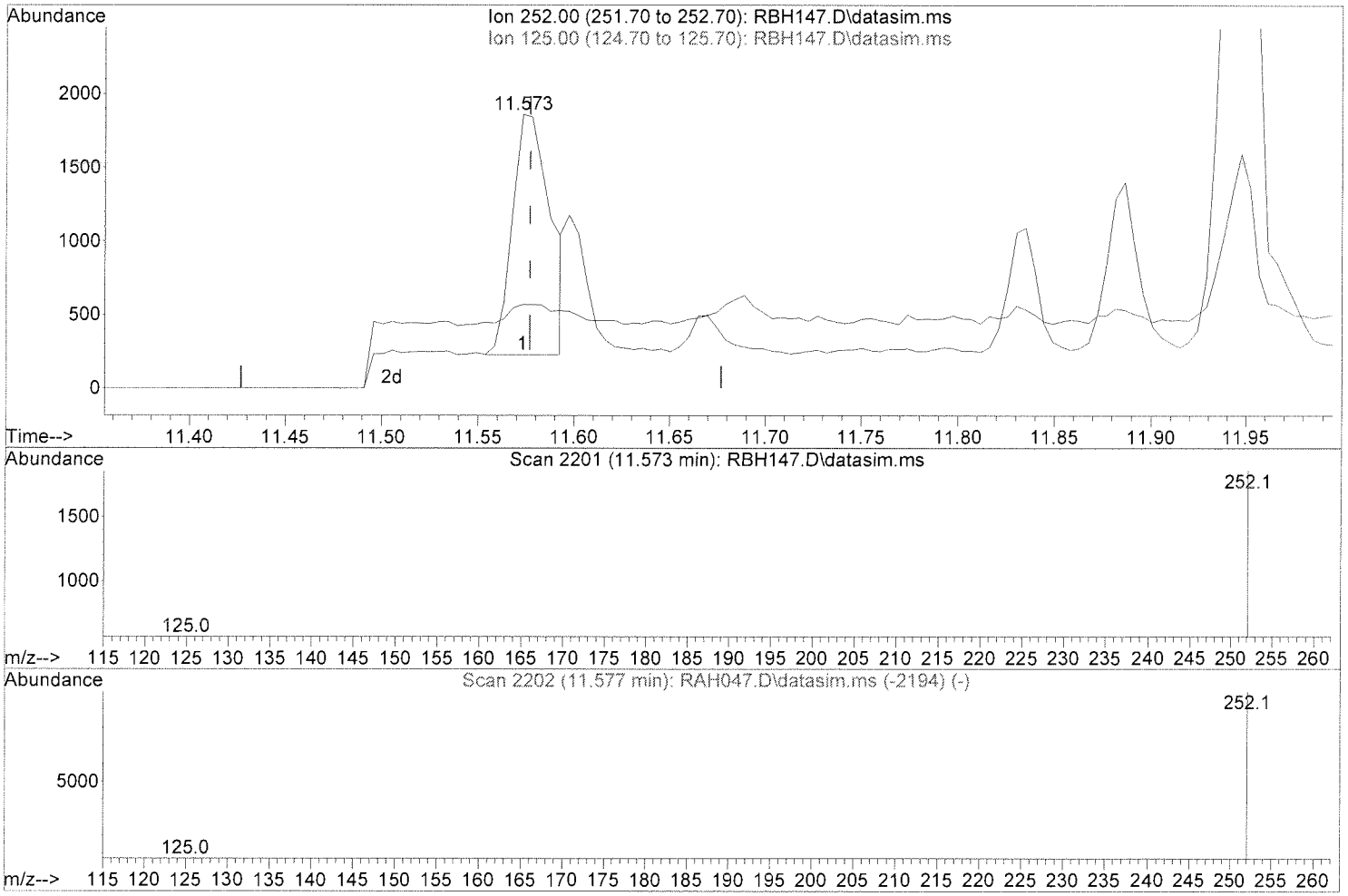
response 3024

Ion	Exp%	Act%
252.00	100	100
125.00	7.60	8.50
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH147.D
Acq On : 12 Feb 2016 14:17
Sample : 16B060-01
Misc :
Integrator: RTE
Quant Time: Feb 16 09:17:08 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 17
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH147.D\data.ms

(50) Benzo(b)fluoranthene (T,P)

11.573min (-0.004) 0.03 ppm m <DL

response 2237

Ion	Exp%	Act%
252.00	100	100
125.00	7.60	11.49
0.00	0.00	0.00
0.00	0.00	0.00

2-18-16

- ☐ Incorrect Retention Time
- ☐ Incorrect Baseline
- ☑ Incorrect Integration
- ☐ Other _____

Initials SJ 2/16/16

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG03-S-010	Date Analyzed:	02/12/16 14:36
Lab Samp ID:	B060-02	Dilution Factor:	1
Lab File ID:	RBH148	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	9.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0055	0.011
ACENAPHTHENE	ND	0.022	0.0055	0.011
ACENAPHTHYLENE	ND	0.022	0.0055	0.011
ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)PYRENE	ND	0.022	0.0055	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0055	0.011
CHRYSENE	ND	0.022	0.0055	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0055	0.011
FLUORANTHENE	ND	0.022	0.0055	0.011
FLUORENE	ND	0.022	0.0055	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0055	0.011
NAPHTHALENE	ND	0.022	0.0055	0.011
PHENANTHRENE	ND	0.022	0.0055	0.011
PYRENE	ND	0.022	0.0055	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.512	0.7359	69.6	45-105
NITROBENZENE-D5	0.534	0.7359	72.6	35-100
TERPHENYL-D14	0.695	0.7359	94.4	30-125

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH148.D Vial: 18
Acq On : 12 Feb 2016 14:36 Operator: KVu
Sample : 16B060-02 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 09:20:26 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	2.845	152	455306	40.00 ppm	0.00
29) Phenanthrene-d10	7.797	188	1992596	40.00 ppm	0.00
48) Perylene-d12	11.947	264	2069592	40.00 ppm	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	1.930	112	266672	21.14 ppm	0.00
Spiked Amount 30.000			Recovery	= 70.47%	
5) Phenol-d5	2.504	99	347846	22.06 ppm	0.00
Spiked Amount 30.000			Recovery	= 73.53%	
10) Nitrobenzene-d5	3.324	82	110937	7.26 ppm	0.00
Spiked Amount 10.000			Recovery	= 72.60%	
20) 2-Fluorobiphenyl	5.252	172	279745	6.96 ppm	-0.01
Spiked Amount 10.000			Recovery	= 69.60%	
32) 2,4,6-Tribromophenol	6.996	330	152902	21.80 ppm	0.00
Spiked Amount 30.000			Recovery	= 72.67%	
43) Terphenyl-d14	9.508	244	463558	9.44 ppm	0.00
Spiked Amount 10.000			Recovery	= 94.40%	
Target Compounds					Qvalue
13] Naphthalene	4.068	128	1817	0.04 ppm	100
15] 2-Methylnaphthalene	4.829	142	1065	0.03 ppm	78
16] 1-Methylnaphthalene	4.944	142	936	0.03 ppm	98
24] Acenaphthylene	5.877	152	1291	0.03 ppm	94
25] Acenaphthene	6.089	153	947	0.03 ppm	98
28] Fluorene	6.708	166	784	0.02 ppm	96

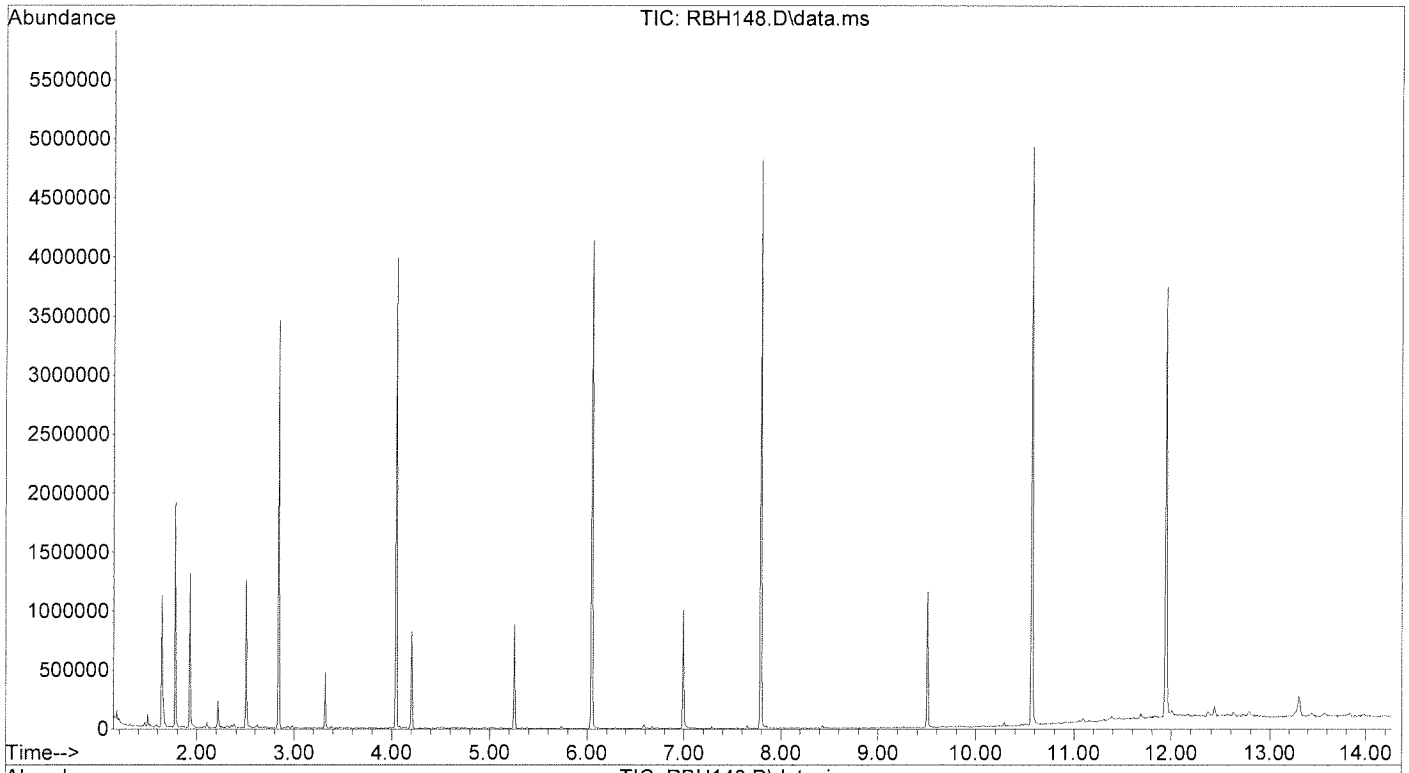
<DL

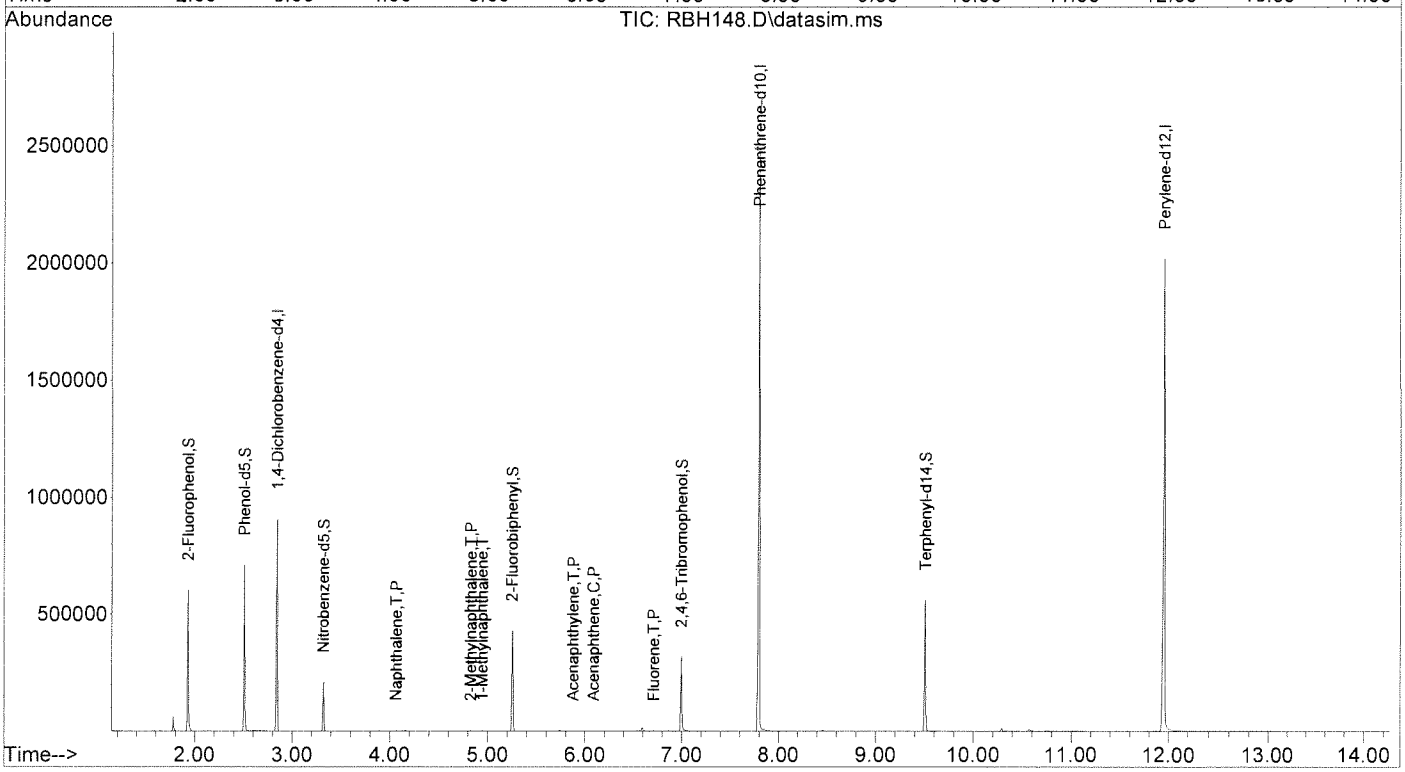
(#) = qualifier out of range (m) = manual integration (+) = signals summed

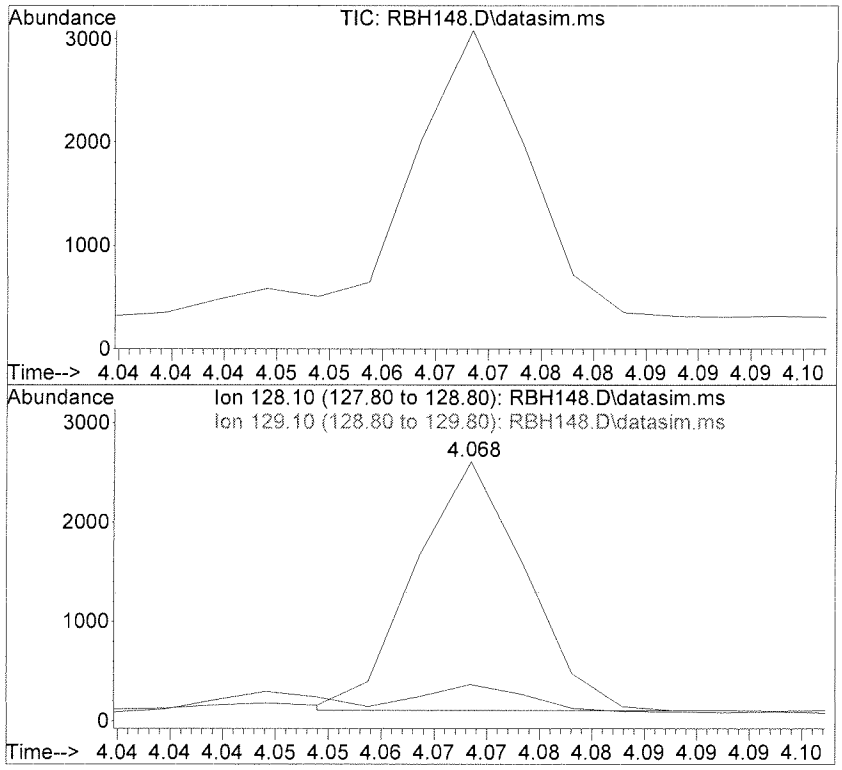
Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH148.D
Acq On : 12 Feb 2016 14:36
Sample : 16B060-02
Misc :
Integrator: RTE
Quant Time: Feb 16 09:20:26 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 18
Operator: KVu
Inst : E7
Multiplr: 1.00



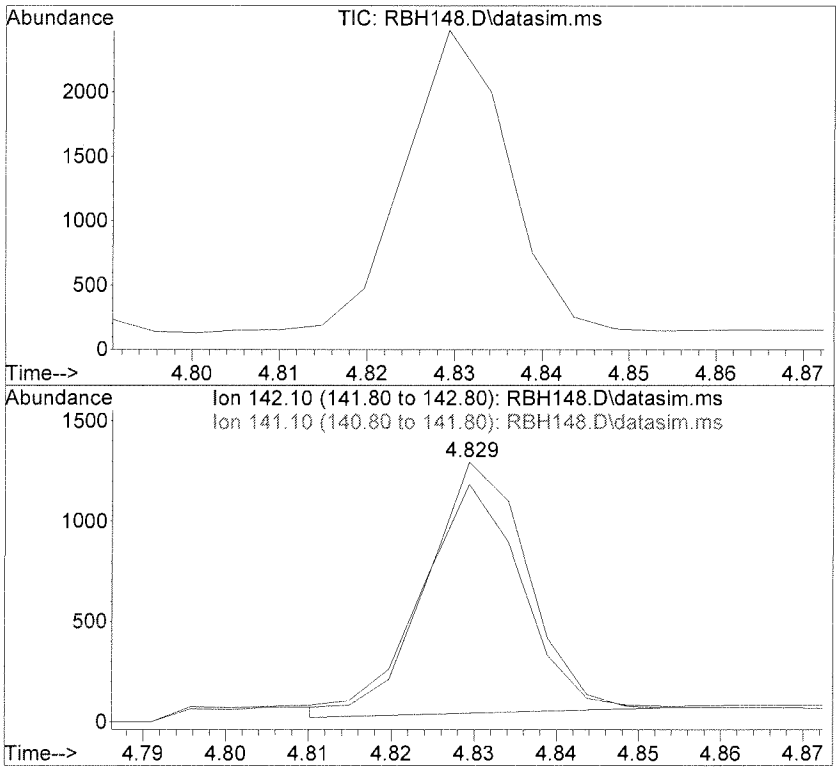




#13
Naphthalene
Concen: 0.04 ppm
RT: 4.068 min Scan# 607
Delta R.T. -0.009 min
Lab File: RBH148.D
Acq: 12 Feb 2016 14:36

Tgt Ion:128 Resp: 1817

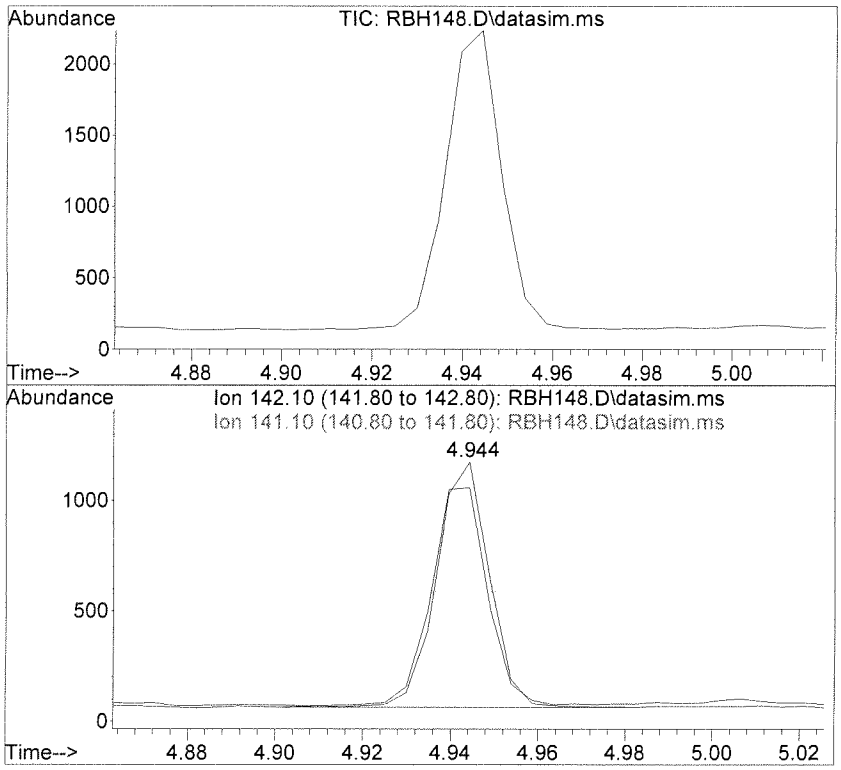
Ion	Ratio	Lower	Upper
128	100		
129	11.1	0.0	41.0



#15
2-Methylnaphthalene
Concen: 0.03 ppm
RT: 4.829 min Scan# 765
Delta R.T. -0.008 min
Lab File: RBH148.D
Acq: 12 Feb 2016 14:36

Tgt Ion:142 Resp: 1065

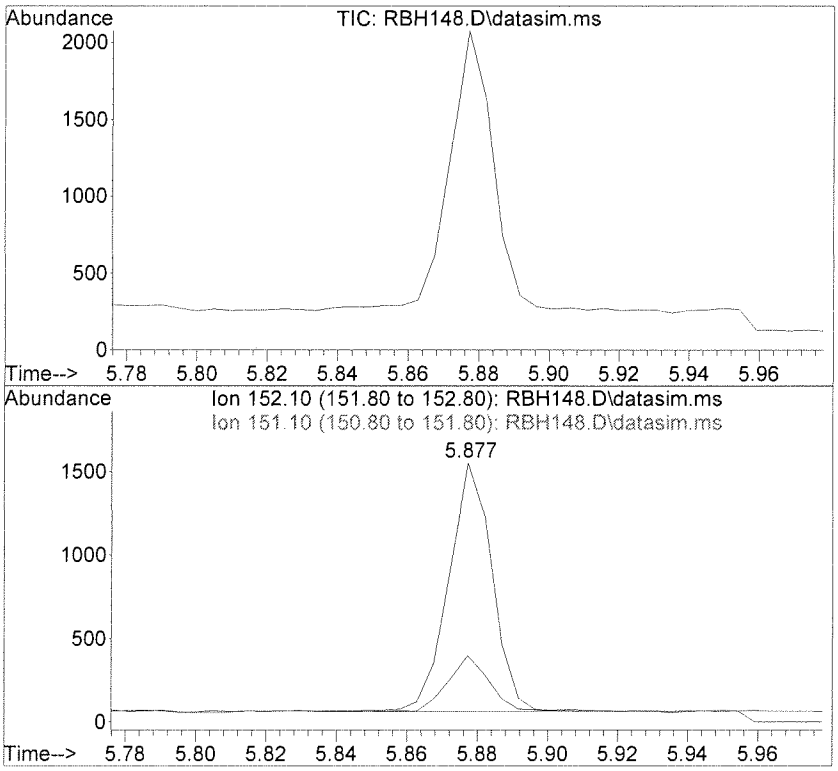
Ion	Ratio	Lower	Upper
142	100		
141	110.7	59.7	119.7



#16
1-Methylnaphthalene
Concen: 0.03 ppm
RT: 4.944 min Scan# 789
Delta R.T. -0.008 min
Lab File: RBH148.D
Acq: 12 Feb 2016 14:36

Tgt Ion:142 Resp: 936

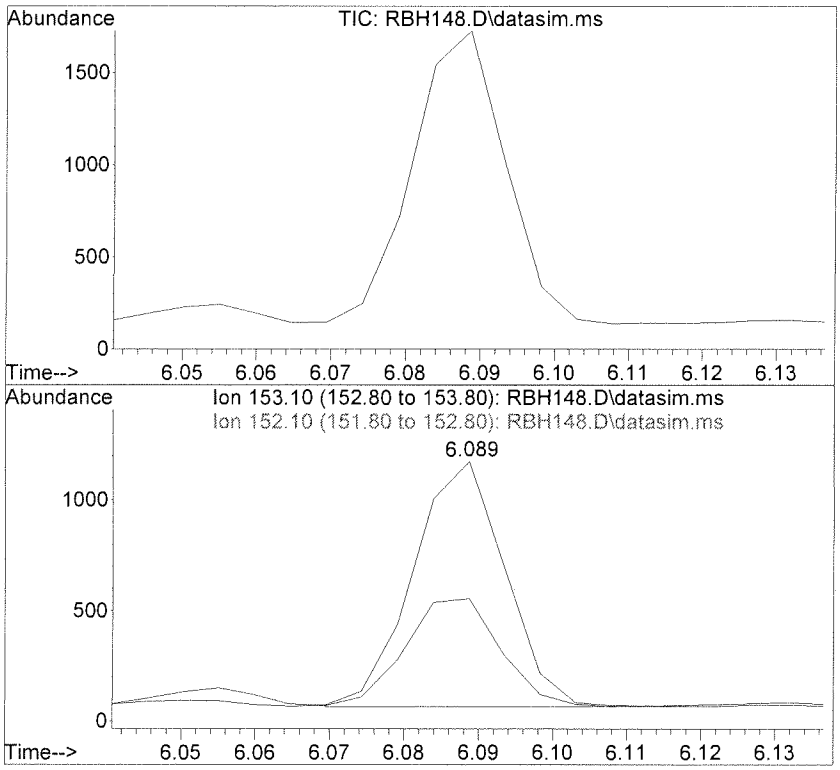
Ion	Ratio	Lower	Upper
142	100		
141	94.9	62.7	122.7



#24
Acenaphthylene
Concen: 0.03 ppm
RT: 5.877 min Scan# 983
Delta R.T. -0.008 min
Lab File: RBH148.D
Acq: 12 Feb 2016 14:36

Tgt Ion:152 Resp: 1291

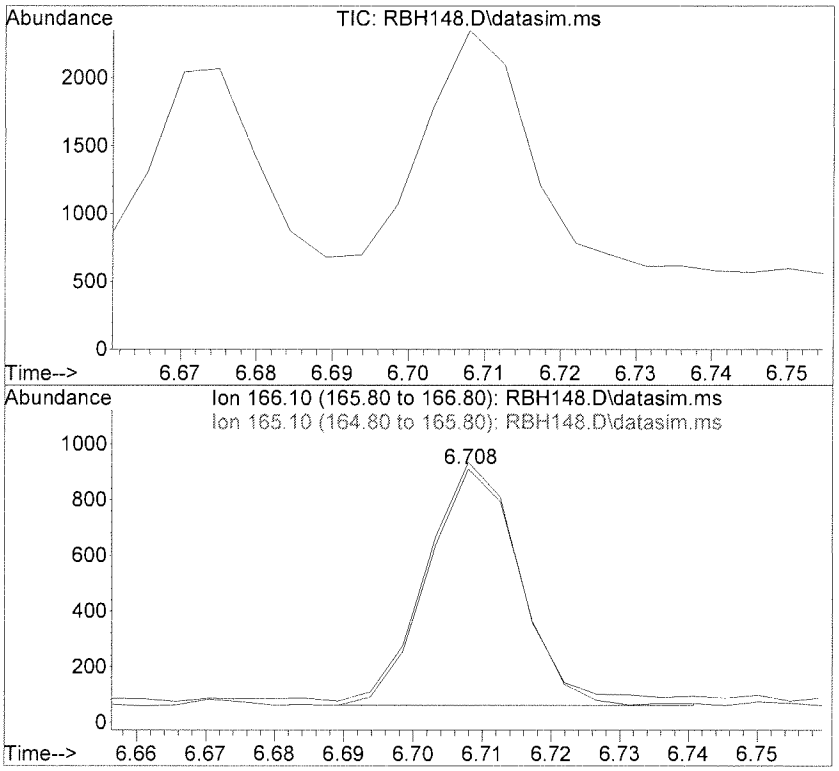
Ion	Ratio	Lower	Upper
152	100		
151	22.8	0.0	49.9



#25
Acenaphthene
Concen: 0.03 ppm
RT: 6.089 min Scan# 1027
Delta R.T. -0.008 min
Lab File: RBH148.D
Acq: 12 Feb 2016 14:36

Tgt Ion:153 Resp: 947

Ion	Ratio	Lower	Upper
153	100		
152	47.3	15.7	75.7



#28
Fluorene
Concen: 0.02 ppm
RT: 6.708 min Scan# 1157
Delta R.T. -0.013 min
Lab File: RBH148.D
Acq: 12 Feb 2016 14:36

Tgt Ion:166 Resp: 784

Ion	Ratio	Lower	Upper
166	100		
165	103.1	69.3	129.3

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG01-S-005	Date Analyzed:	02/12/16 14:56
Lab Samp ID:	B060-04	Dilution Factor:	1
Lab File ID:	RBH149	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	5.5
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.021	0.0053	0.011
ACENAPHTHENE	ND	0.021	0.0053	0.011
ACENAPHTHYLENE	ND	0.021	0.0053	0.011
ANTHRACENE	ND	0.021	0.0053	0.011
BENZO(A)ANTHRACENE	ND	0.021	0.0053	0.011
BENZO(A)PYRENE	ND	0.021	0.0053	0.011
BENZO(B)FLUORANTHENE	ND	0.021	0.0053	0.011
BENZO(K)FLUORANTHENE	ND	0.021	0.0053	0.011
BENZO(G,H,I)PERYLENE	ND	0.021	0.0053	0.011
CHRYSENE	ND	0.021	0.0053	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.021	0.0053	0.011
FLUORANTHENE	ND	0.021	0.0053	0.011
FLUORENE	ND	0.021	0.0053	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.021	0.0053	0.011
NAPHTHALENE	ND	0.021	0.0053	0.011
PHENANTHRENE	ND	0.021	0.0053	0.011
PYRENE	ND	0.021	0.0053	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.486	0.7055	68.8	45-105
NITROBENZENE-D5	0.504	0.7055	71.5	35-100
TERPHENYL-D14	0.621	0.7055	88.0	30-125

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH149.D
Acq On : 12 Feb 2016 14:56
Sample : 16B060-04
Misc :
Integrator: RTE
Quant Time: Feb 16 09:22:12 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 19
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	2.844	152	474453	40.00 ppm	0.00
29) Phenanthrene-d10	7.797	188	2069367	40.00 ppm	0.00
48) Perylene-d12	11.947	264	2183591	40.00 ppm	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	1.930	112	274590	20.89 ppm	0.00
Spiked Amount 30.000			Recovery	= 69.63%	
5) Phenol-d5	2.504	99	358145	21.79 ppm	0.00
Spiked Amount 30.000			Recovery	= 72.63%	
10) Nitrobenzene-d5	3.324	82	113849	7.15 ppm	0.00
Spiked Amount 10.000			Recovery	= 71.50%	
20) 2-Fluorobiphenyl	5.257	172	288537	6.89 ppm	0.00
Spiked Amount 10.000			Recovery	= 68.90%	
32) 2,4,6-Tribromophenol	6.996	330	153506	21.08 ppm	0.00
Spiked Amount 30.000			Recovery	= 70.27%	
43) Terphenyl-d14	9.504	244	448480	8.80 ppm	0.00
Spiked Amount 10.000			Recovery	= 88.00%	
Target Compounds					Qvalue
36] Phenanthrene	7.820	178	3583	0.06 ppm	93
41] Fluoranthene	9.100	202	4537	0.06 ppm	100
42] Pyrene	9.331	202	3684	0.05 ppm	100
45] Benzo(a)anthracene	10.572	228	8410	0.04 ppm	83
46] Chrysene	10.596	228	1895	0.03 ppm	93
47] bis(2-Ethylhexyl)phtha...	10.592	149	12817	0.36 ppm	90
50] Benzo(b)fluoranthene	11.573	252	2820m	0.04 ppm	
52] Benzo(e)pyrene	11.830	252	1349	0.02 ppm	92
53] Benzo(a)pyrene	11.882	252	1764	0.03 ppm	96

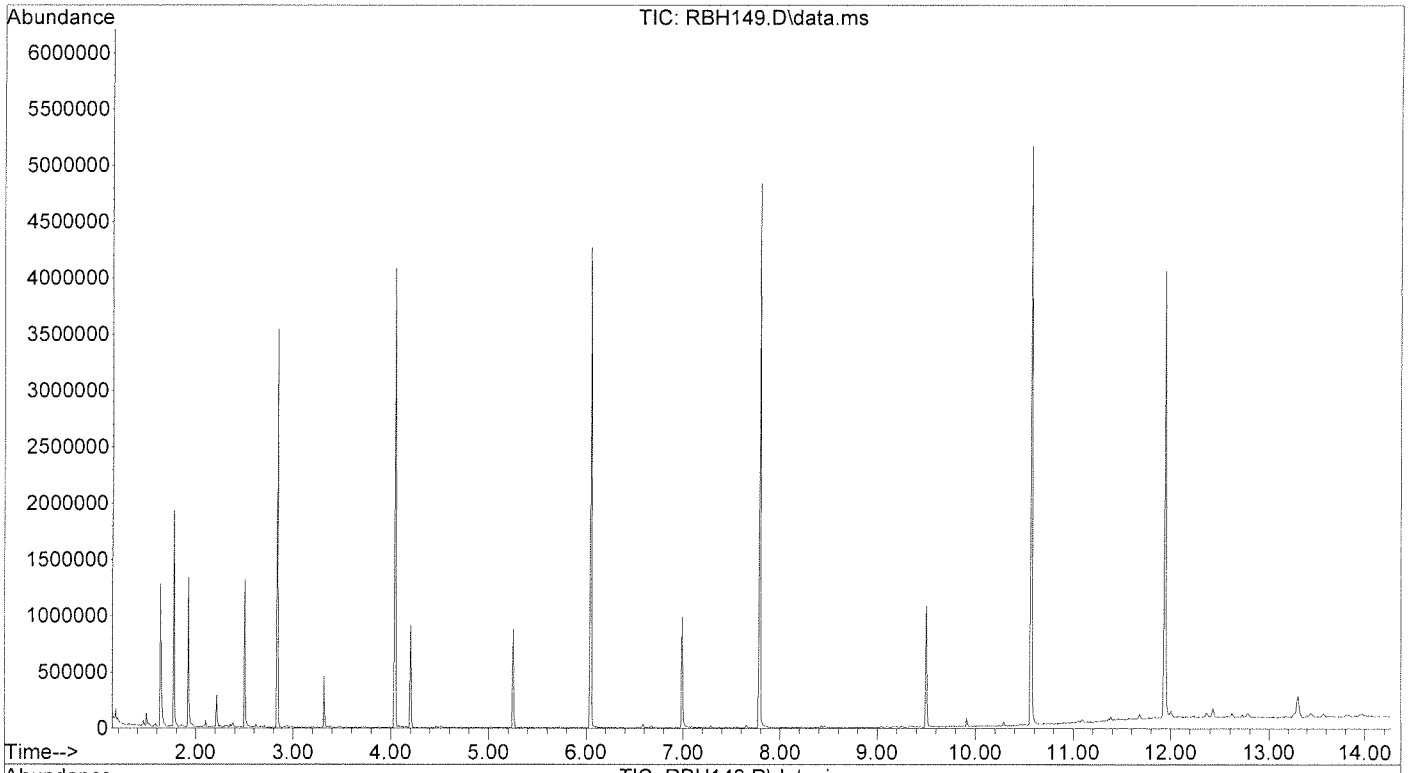
<dl
85
2/16/16

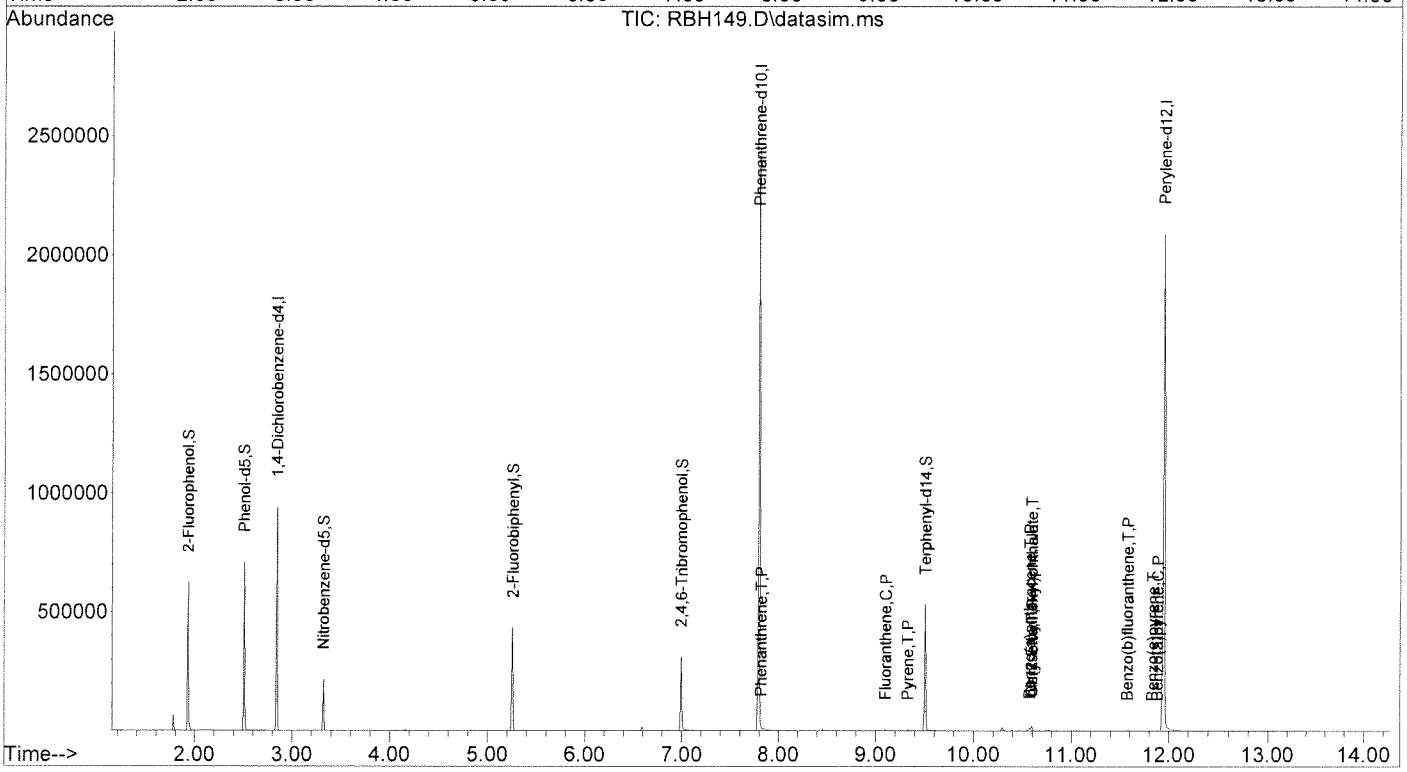
(#) = qualifier out of range (m) = manual integration (+) = signals summed

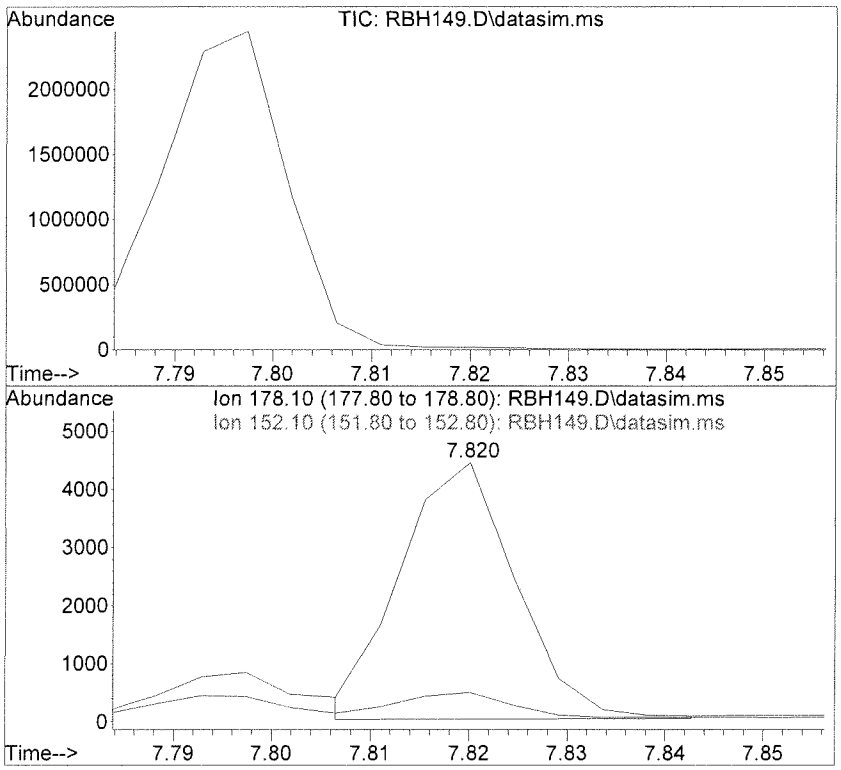
Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH149.D
Acq On : 12 Feb 2016 14:56
Sample : 16B060-04
Misc :
Integrator: RTE
Quant Time: Feb 16 09:22:12 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 19
Operator: KVu
Inst : E7
Multiplr: 1.00



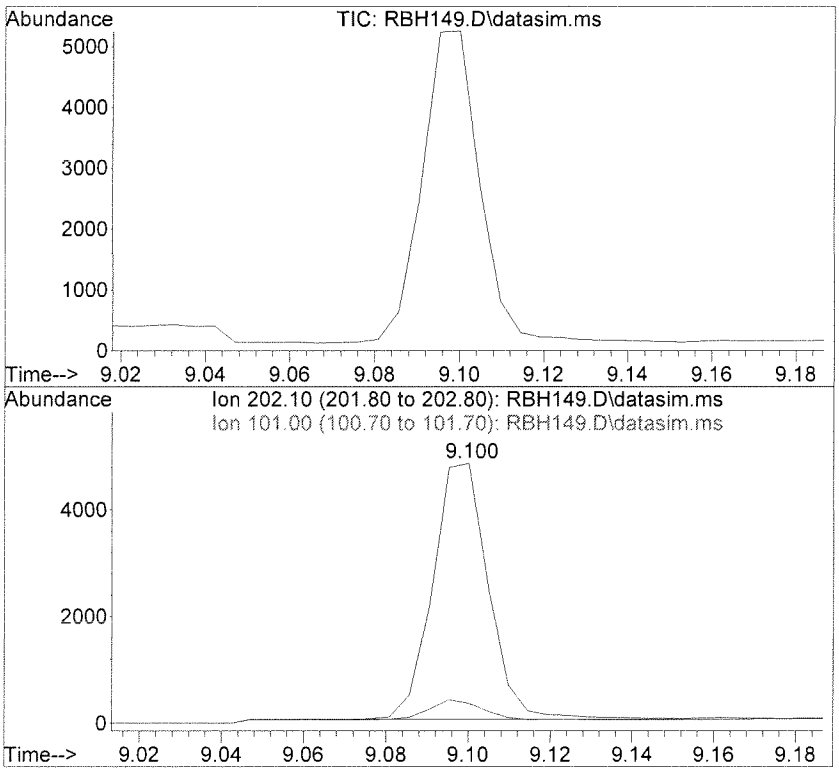




#36
Phenanthrene
Concen: 0.06 ppm
RT: 7.820 min Scan# 1393
Delta R.T. -0.008 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

Tgt Ion:178 Resp: 3583

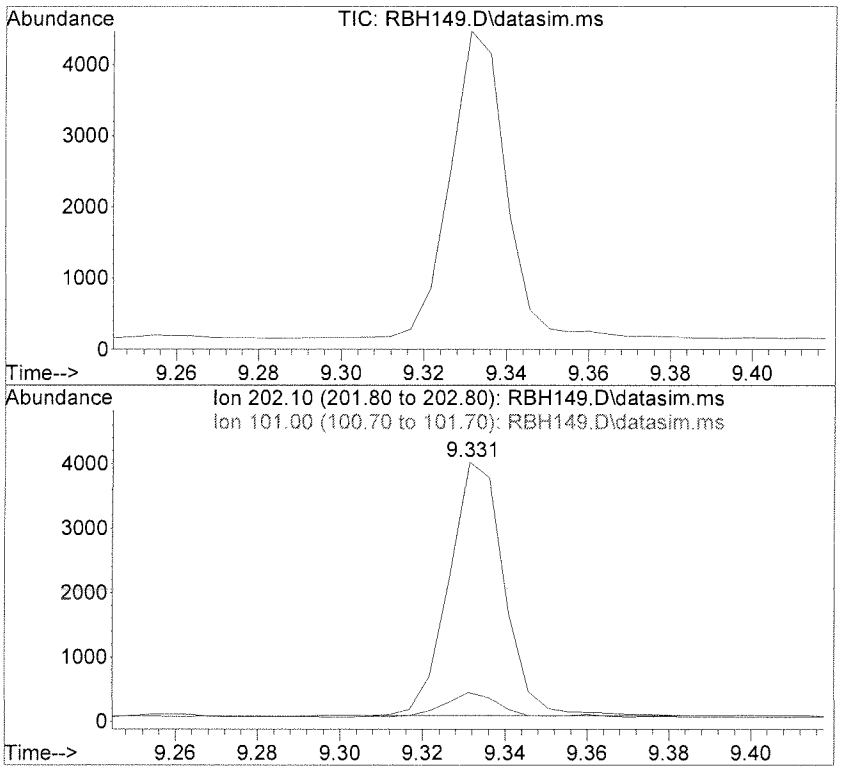
Ion	Ratio	Lower	Upper
178	100		
152	12.2	0.0	39.8



#41
Fluoranthene
Concen: 0.06 ppm
RT: 9.100 min Scan# 1666
Delta R.T. -0.004 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

Tgt Ion:202 Resp: 4537

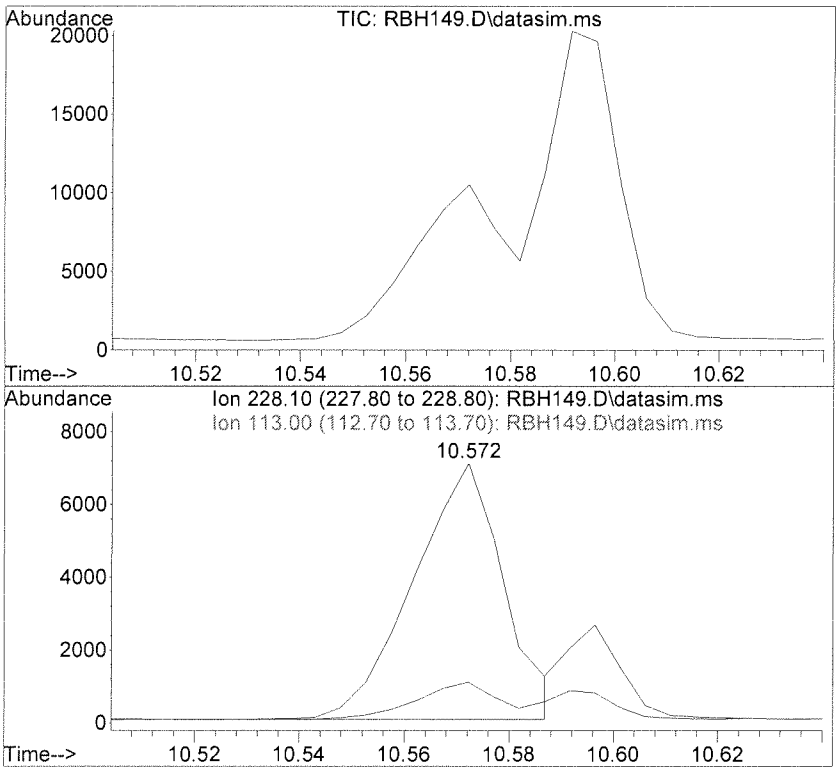
Ion	Ratio	Lower	Upper
202	100		
101	7.5	0.0	37.7



#42
Pyrene
Concen: 0.05 ppm
RT: 9.331 min Scan# 1714
Delta R.T. -0.009 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

Tgt Ion:202 Resp: 3684

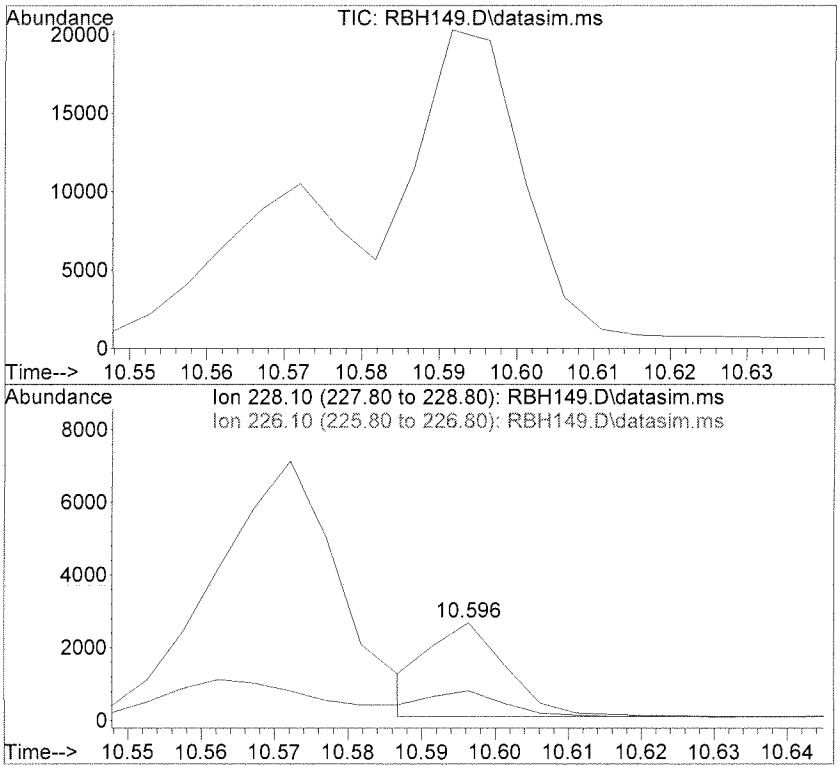
Ion	Ratio	Lower	Upper
202	100		
101	9.1	0.0	39.0



#45
Benzo(a)anthracene
Concen: 0.04 ppm
RT: 10.572 min Scan# 1994
Delta R.T. 0.006 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

Tgt Ion:228 Resp: 8410

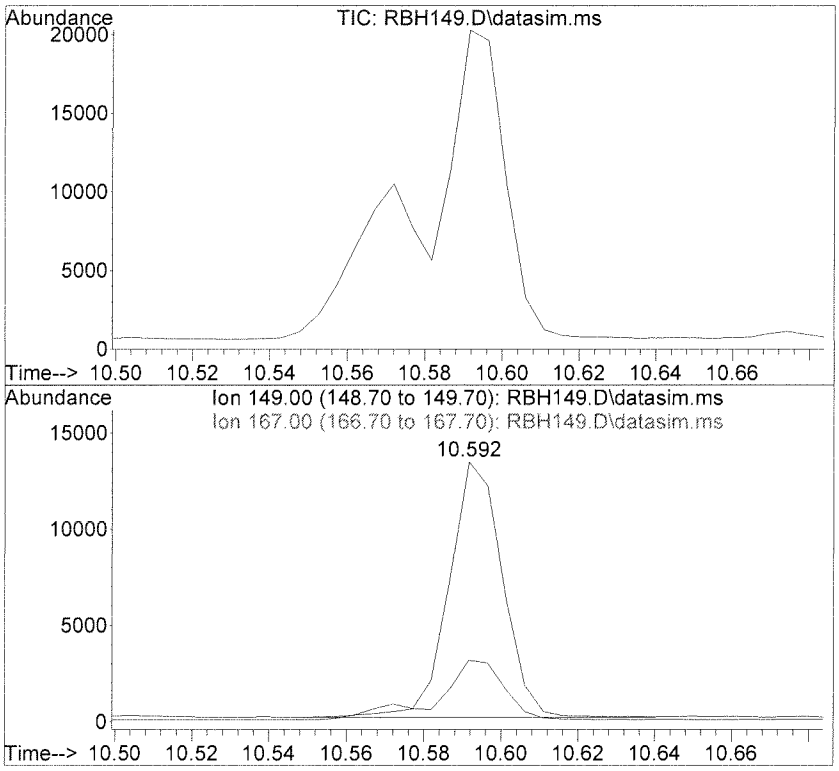
Ion	Ratio	Lower	Upper
228	100		
113	13.1	0.0	37.1



#46
Chrysene
Concen: 0.03 ppm
RT: 10.596 min Scan# 1999
Delta R.T. -0.004 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

Tgt Ion:228 Resp: 1895

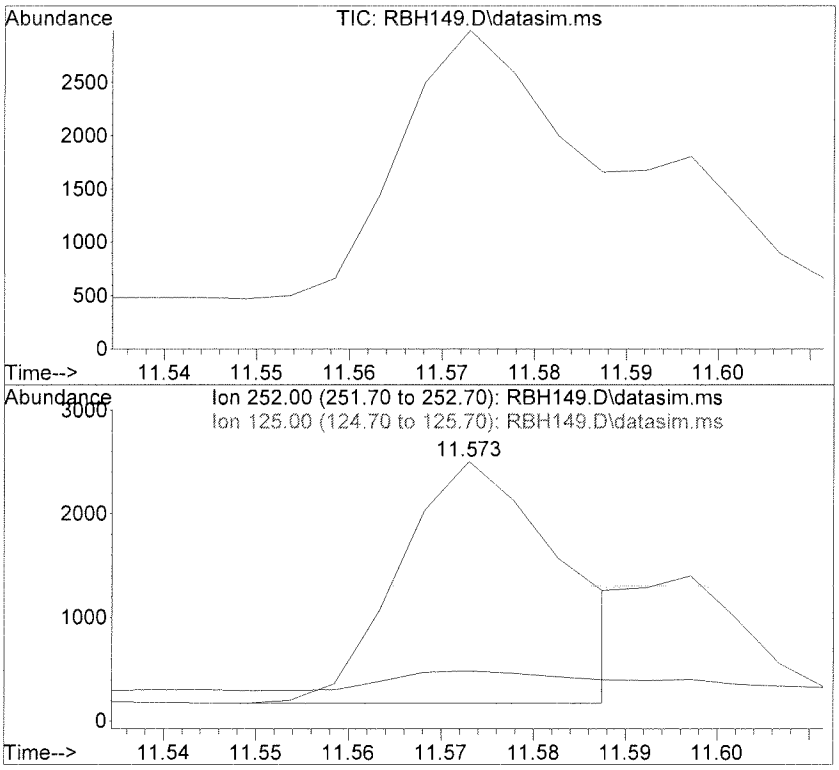
Ion	Ratio	Lower	Upper
228	100		
226	33.5	0.0	59.7



#47
bis(2-Ethylhexyl)phthalate
Concen: 0.36 ppm
RT: 10.592 min Scan# 1998
Delta R.T. -0.013 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

Tgt Ion:149 Resp: 12817

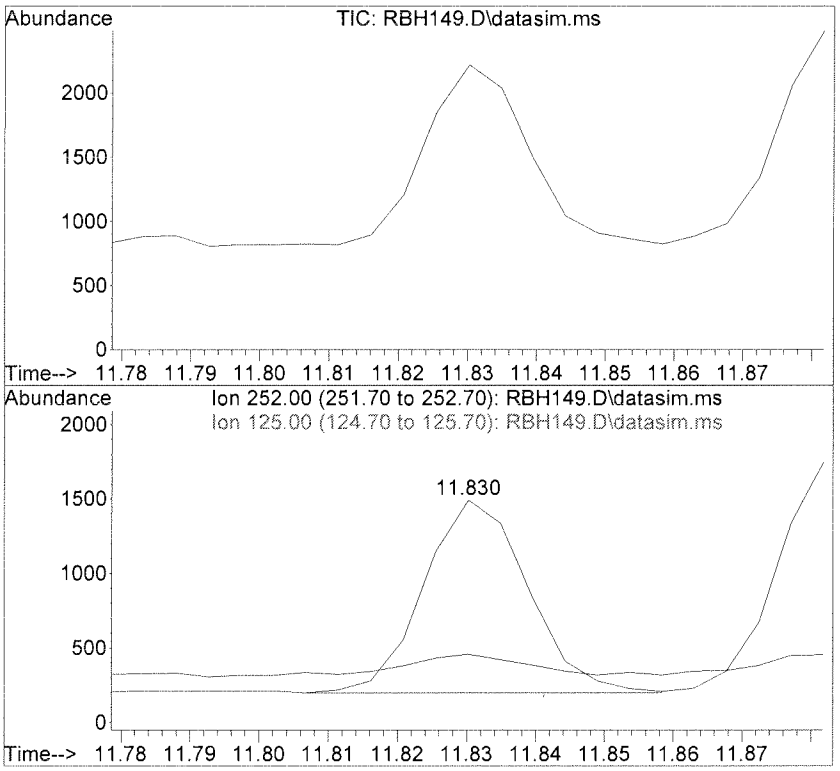
Ion	Ratio	Lower	Upper
149	100		
167	28.5	0.0	53.5



#50
Benzo(b)fluoranthene
Concen: 0.04 ppm m
RT: 11.573 min Scan# 2201
Delta R.T. -0.004 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

Tgt Ion:252 Resp: 2820

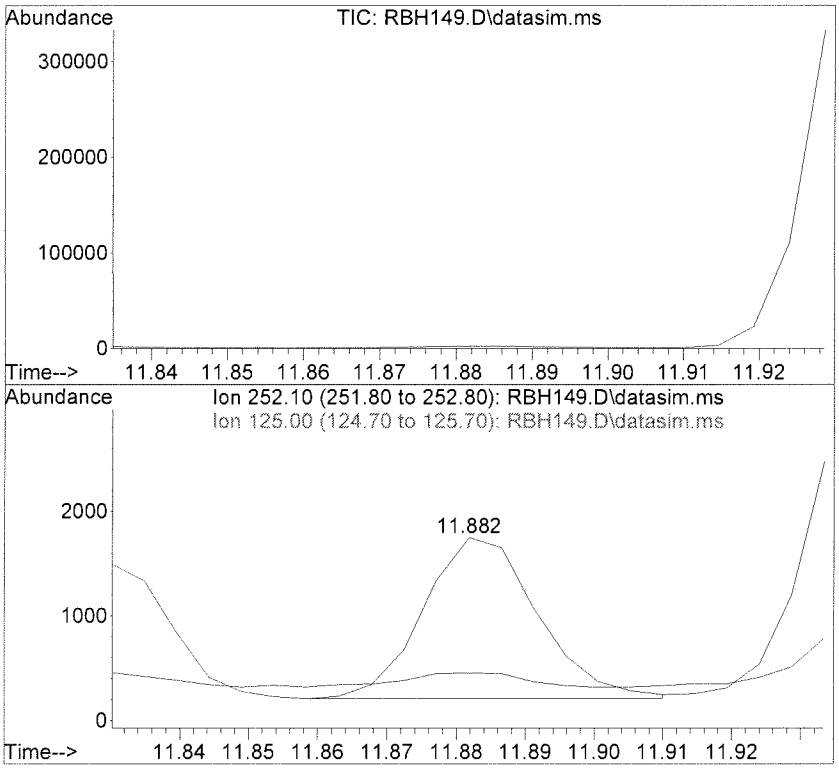
Ion	Ratio	Lower	Upper
252	100		
125	12.5	0.0	37.6



#52
Benzo(e)pyrene
Concen: 0.02 ppm
RT: 11.830 min Scan# 2255
Delta R.T. -0.005 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

Tgt Ion:252 Resp: 1349

Ion	Ratio	Lower	Upper
252	100		
125	13.7	0.0	40.6



#53
Benzo(a)pyrene
Concen: 0.03 ppm
RT: 11.882 min Scan# 2266
Delta R.T. -0.004 min
Lab File: RBH149.D
Acq: 12 Feb 2016 14:56

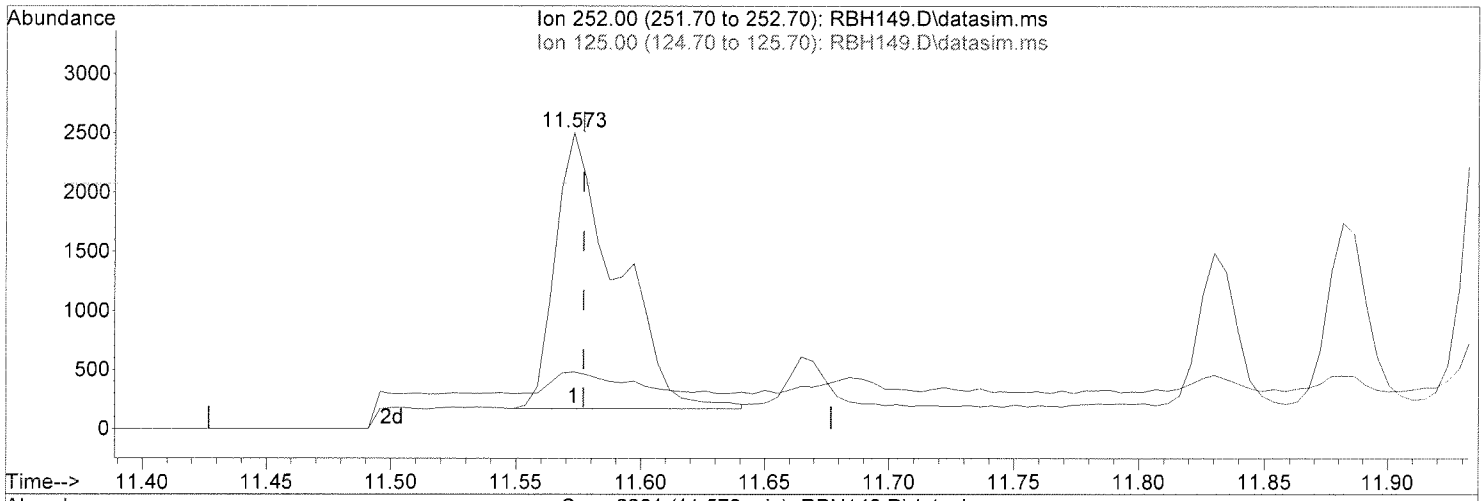
Tgt Ion:252 Resp: 1764

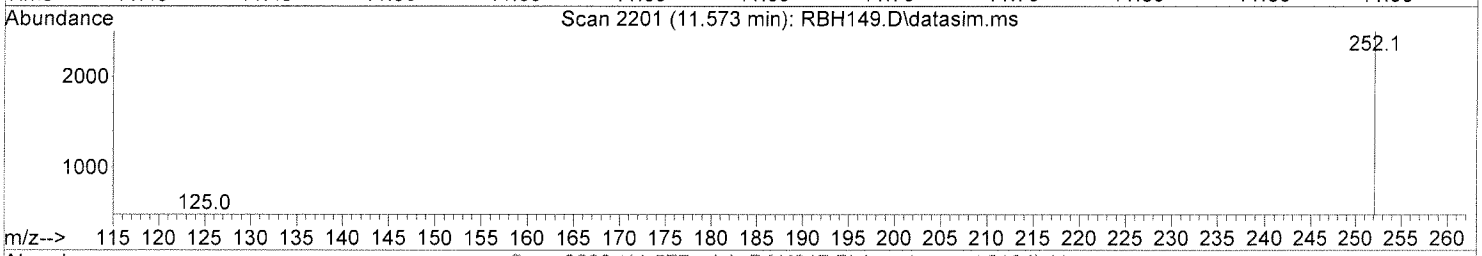
Ion	Ratio	Lower	Upper
252	100		
125	9.3	0.0	38.0

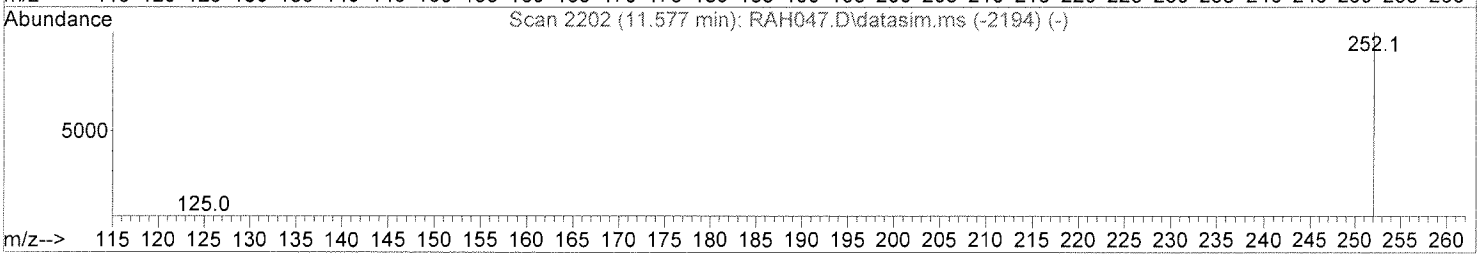
Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH149.D
Acq On : 12 Feb 2016 14:56
Sample : 16B060-04
Misc :
Integrator: RTE
Quant Time: Feb 16 09:20:54 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 19
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RBH149.D\data.ms

(50) Benzo(b)fluoranthene (T,P)

11.573min (-0.004) 0.06 ppm

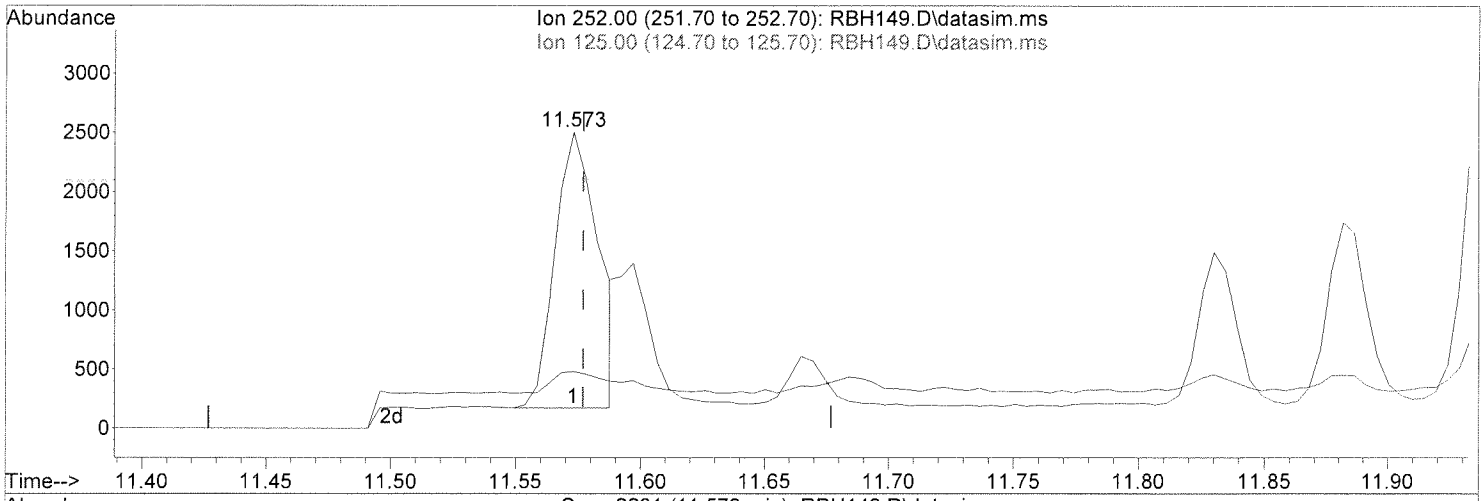
response 3992

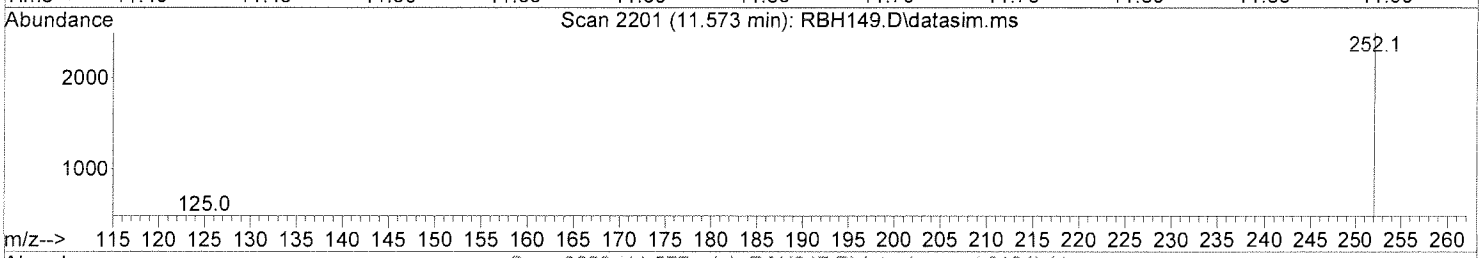
Ion	Exp%	Act%
252.00	100	100
125.00	7.60	8.82
0.00	0.00	0.00
0.00	0.00	0.00

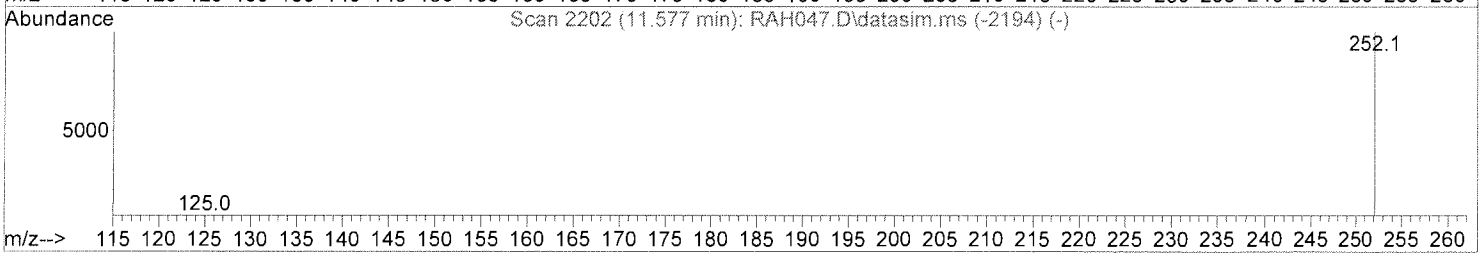
Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH149.D
Acq On : 12 Feb 2016 14:56
Sample : 16B060-04
Misc :
Integrator: RTE
Quant Time: Feb 16 09:20:54 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 19
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RBH149.D\data.ms

(50) Benzo(b)fluoranthene (T,P)

11.573min (-0.004) 0.04 ppm m ∠DL

response 2820

Ion	Exp%	Act%
252.00	100	100
125.00	7.60	12.48
0.00	0.00	0.00
0.00	0.00	0.00

BJ 2/18/16

- ☐ Incorrect Retention Time
- ☐ Incorrect Baseline
- ☑ Incorrect Integration
- ☐ Other _____

Initials BJ 2/16/16

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG01-S-010	Date Analyzed:	02/12/16 15:15
Lab Samp ID:	B060-05	Dilution Factor:	1
Lab File ID:	RBH150	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	6.7
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.021	0.0054	0.011
ACENAPHTHENE	ND	0.021	0.0054	0.011
ACENAPHTHYLENE	ND	0.021	0.0054	0.011
ANTHRACENE	ND	0.021	0.0054	0.011
BENZO(A)ANTHRACENE	0.0057J	0.021	0.0054	0.011
BENZO(A)PYRENE	ND	0.021	0.0054	0.011
BENZO(B)FLUORANTHENE	ND	0.021	0.0054	0.011
BENZO(K)FLUORANTHENE	ND	0.021	0.0054	0.011
BENZO(G,H,I)PERYLENE	ND	0.021	0.0054	0.011
CHRYSENE	ND	0.021	0.0054	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.021	0.0054	0.011
FLUORANTHENE	0.013J	0.021	0.0054	0.011
FLUORENE	ND	0.021	0.0054	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.021	0.0054	0.011
NAPHTHALENE	ND	0.021	0.0054	0.011
PHENANTHRENE	ND	0.021	0.0054	0.011
PYRENE	0.010J	0.021	0.0054	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.478	0.7146	66.9	45-105
NITROBENZENE-D5	0.492	0.7146	68.8	35-100
TERPHENYL-D14	0.663	0.7146	92.7	30-125

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH150.D Vial: 20
Acq On : 12 Feb 2016 15:15 Operator: KVu
Sample : 16B060-05 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 09:57:36 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

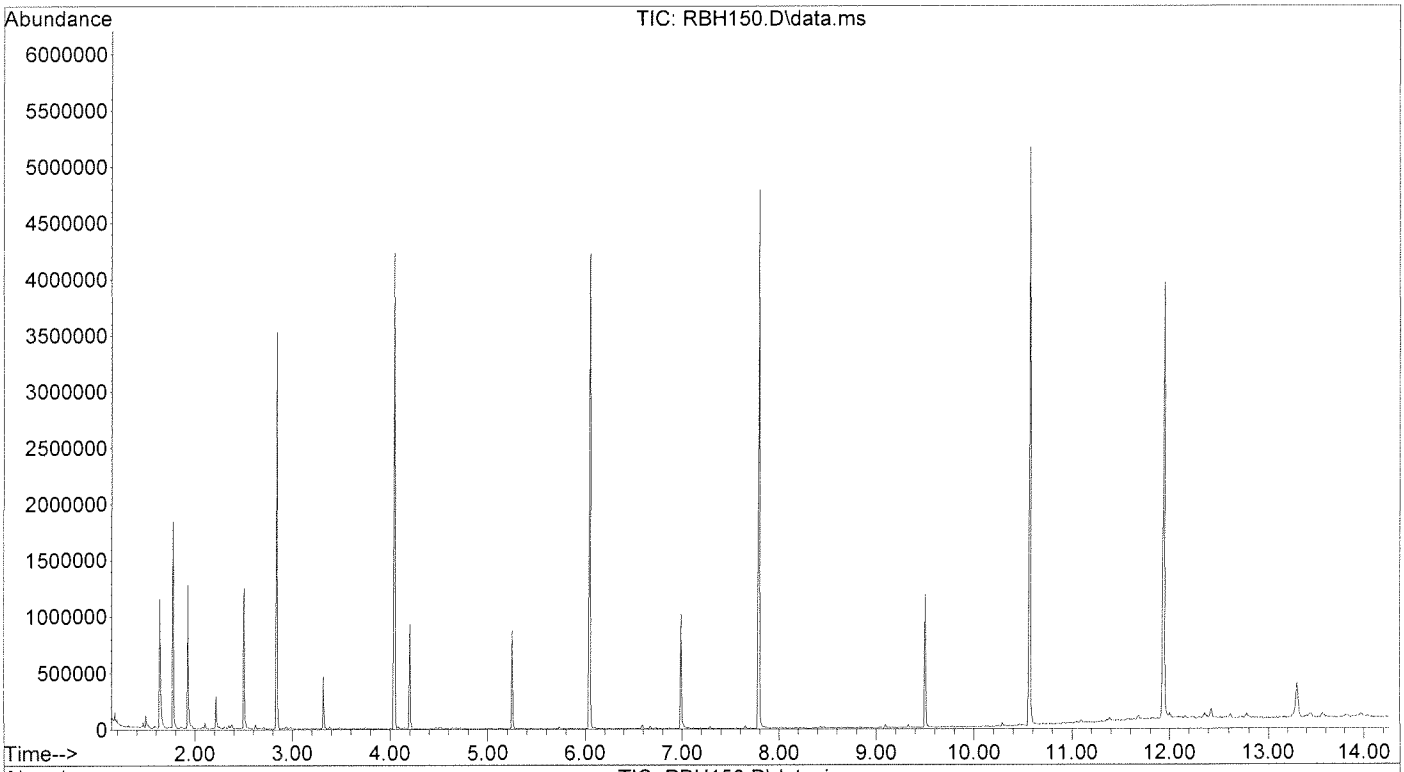
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	475058	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2072861	40.00	ppm	0.00
48) Perylene-d12	11.943	264	2159016	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	261431	19.86	ppm	0.00
Spiked Amount 30.000			Recovery	=	66.20%	
5) Phenol-d5	2.504	99	343668	20.89	ppm	0.00
Spiked Amount 30.000			Recovery	=	69.63%	
10) Nitrobenzene-d5	3.324	82	109708	6.88	ppm	0.00
Spiked Amount 10.000			Recovery	=	68.80%	
20) 2-Fluorobiphenyl	5.257	172	280550	6.69	ppm	0.00
Spiked Amount 10.000			Recovery	=	66.90%	
32) 2,4,6-Tribromophenol	6.996	330	150097	20.57	ppm	0.00
Spiked Amount 30.000			Recovery	=	68.57%	
43) Terphenyl-d14	9.504	244	473609	9.27	ppm	0.00
Spiked Amount 10.000			Recovery	=	92.70%	
Target Compounds						Qvalue
36] Phenanthrene	7.820	178	4354	0.07	ppm	96
37] Anthracene	7.875	178	1336	0.02	ppm	98
41] Fluoranthene	9.095	202	12354	0.18	ppm	98
42] Pyrene	9.331	202	10529	0.14	ppm	99
45] Benzo(a)anthracene	10.567	228	11402	0.08	ppm	87
46] Chrysene	10.596	228	5067	0.07	ppm	100
50] Benzo(b)fluoranthene	11.573	252	3576m	0.06	ppm	
52] Benzo(e)pyrene	11.830	252	1437	0.02	ppm	91
53] Benzo(a)pyrene	11.882	252	1964	0.03	ppm	98

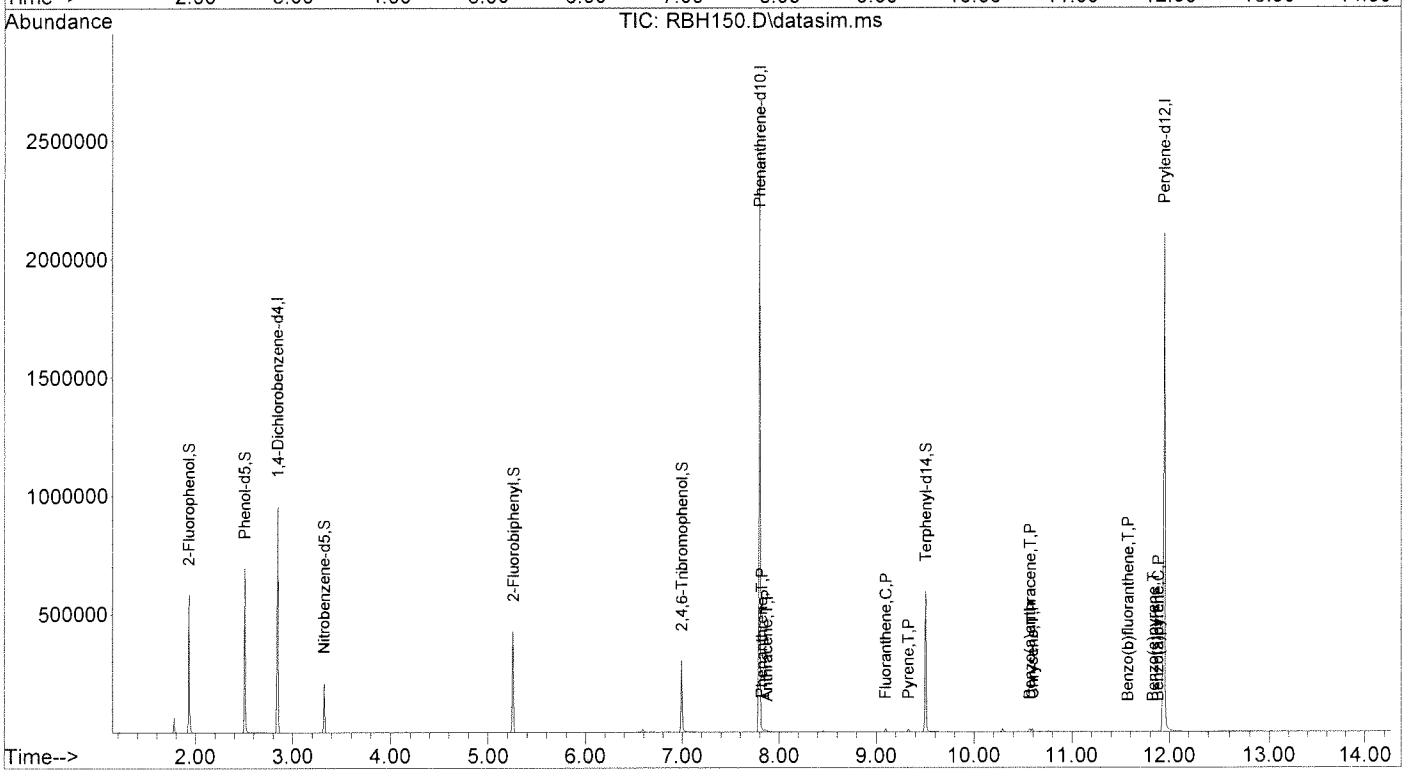
LDL SJ 2/16/16

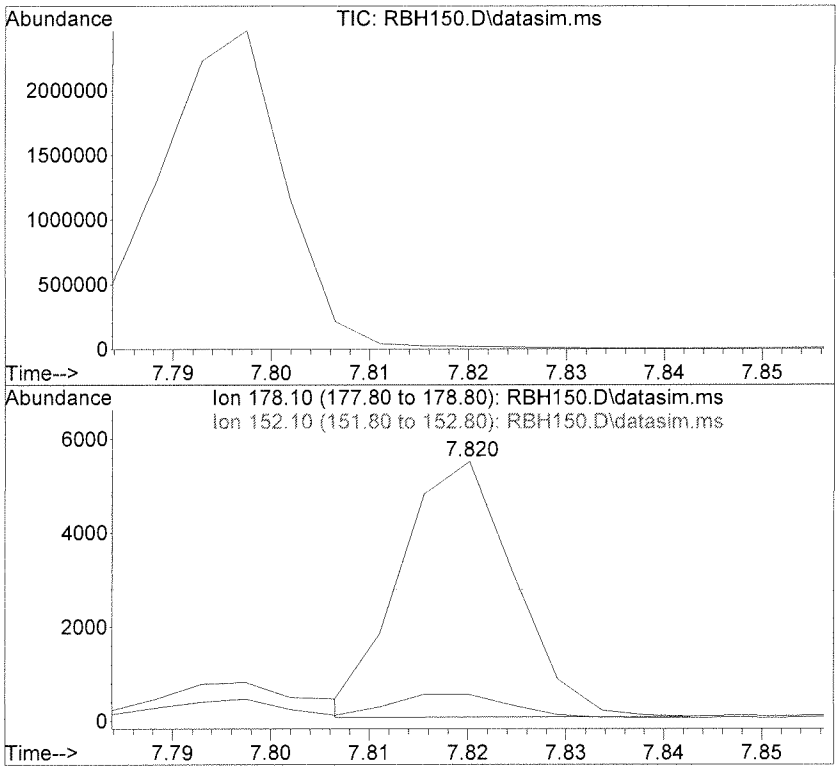
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH150.D
Vial: 20
Acq On : 12 Feb 2016 15:15
Operator: KVu
Sample : 16B060-05
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 09:57:36 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M



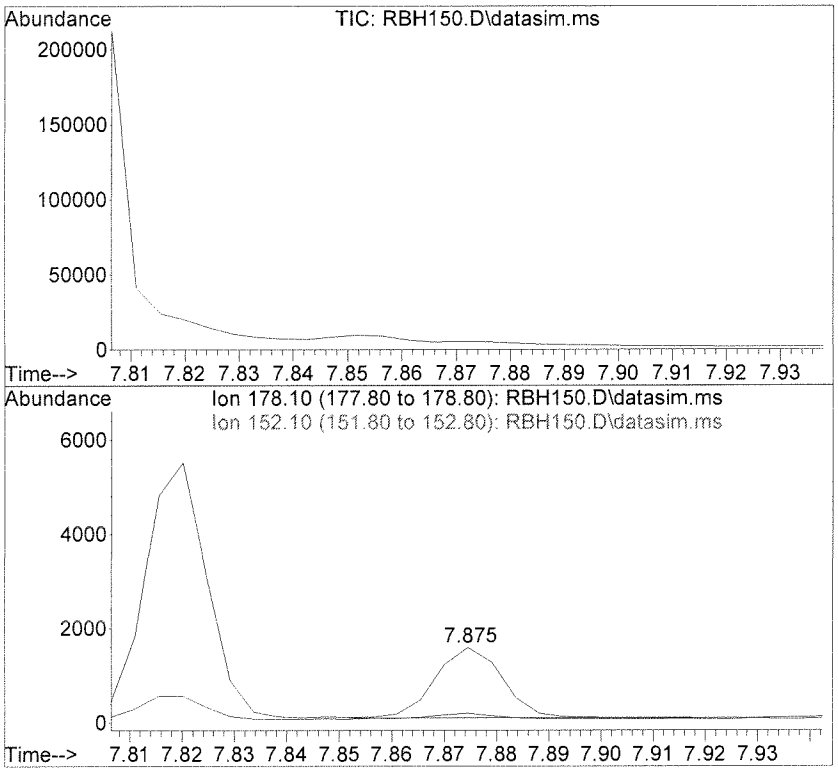




#36
Phenanthrene
Concen: 0.07 ppm
RT: 7.820 min Scan# 1393
Delta R.T. -0.008 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

Tgt Ion:178 Resp: 4354

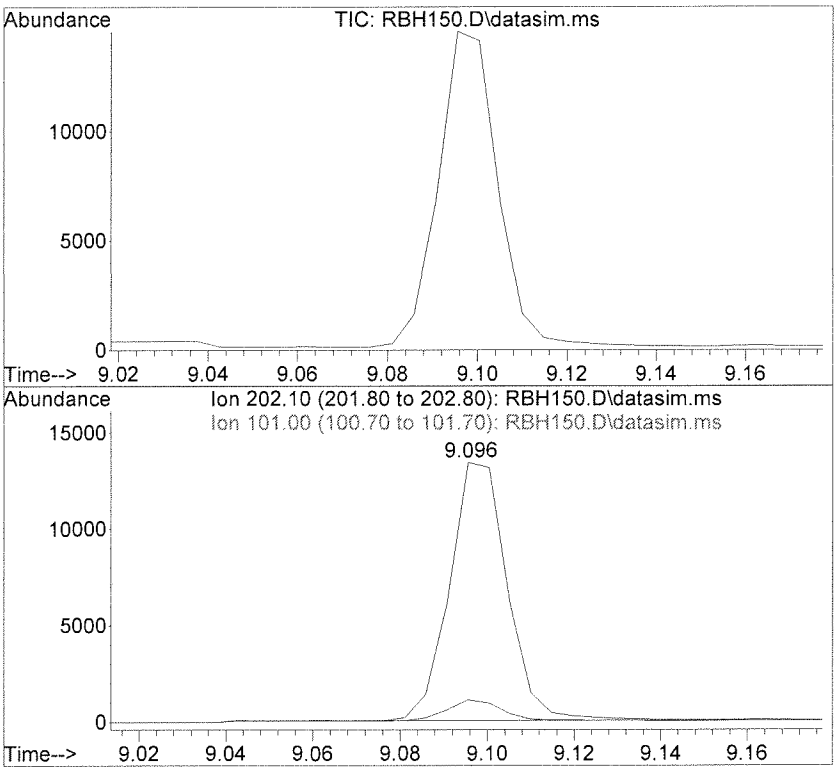
Ion	Ratio	Lower	Upper
178	100		
152	11.4	0.0	39.8



#37
Anthracene
Concen: 0.02 ppm
RT: 7.875 min Scan# 1405
Delta R.T. -0.008 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

Tgt Ion:178 Resp: 1336

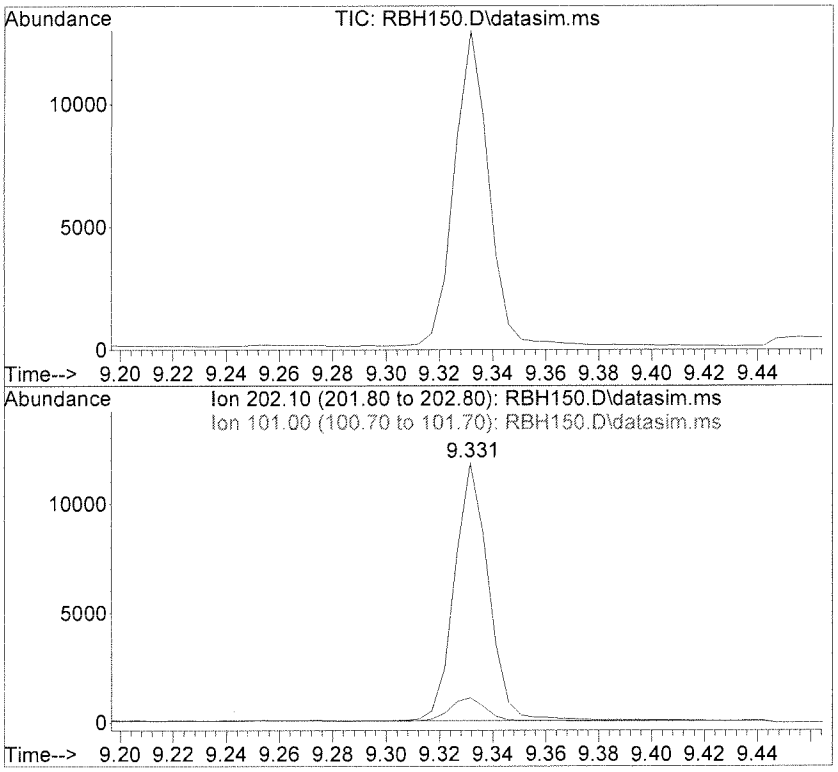
Ion	Ratio	Lower	Upper
178	100		
152	8.5	0.0	37.8



#41
Fluoranthene
Concen: 0.18 ppm
RT: 9.095 min Scan# 1665
Delta R.T. -0.008 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

Tgt Ion:202 Resp: 12354

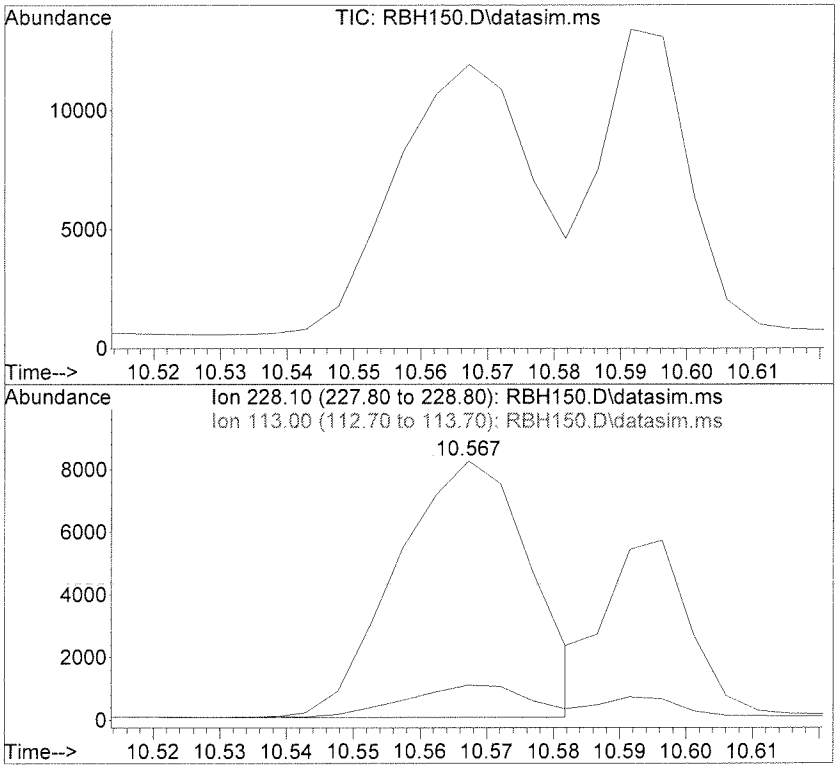
Ion	Ratio	Lower	Upper
202	100		
101	8.4	0.0	37.7



#42
Pyrene
Concen: 0.14 ppm
RT: 9.331 min Scan# 1714
Delta R.T. -0.009 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

Tgt Ion:202 Resp: 10529

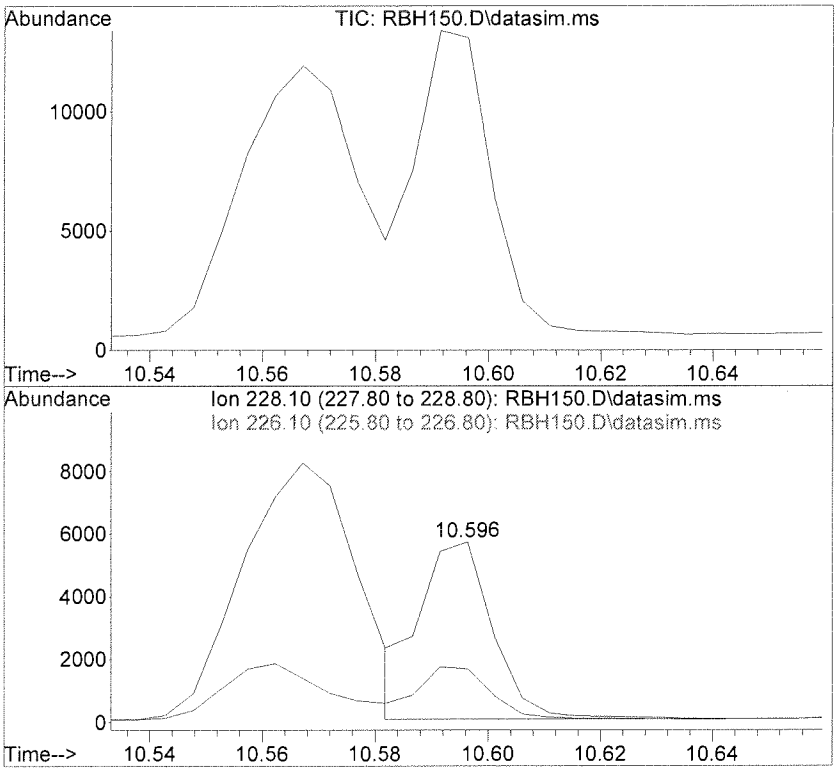
Ion	Ratio	Lower	Upper
202	100		
101	9.5	0.0	39.0



#45
Benzo(a)anthracene
Concen: 0.08 ppm
RT: 10.567 min Scan# 1993
Delta R.T. 0.001 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

Tgt Ion:228 Resp: 11402

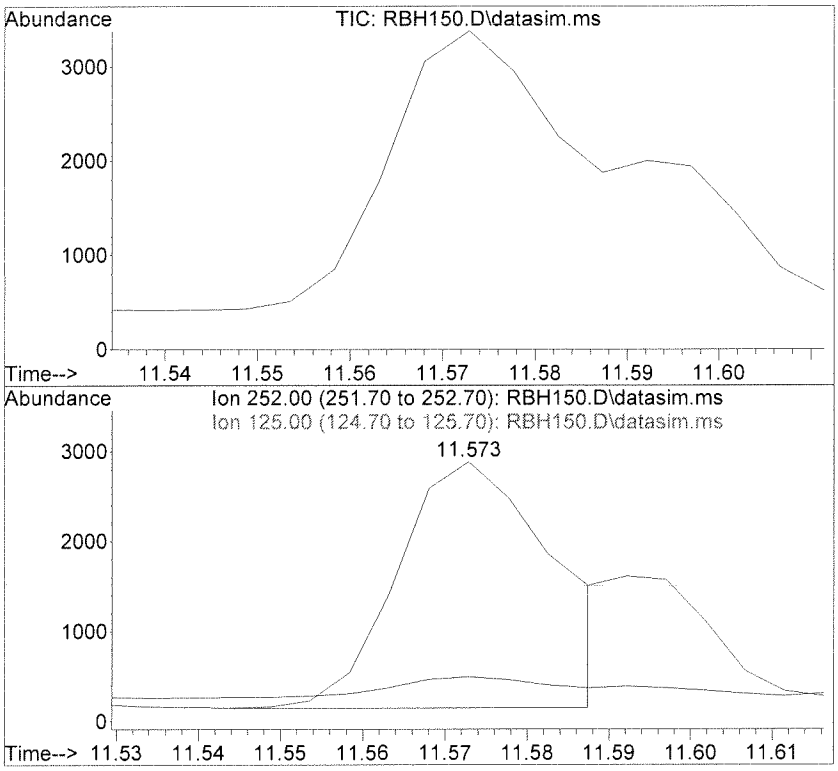
Ion	Ratio	Lower	Upper
228	100		
113	11.5	0.0	37.1



#46
Chrysene
Concen: 0.07 ppm
RT: 10.596 min Scan# 1999
Delta R.T. -0.004 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

Tgt Ion:228 Resp: 5067

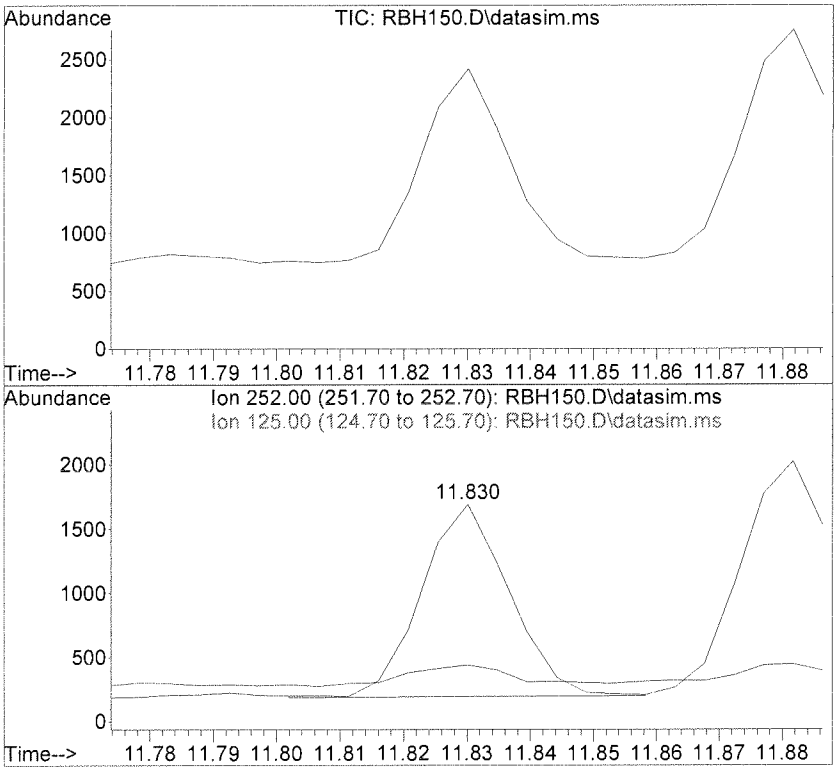
Ion	Ratio	Lower	Upper
228	100		
226	29.6	0.0	59.7



#50
Benzo(b)fluoranthene
Concen: 0.06 ppm m
RT: 11.573 min Scan# 2201
Delta R.T. -0.004 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

Tgt Ion:252 Resp: 3576

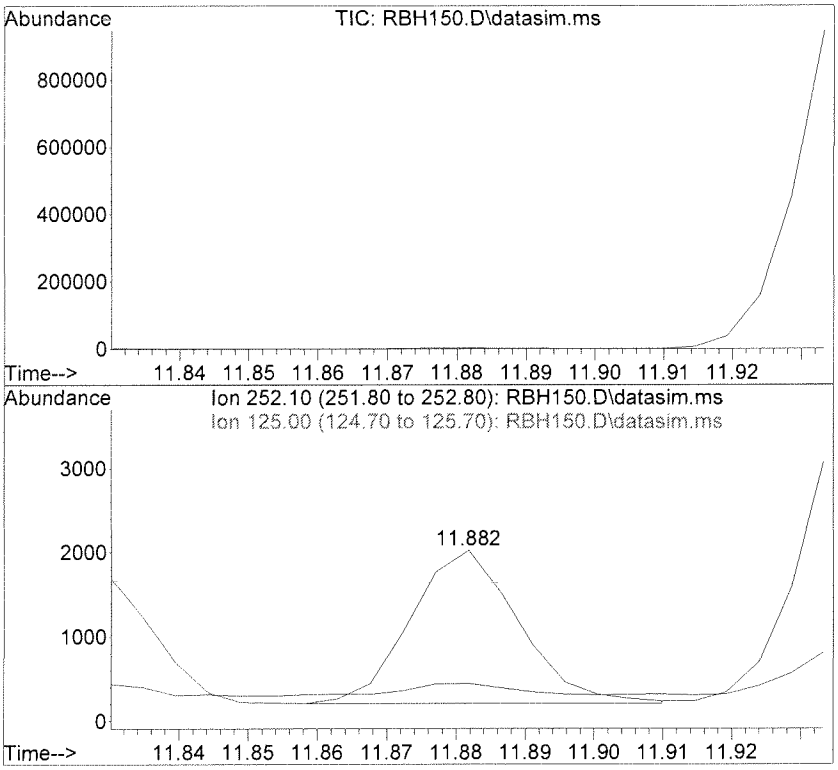
Ion	Ratio	Lower	Upper
252	100		
125	16.1	0.0	37.6



#52
Benzo(e)pyrene
Concen: 0.02 ppm
RT: 11.830 min Scan# 2255
Delta R.T. -0.005 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

Tgt Ion:252 Resp: 1437

Ion	Ratio	Lower	Upper
252	100		
125	13.9	0.0	40.6



#53
Benzo(a)pyrene
Concen: 0.03 ppm
RT: 11.882 min Scan# 2266
Delta R.T. -0.004 min
Lab File: RBH150.D
Acq: 12 Feb 2016 15:15

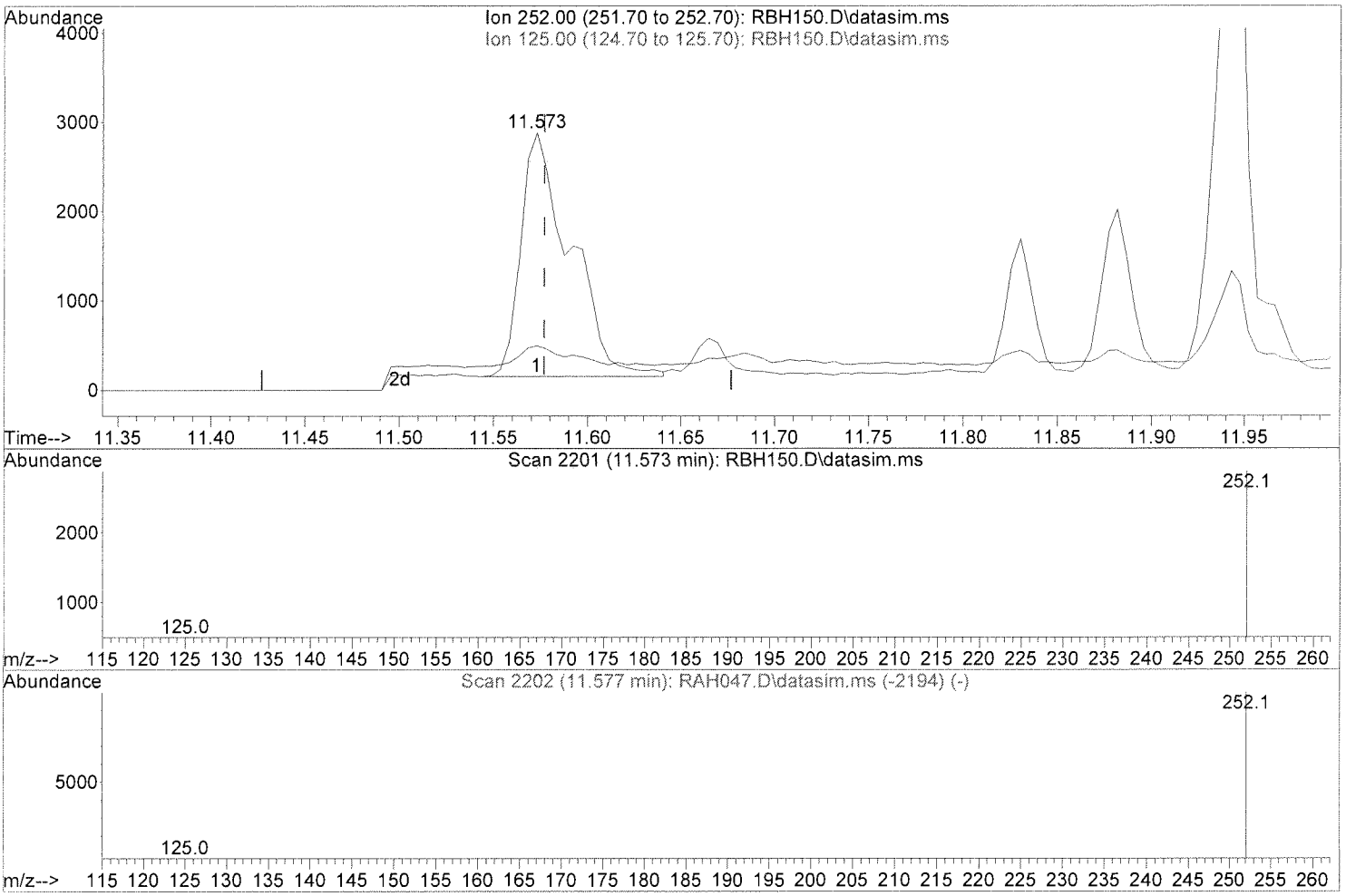
Tgt Ion:252 Resp: 1964

Ion	Ratio	Lower	Upper
252	100		
125	8.6	0.0	38.0

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH150.D
Acq On : 12 Feb 2016 15:15
Sample : 16B060-05
Misc :
Integrator: RTE
Quant Time: Feb 16 08:39:35 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 20
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH150.D\data.ms

(50) Benzo(b)fluoranthene (T,P)

11.573min (-0.004) 0.08 ppm

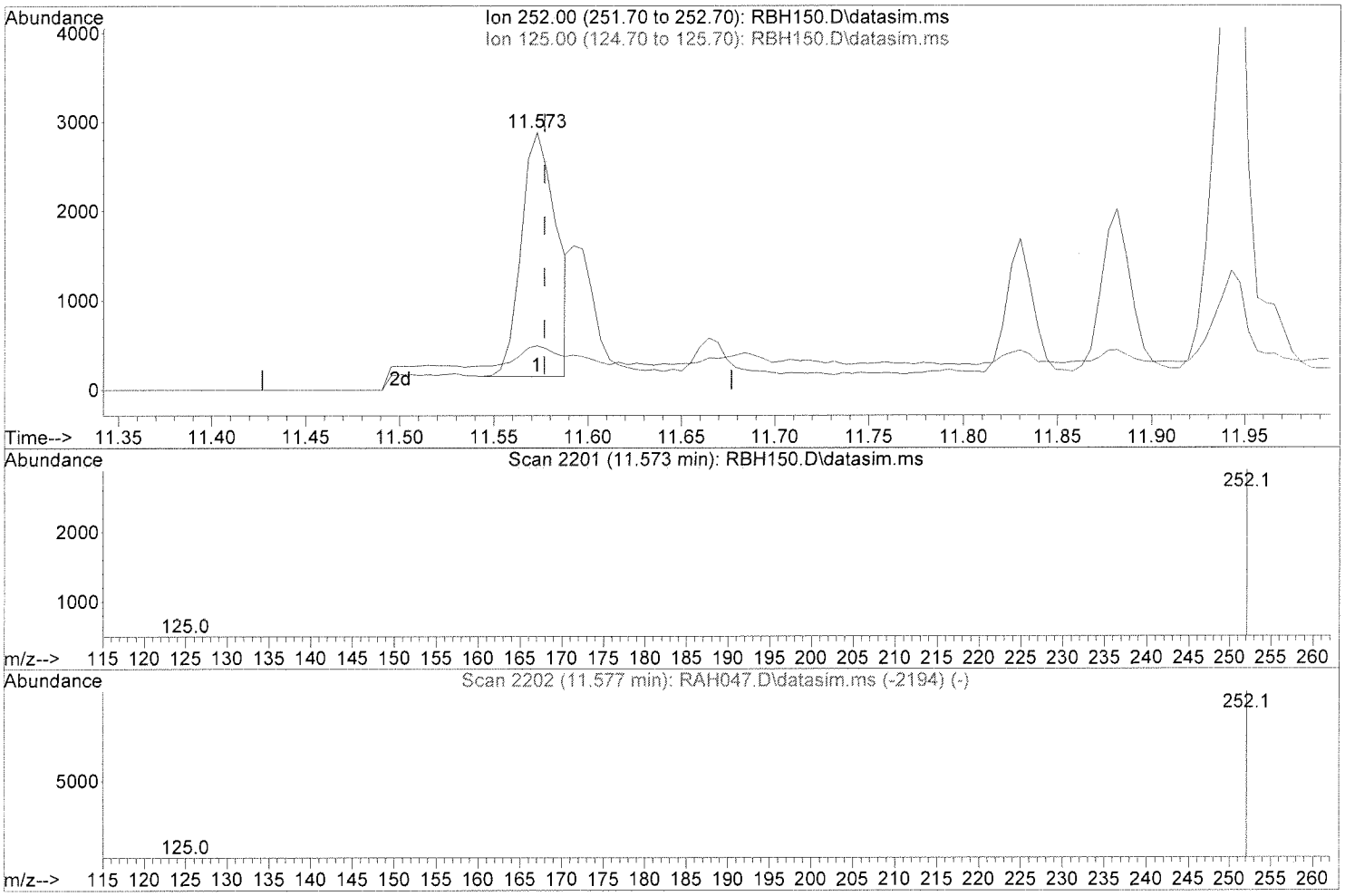
response 4988

Ion	Exp%	Act%
252.00	100	100
125.00	7.60	11.51
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH150.D
Acq On : 12 Feb 2016 15:15
Sample : 16B060-05
Misc :
Integrator: RTE
Quant Time: Feb 16 08:39:35 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 20
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH150.D\data.ms

(50) Benzo(b)fluoranthene (T,P)

11.573min (-0.004) 0.06 ppm m < DL

response 3576

Ion	Exp%	Act%
252.00	100	100
125.00	7.60	16.05
0.00	0.00	0.00
0.00	0.00	0.00

TM 2-18-16

- ☐ Incorrect Retention Time
- ☐ Incorrect Baseline
- ☐ Incorrect Integration
- ☐ Other _____

Initials SJ 2/16/16

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG01-S-210	Date Analyzed:	02/12/16 15:34
Lab Samp ID:	B060-06	Dilution Factor:	1
Lab File ID:	RBH151	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	6.8
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.021	0.0054	0.011
ACENAPHTHENE	ND	0.021	0.0054	0.011
ACENAPHTHYLENE	ND	0.021	0.0054	0.011
ANTHRACENE	ND	0.021	0.0054	0.011
BENZO(A)ANTHRACENE	ND	0.021	0.0054	0.011
BENZO(A)PYRENE	ND	0.021	0.0054	0.011
BENZO(B)FLUORANTHENE	ND	0.021	0.0054	0.011
BENZO(K)FLUORANTHENE	ND	0.021	0.0054	0.011
BENZO(G,H,I)PERYLENE	ND	0.021	0.0054	0.011
CHRYSENE	ND	0.021	0.0054	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.021	0.0054	0.011
FLUORANTHENE	0.0072J	0.021	0.0054	0.011
FLUORENE	ND	0.021	0.0054	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.021	0.0054	0.011
NAPHTHALENE	ND	0.021	0.0054	0.011
PHENANTHRENE	ND	0.021	0.0054	0.011
PYRENE	0.0059J	0.021	0.0054	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.495	0.7153	69.3	45-105
NITROBENZENE-D5	0.513	0.7153	71.7	35-100
TERPHENYL-D14	0.682	0.7153	95.3	30-125

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH151.D Vial: 21
Acq On : 12 Feb 2016 15:34 Operator: KVu
Sample : 16B060-06 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 10:03:39 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	450470	40.00	ppm	0.00
29) Phenanthrene-d10	7.793	188	1962238	40.00	ppm	0.00
48) Perylene-d12	11.943	264	2104353	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	261790	20.98	ppm	0.00
Spiked Amount 30.000			Recovery	=	69.93%	
5) Phenol-d5	2.504	99	338770	21.71	ppm	0.00
Spiked Amount 30.000			Recovery	=	72.37%	
10) Nitrobenzene-d5	3.324	82	108430	7.17	ppm	0.00
Spiked Amount 10.000			Recovery	=	71.70%	
20) 2-Fluorobiphenyl	5.252	172	275592	6.93	ppm	-0.01
Spiked Amount 10.000			Recovery	=	69.30%	
32) 2,4,6-Tribromophenol	6.996	330	150888	21.85	ppm	0.00
Spiked Amount 30.000			Recovery	=	72.83%	
43) Terphenyl-d14	9.504	244	460750	9.53	ppm	0.00
Spiked Amount 10.000			Recovery	=	95.30%	
Target Compounds						Qvalue
36] Phenanthrene	7.820	178	2570	0.04	ppm	91
41] Fluoranthene	9.095	202	6668	0.10	ppm	97
42] Pyrene	9.331	202	5778	0.08	ppm	96
45] Benzo(a)anthracene	10.567	228	8582	0.05	ppm	83
46] Chrysene	10.591	228	2759m	0.04	ppm	
50] Benzo(b)fluoranthene	11.573	252	2126m	0.03	ppm	
53] Benzo(a)pyrene	11.882	252	1189	0.02	ppm	92

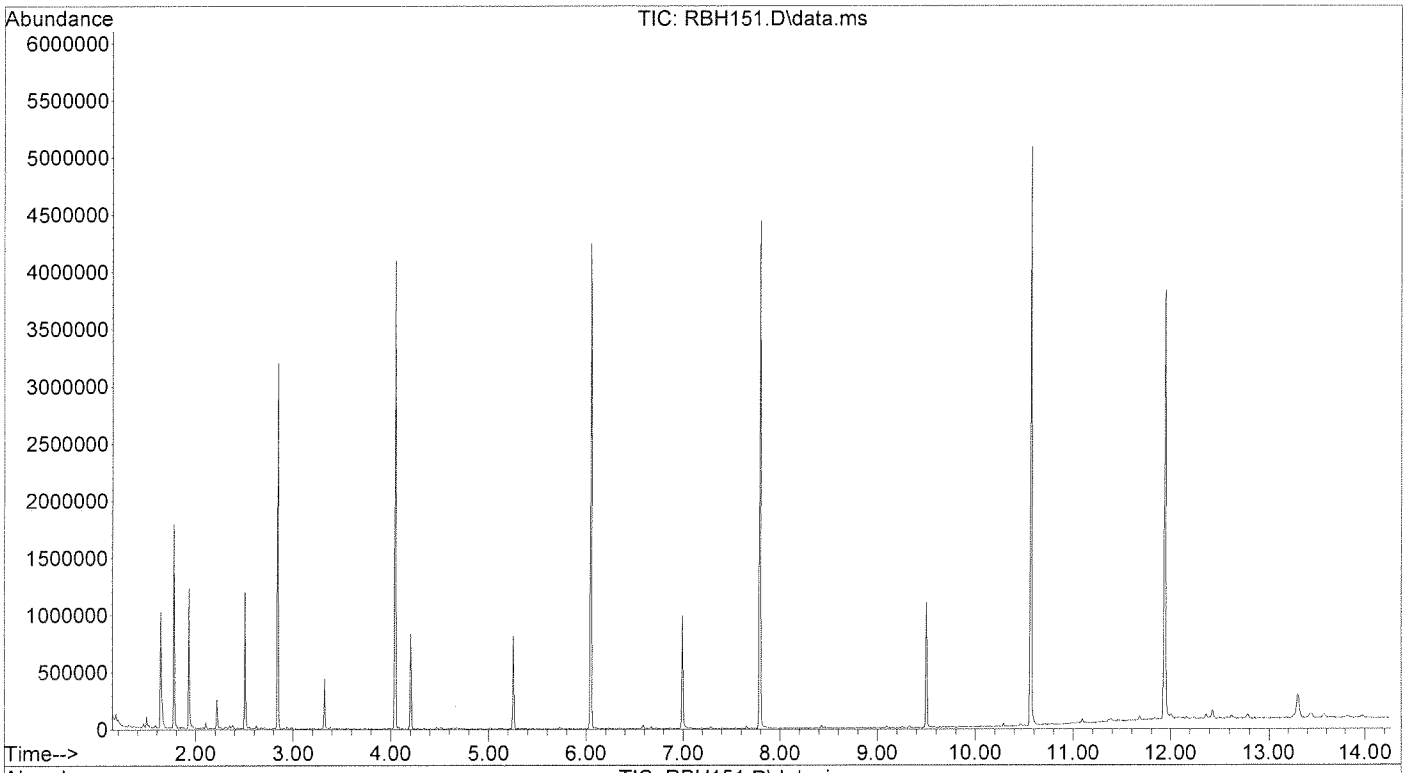
<< RL

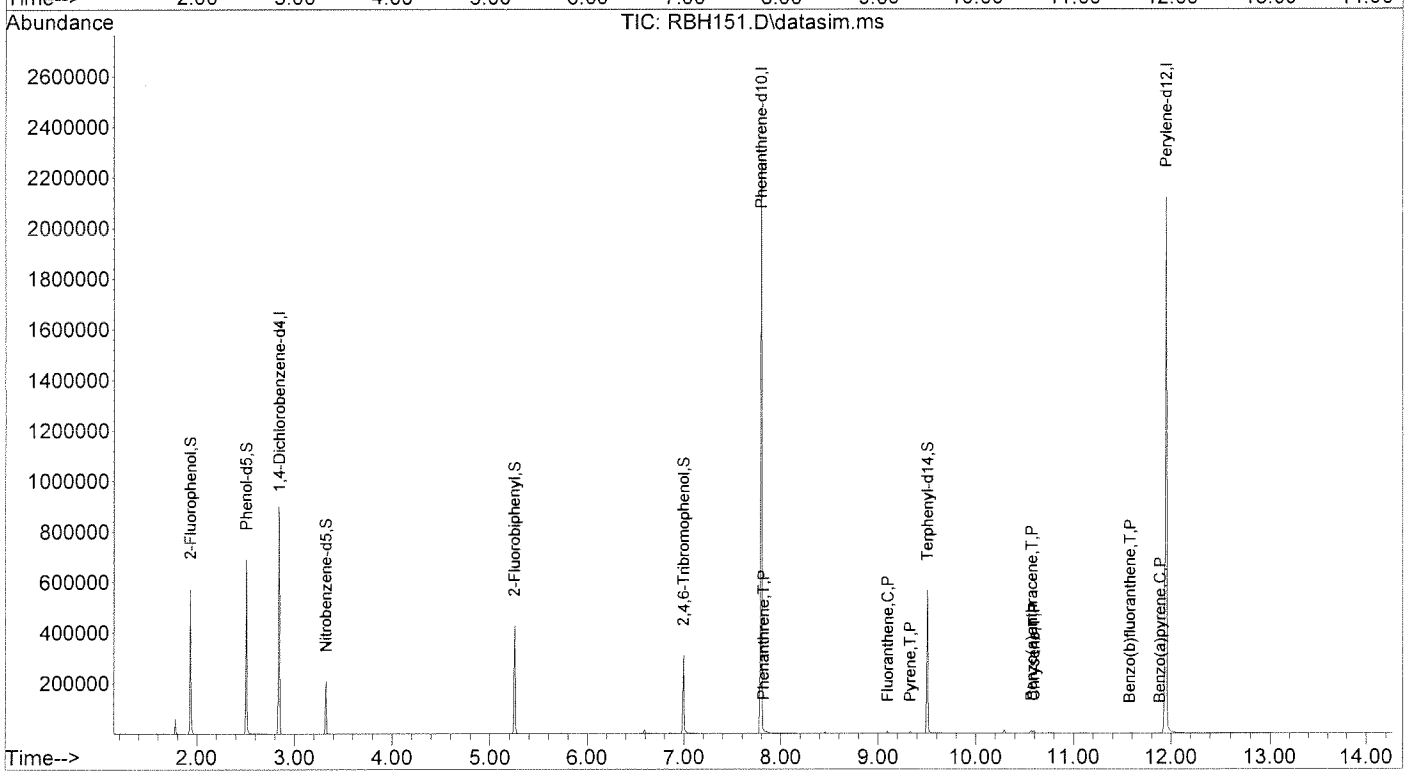
SDJ 2/16/16

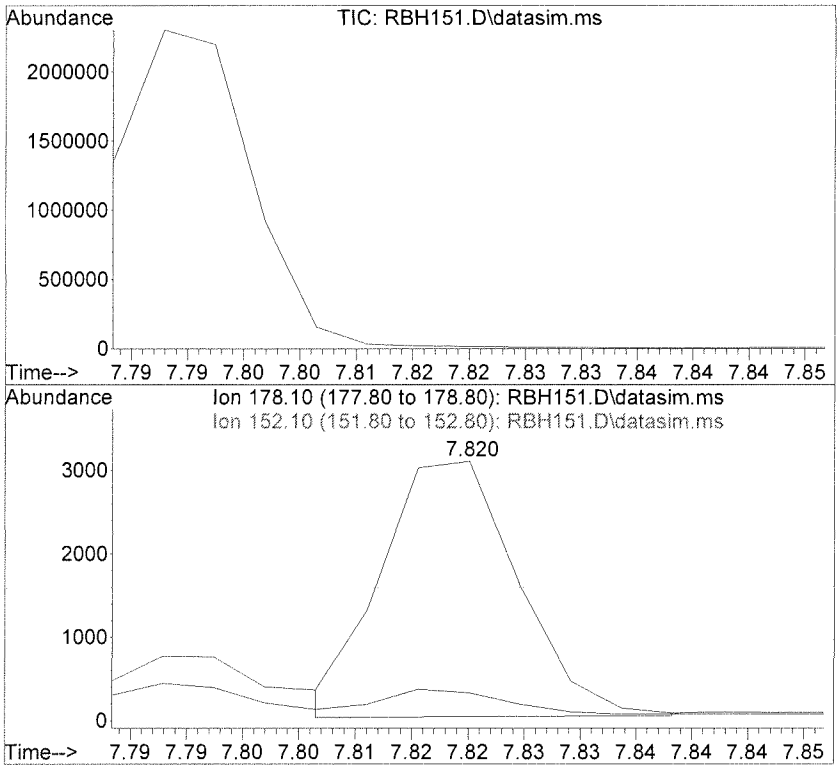
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH151.D
Vial: 21
Acq On : 12 Feb 2016 15:34
Operator: KVu
Sample : 16B060-06
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 10:03:39 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M



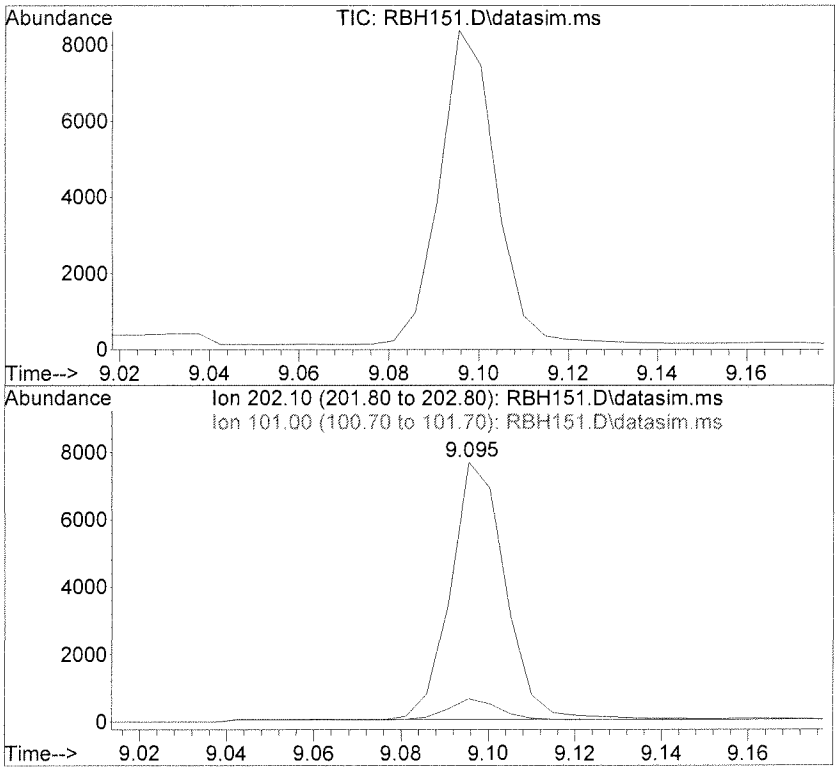




#36
Phenanthrene
Concen: 0.04 ppm
RT: 7.820 min Scan# 1393
Delta R.T. -0.008 min
Lab File: RBH151.D
Acq: 12 Feb 2016 15:34

Tgt Ion:178 Resp: 2570

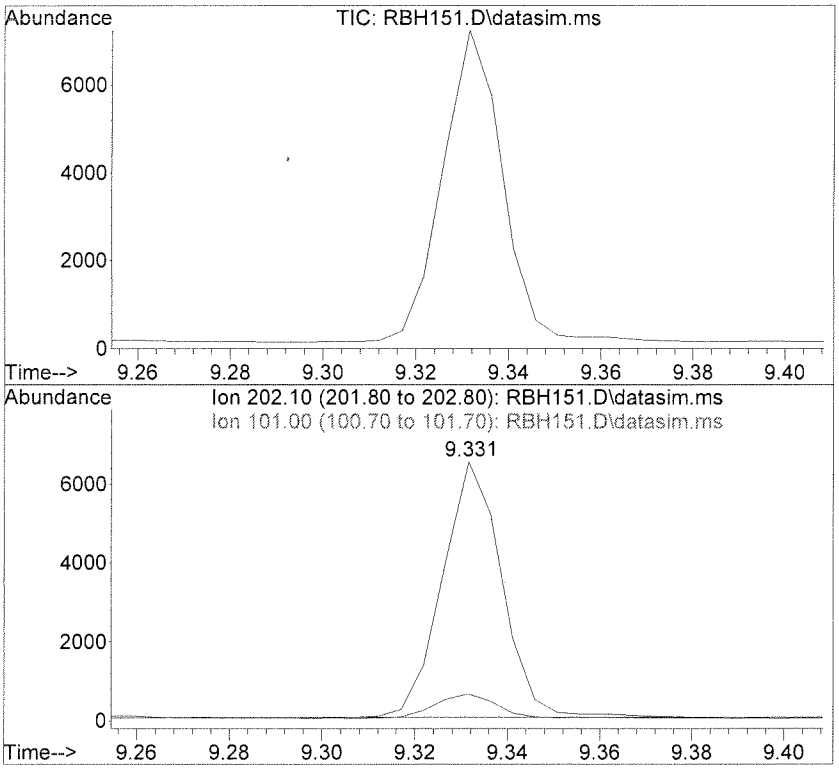
Ion	Ratio	Lower	Upper
178	100		
152	13.3	0.0	39.8



#41
Fluoranthene
Concen: 0.10 ppm
RT: 9.095 min Scan# 1665
Delta R.T. -0.009 min
Lab File: RBH151.D
Acq: 12 Feb 2016 15:34

Tgt Ion:202 Resp: 6668

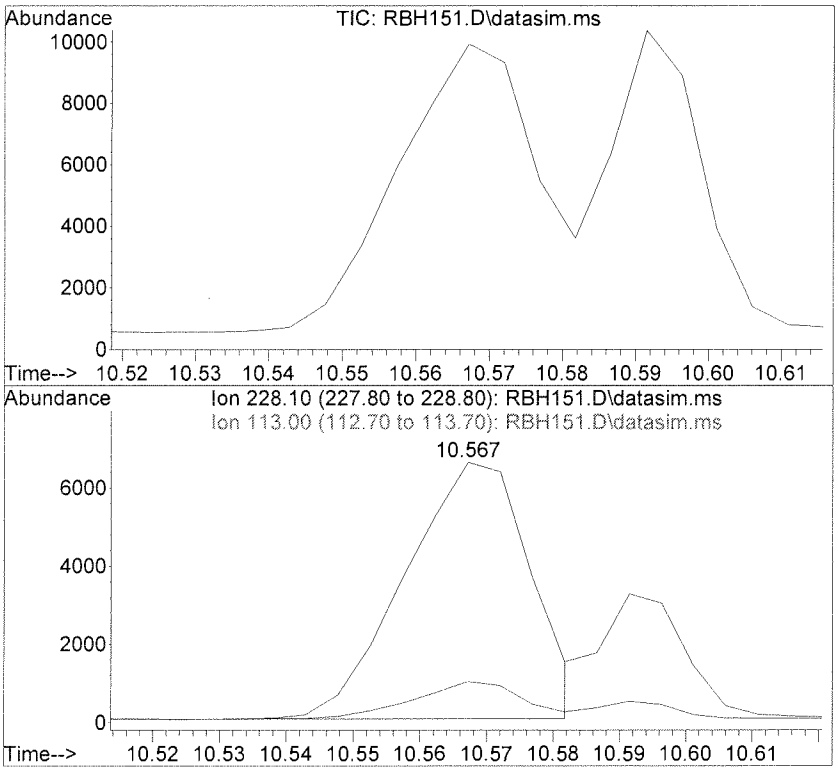
Ion	Ratio	Lower	Upper
202	100		
101	8.9	0.0	37.7



#42
Pyrene
Concen: 0.08 ppm
RT: 9.331 min Scan# 1714
Delta R.T. -0.009 min
Lab File: RBH151.D
Acq: 12 Feb 2016 15:34

Tgt Ion:202 Resp: 5778

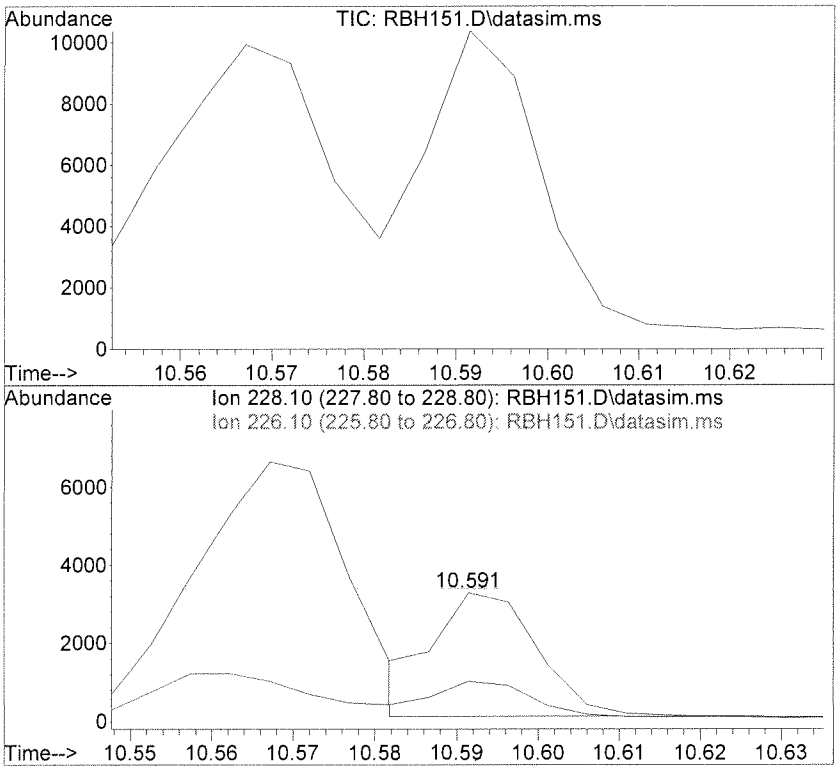
Ion	Ratio	Lower	Upper
202	100		
101	10.5	0.0	39.0



#45
Benzo(a)anthracene
Concen: 0.05 ppm
RT: 10.567 min Scan# 1993
Delta R.T. 0.001 min
Lab File: RBH151.D
Acq: 12 Feb 2016 15:34

Tgt Ion:228 Resp: 8582

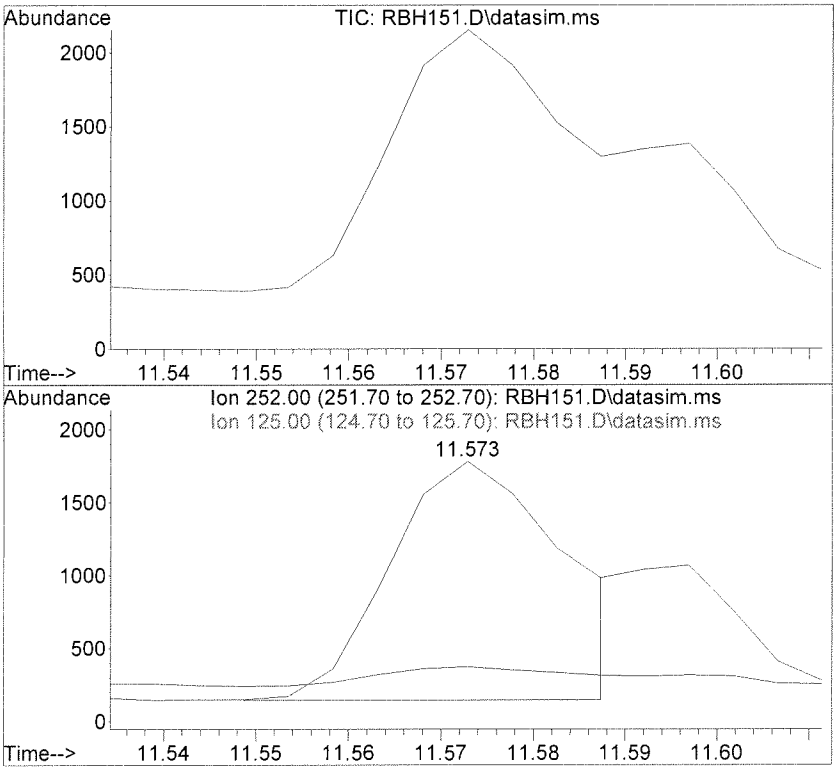
Ion	Ratio	Lower	Upper
228	100		
113	12.8	0.0	37.1



#46
Chrysene
Concen: 0.04 ppm m
RT: 10.591 min Scan# 1998
Delta R.T. -0.009 min
Lab File: RBH151.D
Acq: 12 Feb 2016 15:34

Tgt Ion:228 Resp: 2759

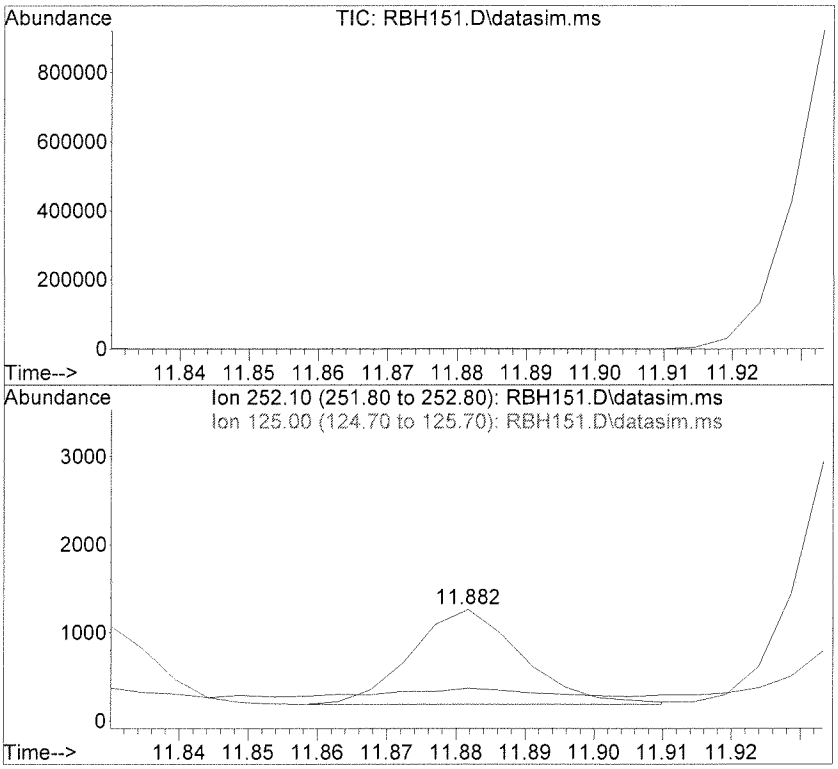
Ion	Ratio	Lower	Upper
228	100		
226	30.6	0.0	59.7



#50
Benzo(b)fluoranthene
Concen: 0.03 ppm m
RT: 11.573 min Scan# 2201
Delta R.T. -0.004 min
Lab File: RBH151.D
Acq: 12 Feb 2016 15:34

Tgt Ion:252 Resp: 2126

Ion	Ratio	Lower	Upper
252	100		
125	11.9	0.0	37.6



#53
Benzo(a)pyrene
Concen: 0.02 ppm
RT: 11.882 min Scan# 2266
Delta R.T. -0.004 min
Lab File: RBH151.D
Acq: 12 Feb 2016 15:34

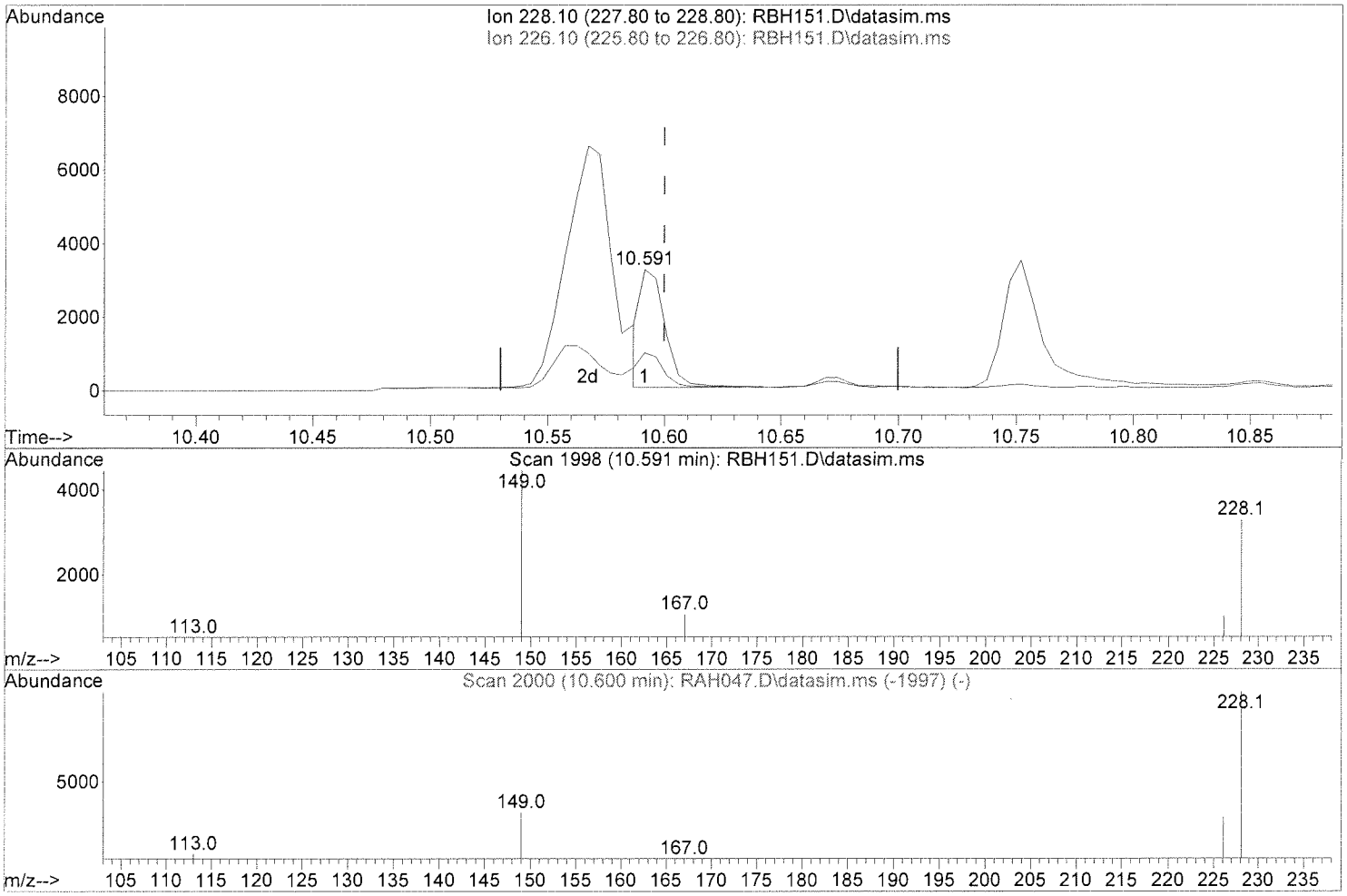
Tgt Ion:252 Resp: 1189

Ion	Ratio	Lower	Upper
252	100		
125	10.8	0.0	38.0

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH151.D
Acq On : 12 Feb 2016 15:34
Sample : 16B060-06
Misc :
Integrator: RTE
Quant Time: Feb 16 08:39:39 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 21
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH151.D\data.ms

(46) Chrysene (T,P)

10.591min (-0.009) 0.04 ppm

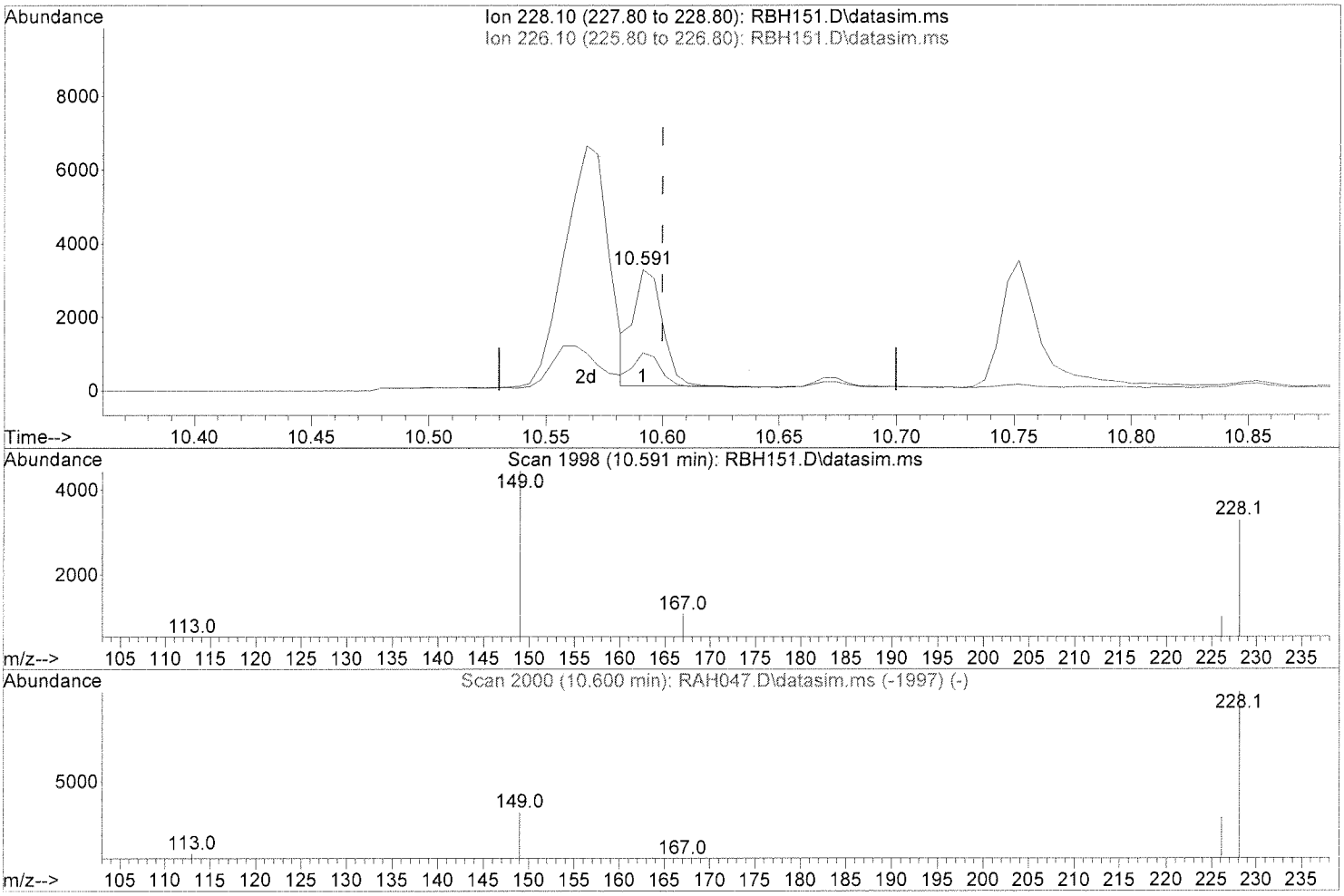
response 2373

Ion	Exp%	Act%
228.10	100	100
226.10	29.70	35.61
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH151.D
Acq On : 12 Feb 2016 15:34
Sample : 16B060-06
Misc :
Integrator: RTE
Quant Time: Feb 16 08:39:39 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 21
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH151.D\data.ms

(46) Chrysene (T,P)

10.591min (-0.009) 0.04 ppm m < DL

response 2759

Ion	Exp%	Act%
228.10	100	100
226.10	29.70	30.63
0.00	0.00	0.00
0.00	0.00	0.00

PM 2/18/16

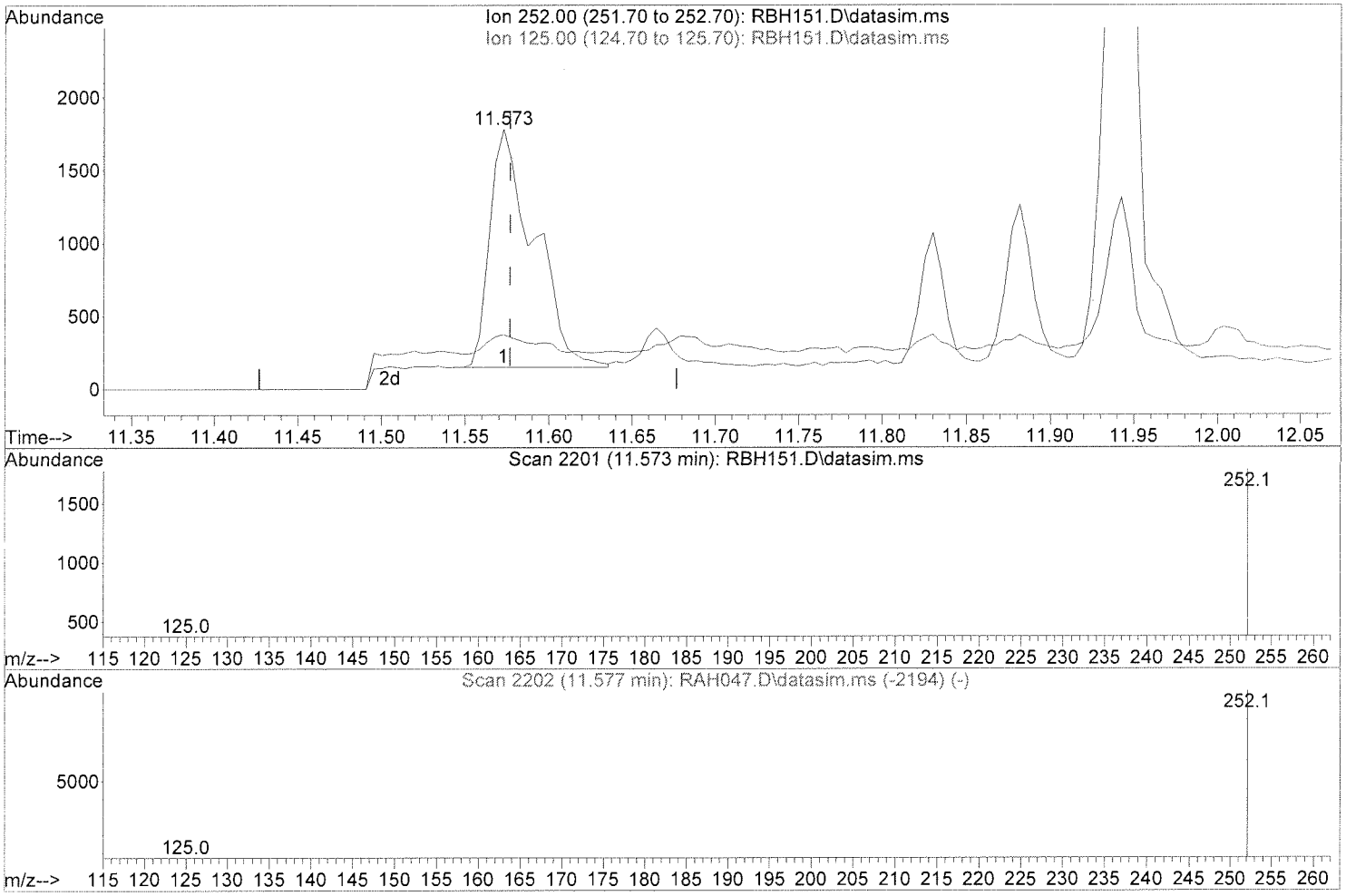
- ☐ Incorrect Retention Time
- ☐ Incorrect Baseline
- ☑ Incorrect Integration
- ☐ Other _____

Initials DJ 2/16/16

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH151.D
Acq On : 12 Feb 2016 15:34
Sample : 16B060-06
Misc :
Integrator: RTE
Quant Time: Feb 16 08:39:39 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 21
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH151.D\data.ms

(50) Benzo(b)fluoranthene (T,P)

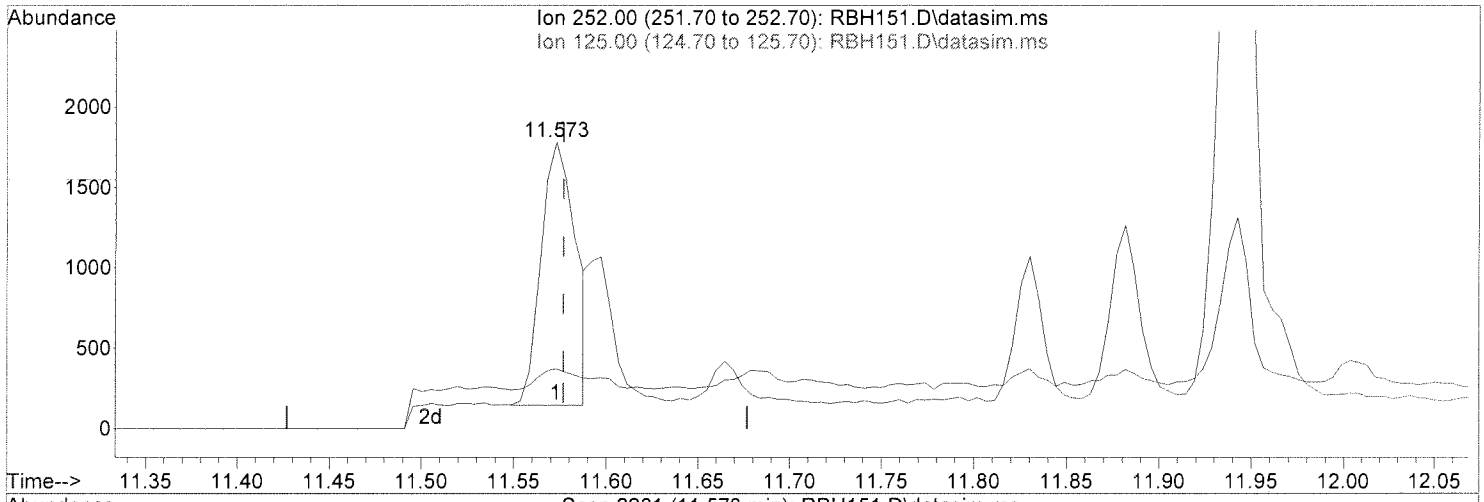
11.573min (-0.004) 0.05 ppm

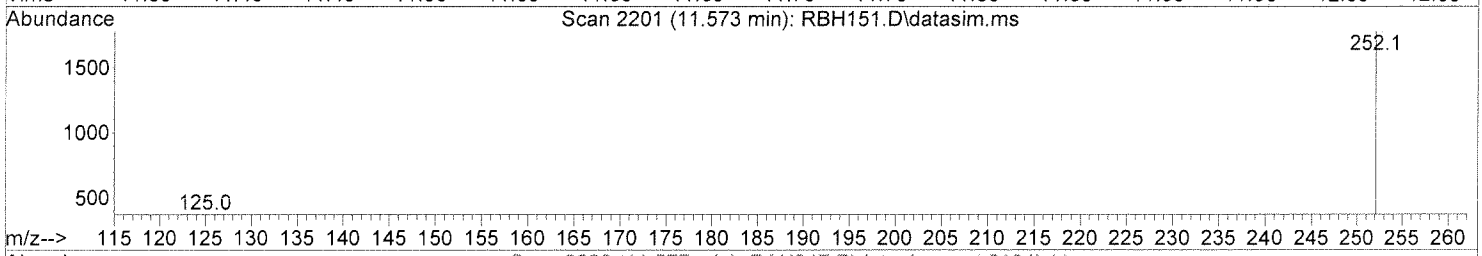
response 2998

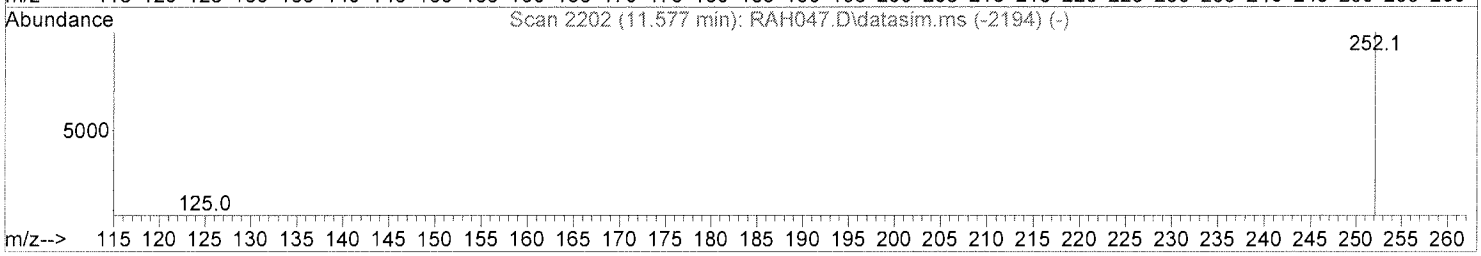
Ion	Exp%	Act%
252.00	100	100
125.00	7.60	8.44
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH151.D
Vial: 21
Acq On : 12 Feb 2016 15:34
Operator: KVu
Sample : 16B060-06
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 08:39:39 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M







TIC: RBH151.D\data.ms

(50) Benzo(b)fluoranthene (T,P)

11.573min (-0.004) 0.03 ppm m

response 2126

Ion	Exp%	Act%
252.00	100	100
125.00	7.60	11.90
0.00	0.00	0.00
0.00	0.00	0.00

<DL

2/18/16

☐ Incorrect Retention Time
☐ Incorrect Baseline
☑ Incorrect Integration
☐ Other

Initials DJ 2/16/16

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID	: CA504-SG02-S-005	Date Analyzed:	02/12/16 15:53
Lab Samp ID	: B060-07	Dilution Factor:	1
Lab File ID	: RBH152	Matrix	: SOIL
Ext Btch ID	: SVB011S	% Moisture	: 8.7
Calib. Ref.	: RAH047	Instrument ID	: T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0055	0.011
ACENAPHTHENE	ND	0.022	0.0055	0.011
ACENAPHTHYLENE	ND	0.022	0.0055	0.011
ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)PYRENE	ND	0.022	0.0055	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0055	0.011
CHRYSENE	ND	0.022	0.0055	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0055	0.011
FLUORANTHENE	ND	0.022	0.0055	0.011
FLUORENE	ND	0.022	0.0055	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0055	0.011
NAPHTHALENE	ND	0.022	0.0055	0.011
PHENANTHRENE	ND	0.022	0.0055	0.011
PYRENE	ND	0.022	0.0055	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.519	0.7302	71.1	45-105
NITROBENZENE-D5	0.538	0.7302	73.6	35-100
TERPHENYL-D14	0.688	0.7302	94.3	30-125

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH152.D Vial: 22
Acq On : 12 Feb 2016 15:53 Operator: KVu
Sample : 16B060-07 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 10:14:01 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

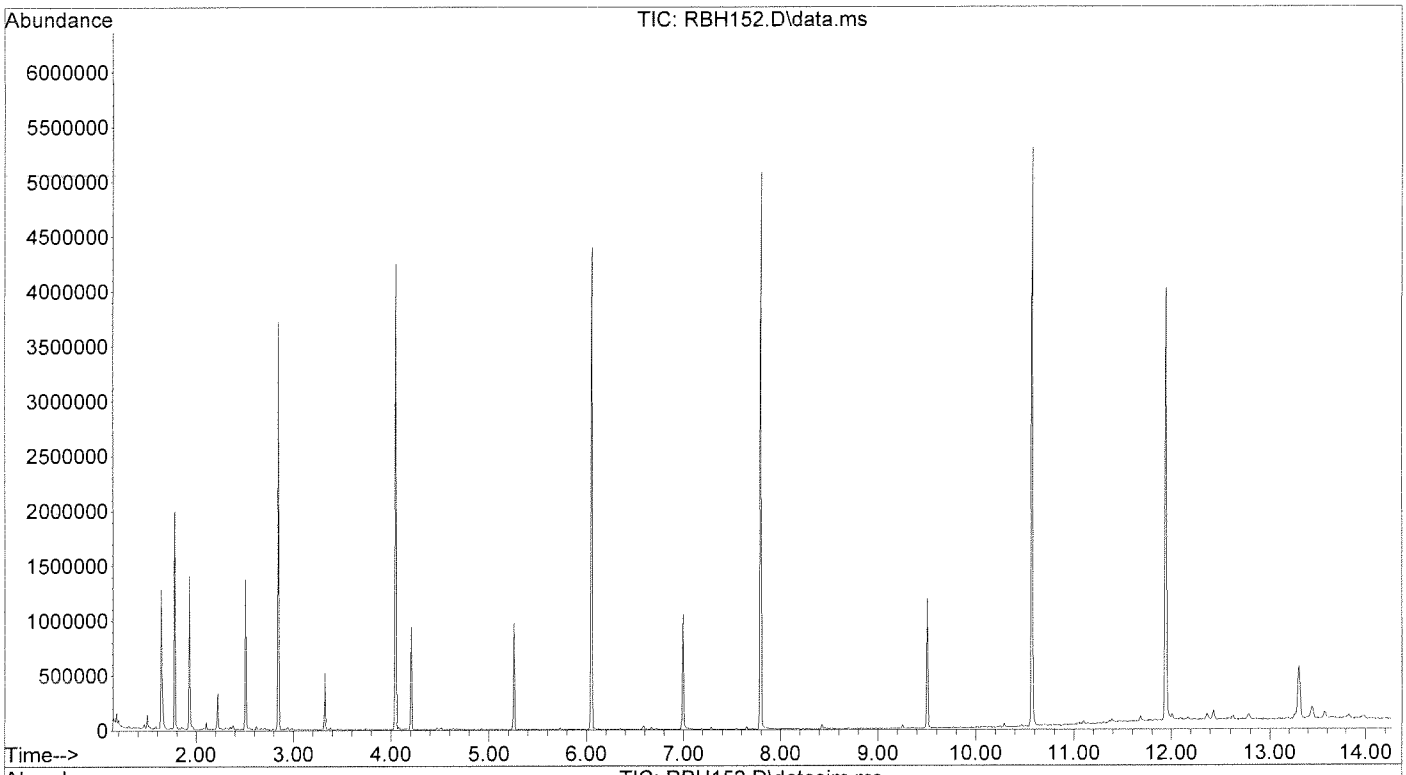
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	494038	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2152501	40.00	ppm	0.00
48) Perylene-d12	11.943	264	2277644	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	294908	21.55	ppm	0.00
Spiked Amount 30.000			Recovery = 71.83%			
5) Phenol-d5	2.504	99	384923	22.49	ppm	0.00
Spiked Amount 30.000			Recovery = 74.97%			
10) Nitrobenzene-d5	3.324	82	122040	7.36	ppm	0.00
Spiked Amount 10.000			Recovery = 73.60%			
20) 2-Fluorobiphenyl	5.252	172	310116	7.11	ppm	-0.01
Spiked Amount 10.000			Recovery = 71.10%			
32) 2,4,6-Tribromophenol	6.991	330	164404	21.70	ppm	0.00
Spiked Amount 30.000			Recovery = 72.33%			
43) Terphenyl-d14	9.504	244	499967	9.43	ppm	0.00
Spiked Amount 10.000			Recovery = 94.30%			
Target Compounds						Qvalue

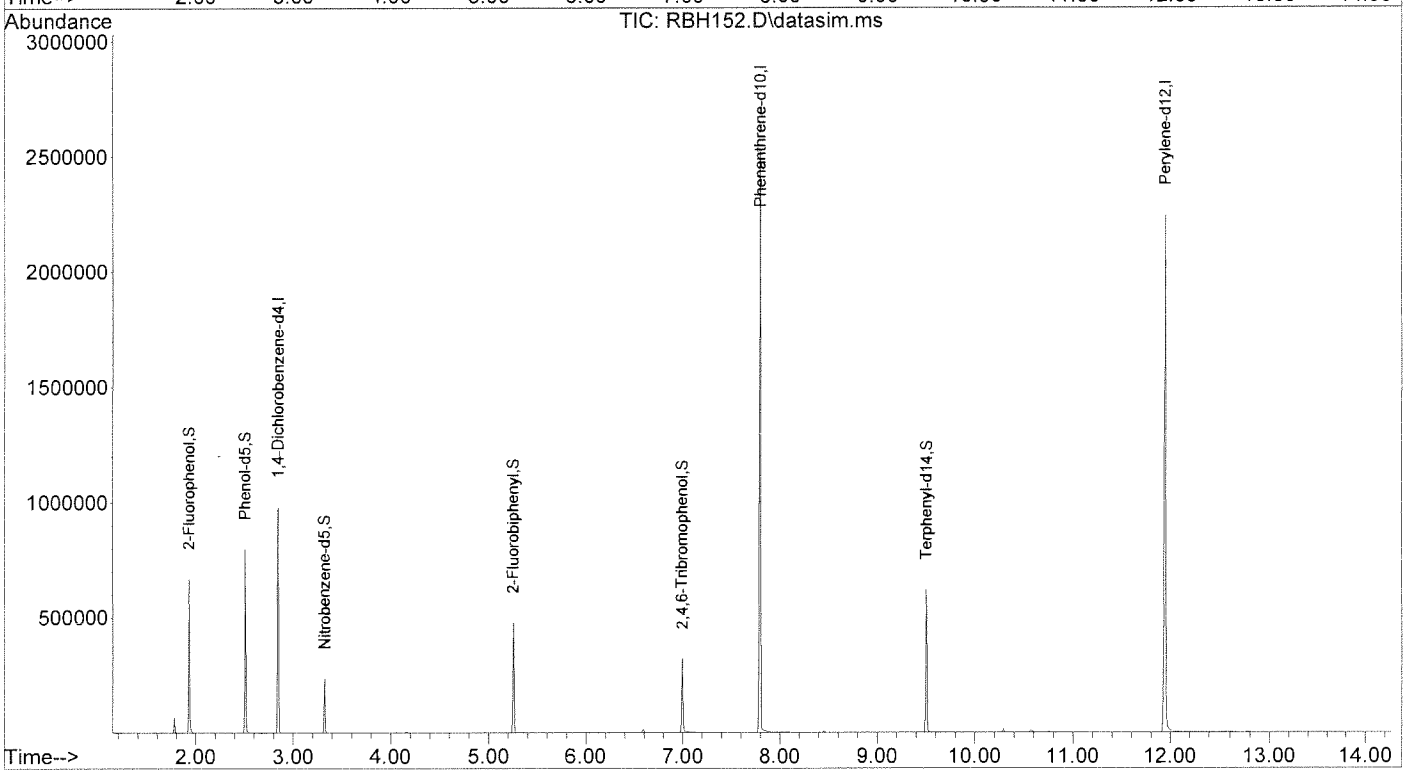
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH152.D
Acq On : 12 Feb 2016 15:53
Sample : 16B060-07
Misc :
Integrator: RTE
Quant Time: Feb 16 10:14:01 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 22
Operator: KVu
Inst : E7
Multiplr: 1.00





METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-010	Date Analyzed:	02/12/16 16:13
Lab Samp ID:	B060-08	Dilution Factor:	1
Lab File ID:	RBH153	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	8.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0055	0.011
ACENAPHTHENE	ND	0.022	0.0055	0.011
ACENAPHTHYLENE	ND	0.022	0.0055	0.011
ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)PYRENE	ND	0.022	0.0055	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0055	0.011
CHRYSENE	ND	0.022	0.0055	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0055	0.011
FLUORANTHENE	ND	0.022	0.0055	0.011
FLUORENE	ND	0.022	0.0055	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0055	0.011
NAPHTHALENE	ND	0.022	0.0055	0.011
PHENANTHRENE	ND	0.022	0.0055	0.011
PYRENE	ND	0.022	0.0055	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.457	0.7278	62.7	45-105
NITROBENZENE-D5	0.470	0.7278	64.5	35-100
TERPHENYL-D14	0.665	0.7278	91.4	30-125

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH153.D Vial: 23
Acq On : 12 Feb 2016 16:13 Operator: KVu
Sample : 16B060-08 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 10:17:03 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

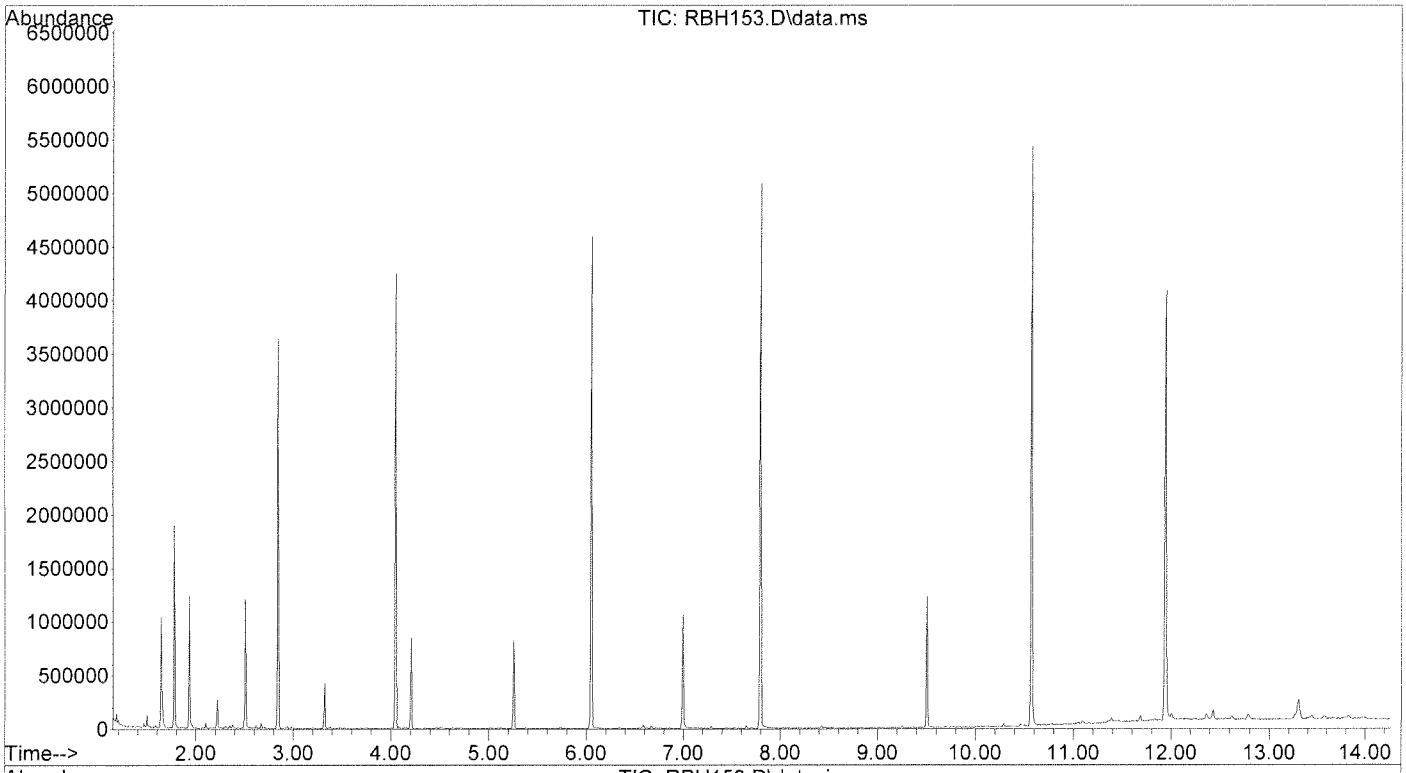
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.844	152	490027	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2146894	40.00	ppm	0.00
48) Perylene-d12	11.942	264	2256001	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	256017	18.86	ppm	0.00
Spiked Amount 30.000			Recovery = 62.87%			
5) Phenol-d5	2.503	99	335359	19.76	ppm	0.00
Spiked Amount 30.000			Recovery = 65.87%			
10) Nitrobenzene-d5	3.323	82	106139	6.46	ppm	0.00
Spiked Amount 10.000			Recovery = 64.60%			
20) 2-Fluorobiphenyl	5.256	172	271577	6.27	ppm	0.00
Spiked Amount 10.000			Recovery = 62.70%			
32) 2,4,6-Tribromophenol	6.996	330	162666	21.53	ppm	0.00
Spiked Amount 30.000			Recovery = 71.77%			
43) Terphenyl-d14	9.503	244	483493	9.14	ppm	0.00
Spiked Amount 10.000			Recovery = 91.40%			

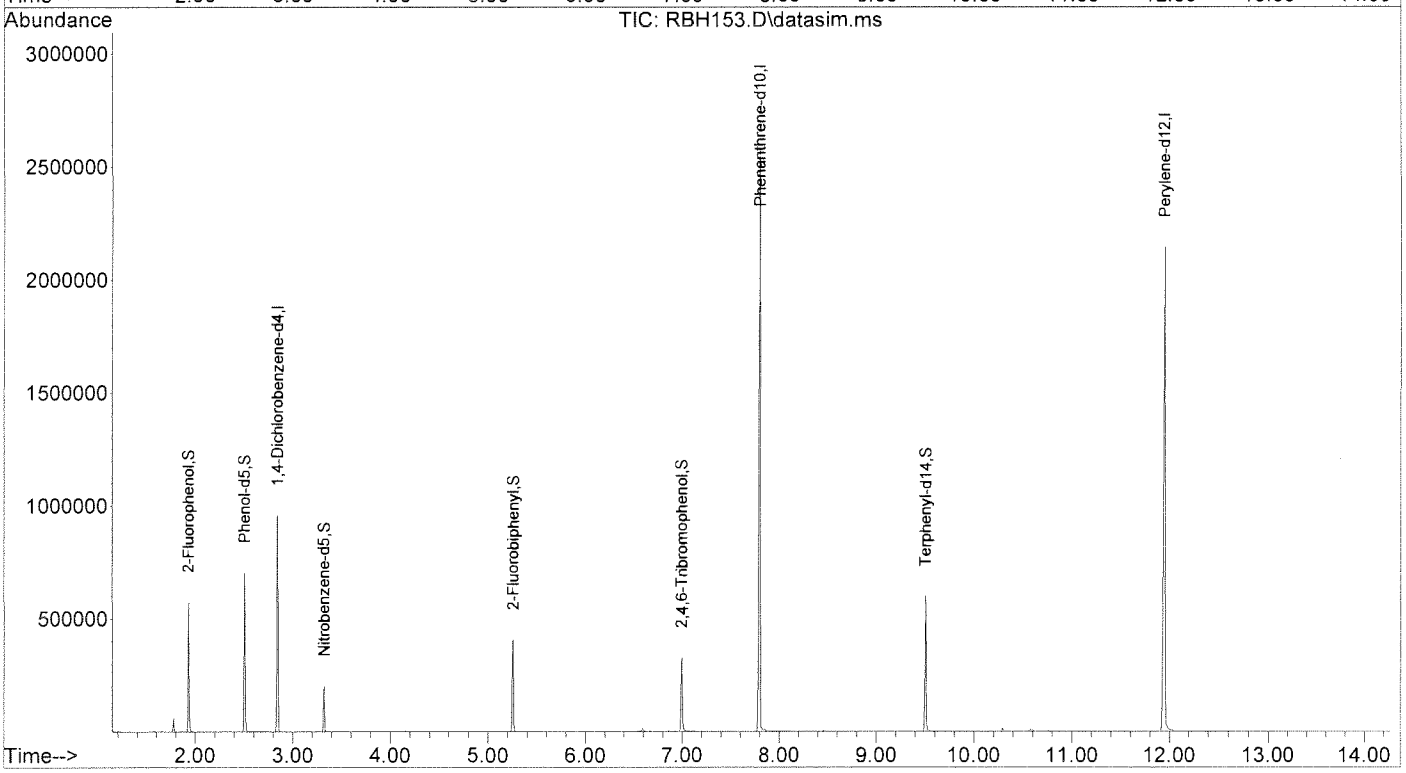
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH153.D
Vial: 23
Acq On : 12 Feb 2016 16:13
Operator: KVu
Sample : 16B060-08
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 10:17:03 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	02/05/16
Project	: CANNON AFB PBR	Date Received:	02/06/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	CA504-SG02-S-210	Date Analyzed:	02/12/16 16:32
Lab Samp ID:	B060-09	Dilution Factor:	1
Lab File ID:	RBH154	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	8.4
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.022	0.0055	0.011
ACENAPHTHENE	ND	0.022	0.0055	0.011
ACENAPHTHYLENE	ND	0.022	0.0055	0.011
ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)ANTHRACENE	ND	0.022	0.0055	0.011
BENZO(A)PYRENE	ND	0.022	0.0055	0.011
BENZO(B)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(K)FLUORANTHENE	ND	0.022	0.0055	0.011
BENZO(G,H,I)PERYLENE	ND	0.022	0.0055	0.011
CHRYSENE	ND	0.022	0.0055	0.011
DIBENZ(A,H)ANTHRACENE	ND	0.022	0.0055	0.011
FLUORANTHENE	ND	0.022	0.0055	0.011
FLUORENE	ND	0.022	0.0055	0.011
INDENO(1,2,3-CD)PYRENE	ND	0.022	0.0055	0.011
NAPHTHALENE	ND	0.022	0.0055	0.011
PHENANTHRENE	ND	0.022	0.0055	0.011
PYRENE	ND	0.022	0.0055	0.011

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.499	0.7278	68.5	45-105
NITROBENZENE-D5	0.515	0.7278	70.8	35-100
TERPHENYL-D14	0.679	0.7278	93.2	30-125

Quantitation Report (QT Reviewed)

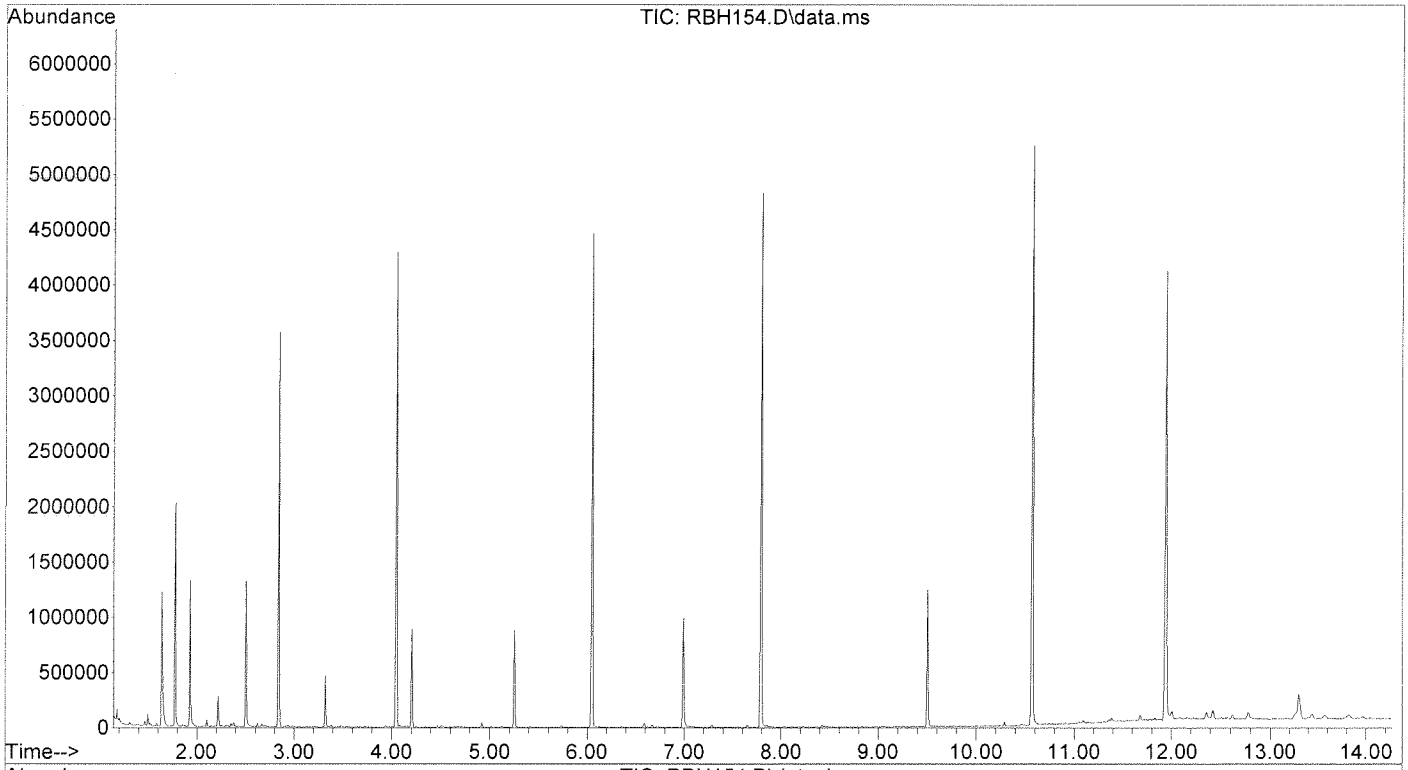
Data File : D:\DATA\16B12\RBH154.D
Vial: 24
Acq On : 12 Feb 2016 16:32
Operator: KVu
Sample : 16B060-09
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 10:19:38 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

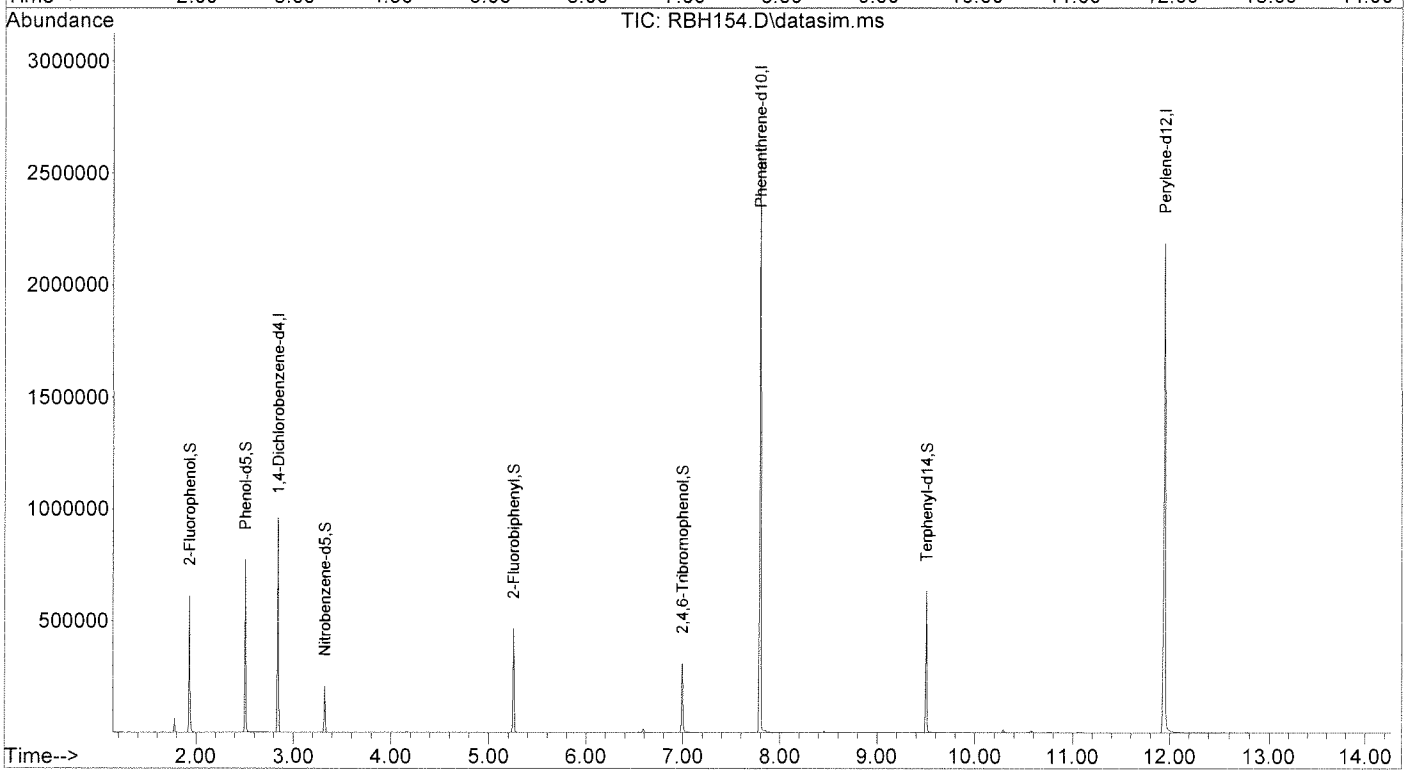
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.845	152	480255	40.00	ppm	0.00
29) Phenanthrene-d10	7.793	188	2094016	40.00	ppm	0.00
48) Perylene-d12	11.943	264	2217101	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	277485	20.85	ppm	0.00
Spiked Amount 30.000			Recovery = 69.50%			
5) Phenol-d5	2.504	99	358739	21.57	ppm	0.00
Spiked Amount 30.000			Recovery = 71.90%			
10) Nitrobenzene-d5	3.324	82	114071	7.08	ppm	0.00
Spiked Amount 10.000			Recovery = 70.80%			
20) 2-Fluorobiphenyl	5.252	172	290788	6.86	ppm	-0.01
Spiked Amount 10.000			Recovery = 68.60%			
32) 2,4,6-Tribromophenol	6.991	330	158850	21.55	ppm	0.00
Spiked Amount 30.000			Recovery = 71.83%			
43) Terphenyl-d14	9.504	244	481005	9.32	ppm	0.00
Spiked Amount 10.000			Recovery = 93.20%			
Target Compounds						Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH154.D
Vial: 24
Acq On : 12 Feb 2016 16:32
Operator: KVu
Sample : 16B060-09
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 16 10:19:38 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





QC SUMMARIES

METHOD SW3550B/8270D SIM
PAHs BY GC/MS SIM

Client	: URS CORPORATION	Date Collected:	NA
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B060	Date Extracted:	02/11/16 17:18
Sample ID:	MBLK1S	Date Analyzed:	02/12/16 10:27
Lab Samp ID:	SVB011SB	Dilution Factor:	1
Lab File ID:	RBH135	Matrix :	SOIL
Ext Btch ID:	SVB011S	% Moisture :	NA
Calib. Ref.:	RAH047	Instrument ID :	T-OE7

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
2-METHYLNAPHTHALENE	ND	0.020	0.0050	0.010
ACENAPHTHENE	ND	0.020	0.0050	0.010
ACENAPHTHYLENE	ND	0.020	0.0050	0.010
ANTHRACENE	ND	0.020	0.0050	0.010
BENZO(A)ANTHRACENE	ND	0.020	0.0050	0.010
BENZO(A)PYRENE	ND	0.020	0.0050	0.010
BENZO(B)FLUORANTHENE	ND	0.020	0.0050	0.010
BENZO(K)FLUORANTHENE	ND	0.020	0.0050	0.010
BENZO(G,H,I)PERYLENE	ND	0.020	0.0050	0.010
CHRYSENE	ND	0.020	0.0050	0.010
DIBENZ(A,H)ANTHRACENE	ND	0.020	0.0050	0.010
FLUORANTHENE	ND	0.020	0.0050	0.010
FLUORENE	ND	0.020	0.0050	0.010
INDENO(1,2,3-CD)PYRENE	ND	0.020	0.0050	0.010
NAPHTHALENE	ND	0.020	0.0050	0.010
PHENANTHRENE	ND	0.020	0.0050	0.010
PYRENE	ND	0.020	0.0050	0.010

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2-FLUOROBIPHENYL	0.371	0.6667	55.7	45-105
NITROBENZENE-D5	0.386	0.6667	57.9	35-100
TERPHENYL-D14	0.542	0.6667	81.3	30-125

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW3550B/8270D SIM

MATRIX:	SOIL			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1S				
LAB SAMP ID:	SVB011SB	SVB011SL	SVB011SC		
LAB FILE ID:	RBH135	RBH136	RBH137		
DATE EXTRACTED:	02/11/1617:18	02/11/1617:18	02/11/1617:18	DATE COLLECTED:	NA
DATE ANALYZED:	02/12/1610:27	02/12/1610:46	02/12/1611:05	DATE RECEIVED:	02/11/16
PREP. BATCH:	SVB011S	SVB011S	SVB011S		
CALIB. REF:	RAH047	RAH047	RAH047		

ACCESSION:

PARAMETER	BLNK RSLT (mg/kg)	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
2-Methylnaphthalene	ND	1.33	0.826	62	1.33	0.853	64	3	45-105	30
Acenaphthene	ND	1.33	0.857	64	1.33	0.885	66	3	45-110	30
Acenaphthylene	ND	1.33	0.873	66	1.33	0.907	68	4	45-105	30
Anthracene	ND	1.33	0.958	72	1.33	0.975	73	2	55-105	30
Benzo(a)anthracene	ND	1.33	1.11	83	1.33	1.10	82	1	50-110	30
Benzo(a)pyrene	ND	1.33	1.13	85	1.33	1.13	85	0	50-110	30
Benzo(b)fluoranthene	ND	1.33	1.12	84	1.33	1.14	85	2	45-115	30
Benzo(k)fluoranthene	ND	1.33	1.16	87	1.33	1.16	87	0	45-125	30
Benzo(g,h,i)perylene	ND	1.33	1.17	88	1.33	1.17	88	0	40-125	30
Chrysene	ND	1.33	1.11	83	1.33	1.10	83	1	55-110	30
Dibenz(a,h)anthracene	ND	1.33	1.16	87	1.33	1.16	87	0	40-125	30
Fluoranthene	ND	1.33	1.10	83	1.33	1.10	82	0	55-115	30
Fluorene	ND	1.33	0.899	67	1.33	0.921	69	2	50-110	30
Indeno(1,2,3-cd)pyrene	ND	1.33	1.11	83	1.33	1.11	83	0	40-120	30
Naphthalene	ND	1.33	0.870	65	1.33	0.894	67	3	40-105	30
Phenanthrene	ND	1.33	0.914	69	1.33	0.929	70	2	50-110	30
Pyrene	ND	1.33	1.11	83	1.33	1.10	83	0	45-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	BS RSLT (mg/kg)	BS % REC	SPIKE AMT (mg/kg)	BSD RSLT (mg/kg)	BSD % REC	QC LIMIT (%)
2-Fluorobiphenyl	0.667	0.386	58	0.667	0.428	64	45-105
Nitrobenzene-d5	0.667	0.400	60	0.667	0.442	66	35-100
Terphenyl-d14	0.667	0.553	83	0.667	0.597	89	30-125

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: URS CORPORATION
PROJECT: CANNON AFB PBR
BATCH NO.: 16B060
METHOD: SW3550B/8270D SIM

MATRIX: SOIL % MOISTURE: 9.4

DILUTION FACTOR:	1	1	1
SAMPLE ID:	CA504-SG03-S-010		
LAB SAMP ID:	B060-02	B060-02M	B060-02S
LAB FILE ID:	RBH148	RBH138	RBH139
DATE EXTRACTED:	02/11/1617:18	02/11/1617:18	02/11/1617:18
DATE ANALYZED:	02/12/1614:36	02/12/1611:24	02/12/1611:43
PREP. BATCH:	SVB011S	SVB011S	SVB011S
CALIB. REF:	RAH047	RAH047	RAH047

DATE COLLECTED: 02/05/16
DATE RECEIVED: 02/06/16

ACCESSION:

PARAMETER	SMPL RSLT (mg/kg)	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
2-Methylnaphthalene	ND	1.47	1.03	70	1.47	0.999	68	3	45-105	30
Acenaphthene	ND	1.47	1.08	73	1.47	1.03	70	5	45-110	30
Acenaphthylene	ND	1.47	1.10	75	1.47	1.06	72	4	45-105	30
Anthracene	ND	1.47	1.17	79	1.47	1.14	78	2	55-105	30
Benzo(a)anthracene	ND	1.47	1.30	88	1.47	1.28	87	2	50-110	30
Benzo(a)pyrene	ND	1.47	1.35	92	1.47	1.32	90	2	50-110	30
Benzo(b)fluoranthene	ND	1.47	1.37	93	1.47	1.34	91	2	45-115	30
Benzo(k)fluoranthene	ND	1.47	1.37	93	1.47	1.35	92	1	45-125	30
Benzo(g,h,i)perylene	ND	1.47	1.39	95	1.47	1.37	93	2	40-125	30
Chrysene	ND	1.47	1.29	88	1.47	1.30	88	0	55-110	30
Dibenz(a,h)anthracene	ND	1.47	1.38	94	1.47	1.35	92	2	40-125	30
Fluoranthene	ND	1.47	1.31	89	1.47	1.30	88	1	55-115	30
Fluorene	ND	1.47	1.13	77	1.47	1.07	73	5	50-110	30
Indeno(1,2,3-cd)pyrene	ND	1.47	1.32	89	1.47	1.29	88	2	40-120	30
Naphthalene	ND	1.47	1.07	73	1.47	1.03	70	3	40-105	30
Phenanthrene	ND	1.47	1.11	76	1.47	1.08	74	3	50-110	30
Pyrene	ND	1.47	1.31	89	1.47	1.30	88	1	45-125	30

SURROGATE PARAMETER	SPIKE AMT (mg/kg)	MS RSLT (mg/kg)	MS % REC	SPIKE AMT (mg/kg)	MSD RSLT (mg/kg)	MSD % REC	QC LIMIT (%)
2-Fluorobiphenyl	0.736	0.523	71	0.736	0.491	67	45-105
Nitrobenzene-d5	0.736	0.531	72	0.736	0.503	68	35-100
Terphenyl-d14	0.736	0.708	96	0.736	0.685	93	30-125

QC DATA

Quantitation Report (QT Reviewed)

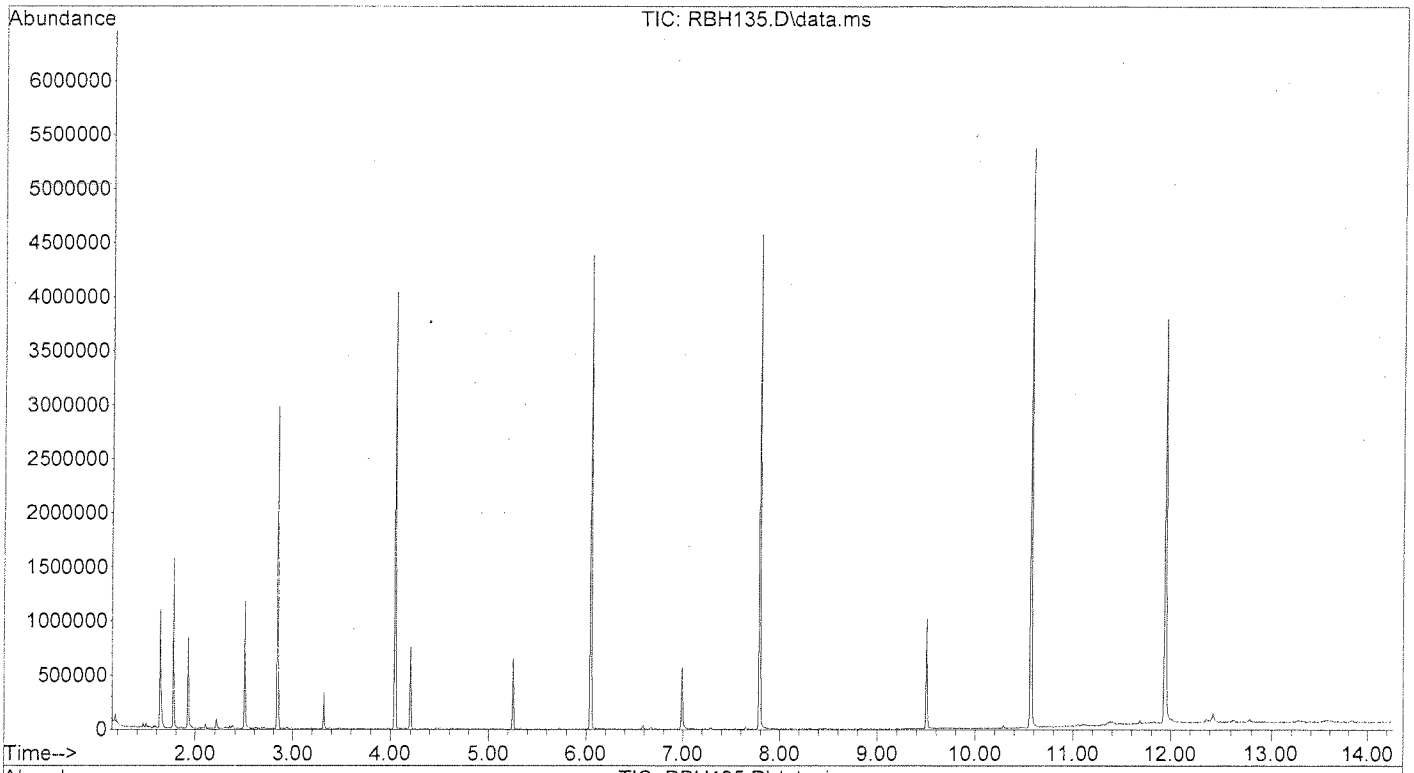
Data File : D:\DATA\16B12\RBH135.D Vial: 5
Acq On : 12 Feb 2016 10:27 Operator: KVu
Sample : SVB011SB Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:11:46 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

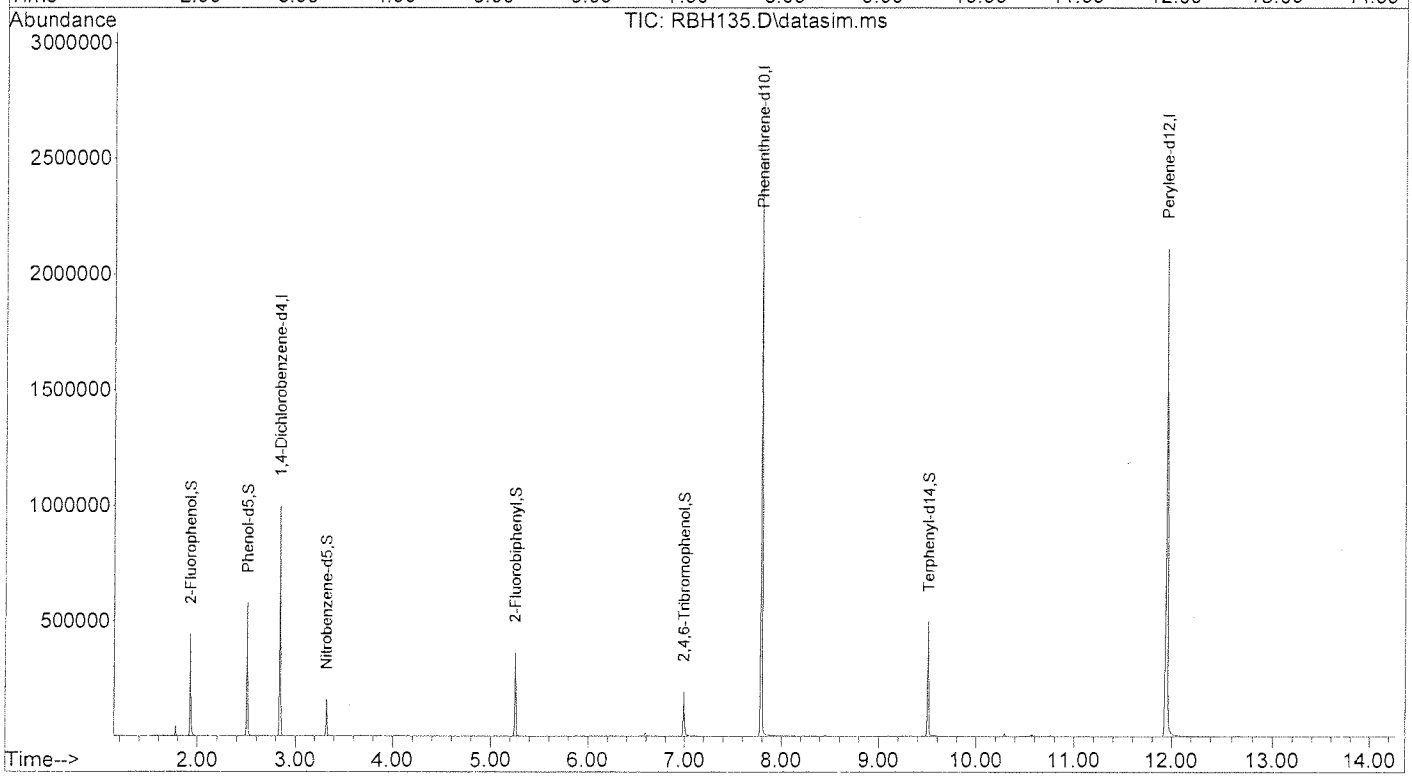
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4	2.840	152	449859	40.00 ppm	0.00
29) Phenanthrene-d10	7.793	188	1940604	40.00 ppm	0.00
48) Perylene-d12	11.943	264	2174976	40.00 ppm	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	1.925	112	204201	16.38 ppm	0.00
Spiked Amount 30.000			Recovery =	54.60%	
5) Phenol-d5	2.504	99	265229	17.02 ppm	0.00
Spiked Amount 30.000			Recovery =	56.73%	
10) Nitrobenzene-d5	3.319	82	87439	5.79 ppm	0.00
Spiked Amount 10.000			Recovery =	57.90%	
20) 2-Fluorobiphenyl	5.252	172	221255	5.57 ppm	-0.01
Spiked Amount 10.000			Recovery =	55.70%	
32) 2,4,6-Tribromophenol	6.991	330	98725	14.46 ppm	0.00
Spiked Amount 30.000			Recovery =	48.20%	
43) Terphenyl-d14	9.504	244	388720	8.13 ppm	0.00
Spiked Amount 10.000			Recovery =	81.30%	
Target Compounds					Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH135.D
Vial: 5
Acq On : 12 Feb 2016 10:27
Operator: KVu
Sample : SVB011SB
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:11:46 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH136.D Vial: 6
Acq On : 12 Feb 2016 10:46 Operator: KVu
Sample : SVB011SL Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:12:33 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.840	152	503063	40.00	ppm	0.00
29) Phenanthrene-d10	7.793	188	2287099	40.00	ppm	0.00
48) Perylene-d12	11.947	264	2507779	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.925	112	239246	17.17	ppm	0.00
Spiked Amount 30.000			Recovery = 57.23%			
5) Phenol-d5	2.504	99	320095	18.37	ppm	0.00
Spiked Amount 30.000			Recovery = 61.23%			
10) Nitrobenzene-d5	3.324	82	101408	6.01	ppm	0.00
Spiked Amount 10.000			Recovery = 60.10%			
20) 2-Fluorobiphenyl	5.252	172	257413	5.79	ppm	-0.01
Spiked Amount 10.000			Recovery = 57.90%			
32) 2,4,6-Tribromophenol	6.996	330	163637	20.33	ppm	0.00
Spiked Amount 30.000			Recovery = 67.77%			
43) Terphenyl-d14	9.504	244	467173	8.29	ppm	0.00
Spiked Amount 10.000			Recovery = 82.90%			
Target Compounds						Qvalue
3] N-nitrosodimethylamine	1.341	74	101506	12.95	ppm	96
6] Phenol	2.514	94	217423	12.11	ppm	99
7] bis(2-chloroethyl)ether	2.608	93	164919	12.43	ppm	96
8] 2-Chlorophenol	2.671	128	192849	12.00	ppm	96
9] N-Nitroso-di-n-propyla...	3.171	70	134205	13.25	ppm	97
11] 2,4-Dimethylphenol	3.669	107	204611	12.51	ppm	100
12] 2,4-Dichlorophenol	3.885	162	186720	12.64	ppm	99
13] Naphthalene	4.068	128	631671	13.05	ppm	100
14] 4-Chloro-3-methylphenol	4.647	107	169665	11.71	ppm	98
15] 2-Methylnaphthalene	4.829	142	426346	12.39	ppm	100
16] 1-Methylnaphthalene	4.944	142	401567	13.28	ppm	99
17] 2,4,6-Trichlorophenol	5.151	196	158827	11.70	ppm	100
18] 2,4,5-Trichlorophenol	5.189	196	164826	11.66	ppm	100
23] Dimethylphthalate	5.742	163	590503	14.33	ppm	100
24] Acenaphthylene	5.877	152	694270	13.10	ppm	100
25] Acenaphthene	6.089	153	478002	12.86	ppm	100
27] Diethylphthalate	6.595	149	638327	15.76	ppm	99
28] Fluorene	6.708	166	546135	13.49	ppm	99
30] N-Nitrosodiphenylamine	6.863	169	493334	13.68	ppm	100
31] Azobenzene	6.906	77	489940	12.88	ppm	99
33] Hexachlorobenzene	7.351	284	258408	14.41	ppm	98
34] Pentachlorophenol	7.582	266	124069	13.90	ppm	99
35] Dibenzothiophene	7.677	184	891312	14.07	ppm	100
36] Phenanthrene	7.820	178	976655	13.71	ppm	99
37] Anthracene	7.874	178	990926	14.38	ppm	100
38] Carbazole	8.060	167	856094	16.12	ppm	99
39] Di-n-butylphthalate	8.458	149	1091627	17.39	ppm	100
41] Fluoranthene	9.100	202	1282208	16.53	ppm	99
42] Pyrene	9.336	202	1359763	16.62	ppm	99
44] Butylbenzylphthalate	10.013	149	452983	16.78	ppm	98
45] Benzo(a)anthracene	10.562	228	1325498	16.60	ppm	100
46] Chrysene	10.601	228	1282408	16.62	ppm	99
47] bis(2-Ethylhexyl)phtha...	10.596	149	728096	16.51	ppm	100
49] Di-n-octylphthalate	11.213	149	1176469	16.44	ppm	100

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH136.D Vial: 6
Acq On : 12 Feb 2016 10:46 Operator: KVu
Sample : SVB011SL Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:12:33 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

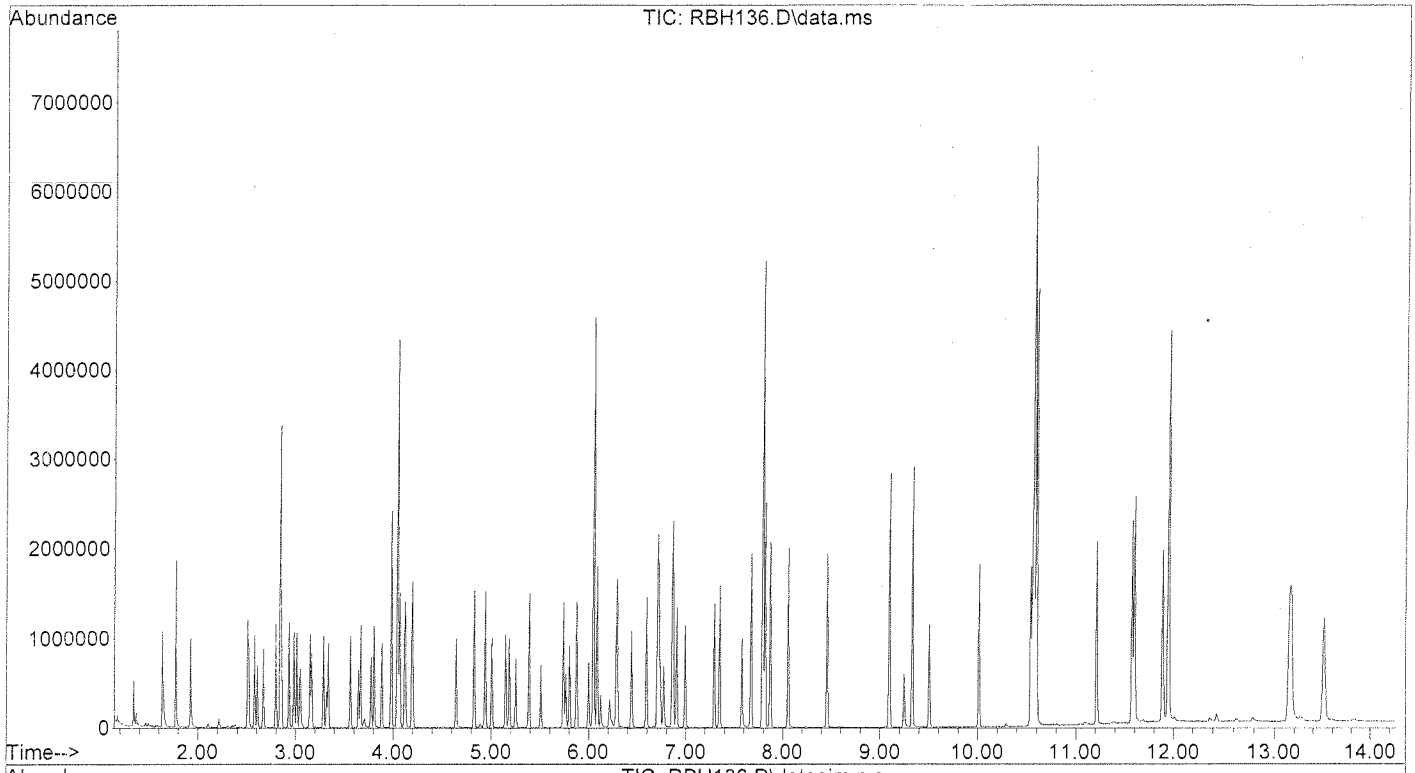
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
50]	Benzo(b)fluoranthene	11.578	252	1222016	16.78	ppm	99
51]	Benzo(k)fluoranthene	11.602	252	1273252	17.41	ppm	99
53]	Benzo(a)pyrene	11.886	252	1159104	16.97	ppm	99
55]	Indeno(1,2,3-cd)pyrene	13.150	276	1282814	16.61	ppm	99
56]	Dibenzo(a,h)anthracene	13.175	278	1128207	17.44	ppm	99
57]	Benzo(g,h,i)perylene	13.514	276	1067766	17.54	ppm	98

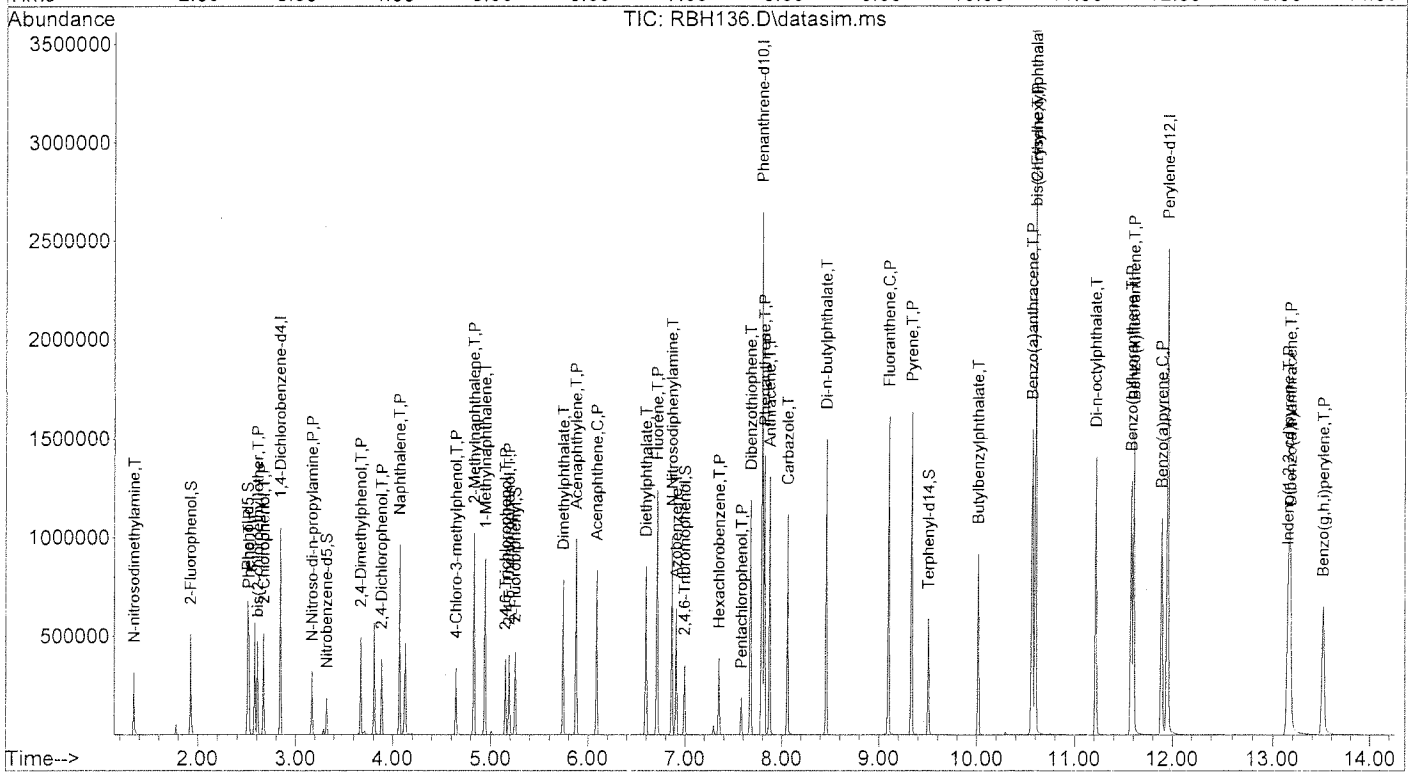
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH136.D
Acq On : 12 Feb 2016 10:46
Sample : SVB011SL
Misc :
Integrator: RTE
Quant Time: Feb 12 12:12:33 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH137.D Vial: 7
Acq On : 12 Feb 2016 11:05 Operator: KVu
Sample : SVB011SC Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:13:21 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.840	152	513091	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2331140	40.00	ppm	0.00
48) Perylene-d12	11.947	264	2523460	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.925	112	269217	18.94	ppm	0.00
Spiked Amount 30.000			Recovery = 63.13%			
5) Phenol-d5	2.504	99	361359	20.33	ppm	0.00
Spiked Amount 30.000			Recovery = 67.77%			
10) Nitrobenzene-d5	3.324	82	114241	6.64	ppm	0.00
Spiked Amount 10.000			Recovery = 66.40%			
20) 2-Fluorobiphenyl	5.252	172	291075	6.42	ppm	-0.01
Spiked Amount 10.000			Recovery = 64.20%			
32) 2,4,6-Tribromophenol	6.996	330	183290	22.34	ppm	0.00
Spiked Amount 30.000			Recovery = 74.47%			
43) Terphenyl-d14	9.504	244	513923	8.95	ppm	0.00
Spiked Amount 10.000			Recovery = 89.50%			
Target Compounds						Qvalue
3] N-nitrosodimethylamine	1.341	74	105691	13.22	ppm	96
6] Phenol	2.514	94	229136	12.51	ppm	100
7] bis(2-chloroethyl)ether	2.608	93	172152	12.72	ppm	97
8] 2-Chlorophenol	2.671	128	203228	12.40	ppm	95
9] N-Nitroso-di-n-propyla...	3.171	70	142207	13.76	ppm	96
11] 2,4-Dimethylphenol	3.669	107	215173	12.90	ppm	99
12] 2,4-Dichlorophenol	3.885	162	197483	13.11	ppm	99
13] Naphthalene	4.068	128	661963	13.41	ppm	100
14] 4-Chloro-3-methylphenol	4.647	107	179974	12.18	ppm	98
15] 2-Methylnaphthalene	4.829	142	448987	12.79	ppm	100
16] 1-Methylnaphthalene	4.944	142	422590	13.71	ppm	99
17] 2,4,6-Trichlorophenol	5.151	196	167674	12.11	ppm	100
18] 2,4,5-Trichlorophenol	5.189	196	176318	12.23	ppm	99
23] Dimethylphthalate	5.742	163	616799	14.68	ppm	100
24] Acenaphthylene	5.877	152	734878	13.60	ppm	100
25] Acenaphthene	6.089	153	503281	13.28	ppm	100
27] Diethylphthalate	6.595	149	662063	16.03	ppm	99
28] Fluorene	6.708	166	570760	13.82	ppm	100
30] N-Nitrosodiphenylamine	6.863	169	511159	13.91	ppm	100
31] Azobenzene	6.911	77	514664	13.27	ppm	99
33] Hexachlorobenzene	7.351	284	266658	14.59	ppm	98
34] Pentachlorophenol	7.582	266	129884	14.27	ppm	98
35] Dibenzothiophene	7.677	184	927567	14.37	ppm	99
36] Phenanthrene	7.820	178	1012491	13.94	ppm	99
37] Anthracene	7.874	178	1027807	14.63	ppm	100
38] Carbazole	8.060	167	872357	16.11	ppm	100
39] Di-n-butylphthalate	8.458	149	1119202	17.49	ppm	100
41] Fluoranthene	9.095	202	1304211	16.50	ppm	99
42] Pyrene	9.331	202	1380216	16.55	ppm	99
44] Butylbenzylphthalate	10.013	149	463704	16.85	ppm	98
45] Benzo(a)anthracene	10.562	228	1338530	16.45	ppm	99
46] Chrysene	10.596	228	1300265	16.53	ppm	99
47] bis(2-Ethylhexyl)phtha...	10.596	149	737391	16.41	ppm	99
49] Di-n-octylphthalate	11.213	149	1188844	16.51	ppm	100

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH137.D
Acq On : 12 Feb 2016 11:05
Sample : SVB011SC
Misc :
Integrator: RTE
Quant Time: Feb 12 12:13:21 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

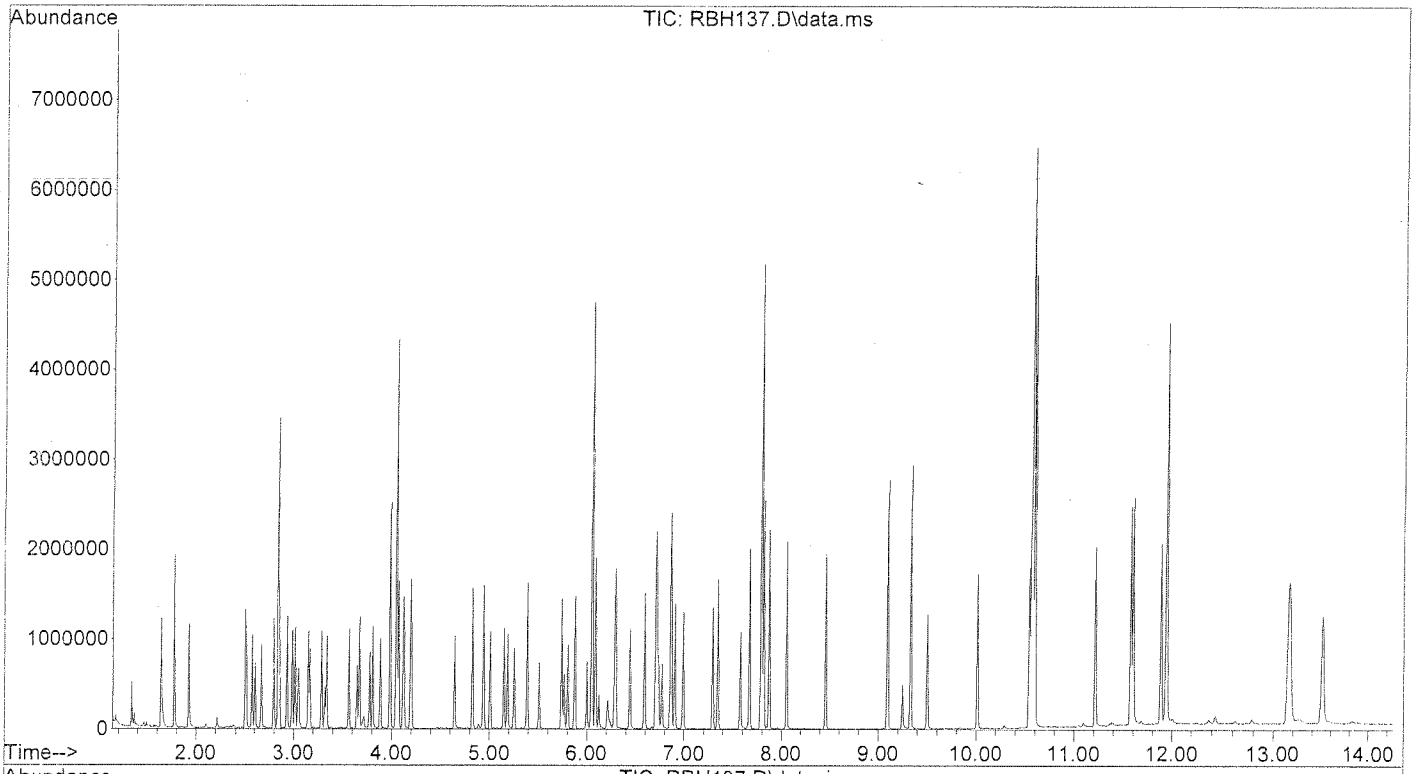
Vial: 7
Operator: KVu
Inst : E7
Multiplr: 1.00

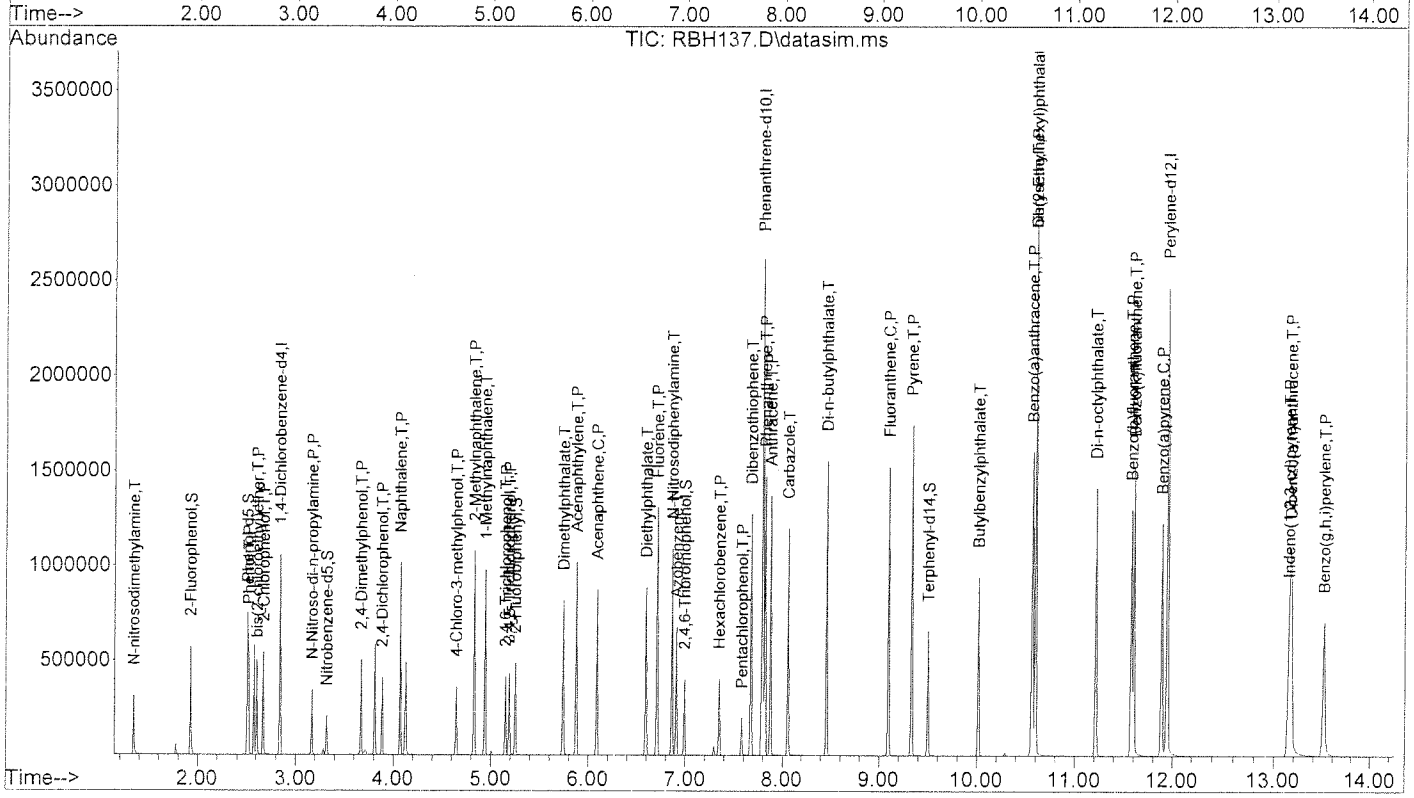
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
50] Benzo(b)fluoranthene	11.573	252	1248943	17.04	ppm	99
51] Benzo(k)fluoranthene	11.602	252	1277340	17.36	ppm	99
53] Benzo(a)pyrene	11.886	252	1162650	16.91	ppm	99
55] Indeno(1,2,3-cd)pyrene	13.150	276	1290565	16.61	ppm	99
56] Dibenzo(a,h)anthracene	13.170	278	1132577	17.40	ppm	99
57] Benzo(g,h,i)perylene	13.514	276	1074068	17.54	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH137.D
Vial: 7
Acq On : 12 Feb 2016 11:05
Operator: KVu
Sample : SVB011SC
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:13:21 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH138.D Vial: 8
Acq On : 12 Feb 2016 11:24 Operator: KVu
Sample : 16B060-02M Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:22:45 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.839	152	471169	40.00	ppm	0.00
29) Phenanthrene-d10	7.793	188	2148681	40.00	ppm	0.00
48) Perylene-d12	11.947	264	2301910	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.925	112	273144	20.92	ppm	0.00
Spiked Amount 30.000			Recovery = 69.73%			
5) Phenol-d5	2.504	99	361785	22.17	ppm	0.00
Spiked Amount 30.000			Recovery = 73.90%			
10) Nitrobenzene-d5	3.324	82	114206	7.22	ppm	0.00
Spiked Amount 10.000			Recovery = 72.20%			
20) 2-Fluorobiphenyl	5.252	172	295546	7.10	ppm	-0.01
Spiked Amount 10.000			Recovery = 71.00%			
32) 2,4,6-Tribromophenol	6.996	330	192285	25.42	ppm	0.00
Spiked Amount 30.000			Recovery = 84.73%			
43) Terphenyl-d14	9.503	244	509463	9.62	ppm	0.00
Spiked Amount 10.000			Recovery = 96.20%			
Target Compounds						Qvalue
3] N-nitrosodimethylamine	1.341	74	104394	14.22	ppm	95
6] Phenol	2.514	94	229400	13.64	ppm	99
7] bis(2-chloroethyl)ether	2.608	93	171417	13.80	ppm	96
8] 2-Chlorophenol	2.670	128	204197	13.57	ppm	96
9] N-Nitroso-di-n-propyla...	3.170	70	142612	15.03	ppm	96
11] 2,4-Dimethylphenol	3.669	107	216423	14.13	ppm	99
12] 2,4-Dichlorophenol	3.885	162	207395	15.00	ppm	99
13] Naphthalene	4.068	128	659759	14.55	ppm	100
14] 4-Chloro-3-methylphenol	4.647	107	186848	13.77	ppm	98
15] 2-Methylnaphthalene	4.829	142	451026	13.99	ppm	100
16] 1-Methylnaphthalene	4.944	142	424322	14.99	ppm	100
17] 2,4,6-Trichlorophenol	5.150	196	178481	14.03	ppm	100
18] 2,4,5-Trichlorophenol	5.189	196	190152	14.36	ppm	99
23] Dimethylphthalate	5.742	163	605625	15.69	ppm	100
24] Acenaphthylene	5.877	152	739874	14.91	ppm	100
25] Acenaphthene	6.088	153	510960	14.68	ppm	100
27] Diethylphthalate	6.595	149	649535	17.12	ppm	99
28] Fluorene	6.707	166	580727	15.32	ppm	100
30] N-Nitrosodiphenylamine	6.863	169	514901	15.20	ppm	100
31] Azobenzene	6.910	77	516388	14.45	ppm	99
33] Hexachlorobenzene	7.351	284	266645	15.83	ppm	98
34] Pentachlorophenol	7.582	266	141680	16.88	ppm	99
35] Dibenzothiophene	7.677	184	923895	15.53	ppm	99
36] Phenanthrene	7.820	178	1013112	15.13	ppm	99
37] Anthracene	7.874	178	1029238	15.89	ppm	100
38] Carbazole	8.060	167	873187	17.50	ppm	99
39] Di-n-butylphthalate	8.457	149	1103389	18.71	ppm	100
41] Fluoranthene	9.100	202	1301311	17.86	ppm	99
42] Pyrene	9.331	202	1373332	17.86	ppm	99
44] Butylbenzylphthalate	10.013	149	454464	17.92	ppm	98
45] Benzo(a)anthracene	10.562	228	1325907	17.68	ppm	99
46] Chrysene	10.596	228	1274881	17.59	ppm	99
47] bis(2-Ethylhexyl)phtha...	10.591	149	732166	17.67	ppm	100
49] Di-n-octylphthalate	11.212	149	1166374	17.75	ppm	100

Quantitation Report (QT Reviewed)

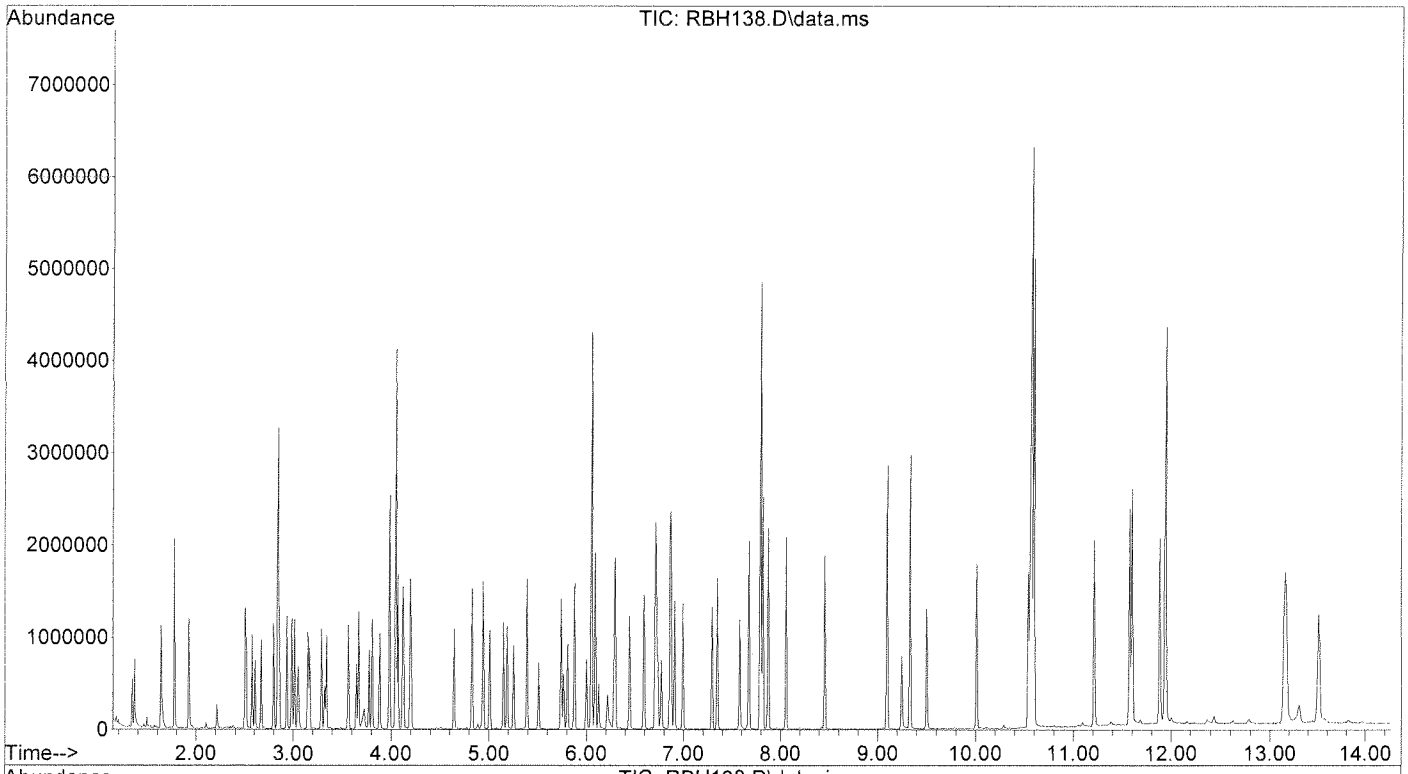
Data File : D:\DATA\16B12\RBH138.D Vial: 8
Acq On : 12 Feb 2016 11:24 Operator: KVu
Sample : 16B060-02M Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:22:45 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

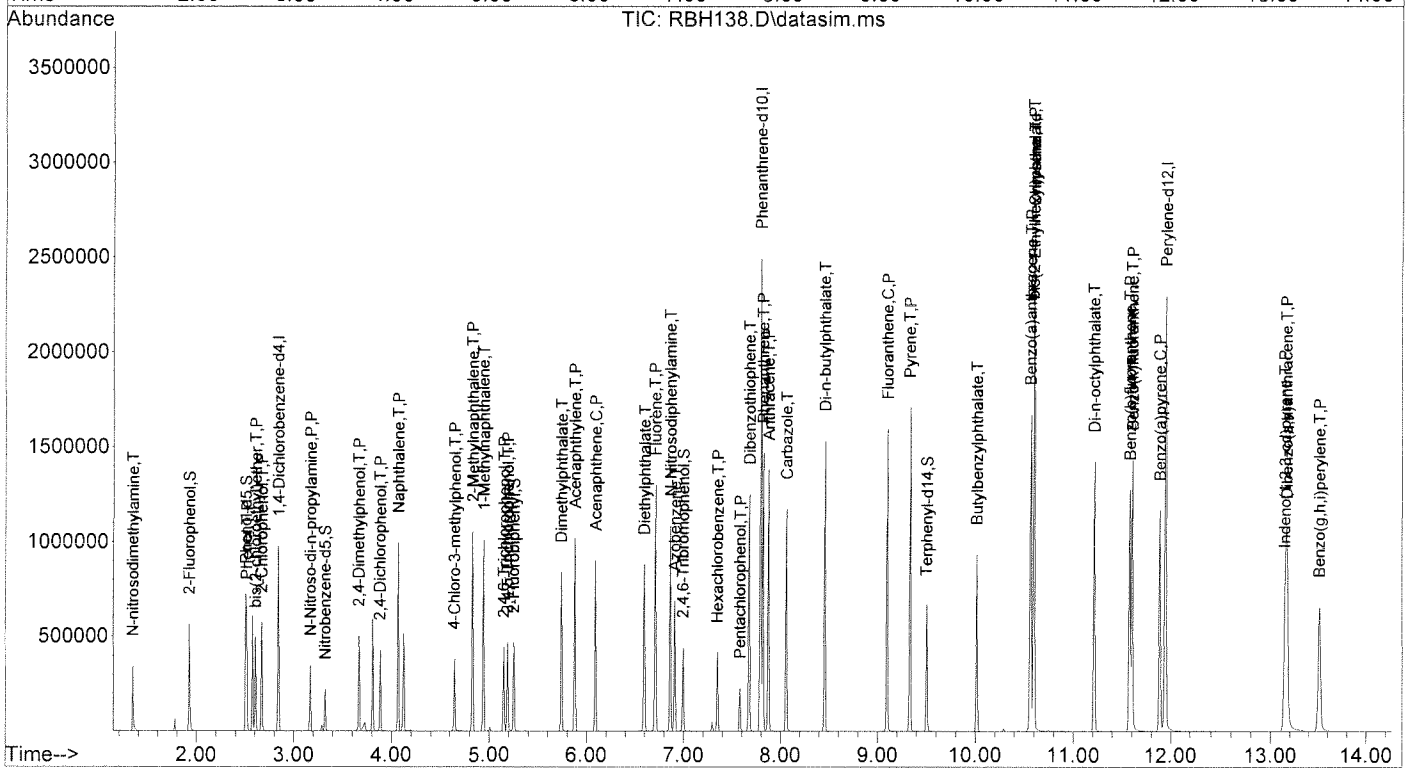
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
50] Benzo(b)fluoranthene	11.577	252	1246016	18.64	ppm	99
51] Benzo(k)fluoranthene	11.601	252	1247665	18.59	ppm	99
53] Benzo(a)pyrene	11.886	252	1149205	18.33	ppm	99
55] Indeno(1,2,3-cd)pyrene	13.150	276	1268498	17.90	ppm	99
56] Dibenzo(a,h)anthracene	13.170	278	1116721	18.81	ppm	99
57] Benzo(g,h,i)perylene	13.514	276	1056578	18.91	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH138.D Vial: 8
Acq On : 12 Feb 2016 11:24 Operator: KVu
Sample : 16B060-02M Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:22:45 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH139.D
Acq On : 12 Feb 2016 11:43
Sample : 16B060-02S
Misc :
Integrator: RTE
Quant Time: Feb 12 12:23:41 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.840	152	475629	40.00	ppm	0.00
29) Phenanthrene-d10	7.793	188	2139669	40.00	ppm	0.00
48) Perylene-d12	11.948	264	2328781	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.925	112	259968	19.73	ppm	0.00
Spiked Amount 30.000			Recovery = 65.77%			
5) Phenol-d5	2.504	99	347813	21.11	ppm	0.00
Spiked Amount 30.000			Recovery = 70.37%			
10) Nitrobenzene-d5	3.324	82	109103	6.84	ppm	0.00
Spiked Amount 10.000			Recovery = 68.40%			
20) 2-Fluorobiphenyl	5.252	172	280193	6.67	ppm	-0.01
Spiked Amount 10.000			Recovery = 66.70%			
32) 2,4,6-Tribromophenol	6.996	330	182687	24.25	ppm	0.00
Spiked Amount 30.000			Recovery = 80.83%			
43) Terphenyl-d14	9.504	244	490989	9.31	ppm	0.00
Spiked Amount 10.000			Recovery = 93.10%			
Target Compounds						Qvalue
3] N-nitrosodimethylamine	1.341	74	101192	13.65	ppm	96
6] Phenol	2.514	94	224582	13.23	ppm	100
7] bis(2-chloroethyl)ether	2.608	93	166411	13.27	ppm	96
8] 2-Chlorophenol	2.671	128	198336	13.05	ppm	96
9] N-Nitroso-di-n-propyla...	3.171	70	138980	14.51	ppm	96
11] 2,4-Dimethylphenol	3.669	107	209900	13.58	ppm	99
12] 2,4-Dichlorophenol	3.885	162	200085	14.33	ppm	100
13] Naphthalene	4.068	128	643557	14.06	ppm	100
14] 4-Chloro-3-methylphenol	4.647	107	179864	13.13	ppm	98
15] 2-Methylnaphthalene	4.829	142	441603	13.57	ppm	100
16] 1-Methylnaphthalene	4.944	142	414778	14.51	ppm	99
17] 2,4,6-Trichlorophenol	5.151	196	172211	13.42	ppm	100
18] 2,4,5-Trichlorophenol	5.189	196	183702	13.74	ppm	99
23] Dimethylphthalate	5.742	163	585681	15.03	ppm	100
24] Acenaphthylene	5.877	152	719032	14.35	ppm	100
25] Acenaphthene	6.089	153	492932	14.03	ppm	100
27] Diethylphthalate	6.595	149	637854	16.66	ppm	99
28] Fluorene	6.708	166	555089	14.50	ppm	99
30] N-Nitrosodiphenylamine	6.863	169	495646	14.69	ppm	100
31] Azobenzene	6.906	77	494058	13.88	ppm	99
33] Hexachlorobenzene	7.351	284	260244	15.51	ppm	98
34] Pentachlorophenol	7.583	266	139287	16.66	ppm	98
35] Dibenzothiophene	7.677	184	895571	15.12	ppm	99
36] Phenanthrene	7.820	178	980931	14.71	ppm	99
37] Anthracene	7.875	178	1000606	15.52	ppm	100
38] Carbazole	8.060	167	858423	17.28	ppm	99
39] Di-n-butylphthalate	8.458	149	1093669	18.62	ppm	100
41] Fluoranthene	9.100	202	1283081	17.69	ppm	99
42] Pyrene	9.332	202	1349970	17.63	ppm	99
44] Butylbenzylphthalate	10.014	149	454223	17.98	ppm	98
45] Benzo(a)anthracene	10.563	228	1299713	17.40	ppm	99
46] Chrysene	10.597	228	1271898	17.62	ppm	99
47] bis(2-Ethylhexyl)phtha...	10.597	149	719805	17.45	ppm	99
49] Di-n-octylphthalate	11.213	149	1157017	17.40	ppm	100

Quantitation Report (QT Reviewed)

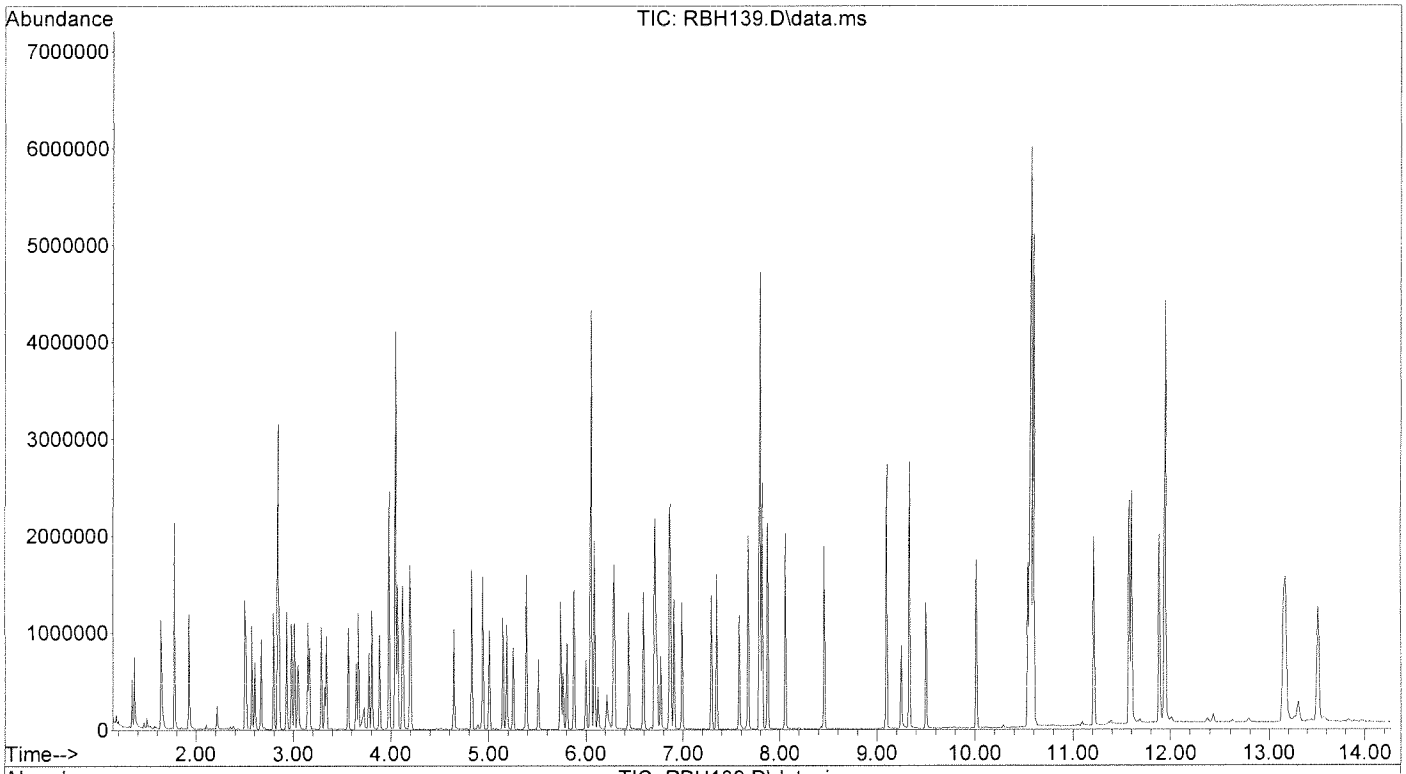
Data File : D:\DATA\16B12\RBH139.D
Vial: 9
Acq On : 12 Feb 2016 11:43
Operator: KVu
Sample : 16B060-02S
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:23:41 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

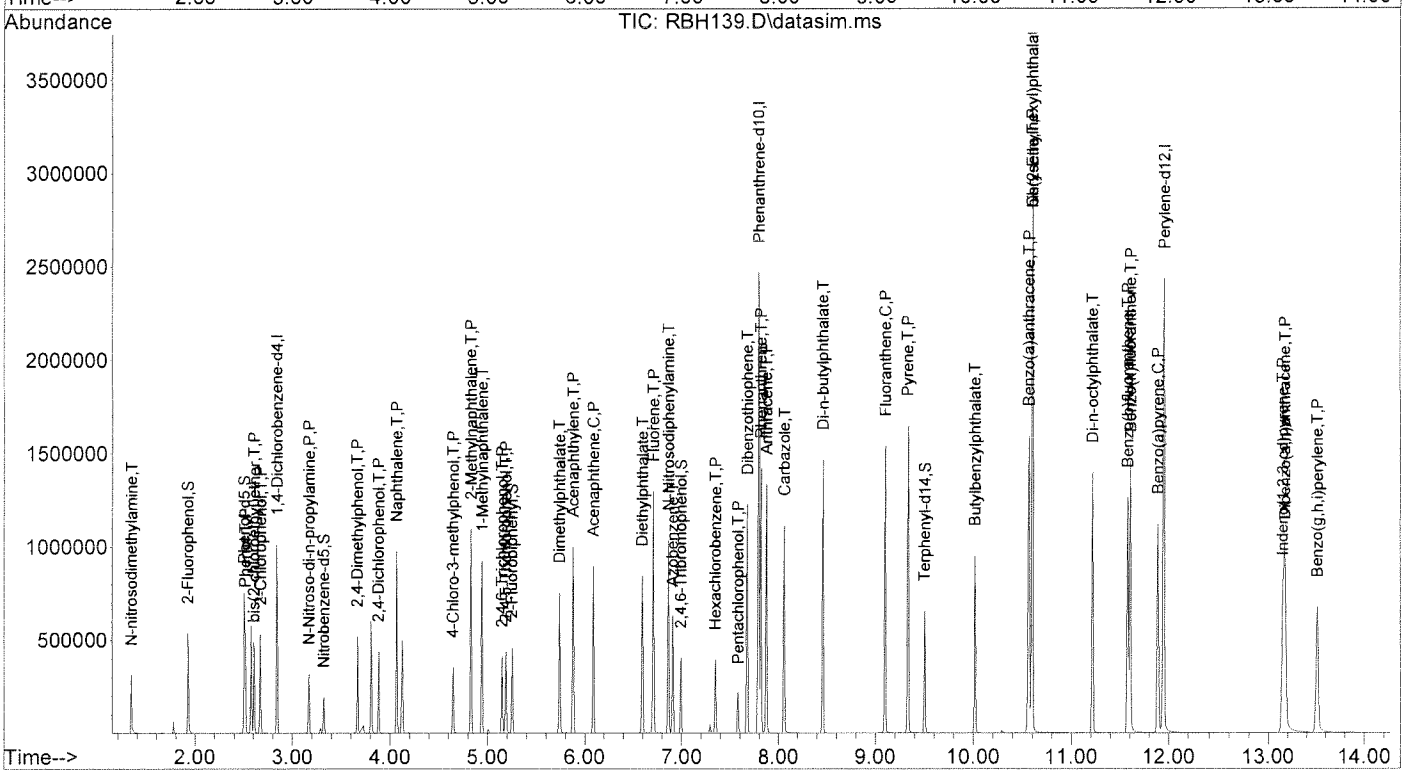
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
50] Benzo(b)fluoranthene	11.573	252	1232983	18.23	ppm	99
51] Benzo(k)fluoranthene	11.602	252	1244489	18.33	ppm	99
53] Benzo(a)pyrene	11.887	252	1137325	17.93	ppm	99
55] Indeno(1,2,3-cd)pyrene	13.151	276	1257521	17.54	ppm	99
56] Dibenzo(a,h)anthracene	13.175	278	1105362	18.40	ppm	99
57] Benzo(g,h,i)perylene	13.515	276	1049370	18.57	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH139.D Vial: 9
Acq On : 12 Feb 2016 11:43 Operator: KVu
Sample : 16B060-02S Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 12:23:41 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





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INITIAL CALIBRATIONS

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH042
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
DFTPP Injection Date: 01/14/16
DFTPP Injection Time: 10:14

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	45.99
68	Less than 2% of mass 69	0.64(1.5)1
69	% of mass 198	41.99
70	Less than 2% of mass 69	0.19(0.4)1
127	10.0 - 80.0% of mass 198	45.23
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.36
275	10.0 - 60.0% of mass 198	24.32
365	Greater than 1.00% of mass 198	2.81
441	Present, but less than 24% of mass 442	10.41(15.4)2
442	Greater than 50% of mass 198	67.44
443	15.0 - 24.0% of mass 442	12.74(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD050	SVE7A143	RAH045	01/14/16	11:14
2	SSTD040	SVE7A144	RAH046	01/14/16	11:41
3	SSTD025	SVE7A145	RAH047	01/14/16	12:01
4	SSTD020	SVE7A146	RAH048	01/14/16	12:20
5	SSTD010	SVE7A147	RAH049	01/14/16	12:39
6	SSTD004	SVE7A148	RAH050	01/14/16	12:58
7	SSTD002	SVE7A149	RAH051	01/14/16	13:17
8	SSTD.5	SVE7A1410	RAH052	01/14/16	13:36
9	SSTD.15	SVE7A1411	RAH053	01/14/16	13:56
10	SSTD.075	SVE7A1412	RAH054	01/14/16	14:15
11	SSTD.05	SVE7A1413	RAH055	01/14/16	14:34

FORM V SV OLM03.0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project:ICAL
SDG No.:ICAL
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	499745	2.85	0	0.00	0	0.00
	UPPER LIMIT	999490	3.35	0	0.50	0	0.50
	LOWER LIMIT	249873	2.35	0	-0.50	0	-0.50
	SAMPLE ID						
1	SVE7A143	495106	2.85	0	0.00	0	0.00
2	SVE7A144	535502	2.85	0	0.00	0	0.00
3	SVE7A146	506112	2.85	0	0.00	0	0.00
4	SVE7A147	492252	2.85	0	0.00	0	0.00
5	SVE7A148	505421	2.85	0	0.00	0	0.00
6	SVE7A149	496929	2.85	0	0.00	0	0.00
7	SVE7A1410	482130	2.85	0	0.00	0	0.00
8	SVE7A1411	484112	2.85	0	0.00	0	0.00
9	SVE7A1412	495608	2.85	0	0.00	0	0.00
10	SVE7A1413	490690	2.85	0	0.00	0	0.00

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-1 OLM02.0

1-22-16

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project:ICAL
SDG No.:ICAL
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	2192741	7.80	0	0.00	2343053	11.95
	UPPER LIMIT	4385482	8.30	0	0.50	4686106	12.45
	LOWER LIMIT	1096371	7.30	0	-0.50	1171527	11.45
	SAMPLE ID						
1	SVE7A143	2156366	7.80	0	0.00	2367940	11.95
2	SVE7A144	2308489	7.81	0	0.00	2503086	11.95
3	SVE7A146	2169346	7.80	0	0.00	2277424	11.94
4	SVE7A147	2091194	7.80	0	0.00	2289088	11.94
5	SVE7A148	2098075	7.80	0	0.00	2271559	11.94
6	SVE7A149	2047650	7.80	0	0.00	2219589	11.94
7	SVE7A1410	1992274	7.80	0	0.00	2164120	11.94
8	SVE7A1411	1973251	7.80	0	0.00	2160350	11.94
9	SVE7A1412	2037108	7.80	0	0.00	2206244	11.94
10	SVE7A1413	2016849	7.80	0	0.00	2199789	11.94

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-2 OLM02.0

RW 1-22-16

Quantitation Limit from Lowest Initial Calibration Concentration

Instrument ID :E7 Column Spec :ZB-SEMI ID :0.18MM
Beginning DateTime :01/14/16 11:14 Ending DateTime :01/14/16 14:34
IC File :RAH047 HPChem Method :SVE7A14S

WATER Init. Vol. (ml) : 1000 Final Vol. (ml) : 1
SOIL Init. Weight (gm) : 30 Final Vol. (ml) : 1

IDX	Parameters	ON_COL MG/L	WATER UG/L	SOIL MG/KG	R_FILE
1	1,4-Dichlorobenzene-d4	IntSTD	IntSTD	IntSTD	IntSTD
2	1,4-Dioxane	.05	.05	.001667	RAH055
3	N-nitrosodimethylamine	.05	.05	.001667	RAH055
4	2-Fluorophenol	.05	.05	.001667	RAH055
5	Phenol-d5	.05	.05	.001667	RAH055
6	Phenol	.05	.05	.001667	RAH055
7	bis(2-chloroethyl)ether	.05	.05	.001667	RAH055
8	2-Chlorophenol	.05	.05	.001667	RAH055
9	N-Nitroso-di-n-propylamine	.05	.05	.001667	RAH055
10	Nitrobenzene-d5	.05	.05	.001667	RAH055
11	2,4-Dimethylphenol	.05	.05	.001667	RAH055
12	2,4-Dichlorophenol	.05	.05	.001667	RAH055
13	Naphthalene	.05	.05	.001667	RAH055
14	4-Chloro-3-methylphenol	.05	.05	.001667	RAH055
15	2-Methylnaphthalene	.05	.05	.001667	RAH055
16	1-Methylnaphthalene	.05	.05	.001667	RAH055
17	2,4,6-Trichlorophenol	.05	.05	.001667	RAH055
18	2,4,5-Trichlorophenol	.05	.05	.001667	RAH055
19	2,3,4-Trichlorophenol	.05	.05	.001667	RAH055
20	2-Fluorobiphenyl	.05	.05	.001667	RAH055
21	Biphenyl	.05	.05	.001667	RAH055
22	2,6-Dimethylnaphthalene	.05	.05	.001667	RAH055
23	Dimethylphthalate	.05	.05	.001667	RAH055
24	Acenaphthylene	.05	.05	.001667	RAH055
25	Acenaphthene	.05	.05	.001667	RAH055
26	2,3,5-Trimethylnaphthalene	.05	.05	.001667	RAH055
27	Diethylphthalate	.05	.05	.001667	RAH055
28	Fluorene	.05	.05	.001667	RAH055
29	Phenanthrene-d10	IntSTD	IntSTD	IntSTD	IntSTD
30	N-Nitrosodiphenylamine	.05	.05	.001667	RAH055
31	Azobenzene	.05	.05	.001667	RAH055
32	2,4,6-Tribromophenol	.05	.05	.001667	RAH055
33	Hexachlorobenzene	.05	.05	.001667	RAH055
34	Pentachlorophenol	.075	.075	.0025	RAH054
35	Dibenzothiophene	.05	.05	.001667	RAH055
36	Phenanthrene	.05	.05	.001667	RAH055
37	Anthracene	.05	.05	.001667	RAH055
38	Carbazole	.05	.05	.001667	RAH055
39	Di-n-butylphthalate	.05	.05	.001667	RAH055
40	1-Methylphenanthrene	.05	.05	.001667	RAH055
41	Fluoranthene	.05	.05	.001667	RAH055
42	Pyrene	.05	.05	.001667	RAH055
43	Terphenyl-d14	.05	.05	.001667	RAH055
44	Butylbenzylphthalate	.05	.05	.001667	RAH055
45	Benzo(a)anthracene	.05	.05	.001667	RAH055
46	Chrysene	.05	.05	.001667	RAH055
47	bis(2-Ethylhexyl)phthalate	.05	.05	.001667	RAH055
48	Perylene-d12	IntSTD	IntSTD	IntSTD	IntSTD
49	Di-n-octylphthalate	.05	.05	.001667	RAH055
50	Benzo(b)fluoranthene	.05	.05	.001667	RAH055
51	Benzo(k)fluoranthene	.05	.05	.001667	RAH055
52	Benzo(e)pyrene	.05	.05	.001667	RAH055
53	Benzo(a)pyrene	.05	.05	.001667	RAH055
54	Perylene	.05	.05	.001667	RAH055
55	Indeno(1,2,3-cd)pyrene	.05	.05	.001667	RAH055
56	Dibenzo(a,h)anthracene	.05	.05	.001667	RAH055
57	Benzo(g,h,i)perylene	.05	.05	.001667	RAH055

MC 1-22-16

Quantitation Limit from Lowest Initial Calibration Concentration

Instrument ID :E7 Column Spec :ZB-SEMI ID :0.18MM
Beginning DateTime :01/14/16 11:14 Ending DateTime :01/14/16 14:34
IC File :RAH047 HPChem Method :SVE7A14S

WATER Init. Vol. (ml) : 1000 Final Vol. (ml) : 2
SOIL Init. Weight (gm) : 30 Final Vol. (ml) : 2

IDX	Parameters	ON_COL MG/L	WATER UG/L	SOIL MG/KG	R_FILE
1	1,4-Dichlorobenzene-d4	IntSTD	IntSTD	IntSTD	IntSTD
2	1,4-Dioxane	.05	.1	.003333	RAH055
3	N-nitrosodimethylamine	.05	.1	.003333	RAH055
4	2-Fluorophenol	.05	.1	.003333	RAH055
5	Phenol-d5	.05	.1	.003333	RAH055
6	Phenol	.05	.1	.003333	RAH055
7	bis(2-chloroethyl)ether	.05	.1	.003333	RAH055
8	2-Chlorophenol	.05	.1	.003333	RAH055
9	N-Nitroso-di-n-propylamine	.05	.1	.003333	RAH055
10	Nitrobenzene-d5	.05	.1	.003333	RAH055
11	2,4-Dimethylphenol	.05	.1	.003333	RAH055
12	2,4-Dichlorophenol	.05	.1	.003333	RAH055
13	Naphthalene	.05	.1	.003333	RAH055
14	4-Chloro-3-methylphenol	.05	.1	.003333	RAH055
15	2-Methylnaphthalene	.05	.1	.003333	RAH055
16	1-Methylnaphthalene	.05	.1	.003333	RAH055
17	2,4,6-Trichlorophenol	.05	.1	.003333	RAH055
18	2,4,5-Trichlorophenol	.05	.1	.003333	RAH055
19	2,3,4-Trichlorophenol	.05	.1	.003333	RAH055
20	2-Fluorobiphenyl	.05	.1	.003333	RAH055
21	Biphenyl	.05	.1	.003333	RAH055
22	2,6-Dimethylnaphthalene	.05	.1	.003333	RAH055
23	Dimethylphthalate	.05	.1	.003333	RAH055
24	Acenaphthylene	.05	.1	.003333	RAH055
25	Acenaphthene	.05	.1	.003333	RAH055
26	2,3,5-Trimethylnaphthalene	.05	.1	.003333	RAH055
27	Diethylphthalate	.05	.1	.003333	RAH055
28	Fluorene	.05	.1	.003333	RAH055
29	Phenanthrene-d10	IntSTD	IntSTD	IntSTD	IntSTD
30	N-Nitrosodiphenylamine	.05	.1	.003333	RAH055
31	Azobenzene	.05	.1	.003333	RAH055
32	2,4,6-Tribromophenol	.05	.1	.003333	RAH055
33	Hexachlorobenzene	.05	.1	.003333	RAH055
34	Pentachlorophenol	.075	.15	.005	RAH054
35	Dibenzothiophene	.05	.1	.003333	RAH055
36	Phenanthrene	.05	.1	.003333	RAH055
37	Anthracene	.05	.1	.003333	RAH055
38	Carbazole	.05	.1	.003333	RAH055
39	Di-n-butylphthalate	.05	.1	.003333	RAH055
40	1-Methylphenanthrene	.05	.1	.003333	RAH055
41	Fluoranthene	.05	.1	.003333	RAH055
42	Pyrene	.05	.1	.003333	RAH055
43	Terphenyl-d14	.05	.1	.003333	RAH055
44	Butylbenzylphthalate	.05	.1	.003333	RAH055
45	Benzo(a)anthracene	.05	.1	.003333	RAH055
46	Chrysene	.05	.1	.003333	RAH055
47	bis(2-Ethylhexyl)phthalate	.05	.1	.003333	RAH055
48	Perylene-d12	IntSTD	IntSTD	IntSTD	IntSTD
49	Di-n-octylphthalate	.05	.1	.003333	RAH055
50	Benzo(b)fluoranthene	.05	.1	.003333	RAH055
51	Benzo(k)fluoranthene	.05	.1	.003333	RAH055
52	Benzo(e)pyrene	.05	.1	.003333	RAH055
53	Benzo(a)pyrene	.05	.1	.003333	RAH055
54	Perylene	.05	.1	.003333	RAH055
55	Indeno(1,2,3-cd)pyrene	.05	.1	.003333	RAH055
56	Dibenzo(a,h)anthracene	.05	.1	.003333	RAH055
57	Benzo(g,h,i)perylene	.05	.1	.003333	RAH055

me 1-22-16

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR

Instrument ID :E7
Beginning DateTime :01/14/16 11:14
Spike Units :PPM
IC File :RAH047

Column Spec :ZB-SEMI ID :0.18MM
Ending DateTime :01/14/16 14:34
HPChem Method :SVE7A14S

IDX	Parameters	.05 14:34 RAH055	.075 14:15 RAH054	.15 13:56 RAH053	.5 13:36 RAH052	2 13:17 RAH051	4 12:58 RAH050	10 12:39 RAH049	20 12:20 RAH048	25 12:01 RAH047	40 11:41 RAH046	50 11:14 RAH045	Av_RRF	% RSD	Av_Rt_M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	1	1	1	0	2.8479
2	1,4-Dioxane	0.246	0.275	0.355	0.365	0.452	0.439	0.422	0.424	0.429	0.422	0.415	0.386	17.79	1.2362
3	N-nitrosodimethylamine	0.582	0.607	0.588	0.584	0.587	0.621	0.632	0.653	0.665	0.675	0.662	0.623	5.77	1.3467
4	2-Fluorophenol	1.021	1.031	1.057	1.035	1.049	1.118	1.127	1.159	1.194	1.204	1.197	1.108	6.54	1.9303
5	Phenol-d5	1.306	1.297	1.286	1.285	1.308	1.388	1.411	1.465	1.494	1.501	1.499	1.386	6.67	2.5028
6	Phenol	1.343	1.347	1.338	1.323	1.357	1.434	1.453	1.493	1.541	1.527	1.547	1.428	6.25	2.5137
7	bis(2-chloroethyl)ether	1.027	1.071	1.004	1.007	0.996	1.044	1.047	1.083	1.106	1.115	1.103	1.055	4.13	2.6109
8	2-Chlorophenol	1.495	1.075	1.247	1.167	1.178	1.246	1.268	1.314	1.351	1.360	1.354	1.278	8.98	2.6725
9	N-Nitroso-di-n-propylamine	0.712	0.823	0.729	0.737	0.754	0.805	0.823	0.853	0.879	0.884	0.861	0.806	7.80	3.1749
10	Nitrobenzene-d5	1.218	1.236	1.217	1.210	1.257	1.345	1.386	1.450	1.482	1.499	1.464	1.342	8.80	3.3256
11	2,4-Dimethylphenol	1.131	1.259	1.144	1.166	1.227	1.310	1.337	1.397	1.444	1.448	1.441	1.300	9.46	3.6742
12	2,4-Dichlorophenol	1.029	1.050	1.027	0.999	1.088	1.183	1.211	1.224	1.340	1.355	1.340	1.174	12.03	3.8874
13	Naphthalene	3.784	3.754	3.750	3.644	3.598	3.776	3.811	3.954	4.062	4.118	4.089	3.849	4.65	4.0748
14	4-Chloro-3-methylphenol	1.133	1.592	0.951	0.876	0.940	1.023	1.058	1.125	1.164	1.182	1.173	1.111	17.18	4.6440
15	2-Methylnaphthalene	2.627	2.892	2.564	2.493	2.531	2.665	2.714	2.832	2.907	2.941	2.932	2.736	6.24	4.8365
16	1-Methylnaphthalene	2.297	2.560	2.265	2.188	2.227	2.342	2.372	2.478	2.563	2.582	2.567	2.404	6.27	4.9493
17	2,4,6-Trichlorophenol	0.779	0.904	0.736	0.748	0.826	0.923	0.976	1.055	1.102	1.109	1.103	0.933	15.68	5.1522
18	2,4,5-Trichlorophenol	0.831	0.941	0.758	0.770	0.872	0.965	1.017	1.093	1.129	1.164	1.152	0.972	15.53	5.1873
19	2,3,4-Trichlorophenol	0.667	0.791	0.792	0.709	0.749	0.811	0.847	0.907	0.941	0.965	0.956	0.830	12.25	5.2628
20	2-Fluorobiphenyl	3.492	3.936	3.309	3.197	3.237	3.394	3.442	3.618	3.722	3.755	3.761	3.533	6.86	5.2628
21	Biphenyl	3.461	3.925	3.233	3.152	3.179	3.347	3.405	3.571	3.670	3.681	3.664	3.481	7.03	5.3788
22	2,6-Dimethylnaphthalene	2.297	2.643	2.159	2.118	2.170	2.306	2.371	2.487	2.557	2.563	2.566	2.385	7.88	5.5619
23	Dimethylphthalate	3.541	3.910	3.036	2.808	2.906	3.090	3.150	3.341	3.436	3.427	3.393	3.276	9.67	5.7495
24	Acenaphthylene	7.091	7.627	3.725	3.626	3.815	7.065	7.181	7.449	7.570	7.607	7.585	7.213	8.97	5.8846
25	Acenaphthene	3.052	3.516	2.803	2.658	2.654	2.802	2.841	2.984	3.080	3.063	3.052	2.955	8.29	6.0955
26	2,3,5-Trimethylnaphthalene	2.473	2.894	2.103	2.020	2.079	2.209	2.265	2.394	2.479	2.454	2.465	2.349	10.63	6.5590
27	Diethylphthalate	3.786	3.922	2.948	2.703	2.813	2.970	3.067	3.248	3.334	3.329	3.301	3.220	11.78	6.6033
28	Fluorene	3.355	3.818	2.972	2.777	2.850	3.023	3.101	3.286	3.383	3.406	3.438	3.219	9.51	6.7163
29	Phenanthrene-d10	1	1	1	1	1	1	1	1	1	1	1	1	0	7.7990
30	N-Nitrosodiphenylamine	1.043	0.969	0.697	0.575	0.574	0.602	0.601	0.622	0.629	0.643	0.635	0.690	23.30	6.8688
31	Azobenzene	0.727	0.780	0.601	0.557	0.600	0.641	0.652	0.682	0.690	0.701	0.687	0.665	9.55	6.9163
32	2,4,6-Tribromophenol	0.105	0.122	0.096	0.094	0.107	0.121	0.128	0.139	0.141	0.146	0.143	0.122	15.68	6.9970
33	Hexachlorobenzene	0.373	0.412	0.314	0.287	0.281	0.292	0.289	0.298	0.301	0.303	0.300	0.314	13.04	7.3537
34	Pentachlorophenol	------	0.110	0.089	0.086	0.103	0.124	0.139	0.152	0.156	0.163	0.162	0.128	23.24	7.5793
35	Dibenzothiophene	1.311	1.402	1.085	1.005	1.000	1.034	1.027	1.066	1.071	1.091	1.092	1.108	11.63	7.6804
36	Phenanthrene	1.537	1.652	1.245	1.135	1.115	1.146	1.131	1.171	1.180	1.198	1.199	1.246	14.29	7.8242
37	Anthracene	1.353	1.493	1.163	1.052	1.079	1.139	1.144	1.191	1.202	1.221	1.225	1.206	10.31	7.8806
38	Carbazole	0.996	1.109	0.857	0.812	0.855	0.916	0.912	0.926	0.935	0.949	0.951	0.929	8.51	8.0607
39	Di-n-butylphthalate	1.120	1.208	0.941	0.862	0.955	1.065	1.115	1.178	1.198	1.218	1.219	1.098	11.51	8.4677
40	1-Methylphenanthrene	0.923	0.996	0.785	0.720	0.752	0.792	0.793	0.815	0.836	0.835	0.841	0.826	9.32	8.4953
41	Fluoranthene	1.514	1.657	1.296	1.175	1.206	1.284	1.293	1.339	1.370	1.390	1.394	1.356	10.08	9.1019
42	Pyrene	1.584	1.730	1.419	1.233	1.285	1.363	1.368	1.413	1.435	1.449	1.463	1.431	9.46	9.3353
43	Terphenyl-d14	1.100	1.184	0.935	0.857	0.887	0.945	0.952	0.982	0.989	1.003	1.005	0.985	9.34	9.5094
44	Butylbenzylphthalate	0.340	0.375	0.299	0.285	0.329	0.382	0.425	0.458	0.473	0.487	0.489	0.395	19.26	10.0200
45	Benzo(a)anthracene	3.781	3.158	2.087	1.439	1.290	1.343	1.338	1.339	1.386	1.409	1.432	1.818	47.09	10.5642
46	Chrysene	1.637	1.737	1.376	1.205	1.206	1.240	1.251	1.267	1.277	1.315	1.335	1.350	13.05	10.5974
47	bis(2-Ethylhexyl)phthalate	0.588	0.627	0.492	0.454	0.545	0.634	0.699	0.744	0.761	0.793	0.808	0.650	18.70	10.6045
48	Perylene-d12	1	1	1	1	1	1	1	1	1	1	1	1	0	11.9425
49	Di-n-octylphthalate	0.695	0.773	0.604	0.595	0.726	0.873	1.001	1.129	1.151	1.180	1.184	0.901	26.15	11.2235
50	Benzo(b)fluoranthene	1.228	1.353	1.043	1.036	1.004	1.111	1.118	1.221	1.181	1.217	1.266	1.162	9.36	11.5717
51	Benzo(k)fluoranthene	1.234	1.356	1.084	0.952	1.089	1.127	1.168	1.170	1.238	1.219	1.195	1.166	8.98	11.5971
52	Benzo(e)pyrene	1.190	1.271	0.998	0.927	0.964	1.027	1.048	1.095	1.108	1.111	1.128	1.079	9.28	11.8295
53	Benzo(a)pyrene	1.097	1.181	0.940	0.895	0.976	1.036	1.102	1.165	1.185	1.196	1.211	1.090	10.29	11.8807
54	Perylene	1.360	1.484	1.143	1.050	1.053	1.084	1.095	1.126	1.140	1.143	1.150	1.166	11.53	11.9651
55	Indeno(1,2,3-cd)pyrene	1.417	1.435	1.080	1.028	1.078	1.161	1.204	1.260	1.278	1.288	1.318	1.232	10.99	13.1457
56	Dibenzo(a,h)anthracene	1.064	1.164	0.974	0.857	0.914	0.989	1.017	1.067	1.085	1.095	1.120	1.032	8.89	13.1683
57	Benzo(g,h,i)perylene	1.031	1.127	0.893	0.830	0.870	0.931	0.956	0.995	1.006	1.008	1.030	0.971	8.77	13.5059

Ave_%RSD : 11.7 Max_%RSD : 47.1

Use Least Square Linear Regression with weighting factor of inverse concentration
Resp_Ratio = xo + x1 * Amt_Ratio

IDX	Parameter	x0	x1	CCF
2	1,4-Dioxane	-0.00023	0.42239	0.9998
14	4-Chloro-3-methylphenol	-0.00027	1.15270	0.9991
17	2,4,6-Trichlorophenol	-0.00096	1.08244	0.9987
18	2,4,5-Trichlorophenol	-0.00099	1.12693	0.9987
30	N-Nitrosodiphenylamine	0.00039	0.62963	0.9997
32	2,4,6-Tribromophenol	-0.00012	0.14102	0.9988
34	Pentachlorophenol	-0.00031	0.15700	0.9977
44	Butylbenzylphthalate	-0.00050	0.47333	0.9980
45	Benzo(a)anthracene	0.00274	1.38987	0.9995
47	bis(2-Ethylhexyl)phthalate	-0.00079	0.77303	0.9980
49	Di-n-octylphthalate	-0.00157	1.14551	0.9974

mc
1-22-16

INITIAL_CALIBRATION - RELATIVE_RESPONSE_FACTOR(%REC)

Instrument ID :E7
Beginning DateTime :01/14/16 11:14
Spike Units :PPM
IC File :RAH047

Column Spec :ZB-SEMI ID :0.18MM
Ending DateTime :01/14/16 14:34
HPChem Method :SVE7A14S

IDX	Parameters	.05 14:34 RAH055	.075 14:15 RAH054	.15 13:56 RAH053	.5 13:36 RAH052	2 13:17 RAH051	4 12:58 RAH050	10 12:39 RAH049	20 12:20 RAH048	25 12:01 RAH047	40 11:41 RAH046	50 11:14 RAH045	AvDRec	%_RSD	Av_Rt_M
1	1,4-Dichlorobenzene-d4	1	1	1	1	1	1	1	1	1	1	1	1	0	2.8479
2	1,4-Dioxane	102	95	99	91	108	105	100	101	102	100	98	3.2	4.6	1.2362
3	N-nitrosodimethylamine	93	97	94	94	94	100	101	105	107	108	106	5	5.77	1.3467
4	2-Fluorophenol	92	93	95	93	95	101	102	105	108	109	108	5.7	6.54	1.9303
5	Phenol-d5	94	94	93	93	94	100	102	106	108	108	108	5.8	6.67	2.5028
6	Phenol	94	94	94	93	95	100	102	105	108	107	108	5.5	6.25	2.5137
7	bis(2-chloroethyl)ether	97	102	95	95	94	99	99	103	105	106	105	3.5	4.13	2.6109
8	2-Chlorophenol	117	84	98	91	92	97	99	103	106	106	106	6.9	8.98	2.6725
9	N-Nitroso-di-n-propylamine	88	102	90	91	94	100	102	106	109	110	107	6.5	7.80	3.1749
10	Nitrobenzene-d5	91	92	91	90	94	100	103	108	110	112	109	7.8	8.80	3.3256
11	2,4-Dimethylphenol	87	97	88	90	94	101	103	107	111	111	111	8	9.46	3.6742
12	2,4-Dichlorophenol	88	89	87	85	93	101	103	110	114	115	114	10.5	12.03	3.8874
13	Naphthalene	98	98	97	95	93	98	99	103	106	107	106	3.9	4.65	4.0748
14	4-Chloro-3-methylphenol	117	151	89	78	82	89	92	98	101	103	102	13.3	20	4.6440
15	2-Methylnaphthalene	96	106	94	91	93	97	99	104	106	107	107	5.5	6.24	4.8365
16	1-Methylnaphthalene	96	106	94	91	93	97	99	103	107	107	107	5.5	6.27	4.9493
17	2,4,6-Trichlorophenol	143	131	92	76	78	86	90	98	102	103	102	14.6	20.5	5.1522
18	2,4,5-Trichlorophenol	144	130	91	75	79	86	91	97	100	103	102	14.5	20.7	5.1873
19	2,3,4-Trichlorophenol	80	95	95	85	90	98	102	109	113	116	115	10.2	12.25	5.2628
20	2-Fluorobiphenyl	99	111	94	90	92	96	97	102	105	106	106	5.8	6.86	5.2628
21	Biphenyl	99	113	93	91	91	96	98	103	105	106	105	5.8	7.03	5.3788
22	2,6-Dimethylnaphthalene	96	111	91	89	91	97	99	104	107	107	108	6.8	7.88	5.5619
23	Dimethylphthalate	108	119	93	86	89	94	96	102	105	105	104	7.7	9.67	5.7495
24	Acenaphthylene	97	110	88	86	91	96	99	106	108	109	109	7.7	8.97	5.8846
25	Acenaphthene	103	119	95	90	90	95	96	101	104	104	103	6.3	8.29	6.0952
26	2,3,5-Trimethylnaphthalene	105	123	90	86	89	94	96	102	106	104	105	8.3	10.63	6.5590
27	Diethylphthalate	118	122	92	84	87	92	95	101	104	103	103	9	11.78	6.6033
28	Fluorene	104	119	92	86	89	94	96	102	105	106	107	7.7	9.51	6.7163
29	Phenanthrene-d10	1	1	1	1	1	1	1	1	1	1	1	1	0	7.7990
30	N-Nitrosodiphenylamine	116	121	94	86	90	95	95	99	100	102	101	7.4	10.4	6.8688
31	Azobenzene	109	117	90	84	90	96	98	103	104	105	103	7.5	9.55	6.9163
32	2,4,6-Tribromophenol	143	132	91	74	78	87	91	98	100	103	102	14.6	21.1	6.9970
33	Hexachlorobenzene	119	131	100	91	89	93	92	95	96	96	96	9.2	13.04	7.3537
34	Pentachlorophenol	------	176	110	71	70	81	89	97	99	104	103	18.6	30.1	7.5793
35	Dibenzothiophene	118	127	98	91	90	93	93	96	97	98	99	8.2	11.63	7.6804
36	Phenanthrene	123	133	100	91	89	92	91	94	95	96	96	10.1	14.29	7.8242
37	Anthracene	112	124	96	87	89	94	95	99	100	101	102	7.1	10.31	7.8806
38	Carbazole	107	119	92	87	92	99	98	100	101	102	102	5.8	8.51	8.0607
39	Di-n-butylphthalate	102	110	86	79	87	97	102	107	109	111	111	9.4	11.51	8.4677
40	1-Methylphenanthrene	112	121	95	87	91	96	96	99	101	101	102	6.6	9.32	8.4953
41	Fluoranthene	112	122	96	87	89	95	95	99	101	103	103	7.3	10.08	9.1019
42	Pyrene	111	121	99	86	90	95	96	99	100	101	102	6.4	9.46	9.3353
43	Terphenyl-d14	112	120	95	87	90	96	97	100	100	102	102	6.5	9.34	9.5094
44	Butylbenzylphthalate	157	136	91	69	72	82	90	97	100	103	103	18	26.2	10.0200
45	Benzo(a)anthracene	114	122	98	88	89	95	95	96	99	101	103	7.3	10.2	10.5642
46	Chrysene	121	129	102	89	89	92	93	94	95	97	99	9.5	13.05	10.5974
47	bis(2-Ethylhexyl)phthalate	158	136	91	67	73	83	91	96	99	103	105	18.4	26.4	10.6045
48	Perylene-d12	1	1	1	1	1	1	1	1	1	1	1	1	0	11.9425
49	Di-n-octylphthalate	170	140	89	63	66	78	88	99	101	103	103	21.3	31.4	11.2235
50	Benzo(b)fluoranthene	106	116	90	89	86	96	96	105	102	105	109	7.8	9.36	11.5717
51	Benzo(k)fluoranthene	106	116	93	82	93	97	100	100	106	105	102	6.5	8.98	11.5971
52	Benzo(e)pyrene	110	118	92	86	89	95	97	101	103	103	105	7.2	9.28	11.8295
53	Benzo(a)pyrene	101	108	86	82	90	95	101	107	109	110	111	8.5	10.29	11.8807
54	Perylene	117	127	98	90	90	93	94	97	98	98	99	8	11.53	11.9651
55	Indeno(1,2,3-cd)pyrene	115	116	88	83	88	94	98	102	104	105	107	9	10.99	13.1457
56	Dibenzo(a,h)anthracene	103	113	94	83	89	96	99	103	105	106	109	7.2	8.89	13.1683
57	Benzo(g,h,i)perylene	106	116	92	85	90	96	98	102	104	104	106	7	8.77	13.5059

pc
1-22-16

Compound List Report E7

Method Path : C:\msdchem\1\METHODS\
Method File : SVE7A14S.M
Title : SEMIVOLATILES - SIM
Last Update : Fri Jan 15 12:19:41 2016
Response Via : Initial Calibration

Total Cpnds : 57

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dichlorobenzene-d4	-152	2.848	1.000	A	1	A	B
2	T	1,4-Dioxane	-88	1.236	0.434	L	1	A	B
3	T	N-nitrosodimethylamine	-74	1.346	0.473	A	1	A	B
4	S	2-Fluorophenol	-112	1.930	0.678	A	1	A	B
5	S	Phenol-d5	-99	2.504	0.879	A	1	A	B
6	T	Phenol	-94	2.514	0.883	A	1	A	B
7	T	bis(2-chloroethyl)ether	-93	2.613	0.917	A	1	A	B
8	T	2-Chlorophenol	-128	2.676	0.940	A	1	A	B
9	P,P	N-Nitroso-di-n-propylamine	-70	3.179	1.116	A	1	A	B
10	S	Nitrobenzene-d5	-82	3.327	1.168	A	1	A	B
11	T	2,4-Dimethylphenol	-107	3.677	1.291	A	1	A	B
12	T	2,4-Dichlorophenol	-162	3.888	1.365	A	1	A	B
13	T	Naphthalene	-128	4.077	1.432	A	1	A	B
14	T	4-Chloro-3-methylphenol	-107	4.646	1.631	L	1	A	B
15	T	2-Methylnaphthalene	-142	4.837	1.698	A	1	A	B
16	T	1-Methylnaphthalene	-142	4.952	1.739	A	1	A	B
17	T	2,4,6-Trichlorophenol	-196	5.100	1.791	L	1	A	B
18	T	2,4,5-Trichlorophenol	-196	5.188	1.822	L	1	A	B
19	T	2,3,4-Trichlorophenol	-196	5.280	1.854	A	1	A	B
20	S	2-Fluorobiphenyl	-172	5.265	1.849	A	1	A	B
21	T	Biphenyl	-154	5.381	1.889	A	1	A	B
22	T	2,6-Dimethylnaphthalene	-156	5.563	1.953	A	1	A	B
23	T	Dimethylphthalate	-163	5.755	2.021	A	1	A	B
24	T	Acenaphthylene	-152	5.885	2.066	A	1	A	B
25	C,P	Acenaphthene	-153	6.097	2.141	A	1	A	B
26	T	2,3,5-Trimethylnaphthalene	-170	6.561	2.304	A	1	A	B
27	T	Diethylphthalate	-149	6.608	2.320	A	1	A	B
28	T	Fluorene	-166	6.721	2.360	A	1	A	B
29	I	Phenanthrene-d10	-188	7.801	1.000	A	1	A	B
30	T	N-Nitrosodiphenylamine	-169	6.871	0.881	L	1	A	B
31	T	Azobenzene	-77	6.919	0.887	A	1	A	B
32	S	2,4,6-Tribromophenol	-330	6.999	0.897	L	1	A	B
33	T	Hexachlorobenzene	-284	7.355	0.943	A	1	A	B
34	T	Pentachlorophenol	-266	7.581	0.972	L	1	A	B
35	T	Dibenzothiophene	-184	7.681	0.985	A	1	A	B
36	T	Phenanthrene	-178	7.828	1.003	A	1	A	B
37	T	Anthracene	-178	7.883	1.011	A	1	A	B
38	T	Carbazole	-167	8.064	1.034	A	1	A	B
39	T	Di-n-butylphthalate	-149	8.471	1.086	A	1	A	B
40	T	1-Methylphenanthrene	-192	8.495	1.089	A	1	A	B
41	C,P	Fluoranthene	-202	9.104	1.167	A	1	A	B
42	T	Pyrene	-202	9.340	1.197	A	1	A	B
43	S	Terphenyl-d14	-244	9.511	1.219	A	1	A	B
44	T	Butylbenzylphthalate	-149	10.021	1.285	L	1	A	B
45	T	Benzo(a)anthracene	-228	10.566	1.354	L	1	A	B
46	T	Chrysene	-228	10.600	1.359	A	1	A	B
47	T	bis(2-Ethylhexyl)phthalate	-149	10.605	1.359	L	1	A	B
48	I	Perylene-d12	-264	11.947	1.000	A	1	A	B
49	T	Di-n-octylphthalate	-149	11.226	0.940	L	1	A	B
50	T	Benzo(b)fluoranthene	-252	11.577	0.969	A	1	A	B
51	T	Benzo(k)fluoranthene	-252	11.601	0.971	A	1	A	B
52	T	Benzo(e)pyrene	-252	11.835	0.991	A	1	A	B
53	C,P	Benzo(a)pyrene	-252	11.886	0.995	A	1	A	B
54	T	Perylene	-252	12.000	1.004	A	1	A	B

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55	T	Indeno(1,2,3-cd)pyrene	-276	13.155	1.101	A	1	A	B
56	T	Dibenzo(a,h)anthracene	-278	13.175	1.103	A	1	A	B
57	T	Benzo(g,h,i)perylene	-276	13.519	1.132	A	1	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

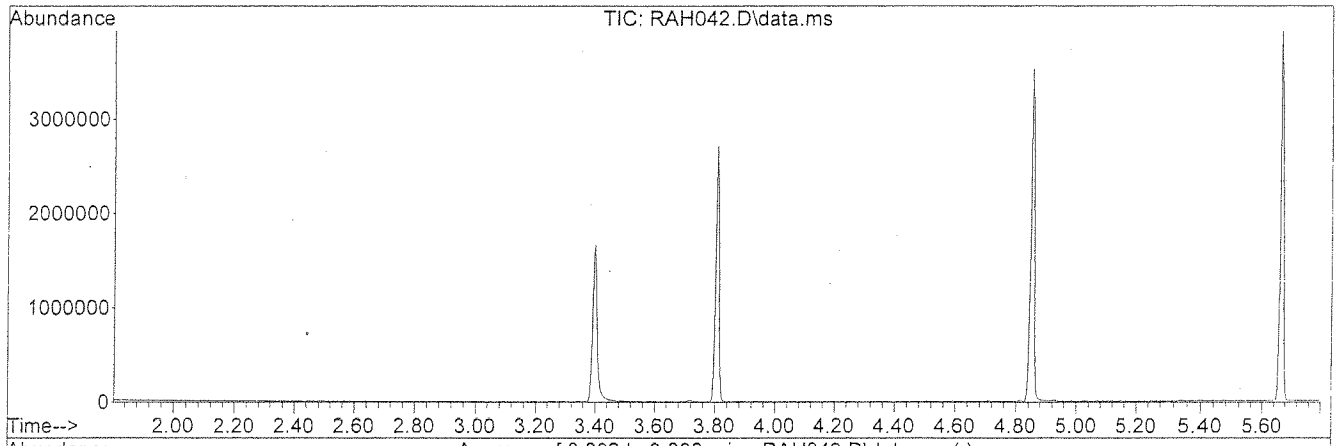
SVE7A14S.M Fri Jan 15 12:20:05 2016

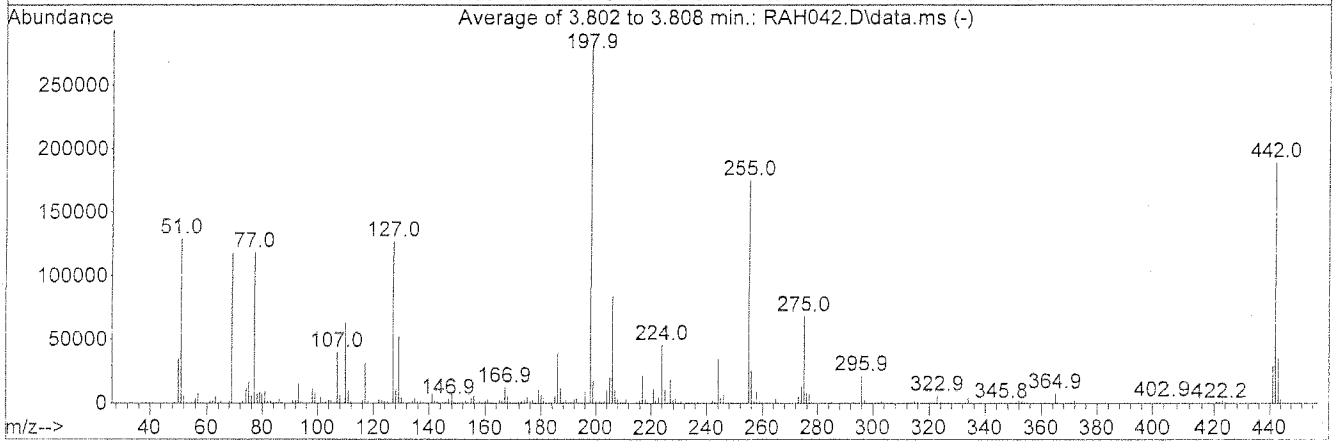
1-22-16

Data Path : D:\DATA\16A14\
Data File : RAH042.D
Acq On : 14 Jan 2016 10:14
Operator : KVu
Sample : DFTE7A1401
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP.M
Title : DFTPP
Last Update : Thu Jan 21 09:52:59 2016





AutoFind: Scans 787, 788, 789; Background Corrected with Scan 778

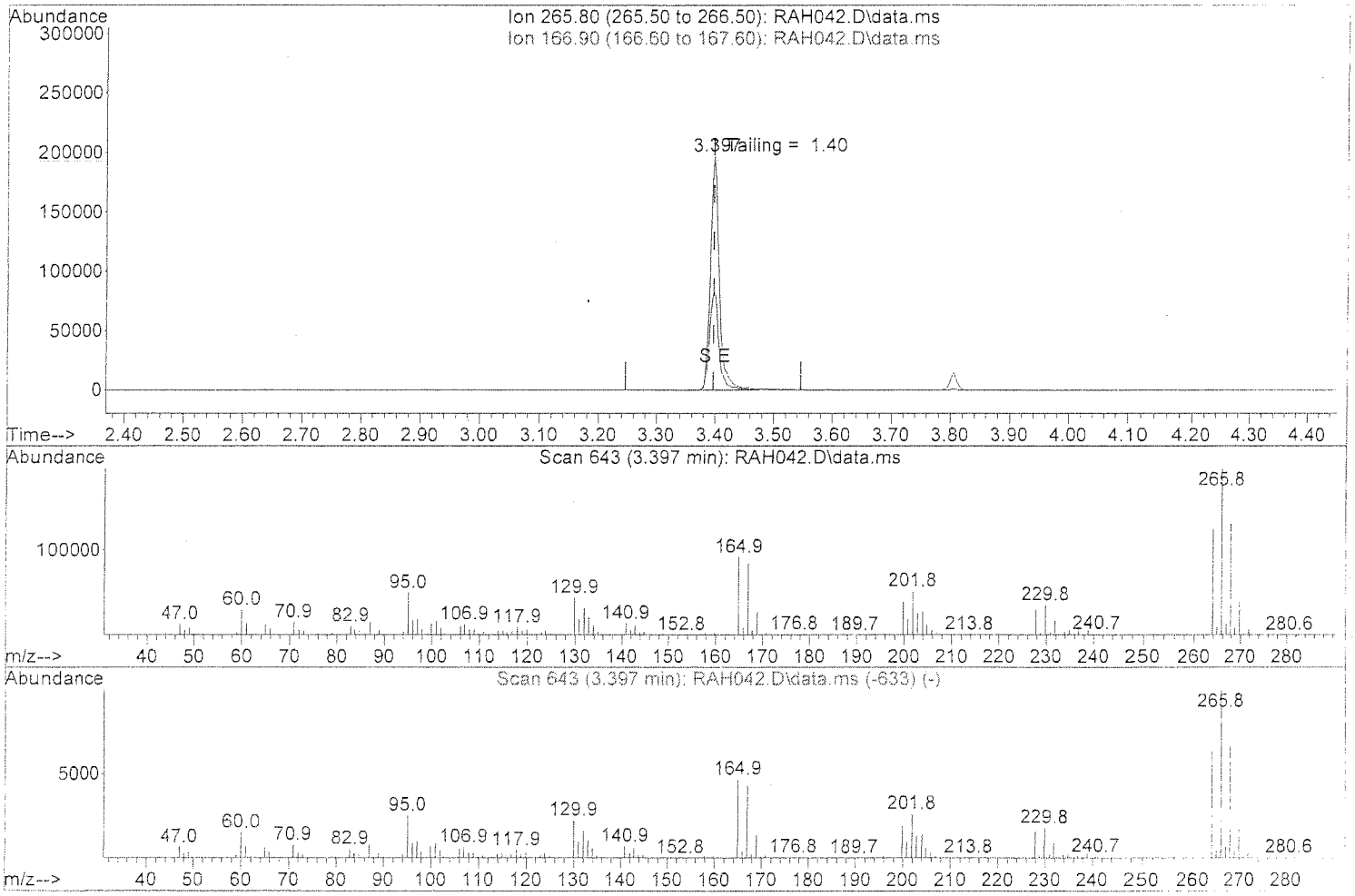
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	46.0	128963	PASS
68	69	0.00	2	1.5	1807	PASS
69	198	0.00	100	42.0	117741	PASS
70	69	0.00	2	0.4	518	PASS
127	198	40	60	45.2	126827	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	280384	PASS
199	198	5	9	6.4	17841	PASS
275	198	10	30	24.3	68176	PASS
365	198	1	100	2.8	7867	PASS
441	443	0.01	100	81.7	29203	PASS
442	198	40	100	67.4	189099	PASS
443	442	17	23	18.9	35736	PASS

RL 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:54:17 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH042.D\data.ms

(1) Pentachlorophenol (T)

3.397min (-0.000) 50.00 ppm

response 205279

Ion	Exp%	Act%
265.80	100	100
166.90	44.50	44.54
0.00	0.00	0.00
0.00	0.00	0.00

AK 1-22-16

Quantitation Report (Qedit)

```
Data File : D:\DATA\16A14\RAH042.D                     Vial: 2
Acq On    : 14 Jan 2016  10:14                     Operator: KVu
Sample    : DFTE7A1401                             Inst    : E7
Misc      :                                        Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 09:54:17 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title  : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M
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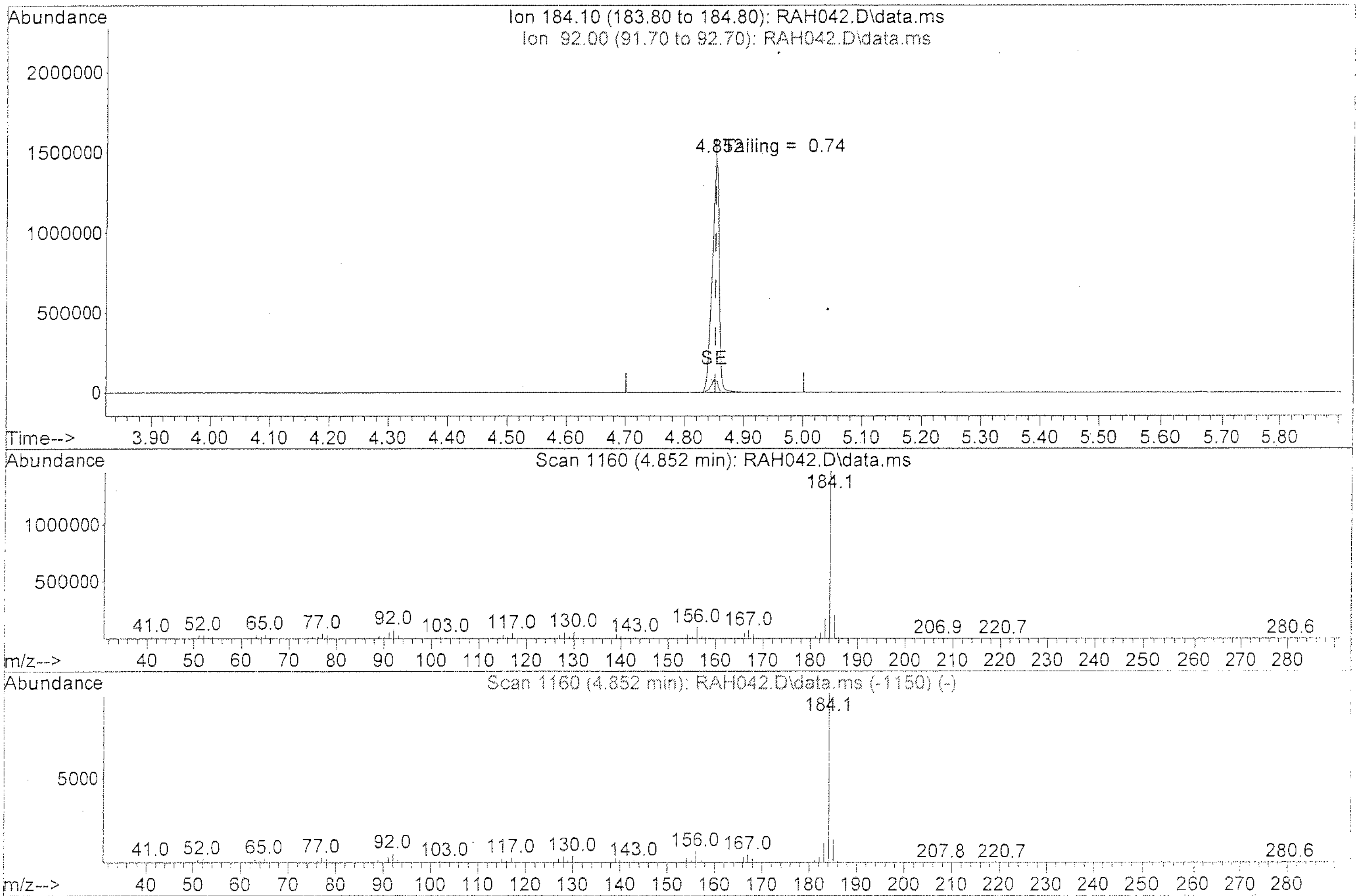


TIC: RAH042.D\data.ms

(3) Benzidine (T)

4.852min (0.000) 50.00 ppm

response 1197485

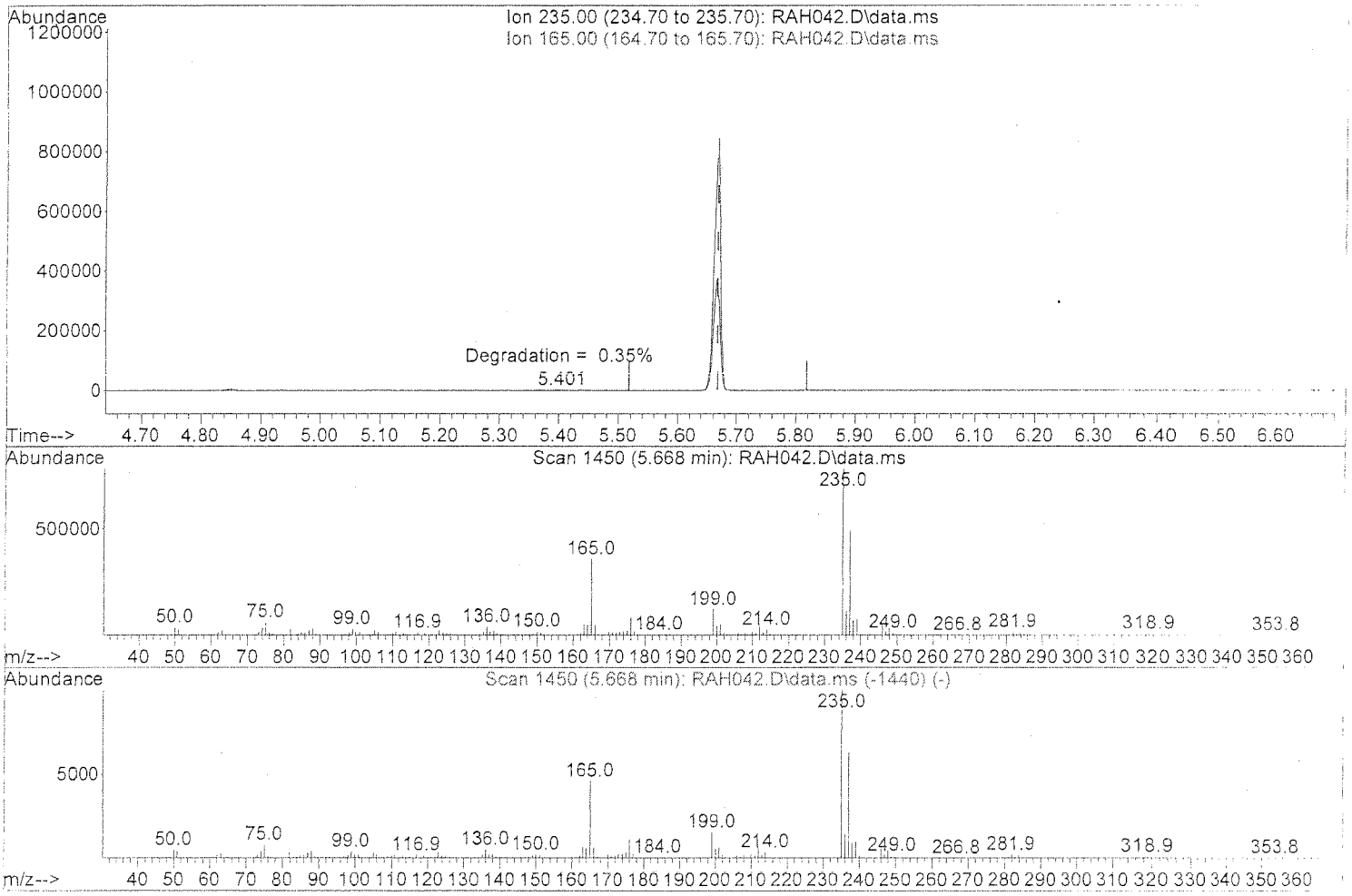
Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.84
0.00	0.00	0.00
0.00	0.00	0.00

TU 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:54:17 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH042.D\data.ms

(6) DDT (T)

5.668min (0.000) 50.00 ppm

response 614216

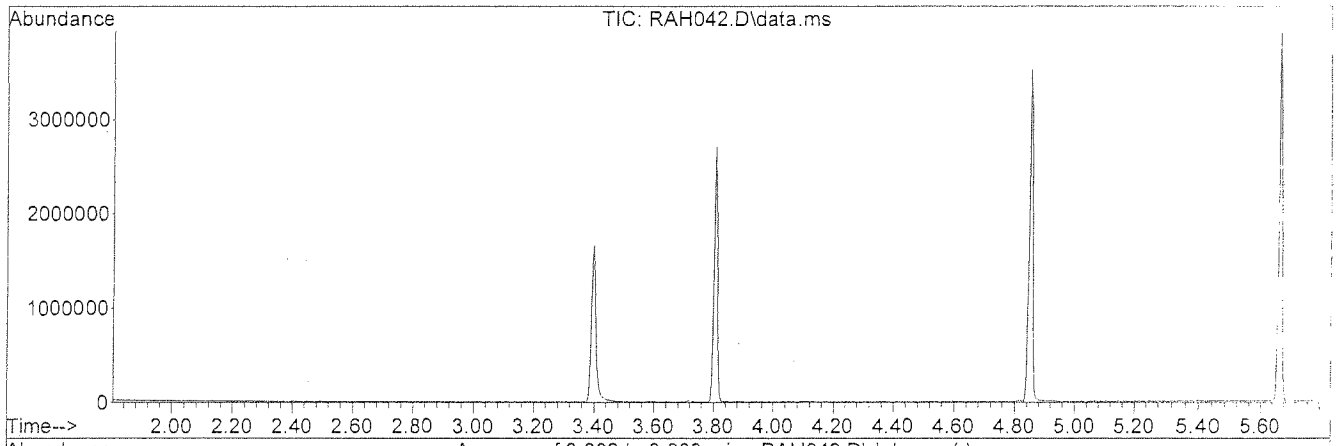
Ion	Exp%	Act%
235.00	100	100
165.00	47.10	47.06
0.00	0.00	0.00
0.00	0.00	0.00

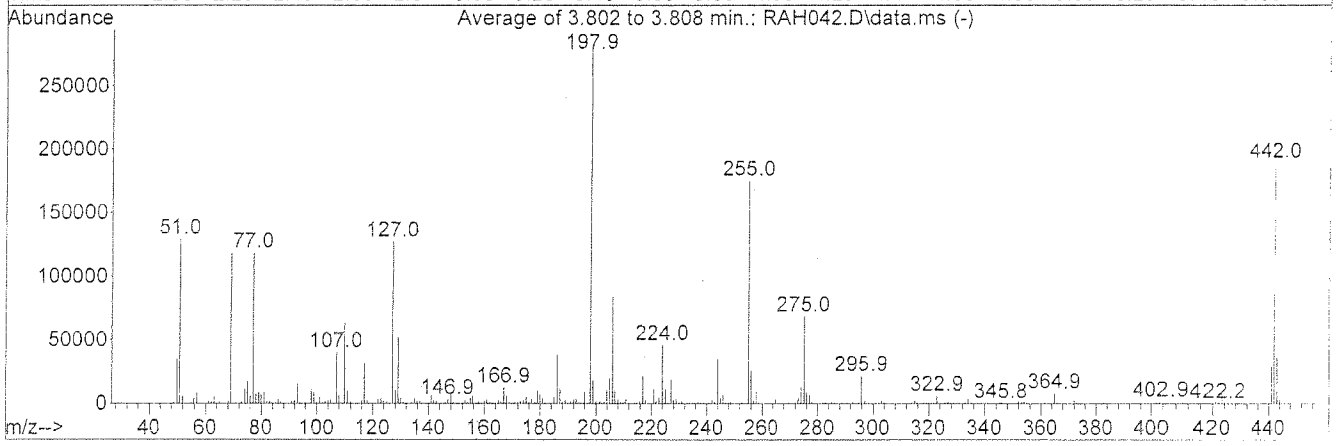
tm 1-22-16

Data Path : D:\DATA\16A14\
Data File : RAH042.D
Acq On : 14 Jan 2016 10:14
Operator : KVu
Sample : DFTE7A1401
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Thu Jan 21 09:55:42 2016





AutoFind: Scans 787, 788, 789; Background Corrected with Scan 778

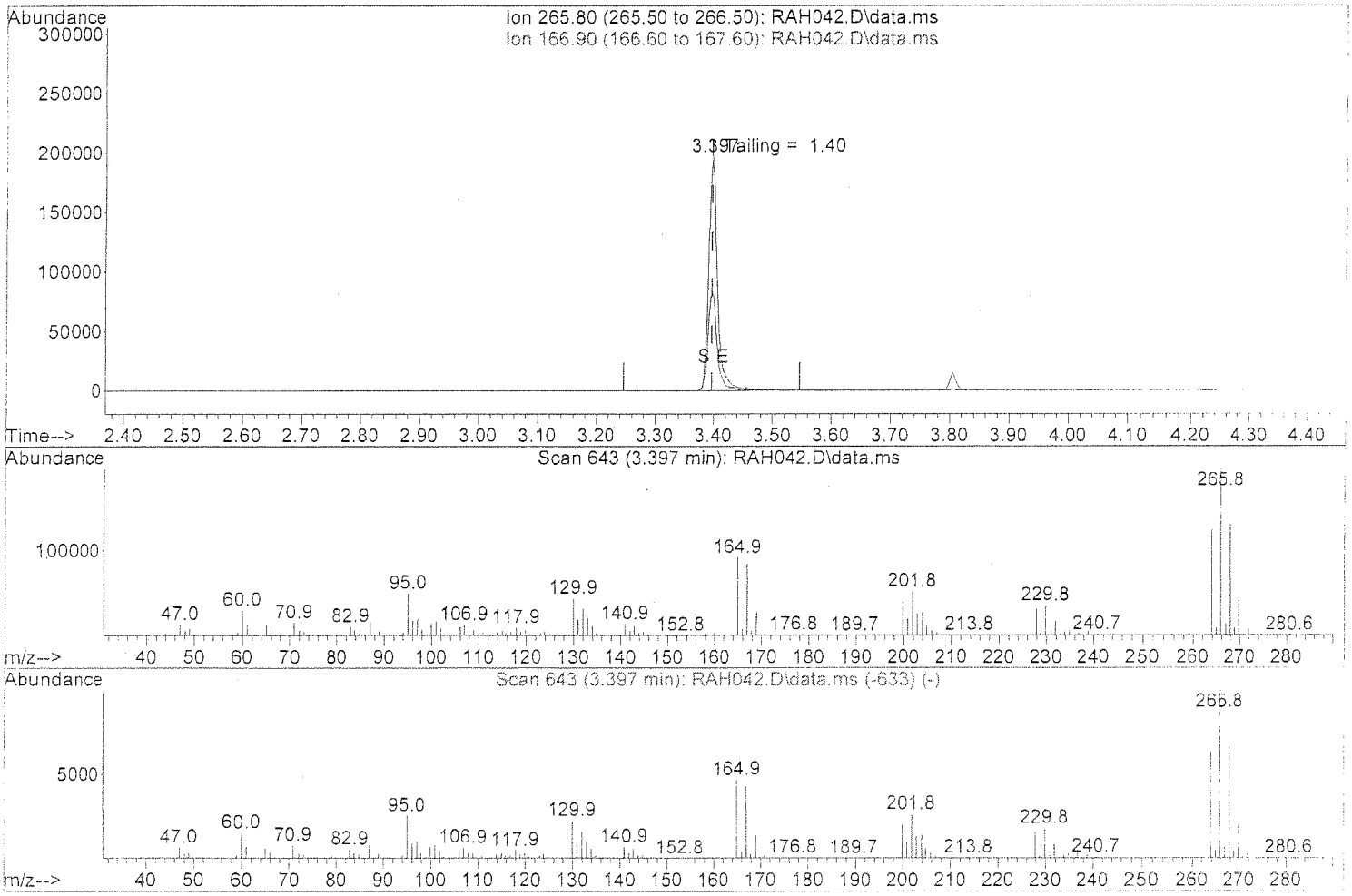
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	46.0	128963	PASS
68	69	0.00	2	1.5	1807	PASS
69	198	0.00	100	42.0	117741	PASS
70	69	0.00	2	0.4	518	PASS
127	198	10	80	45.2	126827	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	280384	PASS
199	198	5	9	6.4	17841	PASS
275	198	10	60	24.3	68176	PASS
365	198	1	100	2.8	7867	PASS
441	442	0.01	24	15.4	29203	PASS
442	198	50	100	67.4	189099	PASS
443	442	15	24	18.9	35736	PASS

pm 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:55:44 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH042.D\data.ms

(1) Pentachlorophenol (T)

3.397min (-0.000) 50.00 ppm

response 205279

Ion	Exp%	Act%
265.80	100	100
166.90	44.50	44.54
0.00	0.00	0.00
0.00	0.00	0.00

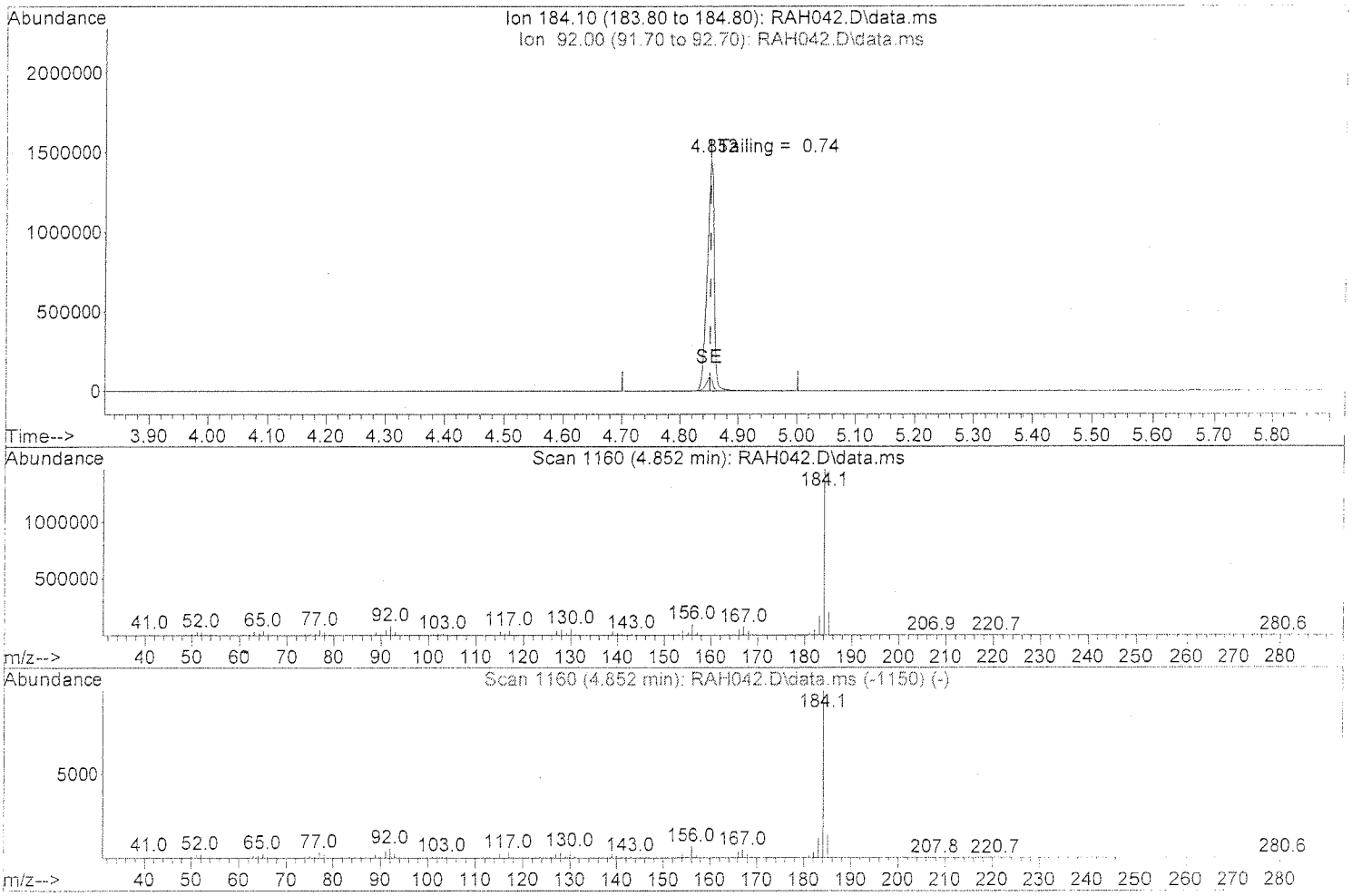
PM 1-22-16

442

Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:55:44 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH042.D\data.ms

(3) Benzidine (T)

4.852min (0.000) 50.00 ppm

response 1197485

Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.84
0.00	0.00	0.00
0.00	0.00	0.00

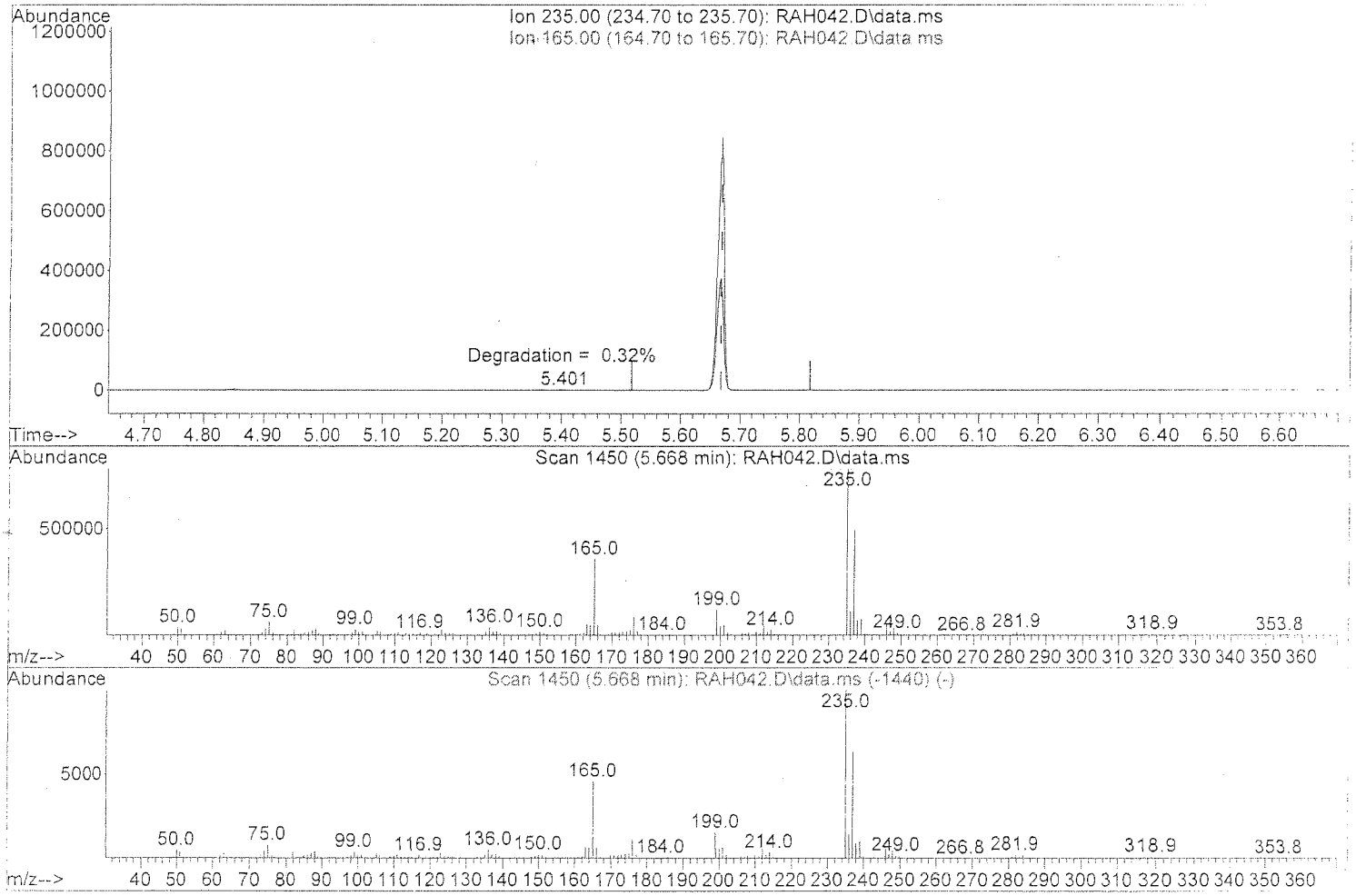
TM 1-22-16

042

Quantitation Report (Qedit)

Data File : D:\DATA\16A14\RAH042.D
Acq On : 14 Jan 2016 10:14
Sample : DFTE7A1401
Misc :
Integrator: RTE
Quant Time: Jan 21 09:55:44 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH042.D\data.ms

(6) DDT (T)

5.668min (0.000) 50.00 ppm

response 614216

Ion	Exp%	Act%
235.00	100	100
165.00	47.10	47.06
0.00	0.00	0.00
0.00	0.00	0.00

PM 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH055.D
Vial: 15
Acq On : 14 Jan 2016 14:34
Operator: KVu
Sample : SVE7A1413
Inst : E7
Misc : 0.05PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:04:52 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	490690	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2016849	40.00	ppm	0.00
48) Perylene-d12	11.938	264	2199789	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	626	0.05	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.17%	
5) Phenol-d5	2.499	99	801	0.05	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.17%	
10) Nitrobenzene-d5	3.323	82	747	0.05	ppm	0.00
Spiked Amount 10.000			Recovery	=	0.50%	
20) 2-Fluorobiphenyl	5.260	172	2142	0.05	ppm	0.00
Spiked Amount 10.000			Recovery	=	0.50%	
32) 2,4,6-Tribromophenol	6.994	330	264	0.07	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.23%	
43) Terphenyl-d14	9.507	244	2774	0.06	ppm	0.00
Spiked Amount 10.000			Recovery	=	0.60%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	151	0.05	ppm #	1
3] N-nitrosodimethylamine	1.351	74	357	0.05	ppm #	66
6] Phenol	2.509	94	824	0.05	ppm	68
7] bis(2-chloroethyl)ether	2.608	93	630	0.05	ppm	99
8] 2-Chlorophenol	2.671	128	917	0.06	ppm	85
9] N-Nitroso-di-n-propyla...	3.169	70	437	0.04	ppm	94
11] 2,4-Dimethylphenol	3.673	107	694	0.04	ppm	67
12] 2,4-Dichlorophenol	3.884	162	631	0.04	ppm #	50
13] Naphthalene	4.072	128	2321	0.05	ppm	98
14] 4-Chloro-3-methylphenol	4.641	107	695	0.06	ppm	75
15] 2-Methylnaphthalene	4.833	142	1611	0.05	ppm	84
16] 1-Methylnaphthalene	4.948	142	1409	0.05	ppm	98
17] 2,4,6-Trichlorophenol	5.149	196	478	0.07	ppm #	59
18] 2,4,5-Trichlorophenol	5.183	196	510	0.07	ppm	100
19] 2,3,4-Trichlorophenol	5.260	196	409	0.04	ppm #	38
21] Biphenyl	5.376	154	2123	0.05	ppm	94
22] 2,6-Dimethylnaphthalene	5.558	156	1409	0.05	ppm	97
23] Dimethylphthalate	5.741	163	2172	0.05	ppm	97
24] Acenaphthylene	5.881	152	2509	0.05	ppm	100
25] Acenaphthene	6.092	153	1872	0.05	ppm	96
26] 2,3,5-Trimethylnaphtha...	6.556	170	1517	0.05	ppm	89
27] Diethylphthalate	6.599	149	2322	0.06	ppm	100
28] Fluorene	6.711	166	2058	0.05	ppm	97
30] N-Nitrosodiphenylamine	6.866	169	2630	0.06	ppm	94
31] Azobenzene	6.914	77	1832	0.05	ppm	96
33] Hexachlorobenzene	7.350	284	940	0.06	ppm	90
34] Pentachlorophenol	7.577	266	250	0.11	ppm	75
35] Dibenzothiophene	7.676	184	3305	0.06	ppm	98
36] Phenanthrene	7.819	178	3876	0.06	ppm	97
37] Anthracene	7.878	178	3410	0.06	ppm	97
38] Carbazole	8.055	167	2511	0.05	ppm	99
39] Di-n-butylphthalate	8.466	149	2823	0.05	ppm	95
40] 1-Methylphenanthrene	8.491	192	2326	0.06	ppm	98
41] Fluoranthene	9.099	202	3818	0.06	ppm	97

1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH055.D
Acq On : 14 Jan 2016 14:34
Sample : SVE7A1413
Misc : 0.05PPM
Integrator: RTE
Quant Time: Jan 21 14:04:52 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 15
Operator: KVu
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
42]	Pyrene	9.330	202	3994	0.06 ppm		100
44]	Butylbenzylphthalate	10.017	149	858	0.08 ppm		98
45]	Benzo(a)anthracene	10.566	228	9532	0.06 ppm		83
46]	Chrysene	10.591	228	4126	0.06 ppm		98
47]	bis(2-Ethylhexyl)phtha...	10.600	149	1482	0.08 ppm		99
49]	Di-n-octylphthalate	11.217	149	1910	0.08 ppm		99
50]	Benzo(b)fluoranthene	11.567	252	3377	0.05 ppm		100
51]	Benzo(k)fluoranthene	11.591	252	3392	0.05 ppm		99
52]	Benzo(e)pyrene	11.821	252	3272	0.06 ppm		93
53]	Benzo(a)pyrene	11.873	252	3016	0.05 ppm		98
54]	Perylene	11.957	252	3741	0.06 ppm	#	71
55]	Indeno(1,2,3-cd)pyrene	13.131	276	3897	0.06 ppm		95
56]	Dibenzo(a,h)anthracene	13.156	278	2927	0.05 ppm		89
57]	Benzo(g,h,i)perylene	13.491	276	2834	0.05 ppm		96

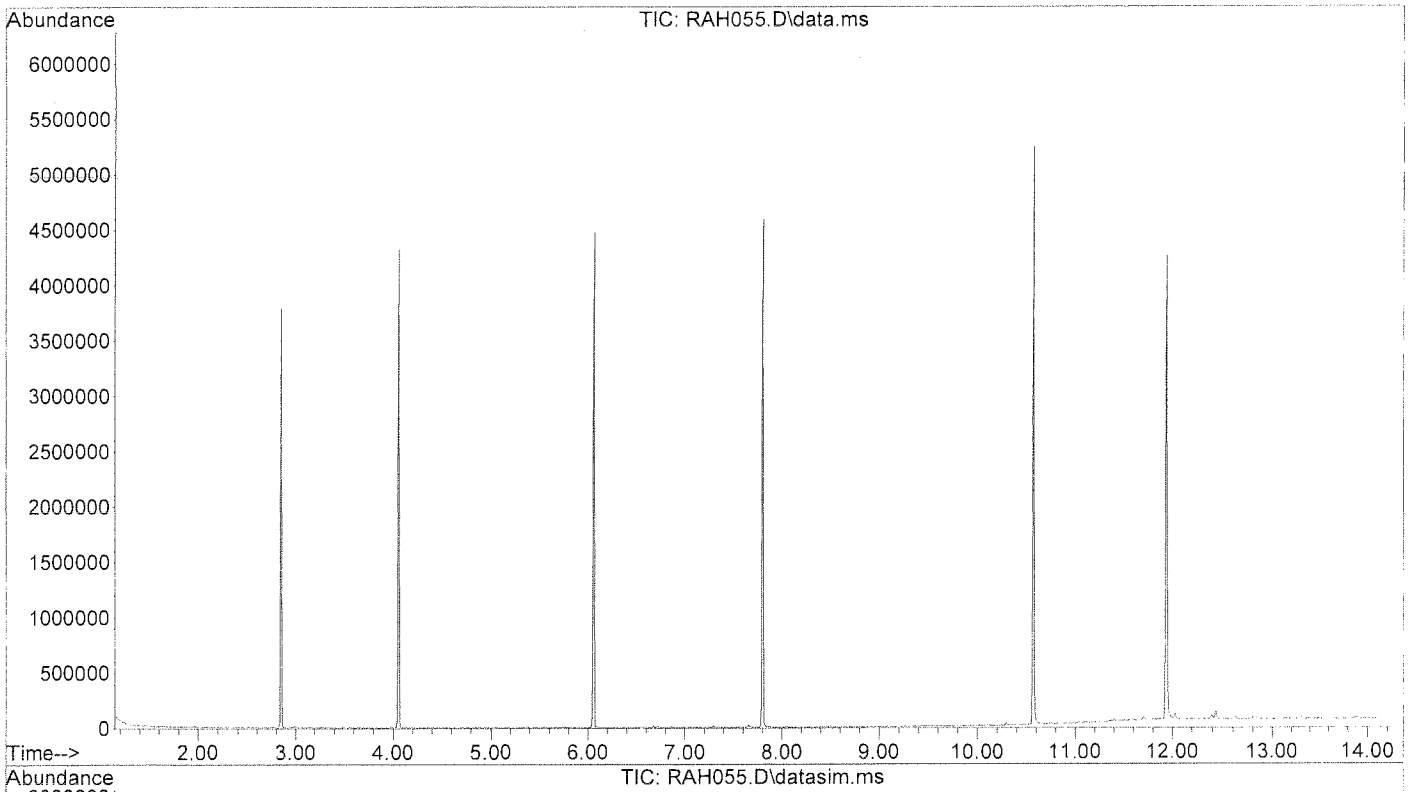
(#) = qualifier out of range (m) = manual integration (+) = signals summed

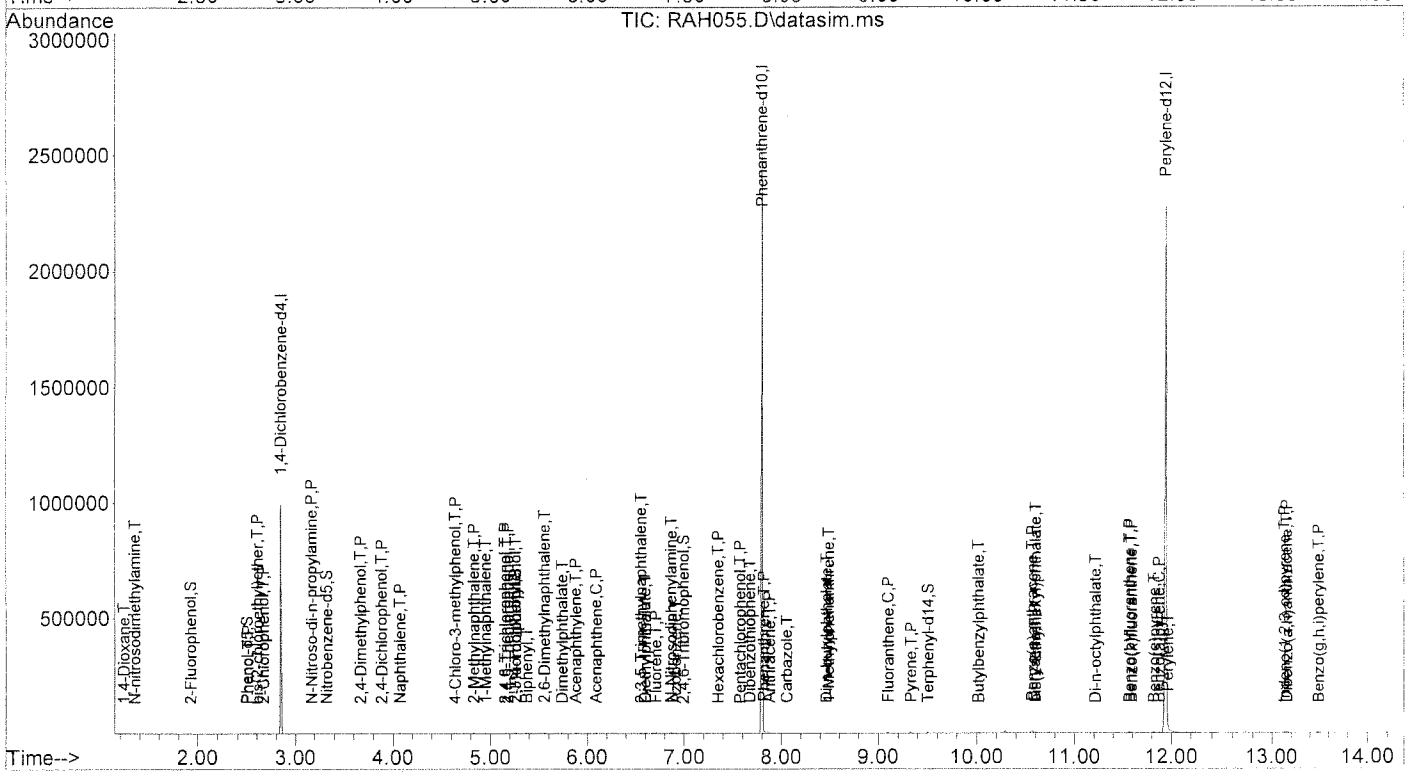
pu 1-22-16

446

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH055.D
Vial: 15
Acq On : 14 Jan 2016 14:34
Operator: KVu
Sample : SVE7A1413
Inst : E7
Misc : 0.05PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:04:52 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





JL 1-22-16

447

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH054.D
Acq On : 14 Jan 2016 14:15
Sample : SVE7A1412
Misc : 0.075PPM
Integrator: RTE
Quant Time: Jan 21 14:04:26 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 14
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	495608	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2037108	40.00	ppm	0.00
48) Perylene-d12	11.938	264	2206244	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	958	0.07	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.23%	
5) Phenol-d5	2.498	99	1205	0.07	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.23%	
10) Nitrobenzene-d5	3.322	82	1149	0.07	ppm	0.00
Spiked Amount 10.000			Recovery	=	0.70%	
20) 2-Fluorobiphenyl	5.260	172	3658	0.08	ppm	0.00
Spiked Amount 10.000			Recovery	=	0.80%	
32) 2,4,6-Tribromophenol	6.994	330	465	0.10	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.33%	
43) Terphenyl-d14	9.507	244	4521	0.09	ppm	0.00
Spiked Amount 10.000			Recovery	=	0.90%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	256	0.07	ppm #	1
3] N-nitrosodimethylamine	1.346	74	564	0.07	ppm #	62
6] Phenol	2.509	94	1252	0.07	ppm	81
7] bis(2-chloroethyl)ether	2.608	93	995	0.08	ppm	96
8] 2-Chlorophenol	2.671	128	999	0.06	ppm	97
9] N-Nitroso-di-n-propyla...	3.169	70	765	0.08	ppm	97
11] 2,4-Dimethylphenol	3.672	107	1170	0.07	ppm	76
12] 2,4-Dichlorophenol	3.883	162	976	0.07	ppm	75
13] Naphthalene	4.072	128	3488	0.07	ppm	99
14] 4-Chloro-3-methylphenol	4.641	107	1479	0.11	ppm	82
15] 2-Methylnaphthalene	4.832	142	2687	0.08	ppm	90
16] 1-Methylnaphthalene	4.947	142	2379	0.08	ppm	99
17] 2,4,6-Trichlorophenol	5.149	196	840	0.10	ppm	80
18] 2,4,5-Trichlorophenol	5.188	196	874	0.10	ppm	99
19] 2,3,4-Trichlorophenol	5.260	196	735	0.07	ppm #	65
21] Biphenyl	5.376	154	3647	0.08	ppm	89
22] 2,6-Dimethylnaphthalene	5.558	156	2456	0.08	ppm	96
23] Dimethylphthalate	5.741	163	3633	0.09	ppm	99
24] Acenaphthylene	5.881	152	4300	0.08	ppm	100
25] Acenaphthene	6.092	153	3267	0.09	ppm	99
26] 2,3,5-Trimethylnaphtha...	6.556	170	2689	0.09	ppm	97
27] Diethylphthalate	6.599	149	3645	0.09	ppm	99
28] Fluorene	6.711	166	3548	0.09	ppm	99
30] N-Nitrosodiphenylamine	6.866	169	3702	0.09	ppm	94
31] Azobenzene	6.914	77	2978	0.09	ppm	93
33] Hexachlorobenzene	7.350	284	1574	0.10	ppm	97
34] Pentachlorophenol	7.577	266	421	0.13	ppm	93
35] Dibenzothiophene	7.676	184	5354	0.09	ppm	98
36] Phenanthrene	7.819	178	6310	0.10	ppm	97
37] Anthracene	7.878	178	5701	0.09	ppm	100
38] Carbazole	8.055	167	4235	0.09	ppm	100
39] Di-n-butylphthalate	8.466	149	4613	0.08	ppm	97
40] 1-Methylphenanthrene	8.491	192	3804	0.09	ppm	98
41] Fluoranthene	9.099	202	6330	0.09	ppm	97

m 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH054.D Vial: 14
Acq On : 14 Jan 2016 14:15 Operator: KVu
Sample : SVE7A1412 Inst : E7
Misc : 0.075PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:04:26 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42] Pyrene	9.330	202	6607	0.09	ppm	100
44] Butylbenzylphthalate	10.017	149	1431	0.10	ppm	97
45] Benzo(a)anthracene	10.566	228	12063	0.09	ppm	86
46] Chrysene	10.590	228	6635	0.10	ppm	99
47] bis(2-Ethylhexyl)phtha...	10.600	149	2395	0.10	ppm	98
49] Di-n-octylphthalate	11.221	149	3196	0.11	ppm	99
50] Benzo(b)fluoranthene	11.567	252	5596	0.09	ppm	99
51] Benzo(k)fluoranthene	11.591	252	5610	0.09	ppm	99
52] Benzo(e)pyrene	11.821	252	5256	0.09	ppm	97
53] Benzo(a)pyrene	11.872	252	4887	0.08	ppm	97
54] Perylene	11.957	252	6140	0.10	ppm	99
55] Indeno(1,2,3-cd)pyrene	13.136	276	5936	0.09	ppm	79
56] Dibenzo(a,h)anthracene	13.155	278	4814	0.08	ppm	95
57] Benzo(g,h,i)perylene	13.490	276	4662	0.09	ppm	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

pk 1-22-16

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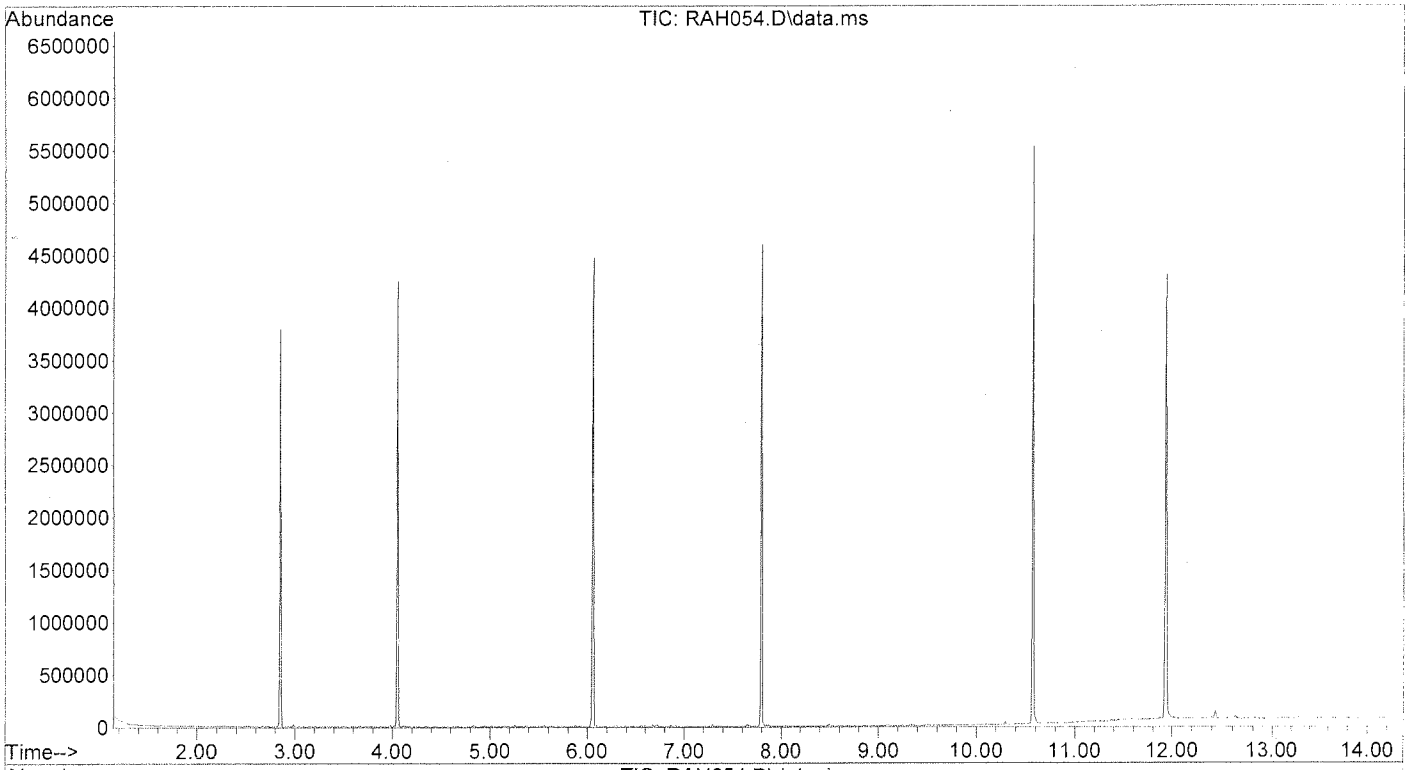
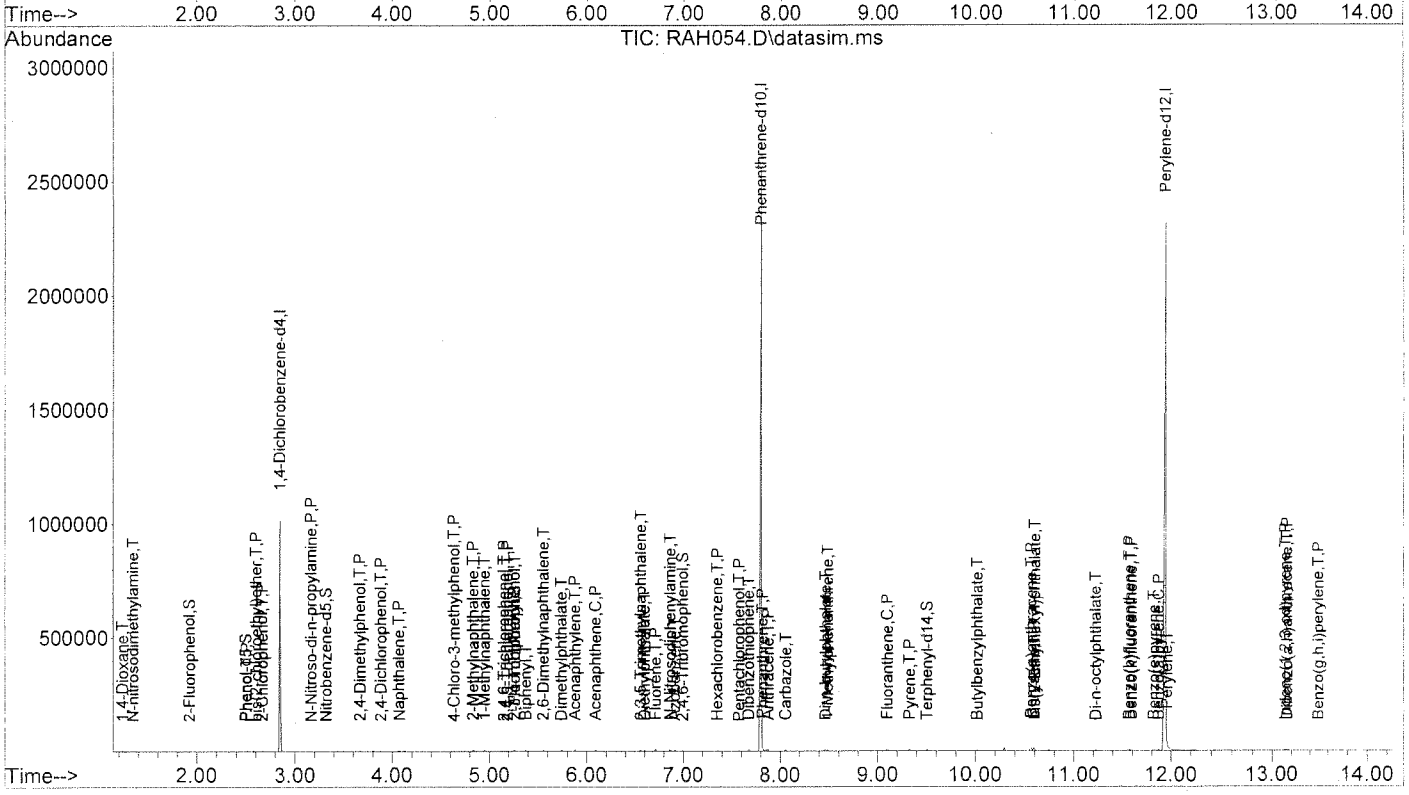
Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH054.D
Vial: 14
Acq On : 14 Jan 2016 14:15
Operator: KVu
Sample : SVE7A1412
Inst : E7
Misc : 0.075PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:04:26 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





1-22-16

150

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH053.D
Acq On : 14 Jan 2016 13:56
Sample : SVE7A1411
Misc : 0.15PPM
Integrator: RTE
Quant Time: Jan 21 14:03:37 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 13
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	484112	40.00	ppm	0.00
29) Phenanthrene-d10	7.796	188	1973251	40.00	ppm	0.00
48) Perylene-d12	11.938	264	2160350	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	1918	0.14	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.47%	
5) Phenol-d5	2.498	99	2334	0.14	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.47%	
10) Nitrobenzene-d5	3.322	82	2209	0.14	ppm	0.00
Spiked Amount 10.000			Recovery	=	1.40%	
20) 2-Fluorobiphenyl	5.260	172	6007	0.14	ppm	0.00
Spiked Amount 10.000			Recovery	=	1.40%	
32) 2,4,6-Tribromophenol	6.994	330	710	0.14	ppm	0.00
Spiked Amount 30.000			Recovery	=	0.47%	
43) Terphenyl-d14	9.507	244	6921	0.14	ppm	0.00
Spiked Amount 10.000			Recovery	=	1.40%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	644	0.15	ppm #	39
3] N-nitrosodimethylamine	1.346	74	1067	0.14	ppm #	57
6] Phenol	2.509	94	2429	0.14	ppm	72
7] bis(2-chloroethyl)ether	2.608	93	1823	0.14	ppm	95
8] 2-Chlorophenol	2.671	128	2263	0.15	ppm	90
9] N-Nitroso-di-n-propyla...	3.169	70	1324	0.14	ppm	98
11] 2,4-Dimethylphenol	3.672	107	2076	0.13	ppm	76
12] 2,4-Dichlorophenol	3.883	162	1865	0.13	ppm	88
13] Naphthalene	4.072	128	6808	0.15	ppm	93
14] 4-Chloro-3-methylphenol	4.641	107	1726	0.13	ppm	61
15] 2-Methylnaphthalene	4.832	142	4654	0.14	ppm	93
16] 1-Methylnaphthalene	4.947	142	4112	0.14	ppm	99
17] 2,4,6-Trichlorophenol	5.149	196	1337	0.14	ppm	87
18] 2,4,5-Trichlorophenol	5.183	196	1376	0.14	ppm	99
19] 2,3,4-Trichlorophenol	5.260	196	1437	0.14	ppm	98
21] Biphenyl	5.376	154	5870	0.14	ppm	93
22] 2,6-Dimethylnaphthalene	5.558	156	3920	0.14	ppm	97
23] Dimethylphthalate	5.741	163	5511	0.14	ppm	96
24] Acenaphthylene	5.881	152	6763	0.13	ppm	100
25] Acenaphthene	6.092	153	5092	0.14	ppm	99
26] 2,3,5-Trimethylnaphtha...	6.556	170	3818	0.13	ppm	92
27] Diethylphthalate	6.599	149	5351	0.14	ppm	99
28] Fluorene	6.711	166	5396	0.14	ppm	99
30] N-Nitrosodiphenylamine	6.866	169	5160	0.14	ppm	97
31] Azobenzene	6.914	77	4444	0.14	ppm	96
33] Hexachlorobenzene	7.350	284	2320	0.15	ppm	94
34] Pentachlorophenol	7.576	266	661	0.16	ppm	95
35] Dibenzothiophene	7.676	184	8025	0.15	ppm	99
36] Phenanthrene	7.819	178	9213	0.15	ppm	98
37] Anthracene	7.878	178	8603	0.14	ppm	99
38] Carbazole	8.055	167	6343	0.14	ppm	98
39] Di-n-butylphthalate	8.466	149	6963	0.13	ppm	97
40] 1-Methylphenanthrene	8.491	192	5811	0.14	ppm	99
41] Fluoranthene	9.099	202	9592	0.14	ppm	98

m 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH053.D Vial: 13
Acq On : 14 Jan 2016 13:56 Operator: KVu
Sample : SVE7A1411 Inst : E7
Misc : 0.15PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:03:37 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42] Pyrene	9.330	202	10501	0.15	ppm	99
44] Butylbenzylphthalate	10.017	149	2209	0.14	ppm	96
45] Benzo(a)anthracene	10.561	228	15441	0.15	ppm	90
46] Chrysene	10.590	228	10185	0.15	ppm	98
47] bis(2-Ethylhexyl)phtha...	10.600	149	3640	0.14	ppm	98
49] Di-n-octylphthalate	11.221	149	4890	0.13	ppm	98
50] Benzo(b)fluoranthene	11.567	252	8451	0.13	ppm	95
51] Benzo(k)fluoranthene	11.591	252	8782	0.14	ppm	100
52] Benzo(e)pyrene	11.825	252	8085	0.14	ppm	99
53] Benzo(a)pyrene	11.872	252	7619	0.13	ppm	98
54] Perylene	11.957	252	9258	0.15	ppm	100
55] Indeno(1,2,3-cd)pyrene	13.136	276	8747	0.13	ppm	91
56] Dibenzo(a,h)anthracene	13.160	278	7889	0.14	ppm	97
57] Benzo(g,h,i)perylene	13.490	276	7237	0.14	ppm	99

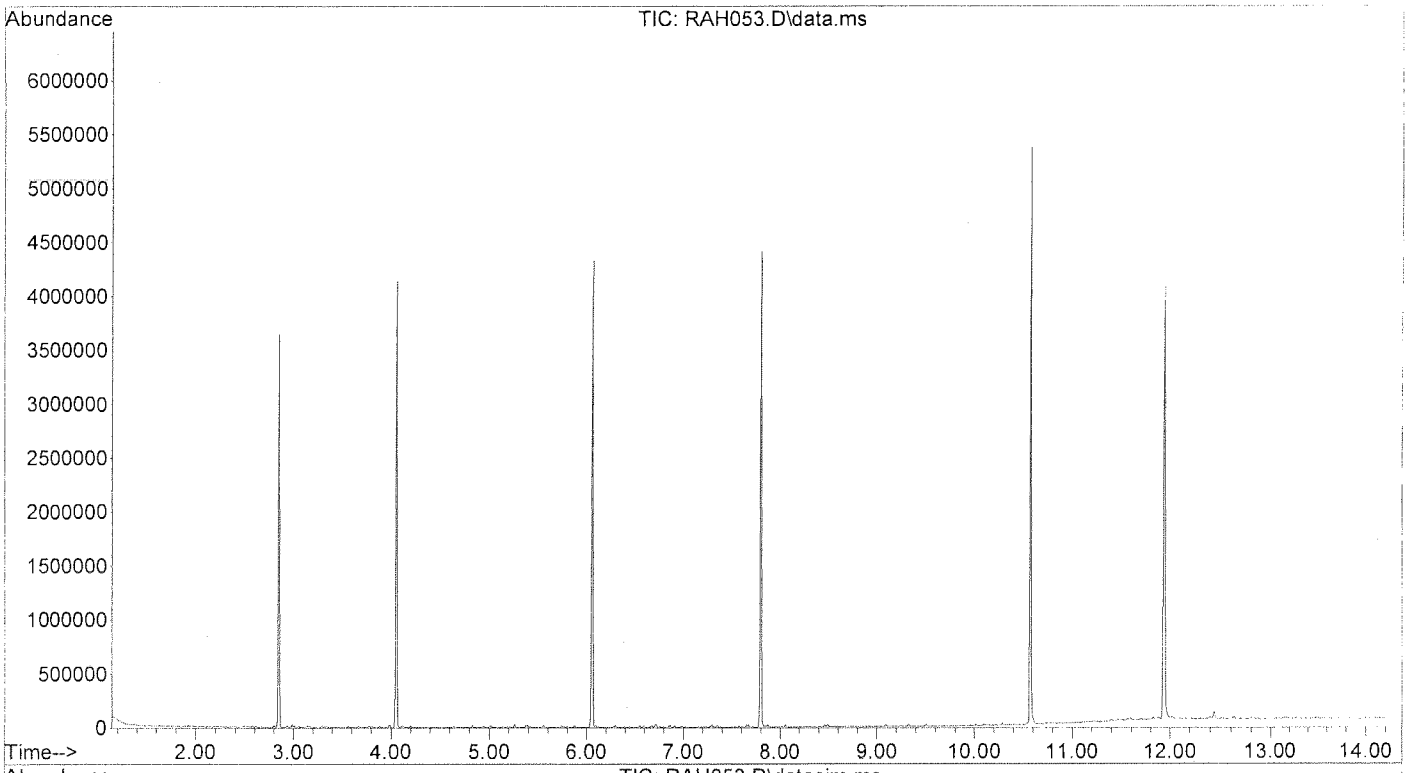
(#) = qualifier out of range (m) = manual integration (+) = signals summed

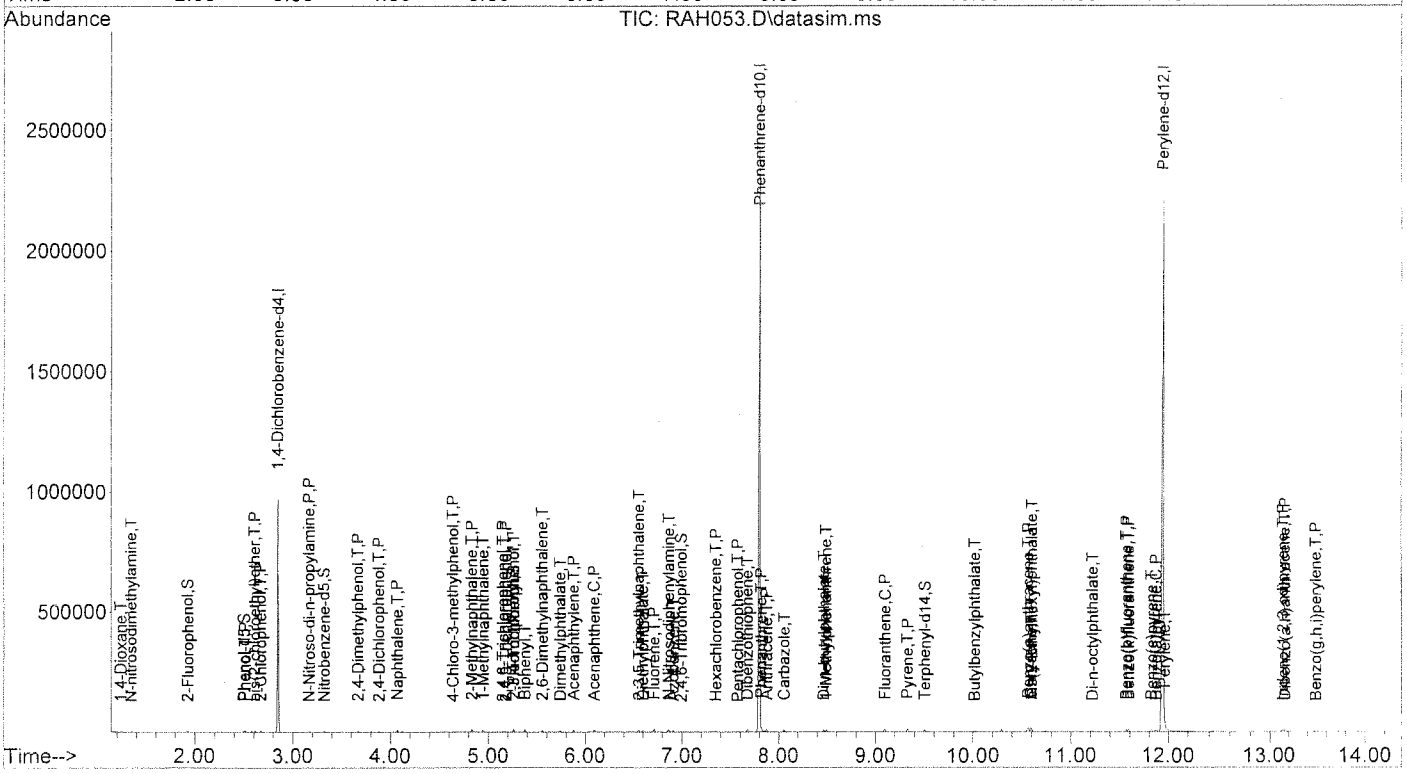
KM 1-22-16

452

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH053.D
Vial: 13
Acq On : 14 Jan 2016 13:56
Operator: KVu
Sample : SVE7A1411
Inst : E7
Misc : 0.15PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:03:37 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





m 1-22-16

53

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH052.D Vial: 12
Acq On : 14 Jan 2016 13:36 Operator: KVu
Sample : SVE7A1410 Inst : E7
Misc : 0.5PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:03:19 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	482130	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	1992274	40.00	ppm	0.00
48) Perylene-d12	11.938	264	2164120	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	6237	0.47	ppm	0.00
Spiked Amount 30.000			Recovery	=	1.57%	
5) Phenol-d5	2.499	99	7745	0.46	ppm	0.00
Spiked Amount 30.000			Recovery	=	1.53%	
10) Nitrobenzene-d5	3.323	82	7295	0.45	ppm	0.00
Spiked Amount 10.000			Recovery	=	4.50%	
20) 2-Fluorobiphenyl	5.260	172	19267	0.45	ppm	0.00
Spiked Amount 10.000			Recovery	=	4.50%	
32) 2,4,6-Tribromophenol	6.994	330	2345	0.37	ppm	0.00
Spiked Amount 30.000			Recovery	=	1.23%	
43) Terphenyl-d14	9.507	244	21349	0.43	ppm	0.00
Spiked Amount 10.000			Recovery	=	4.30%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	2199	0.45	ppm #	74
3] N-nitrosodimethylamine	1.346	74	3518	0.47	ppm	90
6] Phenol	2.509	94	7974	0.46	ppm	91
7] bis(2-chloroethyl)ether	2.608	93	6069	0.48	ppm	99
8] 2-Chlorophenol	2.671	128	7036	0.46	ppm	98
9] N-Nitroso-di-n-propyla...	3.169	70	4441	0.46	ppm	91
11] 2,4-Dimethylphenol	3.673	107	7025	0.45	ppm	77
12] 2,4-Dichlorophenol	3.884	162	6021	0.43	ppm	95
13] Naphthalene	4.072	128	21962	0.47	ppm	98
14] 4-Chloro-3-methylphenol	4.641	107	5280	0.39	ppm	94
15] 2-Methylnaphthalene	4.833	142	15024	0.46	ppm	98
16] 1-Methylnaphthalene	4.948	142	13184	0.46	ppm	100
17] 2,4,6-Trichlorophenol	5.149	196	4508	0.38	ppm	95
18] 2,4,5-Trichlorophenol	5.183	196	4641	0.38	ppm	99
19] 2,3,4-Trichlorophenol	5.260	196	4275	0.43	ppm	100
21] Biphenyl	5.376	154	18998	0.45	ppm	99
22] 2,6-Dimethylnaphthalene	5.558	156	12767	0.44	ppm	100
23] Dimethylphthalate	5.746	163	16920	0.43	ppm	99
24] Acenaphthylene	5.881	152	21851	0.43	ppm	100
25] Acenaphthene	6.092	153	16019	0.45	ppm	99
26] 2,3,5-Trimethylnaphtha...	6.556	170	12176	0.43	ppm	97
27] Diethylphthalate	6.599	149	16291	0.42	ppm	100
28] Fluorene	6.711	166	16735	0.43	ppm	100
30] N-Nitrosodiphenylamine	6.866	169	14325	0.43	ppm	98
31] Azobenzene	6.914	77	13881	0.42	ppm	99
33] Hexachlorobenzene	7.350	284	7136	0.46	ppm	98
34] Pentachlorophenol	7.577	266	2149	0.35	ppm	94
35] Dibenzothiophene	7.680	184	25021	0.45	ppm	100
36] Phenanthrene	7.819	178	28270	0.46	ppm	100
37] Anthracene	7.878	178	26202	0.44	ppm	99
38] Carbazole	8.060	167	20233	0.44	ppm	100
39] Di-n-butylphthalate	8.466	149	21479	0.39	ppm	100
40] 1-Methylphenanthrene	8.495	192	17926	0.44	ppm	99
41] Fluoranthene	9.099	202	29265	0.43	ppm	99

pu 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH052.D Vial: 12
Acq On : 14 Jan 2016 13:36 Operator: KVu
Sample : SVE7A1410 Inst : E7
Misc : 0.5PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:03:19 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

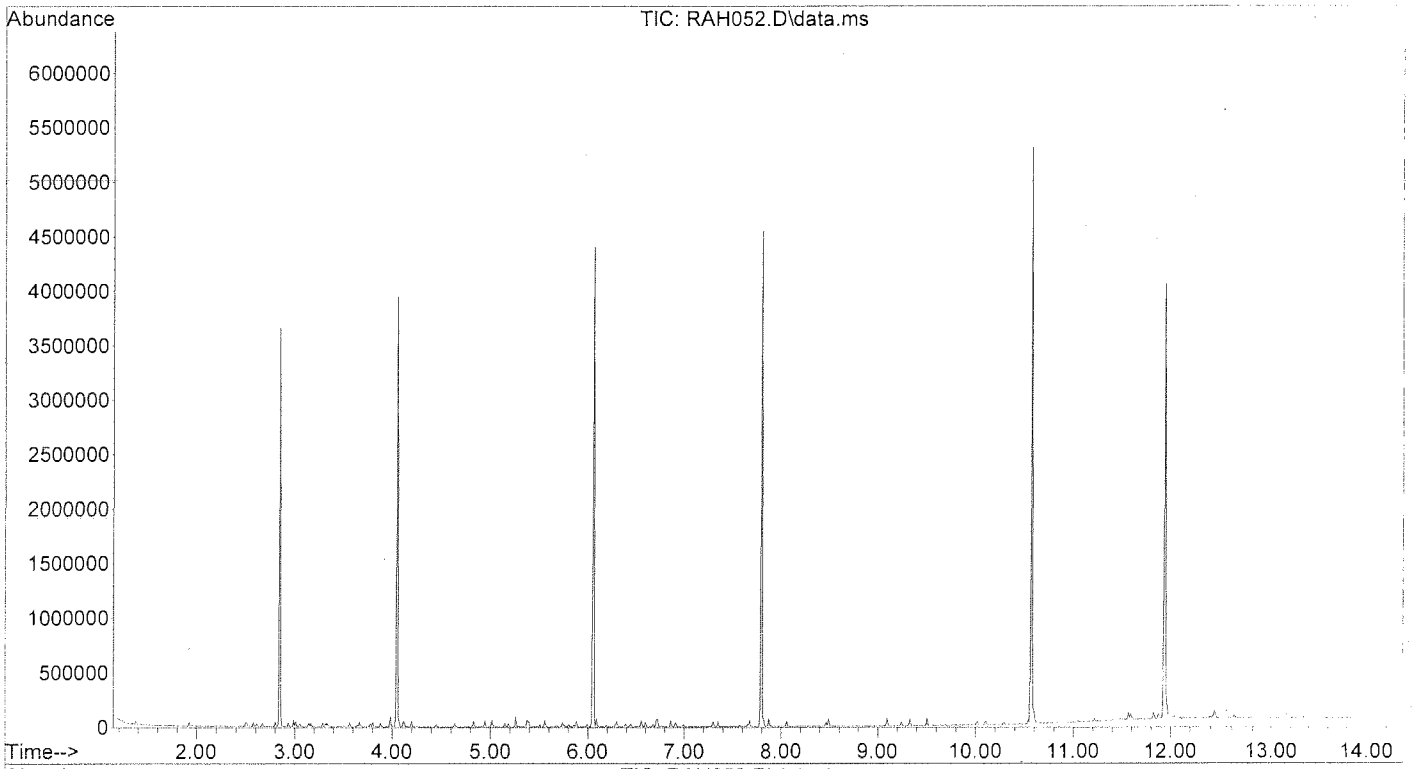
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42]	Pyrene	9.330	202	30709	0.43	ppm	100
44]	Butylbenzylphthalate	10.017	149	7097	0.34	ppm	97
45]	Benzo(a)anthracene	10.562	228	35842	0.44	ppm	95
46]	Chrysene	10.596	228	30005	0.45	ppm	99
47]	bis(2-Ethylhexyl)phtha...	10.605	149	11317	0.33	ppm	99
49]	Di-n-octylphthalate	11.222	149	16088	0.31	ppm	100
50]	Benzo(b)fluoranthene	11.567	252	28021	0.45	ppm	100
51]	Benzo(k)fluoranthene	11.591	252	25752	0.41	ppm	98
52]	Benzo(e)pyrene	11.826	252	25073	0.43	ppm	99
53]	Benzo(a)pyrene	11.877	252	24211	0.41	ppm	98
54]	Perylene	11.962	252	28409	0.45	ppm	99
55]	Indeno(1,2,3-cd)pyrene	13.136	276	27808	0.42	ppm	97
56]	Dibenzo(a,h)anthracene	13.161	278	23187	0.42	ppm	93
57]	Benzo(g,h,i)perylene	13.496	276	22453	0.43	ppm	98

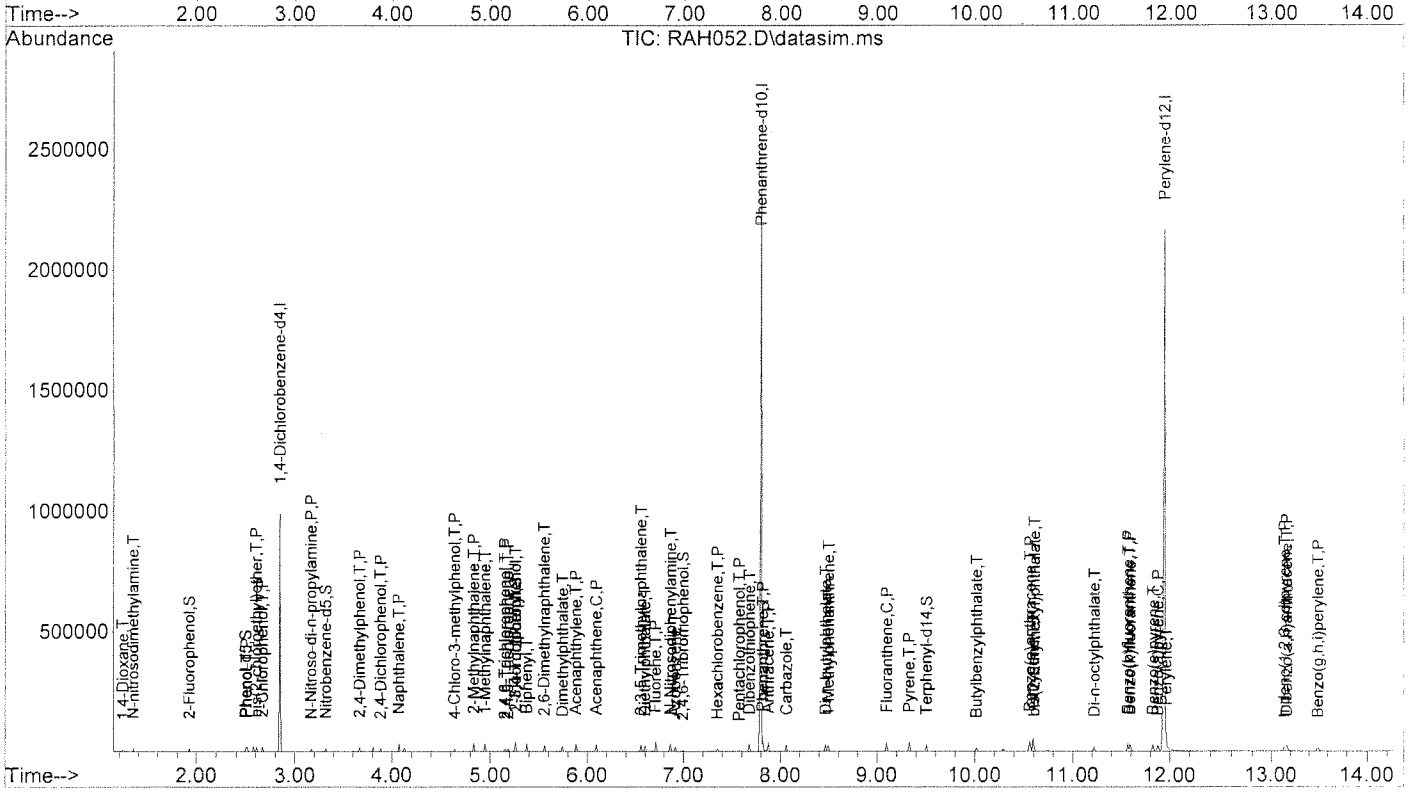
(#) = qualifier out of range (m) = manual integration (+) = signals summed

pu 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH052.D
Vial: 12
Acq On : 14 Jan 2016 13:36
Operator: KVu
Sample : SVE7A1410
Inst : E7
Misc : 0.5PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:03:19 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





mu 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH051.D Vial: 11
Acq On : 14 Jan 2016 13:17 Operator: KVu
Sample : SVE7A149 Inst : E7
Misc : 2PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:02:56 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	496929	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2047650	40.00	ppm	0.00
48) Perylene-d12	11.938	264	2219589	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	26072	1.89	ppm	0.00
Spiked Amount 30.000			Recovery	=	6.30%	
5) Phenol-d5	2.504	99	32503	1.89	ppm	0.00
Spiked Amount 30.000			Recovery	=	6.30%	
10) Nitrobenzene-d5	3.322	82	31233	1.87	ppm	0.00
Spiked Amount 10.000			Recovery	=	18.70%	
20) 2-Fluorobiphenyl	5.260	172	80419	1.83	ppm	0.00
Spiked Amount 10.000			Recovery	=	18.30%	
32) 2,4,6-Tribromophenol	6.994	330	10987	1.56	ppm	0.00
Spiked Amount 30.000			Recovery	=	5.20%	
43) Terphenyl-d14	9.507	244	90790	1.80	ppm	0.00
Spiked Amount 10.000			Recovery	=	18.00%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	11219	2.16	ppm	93
3] N-nitrosodimethylamine	1.346	74	14593	1.88	ppm	100
6] Phenol	2.514	94	33714	1.90	ppm	98
7] bis(2-chloroethyl)ether	2.608	93	24738	1.89	ppm	100
8] 2-Chlorophenol	2.671	128	29266	1.84	ppm	100
9] N-Nitroso-di-n-propyla...	3.169	70	18723	1.87	ppm	94
11] 2,4-Dimethylphenol	3.672	107	30476	1.89	ppm	75
12] 2,4-Dichlorophenol	3.888	162	27027	1.85	ppm	99
13] Naphthalene	4.072	128	89407	1.87	ppm	100
14] 4-Chloro-3-methylphenol	4.641	107	23368	1.64	ppm	95
15] 2-Methylnaphthalene	4.837	142	62896	1.85	ppm	99
16] 1-Methylnaphthalene	4.948	142	55329	1.85	ppm	100
17] 2,4,6-Trichlorophenol	5.149	196	20524	1.56	ppm	98
18] 2,4,5-Trichlorophenol	5.188	196	21668	1.58	ppm	100
19] 2,3,4-Trichlorophenol	5.260	196	18617	1.80	ppm	100
21] Biphenyl	5.376	154	78979	1.83	ppm	100
22] 2,6-Dimethylnaphthalene	5.563	156	53914	1.82	ppm	100
23] Dimethylphthalate	5.746	163	72193	1.77	ppm	100
24] Acenaphthylene	5.885	152	94791	1.81	ppm	100
25] Acenaphthene	6.092	153	65935	1.80	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.556	170	51654	1.77	ppm	99
27] Diethylphthalate	6.599	149	69889	1.75	ppm	99
28] Fluorene	6.716	166	70823	1.77	ppm	100
30] N-Nitrosodiphenylamine	6.866	169	58738	1.80	ppm	100
31] Azobenzene	6.914	77	61435	1.80	ppm	100
33] Hexachlorobenzene	7.355	284	28762	1.79	ppm	99
34] Pentachlorophenol	7.577	266	10548	1.39	ppm	99
35] Dibenzothiophene	7.680	184	102430	1.81	ppm	100
36] Phenanthrene	7.824	178	114126	1.79	ppm	99
37] Anthracene	7.878	178	110499	1.79	ppm	100
38] Carbazole	8.059	167	87534	1.84	ppm	100
39] Di-n-butylphthalate	8.467	149	97764	1.74	ppm	100
40] 1-Methylphenanthrene	8.496	192	77001	1.82	ppm	100
41] Fluoranthene	9.100	202	123477	1.78	ppm	100

TM 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH051.D
Vial: 11
Acq On : 14 Jan 2016 13:17
Operator: KVu
Sample : SVE7A149
Inst : E7
Misc : 2PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:02:56 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42] Pyrene	9.331	202	131589	1.80 ppm	100
44] Butylbenzylphthalate	10.017	149	33652	1.43 ppm	99
45] Benzo(a)anthracene	10.562	228	132081	1.78 ppm	99
46] Chrysene	10.596	228	123476	1.79 ppm	99
47] bis(2-Ethylhexyl)phtha...	10.606	149	55845	1.45 ppm	99
49] Di-n-octylphthalate	11.222	149	80582	1.32 ppm	100
50] Benzo(b)fluoranthene	11.567	252	111378	1.73 ppm	100
51] Benzo(k)fluoranthene	11.592	252	120811	1.87 ppm	100
52] Benzo(e)pyrene	11.826	252	106944	1.79 ppm	100
53] Benzo(a)pyrene	11.877	252	108313	1.79 ppm	99
54] Perylene	11.962	252	116823	1.81 ppm	99
55] Indeno(1,2,3-cd)pyrene	13.137	276	119657	1.75 ppm	98
56] Dibenzo(a,h)anthracene	13.161	278	101446	1.77 ppm	97
57] Benzo(g,h,i)perylene	13.496	276	96578	1.79 ppm	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

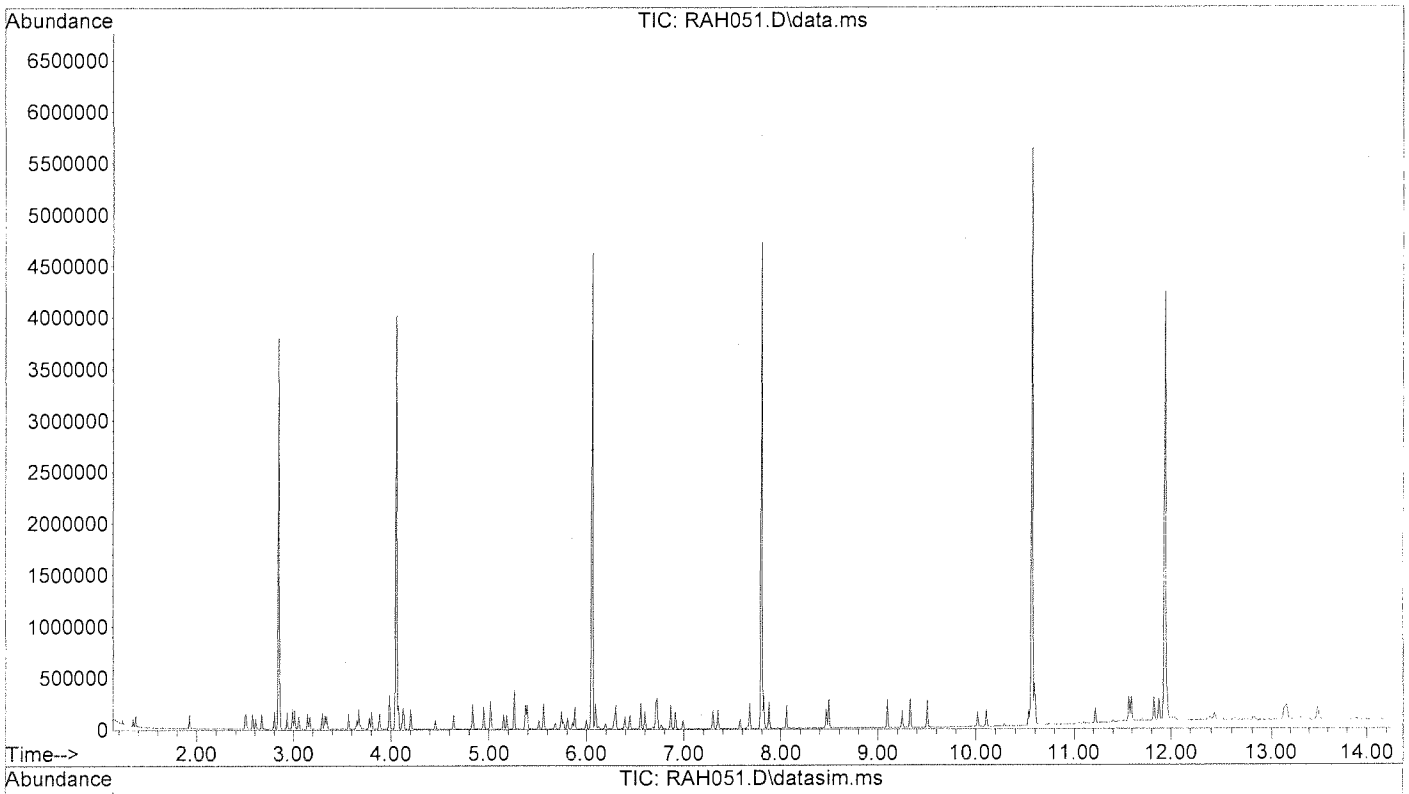
RL 1-22-16

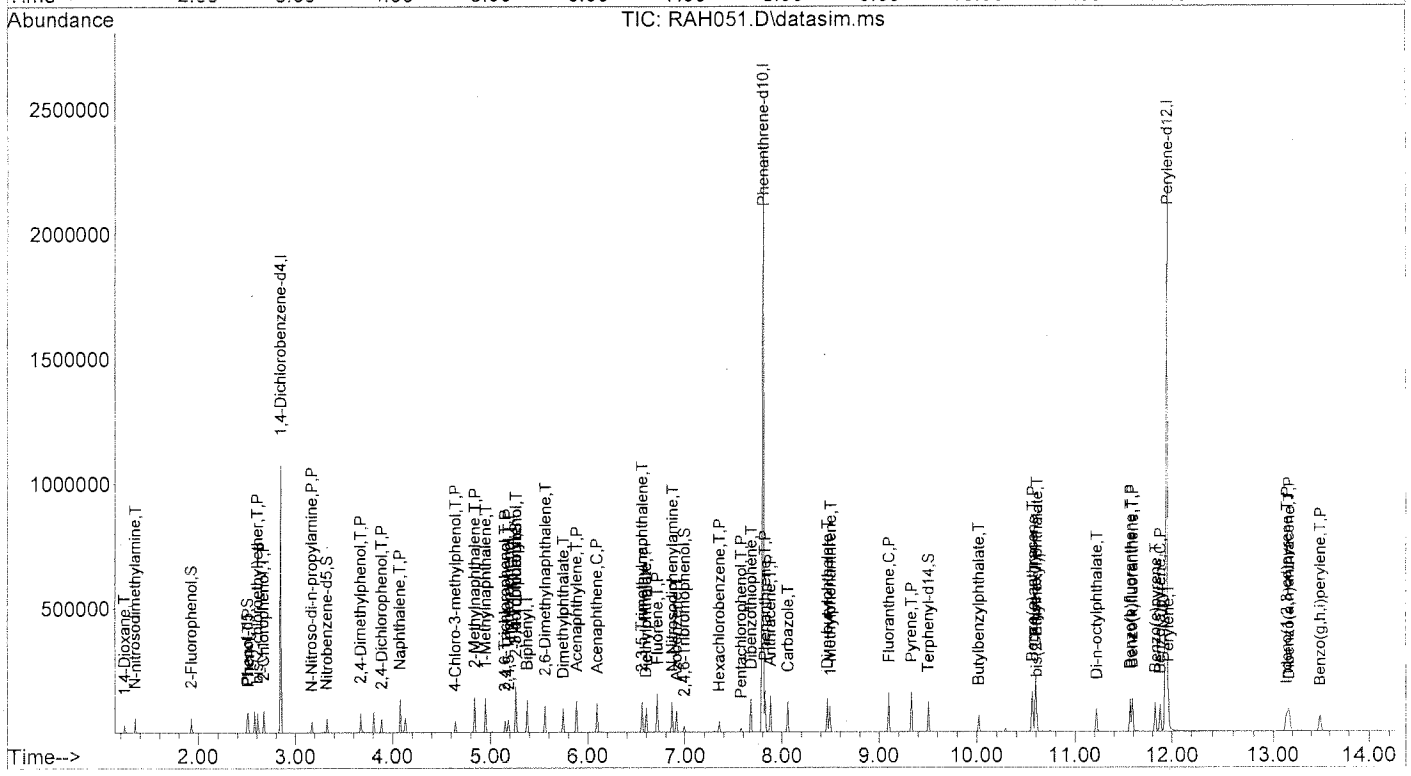
158

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH051.D
Acq On : 14 Jan 2016 13:17
Sample : SVE7A149
Misc : 2PPM
Integrator: RTE
Quant Time: Jan 21 14:02:56 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 11
Operator: KVu
Inst : E7
Multiplr: 1.00





JM 1-22-16

459

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH050.D
Acq On : 14 Jan 2016 12:58
Sample : SVE7A148
Misc : 4PPM
Integrator: RTE
Quant Time: Jan 21 14:02:35 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 10
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	505421	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2098075	40.00	ppm	0.00
48) Perylene-d12	11.943	264	2271559	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	56494	4.03	ppm	0.00
Spiked Amount 30.000			Recovery	=	13.43%	
5) Phenol-d5	2.504	99	70166	4.01	ppm	0.00
Spiked Amount 30.000			Recovery	=	13.37%	
10) Nitrobenzene-d5	3.323	82	67980	4.01	ppm	0.00
Spiked Amount 10.000			Recovery	=	40.10%	
20) 2-Fluorobiphenyl	5.260	172	171523	3.84	ppm	0.00
Spiked Amount 10.000			Recovery	=	38.40%	
32) 2,4,6-Tribromophenol	6.994	330	25461	3.48	ppm	0.00
Spiked Amount 30.000			Recovery	=	11.60%	
43) Terphenyl-d14	9.507	244	198206	3.83	ppm	0.00
Spiked Amount 10.000			Recovery	=	38.30%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	22208	4.18	ppm	97
3] N-nitrosodimethylamine	1.346	74	31392	3.99	ppm	100
6] Phenol	2.514	94	72494	4.02	ppm	99
7] bis(2-chloroethyl)ether	2.608	93	52761	3.96	ppm	100
8] 2-Chlorophenol	2.671	128	62999	3.90	ppm	99
9] N-Nitroso-di-n-propyla...	3.174	70	40667	4.00	ppm	98
11] 2,4-Dimethylphenol	3.673	107	66224	4.03	ppm	98
12] 2,4-Dichlorophenol	3.888	162	59775	4.03	ppm	100
13] Naphthalene	4.072	128	190854	3.92	ppm	100
14] 4-Chloro-3-methylphenol	4.641	107	51695	3.56	ppm	97
15] 2-Methylnaphthalene	4.837	142	134695	3.90	ppm	100
16] 1-Methylnaphthalene	4.948	142	118351	3.90	ppm	100
17] 2,4,6-Trichlorophenol	5.149	196	46674	3.45	ppm	100
18] 2,4,5-Trichlorophenol	5.188	196	48759	3.46	ppm	100
19] 2,3,4-Trichlorophenol	5.260	196	41008	3.91	ppm	100
21] Biphenyl	5.376	154	169176	3.85	ppm	100
22] 2,6-Dimethylnaphthalene	5.563	156	116526	3.87	ppm	100
23] Dimethylphthalate	5.746	163	156164	3.77	ppm	100
24] Acenaphthylene	5.881	152	205441	3.86	ppm	100
25] Acenaphthene	6.092	153	141603	3.79	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.557	170	111654	3.76	ppm	100
27] Diethylphthalate	6.599	149	150122	3.69	ppm	100
28] Fluorene	6.716	166	152778	3.76	ppm	100
30] N-Nitrosodiphenylamine	6.866	169	126307	3.80	ppm	100
31] Azobenzene	6.914	77	134577	3.86	ppm	100
33] Hexachlorobenzene	7.355	284	61356	3.73	ppm	99
34] Pentachlorophenol	7.577	266	26005	3.24	ppm	99
35] Dibenzothiophene	7.681	184	216948	3.73	ppm	100
36] Phenanthrene	7.824	178	240498	3.68	ppm	99
37] Anthracene	7.878	178	238998	3.78	ppm	100
38] Carbazole	8.060	167	192114	3.94	ppm	100
39] Di-n-butylphthalate	8.466	149	223342	3.88	ppm	100
40] 1-Methylphenanthrene	8.495	192	166153	3.83	ppm	99
41] Fluoranthene	9.099	202	269491	3.79	ppm	100

KU 1-22-16

USG

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH050.D Vial: 10
Acq On : 14 Jan 2016 12:58 Operator: KVu
Sample : SVE7A148 Inst : E7
Misc : 4PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:02:35 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42] Pyrene	9.335	202	286047	3.81	ppm	100
44] Butylbenzylphthalate	10.021	149	80101	3.27	ppm	100
45] Benzo(a)anthracene	10.562	228	281833	3.79	ppm	99
46] Chrysene	10.596	228	260057	3.67	ppm	99
47] bis(2-Ethylhexyl)phtha...	10.605	149	133007	3.32	ppm	99
49] Di-n-octylphthalate	11.222	149	198415	3.10	ppm	100
50] Benzo(b)fluoranthene	11.567	252	252302	3.82	ppm	100
51] Benzo(k)fluoranthene	11.596	252	255952	3.86	ppm	99
52] Benzo(e)pyrene	11.826	252	233323	3.81	ppm	100
53] Benzo(a)pyrene	11.877	252	235417	3.80	ppm	99
54] Perylene	11.962	252	246298	3.72	ppm	99
55] Indeno(1,2,3-cd)pyrene	13.141	276	263755	3.77	ppm	99
56] Dibenzo(a,h)anthracene	13.166	278	224661	3.83	ppm	100
57] Benzo(g,h,i)perylene	13.500	276	211458	3.84	ppm	100

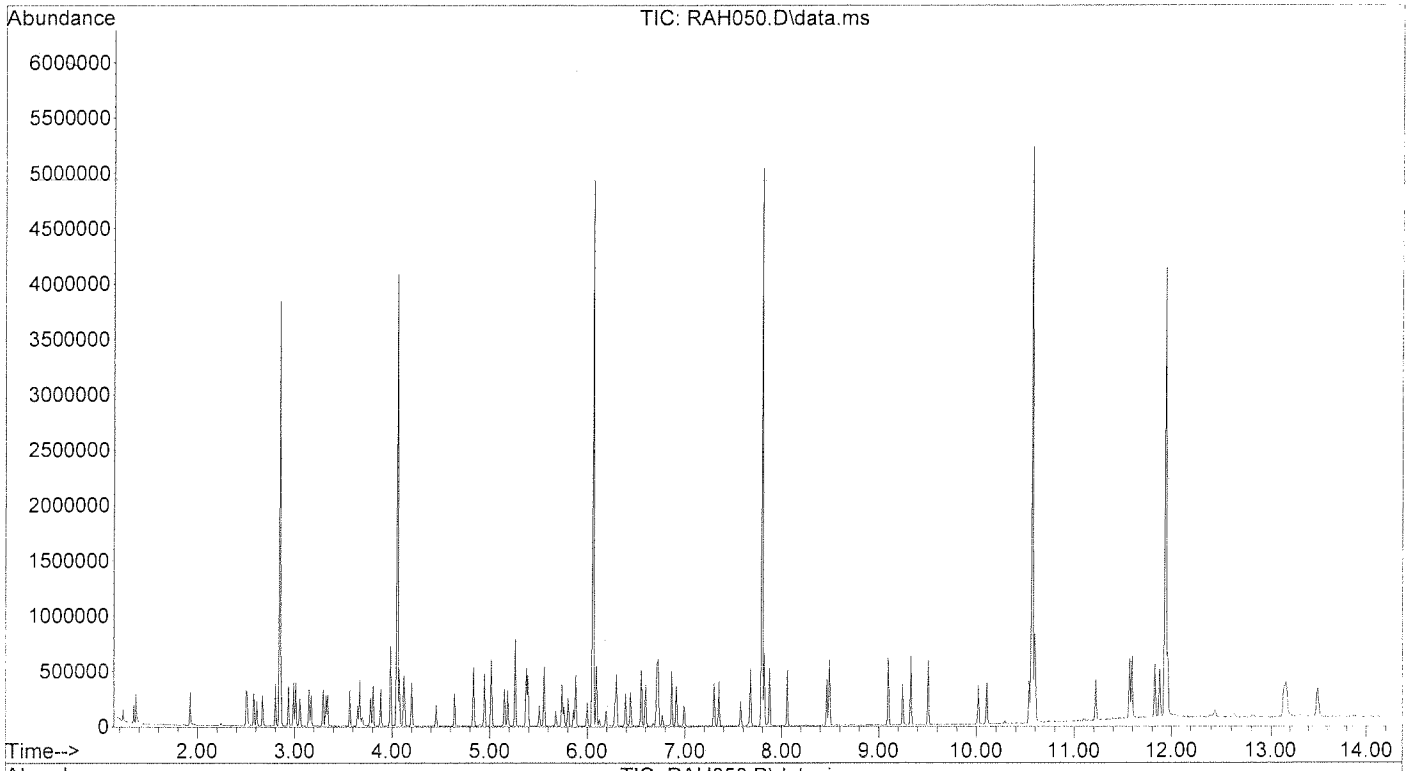
(#) = qualifier out of range (m) = manual integration (+) = signals summed

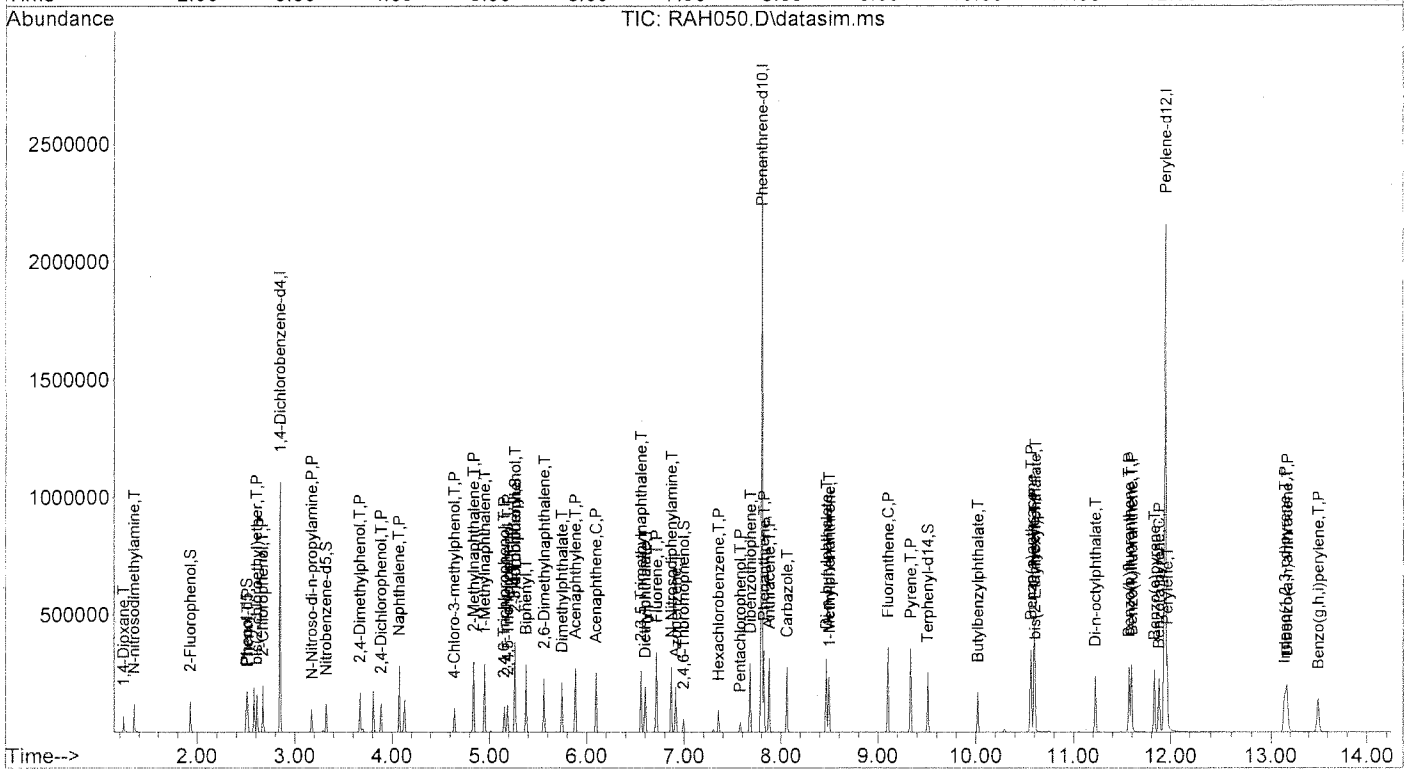
pu 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH050.D
Acq On : 14 Jan 2016 12:58
Sample : SVE7A148
Misc : 4PPM
Integrator: RTE
Quant Time: Jan 21 14:02:35 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 10
Operator: KVu
Inst : E7
Multiplr: 1.00





JK 1-22-16

462

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH049.D Vial: 9
Acq On : 14 Jan 2016 12:39 Operator: KVu
Sample : SVE7A147 Inst : E7
Misc : 10PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:02:14 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	492252	40.00	ppm	0.00
29) Phenanthrene-d10	7.801	188	2091194	40.00	ppm	0.00
48) Perylene-d12	11.943	264	2289088	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	138700	10.17	ppm	0.00
Spiked Amount 30.000			Recovery = 33.90%			
5) Phenol-d5	2.504	99	173695	10.19	ppm	0.00
Spiked Amount 30.000			Recovery = 33.97%			
10) Nitrobenzene-d5	3.327	82	170516	10.32	ppm	0.00
Spiked Amount 10.000			Recovery = 103.20%			
20) 2-Fluorobiphenyl	5.260	172	423560	9.74	ppm	0.00
Spiked Amount 10.000			Recovery = 97.40%			
32) 2,4,6-Tribromophenol	6.994	330	66860	9.10	ppm	0.00
Spiked Amount 30.000			Recovery = 30.33%			
43) Terphenyl-d14	9.507	244	497930	9.67	ppm	0.00
Spiked Amount 10.000			Recovery = 96.70%			
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	51986	10.02	ppm	99
3] N-nitrosodimethylamine	1.346	74	77781	10.14	ppm	99
6] Phenol	2.514	94	178864	10.18	ppm	100
7] bis(2-chloroethyl)ether	2.613	93	128790	9.92	ppm	100
8] 2-Chlorophenol	2.671	128	156070	9.93	ppm	100
9] N-Nitroso-di-n-propyla...	3.174	70	101286	10.22	ppm	99
11] 2,4-Dimethylphenol	3.673	107	164556	10.28	ppm	99
12] 2,4-Dichlorophenol	3.888	162	149069	10.32	ppm	99
13] Naphthalene	4.077	128	469051	9.90	ppm	100
14] 4-Chloro-3-methylphenol	4.646	107	130164	9.19	ppm	100
15] 2-Methylnaphthalene	4.837	142	333955	9.92	ppm	100
16] 1-Methylnaphthalene	4.948	142	291964	9.87	ppm	100
17] 2,4,6-Trichlorophenol	5.154	196	120051	9.05	ppm	100
18] 2,4,5-Trichlorophenol	5.188	196	125134	9.06	ppm	100
19] 2,3,4-Trichlorophenol	5.260	196	104245	10.20	ppm	100
21] Biphenyl	5.381	154	419089	9.78	ppm	100
22] 2,6-Dimethylnaphthalene	5.563	156	291763	9.94	ppm	100
23] Dimethylphthalate	5.750	163	387701	9.62	ppm	100
24] Acenaphthylene	5.885	152	514548	9.92	ppm	100
25] Acenaphthene	6.097	153	349579	9.61	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.556	170	278732	9.64	ppm	100
27] Diethylphthalate	6.603	149	377479	9.53	ppm	100
28] Fluorene	6.716	166	381586	9.63	ppm	100
30] N-Nitrosodiphenylamine	6.866	169	314347	9.53	ppm	100
31] Azobenzene	6.914	77	340775	9.80	ppm	100
33] Hexachlorobenzene	7.355	284	151322	9.23	ppm	99
34] Pentachlorophenol	7.577	266	72473	8.91	ppm	100
35] Dibenzothiophene	7.680	184	536681	9.27	ppm	100
36] Phenanthrene	7.824	178	591101	9.07	ppm	100
37] Anthracene	7.878	178	598111	9.49	ppm	100
38] Carbazole	8.060	167	476756	9.82	ppm	100
39] Di-n-butylphthalate	8.467	149	582822	10.15	ppm	100
40] 1-Methylphenanthrene	8.496	192	414784	9.60	ppm	99
41] Fluoranthene	9.100	202	675955	9.53	ppm	100

M 1-22-16

UG2

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH049.D
Acq On : 14 Jan 2016 12:39
Sample : SVE7A147
Misc : 10PPM
Integrator: RTE
Quant Time: Jan 21 14:02:14 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42]	Pyrene	9.336	202	715391	9.56	ppm	100
44]	Butylbenzylphthalate	10.021	149	222134	9.02	ppm	99
45]	Benzo(a)anthracene	10.562	228	699359	9.55	ppm	100
46]	Chrysene	10.596	228	653978	9.27	ppm	99
47]	bis(2-Ethylhexyl)phtha...	10.605	149	365624	9.09	ppm	99
49]	Di-n-octylphthalate	11.226	149	572661	8.79	ppm	100
50]	Benzo(b)fluoranthene	11.572	252	639814	9.62	ppm	100
51]	Benzo(k)fluoranthene	11.596	252	668621	10.02	ppm	100
52]	Benzo(e)pyrene	11.830	252	599780	9.72	ppm	100
53]	Benzo(a)pyrene	11.882	252	630864	10.12	ppm	100
54]	Perylene	11.966	252	626609	9.39	ppm	100
55]	Indeno(1,2,3-cd)pyrene	13.146	276	688794	9.77	ppm	100
56]	Dibenzo(a,h)anthracene	13.170	278	582136	9.86	ppm	100
57]	Benzo(g,h,i)perylene	13.505	276	547101	9.85	ppm	100

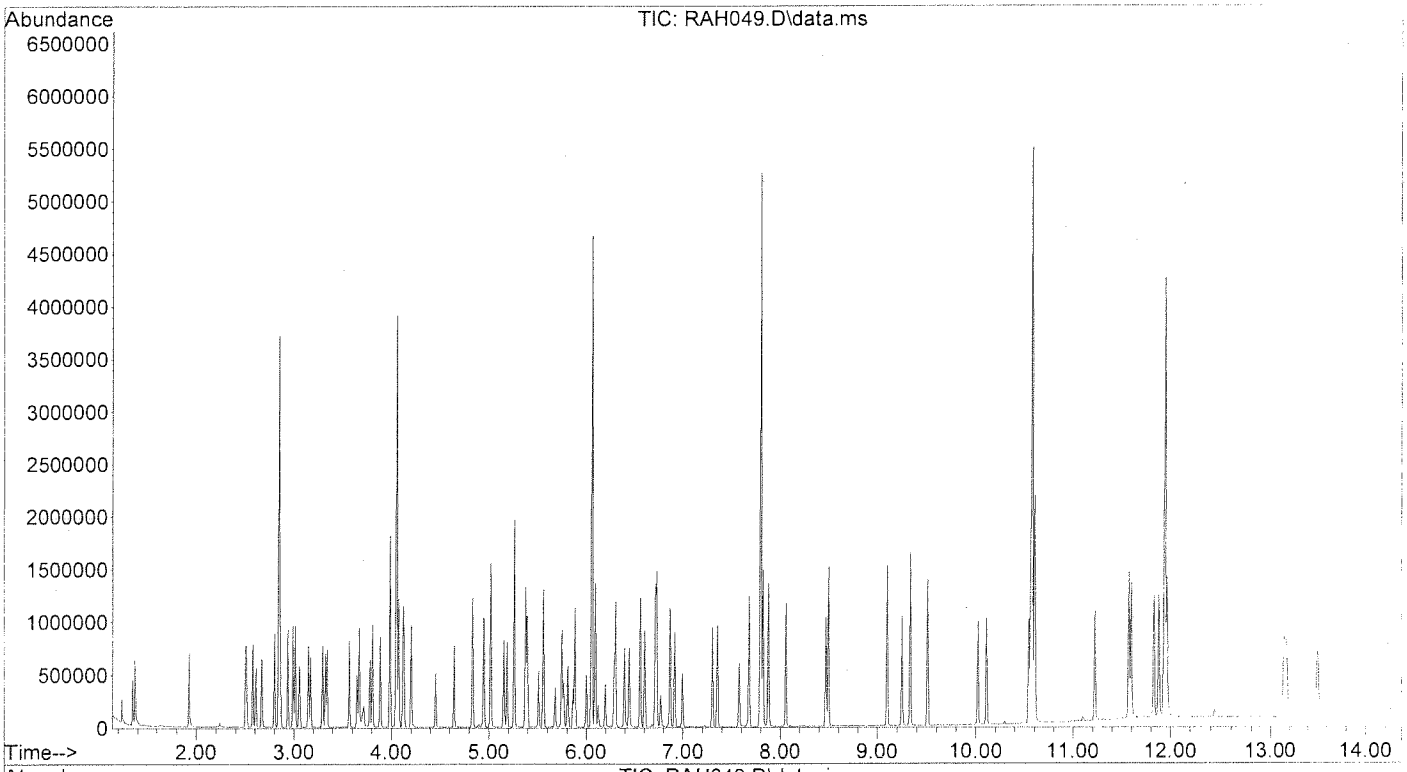
(#) = qualifier out of range (m) = manual integration (+) = signals summed

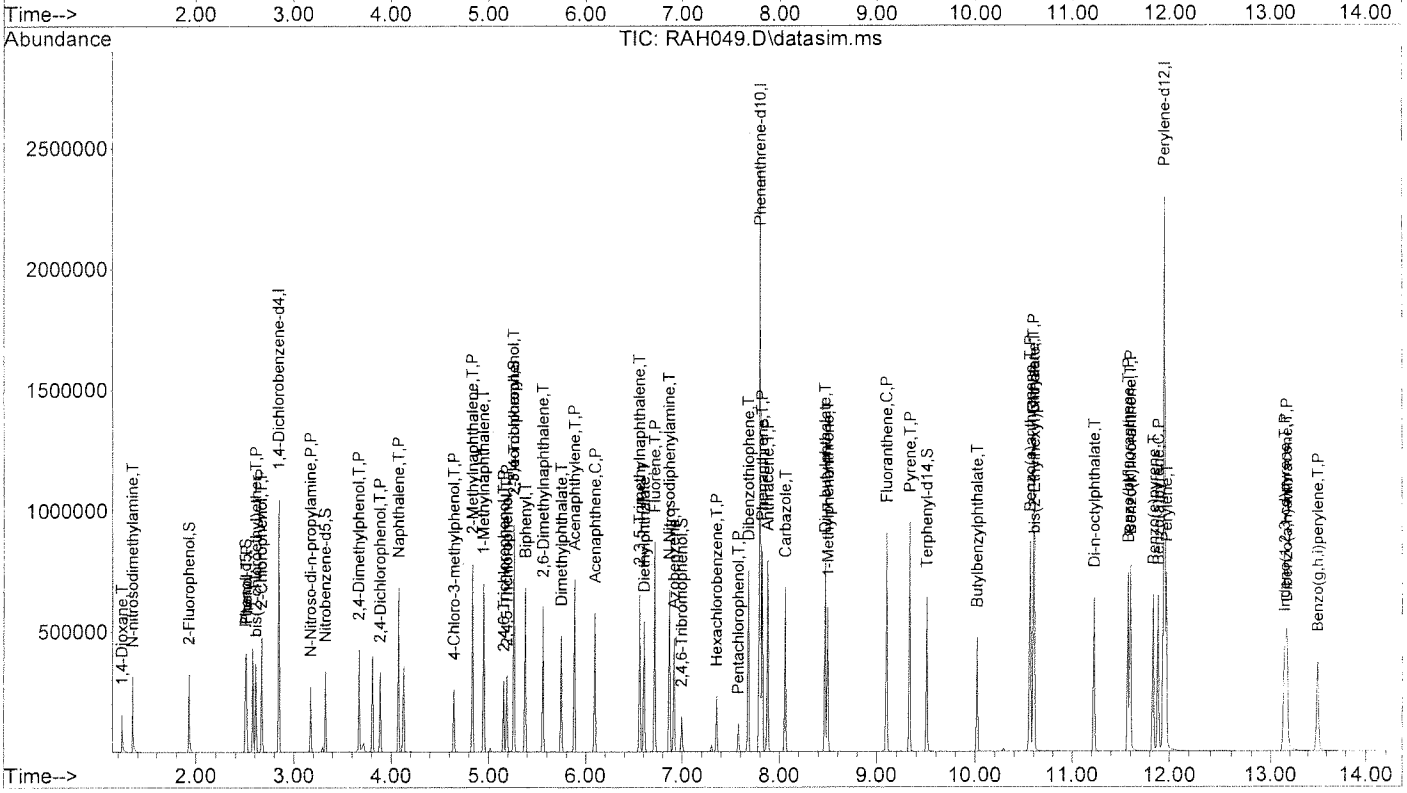
pu 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH049.D
Acq On : 14 Jan 2016 12:39
Sample : SVE7A147
Misc : 10PPM
Integrator: RTE
Quant Time: Jan 21 14:02:14 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 9
Operator: KVu
Inst : E7
Multiplr: 1.00





TM 1-22-16

165

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH048.D
Vial: 8
Acq On : 14 Jan 2016 12:20
Operator: KVu
Sample : SVE7A146
Inst : E7
Misc : 20PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:24:57 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	506112	40.00	ppm	0.00
29) Phenanthrene-d10	7.801	188	2169346	40.00	ppm	0.00
48) Perylene-d12	11.943	264	2277424	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	293300	20.92	ppm	0.00
Spiked Amount 30.000			Recovery	=	69.73%	
5) Phenol-d5	2.504	99	370807	21.15	ppm	0.00
Spiked Amount 30.000			Recovery	=	70.50%	
10) Nitrobenzene-d5	3.327	82	366878	21.60	ppm	0.00
Spiked Amount 10.000			Recovery	=	216.00%	
20) 2-Fluorobiphenyl	5.265	172	915620	20.48	ppm	0.00
Spiked Amount 10.000			Recovery	=	204.80%	
32) 2,4,6-Tribromophenol	6.999	330	150379	19.70	ppm	0.00
Spiked Amount 30.000			Recovery	=	65.67%	
43) Terphenyl-d14	9.511	244	1065153	19.93	ppm	0.00
Spiked Amount 10.000			Recovery	=	199.30%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	107333	20.11	ppm	100
3] N-nitrosodimethylamine	1.346	74	165297	20.96	ppm	99
6] Phenol	2.514	94	377791	20.91	ppm	100
7] bis(2-chloroethyl)ether	2.613	93	274163	20.54	ppm	100
8] 2-Chlorophenol	2.676	128	332495	20.57	ppm	100
9] N-Nitroso-di-n-propyla...	3.179	70	215911	21.18	ppm	100
11] 2,4-Dimethylphenol	3.672	107	353454	21.48	ppm	100
12] 2,4-Dichlorophenol	3.888	162	327402	22.04	ppm	100
13] Naphthalene	4.077	128	1000487	20.54	ppm	100
14] 4-Chloro-3-methylphenol	4.646	107	284618	19.52	ppm	99
15] 2-Methylnaphthalene	4.837	142	716617	20.70	ppm	100
16] 1-Methylnaphthalene	4.952	142	627045	20.62	ppm	100
17] 2,4,6-Trichlorophenol	5.154	196	266925	19.52	ppm	99
18] 2,4,5-Trichlorophenol	5.188	196	276643	19.44	ppm	99
19] 2,3,4-Trichlorophenol	5.265	196	229445	21.84	ppm	100
21] Biphenyl	5.381	154	903547	20.52	ppm	100
22] 2,6-Dimethylnaphthalene	5.563	156	629451	20.86	ppm	100
23] Dimethylphthalate	5.750	163	845570	20.40	ppm	100
24] Acenaphthylene	5.885	152	1125724	21.12	ppm	100
25] Acenaphthene	6.097	153	755159	20.20	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.561	170	605791	20.38	ppm	100
27] Diethylphthalate	6.608	149	821979	20.17	ppm	99
28] Fluorene	6.716	166	831457	20.41	ppm	100
30] N-Nitrosodiphenylamine	6.871	169	675170	19.75	ppm	100
31] Azobenzene	6.918	77	739342	20.49	ppm	100
33] Hexachlorobenzene	7.355	284	323529	19.02	ppm	100
34] Pentachlorophenol	7.581	266	164877	19.44	ppm	99
35] Dibenzothiophene	7.680	184	1156669	19.26	ppm	100
36] Phenanthrene	7.824	178	1269961	18.79	ppm	100
37] Anthracene	7.883	178	1291875	19.76	ppm	100
38] Carbazole	8.064	167	1004044	19.93	ppm	100
39] Di-n-butylphthalate	8.466	149	1277832	21.46	ppm	100
40] 1-Methylphenanthrene	8.495	192	883862	19.73	ppm	100
41] Fluoranthene	9.104	202	1452522	19.75	ppm	100

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH048.D Vial: 8
Acq On : 14 Jan 2016 12:20 Operator: KVu
Sample : SVE7A146 Inst : E7
Misc : 20PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:24:57 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42]	Pyrene	9.335	202	1532581	19.74	ppm	100
44]	Butylbenzylphthalate	10.021	149	496875	19.40	ppm	100
45]	Benzo(a)anthracene	10.562	228	1452295	19.19	ppm	100
46]	Chrysene	10.600	228	1373870	18.77	ppm	99
47]	bis(2-Ethylhexyl)phtha...	10.605	149	807006	19.29	ppm	100
49]	Di-n-octylphthalate	11.222	149	1285533	19.77	ppm	100
50]	Benzo(b)fluoranthene	11.572	252	1390523	21.02	ppm	100
51]	Benzo(k)fluoranthene	11.601	252	1332655	20.07	ppm	100
52]	Benzo(e)pyrene	11.830	252	1246447	20.30	ppm	100
53]	Benzo(a)pyrene	11.882	252	1327153	21.39	ppm	100
54]	Perylene	11.966	252	1282335	19.31	ppm	100
55]	Indeno(1,2,3-cd)pyrene	13.151	276	1434448	20.46	ppm	100
56]	Dibenzo(a,h)anthracene	13.170	278	1215353	20.69	ppm	100
57]	Benzo(g,h,i)perylene	13.510	276	1133473	20.51	ppm	100

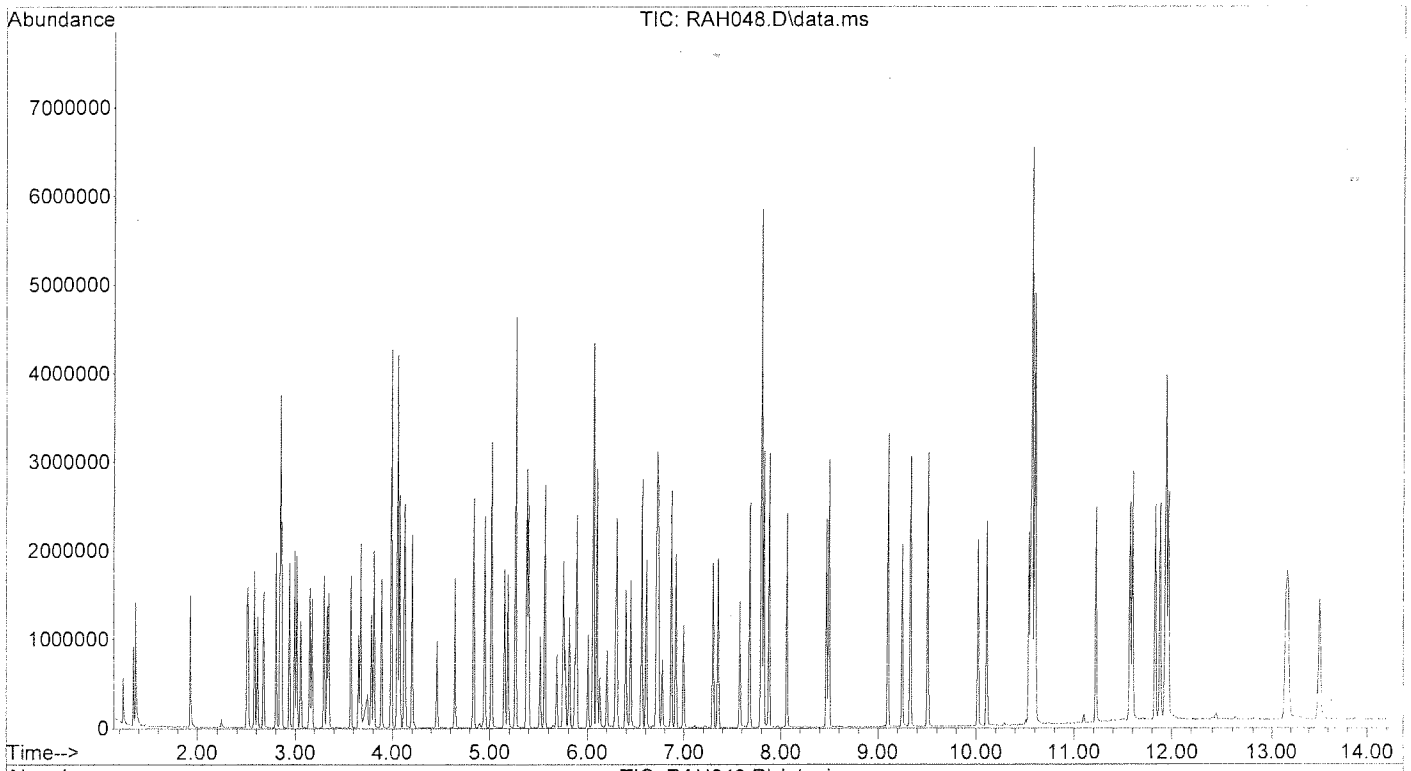
(#) = qualifier out of range (m) = manual integration (+) = signals summed

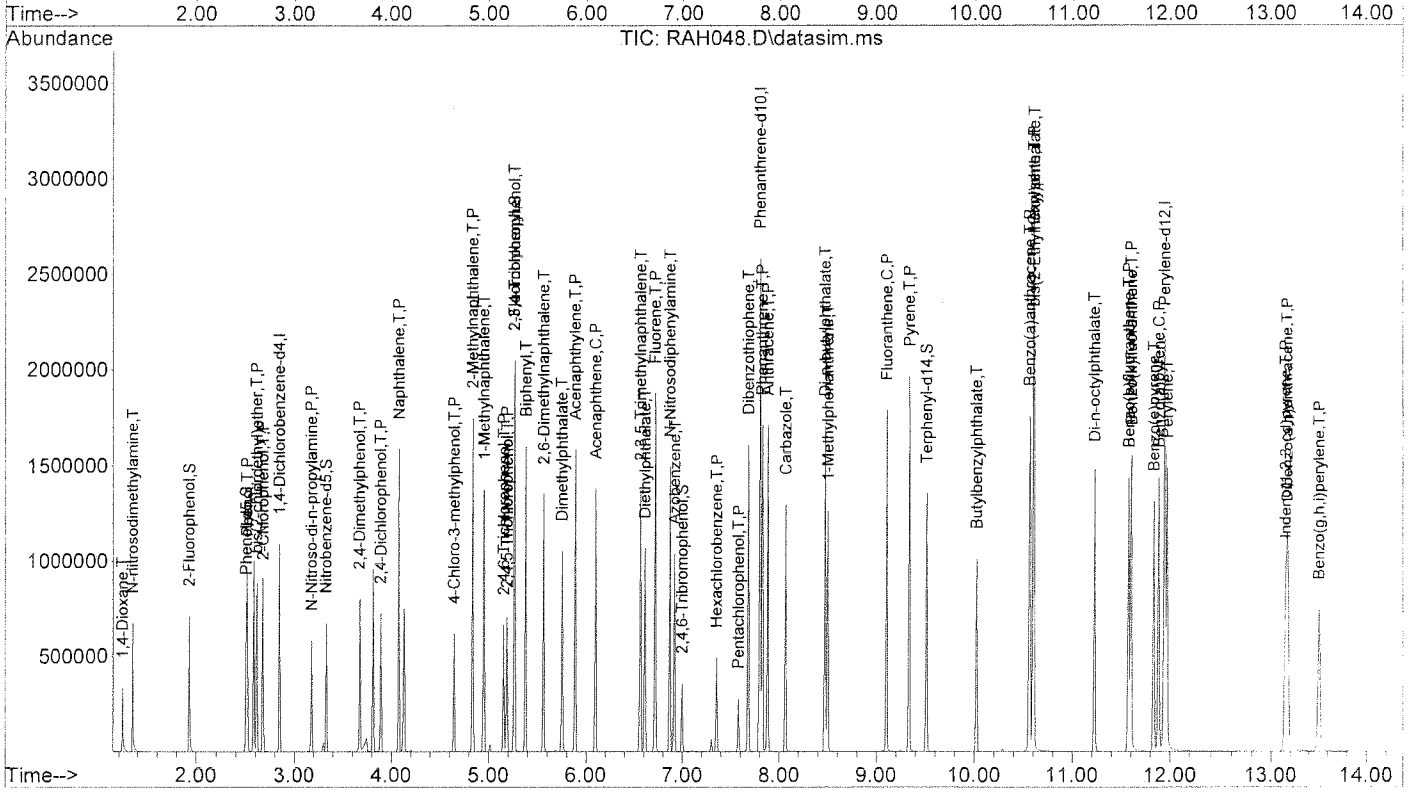
MM 1-22-16

467

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH048.D Vial: 8
Acq On : 14 Jan 2016 12:20 Operator: KVu
Sample : SVE7A146 Inst : E7
Misc : 20PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:24:57 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





PM 1-22-16

168

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH047.D Vial: 7
Acq On : 14 Jan 2016 12:01 Operator: KVu
Sample : SVE7A145 Inst : E7
Misc : 25PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:24:36 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	499745	40.00	ppm	0.00
29) Phenanthrene-d10	7.801	188	2192741	40.00	ppm	0.00
48) Perylene-d12	11.947	264	2343053	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	372964	26.94	ppm	0.00
Spiked Amount 30.000			Recovery = 89.80%			
5) Phenol-d5	2.504	99	466662	26.96	ppm	0.00
Spiked Amount 30.000			Recovery = 89.87%			
10) Nitrobenzene-d5	3.327	82	462954	27.61	ppm	0.00
Spiked Amount 10.000			Recovery = 276.10%			
20) 2-Fluorobiphenyl	5.265	172	1162458	26.34	ppm	0.00
Spiked Amount 10.000			Recovery = 263.40%			
32) 2,4,6-Tribromophenol	6.999	330	193253	25.03	ppm	0.00
Spiked Amount 30.000			Recovery = 83.43%			
43) Terphenyl-d14	9.511	244	1354730	25.08	ppm	0.00
Spiked Amount 10.000			Recovery = 250.80%			
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	134124	25.44	ppm	100
3] N-nitrosodimethylamine	1.346	74	207614	26.66	ppm	100
6] Phenol	2.514	94	481307	26.98	ppm	100
7] bis(2-chloroethyl)ether	2.613	93	345543	26.22	ppm	100
8] 2-Chlorophenol	2.676	128	421965	26.43	ppm	100
9] N-Nitroso-di-n-propyla...	3.179	70	274616	27.29	ppm	100
11] 2,4-Dimethylphenol	3.677	107	450985	27.76	ppm	100
12] 2,4-Dichlorophenol	3.888	162	418431	28.52	ppm	100
13] Naphthalene	4.077	128	1268878	26.39	ppm	100
14] 4-Chloro-3-methylphenol	4.646	107	363714	25.26	ppm	100
15] 2-Methylnaphthalene	4.837	142	908053	26.56	ppm	100
16] 1-Methylnaphthalene	4.952	142	800420	26.65	ppm	100
17] 2,4,6-Trichlorophenol	5.154	196	344061	25.48	ppm	100
18] 2,4,5-Trichlorophenol	5.188	196	352501	25.07	ppm	100
19] 2,3,4-Trichlorophenol	5.265	196	293855	28.32	ppm	100
21] Biphenyl	5.381	154	1146342	26.36	ppm	100
22] 2,6-Dimethylnaphthalene	5.563	156	798810	26.81	ppm	100
23] Dimethylphthalate	5.755	163	1073279	26.22	ppm	100
24] Acenaphthylene	5.885	152	1427321	27.12	ppm	100
25] Acenaphthene	6.097	153	961894	26.05	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.561	170	774278	26.39	ppm	100
27] Diethylphthalate	6.608	149	1041237	25.88	ppm	100
28] Fluorene	6.721	166	1056612	26.27	ppm	100
30] N-Nitrosodiphenylamine	6.871	169	862453	24.96	ppm	100
31] Azobenzene	6.919	77	945476	25.93	ppm	100
33] Hexachlorobenzene	7.355	284	412007	23.96	ppm	100
34] Pentachlorophenol	7.581	266	213169	24.85	ppm	100
35] Dibenzothiophene	7.681	184	1467377	24.17	ppm	100
36] Phenanthrene	7.828	178	1617278	23.67	ppm	100
37] Anthracene	7.883	178	1647632	24.93	ppm	100
38] Carbazole	8.064	167	1281013	25.16	ppm	100
39] Di-n-butylphthalate	8.471	149	1641555	27.27	ppm	100
40] 1-Methylphenanthrene	8.495	192	1145322	25.29	ppm	100
41] Fluoranthene	9.104	202	1877487	25.25	ppm	100

1-22-16

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Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH047.D
Acq On : 14 Jan 2016 12:01
Sample : SVE7A145
Misc : 25PPM
Integrator: RTE
Quant Time: Jan 15 12:24:36 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 7
Operator: KVu
Inst : E7
Multiplr: 1.00

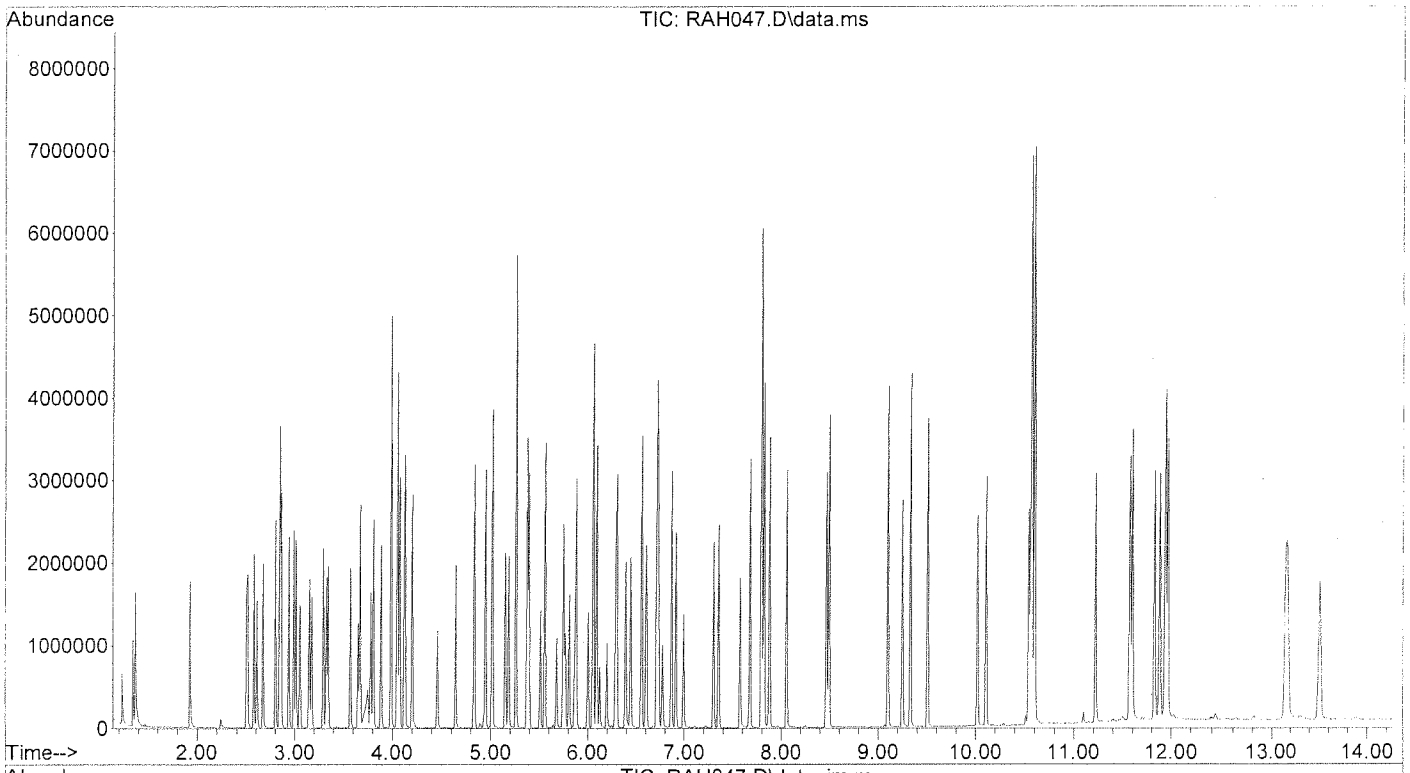
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42]	Pyrene	9.340	202	1967276	25.07 ppm	100
44]	Butylbenzylphthalate	10.021	149	647982	25.02 ppm	100
45]	Benzo(a)anthracene	10.566	228	1898964	24.84 ppm	100
46]	Chrysene	10.600	228	1750437	23.66 ppm	100
47]	bis(2-Ethylhexyl)phtha...	10.605	149	1042380	24.64 ppm	100
49]	Di-n-octylphthalate	11.226	149	1685191	25.17 ppm	100
50]	Benzo(b)fluoranthene	11.577	252	1730163	25.43 ppm	100
51]	Benzo(k)fluoranthene	11.601	252	1813222	26.54 ppm	100
52]	Benzo(e)pyrene	11.835	252	1622470	25.68 ppm	100
53]	Benzo(a)pyrene	11.886	252	1735764	27.19 ppm	100
54]	Perylene	11.971	252	1668711	24.43 ppm	100
55]	Indeno(1,2,3-cd)pyrene	13.155	276	1872034	25.95 ppm	100
56]	Dibenzo(a,h)anthracene	13.175	278	1589087	26.30 ppm	100
57]	Benzo(g,h,i)perylene	13.519	276	1473679	25.92 ppm	100

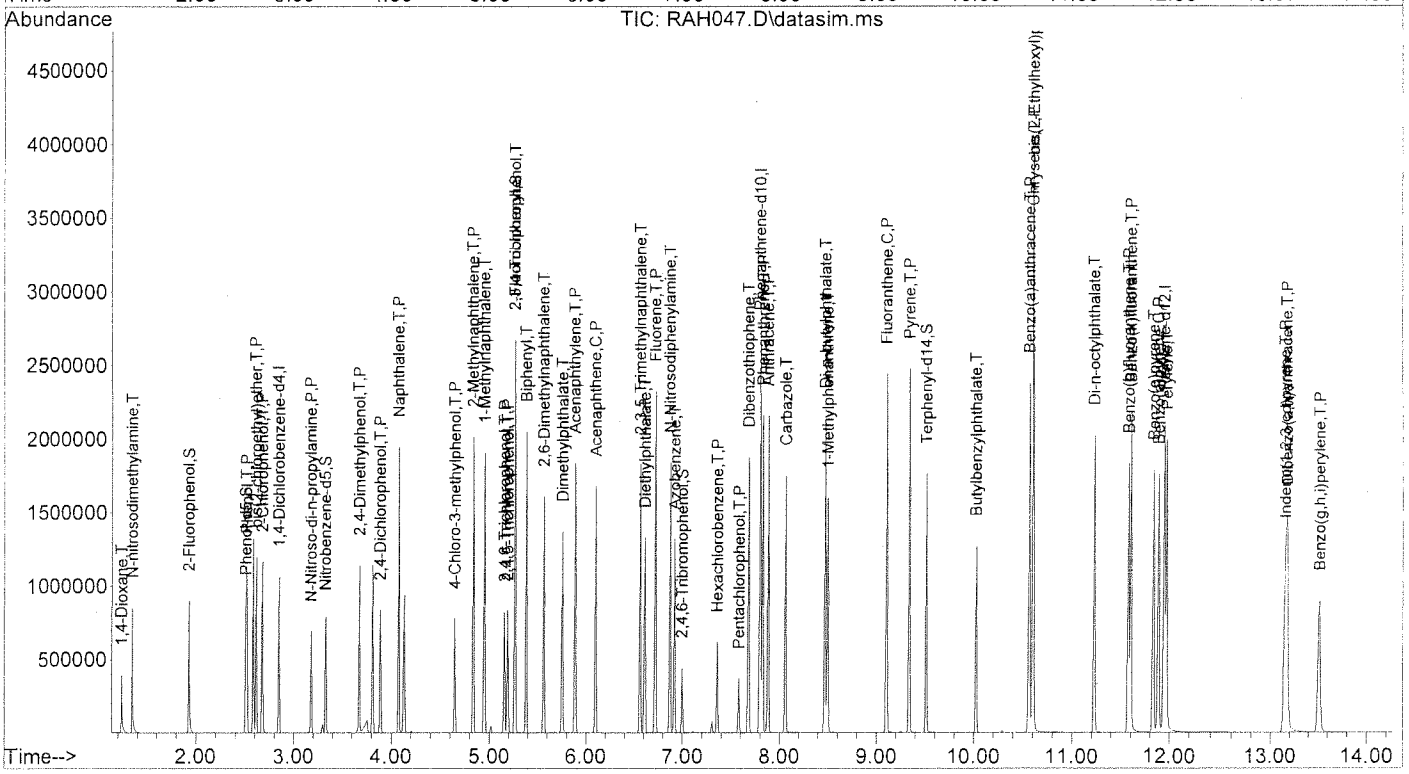
(#) = qualifier out of range (m) = manual integration (+) = signals summed

pu 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH047.D
Vial: 7
Acq On : 14 Jan 2016 12:01
Operator: KVu
Sample : SVE7A145
Inst : E7
Misc : 25PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:24:36 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





pu 1-22-16

474

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH046.D Vial: 6
Acq On : 14 Jan 2016 11:41 Operator: KVu
Sample : SVE7A144 Inst : E7
Misc : 40PPM Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:24:10 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	535502	40.00	ppm	0.00
29) Phenanthrene-d10	7.805	188	2308489	40.00	ppm	0.00
48) Perylene-d12	11.952	264	2503086	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	644513	43.44	ppm	0.00
Spiked Amount 30.000			Recovery	=	144.80%	
5) Phenol-d5	2.509	99	803712	43.33	ppm	0.00
Spiked Amount 30.000			Recovery	=	144.43%	
10) Nitrobenzene-d5	3.332	82	802779	44.68	ppm	0.00
Spiked Amount 10.000			Recovery	=	446.80%	
20) 2-Fluorobiphenyl	5.270	172	2010982	42.52	ppm	0.00
Spiked Amount 10.000			Recovery	=	425.20%	
32) 2,4,6-Tribromophenol	7.004	330	336033	41.32	ppm	0.00
Spiked Amount 30.000			Recovery	=	137.73%	
43) Terphenyl-d14	9.516	244	2316567	40.74	ppm	0.00
Spiked Amount 10.000			Recovery	=	407.40%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.236	88	226096	40.01	ppm	99
3] N-nitrosodimethylamine	1.346	74	361490	43.33	ppm	98
6] Phenol	2.519	94	817937	42.79	ppm	99
7] bis(2-chloroethyl)ether	2.613	93	596895	42.27	ppm	100
8] 2-Chlorophenol	2.676	128	728048	42.56	ppm	100
9] N-Nitroso-di-n-propyla...	3.183	70	473389	43.90	ppm	99
11] 2,4-Dimethylphenol	3.677	107	775487	44.55	ppm	100
12] 2,4-Dichlorophenol	3.893	162	725786	46.17	ppm	99
13] Naphthalene	4.081	128	2205055	42.79	ppm	100
14] 4-Chloro-3-methylphenol	4.650	107	632851	41.02	ppm	99
15] 2-Methylnaphthalene	4.842	142	1574712	42.99	ppm	100
16] 1-Methylnaphthalene	4.952	142	1382461	42.96	ppm	100
17] 2,4,6-Trichlorophenol	5.159	196	594001	41.03	ppm	99
18] 2,4,5-Trichlorophenol	5.192	196	623324	41.35	ppm	99
19] 2,3,4-Trichlorophenol	5.270	196	516627	46.47	ppm	100
21] Biphenyl	5.385	154	1971403	42.30	ppm	100
22] 2,6-Dimethylnaphthalene	5.567	156	1372332	42.98	ppm	100
23] Dimethylphthalate	5.765	163	1834946	41.84	ppm	100
24] Acenaphthylene	5.895	152	2467279	43.75	ppm	100
25] Acenaphthene	6.101	153	1639986	41.45	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.566	170	1314263	41.80	ppm	100
27] Diethylphthalate	6.612	149	1782691	41.35	ppm	100
28] Fluorene	6.725	166	1824147	42.33	ppm	99
30] N-Nitrosodiphenylamine	6.876	169	1484545	40.83	ppm	100
31] Azobenzene	6.923	77	1619305	42.18	ppm	100
33] Hexachlorobenzene	7.359	284	700448	38.70	ppm	100
34] Pentachlorophenol	7.586	266	376181	41.60	ppm	100
35] Dibenzothiophene	7.690	184	2518140	39.40	ppm	100
36] Phenanthrene	7.833	178	2764982	38.44	ppm	100
37] Anthracene	7.887	178	2819657	40.52	ppm	100
38] Carbazole	8.068	167	2191456	40.88	ppm	100
39] Di-n-butylphthalate	8.471	149	2811691	44.37	ppm	100
40] 1-Methylphenanthrene	8.505	192	1928275	40.44	ppm	100
41] Fluoranthene	9.109	202	3207673	40.98	ppm	100

m 1-22-16

U72

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH046.D
Acq On : 14 Jan 2016 11:41
Sample : SVE7A144
Misc : 40PPM
Integrator: RTE
Quant Time: Jan 15 12:24:10 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42]	Pyrene	9.345	202	3344396	40.49 ppm	99
44]	Butylbenzylphthalate	10.026	149	1125263	41.24 ppm	100
45]	Benzo(a)anthracene	10.571	228	3252975	40.48 ppm	100
46]	Chrysene	10.610	228	3034994	38.97 ppm	99
47]	bis(2-Ethylhexyl)phtha...	10.610	149	1830002	41.06 ppm	100
49]	Di-n-octylphthalate	11.231	149	2953955	41.26 ppm	100
50]	Benzo(b)fluoranthene	11.586	252	3047358	41.92 ppm	100
51]	Benzo(k)fluoranthene	11.611	252	3050083	41.78 ppm	100
52]	Benzo(e)pyrene	11.844	252	2780579	41.19 ppm	100
53]	Benzo(a)pyrene	11.896	252	2994119	43.91 ppm	100
54]	Perylene	11.980	252	2860782	39.20 ppm	100
55]	Indeno(1,2,3-cd)pyrene	13.170	276	3223897	41.83 ppm	100
56]	Dibenzo(a,h)anthracene	13.190	278	2741279	42.47 ppm	100
57]	Benzo(g,h,i)perylene	13.534	276	2523164	41.54 ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

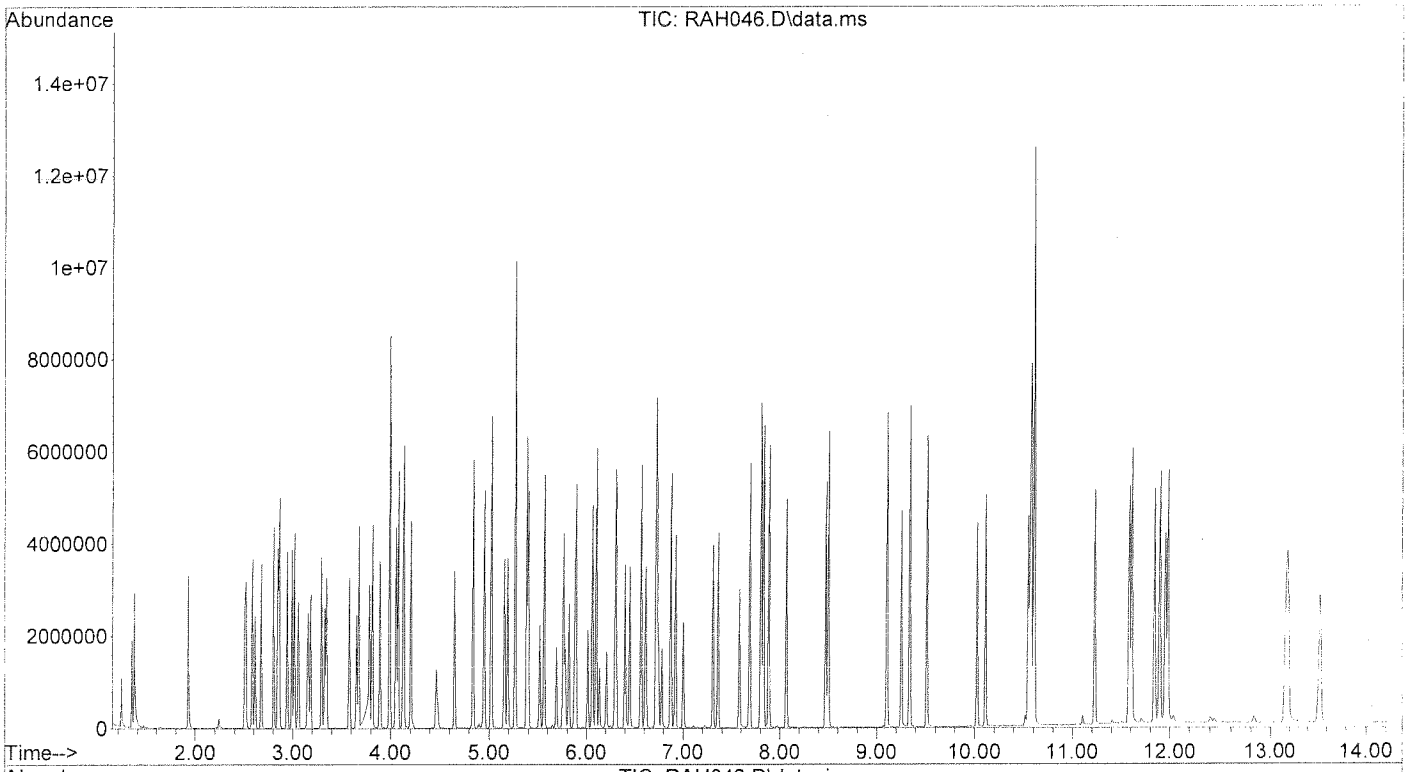
M 1-22-16

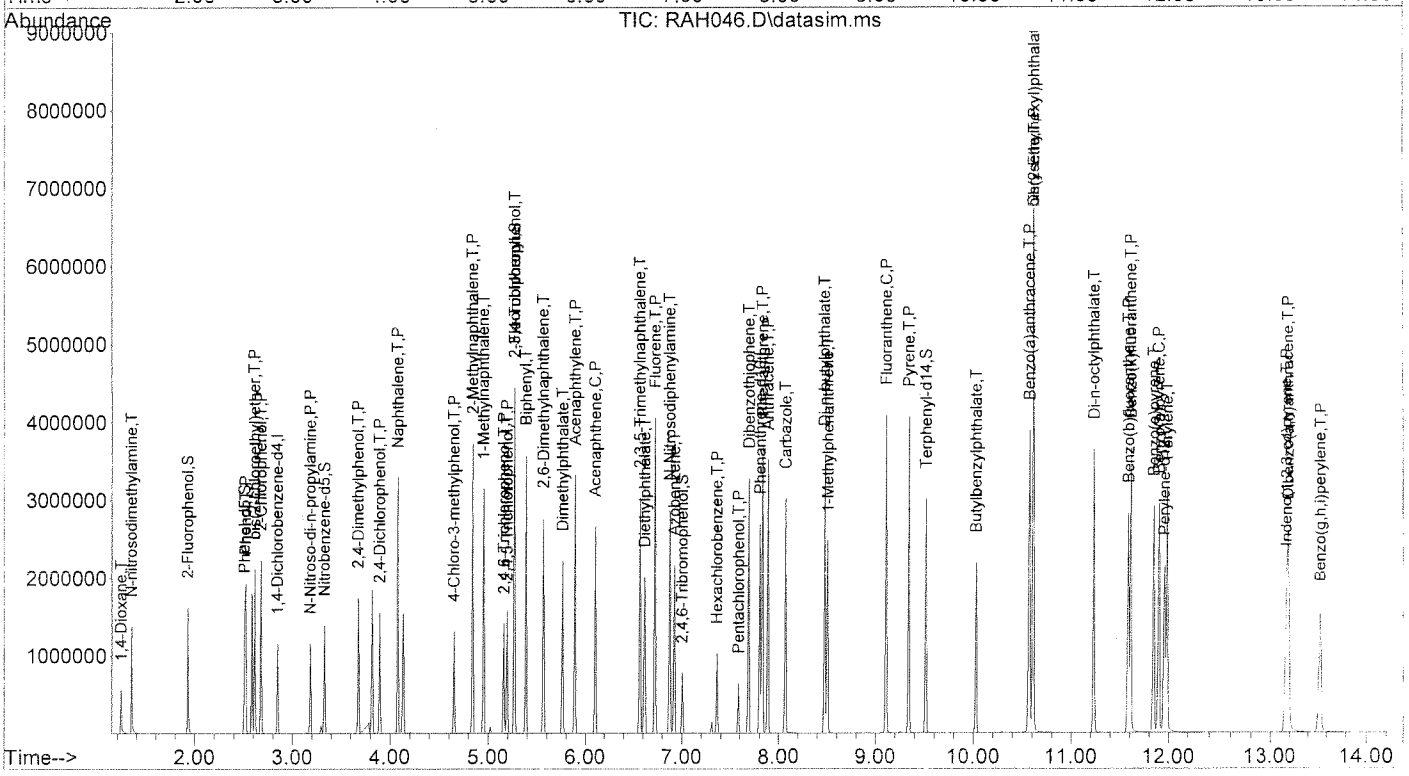
473

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH046.D
Acq On : 14 Jan 2016 11:41
Sample : SVE7A144
Misc : 40PPM
Integrator: RTE
Quant Time: Jan 15 12:24:10 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00





TM 1-22-16

372

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH045.D
Vial: 5
Acq On : 14 Jan 2016 11:14
Operator: KVu
Sample : SVE7A143
Inst : E7
Misc : 50PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:22:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.848	152	495106	40.00	ppm	0.00
29) Phenanthrene-d10	7.801	188	2156366	40.00	ppm	0.00
48) Perylene-d12	11.949	264	2367940	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.935	112	740606	53.99	ppm	0.00
Spiked Amount 30.000			Recovery	=	179.97%	
5) Phenol-d5	2.509	99	927730	54.10	ppm	0.00
Spiked Amount 30.000			Recovery	=	180.33%	
10) Nitrobenzene-d5	3.332	82	905960	54.53	ppm	0.00
Spiked Amount 10.000			Recovery	=	545.30%	
20) 2-Fluorobiphenyl	5.270	172	2327640	53.23	ppm	0.00
Spiked Amount 10.000			Recovery	=	532.30%	
32) 2,4,6-Tribromophenol	7.004	330	386765	50.91	ppm	0.00
Spiked Amount 30.000			Recovery	=	169.70%	
43) Terphenyl-d14	9.515	244	2708100	50.98	ppm	0.00
Spiked Amount 10.000			Recovery	=	509.80%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.241	88	256770	49.14	ppm	99
3] N-nitrosodimethylamine	1.351	74	409510	53.09	ppm	99
6] Phenol	2.525	94	957501	54.18	ppm	100
7] bis(2-chloroethyl)ether	2.619	93	682665	52.29	ppm	100
8] 2-Chlorophenol	2.676	128	837699	52.97	ppm	99
9] N-Nitroso-di-n-propyla...	3.189	70	533099	53.47	ppm	100
11] 2,4-Dimethylphenol	3.682	107	891889	55.41	ppm	100
12] 2,4-Dichlorophenol	3.893	162	829161	57.05	ppm	99
13] Naphthalene	4.082	128	2530326	53.11	ppm	100
14] 4-Chloro-3-methylphenol	4.651	107	725938	50.89	ppm	100
15] 2-Methylnaphthalene	4.842	142	1814451	53.58	ppm	100
16] 1-Methylnaphthalene	4.953	142	1588549	53.39	ppm	100
17] 2,4,6-Trichlorophenol	5.159	196	682871	51.00	ppm	100
18] 2,4,5-Trichlorophenol	5.193	196	712743	51.13	ppm	100
19] 2,3,4-Trichlorophenol	5.270	196	591655	57.56	ppm	100
21] Biphenyl	5.386	154	2267710	52.63	ppm	100
22] 2,6-Dimethylnaphthalene	5.568	156	1588119	53.79	ppm	99
23] Dimethylphthalate	5.765	163	2099905	51.79	ppm	100
24] Acenaphthylene	5.891	152	2837510	54.42	ppm	100
25] Acenaphthene	6.102	153	1890709	51.69	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.566	170	1525744	52.48	ppm	100
27] Diethylphthalate	6.613	149	2042759	51.25	ppm	100
28] Fluorene	6.725	166	2127875	53.40	ppm	99
30] N-Nitrosodiphenylamine	6.876	169	1711203	50.39	ppm	100
31] Azobenzene	6.923	77	1852437	51.65	ppm	100
33] Hexachlorobenzene	7.359	284	808731	47.83	ppm	100
34] Pentachlorophenol	7.586	266	436468	51.65	ppm	100
35] Dibenzothiophene	7.685	184	2943734	49.30	ppm	100
36] Phenanthrene	7.832	178	3230713	48.09	ppm	100
37] Anthracene	7.887	178	3300945	50.79	ppm	100
38] Carbazole	8.068	167	2564131	51.20	ppm	100
39] Di-n-butylphthalate	8.471	149	3284463	55.49	ppm	100
40] 1-Methylphenanthrene	8.500	192	2265792	50.87	ppm	100
41] Fluoranthene	9.109	202	3756123	51.37	ppm	100

Rev 1-22-16

U75

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH045.D
Vial: 5
Acq On : 14 Jan 2016 11:14
Operator: KVu
Sample : SVE7A143
Inst : E7
Misc : 50PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:22:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42]	Pyrene	9.345	202	3943923	51.12	ppm	99
44]	Butylbenzylphthalate	10.025	149	1319252	51.74	ppm	100
45]	Benzo(a)anthracene	10.568	228	3858824	51.42	ppm	100
46]	Chrysene	10.607	228	3599231	49.47	ppm	99
47]	bis(2-Ethylhexyl)phtha...	10.607	149	2176703	52.27	ppm	100
49]	Di-n-octylphthalate	11.228	149	3503633	51.72	ppm	100
50]	Benzo(b)fluoranthene	11.578	252	3748066	54.50	ppm	100
51]	Benzo(k)fluoranthene	11.607	252	3536488	51.21	ppm	100
52]	Benzo(e)pyrene	11.841	252	3338490	52.28	ppm	100
53]	Benzo(a)pyrene	11.893	252	3585870	55.59	ppm	100
54]	Perylene	11.977	252	3404793	49.32	ppm	100
55]	Indeno(1,2,3-cd)pyrene	13.163	276	3901199	53.51	ppm	100
56]	Dibenzo(a,h)anthracene	13.188	278	3316052	54.30	ppm	100
57]	Benzo(g,h,i)perylene	13.532	276	3049670	53.07	ppm	100

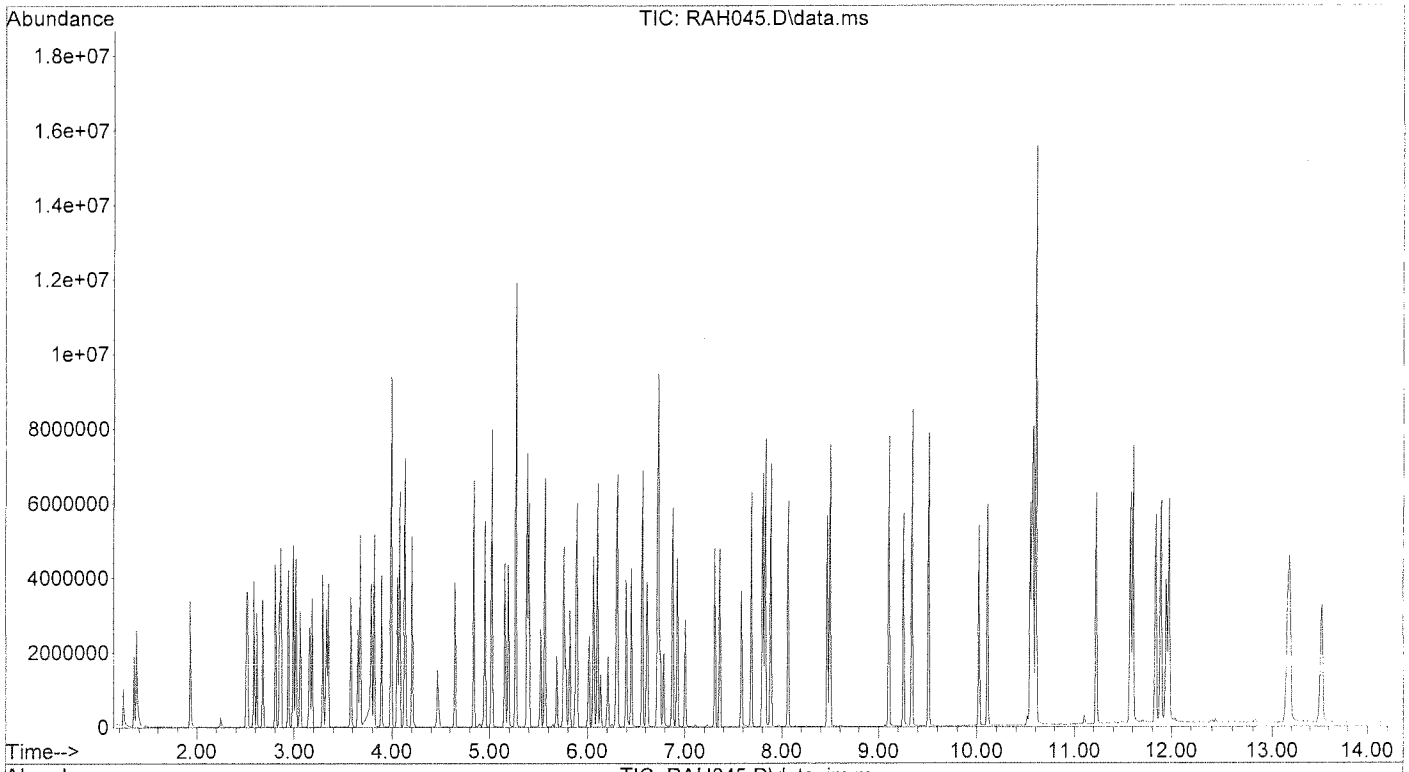
(#) = qualifier out of range (m) = manual integration (+) = signals summed

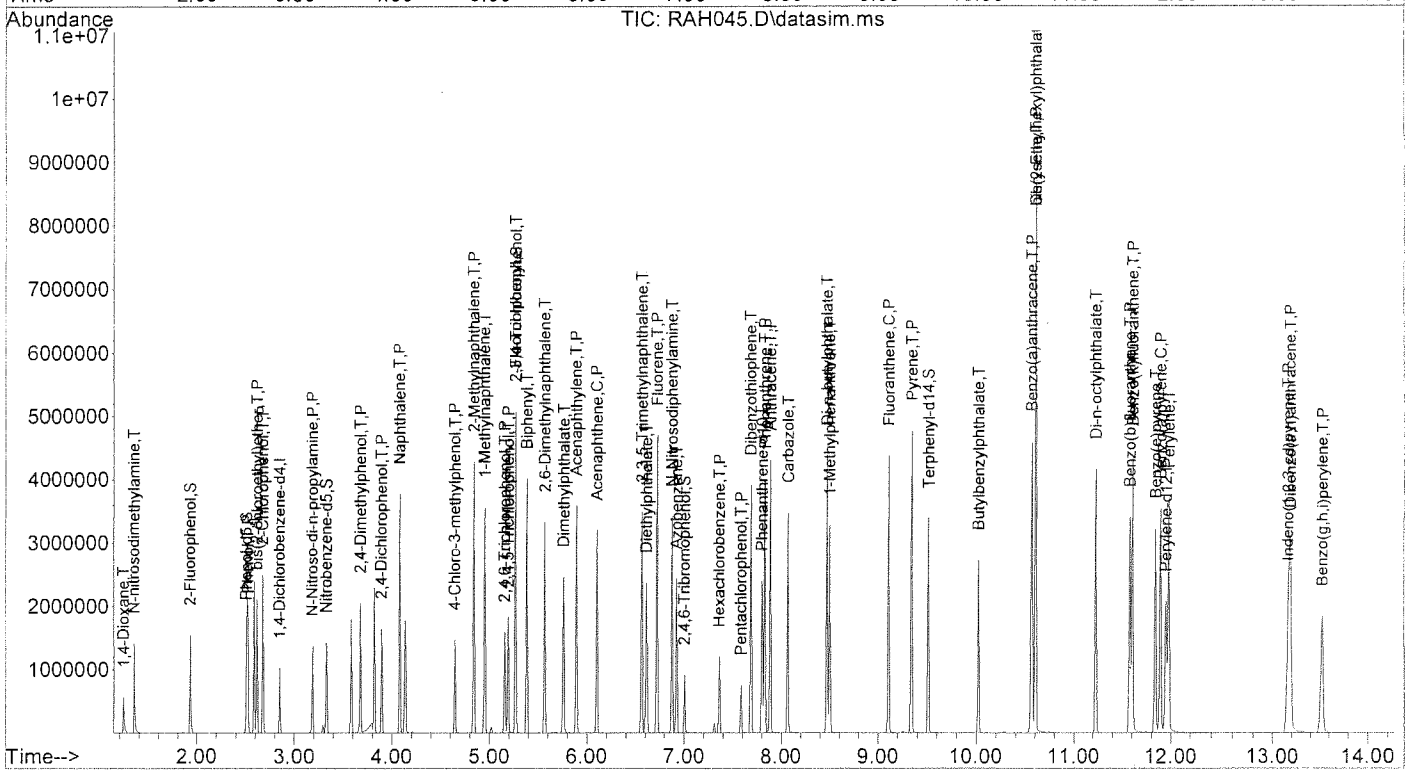
m 1-22-16

475

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A14\RAH045.D
Vial: 5
Acq On : 14 Jan 2016 11:14
Operator: KVu
Sample : SVE7A143
Inst : E7
Misc : 50PPM
Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 15 12:22:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





RL 1-22-16

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SECOND SOURCE VERIFICATION

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH087
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
DFTPP Injection Date: 01/19/16
DFTPP Injection Time: 08:26

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	45.21
68	Less than 2% of mass 69	0.79(1.9)1
69	% of mass 198	42.01
70	Less than 2% of mass 69	0.27(0.6)1
127	10.0 - 80.0% of mass 198	47.66
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	6.47
275	10.0 - 60.0% of mass 198	25.91
365	Greater than 1.00% of mass 198	2.97
441	Present, but less than 24% of mass 442	11.54(16.7)2
442	Greater than 50% of mass 198	69.04
443	15.0 - 24.0% of mass 442	13.47(19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD025	ISVE7A142	RAH091	01/19/16	09:55

FORM V SV OLM03.0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project:ICAL
SDG No.:ICAL
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	499745	2.85	0	0.00	0	0.00
	UPPER LIMIT	999490	3.35	0	0.50	0	0.50
	LOWER LIMIT	249873	2.35	0	-0.50	0	-0.50
	SAMPLE ID						
1	ISVE7A142	629721	2.85	0	0.00	0	0.00

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-1 OLM02.0

1-22-16

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project:ICAL
SDG No.:ICAL
Date Analyzed: 01/14/16
Time Analyzed: 12:01

	IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
12 HOUR STD	2192741	7.80	0	0.00	2343053	11.95
UPPER LIMIT	4385482	8.30	0	0.50	4686106	12.45
LOWER LIMIT	1096371	7.30	0	-0.50	1171527	11.45
SAMPLE ID						
1 ISVE7A142	2938535	7.80	0	0.00	3475193	11.95

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

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

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-2 OLM02.0

1-22-16

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E7
IC_Beginning DateTime :01/14/16 11:14
Spike Amount :25 PPM
CC/CV File :RAH091
IC File :RAH047

Column Spec :ZB-SEMI ID :0.18MM
IC_Ending DateTime :01/14/16 14:34
HPChem Method :SVE7A14S
Date_Time :01/19/16 09:55

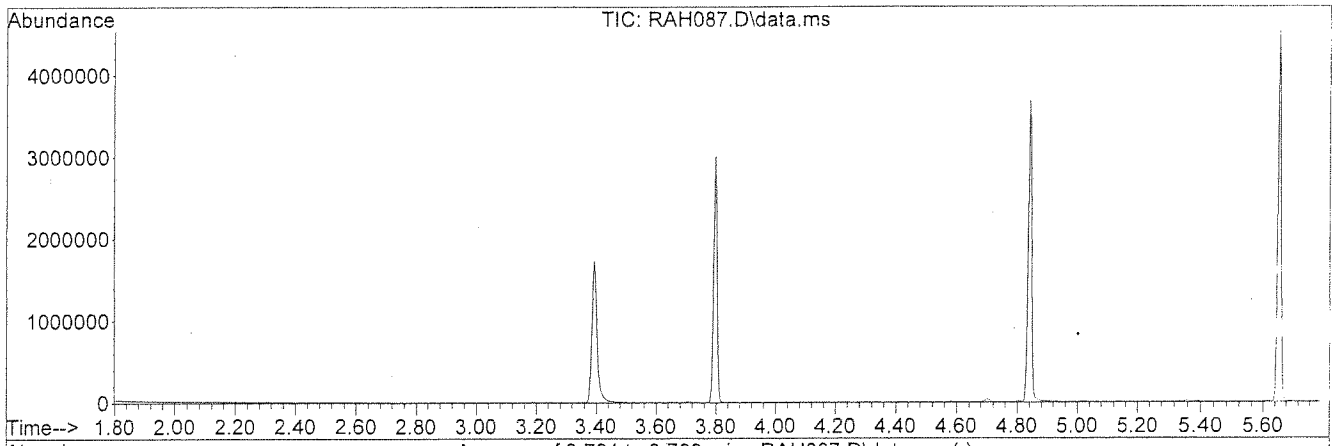
M IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
1	1,4-Dichlorobenzene-d4	40.000	0	629721	1	1	2.849	2.848	0				
2	1,4-Dioxane	20.371	-18.5	135311	0.344	0.386	1.240	1.236	17.79	-0.0002	0.4224		0.9998
3	N-nitrosodimethylamine	24.957	-0.2	244872	0.622	0.623	1.350	1.347	5.77				
4	2-Fluorophenol	25.385	1.5	442882	1.125	1.108	1.935	1.930	6.54				
5	Phenol-d5	24.224	-3.1	528373	1.342	1.386	2.509	2.503	6.67				
6	Phenol	24.979	-0.1	561432	1.426	1.428	2.519	2.514	6.25				
7	bis(2-chloroethyl)ether	24.890	-0.4	413311	1.050	1.055	2.613	2.611	4.13				
8	2-Chlorophenol	25.194	0.8	506779	1.288	1.278	2.676	2.672	8.98				
9	N-Nitroso-di-n-propylamine	24.985	-0.1	316850	0.805	0.806	3.180	3.175	7.80				
10	Nitrobenzene-d5	8.086	-3.0	170859	1.302	1.342	3.329	3.326	8.80				
11	2,4-Dimethylphenol	26.038	4.2	533035	1.354	1.300	3.678	3.674	9.46				
12	2,4-Dichlorophenol	26.491	6.0	489686	1.244	1.174	3.889	3.887	12.03				
13	Naphthalene	25.376	1.5	1537679	3.907	3.849	4.078	4.075	4.65				
14	4-Chloro-3-methylphenol	24.698	-1.2	448030	1.138	1.111	4.647	4.644	17.18	-0.0003	1.1527		0.9991
15	2-Methylnaphthalene	24.777	-0.9	1067208	2.712	2.736	4.839	4.837	6.24				
16	1-Methylnaphthalene	26.245	5.0	993108	2.523	2.404	4.949	4.949	6.27				
17	2,4,6-Trichlorophenol	24.827	-0.7	422466	1.073	0.933	5.155	5.152	15.68	-0.0010	1.0824		0.9987
18	2,4,5-Trichlorophenol	25.548	2.2	452632	1.150	0.972	5.189	5.187	15.53	-0.0010	1.1269		0.9987
19	2,3,4-Trichlorophenol	28.895	15.6	377753	0.960	0.830	5.266	5.263	12.25				
20	2-Fluorobiphenyl	7.584	-9.0	421838	3.216	3.533	5.261	5.263	6.86				
21	Biphenyl	25.381	1.5	1390851	3.534	3.481	5.382	5.379	7.03				
22	2,6-Dimethylnaphthalene	26.447	5.8	993131	2.523	2.385	5.564	5.562	7.88				
23	Dimethylphthalate	27.114	8.5	1398416	3.553	3.276	5.756	5.749	9.67				
24	Acenaphthylene	26.567	6.3	1761970	4.477	4.213	5.887	5.885	8.97				
25	Acenaphthene	24.918	-0.3	1159300	2.946	2.955	6.098	6.095	8.29				
26	2,3,5-Trimethylnaphthalene	26.708	6.8	987534	2.509	2.349	6.562	6.559	10.63				
27	Diethylphthalate	27.172	8.7	1377431	3.500	3.220	6.609	6.603	11.78				
28	Fluorene	26.385	5.5	1337126	3.397	3.219	6.717	6.716	9.51				
29	Phenanthrene-d10	40.000	0	2938535	1	1	7.802	7.799	0				
30	N-Nitrosodiphenylamine	22.872	-8.5	1059075	0.577	0.690	6.872	6.869	23.30	0.0004	0.6296		0.9997
31	Azobenzene	24.139	-3.4	1179717	0.642	0.665	6.920	6.916	9.55				
32	2,4,6-Tribromophenol	23.959	-4.2	247852	0.135	0.122	7.001	6.997	15.68	-0.0001	0.1410		0.9988
33	Hexachlorobenzene	23.267	-6.9	536110	0.292	0.314	7.356	7.354	13.04				
34	Pentachlorophenol	26.371	5.5	303241	0.165	0.128	7.582	7.579	23.24	-0.0003	0.1570		0.9977
35	Dibenzothiophene	24.449	-2.2	1989305	1.083	1.108	7.681	7.680	11.63				
36	Phenanthrene	23.438	-6.2	2145848	1.168	1.246	7.824	7.824	14.29				
37	Anthracene	23.778	-4.9	2106002	1.147	1.206	7.883	7.881	10.31				
38	Carbazole	26.749	7.0	1825369	0.994	0.929	8.065	8.061	8.51				
39	Di-n-butylphthalate	28.595	14.4	2306495	1.256	1.098	8.467	8.468	11.51				
40	1-Methylphenanthrene	25.052	0.2	1520422	0.828	0.826	8.496	8.495	9.32				
41	Fluoranthene	25.502	2.0	2540839	1.383	1.356	9.100	9.102	10.08				
42	Pyrene	25.117	0.5	2640867	1.438	1.431	9.336	9.335	9.46				
43	Terphenyl-d14	7.548	-9.4	546376	0.891	0.985	9.508	9.509	9.34				
44	Butylbenzylphthalate	28.201	12.8	979135	0.533	0.395	10.022	10.020	19.26	-0.0005	0.4733		0.9980
45	Benzo(a)anthracene	26.099	4.4	2672895	1.455	1.818	10.567	10.564	47.09	0.0027	1.3899		0.9995
46	Chrysene	26.503	6.0	2627645	1.431	1.350	10.601	10.597	13.05				
47	bis(2-Ethylhexyl)phthalate	27.526	10.1	1560882	0.850	0.650	10.601	10.604	18.70	-0.0008	0.7730		0.9980
48	Perylene-d12	40.000	0	3475193	1	1	11.948	11.943	0				
49	Di-n-octylphthalate	25.815	3.3	2563750	1.180	0.901	11.222	11.224	26.15	-0.0016	1.1455		0.9974
50	Benzo(b)fluoranthene	25.523	2.1	2575954	1.186	1.162	11.578	11.572	9.36				
51	Benzo(k)fluoranthene	25.389	1.6	2573019	1.185	1.166	11.602	11.597	8.98				
52	Benzo(e)pyrene	25.116	0.5	2353781	1.084	1.079	11.836	11.830	9.28				
53	Benzo(a)pyrene	26.080	4.3	2469115	1.137	1.090	11.887	11.881	10.29				
54	Perylene	23.792	-4.8	2410616	1.110	1.166	11.972	11.965	11.53				
55	Indeno(1,2,3-cd)pyrene	25.920	3.7	2773313	1.277	1.232	13.156	13.146	10.99				
56	Dibenzo(a,h)anthracene	25.549	2.2	2289784	1.054	1.032	13.176	13.168	8.89				
57	Benzo(g,h,i)perylene	24.918	-0.3	2101501	0.968	0.971	13.521	13.506	8.77				

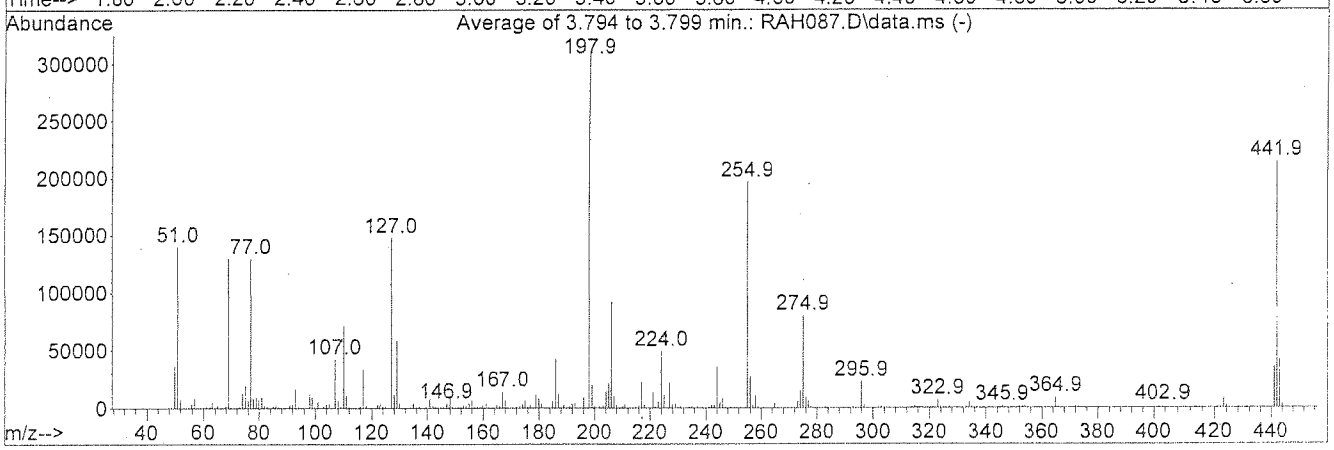
TM 1-22-16

Data Path : D:\DATA\16A19\
Data File : RAH087.D
Acq On : 19 Jan 2016 8:26
Operator : KVu
Sample : DFTE7A1403
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP.M
Title : DFTPP
Last Update : Thu Jan 21 09:52:59 2016





AutoFind: Scans 784, 785, 786; Background Corrected with Scan 775

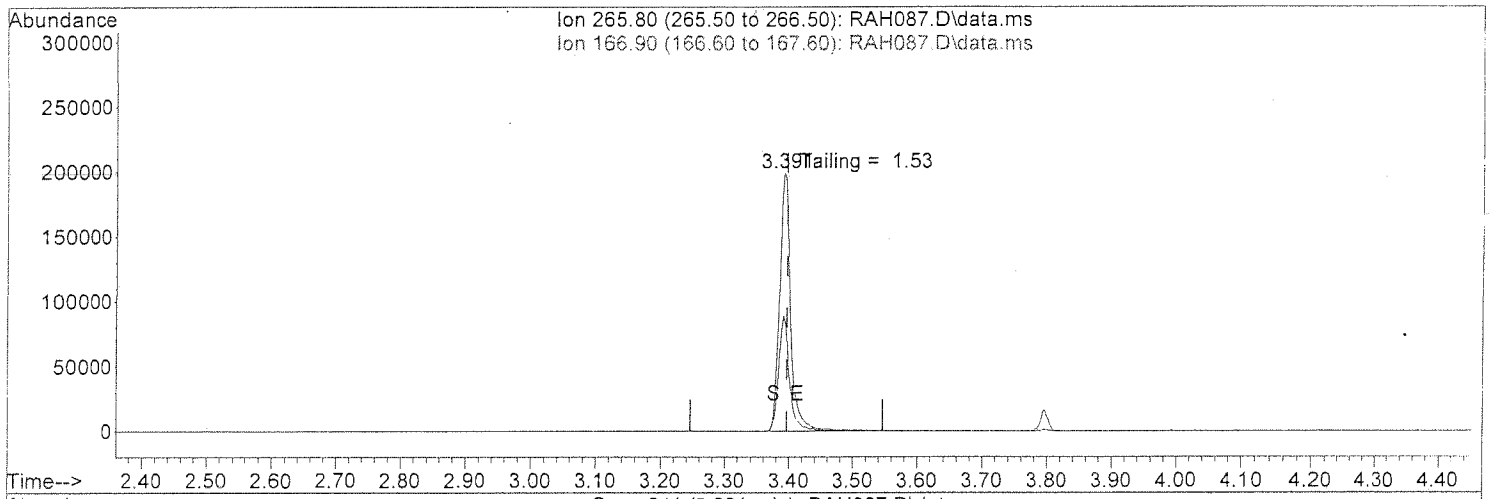
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	45.2	140289	PASS
68	69	0.00	2	1.9	2460	PASS
69	198	0.00	100	42.0	130373	PASS
70	69	0.00	2	0.6	843	PASS
127	198	40	60	47.7	147904	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	310315	PASS
199	198	5	9	6.5	20072	PASS
275	198	10	30	25.9	80408	PASS
365	198	1	100	3.0	9223	PASS
441	443	0.01	100	85.7	35824	PASS
442	198	40	100	69.0	214251	PASS
443	442	17	23	19.5	41811	PASS

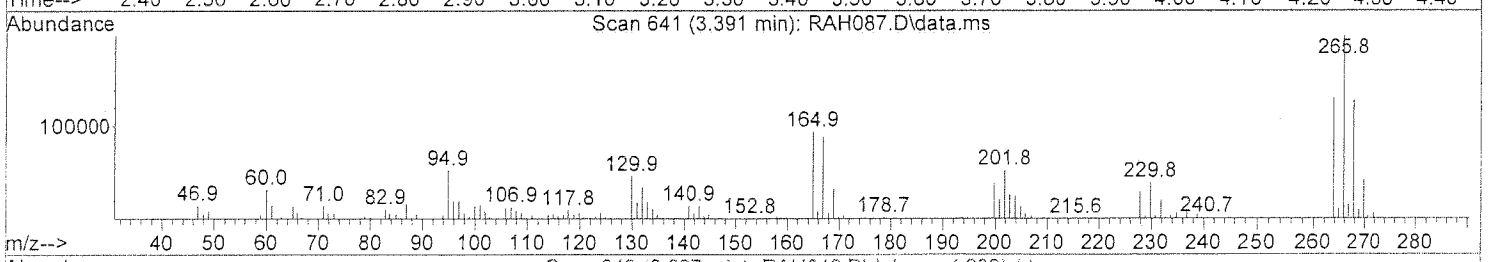
m 1-22-16

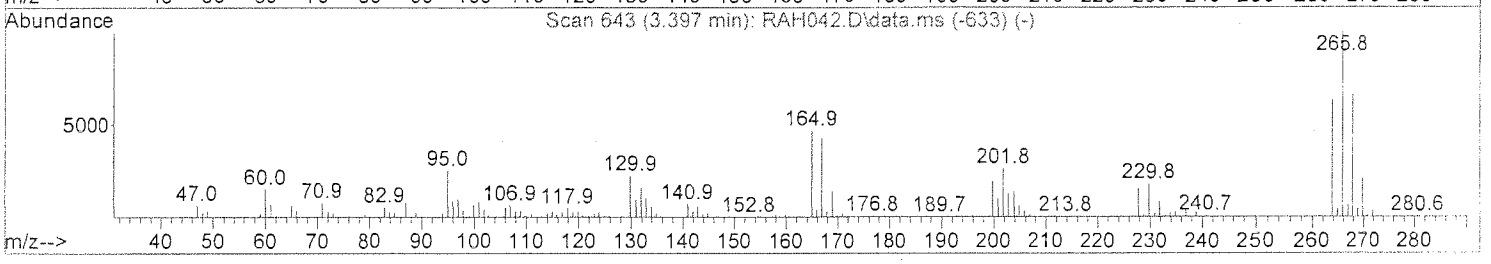
Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:06:44 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RAH087.D\data.ms

(1) Pentachlorophenol (T)

3.391min (-0.006) 59.14 ppm

response 242802

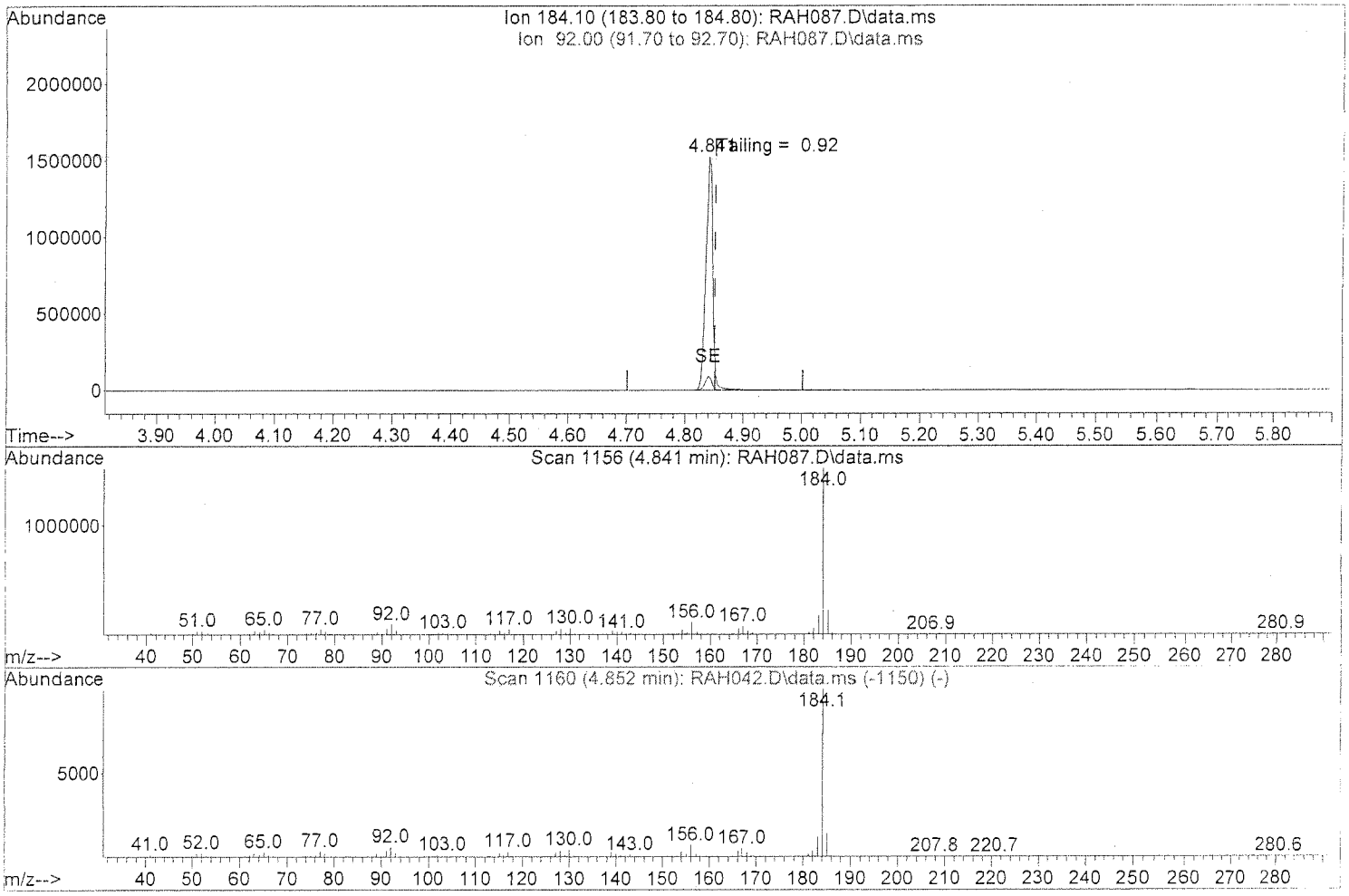
Ion	Exp%	Act%
265.80	100	100
166.90	44.50	43.45
0.00	0.00	0.00
0.00	0.00	0.00

KU 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:06:44 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH087.D\data.ms

(3) Benzidine (T)

4.841min (-0.011) 52.63 ppm

response 1260369

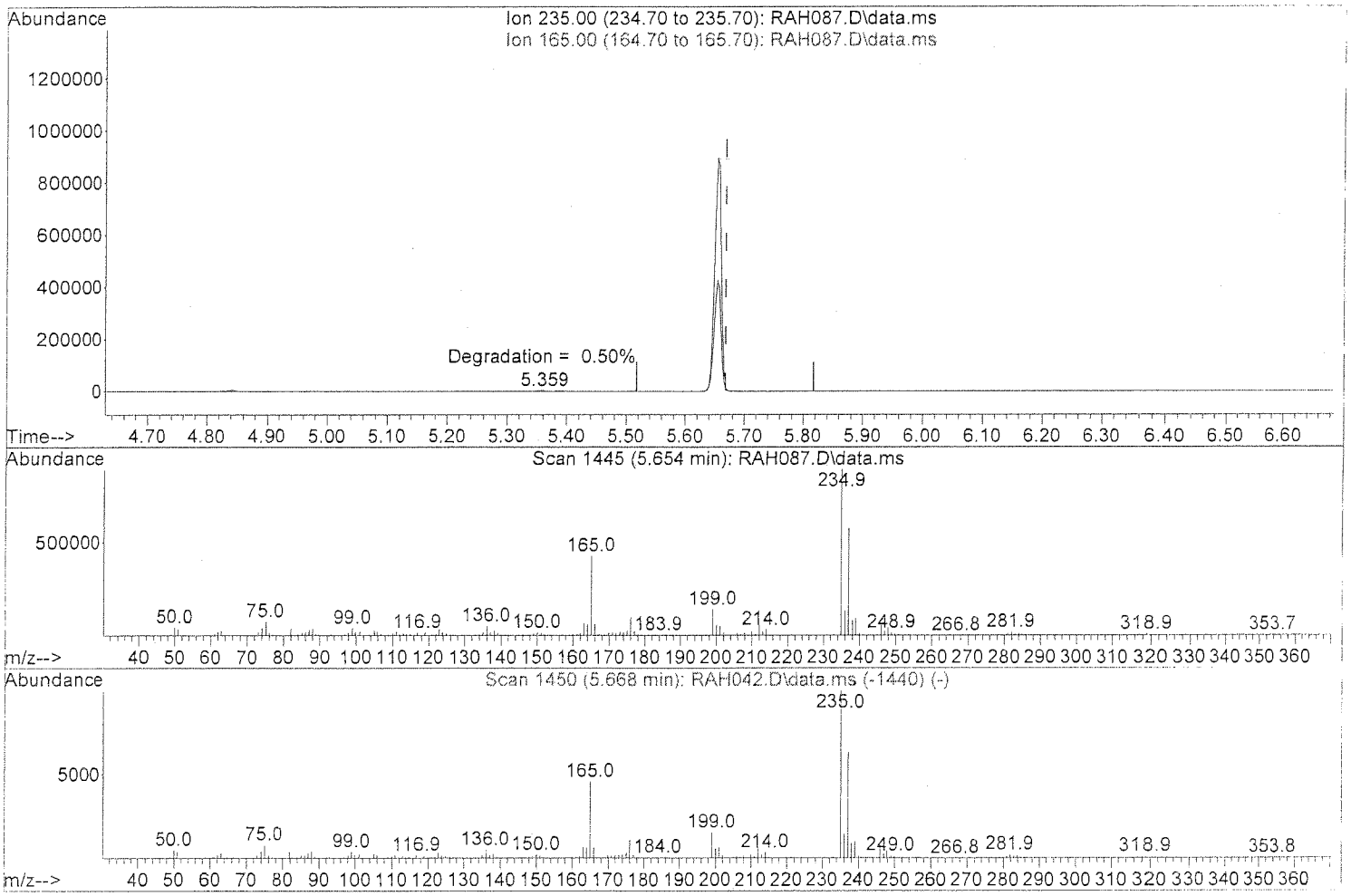
Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.77
0.00	0.00	0.00
0.00	0.00	0.00

KM 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:06:44 2016
Quant Results File: DFTPP.RES
Quant Method : C:\msdchem\1\METHODS\DFTPP.M
Quant Title : DFTPP
QLast Update : Thu Jan 21 09:52:59 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH087.D\data.ms

(6) DDT (T)

5.654min (-0.014) 57.10 ppm

response 701410

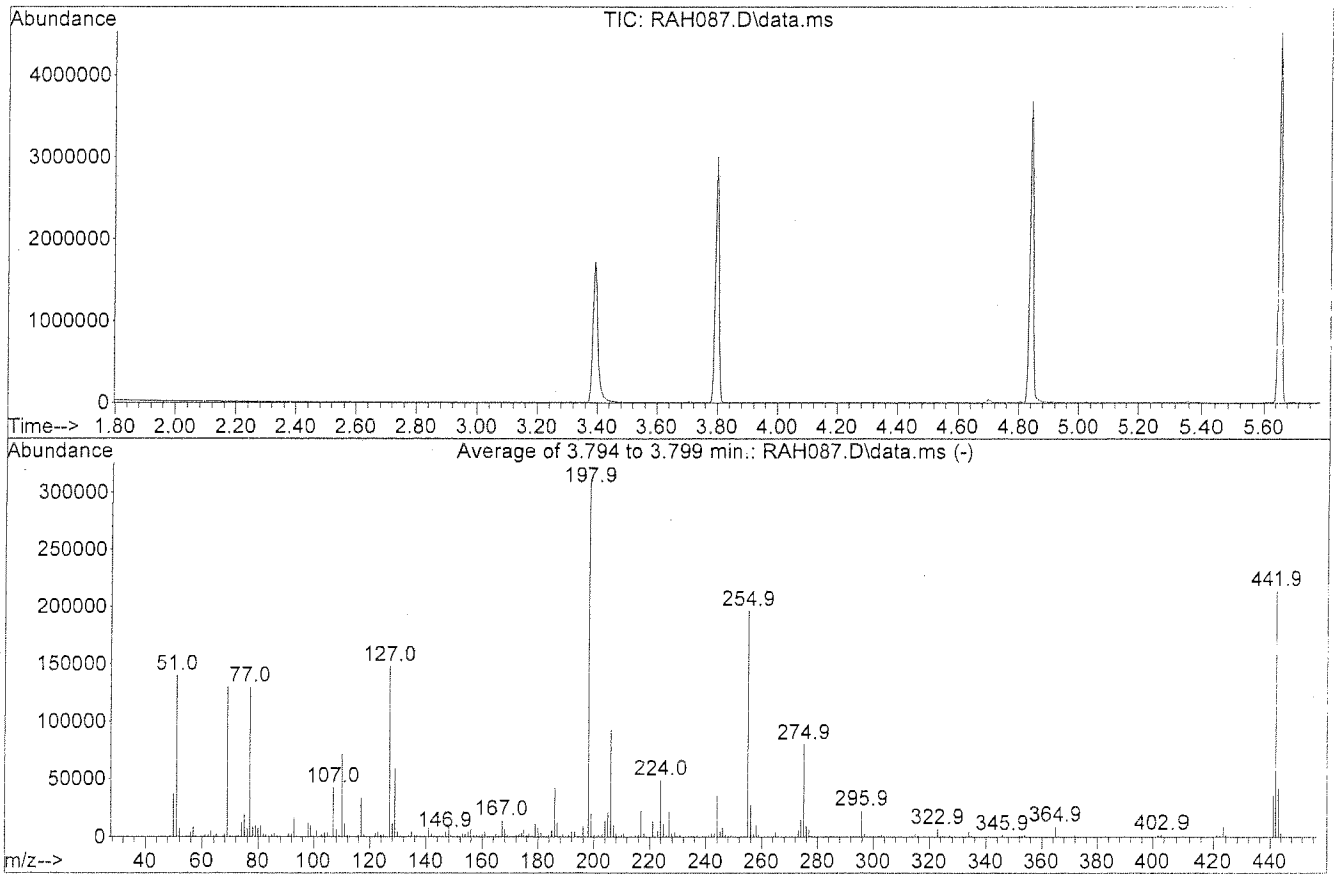
Ion	Exp%	Act%
235.00	100	100
165.00	47.10	47.54
0.00	0.00	0.00
0.00	0.00	0.00

1-22-16

Data Path : D:\DATA\16A19\
Data File : RAH087.D
Acq On : 19 Jan 2016 8:26
Operator : KVu
Sample : DFTE7A1403
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Thu Jan 21 09:55:42 2016



AutoFind: Scans 784, 785, 786; Background Corrected with Scan 775

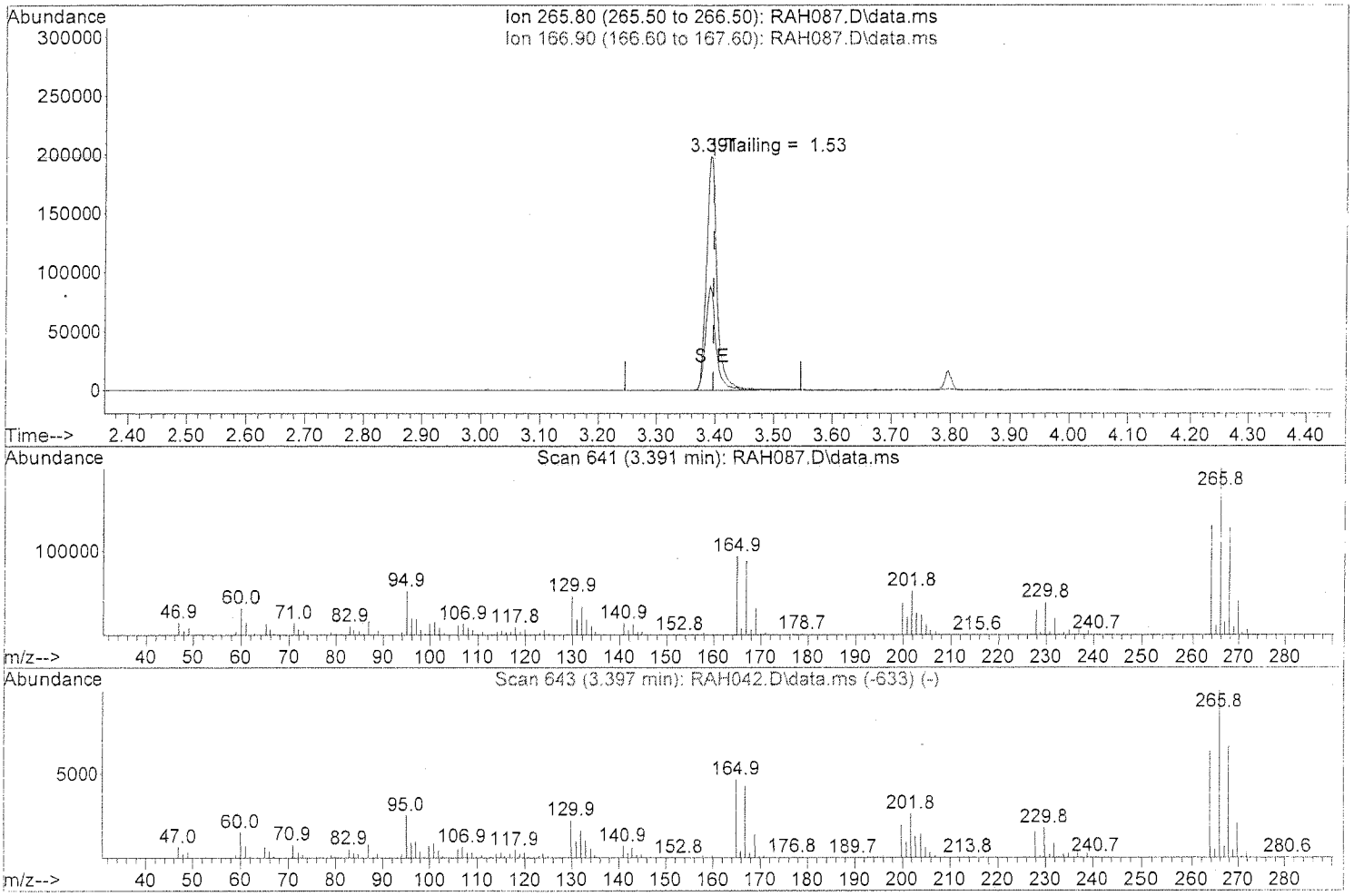
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	45.2	140289	PASS
68	69	0.00	2	1.9	2460	PASS
69	198	0.00	100	42.0	130373	PASS
70	69	0.00	2	0.6	843	PASS
127	198	10	80	47.7	147904	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	310315	PASS
199	198	5	9	6.5	20072	PASS
275	198	10	60	25.9	80408	PASS
365	198	1	100	3.0	9223	PASS
441	442	0.01	24	16.7	35824	PASS
442	198	50	100	69.0	214251	PASS
443	442	15	24	19.5	41811	PASS

RM 1-22-16

Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:07:25 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH087.D\data.ms

(1) Pentachlorophenol (T)

3.391min (-0.006) 59.14 ppm

response 242802

Ion	Exp%	Act%
265.80	100	100
166.90	44.50	43.45
0.00	0.00	0.00
0.00	0.00	0.00

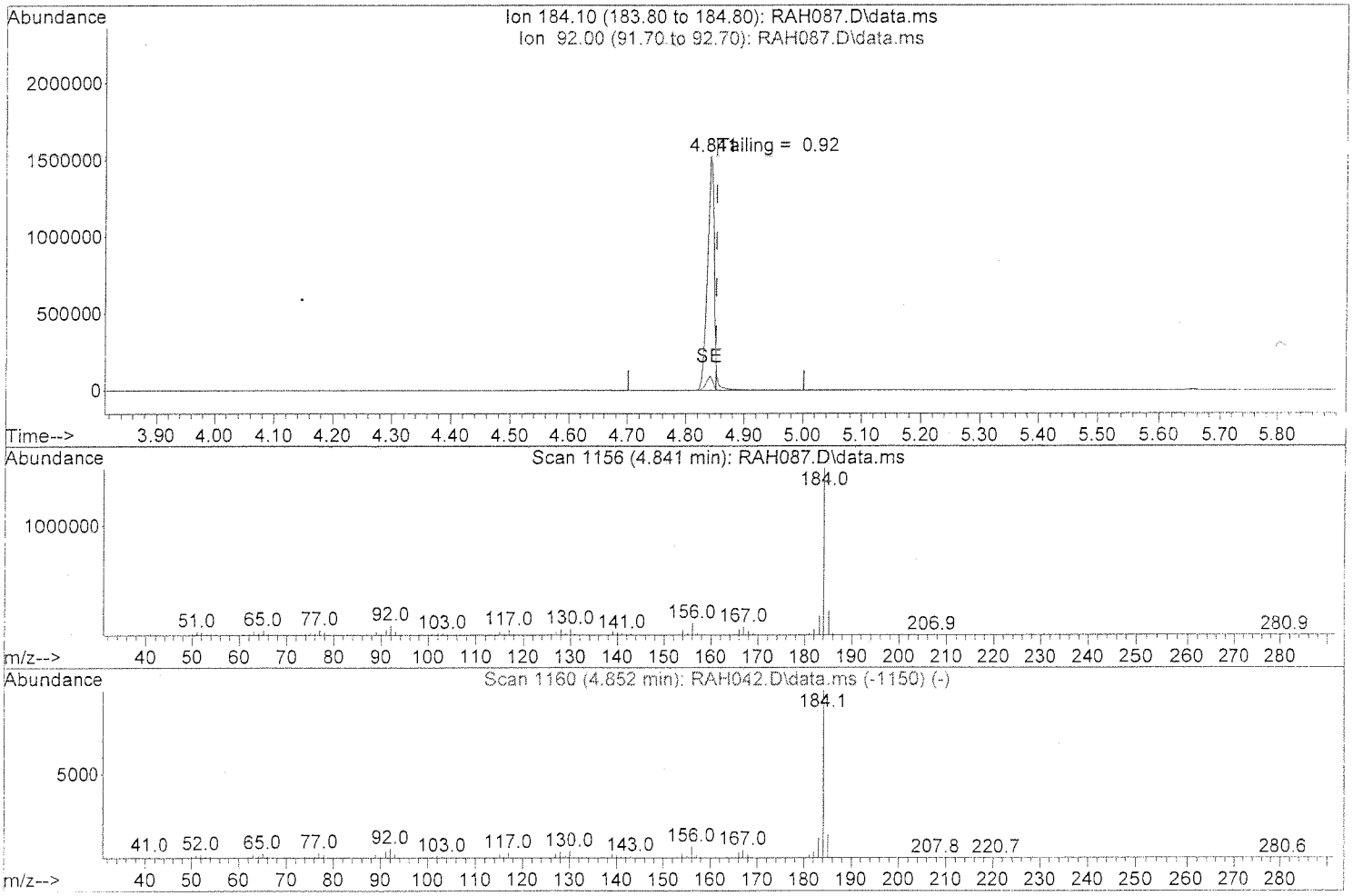
PM 1-22-16

100

Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:07:25 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RAH087.D\data.ms

(3) Benzidine (T)

4.841min (-0.011) 52.63 ppm

response 1260369

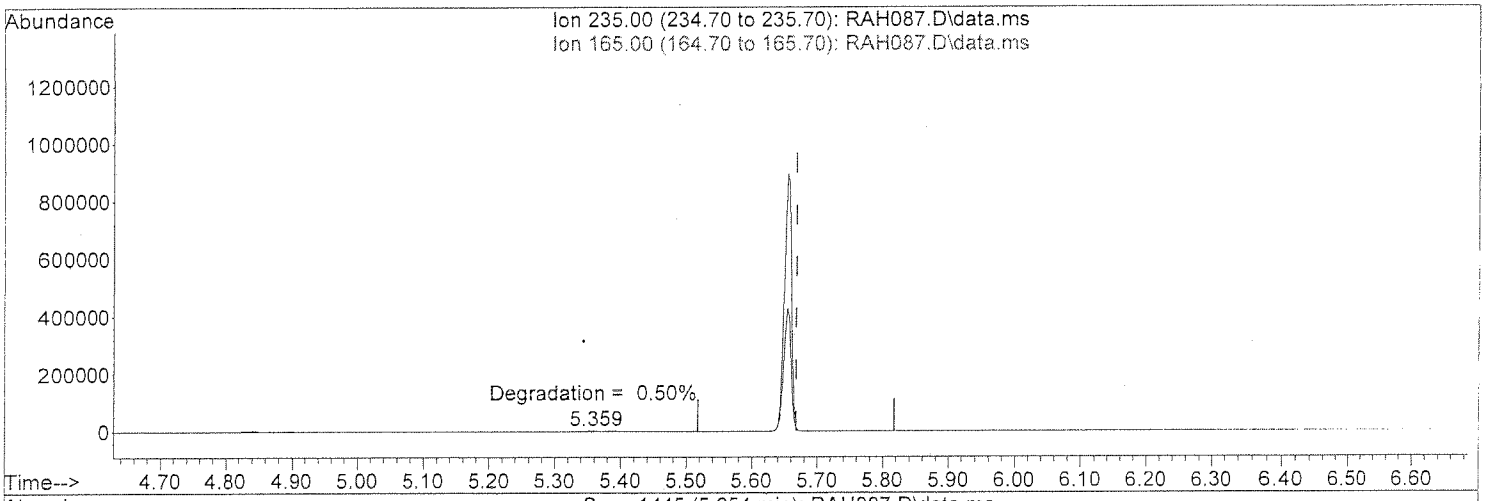
Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.77
0.00	0.00	0.00
0.00	0.00	0.00

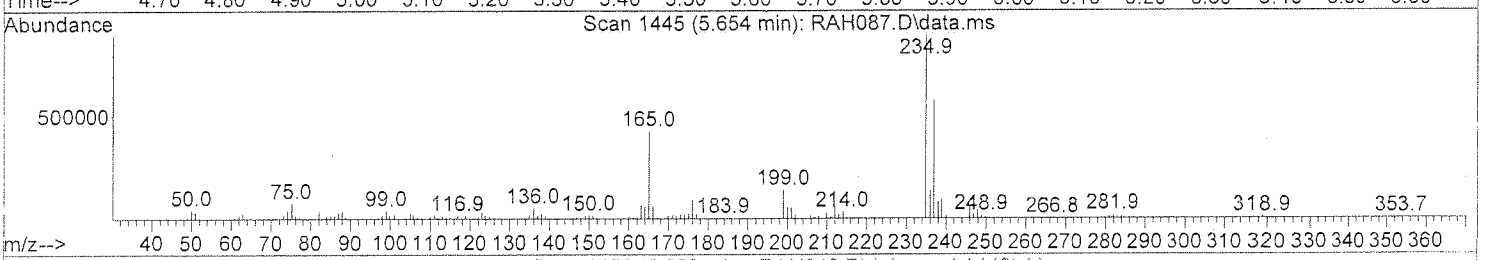
pu 1-22-16

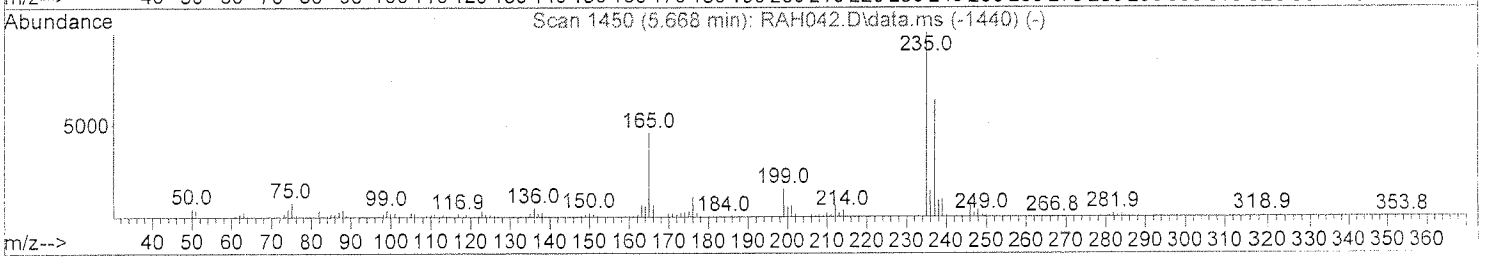
Quantitation Report (Qedit)

Data File : D:\DATA\16A19\RAH087.D
Acq On : 19 Jan 2016 8:26
Sample : DFTE7A1403
Misc :
Integrator: RTE
Quant Time: Jan 21 11:07:25 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RAH087.D\data.ms

(6) DDT (T)

5.654min (-0.014) 57.10 ppm

response 701410

Ion	Exp%	Act%
235.00	100	100
165.00	47.10	47.54
0.00	0.00	0.00
0.00	0.00	0.00

1-22-16

Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D Vial: 6
Acq On : 19 Jan 2016 9:55 Operator: KVu
Sample : ISVE7A142 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:06:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	126	0.00
2	T	1,4-Dioxane	25.000	20.371	18.5	101	0.00
3	T	N-nitrosodimethylamine	25.000	24.957	0.2	118	0.00
4	S	2-Fluorophenol	25.000	25.385	-1.5	119	0.00
5	S	Phenol-d5	25.000	24.224	3.1	113	0.00
6	T,P	Phenol	25.000	24.978	0.1	117	0.00
7	T,P	bis(2-chloroethyl)ether	25.000	24.890	0.4	120	0.00
8	T,P	2-Chlorophenol	25.000	25.194	-0.8	120	0.00
9	P,P	N-Nitroso-di-n-propylamine	25.000	24.985	0.1	115	0.00
10	S	Nitrobenzene-d5 8.333	~~25.000~~	8.086	3.0 ~~67.7#~~	~~37~~ 111	0.00
11	T,P	2,4-Dimethylphenol	25.000	26.038	-4.2	118	0.00
12	T,P	2,4-Dichlorophenol	25.000	26.491	-6.0	117	0.00
13	T,P	Naphthalene	25.000	25.376	-1.5	121	0.00
14	T,P	4-Chloro-3-methylphenol	25.000	24.698	1.2	123	0.00 KV
15	T,P	2-Methylnaphthalene	25.000	24.777	0.9	118	0.00 1/21/16
16	T	1-Methylnaphthalene	25.000	26.245	-5.0	124	0.00
17	T,P	2,4,6-Trichlorophenol	25.000	24.827	0.7	123	0.06
18	T,P	2,4,5-Trichlorophenol	25.000	25.548	-2.2	128	0.00
19	T	2,3,4-Trichlorophenol	25.000	28.895	-15.6	129	-0.01
20	S	2-Fluorobiphenyl 8.333	~~25.000~~	7.584	9.0 ~~69.7#~~	~~36~~ 168	0.00
21	T	Biphenyl	25.000	25.381	-1.5	121	0.00
22	T	2,6-Dimethylnaphthalene	25.000	26.447	-5.8	124	0.00
23	T	Dimethylphthalate	25.000	27.114	-8.5	130	0.00
24	T,P	Acenaphthylene	25.000	26.567	-6.3	123	0.00
25	C,P	Acenaphthene	25.000	24.918	0.3	121	0.00
26	T	2,3,5-Trimethylnaphthalene	25.000	26.708	-6.8	128	0.00
27	T	Diethylphthalate	25.000	27.172	-8.7	132	0.00
28	T,P	Fluorene	25.000	26.385	-5.5	127	0.00
29	I	Phenanthrene-d10	40.000	40.000	0.0	134	0.00
30	T	N-Nitrosodiphenylamine	25.000	22.872	8.5	123	0.00
31	T	Azobenzene	25.000	24.139	3.4	125	0.00
32	S	2,4,6-Tribromophenol	25.000	23.959	4.2	128	0.00
33	T,P	Hexachlorobenzene	25.000	23.267	6.9	130	0.00
34	T,P	Pentachlorophenol	25.000	26.371	-5.5	142	0.00
35	T	Dibenzothiophene	25.000	24.449	2.2	136	0.00
36	T,P	Phenanthrene	25.000	23.438	6.2	133	0.00
37	T,P	Anthracene	25.000	23.778	4.9	128	0.00
38	T	Carbazole	25.000	26.749	-7.0	142	0.00
39	T	Di-n-butylphthalate	25.000	28.595	-14.4	141	0.00
40	T	1-Methylphenanthrene	25.000	25.052	-0.2	133	0.00
41	C,P	Fluoranthene	25.000	25.502	-2.0	135	0.00
42	T,P	Pyrene	25.000	25.117	-0.5	134	0.00
43	S	Terphenyl-d14 8.333	25.000	7.548	9.4 ~~69.8#~~	~~40~~ 120	0.00
44	T	Butylbenzylphthalate	25.000	28.201	-12.8	151	0.00
45	T,P	Benzo(a)anthracene	25.000	26.099	-4.4	141	0.00
46	T,P	Chrysene	25.000	26.503	-6.0	150	0.00
47	T	bis(2-Ethylhexyl)phthalate	25.000	27.526	-10.1	150	0.00
48	I	Perylene-d12	40.000	40.000	0.0	148	0.00

1-22-16

Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D Vial: 6
Acq On : 19 Jan 2016 9:55 Operator: KVu
Sample : ISVE7A142 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:06:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T	Di-n-octylphthalate	25.000	25.815	-3.3	152	0.00
50	T,P	Benzo(b)fluoranthene	25.000	25.523	-2.1	149	0.00
51	T,P	Benzo(k)fluoranthene	25.000	25.389	-1.6	142	0.00
52	T	Benzo(e)pyrene	25.000	25.116	-0.5	145	0.00
53	C,P	Benzo(a)pyrene	25.000	26.080	-4.3	142	0.00
54	T	Perylene	25.000	23.792	4.8	144	-0.03
55	T,P	Indeno(1,2,3-cd)pyrene	25.000	25.920	-3.7	148	0.00
56	T,P	Dibenzo(a,h)anthracene	25.000	25.549	-2.2	144	0.00
57	T,P	Benzo(g,h,i)perylene	25.000	24.918	0.3	143	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

TM
1-22-16

Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D Vial: 6
Acq On : 19 Jan 2016 9:55 Operator: KVu
Sample : ISVE7A142 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:06:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

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	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	126	0.00	
2	T	1,4-Dioxane	0.386	0.344	10.9	101	0.00	
3	T	N-nitrosodimethylamine	0.623	0.622	0.2	118	0.00	
4	S	2-Fluorophenol	1.108	1.125	-1.5	119	0.00	
5	S	Phenol-d5	1.386	1.342	3.2	113	0.00	
6	T,P	Phenol	1.428	1.426	0.1	117	0.00	
7	T,P	bis(2-chloroethyl)ether	1.055	1.050	0.5	120	0.00	
8	T,P	2-Chlorophenol	1.278	1.288	-0.8	120	0.00	
9	P,P	N-Nitroso-di-n-propylamine	0.806	0.805	0.1	115	0.00	
10	S	Nitrobenzene-d5	1.342	~~0.434~~ 1.302	~~67.7#~~	~~37#~~	0.00	111
11	T,P	2,4-Dimethylphenol	1.300	1.354	-4.2	118	0.00	
12	T,P	2,4-Dichlorophenol	1.174	1.244	-6.0	117	0.00	
13	T,P	Naphthalene	3.849	3.907	-1.5	121	0.00	
14	T,P	4-Chloro-3-methylphenol	1.111	1.138	-2.4	123	0.00	
15	T,P	2-Methylnaphthalene	2.736	2.712	0.9	118	0.00	
16	T	1-Methylnaphthalene	2.404	2.523	-5.0	124	0.00	
17	T,P	2,4,6-Trichlorophenol	0.933	1.073	-15.0	123	0.06	
18	T,P	2,4,5-Trichlorophenol	0.972	1.150	-18.3	128	0.00	
19	T	2,3,4-Trichlorophenol	0.830	0.960	-15.7	129	-0.01	
20	S	2-Fluorobiphenyl	3.533	~~1.072~~ 3.216	~~69.7#~~	~~36#~~	0.00	108
21	T	Biphenyl	3.481	3.534	-1.5	121	0.00	
22	T	2,6-Dimethylnaphthalene	2.385	2.523	-5.8	124	0.00	
23	T	Dimethylphthalate	3.276	3.553	-8.5	130	0.00	
24	T,P	Acenaphthylene	4.213	4.477	-6.3	123	0.00	
25	C,P	Acenaphthene	2.955	2.946	0.3	121	0.00	
26	T	2,3,5-Trimethylnaphthalene	2.349	2.509	-6.8	128	0.00	
27	T	Diethylphthalate	3.220	3.500	-8.7	132	0.00	KV
28	T,P	Fluorene	3.219	3.397	-5.5	127	0.00	
29	I	Phenanthrene-d10	1.000	1.000	0.0	134	0.00	1/21/16
30	T	N-Nitrosodiphenylamine	0.690	0.577	16.4	123	0.00	
31	T	Azobenzene	0.665	0.642	3.5	125	0.00	
32	S	2,4,6-Tribromophenol	0.122	0.135	-10.7	128	0.00	
33	T,P	Hexachlorobenzene	0.314	0.292	7.0	130	0.00	
34	T,P	Pentachlorophenol	0.128	0.165	-28.9#	142	0.00	
35	T	Dibenzothiophene	1.108	1.083	2.3	136	0.00	
36	T,P	Phenanthrene	1.246	1.168	6.3	133	0.00	
37	T,P	Anthracene	1.206	1.147	4.9	128	0.00	
38	T	Carbazole	0.929	0.994	-7.0	142	0.00	
39	T	Di-n-butylphthalate	1.098	1.256	-14.4	141	0.00	
40	T	1-Methylphenanthrene	0.826	0.828	-0.2	133	0.00	
41	C,P	Fluoranthene	1.356	1.383	-2.0	135	0.00	
42	T,P	Pyrene	1.431	1.438	-0.5	134	0.00	
43	S	Terphenyl-d14	0.985	~~0.297~~ 0.891	~~69.8#~~	~~40#~~	0.00	120
44	T	Butylbenzylphthalate	0.395	0.533	-34.9#	151	0.00	
45	T,P	Benzo(a)anthracene	1.818	1.455	20.0	141	0.00	
46	T,P	Chrysene	1.350	1.431	-6.0	150	0.00	
47	T	bis(2-Ethylhexyl)phthalate	0.650	0.850	-30.8#	150	0.00	
48	I	Perylene-d12	1.000	1.000	0.0	148	0.00	

PK 1-22-16

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Evaluate Continuing Calibration Report

Data File : D:\DATA\16A19\RAH091.D Vial: 6
Acq On : 19 Jan 2016 9:55 Operator: KVu
Sample : ISVE7A142 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:06:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

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)
49	T	Di-n-octylphthalate	0.901	1.180	-31.0#	152	0.00
50	T,P	Benzo(b)fluoranthene	1.162	1.186	-2.1	149	0.00
51	T,P	Benzo(k)fluoranthene	1.166	1.185	-1.6	142	0.00
52	T	Benzo(e)pyrene	1.079	1.084	-0.5	145	0.00
53	C,P	Benzo(a)pyrene	1.090	1.137	-4.3	142	0.00
54	T	Perylene	1.166	1.110	4.8	144	-0.03
55	T,P	Indeno(1,2,3-cd)pyrene	1.232	1.277	-3.7	148	0.00
56	T,P	Dibenzo(a,h)anthracene	1.032	1.054	-2.1	144	0.00
57	T,P	Benzo(g,h,i)perylene	0.971	0.968	0.3	143	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

TM 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A19\RAH091.D
Acq On : 19 Jan 2016 9:55
Sample : ISVE7A142
Misc :
Integrator: RTE
Quant Time: Jan 21 14:06:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.849	152	629721	40.00	ppm	0.00
29) Phenanthrene-d10	7.802	188	2938535	40.00	ppm	0.00
48) Perylene-d12	11.948	264	3475193	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.935	112	442882	25.38	ppm	0.00
Spiked Amount 30.000			Recovery = 84.60%			
5) Phenol-d5	2.509	99	528373	24.22	ppm	0.00
Spiked Amount 30.000			Recovery = 80.73%			
10) Nitrobenzene-d5	3.329	82	170859	8.09	ppm	0.00
Spiked Amount 10.000			Recovery = 80.90%			
20) 2-Fluorobiphenyl	5.261	172	421838	7.58	ppm	0.00
Spiked Amount 10.000			Recovery = 75.80%			
32) 2,4,6-Tribromophenol	7.001	330	247852	23.96	ppm	0.00
Spiked Amount 30.000			Recovery = 79.87%			
43) Terphenyl-d14	9.508	244	546376	7.55	ppm	0.00
Spiked Amount 10.000			Recovery = 75.50%			
Target Compounds						Qvalue
2] 1,4-Dioxane	1.240	88	135311	20.37	ppm	89
3] N-nitrosodimethylamine	1.351	74	244872	24.96	ppm	92
6] Phenol	2.519	94	561432	24.98	ppm	99
7] bis(2-chloroethyl)ether	2.613	93	413311	24.89	ppm	100
8] 2-Chlorophenol	2.676	128	506779	25.19	ppm	99
9] N-Nitroso-di-n-propyla...	3.180	70	316850	24.98	ppm	100
11] 2,4-Dimethylphenol	3.679	107	533035	26.04	ppm	100
12] 2,4-Dichlorophenol	3.890	162	489686	26.49	ppm	100
13] Naphthalene	4.078	128	1537679	25.38	ppm	100
14] 4-Chloro-3-methylphenol	4.647	107	448030	24.70	ppm	100
15] 2-Methylnaphthalene	4.839	142	1067208	24.78	ppm	100
16] 1-Methylnaphthalene	4.949	142	993108	26.24	ppm	100
17] 2,4,6-Trichlorophenol	5.155	196	422466	24.83	ppm	99
18] 2,4,5-Trichlorophenol	5.189	196	452632	25.55	ppm	99
19] 2,3,4-Trichlorophenol	5.266	196	377753	28.89	ppm	100
21] Biphenyl	5.382	154	1390851	25.38	ppm	100
22] 2,6-Dimethylnaphthalene	5.564	156	993131	26.45	ppm	99
23] Dimethylphthalate	5.756	163	1398416	27.11	ppm	100
24] Acenaphthylene	5.887	152	1761970	26.57	ppm	100
25] Acenaphthene	6.098	153	1159300	24.92	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.562	170	987534	26.71	ppm	99
27] Diethylphthalate	6.609	149	1377431	27.17	ppm	100
28] Fluorene	6.717	166	1337126	26.38	ppm	100
30] N-Nitrosodiphenylamine	6.872	169	1059075	22.87	ppm	100
31] Azobenzene	6.920	77	1179717	24.14	ppm	100
33] Hexachlorobenzene	7.356	284	536110	23.27	ppm	100
34] Pentachlorophenol	7.582	266	303241	26.37	ppm	100
35] Dibenzothiophene	7.681	184	1989305	24.45	ppm	100
36] Phenanthrene	7.824	178	2145848	23.44	ppm	100
37] Anthracene	7.883	178	2106002	23.78	ppm	100
38] Carbazole	8.065	167	1825369	26.75	ppm	100
39] Di-n-butylphthalate	8.467	149	2306495	28.60	ppm	100
40] 1-Methylphenanthrene	8.496	192	1520422	25.05	ppm	100
41] Fluoranthene	9.100	202	2540839	25.50	ppm	100

m 1-22-16

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A19\RAH091.D
Acq On : 19 Jan 2016 9:55
Sample : ISVE7A142
Misc :
Integrator: RTE
Quant Time: Jan 21 14:06:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 6
Operator: KVu
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
42]	Pyrene	9.336	202	2640867	25.12 ppm	100
44]	Butylbenzylphthalate	10.022	149	979135	28.20 ppm	100
45]	Benzo(a)anthracene	10.567	228	2672895	26.10 ppm	100
46]	Chrysene	10.601	228	2627645	26.50 ppm	99
47]	bis(2-Ethylhexyl)phtha...	10.601	149	1560882	27.53 ppm	100
49]	Di-n-octylphthalate	11.222	149	2563750	25.82 ppm	100
50]	Benzo(b)fluoranthene	11.578	252	2575954	25.52 ppm	100
51]	Benzo(k)fluoranthene	11.602	252	2573019	25.39 ppm	100
52]	Benzo(e)pyrene	11.836	252	2353781	25.12 ppm	100
53]	Benzo(a)pyrene	11.887	252	2469115	26.08 ppm	100
54]	Perylene	11.972	252	2410616	23.79 ppm	100
55]	Indeno(1,2,3-cd)pyrene	13.156	276	2773313	25.92 ppm	99
56]	Dibenzo(a,h)anthracene	13.176	278	2289784	25.55 ppm	100
57]	Benzo(g,h,i)perylene	13.520	276	2101501	24.92 ppm	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

RY 1-22-16

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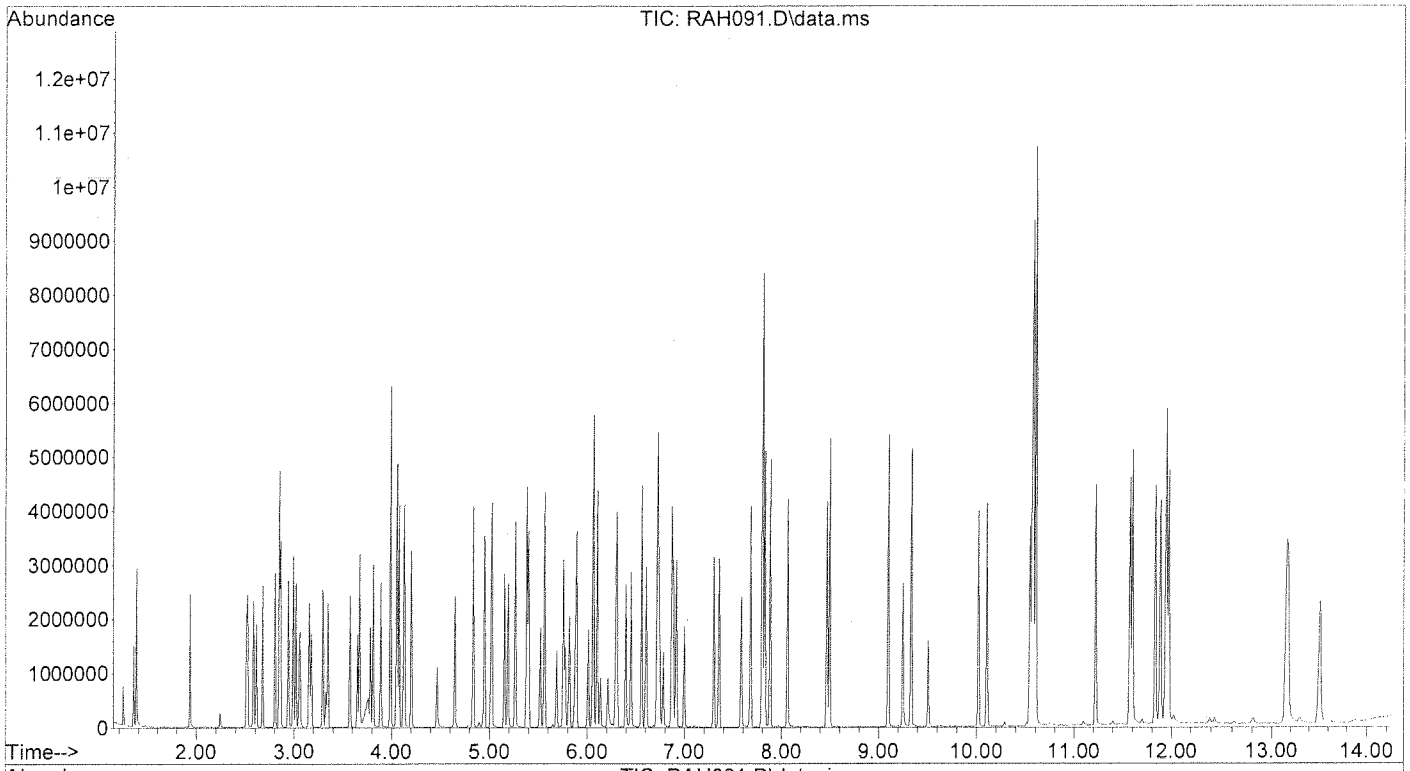
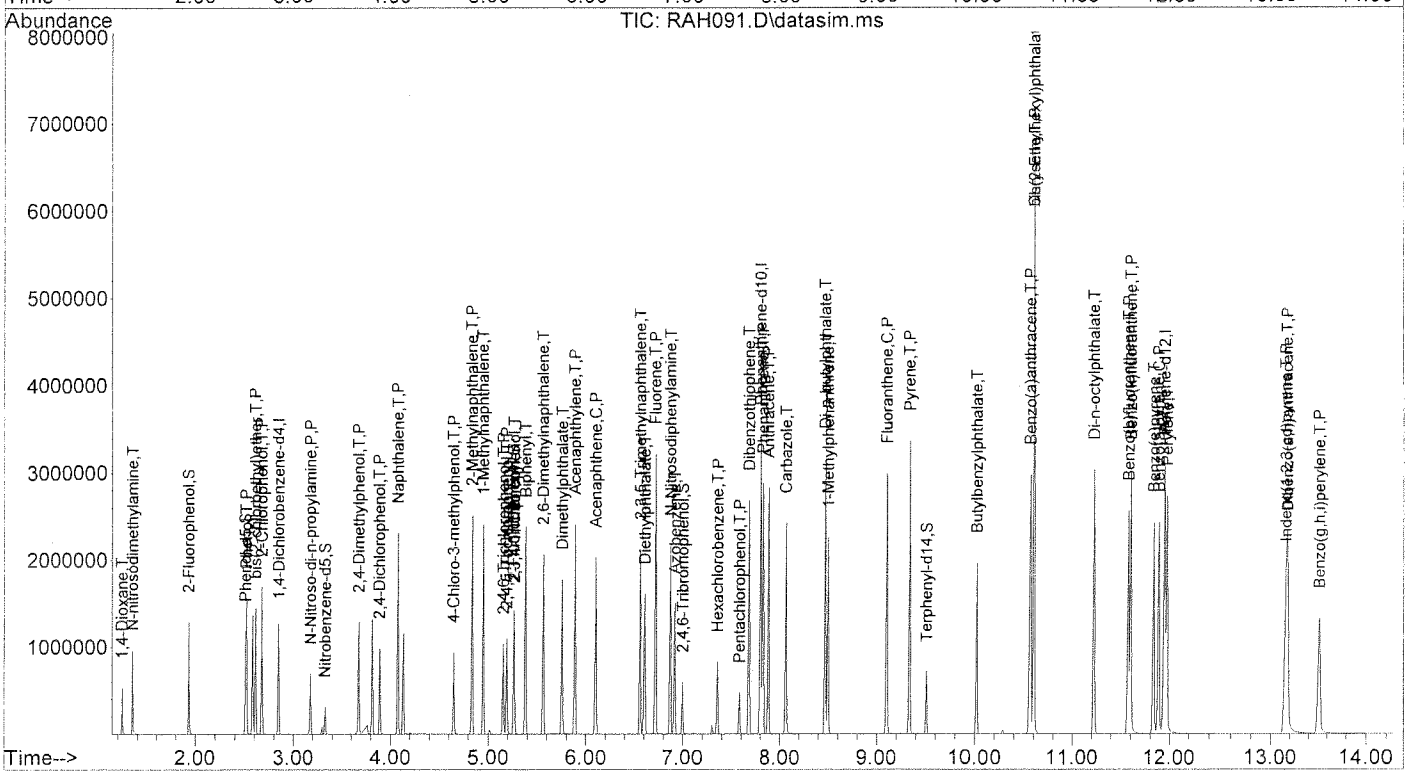
Quantitation Report (QT Reviewed)

Data File : D:\DATA\16A19\RAH091.D Vial: 6
Acq On : 19 Jan 2016 9:55 Operator: KVu
Sample : ISVE7A142 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Jan 21 14:06:49 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M





TM 1-22-16

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DAILY CALIBRATIONS

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RBH132
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
DFTPP Injection Date: 02/12/16
DFTPP Injection Time: 08:40

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	43.87
68	Less than 2% of mass 69	0.75(1.9)1
69	% of mass 198	39.90
70	Less than 2% of mass 69	0.24(0.6)1
127	10.0 - 80.0% of mass 198	44.64
197	Less than 2.0% of mass 198	0.00
198	Base Peak, 100	100.00
199	5.0 - 9.0% of mass 198	7.18
275	10.0 - 60.0% of mass 198	25.03
365	Greater than 1.00% of mass 198	2.97
441	Present, but less than 24% of mass 442	10.80(15.9)2
442	Greater than 50% of mass 198	67.73
443	15.0 - 24.0% of mass 442	12.78(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD,BLANKS, AND STANDARDS:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
1	SSTD025	CSVE7A1418	RBH133	02/12/16	09:49
2	MBLK1S	SVB011SB	RBH135	02/12/16	10:27
3	LCS1S	SVB011SL	RBH136	02/12/16	10:46
4	LCD1S	SVB011SC	RBH137	02/12/16	11:05
5	CA504-SG03-S-010MS	B060-02M	RBH138	02/12/16	11:24
6	CA504-SG03-S-010MSD	B060-02S	RBH139	02/12/16	11:43
7	CA504-SG03-S-005	B060-01	RBH147	02/12/16	14:17
8	CA504-SG03-S-010	B060-02	RBH148	02/12/16	14:36
9	CA504-SG01-S-005	B060-04	RBH149	02/12/16	14:56
10	CA504-SG01-S-010	B060-05	RBH150	02/12/16	15:15
11	CA504-SG01-S-210	B060-06	RBH151	02/12/16	15:34
12	CA504-SG02-S-005	B060-07	RBH152	02/12/16	15:53
13	CA504-SG02-S-010	B060-08	RBH153	02/12/16	16:13
14	CA504-SG02-S-210	B060-09	RBH154	02/12/16	16:32

FORM V SV OLM03.0

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	12 HOUR STD	499745	2.85	0	0.00	0	0.00
	UPPER LIMIT	999490	3.02	0	0.00	0	0.00
	LOWER LIMIT	249873	2.68	0	0.00	0	0.00
	SAMPLE ID						
1	SSTD025	468705	2.84	0	0.00	0	0.00
2	MBLK1S	449859	2.84	0	0.00	0	0.00
3	LCS1S	503063	2.84	0	0.00	0	0.00
4	LCD1S	513091	2.84	0	0.00	0	0.00
5	CA504-SG03-S-010MS	471169	2.84	0	0.00	0	0.00
6	CA504-SG03-S-010MSD	475629	2.84	0	0.00	0	0.00
7	CA504-SG03-S-005	505494	2.84	0	0.00	0	0.00
8	CA504-SG03-S-010	455306	2.84	0	0.00	0	0.00
9	CA504-SG01-S-005	474453	2.84	0	0.00	0	0.00
10	CA504-SG01-S-010	475058	2.84	0	0.00	0	0.00
11	CA504-SG01-S-210	450470	2.84	0	0.00	0	0.00
12	CA504-SG02-S-005	494038	2.84	0	0.00	0	0.00
13	CA504-SG02-S-010	490027	2.84	0	0.00	0	0.00
14	CA504-SG02-S-210	480255	2.84	0	0.00	0	0.00

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +10 seconds of internal standard RT
RT LOWER LIMIT = -10 seconds of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: EMAX Inc
Lab Code: EMXT
Lab File ID: RAH047
Instrument ID: TOE7

Project: CANNON AFB PBR
SDG No.: 16B060
Date Analyzed: 01/14/16
Time Analyzed: 12:01

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	12 HOUR STD	2192741	7.80	0	0.00	2343053	11.95
	UPPER LIMIT	4385482	7.97	0	0.00	4686106	12.12
	LOWER LIMIT	1096371	7.63	0	0.00	1171527	11.78
	SAMPLE ID						
1	SSTD025	2140021	7.80	0	0.00	2169063	11.95
2	MBLK1S	1940604	7.79	0	0.00	2174976	11.94
3	LCS1S	2287099	7.79	0	0.00	2507779	11.95
4	LCD1S	2331140	7.80	0	0.00	2523460	11.95
5	CA504-SG03-S-010MS	2148681	7.79	0	0.00	2301910	11.95
6	CA504-SG03-S-010MSD	2139669	7.79	0	0.00	2328781	11.95
7	CA504-SG03-S-005	2208964	7.80	0	0.00	2293988	11.95
8	CA504-SG03-S-010	1992596	7.80	0	0.00	2069592	11.95
9	CA504-SG01-S-005	2069367	7.80	0	0.00	2183591	11.95
10	CA504-SG01-S-010	2072861	7.80	0	0.00	2159016	11.94
11	CA504-SG01-S-210	1962238	7.79	0	0.00	2104353	11.94
12	CA504-SG02-S-005	2152501	7.80	0	0.00	2277644	11.94
13	CA504-SG02-S-010	2146894	7.80	0	0.00	2256001	11.94
14	CA504-SG02-S-210	2094016	7.79	0	0.00	2217101	11.94

IS4 (PHN) = Phenanthrene-d10
IS5 (CRY) = Chrysene-d12
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = - 50% of internal standard area
RT UPPER LIMIT = +10 seconds of internal standard RT
RT LOWER LIMIT = -10 seconds of internal standard RT

Column used to flag internal standard area values with an asterisk
* Values outside of QC limits.

FORM VIII SV-2 OLM02.0

CONTINUE_CALIBRATION - CALIBRATION VERIFICATION

Instrument ID :E7
IC_Beginning DateTime :01/14/16 11:14
Spike Amount :25 PPM
CC/CV File :RBH133
IC File :RAH047

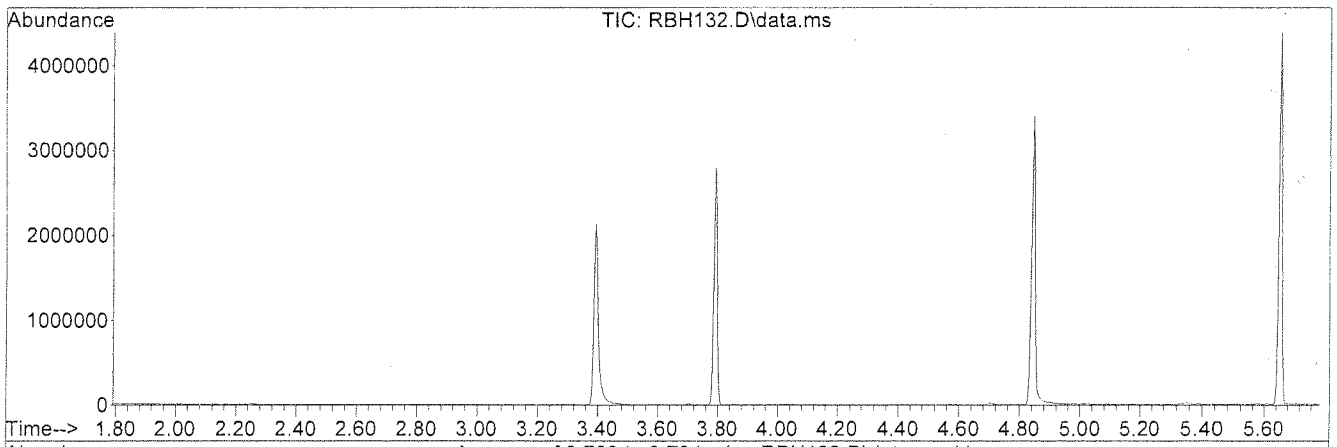
Column Spec :ZB-SEMIVOA ID :0.18MM
IC_Ending DateTime :01/14/16 14:34
HPChem Method :SVE7A14S
Date_Time :02/12/16 09:49

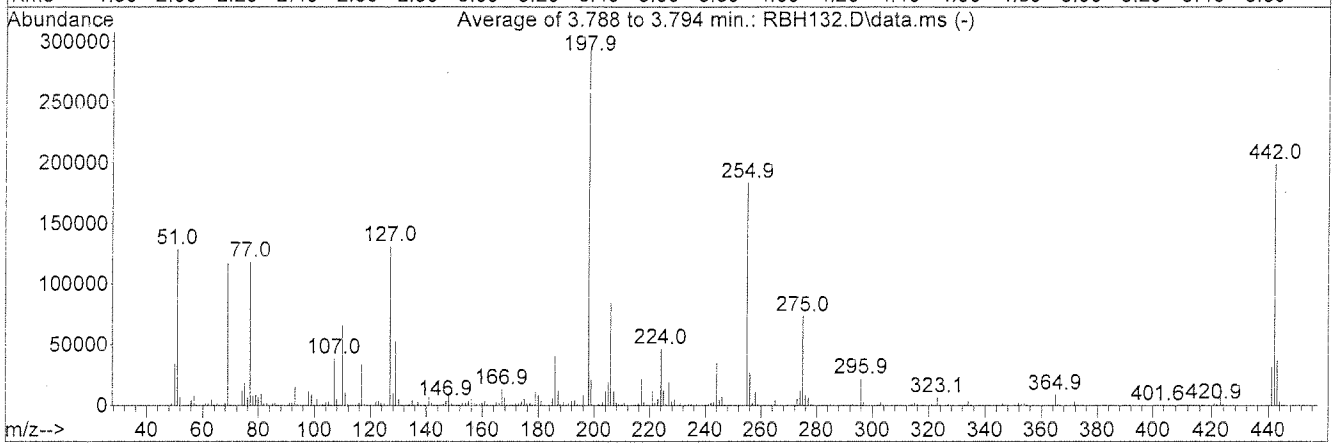
M IDX	Parameters	CC_Con	CC%_D	CC_Resp	CCRRF	AvRRF	CC_Rtm	AvRtm	%_RSD	Co_X0	Co_X1	Co_X2	Co_Cor
1	1,4-Dichlorobenzene-d4	40.000	0	468705	1	1	2.840	2.848	0				
2	1,4-Dioxane	21.450	-14.2	106054	0.362	0.386	1.231	1.236	17.79	-0.0002	0.4224		0.9998
3	N-nitrosodimethylamine	23.087	-7.7	168604	0.576	0.623	1.341	1.347	5.77				
4	2-Fluorophenol	24.020	-3.9	311915	1.065	1.108	1.930	1.930	6.54				
5	Phenol-d5	24.119	-3.5	391572	1.337	1.386	2.509	2.503	6.67				
6	Phenol	23.853	-4.6	399051	1.362	1.428	2.519	2.514	6.25				
7	bis(2-chloroethyl)ether	23.278	-6.9	287701	0.982	1.055	2.608	2.611	4.13				
8	2-Chlorophenol	24.059	-3.8	360205	1.230	1.278	2.671	2.672	8.98				
9	N-Nitroso-di-n-propylamine	24.279	-2.9	229171	0.782	0.806	3.175	3.175	7.80				
10	Nitrobenzene-d5	24.802	-0.8	390068	1.332	1.342	3.324	3.326	8.80				
11	2,4-Dimethylphenol	24.540	-1.8	373908	1.276	1.300	3.674	3.674	9.46				
12	2,4-Dichlorophenol	26.269	5.1	361418	1.234	1.174	3.890	3.887	12.03				
13	Naphthalene	24.104	-3.6	1087147	3.711	3.849	4.073	4.075	4.65				
14	4-Chloro-3-methylphenol	23.146	-7.4	312499	1.067	1.111	4.647	4.644	17.18	-0.0003	1.1527		0.9991
15	2-Methylnaphthalene	24.600	-1.6	788681	2.692	2.736	4.834	4.837	6.24				
16	1-Methylnaphthalene	24.536	-1.9	691044	2.359	2.404	4.944	4.949	6.27				
17	2,4,6-Trichlorophenol	24.238	-3.0	306983	1.048	0.933	5.150	5.152	15.68	-0.0010	1.0824		0.9987
18	2,4,5-Trichlorophenol	23.998	-4.0	316433	1.080	0.972	5.189	5.187	15.53	-0.0010	1.1269		0.9987
19	2,3,4-Trichlorophenol	27.201	8.8	264686	0.904	0.830	5.261	5.263	12.25				
20	2-Fluorobiphenyl	24.288	-2.8	1005463	3.432	3.533	5.257	5.263	6.86				
21	Biphenyl	24.383	-2.5	994529	3.395	3.481	5.372	5.379	7.03				
22	2,6-Dimethylnaphthalene	25.011	0.0	699059	2.386	2.385	5.554	5.562	7.88				
23	Dimethylphthalate	24.450	-2.2	938569	3.204	3.276	5.747	5.749	9.67				
24	Acenaphthylene	25.384	1.5	1253056	4.278	4.213	5.882	5.885	8.97				
25	Acenaphthene	24.235	-3.1	839226	2.865	2.955	6.089	6.095	8.29				
26	2,3,5-Trimethylnaphthalene	24.890	-0.4	685017	2.338	2.349	6.553	6.559	10.63				
27	Diethylphthalate	24.270	-2.9	915734	3.126	3.220	6.595	6.603	11.78				
28	Fluorene	24.679	-1.3	930872	3.178	3.219	6.712	6.716	9.51				
29	Phenanthrene-d10	40.000	0	2140021	1	1	7.797	7.799	0				
30	N-Nitrosodiphenylamine	22.793	-8.8	768642	0.575	0.690	6.863	6.869	23.30	0.0004	0.6296		0.9997
31	Azobenzene	22.028	-11.9	784008	0.586	0.665	6.911	6.916	9.55				
32	2,4,6-Tribromophenol	24.471	-2.1	184366	0.138	0.122	6.996	6.997	15.68	-0.0001	0.1410		0.9988
33	Hexachlorobenzene	21.936	-12.3	368100	0.275	0.314	7.351	7.354	13.04				
34	Pentachlorophenol	23.423	-6.3	196072	0.147	0.128	7.578	7.579	23.24	-0.0003	0.1570		0.9977
35	Dibenzothiophene	22.193	-11.2	1315039	0.983	1.108	7.677	7.680	11.63				
36	Phenanthrene	21.385	-14.5	1425834	1.066	1.246	7.820	7.824	14.29				
37	Anthracene	22.604	-9.6	1457965	1.090	1.206	7.879	7.881	10.31				
38	Carbazole	23.486	-6.1	1167161	0.873	0.929	8.060	8.061	8.51				
39	Di-n-butylphthalate	24.069	-3.7	1413851	1.057	1.098	8.457	8.468	11.51				
40	1-Methylphenanthrene	22.848	-8.6	1009859	0.755	0.826	8.491	8.495	9.32				
41	Fluoranthene	22.715	-9.1	1648186	1.232	1.356	9.100	9.102	10.08				
42	Pyrene	22.434	-10.3	1717798	1.284	1.431	9.336	9.335	9.46				
43	Terphenyl-d14	23.441	-6.2	1235788	0.924	0.985	9.503	9.509	9.34				
44	Butylbenzylphthalate	23.386	-6.5	591144	0.442	0.395	10.013	10.020	19.26	-0.0005	0.4733		0.9980
45	Benzo(a)anthracene	22.679	-9.3	1692240	1.265	1.818	10.562	10.564	47.09	0.0027	1.3899		0.9995
46	Chrysene	21.800	-12.8	1574002	1.177	1.350	10.601	10.597	13.05				
47	bis(2-Ethylhexyl)phthalate	22.695	-9.2	936906	0.700	0.650	10.596	10.604	18.70	-0.0008	0.7730		0.9980
48	Perylene-d12	40.000	0	2169063	1	1	11.947	11.943	0				
49	Di-n-octylphthalate	24.658	-1.4	1528309	1.127	0.901	11.212	11.224	26.15	-0.0016	1.1455		0.9974
50	Benzo(b)fluoranthene	24.925	-0.3	1570150	1.158	1.162	11.577	11.572	9.36				
51	Benzo(k)fluoranthene	25.338	1.4	1602765	1.182	1.166	11.601	11.597	8.98				
52	Benzo(e)pyrene	24.860	-0.6	1454131	1.073	1.079	11.835	11.830	9.28				
53	Benzo(a)pyrene	26.139	4.6	1544556	1.139	1.090	11.886	11.881	10.29				
54	Perylene	23.389	-6.4	1479150	1.091	1.166	11.970	11.965	11.53				
55	Indeno(1,2,3-cd)pyrene	25.499	2.0	1702830	1.256	1.232	13.155	13.146	10.99				
56	Dibenzo(a,h)anthracene	25.660	2.6	1435417	1.059	1.032	13.170	13.168	8.89				
57	Benzo(g,h,i)perylene	25.559	2.2	1345453	0.992	0.971	13.514	13.506	8.77				

Data Path : D:\DATA\16B12\
Data File : RBH132.D
Acq On : 12 Feb 2016 8:40
Operator : KVu
Sample : DFTE7A1418
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPPD.M
Title : Semivolatiles DFTPP
Last Update : Thu Jan 21 09:55:42 2016





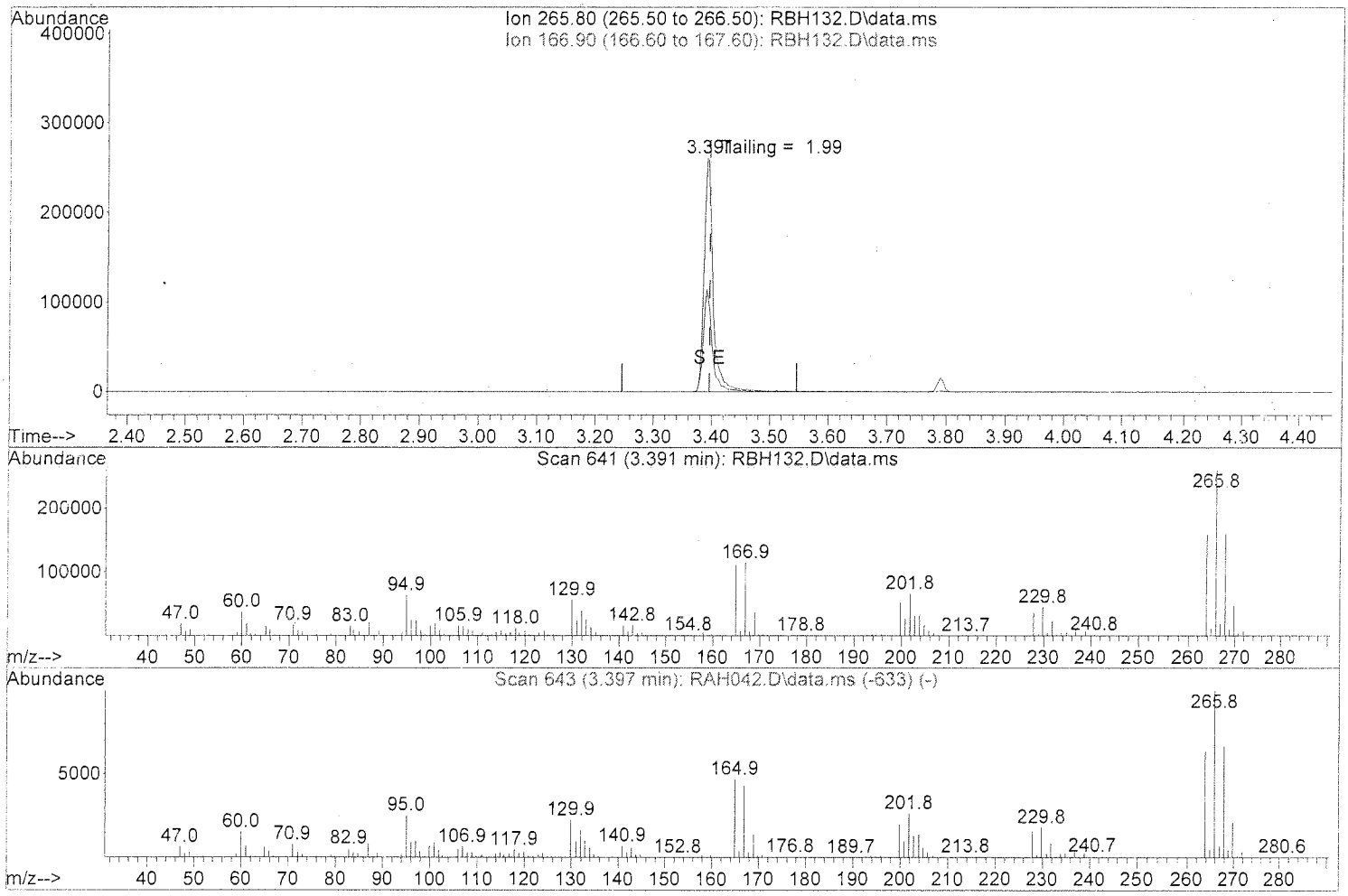
AutoFind: Scans 782, 783, 784; Background Corrected with Scan 773

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	43.9	128804	PASS
68	69	0.00	2	1.9	2216	PASS
69	198	0.00	100	39.9	117163	PASS
70	69	0.00	2	0.6	716	PASS
127	198	10	80	44.6	131080	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	293611	PASS
199	198	5	9	7.2	21091	PASS
275	198	10	60	25.0	73485	PASS
365	198	1	100	3.0	8708	PASS
441	442	0.01	24	15.9	31701	PASS
442	198	50	100	67.7	198869	PASS
443	442	15	24	18.9	37525	PASS

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH132.D
Acq On : 12 Feb 2016 8:40
Sample : DFTE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 11:17:01 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH132.D\data.ms

(1) Pentachlorophenol (T)

3.391min (-0.006) 68.12 ppm

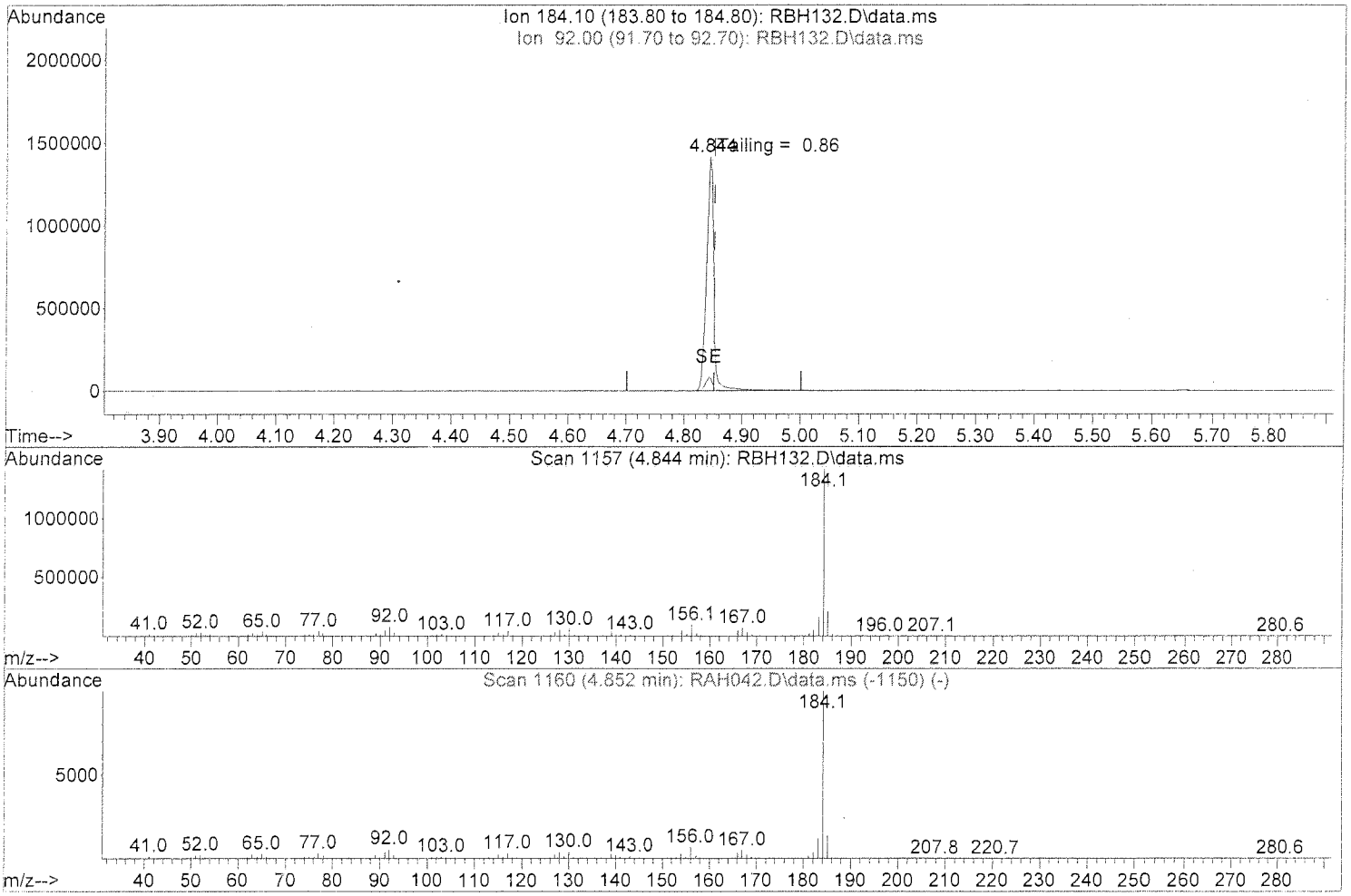
response 279654

Ion	Exp%	Act%
265.80	100	100
166.90	44.50	43.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH132.D
Acq On : 12 Feb 2016 8:40
Sample : DFTE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 11:17:01 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00



TIC: RBH132.D\data.ms

(3) Benzidine (T)

4.844min (-0.008) 51.00 ppm

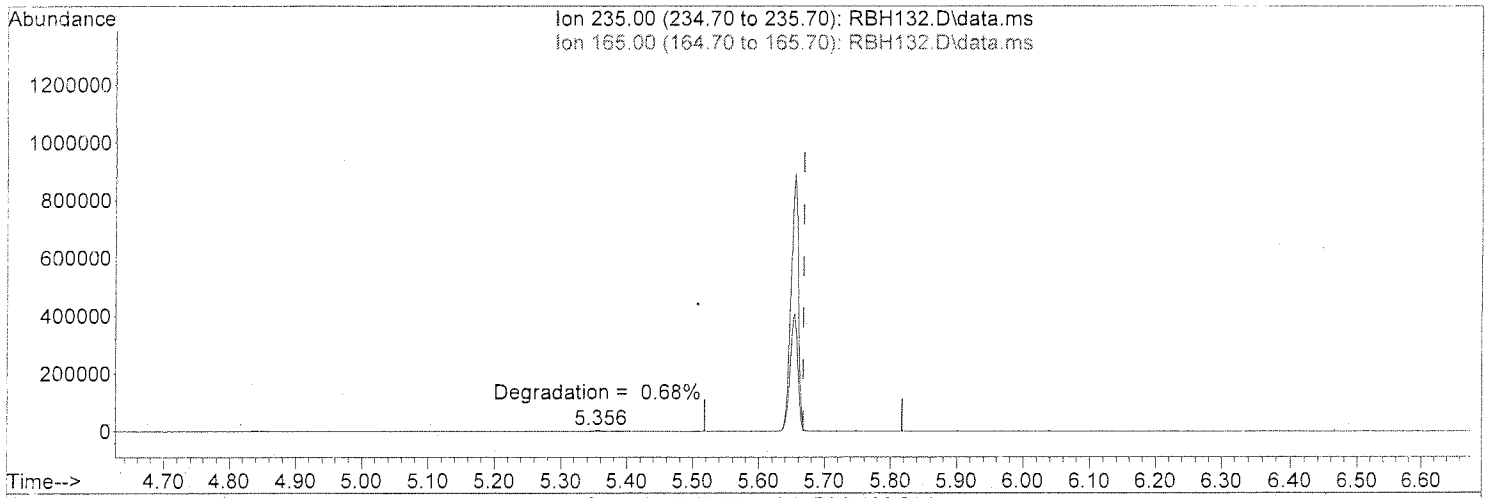
response 1221544

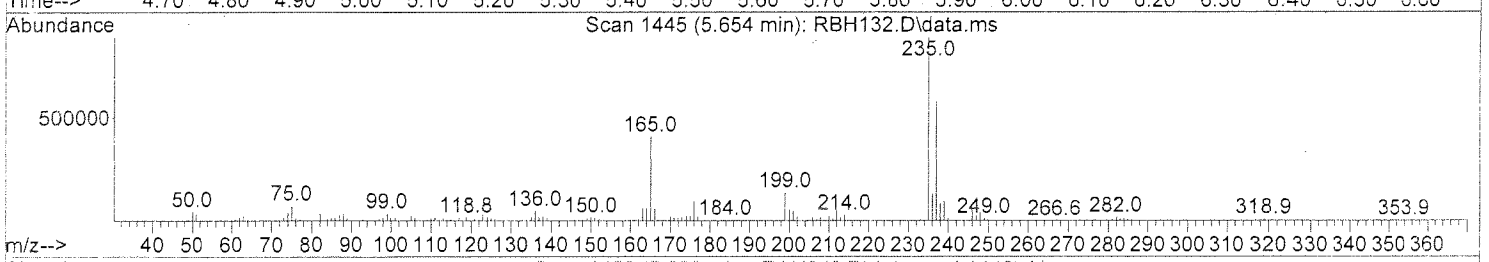
Ion	Exp%	Act%
184.10	100	100
92.00	5.80	5.58
0.00	0.00	0.00
0.00	0.00	0.00

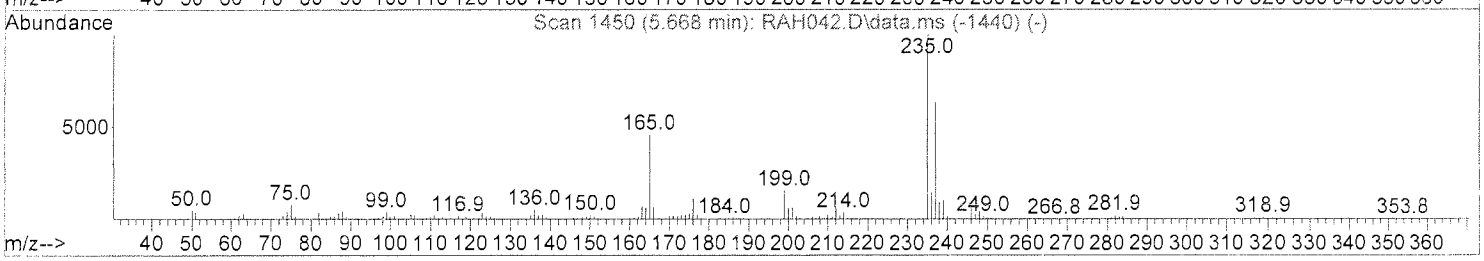
Quantitation Report (Qedit)

Data File : D:\DATA\16B12\RBH132.D
Acq On : 12 Feb 2016 8:40
Sample : DFTE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 11:17:01 2016
Quant Results File: DFTPPD.RES
Quant Method : C:\msdchem\1\METHODS\DFTPPD.M
Quant Title : Semivolatiles DFTPP
QLast Update : Thu Jan 21 09:55:42 2016
Response via : Initial Calibration
DataAcq Meth:DFTPP.M

Vial: 2
Operator: KVu
Inst : E7
Multiplr: 1.00







TIC: RBH132.D\data.ms

(6) DDT (T)

5.654min (-0.014) 56.95 ppm

response 699561

Ion	Exp%	Act%
235.00	100	100
165.00	47.10	46.46
0.00	0.00	0.00
0.00	0.00	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D
Acq On : 12 Feb 2016 9:49
Sample : CSVE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 10:02:58 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	1,4-Dichlorobenzene-d4	40.000	40.000	0.0	94	0.00
2	T	1,4-Dioxane	25.000	21.450	14.2	79	0.00
3	T	N-nitrosodimethylamine	25.000	23.087	7.7	81	0.00
4	S	2-Fluorophenol	25.000	24.020	3.9	84	0.00
5	S	Phenol-d5	25.000	24.119	3.5	84	0.00
6	T,P	Phenol	25.000	23.853	4.6	83	0.00
7	T,P	bis(2-chloroethyl)ether	25.000	23.278	6.9	83	0.00
8	T,P	2-Chlorophenol	25.000	24.059	3.8	85	0.00
9	P,P	N-Nitroso-di-n-propylamine	25.000	24.279	2.9	83	0.00
10	S	Nitrobenzene-d5	25.000	24.802	0.8	84	0.00
11	T,P	2,4-Dimethylphenol	25.000	24.540	1.8	83	0.00
12	T,P	2,4-Dichlorophenol	25.000	26.269	-5.1	86	0.00
13	T,P	Naphthalene	25.000	24.104	3.6	86	0.00
14	T,P	4-Chloro-3-methylphenol	25.000	23.146	7.4	86	0.00
15	T,P	2-Methylnaphthalene	25.000	24.600	1.6	87	0.00
16	T	1-Methylnaphthalene	25.000	24.536	1.9	86	0.00
17	T,P	2,4,6-Trichlorophenol	25.000	24.238	3.0	89	0.05
18	T,P	2,4,5-Trichlorophenol	25.000	23.998	4.0	90	0.00
19	T	2,3,4-Trichlorophenol	25.000	27.201	-8.8	90	-0.02
20	S	2-Fluorobiphenyl	25.000	24.287	2.9	86	0.00
21	T	Biphenyl	25.000	24.383	2.5	87	0.00
22	T	2,6-Dimethylnaphthalene	25.000	25.011	-0.0	88	0.00
23	T	Dimethylphthalate	25.000	24.450	2.2	87	0.00
24	T,P	Acenaphthylene	25.000	25.384	-1.5	88	0.00
25	C,P	Acenaphthene	25.000	24.235	3.1	87	0.00
26	T	2,3,5-Trimethylnaphthalene	25.000	24.890	0.4	88	0.00
27	T	Diethylphthalate	25.000	24.270	2.9	88	-0.01
28	T,P	Fluorene	25.000	24.679	1.3	88	0.00
29	I	Phenanthrene-d10	40.000	40.000	0.0	98	0.00
30	T	N-Nitrosodiphenylamine	25.000	22.793	8.8	89	0.00
31	T	Azobenzene	25.000	22.028	11.9	83	0.00
32	S	2,4,6-Tribromophenol	25.000	24.471	2.1	95	0.00
33	T,P	Hexachlorobenzene	25.000	21.936	12.3	89	0.00
34	T,P	Pentachlorophenol	25.000	23.422	6.3	92	0.00
35	T	Dibenzothiophene	25.000	22.193	11.2	90	0.00
36	T,P	Phenanthrene	25.000	21.385	14.5	88	0.00
37	T,P	Anthracene	25.000	22.604	9.6	88	0.00
38	T	Carbazole	25.000	23.486	6.1	91	0.00
39	T	Di-n-butylphthalate	25.000	24.069	3.7	86	-0.01
40	T	1-Methylphenanthrene	25.000	22.848	8.6	88	0.00
41	C,P	Fluoranthene	25.000	22.715	9.1	88	0.00
42	T,P	Pyrene	25.000	22.434	10.3	87	0.00
43	S	Terphenyl-d14	25.000	23.441	6.2	91	0.00
44	T	Butylbenzylphthalate	25.000	23.387	6.5	91	0.00
45	T,P	Benzo(a)anthracene	25.000	22.679	9.3	89	0.00
46	T,P	Chrysene	25.000	21.800	12.8	90	0.00
47	T	bis(2-Ethylhexyl)phthalate	25.000	22.695	9.2	90	0.00
48	I	Perylene-d12	40.000	40.000	0.0	93	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D
Vial: 3
Acq On : 12 Feb 2016 9:49
Operator: KVu
Sample : CSVE7A1418
Inst : E7
Misc :
Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 10:02:58 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
49	T	Di-n-octylphthalate	25.000	24.658	1.4	91	-0.01
50	T,P	Benzo(b)fluoranthene	25.000	24.925	0.3	91	0.00
51	T,P	Benzo(k)fluoranthene	25.000	25.339	-1.4	88	0.00
52	T	Benzo(e)pyrene	25.000	24.860	0.6	90	0.00
53	C,P	Benzo(a)pyrene	25.000	26.138	-4.6	89	0.00
54	T	Perylene	25.000	23.389	6.4	89	-0.03
55	T,P	Indeno(1,2,3-cd)pyrene	25.000	25.498	-2.0	91	0.00
56	T,P	Dibenzo(a,h)anthracene	25.000	25.660	-2.6	90	0.00
57	T,P	Benzo(g,h,i)perylene	25.000	25.560	-2.2	91	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D
Acq On : 12 Feb 2016 9:49
Sample : CSVE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 10:02:58 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

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	1,4-Dichlorobenzene-d4	1.000	1.000	0.0	94	0.00
2	T	1,4-Dioxane	0.386	0.362	6.2	79	0.00
3	T	N-nitrosodimethylamine	0.623	0.576	7.5	81	0.00
4	S	2-Fluorophenol	1.108	1.065	3.9	84	0.00
5	S	Phenol-d5	1.386	1.337	3.5	84	0.00
6	T,P	Phenol	1.428	1.362	4.6	83	0.00
7	T,P	bis(2-chloroethyl)ether	1.055	0.982	6.9	83	0.00
8	T,P	2-Chlorophenol	1.278	1.230	3.8	85	0.00
9	P,P	N-Nitroso-di-n-propylamine	0.806	0.782	3.0	83	0.00
10	S	Nitrobenzene-d5	1.342	1.332	0.7	84	0.00
11	T,P	2,4-Dimethylphenol	1.300	1.276	1.8	83	0.00
12	T,P	2,4-Dichlorophenol	1.174	1.234	-5.1	86	0.00
13	T,P	Naphthalene	3.849	3.711	3.6	86	0.00
14	T,P	4-Chloro-3-methylphenol	1.111	1.067	4.0	86	0.00
15	T,P	2-Methylnaphthalene	2.736	2.692	1.6	87	0.00
16	T	1-Methylnaphthalene	2.404	2.359	1.9	86	0.00
17	T,P	2,4,6-Trichlorophenol	0.933	1.048	-12.3	89	0.05
18	T,P	2,4,5-Trichlorophenol	0.972	1.080	-11.1	90	0.00
19	T	2,3,4-Trichlorophenol	0.830	0.904	-8.9	90	-0.02
20	S	2-Fluorobiphenyl	3.533	3.432	2.9	86	0.00
21	T	Biphenyl	3.481	3.395	2.5	87	0.00
22	T	2,6-Dimethylnaphthalene	2.385	2.386	-0.0	88	0.00
23	T	Dimethylphthalate	3.276	3.204	2.2	87	0.00
24	T,P	Acenaphthylene	4.213	4.278	-1.5	88	0.00
25	C,P	Acenaphthene	2.955	2.865	3.0	87	0.00
26	T	2,3,5-Trimethylnaphthalene	2.349	2.338	0.5	88	0.00
27	T	Diethylphthalate	3.220	3.126	2.9	88	-0.01
28	T,P	Fluorene	3.219	3.178	1.3	88	0.00
29	I	Phenanthrene-d10	1.000	1.000	0.0	98	0.00
30	T	N-Nitrosodiphenylamine	0.690	0.575	16.7	89	0.00
31	T	Azobenzene	0.665	0.586	11.9	83	0.00
32	S	2,4,6-Tribromophenol	0.122	0.138	-13.1	95	0.00
33	T,P	Hexachlorobenzene	0.314	0.275	12.4	89	0.00
34	T,P	Pentachlorophenol	0.128	0.147	-14.8	92	0.00
35	T	Dibenzothiophene	1.108	0.983	11.3	90	0.00
36	T,P	Phenanthrene	1.246	1.066	14.4	88	0.00
37	T,P	Anthracene	1.206	1.090	9.6	88	0.00
38	T	Carbazole	0.929	0.873	6.0	91	0.00
39	T	Di-n-butylphthalate	1.098	1.057	3.7	86	-0.01
40	T	1-Methylphenanthrene	0.826	0.755	8.6	88	0.00
41	C,P	Fluoranthene	1.356	1.232	9.1	88	0.00
42	T,P	Pyrene	1.431	1.284	10.3	87	0.00
43	S	Terphenyl-d14	0.985	0.924	6.2	91	0.00
44	T	Butylbenzylphthalate	0.395	0.442	-11.9	91	0.00
45	T,P	Benzo(a)anthracene	1.818	1.265	30.4#	89	0.00
46	T,P	Chrysene	1.350	1.177	12.8	90	0.00
47	T	bis(2-Ethylhexyl)phthalate	0.650	0.700	-7.7	90	0.00
48	I	Perylene-d12	1.000	1.000	0.0	93	0.00

Evaluate Continuing Calibration Report

Data File : D:\DATA\16B12\RBH133.D Vial: 3
Acq On : 12 Feb 2016 9:49 Operator: KVu
Sample : CSVE7A1418 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 10:02:58 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

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)
49	T	Di-n-octylphthalate	0.901	1.127	-25.1#	91	-0.01
50	T,P	Benzo(b)fluoranthene	1.162	1.158	0.3	91	0.00
51	T,P	Benzo(k)fluoranthene	1.166	1.182	-1.4	88	0.00
52	T	Benzo(e)pyrene	1.079	1.073	0.6	90	0.00
53	C,P	Benzo(a)pyrene	1.090	1.139	-4.5	89	0.00
54	T	Perylene	1.166	1.091	6.4	89	-0.03
55	T,P	Indeno(1,2,3-cd)pyrene	1.232	1.256	-1.9	91	0.00
56	T,P	Dibenzo(a,h)anthracene	1.032	1.059	-2.6	90	0.00
57	T,P	Benzo(g,h,i)perylene	0.971	0.992	-2.2	91	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH133.D Vial: 3
Acq On : 12 Feb 2016 9:49 Operator: KVu
Sample : CSVE7A1418 Inst : E7
Misc : Multiplr: 1.00
Integrator: RTE
Quant Time: Feb 12 10:02:58 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	2.840	152	468705	40.00	ppm	0.00
29) Phenanthrene-d10	7.797	188	2140021	40.00	ppm	0.00
48) Perylene-d12	11.947	264	2169063	40.00	ppm	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	1.930	112	311915	24.02	ppm	0.00
Spiked Amount 30.000			Recovery	=	80.07%	
5) Phenol-d5	2.509	99	391572	24.12	ppm	0.00
Spiked Amount 30.000			Recovery	=	80.40%	
10) Nitrobenzene-d5	3.324	82	390068	24.80	ppm	0.00
Spiked Amount 10.000			Recovery	=	248.00%	
20) 2-Fluorobiphenyl	5.257	172	1005463	24.29	ppm	0.00
Spiked Amount 10.000			Recovery	=	242.90%	
32) 2,4,6-Tribromophenol	6.996	330	184366	24.47	ppm	0.00
Spiked Amount 30.000			Recovery	=	81.57%	
43) Terphenyl-d14	9.503	244	1235788	23.44	ppm	0.00
Spiked Amount 10.000			Recovery	=	234.40%	
Target Compounds						Qvalue
2] 1,4-Dioxane	1.231	88	106054	21.45	ppm	98
3] N-nitrosodimethylamine	1.341	74	168604	23.09	ppm	96
6] Phenol	2.519	94	399051	23.85	ppm	98
7] bis(2-chloroethyl)ether	2.608	93	287701	23.28	ppm	96
8] 2-Chlorophenol	2.671	128	360205	24.06	ppm	96
9] N-Nitroso-di-n-propyla...	3.175	70	229171	24.28	ppm	97
11] 2,4-Dimethylphenol	3.674	107	373908	24.54	ppm	99
12] 2,4-Dichlorophenol	3.890	162	361418	26.27	ppm	100
13] Naphthalene	4.073	128	1087147	24.10	ppm	100
14] 4-Chloro-3-methylphenol	4.647	107	312499	23.15	ppm	98
15] 2-Methylnaphthalene	4.834	142	788681	24.60	ppm	100
16] 1-Methylnaphthalene	4.944	142	691044	24.54	ppm	100
17] 2,4,6-Trichlorophenol	5.150	196	306983	24.24	ppm	100
18] 2,4,5-Trichlorophenol	5.189	196	316433	24.00	ppm	100
19] 2,3,4-Trichlorophenol	5.262	196	264686	27.20	ppm	100
21] Biphenyl	5.372	154	994529	24.38	ppm	100
22] 2,6-Dimethylnaphthalene	5.554	156	699059	25.01	ppm	98
23] Dimethylphthalate	5.747	163	938569	24.45	ppm	100
24] Acenaphthylene	5.882	152	1253056	25.38	ppm	100
25] Acenaphthene	6.089	153	839226	24.23	ppm	100
26] 2,3,5-Trimethylnaphtha...	6.553	170	685017	24.89	ppm	98
27] Diethylphthalate	6.595	149	915734	24.27	ppm	99
28] Fluorene	6.712	166	930872	24.68	ppm	99
30] N-Nitrosodiphenylamine	6.863	169	768642	22.79	ppm	99
31] Azobenzene	6.911	77	784008	22.03	ppm	99
33] Hexachlorobenzene	7.351	284	368100	21.94	ppm	98
34] Pentachlorophenol	7.578	266	196072	23.42	ppm	98
35] Dibenzothiophene	7.677	184	1315039	22.19	ppm	99
36] Phenanthrene	7.820	178	1425834	21.39	ppm	99
37] Anthracene	7.879	178	1457965	22.60	ppm	100
38] Carbazole	8.060	167	1167161	23.49	ppm	99
39] Di-n-butylphthalate	8.457	149	1413851	24.07	ppm	100
40] 1-Methylphenanthrene	8.491	192	1009859	22.85	ppm	99
41] Fluoranthene	9.100	202	1648186	22.71	ppm	100

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH133.D
Acq On : 12 Feb 2016 9:49
Sample : CSVE7A1418
Misc :
Integrator: RTE
Quant Time: Feb 12 10:02:58 2016
Quant Results File: SVE7A14S.RES
Quant Method : C:\msdchem\1\METHODS\SVE7A14S.M
Quant Title : SEMIVOLATILES - SIM
QLast Update : Fri Jan 15 12:19:41 2016
Response via : Initial Calibration
DataAcq Meth:SVE7A14S.M

Vial: 3
Operator: KVu
Inst : E7
Multiplr: 1.00

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
42]	Pyrene	9.336	202	1717798	22.43	ppm	100
44]	Butylbenzylphthalate	10.013	149	591144	23.39	ppm	97
45]	Benzo(a)anthracene	10.562	228	1692240	22.68	ppm	99
46]	Chrysene	10.601	228	1574002	21.80	ppm	99
47]	bis(2-Ethylhexyl)phtha...	10.596	149	936906	22.69	ppm	100
49]	Di-n-octylphthalate	11.212	149	1528309	24.66	ppm	100
50]	Benzo(b)fluoranthene	11.577	252	1570150	24.93	ppm	99
51]	Benzo(k)fluoranthene	11.601	252	1602765	25.34	ppm	99
52]	Benzo(e)pyrene	11.834	252	1454131	24.86	ppm	99
53]	Benzo(a)pyrene	11.886	252	1544556	26.14	ppm	99
54]	Perylene	11.970	252	1479150	23.39	ppm	99
55]	Indeno(1,2,3-cd)pyrene	13.155	276	1702830	25.50	ppm	98
56]	Dibenzo(a,h)anthracene	13.170	278	1435417	25.66	ppm	99
57]	Benzo(g,h,i)perylene	13.514	276	1345453	25.56	ppm	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data File : D:\DATA\16B12\RBH133.D
Vial: 3
Acq On : 12 Feb 2016 9:49
Operator: KVu
Sample : CSVE7A1418
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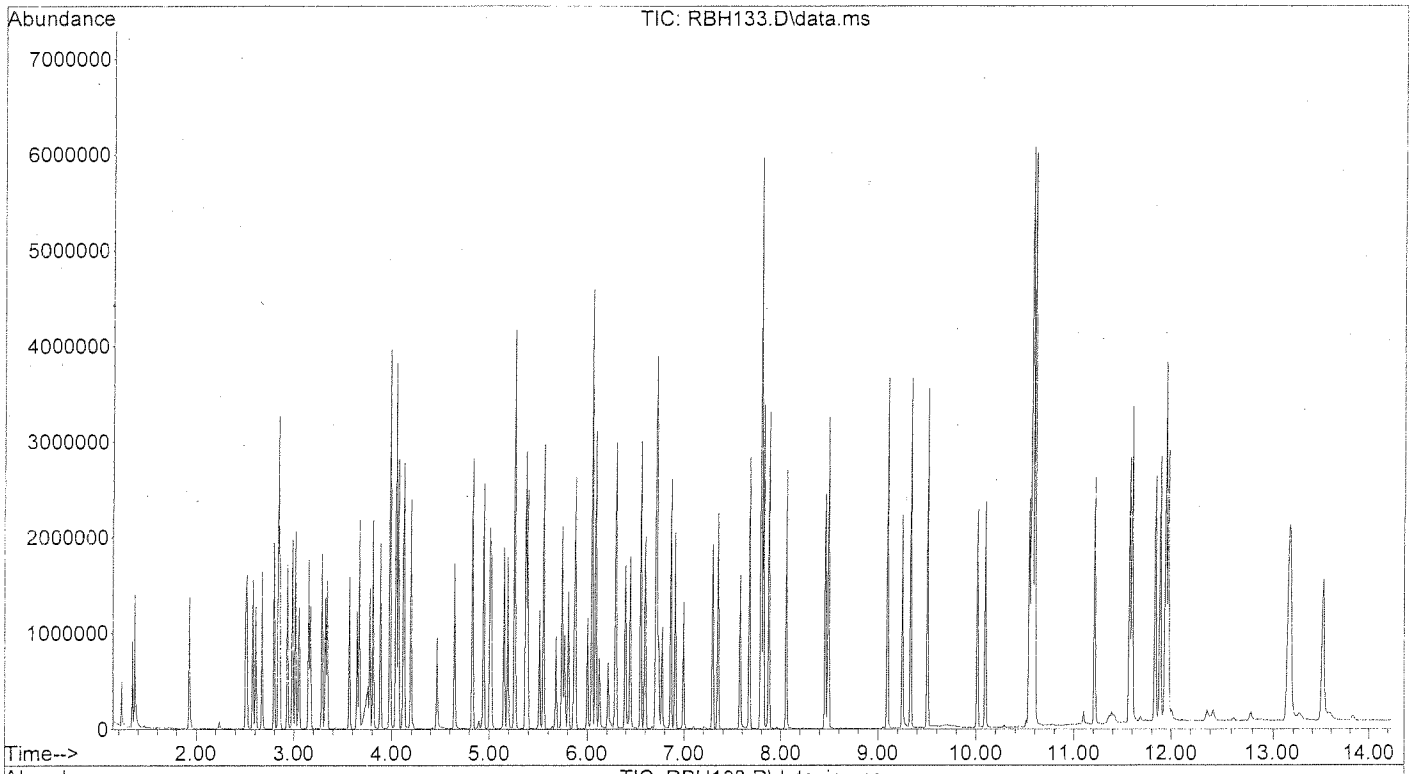
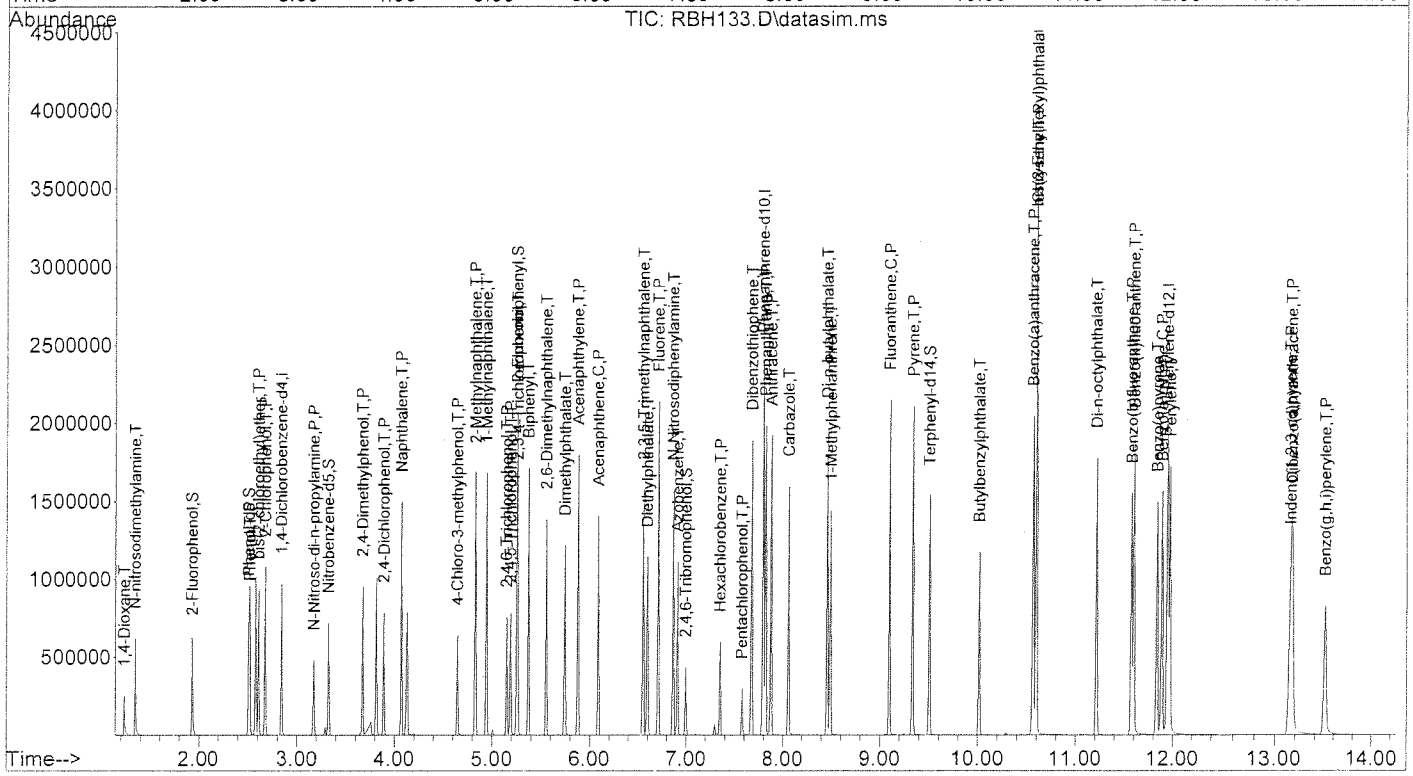
DataAcq Meth:SVE7A14S.M





ANALYTICAL LOGS

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE7-015

Method File: SVE7A14S Tune File: DFTPP Start Date/Time: 1/14/16 10:14 End Date/Time: 1/14/16 20:00

ANALYTICAL BATCH: SVE7A14S

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
NA	RAH041	IBE7A1401	1			
	042	DFTE7A1401				
	043	SVE7A14 1				100ppm 8270
	044	2				80
	045	3				50
	046	4				40
	047	5				25
	048	6				20
	049	7				10
	050	8				4
	051	9				2
	052	10				0.5
	053	11				0.15
	054	12				0.075
	055	13				0.050
	056	ISVE7A141				ICV
	057	SVE7A14A1	1			100ppm Benzidine
	058	2				80
	059	3				50
	060	4				40
	061	5				25
	062	6				10
	063	7				4
	064	ISVE7A14A1				ICV
	065	SVE7A14A1	1			140ppm App9-add
	066	2				120
	067	3				100
	068	4				80
	069	5				50
	070	6				40
	071	7				20
	072	ISVE7A14C1				ICV

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	1/14/16
ICAL ID	SVE7A14/14A/14S/14C

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-17-03	50
INT. STD.	SS2B-12-12-03	2000
ICV 8270	SS2C-14-17-02	25
DCC/ICAL	SS2C-14-16-01	.05-50
BENZIDINE ICAL	SS2C-14-16-02	4-100
APP 9 Add ICV	SS2C-14-21-01	50
APP 9 ADD ICAL	SS2C-14-20-03	20-140
8270 ICAL	SS2C-14-16-03	80-100
Ben ICV	SS2C-14-17-01	25
Solvent	ID	
CH_2Cl_2	55219	
DATA FILE	16A14	

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-2 ☐

Comments:

Analyzed By: KV

Date Disposed: NA

Disposed By: NA

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐

Book #: AE7-015

Method File: SVETA14S Tune File: DFTPP Start Date/Time: 1/19/16 8:26 End Date/Time: 1/19/16 20:15

ANALYTICAL BATCH: CSVETA1403

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RAH 086	IBETA1403				
	087	DFTETA1403				
	088	CSVETA14A03				Ben
	089	CSVETA14C03				Add
	090	CSVETA15B03				App9
	091	ISVETA142				ICV 8270-Sim
	092	CSVETA1403				8270-Sim
SVA003W	093	LOQ-03	1		X	3520-8270
	094	LOD-03				
	095	LOQ-04				35 Dimethy/
	096	LOQ-05				3520-Sim
	097	LOD-05				
	098	LOD-06				
	099	LOQ-07				3520-Ben
	100	LOD-07				
	101	LOQ-08				3520-Thalates
	102	LOD-08				
SVA012W	103	LOQ-24	1		X	3520-App9
	104	LOD-24				
	105	LOD-25				
	106	LOD-26				
	107	LOQ-27				3520-Add
	108	LOD-27				
SVA005S	109	LOQ-13	1	X		3550-App9
	110	LOQ-14				
	111	LOD-14				
	112	LOQ-15				3550-add
	113	LOQ-16				
	114	LOD-16				
	115	LOD-17				
SVA004S	116	LOQ-09	1	X		3550-Sim
	117	LOD-09				

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	1/14/16 - 1/15/16
ICAL ID	SVETA14/14A/14S/14C/15B

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-17-03	50
INT. STD.	SS2B-12-12-03	2000
ICV 8270	SS2C-14-17-02	25
DCC	SS2C-14-16-01	25
BENZIDINE	-16-02	
APP 9	-20-01	
APP 9 ADD	-20-03	50

Solvent	ID
CH_2Cl_2	55219
DATA FILE	16A19

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-2 ☐

Comments:

Analyzed By: KV

Date Disposed: NA

Disposed By: NA

This page is checked during data review.

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP [✓] EMAX-8270 Rev. No. 6 [ ] EMAX-8270D Rev. No. 1 [ ] EMAX-8270SIM Rev. No. 2 [ ] EMAX-M8270SIM Rev. No. 2 [ ] EMAX-625 Rev. No. 1 [ ]

Book #: AE7-015

Method File: SVE7A14S Tune File: DFTPP Start Date/Time: 2/12/16 8:40 End Date/Time: 2/12/16 20:04

ANALYTICAL BATCH: CSVE7A1418

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
	RBH131	1BE7A1418				
	132	DFTE7A1418				
	133	CSVE7A1418				
	134	CSVE7A14A18				Benzidine
SVB011S	135 DJ 2/12/16	SVB0011SB	1	X		
	136	SVB011SL				
	137	↓ SC				
	138	16B060-02M				
	139	↓ -02S				
SVB009S	140	16B052-01M				
	141	-01S				
	142	-01				
	143	-03				
	144	-04				
	145	-05				
	146	↓ -06	↓			
SVB011S	147	16B060-01	1			
	148	-02				
	149	-04				
	150	-05				
	151	-06				
	152	-07				
	153	-08				
	154	↓ -09				
	155	16B068-01				
	156	-02				
	157	-03				
	158	-04				
	159	-05				
	160	-06				
	161	-07				
	162	↓ -08	↓	↓		

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	1/14/16
ICAL ID	SVE7A14/14A/14S DJ 2/12/16

Standards

Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-17-03	50
INT. STD.	SS2B-12-12-03	2000
ICV		
DCC	SS2C-14-16-01	25
BENZIDINE	↓ -16-02	25
APP 9		
APP 9 ADD		

Solvent	ID
CH_2Cl_2	55219
DATA FILE	16B12

Electronic Data Archival

Location	Date
HPCHEM_SVOA/TOE7	

Micropipette ID: [✓] PO97A-02 [ ] PO97A-03 [ ] PO00-01

Syringe ID: [✓] 499766-2 [ ]

Comments:

Analyzed By: KV / DJ

Date Disposed: 2/16/16

Disposed By: DJ

This page is checked during data review.

517

EMAX LABORATORIES, INC.

ANALYSIS LOG FOR SEMIVOLATILES

SOP ☑ EMAX-8270 Rev. No. 6 ☐ EMAX-8270D Rev. No. 1 ☐ EMAX-8270SIM Rev. No. 2 ☐ EMAX-M8270SIM Rev. No. 2 ☐ EMAX-625 Rev. No. 1 ☐ Book #: AE7-015

Method File: SVE7A14S Tune File: DFTPP Start Date/Time: 2/12/16 8:40 End Date/Time: 2/12/16 20:04

ANALYTICAL BATCH: CSVE7A1418

Preparative Batch	Data File Name	Run ID	DF	Matrix S	Matrix W	Notes
SVB011S	RBH163	16B068-09	1	X		
↓	↓ 164	↓ -10	↓	↓		
SVB009S	RBH 165	16B052-01N	1	X		
						DJ 2/12/16

Instrument No:	E7
INITIAL CALIBRATION REFERENCE	
Date	1/14/16
ICAL ID	SVE7A14/14A/14S

Standards		
Name	ID	Conc. (mg/L)
DFTPP	SS2C-14-17-03	50
INT. STD.	SS2B-12-12-03	2000
ICV		
DCC	SS2C-14-16-01	>5
BENZIDINE	↓ -16-02	>5
APP 9		
APP 9 ADD		

Solvent	ID
CH_2Cl_2	55219
DATA FILE	16B12

Electronic Data Archival	
Location	Date
HPCHEM_SVOA/TOE7/	

Micropipette ID: ☑ PO97A-02 ☐ PO97A-03 ☐ PO00-01

Syringe ID: ☑ 499766-I ☐

Comments:

Analyzed By: KV / DJ

Date Disposed: 2/16/16

Disposed By: DJ

This page is checked during data review.

EXTRACTION LOGS

EMAX LABORATORIES, INC.

EXTRACTION LOG
for
SEMIVOLATILES

SOP	Rev. #
☐ EMAX-3520	5
☐ EMAX-3540	2
☐ EMAX-3546	0
☑ EMAX-3550	4
☐ EMAX-3580	2
☐ EMAX-625	1

Note: For samples and relevant QCs/Standards extracted, refer to attached extraction sequence.

☐ MS/MSD can not be extracted due to insufficient amount of samples

Comments:

Book #: ESV-089
Preparation Batch: SVB011S
Matrix: Soil
Micropipette ID: PE00-01 (1000 µL)
Micropipette ID: PE99A-01 (200 µL)

Standards	ID	Amount Added (ml)
Surrogate	SS2A-13-01-10	0.4
LCS/MS (Fall LBT)	SS2A-13-01-14	0.2
LCS/MS		
LCS/MS		
LCS/MS		

Reagent	Lot# / ID
CH_2Cl_2	151090508
Na_2SO_4	SWB-003-08-05
H_2SO_4	–
NaOH	–
Silica Sand	SWB-002-09-19
Silica Gel	–
Reagent Water	–
Residual Chlorine Strip	–
pH Strip	–
Filter Paper	96950284

Lab Sample ID	Sonicator #	Cell #	Concentrator #
SVB011→SB	4	N/A	4
-SL	6		4
-SO	6		4
B060→01	4		4
-02	4		4
-02M	6		4
-02S	6		3
-04	4		3
-05	6		3
-06	6		3
-07	4		3
-08	6		3
-09	6		1
B068→01	4		1
-02	6		1
-03	6		1
-04	4		1
-05	6		1
-06	6		2
-07	4		2
-08	6		2
-09	6		2
-10	4		2

TUNING	
Sonicator #	Reading
4	50%
6	60%

Concentrator	Water Bath Temperature Setting (°C)	Thermometer Reading (°C)
1	35	35
2	35	35
3	35	35
4	35	35
5		
6		
8		

Thermometer ID = SVOC-T1

Prepared By: [illegible] Witnessed By: TW
Standard Added By: [illegible] Checked By: ML
Extract Received By: DJ 2/12/16 Location: SE01 # 06
Disposed By: Disposed On:

FileID: SVB011S

EMAX LABORATORIES, INC.

EXTRACTION LOG FOR SEMIVOLATILES

PrepBatchID	LabSampleID	Aliquot	Unit	DateTime	Ve(ml)	ExpAmt	ExpVe(ml)	PrepFctr	Comments
16SVB011S01	SVB011SB	30	g	2/11/16 11:56	2	30	2	1	
16SVB011S02	SVB011SL	30	g	2/11/16 11:56	2	30	2	1	
16SVB011S03	SVB011SC	30	g	2/11/16 11:56	2	30	2	1	
16SVB011S04	B060-01	30.02	g	2/11/16 11:58	2	30	2	1	clear
16SVB011S05	B060-02	30	g	2/11/16 11:58	2	30	2	1	clear
16SVB011S06	B060-02M	30	g	2/11/16 11:59	2	30	2	1	clear
16SVB011S07	B060-02S	30	g	2/11/16 11:59	2	30	2	1	clear
16SVB011S08	B060-04	30.01	g	2/11/16 12:00	2	30	2	1	clear
16SVB011S09	B060-05	30.03	g	2/11/16 12:00	2	30	2	1	clear
16SVB011S10	B060-06	30.03	g	2/11/16 12:02	2	30	2	1	clear
16SVB011S11	B060-07	30.01	g	2/11/16 12:02	2	30	2	1	clear
16SVB011S12	B060-08	30	g	2/11/16 12:04	2	30	2	1	clear
16SVB011S13	B060-09	30.01	g	2/11/16 12:04	2	30	2	1	clear
16SVB011S14	B068-01	30.01	g	2/11/16 12:06	2	30	2	1	yellow
16SVB011S15	B068-02	30	g	2/11/16 12:06	2	30	2	1	clear
16SVB011S16	B068-03	30	g	2/11/16 12:07	2	30	2	1	clear
16SVB011S17	B068-04	30.02	g	2/11/16 12:07	2	30	2	1	clear
16SVB011S18	B068-05	30.02	g	2/11/16 12:10	2	30	2	1	clear
16SVB011S19	B068-06	30.01	g	2/11/16 12:10	2	30	2	1	yellow
16SVB011S20	B068-07	30	g	2/11/16 12:11	2	30	2	1	slight yellow
16SVB011S21	B068-08	30	g	2/11/16 12:11	2	30	2	1	clear
16SVB011S22	B068-09	30.03	g	2/11/16 12:13	2	30	2	1	clear
16SVB011S23	B068-10	30.01	g	2/11/16 12:13	2	30	2	1	clear

Balance ID: 10304418. Calibration check was verified prior to use.

Ve=extract volume

PrepFctr=(ExpAmt/Aliquot)(Ve/ExpVe)

☑ Extraction Started @ 2/11/16 17:18 ☐ pHAdj(≤2) @

Prepared By: JVille

☑ Extraction Ended @ 2/11/16 20:01 ☐ pHAdj(≥11) @

Checked By: ML

Comments:

Date 02/11/16

SOP EMAX-3550 Rev. 4

D.1 – IDW Analytical Data

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **16B094**

I certify this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than that the conditions detailed in the report. Release of the data contained in this hardcopy data package and in the computer-readable data submitted in CD ROM has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **16B094**

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Method SW3520C/8081B 607-688
Method SW1311/3520C/8081B 689-775
Method 8151A 776-843
Method SW1311/8151A 844-916
Method SW6020A 917-977
Method SW1311/3010A/6010C 978-1104
Method SW7470A 1105-1121
Method SW1311/7470A 1122-1140
Method SW9095B 1141-1144

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 03-01-2016
EMAX Batch No.: 16B094

Attn: Jeff Aust

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: Cannon AFB PBR

Enclosed is the Laboratory report for samples received on 02/11/16.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
TB-021016	B094-01	02/10/16	WATER	VOLATILE ORGANICS BY GC/MS
CAFB-IDW-S-022016	B094-02	02/10/16	SOIL	METALS ICP TCLP
				MERCURY TCLP
				SEMIVOLATILE ORGANICS TCLP
				VOLATILE ORGANICS TCLP
				PAINT FILTER LIQUID TEST
				CHLORINATED HERBICIDES TCLP
				PESTICIDES TCLP
CAFB-IDW-W-022016	B094-03	02/10/16	WATER	VOLATILE ORGANICS BY GC/MS
				SEMIVOLATILE ORGANICS BY GCMS
				PESTICIDES ORGANOCHLORINE
				CHLORINATED HERBICIDES
				TOTAL METALS BY ICP-MS
				MERCURY

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number E871112
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW5030B/8260B
VOLATILE ORGANICS BY GC/MS

A total of two (2) water samples were received on 02/11/16 to be analyzed for Volatile Organics by GC/MS in accordance with Method SW5030B/8260B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There were two (2) CCVs associated with this SDG: CCV(Datafile ID:RBR215) and CCV(Datafile ID:RBW454). All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. VO06B17B and VOF3B10B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, two (2) sets of LCS/LCD were analyzed. All Analytes in VO06B17L/VO06B17C and VOF3B10X/VOF3B10Y were within LCS limits. Refer to LCS summary forms for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.
Sample B094-03 (CAFB-IDW-W-022016) was initially analyzed and reported at dilution to reduce matrix interference (Foamer matrix).

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

One (1) soil sample was received on 02/11/16 to be analyzed for TCLP Volatile Organics by GC/MS in accordance with Method SW1311/5030B/8260B and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Result was within acceptance criteria. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There was one (1) CCV associated with this SDG. Target analytes in CCV(Datafile ID:RBB156) were within calibration acceptance criteria. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. TVB003SB and VS03B07B were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in VS03B07L/VS03B07C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

One (1) water sample was received on 02/11/16 to be analyzed for Semi Volatile Organics by GC/MS in accordance with Method SW3520C/8270D and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There was one (1) CCV associated with this SDG. Target analytes in CCV(Datafile ID:RBJ208) were within calibration acceptance criteria. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. SVB018WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in SVB018WL/SVB018WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.
Sample B094-03 (CAFB-IDW-W-022016) was initially analyzed at dilution due to milky yellow color appearance of the extracts.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

One (1) soil sample was received on 02/11/16 to be analyzed for TCLP Semi Volatile Organics by GC/MS in accordance with Method SW1311/3520C/8270D and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument tune check was performed prior to calibration. Instrument mass ratios as well as DDT breakdown were evaluated. Results were within acceptance criteria. Tailing factor for Benzidine and Pentachlorophenol were also verified and results were within the method limits. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. There was one (1) CCV associated with this SDG. Target analytes in CCV(Datafile ID:RBJ208) were within calibration acceptance criteria. All calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. SVB018WB and TXB005SB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in SVB018WL/SVB018WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW3520C/8081B
PESTICIDES

One (1) water sample was received on 02/11/16 to be analyzed for Pesticides in accordance with Method SW3520C/8081B and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. CPB025WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in CPB025WL/CPB025WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as identified in Method 8081A/DOD QSM 5.0.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW1311/SW3520C/8081B
TCLP PESTICIDES

One (1) soil sample was received on 02/11/16 to be analyzed for Tclp Pesticides in accordance with Method SW1311/SW3520C/8081B and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Instrument Performance and Calibration
Instrument performance was checked prior to calibration. DDT and Endrin breakdown were within specification. Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using secondary source (ICV). Continuing calibration (CCV) was carried on at a frequency required by the project. All project calibration requirements were satisfied. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. CPB025WB and TXB005SB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in CPB025WL/CPB025WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Relative percentage difference (RPD) between the two results was evaluated. If RPD is less than 40% and peaks are well defined the higher result is reported. Where RPD is greater than 40% the chromatogram was checked for anomalies and results were selected based on processed knowledge. If there is no evidence of any chromatographic ambiguity, the higher result is reported.
Note that analyte CASNO 5103-74-2 (registered as trans-chlordane) was reported as gamma-chlordane as identified in Method 8081A/DOD QSM 5.0.
Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD 8151A
HERBICIDES

One (1) water sample was received on 02/11/16 to be analyzed for Herbicides in accordance with Method 8151A and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. HEB007WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in HEB007WL/HEB007WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.
Sample B094-03 (CAFB-IDW-W-022016) was analyzed with 10x dilution due to sample matrix problem.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW1311/8151A
TCLP HERBICIDES

One (1) soil sample was received on 02/11/16 to be analyzed for Tclp Herbicides in accordance with Method SW1311/8151A and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. HEB007WB and TXB005SB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. All Analytes in HEB007WL/HEB007WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW6020A
TOTAL METALS BY ICP-MS

One (1) water sample was received on 02/11/16 to be analyzed for Total Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
The sample was digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. IMB025WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) LCS was analyzed. All Analytes in IMB025WL - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) MS was analyzed. In addition, analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

One (1) soil sample was received on 02/11/16 to be analyzed for TCLP Metals by ICP in accordance with Method SW1311/3010A/6010C and project specific requirements.

Holding Time
The sample was digested and analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria. MRL was analyzed as required by the project.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. IPB034WB - result was compliant to project requirement. Barium(0.00585J <1/2 LOQ) was detected at trace level in TXB005SB. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) LCS was analyzed. All Analytes in IPB034WL - all analytes were within LCS QC limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) MS was analyzed. In addition, analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW7470A
MERCURY BY COLD VAPOR

One (1) water sample was received on 02/11/16 to be analyzed for Mercury by Cold Vapor in accordance with Method SW7470A and project specific requirements.

Holding Time
The sample was digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. Mercury was not detected in HGB009WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) LCS was analyzed. Mercury was within LCS QC limits in HGB009WL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) MS was analyzed. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16B094

METHOD SW1311/7470A
TCLP MERCURY

One (1) soil sample was received on 02/11/16 to be analyzed for Tclp Mercury in accordance with Method SW1311/7470A and project specific requirements.

Holding Time
The sample was digested and analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, two (2) method blanks were analyzed. HGB009WB and TXB005SB were compliant to project requirement. Refer to sample result summary forms for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) LCS was analyzed. Mercury was within LCS QC limits in HGB009WL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) MS was analyzed. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Reference Number: SM02.7.3

SAMPLE RECEIPT FORM 1

Type of Delivery	Airbill / Tracking Number	ECN 168094
☑ Fedex ☐ UPS ☐ GSO ☐ Others	7823 5084 5190	Recipient Miguel
☐ EMAX Courier ☐ Client Delivery		Date 2-11-16 Time 9:15

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☑ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☑ Preservative (if any) ☐ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note:

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☑ Custody Seal ☑ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☑ Sufficient ☑ Plastic Bag
Temperatures (Cool, ≤6 °C but not frozen) ☑ Cooler 1 3.3 °C ☐ Cooler 2 ____ °C ☐ Cooler 3 ____ °C ☐ Cooler 4 ____ °C ☐ Cooler 5 ____ °C
☐ Cooler 6 ____ °C ☐ Cooler 7 ____ °C ☐ Cooler 8 ____ °C ☐ Cooler 9 ____ °C ☐ Cooler 10 ____ °C
Thermometer: A - S/N ____ B - S/N 140252070 C - S/N 140252067 D - S/N 150555630
FM 1/20/15

Comments: ☐ Temperature is out of range. PM was informed IMMEDIATELY.

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
* 4-5	21, 28	D1		R1 R2
↓	↓	D4		R1
↓	↓	D6		R1 R2
4-5	15-17, 20, 22-24, 27	D10		

2/11/16

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS: * ① One label provided for two jars; Marked according to packaging ② Sample 01, 03 label for vials placed on baggie ③ Sample 02 container 03 arrived w/ a cracked lid. ③ Sample 02 no 9095 analysis indicated in label All labels for sample #3 read the same: TCLP water 8260, 8270, 8081, 8151, 6020, 7470 / Pres. w/HCl, 1L Amp, 250 w/HNO3

☐ Continue to next page.

LEGEND:

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in label	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in label	D16	Preservation not indicated in ____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in label	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	
D10	No initial/date on corrections in COC/label	D22		R10	
D11	Container count mismatch COC vs received	D23		R11	
D12	Container size mismatch COC vs received	D24		R12	

REVIEWS:

Sample Labeling ____ Date 2/11/16 / 2/11/16

SRF ____ Date 2/11/16

PM ____ Date 2/11/16

ORIGIN ID:CVNA (402) 334-8181
KYLE KLOEWER
URS GCP
12120 SHAMROCK PLZ STE 100

OMAHA, NE 68154
UNITED STATES US

SHIP DATE: 10
ACTWGT: 56
CAD: 00
DIMS:

3 10:30 A 5190 02.1

RT 477
ST 17

TO SAMPLE CUSTODIAN
EMAX LABORATORIES
1835 W. 205TH ST

TORRANCE CA 90501

16B094

(310) 618-8889 REF:
INV:
PO: DEPT:

FedEx Express

J1610160104011uv

THU - 11 FEB 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7823 5084 5190

A7 HHRA

90501
CA-US LAX

URS
129983 129984

Andy Mai

From: Zorinsky, Jennifer [jennifer.zorinsky@aecom.com]
Sent: Wednesday, February 10, 2016 2:46 PM
To: Andy Mai
Subject: Cannon COC
Follow Up Flag: Follow up
Flag Status: Red
Attachments: 10Feb2016.pdf

Hi Andy,

Here is the COC from today's sampling. This is the end of the sampling event. Please make the following changes at login:

1. TB-021016 – please login in for total VOCs only. Please report only the TCLP compounds.
2. CAFB-IDW-S-022016 (soil) – please login in for TCLP VOCs, TCLP SVOCs, TCLP pesticides, TCLP herbicides, TCLP metals and paint filter.
3. CAFB-IDW-S-022016 (water) – please change the sample ID to CAFB-IDW-**W**-022016. Please login in for total VOCS, total SVOCs, total pesticides, total herbicides, total metals. Please report only the TCLP compounds for each analysis. There is some alconox in this sample; please let me know if you have an issue with surrogate recoveries.
4. Please login in samples CA022-SD06-000.5 and CA022-SD05-000.5 for SIM-PAH as well as SVOCs. Please use the list we discussed this afternoon.
5. All samples were collected on 2/10/2016.

Thanks
Jennifer

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Built to deliver a better world

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16B094

URS Corporation
12120 Shamrock Plaza, Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

Project Name: Cannon AFB
Project No.: 60425210.23446540.0014AA
Project Location: Cloris, NM
Project Manager: Mike Sonderman
Sampler(s): Kyle Kloewer / Jessica Hoppmann

	Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	TCLP Soil	TCLP Water	Preservative / Remarks
1	2/10/16	1049		X	TB-021016	water	2	40 mL VOA		X	4°C
2		1051		X	CAFB-IDW-S-022016	Soil	2	8 oz jar	X		4°C
3		1058		X	CAFB-IDW-~~S~~ W-022016	water	3	40 mL VOA		X	HCl, 4°C
		↓		X	↓ 2/11/16	water	5	1 L amber		X	4°C
		↓		X	↓	water	2	250 mL HDPE		X	HNO_3, 4°C

Jessica Hoppmann 2/10/16

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: Jessica Hoppmann	2/10/16	1300	Method of Shipment: Fedex	☆ Note: Water Solution contains some liquinox
Received by:			Airbill No.:	TCLP Soil: 8260B, 8270D, 8081B, 8151A, 6010C, 7470A, 9095B
Relinquished by:			Lab Address: EMAX Laboratories 1835 W. 205th St. Torrance, CA 90501	TCLP Water: 8260B, 8270D, 8081B, 8151A, 6020A, 7470A
Received for Laboratory by:	2/11/16	9:15		

Temp = 3.3°C 129983

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : F3

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VOF3B10B	1	NA	02/17/1615:00	02/17/1615:00	RBR219	RAR090	VOF3B10	Method Blank
LCS1W	VOF3B10X	1	NA	02/17/1615:28	02/17/1615:28	RBR220	RAR090	VOF3B10	Lab Control Sample (LCS)
LCD1W	VOF3B10Y	1	NA	02/17/1615:56	02/17/1615:56	RBR221	RAR090	VOF3B10	LCS Duplicate
TB-021016	B094-01N	1	NA	02/17/1620:10	02/17/1620:10	RBR230	RAR090	VOF3B10	Field Sample
MBLK2W!	VO06B17B	1	NA	02/24/1612:54	02/24/1612:54	RBW458	RBW406	VO06B17	Method Blank
LCS2W!	VO06B17L	1	NA	02/24/1611:38	02/24/1611:38	RBW455	RBW406	VO06B17	Lab Control Sample (LCS)
LCD2W!	VO06B17C	1	NA	02/24/1612:04	02/24/1612:04	RBW456	RBW406	VO06B17	LCS Duplicate
CAFB-IDW-W-022016!	B094-03N	10	NA	02/24/1616:54	02/24/1616:54	RBW467	RBW406	VO06B17	Field Sample

! Instrument ID : T-006
FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : T-003

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VS03B07B	1	NA	02/22/1616:55	02/22/1616:55	RBB159	RIB382	VS03B07	Method Blank
LCS1W	VS03B07L	1	NA	02/22/1615:59	02/22/1615:59	RBB157	RIB382	VS03B07	Lab Control Sample (LCS)
LCD1W	VS03B07C	1	NA	02/22/1616:27	02/22/1616:27	RBB158	RIB382	VS03B07	LCS Duplicate
MBLK2W	TVB003SB	10	NA	02/22/1617:23	02/22/1617:23	RBB160	RIB382	VS03B07	Method Blank
CAFB-IDW-S-022016	B094-02	10	NA	02/22/1617:51	02/22/1617:51	RBB161	RIB382	VS03B07	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE

SEMI VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : T-OE4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVB018WB	1	NA	02/22/1610:39	02/17/1614:30	RBJ210	RBJ007	SVB018W	Method Blank
LCS1W	SVB018WL	1	NA	02/22/1610:59	02/17/1614:30	RBJ211	RBJ007	SVB018W	Lab Control Sample (LCS)
LCD1W	SVB018WC	1	NA	02/22/1611:18	02/17/1614:30	RBJ212	RBJ007	SVB018W	LCS Duplicate
CAFB-IDW-W-022016	B094-03	5.9	NA	02/22/1613:54	02/17/1614:30	RBJ220	RBJ007	SVB018W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE

TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : T-OE4

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	SVB018WB	1	NA	02/22/1610:39	02/17/1614:30	RBJ210	RBJ007	SVB018W	Method Blank
LCS1W	SVB018WL	1	NA	02/22/1610:59	02/17/1614:30	RBJ211	RBJ007	SVB018W	Lab Control Sample (LCS)
LCD1W	SVB018WC	1	NA	02/22/1611:18	02/17/1614:30	RBJ212	RBJ007	SVB018W	LCS Duplicate
MBLK2W	TXB005SB	10	NA	02/22/1611:38	02/17/1614:30	RBJ213	RBJ007	SVB018W	Method Blank
CAFB-IDW-S-022016	B094-02	10	NA	02/22/1612:16	02/17/1614:30	RBJ215	RBJ007	SVB018W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PESTICIDES

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPB025WB	1	NA	02/19/1622:02	02/17/1612:45	RB19030A	RB19028A	CPB025W	Method Blank
LCS1W	CPB025WL	1	NA	02/19/1622:23	02/17/1612:45	RB19031A	RB19028A	CPB025W	Lab Control Sample (LCS)
LCD1W	CPB025WC	1	NA	02/19/1622:43	02/17/1612:45	RB19032A	RB19028A	CPB025W	LCS Duplicate
CAFB-IDW-W-022016	B094-03	0.99	NA	02/19/1623:44	02/17/1612:45	RB19035A	RB19028A	CPB025W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP PESTICIDES

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : F9

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	CPB025WB	1	NA	02/19/1622:02	02/17/1612:45	RB19030A	RB19028A	CPB025W	Method Blank
LCS1W	CPB025WL	1	NA	02/19/1622:23	02/17/1612:45	RB19031A	RB19028A	CPB025W	Lab Control Sample (LCS)
LCD1W	CPB025WC	1	NA	02/19/1622:43	02/17/1612:45	RB19032A	RB19028A	CPB025W	LCS Duplicate
MBLK2W	TXB005SB	10	NA	02/19/1623:04	02/17/1612:45	RB19033A	RB19028A	CPB025W	Method Blank
CAFB-IDW-S-022016	B094-02	10	NA	02/19/1623:24	02/17/1612:45	RB19034A	RB19028A	CPB025W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
HERBICIDES

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : GCT016

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEB007WB	1	NA	02/22/1612:58	02/17/1613:59	WB19018A	WB19017A	HEB007W	Method Blank
LCS1W	HEB007WL	1	NA	02/19/1619:44	02/17/1613:59	WB19012A	WB19002A	HEB007W	Lab Control Sample (LCS)
LCD1W	HEB007WC	1	NA	02/19/1615:47	02/17/1613:59	WB19005A	WB19002A	HEB007W	LCS Duplicate
CAFB-IDW-W-022016	B094-03	10	NA	02/22/1613:32	02/17/1613:59	WB19019A	WB19017A	HEB007W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP HERBICIDES

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : GCT016

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HEB007WB	1	NA	02/22/1612:58	02/17/1613:59	WB19018A	WB19017A	HEB007W	Method Blank
LCS1W	HEB007WL	1	NA	02/19/1619:44	02/17/1613:59	WB19012A	WB19002A	HEB007W	Lab Control Sample (LCS)
LCD1W	HEB007WC	1	NA	02/19/1615:47	02/17/1613:59	WB19005A	WB19002A	HEB007W	LCS Duplicate
MBLK2W	TXB005SB	50	NA	02/19/1616:20	02/17/1613:59	WB19006A	WB19002A	HEB007W	Method Blank
CAFB-IDW-S-022016	B094-02	50	NA	02/19/1616:54	02/17/1613:59	WB19007A	WB19002A	HEB007W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TOTAL METALS BY ICP-MS

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : T-IF6

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IMB025WB	1	NA	02/23/1623:30	02/17/1611:22	F6B10110	F6B10108	IMB025W	Method Blank
LCS1W	IMB025WL	1	NA	02/23/1623:34	02/17/1611:22	F6B10111	F6B10108	IMB025W	Lab Control Sample (LCS)
CAFB-IDW-W-022016MS	B094-03M	1	NA	02/23/1623:38	02/17/1611:22	F6B10112	F6B10108	IMB025W	Matrix Spike Sample (MS)
CAFB-IDW-W-022016AS	B094-03A	1	NA	02/23/1623:42	02/17/1611:22	F6B10113	F6B10108	IMB025W	Analytical Spike Sample
CAFB-IDW-W-022016	B094-03	1	NA	02/23/1623:47	02/17/1611:22	F6B10114	F6B10108	IMB025W	Field Sample
CAFB-IDW-W-022016DL	B094-03J	5	NA	02/23/1623:51	02/17/1611:22	F6B10115	F6B10108	IMB025W	Diluted Sample
CAFB-IDW-W-022016DUP	B094-03D	1	NA	02/23/1623:55	02/17/1611:22	F6B10116	F6B10108	IMB025W	Duplicate Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP METALS BY ICP

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : T-ID8

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	IPB034WB	1	NA	02/25/1619:43	02/25/1611:30	ID8B025036	ID8B025034	IPB034W	Method Blank
LCS1W	IPB034WL	1	NA	02/25/1619:46	02/25/1611:30	ID8B025037	ID8B025034	IPB034W	Lab Control Sample (LCS)
MBLK2W	TXB005SB	5	NA	02/25/1620:08	02/25/1611:30	ID8B025044	ID8B025042	IPB034W	Method Blank
CAFB-IDW-S-022016MS	B094-02M	5	NA	02/25/1620:24	02/25/1611:30	ID8B025049	ID8B025042	IPB034W	Matrix Spike Sample (MS)
CAFB-IDW-S-022016DUP	B094-02D	5	NA	02/29/1614:21	02/25/1611:30	ID8B028036	ID8B02B033	IPB034W	Duplicate Sample
CAFB-IDW-S-022016AS	B094-02A	5	NA	02/29/1614:31	02/25/1611:30	ID8B028037	ID8B028033	IPB034W	Analytical Spike Sample
CAFB-IDW-S-022016	B094-02R	5	NA	02/29/1614:34	02/25/1611:30	ID8B028038	ID8B028033	IPB034W	Field Sample
CAFB-IDW-S-022016DL	B094-02J	25	NA	02/29/1614:37	02/25/1611:30	ID8B028039	ID8B028033	IPB034W	Diluted Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : TI047

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGB009WB	1	NA	02/18/1619:16	02/18/1614:10	M47B007037	M47B007	HGB009W	Method Blank
LCS1W	HGB009WL	1	NA	02/18/1619:19	02/18/1614:10	M47B007038	M47B007	HGB009W	Lab Control Sample (LCS)
CAFB-IDW-W-022016	B094-03	1	NA	02/18/1619:24	02/18/1614:10	M47B007040	M47B007	HGB009W	Field Sample
CAFB-IDW-W-022016MS	B094-03M	1	NA	02/18/1619:28	02/18/1614:10	M47B007042	M47B007	HGB009W	Matrix Spike Sample (MS)
CAFB-IDW-W-022016DUP	B094-03D	1	NA	02/18/1619:30	02/18/1614:10	M47B007043	M47B007	HGB009W	Duplicate Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
TCLP MERCURY

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16B094
Instrument ID : TI047

LEACHATE

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	HGB009WB	1	NA	02/18/1619:16	02/18/1614:10	M47B007037	M47B007	HGB009W	Method Blank
LCS1W	HGB009WL	1	NA	02/18/1619:19	02/18/1614:10	M47B007038	M47B007	HGB009W	Lab Control Sample (LCS)
MBLK2W	TXB005SB	1	NA	02/18/1619:32	02/1B/1614:10	M47B007044	M47B007	HGB009W	Method Blank
CAFB-IDW-S-022016	B094-02	1	NA	02/18/1619:40	02/18/1614:10	M47B007048	M47B007	HGB009W	Field Sample
CAFB-IDW-S-022016MS	B094-02M	1	NA	02/18/1619:45	02/18/1614:10	M47B007050	M47B007	HGB009W	Matrix Spike Sample (MS)
CAFB-IDW-S-022016DUP	B094-02D	1	NA	02/18/1619:47	02/18/1614:10	M47B007051	M47B007	HGB009W	Duplicate Sample

FN - Filename
% Moist - Percent Moisture

RESULTS SUMMARIES

METHOD SW5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/17/16 20:10
Sample ID:	TB-021016	Date Analyzed:	02/17/16 20:10
Lab Samp ID:	B094-01N	Dilution Factor:	1
Lab File ID:	RBR230	Matrix :	WATER
Ext Btch ID:	VOF3B10	% Moisture :	NA
Calib. Ref.:	RAR090	Instrument ID :	F3

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	1.0	0.10	0.20
2-BUTANONE	ND	10	2.0	4.0
CARBON TETRACHLORIDE	ND	1.0	0.10	0.20
CHLOROBENZENE	ND	1.0	0.10	0.20
CHLOROFORM	ND	1.0	0.10	0.20
1,4-DICHLOROBENZENE	ND	1.0	0.10	0.20
1,2-DICHLOROETHANE	ND	1.0	0.10	0.20
1,1-DICHLOROETHENE	ND	1.0	0.10	0.20
TETRACHLOROETHENE	ND	1.0	0.15	0.20
TRICHLOROETHENE	ND	1.0	0.10	0.20
VINYL CHLORIDE	ND	1.0	0.12	0.20

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	9.32	10.00	93.2	70-120
4-BROMOFLUOROBENZENE	10.2	10.00	102	75-120
TOLUENE-D8	10.1	10.00	101	85-120
DIBROMOFLUOROMETHANE	10.5	10.00	105	85-115

METHOD SW5030B/8260B
VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/24/16 16:54
Sample ID:	CAFB-IDW-W-022016	Date Analyzed:	02/24/16 16:54
Lab Samp ID:	B094-03N	Dilution Factor:	10
Lab File ID:	RBW467	Matrix :	WATER
Ext Btch ID:	VO06B17	% Moisture :	NA
Calib. Ref.:	RBW406	Instrument ID :	06

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	10	1.0	2.0
2-BUTANONE	ND	100	20	40
CARBON TETRACHLORIDE	ND	10	1.0	2.0
CHLOROBENZENE	ND	10	1.0	2.0
CHLOROFORM	ND	10	1.0	2.0
1,4-DICHLOROBENZENE	ND	10	1.0	2.0
1,2-DICHLOROETHANE	ND	10	1.0	2.0
1,1-DICHLOROETHENE	ND	10	1.0	2.0
TETRACHLOROETHENE	ND	10	1.5	2.0
TRICHLOROETHENE	ND	10	1.0	2.0
VINYL CHLORIDE	ND	10	1.2	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	98.6	100.0	98.6	70-120
4-BROMOFLUOROBENZENE	92.7	100.0	92.7	75-120
TOLUENE-D8	107	100.0	107	85-120
DIBROMOFLUOROMETHANE	105	100.0	105	85-115

METHOD SW1311/5030B/8260B
TCLP VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/22/16 17:51
Sample ID:	CAFB-IDW-S-022016	Date Analyzed:	02/22/16 17:51
Lab Samp ID:	B094-02	Dilution Factor:	10
Lab File ID:	RBB161	Matrix :	LEACHATE
Ext Btch ID:	VS03B07	% Moisture :	NA
Calib. Ref.:	RIB382	Instrument ID :	T-003

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
BENZENE	ND	50	5.0	10
2-BUTANONE	ND	100	25	50
CARBON TETRACHLORIDE	ND	50	5.4	10
CHLOROBENZENE	ND	50	5.0	10
CHLOROFORM	ND	50	5.0	10
1,4-DICHLOROBENZENE	ND	50	5.0	10
1,2-DICHLOROETHANE	ND	50	5.0	10
1,1-DICHLOROETHENE	ND	50	5.0	10
TETRACHLOROETHENE	ND	50	5.0	10
TRICHLOROETHENE	ND	50	5.0	10
VINYL CHLORIDE	ND	50	6.1	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
1,2-DICHLOROETHANE-D4	413	500.0	82.7	70-120
4-BROMOFLUOROBENZENE	549	500.0	110	75-120
TOLUENE-D8	534	500.0	107	85-120
DIBROMOFLUOROMETHANE	465	500.0	93.0	85-115

DateTime Leached: 02/18/16 18:00

METHOD SW3520C/8270D
SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/17/16 14:30
Sample ID:	CAFB-IDW-W-022016	Date Analyzed:	02/22/16 13:54
Lab Samp ID:	B094-03	Dilution Factor:	5.9
Lab File ID:	RBJ220	Matrix :	WATER
Ext Btch ID:	SVB018W	% Moisture :	NA
Calib. Ref.:	RBJ007	Instrument ID :	T-OE4

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	59	15	30
2,4,6-TRICHLOROPHENOL	ND	59	15	30
2,4-DINITROTOLUENE	ND	59	15	30
2-METHYLPHENOL	ND	59	15	30
4-METHYLPHENOL (1)	ND	59	15	30
HEXACHLOROBENZENE	ND	59	15	30
HEXACHLOROBUTADIENE	ND	59	15	30
HEXACHLOROETHANE	ND	59	15	30
NITROBENZENE	ND	59	15	30
PENTACHLOROPHENOL	ND	120	15	30
PYRIDINE	ND	240	67	120

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	60.9	70.80	86.0	40-125
2-FLUOROBIPHENYL	14.4	23.60	61.0	50-110
2-FLUOROPHENOL	43.6	70.80	61.6	20-110
NITROBENZENE-D5	16.6	23.60	70.3	40-110
PHENOL-D5	52.5	70.80	74.2	10-115
TERPHENYL-D14	13.8	23.60	58.5	50-135

(1): 4-Methylphenol cannot be separated from 3-Methylphenol

METHOD SW1311/3520C/8270D
TCLP SEMI VOLATILE ORGANICS BY GC/MS

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/17/16 14:30
Sample ID:	CAFB-IDW-S-022016	Date Analyzed:	02/22/16 12:16
Lab Samp ID:	B094-02	Dilution Factor:	10
Lab File ID:	RBJ215	Matrix :	LEACHATE
Ext Btch ID:	SVB018W	% Moisture :	NA
Calib. Ref.:	RBJ007	Instrument ID :	T-OE4

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4,5-TRICHLOROPHENOL	ND	100	25	50
2,4,6-TRICHLOROPHENOL	ND	100	25	50
2,4-DINITROTOLUENE	ND	100	25	50
2-METHYLPHENOL	ND	100	25	50
4-METHYLPHENOL (1)	ND	100	25	50
HEXACHLOROBENZENE	ND	100	25	50
HEXACHLOROBUTADIENE	ND	100	25	50
HEXACHLOROETHANE	ND	100	25	50
NITROBENZENE	ND	100	25	50
PENTACHLOROPHENOL	ND	200	25	50
PYRIDINE	ND	400	110	200

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4,6-TRIBROMOPHENOL	508	600.0	84.6	40-125
2-FLUOROBIPHENYL	157	200.0	78.7	50-110
2-FLUOROPHENOL	351	600.0	58.5	20-110
NITROBENZENE-D5	140	200.0	70.1	40-110
PHENOL-D5	428	600.0	71.4	10-115
TERPHENYL-D14	164	200.0	82.0	50-135

(1): Cannot be separated from 3-Methylphenol
DateTime Leached: 02/16/16 17:30

METHOD SW3520C/8081B
PESTICIDES

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/17/16 12:45
Sample ID:	CAFB-IDW-W-022016	Date Analyzed:	02/19/16 23:44
Lab Samp ID:	B094-03	Dilution Factor:	0.99
Lab File ID:	RB19035A	Matrix :	WATER
Ext Btch ID:	CPB025W	% Moisture :	NA
Calib. Ref.:	RB19028A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)		LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND)	0.028J	0.099	0.0049	0.0099
HEPTACHLOR	(ND)	ND	0.099	0.0069	0.0099
HEPTACHLOR EPOXIDE	(ND)	0.013J	0.099	0.0049	0.0099
GAMMA-CHLORDANE	(ND)	ND	0.099	0.0049	0.0099
ALPHA-CHLORDANE	(ND)	ND	0.099	0.0049	0.0099
ENDRIN	(ND)	ND	0.099	0.0079	0.0099
METHOXYCHLOR	(ND)	ND	0.99	0.050	0.099
TOXAPHENE	(ND)	ND	2.0	0.25	0.50

SURROGATE PARAMETERS	RESULTS		SPK_AMT	% RECOVERY		QC LIMIT
TETRACHLORO-M-XYLENE	(0.3430)	0.3897	0.4000	(85.8)	97.4	25-140
DECACHLOROBIPHENYL	(0.2661)	0.3351	0.4000	(66.5)	83.8	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

METHOD SW1311/3520C/8081B
TCLP PESTICIDES

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/17/16 12:45
Sample ID:	CAFB-IDW-S-022016	Date Analyzed:	02/19/16 23:24
Lab Samp ID:	B094-02	Dilution Factor:	10
Lab File ID:	RB19034A	Matrix :	WATER
Ext Btch ID:	CPB025W	% Moisture :	NA
Calib. Ref.:	RB19028A	Instrument ID :	F9

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
GAMMA-BHC (LINDANE)	(ND) | ND	1.0	0.050	0.10
HEPTACHLOR	(ND) | ND	1.0	0.070	0.10
HEPTACHLOR EPOXIDE	(ND) | ND	1.0	0.050	0.10
GAMMA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ALPHA-CHLORDANE	(ND) | ND	1.0	0.050	0.10
ENDRIN	(ND) | ND	1.0	0.080	0.10
METHOXYCHLOR	(ND) | ND	10	0.50	1.0
TOXAPHENE	(ND) | ND	20	2.5	5.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
TETRACHLORO-M-XYLENE	(3.067) | 3.768	4.000	(76.7) | 94.2	25-140
DECACHLOROBIPHENYL	(3.227) | 3.707	4.000	(80.7) | 92.7	30-135

Left of | is related to first column ; Right of | related to second column
Final result indicated by ( )

DateTime Leached: 02/16/16 17:30

METHOD 8151A
HERBICIDES

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/17/16 13:59
Sample ID:	CAFB-IDW-W-022016	Date Analyzed:	02/22/16 13:32
Lab Samp ID:	B094-03	Dilution Factor:	10
Lab File ID:	WB19019A	Matrix :	WATER
Ext Btch ID:	HEB007W	% Moisture :	NA
Calib. Ref.:	WB19017A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	4.0	1.0	2.0
2,4,5-TP (SILVEX)	(ND)|ND	4.0	1.0	2.0

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	5.505|(6.189)	10.00	55.1|(61.9)	50-130

METHOD SW1311/8151A
TCLP HERBICIDES

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
Batch No.	: 16B094	Date Extracted:	02/17/16 13:59
Sample ID:	CAFB-IDW-S-022016	Date Analyzed:	02/19/16 16:54
Lab Samp ID:	B094-02	Dilution Factor:	50
Lab File ID:	WB19007A	Matrix :	LEACHATE
Ext Btch ID:	HEB007W	% Moisture :	NA
Calib. Ref.:	WB19002A	Instrument ID :	GCT016

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
2,4-D	(ND)|ND	20	5.0	10
2,4,5-TP (SILVEX)	(ND)|ND	20	5.0	10

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
2,4-DCPAA	323.3|(336.1)	500.0	64.7|(67.2)	50-130

DateTime Leached: 02/16/16 17:30

METHOD SW6020A
TOTAL METALS BY ICP-MS

Client	: URS CORPORATION	Date Collected:	02/10/16
Project	: CANNON AFB PBR	Date Received:	02/11/16
SDG NO.	: 16B094	Date Extracted:	02/17/16 11:22
Sample ID:	CAFB-IDW-W-022016	Date Analyzed:	02/23/16 23:47
Lab Samp ID:	B094-03	Dilution Factor:	1
Lab File ID:	F6B10114	Matrix :	WATER
Ext Btch ID:	IMB025W	% Moisture :	NA
Calib. Ref.:	F6B10108	Instrument ID :	T-IF6

PARAMETERS	RESULTS (ug/L)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)
Arsenic	4.14	1.00	0.200	0.100
Barium	121	1.00	0.500	0.250
Cadmium	0.434J	1.00	0.200	0.100
Chromium, total	50.9	1.00	0.200	0.100
Lead	9.83	1.00	0.200	0.100
Selenium	10.7	1.00	0.300	0.150
Silver	ND	1.00	0.200	0.100

METHOD SW1311/3010A/6010C
TCLP METALS BY ICP

Client	: URS CORPORATION	Date Collected:	02/10/16 10:51
Project	: CANNON AFB PBR	Date Received:	02/11/16
SDG NO.	: 16B094	Date Extracted:	02/25/16 11:30
Sample ID:	CAFB-IDW-S-022016	Date Analyzed:	02/29/16 14:34
Lab Samp ID:	B094-02R	Dilution Factor:	5
Lab File ID:	ID8B028038	Matrix :	LEACHATE
Ext Btch ID:	IPB034W	% Moisture :	NA
Calib. Ref.:	ID8B028033	Instrument ID :	EMAXTID8

PARAMETERS	RESULTS (mg/L)	LOQ (mg/L)	DL (mg/L)	LOD (mg/L)
Arsenic	0.0306J	0.0500	0.0150	0.0250
Barium	1.26	0.0500	0.00500	0.0100
Cadmium	ND	0.0500	0.00500	0.0100
Chromium	0.0511	0.0500	0.00750	0.0150
Lead	0.0487J	0.0500	0.00850	0.0150
Selenium	0.0265J	0.0500	0.0125	0.0250
Silver	ND	0.0500	0.00750	0.0150

DateTime Leached: 02/16/16 17:30

METHOD SW7470A
MERCURY BY COLD VAPOR

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 168094

Matrix : WATER
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DIL'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1W	HGB009WB	ND	1	NA	0.50	0.054	0.10	02/18/1619:16	02/18/1614:10	M47B007037	M47B007	HGB009W	NA	NA
LCS1W	HGB009WL	2.53	1	NA	0.50	0.054	0.10	02/18/1619:19	02/18/1614:10	M47B007038	M47B007	HGB009W	NA	NA
CAFB-IDW-W-022016	B094-03	ND	1	NA	0.50	0.054	0.10	02/18/1619:24	02/18/1614:10	M47B007040	M47B007	HGB009W	02/10/1610:58	02/11/16
CAFB-IDW-W-022016MS	B094-03M	2.52	1	NA	0.50	0.054	0.10	02/18/1619:28	02/18/1614:10	M47B007042	M47B007	HGB009W	02/10/1610:58	02/11/16
CAFB-IDW-W-022016DUP	B094-03D	ND	1	NA	0.50	0.054	0.10	02/18/1619:30	02/18/1614:10	M47B007043	M47B007	HGB009W	02/10/1610:58	02/11/16

METHOD SW1311/7470A
TCLP MERCURY

Client : URS CORPORATION
Project : CANNON AFB PBR
Batch No. : 16B094

Matrix : LEACHATE
InstrumentID : 47

CLIENT SAMPLE ID	EMAX SAMPLE ID	RESULTS (ug/L)	DIL'N FACTOR	MOIST (%)	LOQ (ug/L)	DL (ug/L)	LOD (ug/L)	ANALYSIS DATETIME	PREPARATION DATETIME	DATA FILE ID	CAL REF	PREP BATCH	COLLECTION DATETIME	RECEIVED DATETIME
MBLK1W	HGB009WB	ND	1	NA	0.50	0.054	0.10	02/18/1619:16	02/18/1614:10	M47B007037	M47B007	HGB009W	NA	NA
LCS1W	HGB009WL	2.53	1	NA	0.50	0.054	0.10	02/18/1619:19	02/18/1614:10	M47B007038	M47B007	HGB009W	NA	NA
MBLK2W	TXB005SB	ND	1	NA	5.0	0.54	1.0	02/18/1619:32	02/18/1614:10	M47B007044	M47B007	HGB009W	NA	NA
CAFB-IDW-S-022016	B094-02	ND	1	NA	5.0	0.54	1.0	02/18/1619:40	02/18/1614:10	M47B007048	M47B007	HGB009W	02/10/1610:51	02/11/16
CAFB-IDW-S-022016MS	B094-02M	23.8	1	NA	5.0	0.54	1.0	02/18/1619:45	02/18/1614:10	M47B007050	M47B007	HGB009W	02/10/1610:51	02/11/16
CAFB-IDW-S-022016DUP	B094-02D	ND	1	NA	5.0	0.54	1.0	02/18/1619:47	02/18/1614:10	M47B007051	M47B007	HGB009W	02/10/1610:51	02/11/16

DateTime Leached: 02/16/16 17:30
Note: 5 ml leachate was diluted to 50 ml reagent water prior to digestion.

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **16D201**

I certify this package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than that the conditions detailed in the report. Release of the data contained in this hardcopy data package and in the computer-readable data submitted in CD ROM has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Caspar J. Pang
Laboratory Director

LABORATORY REPORT

CLIENT: **URS CORPORATION**

PROJECT: **CANNON AFB PBR**

SDG: **16D201**

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LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889
Fax: (310) 618-0818

Date: 05-02-2016
EMAX Batch No.: 16D201

Attn: Jeff Aust

URS Corporation
12120 Shamrock Plaza, Suite 300
Omaha, NE 68154

Subject: Laboratory Report
Project: CANNON AFB PBR

Enclosed is the Laboratory report for samples received on 04/29/16.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
CAFB-IDW-S-042816	D201-01	04/28/16	SOIL	DRO & ORO GASOLINE RANGE ORGANICS

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all NELAC & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number E871112
L-A-B Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16D201

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

One (1) soil sample was received on 04/29/16 to be analyzed for Gasoline Range Organics by Purge and Trap in accordance with Method SW5035A/8015C and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. GPD012SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. GPD012SL/GPD012SC was within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : URS CORPORATION

Project: CANNON AFB PBR

SDG : 16D201

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION
OIL RANGE ORGANICS BY EXTRACTION

One (1) soil sample was received on 04/29/16 to be analyzed for Diesel Range Organics by Extraction and Oil Range Organics by Extraction in accordance with Method SW3550B/8015C and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one (1) method blank was analyzed. DSD037SB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one (1) set of LCS/LCD was analyzed. DRO was within LCS QC limits in DSD037SL/DSD037SC. ORO was within LCS QC limits in DSD037SX/DSD037SY. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was designated on this SDG.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
The sample was analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

SAMPLE RECEIPT FORM 1 Reference Number: SM02.7.3

Type of Delivery	Airbill / Tracking Number	ECN KeD201
☑ Fedex ☐ UPS ☐ GSO ☐ Others	7829 4574 4876	Recipient Sheri Fama
☐ EMAX Courier ☐ Client Delivery		Date 04-29-16 Time 0940

COC INSPECTION

☑ Client Name	☑ Client PM/FC	☑ Sampler Name	☑ Sampling Date/Time	☑ Sample ID	☑ Matrix
☑ Address	☑ Tel # / Fax #	☐ Courier Signature	☑ Analysis Required	☑ Preservative (if any)	☑ TAT
Safety Issues (if any)	☐ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note:

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☑ Custody Seal	☑ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☑ Sufficient	☑ plastic bag
Temperatures (Cool, ≤6 °C but not frozen)	☑ Cooler 1 3.5 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	*A - S/N* 130538505 SF 04/29/16	*B - S/N* 140252070	*C - S/N* 140252067	*D - S/N* 150555630	FM 2/8/16

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1	1-2	D10		OK
	3	D3	Label: CAFB-IDW-042816	R1
			04/29/16	

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

NOTES/OBSERVATIONS:

LEGEND: ☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
D1	Analysis is not indicated in _____	D13	Out of Holding Time	R1	Proceed as indicated in ☐ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in _____	D16	Preservation not indicated in _____	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in _____	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	
D9	Sample received is not listed in COC	D21	No sample for moisture determination	R9	
D10	No initial/date on corrections in COC/label	D22		R10	
D11	Container count mismatch COC vs received	D23		R11	
D12	Container size mismatch COC vs received	D24		R12	

REVIEWS:

Sample Labeling Date 4/29/16 4/29/16 **SRF** Date 4/29/16 **PM** Date 4/29/16

ORIGIN ID:CVNA (402) 321-0977
KYLE KLOEWER
URS GCP
12120 SHAMROCK PLZ STE 100

OMAHA, NE 68154
UNITED STATES US

SHIP DATE: 28APR16
ACTWGT: 11.40 LB
CAD: 006993959/SSFE1703
DIMS: 12x10x7 IN

BILL THIRD PARTY

Part # 156297-435 RIT2 12/15

TO **SAMPLE CUSTODIAN**
EMAX LABORATORIES
1835 WEST 205TH STREET

TORRANCE CA 90501
(310) 618-0818
INV:
PO: REF:
DEPT:

FedEx Express

REL#
3785346

TRK# 0201 **7829 4574 4876**

FRI - 29 APR 10:30A
PRIORITY OVERNIGHT

A7 HHRA

90501
CA-US **LAX**

URS Corporation
12120 Shamrock Plaza, Suite 100, Omaha, NE 68154 (402) 334-8181 Fax (402) 334-1984

CHAIN OF CUSTODY RECORD

Project Name: Cannon AFB PBR
Project No.: 60425210
Project Location: Cannon AFB Clovis, NM
Project Manager: Mike Sonderman
Sampler(s): K. Kloewer, J. Carritt

KeD201

Analytical Parameters

Sample Date	Sample Time	Type Comp.	Type Grab	Sample Identification	Matrix	Containers No.	Containers Type	TPH-GRO 8015C	TPH-DRO/ORO 8015C	Preservative / Remarks
04/28/16	15:00	X		CAFB-IDW-S-042816	Soil	2	40 mL VOA	X		MeOH
↓	↓	X		↓	↓	1	4 oz glass jar		X	

Signatures	Date	Time	Shipping Details	Special Instructions
Relinquished by: Jeffrey Carritt	4/28/16	17:00	Method of Shipment: Fed EX	24 Hour TAT
Received by:			Airbill No.:	
Relinquished by:			Lab Address: Sample Custodian, Emax Laboratories, 1835 West 205th St.	
Received for Laboratory by:	042916	0940		Temp = 3.5°C

P Drive/Office Administration/Chain of Custody Form (Nov 2012)

White copy - Laboratory Yellow copy - Laboratory Pink copy - URS

Torrance, CA 90501

130420

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than LOQ/RL but greater than LOD/MDL/DL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
MDL	Method Detection Limit
DL	Detection Limit
LOD	Limit of Detection
LOQ	Limit of Quantitation
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LAB CHRONICLE
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16D201
Instrument ID : GCT039

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	GPD012SB	1	NA	04/30/1608:07	04/30/1608:07	ED29031A	ED29026A	GPD012S	Method Blank
LCS1S	GPD012SL	1	NA	04/30/1608:45	04/30/1608:45	ED29032A	ED29026A	GPD012S	Lab Control Sample (LCS)
LCD1S	GPD012SC	1	NA	04/30/1609:24	04/30/1609:24	ED29033A	ED29026A	GPD012S	LCS Duplicate
CAFB-IDW-S-042816	D201-01	0.69	20.3	04/30/1610:42	04/30/1610:42	ED29035A	ED29026A	GPD012S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
DIESEL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16D201
Instrument ID : D5

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSD037SB	1	NA	04/29/1620:18	04/29/1614:40	LD29037A	LD29035A	DSD037S	Method Blank
LCS1S	DSD037SL	1	NA	04/29/1620:35	04/29/1614:40	LD29038A	LD29035A	DSD037S	Lab Control Sample (LCS)
LCD1S	DSD037SC	1	NA	04/29/1620:52	04/29/1614:40	LD29039A	LD29035A	DSD037S	LCS Duplicate
CAFB-IDW-S-042816	D201-01	1	20.3	04/29/1621:43	04/29/1614:40	LD29042A	LD29035A	DSD037S	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
OIL RANGE ORGANICS BY EXTRACTION

Client : URS CORPORATION
Project : CANNON AFB PBR

SDG NO. : 16D201
Instrument ID : D5

SOIL

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1S	DSD037SB	1	NA	04/29/1620:18	04/29/1614:40	LD29037A	LD29035A	DSD037S	Method Blank
LCS1S	DSD037SX	1	NA	04/29/1621:09	04/29/1614:40	LD29040A	LD29035A	DSD037S	Lab Control Sample (LCS)
LCD1S	DSD037SY	1	NA	04/29/1621:26	04/29/1614:40	LD29041A	LD29035A	DSD037S	LCS Duplicate
CAFB-IDW-S-042816	D201-01	1	20.3	04/29/1621:43	04/29/1614:40	LD29042A	LD29035A	DSD037S	Field Sample

FN - Filename
% Moist - Percent Moisture

RESULTS SUMMARIES

METHOD SW5035A/8015C
GASOLINE RANGE ORGANICS BY PURGE AND TRAP

Client	: URS CORPORATION	Date Collected:	04/28/16
Project	: CANNON AFB PBR	Date Received:	04/29/16
Batch No.	: 16D201	Date Extracted:	04/30/16 10:42
Sample ID:	CAFB-IDW-S-042816	Date Analyzed:	04/30/16 10:42
Lab Samp ID:	D201-01	Dilution Factor:	0.69
Lab File ID:	ED29035A	Matrix :	SOIL
Ext Btch ID:	GPD012S	% Moisture :	20.3
Calib. Ref.:	ED29026A	Instrument ID :	GCT039

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
GRO	ND	0.87	0.22	0.43

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOFLUOROBENZENE	1.34	1.731	77.3	67-134

Parameter	H-C Range
GRO	C6-C10

METHOD SW3550B/8015C
DIESEL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	04/28/16
Project	: CANNON AFB PBR	Date Received:	04/29/16
Batch No.	: 16D201	Date Extracted:	04/29/16 14:40
Sample ID:	CAFB-IDW-S-042816	Date Analyzed:	04/29/16 21:43
Lab Samp ID:	D201-01	Dilution Factor:	1
Lab File ID:	LD29042A	Matrix :	SOIL
Ext Btch ID:	DSD037S	% Moisture :	20.3
Calib. Ref.:	LD29035A	Instrument ID :	D5

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
DRO	ND	13	3.1	6.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	101	125.5	80.5	60-130
HEXACOSANE	30.7	31.37	97.8	60-130

Parameter	H-C Range
DRO	C10-C24

METHOD SW3550B/8015C
OIL RANGE ORGANICS BY EXTRACTION

Client	: URS CORPORATION	Date Collected:	04/28/16
Project	: CANNON AFB PBR	Date Received:	04/29/16
Batch No.	: 16D201	Date Extracted:	04/29/16 14:40
Sample ID:	CAFB-IDW-S-042816	Date Analyzed:	04/29/16 21:43
Lab Samp ID:	D201-01	Dilution Factor:	1
Lab File ID:	LD29042A	Matrix :	SOIL
Ext Btch ID:	DSD037S	% Moisture :	20.3
Calib. Ref.:	LD29035A	Instrument ID :	D5

PARAMETERS	RESULTS (mg/kg)	LOQ (mg/kg)	DL (mg/kg)	LOD (mg/kg)
ORO	ND	25	3.1	6.3

SURROGATE PARAMETERS	RESULTS	SPK_AMT	% RECOVERY	QC LIMIT
BROMOBENZENE	101	125.5	80.5	60-130
HEXACOSANE	30.7	31.37	97.8	60-130

Parameter	H-C Range
ORO	C24-C36

D2 – IDW Profile Sheet

Form 29-1
Clovis Regional Solid Waste Facility (CRSWF)
Generator Waste Profile Sheet

Profile Number 017

☐ Renewal for Profile Number _____ Waste Approval Expiration Date 6/30/16

Special Waste Type (Check One): ☐ Regulated Asbestos Waste; ☐ Non Regulated Asbestos Waste; ☐ Ash; ☐ Industrial (Non-Hazardous) Solid Waste ☐ Offal; ☒ Petroleum Contaminated Soils; ☐ Sludge; ☐ Spill of a Chemical Substance or Product; ☐ Special Waste Not Otherwise Specified

A. Waste Generator Facility Information (must reflect location of waste generation/origin)

1. Generator Name: CANNON AFB
2. Site Address: 402. S. Chindit Blvd
3. City/Zip: Cannon AFB 88103
4. State: New Mexico
5. County: Curry
6. Contact Name/Title: Sheen Kott Kamp
7. Email Address: Sheen.KottKamp.CTR@us.af.mil
8. Phone: 575-904-6743
9. FAX:
10. NAICS Code:
11. Generator USEPA ID#: 757 212 4454
12. State ID# (if applicable):

B. Customer Information ☐ same as above

1. Customer Name: AECOM
2. Billing Address: 12120 Shamrock Plz Suite 100
3. City, State and Zip: Omaha, NE 68154
4. Contact Name: Mike Sonderman
5. Contact Email: michael.sonderman@aecom.com
6. Phone: 505-715-2413 FAX:
7. Transporter Name: Little Gator Trucking
8. Transporter ID# (if appl.):
9. Transporter Address: 1966. South Roosevelt RD#8
10. City, State, and Zip: Portales, NM 88130

C. Waste Stream Information

1. DESCRIPTION

a. Common Waste Name: Non-Hazardous Soil State Waste Code(s): N/A

b. Describe Process Generating Waste or Source of Contamination:

Soil From investigations at multiple site at Cannon AFB. Includes soil from a petroleum contaminated site. Characterization samples indicate soil is not a special waste.

c. Typical Color(s): Brown

d. Strong Odor? ☐ Yes ☒ No Describe:

e. Physical State at 70° F: ☒ Solid ☐ Liquid ☐ Powder ☐ Semi-Solid or Sludge ☐ Other:

f. Layers? ☐ Single Layer ☐ Multi-layer ☒ NA

g. Water Reactive? ☐ Yes ☒ No If Yes, Describe:

h. Free Liquid Range (%): _____ to _____ ☒ NA (solid)

i. pH: ☐ 2.1-12.4 ☒ NA (solid) ☐ Actual:

j. Liquid Flash Point: ☐ ≥140° F ☒ NA (solid) ☐ Actual:

k. Flammable Solid: ☐ Yes ☒ No

l. Does the waste contain asbestos? ☐ Yes ☒ No

If yes, does the waste contain greater than 1% asbestos? ☐ Yes ☐ No (If yes, go to next question. If no, attach results of Polarized Light Microscopy)

Is the waste classified as regulated asbestos waste per 20.9.2.7(A)(9)(d) NMAC? ☐ Yes ☐ No

m. Physical Constituents: List all constituents of waste stream - (e.g. Soil 0-80%, Wood 0-20%) ☐ (See Attached)

Constituents (total Composition Must be ≥100%)	Concentration %	Constituents (Total Composition Must be ≥ 100%)	Concentration %
1. SOIL	100%		
2.			
3.			

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Form 29-1
Clovis Regional Solid Waste Facility (CRSWF)
Generator Waste Profile Sheet

2. ESTIMATED QUANTITY OF WASTE AND SHIPPING INFORMATION
   a. ☒ Event ☐ Base/Ongoing (check one)
   b. Estimated Annual Quantity: 6 ☐ Tons ☐ Cubic Yards ☒ Drums ☐ Gallons ☐ Other (specify):
   c. Shipping Frequency: _____ Units per ☐ Month ☐ Quarter ☐ Year ☒ One Time ☐ Other
   d. Is this a U.S. Department of Transportation (USDOT) Hazardous Material? (If yes, answer e.) ☐ Yes ☒ No
   e. USDOT Shipping Description (if applicable):
3. SAFETY REQUIREMENTS (Handling, PPE, etc.): NA

D. Regulatory Status (Please check appropriate responses)

- Is this a USEPA (40 CFR Part 261)/State hazardous waste? ☐ Yes ☒ No
- Is this waste included in one or more of categories below? (Check all that apply) ☐ Yes ☒ No
  - ☐ Delisted Hazardous Waste
  - ☐ Excluded Wastes Under 40 CFR 261.4
  - ☐ Treated Hazardous Waste Debris
  - ☐ Treated Characteristic Hazardous Waste
- Is the waste from a Federal (40 CFR 300, Appendix B) or state mandated clean-up? ☐ Yes ☒ No
- Is the waste classified as ignitable by 40 CFR Part 261? ☐ Yes ☒ No
- Is the waste classified as corrosive by 40 CFR Part 261? ☐ Yes ☒ No
- Is the waste classified as reactive by 40 CFR Part 261? ☐ Yes ☒ No
- Is the waste classified as toxic by 40 CFR Part 261? ☐ Yes ☒ No
- Does the waste represented by this waste profile sheet contain radioactive material? ☐ Yes ☒ No
- Does the waste contain concentration of regulated Polychlorinated Biphenyls (PCBs)? ☐ Yes ☒ No
- Does the waste contain infectious waste? ☐ Yes ☒ No
- Is this remediation waste from a facility that a major sources of Hazardous Air Pollutants (Site Remediation NESHAP, 40 CFR 63 subpart GGGGG)? ☐ Yes ☒ No
  - If yes, does the waste contain <500 ppmw VOHAPs at the point of determination? ☐ Yes ☒ No

If any question from Section D was answered "yes", the waste cannot be accepted at CRSWF

E. Generator Certification (Please read and certify by signature below)

By signing this Generator Waste Profile Sheet, I hereby certify that all:

1. Information submitted in this profile and all attached documents contain true and accurate descriptions of the waste material;
2. Relevant information within the possession of the Generator regarding known or suspected hazardous pertaining to this waste has been disclosed to CRSWF;
3. Analytical data attached pertaining to the profiled waste was derived from testing a representative sample in accordance with 40 CFR 261.20(c) or equivalent rules; and,
4. Changes that occur in the character of the waste (i.e. changes in the process or new analytical) will be identified by the Generator and disclosed to the CRSWF prior to providing the waste to CRSWF.

Check all that apply:

☒ Attached analytical pertains to the waste. Identify laboratory & sample ID #s and parameters tested:

_____ # Pages _____

☐ Additional information necessary to characterize the profiled waste has been attached (other than analytical).

Indicate the number of attached pages: _____

☒ By Generator process knowledge, the following waste is not a listed waste and is below all TCLP regulatory limits.

6. For non-friable asbestos waste, the following are valid statements:
   - Public access to the asbestos waste is prevented at the point of generation.
   - The hauler has been instructed to prevent public access to the asbestos wastes during transportation.
   - If Category I non-friable asbestos containing material, the waste has not been subjected to sanding, grinding, cutting or abrading.
   - If Category II non-friable asbestos containing material, the waste has not been subjected to forces expected to break, crumble, pulverize or reduce the material to powder during the course of excavation, renovation, demolition or storage.
   - The hauler has been instructed to handle non-regulated asbestoses waste in a manner to prevent the asbestos waste from becoming regulated asbestos waste.

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Form 29-1
Clovis Regional Solid Waste Facility (CRSWF)
Generator Waste Profile Sheet

7. For regulated asbestos waste, the following are valid statements:

- Public access to the asbestos waste is prevented at the point of generation.
- The hauler has been instructed to prevent public access to the asbestos wastes during transportation.
- Waste was wet, containerized and included the appropriate labels prior to transport and the outsides of the containers are not contaminated with asbestos debris adhering to the containers.
- The hauler has been instructed with the requirements of 20.9.8.12.E (3) NMAC.

Certification Signature: [signature] Title: Program Manager / Scientist

Company Name: Cannon AFB / 27 SOCES Name (Print): Sheen T. Kottkamp

Date: 05/04/2016

FOR CRSWF USE ONLY

Approval Decision: ☑ Approved ☐ Not Approved

Waste Approval Expiration Date: 6/30/16

Management Facility Precautions, Special Handling Procedures or Limitation on approval: None

☑ Shall not contain free liquid
☑ Shipment must be scheduled into disposal facility
☐ Approval number must accompany each shipment
☐ Waste manifest must accompany load

CRSWF Authorization Name/Title: [signature] Date: 5/17/16

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CLOVIS REGIONAL LANDFILL
P.O. BOX 760 CLOVIS, NM 88101-0760
(505) 769-7852
Account cards are mandatory!

*** Reprinted Ticket ***

Truck: 1A
Customer: 436508/URS/AECOM

Ticket: 419245
Date: 5/18/2016
Time: 14:13:12 - 14:31:32

			Scale
Gross:	16680 LBS	In	Scale IN
Tare:	12320 LBS	Out	Scale OUT
Net:	4360 LBS		

Grid: WEDGE/C & D wedge
Comment:

Origin	Materials & Services	Quantity	Unit	Rate/Unit	Amount
8/CLOVIS	100% of 12/C&D	2.18	TON	$13.00/TN	$28.34
				Total Taxes:	$1.42
				Total Amount:	$29.76

Driver: 05/18/2016 14:29

Deputy Weighmaster:
OSCAR M

TABLE E-1
SUMMARY OF SOIL ANALYTICAL DATA AT TU504
0 TO 10-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			CA504-SG01-S-005				CA504-SG01-S-010				CA504-SG01-S-210**				CA504-SG02-S-005				CA504-SG02-S-010			
DATE COLLECTED			February 5, 2016				February 5, 2016				February 5, 2016				February 5, 2016				February 5, 2016			
	Maximum	Frequency*	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																						
Toluene	3.80E-03 J	4 / 28	5.30E-04	5.30E-04	5.30E-03	J	8.60E-04	5.50E-04	5.50E-03	J	<	1.10E-03	5.60E-03	U	<	9.90E-04	4.90E-03	U	<	1.10E-03	5.50E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																						
No semivolatile organic compounds detected.																						
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																						
2-Methylnaphthalene	4.90E-03 J	1 / 28	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Benzo(a)anthracene	4.80E+00	11 / 28	<	1.10E-02	2.10E-02	U	5.70E-03	5.40E-03	2.10E-02	J	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Benzo(a)pyrene	2.10E+00	9 / 28	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Benzo(b)fluoranthene	3.40E+00	10 / 28	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Benzo(k)fluoranthene	9.40E-01	5 / 28	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Chrysene	4.60E+00	9 / 28	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Dibenz(a,h)anthracene	2.20E-01	3 / 28	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Fluoranthene	1.30E-02 J	2 / 6	<	1.10E-02	2.10E-02	U	1.30E-02	5.40E-03	2.10E-02	J	7.20E-03	5.40E-03	2.10E-02	J	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Indeno(1,2,3-cd)pyrene	7.00E-01	8 / 28	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
Pyrene	1.00E-02 J	2 / 6	<	1.10E-02	2.10E-02	U	1.00E-02	5.40E-03	2.10E-02	J	5.90E-03	5.40E-03	2.10E-02	J	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U
PETROLEUM HYDROCARBONS (mg/kg)																						
Diesel Range Organics	3.05E+03	6 / 22	N/A				N/A				N/A				N/A				N/A			
Oil Range Organics	1.00E+02	10 / 22	N/A				N/A				N/A				N/A				N/A			

Notes:
*Frequency does not include duplicate samples.
**This sample is a duplicate.
< = result is less than the LOD for the 2016 data. LODs were not readily available for the 2013 data.
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
N/A = not applicable
Qual = Qualifier
U = Nondetect

TABLE E-1
SUMMARY OF SOIL ANALYTICAL DATA AT TU504
0 TO 10-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			CA504-SG02-S-210**				CA504-SG03-S-005				CA504-SG03-S-010				CA504-SB01-005			CA504-SB01-010			CA504-SB02-005		
DATE COLLECTED			February 5, 2016				February 5, 2016				February 5, 2016				February 5, 2013			February 5, 2013			February 7, 2013		
	Maximum	Frequency*	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																							
Toluene	3.80E-03 J	4 / 28	6.60E-04	5.10E-04	5.10E-03	J	<	8.40E-04	4.20E-03	U	<	1.00E-03	5.20E-03	U	<	4.80E-03	U	<	6.20E-03	U	<	5.60E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																							
No semivolatile organic compounds detected.																							
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																							
2-Methylnaphthalene	4.90E-03 J	1 / 28	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	11 / 28	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	2.40E-02	1.10E-02		6.80E-03	1.10E-02	J	6.30E-03	1.10E-02	J
Benzo(a)pyrene	2.10E+00	9 / 28	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	2.90E-02	1.10E-02		3.80E-03	1.10E-02	J	5.50E-03	1.10E-02	J
Benzo(b)fluoranthene	3.40E+00	10 / 28	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	4.80E-02	1.10E-02		6.40E-03	1.10E-02	J	8.80E-03	1.10E-02	J
Benzo(k)fluoranthene	9.40E-01	5 / 28	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	1.40E-02	1.10E-02		<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	9 / 28	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	3.20E-02	1.10E-02		5.30E-03	1.10E-02	J	4.50E-03	1.10E-02	J
Dibenz(a,h)anthracene	2.20E-01	3 / 28	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	4.60E-03	1.10E-02	J	<	1.10E-02	U	<	1.10E-02	U
Fluoranthene	1.30E-02 J	2 / 6	<	1.10E-02	2.20E-02	U	8.30E-03	5.40E-03	2.20E-02	J	<	1.10E-02	2.20E-02	U	N/A			N/A			N/A		
Indeno(1,2,3-cd)pyrene	7.00E-01	8 / 28	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	1.70E-02	1.10E-02		<	1.10E-02	U	3.90E-03	1.10E-02	J
Pyrene	1.00E-02 J	2 / 6	<	1.10E-02	2.20E-02	U	6.70E-03	5.40E-03	2.20E-02	J	<	1.10E-02	2.20E-02	U	N/A			N/A			N/A		
PETROLEUM HYDROCARBONS (mg/kg)																							
Diesel Range Organics	3.05E+03	6 / 22	N/A				N/A				N/A				4.60E+00	1.10E+01	J	<	1.10E+01	U	7.60E+00	1.10E+01	J
Oil Range Organics	1.00E+02	10 / 22	N/A				N/A				N/A				1.80E+01	2.10E+01	J	1.50E+01	2.10E+01	J	1.80E+01	2.10E+01	J

Notes:

*Frequency does not include duplicate samples.

**This sample is a duplicate.

< = result is less than the LOD for the 2016 data. LODs were not readily available for the 2013 data.

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

N/A = not applicable

Qual = Qualifier

U = Nondetect

TABLE E-1
SUMMARY OF SOIL ANALYTICAL DATA AT TU504
0 TO 10-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			CA504-SB02-010			CA504-SB03-005			CA504-SB03-010			CA504-SB04-005			CA504-SB04-010			CA504-SB05-005			CA504-SB05-010		
DATE COLLECTED			February 7, 2013			February 12, 2013			February 12, 2013			February 10, 2013			February 10, 2013			February 13, 2013			February 13, 2013		
	Maximum	Frequency*	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																							
Toluene	3.80E-03 J	4 / 28	<	6.30E-03	U	<	5.00E-03	U	<	5.30E-03	U	<	6.90E-03	U	<	7.20E-03	U	<	5.10E-03	U	<	6.80E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																							
No semivolatile organic compounds detected.																							
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																							
2-Methylnaphthalene	4.90E-03 J	1 / 28	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Benzo(a)anthracene	4.80E+00	11 / 28	<	1.10E-02	U	6.90E-03	1.00E-02	J	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Benzo(a)pyrene	2.10E+00	9 / 28	<	1.10E-02	U	7.00E-03	1.00E-02	J	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Benzo(b)fluoranthene	3.40E+00	10 / 28	<	1.10E-02	U	7.00E-03	1.00E-02	J	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	2.80E-03	1.10E-02	J	<	1.20E-02	U
Benzo(k)fluoranthene	9.40E-01	5 / 28	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Chrysene	4.60E+00	9 / 28	<	1.10E-02	U	5.10E-03	1.00E-02	J	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Dibenz(a,h)anthracene	2.20E-01	3 / 28	<	1.10E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Fluoranthene	1.30E-02 J	2 / 6	N/A			N/A			N/A			N/A			N/A			N/A			N/A		
Indeno(1,2,3-cd)pyrene	7.00E-01	8 / 28	<	1.10E-02	U	4.60E-03	1.00E-02	J	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.20E-02	U
Pyrene	1.00E-02 J	2 / 6	N/A			N/A			N/A			N/A			N/A			N/A			N/A		
PETROLEUM HYDROCARBONS (mg/kg)																							
Diesel Range Organics	3.05E+03	6 / 22	9.50E+00	1.10E+01	J	<	1.00E+01	U	<	1.00E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	<	1.20E+01	U
Oil Range Organics	1.00E+02	10 / 22	<	2.20E+01	U	<	2.10E+01	U	<	2.10E+01	U	6.60E+01	2.20E+01		<	2.20E+01	U	<	2.10E+01	U	<	2.30E+01	U

Notes:

*Frequency does not include duplicate samples.

**This sample is a duplicate.

< = result is less than the LOD for the 2016 data. LODs were not readily available for the 2013 data.

J = Estimated

LOD = Limit of Detection

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mg/kg = milligrams per kilogram

N/A = not applicable

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U = Nondetect

TABLE E-1
SUMMARY OF SOIL ANALYTICAL DATA AT TU504
0 TO 10-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			CA504-SB06-005			CA504-SB06-010			CA504-SB07-005			CA504-SB07-010			CA504-SB08-005			CA504-SB08-010		
DATE COLLECTED			February 13, 2013			February 13, 2013			February 12, 2013			February 12, 2013			February 10, 2013			February 10, 2013		
	Maximum	Frequency*	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																				
Toluene	3.80E-03 J	4 / 28	<	5.30E-03	U	<	5.20E-03	U	<	6.60E-03	U	<	4.80E-03	U	<	5.20E-03	U	<	5.10E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																				
No semivolatile organic compounds detected.																				
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																				
2-Methylnaphthalene	4.90E-03 J	1 / 28	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	4.90E-03	1.00E-02	J	<	1.00E-02	U
Benzo(a)anthracene	4.80E+00	11 / 28	1.50E-02	1.00E-02		<	1.10E-02	U	1.20E-02	1.10E-02		<	1.10E-02	U	4.80E+00	5.10E-02		6.60E-02	1.00E-02	J
Benzo(a)pyrene	2.10E+00	9 / 28	1.10E-02	1.00E-02		<	1.10E-02	U	8.70E-03	1.10E-02	J	<	1.10E-02	U	2.10E+00	1.00E-02		2.00E-02	1.00E-02	J
Benzo(b)fluoranthene	3.40E+00	10 / 28	1.50E-02	1.00E-02		<	1.10E-02	U	1.00E-02	1.10E-02	J	<	1.10E-02	U	3.40E+00	5.10E-02		1.40E-01	1.00E-02	J
Benzo(k)fluoranthene	9.40E-01	5 / 28	4.80E-03	1.00E-02	J	<	1.10E-02	U	3.70E-03	1.10E-02	J	<	1.10E-02	U	9.40E-01	1.00E-02		3.10E-02	1.00E-02	J
Chrysene	4.60E+00	9 / 28	1.20E-02	1.00E-02		<	1.10E-02	U	1.00E-02	1.10E-02	J	<	1.10E-02	U	4.60E+00	5.10E-02		2.90E-01	1.00E-02	J
Dibenz(a,h)anthracene	2.20E-01	3 / 28	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U	<	1.10E-02	U	2.20E-01	1.00E-02		<	1.00E-02	U
Fluoranthene	1.30E-02 J	2 / 6	N/A			N/A			N/A			N/A			N/A			N/A		
Indeno(1,2,3-cd)pyrene	7.00E-01	8 / 28	6.00E-03	1.00E-02	J	<	1.10E-02	U	5.20E-03	1.10E-02	J	<	1.10E-02	U	7.00E-01	1.00E-02		1.10E-02	1.00E-02	J
Pyrene	1.00E-02 J	2 / 6	N/A			N/A			N/A			N/A			N/A			N/A		
PETROLEUM HYDROCARBONS (mg/kg)																				
Diesel Range Organics	3.05E+03	6 / 22	1.40E+01	1.00E+01		<	1.10E+01	U	<	1.10E+01	U	<	1.10E+01	U	2.20E+01	1.00E+01		3.05E+03	2.10E+01	
Oil Range Organics	1.00E+02	10 / 22	1.00E+02	2.10E+01		<	2.20E+01	U	<	2.20E+01	U	<	2.20E+01	U	4.60E+01	2.00E+01		1.20E+01	4.20E+01	J

Notes:

*Frequency does not include duplicate samples.

**This sample is a duplicate.

< = result is less than the LOD for the 2016 data. LODs were not readily available for the 2013 data.

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

N/A = not applicable

Qual = Qualifier

U = Nondetect

TABLE E-1
SUMMARY OF SOIL ANALYTICAL DATA AT TU504
0 TO 10-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			CA504-SB09-005			CA504-SB09-010			CA504-SB10-005			CA504-SB10-010			CA504-SB11-005			CA504-SB11-010		
DATE COLLECTED			February 11, 2013			February 11, 2013			February 11, 2013			February 11, 2013			February 8, 2013			February 8, 2013		
	Maximum	Frequency*	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																				
Toluene	3.80E-03 J	4 / 28	<	5.10E-03	U	<	5.40E-03	U	3.80E-03	6.40E-03	J	<	5.20E-03	U	<	4.80E-03	U	2.40E-03	5.30E-03	J
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																				
No semivolatile organic compounds detected.																				
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																				
2-Methylnaphthalene	4.90E-03 J	1 / 28	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00	11 / 28	6.70E-03	1.00E-02	J	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	3.30E-03	1.10E-02	J
Benzo(a)pyrene	2.10E+00	9 / 28	3.50E-03	1.00E-02	J	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00	10 / 28	6.70E-03	1.00E-02	J	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01	5 / 28	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Chrysene	4.60E+00	9 / 28	5.60E-03	1.00E-02	J	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01	3 / 28	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	3.10E-03	1.10E-02	J
Fluoranthene	1.30E-02 J	2 / 6	N/A			N/A			N/A			N/A			N/A			N/A		
Indeno(1,2,3-cd)pyrene	7.00E-01	8 / 28	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U	3.10E-03	1.10E-02	J
Pyrene	1.00E-02 J	2 / 6	N/A			N/A			N/A			N/A			N/A			N/A		
PETROLEUM HYDROCARBONS (mg/kg)																				
Diesel Range Organics	3.05E+03	6 / 22	<	1.00E+01	U	<	1.00E+01	U	<	1.00E+01	U	<	1.00E+01	U	<	1.10E+01	U	<	1.10E+01	U
Oil Range Organics	1.00E+02	10 / 22	8.60E+00	2.10E+01	J	8.80E+00	2.10E+01	J	5.90E+00	2.10E+01	J	<	2.10E+01	U	<	2.30E+01	U	<	2.30E+01	U

Notes:

*Frequency does not include duplicate samples.

**This sample is a duplicate.

< = result is less than the LOD for the 2016 data. LODs were not readily available for the 2013 data.

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

N/A = not applicable

Qual = Qualifier

U = Nondetect

TABLE E-2
SUMMARY OF SOIL ANALYTICAL DATA AT TU504
0 TO 5-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION				CA504-SG01-S-005				CA504-SG02-S-005				CA504-SG03-S-005				CA504-SB01-005			CA504-SB02-005		
DATE COLLECTED				February 5, 2016				February 5, 2016				February 5, 2016				February 5, 2013			February 7, 2013		
	Maximum		Frequency	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual	Result	LOD	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																					
Toluene	3.80E-03	J	2 / 14	5.30E-04	5.30E-04	5.30E-03	J	<	9.90E-04	4.90E-03	U	<	8.40E-04	4.20E-03	U	<	4.80E-03	U	<	5.60E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																					
No semivolatile organic compounds detected.																					
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																					
2-Methylnaphthalene	4.90E-03	J	1 / 14	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00		7 / 14	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	2.40E-02	1.10E-02		6.30E-03	1.10E-02	J
Benzo(a)pyrene	2.10E+00		7 / 14	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	2.90E-02	1.10E-02		5.50E-03	1.10E-02	J
Benzo(b)fluoranthene	3.40E+00		8 / 14	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	4.80E-02	1.10E-02		8.80E-03	1.10E-02	J
Benzo(k)fluoranthene	9.40E-01		4 / 14	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	1.40E-02	1.10E-02		<	1.10E-02	U
Chrysene	4.60E+00		7 / 14	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	3.20E-02	1.10E-02		4.50E-03	1.10E-02	J
Dibenz(a,h)anthracene	2.20E-01		2 / 14	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	4.60E-03	1.10E-02	J	<	1.10E-02	U
Fluoranthene	8.30E-03	J	1 / 3	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	8.30E-03	5.40E-03	2.20E-02	J	N/A			N/A		
Indeno(1,2,3-cd)pyrene	7.00E-01		6 / 14	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	<	1.10E-02	2.20E-02	U	1.70E-02	1.10E-02		3.90E-03	1.10E-02	J
Pyrene	6.70E-03	J	1 / 3	<	1.10E-02	2.10E-02	U	<	1.10E-02	2.20E-02	U	6.70E-03	5.40E-03	2.20E-02	J	N/A			N/A		
PETROLEUM HYDROCARBONS (mg/kg)																					
Diesel Range Organics	2.20E+01		4 / 11	N/A				N/A				N/A				4.60E+00	1.10E+01	J	7.60E+00	1.10E+01	J
Oil Range Organics	1.00E+02		7 / 11	N/A				N/A				N/A				1.80E+01	2.10E+01	J	1.80E+01	2.10E+01	J

Notes:

< = result is less than the LOD for the 2016 data. LODs were not readily available for the 2013 data.

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

N/A = not applicable

Qual = Qualifier

U = Nondetect

TABLE E-2
SUMMARY OF SOIL ANALYTICAL DATA AT TU504
0 TO 5-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION				CA504-SB03-005			CA504-SB04-005			CA504-SB05-005			CA504-SB06-005			CA504-SB07-005			CA504-SB08-005		
DATE COLLECTED				February 12, 2013			February 10, 2013			February 13, 2013			February 13, 2013			February 12, 2013			February 10, 2013		
	Maximum		Frequency	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)																					
Toluene	3.80E-03	J	2 / 14	<	5.00E-03	U	<	6.90E-03	U	<	5.10E-03	U	<	5.30E-03	U	<	6.60E-03	U	<	5.20E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)																					
No semivolatile organic compounds detected.																					
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)																					
2-Methylnaphthalene	4.90E-03	J	1 / 14	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	4.90E-03	1.00E-02	J
Benzo(a)anthracene	4.80E+00		7 / 14	6.90E-03	1.00E-02	J	<	2.20E-02	U	<	1.10E-02	U	1.50E-02	1.00E-02		1.20E-02	1.10E-02		4.80E+00	5.10E-02	
Benzo(a)pyrene	2.10E+00		7 / 14	7.00E-03	1.00E-02	J	<	2.20E-02	U	<	1.10E-02	U	1.10E-02	1.00E-02		8.70E-03	1.10E-02	J	2.10E+00	1.00E-02	
Benzo(b)fluoranthene	3.40E+00		8 / 14	7.00E-03	1.00E-02	J	<	2.20E-02	U	2.80E-03	1.10E-02	J	1.50E-02	1.00E-02		1.00E-02	1.10E-02	J	3.40E+00	5.10E-02	
Benzo(k)fluoranthene	9.40E-01		4 / 14	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	4.80E-03	1.00E-02	J	3.70E-03	1.10E-02	J	9.40E-01	1.00E-02	
Chrysene	4.60E+00		7 / 14	5.10E-03	1.00E-02	J	<	2.20E-02	U	<	1.10E-02	U	1.20E-02	1.00E-02		1.00E-02	1.10E-02	J	4.60E+00	5.10E-02	
Dibenz(a,h)anthracene	2.20E-01		2 / 14	<	1.00E-02	U	<	2.20E-02	U	<	1.10E-02	U	<	1.00E-02	U	<	1.10E-02	U	2.20E-01	1.00E-02	
Fluoranthene	8.30E-03	J	1 / 3	N/A			N/A			N/A			N/A			N/A			N/A		
Indeno(1,2,3-cd)pyrene	7.00E-01		6 / 14	4.60E-03	1.00E-02	J	<	2.20E-02	U	<	1.10E-02	U	6.00E-03	1.00E-02	J	5.20E-03	1.10E-02	J	7.00E-01	1.00E-02	
Pyrene	6.70E-03	J	1 / 3	N/A			N/A			N/A			N/A			N/A			N/A		
PETROLEUM HYDROCARBONS (mg/kg)																					
Diesel Range Organics	2.20E+01		4 / 11	<	1.00E+01	U	<	1.10E+01	U	<	1.10E+01	U	1.40E+01	1.00E+01		<	1.10E+01	U	2.20E+01	1.00E+01	
Oil Range Organics	1.00E+02		7 / 11	<	2.10E+01	U	6.60E+01	2.20E+01		<	2.10E+01	U	1.00E+02	2.10E+01		<	2.20E+01	U	4.60E+01	2.00E+01	

Notes:

< = result is less than the LOD for the 2016 data. LODs were not readily available for the 2013 data.

J = Estimated

LOD = Limit of Detection

LOQ = Limit of Quantitation

mg/kg = milligrams per kilogram

N/A = not applicable

Qual = Qualifier

U = Nondetect

TABLE E-2
SUMMARY OF SOIL ANALYTICAL DATA AT TU504
0 TO 5-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION				CA504-SB09-005			CA504-SB10-005			CA504-SB11-005		
DATE COLLECTED				February 11, 2013			February 11, 2013			February 8, 2013		
	Maximum		Frequency	Result	LOQ	Qual	Result	LOQ	Qual	Result	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (mg/kg)												
Toluene	3.80E-03	J	2 / 14	<	5.10E-03	U	3.80E-03	6.40E-03	J	<	4.80E-03	U
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg)												
No semivolatile organic compounds detected.												
POLYNUCLEAR AROMATIC HYDROCARBONS (mg/kg)												
2-Methylnaphthalene	4.90E-03	J	1 / 14	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U
Benzo(a)anthracene	4.80E+00		7 / 14	6.70E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U
Benzo(a)pyrene	2.10E+00		7 / 14	3.50E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U
Benzo(b)fluoranthene	3.40E+00		8 / 14	6.70E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U
Benzo(k)fluoranthene	9.40E-01		4 / 14	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U
Chrysene	4.60E+00		7 / 14	5.60E-03	1.00E-02	J	<	1.00E-02	U	<	1.10E-02	U
Dibenz(a,h)anthracene	2.20E-01		2 / 14	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U
Fluoranthene	8.30E-03	J	1 / 3	N/A			N/A			N/A		
Indeno(1,2,3-cd)pyrene	7.00E-01		6 / 14	<	1.00E-02	U	<	1.00E-02	U	<	1.10E-02	U
Pyrene	6.70E-03	J	1 / 3	N/A			N/A			N/A		
PETROLEUM HYDROCARBONS (mg/kg)												
Diesel Range Organics	2.20E+01		4 / 11	<	1.00E+01	U	<	1.00E+01	U	<	1.10E+01	U
Oil Range Organics	1.00E+02		7 / 11	8.60E+00	2.10E+01	J	5.90E+00	2.10E+01	J	<	2.30E+01	U

Notes:

< = result is less than the LOD for the 2016 data. LODs were not readily available for the 2013 data.
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
mg/kg = milligrams per kilogram
N/A = not applicable
Qual = Qualifier
U = Nondetect

TABLE E-3
COMPARISON OF MAXIMUM DETECTED CONCENTRATIONS AT TU504 TO SCREENING CRITERIA - 0 TO 10-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Concentration (mg/kg)	Frequency*	Residential Screening Value (mg/kg)	Exceeds Screening Value (Y/N)	Source
Volatile Organic Compounds					
Toluene	3.80E-03	4/28	5.23E+03	N	NMED
Polynuclear Aromatic Hydrocarbons					
2-Methylnaphthalene	4.90E-03	1/28	2.40E+02	N	RSL
Benzo(a)anthracene	4.80E+00	11/28	1.53E+00	Y	NMED
Benzo(a)pyrene	2.10E+00	9/28	1.53E-01	Y	NMED
Benzo(b)fluoranthene	3.40E+00	10/28	1.53E+00	Y	NMED
Benzo(k)fluoranthene	9.40E-01	5/28	1.53E+01	N	NMED
Chrysene	4.60E+00	9/28	1.53E+02	N	NMED
Dibenz(a,h)anthracene	2.20E-01	3/28	1.53E-01	Y	NMED
Fluoranthene	1.30E-02	2/6	2.32E+03	N	NMED
Indeno(1,2,3-c,d)pyrene	7.00E-01	8/28	1.53E+00	N	NMED
Pyrene	1.00E-02	2/6	1.74E+03	N	NMED
Petroleum Hydrocarbons					
Diesel Range Organics (DRO)**	3.05E+03	6/22	1.00E+03	Y	NMED
Oil Range Organics (ORO)**	1.00E+02	10/22	1.00E+03	N	NMED

Notes:

Maximum concentration from **Table E-1**. All samples from 0 to 10 feet below ground surface were included in the data set.

Shading indicates chemicals with maximum concentrations greater than the SSL or RSL.

*Frequency does not include duplicates. The higher of the parent or duplicate result was used in the evaluation.

The residential exposure diesel #2/crankcase oil SSL from NMED (2015) was used for DRO. The resdiential exposure unknown oil SSL from NMED (2015) was used for ORO. TPH is further evaluated in **Table E-9.

Shading indicates chemicals with maximum concentrations greater than the SSL or RSL.

mg/kg = milligrams per kilogram

N = No

NMED = New Mexico Environment Department Screening Levels (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0)

RSL = Regional Screening Levels (USEPA 2015, November Update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

SSL = soil screening level

TPH = total petroleum hydrocarbons

USEPA = United States Environmental Protection Agency

Y = Yes

TABLE E-4
COMPARISON OF MAXIMUM DETECTED CONCENTRATIONS AT TU504 TO SCREENING CRITERIA - 0 TO 5-FOOT EXPOSURE INTERVAL
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Concentration (mg/kg)	Frequency	Residential Screening Value (mg/kg)	Exceeds Screening Value (Y/N)	Source
Volatile Organic Compounds					
Toluene	3.80E-03	2/14	5.23E+03	N	NMED
Polynuclear Aromatic Hydrocarbons					
2-Methylnaphthalene	4.90E-03	1/14	2.40E+02	N	RSL
Benzo(a)anthracene	4.80E+00	7/14	1.53E+00	Y	NMED
Benzo(a)pyrene	2.10E+00	7/14	1.53E-01	Y	NMED
Benzo(b)fluoranthene	3.40E+00	8/14	1.53E+00	Y	NMED
Benzo(k)fluoranthene	9.40E-01	4/14	1.53E+01	N	NMED
Chrysene	4.60E+00	7/14	1.53E+02	N	NMED
Dibenz(a,h)anthracene	2.20E-01	2/14	1.53E-01	Y	NMED
Fluoranthene	8.30E-03	1/3	2.32E+03	N	NMED
Indeno(1,2,3-c,d)pyrene	7.00E-01	6/14	1.53E+00	N	NMED
Pyrene	6.70E-03	1/3	1.74E+03	N	NMED
Petroleum Hydrocarbons					
Diesel Range Organics (DRO)**	2.20E+01	4/11	1.00E+03	N	NMED
Oil Range Organics (ORO)**	1.00E+02	7/11	1.00E+03	N	NMED

Notes:

Maximum concentration from **Table E-2**. All samples from 0 to 5 feet below ground surface were included in the data set.

The residential exposure diesel #2/crankcase oil SSL from NMED (2015) was used for DRO. The resdiential exposure unknown oil SSL from NMED (2015) was used for ORO. TPH is further evaluated in **Table E-9.

Shading indicates chemicals with maximum concentrations greater than the SSL or RSL.

mg/kg = milligrams per kilogram

N = No

NMED = New Mexico Environment Department Screening Levels (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0)

RSL = Regional Screening Levels (USEPA 2015, November Update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

SSL = soil screening level

TPH = total petroleum hydrocarbons

USEPA = United States Environmental Protection Agency

Y = Yes

TABLE E-5
HUMAN HEALTH QUANTITATIVE SCREENING EVALUATION RESULTS FOR TU504
RESIDENTIAL SCENARIO
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Concentration (mg/kg)	Frequency*	Residential Value Cancer Endpoint (mg/kg)	Residential Value Noncancer Endpoint (mg/kg)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Volatile Organic Compounds									
Toluene	3.80E-03	4/28	NA	5.23E+03	NMED	1E-05	NA	1	0.0000007
Polynuclear Aromatic Hydrocarbons									
2-Methylnaphthalene	4.90E-03	1/28	NA	2.40E+02	RSL	1E-05	NA	1	0.00002
Benzo(a)anthracene	4.80E+00	11/28	1.53E+00	NA	NMED	1E-05	3.14E-05	1	NA
Benzo(a)pyrene	2.10E+00	9/28	1.53E-01	NA	NMED	1E-05	1.37E-04	1	NA
Benzo(b)fluoranthene	3.40E+00	10/28	1.53E+00	NA	NMED	1E-05	2.22E-05	1	NA
Benzo(k)fluoranthene	9.40E-01	5/28	1.53E+01	NA	NMED	1E-05	6.14E-07	1	NA
Chrysene	4.60E+00	9/28	1.53E+02	NA	NMED	1E-05	3.01E-07	1	NA
Dibenz(a,h)anthracene	2.20E-01	3/28	1.53E-01	NA	NMED	1E-05	1.44E-05	1	NA
Fluoranthene	1.30E-02	2/6	NA	2.32E+03	NMED	1E-05	NA	1	0.000006
Indeno(1,2,3-c,d)pyrene	7.00E-01	8/28	1.53E+00	NA	NMED	1E-05	4.58E-06	1	NA
Pyrene	1.00E-02	2/6	NA	1.74E+03	NMED	1E-05	NA	1	0.000006
						Total	**2E-04**	**Total**	**0.00003**

Notes:

Maximum concentration from Table **E-3**. All samples 0 to 10 feet below ground surface were included in the data set.

*Frequency does not include duplicates. The higher of the parent or duplicate result was used in the evaluation.

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department Screening Levels (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

RSL = Regional Screening Levels (USEPA 2015, November Update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

USEPA = United States Environmental Protection Agency

TABLE E-6
HUMAN HEALTH QUANTITATIVE SCREENING EVALUATION RESULTS FOR TU504
CONSTRUCTION WORKER SCENARIO
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Concentration (mg/kg)	Frequency*	Construction Worker Value Cancer Endpoint (mg/kg)	Construction Worker Value Noncancer Endpoint (mg/kg)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Volatile Organic Compounds									
Toluene	3.80E-03	4/28	NA	1.40E+04	NMED	1E-05	NA	1	0.0000003
Polynuclear Aromatic Hydrocarbons									
2-Methylnaphthalene	4.90E-03	1/28	NA	3.00E+03	RSL	1E-05	NA	1	0.000002
Benzo(a)anthracene	4.80E+00	11/28	2.40E+02	NA	NMED	1E-05	2.00E-07	1	NA
Benzo(a)pyrene	2.10E+00	9/28	2.40E+01	NA	NMED	1E-05	8.75E-07	1	NA
Benzo(b)fluoranthene	3.40E+00	10/28	2.40E+02	NA	NMED	1E-05	1.42E-07	1	NA
Benzo(k)fluoranthene	9.40E-01	5/28	2.31E+03	NA	NMED	1E-05	4.07E-09	1	NA
Chrysene	4.60E+00	9/28	2.31E+04	NA	NMED	1E-05	1.99E-09	1	NA
Dibenz(a,h)anthracene	2.20E-01	3/28	2.40E+01	NA	NMED	1E-05	9.17E-08	1	NA
Fluoranthene	1.30E-02	2/6	NA	1.00E+04	NMED	1E-05	NA	1	0.0000013
Indeno(1,2,3-c,d)pyrene	7.00E-01	8/28	2.40E+02	NA	NMED	1E-05	2.92E-08	1	NA
Pyrene	1.00E-02	2/6	NA	7.53E+03	NMED	1E-05	NA	1	0.0000013
						Total	**1E-06**	**Total**	**0.000005**

Notes:

Maximum concentration from Table **E-3**. All samples 0 to 10 feet below ground surface were included in the data set.

*Frequency does not include duplicates. The higher of the parent or duplicate result was used in the evaluation.

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department Screening Levels (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

RSL = Regional Screening Levels (USEPA 2015, November Update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

USEPA = United States Environmental Protection Agency

TABLE E-7
HUMAN HEALTH QUANTITATIVE SCREENING EVALUATION RESULTS FOR TU504
COMMERCIAL/INDUSTRIAL WORKER SCENARIO
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Concentration (mg/kg)	Frequency	Commercial Value Cancer Endpoint (mg/kg)	Commercial Value Noncancer Endpoint (mg/kg)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Volatile Organic Compounds									
Toluene	3.80E-03	2/14	NA	6.13E+04	NMED	1E-05	NA	1	0.0000001
Polynuclear Aromatic Hydrocarbons									
2-Methylnaphthalene	4.90E-03	1/14	NA	3.00E+03	RSL	1E-05	NA	1	0.000002
Benzo(a)anthracene	4.80E+00	7/14	3.23E+01	NA	NMED	1E-05	1.49E-06	1	NA
Benzo(a)pyrene	2.10E+00	7/14	3.23E+00	NA	NMED	1E-05	6.50E-06	1	NA
Benzo(b)fluoranthene	3.40E+00	8/14	3.23E+01	NA	NMED	1E-05	1.05E-06	1	NA
Benzo(k)fluoranthene	9.40E-01	4/14	3.23E+02	NA	NMED	1E-05	2.91E-08	1	NA
Chrysene	4.60E+00	7/14	3.23E+03	NA	NMED	1E-05	1.42E-08	1	NA
Dibenz(a,h)anthracene	2.20E-01	2/14	3.23E+00	NA	NMED	1E-05	6.81E-07	1	NA
Fluoranthene	8.30E-03	1/3	NA	3.37E+04	NMED	1E-05	NA	1	0.0000002
Indeno(1,2,3-c,d)pyrene	7.00E-01	6/14	3.23E+01	NA	NMED	1E-05	2.17E-07	1	NA
Pyrene	6.70E-03	1/3	NA	2.53E+04	NMED	1E-05	NA	1	0.0000003
						Total	**1E-05**	**Total**	**0.000002**

Notes:

Maximum concentration from **Table E-4**. There were no 0 to 1 foot samples; therefore, the 0 to 5-foot samples were used in this evaluation.

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department Screening Levels for Commercial/Industrial Workers (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

RSL = Regional Screening Levels (USEPA 2015, November Update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

USEPA = United States Environmental Protection Agency

TABLE E-8
HUMAN HEALTH QUANTITATIVE TPH SCREENING EVALUATION RESULTS FOR TU504
ALL EXPOSURE SCENARIOS
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Concentration (mg/kg)	Frequency	Residential Value Cancer Endpoint (mg/kg)	Residential Value Noncancer Endpoint (mg/kg)	Commercial Value Cancer Endpoint (mg/kg)	Commercial Value Noncancer Endpoint (mg/kg)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Petroleum Hydrocarbons											
0 To 10-Foot Depth - Residential											
Diesel Range Organics (DRO)**	3.05E+03	12/22	NA	1.00E+03	NA	NA	NMED	1E-05	NA	1	3
Oil Range Organics (ORO)**	1.00E+02	16/22	NA	1.00E+03	NA	NA	NMED	1E-05	NA	1	0.10
										Hazard Index	**3**
0 To 10-Foot Depth - Construction Worker											
Diesel Range Organics (DRO)**	3.05E+03	12/22	NA	NA	NA	3.00E+03	NMED	1E-05	NA	1	1
Oil Range Organics (ORO)**	1.00E+02	16/22	NA	NA	NA	3.80E+03	NMED	1E-05	NA	1	0.03
										Hazard Index	**1**
0 To 5-Foot Depth - Site Worker											
Diesel Range Organics (DRO)**	2.20E+01	4/11	NA	NA	NA	3.00E+03	NMED	1E-05	NA	1	0.01
Oil Range Organics (ORO)**	1.00E+02	7/11	NA	NA	NA	3.80E+03	NMED	1E-05	NA	1	0.03
										Hazard Index	**0.04**

Notes:

Maximum concentrations for 0 to 10-foot depth are from **Table E-1**. Maximum concentrations for 0 to 5-foot depth are from **Table E-2**.

**The diesel #2/crankcase oil SSL from NMED (2015) was used for DRO. The unknown oil SSL from NMED (2015) was used for ORO.

TPH hazard quotients are not added to the individual constituent hazard quotients as part of the site hazard index because that would be counting the noncancer health effects at the site twice; once for the individual constituents and once for the complex TPH compound.

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department TPH Soil Screening Levels (NMED 2015, July update; Hazard Quotient = 1.0)

SSL = soil screening level

TPH = total petroleum hydrocarbons

TABLE E-9
SUMMARY OF ANALYTICAL SOIL GAS DATA AT TU504
VAPOR INTRUSION PATHWAY FOR RESIDENTS AND SITE (INDUSTRIAL) WORKERS
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			CA504-SG02-010				CA504-SG02-005				CA504-SG01-005				CA504-SG01-010				CA504-SG03-005			
DATE COLLECTED			February 9, 2016				February 9, 2016				February 9, 2016				February 9, 2016				February 9, 2016			
	Maximum	Frequency	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual	Result	DL/LOD*	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS ($\mu g/m^3$)																						
Ethylbenzene	5.00E+00	5 / 6	1.80E+00	8.20E-01	4.20E+00	J	<	1.90E+00	3.90E+00	U	5.00E+00	2.20E+00	4.40E+00		3.20E+00	1.10E+00	4.40E+00	J	2.20E+00	1.10E+00	4.50E+00	J
m,p-Xylene (sum of isomers)	2.30E+01	5 / 6	5.00E+00	2.10E+00	4.20E+00		<	1.90E+00	3.90E+00	U	2.30E+01	2.20E+00	4.40E+00		1.20E+01	2.20E+00	4.40E+00		5.00E+00	2.20E+00	4.50E+00	
o-Xylene (1,2-Dimethylbenzene)	9.00E+00	5 / 6	1.70E+00	5.90E-01	4.20E+00	J	<	1.90E+00	3.90E+00	U	9.00E+00	2.20E+00	4.40E+00		6.10E+00	2.20E+00	4.40E+00		2.80E+00	1.10E+00	4.50E+00	J
Toluene	1.70E+01	5 / 6	1.30E+01	1.80E+00	3.60E+00		<	1.70E+00	3.40E+00	U	4.90E+00	1.90E+00	3.80E+00		9.60E+00	1.90E+00	3.80E+00		1.60E+01	1.90E+00	3.90E+00	
PETROLEUM HYDROCARBONS ($\mu g/m^3$)																						
Gasoline Hydrocarbons	3.50E+02	6 / 6	2.70E+02	9.50E+01	2.00E+02		2.90E+02	9.50E+01	2.00E+02		3.30E+02	9.90E+01	2.00E+02		3.50E+02	9.90E+01	2.00E+02		3.10E+02	1.00E+02	2.10E+02	

Notes:
< = result is less than the LOD
* DL value is shown if the detection is less than the LOQ
$\mu g/m^3$ = microgram per cubic meter
DL = Detection Limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
Qual = Qualifier
U = Nondetect

TABLE E-9
SUMMARY OF ANALYTICAL SOIL GAS DATA AT TU504
VAPOR INTRUSION PATHWAY FOR RESIDENTS AND SITE (INDUSTRIAL) WORKERS
CANNON AFB, NEW MEXICO

FIELD IDENTIFICATION			CA504-SG03-010			
DATE COLLECTED			February 9, 2016			
	Maximum	Frequency	Result	DL/LOD*	LOQ	Qual
VOLATILE ORGANIC COMPOUNDS (µg/m^3)						
Ethylbenzene	5.00E+00	5 / 6	1.80E+00	1.10E+00	4.20E+00	J
m,p-Xylene (sum of isomers)	2.30E+01	5 / 6	3.50E+00	1.10E+00	4.20E+00	J
o-Xylene (1,2-Dimethylbenzene)	9.00E+00	5 / 6	2.00E+00	1.00E+00	4.20E+00	J
Toluene	1.70E+01	5 / 6	1.70E+01	1.80E+00	3.70E+00	
PETROLEUM HYDROCARBONS (µg/m^3)						
Gasoline Hydrocarbons	3.50E+02	6 / 6	2.20E+02	9.60E+01	2.00E+02	

Notes:
< = result is less than the LOD
* DL value is shown if the detection is less than the LOQ
µg/m^3 = microgram per cubic meter
DL = Detection Limit
J = Estimated
LOD = Limit of Detection
LOQ = Limit of Quantitation
Qual = Qualifier
U = Nondetect

TABLE E-10
COMPARISON OF MAXIMUM DETECTED SOIL GAS CONCENTRATIONS AT TU504 TO AIR SCREENING CRITERIA
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Gas Concentration ($\mu g/m^3$)	Frequency	Residential Screening Value ($\mu g/m^3$)	Exceeds Screening Value (Y/N)	Source
Volatile Organic Compounds					
Ethylbenzene	5.00E+00	5/6	1.12E+02	N	NMED
m,p-Xylene (sum of isomers)	2.30E+01	5/6	1.04E+03	N	NMED
o-Xylene (1,2-Dimethylbenzene)	9.00E+00	5/6	1.04E+03	N	NMED
Toluene	1.70E+01	5/6	5.21E+04	N	NMED
Petroleum Hydrocarbons					
Gasoline Hydrocarbons	3.50E+02	6/6	NA	NA	

Notes:

Maximum concentration from **Table 5-2** in the main text.

$\mu g/m^3$ = micrograms per cubic meter

N = No

NA= not applicable

NMED = New Mexico Environment Department Screening Levels (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient - 1.0).

Y = Yes

TABLE E-11
HUMAN HEALTH QUANTITATAIVE SCREENING EVALUATION RESULTS FOR TU504
VAPOR INTRUSION FOR THE RESIDENTIAL SCENARIO
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Gas Concentration ($\mu g/m^3$)	Frequency	Residential Value Cancer Endpoint ($\mu g/m^3$)	Residential Value Noncancer Endpoint ($\mu g/m^3$)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Volatile Organic Compounds									
Ethylbenzene	5.00E+00	5/6	1.12E+02	NA	NMED	1E-05	4.46E-07	1	NA
m,p-Xylene (sum of isomers)	2.30E+01	5/6	NA	1.04E+03	NMED	1E-05	NA	1	0.02
o-Xylene (1,2-Dimethylbenzene)	9.00E+00	5/6	NA	1.04E+03	NMED	1E-05	NA	1	0.009
Toluene	1.70E+01	5/6	NA	5.21E+04	NMED	1E-05	NA	1	0.0003
Petroleum Hydrocarbons									
Gasoline Hydrocarbons	3.50E+02	6/6	NA	NA	NMED	1E-05	NA	1	NA
						Total	**4E-07**	**Total**	**0.03**

Notes:

Maximum concentration from **Table E-9**.

$\mu g/m^3$ = micrograms per cubic meters

NA = not applicable

NMED = New Mexico Environment Department Screening Levels (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

TABLE E-12
HUMAN HEALTH QUANTITATIVE SCREENING EVALUATION RESULTS
VAPOR INTRUSION FOR THE COMMERCIAL/INDUSTRIAL SCENARIO
CANNON AFB, NEW MEXICO

Chemical	Maximum Soil Gas Concentration ($\mu g/m^3$)	Frequency	Commercial Value Cancer Endpoint ($\mu g/m^3$)	Commercial Value Noncancer Endpoint ($\mu g/m^3$)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Volatile Organic Compounds									
Ethylbenzene	5.00E+00	5/6	5.51E+02	NA	NMED	1E-05	9.07E-08	1	NA
m,p-Xylene (sum of isomers)	2.30E+01	5/6	NA	4.92E+03	NMED	1E-05	NA	1	0.005
o-Xylene (1,2-Dimethylbenzene)	9.00E+00	5/6	NA	4.92E+03	NMED	1E-05	NA	1	0.002
Toluene	1.70E+01	5/6	NA	2.46E+05	NMED	1E-05	NA	1	0.00007
Petroleum Hydrocarbons									
Gasoline Hydrocarbons	3.50E+02	6/6	NA	NA	NMED	1E-05	NA	1	NA
						Total	**9E-08**	**Total**	**0.01**

Notes:

Maximum concentration from **Table E-9**.

$\mu g/m^3$ = micrograms per cubic meters

NA = not applicable

NMED = New Mexico Environment Department Screening Levels (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

TABLE E-13
HUMAN HEALTH QUANTITATIVE SCREENING EVALUATION RESULTS FOR TU504
RESIDENTIAL SCENARIO - 95% UCL
CANNON AFB, NEW MEXICO

Chemical	Soil Concentration (mg/kg)	Frequency**	Residential Value Cancer Endpoint (mg/kg)	Residential Value Noncancer Endpoint (mg/kg)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Volatile Organic Compounds									
Toluene	3.80E-03	4/28	NA	5.23E+03	NMED	1E-05	NA	1	0.0000007
Polynuclear Aromatic Hydrocarbons									
2-Methylnaphthalene	4.90E-03	1/28	NA	2.40E+02	RSL	1E-05	NA	1	0.00002
Benzo(a)anthracene*	9.30E-01	11/28	1.53E+00	NA	NMED	1E-05	6.08E-06	1	NA
Benzo(a)pyrene*	4.10E-01	9/28	1.53E-01	NA	NMED	1E-05	2.68E-05	1	NA
Benzo(b)fluoranthene*	6.70E-01	10/28	1.53E+00	NA	NMED	1E-05	4.38E-06	1	NA
Benzo(k)fluoranthene	9.40E-01	5/28	1.53E+01	NA	NMED	1E-05	6.14E-07	1	NA
Chrysene*	8.99E-01	9/28	1.53E+02	NA	NMED	1E-05	5.88E-08	1	NA
Dibenz(a,h)anthracene	2.20E-01	3/28	1.53E-01	NA	NMED	1E-05	1.44E-05	1	NA
Fluoranthene	1.30E-02	2/6	NA	2.32E+03	NMED	1E-05	NA	1	0.000006
Indeno(1,2,3-c,d)pyrene*	1.40E-01	8/28	1.53E+00	NA	NMED	1E-05	9.15E-07	1	NA
Pyrene	1.00E-02	2/6	NA	1.74E+03	NMED	1E-05	NA	1	0.000006
						Total	**5E-05**	**Total**	**0.00003**

Notes:

**Frequency does not include duplicates. The higher of the parent or duplicate result was used in the evaluation.

*These concentrations represent the 95% UCL for the dataset. UCLs were only calculated for those chemicals with a minimum of eight detections.

Maximum concentrations were used for the remaining compounds.

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department Screening Levels (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

RSL = Regional Screening Levels (USEPA 2015, November Update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

UCL = upper confidence limit

TABLE E-14
HUMAN HEALTH QUANTITATIVE SCREENING EVALUATION RESULTS FOR TU504
CONSTRUCTION WORKER SCENARIO - 95% UCL
CANNON AFB, NEW MEXICO

Chemical	Soil Concentration* (mg/kg)	Frequency**	Construction Worker Value Cancer Endpoint (mg/kg)	Construction Worker Value Noncancer Endpoint (mg/kg)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Volatile Organic Compounds									
Toluene	3.80E-03	4/28	NA	1.40E+04	NMED	1E-05	NA	1	0.0000003
Polynuclear Aromatic Hydrocarbons									
2-Methylnaphthalene	4.90E-03	1/28	NA	3.00E+03	RSL	1E-05	NA	1	0.000002
Benzo(a)anthracene*	9.30E-01	11/28	2.40E+02	NA	NMED	1E-05	3.88E-08	1	NA
Benzo(a)pyrene*	4.10E-01	9/28	2.40E+01	NA	NMED	1E-05	1.71E-07	1	NA
Benzo(b)fluoranthene*	6.70E-01	10/28	2.40E+02	NA	NMED	1E-05	2.79E-08	1	NA
Benzo(k)fluoranthene	9.40E-01	5/28	2.31E+03	NA	NMED	1E-05	4.07E-09	1	NA
Chrysene*	8.99E-01	9/28	2.31E+04	NA	NMED	1E-05	3.89E-10	1	NA
Dibenz(a,h)anthracene	2.20E-01	3/28	2.40E+01	NA	NMED	1E-05	9.17E-08	1	NA
Fluoranthene	1.30E-02	2/6	NA	1.00E+04	NMED	1E-05	NA	1	0.0000013
Indeno(1,2,3-c,d)pyrene*	1.40E-01	8/28	2.40E+02	NA	NMED	1E-05	5.83E-09	1	NA
Pyrene	1.00E-02	2/6	NA	7.53E+03	NMED	1E-05	NA	1	0.0000013
						Total	**3E-07**	**Total**	**0.000005**

Notes:

There are no construction worker RSL; therefore, the commercial/industrial RSLs are used for the construction worker scenario.

**Frequency does not include duplicates. The higher of the parent or duplicate result was used in the evaluation.

*These concentrations represent the 95% Upper Confidence Limit (UCL) for the dataset. UCLs were only calculated for those chemicals with a minimum of eight detections.

Maximum concentrations were used for the remaining compounds.

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department Screening Levels for Construction Workers (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

RSL = Regional Screening Levels (USEPA 2014, November Update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

USEPA = United States Environmental Protection Agency

TABLE E-15
HUMAN HEALTH QUANTITATIVE SCREENING EVALUATION RESULTS FOR TU504
COMMERCIAL/INDUSTRIAL WORKER SCENARIO - 95% UCL
CANNON AFB, NEW MEXICO

Chemical	Soil Concentration* (mg/kg)	Frequency	Commercial Value Cancer Endpoint (mg/kg)***	Commercial Value Noncancer Endpoint (mg/kg)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Volatile Organics Compounds									
Toluene	3.80E-03	2/14	NA	6.13E+04	NMED	1E-05	NA	1	0.0000001
Polycyclic Aromatic Hydrocarbons									
2-Methylnaphthalene	4.90E-03	1/14	NA	3.00E+03	RSL	1E-05	NA	1	0.000002
Benzo(a)anthracene	4.80E+00	7/14	.	NA	NMED	1E-05	#VALUE!	1	NA
Benzo(a)pyrene	2.10E+00	7/14	3.23E+00	NA	NMED	1E-05	6.50E-06	1	NA
Benzo(b)fluoranthene*	2.70E+00	8/14	3.23E+01	NA	NMED	1E-05	8.36E-07	1	NA
Benzo(k)fluoranthene	9.40E-01	4/14	3.23E+02	NA	NMED	1E-05	2.91E-08	1	NA
Chrysene	4.60E+00	7/14	3.23E+03	NA	NMED	1E-05	1.42E-08	1	NA
Dibenz(a,h)anthracene	2.20E-01	2/14	3.23E+00	NA	NMED	1E-05	6.81E-07	1	NA
Fluoranthene	8.30E-03	1/3	NA	3.37E+04	NMED	1E-05	NA	1	0.0000002
Indeno(1,2,3-c,d)pyrene	7.00E-01	6/14	3.23E+01	NA	NMED	1E-05	2.17E-07	1	NA
Pyrene	6.70E-03	1/3	NA	2.53E+04	NMED	1E-05	NA	1	0.0000003
						Total	**#VALUE!**	**Total**	**0.000002**

Notes:

*These concentrations represent the 95% Upper Confidence Limit (UCL) for the dataset. UCLs were only calculated for those chemicals with a minimum of eight detections.
Maximum concentrations were used for the remaining compounds.

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department Screening Levels for Commercial/Industrial Workers (NMED 2015, July update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

RSL = Regional Screening Levels (USEPA 2015, November Update; Cancer Risk = 1E-05, Hazard Quotient = 1.0).

USEPA = United States Environmental Protection Agency

TABLE E-16
HUMAN HEALTH QUANTITATIVE SCREENING EVALUATION RESULTS FOR TU504
ALL EXPOSURE SCENARIOS - 95% UCL
CANNON AFB, NEW MEXICO

Chemical	Soil Concentration* (mg/kg)	Frequency	Residential Value Cancer Endpoint (mg/kg)	Residential Value Noncancer Endpoint (mg/kg)	Commercial Value Cancer Endpoint (mg/kg)	Commercial Value Noncancer Endpoint (mg/kg)	Source	Target Risk	Estimated Cancer Risk	Target Hazard Quotient	Estimated Hazard Quotient
Petroleum Hydrocarbons											
0 To 10-Foot Depth - Residential											
Diesel Range Organics (DRO)**	7.51E+02	12/22	NA	1.00E+03	NA	NA	NMED	1E-05	NA	1	0.8
Oil Range Organics (ORO)**	4.50E+01	16/22	NA	1.00E+03	NA	NA	NMED	1E-05	NA	1	0.05
										Hazard Index	**0.8**
0 To 10-Foot Depth - Construction Worker											
Diesel Range Organics (DRO)**	7.51E+02	12/22	NA	NA	NA	3.00E+03	NMED	1E-05	NA	1	0.25
Oil Range Organics (ORO)**	4.50E+01	16/22	NA	NA	NA	3.80E+03	NMED	1E-05	NA	1	0.01
										Hazard Index	**0.3**

Notes:

*Concentrations represent the 95% Upper Confidence Limit (UCL) for the dataset. UCLs were only calculated for those chemicals with a minimum of eight detections. The maximum detected concentration was used for the remaining compounds.

The commercial/industrial worker and the recreational user scenarios were not evaluated for the 95% UCL exposure concentrations because no compounds in the 0 to 5-foot interval had a minimum of eight detections.

**The diesel #2/crankcase oil SSL from NMED (2015) was used for DRO. The unknown oil SSL from NMED (2015) was used for ORO.

TPH hazard quotients are not added to the individual constituent hazard quotients as part of the site hazard index because that would be counting the noncancer health effects at the site twice; once for the individual constituents and once for the complex TPH compound.

mg/kg = milligrams per kilogram

NA = not applicable

NMED = New Mexico Environment Department TPH Soil Screening Levels (NMED 2015, July update; Hazard Quotient = 1.0)

SSL = soil screening level

TPH = total petroleum hydrocarbons

Attachment 1 – Pro UCLs

Benzo(a)anthracene	d_Benzo(a)anthracene	Benzo(a)pyrene	d_Benzo(a)pyrene
0.011	0	0.011	0
0.0057	1	0.011	0
0.011	0	0.011	0
0.011	0	0.011	0
0.011	0	0.011	0
0.011	0	0.011	0
0.024	1	0.029	1
0.0068	1	0.0038	1
0.0063	1	0.0055	1
0.011	0	0.011	0
0.0069	1	0.007	1
0.01	0	0.01	0
0.022	0	0.022	0
0.011	0	0.011	0
0.011	0	0.011	0
0.012	0	0.012	0
0.015	1	0.011	1
0.011	0	0.011	0
0.012	1	0.0087	1
0.011	0	0.011	0
4.8	1	2.1	1
0.066	1	0.02	1
0.0067	1	0.0035	1
0.01	0	0.01	0
0.01	0	0.01	0
0.01	0	0.01	0
0.011	0	0.011	0
0.0033	1	0.011	0

Benzo(b)fluoranthene	d_Benzo(b)fluoranthene	Chrysene	d_Chrysene	Indeno(1,2,3-c,d)pyrene
0.011	0	0.011	0	0.011
0.011	0	0.011	0	0.011
0.011	0	0.011	0	0.011
0.011	0	0.011	0	0.011
0.011	0	0.011	0	0.011
0.011	0	0.011	0	0.011
0.048	1	0.032	1	0.017
0.0064	1	0.0053	1	0.011
0.0088	1	0.0045	1	0.0039
0.011	0	0.011	0	0.011
0.007	1	0.0051	1	0.0046
0.01	0	0.01	0	0.01
0.022	0	0.022	0	0.022
0.011	0	0.011	0	0.011
0.0028	1	0.011	0	0.011
0.012	0	0.012	0	0.012
0.015	1	0.012	1	0.006
0.011	0	0.011	0	0.011
0.01	1	0.01	1	0.0052
0.011	0	0.011	0	0.011
3.4	1	4.6	1	0.7
0.14	1	0.29	1	0.011
0.0067	1	0.0056	1	0.01
0.01	0	0.01	0	0.01
0.01	0	0.01	0	0.01
0.01	0	0.01	0	0.01
0.011	0	0.011	0	0.011
0.011	0	0.011	0	0.0031

d_Indeno(1,2,3-c,d)pyrene	TPH ORO	d_TPH ORO
0	18	1
0	15	1
0	18	1
0	22	0
0	21	0
0	21	0
1	66	1
0	22	0
1	21	0
0	23	0
1	100	1
0	22	0
0	22	0
0	22	0
0	46	1
0	12	1
1	8.6	1
0	8.8	1
1	5.9	1
0	21	0
1	23	0
1	23	0
0		
0		
0		
0		
0		
1		

Benzo(a)anthracene	d_Benzo(a)anthracene	Benzo(b)fluoranthene	d_Benzo(b)fluoranthene
0.011	0	0.011	0
0.011	0	0.011	0
0.011	0	0.011	0
0.024	1	0.048	1
0.0063	1	0.0088	1
0.0069	1	0.007	1
0.022	0	0.022	0
0.011	0	0.0028	1
0.015	1	0.015	1
0.012	1	0.01	1
4.8	1	3.4	1
0.0067	1	0.0067	1
0.01	0	0.01	0
0.011	0	0.011	0

	A	B	C	D	E	F	G	H	I	J	K	L	M
1				General Statistics on Uncensored Data									
2			Date/Time of Computation	4/11/2016 8:35:10 AM									
3			User Selected Options										
4			From File	TU504 PAH-TPH Data.xls									
5			Full Precision	OFF									
6													
7	From File: TU504 PAH-TPH Data.xls												
8													
9	General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method												
10													
11	Variable		NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
12	Benzo(a)anthracene		28	0	11	17	60.71%	0.01	0.022	0.181	0.79	0.889	4.925
13	Benzo(a)pyrene		28	0	9	19	67.86%	0.01	0.022	0.0821	0.151	0.388	4.733
14	Benzo(b)fluoranthene		28	0	10	18	64.29%	0.01	0.022	0.134	0.396	0.629	4.679
15	Chrysene		28	0	9	19	67.86%	0.01	0.022	0.181	0.726	0.852	4.705
16	Indeno(1,2,3-c,d)pyrene		28	0	8	20	71.43%	0.01	0.022	0.0301	0.0166	0.129	4.283
17	TPH ORO		22	0	10	12	54.55%	21	23	20.28	485.7	22.04	1.087
18													
19	General Statistics for Raw Data Sets using Detected Data Only												
20													
21	Variable		NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
22	Benzo(a)anthracene		11	0	0.0033	4.8	0.45	0.0069	2.082	1.443	0.00534	3.316	3.204
23	Benzo(a)pyrene		9	0	0.0035	2.1	0.243	0.0087	0.485	0.696	0.00726	2.999	2.864
24	Benzo(b)fluoranthene		10	0	0.0028	3.4	0.364	0.0094	1.139	1.067	0.00638	3.153	2.929
25	Chrysene		9	0	0.0045	4.6	0.552	0.01	2.313	1.521	0.00726	2.979	2.757
26	Indeno(1,2,3-c,d)pyrene		8	0	0.0031	0.7	0.0939	0.0056	0.06	0.245	0.00311	2.826	2.61
27	TPH ORO		10	0	5.9	100	29.83	16.5	975.2	31.23	11.56	1.606	1.047
28													
29	Percentiles using all Detects (Ds) and Non-Detects (NDs)												
30													
31	Variable		NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
32	Benzo(a)anthracene		28	0	0.00658	0.00814	0.01	0.011	0.0113	0.012	0.0226	0.0513	3.522
33	Benzo(a)pyrene		28	0	0.00655	0.01	0.01	0.011	0.011	0.011	0.0206	0.0266	1.541
34	Benzo(b)fluoranthene		28	0	0.00691	0.01	0.01	0.011	0.011	0.0116	0.0298	0.108	2.52
35	Chrysene		28	0	0.00551	0.01	0.01	0.011	0.011	0.0116	0.025	0.2	3.436
36	Indeno(1,2,3-c,d)pyrene		28	0	0.00502	0.01	0.01	0.011	0.011	0.011	0.0135	0.0203	0.517
37	TPH ORO		22	0	9.12	15.6	18	21.5	22.75	23	43.7	65	92.86

	A	B	C	D	E	F	G	H	I	J	K	L
1	**UCL Statistics for Data Sets with Non-Detects**											
2												
3	User Selected Options											
4	Date/Time of Computation			4/11/2016 8:36:37 AM								
5	From File			TU504 PAH-TPH Data.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10	**Benzo(a)anthracene**											
11												
12	**General Statistics**											
13	Total Number of Observations					28	Number of Distinct Observations					14
14	Number of Detects					11	Number of Non-Detects					17
15	Number of Distinct Detects					11	Number of Distinct Non-Detects					4
16	Minimum Detect					0.0033	Minimum Non-Detect					0.01
17	Maximum Detect					4.8	Maximum Non-Detect					0.022
18	Variance Detects					2.082	Percent Non-Detects					60.71%
19	Mean Detects					0.45	SD Detects					1.443
20	Median Detects					0.0069	CV Detects					3.204
21	Skewness Detects					3.316	Kurtosis Detects					11
22	Mean of Logged Detects					-4.038	SD of Logged Detects					2.033
23												
24	**Normal GOF Test on Detects Only**											
25	Shapiro Wilk Test Statistic					0.353	**Shapiro Wilk GOF Test**					
26	5% Shapiro Wilk Critical Value					0.85	Detected Data Not Normal at 5% Significance Level					
27	Lilliefors Test Statistic					0.514	**Lilliefors GOF Test**					
28	5% Lilliefors Critical Value					0.267	Detected Data Not Normal at 5% Significance Level					
29	**Detected Data Not Normal at 5% Significance Level**											
30												
31	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
32	Mean					0.181	Standard Error of Mean					0.176
33	SD					0.889	95% KM (BCA) UCL					0.521
34	95% KM (t) UCL					0.481	95% KM (Percentile Bootstrap) UCL					0.522
35	95% KM (z) UCL					0.47	95% KM Bootstrap t UCL					38.06
36	90% KM Chebyshev UCL					0.709	95% KM Chebyshev UCL					0.949
37	97.5% KM Chebyshev UCL					1.281	99% KM Chebyshev UCL					1.934
38												
39	**Gamma GOF Tests on Detected Observations Only**											
40	A-D Test Statistic					2.624	**Anderson-Darling GOF Test**					
41	5% A-D Critical Value					0.852	Detected Data Not Gamma Distributed at 5% Significance Level					
42	K-S Test Statistic					0.411	**Kolmogrov-Smirnoff GOF**					
43	5% K-S Critical Value					0.28	Detected Data Not Gamma Distributed at 5% Significance Level					
44	**Detected Data Not Gamma Distributed at 5% Significance Level**											
45												
46	**Gamma Statistics on Detected Data Only**											
47	k hat (MLE)					0.223	k star (bias corrected MLE)					0.223
48	Theta hat (MLE)					2.017	Theta star (bias corrected MLE)					2.02
49	nu hat (MLE)					4.911	nu star (bias corrected)					4.905
50	MLE Mean (bias corrected)					0.45	MLE Sd (bias corrected)					0.954

	A	B	C	D	E	F	G	H	I	J	K	L
51												
52	**Gamma Kaplan-Meier (KM) Statistics**											
53					k hat (KM)	0.0412				nu hat (KM)		2.308
54					Approximate Chi Square Value (2.31, α)	0.201				Adjusted Chi Square Value (2.31, β)		0.177
55					95% Gamma Approximate KM-UCL (use when n>=50)	2.073				95% Gamma Adjusted KM-UCL (use when n<50)		2.355
56	Gamma (KM) may not be used when k hat (KM) is < 0.1											
57												
58	**Gamma ROS Statistics using Imputed Non-Detects**											
59	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
60	GROS may not be used when kstar of detected data is small such as < 0.1											
61	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
62	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
63					Minimum	0.0033				Mean		0.184
64					Maximum	4.8				Median		0.01
65					SD	0.905				CV		4.912
66					k hat (MLE)	0.267				k star (bias corrected MLE)		0.262
67					Theta hat (MLE)	0.691				Theta star (bias corrected MLE)		0.704
68					nu hat (MLE)	14.93				nu star (bias corrected)		14.66
69					MLE Mean (bias corrected)	0.184				MLE Sd (bias corrected)		0.36
70										Adjusted Level of Significance (β)		0.0404
71					Approximate Chi Square Value (14.66, α)	7.025				Adjusted Chi Square Value (14.66, β)		6.7
72					95% Gamma Approximate UCL (use when n>=50)	0.384				95% Gamma Adjusted UCL (use when n<50)		0.403
73												
74	**Lognormal GOF Test on Detected Observations Only**											
75					Shapiro Wilk Test Statistic	0.692				**Shapiro Wilk GOF Test**		
76					5% Shapiro Wilk Critical Value	0.85				Detected Data Not Lognormal at 5% Significance Level		
77					Lilliefors Test Statistic	0.259				**Lilliefors GOF Test**		
78					5% Lilliefors Critical Value	0.267				Detected Data appear Lognormal at 5% Significance Level		
79	**Detected Data appear Approximate Lognormal at 5% Significance Level**											
80												
81	**Lognormal ROS Statistics Using Imputed Non-Detects**											
82					Mean in Original Scale	0.182				Mean in Log Scale		-4.731
83					SD in Original Scale	0.905				SD in Log Scale		1.523
84					95% t UCL (assumes normality of ROS data)	0.473				95% Percentile Bootstrap UCL		0.524
85					95% BCA Bootstrap UCL	0.698				95% Bootstrap t UCL		27.59
86					95% H-UCL (Log ROS)	0.071						
87												
88	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
89					KM Mean (logged)	-4.713				95% H-UCL (KM -Log)		0.0472
90					KM SD (logged)	1.346				95% Critical H Value (KM-Log)		2.911
91					KM Standard Error of Mean (logged)	0.278						
92												
93	**DL/2 Statistics**											
94	**DL/2 Normal**						**DL/2 Log-Transformed**					
95					Mean in Original Scale	0.18				Mean in Log Scale		-4.731
96					SD in Original Scale	0.905				SD in Log Scale		1.368
97					95% t UCL (Assumes normality)	0.472				95% H-Stat UCL		0.0487
98	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
99												
100	**Nonparametric Distribution Free UCL Statistics**											

	A	B	C	D	E	F	G	H	I	J	K	L
101	Detected Data appear Approximate Lognormal Distributed at 5% Significance Level											
102												
103	Suggested UCL to Use											
104	99% KM (Chebyshev) UCL					1.934						
105												
106	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
107	Recommendations are based upon data size, data distribution, and skewness.											
108	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
109	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
110												
111	Benzo(a)pyrene											
112												
113	General Statistics											
114	Total Number of Observations					28	Number of Distinct Observations					12
115	Number of Detects					9	Number of Non-Detects					19
116	Number of Distinct Detects					9	Number of Distinct Non-Detects					4
117	Minimum Detect					0.0035	Minimum Non-Detect					0.01
118	Maximum Detect					2.1	Maximum Non-Detect					0.022
119	Variance Detects					0.485	Percent Non-Detects					67.86%
120	Mean Detects					0.243	SD Detects					0.696
121	Median Detects					0.0087	CV Detects					2.864
122	Skewness Detects					2.999	Kurtosis Detects					8.996
123	Mean of Logged Detects					-4.151	SD of Logged Detects					1.965
124												
125	Normal GOF Test on Detects Only											
126	Shapiro Wilk Test Statistic					0.4	Shapiro Wilk GOF Test					
127	5% Shapiro Wilk Critical Value					0.829	Detected Data Not Normal at 5% Significance Level					
128	Lilliefors Test Statistic					0.51	Lilliefors GOF Test					
129	5% Lilliefors Critical Value					0.295	Detected Data Not Normal at 5% Significance Level					
130	Detected Data Not Normal at 5% Significance Level											
131												
132	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
133	Mean					0.0821	Standard Error of Mean					0.0779
134	SD					0.388	95% KM (BCA) UCL					0.232
135	95% KM (t) UCL					0.215	95% KM (Percentile Bootstrap) UCL					0.232
136	95% KM (z) UCL					0.21	95% KM Bootstrap t UCL					6.718
137	90% KM Chebyshev UCL					0.316	95% KM Chebyshev UCL					0.421
138	97.5% KM Chebyshev UCL					0.568	99% KM Chebyshev UCL					0.857
139												
140	Gamma GOF Tests on Detected Observations Only											
141	A-D Test Statistic					1.984	Anderson-Darling GOF Test					
142	5% A-D Critical Value					0.824	Detected Data Not Gamma Distributed at 5% Significance Level					
143	K-S Test Statistic					0.442	Kolmogrov-Smirnoff GOF					
144	5% K-S Critical Value					0.304	Detected Data Not Gamma Distributed at 5% Significance Level					
145	Detected Data Not Gamma Distributed at 5% Significance Level											
146												
147	Gamma Statistics on Detected Data Only											
148	k hat (MLE)					0.258	k star (bias corrected MLE)					0.246
149	Theta hat (MLE)					0.942	Theta star (bias corrected MLE)					0.988
150	nu hat (MLE)					4.647	nu star (bias corrected)					4.432

	A	B	C	D	E	F	G	H	I	J	K	L
151	MLE Mean (bias corrected)					0.243	MLE Sd (bias corrected)					0.49
152												
153	**Gamma Kaplan-Meier (KM) Statistics**											
154	k hat (KM)					0.0446	nu hat (KM)					2.5
155	Approximate Chi Square Value (2.50, α)					0.241	Adjusted Chi Square Value (2.50, β)					0.211
156	95% Gamma Approximate KM-UCL (use when n>=50)					0.851	95% Gamma Adjusted KM-UCL (use when n<50)					0.972
157	Gamma (KM) may not be used when k hat (KM) is < 0.1											
158												
159	**Gamma ROS Statistics using Imputed Non-Detects**											
160	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
161	GROS may not be used when kstar of detected data is small such as < 0.1											
162	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
163	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
164	Minimum					0.0035	Mean					0.0882
165	Maximum					2.1	Median					0.01
166	SD					0.395	CV					4.473
167	k hat (MLE)					0.346	k star (bias corrected MLE)					0.333
168	Theta hat (MLE)					0.255	Theta star (bias corrected MLE)					0.265
169	nu hat (MLE)					19.36	nu star (bias corrected)					18.62
170	MLE Mean (bias corrected)					0.0882	MLE Sd (bias corrected)					0.153
171							Adjusted Level of Significance (β)					0.0404
172	Approximate Chi Square Value (18.62, α)					9.843	Adjusted Chi Square Value (18.62, β)					9.448
173	95% Gamma Approximate UCL (use when n>=50)					0.167	95% Gamma Adjusted UCL (use when n<50)					0.174
174												
175	**Lognormal GOF Test on Detected Observations Only**											
176	Shapiro Wilk Test Statistic					0.722	**Shapiro Wilk GOF Test**					
177	5% Shapiro Wilk Critical Value					0.829	Detected Data Not Lognormal at 5% Significance Level					
178	Lilliefors Test Statistic					0.267	**Lilliefors GOF Test**					
179	5% Lilliefors Critical Value					0.295	Detected Data appear Lognormal at 5% Significance Level					
180	**Detected Data appear Approximate Lognormal at 5% Significance Level**											
181												
182	**Lognormal ROS Statistics Using Imputed Non-Detects**											
183	Mean in Original Scale					0.0831	Mean in Log Scale					-4.916
184	SD in Original Scale					0.395	SD in Log Scale					1.41
185	95% t UCL (assumes normality of ROS data)					0.21	95% Percentile Bootstrap UCL					0.232
186	95% BCA Bootstrap UCL					0.309	95% Bootstrap t UCL					5.581
187	95% H-UCL (Log ROS)					0.0447						
188												
189	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
190	KM Mean (logged)					-4.877	95% H-UCL (KM -Log)					0.0293
191	KM SD (logged)					1.2	95% Critical H Value (KM-Log)					2.711
192	KM Standard Error of Mean (logged)					0.271						
193												
194	**DL/2 Statistics**											
195	**DL/2 Normal**						**DL/2 Log-Transformed**					
196	Mean in Original Scale					0.082	Mean in Log Scale					-4.851
197	SD in Original Scale					0.396	SD in Log Scale					1.185
198	95% t UCL (Assumes normality)					0.209	95% H-Stat UCL					0.0292
199	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
200												

	A	B	C	D	E	F	G	H	I	J	K	L
201	**Nonparametric Distribution Free UCL Statistics**											
202	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
203												
204	**Suggested UCL to Use**											
205					97.5% KM (Chebyshev) UCL	0.568						
206												
207	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
208	Recommendations are based upon data size, data distribution, and skewness.											
209	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
210	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
211												
212	**Benzo(b)fluoranthene**											
213												
214	**General Statistics**											
215					Total Number of Observations	28			Number of Distinct Observations			13
216					Number of Detects	10			Number of Non-Detects			18
217					Number of Distinct Detects	10			Number of Distinct Non-Detects			4
218					Minimum Detect	0.0028			Minimum Non-Detect			0.01
219					Maximum Detect	3.4			Maximum Non-Detect			0.022
220					Variance Detects	1.139			Percent Non-Detects			64.29%
221					Mean Detects	0.364			SD Detects			1.067
222					Median Detects	0.0094			CV Detects			2.929
223					Skewness Detects	3.153			Kurtosis Detects			9.957
224					Mean of Logged Detects	-3.821			SD of Logged Detects			2.096
225												
226	**Normal GOF Test on Detects Only**											
227					Shapiro Wilk Test Statistic	0.391			**Shapiro Wilk GOF Test**			
228					5% Shapiro Wilk Critical Value	0.842			Detected Data Not Normal at 5% Significance Level			
229					Lilliefors Test Statistic	0.483			**Lilliefors GOF Test**			
230					5% Lilliefors Critical Value	0.28			Detected Data Not Normal at 5% Significance Level			
231	**Detected Data Not Normal at 5% Significance Level**											
232												
233	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
234					Mean	0.134			Standard Error of Mean			0.125
235					SD	0.629			95% KM (BCA) UCL			0.376
236					95% KM (t) UCL	0.348			95% KM (Percentile Bootstrap) UCL			0.375
237					95% KM (z) UCL	0.341			95% KM Bootstrap t UCL			10.02
238					90% KM Chebyshev UCL	0.51			95% KM Chebyshev UCL			0.681
239					97.5% KM Chebyshev UCL	0.917			99% KM Chebyshev UCL			1.381
240												
241	**Gamma GOF Tests on Detected Observations Only**											
242					A-D Test Statistic	1.853			**Anderson-Darling GOF Test**			
243					5% A-D Critical Value	0.833			Detected Data Not Gamma Distributed at 5% Significance Level			
244					K-S Test Statistic	0.352			**Kolmogrov-Smirnoff GOF**			
245					5% K-S Critical Value	0.291			Detected Data Not Gamma Distributed at 5% Significance Level			
246	**Detected Data Not Gamma Distributed at 5% Significance Level**											
247												
248	**Gamma Statistics on Detected Data Only**											
249					k hat (MLE)	0.252			k star (bias corrected MLE)			0.243
250					Theta hat (MLE)	1.445			Theta star (bias corrected MLE)			1.498

	A	B	C	D	E	F	G	H	I	J	K	L
251					nu hat (MLE)	5.044					nu star (bias corrected)	4.864
252					MLE Mean (bias corrected)	0.364					MLE Sd (bias corrected)	0.739
253												
254					**Gamma Kaplan-Meier (KM) Statistics**							
255					k hat (KM)	0.0457					nu hat (KM)	2.558
256					Approximate Chi Square Value (2.56, α)	0.255					Adjusted Chi Square Value (2.56, β)	0.223
257					95% Gamma Approximate KM-UCL (use when n>=50)	1.351					95% Gamma Adjusted KM-UCL (use when n<50)	1.545
258					Gamma (KM) may not be used when k hat (KM) is < 0.1							
259												
260					**Gamma ROS Statistics using Imputed Non-Detects**							
261					GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
262					GROS may not be used when kstar of detected data is small such as < 0.1							
263					For such situations, GROS method tends to yield inflated values of UCLs and BTVs							
264					For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
265					Minimum	0.0028					Mean	0.142
266					Maximum	3.4					Median	0.01
267					SD	0.64					CV	4.504
268					k hat (MLE)	0.303					k star (bias corrected MLE)	0.294
269					Theta hat (MLE)	0.469					Theta star (bias corrected MLE)	0.483
270					nu hat (MLE)	16.96					nu star (bias corrected)	16.47
271					MLE Mean (bias corrected)	0.142					MLE Sd (bias corrected)	0.262
272											Adjusted Level of Significance (β)	0.0404
273					Approximate Chi Square Value (16.47, α)	8.296					Adjusted Chi Square Value (16.47, β)	7.938
274					95% Gamma Approximate UCL (use when n>=50)	0.282					95% Gamma Adjusted UCL (use when n<50)	0.295
275												
276					**Lognormal GOF Test on Detected Observations Only**							
277					Shapiro Wilk Test Statistic	0.796					**Shapiro Wilk GOF Test**	
278					5% Shapiro Wilk Critical Value	0.842					Detected Data Not Lognormal at 5% Significance Level	
279					Lilliefors Test Statistic	0.272					**Lilliefors GOF Test**	
280					5% Lilliefors Critical Value	0.28					Detected Data appear Lognormal at 5% Significance Level	
281					**Detected Data appear Approximate Lognormal at 5% Significance Level**							
282												
283					**Lognormal ROS Statistics Using Imputed Non-Detects**							
284					Mean in Original Scale	0.136					Mean in Log Scale	-4.651
285					SD in Original Scale	0.64					SD in Log Scale	1.589
286					95% t UCL (assumes normality of ROS data)	0.342					95% Percentile Bootstrap UCL	0.375
287					95% BCA Bootstrap UCL	0.502					95% Bootstrap t UCL	8.268
288					95% H-UCL (Log ROS)	0.0915						
289												
290					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
291					KM Mean (logged)	-4.633					95% H-UCL (KM -Log)	0.0543
292					KM SD (logged)	1.372					95% Critical H Value (KM-Log)	2.947
293					KM Standard Error of Mean (logged)	0.302						
294												
295					**DL/2 Statistics**							
296					**DL/2 Normal**						**DL/2 Log-Transformed**	
297					Mean in Original Scale	0.134					Mean in Log Scale	-4.695
298					SD in Original Scale	0.641					SD in Log Scale	1.387
299					95% t UCL (Assumes normality)	0.34					95% H-Stat UCL	0.0528
300					**DL/2 is not a recommended method, provided for comparisons and historical reasons**							

	A	B	C	D	E	F	G	H	I	J	K	L
301												
302	**Nonparametric Distribution Free UCL Statistics**											
303	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
304												
305	**Suggested UCL to Use**											
306					99% KM (Chebyshev) UCL	1.381						
307												
308	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
309	Recommendations are based upon data size, data distribution, and skewness.											
310	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
311	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
312												
313	**Chrysene**											
314												
315	**General Statistics**											
316					Total Number of Observations	28			Number of Distinct Observations			11
317					Number of Detects	9			Number of Non-Detects			19
318					Number of Distinct Detects	9			Number of Distinct Non-Detects			4
319					Minimum Detect	0.0045			Minimum Non-Detect			0.01
320					Maximum Detect	4.6			Maximum Non-Detect			0.022
321					Variance Detects	2.313			Percent Non-Detects			67.86%
322					Mean Detects	0.552			SD Detects			1.521
323					Median Detects	0.01			CV Detects			2.757
324					Skewness Detects	2.979			Kurtosis Detects			8.903
325					Mean of Logged Detects	-3.699			SD of Logged Detects			2.365
326												
327	**Normal GOF Test on Detects Only**											
328					Shapiro Wilk Test Statistic	0.425			**Shapiro Wilk GOF Test**			
329					5% Shapiro Wilk Critical Value	0.829			Detected Data Not Normal at 5% Significance Level			
330					Lilliefors Test Statistic	0.457			**Lilliefors GOF Test**			
331					5% Lilliefors Critical Value	0.295			Detected Data Not Normal at 5% Significance Level			
332	**Detected Data Not Normal at 5% Significance Level**											
333												
334	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
335					Mean	0.181			Standard Error of Mean			0.171
336					SD	0.852			95% KM (BCA) UCL			0.508
337					95% KM (t) UCL	0.472			95% KM (Percentile Bootstrap) UCL			0.507
338					95% KM (z) UCL	0.462			95% KM Bootstrap t UCL			26.95
339					90% KM Chebyshev UCL	0.693			95% KM Chebyshev UCL			0.926
340					97.5% KM Chebyshev UCL	1.248			99% KM Chebyshev UCL			1.88
341												
342	**Gamma GOF Tests on Detected Observations Only**											
343					A-D Test Statistic	1.618			**Anderson-Darling GOF Test**			
344					5% A-D Critical Value	0.835			Detected Data Not Gamma Distributed at 5% Significance Level			
345					K-S Test Statistic	0.374			**Kolmogrov-Smirnoff GOF**			
346					5% K-S Critical Value	0.306			Detected Data Not Gamma Distributed at 5% Significance Level			
347	**Detected Data Not Gamma Distributed at 5% Significance Level**											
348												
349	**Gamma Statistics on Detected Data Only**											
350					k hat (MLE)	0.232			k star (bias corrected MLE)			0.229

	A	B	C	D	E	F	G	H	I	J	K	L
351					Theta hat (MLE)	2.381					Theta star (bias corrected MLE)	2.414
352					nu hat (MLE)	4.17					nu star (bias corrected)	4.113
353					MLE Mean (bias corrected)	0.552					MLE Sd (bias corrected)	1.154
354												
355					**Gamma Kaplan-Meier (KM) Statistics**							
356					k hat (KM)	0.0452					nu hat (KM)	2.529
357					Approximate Chi Square Value (2.53, α)	0.248					Adjusted Chi Square Value (2.53, β)	0.217
358					95% Gamma Approximate KM-UCL (use when n>=50)	1.848					95% Gamma Adjusted KM-UCL (use when n<50)	2.113
359					Gamma (KM) may not be used when k hat (KM) is < 0.1							
360												
361					**Gamma ROS Statistics using Imputed Non-Detects**							
362					GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
363					GROS may not be used when kstar of detected data is small such as < 0.1							
364					For such situations, GROS method tends to yield inflated values of UCLs and BTVs							
365					For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
366					Minimum	0.0045					Mean	0.19
367					Maximum	4.6					Median	0.01
368					SD	0.866					CV	4.565
369					k hat (MLE)	0.274					k star (bias corrected MLE)	0.269
370					Theta hat (MLE)	0.692					Theta star (bias corrected MLE)	0.706
371					nu hat (MLE)	15.36					nu star (bias corrected)	15.05
372					MLE Mean (bias corrected)	0.19					MLE Sd (bias corrected)	0.366
373											Adjusted Level of Significance (β)	0.0404
374					Approximate Chi Square Value (15.05, α)	7.295					Adjusted Chi Square Value (15.05, β)	6.962
375					95% Gamma Approximate UCL (use when n>=50)	0.392					95% Gamma Adjusted UCL (use when n<50)	0.41
376												
377					**Lognormal GOF Test on Detected Observations Only**							
378					Shapiro Wilk Test Statistic	0.756					**Shapiro Wilk GOF Test**	
379					5% Shapiro Wilk Critical Value	0.829					Detected Data Not Lognormal at 5% Significance Level	
380					Lilliefors Test Statistic	0.287					**Lilliefors GOF Test**	
381					5% Lilliefors Critical Value	0.295					Detected Data appear Lognormal at 5% Significance Level	
382					**Detected Data appear Approximate Lognormal at 5% Significance Level**							
383												
384					**Lognormal ROS Statistics Using Imputed Non-Detects**							
385					Mean in Original Scale	0.183					Mean in Log Scale	-4.775
386					SD in Original Scale	0.867					SD in Log Scale	1.759
387					95% t UCL (assumes normality of ROS data)	0.462					95% Percentile Bootstrap UCL	0.509
388					95% BCA Bootstrap UCL	0.829					95% Bootstrap t UCL	18.22
389					95% H-UCL (Log ROS)	0.13						
390												
391					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
392					KM Mean (logged)	-4.728					95% H-UCL (KM -Log)	0.0608
393					KM SD (logged)	1.459					95% Critical H Value (KM-Log)	3.071
394					KM Standard Error of Mean (logged)	0.298						
395												
396					**DL/2 Statistics**							
397					**DL/2 Normal**						**DL/2 Log-Transformed**	
398					Mean in Original Scale	0.181					Mean in Log Scale	-4.705
399					SD in Original Scale	0.868					SD in Log Scale	1.475
400					95% t UCL (Assumes normality)	0.46					95% H-Stat UCL	0.0645

	A	B	C	D	E	F	G	H	I	J	K	L
401	DL/2 is not a recommended method, provided for comparisons and historical reasons											
402												
403	Nonparametric Distribution Free UCL Statistics											
404	Detected Data appear Approximate Lognormal Distributed at 5% Significance Level											
405												
406	Suggested UCL to Use											
407	99% KM (Chebyshev) UCL					1.88						
408												
409	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
410	Recommendations are based upon data size, data distribution, and skewness.											
411	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
412	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
413												
414	Indeno(1,2,3-c,d)pyrene											
415												
416	General Statistics											
417	Total Number of Observations					28	Number of Distinct Observations					11
418	Number of Detects					8	Number of Non-Detects					20
419	Number of Distinct Detects					8	Number of Distinct Non-Detects					4
420	Minimum Detect					0.0031	Minimum Non-Detect					0.01
421	Maximum Detect					0.7	Maximum Non-Detect					0.022
422	Variance Detects					0.06	Percent Non-Detects					71.43%
423	Mean Detects					0.0939	SD Detects					0.245
424	Median Detects					0.0056	CV Detects					2.61
425	Skewness Detects					2.826	Kurtosis Detects					7.991
426	Mean of Logged Detects					-4.503	SD of Logged Detects					1.765
427												
428	Normal GOF Test on Detects Only											
429	Shapiro Wilk Test Statistic					0.434	Shapiro Wilk GOF Test					
430	5% Shapiro Wilk Critical Value					0.818	Detected Data Not Normal at 5% Significance Level					
431	Lilliefors Test Statistic					0.498	Lilliefors GOF Test					
432	5% Lilliefors Critical Value					0.313	Detected Data Not Normal at 5% Significance Level					
433	Detected Data Not Normal at 5% Significance Level											
434												
435	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
436	Mean					0.0301	Standard Error of Mean					0.0261
437	SD					0.129	95% KM (BCA) UCL					0.08
438	95% KM (t) UCL					0.0745	95% KM (Percentile Bootstrap) UCL					0.0795
439	95% KM (z) UCL					0.073	95% KM Bootstrap t UCL					1.437
440	90% KM Chebyshev UCL					0.108	95% KM Chebyshev UCL					0.144
441	97.5% KM Chebyshev UCL					0.193	99% KM Chebyshev UCL					0.289
442												
443	Gamma GOF Tests on Detected Observations Only											
444	A-D Test Statistic					1.756	Anderson-Darling GOF Test					
445	5% A-D Critical Value					0.794	Detected Data Not Gamma Distributed at 5% Significance Level					
446	K-S Test Statistic					0.431	Kolmogrov-Smirnoff GOF					
447	5% K-S Critical Value					0.316	Detected Data Not Gamma Distributed at 5% Significance Level					
448	Detected Data Not Gamma Distributed at 5% Significance Level											
449												
450	Gamma Statistics on Detected Data Only											

	A	B	C	D	E	F	G	H	I	J	K	L
451					k hat (MLE)	0.319					k star (bias corrected MLE)	0.283
452					Theta hat (MLE)	0.294					Theta star (bias corrected MLE)	0.332
453					nu hat (MLE)	5.111					nu star (bias corrected)	4.528
454					MLE Mean (bias corrected)	0.0939					MLE Sd (bias corrected)	0.176
455												
456					**Gamma Kaplan-Meier (KM) Statistics**							
457					k hat (KM)	0.0545					nu hat (KM)	3.053
458					Approximate Chi Square Value (3.05, α)	0.388					Adjusted Chi Square Value (3.05, β)	0.34
459					95% Gamma Approximate KM-UCL (use when n>=50)	0.237					95% Gamma Adjusted KM-UCL (use when n<50)	0.27
460					Gamma (KM) may not be used when k hat (KM) is < 0.1							
461												
462					**Gamma ROS Statistics using Imputed Non-Detects**							
463					GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
464					GROS may not be used when kstar of detected data is small such as < 0.1							
465					For such situations, GROS method tends to yield inflated values of UCLs and BTVs							
466					For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
467					Minimum	0.0031					Mean	0.0377
468					Maximum	0.7					Median	0.01
469					SD	0.131					CV	3.463
470					k hat (MLE)	0.545					k star (bias corrected MLE)	0.51
471					Theta hat (MLE)	0.0692					Theta star (bias corrected MLE)	0.0738
472					nu hat (MLE)	30.52					nu star (bias corrected)	28.59
473					MLE Mean (bias corrected)	0.0377					MLE Sd (bias corrected)	0.0528
474											Adjusted Level of Significance (β)	0.0404
475					Approximate Chi Square Value (28.59, α)	17.39					Adjusted Chi Square Value (28.59, β)	16.85
476					95% Gamma Approximate UCL (use when n>=50)	0.062					95% Gamma Adjusted UCL (use when n<50)	0.064
477												
478					**Lognormal GOF Test on Detected Observations Only**							
479					Shapiro Wilk Test Statistic	0.7					**Shapiro Wilk GOF Test**	
480					5% Shapiro Wilk Critical Value	0.818					Detected Data Not Lognormal at 5% Significance Level	
481					Lilliefors Test Statistic	0.279					**Lilliefors GOF Test**	
482					5% Lilliefors Critical Value	0.313					Detected Data appear Lognormal at 5% Significance Level	
483					**Detected Data appear Approximate Lognormal at 5% Significance Level**							
484												
485					**Lognormal ROS Statistics Using Imputed Non-Detects**							
486					Mean in Original Scale	0.0312					Mean in Log Scale	-5.139
487					SD in Original Scale	0.131					SD in Log Scale	1.218
488					95% t UCL (assumes normality of ROS data)	0.0734					95% Percentile Bootstrap UCL	0.0807
489					95% BCA Bootstrap UCL	0.106					95% Bootstrap t UCL	0.903
490					95% H-UCL (Log ROS)	0.0233						
491												
492					**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**							
493					KM Mean (logged)	-5.151					95% H-UCL (KM -Log)	0.0152
494					KM SD (logged)	0.994					95% Critical H Value (KM-Log)	2.449
495					KM Standard Error of Mean (logged)	0.219						
496												
497					**DL/2 Statistics**							
498					**DL/2 Normal**						**DL/2 Log-Transformed**	
499					Mean in Original Scale	0.0309					Mean in Log Scale	-4.992
500					SD in Original Scale	0.131					SD in Log Scale	0.963

	A	B	C	D	E	F	G	H	I	J	K	L
501					95% t UCL (Assumes normality)	0.0731					95% H-Stat UCL	0.0169
502	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
503												
504	**Nonparametric Distribution Free UCL Statistics**											
505	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
506												
507	**Suggested UCL to Use**											
508					97.5% KM (Chebyshev) UCL	0.193						
509												
510	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
511	Recommendations are based upon data size, data distribution, and skewness.											
512	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
513	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
514												
515	TPH ORO											
516												
517	**General Statistics**											
518					Total Number of Observations	22				Number of Distinct Observations		12
519					Number of Detects	10				Number of Non-Detects		12
520					Number of Distinct Detects	9				Number of Distinct Non-Detects		3
521					Minimum Detect	5.9				Minimum Non-Detect		21
522					Maximum Detect	100				Maximum Non-Detect		23
523					Variance Detects	975.2				Percent Non-Detects		54.55%
524					Mean Detects	29.83				SD Detects		31.23
525					Median Detects	16.5				CV Detects		1.047
526					Skewness Detects	1.606				Kurtosis Detects		1.843
527					Mean of Logged Detects	2.97				SD of Logged Detects		0.94
528												
529	**Normal GOF Test on Detects Only**											
530					Shapiro Wilk Test Statistic	0.761				**Shapiro Wilk GOF Test**		
531					5% Shapiro Wilk Critical Value	0.842				Detected Data Not Normal at 5% Significance Level		
532					Lilliefors Test Statistic	0.348				**Lilliefors GOF Test**		
533					5% Lilliefors Critical Value	0.28				Detected Data Not Normal at 5% Significance Level		
534	**Detected Data Not Normal at 5% Significance Level**											
535												
536	**Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs**											
537					Mean	20.28				Standard Error of Mean		5.101
538					SD	22.04				95% KM (BCA) UCL		29.99
539					95% KM (t) UCL	29.06				95% KM (Percentile Bootstrap) UCL		28.64
540					95% KM (z) UCL	28.67				95% KM Bootstrap t UCL		36.59
541					90% KM Chebyshev UCL	35.59				95% KM Chebyshev UCL		42.52
542					97.5% KM Chebyshev UCL	52.14				99% KM Chebyshev UCL		71.04
543												
544	**Gamma GOF Tests on Detected Observations Only**											
545					A-D Test Statistic	0.63				**Anderson-Darling GOF Test**		
546					5% A-D Critical Value	0.743				Detected data appear Gamma Distributed at 5% Significance Level		
547					K-S Test Statistic	0.291				**Kolmogrov-Smirnoff GOF**		
548					5% K-S Critical Value	0.272				Detected Data Not Gamma Distributed at 5% Significance Level		
549	**Detected data follow Appr. Gamma Distribution at 5% Significance Level**											
550												

	A	B	C	D	E	F	G	H	I	J	K	L
551	**Gamma Statistics on Detected Data Only**											
552					k hat (MLE)	1.316				k star (bias corrected MLE)		0.988
553					Theta hat (MLE)	22.66				Theta star (bias corrected MLE)		30.19
554					nu hat (MLE)	26.33				nu star (bias corrected)		19.76
555					MLE Mean (bias corrected)	29.83				MLE Sd (bias corrected)		30.01
556												
557	**Gamma Kaplan-Meier (KM) Statistics**											
558					k hat (KM)	0.847				nu hat (KM)		37.27
559					Approximate Chi Square Value (37.27, α)	24.29				Adjusted Chi Square Value (37.27, β)		23.51
560					95% Gamma Approximate KM-UCL (use when n>=50)	31.12				95% Gamma Adjusted KM-UCL (use when n<50)		32.15
561												
562	**Gamma ROS Statistics using Imputed Non-Detects**											
563	GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs											
564	GROS may not be used when kstar of detected data is small such as < 0.1											
565	For such situations, GROS method tends to yield inflated values of UCLs and BTVs											
566	For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates											
567					Minimum	0.01				Mean		20.54
568					Maximum	100				Median		13.5
569					SD	23.55				CV		1.147
570					k hat (MLE)	0.624				k star (bias corrected MLE)		0.569
571					Theta hat (MLE)	32.9				Theta star (bias corrected MLE)		36.07
572					nu hat (MLE)	27.47				nu star (bias corrected)		25.06
573					MLE Mean (bias corrected)	20.54				MLE Sd (bias corrected)		27.22
574										Adjusted Level of Significance (β)		0.0386
575					Approximate Chi Square Value (25.06, α)	14.66				Adjusted Chi Square Value (25.06, β)		14.06
576					95% Gamma Approximate UCL (use when n>=50)	35.12				95% Gamma Adjusted UCL (use when n<50)		36.6
577												
578	**Lognormal GOF Test on Detected Observations Only**											
579					Shapiro Wilk Test Statistic	0.922				**Shapiro Wilk GOF Test**		
580					5% Shapiro Wilk Critical Value	0.842				Detected Data appear Lognormal at 5% Significance Level		
581					Lilliefors Test Statistic	0.234				**Lilliefors GOF Test**		
582					5% Lilliefors Critical Value	0.28				Detected Data appear Lognormal at 5% Significance Level		
583	**Detected Data appear Lognormal at 5% Significance Level**											
584												
585	**Lognormal ROS Statistics Using Imputed Non-Detects**											
586					Mean in Original Scale	21.06				Mean in Log Scale		2.718
587					SD in Original Scale	22.54				SD in Log Scale		0.754
588					95% t UCL (assumes normality of ROS data)	29.33				95% Percentile Bootstrap UCL		29.35
589					95% BCA Bootstrap UCL	32.22				95% Bootstrap t UCL		39.93
590					95% H-UCL (Log ROS)	29.23						
591												
592	**UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed**											
593					KM Mean (logged)	2.68				95% H-UCL (KM -Log)		26.73
594					KM SD (logged)	0.717				95% Critical H Value (KM-Log)		2.223
595					KM Standard Error of Mean (logged)	0.194						
596												
597	**DL/2 Statistics**											
598	**DL/2 Normal**						**DL/2 Log-Transformed**					
599					Mean in Original Scale	19.54				Mean in Log Scale		2.655
600					SD in Original Scale	22.6				SD in Log Scale		0.682

	A	B	C	D	E	F	G	H	I	J	K	L
601					95% t UCL (Assumes normality)	27.83					95% H-Stat UCL	24.86
602	**DL/2 is not a recommended method, provided for comparisons and historical reasons**											
603												
604	**Nonparametric Distribution Free UCL Statistics**											
605	**Detected Data appear Approximate Gamma Distributed at 5% Significance Level**											
606												
607	**Suggested UCL to Use**											
608					95% KM (t) UCL	29.06					95% GROS Adjusted Gamma UCL	36.6
609					95% Adjusted Gamma KM-UCL	32.15						
610												
611	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
612	Recommendations are based upon data size, data distribution, and skewness.											
613	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
614	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
615												

	A	B	C	D	E	F	G	H	I	J	K	L	M
1				General Statistics on Uncensored Data									
2			Date/Time of Computation	4/11/2016 8:37:46 AM									
3			User Selected Options										
4			From File	TU504 PAH-TPH Data_a.xls									
5			Full Precision	OFF									
6													
7	From File: TU504 PAH-TPH Data_a.xls												
8													
9	General Statistics for Censored Data Set (with NDs) using Kaplan Meier Method												
10													
11	Variable		NumObs	# Missing	Num Ds	NumNDs	% NDs	Min ND	Max ND	KM Mean	KM Var	KM SD	KM CV
12	Benzo(b)fluoranthene		14	0	8	6	42.86%	0.01	0.022	0.253	0.762	0.873	3.452
13													
14	General Statistics for Raw Data Sets using Detected Data Only												
15													
16	Variable		NumObs	# Missing	Minimum	Maximum	Mean	Median	Var	SD	MAD/0.675	Skewness	CV
17	Benzo(b)fluoranthene		8	0	0.0028	3.4	0.437	0.0094	1.433	1.197	0.00615	2.828	2.738
18													
19	Percentiles using all Detects (Ds) and Non-Detects (NDs)												
20													
21	Variable		NumObs	# Missing	10%ile	20%ile	25%ile(Q1)	50%ile(Q2)	75%ile(Q3)	80%ile	90%ile	95%ile	99%ile
22	Benzo(b)fluoranthene		14	0	0.00679	0.00808	0.0091	0.011	0.014	0.0178	0.0402	1.221	2.964
23													
24													
25													
26													
27													
28													
29													
30													
31		t											

	A	B	C	D	E	F	G	H	I	J	K	L
1	UCL Statistics for Data Sets with Non-Detects											
2												
3	User Selected Options											
4	Date/Time of Computation			4/11/2016 8:39:02 AM								
5	From File			TU504 PAH-TPH Data_a.xls								
6	Full Precision			OFF								
7	Confidence Coefficient			95%								
8	Number of Bootstrap Operations			2000								
9												
10												
11	Benzo(b)fluoranthene											
12												
13	General Statistics											
14	Total Number of Observations					14	Number of Distinct Observations					10
15	Number of Detects					8	Number of Non-Detects					6
16	Number of Distinct Detects					8	Number of Distinct Non-Detects					3
17	Minimum Detect					0.0028	Minimum Non-Detect					0.01
18	Maximum Detect					3.4	Maximum Non-Detect					0.022
19	Variance Detects					1.433	Percent Non-Detects					42.86%
20	Mean Detects					0.437	SD Detects					1.197
21	Median Detects					0.0094	CV Detects					2.738
22	Skewness Detects					2.828	Kurtosis Detects					7.997
23	Mean of Logged Detects					-3.9	SD of Logged Detects					2.221
24												
25	Normal GOF Test on Detects Only											
26	Shapiro Wilk Test Statistic					0.427	Shapiro Wilk GOF Test					
27	5% Shapiro Wilk Critical Value					0.818	Detected Data Not Normal at 5% Significance Level					
28	Lilliefors Test Statistic					0.502	Lilliefors GOF Test					
29	5% Lilliefors Critical Value					0.313	Detected Data Not Normal at 5% Significance Level					
30	Detected Data Not Normal at 5% Significance Level											
31												
32	Kaplan-Meier (KM) Statistics using Normal Critical Values and other Nonparametric UCLs											
33	Mean					0.253	Standard Error of Mean					0.249
34	SD					0.873	95% KM (BCA) UCL					0.74
35	95% KM (t) UCL					0.695	95% KM (Percentile Bootstrap) UCL					0.736
36	95% KM (z) UCL					0.663	95% KM Bootstrap t UCL					58.29
37	90% KM Chebyshev UCL					1.001	95% KM Chebyshev UCL					1.34
38	97.5% KM Chebyshev UCL					1.81	99% KM Chebyshev UCL					2.734
39												
40	Gamma GOF Tests on Detected Observations Only											
41	A-D Test Statistic					1.716	Anderson-Darling GOF Test					
42	5% A-D Critical Value					0.823	Detected Data Not Gamma Distributed at 5% Significance Level					
43	K-S Test Statistic					0.41	Kolmogrov-Smirnoff GOF					
44	5% K-S Critical Value					0.321	Detected Data Not Gamma Distributed at 5% Significance Level					
45	Detected Data Not Gamma Distributed at 5% Significance Level											
46												
47	Gamma Statistics on Detected Data Only											
48	k hat (MLE)					0.234	k star (bias corrected MLE)					0.229
49	Theta hat (MLE)					1.871	Theta star (bias corrected MLE)					1.906
50	nu hat (MLE)					3.739	nu star (bias corrected)					3.67

	A	B	C	D	E	F	G	H	I	J	K	L
51					MLE Mean (bias corrected)	0.437				MLE Sd (bias corrected)		0.913
52												
53					Gamma Kaplan-Meier (KM) Statistics							
54					k hat (KM)	0.0839				nu hat (KM)		2.349
55					Approximate Chi Square Value (2.35, α)	0.209				Adjusted Chi Square Value (2.35, β)		0.159
56					95% Gamma Approximate KM-UCL (use when n>=50)	2.842				95% Gamma Adjusted KM-UCL (use when n<50)		3.728
57					Gamma (KM) may not be used when k hat (KM) is < 0.1							
58												
59					Gamma ROS Statistics using Imputed Non-Detects							
60					GROS may not be used when data set has > 50% NDs with many tied observations at multiple DLs							
61					GROS may not be used when kstar of detected data is small such as < 0.1							
62					For such situations, GROS method tends to yield inflated values of UCLs and BTVs							
63					For gamma distributed detected data, BTVs and UCLs may be computed using gamma distribution on KM estimates							
64					Minimum	0.0028				Mean		0.254
65					Maximum	3.4				Median		0.01
66					SD	0.905				CV		3.563
67					k hat (MLE)	0.251				k star (bias corrected MLE)		0.245
68					Theta hat (MLE)	1.014				Theta star (bias corrected MLE)		1.039
69					nu hat (MLE)	7.019				nu star (bias corrected)		6.848
70					MLE Mean (bias corrected)	0.254				MLE Sd (bias corrected)		0.514
71										Adjusted Level of Significance (β)		0.0312
72					Approximate Chi Square Value (6.85, α)	2.088				Adjusted Chi Square Value (6.85, β)		1.757
73					95% Gamma Approximate UCL (use when n>=50)	0.834				95% Gamma Adjusted UCL (use when n<50)		0.99
74												
75					Lognormal GOF Test on Detected Observations Only							
76					Shapiro Wilk Test Statistic	0.742				Shapiro Wilk GOF Test		
77					5% Shapiro Wilk Critical Value	0.818				Detected Data Not Lognormal at 5% Significance Level		
78					Lilliefors Test Statistic	0.304				Lilliefors GOF Test		
79					5% Lilliefors Critical Value	0.313				Detected Data appear Lognormal at 5% Significance Level		
80					Detected Data appear Approximate Lognormal at 5% Significance Level							
81												
82					Lognormal ROS Statistics Using Imputed Non-Detects							
83					Mean in Original Scale	0.253				Mean in Log Scale		-4.389
84					SD in Original Scale	0.906				SD in Log Scale		1.806
85					95% t UCL (assumes normality of ROS data)	0.682				95% Percentile Bootstrap UCL		0.737
86					95% BCA Bootstrap UCL	0.982				95% Bootstrap t UCL		45.72
87					95% H-UCL (Log ROS)	0.542						
88												
89					UCLs using Lognormal Distribution and KM Estimates when Detected data are Lognormally Distributed							
90					KM Mean (logged)	-4.395				95% H-UCL (KM -Log)		0.355
91					KM SD (logged)	1.698				95% Critical H Value (KM-Log)		4.074
92					KM Standard Error of Mean (logged)	0.501						
93												
94					DL/2 Statistics							
95					DL/2 Normal					DL/2 Log-Transformed		
96					Mean in Original Scale	0.253				Mean in Log Scale		-4.415
97					SD in Original Scale	0.906				SD in Log Scale		1.753
98					95% t UCL (Assumes normality)	0.681				95% H-Stat UCL		0.429
99					DL/2 is not a recommended method, provided for comparisons and historical reasons							
100												

	A	B	C	D	E	F	G	H	I	J	K	L
101	**Nonparametric Distribution Free UCL Statistics**											
102	**Detected Data appear Approximate Lognormal Distributed at 5% Significance Level**											
103												
104	**Suggested UCL to Use**											
105					99% KM (Chebyshev) UCL	2.734						
106												
107	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
108	Recommendations are based upon data size, data distribution, and skewness.											
109	These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).											
110	However, simulations results will not cover all Real World data sets; for additional insight the user may want to consult a statistician.											
111												

HTRW DRILLING LOG

DISTRICT: AFCEC-FA8903-08-D-8783-TO-0169		HOLE NUMBER: CA504-SB01
1. COMPANY NAME: URS Corp.	2. DRILLING SUBCONTRACTOR: Plains Environmental Services/Boart Longyear	SHEET 1 OF SHEETS 30
3. PROJECT: Site Investigation at 8 Sites, Cannon AFB	4. LOCATION: Cannon AFB, New Mexico	
5. NAME OF DRILLER: Jesse Kalvig (PES) Roger Rodriguez (BL)	6. MANUFACTURE'S DESIGNATION OF DRILL: Geoprobe 6620 DT / Sonic Drill Rig	
7. SIZES AND TYPES OF DRILLING AND SAMPLING EQUIPMENT: 5 ft long macrocore sampler; 1 5/8" dia. sample liner; 5 ft long 1 1/2" drill rods; Sonic Drill Rig	8. HOLE LOCATION: 1238830.303N 844711.606E	
	9. SURFACE ELEVATION: 4312.0 ft AMSL	
	10. DATE STARTED: 2-5-13	11. DATE COMPLETED: 7-11-13
12. OVERBURDEN THICKNESS: NA	15. DEPTH GROUNDWATER ENCOUNTERED: NA	
13. DEPTH DRILLED INTO ROCK: NA	16. DEPTH TO WATER AND ELAPSED TIME AFTER DRILLING: NA	
14. TOTAL DEPTH OF HOLE: 276 ft bgs.	17. OTHER WATER LEVEL MEASUREMENTS (SPECIFY): NA	

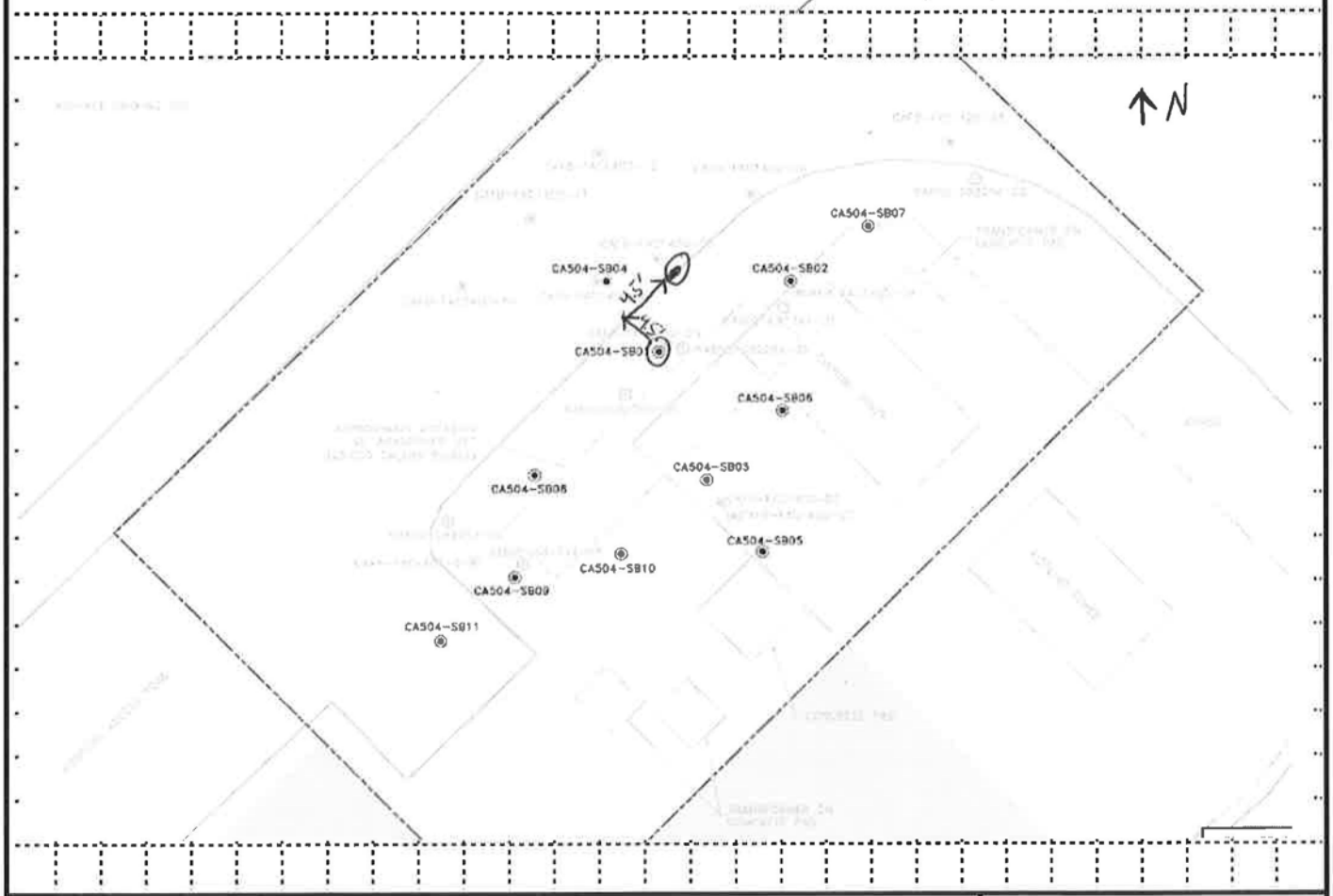
18. GEOTECHNICAL SAMPLES	DISTURBED	UNDISTURBED	19. TOTAL NUMBER OF CORE BOXES
0	—	—	NA

20. SAMPLES FOR CHEMICAL ANALYSIS	VOC	METALS	OTHER (SPECIFY)	OTHER (SPECIFY)	OTHER (SPECIFY)	21. TOTAL CORE RECOVERY
65	BTEX + Naphthalene	—	Site Related SVOCs	TPH-ORO, DRO	—	NA %

22. DISPOSITION OF HOLE	BACKFILLED	MONITORING WELL	OTHER (SPECIFY)	23. SIGNATURE OF INSPECTOR
Abandoned	Bentonite Pellets & Slurry	—	—	[signature]

LOCATION SKETCH/COMMENTS

SCALE: Not to Scale



PROJECT	HOLE
Site Investigation at 8 Sites, Cannon AFB	CA504-SB01

HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT: Site Investigation at 8 Sites, Cannon AF

INSPECTOR: Jennifer L Allen

SHEET 2 OF 3 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO e.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	0	Silty SAND (SM) - loose, dry, reddish-brown, fine grain (FILL)	HS = Head Space Screening FS=Field Screening BKG = Background PPM=Parts Per Million ND=Non Detect BKG=ND FS=ND			PP=Pocket Pen	START TIME: = 09:25 Time (T) Recovery (R)
	1	0-2 ft bgs Hand Augered			CA504-SB01-005		T=09:28 R=4.3'/5.0' Soil samples collected analyzed for BTEX + napthalene, Site-Related SVOCs, TPH-DRO, and TPH-ORO
	2	Pulverized Caliche 2.0'-3.0', white with some fine caliche nodules	HS=ND				
	3						NOTE: BTEX+ napthalene samples collected from the bottom of the sample intervals
	4					NO Recovery	
	5	Native Surface @ 5.0 ft bgs SILT (ML) - soft, dry, light brownish-white, No plasticity, Calcareous with high content of fine caliche nodules	FS=ND		CA504-SB01-010	PP=1.0	T=09:34 R=2.5'/2.5'
	6						
	7						HS=ND
	8	Becomes Medium Stiff	FS=ND			PP=1.5	T=0942 R=2.5'/2.5'
	9						
	10						

PROJECT: Site Investigation at 8 Sites, Cannon AFB

HOLE: CA504-SB01

HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT :e Investigation at 8 Sites, Cannon AFB

INSPECTOR Jennifer Deller

SHEET 3 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	10	Same as Above					
		SILT (ML) - Medium Stiff, dry, light brownish-white, no plasticity, Calcareous, high fine Caliche nodudule content				PP=1.5	
	11				CA504-SB01-C15		T=0956 R=5.0'/5.0'
	12		FS=ND HS=ND				
		Some brownish-red sand, becomes Stiff				PP=2.5	
	13						
		Transitions to a Sandy SILT (ML) Sand is brownish-red and fine grain					
	14						
	15						
						PP=2.5	
	16						T=1007 R=5.0'/5.0'
			FS=ND HS=ND		CA504-SB01-C20		
	17						
	18					PP=2.5	
	19						
	20						

PROJECT Site Investigation at 8 Sites, Cannon AFB

HOLE CA504-SB01

HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT: e Investigation at 8 Sites, Cannon AFB

INSPECTOR: [signature]

SHEET 4 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO	BLOW COUNTS	REMARKS h
	20	Same As Above Sandy SILT (ML) - Medium Stiff, dry, light brownish white with reddish-brown sand, slight plasticity, fine sand, moderate chemical odor-sweet	FS=27.5 ppm		CA504-SB01-023	PP=1.5	T=1015 R=2.5'/2.5'
	21		FS=57.1 ppm				
	22	Increasing reddish-brown sand content, soft	FS=85.6 ppm			PP=0.5	HS=167.6 ppm (5ft interval)
	23	SILTY SAND (SM) - loose, dry, reddish brown with some white calcareous silt, fine grain, moderate sweet chemical odor	FS=118 ppm		CA504-SB01-025 and duplicate CA504-SB501-025 @ false time 0700		T=1029 R=2.5'/2.5'
	24		FS=121 ppm				
			FS=151 ppm				
	25	Some caliche mottling 25.3'-26.5'	FS=99.8 ppm				T=1050 R=2.5'/2.5'
	26		FS=84.2 ppm				
	27	SAND (SP) - loose, dry, pale orangish-tan, fine grain, moderate sweet chemical odor	FS=127.1 ppm		CA504-SB01-030		HS=186.7 ppm (5ft interval)
	28		FS=110.1 ppm				T=1100 R=2.5'/2.5'
	29		FS=124 ppm				
	30						

PROJECT: Site Investigation at 8 Sites, Cannon AFB

HOLE: CA504-SB01

HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT: :e Investigation at 8 Sites, Cannon AFB

INSPECTOR: [illegible]

SHEET 5 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO	ANALYTICAL SAMPLE NO	BLOW COUNTS	REMARKS h
	30	Same As Above	FS=92.1 ppm				
		SAND(SP) - loose, dry, pale orangish-tan, fine grain, moderate sweet chemical odor, trace coarse caliche nodules 31'-32' bgs					T=1108 R=2.5'/2.5'
	31		FS=56.2 ppm		CA504-SB01-035		
	32						HS=295.4 ppm (5 ft interval)
	33		FS=169.7 ppm				T=1122 R=2.5'/2.5'
	34		FS=191.2 ppm				
	35	Trace fine caliche nodules 35.0'-36.5' bgs	FS=130.8 ppm				T=1130 R=2.5'/2.5'
	36				CA504-SB01 040		
	37		FS=191.2 ppm				HS=352.3 ppm (5 ft interval)
	38		FS=161.7 ppm				T=1153 R=2.5'/2.5'
	39		FS=185.1 ppm				
	40		FS=238.4 ppm				

PROJECT: Site Investigation at 8 Sites, Cannon AFB

HOLE: CA504-SB01

HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT: :e Investigation at 8 Sites, Cannon AFB

INSPECTOR: Jennifer L Allen

SHEET 6 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO	BLOW COUNTS	REMARKS h
	40	Same As Above					
		SAND (SP) - loose, dry, pale orangish-tan, fine grain, moderate sweet chemical odor, trace fine caliche nodules					
	41		FS=1986 ppm				T=1250 R=2.5'/2.5'
	42		FS=169.2 ppm		CA504-SB01-045 and duplicate		HS=354.8 ppm (5 ft interval)
	43	Becomes very fine to fine grain	FS=208.2 ppm		CA504-SB501-045 @ false time 0730		T=1302 R=2.5'/2.5'
	44		FS=199.0 ppm				
			FS=207.1 ppm				
	45						
	46		FS=211.1 ppm		CA504-SB01-050		T=1331 R=2.5'/2.5'
	47		FS=324.2 ppm				HS=310.4 ppm (5 ft interval)
	48		FS=240.1 ppm				T=1359 R=2.5'/2.5'
	49		FS=320.0 ppm				
	50		FS=297.8 ppm				

PROJECT: Site Investigation at 8 Sites, Cannon AFB

HOLE: CA504-SB01

HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT :e Investigation at 8 Sites, Cannon AFB

INSPECTOR Jennifer D Allen

SHEET 7 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO	BLOW COUNTS	REMARKS h
	50	SAND (SP) - Medium dense, dry, tan with white calcareous silt, fine to coarse caliche nodules, very fine grain sand, strong hydrocarbon odor	FS=235 ppm				T= 1415 R= 1.5'/1.5'
	51		FS= 257 ppm				HS= 332.4 ppm (5 ft interval)
	52	Changes to a clean sand (SP) @52.0 ft bgs (No silt or caliche) becomes tan, moist, fine grain with a strong hydrocarbon odor, loose			CA504-SB01-055		T= 1441 R= 3.5'/3.5'
	53		FS= 251 ppm				
	54		FS=261 ppm				
	55						
	56		FS= 179 ppm				T=1458 R= 2.5'/2.5'
	57		FS=194 ppm		CA504-SB01-060		HS= 363.3 ppm (5 ft interval)
	58	Coarse caliche nodules 58'-59' bgs	FS= 191 ppm				T = 1500 R= 2.5'/2.5'
	59		FS=168 ppm				
	60		FS= 337 ppm				

PROJECT Site Investigation at 8 Sites, Cannon AFB

HOLE CA504 - SB01

HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT :e Investigation at 8 Sites, Cannon AFB

INSPECTOR Jennifer [illegible]

SHEET 8 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	60	Same As Above SAND(SP) loose, moist, tan, fine grain, Strong Hydrocarbon odor					T=1512 R=2.5'/2.5'
	61		FS=294 ppm		CA504-SB01-065		
	62		FS=304 ppm		and Duplicate		HS=246.0 ppm (5ft interval)
	63		FS=210 ppm		CA504-SB501-065 @ false time 0800		T=1538 R=2.5'/2.5
	64		FS=285 ppm				
	65		FS=303 ppm				
	66		FS=132 ppm		CA504-SB01-070		T=1545 R=2.5'/2.5'
	67		FS=132 ppm				HS=289.1 ppm (5ft interval)
	68		FS=206 ppm				T=1600 R=2.5'/2.5'
	69		FS=229 ppm				
	70						

PROJECT Site Investigation at 8 Sites, Cannon AFB

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HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT: Site Investigation at 8 Sites, Cannon AFB

INSPECTOR: Jennifer Allen

SHEET 9 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	70	Same As Above SAND (SP) - loose, moist, tan, fine grain, strong hydrocarbon odor					T=1606 R=2.5'/2.5'
	71		FS=189.6 ppm		CA504-SB01-075		
	72		FS=268.9 ppm				HS=220.0 ppm (5ft-interval)
		Sand grains become very fine					
	73		FS=262.8 ppm				T=1616 R=2.5'/2.5'
	74		FS=287.7 ppm				
	75						T=1651 R=0/2.5'
	76						Recovery all slough, will used a closed sampling system for 77.5' + deeper
	77						End drilling, will Resume 2/6/13
	78		FS=132.1 ppm HS=173.7 (2.5ft interval) FS=127.6 ppm		CA504-SB01-080		Resume drilling 2/6/13@0820
	79						T=0912 R=2.5'/2.5'
	80						

PROJECT: Site Investigation at 8 Sites, Cannon AFB

HOLE: CA504-SB01

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PROJECT :e Investigation at 8 Sites, Cannon AFB

INSPECTOR Jennifer L Allen

SHEET 10 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	80	Same As Above SAND (SP) - loose, moist, tan, very fine grain, strong hydrocarbon odor					
	81	Some fine to Coarse Caliche nodules and calcareous silt 81.0 - 81.5 ft bgs	FS=97.9 ppm		CA504-SB01-085 and duplicate		T=0945 R=2.5'/2.5'
		Trace coarse caliche nodules 81.5' - 85.0' bgs					
	82		FS=57.9 ppm		CA504-SB501-085 @ false time 0700		HS=187.3ppm (5-ft interval)
	83		FS=120.5 ppm				T=1030 R=2.5'/2.5'
	84		FS=104.5 ppm				
	85		FS=127.0 ppm				T=1123 R=2.5'/2.5
	86				CA504-SB01-090		
	87		FS=117.3 ppm				HS=231.7ppm (5-ft interval)
	88		FS=144 ppm				T=1207 R=2.5'/2.5'
	89		FS=128.1 ppm				
	90						

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HTRW DRILLING LOG

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PROJECT :e Investigation at 8 Sites, Cannon AFB

INSPECTOR

SHEET 11 OF 30 SHEETS

ELEV a.	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	90	Same As Above					
		SAND (SP) - loose, moist, tan, very fine grain, strong hydrocarbon odor.					
	91		FS= 76.0 ppm				T=1332 R=2.5'/2.5
					CA504-SB01-095		
	92		FS= 97.7 ppm				HS=208.0 ppm (5 ft interval)
	93		FS=170.1 ppm				T=1400 R=2.5'/2.5'
	94		FS=174.3 ppm				
	95						T=1457 R=2.5'/2.5'
	96		FS= 89.6 ppm		CA504-SB01-100		HS=182.9 ppm (5 ft interval)
	97		FS= 103.9 ppm				
	98		FS= 117.0 ppm				T=1556 R=2.5'/2.5'
	99		FS= 109.2 ppm				
	100						

PROJECT Site Investigation at 8 Sites, Cannon AFB

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HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT: :e Investigation at 8 Sites, Cannon AFB

INSPECTOR: Jennifer Cox

SHEET 12 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO	BLOW COUNTS	REMARKS h
	100	Same As Above SAND (SP) loose, moist, tan, very fine grain, moderate to strong Hydro Carbon odor	FS=862 ppm				T=1615 R=2.5'/2.5'
	101	Some coarse Caliche nodules			CA504-SB01-105		
	102		FS=79.6 ppm				
							HS=138.3 ppm (5ft interval)
	103		FS=71.2 ppm				T=1640 R=2.5'/2.5'
	104		FS=86.8 ppm				
	105						Complete drilling for day @ 1640 Begin drilling 2-7-13 @ 0810
		Hydro Carbon odor increases	FS=150.6 ppm		CA504-SB01-110		
	106		FS=130.6 ppm				T=0830 R=2.5'/2.5'
	107						HS=270.5 ppm (5ft interval)
	108		FS=109.1 ppm				T=0848 R=2.5'/2.5'
	109		FS=106.3 ppm				
	110						

PROJECT: Site Investigation at 8 Sites, Cannon AFB

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PROJECT: Site Investigation at 8 Sites, Cannon AFB

INSPECTOR: [illegible]

SHEET 13 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	110	Same As Above SAND (SP) loose, moist, tan, very fine grain, trace fine caliche nodules, strong hydro carbon odor	FS=1.25 ppm				
	111						T=0950 R=2.5'/2.5'
			FS=116.6 ppm		CA504-SB01-115		
	112						HS=329.5 ppm (5-foot interval)
	113		FS=181.0 ppm				T=1008 R=2.5'/2.5'
	114		FS=196.9 ppm				
	115						"
			FS=89.4 ppm				T=1033 R=2.5'/2.5'
	116						
		Some coarse caliche nodules	FS=189.4 ppm		CA504-SB01-120		
	117						HS=305.1 ppm (5-foot interval)
	118		FS=99.7 ppm				T=1104 R=2.5'/2.5'
	119		FS=126.5 ppm				
	120						

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INSPECTOR: Jennifer Allen

SHEET 14 OF 30 SHEETS

ELEV a	DEPTH b	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h
	120	Same As Above					
		SAND (SP) loose, moist, tan, very fine grain, trace coarse calcite nodules, strong Hydrocarbon odor	FS= 113.8 ppm				T= 1150 R= 2.5'/2.5'
	121				CA504-SB01-125		
			FS= 104.9 ppm				
	122						
							HS= 338.8 ppm (5 feet interval)
	123		FS= 184.5 ppm				T= 1207 R= 2.5'/2.5'
	124		FS= 176.3 ppm				
	125	Bottom of Boring @ 125.0 ft bgs due to lack of drill rods					END TIME = 1207
	126						
	127						
	128						
	129						
	130						

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HTRW DRILLING LOG

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INSPECTOR: J Conradi

SHEET 15 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO. e.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	125	See previous CA504-SB01 logs for depths 0-125'. Resume SB01 sampling on 7-9-13	HS = Head Space Screening FS=Field Screening BKG = Background PPM=Parts Per Million ND=Non Detect		CA504-SB01-130	PP=Pocket Pen	START TIME = 0830
		Same as Above	FS=410 ppm				Time (T) 1545 Recovery (R) 5.0/5.0
	126	SAND (SP) - loose, moist, tan, very fine grained, trace caliche nodules, strong hydrocarbon odor.					
							Soil samples collected analyzed for BTEX + napthalene, Site-Related SVOCs, TPH-DRO, and TPH-ORO
	127						
	128						
	129						
	130						
			FS=251 ppm		CA504-SB01-135 + dup at 0800		0753 T=~~1555~~ SC R=5.0/5.0
	131						Resume drilling 7-10-13
	132						
	133						
	134						
	135						

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INSPECTOR J Conradi

SHEET 16 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	135	Same as above SAND (SP) loose, moist, tan, very fine grained, trace caliche nodules strong hydrocarbon odor	FS=488 ppm	NA	CA504-SB01-140	NA	T=0756 R=5/5.0 HS=49.6 ppm
	136						
	137						
	138						
	139						
	140		FS= 320 ppm		CA504-SB01-145 +MS/MSD		T=0850 R=5/5.0 HS=45.0 ppm
	141						
	142						
	143						
	144						
	145						

PROJECT Site Investigation at 8 Sites, Cannon AFB

HOLE CA504-SB01

HTRW DRILLING LOG

HOLE NO. CA504-SB01

PROJECT: Site Investigation at 8 Sites, Cannon AF

INSPECTOR: J Conadi

SHEET 17 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS (HS = Head Space Screening; FS=Field Screening; BKG = Background; PPM=Parts Per Million; ND=Non Detect)	GEOTECH SAMPLE OR CORE BOX NO. e.	ANALYTICAL SAMPLE NO.	BLOW COUNTS (PP=Pocket Pen)	REMARKS h.
	145	Same as above SAND (SP) loose, moist, tan, very fine grained, trace coarse quartz nodules strong hydro carbon odor	FS=360 ppm	NA	CA504-SB01-150	NA	START TIME = Time (T) 0855 Recovery (R) 5/5.0
	146						
	147						Soil samples collected analyzed for BTEX + napthalene, Site-Related SVOCs, TPH-DRO, and TPH-ORO
	148						
	149						
	150	Becomes light tan slightly less odor	FS=400 ppm		CA504-SB01-155		T=0908 R=5/5.0 HS=53.0 ppm
	151						
	152						
	153						
	154						
	155	odor increases					

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INSPECTOR J Conradi

SHEET 18 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	155	Same as above SAND (SP) loose, moist, tan, very fine grained, trace calche nodules, strong hydrocarbon odor	FS=610 ppm	NA	CA504-SB01-160 tdup	NA	T=0933 R=5/5.0 HS=36.0 ppm
	156						
	157						
	158						Field screening for each sample is written at top of interval. e.g: 610 is for SB01-160
	159						
	160		FS=400 ppm		CA504-SB01-165		T=1030 R=5/5.0
	161						
	162						
	163						
	164						
	165						

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SHEET 19 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	165	Same as above SAND (SP) loose, moist, tan very fine grained, few calcite nodules, strong hydrocarbon odor	FS=412 ppm	NA	CA504-SB01-170	NA	T=1050 R=5/5.0
	166						
	167						
	168						
	169						
	170		FS=355 ppm		CA504-SB01-175		T=1120 R=5/5.0
	171						HS=50.1 ppm
	172						
	173						
	174						
	175						

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SHEET 20 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	175	Same as above: SAND (SP) loose, moist, tan. Very fine grained, few calicte nodules. Strong hydrocarbon odor	FS=385 ppm	NA	CA504-SB01-180 +MS/MSD	NA	T=1130 R=5.0/5.0
	176						HS=73.5ppm
	177						
	178						
	179						
	180		FS=400 ppm		CA504-SB01-185		T=1245 R=5/5.0
	181						
	182	with increasing grey sand					HS=41.8 ppm
	183						
	184						
	185						

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SHEET 21 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	185	Same as above	FS=135 ppm	NA	CA504-SB01-190	NA	T=1315 R=5/5.0
		SAND(SP) loose, moist, tan very fine grained few caliche nodules, strong Hydrocarbon odor					
	186						
	187						HS=49.8 ppm
	~~188~~						
	189						
	190		FS=300 ppm		CA504-SB01-195		T=1325 R=5/50
	191						
	192						HS=47.5 ppm
	193						
	194						
	~~195~~						
	195						

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SHEET 22 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	195	Same as above SAND(SP) loose, moist, tan very fine grained, few caliche nodules, strong Hydrocarbon odor	FS=372 ppm	NA	CA504 -SB01 -200	NA	T=1350 R=5/5.0
	196						
	197						
	198						
	199						
	200		FS=360 ppm	NA	CA504 -SB01 -205	NA	T=1405 R=5/5.0
	201						
	202						
	203						
	204						
	205	sandstone cobbles					

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SHEET 23 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	205	Same as above SAND (SP) - loose, moist, tan very fine grained, trace caliche nodules, strong hydrocarbon odor	FS=145 ppm	NA	CA504-SB01-210	NA	T=1425 R=5/5.0
	206						
	207						
	208						
	209						
	210		FS=180 ppm		CA504-SB01-215		T=1435 R=~~1435~~ 5/5.0
	211						
	212	Coarse sandstone gravel					
	213						
	214						
	215	Sandstone cobbles					

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SHEET 24 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	215	Same as above SAND (SP) loose, moist, tan, very fine grained. Some calcite hydrocarbon odor less strong	FS=148	NA	CA504 -SB01 -220	NA	T=1508 R=5/5.0 HS=40.5 ppm
	216						
	217						
	218						
	219						
	220		FS=200 ppm		CA504 -SB01 -225		T=1535 R=5/5.0 HS=37.9 ppm
	221						
	222						
	223						
	224						
	225						

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SHEET 25 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	225	Same as above SAND (SP) loose, moist, tan very fine grained, some caliche nodules, hydocarbon odor less strong slightly.	FS=118 PP	NA	CA504 -SB01 -230	NA	T=0750 R=5/5.0
	226						Resume drilling 7-11-13
	227						
	228	with less caliche					
	229						
	230		~~FS=116~~ PPM FS=240		CA504 -SB01 -235		T=0803 R=5/5.0
	231						
	232						
	233						
	234						
	235						

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SHEET 26 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	235	Same as above	FS=65.8 ppm	NA	CA504-SB01-240 + dup	NA	T=0824 R=5/5.0
		SAND (SP) loose, moist, tan very fine grained, some calcite nodules, hydrocarbon odor					
	236						
	237						
							* lower reading + less odor could be from less volitilization due to lower temps. of air.
	238						
	239	less hydrocarbon odor.					
	240		FS=125 ppm		CA504-SB01-245		T=0905 R=5/5.0
	241						
	242						
	243						
	244						
	245						

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SHEET 27 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	245	Same as above	FS=~~34.0~~ ppm 34.0	NA	CA504 -SB01 -250	NA	T=0915 R=5/5.0
		SAND (SP) loose, moist, tan very fine grained, few calicte nodules					
	246						
	247						
	248						
	249						
		Some sandstone cobbles					
	250		FS=333 ppm		CA504 -SB01 -255		T=1115 R=5/5.0
	251						
	252						
	253						
	254						
	255						

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SHEET 28 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	255	Same as above SAND (SP) loose, moist, tan Very fine grained. few calcite nodules, hydrocarbon odor	FS=185 ppm	NA	CA504 -SB01 -260	NA	T=1152 R=5/5.0
	256						
	257						
	258						
	259						
	260	Becomes dark tan with increasing moisture	FS=400 ppm	NA	CA504 -SB01 -265	NA	T=1236 R=5/5.0
	261						
	262						
	263						
	264						
	265	Increasing ~~clay~~ silt chunks					

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SHEET 29 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	265	Same as above SAND (SP) loose, moist, tan very fine grained.	FS=90 ppm		CA504 -SB01 -270		T=1425 R=5/5.0
	266	Silty SAND (SM) stiff, moist, tan very fine grained, compacted					
	267	SAND (SP) loose, moist, tan very fine grained No Hydro carbon odor					
	268						
	269						
	270		FS=77 ppm		CA504 -SB01 -275		T=1430 R=5/5.0
	271						
	272						
	273						
	274						
	275	No hydrocarbon odor					

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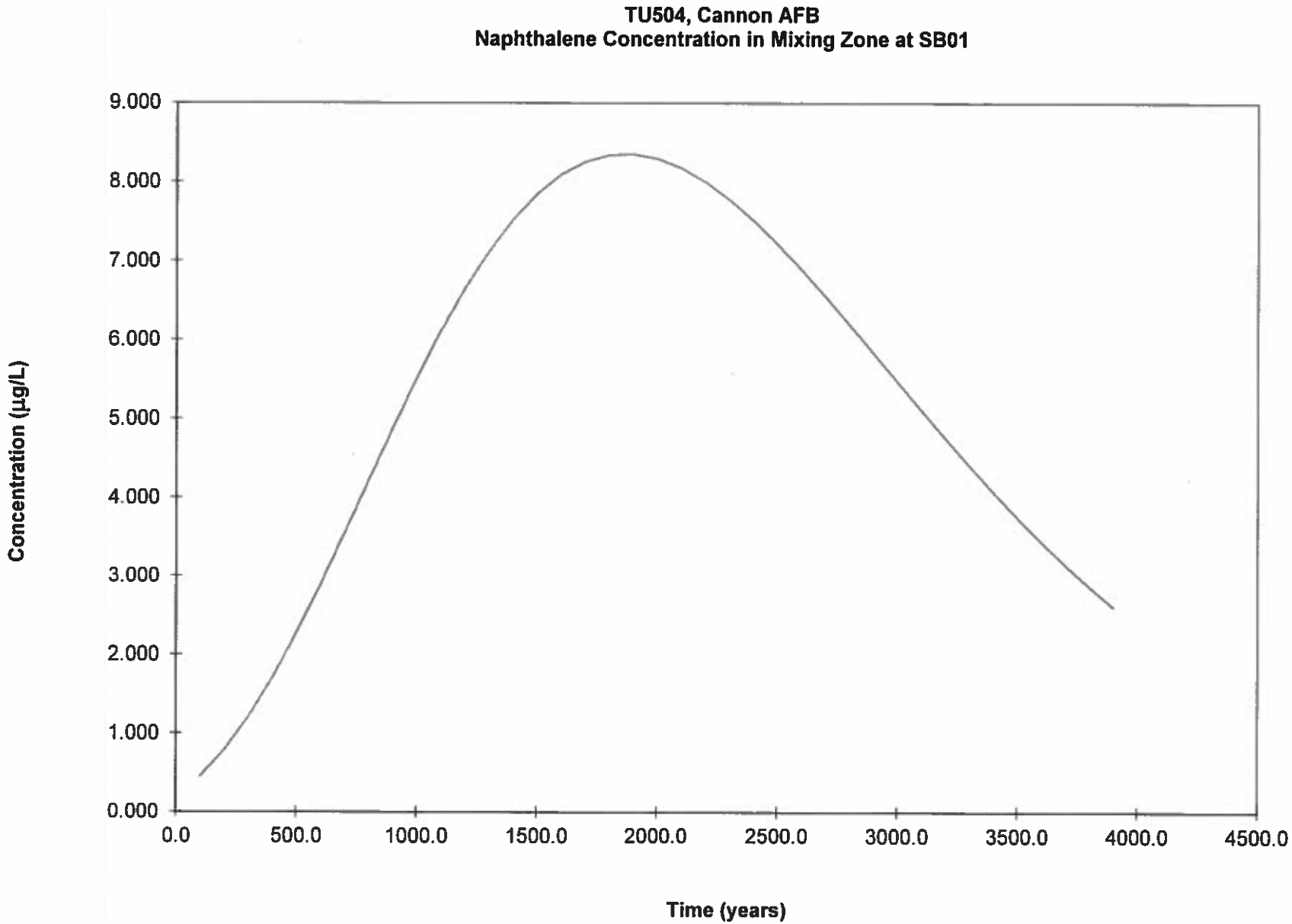
SHEET 30 OF 30 SHEETS

ELEV a.	DEPTH b.	DESCRIPTION OF MATERIALS c.	FIELD SCREENING RESULTS	GEOTECH SAMPLE OR CORE BOX NO.	ANALYTICAL SAMPLE NO.	BLOW COUNTS	REMARKS h.
	275	Same as above SAND (SP) - loose, moist, tan, very fine grained No Hydro carbon odor					
	276	Bottom of Boring 276 ft.					End time = 1435
	277						
	278						
	279						
	280						

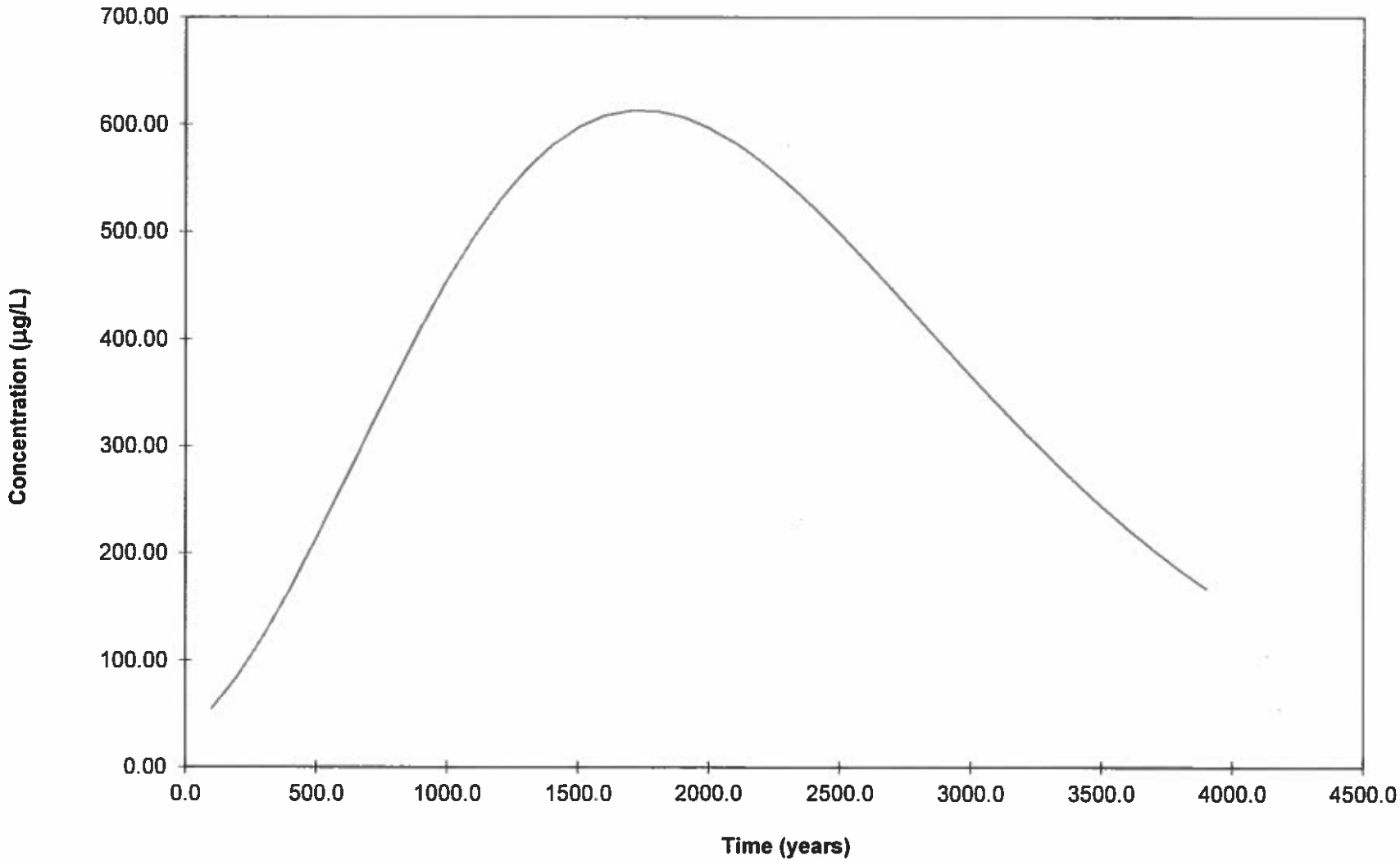
PROJECT Site Investigation at 8 Sites, Cannon AFB

HOLE CA504-SB01

Time (yr)	Mass (g/yr)	Cumulative Mass (g/yr)	Leachate Conc (ug/l)	Naphthalene		Mixing Zone Conc (ug/l)
						0.000000000
100	0.029507946		31.406	Inf (ft/yr)=	0.083	0.197477955
200	0.051305301		54.606	Area (sft)=	400.0	0.450719366
300	0.080345459		85.514	Depth(ft) =	15	0.782749944
400	0.1158058		123.255	w (ft)=	10	1.200583118
500	0.1564961		166.563	L (ft)=	40	1.700066564
600	0.2009906		213.920	K (ft/day) =	31	2.269401027
700	0.2477496		263.687	porosity =	0.44	2.891867213
800	0.2952247		314.216	GW slope =	0.0014	3.548012654
900	0.3419441		363.941			4.217411537
1000	0.3865772		411.445			4.880053818
1100	0.4279791		455.510			5.517398274
1200	0.4652171		495.144			6.113122375
1300	0.4975815		529.590			6.653602255
1400	0.5245832		558.329			7.128157604
1500	0.5459422		581.062			7.529107849
1600	0.5615683		597.693			7.851673536
1700	0.571537		608.303			8.093761429
1800	0.5760636		613.121			8.255674335
1900	0.5754753		612.494			8.339766626
2000	0.5701854		606.864			8.350084291
2100	0.5606678		596.734			8.291998581
2200	0.5474338		582.649			8.171851564
2300	0.5310128		565.172			7.996634256
2400	0.5119351		544.867			7.773696521
2500	0.4907175		522.284			7.510492975
2600	0.4678524		497.948			7.214371891
2700	0.4437996		472.348			6.892405556
2800	0.4189799		445.932			6.551255203
2900	0.3937719		419.102			6.197076167
3000	0.3685098		392.215			5.835451591
3100	3.43E-01		365.578			5.471353041
3200	3.19E-01		339.453			5.109127121
3300	2.95E-01		314.057			4.752501581
3400	2.72E-01		289.564			4.404602026
3500	2.50E-01		266.111			4.067986427
3600	2.29E-01		243.800			3.744682622
3700	2.09E-01		222.700			3.436235482
3800	1.91E-01		202.855			3.143755967
3900	1.73E-01		184.285			2.867969890
	1.57E-01		166.988			2.609267177

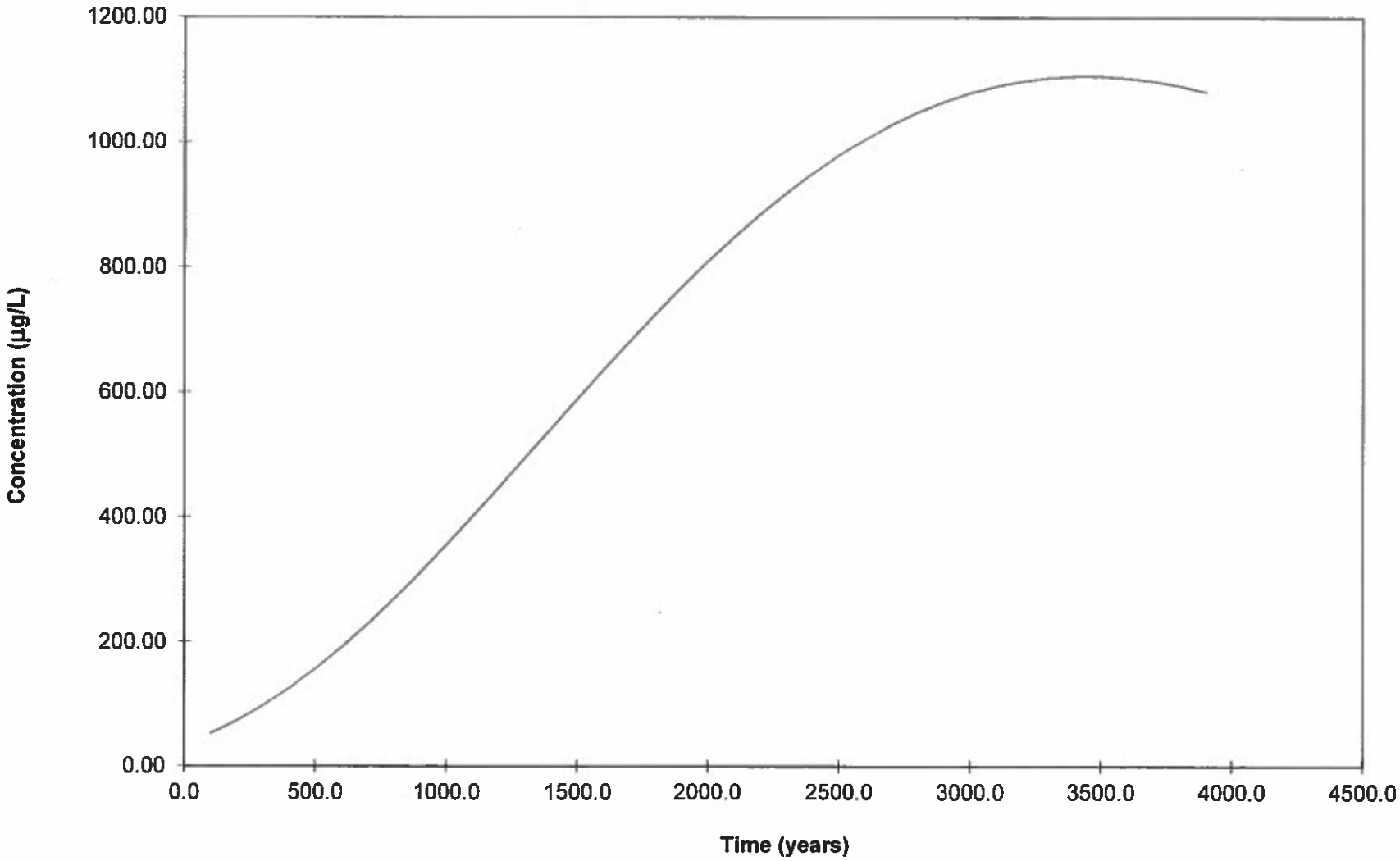

TU504, Cannon AFB
Naphthalene Concentration in Mixing Zone at SB01
Concentration (µg/L)
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
0.000
0.0
500.0
1000.0
1500.0
2000.0
2500.0
3000.0
3500.0
4000.0
4500.0
Time (years)

TU504, Cannon AFB
Naphthalene Leachate Concentration at SB01

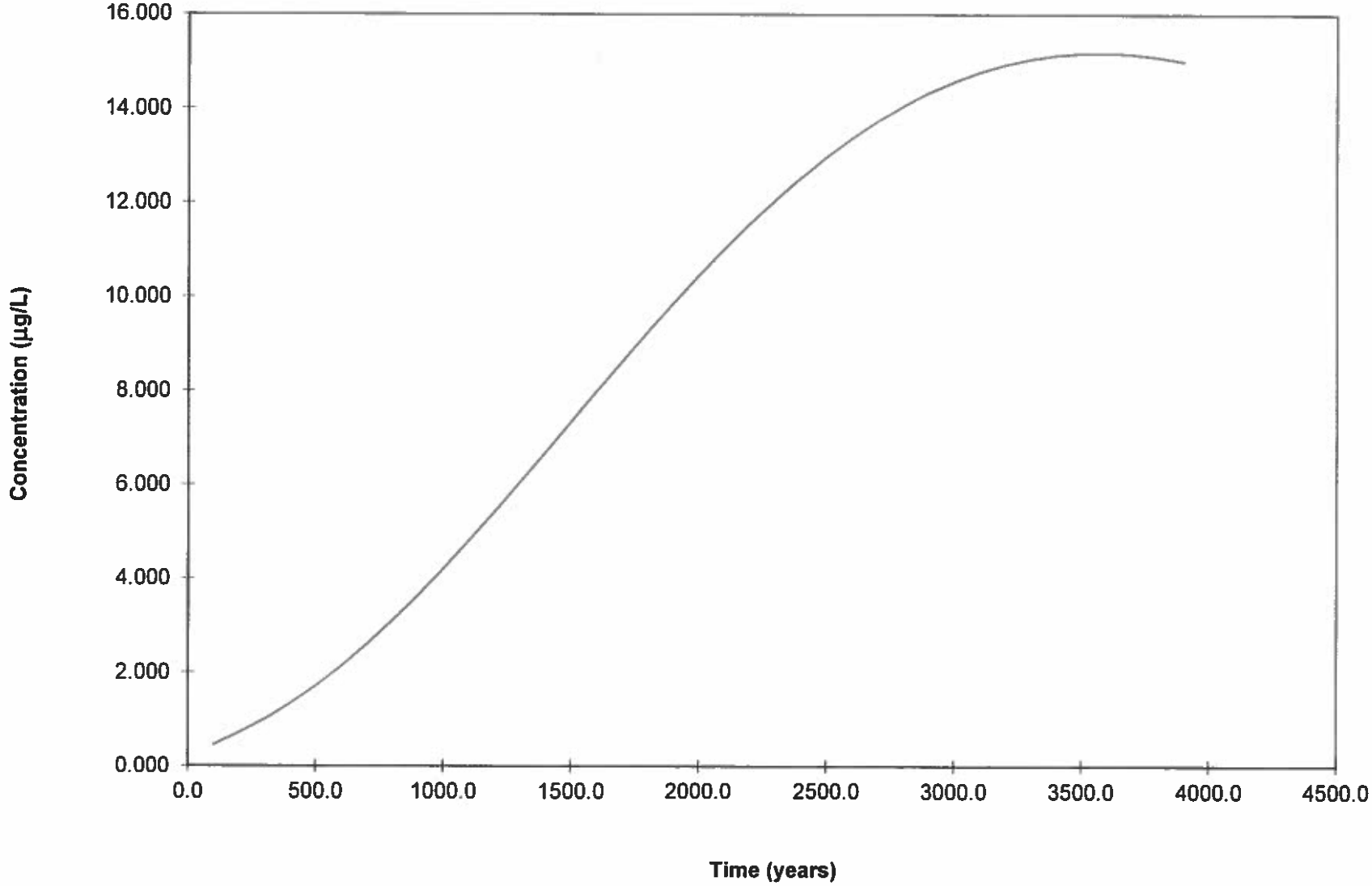


Time (yr)	Mass (g/yr)	Cumulative Mass (g/yr)	Leachate Conc (ug/l)	2-Methylnaphthalene		Mixing Zone Conc (ug/l)
						0.000000000
100	0.034306303		36.513	Inf (ft/yr)=	0.083	0.229590313
200	0.049696743		52.894	Area (sft)=	400.0	0.457413275
300	0.068730004		73.151	Depth(ft) =	15	0.708654444
400	0.091358379		97.235	w (ft)=	10	0.996687529
500	0.1174623		125.018	L (ft)=	40	1.327983402
600	0.1468587		156.306	K (ft/day) =	31	1.704835021
700	0.1793093		190.844	porosity =	0.44	2.126894379
800	0.2145299		228.330	GW slope =	0.0014	2.592070300
900	0.2521989		268.422			3.097073583
1000	0.2919661		310.748			3.637772273
1100	0.3334604		354.911			4.209436360
1200	0.3762984		400.505			4.806928359
1300	0.4200903		447.114			5.424846422
1400	0.4644478		494.325			6.057655004
1500	0.5089885		541.731			6.699785360
1600	0.553342		588.937			7.345731002
1700	0.5971538		635.567			7.990125699
1800	0.6400892		681.265			8.627811983
1900	0.6818362		725.697			9.253897805
2000	0.7221079		768.560			9.863803399
2100	0.7606447		809.575			10.453301481
2200	0.7972143		848.497			11.018539111
2300	0.831614		885.110			11.556064964
2400	0.8636698		919.228			12.062838140
2500	0.8932366		950.697			12.536234290
2600	0.920198		979.392			12.974047605
2700	0.9444646		1005.220			13.374480526
2800	0.9659739		1028.113			13.736137477
2900	0.9846881		1048.031			14.058006734
3000	1.000593		1064.959			14.339443209
3100	1.01E+00		1078.907			14.580159084
3200	1.02E+00		1089.903			14.780171210
3300	1.03E+00		1097.998			14.939816677
3400	1.04E+00		1103.259			15.059693679
3500	1.04E+00		1105.769			15.140649450
3600	1.04E+00		1105.624			15.183753622
3700	1.04E+00		1102.934			15.190277051
3800	1.03E+00		1097.818			15.161653533
3900	1.02E+00		1090.402			15.099458991
	1.02E+00		1080.820			15.005393466

TU504, Cannon AFB
2-Methylnaphthalene Leachate Concentration at SB01

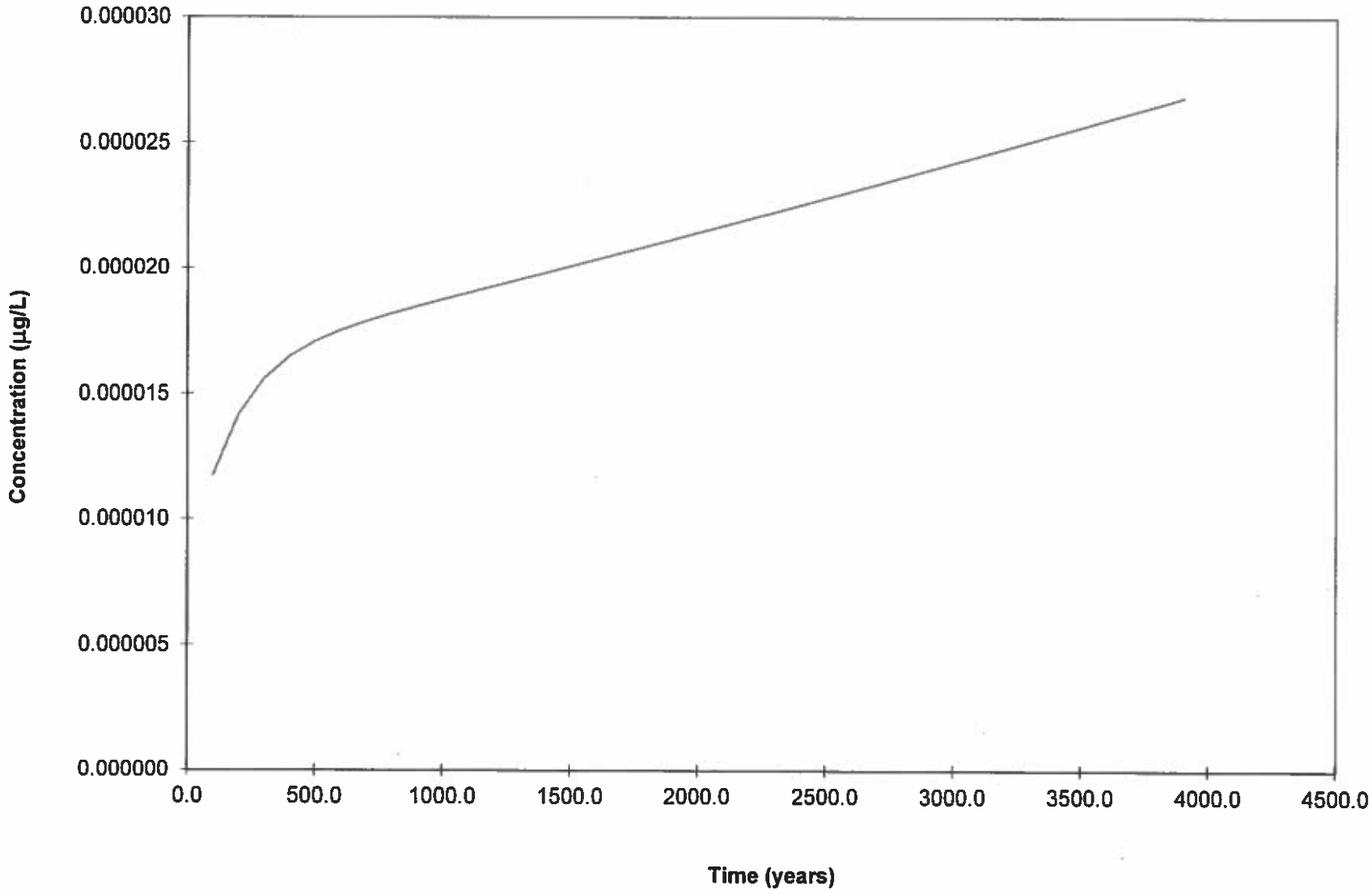


TU504, Cannon AFB
2-Methylnaphthalene Concentration in Mixing Zone at SB01

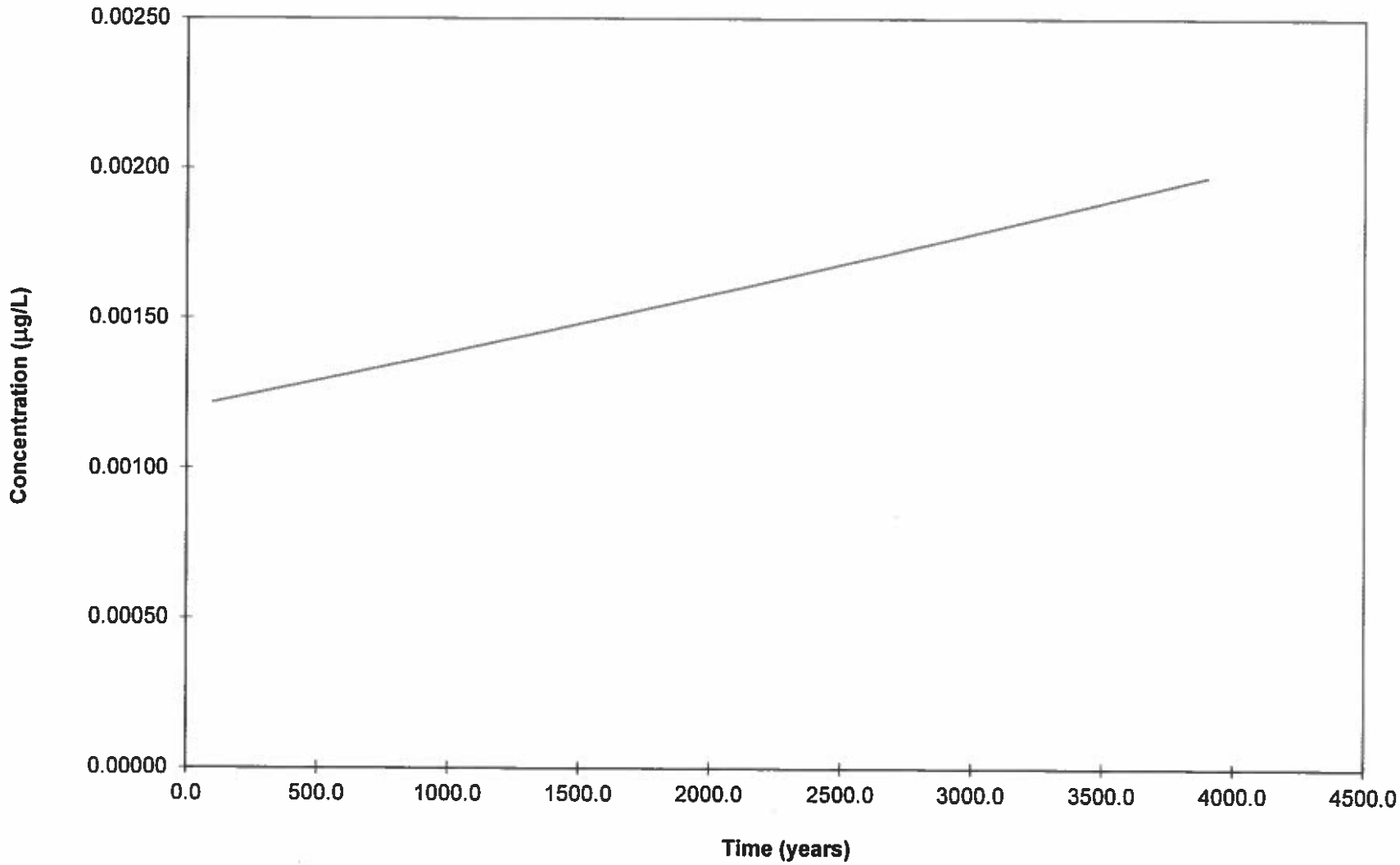


Time (yr)	Mass (g/yr)	Cumulative Mass (g/yr)	Leachate Conc (ug/l)	Benzo(a)anthracene		Mixing Zone Conc (ug/l)
						0.000000000
100	1.12769E-06		0.0012002	Inf (ft/yr)=	0.083	0.000007547
200	1.14464E-06		0.0012183	Area (sft)=	400.0	0.000011764
300	1.16168E-06		0.0012364	Depth(ft) =	15	0.000014170
400	1.17881E-06		0.0012546	w (ft)=	10	0.000015593
500	1.19602E-06		0.0012730	L (ft)=	40	0.000016482
600	1.21331E-06		0.0012914	K (ft/day) =	31	0.000017081
700	1.23069E-06		0.0013099	porosity =	0.44	0.000017523
800	1.24816E-06		0.0013284	GW slope =	0.0014	0.000017880
900	1.26571E-06		0.0013471			0.000018192
1000	1.28335E-06		0.0013659			0.000018479
1100	1.30107E-06		0.0013848			0.000018754
1200	1.31888E-06		0.0014037			0.000019023
1300	1.33678E-06		0.0014228			0.000019289
1400	1.35476E-06		0.0014419			0.000019553
1500	1.37283E-06		0.0014611			0.000019818
1600	1.39098E-06		0.0014805			0.000020084
1700	1.40923E-06		0.0014999			0.000020350
1800	1.42755E-06		0.0015194			0.000020618
1900	1.44597E-06		0.0015390			0.000020887
2000	1.46447E-06		0.0015587			0.000021156
2100	1.48306E-06		0.0015785			0.000021428
2200	1.50173E-06		0.0015983			0.000021700
2300	1.52049E-06		0.0016183			0.000021974
2400	1.53934E-06		0.0016384			0.000022249
2500	1.55828E-06		0.0016585			0.000022525
2600	1.5773E-06		0.0016788			0.000022802
2700	1.59641E-06		0.0016991			0.000023081
2800	1.6156E-06		0.0017195			0.000023361
2900	1.63489E-06		0.0017401			0.000023642
3000	1.65426E-06		0.0017607			0.000023925
3100	1.67E-06		0.0017814			0.000024209
3200	1.69E-06		0.0018022			0.000024494
3300	1.71E-06		0.0018231			0.000024780
3400	1.73E-06		0.0018441			0.000025068
3500	1.75E-06		0.0018652			0.000025357
3600	1.77E-06		0.0018863			0.000025647
3700	1.79E-06		0.0019076			0.000025939
3800	1.81E-06		0.0019290			0.000026232
3900	1.83E-06		0.0019504			0.000026526
	1.85E-06		0.0019720			0.000026821

TU504, Cannon AFB
Benzo(a)anthracene Concentration in Mixing Zone at SB01

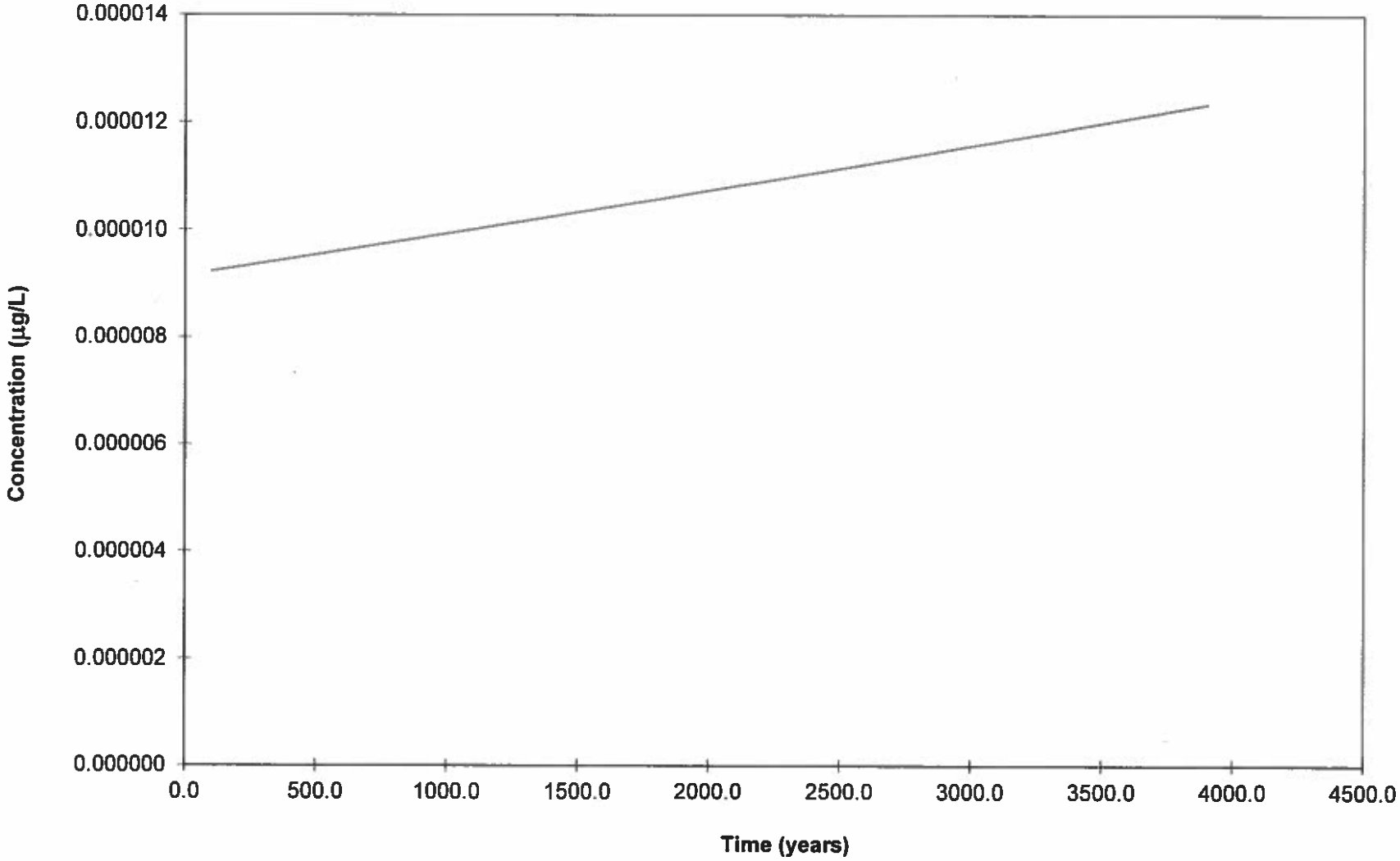
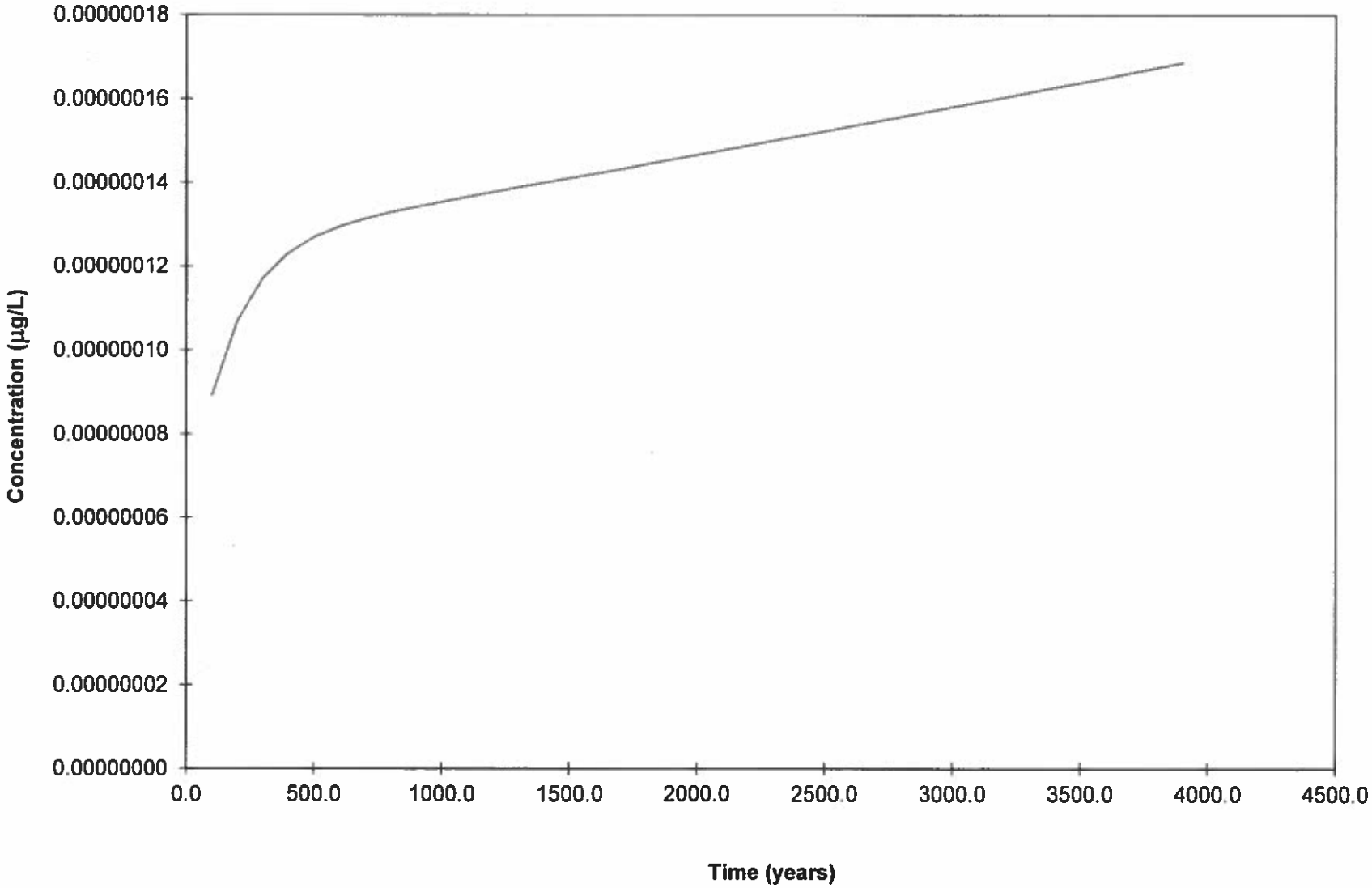


TU504, Cannon AFB
Benzo(a)anthracene Leachate Concentration at SB01



Time (yr)	Mass (g/yr)	Cumulative Mass (g/yr)	Leachate Conc (ug/l)	Benzo(a)pyrene		Mixing Zone Conc (ug/l)
						0.000000000
100	8.59977E-09		0.0000092	Inf (ft/yr)=	0.083	0.000000058
200	8.67185E-09		0.0000092	Area (sft)=	400.0	0.000000089
300	8.74418E-09		0.0000093	Depth(ft) =	15	0.000000107
400	8.81676E-09		0.0000094	w (ft)=	10	0.000000117
500	8.88958E-09		0.0000095	L (ft)=	40	0.000000123
600	8.96266E-09		0.0000095	K (ft/day) =	31	0.000000127
700	9.03598E-09		0.0000096	porosity =	0.44	0.000000130
800	9.10954E-09		0.0000097	GW slope =	0.0014	0.000000131
900	9.18336E-09		0.0000098			0.000000133
1000	9.25742E-09		0.0000099			0.000000134
1100	9.33174E-09		0.0000099			0.000000135
1200	9.4063E-09		0.0000100			0.000000137
1300	9.48111E-09		0.0000101			0.000000138
1400	9.55617E-09		0.0000102			0.000000139
1500	9.63149E-09		0.0000103			0.000000140
1600	9.70705E-09		0.0000103			0.000000141
1700	9.78287E-09		0.0000104			0.000000142
1800	9.85893E-09		0.0000105			0.000000143
1900	9.93525E-09		0.0000106			0.000000144
2000	1.00118E-08		0.0000107			0.000000146
2100	1.00887E-08		0.0000107			0.000000147
2200	1.01657E-08		0.0000108			0.000000148
2300	1.02431E-08		0.0000109			0.000000149
2400	1.03206E-08		0.0000110			0.000000150
2500	1.03985E-08		0.0000111			0.000000151
2600	1.04766E-08		0.0000112			0.000000152
2700	1.05549E-08		0.0000112			0.000000153
2800	1.06335E-08		0.0000113			0.000000155
2900	1.07124E-08		0.0000114			0.000000156
3000	1.07915E-08		0.0000115			0.000000157
3100	1.09E-08		0.0000116			0.000000158
3200	1.10E-08		0.0000117			0.000000159
3300	1.10E-08		0.0000117			0.000000160
3400	1.11E-08		0.0000118			0.000000162
3500	1.12E-08		0.0000119			0.000000163
3600	1.13E-08		0.0000120			0.000000164
3700	1.14E-08		0.0000121			0.000000165
3800	1.14E-08		0.0000122			0.000000166
3900	1.15E-08		0.0000123			0.000000167
	1.16E-08		0.0000123			0.000000169

TU504, Cannon AFB
Benzo(a)pyrene Leachate Concentration at SB01



TU504, Cannon AFB
Benzo(a)pyrene Concentration in Mixing Zone at SB01