

Semiannual Monitoring Report

U.S. Dredging Shipyard Site
Tax Block 612, Lot 130
Brooklyn, New York
NYSDEC –BCP Number C224043

Prepared for:

One Beard Street, LLC
420 Alan Wood Road
Conshohocken, PA 19428

6/26/18 to 1/4/19

Prepared by:

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I Introduction

The subject property (Site), located at 1 Beard Street, Brooklyn, N.Y. (Red Hook section – see Figure #1) was formerly occupied by the United States Dredging Shipyard (USDC). The Site was subject to remedial actions under the New York State Brownfield Cleanup Program (BCP) administered by the New York State Department of Environmental Conservation (NYSDEC) under New York Environmental Conservation Law (ECL) Section 27-1401 et seq. (the “Brownfields Law”). The Site was remediated, to facilitate construction of new IKEA retail store, in accordance with the Brownfield Cleanup Agreement (BCA) between One Beard Street, LLC (the Volunteer), a wholly owned subsidiary of IKEA Property, Inc. (IKEA), and NYSDCE under Index #W2-1023-04-10, Site #C224043 (effective on January 11, 2005).

Upon completion of the remedial actions referenced above, a Site Management Plan (SMP, dated 5/08) was prepared to address long term site management issues. The SMP was prepared in accordance with the environmental easement executed by the Volunteer and recorded against the property with the Kings County Clerk pursuant to ECL Section 27-1419(2)(e) and in accordance with the Brownfields Regulations. The SMP was prepared on behalf of the Volunteer in accordance with the Brownfields Law, the Brownfields Regulations, guidelines contained in NYSDCE Draft DER-10 Technical Guidance for Site Investigation and Remediation, dated December 2002, and other guidelines provided by NYSDCE. As required by the Brownfields Law and Regulations, the SMP, among other things, addresses the implementation of Site-specific engineering controls (ECs), which were identified in the Remedial Work Plan (RWP).

ECs identified in the SMP that require routine monitoring include:

- The composite site cap;
- The sub-slab vapor mitigation system (SSVMS) and associated perimeter soil-vapor monitoring system, which consists of 15 soil-vapor monitoring wells or implants.

The SMP mandates that the composite site cap be subject to yearly monitoring/inspection, the results of which will be reported in the Annual Site Management Report. The SMP further mandates that the SSVMS and associated perimeter monitoring wells be subject to monthly/quarterly monitoring and inspection. Notably, per the directive of the NYSDCE (dated 2/27/15) the monitoring period was reduced to semiannually because methane concentrations have been documented to be generally consistent. The results of required monitoring and inspection efforts for the time period 6/26/18 to 1/4/19 are presented herein and will also be incorporated into the Annual Site Management Report. All monitoring and inspection activities were conducted in conformance with the SMP.

II Sub-slab Vapor Mitigation System (SSVMS) Monitoring

The sub-slab vapor mitigation system associated with the IKEA retail store consists of: (i) a sub-slab network of horizontal slotted screen PVC piping in a gravel layer under selected portions of the building, which consists of two separate manifolds or zones; (ii) two separate riser pipes (one per manifold) that extend from the piping network to the roof; (iii) two blower units (one per riser) mounted on the roof of the IKEA Building; and (iv) a Liquid Boot brand vapor barrier membrane, which was sprayed into the gravel layer and is attached to the underside of the building's structural slab. When operational, the blowers create negative air pressure or suction in the horizontal well network. As organic vapors naturally rise to the gravel layer, the vapors are captured by Recovered vapors are discharged through short stacks on top of the blowers to the atmosphere.

Visual inspection of accessible portions of the SSVMS was performed in conformance with Section 4.2 of the SMP. During the time period 6/26/18 to 1/4/19, there was no need for an unscheduled inspection or sampling due to: (i) suspected failure of the SSVMS; or (ii) other emergency.

a) System Start-Up and Testing

Prior to activation of the system, qualified Soil Mechanics Environmental Services (SMES) professionals reviewed the status of the equipment and inspected/tested same to ensure all equipment meets performance requirements and were fully operational. The system was formally put into fulltime operation on 6/3/08.

b). Monthly System Operation/Monitoring

(i)	8/3/18	(July 2018 visit)
(ii)	8/29/18	(August 2018 visit)
(iii)	10/12/18	(September 2018 visit)
(iv)	11/9/18	(October 2018 visit)
(v)	12/7/18	(November 2018 visit)
(vi)	1/4/19	(December 2018 Visit)

Regular monthly inspections were conducted by qualified SMES professionals on 8/3/18, 8/29/18, 10/12/18, 11/9/18, 12/7/18 and 1/4/19. The inspections were conducted to: (i) ensure the SSVMS is operating properly; (ii) to document any unusual conditions; and (iii) make any necessary repairs/adjustments. During the time period 6/26/18 to 1/4/19, the SSVMS operated as designed; there were no system malfunctions or low vacuum pressure alarms with the exception of that which is cited below in Table A below. Repairs and or adjustments were made as necessary to ensure proper operation of the SSVMS and protection of building occupants (see Monthly SSVMS Inspection Forms attached for complete summaries)

Table A

Date	Comments
Not Applicable	SSVMS operated as designed; there were no system malfunctions or low vacuum pressure alarms

Visual inspection of vapor sampling ports revealed no evidence of any damage (e.g., broken valve, cracked piping). Vapor discharge sampling, utilizing a GEM 2000 Landfill Gas Analyzer, indicated non-detectable concentrations of methane during monitoring efforts conducted on 2/13/18, 3/6/18, 3/27/18, 4/30/18, 6/7/18 and 6/25/18 at both blower locations (see Monthly SSVMS Inspection Forms attached for complete summary).

III Semiannually Soil Vapor Sampling – 6/26/18 to 1/4/19

A series of 15 permanent soil-vapor monitoring wells, identified as SVW-1 to SVW-15, were installed along the perimeter of the Site in conformance with the SMP (see Figure #2). Inspection of all well locations revealed that they were all in good condition. Accordingly, on 12/14/18 qualified SMES professionals visited the subject property to provide real-time monitoring of the wells for methane and acquire samples for laboratory testing for volatile organic compounds (EPA method TO-15, including helium) and real time analysis for methane and other organic vapors.

a) Methane Sampling

The wells were sampled, on 12/14/18, for the presence of methane, organic vapor, oxygen, and carbon dioxide utilizing a GEM 2000 Landfill Gas Analyzer and MiniRae 3000 organic vapor analyzer. Samples were collected via connection of the sampling equipment directly to dedicated valves at each well location. The sampling equipment was purged with ambient air between sample locations. Table #1 (Soil Vapor Sampling Form - see attached) provides a complete summary of all recorded measurements, including temperature and barometric pressure. Chart #1 provides a graphic representation of methane monitoring results since commencement of data collection efforts. The results of monitoring activities for organic vapor and methane indicated:

- Non-detectable concentrations of methane at monitoring well locations SVW-1, 2, 3, and 5 to 12 and 15; detectable concentrations at the balance of the well locations, all of which were within the lower explosive limit (LEL) for methane of 5% gas by volume with the exception of well SVW-13;
- Non-detectable concentrations of organic vapor at monitoring well locations SVW-1 to 12, 14 and 15; detectable concentration at well SVW-13 (0.4 parts/million).

b) Volatile Organic Compound (VOC) Sampling

Organic vapor samples were collected directly from the sample port(s) at each well location, utilizing 1 liter Summa canisters equipped with flow regulators to allow sample collection over a two-hour period (see Site Plan). The vapor samples were collected from all wells on the property on 12/14/18, utilizing the procedure detailed below.

Samples were collected as follows:

- Prior to sample collection, one to three probe volumes were purged.
- Flow rates for both purging and sample collection did not exceed 0.2 liters per minute.
- New, clean 1/8-inch inside diameter polyethylene tubing was attached to the sampling port and the sample port valve opened.
- The inlet on a labeled Tedlar bag was opened and attached to the discharge end of the tubing. The bag was allowed to fill approximately two-thirds full and the inlet valve closed. The bag was subsequently detached and the valve on the sampling port closed.
- The Tedlar bag was field screened for VOCs by attaching the sample port to the PID probe using a new section of polyethylene tubing. The PID pump was allowed to draw the soil gas sample into the meter. Once the readings stabilized measurements were recorded.
- The tubing on the stack sample port was connected to the inlet of a certified clean, labeled Summa canister equipped with a flow regulator and vacuum gauge. The vacuum reading from the vacuum gauge on the canister at the beginning of the sampling period was recorded. The valve of the canister was opened and then the valve on the system sample port to initiate sample collection. The initial vacuum reading and sampling start time was recorded.
- At the end of the sampling period and prior to the vacuum gauge returning to ambient pressure, the valve was closed and the flow-rate controller and vacuum gauge removed, canister cap was installed, and the time recorded.
- The canister was placed into the shipping container for transportation to the testing laboratory.
- Sample locations, measurements, weather conditions are recorded (see Table #1).

The results of VOC sampling are presented in Table #2 for all acquired samples. Standards, criteria, and/or guidance values for selected compounds presented in Table #2, i.e., carbon tetrachloride (CCl_4), tetrachloroethene (C_2Cl_4), 1, 1, 1-trichloroethane ($\text{C}_2\text{H}_3\text{Cl}_3$), trichloroethene (C_2HCl_3), 1, 1-dichloroethene ($\text{C}_2\text{H}_3\text{Cl}_2$), *cis*-1,2-dichloroethene ($\text{C}_2\text{H}_3\text{Cl}_2$), and vinyl chloride ($\text{C}_2\text{H}_3\text{Cl}$) are contained in decision making matrices provided by New York State Department of Health - Guidance for Evaluating Soil Vapor Intrusion in the State of New York (10/06). Notably, however, the noted matrices could not be utilized for comparative purposes since soil vapor samples

acquired at the Site were not collected from wells located in the footprint of the IKEA building or from a sub-slab environment. As per the SMP(5/08), up and down wind ambient air samples were collected for laboratory analysis (EPA Method TO-15). The results of these samples are also presented in Table #2. As a quality assurance/quality control (QA/QC) measure, helium tracer was utilized to verify that soil vapor samples were not diluted by outdoor air infiltration during sampling efforts. Helium was used because: (i) it is readily available; (ii) has a low toxicity; (iii) can be monitored with portable measurement devices; and (iv) it can be included in the targeted suite of analytical parameters requested by the testing laboratory.

Helium was utilized to enrich the atmosphere in the immediate vicinity of the area where the probe intersects the ground during all sampling efforts. Appropriate measures were implemented to keep the tracer gas in contact with the probe during the testing as shown in pp.28 of NYSDEC Guidance for Evaluating Soil Vapor Intrusion in New York State (10/06). The effectiveness of the probe seals at well locations were documented as follow:

- Prior to and after completion of sampling efforts, vapor samples were monitored for elevated concentrations of tracer gas (> 10% of helium) utilizing MGD 2002 Portable Helium Monitor equipped with a Tedlar bag. Tracer gas was not detected by the field monitoring instrument at any of the probe locations during this round of sampling activities. Accordingly, probe seals did not require enhancement to reduce/eliminate the infiltration of outdoor air.
- Helium was not detected in soil vapor samples subject to laboratory testing.

Appropriate QA/QC procedures were followed during all aspects of sample collection and analysis to ensure that sampling error is minimized and high quality data are obtained. Sampling team members avoided actions (e.g., fueling vehicles, using permanent marking pens, wearing freshly dry-cleaned clothing or personal fragrances, etc.). Portable air monitoring equipment or field instrumentation was properly maintained, calibrated and tested to ensure validity of measurements. Air sampling equipment was stored, transported and between samples decontaminated in a manner consistent with the best environmental consulting practices to minimize problems such as field contamination and cross-contamination. Samples were collected using certified clean sample devices supplied by the testing laboratory. Gas used by the laboratory to clean the sample device was different from the gas used as a tracer during sampling (e.g., helium). Samples met holding times and temperatures and were delivered to the analytical laboratory (CENTEK Laboratories or Syracuse, N.Y. – NYS ELAP certified) as soon as possible after collection. Further, laboratory accession procedures were followed, including field documentation (sample collection information and locations), chain of custody, field/trip blanks, field sample duplicates and laboratory duplicates, as appropriate to prepare a Category “B” deliverables package (see attached). Qualified Soil Mechanics personnel completed all sampling activities, in general compliance with appropriate sampling and decontamination protocols recognized by the NYSDEC/NYSDOH.

IV Residual Management Zone – Work Conducted Beneath Site Cap

Since the potential for residual contamination and methane exist beneath the Site Cap, certain engineering and institutional controls were employed at the subject property to ensure the long-term effectiveness of the remedy to protect human health and the environment. Accordingly, based on the aforementioned, all activities on the Site that in any way disturbed residual contamination must be conducted in accordance with Site Management Plan (SMP).

During the time period of this report (6/26/18 to 1/4/19), no activities were conducted at the subject property that breached the established Site Cap or in any way disturbed residual site contamination.

V Conclusion, Comments and Recommendations

The SSVMS was observed to be operating, as designed and in compliance with the SMP, during the time period 6/26/18 to 1/4/19. The system operated continuously and did not require any shut downs or repairs with the exception of that which is cited in Table A above.

Visual inspection of accessible portions of the SSVMS was performed in conformance with Section 4.2 of the SMP. During the time period 6/26/18 to 1/4/19, there was no need for an unscheduled inspection or sampling due to: (i) suspected failure of the SSVMS; or (ii) other emergency.

Based on the results of real time monitoring and laboratory testing of acquired samples, presented in Tables #1 and 2, no modifications or adjustments to the system are required. Accordingly, monthly/semiannual monitoring activities will continue, as required by the SMP.

An elevated concentration of methane gas was detected at monitoring well location SVW-13 during this reporting period. Notably, methane gas has been recorded at this monitoring well location at concentrations exceeding its lower explosive limit or LEL during prior reporting periods (see Chart #1). At those times, all concerned parties, including National Grid, were advised of the identified condition so that appropriate actions could be taken. Implementation of mitigative measures has not been considered, however, because the identified condition has, in our opinion, been inconsistent and representative of isolated and/or intermittent occurrence. Further, monitoring well SVW-13 was, by design, positioned along Beard St. to coincide with the location wherein utilities enter/exit the subject property, in this case, National Grid's natural gas supply line/valve, which is likely the source of the identified condition. In any case, indoor air quality within the IKEA building is already protected with the SSVMS. Notably, if subsequent round(s) of monitoring activities reveal elevated concentrations of methane gas on a regular basis at a given monitoring well location, mitigative measures will be considered. We, therefore, recommend that monitoring efforts continue as established with the SMP.

Finally, an oil-like substance was identified to be leaking from one of the four mothballed Gantry Cranes on the subject property during the prior monitoring period. As a result of mitigative measures established to be protective of human health and the environment (see monitoring report for time period 12/20/16 to 6/27/17), no evidence of any discharge(s) was observed in association with any of the mothballed Gantry Cranes during this reporting period. Nevertheless, we recommend that the Gantry Cranes be subject to regular monitoring efforts for evidence of any discharges that would represent threat to human health or the environment.

Appendix

- A) Figures**
- B) Charts and Tables**
- C) Complete Laboratory Reports and Associated Chains of Custody**
- D) Monthly SSVMS Inspection Forms**
- E) QA/QC Samples**

Figures

**U.S. Dredging Shipyard Site
Tax Block 612, Lot 130
Brooklyn, New York
NYSDEC - BCP Number C224043**



Approximate
Footprint of Upland
Portion of Subject
Property



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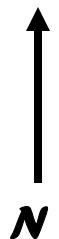
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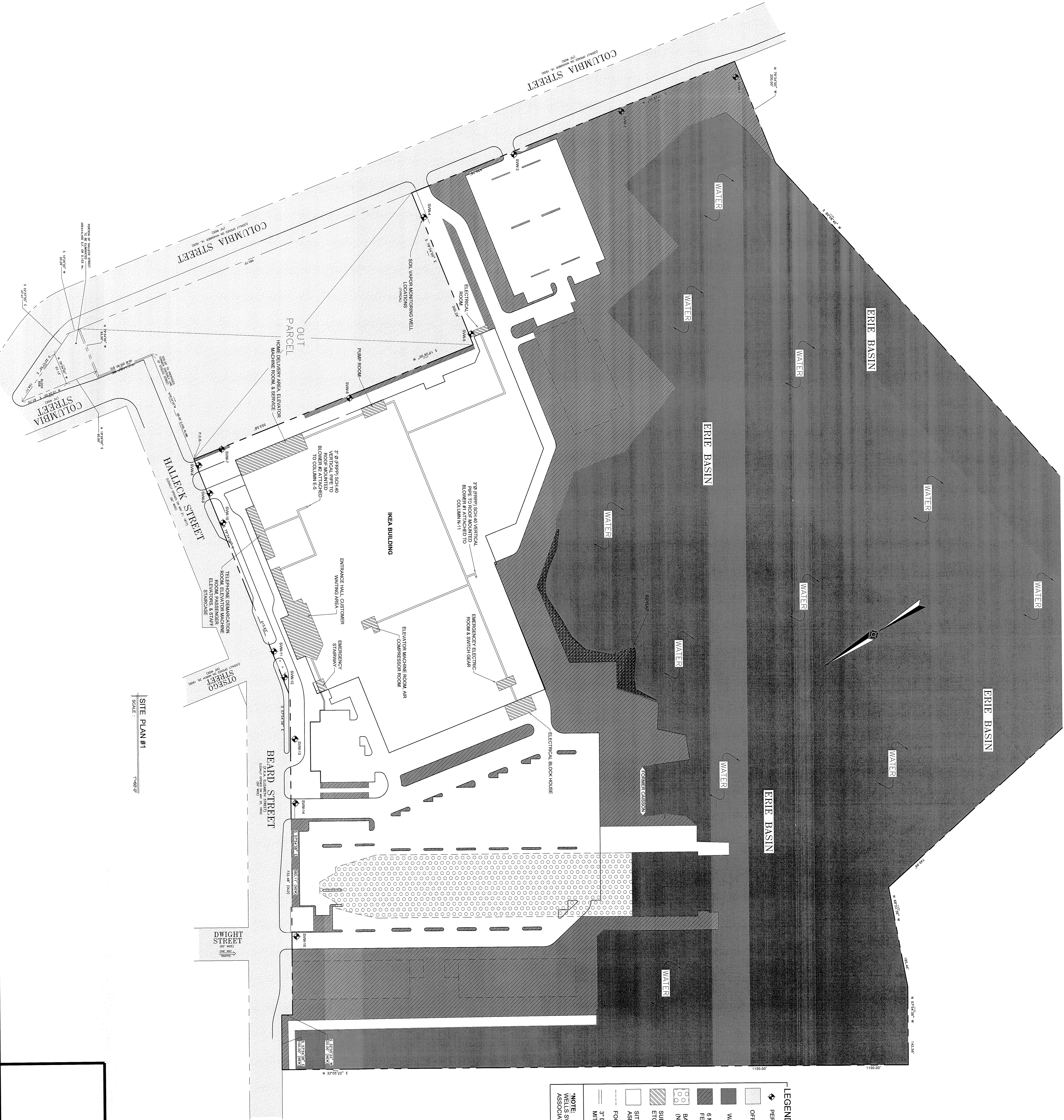
**Figure #1
Project Location Plan
Brooklyn, NY**

DATE: 6/17

SCALE: N.T.S.

JOB NO.: 08-387





LEGEND

PERIMETER SOIL VAPOR MONITORING WELLS(S)

OFF-SITE ROADS, OUT PARCELS, ETC...

WATER (ERIE BASIN)

8 MIL PLASTIC DEMARCATION BARRIER COVERED BY AT LEAST FOUR FEET OF CLEAN FILL

BACKFILLED PORTION OF FORMER DRYDOCK #1 (NOT ENVIRONMENTAL CONTROL AREA)

SUB-SLAB METHANE VOC VENTING SYSTEM PLUMBING, GRAVEL LAYER, ETC. ASSOCIATED WITH METHANE MITIGATION SYSTEM

SITE CAP - NO LESS THAN ONE FOOT OF CLEAN FILL AND CONCRETE, ASPHALT OR BUILDING STRUCTURES

FOOTPRINT OF FUTURE BUILDINGS

3" DIAMETER PVC PIPE BELOW ASPHALT PAVEMENT TO METHANE MITIGATION SYSTEM BLOWER UNIT

NOTE:

WELLS SWW-3, 9, 10, 11, 12, 13, 14, & 15 ARE POSITIONED IN UTILITY TRENCHES ASSOCIATED WITH GAS, ELECTRIC, WASTE, & WATER LINES

SOIL MECHANICS ENVIRONMENTAL SERVICES

Subsoil Investigations

3770 MERRICK ROAD • SEAFORD, NEW YORK 11783 • 516-221-7590

FIGURE #2 - ENGINEERING CONTROL LOCATION PLAN

IKEA BROOKLYN

BROOKLYN, NEW YORK

DRAWING DATE

APRIL 1, 2008

DRAWING NUMBER

02L404

REVISION

JAN

SHEET 1 OF 1

Charts and Tables

**U.S. Dredging Shipyard Site
Tax Block 612, Lot 130
Brooklyn, New York
NYSDEC - BCP Number C224043**

**Table #1 – Soil Vapor Sampling Form
IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, N.Y.
Quarterly Methane Monitoring Results**

Location/ID #	Leak Test (% He) ^	PID Readings**	CH ₄ *	CO ₂ *	O ₂ *	Lab Sample ID TO-15 Analysis
SVW-1	ND	ND	0.0	5.0	13.6	C1812057-001A
SVW-2	ND	ND	0.0	3.8	17.9	C1812057-003A
SVW-3	ND	ND	0.0	1.2	14.6	C1812057-004A
SVW-4	ND	ND	2.7	1.9	10.2	C1812057-005A
SVW-5	ND	ND	0.0	0.6	21.0	C1812057-006A
SVW-6	ND	ND	0.0	0.1	21.7	C1812057-007A
SVW-7	ND	ND	0.0	0.0	21.8	C1812057-008A
SVW-8	ND	ND	0.0	0.4	21.2	C1812057-009A
SVW-9	ND	ND	0.0	0.3	21.3	C1812057-010A
SVW-10	ND	ND	0.0	0.7	20.8	C1812057-011A
SVW-11	ND	ND	0.0	0.1	12.6	C1812057-012A
SVW-12	ND	ND	0.0	0.5	19.7	C1812057-013A
SVW-13	ND	0.4	10.1	0.0	0.8	C1812057-014A
SVW-14	ND	ND	2.4	0.5	14.2	C1812057-015A
SVW-15	ND	ND	0.0	1.1	18.0	C1812057-016A

Date of work:

- 12/14/18

Weather:

- 12/14/18 – Overcast, 56° F.; barometric pressure 29.9" Hg; winds from west at ±20 MPH

Monitoring equipment utilized:

- (*) GEM 2000 Land fill Gas Analyzer; results reported in percent gas by volume
- (**) MiniRae 3000 Organic Vapor Analyzer; results reported in parts/million

Field Technicians:

- Dan Marzano

ND non-detect

PID photo ionization detector

^ Results of laboratory testing for the presence of helium (He) tracer gas

Table #2
IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, N.Y.
Quarterly VOC Analysis
EPA Method TO-15

EPA Method TO-15	SVW-1	SVW-2	SVW-3	SVW-4	SVW-5	SVW-6	SVW-7	SVW-8
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	5.1	-	-	-	-	9.9
1,2-Dibromoethane	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	-	-	-	-	-	-	-
1,2-Dichloropropane	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	1.9	-	-	-	-	2.5
1,3-butadiene	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	1.7	-	-	-	-	1.4
1,4-Dichlorobenzene	-	-	-	0.66	-	-	-	-
1,4-Dioxane	-	-	-	-	-	-	-	-
2,2,4-trimethylpentane	-	-	-	0.47	-	0.56	0.51	3.0
4-ethyltoluene	-	-	2.0	-	-	-	-	1.6
Acetone	13.0	5.1	45.0	19.0	17.0	17.0	14.0	46.0
Allyl chloride	-	-	-	-	-	-	-	-
Benzene	0.7	0.61	1.1	1.1	0.51	0.96	0.99	3.4
Benzyl chloride	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-
Bromofluorobenzene	-	-	-	-	-	-	-	-
Bromoform	-	-	-	-	-	-	-	-
Bromomethane	-	-	-	-	-	-	-	-
Carbon disulfide	1.7	-	190.0	26.0	7.8	11.0	32.0	170.0
Carbon tetrachloride	-	-	-	-	-	-	-	-
Chlorobenzene	-	-	-	-	-	-	-	-
Chloroethane	-	-	-	-	-	-	-	-
Chloroform	-	-	0.78	-	-	1.3	42.0	6.1
Chloromethane	1.0	-	-	-	0.47	0.29	-	-
cis-1,2-Dichloroethene	0.63	-	-	-	-	3.7	-	-
cis-1,3-Dichloropropene	-	-	-	-	-	-	-	-
Cyclohexane	0.48	-	-	1.9	0.38	-	-	-
Dibromochloromethane	-	-	-	-	-	-	-	-
Ethyl acetate	0.61	0.65	-	-	-	1.2	-	-
Ethylbenzene	-	-	2.6	-	-	-	-	1.7
Freon 11	2.1	2.3	3.3	-	1.8	1.7	3.1	2.2
Freon 113	-	-	-	-	-	-	-	-
Freon 114	-	-	-	-	-	-	-	-
Freon 12	3.0	1.8	2.4	3.8	2.9	2.8	2.4	2.2
Heptane	-	0.45	0.57	-	0.57	-	0.45	2.9
Hexachloro-1,3-butadiene	-	-	-	-	-	-	-	-
Hexane	0.88	0.49	0.99	2.1	0.63	0.85	0.99	46.0
Isopropyl alcohol	3.1	1.1	-	-	-	6.9	-	-
m&p-Xylene	0.48	-	5.6	-	0.48	1.5	-	5.3
Methyl Butyl Ketone	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	1.2	-	1.7	-	1.6	1.0	-	0.56
Methyl Isobutyl Ketone	2.2	-	29.0	-	-	5.4	-	6.4
Methyl tert-butyl ether	-	-	-	-	-	-	-	-
Methylene chloride	1.6	0.69	0.80	0.73	0.49	1.6	3.5	29.0
o-Xylene	-	-	1.8	-	-	0.52	-	2.6
Propylene	-	-	-	-	-	-	-	-
Styrene	-	-	-	-	-	-	-	0.55
Tetrachloroethylene	-	-	1.1	-	-	0.75	1.1	3.7
Tetrahydrofuran	-	-	11.0	-	-	-	-	-
Toluene	2.8	2.6	16.0	1.4	2.0	5.7	3.0	6.0
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	-	-	-	-	-	-	-
Trichloroethene	1.1	-	-	-	-	8.9	-	-
Vinyl acetate	-	-	-	-	-	-	-	-
Vinyl Bromide	-	-	-	-	-	-	-	-
Vinyl chloride	-	-	-	-	-	-	-	-

All concentrations in ug/m³
AS ambient sample
- below detection limit

Table #2 continued

IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, N.Y.
Quarterly VOC Analysis
EPA Method TO-15

EPA Method TO-15	SVW-9	SVW-10	SVW-11	SVW-12	SVW-13	SVW-14	SVW-15	AS-1 up wind	AS-2 down wind
1,1,1-Trichloroethane	1.5	-	-	-	-	-	0.93	-	-
1,1,2,2-Tetrachloroethane	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	6.2	-	0.54	6.6	8.8	14.0	-	0.54	-
1,2-Dibromoethane	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	0.53	-	0.73	-	-	-	-	-
1,2-Dichloropropane	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	3.2	-	-	3.6	4.1	6.3	-	-	-
1,3-butadiene	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	1.5	-	-	2.2	1.4	1.9	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	0.72	-	-	-
1,4-Dioxane	-	-	-	-	-	-	-	-	-
2,2,4-trimethylpentane	-	-	-	2.0	17.0	9.6	-	0.79	0.47
4-ethyltoluene	2.1	-	-	2.4	2.9	4.5	-	-	-
Acetone	64.0	37.0	23.0	160.0	150.0	66.0	6.8	15.0	11.0
Allyl chloride	-	-	-	-	-	-	-	-	-
Benzene	1.4	-	-	6.3	18.0	5.7	-	1.0	0.89
Benzyl chloride	-	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-	-
Bromofluorobenzene	-	-	-	-	-	-	-	-	-
Bromoform	-	-	-	-	-	-	-	-	-
Bromomethane	-	-	-	-	-	-	-	-	-
Carbon disulfide	70.0	15.0	1.6	300.0	530.0	28.0	1.8	-	-
Carbon tetrachloride	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	-	-	-	-	-	-	-	-
Chloroethane	-	-	-	-	0.84	-	-	-	-
Chloroform	15.0	2.7	0.83	-	-	-	1.8	-	-
Chloromethane	-	-	-	-	-	-	-	1.1	0.93
cis-1,2-Dichloroethene	-	-	-	-	0.87	-	-	-	-
cis-1,3-Dichloropropene	-	-	-	-	-	-	-	-	-
Cyclohexane	1.4	1.5	-	2.3	150.0	9.3	-	-	-
Dibromochloromethane	-	-	-	-	-	-	-	-	-
Ethyl acetate	-	-	0.65	-	-	-	-	-	0.47
Ethylbenzene	1.9	-	-	4.6	4.6	8.1	-	-	-
Freon 11	1.7	1.2	18.0	1.5	1.9	1.5	14.0	1.6	1.6
Freon 113	-	-	-	-	-	-	-	-	-
Freon 114	-	-	-	-	-	-	-	-	-
Freon 12	2.0	1.9	2.0	2.3	-	3.1	2.7	2.5	2.7
Heptane	0.45	0.49	0.49	2.8	20.0	7.4	-	0.49	-
Hexachloro-1,3-butadiene	-	-	-	-	-	-	-	-	-
Hexane	-	3.8	2.7	6.3	130.0	14.0	-	0.95	0.78
Isopropyl alcohol	-	-	-	1.1	-	-	-	3.0	1.5
m&p-Xylene	6.2	-	-	16.0	15.0	18.0	-	0.87	0.65
Methyl Butyl Ketone	0.49	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	6.1	-	-	15.0	19.0	12.0	-	-	-
Methyl Isobutyl Ketone	280.0	220.0	3.3	530.0	960.0	660.0	-	-	-
Methyl tert-butyl ether	-	-	-	-	-	-	-	-	-
Methylene chloride	52.0	180.0	5.3	830.0	510.0	120.0	2.1	0.56	0.59
o-Xylene	4.0	-	-	6.1	6.8	7.0	-	-	-
Propylene	-	-	-	-	-	-	-	-	-
Styrene	0.60	-	-	0.85	1.1	1.5	-	-	-
Tetrachloroethylene	4.6	-	2.7	6.8	4.3	2.0	20.0	1.2	1.4
Tetrahydrofuran	7.2	13.0	4.8	18.0	-	12.0	-	-	-
Toluene	6.5	0.9	2.6	13.0	19.0	18.0	1.0	2.5	2.2
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-
trans-1,3-Dichloropropene	-	-	-	-	-	-	-	-	-
Trichloroethene	-	-	-	-	3.4	0.54	-	-	-
Vinyl acetate	-	-	-	-	-	-	-	-	-
Vinyl Bromide	-	-	-	-	-	-	-	-	-
Vinyl chloride	1.0	0.72	-	2.9	1.0	-	-	-	-

All concentrations in ug/m³
AS ambient sample
- below detection limit

Chart #1 - Methane Concentrations

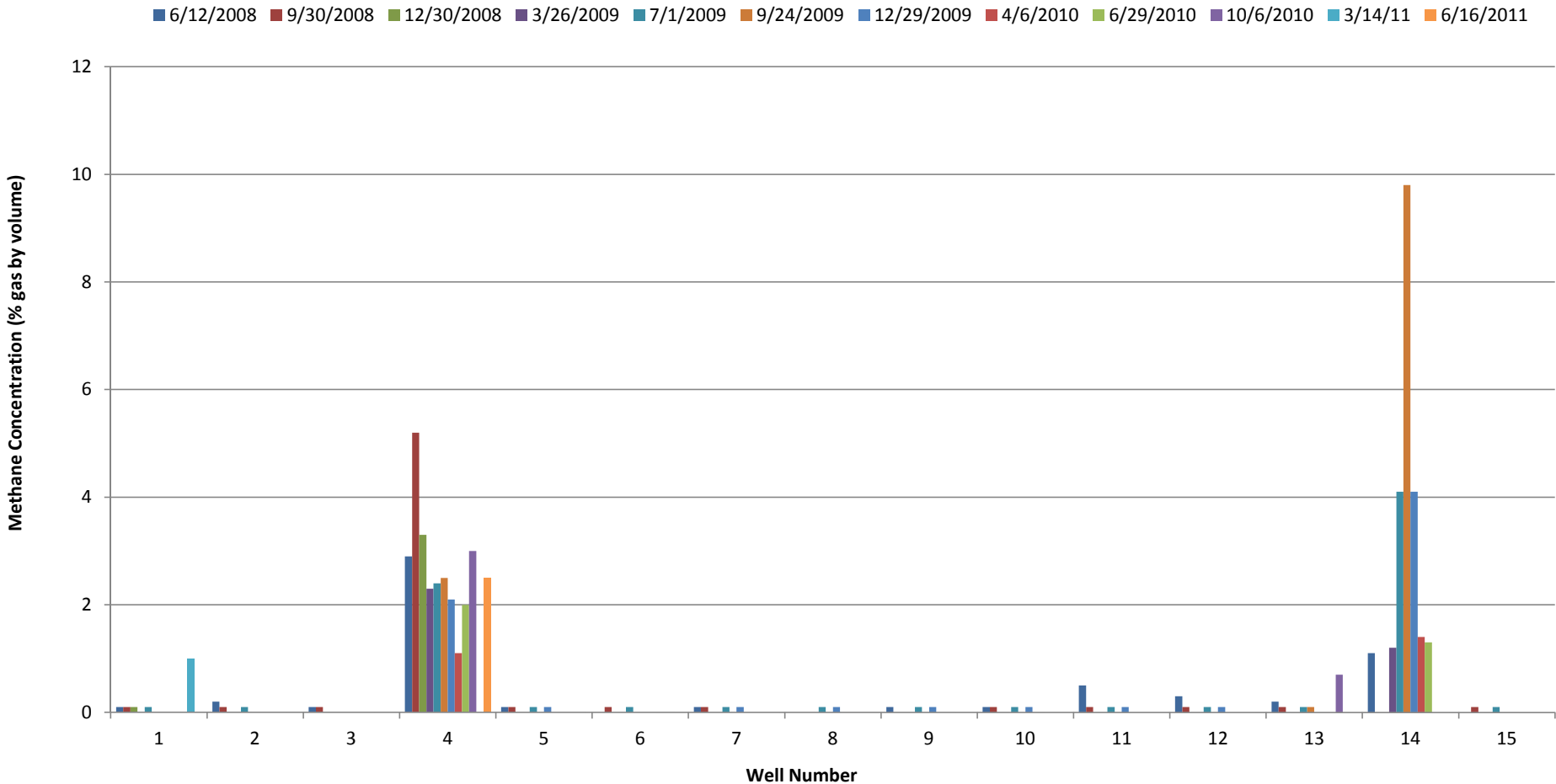


Chart #1 (Continued)- Methane Concentrations

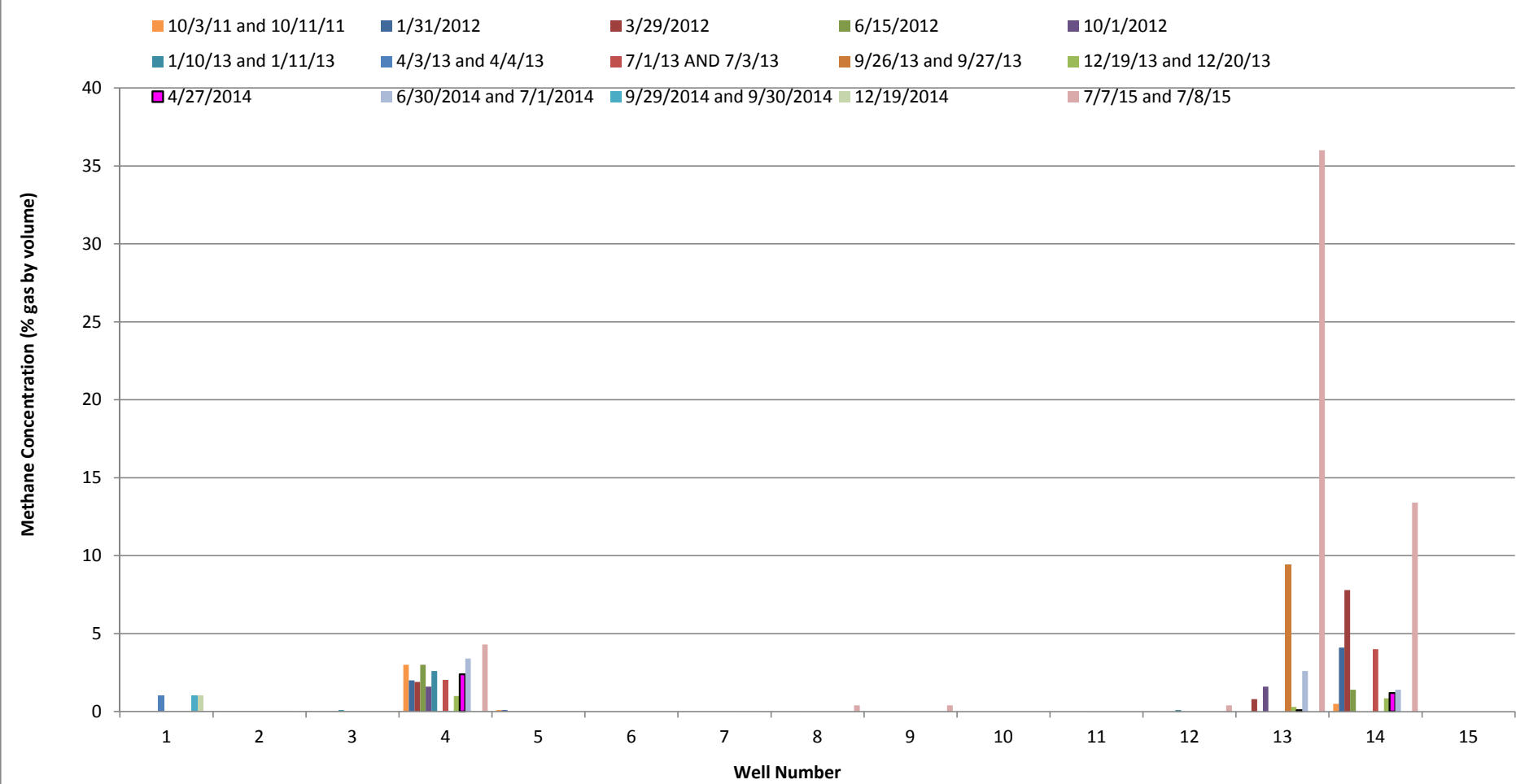
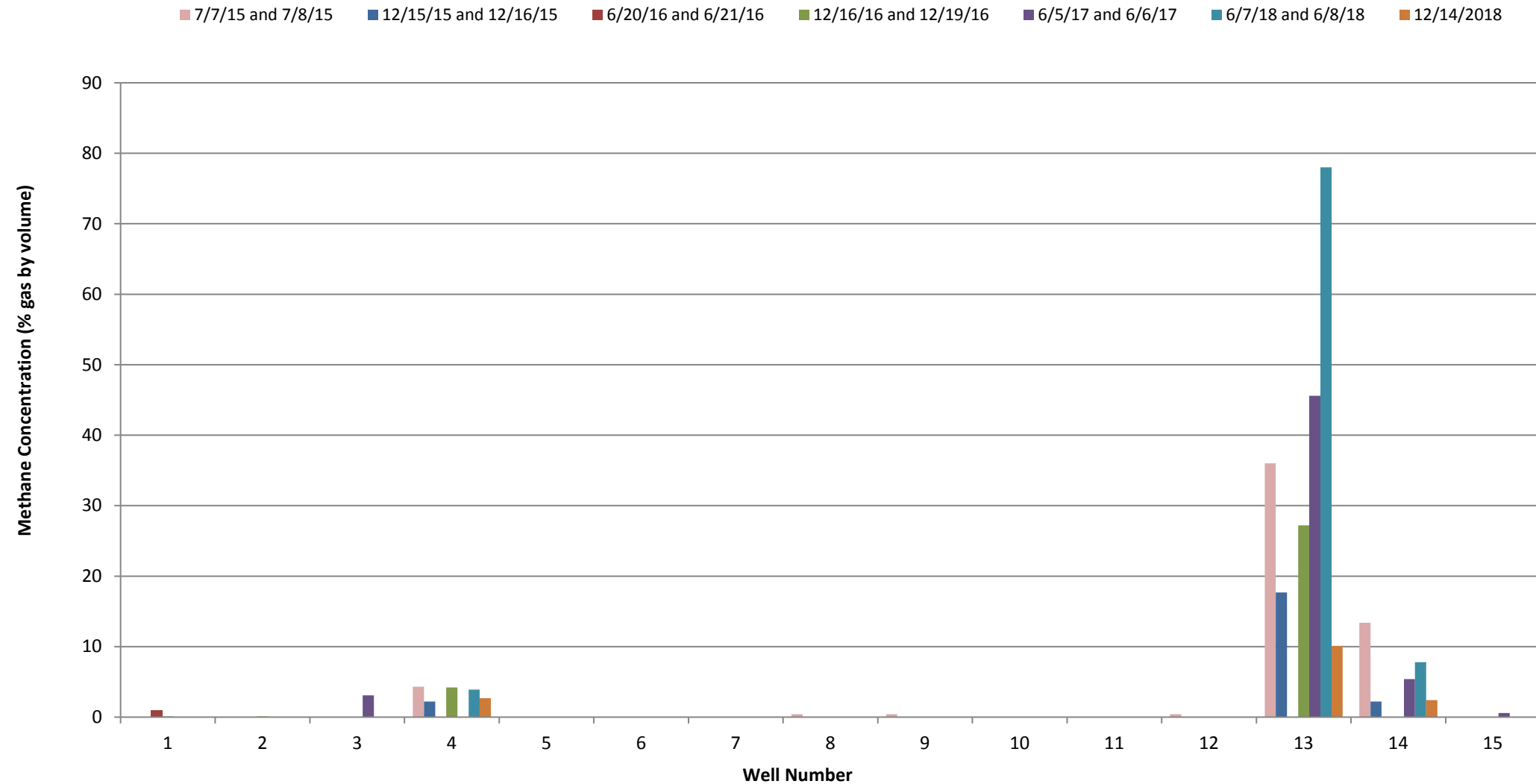


Chart #1 (Continued)- Methane Concentrations



Complete Laboratory Reports and Associated Chains of Custody

**U.S. Dredging Shipyard Site
Tax Block 612, Lot 130
Brooklyn, New York
NYSDEC - BCP Number C224043**

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:44:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:44:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:44:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:44:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 12:44:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 12:44:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 12:44:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
Acetone	13	3.6		ug/m3	5	12/23/2018 12:54:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 12:44:00 AM
Benzene	0.70	0.48		ug/m3	1	12/22/2018 12:44:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 12:44:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 12:44:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 12:44:00 AM
Carbon disulfide	1.7	0.47		ug/m3	1	12/22/2018 12:44:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 12:44:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 12:44:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 12:44:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 12:44:00 AM
Chloromethane	1.0	0.31		ug/m3	1	12/22/2018 12:44:00 AM
cis-1,2-Dichloroethene	0.63	0.59		ug/m3	1	12/22/2018 12:44:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:44:00 AM
Cyclohexane	0.48	0.52	J	ug/m3	1	12/22/2018 12:44:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 12:44:00 AM
Ethyl acetate	0.61	0.54		ug/m3	1	12/22/2018 12:44:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 12:44:00 AM
Freon 11	2.1	0.84		ug/m3	1	12/22/2018 12:44:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	3.0	0.74		ug/m3	1	12/22/2018 12:44:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 12:44:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 12:44:00 AM
Hexane	0.88	0.53		ug/m3	1	12/22/2018 12:44:00 AM
Isopropyl alcohol	3.1	0.37		ug/m3	1	12/22/2018 12:44:00 AM
m&p-Xylene	0.48	1.3	J	ug/m3	1	12/22/2018 12:44:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
Methyl Ethyl Ketone	1.2	0.88		ug/m3	1	12/22/2018 12:44:00 AM
Methyl Isobutyl Ketone	2.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 12:44:00 AM
Methylene chloride	1.6	0.52		ug/m3	1	12/22/2018 12:44:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 12:44:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 12:44:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 12:44:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 12:44:00 AM
Toluene	2.8	0.57		ug/m3	1	12/22/2018 12:44:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:44:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:44:00 AM
Trichloroethene	1.1	0.81		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 12:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:24:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:24:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:24:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:24:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:24:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:24:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	12/22/2018 1:24:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
Acetone	11	3.6		ug/m3	5	12/23/2018 1:31:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:24:00 AM
Benzene	0.70	0.48		ug/m3	1	12/22/2018 1:24:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:24:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:24:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:24:00 AM
Carbon disulfide	2.9	0.47		ug/m3	1	12/22/2018 1:24:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:24:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:24:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:24:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 1:24:00 AM
Chloromethane	0.99	0.31		ug/m3	1	12/22/2018 1:24:00 AM
cis-1,2-Dichloroethene	0.87	0.59		ug/m3	1	12/22/2018 1:24:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:24:00 AM
Cyclohexane	0.76	0.52		ug/m3	1	12/22/2018 1:24:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:24:00 AM
Ethyl acetate	1.2	0.54		ug/m3	1	12/22/2018 1:24:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:24:00 AM
Freon 11	1.9	0.84		ug/m3	1	12/22/2018 1:24:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.7	0.74		ug/m3	1	12/22/2018 1:24:00 AM
Heptane	0.78	0.61		ug/m3	1	12/22/2018 1:24:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:24:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 1:24:00 AM
Isopropyl alcohol	4.0	0.37		ug/m3	1	12/22/2018 1:24:00 AM
m&p-Xylene	0.65	1.3	J	ug/m3	1	12/22/2018 1:24:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:24:00 AM
Methyl Ethyl Ketone	0.86	0.88	J	ug/m3	1	12/22/2018 1:24:00 AM
Methyl Isobutyl Ketone	2.0	1.2		ug/m3	1	12/22/2018 1:24:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:24:00 AM
Methylene chloride	2.5	0.52		ug/m3	1	12/22/2018 1:24:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:24:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:24:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:24:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 1:24:00 AM
Toluene	5.8	0.57		ug/m3	1	12/22/2018 1:24:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:24:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:24:00 AM
Trichloroethene	2.2	0.81		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 1:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:04:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:04:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:04:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:04:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:04:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 2:04:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
Acetone	5.1	0.71		ug/m3	1	12/22/2018 2:04:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:04:00 AM
Benzene	0.61	0.48		ug/m3	1	12/22/2018 2:04:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:04:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:04:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:04:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/22/2018 2:04:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:04:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:04:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:04:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 2:04:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:04:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:04:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 2:04:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:04:00 AM
Ethyl acetate	0.65	0.54		ug/m3	1	12/22/2018 2:04:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 2:04:00 AM
Freon 11	2.3	0.84		ug/m3	1	12/22/2018 2:04:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	1.8	0.74		ug/m3	1	12/22/2018 2:04:00 AM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 2:04:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:04:00 AM
Hexane	0.49	0.53	J	ug/m3	1	12/22/2018 2:04:00 AM
Isopropyl alcohol	1.1	0.37		ug/m3	1	12/22/2018 2:04:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:04:00 AM
Methylene chloride	0.69	0.52		ug/m3	1	12/22/2018 2:04:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 2:04:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:04:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 2:04:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 2:04:00 AM
Toluene	2.6	0.57		ug/m3	1	12/22/2018 2:04:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:04:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 2:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:44:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:44:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:44:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
1,2,4-Trimethylbenzene	5.1	0.74		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:44:00 AM
1,3,5-Trimethylbenzene	1.9	0.74		ug/m3	1	12/22/2018 2:44:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:44:00 AM
1,3-Dichlorobenzene	1.7	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 2:44:00 AM
4-ethyltoluene	2.0	0.74		ug/m3	1	12/22/2018 2:44:00 AM
Acetone	45	7.1		ug/m3	10	12/23/2018 2:08:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:44:00 AM
Benzene	1.1	0.48		ug/m3	1	12/22/2018 2:44:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:44:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:44:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:44:00 AM
Carbon disulfide	190	19		ug/m3	40	12/23/2018 2:45:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:44:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:44:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:44:00 AM
Chloroform	0.78	0.73		ug/m3	1	12/22/2018 2:44:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:44:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:44:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 2:44:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:44:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 2:44:00 AM
Ethylbenzene	2.6	0.65		ug/m3	1	12/22/2018 2:44:00 AM
Freon 11	3.3	0.84		ug/m3	1	12/22/2018 2:44:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.4	0.74		ug/m3	1	12/22/2018 2:44:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 2:44:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:44:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 2:44:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 2:44:00 AM
m&p-Xylene	5.6	1.3		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Ethyl Ketone	1.7	0.88		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Isobutyl Ketone	29	12		ug/m3	10	12/23/2018 2:08:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:44:00 AM
Methylene chloride	0.80	0.52		ug/m3	1	12/22/2018 2:44:00 AM
o-Xylene	1.8	0.65		ug/m3	1	12/22/2018 2:44:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:44:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 2:44:00 AM
Tetrachloroethylene	1.1	1.0		ug/m3	1	12/22/2018 2:44:00 AM
Tetrahydrofuran	11	4.4		ug/m3	10	12/23/2018 2:08:00 AM
Toluene	16	5.7		ug/m3	10	12/23/2018 2:08:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:44:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:25:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:25:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:25:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:25:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:25:00 AM
1,4-Dichlorobenzene	0.66	0.90	J	ug/m3	1	12/22/2018 3:25:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
2,2,4-trimethylpentane	0.47	0.70	J	ug/m3	1	12/22/2018 3:25:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
Acetone	19	7.1		ug/m3	10	12/23/2018 3:22:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:25:00 AM
Benzene	1.1	0.48		ug/m3	1	12/22/2018 3:25:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:25:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:25:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:25:00 AM
Carbon disulfide	26	4.7		ug/m3	10	12/23/2018 3:22:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:25:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:25:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 3:25:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:25:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:25:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:25:00 AM
Cyclohexane	1.9	0.52		ug/m3	1	12/22/2018 3:25:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:25:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:25:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 3:25:00 AM
Freon 11	< 0.84	0.84		ug/m3	1	12/22/2018 3:25:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	3.8	0.74		ug/m3	1	12/22/2018 3:25:00 AM
Heptane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:25:00 AM
Hexane	2.1	0.53		ug/m3	1	12/22/2018 3:25:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:25:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:25:00 AM
Methylene chloride	0.73	0.52		ug/m3	1	12/22/2018 3:25:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 3:25:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:25:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 3:25:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 3:25:00 AM
Toluene	1.4	0.57		ug/m3	1	12/22/2018 3:25:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:25:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 3:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:04:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:04:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:04:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 4:04:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 4:04:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 4:04:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
Acetone	17	3.6		ug/m3	5	12/23/2018 4:36:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 4:04:00 AM
Benzene	0.51	0.48		ug/m3	1	12/22/2018 4:04:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 4:04:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 4:04:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 4:04:00 AM
Carbon disulfide	7.8	2.3		ug/m3	5	12/23/2018 4:36:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 4:04:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 4:04:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 4:04:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 4:04:00 AM
Chloromethane	0.47	0.31		ug/m3	1	12/22/2018 4:04:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:04:00 AM
Cyclohexane	0.38	0.52	J	ug/m3	1	12/22/2018 4:04:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 4:04:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 4:04:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 4:04:00 AM
Freon 11	1.8	0.84		ug/m3	1	12/22/2018 4:04:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	12/22/2018 4:04:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 4:04:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 4:04:00 AM
Hexane	0.63	0.53		ug/m3	1	12/22/2018 4:04:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 4:04:00 AM
m&p-Xylene	0.48	1.3	J	ug/m3	1	12/22/2018 4:04:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
Methyl Ethyl Ketone	1.6	0.88		ug/m3	1	12/22/2018 4:04:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 4:04:00 AM
Methylene chloride	0.49	0.52	J	ug/m3	1	12/22/2018 4:04:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 4:04:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 4:04:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 4:04:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 4:04:00 AM
Toluene	2.0	0.57		ug/m3	1	12/22/2018 4:04:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:04:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 4:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:45:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:45:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:45:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 4:45:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 4:45:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	12/22/2018 4:45:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
Acetone	17	3.6		ug/m3	5	12/23/2018 5:14:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 4:45:00 AM
Benzene	0.96	0.48		ug/m3	1	12/22/2018 4:45:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 4:45:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 4:45:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 4:45:00 AM
Carbon disulfide	11	2.3		ug/m3	5	12/23/2018 5:14:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 4:45:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 4:45:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 4:45:00 AM
Chloroform	1.3	0.73		ug/m3	1	12/22/2018 4:45:00 AM
Chloromethane	0.29	0.31	J	ug/m3	1	12/22/2018 4:45:00 AM
cis-1,2-Dichloroethene	3.7	0.59		ug/m3	1	12/22/2018 4:45:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:45:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 4:45:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 4:45:00 AM
Ethyl acetate	1.2	0.54		ug/m3	1	12/22/2018 4:45:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 4:45:00 AM
Freon 11	1.7	0.84		ug/m3	1	12/22/2018 4:45:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.8	0.74		ug/m3	1	12/22/2018 4:45:00 AM
Heptane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 4:45:00 AM
Hexane	0.85	0.53		ug/m3	1	12/22/2018 4:45:00 AM
Isopropyl alcohol	6.9	1.8		ug/m3	5	12/23/2018 5:14:00 AM
m&p-Xylene	1.5	1.3		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Ethyl Ketone	1.0	0.88		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Isobutyl Ketone	5.4	1.2		ug/m3	1	12/22/2018 4:45:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 4:45:00 AM
Methylene chloride	1.6	0.52		ug/m3	1	12/22/2018 4:45:00 AM
o-Xylene	0.52	0.65	J	ug/m3	1	12/22/2018 4:45:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 4:45:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 4:45:00 AM
Tetrachloroethylene	0.75	1.0	J	ug/m3	1	12/22/2018 4:45:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 4:45:00 AM
Toluene	5.7	0.57		ug/m3	1	12/22/2018 4:45:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:45:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:45:00 AM
Trichloroethene	8.9	0.81		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 4:45:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 5:25:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 5:25:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 5:25:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 5:25:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 5:25:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
2,2,4-trimethylpentane	0.51	0.70	J	ug/m3	1	12/22/2018 5:25:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
Acetone	14	3.6		ug/m3	5	12/23/2018 5:53:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 5:25:00 AM
Benzene	0.99	0.48		ug/m3	1	12/22/2018 5:25:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 5:25:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 5:25:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 5:25:00 AM
Carbon disulfide	32	2.3		ug/m3	5	12/23/2018 5:53:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 5:25:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 5:25:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 5:25:00 AM
Chloroform	42	3.7		ug/m3	5	12/23/2018 5:53:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 5:25:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 5:25:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 5:25:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 5:25:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 5:25:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 5:25:00 AM
Freon 11	3.1	0.84		ug/m3	1	12/22/2018 5:25:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.4	0.74		ug/m3	1	12/22/2018 5:25:00 AM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 5:25:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 5:25:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 5:25:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 5:25:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 5:25:00 AM
Methylene chloride	3.5	0.52		ug/m3	1	12/22/2018 5:25:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 5:25:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 5:25:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 5:25:00 AM
Tetrachloroethylene	1.1	1.0		ug/m3	1	12/22/2018 5:25:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 5:25:00 AM
Toluene	3.0	0.57		ug/m3	1	12/22/2018 5:25:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 5:25:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 5:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 7:24:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 7:24:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 7:24:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
1,2,4-Trimethylbenzene	9.9	0.74		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 7:24:00 AM
1,3,5-Trimethylbenzene	2.5	0.74		ug/m3	1	12/22/2018 7:24:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 7:24:00 AM
1,3-Dichlorobenzene	1.4	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
2,2,4-trimethylpentane	3.0	0.70		ug/m3	1	12/22/2018 7:24:00 AM
4-ethyltoluene	1.6	0.74		ug/m3	1	12/22/2018 7:24:00 AM
Acetone	46	7.1		ug/m3	10	12/23/2018 6:32:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 7:24:00 AM
Benzene	3.4	0.48		ug/m3	1	12/22/2018 7:24:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 7:24:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 7:24:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 7:24:00 AM
Carbon disulfide	170	19		ug/m3	40	12/23/2018 7:09:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 7:24:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 7:24:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 7:24:00 AM
Chloroform	6.1	0.73		ug/m3	1	12/22/2018 7:24:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 7:24:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 7:24:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 7:24:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 7:24:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 7:24:00 AM
Ethylbenzene	1.7	0.65		ug/m3	1	12/22/2018 7:24:00 AM
Freon 11	2.2	0.84		ug/m3	1	12/22/2018 7:24:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	2.2	0.74		ug/m3	1	12/22/2018 7:24:00 AM
Heptane	2.9	0.61		ug/m3	1	12/22/2018 7:24:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 7:24:00 AM
Hexane	46	5.3		ug/m3	10	12/23/2018 6:32:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 7:24:00 AM
m&p-Xylene	5.3	1.3		ug/m3	1	12/22/2018 7:24:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 7:24:00 AM
Methyl Ethyl Ketone	0.56	0.88	J	ug/m3	1	12/22/2018 7:24:00 AM
Methyl Isobutyl Ketone	6.4	1.2		ug/m3	1	12/22/2018 7:24:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 7:24:00 AM
Methylene chloride	29	5.2		ug/m3	10	12/23/2018 6:32:00 AM
o-Xylene	2.6	0.65		ug/m3	1	12/22/2018 7:24:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 7:24:00 AM
Styrene	0.55	0.64	J	ug/m3	1	12/22/2018 7:24:00 AM
Tetrachloroethylene	3.7	1.0		ug/m3	1	12/22/2018 7:24:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 7:24:00 AM
Toluene	6.0	0.57		ug/m3	1	12/22/2018 7:24:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 7:24:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 7:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	1.5	0.82		ug/m3	1	12/22/2018 12:32:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:32:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:32:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
1,2,4-Trimethylbenzene	6.2	6.9	J	ug/m3	9	12/23/2018 3:10:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 12:32:00 PM
1,3,5-Trimethylbenzene	3.2	0.74		ug/m3	1	12/22/2018 12:32:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 12:32:00 PM
1,3-Dichlorobenzene	1.5	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 12:32:00 PM
4-ethyltoluene	2.1	0.74		ug/m3	1	12/22/2018 12:32:00 PM
Acetone	64	64		ug/m3	90	12/23/2018 3:47:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 12:32:00 PM
Benzene	1.4	0.48		ug/m3	1	12/22/2018 12:32:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 12:32:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 12:32:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 12:32:00 PM
Carbon disulfide	70	44		ug/m3	90	12/23/2018 3:47:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 12:32:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 12:32:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 12:32:00 PM
Chloroform	15	6.8		ug/m3	9	12/23/2018 3:10:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 12:32:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:32:00 PM
Cyclohexane	1.4	0.52		ug/m3	1	12/22/2018 12:32:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 12:32:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 12:32:00 PM
Ethylbenzene	1.9	0.65		ug/m3	1	12/22/2018 12:32:00 PM
Freon 11	1.7	0.84		ug/m3	1	12/22/2018 12:32:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.0	0.74		ug/m3	1	12/22/2018 12:32:00 PM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 12:32:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 12:32:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/22/2018 12:32:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 12:32:00 PM
m&p-Xylene	6.2	1.3		ug/m3	1	12/22/2018 12:32:00 PM
Methyl Butyl Ketone	0.49	1.2	J	ug/m3	1	12/22/2018 12:32:00 PM
Methyl Ethyl Ketone	6.1	0.88		ug/m3	1	12/22/2018 12:32:00 PM
Methyl Isobutyl Ketone	280	110		ug/m3	90	12/23/2018 3:47:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 12:32:00 PM
Methylene chloride	52	4.9		ug/m3	9	12/23/2018 3:10:00 PM
o-Xylene	4.0	0.65		ug/m3	1	12/22/2018 12:32:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 12:32:00 PM
Styrene	0.60	0.64	J	ug/m3	1	12/22/2018 12:32:00 PM
Tetrachloroethylene	4.6	1.0		ug/m3	1	12/22/2018 12:32:00 PM
Tetrahydrofuran	7.2	4.1		ug/m3	9	12/23/2018 3:10:00 PM
Toluene	6.5	0.57		ug/m3	1	12/22/2018 12:32:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:32:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl chloride	1.0	0.38		ug/m3	1	12/22/2018 12:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:15:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:15:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:15:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichloroethane	0.53	0.61	J	ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:15:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:15:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 1:15:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
Acetone	37	7.1		ug/m3	10	12/23/2018 4:25:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:15:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/22/2018 1:15:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:15:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:15:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:15:00 PM
Carbon disulfide	15	4.7		ug/m3	10	12/23/2018 4:25:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:15:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:15:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:15:00 PM
Chloroform	2.7	0.73		ug/m3	1	12/22/2018 1:15:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 1:15:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:15:00 PM
Cyclohexane	1.5	0.52		ug/m3	1	12/22/2018 1:15:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:15:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 1:15:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:15:00 PM
Freon 11	1.2	0.84		ug/m3	1	12/22/2018 1:15:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	1.9	0.74		ug/m3	1	12/22/2018 1:15:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/22/2018 1:15:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:15:00 PM
Hexane	3.8	0.53		ug/m3	1	12/22/2018 1:15:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 1:15:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Isobutyl Ketone	220	110		ug/m3	90	12/24/2018 7:47:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:15:00 PM
Methylene chloride	180	49		ug/m3	90	12/24/2018 7:47:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:15:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:15:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:15:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
Tetrahydrofuran	13	4.4		ug/m3	10	12/23/2018 4:25:00 PM
Toluene	0.90	0.57		ug/m3	1	12/22/2018 1:15:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:15:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl chloride	0.72	0.38		ug/m3	1	12/22/2018 1:15:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:58:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:58:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:58:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
1,2,4-Trimethylbenzene	0.54	0.74	J	ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:58:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:58:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:58:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 1:58:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:58:00 PM
Acetone	23	3.6		ug/m3	5	12/23/2018 5:41:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:58:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/22/2018 1:58:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:58:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:58:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:58:00 PM
Carbon disulfide	1.6	0.47		ug/m3	1	12/22/2018 1:58:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:58:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:58:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:58:00 PM
Chloroform	0.83	0.73		ug/m3	1	12/22/2018 1:58:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 1:58:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:58:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 1:58:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:58:00 PM
Ethyl acetate	0.65	0.54		ug/m3	1	12/22/2018 1:58:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:58:00 PM
Freon 11	18	4.2		ug/m3	5	12/23/2018 5:41:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.0	0.74		ug/m3	1	12/22/2018 1:58:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/22/2018 1:58:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:58:00 PM
Hexane	2.7	0.53		ug/m3	1	12/22/2018 1:58:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 1:58:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Isobutyl Ketone	3.3	1.2		ug/m3	1	12/22/2018 1:58:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:58:00 PM
Methylene chloride	5.3	0.52		ug/m3	1	12/22/2018 1:58:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:58:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:58:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:58:00 PM
Tetrachloroethylene	2.7	1.0		ug/m3	1	12/22/2018 1:58:00 PM
Tetrahydrofuran	4.8	0.44		ug/m3	1	12/22/2018 1:58:00 PM
Toluene	2.6	0.57		ug/m3	1	12/22/2018 1:58:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:58:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 1:58:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:37:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:37:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:37:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
1,2,4-Trimethylbenzene	6.6	6.9	J	ug/m3	9	12/23/2018 6:21:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichloroethane	0.73	0.61		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:37:00 PM
1,3,5-Trimethylbenzene	3.6	0.74		ug/m3	1	12/22/2018 2:37:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:37:00 PM
1,3-Dichlorobenzene	2.2	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
2,2,4-trimethylpentane	2.0	0.70		ug/m3	1	12/22/2018 2:37:00 PM
4-ethyltoluene	2.4	0.74		ug/m3	1	12/22/2018 2:37:00 PM
Acetone	160	64		ug/m3	90	12/23/2018 6:59:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:37:00 PM
Benzene	6.3	4.5		ug/m3	9	12/23/2018 6:21:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:37:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:37:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:37:00 PM
Carbon disulfide	300	44		ug/m3	90	12/23/2018 6:59:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:37:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:37:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:37:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 2:37:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:37:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:37:00 PM
Cyclohexane	2.3	0.52		ug/m3	1	12/22/2018 2:37:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:37:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 2:37:00 PM
Ethylbenzene	4.6	0.65		ug/m3	1	12/22/2018 2:37:00 PM
Freon 11	1.5	0.84		ug/m3	1	12/22/2018 2:37:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	2.3	0.74		ug/m3	1	12/22/2018 2:37:00 PM
Heptane	2.8	0.61		ug/m3	1	12/22/2018 2:37:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:37:00 PM
Hexane	6.3	4.9		ug/m3	9	12/23/2018 6:21:00 PM
Isopropyl alcohol	1.1	0.37		ug/m3	1	12/22/2018 2:37:00 PM
m&p-Xylene	16	1.3		ug/m3	1	12/22/2018 2:37:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:37:00 PM
Methyl Ethyl Ketone	15	8.0		ug/m3	9	12/23/2018 6:21:00 PM
Methyl Isobutyl Ketone	530	110		ug/m3	90	12/23/2018 6:59:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:37:00 PM
Methylene chloride	830	94		ug/m3	180	12/23/2018 7:38:00 PM
o-Xylene	6.1	0.65		ug/m3	1	12/22/2018 2:37:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:37:00 PM
Styrene	0.85	0.64		ug/m3	1	12/22/2018 2:37:00 PM
Tetrachloroethylene	6.8	1.0		ug/m3	1	12/22/2018 2:37:00 PM
Tetrahydrofuran	18	4.1		ug/m3	9	12/23/2018 6:21:00 PM
Toluene	13	5.3		ug/m3	9	12/23/2018 6:21:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:37:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl chloride	2.9	0.38		ug/m3	1	12/22/2018 2:37:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:17:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:17:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:17:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:17:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:17:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
1,2,4-Trimethylbenzene	8.8	6.9		ug/m3	9	12/23/2018 8:18:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:17:00 PM
1,3,5-Trimethylbenzene	4.1	0.74		ug/m3	1	12/22/2018 3:17:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:17:00 PM
1,3-Dichlorobenzene	1.4	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
2,2,4-trimethylpentane	17	6.5		ug/m3	9	12/23/2018 8:18:00 PM
4-ethyltoluene	2.9	0.74		ug/m3	1	12/22/2018 3:17:00 PM
Acetone	150	64		ug/m3	90	12/23/2018 8:55:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:17:00 PM
Benzene	18	4.5		ug/m3	9	12/23/2018 8:18:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:17:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:17:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:17:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:17:00 PM
Carbon disulfide	530	44		ug/m3	90	12/23/2018 8:55:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:17:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:17:00 PM
Chloroethane	0.84	0.40		ug/m3	1	12/22/2018 3:17:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:17:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:17:00 PM
cis-1,2-Dichloroethene	0.87	0.59		ug/m3	1	12/22/2018 3:17:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:17:00 PM
Cyclohexane	150	48		ug/m3	90	12/23/2018 8:55:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:17:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:17:00 PM
Ethylbenzene	4.6	0.65		ug/m3	1	12/22/2018 3:17:00 PM
Freon 11	1.9	0.84		ug/m3	1	12/22/2018 3:17:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:17:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	< 0.74	0.74		ug/m3	1	12/22/2018 3:17:00 PM
Heptane	20	5.7		ug/m3	9	12/23/2018 8:18:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:17:00 PM
Hexane	130	49		ug/m3	90	12/23/2018 8:55:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:17:00 PM
m&p-Xylene	15	1.3		ug/m3	1	12/22/2018 3:17:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:17:00 PM
Methyl Ethyl Ketone	19	8.0		ug/m3	9	12/23/2018 8:18:00 PM
Methyl Isobutyl Ketone	960	220		ug/m3	180	12/23/2018 9:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:17:00 PM
Methylene chloride	510	49		ug/m3	90	12/23/2018 8:55:00 PM
o-Xylene	6.8	0.65		ug/m3	1	12/22/2018 3:17:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:17:00 PM
Styrene	1.1	0.64		ug/m3	1	12/22/2018 3:17:00 PM
Tetrachloroethylene	4.3	1.0		ug/m3	1	12/22/2018 3:17:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 3:17:00 PM
Toluene	19	5.3		ug/m3	9	12/23/2018 8:18:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:17:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:17:00 PM
Trichloroethene	3.4	0.81		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl chloride	1.0	0.38		ug/m3	1	12/22/2018 3:17:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:59:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:59:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:59:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
1,2,4-Trimethylbenzene	14	6.9		ug/m3	9	12/23/2018 10:13:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:59:00 PM
1,3,5-Trimethylbenzene	6.3	0.74		ug/m3	1	12/22/2018 3:59:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:59:00 PM
1,3-Dichlorobenzene	1.9	0.90		ug/m3	1	12/22/2018 3:59:00 PM
1,4-Dichlorobenzene	0.72	0.90	J	ug/m3	1	12/22/2018 3:59:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
2,2,4-trimethylpentane	9.6	0.70		ug/m3	1	12/22/2018 3:59:00 PM
4-ethyltoluene	4.5	0.74		ug/m3	1	12/22/2018 3:59:00 PM
Acetone	66	64		ug/m3	90	12/23/2018 10:49:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:59:00 PM
Benzene	5.7	0.48		ug/m3	1	12/22/2018 3:59:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:59:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:59:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:59:00 PM
Carbon disulfide	28	4.4		ug/m3	9	12/23/2018 10:13:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:59:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:59:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 3:59:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:59:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:59:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:59:00 PM
Cyclohexane	9.3	4.8		ug/m3	9	12/23/2018 10:13:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:59:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:59:00 PM
Ethylbenzene	8.1	0.65		ug/m3	1	12/22/2018 3:59:00 PM
Freon 11	1.5	0.84		ug/m3	1	12/22/2018 3:59:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	3.1	0.74		ug/m3	1	12/22/2018 3:59:00 PM
Heptane	7.4	5.7		ug/m3	9	12/23/2018 10:13:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:59:00 PM
Hexane	14	4.9		ug/m3	9	12/23/2018 10:13:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:59:00 PM
m&p-Xylene	18	12		ug/m3	9	12/23/2018 10:13:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:59:00 PM
Methyl Ethyl Ketone	12	8.0		ug/m3	9	12/23/2018 10:13:00 PM
Methyl Isobutyl Ketone	660	220		ug/m3	180	12/23/2018 11:26:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:59:00 PM
Methylene chloride	120	49		ug/m3	90	12/23/2018 10:49:00 PM
o-Xylene	7.0	6.1		ug/m3	9	12/23/2018 10:13:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:59:00 PM
Styrene	1.5	0.64		ug/m3	1	12/22/2018 3:59:00 PM
Tetrachloroethylene	2.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
Tetrahydrofuran	12	4.1		ug/m3	9	12/23/2018 10:13:00 PM
Toluene	18	5.3		ug/m3	9	12/23/2018 10:13:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:59:00 PM
Trichloroethene	0.54	0.81	J	ug/m3	1	12/22/2018 3:59:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:59:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:59:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 3:59:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	0.93	0.82		ug/m3	1	12/21/2018 10:33:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 10:33:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 10:33:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 10:33:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/21/2018 10:33:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
Acetone	6.8	0.71		ug/m3	1	12/21/2018 10:33:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 10:33:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/21/2018 10:33:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 10:33:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 10:33:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 10:33:00 PM
Carbon disulfide	1.8	0.47		ug/m3	1	12/21/2018 10:33:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 10:33:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 10:33:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 10:33:00 PM
Chloroform	1.8	0.73		ug/m3	1	12/21/2018 10:33:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/21/2018 10:33:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 10:33:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 10:33:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 10:33:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 10:33:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 10:33:00 PM
Freon 11	14	0.84		ug/m3	1	12/21/2018 10:33:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.7	0.74		ug/m3	1	12/21/2018 10:33:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 10:33:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/21/2018 10:33:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/21/2018 10:33:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 10:33:00 PM
Methylene chloride	2.1	0.52		ug/m3	1	12/21/2018 10:33:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 10:33:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 10:33:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 10:33:00 PM
Tetrachloroethylene	20	1.0		ug/m3	1	12/21/2018 10:33:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 10:33:00 PM
Toluene	1.0	0.57		ug/m3	1	12/21/2018 10:33:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 10:33:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 10:33:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:13:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:13:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:13:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
1,2,4-Trimethylbenzene	0.54	0.74	J	ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 9:13:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:13:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 9:13:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
2,2,4-trimethylpentane	0.79	0.70		ug/m3	1	12/21/2018 9:13:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 9:13:00 PM
Acetone	15	3.6		ug/m3	5	12/22/2018 10:20:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 9:13:00 PM
Benzene	1.0	0.48		ug/m3	1	12/21/2018 9:13:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 9:13:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 9:13:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 9:13:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 9:13:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 9:13:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 9:13:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 9:13:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 9:13:00 PM
Chloromethane	1.1	0.31		ug/m3	1	12/21/2018 9:13:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:13:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 9:13:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 9:13:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 9:13:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 9:13:00 PM
Freon 11	1.6	0.84		ug/m3	1	12/21/2018 9:13:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.5	0.74		ug/m3	1	12/21/2018 9:13:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/21/2018 9:13:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 9:13:00 PM
Hexane	0.95	0.53		ug/m3	1	12/21/2018 9:13:00 PM
Isopropyl alcohol	3.0	0.37		ug/m3	1	12/21/2018 9:13:00 PM
m&p-Xylene	0.87	1.3	J	ug/m3	1	12/21/2018 9:13:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 9:13:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 9:13:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	12/21/2018 9:13:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 9:13:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 9:13:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 9:13:00 PM
Tetrachloroethylene	1.2	1.0		ug/m3	1	12/21/2018 9:13:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 9:13:00 PM
Toluene	2.5	0.57		ug/m3	1	12/21/2018 9:13:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:13:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 9:13:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:53:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:53:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 9:53:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 9:53:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
2,2,4-trimethylpentane	0.47	0.70	J	ug/m3	1	12/21/2018 9:53:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
Acetone	11	3.6		ug/m3	5	12/22/2018 10:58:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 9:53:00 PM
Benzene	0.89	0.48		ug/m3	1	12/21/2018 9:53:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 9:53:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 9:53:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 9:53:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 9:53:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 9:53:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 9:53:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 9:53:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 9:53:00 PM
Chloromethane	0.93	0.31		ug/m3	1	12/21/2018 9:53:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:53:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 9:53:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 9:53:00 PM
Ethyl acetate	0.47	0.54	J	ug/m3	1	12/21/2018 9:53:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 9:53:00 PM
Freon 11	1.6	0.84		ug/m3	1	12/21/2018 9:53:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.7	0.74		ug/m3	1	12/21/2018 9:53:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 9:53:00 PM
Hexane	0.78	0.53		ug/m3	1	12/21/2018 9:53:00 PM
Isopropyl alcohol	1.5	0.37		ug/m3	1	12/21/2018 9:53:00 PM
m&p-Xylene	0.65	1.3	J	ug/m3	1	12/21/2018 9:53:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 9:53:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 9:53:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	12/21/2018 9:53:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 9:53:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 9:53:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 9:53:00 PM
Tetrachloroethylene	1.4	1.0		ug/m3	1	12/21/2018 9:53:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 9:53:00 PM
Toluene	2.2	0.57		ug/m3	1	12/21/2018 9:53:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:53:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 9:53:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1132
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 8:32:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 8:32:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 8:32:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 8:32:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/21/2018 8:32:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
Acetone	< 0.71	0.71		ug/m3	1	12/21/2018 8:32:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 8:32:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/21/2018 8:32:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 8:32:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 8:32:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 8:32:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 8:32:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 8:32:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 8:32:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 8:32:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 8:32:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/21/2018 8:32:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 8:32:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 8:32:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 8:32:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 8:32:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 8:32:00 PM
Freon 11	< 0.84	0.84		ug/m3	1	12/21/2018 8:32:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1132
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 8:32:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/21/2018 8:32:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/21/2018 8:32:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 8:32:00 PM
Methylene chloride	< 0.52	0.52		ug/m3	1	12/21/2018 8:32:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 8:32:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 8:32:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 8:32:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 8:32:00 PM
Toluene	< 0.57	0.57		ug/m3	1	12/21/2018 8:32:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 8:32:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 8:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 12:44:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Acetone	5.4	1.5		ppbV	5	12/23/2018 12:54:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Benzene	0.22	0.15		ppbV	1	12/22/2018 12:44:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Carbon disulfide	0.55	0.15		ppbV	1	12/22/2018 12:44:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Chloromethane	0.49	0.15		ppbV	1	12/22/2018 12:44:00 AM
cis-1,2-Dichloroethene	0.16	0.15		ppbV	1	12/22/2018 12:44:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Cyclohexane	0.14	0.15	J	ppbV	1	12/22/2018 12:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Ethyl acetate	0.17	0.15		ppbV	1	12/22/2018 12:44:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 11	0.38	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 12	0.61	0.15		ppbV	1	12/22/2018 12:44:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 12:44:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Hexane	0.25	0.15		ppbV	1	12/22/2018 12:44:00 AM
Isopropyl alcohol	1.3	0.15		ppbV	1	12/22/2018 12:44:00 AM
m&p-Xylene	0.11	0.30	J	ppbV	1	12/22/2018 12:44:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl Ethyl Ketone	0.41	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl Isobutyl Ketone	0.54	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Methylene chloride	0.46	0.15		ppbV	1	12/22/2018 12:44:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Toluene	0.75	0.15		ppbV	1	12/22/2018 12:44:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Trichloroethene	0.20	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Surr: Bromofluorobenzene	75.0	70-130		%REC	1	12/22/2018 12:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:24:00 AM
2,2,4-trimethylpentane	0.12	0.15	J	ppbV	1	12/22/2018 1:24:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Acetone	4.6	1.5		ppbV	5	12/23/2018 1:31:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Benzene	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Carbon disulfide	0.94	0.15		ppbV	1	12/22/2018 1:24:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloromethane	0.48	0.15		ppbV	1	12/22/2018 1:24:00 AM
cis-1,2-Dichloroethene	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Cyclohexane	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15			Analyst: RJP
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Ethyl acetate	0.33	0.15		ppbV	1	12/22/2018 1:24:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 11	0.34	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 12	0.55	0.15		ppbV	1	12/22/2018 1:24:00 AM
Heptane	0.19	0.15		ppbV	1	12/22/2018 1:24:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 1:24:00 AM
Isopropyl alcohol	1.6	0.15		ppbV	1	12/22/2018 1:24:00 AM
m&p-Xylene	0.15	0.30	J	ppbV	1	12/22/2018 1:24:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:24:00 AM
Methyl Ethyl Ketone	0.29	0.30	J	ppbV	1	12/22/2018 1:24:00 AM
Methyl Isobutyl Ketone	0.48	0.30		ppbV	1	12/22/2018 1:24:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Methylene chloride	0.72	0.15		ppbV	1	12/22/2018 1:24:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Toluene	1.6	0.15		ppbV	1	12/22/2018 1:24:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Trichloroethene	0.41	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Surr: Bromofluorobenzene	74.0	70-130		%REC	1	12/22/2018 1:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Acetone	2.2	0.30		ppbV	1	12/22/2018 2:04:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Benzene	0.19	0.15		ppbV	1	12/22/2018 2:04:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Ethyl acetate	0.18	0.15		ppbV	1	12/22/2018 2:04:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 11	0.41	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 12	0.37	0.15		ppbV	1	12/22/2018 2:04:00 AM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 2:04:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Hexane	0.14	0.15	J	ppbV	1	12/22/2018 2:04:00 AM
Isopropyl alcohol	0.44	0.15		ppbV	1	12/22/2018 2:04:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Methylene chloride	0.20	0.15		ppbV	1	12/22/2018 2:04:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Toluene	0.69	0.15		ppbV	1	12/22/2018 2:04:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 2:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,2,4-Trimethylbenzene	1.0	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,3,5-Trimethylbenzene	0.39	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,3-Dichlorobenzene	0.28	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 2:44:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
4-ethyltoluene	0.40	0.15		ppbV	1	12/22/2018 2:44:00 AM
Acetone	19	3.0		ppbV	10	12/23/2018 2:08:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Benzene	0.36	0.15		ppbV	1	12/22/2018 2:44:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Carbon disulfide	62	6.0		ppbV	40	12/23/2018 2:45:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Chloroform	0.16	0.15		ppbV	1	12/22/2018 2:44:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15			Analyst: RJP
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Ethylbenzene	0.61	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 11	0.58	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 12	0.48	0.15		ppbV	1	12/22/2018 2:44:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 2:44:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 2:44:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
m&p-Xylene	1.3	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Ethyl Ketone	0.56	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Isobutyl Ketone	7.0	3.0		ppbV	10	12/23/2018 2:08:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Methylene chloride	0.23	0.15		ppbV	1	12/22/2018 2:44:00 AM
o-Xylene	0.41	0.15		ppbV	1	12/22/2018 2:44:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Tetrachloroethylene	0.16	0.15		ppbV	1	12/22/2018 2:44:00 AM
Tetrahydrofuran	3.6	1.5		ppbV	10	12/23/2018 2:08:00 AM
Toluene	4.3	1.5		ppbV	10	12/23/2018 2:08:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Surr: Bromofluorobenzene	88.0	70-130		%REC	1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,4-Dichlorobenzene	0.11	0.15	J	ppbV	1	12/22/2018 3:25:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
2,2,4-trimethylpentane	0.10	0.15	J	ppbV	1	12/22/2018 3:25:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Acetone	8.1	3.0		ppbV	10	12/23/2018 3:22:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Benzene	0.36	0.15		ppbV	1	12/22/2018 3:25:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Carbon disulfide	8.2	1.5		ppbV	10	12/23/2018 3:22:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Cyclohexane	0.55	0.15		ppbV	1	12/22/2018 3:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 11	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 12	0.76	0.15		ppbV	1	12/22/2018 3:25:00 AM
Heptane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Hexane	0.61	0.15		ppbV	1	12/22/2018 3:25:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Methylene chloride	0.21	0.15		ppbV	1	12/22/2018 3:25:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Toluene	0.36	0.15		ppbV	1	12/22/2018 3:25:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Surr: Bromofluorobenzene	129	70-130		%REC	1	12/22/2018 3:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-4			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 4:04:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Acetone	7.3	1.5		ppbV	5	12/23/2018 4:36:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Benzene	0.16	0.15		ppbV	1	12/22/2018 4:04:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Carbon disulfide	2.5	0.75		ppbV	5	12/23/2018 4:36:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Chloromethane	0.23	0.15		ppbV	1	12/22/2018 4:04:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Cyclohexane	0.11	0.15	J	ppbV	1	12/22/2018 4:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 11	0.32	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 12	0.58	0.15		ppbV	1	12/22/2018 4:04:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 4:04:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Hexane	0.18	0.15		ppbV	1	12/22/2018 4:04:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
m&p-Xylene	0.11	0.30	J	ppbV	1	12/22/2018 4:04:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl Ethyl Ketone	0.54	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Methylene chloride	0.14	0.15	J	ppbV	1	12/22/2018 4:04:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Toluene	0.53	0.15		ppbV	1	12/22/2018 4:04:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Surr: Bromofluorobenzene	78.0	70-130		%REC	1	12/22/2018 4:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 4:45:00 AM
2,2,4-trimethylpentane	0.12	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Acetone	7.2	1.5		ppbV	5	12/23/2018 5:14:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Benzene	0.30	0.15		ppbV	1	12/22/2018 4:45:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Carbon disulfide	3.4	0.75		ppbV	5	12/23/2018 5:14:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloroform	0.26	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloromethane	0.14	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
cis-1,2-Dichloroethene	0.94	0.15		ppbV	1	12/22/2018 4:45:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Ethyl acetate	0.33	0.15		ppbV	1	12/22/2018 4:45:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 11	0.30	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 12	0.56	0.15		ppbV	1	12/22/2018 4:45:00 AM
Heptane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Hexane	0.24	0.15		ppbV	1	12/22/2018 4:45:00 AM
Isopropyl alcohol	2.8	0.75		ppbV	5	12/23/2018 5:14:00 AM
m&p-Xylene	0.34	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Ethyl Ketone	0.35	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Isobutyl Ketone	1.3	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Methylene chloride	0.46	0.15		ppbV	1	12/22/2018 4:45:00 AM
o-Xylene	0.12	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Tetrachloroethylene	0.11	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Toluene	1.5	0.15		ppbV	1	12/22/2018 4:45:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Trichloroethene	1.6	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 4:45:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
2,2,4-trimethylpentane	0.11	0.15	J	ppbV	1	12/22/2018 5:25:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Acetone	5.8	1.5		ppbV	5	12/23/2018 5:53:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Benzene	0.31	0.15		ppbV	1	12/22/2018 5:25:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Carbon disulfide	10	0.75		ppbV	5	12/23/2018 5:53:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Chloroform	8.7	0.75		ppbV	5	12/23/2018 5:53:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 11	0.55	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 12	0.49	0.15		ppbV	1	12/22/2018 5:25:00 AM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 5:25:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 5:25:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Methylene chloride	1.0	0.15		ppbV	1	12/22/2018 5:25:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Tetrachloroethylene	0.16	0.15		ppbV	1	12/22/2018 5:25:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Toluene	0.80	0.15		ppbV	1	12/22/2018 5:25:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Surr: Bromofluorobenzene	72.0	70-130		%REC	1	12/22/2018 5:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2,4-Trimethylbenzene	2.0	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,3,5-Trimethylbenzene	0.51	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,3-Dichlorobenzene	0.24	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 7:24:00 AM
2,2,4-trimethylpentane	0.65	0.15		ppbV	1	12/22/2018 7:24:00 AM
4-ethyltoluene	0.32	0.15		ppbV	1	12/22/2018 7:24:00 AM
Acetone	19	3.0		ppbV	10	12/23/2018 6:32:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Benzene	1.1	0.15		ppbV	1	12/22/2018 7:24:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Carbon disulfide	54	6.0		ppbV	40	12/23/2018 7:09:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Chloroform	1.2	0.15		ppbV	1	12/22/2018 7:24:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Ethylbenzene	0.40	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 11	0.39	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 12	0.44	0.15		ppbV	1	12/22/2018 7:24:00 AM
Heptane	0.71	0.15		ppbV	1	12/22/2018 7:24:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Hexane	13	1.5		ppbV	10	12/23/2018 6:32:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
m&p-Xylene	1.2	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl Ethyl Ketone	0.19	0.30	J	ppbV	1	12/22/2018 7:24:00 AM
Methyl Isobutyl Ketone	1.6	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Methylene chloride	8.3	1.5		ppbV	10	12/23/2018 6:32:00 AM
o-Xylene	0.60	0.15		ppbV	1	12/22/2018 7:24:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Styrene	0.13	0.15	J	ppbV	1	12/22/2018 7:24:00 AM
Tetrachloroethylene	0.54	0.15		ppbV	1	12/22/2018 7:24:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Toluene	1.6	0.15		ppbV	1	12/22/2018 7:24:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Surr: Bromofluorobenzene	86.0	70-130		%REC	1	12/22/2018 7:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	0.27	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2,4-Trimethylbenzene	1.3	1.4	J	ppbV	9	12/23/2018 3:10:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3,5-Trimethylbenzene	0.66	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3-Dichlorobenzene	0.25	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 12:32:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
4-ethyltoluene	0.43	0.15		ppbV	1	12/22/2018 12:32:00 PM
Acetone	27	27		ppbV	90	12/23/2018 3:47:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Benzene	0.44	0.15		ppbV	1	12/22/2018 12:32:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Carbon disulfide	22	14		ppbV	90	12/23/2018 3:47:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chloroform	3.1	1.4		ppbV	9	12/23/2018 3:10:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Cyclohexane	0.42	0.15		ppbV	1	12/22/2018 12:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Ethylbenzene	0.43	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 11	0.30	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 12	0.40	0.15		ppbV	1	12/22/2018 12:32:00 PM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 12:32:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
m&p-Xylene	1.4	0.30		ppbV	1	12/22/2018 12:32:00 PM
Methyl Butyl Ketone	0.12	0.30	J	ppbV	1	12/22/2018 12:32:00 PM
Methyl Ethyl Ketone	2.1	0.30		ppbV	1	12/22/2018 12:32:00 PM
Methyl Isobutyl Ketone	68	27		ppbV	90	12/23/2018 3:47:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Methylene chloride	15	1.4		ppbV	9	12/23/2018 3:10:00 PM
o-Xylene	0.91	0.15		ppbV	1	12/22/2018 12:32:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Styrene	0.14	0.15	J	ppbV	1	12/22/2018 12:32:00 PM
Tetrachloroethylene	0.68	0.15		ppbV	1	12/22/2018 12:32:00 PM
Tetrahydrofuran	2.4	1.4		ppbV	9	12/23/2018 3:10:00 PM
Toluene	1.7	0.15		ppbV	1	12/22/2018 12:32:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl chloride	0.40	0.15		ppbV	1	12/22/2018 12:32:00 PM
Surr: Bromofluorobenzene	86.0	70-130		%REC	1	12/22/2018 12:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-7			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichloroethane	0.13	0.15	J	ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Acetone	16	3.0		ppbV	10	12/23/2018 4:25:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Carbon disulfide	4.8	1.5		ppbV	10	12/23/2018 4:25:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloroform	0.55	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Cyclohexane	0.43	0.15		ppbV	1	12/22/2018 1:15:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15			Analyst: RJP
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 11	0.21	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 12	0.39	0.15		ppbV	1	12/22/2018 1:15:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/22/2018 1:15:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Hexane	1.1	0.15		ppbV	1	12/22/2018 1:15:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Isobutyl Ketone	55	27		ppbV	90	12/24/2018 7:47:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Methylene chloride	52	14		ppbV	90	12/24/2018 7:47:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Tetrahydrofuran	4.3	1.5		ppbV	10	12/23/2018 4:25:00 PM
Toluene	0.24	0.15		ppbV	1	12/22/2018 1:15:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl chloride	0.28	0.15		ppbV	1	12/22/2018 1:15:00 PM
Surr: Bromofluorobenzene	84.0	70-130		%REC	1	12/22/2018 1:15:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-10			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2,4-Trimethylbenzene	0.11	0.15	J	ppbV	1	12/22/2018 1:58:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Acetone	9.6	1.5		ppbV	5	12/23/2018 5:41:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Carbon disulfide	0.52	0.15		ppbV	1	12/22/2018 1:58:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloroform	0.17	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Ethyl acetate	0.18	0.15		ppbV	1	12/22/2018 1:58:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 11	3.2	0.75		ppbV	5	12/23/2018 5:41:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 12	0.41	0.15		ppbV	1	12/22/2018 1:58:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/22/2018 1:58:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Hexane	0.76	0.15		ppbV	1	12/22/2018 1:58:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Isobutyl Ketone	0.80	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Methylene chloride	1.5	0.15		ppbV	1	12/22/2018 1:58:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Tetrachloroethylene	0.40	0.15		ppbV	1	12/22/2018 1:58:00 PM
Tetrahydrofuran	1.6	0.15		ppbV	1	12/22/2018 1:58:00 PM
Toluene	0.70	0.15		ppbV	1	12/22/2018 1:58:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 1:58:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2,4-Trimethylbenzene	1.4	1.4	J	ppbV	9	12/23/2018 6:21:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichloroethane	0.18	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3,5-Trimethylbenzene	0.73	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3-Dichlorobenzene	0.36	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 2:37:00 PM
2,2,4-trimethylpentane	0.43	0.15		ppbV	1	12/22/2018 2:37:00 PM
4-ethyltoluene	0.48	0.15		ppbV	1	12/22/2018 2:37:00 PM
Acetone	68	27		ppbV	90	12/23/2018 6:59:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Benzene	2.0	1.4		ppbV	9	12/23/2018 6:21:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Carbon disulfide	95	14		ppbV	90	12/23/2018 6:59:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Cyclohexane	0.68	0.15		ppbV	1	12/22/2018 2:37:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Ethylbenzene	1.1	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 11	0.26	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 12	0.47	0.15		ppbV	1	12/22/2018 2:37:00 PM
Heptane	0.69	0.15		ppbV	1	12/22/2018 2:37:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Hexane	1.8	1.4		ppbV	9	12/23/2018 6:21:00 PM
Isopropyl alcohol	0.46	0.15		ppbV	1	12/22/2018 2:37:00 PM
m&p-Xylene	3.6	0.30		ppbV	1	12/22/2018 2:37:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:37:00 PM
Methyl Ethyl Ketone	5.1	2.7		ppbV	9	12/23/2018 6:21:00 PM
Methyl Isobutyl Ketone	130	27		ppbV	90	12/23/2018 6:59:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Methylene chloride	240	27		ppbV	180	12/23/2018 7:38:00 PM
o-Xylene	1.4	0.15		ppbV	1	12/22/2018 2:37:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Styrene	0.20	0.15		ppbV	1	12/22/2018 2:37:00 PM
Tetrachloroethylene	1.0	0.15		ppbV	1	12/22/2018 2:37:00 PM
Tetrahydrofuran	6.2	1.4		ppbV	9	12/23/2018 6:21:00 PM
Toluene	3.3	1.4		ppbV	9	12/23/2018 6:21:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl chloride	1.1	0.15		ppbV	1	12/22/2018 2:37:00 PM
Surr: Bromofluorobenzene	78.0	70-130		%REC	1	12/22/2018 2:37:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-6			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2,4-Trimethylbenzene	1.8	1.4		ppbV	9	12/23/2018 8:18:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3,5-Trimethylbenzene	0.84	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3-Dichlorobenzene	0.23	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:17:00 PM
2,2,4-trimethylpentane	3.6	1.4		ppbV	9	12/23/2018 8:18:00 PM
4-ethyltoluene	0.58	0.15		ppbV	1	12/22/2018 3:17:00 PM
Acetone	61	27		ppbV	90	12/23/2018 8:55:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Benzene	5.5	1.4		ppbV	9	12/23/2018 8:18:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Carbon disulfide	170	14		ppbV	90	12/23/2018 8:55:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloroethane	0.32	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
cis-1,2-Dichloroethene	0.22	0.15		ppbV	1	12/22/2018 3:17:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Cyclohexane	45	14		ppbV	90	12/23/2018 8:55:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Ethylbenzene	1.0	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 11	0.33	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 12	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Heptane	4.8	1.4		ppbV	9	12/23/2018 8:18:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Hexane	36	14		ppbV	90	12/23/2018 8:55:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
m&p-Xylene	3.4	0.30		ppbV	1	12/22/2018 3:17:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:17:00 PM
Methyl Ethyl Ketone	6.6	2.7		ppbV	9	12/23/2018 8:18:00 PM
Methyl Isobutyl Ketone	230	54		ppbV	180	12/23/2018 9:33:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Methylene chloride	150	14		ppbV	90	12/23/2018 8:55:00 PM
o-Xylene	1.6	0.15		ppbV	1	12/22/2018 3:17:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Styrene	0.25	0.15		ppbV	1	12/22/2018 3:17:00 PM
Tetrachloroethylene	0.64	0.15		ppbV	1	12/22/2018 3:17:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Toluene	5.1	1.4		ppbV	9	12/23/2018 8:18:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Trichloroethene	0.63	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl chloride	0.40	0.15		ppbV	1	12/22/2018 3:17:00 PM
Surr: Bromofluorobenzene	115	70-130		%REC	1	12/22/2018 3:17:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-6			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2,4-Trimethylbenzene	2.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3,5-Trimethylbenzene	1.3	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3-Dichlorobenzene	0.32	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,4-Dichlorobenzene	0.12	0.15	J	ppbV	1	12/22/2018 3:59:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:59:00 PM
2,2,4-trimethylpentane	2.1	0.15		ppbV	1	12/22/2018 3:59:00 PM
4-ethyltoluene	0.91	0.15		ppbV	1	12/22/2018 3:59:00 PM
Acetone	28	27		ppbV	90	12/23/2018 10:49:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Benzene	1.8	0.15		ppbV	1	12/22/2018 3:59:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Carbon disulfide	8.9	1.4		ppbV	9	12/23/2018 10:13:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Cyclohexane	2.7	1.4		ppbV	9	12/23/2018 10:13:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Ethylbenzene	1.9	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 11	0.26	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 12	0.62	0.15		ppbV	1	12/22/2018 3:59:00 PM
Heptane	1.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Hexane	4.0	1.4		ppbV	9	12/23/2018 10:13:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
m&p-Xylene	4.0	2.7		ppbV	9	12/23/2018 10:13:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:59:00 PM
Methyl Ethyl Ketone	4.1	2.7		ppbV	9	12/23/2018 10:13:00 PM
Methyl Isobutyl Ketone	160	54		ppbV	180	12/23/2018 11:26:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Methylene chloride	34	14		ppbV	90	12/23/2018 10:49:00 PM
o-Xylene	1.6	1.4		ppbV	9	12/23/2018 10:13:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Styrene	0.36	0.15		ppbV	1	12/22/2018 3:59:00 PM
Tetrachloroethylene	0.29	0.15		ppbV	1	12/22/2018 3:59:00 PM
Tetrahydrofuran	4.0	1.4		ppbV	9	12/23/2018 10:13:00 PM
Toluene	4.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Trichloroethene	0.10	0.15	J	ppbV	1	12/22/2018 3:59:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Surr: Bromofluorobenzene	97.0	70-130		%REC	1	12/22/2018 3:59:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	0.17	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Acetone	2.9	0.30		ppbV	1	12/21/2018 10:33:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Carbon disulfide	0.58	0.15		ppbV	1	12/21/2018 10:33:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Chloroform	0.37	0.15		ppbV	1	12/21/2018 10:33:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 11	2.6	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 12	0.55	0.15		ppbV	1	12/21/2018 10:33:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Methylene chloride	0.60	0.15		ppbV	1	12/21/2018 10:33:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Tetrachloroethylene	2.9	0.15		ppbV	1	12/21/2018 10:33:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Toluene	0.27	0.15		ppbV	1	12/21/2018 10:33:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Surr: Bromofluorobenzene	77.0	70-130		%REC	1	12/21/2018 10:33:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2,4-Trimethylbenzene	0.11	0.15	J	ppbV	1	12/21/2018 9:13:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
2,2,4-trimethylpentane	0.17	0.15		ppbV	1	12/21/2018 9:13:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Acetone	6.4	1.5		ppbV	5	12/22/2018 10:20:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Benzene	0.32	0.15		ppbV	1	12/21/2018 9:13:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloromethane	0.51	0.15		ppbV	1	12/21/2018 9:13:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15			Analyst: RJP
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 11	0.29	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 12	0.51	0.15		ppbV	1	12/21/2018 9:13:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/21/2018 9:13:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Hexane	0.27	0.15		ppbV	1	12/21/2018 9:13:00 PM
Isopropyl alcohol	1.2	0.15		ppbV	1	12/21/2018 9:13:00 PM
m&p-Xylene	0.20	0.30	J	ppbV	1	12/21/2018 9:13:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Methylene chloride	0.16	0.15		ppbV	1	12/21/2018 9:13:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Tetrachloroethylene	0.17	0.15		ppbV	1	12/21/2018 9:13:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Toluene	0.67	0.15		ppbV	1	12/21/2018 9:13:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/21/2018 9:13:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
2,2,4-trimethylpentane	0.10	0.15	J	ppbV	1	12/21/2018 9:53:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Acetone	4.6	1.5		ppbV	5	12/22/2018 10:58:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Benzene	0.28	0.15		ppbV	1	12/21/2018 9:53:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloromethane	0.45	0.15		ppbV	1	12/21/2018 9:53:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Ethyl acetate	0.13	0.15	J	ppbV	1	12/21/2018 9:53:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 11	0.29	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 12	0.54	0.15		ppbV	1	12/21/2018 9:53:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Hexane	0.22	0.15		ppbV	1	12/21/2018 9:53:00 PM
Isopropyl alcohol	0.61	0.15		ppbV	1	12/21/2018 9:53:00 PM
m&p-Xylene	0.15	0.30	J	ppbV	1	12/21/2018 9:53:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Methylene chloride	0.17	0.15		ppbV	1	12/21/2018 9:53:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Tetrachloroethylene	0.21	0.15		ppbV	1	12/21/2018 9:53:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Toluene	0.59	0.15		ppbV	1	12/21/2018 9:53:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Surr: Bromofluorobenzene	74.0	70-130		%REC	1	12/21/2018 9:53:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1132
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-30			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Acetone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 31-Dec-18

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1132
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 11	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 12	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Methylene chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Toluene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Surr: Bromofluorobenzene	71.0	70-130		%REC	1	12/21/2018 8:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Labs - Chain of Custody				Site Name: <u>IKEA</u>		Detection Limit		Report Level	
143 Midler Park Drive Syracuse, NY 13206 315-431-9730 www.CentekLabs.com				Project: <u>Red Hook</u> PO#: <u>08-387</u> Quote # <u>Q-</u> Canister Order #: <u>7592</u>		☐ 5ppbv ☒ 1ugM3 ☐ 1ugM3 + 0.2 NYS		☐ Level I ☐ Level II ☒ Cat "B" Like	
Vapor Intrusion & IAQ Company: <u>Soil mech</u> Report to: <u>3770 Merrick Rd.</u> Address: <u>3770 Merrick Rd.</u> City, State, Zip: <u>NY 11783</u> Email: <u>soilmechanicscorp.com</u> Phone: <u>516 624 1468</u> FAX: <u>516 624 1468</u> Phone: <u>516 624 7588</u>				Invoice to: Address: City, State, Zip: Email: Phone:		Check Here if Same: ☐		Company:	
Turnaround Time: 5 Business Days ☐ 0% 4 Business Days ☐ 25% 3 Business Days ☐ 50% 2 Business Days ☐ 75% *Next Day by 5pm ☐ 100% *Next Day by Noon ☐ 150% *Same Day ☐ 200%				Check Rush TAT ☐ Due Date:		Field Vacuum Start / Stop		Labs Vacuum RecV/Analysis	
For Same and Next Day TAT Please Notify Lab				Regulator Number		Analysis Request		Comments	
Sample ID				Canister Number		Date Sampled		Comments	
SVW-1				232		12-14-13		Duplicate	
SVW-2				1195		30415		Duplicate	
SVW-3				328		30413		Duplicate	
SVW-4				542		30414		Duplicate	
SVW-5				475		30414		Duplicate	
SVW-6				86		30411		Duplicate	
SVW-7				1318		2414		Duplicate	
SVW-8				554		30417		Duplicate	
SVW-9				240		30416		Duplicate	
SVW-10				1174		30417		Duplicate	
SVW-11				233		304110		Duplicate	
SVW-12				353		304113		Duplicate	
SVW-13				562		30416		Duplicate	
SVW-14				352		304110		Duplicate	
SVW-15 MS/MS				320		30418		Duplicate	
AS-1				1267		30415		Duplicate	
AS-2				1176		30415		Duplicate	
Chain of Custody				Signature		Date/Time		Courier: CIRCLE ONE FedEx UPS Pickup/Dropoff	
Sampled by:				Print Name		Date/Time		Work Order #	
Relinquished by:				Signature		Date/Time		Work Order #	
Received at Lab by:				Signature		Date/Time		Work Order #	

***Chain of Custody must be completed in full. Lack of any missing information will affect your Turn Around Times (TAT)

*** By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.

Centek Labs - Chain of Custody				Site Name: <u>IKEA</u>		Detection Limit		Report Level	
 143 Midler Park Drive Syracuse, NY 13206 315-431-9730 www.CentekLabs.com				Project: <u>Red Hook</u> PO#: <u>08-337</u> Quote # <u>Q-</u> Canister Order #:		☐ 5ppbv ☒ 1ug/M3 ☐ 1ug/M3 + 0.2 NYS		☐ Level I ☐ Level II ☒ Cal "B" Lite	
Turnaround Time: 5 Business Days ☐ 4 Business Days ☐ 3 Business Days ☐ 2 Business Days ☐ *Next Day by 5pm ☐ *Next Day by Noon ☐ *Same Day ☐				Company: <u>Check Here if Same:</u> Invoice to: Address: City, State, Zip: Email: Phone:		Company: Address: City, State, Zip: Email: Phone:			
TAT Rush TAT Due Date: 0% 25% 50% 75% 100% 150% 200%				Report to: Address: City, State, Zip: Email: Phone:		Analysis Request Regulator Number Canister Number Date Sampled		Field Vacuum Start / Stop Labs Vacuum Recv/Analysis Comments	
Sample ID For Same and Next Day TAT Please Notify Lab				Date Sampled		Date / Time		Courier: CIRCLE ONE FedEx UPS Pickup/Dropoff **For LAB USE ONLY Work Order #	
Chain of Custody Sampled by:				Print Name		Signature		Date/Time	
Relinquished by:				Dave Wilson		Robin Gushlan		12-21-18	
Received at Lab by:				Rebrn Gushlan		Robin Gushlan		12-21-18	

***Chain of Custody must be completed in full. Lack of any missing information will affect your Turn Around Times (TAT)

*** By signing Centek Labs Chain of Custody, you are accepting Centek Labs Terms and Conditions listed on the reverse side.

Monthly SSVMS Inspection Forms

**U.S. Dredging Shipyard Site
Tax Block 612, Lot 130
Brooklyn, New York
NYSDEC - BCP Number C224043**

METHANE MITIGATION SYSTEM MEASUREMENTS

DATE: 8/3/18 WEATHER Cldy 84°F BARO. PRESS 30.09Hg SMES #: 08-387	BLOWER #1	BLOWER #2	COMMENTS
Electric Control Room			<u>July 2018</u>
Previous hour meter reading	24276.5	16429.5	Both Blowers operating normally
Current hour meter reading	25212.0	17365.0	
Total elapsed motor run time (Current monitoring period)	935.5	935.5	
Total days operational	Approx. 3535.9	Approx. 3615.3	
Alarm Condition	None	None	
Roof Top Blowers			
Filter inlet gauge reading	-50.0" H ₂ O	-50.0" H ₂ O	
Filter outlet gauge reading	-66.0" H ₂ O	-64.0" H ₂ O	
Magnehelic gauge reading	11.0" H ₂ O	10.0" H ₂ O	
Flow at stack	360 SCFM	360 SCFM	
Methane (CH ₄) concentration At exhaust stack *	0.0	0.0	
Dilution valve	CLOSED	CLOSED	

* = Percent Gas by Volume

Monthly Sub-Slab Vapor Mitigation System Inspection Form

IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, NY

Inspector: DAN MARZANO
Date: 8/3/18
Weather: CLOUDY
Temp: 84 F°
Barometric
Pressure 30.09 in. Hg

1. General

- a). When was the last rain event? 8/2/18
- b). Are system fans operating? YES
If no, please list: _____
- c). Any evidence of system tampering or vandalism? NO
- d). Were all cleanout and sampling port caps securely attached prior to system testing? YES
- e). Please list caps that were not securely in place: NA

2. Operations

- a). Attach Fan Operation Routine Checklist as per Manufacturer Specifications

3. Comments

BOTH BLOWERS OPERATING NORMALLY.

METHANE MITIGATION SYSTEM MEASUREMENTS

DATE: <u>8/29/18</u> WEATHER <u>Prtly Cldy 94°F</u> BARO. PRESS <u>30.02Hg</u> SMES #: <u>08-387</u>	BLOWER #1	BLOWER #2	COMMENTS
Electric Control Room			<u>August 2018</u>
Previous hour meter reading	25212.0	17365.0	Both Blowers operating normally
Current hour meter reading	25837.3	17990.2	
Total elapsed motor run time (Current monitoring period)	625.3	625.2	
Total days operational	Approx. 3561.9	Approx. 3641.3	
Alarm Condition	None	None	
Roof Top Blowers			
Filter inlet gauge reading	-50.0" H ₂ O	-50.0" H ₂ O	
Filter outlet gauge reading	-64.0" H ₂ O	-64.0" H ₂ O	
Magnehelic gauge reading	11.0" H ₂ O	10.0" H ₂ O	
Flow at stack	360 SCFM	360 SCFM	
Methane (CH ₄) concentration At exhaust stack *	0.0	0.0	
Dilution valve	CLOSED	CLOSED	

* = Percent Gas by Volumn

Monthly Sub-Slab Vapor Mitigation System
Inspection Form

IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, NY

Inspector: DAN MARZANO
Date: 8/29/18
Weather: PTLY CLOUDY
Temp: 94 F°
Barometric
Pressure 30.02 in. Hg

1. General

- a). When was the last rain event? _____
b). Are system fans operating? YES
If no, please list: _____
c). Any evidence of system tampering or vandalism? NO
d). Were all cleanout and sampling port caps securely attached prior to system testing? YES
e). Please list caps that were not securely in place: _____

2. Operations

- a). Attach Fan Operation Routine Checklist as per Manufacturer Specifications

3. Comments

BOTH BLOWERS OPERATING NORMALLY

METHANE MITIGATION SYSTEM MEASUREMENTS

DATE: 10/12/18 WEATHER Prtly Cldy 62°F BARO. PRESS 29.70Hg SMES #: 08-387	BLOWER #1	BLOWER #2	COMMENTS
Electric Control Room			<u>September 2018</u>
Previous hour meter reading	25837.3	17990.2	Both Blowers operating normally
Current hour meter reading	26894.4	19047.4	
Total elapsed motor run time (Current monitoring period)	1057.1	1057.2	
Total days operational	Approx. 3605.9	Approx. 3685.3	
Alarm Condition	None	None	
Roof Top Blowers			
Filter inlet gauge reading	-50.0" H ₂ O	-50.0" H ₂ O	
Filter outlet gauge reading	-65.0" H ₂ O	-62.0" H ₂ O	
Magnehelic gauge reading	10.0" H ₂ O	10.0" H ₂ O	
Flow at stack	360 SCFM	360 SCFM	
Methane (CH ₄) concentration At exhaust stack *	0.0	0.0	
Dilution valve	CLOSED	CLOSED	

* = Percent Gas by Volume

Monthly Soil Slab Vapor Mitigation System Inspection Form

IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, NY

Inspector: DAN MARZANO
Date: 10/12/18
Weather: PTLY CLOUDY
Temp: 62 F°
Barometric
Pressure 29.70 in. Hg

1. General

- a). When was the last rain event? 10/11/18
- b). Are system fans operating? Yes
If no, please list: -0-
- c). Any evidence of system tampering or vandalism? No
- d). Were all cleanout and sampling port caps securely attached prior to system testing? Yes
- e). Please list caps that were not securely in place: -0-

2. Operations

- a). Attach Fan Operation Routine Checklist as per Manufacturer Specifications

3. Comments

BOTH BLOWER ARE OPERATIONAL NORMALLY

METHANE MITIGATION SYSTEM MEASUREMENTS

DATE: 11/9/18 WEATHER: Cldy 50°F BARO. PRESS: 30.23Hg SMES #: 08-387	BLOWER #1	BLOWER #2	COMMENTS
Electric Control Room			<u>October 2018</u>
Previous hour meter reading	26894.4	19047.4	Both Blowers operating normally
Current hour meter reading	27564.5	19717.4	
Total elapsed motor run time (Current monitoring period)	670.1	670.0	
Total days operational	Approx. 3633.9	Approx. 3713.3	
Alarm Condition	None	None	
Roof Top Blowers			
Filter inlet gauge reading	-50.0" H ₂ O	-50.0" H ₂ O	
Filter outlet gauge reading	-66.0" H ₂ O	-64.0" H ₂ O	
Magnehelic gauge reading	10.0" H ₂ O	10.0" H ₂ O	
Flow at stack	360 SCFM	360 SCFM	
Methane (CH ₄) concentration At exhaust stack *	0.0	0.0	
Dilution valve	CLOSED	CLOSED	

* = Percent Gas by Volume

Monthly Sub-Slab Vapor Mitigation System Inspection Form

IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, NY

Inspector: DAN MARZANO
Date: 11/9/18
Weather: CLDY
Temp: 50 F°
Barometric
Pressure 30.23 in. Hg

1. General

- a). When was the last rain event? 11/6/18
- b). Are system fans operating? YES
If no, please list: -0-
- c). Any evidence of system tampering or vandalism? No
- d). Were all cleanout and sampling port caps securely attached prior to system testing? YES
- e). Please list caps that were not securely in place: -0-

2. Operations

- a). Attach Fan Operation Routine Checklist as per Manufacturer Specifications

3. Comments

BOTH BLOWERS OPERATING NORMALLY.

METHANE MITIGATION SYSTEM MEASUREMENTS

DATE: 12/7/18 WEATHER Clear 37°F BARO. PRESS 30.45Hg SMES #: 08-387	BLOWER #1	BLOWER #2	COMMENTS
Electric Control Room			<u>November 2018</u>
Previous hour meter reading	27564.5	19717.4	Both Blowers operating normally
Current hour meter reading	28237.7	20390.6	
Total elapsed motor run time (Current monitoring period)	673.2	673.2	
Total days operational	Approx. 3661.9	Approx. 3741.3	
Alarm Condition	None	None	
Roof Top Blowers			
Filter inlet gauge reading	-48.0" H ₂ O	-50.0" H ₂ O	
Filter outlet gauge reading	-66.0" H ₂ O	-62.0" H ₂ O	
Magnehelic gauge reading	11.0" H ₂ O	10.0" H ₂ O	
Flow at stack	360 SCFM	360 SCFM	
Methane (CH ₄) concentration At exhaust stack *	0.0	0.0	
Dilution valve	CLOSED	CLOSED	

* = Percent Gas by Volume

Monthly Sub-Slab Vapor Mitigation System Inspection Form

IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, NY

Inspector: Dan MARZANO
Date: 12/7/18
Weather: Clear
Temp: 37 F°
Barometric
Pressure 30.45 in. Hg

1. General

- a). When was the last rain event? 12/2/18
- b). Are system fans operating? Yes
If no, please list: _____
- c). Any evidence of system tampering or vandalism? NO
- d). Were all cleanout and sampling port caps securely attached prior to system testing? Yes
- e). Please list caps that were not securely in place: _____

2. Operations

- a). Attach Fan Operation Routine Checklist as per Manufacturer Specifications

3. Comments

BOTH BLOWERS ARE OPERATING NORMALLY

METHANE MITIGATION SYSTEM MEASUREMENTS

DATE: 1/4/18 WEATHER Clear 33°F BARO. PRESS 30.24Hg SMES #: 08-387	BLOWER #1	BLOWER #2	COMMENTS
Electric Control Room			<u>December 2018</u>
Previous hour meter reading	28237.7	20390.6	Both Blowers operating normally
Current hour meter reading	28907.8	21060.6	
Total elapsed motor run time (Current monitoring period)	670.1	670.0	
Total days operational	Approx. 3689.9	Approx. 3769.3	
Alarm Condition	None	None	
Roof Top Blowers			
Filter inlet gauge reading	-46.0" H ₂ O	-48.0" H ₂ O	
Filter outlet gauge reading	-66.0" H ₂ O	-64.0" H ₂ O	
Magnehelic gauge reading	11.0" H ₂ O	10.0" H ₂ O	
Flow at stack	360 SCFM	360 SCFM	
Methane (CH ₄) concentration At exhaust stack *	0.0	0.0	
Dilution valve	CLOSED	CLOSED	

* = Percent Gas by Volume

Monthly Sub-Slab Vapor Mitigation System Inspection Form

IKEA (BCP Site No. C224043)
1 Beard Street, Brooklyn, NY

Inspector: DANE S.
Date: 11/4/19
Weather: SUNNY
Temp: 33° F
Barometric
Pressure 30.24 in. Hg

1. General

- a). When was the last rain event? 11/1/19
- b). Are system fans operating? YES
If no, please list: _____
- c). Any evidence of system tampering or vandalism? NO
- d). Were all cleanout and sampling port caps securely attached prior to system testing? YES
- e). Please list caps that were not securely in place: NA

2. Operations

- a). Attach Fan Operation Routine Checklist as per Manufacturer Specifications

3. Comments

BOTH BLOWERS OPERATING NORMALLY

QA/QC Samples

**U.S. Dredging Shipyard Site
Tax Block 612, Lot 130
Brooklyn, New York
NYSDEC - BCP Number C224043**



Centek Laboratories TO-15 Package Review CheckList

Client: Soil Mechanics

Project: Ikea Red Hook

SDG: C1812057

		YES	NO	NA
Analytical Results	Present and Complete	☒	☐	☐
TIC's Present	Present and Complete	☒	☐	☐
	Holdin Times Met	☒	☐	☐

Comments:

Chain of Custody	Present and Complete	☒	☐	☐
Surrogate	Present and Complete	☒	☐	☐
	Recoveries within Limits	☒	☐	☐
	Sample(s) reanalyzed	☐	☐	☒
Internal Standards	Present and Complete	☒	☐	☐
Recovery	Recoveries within Limits	☐	☒	☐
	Sample(s) reanalyzed	☒	☐	☐

Comments:

SEE CASE NARRATIVE

Lab Control Sample (LCS)	Present and Complete	☒	☐	☐
	Recoveries within Limits	☒	☐	☐
Lab Control Sample Dupe (LCSD)	Present and Complete	☒	☐	☐
	Recoveries within Limits	☒	☐	☐
MS/MSD	Present and Complete	☒	☐	☐
	Recoveries within Limits	☐	☒	☐

Comments:

SEE CASE NARRATIVE

Sample Raw Data	Present and Complete	☒	☐	☐
	Spectra present	☒	☐	☐

Comments:

Centek Laboratories TO-15 Package Review Checklist



Client: Soil Mechanics

Project: Ikea Red Hook

SDG: C1812057

Standards Data

		YES	NO	NA
Initial Calibration	Present and Complete	/	—	—
	Calibration meets criteria	/	—	—
Continuing Calibration	Present and Complete	/	—	—
	Calibration meets criteria	—	/	—
Standards Raw Data	Present and Complete	/	—	—

Comments: SEE CASE NARRATIVE

Raw Quality Control Data

Tune Criteria Report	Present and Complete	/	—	—
Method Blank Data	MB Results <PQL	/	—	—
	Associated results flagged "B"	/	—	—
LCS Sample Data	Present and Complete	/	—	—
LCSD Sample Data	Present and Complete	/	—	—
MS/MSD Sample Data	Present and Complete	/	—	—

Comments:

Logbooks

Injection Log	/	—	—
Standards Log	/	—	—
Can Cleaning Log	/	—	—
Calculation Sheet	/	—	—
IDL's	/	—	—
Canister Order Form	/	—	—
Sample Tracking Form	/	—	—

Additional Comments:

Section Supervisor:

Heidi Dahl

Date:

2/4/19

QC Supervisor:

[Signature]

Date:

2/4/19



CENTEK LABORATORIES, LLC

143 Midler Park Drive * Syracuse, NY 13206

Phone (315) 431-9730 * Emergency 24/7 (315) 416-2752

NYSDOH ELAP Certificate No. 11830

Analytical Report

SOIL MECHANICS

SOIL MECHANICS

3770 Merrick Road

Seaford, NY 11783

TEL: 516-221-7500

FAX 516-679-1900

RE: IKEA-RED HOOK

Dear SOIL MECHANICS:

Monday, December 31, 2018

Order No.: C1812057

Centek Laboratories, LLC received 19 sample(s) on 12/21/2018 for the analyses presented in the following report.

I certify that this data package is in compliance with the terms and conditions of the Contract, both technically and for completeness. Release of the data contained in this hardcopy data package and/or in the computer readable data submitted has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the case narrative. All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

Centek Laboratories is distinctively qualified to meet your needs for precise and timely volatile organic compound analysis. We perform all analyses according to EPA, NIOSH or OSHA-approved analytical methods. Centek Laboratories is dedicated to providing quality analyses and exceptional customer service. Samples were analyzed using the methods outlined in the following references:

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999.

Analytical results relate to samples as received at laboratory. We do our best to make our reporting format clear and understandable and hope you are thoroughly satisfied with our services.

Please contact your client service representative at (315) 431-9730 or myself, if you would like any additional information regarding this report.

Thank you for using Centek Laboratories. This report can not be reproduced except in its entirety, without prior written authorization.

Sincerely,



William Dobbin
Lead Technical Director

Disclaimer: The test results and procedures utilized, and laboratory interpretations of the data obtained by Centek as contained in this report are believed by Centek to be accurate and reliable for sample(s) tested. In accepting this report, the customer agrees that the full extent of any and all liability for actual and consequential damages of Centek for the services performed shall be equal to the fee charged to the customer for the services as liquidated damages. ELAP does not offer certification for the following parameters by this method at present time, they are: 4-ethyltoluene, ethyl acetate, propylene, 4-PCH, sulfur derived and silicon series compounds.

Centek Laboratories, LLC Terms and Conditions

Sample Submission

All samples sent to Centek Laboratories should be accompanied by our Request for Analysis Form or Chain of Custody Form. A Chain of Custody will be provided with each order shipped for all sampling events, or if needed, one is available at our website www.CentekLabs.com. Samples received after 3:00pm are considered to be a part of the next day's business.

Sample Media

Samples can be collected in an canister or a Tedlar bag. Depending on your analytical needs, Centek Laboratories may receive a bulk, liquid, soil or other matrix sample for headspace analysis.

Blanks

Every sample is run with a surrogate or tracer compound at a pre-established concentration. The surrogate compound run with each sample is used as a standard to measure the performance of each run of the instrument. If required, a Minican can be provided containing nitrogen to be run as a trip blank with your samples.

Sampling Equipment

Centek Laboratories will be happy to provide the canisters to carry-out your sampling event at no charge. The necessary accessories, such as regulators, tubing or personal sampling belts, are also provided to meet your sampling needs. The customer is responsible for all shipping charges to the client's destination and return shipping to the laboratory. Client assumes all responsibility for lost, stolen and any damages of equipment.

Turn Around time (TAT)

Centek Laboratories will provide results to its clients in one business-week by 6:00pm EST after receipt of samples. For example, if samples are received on a Monday they are due on the following Monday by 6:00pm EST. Results are faxed or emailed to the requested location indicated on the Chain of Custody. Non-routine analysis may require more than the one business-week turnaround time. Please confirm non-routine sample turnaround times.

Reporting

Results are emailed or faxed at no additional charge. A hard copy of the result report is mailed within 24 hours of the faxing or emailing of your results. Cat "B" like packages are within 3-4 weeks from time of analysis. Standard Electronic Disk Deliverables (EDD) is also available at no additional charge.

Payment Terms

Payment for all purchases shall be due within 30 days from date of invoice. The client agrees to pay a finance charge of 1.5% per month on the overdue balance and cost of collection, including attorney fees, if collection proceedings are necessary. You must have a completed credit application on file to extend credit. Purchase orders or checks information must be submitted for us to release results

Rush Turnaround Samples

Expedited turn around times is available. Please confirm rush turnaround times with Client Services before submitting samples.

Applicable Surcharges for Rush Turnaround Samples:

Same day TAT = 200%

Next business day TAT by Noon = 150%

Next business day TAT by 6:00pm = 100%

Second business day TAT by 6:00pm = 75%

Third business day TAT by 6:00pm = 50%

Fourth business day TAT by 6:00pm = 35%

Fifth business day = Standard

Statement of Confidentiality

Centek Laboratories, LLC is aware of the importance of the confidentiality of results to many of our clients. Your name and data will be held in the strictest of confidence. We will not accept business that may constitute a conflict of interest. We commonly sign Confidential Nondisclosure Agreements with clients prior to beginning work. All research, results and reports will be kept strictly confidential. Secrecy Agreements and Disclosure Statements will be signed for the client if so specified. Results will be provided only to the addressee specified on the Chain of Custody Form submitted with the samples unless law requires release. Written permission is required from the addressee to release results to any other party.

Limitation on Liability

Centek Laboratories, LLC warrants the test results to be accurate to the methodology and sample type for each sample submitted to Centek Laboratories, LLC. In no event shall Centek Laboratories, LLC be liable for direct, indirect, special, punitive, incidental, exemplary or consequential damages, or any damages whatsoever, even if Centek Laboratories, LLC has been previously advised of the possibility of such damages whether in an action under contract, negligence, or any other theory, arising out of or in connection with the use, inability to use or performance of the information, services, products and materials available from the laboratory or this site. These limitations shall apply notwithstanding any failure of essential purpose of any limited remedy. Because some jurisdictions do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of liability for consequential or incidental damages, the above limitations may not apply to you. This is a comprehensive limitation of liability that applies to all damages of any kind, including (without limitation) compensatory, direct, indirect or consequential damages, loss of data, income or profit and or loss of or damage

to property and claims of third parties.

ASP CAT B DELIVERABLE PACKAGE

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Date: 04-Feb-19

CLIENT: SOIL MECHANICS

Project: IKEA-RED HOOK

Lab Order: C1812057

CASE NARRATIVE

Samples were analyzed using the methods outlined in the following references:

Centek Laboratories, LLC SOP TS-80

Compendium of Methods for the Determination of Toxic Organic Compounds, Compendium Method TO-15, January 1999

All method blanks, laboratory spikes, and/or matrix spikes met quality assurance objective except as indicated in the corrective action report(s). All samples were received and analyzed within the EPA recommended holding times. Test results are not Method Blank (MB) corrected for contamination.

NYSDEC ASP samples:

Canisters should be evacuated to a reading of less than or equal to 50 millitorr prior to shipment to sampling personnel. The vacuum in the canister will be field checked prior to sampling, and must read 28" of Hg (± 2 ", vacuum, absolute) before a sample can be collected. After the sample has been collected, the pressure of the canister will be read and recorded again, and must be 5" of Hg (± 1 ", vacuum, absolute) for the sample to be valid. Once received at the laboratory, the canister vacuum should be confirmed to be 5" of Hg, ± 1 ". Please record and report the pressure/vacuum of received canisters on the sample receipt paperwork. A pressure/vacuum reading should also be taken just prior to the withdrawal of sample from the canister, and recorded on the sample preparation log sheet. All regulators are calibrated to meet these requirements before they leave the laboratory. However, due to environmental conditions and use of the equipment Centek can not guarantee that this criteria can always be achieved.

See Corrective Action: [3869] CC did not meet criteria.

See Corrective Action: [3870] IS did not meet criteria.

See Corrective Action: [3871] MS/MSD did not meet criteria.

See Corrective Action: [3872] CC did not meet criteria.

See Corrective Action: [3873] IS did not meet criteria.

Centek Laboratories, LLC
Corrective Action Report

Date Initiated: 21-Dec-18
Initiated By: Russell Pellegrino

Corrective Action Report ID: 3869
Department: MSVOA

Corrective Action Description

CAR Summary: CC did not meet criteria.

Description of Nonconformance Root/Cause(s): Continuing calibration did not meet criteria on 12/21/18 for Bromoform & Dibromochloroethane. The compound was more sensitive. The compounds in question was not detected in the associated samples. Compounds met criteria in the associated LCS and LCSD

Description of Corrective Action w/Proposed C.A.: Since the compound of interest was not detected the results should be considered valid. If compounds remain outside criteria perform system calibration. All sets of data submitted.

Performed By: Russell Pellegrino

Completion Date: 23-Dec-18

Client Notification

Client Notification Required: No **Notified By:**

Comment:

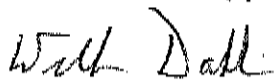
Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: Recalibrate the system ASAP if compound remains outside criteria. Monitoring of all quality control remains post initial calibration. All sets of data submitted.

Approval and Closure

Technical Director / Deputy Tech. Dir.:



William Dobbins

Close Date: 26-Dec-18

QA Officer Approval:



Nick Scala

QA Date: 26-Dec-18

Last Updated BY: russ

Updated: 04-Feb-2019 11:27 AM

Reported: 04-Feb-2019 11:27 A

Centek Laboratories, LLC
Corrective Action Report

Date Initiated: 21-Dec-18
Initiated By: Russell Pellegrino

Corrective Action Report ID: 3870
Department: MSVOA

Corrective Action Description

CAR Summary: IS did not meet criteria.

Description of Nonconformance Root/Cause(s): IS was high and did not meet criteria for samples C1812057-009. Based on the chromatographic evidence, it appears that the contamination is from high concentration of interfering compounds.

Description of Corrective Action w/Proposed C.A.: Sample was analyzed further as dilutions with criteria being met. Due to matrix being in a canister it is difficult to see any signs of problems. All sets of data submitted.

Performed By: Russell Pellegrino **Completion Date:** 23-Dec-18

Client Notification

Client Notification Required: No **Notified By:**

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: Monitor all quality control for sample matrix interference. At this time no further corrective action taken. All sets of data submitted.

Approval and Closure

Technical Director / Deputy Tech. Dir.:



William Dobbin

Close Date: 26-Dec-18

QA Officer Approval:



Nick Scala

QA Date: 26-Dec-18

Last Updated BY: russ

Updated: 04-Feb-2019 11:29 AM

Reported: 04-Feb-2019 11:29 A

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 21-Dec-18
Initiated By: Russell Pellegrino

Corrective Action Report ID: 3871
Department: MSVOA

Corrective Action Description

CAR Summary: MS/MSD did not meet criteria.

Description of Nonconformance Root/Cause(s): Several compounds did not meet criteria for sample C1812057-016A MS/MSD. Based on the chromatographic evidence this is most likely due to matrix interference.

Description of Corrective Action w/Proposed C.A.: Since MS/MSD show similar results at this time no further corrective action taken. All other QC meets criteria. The samples show many hits in the matrix which will interfere with spike results. All sets of data submitted

Performed By: Russell Pellegrino

Completion Date: 23-Dec-18

Client Notification

Client Notification Required: No Notified By:

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: Monitor all quality control for sample matrix interference. At this time no further corrective action taken. All sets of data submitted

Approval and Closure

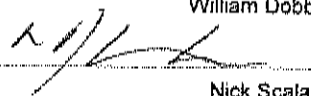
Technical Director /
Deputy Tech. Dir.:



William Dobbin

Close Date: 26-Dec-18

QA Officer Approval:



Nick Scala

QA Date: 26-Dec-18

Last Updated BY russ

Updated: 04-Feb-2019 11:31 AM

Reported: 04-Feb-2019 11:31 A

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 22-Dec-18
Initiated By: Russell Pellegrino

Corrective Action Report ID: 3872
Department: MSVOA

Corrective Action Description

CAR Summary: CC did not meet criteria.

Description of Nonconformance Root/Cause(s): Continuing calibration did not meet criteria on 12/22/18 for Bromoform & Dibromochloroethane. The compound was more sensitive. The compounds in question was not detected in the associated samples. Compounds met criteria in the associated LCS and LCSD

Description of Corrective Action w/Proposed C.A.: Since the compound of interest was not detected the results should be considered valid. If compounds remain outside criteria perform system calibration. All sets of data submitted.

Performed By: Russell Pellegrino

Completion Date: 26-Dec-18

Client Notification

Client Notification Required: No

Notified By:

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: Recalibrate the system ASAP if compound remains outside criteria. Monitoring of all quality control remains post initial calibration. All sets of data submitted.

Approval and Closure

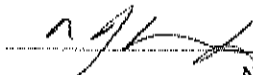
Technical Director /
Deputy Tech. Dir.:



William Dobbin

Close Date: 27-Dec-18

QA Officer Approval:



Nick Scala

QA Date: 27-Dec-18

Last Updated BY russ

Updated: 04-Feb-2019 11:33 AM

Reported: 04-Feb-2019 11:33 A

Centek Laboratories, LLC

Corrective Action Report

Date Initiated: 22-Dec-18
Initiated By: Russell Pellegrino

Corrective Action Report ID: 3873
Department: MSVOA

Corrective Action Description

CAR Summary: IS did not meet criteria.

Description of Nonconformance Root/Cause(s): IS was high and did not meet criteria for samples C1812057-013 & 014. Based on the chromatographic evidence, it appears that the contamination is from high concentration of interfering compounds.

Description of Corrective Action w/Proposed C.A.: Sample was analyzed further as dilutions with criteria being met. Due to matrix being in a canister it is difficult to see any signs of problems. All sets of data submitted.

Performed By: Russell Pellegrino

Completion Date: 26-Dec-18

Client Notification

Client Notification Required: No

Notified By:

Comment:

Quality Assurance Review

Nonconformance Type: Deficiency

Further Action required by QA: Monitor all quality control for sample matrix interference. At this time no further corrective action taken. All sets of data submitted.

Approval and Closure

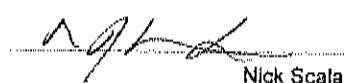
Technical Director /
Deputy Tech. Dir.:



William Dobbin

Close Date: 27-Dec-18

QA Officer Approval:



Nick Scala

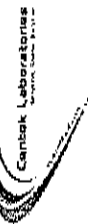
QA Date: 27-Dec-18

Last Updated BY russ

Updated: 04-Feb-2019 11:36 AM

Reported: 04-Feb-2019 11:36 A

Centek Labs - Chain of Custody



143 Midler Park Drive
Syracuse, NY 13206
315-431-8730
www.CentekLabs.com

Vapor Intrusion & IAQ

Site Name: JKEA

Project: Red Hook

PO#: 08-387

Quote # Q-

Canister Order #: 7592

TAT Turnaround Time:
5 Business Days
4 Business Days
3 Business Days
2 Business Days
*Next Day by 5pm
*Next Day by Noon
*Same Day

Check Rush TAT Due Date:
One Surchage %
0%
25%
50%
75%
100%
150%
200%

Company: Soil mech

Report to: 3770 Merrick Rd.

Address: 3770 Merrick Rd.

City, State, Zip: Syrac NY 13203

Email: 501mechanicscorp.com

Phone: 516 674 1466

Canister Number: 232

Regulator Number: 300

Analysis Request: T-15 + Helium

Field Vacuum Start/Stop: 30+15

Labs Vacuum Rec/Analysis: -1

Comments: Duplicate

SVW-1 Dup

SVW-2

SVW-3

SVW-4

SVW-5

SVW-6

SVW-7

SVW-8

SVW-9

SVW-10

SVW-11

SVW-12

SVW-13

SVW-14

SVW-15 MS/MSB

AS-1

AS-2

Signature: Steve Anderson

Print Name: Steve Anderson

Date/Time: 12-14-13

Signature: Robin Gashlew

Print Name: Robin Gashlew

Date/Time: 12-21-13

Signature: Steve Anderson

Print Name: Steve Anderson

Date/Time: 12-21-13

Signature: Steve Anderson

Print Name: Steve Anderson

Date/Time: 12-21-13

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Print Name: Steve Anderson

Date/Time: 12-21-13

Signature: Steve Anderson



CENTEK LABORATORIES, LLC

Sample Receipt Checklist

Client Name: SOIL MECHANICS

Date and Time Received

12/21/2018

Work Order Number C1812057

Received by: RG

Checklist completed by

Robin Gustafson
Signature

12/21/18
Date

Reviewed by

RM
Initials

12/21/19
Date

Matrix:

Carrier name: FedEx Ground

Shipping container/cooler in good condition?	Yes ☒	No ☐	Not Present ☐
Custody seals intact on shipping container/cooler?	Yes ☐	No ☒	Not Present ☐
Custody seals intact on sample bottles?	Yes ☐	No ☒	Not Present ☐
Chain of custody present?	Yes ☒	No ☐	
Chain of custody signed when relinquished and received?	Yes ☒	No ☐	
Chain of custody agrees with sample labels?	Yes ☒	No ☐	
Samples in proper container/bottle?	Yes ☒	No ☐	
Sample containers intact?	Yes ☒	No ☐	
Sufficient sample volume for indicated test?	Yes ☒	No ☐	
All samples received within holding time?	Yes ☒	No ☐	
Container/Temp Blank temperature in compliance?	Yes ☒	No ☐	
Water - VOA vials have zero headspace?	No VOA vials submitted ☒	Yes ☐	No ☐
Water - pH acceptable upon receipt?	Yes ☒	No ☐	

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below

Client contacted: _____ Date contacted: _____ Person contacted: _____

Contacted by: _____ Regarding: _____

Comments: SVW12 canister #562 wrote wrong number -3
Lab vacuum received

Corrective Action: Changed to -1



CEN TEK LABORATORIES, LLC

Date: 24-Jan-19

CLIENT: SOIL MECHANICS
Project: IKEA-RED HOOK
Lab Order: C1812057

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1812057-001A	SVW-1	232,300	12/14/2018	12/21/2018
C1812057-002A	SVW-1Dup	1185,300	12/14/2018	12/21/2018
C1812057-003A	SVW-2	328,279	12/14/2018	12/21/2018
C1812057-004A	SVW-3	542,1165	12/14/2018	12/21/2018
C1812057-005A	SVW-4	475,1170	12/14/2018	12/21/2018
C1812057-006A	SVW-5	86,180	12/14/2018	12/21/2018
C1812057-007A	SVW-6	1318,1164	12/14/2018	12/21/2018

CLIENT: SOIL MECHANICS
Project: IKEA-RED HOOK
Lab Order: C1812057

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1812057-008A	SVW-7	554,1158	12/14/2018	12/21/2018
C1812057-009A	SVW-8	240,251	12/14/2018	12/21/2018
C1812057-010A	SVW-9	1179,1161	12/14/2018	12/21/2018
C1812057-011A	SVW-10	233,1154	12/14/2018	12/21/2018
C1812057-012A	SVW-11	353,387	12/14/2018	12/21/2018
C1812057-013A	SVW-12	562,1163	12/14/2018	12/21/2018
C1812057-014A	SVW-13	352,1153	12/14/2018	12/21/2018
C1812057-015A	SVW-14	320,277	12/14/2018	12/21/2018

CLIENT: SOIL MECHANICS
Project: IKEA-RED HOOK
Lab Order: C1812057

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Tag Number	Collection Date	Date Received
C1812057-016A	SVW-15	1207,1343	12/14/2018	12/21/2018
C1812057-017A	AS-1	1176,1172	12/14/2018	12/21/2018
C1812057-018A	AS-2	285,187	12/14/2018	12/21/2018
C1812057-019A	TB-1	1182	12/14/2018	12/21/2018

Lab Order: C1812057

Client: SOIL MECHANICS

Project: IKEA-RED HOOK

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1812057-001A	SVW-1	12/14/2018	Air	lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/22/2018
				Helium Leak Test			12/31/2018
C1812057-002A	SVW-1Dup			lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-003A	SVW-2			lug/M3 by Method TO15			12/22/2018
				Helium Leak Test			12/31/2018
C1812057-004A	SVW-3			lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-005A	SVW-4			lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-006A	SVW-5			lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/22/2018
				Helium Leak Test			12/31/2018
C1812057-007A	SVW-6			lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-008A	SVW-7			lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/22/2018
				Helium Leak Test			12/31/2018
C1812057-009A	SVW-8			lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/22/2018
				Helium Leak Test			12/31/2018

Lab Order: C1812057
 Client: SOIL MECHANICS
 Project: IKEA-RED HOOK

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1812057-010A	SVW-9	12/14/2018	Air	lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-011A	SVW-10			lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/24/2018
				Helium Leak Test			12/31/2018
C1812057-012A	SVW-11			lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-013A	SVW-12			lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-014A	SVW-13			lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-015A	SVW-14			lug/M3 by Method TO15			12/22/2018
				lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/23/2018
				lug/M3 by Method TO15			12/23/2018
				Helium Leak Test			12/31/2018
C1812057-016A	SVW-15			lug/M3 by Method TO15			12/21/2018
				Helium Leak Test			12/31/2018

Lab Order: C1812057

Client: SOIL MECHANICS

Project: IKEA-RED HOOK

DATES REPORT

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
C1812057-017A	AS-1	12/14/2018	Air	1ug/M3 by Method TO15			12/21/2018
				1ug/M3 by Method TO15			12/22/2018
				Helium Leak Test			12/31/2018
C1812057-018A	AS-2			1ug/M3 by Method TO15			12/21/2018
				1ug/M3 by Method TO15			12/22/2018
				Helium Leak Test			12/31/2018
C1812057-019A	TB-1			1ug/M3 by Method TO15			12/21/2018



CENTEK LABORATORIES, LLC

Air Quality Testing...It's a Gas

143 Midler Park Drive * Syracuse, NY 13206
TEL: 315-431-9730 * FAX: 315-431-9731

CANISTER ORDER

7592

24-Jan-19

SHIPPED TO:

Company: SOIL MECHANICS
Contact: SOIL MECHANICS
Address: 3770 Merrick Road
Seafood, NY 11783
Phone: 516-221-7500
Quote ID: 0
Project:
PO:

Submitted By:

MadeBy: rjp

Ship Date: 12/10/2018
VIA: FedEx Ground
Due Date: 12/12/2018

Bottle Code	Bottle Type	TEST(s)	QTY
MC1400CC	1.4L Mini-Can	1ug/M3 by Method TO15	1
MC1000CC	1L Mini-Can	1ug/M3 by Method TO15	20

Can / Reg ID	Description
86	1L Mini-Can - 1091 VI
170	1L Mini-Can - 1141 VI
180	Time-Set Reg - 654 VI
187	Time-Set Reg - 625 VI
232	1L Mini-Can - 1163 VI
233	1L Mini-Can - 1164 VI
240	1L Mini-Can - 1172 VI
251	Time-Set Reg - 689 VI
274	1L Mini-Can - 1189 VI
277	Time-Set Reg - 633 VI
279	Time-Set Reg - 635 VI
285	1L Mini-Can - 1061 VI
300	Time-Set Reg - 723 VI
320	1L Mini-Can - 1283 VI
328	1L Mini-Can - 1291 VI
352	1L Mini-Can - 1301 VI
353	1L Mini-Can - 1302 VI
382	Time-Set Reg - 756 VI
387	Time-Set Reg - 761 VI
475	1L Mini-Can - 1377 VI
542	1L Mini-Can - 110 VI
554	1L Mini-Can - 122 VI
562	1L Mini-Can - 132 VI
1152	Time-Set Reg-0744 VI
1153	Time-Set Reg-0745 VI
1154	Time-Set Reg-0680 VI
1158	Time-Set Reg-0671 VI
1161	Time-Set Reg-0674 VI
1163	Time-Set Reg-0676 VI
1164	Time-Set Reg-0677 VI
1165	Time-Set Reg-0678 VI
1170	Time-Set Reg-0795 VI

SHIPPED TO:

Company: SOIL MECHANICS
Contact: SOIL MECHANICS
Address: 3770 Merrick Road
Seafood, NY 11783
Phone: 516-221-7500
Quote ID: 0
Project:
PO:

Submitted By:

MadeBy: rjp

Ship Date: 12/10/2018
VIA: FedEx Ground
Due Date: 12/12/2018

Bottle Code	Bottle Type	TEST(s)	QTY
1172	Time-Set Reg-0797 VI		
1176	1L Mini-Can - 1253 VI		
1179	1L Mini-Can - 1249 VI		
1182	1L Mini-Can - 1237 VI		
1185	1L Mini-Can - 1260 VI		
1318	1 L Mini-Can -0108 VI		
1343	Time-Set Reg-2195 IAQ		

Comments: (18) 1L @ 2 hr. + (1) 1.4 @ 2hr + dupe + trip blank IKEA Site WAC 082018A-B, 111918G-I, 112818B-D

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

ANALYTICAL RESULTS

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,1,2-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,1-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,1-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,2-Dibromoethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,2-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,2-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,2-Dichloropropane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,3-butadiene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,3-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,4-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
1,4-Dioxane	< 0.30	0.30	ppbV		1	12/22/2018 12:44:00 AM
2,2,4-trimethylpentane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
4-ethyltoluene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Acetone	5.4	1.5	ppbV		5	12/23/2018 12:54:00 AM
Allyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Benzene	0.22	0.15	ppbV		1	12/22/2018 12:44:00 AM
Benzyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Bromodichloromethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Bromoform	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Bromomethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Carbon disulfide	0.55	0.15	ppbV		1	12/22/2018 12:44:00 AM
Carbon tetrachloride	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Chlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Chloroethane	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Chloroform	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Chloromethane	0.49	0.15	ppbV		1	12/22/2018 12:44:00 AM
cis-1,2-Dichloroethene	0.16	0.15	ppbV		1	12/22/2018 12:44:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15	ppbV		1	12/22/2018 12:44:00 AM
Cyclohexane	0.14	0.15	J ppbV		1	12/22/2018 12:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Page 1 of 38

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Ethyl acetate	0.17	0.15		ppbV	1	12/22/2018 12:44:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 11	0.38	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 12	0.61	0.15		ppbV	1	12/22/2018 12:44:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 12:44:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Hexane	0.25	0.15		ppbV	1	12/22/2018 12:44:00 AM
Isopropyl alcohol	1.3	0.15		ppbV	1	12/22/2018 12:44:00 AM
m&p-Xylene	0.11	0.30	J	ppbV	1	12/22/2018 12:44:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl Ethyl Ketone	0.41	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl Isobutyl Ketone	0.54	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Methylene chloride	0.46	0.15		ppbV	1	12/22/2018 12:44:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Toluene	0.75	0.15		ppbV	1	12/22/2018 12:44:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Trichloroethene	0.20	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Surr: Bromofluorobenzene	75.0	70-130		%REC	1	12/22/2018 12:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Page 2 of 38

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:44:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:44:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:44:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:44:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 12:44:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 12:44:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 12:44:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
Acetone	13	3.6		ug/m3	5	12/23/2018 12:54:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 12:44:00 AM
Benzene	0.70	0.48		ug/m3	1	12/22/2018 12:44:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 12:44:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 12:44:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 12:44:00 AM
Carbon disulfide	1.7	0.47		ug/m3	1	12/22/2018 12:44:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 12:44:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 12:44:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 12:44:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 12:44:00 AM
Chloromethane	1.0	0.31		ug/m3	1	12/22/2018 12:44:00 AM
cis-1,2-Dichloroethene	0.63	0.59		ug/m3	1	12/22/2018 12:44:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:44:00 AM
Cyclohexane	0.48	0.52	J	ug/m3	1	12/22/2018 12:44:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 12:44:00 AM
Ethyl acetate	0.61	0.54		ug/m3	1	12/22/2018 12:44:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 12:44:00 AM
Freon 11	2.1	0.84		ug/m3	1	12/22/2018 12:44:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	3.0	0.74		ug/m3	1	12/22/2018 12:44:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 12:44:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 12:44:00 AM
Hexane	0.88	0.53		ug/m3	1	12/22/2018 12:44:00 AM
Isopropyl alcohol	3.1	0.37		ug/m3	1	12/22/2018 12:44:00 AM
m&p-Xylene	0.48	1.3	J	ug/m3	1	12/22/2018 12:44:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
Methyl Ethyl Ketone	1.2	0.88		ug/m3	1	12/22/2018 12:44:00 AM
Methyl Isobutyl Ketone	2.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 12:44:00 AM
Methylene chloride	1.6	0.52		ug/m3	1	12/22/2018 12:44:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 12:44:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 12:44:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 12:44:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 12:44:00 AM
Toluene	2.8	0.57		ug/m3	1	12/22/2018 12:44:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:44:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:44:00 AM
Trichloroethene	1.1	0.81		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 12:44:00 AM

Qualifiers:	** Quantitation Limit	- Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
				FLD		Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
				GC		Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
				TO-15		Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:24:00 AM
2,2,4-trimethylpentane	0.12	0.15	J	ppbV	1	12/22/2018 1:24:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Acetone	4.6	1.5		ppbV	5	12/23/2018 1:31:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Benzene	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Carbon disulfide	0.94	0.15		ppbV	1	12/22/2018 1:24:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloromethane	0.48	0.15		ppbV	1	12/22/2018 1:24:00 AM
cis-1,2-Dichloroethene	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Cyclohexane	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Ethyl acetate	0.33	0.15		ppbV	1	12/22/2018 1:24:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 11	0.34	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 12	0.55	0.15		ppbV	1	12/22/2018 1:24:00 AM
Heptane	0.19	0.15		ppbV	1	12/22/2018 1:24:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 1:24:00 AM
Isopropyl alcohol	1.6	0.15		ppbV	1	12/22/2018 1:24:00 AM
m&p-Xylene	0.15	0.30	J	ppbV	1	12/22/2018 1:24:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:24:00 AM
Methyl Ethyl Ketone	0.29	0.30	J	ppbV	1	12/22/2018 1:24:00 AM
Methyl Isobutyl Ketone	0.48	0.30		ppbV	1	12/22/2018 1:24:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Methylene chloride	0.72	0.15		ppbV	1	12/22/2018 1:24:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Toluene	1.6	0.15		ppbV	1	12/22/2018 1:24:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Trichloroethene	0.41	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Surr: Bromofluorobenzene	74.0	70-130		%REC	1	12/22/2018 1:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:24:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:24:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:24:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:24:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:24:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:24:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	12/22/2018 1:24:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
Acetone	11	3.6		ug/m3	5	12/23/2018 1:31:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:24:00 AM
Benzene	0.70	0.48		ug/m3	1	12/22/2018 1:24:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:24:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:24:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:24:00 AM
Carbon disulfide	2.9	0.47		ug/m3	1	12/22/2018 1:24:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:24:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:24:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:24:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 1:24:00 AM
Chloromethane	0.99	0.31		ug/m3	1	12/22/2018 1:24:00 AM
cis-1,2-Dichloroethene	0.87	0.59		ug/m3	1	12/22/2018 1:24:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:24:00 AM
Cyclohexane	0.76	0.52		ug/m3	1	12/22/2018 1:24:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:24:00 AM
Ethyl acetate	1.2	0.54		ug/m3	1	12/22/2018 1:24:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:24:00 AM
Freon 11	1.9	0.84		ug/m3	1	12/22/2018 1:24:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	2.7	0.74		ug/m3	1	12/22/2018 1:24:00 AM
Heptane	0.78	0.61		ug/m3	1	12/22/2018 1:24:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:24:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 1:24:00 AM
Isopropyl alcohol	4.0	0.37		ug/m3	1	12/22/2018 1:24:00 AM
m&p-Xylene	0.65	1.3	J	ug/m3	1	12/22/2018 1:24:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:24:00 AM
Methyl Ethyl Ketone	0.86	0.88	J	ug/m3	1	12/22/2018 1:24:00 AM
Methyl Isobutyl Ketone	2.0	1.2		ug/m3	1	12/22/2018 1:24:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:24:00 AM
Methylene chloride	2.5	0.52		ug/m3	1	12/22/2018 1:24:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:24:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:24:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:24:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 1:24:00 AM
Toluene	5.8	0.57		ug/m3	1	12/22/2018 1:24:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:24:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:24:00 AM
Trichloroethene	2.2	0.81		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 1:24:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Acetone	2.2	0.30		ppbV	1	12/22/2018 2:04:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Benzene	0.19	0.15		ppbV	1	12/22/2018 2:04:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM

Qualifiers:	** Quantitation Limit	.
	B Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits	

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Ethyl acetate	0.18	0.15		ppbV	1	12/22/2018 2:04:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 11	0.41	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 12	0.37	0.15		ppbV	1	12/22/2018 2:04:00 AM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 2:04:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Hexane	0.14	0.15	J	ppbV	1	12/22/2018 2:04:00 AM
Isopropyl alcohol	0.44	0.15		ppbV	1	12/22/2018 2:04:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Methylene chloride	0.20	0.15		ppbV	1	12/22/2018 2:04:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Toluene	0.69	0.15		ppbV	1	12/22/2018 2:04:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 2:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:04:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:04:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:04:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:04:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:04:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 2:04:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
Acetone	5.1	0.71		ug/m3	1	12/22/2018 2:04:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:04:00 AM
Benzene	0.61	0.48		ug/m3	1	12/22/2018 2:04:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:04:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:04:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:04:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/22/2018 2:04:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:04:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:04:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:04:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 2:04:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:04:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:04:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 2:04:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:04:00 AM
Ethyl acetate	0.65	0.54		ug/m3	1	12/22/2018 2:04:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 2:04:00 AM
Freon 11	2.3	0.84		ug/m3	1	12/22/2018 2:04:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15				TO-15	Analyst: RJP	
Freon 12	1.8	0.74		ug/m3	1	12/22/2018 2:04:00 AM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 2:04:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:04:00 AM
Hexane	0.49	0.53	J	ug/m3	1	12/22/2018 2:04:00 AM
Isopropyl alcohol	1.1	0.37		ug/m3	1	12/22/2018 2:04:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:04:00 AM
Methylene chloride	0.69	0.52		ug/m3	1	12/22/2018 2:04:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 2:04:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:04:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 2:04:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 2:04:00 AM
Toluene	2.6	0.57		ug/m3	1	12/22/2018 2:04:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:04:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 2:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,1,2-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,1-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,1-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2,4-Trimethylbenzene	1.0	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2-Dibromoethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2-Dichloropropane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,3,5-Trimethylbenzene	0.39	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,3-butadiene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,3-Dichlorobenzene	0.28	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,4-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,4-Dioxane	< 0.30	0.30	ppbV		1	12/22/2018 2:44:00 AM
2,2,4-trimethylpentane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
4-ethyltoluene	0.40	0.15	ppbV		1	12/22/2018 2:44:00 AM
Acetone	19	3.0	ppbV		10	12/23/2018 2:08:00 AM
Allyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Benzene	0.36	0.15	ppbV		1	12/22/2018 2:44:00 AM
Benzyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Bromodichloromethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Bromoform	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Bromomethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Carbon disulfide	62	6.0	ppbV		40	12/23/2018 2:45:00 AM
Carbon tetrachloride	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Chlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Chloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Chloroform	0.16	0.15	ppbV		1	12/22/2018 2:44:00 AM
Chloromethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Cyclohexane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
J Analyte detected below quantitation limit
IN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Ethylbenzene	0.61	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 11	0.58	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 12	0.48	0.15		ppbV	1	12/22/2018 2:44:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 2:44:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 2:44:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
m&p-Xylene	1.3	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Ethyl Ketone	0.56	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Isobutyl Ketone	7.0	3.0		ppbV	10	12/23/2018 2:08:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Methylene chloride	0.23	0.15		ppbV	1	12/22/2018 2:44:00 AM
o-Xylene	0.41	0.15		ppbV	1	12/22/2018 2:44:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Tetrachloroethylene	0.16	0.15		ppbV	1	12/22/2018 2:44:00 AM
Tetrahydrofuran	3.6	1.5		ppbV	10	12/23/2018 2:08:00 AM
Toluene	4.3	1.5		ppbV	10	12/23/2018 2:08:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Surr: Bromofluorobenzene	88.0	70-130		%REC	1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:44:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:44:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:44:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
1,2,4-Trimethylbenzene	5.1	0.74		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:44:00 AM
1,3,5-Trimethylbenzene	1.9	0.74		ug/m3	1	12/22/2018 2:44:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:44:00 AM
1,3-Dichlorobenzene	1.7	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 2:44:00 AM
4-ethyltoluene	2.0	0.74		ug/m3	1	12/22/2018 2:44:00 AM
Acetone	45	7.1		ug/m3	10	12/23/2018 2:08:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:44:00 AM
Benzene	1.1	0.48		ug/m3	1	12/22/2018 2:44:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:44:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:44:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:44:00 AM
Carbon disulfide	190	19		ug/m3	40	12/23/2018 2:45:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:44:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:44:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:44:00 AM
Chloroform	0.78	0.73		ug/m3	1	12/22/2018 2:44:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:44:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:44:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 2:44:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:44:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 2:44:00 AM
Ethylbenzene	2.6	0.65		ug/m3	1	12/22/2018 2:44:00 AM
Freon 11	3.3	0.84		ug/m3	1	12/22/2018 2:44:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15				TO-15		Analyst: RJP
Freon 12	2.4	0.74		ug/m3	1	12/22/2018 2:44:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 2:44:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:44:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 2:44:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 2:44:00 AM
m&p-Xylene	5.6	1.3		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Ethyl Ketone	1.7	0.88		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Isobutyl Ketone	29	12		ug/m3	10	12/23/2018 2:08:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:44:00 AM
Methylene chloride	0.80	0.52		ug/m3	1	12/22/2018 2:44:00 AM
o-Xylene	1.8	0.65		ug/m3	1	12/22/2018 2:44:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:44:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 2:44:00 AM
Tetrachloroethylene	1.1	1.0		ug/m3	1	12/22/2018 2:44:00 AM
Tetrahydrofuran	11	4.4		ug/m3	10	12/23/2018 2:08:00 AM
Toluene	16	5.7		ug/m3	10	12/23/2018 2:08:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:44:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,4-Dichlorobenzene	0.11	0.15	J	ppbV	1	12/22/2018 3:25:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
2,2,4-trimethylpentane	0.10	0.15	J	ppbV	1	12/22/2018 3:25:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Acetone	8.1	3.0		ppbV	10	12/23/2018 3:22:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Benzene	0.36	0.15		ppbV	1	12/22/2018 3:25:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Carbon disulfide	8.2	1.5		ppbV	10	12/23/2018 3:22:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Cyclohexane	0.55	0.15		ppbV	1	12/22/2018 3:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 11	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 12	0.76	0.15		ppbV	1	12/22/2018 3:25:00 AM
Heptane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Hexane	0.61	0.15		ppbV	1	12/22/2018 3:25:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Methylene chloride	0.21	0.15		ppbV	1	12/22/2018 3:25:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Toluene	0.36	0.15		ppbV	1	12/22/2018 3:25:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Surr: Bromofluorobenzene	129	70-130		%REC	1	12/22/2018 3:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15				TO-15	Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:25:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:25:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:25:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:25:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:25:00 AM
1,4-Dichlorobenzene	0.66	0.90	J	ug/m3	1	12/22/2018 3:25:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
2,2,4-trimethylpentane	0.47	0.70	J	ug/m3	1	12/22/2018 3:25:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
Acetone	19	7.1		ug/m3	10	12/23/2018 3:22:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:25:00 AM
Benzene	1.1	0.48		ug/m3	1	12/22/2018 3:25:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:25:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:25:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:25:00 AM
Carbon disulfide	26	4.7		ug/m3	10	12/23/2018 3:22:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:25:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:25:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 3:25:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:25:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:25:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:25:00 AM
Cyclohexane	1.9	0.52		ug/m3	1	12/22/2018 3:25:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:25:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:25:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 3:25:00 AM
Freon 11	< 0.84	0.84		ug/m3	1	12/22/2018 3:25:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	3.8	0.74		ug/m3	1	12/22/2018 3:25:00 AM
Heptane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:25:00 AM
Hexane	2.1	0.53		ug/m3	1	12/22/2018 3:25:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:25:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:25:00 AM
Methylene chloride	0.73	0.52		ug/m3	1	12/22/2018 3:25:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 3:25:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:25:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 3:25:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 3:25:00 AM
Toluene	1.4	0.57		ug/m3	1	12/22/2018 3:25:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:25:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 3:25:00 AM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-4			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,1,2-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,1-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,1-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,2-Dibromoethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,2-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,2-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,2-Dichloropropane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,3-butadiene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,3-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,4-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
1,4-Dioxane	< 0.30	0.30	ppbV		1	12/22/2018 4:04:00 AM
2,2,4-trimethylpentane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
4-ethyltoluene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Acetone	7.3	1.5	ppbV		5	12/23/2018 4:36:00 AM
Allyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Benzene	0.16	0.15	ppbV		1	12/22/2018 4:04:00 AM
Benzyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Bromodichloromethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Bromoform	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Bromomethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Carbon disulfide	2.5	0.75	ppbV		5	12/23/2018 4:36:00 AM
Carbon tetrachloride	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Chlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Chloroethane	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Chloroform	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Chloromethane	0.23	0.15	ppbV		1	12/22/2018 4:04:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15	ppbV		1	12/22/2018 4:04:00 AM
Cyclohexane	0.11	0.15	J ppbV		1	12/22/2018 4:04:00 AM

Qualifiers:	**	Quantitation Limit	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits	

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 11	0.32	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 12	0.58	0.15		ppbV	1	12/22/2018 4:04:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 4:04:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Hexane	0.18	0.15		ppbV	1	12/22/2018 4:04:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
m&p-Xylene	0.11	0.30	J	ppbV	1	12/22/2018 4:04:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl Ethyl Ketone	0.54	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Methylene chloride	0.14	0.15	J	ppbV	1	12/22/2018 4:04:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Toluene	0.53	0.15		ppbV	1	12/22/2018 4:04:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Surr: Bromofluorobenzene	78.0	70-130		%REC	1	12/22/2018 4:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:04:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:04:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:04:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 4:04:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 4:04:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 4:04:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
Acetone	17	3.6		ug/m3	5	12/23/2018 4:36:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 4:04:00 AM
Benzene	0.51	0.48		ug/m3	1	12/22/2018 4:04:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 4:04:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 4:04:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 4:04:00 AM
Carbon disulfide	7.8	2.3		ug/m3	5	12/23/2018 4:36:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 4:04:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 4:04:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 4:04:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 4:04:00 AM
Chloromethane	0.47	0.31		ug/m3	1	12/22/2018 4:04:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:04:00 AM
Cyclohexane	0.38	0.52	J	ug/m3	1	12/22/2018 4:04:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 4:04:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 4:04:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 4:04:00 AM
Freon 11	1.8	0.84		ug/m3	1	12/22/2018 4:04:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

, Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15				TO-15	Analyst: RJP	
Freon 12	2.9	0.74		ug/m3	1	12/22/2018 4:04:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 4:04:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 4:04:00 AM
Hexane	0.63	0.53		ug/m3	1	12/22/2018 4:04:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 4:04:00 AM
m&p-Xylene	0.48	1.3	J	ug/m3	1	12/22/2018 4:04:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
Methyl Ethyl Ketone	1.6	0.88		ug/m3	1	12/22/2018 4:04:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 4:04:00 AM
Methylene chloride	0.49	0.52	J	ug/m3	1	12/22/2018 4:04:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 4:04:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 4:04:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 4:04:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 4:04:00 AM
Toluene	2.0	0.57		ug/m3	1	12/22/2018 4:04:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:04:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 4:04:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 4:45:00 AM
2,2,4-trimethylpentane	0.12	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Acetone	7.2	1.5		ppbV	5	12/23/2018 5:14:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Benzene	0.30	0.15		ppbV	1	12/22/2018 4:45:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Carbon disulfide	3.4	0.75		ppbV	5	12/23/2018 5:14:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloroform	0.26	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloromethane	0.14	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
cis-1,2-Dichloroethene	0.94	0.15		ppbV	1	12/22/2018 4:45:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Ethyl acetate	0.33	0.15		ppbV	1	12/22/2018 4:45:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 11	0.30	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 12	0.56	0.15		ppbV	1	12/22/2018 4:45:00 AM
Heptane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Hexane	0.24	0.15		ppbV	1	12/22/2018 4:45:00 AM
Isopropyl alcohol	2.8	0.75		ppbV	5	12/23/2018 5:14:00 AM
m&p-Xylene	0.34	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Ethyl Ketone	0.35	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Isobutyl Ketone	1.3	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Methylene chloride	0.46	0.15		ppbV	1	12/22/2018 4:45:00 AM
o-Xylene	0.12	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Tetrachloroethylene	0.11	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Toluene	1.5	0.15		ppbV	1	12/22/2018 4:45:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Trichloroethene	1.6	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 4:45:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:45:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:45:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:45:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 4:45:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 4:45:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	12/22/2018 4:45:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
Acetone	17	3.6		ug/m3	5	12/23/2018 5:14:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 4:45:00 AM
Benzene	0.96	0.48		ug/m3	1	12/22/2018 4:45:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 4:45:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 4:45:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 4:45:00 AM
Carbon disulfide	11	2.3		ug/m3	5	12/23/2018 5:14:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 4:45:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 4:45:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 4:45:00 AM
Chloroform	1.3	0.73		ug/m3	1	12/22/2018 4:45:00 AM
Chloromethane	0.29	0.31	J	ug/m3	1	12/22/2018 4:45:00 AM
cis-1,2-Dichloroethene	3.7	0.59		ug/m3	1	12/22/2018 4:45:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:45:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 4:45:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 4:45:00 AM
Ethyl acetate	1.2	0.54		ug/m3	1	12/22/2018 4:45:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 4:45:00 AM
Freon 11	1.7	0.84		ug/m3	1	12/22/2018 4:45:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	2.8	0.74		ug/m3	1	12/22/2018 4:45:00 AM
Heptane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 4:45:00 AM
Hexane	0.85	0.53		ug/m3	1	12/22/2018 4:45:00 AM
Isopropyl alcohol	6.9	1.8		ug/m3	5	12/23/2018 5:14:00 AM
m&p-Xylene	1.5	1.3		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Ethyl Ketone	1.0	0.88		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Isobutyl Ketone	5.4	1.2		ug/m3	1	12/22/2018 4:45:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 4:45:00 AM
Methylene chloride	1.6	0.52		ug/m3	1	12/22/2018 4:45:00 AM
o-Xylene	0.52	0.65	J	ug/m3	1	12/22/2018 4:45:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 4:45:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 4:45:00 AM
Tetrachloroethylene	0.75	1.0	J	ug/m3	1	12/22/2018 4:45:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 4:45:00 AM
Toluene	5.7	0.57		ug/m3	1	12/22/2018 4:45:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:45:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:45:00 AM
Trichloroethene	8.9	0.81		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 4:45:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,1,2-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,1-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,1-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,2-Dibromoethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,2-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,2-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,2-Dichloropropane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,3-butadiene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,3-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,4-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
1,4-Dioxane	< 0.30	0.30	ppbV		1	12/22/2018 5:25:00 AM
2,2,4-trimethylpentane	0.11	0.15	J ppbV		1	12/22/2018 5:25:00 AM
4-ethyltoluene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Acetone	5.8	1.5	ppbV		5	12/23/2018 5:53:00 AM
Allyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Benzene	0.31	0.15	ppbV		1	12/22/2018 5:25:00 AM
Benzyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Bromodichloromethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Bromoform	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Bromomethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Carbon disulfide	10	0.75	ppbV		5	12/23/2018 5:53:00 AM
Carbon tetrachloride	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Chlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Chloroethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Chloroform	8.7	0.75	ppbV		5	12/23/2018 5:53:00 AM
Chloromethane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM
Cyclohexane	< 0.15	0.15	ppbV		1	12/22/2018 5:25:00 AM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 11	0.55	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 12	0.49	0.15		ppbV	1	12/22/2018 5:25:00 AM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 5:25:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 5:25:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Methylene chloride	1.0	0.15		ppbV	1	12/22/2018 5:25:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Tetrachloroethylene	0.16	0.15		ppbV	1	12/22/2018 5:25:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Toluene	0.80	0.15		ppbV	1	12/22/2018 5:25:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Surr: Bromofluorobenzene	72.0	70-130		%REC	1	12/22/2018 5:25:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated,	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 5:25:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 5:25:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 5:25:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 5:25:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 5:25:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
2,2,4-trimethylpentane	0.51	0.70	J	ug/m3	1	12/22/2018 5:25:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
Acetone	14	3.6		ug/m3	5	12/23/2018 5:53:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 5:25:00 AM
Benzene	0.99	0.48		ug/m3	1	12/22/2018 5:25:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 5:25:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 5:25:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 5:25:00 AM
Carbon disulfide	32	2.3		ug/m3	5	12/23/2018 5:53:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 5:25:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 5:25:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 5:25:00 AM
Chloroform	42	3.7		ug/m3	5	12/23/2018 5:53:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 5:25:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 5:25:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 5:25:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 5:25:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 5:25:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 5:25:00 AM
Freon 11	3.1	0.84		ug/m3	1	12/22/2018 5:25:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.4	0.74		ug/m3	1	12/22/2018 5:25:00 AM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 5:25:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 5:25:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 5:25:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 5:25:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 5:25:00 AM
Methylene chloride	3.5	0.52		ug/m3	1	12/22/2018 5:25:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 5:25:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 5:25:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 5:25:00 AM
Tetrachloroethylene	1.1	1.0		ug/m3	1	12/22/2018 5:25:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 5:25:00 AM
Toluene	3.0	0.57		ug/m3	1	12/22/2018 5:25:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 5:25:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 5:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,1,2-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,1-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,1-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,2,4-Trimethylbenzene	2.0	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,2-Dibromoethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,2-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,2-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,2-Dichloropropane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,3,5-Trimethylbenzene	0.51	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,3-butadiene	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,3-Dichlorobenzene	0.24	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,4-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
1,4-Dioxane	< 0.30	0.30	ppbV		1	12/22/2018 7:24:00 AM
2,2,4-trimethylpentane	0.65	0.15	ppbV		1	12/22/2018 7:24:00 AM
4-ethyltoluene	0.32	0.15	ppbV		1	12/22/2018 7:24:00 AM
Acetone	19	3.0	ppbV		10	12/23/2018 6:32:00 AM
Allyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Benzene	1.1	0.15	ppbV		1	12/22/2018 7:24:00 AM
Benzyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Bromodichloromethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Bromoform	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Bromomethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Carbon disulfide	54	6.0	ppbV		40	12/23/2018 7:09:00 AM
Carbon tetrachloride	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Chlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Chloroethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Chloroform	1.2	0.15	ppbV		1	12/22/2018 7:24:00 AM
Chloromethane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM
Cyclohexane	< 0.15	0.15	ppbV		1	12/22/2018 7:24:00 AM

Qualifiers: ** Quantitation Limit
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits
 . Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Ethylbenzene	0.40	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 11	0.39	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 12	0.44	0.15		ppbV	1	12/22/2018 7:24:00 AM
Heptane	0.71	0.15		ppbV	1	12/22/2018 7:24:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Hexane	13	1.5		ppbV	10	12/23/2018 6:32:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
m&p-Xylene	1.2	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl Ethyl Ketone	0.19	0.30	J	ppbV	1	12/22/2018 7:24:00 AM
Methyl Isobutyl Ketone	1.6	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Methylene chloride	8.3	1.5		ppbV	10	12/23/2018 6:32:00 AM
o-Xylene	0.60	0.15		ppbV	1	12/22/2018 7:24:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Styrene	0.13	0.15	J	ppbV	1	12/22/2018 7:24:00 AM
Tetrachloroethylene	0.54	0.15		ppbV	1	12/22/2018 7:24:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Toluene	1.6	0.15		ppbV	1	12/22/2018 7:24:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Surr: Bromofluorobenzene	86.0	70-130		%REC	1	12/22/2018 7:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 7:24:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 7:24:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 7:24:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
1,2,4-Trimethylbenzene	9.9	0.74		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 7:24:00 AM
1,3,5-Trimethylbenzene	2.5	0.74		ug/m3	1	12/22/2018 7:24:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 7:24:00 AM
1,3-Dichlorobenzene	1.4	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
2,2,4-trimethylpentane	3.0	0.70		ug/m3	1	12/22/2018 7:24:00 AM
4-ethyltoluene	1.6	0.74		ug/m3	1	12/22/2018 7:24:00 AM
Acetone	46	7.1		ug/m3	10	12/23/2018 6:32:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 7:24:00 AM
Benzene	3.4	0.48		ug/m3	1	12/22/2018 7:24:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 7:24:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 7:24:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 7:24:00 AM
Carbon disulfide	170	19		ug/m3	40	12/23/2018 7:09:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 7:24:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 7:24:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 7:24:00 AM
Chloroform	6.1	0.73		ug/m3	1	12/22/2018 7:24:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 7:24:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 7:24:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 7:24:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 7:24:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 7:24:00 AM
Ethylbenzene	1.7	0.65		ug/m3	1	12/22/2018 7:24:00 AM
Freon 11	2.2	0.84		ug/m3	1	12/22/2018 7:24:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	2.2	0.74		ug/m3	1	12/22/2018 7:24:00 AM
Heptane	2.9	0.61		ug/m3	1	12/22/2018 7:24:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 7:24:00 AM
Hexane	46	5.3		ug/m3	10	12/23/2018 6:32:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 7:24:00 AM
m&p-Xylene	5.3	1.3		ug/m3	1	12/22/2018 7:24:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 7:24:00 AM
Methyl Ethyl Ketone	0.56	0.88	J	ug/m3	1	12/22/2018 7:24:00 AM
Methyl Isobutyl Ketone	6.4	1.2		ug/m3	1	12/22/2018 7:24:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 7:24:00 AM
Methylene chloride	29	5.2		ug/m3	10	12/23/2018 6:32:00 AM
o-Xylene	2.6	0.65		ug/m3	1	12/22/2018 7:24:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 7:24:00 AM
Styrene	0.55	0.64	J	ug/m3	1	12/22/2018 7:24:00 AM
Tetrachloroethylene	3.7	1.0		ug/m3	1	12/22/2018 7:24:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 7:24:00 AM
Toluene	6.0	0.57		ug/m3	1	12/22/2018 7:24:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 7:24:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 7:24:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	0.27	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2,4-Trimethylbenzene	1.3	1.4	J	ppbV	9	12/23/2018 3:10:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3,5-Trimethylbenzene	0.66	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3-Dichlorobenzene	0.25	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 12:32:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
4-ethyltoluene	0.43	0.15		ppbV	1	12/22/2018 12:32:00 PM
Acetone	27	27		ppbV	90	12/23/2018 3:47:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Benzene	0.44	0.15		ppbV	1	12/22/2018 12:32:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Carbon disulfide	22	14		ppbV	90	12/23/2018 3:47:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chloroform	3.1	1.4		ppbV	9	12/23/2018 3:10:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Cyclohexane	0.42	0.15		ppbV	1	12/22/2018 12:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Ethylbenzene	0.43	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 11	0.30	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 12	0.40	0.15		ppbV	1	12/22/2018 12:32:00 PM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 12:32:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
m&p-Xylene	1.4	0.30		ppbV	1	12/22/2018 12:32:00 PM
Methyl Butyl Ketone	0.12	0.30	J	ppbV	1	12/22/2018 12:32:00 PM
Methyl Ethyl Ketone	2.1	0.30		ppbV	1	12/22/2018 12:32:00 PM
Methyl Isobutyl Ketone	68	27		ppbV	90	12/23/2018 3:47:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Methylene chloride	15	1.4		ppbV	9	12/23/2018 3:10:00 PM
o-Xylene	0.91	0.15		ppbV	1	12/22/2018 12:32:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Styrene	0.14	0.15	J	ppbV	1	12/22/2018 12:32:00 PM
Tetrachloroethylene	0.68	0.15		ppbV	1	12/22/2018 12:32:00 PM
Tetrahydrofuran	2.4	1.4		ppbV	9	12/23/2018 3:10:00 PM
Toluene	1.7	0.15		ppbV	1	12/22/2018 12:32:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl chloride	0.40	0.15		ppbV	1	12/22/2018 12:32:00 PM
Surr: Bromofluorobenzene	86.0	70-130		%REC	1	12/22/2018 12:32:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	1.5	0.82		ug/m3	1	12/22/2018 12:32:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:32:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:32:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
1,2,4-Trimethylbenzene	6.2	6.9	J	ug/m3	9	12/23/2018 3:10:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 12:32:00 PM
1,3,5-Trimethylbenzene	3.2	0.74		ug/m3	1	12/22/2018 12:32:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 12:32:00 PM
1,3-Dichlorobenzene	1.5	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 12:32:00 PM
4-ethyltoluene	2.1	0.74		ug/m3	1	12/22/2018 12:32:00 PM
Acetone	64	64		ug/m3	90	12/23/2018 3:47:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 12:32:00 PM
Benzene	1.4	0.48		ug/m3	1	12/22/2018 12:32:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 12:32:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 12:32:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 12:32:00 PM
Carbon disulfide	70	44		ug/m3	90	12/23/2018 3:47:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 12:32:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 12:32:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 12:32:00 PM
Chloroform	15	6.8		ug/m3	9	12/23/2018 3:10:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 12:32:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:32:00 PM
Cyclohexane	1.4	0.52		ug/m3	1	12/22/2018 12:32:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 12:32:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 12:32:00 PM
Ethylbenzene	1.9	0.65		ug/m3	1	12/22/2018 12:32:00 PM
Freon 11	1.7	0.84		ug/m3	1	12/22/2018 12:32:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
Freon 12	2.0	0.74		ug/m3	1	12/22/2018 12:32:00 PM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 12:32:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 12:32:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/22/2018 12:32:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 12:32:00 PM
m&p-Xylene	6.2	1.3		ug/m3	1	12/22/2018 12:32:00 PM
Methyl Butyl Ketone	0.49	1.2	J	ug/m3	1	12/22/2018 12:32:00 PM
Methyl Ethyl Ketone	6.1	0.88		ug/m3	1	12/22/2018 12:32:00 PM
Methyl Isobutyl Ketone	280	110		ug/m3	90	12/23/2018 3:47:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 12:32:00 PM
Methylene chloride	52	4.9		ug/m3	9	12/23/2018 3:10:00 PM
o-Xylene	4.0	0.65		ug/m3	1	12/22/2018 12:32:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 12:32:00 PM
Styrene	0.60	0.64	J	ug/m3	1	12/22/2018 12:32:00 PM
Tetrachloroethylene	4.6	1.0		ug/m3	1	12/22/2018 12:32:00 PM
Tetrahydrofuran	7.2	4.1		ug/m3	9	12/23/2018 3:10:00 PM
Toluene	6.5	0.57		ug/m3	1	12/22/2018 12:32:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:32:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl chloride	1.0	0.38		ug/m3	1	12/22/2018 12:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-7			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichloroethane	0.13	0.15	J	ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Acetone	16	3.0		ppbV	10	12/23/2018 4:25:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Carbon disulfide	4.8	1.5		ppbV	10	12/23/2018 4:25:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloroform	0.55	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Cyclohexane	0.43	0.15		ppbV	1	12/22/2018 1:15:00 PM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte, Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 11	0.21	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 12	0.39	0.15		ppbV	1	12/22/2018 1:15:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/22/2018 1:15:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Hexane	1.1	0.15		ppbV	1	12/22/2018 1:15:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Isobutyl Ketone	55	27		ppbV	90	12/24/2018 7:47:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Methylene chloride	52	14		ppbV	90	12/24/2018 7:47:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Tetrahydrofuran	4.3	1.5		ppbV	10	12/23/2018 4:25:00 PM
Toluene	0.24	0.15		ppbV	1	12/22/2018 1:15:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl chloride	0.28	0.15		ppbV	1	12/22/2018 1:15:00 PM
Surr: Bromofluorobenzene	84.0	70-130		%REC	1	12/22/2018 1:15:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:15:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:15:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:15:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichloroethane	0.53	0.61	J	ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:15:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:15:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 1:15:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
Acetone	37	7.1		ug/m3	10	12/23/2018 4:25:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:15:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/22/2018 1:15:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:15:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:15:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:15:00 PM
Carbon disulfide	15	4.7		ug/m3	10	12/23/2018 4:25:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:15:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:15:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:15:00 PM
Chloroform	2.7	0.73		ug/m3	1	12/22/2018 1:15:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 1:15:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:15:00 PM
Cyclohexane	1.5	0.52		ug/m3	1	12/22/2018 1:15:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:15:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 1:15:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:15:00 PM
Freon 11	1.2	0.84		ug/m3	1	12/22/2018 1:15:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	1.9	0.74		ug/m3	1	12/22/2018 1:15:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/22/2018 1:15:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:15:00 PM
Hexane	3.8	0.53		ug/m3	1	12/22/2018 1:15:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 1:15:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Isobutyl Ketone	220	110		ug/m3	90	12/24/2018 7:47:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:15:00 PM
Methylene chloride	180	49		ug/m3	90	12/24/2018 7:47:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:15:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:15:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:15:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
Tetrahydrofuran	13	4.4		ug/m3	10	12/23/2018 4:25:00 PM
Toluene	0.90	0.57		ug/m3	1	12/22/2018 1:15:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:15:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl chloride	0.72	0.38		ug/m3	1	12/22/2018 1:15:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-10			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2,4-Trimethylbenzene	0.11	0.15	J	ppbV	1	12/22/2018 1:58:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Acetone	9.6	1.5		ppbV	5	12/23/2018 5:41:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Carbon disulfide	0.52	0.15		ppbV	1	12/22/2018 1:58:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloroform	0.17	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Ethyl acetate	0.18	0.15		ppbV	1	12/22/2018 1:58:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 11	3.2	0.75		ppbV	5	12/23/2018 5:41:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 12	0.41	0.15		ppbV	1	12/22/2018 1:58:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/22/2018 1:58:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Hexane	0.76	0.15		ppbV	1	12/22/2018 1:58:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Isobutyl Ketone	0.80	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Methylene chloride	1.5	0.15		ppbV	1	12/22/2018 1:58:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Tetrachloroethylene	0.40	0.15		ppbV	1	12/22/2018 1:58:00 PM
Tetrahydrofuran	1.6	0.15		ppbV	1	12/22/2018 1:58:00 PM
Toluene	0.70	0.15		ppbV	1	12/22/2018 1:58:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 1:58:00 PM

Qualifiers:	**	Quantitation Limit	,	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:58:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:58:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:58:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
1,2,4-Trimethylbenzene	0.54	0.74	J	ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:58:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:58:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:58:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 1:58:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:58:00 PM
Acetone	23	3.6		ug/m3	5	12/23/2018 5:41:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:58:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/22/2018 1:58:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:58:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:58:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:58:00 PM
Carbon disulfide	1.6	0.47		ug/m3	1	12/22/2018 1:58:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:58:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:58:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:58:00 PM
Chloroform	0.83	0.73		ug/m3	1	12/22/2018 1:58:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 1:58:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:58:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 1:58:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:58:00 PM
Ethyl acetate	0.65	0.54		ug/m3	1	12/22/2018 1:58:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:58:00 PM
Freon 11	18	4.2		ug/m3	5	12/23/2018 5:41:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.0	0.74		ug/m3	1	12/22/2018 1:58:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/22/2018 1:58:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:58:00 PM
Hexane	2.7	0.53		ug/m3	1	12/22/2018 1:58:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 1:58:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Isobutyl Ketone	3.3	1.2		ug/m3	1	12/22/2018 1:58:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:58:00 PM
Methylene chloride	5.3	0.52		ug/m3	1	12/22/2018 1:58:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:58:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:58:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:58:00 PM
Tetrachloroethylene	2.7	1.0		ug/m3	1	12/22/2018 1:58:00 PM
Tetrahydrofuran	4.8	0.44		ug/m3	1	12/22/2018 1:58:00 PM
Toluene	2.6	0.57		ug/m3	1	12/22/2018 1:58:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
trans-1,3-Dichloropropene	< 0.68	0.88		ug/m3	1	12/22/2018 1:58:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 1:58:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
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FIELD PARAMETERS

FLD

Analyst:

Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018

HELIUM LEAK TEST

GC

Analyst: RJP

Helium	ND	0.75		%	1	12/31/2018
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1UG/M3 BY METHOD TO15

TO-15

Analyst: RJP

1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2,4-Trimethylbenzene	1.4	1.4	J	ppbV	9	12/23/2018 6:21:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichloroethane	0.18	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3,5-Trimethylbenzene	0.73	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3-Dichlorobenzene	0.36	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 2:37:00 PM
2,2,4-trimethylpentane	0.43	0.15		ppbV	1	12/22/2018 2:37:00 PM
4-ethyltoluene	0.48	0.15		ppbV	1	12/22/2018 2:37:00 PM
Acetone	68	27		ppbV	90	12/23/2018 6:59:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Benzene	2.0	1.4		ppbV	9	12/23/2018 6:21:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Carbon disulfide	95	14		ppbV	90	12/23/2018 6:59:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Cyclohexane	0.68	0.15		ppbV	1	12/22/2018 2:37:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Ethylbenzene	1.1	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 11	0.26	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 12	0.47	0.15		ppbV	1	12/22/2018 2:37:00 PM
Heptane	0.69	0.15		ppbV	1	12/22/2018 2:37:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Hexane	1.8	1.4		ppbV	9	12/23/2018 6:21:00 PM
Isopropyl alcohol	0.46	0.15		ppbV	1	12/22/2018 2:37:00 PM
m&p-Xylene	3.6	0.30		ppbV	1	12/22/2018 2:37:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:37:00 PM
Methyl Ethyl Ketone	5.1	2.7		ppbV	9	12/23/2018 6:21:00 PM
Methyl Isobutyl Ketone	130	27		ppbV	90	12/23/2018 6:59:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Methylene chloride	240	27		ppbV	180	12/23/2018 7:38:00 PM
o-Xylene	1.4	0.15		ppbV	1	12/22/2018 2:37:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Styrene	0.20	0.15		ppbV	1	12/22/2018 2:37:00 PM
Tetrachloroethylene	1.0	0.15		ppbV	1	12/22/2018 2:37:00 PM
Tetrahydrofuran	6.2	1.4		ppbV	9	12/23/2018 6:21:00 PM
Toluene	3.3	1.4		ppbV	9	12/23/2018 6:21:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl chloride	1.1	0.15		ppbV	1	12/22/2018 2:37:00 PM
Surr: Bromofluorobenzene	78.0	70-130		%REC	1	12/22/2018 2:37:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:37:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:37:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:37:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
1,2,4-Trimethylbenzene	6.6	6.9	J	ug/m3	9	12/23/2018 6:21:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichloroethane	0.73	0.61		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:37:00 PM
1,3,5-Trimethylbenzene	3.6	0.74		ug/m3	1	12/22/2018 2:37:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:37:00 PM
1,3-Dichlorobenzene	2.2	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
2,2,4-trimethylpentane	2.0	0.70		ug/m3	1	12/22/2018 2:37:00 PM
4-ethyltoluene	2.4	0.74		ug/m3	1	12/22/2018 2:37:00 PM
Acetone	160	64		ug/m3	90	12/23/2018 6:59:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:37:00 PM
Benzene	6.3	4.5		ug/m3	9	12/23/2018 6:21:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:37:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:37:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:37:00 PM
Carbon disulfide	300	44		ug/m3	90	12/23/2018 6:59:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:37:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:37:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:37:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 2:37:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:37:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:37:00 PM
Cyclohexane	2.3	0.52		ug/m3	1	12/22/2018 2:37:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:37:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 2:37:00 PM
Ethylbenzene	4.6	0.65		ug/m3	1	12/22/2018 2:37:00 PM
Freon 11	1.5	0.84		ug/m3	1	12/22/2018 2:37:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	2.3	0.74		ug/m3	1	12/22/2018 2:37:00 PM
Heptane	2.8	0.61		ug/m3	1	12/22/2018 2:37:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:37:00 PM
Hexane	6.3	4.9		ug/m3	9	12/23/2018 6:21:00 PM
Isopropyl alcohol	1.1	0.37		ug/m3	1	12/22/2018 2:37:00 PM
m&p-Xylene	16	1.3		ug/m3	1	12/22/2018 2:37:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:37:00 PM
Methyl Ethyl Ketone	15	8.0		ug/m3	9	12/23/2018 6:21:00 PM
Methyl Isobutyl Ketone	530	110		ug/m3	90	12/23/2018 6:59:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:37:00 PM
Methylene chloride	830	94		ug/m3	180	12/23/2018 7:38:00 PM
o-Xylene	6.1	0.65		ug/m3	1	12/22/2018 2:37:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:37:00 PM
Styrene	0.85	0.64		ug/m3	1	12/22/2018 2:37:00 PM
Tetrachloroethylene	6.8	1.0		ug/m3	1	12/22/2018 2:37:00 PM
Tetrahydrofuran	18	4.1		ug/m3	9	12/23/2018 6:21:00 PM
Toluene	13	5.3		ug/m3	9	12/23/2018 6:21:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:37:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl chloride	2.9	0.38		ug/m3	1	12/22/2018 2:37:00 PM

Qualifiers: ** Quantitation Limit . Results reported are not blank corrected
B Analyte detected in the associated Method Blank E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit
JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection
S Spike Recovery outside accepted recovery limits

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-6			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2,4-Trimethylbenzene	1.8	1.4		ppbV	9	12/23/2018 8:18:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3,5-Trimethylbenzene	0.84	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3-Dichlorobenzene	0.23	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:17:00 PM
2,2,4-trimethylpentane	3.6	1.4		ppbV	9	12/23/2018 8:18:00 PM
4-ethyltoluene	0.58	0.15		ppbV	1	12/22/2018 3:17:00 PM
Acetone	61	27		ppbV	90	12/23/2018 8:55:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Benzene	5.5	1.4		ppbV	9	12/23/2018 8:18:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Carbon disulfide	170	14		ppbV	90	12/23/2018 8:55:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloroethane	0.32	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
cis-1,2-Dichloroethene	0.22	0.15		ppbV	1	12/22/2018 3:17:00 PM
cis-1,3-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Cyclohexane	45	14		ppbV	90	12/23/2018 8:55:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Ethylbenzene	1.0	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 11	0.33	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 12	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Heptane	4.8	1.4		ppbV	9	12/23/2018 8:18:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Hexane	36	14		ppbV	90	12/23/2018 8:55:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
m&p-Xylene	3.4	0.30		ppbV	1	12/22/2018 3:17:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:17:00 PM
Methyl Ethyl Ketone	6.6	2.7		ppbV	9	12/23/2018 8:18:00 PM
Methyl Isobutyl Ketone	230	54		ppbV	180	12/23/2018 9:33:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Methylene chloride	150	14		ppbV	90	12/23/2018 8:55:00 PM
o-Xylene	1.6	0.15		ppbV	1	12/22/2018 3:17:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Styrene	0.25	0.15		ppbV	1	12/22/2018 3:17:00 PM
Tetrachloroethylene	0.64	0.15		ppbV	1	12/22/2018 3:17:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Toluene	5.1	1.4		ppbV	9	12/23/2018 8:18:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Trichloroethene	0.63	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl chloride	0.40	0.15		ppbV	1	12/22/2018 3:17:00 PM
Surr: Bromofluorobenzene	115	70-130		%REC	1	12/22/2018 3:17:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:17:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:17:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:17:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:17:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:17:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
1,2,4-Trimethylbenzene	8.8	6.9		ug/m3	9	12/23/2018 8:18:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:17:00 PM
1,3,5-Trimethylbenzene	4.1	0.74		ug/m3	1	12/22/2018 3:17:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:17:00 PM
1,3-Dichlorobenzene	1.4	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
2,2,4-trimethylpentane	17	6.5		ug/m3	9	12/23/2018 8:18:00 PM
4-ethyltoluene	2.9	0.74		ug/m3	1	12/22/2018 3:17:00 PM
Acetone	150	64		ug/m3	90	12/23/2018 8:55:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:17:00 PM
Benzene	18	4.5		ug/m3	9	12/23/2018 8:18:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:17:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:17:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:17:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:17:00 PM
Carbon disulfide	530	44		ug/m3	90	12/23/2018 8:55:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:17:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:17:00 PM
Chloroethane	0.84	0.40		ug/m3	1	12/22/2018 3:17:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:17:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:17:00 PM
cis-1,2-Dichloroethene	0.87	0.59		ug/m3	1	12/22/2018 3:17:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:17:00 PM
Cyclohexane	150	48		ug/m3	90	12/23/2018 8:55:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:17:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:17:00 PM
Ethylbenzene	4.6	0.65		ug/m3	1	12/22/2018 3:17:00 PM
Freon 11	1.9	0.84		ug/m3	1	12/22/2018 3:17:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:17:00 PM

Qualifiers:	** Quantitation Limit	- Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	< 0.74	0.74		ug/m3	1	12/22/2018 3:17:00 PM
Heptane	20	5.7		ug/m3	9	12/23/2018 8:18:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:17:00 PM
Hexane	130	49		ug/m3	90	12/23/2018 8:55:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:17:00 PM
m&p-Xylene	15	1.3		ug/m3	1	12/22/2018 3:17:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:17:00 PM
Methyl Ethyl Ketone	19	8.0		ug/m3	9	12/23/2018 8:18:00 PM
Methyl Isobutyl Ketone	960	220		ug/m3	180	12/23/2018 9:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:17:00 PM
Methylene chloride	510	49		ug/m3	90	12/23/2018 8:55:00 PM
o-Xylene	6.8	0.65		ug/m3	1	12/22/2018 3:17:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:17:00 PM
Styrene	1.1	0.64		ug/m3	1	12/22/2018 3:17:00 PM
Tetrachloroethylene	4.3	1.0		ug/m3	1	12/22/2018 3:17:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 3:17:00 PM
Toluene	19	5.3		ug/m3	9	12/23/2018 8:18:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:17:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:17:00 PM
Trichloroethene	3.4	0.81		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl chloride	1.0	0.38		ug/m3	1	12/22/2018 3:17:00 PM

Qualifiers:	**	Quantitation Limit	,	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-6			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2,4-Trimethylbenzene	2.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3,5-Trimethylbenzene	1.3	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3-Dichlorobenzene	0.32	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,4-Dichlorobenzene	0.12	0.15	J	ppbV	1	12/22/2018 3:59:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:59:00 PM
2,2,4-trimethylpentane	2.1	0.15		ppbV	1	12/22/2018 3:59:00 PM
4-ethyltoluene	0.91	0.15		ppbV	1	12/22/2018 3:59:00 PM
Acetone	28	27		ppbV	90	12/23/2018 10:49:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Benzene	1.8	0.15		ppbV	1	12/22/2018 3:59:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Carbon disulfide	8.9	1.4		ppbV	9	12/23/2018 10:13:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Cyclohexane	2.7	1.4		ppbV	9	12/23/2018 10:13:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Ethylbenzene	1.9	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 11	0.26	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 12	0.62	0.15		ppbV	1	12/22/2018 3:59:00 PM
Heptane	1.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Hexane	4.0	1.4		ppbV	9	12/23/2018 10:13:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
m&p-Xylene	4.0	2.7		ppbV	9	12/23/2018 10:13:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:59:00 PM
Methyl Ethyl Ketone	4.1	2.7		ppbV	9	12/23/2018 10:13:00 PM
Methyl Isobutyl Ketone	160	54		ppbV	180	12/23/2018 11:26:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Methylene chloride	34	14		ppbV	90	12/23/2018 10:49:00 PM
o-Xylene	1.6	1.4		ppbV	9	12/23/2018 10:13:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Styrene	0.36	0.15		ppbV	1	12/22/2018 3:59:00 PM
Tetrachloroethylene	0.29	0.15		ppbV	1	12/22/2018 3:59:00 PM
Tetrahydrofuran	4.0	1.4		ppbV	9	12/23/2018 10:13:00 PM
Toluene	4.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Trichloroethene	0.10	0.15	J	ppbV	1	12/22/2018 3:59:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Surr: Bromofluorobenzene	97.0	70-130		%REC	1	12/22/2018 3:59:00 PM

Qualifiers:	** Quantitation Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte, Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:59:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:59:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:59:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
1,2,4-Trimethylbenzene	14	6.9		ug/m3	9	12/23/2018 10:13:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:59:00 PM
1,3,5-Trimethylbenzene	6.3	0.74		ug/m3	1	12/22/2018 3:59:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:59:00 PM
1,3-Dichlorobenzene	1.9	0.90		ug/m3	1	12/22/2018 3:59:00 PM
1,4-Dichlorobenzene	0.72	0.90	J	ug/m3	1	12/22/2018 3:59:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
2,2,4-trimethylpentane	9.6	0.70		ug/m3	1	12/22/2018 3:59:00 PM
4-ethyltoluene	4.5	0.74		ug/m3	1	12/22/2018 3:59:00 PM
Acetone	66	64		ug/m3	90	12/23/2018 10:49:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:59:00 PM
Benzene	5.7	0.48		ug/m3	1	12/22/2018 3:59:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:59:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:59:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:59:00 PM
Carbon disulfide	28	4.4		ug/m3	9	12/23/2018 10:13:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:59:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:59:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 3:59:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:59:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:59:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
cis-1,3-Dichloropropane	< 0.68	0.68		ug/m3	1	12/22/2018 3:59:00 PM
Cyclohexane	9.3	4.8		ug/m3	9	12/23/2018 10:13:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:59:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:59:00 PM
Ethylbenzene	8.1	0.65		ug/m3	1	12/22/2018 3:59:00 PM
Freon 11	1.5	0.84		ug/m3	1	12/22/2018 3:59:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	3.1	0.74		ug/m3	1	12/22/2018 3:59:00 PM
Heptane	7.4	5.7		ug/m3	9	12/23/2018 10:13:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:59:00 PM
Hexane	14	4.9		ug/m3	9	12/23/2018 10:13:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:59:00 PM
m&p-Xylene	18	12		ug/m3	9	12/23/2018 10:13:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:59:00 PM
Methyl Ethyl Ketone	12	8.0		ug/m3	9	12/23/2018 10:13:00 PM
Methyl Isobutyl Ketone	660	220		ug/m3	180	12/23/2018 11:26:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:59:00 PM
Methylene chloride	120	49		ug/m3	90	12/23/2018 10:49:00 PM
o-Xylene	7.0	6.1		ug/m3	9	12/23/2018 10:13:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:59:00 PM
Styrene	1.5	0.64		ug/m3	1	12/22/2018 3:59:00 PM
Tetrachloroethylene	2.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
Tetrahydrofuran	12	4.1		ug/m3	9	12/23/2018 10:13:00 PM
Toluene	18	5.3		ug/m3	9	12/23/2018 10:13:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:59:00 PM
Trichloroethene	0.54	0.81	J	ug/m3	1	12/22/2018 3:59:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:59:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:59:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 3:59:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	NID	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	0.17	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Acetone	2.9	0.30		ppbV	1	12/21/2018 10:33:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Carbon disulfide	0.58	0.15		ppbV	1	12/21/2018 10:33:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Chloroform	0.37	0.15		ppbV	1	12/21/2018 10:33:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 11	2.6	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 12	0.55	0.15		ppbV	1	12/21/2018 10:33:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Methylene chloride	0.60	0.15		ppbV	1	12/21/2018 10:33:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Tetrachloroethylene	2.9	0.15		ppbV	1	12/21/2018 10:33:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Toluene	0.27	0.15		ppbV	1	12/21/2018 10:33:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Surri: Bromofluorobenzene	77.0	70-130		%REC	1	12/21/2018 10:33:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte, Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	0.93	0.82		ug/m3	1	12/21/2018 10:33:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 10:33:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 10:33:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 10:33:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/21/2018 10:33:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
Acetone	6.8	0.71		ug/m3	1	12/21/2018 10:33:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 10:33:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/21/2018 10:33:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 10:33:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 10:33:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 10:33:00 PM
Carbon disulfide	1.8	0.47		ug/m3	1	12/21/2018 10:33:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 10:33:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 10:33:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 10:33:00 PM
Chloroform	1.8	0.73		ug/m3	1	12/21/2018 10:33:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/21/2018 10:33:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 10:33:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 10:33:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 10:33:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 10:33:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 10:33:00 PM
Freon 11	14	0.84		ug/m3	1	12/21/2018 10:33:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.7	0.74		ug/m3	1	12/21/2018 10:33:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 10:33:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/21/2018 10:33:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/21/2018 10:33:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 10:33:00 PM
Methylene chloride	2.1	0.52		ug/m3	1	12/21/2018 10:33:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 10:33:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 10:33:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 10:33:00 PM
Tetrachloroethylene	20	1.0		ug/m3	1	12/21/2018 10:33:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 10:33:00 PM
Toluene	1.0	0.57		ug/m3	1	12/21/2018 10:33:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 10:33:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 10:33:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2,4-Trimethylbenzene	0.11	0.15	J	ppbV	1	12/21/2018 9:13:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
2,2,4-trimethylpentane	0.17	0.15		ppbV	1	12/21/2018 9:13:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Acetone	6.4	1.5		ppbV	5	12/22/2018 10:20:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Benzene	0.32	0.15		ppbV	1	12/21/2018 9:13:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloromethane	0.51	0.15		ppbV	1	12/21/2018 9:13:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 11	0.29	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 12	0.51	0.15		ppbV	1	12/21/2018 9:13:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/21/2018 9:13:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Hexane	0.27	0.15		ppbV	1	12/21/2018 9:13:00 PM
Isopropyl alcohol	1.2	0.15		ppbV	1	12/21/2018 9:13:00 PM
m&p-Xylene	0.20	0.30	J	ppbV	1	12/21/2018 9:13:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Methylene chloride	0.16	0.15		ppbV	1	12/21/2018 9:13:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Tetrachloroethylene	0.17	0.15		ppbV	1	12/21/2018 9:13:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Toluene	0.67	0.15		ppbV	1	12/21/2018 9:13:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/21/2018 9:13:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

, Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:13:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:13:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:13:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
1,2,4-Trimethylbenzene	0.54	0.74	J	ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 9:13:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:13:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 9:13:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
2,2,4-trimethylpentane	0.79	0.70		ug/m3	1	12/21/2018 9:13:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 9:13:00 PM
Acetone	15	3.6		ug/m3	5	12/22/2018 10:20:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 9:13:00 PM
Benzene	1.0	0.48		ug/m3	1	12/21/2018 9:13:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 9:13:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 9:13:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 9:13:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 9:13:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 9:13:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 9:13:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 9:13:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 9:13:00 PM
Chloromethane	1.1	0.31		ug/m3	1	12/21/2018 9:13:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:13:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 9:13:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 9:13:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 9:13:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 9:13:00 PM
Freon 11	1.6	0.84		ug/m3	1	12/21/2018 9:13:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM

Qualifiers:	** Quantitation Limit	- Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.5	0.74		ug/m3	1	12/21/2018 9:13:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/21/2018 9:13:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 9:13:00 PM
Hexane	0.95	0.53		ug/m3	1	12/21/2018 9:13:00 PM
Isopropyl alcohol	3.0	0.37		ug/m3	1	12/21/2018 9:13:00 PM
m&p-Xylene	0.87	1.3	J	ug/m3	1	12/21/2018 9:13:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 9:13:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 9:13:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	12/21/2018 9:13:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 9:13:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 9:13:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 9:13:00 PM
Tetrachloroethylene	1.2	1.0		ug/m3	1	12/21/2018 9:13:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 9:13:00 PM
Toluene	2.5	0.57		ug/m3	1	12/21/2018 9:13:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:13:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 9:13:00 PM

Qualifiers:	** Quantitation Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST		GC		Analyst: RJP		
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
2,2,4-trimethylpentane	0.10	0.15	J	ppbV	1	12/21/2018 9:53:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Acetone	4.6	1.5		ppbV	5	12/22/2018 10:58:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Benzene	0.28	0.15		ppbV	1	12/21/2018 9:53:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloromethane	0.45	0.15		ppbV	1	12/21/2018 9:53:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Ethyl acetate	0.13	0.15	J	ppbV	1	12/21/2018 9:53:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 11	0.29	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 12	0.54	0.15		ppbV	1	12/21/2018 9:53:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Hexane	0.22	0.15		ppbV	1	12/21/2018 9:53:00 PM
Isopropyl alcohol	0.61	0.15		ppbV	1	12/21/2018 9:53:00 PM
m&p-Xylene	0.15	0.30	J	ppbV	1	12/21/2018 9:53:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Methylene chloride	0.17	0.15		ppbV	1	12/21/2018 9:53:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Tetrachloroethylene	0.21	0.15		ppbV	1	12/21/2018 9:53:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Toluene	0.59	0.15		ppbV	1	12/21/2018 9:53:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Surr: Bromofluorobenzene	74.0	70-130		%REC	1	12/21/2018 9:53:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:53:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:53:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 9:53:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 9:53:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
2,2,4-trimethylpentane	0.47	0.70	J	ug/m3	1	12/21/2018 9:53:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
Acetone	11	3.6		ug/m3	5	12/22/2018 10:58:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 9:53:00 PM
Benzene	0.89	0.48		ug/m3	1	12/21/2018 9:53:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 9:53:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 9:53:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 9:53:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 9:53:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 9:53:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 9:53:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 9:53:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 9:53:00 PM
Chloromethane	0.93	0.31		ug/m3	1	12/21/2018 9:53:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:53:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 9:53:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 9:53:00 PM
Ethyl acetate	0.47	0.54	J	ug/m3	1	12/21/2018 9:53:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 9:53:00 PM
Freon 11	1.6	0.84		ug/m3	1	12/21/2018 9:53:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.7	0.74		ug/m3	1	12/21/2018 9:53:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 9:53:00 PM
Hexane	0.78	0.53		ug/m3	1	12/21/2018 9:53:00 PM
Isopropyl alcohol	1.5	0.37		ug/m3	1	12/21/2018 9:53:00 PM
m&p-Xylene	0.65	1.3	J	ug/m3	1	12/21/2018 9:53:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 9:53:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 9:53:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	12/21/2018 9:53:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 9:53:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 9:53:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 9:53:00 PM
Tetrachloroethylene	1.4	1.0		ug/m3	1	12/21/2018 9:53:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 9:53:00 PM
Toluene	2.2	0.57		ug/m3	1	12/21/2018 9:53:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:53:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 9:53:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 29-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1182
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	+30			"Hg		12/21/2018
Lab Vacuum Out	+30			"Hg		12/21/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Acetone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

Centek Laboratories, LLC

Date: 29-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1182
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 11	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 12	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Methylene chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Toluene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Surr: Bromofluorobenzene	71.0	70-130		%REC	1	12/21/2018 8:32:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 29-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1182
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 8:32:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 8:32:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 8:32:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 8:32:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
2,2,4-Trimethylpentane	< 0.70	0.70		ug/m3	1	12/21/2018 8:32:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
Acetone	< 0.71	0.71		ug/m3	1	12/21/2018 8:32:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 8:32:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/21/2018 8:32:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 8:32:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 8:32:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 8:32:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 8:32:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 8:32:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 8:32:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 8:32:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 8:32:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/21/2018 8:32:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 8:32:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 8:32:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 8:32:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 8:32:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 8:32:00 PM
Freon 11	< 0.84	0.84		ug/m3	1	12/21/2018 8:32:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Page 1 of 2

Centek Laboratories, LLC

Date: 29-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1182
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 8:32:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/21/2018 8:32:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/21/2018 8:32:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 8:32:00 PM
Methylene chloride	< 0.52	0.52		ug/m3	1	12/21/2018 8:32:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 8:32:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 8:32:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 8:32:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 8:32:00 PM
Toluene	< 0.57	0.57		ug/m3	1	12/21/2018 8:32:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 8:32:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 8:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

QUALITY CONTROL SUMMARY



CEN TEK LABORATORIES, LLC

Date: 02-Jan-19

QC SUMMARY REPORT SURROGATE RECOVERIES

CLIENT: SOIL MECHANICS

Work Order: C1812057

Project: IKEA-RED HOOK

Test No: TO-15

Matrix: A

Sample ID	BR4FBZ						
ALCS1UG-122118	110						
ALCS1UG-122218	115						
ALCS1UG-122318	111						
ALCS1UGD-122118	108						
ALCS1UGD-122218	112						
ALCS1UGD-122318	111						
AMBIUG-122118	73.0						
AMBIUG-122218	71.0						
AMBIUG-122318	72.0						
C1812057-001A	75.0						
C1812057-002A	74.0						
C1812057-003A	76.0						
C1812057-004A	88.0						
C1812057-005A	129						
C1812057-006A	78.0						
C1812057-007A	76.0						
C1812057-008A	72.0						
C1812057-009A	86.0						
C1812057-010A	86.0						
C1812057-011A	84.0						
C1812057-012A	76.0						
C1812057-013A	78.0						
C1812057-014A	115						

Acronym

Surrogate

QC Limits

BR4FBZ

= Bromofluorobenzene

70-130

* Surrogate recovery outside acceptance limits

1

CLIENT: SOIL MECHANICS

Work Order: C1812057

Project: IKEA-RED HOOK

Test No: TO-15

Matrix: A

Sample ID		BR4FBZ						
C1812057-015A	97.0							
C1812057-016A	77.0							
C1812057-016A MS	98.0							
C1812057-016A MSD	99.0							
C1812057-017A	76.0							
C1812057-018A	74.0							
C1812057-019A	71.0							

Acronym	Surrogate	QC Limits
BR4FBZ	= Bromofluorobenzene	70-130

* Surrogate recovery outside acceptance limits

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AP122103.D

Tune Time : 21 Dec 2018 11:00 am

Daily Calibration File : C:\HPCHEM\1\DATA\AP122103.D

		(BFB)	(IS1) 41855	(IS2) 176484	(IS3) 140076
File	Sample	DL	Surrogate Recovery %	Internal	Standard Responses
AP122104.D	ALCS1UG-122118	110		43161	182136 141181
AP122105.D	AMB1UG-122118	73		41054	164857 109403
AP122115.D	C1812057-019A	71		40987	175942 121002
AP122116.D	C1812057-017A	76		38921	162949 130920
AP122117.D	C1812057-018A	74		40055	164182 126688
AP122118.D	C1812057-016A	77		39608	161437 135145
AP122119.D	C1812057-016A MS	98		44237	167031 152272
AP122120.D	C1812057-016A MSD	99		41707	175000 148642
AP122121.D	C1812057-001A	75		37433	165478 139124
AP122122.D	C1812057-002A	74		39665	163922 141358
AP122123.D	C1812057-003A	76		41191	162954 126683
AP122124.D	C1812057-004A	88		42687	173658 212488
AP122125.D	C1812057-005A	129		48736	198497 176976
AP122126.D	C1812057-006A	78		46077	190496 169540
AP122127.D	C1812057-007A	76		42100	175497 142194
AP122128.D	C1812057-008A	72		40686	169457 136687
AP122129.D	ALCS1UGD-122118	108		39569	162023 129410
AP122131.D	C1812057-009A	86		47588	226502 238167*

t - fails 24hr time check * - fails criteria

Created: Wed Jan 02 11:58:14 2019 MSD #1/

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AP122203.D

Tune Time : 22 Dec 2018 10:31 am

Daily Calibration File : C:\HPCHEM\1\DATA\AP122203.D

	(BFB)	(IS1)	(IS2)	(IS3)
		46118	188200	151188
File	Sample	DL	Surrogate Recovery %	Internal Standard Responses
AP122204.D	ALCS1UG-122218	115		43772 185144 144393
AP122205.D	AMB1UG-122218	71		39458 165471 109578
AP122206.D	C1812057-010A	86		42207 189806 216651
AP122207.D	C1812057-011A	84		43564 187294 172940
AP122208.D	C1812057-012A	76		42728 168384 137627
AP122209.D	C1812057-013A	78		48186 221241 253791*
AP122210.D	C1812057-014A	115		64897 310949* 320749*
AP122211.D	C1812057-015A	97		57660 278528 311419*
AP122221.D	C1812057-017A 5x	71		34556 139113 96810
AP122222.D	C1812057-018A 5x	73		35162 134551 92909
AP122223.D	ALCS1UGD-122218	112		39545 159583 126472
AP122225.D	C1812057-001A 5x	72		37264 145047 108555
AP122226.D	C1812057-002A 5x	75		34059 143522 107470
AP122227.D	C1812057-004A 10x	79		34621 132732 118246
AP122228.D	C1812057-004A 40x	71		34807 136036 102074
AP122229.D	C1812057-005A 10x	89		34379 138470 97883
AP122231.D	C1812057-006A 5x	73		35642 143417 101423
AP122232.D	C1812057-007A 5x	72		34004 134161 97727
AP122233.D	C1812057-008A 5x	76		35570 137231 95512
AP122234.D	C1812057-009A 10x	73		35921 155048 140692
AP122235.D	C1812057-009A 40x	76		37161 147235 109115

t - fails 24hr time check * - fails criteria

Created: Wed Jan 02 12:00:18 2019 MSD #1/

GC/MS QA-QC Check Report

Tune File : C:\HPCHEM\1\DATA\AP122304.D

Tune Time : 23 Dec 2018 11:48 am

Daily Calibration File : C:\HPCHEM\1\DATA\AP122304.D

		(BFB)	(IS1)	(IS2)	(IS3)
			41655	172484	138320
File	Sample	DL Surrogate Recovery %	Internal Standard Responses		
AP122305.D	ALCS1UG-122318	111	40666	174878	136917
AP122306.D	AMB1UG-122318	72	39205	161242	107833
AP122307.D	C1812059-001A 40x	77	34183	139312	106474
AP122308.D	C1812057-010A 9x	74	35924	149449	127915
AP122309.D	C1812057-010A 90x	73	33464	138240	97985
AP122310.D	C1812057-011A 10x	79	34321	138857	109185
AP122312.D	C1812057-012A 5x	72	34362	132457	96104
AP122313.D	C1812057-013A 9x	71	36466	154796	165322
AP122314.D	C1812057-013A 90x	74	33111	142049	99020
AP122315.D	C1812057-013A 180x	76	32372	134845	90611
AP122316.D	C1812057-014A 9x	82	43167	193152	197456
AP122317.D	C1812057-014A 90x	73	40668	171616	124854
AP122318.D	C1812057-014A 180x	75	37968	158169	111381
AP122319.D	C1812057-015A 9x	77	36912	161803	193095
AP122320.D	C1812057-015A 90x	72	34694	151048	119552
AP122321.D	C1812057-015A 180x	71	33304	140948	106674
AP122323.D	ALCS1UGD-122318	111	38541	158924	127920
AP122324.D	C1812057-011A 90x	72	38427	155363	110031

t - fails 24hr time check * - fails criteria

Created: Wed Jan 02 12:02:19 2019 MSD #1/



Date: 02-Jan-19

ANALYTICAL QC SUMMARY REPORT

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122118		Sample Type: LCS	TestCode: 1ugM3_TO15		Units: ppbV	Prep Date:		RunNo: 14492	
Client ID: ZZZZZ		Batch ID: R14492	TestNo: TO-15			Analysis Date: 12/21/2018		SeqNo: 166945	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPDLimit
1,1,1-Trichloroethane	0.8300	0.15	1	0	83.0	70	130		
1,1,2,2-Tetrachloroethane	0.8800	0.15	1	0	88.0	70	130		
1,1,2-Trichloroethane	0.8700	0.15	1	0	87.0	70	130		
1,1-Dichloroethane	0.9500	0.15	1	0	95.0	70	130		
1,1-Dichloroethene	0.8800	0.15	1	0	88.0	70	130		
1,2,4-Trichlorobenzene	0.8700	0.15	1	0	87.0	70	130		
1,2,4-Trimethylbenzene	0.8200	0.15	1	0	82.0	70	130		
1,2-Dibromoethane	0.8800	0.15	1	0	88.0	70	130		
1,2-Dichlorobenzene	0.8800	0.15	1	0	88.0	70	130		
1,2-Dichloroethane	0.9400	0.15	1	0	94.0	70	130		
1,2-Dichloropropane	0.8400	0.15	1	0	84.0	70	130		
1,3,5-Trimethylbenzene	0.9000	0.15	1	0	90.0	70	130		
1,3-butadiene	0.9600	0.15	1	0	96.0	70	130		
1,3-Dichlorobenzene	0.8300	0.15	1	0	83.0	70	130		
1,4-Dichlorobenzene	0.8200	0.15	1	0	82.0	70	130		
1,4-Dioxane	0.9900	0.30	1	0	99.0	70	130		
2,2,4-trimethylpentane	0.8000	0.15	1	0	80.0	70	130		
4-ethyltoluene	0.8500	0.15	1	0	85.0	70	130		
Acetone	0.8700	0.30	1	0	87.0	70	130		
Allyl chloride	0.9200	0.15	1	0	92.0	70	130		
Benzene	0.8300	0.15	1	0	83.0	70	130		
Benzyl chloride	0.9400	0.15	1	0	94.0	70	130		
Bromodichloromethane	1.000	0.15	1	0	100	70	130		
Bromoforn	5.410	0.15	1	0	541	70	130		S
Bromomethane	0.9400	0.15	1	0	94.0	70	130		

Qualifiers: J Results reported are not blank corrected
S Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IEKA-RED HOOK

TestCode: IugM3_TO15

Sample ID: ALCS1UG-122118		SampType: LCS		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14492	
Client ID: ZZZZZ		Batch ID: R14492		TestNo: TO-15				Analysis Date: 12/21/2018		SeqNo: 166945	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	0.9200	0.15	1	0	92.0	70	130				
Carbon tetrachloride	0.7700	0.15	1	0	77.0	70	130				
Chlorobenzene	0.8000	0.15	1	0	80.0	70	130				
Chloroethane	0.9400	0.15	1	0	94.0	70	130				
Chloroform	0.9300	0.15	1	0	93.0	70	130				
Chloromethane	1.000	0.15	1	0	100	70	130				
cis-1,2-Dichloroethane	0.8600	0.15	1	0	86.0	70	130				
cis-1,3-Dichloropropene	0.8500	0.15	1	0	85.0	70	130				
Cyclohexane	0.8100	0.15	1	0	81.0	70	130				
Dibromochloromethane	1.400	0.15	1	0	140	70	130				
Ethyl acetate	0.9700	0.15	1	0	97.0	70	130				
Ethylbenzene	0.7700	0.15	1	0	77.0	70	130				
Freon 11	0.9600	0.15	1	0	96.0	70	130				
Freon 113	0.9300	0.15	1	0	93.0	70	130				
Freon 114	0.9600	0.15	1	0	96.0	70	130				
Freon 12	0.9300	0.15	1	0	93.0	70	130				
Heptane	0.8000	0.15	1	0	80.0	70	130				
Hexachloro-1,3-butadiene	0.9600	0.15	1	0	96.0	70	130				
Hexane	0.9000	0.15	1	0	90.0	70	130				
Isopropyl alcohol	0.9800	0.15	1	0	98.0	70	130				
m&p-Xylene	1.670	0.30	2	0	83.5	70	130				
Methyl Butyl Ketone	1.030	0.30	1	0	103	70	130				
Methyl Ethyl Ketone	0.9800	0.30	1	0	98.0	70	130				
Methyl Isobutyl Ketone	1.050	0.30	1	0	105	70	130				
Methyl tert-butyl ether	0.9000	0.15	1	0	90.0	70	130				
Methylene chloride	0.8700	0.15	1	0	87.0	70	130				
o-Xylene	0.9100	0.15	1	0	91.0	70	130				
Propylene	0.9300	0.15	1	0	93.0	70	130				
Styrene	0.8600	0.15	1	0	86.0	70	130				
Tetrachloroethylene	0.8200	0.15	1	0	82.0	70	130				
Tetrahydrofuran	0.9900	0.15	1	0	99.0	70	130				

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122118	SampleType: LCS	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166945						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	0.7900	0.15	1	0	79.0	70	130				
trans-1,2-Dichloroethane	0.9300	0.15	1	0	93.0	70	130				
trans-1,3-Dichloropropene	0.7800	0.15	1	0	78.0	70	130				
Trichloroethane	0.7700	0.15	1	0	77.0	70	130				
Vinyl acetate	0.9200	0.15	1	0	92.0	70	130				
Vinyl Bromide	0.9500	0.15	1	0	95.0	70	130				
Vinyl chloride	0.9000	0.15	1	0	90.0	70	130				

Sample ID: ALCS1UG-122218	SampleType: LCS	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14493						
Client ID: ZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166963						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	0.8600	0.15	1	0	86.0	70	130				
1,1,2,2-Tetrachloroethane	0.8600	0.15	1	0	86.0	70	130				
1,1,2-Trichloroethane	0.8700	0.15	1	0	87.0	70	130				
1,1-Dichloroethane	0.9500	0.15	1	0	95.0	70	130				
1,1-Dichloroethene	0.8800	0.15	1	0	88.0	70	130				
1,2,4-Trichlorobenzene	0.8100	0.15	1	0	81.0	70	130				
1,2,4-Trimethylbenzene	0.7500	0.15	1	0	75.0	70	130				
1,2-Dibromooethane	0.8500	0.15	1	0	85.0	70	130				
1,2-Dichlorobenzene	0.8200	0.15	1	0	82.0	70	130				
1,2-Dichloroethane	0.8900	0.15	1	0	89.0	70	130				
1,2-Dichloropropane	0.8700	0.15	1	0	87.0	70	130				
1,3,5-Trimethylbenzene	0.8500	0.15	1	0	85.0	70	130				
1,3-butadiene	1.000	0.15	1	0	100	70	130				
1,3-Dichlorobenzene	0.8000	0.15	1	0	80.0	70	130				
1,4-Dichlorobenzene	0.7800	0.15	1	0	78.0	70	130				
1,4-Dioxane	0.8800	0.30	1	0	88.0	70	130				
2,2,4-trimethylpentane	0.8200	0.15	1	0	82.0	70	130				
4-ethyltoluene	0.8400	0.15	1	0	84.0	70	130				

Qualifiers:	J	S	E	H
Results reported are not blank corrected				
Analyte detected below quantitation limit				
Spike Recovery outside accepted recovery limits				
Estimated Value above quantitation range				
Not Detected at the Limit of Detection				
Holding times for preparation or analysis exceeded				
RPD outside accepted recovery limits				

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122218	SampleType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166963						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	0.8600	0.30	1	0	86.0	70	130				
Allyl chloride	0.9300	0.15	1	0	93.0	70	130				
Benzene	0.8300	0.15	1	0	83.0	70	130				
Benzyl chloride	0.8300	0.15	1	0	83.0	70	130				
Bromodichloromethane	0.9600	0.15	1	0	96.0	70	130				
Bromoform	5.110	0.15	1	0	511	70	130				S
Bromomethane	0.9200	0.15	1	0	92.0	70	130				
Carbon disulfide	0.9400	0.15	1	0	94.0	70	130				
Carbon tetrachloride	0.7800	0.15	1	0	78.0	70	130				
Chlorobenzene	0.7900	0.15	1	0	79.0	70	130				
Chloroethane	1.020	0.15	1	0	102	70	130				
Chloroform	0.9300	0.15	1	0	93.0	70	130				
Chloromethane	0.9800	0.15	1	0	98.0	70	130				
cis-1,2-Dichloroethene	0.8700	0.15	1	0	87.0	70	130				
cis-1,3-Dichloropropene	0.8500	0.15	1	0	85.0	70	130				
Cyclohexane	0.8300	0.15	1	0	83.0	70	130				S
Dibromochloromethane	1.540	0.15	1	0	154	70	130				
Ethyl acetate	0.9400	0.15	1	0	94.0	70	130				
Ethylbenzene	0.7600	0.15	1	0	76.0	70	130				
Freon 11	0.9500	0.15	1	0	95.0	70	130				
Freon 113	0.9600	0.15	1	0	96.0	70	130				
Freon 114	0.9900	0.15	1	0	99.0	70	130				
Freon 12	0.9800	0.15	1	0	98.0	70	130				
Heptane	0.8000	0.15	1	0	80.0	70	130				
Hexachloro-1,3-butadiene	0.8500	0.15	1	0	85.0	70	130				
Hexane	0.9500	0.15	1	0	95.0	70	130				
Isopropyl alcohol	0.9500	0.15	1	0	95.0	70	130				
m&p-Xylene	1.680	0.30	2	0	84.0	70	130				
Methyl Butyl Ketone	0.8000	0.30	1	0	80.0	70	130				
Methyl Ethyl Ketone	0.9400	0.30	1	0	94.0	70	130				
Methyl Isobutyl Ketone	0.8900	0.30	1	0	89.0	70	130				

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122218		SampType: LCS		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14493	
Client ID: ZZZZZ		Batch ID: R14493		TestNo: TO-15		Analysis Date: 12/22/2018		SeqNo: 166963			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.8900	0.15	1	0	89.0	70	130				
Methylene chloride	0.8900	0.15	1	0	89.0	70	130				
o-Xylene	0.9000	0.15	1	0	90.0	70	130				
Propylene	0.9500	0.15	1	0	95.0	70	130				
Styrene	0.8700	0.15	1	0	87.0	70	130				
Tetrachloroethylene	0.8400	0.15	1	0	84.0	70	130				
Tetrahydrofuran	0.8600	0.15	1	0	86.0	70	130				
Toluene	0.8000	0.15	1	0	80.0	70	130				
trans-1,2-Dichloroethene	0.9300	0.15	1	0	93.0	70	130				
trans-1,3-Dichloropropene	0.8200	0.15	1	0	82.0	70	130				
Trichloroethene	0.7700	0.15	1	0	77.0	70	130				
Vinyl acetate	0.8800	0.15	1	0	88.0	70	130				
Vinyl Bromide	0.9500	0.15	1	0	95.0	70	130				
Vinyl chloride	0.9100	0.15	1	0	91.0	70	130				

Sample ID: ALCS1UG-122318		SampType: LCS		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14495	
Client ID: ZZZZZ		Batch ID: R14495		TestNo: TO-15		Analysis Date: 12/23/2018		SeqNo: 167007			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9400	0.15	1	0	94.0	70	130				
1,1,2,2-Tetrachloroethane	0.9800	0.15	1	0	98.0	70	130				
1,1,2-Trichloroethane	0.9500	0.15	1	0	96.0	70	130				
1,1-Dichloroethane	1.060	0.15	1	0	106	70	130				
1,1-Dichloroethene	1.000	0.15	1	0	100	70	130				
1,2,4-Trichlorobenzene	0.7600	0.15	1	0	76.0	70	130				
1,2,4-Trimethylbenzene	0.8500	0.15	1	0	85.0	70	130				
1,2-Dibromoethane	0.9600	0.15	1	0	96.0	70	130				
1,2-Dichlorobenzene	0.9500	0.15	1	0	95.0	70	130				
1,2-Dichloroethane	1.050	0.15	1	0	105	70	130				
1,2-Dichloropropane	0.9700	0.15	1	0	97.0	70	130				

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122318		SampleType: LCS	TestCode: 1ugM3_TO15		Units: ppbv	Prep Date:		RunNo: 14495	
Client ID: ZZZZZ		Batch ID: R14495	TestNo: TO-15			Analysis Date: 12/23/2018		SeqNo: 167007	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	RPD Limit
1,3,5-Trimethylbenzene	0.9700	0.15	1	0	97.0	70	130		
1,3-butadiene	1.120	0.15	1	0	112	70	130		
1,3-Dichlorobenzene	0.9200	0.15	1	0	92.0	70	130		
1,4-Dichlorobenzene	0.9400	0.15	1	0	94.0	70	130		
1,4-Dioxane	0.9100	0.30	1	0	91.0	70	130		
2,2,4-trimethylpentane	0.9000	0.15	1	0	90.0	70	130		
4-ethyltoluene	0.9700	0.15	1	0	97.0	70	130		
Acetone	0.9100	0.30	1	0	91.0	70	130		
Allyl chloride	1.060	0.15	1	0	106	70	130		
Benzene	0.9300	0.15	1	0	93.0	70	130		
Benzyl chloride	0.9600	0.15	1	0	96.0	70	130		
Bromodichloromethane	1.110	0.15	1	0	111	70	130		
Bromoform	5.700	0.15	1	0	570	70	130		S
Bromomethane	1.030	0.15	1	0	103	70	130		
Carbon disulfide	1.040	0.15	1	0	104	70	130		
Carbon tetrachloride	0.8700	0.15	1	0	87.0	70	130		
Chlorobenzene	0.9000	0.15	1	0	90.0	70	130		
Chloroethane	1.090	0.15	1	0	109	70	130		
Chloroform	1.060	0.15	1	0	106	70	130		
Chloromethane	1.070	0.15	1	0	107	70	130		
cis-1,2-Dichloroethane	0.9900	0.15	1	0	99.0	70	130		
cis-1,3-Dichloropropene	0.9500	0.15	1	0	95.0	70	130		
Cyclohexane	0.9000	0.15	1	0	90.0	70	130		
Dibromochloromethane	1.720	0.15	1	0	172	70	130		S
Ethyl acetate	1.050	0.15	1	0	105	70	130		
Ethylbenzene	0.8900	0.15	1	0	89.0	70	130		
Freon 11	1.080	0.15	1	0	108	70	130		
Freon 113	1.070	0.15	1	0	107	70	130		
Freon 114	1.110	0.15	1	0	111	70	130		
Freon 12	1.100	0.15	1	0	110	70	130		
Heptane	0.8800	0.15	1	0	88.0	70	130		

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122318	SampleType: LCS	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	0.9400	0.15	1	0	94.0	70	130				
Hexane	0.9900	0.15	1	0	99.0	70	130				
Isopropyl alcohol	0.9500	0.15	1	0	95.0	70	130				
m&p-Xylene	1.970	0.30	2	0	98.5	70	130				
Methyl Butyl Ketone	0.7900	0.30	1	0	79.0	70	130				
Methyl Ethyl Ketone	0.9000	0.30	1	0	90.0	70	130				
Methyl Isobutyl Ketone	0.8500	0.30	1	0	85.0	70	130				
Methyl tert-butyl ether	0.9700	0.15	1	0	97.0	70	130				
Methylene chloride	1.010	0.15	1	0	101	70	130				
o-Xylene	1.030	0.15	1	0	103	70	130				
Propylene	1.090	0.15	1	0	109	70	130				
Styrene	0.9900	0.15	1	0	99.0	70	130				
Tetrachloroethylene	0.9400	0.15	1	0	94.0	70	130				
Tetrahydrofuran	1.040	0.15	1	0	104	70	130				
Toluene	0.9300	0.15	1	0	93.0	70	130				
trans-1,2-Dichloroethene	1.040	0.15	1	0	104	70	130				
trans-1,3-Dichloropropene	0.9000	0.15	1	0	90.0	70	130				
Trichloroethene	0.8700	0.15	1	0	87.0	70	130				
Vinyl acetate	1.010	0.15	1	0	101	70	130				
Vinyl Bromide	1.020	0.15	1	0	102	70	130				
Vinyl chloride	1.060	0.15	1	0	106	70	130				

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				



Date: 02-Jan-19

ANALYTICAL QC SUMMARY REPORT

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122118	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14492						
Client ID: ZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166946						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.8900	0.15	1	0	89.0	70	130	0.83	6.98	30	
1,1,2,2-Tetrachloroethane	0.9200	0.15	1	0	92.0	70	130	0.88	4.44	30	
1,1,2-Trichloroethane	0.9400	0.15	1	0	94.0	70	130	0.87	7.73	30	
1,1-Dichloroethane	0.9900	0.15	1	0	99.0	70	130	0.95	4.12	30	
1,1-Dichloroethene	0.8900	0.15	1	0	89.0	70	130	0.88	1.13	30	
1,2,4-Trichlorobenzene	0.7200	0.15	1	0	72.0	70	130	0.87	18.9	30	
1,2,4-Trimethylbenzene	0.8100	0.15	1	0	81.0	70	130	0.82	1.23	30	
1,2-Dibromoethane	0.8900	0.15	1	0	89.0	70	130	0.88	1.13	30	
1,2-Dichlorobenzene	0.8900	0.15	1	0	89.0	70	130	0.88	1.13	30	
1,2-Dichloroethane	0.9400	0.15	1	0	94.0	70	130	0.94	0	30	
1,2-Dichloropropane	0.9400	0.15	1	0	94.0	70	130	0.84	11.2	30	
1,3,5-Trimethylbenzene	0.9100	0.15	1	0	91.0	70	130	0.9	1.10	30	
1,3-butadiene	1.010	0.15	1	0	101	70	130	0.96	5.08	30	
1,3-Dichlorobenzene	0.8700	0.15	1	0	87.0	70	130	0.83	4.71	30	
1,4-Dichlorobenzene	0.8600	0.15	1	0	86.0	70	130	0.82	4.76	30	
1,4-Dioxane	0.9200	0.30	1	0	92.0	70	130	0.99	7.33	30	
2,2,4-trimethylpentane	0.8500	0.15	1	0	85.0	70	130	0.8	6.06	30	
4-ethyltoluene	0.8900	0.15	1	0	89.0	70	130	0.85	4.60	30	
Acetone	0.9000	0.30	1	0	90.0	70	130	0.87	3.39	30	
Alkyl chloride	0.9000	0.15	1	0	90.0	70	130	0.92	2.20	30	
Benzene	0.8700	0.15	1	0	87.0	70	130	0.83	4.71	30	
Benzyl chloride	0.9200	0.15	1	0	92.0	70	130	0.94	2.15	30	
Bromodichloromethane	1.050	0.15	1	0	105	70	130	1	4.88	30	
Bromoforn	5.410	0.15	1	0	541	70	130	5.41	0	30	S
Bromomethane	0.9500	0.15	1	0	95.0	70	130	0.94	1.06	30	

Qualifiers: Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122118		SampleType: LCS	TestCode: 1ugM3_TO15		Units: ppbV	Prep Date:		RunNo: 14492			
Client ID: ZZZZ		Batch ID: R14492	TestNo: TO-15			Analysis Date: 12/22/2018		SeqNo: 166946			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	0.9600	0.15	1	0	96.0	70	130	0.92	4.26	30	
Carbon tetrachloride	0.8200	0.15	1	0	82.0	70	130	0.77	6.29	30	
Chlorobenzene	0.8500	0.15	1	0	85.0	70	130	0.8	6.06	30	
Chloroethane	1.040	0.15	1	0	104	70	130	0.94	10.1	30	
Chloroform	0.9700	0.15	1	0	97.0	70	130	0.93	4.21	30	
Chloromethane	1.020	0.15	1	0	102	70	130	1	1.98	30	
cis-1,2-Dichloroethene	0.8800	0.15	1	0	88.0	70	130	0.86	2.30	30	
cis-1,3-Dichloropropene	0.8900	0.15	1	0	89.0	70	130	0.85	4.60	30	
Cyclohexane	0.8300	0.15	1	0	83.0	70	130	0.81	2.44	30	
Dibromochloromethane	1.630	0.15	1	0	163	70	130	1.4	15.2	30	S
Ethyl acetate	1.010	0.15	1	0	101	70	130	0.97	4.04	30	
Ethylbenzene	0.8000	0.15	1	0	80.0	70	130	0.77	3.82	30	
Freon 11	0.9800	0.15	1	0	98.0	70	130	0.96	2.06	30	
Freon 113	0.9900	0.15	1	0	99.0	70	130	0.93	6.25	30	
Freon 114	1.030	0.15	1	0	103	70	130	0.96	7.04	30	
Freon 12	1.010	0.15	1	0	101	70	130	0.93	8.25	30	
Heptane	0.8400	0.15	1	0	84.0	70	130	0.8	4.88	30	
Hexachloro-1,3-butadiene	0.9500	0.15	1	0	95.0	70	130	0.96	1.05	30	
Hexane	0.9600	0.15	1	0	96.0	70	130	0.9	6.45	30	
Isopropyl alcohol	0.9600	0.15	1	0	96.0	70	130	0.98	2.06	30	
m&p-Xylene	1.760	0.30	2	0	88.0	70	130	1.67	5.25	30	
Methyl Butyl Ketone	0.8100	0.30	1	0	81.0	70	130	1.03	23.9	30	
Methyl Ethyl Ketone	1.000	0.30	1	0	100	70	130	0.98	2.02	30	
Methyl Isobutyl Ketone	0.8700	0.30	1	0	87.0	70	130	1.05	18.8	30	
Methyl tert-butyl ether	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	
Methylene chloride	0.8800	0.15	1	0	88.0	70	130	0.87	1.14	30	
o-Xylene	0.9400	0.15	1	0	94.0	70	130	0.91	3.24	30	
Propylene	0.9900	0.15	1	0	99.0	70	130	0.93	6.25	30	
Styrene	0.9000	0.15	1	0	90.0	70	130	0.86	4.55	30	
Tetrachloroethylene	0.8900	0.15	1	0	89.0	70	130	0.82	8.19	30	
Tetrahydrofuran	0.9600	0.15	1	0	96.0	70	130	0.99	3.08	30	

Qualifiers: J Results reported are not blank corrected
S Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122118		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14492	
Client ID: ZZZZZ		Batch ID: R14492		TestNo: TO-15				Analysis Date: 12/22/2018		SeqNo: 166946	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	0.8300	0.15	1	0	83.0	70	130	0.79	4.94	30	
trans-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130	0.93	5.24	30	
trans-1,3-Dichloropropene	0.8800	0.15	1	0	88.0	70	130	0.78	12.0	30	
Trichloroethene	0.8400	0.15	1	0	84.0	70	130	0.77	8.70	30	
Vinyl acetate	0.8900	0.15	1	0	89.0	70	130	0.92	3.31	30	
Vinyl Bromide	0.9700	0.15	1	0	97.0	70	130	0.95	2.08	30	
Vinyl chloride	0.9400	0.15	1	0	94.0	70	130	0.9	4.35	30	

Sample ID: ALCS1UGD-122218		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14493	
Client ID: ZZZZZ		Batch ID: R14493		TestNo: TO-15				Analysis Date: 12/22/2018		SeqNo: 166964	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.8500	0.15	1	0	86.0	70	130	0.86	0	30	
1,1,2,2-Tetrachloroethane	0.8700	0.15	1	0	87.0	70	130	0.86	1.16	30	
1,1,2-Trichloroethane	0.8900	0.15	1	0	89.0	70	130	0.87	2.27	30	
1,1-Dichloroethane	0.8700	0.15	1	0	87.0	70	130	0.95	8.79	30	
1,1-Dichloroethene	0.8000	0.15	1	0	80.0	70	130	0.88	9.52	30	
1,2,4-Trichlorobenzene	0.7800	0.15	1	0	78.0	70	130	0.81	3.77	30	
1,2,4-Trimethylbenzene	0.7400	0.15	1	0	74.0	70	130	0.76	2.67	30	
1,2-Dibromoethane	0.8600	0.15	1	0	86.0	70	130	0.85	1.17	30	
1,2-Dichlorobenzene	0.8300	0.15	1	0	83.0	70	130	0.82	1.21	30	
1,2-Dichloroethane	0.8600	0.15	1	0	88.0	70	130	0.89	1.13	30	
1,2-Dichloropropane	0.8900	0.15	1	0	89.0	70	130	0.87	2.27	30	
1,3,5-Trimethylbenzene	0.9100	0.15	1	0	91.0	70	130	0.86	5.65	30	
1,3-butadiene	0.9200	0.15	1	0	92.0	70	130	1	8.33	30	
1,3-Dichlorobenzene	0.8100	0.15	1	0	81.0	70	130	0.8	1.24	30	
1,4-Dichlorobenzene	0.7900	0.15	1	0	79.0	70	130	0.78	1.27	30	
1,4-Dioxane	0.7100	0.30	1	0	71.0	70	130	0.88	21.4	30	
2,2,4-trimethylpentane	0.7800	0.15	1	0	78.0	70	130	0.82	5.00	30	
4-ethyltoluene	0.8700	0.15	1	0	87.0	70	130	0.84	3.51	30	

Qualifiers: - Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122218		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14493	
Client ID: ZZZZZ		Batch ID: R14493		TestNo: TO-15		Analysis Date: 12/22/2018		SeqNo: 166964			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	0.8000	0.30	1	0	80.0	70	130	0.86	7.23	30	
Allyl chloride	0.8100	0.15	1	0	81.0	70	130	0.93	13.8	30	
Benzene	0.8200	0.15	1	0	82.0	70	130	0.83	1.21	30	
Benzyl chloride	0.8100	0.15	1	0	81.0	70	130	0.83	2.44	30	
Bromodichloromethane	0.9900	0.15	1	0	99.0	70	130	0.96	3.08	30	
Bromoform	5.010	0.15	1	0	501	70	130	5.11	1.98	30	S
Bromomethane	0.8200	0.15	1	0	82.0	70	130	0.92	11.5	30	
Carbon disulfide	0.8400	0.15	1	0	84.0	70	130	0.94	11.2	30	
Carbon tetrachloride	0.7800	0.15	1	0	78.0	70	130	0.78	0	30	
Chlorobenzene	0.8000	0.15	1	0	80.0	70	130	0.79	1.26	30	
Chloroethane	0.9300	0.15	1	0	93.0	70	130	1.02	9.23	30	
Chloroform	0.9000	0.15	1	0	90.0	70	130	0.93	3.28	30	
Chloromethane	0.8900	0.15	1	0	89.0	70	130	0.98	9.63	30	
cis-1,2-Dichloroethene	0.7800	0.15	1	0	78.0	70	130	0.87	10.9	30	
cis-1,3-Dichloropropene	0.8400	0.15	1	0	84.0	70	130	0.85	1.18	30	
Cyclohexane	0.7900	0.15	1	0	79.0	70	130	0.83	4.94	30	
Dibromochloromethane	1.540	0.15	1	0	154	70	130	1.54	0	30	S
Ethyl acetate	0.8700	0.15	1	0	87.0	70	130	0.94	7.73	30	
Ethylbenzene	0.7600	0.15	1	0	76.0	70	130	0.76	0	30	
Freon 11	0.9100	0.15	1	0	91.0	70	130	0.95	4.30	30	
Freon 113	0.8800	0.15	1	0	88.0	70	130	0.96	8.70	30	
Freon 114	0.8900	0.15	1	0	89.0	70	130	0.99	10.6	30	
Freon 12	0.8800	0.15	1	0	88.0	70	130	0.98	10.8	30	
Heptane	0.7700	0.15	1	0	77.0	70	130	0.8	3.82	30	
Hexachloro-1,3-butadiene	0.8600	0.15	1	0	86.0	70	130	0.85	1.17	30	
Hexane	0.8200	0.15	1	0	82.0	70	130	0.95	14.7	30	
Isopropyl alcohol	0.7700	0.15	1	0	77.0	70	130	0.95	20.9	30	
m&p-Xylene	1.660	0.30	2	0	63.0	70	130	1.68	1.20	30	
Methyl Butyl Ketone	0.6400	0.30	1	0	64.0	70	130	0.8	22.2	30	S
Methyl Ethyl Ketone	0.8300	0.30	1	0	83.0	70	130	0.94	12.4	30	
Methyl Isobutyl Ketone	0.7500	0.30	1	0	75.0	70	130	0.89	17.1	30	

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122218		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14493	
Client ID: ZZZZZ		Batch ID: R14493		TestNo: TO-15		Analysis Date: 12/22/2018		SeqNo: 166964			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.7900	0.15	1	0	79.0	70	130	0.89	11.9	30	30
Methylene chloride	0.8400	0.15	1	0	84.0	70	130	0.89	5.78	30	30
o-Xylene	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	30
Propylene	0.8100	0.15	1	0	81.0	70	130	0.95	15.9	30	30
Styrene	0.8800	0.15	1	0	88.0	70	130	0.87	1.14	30	30
Tetrachloroethylene	0.8400	0.15	1	0	84.0	70	130	0.84	0	30	30
Tetrahydrofuran	0.7900	0.15	1	0	79.0	70	130	0.86	8.48	30	30
Toluene	0.7900	0.15	1	0	79.0	70	130	0.8	1.26	30	30
trans-1,2-Dichloroethene	0.8500	0.15	1	0	85.0	70	130	0.93	8.99	30	30
trans-1,3-Dichloropropene	0.8000	0.15	1	0	80.0	70	130	0.82	2.47	30	30
Trichloroethene	0.8000	0.15	1	0	80.0	70	130	0.77	3.82	30	30
Vinyl acetate	0.7800	0.15	1	0	78.0	70	130	0.88	12.0	30	30
Vinyl Bromide	0.8300	0.15	1	0	83.0	70	130	0.95	13.5	30	30
Vinyl chloride	0.8100	0.15	1	0	81.0	70	130	0.91	11.6	30	30

Sample ID: ALCS1UGD-122318		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14495	
Client ID: ZZZZZ		Batch ID: R14495		TestNo: TO-15		Analysis Date: 12/24/2018		SeqNo: 167008			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9200	0.15	1	0	92.0	70	130	0.94	2.15	30	30
1,1,2,2-Tetrachloroethane	1.000	0.15	1	0	100	70	130	0.98	2.02	30	30
1,1,2-Trichloroethane	1.000	0.15	1	0	100	70	130	0.96	4.08	30	30
1,1-Dichloroethane	1.000	0.15	1	0	100	70	130	1.06	5.83	30	30
1,1-Dichloroethene	0.8800	0.15	1	0	88.0	70	130	1	12.8	30	30
1,2,4-Trichlorobenzene	0.8500	0.15	1	0	85.0	70	130	0.76	11.2	30	30
1,2,4-Trimethylbenzene	0.8700	0.15	1	0	87.0	70	130	0.85	2.33	30	30
1,2-Dibromoethane	0.9500	0.15	1	0	95.0	70	130	0.96	1.05	30	30
1,2-Dichlorobenzene	0.9300	0.15	1	0	93.0	70	130	0.95	2.13	30	30
1,2-Dichloroethane	0.9900	0.15	1	0	99.0	70	130	1.05	5.88	30	30
1,2-Dichloropropane	0.9700	0.15	1	0	97.0	70	130	0.97	0	30	30

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALC51UGD-122318		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14495	
Client ID: ZZZZZ		Batch ID: R14495		TestNo: TO-15				Analysis Date: 12/24/2018		SeqNo: 167008	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	1.000	0.15	1	0	100	70	130	0.97	3.05	30	
1,3-butadiene	1.010	0.15	1	0	101	70	130	1.12	10.3	30	
1,3-Dichlorobenzene	0.9200	0.15	1	0	92.0	70	130	0.92	0	30	
1,4-Dichlorobenzene	0.9300	0.15	1	0	93.0	70	130	0.94	1.07	30	
1,4-Dioxane	0.9400	0.30	1	0	94.0	70	130	0.91	3.24	30	
2,2,4-trimethylpentane	0.9300	0.15	1	0	93.0	70	130	0.9	3.28	30	
4-ethyltoluene	0.9900	0.15	1	0	99.0	70	130	0.97	2.04	30	
Acetone	0.9400	0.30	1	0	94.0	70	130	0.91	3.24	30	
Allyl chloride	0.8900	0.15	1	0	89.0	70	130	1.06	17.4	30	
Benzene	0.8900	0.15	1	0	89.0	70	130	0.93	4.40	30	
Benzyl chloride	0.9300	0.15	1	0	93.0	70	130	0.96	3.17	30	
Bromodichloromethane	1.110	0.15	1	0	111	70	130	1.11	0	30	
Bromoform	5.540	0.15	1	0	554	70	130	5.7	2.85	30	S
Bromomethane	0.8900	0.15	1	0	89.0	70	130	1.03	14.6	30	
Carbon disulfide	0.9800	0.15	1	0	98.0	70	130	1.04	5.94	30	
Carbon tetrachloride	0.8700	0.15	1	0	87.0	70	130	0.87	0	30	
Chlorobenzene	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	
Chloroethane	0.9900	0.15	1	0	99.0	70	130	1.09	9.62	30	
Chloroform	1.020	0.15	1	0	102	70	130	1.06	3.85	30	
Chloromethane	1.090	0.15	1	0	109	70	130	1.07	6.76	30	
cis-1,2-Dichloroethene	0.9300	0.15	1	0	93.0	70	130	0.99	6.25	30	
cis-1,3-Dichloropropene	0.9100	0.15	1	0	91.0	70	130	0.95	4.30	30	
Cyclohexane	0.9200	0.15	1	0	92.0	70	130	0.9	2.20	30	
Dibromochloromethane	1.700	0.15	1	0	170	70	130	1.72	1.17	30	S
Ethyl acetate	1.020	0.15	1	0	102	70	130	1.05	2.90	30	
Ethylbenzene	0.8300	0.15	1	0	83.0	70	130	0.89	6.98	30	
Freon 11	1.030	0.15	1	0	103	70	130	1.08	4.74	30	
Freon 113	1.020	0.15	1	0	102	70	130	1.07	4.78	30	
Freon 114	1.000	0.15	1	0	100	70	130	1.11	10.4	30	
Freon 12	0.9900	0.15	1	0	99.0	70	130	1.1	10.5	30	
Heptane	0.8700	0.15	1	0	87.0	70	130	0.88	1.14	30	

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: IugM3_TO15

Sample ID: ALCS1UGD-122318		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14495			
Client ID: ZZZZZ		Batch ID: R14495		TestNo: TO-15		Analysis Date: 12/24/2018						SeqNo: 167008	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Hexachloro-1,3-butadiene	0.9700	0.15	1	0	97.0	70	130	0.94	3.14	30			
Hexane	0.9700	0.15	1	0	97.0	70	130	0.99	2.04	30			
Isopropyl alcohol	0.8600	0.15	1	0	86.0	70	130	0.95	9.94	30			
m&p-Xylene	1.990	0.30	2	0	99.5	70	130	1.97	1.01	30			
Methyl Butyl Ketone	0.7200	0.30	1	0	72.0	70	130	0.79	9.27	30			
Methyl Ethyl Ketone	0.9600	0.30	1	0	98.0	70	130	0.9	8.51	30			
Methyl Isobutyl Ketone	0.8200	0.30	1	0	82.0	70	130	0.85	3.59	30			
Methyl tert-butyl ether	0.9100	0.15	1	0	91.0	70	130	0.97	6.38	30			
Methylene chloride	0.9200	0.15	1	0	92.0	70	130	1.01	9.33	30			
o-Xylene	1.050	0.15	1	0	105	70	130	1.03	1.92	30			
Propylene	0.9200	0.15	1	0	92.0	70	130	1.09	16.9	30			
Styrene	1.020	0.15	1	0	102	70	130	0.99	2.99	30			
Tetrachloroethylene	0.9300	0.15	1	0	93.0	70	130	0.94	1.07	30			
Tetrahydrofuran	0.9900	0.15	1	0	99.0	70	130	1.04	4.93	30			
Toluene	0.8900	0.15	1	0	89.0	70	130	0.93	4.40	30			
trans-1,2-Dichloroethene	0.9700	0.15	1	0	97.0	70	130	1.04	6.97	30			
trans-1,3-Dichloropropene	0.9000	0.15	1	0	90.0	70	130	0.9	0	30			
Trichloroethene	0.8800	0.15	1	0	88.0	70	130	0.87	1.14	30			
Vinyl acetate	0.8800	0.15	1	0	88.0	70	130	1.01	13.8	30			
Vinyl Bromide	0.9600	0.15	1	0	96.0	70	130	1.02	6.06	30			
Vinyl chloride	0.9100	0.15	1	0	91.0	70	130	1.06	15.2	30			

Qualifiers: J Results reported are not blank corrected E Estimated Value above quantitation range H Holding times for preparation or analysis exceeded
 S Analyte detected below quantitation limit ND Not Detected at the Limit of Detection R RPD outside accepted recovery limits
 Spike Recovery outside accepted recovery limits



Date: 02-Jan-19

ANALYTICAL QC SUMMARY REPORT

CLIENT: SOIL MECHANICS

Work Order: C1812057

Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122118	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166944						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	< 0.15	0.15									
1,1,2,2-Tetrachloroethane	< 0.15	0.15									
1,1,2-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
1,2,4-Trichlorobenzene	< 0.15	0.15									
1,2,4-Trimethylbenzene	< 0.15	0.15									
1,2-Dibromoethane	< 0.15	0.15									
1,2-Dichlorobenzene	< 0.15	0.15									
1,2-Dichloroethane	< 0.15	0.15									
1,2-Dichloropropane	< 0.15	0.15									
1,3,5-Trimethylbenzene	< 0.15	0.15									
1,3-butadiene	< 0.15	0.15									
1,3-Dichlorobenzene	< 0.15	0.15									
1,4-Dichlorobenzene	< 0.15	0.15									
1,4-Dioxane	< 0.30	0.30									
2,2,4-trimethylpentane	< 0.15	0.15									
4-ethyltoluene	< 0.15	0.15									
Acetone	< 0.30	0.30									
Allyl chloride	< 0.15	0.15									
Benzene	< 0.15	0.15									
Benzyl chloride	< 0.15	0.15									
Bromodichloromethane	< 0.15	0.15									
Bromoform	< 0.15	0.15									
Bromomethane	< 0.15	0.15									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: IugM3_TO15

Sample ID: AMB1UG-122118	Sample Type: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166944						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.15	0.15									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122118	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166944						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Sample ID: AMB1UG-122218	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166962						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	< 0.15	0.15									
1,1,2,2-Tetrachloroethane	< 0.15	0.15									
1,1,2-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
1,2,4-Trichlorobenzene	< 0.15	0.15									
1,2,4-Trimethylbenzene	< 0.15	0.15									
1,2-Dibromoethane	< 0.15	0.15									
1,2-Dichlorobenzene	< 0.15	0.15									
1,2-Dichloroethane	< 0.15	0.15									
1,2-Dichloropropane	< 0.15	0.15									
1,3,5-Trimethylbenzene	< 0.15	0.15									
1,3-butadiene	< 0.15	0.15									
1,3-Dichlorobenzene	< 0.15	0.15									
1,4-Dichlorobenzene	< 0.15	0.15									
1,4-Dioxane	< 0.30	0.30									
2,2,4-trimethylpentane	< 0.15	0.15									
4-ethyltoluene	< 0.15	0.15									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantification range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122218	SampleType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166962						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	< 0.30	0.30									
Allyl chloride	< 0.15	0.15									
Benzene	< 0.15	0.15									
Benzyl chloride	< 0.15	0.15									
Bromodichloromethane	< 0.15	0.15									
Bromoform	< 0.15	0.15									
Bromomethane	< 0.15	0.15									
Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.15	0.15									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									

Qualifiers: - Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122218	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166962						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Sample ID: AMB1UG-122318	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	< 0.15	0.15									
1,1,2,2-Tetrachloroethane	< 0.15	0.15									
1,1,2-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
1,2,4-Trichlorobenzene	< 0.15	0.15									
1,2,4-Trimethylbenzene	< 0.15	0.15									
1,2-Dibromoethane	< 0.15	0.15									
1,2-Dichlorobenzene	< 0.15	0.15									
1,2-Dichloroethane	< 0.15	0.15									
1,2-Dichloropropane	< 0.15	0.15									

Qualifiers: - Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122318	Sample Type: MBLK	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	< 0.15	0.15									
1,3-butadiene	< 0.15	0.15									
1,3-Dichlorobenzene	< 0.15	0.15									
1,4-Dichlorobenzene	< 0.15	0.15									
1,4-Dioxane	< 0.30	0.30									
2,2,4-trimethylpentane	< 0.15	0.15									
4-ethyltoluene	< 0.15	0.15									
Acetone	< 0.30	0.30									
Allyl chloride	< 0.15	0.15									
Benzene	< 0.15	0.15									
Benzyl chloride	< 0.15	0.15									
Bromodichloromethane	< 0.15	0.15									
Bromoform	< 0.15	0.15									
Bromomethane	< 0.15	0.15									
Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.15	0.15									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethane	< 0.15	0.15									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									

Qualifiers: - Results reported are not blank, corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122318	Sample Type: MBLK	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				



Date: 02-Jan-19

ANALYTICAL QC SUMMARY REPORT

CLIENT: SOIL MECHANICS

Work Order: C1812057

Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS		SampType: MS		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14492	
Client ID: SVW-15		Batch ID: R14492		TestNo: TO-15				Analysis Date: 12/21/2018		SeqNo: 166960	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.000	0.15	1	0.17	83.0	70	130				
1,1,2,2-Tetrachloroethane	0.7700	0.15	1	0	77.0	70	130				
1,1,2-Trichloroethane	0.8500	0.15	1	0	85.0	70	130				
1,1-Dichloroethane	0.8300	0.15	1	0	83.0	70	130				
1,1-Dichloroethene	0.7500	0.15	1	0	75.0	70	130				
1,2,4-Trichlorobenzene	0.7800	0.15	1	0	78.0	70	130				
1,2,4-Trimethylbenzene	0.7900	0.15	1	0	79.0	70	130				
1,2-Dibromoethane	0.8100	0.15	1	0	81.0	70	130				
1,2-Dichlorobenzene	0.8100	0.15	1	0	81.0	70	130				
1,2-Dichloroethane	0.7900	0.15	1	0	79.0	70	130				
1,2-Dichloropropane	0.8300	0.15	1	0	83.0	70	130				
1,3,5-Trimethylbenzene	0.8000	0.15	1	0	80.0	70	130				
1,3-butadiene	0.9400	0.15	1	0	94.0	70	130				
1,3-Dichlorobenzene	0.8600	0.15	1	0	86.0	70	130				
1,4-Dichlorobenzene	0.7700	0.15	1	0	77.0	70	130				
1,4-Dioxane	0.8900	0.30	1	0	89.0	70	130				
2,2,4-trimethylpentane	0.7800	0.15	1	0	78.0	70	130				
4-ethyltoluene	0.7800	0.15	1	0	78.0	70	130				
Acetone	3.360	0.30	1	2.88	48.0	70	130				S
Allyl chloride	0.8300	0.15	1	0	83.0	70	130				
Benzene	0.8600	0.15	1	0	86.0	70	130				
Benzyl chloride	0.7800	0.15	1	0	78.0	70	130				
Bromodichloromethane	0.9400	0.15	1	0	94.0	70	130				
Bromoform	4.360	0.15	1	0	436	70	130				S
Bromomethane	0.8200	0.15	1	0	82.0	70	130				

Qualifiers:

- J Results reported are not blank corrected
- S Analyte detected below quantitation limit
- S Spike Recovery outside accepted recovery limits
- E Estimated Value above quantitation range
- ND Not Detected at the Limit of Detection
- H Holding times for preparation or analysis exceeded
- R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS		SampType: MS		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14492	
Client ID: SVW-15		Batch ID: R14492		TestNo: TO-15				Analysis Date: 12/21/2018		SeqNo: 166950	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	1.370	0.15	1	0.58	79.0	70	130				
Carbon tetrachloride	0.7900	0.15	1	0	79.0	70	130				
Chlorobenzene	0.7300	0.15	1	0	73.0	70	130				
Chloroethane	0.8800	0.15	1	0	88.0	70	130				
Chloroform	1.150	0.15	1	0.37	78.0	70	130				
Chloromethane	0.9700	0.15	1	0	97.0	70	130				
cis-1,2-Dichloroethene	0.7700	0.15	1	0	77.0	70	130				
cis-1,3-Dichloropropene	0.8000	0.15	1	0	80.0	70	130				
Cyclohexane	0.8900	0.15	1	0	89.0	70	130				
Dibromochloromethane	1.400	0.15	1	0	140	70	130				S
Ethyl acetate	0.9000	0.15	1	0	90.0	70	130				
Ethylbenzene	0.7100	0.15	1	0	71.0	70	130				
Freon 11	3.160	0.15	1	2.56	60.0	70	130				S
Freon 113	0.9000	0.15	1	0	90.0	70	130				
Freon 114	0.9100	0.15	1	0	91.0	70	130				
Freon 12	1.300	0.15	1	0.55	75.0	70	130				
Heptane	0.8100	0.15	1	0	81.0	70	130				
Hexachloro-1,3-butadiene	0.8400	0.15	1	0	84.0	70	130				
Hexane	0.9500	0.15	1	0	95.0	70	130				
Isopropyl alcohol	1.460	0.15	1	0	146	70	130				S
m&p-Xylene	1.490	0.30	2	0	74.5	70	130				
Methyl Butyl Ketone	0.7600	0.30	1	0	76.0	70	130				
Methyl Ethyl Ketone	0.9100	0.30	1	0	91.0	70	130				
Methyl Isobutyl Ketone	0.8500	0.30	1	0	85.0	70	130				
Methyl tert-butyl ether	0.7600	0.15	1	0	76.0	70	130				
Methylene chloride	1.320	0.15	1	0.6	72.0	70	130				
o-Xylene	0.7900	0.15	1	0	79.0	70	130				
Propylene	1.390	0.15	1	0	139	70	130				
Styrene	0.7400	0.15	1	0	74.0	70	130				S
Tetrachloroethylene	3.640	0.15	1	2.88	76.0	70	130				
Tetrahydrofuran	0.8400	0.15	1	0	84.0	70	130				

Qualifiers: Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS	SampleType: MS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: SVW-15	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166960						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	1.030	0.15	1	0.27	75.0	70	130				
trans-1,2-Dichloroethene	0.8300	0.15	1	0	83.0	70	130				
trans-1,3-Dichloropropene	0.7900	0.15	1	0	79.0	70	130				
Trichloroethene	0.8000	0.15	1	0	80.0	70	130				
Vinyl acetate	0.7600	0.15	1	0	76.0	70	130				
Vinyl Bromide	0.8500	0.15	1	0	85.0	70	130				
Vinyl chloride	0.8200	0.15	1	0	82.0	70	130				

Sample ID: C1812057-016A MS	SampleType: MSD	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: SVW-15	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166961						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	0.9500	0.15	1	0.17	78.0	70	130	1	5.13	30	
1,1,2,2-Tetrachloroethane	0.7200	0.15	1	0	72.0	70	130	0.77	6.71	30	
1,1,2-Trichloroethane	0.8100	0.15	1	0	81.0	70	130	0.85	4.82	30	
1,1-Dichloroethane	0.9500	0.15	1	0	96.0	70	130	0.83	14.5	30	
1,1-Dichloroethene	0.8800	0.15	1	0	88.0	70	130	0.75	16.0	30	
1,2,4-Trichlorobenzene	0.7200	0.15	1	0	72.0	70	130	0.78	8.00	30	
1,2,4-Trimethylbenzene	0.7300	0.15	1	0	73.0	70	130	0.79	7.89	30	
1,2-Dibromoethane	0.8000	0.15	1	0	80.0	70	130	0.81	1.24	30	
1,2-Dichlorobenzene	0.7500	0.15	1	0	75.0	70	130	0.81	7.69	30	
1,2-Dichloroethane	0.9100	0.15	1	0	91.0	70	130	0.79	14.1	30	
1,2-Dichloropropene	0.8500	0.15	1	0	85.0	70	130	0.83	2.38	30	
1,3,5-Trimethylbenzene	0.7200	0.15	1	0	72.0	70	130	0.8	10.5	30	
1,3-butadiene	1.100	0.15	1	0	110	70	130	0.94	15.7	30	
1,3-Dichlorobenzene	0.7700	0.15	1	0	77.0	70	130	0.86	11.0	30	
1,4-Dichlorobenzene	0.7100	0.15	1	0	71.0	70	130	0.77	8.11	30	
1,4-Dioxane	0.7300	0.30	1	0	73.0	70	130	0.89	19.8	30	
2,2,4-trimethylpentane	0.7800	0.15	1	0	78.0	70	130	0.78	0	30	
4-ethyltoluene	0.7400	0.15	1	0	74.0	70	130	0.78	5.26	30	

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits
 S Spike Recovery outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS		SampType: MSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14492	
Client ID: SVW-15		Batch ID: R14492		TestNo: TO-15		Analysis Date: 12/22/2018		SeqNo: 166961			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HightLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	3.510	0.30	1	2.88	63.0	70	130	3.36	4.37	30	S
Allyl chloride	0.9500	0.15	1	0	95.0	70	130	0.83	13.5	30	
Benzene	0.8700	0.15	1	0	87.0	70	130	0.86	1.16	30	
Benzyl chloride	0.7600	0.15	1	0	76.0	70	130	0.78	2.60	30	
Bromodichloromethane	0.9500	0.15	1	0	95.0	70	130	0.94	1.06	30	
Bromoform	4.300	0.15	1	0	430	70	130	4.36	1.39	30	S
Bromomethane	0.9000	0.15	1	0	90.0	70	130	0.82	9.30	30	
Carbon disulfide	1.440	0.15	1	0.58	86.0	70	130	1.37	4.98	30	
Carbon tetrachloride	0.7800	0.15	1	0	78.0	70	130	0.79	1.27	30	
Chlorobenzene	0.7000	0.15	1	0	70.0	70	130	0.73	4.20	30	
Chloroethane	1.030	0.15	1	0	103	70	130	0.88	15.7	30	
Chloroform	1.210	0.15	1	0.37	84.0	70	130	1.15	5.08	30	
Chloromethane	1.050	0.15	1	0	105	70	130	0.97	7.92	30	
cis-1,2-Dichloroethene	0.8800	0.15	1	0	88.0	70	130	0.77	13.3	30	
cis-1,3-Dichloropropene	0.7800	0.15	1	0	78.0	70	130	0.8	2.53	30	
Cyclohexane	0.8800	0.15	1	0	88.0	70	130	0.89	1.13	30	S
Dibromochloromethane	1.420	0.15	1	0	142	70	130	1.4	1.42	30	
Ethyl acetate	0.8900	0.15	1	0	89.0	70	130	0.9	1.12	30	
Ethylbenzene	0.7000	0.15	1	0	70.0	70	130	0.71	1.42	30	
Freon 11	3.050	0.15	1	2.56	49.0	70	130	3.16	3.54	30	S
Freon 113	0.9800	0.15	1	0	98.0	70	130	0.9	8.51	30	
Freon 114	1.000	0.15	1	0	100	70	130	0.91	9.42	30	
Freon 12	1.360	0.15	1	0.55	81.0	70	130	1.3	4.51	30	
Heptane	0.8100	0.15	1	0	81.0	70	130	0.81	0	30	
Hexachloro-1,3-butadiene	0.8100	0.15	1	0	81.0	70	130	0.84	3.64	30	
Hexane	1.030	0.15	1	0	103	70	130	0.95	8.08	30	
Isopropyl alcohol	1.410	0.15	1	0	141	70	130	1.46	3.48	30	S
m&p-Xylene	1.440	0.30	2	0	72.0	70	130	1.49	3.41	30	
Methyl Butyl Ketone	0.7300	0.30	1	0	73.0	70	130	0.76	4.03	30	
Methyl Ethyl Ketone	0.9100	0.30	1	0	91.0	70	130	0.91	0	30	
Methyl Isobutyl Ketone	0.7500	0.30	1	0	75.0	70	130	0.85	12.5	30	

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS	Sample Type: MSD	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14492						
Client ID: SVW-15	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166961						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.7400	0.15	1	0	74.0	70	130	0.76	2.67	30	
Methylene chloride	1.410	0.15	1	0.6	81.0	70	130	1.32	6.59	30	
o-Xylene	0.7500	0.15	1	0	75.0	70	130	0.79	5.19	30	
Propylene	1.460	0.15	1	0	146	70	130	1.39	4.91	30	S
Styrene	0.7200	0.15	1	0	72.0	70	130	0.74	2.74	30	
Tetrachloroethylene	3.310	0.15	1	2.88	43.0	70	130	3.64	9.50	30	S
Tetrahydrofuran	0.8100	0.15	1	0	81.0	70	130	0.84	3.64	30	
Toluene	1.030	0.15	1	0.27	76.0	70	130	1.03	0	30	
trans-1,2-Dichloroethene	0.9100	0.15	1	0	91.0	70	130	0.83	9.20	30	
trans-1,3-Dichloropropene	0.7500	0.15	1	0	75.0	70	130	0.79	5.19	30	
Trichloroethene	0.7900	0.15	1	0	79.0	70	130	0.8	1.26	30	
Vinyl acetate	0.8400	0.15	1	0	84.0	70	130	0.76	10.0	30	
Vinyl Bromide	0.9600	0.15	1	0	96.0	70	130	0.85	12.2	30	
Vinyl chloride	0.9800	0.15	1	0	98.0	70	130	0.82	17.8	30	

Qualifiers: - Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #6	IDL #7	AVG	StdDev	%Rec	IDL
Propylene	0.3	0.32	0.31	0.3	0.3	0.33	0.32	0.33	0.32	0.01	105.2%	0.040
Freon 12	0.3	0.32	0.32	0.32	0.33	0.3	0.33	0.31	0.32	0.01	106.2%	0.034
Chloromethane	0.3	0.32	0.32	0.3	0.31	0.28	0.31	0.32	0.31	0.01	102.9%	0.046
Freon 114	0.3	0.31	0.31	0.3	0.3	0.29	0.31	0.3	0.30	0.01	101.0%	0.024
Vinyl Chloride	0.3	0.27	0.29	0.28	0.28	0.28	0.27	0.27	0.28	0.01	92.4%	0.024
Butane	0.3	0.32	0.31	0.31	0.31	0.28	0.29	0.29	0.30	0.01	100.5%	0.046
1,3-butadiene	0.3	0.3	0.29	0.29	0.3	0.28	0.29	0.29	0.29	0.01	97.1%	0.022
Bromomethane	0.3	0.29	0.3	0.31	0.32	0.31	0.32	0.28	0.30	0.02	101.4%	0.048
Chloroethane	0.3	0.3	0.29	0.31	0.31	0.27	0.29	0.29	0.29	0.01	98.1%	0.044
Ethanol	0.3	0.28	0.35	0.39	0.28	0.24	0.31	0.34	0.31	0.05	104.3%	0.160
Acrolein	0.3	0.3	0.29	0.34	0.29	0.31	0.32	0.28	0.30	0.02	101.4%	0.065
Vinyl Bromide	0.3	0.32	0.3	0.31	0.31	0.29	0.31	0.3	0.31	0.01	101.9%	0.031
Freon 11	0.3	0.33	0.31	0.32	0.32	0.3	0.31	0.3	0.31	0.01	104.3%	0.035
Acetone	0.3	0.31	0.28	0.28	0.26	0.21	0.32	0.3	0.28	0.04	93.3%	0.116
Pentane	0.3	0.32	0.29	0.3	0.31	0.21	0.3	0.29	0.29	0.04	96.2%	0.114
Isopropyl alcohol	0.3	0.29	0.23	0.29	0.23	0.26	0.25	0.29	0.26	0.03	87.6%	0.086
1,1-dichloroethene	0.3	0.31	0.29	0.28	0.29	0.28	0.29	0.28	0.29	0.01	96.2%	0.034
Freon 113	0.3	0.32	0.3	0.31	0.32	0.3	0.33	0.32	0.31	0.01	104.8%	0.036
t-Butyl alcohol	0.3	0.29	0.22	0.26	0.39	0.24	0.26	0.27	0.28	0.06	91.9%	0.173
Methylene chloride	0.3	0.32	0.31	0.29	0.33	0.31	0.32	0.32	0.31	0.01	104.8%	0.040
Allyl chloride	0.3	0.31	0.29	0.32	0.32	0.3	0.33	0.31	0.31	0.01	103.8%	0.042
Carbon disulfide	0.3	0.31	0.31	0.3	0.32	0.31	0.34	0.33	0.32	0.01	105.7%	0.043
trans-1,2-dichloroethene	0.3	0.31	0.3	0.31	0.32	0.29	0.33	0.32	0.31	0.01	103.8%	0.042
methyl tert-butyl ether	0.3	0.31	0.28	0.3	0.28	0.26	0.31	0.31	0.29	0.02	97.6%	0.062
1,1-dichloroethane	0.3	0.33	0.32	0.32	0.33	0.31	0.33	0.33	0.32	0.01	108.1%	0.025
Vinyl acetate	0.3	0.29	0.29	0.29	0.31	0.28	0.3	0.3	0.29	0.01	98.1%	0.031
Methyl Ethyl Ketone	0.3	0.29	0.29	0.27	0.24	0.21	0.3	0.32	0.27	0.04	91.4%	0.119
cis-1,2-dichloroethene	0.3	0.31	0.29	0.3	0.31	0.21	0.32	0.31	0.29	0.04	97.6%	0.119
Hexane	0.3	0.32	0.29	0.31	0.3	0.31	0.34	0.3	0.31	0.02	103.3%	0.051
Ethyl acetate	0.3	0.3	0.27	0.29	0.23	0.21	0.3	0.33	0.28	0.04	91.9%	0.133
Chloroform	0.3	0.33	0.31	0.31	0.33	0.31	0.33	0.32	0.32	0.01	106.7%	0.031
Tetrahydrofuran	0.3	0.31	0.26	0.31	0.26	0.25	0.31	0.32	0.29	0.03	96.2%	0.095
1,2-dichloroethane	0.3	0.33	0.31	0.31	0.32	0.31	0.33	0.32	0.32	0.01	106.2%	0.028
1,1,1-trichloroethane	0.3	0.33	0.31	0.33	0.32	0.31	0.32	0.34	0.32	0.01	107.6%	0.035
Cyclohexane	0.3	0.31	0.29	0.3	0.3	0.31	0.31	0.33	0.31	0.01	102.4%	0.039
Carbon tetrachloride	0.3	0.29	0.28	0.3	0.29	0.28	0.29	0.29	0.29	0.01	96.2%	0.022
Benzene	0.3	0.32	0.31	0.32	0.32	0.31	0.33	0.35	0.32	0.01	107.6%	0.043

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #6	IDL #7	AVG	StdDev	%Rec	IDL
Methyl methacrylate	0.3	0.27	0.24	0.25	0.21	0.2	0.28	0.29	0.25	0.03	82.9%	0.108
1,4-dioxane	0.3	0.28	0.2	0.25	0.39	0.2	0.24	0.27	0.26	0.06	87.1%	0.203
2,2,4-trimethylpentane	0.3	0.3	0.29	0.31	0.31	0.3	0.32	0.33	0.31	0.01	102.9%	0.042
Heptane	0.3	0.29	0.29	0.31	0.3	0.29	0.3	0.32	0.30	0.01	100.0%	0.036
Trichloroethene	0.3	0.28	0.27	0.27	0.28	0.27	0.28	0.28	0.28	0.01	91.9%	0.017
1,2-dichloropropane	0.3	0.31	0.31	0.32	0.33	0.31	0.35	0.35	0.33	0.02	108.6%	0.057
Bromodichloromethane	0.3	0.32	0.31	0.32	0.33	0.32	0.34	0.33	0.32	0.01	108.1%	0.031
cis-1,3-dichloropropene	0.3	0.28	0.29	0.3	0.3	0.29	0.32	0.3	0.30	0.01	99.0%	0.039
trans-1,3-dichloropropene	0.3	0.3	0.3	0.31	0.3	0.29	0.29	0.32	0.30	0.01	100.5%	0.034
1,1,2-trichloroethane	0.3	0.32	0.31	0.31	0.32	0.31	0.33	0.35	0.32	0.01	107.1%	0.046
Toluene	0.3	0.29	0.28	0.29	0.3	0.29	0.3	0.33	0.30	0.02	99.0%	0.050
Methyl isobutyl Ketone	0.3	0.28	0.23	0.26	0.36	0.26	0.27	0.26	0.27	0.04	91.4%	0.128
Dibromochloromethane	0.3	0.33	0.32	0.34	0.33	0.33	0.34	0.34	0.33	0.01	111.0%	0.024
Methyl Butyl Ketone	0.3	0.23	0.24	0.26	0.3	0.29	0.25	0.23	0.26	0.03	85.7%	0.088
1,2-dibromoethane	0.3	0.32	0.32	0.32	0.33	0.31	0.33	0.35	0.33	0.01	108.6%	0.040
Tetrachloroethylene	0.3	0.32	0.32	0.32	0.33	0.32	0.33	0.34	0.33	0.01	108.6%	0.025
Chlorobenzene	0.3	0.32	0.32	0.32	0.31	0.31	0.33	0.34	0.32	0.01	107.1%	0.034
Ethylbenzene	0.3	0.28	0.27	0.28	0.27	0.26	0.28	0.29	0.28	0.01	91.9%	0.031
m&p-xylene	0.6	0.51	0.5	0.51	0.5	0.48	0.5	0.53	0.50	0.02	84.0%	0.048
Nonane	0.3	0.24	0.26	0.27	0.25	0.25	0.28	0.28	0.26	0.02	87.1%	0.049
Styrene	0.3	0.26	0.25	0.26	0.24	0.24	0.27	0.27	0.26	0.01	85.2%	0.040
Bromoform	0.3	0.32	0.32	0.33	0.31	0.32	0.33	0.33	0.32	0.01	107.6%	0.024
o-xylene	0.3	0.27	0.28	0.28	0.27	0.27	0.28	0.28	0.28	0.01	91.9%	0.017
Cumene	0.3	0.26	0.26	0.26	0.24	0.24	0.26	0.28	0.26	0.01	85.7%	0.043
Bromofluorobenzene	1	0.97	0.97	0.95	0.95	0.95	0.93	0.95	0.95	0.01	95.3%	0.043
1,1,2,2-tetrachloroethane	0.3	0.33	0.31	0.33	0.31	0.31	0.37	0.39	0.34	0.03	111.9%	0.101
Propylbenzene	0.3	0.26	0.26	0.26	0.23	0.22	0.26	0.27	0.25	0.02	83.8%	0.059
2-Chlorotoluene	0.3	0.28	0.28	0.28	0.26	0.26	0.28	0.3	0.28	0.01	92.4%	0.043
4-ethyltoluene	0.3	0.24	0.24	0.24	0.21	0.21	0.24	0.26	0.23	0.02	78.1%	0.057
1,3,5-trimethylbenzene	0.3	0.26	0.25	0.26	0.22	0.21	0.25	0.27	0.25	0.02	81.9%	0.070
1,2,4-trimethylbenzene	0.3	0.25	0.24	0.24	0.2	0.2	0.24	0.26	0.23	0.02	77.6%	0.074
1,3-dichlorobenzene	0.3	0.28	0.28	0.29	0.25	0.26	0.27	0.29	0.27	0.02	91.4%	0.048
benzyl chloride	0.3	0.26	0.26	0.26	0.24	0.19	0.26	0.29	0.25	0.03	83.8%	0.097
1,4-dichlorobenzene	0.3	0.27	0.26	0.27	0.24	0.25	0.26	0.28	0.26	0.01	87.1%	0.042
1,2,3-trimethylbenzene	0.3	0.24	0.22	0.23	0.19	0.19	0.24	0.25	0.22	0.02	74.3%	0.076
1,2-dichlorobenzene	0.3	0.29	0.27	0.29	0.25	0.25	0.29	0.3	0.28	0.02	92.4%	0.055
1,2,4-trichlorobenzene	0.3	0.26	0.21	0.22	0.19	0.2	0.21	0.25	0.22	0.03	73.3%	0.081
Naphthalene	0.3	0.2	0.2	0.21	0.22	0.18	0.19	0.21	0.20	0.01	67.1%	0.042
Hexachloro-1,3-butadiene	0.3	0.3	0.26	0.28	0.23	0.24	0.3	0.32	0.28	0.03	91.9%	0.106

Compound	Amt	IDL #1	IDL #2	IDL #3	IDL #4	IDL #5	IDL #6	IDL #7	AVG	StdDev	%Rec	IDL
Vinyl Chloride	0.1	0.12	0.11	0.12	0.12	0.11	0.11	0.11	0.11	0.01	114.3%	0.017
1,1-dichloroethene	0.1	0.13	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.00	121.4%	0.012
1,1-dichloroethane	0.1	0.13	0.12	0.13	0.13	0.14	0.13	0.13	0.13	0.01	130.0%	0.018
cis-1,2-dichloroethene	0.1	0.12	0.11	0.11	0.11	0.13	0.13	0.13	0.12	0.01	120.0%	0.031
Carbon tetrachloride	0.1	0.12	0.12	0.12	0.12	0.12	0.11	0.11	0.12	0.00	117.1%	0.015
Trichloroethene	0.1	0.1	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.00	108.6%	0.012
Bromofluorobenzene	1	0.88	0.84	0.86	0.85	0.85	0.85	0.85	0.85	0.01	85.4%	0.040
Naphthalene	0.1	0.09	0.08	0.08	0.1	0.09	0.07	0.07	0.08	0.01	82.9%	0.035

GC/MS-Whole Air Calculations

Relative Response Factor (RRF)

$$RRF = \frac{A_x * C_{is}}{A_{is} * C_x}$$

where: A_x = area of the characteristic ion for the compound being measured
 A_{is} = area of the characteristic ion for the specific internal standard of the compound being measured
 C_x = concentration of the compound being measured (ppbv)
 C_{is} = concentration of the internal standard (ppbv)

Percent Relative Standard Deviation (%RSD)

$$\% RSD = \frac{\text{Standard deviation of RRF values} * 100}{\text{mean RRF}}$$

Percent Difference (%D)

$$\% D = \frac{(RRF_c - \text{mean } RRF_i) * 100}{\text{mean } RRF_i}$$

where: RRF_c = relative response factor from the continuing calibration
mean RRF_i = mean relative response factor from the initial calibration

Sample Calculations

$$ppbv = \frac{A_x * I_s * D_f}{A_{is} * RRF}$$

where: A_x = area of the characteristic ion for the compound being measured
 A_{is} = area of the characteristic ion for the specific internal standard of the compound being measured
 I_s = Concentration of the internal standard injected (ppbv)
 RRF = relative response factor for the compound being measured
 D_f = Dilution factor

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

SAMPLE DATA

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
				FLD		Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
				GC		Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
				TO-15		Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 12:44:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Acetone	5.4	1.5		ppbV	5	12/23/2018 12:54:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Benzene	0.22	0.15		ppbV	1	12/22/2018 12:44:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Carbon disulfide	0.55	0.15		ppbV	1	12/22/2018 12:44:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Chloromethane	0.49	0.15		ppbV	1	12/22/2018 12:44:00 AM
cis-1,2-Dichloroethene	0.16	0.15		ppbV	1	12/22/2018 12:44:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Cyclohexane	0.14	0.15	J	ppbV	1	12/22/2018 12:44:00 AM

Qualifiers:	** Quantitation Limit	- Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Ethyl acetate	0.17	0.15		ppbV	1	12/22/2018 12:44:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 11	0.38	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Freon 12	0.61	0.15		ppbV	1	12/22/2018 12:44:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 12:44:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Hexane	0.25	0.15		ppbV	1	12/22/2018 12:44:00 AM
Isopropyl alcohol	1.3	0.15		ppbV	1	12/22/2018 12:44:00 AM
m&p-Xylene	0.11	0.30	J	ppbV	1	12/22/2018 12:44:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl Ethyl Ketone	0.41	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl Isobutyl Ketone	0.54	0.30		ppbV	1	12/22/2018 12:44:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Methylene chloride	0.46	0.15		ppbV	1	12/22/2018 12:44:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Toluene	0.75	0.15		ppbV	1	12/22/2018 12:44:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Trichloroethene	0.20	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:44:00 AM
Surr: Bromofluorobenzene	75.0	70-130		%REC	1	12/22/2018 12:44:00 AM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte, Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:44:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:44:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:44:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:44:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:44:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 12:44:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 12:44:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:44:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 12:44:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 12:44:00 AM
Acetone	13	3.6		ug/m3	5	12/23/2018 12:54:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 12:44:00 AM
Benzene	0.70	0.48		ug/m3	1	12/22/2018 12:44:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 12:44:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 12:44:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 12:44:00 AM
Carbon disulfide	1.7	0.47		ug/m3	1	12/22/2018 12:44:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 12:44:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 12:44:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 12:44:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 12:44:00 AM
Chloromethane	1.0	0.31		ug/m3	1	12/22/2018 12:44:00 AM
cis-1,2-Dichloroethene	0.63	0.59		ug/m3	1	12/22/2018 12:44:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:44:00 AM
Cyclohexane	0.48	0.52	J	ug/m3	1	12/22/2018 12:44:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 12:44:00 AM
Ethyl acetate	0.61	0.54		ug/m3	1	12/22/2018 12:44:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 12:44:00 AM
Freon 11	2.1	0.84		ug/m3	1	12/22/2018 12:44:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 12:44:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-001A

Client Sample ID: SVW-1
Tag Number: 232,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15				TO-15	Analyst: RJP	
Freon 12	3.0	0.74		ug/m3	1	12/22/2018 12:44:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 12:44:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 12:44:00 AM
Hexane	0.88	0.53		ug/m3	1	12/22/2018 12:44:00 AM
Isopropyl alcohol	3.1	0.37		ug/m3	1	12/22/2018 12:44:00 AM
m&p-Xylene	0.48	1.3	J	ug/m3	1	12/22/2018 12:44:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
Methyl Ethyl Ketone	1.2	0.88		ug/m3	1	12/22/2018 12:44:00 AM
Methyl Isobutyl Ketone	2.2	1.2		ug/m3	1	12/22/2018 12:44:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 12:44:00 AM
Methylen chloride	1.6	0.52		ug/m3	1	12/22/2018 12:44:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 12:44:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 12:44:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 12:44:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 12:44:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 12:44:00 AM
Toluene	2.8	0.57		ug/m3	1	12/22/2018 12:44:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:44:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:44:00 AM
Trichloroethene	1.1	0.81		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 12:44:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 12:44:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Data File : C:\HPCHEM\1\DATA\AP122121.D

Vial: 5

Acq On : 22 Dec 2018 12:44 am

Operator: RJP

Sample : C1812057-001A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:37 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	37433	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	165478	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	139124	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	71710m	0.75	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	75.00%

Target Compounds

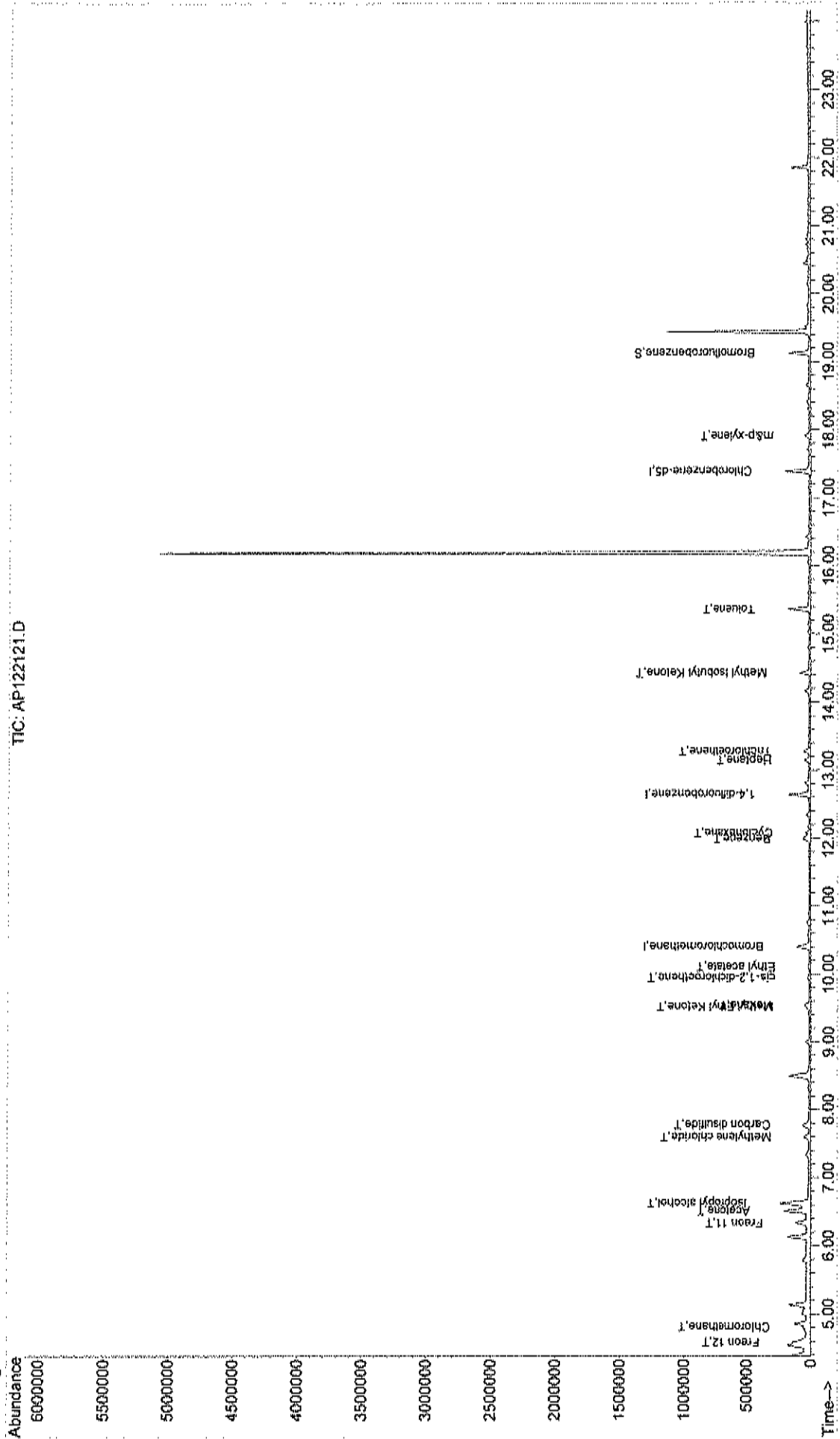
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.59	85	133126	0.61	ppb	99
4) Chloromethane	4.80	50	33567	0.49	ppb	98
14) Freon 11	6.33	101	112852	0.38	ppb	97
15) Acetone	6.51	58	108010	4.70	ppb	91
17) Isopropyl alcohol	6.63	45	107973	1.28	ppb	# 58
21) Methylene chloride	7.60	84	27057	0.46	ppb	# 70
23) Carbon disulfide	7.78	76	71999	0.55	ppb	100
28) Methyl Ethyl Ketone	9.51	72	9721m	0.41	ppb	
29) cis-1,2-dichloroethene	9.95	61	11879m	0.16	ppb	
30) Hexane	9.54	57	18395	0.25	ppb	# 65
31) Ethyl acetate	10.10	43	18935	0.17	ppb	86
37) Cyclohexane	12.07	56	11261	0.14	ppb	# 81
39) Benzene	11.98	78	40629	0.22	ppb	96
43) Heptane	13.15	43	12981	0.14	ppb	90
44) Trichloroethene	13.27	130	17798	0.20	ppb	# 19
51) Toluene	15.36	92	80806	0.75	ppb	90
52) Methyl Isobutyl Ketone	14.43	43	65469	0.54	ppb	89
59) m&p-xylene	17.90	91	19897	0.11	ppb	85

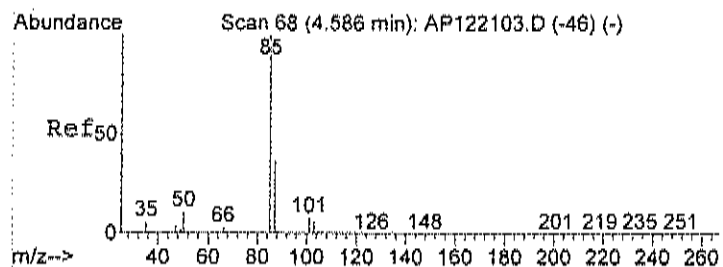
Data File : C:\HPCHEM\1\DATA\AP122121.D
 Acq On : 22 Dec 2018 12:44 am
 Sample : C1812057-001A
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 27 10:13 2018

Vial: 5
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

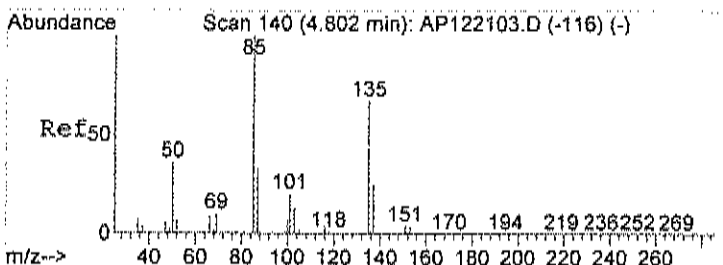
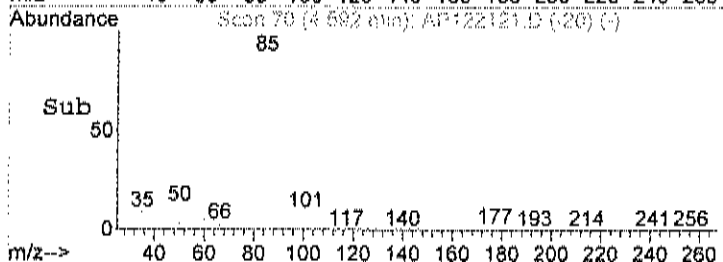
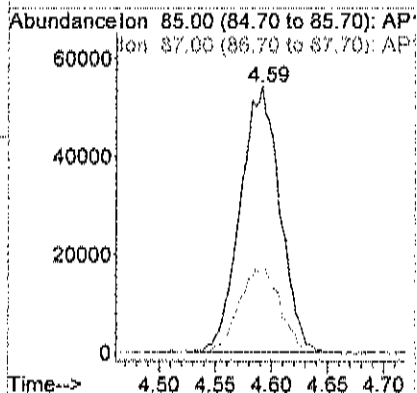
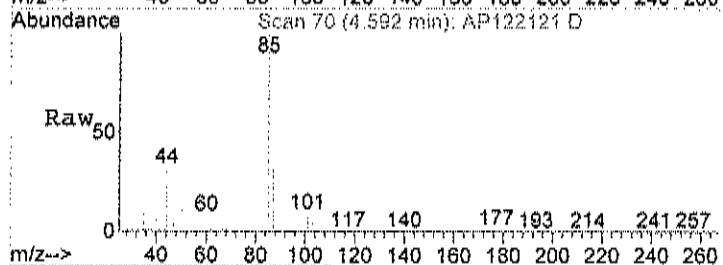
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





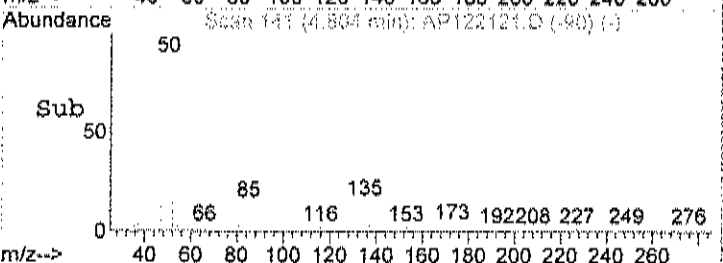
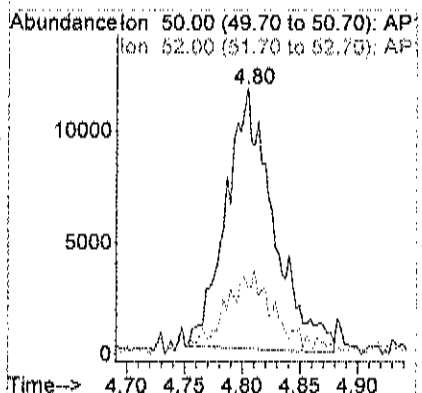
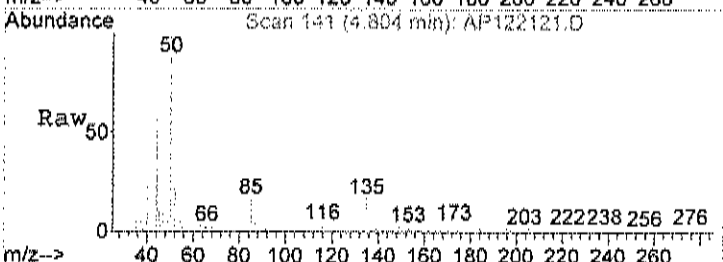
#3
Freon 12
Concen: 0.61 ppb
RT: 4.59 min Scan# 70
Delta R.T. -0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

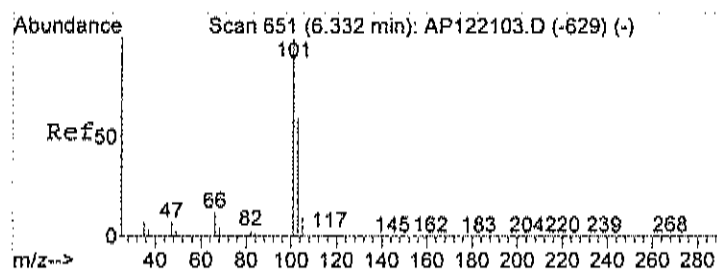
Tgt Ion: 85 Resp: 133126
Ion Ratio Lower Upper
85 100
87 33.1 12.4 52.4



#4
Chloromethane
Concen: 0.49 ppb
RT: 4.80 min Scan# 141
Delta R.T. 0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

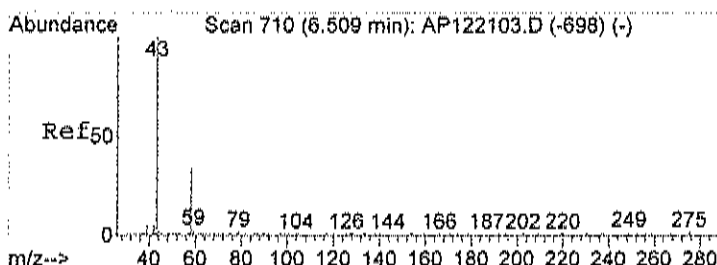
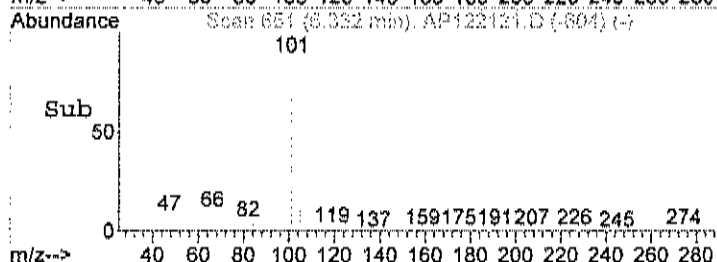
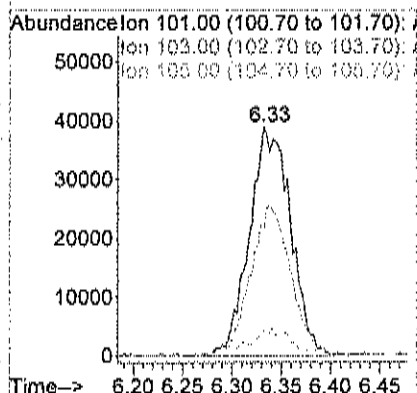
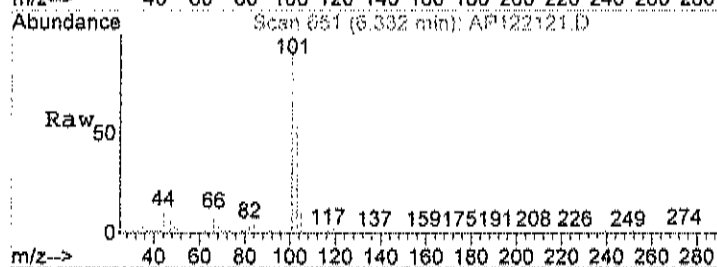
Tgt Ion: 50 Resp: 33567
Ion Ratio Lower Upper
50 100
52 26.7 5.5 45.5





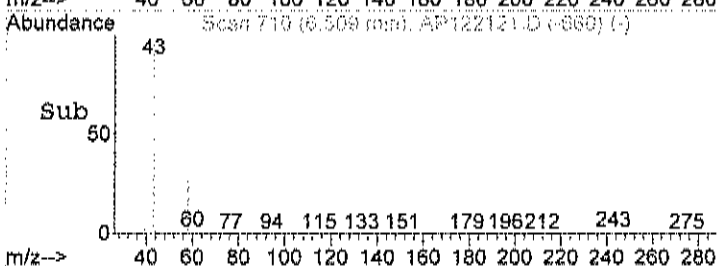
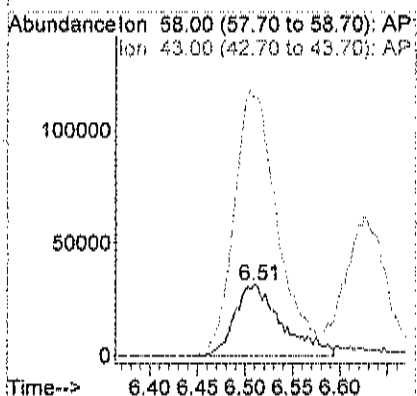
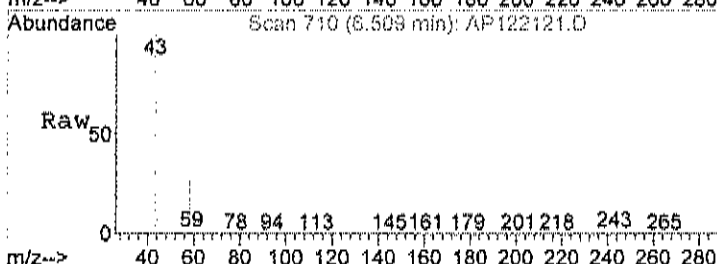
#14
Freon 11
Concen: 0.38 ppb
RT: 6.33 min Scan# 651
Delta R.T. -0.01 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

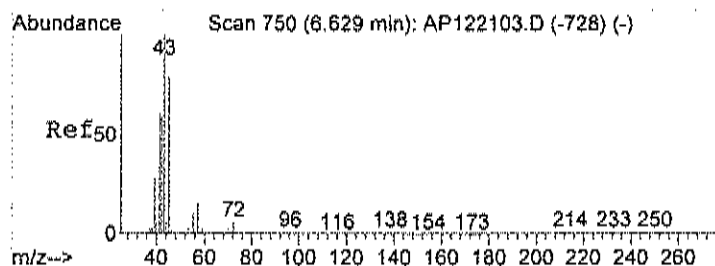
Tgt Ion	Ratio	Lower	Upper
101	100		
103	64.2	44.4	84.4
105	4.9	0.0	31.9



#15
Acetone
Concen: 4.70 ppb
RT: 6.51 min Scan# 710
Delta R.T. -0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

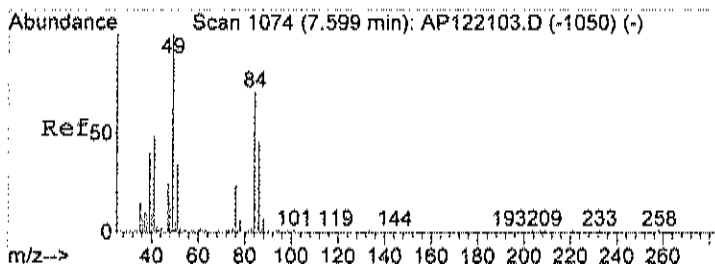
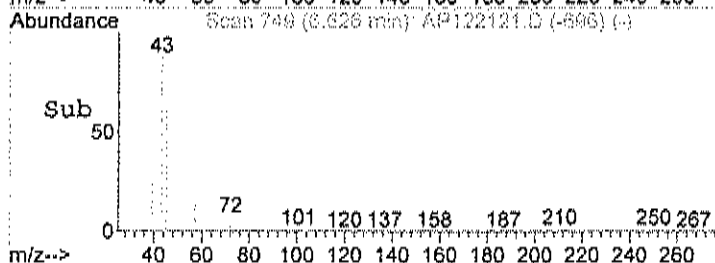
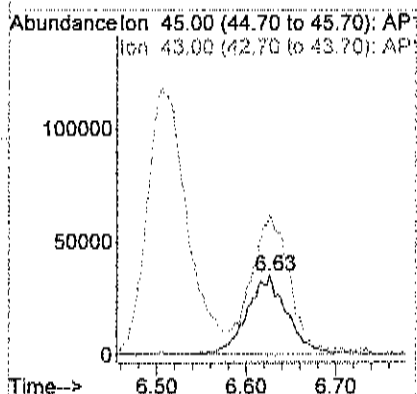
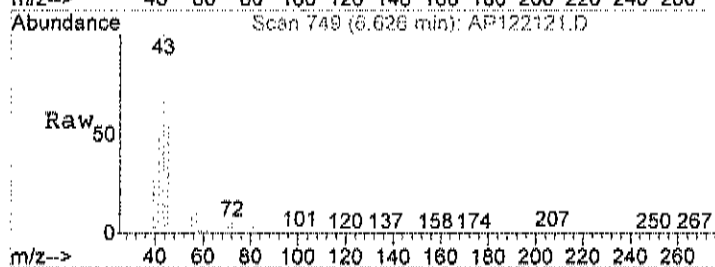
Tgt Ion	Ratio	Lower	Upper
58	100		
43	346.8	298.2	358.2





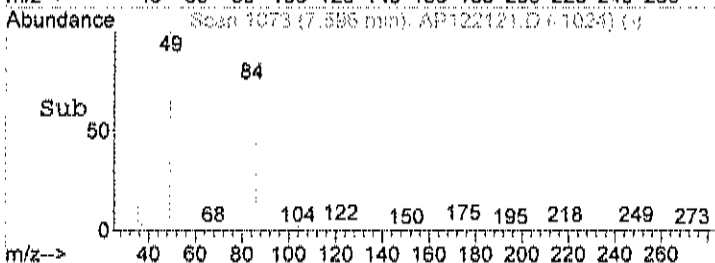
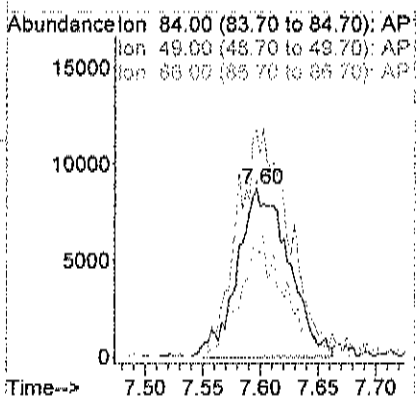
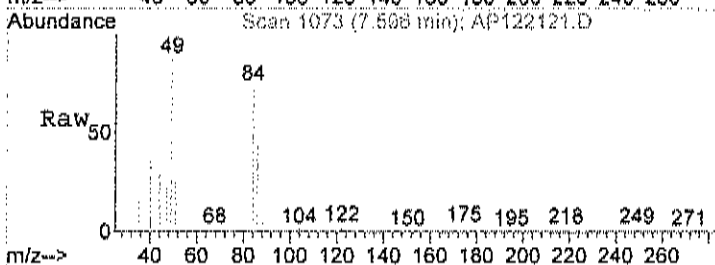
#17
Isopropyl alcohol
Concen: 1.28 ppb
RT: 6.63 min Scan# 749
Delta R.T. 0.01 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

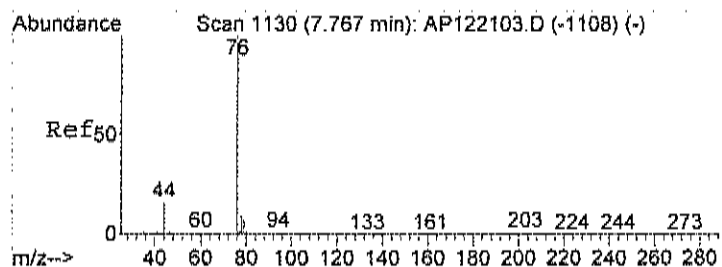
Tgt Ion: 45 Resp: 107973
Ion Ratio Lower Upper
45 100
43 164.3 98.0 138.0#



#21
Methylene chloride
Concen: 0.46 ppb
RT: 7.60 min Scan# 1073
Delta R.T. -0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

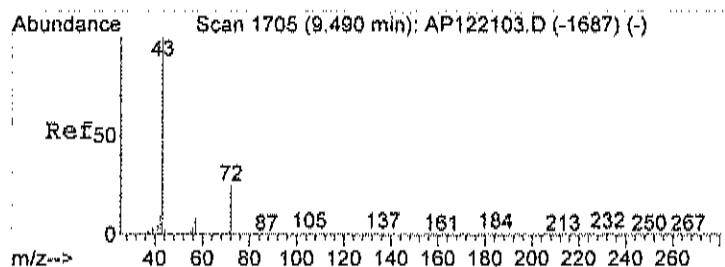
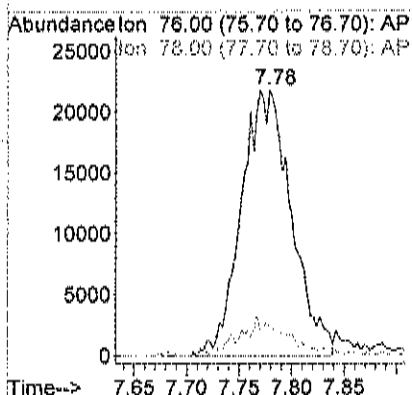
Tgt Ion: 84 Resp: 27057
Ion Ratio Lower Upper
84 100
49 89.6 121.5 161.5#
86 63.3 46.0 86.0





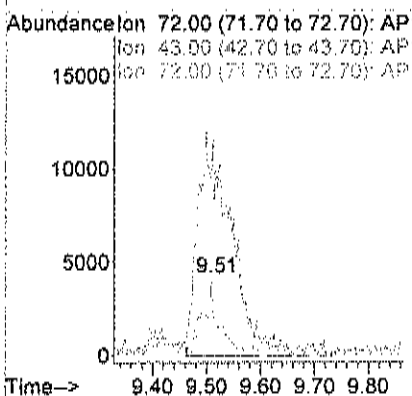
#23
Carbon disulfide
Concen: 0.55 ppb
RT: 7.78 min Scan# 1134
Delta R.T. 0.01 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

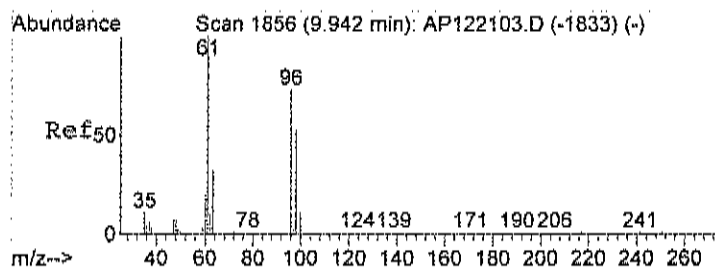
Tgt Ion	76	78	Resp	71999
Ion Ratio	100	9.2	0.0	29.2
Lower				
Upper				



#28
Methyl Ethyl Ketone
Concen: 0.41 ppb m
RT: 9.51 min Scan# 1711
Delta R.T. 0.02 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

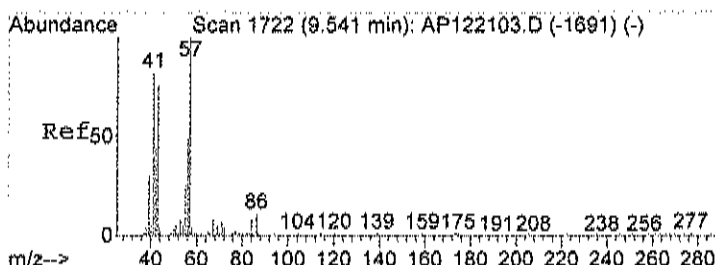
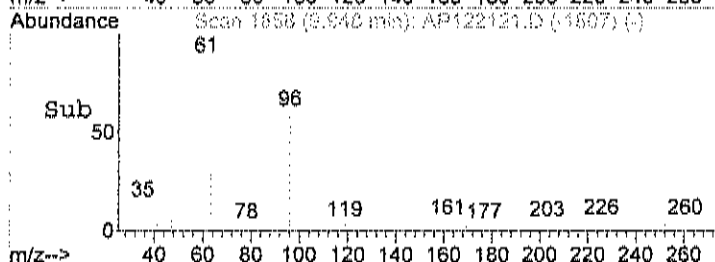
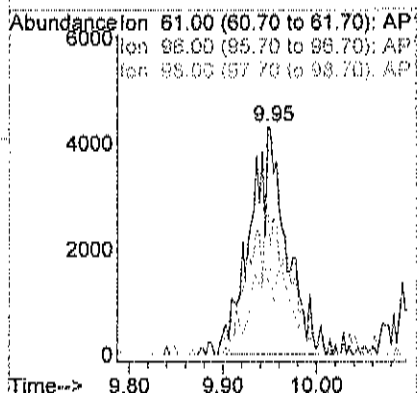
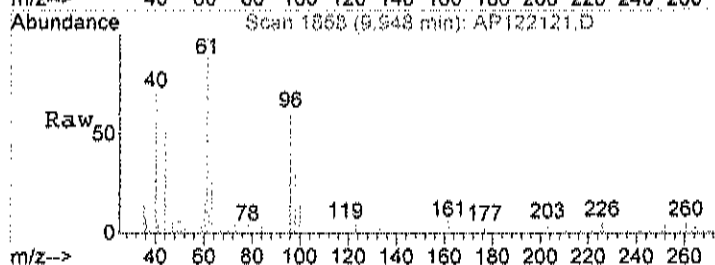
Tgt Ion	72	43	Resp	9721
Ion Ratio	100	489.7	0.0	20.0#
Lower		32.0	80.0	120.0#
Upper				





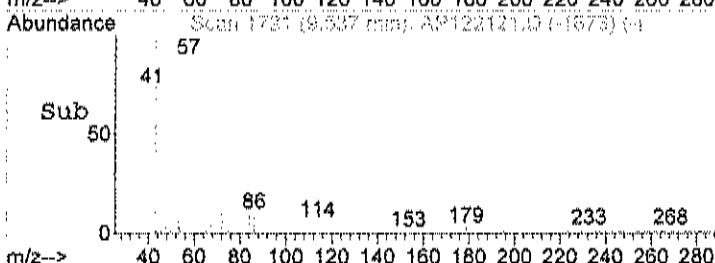
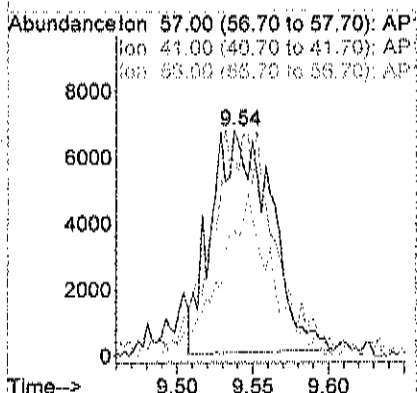
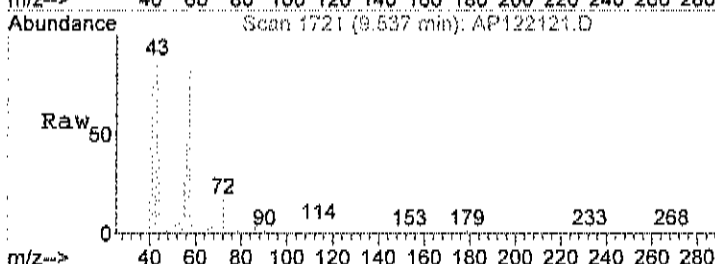
#29
cis-1,2-dichloroethene
Concen: 0.16 ppb m
RT: 9.95 min Scan# 1858
Delta R.T. 0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

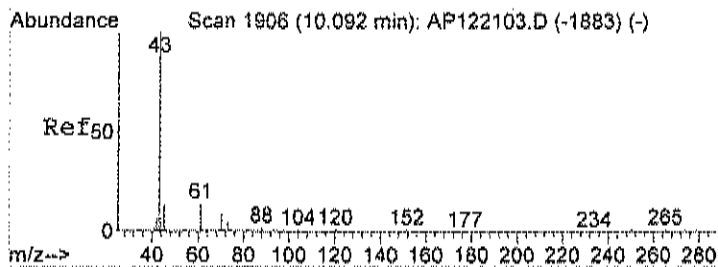
Tgt Ion: 61 Resp: 11879
Ion Ratio Lower Upper
61 100
96 43.3 51.7 91.7#
98 20.7 28.0 68.0#



#30
Hexane
Concen: 0.25 ppb
RT: 9.54 min Scan# 1721
Delta R.T. -0.01 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

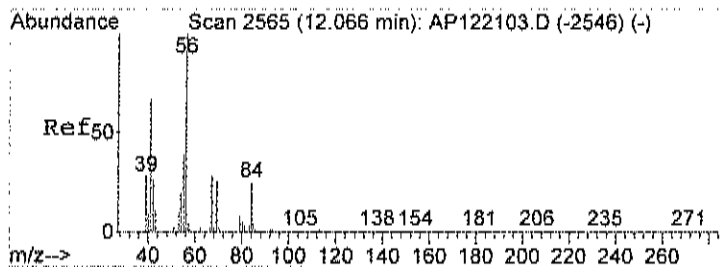
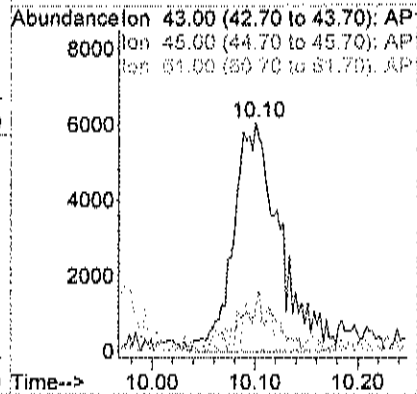
Tgt Ion: 57 Resp: 18395
Ion Ratio Lower Upper
57 100
41 106.5 49.7 89.7#
56 61.4 27.9 67.9





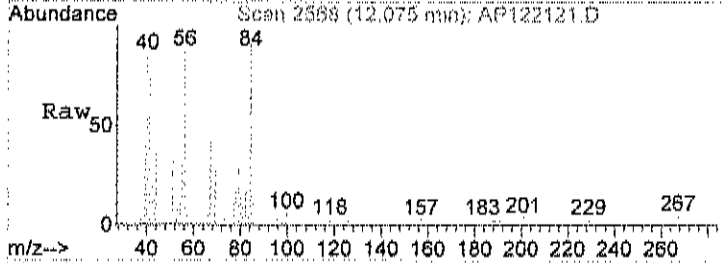
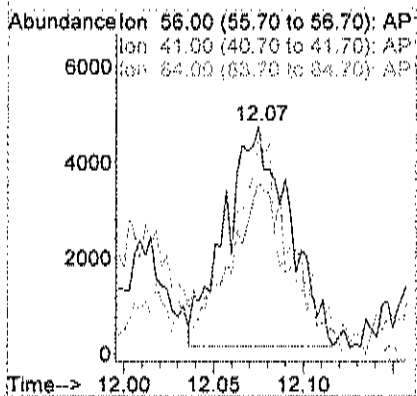
#31
Ethyl acetate
Concen: 0.17 ppb
RT: 10.10 min Scan# 1909
Delta R.T. 0.01 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

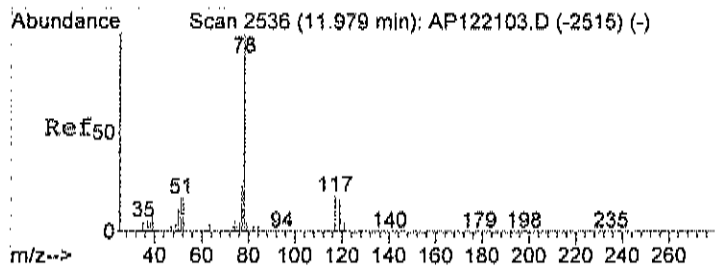
Tgt Ion	Ratio	Lower	Upper
43	100		
45	4.1	0.0	35.0
61	13.5	0.0	34.3



#37
Cyclohexane
Concen: 0.14 ppb
RT: 12.07 min Scan# 2568
Delta R.T. -0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

Tgt Ion	Ratio	Lower	Upper
56	100		
41	79.3	36.3	76.3
84	85.1	56.0	96.0

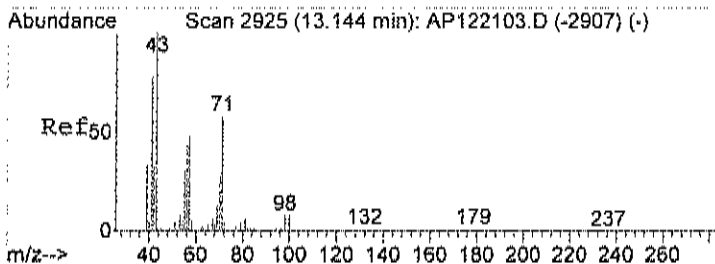
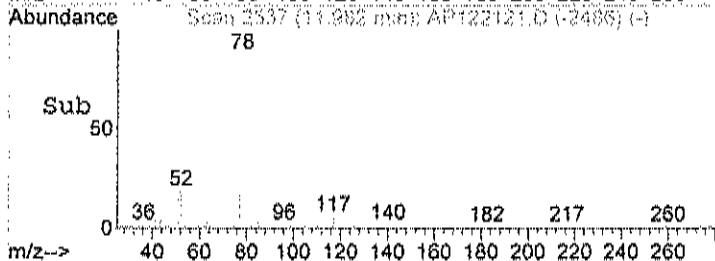
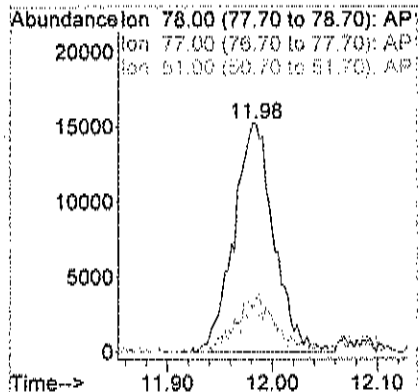
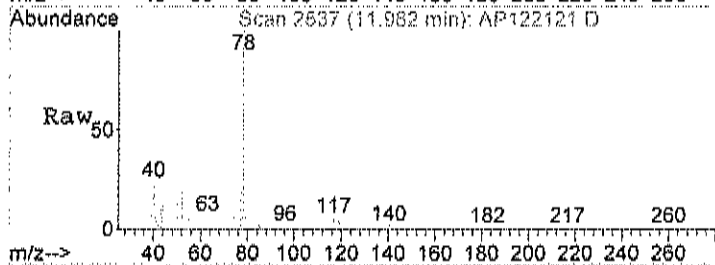




#39
Benzene
Concen: 0.22 ppb
RT: 11.98 min Scan# 2537
Delta R.T. 0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

Tgt Ion: 78 Resp: 40629

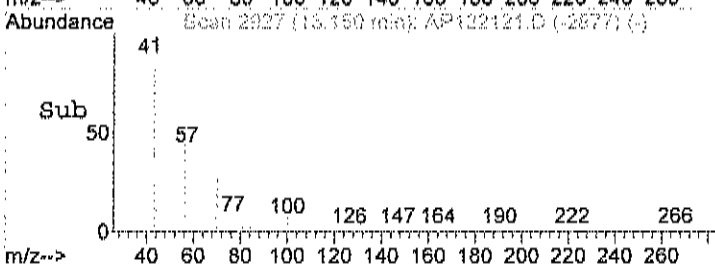
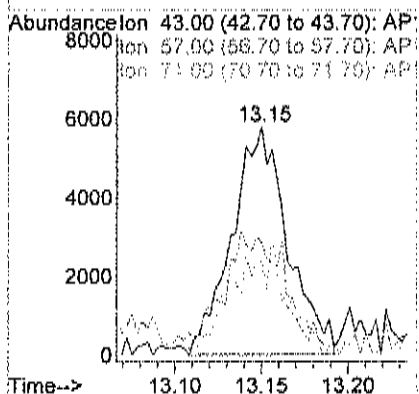
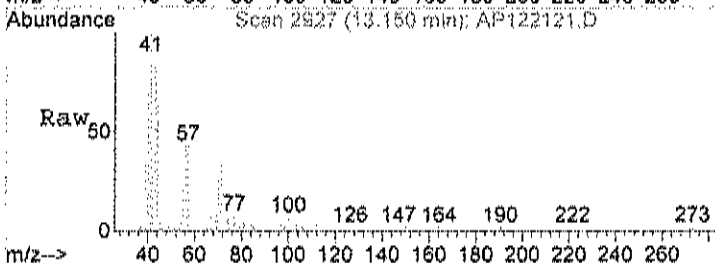
Ion	Ratio	Lower	Upper
78	100		
77	23.9	3.1	43.1
51	13.1	0.0	36.7

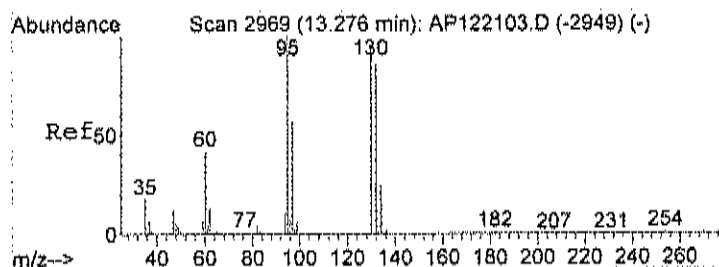


#43
Heptane
Concen: 0.14 ppb
RT: 13.15 min Scan# 2927
Delta R.T. -0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

Tgt Ion: 43 Resp: 12981

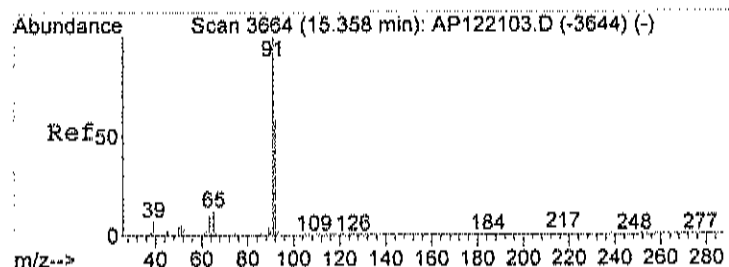
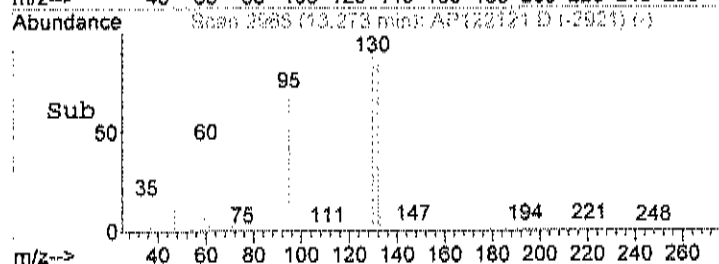
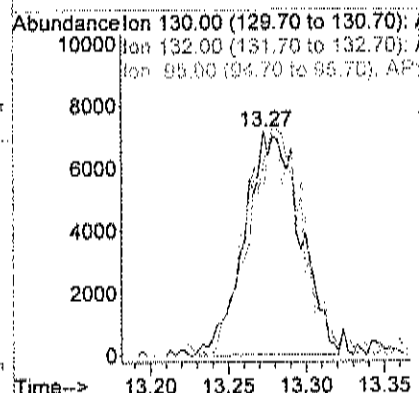
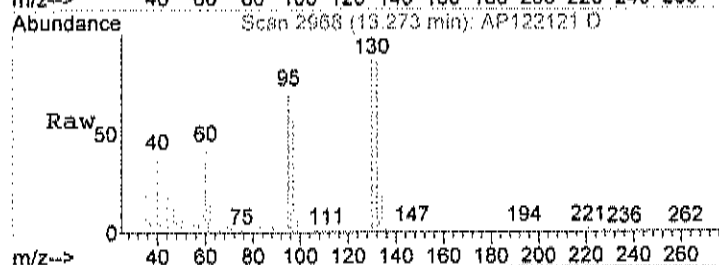
Ion	Ratio	Lower	Upper
43	100		
57	58.8	32.7	72.7
71	47.5	35.6	75.6





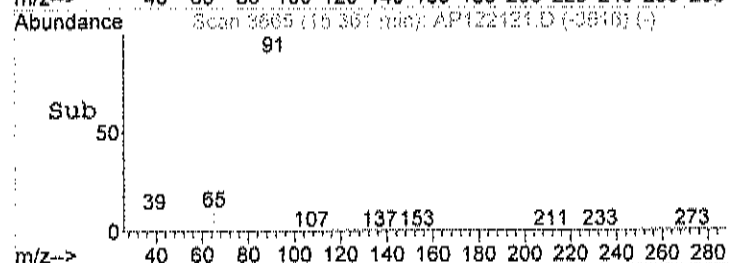
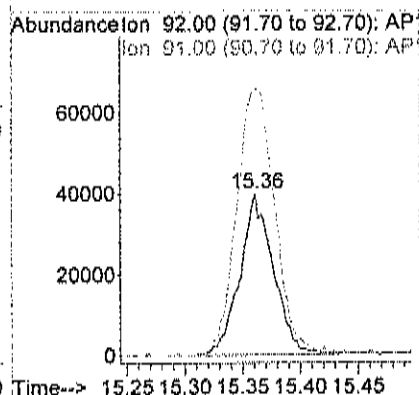
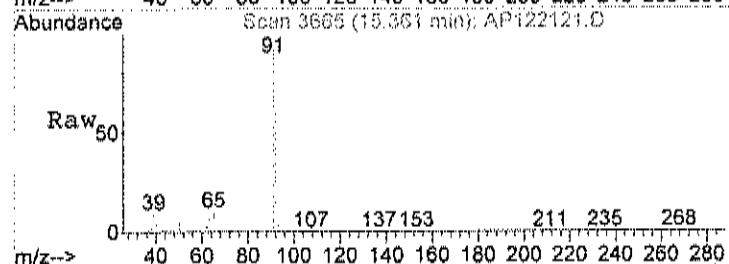
#44
Trichloroethene
Concen: 0.20 ppb
RT: 13.27 min Scan# 2968
Delta R.T. -0.01 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

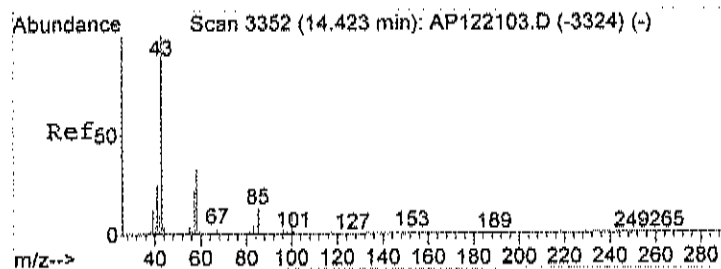
Tgt Ion: 130 Resp: 17798
Ion Ratio Lower Upper
130 100
132 0.0 77.2 117.2#
95 38.1 84.8 124.8#



#51
Toluene
Concen: 0.75 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

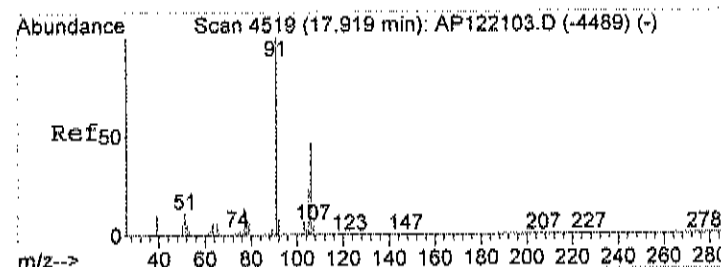
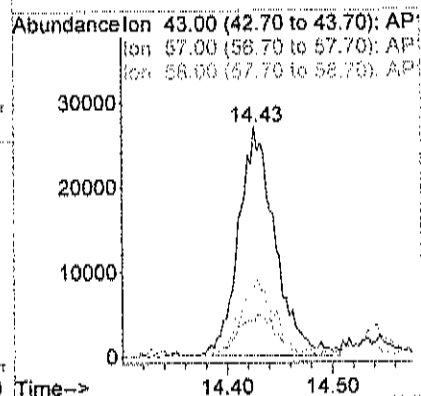
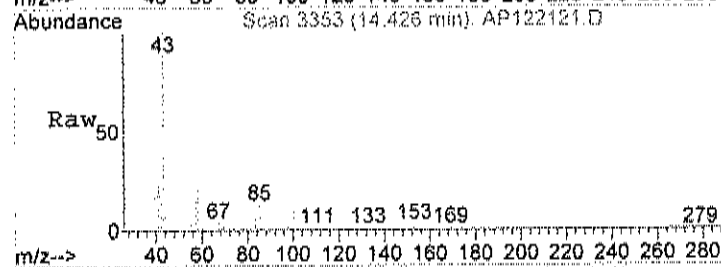
Tgt Ion: 92 Resp: 80806
Ion Ratio Lower Upper
92 100
91 187.9 154.3 194.3





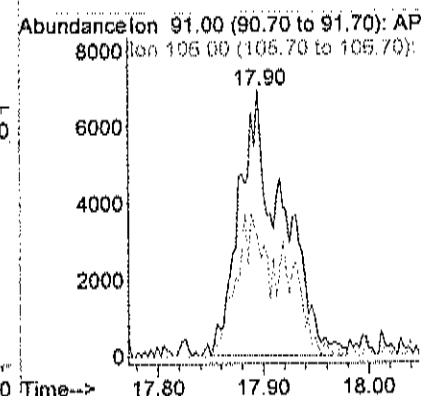
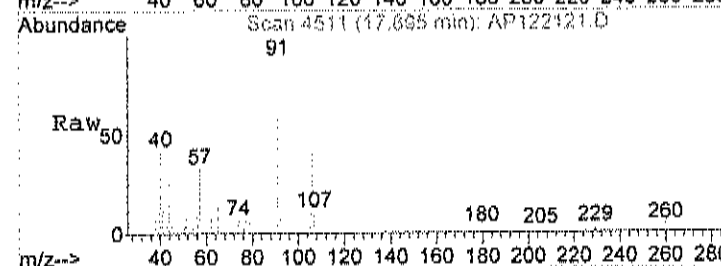
#52
Methyl Isobutyl Ketone
Concen: 0.54 ppb
RT: 14.43 min Scan# 3353
Delta R.T. -0.00 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

Tgt Ion: 43 Resp: 65469
Ion Ratio Lower Upper
43 100
57 18.8 3.5 43.5
58 31.0 17.9 57.9



#59
m&p-xylene
Concen: 0.11 ppb
RT: 17.90 min Scan# 4511
Delta R.T. -0.03 min
Lab File: AP122121.D
Acq: 22 Dec 2018 12:44 am

Tgt Ion: 91 Resp: 19897
Ion Ratio Lower Upper
91 100
106 38.4 28.3 68.3



Data File : C:\HPCHEM\1\DATA\AP122225.D

Vial: 71

Acq On : 23 Dec 2018 12:54 am

Operator: RJP

Sample : C1812057-001A 5x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:32 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	37264	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	145047	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	108555	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.14	95	53421m	0.72	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	72.00%

Target Compounds

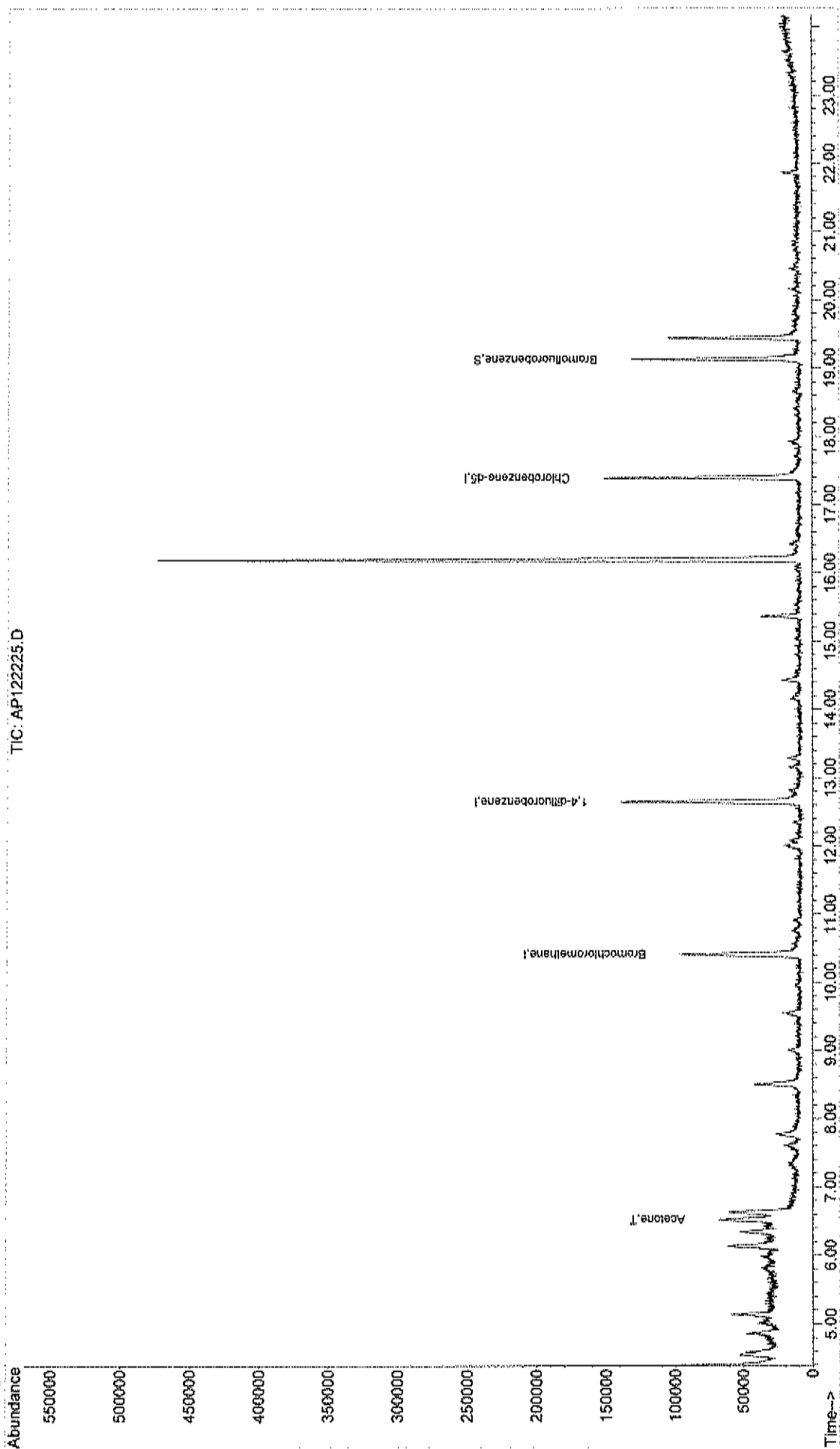
15) Acetone	6.52	58	24546	1.07	ppb	Qvalue 99
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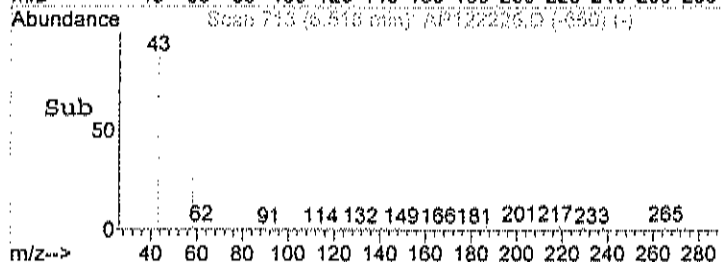
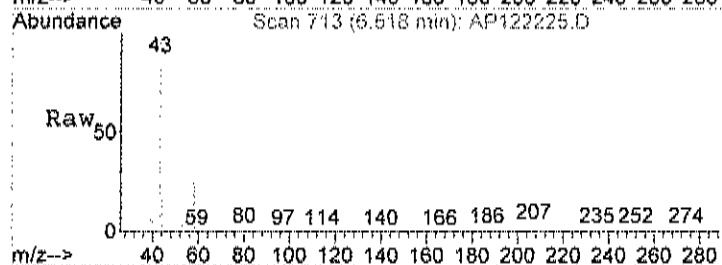
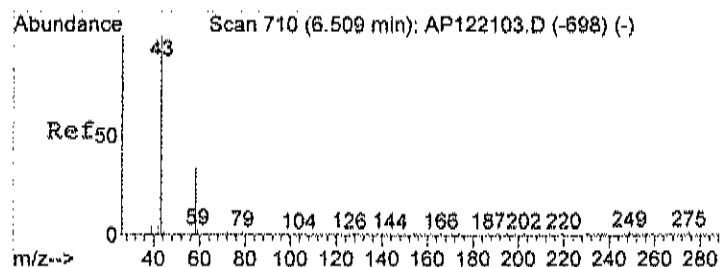
Data File : C:\HPCHEM\1\DATA\AP122225.D
 Acq On : 23 Dec 2018 12:54 am
 Sample : C1812057-001A 5x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 28 10:25 2018

Vial: 71
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

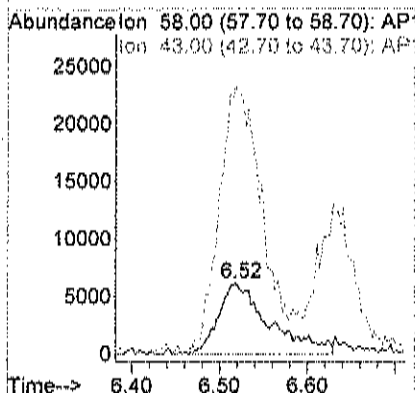
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





#15
 Acetone
 Concen: 1.07 ppb
 RT: 6.52 min Scan# 713
 Delta R.T. 0.01 min
 Lab File: AP122225.D
 Acq: 23 Dec 2018 12:54 am

Tgt Ion	Resp	Ion Ratio	Lower	Upper
58	24546	100		
43		331.2	298.2	358.2



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:24:00 AM
2,2,4-trimethylpentane	0.12	0.15	J	ppbV	1	12/22/2018 1:24:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Acetone	4.6	1.5		ppbV	5	12/23/2018 1:31:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Benzene	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Carbon disulfide	0.94	0.15		ppbV	1	12/22/2018 1:24:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Chloromethane	0.48	0.15		ppbV	1	12/22/2018 1:24:00 AM
cis-1,2-Dichloroethene	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Cyclohexane	0.22	0.15		ppbV	1	12/22/2018 1:24:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Ethyl acetate	0.33	0.15		ppbV	1	12/22/2018 1:24:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 11	0.34	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Freon 12	0.55	0.15		ppbV	1	12/22/2018 1:24:00 AM
Heptane	0.19	0.15		ppbV	1	12/22/2018 1:24:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 1:24:00 AM
Isopropyl alcohol	1.6	0.15		ppbV	1	12/22/2018 1:24:00 AM
m&p-Xylene	0.15	0.30	J	ppbV	1	12/22/2018 1:24:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:24:00 AM
Methyl Ethyl Ketone	0.29	0.30	J	ppbV	1	12/22/2018 1:24:00 AM
Methyl Isobutyl Ketone	0.48	0.30		ppbV	1	12/22/2018 1:24:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Methylene chloride	0.72	0.15		ppbV	1	12/22/2018 1:24:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Toluene	1.6	0.15		ppbV	1	12/22/2018 1:24:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Trichloroethene	0.41	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:24:00 AM
Surr: Bromofluorobenzene	74.0	70-130		%REC	1	12/22/2018 1:24:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte, Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:24:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:24:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:24:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:24:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:24:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:24:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:24:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:24:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	12/22/2018 1:24:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:24:00 AM
Acetone	11	3.6		ug/m3	5	12/23/2018 1:31:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:24:00 AM
Benzene	0.70	0.48		ug/m3	1	12/22/2018 1:24:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:24:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:24:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:24:00 AM
Carbon disulfide	2.9	0.47		ug/m3	1	12/22/2018 1:24:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:24:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:24:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:24:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 1:24:00 AM
Chloromethane	0.99	0.31		ug/m3	1	12/22/2018 1:24:00 AM
cis-1,2-Dichloroethene	0.87	0.59		ug/m3	1	12/22/2018 1:24:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:24:00 AM
Cyclohexane	0.76	0.52		ug/m3	1	12/22/2018 1:24:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:24:00 AM
Ethyl acetate	1.2	0.54		ug/m3	1	12/22/2018 1:24:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:24:00 AM
Freon 11	1.9	0.84		ug/m3	1	12/22/2018 1:24:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:24:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-002A

Client Sample ID: SVW-1Dup
Tag Number: 1185,300
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.7	0.74		ug/m3	1	12/22/2018 1:24:00 AM
Heptane	0.78	0.61		ug/m3	1	12/22/2018 1:24:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:24:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 1:24:00 AM
Isopropyl alcohol	4.0	0.37		ug/m3	1	12/22/2018 1:24:00 AM
m&p-Xylene	0.65	1.3	J	ug/m3	1	12/22/2018 1:24:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:24:00 AM
Methyl Ethyl Ketone	0.86	0.88	J	ug/m3	1	12/22/2018 1:24:00 AM
Methyl Isobutyl Ketone	2.0	1.2		ug/m3	1	12/22/2018 1:24:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:24:00 AM
Methylene chloride	2.5	0.52		ug/m3	1	12/22/2018 1:24:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:24:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:24:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:24:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 1:24:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 1:24:00 AM
Toluene	5.8	0.57		ug/m3	1	12/22/2018 1:24:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:24:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:24:00 AM
Trichloroethene	2.2	0.81		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:24:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 1:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Data File : C:\HPCHEM\1\DATA\AP122122.D

Vial: 6

Acq On : 22 Dec 2018 1:24 am

Operator: RJP

Sample : C1812057-002A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:38 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	39665	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	163922	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	141358	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	71560m	0.74	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	74.00%

Target Compounds

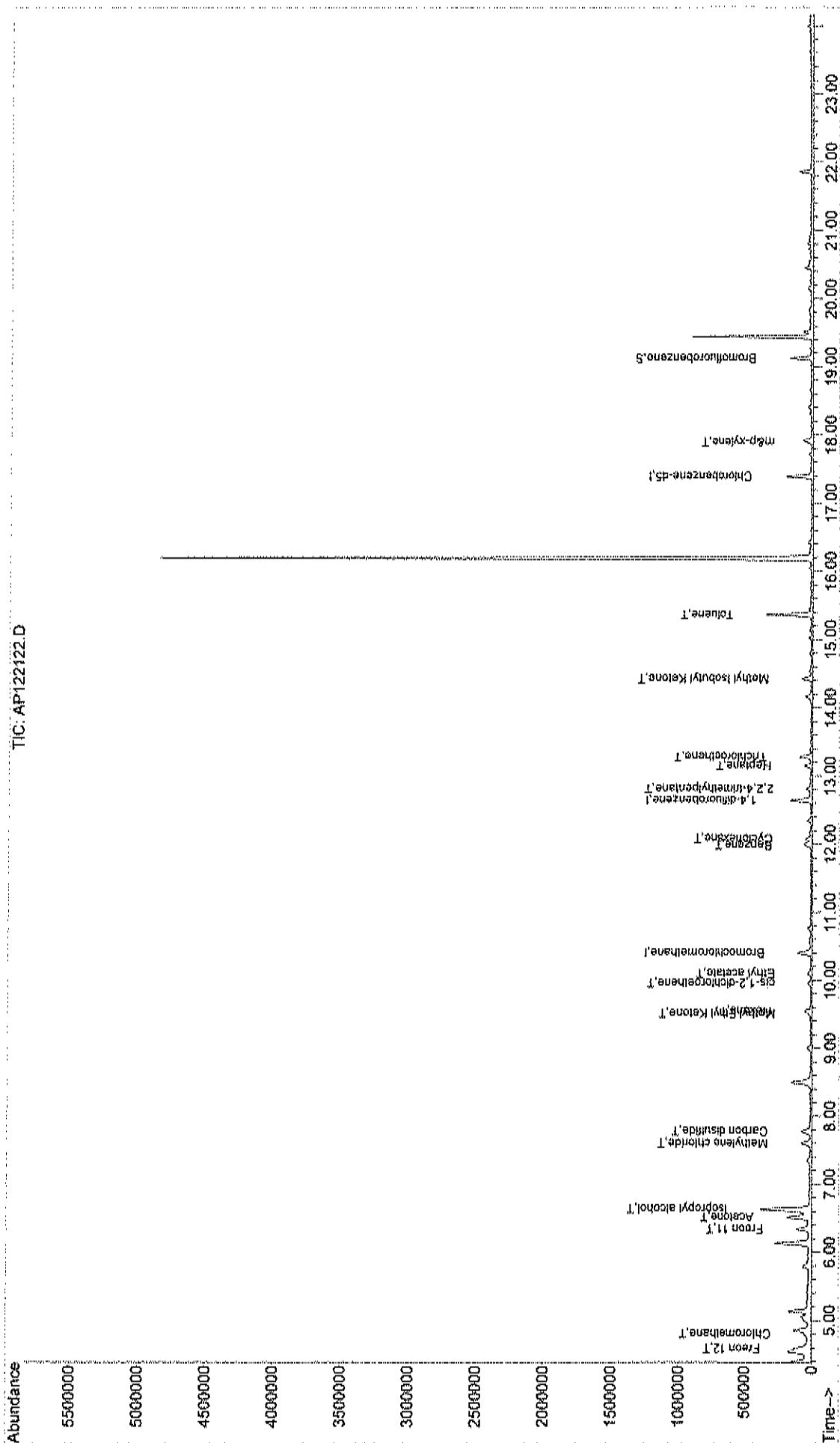
						Qvalue
3) Freon 12	4.59	85	125775	0.55	ppb	99
4) Chloromethane	4.80	50	34492	0.48	ppb	84
14) Freon 11	6.34	101	107897	0.34	ppb	98
15) Acetone	6.52	58	97963	4.03	ppb	98
17) Isopropyl alcohol	6.63	45	144231	1.62	ppb	# 21
21) Methylene chloride	7.60	84	45262	0.72	ppb	96
23) Carbon disulfide	7.77	76	130824	0.94	ppb	91
28) Methyl Ethyl Ketone	9.50	72	7241	0.29	ppb	# 100
29) cis-1,2-dichloroethene	9.95	61	16764	0.22	ppb	93
30) Hexane	9.54	57	21786	0.28	ppb	86
31) Ethyl acetate	10.09	43	38994	0.33	ppb	88
37) Cyclohexane	12.07	56	17405	0.22	ppb	88
39) Benzene	11.98	78	41604	0.22	ppb	92
42) 2,2,4-trimethylpentane	12.81	57	30881	0.12	ppb	78
43) Heptane	13.15	43	17641	0.19	ppb	93
44) Trichloroethene	13.28	130	36496	0.41	ppb	96
51) Toluene	15.36	92	169612	1.55	ppb	97
52) Methyl Isobutyl Ketone	14.43	43	59139	0.48	ppb	93
59) m&p-xylene	17.89	91	28735	0.15	ppb	80

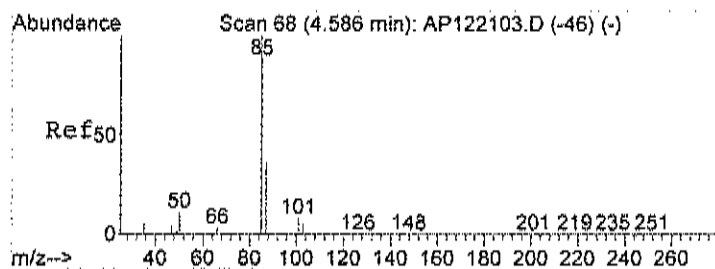
Data File : C:\HPCHEM\1\DATA\AP122122.D
Acq On : 22 Dec 2018 1:24 am
Sample : C1812057-002A
Misc : AD10_IUG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:14 2018

Vial: 6
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_IUG.RES

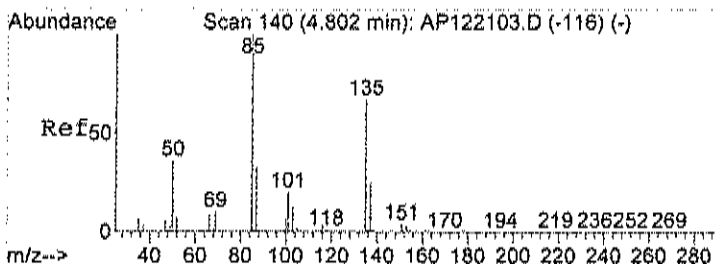
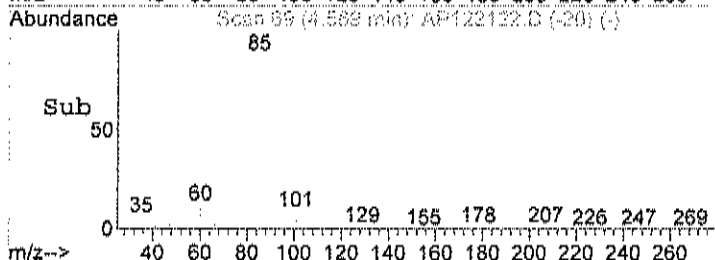
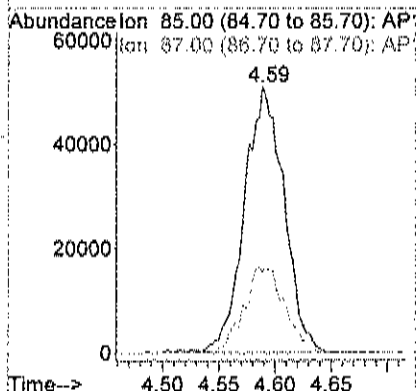
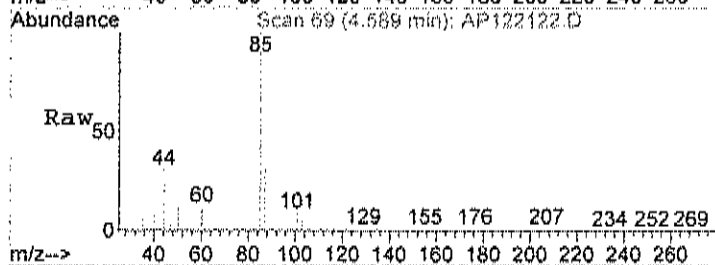
Method : C:\HPCHEM\1\METHODS\AD10_IUG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





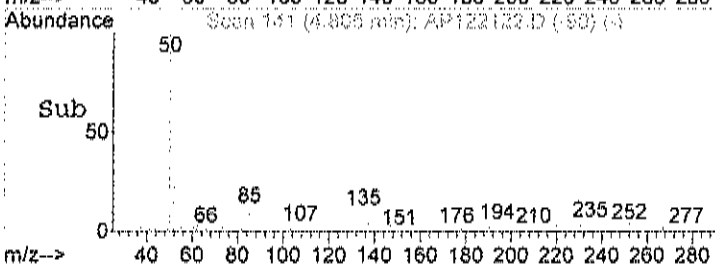
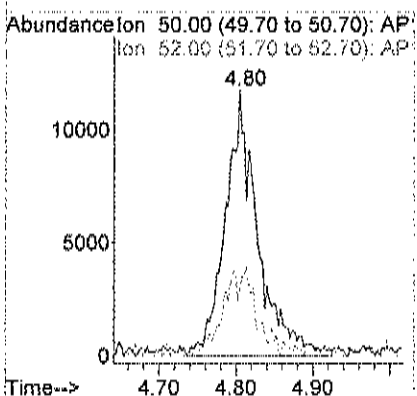
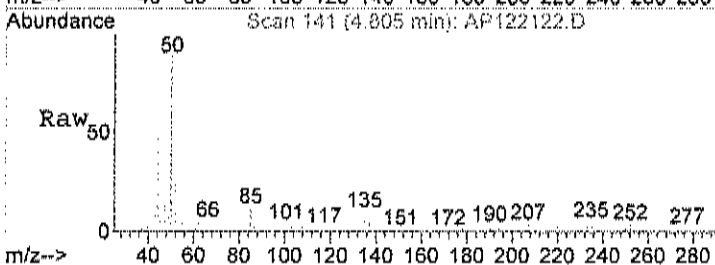
#3
Freon 12
Concen: 0.55 ppb
RT: 4.59 min Scan# 69
Delta R.T. -0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

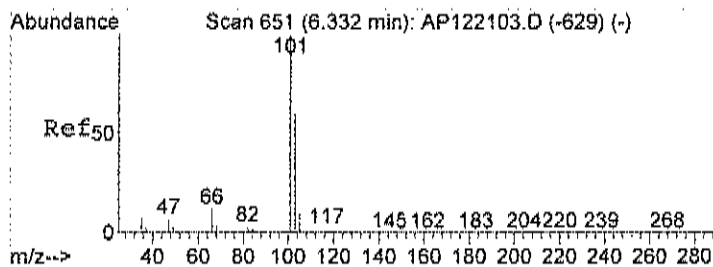
Tgt Ion: 85 Resp: 125775
Ion Ratio Lower Upper
85 100
87 33.2 12.4 52.4



#4
Chloromethane
Concen: 0.48 ppb
RT: 4.80 min Scan# 141
Delta R.T. 0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

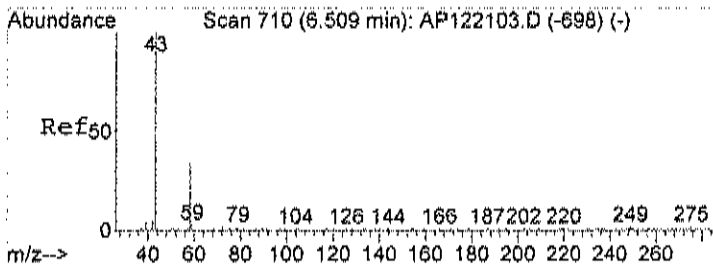
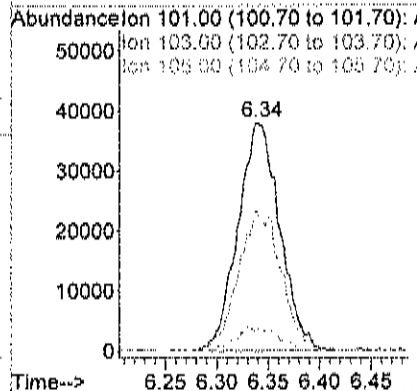
Tgt Ion: 50 Resp: 34492
Ion Ratio Lower Upper
50 100
52 17.2 5.5 45.5





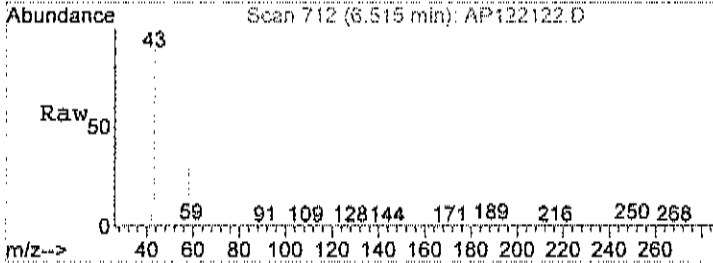
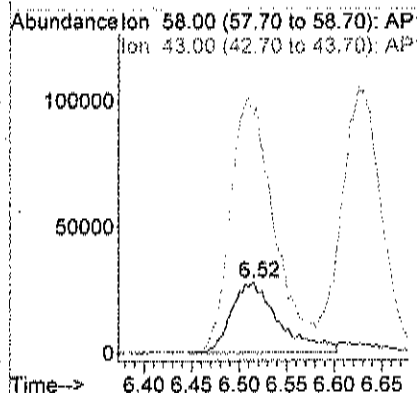
#14
Freon 11
Concen: 0.34 ppb
RT: 6.34 min Scan# 653
Delta R.T. -0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

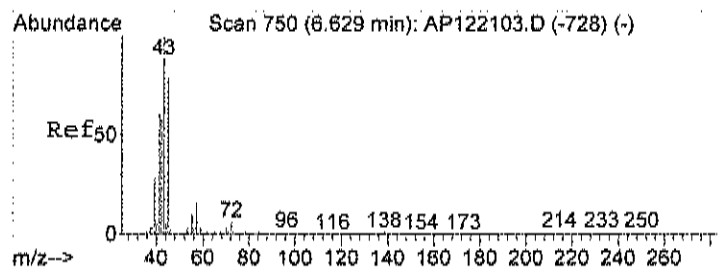
Tgt Ion	101	103	105	Resp	107897
Ion Ratio	100	62.9	10.7	Lower	Upper
		44.4	0.0		
		84.4	31.9		



#15
Acetone
Concen: 4.03 ppb
RT: 6.52 min Scan# 712
Delta R.T. 0.01 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

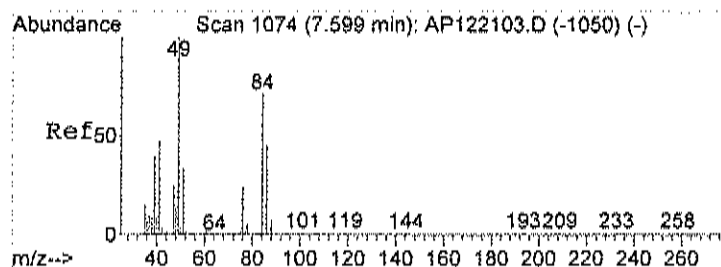
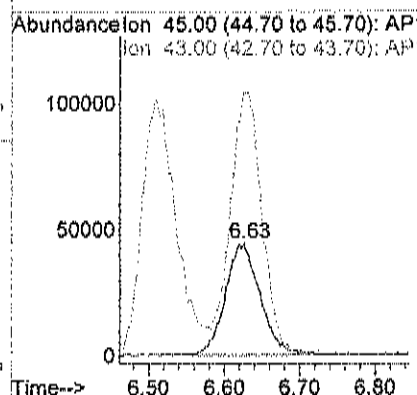
Tgt Ion	58	43	Resp	97963
Ion Ratio	100	331.9	Lower	Upper
		298.2		
		358.2		





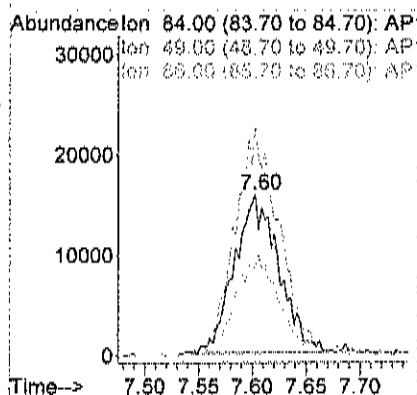
#17
Isopropyl alcohol
Concen: 1.62 ppb
RT: 6.63 min Scan# 749
Delta R.T. 0.01 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

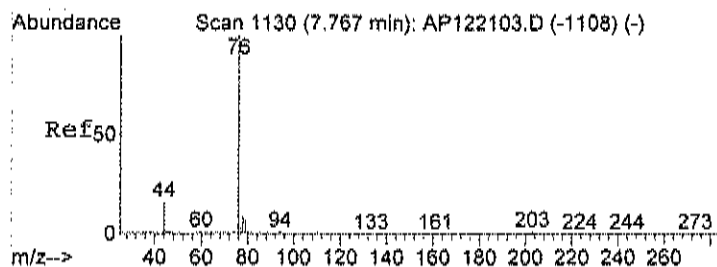
Tgt Ion: 45 Resp: 144231
Ion Ratio Lower Upper
45 100
43 204.6 98.0 138.0#



#21
Methylene chloride
Concen: 0.72 ppb
RT: 7.60 min Scan# 1075
Delta R.T. 0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

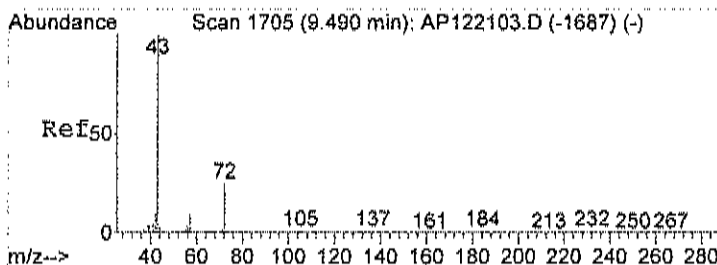
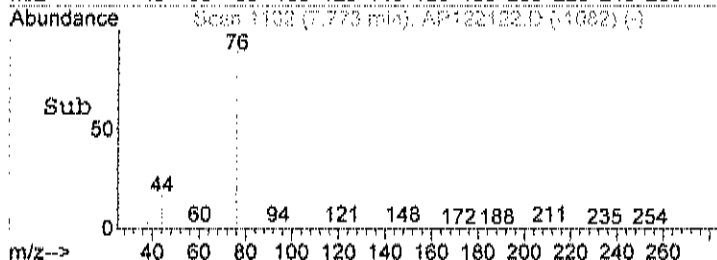
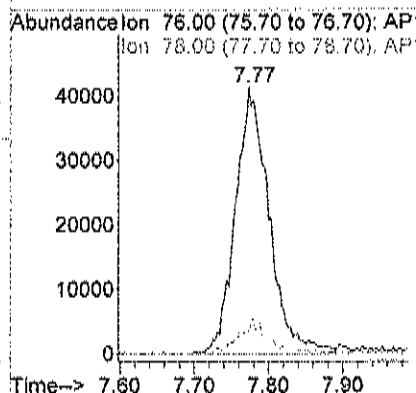
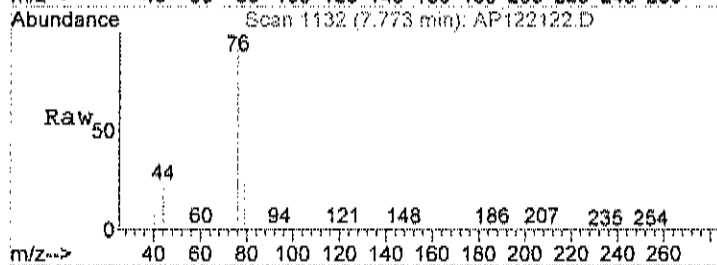
Tgt Ion: 84 Resp: 45262
Ion Ratio Lower Upper
84 100
49 147.9 121.5 161.5
86 63.8 46.0 86.0





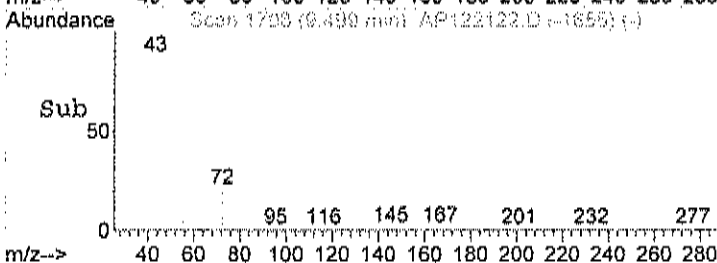
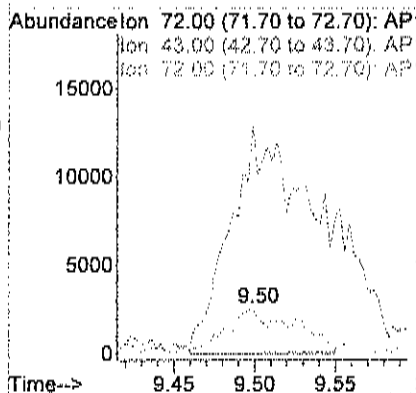
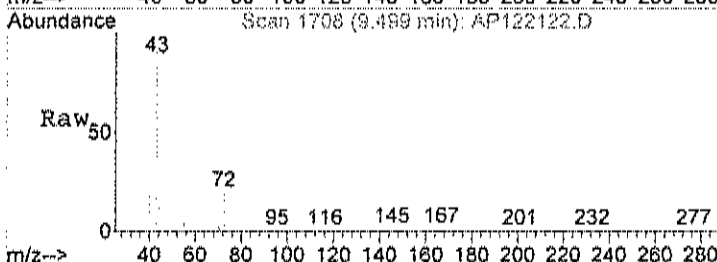
#23
Carbon disulfide
Concen: 0.94 ppb
RT: 7.77 min Scan# 1132
Delta R.T. 0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

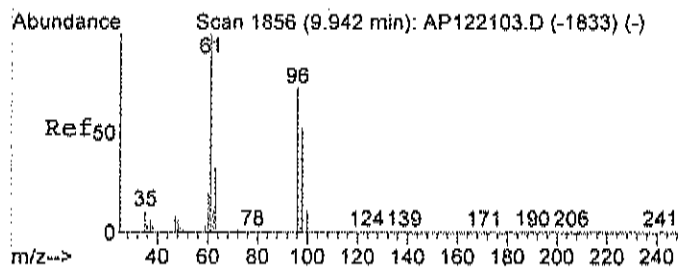
Tgt Ion: 76 Resp: 130824
Ion Ratio Lower Upper
76 100
78 6.0 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 0.29 ppb
RT: 9.50 min Scan# 1708
Delta R.T. 0.01 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

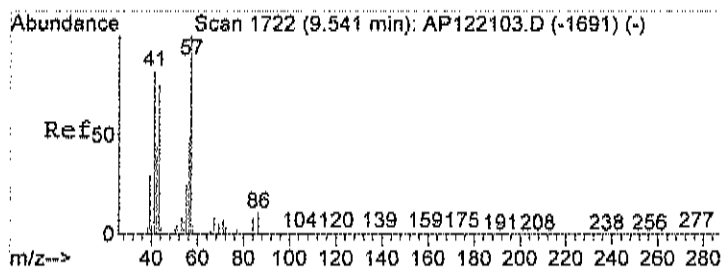
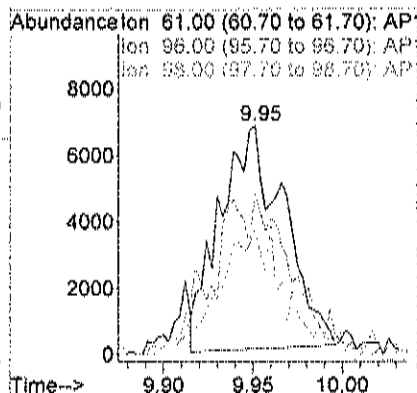
Tgt Ion: 72 Resp: 7241
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0





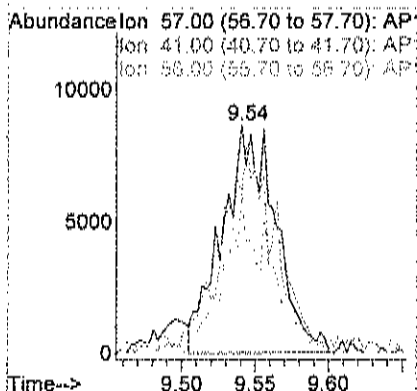
#29
cis-1,2-dichloroethene
Concen: 0.22 ppb
RT: 9.95 min Scan# 1859
Delta R.T. 0.01 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

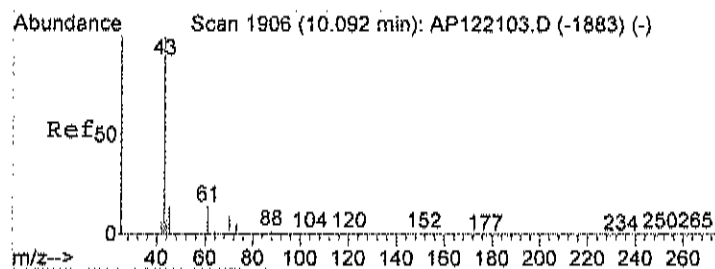
Tgt Ion: 61 Resp: 16764
Ion Ratio Lower Upper
61 100
96 71.1 51.7 91.7
98 58.5 28.0 68.0



#30
Hexane
Concen: 0.28 ppb
RT: 9.54 min Scan# 1722
Delta R.T. -0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

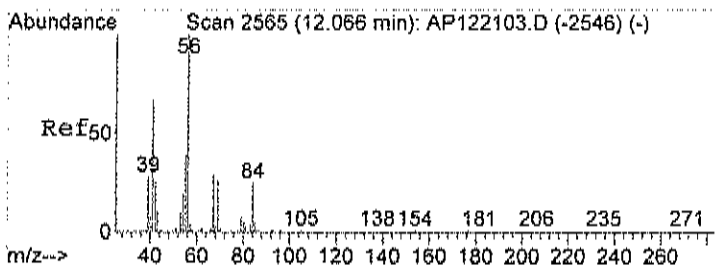
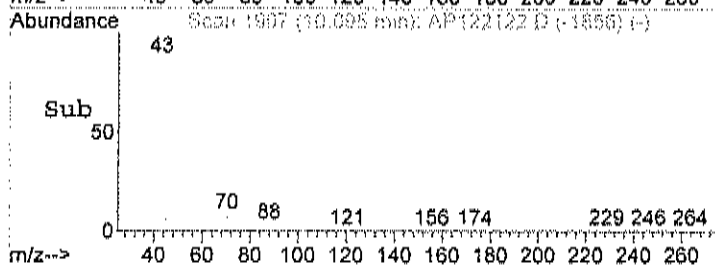
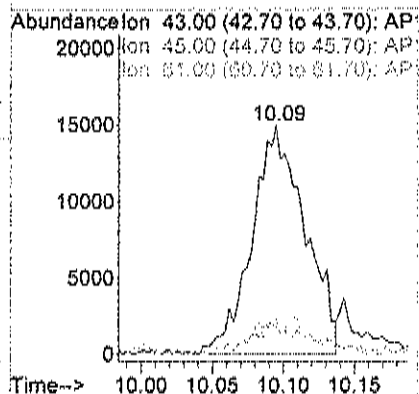
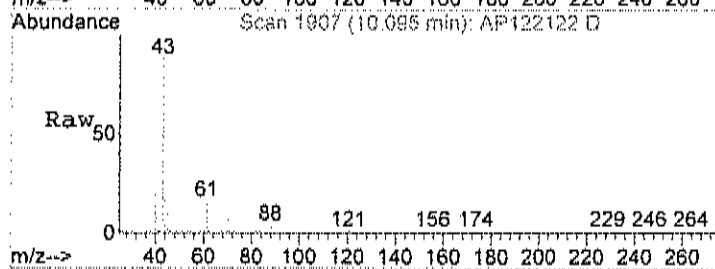
Tgt Ion: 57 Resp: 21786
Ion Ratio Lower Upper
57 100
41 81.7 49.7 89.7
56 39.3 27.9 67.9





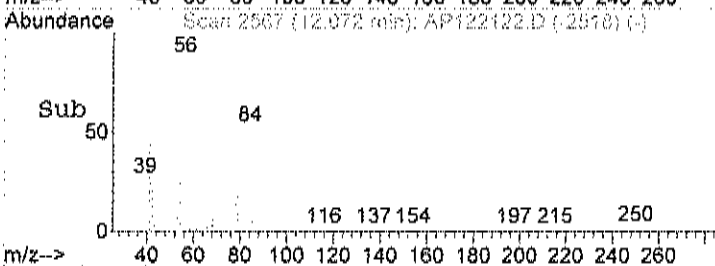
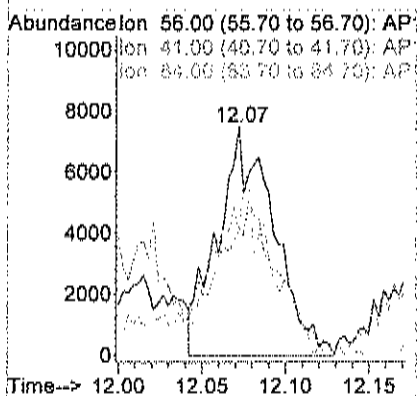
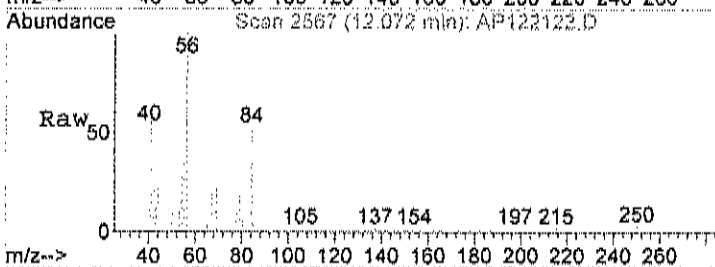
#31
Ethyl acetate
Concen: 0.33 ppb
RT: 10.09 min Scan# 1907
Delta R.T. 0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

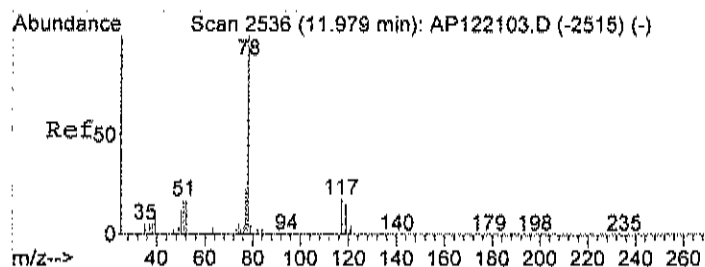
Tgt Ion	Ratio	Lower	Upper
43	100		
45	15.5	0.0	35.0
61	4.3	0.0	34.3



#37
Cyclohexane
Concen: 0.22 ppb
RT: 12.07 min Scan# 2567
Delta R.T. -0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

Tgt Ion	Ratio	Lower	Upper
56	100		
41	74.7	36.3	76.3
84	78.3	56.0	96.0

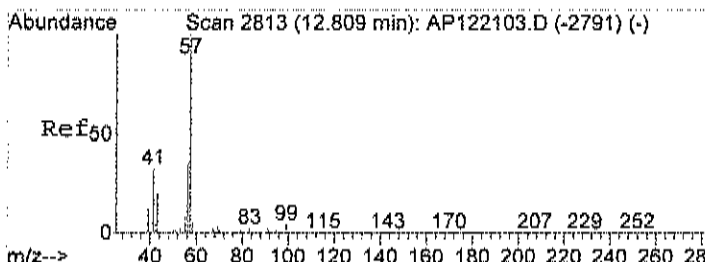
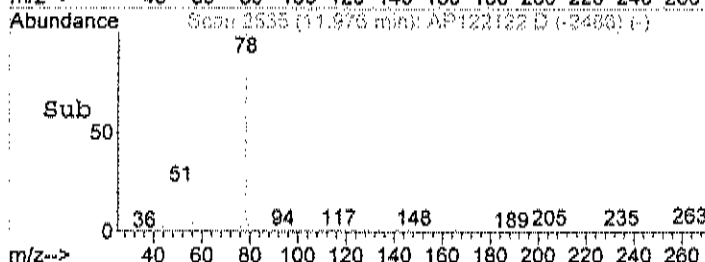
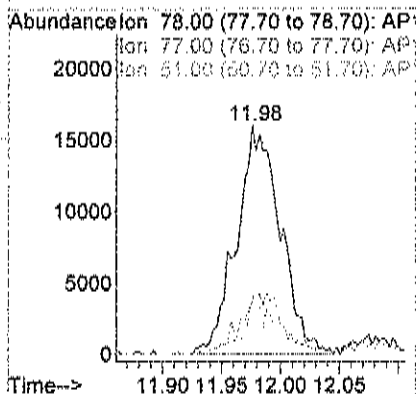
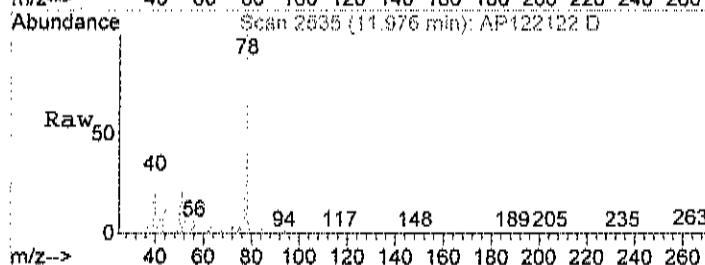




#39
Benzene
Concen: 0.22 ppb
RT: 11.98 min Scan# 2535
Delta R.T. -0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

Tgt Ion: 78 Resp: 41604

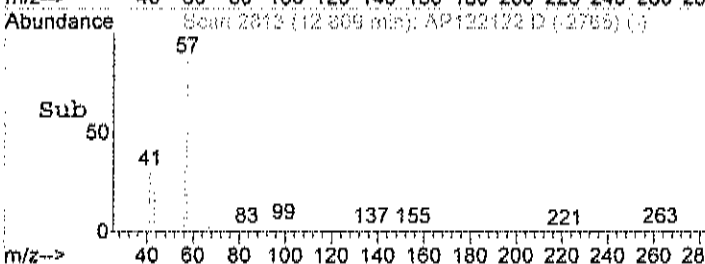
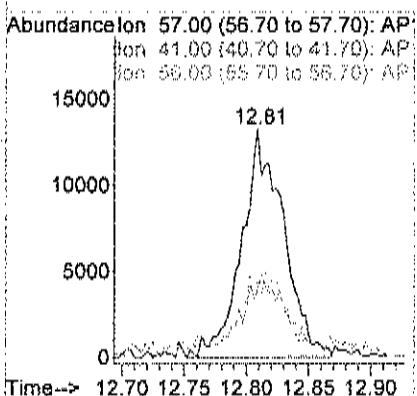
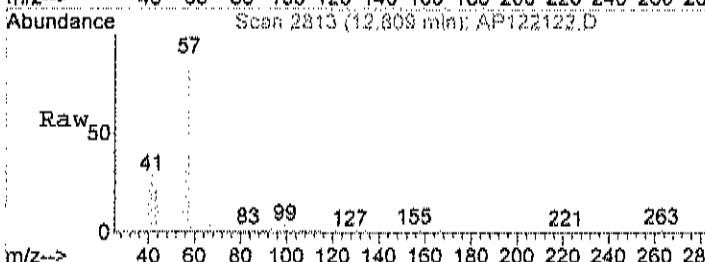
Ion	Ratio	Lower	Upper
78	100		
77	26.7	3.1	43.1
51	20.5	0.0	36.7

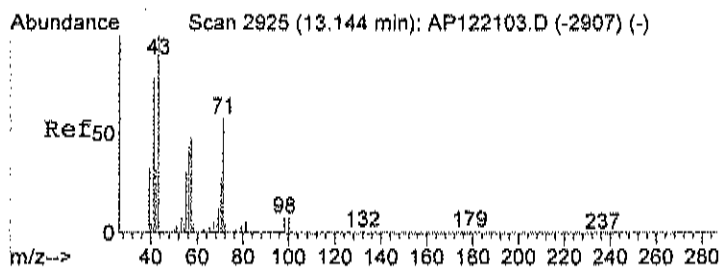


#42
2,2,4-trimethylpentane
Concen: 0.12 ppb
RT: 12.81 min Scan# 2813
Delta R.T. -0.01 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

Tgt Ion: 57 Resp: 30881

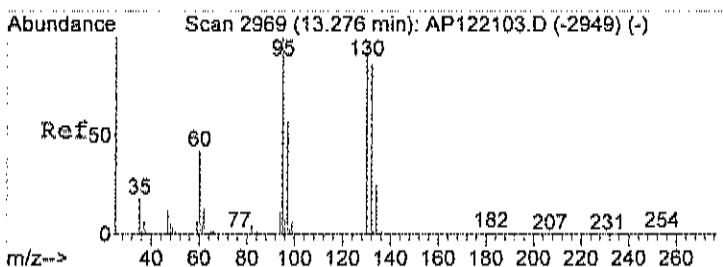
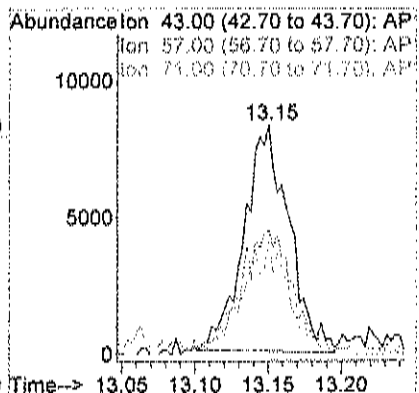
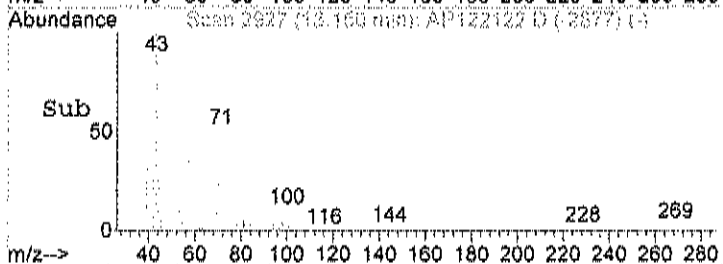
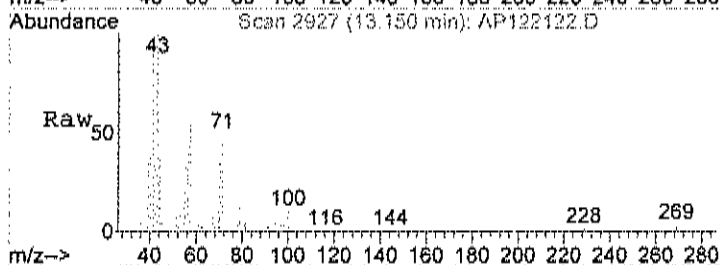
Ion	Ratio	Lower	Upper
57	100		
41	38.7	6.9	46.9
56	43.2	11.5	51.5





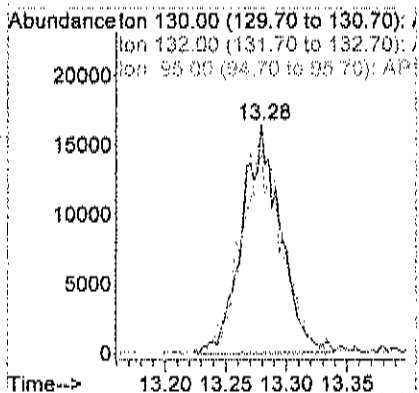
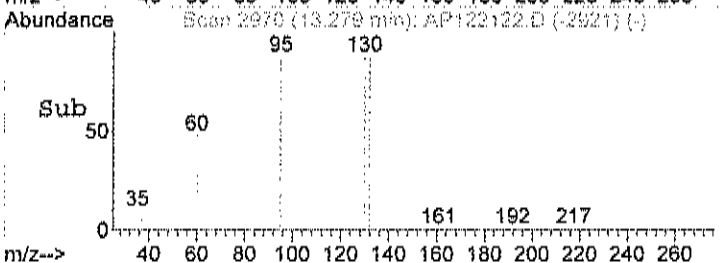
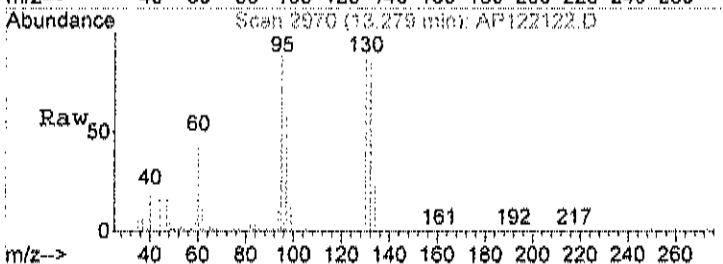
#43
Heptane
Concen: 0.19 ppb
RT: 13.15 min Scan# 2927
Delta R.T. 0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

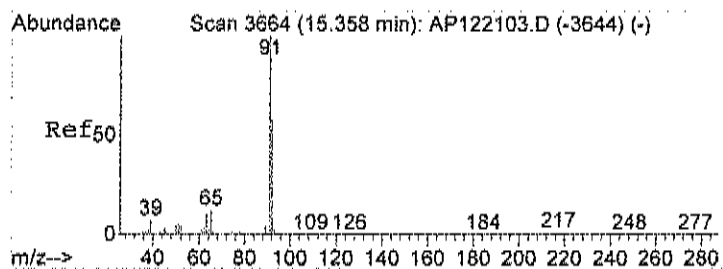
Tgt Ion: 43 Resp: 17641
Ion Ratio Lower Upper
43 100
57 60.5 32.7 72.7
71 53.6 35.6 75.6



#44
Trichloroethene
Concen: 0.41 ppb
RT: 13.28 min Scan# 2970
Delta R.T. -0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

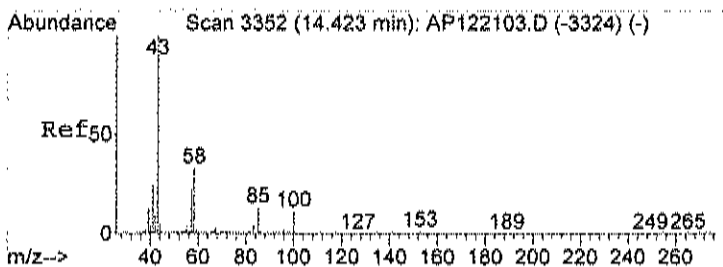
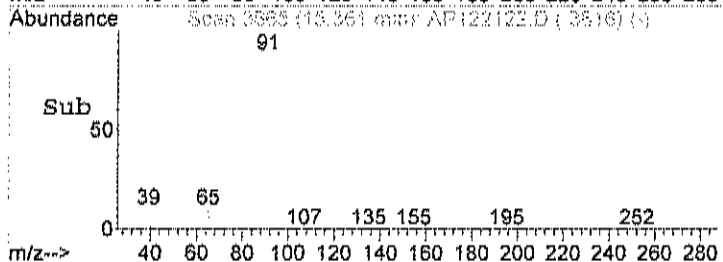
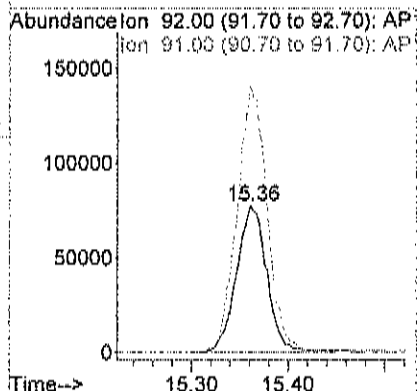
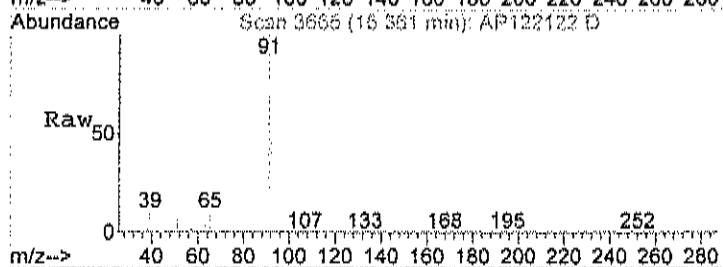
Tgt Ion: 130 Resp: 36496
Ion Ratio Lower Upper
130 100
132 92.8 77.2 117.2
95 102.1 84.8 124.8





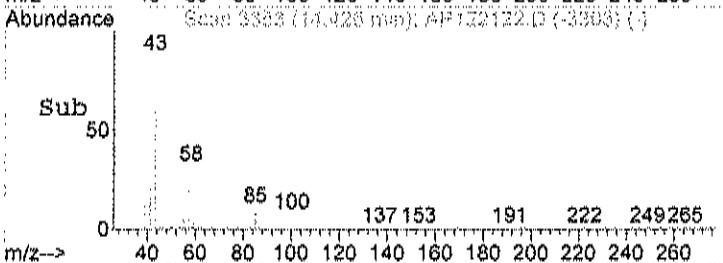
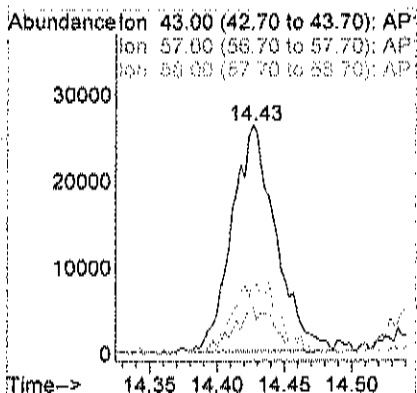
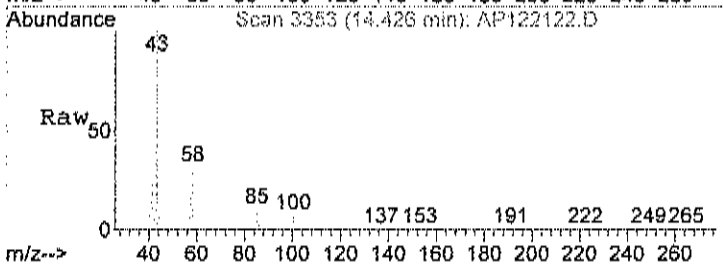
#51
Toluene
Concen: 1.55 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

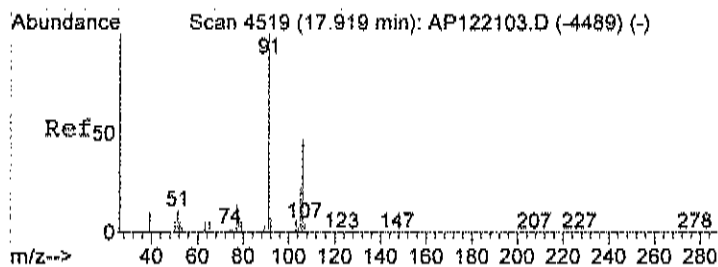
Tgt Ion: 92 Resp: 169612
Ion Ratio Lower Upper
92 100
91 179.1 154.3 194.3



#52
Methyl Isobutyl Ketone
Concen: 0.48 ppb
RT: 14.43 min Scan# 3353
Delta R.T. 0.00 min
Lab File: AP122122.D
Acq: 22 Dec 2018 1:24 am

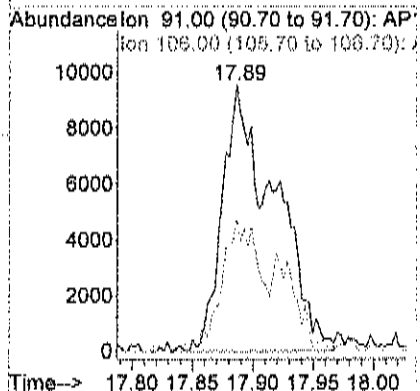
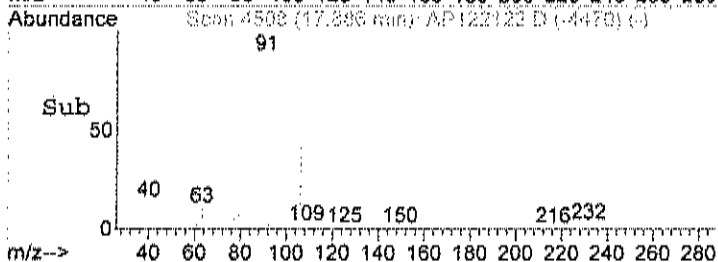
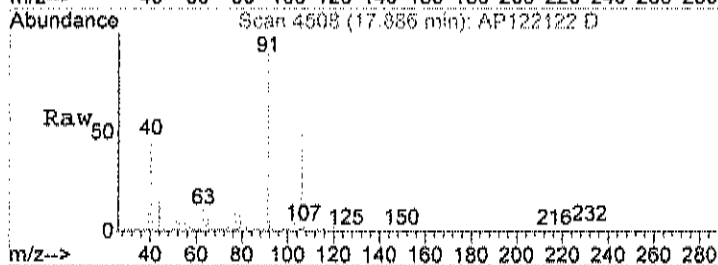
Tgt Ion: 43 Resp: 59139
Ion Ratio Lower Upper
43 100
57 19.6 3.5 43.5
58 34.0 17.9 57.9





#59
 m&p-xylene
 Concen: 0.15 ppb
 RT: 17.89 min Scan# 4508
 Delta R.T. -0.04 min
 Lab File: AP122122.D
 Acq: 22 Dec 2018 1:24 am

Tgt Ion: 91 Resp: 28735
 Ion Ratio Lower Upper
 91 100
 106 34.5 28.3 68.3



Data File : C:\HPCHEM\1\DATA\AP122226.D

Vial: 72

Acq On : 23 Dec 2018 1:31 am

Operator: RJP

Sample : C1812057-002A 5x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:33 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	34059	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	143522	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	107470	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	55183m	0.75	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	75.00%

Target Compounds

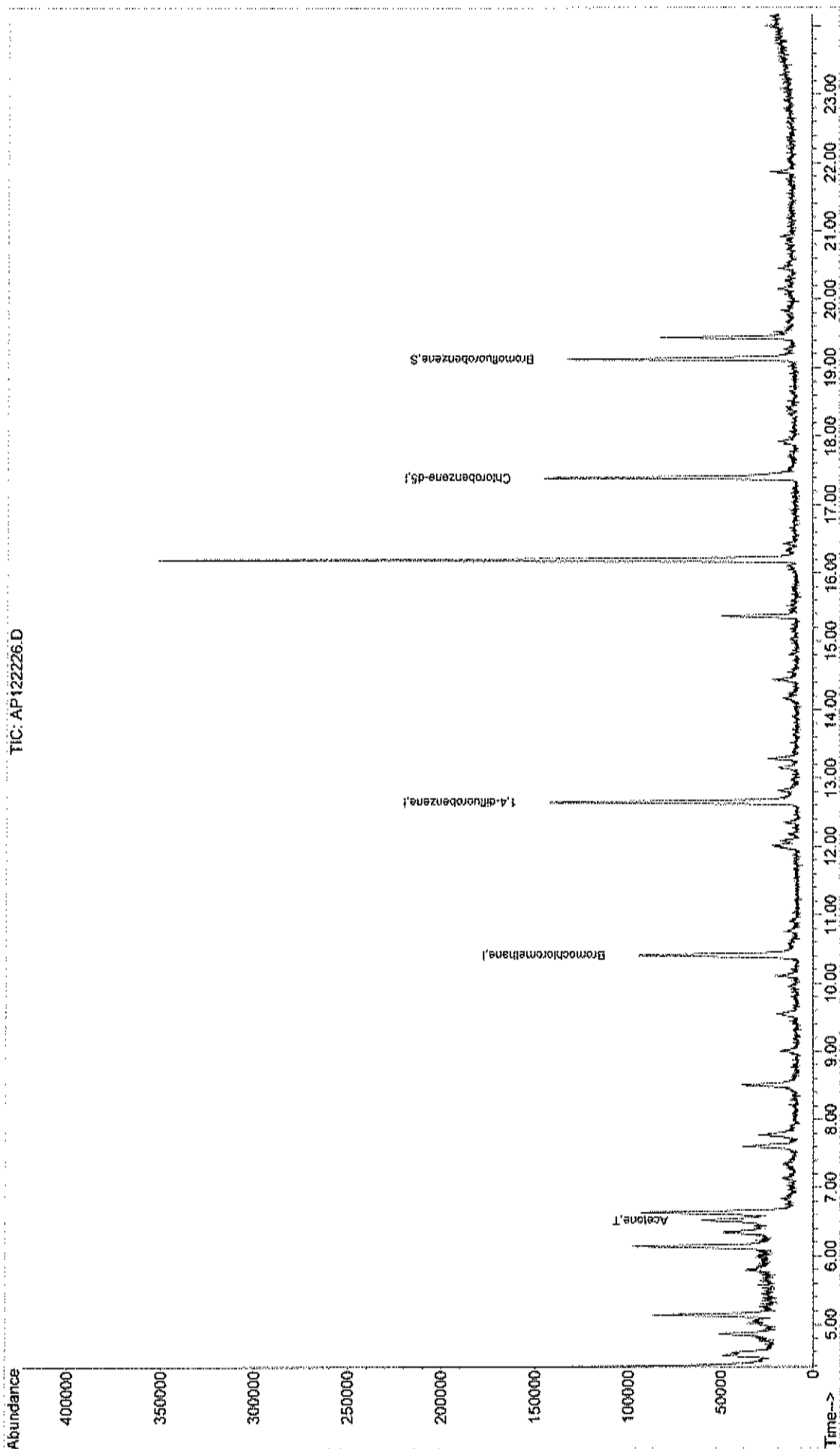
15) Acetone	6.51	58	18946	0.91	ppb	Qvalue # 85
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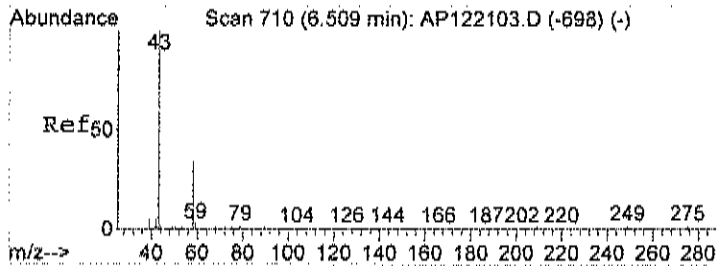
Data File : C:\HPCHEM\1\DATA\AP122226.D
 Acq On : 23 Dec 2018 1:31 am
 Sample : C1812057-002A 5x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 28 10:29 2018

Vial: 72
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

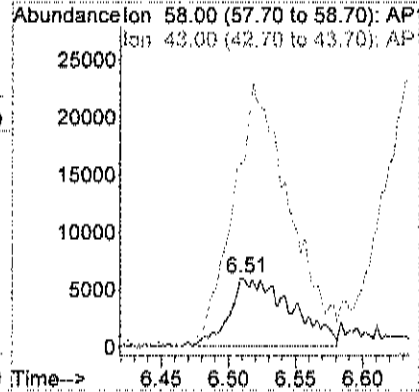
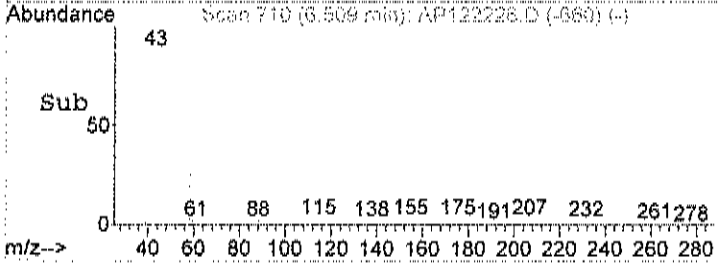
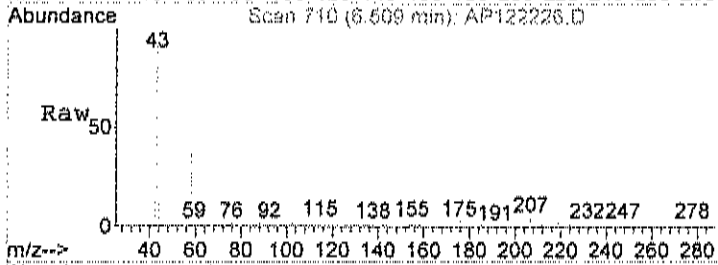
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integration)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





#15
Acetone
Concen: 0.91 ppb
RT: 6.51 min Scan# 710
Delta R.T. -0.00 min
Lab File: AP122226.D
Acq: 23 Dec 2018 1:31 am

Tgt Ion: 58 Resp: 18946
Ion Ratio Lower Upper
58 100
43 359.9 298.2 358.2#



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Acetone	2.2	0.30		ppbV	1	12/22/2018 2:04:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Benzene	0.19	0.15		ppbV	1	12/22/2018 2:04:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Ethyl acetate	0.18	0.15		ppbV	1	12/22/2018 2:04:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 11	0.41	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Freon 12	0.37	0.15		ppbV	1	12/22/2018 2:04:00 AM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 2:04:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Hexane	0.14	0.15	J	ppbV	1	12/22/2018 2:04:00 AM
Isopropyl alcohol	0.44	0.15		ppbV	1	12/22/2018 2:04:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:04:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Methylene chloride	0.20	0.15		ppbV	1	12/22/2018 2:04:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Toluene	0.69	0.15		ppbV	1	12/22/2018 2:04:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:04:00 AM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 2:04:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:04:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:04:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:04:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:04:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:04:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:04:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:04:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 2:04:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 2:04:00 AM
Acetone	5.1	0.71		ug/m3	1	12/22/2018 2:04:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:04:00 AM
Benzene	0.61	0.48		ug/m3	1	12/22/2018 2:04:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:04:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:04:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:04:00 AM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/22/2018 2:04:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:04:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:04:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:04:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 2:04:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:04:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:04:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 2:04:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:04:00 AM
Ethyl acetate	0.65	0.54		ug/m3	1	12/22/2018 2:04:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 2:04:00 AM
Freon 11	2.3	0.84		ug/m3	1	12/22/2018 2:04:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:04:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-003A

Client Sample ID: SVW-2
Tag Number: 328,279
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	1.8	0.74		ug/m3	1	12/22/2018 2:04:00 AM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 2:04:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:04:00 AM
Hexane	0.49	0.53	J	ug/m3	1	12/22/2018 2:04:00 AM
Isopropyl alcohol	1.1	0.37		ug/m3	1	12/22/2018 2:04:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 2:04:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:04:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:04:00 AM
Methylene chloride	0.69	0.52		ug/m3	1	12/22/2018 2:04:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 2:04:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:04:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 2:04:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 2:04:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 2:04:00 AM
Toluene	2.6	0.57		ug/m3	1	12/22/2018 2:04:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:04:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:04:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:04:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 2:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Data File : C:\HPCHEM\1\DATA\AP122123.D

Vial: 7

Acq On : 22 Dec 2018 2:04 am

Operator: RJP

Sample : C1812057-003A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:39 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	41191	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	162954	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	126683	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	65501m	0.76	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	76.00%

Target Compounds

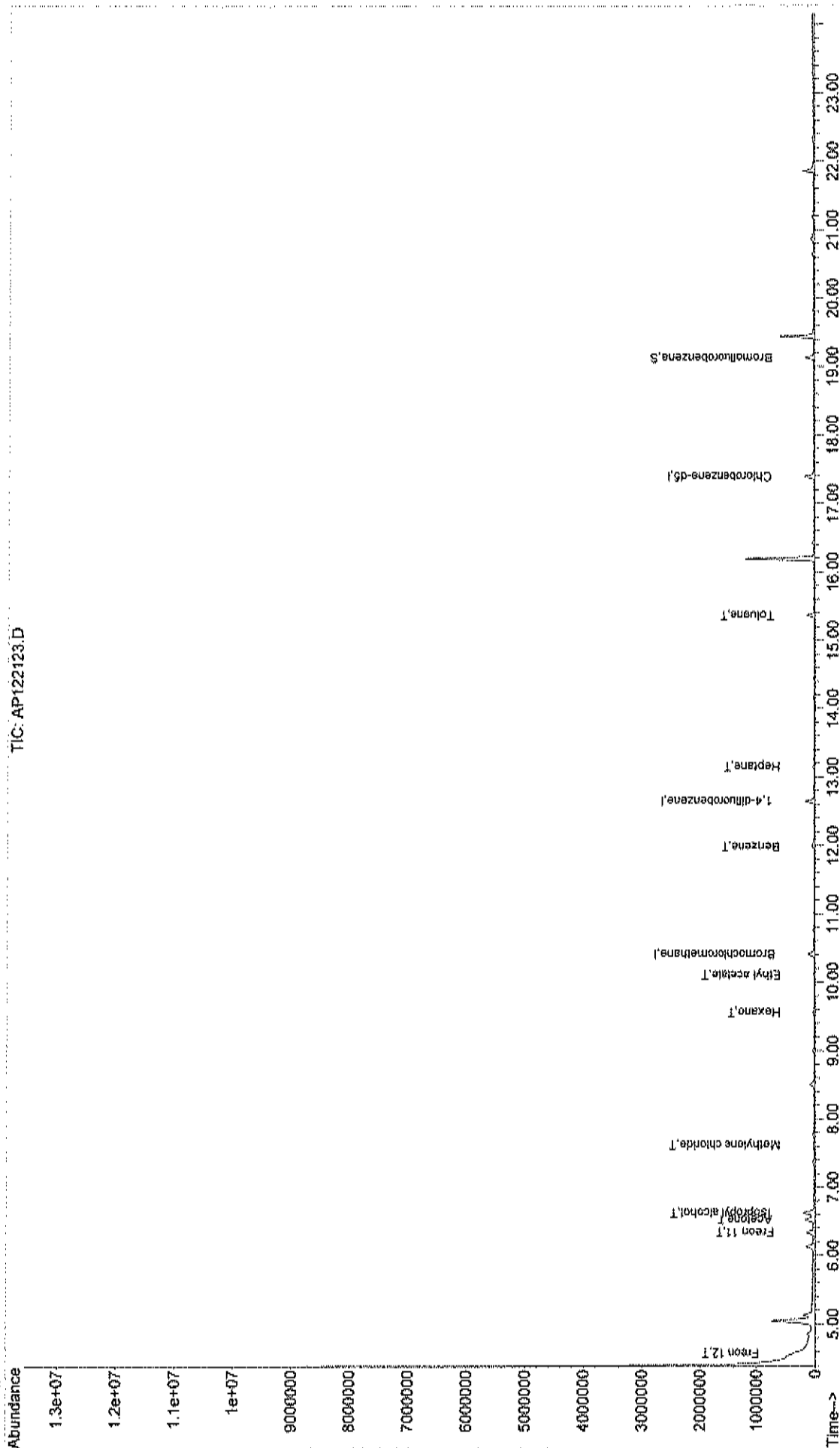
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.58	85	87913m	0.37	ppb	
14) Freon 11	6.34	101	134078	0.41	ppb	96
15) Acetone	6.52	58	54367m	2.15	ppb	
17) Isopropyl alcohol	6.63	45	40310	0.44	ppb	# 1
21) Methylene chloride	7.62	84	13284	0.20	ppb	95
30) Hexane	9.56	57	11188	0.14	ppb	# 47
31) Ethyl acetate	10.11	43	22636	0.18	ppb	85
39) Benzene	11.98	78	35745	0.19	ppb	91
43) Heptane	13.14	43	9758	0.11	ppb	# 39
51) Toluene	15.36	92	67679	0.69	ppb	100

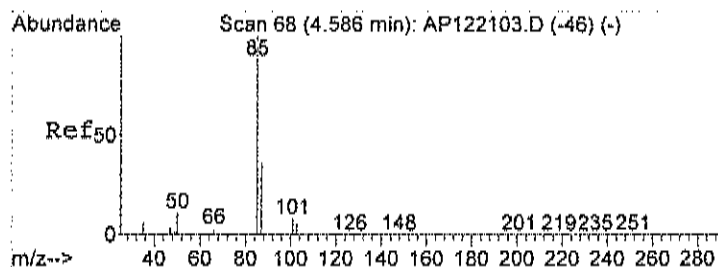
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Acq On : 22 Dec 2018 2:04 am
Sample : C1812057-003A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 28 10:29 2018

Vial: 7
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

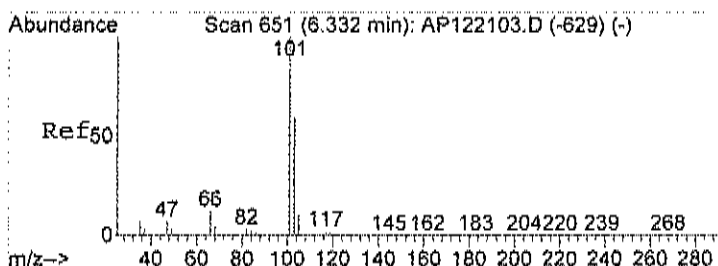
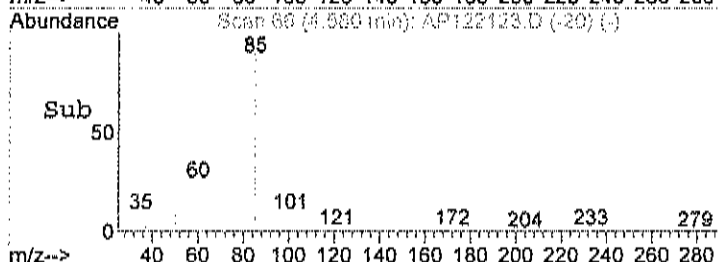
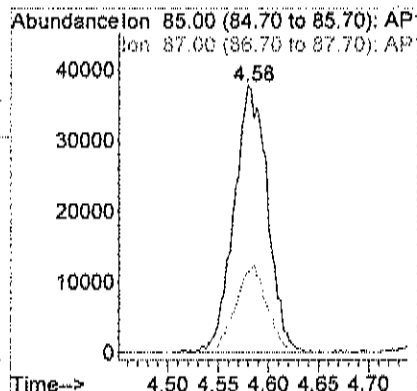
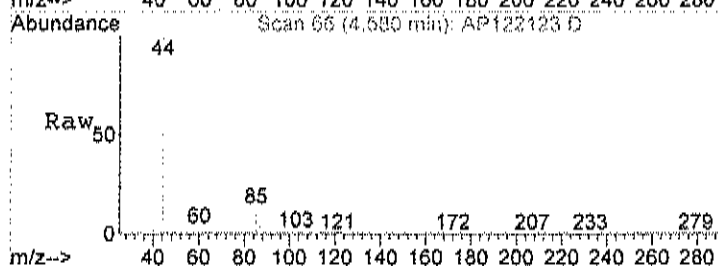
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





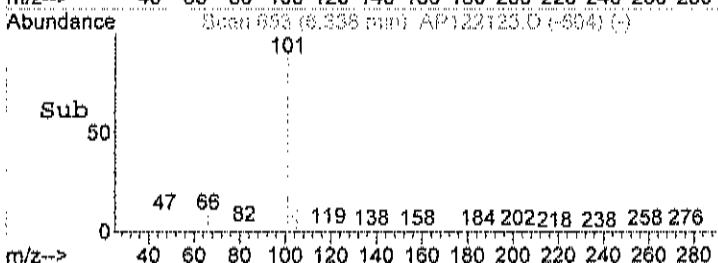
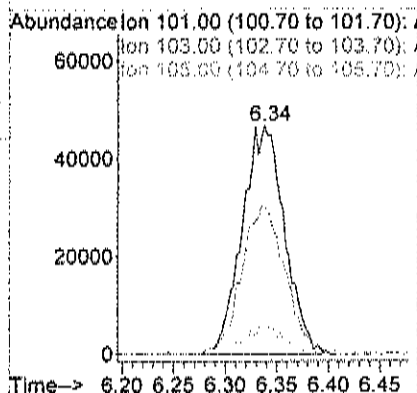
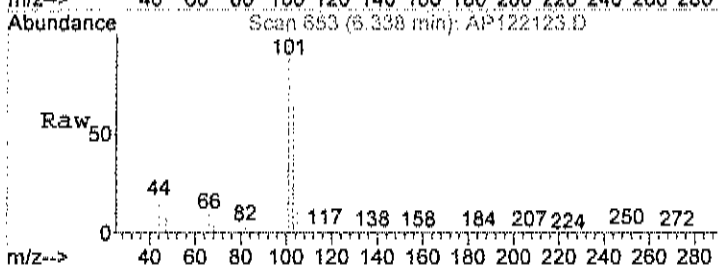
#3
 Freon 12
 Concen: 0.37 ppb m
 RT: 4.58 min Scan# 66
 Delta R.T. -0.01 min
 Lab File: AP122123.D
 Acq: 22 Dec 2018 2:04 am

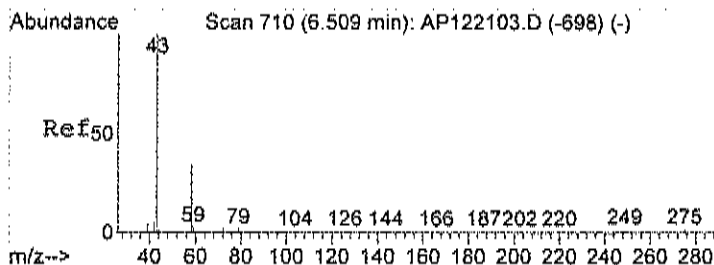
Tgt Ion: 85 Resp: 87913
 Ion Ratio Lower Upper
 85 100
 87 0.0 12.4 52.4#



#14
 Freon 11
 Concen: 0.41 ppb
 RT: 6.34 min Scan# 653
 Delta R.T. -0.00 min
 Lab File: AP122123.D
 Acq: 22 Dec 2018 2:04 am

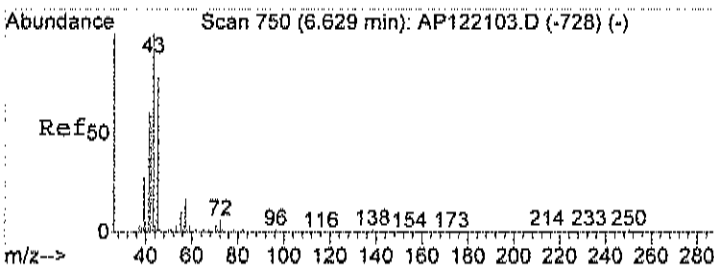
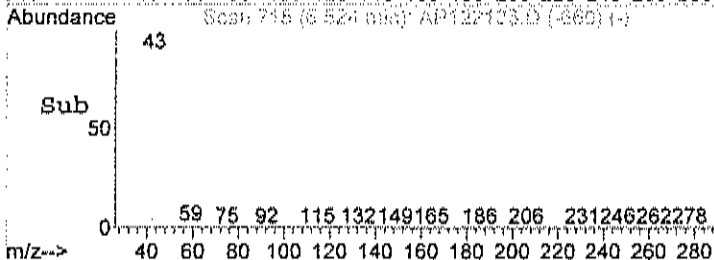
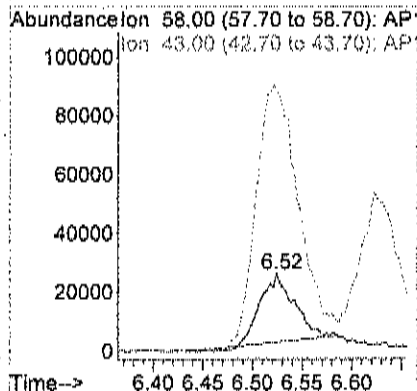
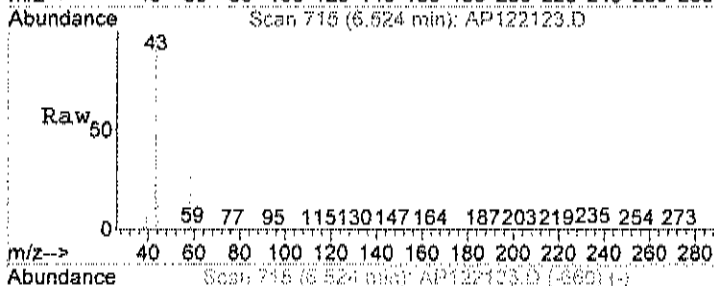
Tgt Ion: 101 Resp: 134078
 Ion Ratio Lower Upper
 101 100
 103 66.4 44.4 84.4
 105 7.6 0.0 31.9





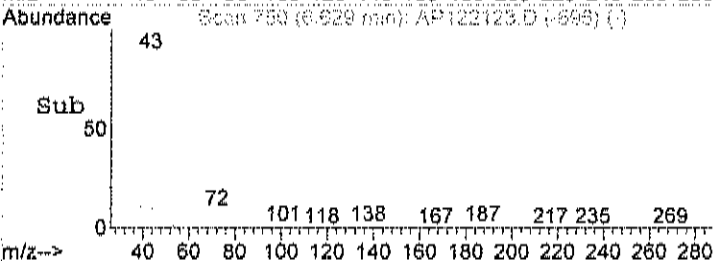
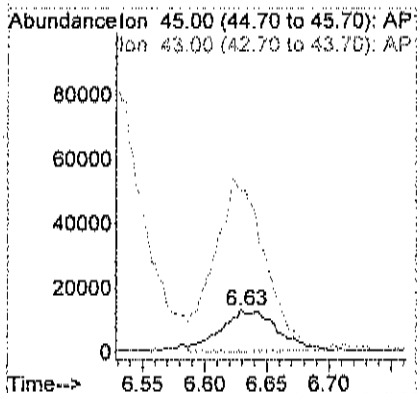
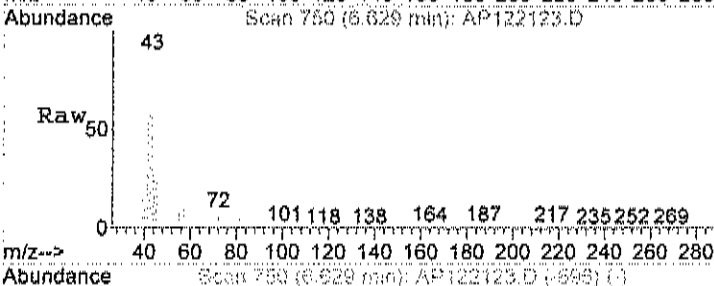
#15
Acetone
Concen: 2.15 ppb m
RT: 6.52 min Scan# 715
Delta R.T. 0.01 min
Lab File: AP122123.D
Acq: 22 Dec 2018 2:04 am

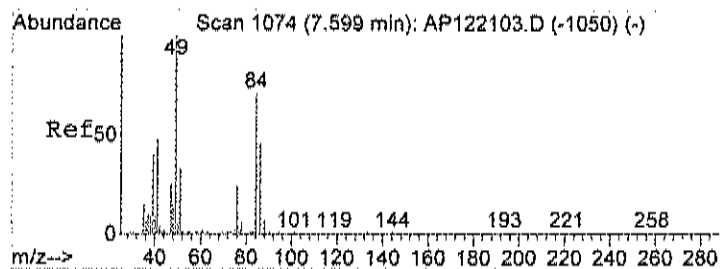
Tgt Ion: 58 Resp: 54367
Ion Ratio Lower Upper
58 100
43 513.6 298.2 358.2#



#17
Isopropyl alcohol
Concen: 0.44 ppb
RT: 6.63 min Scan# 750
Delta R.T. 0.01 min
Lab File: AP122123.D
Acq: 22 Dec 2018 2:04 am

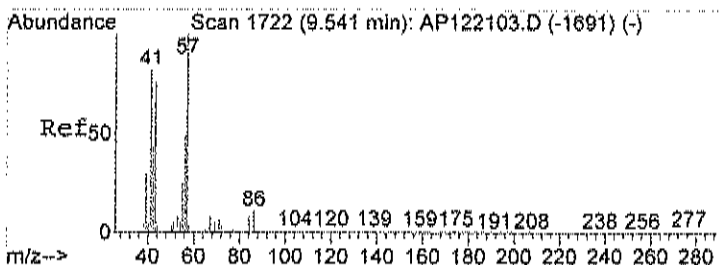
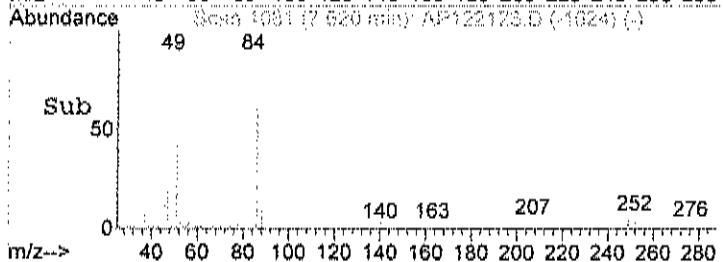
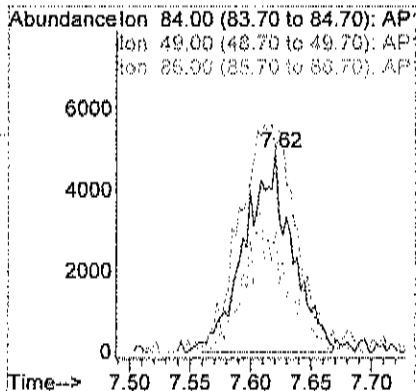
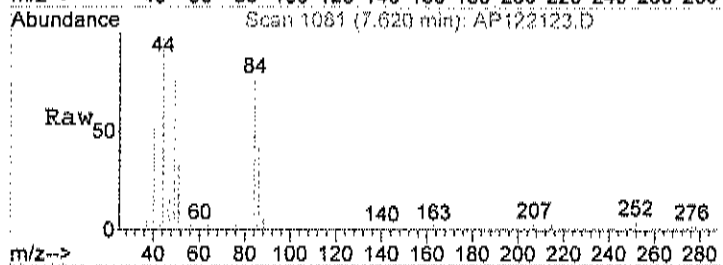
Tgt Ion: 45 Resp: 40310
Ion Ratio Lower Upper
45 100
43 362.3 98.0 138.0#





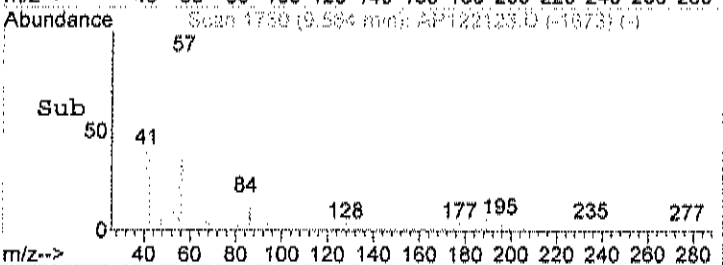
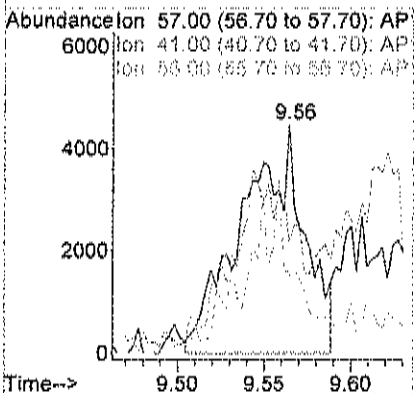
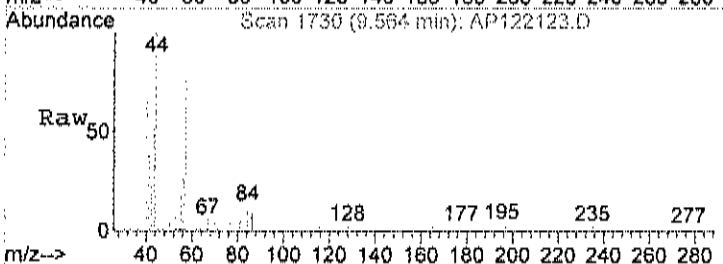
#21
Methylene chloride
Concen: 0.20 ppb
RT: 7.62 min Scan# 1081
Delta R.T. 0.02 min
Lab File: AP122123.D
Acq: 22 Dec 2018 2:04 am

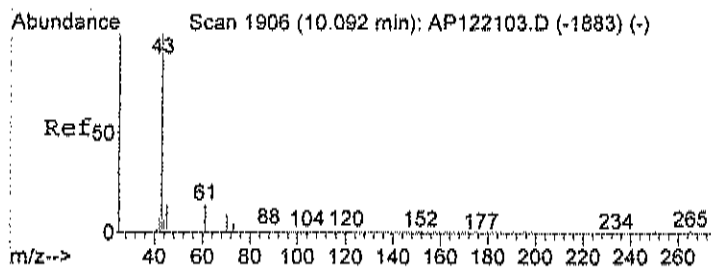
Tgt Ion: 84 Resp: 13284
Ion Ratio Lower Upper
84 100
49 134.4 121.5 161.5
86 62.4 46.0 86.0



#30
Hexane
Concen: 0.14 ppb
RT: 9.56 min Scan# 1730
Delta R.T. 0.02 min
Lab File: AP122123.D
Acq: 22 Dec 2018 2:04 am

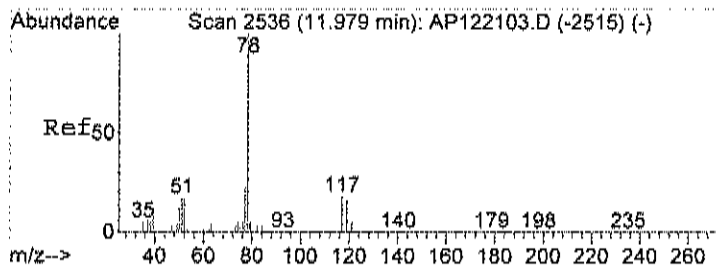
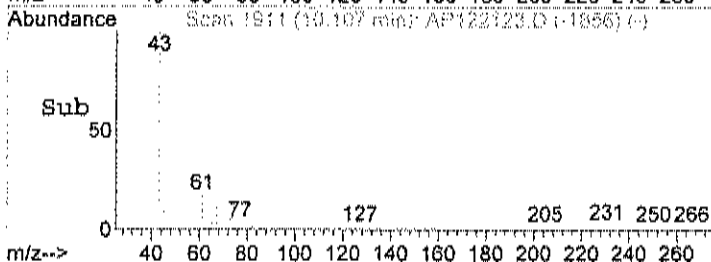
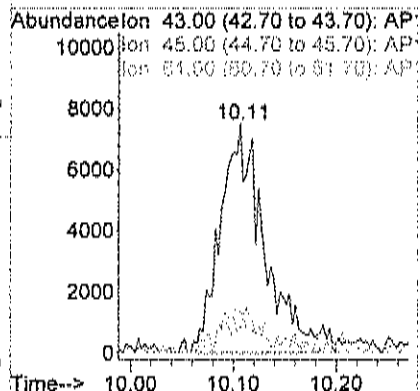
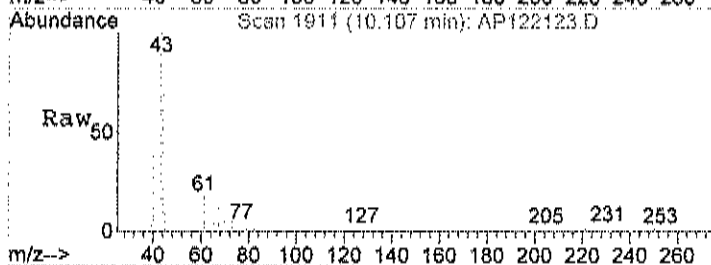
Tgt Ion: 57 Resp: 11188
Ion Ratio Lower Upper
57 100
41 0.0 49.7 89.7#
56 44.2 27.9 67.9





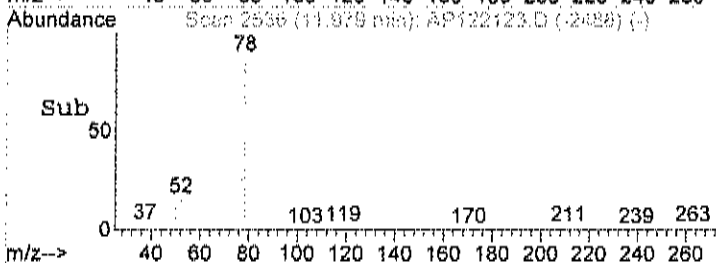
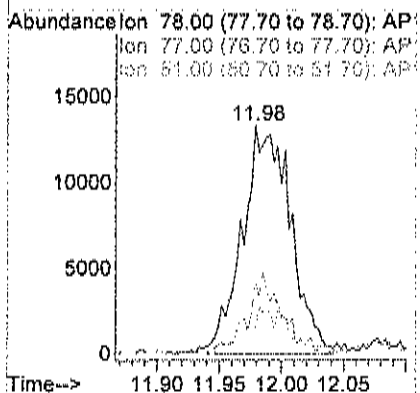
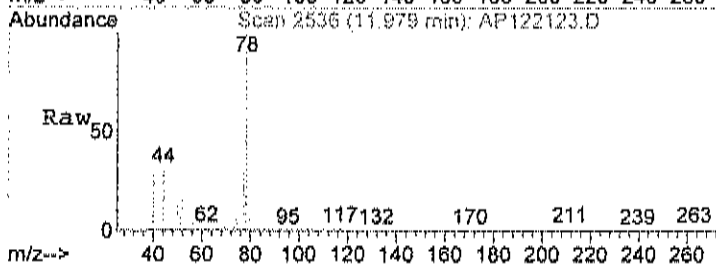
#31
Ethyl acetate
Concen: 0.18 ppb
RT: 10.11 min Scan# 1911
Delta R.T. 0.01 min
Lab File: AP122123.D
Acq: 22 Dec 2018 2:04 am

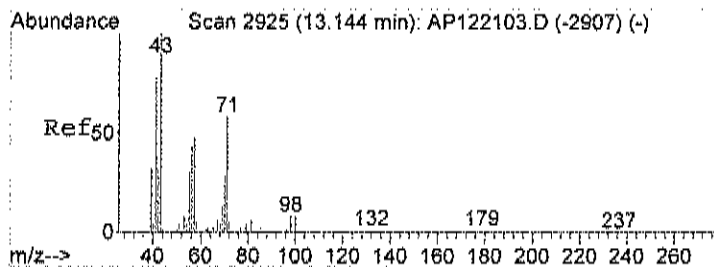
Tgt Ion: 43 Resp: 22636
Ion Ratio Lower Upper
43 100
45 7.7 0.0 35.0
61 9.1 0.0 34.3



#39
Benzene
Concen: 0.19 ppb
RT: 11.98 min Scan# 2536
Delta R.T. -0.00 min
Lab File: AP122123.D
Acq: 22 Dec 2018 2:04 am

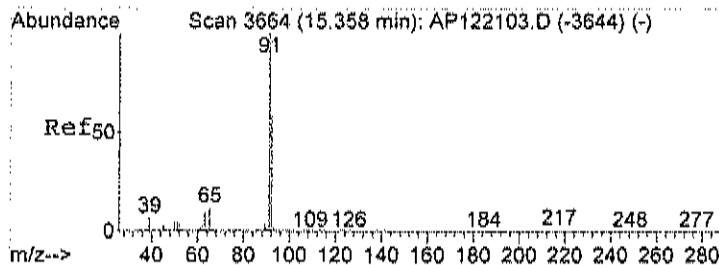
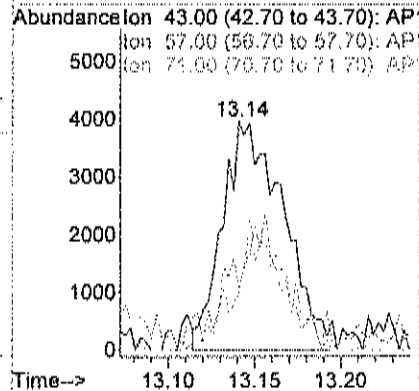
Tgt Ion: 78 Resp: 35745
Ion Ratio Lower Upper
78 100
77 26.4 3.1 43.1
51 11.2 0.0 36.7





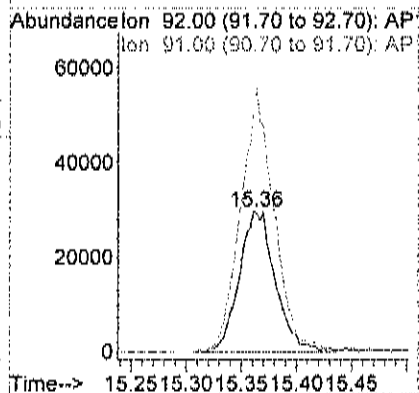
#43
Heptane
Concen: 0.11 ppb
RT: 13.14 min Scan# 2924
Delta R.T. -0.01 min
Lab File: AP122123.D
Acq: 22 Dec 2018 2:04 am

Tgt Ion	Resp	Ion Ratio	Lower	Upper
43	9758	100		
57	13.1	32.7	72.7#	
71	7.7	35.6	75.6#	



#51
Toluene
Concen: 0.69 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122123.D
Acq: 22 Dec 2018 2:04 am

Tgt Ion	Resp	Ion Ratio	Lower	Upper
92	67679	100		
91	174.0	154.3	194.3	



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,1,2-Trichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,1-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,1-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2,4-Trimethylbenzene	1.0	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2-Dibromoethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2-Dichloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,2-Dichloropropane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,3,5-Trimethylbenzene	0.39	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,3-butadiene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,3-Dichlorobenzene	0.28	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,4-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
1,4-Dioxane	< 0.30	0.30	ppbV		1	12/22/2018 2:44:00 AM
2,2,4-trimethylpentane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
4-ethyltoluene	0.40	0.15	ppbV		1	12/22/2018 2:44:00 AM
Acetone	19	3.0	ppbV		10	12/23/2018 2:08:00 AM
Allyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Benzene	0.36	0.15	ppbV		1	12/22/2018 2:44:00 AM
Benzyl chloride	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Bromodichloromethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Bromoform	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Bromomethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Carbon disulfide	62	6.0	ppbV		40	12/23/2018 2:45:00 AM
Carbon tetrachloride	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Chlorobenzene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Chloroethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Chloroform	0.16	0.15	ppbV		1	12/22/2018 2:44:00 AM
Chloromethane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM
Cyclohexane	< 0.15	0.15	ppbV		1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Ethylbenzene	0.61	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 11	0.68	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Freon 12	0.48	0.15		ppbV	1	12/22/2018 2:44:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 2:44:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 2:44:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
m&p-Xylene	1.3	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Ethyl Ketone	0.66	0.30		ppbV	1	12/22/2018 2:44:00 AM
Methyl Isobutyl Ketone	7.0	3.0		ppbV	10	12/23/2018 2:08:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Methylene chloride	0.23	0.15		ppbV	1	12/22/2018 2:44:00 AM
o-Xylene	0.41	0.15		ppbV	1	12/22/2018 2:44:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Tetrachloroethylene	0.16	0.15		ppbV	1	12/22/2018 2:44:00 AM
Tetrahydrofuran	3.6	1.5		ppbV	10	12/23/2018 2:08:00 AM
Toluene	4.3	1.5		ppbV	10	12/23/2018 2:08:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:44:00 AM
Surr: Bromofluorobenzene	88.0	70-130		%REC	1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	II	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:44:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:44:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:44:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
1,2,4-Trimethylbenzene	5.1	0.74		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:44:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:44:00 AM
1,3,5-Trimethylbenzene	1.9	0.74		ug/m3	1	12/22/2018 2:44:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:44:00 AM
1,3-Dichlorobenzene	1.7	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:44:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 2:44:00 AM
4-ethyltoluene	2.0	0.74		ug/m3	1	12/22/2018 2:44:00 AM
Acetone	45	7.1		ug/m3	10	12/23/2018 2:08:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:44:00 AM
Benzene	1.1	0.48		ug/m3	1	12/22/2018 2:44:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:44:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:44:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:44:00 AM
Carbon disulfide	190	19		ug/m3	40	12/23/2018 2:45:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:44:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:44:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:44:00 AM
Chloroform	0.78	0.73		ug/m3	1	12/22/2018 2:44:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:44:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:44:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 2:44:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:44:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 2:44:00 AM
Ethylbenzene	2.6	0.65		ug/m3	1	12/22/2018 2:44:00 AM
Freon 11	3.3	0.84		ug/m3	1	12/22/2018 2:44:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:44:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:44:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-004A

Client Sample ID: SVW-3
Tag Number: 542,1165
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.4	0.74		ug/m3	1	12/22/2018 2:44:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 2:44:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:44:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 2:44:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 2:44:00 AM
m&p-Xylene	5.6	1.3		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Ethyl Ketone	1.7	0.88		ug/m3	1	12/22/2018 2:44:00 AM
Methyl Isobutyl Ketone	29	12		ug/m3	10	12/23/2018 2:08:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:44:00 AM
Methylene chloride	0.80	0.52		ug/m3	1	12/22/2018 2:44:00 AM
o-Xylene	1.8	0.65		ug/m3	1	12/22/2018 2:44:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:44:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 2:44:00 AM
Tetrachloroethylene	1.1	1.0		ug/m3	1	12/22/2018 2:44:00 AM
Tetrahydrofuran	11	4.4		ug/m3	10	12/23/2018 2:08:00 AM
Toluene	16	5.7		ug/m3	10	12/23/2018 2:08:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:44:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:44:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:44:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 2:44:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

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Data File : C:\HPCHEM\1\DATA\AP122124.D

Acq On : 22 Dec 2018 2:44 am

Sample : C1812057-004A

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:40 2018

Vial: 8

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	42687	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.64	114	173658	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	212488	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	127259	0.88	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	88.00%

Target Compounds

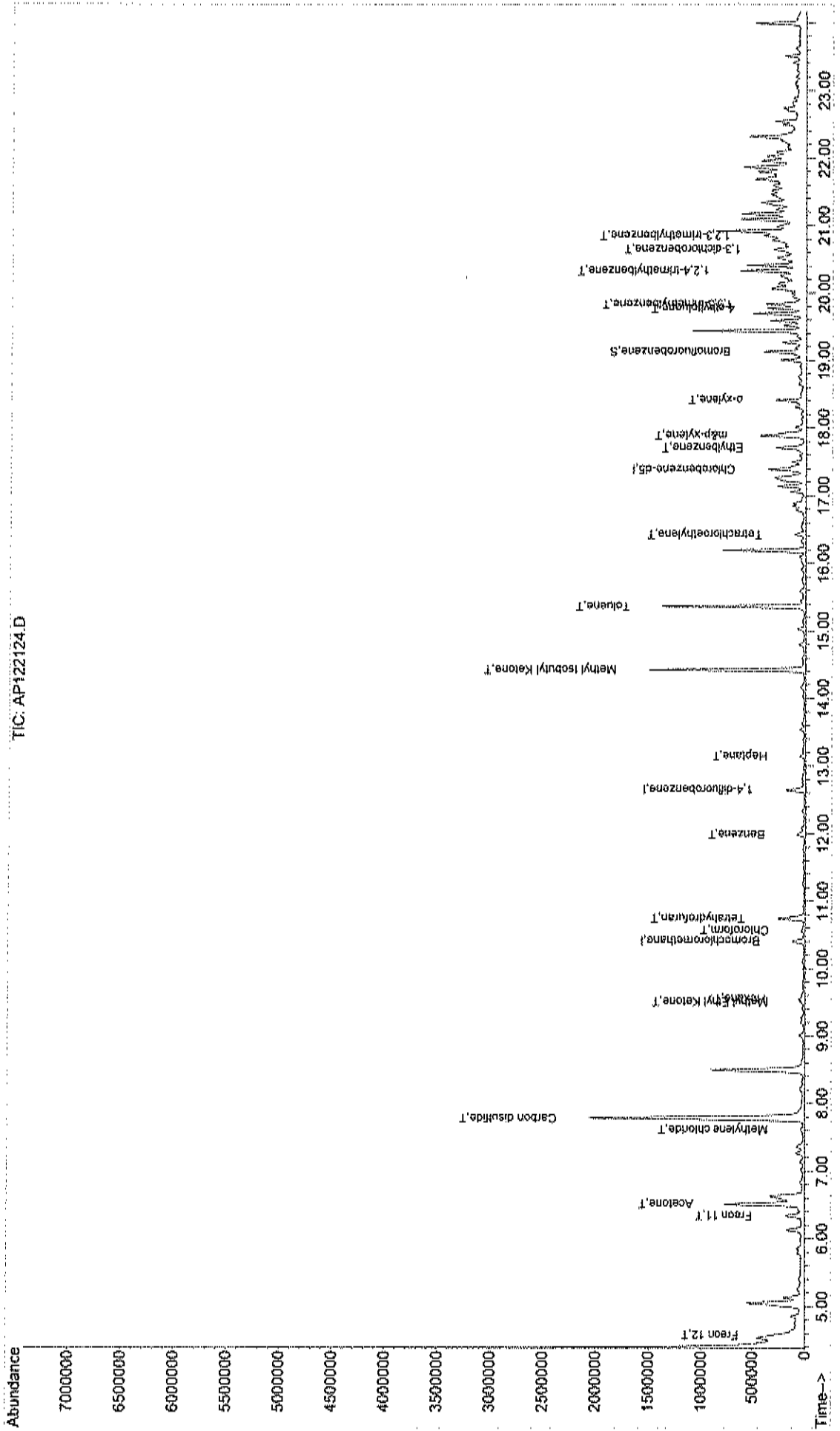
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.59	85	118809	0.48	ppb	100
14) Freon 11	6.34	101	194526	0.58	ppb	97
15) Acetone	6.51	58	406737	15.54	ppb	91
21) Methylene chloride	7.61	84	15523m	0.23	ppb	
23) Carbon disulfide	7.78	76	4842599	32.35	ppb	100
28) Methyl Ethyl Ketone	9.50	72	15080m	0.56	ppb	
30) Hexane	9.55	57	23438	0.28	ppb	81
32) Chloroform	10.56	83	25973	0.16	ppb	99
33) Tetrahydrofuran	10.74	42	201265	3.53	ppb	95
39) Benzene	11.98	78	72078	0.36	ppb	95
43) Heptane	13.15	43	14218	0.14	ppb	88
51) Toluene	15.36	92	660771	4.02	ppb	98
52) Methyl Isobutyl Ketone	14.42	43	1184765	6.46	ppb	96
56) Tetrachloroethylene	16.43	164	21638	0.16	ppb	99
58) Ethylbenzene	17.71	91	207319	0.61	ppb	98
59) m&p-xylene	17.89	91	374108	1.30	ppb	98
63) o-xylene	18.42	91	150900	0.41	ppb	99
69) 4-ethyltoluene	19.77	105	174256	0.40	ppb	99
70) 1,3,5-trimethylbenzene	19.84	105	150013	0.39	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	308171	1.03	ppb	100
72) 1,3-dichlorobenzene	20.65	146	79456	0.28	ppb	90
75) 1,2,3-trimethylbenzene	20.85	105	101555	0.29	ppb	91

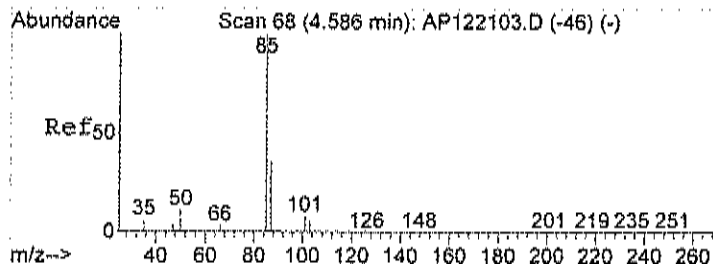
Data File : C:\HPCHEM\1\DATA\AP122124.D
 Acq On : 22 Dec 2018 2:44 am
 Sample : C1812057-004A
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 27 10:18 2018

Vial: 8
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

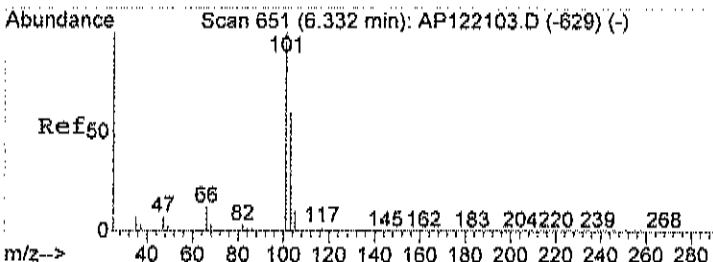
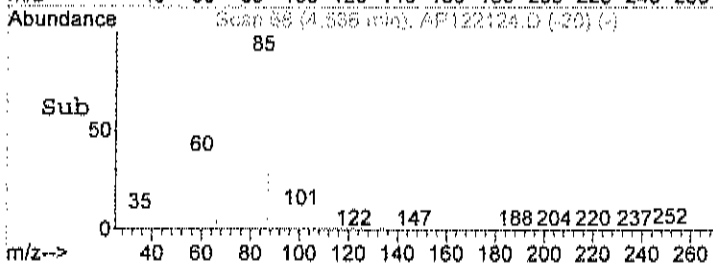
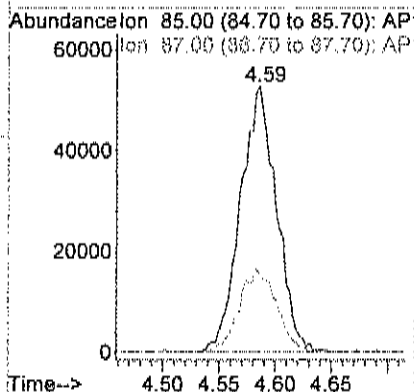
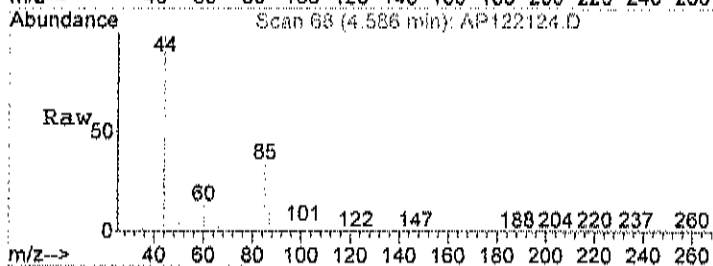
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





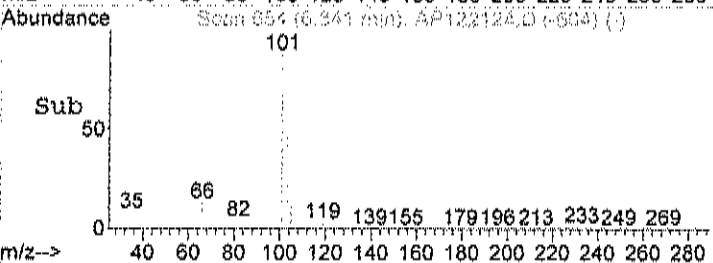
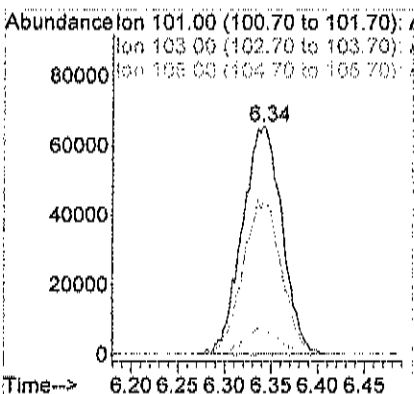
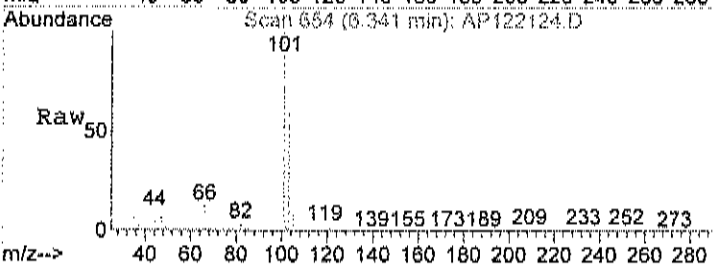
#3
 Freon 12
 Concen: 0.48 ppb
 RT: 4.59 min Scan# 68
 Delta R.T. -0.01 min
 Lab File: AP122124.D
 Acq: 22 Dec 2018 2:44 am

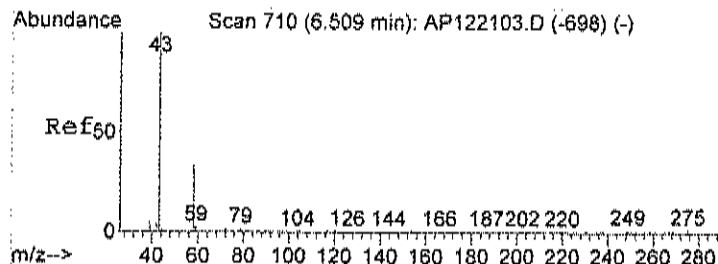
Tgt Ion	Ratio	Lower	Upper
85	100		
87	32.4	12.4	52.4



#14
 Freon 11
 Concen: 0.58 ppb
 RT: 6.34 min Scan# 654
 Delta R.T. -0.00 min
 Lab File: AP122124.D
 Acq: 22 Dec 2018 2:44 am

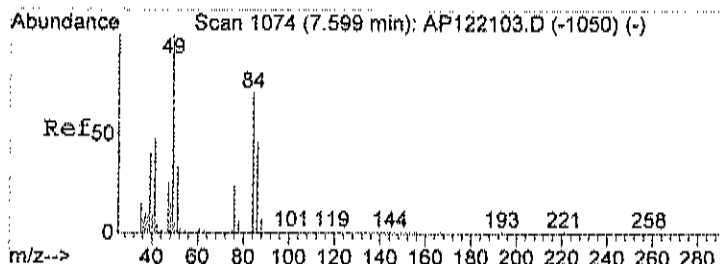
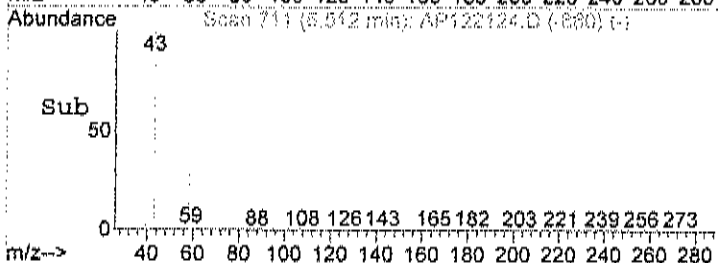
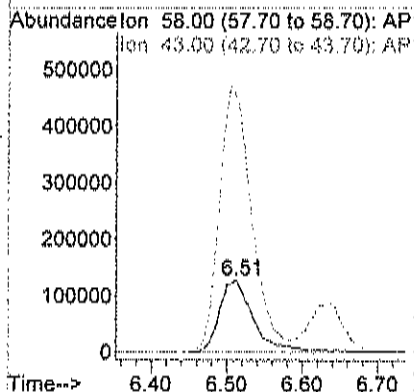
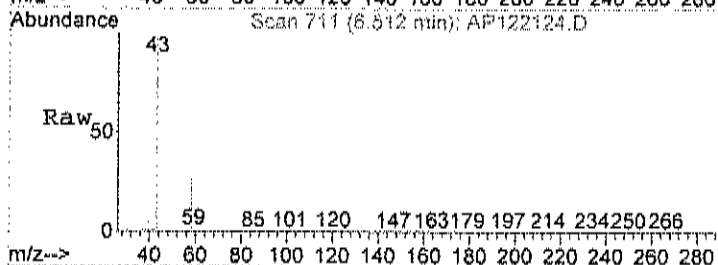
Tgt Ion	Ratio	Lower	Upper
101	100		
103	66.3	44.4	84.4
105	10.5	0.0	31.9





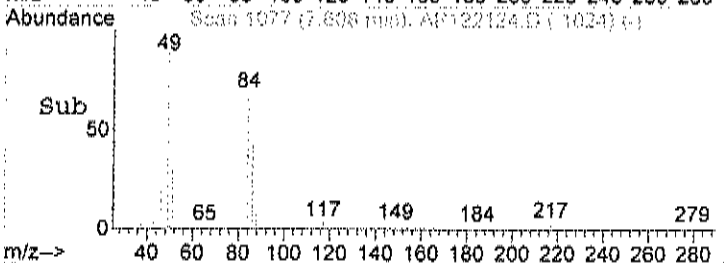
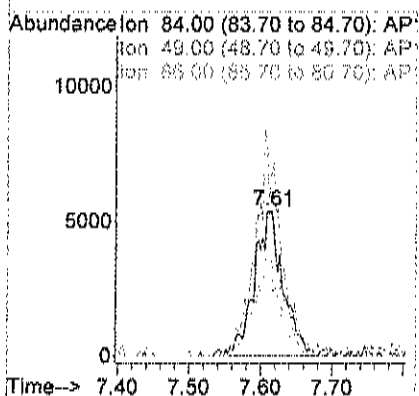
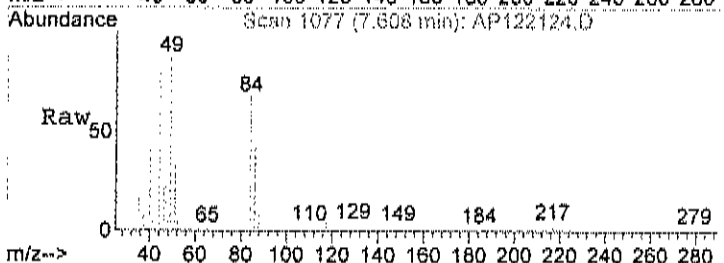
#15
Acetone
Concen: 15.54 ppb
RT: 6.51 min Scan# 711
Delta R.T. 0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

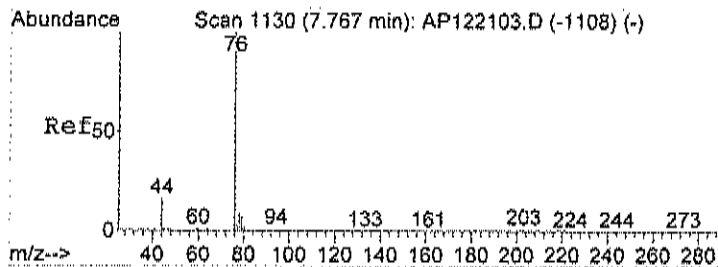
Tgt Ion: 58 Resp: 406737
Ion Ratio Lower Upper
58 100
43 346.7 298.2 358.2



#21
Methylene chloride
Concen: 0.23 ppb m
RT: 7.61 min Scan# 1077
Delta R.T. 0.01 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

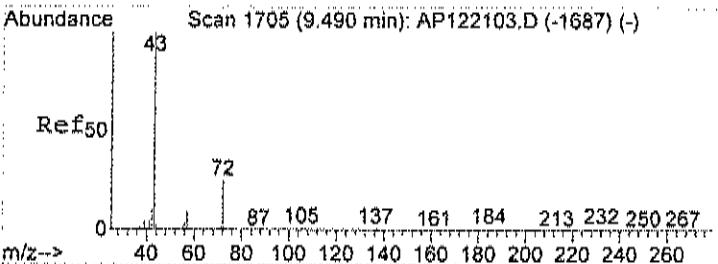
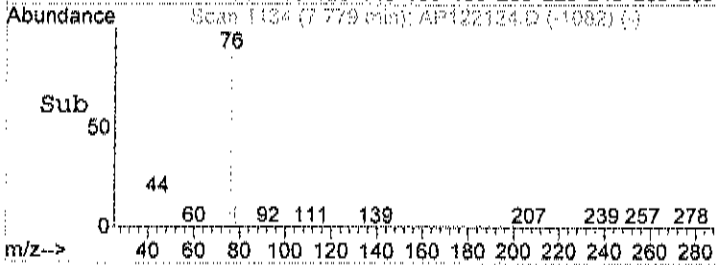
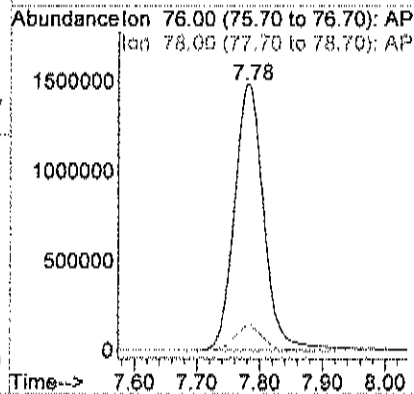
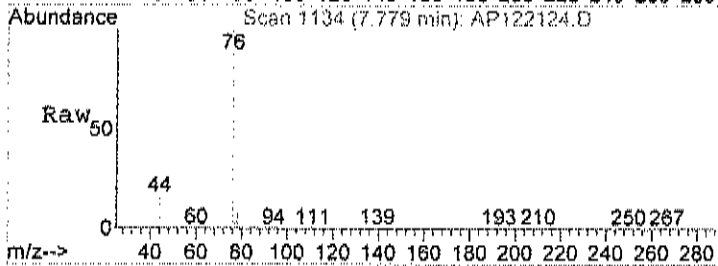
Tgt Ion: 84 Resp: 15523
Ion Ratio Lower Upper
84 100
49 131.8 121.5 161.5
86 62.4 46.0 86.0





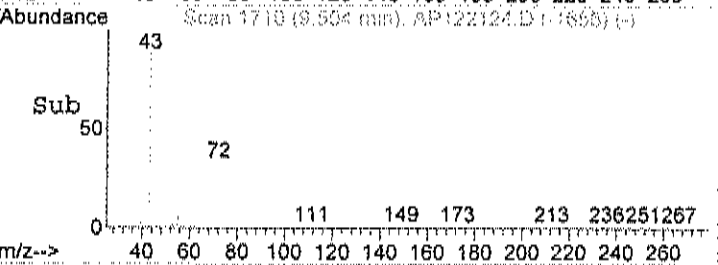
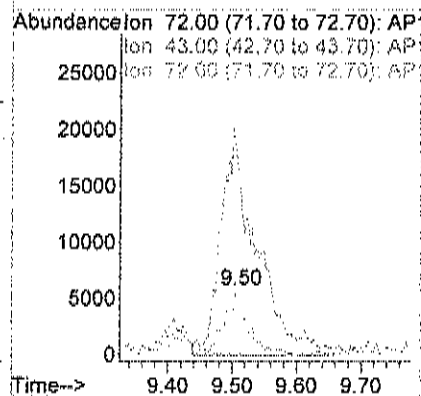
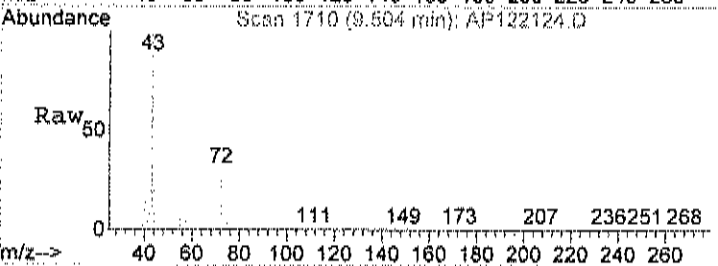
#23
Carbon disulfide
Concen: 32.35 ppb
RT: 7.78 min Scan# 1134
Delta R.T. 0.01 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

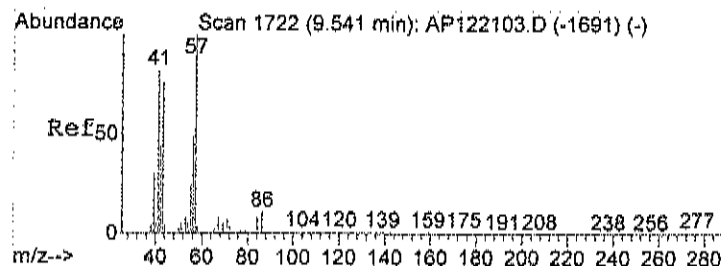
Tgt Ion: 76 Resp: 4842599
Ion Ratio Lower Upper
76 100
78 9.3 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 0.56 ppb m
RT: 9.50 min Scan# 1710
Delta R.T. 0.01 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

Tgt Ion: 72 Resp: 15080
Ion Ratio Lower Upper
72 100
43 456.6 0.0 20.0#
72 75.5 80.0 120.0#

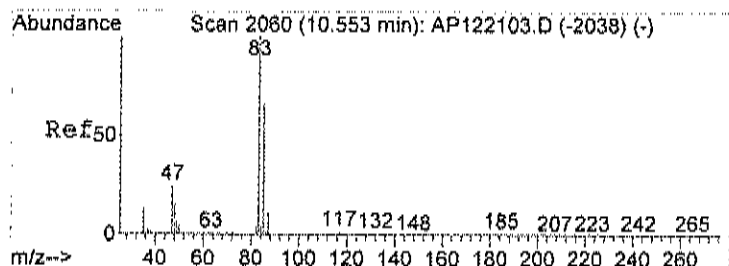
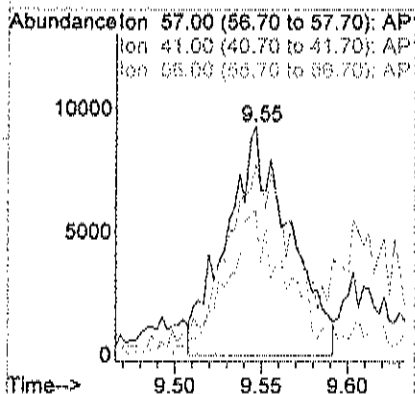




#30
Hexane
Concen: 0.28 ppb
RT: 9.55 min Scan# 1724
Delta R.T. 0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

Tgt Ion: 57 Resp: 23438

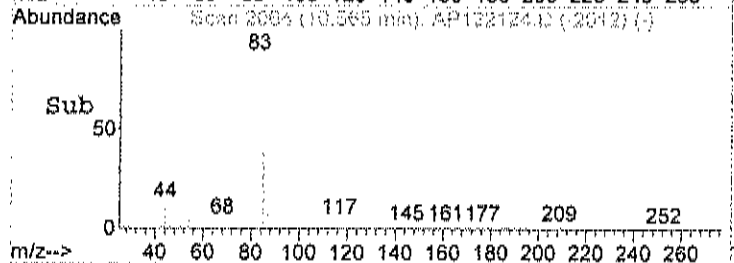
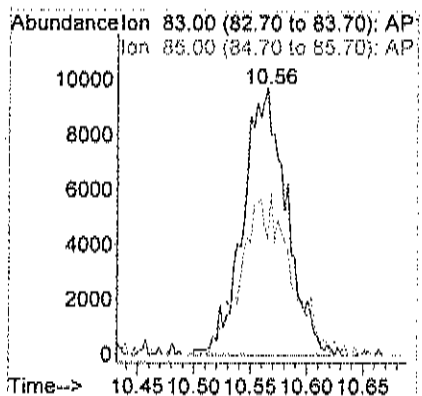
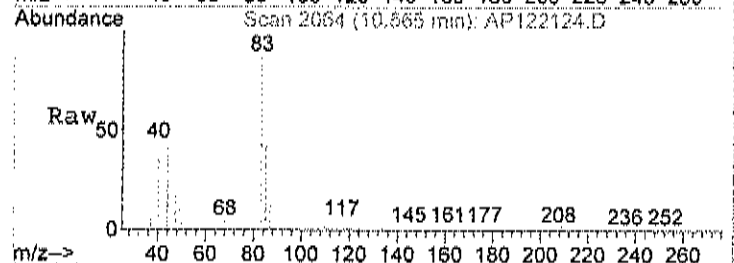
Ion	Ratio	Lower	Upper
57	100		
41	87.0	49.7	89.7
56	58.5	27.9	67.9

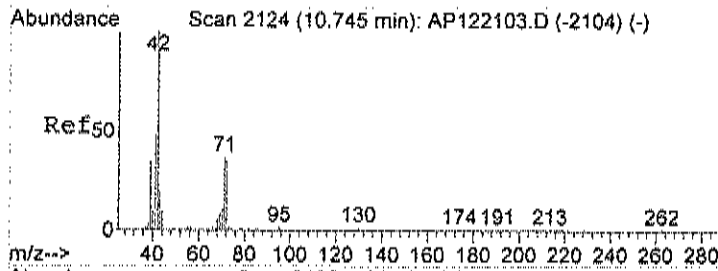


#32
Chloroform
Concen: 0.16 ppb
RT: 10.56 min Scan# 2064
Delta R.T. 0.01 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

Tgt Ion: 83 Resp: 25973

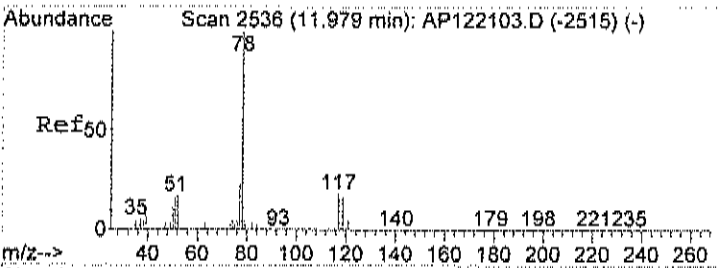
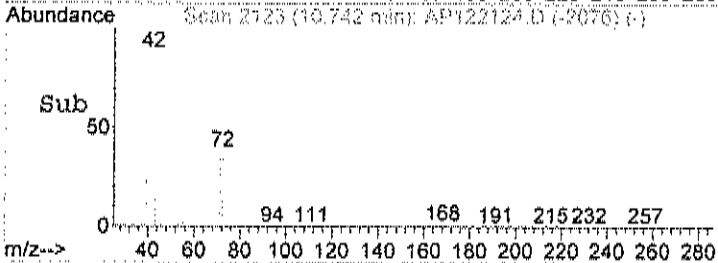
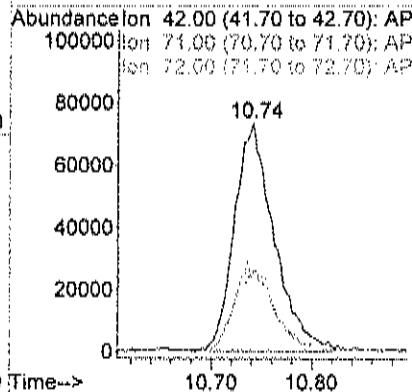
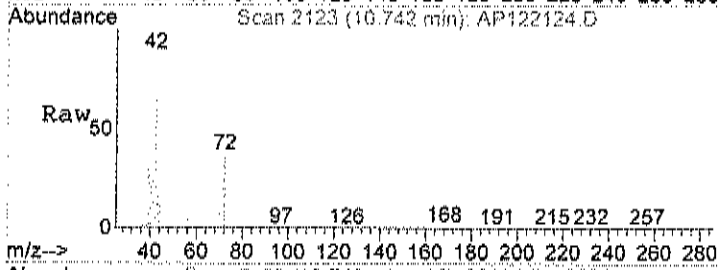
Ion	Ratio	Lower	Upper
83	100		
85	66.2	45.5	85.5





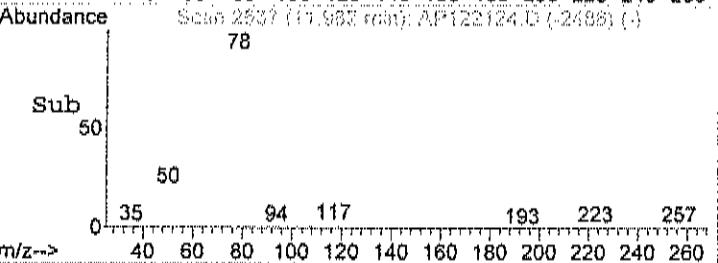
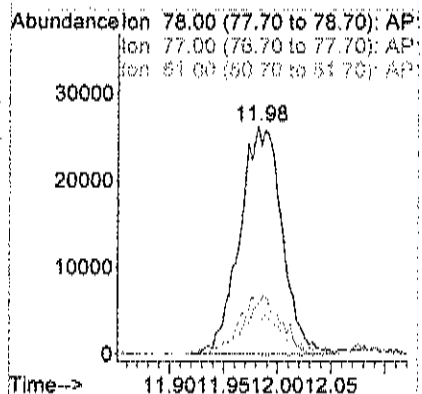
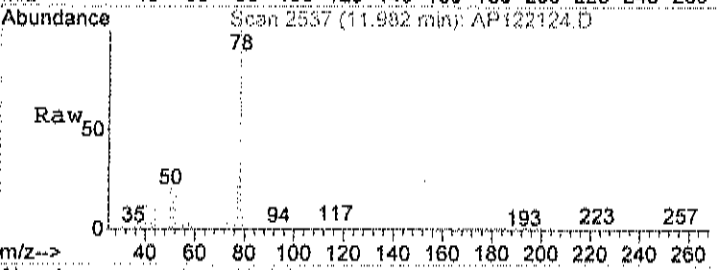
#33
Tetrahydrofuran
Concen: 3.53 ppb
RT: 10.74 min Scan# 2123
Delta R.T. -0.01 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

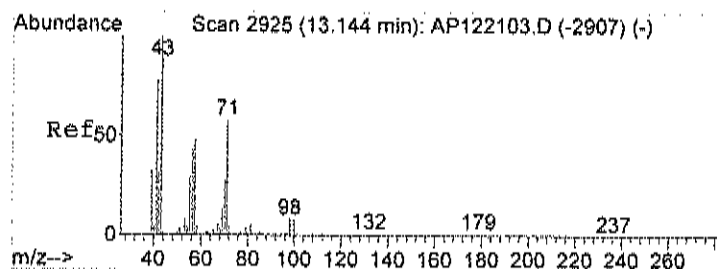
Tgt Ion	Ratio	Lower	Upper
42	100		
71	38.6	21.4	61.4
72	39.2	22.4	62.4



#39
Benzene
Concen: 0.36 ppb
RT: 11.98 min Scan# 2537
Delta R.T. 0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

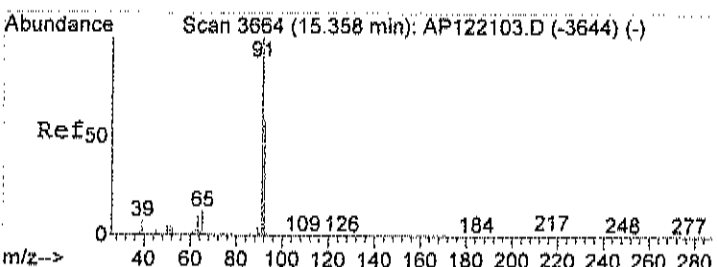
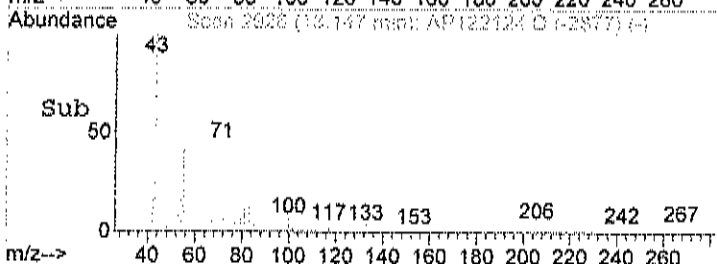
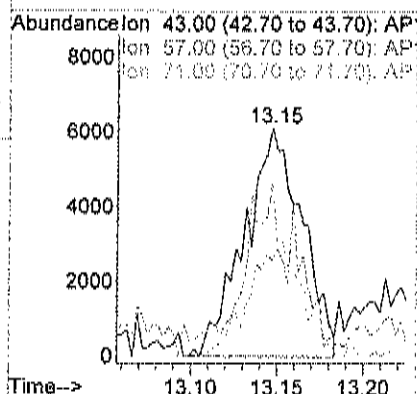
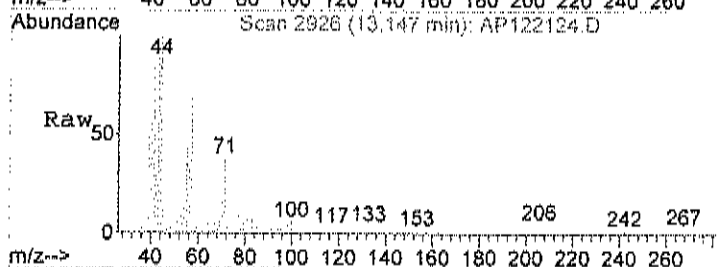
Tgt Ion	Ratio	Lower	Upper
78	100		
77	25.6	3.1	43.1
51	18.3	0.0	36.7





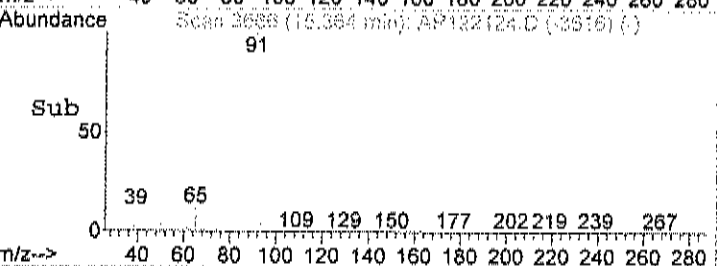
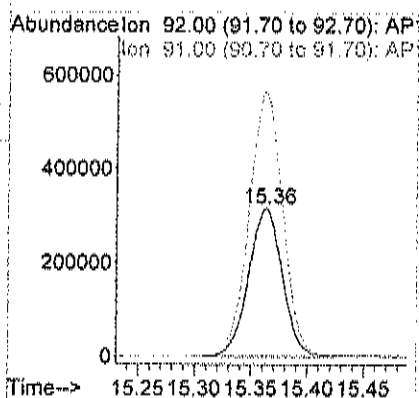
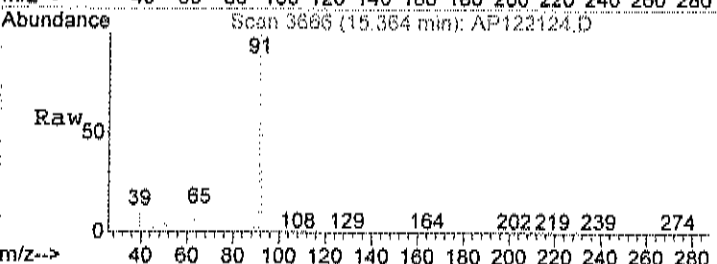
#43
Heptane
Concen: 0.14 ppb
RT: 13.15 min Scan# 2926
Delta R.T. -0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

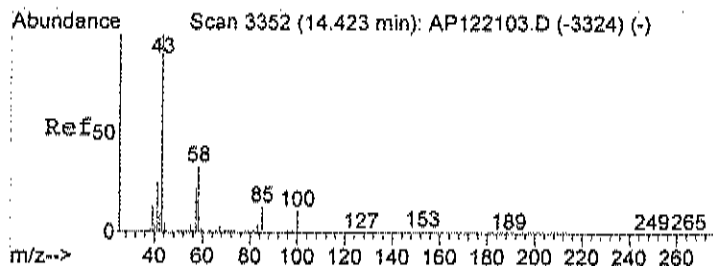
Tgt Ion	Ratio	Lower	Upper
43	100		
57	43.8	32.7	72.7
71	47.0	35.6	75.6



#51
Toluene
Concen: 4.02 ppb
RT: 15.36 min Scan# 3666
Delta R.T. -0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

Tgt Ion	Ratio	Lower	Upper
92	100		
91	177.7	154.3	194.3

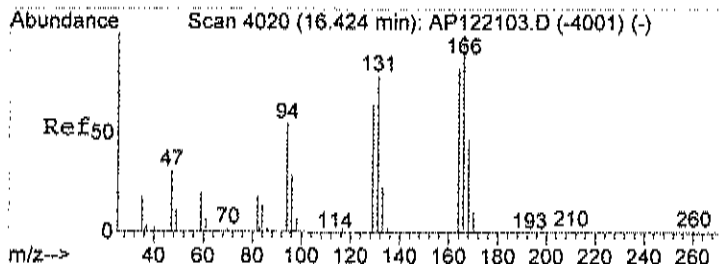
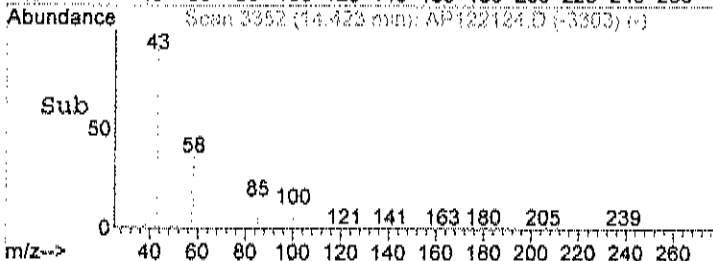
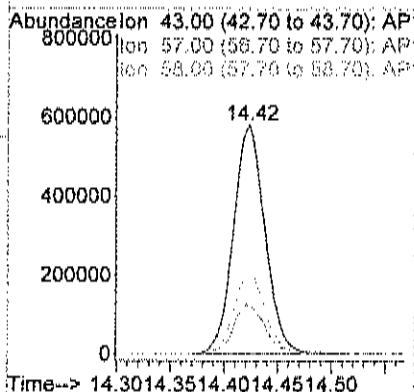
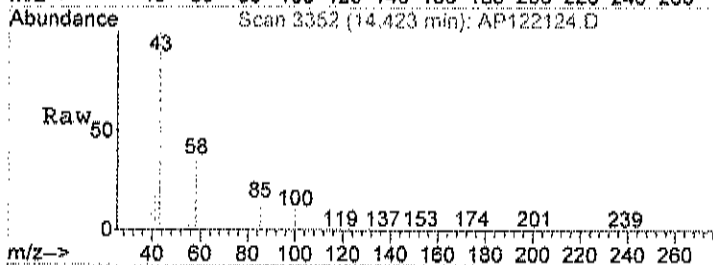




#52
Methyl Isobutyl Ketone
Concen: 6.46 ppb
RT: 14.42 min Scan# 3352
Delta R.T. -0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

Tgt Ion: 43 Resp: 1184765

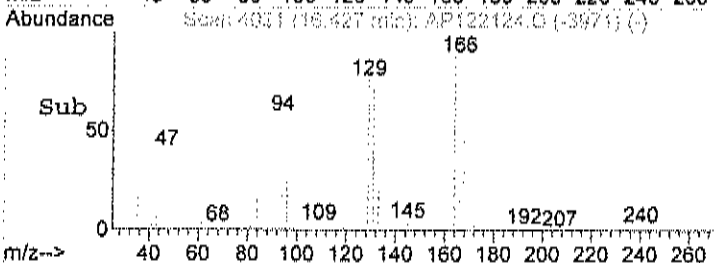
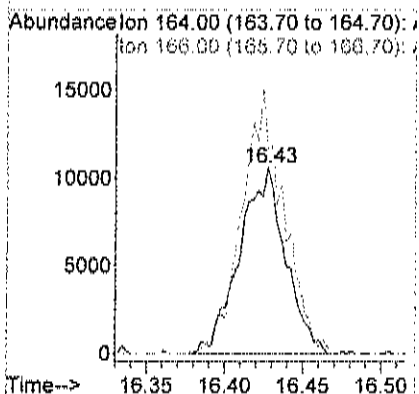
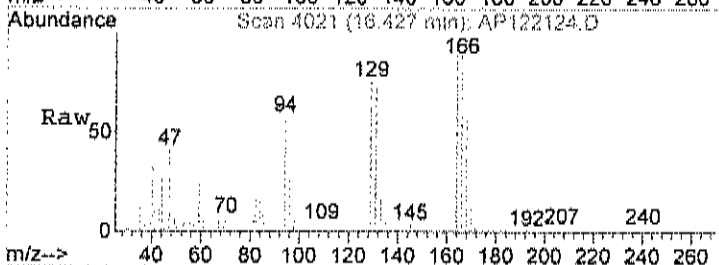
Ion	Ratio	Lower	Upper
43	100		
57	21.3	3.5	43.5
58	35.9	17.9	57.9

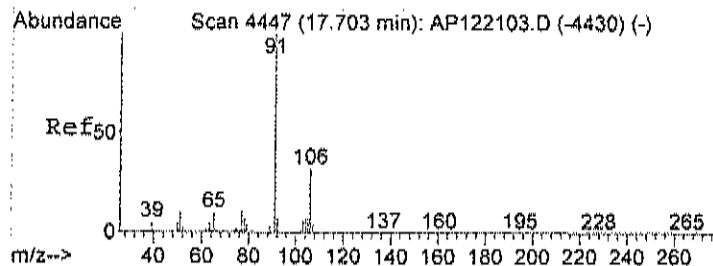


#56
Tetrachloroethylene
Concen: 0.16 ppb
RT: 16.43 min Scan# 4021
Delta R.T. -0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

Tgt Ion: 164 Resp: 21638

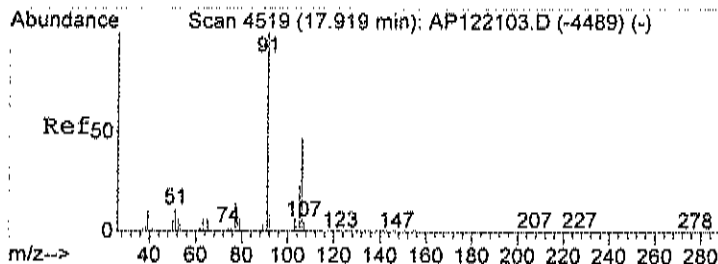
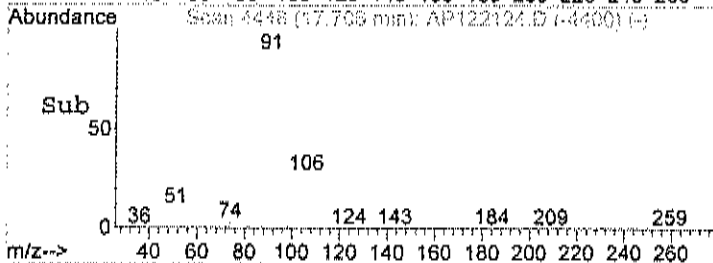
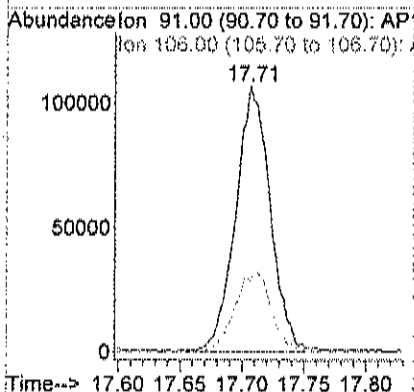
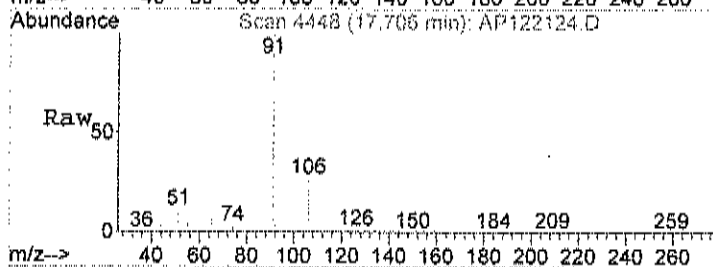
Ion	Ratio	Lower	Upper
164	100		
166	129.7	108.5	148.5





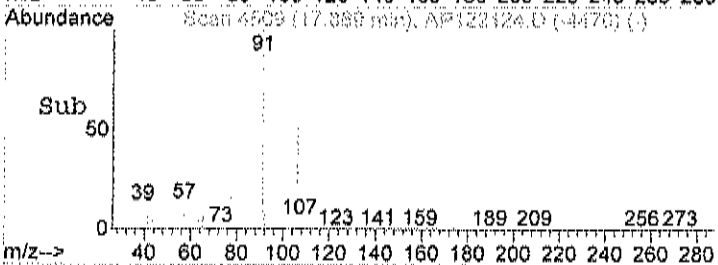
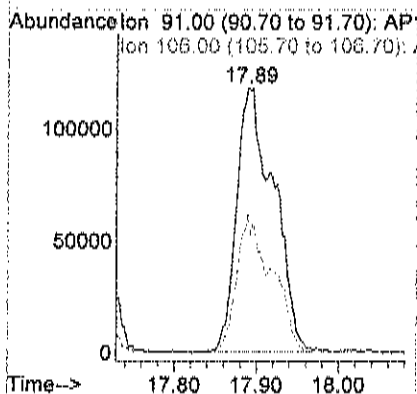
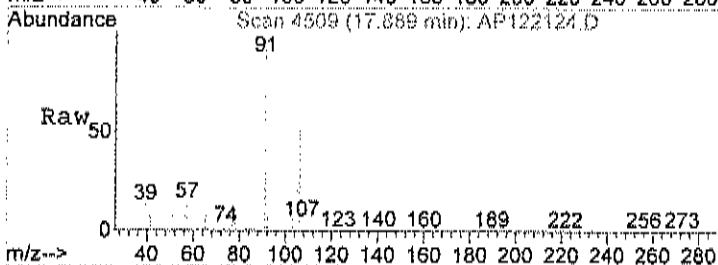
#58
Ethylbenzene
Concen: 0.61 ppb
RT: 17.71 min Scan# 4448
Delta R.T. -0.01 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

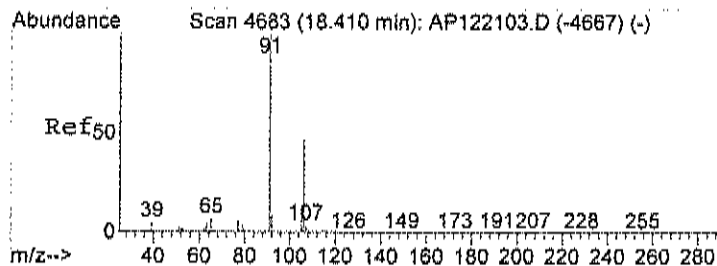
Tgt Ion: 91 Resp: 207319
Ion Ratio Lower Upper
91 100
106 32.4 11.4 51.4



#59
m&p-xylene
Concen: 1.30 ppb
RT: 17.89 min Scan# 4509
Delta R.T. -0.03 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

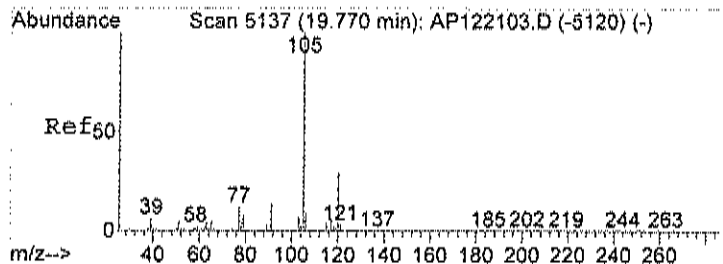
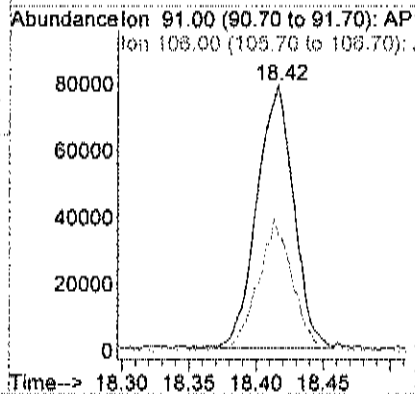
Tgt Ion: 91 Resp: 374108
Ion Ratio Lower Upper
91 100
106 49.8 28.3 68.3





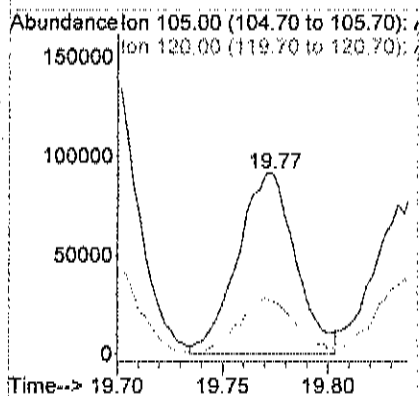
#63
o-xylene
Concen: 0.41 ppb
RT: 18.42 min Scan# 4685
Delta R.T. 0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

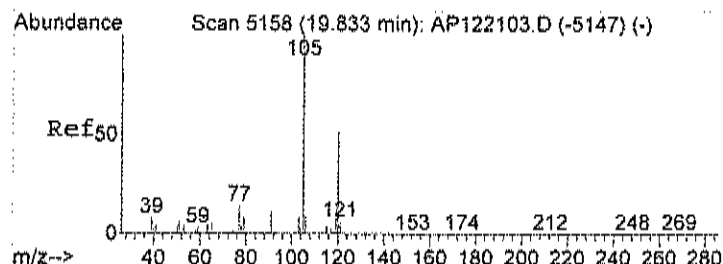
Tgt Ion: 91 Resp: 150900
Ion Ratio Lower Upper
91 100
106 47.4 26.6 66.6



#69
4-ethyltoluene
Concen: 0.40 ppb
RT: 19.77 min Scan# 5138
Delta R.T. 0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

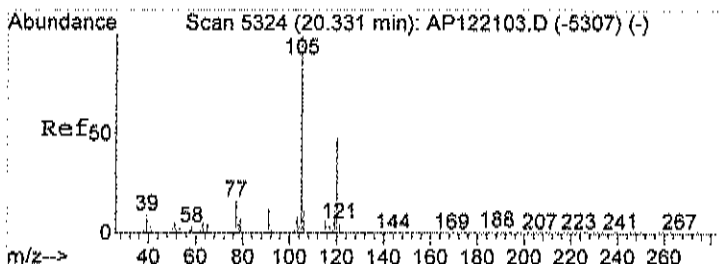
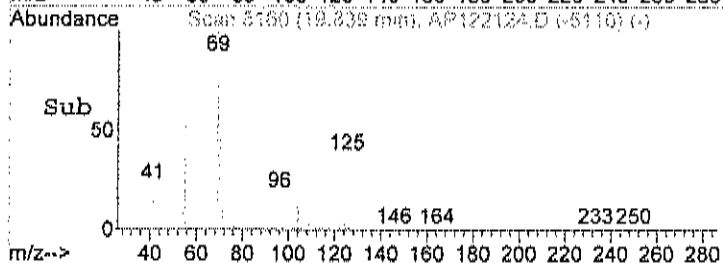
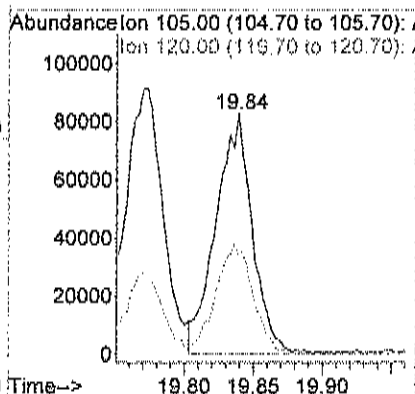
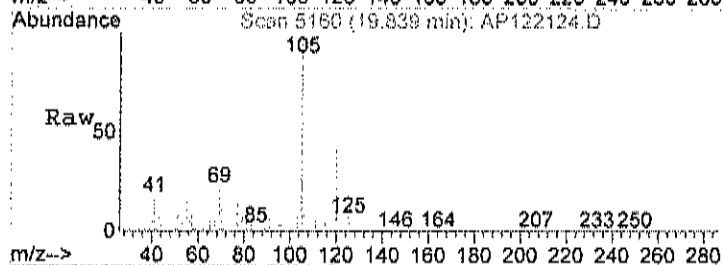
Tgt Ion: 105 Resp: 174256
Ion Ratio Lower Upper
105 100
120 30.9 10.2 50.2





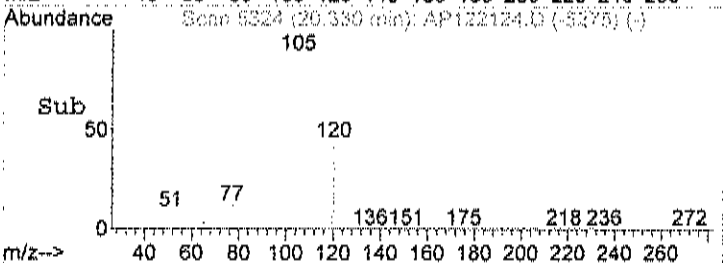
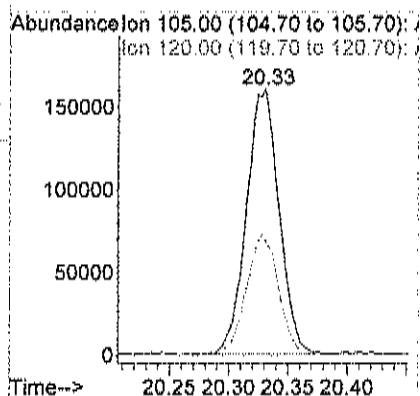
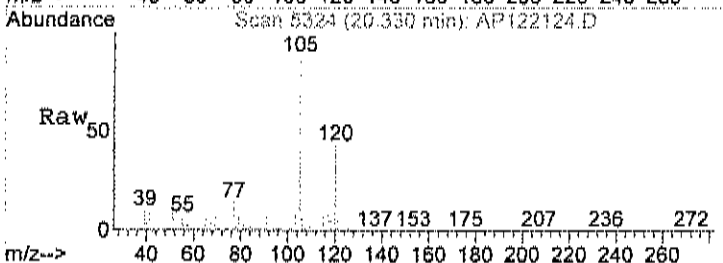
#70
1,3,5-trimethylbenzene
Concen: 0.39 ppb
RT: 19.84 min Scan# 5160
Delta R.T. -0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

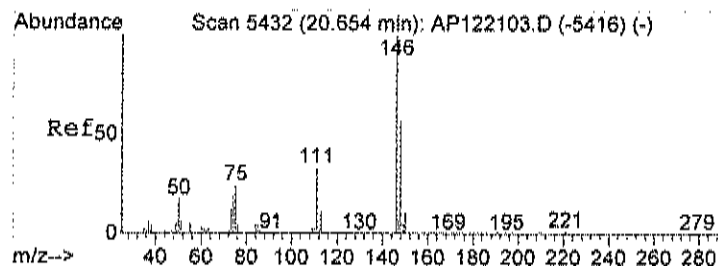
Tgt Ion:105 Resp: 150013
Ion Ratio Lower Upper
105 100
120 47.0 27.6 67.6



#71
1,2,4-trimethylbenzene
Concen: 1.03 ppb
RT: 20.33 min Scan# 5324
Delta R.T. -0.00 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

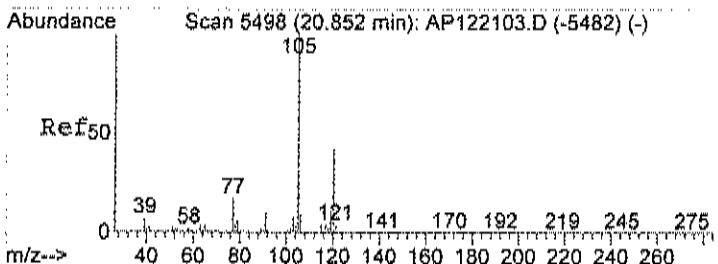
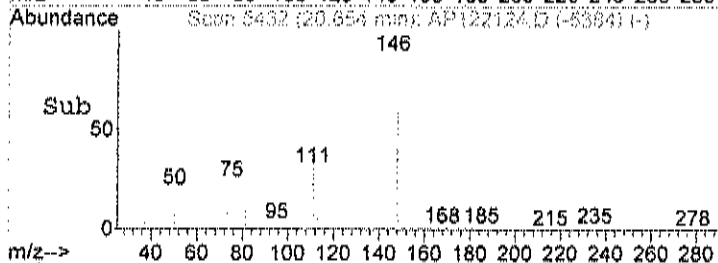
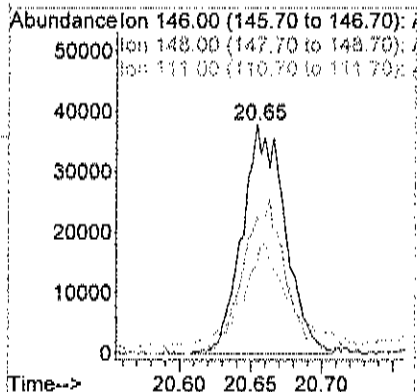
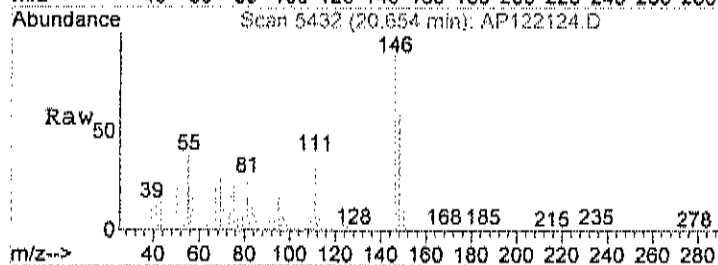
Tgt Ion:105 Resp: 308171
Ion Ratio Lower Upper
105 100
120 45.1 25.3 65.3





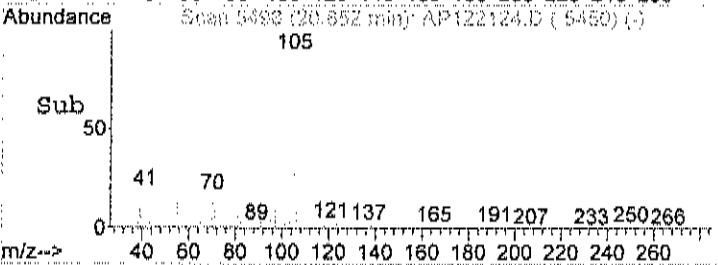
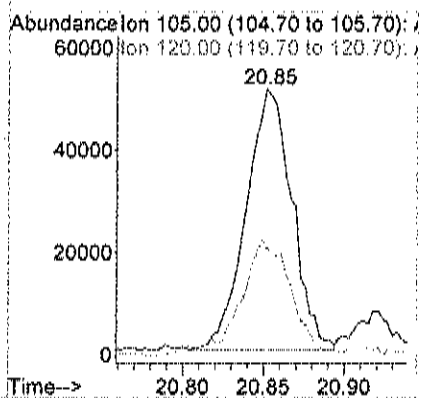
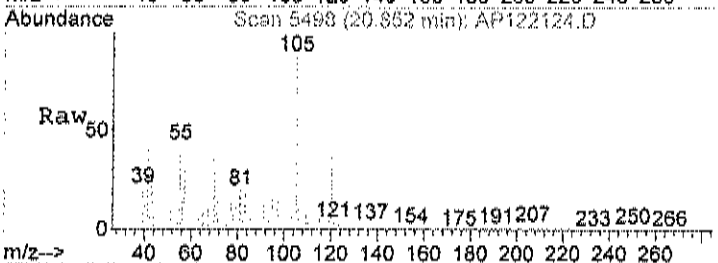
#72
1,3-dichlorobenzene
Concen: 0.28 ppb
RT: 20.65 min Scan# 5432
Delta R.T. -0.01 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

Tgt Ion	Ratio	Lower	Upper
146	100		
148	65.7	43.6	83.6
111	54.0	19.9	59.9



#75
1,2,3-trimethylbenzene
Concen: 0.29 ppb
RT: 20.85 min Scan# 5498
Delta R.T. -0.01 min
Lab File: AP122124.D
Acq: 22 Dec 2018 2:44 am

Tgt Ion	Ratio	Lower	Upper
105	100		
120	48.1	31.6	52.8



Data File : C:\HPCHEM\1\DATA\AP122227.D

Vial: 73

Acq On : 23 Dec 2018 2:08 am

Operator: RJP

Sample : C1812057-004A 10x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:34 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.42	128	34621	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.65	114	132732	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	118246	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	63929m	0.79	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	79.00%

Target Compounds

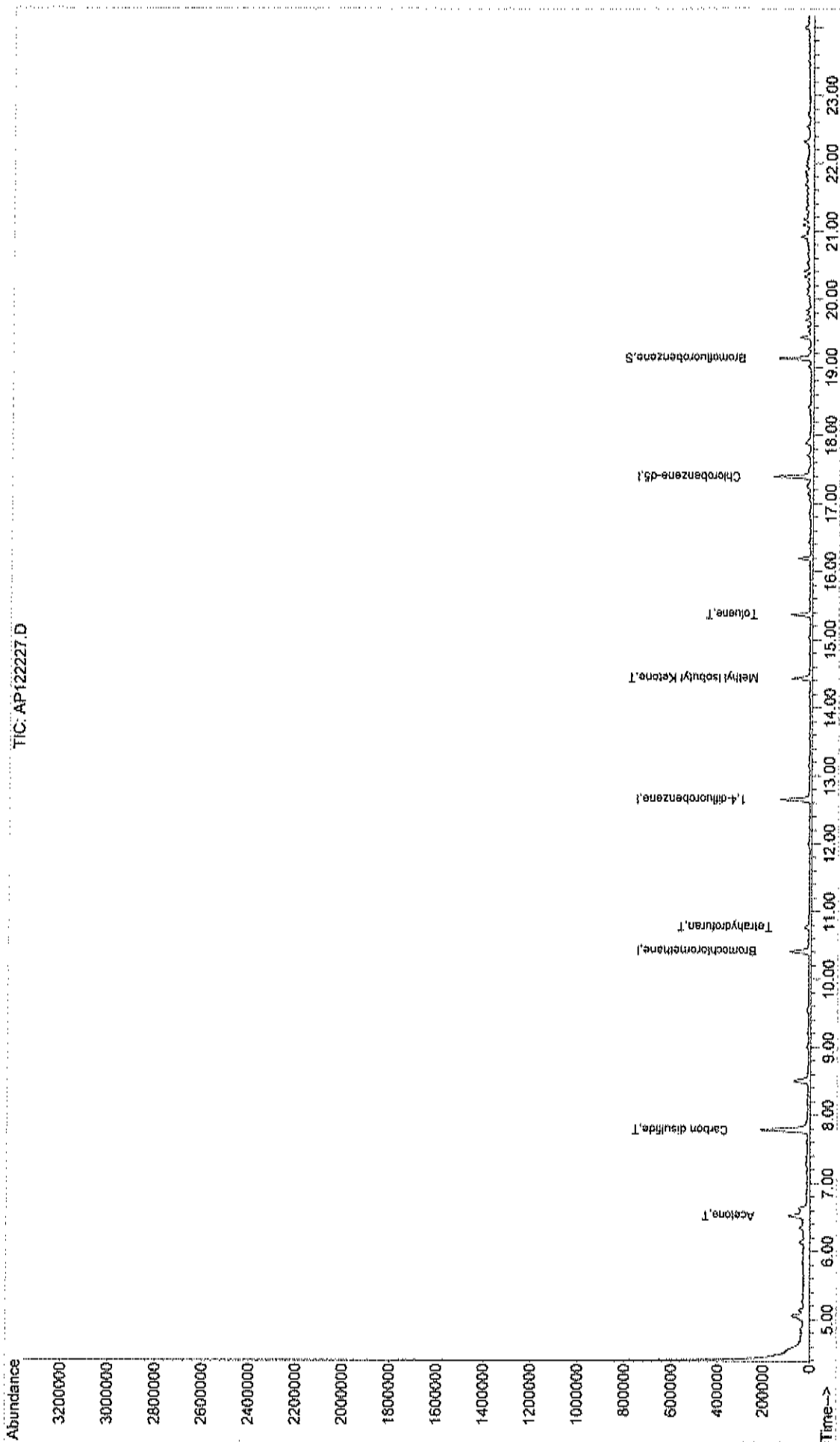
					Qvalue
15) Acetone	6.52	58	40541	1.91	ppb # 80
23) Carbon disulfide	7.78	76	491996	4.05	ppb 99
33) Tetrahydrofuran	10.77	42	16600m	0.36	ppb
51) Toluene	15.37	92	39590	0.43	ppb 95
52) Methyl Isobutyl Ketone	14.44	43	71067	0.70	ppb 91

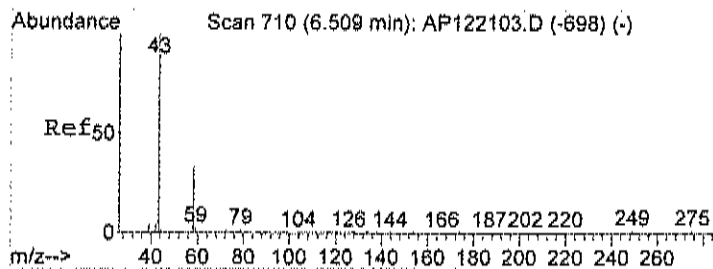
Data File : C:\HPCHEM\1\DATA\AP122227.D
Acq On : 23 Dec 2018 2:08 am
Sample : C1812057-004A 10x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 28 10:30 2018

Vial: 73
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

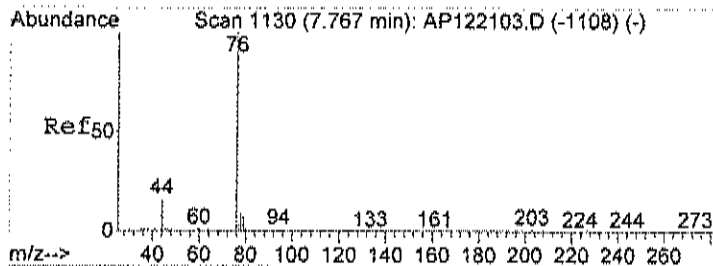
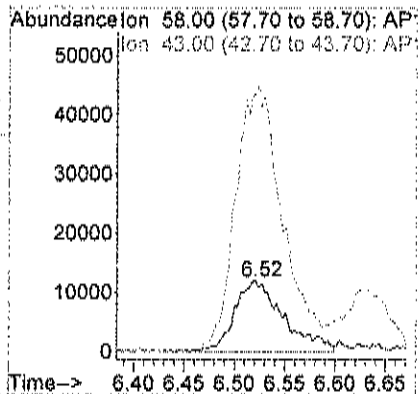
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integration)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





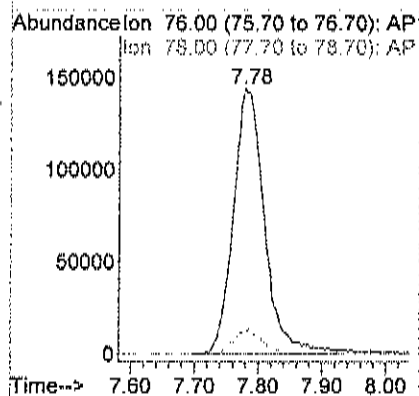
#15
Acetone
Concen: 1.91 ppb
RT: 6.52 min Scan# 714
Delta R.T. 0.01 min
Lab File: AP122227.D
Acq: 23 Dec 2018 2:08 am

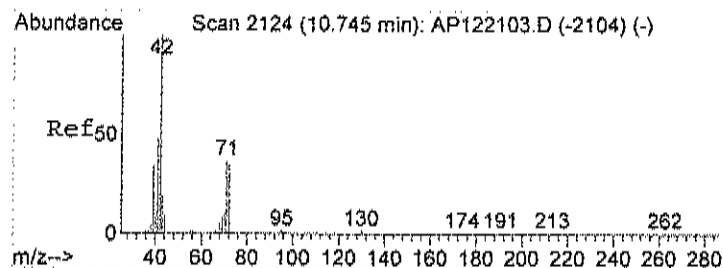
Tgt Ion: 58 Resp: 40541
Ion Ratio Lower Upper
58 100
43 369.0 298.2 358.2#



#23
Carbon disulfide
Concen: 4.05 ppb
RT: 7.78 min Scan# 1134
Delta R.T. 0.01 min
Lab File: AP122227.D
Acq: 23 Dec 2018 2:08 am

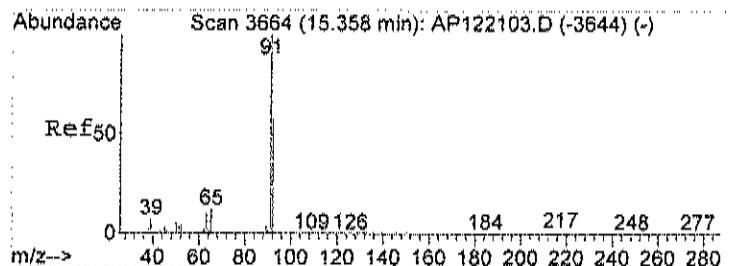
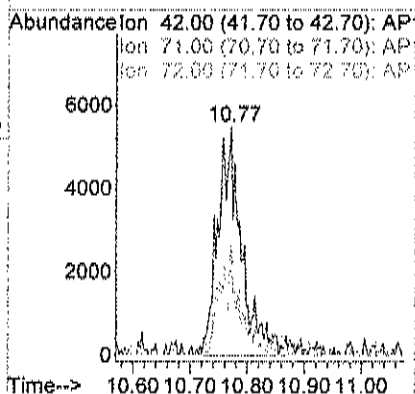
Tgt Ion: 76 Resp: 491996
Ion Ratio Lower Upper
76 100
78 9.0 0.0 29.2





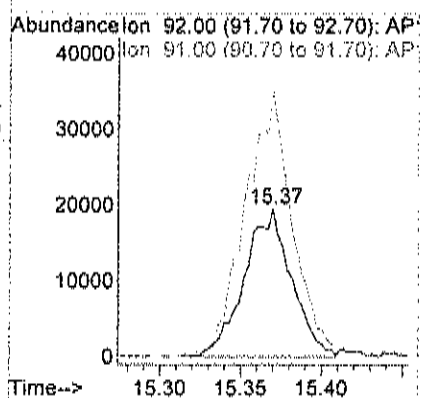
#33
Tetrahydrofuran
Concen: 0.36 ppb m
RT: 10.77 min Scan# 2133
Delta R.T. 0.02 min
Lab File: AP122227.D
Acq: 23 Dec 2018 2:08 am

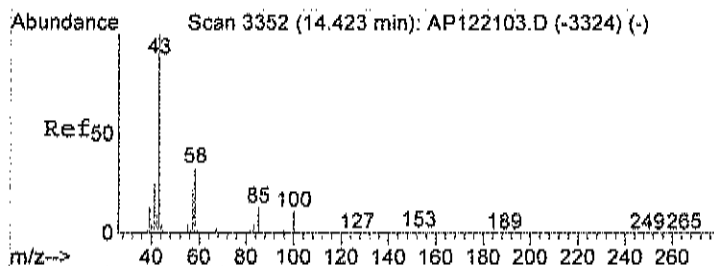
Tgt Ion	Ratio	Lower	Upper
42	100		
71	36.6	21.4	61.4
72	21.1	22.4	62.4#



#51
Toluene
Concen: 0.43 ppb
RT: 15.37 min Scan# 3668
Delta R.T. 0.01 min
Lab File: AP122227.D
Acq: 23 Dec 2018 2:08 am

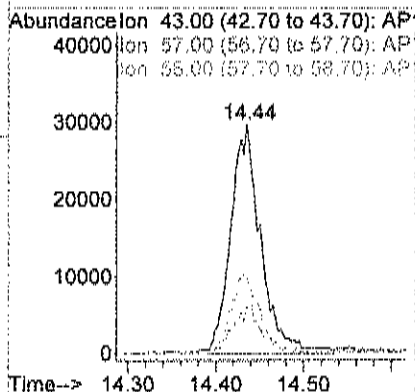
Tgt Ion	Ratio	Lower	Upper
92	100		
91	181.6	154.3	194.3





#52
Methyl Isobutyl Ketone
Concen: 0.70 ppb
RT: 14.44 min Scan# 3356
Delta R.T. 0.01 min
Lab File: AP122227.D
Acq: 23 Dec 2018 2:08 am

Tgt Ion	Ratio	Lower	Upper
43	100		
57	19.2	3.5	43.5
58	32.8	17.9	57.9



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122228.D

Vial: 74

Acq On : 23 Dec 2018 2:45 am

Operator: RJP

Sample : C1812057-004A 40x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:35 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	34807	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.64	114	136036	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	102074	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	49399m	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%

Target Compounds

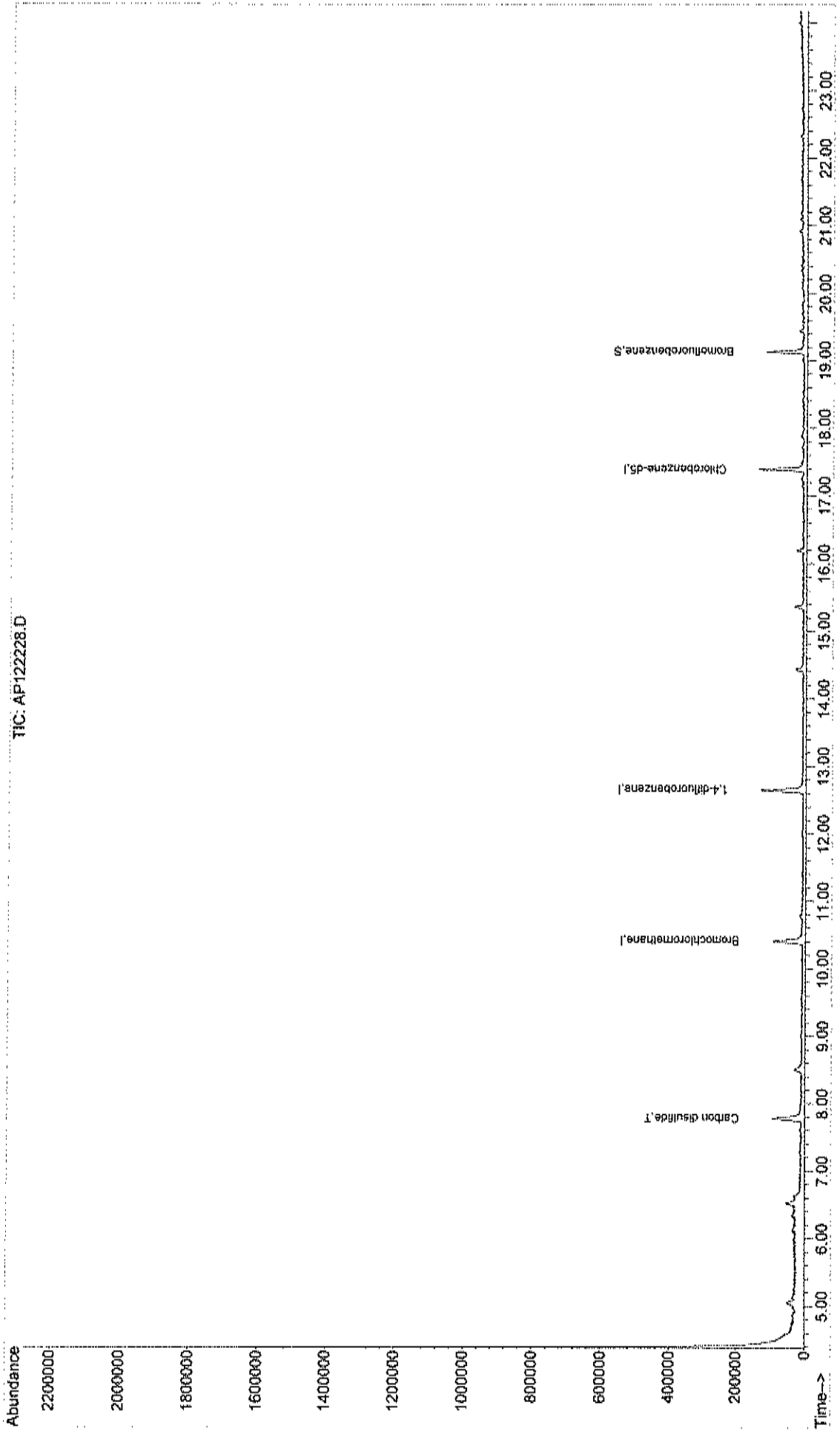
23) Carbon disulfide	7.78	76	189851	1.56	ppb	Qvalue 92
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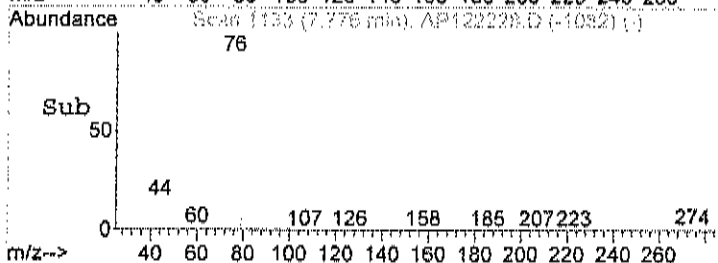
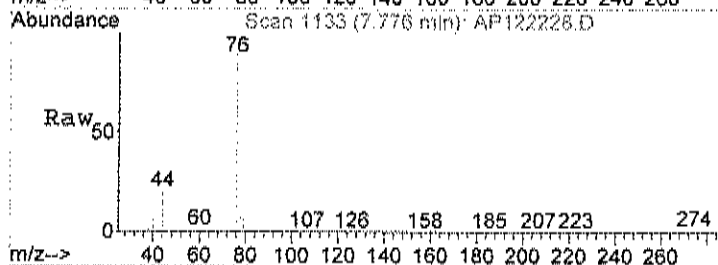
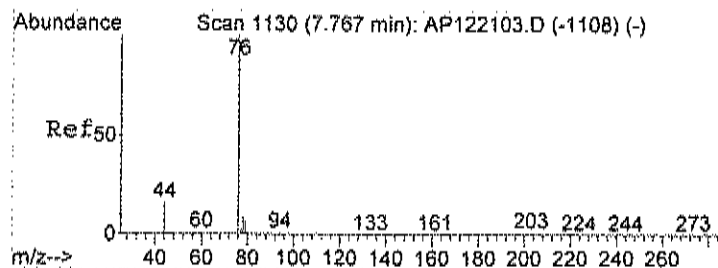
Data File : C:\HPCHEM\1\DATA\AP122228.D
 Acq On : 23 Dec 2018 2:45 am
 Sample : C1812057-004A 40x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 28 10:30 2018

Vial: 74
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

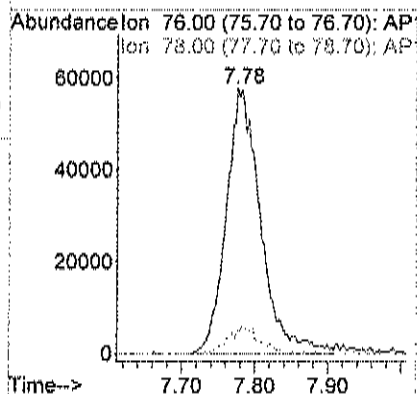
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





#23
Carbon disulfide
Concen: 1.56 ppb
RT: 7.78 min Scan# 1133
Delta R.T. 0.00 min
Lab File: AP122228.D
Acq: 23 Dec 2018 2:45 am

Tgt Ion: 76 Resp: 189851
Ion Ratio Lower Upper
76 100
78 6.4 0.0 29.2



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
1,4-Dichlorobenzene	0.11	0.15	J	ppbV	1	12/22/2018 3:25:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
2,2,4-trimethylpentane	0.10	0.15	J	ppbV	1	12/22/2018 3:25:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Acetone	8.1	3.0		ppbV	10	12/23/2018 3:22:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Benzene	0.36	0.15		ppbV	1	12/22/2018 3:25:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Carbon disulfide	8.2	1.5		ppbV	10	12/23/2018 3:22:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
cis-1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Cyclohexane	0.55	0.15		ppbV	1	12/22/2018 3:25:00 AM

Qualifiers:	** Quantitation Limit	- Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 11	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Freon 12	0.76	0.15		ppbV	1	12/22/2018 3:25:00 AM
Heptane	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Hexane	0.61	0.15		ppbV	1	12/22/2018 3:25:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:25:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Methylene chloride	0.21	0.15		ppbV	1	12/22/2018 3:25:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Toluene	0.36	0.15		ppbV	1	12/22/2018 3:25:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:25:00 AM
Surr: Bromofluorobenzene	129	70-130		%REC	1	12/22/2018 3:25:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:25:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:25:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:25:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:25:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:25:00 AM
1,4-Dichlorobenzene	0.66	0.90	J	ug/m3	1	12/22/2018 3:25:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
2,2,4-trimethylpentane	0.47	0.70	J	ug/m3	1	12/22/2018 3:25:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 3:25:00 AM
Acetone	19	7.1		ug/m3	10	12/23/2018 3:22:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:25:00 AM
Benzene	1.1	0.48		ug/m3	1	12/22/2018 3:25:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:25:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:25:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:25:00 AM
Carbon disulfide	26	4.7		ug/m3	10	12/23/2018 3:22:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:25:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:25:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 3:25:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:25:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:25:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:25:00 AM
Cyclohexane	1.9	0.52		ug/m3	1	12/22/2018 3:25:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:25:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:25:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 3:25:00 AM
Freon 11	< 0.84	0.84		ug/m3	1	12/22/2018 3:25:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:25:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-005A

Client Sample ID: SVW-4
Tag Number: 475,1170
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	3.8	0.74		ug/m3	1	12/22/2018 3:25:00 AM
Heptane	< 0.61	0.61		ug/m3	1	12/22/2018 3:25:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:25:00 AM
Hexane	2.1	0.53		ug/m3	1	12/22/2018 3:25:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:25:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 3:25:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:25:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:25:00 AM
Methylene chloride	0.73	0.52		ug/m3	1	12/22/2018 3:25:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 3:25:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:25:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 3:25:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 3:25:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 3:25:00 AM
Toluene	1.4	0.57		ug/m3	1	12/22/2018 3:25:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:25:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:25:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:25:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 3:25:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

Data File : C:\HPCHEM\1\DATA\AP122125.D

Vial: 9

Acq On : 22 Dec 2018 3:25 am

Operator: RJP

Sample : C1812057-005A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:41 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	48736	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	198497	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	176976	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	155657	1.29	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	129.00%

Target Compounds

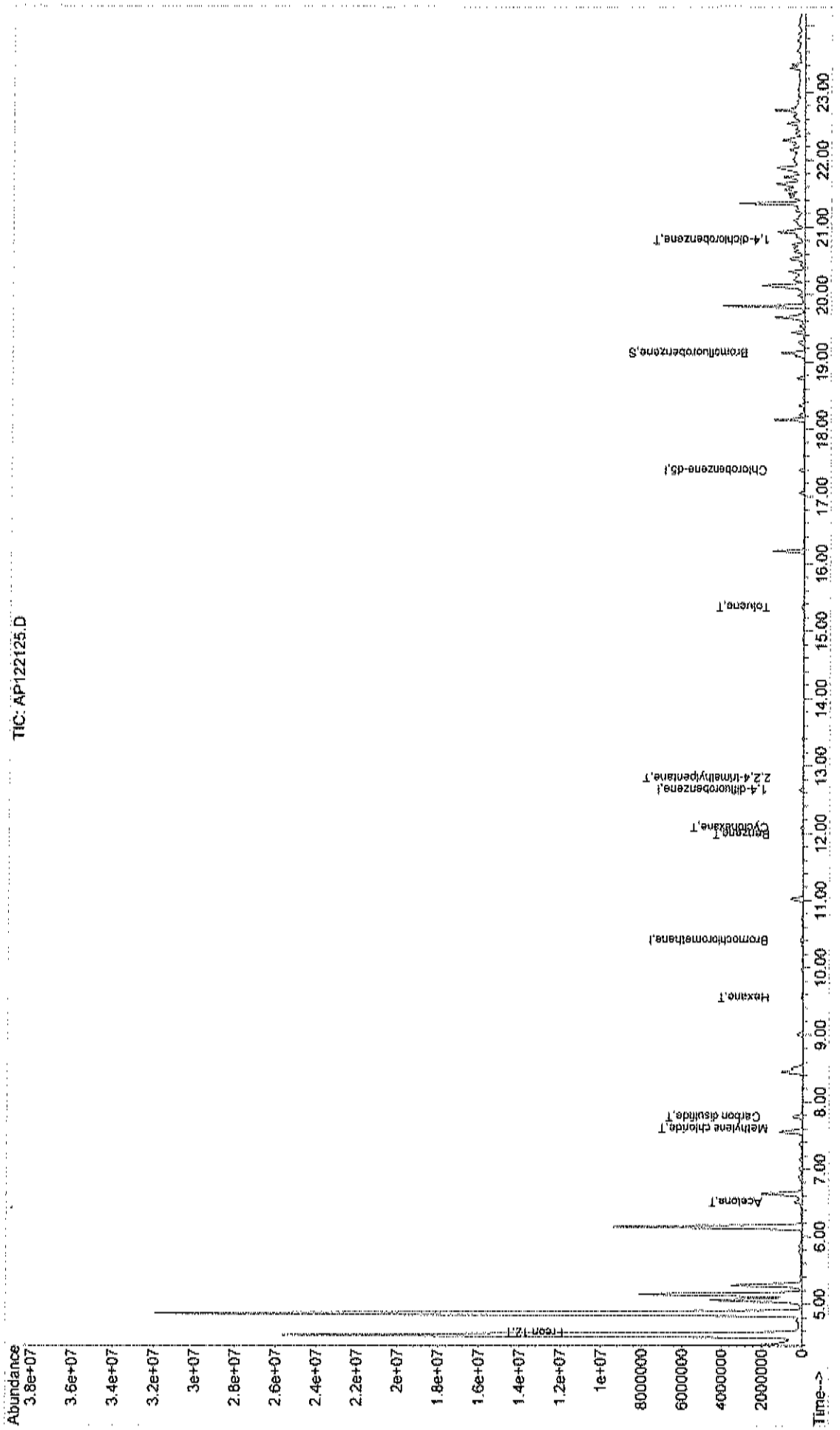
						Qvalue
3) Freon 12	4.58	85	213908	0.76	ppb	100
15) Acetone	6.51	58	209169	7.00	ppb	98
21) Methylene chloride	7.61	84	16149	0.21	ppb	90
23) Carbon disulfide	7.78	76	1018058	5.96	ppb	99
30) Hexane	9.55	57	58320	0.61	ppb	79
37) Cyclohexane	12.08	56	51994	0.55	ppb	90
39) Benzene	11.98	78	82389	0.36	ppb	97
42) 2,2,4-trimethylpentane	12.82	57	32992	0.10	ppb	# 71
51) Toluene	15.36	92	49100	0.36	ppb	93
74) 1,4-dichlorobenzene	20.80	146	25778	0.11	ppb	# 84

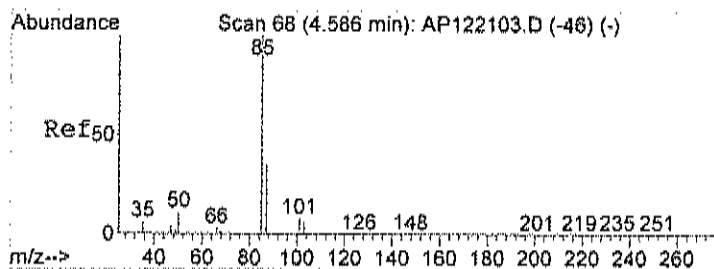
Data File : C:\HPCHEM\1\DATA\AP122125.D
Acq On : 22 Dec 2018 3:25 am
Sample : C1812057-005A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:19 2018

Vial: 9
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

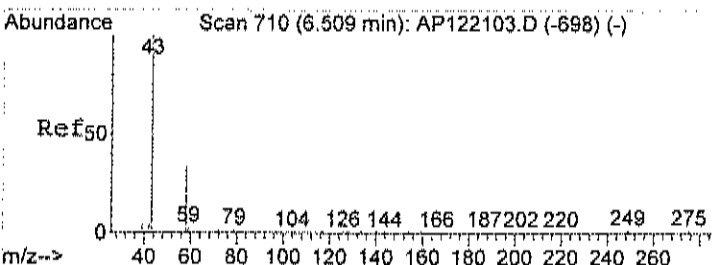
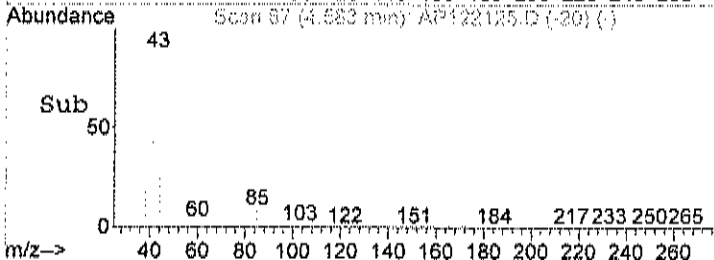
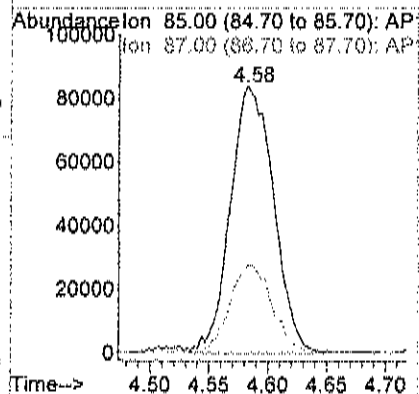
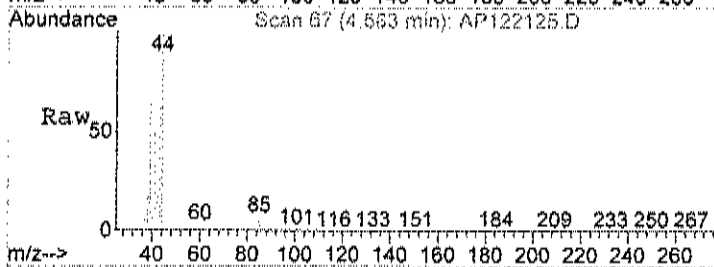
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





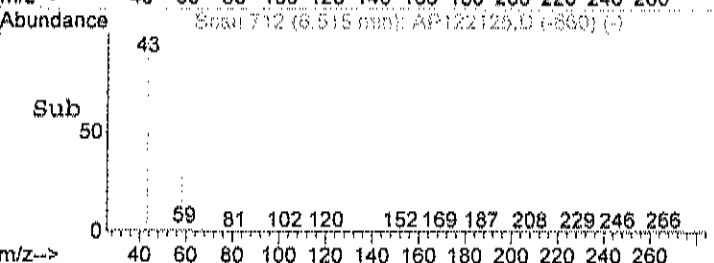
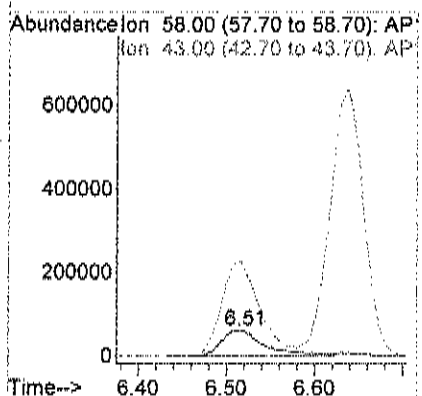
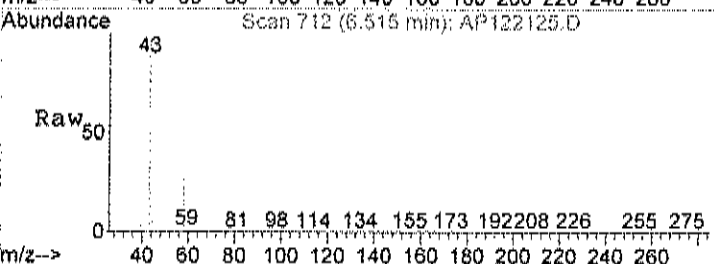
#3
 Freon 12
 Concen: 0.76 ppb
 RT: 4.58 min Scan# 67
 Delta R.T. -0.01 min
 Lab File: AP122125.D
 Acq: 22 Dec 2018 3:25 am

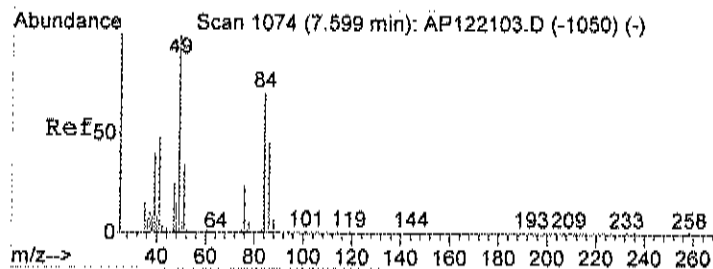
Tgt Ion: 85 Resp: 213908
 Ion Ratio Lower Upper
 85 100
 87 32.4 12.4 52.4



#15
 Acetone
 Concen: 7.00 ppb
 RT: 6.51 min Scan# 712
 Delta R.T. 0.01 min
 Lab File: AP122125.D
 Acq: 22 Dec 2018 3:25 am

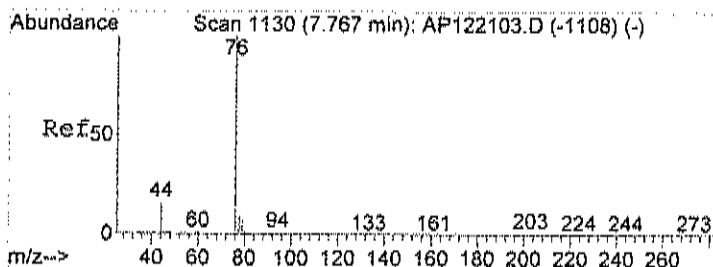
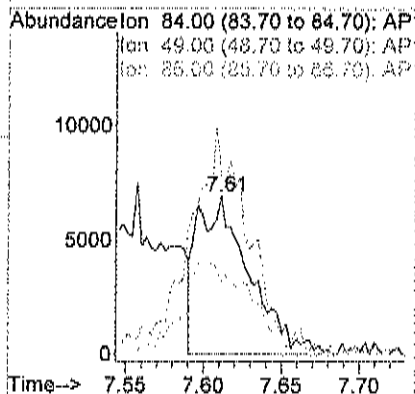
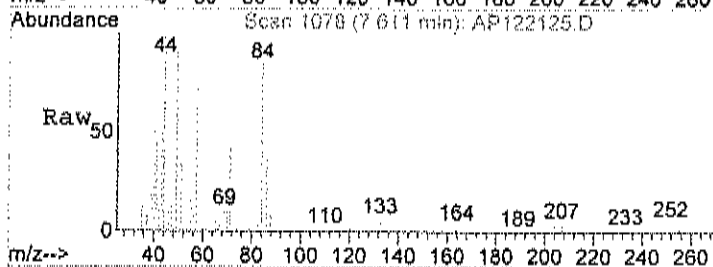
Tgt Ion: 58 Resp: 209169
 Ion Ratio Lower Upper
 58 100
 43 323.6 298.2 358.2





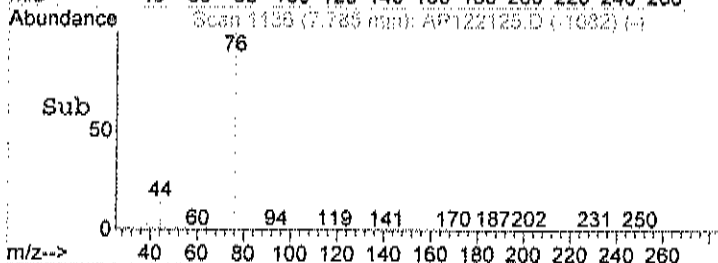
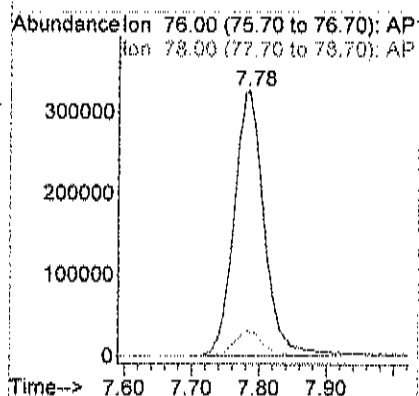
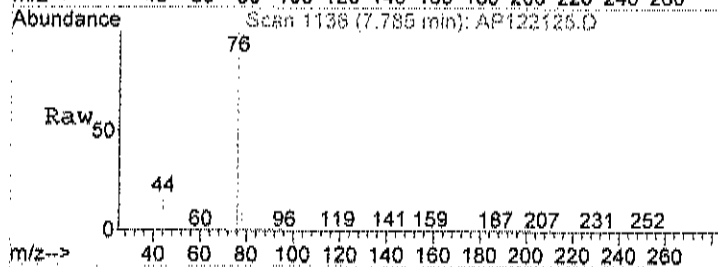
#21
Methylene chloride
Concen: 0.21 ppb
RT: 7.61 min Scan# 1078
Delta R.T. 0.01 min
Lab File: AP122125.D
Acq: 22 Dec 2018 3:25 am

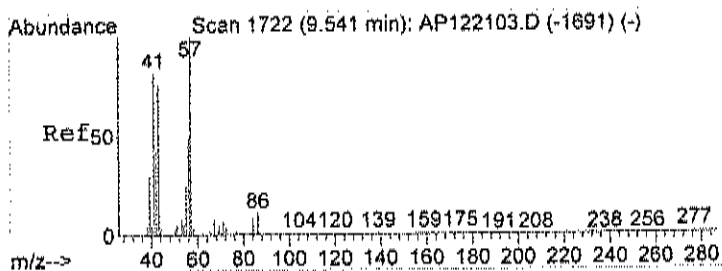
Tgt Ion: 84 Resp: 16149
Ion Ratio Lower Upper
84 100
49 153.4 121.5 161.5
86 73.6 46.0 86.0



#23
Carbon disulfide
Concen: 5.96 ppb
RT: 7.78 min Scan# 1136
Delta R.T. 0.01 min
Lab File: AP122125.D
Acq: 22 Dec 2018 3:25 am

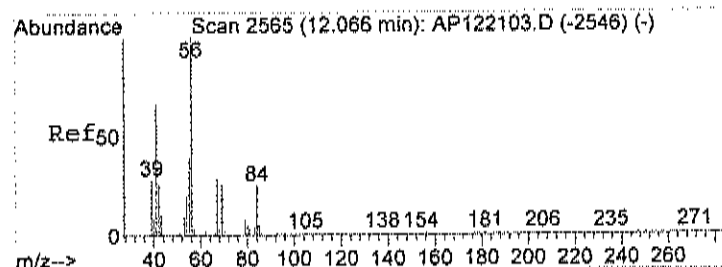
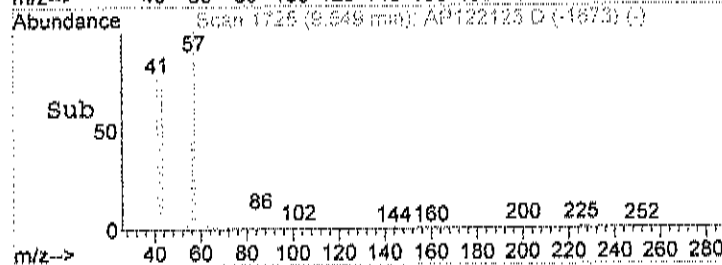
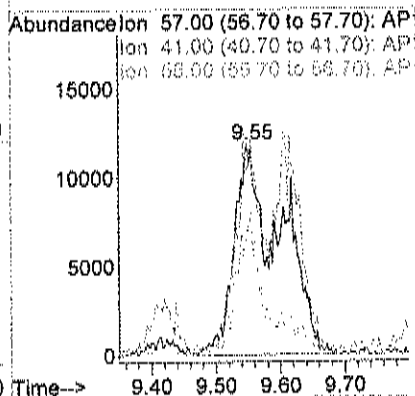
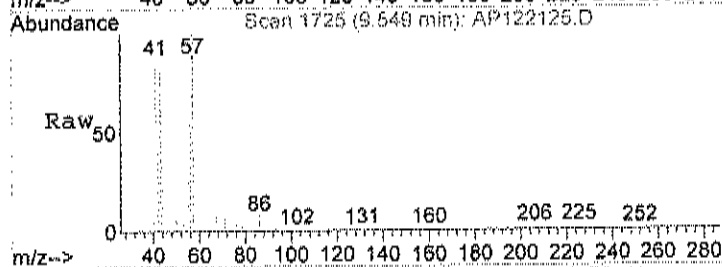
Tgt Ion: 76 Resp: 1018058
Ion Ratio Lower Upper
76 100
78 9.5 0.0 29.2





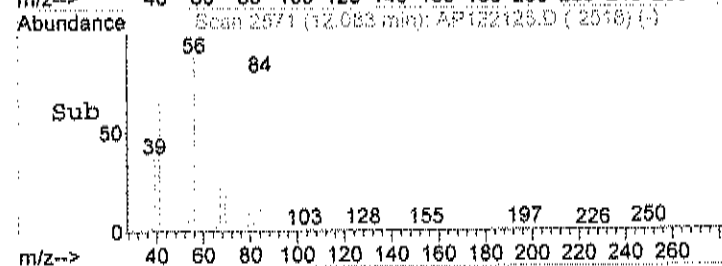
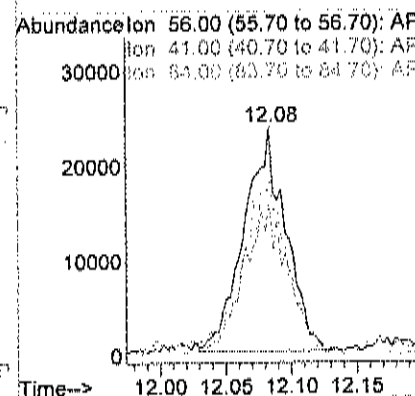
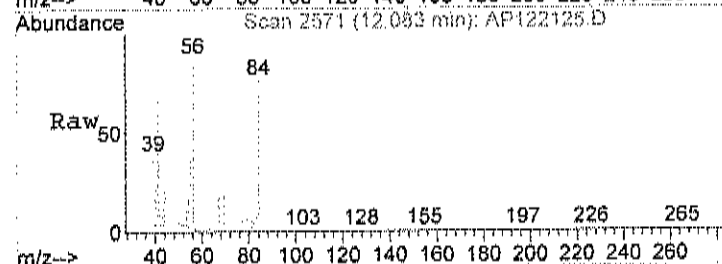
#30
Hexane
Concen: 0.61 ppb
RT: 9.55 min Scan# 1725
Delta R.T. 0.01 min
Lab File: AP122125.D
Acq: 22 Dec 2018 3:25 am

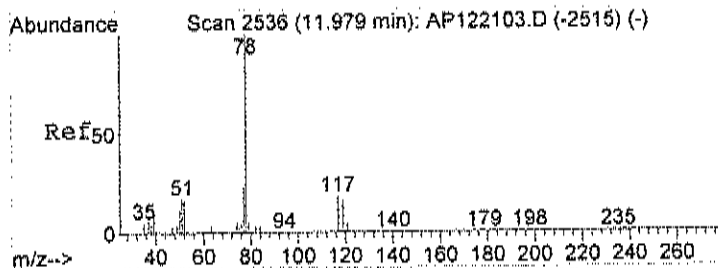
Tgt Ion:	57	Resp:	58320
Ion	Ratio	Lower	Upper
57	100		
41	54.6	49.7	89.7
56	31.6	27.9	67.9



#37
Cyclohexane
Concen: 0.55 ppb
RT: 12.08 min Scan# 2571
Delta R.T. 0.01 min
Lab File: AP122125.D
Acq: 22 Dec 2018 3:25 am

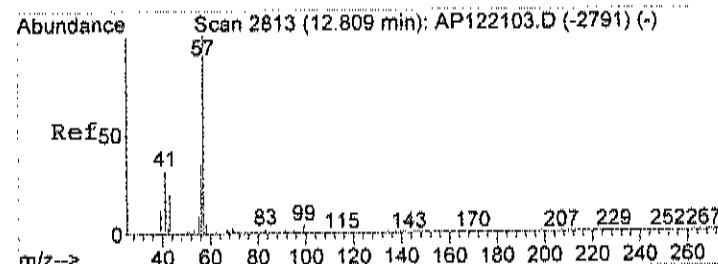
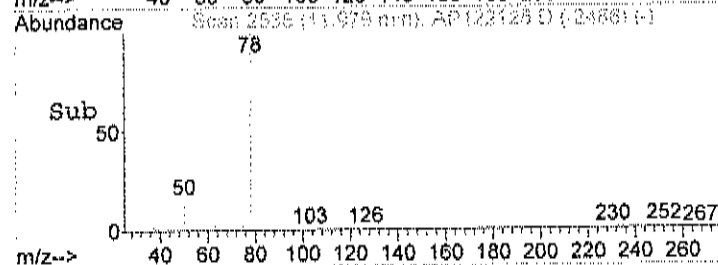
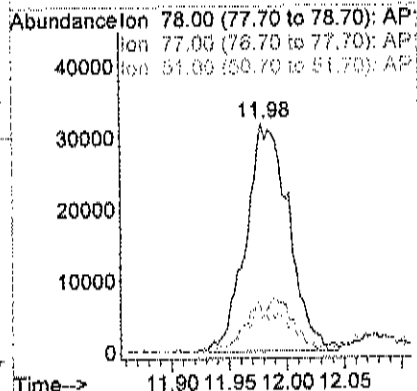
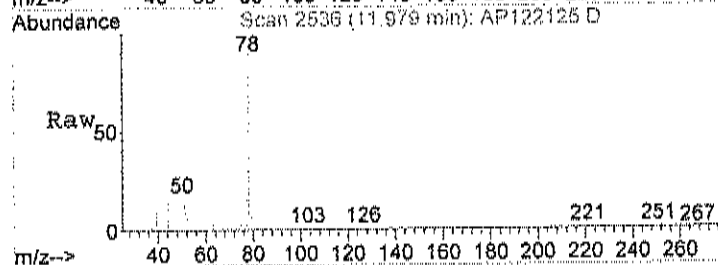
Tgt Ion:	56	Resp:	51994
Ion	Ratio	Lower	Upper
56	100		
41	68.4	36.3	76.3
84	81.1	56.0	96.0





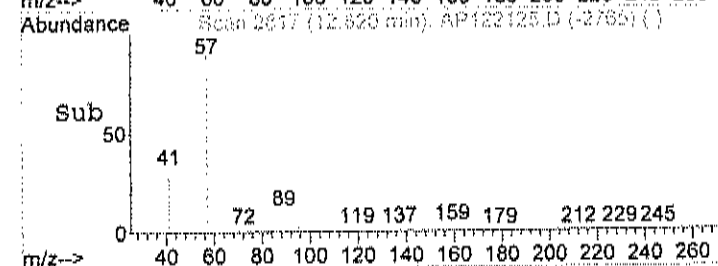
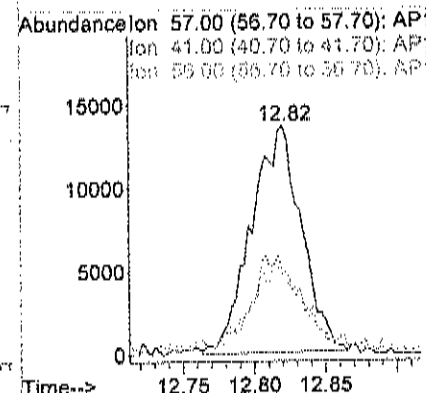
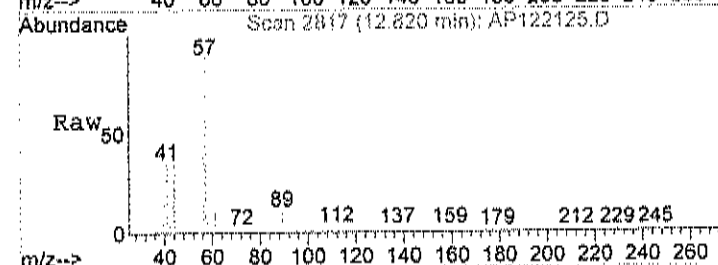
#39
Benzene
Concen: 0.36 ppb
RT: 11.98 min Scan# 2536
Delta R.T. -0.00 min
Lab File: AP122125.D
Acq: 22 Dec 2018 3:25 am

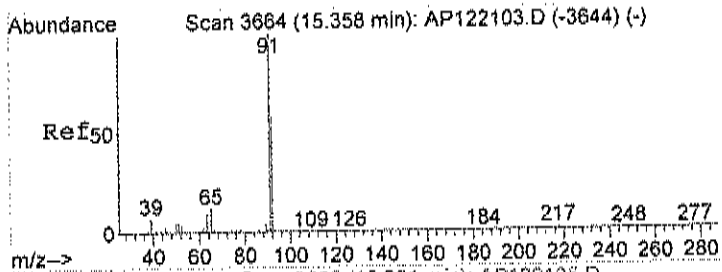
Tgt Ion: 78 Resp: 82389
Ion Ratio Lower Upper
78 100
77 24.0 3.1 43.1
51 18.3 0.0 36.7



#42
2,2,4-trimethylpentane
Concen: 0.10 ppb
RT: 12.82 min Scan# 2817
Delta R.T. 0.01 min
Lab File: AP122125.D
Acq: 22 Dec 2018 3:25 am

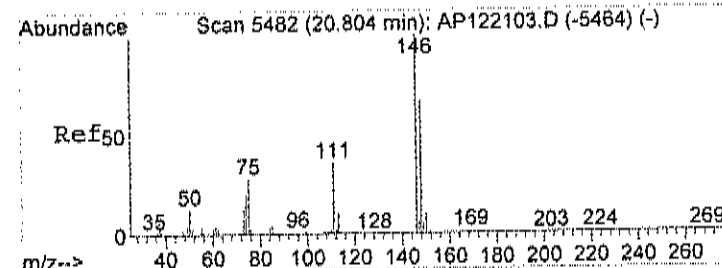
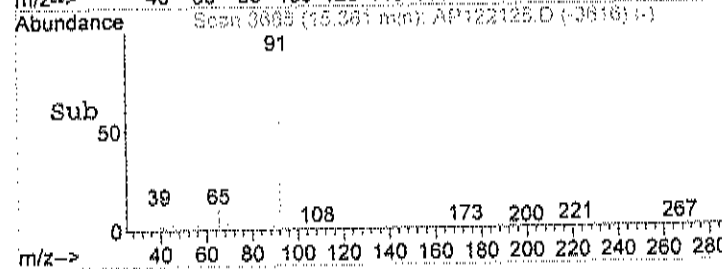
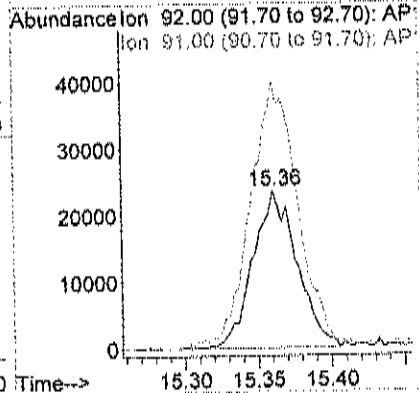
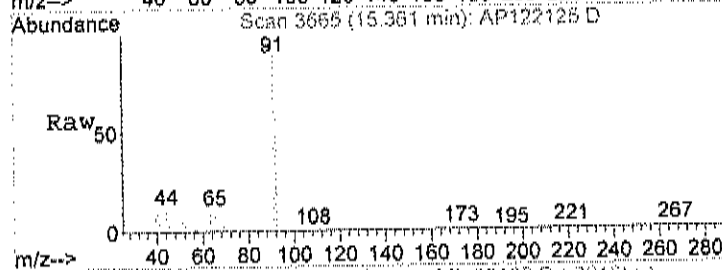
Tgt Ion: 57 Resp: 32992
Ion Ratio Lower Upper
57 100
41 0.0 6.9 46.9#
56 26.3 11.5 51.5





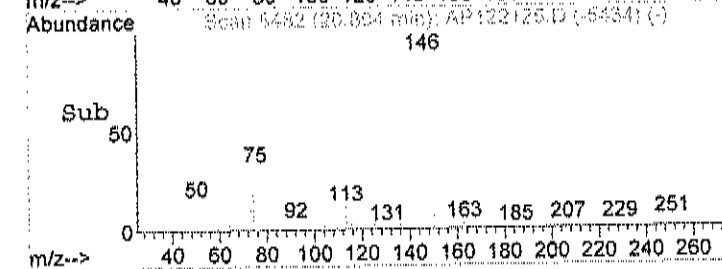
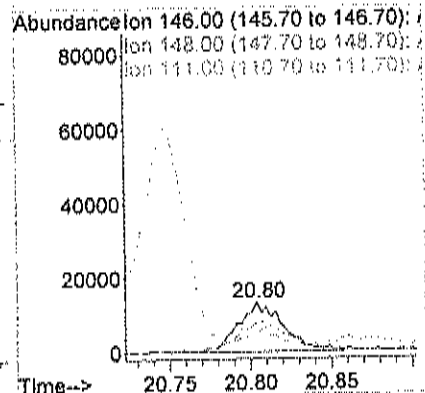
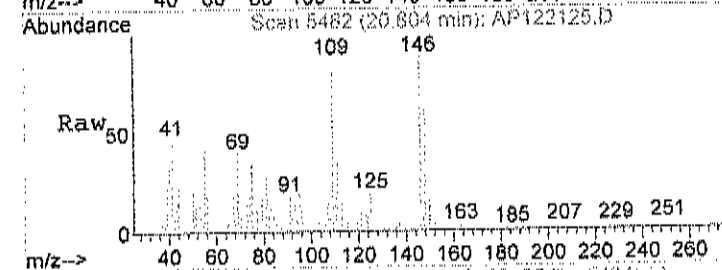
#51
Toluene
Concen: 0.36 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122125.D
Acq: 22 Dec 2018 3:25 am

Tgt Ion: 92 Resp: 49100
Ion Ratio Lower Upper
92 100
91 183.7 154.3 194.3



#74
1,4-dichlorobenzene
Concen: 0.11 ppb
RT: 20.80 min Scan# 5482
Delta R.T. -0.01 min
Lab File: AP122125.D
Acq: 22 Dec 2018 3:25 am

Tgt Ion: 146 Resp: 25778
Ion Ratio Lower Upper
146 100
148 68.4 44.4 84.4
111 19.6 19.9 59.9#



Data File : C:\HPCHEM\1\DATA\AP122229.D

Vial: 75

Acq On : 23 Dec 2018 3:22 am

Operator: RJP

Sample : C1812057-005A 10x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:36 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	34379	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	138470	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	97883	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	59299	0.89	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	89.00%

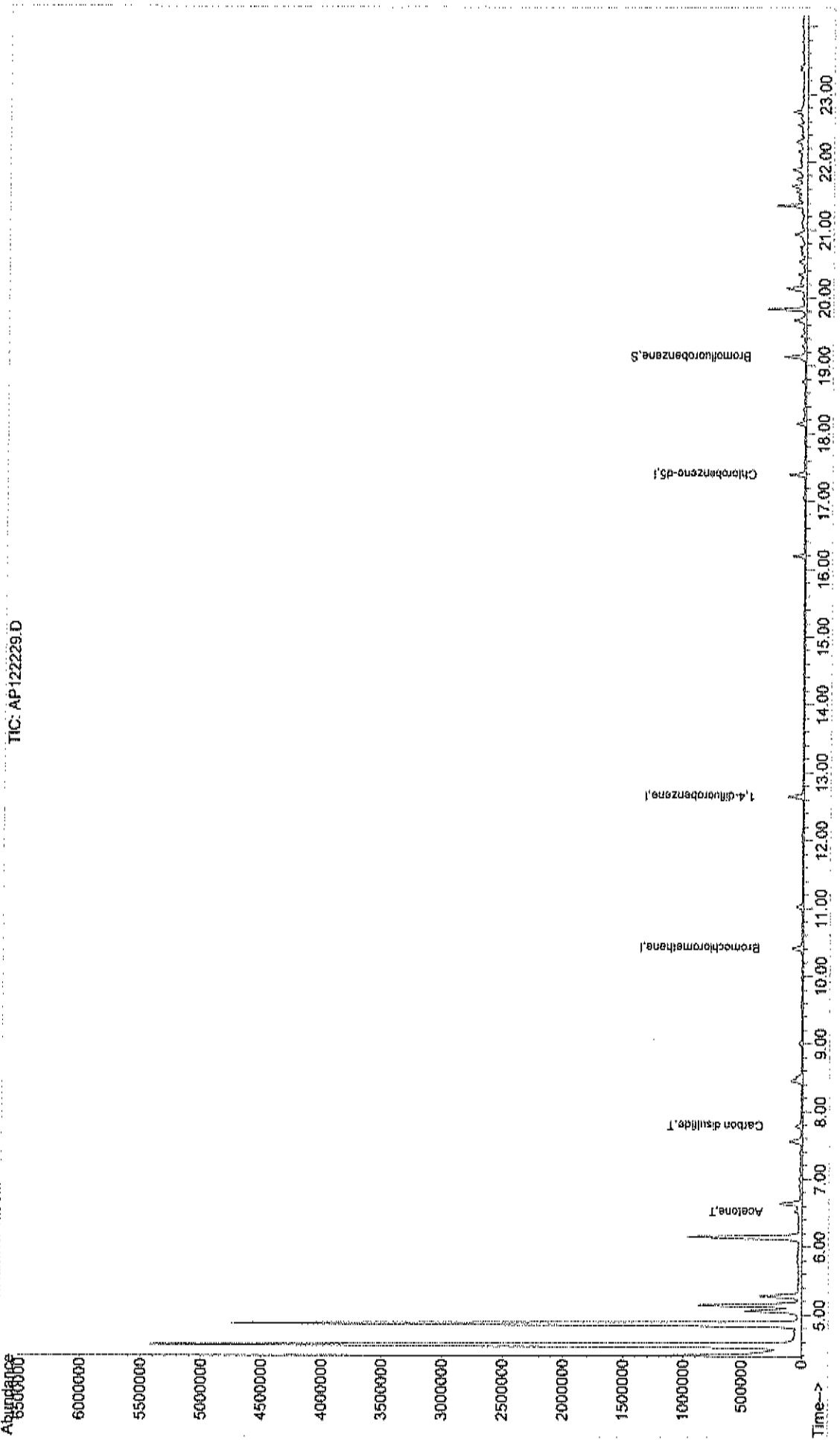
Target Compounds

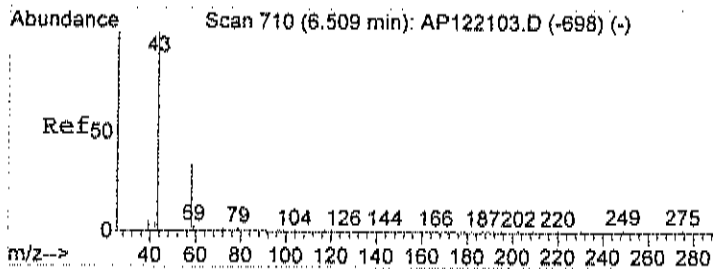
15) Acetone	6.51	58	17017	0.81	ppb	Qvalue # 72
23) Carbon disulfide	7.79	76	99060	0.82	ppb	99

Data File : C:\HPCHEM\1\DATA\AP122229.D
Acq On : 23 Dec 2018 3:22 am
Sample : C1812057-005A 10x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 28 10:31 2018
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

Vial: 75
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

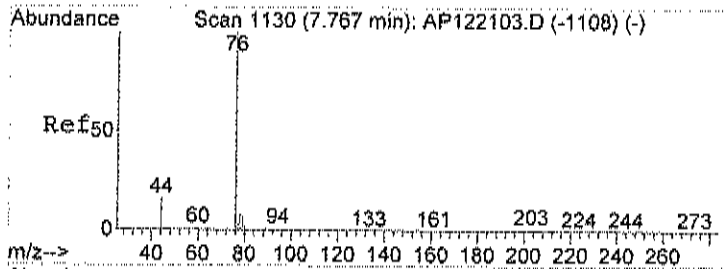
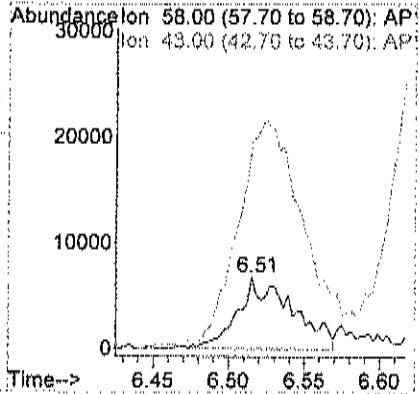
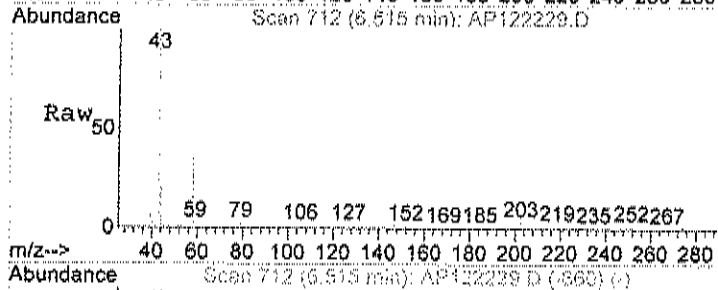
Quant Results File: AD10_1UG.RES





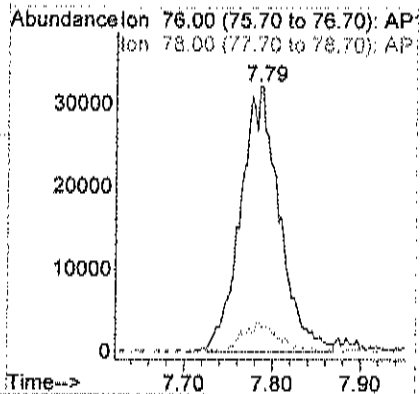
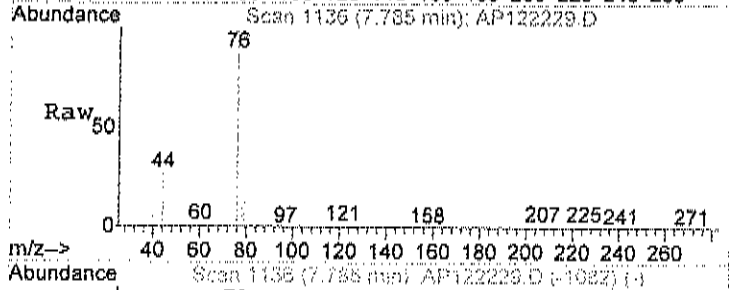
#15
Acetone
Concen: 0.81 ppb
RT: 6.51 min Scan# 712
Delta R.T. 0.01 min
Lab File: AP122229.D
Acq: 23 Dec 2018 3:22 am

Tgt Ion: 58 Resp: 17017
Ion Ratio Lower Upper
58 100
43 385.6 298.2 358.2#



#23
Carbon disulfide
Concen: 0.82 ppb
RT: 7.79 min Scan# 1136
Delta R.T. 0.01 min
Lab File: AP122229.D
Acq: 23 Dec 2018 3:22 am

Tgt Ion: 76 Resp: 99060
Ion Ratio Lower Upper
76 100
78 9.6 0.0 29.2



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-4			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 4:04:00 AM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Acetone	7.3	1.5		ppbV	5	12/23/2018 4:36:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Benzene	0.16	0.15		ppbV	1	12/22/2018 4:04:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Carbon disulfide	2.5	0.75		ppbV	5	12/23/2018 4:36:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Chloromethane	0.23	0.15		ppbV	1	12/22/2018 4:04:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Cyclohexane	0.11	0.15	J	ppbV	1	12/22/2018 4:04:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
 Lab Order: C1812057
 Project: IKEA-RED HOOK
 Lab ID: C1812057-006A

Client Sample ID: SVW-5
 Tag Number: 86,180
 Collection Date: 12/14/2018
 Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 11	0.32	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Freon 12	0.58	0.15		ppbV	1	12/22/2018 4:04:00 AM
Heptane	0.14	0.15	J	ppbV	1	12/22/2018 4:04:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Hexane	0.18	0.15		ppbV	1	12/22/2018 4:04:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
m&p-Xylene	0.11	0.30	J	ppbV	1	12/22/2018 4:04:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl Ethyl Ketone	0.54	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:04:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Methylene chloride	0.14	0.15	J	ppbV	1	12/22/2018 4:04:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Toluene	0.53	0.15		ppbV	1	12/22/2018 4:04:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:04:00 AM
Surr. Bromofluorobenzene	78.0	70-130		%REC	1	12/22/2018 4:04:00 AM

Qualifiers: ** Quantitation Limit . Results reported are not blank corrected
 B Analyte detected in the associated Method Blank E Estimated Value above quantitation range
 H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit
 JN Non-routine analyte, Quantitation estimated. ND Not Detected at the Limit of Detection
 S Spike Recovery outside accepted recovery limits

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Centek Laboratories, LLC

Date: 02-Jun-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:04:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:04:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:04:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:04:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 4:04:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 4:04:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:04:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 4:04:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 4:04:00 AM
Acetone	17	3.6		ug/m3	5	12/23/2018 4:36:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 4:04:00 AM
Benzene	0.51	0.48		ug/m3	1	12/22/2018 4:04:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 4:04:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 4:04:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 4:04:00 AM
Carbon disulfide	7.8	2.3		ug/m3	5	12/23/2018 4:36:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 4:04:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 4:04:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 4:04:00 AM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 4:04:00 AM
Chloromethane	0.47	0.31		ug/m3	1	12/22/2018 4:04:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:04:00 AM
Cyclohexane	0.38	0.52	J	ug/m3	1	12/22/2018 4:04:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 4:04:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 4:04:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 4:04:00 AM
Freon 11	1.8	0.84		ug/m3	1	12/22/2018 4:04:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 4:04:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM

Qualifiers:	** Quantitation Limit	- Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-006A

Client Sample ID: SVW-5
Tag Number: 86,180
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.9	0.74		ug/m3	1	12/22/2018 4:04:00 AM
Heptane	0.57	0.61	J	ug/m3	1	12/22/2018 4:04:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 4:04:00 AM
Hexane	0.63	0.53		ug/m3	1	12/22/2018 4:04:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 4:04:00 AM
m&p-Xylene	0.48	1.3	J	ug/m3	1	12/22/2018 4:04:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
Methyl Ethyl Ketone	1.6	0.88		ug/m3	1	12/22/2018 4:04:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:04:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 4:04:00 AM
Methylene chloride	0.49	0.52	J	ug/m3	1	12/22/2018 4:04:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 4:04:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 4:04:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 4:04:00 AM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 4:04:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 4:04:00 AM
Toluene	2.0	0.57		ug/m3	1	12/22/2018 4:04:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:04:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:04:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 4:04:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 4:04:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Page 12 of 38

Data File : C:\HPCHEM\1\DATA\AP122126.D

Vial: 10

Acq On : 22 Dec 2018 4:04 am

Operator: RJP

Sample : C1812057-006A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:42 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	46077	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	190496	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	169540	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	90278	0.78	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	78.00%

Target Compounds

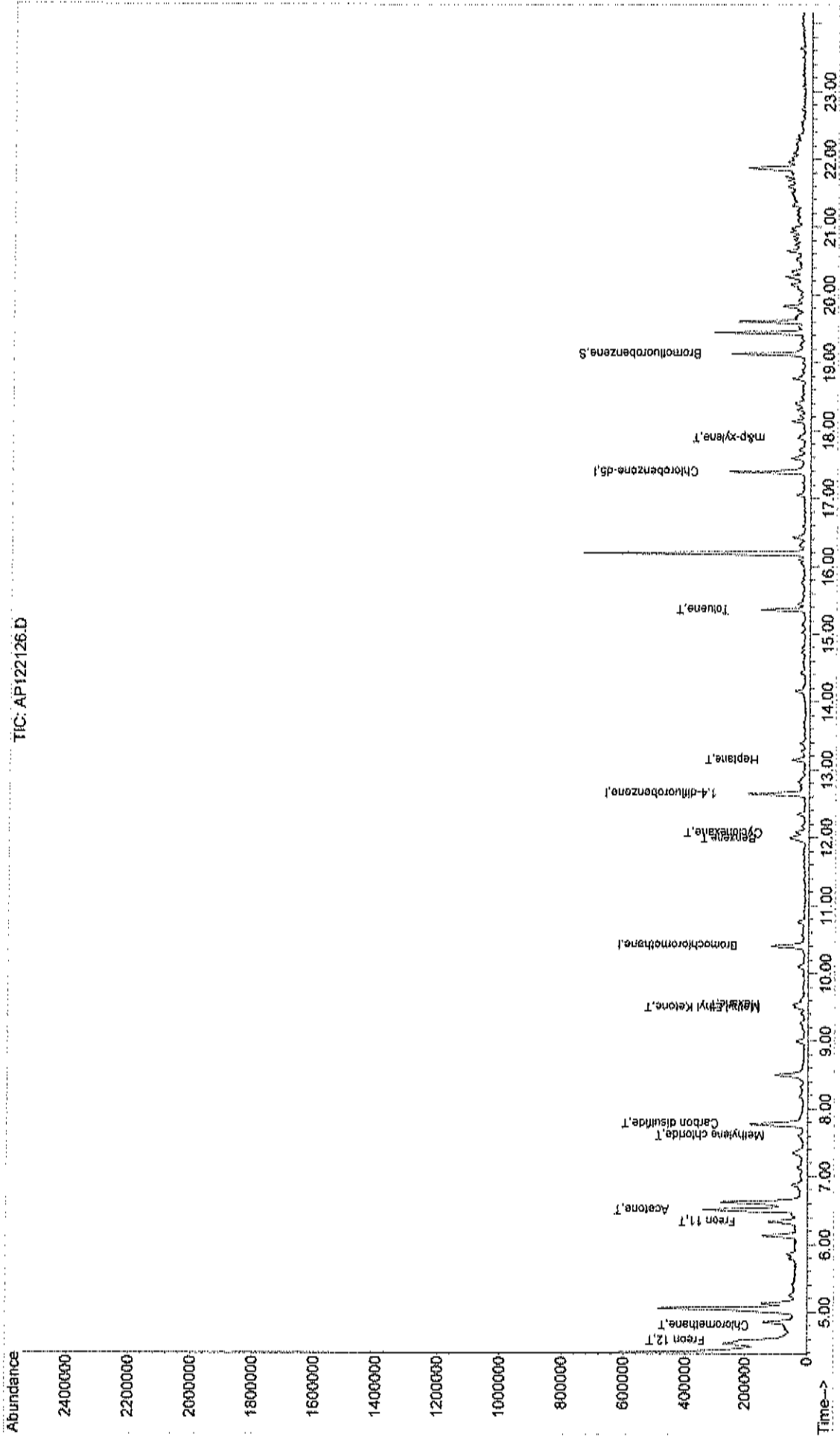
						Qvalue
3) Freon 12	4.58	85	155121	0.58	ppb	99
4) Chloromethane	4.80	50	19639	0.23	ppb	94
14) Freon 11	6.34	101	117140	0.32	ppb	96
15) Acetone	6.51	58	197227	6.98	ppb	91
21) Methylene chloride	7.60	84	10491	0.14	ppb	92
23) Carbon disulfide	7.78	76	362575	2.24	ppb	98
28) Methyl Ethyl Ketone	9.50	72	15587m	0.54	ppb	
30) Hexane	9.55	57	16699	0.18	ppb	88
37) Cyclohexane	12.07	56	9861	0.11	ppb	# 66
39) Benzene	11.98	78	35751	0.16	ppb	96
43) Heptane	13.16	43	14787	0.14	ppb	76
51) Toluene	15.36	92	69463	0.53	ppb	96
59) m&p-xylene	17.88	91	25666	0.11	ppb	92

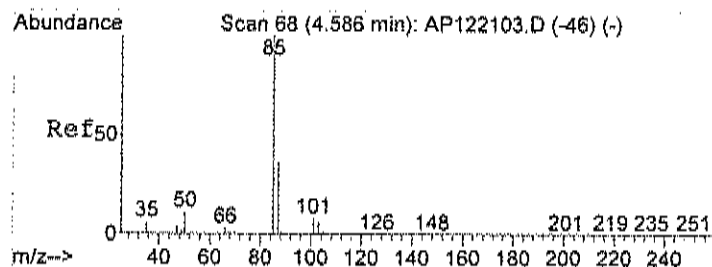
Data File : C:\HPCHEM\1\DATA\AP122126.D
Acq On : 22 Dec 2018 4:04 am
Sample : C1812057-006A
Misc : AD10 IUG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:20 2018

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_IUG.RES

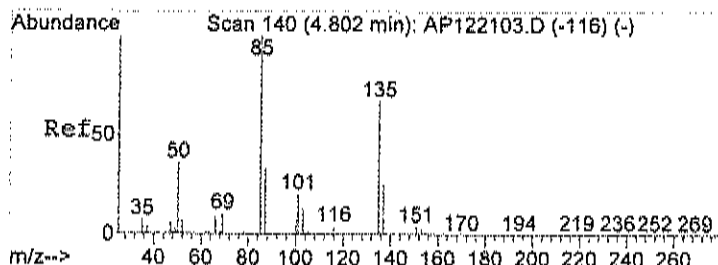
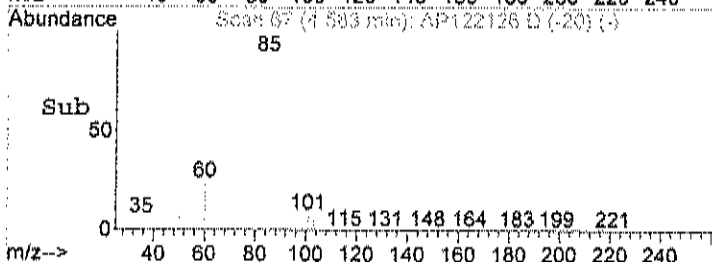
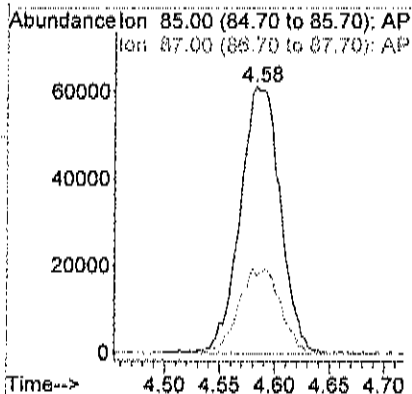
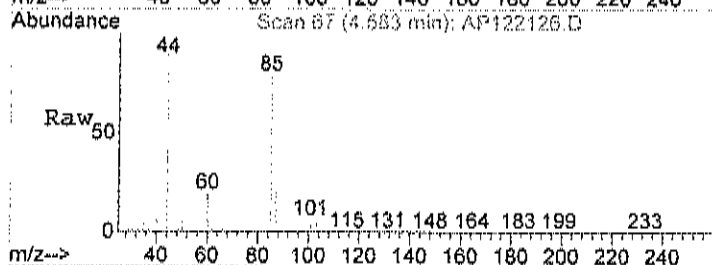
Method : C:\HPCHEM\1\METHODS\AD10_IUG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





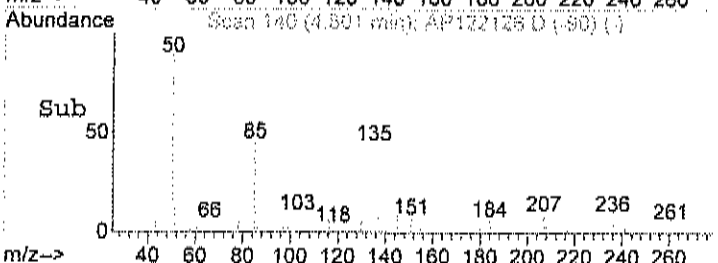
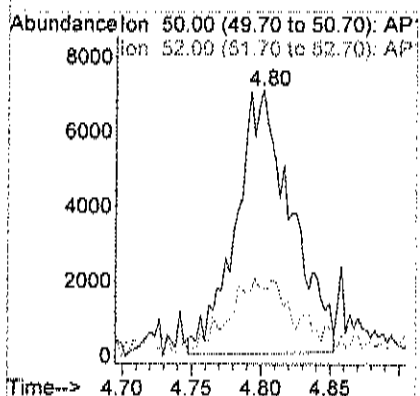
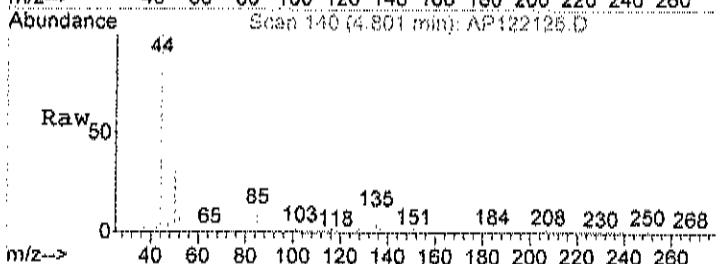
#3
Freon 12
Concen: 0.58 ppb
RT: 4.58 min Scan# 67
Delta R.T. -0.01 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

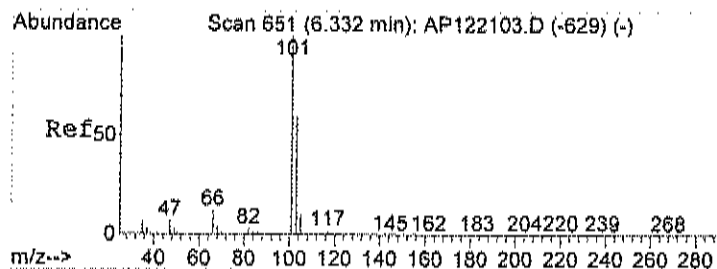
Tgt Ion: 85 Resp: 155121
Ion Ratio Lower Upper
85 100
87 32.8 12.4 52.4



#4
Chloromethane
Concen: 0.23 ppb
RT: 4.80 min Scan# 140
Delta R.T. -0.00 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

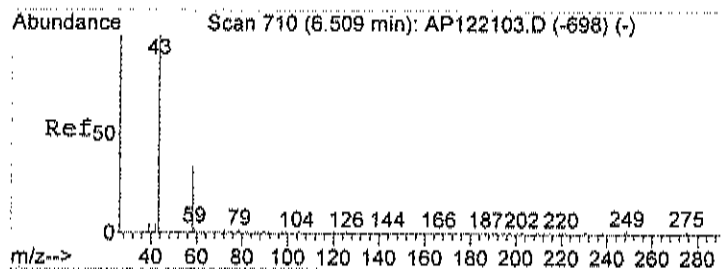
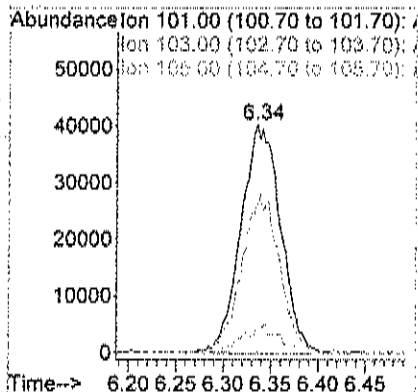
Tgt Ion: 50 Resp: 19639
Ion Ratio Lower Upper
50 100
52 22.6 5.5 45.5





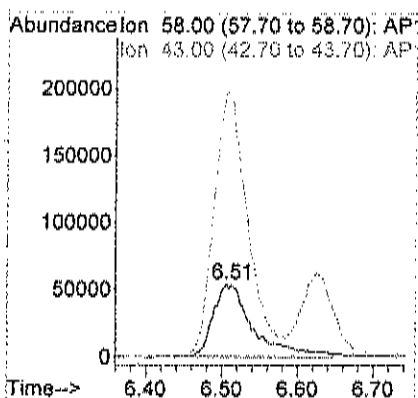
#14
Freon 11
Concen: 0.32 ppb
RT: 6.34 min Scan# 652
Delta R.T. -0.01 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

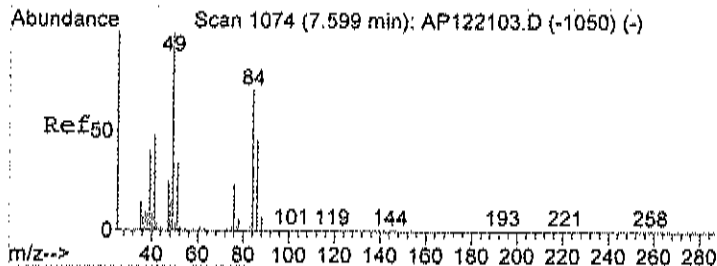
Tgt Ion: 101 Resp: 117140
Ion Ratio Lower Upper
101 100
103 66.3 44.4 84.4
105 7.6 0.0 31.9



#15
Acetone
Concen: 6.98 ppb
RT: 6.51 min Scan# 709
Delta R.T. -0.00 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

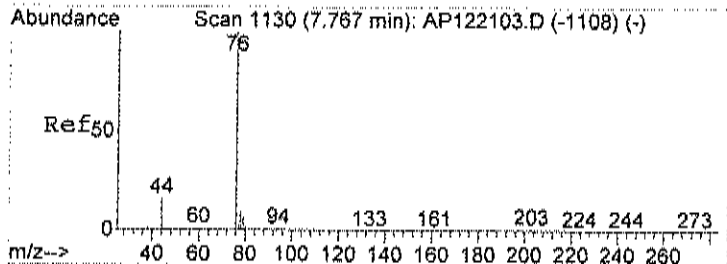
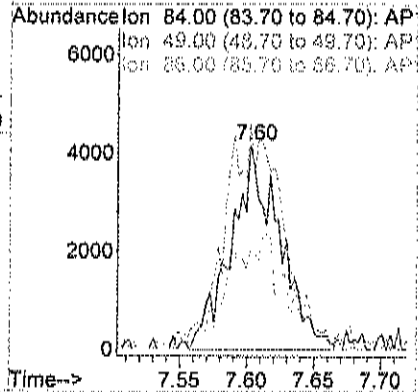
Tgt Ion: 58 Resp: 197227
Ion Ratio Lower Upper
58 100
43 310.2 298.2 358.2





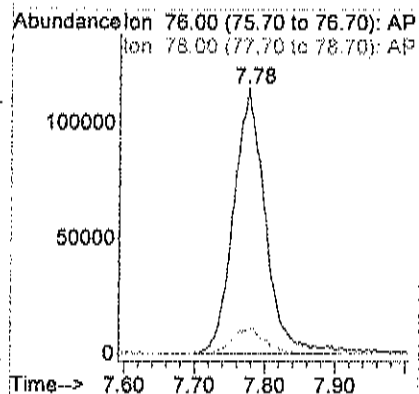
#21
Methylene chloride
Concen: 0.14 ppb
RT: 7.60 min Scan# 1075
Delta R.T. 0.00 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

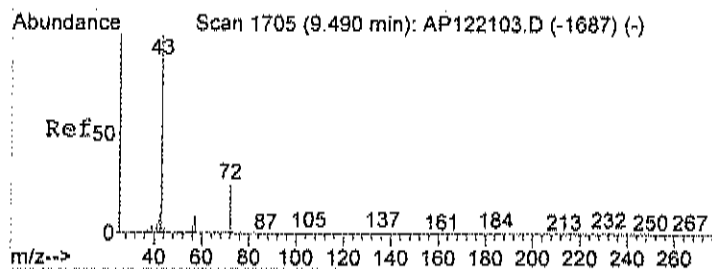
Tgt Ion	Ratio	Lower	Upper
84	100		
49	128.0	121.5	161.5
86	66.3	46.0	86.0



#23
Carbon disulfide
Concen: 2.24 ppb
RT: 7.78 min Scan# 1133
Delta R.T. 0.00 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

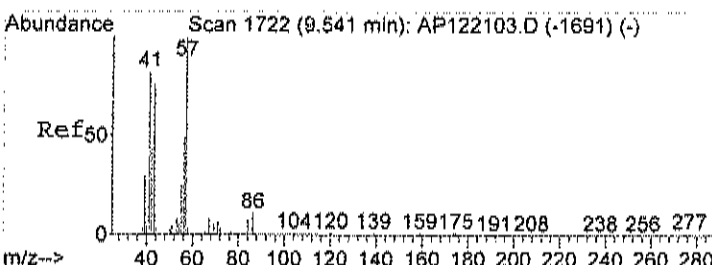
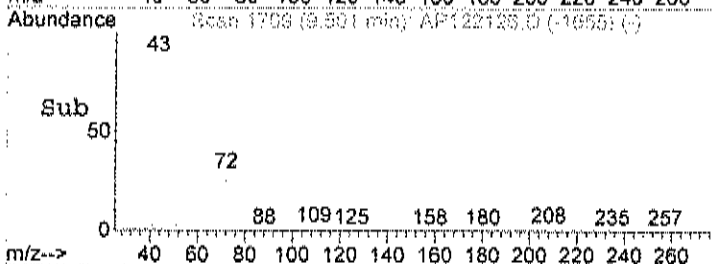
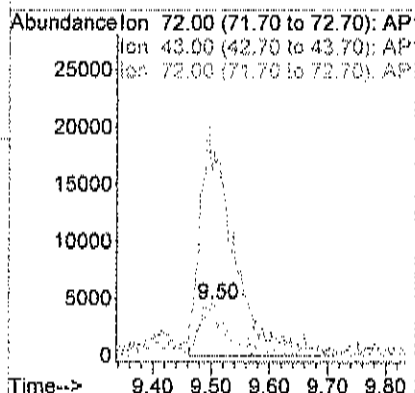
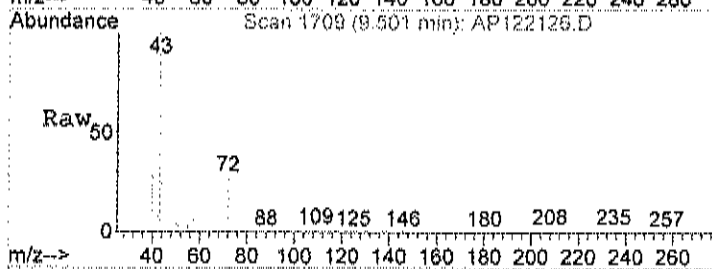
Tgt Ion	Ratio	Lower	Upper
76	100		
78	9.9	0.0	29.2





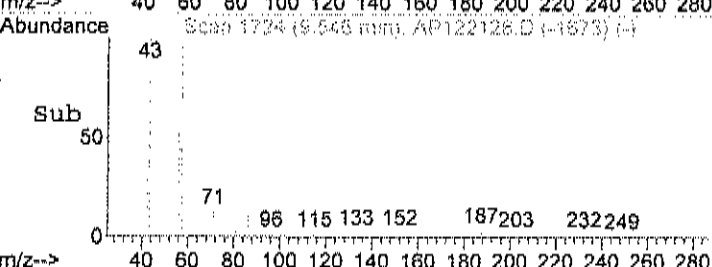
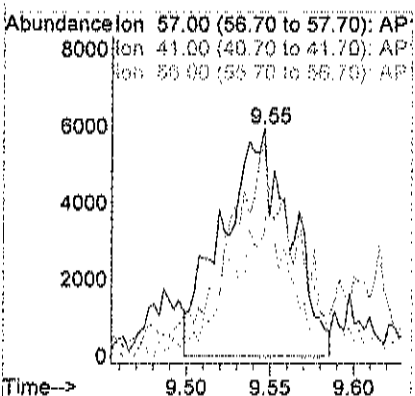
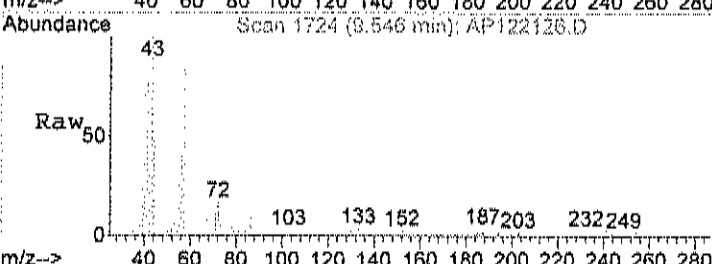
#28
Methyl Ethyl Ketone
Concen: 0.54 ppb m
RT: 9.50 min Scan# 1709
Delta R.T. 0.01 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

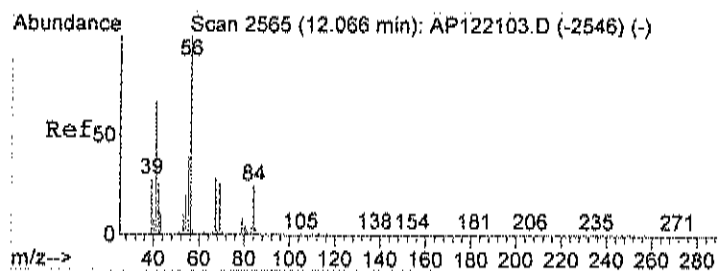
Tgt Ion: 72 Resp: 15587
Ion Ratio Lower Upper
72 100
43 420.3 0.0 20.0#
72 83.7 80.0 120.0



#30
Hexane
Concen: 0.18 ppb
RT: 9.55 min Scan# 1724
Delta R.T. 0.00 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

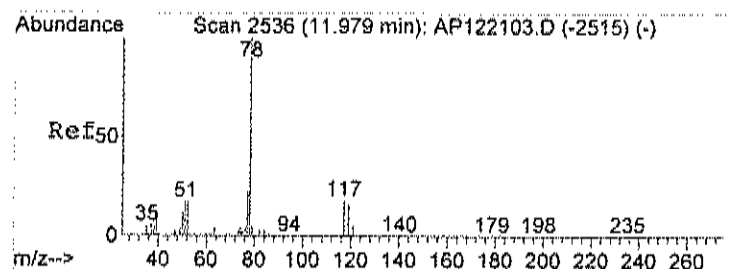
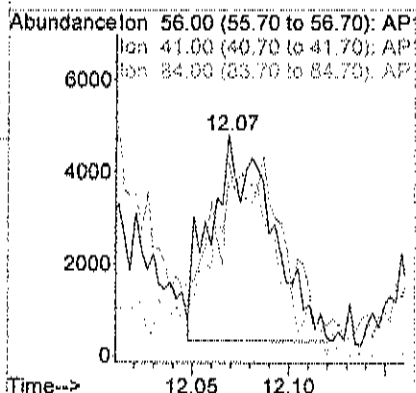
Tgt Ion: 57 Resp: 16699
Ion Ratio Lower Upper
57 100
41 64.1 49.7 89.7
56 34.7 27.9 67.9





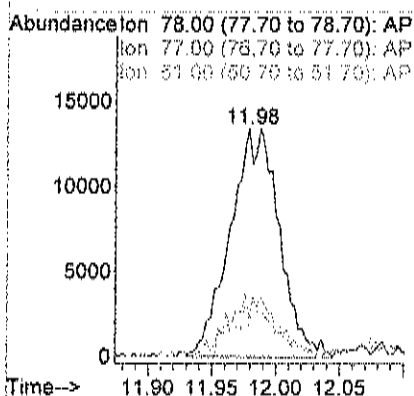
#37
Cyclohexane
Concen: 0.11 ppb
RT: 12.07 min Scan# 2566
Delta R.T. -0.01 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

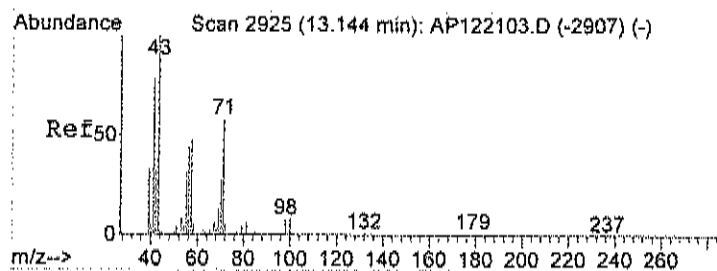
Tgt Ion	Resp	Lower	Upper
56	9861		
41	14.2	36.3	76.3#
84	90.6	56.0	96.0



#39
Benzene
Concen: 0.16 ppb
RT: 11.98 min Scan# 2536
Delta R.T. -0.00 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

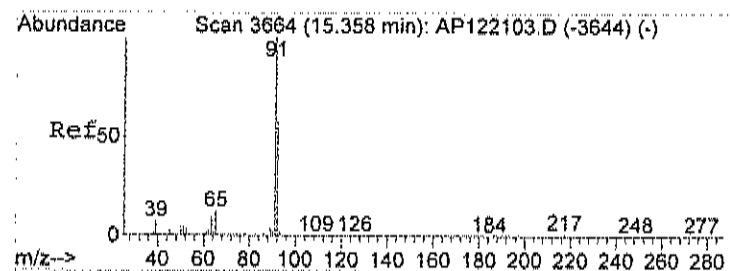
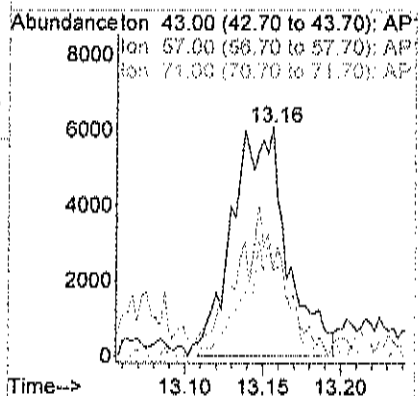
Tgt Ion	Resp	Lower	Upper
78	35751		
77	24.9	3.1	43.1
51	14.9	0.0	36.7





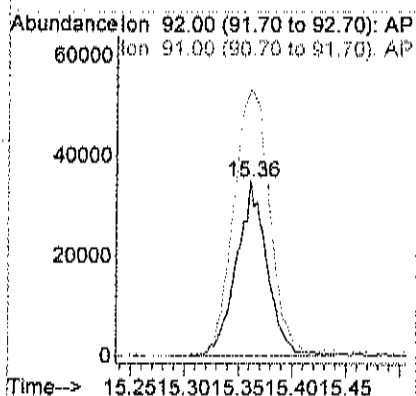
#43
Heptane
Concen: 0.14 ppb
RT: 13.16 min Scan# 2929
Delta R.T. 0.01 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

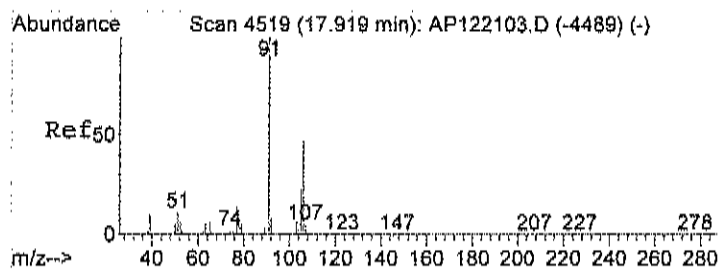
Tgt Ion	43	57	71	Resp	14787	Lower	Upper
Ion Ratio	100	34.3	39.5				
		32.7	35.6				
		72.7	75.6				



#51
Toluene
Concen: 0.53 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122126.D
Acq: 22 Dec 2018 4:04 am

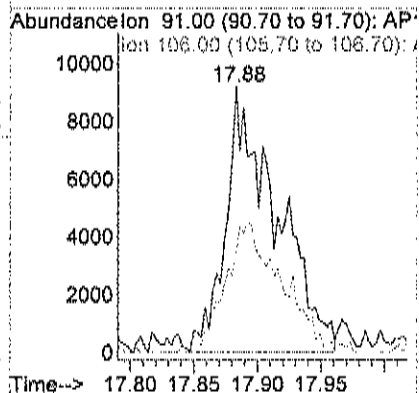
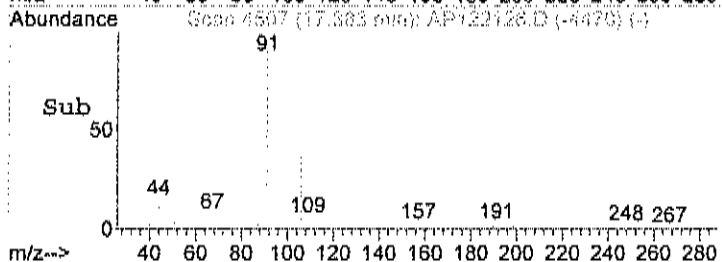
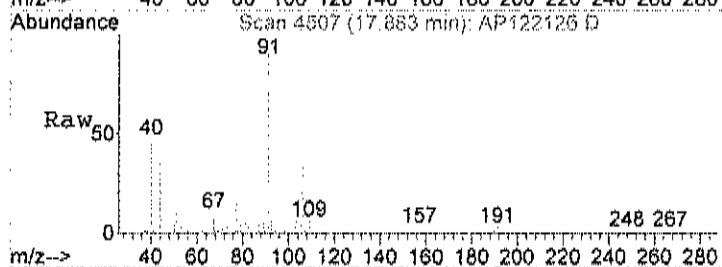
Tgt Ion	92	91	Resp	69463	Lower	Upper
Ion Ratio	100	180.4				
		154.3				
		194.3				





#59
 m&p-xylene
 Concen: 0.11 ppb
 RT: 17.88 min Scan# 4507
 Delta R.T. -0.04 min
 Lab File: AP122126.D
 Acq: 22 Dec 2018 4:04 am

Tgt Ion: 91 Resp: 25666
 Ion Ratio Lower Upper
 91 100
 106 53.7 28.3 68.3



Data File : C:\HPCHEM\1\DATA\AP122231.D

Acq On : 23 Dec 2018 4:36 am

Sample : C1812057-006A 5x

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:38 2018

Vial: 77

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	35642	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	143417	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	101423	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	50376m	2.30	0.73 ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%

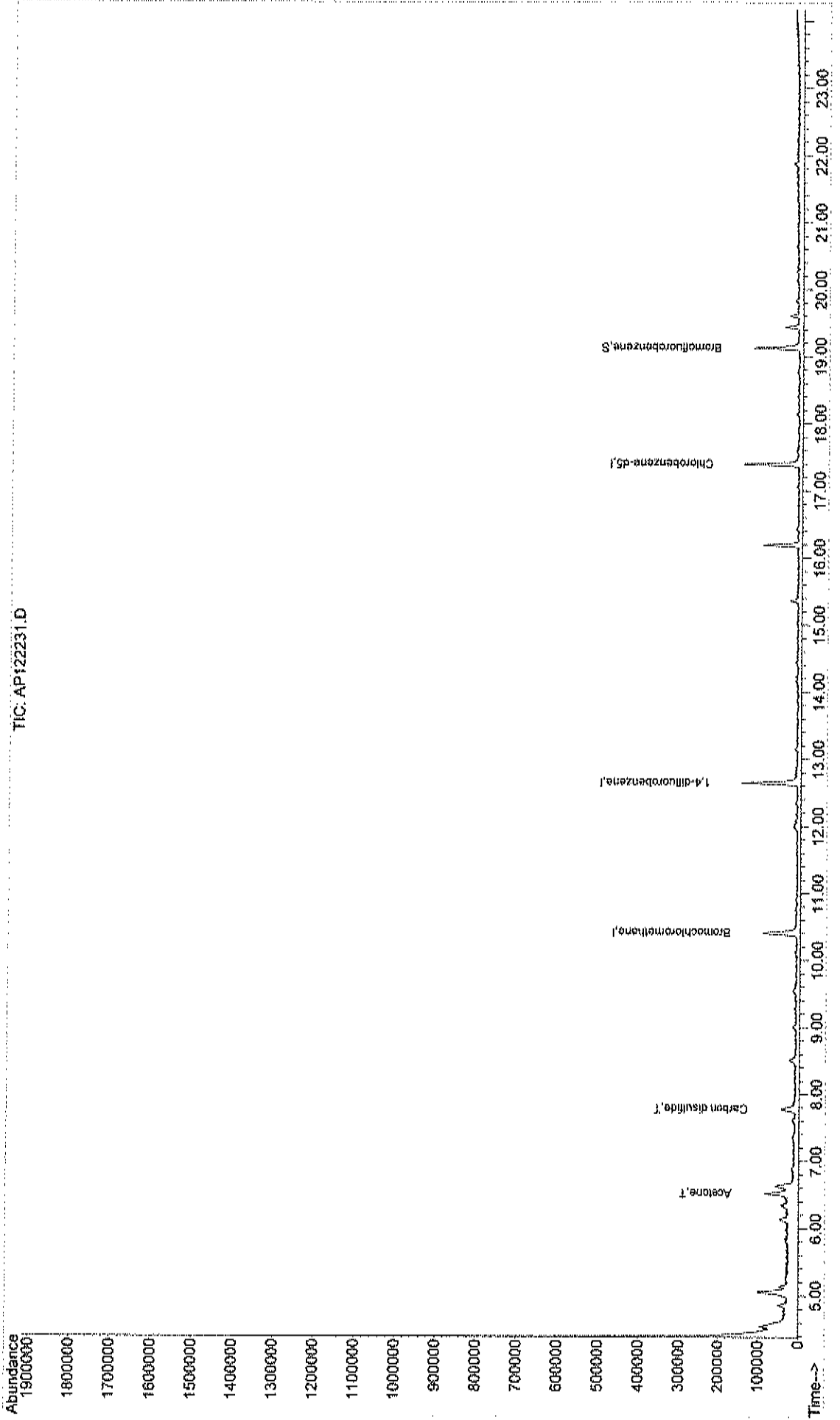
Target Compounds

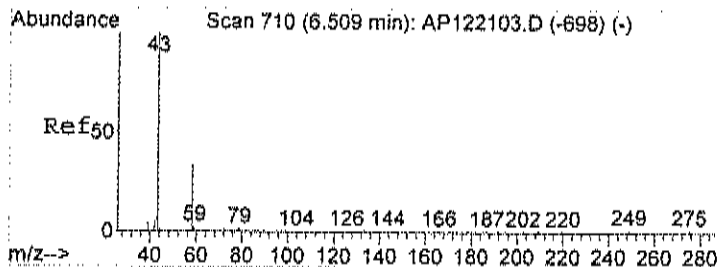
					Qvalue
15) Acetone	6.52	58	31777	1.45 ppb	# 85
23) Carbon disulfide	7.78	76	62674	0.50 ppb	# 83

Data File : C:\HPCHEM\1\DATA\AP122231.D
 Acq On : 23 Dec 2018 4:36 am
 Sample : C1812057-006A 5x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 28 11:23 2018
 Quant Results File: AD10_1UG.RES

Vial: 77
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

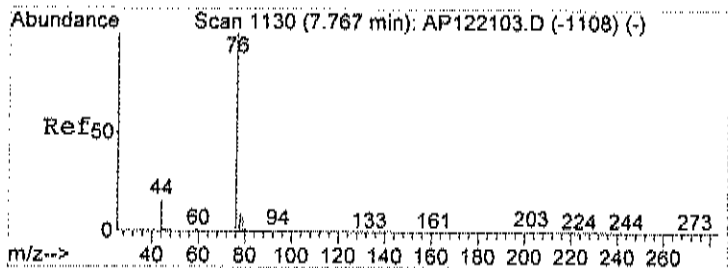
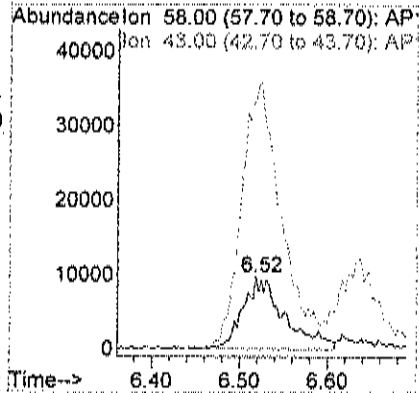
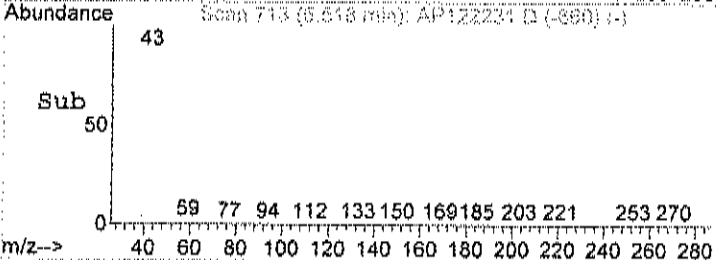
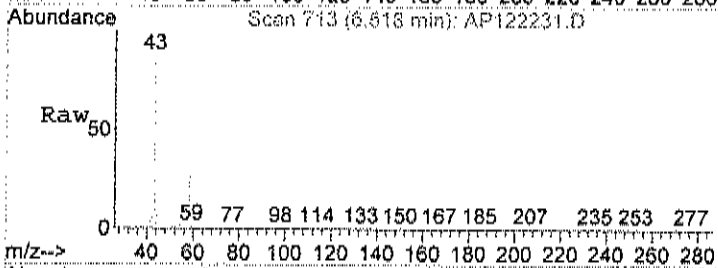
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





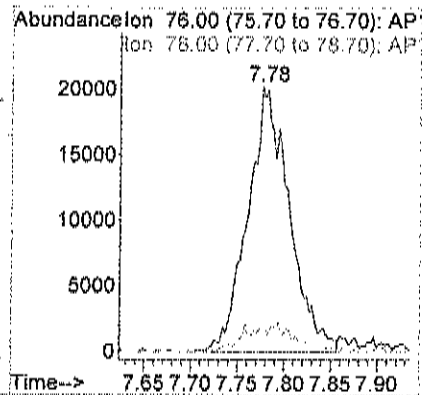
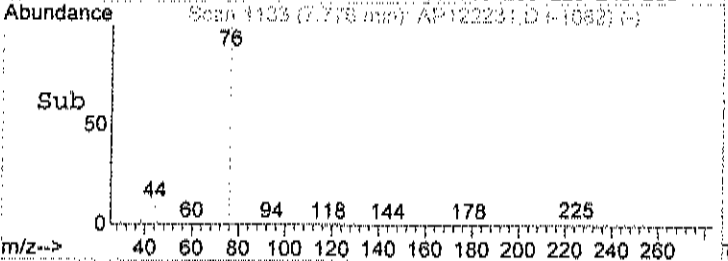
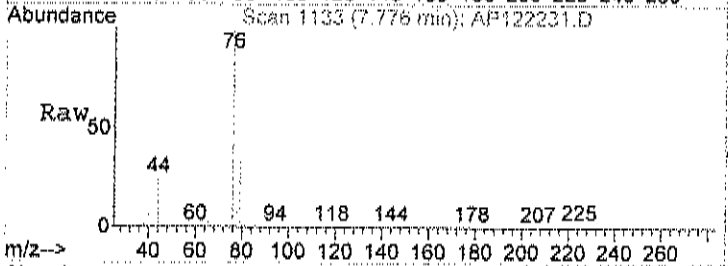
#15
Acetone
Concen: 1.45 ppb
RT: 6.52 min Scan# 713
Delta R.T. 0.01 min
Lab File: AP122231.D
Acq: 23 Dec 2018 4:36 am

Tgt Ion: 58 Resp: 31777
Ion Ratio Lower Upper
58 100
43 360.2 298.2 358.2#



#23
Carbon disulfide
Concen: 0.50 ppb
RT: 7.78 min Scan# 1133
Delta R.T. 0.00 min
Lab File: AP122231.D
Acq: 23 Dec 2018 4:36 am

Tgt Ion: 76 Resp: 62674
Ion Ratio Lower Upper
76 100
78 2.9 0.0 29.2



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 4:45:00 AM
2,2,4-trimethylpentane	0.12	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Acetone	7.2	1.5		ppbV	5	12/23/2018 5:14:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Benzene	0.30	0.15		ppbV	1	12/22/2018 4:45:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Carbon disulfide	3.4	0.75		ppbV	5	12/23/2018 5:14:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloroform	0.26	0.15		ppbV	1	12/22/2018 4:45:00 AM
Chloromethane	0.14	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
cis-1,2-Dichloroethene	0.94	0.15		ppbV	1	12/22/2018 4:45:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Ethyl acetate	0.33	0.15		ppbV	1	12/22/2018 4:45:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 11	0.30	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Freon 12	0.56	0.15		ppbV	1	12/22/2018 4:45:00 AM
Heptane	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Hexane	0.24	0.15		ppbV	1	12/22/2018 4:45:00 AM
Isopropyl alcohol	2.8	0.75		ppbV	5	12/23/2018 5:14:00 AM
m&p-Xylene	0.34	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Ethyl Ketone	0.35	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl Isobutyl Ketone	1.3	0.30		ppbV	1	12/22/2018 4:45:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Methylene chloride	0.46	0.15		ppbV	1	12/22/2018 4:45:00 AM
o-Xylene	0.12	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Tetrachloroethylene	0.11	0.15	J	ppbV	1	12/22/2018 4:45:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Toluene	1.5	0.15		ppbV	1	12/22/2018 4:45:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Trichloroethene	1.6	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 4:45:00 AM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 4:45:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated,	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:45:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 4:45:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:45:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 4:45:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 4:45:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 4:45:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
2,2,4-trimethylpentane	0.56	0.70	J	ug/m3	1	12/22/2018 4:45:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 4:45:00 AM
Acetone	17	3.6		ug/m3	5	12/23/2018 5:14:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 4:45:00 AM
Benzene	0.96	0.48		ug/m3	1	12/22/2018 4:45:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 4:45:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 4:45:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 4:45:00 AM
Carbon disulfide	11	2.3		ug/m3	5	12/23/2018 5:14:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 4:45:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 4:45:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 4:45:00 AM
Chloroform	1.3	0.73		ug/m3	1	12/22/2018 4:45:00 AM
Chloromethane	0.29	0.31	J	ug/m3	1	12/22/2018 4:45:00 AM
cis-1,2-Dichloroethene	3.7	0.59		ug/m3	1	12/22/2018 4:45:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:45:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 4:45:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 4:45:00 AM
Ethyl acetate	1.2	0.54		ug/m3	1	12/22/2018 4:45:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 4:45:00 AM
Freon 11	1.7	0.84		ug/m3	1	12/22/2018 4:45:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 4:45:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 4:45:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte, Quantitation estimated,
S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-007A

Client Sample ID: SVW-6
Tag Number: 1318,1164
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.8	0.74		ug/m3	1	12/22/2018 4:45:00 AM
Heptane	< 0.61	0.61		ug/m3	1	12/22/2018 4:45:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 4:45:00 AM
Hexane	0.85	0.53		ug/m3	1	12/22/2018 4:45:00 AM
Isopropyl alcohol	6.9	1.8		ug/m3	5	12/23/2018 5:14:00 AM
m&p-Xylene	1.5	1.3		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Ethyl Ketone	1.0	0.88		ug/m3	1	12/22/2018 4:45:00 AM
Methyl Isobutyl Ketone	5.4	1.2		ug/m3	1	12/22/2018 4:45:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 4:45:00 AM
Methylene chloride	1.6	0.52		ug/m3	1	12/22/2018 4:45:00 AM
o-Xylene	0.52	0.65	J	ug/m3	1	12/22/2018 4:45:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 4:45:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 4:45:00 AM
Tetrachloroethylene	0.75	1.0	J	ug/m3	1	12/22/2018 4:45:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 4:45:00 AM
Toluene	5.7	0.57		ug/m3	1	12/22/2018 4:45:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 4:45:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 4:45:00 AM
Trichloroethene	8.9	0.81		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 4:45:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 4:45:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Data File : C:\HPCHEM\1\DATA\AP122127.D

Acq On : 22 Dec 2018 4:45 am

Sample : C1812057-007A

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:43 2018

Vial: 11

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	42100	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	175497	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	142194	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	74310	0.76	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	76.00%

Target Compounds

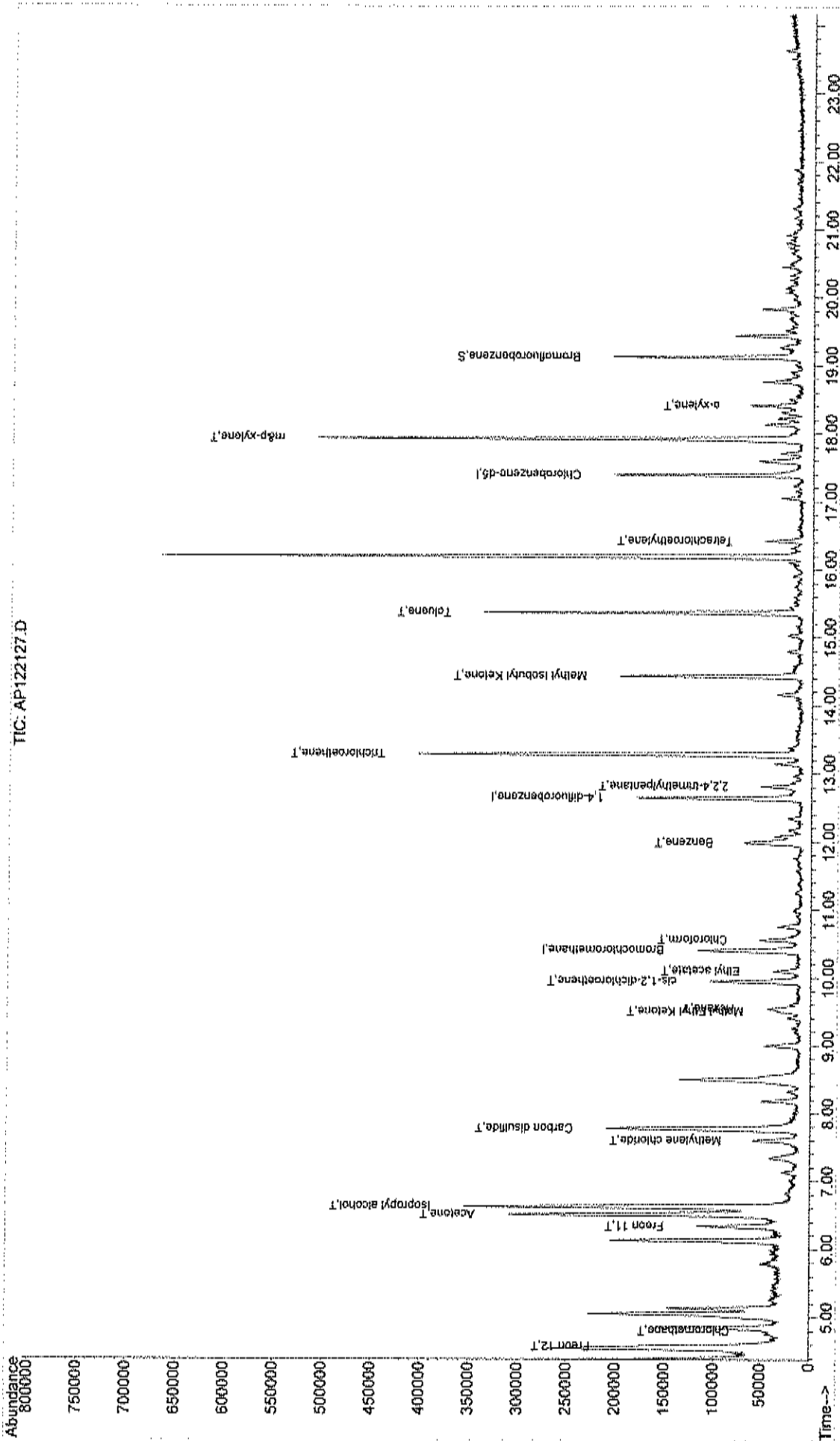
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.59	85	136415	0.56	ppb	100
4) Chloromethane	4.80	50	10699	0.14	ppb	97
14) Freon 11	6.33	101	100463	0.30	ppb	98
15) Acetone	6.51	58	159687	6.18	ppb	86
17) Isopropyl alcohol	6.62	45	269983	2.85	ppb	# 75
21) Methylene chloride	7.60	84	30616	0.46	ppb	97
23) Carbon disulfide	7.77	76	454011	3.08	ppb	99
28) Methyl Ethyl Ketone	9.50	72	9278	0.35	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	77386	0.94	ppb	97
30) Hexane	9.54	57	20023m	0.24	ppb	
31) Ethyl acetate	10.10	43	41973	0.33	ppb	95
32) Chloroform	10.55	83	41104	0.26	ppb	98
39) Benzene	11.98	78	59889	0.30	ppb	97
42) 2,2,4-trimethylpentane	12.81	57	35559	0.12	ppb	84
44) Trichloroethene	13.28	130	158649	1.65	ppb	99
51) Toluene	15.36	92	166153	1.51	ppb	98
52) Methyl Isobutyl Ketone	14.43	43	162501	1.32	ppb	92
56) Tetrachloroethylene	16.42	164	9417	0.11	ppb	95
59) m&p-xylene	17.92	91	64792m	0.34	ppb	
63) o-xylene	18.41	91	30415	0.12	ppb	96

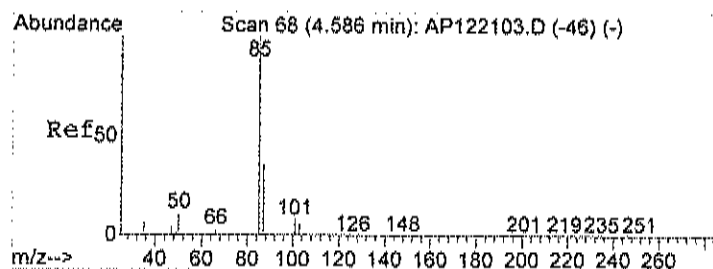
Data File : C:\HPCHEM\1\DATA\AP122127.D
 Acq On : 22 Dec 2018 4:45 am
 Sample : C1812057-007A
 Misc : AD10_IUG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 27 10:21 2018

Vial: 11
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_IUG.RES

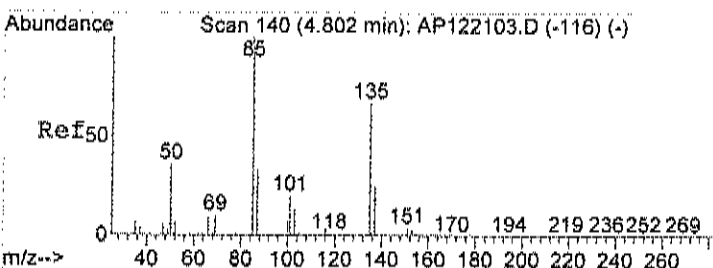
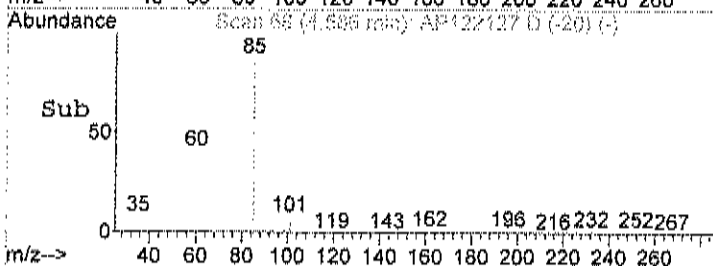
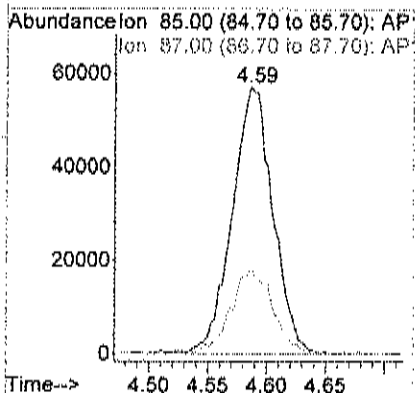
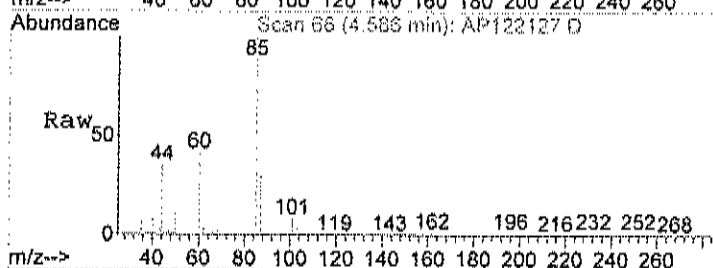
Method : C:\HPCHEM\1\METHODS\AD10_IUG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





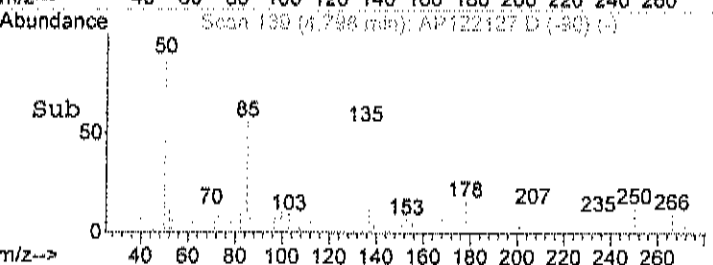
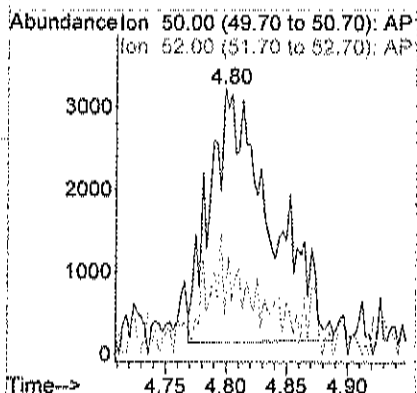
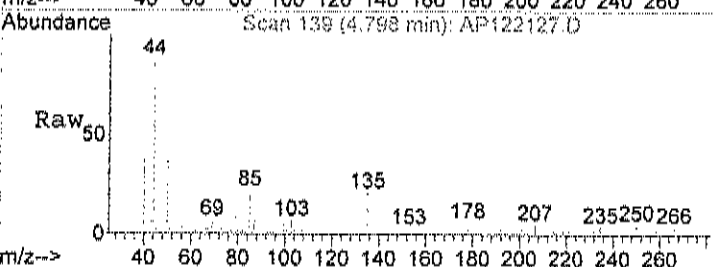
#3
Freon 12
Concen: 0.56 ppb
RT: 4.59 min Scan# 68
Delta R.T. -0.01 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

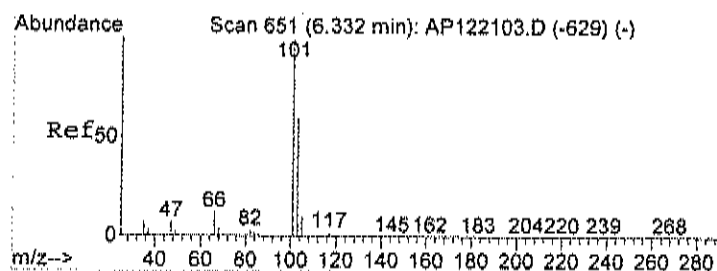
Tgt Ion: 85 Resp: 136415
Ion Ratio Lower Upper
85 100
87 32.6 12.4 52.4



#4
Chloromethane
Concen: 0.14 ppb
RT: 4.80 min Scan# 139
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

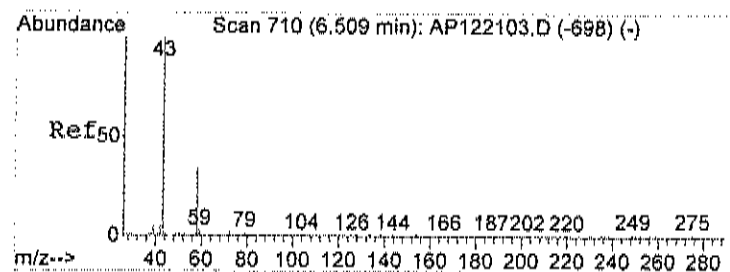
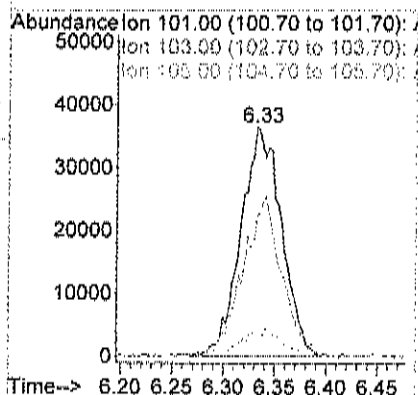
Tgt Ion: 50 Resp: 10699
Ion Ratio Lower Upper
50 100
52 27.0 5.5 45.5





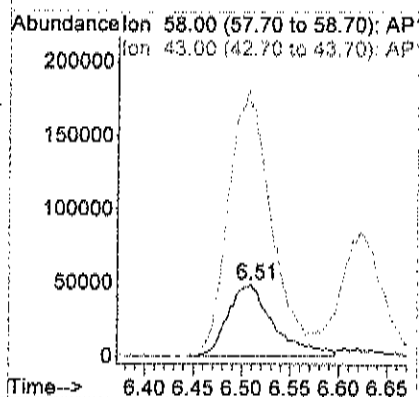
#14
Freon 11
Concen: 0.30 ppb
RT: 6.33 min Scan# 651
Delta R.T. -0.01 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

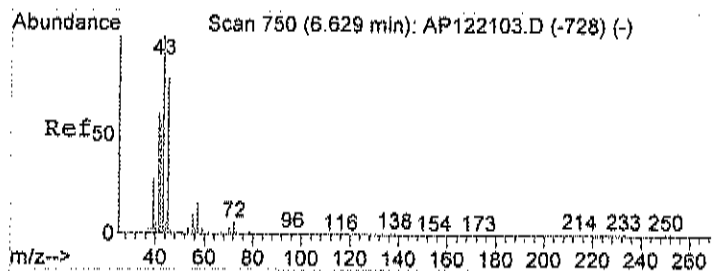
Tgt Ion	101	Resp	100463
Ion	Ratio	Lower	Upper
101	100		
103	66.5	44.4	84.4
105	11.7	0.0	31.9



#15
Acetone
Concen: 6.18 ppb
RT: 6.51 min Scan# 710
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

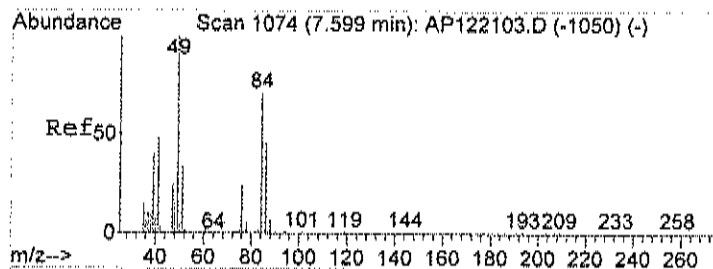
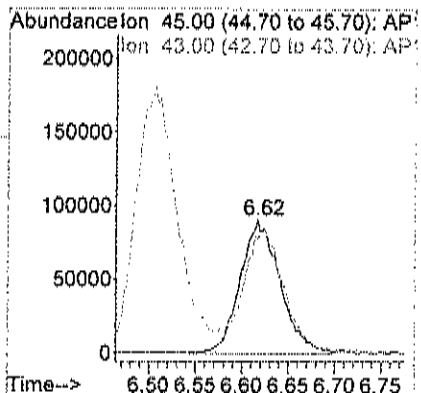
Tgt Ion	58	Resp	159687
Ion	Ratio	Lower	Upper
58	100		
43	357.3	298.2	358.2





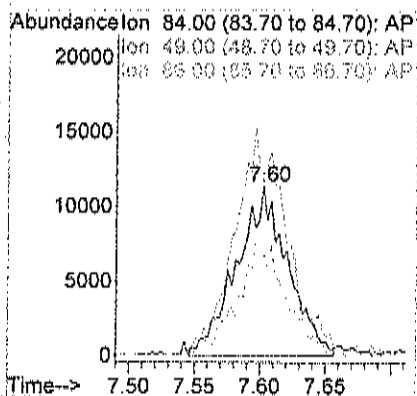
#17
Isopropyl alcohol
Concen: 2.85 ppb
RT: 6.62 min Scan# 746
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

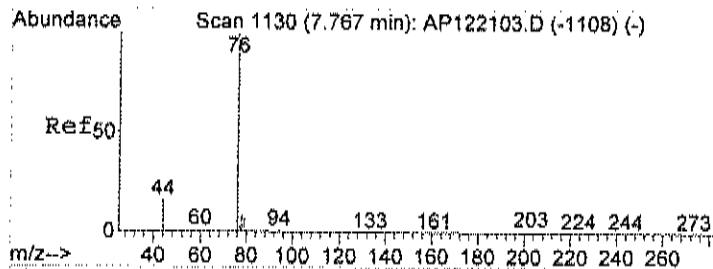
Tgt Ion: 45 Resp: 269983
Ion Ratio Lower Upper
45 100
43 90.2 98.0 138.0#



#21
Methylene chloride
Concen: 0.46 ppb
RT: 7.60 min Scan# 1075
Delta R.T. 0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

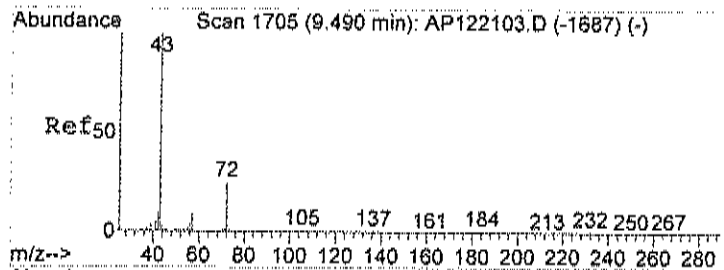
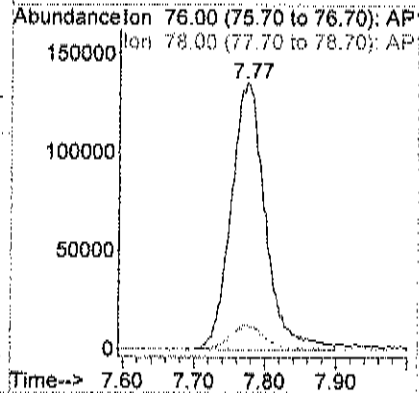
Tgt Ion: 84 Resp: 30616
Ion Ratio Lower Upper
84 100
49 138.9 121.5 161.5
86 63.1 46.0 86.0





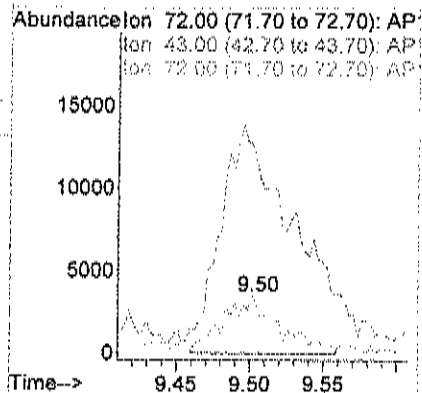
#23
Carbon disulfide
Concen: 3.08 ppb
RT: 7.77 min Scan# 1132
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

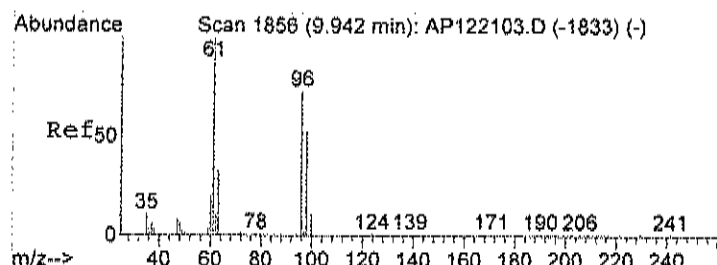
Tgt Ion: 76 Resp: 454011
Ion Ratio Lower Upper
76 100
78 8.8 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 0.35 ppb
RT: 9.50 min Scan# 1709
Delta R.T. 0.01 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

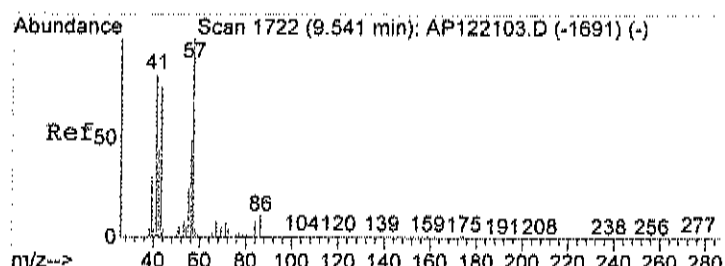
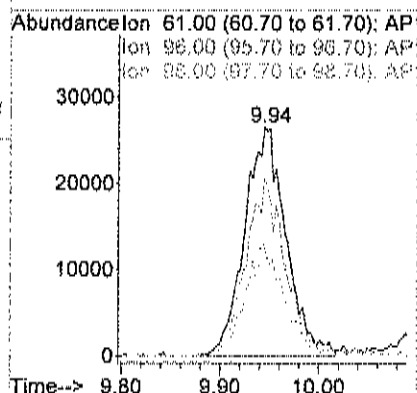
Tgt Ion: 72 Resp: 9278
Ion Ratio Lower Upper
72 100
43 502.8 0.0 20.0#
72 100.0 80.0 120.0





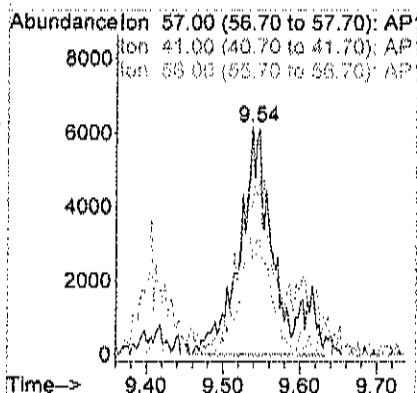
#29
cis-1,2-dichloroethene
Concen: 0.94 ppb
RT: 9.94 min Scan# 1857
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

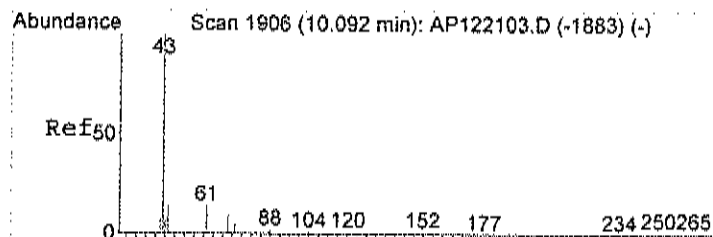
Tgt Ion: 61 Resp: 77386
Ion Ratio Lower Upper
61 100
96 73.6 51.7 91.7
98 45.4 28.0 68.0



#30
Hexane
Concen: 0.24 ppb m
RT: 9.54 min Scan# 1721
Delta R.T. -0.01 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

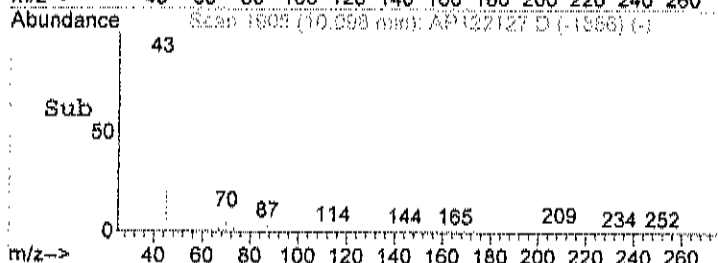
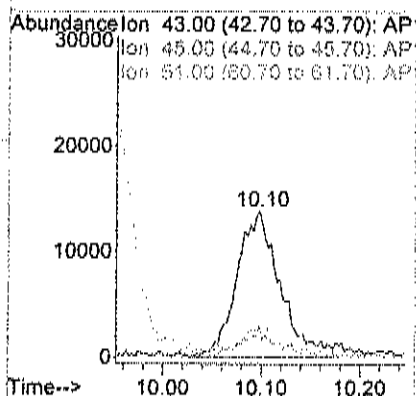
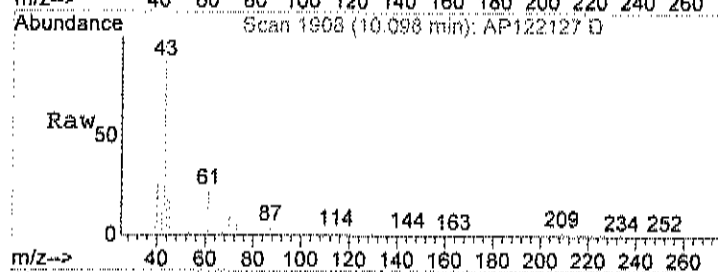
Tgt Ion: 57 Resp: 20023
Ion Ratio Lower Upper
57 100
41 67.5 49.7 89.7
56 43.8 27.9 67.9





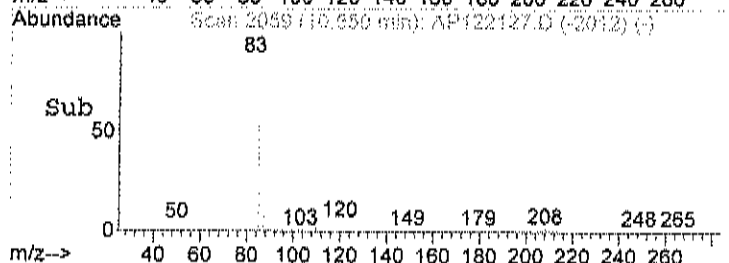
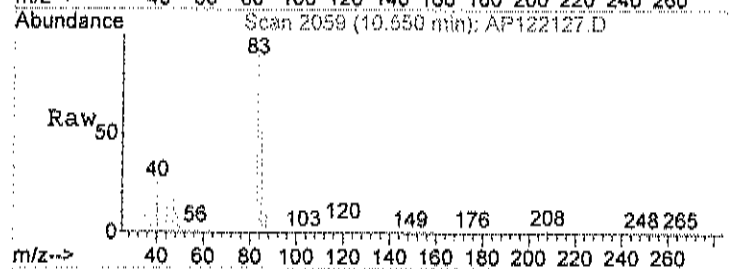
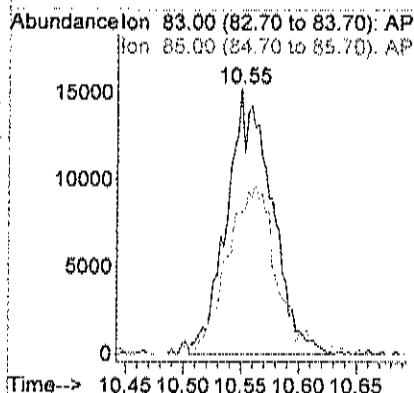
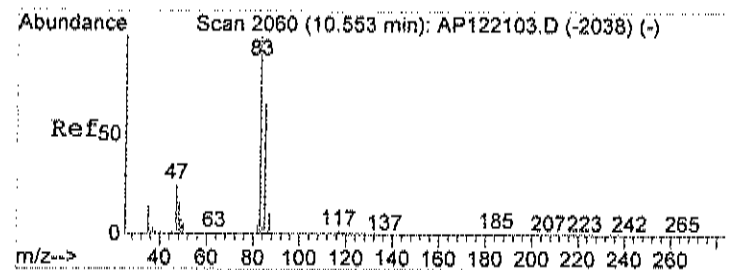
#31
Ethyl acetate
Concen: 0.33 ppb
RT: 10.10 min Scan# 1908
Delta R.T. 0.01 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

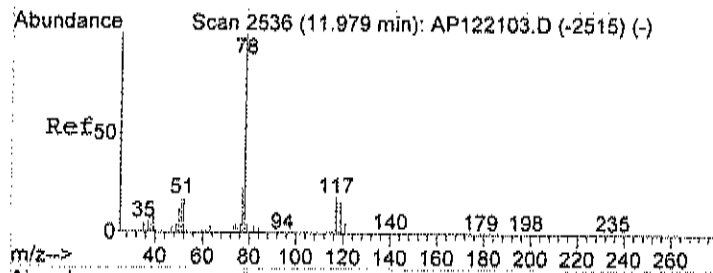
Tgt Ion	Ratio	Lower	Upper
43	100		
45	14.5	0.0	35.0
61	10.4	0.0	34.3



#32
Chloroform
Concen: 0.26 ppb
RT: 10.55 min Scan# 2059
Delta R.T. -0.01 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

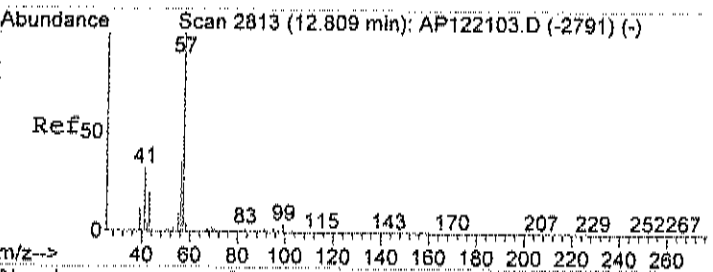
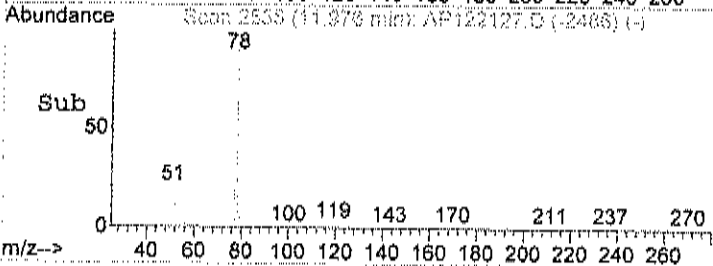
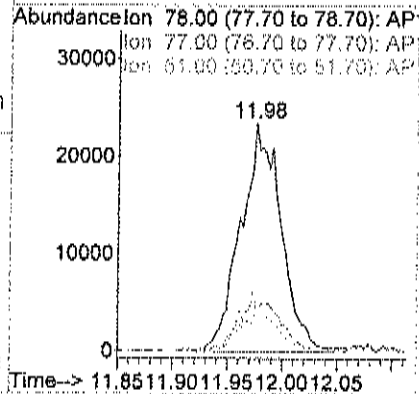
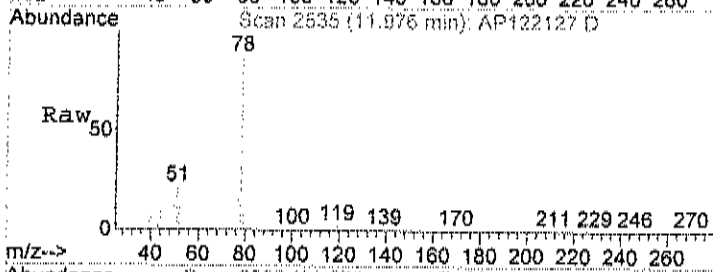
Tgt Ion	Ratio	Lower	Upper
83	100		
85	66.7	45.5	85.5





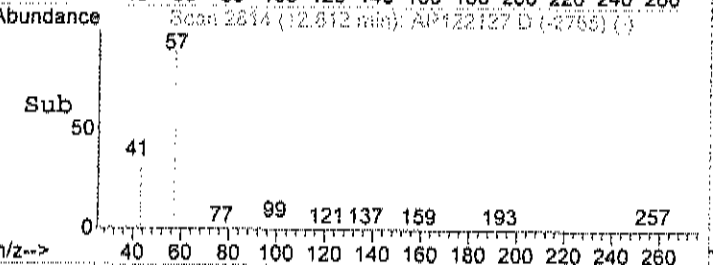
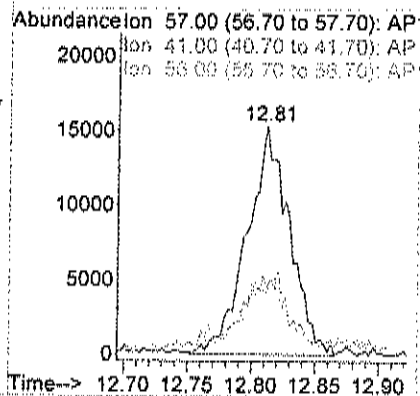
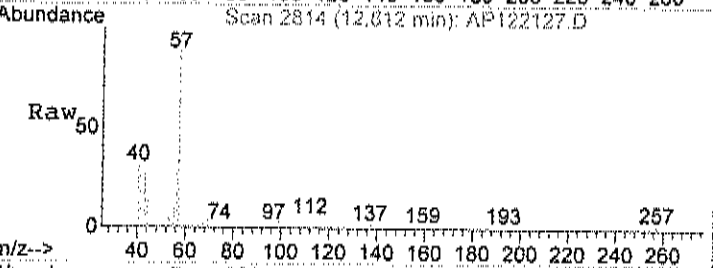
#39
Benzene
Concen: 0.30 ppb
RT: 11.98 min Scan# 2535
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

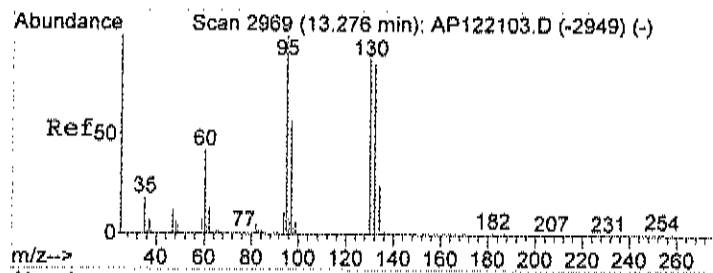
Tgt Ion	Ratio	Lower	Upper
78	100		
77	24.8	3.1	43.1
51	17.9	0.0	36.7



#42
2,2,4-trimethylpentane
Concen: 0.12 ppb
RT: 12.81 min Scan# 2814
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

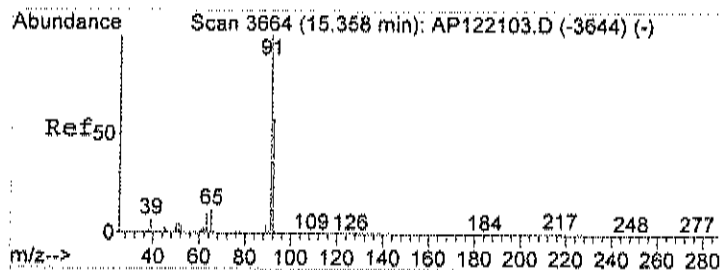
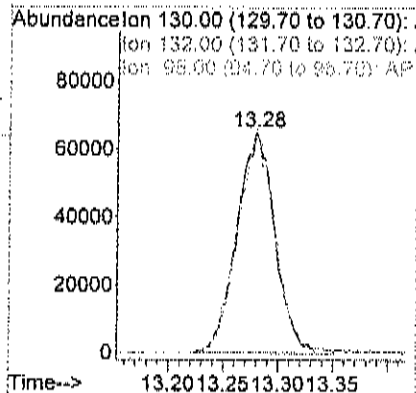
Tgt Ion	Ratio	Lower	Upper
57	100		
41	38.9	6.9	46.9
56	37.0	11.5	51.5





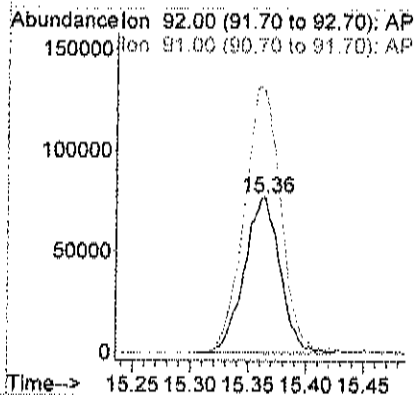
#44
Trichloroethene
Concen: 1.65 ppb
RT: 13.28 min Scan# 2970
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

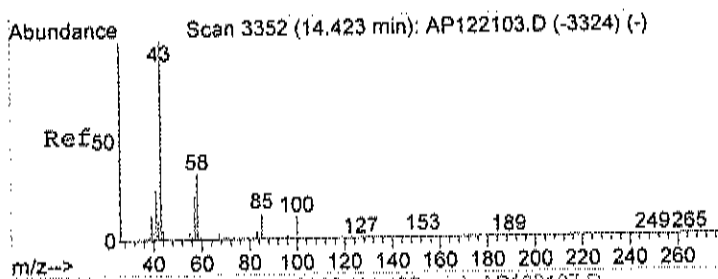
Tgt Ion	Ratio	Lower	Upper
130	100		
132	96.6	77.2	117.2
95	104.2	84.8	124.8



#51
Toluene
Concen: 1.51 ppb
RT: 15.36 min Scan# 3666
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

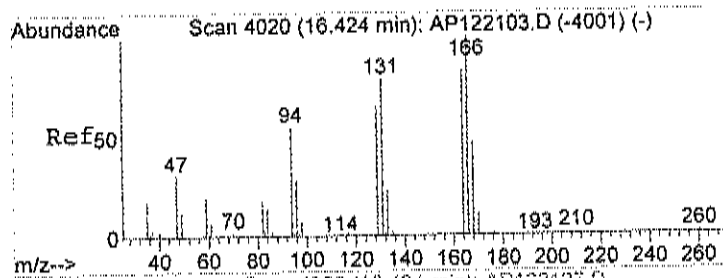
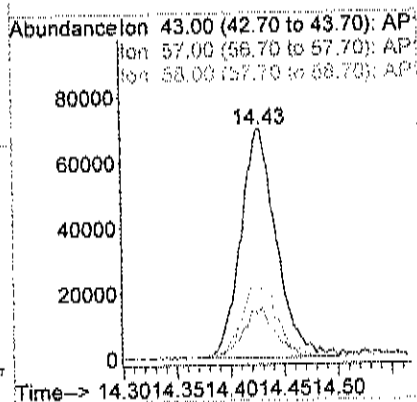
Tgt Ion	Ratio	Lower	Upper
92	100		
91	177.2	154.3	194.3





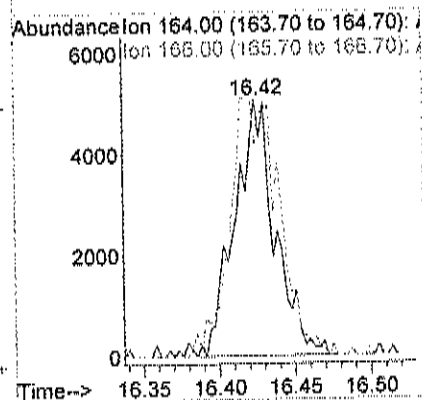
#52
Methyl Isobutyl Ketone
Concen: 1.32 ppb
RT: 14.43 min Scan# 3353
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

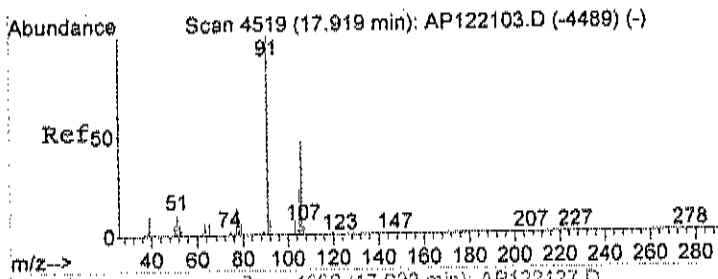
Tgt Ion: 43 Resp: 162501
Ion Ratio Lower Upper
43 100
57 20.1 3.5 43.5
58 33.2 17.9 57.9



#56
Tetrachloroethylene
Concen: 0.11 ppb
RT: 16.42 min Scan# 4020
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

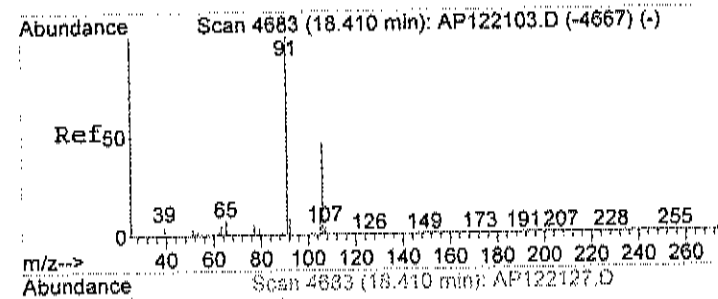
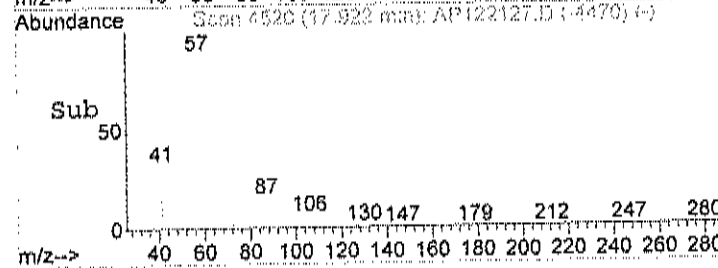
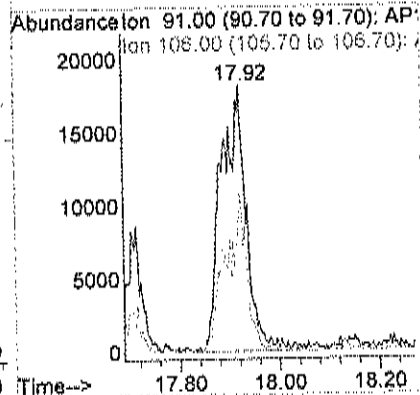
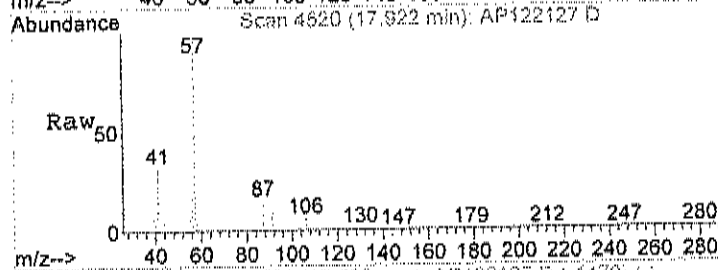
Tgt Ion: 164 Resp: 9417
Ion Ratio Lower Upper
164 100
166 122.9 108.5 148.5





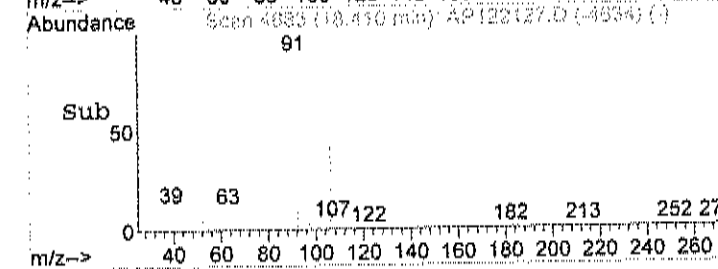
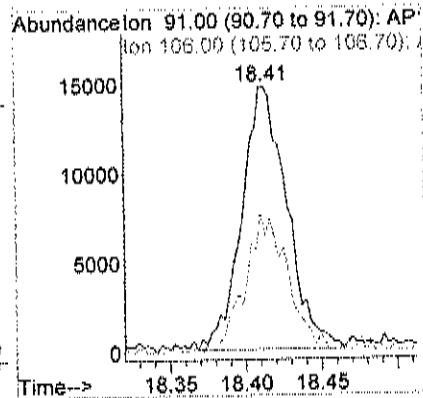
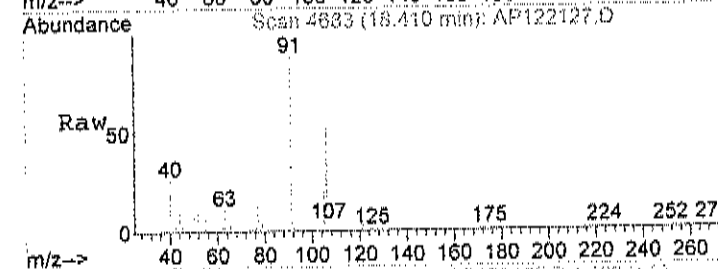
#59
m&p-xylene
Concen: 0.34 ppb m
RT: 17.92 min Scan# 4520
Delta R.T. 0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

Tgt Ion: 91 Resp: 64792
Ion Ratio Lower Upper
91 100
106 20.5 28.3 68.3#



#63
o-xylene
Concen: 0.12 ppb
RT: 18.41 min Scan# 4683
Delta R.T. -0.00 min
Lab File: AP122127.D
Acq: 22 Dec 2018 4:45 am

Tgt Ion: 91 Resp: 30415
Ion Ratio Lower Upper
91 100
106 49.3 26.6 66.6



Data File : C:\HPCHEM\1\DATA\AP122232.D

Vial: 78

Acq On : 23 Dec 2018 5:14 am

Operator: RJP

Sample : C1812057-007A 5x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:39 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	34004	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.65	114	134161	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	97727	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	47967	0.72	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	72.00%

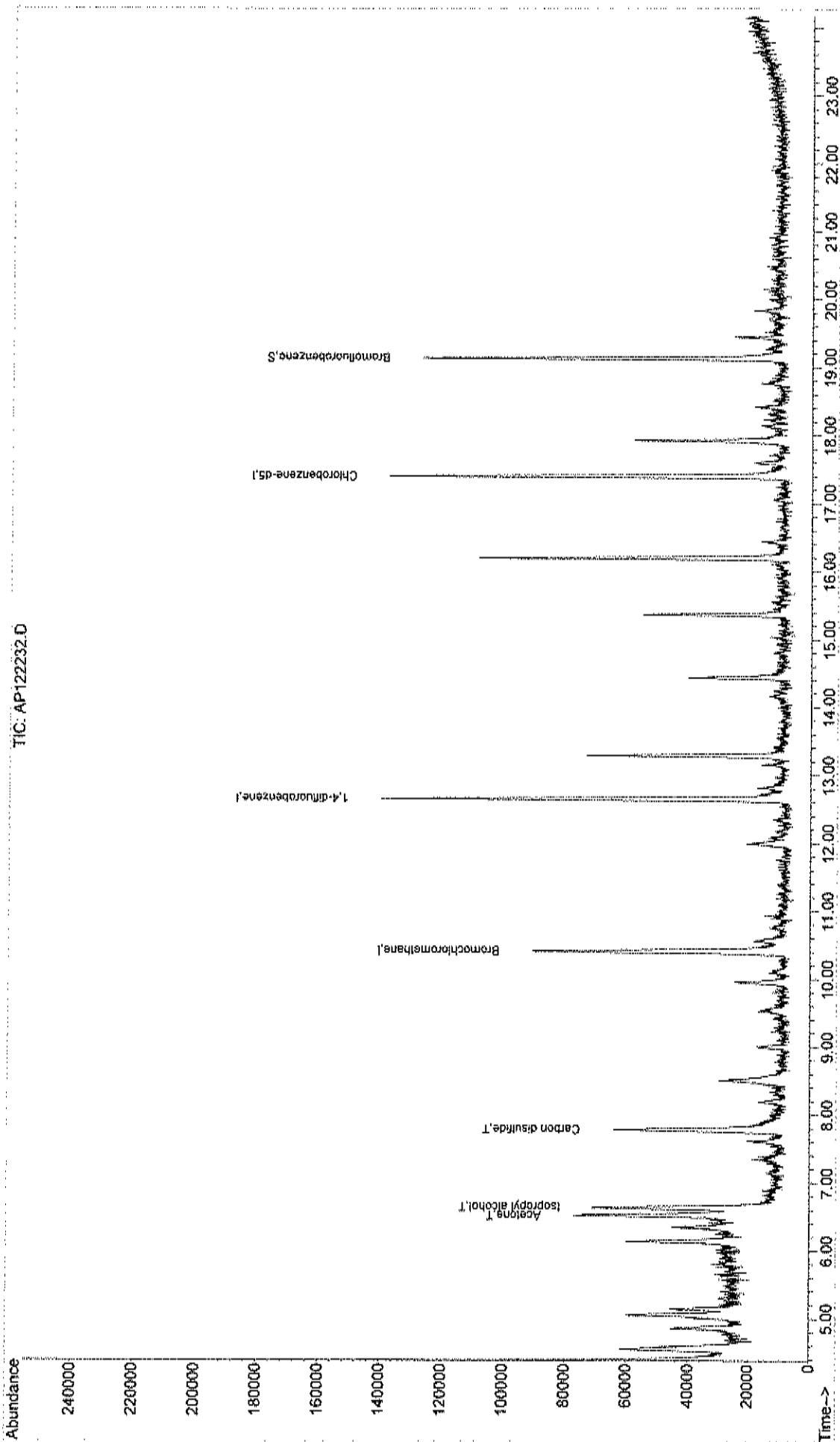
Target Compounds

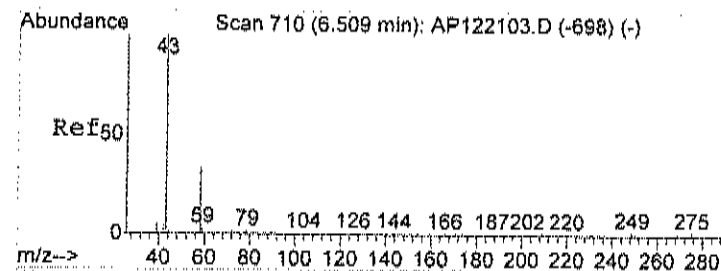
					Qvalue
15) Acetone	6.52	58	29877	1.43 ppb	93
17) Isopropyl alcohol	6.64	45	43078	0.56 ppb	87
23) Carbon disulfide	7.78	76	80592	0.68 ppb	94

Data File : C:\HPCHEM\1\DATA\AP122232.D
 Acq On : 23 Dec 2018 5:14 am
 Sample : C1812057-007A 5x
 Misc : AD10 IUG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 28 11:26 2018
 Quant Results File: AD10_IUG.RES

Vial: 78
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

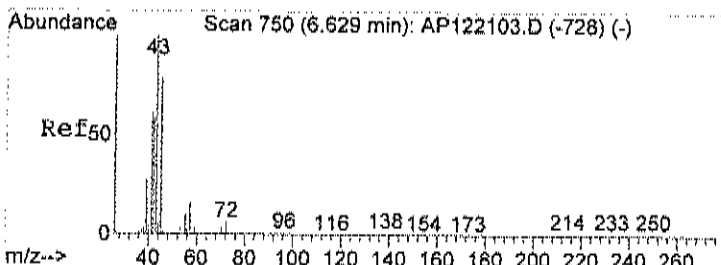
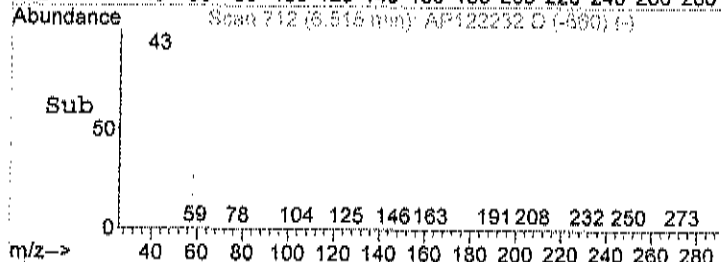
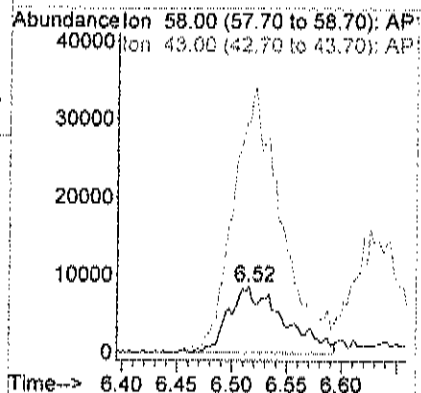
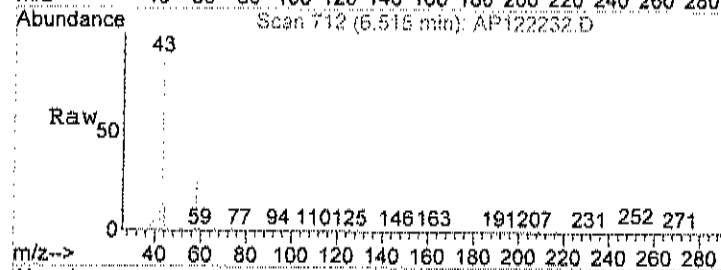
Method : C:\HPCHEM\1\METHODS\AD10_IUG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





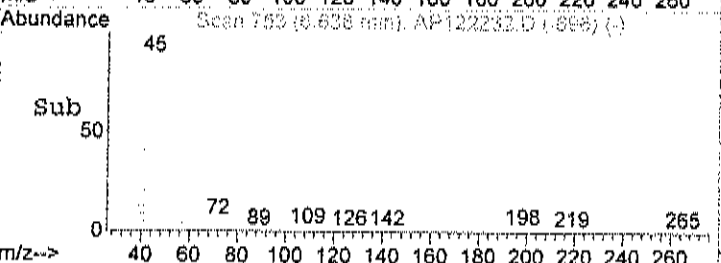
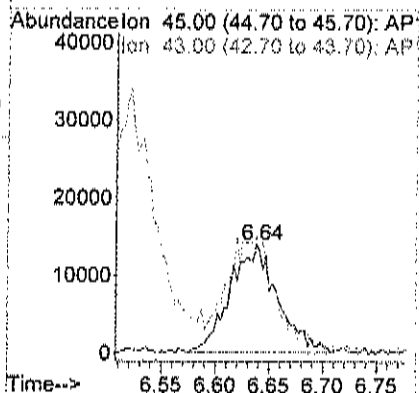
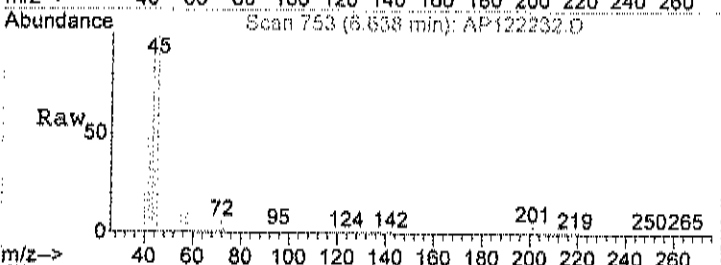
#15
Acetone
Concen: 1.43 ppb
RT: 6.52 min Scan# 712
Delta R.T. 0.01 min
Lab File: AP122232.D
Acq: 23 Dec 2018 5:14 am

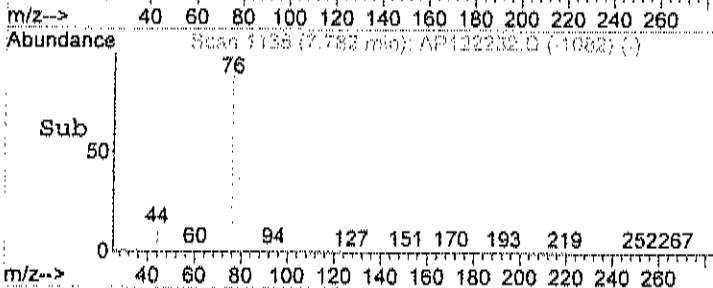
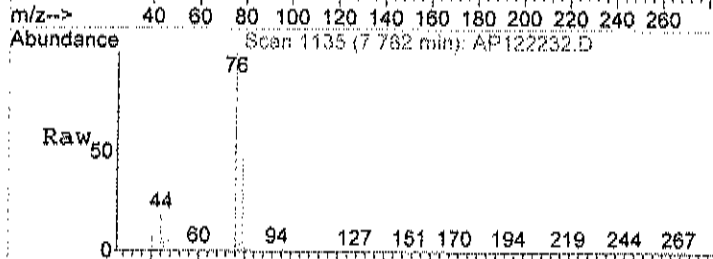
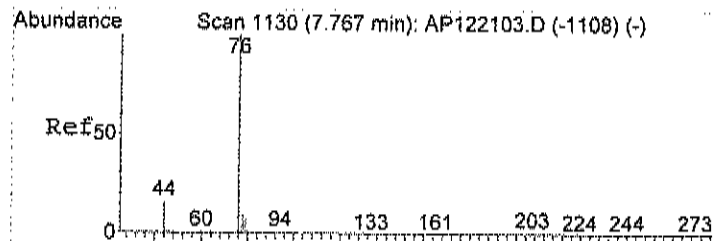
Tgt Ion	58	Resp	29877
Ion Ratio	Lower	Upper	
58	100		
43	343.5	298.2	358.2



#17
Isopropyl alcohol
Concen: 0.56 ppb
RT: 6.64 min Scan# 753
Delta R.T. 0.02 min
Lab File: AP122232.D
Acq: 23 Dec 2018 5:14 am

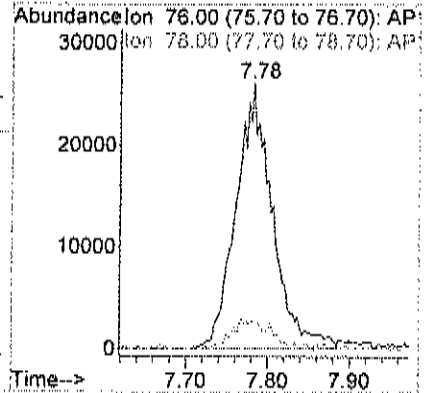
Tgt Ion	45	Resp	43078
Ion Ratio	Lower	Upper	
45	100		
43	103.3	98.0	138.0





#23
Carbon disulfide
Concen: 0.68 ppb
RT: 7.78 min Scan# 1135
Delta R.T. 0.01 min
Lab File: AP122232.D
Acq: 23 Dec 2018 5:14 am

Tgt Ion	Ratio	Lower	Upper
76	100		
78	11.2	0.0	29.2



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
2,2,4-trimethylpentane	0.11	0.15	J	ppbV	1	12/22/2018 5:25:00 AM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Acetone	5.8	1.5		ppbV	5	12/23/2018 5:53:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Benzene	0.31	0.15		ppbV	1	12/22/2018 5:25:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Carbon disulfide	10	0.75		ppbV	5	12/23/2018 5:53:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Chloroform	8.7	0.75		ppbV	5	12/23/2018 5:53:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 11	0.55	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Freon 12	0.49	0.15		ppbV	1	12/22/2018 5:25:00 AM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 5:25:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Hexane	0.28	0.15		ppbV	1	12/22/2018 5:25:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 5:25:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Methylene chloride	1.0	0.15		ppbV	1	12/22/2018 5:25:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Tetrachloroethylene	0.16	0.15		ppbV	1	12/22/2018 5:25:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Toluene	0.80	0.15		ppbV	1	12/22/2018 5:25:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 5:25:00 AM
Surr: Bromofluorobenzene	72.0	70-130		%REC	1	12/22/2018 5:25:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 5:25:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 5:25:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 5:25:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 5:25:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 5:25:00 AM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 5:25:00 AM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 5:25:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
2,2,4-trimethylpentane	0.51	0.70	J	ug/m3	1	12/22/2018 5:25:00 AM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 5:25:00 AM
Acetone	14	3.6		ug/m3	5	12/23/2018 5:53:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 5:25:00 AM
Benzene	0.99	0.48		ug/m3	1	12/22/2018 5:25:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 5:25:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 5:25:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 5:25:00 AM
Carbon disulfide	32	2.3		ug/m3	5	12/23/2018 5:53:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 5:25:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 5:25:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 5:25:00 AM
Chloroform	42	3.7		ug/m3	5	12/23/2018 5:53:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 5:25:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 5:25:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 5:25:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 5:25:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 5:25:00 AM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 5:25:00 AM
Freon 11	3.1	0.84		ug/m3	1	12/22/2018 5:25:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 5:25:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 5:25:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-008A

Client Sample ID: SVW-7
Tag Number: 554,1158
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.4	0.74		ug/m3	1	12/22/2018 5:25:00 AM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 5:25:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 5:25:00 AM
Hexane	0.99	0.53		ug/m3	1	12/22/2018 5:25:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 5:25:00 AM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 5:25:00 AM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 5:25:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 5:25:00 AM
Methylene chloride	3.5	0.52		ug/m3	1	12/22/2018 5:25:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 5:25:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 5:25:00 AM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 5:25:00 AM
Tetrachloroethylene	1.1	1.0		ug/m3	1	12/22/2018 5:25:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 5:25:00 AM
Toluene	3.0	0.57		ug/m3	1	12/22/2018 5:25:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 5:25:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 5:25:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 5:25:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 5:25:00 AM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Data File : C:\HPCHEM\1\DATA\AP122128.D

Vial: 12

Acq On : 22 Dec 2018 5:25 am

Operator: RJP

Sample : C1812057-008A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:44 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	40686	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	169457	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	136687	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	66979	0.72	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	72.00%

Target Compounds

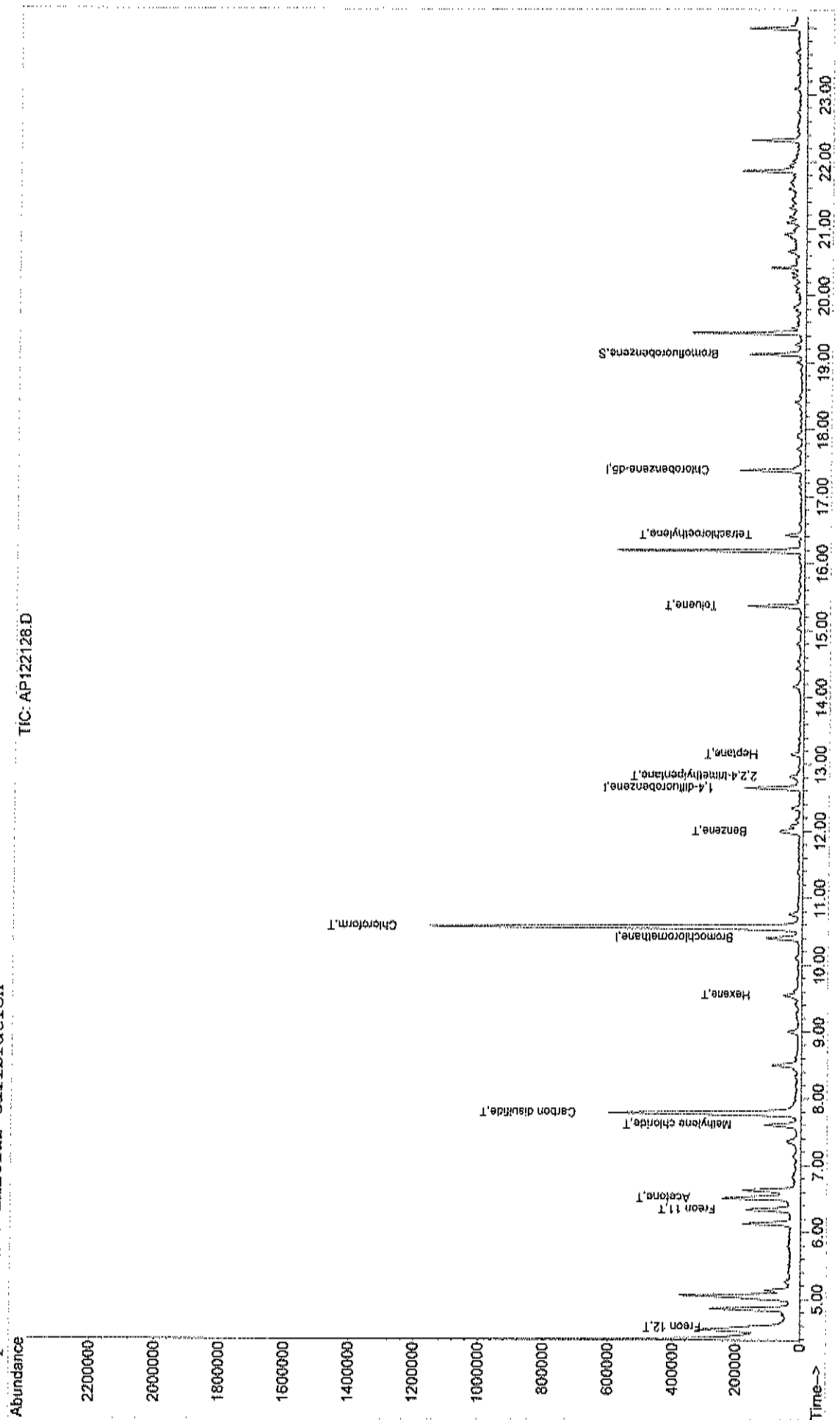
						Qvalue
3) Freon 12	4.59	85	115142	0.49	ppb	98
14) Freon 11	6.34	101	176077	0.55	ppb	99
15) Acetone	6.51	58	129976	5.21	ppb	92
21) Methylene chloride	7.61	84	65788	1.02	ppb	99
23) Carbon disulfide	7.78	76	1382055	9.69	ppb	100
30) Hexane	9.55	57	22711m	0.28	ppb	
32) Chloroform	10.56	83	1245005	8.07	ppb	100
39) Benzene	11.99	78	59438	0.31	ppb	91
42) 2,2,4-trimethylpentane	12.83	57	30303	0.11	ppb	78
43) Heptane	13.15	43	10961	0.11	ppb	93
51) Toluene	15.37	92	84791	0.80	ppb	98
56) Tetrachloroethylene	16.43	164	13478	0.16	ppb	95

Data File : C:\HPCHEM\1\DATA\AP122128.D
Acq On : 22 Dec 2018 5:25 am
Sample : C1812057-008A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:23 2018

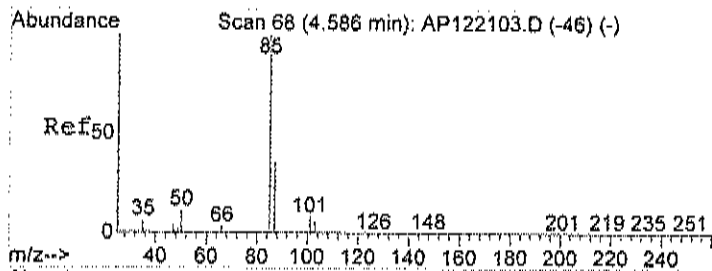
Vial: 12
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

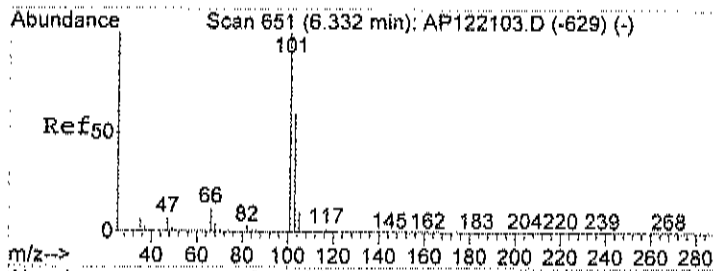
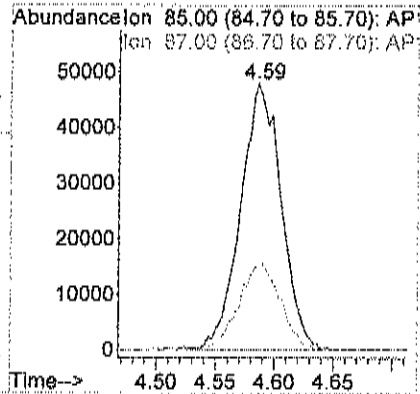


TIC: AP122128.D



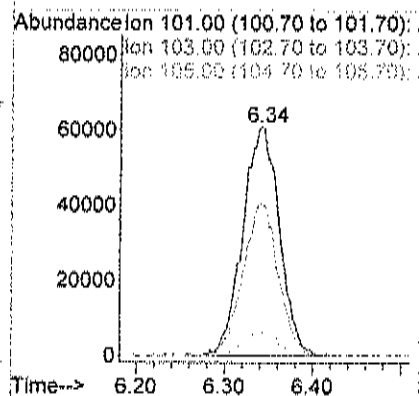
#3
Freon 12
Concen: 0.49 ppb
RT: 4.59 min Scan# 68
Delta R.T. -0.01 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

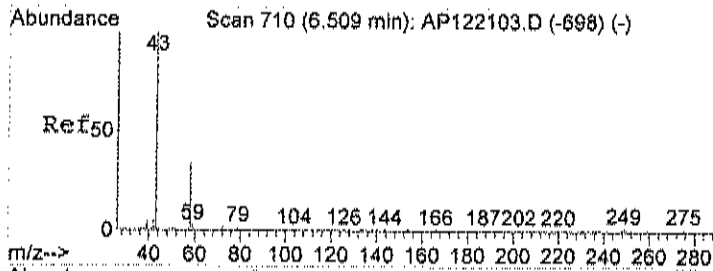
Tgt Ion: 85 Resp: 115142
Ion Ratio Lower Upper
85 100
87 33.4 12.4 52.4



#14
Freon 11
Concen: 0.55 ppb
RT: 6.34 min Scan# 654
Delta R.T. -0.00 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

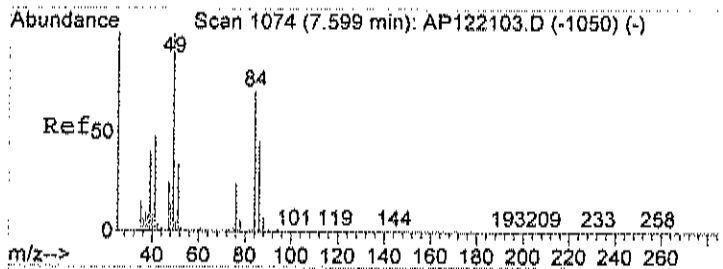
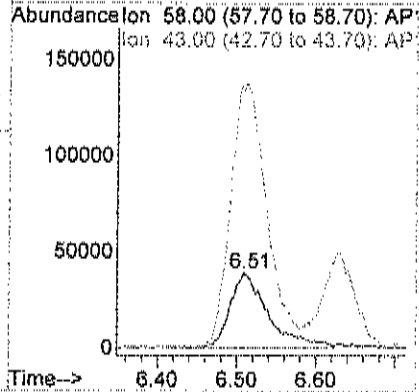
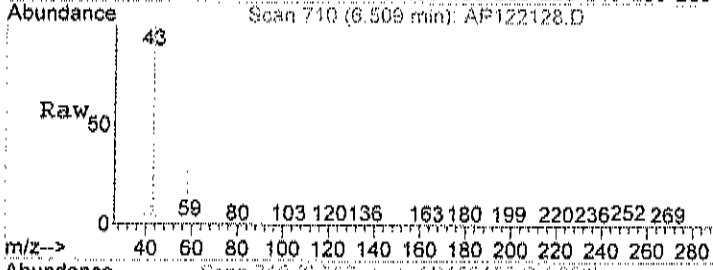
Tgt Ion: 101 Resp: 176077
Ion Ratio Lower Upper
101 100
103 64.7 44.4 84.4
105 10.4 0.0 31.9





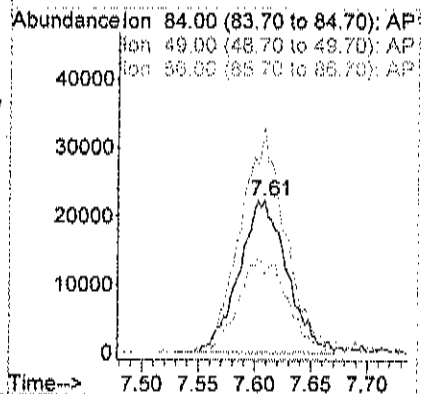
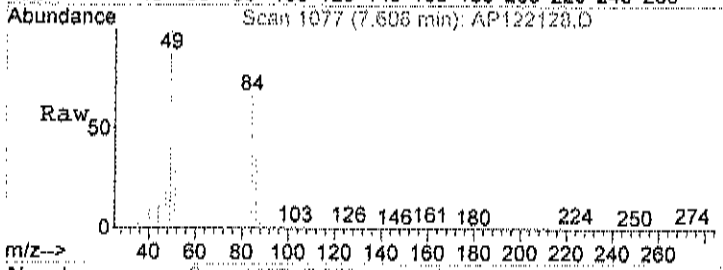
#15
Acetone
Concen: 5.21 ppb
RT: 6.51 min Scan# 710
Delta R.T. -0.00 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

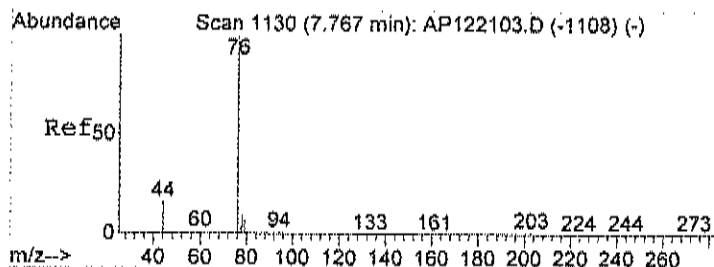
Tgt Ion: 58 Resp: 129976
Ion Ratio Lower Upper
58 100
43 345.5 298.2 358.2



#21
Methylene chloride
Concen: 1.02 ppb
RT: 7.61 min Scan# 1077
Delta R.T. 0.01 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

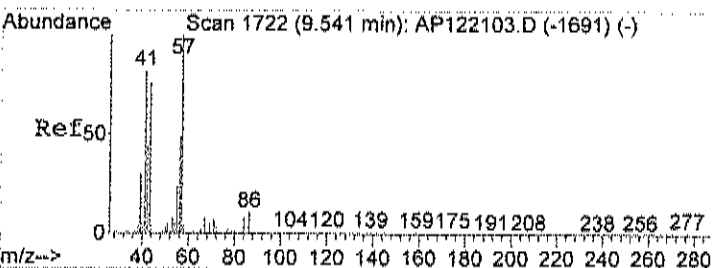
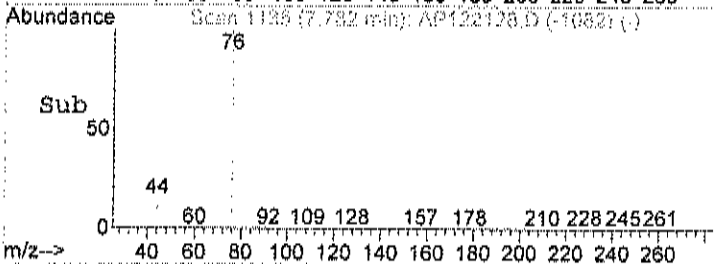
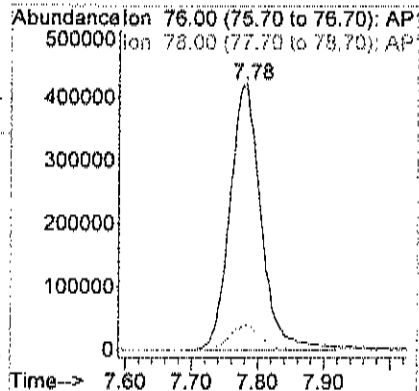
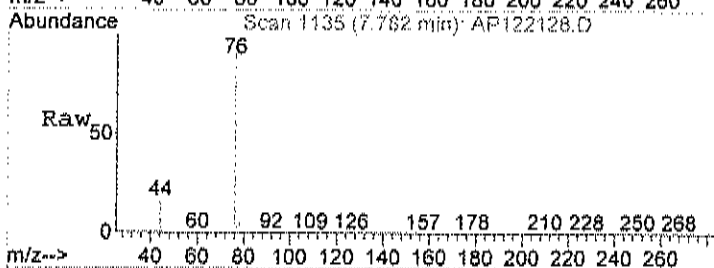
Tgt Ion: 84 Resp: 65788
Ion Ratio Lower Upper
84 100
49 141.2 121.5 161.5
86 64.7 46.0 86.0





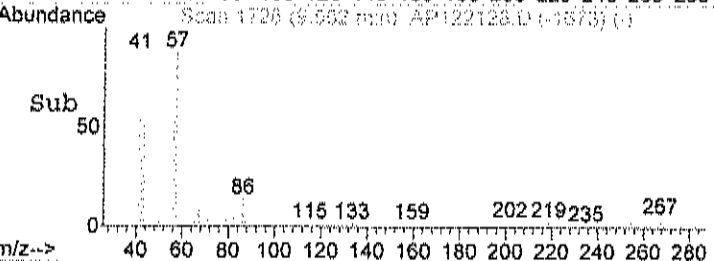
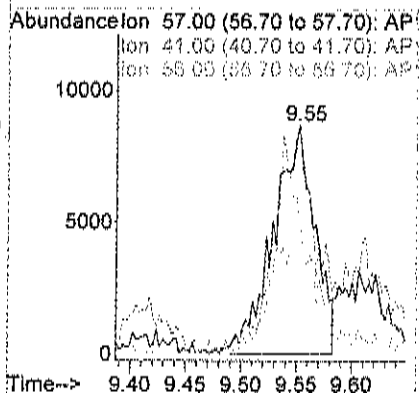
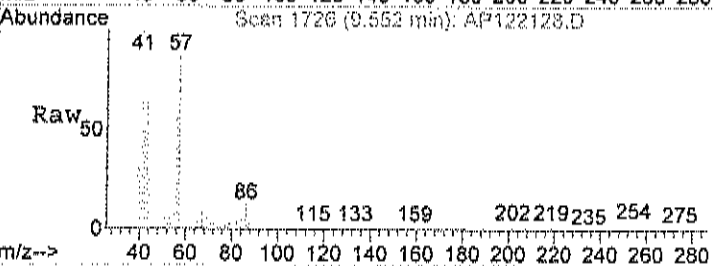
#23
Carbon disulfide
Concen: 9.69 ppb
RT: 7.78 min Scan# 1135
Delta R.T. 0.01 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

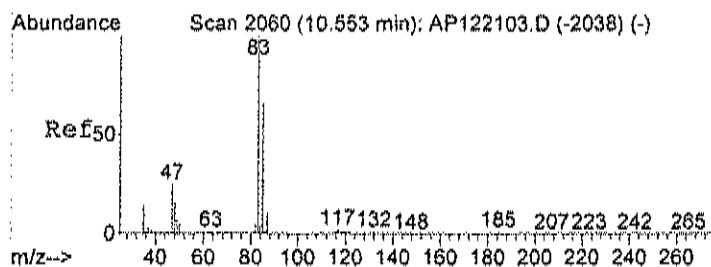
Tgt Ion: 76 Resp: 1382055
Ion Ratio Lower Upper
76 100
78 9.2 0.0 29.2



#30
Hexane
Concen: 0.28 ppb m
RT: 9.55 min Scan# 1726
Delta R.T. 0.01 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

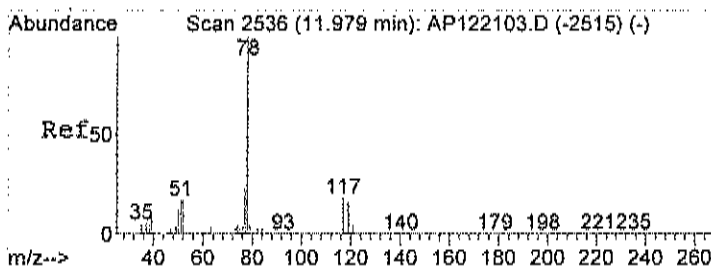
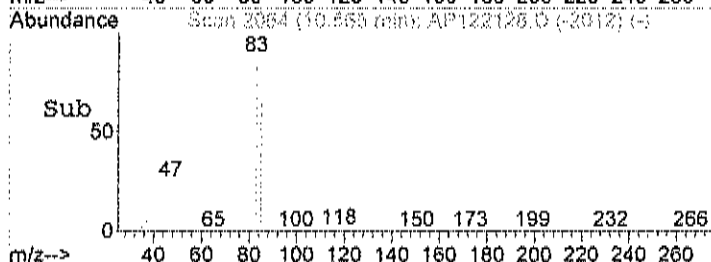
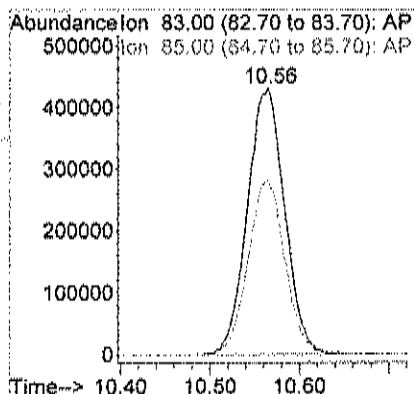
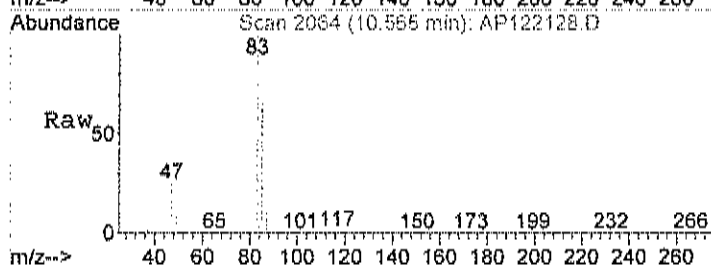
Tgt Ion: 57 Resp: 22711
Ion Ratio Lower Upper
57 100
41 96.7 49.7 89.7#
56 36.6 27.9 67.9





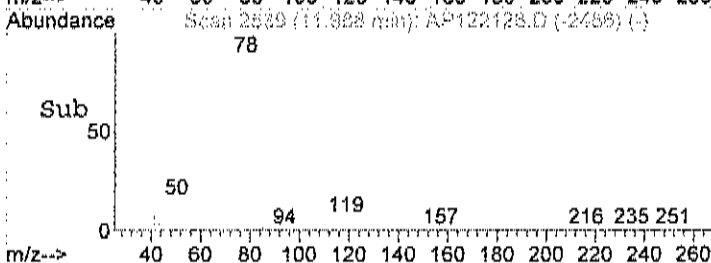
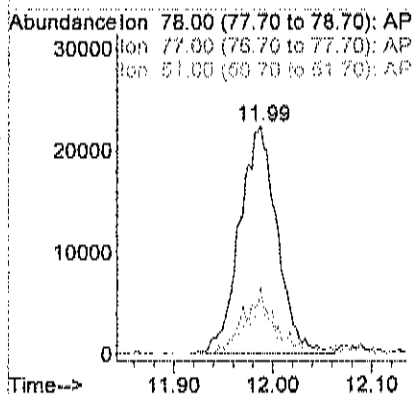
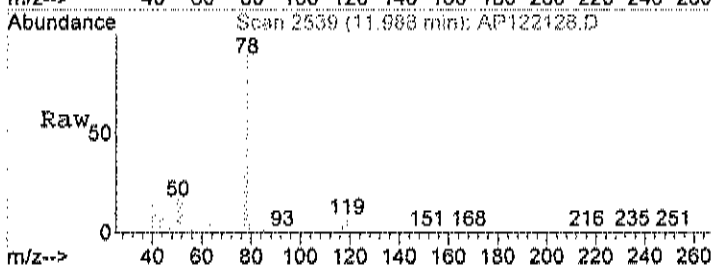
#32
Chloroform
Concen: 8.07 ppb
RT: 10.56 min Scan# 2064
Delta R.T. 0.01 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

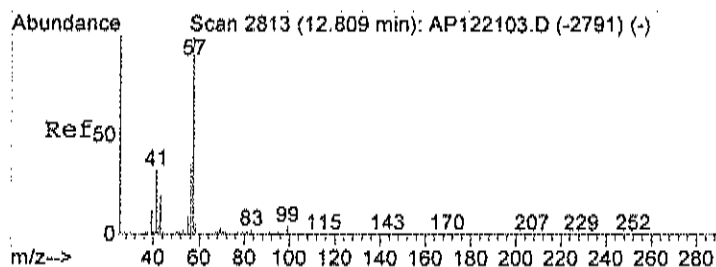
Tgt Ion: 83 Resp: 1245005
Ion Ratio Lower Upper
83 100
85 65.1 45.5 85.5



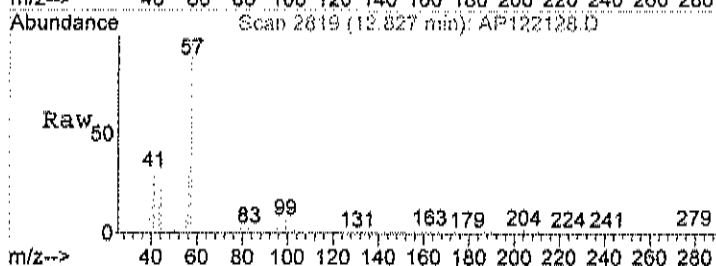
#39
Benzene
Concen: 0.31 ppb
RT: 11.99 min Scan# 2539
Delta R.T. 0.01 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

Tgt Ion: 78 Resp: 59438
Ion Ratio Lower Upper
78 100
77 16.1 3.1 43.1
51 17.5 0.0 36.7

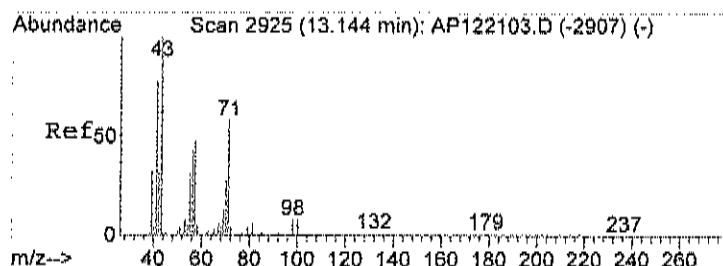
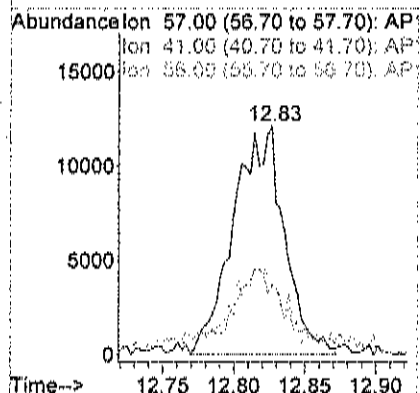
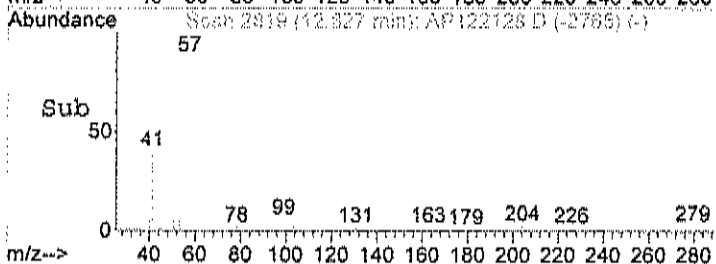




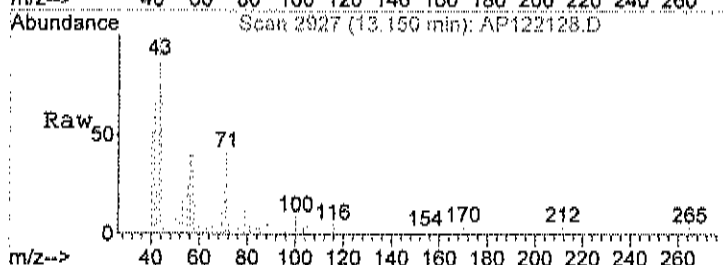
#42
2,2,4-trimethylpentane
Concen: 0.11 ppb
RT: 12.83 min Scan# 2819
Delta R.T. 0.01 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am



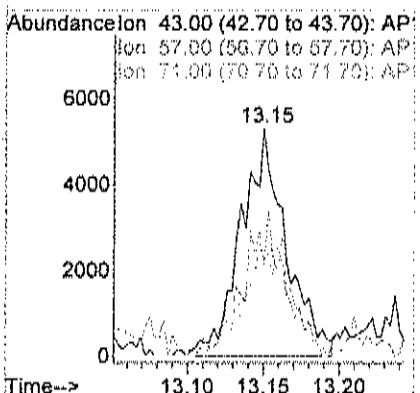
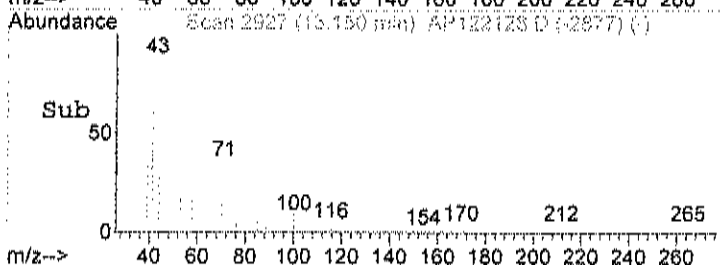
Tgt Ion: 57 Resp: 30303
Ion Ratio Lower Upper
57 100
41 41.9 6.9 46.9
56 40.1 11.5 51.5

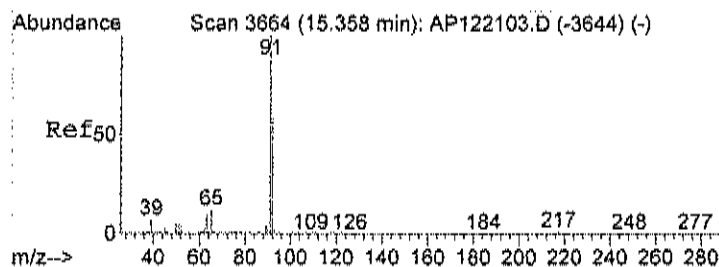


#43
Heptane
Concen: 0.11 ppb
RT: 13.15 min Scan# 2927
Delta R.T. -0.00 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am



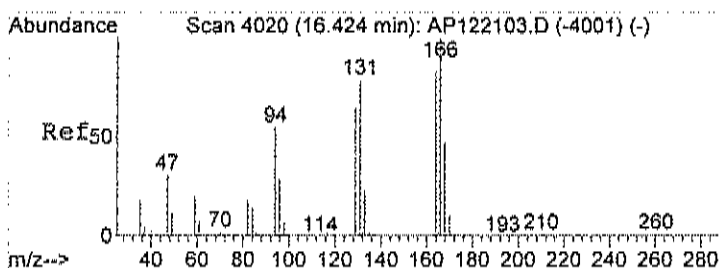
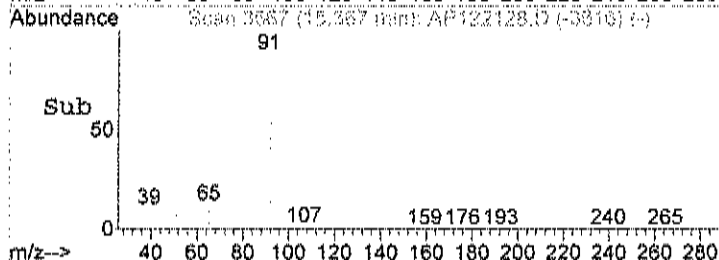
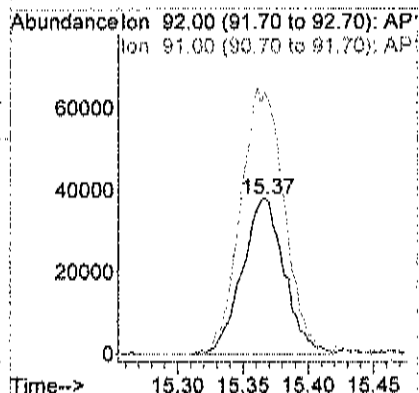
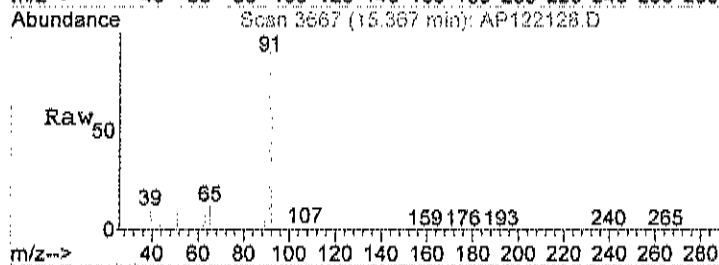
Tgt Ion: 43 Resp: 10961
Ion Ratio Lower Upper
43 100
57 59.1 32.7 72.7
71 51.9 35.6 75.6





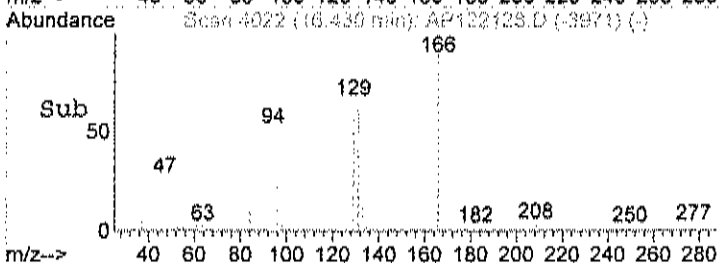
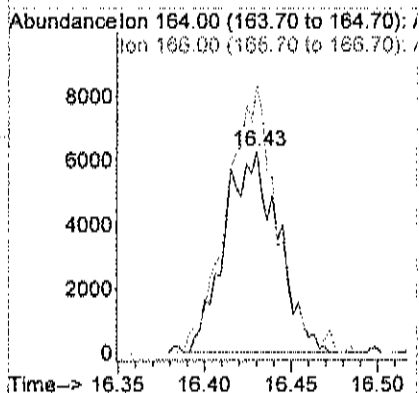
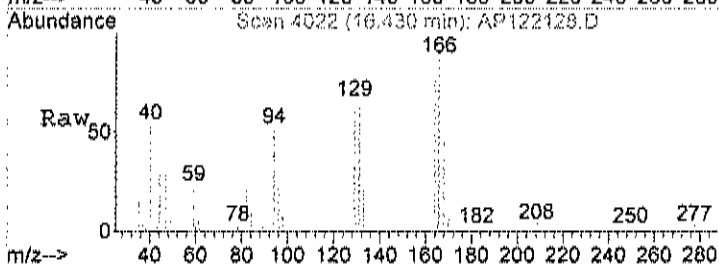
#51
Toluene
Concen: 0.80 ppb
RT: 15.37 min Scan# 3667
Delta R.T. 0.00 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

Tgt Ion: 92 Resp: 84791
Ion Ratio Lower Upper
92 100
91 177.6 154.3 194.3



#56
Tetrachloroethylene
Concen: 0.16 ppb
RT: 16.43 min Scan# 4022
Delta R.T. 0.00 min
Lab File: AP122128.D
Acq: 22 Dec 2018 5:25 am

Tgt Ion: 164 Resp: 13478
Ion Ratio Lower Upper
164 100
166 122.8 108.5 148.5



Data File : C:\HPCHEM\1\DATA\AP122233.D

Vial: 79

Acq On : 23 Dec 2018 5:53 am

Operator: RJP

Sample : C1812057-008A 5x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:40 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	35570	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.66	114	137231	1.00	ppb	0.01
50) Chlorobenzene-d5	17.39	117	95512	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.14	95	49729m	0.76	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	76.00%

Target Compounds

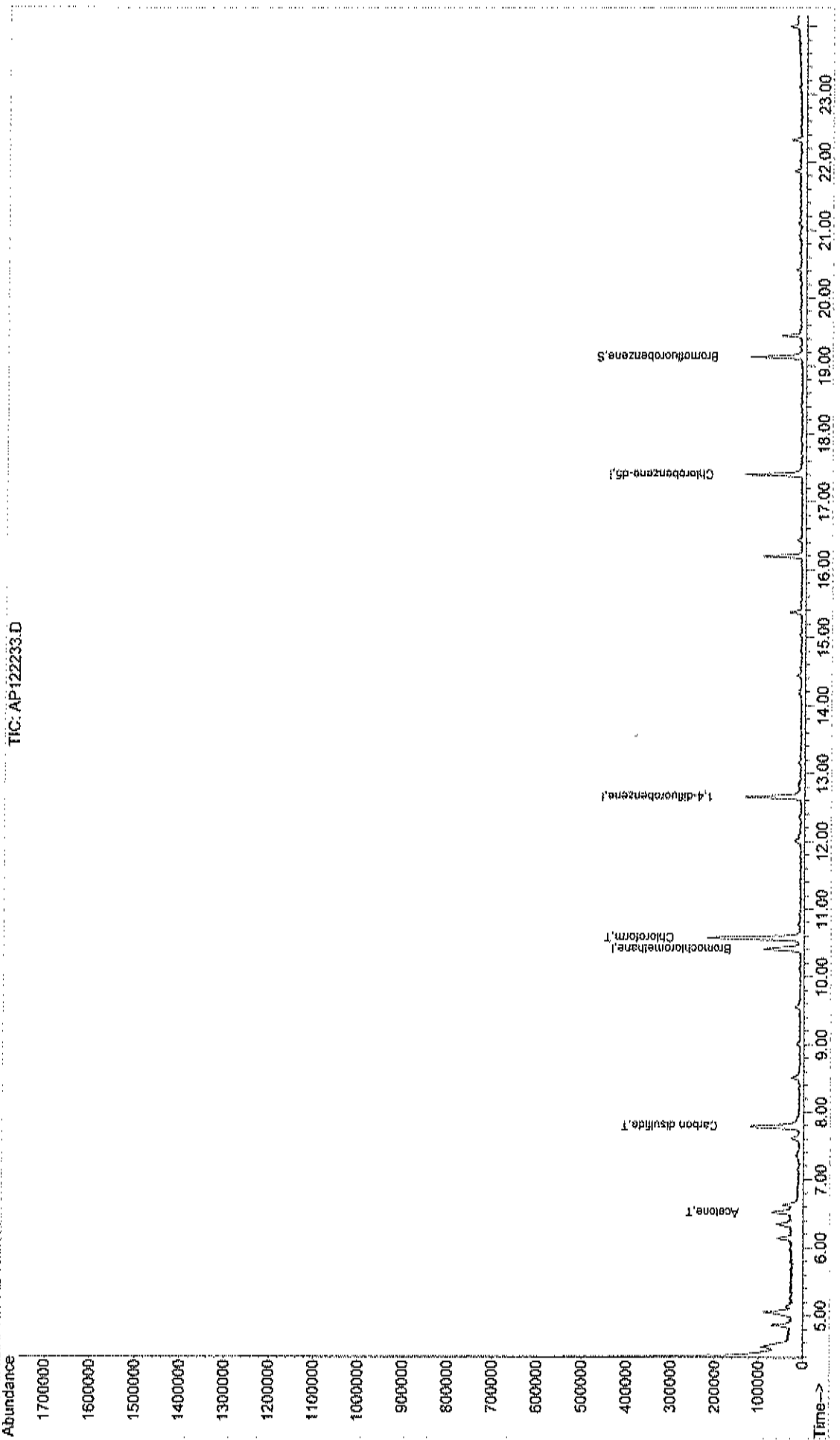
						Qvalue
15) Acetone	6.52	58	25526	1.17	ppb	# 83
23) Carbon disulfide	7.79	76	253680	2.03	ppb	99
32) Chloroform	10.56	83	234398	1.74	ppb	99

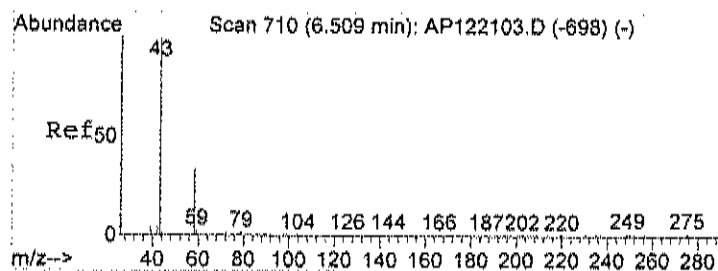
Data File : C:\HPCHEM\1\DATA\AP122233.D
Acq On : 23 Dec 2018 5:53 am
Sample : C1812057-008A 5x
Misc : AD10 1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 28 11:26 2018

Vial: 79
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

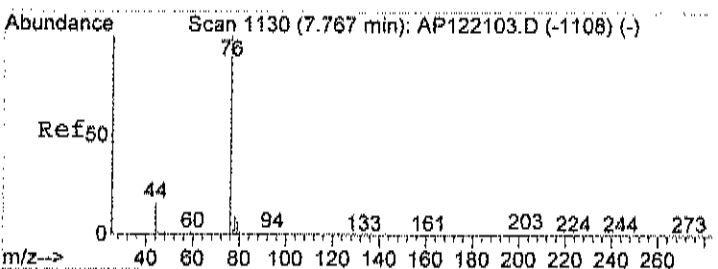
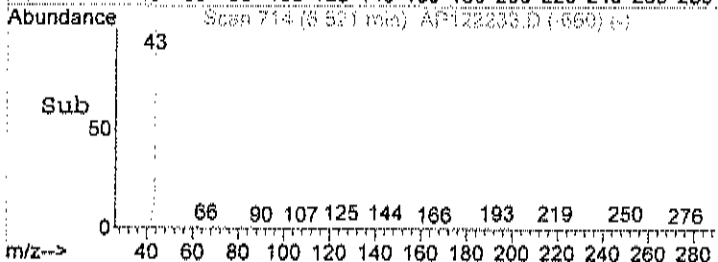
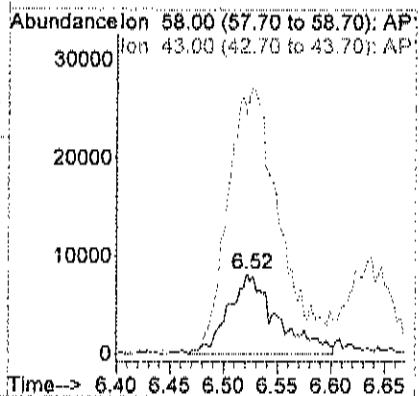
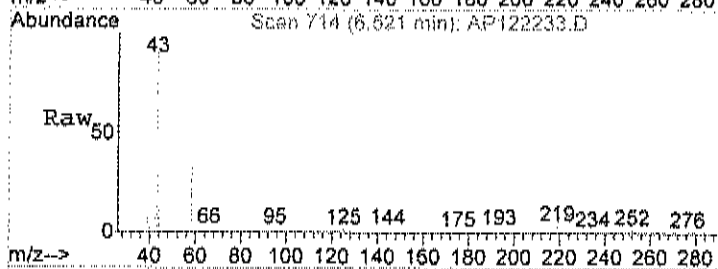
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





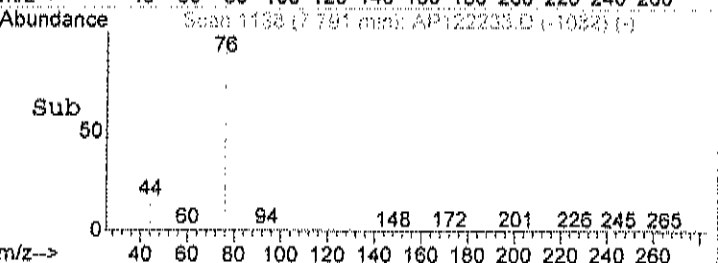
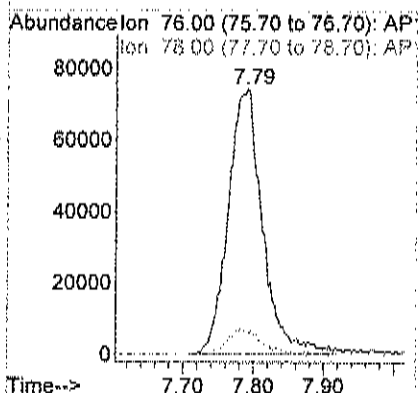
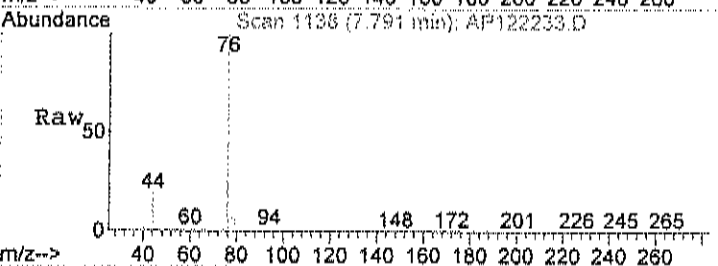
#15
Acetone
Concen: 1.17 ppb
RT: 6.52 min Scan# 714
Delta R.T. 0.01 min
Lab File: AP122233.D
Acq: 23 Dec 2018 5:53 am

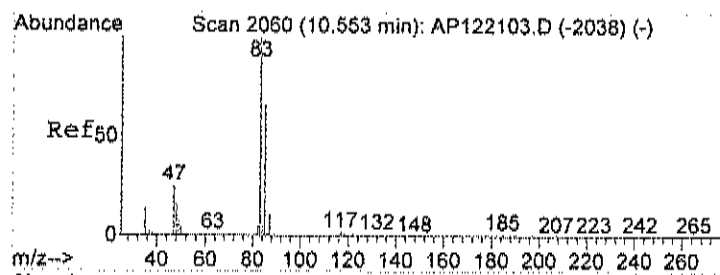
Tgt Ion: 58 Resp: 25526
Ion Ratio Lower Upper
58 100
43 364.1 298.2 358.2#



#23
Carbon disulfide
Concen: 2.03 ppb
RT: 7.79 min Scan# 1138
Delta R.T. 0.02 min
Lab File: AP122233.D
Acq: 23 Dec 2018 5:53 am

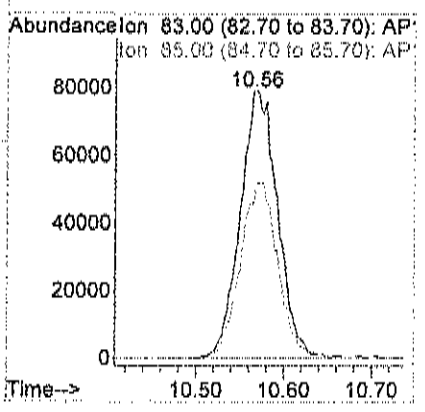
Tgt Ion: 76 Resp: 253680
Ion Ratio Lower Upper
76 100
78 9.5 0.0 29.2





#32
 Chloroform
 Concen: 1.74 ppb
 RT: 10.56 min Scan# 2064
 Delta R.T. 0.01 min
 Lab File: AP122233.D
 Acq: 23 Dec 2018 5:53 am

Tgt Ion: 83 Resp: 234398
 Ion Ratio Lower Upper
 83 100
 85 66.2 45.5 85.5



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2,4-Trimethylbenzene	2.0	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,3,5-Trimethylbenzene	0.51	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,3-Dichlorobenzene	0.24	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 7:24:00 AM
2,2,4-trimethylpentane	0.65	0.15		ppbV	1	12/22/2018 7:24:00 AM
4-ethyltoluene	0.32	0.15		ppbV	1	12/22/2018 7:24:00 AM
Acetone	19	3.0		ppbV	10	12/23/2018 6:32:00 AM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Benzene	1.1	0.15		ppbV	1	12/22/2018 7:24:00 AM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Carbon disulfide	54	6.0		ppbV	40	12/23/2018 7:09:00 AM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Chloroform	1.2	0.15		ppbV	1	12/22/2018 7:24:00 AM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Ethylbenzene	0.40	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 11	0.39	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Freon 12	0.44	0.15		ppbV	1	12/22/2018 7:24:00 AM
Heptane	0.71	0.15		ppbV	1	12/22/2018 7:24:00 AM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Hexane	13	1.5		ppbV	10	12/23/2018 6:32:00 AM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
m&p-Xylene	1.2	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl Ethyl Ketone	0.19	0.30	J	ppbV	1	12/22/2018 7:24:00 AM
Methyl Isobutyl Ketone	1.6	0.30		ppbV	1	12/22/2018 7:24:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Methylene chloride	8.3	1.5		ppbV	10	12/23/2018 6:32:00 AM
o-Xylene	0.60	0.15		ppbV	1	12/22/2018 7:24:00 AM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Styrene	0.13	0.15	J	ppbV	1	12/22/2018 7:24:00 AM
Tetrachloroethylene	0.54	0.15		ppbV	1	12/22/2018 7:24:00 AM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Toluene	1.6	0.15		ppbV	1	12/22/2018 7:24:00 AM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 7:24:00 AM
Surr: Bromofluorobenzene	86.0	70-130		%REC	1	12/22/2018 7:24:00 AM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 7:24:00 AM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 7:24:00 AM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 7:24:00 AM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
1,2,4-Trimethylbenzene	9.9	0.74		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 7:24:00 AM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 7:24:00 AM
1,3,5-Trimethylbenzene	2.5	0.74		ug/m3	1	12/22/2018 7:24:00 AM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 7:24:00 AM
1,3-Dichlorobenzene	1.4	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 7:24:00 AM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
2,2,4-trimethylpentane	3.0	0.70		ug/m3	1	12/22/2018 7:24:00 AM
4-ethyltoluene	1.6	0.74		ug/m3	1	12/22/2018 7:24:00 AM
Acetone	46	7.1		ug/m3	10	12/23/2018 6:32:00 AM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 7:24:00 AM
Benzene	3.4	0.48		ug/m3	1	12/22/2018 7:24:00 AM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 7:24:00 AM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 7:24:00 AM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 7:24:00 AM
Carbon disulfide	170	19		ug/m3	40	12/23/2018 7:09:00 AM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 7:24:00 AM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 7:24:00 AM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 7:24:00 AM
Chloroform	6.1	0.73		ug/m3	1	12/22/2018 7:24:00 AM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 7:24:00 AM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 7:24:00 AM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 7:24:00 AM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 7:24:00 AM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 7:24:00 AM
Ethylbenzene	1.7	0.65		ug/m3	1	12/22/2018 7:24:00 AM
Freon 11	2.2	0.84		ug/m3	1	12/22/2018 7:24:00 AM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 7:24:00 AM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 7:24:00 AM

Qualifiers:	** Quantitation Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte, Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-009A

Client Sample ID: SVW-8
Tag Number: 240,251
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	2.2	0.74		ug/m3	1	12/22/2018 7:24:00 AM
Heptane	2.9	0.61		ug/m3	1	12/22/2018 7:24:00 AM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 7:24:00 AM
Hexane	46	5.3		ug/m3	10	12/23/2018 6:32:00 AM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 7:24:00 AM
m&p-Xylene	5.3	1.3		ug/m3	1	12/22/2018 7:24:00 AM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 7:24:00 AM
Methyl Ethyl Ketone	0.56	0.88	J	ug/m3	1	12/22/2018 7:24:00 AM
Methyl Isobutyl Ketone	6.4	1.2		ug/m3	1	12/22/2018 7:24:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 7:24:00 AM
Methylene chloride	29	5.2		ug/m3	10	12/23/2018 6:32:00 AM
o-Xylene	2.6	0.65		ug/m3	1	12/22/2018 7:24:00 AM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 7:24:00 AM
Styrene	0.55	0.64	J	ug/m3	1	12/22/2018 7:24:00 AM
Tetrachloroethylene	3.7	1.0		ug/m3	1	12/22/2018 7:24:00 AM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 7:24:00 AM
Toluene	6.0	0.57		ug/m3	1	12/22/2018 7:24:00 AM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 7:24:00 AM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 7:24:00 AM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 7:24:00 AM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 7:24:00 AM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Data File : C:\HPCHEM\1\DATA\AP122131.D

Vial: 41

Acq On : 22 Dec 2018 7:24 am

Operator: RJP

Sample : C1812057-009A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:47 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	47588	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	226502	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	238167	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	140054	0.86	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	86.00%

Target Compounds

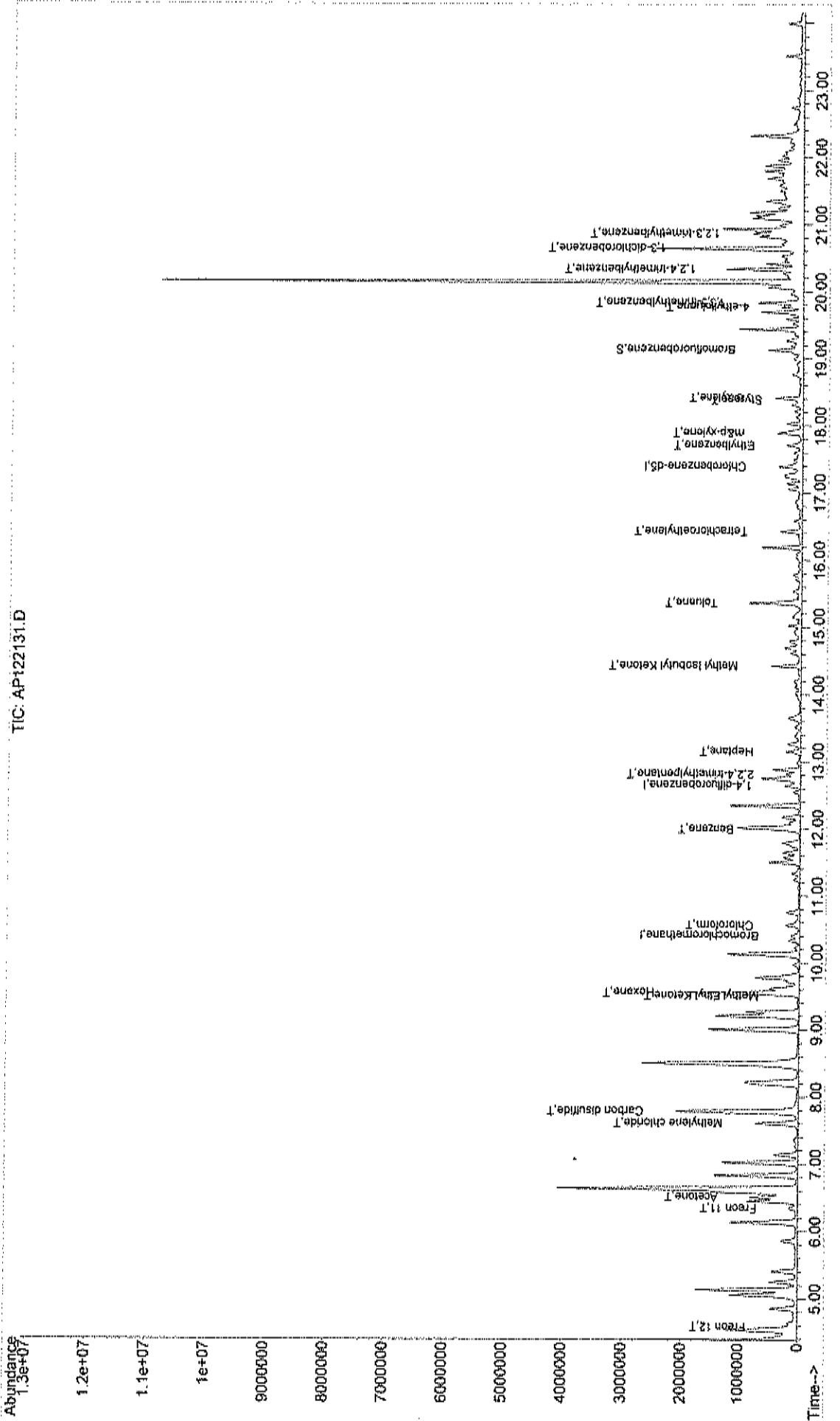
						Qvalue
3) Freon 12	4.59	85	122162	0.44	ppb	96
14) Freon 11	6.34	101	148335	0.39	ppb	100
15) Acetone	6.50	58	422557	14.48	ppb	98
21) Methylene chloride	7.61	84	481271	6.41	ppb	98
23) Carbon disulfide	7.78	76	4924215	29.51	ppb	100
28) Methyl Ethyl Ketone	9.50	72	5554	0.19	ppb	# 100
30) Hexane	9.54	57	1236026	13.15	ppb	# 72
32) Chloroform	10.57	83	225586	1.25	ppb	97
39) Benzene	11.98	78	277519	1.08	ppb	85
42) 2,2,4-trimethylpentane	12.81	57	238824	0.65	ppb	# 73
43) Heptane	13.15	43	90372	0.71	ppb	98
51) Toluene	15.36	92	295239	1.60	ppb	94
52) Methyl Isobutyl Ketone	14.43	43	322307	1.57	ppb	96
56) Tetrachloroethylene	16.43	164	80354	0.54	ppb	99
58) Ethylbenzene	17.71	91	152625	0.40	ppb	100
59) m&p-xylene	17.89	91	393212	1.22	ppb	98
61) Styrene	18.38	104	35959	0.13	ppb	88
63) o-xylene	18.41	91	245670	0.60	ppb	99
69) 4-ethyltoluene	19.77	105	154873	0.32	ppb	99
70) 1,3,5-trimethylbenzene	19.83	105	221568	0.51	ppb	96
71) 1,2,4-trimethylbenzene	20.33	105	676253	2.02	ppb	100
72) 1,3-dichlorobenzene	20.66	146	74696	0.24	ppb	# 78
75) 1,2,3-trimethylbenzene	20.85	105	264240	0.68	ppb	97

Data File : C:\HPCHEM\1\DATA\AP122131.D
 Acq On : 22 Dec 2018 7:24 am
 Sample : C1812057-009A
 Misc : AD10 1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 28 11:31 2018

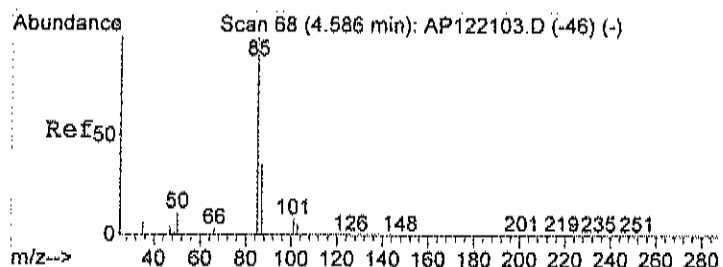
Vial: 41
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration

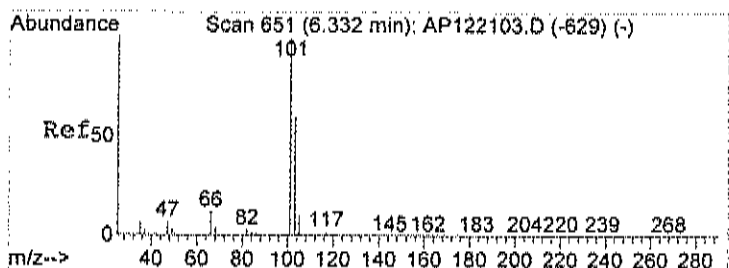
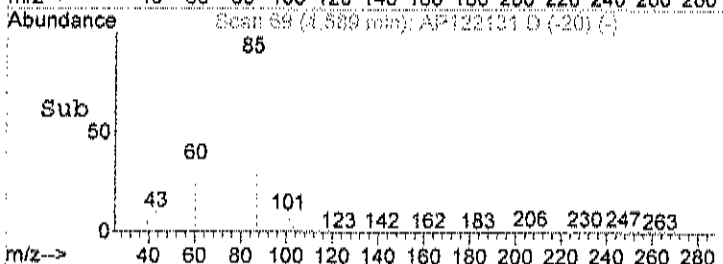
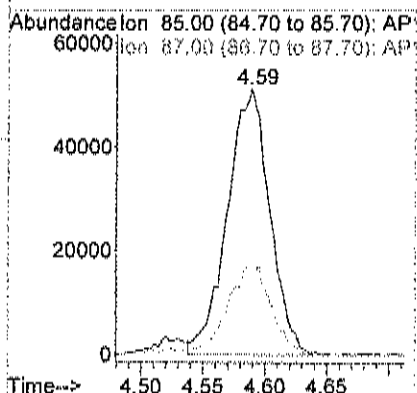
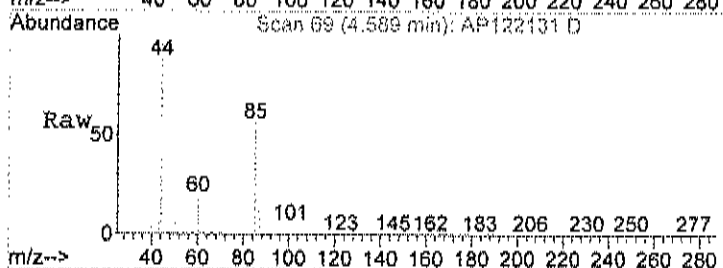


TIC: AP122131.D



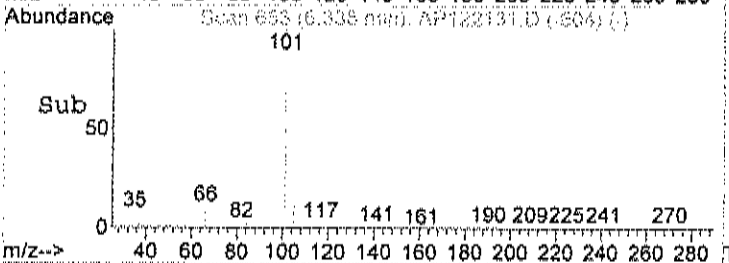
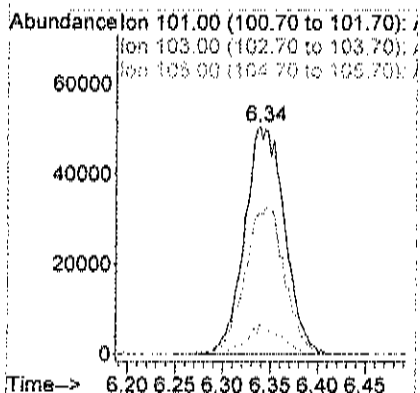
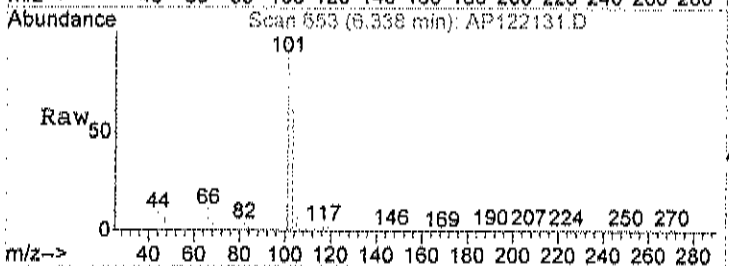
#3
Freon 12
Concen: 0.44 ppb
RT: 4.59 min Scan# 69
Delta R.T. -0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

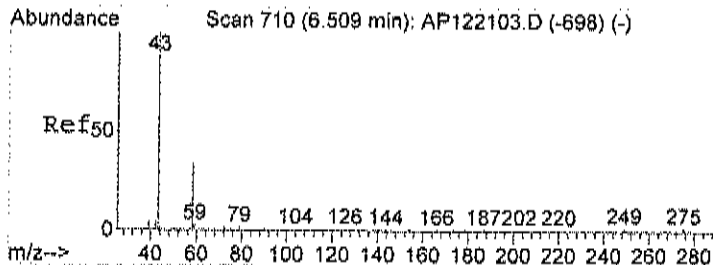
Tgt Ion: 85 Resp: 122162
Ion Ratio Lower Upper
85 100
87 34.4 12.4 52.4



#14
Freon 11
Concen: 0.39 ppb
RT: 6.34 min Scan# 653
Delta R.T. -0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

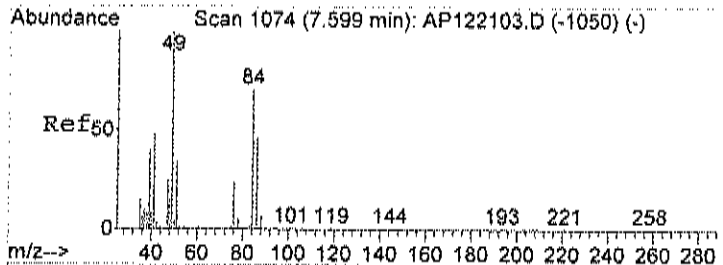
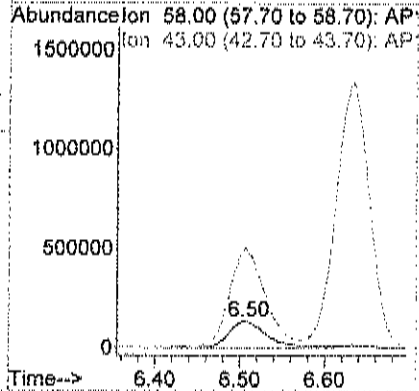
Tgt Ion: 101 Resp: 148335
Ion Ratio Lower Upper
101 100
103 64.4 44.4 84.4
105 11.7 0.0 31.9





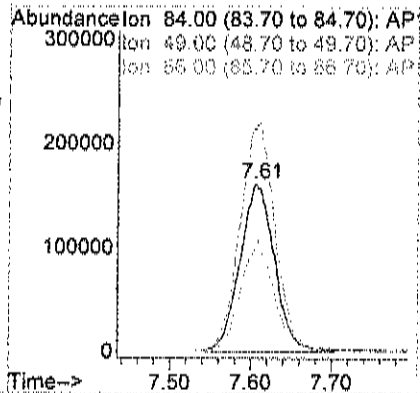
#15
Acetone
Concen: 14.48 ppb
RT: 6.50 min Scan# 708
Delta R.T. -0.01 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

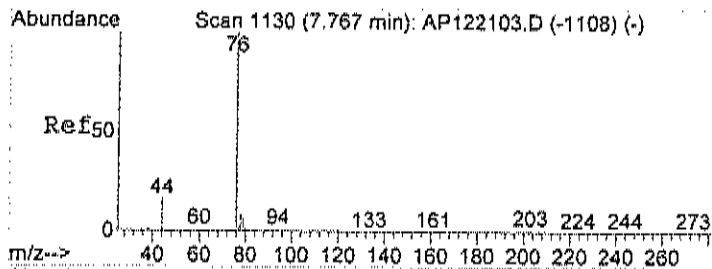
Tgt Ion: 58 Resp: 422557
Ion Ratio Lower Upper
58 100
43 333.1 298.2 358.2



#21
Methylene chloride
Concen: 6.41 ppb
RT: 7.61 min Scan# 1076
Delta R.T. 0.01 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

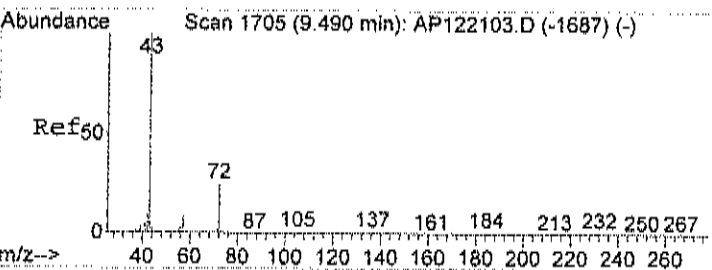
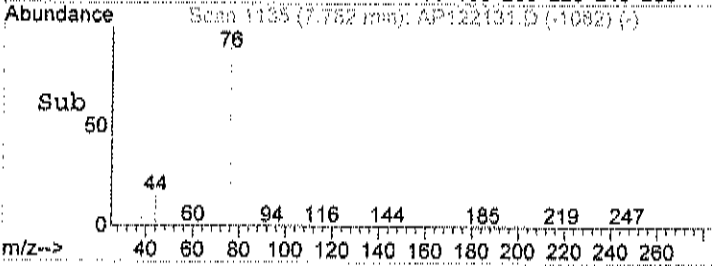
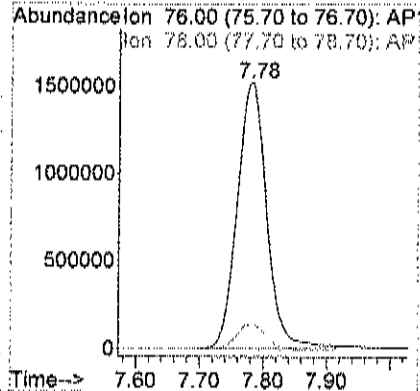
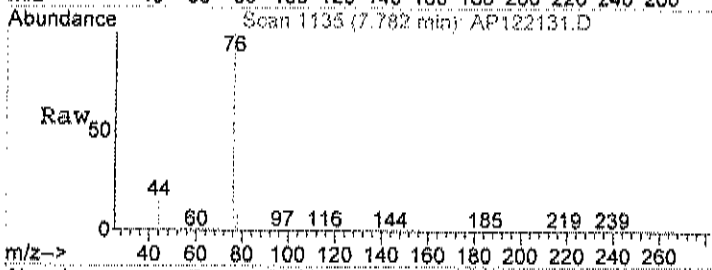
Tgt Ion: 84 Resp: 481271
Ion Ratio Lower Upper
84 100
49 139.2 121.5 161.5
86 63.2 46.0 86.0





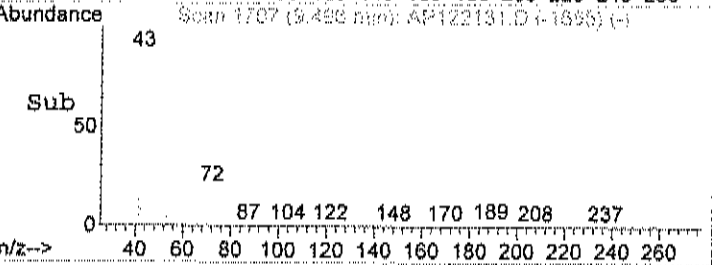
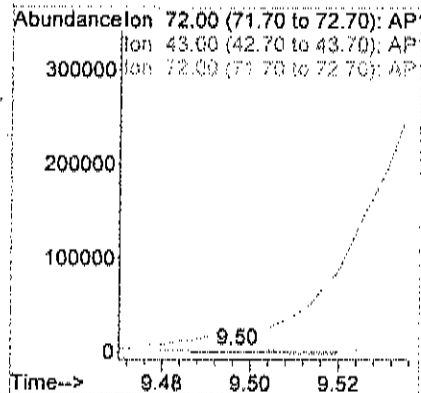
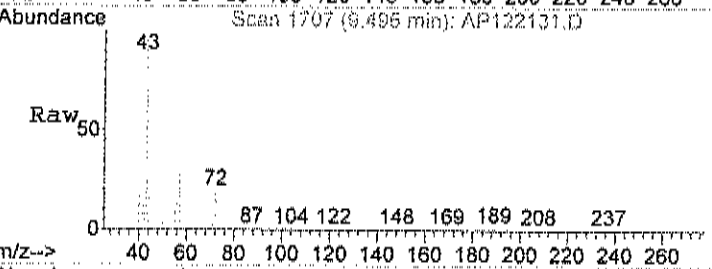
#23
Carbon disulfide
Concen: 29.51 ppb
RT: 7.78 min Scan# 1135
Delta R.T. 0.01 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

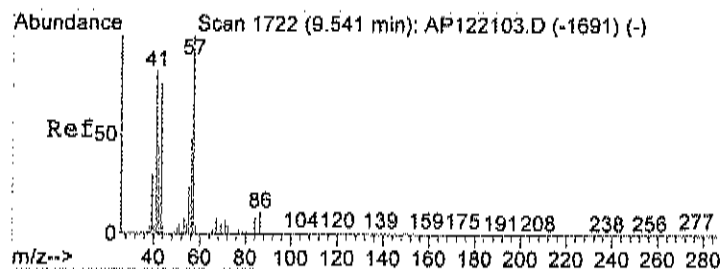
Tgt Ion: 76 Resp: 4924215
Ion Ratio Lower Upper
76 100
78 9.3 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 0.19 ppb
RT: 9.50 min Scan# 1707
Delta R.T. 0.01 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

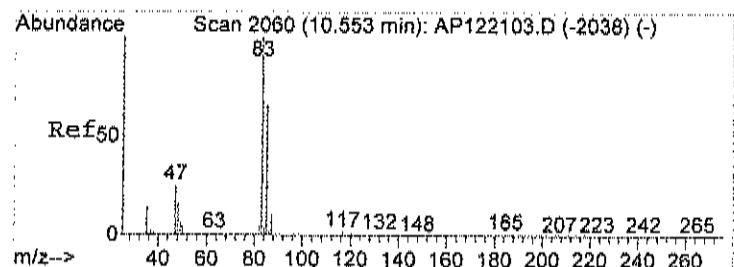
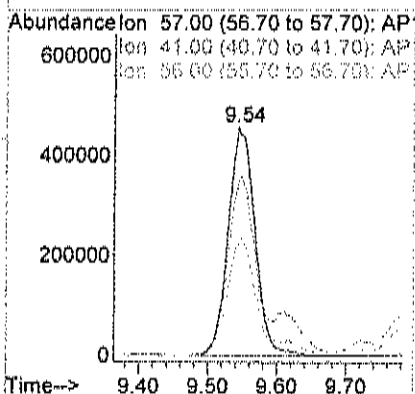
Tgt Ion: 72 Resp: 5554
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0





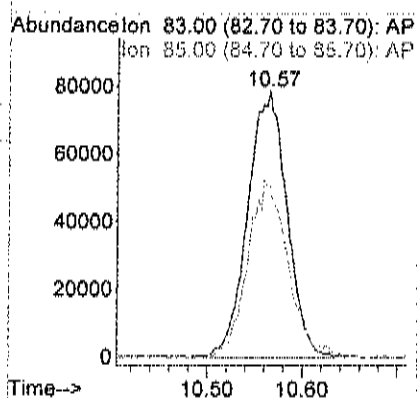
#30
Hexane
Concen: 13.15 ppb
RT: 9.54 min Scan# 1723
Delta R.T. 0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

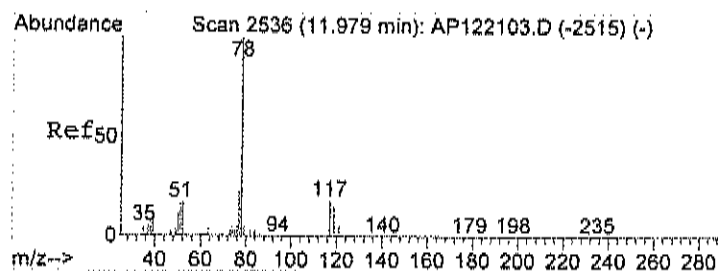
Tgt Ion: 57 Resp: 1236026
Ion Ratio Lower Upper
57 100
41 99.2 49.7 89.7#
56 58.6 27.9 67.9



#32
Chloroform
Concen: 1.25 ppb
RT: 10.57 min Scan# 2064
Delta R.T. 0.01 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

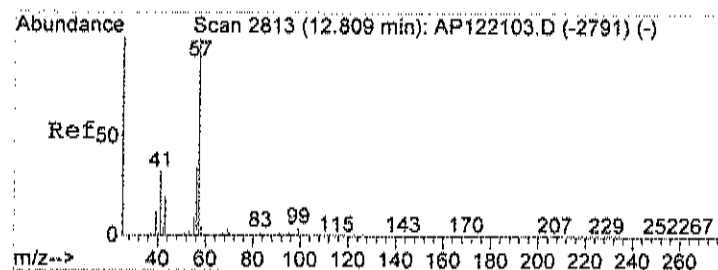
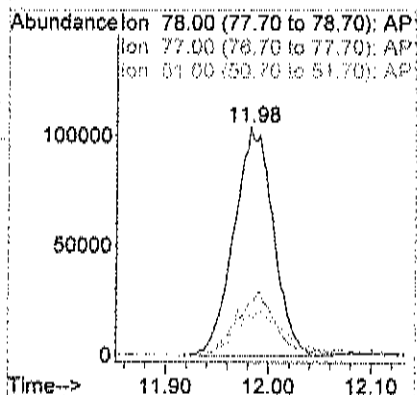
Tgt Ion: 83 Resp: 225586
Ion Ratio Lower Upper
83 100
85 68.3 45.5 85.5





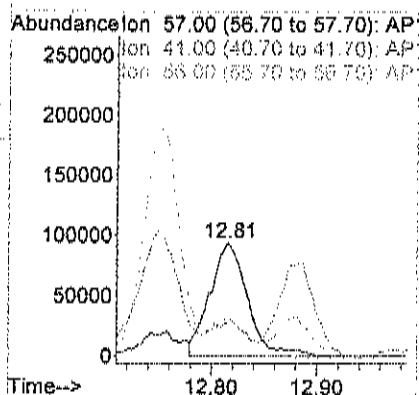
#39
Benzene
Concen: 1.08 ppb
RT: 11.98 min Scan# 2537
Delta R.T. 0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

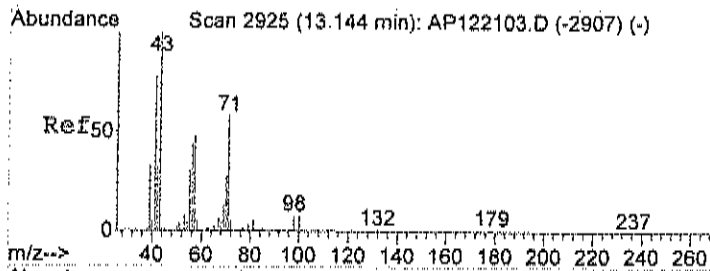
Tgt Ion: 78 Resp: 277519
Ion Ratio Lower Upper
78 100
77 28.4 3.1 43.1
51 26.0 0.0 36.7



#42
2,2,4-trimethylpentane
Concen: 0.65 ppb
RT: 12.81 min Scan# 2815
Delta R.T. 0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

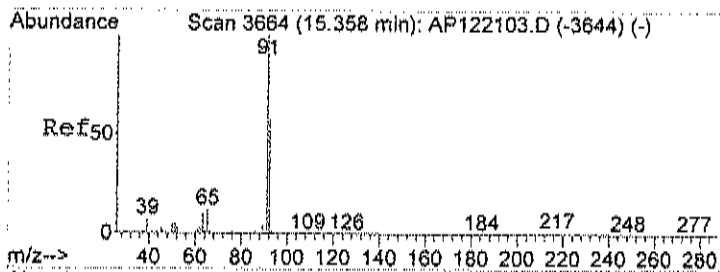
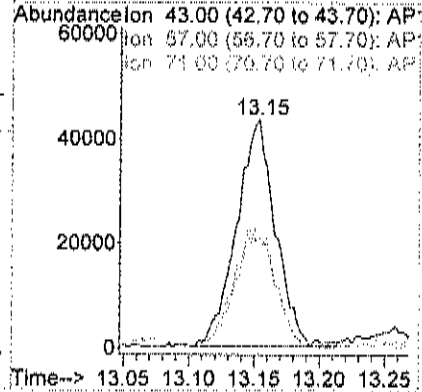
Tgt Ion: 57 Resp: 238824
Ion Ratio Lower Upper
57 100
41 0.0 6.9 46.9#
56 28.3 11.5 51.5





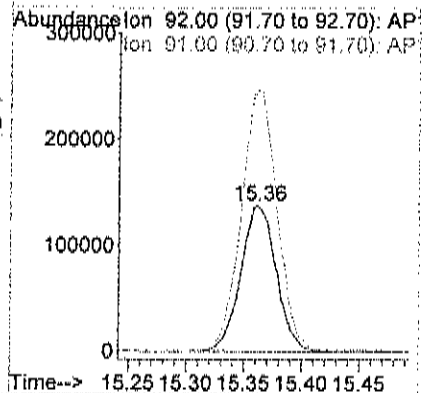
#43
Heptane
Concen: 0.71 ppb
RT: 13.15 min Scan# 2928
Delta R.T. 0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

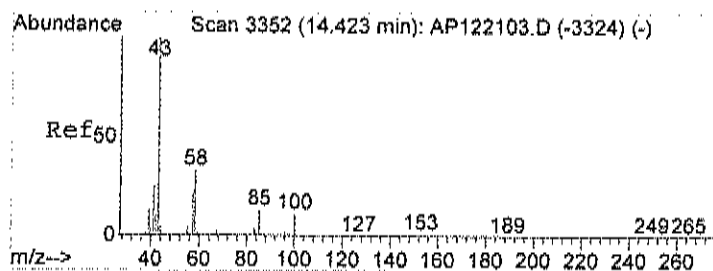
Tgt Ion: 43 Resp: 90372
Ion Ratio Lower Upper
43 100
57 54.0 32.7 72.7
71 54.2 35.6 75.6



#51
Toluene
Concen: 1.60 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

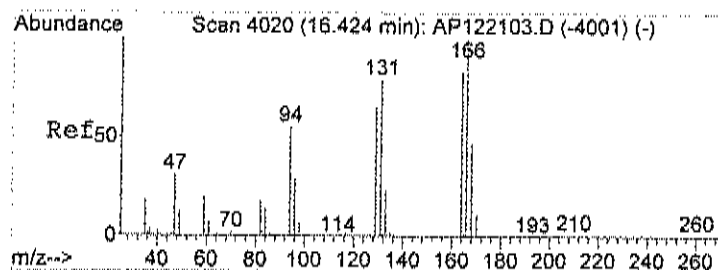
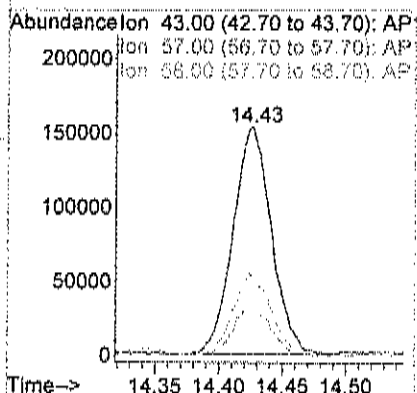
Tgt Ion: 92 Resp: 295239
Ion Ratio Lower Upper
92 100
91 182.1 154.3 194.3





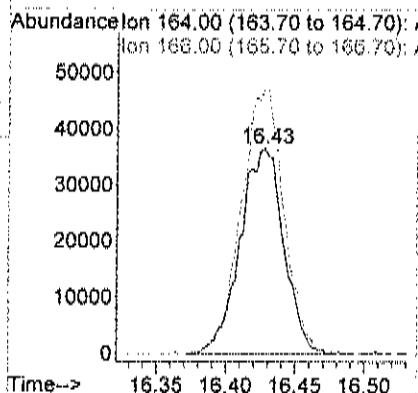
#52
Methyl Isobutyl Ketone
Concen: 1.57 ppb
RT: 14.43 min Scan# 3353
Delta R.T. -0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

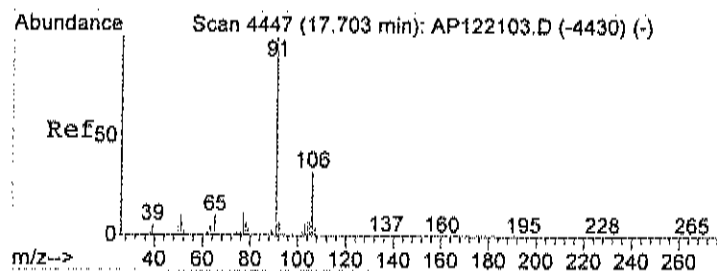
Tgt Ion: 43 Resp: 322307
Ion Ratio Lower Upper
43 100
57 20.9 3.5 43.5
58 36.3 17.9 57.9



#56
Tetrachloroethylene
Concen: 0.54 ppb
RT: 16.43 min Scan# 4021
Delta R.T. 0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

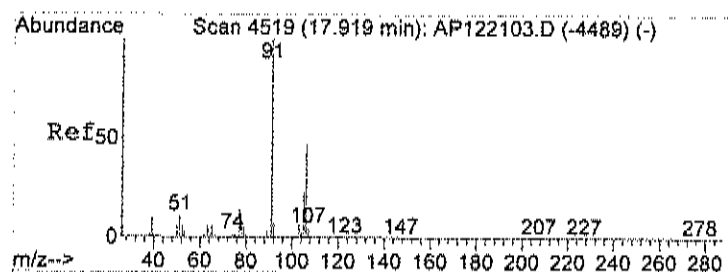
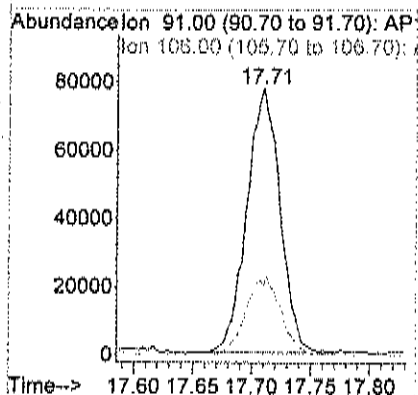
Tgt Ion: 164 Resp: 80354
Ion Ratio Lower Upper
164 100
166 127.2 108.5 148.5





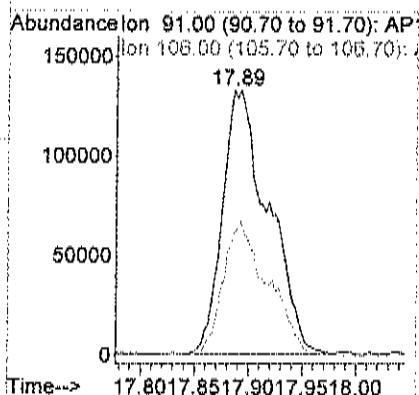
#58
Ethylbenzene
Concen: 0.40 ppb
RT: 17.71 min Scan# 4449
Delta R.T. -0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

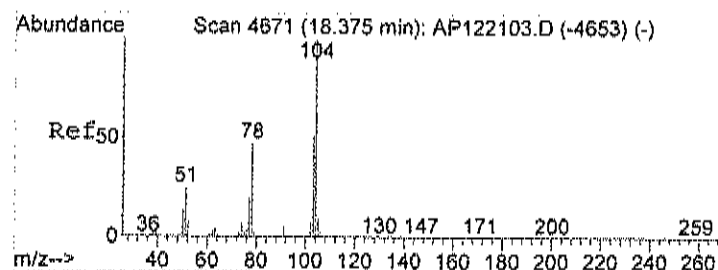
Tgt Ion: 91 Resp: 152625
Ion Ratio Lower Upper
91 100
106 31.3 11.4 51.4



#59
m&p-xylene
Concen: 1.22 ppb
RT: 17.89 min Scan# 4508
Delta R.T. -0.04 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

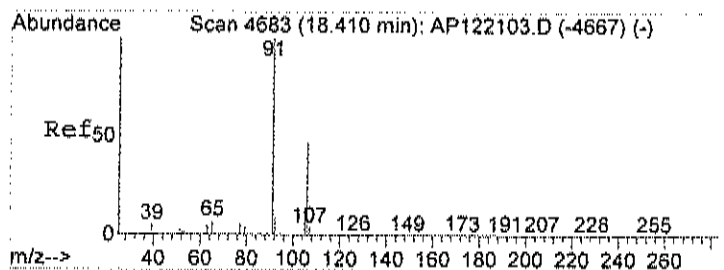
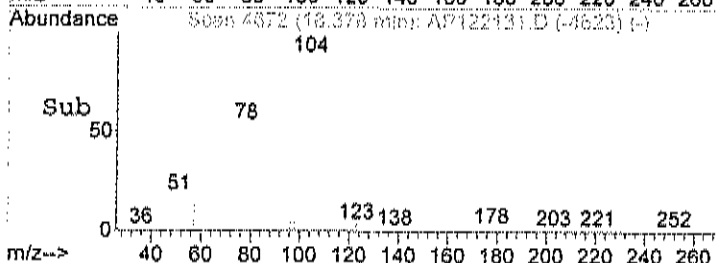
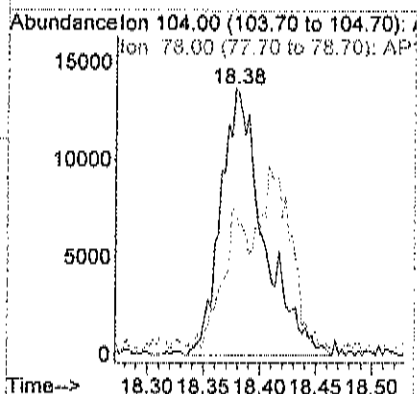
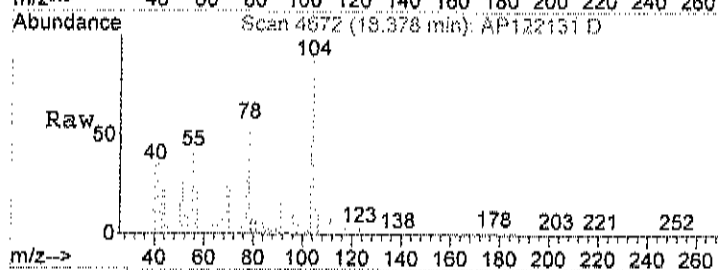
Tgt Ion: 91 Resp: 393212
Ion Ratio Lower Upper
91 100
106 49.9 28.3 68.3





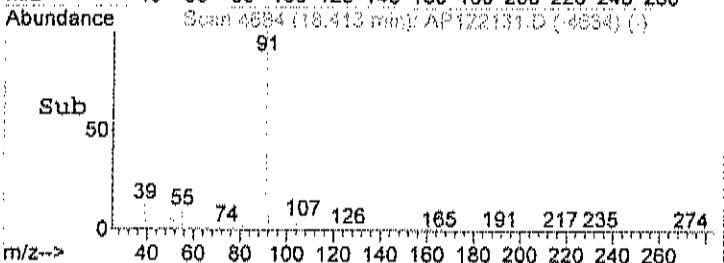
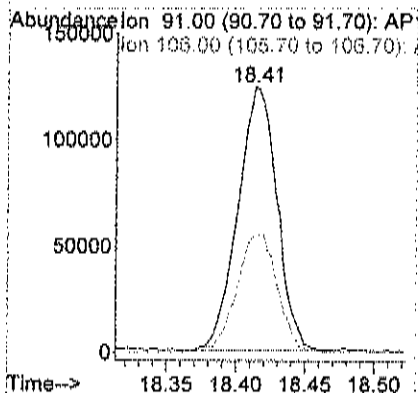
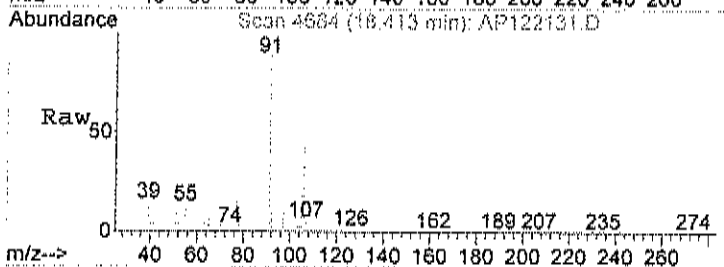
#61
Styrene
Concen: 0.13 ppb
RT: 18.38 min Scan# 4672
Delta R.T. -0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

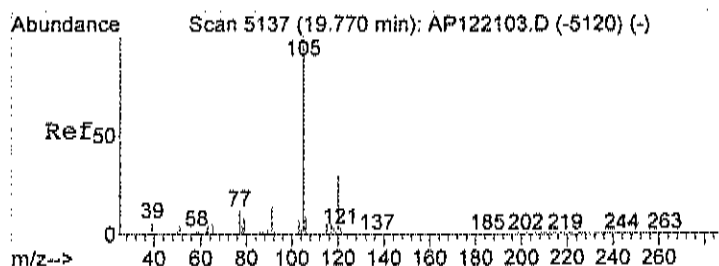
Tgt Ion: 104 Resp: 35959
Ion Ratio Lower Upper
104 100
78 46.7 35.3 75.3



#63
o-xylene
Concen: 0.60 ppb
RT: 18.41 min Scan# 4684
Delta R.T. 0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

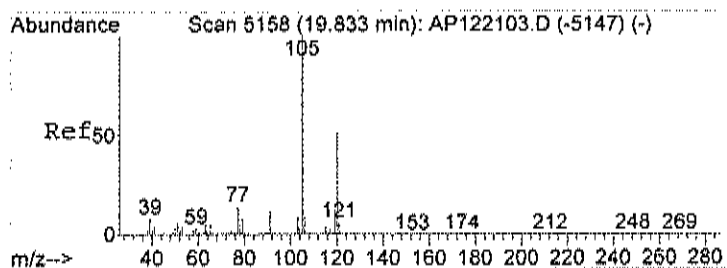
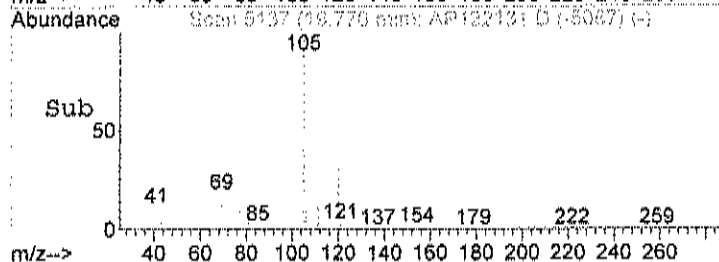
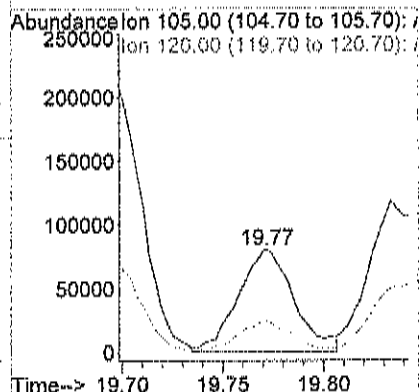
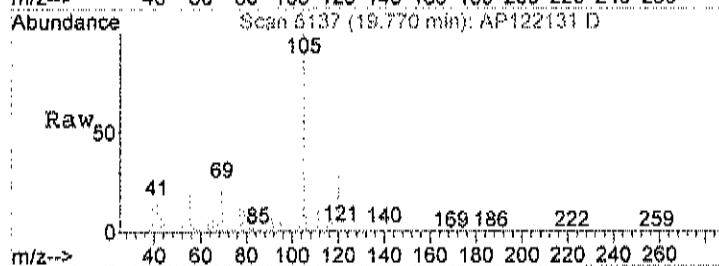
Tgt Ion: 91 Resp: 245670
Ion Ratio Lower Upper
91 100
106 47.1 26.6 66.6





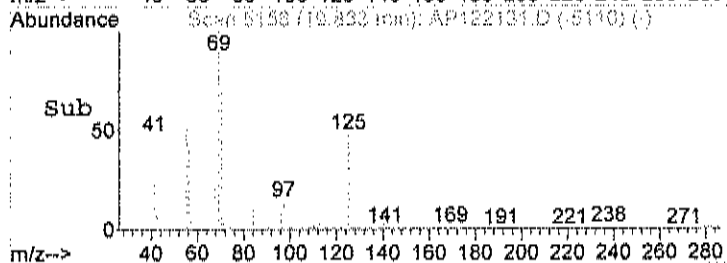
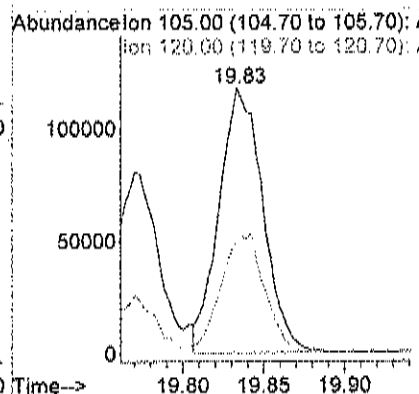
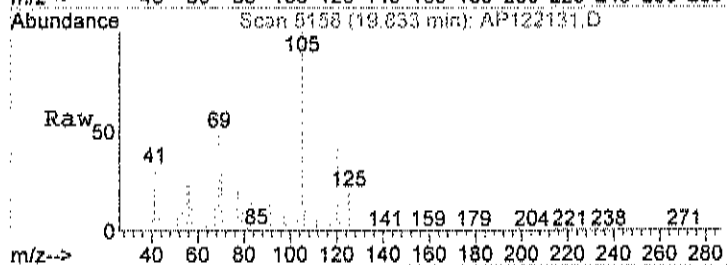
#69
4-ethyltoluene
Concen: 0.32 ppb
RT: 19.77 min Scan# 5137
Delta R.T. 0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

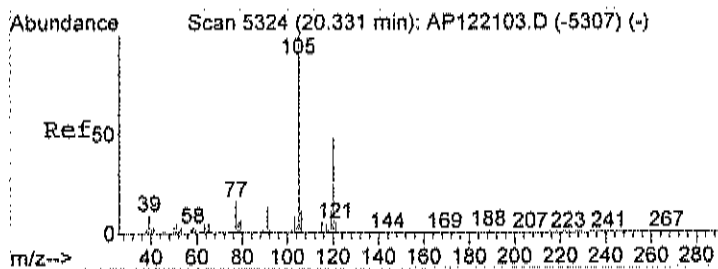
Tgt Ion:105 Resp: 154873
Ion Ratio Lower Upper
105 100
120 29.4 10.2 50.2



#70
1,3,5-trimethylbenzene
Concen: 0.51 ppb
RT: 19.83 min Scan# 5158
Delta R.T. -0.01 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

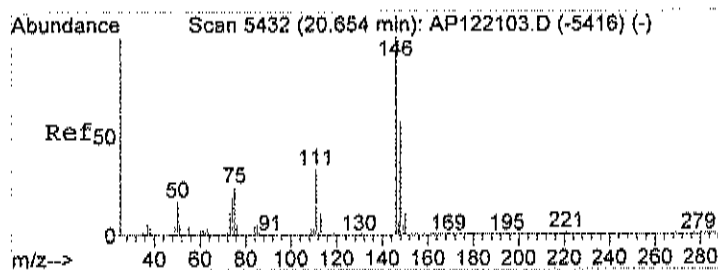
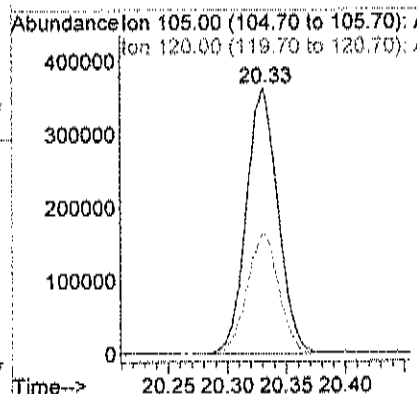
Tgt Ion:105 Resp: 221568
Ion Ratio Lower Upper
105 100
120 45.1 27.6 67.6





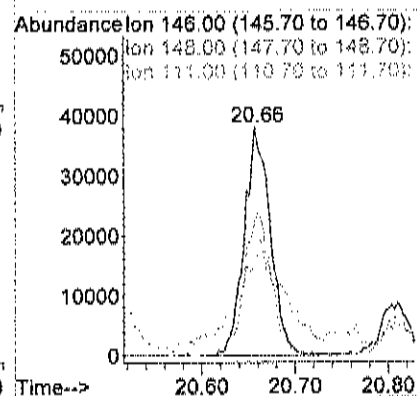
#71
1,2,4-trimethylbenzene
Concen: 2.02 ppb
RT: 20.33 min Scan# 5324
Delta R.T. -0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

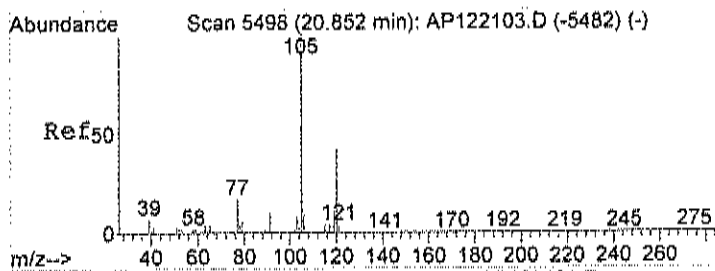
Tgt Ion:105 Resp: 676253
Ion Ratio Lower Upper
105 100
120 45.4 25.3 65.3



#72
1,3-dichlorobenzene
Concen: 0.24 ppb
RT: 20.66 min Scan# 5433
Delta R.T. -0.00 min
Lab File: AP122131.D
Acq: 22 Dec 2018 7:24 am

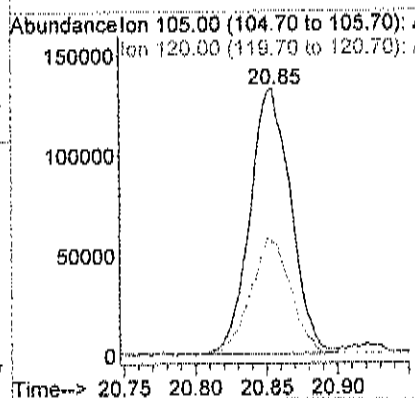
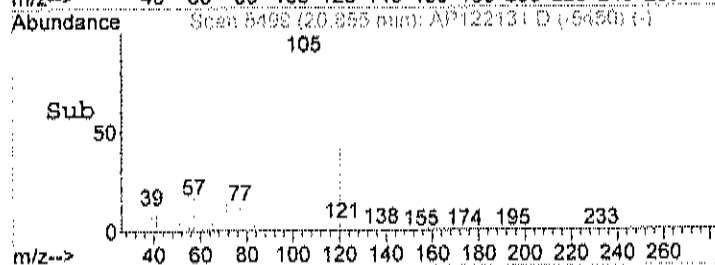
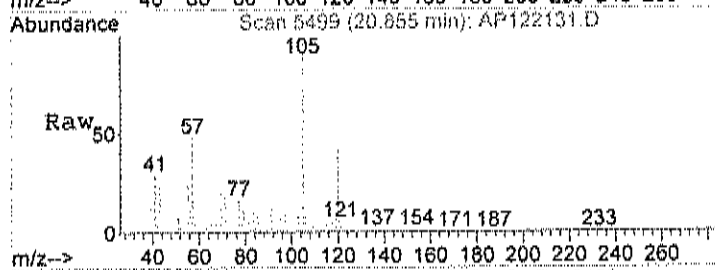
Tgt Ion:146 Resp: 74696
Ion Ratio Lower Upper
146 100
148 63.9 43.6 83.6
111 75.4 19.9 59.9#





#75
 1,2,3-trimethylbenzene
 Concen: 0.68 ppb
 RT: 20.85 min Scan# 5499
 Delta R.T. -0.00 min
 Lab File: AP122131.D
 Acq: 22 Dec 2018 7:24 am

Tgt Ion: 105 Resp: 264240
 Ion Ratio Lower Upper
 105 100
 120 44.3 31.6 52.8



Data File : C:\HPCHEM\1\DATA\AP122234.D

Vial: 80

Acq On : 23 Dec 2018 6:32 am

Operator: RJP

Sample : C1812057-009A 10x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:41 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.42	128	35921	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.65	114	155048	1.00	ppb	0.00
50) Chlorobenzene-d5	17.40	117	140692	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	69946m	0.73	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%

Target Compounds

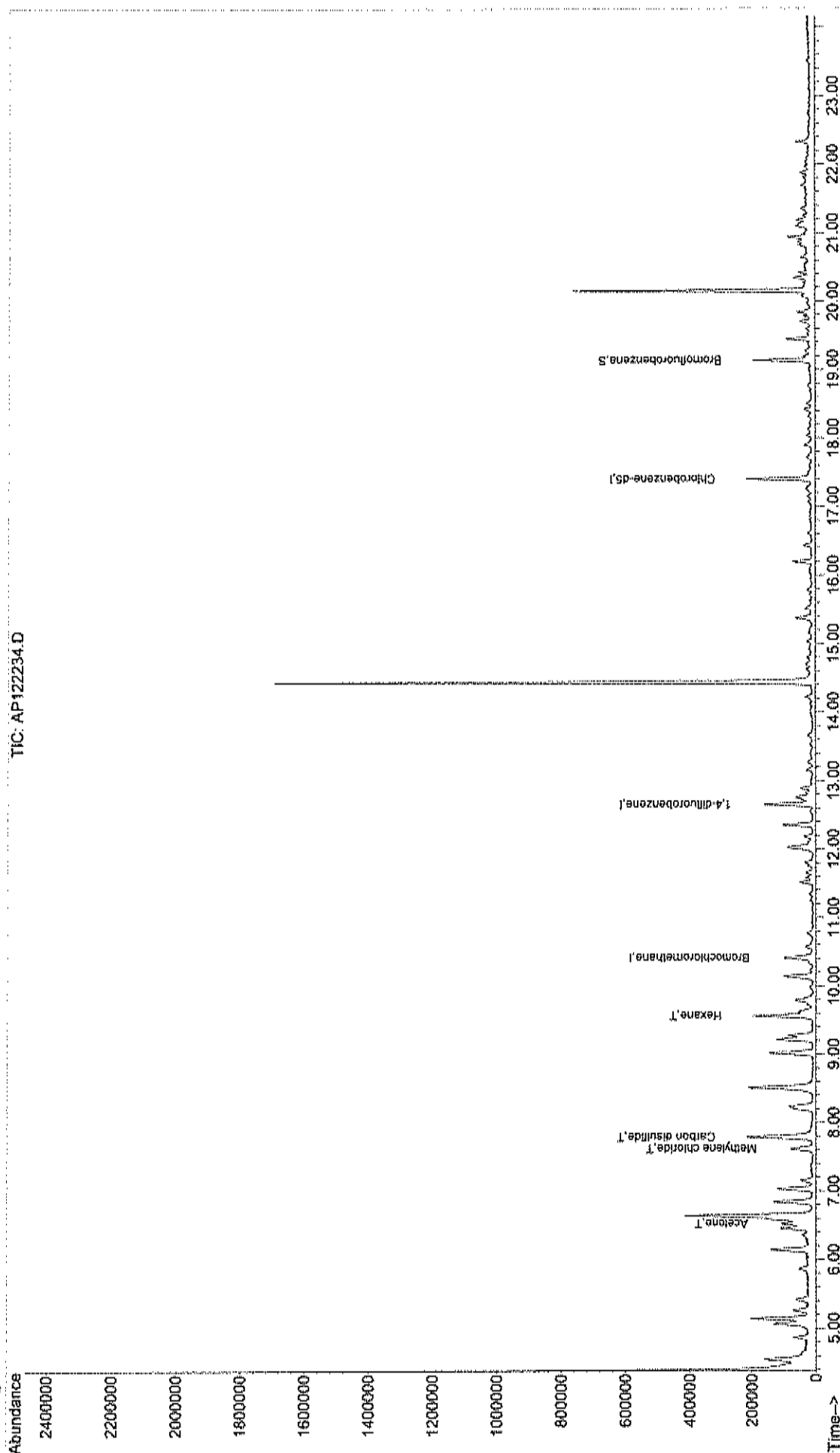
	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.53	58	42618	1.93	ppb	# 84
21) Methylene chloride	7.61	84	46796	0.83	ppb	99
23) Carbon disulfide	7.79	76	468974	3.72	ppb	99
30) Hexane	9.56	57	92470	1.30	ppb	# 76

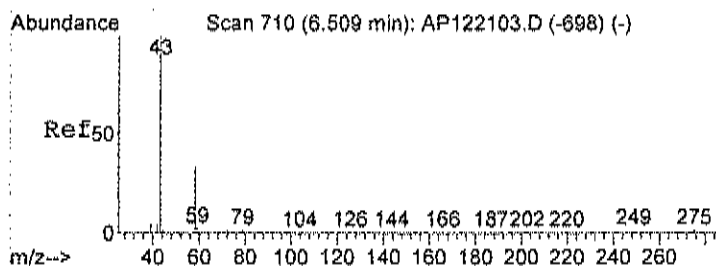
Data File : C:\HPCHEM\1\DATA\AP122234.D
Acq On : 23 Dec 2018 6:32 am
Sample : C1812057-009A 10x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 28 11:30 2018

Vial: 80
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

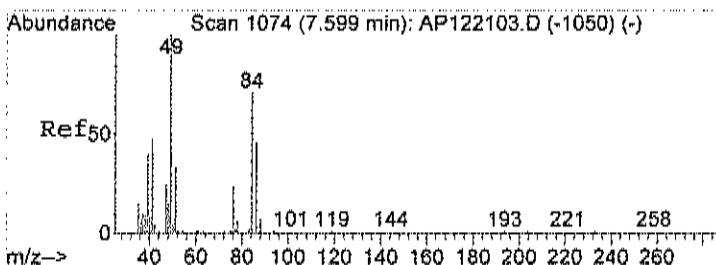
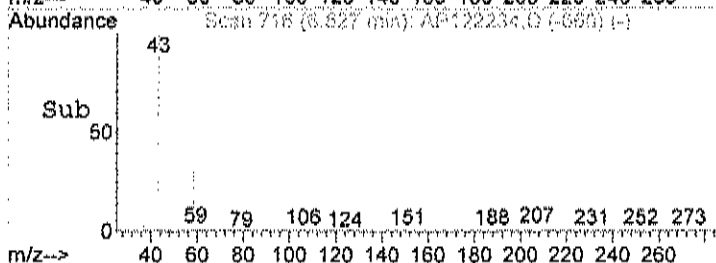
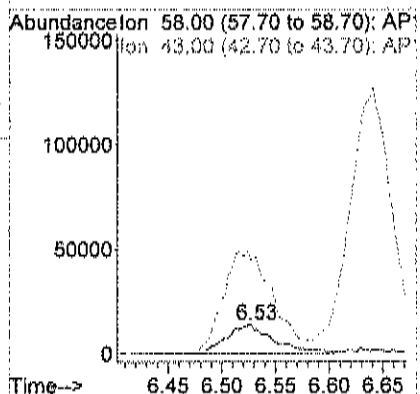
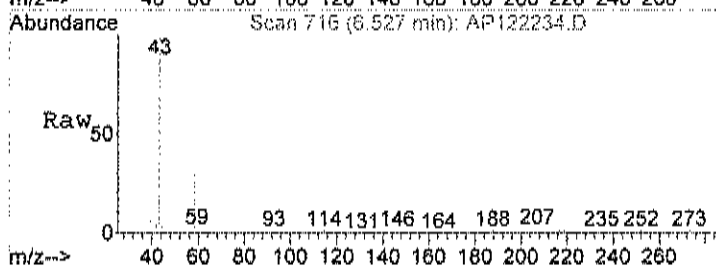
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





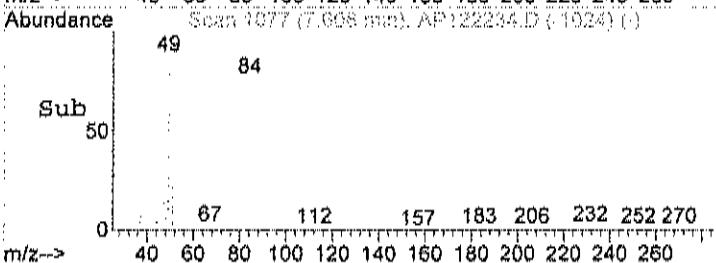
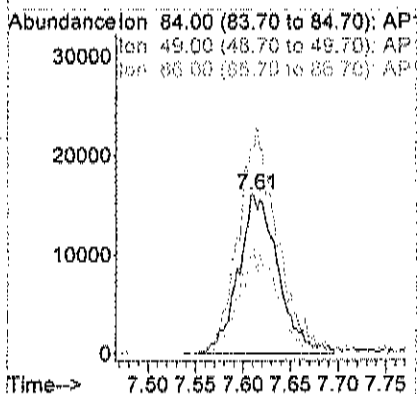
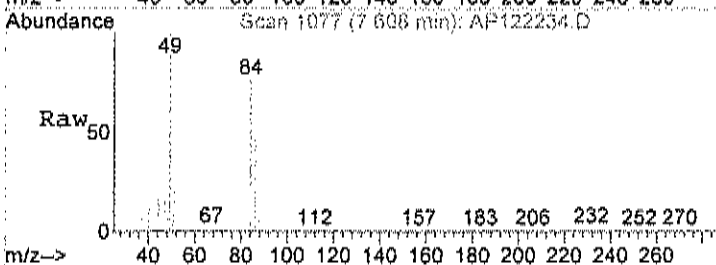
#15
Acetone
Concen: 1.93 ppb
RT: 6.53 min Scan# 716
Delta R.T. 0.02 min
Lab File: AP122234.D
Acq: 23 Dec 2018 6:32 am

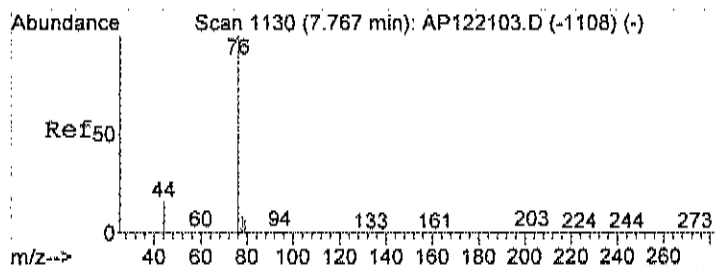
Tgt Ion: 58 Resp: 42618
Ion Ratio Lower Upper
58 100
43 361.4 298.2 358.2#



#21
Methylene chloride
Concen: 0.83 ppb
RT: 7.61 min Scan# 1077
Delta R.T. 0.01 min
Lab File: AP122234.D
Acq: 23 Dec 2018 6:32 am

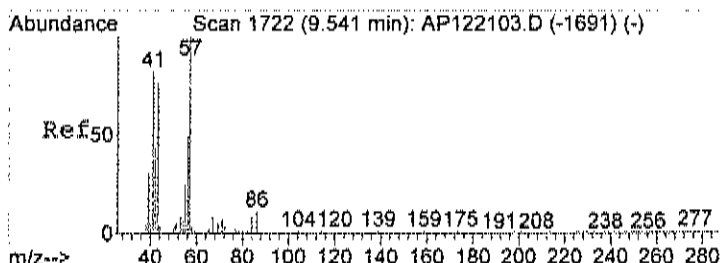
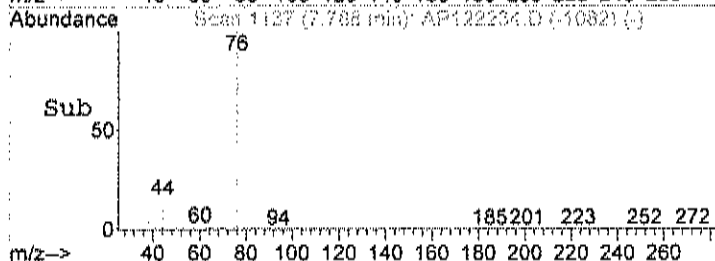
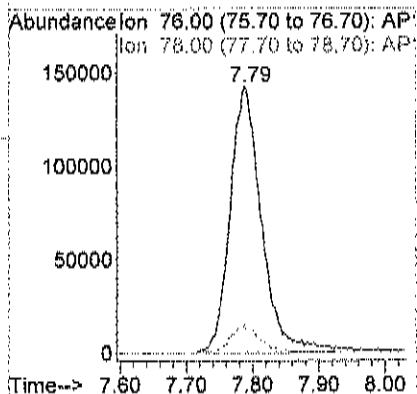
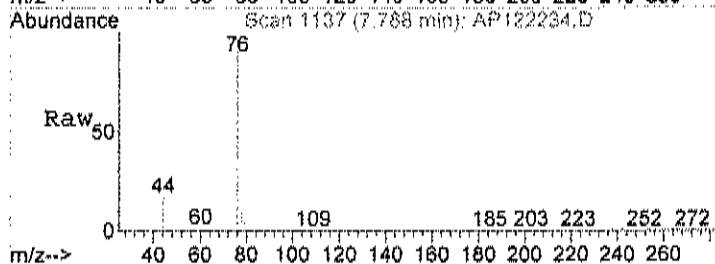
Tgt Ion: 84 Resp: 46796
Ion Ratio Lower Upper
84 100
49 139.7 121.5 161.5
86 65.5 46.0 86.0





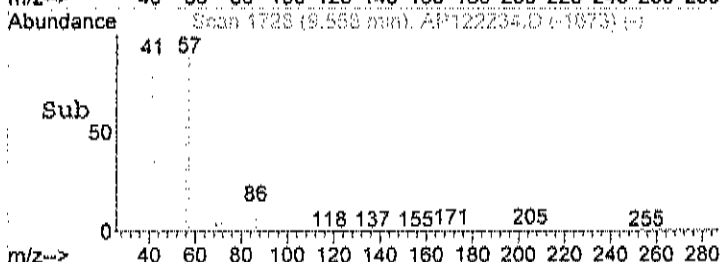
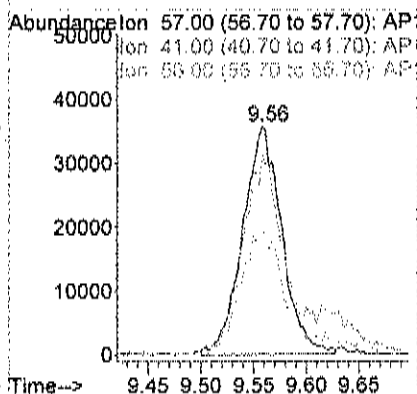
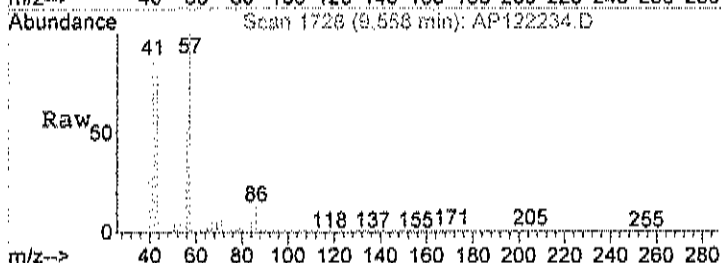
#23
Carbon disulfide
Concen: 3.72 ppb
RT: 7.79 min Scan# 1137
Delta R.T. 0.01 min
Lab File: AP122234.D
Acq: 23 Dec 2018 6:32 am

Tgt Ion: 76 Resp: 468974
Ion Ratio Lower Upper
76 100
78 9.5 0.0 29.2



#30
Hexane
Concen: 1.30 ppb
RT: 9.56 min Scan# 1728
Delta R.T. 0.01 min
Lab File: AP122234.D
Acq: 23 Dec 2018 6:32 am

Tgt Ion: 57 Resp: 92470
Ion Ratio Lower Upper
57 100
41 94.0 49.7 89.7#
56 58.4 27.9 67.9



Data File : C:\HPCHEM\1\DATA\AP122235.D

Vial: 81

Acq On : 23 Dec 2018 7:09 am

Operator: RJP

Sample : C1812057-009A 40x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:42 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	37161	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	147235	1.00	ppb	0.00
50) Chlorobenzene-d5	17.40	117	109115	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	56565m	0.76	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	76.00%

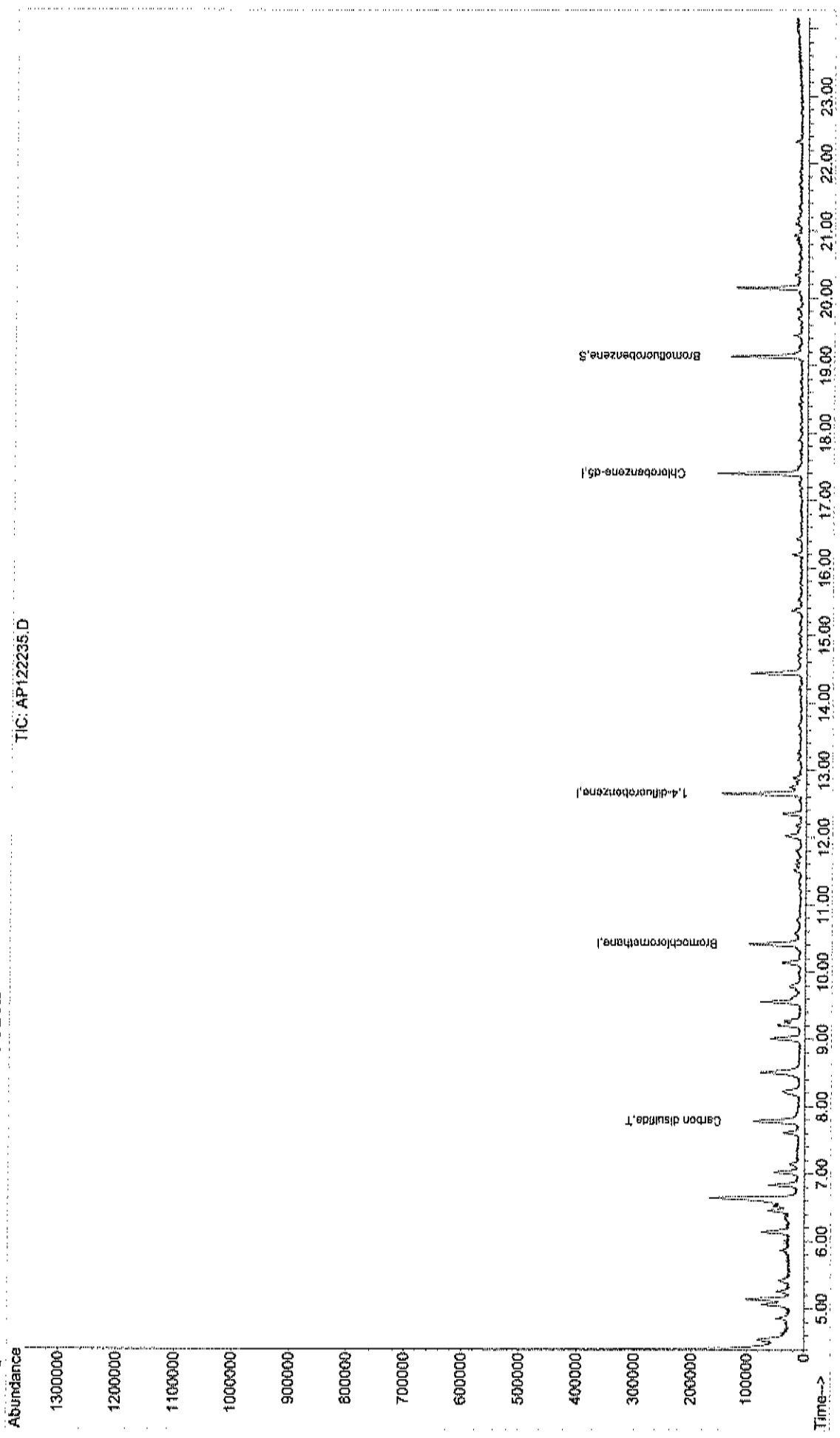
Target Compounds

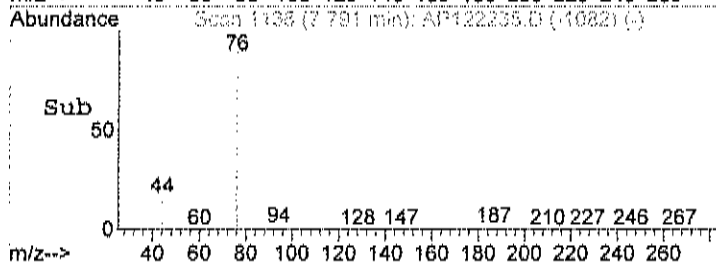
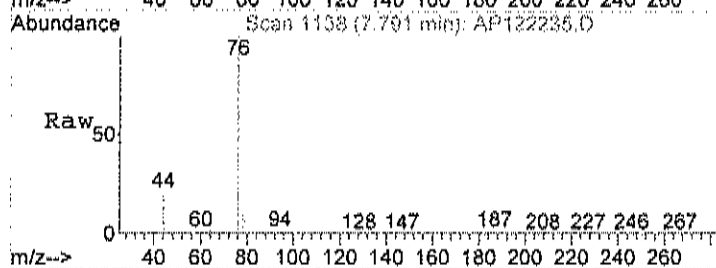
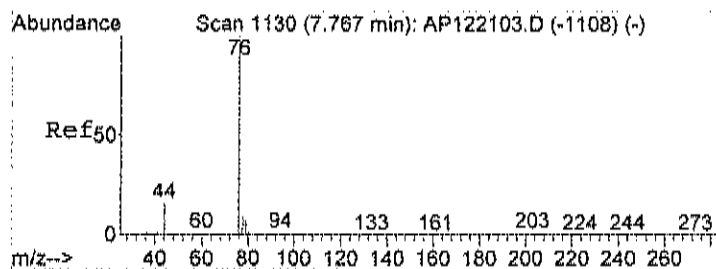
23) Carbon disulfide	7.79	76	177775	1.36	ppb	Qvalue 100
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Data File : C:\HPCHEM\1\DATA\AP122235.D
Acq On : 23 Dec 2018 7:09 am
Sample : C1812057-009A 40x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 28 11:30 2018
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

Vial: 81
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

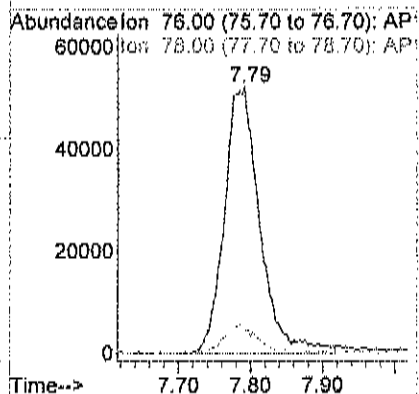
Quant Results File: AD10_1UG.RES





#23
 Carbon disulfide
 Concen: 1.36 ppb
 RT: 7.79 min Scan# 1138
 Delta R.T. 0.02 min
 Lab File: AP122235.D
 Acq: 23 Dec 2018 7:09 am

Tgt Ion	Ratio	Lower	Upper
76	100		
78	9.1	0.0	29.2



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-3			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	0.27	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2,4-Trimethylbenzene	1.3	1.4	J	ppbV	9	12/23/2018 3:10:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3,5-Trimethylbenzene	0.66	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,3-Dichlorobenzene	0.25	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 12:32:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
4-ethyltoluene	0.43	0.15		ppbV	1	12/22/2018 12:32:00 PM
Acetone	27	27		ppbV	90	12/23/2018 3:47:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Benzene	0.44	0.15		ppbV	1	12/22/2018 12:32:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Carbon disulfide	22	14		ppbV	90	12/23/2018 3:47:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Chloroform	3.1	1.4		ppbV	9	12/23/2018 3:10:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Cyclohexane	0.42	0.15		ppbV	1	12/22/2018 12:32:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Ethylbenzene	0.43	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 11	0.30	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Freon 12	0.40	0.15		ppbV	1	12/22/2018 12:32:00 PM
Heptane	0.11	0.15	J	ppbV	1	12/22/2018 12:32:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
m&p-Xylene	1.4	0.30		ppbV	1	12/22/2018 12:32:00 PM
Methyl Butyl Ketone	0.12	0.30	J	ppbV	1	12/22/2018 12:32:00 PM
Methyl Ethyl Ketone	2.1	0.30		ppbV	1	12/22/2018 12:32:00 PM
Methyl Isobutyl Ketone	68	27		ppbV	90	12/23/2018 3:47:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Methylene chloride	15	1.4		ppbV	9	12/23/2018 3:10:00 PM
o-Xylene	0.91	0.15		ppbV	1	12/22/2018 12:32:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Styrene	0.14	0.15	J	ppbV	1	12/22/2018 12:32:00 PM
Tetrachloroethylene	0.68	0.15		ppbV	1	12/22/2018 12:32:00 PM
Tetrahydrofuran	2.4	1.4		ppbV	9	12/23/2018 3:10:00 PM
Toluene	1.7	0.15		ppbV	1	12/22/2018 12:32:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 12:32:00 PM
Vinyl chloride	0.40	0.15		ppbV	1	12/22/2018 12:32:00 PM
Surr: Bromofluorobenzene	86.0	70-130		%REC	1	12/22/2018 12:32:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	1.5	0.82		ug/m3	1	12/22/2018 12:32:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 12:32:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:32:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
1,2,4-Trimethylbenzene	6.2	6.9	J	ug/m3	9	12/23/2018 3:10:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 12:32:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 12:32:00 PM
1,3,5-Trimethylbenzene	3.2	0.74		ug/m3	1	12/22/2018 12:32:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 12:32:00 PM
1,3-Dichlorobenzene	1.5	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 12:32:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 12:32:00 PM
4-ethyltoluene	2.1	0.74		ug/m3	1	12/22/2018 12:32:00 PM
Acetone	64	64		ug/m3	90	12/23/2018 3:47:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 12:32:00 PM
Benzene	1.4	0.48		ug/m3	1	12/22/2018 12:32:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 12:32:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 12:32:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 12:32:00 PM
Carbon disulfide	70	44		ug/m3	90	12/23/2018 3:47:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 12:32:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 12:32:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 12:32:00 PM
Chloroform	15	6.8		ug/m3	9	12/23/2018 3:10:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 12:32:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:32:00 PM
Cyclohexane	1.4	0.52		ug/m3	1	12/22/2018 12:32:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 12:32:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 12:32:00 PM
Ethylbenzene	1.9	0.65		ug/m3	1	12/22/2018 12:32:00 PM
Freon 11	1.7	0.84		ug/m3	1	12/22/2018 12:32:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 12:32:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 12:32:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-010A

Client Sample ID: SVW-9
Tag Number: 1179,1161
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.0	0.74		ug/m3	1	12/22/2018 12:32:00 PM
Heptane	0.45	0.61	J	ug/m3	1	12/22/2018 12:32:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 12:32:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/22/2018 12:32:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 12:32:00 PM
m&p-Xylene	6.2	1.3		ug/m3	1	12/22/2018 12:32:00 PM
Methyl Butyl Ketone	0.49	1.2	J	ug/m3	1	12/22/2018 12:32:00 PM
Methyl Ethyl Ketone	6.1	0.88		ug/m3	1	12/22/2018 12:32:00 PM
Methyl Isobutyl Ketone	260	110		ug/m3	90	12/23/2018 3:47:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 12:32:00 PM
Methylene chloride	52	4.9		ug/m3	9	12/23/2018 3:10:00 PM
o-Xylene	4.0	0.65		ug/m3	1	12/22/2018 12:32:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 12:32:00 PM
Styrene	0.60	0.64	J	ug/m3	1	12/22/2018 12:32:00 PM
Tetrachloroethylene	4.6	1.0		ug/m3	1	12/22/2018 12:32:00 PM
Tetrahydrofuran	7.2	4.1		ug/m3	9	12/23/2018 3:10:00 PM
Toluene	6.5	0.57		ug/m3	1	12/22/2018 12:32:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 12:32:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 12:32:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 12:32:00 PM
Vinyl chloride	1.0	0.38		ug/m3	1	12/22/2018 12:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Data File : C:\HPCHEM\1\DATA\AP122206.D

Acq On : 22 Dec 2018 12:32 pm

Sample : C1812057-010A

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:13 2018

Vial: 52

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.39	128	42207	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.63	114	189806	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	216651	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	127267	0.86	ppb	0.00
Spiked Amount	1.000	Range	70 ~ 130	Recovery	=	86.00%

Target Compounds

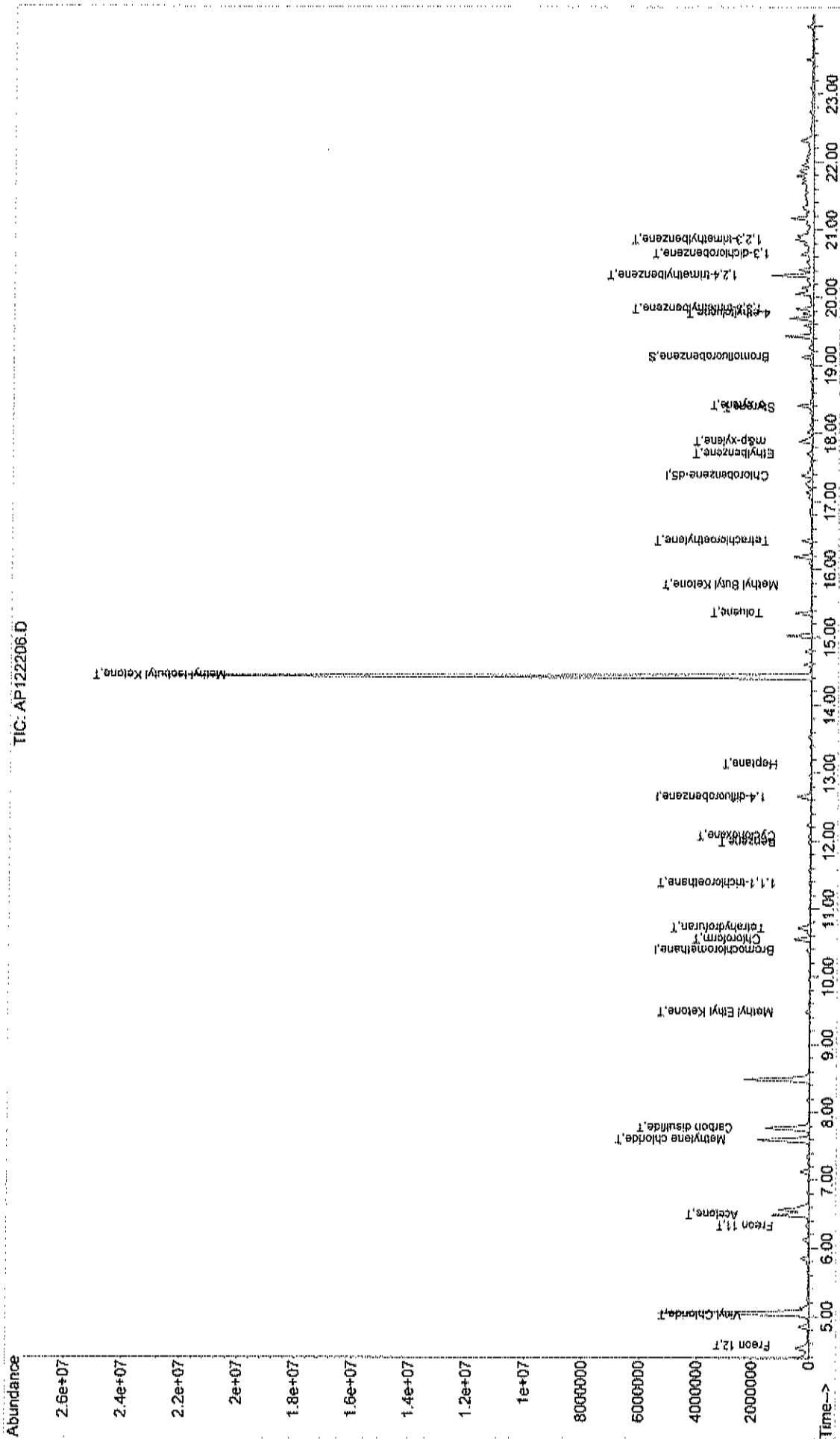
						Qvalue
3) Freon 12	4.58	85	98135	0.40	ppb	100
6) Vinyl Chloride	5.01	62	27776	0.40	ppb	96
14) Freon 11	6.33	101	101105	0.30	ppb	97
15) Acetone	6.49	58	684699	26.45	ppb	# 80
21) Methylene chloride	7.60	84	1208423	18.14	ppb	98
23) Carbon disulfide	7.77	76	3572606	24.14	ppb	99
28) Methyl Ethyl Ketone	9.47	72	55365	2.08	ppb	# 100
32) Chloroform	10.55	83	615665	3.84	ppb	100
33) Tetrahydrofuran	10.72	42	244219	4.34	ppb	90
36) 1,1,1-trichloroethane	11.37	97	46262	0.27	ppb	98
37) Cyclohexane	12.07	56	37933	0.42	ppb	# 82
39) Benzene	11.97	78	94610	0.44	ppb	97
43) Heptane	13.14	43	11652	0.11	ppb	# 67
51) Toluene	15.36	92	288250	1.72	ppb	99
52) Methyl Isobutyl Ketone	14.42	43	19060585	101.86	ppb	95
54) Methyl Butyl Ketone	15.77	43	22106	0.12	ppb	89
56) Tetrachloroethylene	16.42	164	92045	0.68	ppb	98
58) Ethylbenzene	17.70	91	148194	0.43	ppb	100
59) m&p-xylene	17.88	91	417944	1.42	ppb	99
61) Styrene	18.37	104	36736	0.14	ppb	# 65
63) o-xylene	18.41	91	338884	0.91	ppb	100
69) 4-ethyltoluene	19.77	105	193805	0.43	ppb	99
70) 1,3,5-trimethylbenzene	19.83	105	260485	0.66	ppb	99
71) 1,2,4-trimethylbenzene	20.32	105	843861	2.78	ppb	99
72) 1,3-dichlorobenzene	20.65	146	70845	0.25	ppb	96
75) 1,2,3-trimethylbenzene	20.85	105	281045	0.80	ppb	97

Data File : C:\HPCHEM\1\DATA\AP122206.D
 Acq On : 22 Dec 2018 12:32 pm
 Sample : C1812057-010A
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 27 10:28 2018

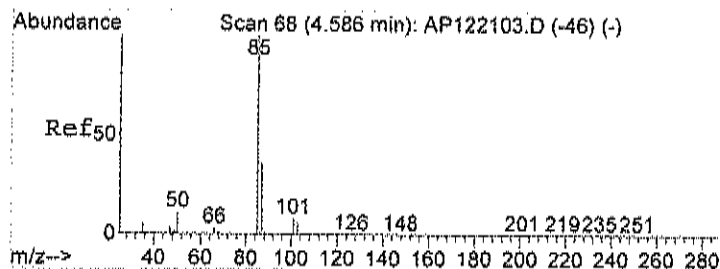
Vial: 52
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integration)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration

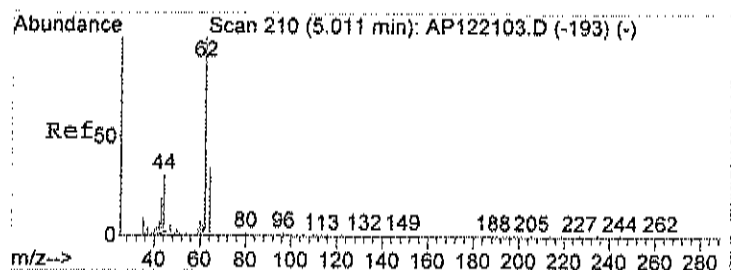
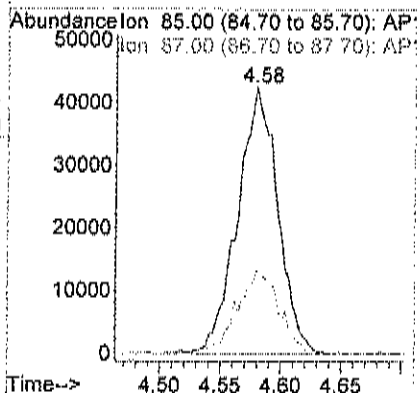


TIC: AP122206.D



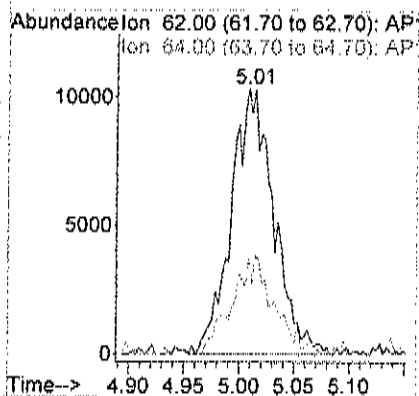
#3
Freon 12
Concen: 0.40 ppb
RT: 4.58 min Scan# 66
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

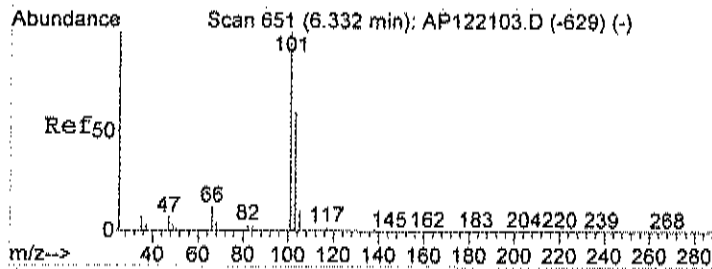
Tgt Ion: 85 Resp: 98135
Ion Ratio Lower Upper
85 100
87 32.4 12.4 52.4



#6
Vinyl Chloride
Concen: 0.40 ppb
RT: 5.01 min Scan# 209
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

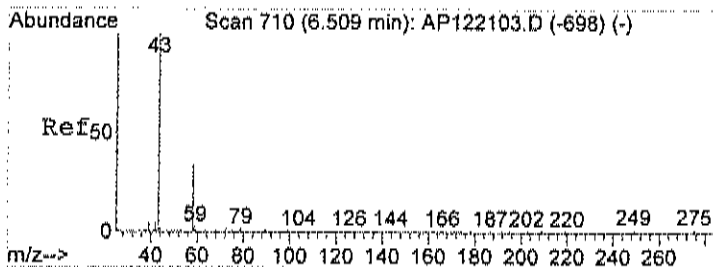
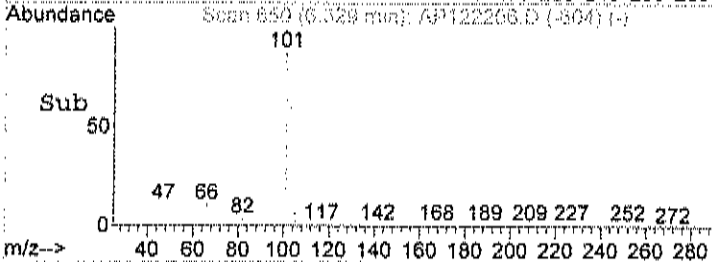
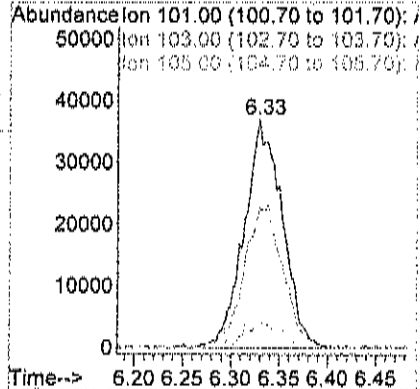
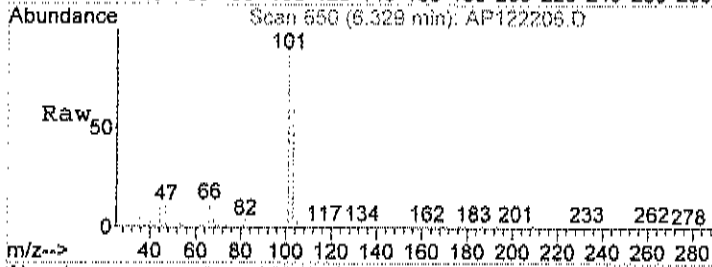
Tgt Ion: 62 Resp: 27776
Ion Ratio Lower Upper
62 100
64 36.0 3.9 63.9





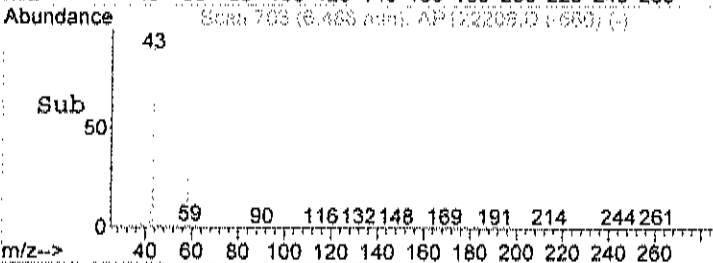
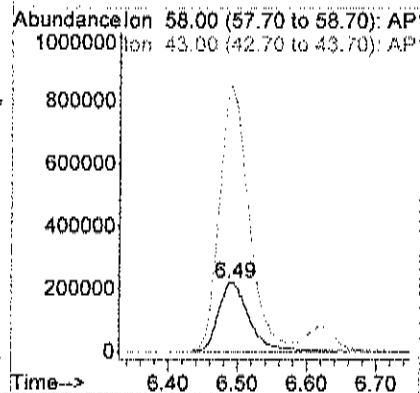
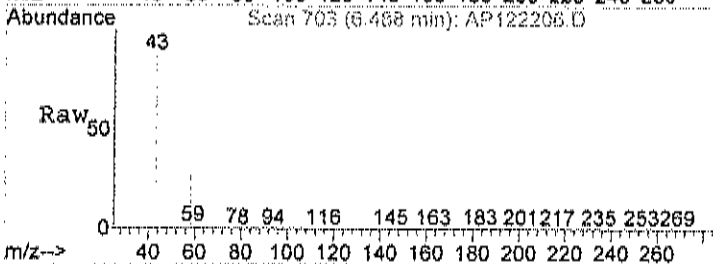
#14
Freon 11
Concen: 0.30 ppb
RT: 6.33 min Scan# 650
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

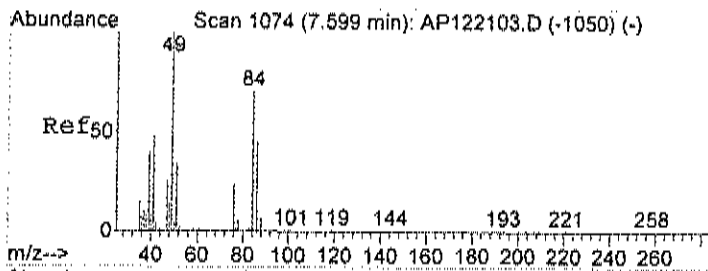
Tgt Ion: 101 Resp: 101105
Ion Ratio Lower Upper
101 100
103 64.0 44.4 84.4
105 6.0 0.0 31.9



#15
Acetone
Concen: 26.45 ppb
RT: 6.49 min Scan# 703
Delta R.T. -0.02 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

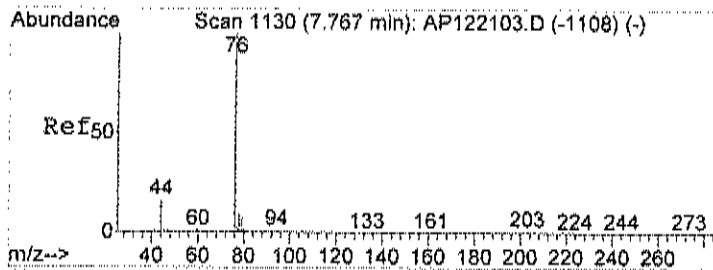
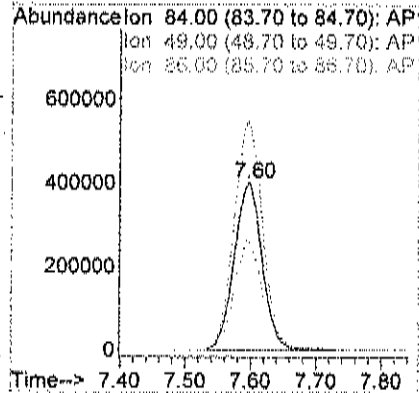
Tgt Ion: 58 Resp: 684699
Ion Ratio Lower Upper
58 100
43 370.4 298.2 358.2#





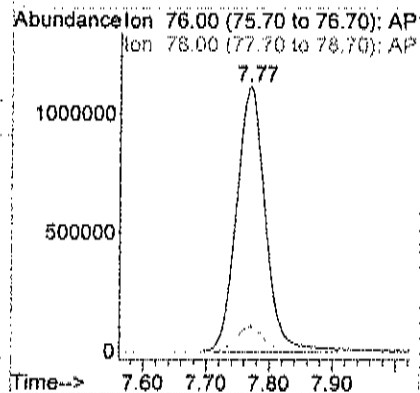
#21
Methylene chloride
Concen: 18.14 ppb
RT: 7.60 min Scan# 1073
Delta R.T. -0.00 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

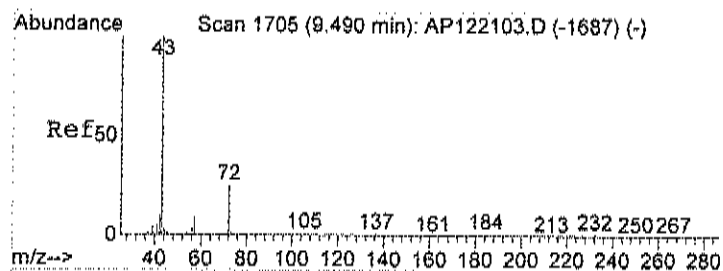
Tgt Ion: 84 Resp: 1208423
Ion Ratio Lower Upper
84 100
49 138.0 121.5 161.5
86 64.8 46.0 86.0



#23
Carbon disulfide
Concen: 24.14 ppb
RT: 7.77 min Scan# 1131
Delta R.T. -0.00 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

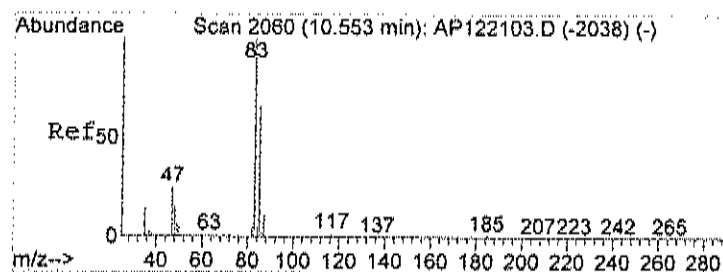
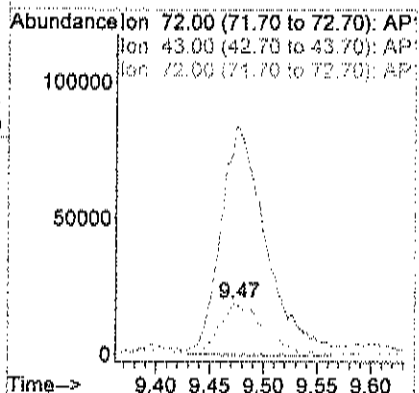
Tgt Ion: 76 Resp: 3572606
Ion Ratio Lower Upper
76 100
78 9.4 0.0 29.2





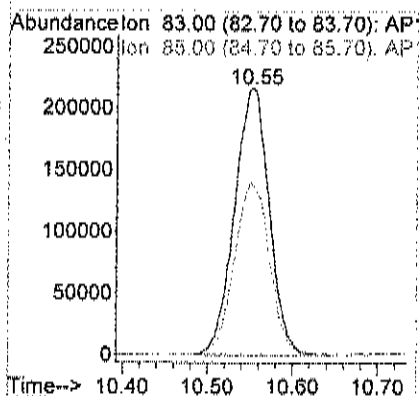
#28
Methyl Ethyl Ketone
Concen: 2.08 ppb
RT: 9.47 min Scan# 1699
Delta R.T. -0.02 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

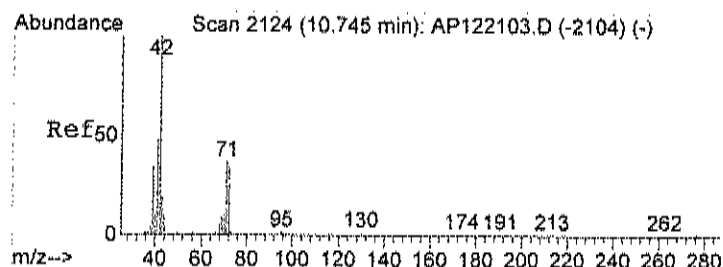
Tgt Ion: 72 Resp: 55365
Ion Ratio Lower Upper
72 100
43 430.8 0.0 20.0#
72 100.0 80.0 120.0



#32
Chloroform
Concen: 3.84 ppb
RT: 10.55 min Scan# 2060
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

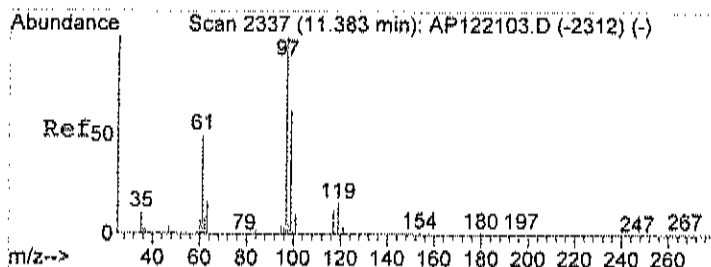
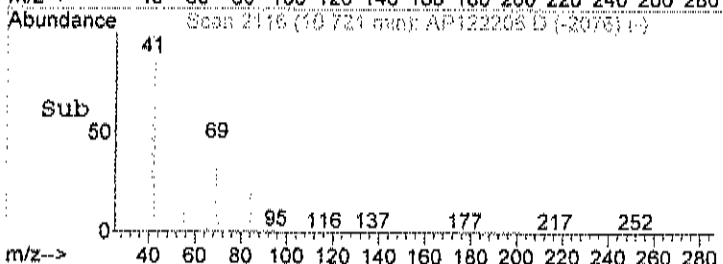
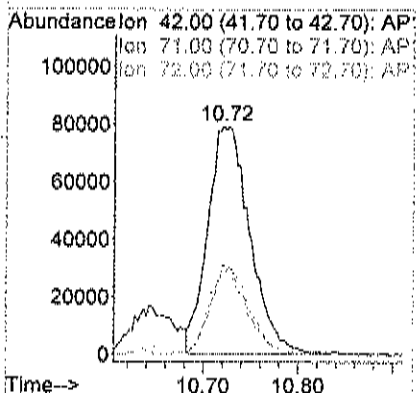
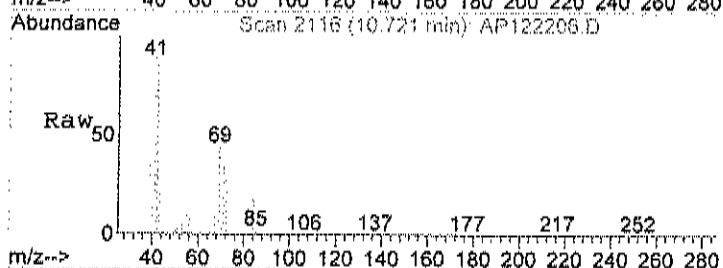
Tgt Ion: 83 Resp: 615665
Ion Ratio Lower Upper
83 100
85 65.2 45.5 85.5





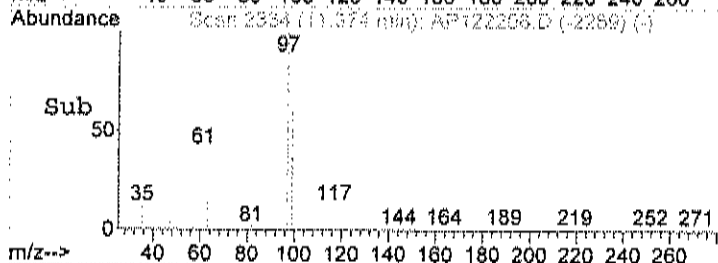
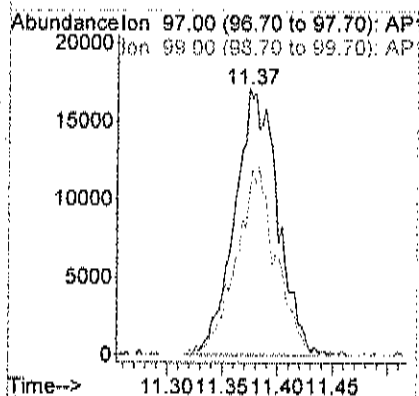
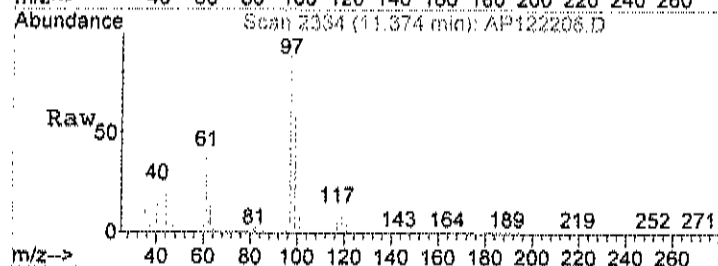
#33
Tetrahydrofuran
Concen: 4.34 ppb
RT: 10.72 min Scan# 2116
Delta R.T. -0.03 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

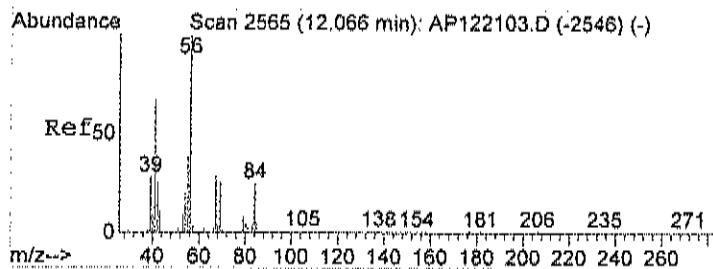
Tgt Ion	Ratio	Lower	Upper
42	100		
71	34.8	21.4	61.4
72	36.1	22.4	62.4



#36
1,1,1-trichloroethane
Concen: 0.27 ppb
RT: 11.37 min Scan# 2334
Delta R.T. -0.02 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

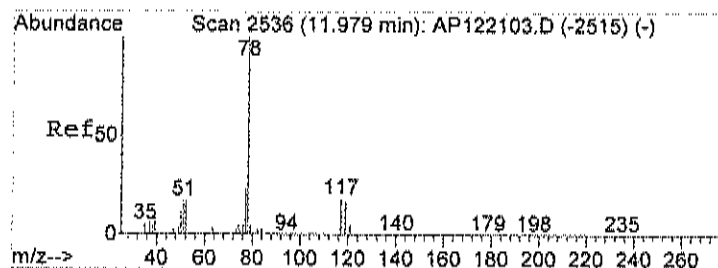
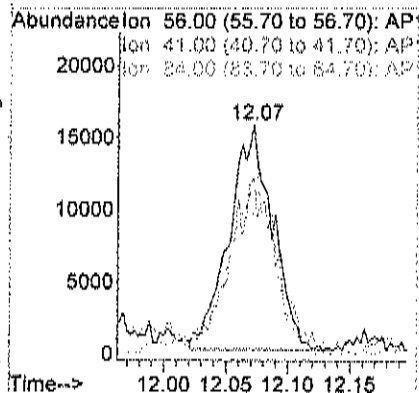
Tgt Ion	Ratio	Lower	Upper
97	100		
99	65.5	44.1	84.1





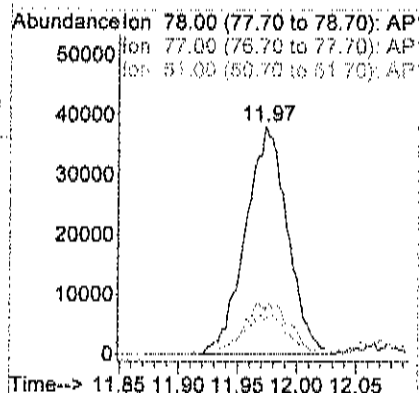
#37
Cyclohexane
Concen: 0.42 ppb
RT: 12.07 min Scan# 2567
Delta R.T. -0.00 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

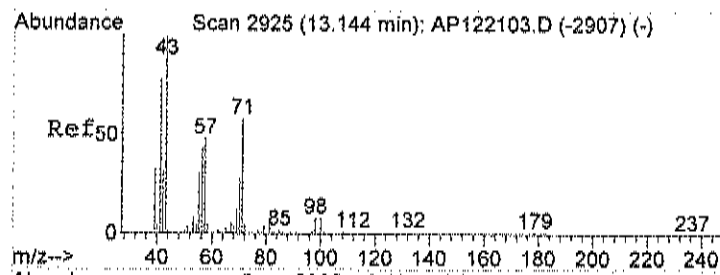
Tgt Ion: 56 Resp: 37933
Ion Ratio Lower Upper
56 100
41 78.1 36.3 76.3#
84 84.5 56.0 96.0



#39
Benzene
Concen: 0.44 ppb
RT: 11.97 min Scan# 2534
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

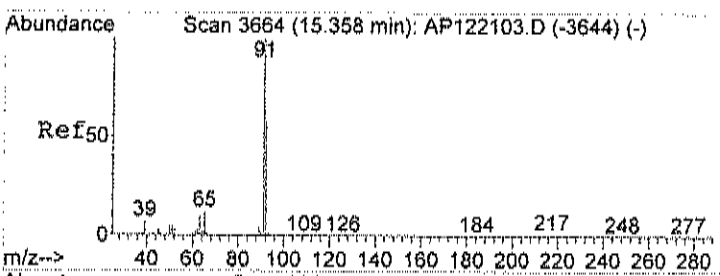
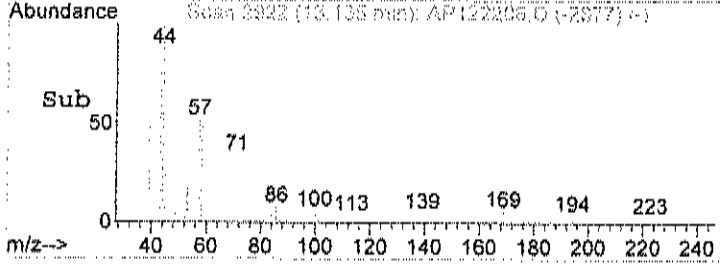
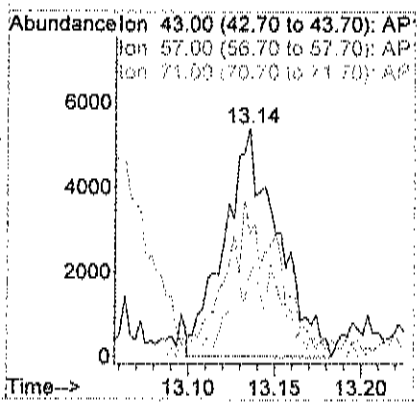
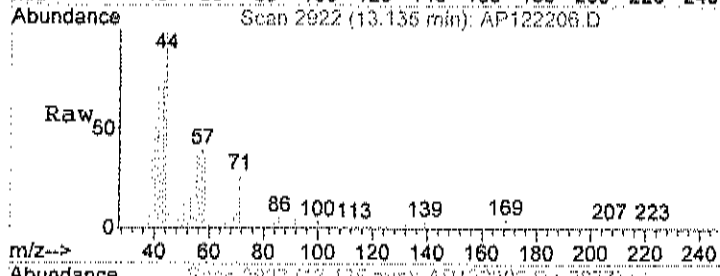
Tgt Ion: 78 Resp: 94610
Ion Ratio Lower Upper
78 100
77 24.9 3.1 43.1
51 18.0 0.0 36.7





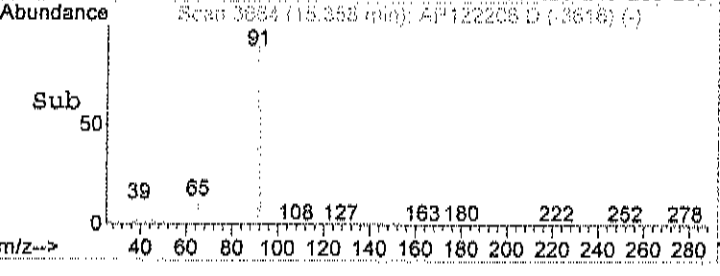
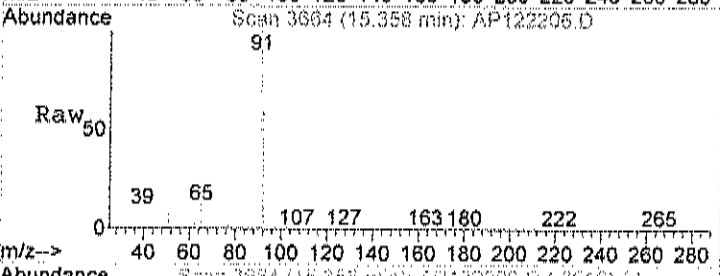
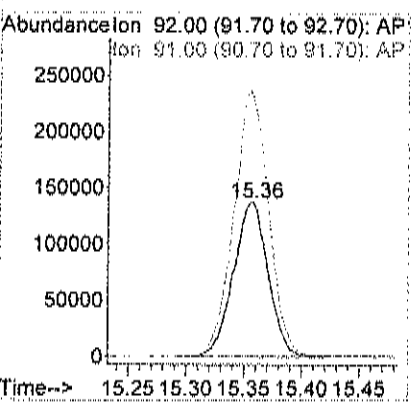
#43
 Heptane
 Concen: 0.11 ppb
 RT: 13.14 min Scan# 2922
 Delta R.T. -0.02 min
 Lab File: AP122206.D
 Acq: 22 Dec 2018 12:32 pm

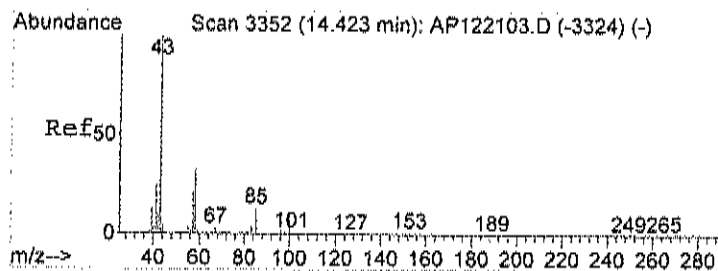
Tgt Ion:	43	Resp:	11652
Ion	Ratio	Lower	Upper
43	100		
57	66.3	32.7	72.7
71	21.5	35.6	75.6#



#51
 Toluene
 Concen: 1.72 ppb
 RT: 15.36 min Scan# 3664
 Delta R.T. -0.01 min
 Lab File: AP122206.D
 Acq: 22 Dec 2018 12:32 pm

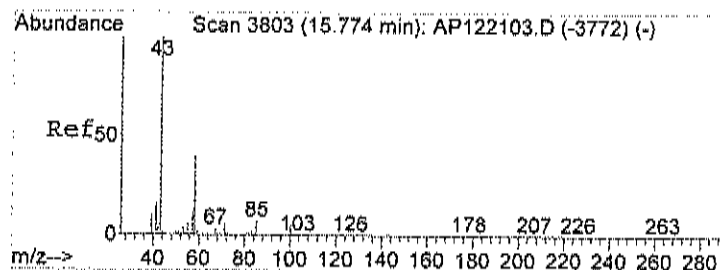
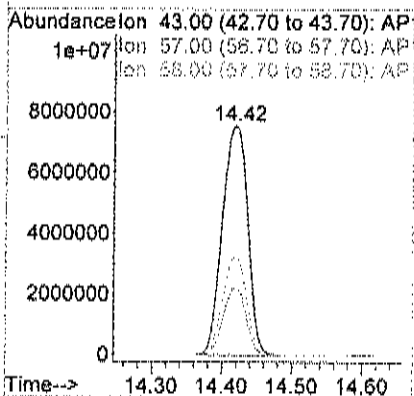
Tgt Ion:	92	Resp:	288250
Ion	Ratio	Lower	Upper
92	100		
91	173.2	154.3	194.3





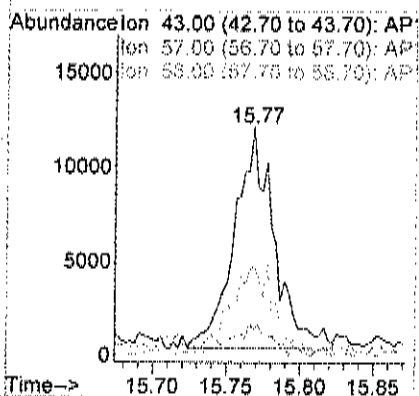
#52
Methyl Isobutyl Ketone
Concen: 101.86 ppb
RT: 14.42 min Scan# 3351
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

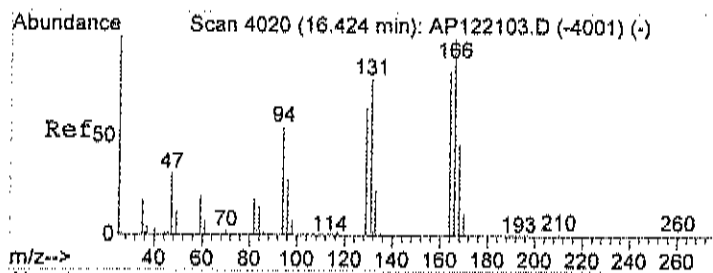
Tgt Ion: 43 Resp:19060585
Ion Ratio Lower Upper
43 100
57 26.8 3.5 43.5
58 40.7 17.9 57.9



#54
Methyl Butyl Ketone
Concen: 0.12 ppb
RT: 15.77 min Scan# 3801
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

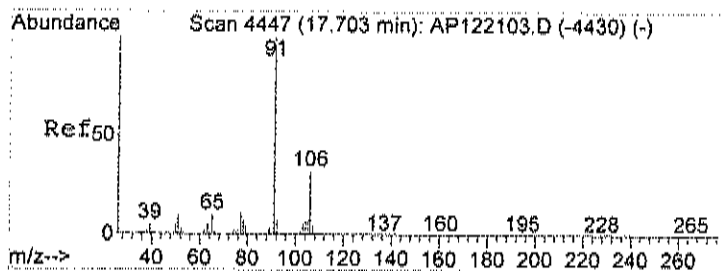
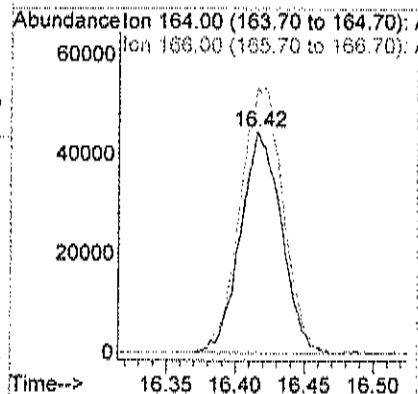
Tgt Ion: 43 Resp: 22106
Ion Ratio Lower Upper
43 100
57 13.1 0.0 37.2
58 45.5 33.9 73.9





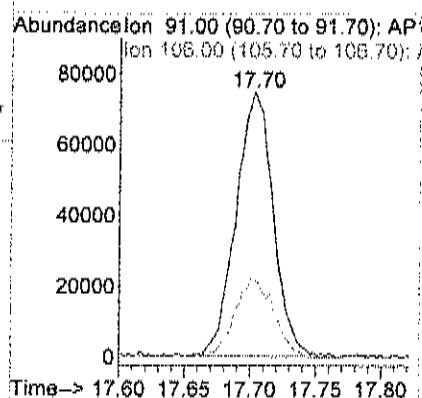
#56
Tetrachloroethylene
Concen: 0.68 ppb
RT: 16.42 min Scan# 4017
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

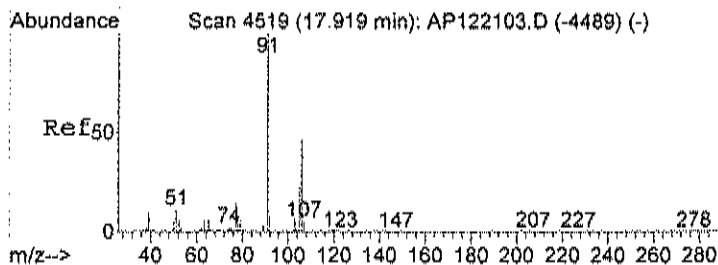
Tgt Ion: 164 Resp: 92045
Ion Ratio Lower Upper
164 100
166 126.3 108.5 148.5



#58
Ethylbenzene
Concen: 0.43 ppb
RT: 17.70 min Scan# 4447
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

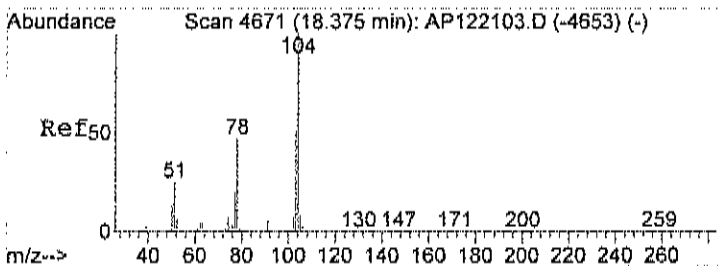
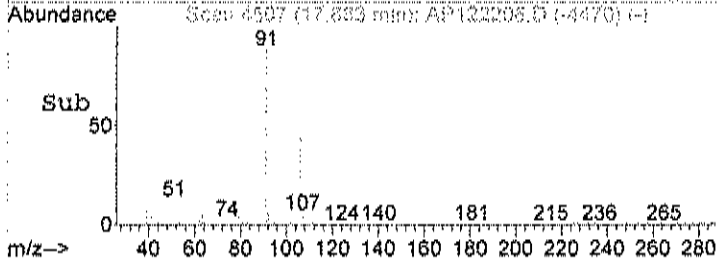
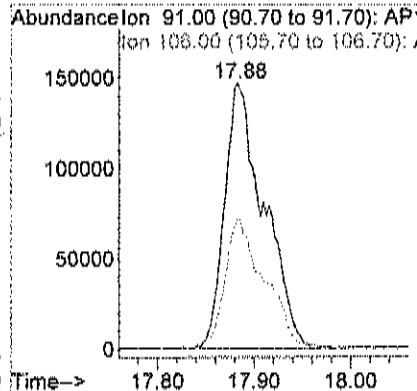
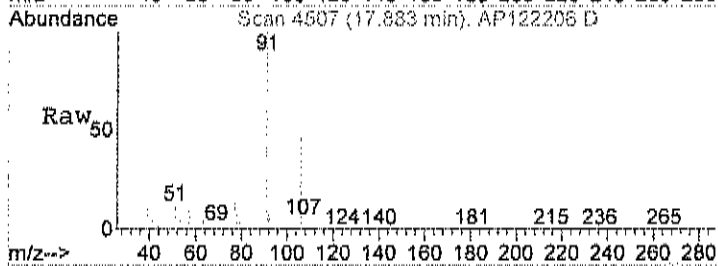
Tgt Ion: 91 Resp: 148194
Ion Ratio Lower Upper
91 100
106 31.5 11.4 51.4





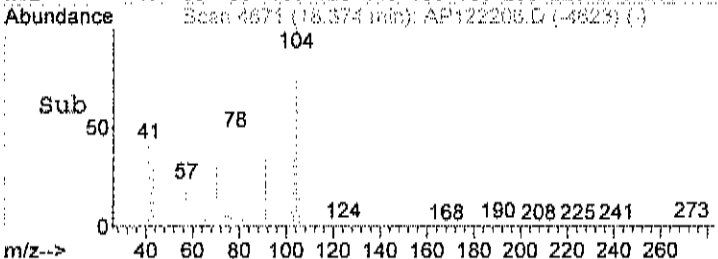
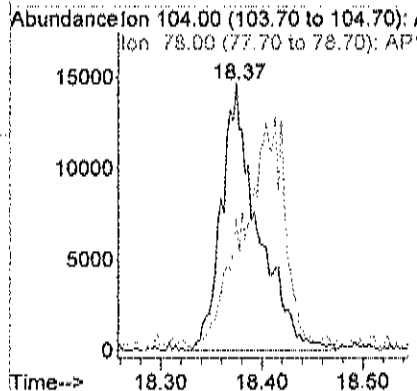
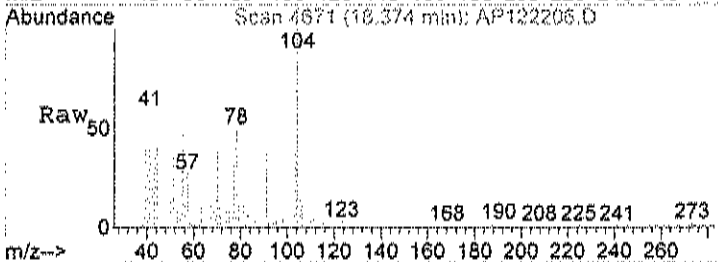
#59
m&p-xylene
Concen: 1.42 ppb
RT: 17.88 min Scan# 4507
Delta R.T. -0.04 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

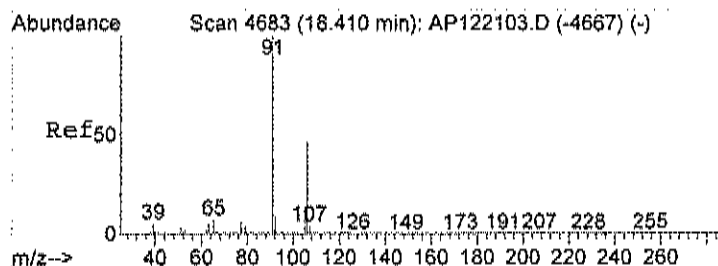
Tgt Ion: 91 Resp: 417944
Ion Ratio Lower Upper
91 100
106 48.9 28.3 68.3



#61
Styrene
Concen: 0.14 ppb
RT: 18.37 min Scan# 4671
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

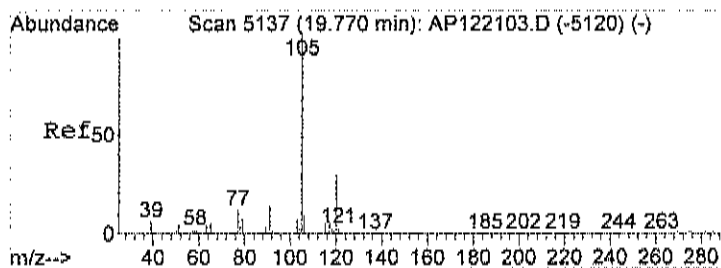
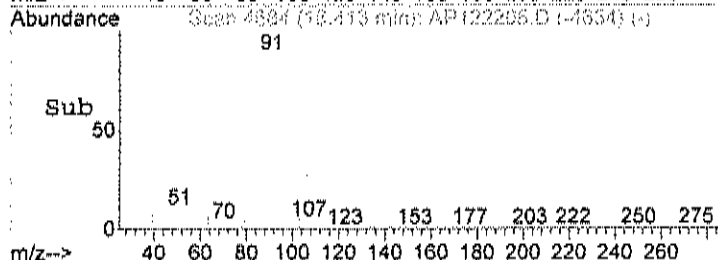
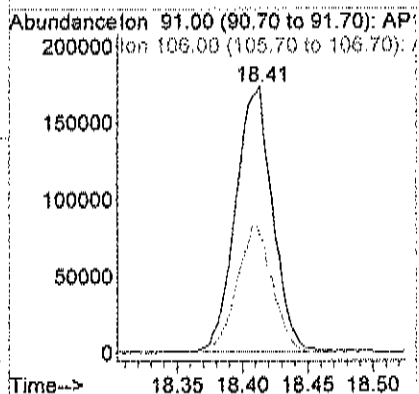
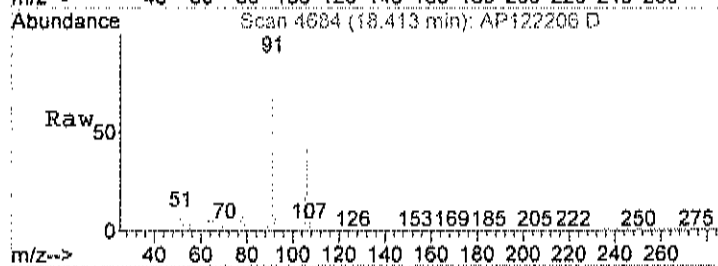
Tgt Ion: 104 Resp: 36736
Ion Ratio Lower Upper
104 100
78 29.8 35.3 75.3#





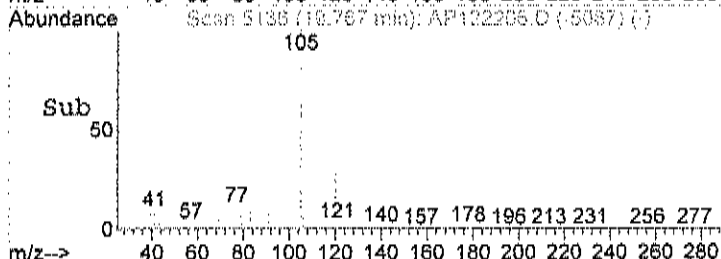
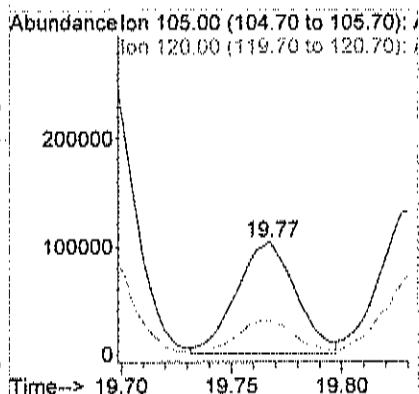
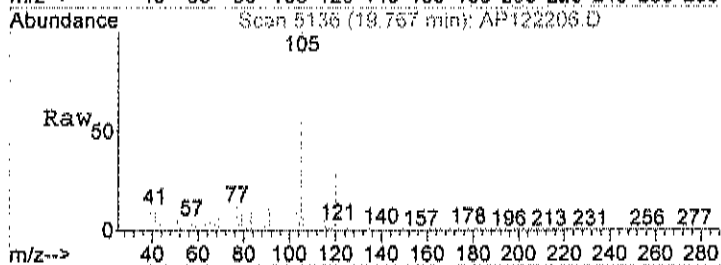
#63
o-xylene
Concen: 0.91 ppb
RT: 18.41 min Scan# 4684
Delta R.T. -0.00 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

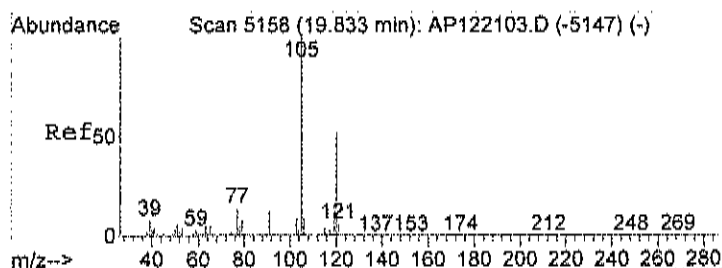
Tgt Ion: 91 Resp: 338884
Ion Ratio Lower Upper
91 100
106 46.4 26.6 66.6



#69
4-ethyltoluene
Concen: 0.43 ppb
RT: 19.77 min Scan# 5136
Delta R.T. -0.00 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

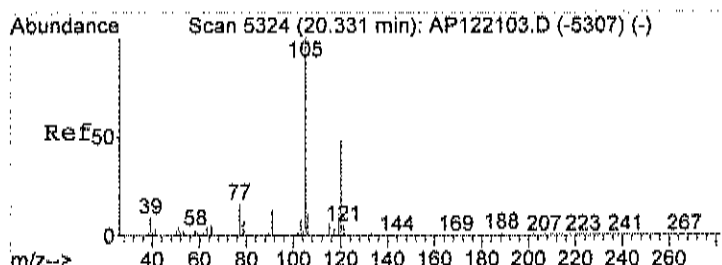
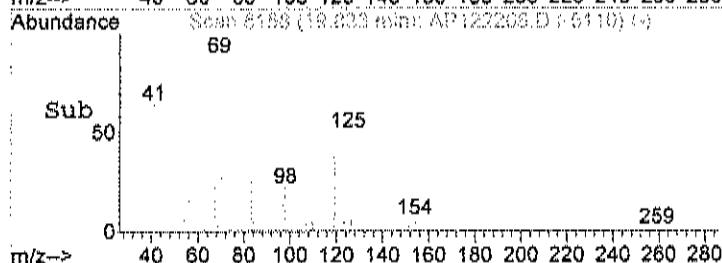
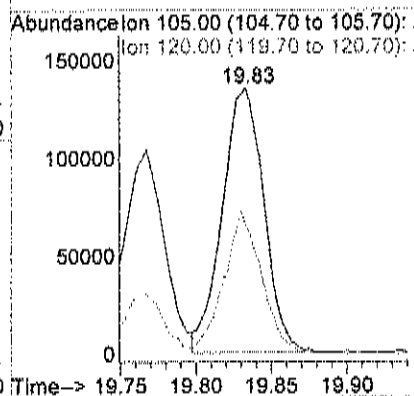
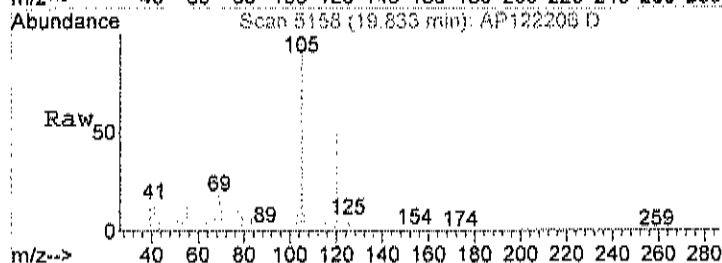
Tgt Ion: 105 Resp: 193805
Ion Ratio Lower Upper
105 100
120 29.8 10.2 50.2





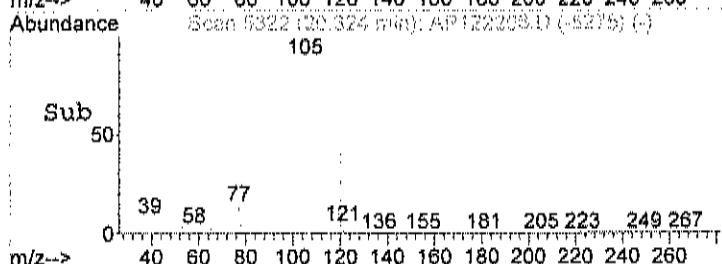
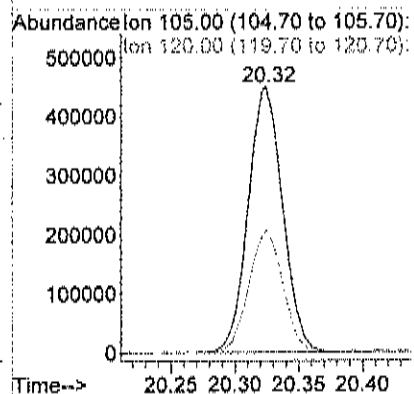
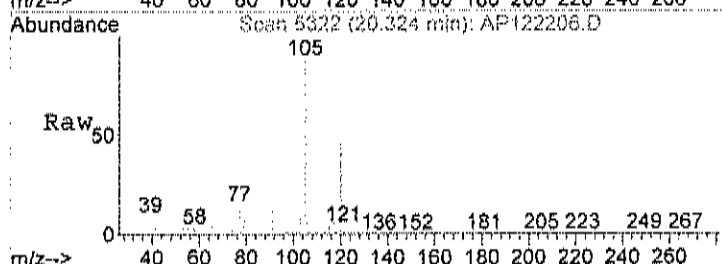
#70
1,3,5-trimethylbenzene
Concen: 0.66 ppb
RT: 19.83 min Scan# 5158
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

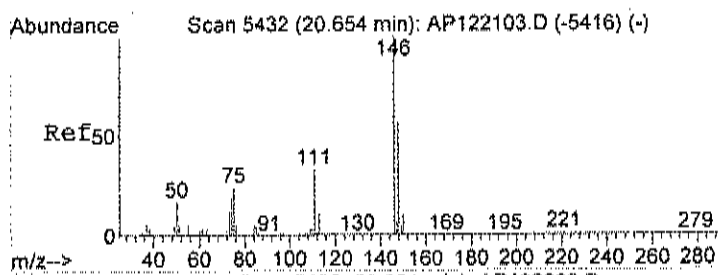
Tgt Ion:105 Resp: 260485
Ion Ratio Lower Upper
105 100
120 48.4 27.6 67.6



#71
1,2,4-trimethylbenzene
Concen: 2.78 ppb
RT: 20.32 min Scan# 5322
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

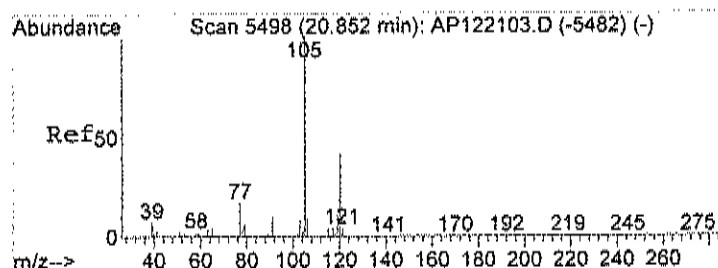
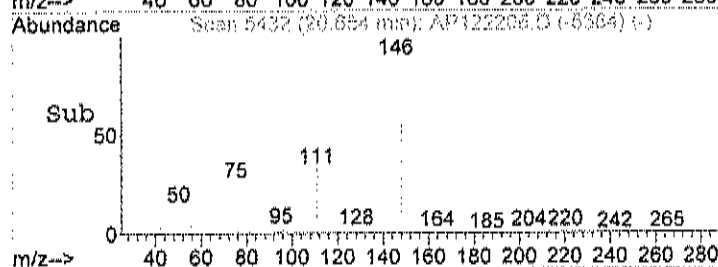
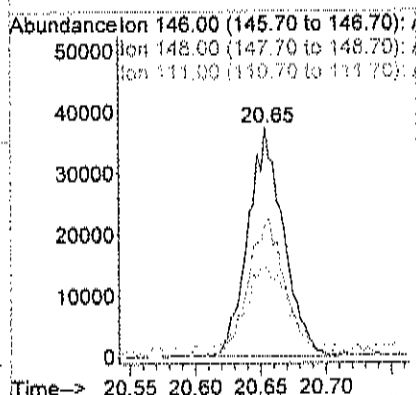
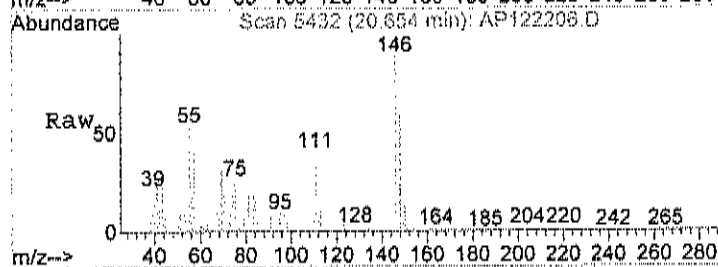
Tgt Ion:105 Resp: 843861
Ion Ratio Lower Upper
105 100
120 46.0 25.3 65.3





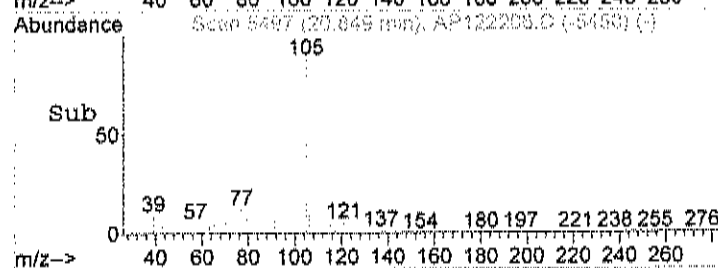
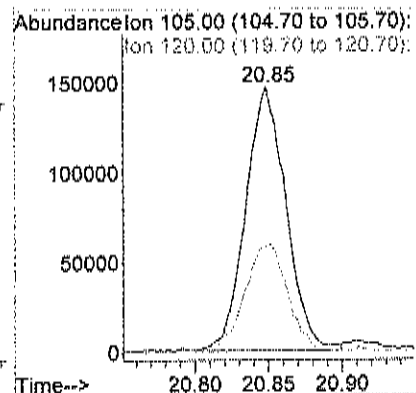
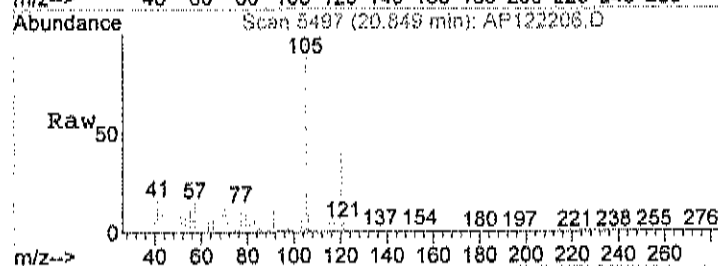
#72
1,3-dichlorobenzene
Concen: 0.25 ppb
RT: 20.65 min Scan# 5432
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

Tgt Ion:	146	Resp:	70845
Ion	Ratio	Lower	Upper
146	100		
148	62.4	43.6	83.6
111	44.8	19.9	59.9



#75
1,2,3-trimethylbenzene
Concen: 0.80 ppb
RT: 20.85 min Scan# 5497
Delta R.T. -0.01 min
Lab File: AP122206.D
Acq: 22 Dec 2018 12:32 pm

Tgt Ion:	105	Resp:	281045
Ion	Ratio	Lower	Upper
105	100		
120	44.2	31.6	52.8



Data File : C:\HPCHEM\1\DATA\AP122308.D

Vial: 8

Acq On : 23 Dec 2018 3:10 pm

Operator: RJP

Sample : C1812057-010A 9x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:27 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	35924	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	149449	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	127915	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	64901m	0.74	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	74.00%

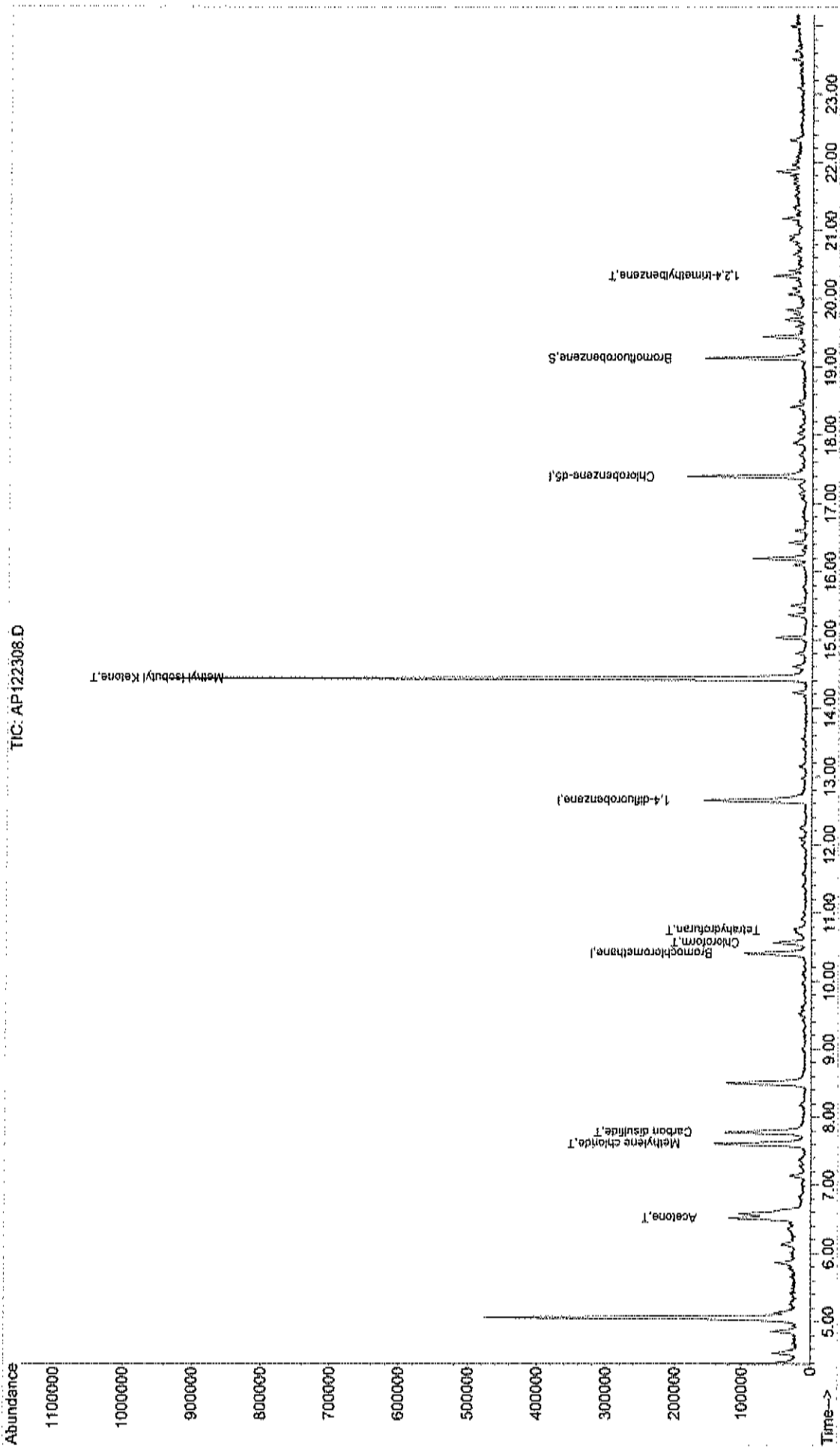
Target Compounds

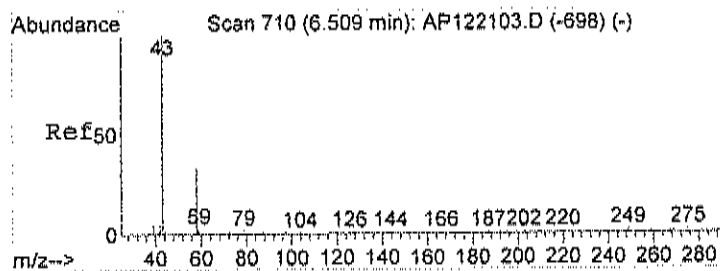
						Qvalue
15) Acetone	6.51	58	54160	2.46	ppb	90
21) Methylene chloride	7.61	84	93768	1.65	ppb	96
23) Carbon disulfide	7.78	76	267718	2.13	ppb	99
32) Chloroform	10.56	83	46886	0.34	ppb	96
33) Tetrahydrofuran	10.75	42	13069m	0.27	ppb	
52) Methyl Isobutyl Ketone	14.43	43	760736	6.89	ppb	95
71) 1,2,4-trimethylbenzene	20.33	105	25940	0.14	ppb	94

Data File : C:\HPCHEM\1\DATA\AP122308.D
Acq On : 23 Dec 2018 3:10 pm
Sample : C1812057-010A 9x
Misc : AD10 1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 8:20 2018

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

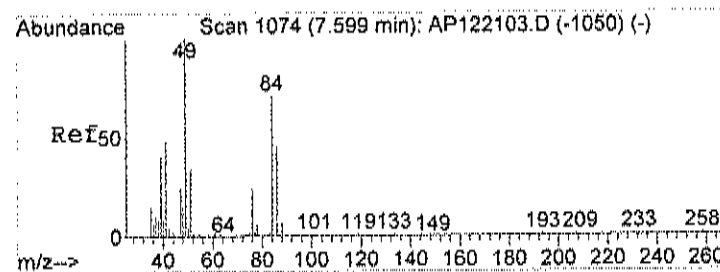
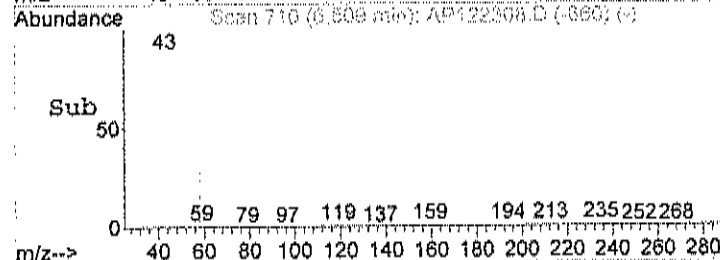
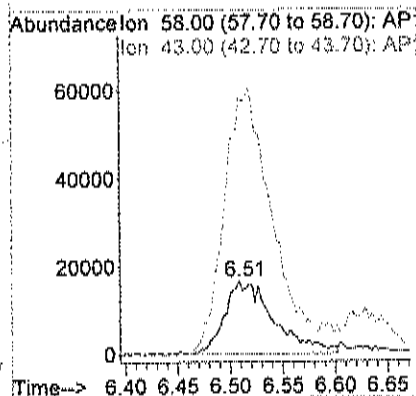
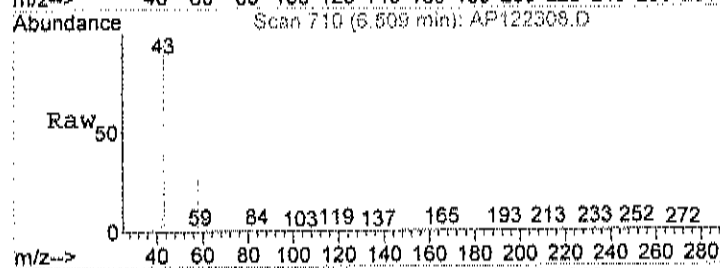
Quant Results File: AD10_1UG.RES





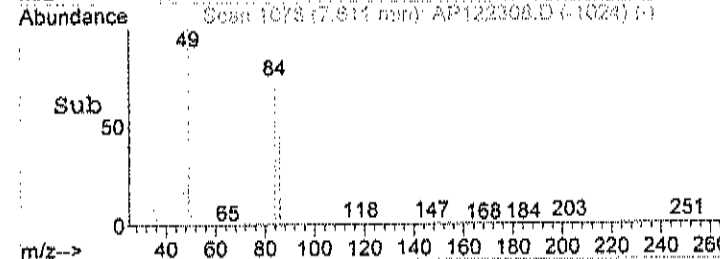
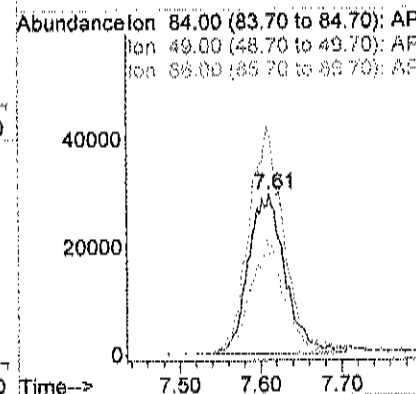
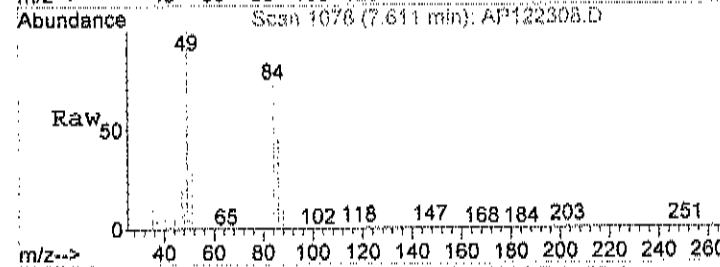
#15
Acetone
Concen: 2.46 ppb
RT: 6.51 min Scan# 710
Delta R.T. -0.00 min
Lab File: AP122308.D
Acq: 23 Dec 2018 3:10 pm

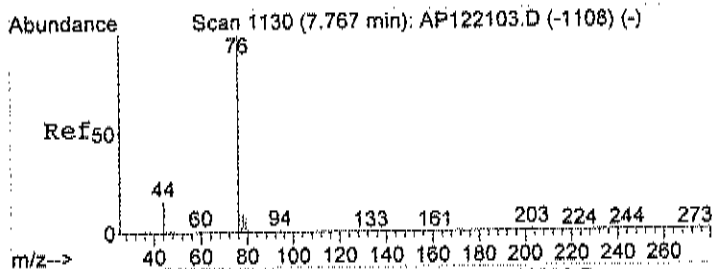
Tgt Ion: 58 Resp: 54160
Ion Ratio Lower Upper
58 100
43 349.5 298.2 358.2



#21
Methylene chloride
Concen: 1.65 ppb
RT: 7.61 min Scan# 1078
Delta R.T. 0.01 min
Lab File: AP122308.D
Acq: 23 Dec 2018 3:10 pm

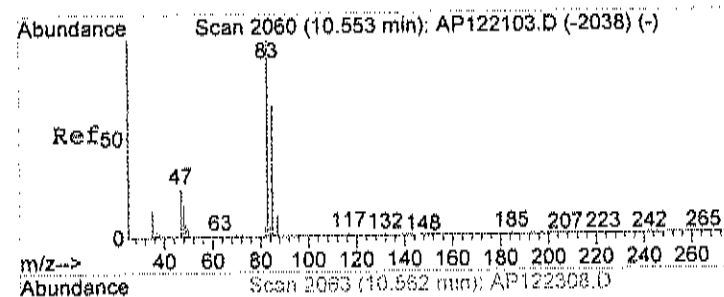
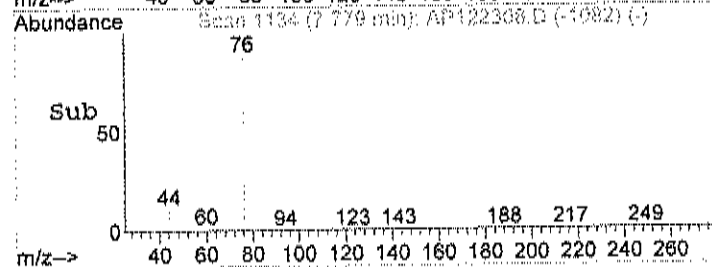
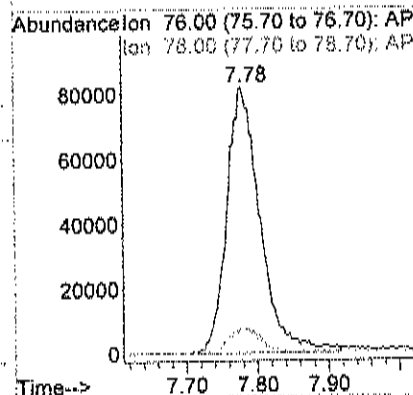
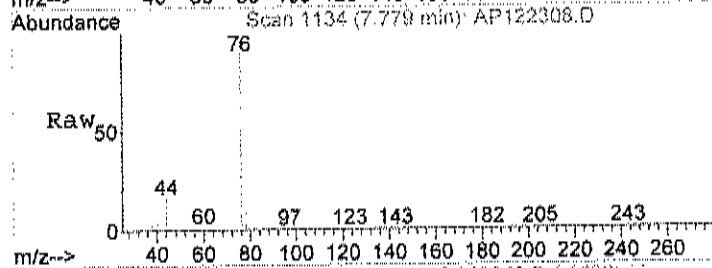
Tgt Ion: 84 Resp: 93768
Ion Ratio Lower Upper
84 100
49 134.7 121.5 161.5
86 64.8 46.0 86.0





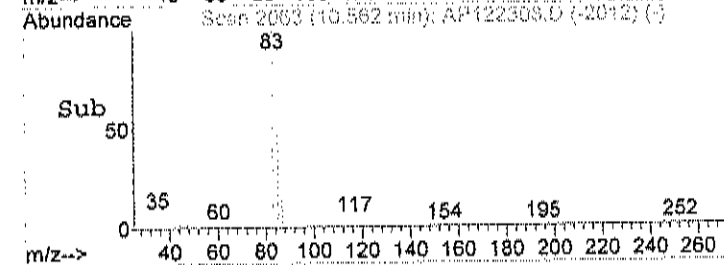
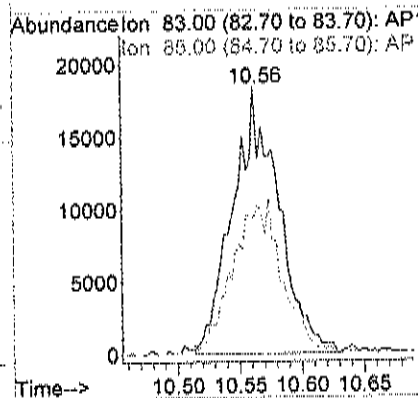
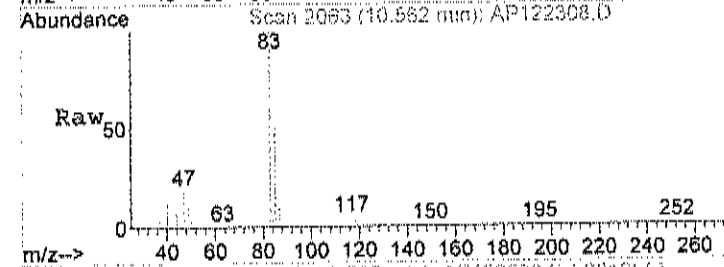
#23
Carbon disulfide
Concen: 2.13 ppb
RT: 7.78 min Scan# 1134
Delta R.T. 0.01 min
Lab File: AP122308.D
Acq: 23 Dec 2018 3:10 pm

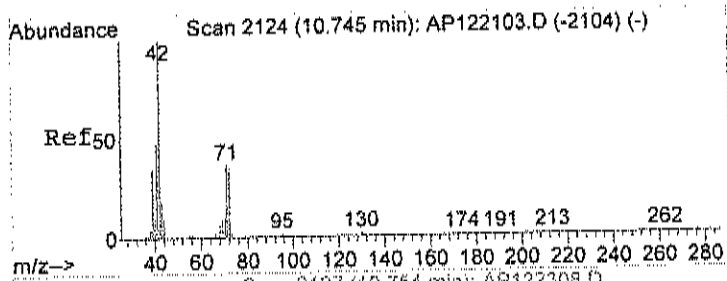
Tgt Ion: 76 Resp: 267718
Ion Ratio Lower Upper
76 100
78 9.6 0.0 29.2



#32
Chloroform
Concen: 0.34 ppb
RT: 10.56 min Scan# 2063
Delta R.T. 0.00 min
Lab File: AP122308.D
Acq: 23 Dec 2018 3:10 pm

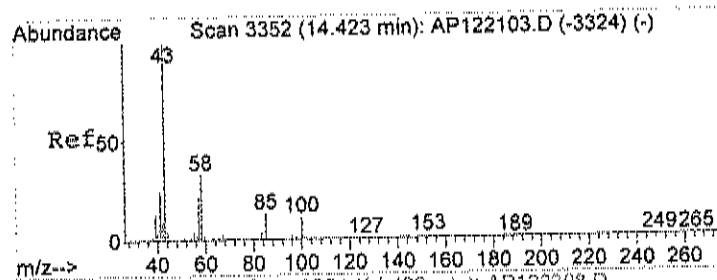
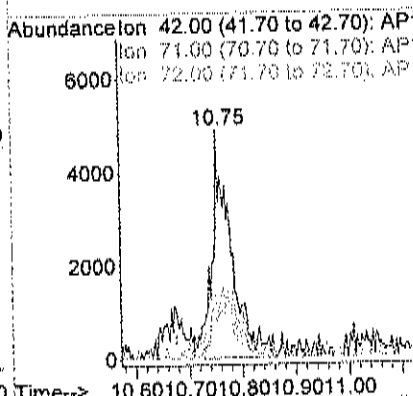
Tgt Ion: 83 Resp: 46886
Ion Ratio Lower Upper
83 100
85 62.4 45.5 85.5





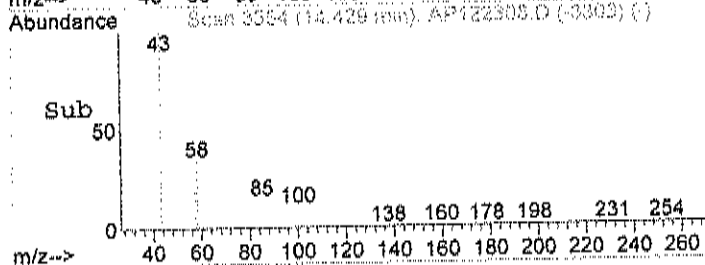
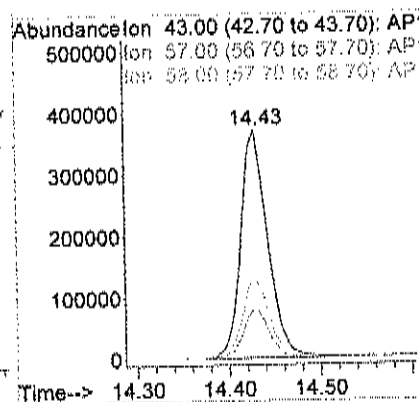
#33
Tetrahydrofuran
Concen: 0.27 ppb m
RT: 10.75 min Scan# 2127
Delta R.T. 0.00 min
Lab File: AP122308.D
Acq: 23 Dec 2018 3:10 pm

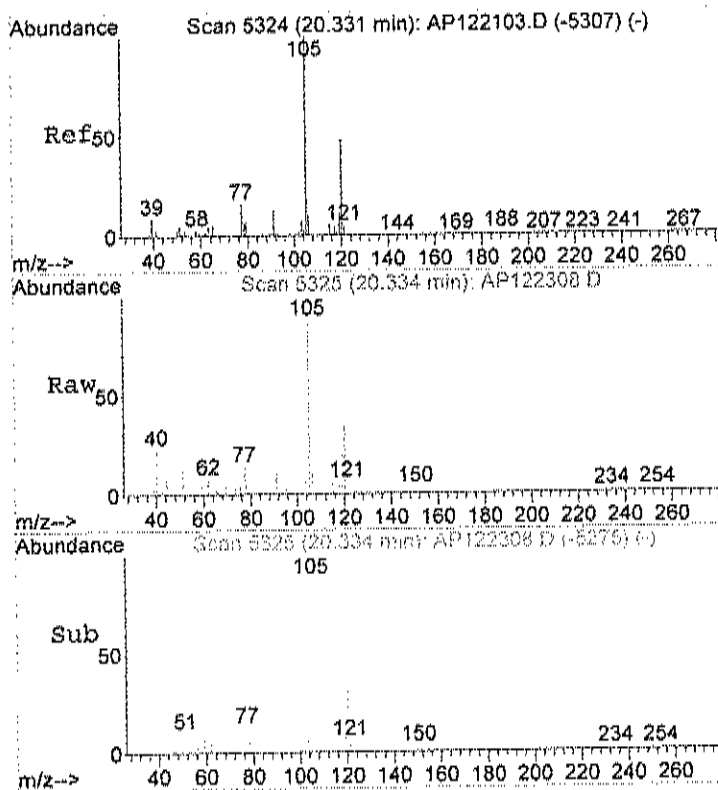
Tgt Ion:	42	Resp:	13069
Ion	Ratio	Lower	Upper
42	100		
71	9.6	21.4	61.4#
72	12.1	22.4	62.4#



#52
Methyl Isobutyl Ketone
Concen: 6.89 ppb
RT: 14.43 min Scan# 3354
Delta R.T. 0.00 min
Lab File: AP122308.D
Acq: 23 Dec 2018 3:10 pm

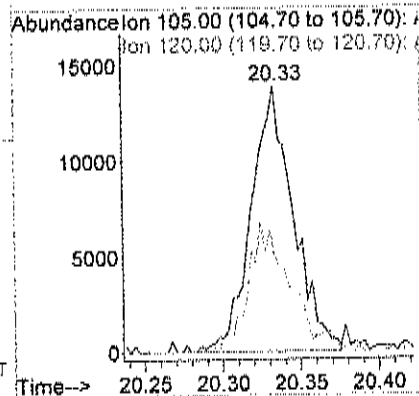
Tgt Ion:	43	Resp:	760736
Ion	Ratio	Lower	Upper
43	100		
57	21.1	3.5	43.5
58	35.0	17.9	57.9





#71
 1,2,4-trimethylbenzene
 Concen: 0.14 ppb
 RT: 20.33 min Scan# 5325
 Delta R.T. -0.00 min
 Lab File: AP122308.D
 Acq: 23 Dec 2018 3:10 pm

Tgt Ion	Ratio	Lower	Upper
105	100		
120	49.3	25.3	65.3



Data File : C:\HPCHEM\1\DATA\AP122309.D

Vial: 9

Acq On : 23 Dec 2018 3:47 pm

Operator: RJP

Sample : C1812057-010A 90x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:28 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	33464	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.65	114	138240	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	97985	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	48839m	0.73	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%

Target Compounds

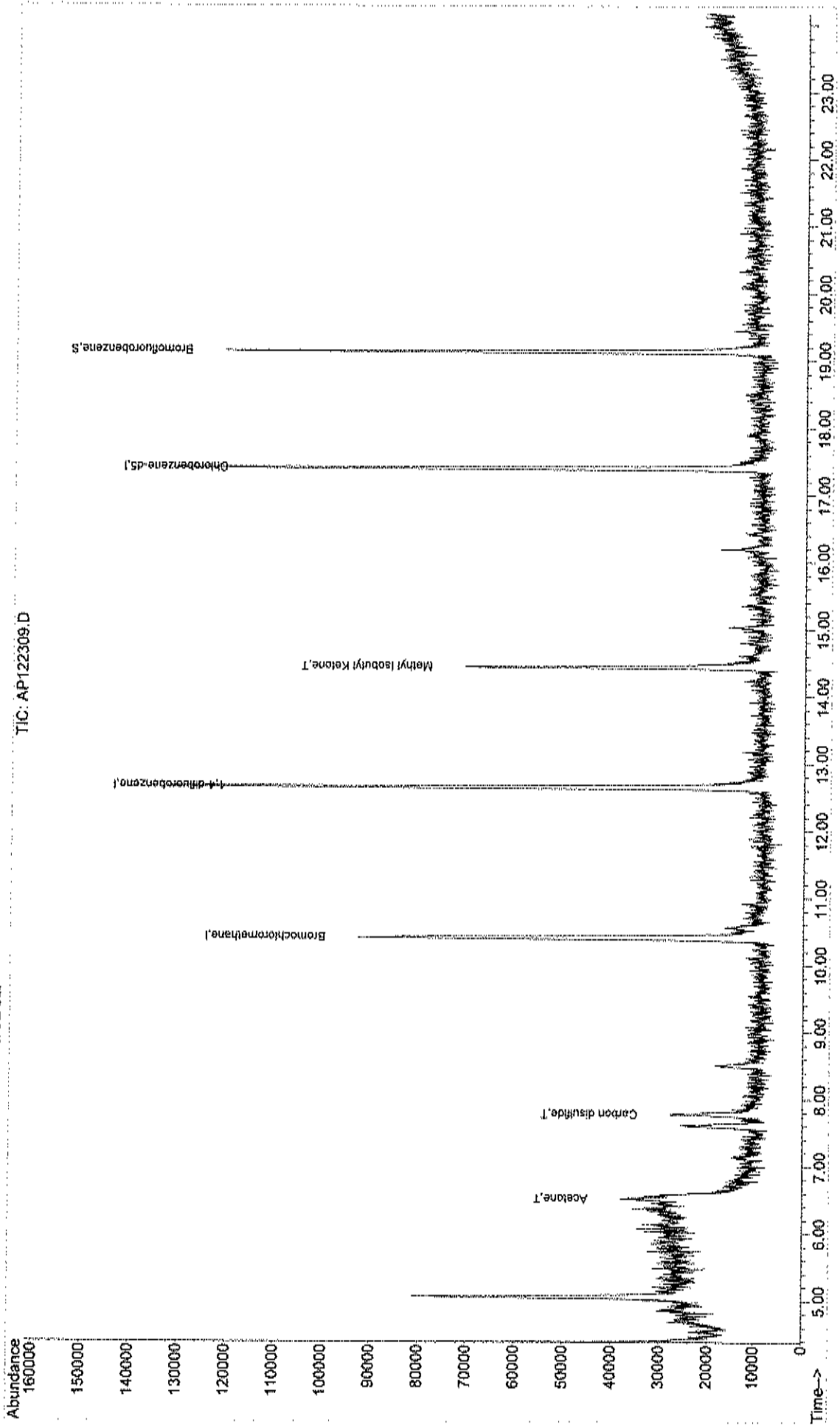
	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.52	58	6126m	0.30	ppb	
23) Carbon disulfide	7.78	76	29334	0.25	ppb	80
52) Methyl Isobutyl Ketone	14.44	43	63078	0.75	ppb	90

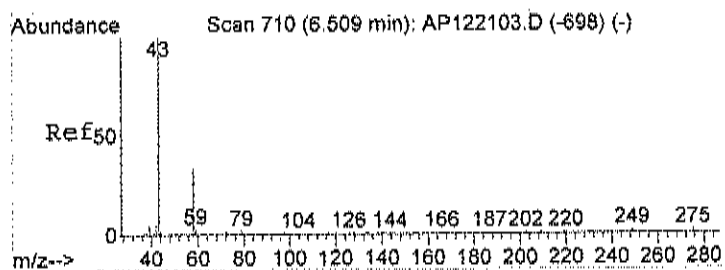
Data File : C:\HPCHEM\1\DATA\AP122309.D
Acq On : 23 Dec 2018 3:47 pm
Sample : C1812057-010A 90x
Misc : AD10 IUG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 8:20 2018

Vial: 9
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_IUG.RES

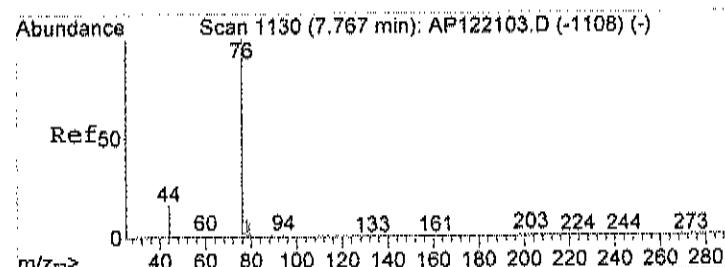
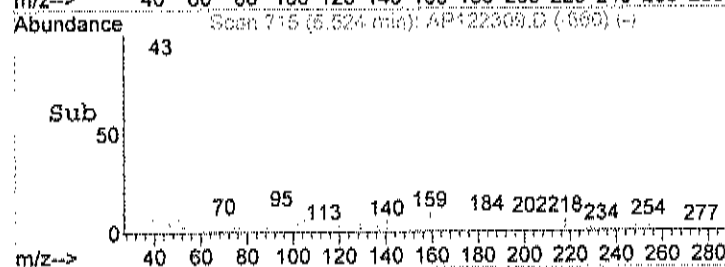
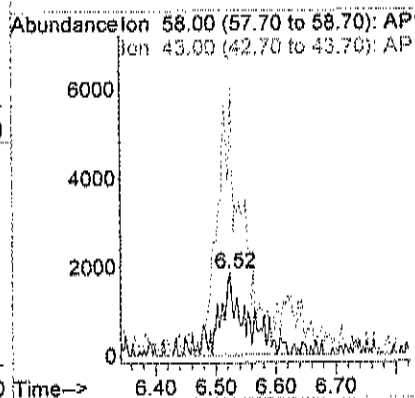
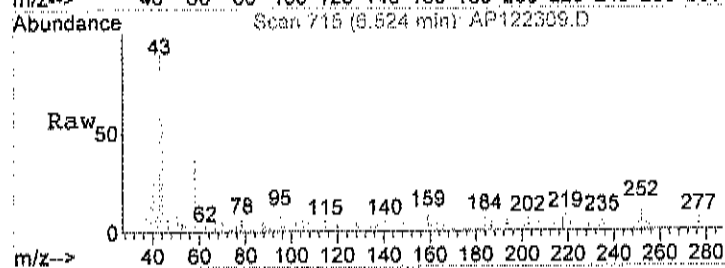
Method : C:\HPCHEM\1\METHODS\AD10_IUG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





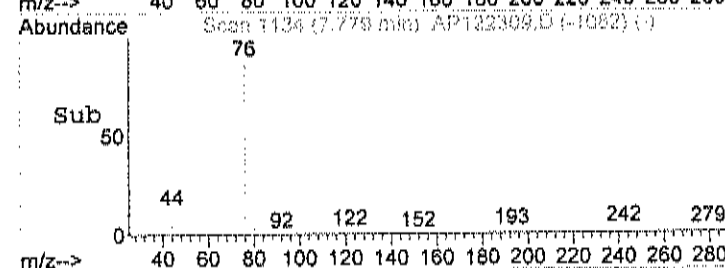
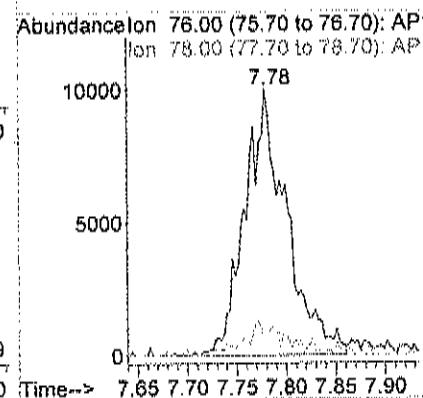
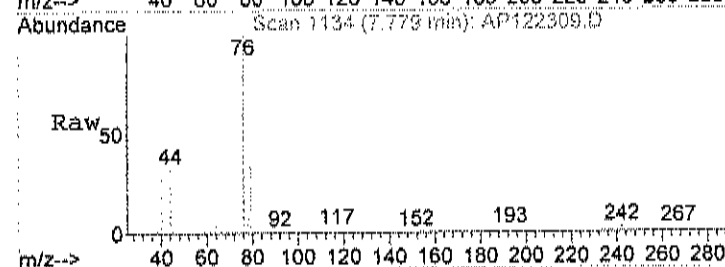
#15
Acetone
Concen: 0.30 ppb m
RT: 6.52 min Scan# 715
Delta R.T. 0.01 min
Lab File: AP122309.D
Acq: 23 Dec 2018 3:47 pm

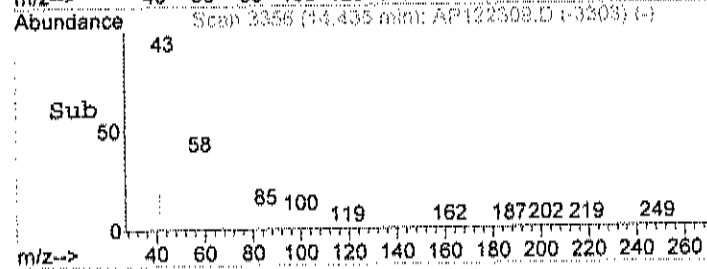
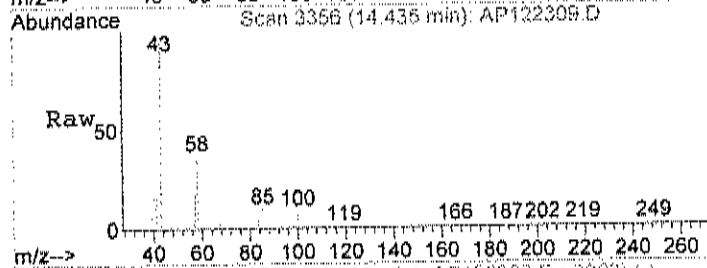
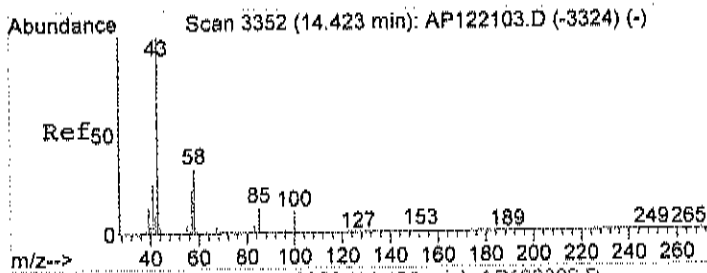
Tgt Ion: 58 Resp: 6126
Ion Ratio Lower Upper
58 100
43 0.0 298.2 358.2#



#23
Carbon disulfide
Concen: 0.25 ppb
RT: 7.78 min Scan# 1134
Delta R.T. 0.01 min
Lab File: AP122309.D
Acq: 23 Dec 2018 3:47 pm

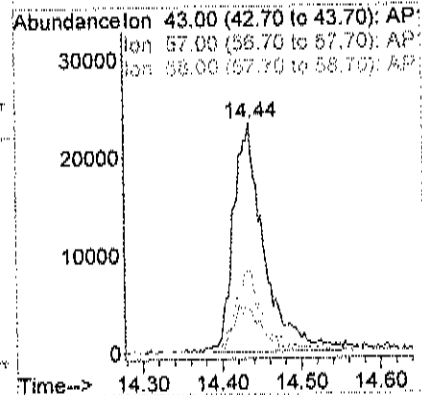
Tgt Ion: 76 Resp: 29334
Ion Ratio Lower Upper
76 100
78 2.1 0.0 29.2





#52
Methyl Isobutyl Ketone
Concen: 0.75 ppb
RT: 14.44 min Scan# 3356
Delta R.T. 0.01 min
Lab File: AP122309.D
Acq: 23 Dec 2018 3:47 pm

Tgt Ion	Ratio	Lower	Upper
43	100		
57	18.7	3.5	43.5
58	32.2	17.9	57.9



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-7			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichloroethane	0.13	0.15	J	ppbV	1	12/22/2018 1:15:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Acetone	16	3.0		ppbV	10	12/23/2018 4:25:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Carbon disulfide	4.8	1.5		ppbV	10	12/23/2018 4:25:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloroform	0.55	0.15		ppbV	1	12/22/2018 1:15:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Cyclohexane	0.43	0.15		ppbV	1	12/22/2018 1:15:00 PM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 11	0.21	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Freon 12	0.39	0.15		ppbV	1	12/22/2018 1:15:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/22/2018 1:15:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Hexane	1.1	0.15		ppbV	1	12/22/2018 1:15:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:15:00 PM
Methyl Isobutyl Ketone	55	27		ppbV	90	12/24/2018 7:47:00 AM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Methylene chloride	52	14		ppbV	90	12/24/2018 7:47:00 AM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Tetrahydrofuran	4.3	1.5		ppbV	10	12/23/2018 4:25:00 PM
Toluene	0.24	0.15		ppbV	1	12/22/2018 1:15:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:15:00 PM
Vinyl chloride	0.28	0.15		ppbV	1	12/22/2018 1:15:00 PM
Surr: Bromofluorobenzene	84.0	70-130		%REC	1	12/22/2018 1:15:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit	
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection	
S	Spike Recovery outside accepted recovery limits			

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:15:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:15:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:15:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichloroethane	0.53	0.61	J	ug/m3	1	12/22/2018 1:15:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:15:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:15:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:15:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 1:15:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:15:00 PM
Acetone	37	7.1		ug/m3	10	12/23/2018 4:25:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:15:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/22/2018 1:15:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:15:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:15:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:15:00 PM
Carbon disulfide	15	4.7		ug/m3	10	12/23/2018 4:25:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:15:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:15:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:15:00 PM
Chloroform	2.7	0.73		ug/m3	1	12/22/2018 1:15:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 1:15:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:15:00 PM
Cyclohexane	1.5	0.52		ug/m3	1	12/22/2018 1:15:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:15:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 1:15:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:15:00 PM
Freon 11	1.2	0.84		ug/m3	1	12/22/2018 1:15:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:15:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-011A

Client Sample ID: SVW-10
Tag Number: 233,1154
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	1.9	0.74		ug/m3	1	12/22/2018 1:15:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/22/2018 1:15:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:15:00 PM
Hexane	3.8	0.53		ug/m3	1	12/22/2018 1:15:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 1:15:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 1:15:00 PM
Methyl Isobutyl Ketone	220	110		ug/m3	90	12/24/2018 7:47:00 AM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:15:00 PM
Methylene chloride	180	49		ug/m3	90	12/24/2018 7:47:00 AM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:15:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:15:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:15:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/22/2018 1:15:00 PM
Tetrahydrofuran	13	4.4		ug/m3	10	12/23/2018 4:25:00 PM
Toluene	0.90	0.57		ug/m3	1	12/22/2018 1:15:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:15:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:15:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:15:00 PM
Vinyl chloride	0.72	0.38		ug/m3	1	12/22/2018 1:15:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

Data File : C:\HPCHEM\1\DATA\AP122207.D

Vial: 53

Acq On : 22 Dec 2018 1:15 pm

Operator: RJP

Sample : C1812057-011A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:14 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.39	128	43564	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.63	114	187294	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	172940	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	99193	0.84	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	84.00%

Target Compounds

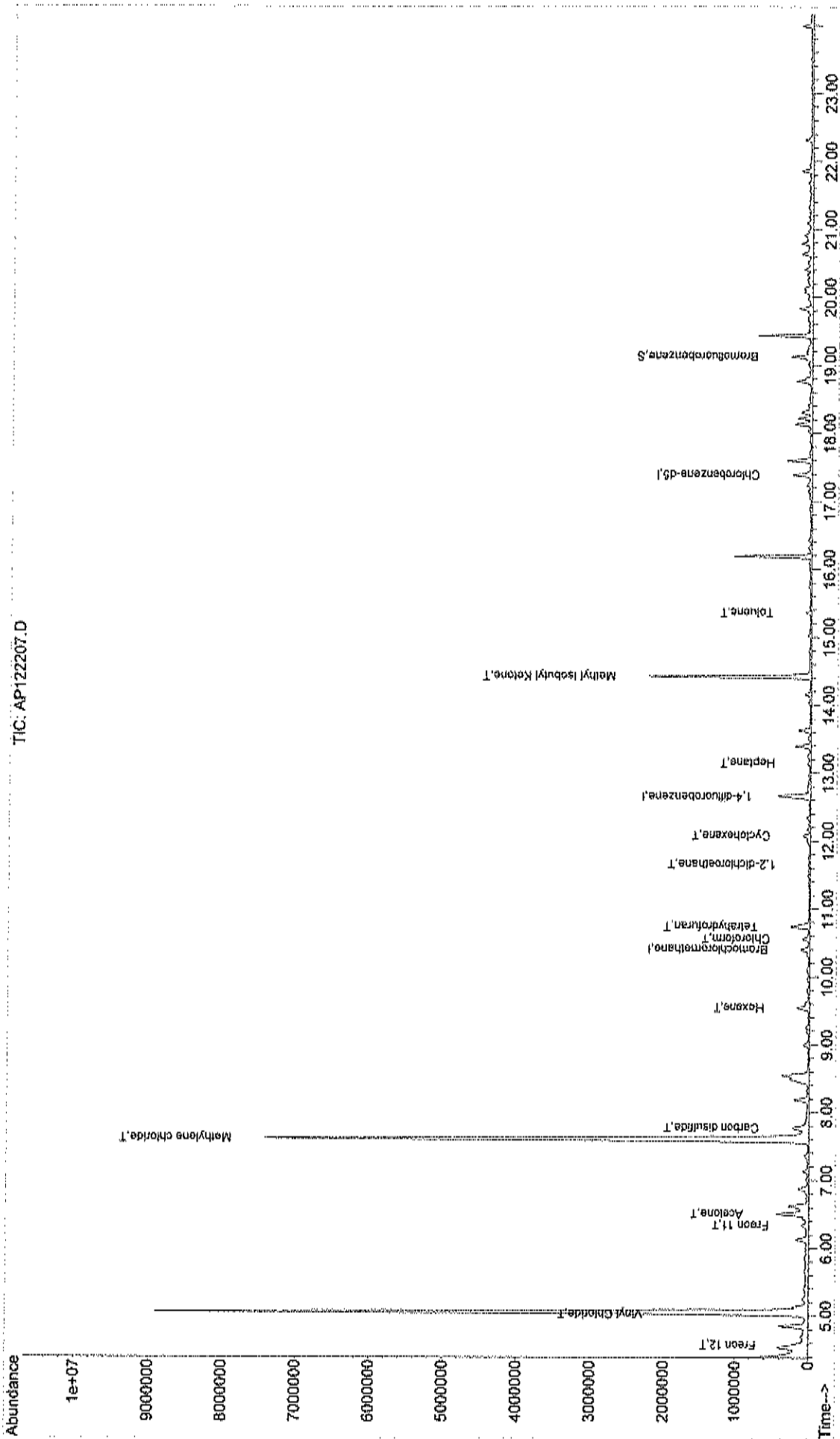
						Qvalue
3) Freon 12	4.58	85	97148	0.39	ppb	100
6) Vinyl Chloride	5.01	62	19865	0.28	ppb	90
14) Freon 11	6.34	101	72649	0.21	ppb	95
15) Acetone	6.50	58	242992	9.09	ppb	99
21) Methylene chloride	7.60	84	5118206	74.46	ppb	96
23) Carbon disulfide	7.77	76	372972	2.44	ppb	99
30) Hexane	9.54	57	92472	1.07	ppb	80
32) Chloroform	10.56	83	90188	0.55	ppb	100
33) Tetrahydrofuran	10.74	42	178914	3.08	ppb	93
34) 1,2-dichloroethane	11.66	62	12850	0.13	ppb	76
37) Cyclohexane	12.08	56	38206	0.43	ppb	86
43) Heptane	13.15	43	12257	0.12	ppb	# 28
51) Toluene	15.36	92	32191	0.24	ppb	95
52) Methyl Isobutyl Ketone	14.42	43	1884510	12.62	ppb	97

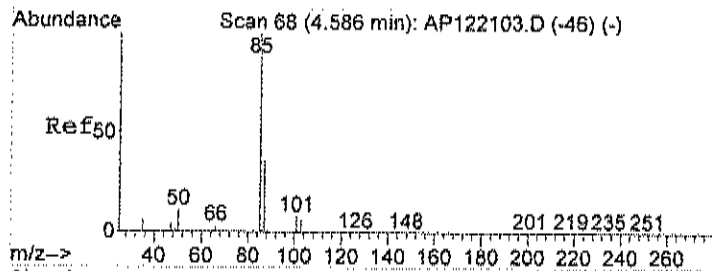
Data File : C:\HPCHEM\1\DATA\AP122207.D
 Acq On : 22 Dec 2018 1:15 pm
 Sample : C1812057-011A
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 27 10:29 2018

Vial: 53
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

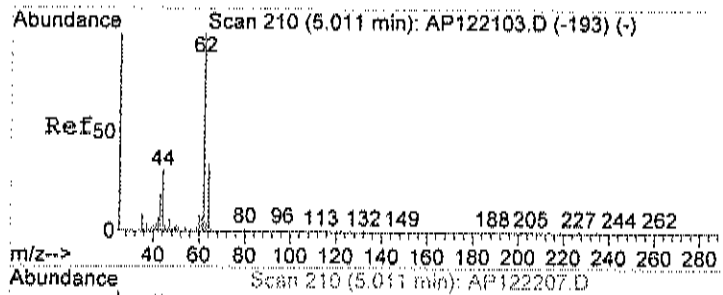
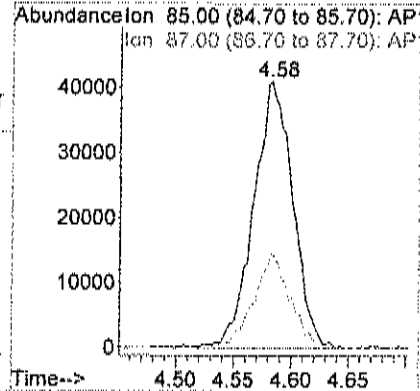
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





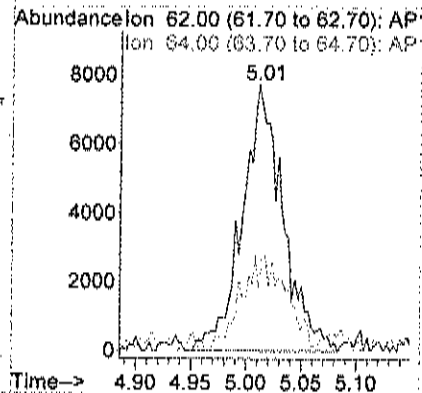
#3
Freon 12
Concen: 0.39 ppb
RT: 4.58 min Scan# 67
Delta R.T. -0.01 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

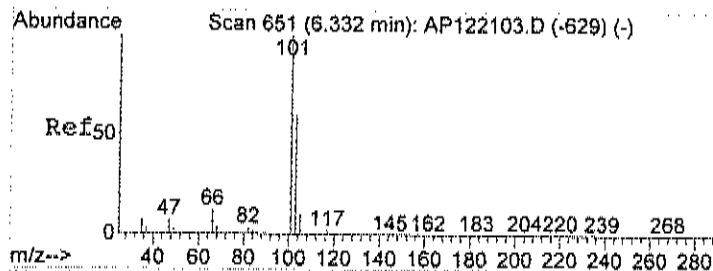
Tgt Ion	85	87	Resp	97148	Lower	Upper
Ion Ratio	100	32.7			12.4	52.4



#6
Vinyl Chloride
Concen: 0.28 ppb
RT: 5.01 min Scan# 210
Delta R.T. -0.00 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

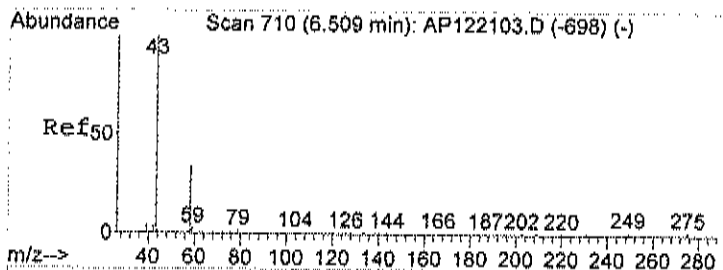
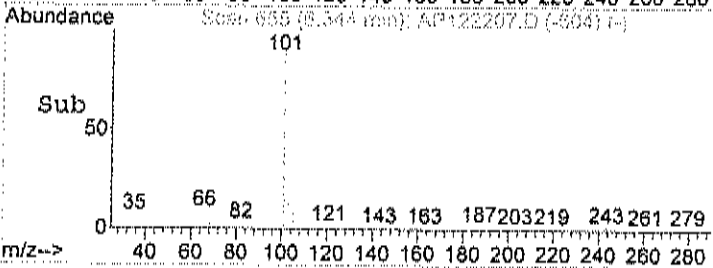
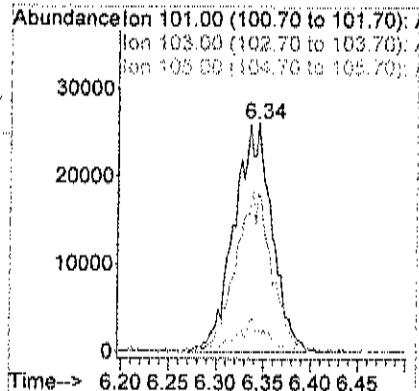
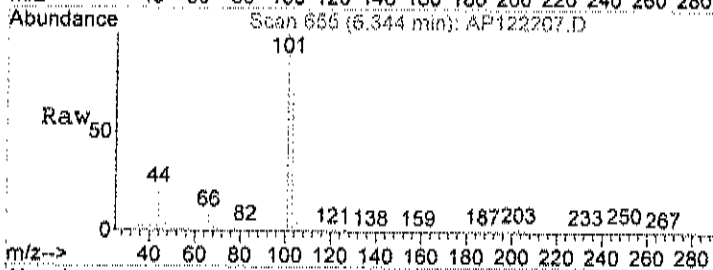
Tgt Ion	62	64	Resp	19865	Lower	Upper
Ion Ratio	100	39.8			3.9	63.9





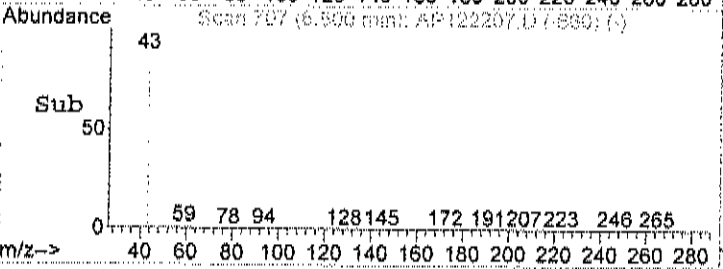
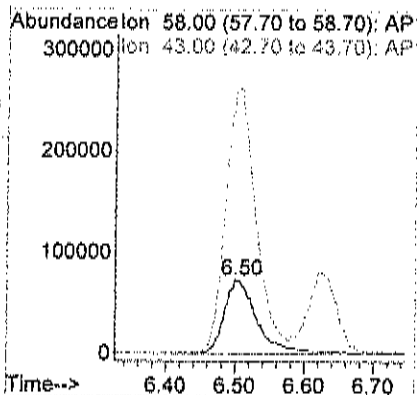
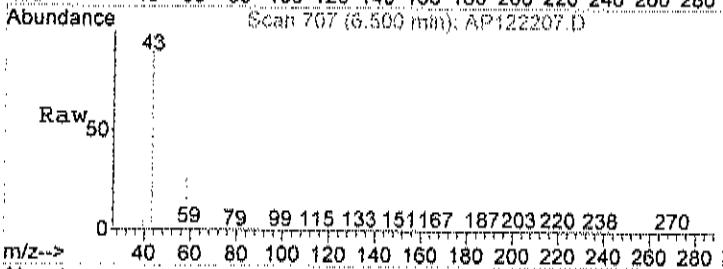
#14
Freon 11
Concen: 0.21 ppb
RT: 6.34 min Scan# 655
Delta R.T. 0.00 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

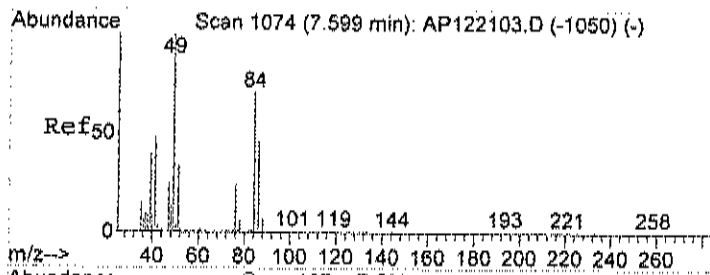
Tgt Ion: 101 Resp: 72649
Ion Ratio Lower Upper
101 100
103 67.4 44.4 84.4
105 6.7 0.0 31.9



#15
Acetone
Concen: 9.09 ppb
RT: 6.50 min Scan# 707
Delta R.T. -0.01 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

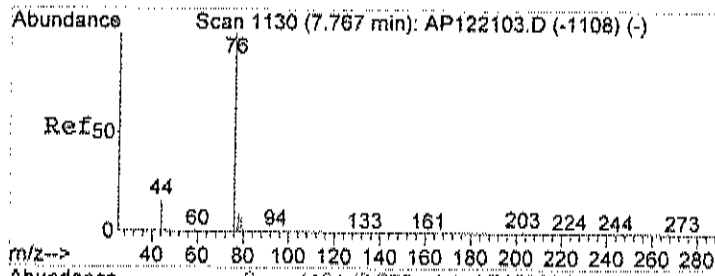
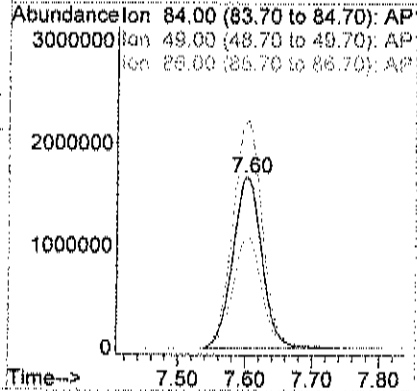
Tgt Ion: 58 Resp: 242992
Ion Ratio Lower Upper
58 100
43 326.6 298.2 358.2





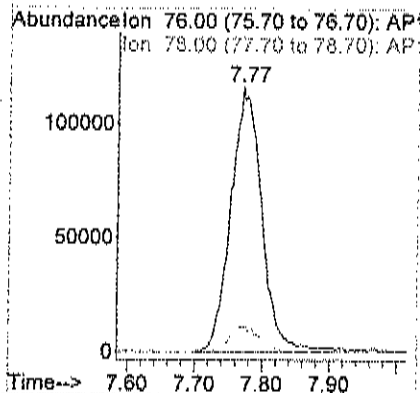
#21
Methylene chloride
Concen: 74.46 ppb
RT: 7.60 min Scan# 1074
Delta R.T. -0.00 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

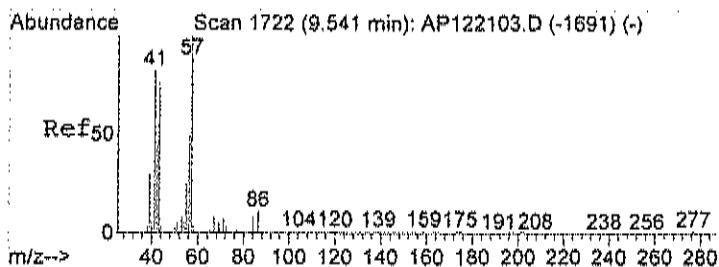
Tgt Ion: 84 Resp: 5118206
Ion Ratio Lower Upper
84 100
49 134.8 121.5 161.5
86 65.1 46.0 86.0



#23
Carbon disulfide
Concen: 2.44 ppb
RT: 7.77 min Scan# 1131
Delta R.T. -0.00 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

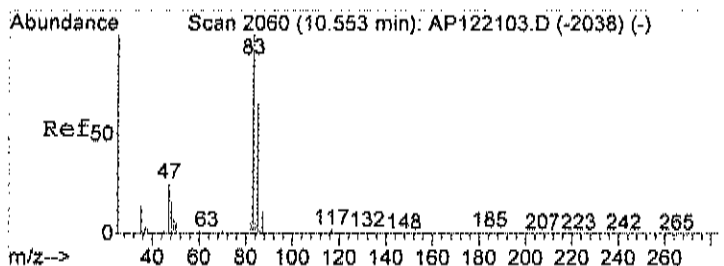
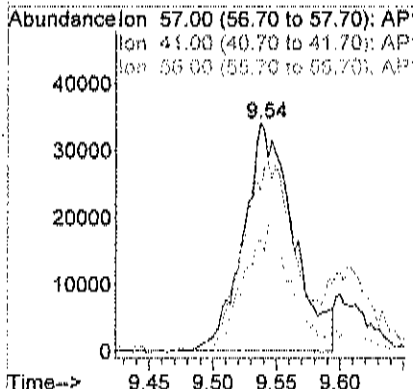
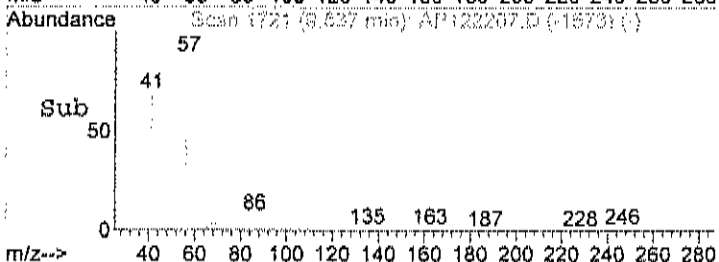
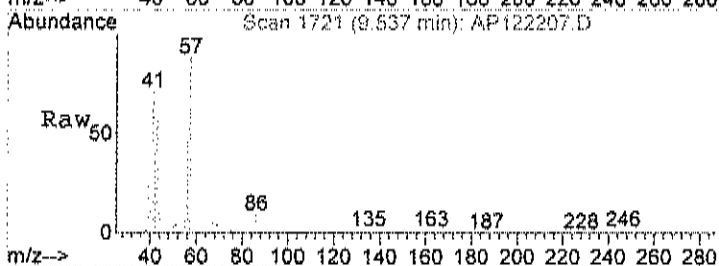
Tgt Ion: 76 Resp: 372972
Ion Ratio Lower Upper
76 100
78 9.6 0.0 29.2





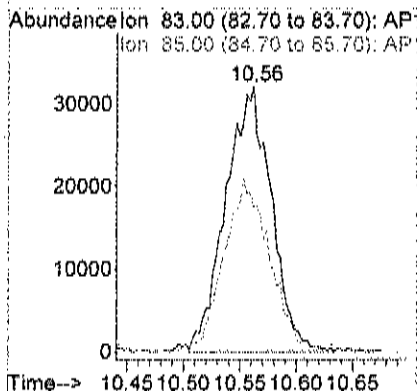
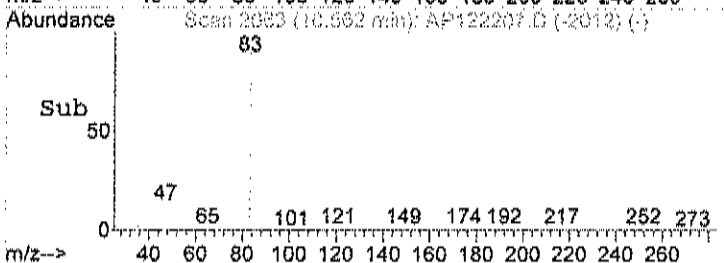
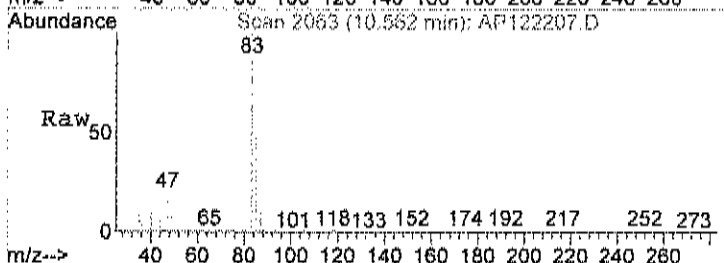
#30
Hexane
Concen: 1.07 ppb
RT: 9.54 min Scan# 1721
Delta R.T. -0.01 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

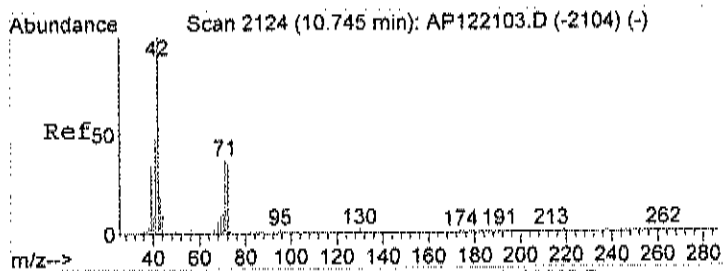
Tgt Ion: 57 Resp: 92472
Ion Ratio Lower Upper
57 100
41 87.3 49.7 89.7
56 60.3 27.9 67.9



#32
Chloroform
Concen: 0.55 ppb
RT: 10.56 min Scan# 2063
Delta R.T. 0.00 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

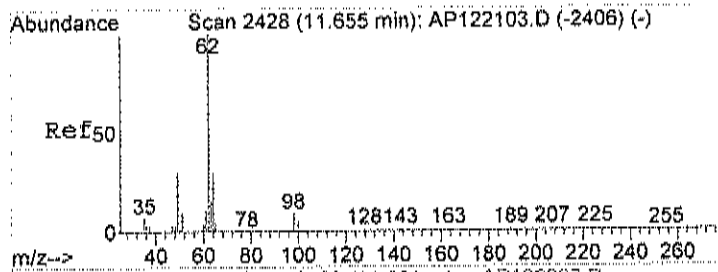
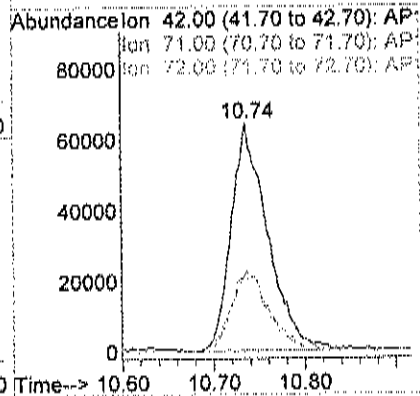
Tgt Ion: 83 Resp: 90188
Ion Ratio Lower Upper
83 100
85 65.5 45.5 85.5





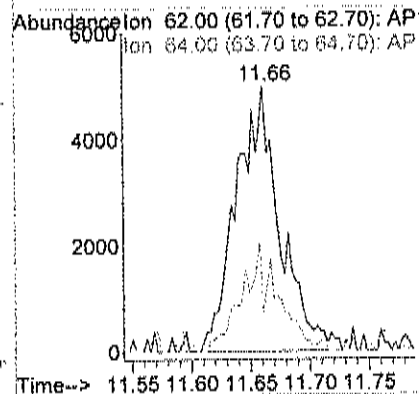
#33
Tetrahydrofuran
Concen: 3.08 ppb
RT: 10.74 min Scan# 2121
Delta R.T. -0.02 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

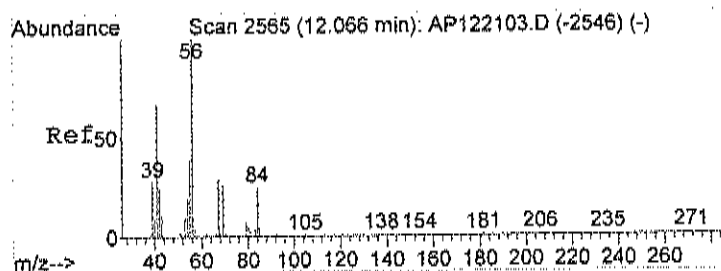
Tgt Ion: 42 Resp: 178914
Ion Ratio Lower Upper
42 100
71 36.9 21.4 61.4
72 37.8 22.4 62.4



#34
1,2-dichloroethane
Concen: 0.13 ppb
RT: 11.66 min Scan# 2430
Delta R.T. -0.00 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

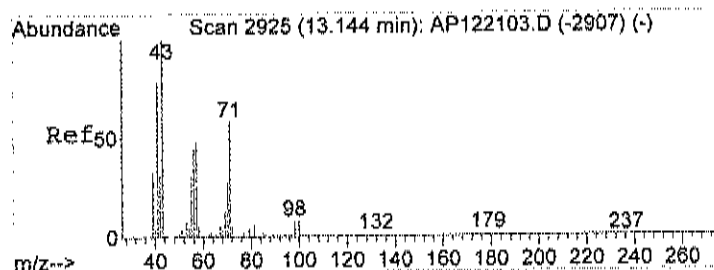
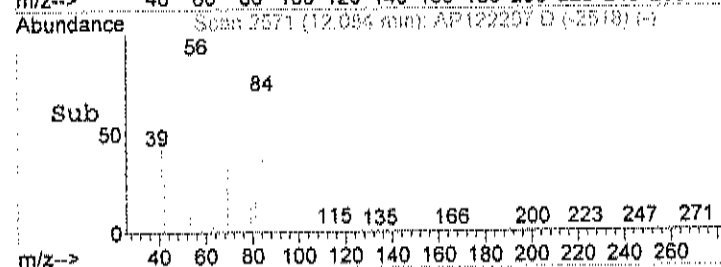
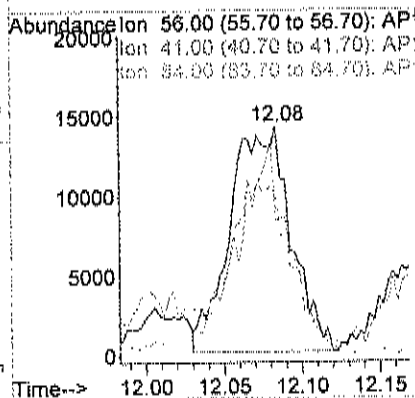
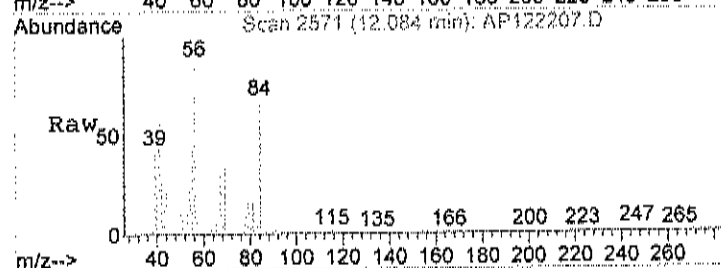
Tgt Ion: 62 Resp: 12850
Ion Ratio Lower Upper
62 100
64 19.5 13.2 53.2





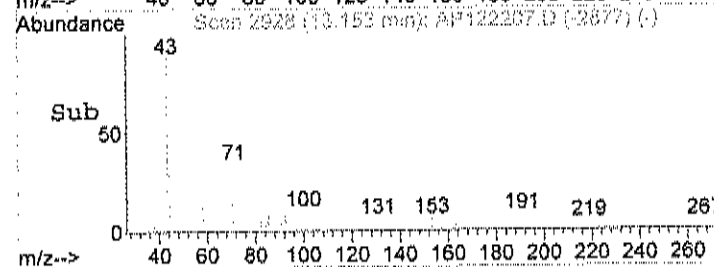
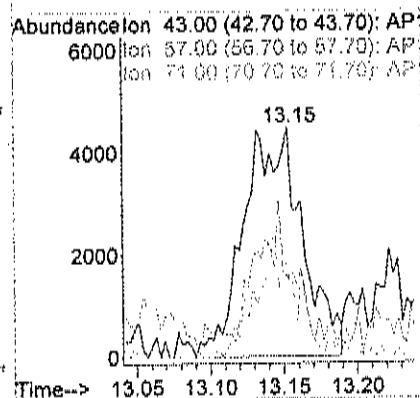
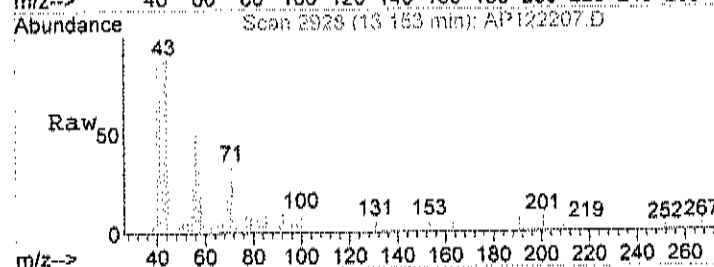
#37
Cyclohexane
Concen: 0.43 ppb
RT: 12.08 min Scan# 2571
Delta R.T. 0.01 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

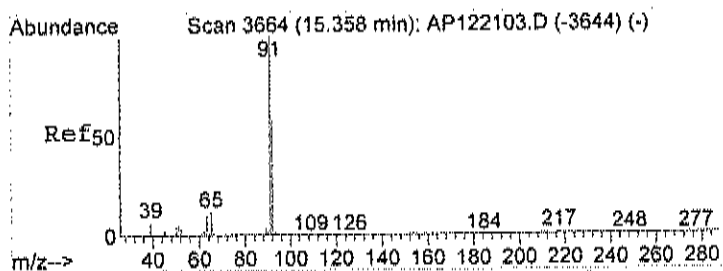
Tgt Ion: 56 Resp: 38206
Ion Ratio Lower Upper
56 100
41 71.5 36.3 76.3
84 83.4 56.0 96.0



#43
Heptane
Concen: 0.12 ppb
RT: 13.15 min Scan# 2928
Delta R.T. 0.00 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

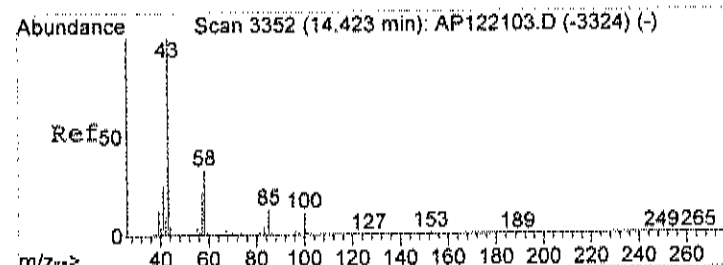
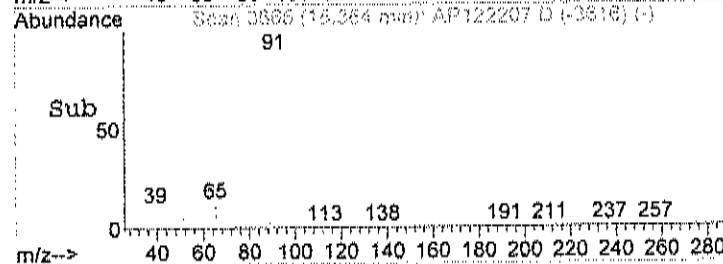
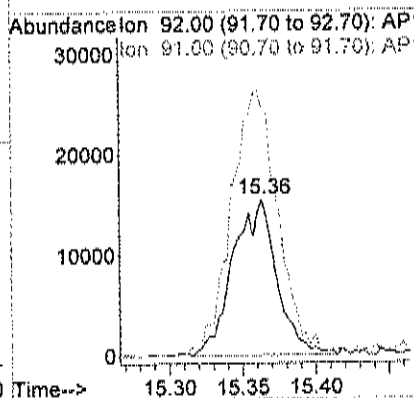
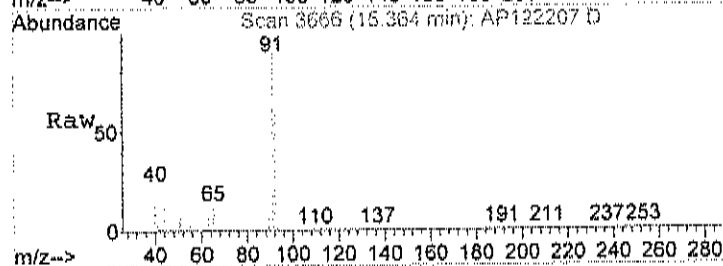
Tgt Ion: 43 Resp: 12257
Ion Ratio Lower Upper
43 100
57 0.0 32.7 72.7#
71 5.6 35.6 75.6#





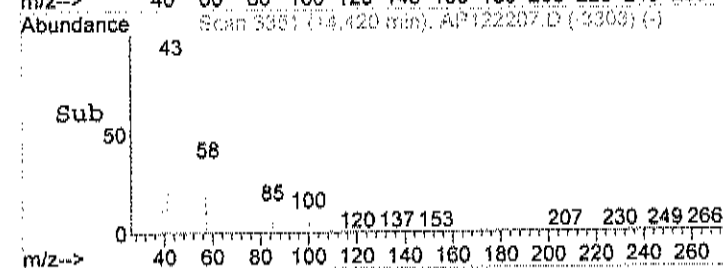
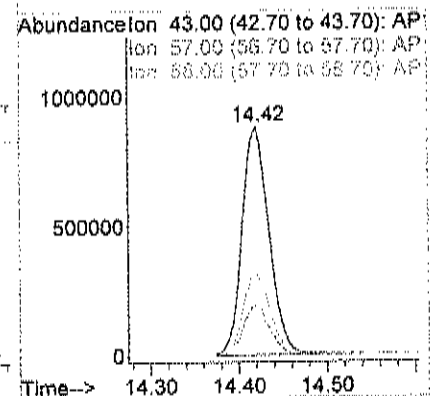
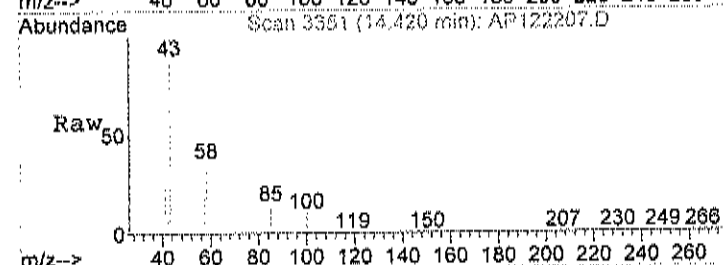
#51
Toluene
Concen: 0.24 ppb
RT: 15.36 min Scan# 3666
Delta R.T. -0.00 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

Tgt Ion: 92 Resp: 32191
Ion Ratio Lower Upper
92 100
91 181.4 154.3 194.3



#52
Methyl Isobutyl Ketone
Concen: 12.62 ppb
RT: 14.42 min Scan# 3351
Delta R.T. -0.01 min
Lab File: AP122207.D
Acq: 22 Dec 2018 1:15 pm

Tgt Ion: 43 Resp: 1884510
Ion Ratio Lower Upper
43 100
57 21.4 3.5 43.5
58 36.5 17.9 57.9



Data File : C:\HPCHEM\1\DATA\AP122310.D

Acq On : 23 Dec 2018 4:25 pm

Sample : C1812057-011A 10x

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:29 2018

Vial: 10

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	34321	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	138857	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	109185	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	58967	0.79	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	79.00%

Target Compounds

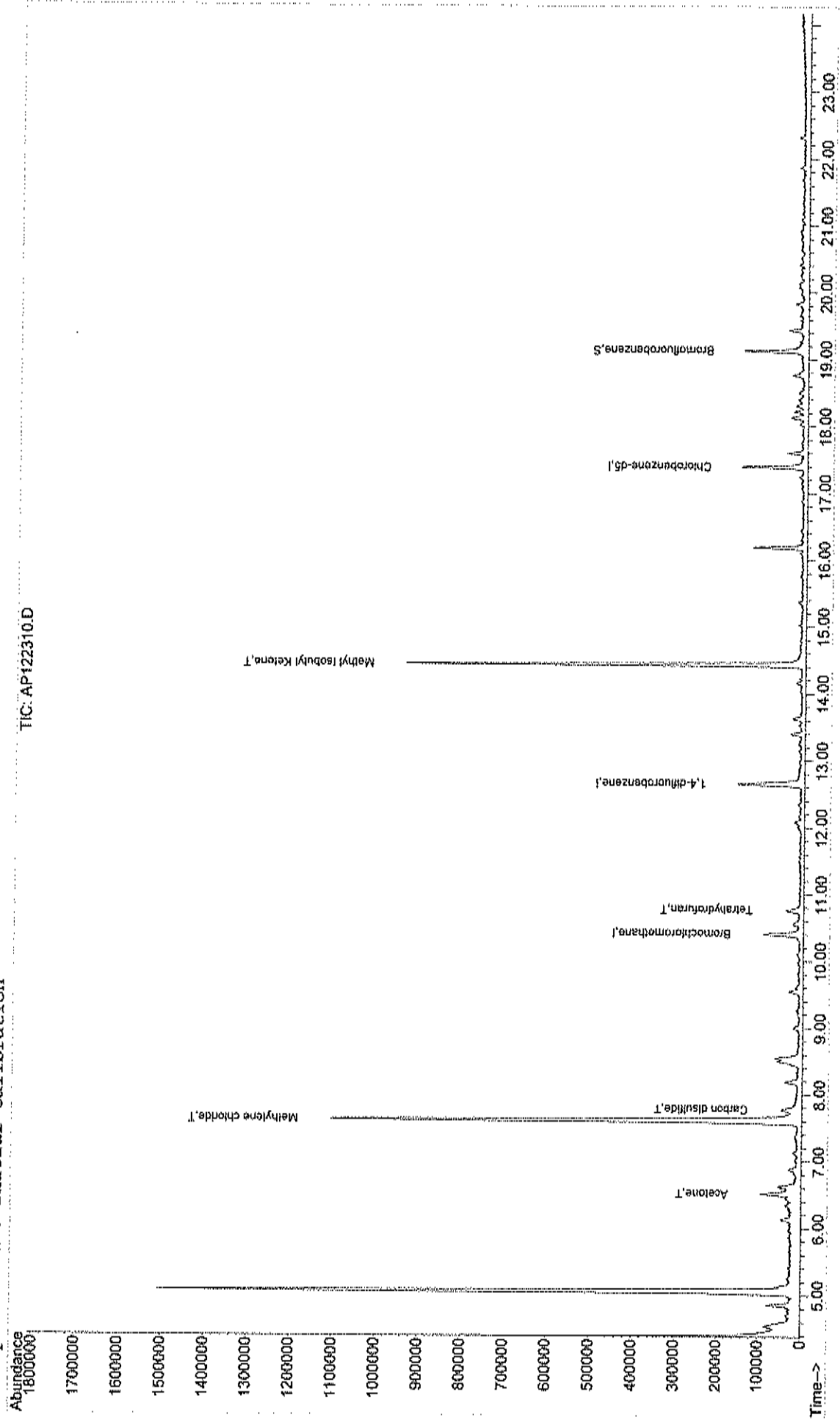
	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.52	58	33090	1.57	ppb	# 53
21) Methylene chloride	7.61	84	796367	14.70	ppb	96
23) Carbon disulfide	7.78	76	58233	0.48	ppb	81
33) Tetrahydrofuran	10.76	42	19761	0.43	ppb	# 69
52) Methyl Isobutyl Ketone	14.43	43	756210	8.02	ppb	96

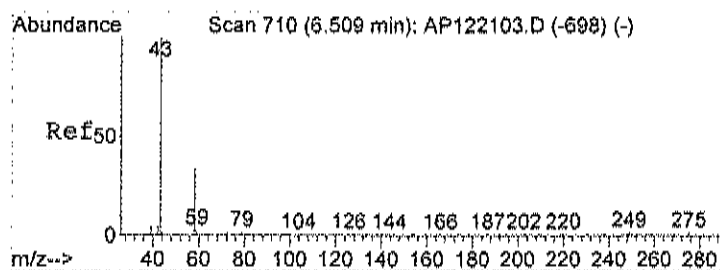
Data File : C:\HPCHEM\1\DATA\AP122310.D
Acq On : 23 Dec 2018 4:25 pm
Sample : C1812057-011A 10x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 8:21 2018

Vial: 10
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

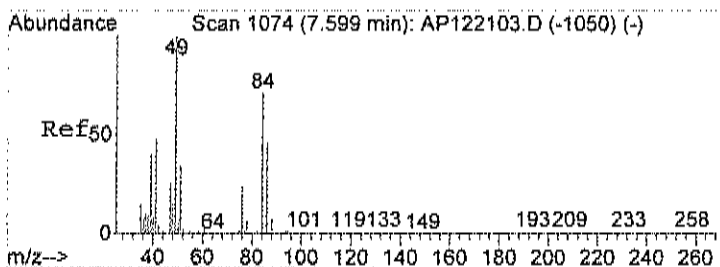
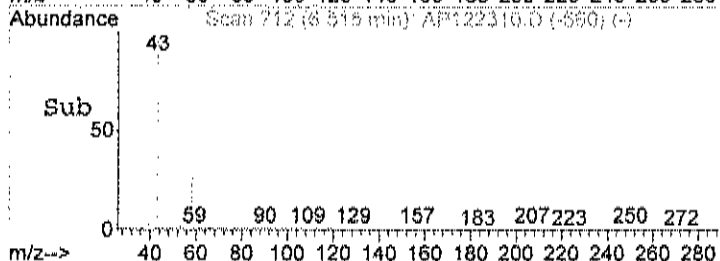
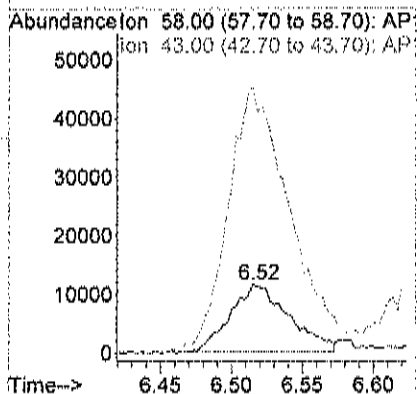
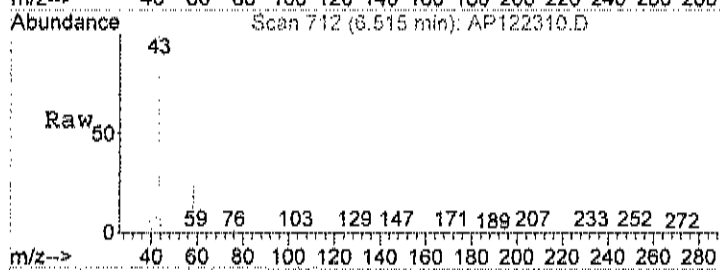
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





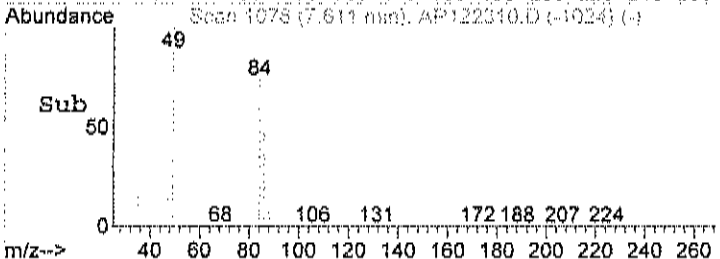
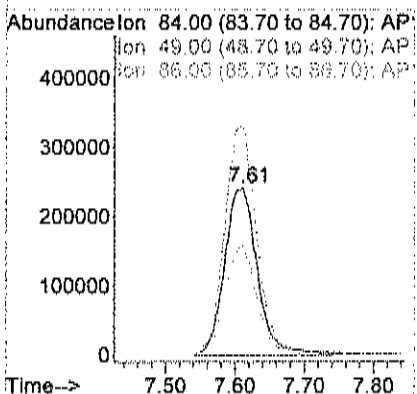
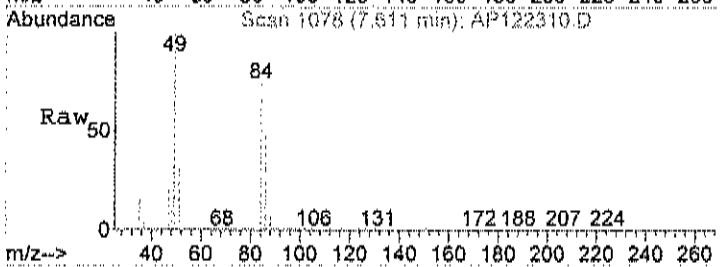
#15
Acetone
Concen: 1.57 ppb
RT: 6.52 min Scan# 712
Delta R.T. 0.01 min
Lab File: AP122310.D
Acq: 23 Dec 2018 4:25 pm

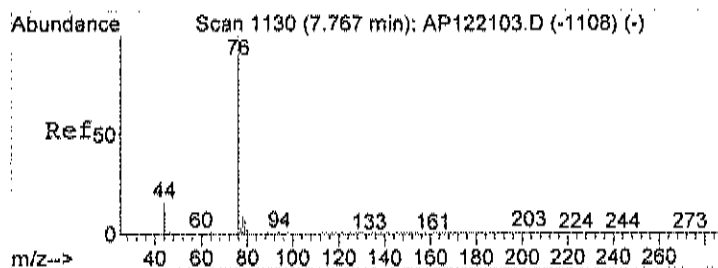
Tgt Ion: 58 Resp: 33090
Ion Ratio Lower Upper
58 100
43 425.5 298.2 358.2#



#21
Methylene chloride
Concen: 14.70 ppb
RT: 7.61 min Scan# 1078
Delta R.T. 0.01 min
Lab File: AP122310.D
Acq: 23 Dec 2018 4:25 pm

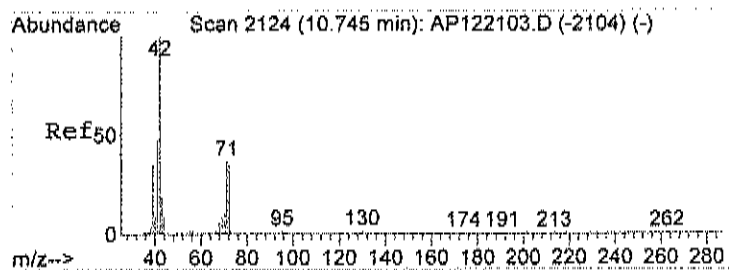
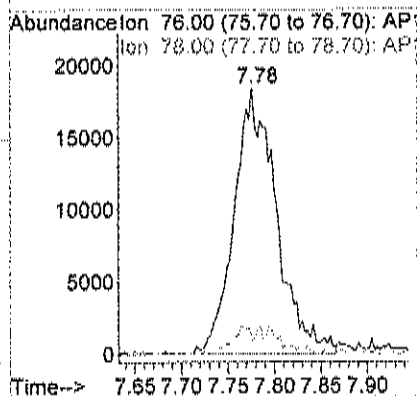
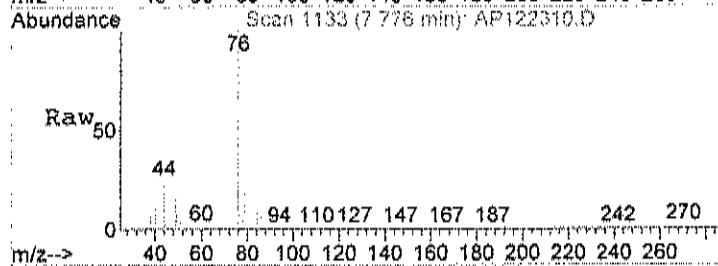
Tgt Ion: 84 Resp: 796367
Ion Ratio Lower Upper
84 100
49 135.3 121.5 161.5
86 64.4 46.0 86.0





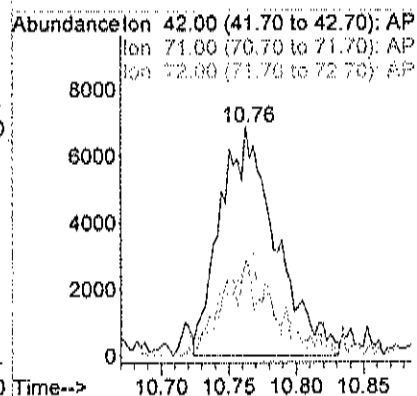
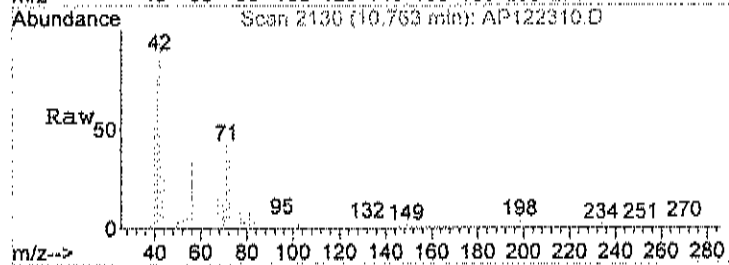
#23
Carbon disulfide
Concen: 0.48 ppb
RT: 7.78 min Scan# 1133
Delta R.T. 0.00 min
Lab File: AP122310.D
Acq: 23 Dec 2018 4:25 pm

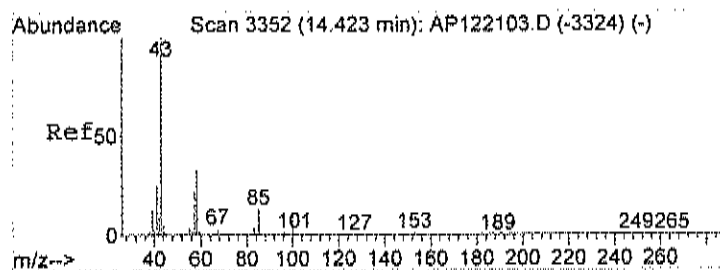
Tgt Ion: 76 Resp: 58233
Ion Ratio Lower Upper
76 100
78 2.2 0.0 29.2



#33
Tetrahydrofuran
Concen: 0.43 ppb
RT: 10.76 min Scan# 2130
Delta R.T. 0.01 min
Lab File: AP122310.D
Acq: 23 Dec 2018 4:25 pm

Tgt Ion: 42 Resp: 19761
Ion Ratio Lower Upper
42 100
71 23.1 21.4 61.4
72 21.3 22.4 62.4#

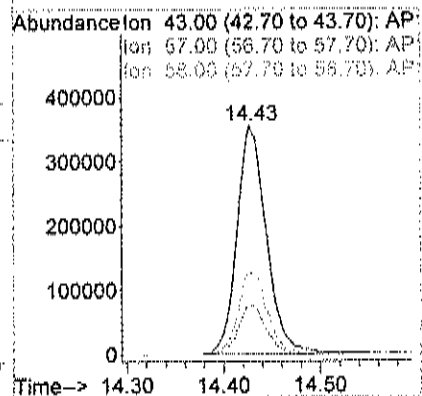
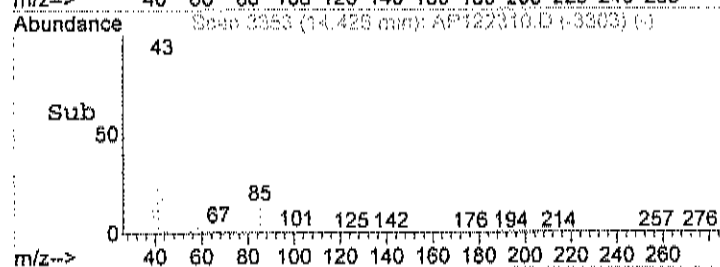
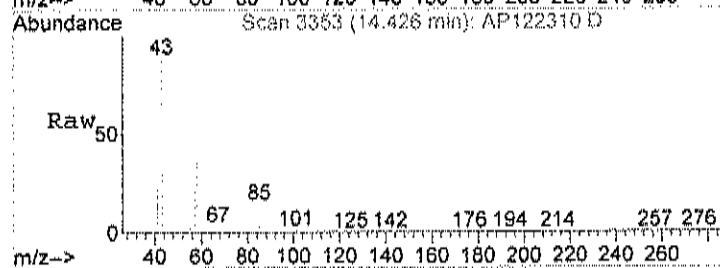




#52
Methyl Isobutyl Ketone
Concen: 8.02 ppb
RT: 14.43 min Scan# 3353
Delta R.T. -0.00 min
Lab File: AP122310.D
Acq: 23 Dec 2018 4:25 pm

Tgt Ion: 43 Resp: 756210

Ion	Ratio	Lower	Upper
43	100		
57	20.9	3.5	43.5
58	35.9	17.9	57.9



Data File : C:\HPCHEM\1\DATA\AP122324.D
 Acq On : 24 Dec 2018 7:47 am
 Sample : C1812057-011A 90x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 26 14:09:43 2018

Vial: 22
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

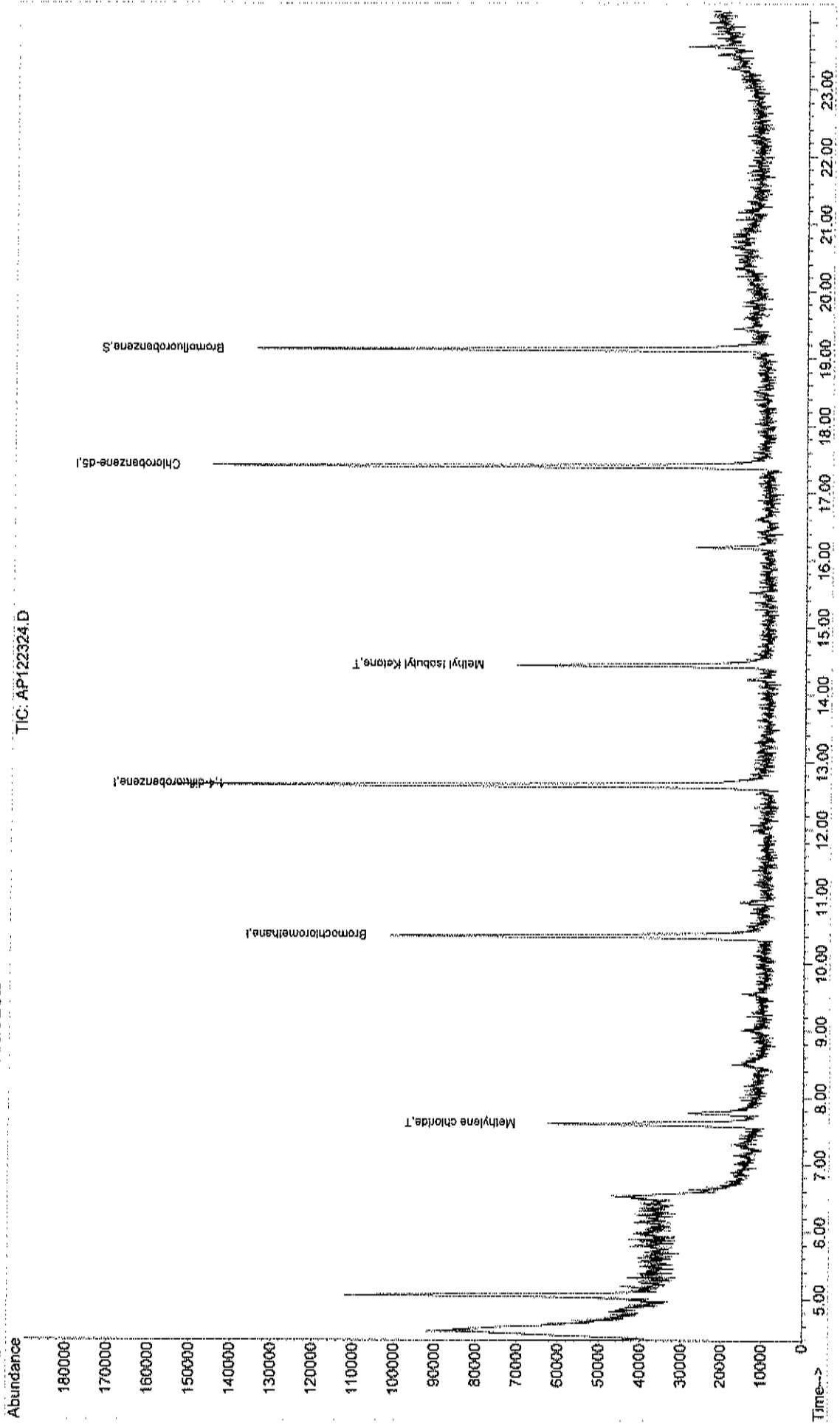
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	38427	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.64	114	155363	1.00	ppb	0.00
50) Chlorobenzene-d5	17.40	117	110031	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	19.13	95	54370m	0.72	ppb	0.00
Spiked Amount 1.000	Range 70 - 130		Recovery =	72.00%		
Target Compounds						
21) Methylene chloride	7.61	84	35045	0.58	ppb	98
52) Methyl Isobutyl Ketone	14.44	43	58168	0.61	ppb	86

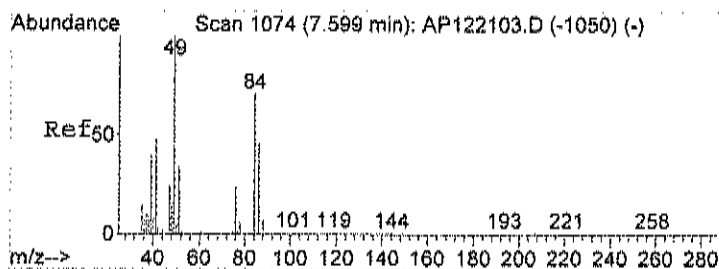
Data File : C:\HPCHEM\1\DATA\AP122324.D
Acq On : 24 Dec 2018 7:47 am
Sample : C1812057-011A 90x
Misc : AD10 1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 8:23 2018

Vial: 22
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

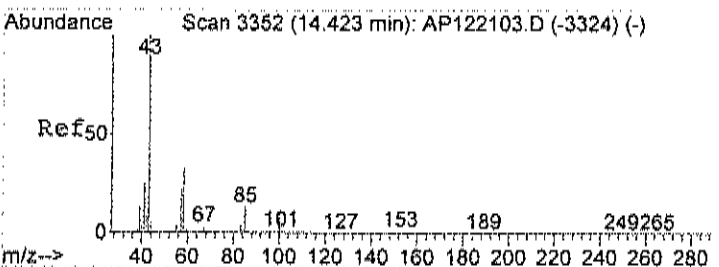
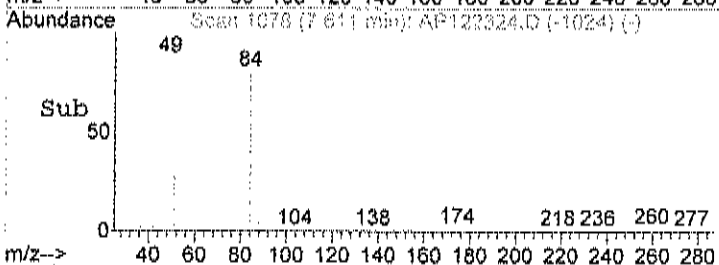
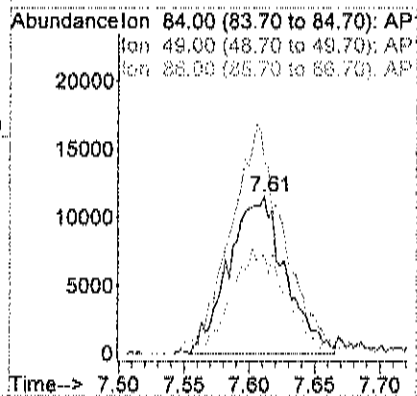
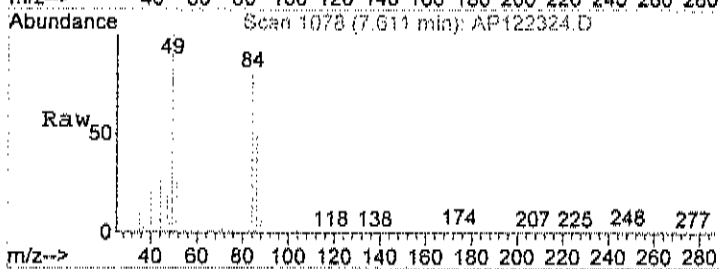
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





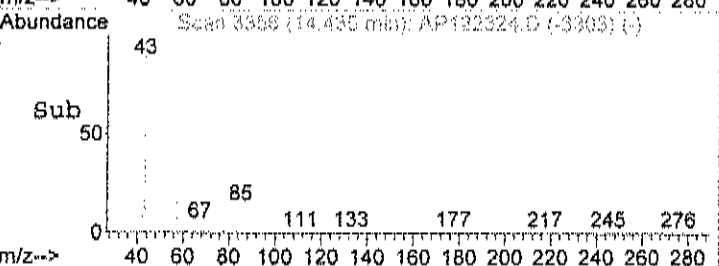
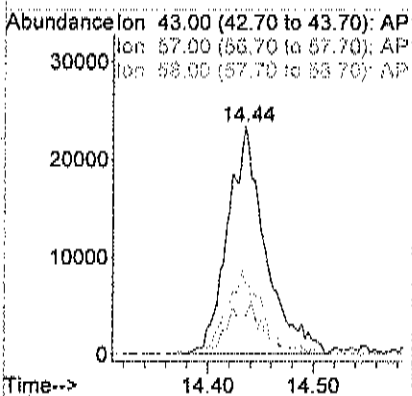
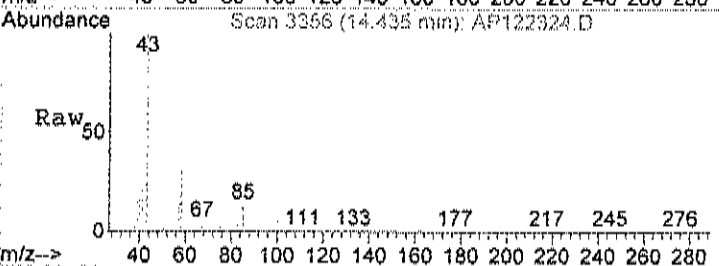
#21
Methylene chloride
Concen: 0.58 ppb
RT: 7.61 min Scan# 1078
Delta R.T. 0.01 min
Lab File: AP122324.D
Acq: 24 Dec 2018 7:47 am

Tgt Ion	Ratio	Lower	Upper
84	100		
49	140.0	121.5	161.5
86	64.4	46.0	86.0



#52
Methyl Isobutyl Ketone
Concen: 0.61 ppb
RT: 14.44 min Scan# 3356
Delta R.T. 0.01 min
Lab File: AP122324.D
Acq: 24 Dec 2018 7:47 am

Tgt Ion	Ratio	Lower	Upper
43	100		
57	11.2	3.5	43.5
58	33.3	17.9	57.9



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-10			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2,4-Trimethylbenzene	0.11	0.15	J	ppbV	1	12/22/2018 1:58:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Acetone	9.6	1.5		ppbV	5	12/23/2018 5:41:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Carbon disulfide	0.52	0.15		ppbV	1	12/22/2018 1:58:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloroform	0.17	0.15		ppbV	1	12/22/2018 1:58:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Ethyl acetate	0.18	0.15		ppbV	1	12/22/2018 1:58:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 11	3.2	0.75		ppbV	5	12/23/2018 5:41:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Freon 12	0.41	0.15		ppbV	1	12/22/2018 1:58:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/22/2018 1:58:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Hexane	0.76	0.15		ppbV	1	12/22/2018 1:58:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl Isobutyl Ketone	0.80	0.30		ppbV	1	12/22/2018 1:58:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Methylene chloride	1.5	0.15		ppbV	1	12/22/2018 1:58:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Tetrachloroethylene	0.40	0.15		ppbV	1	12/22/2018 1:58:00 PM
Tetrahydrofuran	1.6	0.15		ppbV	1	12/22/2018 1:58:00 PM
Toluene	0.70	0.15		ppbV	1	12/22/2018 1:58:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 1:58:00 PM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/22/2018 1:58:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15				TO-15		Analyst: RJP
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:58:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 1:58:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:58:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
1,2,4-Trimethylbenzene	0.54	0.74	J	ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 1:58:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 1:58:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/22/2018 1:58:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 1:58:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 1:58:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/22/2018 1:58:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/22/2018 1:58:00 PM
Acetone	23	3.6		ug/m3	5	12/23/2018 5:41:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 1:58:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/22/2018 1:58:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 1:58:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 1:58:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 1:58:00 PM
Carbon disulfide	1.6	0.47		ug/m3	1	12/22/2018 1:58:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 1:58:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 1:58:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 1:58:00 PM
Chloroform	0.83	0.73		ug/m3	1	12/22/2018 1:58:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 1:58:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:58:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/22/2018 1:58:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 1:58:00 PM
Ethyl acetate	0.65	0.54		ug/m3	1	12/22/2018 1:58:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/22/2018 1:58:00 PM
Freon 11	18	4.2		ug/m3	5	12/23/2018 5:41:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 1:58:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 1:58:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-012A

Client Sample ID: SVW-11
Tag Number: 353,387
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15				TO-15	Analyst: RJP	
Freon 12	2.0	0.74		ug/m3	1	12/22/2018 1:58:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/22/2018 1:58:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 1:58:00 PM
Hexane	2.7	0.53		ug/m3	1	12/22/2018 1:58:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 1:58:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/22/2018 1:58:00 PM
Methyl Isobutyl Ketone	3.3	1.2		ug/m3	1	12/22/2018 1:58:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 1:58:00 PM
Methylene chloride	5.3	0.52		ug/m3	1	12/22/2018 1:58:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/22/2018 1:58:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 1:58:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/22/2018 1:58:00 PM
Tetrachloroethylene	2.7	1.0		ug/m3	1	12/22/2018 1:58:00 PM
Tetrahydrofuran	4.8	0.44		ug/m3	1	12/22/2018 1:58:00 PM
Toluene	2.6	0.57		ug/m3	1	12/22/2018 1:58:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 1:58:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 1:58:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 1:58:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 1:58:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Data File : C:\HPCHEM\1\DATA\AP122208.D

Vial: 54

Acq On : 22 Dec 2018 1:58 pm

Operator: RJP

Sample : C1812057-012A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:15 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.39	128	42728	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	168384	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	137627	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	71546	0.76	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	76.00%

Target Compounds

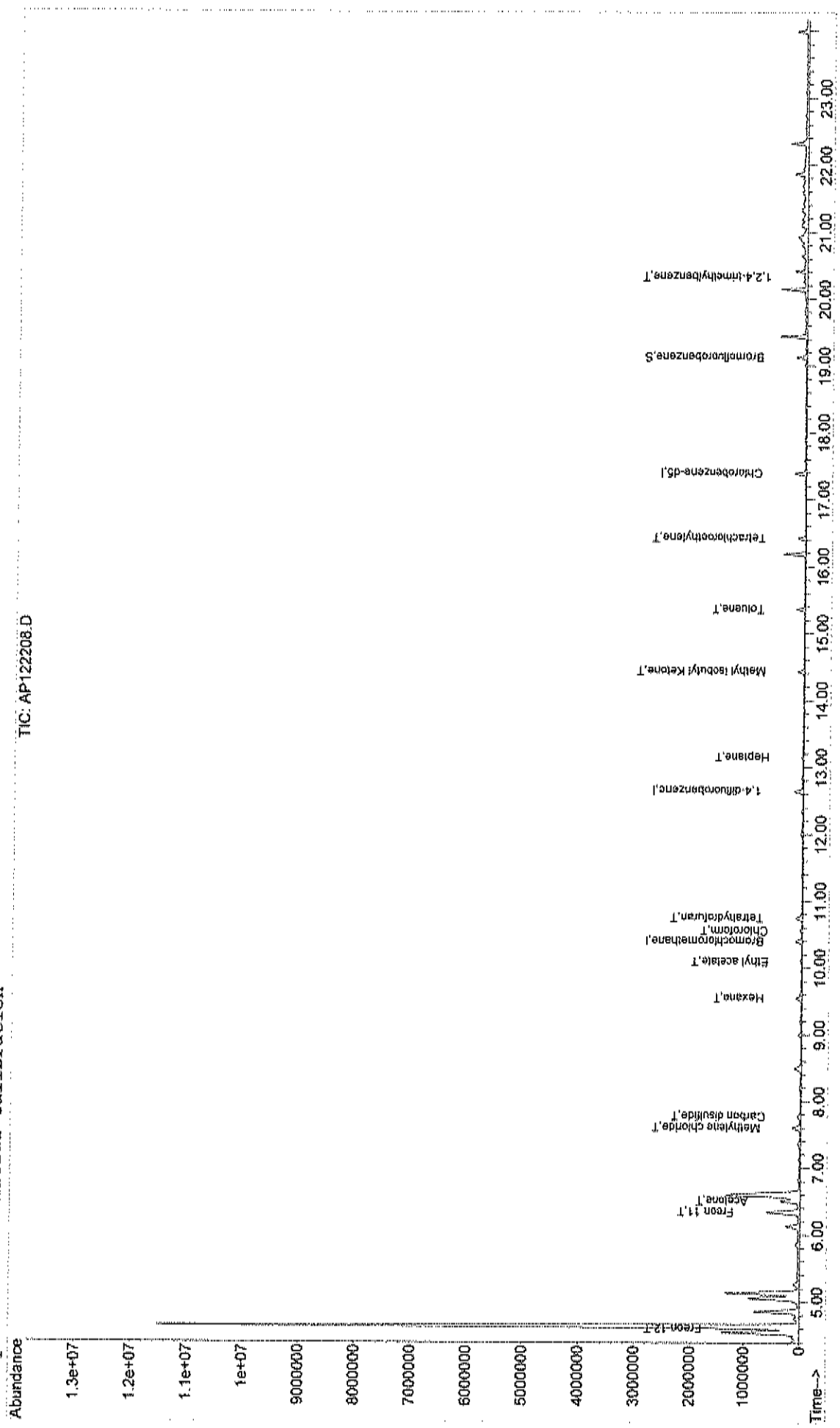
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.59	85	101967	0.41	ppb	99
14) Freon 11	6.34	101	751555	2.23	ppb	98
15) Acetone	6.51	58	198974	7.59	ppb	96
21) Methylene chloride	7.60	84	104002	1.54	ppb	94
23) Carbon disulfide	7.78	76	78308	0.52	ppb	93
30) Hexane	9.54	57	64146	0.76	ppb	# 79
31) Ethyl acetate	10.10	43	23245	0.18	ppb	87
32) Chloroform	10.55	83	27916	0.17	ppb	95
33) Tetrahydrofuran	10.74	42	93275	1.64	ppb	94
43) Heptane	13.15	43	11700	0.12	ppb	87
51) Toluene	15.36	92	74824	0.70	ppb	97
52) Methyl Isobutyl Ketone	14.42	43	95497	0.80	ppb	93
56) Tetrachloroethylene	16.42	164	35067	0.40	ppb	100
71) 1,2,4-trimethylbenzene	20.32	105	21978	0.11	ppb	92

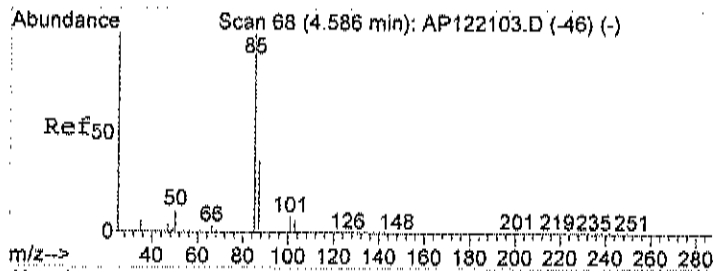
Data File : C:\HPCHEM\1\DATA\AP122208.D
Acq On : 22 Dec 2018 1:58 pm
Sample : C1812057-012A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:30 2018

Vial: 54
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

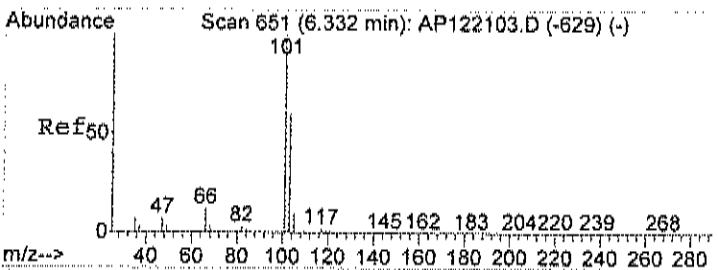
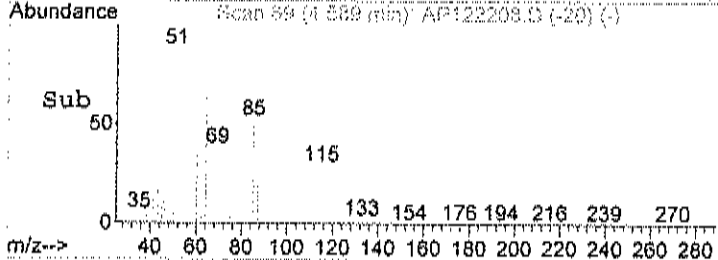
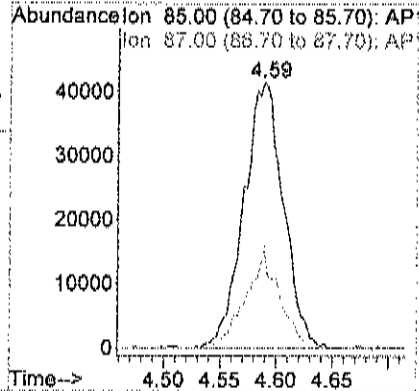
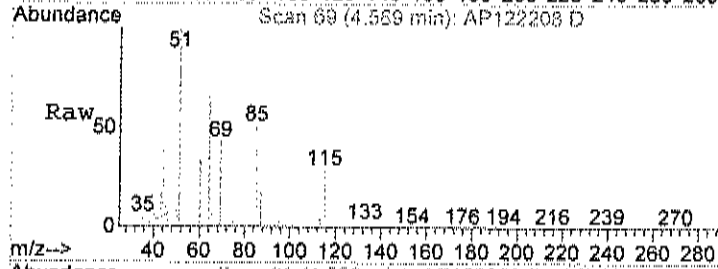
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





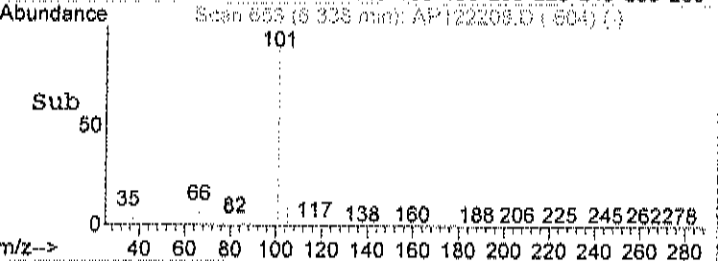
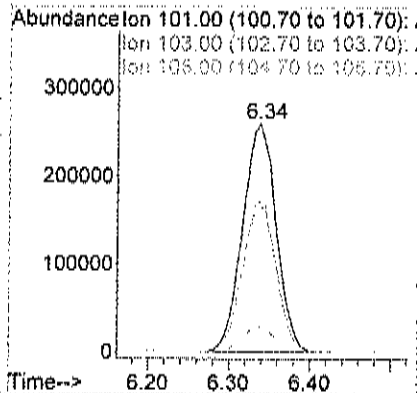
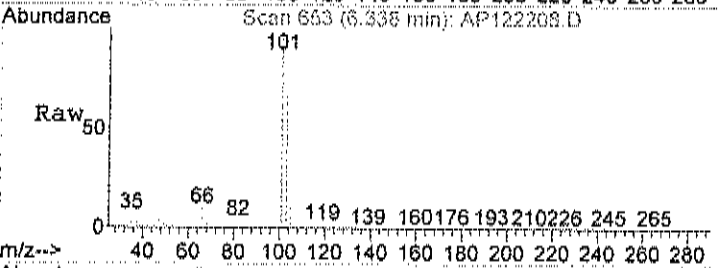
#3
Freon 12
Concen: 0.41 ppb
RT: 4.59 min Scan# 69
Delta R.T. -0.00 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

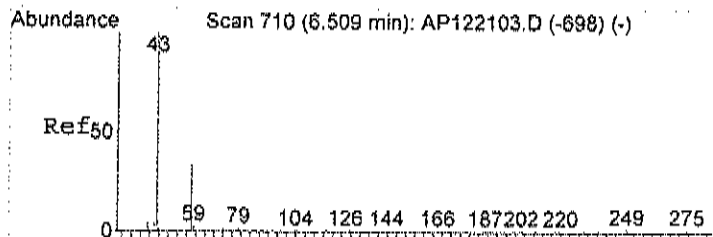
Tgt Ion: 85 Resp: 101967
Ion Ratio Lower Upper
85 100
87 31.9 12.4 52.4



#14
Freon 11
Concen: 2.23 ppb
RT: 6.34 min Scan# 653
Delta R.T. -0.00 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

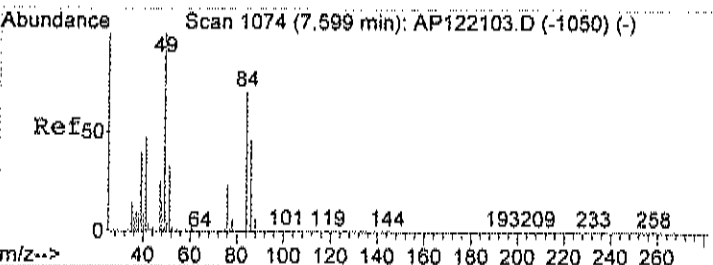
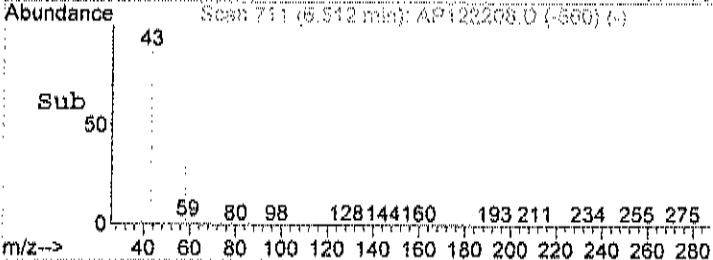
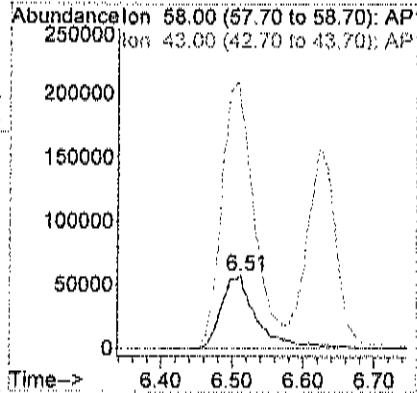
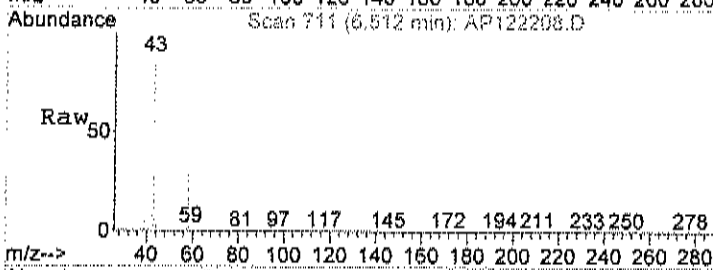
Tgt Ion: 101 Resp: 751555
Ion Ratio Lower Upper
101 100
103 65.8 44.4 84.4
105 10.7 0.0 31.9





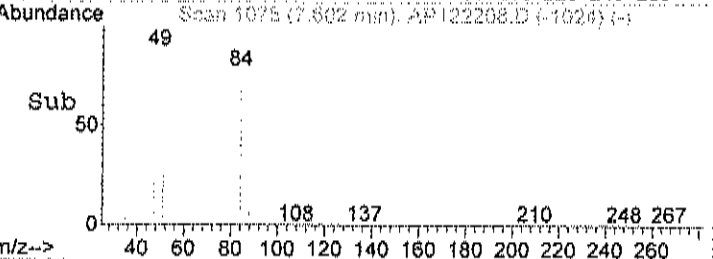
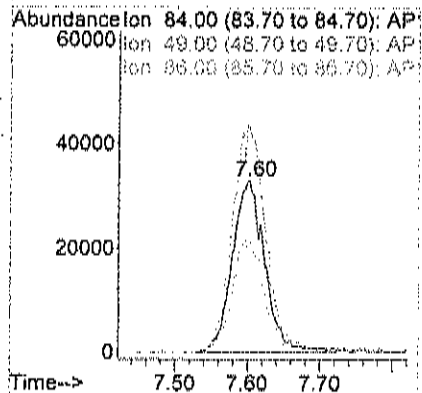
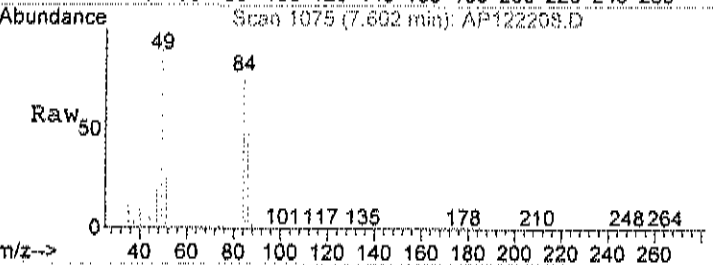
#15
Acetone
Concen: 7.59 ppb
RT: 6.51 min Scan# 711
Delta R.T. 0.00 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

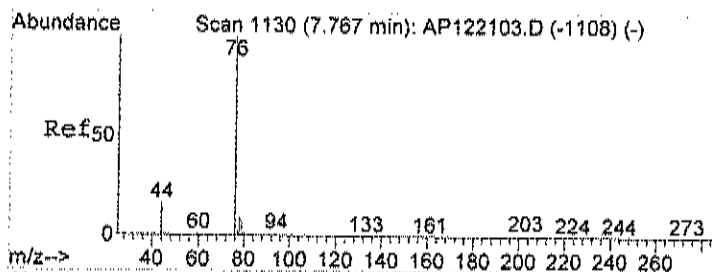
Tgt Ion: 58 Resp: 198974
Ion Ratio Lower Upper
58 100
43 337.2 298.2 358.2



#21
Methylene chloride
Concen: 1.54 ppb
RT: 7.60 min Scan# 1075
Delta R.T. 0.00 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

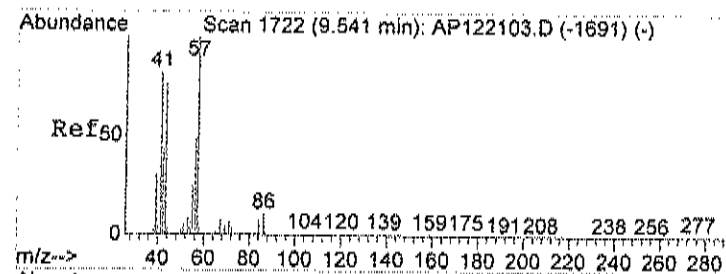
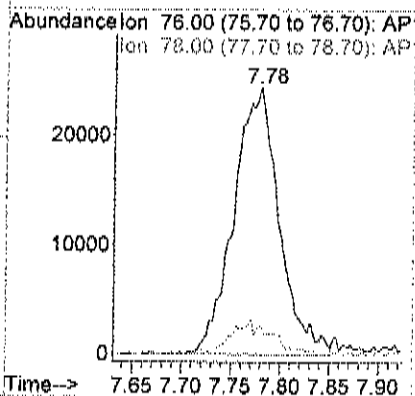
Tgt Ion: 84 Resp: 104002
Ion Ratio Lower Upper
84 100
49 132.7 121.5 161.5
86 63.9 46.0 86.0





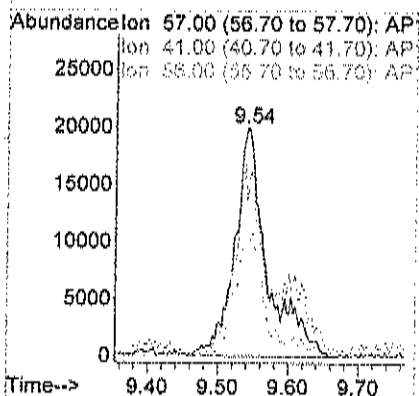
#23
Carbon disulfide
Concen: 0.52 ppb
RT: 7.78 min Scan# 1134
Delta R.T. 0.01 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

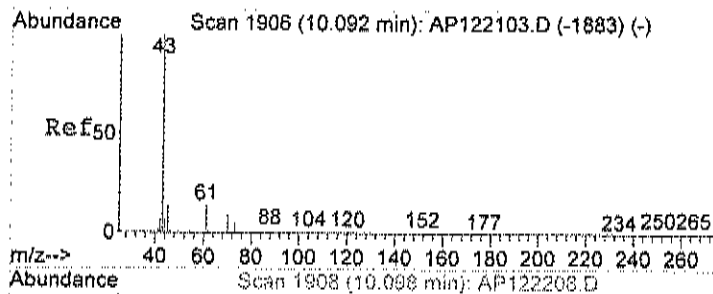
Tgt Ion: 76 Resp: 78308
Ion Ratio Lower Upper
76 100
78 11.7 0.0 29.2



#30
Hexane
Concen: 0.76 ppb
RT: 9.54 min Scan# 1722
Delta R.T. -0.00 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion: 57 Resp: 64146
Ion Ratio Lower Upper
57 100
41 97.4 49.7 89.7#
56 46.3 27.9 67.9

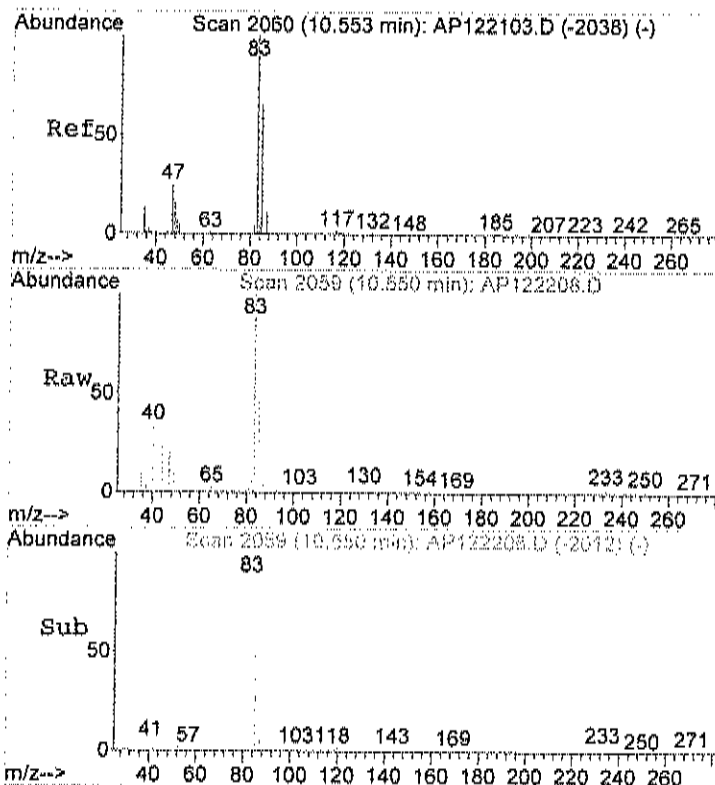
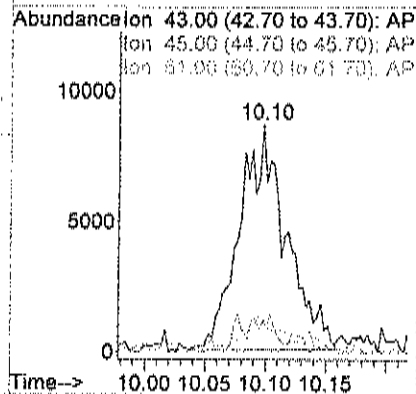




#31
Ethyl acetate
Concen: 0.18 ppb
RT: 10.10 min Scan# 1908
Delta R.T. 0.01 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion: 43 Resp: 23245

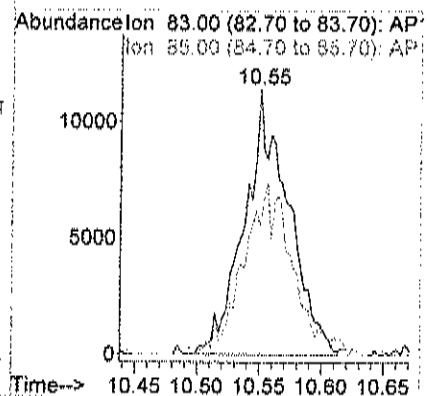
Ion	Ratio	Lower	Upper
43	100		
45	8.3	0.0	35.0
61	10.5	0.0	34.3

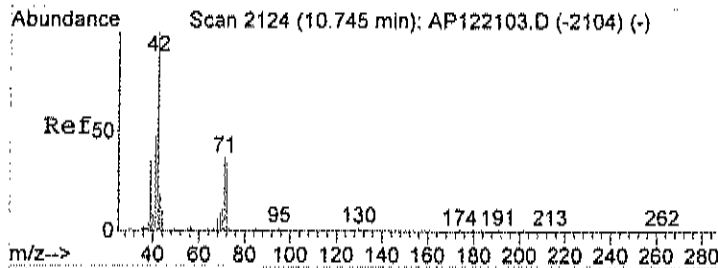


#32
Chloroform
Concen: 0.17 ppb
RT: 10.55 min Scan# 2059
Delta R.T. -0.01 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion: 83 Resp: 27916

Ion	Ratio	Lower	Upper
83	100		
85	69.6	45.5	85.5

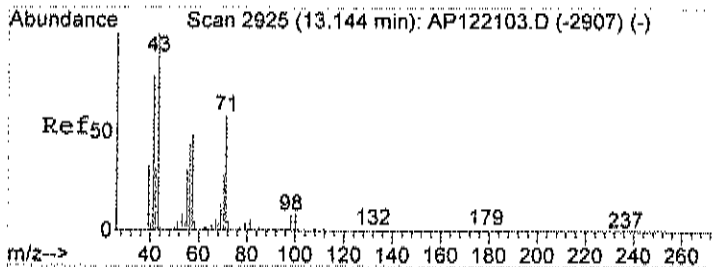
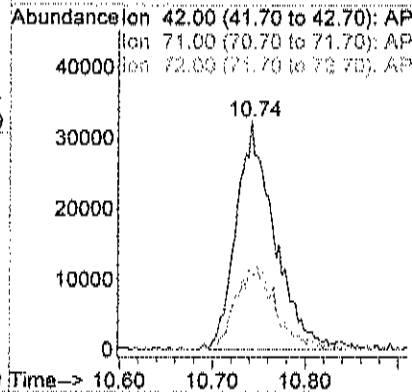




#33
Tetrahydrofuran
Concen: 1.64 ppb
RT: 10.74 min Scan# 2123
Delta R.T. -0.01 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion: 42 Resp: 93275

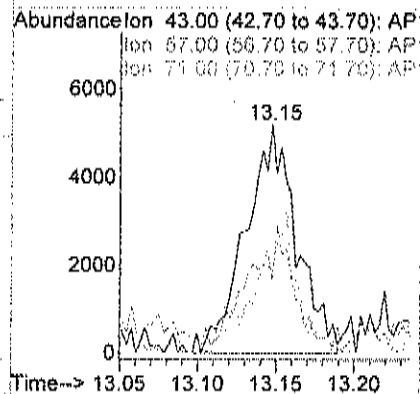
Ion	Ratio	Lower	Upper
42	100		
71	38.4	21.4	61.4
72	37.8	22.4	62.4

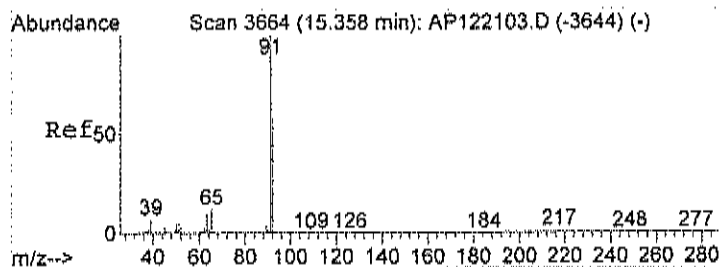


#43
Heptane
Concen: 0.12 ppb
RT: 13.15 min Scan# 2926
Delta R.T. -0.00 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion: 43 Resp: 11700

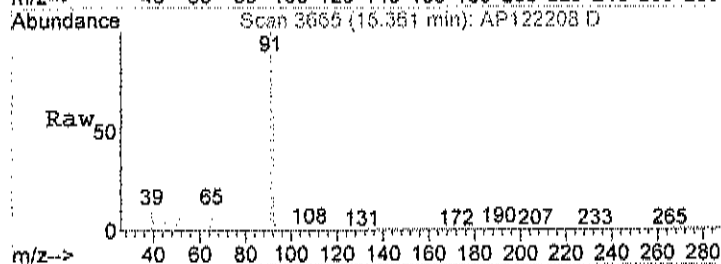
Ion	Ratio	Lower	Upper
43	100		
57	50.4	32.7	72.7
71	39.2	35.6	75.6



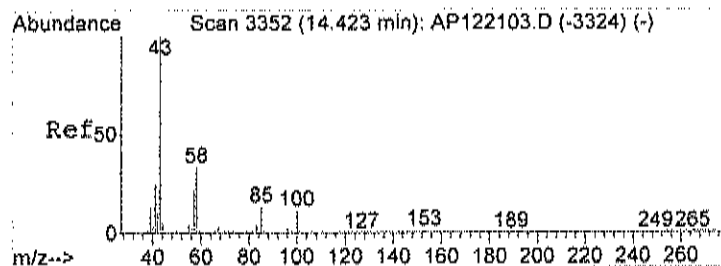
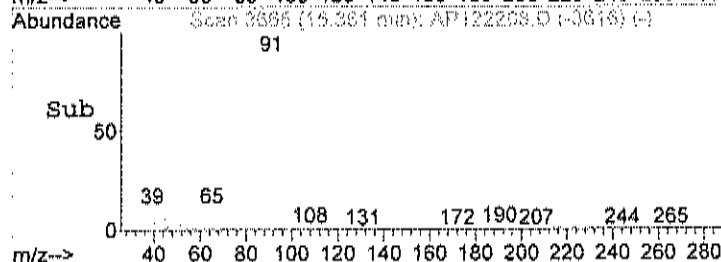
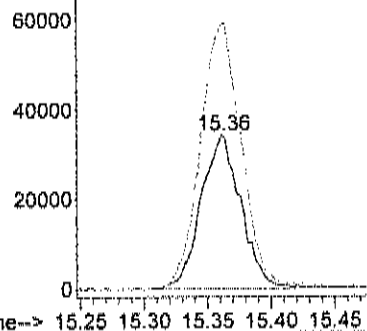


#51
Toluene
Concen: 0.70 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion: 92 Resp: 74824
Ion Ratio Lower Upper
92 100
91 177.9 154.3 194.3

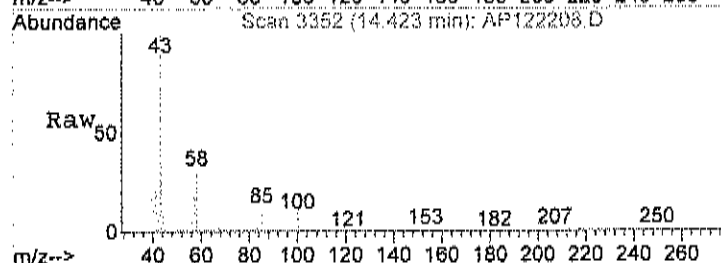


Abundance Ion 92.00 (91.70 to 92.70): AP
Ion 91.00 (90.70 to 91.70): AP

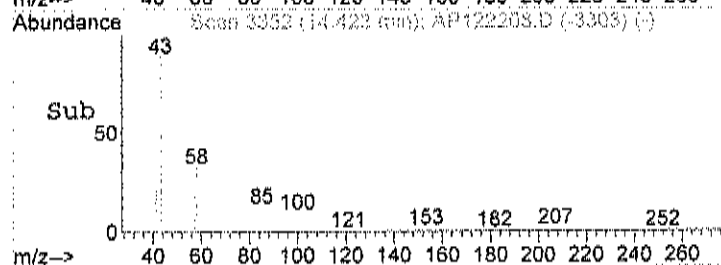
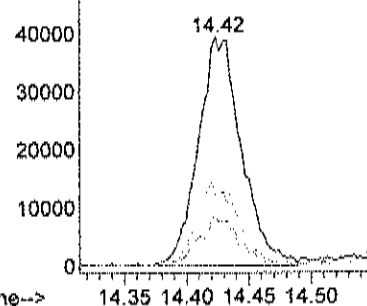


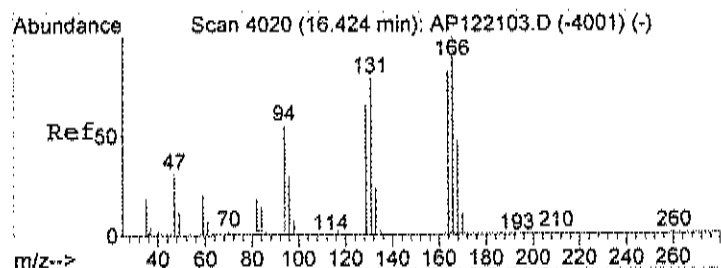
#52
Methyl Isobutyl Ketone
Concen: 0.80 ppb
RT: 14.42 min Scan# 3352
Delta R.T. -0.00 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion: 43 Resp: 95497
Ion Ratio Lower Upper
43 100
57 19.8 3.5 43.5
58 34.3 17.9 57.9



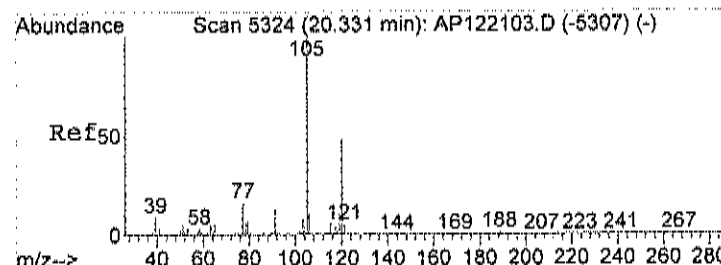
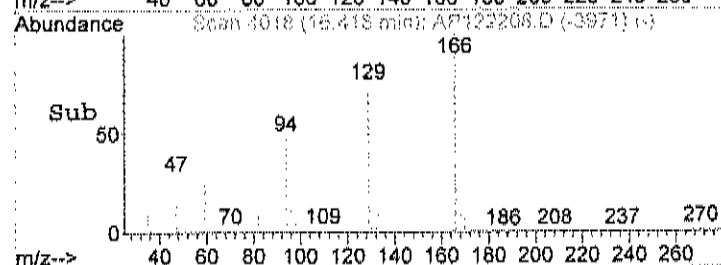
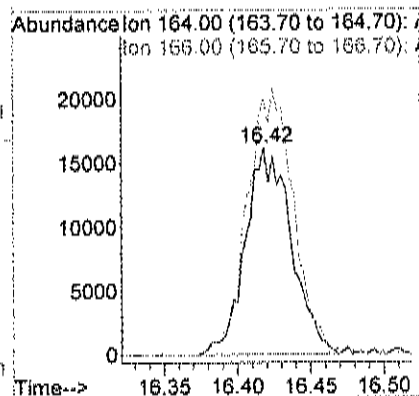
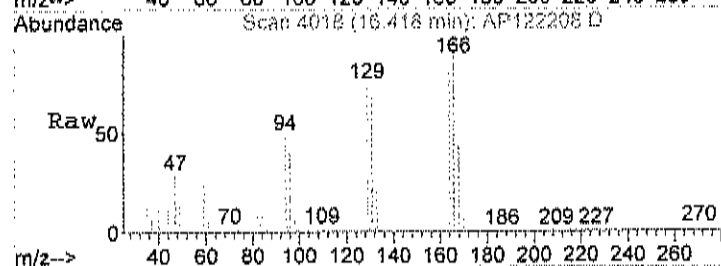
Abundance Ion 43.00 (42.70 to 43.70): AP
Ion 57.00 (56.70 to 57.70): AP
Ion 58.00 (57.70 to 58.70): AP





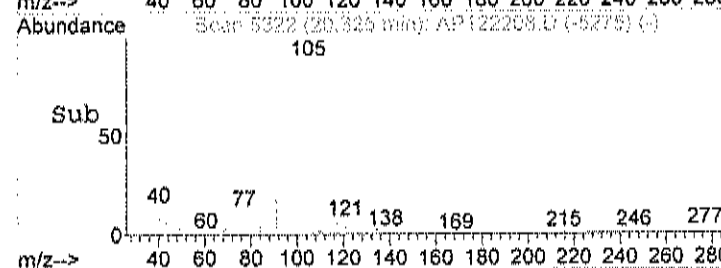
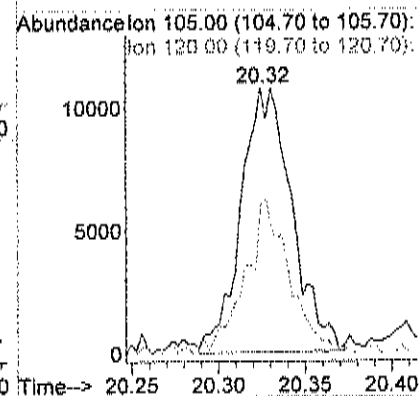
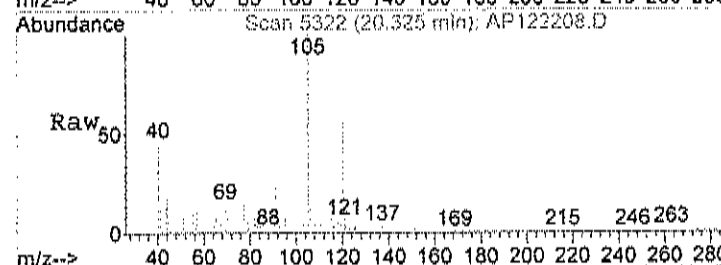
#56
Tetrachloroethylene
Concen: 0.40 ppb
RT: 16.42 min Scan# 4018
Delta R.T. -0.01 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion:164 Resp: 35067
Ion Ratio Lower Upper
164 100
166 128.5 108.5 148.5



#71
1,2,4-trimethylbenzene
Concen: 0.11 ppb
RT: 20.32 min Scan# 5322
Delta R.T. -0.01 min
Lab File: AP122208.D
Acq: 22 Dec 2018 1:58 pm

Tgt Ion:105 Resp: 21978
Ion Ratio Lower Upper
105 100
120 50.6 25.3 65.3



Data File : C:\HPCHEM\1\DATA\AP122312.D

Vial: 12

Acq On : 23 Dec 2018 5:41 pm

Operator: RJP

Sample : C1812057-012A 5x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:31 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	34362	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	132457	1.00	ppb	0.01
50) Chlorobenzene-d5	17.40	117	96104	1.00	ppb	0.00

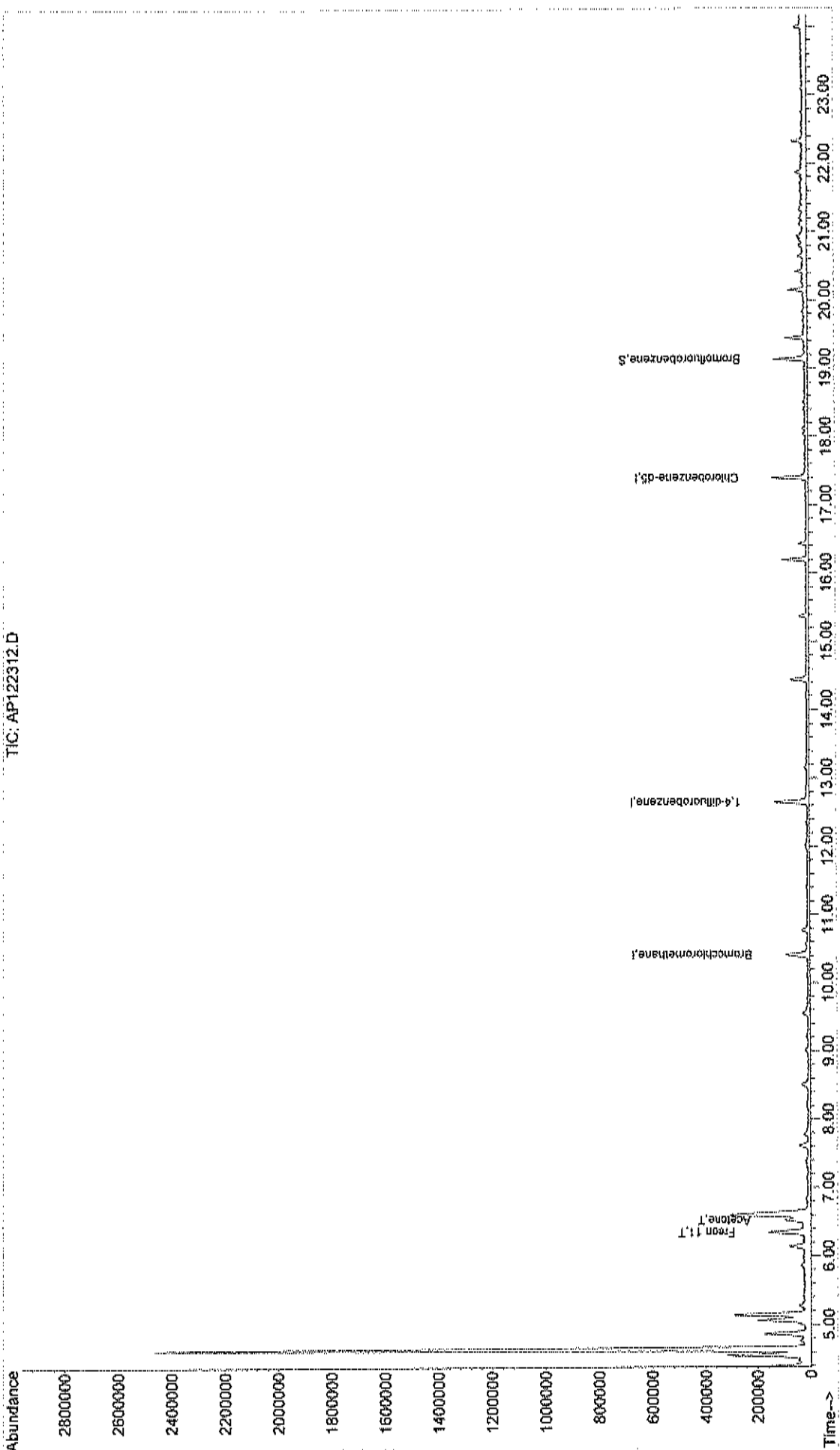
System Monitoring Compounds

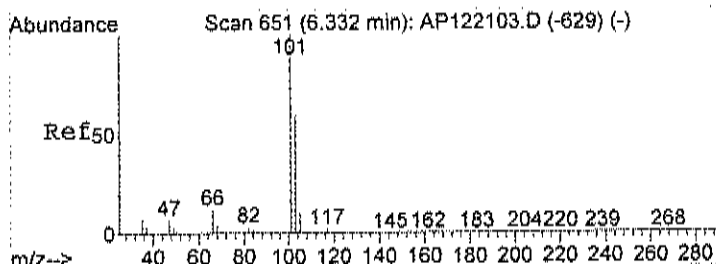
65) Bromofluorobenzene	19.13	95	47369	0.72	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	72.00%

Target Compounds

					Qvalue
14) Freon 11	6.35	101	170773	0.63	ppb 97
15) Acetone	6.52	58	40436	1.92	ppb # 76

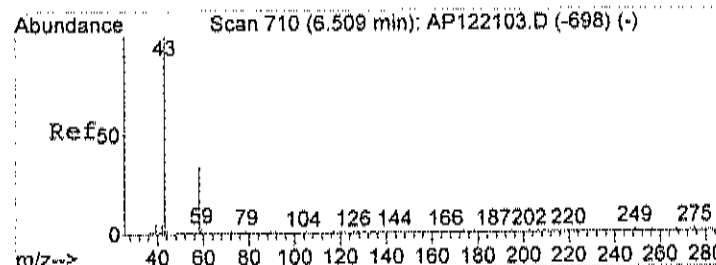
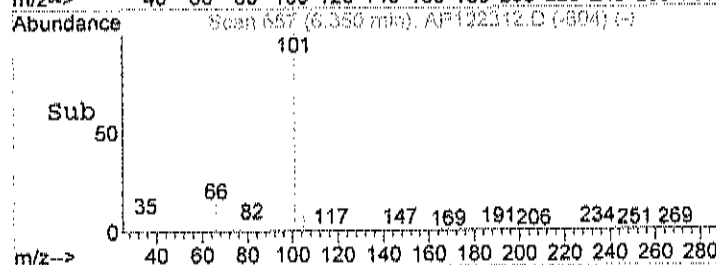
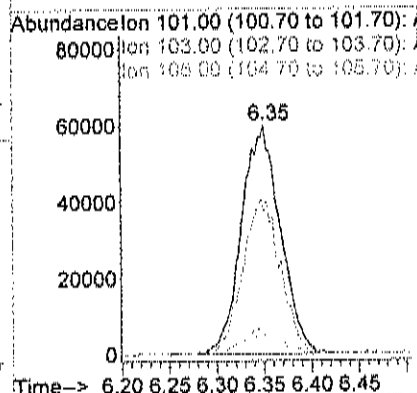
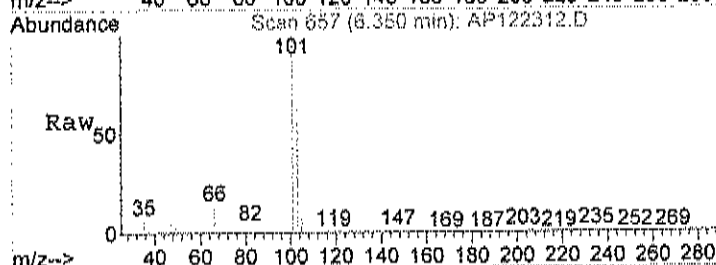
Data File : C:\HPCHEM\1\DATA\AP122312.D
Acq On : 23 Dec 2018 5:41 pm
Sample : C1812057-012A 5x
Misc : AD10_LUG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 8:31 2018
Quant Results File: AD10_LUG.RES
Method : C:\HPCHEM\1\METHODS\AD10_LUG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





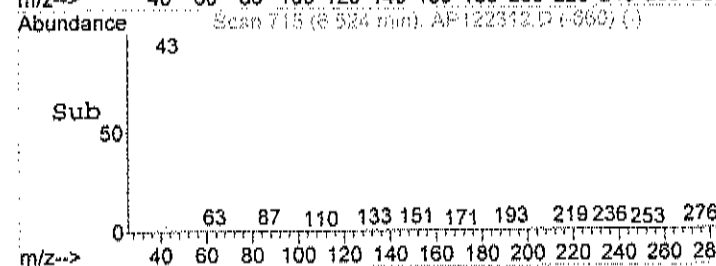
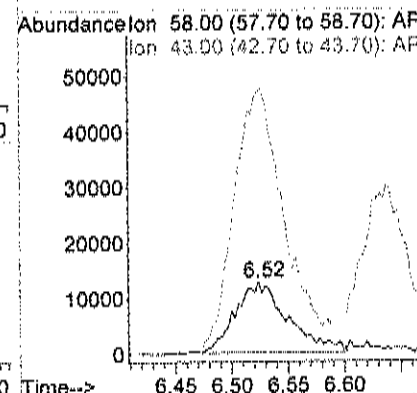
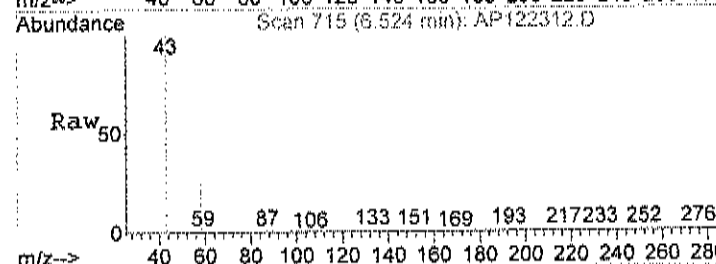
#14
Freon 11
Concen: 0.63 ppb
RT: 6.35 min Scan# 657
Delta R.T. 0.01 min
Lab File: AP122312.D
Acq: 23 Dec 2018 5:41 pm

Tgt Ion:	101	Resp:	170773
Ion	Ratio	Lower	Upper
101	100		
103	66.2	44.4	84.4
105	10.5	0.0	31.9



#15
Acetone
Concen: 1.92 ppb
RT: 6.52 min Scan# 715
Delta R.T. 0.01 min
Lab File: AP122312.D
Acq: 23 Dec 2018 5:41 pm

Tgt Ion:	58	Resp:	40436
Ion	Ratio	Lower	Upper
58	100		
43	377.9	298.2	358.2#



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-1			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2,4-Trimethylbenzene	1.4	1.4	J	ppbV	9	12/23/2018 6:21:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichloroethane	0.18	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3,5-Trimethylbenzene	0.73	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,3-Dichlorobenzene	0.36	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 2:37:00 PM
2,2,4-trimethylpentane	0.43	0.15		ppbV	1	12/22/2018 2:37:00 PM
4-ethyltoluene	0.48	0.15		ppbV	1	12/22/2018 2:37:00 PM
Acetone	68	27		ppbV	90	12/23/2018 6:59:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Benzene	2.0	1.4		ppbV	9	12/23/2018 6:21:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Carbon disulfide	95	14		ppbV	90	12/23/2018 6:59:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
cis-1,3-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Cyclohexane	0.68	0.15		ppbV	1	12/22/2018 2:37:00 PM

Qualifiers:	** Quantitation Limit	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Ethylbenzene	1.1	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 11	0.26	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Freon 12	0.47	0.15		ppbV	1	12/22/2018 2:37:00 PM
Heptane	0.69	0.15		ppbV	1	12/22/2018 2:37:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Hexane	1.8	1.4		ppbV	9	12/23/2018 6:21:00 PM
Isopropyl alcohol	0.46	0.15		ppbV	1	12/22/2018 2:37:00 PM
m&p-Xylene	3.6	0.30		ppbV	1	12/22/2018 2:37:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 2:37:00 PM
Methyl Ethyl Ketone	5.1	2.7		ppbV	9	12/23/2018 6:21:00 PM
Methyl Isobutyl Ketone	130	27		ppbV	90	12/23/2018 6:59:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Methylene chloride	240	27		ppbV	180	12/23/2018 7:38:00 PM
o-Xylene	1.4	0.15		ppbV	1	12/22/2018 2:37:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Styrene	0.20	0.15		ppbV	1	12/22/2018 2:37:00 PM
Tetrachloroethylene	1.0	0.15		ppbV	1	12/22/2018 2:37:00 PM
Tetrahydrofuran	6.2	1.4		ppbV	9	12/23/2018 6:21:00 PM
Toluene	3.3	1.4		ppbV	9	12/23/2018 6:21:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 2:37:00 PM
Vinyl chloride	1.1	0.15		ppbV	1	12/22/2018 2:37:00 PM
Surr: Bromofluorobenzene	78.0	70-130		%REC	1	12/22/2018 2:37:00 PM

Qualifiers:	** Quantitation Limit	.
	B Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:37:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 2:37:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 2:37:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
1,2,4-Trimethylbenzene	6.6	6.9	J	ug/m3	9	12/23/2018 6:21:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichloroethane	0.73	0.61		ug/m3	1	12/22/2018 2:37:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 2:37:00 PM
1,3,5-Trimethylbenzene	3.6	0.74		ug/m3	1	12/22/2018 2:37:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 2:37:00 PM
1,3-Dichlorobenzene	2.2	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 2:37:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
2,2,4-trimethylpentane	2.0	0.70		ug/m3	1	12/22/2018 2:37:00 PM
4-ethyltoluene	2.4	0.74		ug/m3	1	12/22/2018 2:37:00 PM
Acetone	160	64		ug/m3	90	12/23/2018 6:59:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 2:37:00 PM
Benzene	6.3	4.5		ug/m3	9	12/23/2018 6:21:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 2:37:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 2:37:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 2:37:00 PM
Carbon disulfide	300	44		ug/m3	90	12/23/2018 6:59:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 2:37:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 2:37:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 2:37:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 2:37:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 2:37:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:37:00 PM
Cyclohexane	2.3	0.52		ug/m3	1	12/22/2018 2:37:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 2:37:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 2:37:00 PM
Ethylbenzene	4.6	0.65		ug/m3	1	12/22/2018 2:37:00 PM
Freon 11	1.5	0.84		ug/m3	1	12/22/2018 2:37:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 2:37:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 2:37:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated,	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-013A

Client Sample ID: SVW-12
Tag Number: 562,1163
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.3	0.74		ug/m3	1	12/22/2018 2:37:00 PM
Heptane	2.8	0.61		ug/m3	1	12/22/2018 2:37:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 2:37:00 PM
Hexane	6.3	4.9		ug/m3	9	12/23/2018 6:21:00 PM
Isopropyl alcohol	1.1	0.37		ug/m3	1	12/22/2018 2:37:00 PM
m&p-Xylene	16	1.3		ug/m3	1	12/22/2018 2:37:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 2:37:00 PM
Methyl Ethyl Ketone	15	8.0		ug/m3	9	12/23/2018 6:21:00 PM
Methyl Isobutyl Ketone	530	110		ug/m3	90	12/23/2018 6:59:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 2:37:00 PM
Methylene chloride	830	94		ug/m3	180	12/23/2018 7:38:00 PM
o-Xylene	6.1	0.65		ug/m3	1	12/22/2018 2:37:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 2:37:00 PM
Styrene	0.85	0.64		ug/m3	1	12/22/2018 2:37:00 PM
Tetrachloroethylene	6.8	1.0		ug/m3	1	12/22/2018 2:37:00 PM
Tetrahydrofuran	18	4.1		ug/m3	9	12/23/2018 6:21:00 PM
Toluene	13	5.3		ug/m3	9	12/23/2018 6:21:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 2:37:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 2:37:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 2:37:00 PM
Vinyl chloride	2.9	0.38		ug/m3	1	12/22/2018 2:37:00 PM

Qualifiers:	** Quantitation Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Data File : C:\HPCHEM\1\DATA\AP122209.D

Acq On : 22 Dec 2018 2:37 pm

Sample : C1812057-013A

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:16 2018

Vial: 55

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	48186	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	221241	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	253791	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	134885	0.78	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	78.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.59	85	129806	0.47	ppb	99
6) Vinyl Chloride	5.02	62	90432	1.14	ppb	98
14) Freon 11	6.34	101	99313	0.26	ppb	99
15) Acetone	6.49	58	2839713m	2096.09	ppb	
17) Isopropyl alcohol	6.61	45	49537	0.46	ppb	# 1
21) Methylene chloride	7.60	84	16485407	216.81	ppb	90
23) Carbon disulfide	7.78	76	16012148	94.77	ppb	99
28) Methyl Ethyl Ketone	9.47	72	288807	9.52	ppb	# 100
30) Hexane	9.55	57	233202	2.45	ppb	# 78
33) Tetrahydrofuran	10.73	42	701262	10.91	ppb	93
34) 1,2-dichloroethane	11.66	62	19692	0.18	ppb	93
37) Cyclohexane	12.08	56	71186	0.68	ppb	90
39) Benzene	11.98	78	642263	2.55	ppb	98
42) 2,2,4-trimethylpentane	12.81	57	153840	0.43	ppb	95
43) Heptane	13.15	43	86295	0.69	ppb	96
51) Toluene	15.36	92	1181795	6.01	ppb	97
52) Methyl Isobutyl Ketone	14.42	43	26631586	121.50	ppb	85
56) Tetrachloroethylene	16.42	164	159089	1.00	ppb	99
58) Ethylbenzene	17.71	91	428936	1.06	ppb	99
59) m&p-xylene	17.89	91	1244225	3.61	ppb	98
61) Styrene	18.38	104	60524	0.20	ppb	# 34
63) o-xylene	18.41	91	609733	1.40	ppb	99
69) 4-ethyltoluene	19.77	105	252674	0.48	ppb	100
70) 1,3,5-trimethylbenzene	19.84	105	339188	0.73	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	1052766	2.96	ppb	99
72) 1,3-dichlorobenzene	20.66	146	119453	0.36	ppb	97
75) 1,2,3-trimethylbenzene	20.85	105	347893	0.85	ppb	96

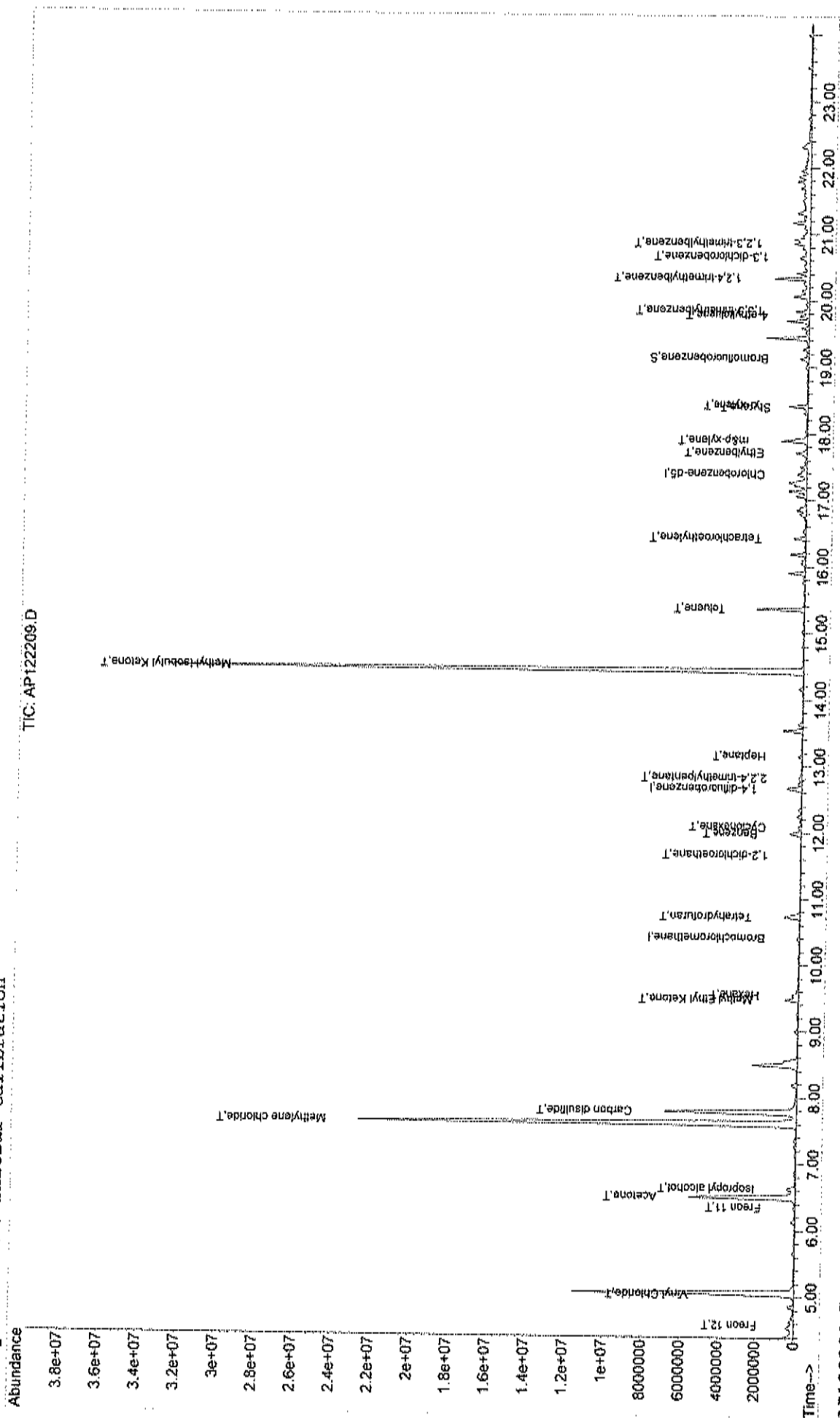
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP122209.D AD10_1UG.M Wed Jan 02 11:49:51 2019 MSD1

Data File : C:\HPCHEM\1\DATA\AP122209.D
Acq On : 22 Dec 2018 2:37 pm
Sample : C1812057-013A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:32 2018

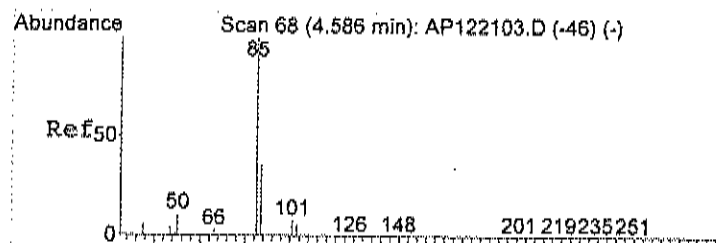
Vial: 55
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : 70-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

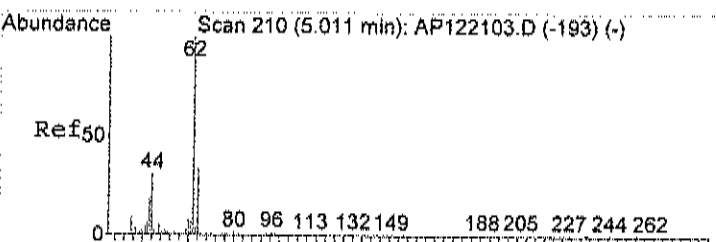
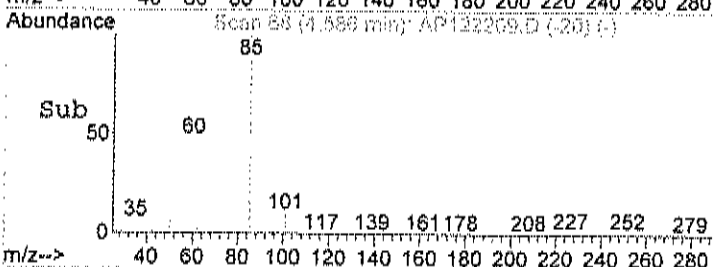
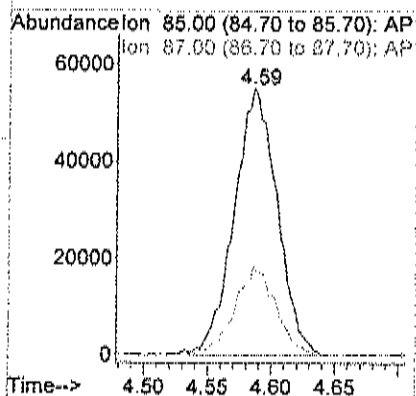
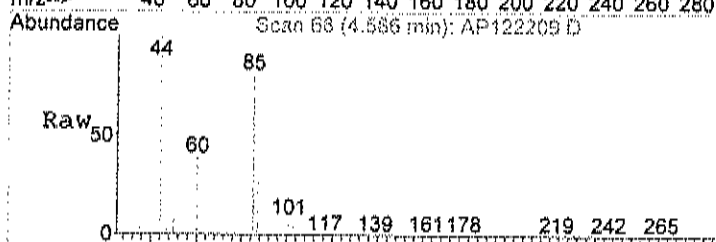


TIC: AP122209.D



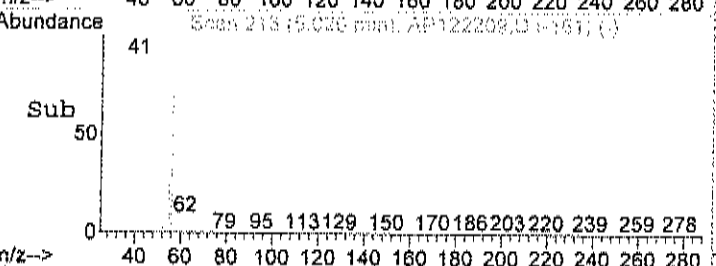
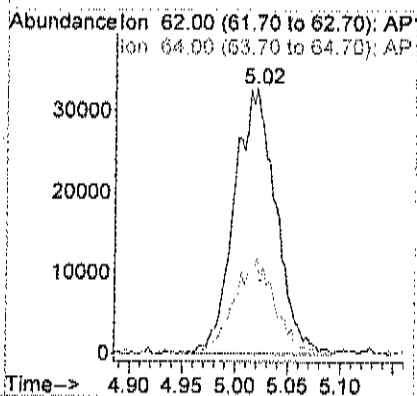
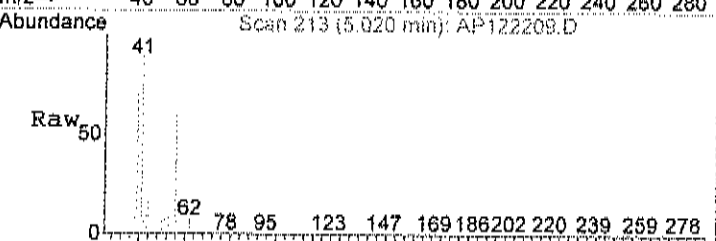
#3
Freon 12
Concen: 0.47 ppb
RT: 4.59 min Scan# 68
Delta R.T. -0.01 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

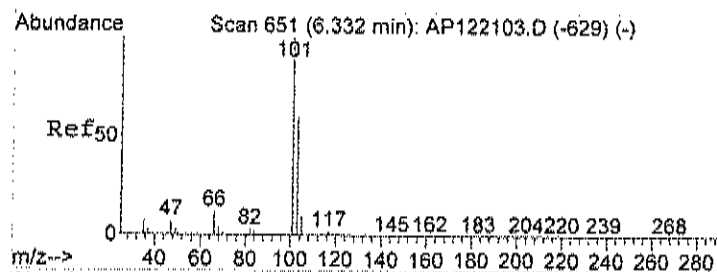
Tgt Ion	85	Resp	129806
Ion Ratio	100		
Lower	32.0	12.4	52.4
Upper			



#6
Vinyl Chloride
Concen: 1.14 ppb
RT: 5.02 min Scan# 213
Delta R.T. 0.01 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

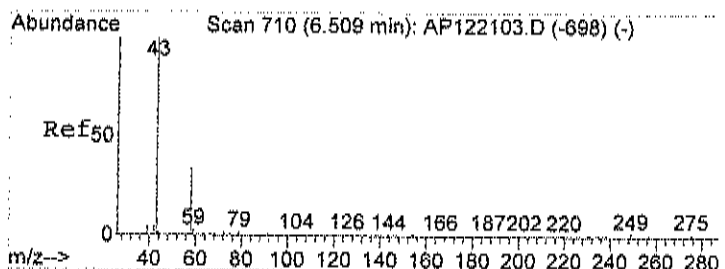
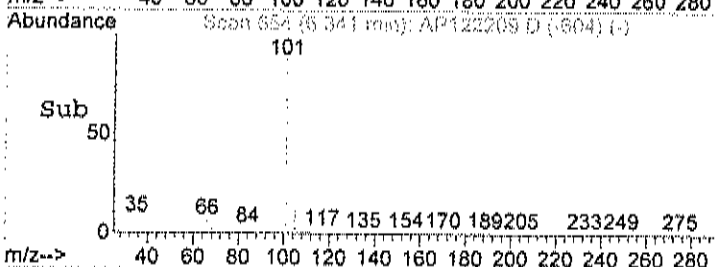
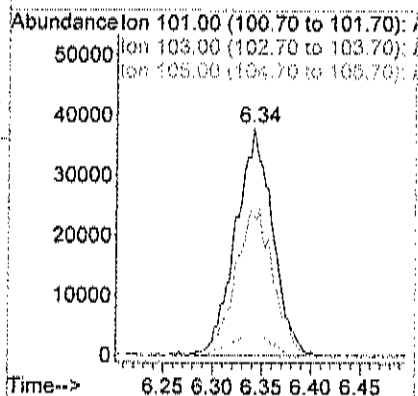
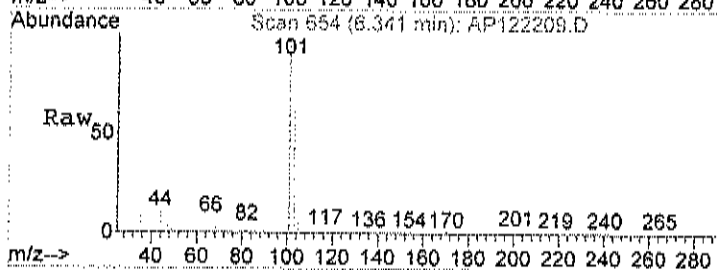
Tgt Ion	62	Resp	90432
Ion Ratio	100		
Lower	35.3	3.9	63.9
Upper			





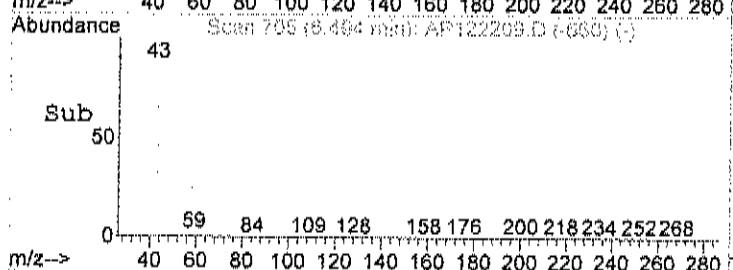
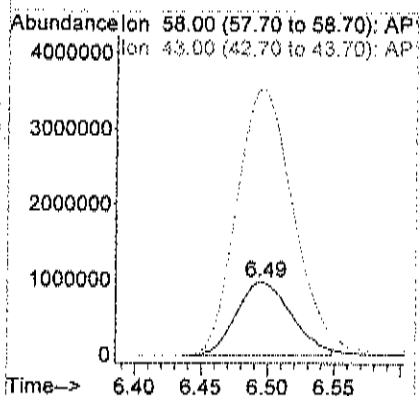
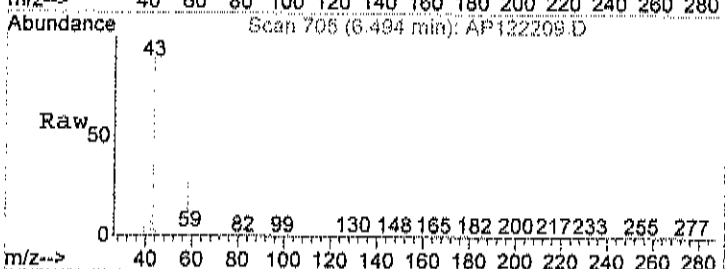
#14
Freon 11
Concen: 0.26 ppb
RT: 6.34 min Scan# 654
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

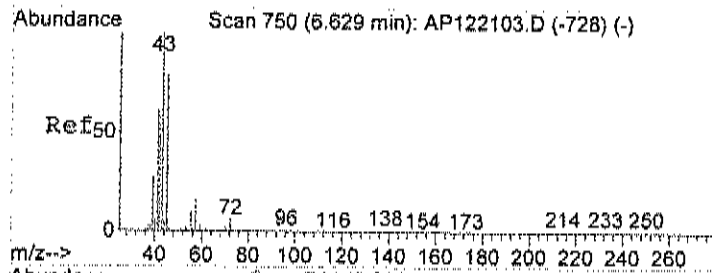
Tgt Ion: 101 Resp: 99313
Ion Ratio Lower Upper
101 100
103 65.1 44.4 84.4
105 11.3 0.0 31.9



#15
Acetone
Concen: 96.09 ppb m
RT: 6.49 min Scan# 705
Delta R.T. -0.02 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

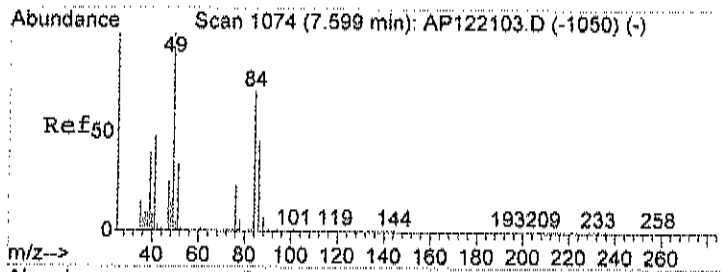
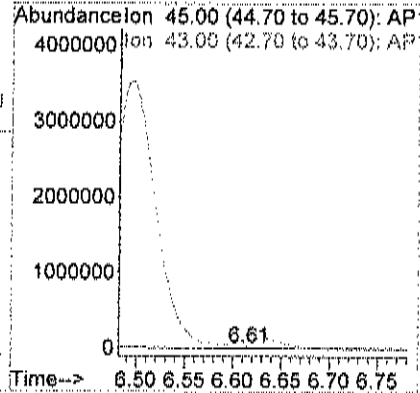
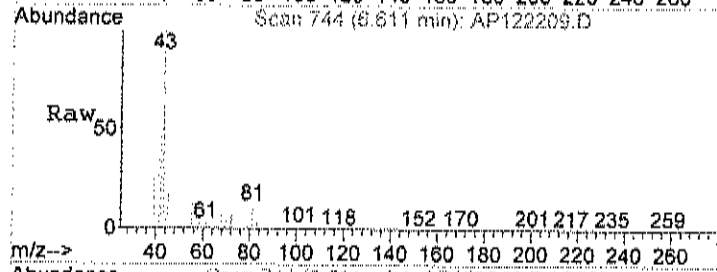
Tgt Ion: 58 Resp: 2839713
Ion Ratio Lower Upper
58 100
43 375.9 298.2 358.2#





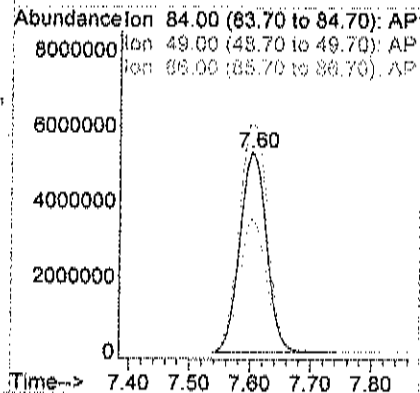
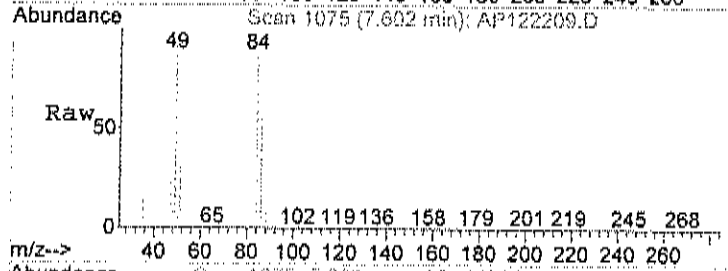
#17
Isopropyl alcohol
Concen: 0.46 ppb
RT: 6.61 min Scan# 744
Delta R.T. -0.01 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

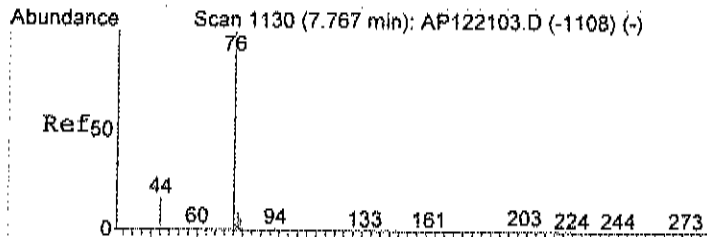
Tgt Ion	Ratio	Lower	Upper
45	100		
43	743.4	98.0	138.0#



#21
Methylene chloride
Concen: 216.81 ppb
RT: 7.60 min Scan# 1075
Delta R.T. 0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

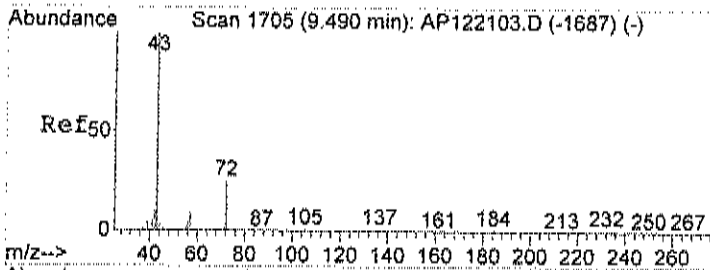
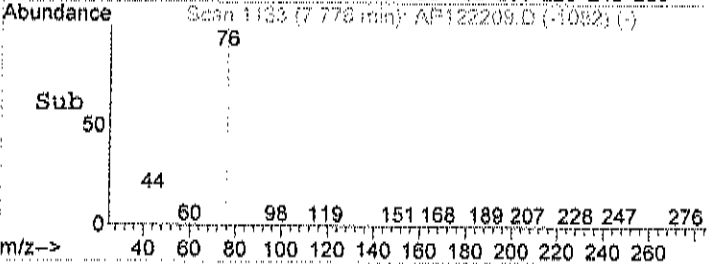
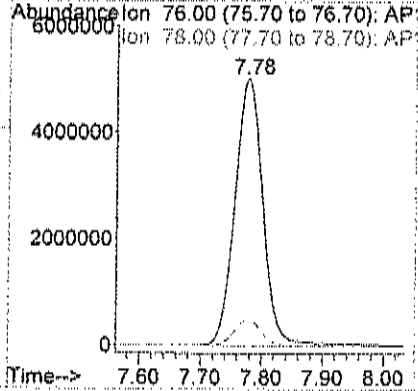
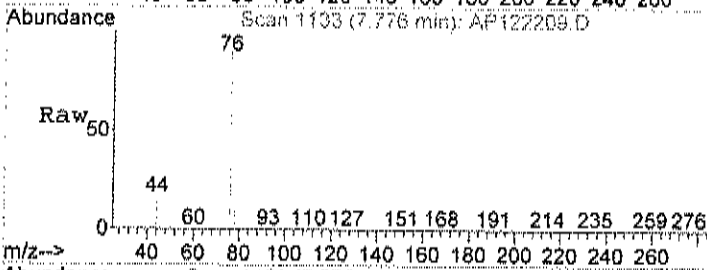
Tgt Ion	Ratio	Lower	Upper
84	100		
49	123.1	121.5	161.5
86	66.0	46.0	86.0





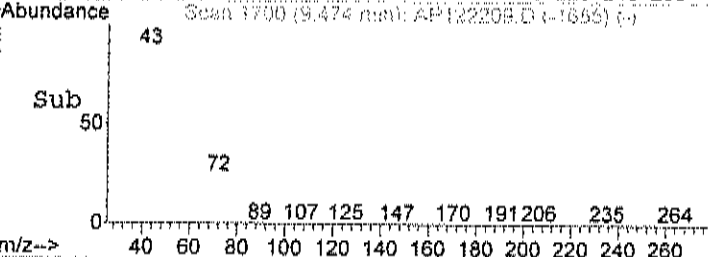
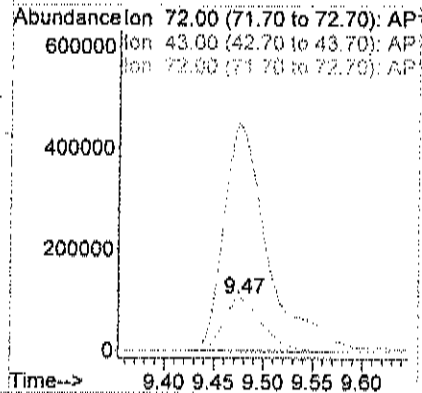
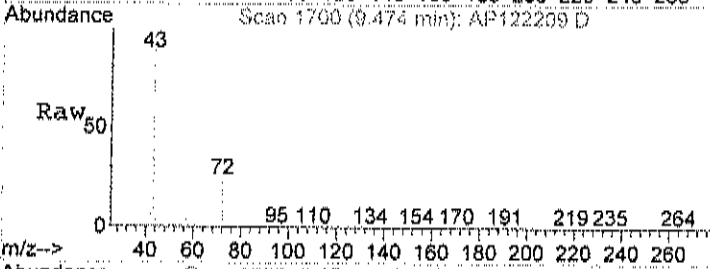
#23
Carbon disulfide
Concen: 94.77 ppb
RT: 7.78 min Scan# 1133
Delta R.T. 0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

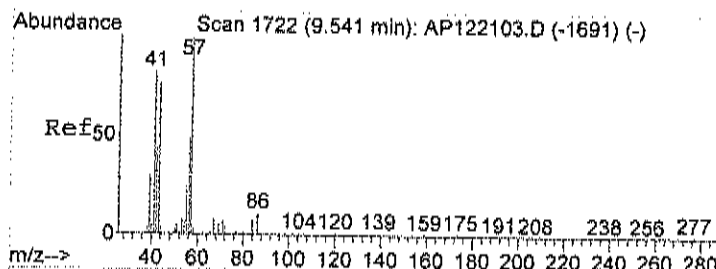
Tgt Ion: 76 Resp:16012148
Ion Ratio Lower Upper
76 100
78 9.5 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 9.52 ppb
RT: 9.47 min Scan# 1700
Delta R.T. -0.02 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

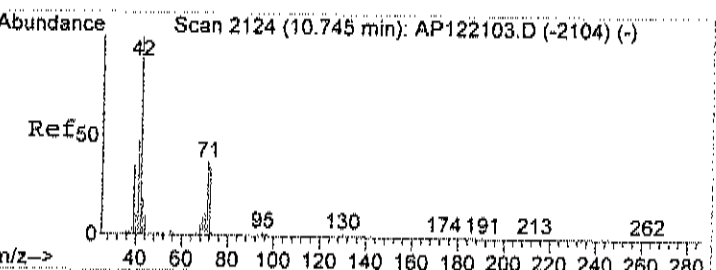
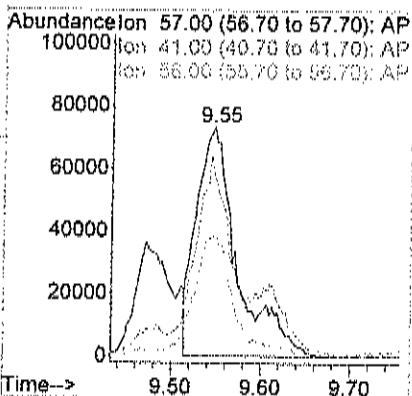
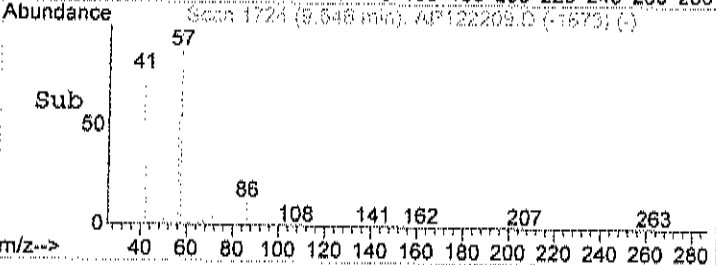
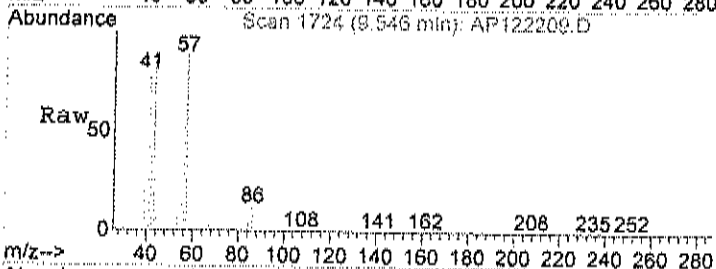
Tgt Ion: 72 Resp: 288807
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0





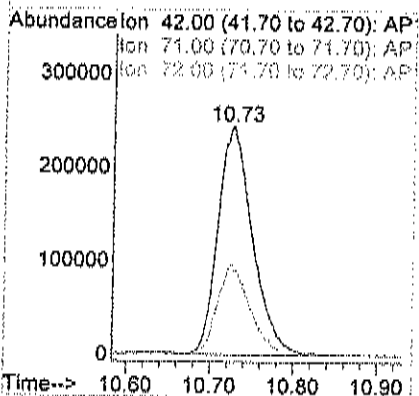
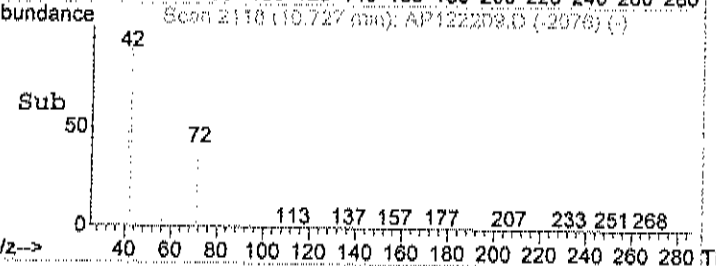
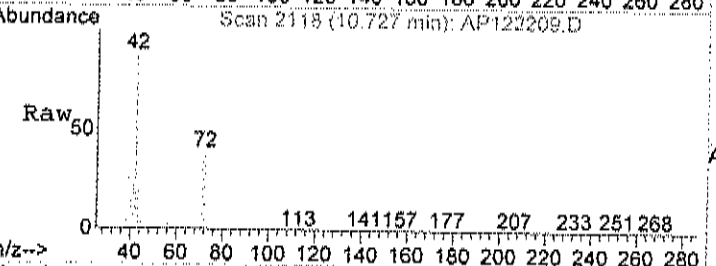
#30
Hexane
Concen: 2.45 ppb
RT: 9.55 min Scan# 1724
Delta R.T. 0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

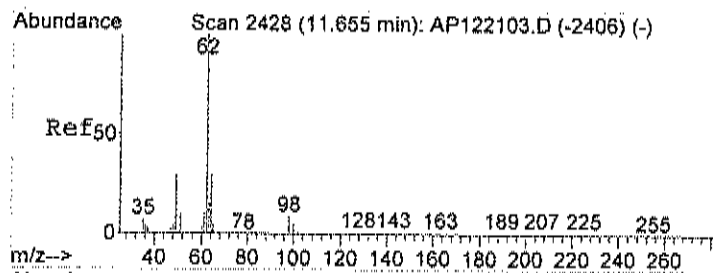
Tgt Ion: 57 Resp: 233202
Ion Ratio Lower Upper
57 100
41 97.3 49.7 89.7#
56 50.9 27.9 67.9



#33
Tetrahydrofuran
Concen: 10.91 ppb
RT: 10.73 min Scan# 2118
Delta R.T. -0.02 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

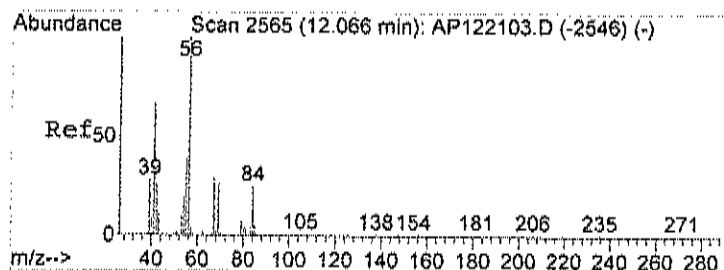
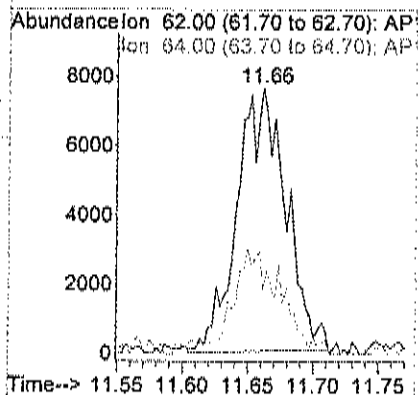
Tgt Ion: 42 Resp: 701262
Ion Ratio Lower Upper
42 100
71 37.4 21.4 61.4
72 37.5 22.4 62.4





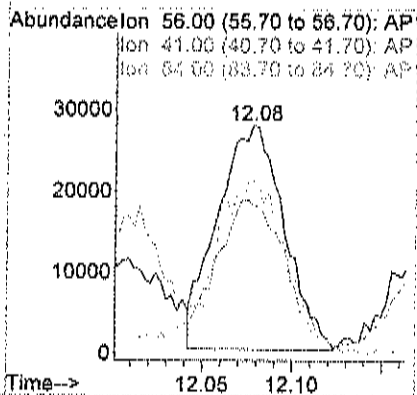
#34
1,2-dichloroethane
Concen: 0.18 ppb
RT: 11.66 min Scan# 2430
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

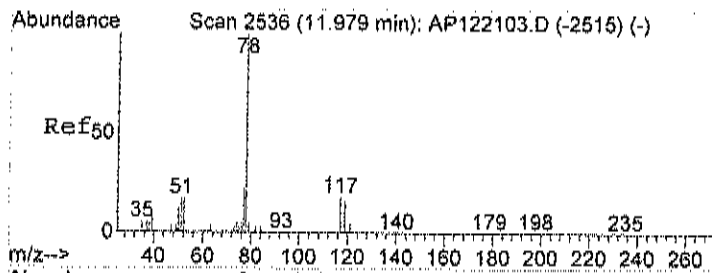
Tgt Ion: 62 Resp: 19692
Ion Ratio Lower Upper
62 100
64 36.9 13.2 53.2



#37
Cyclohexane
Concen: 0.68 ppb
RT: 12.08 min Scan# 2569
Delta R.T. 0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

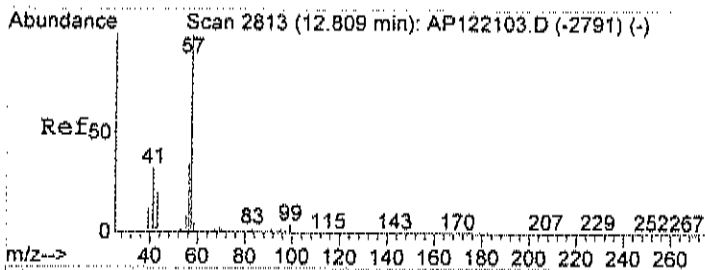
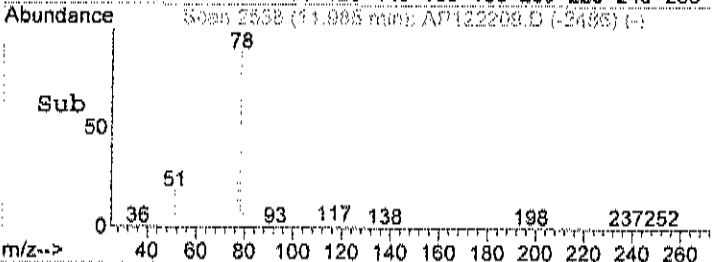
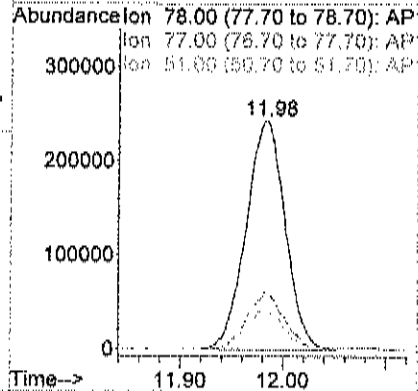
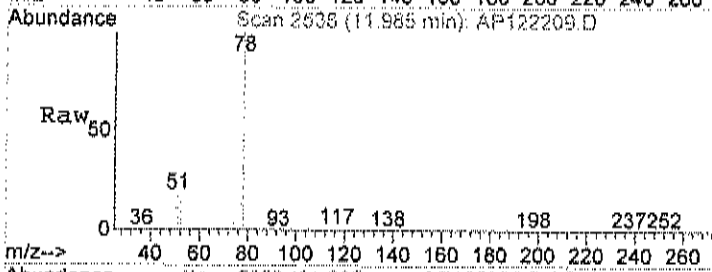
Tgt Ion: 56 Resp: 71186
Ion Ratio Lower Upper
56 100
41 66.0 36.3 76.3
84 83.1 56.0 96.0





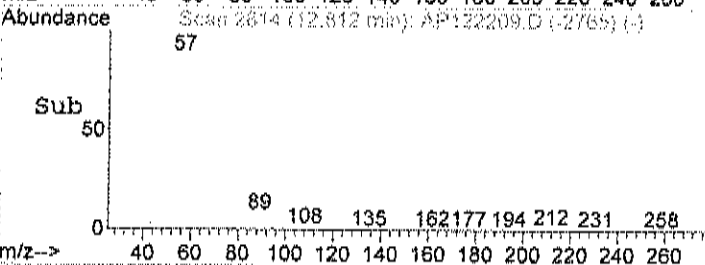
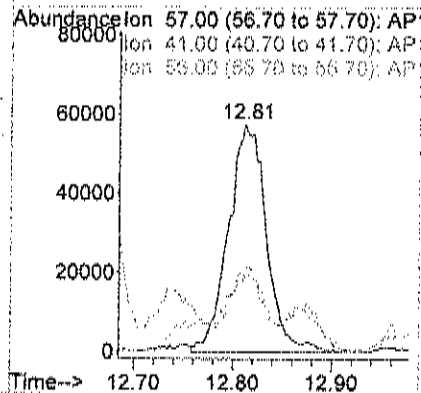
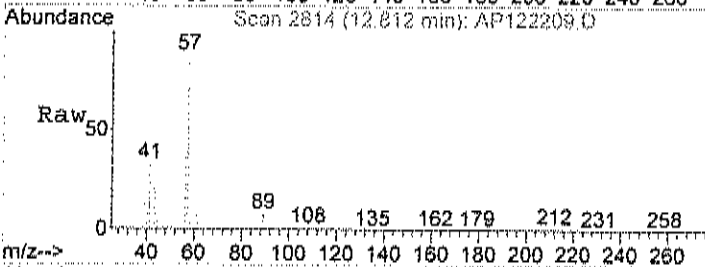
#39
Benzene
Concen: 2.55 ppb
RT: 11.98 min Scan# 2538
Delta R.T. 0.01 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

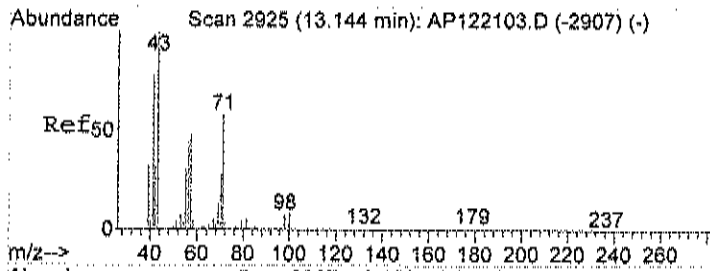
Tgt Ion: 78 Resp: 642263
Ion Ratio Lower Upper
78 100
77 24.0 3.1 43.1
51 17.2 0.0 36.7



#42
2,2,4-trimethylpentane
Concen: 0.43 ppb
RT: 12.81 min Scan# 2814
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

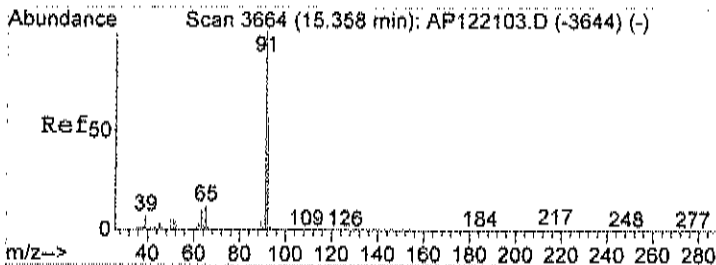
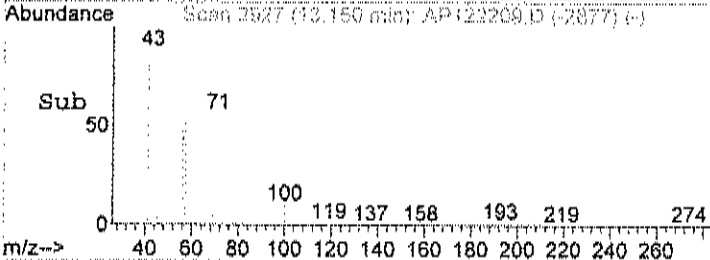
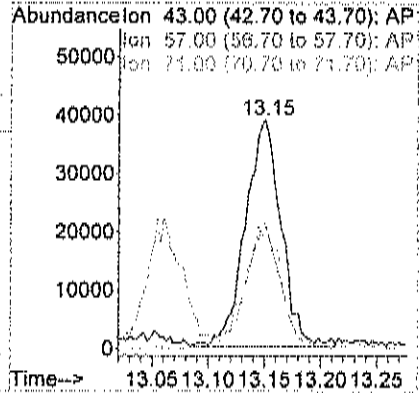
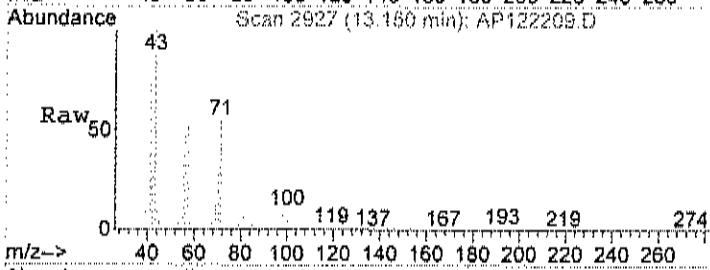
Tgt Ion: 57 Resp: 153840
Ion Ratio Lower Upper
57 100
41 27.0 6.9 46.9
56 36.6 11.5 51.5





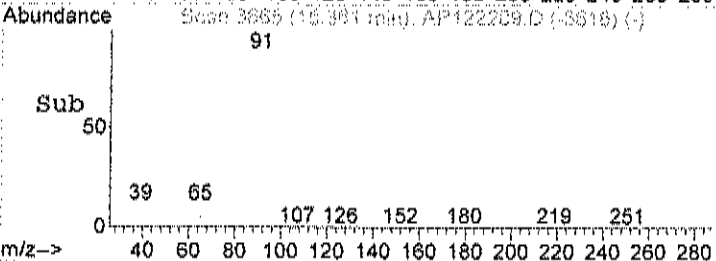
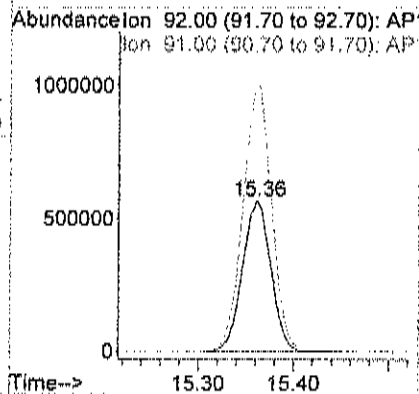
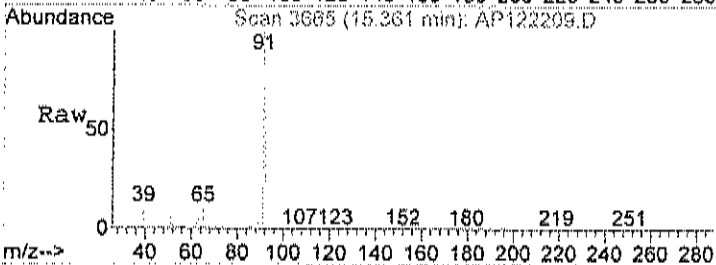
#43
Heptane
Concen: 0.69 ppb
RT: 13.15 min Scan# 2927
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

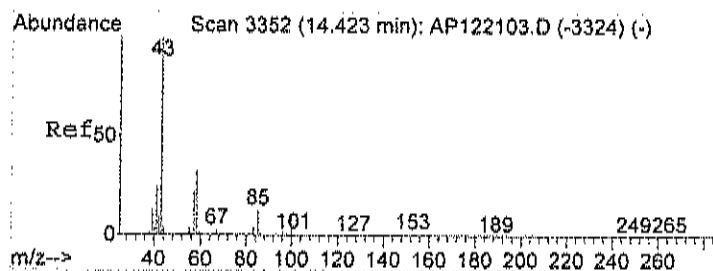
Tgt Ion: 43 Resp: 86295
Ion Ratio Lower Upper
43 100
57 49.4 32.7 72.7
71 53.0 35.6 75.6



#51
Toluene
Concen: 6.01 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

Tgt Ion: 92 Resp: 1181795
Ion Ratio Lower Upper
92 100
91 177.9 154.3 194.3

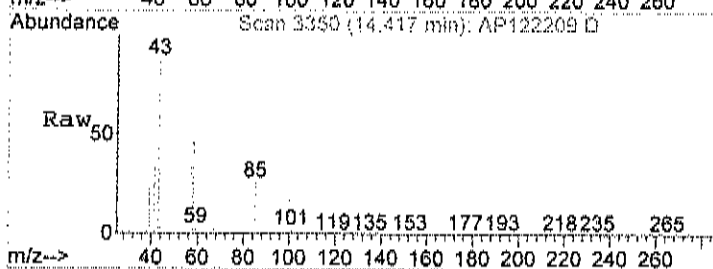




#52
Methyl Isobutyl Ketone
Concen: 121.50 ppb
RT: 14.42 min Scan# 3350
Delta R.T. -0.01 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

Tgt Ion: 43 Resp: 26631586

Ion	Ratio	Lower	Upper
43	100		
57	32.2	3.5	43.5
58	46.1	17.9	57.9

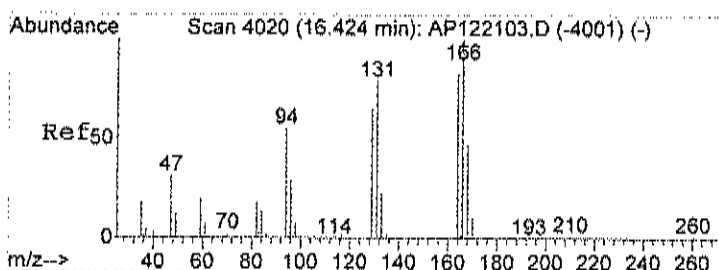
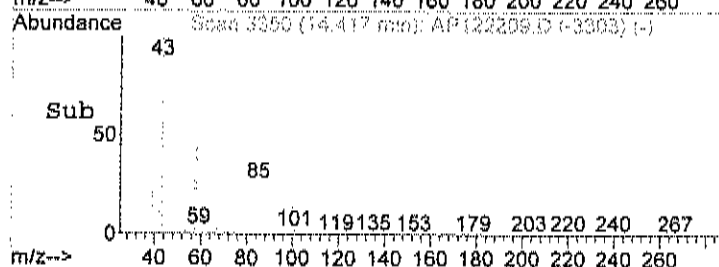
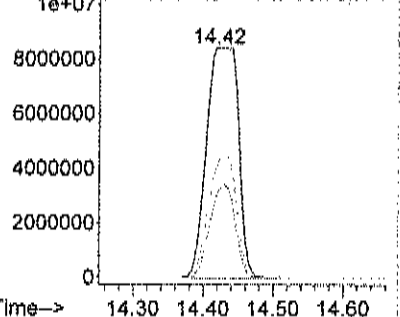


Abundance

Ion 43.00 (42.70 to 43.70): AP

Ion 57.00 (56.70 to 57.70): AP

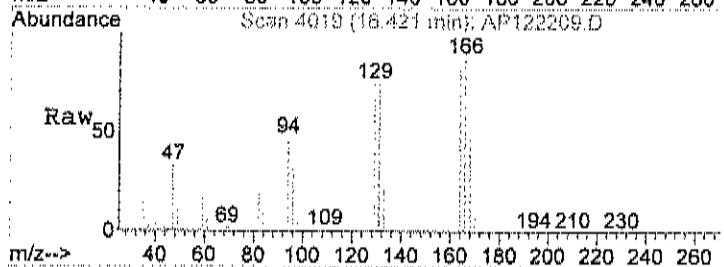
Ion 58.00 (57.70 to 58.70): AP



#56
Tetrachloroethylene
Concen: 1.00 ppb
RT: 16.42 min Scan# 4019
Delta R.T. -0.01 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

Tgt Ion: 164 Resp: 159089

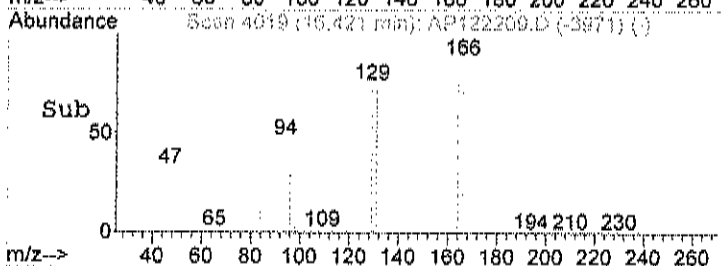
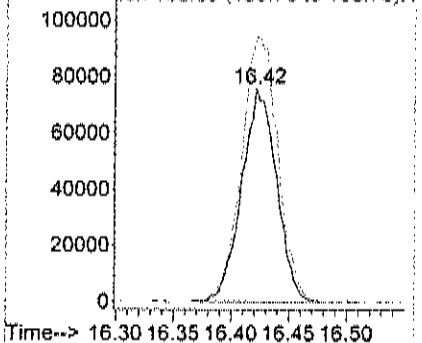
Ion	Ratio	Lower	Upper
164	100		
166	130.1	108.5	148.5

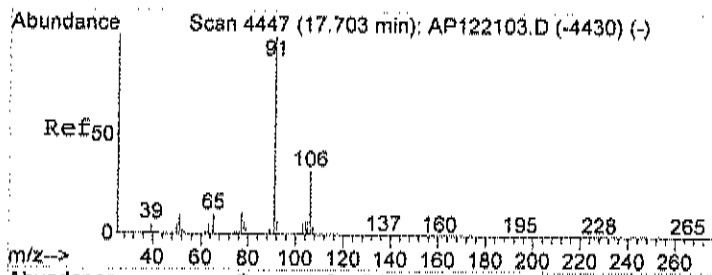


Abundance

Ion 164.00 (163.70 to 164.70): AP

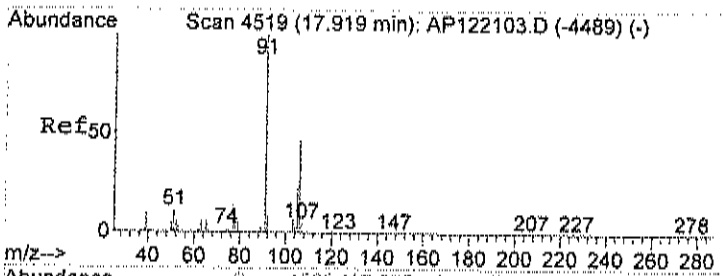
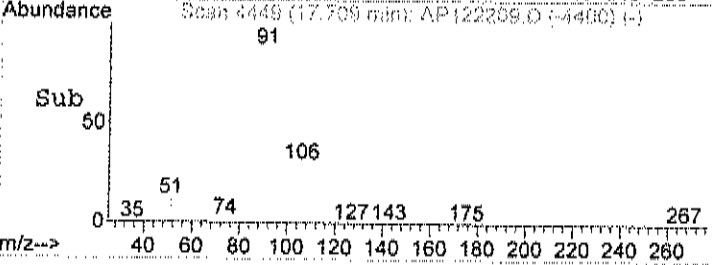
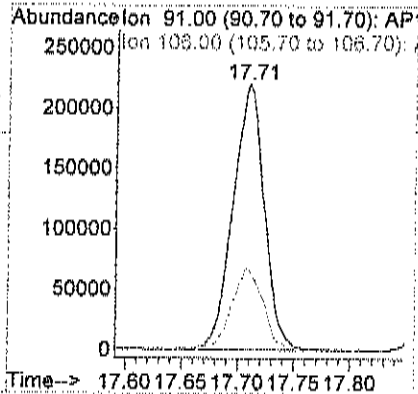
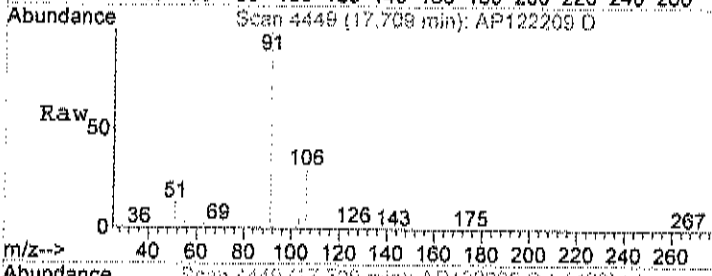
Ion 166.00 (165.70 to 166.70): AP





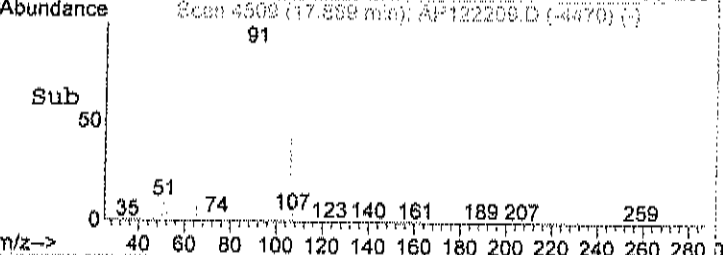
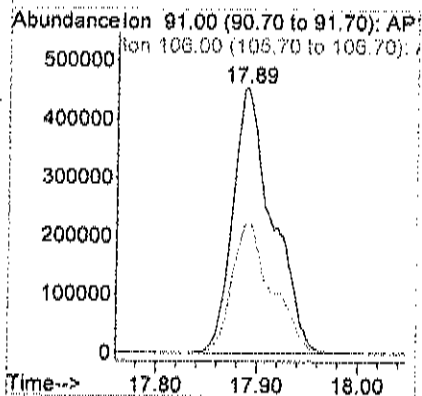
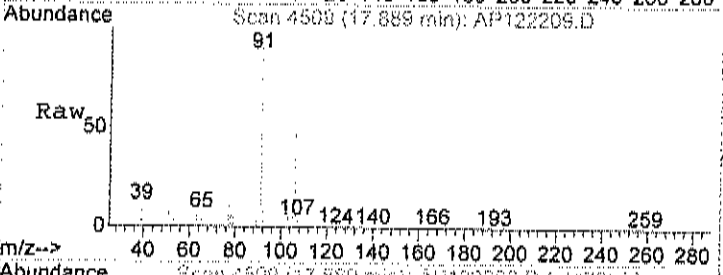
#58
Ethylbenzene
Concen: 1.06 ppb
RT: 17.71 min Scan# 4449
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

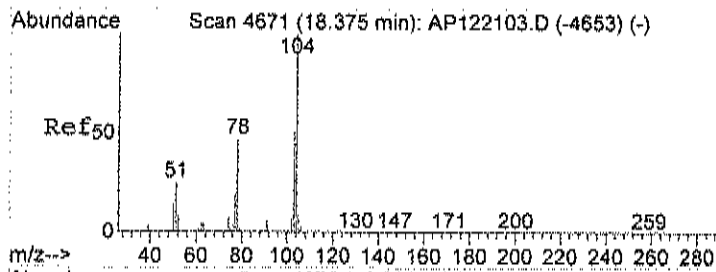
Tgt Ion: 91 Resp: 428936
Ion Ratio Lower Upper
91 100
106 31.0 11.4 51.4



#59
m&p-xylene
Concen: 3.61 ppb
RT: 17.89 min Scan# 4509
Delta R.T. -0.03 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

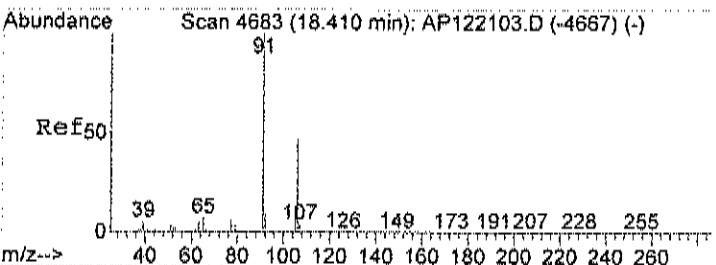
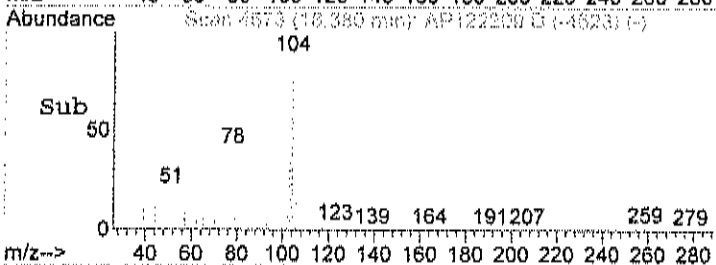
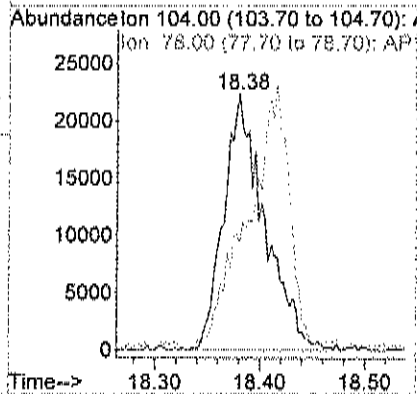
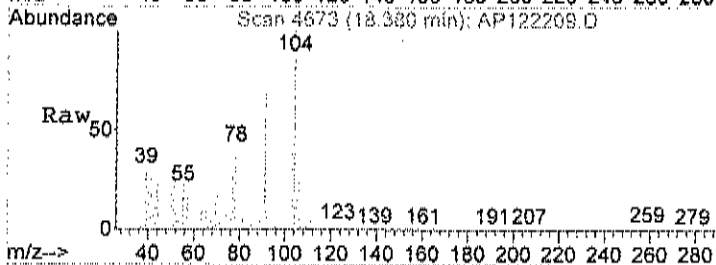
Tgt Ion: 91 Resp: 1244225
Ion Ratio Lower Upper
91 100
106 49.5 28.3 68.3





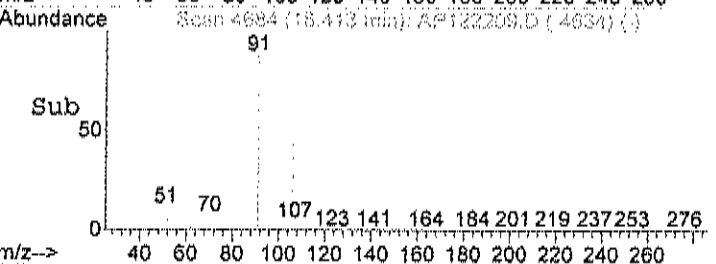
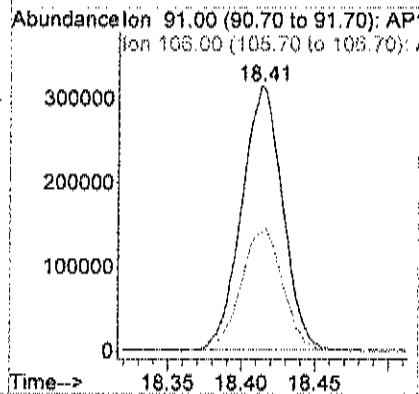
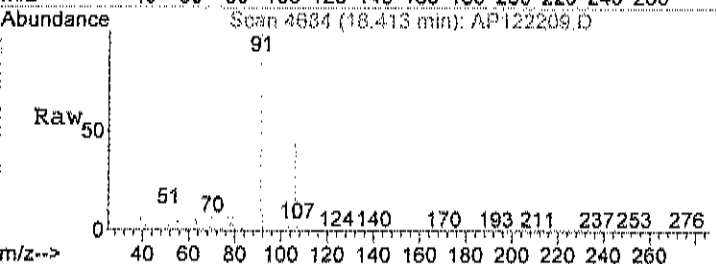
#61
Styrene
Concen: 0.20 ppb
RT: 18.38 min Scan# 4673
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

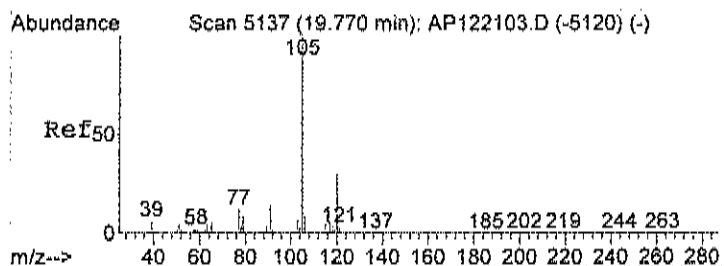
Tgt Ion: 104 Resp: 60524
Ion Ratio Lower Upper
104 100
78 102.8 35.3 75.3#



#63
o-xylene
Concen: 1.40 ppb
RT: 18.41 min Scan# 4684
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

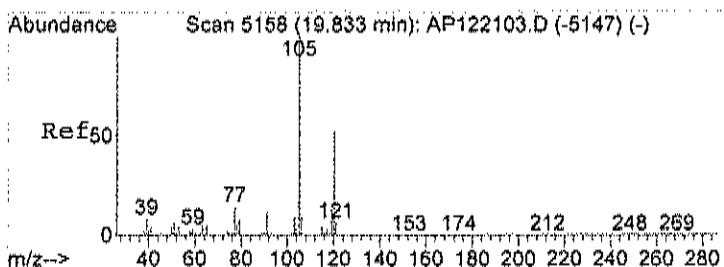
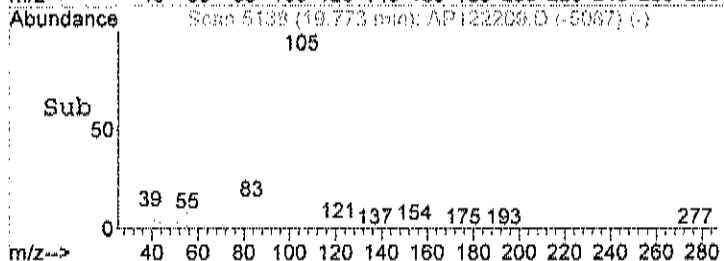
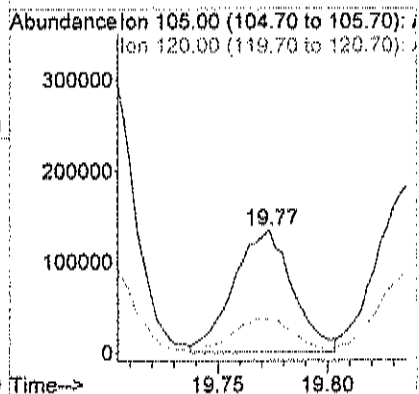
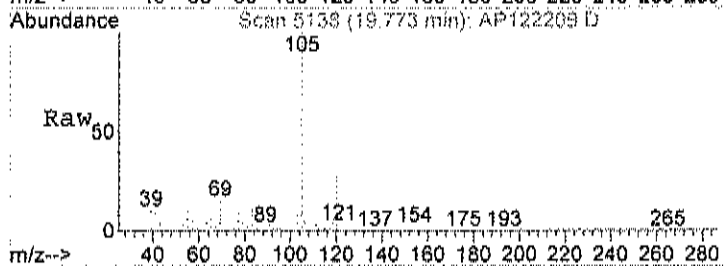
Tgt Ion: 91 Resp: 609733
Ion Ratio Lower Upper
91 100
106 47.4 26.6 66.6





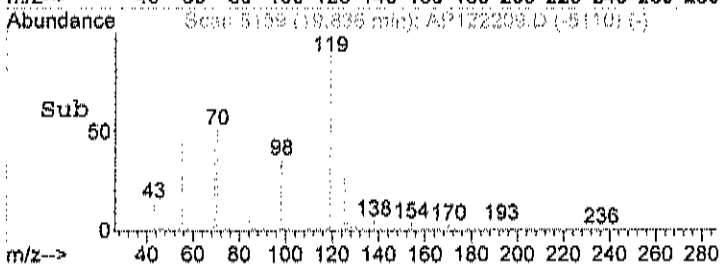
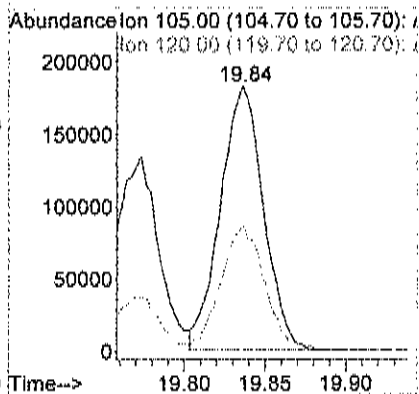
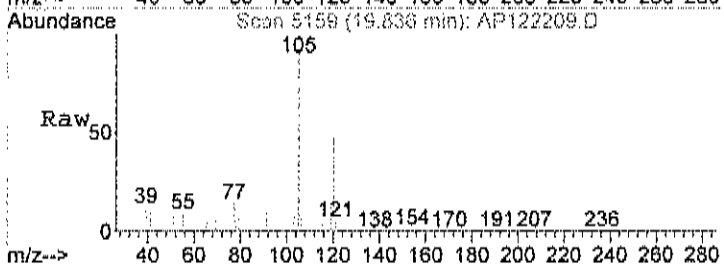
#69
4-ethyltoluene
Concen: 0.48 ppb
RT: 19.77 min Scan# 5138
Delta R.T. 0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

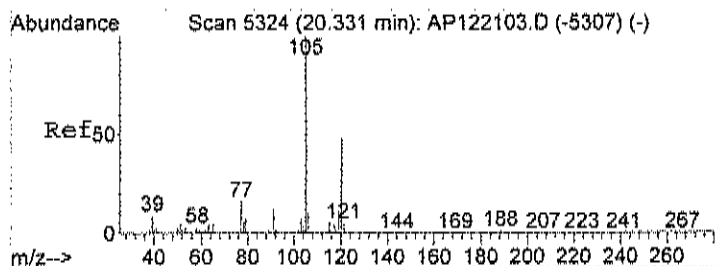
Tgt Ion:105 Resp: 252674
Ion Ratio Lower Upper
105 100
120 30.2 10.2 50.2



#70
1,3,5-trimethylbenzene
Concen: 0.73 ppb
RT: 19.84 min Scan# 5159
Delta R.T. -0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

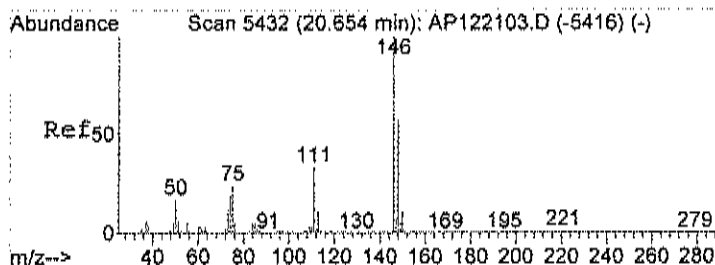
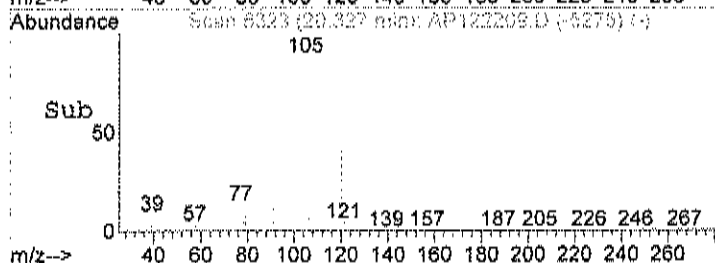
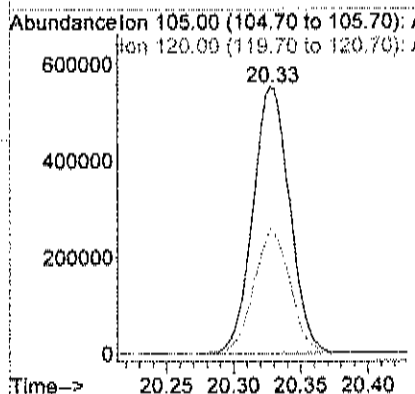
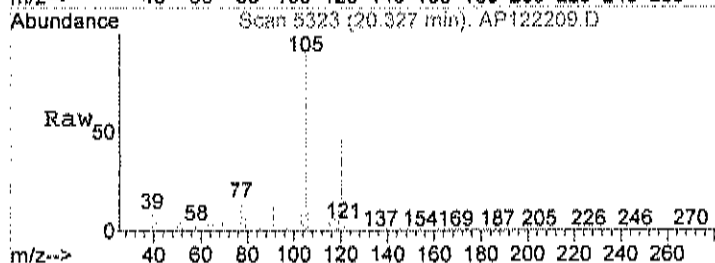
Tgt Ion:105 Resp: 339188
Ion Ratio Lower Upper
105 100
120 48.2 27.6 67.6





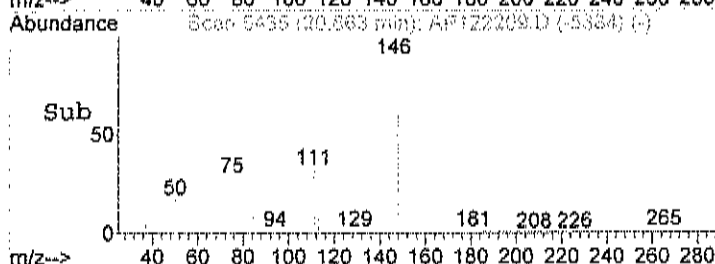
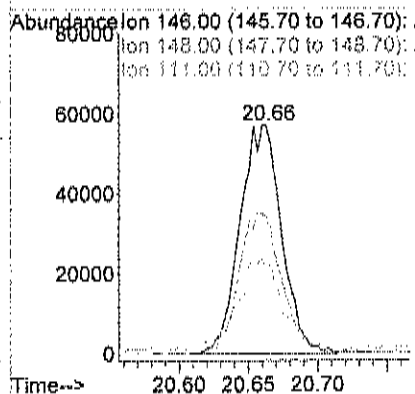
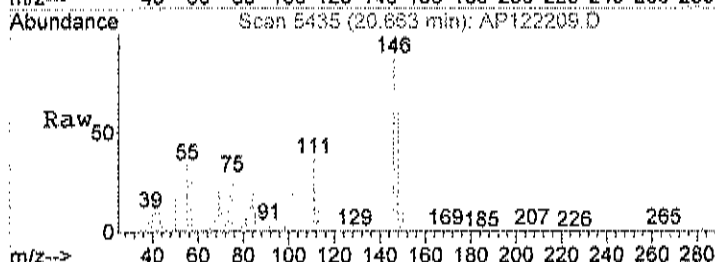
#71
1,2,4-trimethylbenzene
Concen: 2.96 ppb
RT: 20.33 min Scan# 5323
Delta R.T. -0.01 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

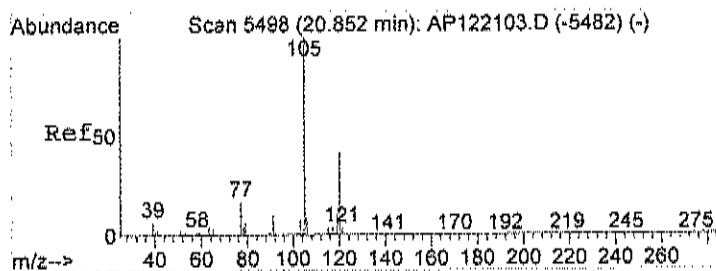
Tgt Ion:105 Resp: 1052766
Ion Ratio Lower Upper
105 100
120 45.6 25.3 65.3



#72
1,3-dichlorobenzene
Concen: 0.36 ppb
RT: 20.66 min Scan# 5435
Delta R.T. 0.00 min
Lab File: AP122209.D
Acq: 22 Dec 2018 2:37 pm

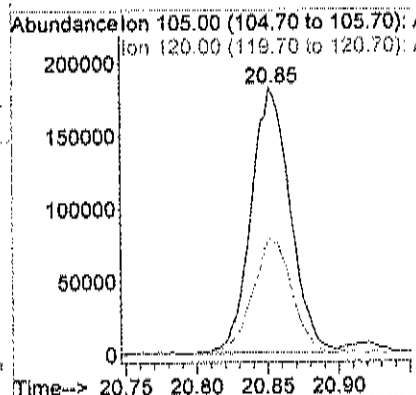
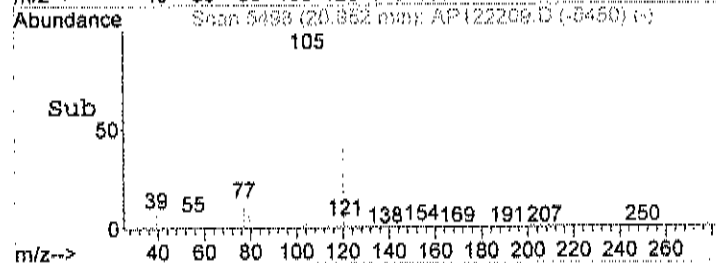
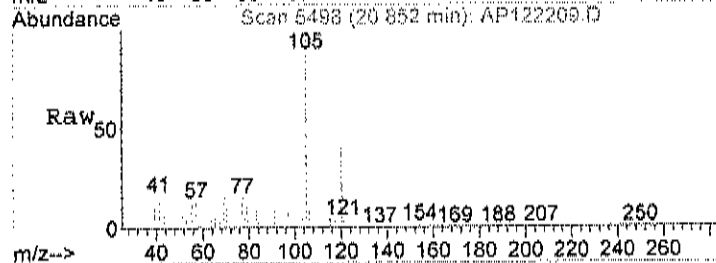
Tgt Ion:146 Resp: 119453
Ion Ratio Lower Upper
146 100
148 63.1 43.6 83.6
111 44.3 19.9 59.9





#75
 1,2,3-trimethylbenzene
 Concen: 0.85 ppb
 RT: 20.85 min Scan# 5498
 Delta R.T. -0.01 min
 Lab File: AP122209.D
 Acq: 22 Dec 2018 2:37 pm

Tgt Ion: 105 Resp: 347893
 Ion Ratio Lower Upper
 105 100
 120 44.9 31.6 52.8



Data File : C:\HPCHEM\1\DATA\AP122313.D

Acq On : 23 Dec 2018 6:21 pm

Sample : C1812057-013A 9x

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:32 2018

Vial: 13

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	36466	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.66	114	154796	1.00	ppb	0.02
50) Chlorobenzene-d5	17.40	117	165322	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	79854m	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%

Target Compounds

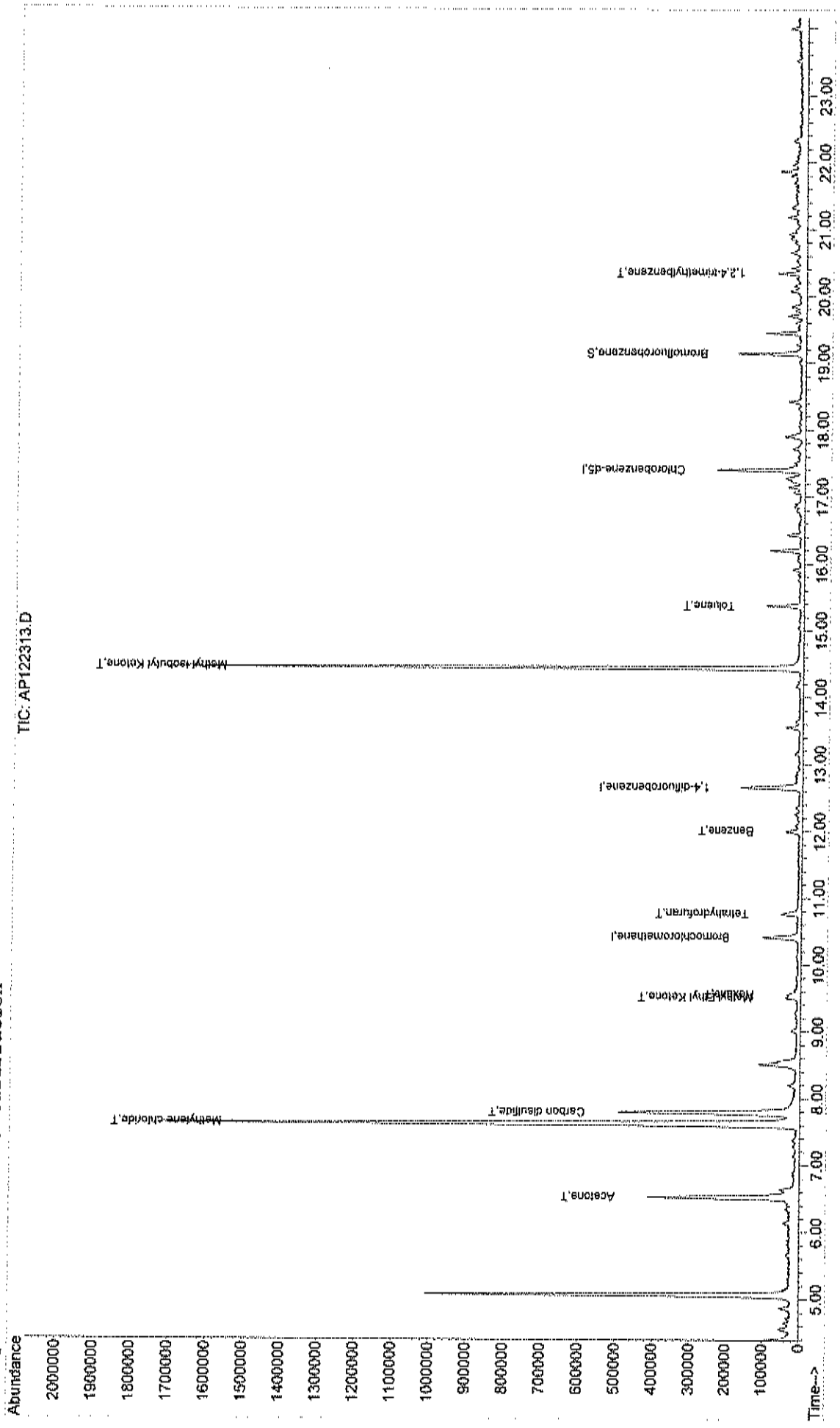
	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.52	58	205054	9.17	ppb	# 69
21) Methylene chloride	7.61	84	1205564	20.95	ppb	97
23) Carbon disulfide	7.79	76	1126907	8.81	ppb	100
28) Methyl Ethyl Ketone	9.51	72	13193	0.57	ppb	# 100
30) Hexane	9.55	57	14480m	0.20	ppb	
33) Tetrahydrofuran	10.76	42	33798	0.69	ppb	90
39) Benzene	11.99	78	39228	0.22	ppb	97
51) Toluene	15.37	92	47701	0.37	ppb	91
52) Methyl Isobutyl Ketone	14.43	43	1419083	9.94	ppb	97
71) 1,2,4-trimethylbenzene	20.34	105	35655	0.15	ppb	93

Data File : C:\HPCHEM\1\DATA\AP122313.D
Acq On : 23 Dec 2018 6:21 pm
Sample : C1812057-013A 9X
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 8:33 2018

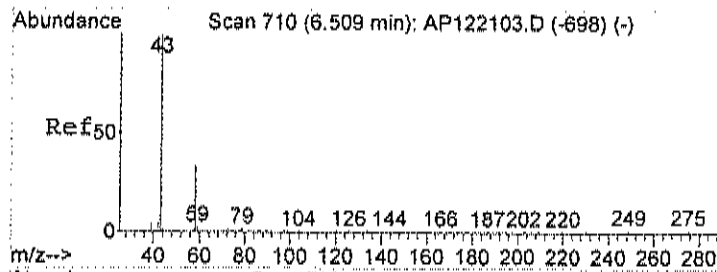
Vial: 13
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

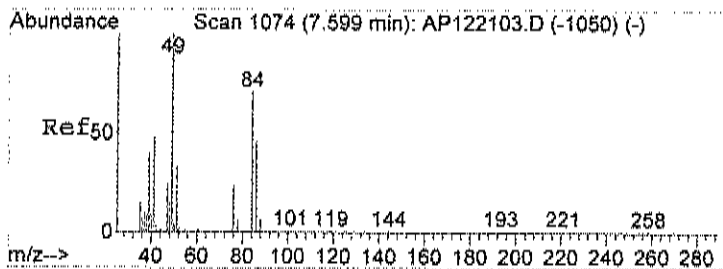
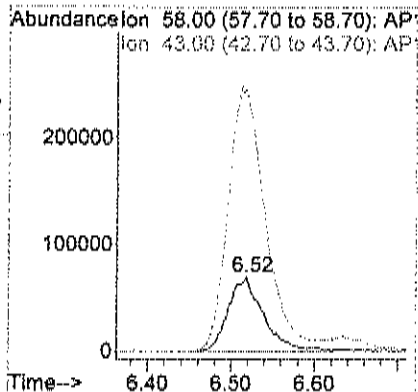
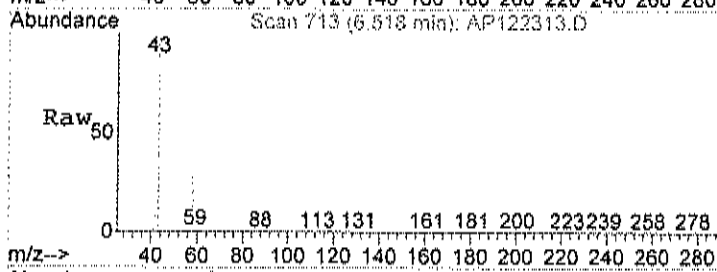


TIC: AP122313.D



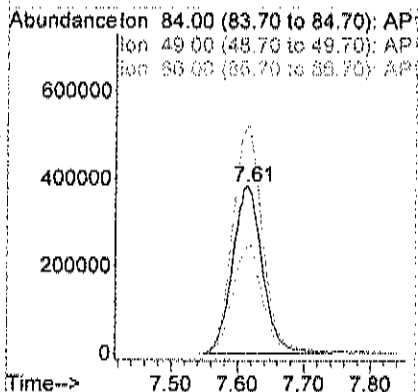
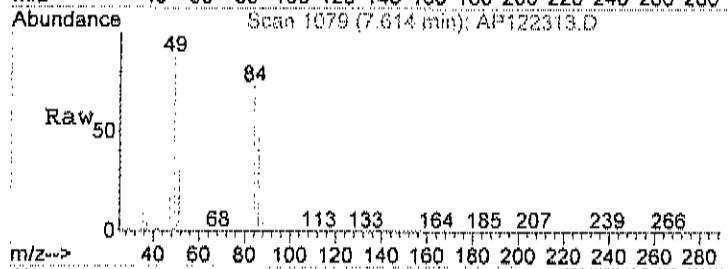
#15
Acetone
Concen: 9.17 ppb
RT: 6.52 min Scan# 713
Delta R.T. 0.01 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

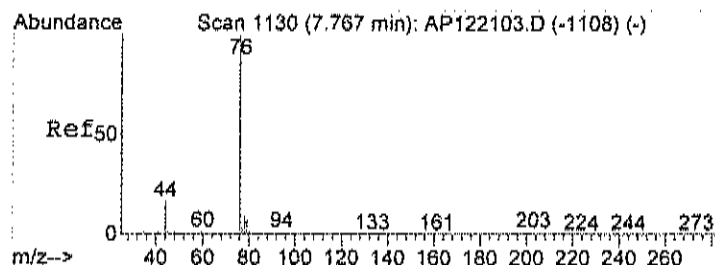
Tgt Ion: 58 Resp: 205054
Ion Ratio Lower Upper
58 100
43 391.9 298.2 358.2#



#21
Methylene chloride
Concen: 20.95 ppb
RT: 7.61 min Scan# 1079
Delta R.T. 0.02 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

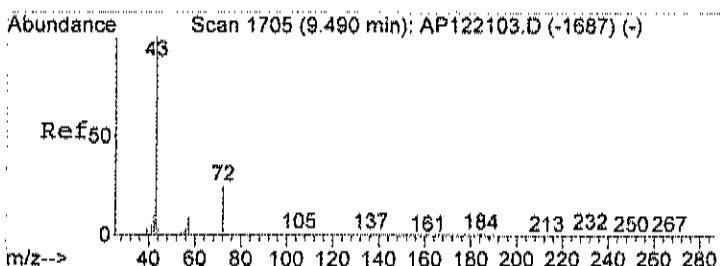
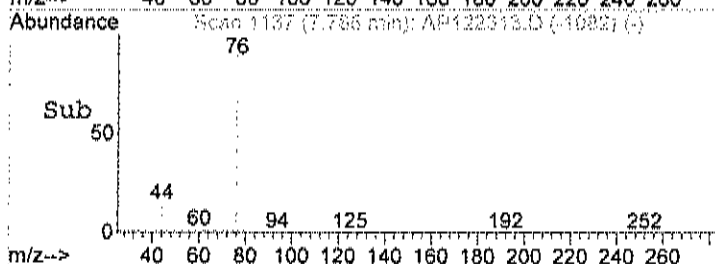
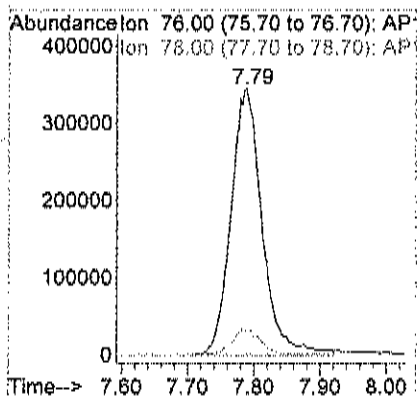
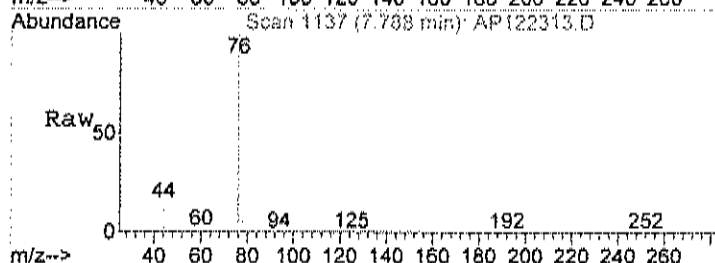
Tgt Ion: 84 Resp: 1205564
Ion Ratio Lower Upper
84 100
49 136.4 121.5 161.5
86 64.8 46.0 86.0





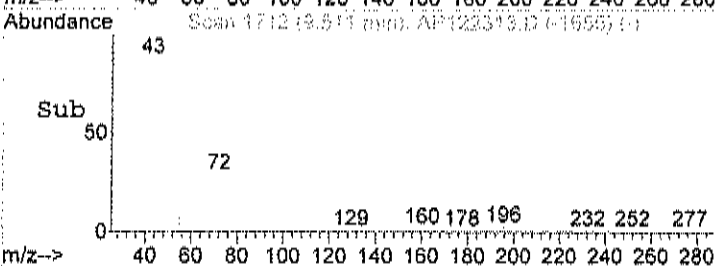
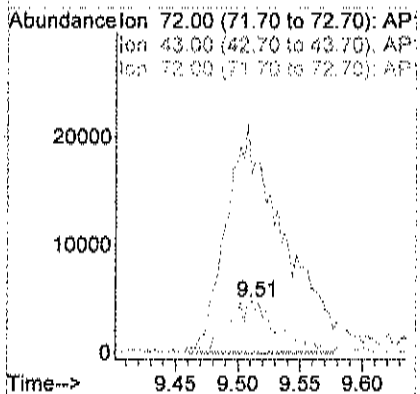
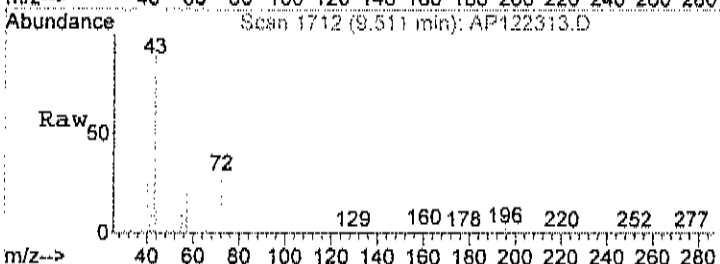
#23
Carbon disulfide
Concen: 8.81 ppb
RT: 7.79 min Scan# 1137
Delta R.T. 0.02 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

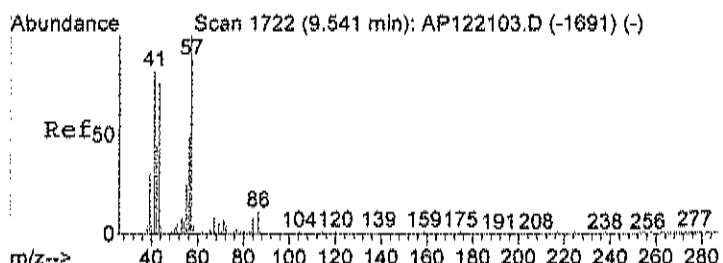
Tgt Ion: 76 Resp: 1126907
Ion Ratio Lower Upper
76 100
78 9.4 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 0.57 ppb
RT: 9.51 min Scan# 1712
Delta R.T. 0.02 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

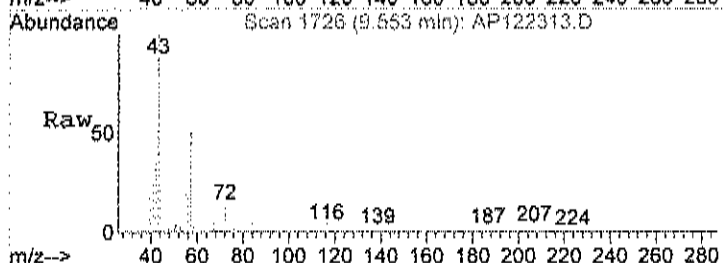
Tgt Ion: 72 Resp: 13193
Ion Ratio Lower Upper
72 100
43 534.9 0.0 20.0#
72 100.0 80.0 120.0



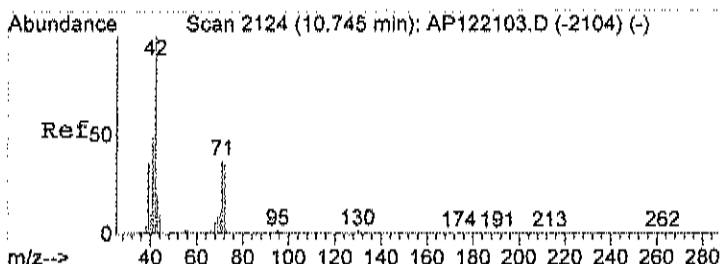
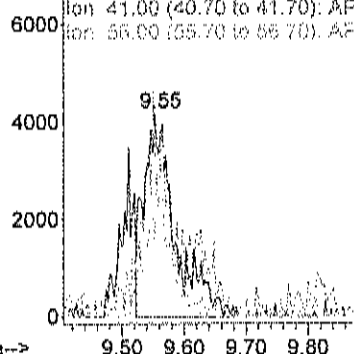
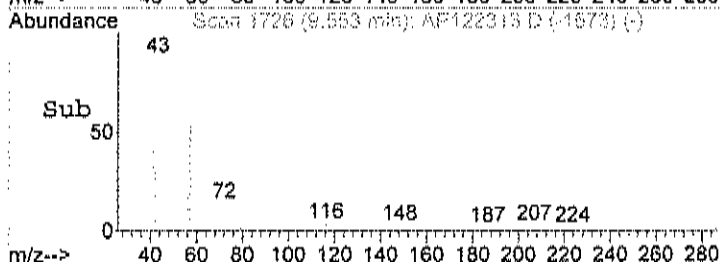


#30
Hexane
Concen: 0.20 ppb m
RT: 9.55 min Scan# 1726
Delta R.T. 0.01 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

Tgt Ion: 57 Resp: 14480
Ion Ratio Lower Upper
57 100
41 83.1 49.7 89.7
56 13.6 27.9 67.9#

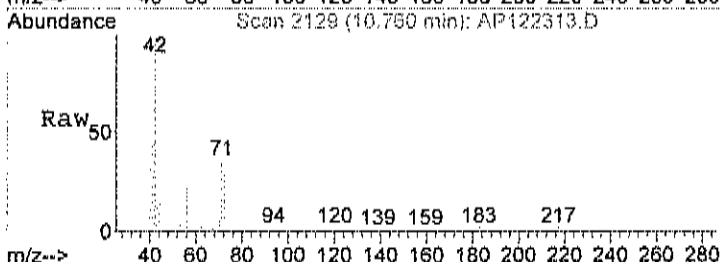


Abundance Ion 57.00 (56.70 to 57.70): AP
Ion 41.00 (40.70 to 41.70): AP
Ion 56.00 (55.70 to 56.70): AP

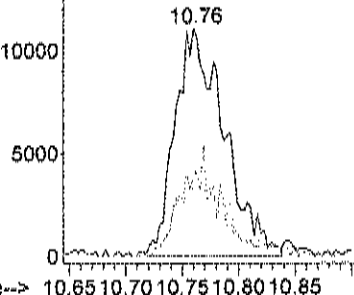
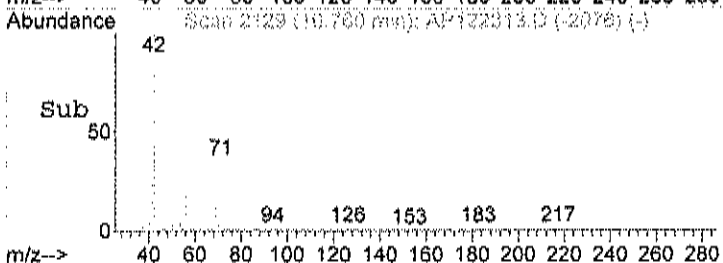


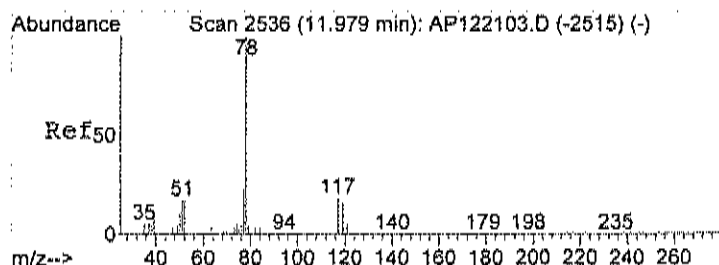
#33
Tetrahydrofuran
Concen: 0.69 ppb
RT: 10.76 min Scan# 2129
Delta R.T. 0.01 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

Tgt Ion: 42 Resp: 33798
Ion Ratio Lower Upper
42 100
71 36.8 21.4 61.4
72 35.0 22.4 62.4



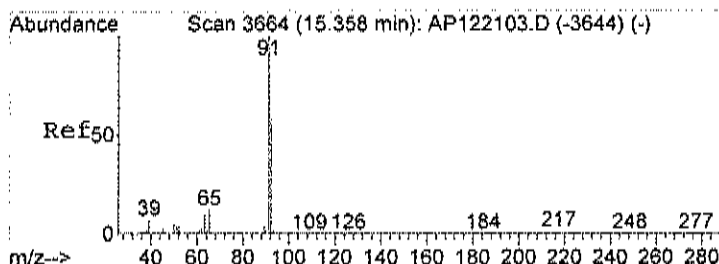
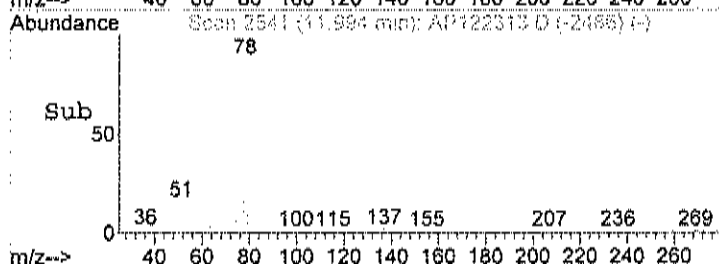
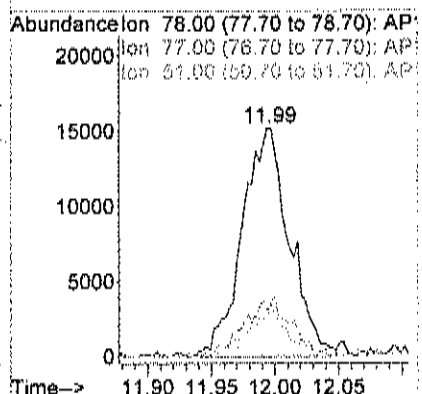
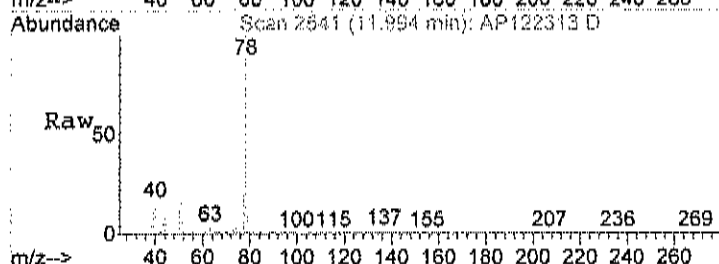
Abundance Ion 42.00 (41.70 to 42.70): AP
Ion 71.00 (70.70 to 71.70): AP
Ion 72.00 (71.70 to 72.70): AP





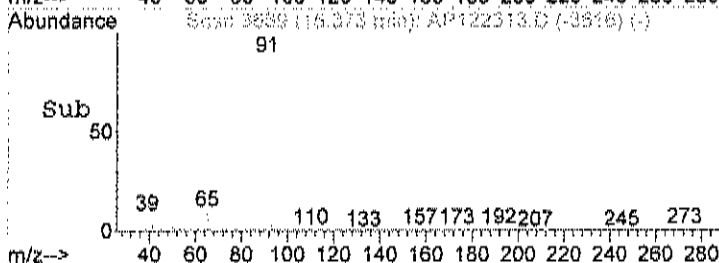
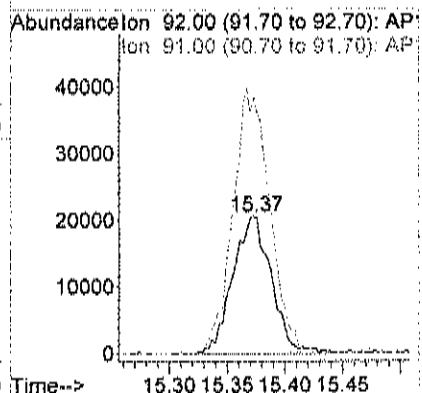
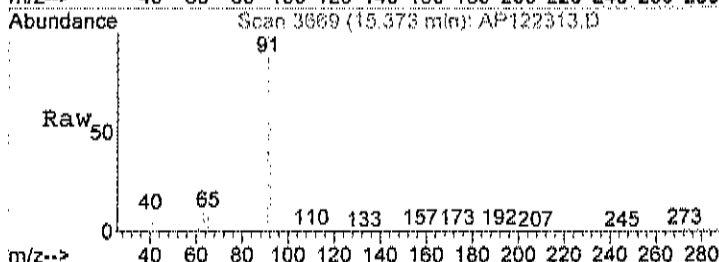
#39
Benzene
Concen: 0.22 ppb
RT: 11.99 min Scan# 2541
Delta R.T. 0.02 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

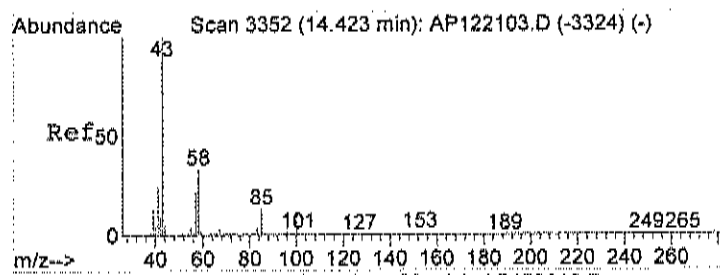
Tgt Ion	Ratio	Lower	Upper
78	100		
77	25.4	3.1	43.1
51	16.6	0.0	36.7



#51
Toluene
Concen: 0.37 ppb
RT: 15.37 min Scan# 3669
Delta R.T. 0.01 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

Tgt Ion	Ratio	Lower	Upper
92	100		
91	186.9	154.3	194.3

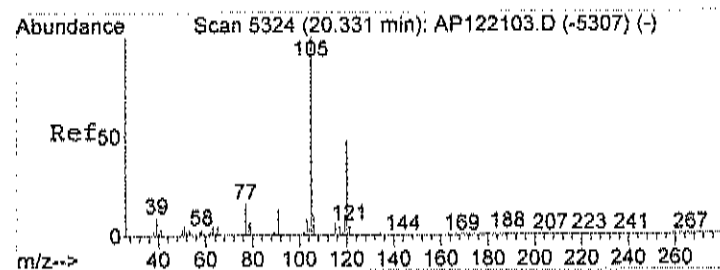
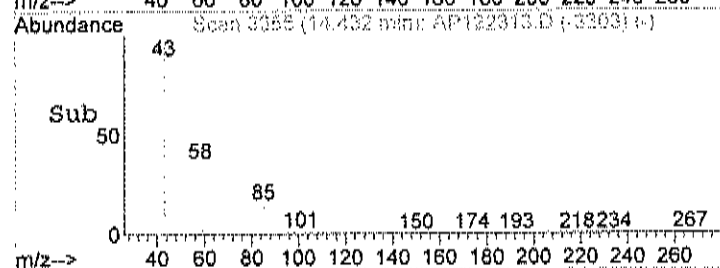
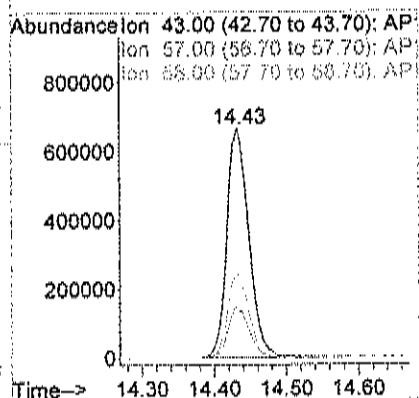
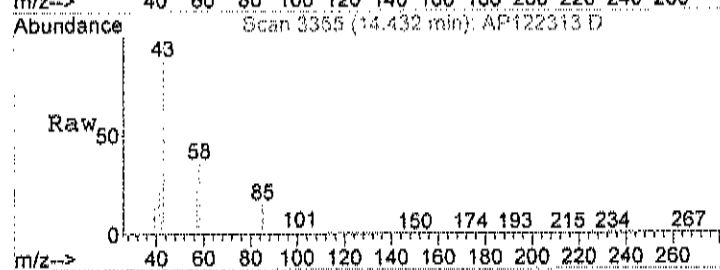




#52
Methyl Isobutyl Ketone
Concen: 9.94 ppb
RT: 14.43 min Scan# 3355
Delta R.T. 0.01 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

Tgt Ion: 43 Resp: 1419083

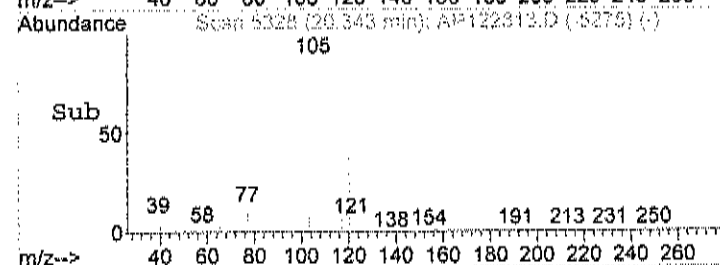
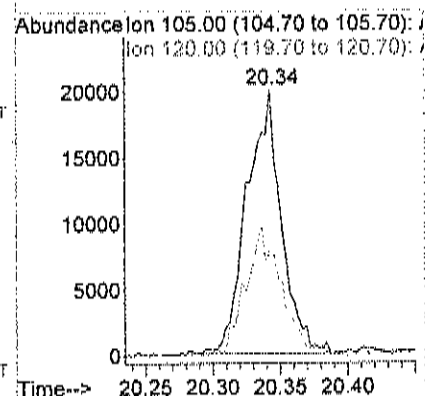
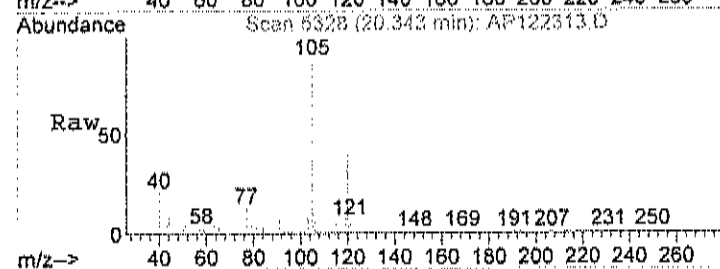
Ion	Ratio	Lower	Upper
43	100		
57	21.6	3.5	43.5
58	35.9	17.9	57.9



#71
1,2,4-trimethylbenzene
Concen: 0.15 ppb
RT: 20.34 min Scan# 5328
Delta R.T. 0.01 min
Lab File: AP122313.D
Acq: 23 Dec 2018 6:21 pm

Tgt Ion: 105 Resp: 35655

Ion	Ratio	Lower	Upper
105	100		
120	49.6	25.3	65.3



Data File : C:\HPCHEM\1\DATA\AP122314.D

Vial: 14

Acq On : 23 Dec 2018 6:59 pm

Operator: RJP

Sample : C1812057-013A 90x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:33 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	33111	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	142049	1.00	ppb	0.01
50) Chlorobenzene-d5	17.39	117	99020	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	50328m	0.74	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	74.00%

Target Compounds

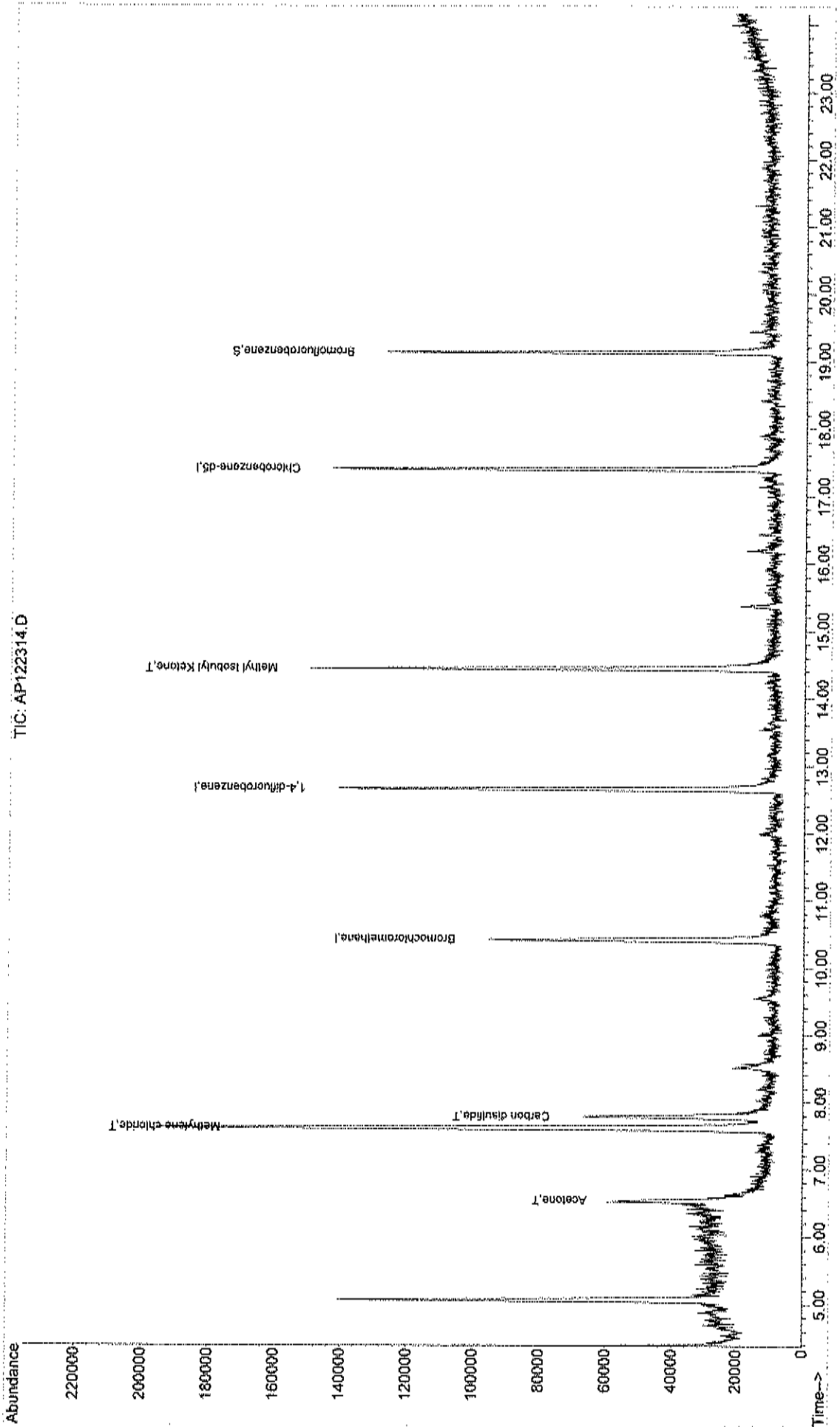
	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.53	58	15335	0.76	ppb	# 73
21) Methylene chloride	7.61	84	130474	2.50	ppb	98
23) Carbon disulfide	7.79	76	122759	1.06	ppb	100
52) Methyl Isobutyl Ketone	14.44	43	124110	1.45	ppb	95

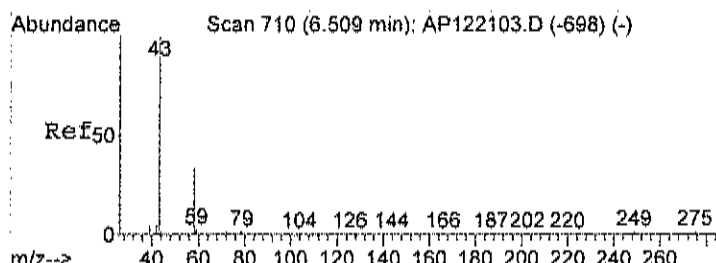
Data File : C:\HPCHEM\1\DATA\AP122314.D
Acq On : 23 Dec 2018 6:59 pm
Sample : C1812057-013A 90x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 8:33 2018

Vial: 14
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

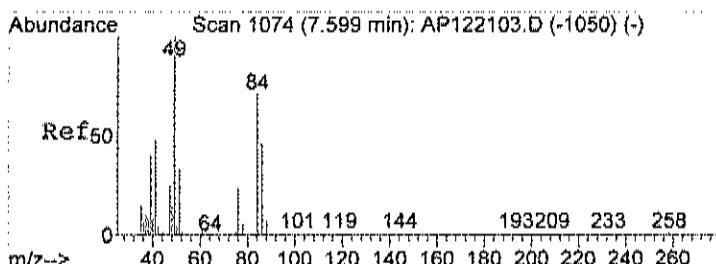
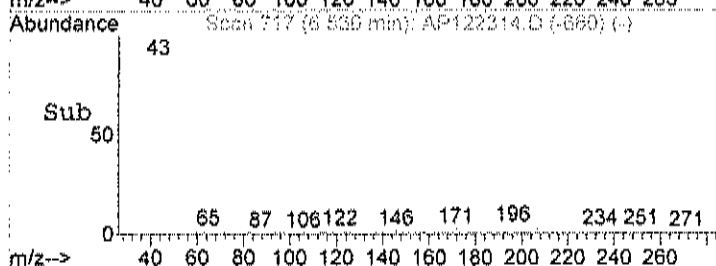
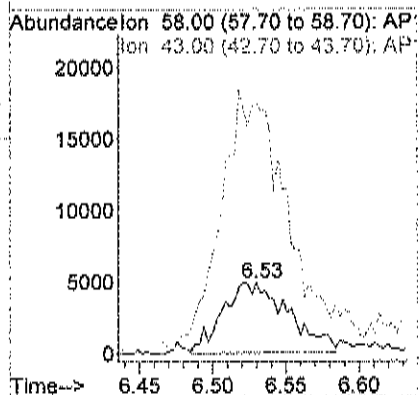
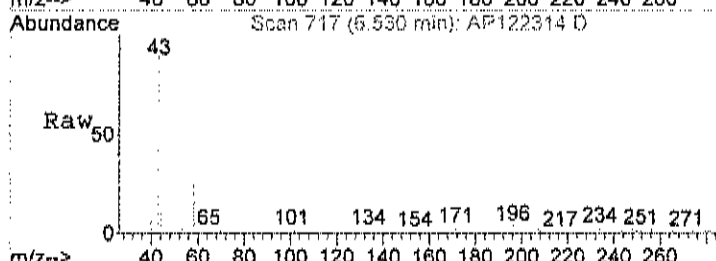
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





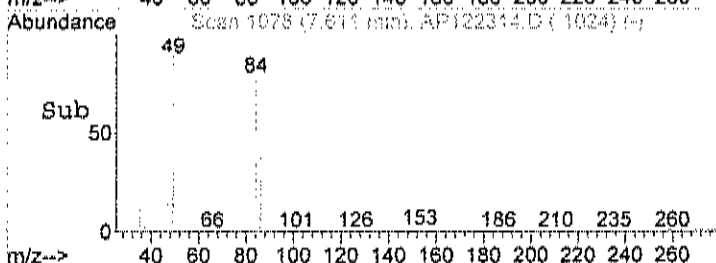
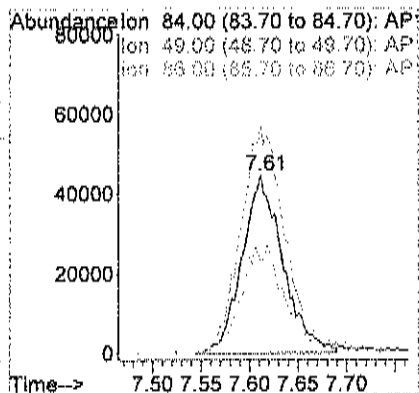
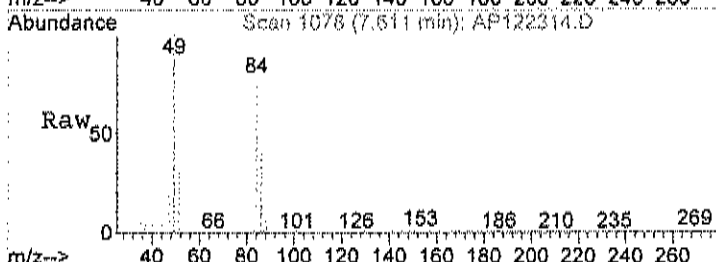
#15
Acetone
Concen: 0.76 ppb
RT: 6.53 min Scan# 717
Delta R.T. 0.02 min
Lab File: AP122314.D
Acq: 23 Dec 2018 6:59 pm

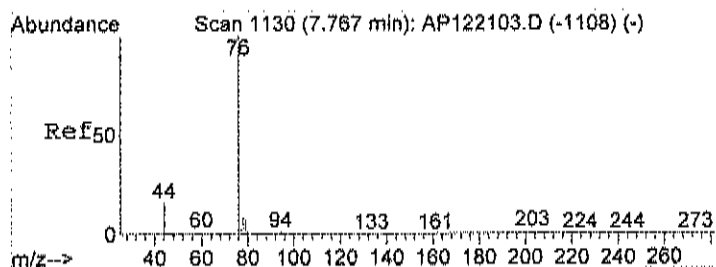
Tgt Ion: 58 Resp: 15335
Ion Ratio Lower Upper
58 100
43 383.4 298.2 358.2#



#21
Methylene chloride
Concen: 2.50 ppb
RT: 7.61 min Scan# 1078
Delta R.T. 0.01 min
Lab File: AP122314.D
Acq: 23 Dec 2018 6:59 pm

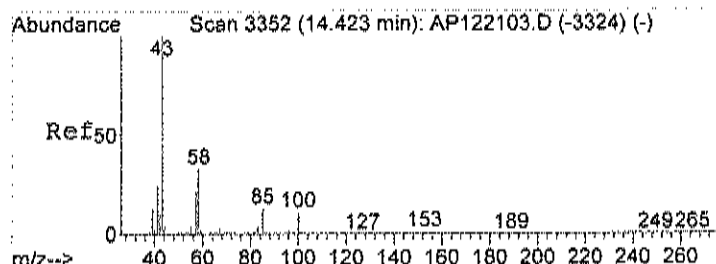
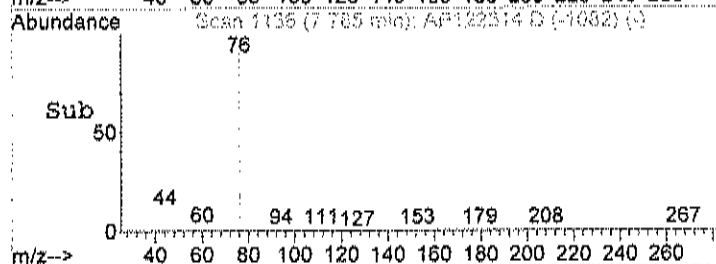
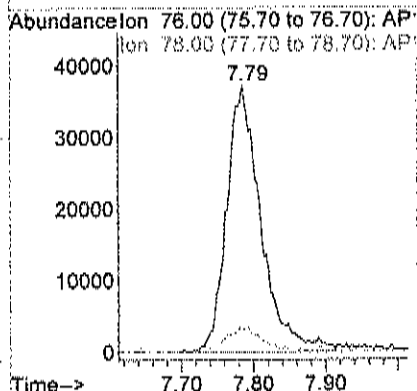
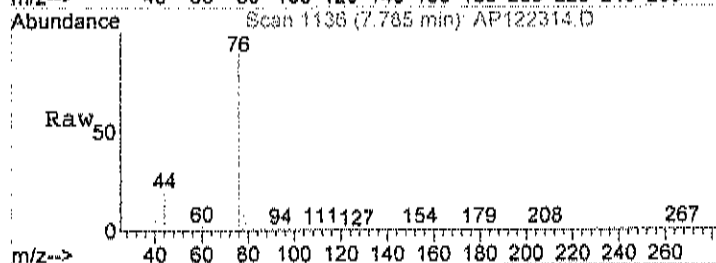
Tgt Ion: 84 Resp: 130474
Ion Ratio Lower Upper
84 100
49 139.4 121.5 161.5
86 65.0 46.0 86.0





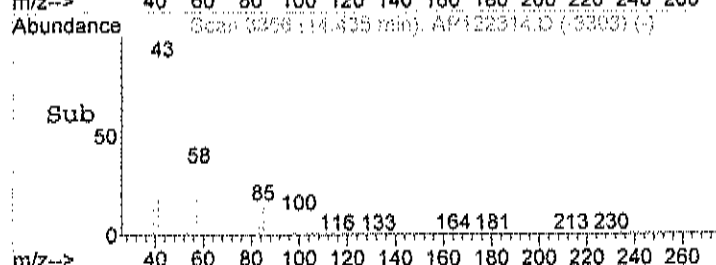
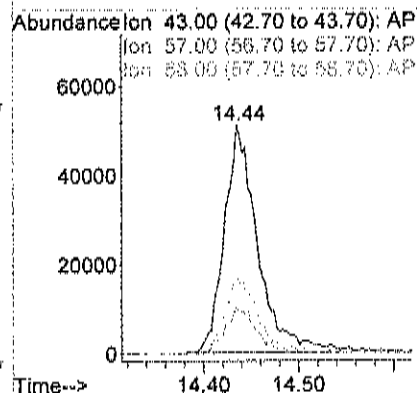
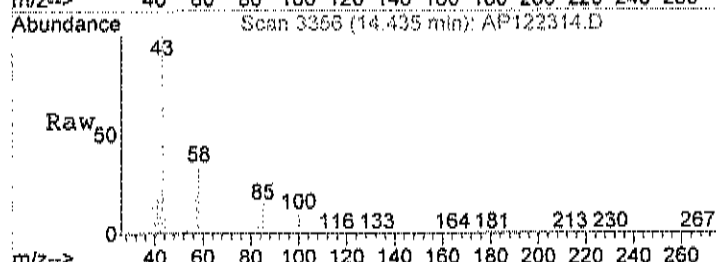
#23
Carbon disulfide
Concen: 1.06 ppb
RT: 7.79 min Scan# 1136
Delta R.T. 0.01 min
Lab File: AP122314.D
Acq: 23 Dec 2018 6:59 pm

Tgt Ion: 76 Resp: 122759
Ion Ratio Lower Upper
76 100
78 9.3 0.0 29.2



#52
Methyl Isobutyl Ketone
Concen: 1.45 ppb
RT: 14.44 min Scan# 3356
Delta R.T. 0.01 min
Lab File: AP122314.D
Acq: 23 Dec 2018 6:59 pm

Tgt Ion: 43 Resp: 124110
Ion Ratio Lower Upper
43 100
57 20.0 3.5 43.5
58 35.3 17.9 57.9



Data File : C:\HPCHEM\1\DATA\AP122315.D

Vial: 15

Acq On : 23 Dec 2018 7:38 pm

Operator: RJP

Sample : C1812057-013A 180x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:34 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	32372	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.65	114	134845	1.00	ppb	0.01
50) Chlorobenzene-d5	17.40	117	90611	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.14	95	46985m	0.76	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	76.00%

Target Compounds

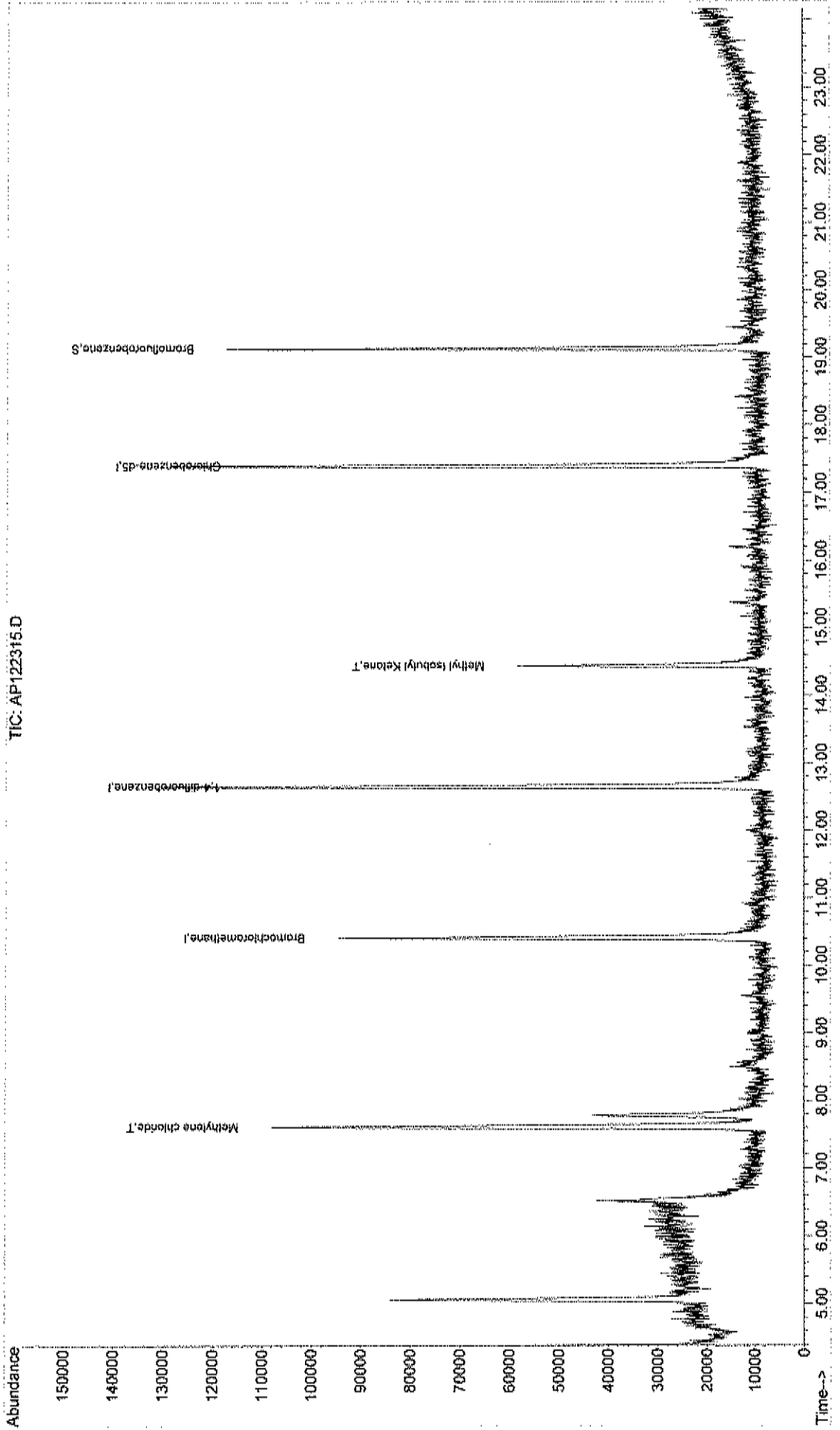
					Qvalue
21) Methylene chloride	7.61	84	68010	1.33	ppb 100
52) Methyl Isobutyl Ketone	14.44	43	46191	0.59	ppb 75

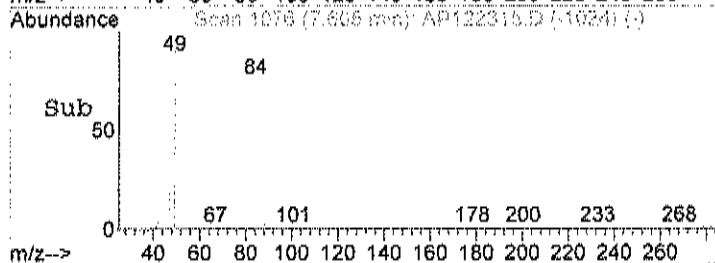
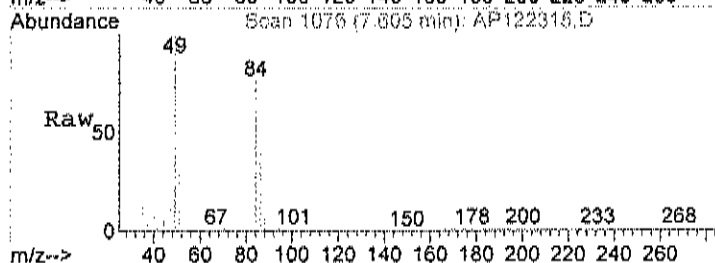
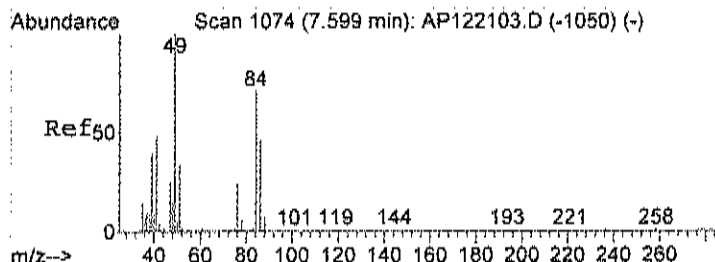
Data File : C:\HPCHEM\1\DATA\AP122315.D
 Acq On : 23 Dec 2018 7:38 pm
 Sample : C1812057-013A 180x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 31 8:34 2018

Vial: 15
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

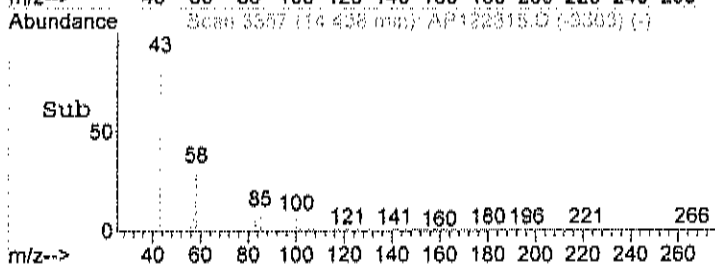
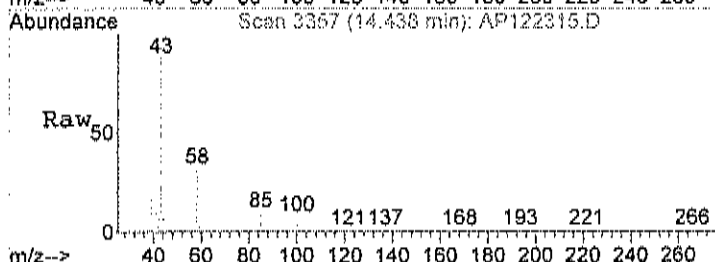
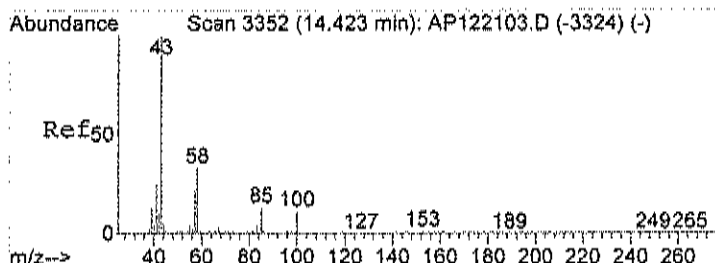
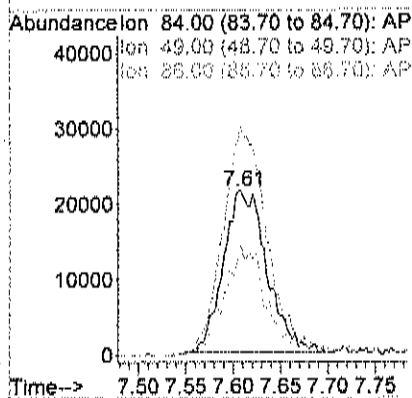
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





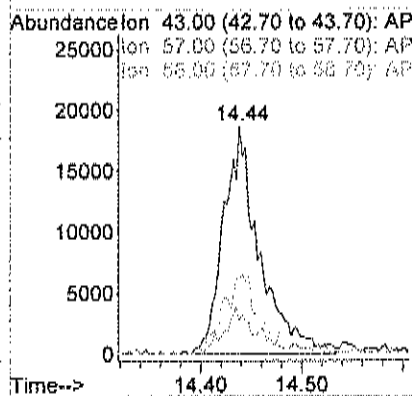
#21
Methylene chloride
Concen: 1.33 ppb
RT: 7.61 min Scan# 1076
Delta R.T. 0.01 min
Lab File: AP122315.D
Acq: 23 Dec 2018 7:38 pm

Tgt Ion: 84 Resp: 68010
Ion Ratio Lower Upper
84 100
49 142.0 121.5 161.5
86 66.0 46.0 86.0



#52
Methyl Isobutyl Ketone
Concen: 0.59 ppb
RT: 14.44 min Scan# 3357
Delta R.T. 0.01 min
Lab File: AP122315.D
Acq: 23 Dec 2018 7:38 pm

Tgt Ion: 43 Resp: 46191
Ion Ratio Lower Upper
43 100
57 11.5 3.5 43.5
58 22.3 17.9 57.9



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
Lab Vacuum In	-6			"Hg		Analyst: 12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
Helium	ND	0.75		%	1	Analyst: RJP 12/31/2018
1UG/M3 BY METHOD TO15						
		TO-15				Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2,4-Trimethylbenzene	1.8	1.4		ppbV	9	12/23/2018 8:18:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3,5-Trimethylbenzene	0.84	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,3-Dichlorobenzene	0.23	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:17:00 PM
2,2,4-trimethylpentane	3.6	1.4		ppbV	9	12/23/2018 8:18:00 PM
4-ethyltoluene	0.58	0.15		ppbV	1	12/22/2018 3:17:00 PM
Acetone	61	27		ppbV	90	12/23/2018 8:55:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Benzene	5.5	1.4		ppbV	9	12/23/2018 8:18:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Carbon disulfide	170	14		ppbV	90	12/23/2018 8:55:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloroethane	0.32	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
cis-1,2-Dichloroethene	0.22	0.15		ppbV	1	12/22/2018 3:17:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Cyclohexane	45	14		ppbV	90	12/23/2018 8:55:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte, Quantitation estimated.
S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Ethylbenzene	1.0	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 11	0.33	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Freon 12	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Heptane	4.8	1.4		ppbV	9	12/23/2018 8:18:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Hexane	36	14		ppbV	90	12/23/2018 8:55:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
m&p-Xylene	3.4	0.30		ppbV	1	12/22/2018 3:17:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:17:00 PM
Methyl Ethyl Ketone	6.6	2.7		ppbV	9	12/23/2018 8:18:00 PM
Methyl Isobutyl Ketone	230	54		ppbV	180	12/23/2018 9:33:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Methylene chloride	150	14		ppbV	90	12/23/2018 8:55:00 PM
o-Xylene	1.6	0.15		ppbV	1	12/22/2018 3:17:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Styrene	0.25	0.15		ppbV	1	12/22/2018 3:17:00 PM
Tetrachloroethylene	0.64	0.15		ppbV	1	12/22/2018 3:17:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Toluene	5.1	1.4		ppbV	9	12/23/2018 8:18:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Trichloroethene	0.63	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:17:00 PM
Vinyl chloride	0.40	0.15		ppbV	1	12/22/2018 3:17:00 PM
Surr: Bromofluorobenzene	115	70-130		%REC	1	12/22/2018 3:17:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:17:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:17:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:17:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:17:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:17:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
1,2,4-Trimethylbenzene	8.8	6.9		ug/m3	9	12/23/2018 8:18:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:17:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:17:00 PM
1,3,5-Trimethylbenzene	4.1	0.74		ug/m3	1	12/22/2018 3:17:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:17:00 PM
1,3-Dichlorobenzene	1.4	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:17:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
2,2,4-trimethylpentane	17	6.5		ug/m3	9	12/23/2018 8:18:00 PM
4-ethyltoluene	2.9	0.74		ug/m3	1	12/22/2018 3:17:00 PM
Acetone	150	64		ug/m3	90	12/23/2018 8:55:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:17:00 PM
Benzene	18	4.5		ug/m3	9	12/23/2018 8:18:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:17:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/23/2018 3:17:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:17:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:17:00 PM
Carbon disulfide	530	44		ug/m3	90	12/23/2018 8:55:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:17:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:17:00 PM
Chloroethane	0.84	0.40		ug/m3	1	12/22/2018 3:17:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:17:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:17:00 PM
cis-1,2-Dichloroethene	0.87	0.59		ug/m3	1	12/22/2018 3:17:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:17:00 PM
Cyclohexane	150	48		ug/m3	90	12/23/2018 8:55:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:17:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:17:00 PM
Ethylbenzene	4.6	0.65		ug/m3	1	12/22/2018 3:17:00 PM
Freon 11	1.9	0.84		ug/m3	1	12/22/2018 3:17:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:17:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:17:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-014A

Client Sample ID: SVW-13
Tag Number: 352,1153
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Freon 12	< 0.74	0.74		ug/m3	1	12/22/2018 3:17:00 PM
Heptane	20	5.7		ug/m3	9	12/23/2018 8:18:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:17:00 PM
Hexane	130	49		ug/m3	90	12/23/2018 8:55:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:17:00 PM
m&p-Xylene	15	1.3		ug/m3	1	12/22/2018 3:17:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:17:00 PM
Methyl Ethyl Ketone	19	8.0		ug/m3	9	12/23/2018 8:18:00 PM
Methyl Isobutyl Ketone	960	220		ug/m3	180	12/23/2018 9:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:17:00 PM
Methylene chloride	510	49		ug/m3	90	12/23/2018 8:55:00 PM
o-Xylene	6.8	0.65		ug/m3	1	12/22/2018 3:17:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:17:00 PM
Styrene	1.1	0.64		ug/m3	1	12/22/2018 3:17:00 PM
Tetrachloroethylene	4.3	1.0		ug/m3	1	12/22/2018 3:17:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/22/2018 3:17:00 PM
Toluene	19	5.3		ug/m3	9	12/23/2018 8:18:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:17:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:17:00 PM
Trichloroethene	3.4	0.81		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:17:00 PM
Vinyl chloride	1.0	0.38		ug/m3	1	12/22/2018 3:17:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Data File : C:\HPCHEM\1\DATA\AP122210.D

Vial: 56

Acq On : 22 Dec 2018 3:17 pm

Operator: RJP

Sample : C1812057-014A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:17 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	64897	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.65	114	310949	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	320749	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	252789	1.15	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	115.00%

Target Compounds

						Qvalue
6) Vinyl Chloride	5.01	62	42846	0.40	ppb	98
10) Chloroethane	5.69	64	13253	0.32	ppb	90
14) Freon 11	6.34	101	169200	0.33	ppb	98
15) Acetone	6.48	58	2530887	63.59	ppb	97
21) Methylene chloride	7.61	84	12977489	126.73	ppb	90
23) Carbon disulfide	7.77	76	30838179	135.52	ppb	93
28) Methyl Ethyl Ketone	9.47	72	383836	9.39	ppb	# 100
29) cis-1,2-dichloroethene	9.95	61	28213	0.22	ppb	# 35
30) Hexane	9.55	57	6377089	49.75	ppb	95
37) Cyclohexane	12.08	56	8460154	57.49	ppb	95
39) Benzene	11.98	78	2099849	5.93	ppb	97
42) 2,2,4-trimethylpentane	12.81	57	2097690	4.16	ppb	# 45
43) Heptane	13.15	43	1139808	6.49	ppb	99
44) Trichloroethene	13.28	130	108184	0.63	ppb	97
51) Toluene	15.36	92	1479010	5.95	ppb	98
52) Methyl Isobutyl Ketone	14.41	43	31607833	114.10	ppb	68
56) Tetrachloroethylene	16.42	164	129518	0.64	ppb	98
58) Ethylbenzene	17.71	91	538873	1.05	ppb	99
59) m&p-xylene	17.89	91	1470968	3.38	ppb	99
61) Styrene	18.38	104	92682	0.25	ppb	98
63) o-xylene	18.41	91	860409	1.57	ppb	99
69) 4-ethyltoluene	19.77	105	385179	0.58	ppb	99
70) 1,3,5-trimethylbenzene	19.84	105	492702	0.84	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	1338194	2.97	ppb	100
72) 1,3-dichlorobenzene	20.66	146	97636	0.23	ppb	# 58
75) 1,2,3-trimethylbenzene	20.85	105	449729	0.87	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP122210.D AD10_1UG.M Wed Jan 02 11:50:09 2019 MSD1

Data File : C:\HPCHEM\1\DATA2\AP112815.D

Vial: 4

Acq On : 28 Nov 2018 8:18 pm

Operator: RJP

Sample : WAC112818D

Inst : MSD #1

Misc : AO05_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 03 13:59:59 2018

Quant Results File: AO05_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AO05_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Oct 31 09:54:53 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.42	128	30179	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	130211	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	90739	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	40258	0.69	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	69.00%#

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA2\AP112815.D

Acq On : 28 Nov 2018 8:18 pm

Sample : WAC112818D

Misc : AO05_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 3 13:59 2018

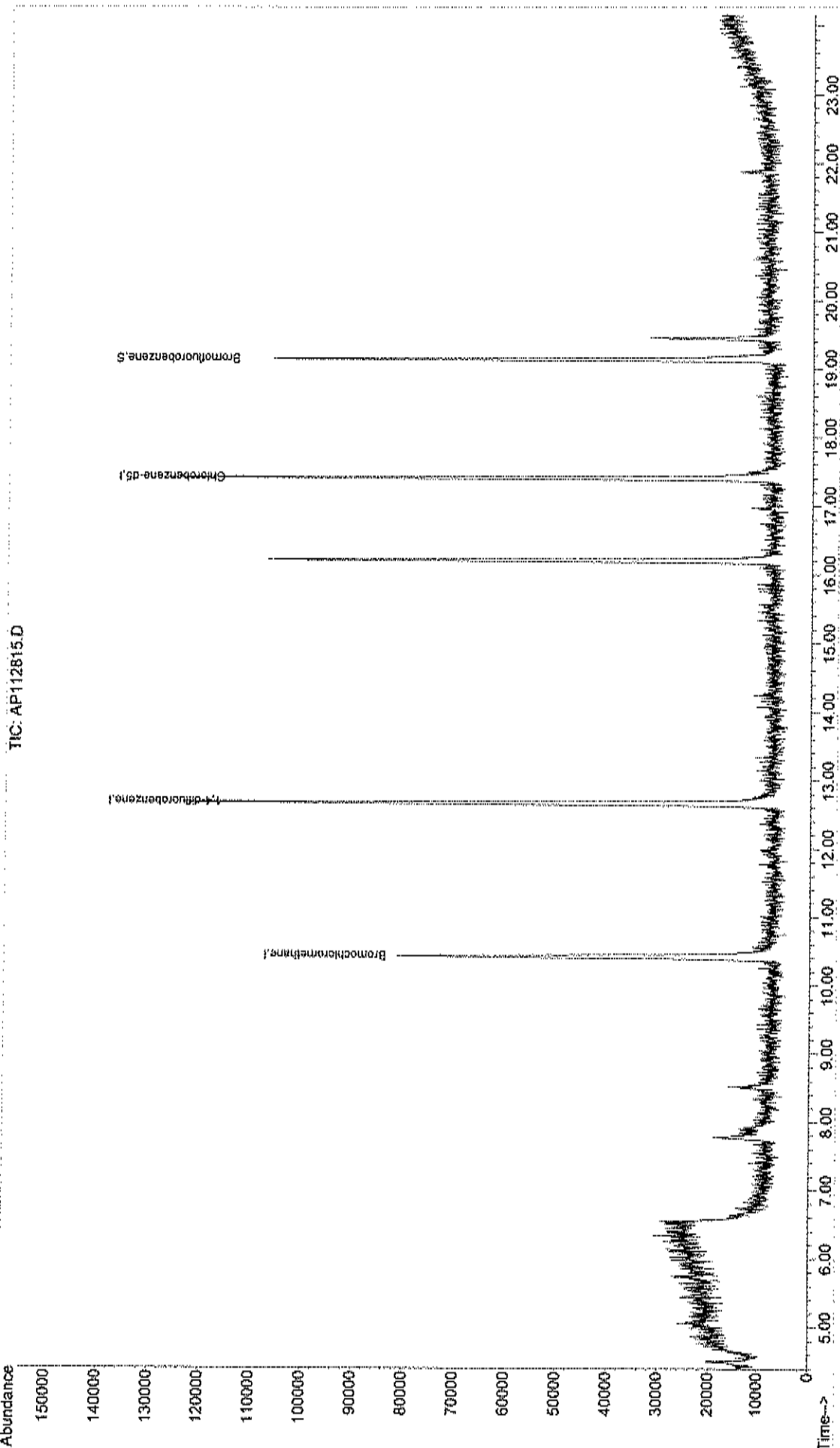
Quant Results File: AO05_1UG.RES

Method : C:\HPCHEM\1\METHODS\AO05_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Oct 31 09:54:53 2018

Response via : Initial Calibration



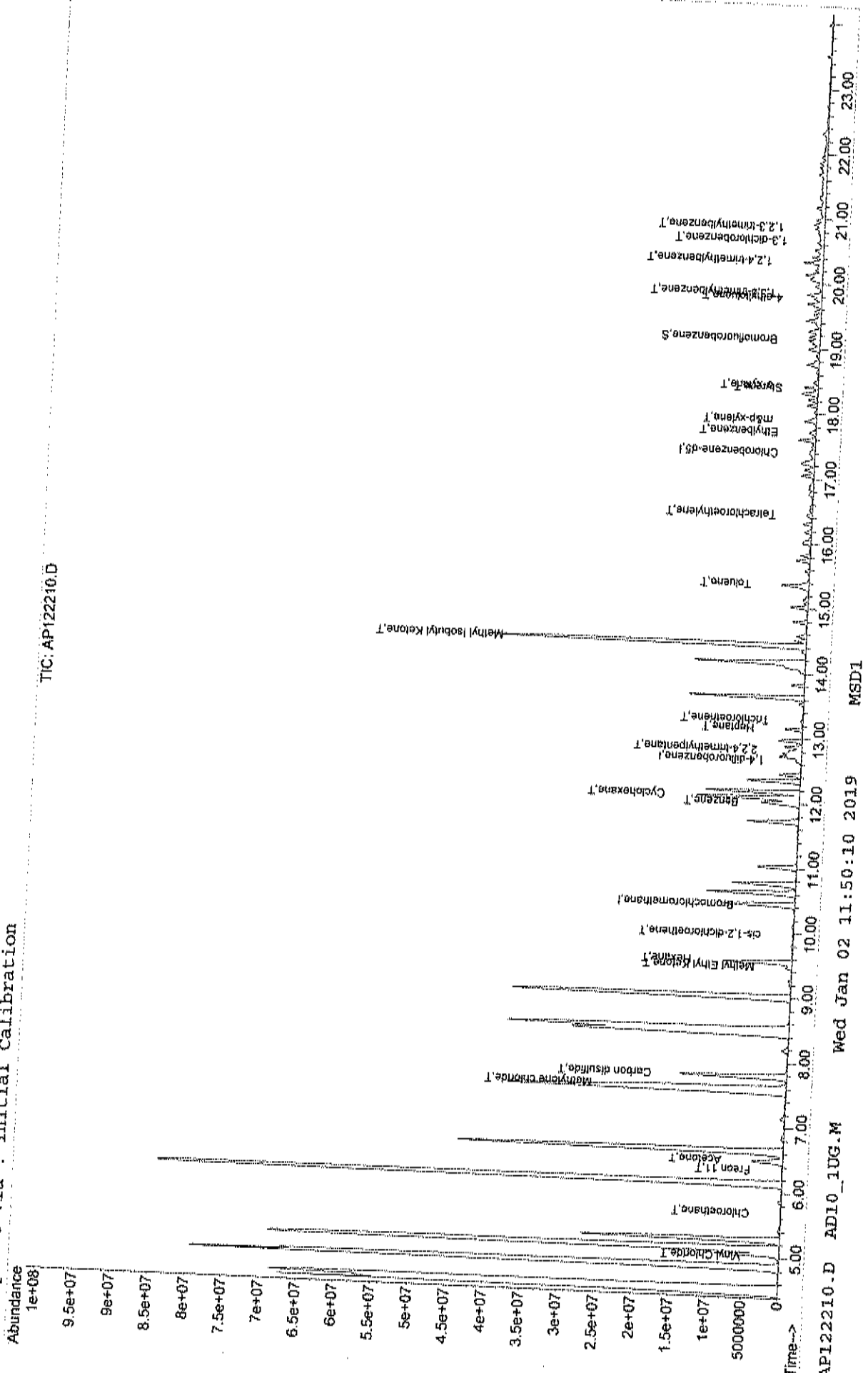
Quantitation Report (QT Reviewed)

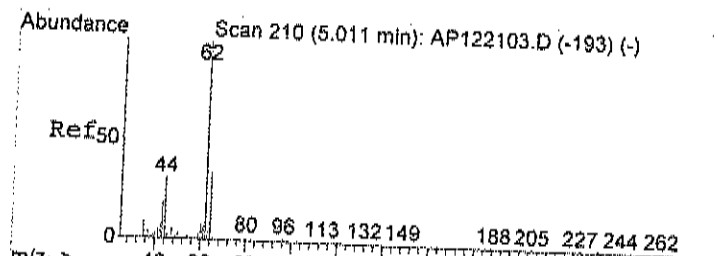
Data File : C:\HPCHEM\1\DATA\AP122210.D
Acq On : 22 Dec 2018 3:17 pm
Sample : C1812057-014A
Misc : AD10_IUG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:34 2018

Vial: 56
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_IUG.RES

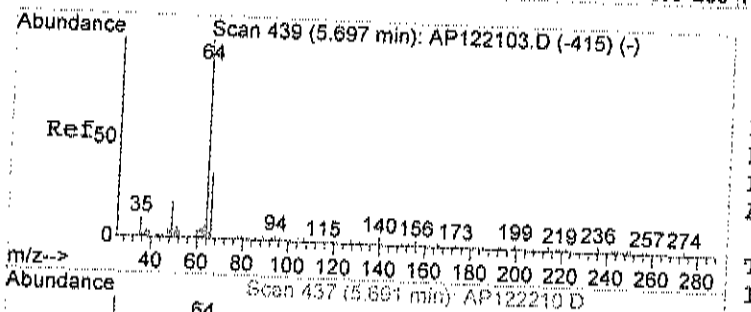
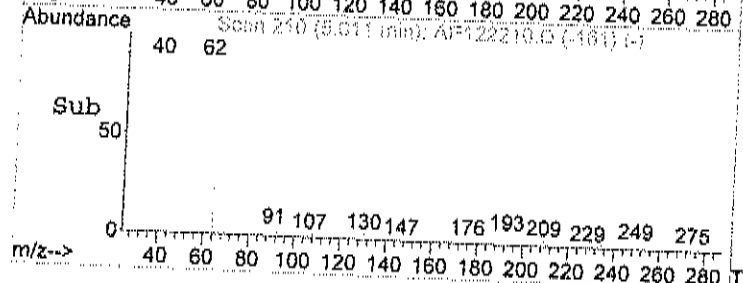
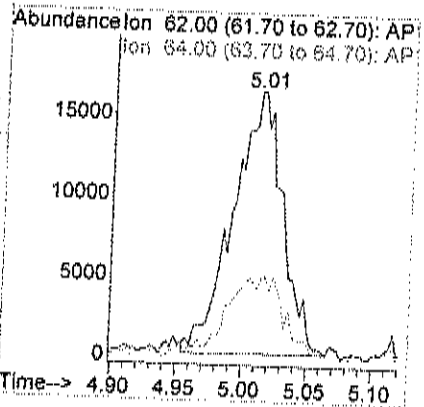
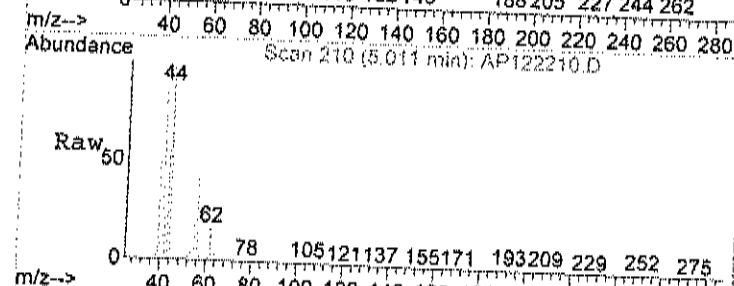
Method : C:\HPCHEM\1\METHODS\AD10_IUG.M (RTB Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





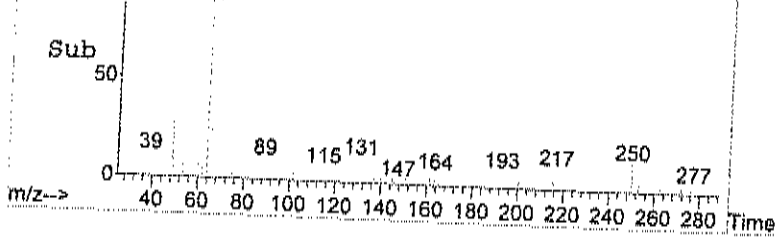
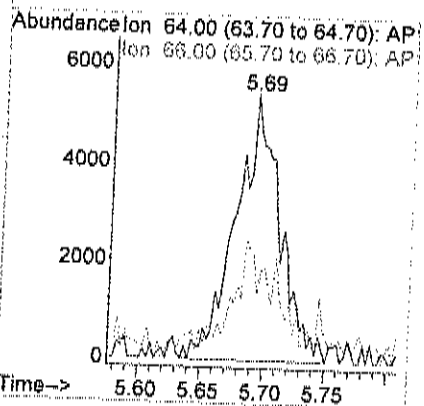
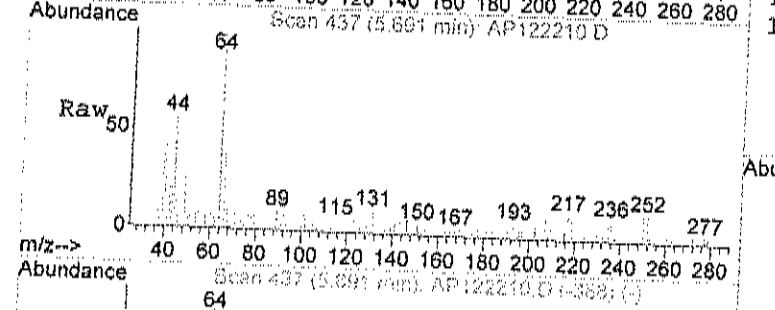
#6
 Vinyl Chloride
 Concen: 0.40 ppb
 RT: 5.01 min Scan# 210
 Delta R.T. -0.00 min
 Lab File: AP122210.D
 Acq: 22 Dec 2018 3:17 pm

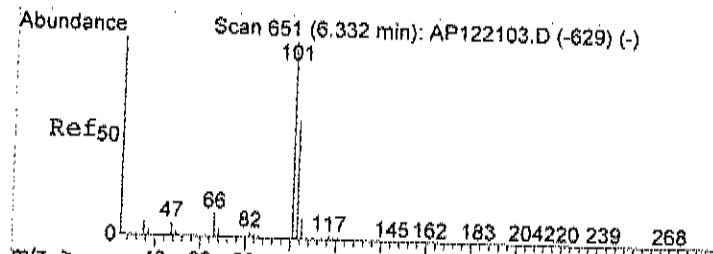
Tgt Ion: 62 Resp: 42846
 Ion Ratio Lower Upper
 62 100
 64 32.8 3.9 63.9



#10
 Chloroethane
 Concen: 0.32 ppb
 RT: 5.69 min Scan# 437
 Delta R.T. -0.00 min
 Lab File: AP122210.D
 Acq: 22 Dec 2018 3:17 pm

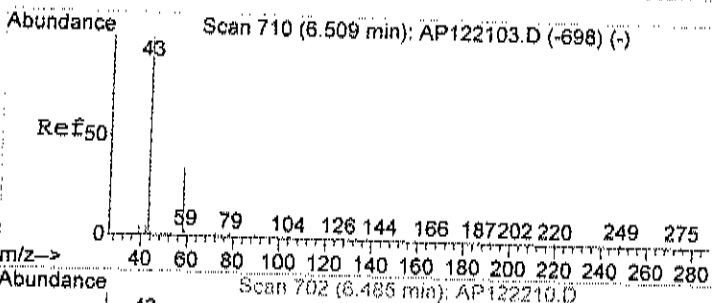
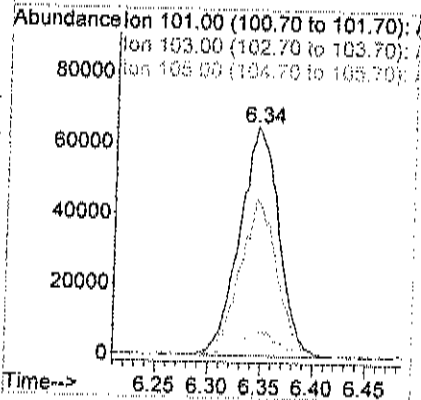
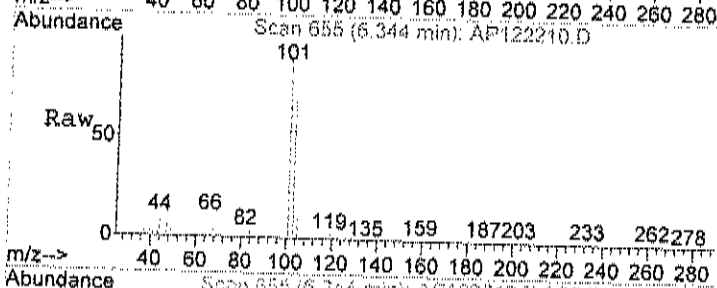
Tgt Ion: 64 Resp: 13253
 Ion Ratio Lower Upper
 64 100
 66 40.4 27.7 41.5





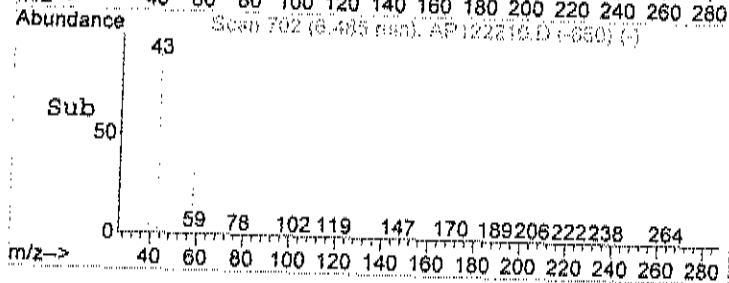
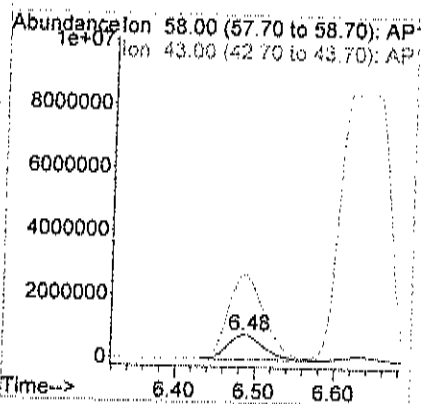
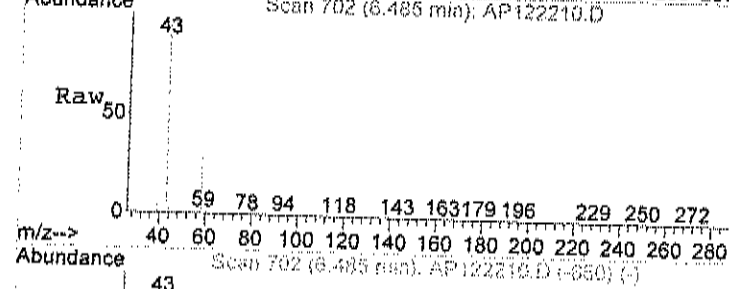
#14
 Freon 11
 Concen: 0.33 ppb
 RT: 6.34 min Scan# 655
 Delta R.T. 0.00 min
 Lab File: AP122210.D
 Acq: 22 Dec 2018 3:17 pm

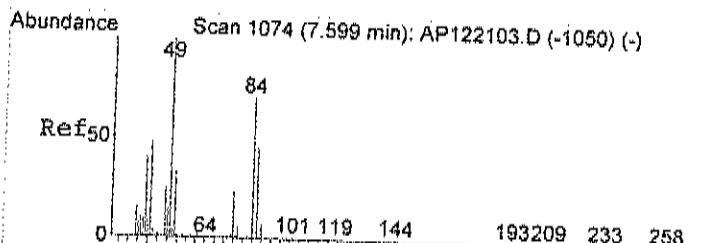
Tgt Ion	Ratio	Lower	Upper
101	100		
103	65.7	44.4	84.4
105	11.4	0.0	31.9



#15
 Acetone
 Concen: 63.59 ppb
 RT: 6.48 min Scan# 702
 Delta R.T. -0.02 min
 Lab File: AP122210.D
 Acq: 22 Dec 2018 3:17 pm

Tgt Ion	Ratio	Lower	Upper
58	100		
43	333.9	298.2	358.2

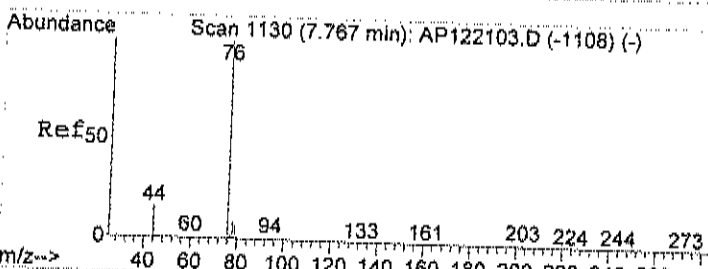
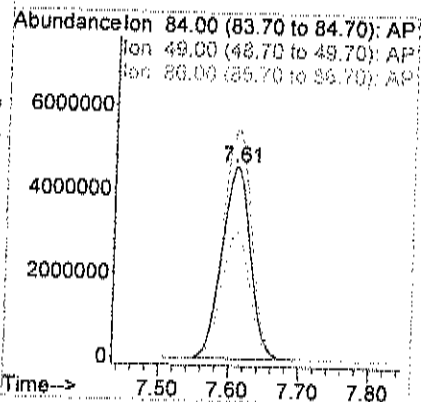
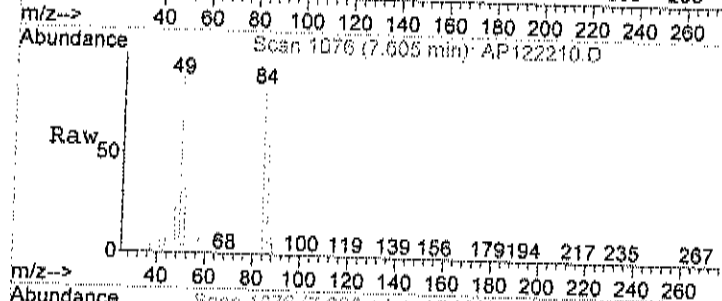




#21
Methylene chloride
Concen: 126.73 ppb
RT: 7.61 min Scan# 1076
Delta R.T. 0.01 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

Tgt Ion: 84 Resp:12977489

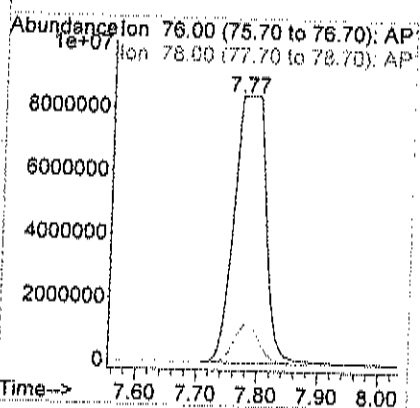
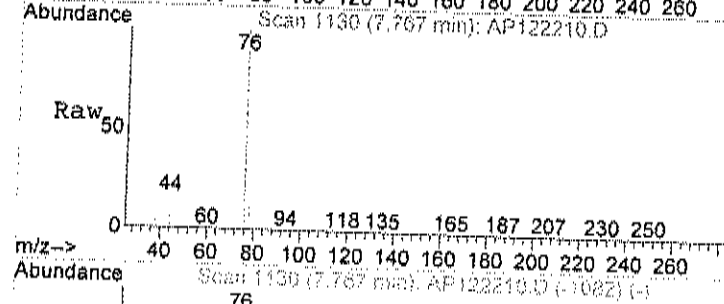
Ion	Ratio	Lower	Upper
84	100		
49	123.2	121.5	161.5
86	66.3	46.0	86.0

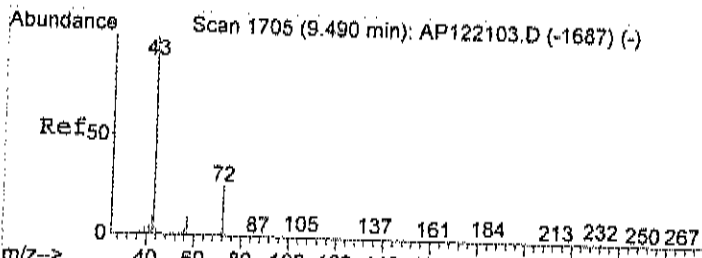


#23
Carbon disulfide
Concen: 135.52 ppb
RT: 7.77 min Scan# 1130
Delta R.T. -0.01 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

Tgt Ion: 76 Resp:30838179

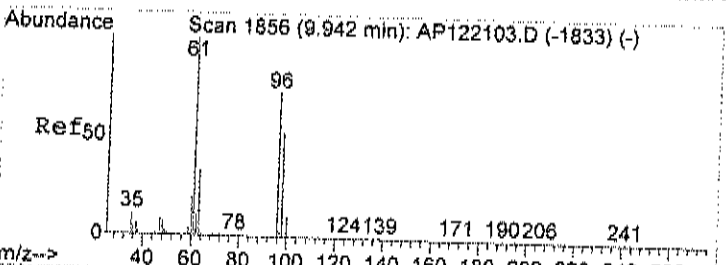
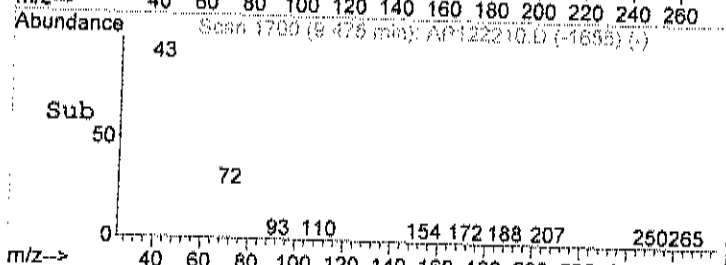
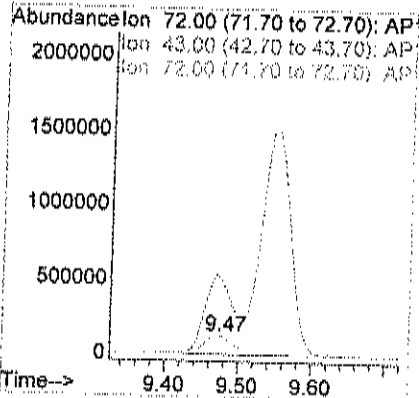
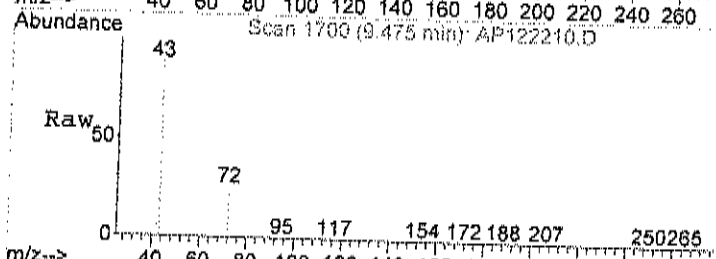
Ion	Ratio	Lower	Upper
76	100		
78	11.7	0.0	29.2





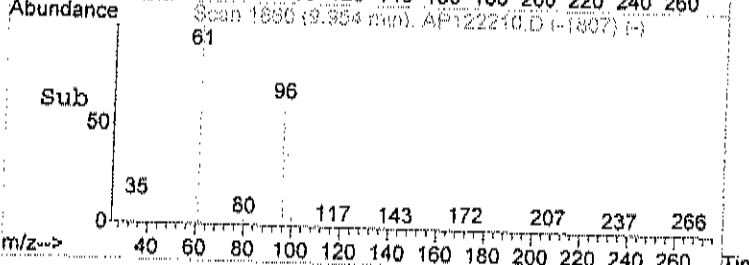
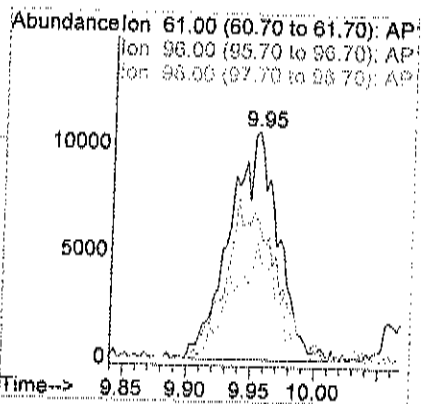
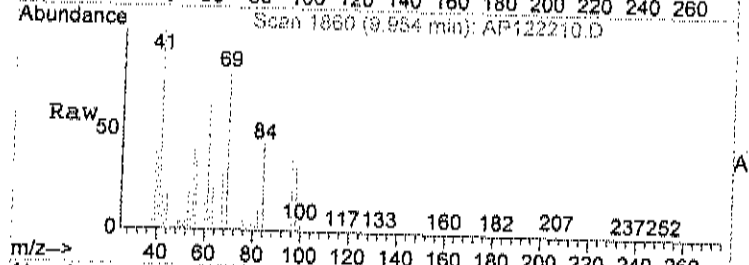
#28
Methyl Ethyl Ketone
Concen: 9.39 ppb
RT: 9.47 min Scan# 1700
Delta R.T. -0.02 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

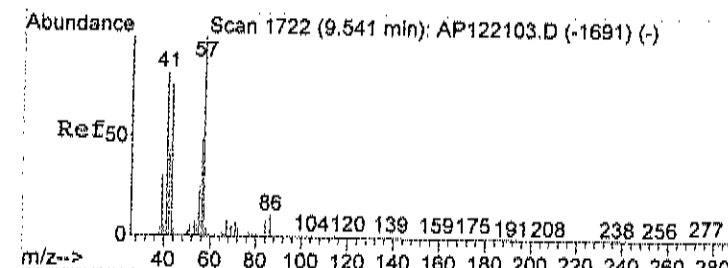
Tgt Ion: 72 Resp: 383836
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0



#29
cis-1,2-dichloroethene
Concen: 0.22 ppb
RT: 9.95 min Scan# 1860
Delta R.T. 0.01 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

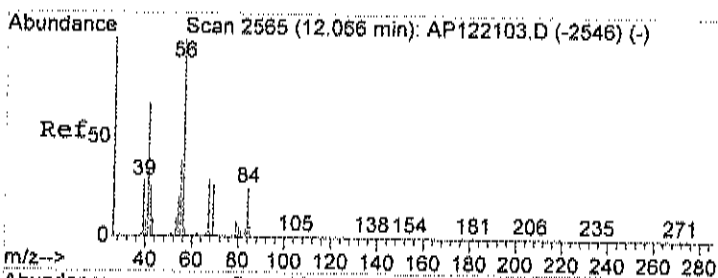
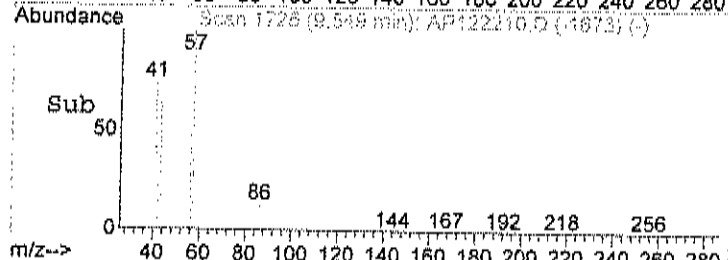
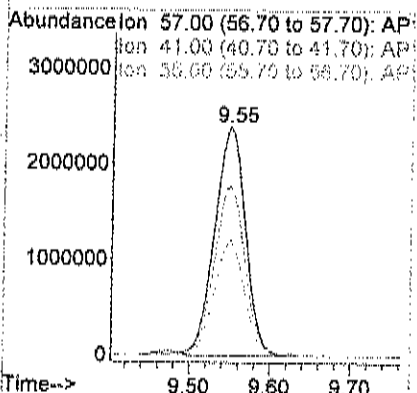
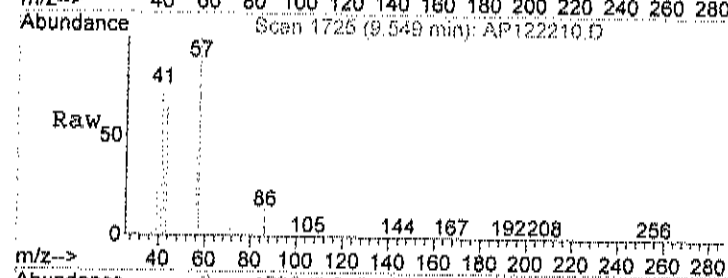
Tgt Ion: 61 Resp: 28213
Ion Ratio Lower Upper
61 100
96 0.0 51.7 91.7#
98 26.2 28.0 68.0#





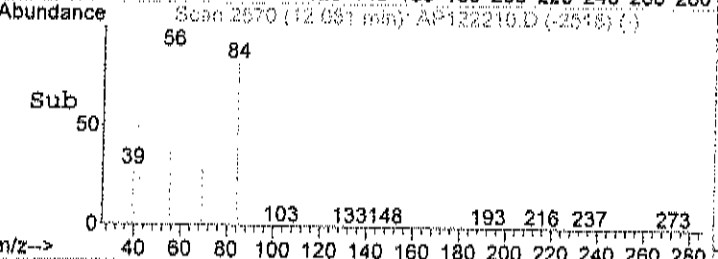
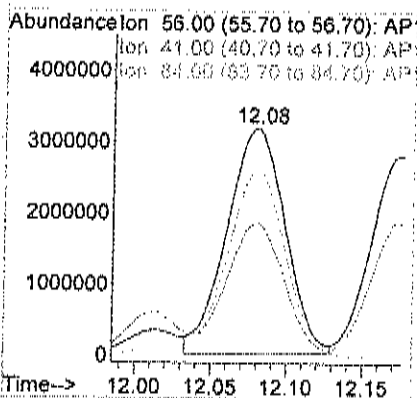
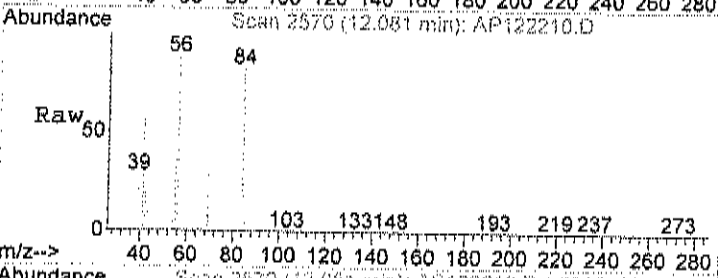
#30
Hexane
Concen: 49.75 ppb
RT: 9.55 min Scan# 1725
Delta R.T. 0.01 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

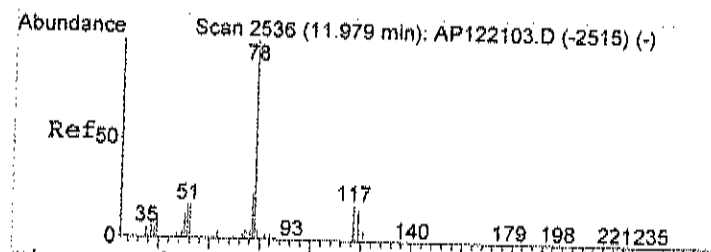
Tgt Ion: 57	Resp: 6377089		
Ion	Ratio	Lower	Upper
57	100		
41	75.4	49.7	89.7
56	50.0	27.9	67.9



#37
Cyclohexane
Concen: 57.49 ppb
RT: 12.08 min Scan# 2570
Delta R.T. 0.01 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

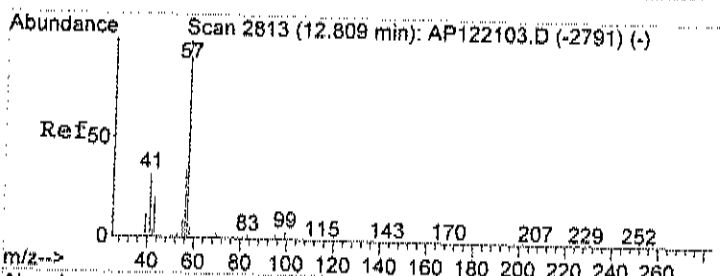
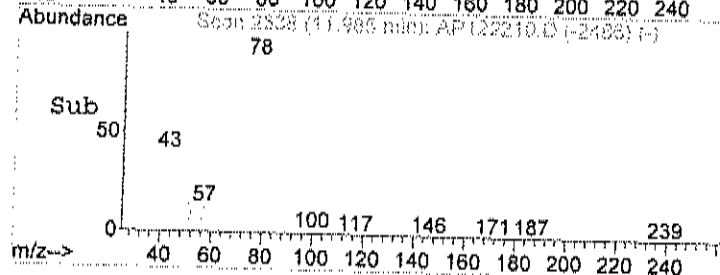
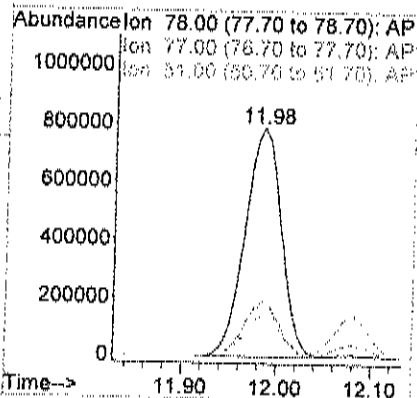
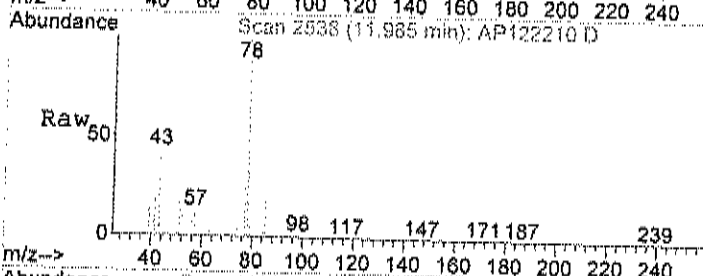
Tgt Ion: 56	Resp: 8460154
Ion Ratio	Lower Upper
56 100	
41 57.4	36.3 76.3
84 82.5	56.0 96.0





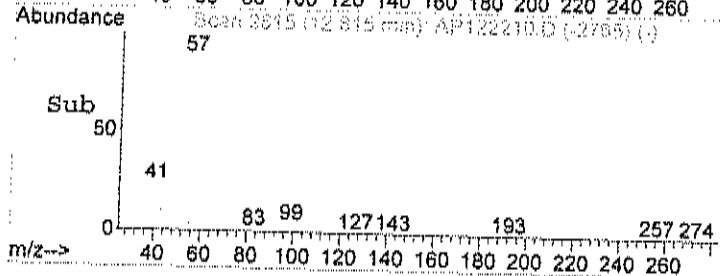
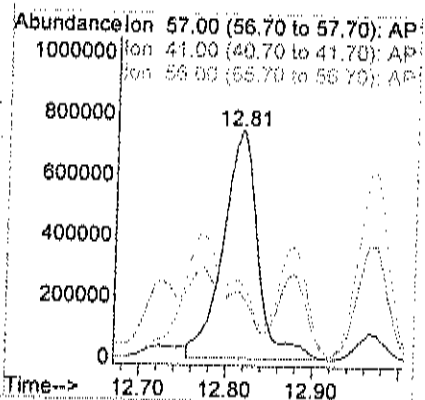
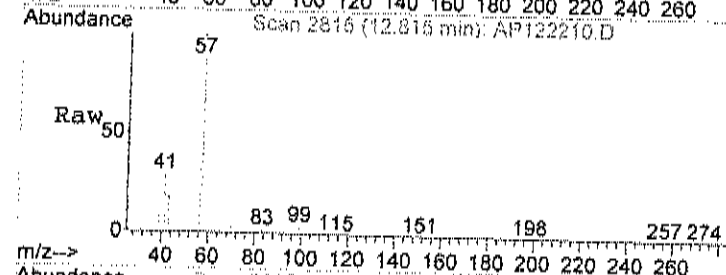
#39
Benzene
Concen: 5.93 ppb
RT: 11.98 min Scan# 2538
Delta R.T. 0.01 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

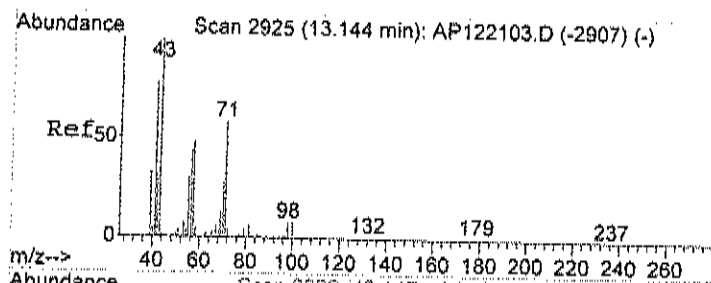
Tgt Ion: 78 Resp: 2099849
Ion Ratio Lower Upper
78 100
77 23.7 3.1 43.1
51 19.2 0.0 36.7



#42
2,2,4-trimethylpentane
Concen: 4.16 ppb
RT: 12.81 min Scan# 2815
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

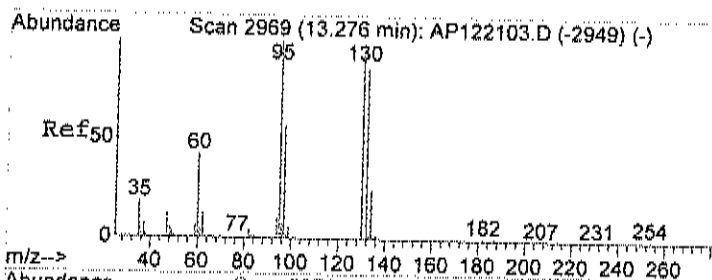
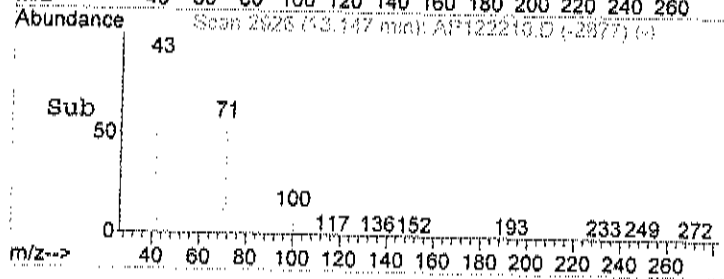
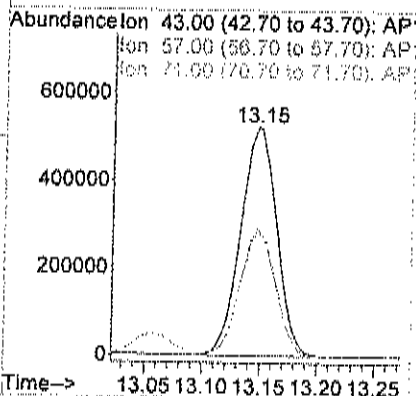
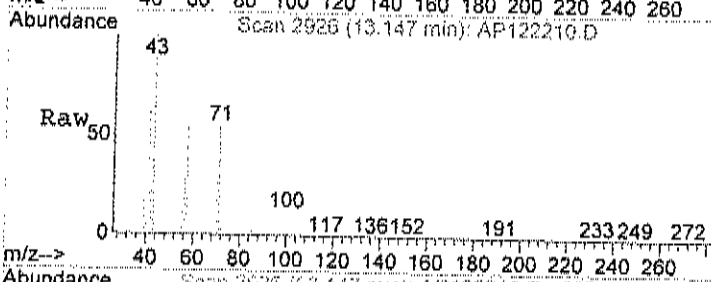
Tgt Ion: 57 Resp: 2097690
Ion Ratio Lower Upper
57 100
41 0.0 6.9 46.9#
56 0.0 11.5 51.5#





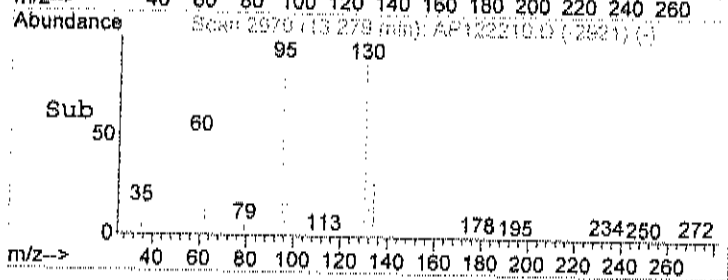
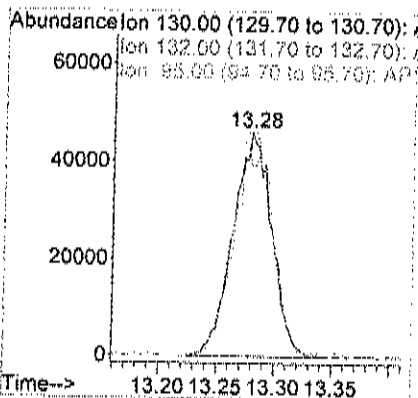
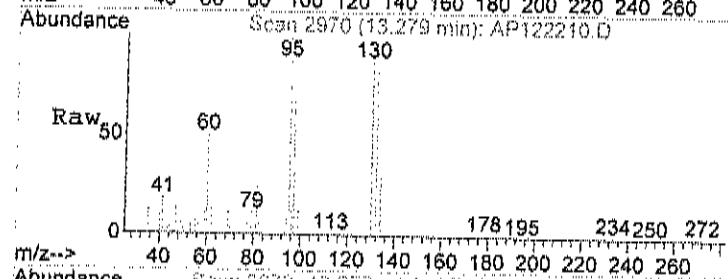
#43
Heptane
Concen: 6.49 ppb
RT: 13.15 min Scan# 2926
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

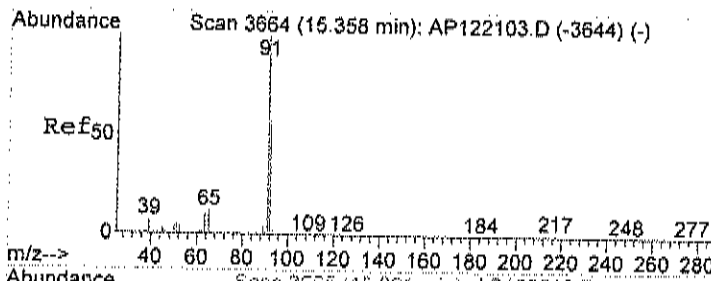
Tgt Ion: 43 Resp: 1139808
Ion Ratio Lower Upper
43 100
57 54.4 32.7 72.7
71 55.7 35.6 75.6



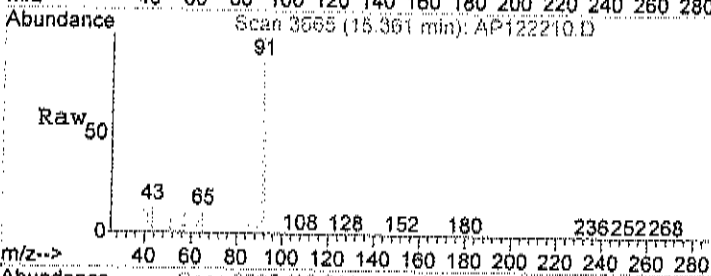
#44
Trichloroethene
Concen: 0.63 ppb
RT: 13.28 min Scan# 2970
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

Tgt Ion: 130 Resp: 108184
Ion Ratio Lower Upper
130 100
132 93.4 77.2 117.2
95 107.6 84.8 124.8

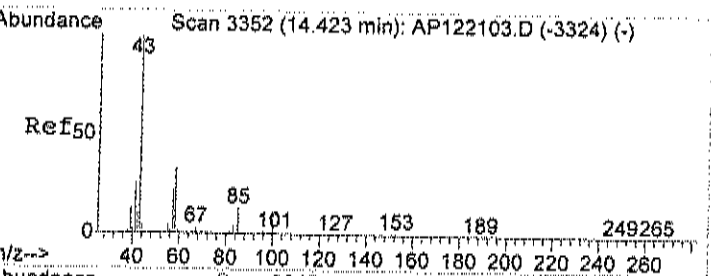
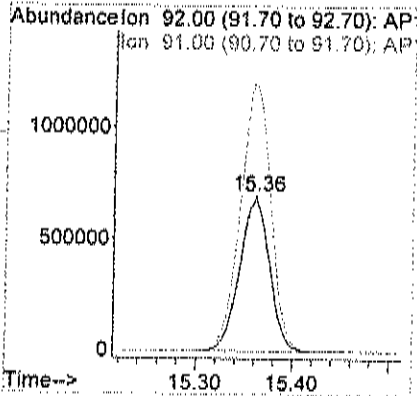
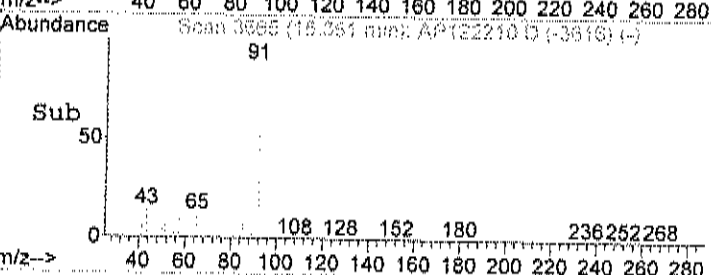




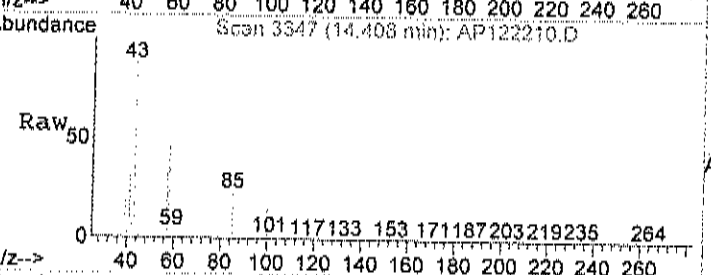
#51
Toluene
Concen: 5.95 ppb
RT: 15.36 min Scan# 3665
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm



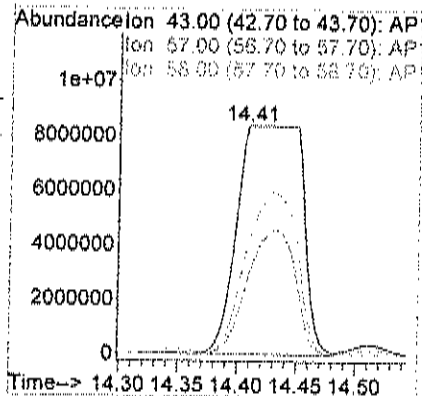
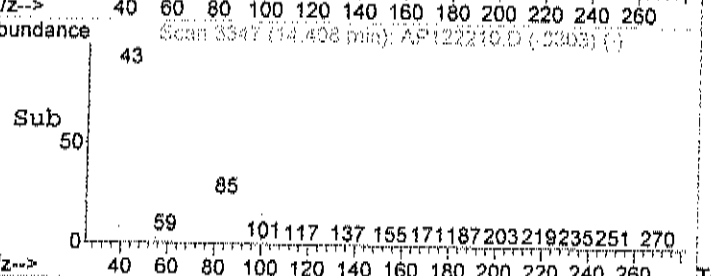
Tgt Ion: 92 Resp: 1479010
Ion Ratio Lower Upper
92 100
91 177.6 154.3 194.3

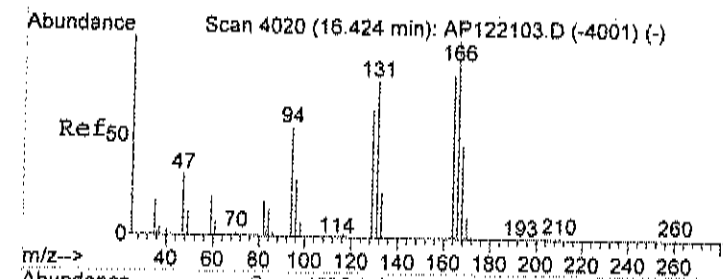


#52
Methyl Isobutyl Ketone
Concen: 114.10 ppb
RT: 14.41 min Scan# 3347
Delta R.T. -0.02 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm



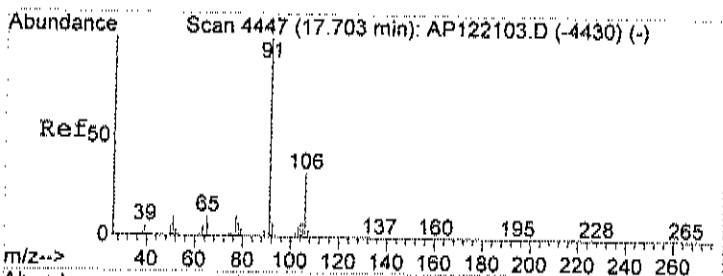
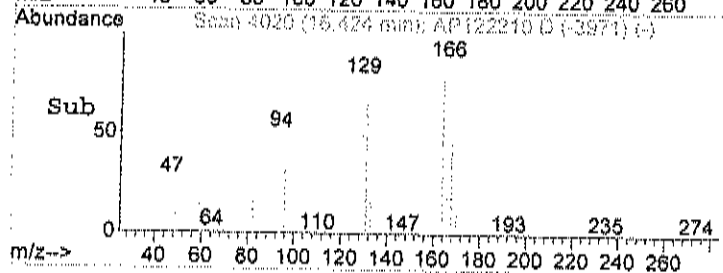
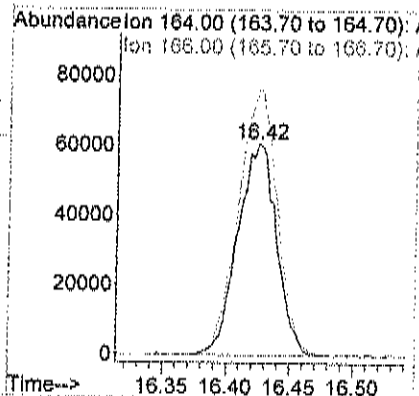
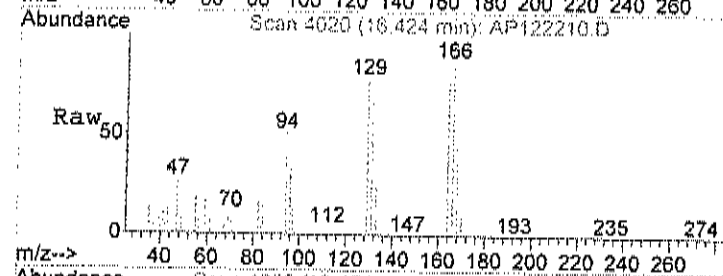
Tgt Ion: 43 Resp: 31607833
Ion Ratio Lower Upper
43 100
57 40.5 3.5 43.5
58 56.4 17.9 57.9





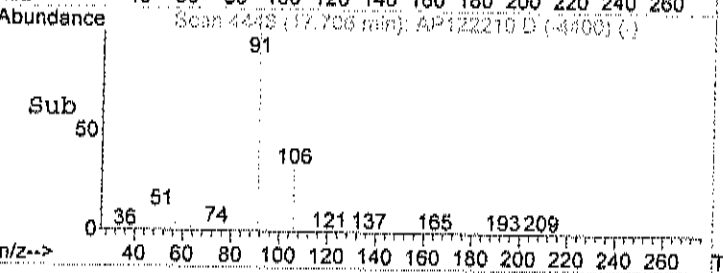
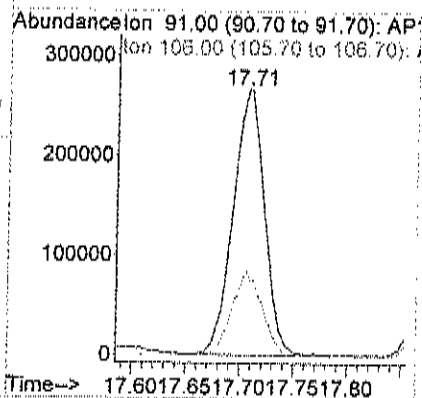
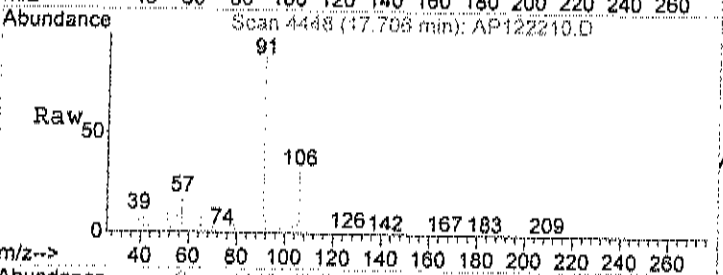
#56
Tetrachloroethylene
Concen: 0.64 ppb
RT: 16.42 min Scan# 4020
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

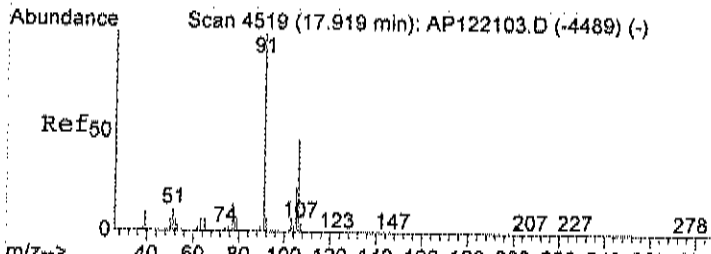
Tgt Ion: 164 Resp: 129518
Ion Ratio Lower Upper
164 100
166 125.7 108.5 148.5



#58
Ethylbenzene
Concen: 1.05 ppb
RT: 17.71 min Scan# 4448
Delta R.T. -0.01 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

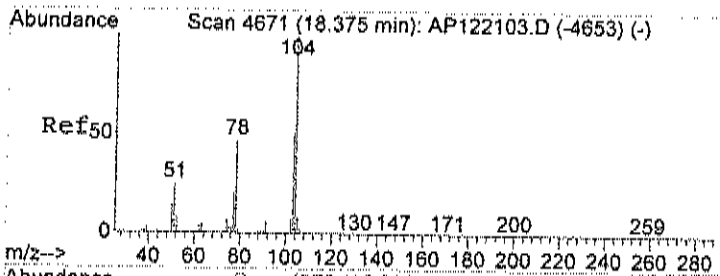
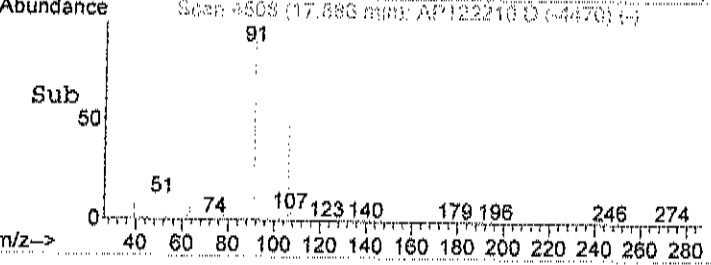
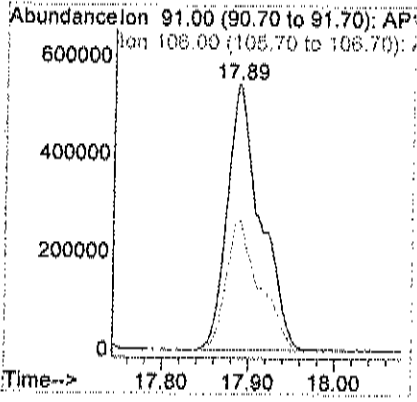
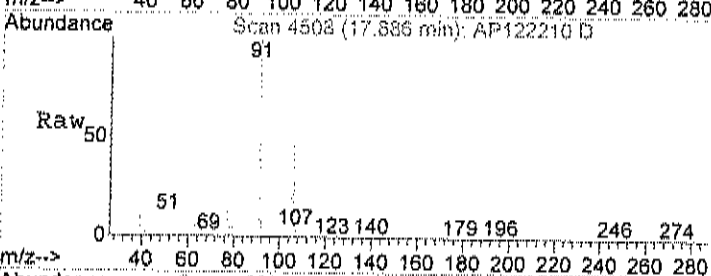
Tgt Ion: 91 Resp: 538873
Ion Ratio Lower Upper
91 100
106 30.8 11.4 51.4





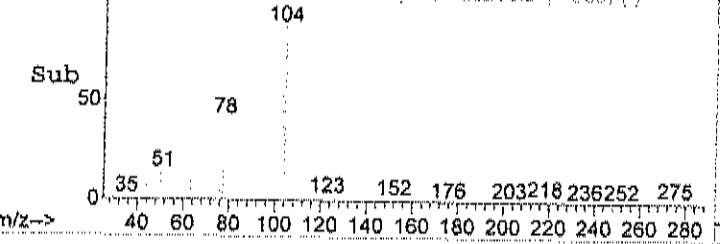
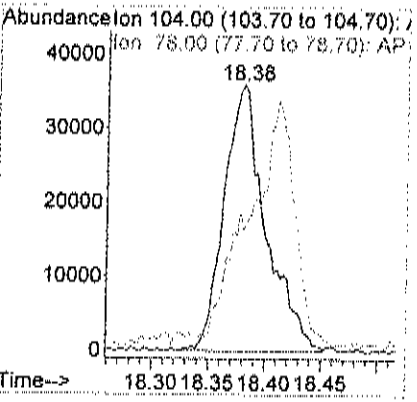
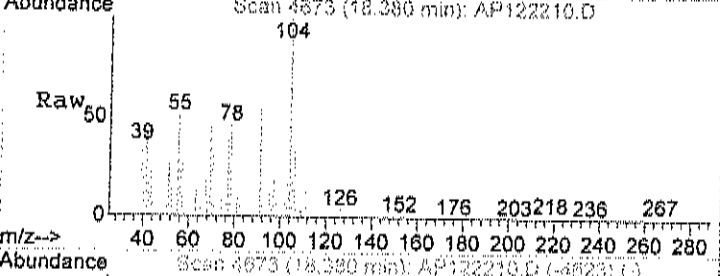
#59
 m&p-xylene
 Concen: 3.38 ppb
 RT: 17.89 min Scan# 4508
 Delta R.T. -0.04 min
 Lab File: AP122210.D
 Acq: 22 Dec 2018 3:17 pm

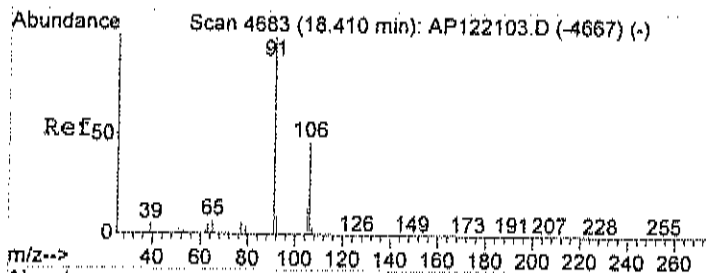
Tgt Ion: 91 Resp: 1470968
 Ion Ratio Lower Upper
 91 100
 106 49.2 28.3 68.3



#61
 Styrene
 Concen: 0.25 ppb
 RT: 18.38 min Scan# 4673
 Delta R.T. -0.00 min
 Lab File: AP122210.D
 Acq: 22 Dec 2018 3:17 pm

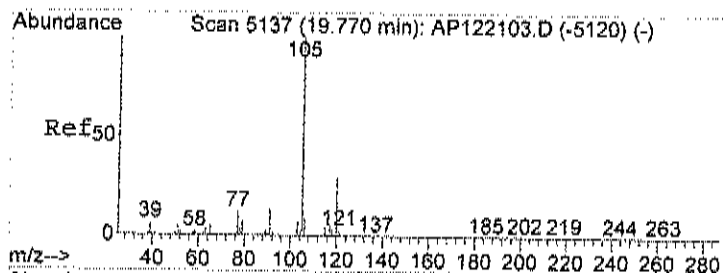
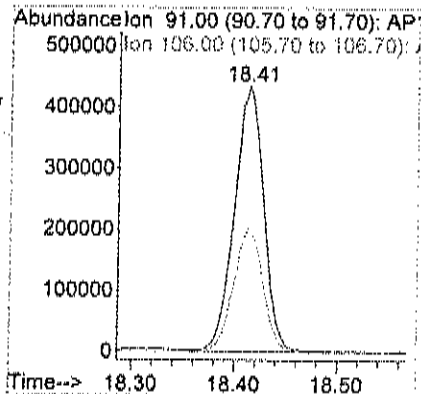
Tgt Ion: 104 Resp: 92682
 Ion Ratio Lower Upper
 104 100
 78 56.8 35.3 75.3





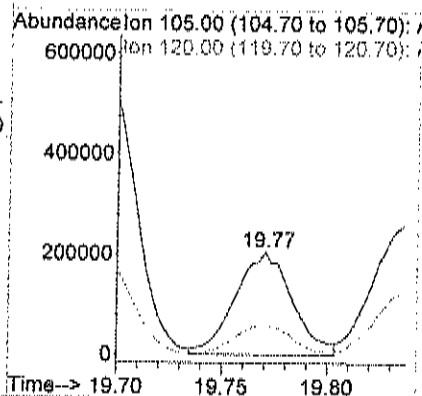
#63
o-xylene
Concen: 1.57 ppb
RT: 18.41 min Scan# 4684
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

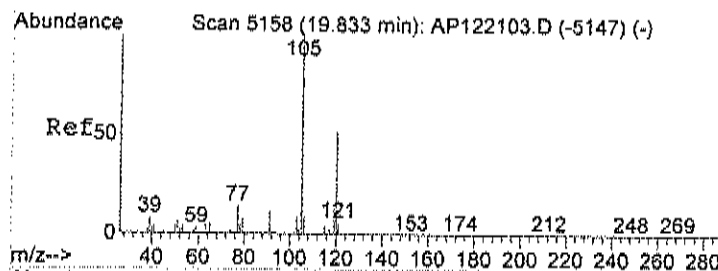
Tgt Ion: 91 Resp: 860409
Ion Ratio Lower Upper
91 100
106 47.0 26.6 66.6



#69
4-ethyltoluene
Concen: 0.58 ppb
RT: 19.77 min Scan# 5137
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

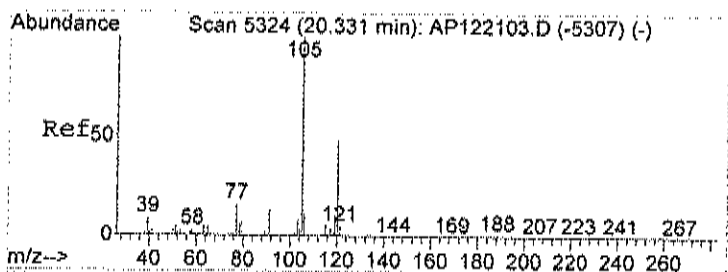
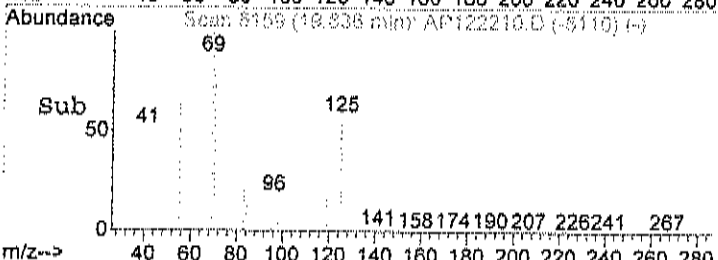
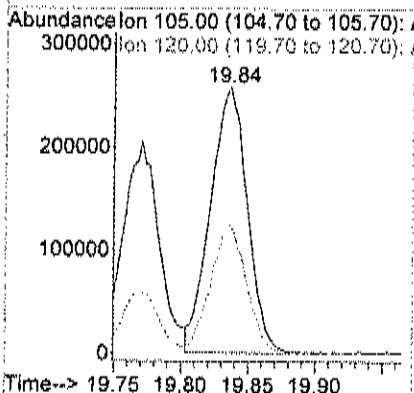
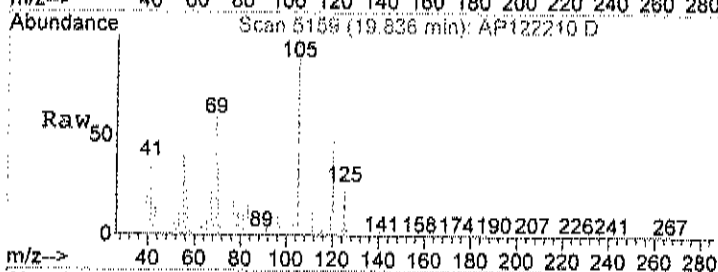
Tgt Ion: 105 Resp: 385179
Ion Ratio Lower Upper
105 100
120 29.8 10.2 50.2





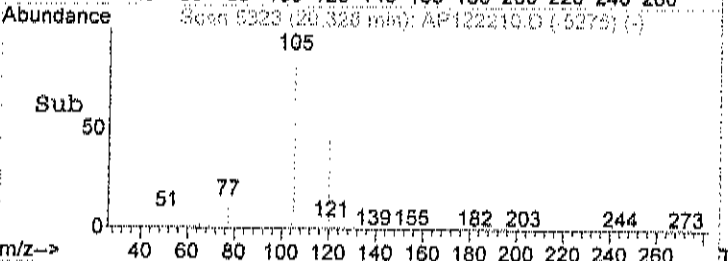
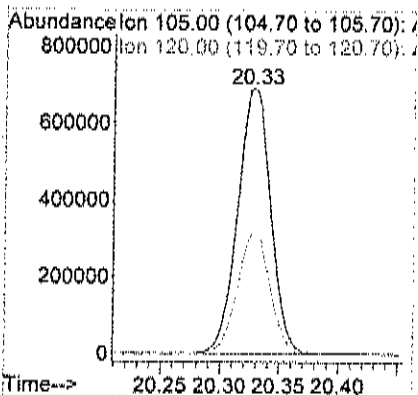
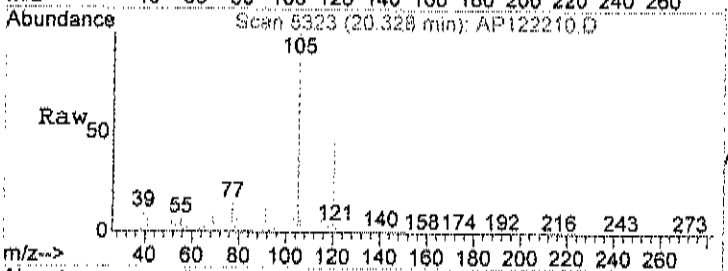
#70
 1,3,5-trimethylbenzene
 Concen: 0.84 ppb
 RT: 19.84 min Scan# 5159
 Delta R.T. -0.00 min
 Lab File: AP122210.D
 Acq: 22 Dec 2018 3:17 pm

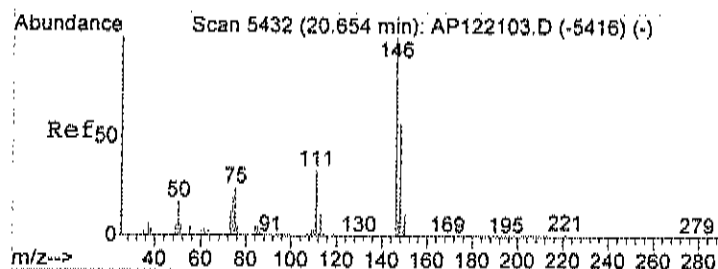
Tgt Ion:105 Resp: 492702
 Ion Ratio Lower Upper
 105 100
 120 47.2 27.6 67.6



#71
 1,2,4-trimethylbenzene
 Concen: 2.97 ppb
 RT: 20.33 min Scan# 5323
 Delta R.T. -0.01 min
 Lab File: AP122210.D
 Acq: 22 Dec 2018 3:17 pm

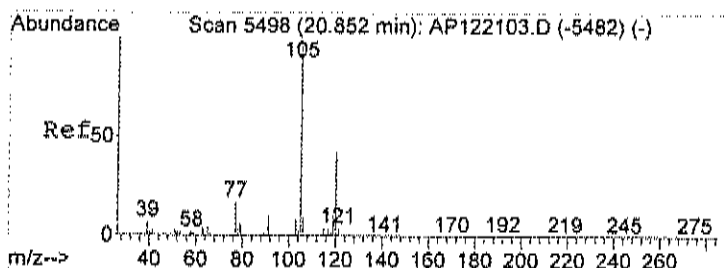
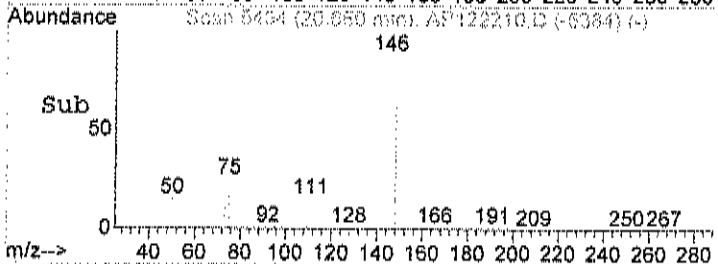
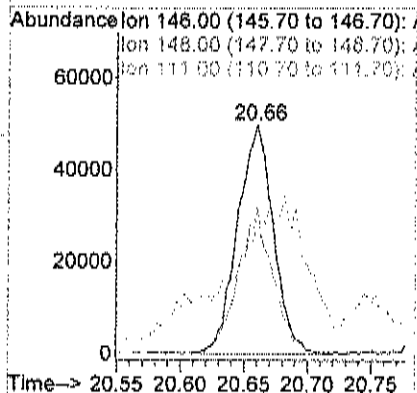
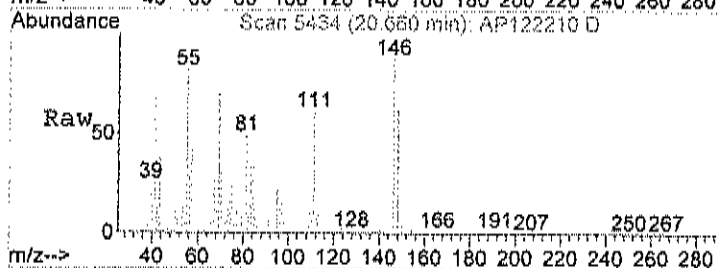
Tgt Ion:105 Resp: 1338194
 Ion Ratio Lower Upper
 105 100
 120 45.6 25.3 65.3





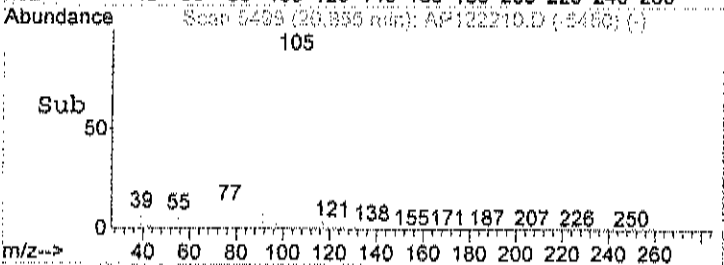
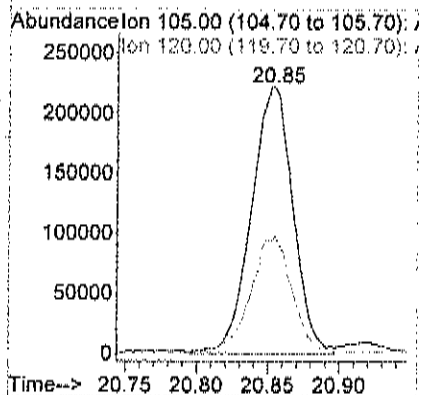
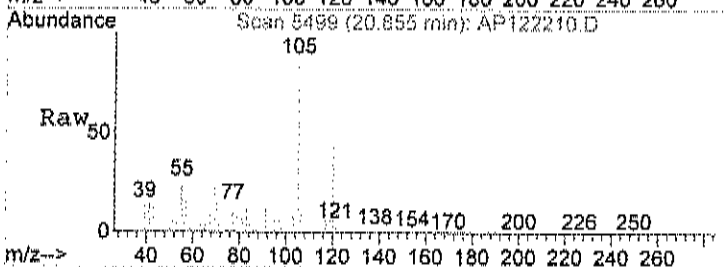
#72
1,3-dichlorobenzene
Concen: 0.23 ppb
RT: 20.66 min Scan# 5434
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

Tgt Ion:146 Resp: 97636
Ion Ratio Lower Upper
146 100
148 60.7 43.6 83.6
111 103.4 19.9 59.9#



#75
1,2,3-trimethylbenzene
Concen: 0.87 ppb
RT: 20.85 min Scan# 5499
Delta R.T. -0.00 min
Lab File: AP122210.D
Acq: 22 Dec 2018 3:17 pm

Tgt Ion:105 Resp: 449729
Ion Ratio Lower Upper
105 100
120 44.1 31.6 52.8



Data File : C:\HPCHEM\1\DATA\AP122316.D

Acq On : 23 Dec 2018 8:18 pm

Sample : C1812057-014A 9x

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:35 2018

Vial: 16

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	43167	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.65	114	193152	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	197456	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	110729	0.82	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	82.00%

Target Compounds

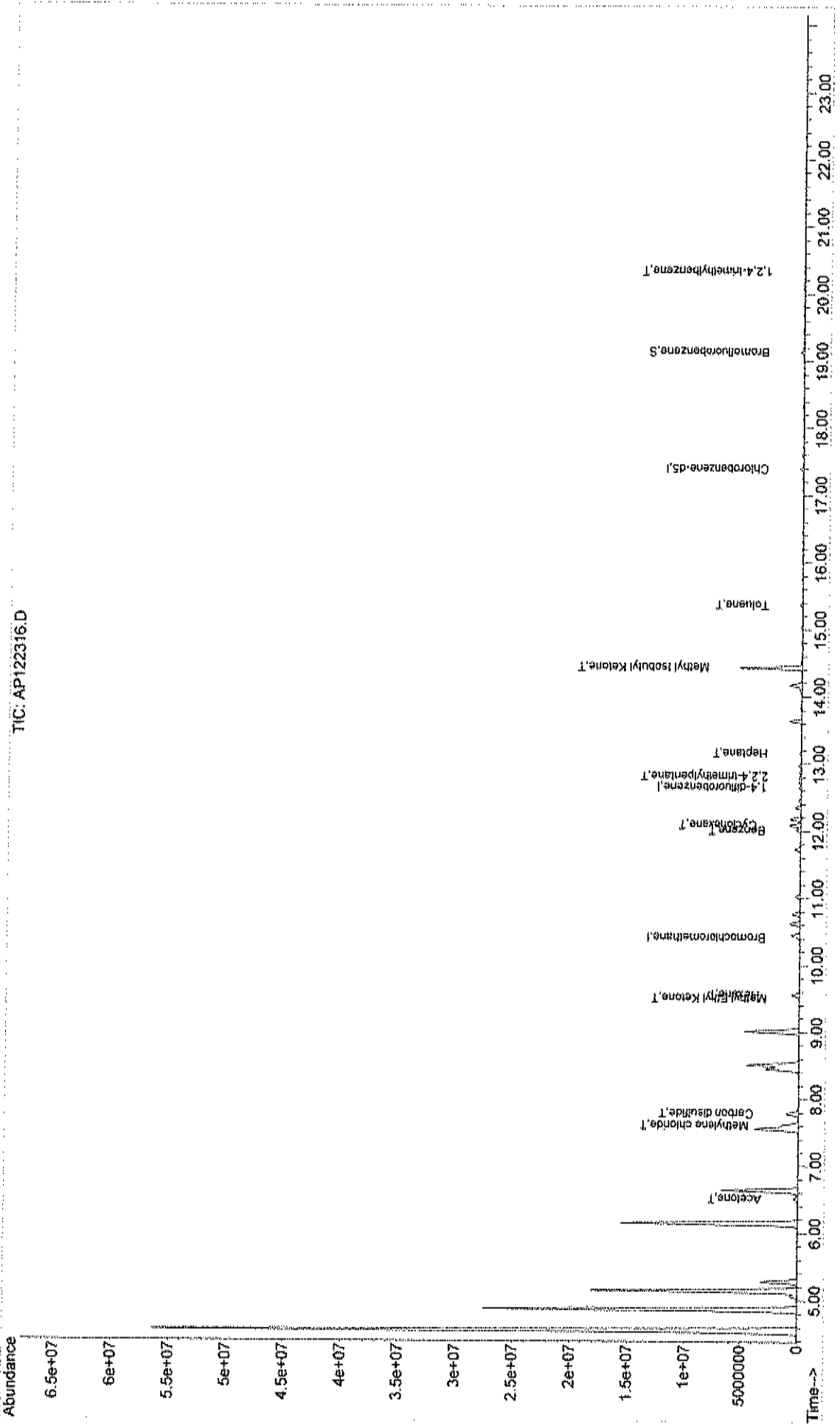
						Qvalue
15) Acetone	6.51	58	178767m	6.75	ppb	
21) Methylene chloride	7.61	84	925736	13.59	ppb	96
23) Carbon disulfide	7.79	76	2507314	16.57	ppb	99
28) Methyl Ethyl Ketone	9.50	72	19894	0.73	ppb	# 100
30) Hexane	9.56	57	393726	4.62	ppb	87
37) Cyclohexane	12.09	56	529822	5.80	ppb	91
39) Benzene	12.00	78	133492	0.61	ppb	90
42) 2,2,4-trimethylpentane	12.82	57	124361	0.40	ppb	# 45
43) Heptane	13.16	43	57963	0.53	ppb	94
51) Toluene	15.37	92	87398	0.57	ppb	99
52) Methyl Isobutyl Ketone	14.43	43	4636294	27.19	ppb	99
71) 1,2,4-trimethylbenzene	20.34	105	56266	0.20	ppb	97

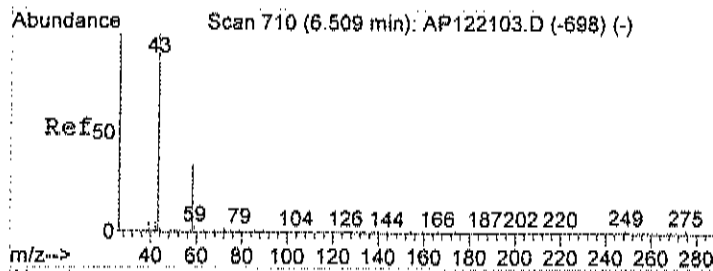
Data File : C:\HPCHEM\1\DATA\AP122316.D
 Acq On : 23 Dec 2018 8:18 pm
 Sample : C1812057-014A 9x
 Misc : AD10 1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 31 8:36 2018

Vial: 16
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

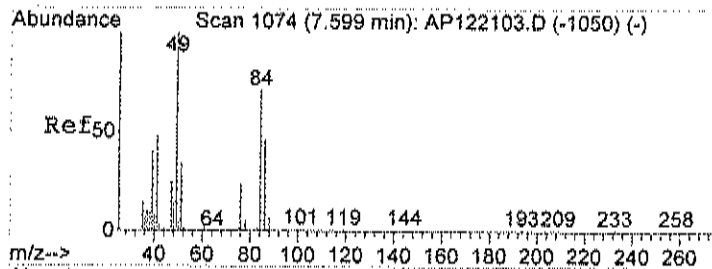
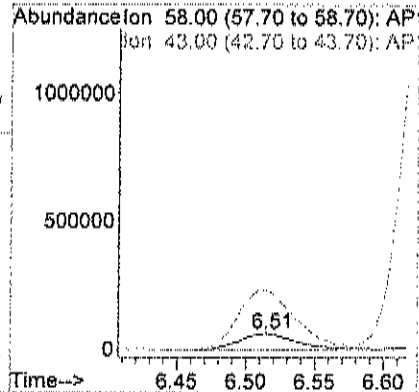
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





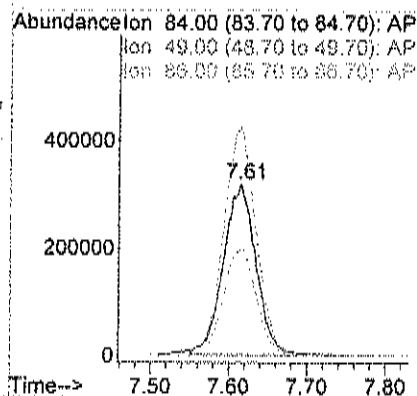
#15
Acetone
Concen: 6.75 ppb m
RT: 6.51 min Scan# 712
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

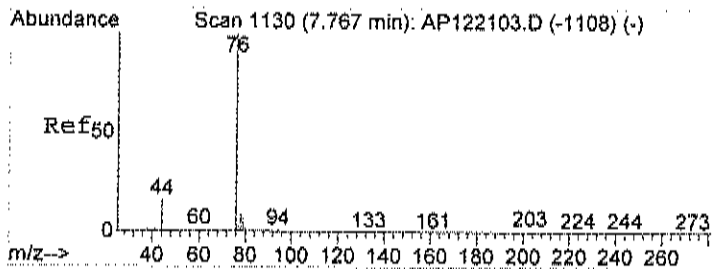
Tgt Ion: 58 Resp: 178767
Ion Ratio Lower Upper
58 100
43 382.1 298.2 358.2#



#21
Methylene chloride
Concen: 13.59 ppb
RT: 7.61 min Scan# 1079
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

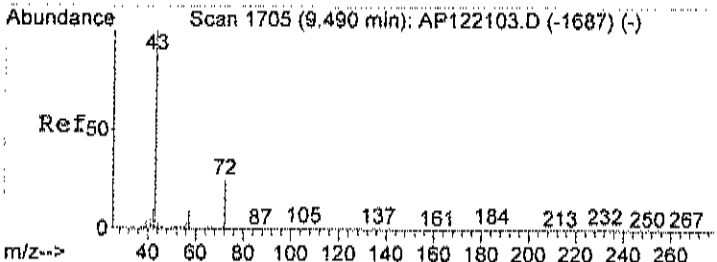
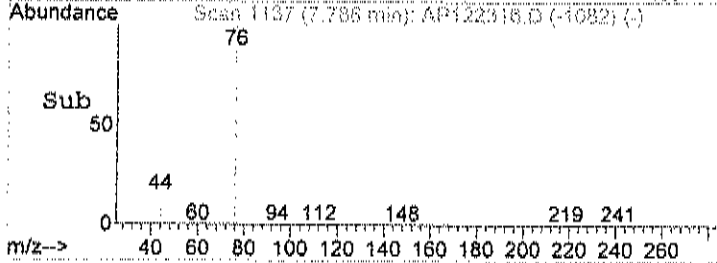
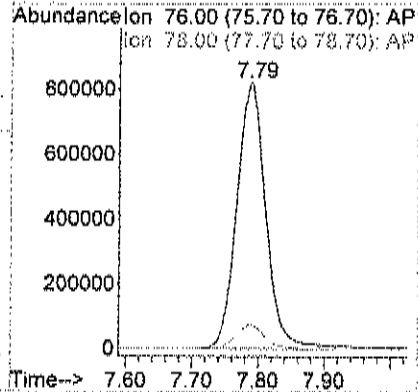
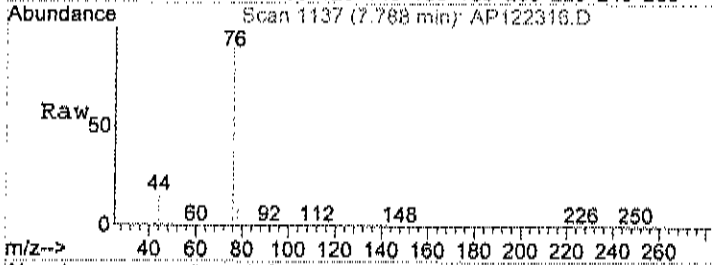
Tgt Ion: 84 Resp: 925736
Ion Ratio Lower Upper
84 100
49 135.3 121.5 161.5
86 64.2 46.0 86.0





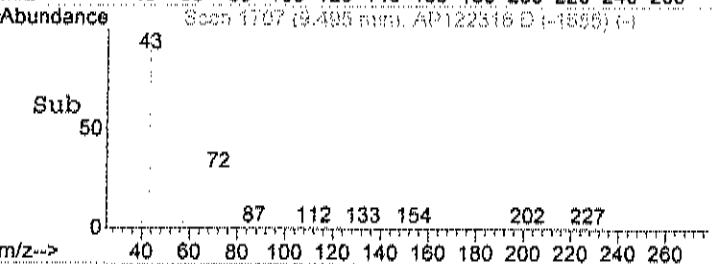
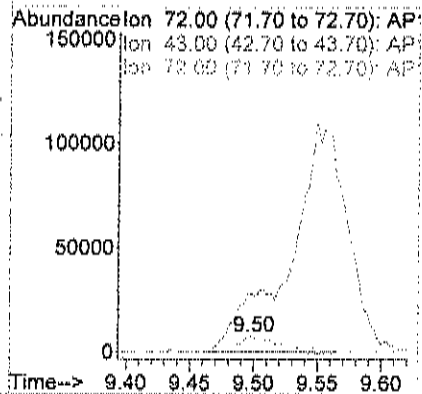
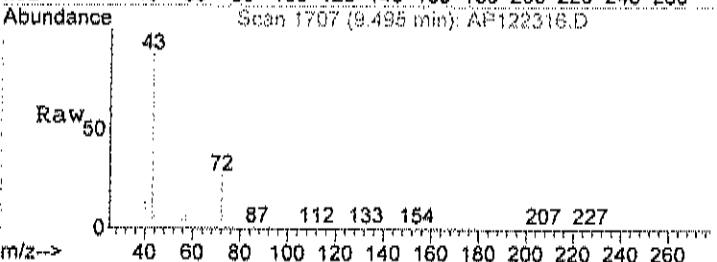
#23
Carbon disulfide
Concen: 16.57 ppb
RT: 7.79 min Scan# 1137
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

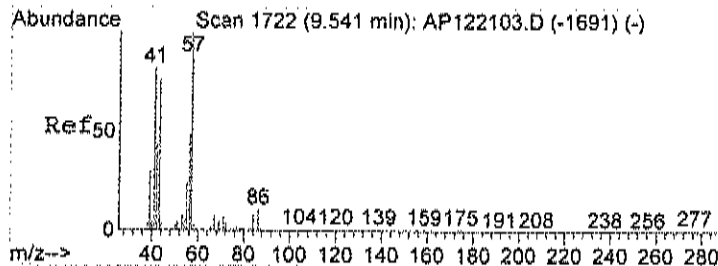
Tgt Ion: 76 Resp: 2507314
Ion Ratio Lower Upper
76 100
78 9.0 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 0.73 ppb
RT: 9.50 min Scan# 1707
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

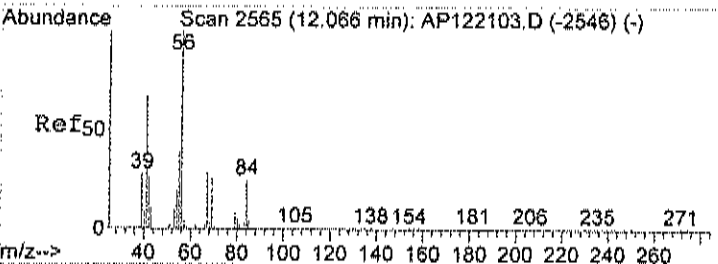
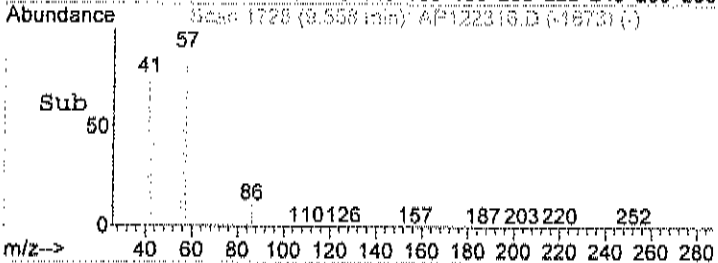
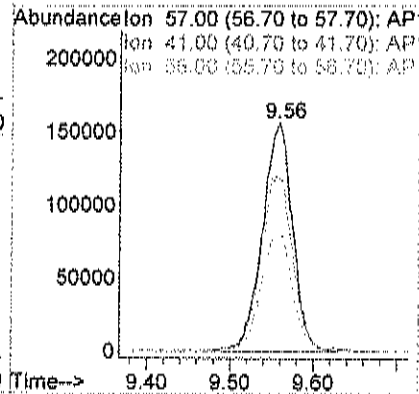
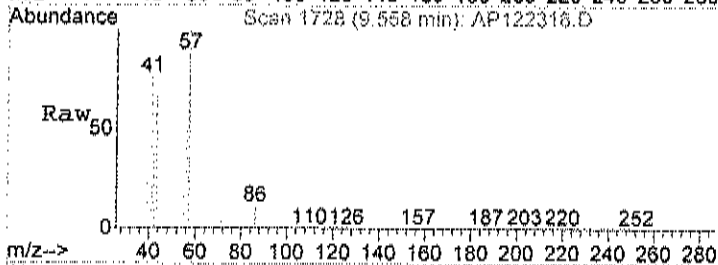
Tgt Ion: 72 Resp: 19894
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0





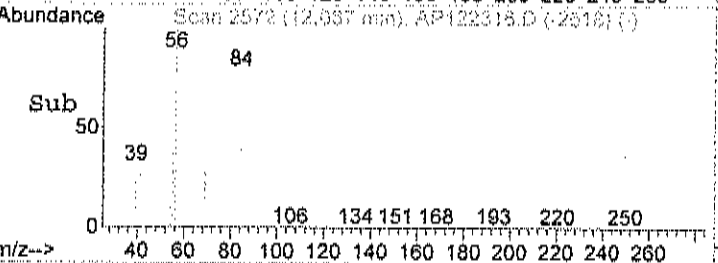
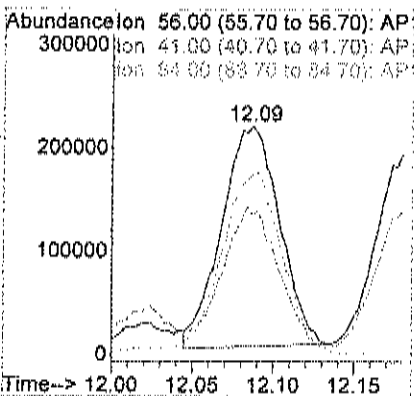
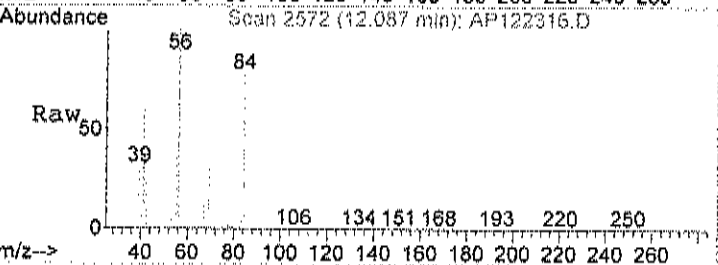
#30
Hexane
Concen: 4.62 ppb
RT: 9.56 min Scan# 1728
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

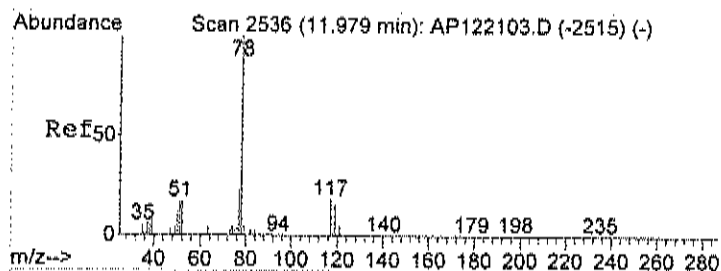
Tgt Ion	Ratio	Lower	Upper
57	100		
41	83.1	49.7	89.7
56	54.2	27.9	67.9



#37
Cyclohexane
Concen: 5.80 ppb
RT: 12.09 min Scan# 2572
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

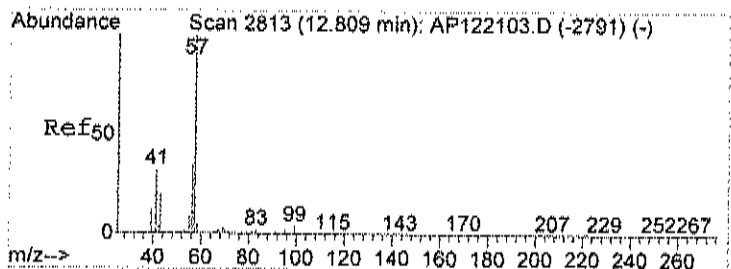
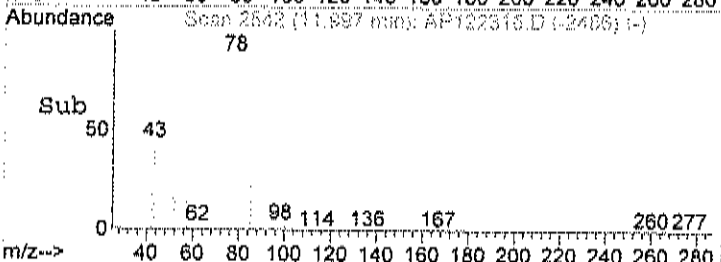
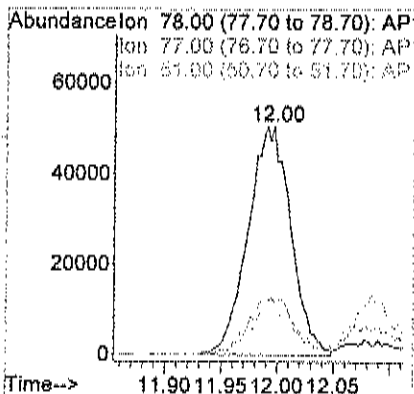
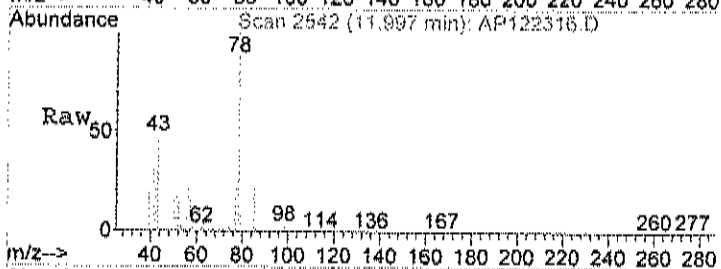
Tgt Ion	Ratio	Lower	Upper
56	100		
41	61.6	36.3	76.3
84	85.5	56.0	96.0





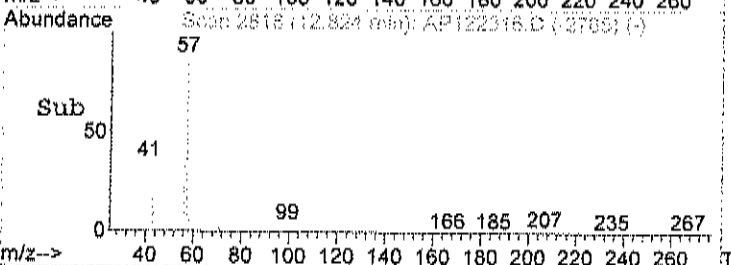
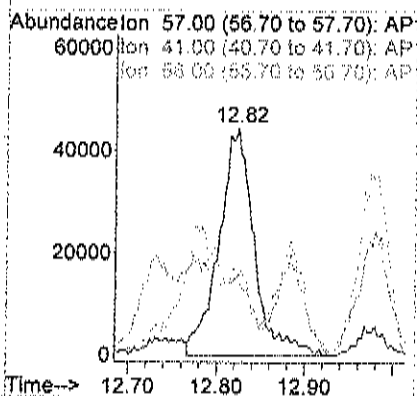
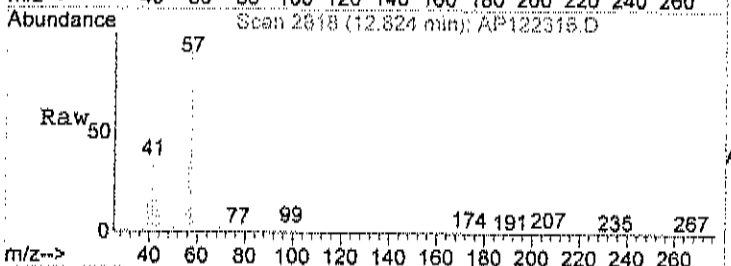
#39
Benzene
Concen: 0.61 ppb
RT: 12.00 min Scan# 2542
Delta R.T. 0.02 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

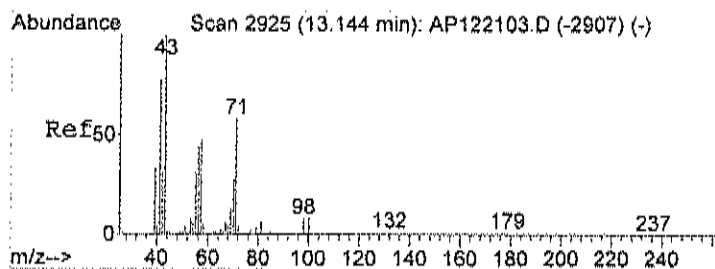
Tgt Ion	Ratio	Lower	Upper
78	100		
77	27.2	3.1	43.1
51	21.9	0.0	36.7



#42
2,2,4-trimethylpentane
Concen: 0.40 ppb
RT: 12.82 min Scan# 2818
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

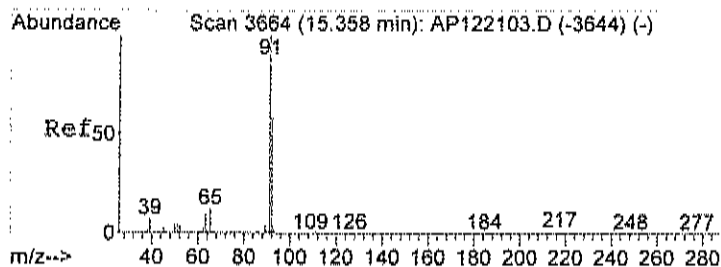
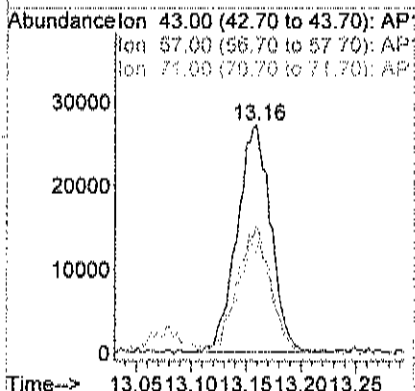
Tgt Ion	Ratio	Lower	Upper
57	100		
41	0.0	6.9	46.9#
56	0.0	11.5	51.5#





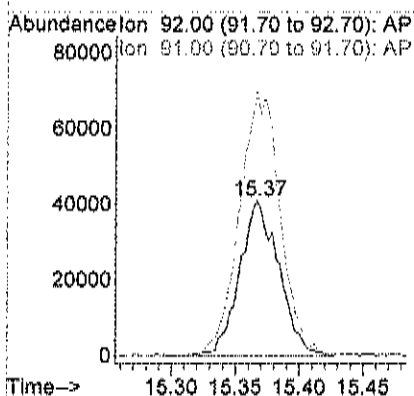
#43
Heptane
Concen: 0.53 ppb
RT: 13.16 min Scan# 2930
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

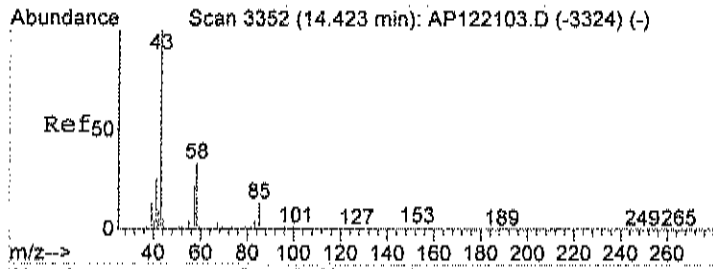
Tgt Ion	Ratio	Lower	Upper
43	100		
57	56.6	32.7	72.7
71	51.4	35.6	75.6



#51
Toluene
Concen: 0.57 ppb
RT: 15.37 min Scan# 3667
Delta R.T. 0.00 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

Tgt Ion	Ratio	Lower	Upper
92	100		
91	175.6	154.3	194.3

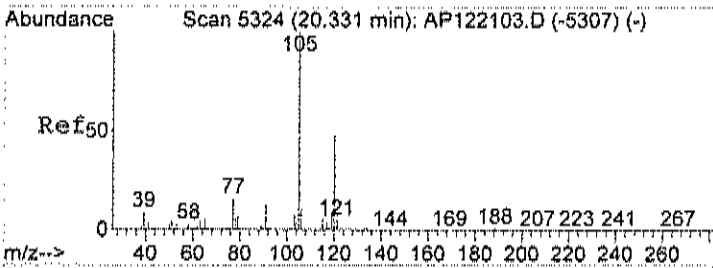
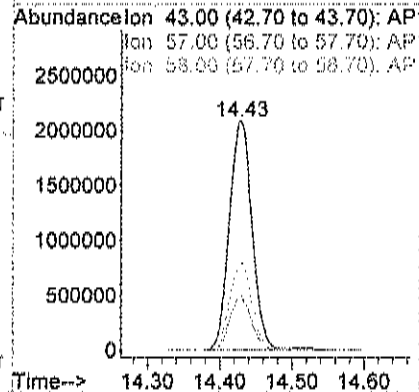




#52
Methyl Isobutyl Ketone
Concen: 27.19 ppb
RT: 14.43 min Scan# 3353
Delta R.T. -0.00 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

Tgt Ion: 43 Resp: 4636294

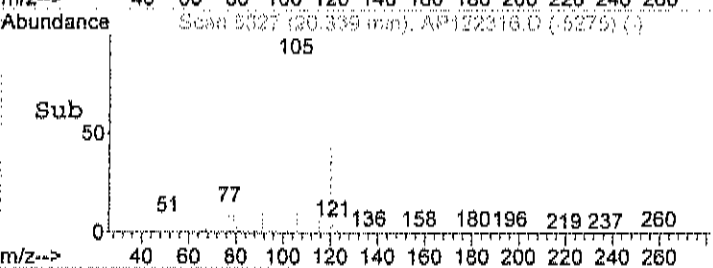
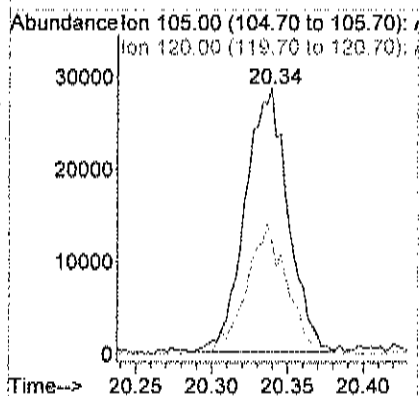
Ion	Ratio	Lower	Upper
43	100		
57	22.4	3.5	43.5
58	37.3	17.9	57.9



#71
1,2,4-trimethylbenzene
Concen: 0.20 ppb
RT: 20.34 min Scan# 5327
Delta R.T. 0.01 min
Lab File: AP122316.D
Acq: 23 Dec 2018 8:18 pm

Tgt Ion: 105 Resp: 56266

Ion	Ratio	Lower	Upper
105	100		
120	47.4	25.3	65.3



Data File : C:\HPCHEM\1\DATA\AP122317.D

Acq On : 23 Dec 2018 8:55 pm

Sample : C1812057-014A 90x

Misc : AD10_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:36 2018

Vial: 17

Operator: RJP

Inst : MSD #1

Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	40668	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	171616	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	124854	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.14	95	62654m	0.73	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%

Target Compounds

					Qvalue
15) Acetone	6.51	58	17054	0.68 ppb	100
21) Methylene chloride	7.61	84	105324	1.64 ppb	92
23) Carbon disulfide	7.78	76	267911	1.88 ppb	99
30) Hexane	9.55	57	31881	0.40 ppb	# 68
37) Cyclohexane	12.08	56	40521	0.50 ppb	88
52) Methyl Isobutyl Ketone	14.44	43	325910	3.02 ppb	93

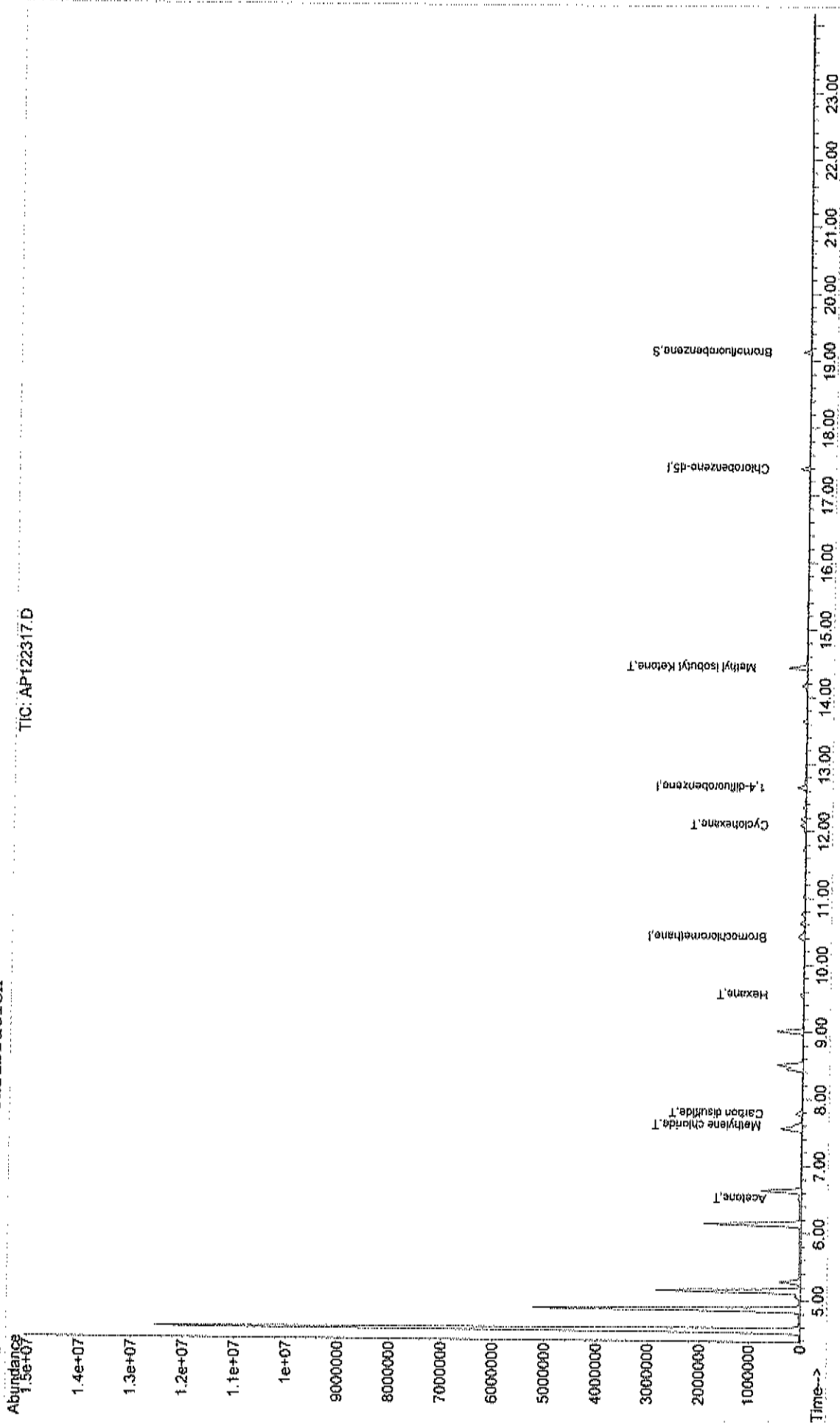
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP122317.D AD10_1UG.M Wed Jan 02 11:52:34 2019 MSD1

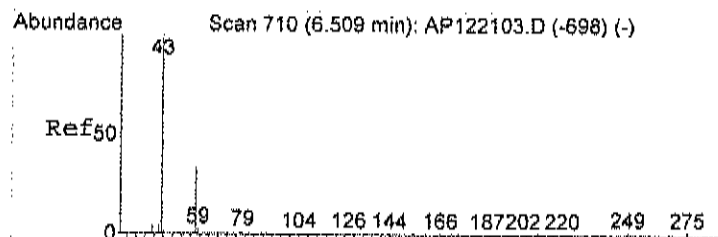
Data File : C:\HPCHEM\1\DATA\AP122317.D
Acq On : 23 Dec 2018 8:55 pm
Sample : C1812057-014A 90x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 8:37 2018

Vial: 17
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

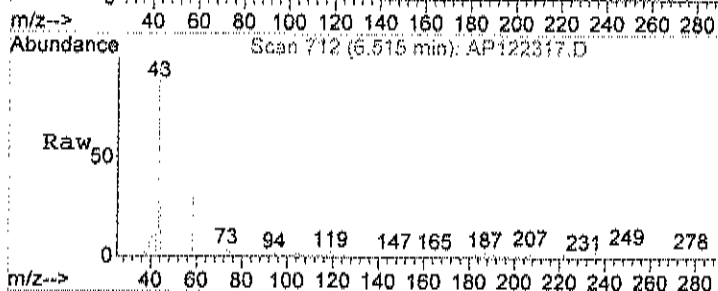
Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

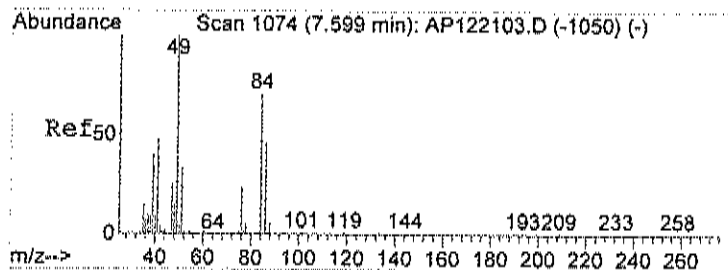
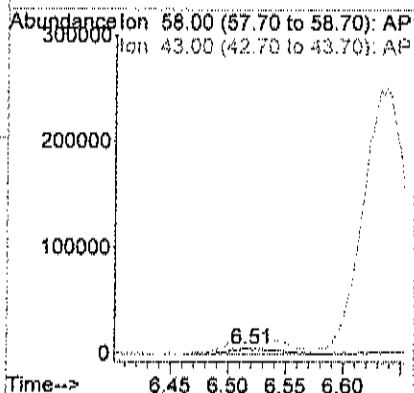
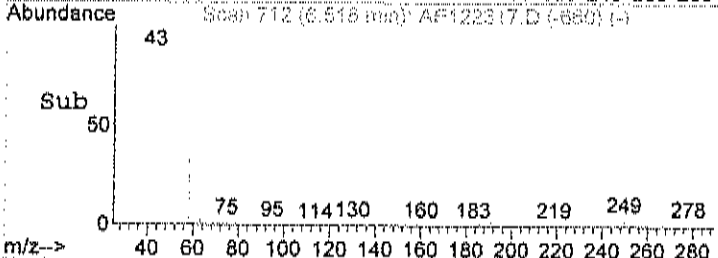




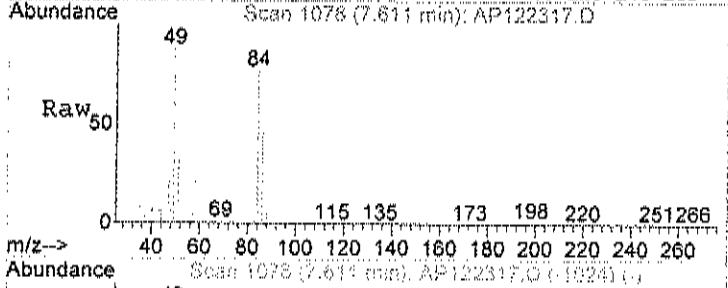
#15
Acetone
Concen: 0.68 ppb
RT: 6.51 min Scan# 712
Delta R.T. 0.01 min
Lab File: AP122317.D
Acq: 23 Dec 2018 8:55 pm



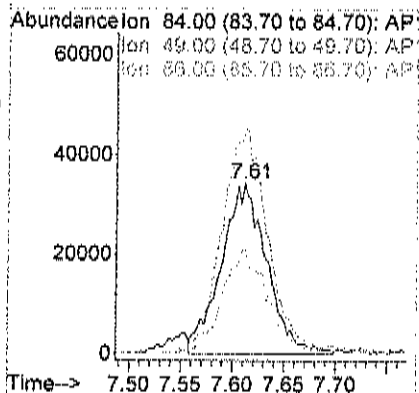
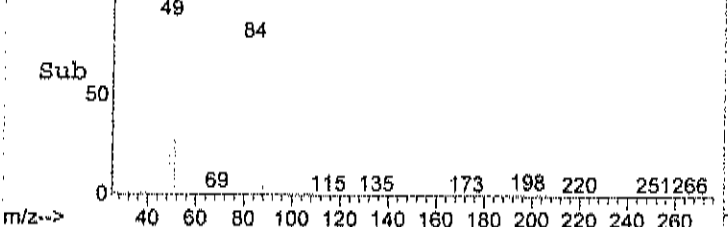
Tgt Ion: 58 Resp: 17054
Ion Ratio Lower Upper
58 100
43 329.2 298.2 358.2

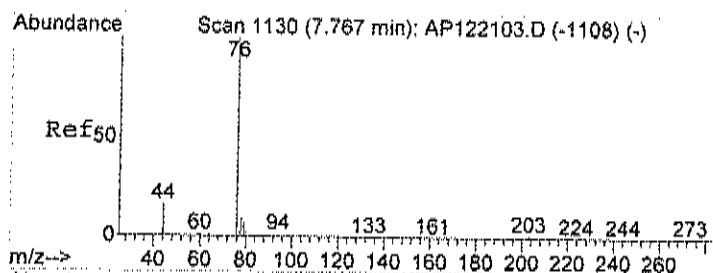


#21
Methylene chloride
Concen: 1.64 ppb
RT: 7.61 min Scan# 1078
Delta R.T. 0.01 min
Lab File: AP122317.D
Acq: 23 Dec 2018 8:55 pm



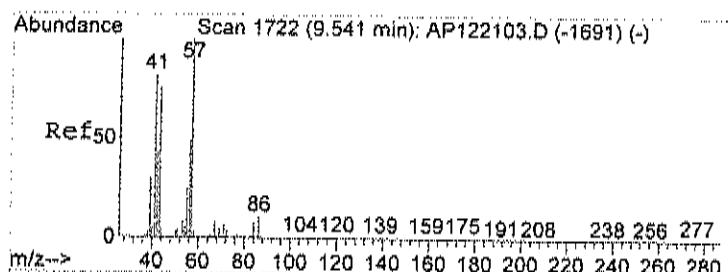
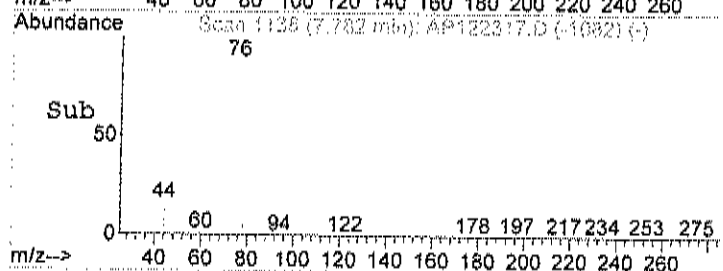
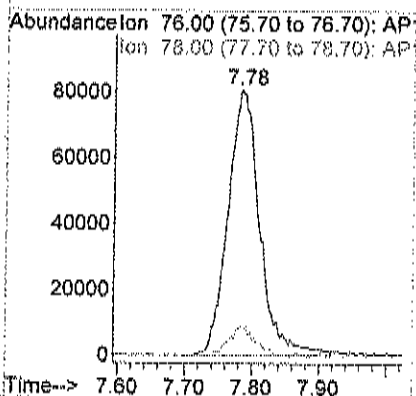
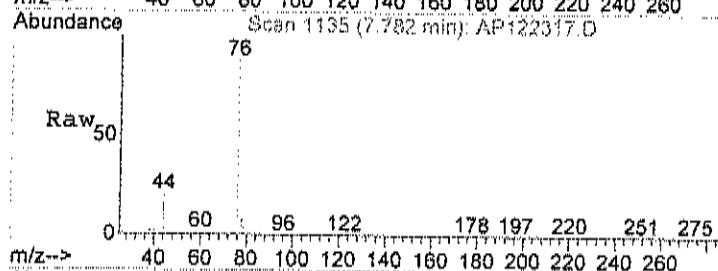
Tgt Ion: 84 Resp: 105324
Ion Ratio Lower Upper
84 100
49 132.6 121.5 161.5
86 58.5 46.0 86.0





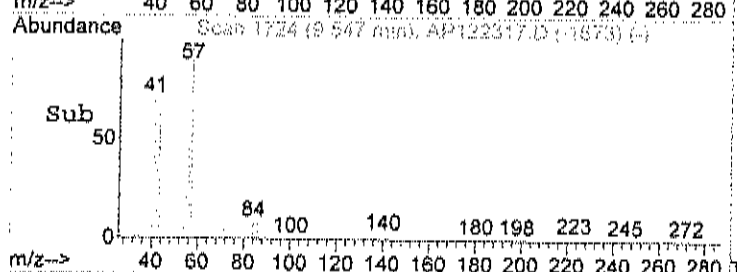
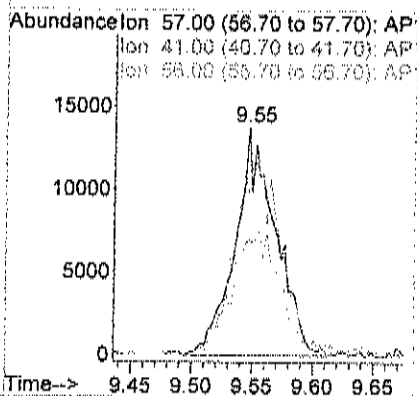
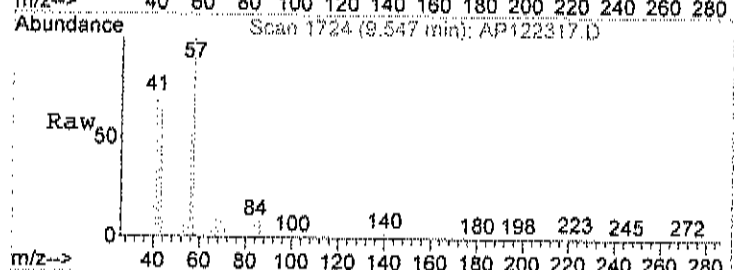
#23
Carbon disulfide
Concen: 1.88 ppb
RT: 7.78 min Scan# 1135
Delta R.T. 0.01 min
Lab File: AP122317.D
Acq: 23 Dec 2018 8:55 pm

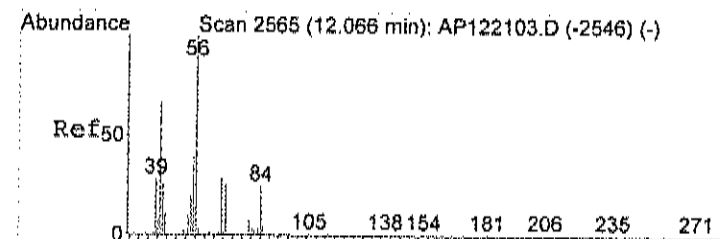
Tgt Ion: 76 Resp: 267911
Ion Ratio Lower Upper
76 100
78 9.5 0.0 29.2



#30
Hexane
Concen: 0.40 ppb
RT: 9.55 min Scan# 1724
Delta R.T. 0.00 min
Lab File: AP122317.D
Acq: 23 Dec 2018 8:55 pm

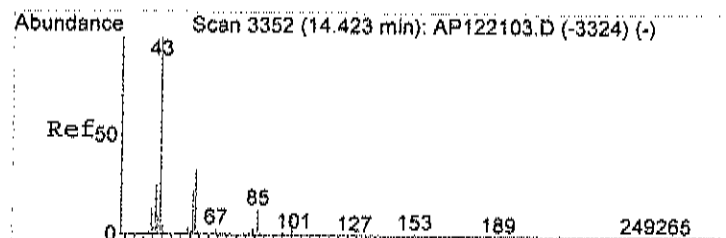
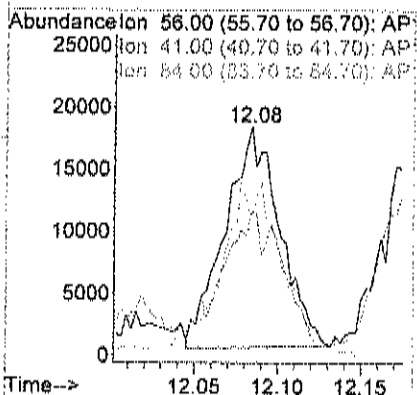
Tgt Ion: 57 Resp: 31881
Ion Ratio Lower Upper
57 100
41 100.8 49.7 89.7#
56 64.1 27.9 67.9





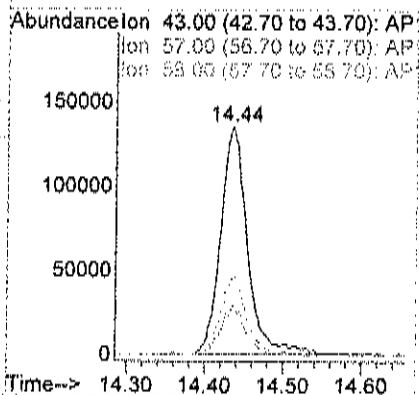
#37
Cyclohexane
Concen: 0.50 ppb
RT: 12.08 min Scan# 2571
Delta R.T. 0.01 min
Lab File: AP122317.D
Acq: 23 Dec 2018 8:55 pm

Tgt Ion	Ratio	Lower	Upper
56	100		
41	68.2	36.3	76.3
84	84.1	56.0	96.0



#52
Methyl Isobutyl Ketone
Concen: 3.02 ppb
RT: 14.44 min Scan# 3356
Delta R.T. 0.01 min
Lab File: AP122317.D
Acq: 23 Dec 2018 8:55 pm

Tgt Ion	Ratio	Lower	Upper
43	100		
57	19.8	3.5	43.5
58	33.8	17.9	57.9



Data File : C:\HPCHEM\1\DATA\AP122318.D

Vial: 18

Acq On : 23 Dec 2018 9:33 pm

Operator: RJP

Sample : C1812057-014A 180x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:37 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	37968	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	158169	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	111381	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	57101m	230.75	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	75.00%

Target Compounds

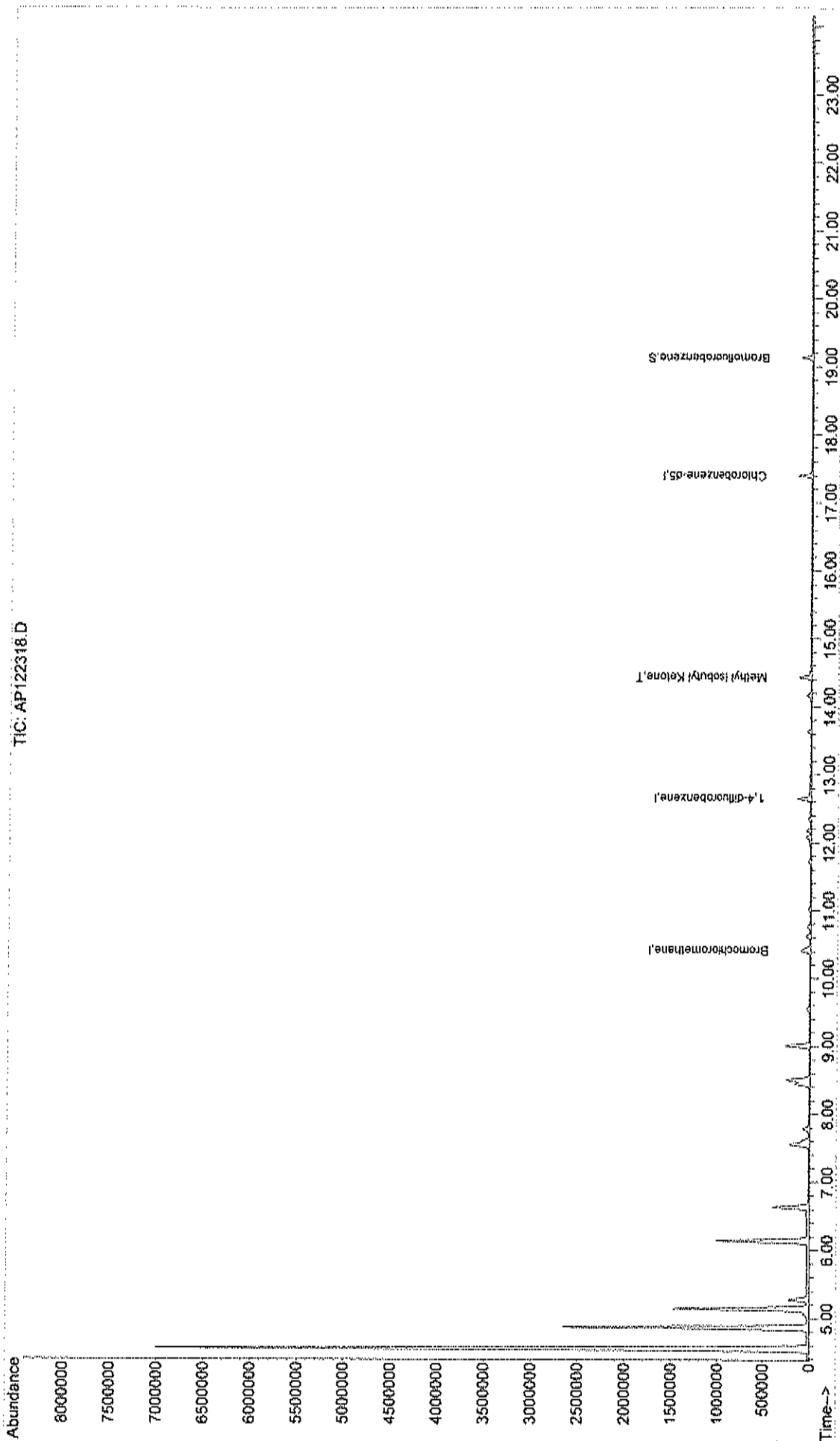
52) Methyl Isobutyl Ketone	14.44	43	124835	1.30	ppb	Qvalue 91
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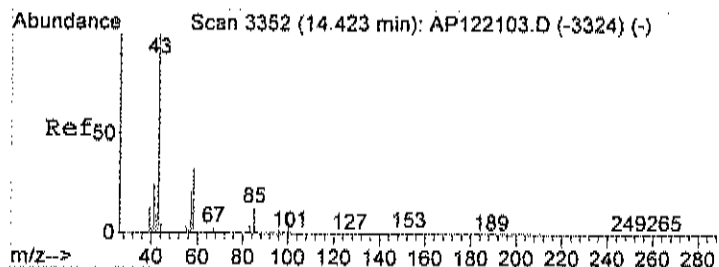
Data File : C:\HPCHEM\1\DATA\AP122318.D
 Acq On : 23 Dec 2018 9:33 pm
 Sample : C1812057-014A 180x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 31 8:37 2018

Vial: 18
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

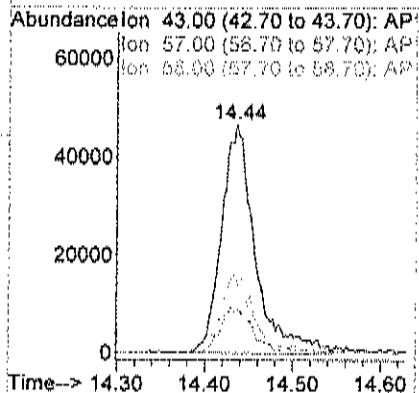
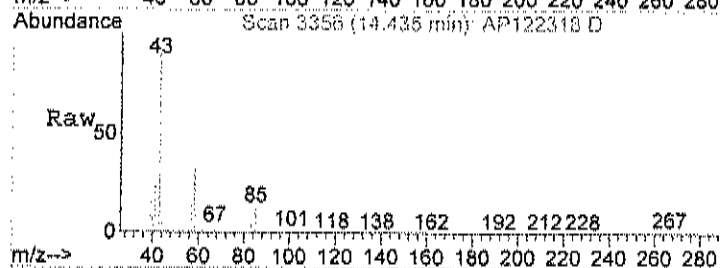
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





#52
Methyl Isobutyl Ketone
Concen: 1.30 ppb
RT: 14.44 min Scan# 3356
Delta R.T. 0.01 min
Lab File: AP122318.D
Acq: 23 Dec 2018 9:33 pm

Tgt Ion	Ratio	Lower	Upper
43	100		
57	19.0	3.5	43.5
58	32.8	17.9	57.9



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS

Client Sample ID: SVW-14

Lab Order: C1812057

Tag Number: 320,277

Project: IKEA-RED HOOK

Collection Date: 12/14/2018

Lab ID: C1812057-015A

Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
Lab Vacuum In	-6			"Hg		Analyst: 12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
Helium	ND	0.75		%	1	Analyst: RJP 12/31/2018
1UG/M3 BY METHOD TO15						
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	Analyst: RJP 12/22/2018 3:59:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2,4-Trimethylbenzene	2.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3,5-Trimethylbenzene	1.3	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,3-Dichlorobenzene	0.32	0.15		ppbV	1	12/22/2018 3:59:00 PM
1,4-Dichlorobenzene	0.12	0.15	J	ppbV	1	12/22/2018 3:59:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/22/2018 3:59:00 PM
2,2,4-trimethylpentane	2.1	0.15		ppbV	1	12/22/2018 3:59:00 PM
4-ethyltoluene	0.91	0.15		ppbV	1	12/22/2018 3:59:00 PM
Acetone	28	27		ppbV	90	12/23/2018 10:49:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Benzene	1.8	0.15		ppbV	1	12/22/2018 3:59:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Carbon disulfide	8.9	1.4		ppbV	9	12/23/2018 10:13:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Cyclohexane	2.7	1.4		ppbV	9	12/23/2018 10:13:00 PM

Qualifiers: ** Quantitation Limit
 B Analyte detected in the associated Method Blank
 H Holding times for preparation or analysis exceeded
 JN Non-routine analyte. Quantitation estimated.
 S Spike Recovery outside accepted recovery limits

Results reported are not blank corrected
 E Estimated Value above quantitation range
 J Analyte detected below quantitation limit
 ND Not Detected at the Limit of Detection

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Ethylbenzene	1.9	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 11	0.26	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Freon 12	0.62	0.15		ppbV	1	12/22/2018 3:59:00 PM
Heptane	1.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Hexane	4.0	1.4		ppbV	9	12/23/2018 10:13:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
m&p-Xylene	4.0	2.7		ppbV	9	12/23/2018 10:13:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/22/2018 3:59:00 PM
Methyl Ethyl Ketone	4.1	2.7		ppbV	9	12/23/2018 10:13:00 PM
Methyl Isobutyl Ketone	160	54		ppbV	180	12/23/2018 11:26:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Methylene chloride	34	14		ppbV	90	12/23/2018 10:49:00 PM
o-Xylene	1.6	1.4		ppbV	9	12/23/2018 10:13:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Styrene	0.36	0.15		ppbV	1	12/22/2018 3:59:00 PM
Tetrachloroethylene	0.29	0.15		ppbV	1	12/22/2018 3:59:00 PM
Tetrahydrofuran	4.0	1.4		ppbV	9	12/23/2018 10:13:00 PM
Toluene	4.8	1.4		ppbV	9	12/23/2018 10:13:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Trichloroethene	0.10	0.15	J	ppbV	1	12/22/2018 3:59:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/22/2018 3:59:00 PM
Surr: Bromofluorobenzene	97.0	70-130		%REC	1	12/22/2018 3:59:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:59:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/22/2018 3:59:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:59:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
1,2,4-Trimethylbenzene	14	6.9		ug/m3	9	12/23/2018 10:13:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/22/2018 3:59:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/22/2018 3:59:00 PM
1,3,5-Trimethylbenzene	6.3	0.74		ug/m3	1	12/22/2018 3:59:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/22/2018 3:59:00 PM
1,3-Dichlorobenzene	1.9	0.90		ug/m3	1	12/22/2018 3:59:00 PM
1,4-Dichlorobenzene	0.72	0.90	J	ug/m3	1	12/22/2018 3:59:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
2,2,4-trimethylpentane	9.6	0.70		ug/m3	1	12/22/2018 3:59:00 PM
4-ethyltoluene	4.5	0.74		ug/m3	1	12/22/2018 3:59:00 PM
Acetone	66	64		ug/m3	90	12/23/2018 10:49:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/22/2018 3:59:00 PM
Benzene	5.7	0.48		ug/m3	1	12/22/2018 3:59:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/22/2018 3:59:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/22/2018 3:59:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/22/2018 3:59:00 PM
Carbon disulfide	28	4.4		ug/m3	9	12/23/2018 10:13:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/22/2018 3:59:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/22/2018 3:59:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/22/2018 3:59:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/22/2018 3:59:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/22/2018 3:59:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:59:00 PM
Cyclohexane	9.3	4.8		ug/m3	9	12/23/2018 10:13:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/22/2018 3:59:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/22/2018 3:59:00 PM
Ethylbenzene	8.1	0.65		ug/m3	1	12/22/2018 3:59:00 PM
Freon 11	1.5	0.84		ug/m3	1	12/22/2018 3:59:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/22/2018 3:59:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-015A

Client Sample ID: SVW-14
Tag Number: 320,277
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	3.1	0.74		ug/m3	1	12/22/2018 3:59:00 PM
Heptane	7.4	5.7		ug/m3	9	12/23/2018 10:13:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/22/2018 3:59:00 PM
Hexane	14	4.9		ug/m3	9	12/23/2018 10:13:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/22/2018 3:59:00 PM
m&p-Xylene	18	12		ug/m3	9	12/23/2018 10:13:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/22/2018 3:59:00 PM
Methyl Ethyl Ketone	12	8.0		ug/m3	9	12/23/2018 10:13:00 PM
Methyl Isobutyl Ketone	660	220		ug/m3	180	12/23/2018 11:26:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/22/2018 3:59:00 PM
Methylene chloride	120	49		ug/m3	90	12/23/2018 10:49:00 PM
o-Xylene	7.0	6.1		ug/m3	9	12/23/2018 10:13:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/22/2018 3:59:00 PM
Styrene	1.5	0.64		ug/m3	1	12/22/2018 3:59:00 PM
Tetrachloroethylene	2.0	1.0		ug/m3	1	12/22/2018 3:59:00 PM
Tetrahydrofuran	12	4.1		ug/m3	9	12/23/2018 10:13:00 PM
Toluene	18	5.3		ug/m3	9	12/23/2018 10:13:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/22/2018 3:59:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/22/2018 3:59:00 PM
Trichloroethene	0.54	0.81	J	ug/m3	1	12/22/2018 3:59:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/22/2018 3:59:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/22/2018 3:59:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/22/2018 3:59:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Data File : C:\HPCHEM\1\DATA\AP122211.D

Vial: 57

Acq On : 22 Dec 2018 3:59 pm

Operator: RJP

Sample : C1812057-015A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:18 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	57660	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	278528	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	311419	1.00	ppb	0.00

System Monitoring Compounds

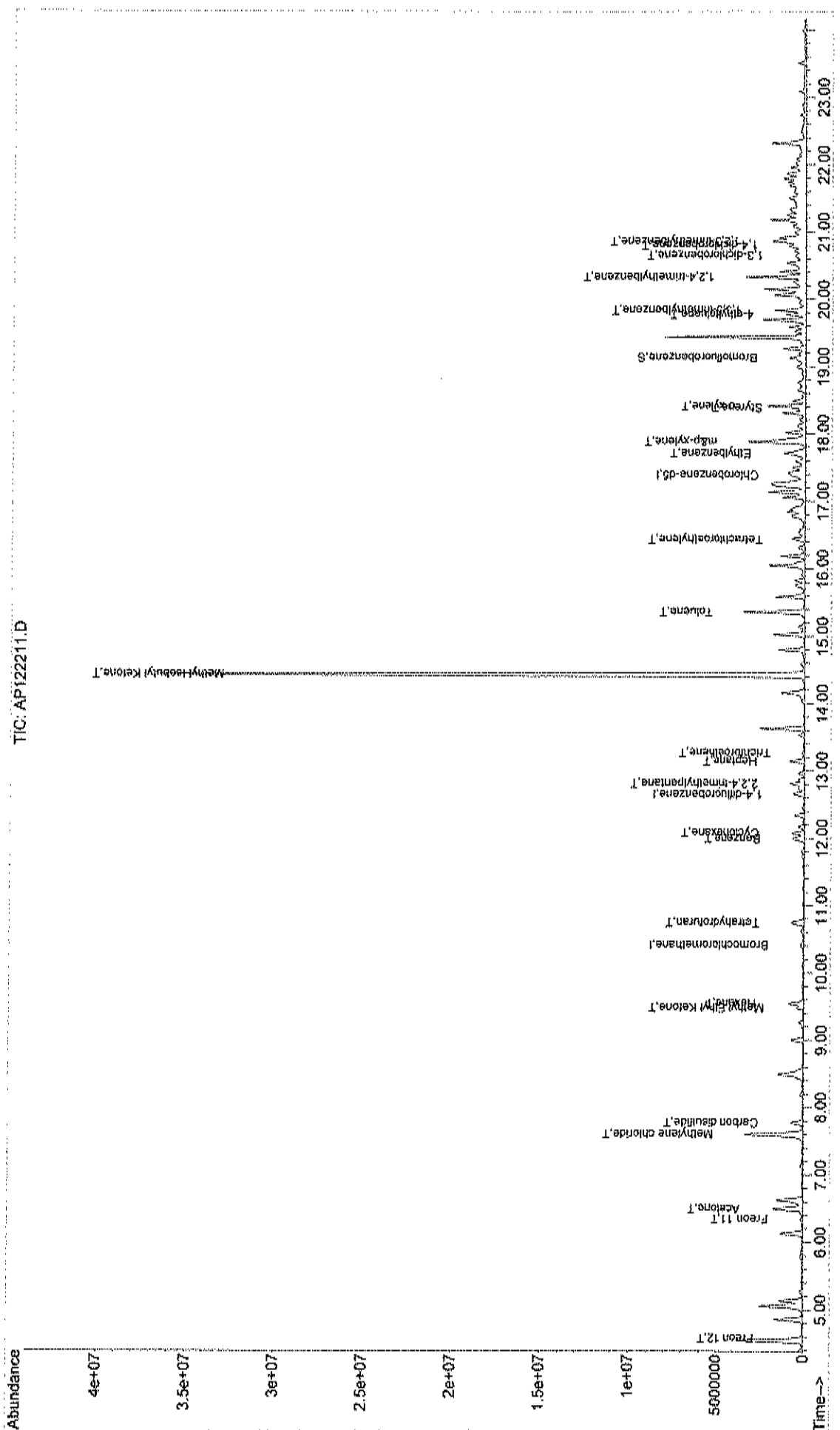
65) Bromofluorobenzene	19.13	95	205958	0.97	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	97.00%

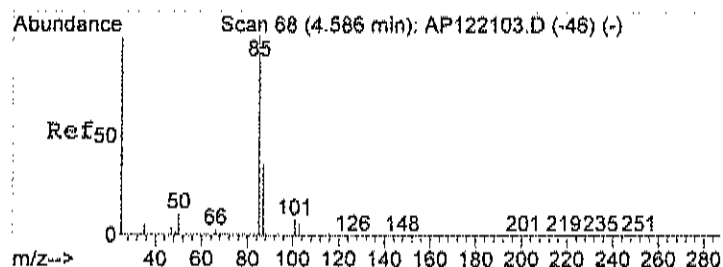
Target Compounds

						Qvalue
3) Freon 12	4.59	85	208114	0.62	ppb	99
14) Freon 11	6.34	101	120478	0.26	ppb	99
15) Acetone	6.49	58	988441	27.95	ppb	99
21) Methylene chloride	7.60	84	2372347	26.07	ppb	93
23) Carbon disulfide	7.77	76	1561038	7.72	ppb	100
28) Methyl Ethyl Ketone	9.48	72	180085	4.96	ppb	# 100
30) Hexane	9.55	57	565908	4.97	ppb	89
33) Tetrahydrofuran	10.73	42	411500	5.35	ppb	83
37) Cyclohexane	12.08	56	367052	2.78	ppb	92
39) Benzene	11.98	78	572444	1.80	ppb	98
42) 2,2,4-trimethylpentane	12.81	57	929443	2.06	ppb	80
43) Heptane	13.14	43	379495	2.41	ppb	96
44) Trichloroethene	13.28	130	15800	0.10	ppb	93
51) Toluene	15.36	92	1571458	6.52	ppb	98
52) Methyl Isobutyl Ketone	14.41	43	28410245	105.63	ppb	78
56) Tetrachloroethylene	16.42	164	56770	0.29	ppb	95
58) Ethylbenzene	17.71	91	924991	1.86	ppb	98
59) m&p-xylene	17.89	91	2391908	5.66	ppb	99
61) Styrene	18.38	104	130969	0.36	ppb	# 36
63) o-xylene	18.41	91	1291555	2.42	ppb	100
69) 4-ethyltoluene	19.77	105	585110	0.91	ppb	99
70) 1,3,5-trimethylbenzene	19.83	105	727551	1.28	ppb	98
71) 1,2,4-trimethylbenzene	20.33	105	1969084	4.51	ppb	100
72) 1,3-dichlorobenzene	20.66	146	132170	0.32	ppb	94
74) 1,4-dichlorobenzene	20.81	146	50308	0.12	ppb	95
75) 1,2,3-trimethylbenzene	20.85	105	617941	1.22	ppb	96

Data File : C:\HPCHEM\1\DATA\AP122211.D
Acq On : 22 Dec 2018 3:59 pm
Sample : C1812057-015A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:36 2018
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

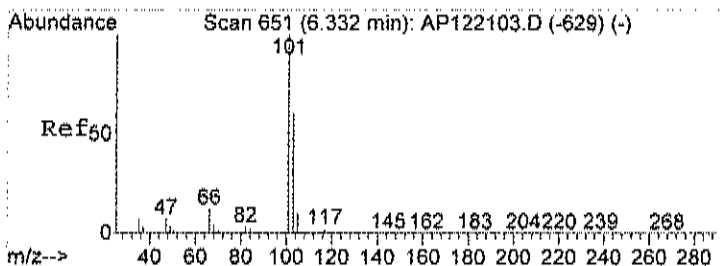
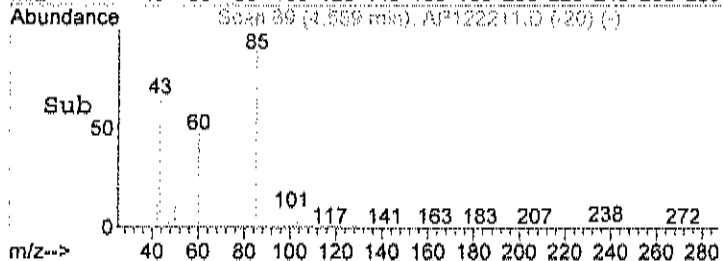
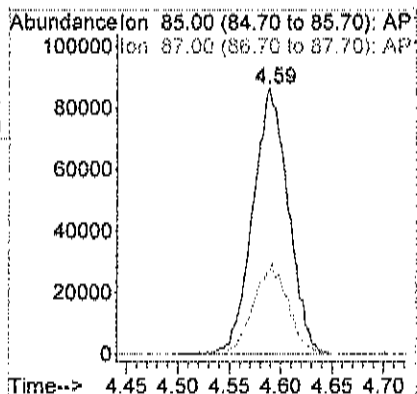
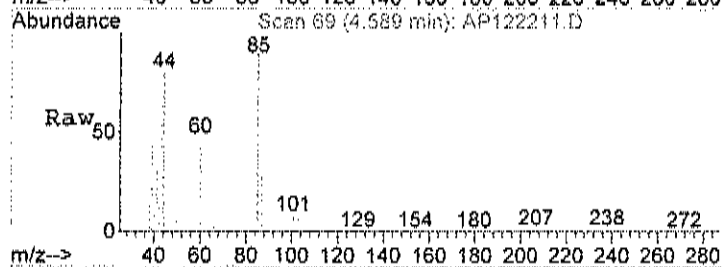
Vial: 57
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: AD10_1UG.RES





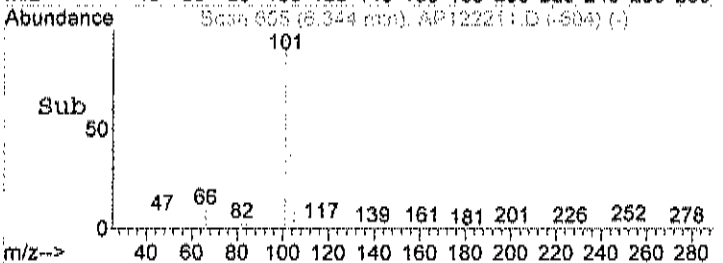
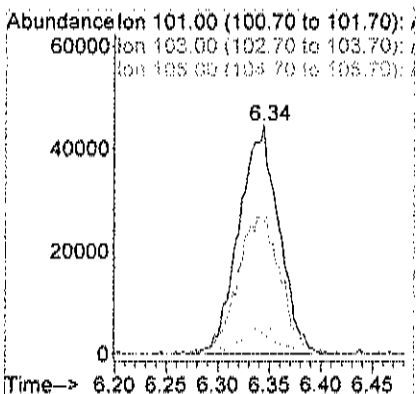
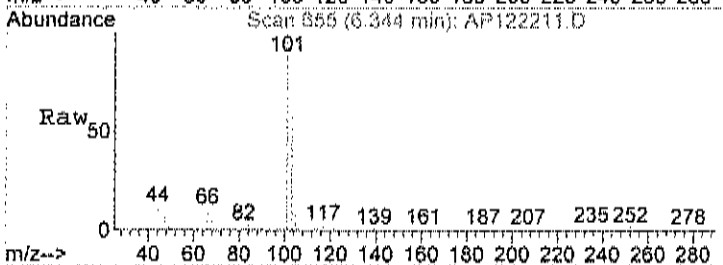
#3
Freon 12
Concen: 0.62 ppb
RT: 4.59 min Scan# 69
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

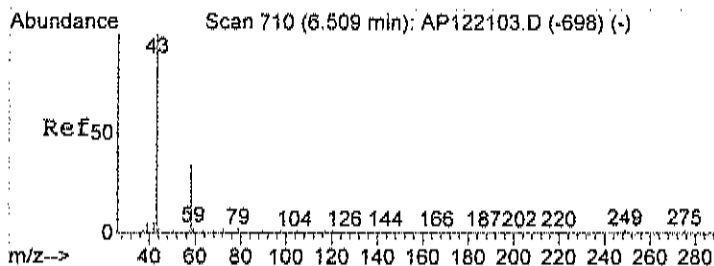
Tgt Ion: 85 Resp: 208114
Ion Ratio Lower Upper
85 100
87 33.0 12.4 52.4



#14
Freon 11
Concen: 0.26 ppb
RT: 6.34 min Scan# 655
Delta R.T. 0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

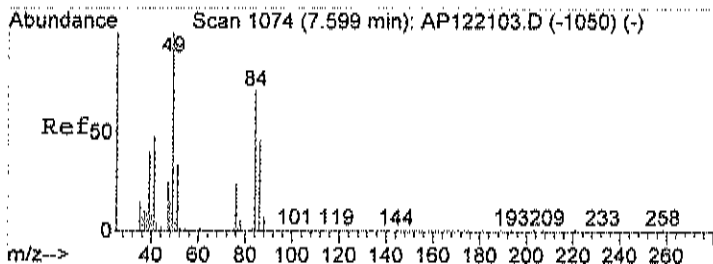
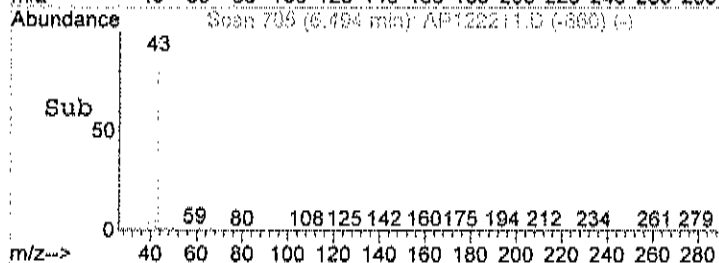
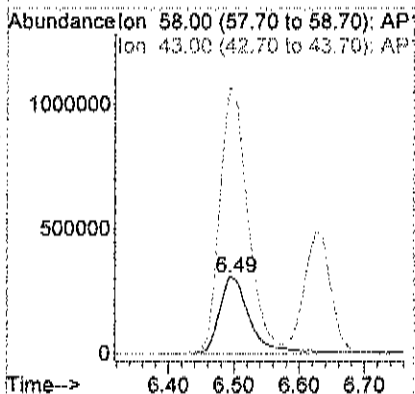
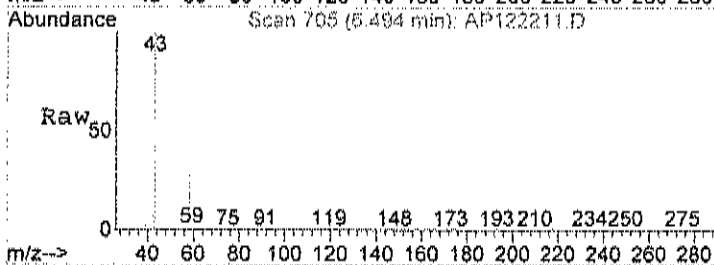
Tgt Ion: 101 Resp: 120478
Ion Ratio Lower Upper
101 100
103 64.7 44.4 84.4
105 10.9 0.0 31.9





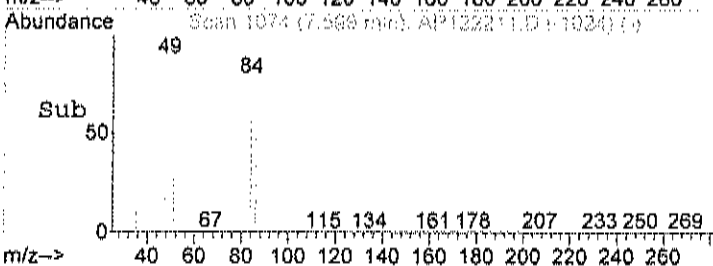
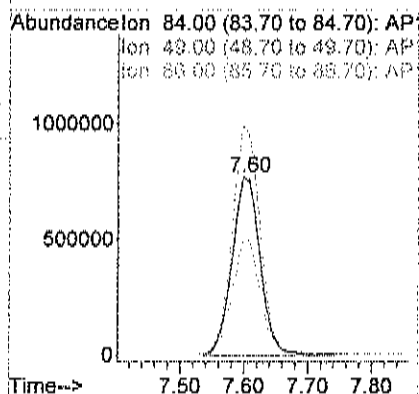
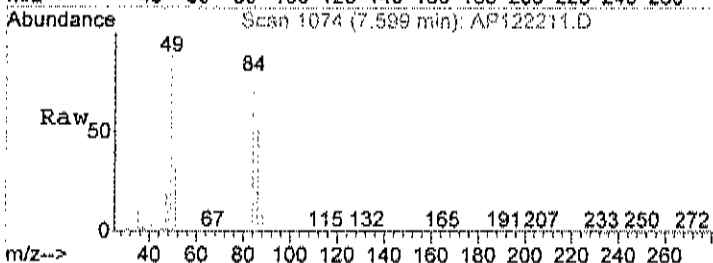
#15
Acetone
Concen: 27.95 ppb
RT: 6.49 min Scan# 705
Delta R.T. -0.02 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

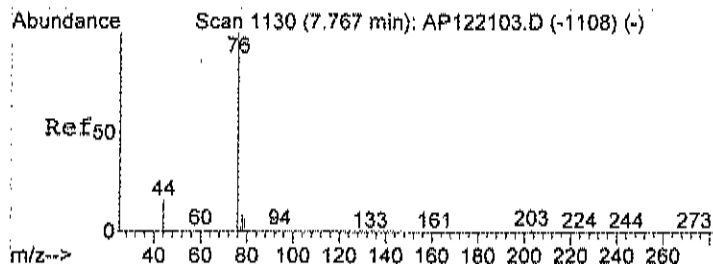
Tgt Ion: 58 Resp: 988441
Ion Ratio Lower Upper
58 100
43 325.4 298.2 358.2



#21
Methylene chloride
Concen: 26.07 ppb
RT: 7.60 min Scan# 1074
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

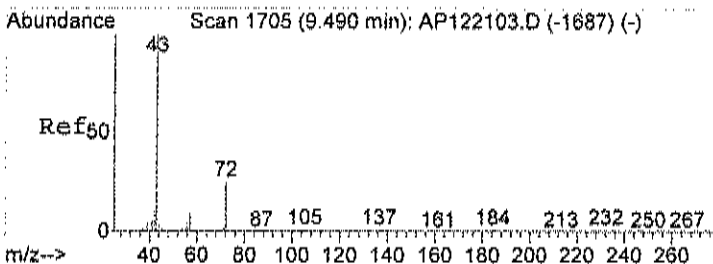
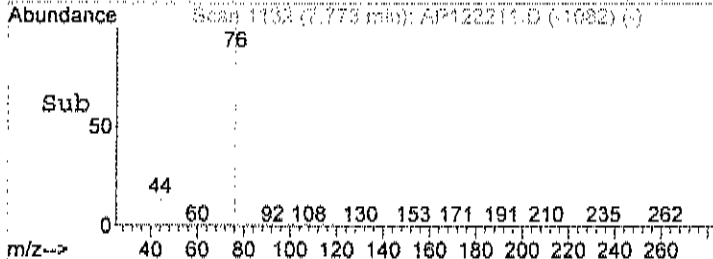
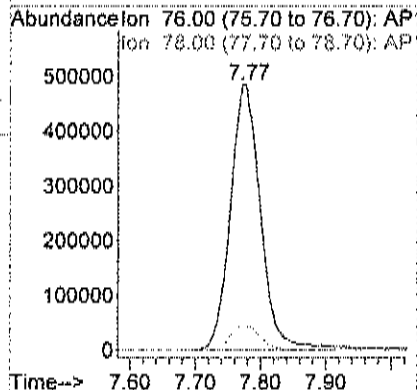
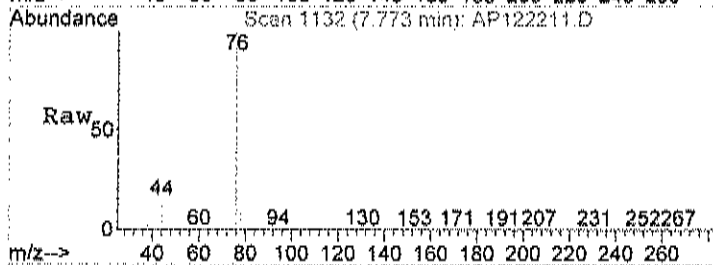
Tgt Ion: 84 Resp: 2372347
Ion Ratio Lower Upper
84 100
49 129.4 121.5 161.5
86 64.9 46.0 86.0





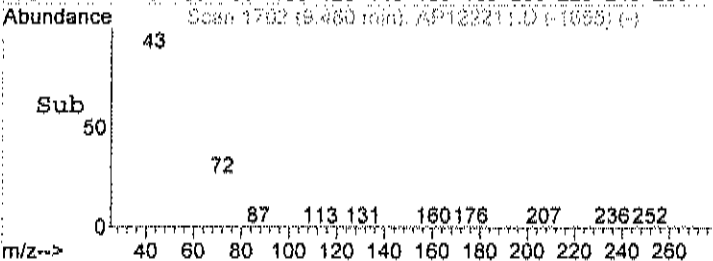
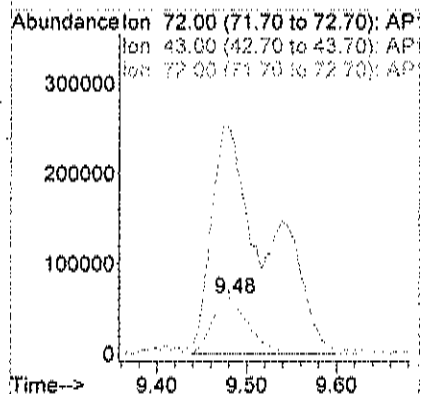
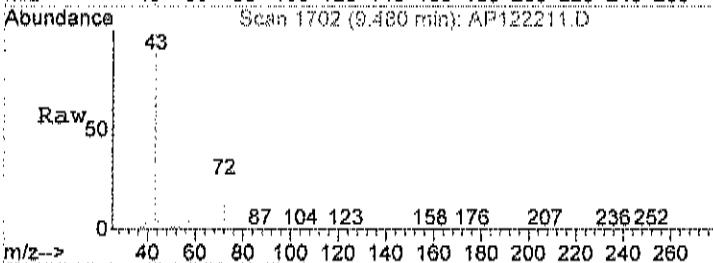
#23
Carbon disulfide
Concen: 7.72 ppb
RT: 7.77 min Scan# 1132
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

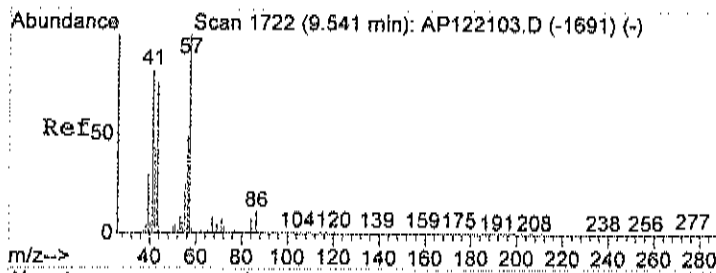
Tgt Ion: 76 Resp: 1561038
Ion Ratio Lower Upper
76 100
78 9.2 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 4.96 ppb
RT: 9.48 min Scan# 1702
Delta R.T. -0.01 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

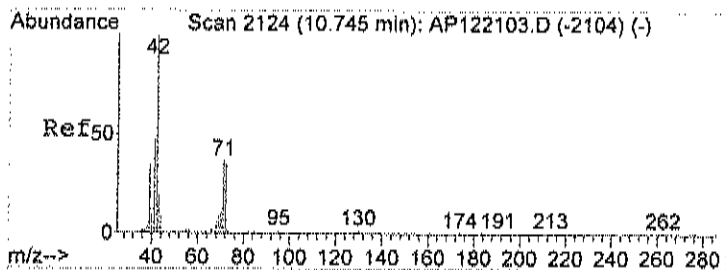
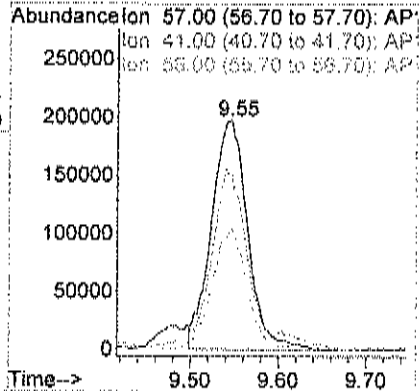
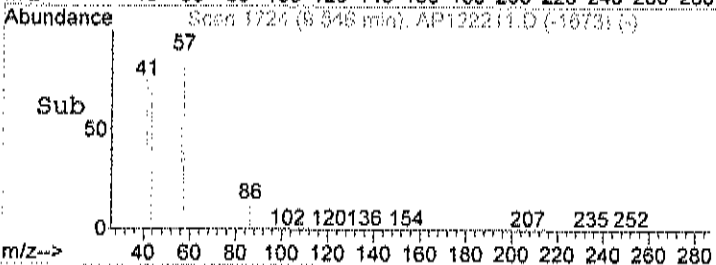
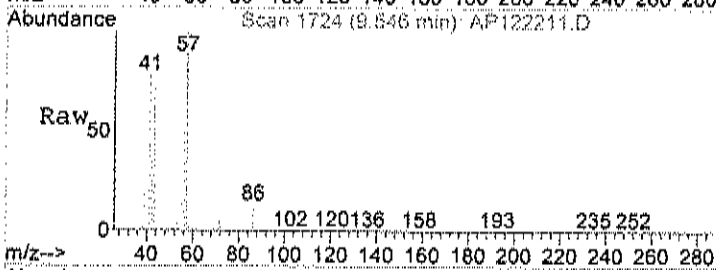
Tgt Ion: 72 Resp: 180085
Ion Ratio Lower Upper
72 100
43 0.0 0.0 20.0
72 100.0 80.0 120.0





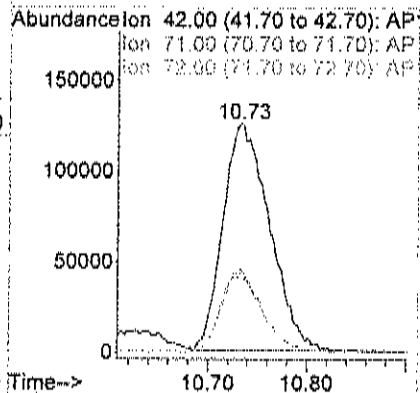
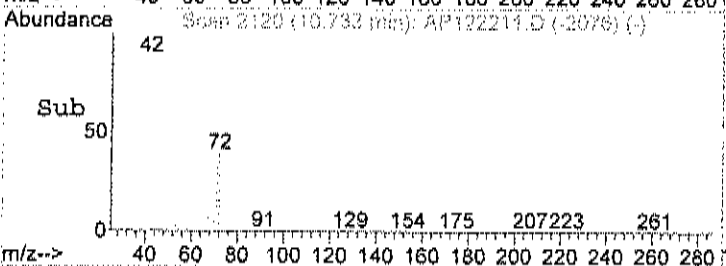
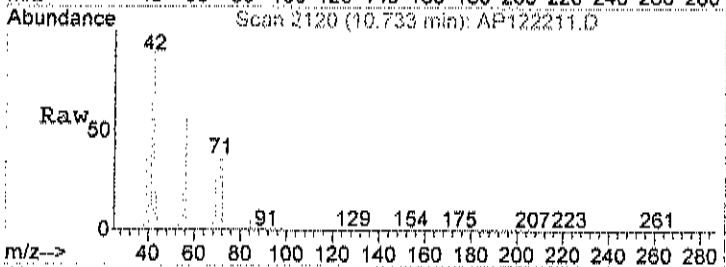
#30
Hexane
Concen: 4.97 ppb
RT: 9.55 min Scan# 1724
Delta R.T. 0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

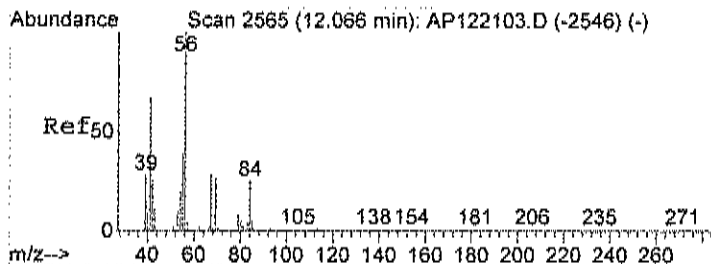
Tgt Ion:	57	Resp:	565908
Ion	Ratio	Lower	Upper
57	100		
41	81.9	49.7	89.7
56	51.0	27.9	67.9



#33
Tetrahydrofuran
Concen: 5.35 ppb
RT: 10.73 min Scan# 2120
Delta R.T. -0.02 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

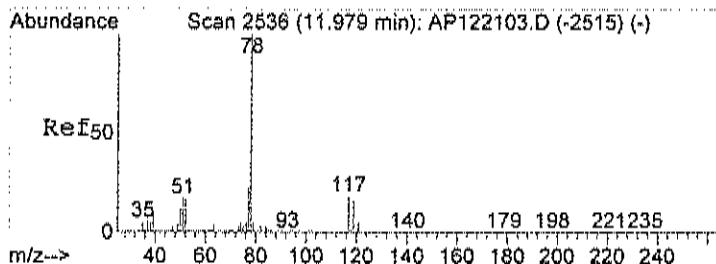
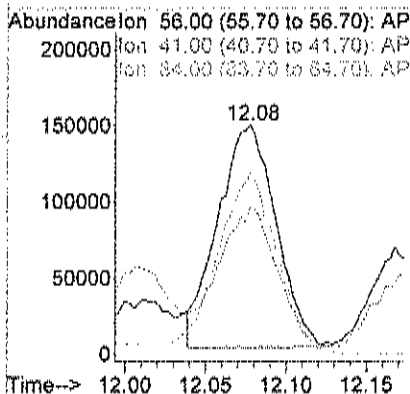
Tgt Ion:	42	Resp:	411500
Ion	Ratio	Lower	Upper
42	100		
71	31.3	21.4	61.4
72	31.2	22.4	62.4





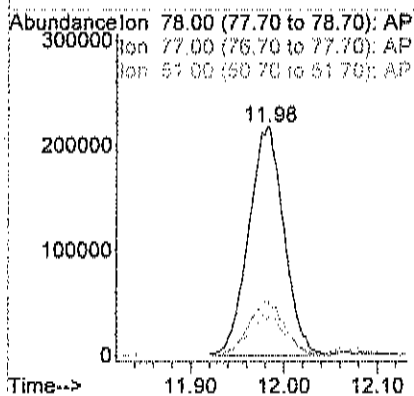
#37
Cyclohexane
Concen: 2.78 ppb
RT: 12.08 min Scan# 2569
Delta R.T. 0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

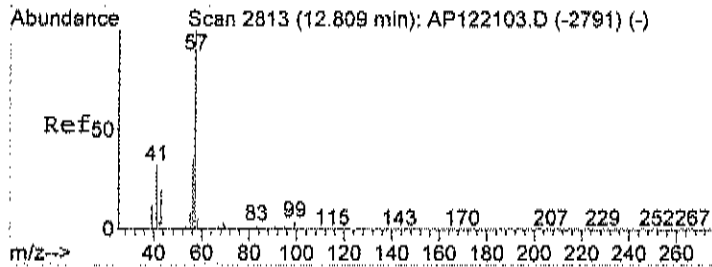
Tgt Ion	Resp	Lower	Upper
56	367052		
41	62.7	36.3	76.3
84	82.9	56.0	96.0



#39
Benzene
Concen: 1.80 ppb
RT: 11.98 min Scan# 2537
Delta R.T. 0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

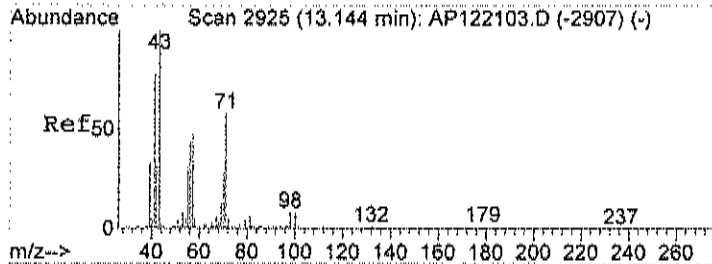
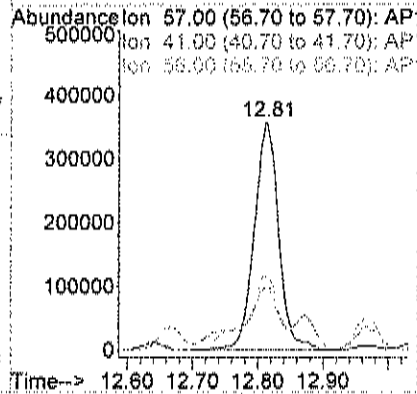
Tgt Ion	Resp	Lower	Upper
78	572444		
77	23.9	3.1	43.1
51	17.8	0.0	36.7





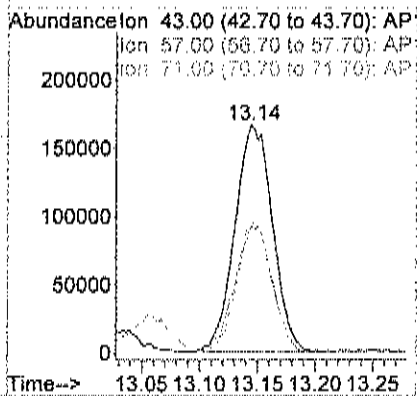
#42
2,2,4-trimethylpentane
Concen: 2.06 ppb
RT: 12.81 min Scan# 2814
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

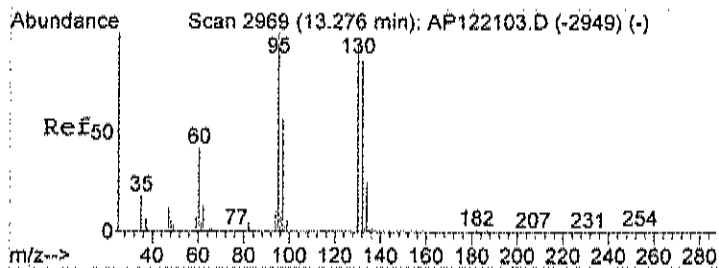
Tgt Ion: 57 Resp: 929443
Ion Ratio Lower Upper
57 100
41 37.2 6.9 46.9
56 42.5 11.5 51.5



#43
Heptane
Concen: 2.41 ppb
RT: 13.14 min Scan# 2925
Delta R.T. -0.01 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

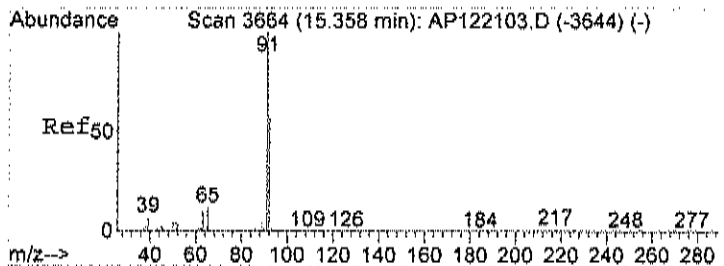
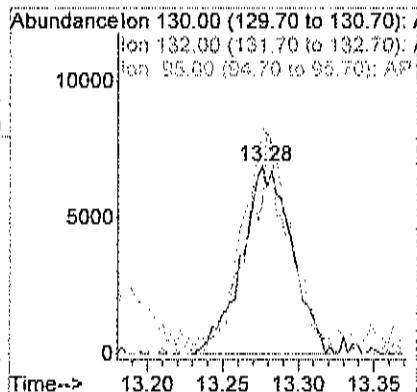
Tgt Ion: 43 Resp: 379495
Ion Ratio Lower Upper
43 100
57 55.9 32.7 72.7
71 53.2 35.6 75.6





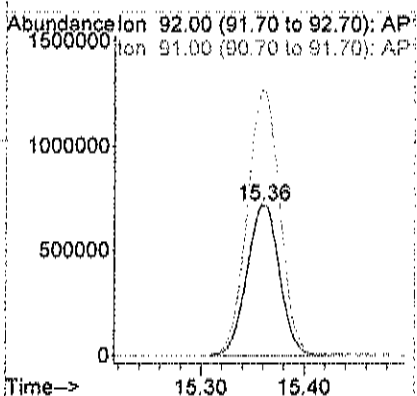
#44
Trichloroethene
Concen: 0.10 ppb
RT: 13.28 min Scan# 2969
Delta R.T. -0.01 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

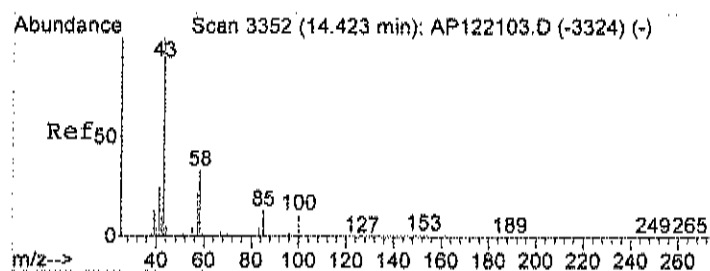
Tgt Ion:130 Resp: 15800
Ion Ratio Lower Upper
130 100
132 98.3 77.2 117.2
95 118.3 84.8 124.8



#51
Toluene
Concen: 6.52 ppb
RT: 15.36 min Scan# 3664
Delta R.T. -0.01 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

Tgt Ion: 92 Resp: 1571458
Ion Ratio Lower Upper
92 100
91 177.7 154.3 194.3

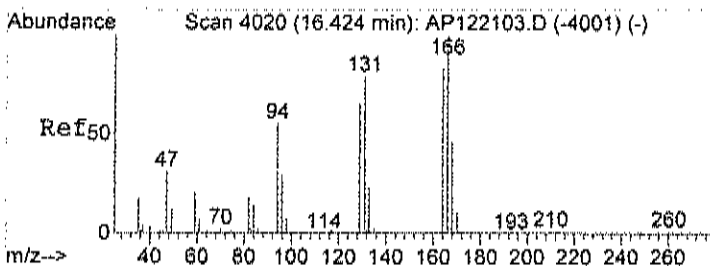
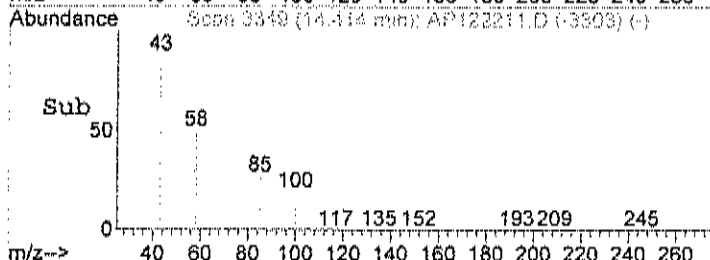
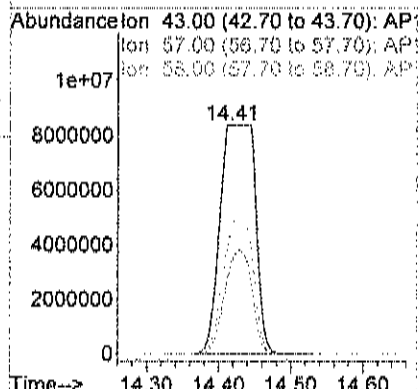
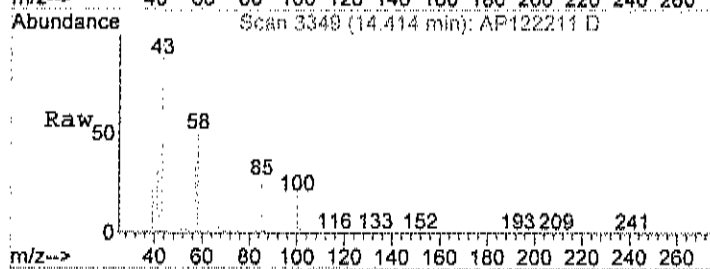




#52
Methyl Isobutyl Ketone
Concen: 105.63 ppb
RT: 14.41 min Scan# 3349
Delta R.T. -0.01 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

Tgt Ion: 43 Resp:28410245

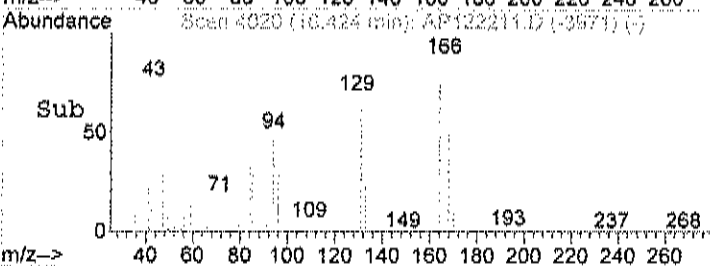
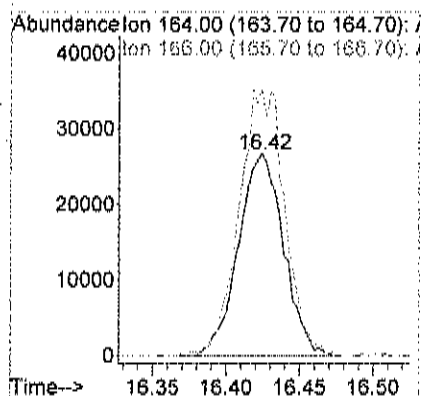
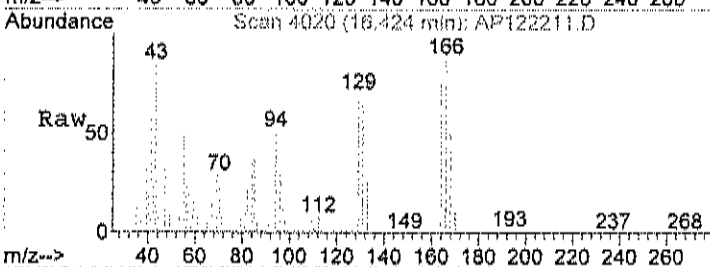
Ion	Ratio	Lower	Upper
43	100		
57	35.1	3.5	43.5
58	50.1	17.9	57.9

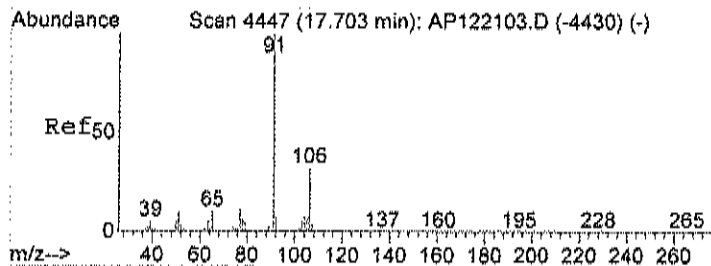


#56
Tetrachloroethylene
Concen: 0.29 ppb
RT: 16.42 min Scan# 4020
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

Tgt Ion:164 Resp: 56770

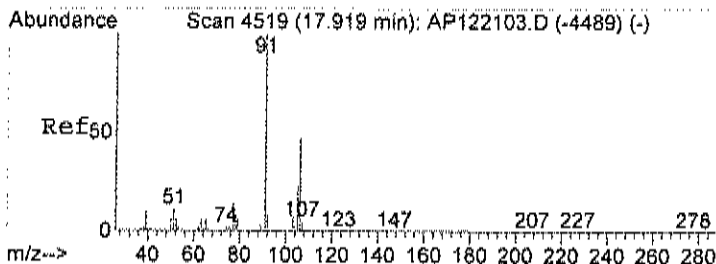
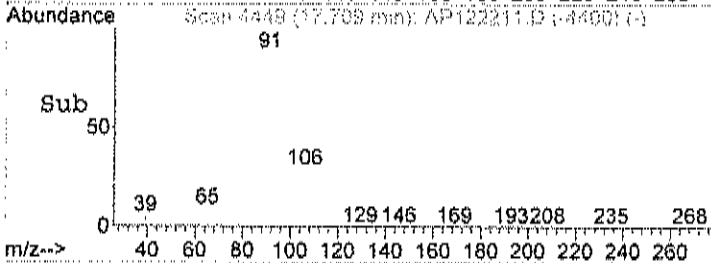
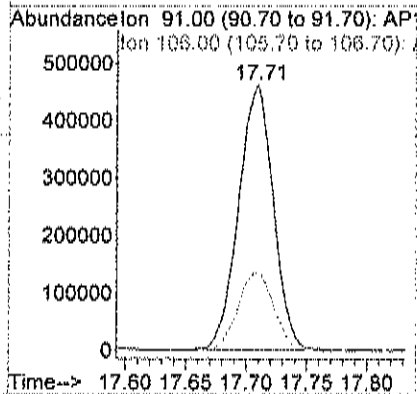
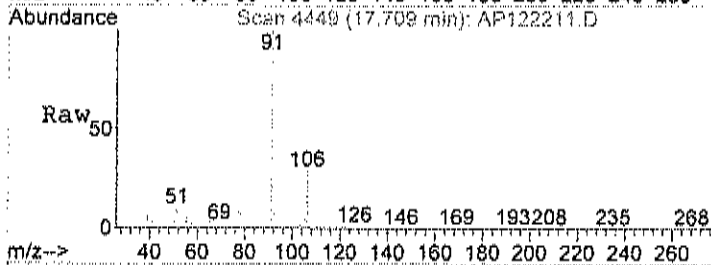
Ion	Ratio	Lower	Upper
164	100		
166	134.6	108.5	148.5





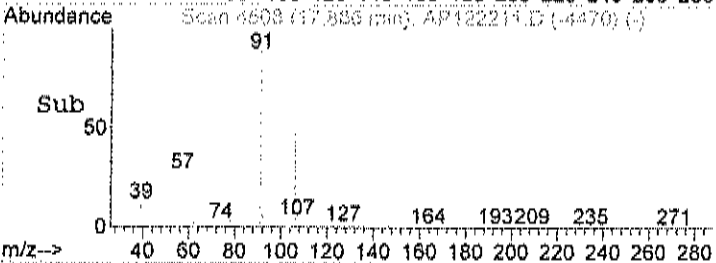
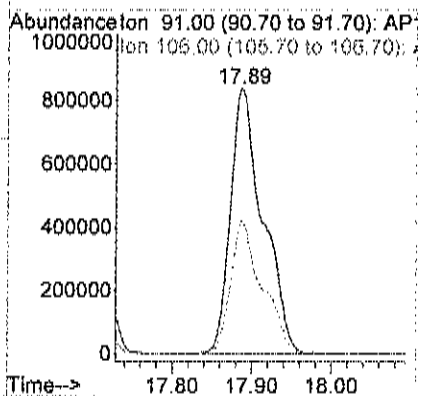
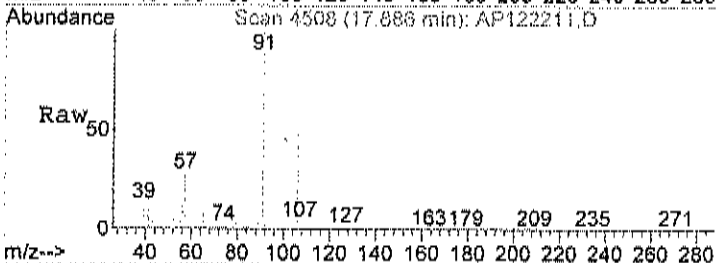
#58
Ethylbenzene
Concen: 1.86 ppb
RT: 17.71 min Scan# 4449
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

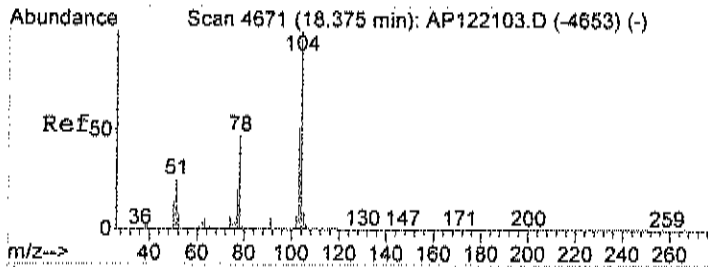
Tgt Ion: 91 Resp: 924991
Ion Ratio Lower Upper
91 100
106 30.6 11.4 51.4



#59
m&p-xylene
Concen: 5.66 ppb
RT: 17.89 min Scan# 4508
Delta R.T. -0.04 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

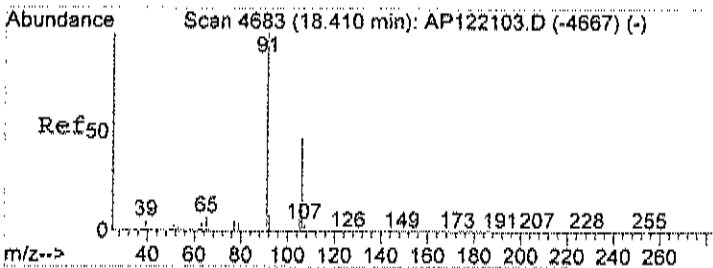
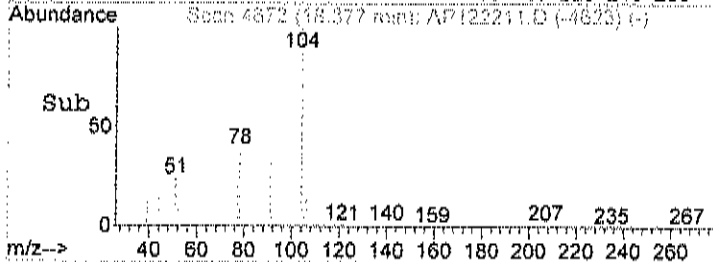
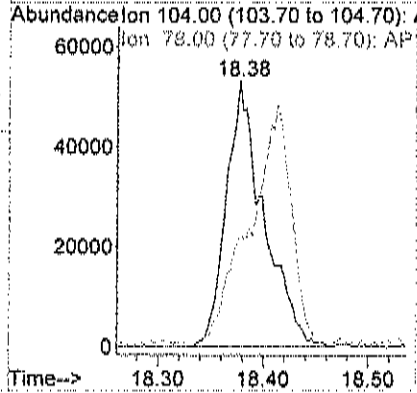
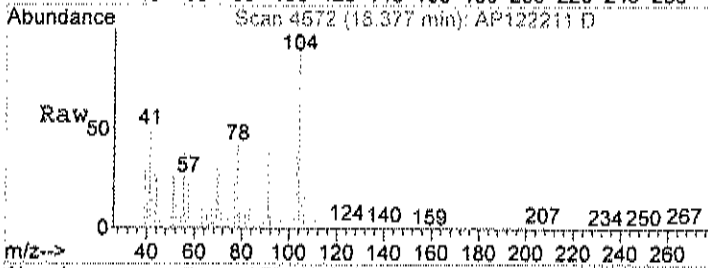
Tgt Ion: 91 Resp: 2391908
Ion Ratio Lower Upper
91 100
106 48.8 28.3 68.3





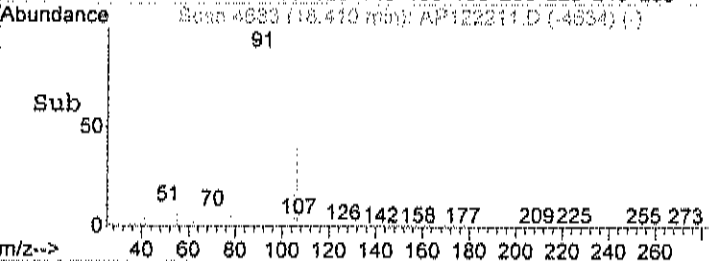
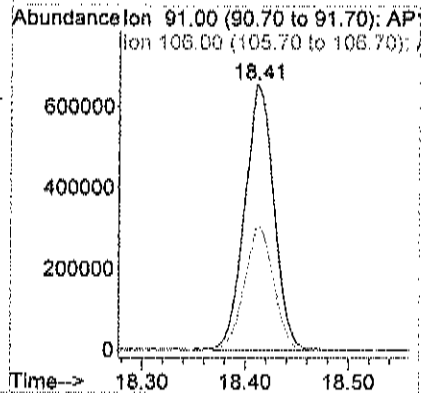
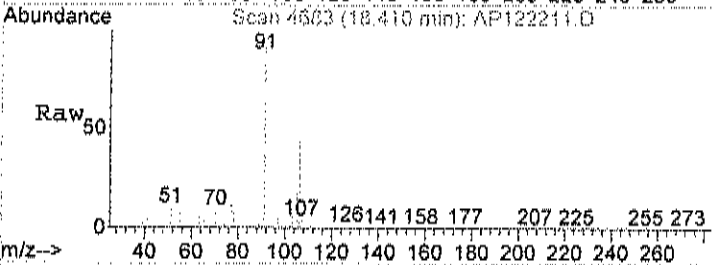
#61
Styrene
Concen: 0.36 ppb
RT: 18.38 min Scan# 4672
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

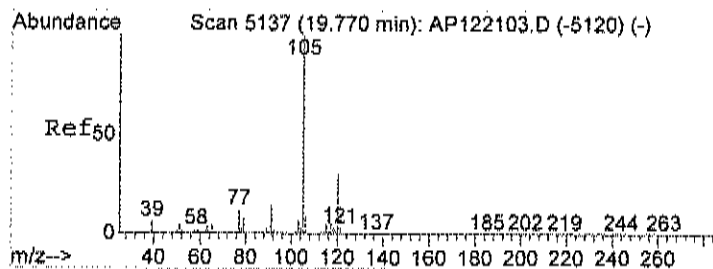
Tgt Ion: 104 Resp: 130969
Ion Ratio Lower Upper
104 100
78 101.6 35.3 75.3#



#63
o-xylene
Concen: 2.42 ppb
RT: 18.41 min Scan# 4683
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

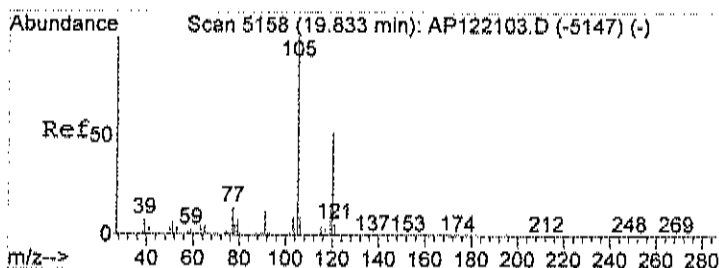
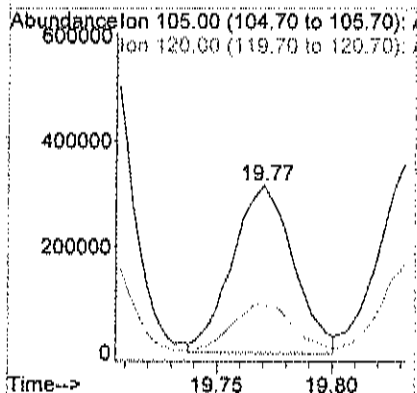
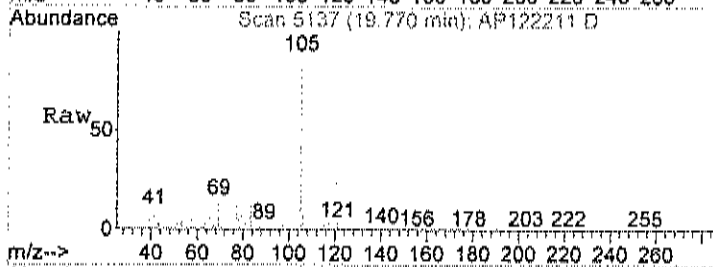
Tgt Ion: 91 Resp: 1291555
Ion Ratio Lower Upper
91 100
106 46.5 26.6 66.6





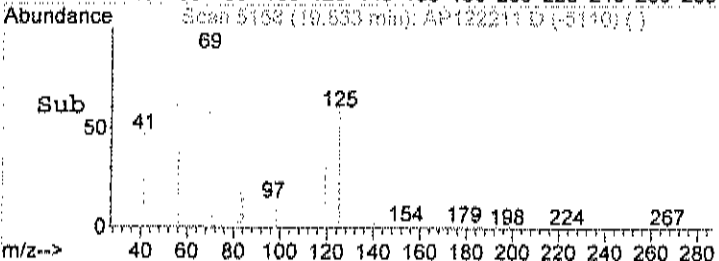
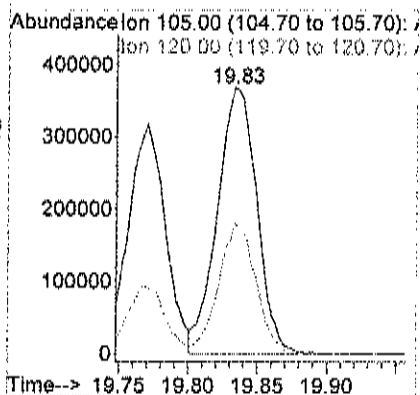
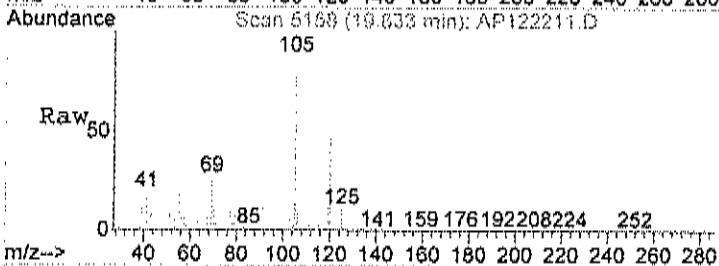
#69
4-ethyltoluene
Concen: 0.91 ppb
RT: 19.77 min Scan# 5137
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

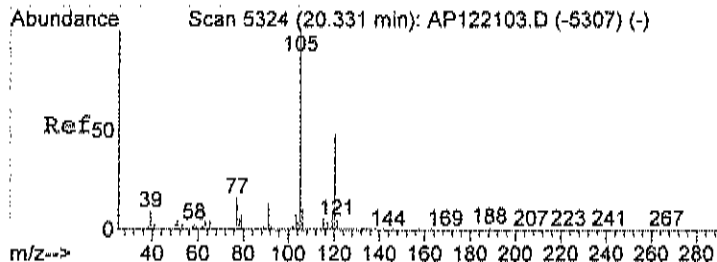
Tgt Ion:105 Resp: 585110
Ion Ratio Lower Upper
105 100
120 30.7 10.2 50.2



#70
1,3,5-trimethylbenzene
Concen: 1.28 ppb
RT: 19.83 min Scan# 5158
Delta R.T. -0.01 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

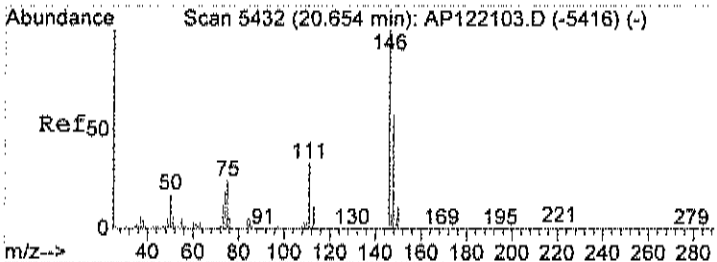
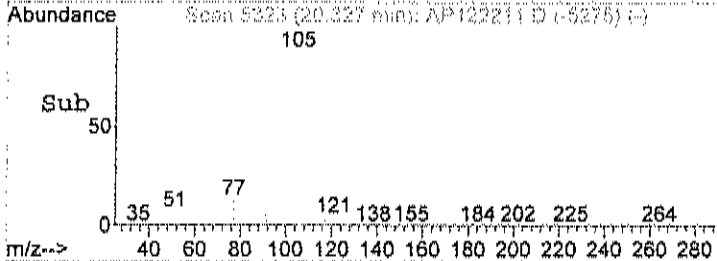
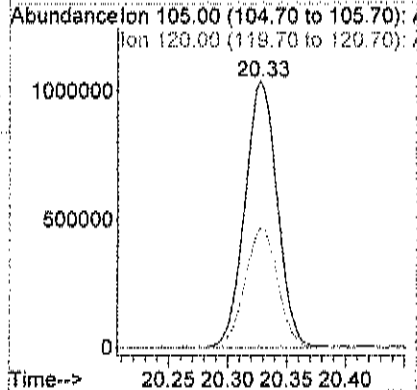
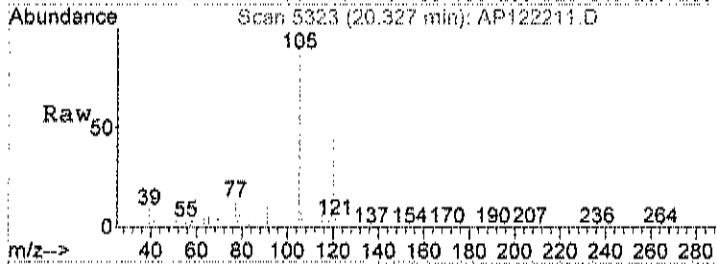
Tgt Ion:105 Resp: 727551
Ion Ratio Lower Upper
105 100
120 46.5 27.6 67.6





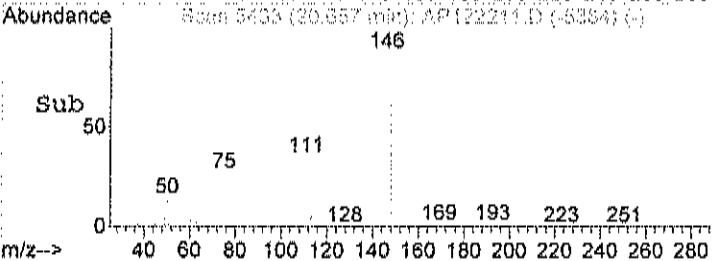
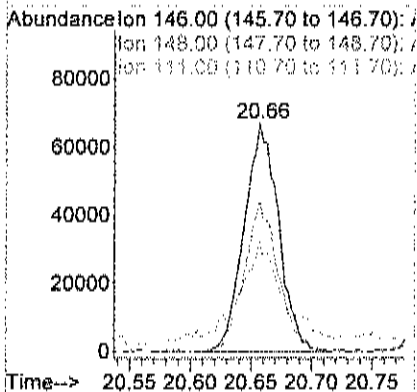
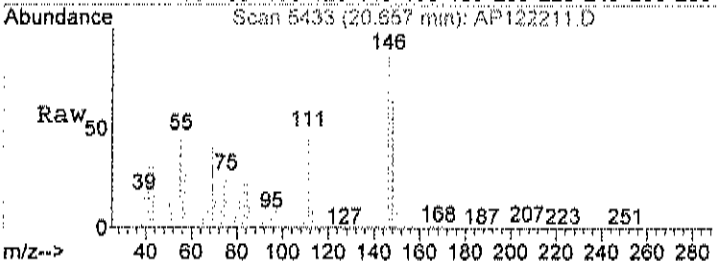
#71
1,2,4-trimethylbenzene
Concen: 4.51 ppb
RT: 20.33 min Scan# 5323
Delta R.T. -0.01 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

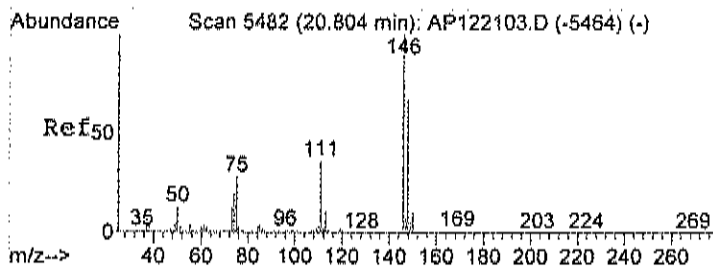
Tgt Ion: 105 Resp: 1969084
Ion Ratio Lower Upper
105 100
120 45.5 25.3 65.3



#72
1,3-dichlorobenzene
Concen: 0.32 ppb
RT: 20.66 min Scan# 5433
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

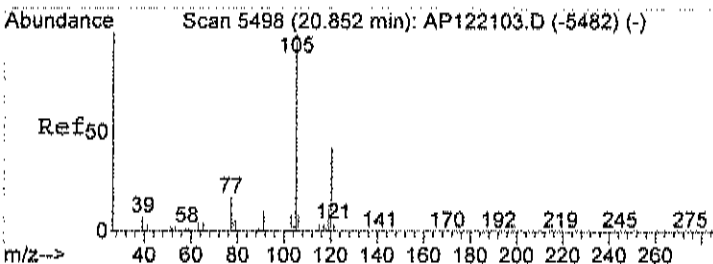
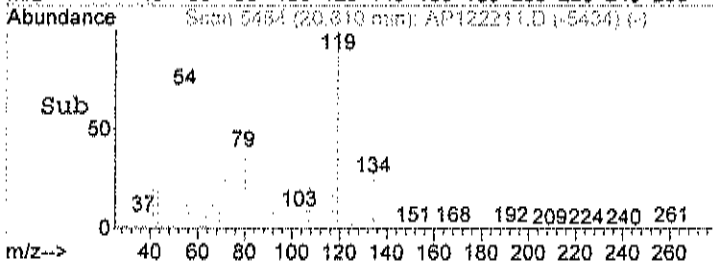
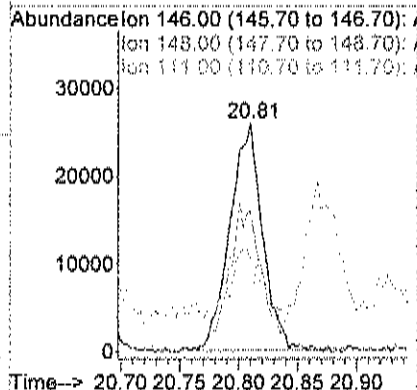
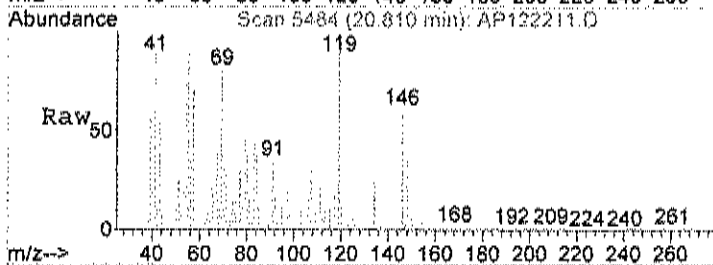
Tgt Ion: 146 Resp: 132170
Ion Ratio Lower Upper
146 100
148 64.5 43.6 83.6
111 48.5 19.9 59.9





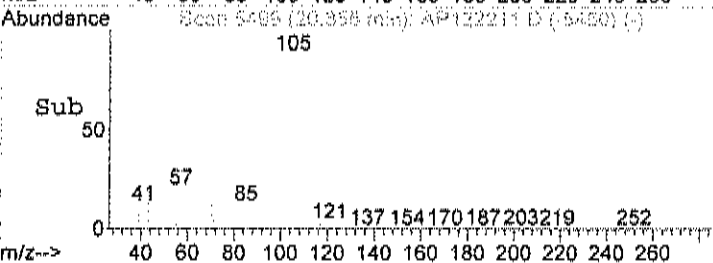
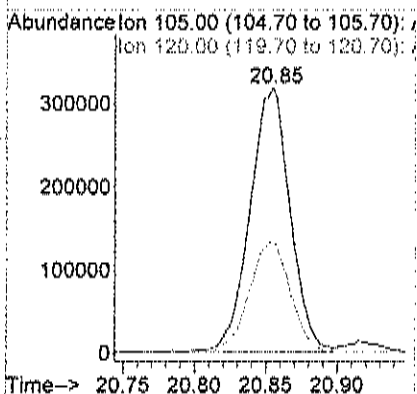
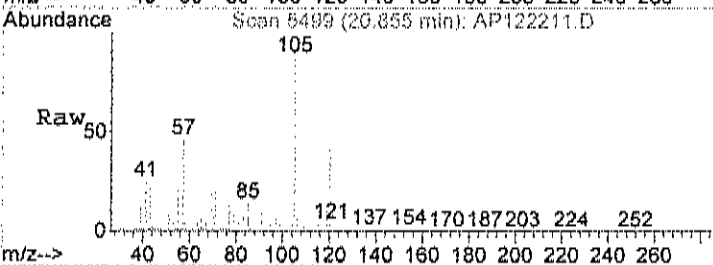
#74
1,4-dichlorobenzene
Concen: 0.12 ppb
RT: 20.81 min Scan# 5484
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

Tgt Ion	Ratio	Lower	Upper
146	100		
148	63.5	44.4	84.4
111	32.5	19.9	59.9



#75
1,2,3-trimethylbenzene
Concen: 1.22 ppb
RT: 20.85 min Scan# 5499
Delta R.T. -0.00 min
Lab File: AP122211.D
Acq: 22 Dec 2018 3:59 pm

Tgt Ion	Ratio	Lower	Upper
105	100		
120	44.7	31.6	52.8



Data File : C:\HPCHEM\1\DATA\AP122319.D

Vial: 19

Acq On : 23 Dec 2018 10:13 pm

Operator: RJP

Sample : C1812057-015A 9x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:38 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	36912	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.65	114	161803	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	193095	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	102286m	0.77	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	77.00%

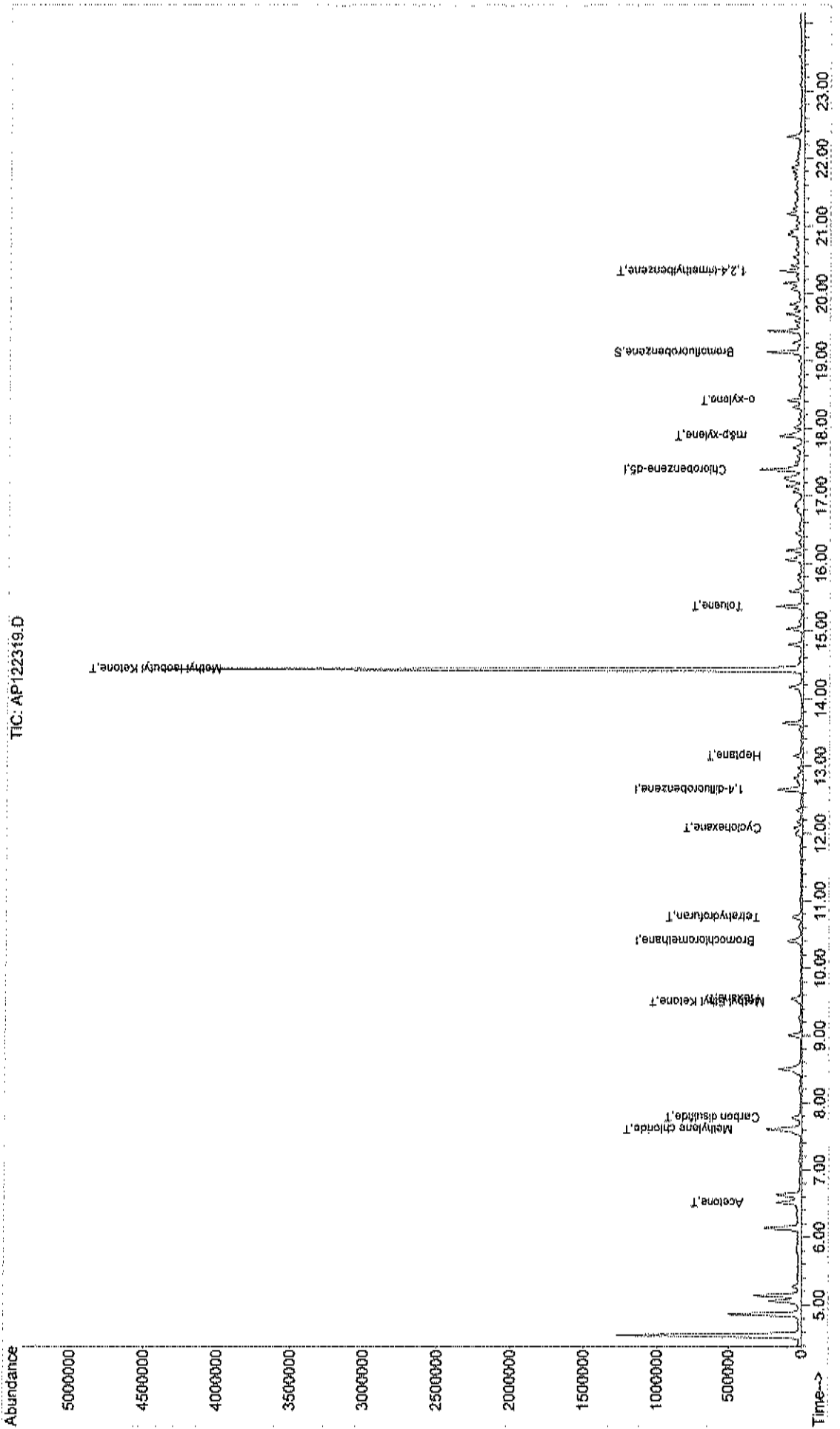
Target Compounds

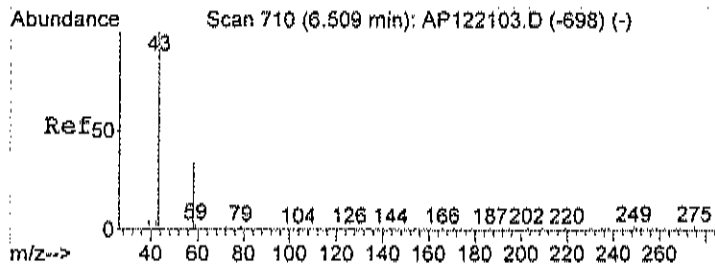
	R.T.	QIon	Response	Conc	Units	Qvalue
15) Acetone	6.52	58	82312	3.64	ppb	# 85
21) Methylene chloride	7.61	84	170514	2.93	ppb	96
23) Carbon disulfide	7.78	76	128180	0.99	ppb	93
28) Methyl Ethyl Ketone	9.49	72	10721m	0.46	ppb	
30) Hexane	9.56	57	33117	0.45	ppb	# 79
33) Tetrahydrofuran	10.76	42	21830	0.44	ppb	85
37) Cyclohexane	12.09	56	22747m	0.30	ppb	
43) Heptane	13.15	43	18729	0.20	ppb	87
51) Toluene	15.37	92	78725	0.53	ppb	95
52) Methyl Isobutyl Ketone	14.42	43	3773592	22.63	ppb	98
59) m&p-xylene	17.90	91	116614	0.45	ppb	100
63) o-xylene	18.42	91	59596	0.18	ppb	95
71) 1,2,4-trimethylbenzene	20.33	105	83775	0.31	ppb	94

Data File : C:\HPCHEM\1\DATA\AP122319.D
 Acq On : 23 Dec 2018 10:13 pm
 Sample : C1812057-015A 9x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 31 10:29 2018

Vial: 19
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00
 Quant Results File: AD10_1UG.RES

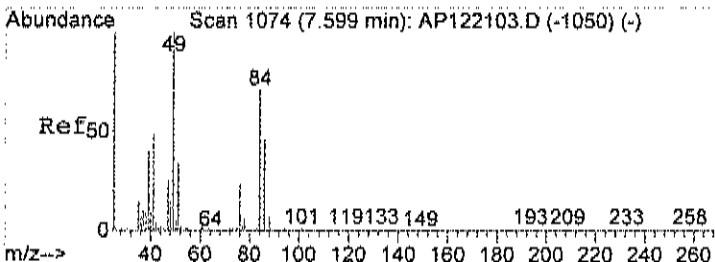
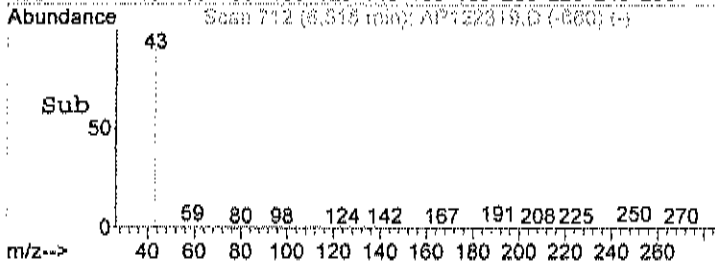
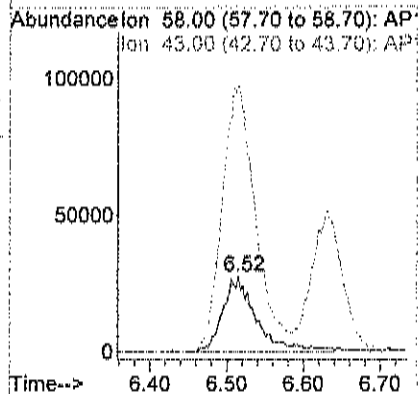
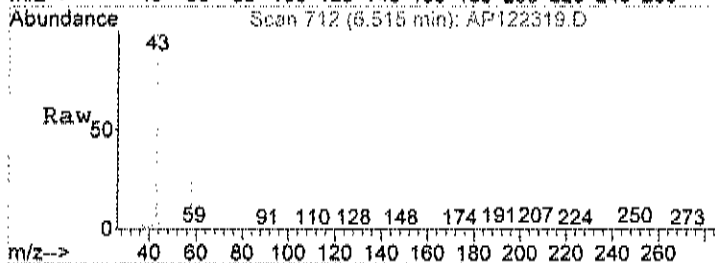
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





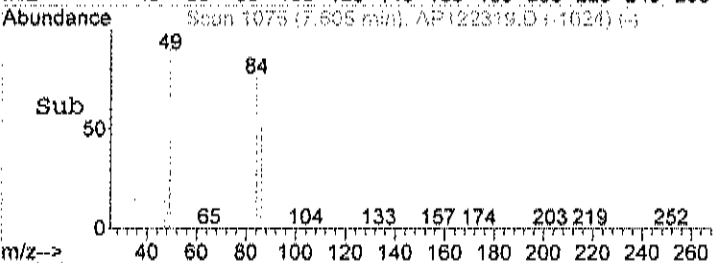
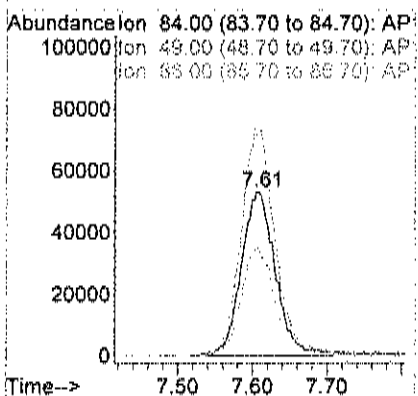
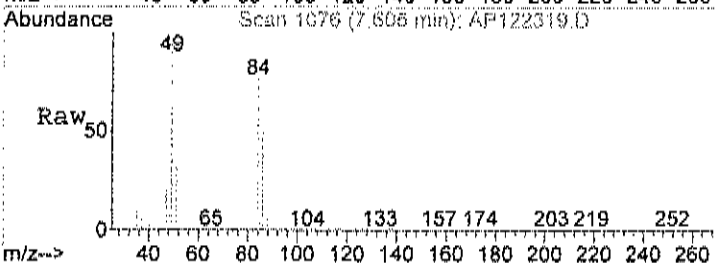
#15
Acetone
Concen: 3.64 ppb
RT: 6.52 min Scan# 712
Delta R.T. 0.01 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

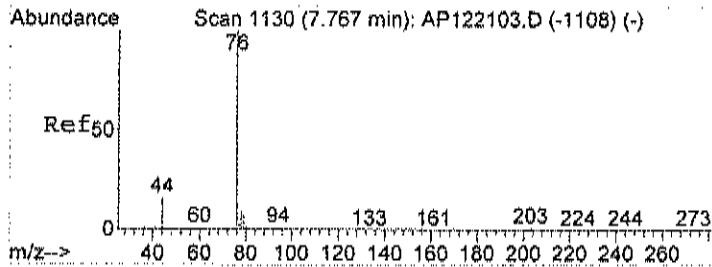
Tgt Ion: 58 Resp: 82312
Ion Ratio Lower Upper
58 100
43 359.0 298.2 358.2#



#21
Methylene chloride
Concen: 2.93 ppb
RT: 7.61 min Scan# 1076
Delta R.T. 0.01 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

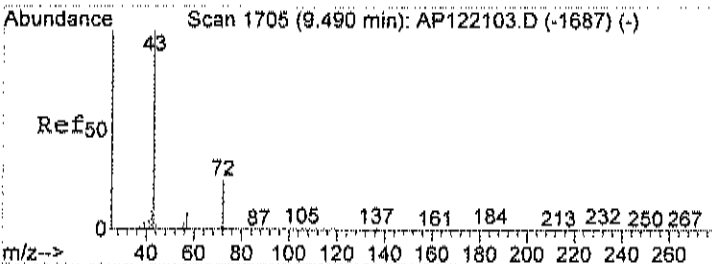
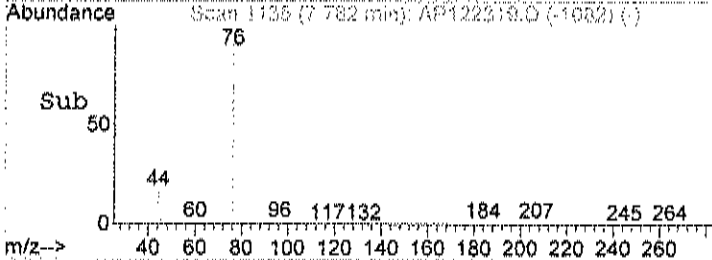
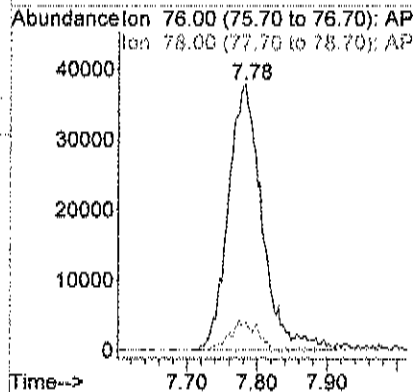
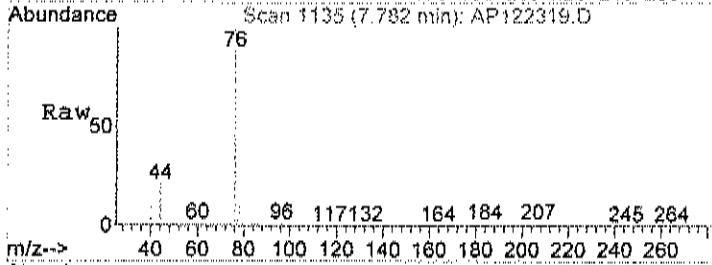
Tgt Ion: 84 Resp: 170514
Ion Ratio Lower Upper
84 100
49 135.8 121.5 161.5
86 64.8 46.0 86.0





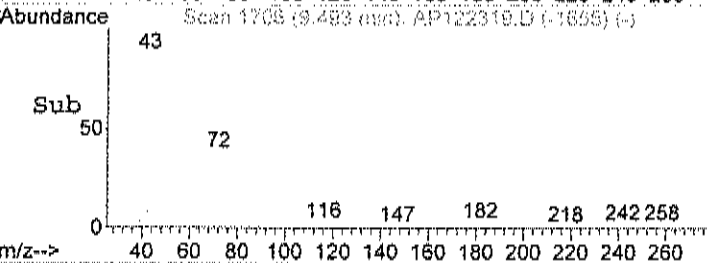
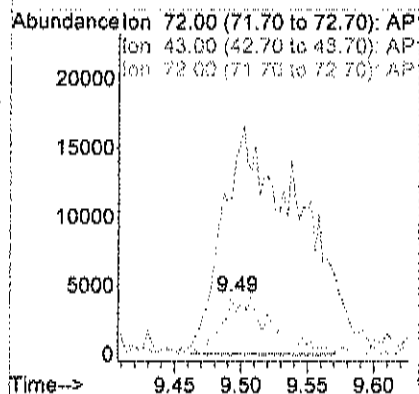
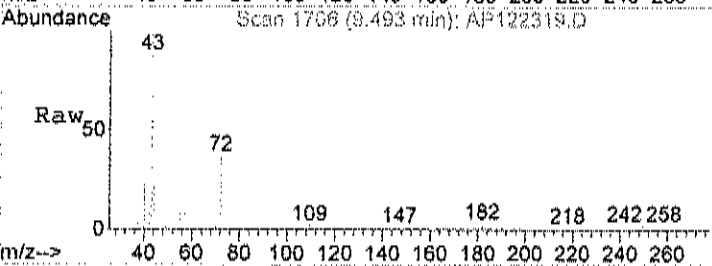
#23
Carbon disulfide
Concen: 0.99 ppb
RT: 7.78 min Scan# 1135
Delta R.T. 0.01 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

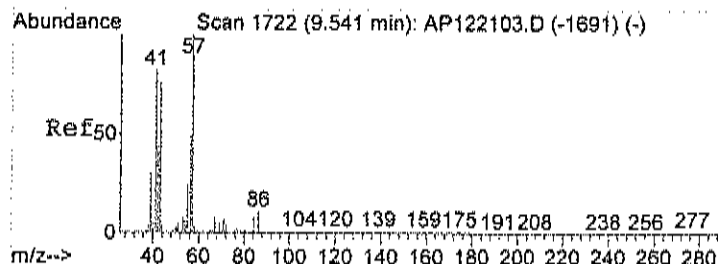
Tgt Ion: 76 Resp: 128180
Ion Ratio Lower Upper
76 100
78 6.8 0.0 29.2



#28
Methyl Ethyl Ketone
Concen: 0.46 ppb m
RT: 9.49 min Scan# 1706
Delta R.T. 0.00 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

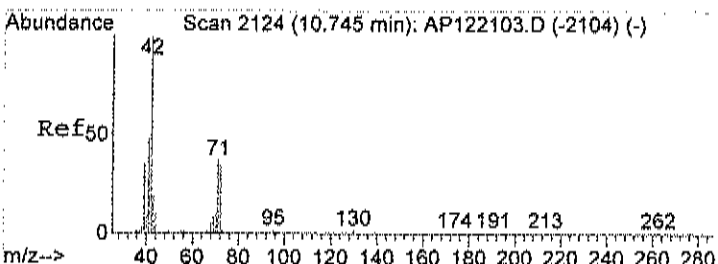
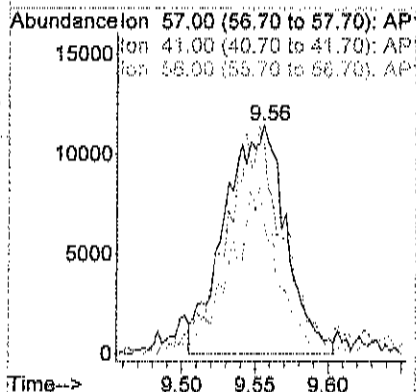
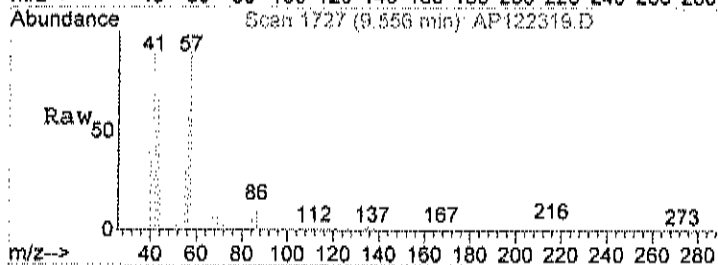
Tgt Ion: 72 Resp: 10721
Ion Ratio Lower Upper
72 100
43 622.4 0.0 20.0#
72 68.2 80.0 120.0#





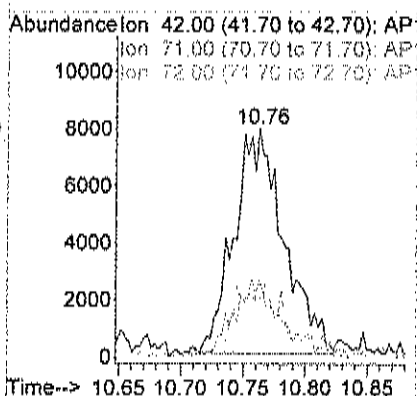
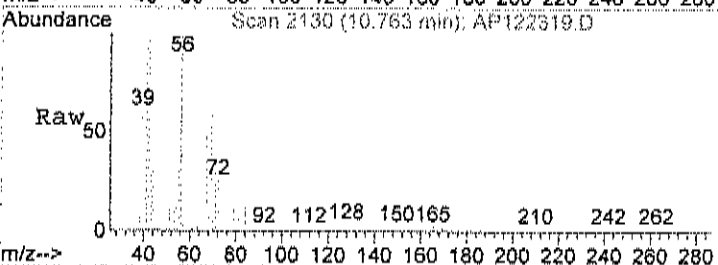
#30
Hexane
Concen: 0.45 ppb
RT: 9.56 min Scan# 1727
Delta R.T. 0.01 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

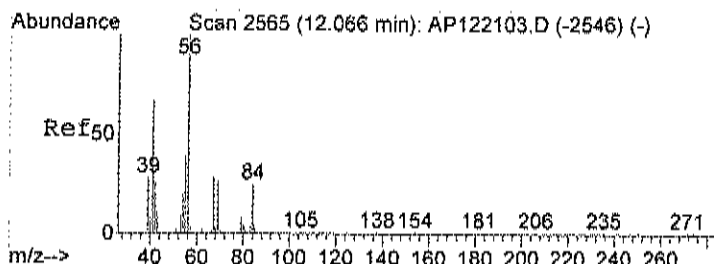
Tgt Ion	Ratio	Lower	Upper
57	100		
41	91.4	49.7	89.7#
56	38.3	27.9	67.9



#33
Tetrahydrofuran
Concen: 0.44 ppb
RT: 10.76 min Scan# 2130
Delta R.T. 0.01 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

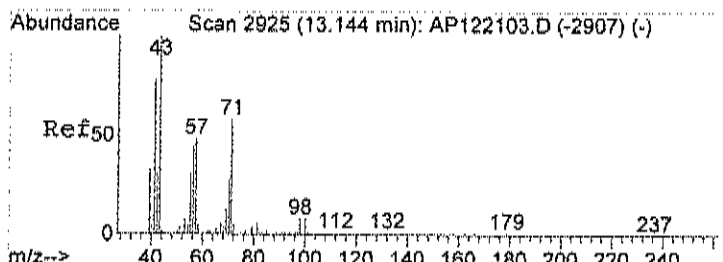
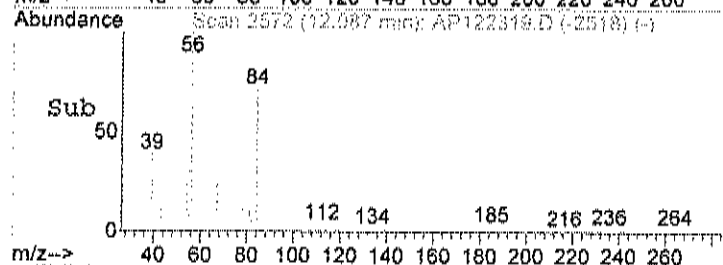
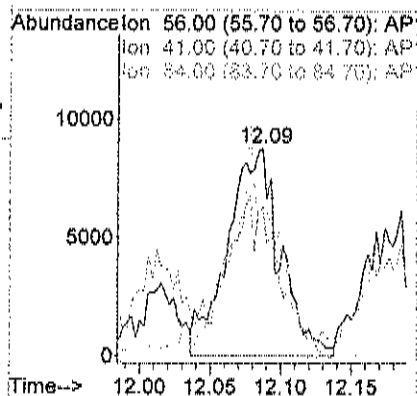
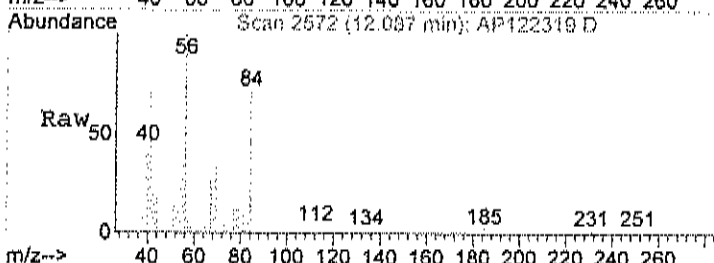
Tgt Ion	Ratio	Lower	Upper
42	100		
71	33.5	21.4	61.4
72	31.8	22.4	62.4





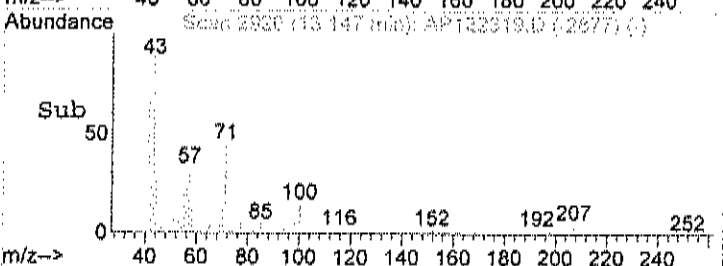
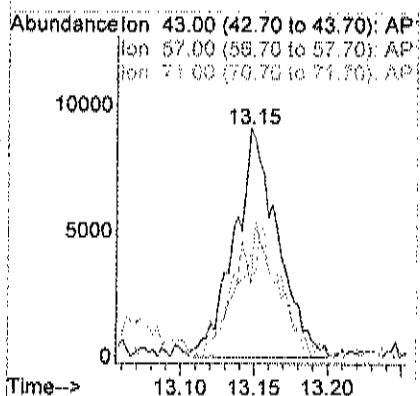
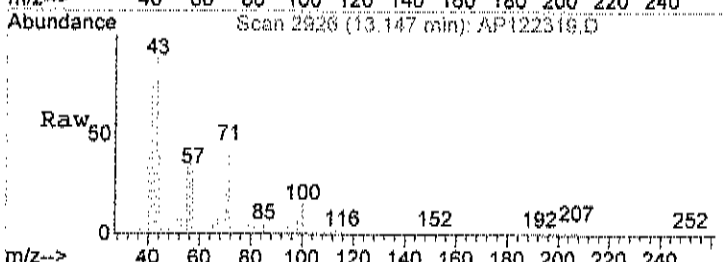
#37
Cyclohexane
Concen: 0.30 ppb m
RT: 12.09 min Scan# 2572
Delta R.T. 0.01 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

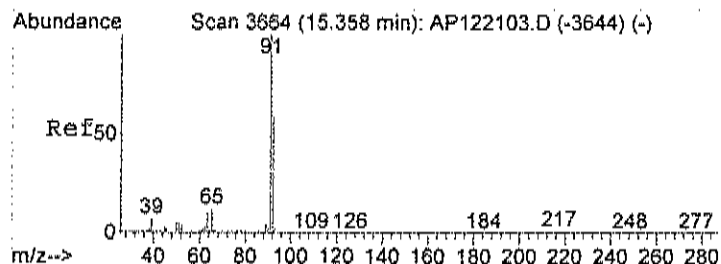
Tgt Ion	Ratio	Lower	Upper
56	100		
41	0.0	36.3	76.3#
84	0.0	56.0	96.0#



#43
Heptane
Concen: 0.20 ppb
RT: 13.15 min Scan# 2926
Delta R.T. -0.00 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

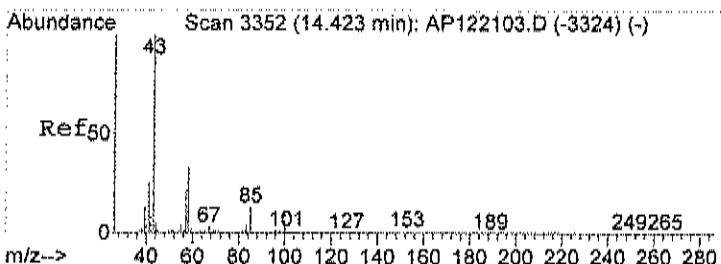
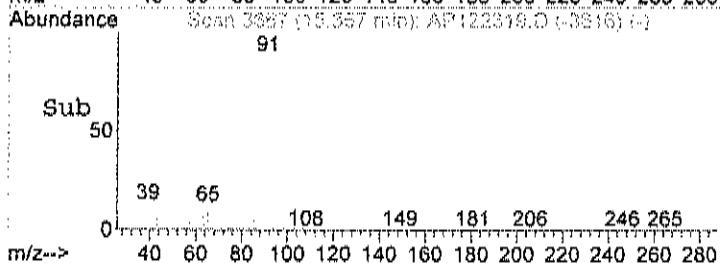
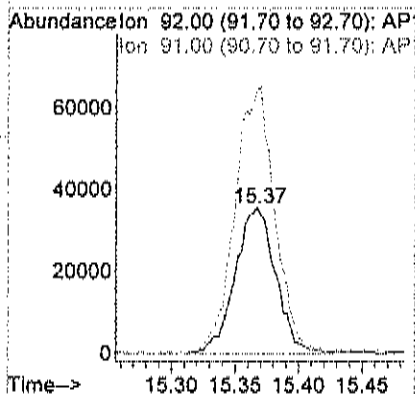
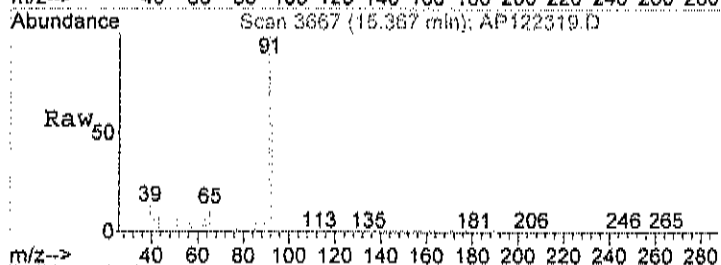
Tgt Ion	Ratio	Lower	Upper
43	100		
57	33.7	32.7	72.7
71	55.7	35.6	75.6





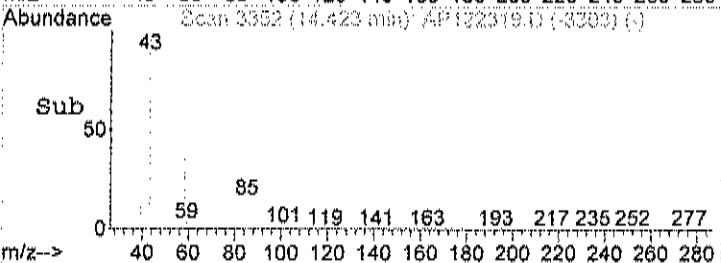
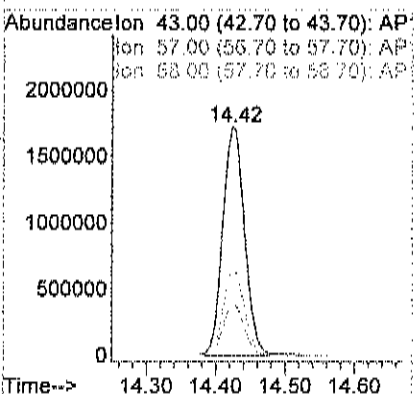
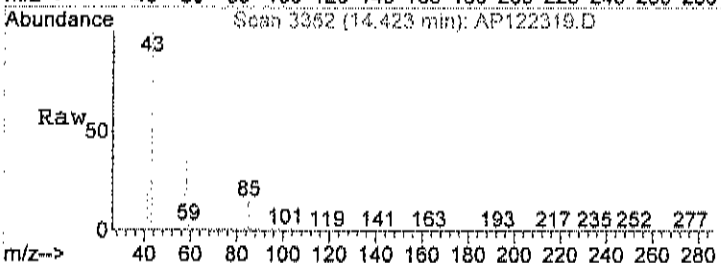
#51
Toluene
Concen: 0.53 ppb
RT: 15.37 min Scan# 3667
Delta R.T. 0.00 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

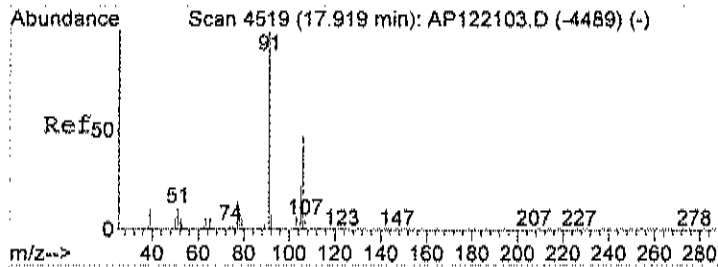
Tgt Ion: 92 Resp: 78725
Ion Ratio Lower Upper
92 100
91 181.2 154.3 194.3



#52
Methyl Isobutyl Ketone
Concen: 22.63 ppb
RT: 14.42 min Scan# 3352
Delta R.T. -0.00 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

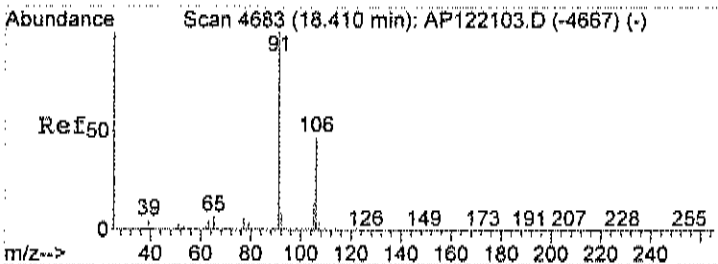
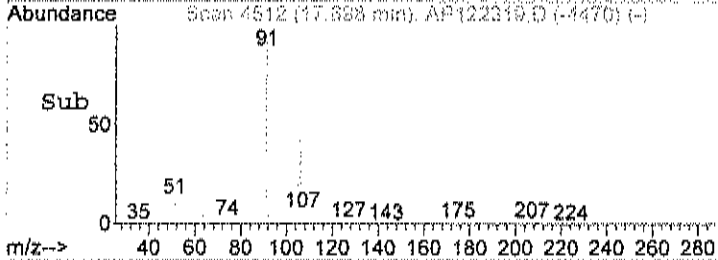
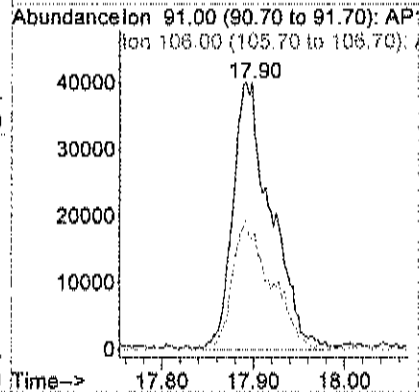
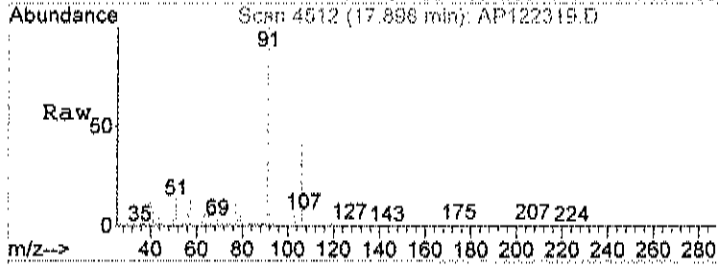
Tgt Ion: 43 Resp: 3773592
Ion Ratio Lower Upper
43 100
57 22.1 3.5 43.5
58 36.9 17.9 57.9





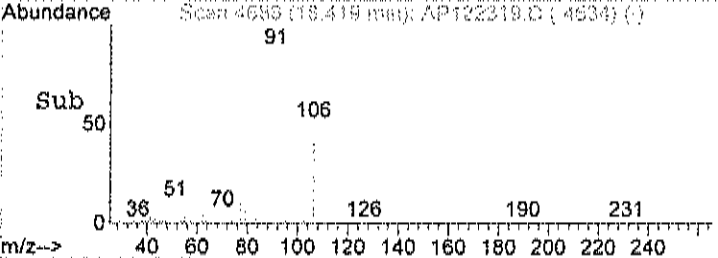
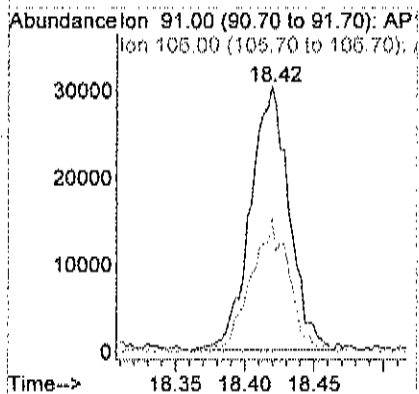
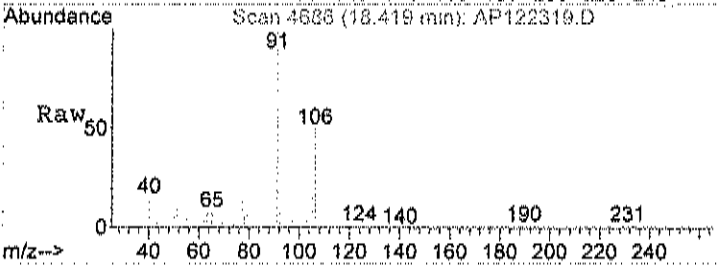
#59
m&p-xylene
Concen: 0.45 ppb
RT: 17.90 min Scan# 4512
Delta R.T. -0.02 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

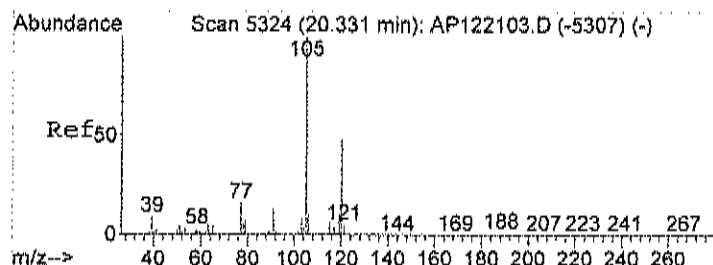
Tgt Ion: 91 Resp: 116614
Ion Ratio Lower Upper
91 100
106 48.1 28.3 68.3



#63
o-xylene
Concen: 0.18 ppb
RT: 18.42 min Scan# 4686
Delta R.T. 0.01 min
Lab File: AP122319.D
Acq: 23 Dec 2018 10:13 pm

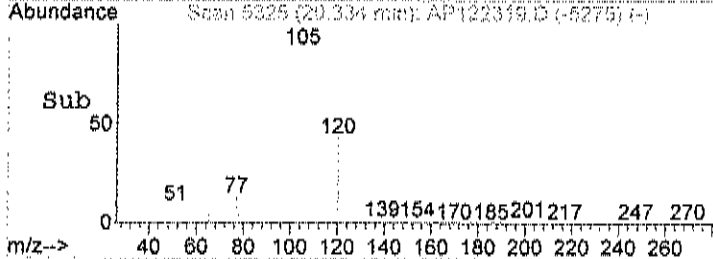
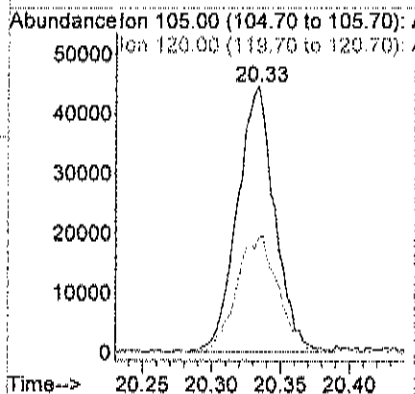
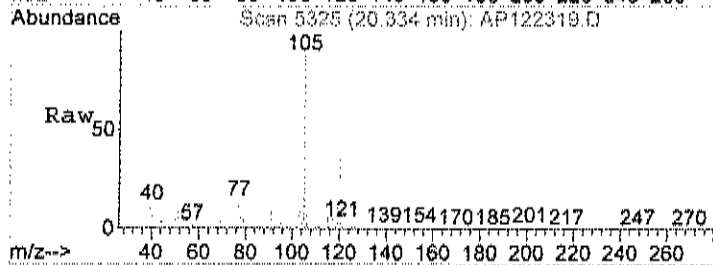
Tgt Ion: 91 Resp: 59596
Ion Ratio Lower Upper
91 100
106 49.7 26.6 66.6





#71
 1,2,4-trimethylbenzene
 Concen: 0.31 ppb
 RT: 20.33 min Scan# 5325
 Delta R.T. -0.00 min
 Lab File: AP122319.D
 Acq: 23 Dec 2018 10:13 pm

Tgt Ion	Resp	Ion	Ratio	Lower	Upper
105	83775	105	100		
120		120	49.1	25.3	65.3



Data File : C:\HPCHEM\1\DATA\AP122320.D

Vial: 20

Acq On : 23 Dec 2018 10:49 pm

Operator: RJP

Sample : C1812057-015A 90x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:39 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	34694	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	151048	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	119552	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	58842m	0.72	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	72.00%

Target Compounds

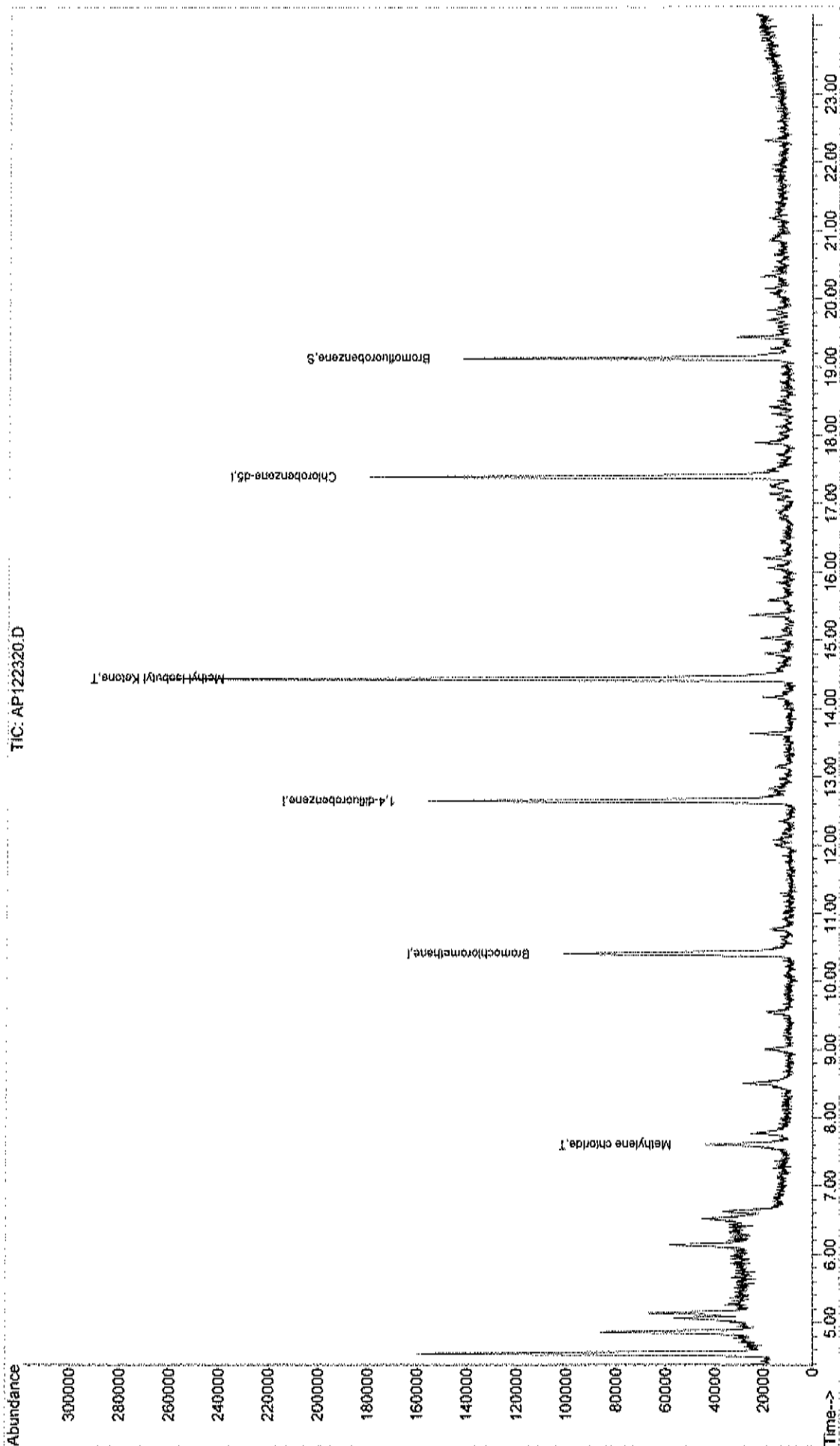
					Qvalue
21) Methylene chloride	7.60	84	20547	0.38	ppb 99
52) Methyl Isobutyl Ketone	14.44	43	234016	2.27	ppb 92

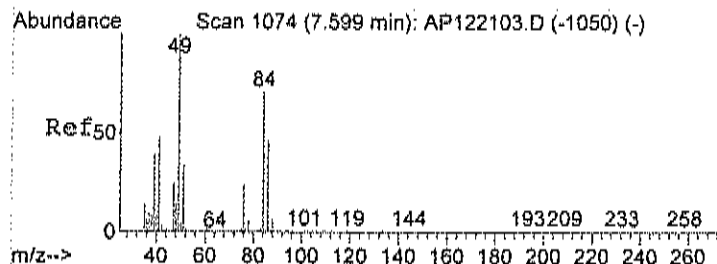
Data File : C:\HPCHEM\1\DATA\AP122320.D
Acq On : 23 Dec 2018 10:49 pm
Sample : C1812057-015A 90x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 10:03 2018

Vial: 20
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

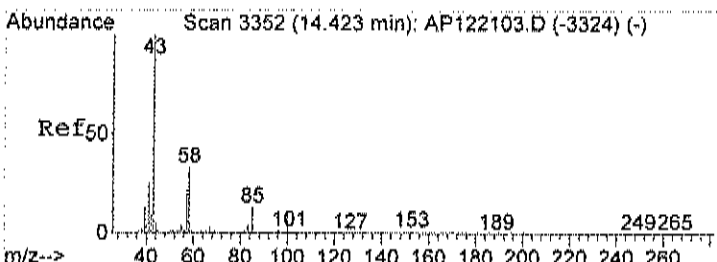
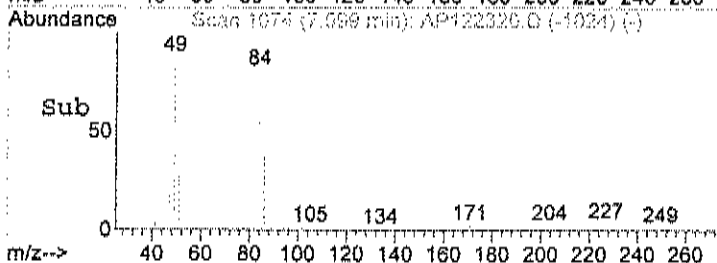
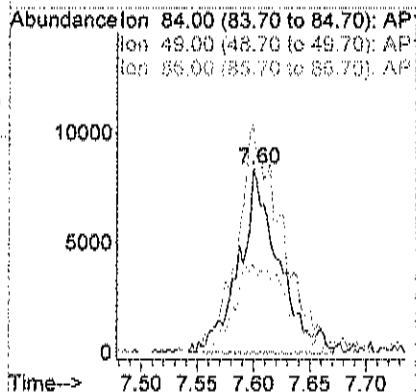
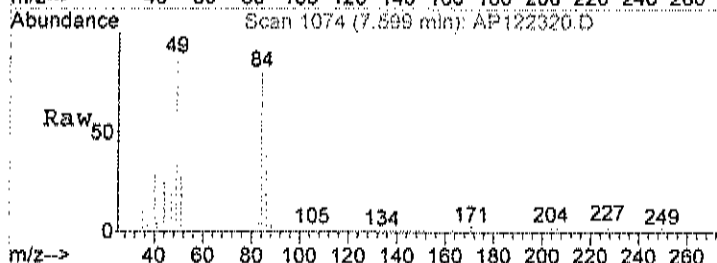
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





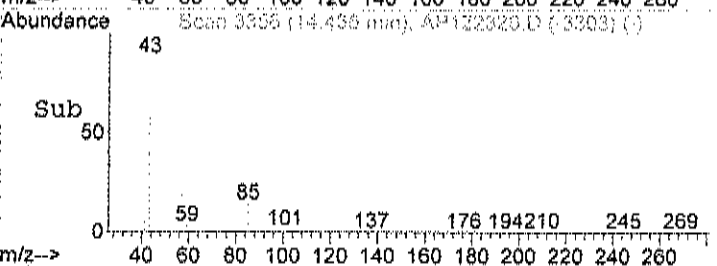
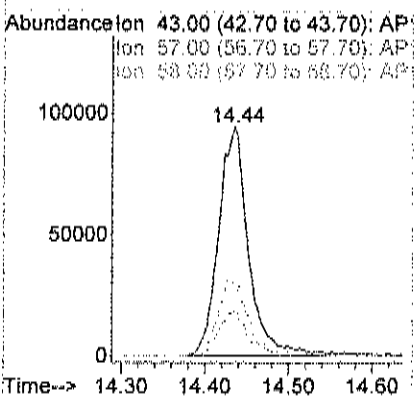
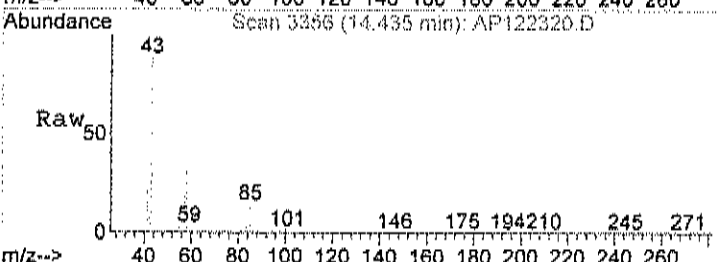
#21
Methylene chloride
Concen: 0.38 ppb
RT: 7.60 min Scan# 1074
Delta R.T. -0.00 min
Lab File: AP122320.D
Acq: 23 Dec 2018 10:49 pm

Tgt Ion	Ratio	Lower	Upper
84	100		
49	141.6	121.5	161.5
86	63.8	46.0	86.0



#52
Methyl Isobutyl Ketone
Concen: 2.27 ppb
RT: 14.44 min Scan# 3356
Delta R.T. 0.01 min
Lab File: AP122320.D
Acq: 23 Dec 2018 10:49 pm

Tgt Ion	Ratio	Lower	Upper
43	100		
57	19.1	3.5	43.5
58	33.9	17.9	57.9



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122321.D

Vial: 21

Acq On : 23 Dec 2018 11:26 pm

Operator: RJP

Sample : C1812057-015A 180x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 26 14:09:40 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	33304	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	140948	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	106674	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	51718m	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%

Target Compounds

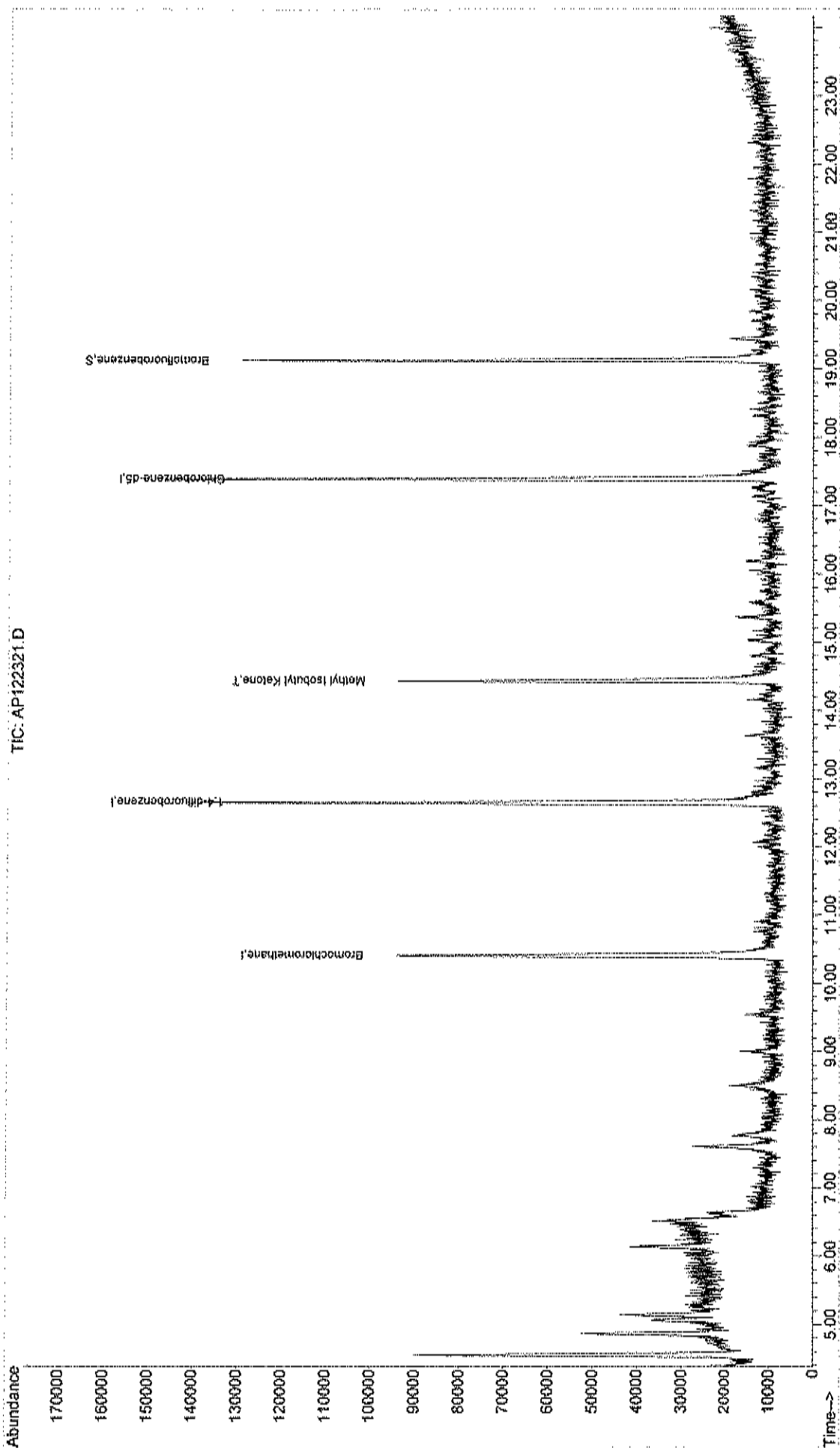
52) Methyl Isobutyl Ketone	14.43	43	82753	0.90	ppb	Qvalue 90
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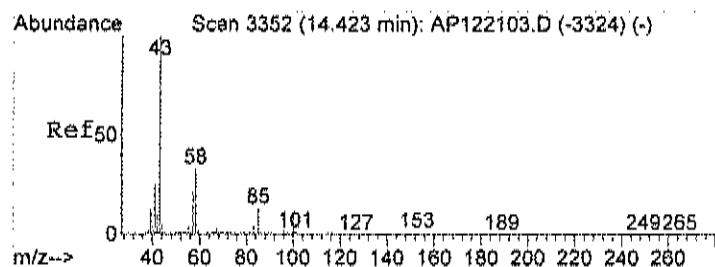
Data File : C:\HPCHEM\1\DATA\AP122321.D
Acq On : 23 Dec 2018 11:26 pm
Sample : C1812057-015A 180x
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 31 10:03 2018

Vial: 21
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

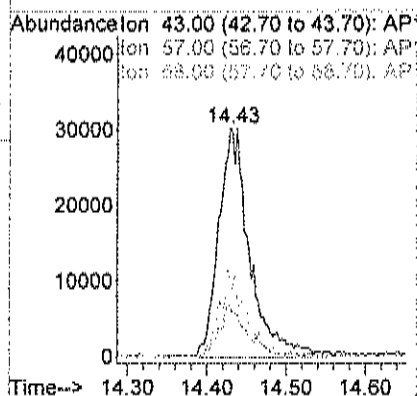
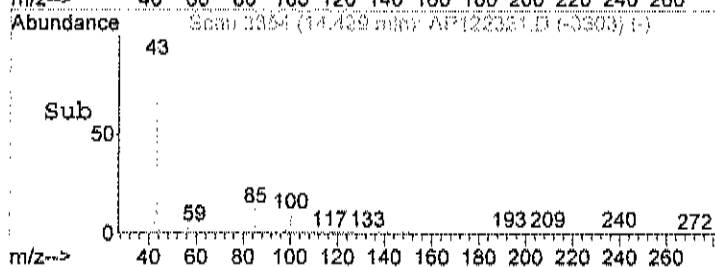
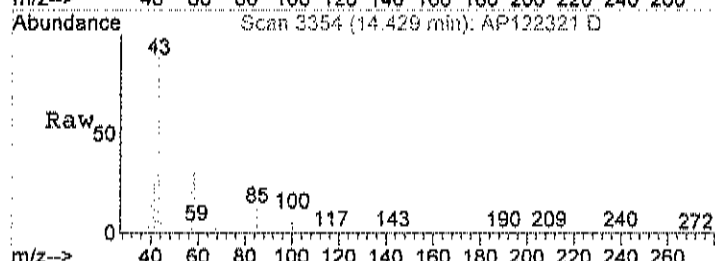
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





#52
Methyl Isobutyl Ketone
Concen: 0.90 ppb
RT: 14.43 min Scan# 3354
Delta R.T. 0.00 min
Lab File: AP122321.D
Acq: 23 Dec 2018 11:26 pm

Tgt Ion: 43 Resp: 82753
Ion Ratio Lower Upper
43 100
57 20.0 3.5 43.5
58 30.9 17.9 57.9



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75	%		1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	0.17	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,1,2-Trichloroethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,1-Dichloroethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,1-Dichloroethene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,2-Dibromoethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,2-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,2-Dichloroethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,2-Dichloropropane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,3-butadiene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,3-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,4-Dichlorobenzene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
1,4-Dioxane	< 0.30	0.30	ppbV		1	12/21/2018 10:33:00 PM
2,2,4-trimethylpentane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
4-ethyltoluene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Acetone	2.9	0.30	ppbV		1	12/21/2018 10:33:00 PM
Allyl chloride	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Benzene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Benzyl chloride	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Bromodichloromethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Bromoform	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Bromomethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Carbon disulfide	0.58	0.15	ppbV		1	12/21/2018 10:33:00 PM
Carbon tetrachloride	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Chlorobenzene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Chloroethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Chloroform	0.37	0.15	ppbV		1	12/21/2018 10:33:00 PM
Chloromethane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM
Cyclohexane	< 0.15	0.15	ppbV		1	12/21/2018 10:33:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 11	2.6	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Freon 12	0.55	0.15		ppbV	1	12/21/2018 10:33:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 10:33:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Methylene chloride	0.60	0.15		ppbV	1	12/21/2018 10:33:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Tetrachloroethylene	2.9	0.15		ppbV	1	12/21/2018 10:33:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Toluene	0.27	0.15		ppbV	1	12/21/2018 10:33:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 10:33:00 PM
Surr. Bromofluorobenzene	77.0	70-130		%REC	1	12/21/2018 10:33:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated,	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	0.93	0.82		ug/m3	1	12/21/2018 10:33:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 10:33:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 10:33:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 10:33:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 10:33:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/21/2018 10:33:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 10:33:00 PM
Acetone	6.8	0.71		ug/m3	1	12/21/2018 10:33:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 10:33:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/21/2018 10:33:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 10:33:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 10:33:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 10:33:00 PM
Carbon disulfide	1.8	0.47		ug/m3	1	12/21/2018 10:33:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 10:33:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 10:33:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 10:33:00 PM
Chloroform	1.8	0.73		ug/m3	1	12/21/2018 10:33:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/21/2018 10:33:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 10:33:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 10:33:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 10:33:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 10:33:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 10:33:00 PM
Freon 11	14	0.84		ug/m3	1	12/21/2018 10:33:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 10:33:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 10:33:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-016A

Client Sample ID: SVW-15
Tag Number: 1207,1343
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.7	0.74		ug/m3	1	12/21/2018 10:33:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 10:33:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 10:33:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/21/2018 10:33:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/21/2018 10:33:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 10:33:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 10:33:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 10:33:00 PM
Methylene chloride	2.1	0.52		ug/m3	1	12/21/2018 10:33:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 10:33:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 10:33:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 10:33:00 PM
Tetrachloroethylene	20	1.0		ug/m3	1	12/21/2018 10:33:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 10:33:00 PM
Toluene	1.0	0.57		ug/m3	1	12/21/2018 10:33:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 10:33:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 10:33:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 10:33:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 10:33:00 PM

Qualifiers:	** Quantitation Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Data File : C:\HPCHEM\1\DATA\AP122118.D

Vial: 4

Acq On : 21 Dec 2018 10:33 pm

Operator: RJP

Sample : C1812057-016A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:34 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	39608	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	161437	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	135145	1.00	ppb	0.00

System Monitoring Compounds

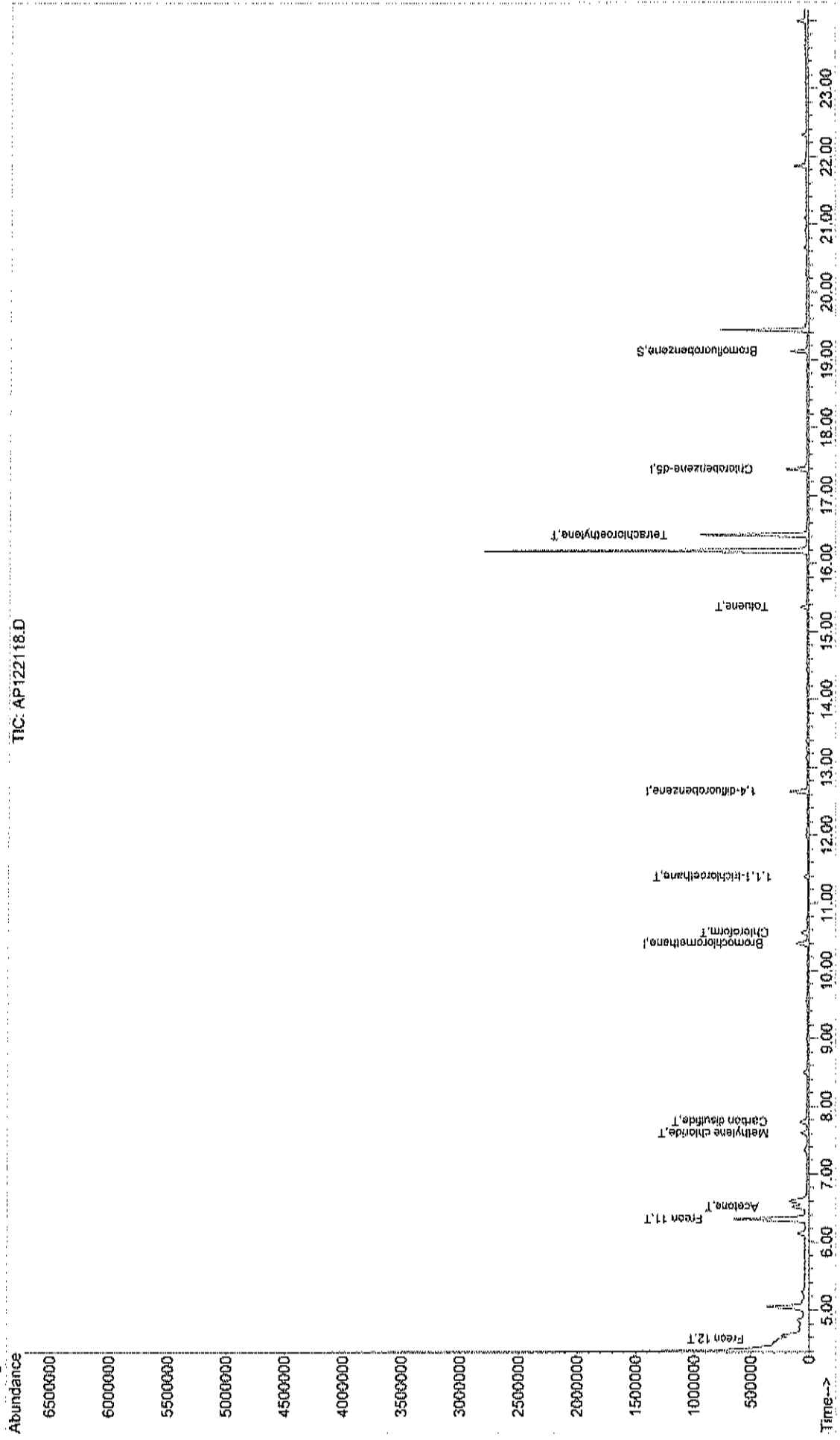
65) Bromofluorobenzene	19.12	95	71081m	0.77	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	77.00%

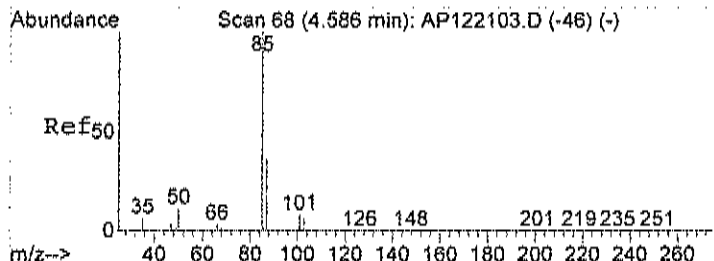
Target Compounds

						Qvalue
3) Freon 12	4.59	85	125935	0.55	ppb	98
14) Freon 11	6.34	101	801649	2.56	ppb	99
15) Acetone	6.52	58	70078	2.88	ppb	93
21) Methylene chloride	7.60	84	37692	0.60	ppb	95
23) Carbon disulfide	7.78	76	81234	0.58	ppb	83
32) Chloroform	10.56	83	54935	0.37	ppb	99
36) 1,1,1-trichloroethane	11.39	97	24479	0.17	ppb	98
51) Toluene	15.37	92	28757	0.27	ppb	93
56) Tetrachloroethylene	16.42	164	244905	2.88	ppb	100

Data File : C:\HPCHEM\1\DATA\AP122118.D
Acq On : 21 Dec 2018 10:33 pm
Sample : C1812057-016A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:03 2018
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

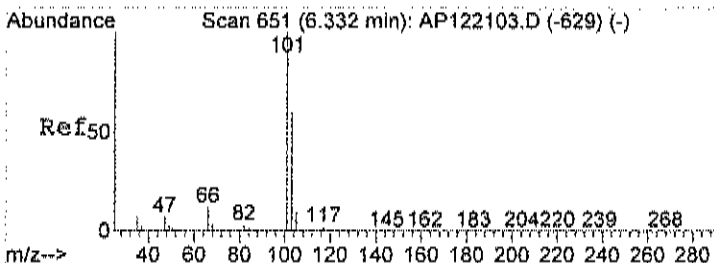
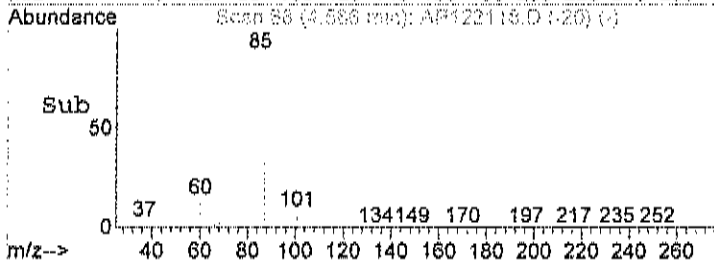
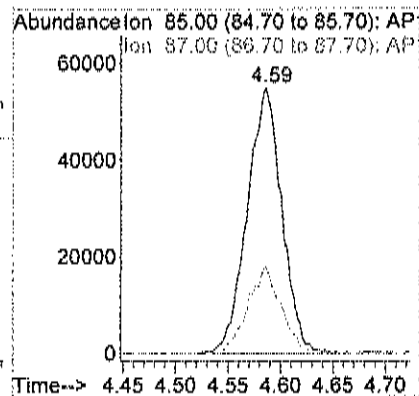
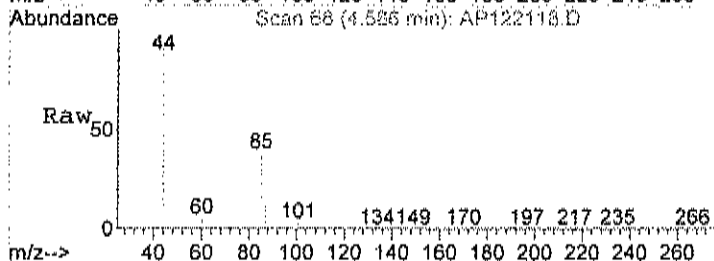
Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: AD10_1UG.RES





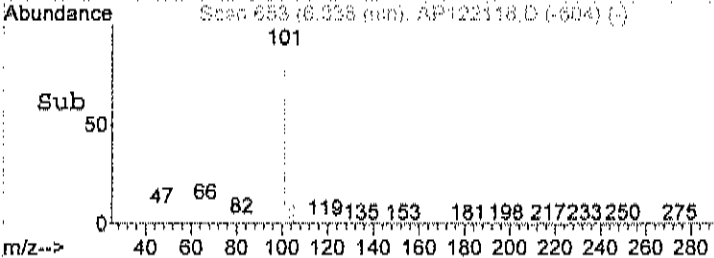
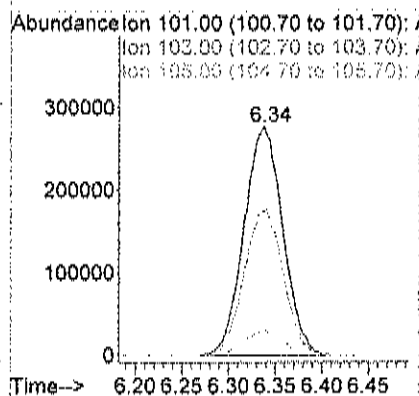
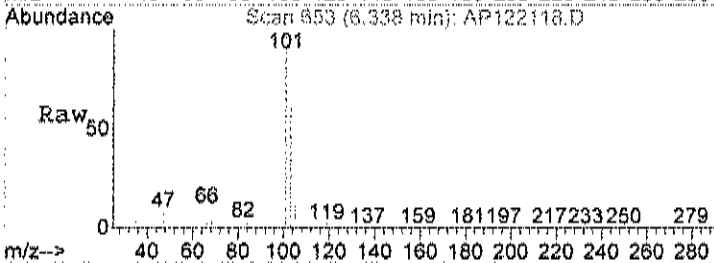
#3
 Freon 12
 Concen: 0.55 ppb
 RT: 4.59 min Scan# 68
 Delta R.T. -0.01 min
 Lab File: AP122118.D
 Acq: 21 Dec 2018 10:33 pm

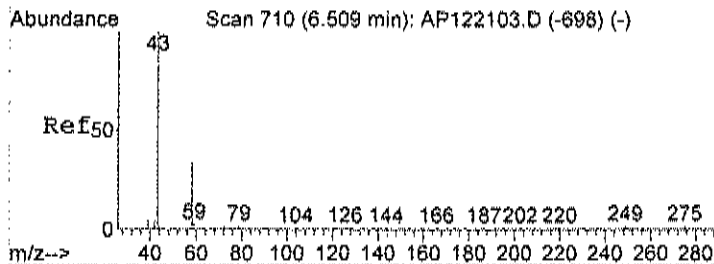
Tgt Ion: 85 Resp: 125935
 Ion Ratio Lower Upper
 85 100
 87 31.3 12.4 52.4



#14
 Freon 11
 Concen: 2.56 ppb
 RT: 6.34 min Scan# 653
 Delta R.T. -0.00 min
 Lab File: AP122118.D
 Acq: 21 Dec 2018 10:33 pm

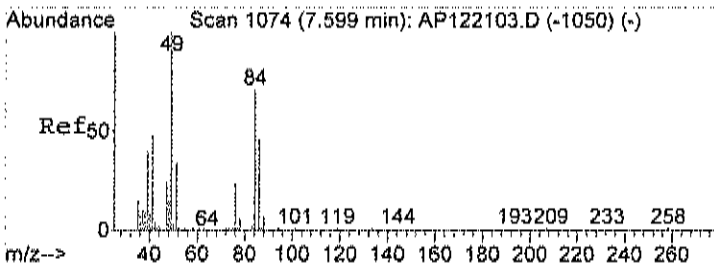
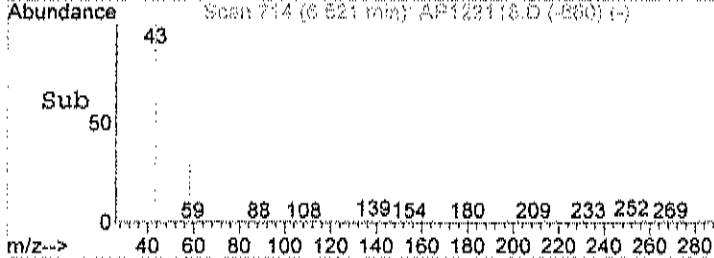
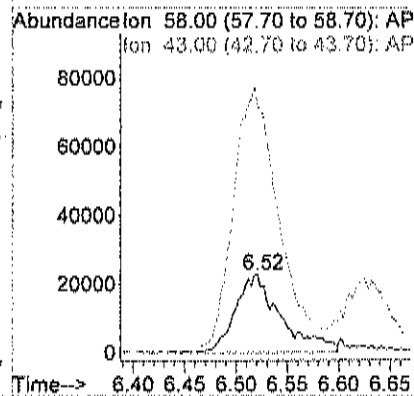
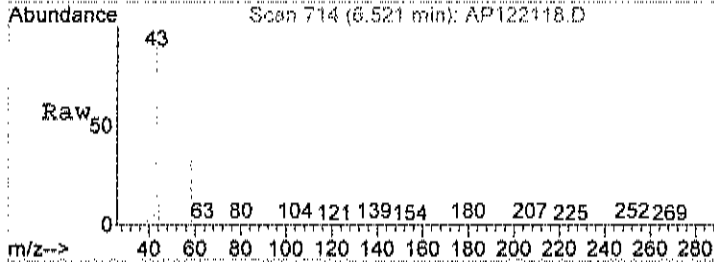
Tgt Ion: 101 Resp: 801649
 Ion Ratio Lower Upper
 101 100
 103 64.3 44.4 84.4
 105 10.9 0.0 31.9





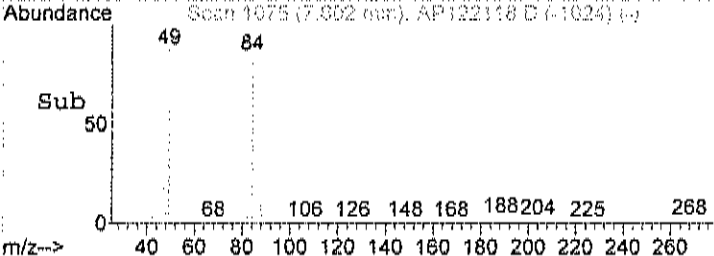
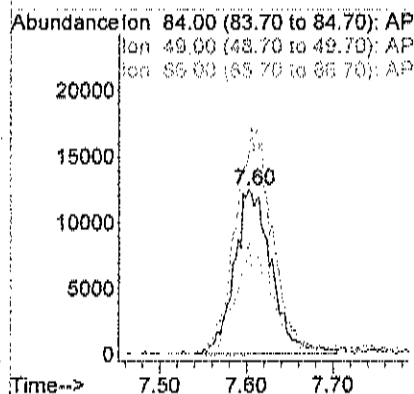
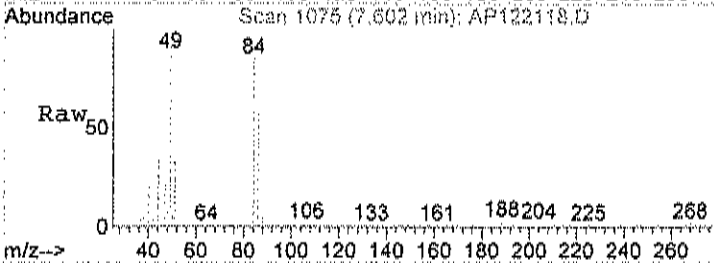
#15
Acetone
Concen: 2.88 ppb
RT: 6.52 min Scan# 714
Delta R.T. 0.01 min
Lab File: AP122118.D
Acq: 21 Dec 2018 10:33 pm

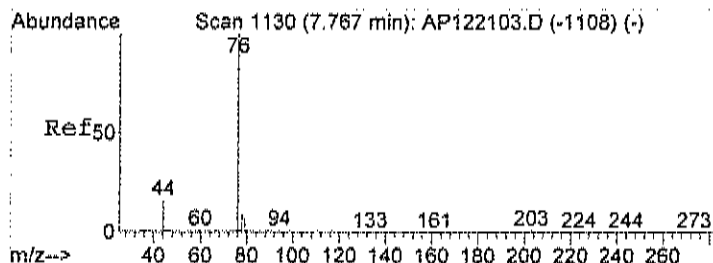
Tgt Ion: 58 Resp: 70078
Ion Ratio Lower Upper
58 100
43 342.0 298.2 358.2



#21
Methylene chloride
Concen: 0.60 ppb
RT: 7.60 min Scan# 1075
Delta R.T. 0.00 min
Lab File: AP122118.D
Acq: 21 Dec 2018 10:33 pm

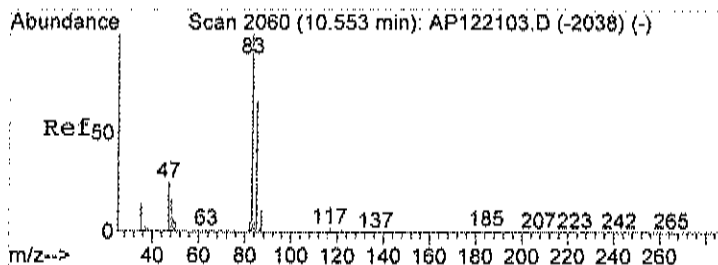
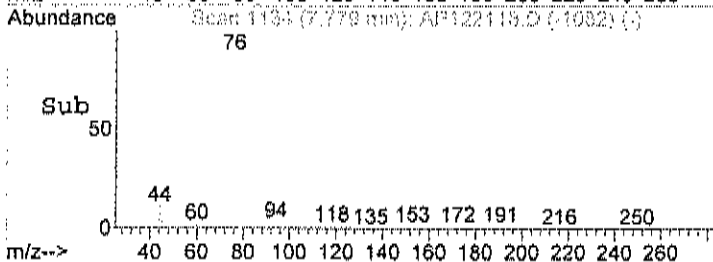
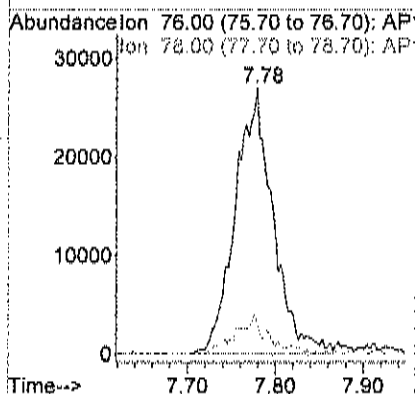
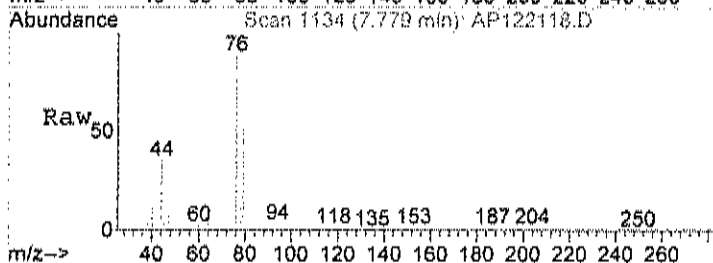
Tgt Ion: 84 Resp: 37692
Ion Ratio Lower Upper
84 100
49 137.1 121.5 161.5
86 60.3 46.0 86.0





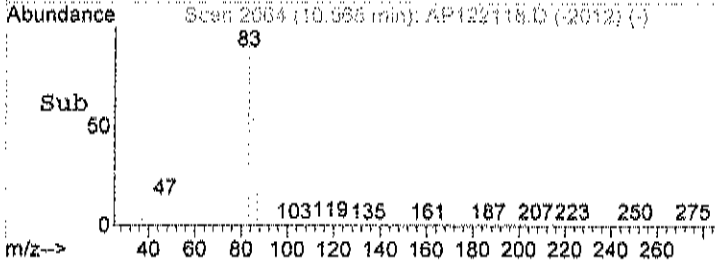
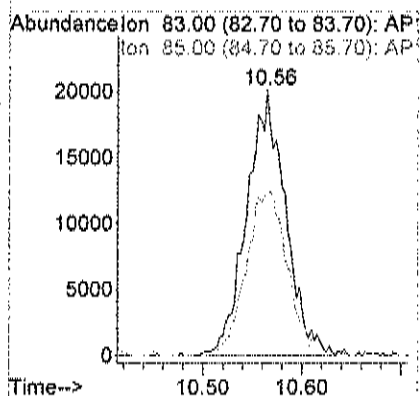
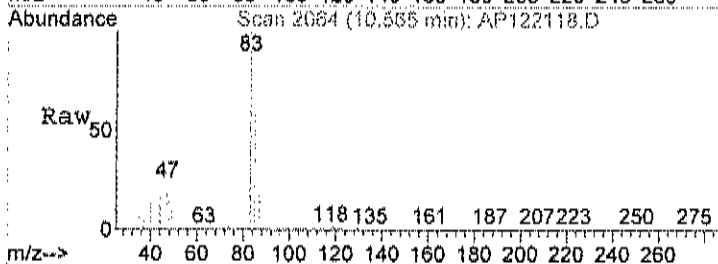
#23
Carbon disulfide
Concen: 0.58 ppb
RT: 7.78 min Scan# 1134
Delta R.T. 0.01 min
Lab File: AP122118.D
Acq: 21 Dec 2018 10:33 pm

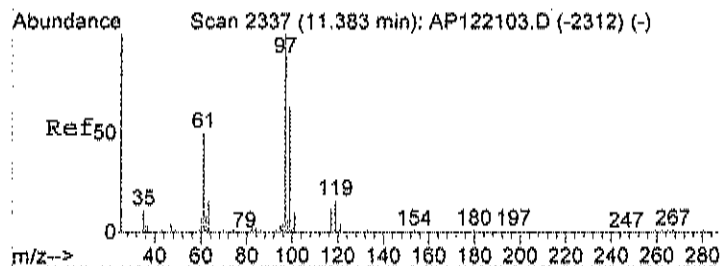
Tgt Ion: 76 Resp: 81234
Ion Ratio Lower Upper
76 100
78 3.1 0.0 29.2



#32
Chloroform
Concen: 0.37 ppb
RT: 10.56 min Scan# 2064
Delta R.T. 0.01 min
Lab File: AP122118.D
Acq: 21 Dec 2018 10:33 pm

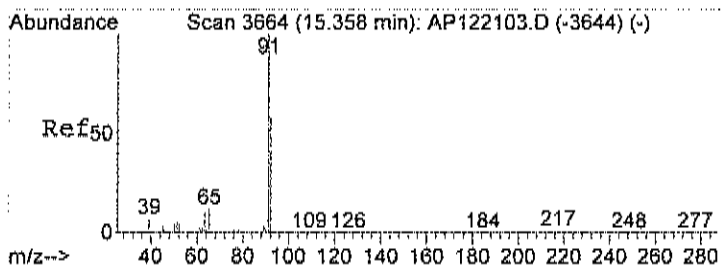
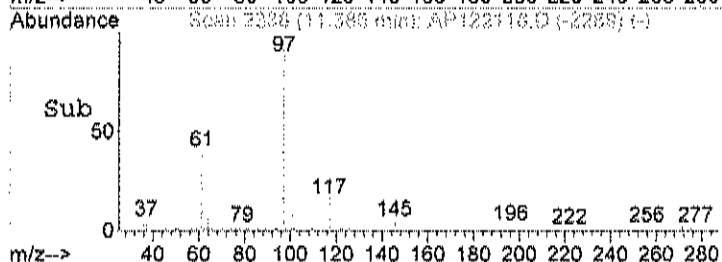
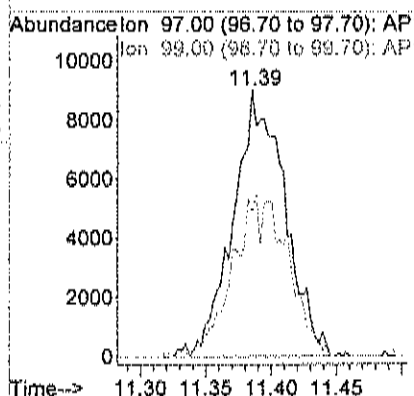
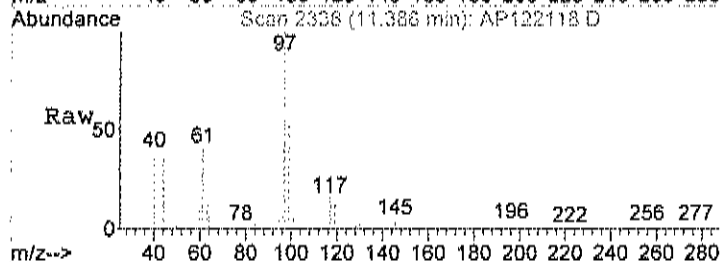
Tgt Ion: 83 Resp: 54935
Ion Ratio Lower Upper
83 100
85 66.3 45.5 85.5





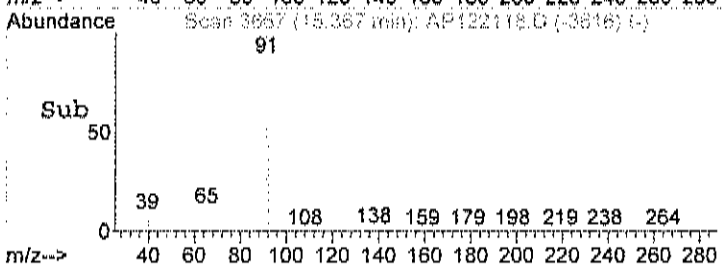
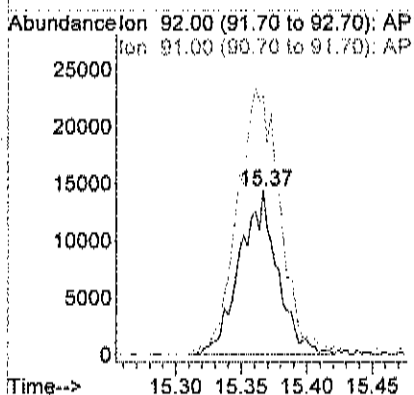
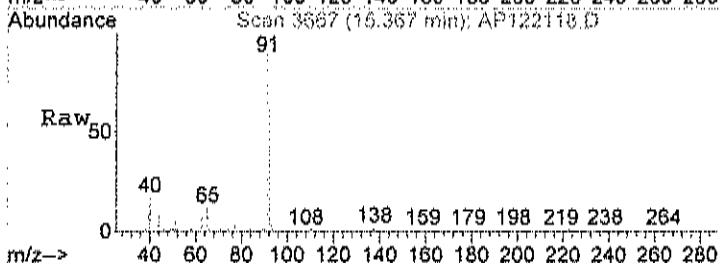
#36
1,1,1-trichloroethane
Concen: 0.17 ppb
RT: 11.39 min Scan# 2338
Delta R.T. -0.00 min
Lab File: AP122118.D
Acq: 21 Dec 2018 10:33 pm

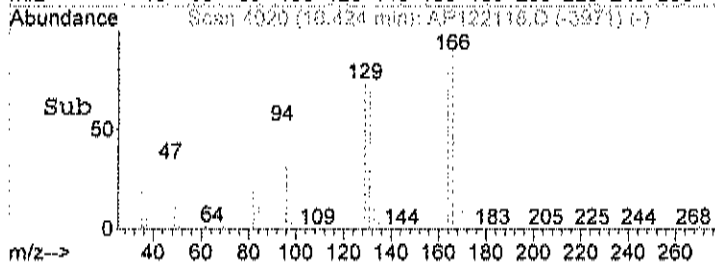
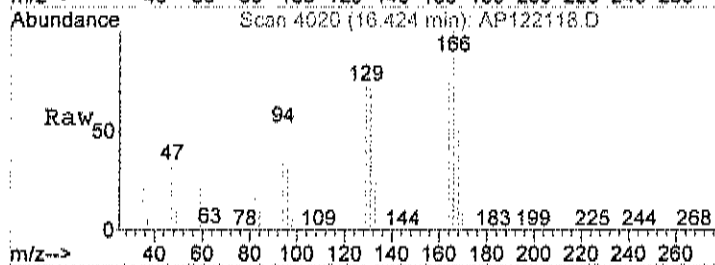
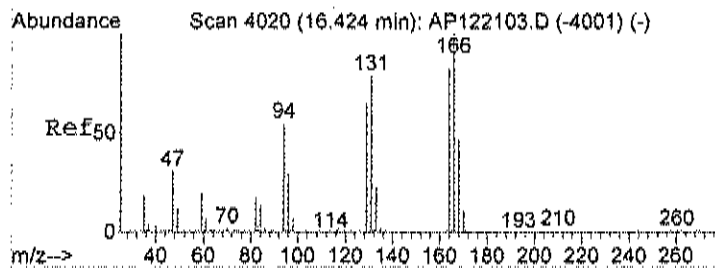
Tgt Ion: 97 Resp: 24479
Ion Ratio Lower Upper
97 100
99 65.3 44.1 84.1



#51
Toluene
Concen: 0.27 ppb
RT: 15.37 min Scan# 3667
Delta R.T. 0.00 min
Lab File: AP122118.D
Acq: 21 Dec 2018 10:33 pm

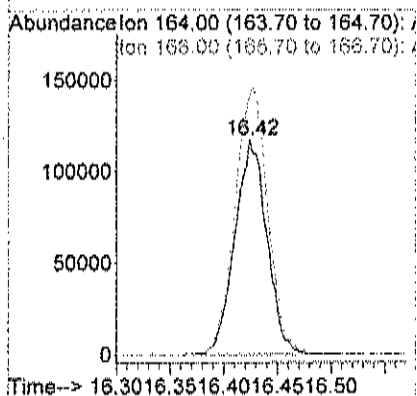
Tgt Ion: 92 Resp: 28757
Ion Ratio Lower Upper
92 100
91 183.9 154.3 194.3





#56
Tetrachloroethylene
Concen: 2.88 ppb
RT: 16.42 min Scan# 4020
Delta R.T. -0.00 min
Lab File: AP122118.D
Acq: 21 Dec 2018 10:33 pm

Tgt Ion:164 Resp: 244905
Ion Ratio Lower Upper
164 100
166 128.1 108.5 148.5



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2,4-Trimethylbenzene	0.11	0.15	J	ppbV	1	12/21/2018 9:13:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
2,2,4-trimethylpentane	0.17	0.15		ppbV	1	12/21/2018 9:13:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Acetone	6.4	1.5		ppbV	5	12/22/2018 10:20:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Benzene	0.32	0.15		ppbV	1	12/21/2018 9:13:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Chloromethane	0.51	0.15		ppbV	1	12/21/2018 9:13:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 11	0.29	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Freon 12	0.51	0.15		ppbV	1	12/21/2018 9:13:00 PM
Heptane	0.12	0.15	J	ppbV	1	12/21/2018 9:13:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Hexane	0.27	0.15		ppbV	1	12/21/2018 9:13:00 PM
Isopropyl alcohol	1.2	0.15		ppbV	1	12/21/2018 9:13:00 PM
m&p-Xylene	0.20	0.30	J	ppbV	1	12/21/2018 9:13:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:13:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Methylene chloride	0.16	0.15		ppbV	1	12/21/2018 9:13:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Tetrachloroethylene	0.17	0.15		ppbV	1	12/21/2018 9:13:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Toluene	0.67	0.15		ppbV	1	12/21/2018 9:13:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:13:00 PM
Surr: Bromofluorobenzene	76.0	70-130		%REC	1	12/21/2018 9:13:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
IN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits
Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:13:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:13:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:13:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
1,2,4-Trimethylbenzene	0.54	0.74	J	ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:13:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 9:13:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:13:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 9:13:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:13:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
2,2,4-trimethylpentane	0.79	0.70		ug/m3	1	12/21/2018 9:13:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 9:13:00 PM
Acetone	15	3.6		ug/m3	5	12/22/2018 10:20:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 9:13:00 PM
Benzene	1.0	0.48		ug/m3	1	12/21/2018 9:13:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 9:13:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 9:13:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 9:13:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 9:13:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 9:13:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 9:13:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 9:13:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 9:13:00 PM
Chloromethane	1.1	0.31		ug/m3	1	12/21/2018 9:13:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:13:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 9:13:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 9:13:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 9:13:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 9:13:00 PM
Freon 11	1.6	0.84		ug/m3	1	12/21/2018 9:13:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 9:13:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 9:13:00 PM

Qualifiers:	** Quantitation Limit	. Results reported are not blank corrected
B	Analyte detected in the associated Method Blank	E Estimated Value above quantitation range
H	Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limit
JN	Non-routine analyte. Quantitation estimated.	ND Not Detected at the Limit of Detection
S	Spike Recovery outside accepted recovery limits	

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-017A

Client Sample ID: AS-1
Tag Number: 1176,1172
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.5	0.74		ug/m3	1	12/21/2018 9:13:00 PM
Heptane	0.49	0.61	J	ug/m3	1	12/21/2018 9:13:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 9:13:00 PM
Hexane	0.95	0.53		ug/m3	1	12/21/2018 9:13:00 PM
Isopropyl alcohol	3.0	0.37		ug/m3	1	12/21/2018 9:13:00 PM
m&p-Xylene	0.87	1.3	J	ug/m3	1	12/21/2018 9:13:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 9:13:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:13:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 9:13:00 PM
Methylene chloride	0.56	0.52		ug/m3	1	12/21/2018 9:13:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 9:13:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 9:13:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 9:13:00 PM
Tetrachloroethylene	1.2	1.0		ug/m3	1	12/21/2018 9:13:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 9:13:00 PM
Toluene	2.5	0.57		ug/m3	1	12/21/2018 9:13:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:13:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:13:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 9:13:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 9:13:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Data File : C:\HPCHEM\1\DATA\AP122116.D

Vial: 2

Acq On : 21 Dec 2018 9:13 pm

Operator: RJP

Sample : C1812057-017A

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 22 09:29:32 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	38921	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	162949	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	130920	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	67809m	0.76	ppb	0.00
Spiked Amount	1.000	Range	70 ~ 130	Recovery	=	76.00%

Target Compounds

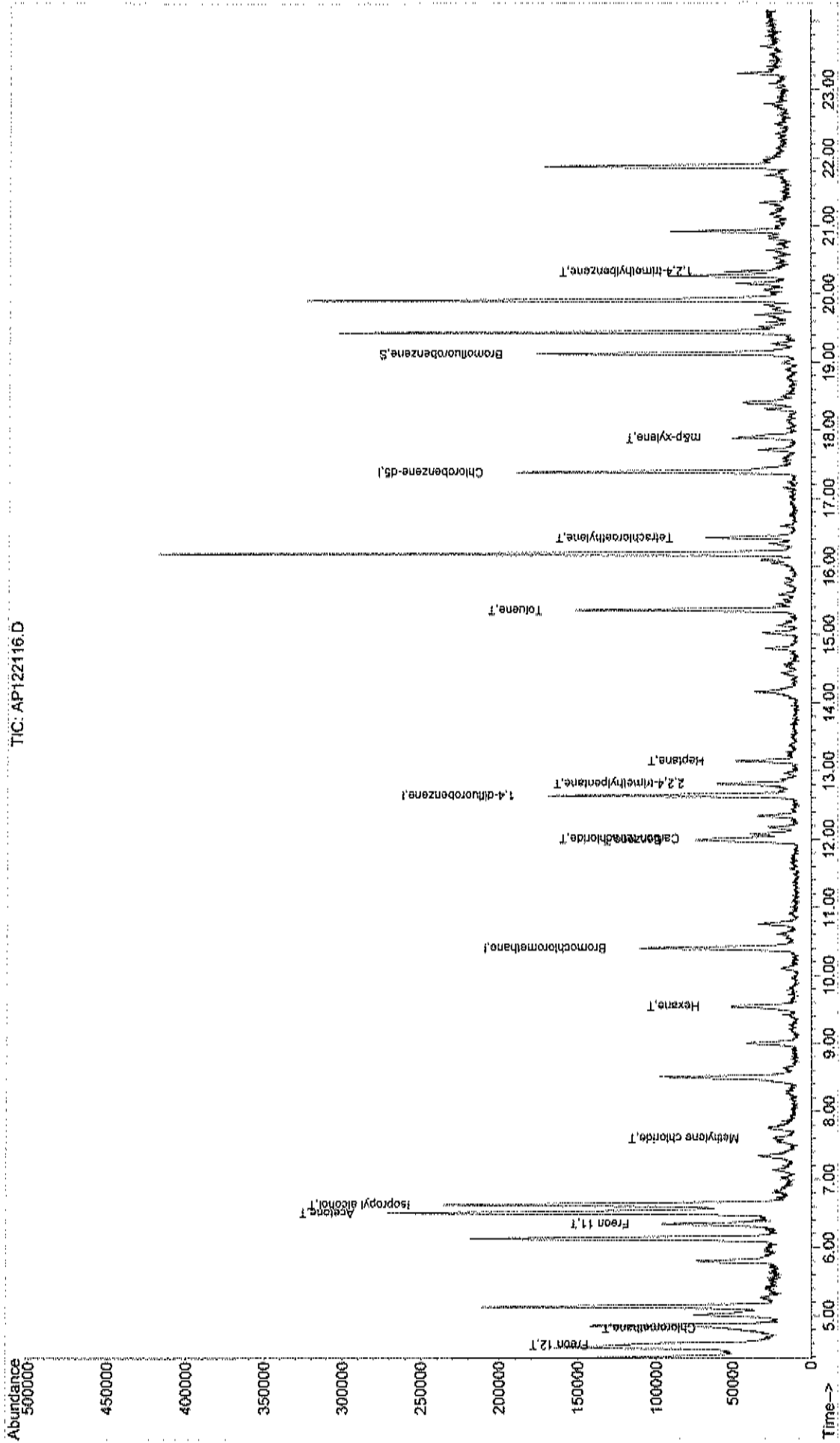
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.59	85	115115	0.51	ppb	99
4) Chloromethane	4.81	50	35913	0.51	ppb	89
14) Freon 11	6.34	101	88082	0.29	ppb	96
15) Acetone	6.51	58	150696	6.31	ppb	100
17) Isopropyl alcohol	6.63	45	107386	1.23	ppb	# 66
21) Methylene chloride	7.60	84	9689m	0.16	ppb	
30) Hexane	9.53	57	20532	0.27	ppb	# 73
38) Carbon tetrachloride	12.01	117	12805	0.07	ppb	99
39) Benzene	11.98	78	59425	0.32	ppb	98
42) 2,2,4-trimethylpentane	12.81	57	45887	0.17	ppb	85
43) Heptane	13.15	43	11422	0.12	ppb	92
51) Toluene	15.36	92	68264	0.67	ppb	95
56) Tetrachloroethylene	16.42	164	14139	0.17	ppb	96
59) m&p-xylene	17.88	91	36405	0.20	ppb	95
71) 1,2,4-trimethylbenzene	20.33	105	19654	0.11	ppb	98

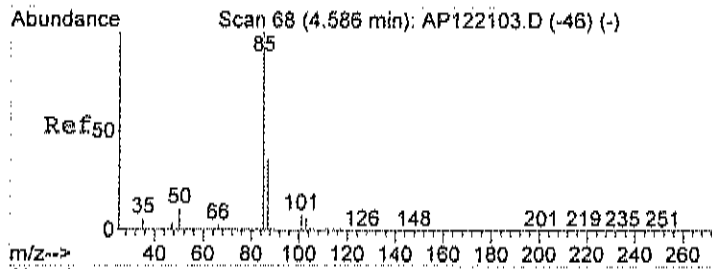
Data File : C:\HPCHEM\1\DATA\AP122116.D
 Acq On : 21 Dec 2018 9:13 pm
 Sample : C1812057-017A
 Misc : AD10_IUG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 27 10:02 2018

Vial: 2
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_IUG.RES

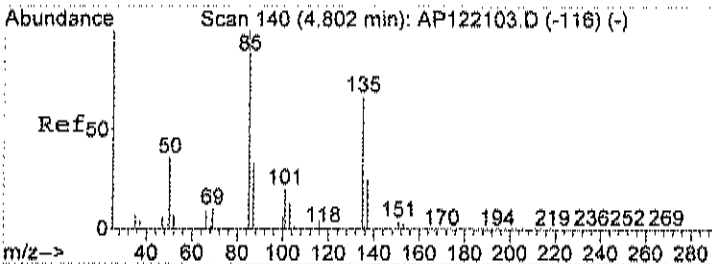
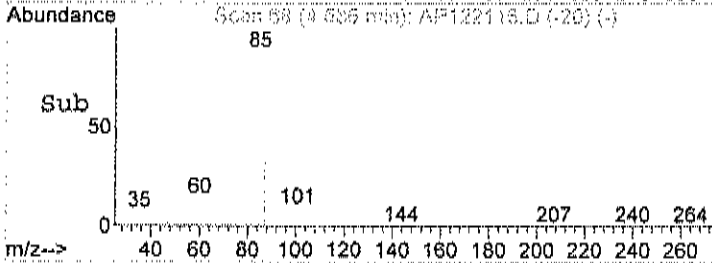
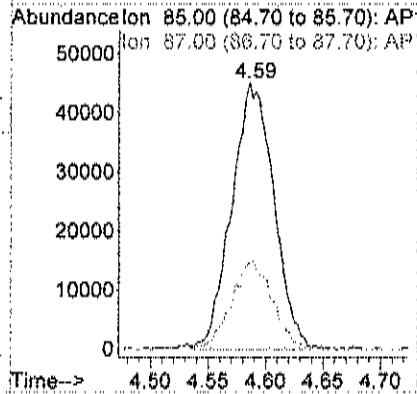
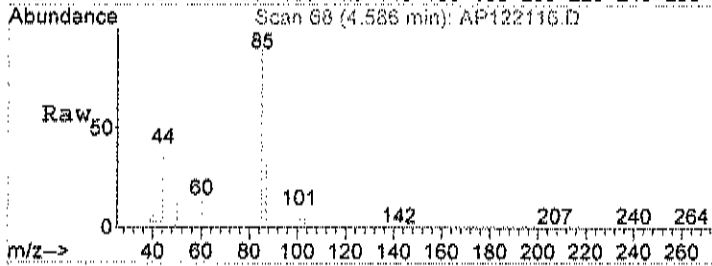
Method : C:\HPCHEM\1\METHODS\AD10_IUG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





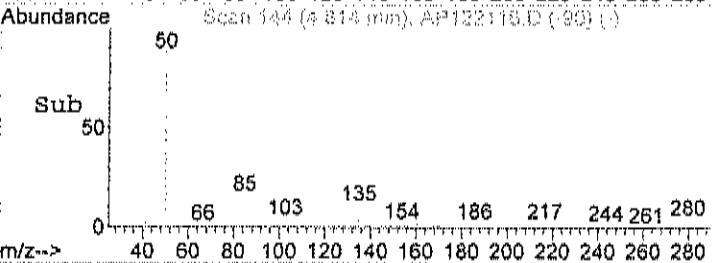
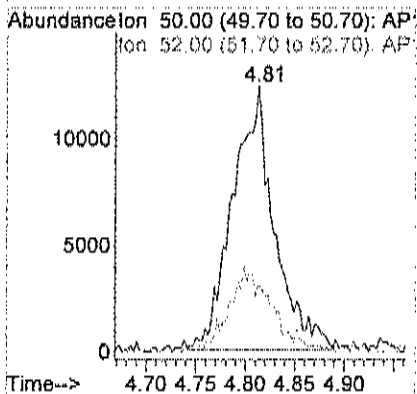
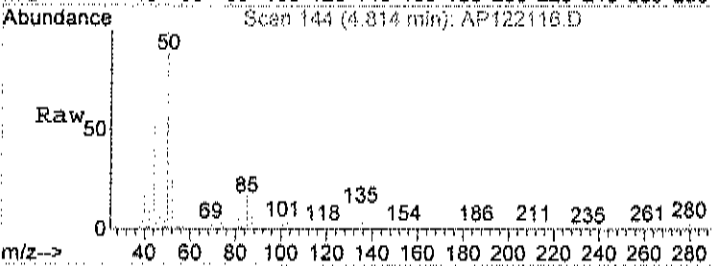
#3
 Freon 12
 Concen: 0.51 ppb
 RT: 4.59 min Scan# 68
 Delta R.T. ~0.01 min
 Lab File: AP122116.D
 Acq: 21 Dec 2018 9:13 pm

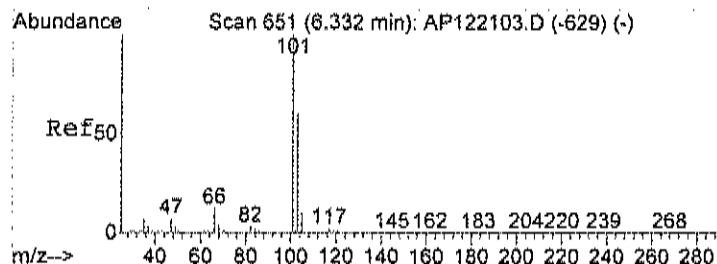
Tgt Ion: 85 Resp: 115115
 Ion Ratio Lower Upper
 85 100
 87 31.9 12.4 52.4



#4
 Chloromethane
 Concen: 0.51 ppb
 RT: 4.81 min Scan# 144
 Delta R.T. 0.01 min
 Lab File: AP122116.D
 Acq: 21 Dec 2018 9:13 pm

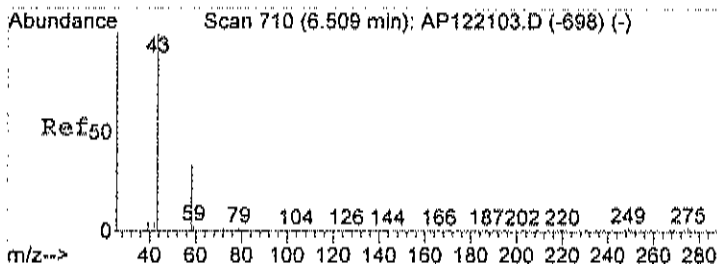
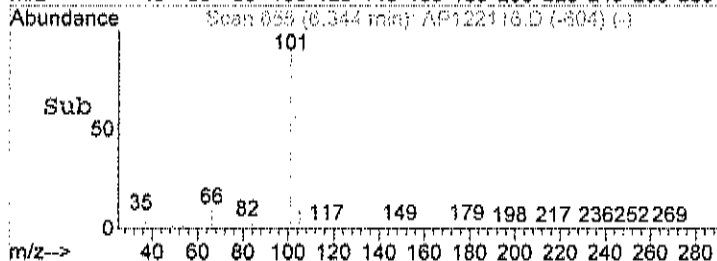
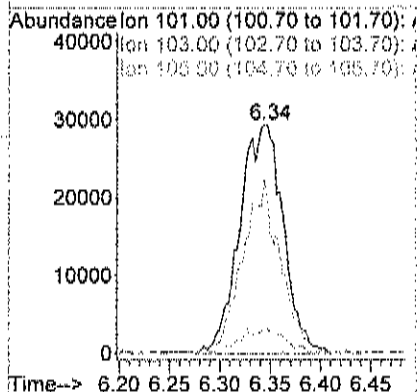
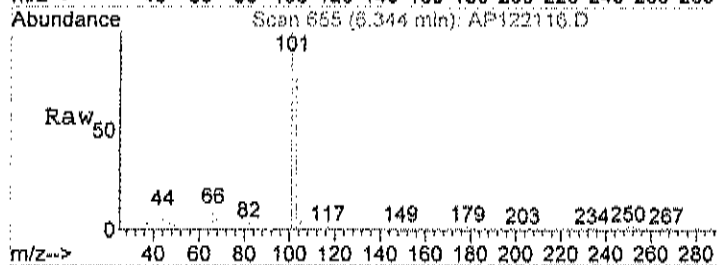
Tgt Ion: 50 Resp: 35913
 Ion Ratio Lower Upper
 50 100
 52 30.8 5.5 45.5





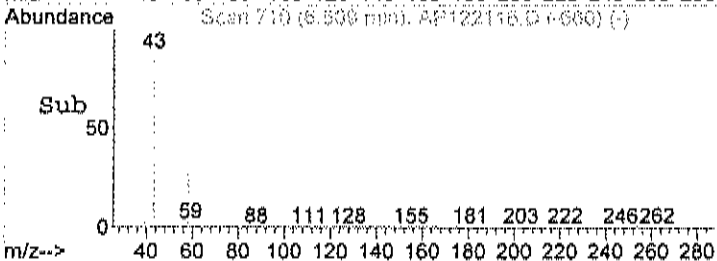
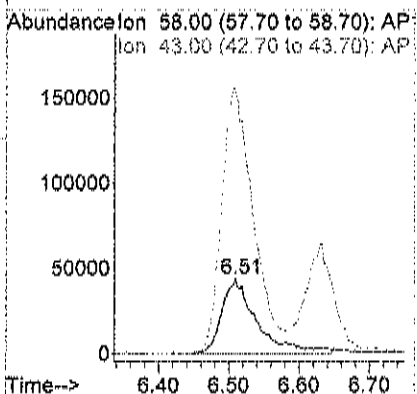
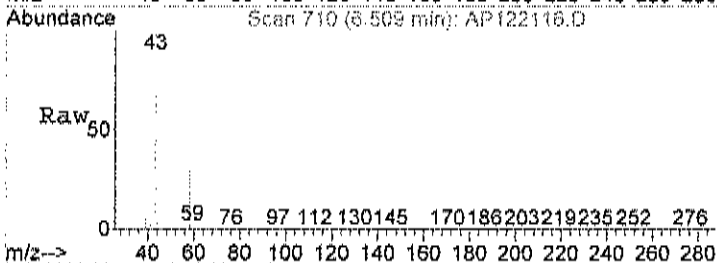
#14
Freon 11
Concen: 0.29 ppb
RT: 6.34 min Scan# 655
Delta R.T. 0.00 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

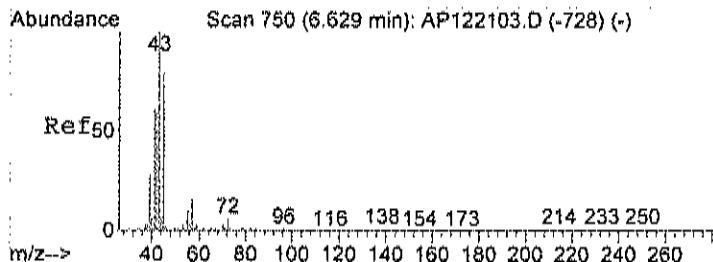
Tgt Ion	Ratio	Lower	Upper
101	100		
103	66.0	44.4	84.4
105	6.7	0.0	31.9



#15
Acetone
Concen: 6.31 ppb
RT: 6.51 min Scan# 710
Delta R.T. -0.00 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

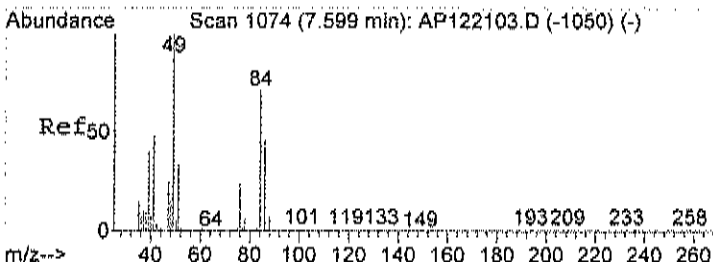
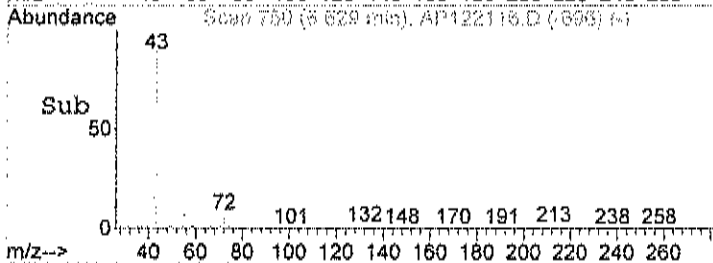
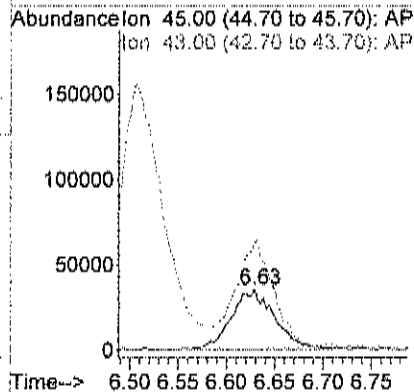
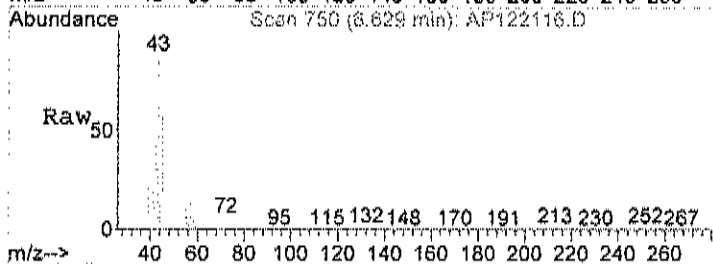
Tgt Ion	Ratio	Lower	Upper
58	100		
43	327.8	298.2	358.2





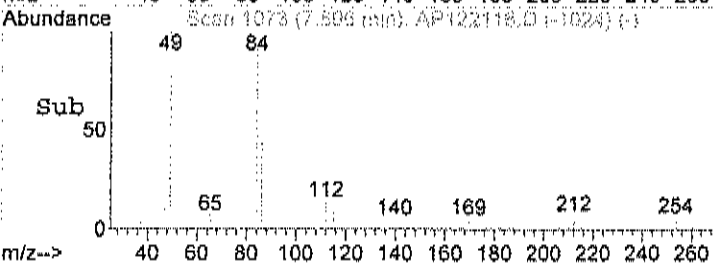
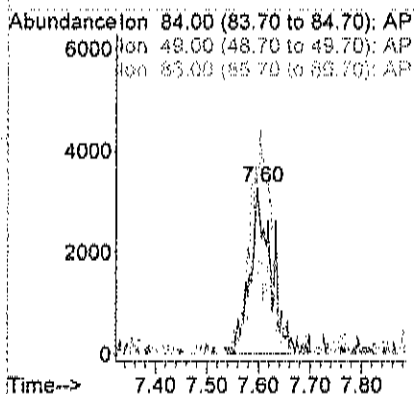
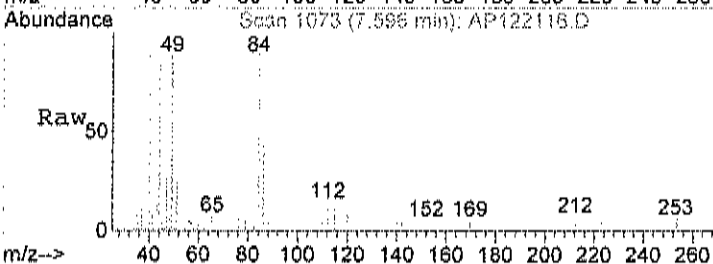
#17
Isopropyl alcohol
Concen: 1.23 ppb
RT: 6.63 min Scan# 750
Delta R.T. 0.01 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

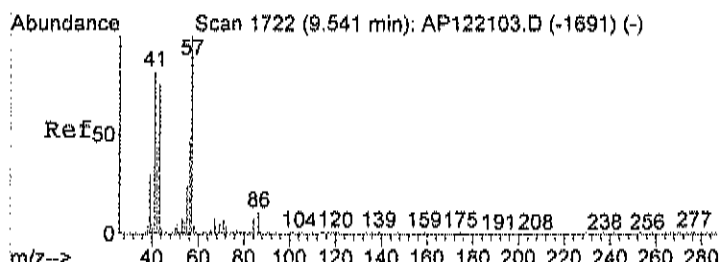
Tgt Ion: 45 Resp: 107386
Ion Ratio Lower Upper
45 100
43 155.3 98.0 138.0#



#21
Methylene chloride
Concen: 0.16 ppb m
RT: 7.60 min Scan# 1073
Delta R.T. -0.00 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

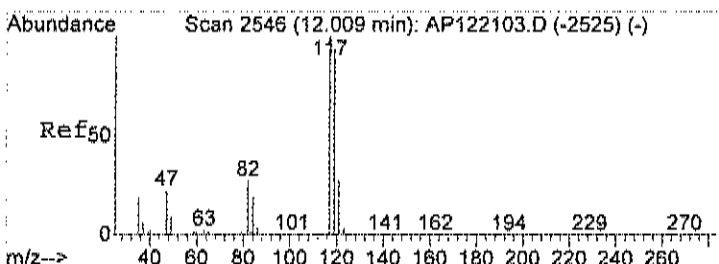
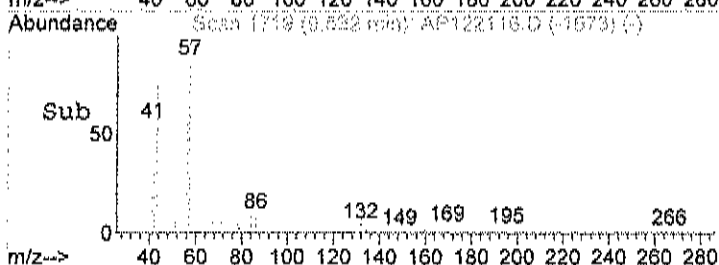
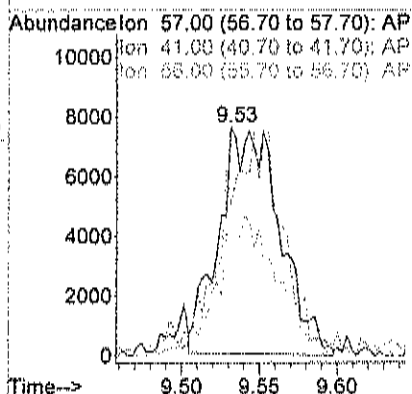
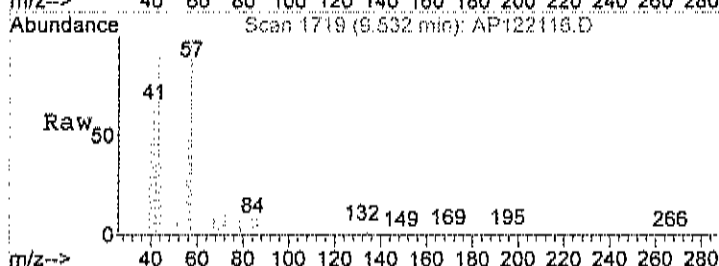
Tgt Ion: 84 Resp: 9689
Ion Ratio Lower Upper
84 100
49 126.2 121.5 161.5
86 33.3 46.0 86.0#





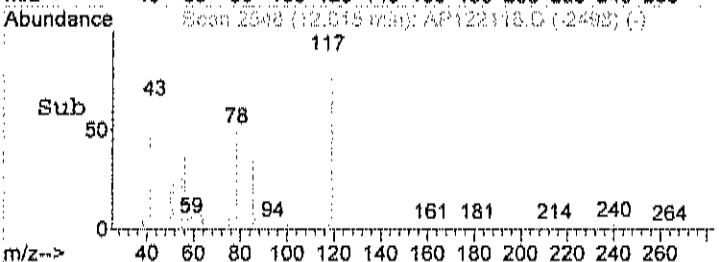
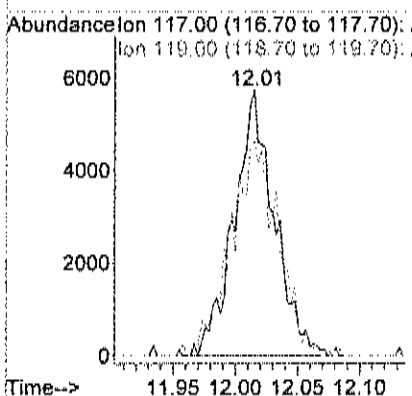
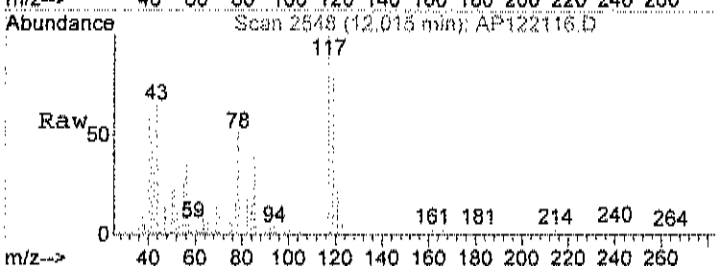
#30
Hexane
Concen: 0.27 ppb
RT: 9.53 min Scan# 1719
Delta R.T. -0.01 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

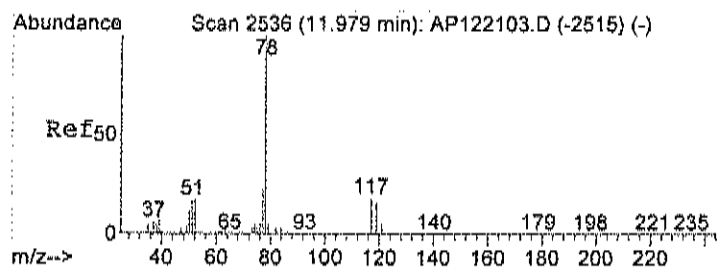
Tgt Ion: 57 Resp: 20532
Ion Ratio Lower Upper
57 100
41 97.2 49.7 89.7#
56 59.8 27.9 67.9



#38
Carbon tetrachloride
Concen: 0.07 ppb
RT: 12.01 min Scan# 2548
Delta R.T. -0.00 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

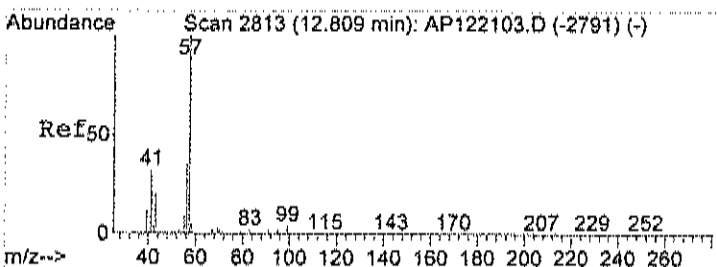
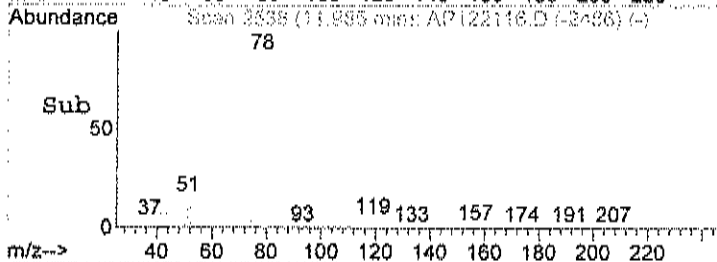
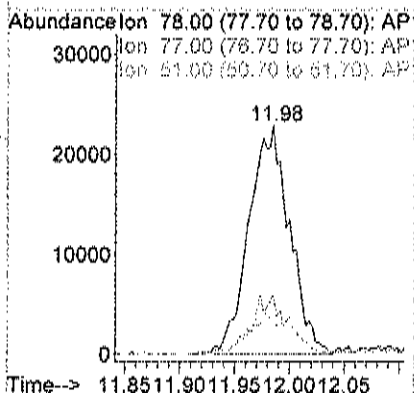
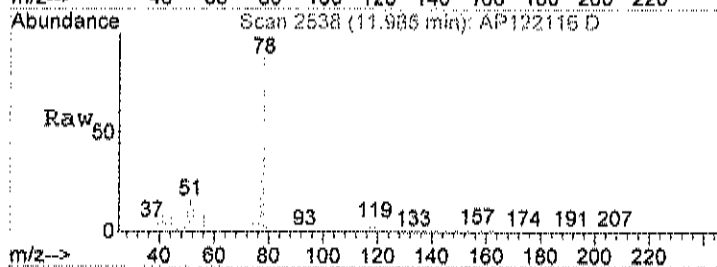
Tgt Ion: 117 Resp: 12805
Ion Ratio Lower Upper
117 100
119 94.8 75.6 115.6





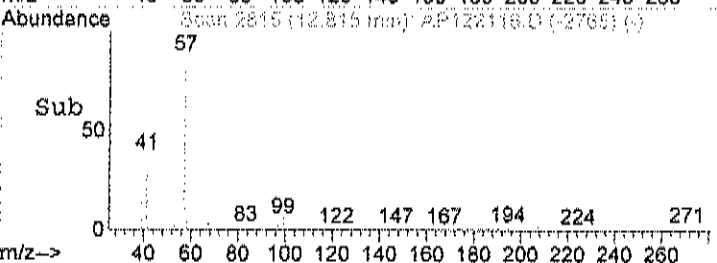
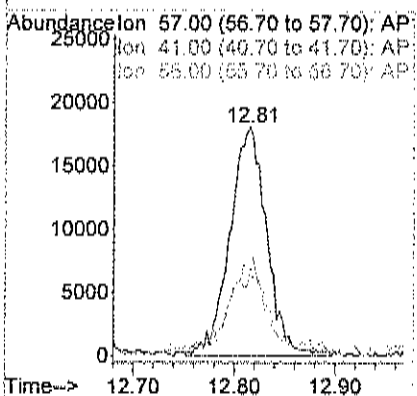
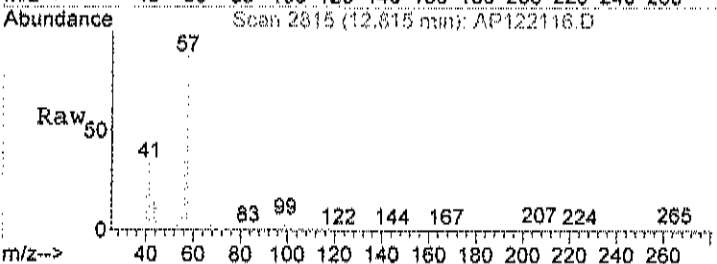
#39
Benzene
Concen: 0.32 ppb
RT: 11.98 min Scan# 2538
Delta R.T. 0.01 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

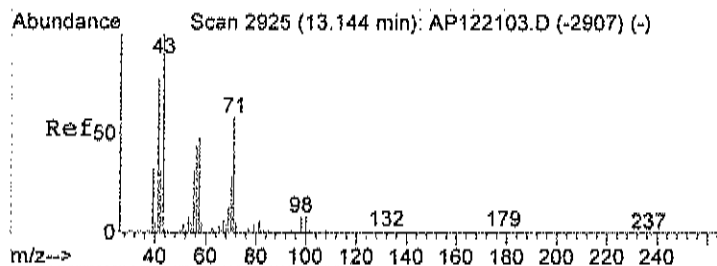
Tgt Ion: 78 Resp: 59425
Ion Ratio Lower Upper
78 100
77 23.1 3.1 43.1
51 19.0 0.0 36.7



#42
2,2,4-trimethylpentane
Concen: 0.17 ppb
RT: 12.81 min Scan# 2815
Delta R.T. -0.00 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

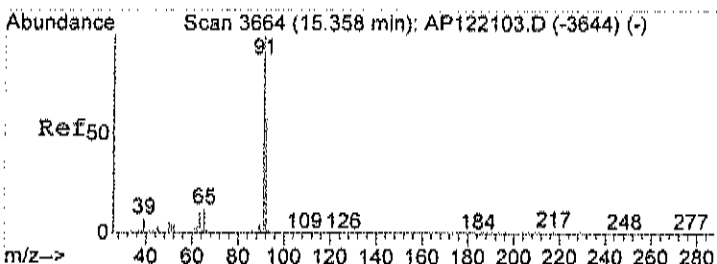
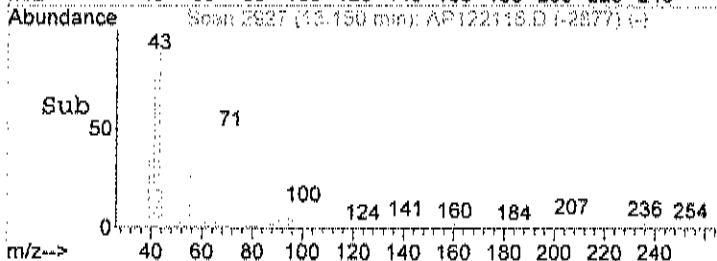
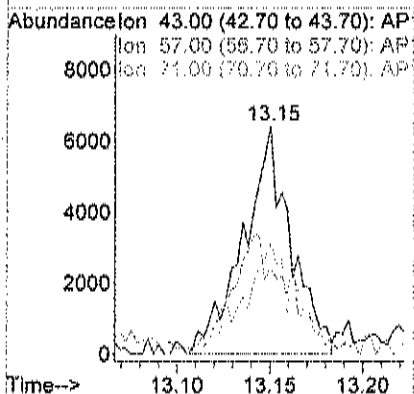
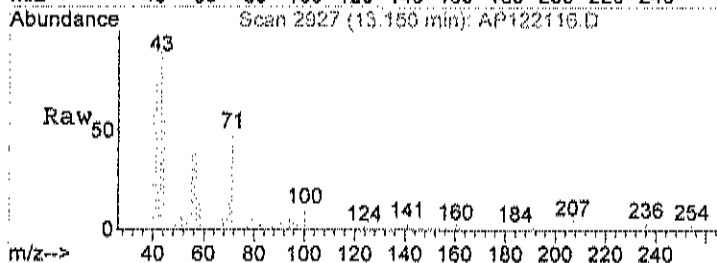
Tgt Ion: 57 Resp: 45887
Ion Ratio Lower Upper
57 100
41 19.4 6.9 46.9
56 39.6 11.5 51.5





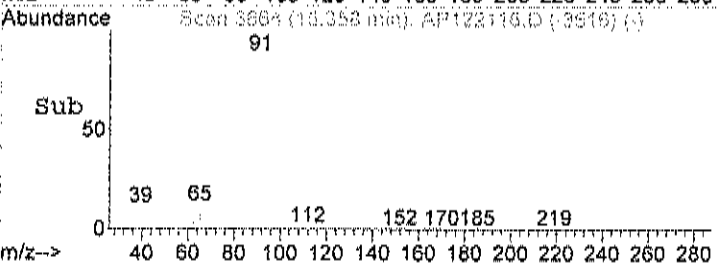
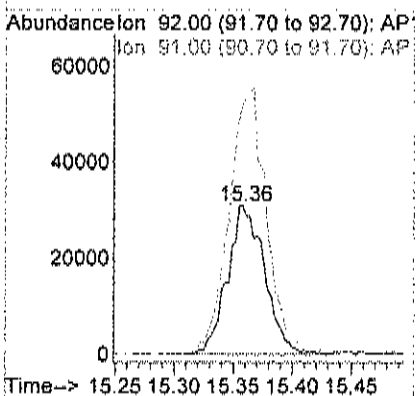
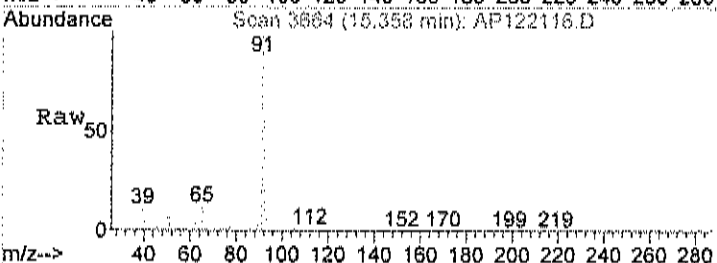
#43
Heptane
Concen: 0.12 ppb
RT: 13.15 min Scan# 2927
Delta R.T. -0.00 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

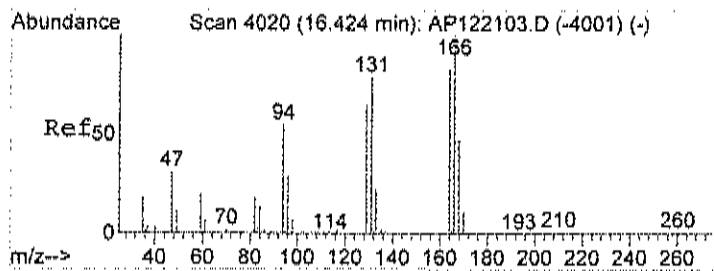
Tgt Ion	Ratio	Lower	Upper
43	100		
57	62.8	32.7	72.7
71	54.6	35.6	75.6



#51
Toluene
Concen: 0.67 ppb
RT: 15.36 min Scan# 3664
Delta R.T. -0.01 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

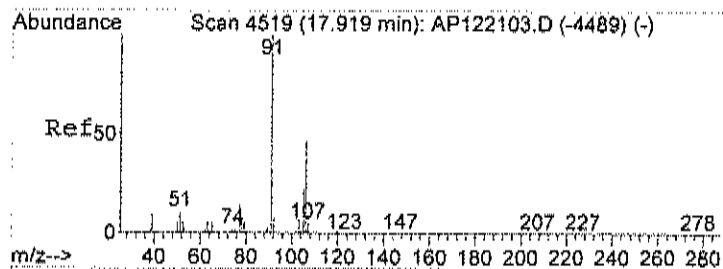
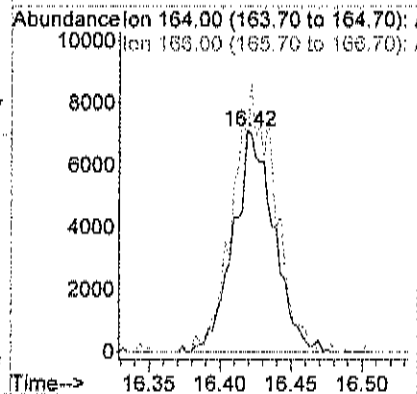
Tgt Ion	Ratio	Lower	Upper
92	100		
91	181.4	154.3	194.3





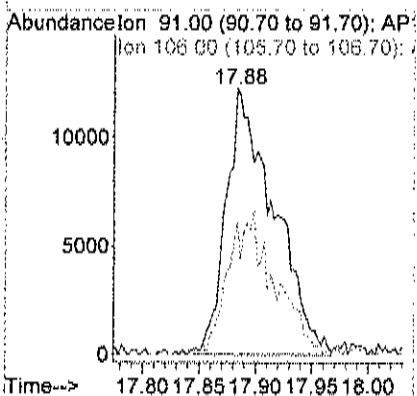
#56
Tetrachloroethylene
Concen: 0.17 ppb
RT: 16.42 min Scan# 4018
Delta R.T. -0.01 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

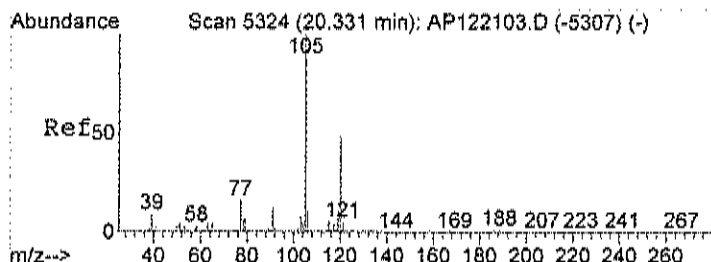
Tgt Ion: 164 Resp: 14139
Ion Ratio Lower Upper
164 100
166 123.4 108.5 148.5



#59
m&p-xylene
Concen: 0.20 ppb
RT: 17.88 min Scan# 4507
Delta R.T. -0.04 min
Lab File: AP122116.D
Acq: 21 Dec 2018 9:13 pm

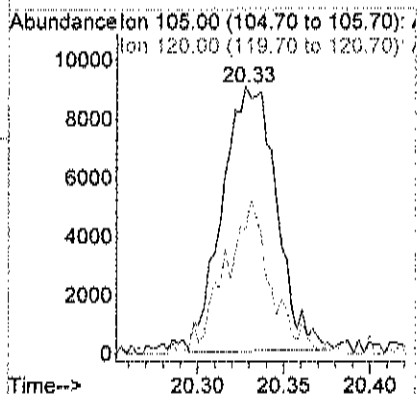
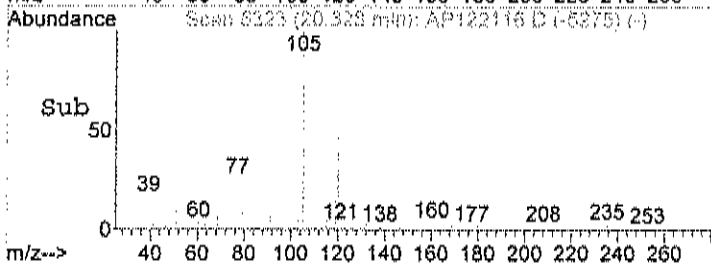
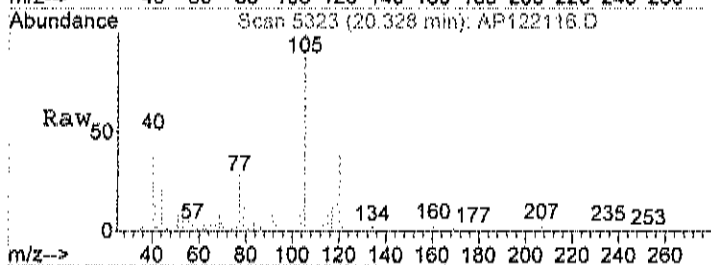
Tgt Ion: 91 Resp: 36405
Ion Ratio Lower Upper
91 100
106 51.5 28.3 68.3





#71
 1,2,4-trimethylbenzene
 Concen: 0.11 ppb
 RT: 20.33 min Scan# 5323
 Delta R.T. -0.01 min
 Lab File: AP122116.D
 Acq: 21 Dec 2018 9:13 pm

Tgt Ion:105 Resp: 19654
 Ion Ratio Lower Upper
 105 100
 120 46.8 25.3 65.3



Data File : C:\HPCHEM\1\DATA\AP122221.D

Vial: 67

Acq On : 22 Dec 2018 10:20 pm

Operator: RJP

Sample : C1812057-017A 5x

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:28 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

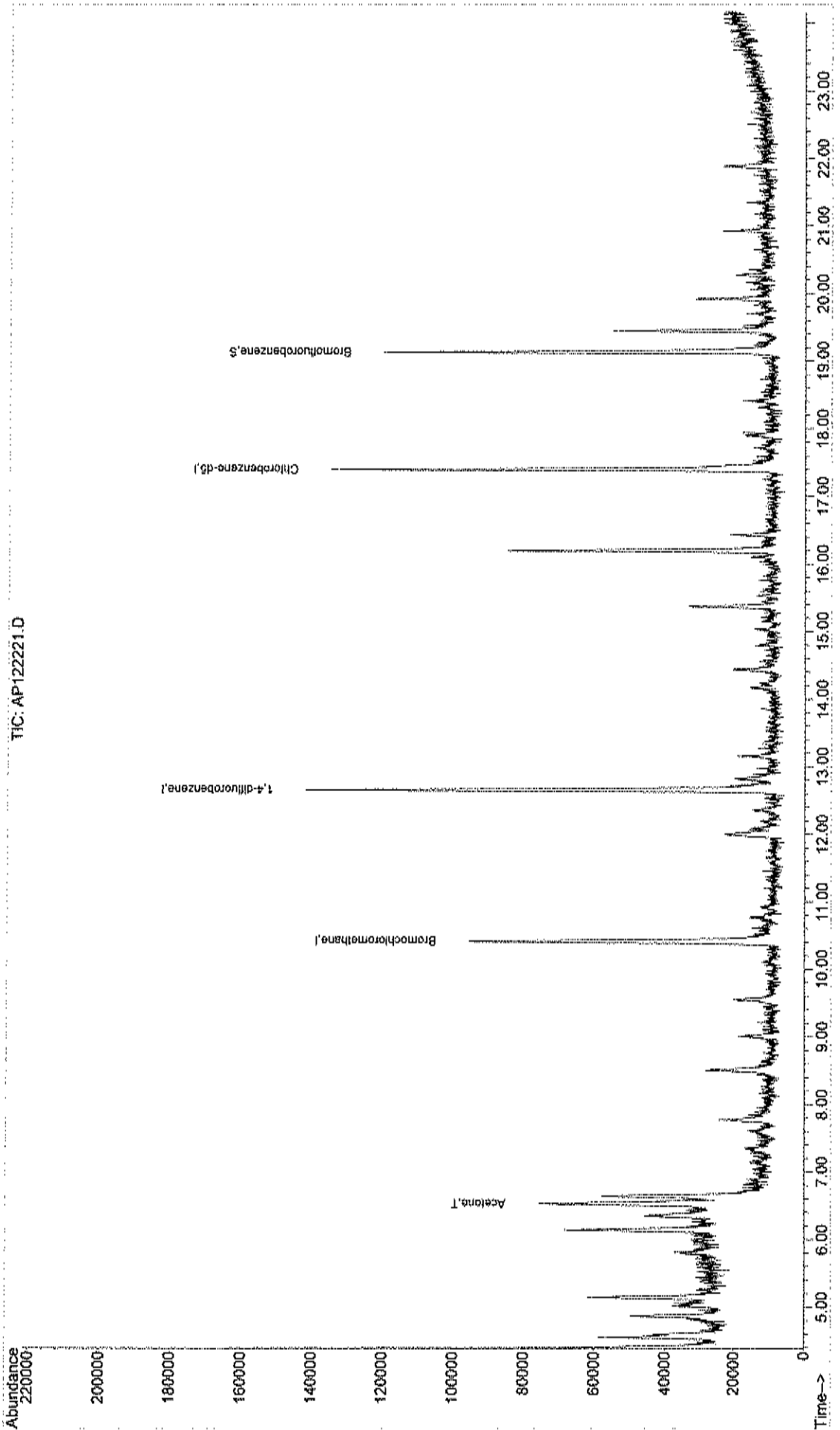
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	34556	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	139113	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	96810	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	19.13	95	47199m <i>23</i>	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%
Target Compounds						
15) Acetone	6.52	58	27235	1.29	ppb	Qvalue # 82

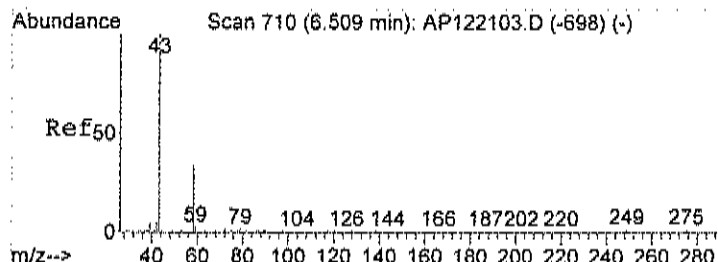
Data File : C:\HPCHEM\1\DATA\AP122221.D
Acq On : 22 Dec 2018 10:20 pm
Sample : C1812057-017A 5x
Misc : AD10 1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 28 10:24 2018

Vial: 67
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

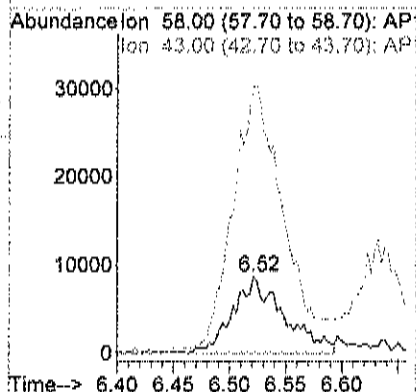
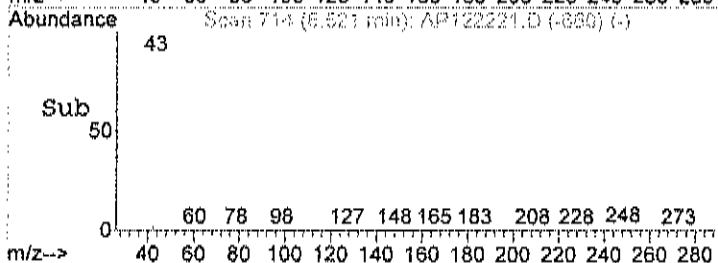
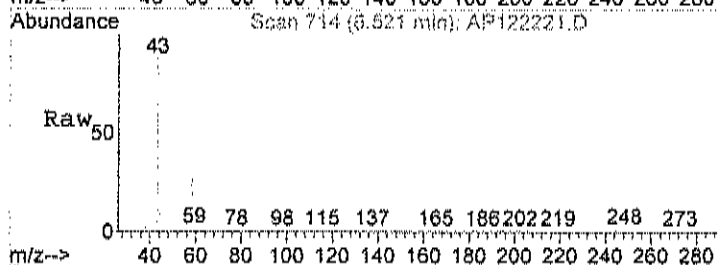
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





#15
 Acetone
 Concen: 1.29 ppb
 RT: 6.52 min Scan# 714
 Delta R.T. 0.01 min
 Lab File: AP122221.D
 Acq: 22 Dec 2018 10:20 pm

Tgt Ion: 58 Resp: 27235
 Ion Ratio Lower Upper
 58 100
 43 364.7 298.2 358.2#



Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS						
			FLD			Analyst:
Lab Vacuum In	-2			"Hg		12/21/2018
Lab Vacuum Out	-30			"Hg		12/21/2018
HELIUM LEAK TEST						
			GC			Analyst: RJP
Helium	ND	0.75		%	1	12/31/2018
1UG/M3 BY METHOD TO15						
			TO-15			Analyst: RJP
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
2,2,4-trimethylpentane	0.10	0.15	J	ppbV	1	12/21/2018 9:53:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Acetone	4.6	1.5		ppbV	5	12/22/2018 10:58:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Benzene	0.28	0.15		ppbV	1	12/21/2018 9:53:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Chloromethane	0.45	0.15		ppbV	1	12/21/2018 9:53:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte, Quantitation estimated,	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Ethyl acetate	0.13	0.15	J	ppbV	1	12/21/2018 9:53:00 PM
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 11	0.29	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Freon 12	0.54	0.15		ppbV	1	12/21/2018 9:53:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Hexane	0.22	0.15		ppbV	1	12/21/2018 9:53:00 PM
Isopropyl alcohol	0.61	0.15		ppbV	1	12/21/2018 9:53:00 PM
m&p-Xylene	0.15	0.30	J	ppbV	1	12/21/2018 9:53:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 9:53:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Methylene chloride	0.17	0.15		ppbV	1	12/21/2018 9:53:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Tetrachloroethylene	0.21	0.15		ppbV	1	12/21/2018 9:53:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Toluene	0.59	0.15		ppbV	1	12/21/2018 9:53:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 9:53:00 PM
Surr: Bromofluorobenzene	74.0	70-130		%REC	1	12/21/2018 9:53:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:53:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 9:53:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 9:53:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 9:53:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 9:53:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
2,2,4-trimethylpentane	0.47	0.70	J	ug/m3	1	12/21/2018 9:53:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 9:53:00 PM
Acetone	11	3.6		ug/m3	5	12/22/2018 10:58:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 9:53:00 PM
Benzene	0.89	0.48		ug/m3	1	12/21/2018 9:53:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 9:53:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 9:53:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 9:53:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 9:53:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 9:53:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 9:53:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 9:53:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 9:53:00 PM
Chloromethane	0.93	0.31		ug/m3	1	12/21/2018 9:53:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:53:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 9:53:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 9:53:00 PM
Ethyl acetate	0.47	0.54	J	ug/m3	1	12/21/2018 9:53:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 9:53:00 PM
Freon 11	1.6	0.84		ug/m3	1	12/21/2018 9:53:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 9:53:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 9:53:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

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Centek Laboratories, LLC

Date: 02-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-018A

Client Sample ID: AS-2
Tag Number: 285,187
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	2.7	0.74		ug/m3	1	12/21/2018 9:53:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 9:53:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 9:53:00 PM
Hexane	0.78	0.53		ug/m3	1	12/21/2018 9:53:00 PM
Isopropyl alcohol	1.5	0.37		ug/m3	1	12/21/2018 9:53:00 PM
m&p-Xylene	0.65	1.3	J	ug/m3	1	12/21/2018 9:53:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 9:53:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 9:53:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 9:53:00 PM
Methylene chloride	0.59	0.52		ug/m3	1	12/21/2018 9:53:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 9:53:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 9:53:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 9:53:00 PM
Tetrachloroethylene	1.4	1.0		ug/m3	1	12/21/2018 9:53:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 9:53:00 PM
Toluene	2.2	0.57		ug/m3	1	12/21/2018 9:53:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 9:53:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 9:53:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 9:53:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 9:53:00 PM

Qualifiers: ** Quantitation Limit . Results reported are not blank corrected
B Analyte detected in the associated Method Blank E Estimated Value above quantitation range
H Holding times for preparation or analysis exceeded J Analyte detected below quantitation limit
JN Non-routine analyte. Quantitation estimated. ND Not Detected at the Limit of Detection
S Spike Recovery outside accepted recovery limits

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122117.D
 Acq On : 21 Dec 2018 9:53 pm
 Sample : C1812057-018A
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:33 2018

Vial: 3
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	40055	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	164182	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	126688	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	63851	0.74	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	74.00%

Target Compounds

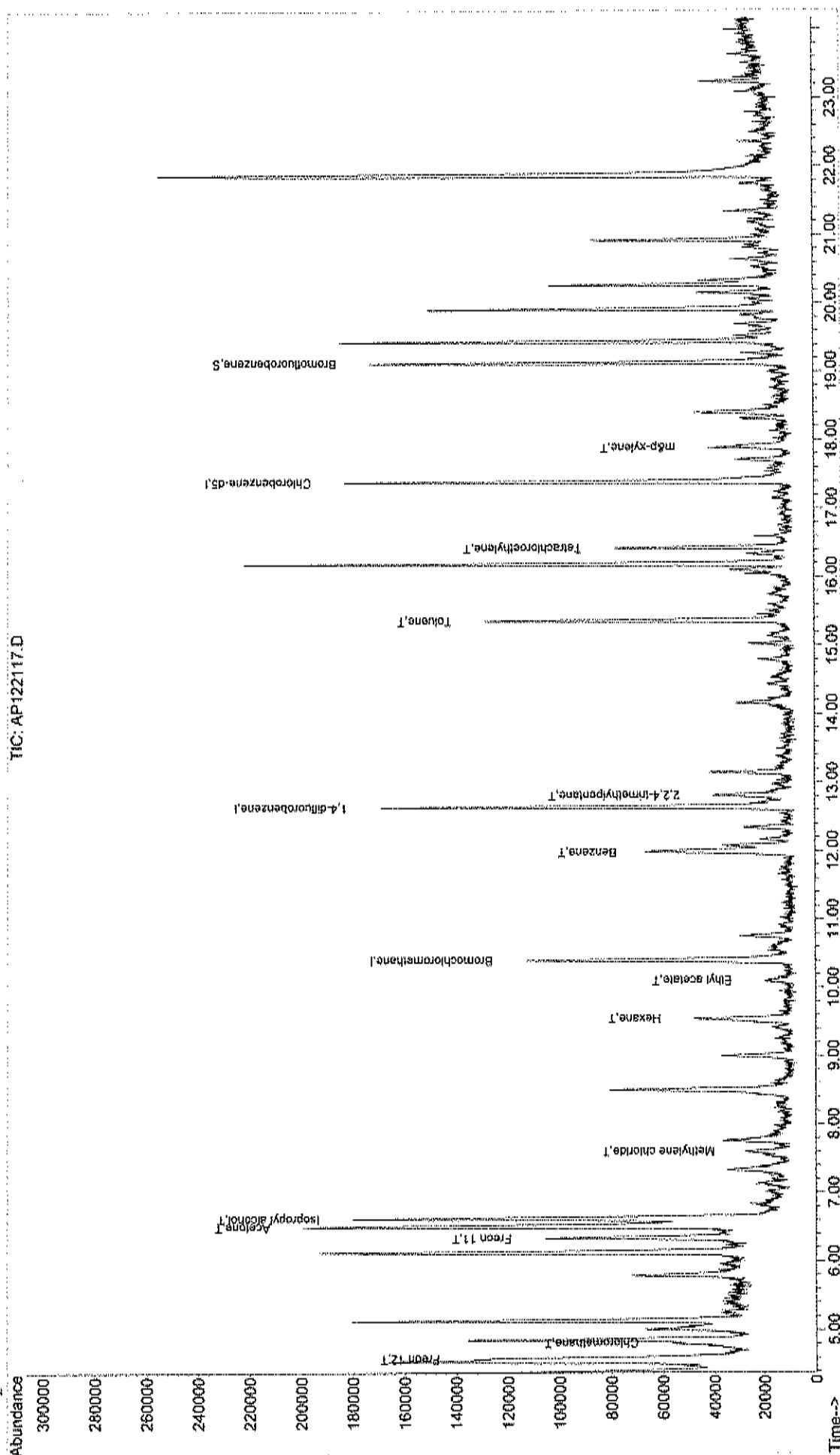
	R.T.	QIon	Response	Conc	Units	Qvalue
3) Freon 12	4.59	85	125541	0.54	ppb	99
4) Chloromethane	4.81	50	32720	0.45	ppb	80
14) Freon 11	6.34	101	93191	0.29	ppb	99
15) Acetone	6.51	58	106736	4.34	ppb	94
17) Isopropyl alcohol	6.62	45	54456	0.61	ppb	# 1
21) Methylene chloride	7.59	84	10525m	0.17	ppb	
30) Hexane	9.55	57	17153	0.22	ppb	# 70
31) Ethyl acetate	10.10	43	15526	0.13	ppb	84
39) Benzene	11.98	78	53231	0.28	ppb	96
42) 2,2,4-trimethylpentane	12.82	57	27071	0.10	ppb	# 60
51) Toluene	15.36	92	58350	0.59	ppb	91
56) Tetrachloroethylene	16.43	164	16787	0.21	ppb	99
59) m&p-xylene	17.89	91	26573	0.15	ppb	92

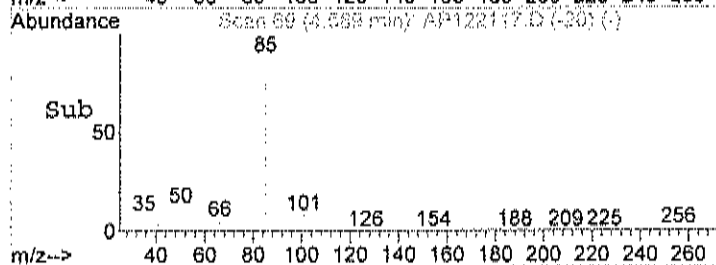
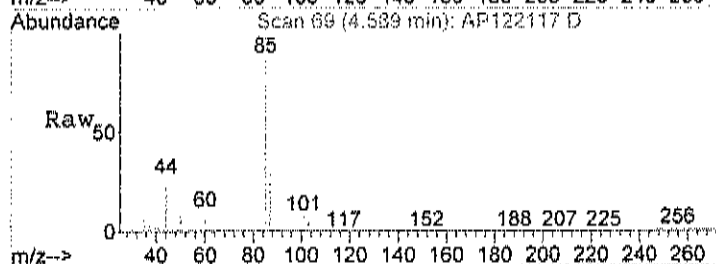
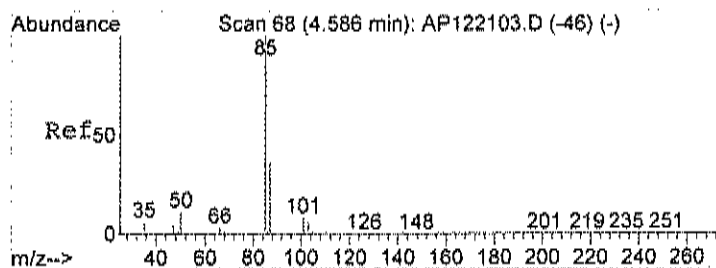
Data File : C:\HPCHEM\1\DATA\AP122117.D
Acq On : 21 Dec 2018 9:53 pm
Sample : C1812057-018A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:02 2018

Vial: 3
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

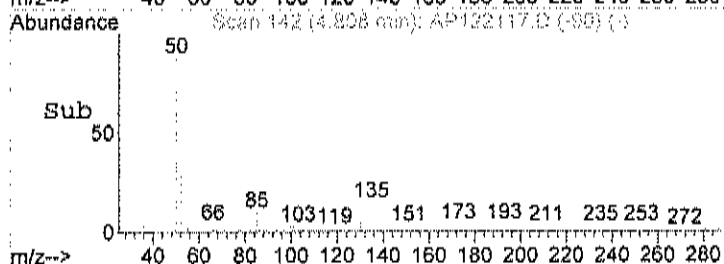
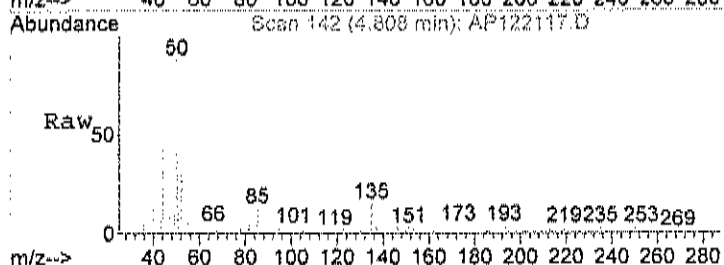
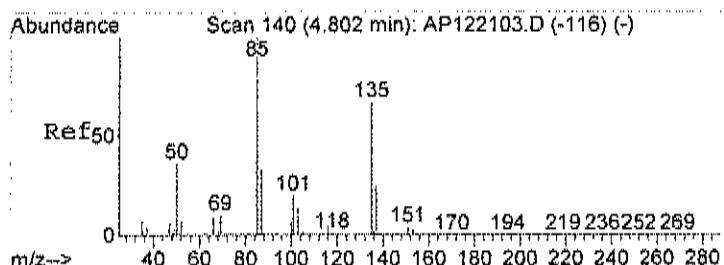
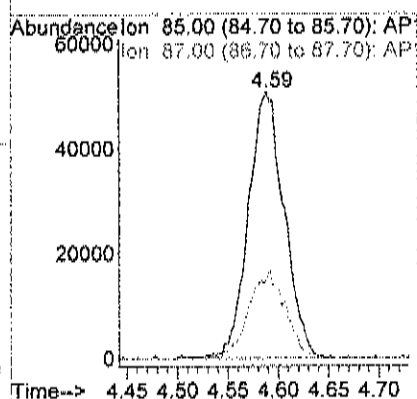
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





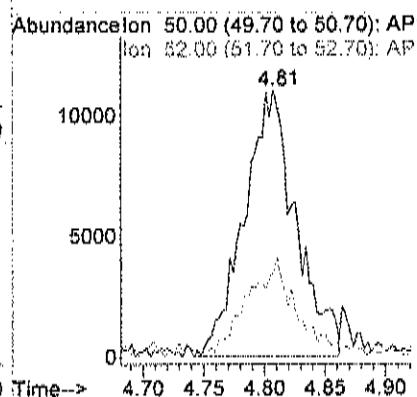
#3
 Freon 12
 Concen: 0.54 ppb
 RT: 4.59 min Scan# 69
 Delta R.T. -0.00 min
 Lab File: AP122117.D
 Acq: 21 Dec 2018 9:53 pm

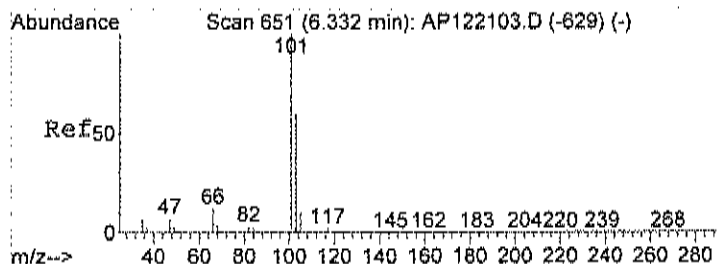
Tgt Ion: 85 Resp: 125541
 Ion Ratio Lower Upper
 85 100
 87 33.2 12.4 52.4



#4
 Chloromethane
 Concen: 0.45 ppb
 RT: 4.81 min Scan# 142
 Delta R.T. 0.01 min
 Lab File: AP122117.D
 Acq: 21 Dec 2018 9:53 pm

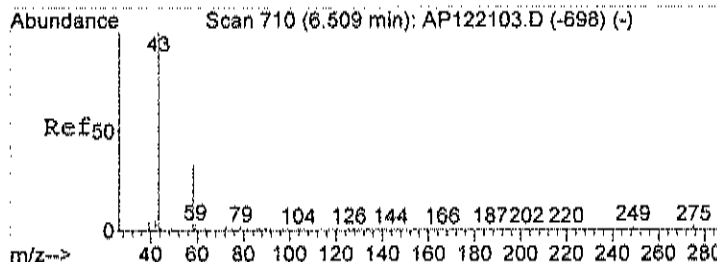
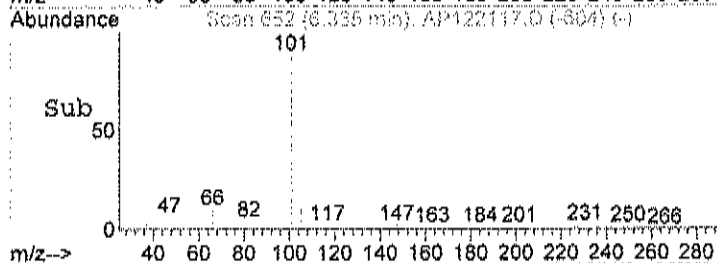
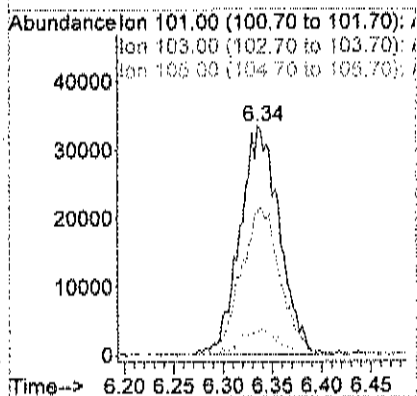
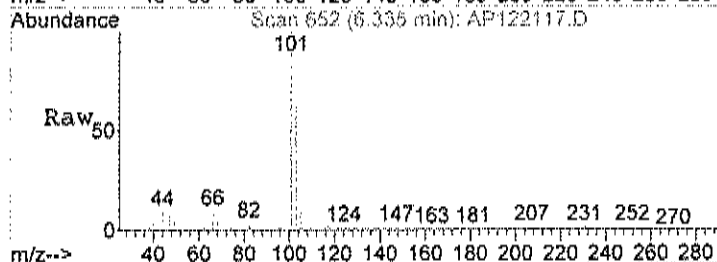
Tgt Ion: 50 Resp: 32720
 Ion Ratio Lower Upper
 50 100
 52 35.4 5.5 45.5





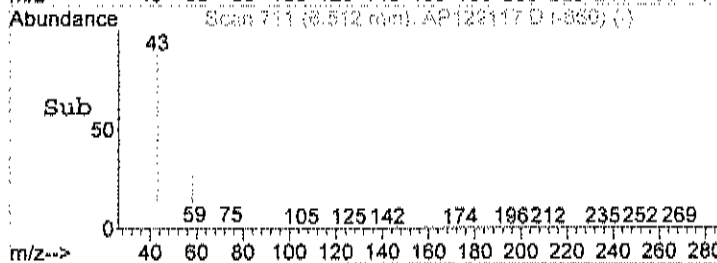
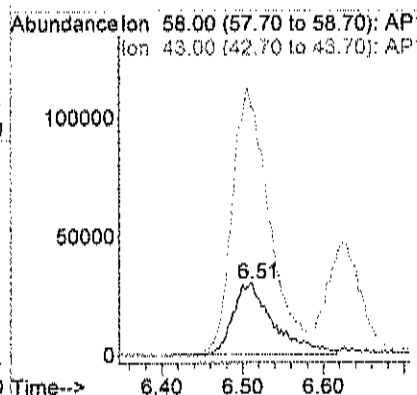
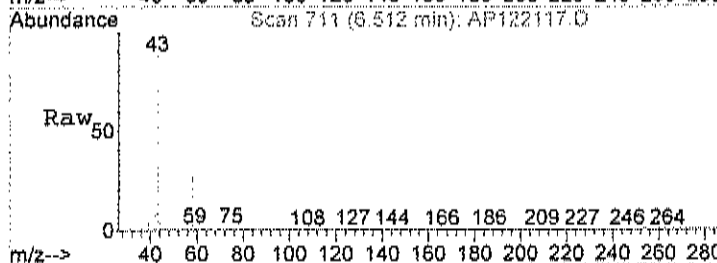
#14
Freon 11
Concen: 0.29 ppb
RT: 6.34 min Scan# 652
Delta R.T. -0.01 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

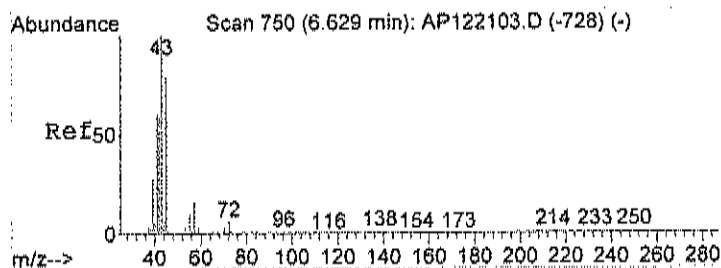
Tgt Ion	Ratio	Lower	Upper
101	100		
103	64.8	44.4	84.4
105	11.0	0.0	31.9



#15
Acetone
Concen: 4.34 ppb
RT: 6.51 min Scan# 711
Delta R.T. 0.00 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

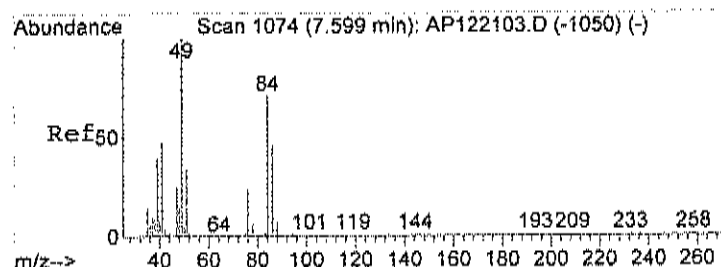
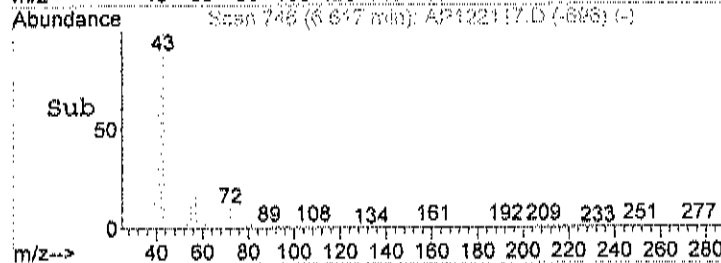
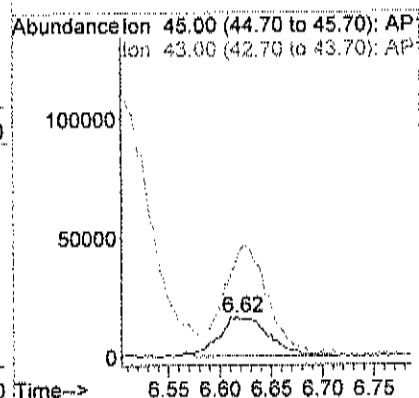
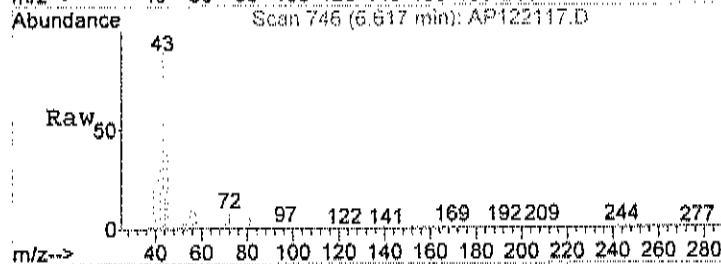
Tgt Ion	Ratio	Lower	Upper
58	100		
43	340.4	298.2	358.2





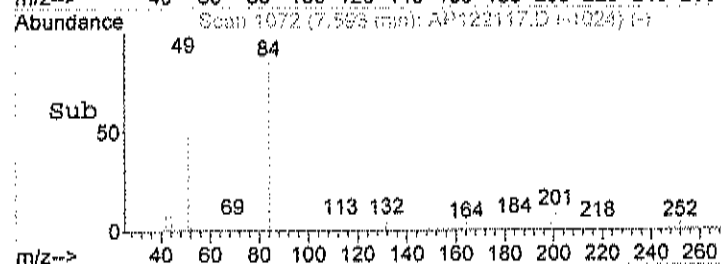
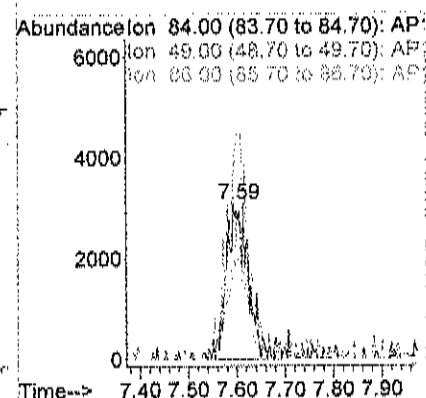
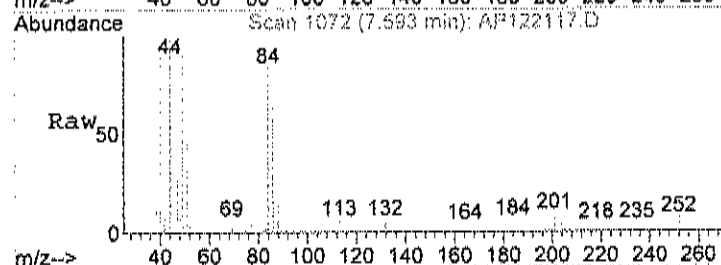
#17
Isopropyl alcohol
Concen: 0.61 ppb
RT: 6.62 min Scan# 746
Delta R.T. -0.00 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

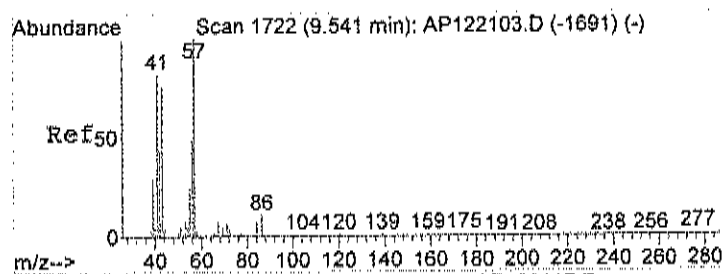
Tgt Ion: 45 Resp: 54456
Ion Ratio Lower Upper
45 100
43 234.8 98.0 138.0#



#21
Methylene chloride
Concen: 0.17 ppb m
RT: 7.59 min Scan# 1072
Delta R.T. -0.01 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

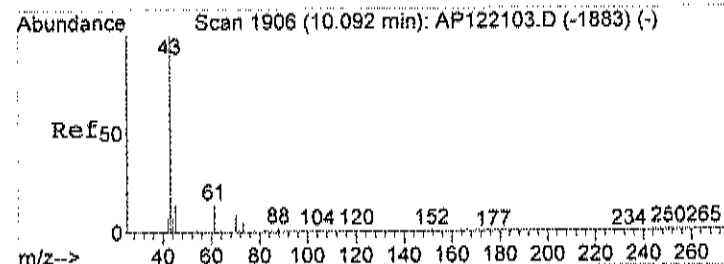
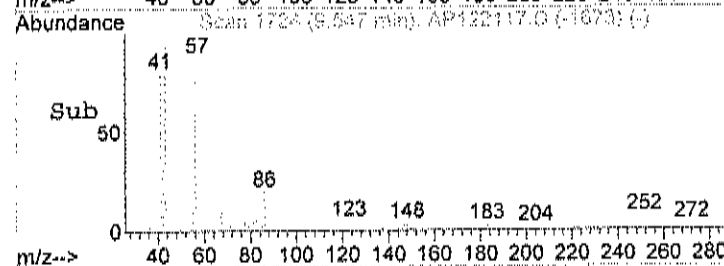
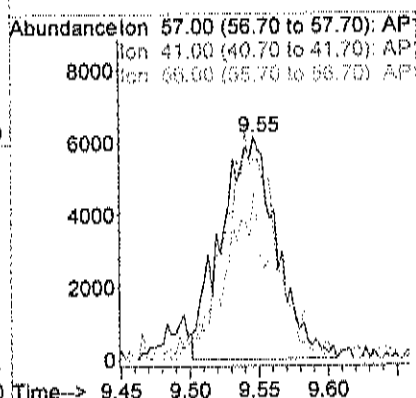
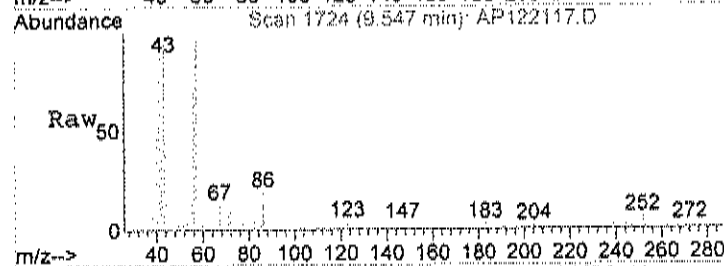
Tgt Ion: 84 Resp: 10525
Ion Ratio Lower Upper
84 100
49 110.5 121.5 161.5#
86 58.0 46.0 86.0





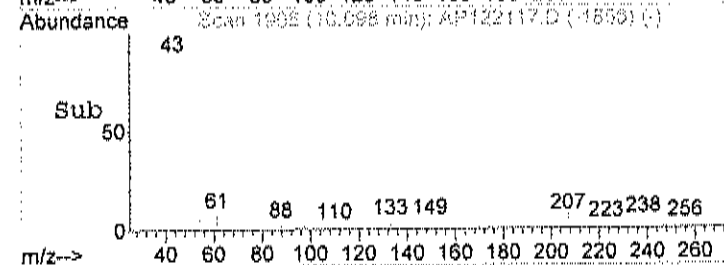
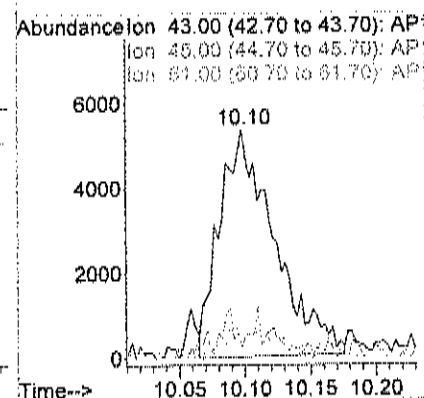
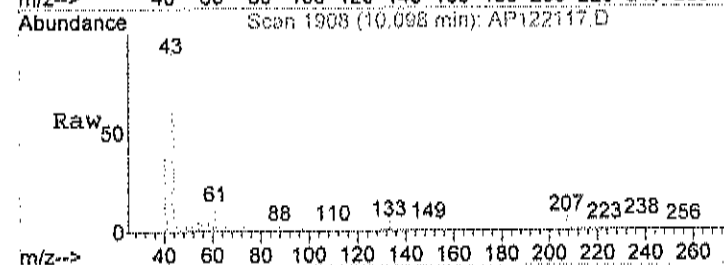
#30
Hexane
Concen: 0.22 ppb
RT: 9.55 min Scan# 1724
Delta R.T. 0.00 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

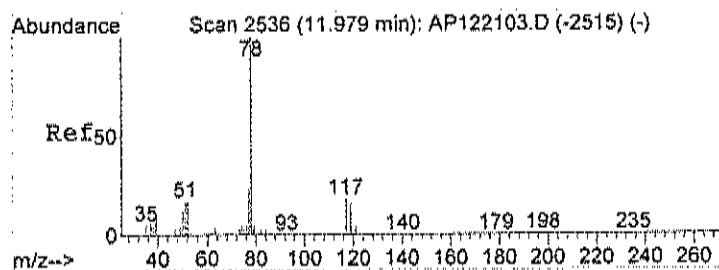
Tgt Ion: 57 Resp: 17153
Ion Ratio Lower Upper
57 100
41 95.0 49.7 89.7#
56 67.0 27.9 67.9



#31
Ethyl acetate
Concen: 0.13 ppb
RT: 10.10 min Scan# 1908
Delta R.T. 0.01 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

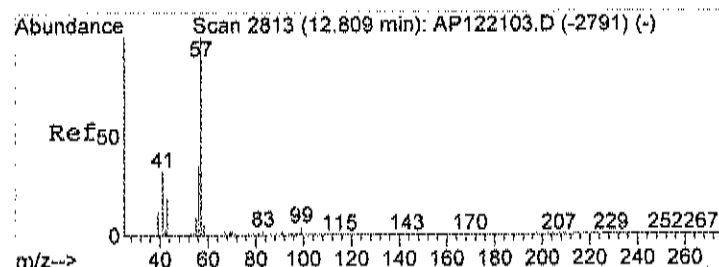
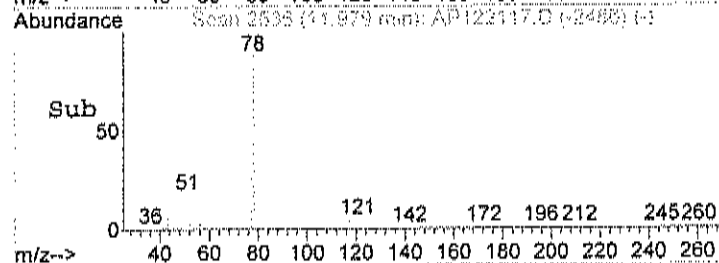
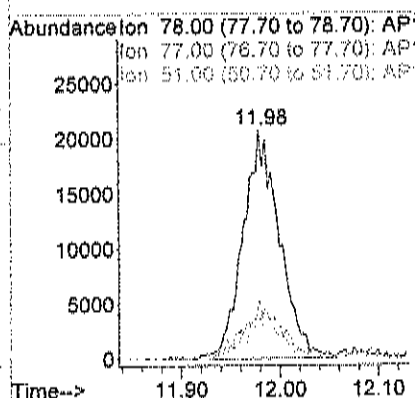
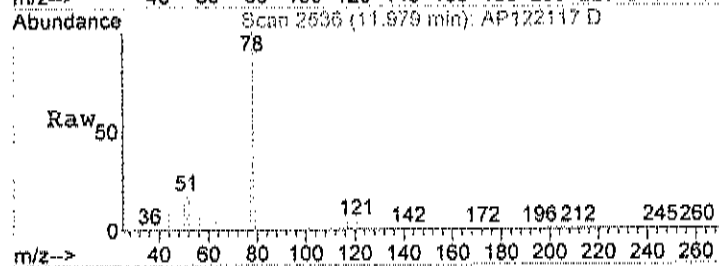
Tgt Ion: 43 Resp: 15526
Ion Ratio Lower Upper
43 100
45 5.6 0.0 35.0
61 10.7 0.0 34.3





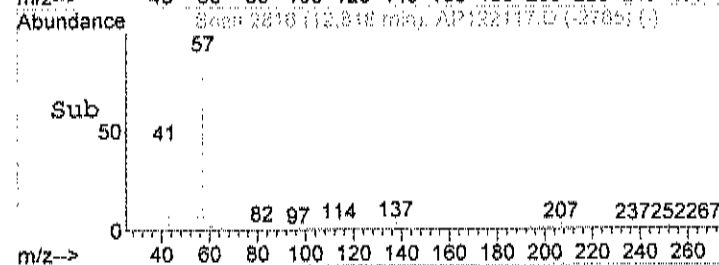
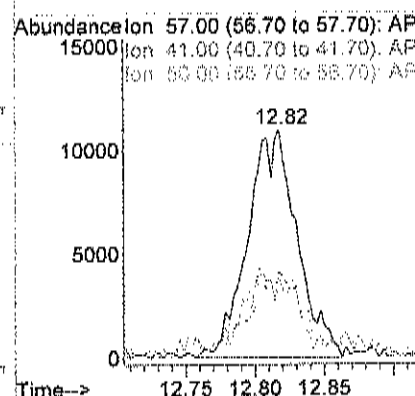
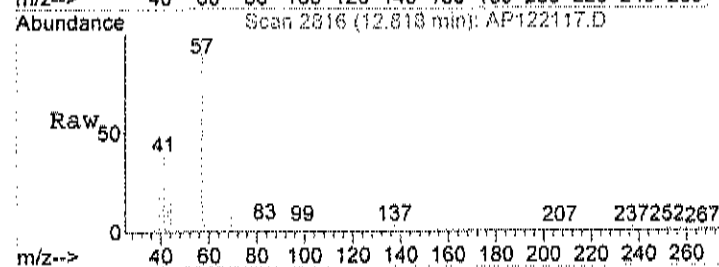
#39
Benzene
Concen: 0.28 ppb
RT: 11.98 min Scan# 2536
Delta R.T. -0.00 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

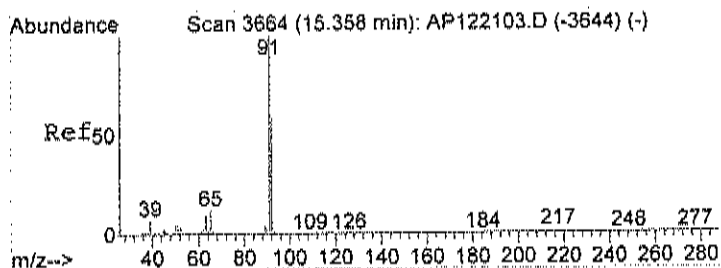
Tgt Ion	Ratio	Lower	Upper
78	100		
77	24.5	3.1	43.1
51	18.9	0.0	36.7



#42
2,2,4-trimethylpentane
Concen: 0.10 ppb
RT: 12.82 min Scan# 2816
Delta R.T. 0.00 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

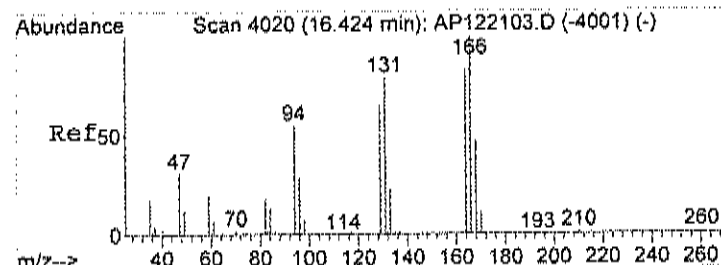
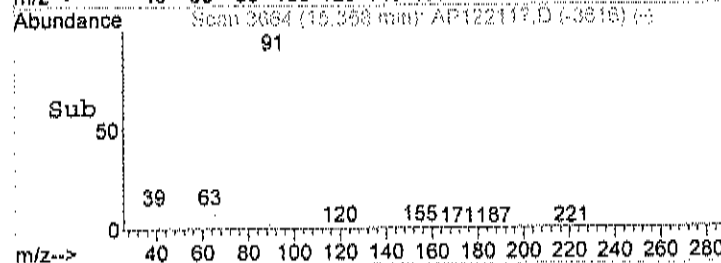
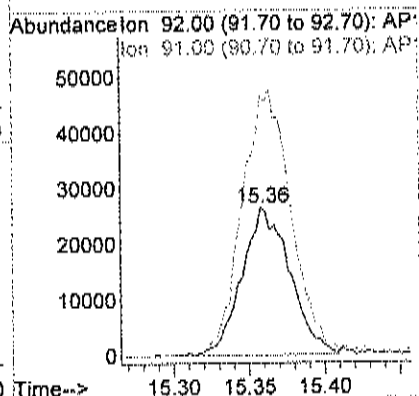
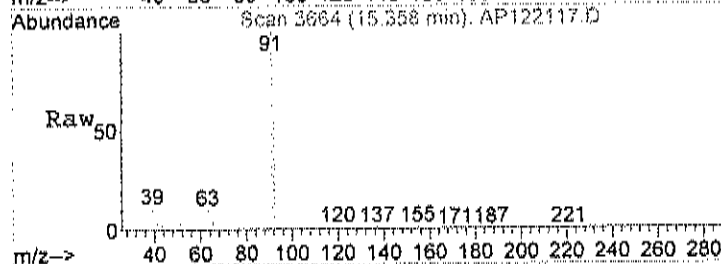
Tgt Ion	Ratio	Lower	Upper
57	100		
41	16.1	6.9	46.9
56	0.0	11.5	51.5#





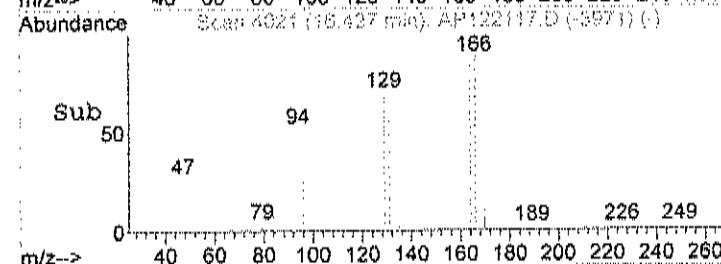
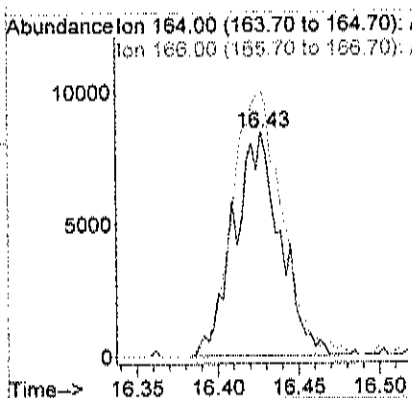
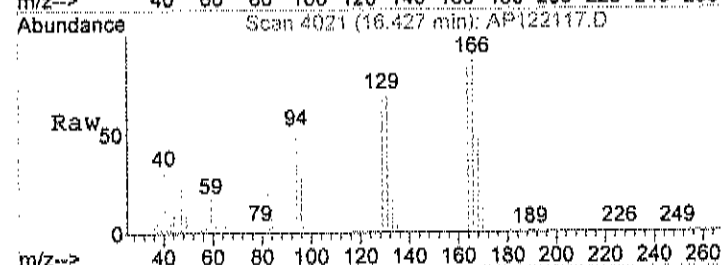
#51
Toluene
Concen: 0.59 ppb
RT: 15.36 min Scan# 3664
Delta R.T. -0.01 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

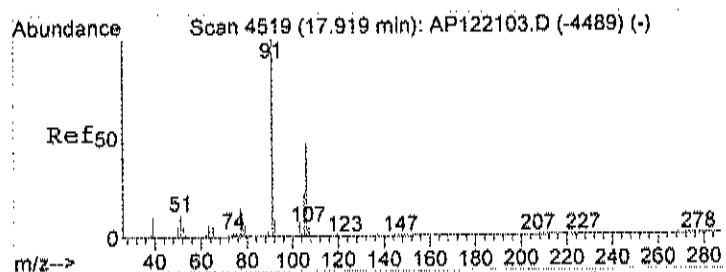
Tgt Ion: 92 Resp: 58350
Ion Ratio Lower Upper
92 100
91 186.8 154.3 194.3



#56
Tetrachloroethylene
Concen: 0.21 ppb
RT: 16.43 min Scan# 4021
Delta R.T. -0.00 min
Lab File: AP122117.D
Acq: 21 Dec 2018 9:53 pm

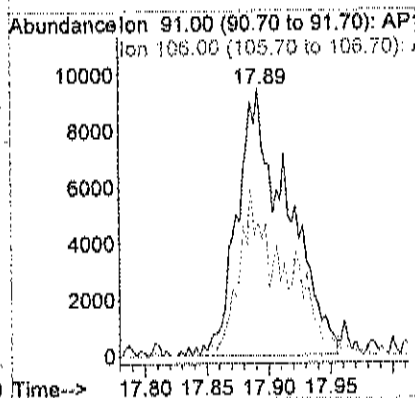
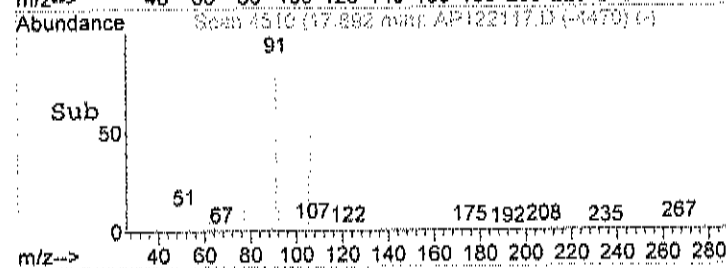
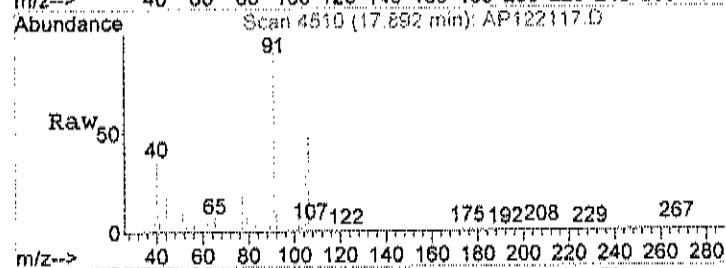
Tgt Ion: 164 Resp: 16787
Ion Ratio Lower Upper
164 100
166 126.9 108.5 148.5





#59
 m&p-xylene
 Concen: 0.15 ppb
 RT: 17.89 min Scan# 4510
 Delta R.T. -0.03 min
 Lab File: AP122117.D
 Acq: 21 Dec 2018 9:53 pm

Tgt Ion: 91 Resp: 26573
 Ion Ratio Lower Upper
 91 100
 106 42.8 28.3 68.3



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122222.D Vial: 68
 Acq On : 22 Dec 2018 10:58 pm Operator: RJP
 Sample : C1812057-018A 5x Inst : MSD #1
 Misc : AD10_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 08:54:29 2018 Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

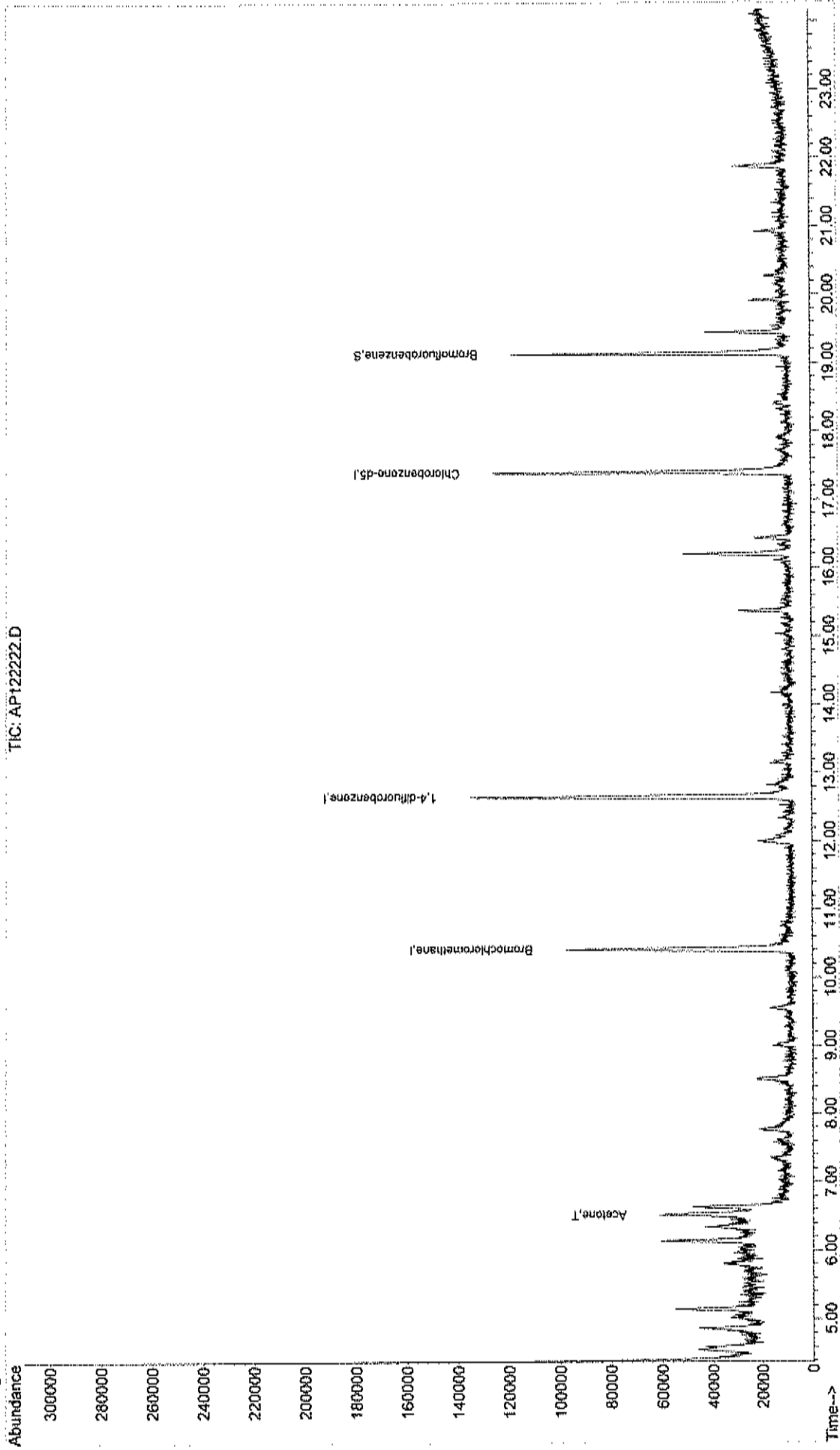
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	35162	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	134551	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	92909	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	19.13	95	46554m	0.73	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%
Target Compounds						
15) Acetone	6.53	58	19913	0.92	ppb	Qvalue 89

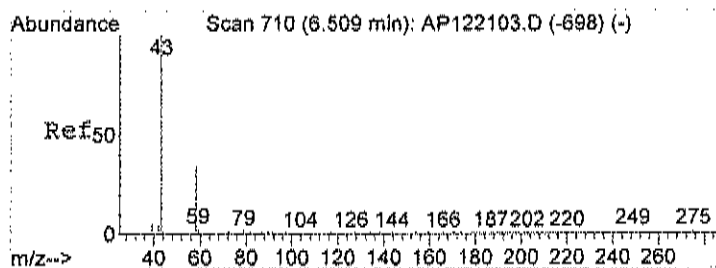
Data File : C:\HPCHEM\1\DATA\AP122222.D
 Acq On : 22 Dec 2018 10:58 pm
 Sample : C1812057-018A 5x
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 28 10:24 2018

Vial: 68
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

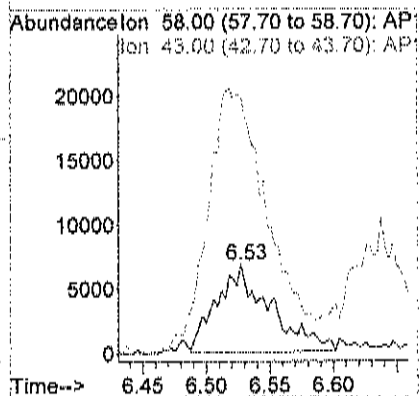
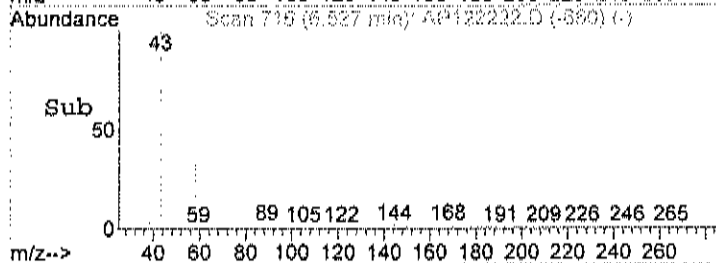
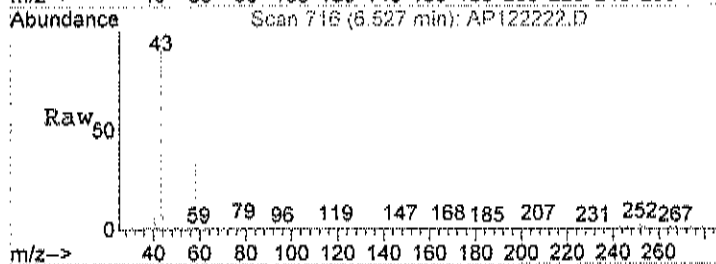
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration





#15
 Acetone
 Concen: 0.92 ppb
 RT: 6.53 min Scan# 716
 Delta R.T. 0.02 min
 Lab File: AP122222.D
 Acq: 22 Dec 2018 10:58 pm

Tgt Ion: 58 Resp: 19913
 Ion Ratio Lower Upper
 58 100
 43 352.1 298.2 358.2



Centek Laboratories, LLC

Date: 29-Jan-19

CLIENT:	SOIL MECHANICS	Client Sample ID:	TB-1
Lab Order:	C1812057	Tag Number:	1182
Project:	IKEA-RED HOOK	Collection Date:	12/14/2018
Lab ID:	C1812057-019A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
FIELD PARAMETERS		FLD		Analyst:		
Lab Vacuum In	+30			"Hg		12/21/2018
Lab Vacuum Out	+30			"Hg		12/21/2018
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1,2,2-Tetrachloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1,2-Trichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,1-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2,4-Trichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2,4-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dibromoethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,2-Dichloropropane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3,5-Trimethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,3-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,4-Dichlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
1,4-Dioxane	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
2,2,4-trimethylpentane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
4-ethyltoluene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Acetone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Allyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Benzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Benzyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromodichloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromoform	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Bromomethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Carbon disulfide	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Carbon tetrachloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chlorobenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloroethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloroform	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Chloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
cis-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
cis-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Cyclohexane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Dibromochloromethane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Ethyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM

Qualifiers:	** Quantitation Limit	.	Results reported are not blank corrected
	B Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 29-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1182
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15			TO-15		Analyst: RJP	
Ethylbenzene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 11	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 113	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 114	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Freon 12	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Heptane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Hexachloro-1,3-butadiene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Hexane	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Isopropyl alcohol	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
m&p-Xylene	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Butyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Ethyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl Isobutyl Ketone	< 0.30	0.30		ppbV	1	12/21/2018 8:32:00 PM
Methyl tert-butyl ether	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Methylene chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
o-Xylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Propylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Styrene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Tetrachloroethylene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Tetrahydrofuran	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Toluene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
trans-1,2-Dichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
trans-1,3-Dichloropropene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Trichloroethene	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl acetate	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl Bromide	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Vinyl chloride	< 0.15	0.15		ppbV	1	12/21/2018 8:32:00 PM
Surr: Bromofluorobenzene	71.0	70-130		%REC	1	12/21/2018 8:32:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte, Quantitation estimated.
S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

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Centek Laboratories, LLC

Date: 29-Jan-19

CLIENT:	SOIL MECHANICS	Client Sample ID:	TB-1
Lab Order:	C1812057	Tag Number:	1182
Project:	IKEA-RED HOOK	Collection Date:	12/14/2018
Lab ID:	C1812057-019A	Matrix:	AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
1,1,1-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 8:32:00 PM
1,1,2,2-Tetrachloroethane	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
1,1,2-Trichloroethane	< 0.82	0.82		ug/m3	1	12/21/2018 8:32:00 PM
1,1-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
1,1-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
1,2,4-Trichlorobenzene	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
1,2,4-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dibromoethane	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichloroethane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
1,2-Dichloropropane	< 0.69	0.69		ug/m3	1	12/21/2018 8:32:00 PM
1,3,5-Trimethylbenzene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
1,3-butadiene	< 0.33	0.33		ug/m3	1	12/21/2018 8:32:00 PM
1,3-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,4-Dichlorobenzene	< 0.90	0.90		ug/m3	1	12/21/2018 8:32:00 PM
1,4-Dioxane	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
2,2,4-trimethylpentane	< 0.70	0.70		ug/m3	1	12/21/2018 8:32:00 PM
4-ethyltoluene	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
Acetone	< 0.71	0.71		ug/m3	1	12/21/2018 8:32:00 PM
Allyl chloride	< 0.47	0.47		ug/m3	1	12/21/2018 8:32:00 PM
Benzene	< 0.48	0.48		ug/m3	1	12/21/2018 8:32:00 PM
Benzyl chloride	< 0.86	0.86		ug/m3	1	12/21/2018 8:32:00 PM
Bromodichloromethane	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
Bromoform	< 1.6	1.6		ug/m3	1	12/21/2018 8:32:00 PM
Bromomethane	< 0.58	0.58		ug/m3	1	12/21/2018 8:32:00 PM
Carbon disulfide	< 0.47	0.47		ug/m3	1	12/21/2018 8:32:00 PM
Carbon tetrachloride	< 0.94	0.94		ug/m3	1	12/21/2018 8:32:00 PM
Chlorobenzene	< 0.69	0.69		ug/m3	1	12/21/2018 8:32:00 PM
Chloroethane	< 0.40	0.40		ug/m3	1	12/21/2018 8:32:00 PM
Chloroform	< 0.73	0.73		ug/m3	1	12/21/2018 8:32:00 PM
Chloromethane	< 0.31	0.31		ug/m3	1	12/21/2018 8:32:00 PM
cis-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
cis-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 8:32:00 PM
Cyclohexane	< 0.52	0.52		ug/m3	1	12/21/2018 8:32:00 PM
Dibromochloromethane	< 1.3	1.3		ug/m3	1	12/21/2018 8:32:00 PM
Ethyl acetate	< 0.54	0.54		ug/m3	1	12/21/2018 8:32:00 PM
Ethylbenzene	< 0.65	0.65		ug/m3	1	12/21/2018 8:32:00 PM
Freon 11	< 0.84	0.84		ug/m3	1	12/21/2018 8:32:00 PM
Freon 113	< 1.1	1.1		ug/m3	1	12/21/2018 8:32:00 PM
Freon 114	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM

Qualifiers:	**	Quantitation Limit	.	Results reported are not blank corrected
	B	Analyte detected in the associated Method Blank	E	Estimated Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limit
	JN	Non-routine analyte. Quantitation estimated.	ND	Not Detected at the Limit of Detection
	S	Spike Recovery outside accepted recovery limits		

Centek Laboratories, LLC

Date: 29-Jan-19

CLIENT: SOIL MECHANICS
Lab Order: C1812057
Project: IKEA-RED HOOK
Lab ID: C1812057-019A

Client Sample ID: TB-1
Tag Number: 1182
Collection Date: 12/14/2018
Matrix: AIR

Analyses	Result	**Limit	Qual	Units	DF	Date Analyzed
1UG/M3 BY METHOD TO15		TO-15		Analyst: RJP		
Freon 12	< 0.74	0.74		ug/m3	1	12/21/2018 8:32:00 PM
Heptane	< 0.61	0.61		ug/m3	1	12/21/2018 8:32:00 PM
Hexachloro-1,3-butadiene	< 1.6	1.6		ug/m3	1	12/21/2018 8:32:00 PM
Hexane	< 0.53	0.53		ug/m3	1	12/21/2018 8:32:00 PM
Isopropyl alcohol	< 0.37	0.37		ug/m3	1	12/21/2018 8:32:00 PM
m&p-Xylene	< 1.3	1.3		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Butyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Ethyl Ketone	< 0.88	0.88		ug/m3	1	12/21/2018 8:32:00 PM
Methyl Isobutyl Ketone	< 1.2	1.2		ug/m3	1	12/21/2018 8:32:00 PM
Methyl tert-butyl ether	< 0.54	0.54		ug/m3	1	12/21/2018 8:32:00 PM
Methylene chloride	< 0.52	0.52		ug/m3	1	12/21/2018 8:32:00 PM
o-Xylene	< 0.65	0.65		ug/m3	1	12/21/2018 8:32:00 PM
Propylene	< 0.26	0.26		ug/m3	1	12/21/2018 8:32:00 PM
Styrene	< 0.64	0.64		ug/m3	1	12/21/2018 8:32:00 PM
Tetrachloroethylene	< 1.0	1.0		ug/m3	1	12/21/2018 8:32:00 PM
Tetrahydrofuran	< 0.44	0.44		ug/m3	1	12/21/2018 8:32:00 PM
Toluene	< 0.57	0.57		ug/m3	1	12/21/2018 8:32:00 PM
trans-1,2-Dichloroethene	< 0.59	0.59		ug/m3	1	12/21/2018 8:32:00 PM
trans-1,3-Dichloropropene	< 0.68	0.68		ug/m3	1	12/21/2018 8:32:00 PM
Trichloroethene	< 0.81	0.81		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl acetate	< 0.53	0.53		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl Bromide	< 0.66	0.66		ug/m3	1	12/21/2018 8:32:00 PM
Vinyl chloride	< 0.38	0.38		ug/m3	1	12/21/2018 8:32:00 PM

Qualifiers: ** Quantitation Limit
B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
JN Non-routine analyte. Quantitation estimated.
S Spike Recovery outside accepted recovery limits

. Results reported are not blank corrected
E Estimated Value above quantitation range
J Analyte detected below quantitation limit
ND Not Detected at the Limit of Detection

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122115.D Vial: 1
 Acq On : 21 Dec 2018 8:32 pm Operator: RJP
 Sample : C1812057-019A Inst : MSD #1
 Misc : AD10_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:31 2018 Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	40987	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	175942	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	121002	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	58854m	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%

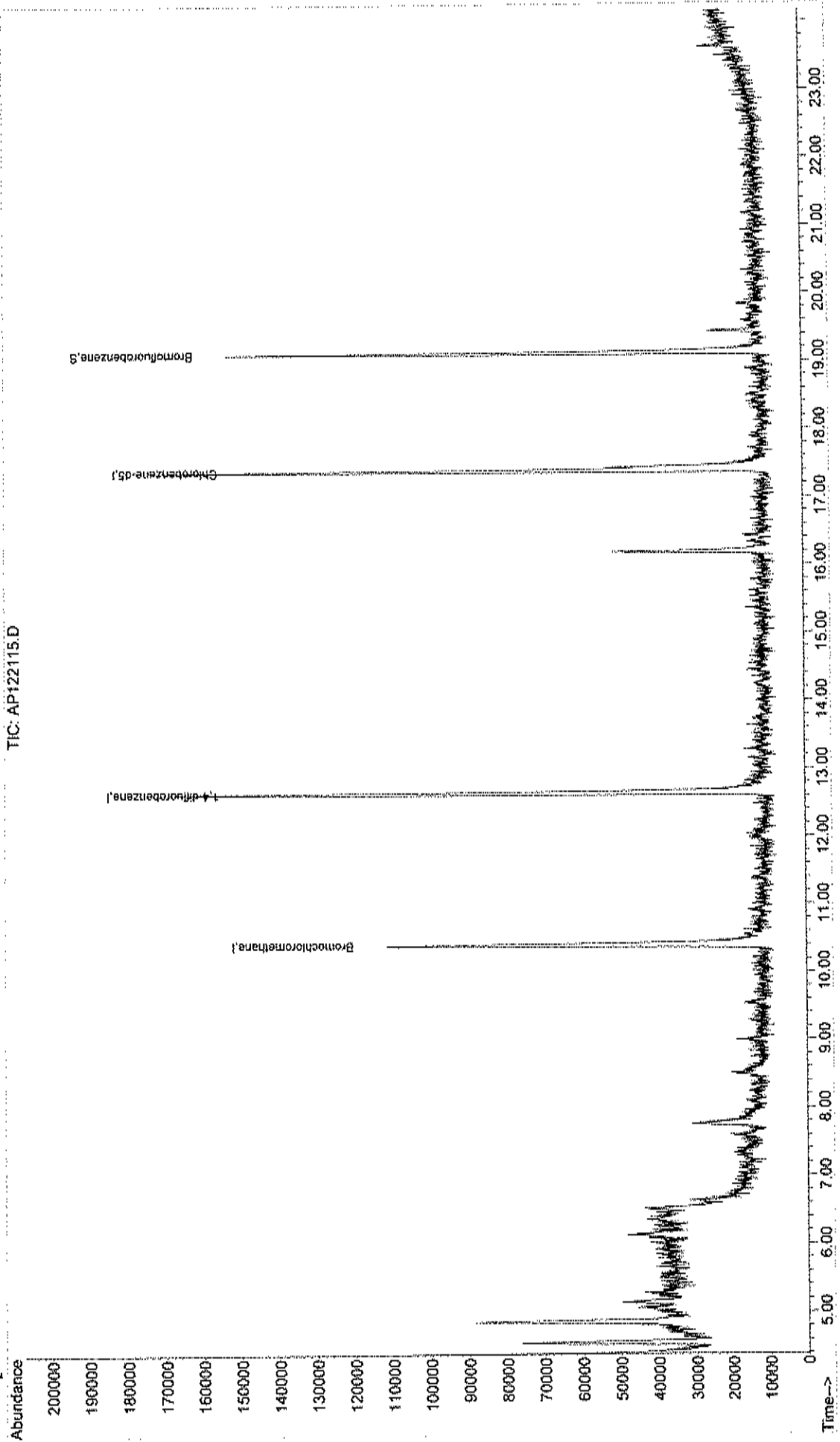
Target Compounds Qvalue

Data File : C:\HPCHEM\1\DATA\AP122115.D
Acq On : 21 Dec 2018 8:32 pm
Sample : C1812057-019A
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:00 2018

Vial: 1
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS DATA

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INITIAL CALIBRATION

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\AD10_LUG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 10:26:39 2019
 Response via : Initial Calibration

Calibration Files

0.03 =AP121016.D 0.04 =AP121015.D 0.10 =AP121014.D
 0.15 =AP121013.D 0.30 =AP121012.D .50 =AP121011.D

Compound	0.03	0.04	0.10	0.15	0.30	.50	Avg	%RSD
1) I Bromochloromethane	-----ISTD-----							
2) T Propylene				1.875	1.718	1.570	1.544	11.28
3) T Freon 12				7.054	6.556	6.087	5.783	12.48
4) T Chloromethane				2.048	2.196	1.947	1.827	12.09
5) T Freon 114				6.667	6.383	6.018	5.605	11.87
6) T Vinyl Chloride	2.152	1.687		1.942	1.769	1.762	1.647	15.92
7) T Butane				3.347	3.230	2.928	2.786	12.68
8) T 1,3-butadiene				1.936	1.836	1.668	1.589	13.21
9) T Bromomethane				2.725	2.189	2.223	1.995	18.31
10) T Chloroethane				0.715	0.687	0.719	0.644	9.05
11) T Ethanol				0.526	0.487	0.474	0.442	12.12
12) T Acrolein				0.473	0.443	0.463	0.410	10.50
13) T Vinyl Bromide				2.260	1.937	1.936	1.783	13.76
14) T Freon 11				9.641	9.059	8.366	7.901	13.01
15) T Acetone				0.844	0.588	0.719	0.613	18.49
16) T Pentane				2.156	1.942	1.840	1.735	13.13
17) T Isopropyl alcohol				2.718	2.434	2.345	2.247	11.72
18) T 1,1-dichloroeth	1.986	1.669		1.827	1.715	1.671	1.582	14.23
19) T Freon 113				4.447	4.170	3.881	3.679	12.17
20) t t-Butyl alcohol				2.842	2.460	2.266	2.310	11.10
21) T Methylene chlor				1.913	1.749	1.606	1.578	11.26
22) T Allyl chloride				1.953	1.793	1.804	1.743	6.54
23) T Carbon disulfid				4.686	3.933	3.526	3.506	15.77
24) T trans-1,2-dichl				1.985	1.997	2.020	1.863	6.37
25) T methyl tert-but				3.387	3.119	3.046	2.985	6.78
26) T 1,1-dichloroeth				3.478	3.535	3.289	3.093	9.68
27) T Vinyl acetate				2.790	2.827	2.688	2.793	2.20
28) T Methyl Ethyl Ke				0.710	0.671	0.617	0.630	6.82
29) T cis-1,2-dichlor	2.248	2.065		2.139	2.046	1.996	1.954	8.82
30) T Hexane				2.112	2.102	1.956	1.975	4.95
31) T Ethyl acetate				2.964	3.107	3.191	3.011	3.37
32) T Chloroform				4.667	4.302	4.019	3.794	12.85
33) T Tetrahydrofuran				1.425	1.268	1.308	1.334	4.27
34) T 1,2-dichloroeth				2.712	2.686	2.435	2.309	11.61
35) I 1,4-difluorobenzene	-----ISTD-----							
36) T 1,1,1-trichloro				1.026	0.965	0.902	0.913	6.56
37) T Cyclohexane				0.413	0.437	0.433	0.473	10.65
38) T Carbon tetrachl	1.408	1.504	1.091	1.050	0.972	0.912	1.048	20.42
39) T Benzene				1.248	1.150	1.090	1.139	5.67
40) T Methyl methacry				0.360	0.381	0.362	0.411	10.47
41) T 1,4-dioxane				0.232	0.196	0.179	0.212	11.13
42) T 2,2,4-trimethyl				1.575	1.524	1.522	1.624	7.66
43) T Heptane				0.534	0.510	0.509	0.565	10.59
44) T Trichloroethene	0.715	0.798	0.554	0.531	0.503	0.486	0.549	19.64
45) T 1,2-dichloropro				0.417	0.499	0.459	0.476	6.58
46) T Bromodichlorome				0.938	0.905	0.859	0.884	4.15
47) T cis-1,3-dichlor				0.489	0.481	0.495	0.546	11.97
48) T trans-1,3-dichl				0.350	0.357	0.324	0.385	13.23
49) T 1,1,2-trichloro				0.563	0.530	0.504	0.522	6.00
50) I Chlorobenzene-d5	-----ISTD-----							
51) T Toluene				0.736	0.673	0.724	0.774	10.65

(#) = Out of Range ### Number of calibration levels exceeded format ###
 AD10_LUG.M Wed Jan 02 10:30:59 2019 MSD1

Response Factor Report MSD #1

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 10:26:39 2019
 Response via : Initial Calibration

Calibration Files

0.03 =AP121016.D 0.04 =AP121015.D 0.10 =AP121014.D
 0.15 =AP121013.D 0.30 =AP121012.D .50 =AP121011.D

Compound	0.03	0.04	0.10	0.15	0.30	.50	Avg	%RSD
52) T Methyl Isobutyl				0.972	0.805	0.743	0.864	11.70
53) T Dibromochlorome				0.711	0.664	0.653	0.653	4.73
54) T Methyl Butyl Ke				0.960	0.849	0.732	0.848	12.39
55) T 1,2-dibromocetha				0.849	0.848	0.882	0.880	4.29
56) T Tetrachloroethy			0.757	0.676	0.632	0.625	0.629	9.17
57) T Chlorobenzene				1.211	1.230	1.182	1.191	4.31
58) T Ethylbenzene				1.467	1.340	1.446	1.600	14.68
59) T m&p-xylene				0.973	1.032	1.212	1.357	20.55
60) T Nonane				0.752	0.733	0.851	1.002	22.18
61) T Styrene				0.940	0.895	1.119	1.170	16.29
62) T Bromoform				0.205	0.197	0.183	0.192	4.87
63) T o-xylene				1.350	1.418	1.677	1.711	13.68
64) T Cumene				1.470	1.526	1.595	1.805	16.59
65) S Bromofluorobenz	0.591	0.560	0.634	0.646	0.645	0.696	0.684	10.79
66) T 1,1,2,2-tetrach				1.774	1.631	1.637	1.597	5.99
67) T Propylbenzene				0.466	0.451	0.431	0.521	15.65
68) T 2-Chlorotoluene				0.535	0.527	0.582	0.613	11.24
69) T 4-ethyltoluene				1.447	1.668	1.775	2.062	20.30
70) T 1,3,5-trimethyl				1.444	1.511	1.653	1.826	15.23
71) T 1,2,4-trimethyl				1.056	1.102	1.197	1.403	21.60
72) T 1,3-dichloroben				1.125	1.159	1.226	1.313	11.84
73) T benzyl chloride				0.875	0.861	1.030	1.127	18.42
74) T 1,4-dichloroben				1.007	1.094	1.224	1.314	16.45
75) T 1,2,3-trimethyl				1.249	1.270	1.439	1.621	19.82
76) T 1,2-dichloroben				1.050	1.142	1.229	1.269	11.76
77) T 1,2,4-trichloro				0.518	0.502	0.476	0.576	18.87
78) T Naphthalene	1.565	1.745	1.297	1.224	1.063	1.107	1.374	18.04
79) T Hexachloro-1,3-				0.927	0.843	0.900	0.913	6.03

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121007.D

Vial: 7

Acq On : 10 Dec 2018 12:36 pm

Operator: RJP

Sample : A1UG_1.50

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 15:18:28 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	46321	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.63	114	168382	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	135792	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	103421	1.03	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	103.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	97034	1.43	ppb	99
3) Freon 12	4.59	85	363940	1.44	ppb	99
4) Chloromethane	4.80	50	110386	1.40	ppb	96
5) Freon 114	4.80	85	346817	1.41	ppb	90
6) Vinyl Chloride	5.01	62	97642	1.42	ppb	98
7) Butane	5.13	43	175232	1.46	ppb	93
8) 1,3-butadiene	5.13	39	96589	1.38	ppb	88
9) Bromomethane	5.50	94	120775	1.40	ppb	96
10) Chloroethane	5.68	64	40299	1.37	ppb	93
11) Ethanol	5.79	45	27852	1.42	ppb	93
12) Acrolein	6.39	56	26611m/N	1.49	ppb	
13) Vinyl Bromide	6.04	106	110676	1.48	ppb	93
14) Freon 11	6.33	101	484238	1.41	ppb	98
15) Acetone	6.50	58	37506	1.42	ppb	86
16) Pentane	6.63	42	105774	1.38	ppb	98
17) Isopropyl alcohol	6.62	45	146096	1.42	ppb	82
18) 1,1-dichloroethene	7.12	96	93811	1.44	ppb	91
19) Freon 113	7.33	101	229783	1.43	ppb	94
20) t-Butyl alcohol	7.36	59	156580	1.46	ppb	# 72
21) Methylene chloride	7.59	84	102513	1.45	ppb	97
22) Allyl chloride	7.58	41	114610	1.43	ppb	99
23) Carbon disulfide	7.77	76	218173	1.44	ppb	88
24) trans-1,2-dichloroethene	8.56	61	123025	1.49	ppb	98
25) methyl tert-butyl ether	8.58	73	201070	1.46	ppb	70
26) 1,1-dichloroethane	8.99	63	197959	1.44	ppb	97
27) Vinyl acetate	8.97	43	197417	1.55	ppb	98
28) Methyl Ethyl Ketone	9.49	72	42989	1.58	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	124680	1.51	ppb	99
30) Hexane	9.54	57	139097	1.62	ppb	88
31) Ethyl acetate	10.09	43	206903	1.46	ppb	99
32) Chloroform	10.55	83	235471	1.42	ppb	99
33) Tetrahydrofuran	10.74	42	95987	1.54	ppb	95
34) 1,2-dichloroethane	11.66	62	146818	1.46	ppb	98
36) 1,1,1-trichloroethane	11.39	97	218049	1.48	ppb	98
37) Cyclohexane	12.07	56	125087	1.50	ppb	94
38) Carbon tetrachloride	12.01	117	228232	1.48	ppb	100
39) Benzene	11.98	78	274381	1.47	ppb	98
40) Methyl methacrylate	13.49	41	112903	1.60	ppb	98
41) 1,4-dioxane	13.53	88	55833	1.53	ppb	90
42) 2,2,4-trimethylpentane	12.81	57	425508	1.56	ppb	93
43) Heptane	13.14	43	153352	1.61	ppb	97
44) Trichloroethene	13.28	130	120966	1.49	ppb	97
45) 1,2-dichloropropane	13.38	63	120170	1.49	ppb	100

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

AP121007.D AD10_1UG.M

Wed Jan 02 10:31:28 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121007.D

Vial: 7

Acq On : 10 Dec 2018 12:36 pm

Operator: RJP

Sample : A1UG_1.50

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 15:18:28 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	216499	1.47	ppb	100
47) cis-1,3-dichloropropene	14.52	75	148573	1.58	ppb	99
48) trans-1,3-dichloropropene	15.27	75	102639	1.59	ppb	93
49) 1,1,2-trichloroethane	15.59	97	126973	1.49	ppb	100
51) Toluene	15.36	92	171705	1.64	ppb	97
52) Methyl Isobutyl Ketone	14.42	43	193985	1.63	ppb	95
53) Dibromochloromethane	16.33	129	131378	1.52	ppb	98
54) Methyl Butyl Ketone	15.77	43	191489	1.71	ppb	90
55) 1,2-dibromoethane	16.60	107	182110	1.55	ppb	99
56) Tetrachloroethylene	16.42	164	120119	1.51	ppb	100
57) Chlorobenzene	17.44	112	239663	1.52	ppb	98
58) Ethylbenzene	17.71	91	358821	1.64	ppb	99
59) m&p-xylene	17.92	91	649146	3.28	ppb	100
60) Nonane	18.31	43	242793	1.66	ppb	91
61) Styrene	18.38	104	264936	1.59	ppb	96
62) Bromoform	18.50	173	39572	1.44	ppb	98
63) o-xylene	18.41	91	378621	1.51	ppb	99
64) Cumene	19.01	105	412777	1.63	ppb	99
66) 1,1,2,2-tetrachloroethane	18.88	83	311423	1.48	ppb	100
67) Propylbenzene	19.59	120	119861	1.66	ppb	88
68) 2-Chlorotoluene	19.64	126	136484	1.59	ppb	90
69) 4-ethyltoluene	19.77	105	484970	1.58	ppb	100
70) 1,3,5-trimethylbenzene	19.84	105	416655	1.58	ppb	100
71) 1,2,4-trimethylbenzene	20.33	105	334543	1.69	ppb	98
72) 1,3-dichlorobenzene	20.66	146	286480	1.56	ppb	99
73) benzyl chloride	20.73	91	268134	1.68	ppb	99
74) 1,4-dichlorobenzene	20.80	146	295733	1.59	ppb	98
75) 1,2,3-trimethylbenzene	20.85	105	383675	1.66	ppb	98
76) 1,2-dichlorobenzene	21.17	146	279159	1.58	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	130850	1.67	ppb	95
78) Naphthalene	23.51	128	317678	1.87	ppb	99
79) Hexachloro-1,3-butadiene	23.63	225	186977	1.51	ppb	96

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP121007.D AD10_1UG.M Wed Jan 02 10:31:28 2019 MSD1

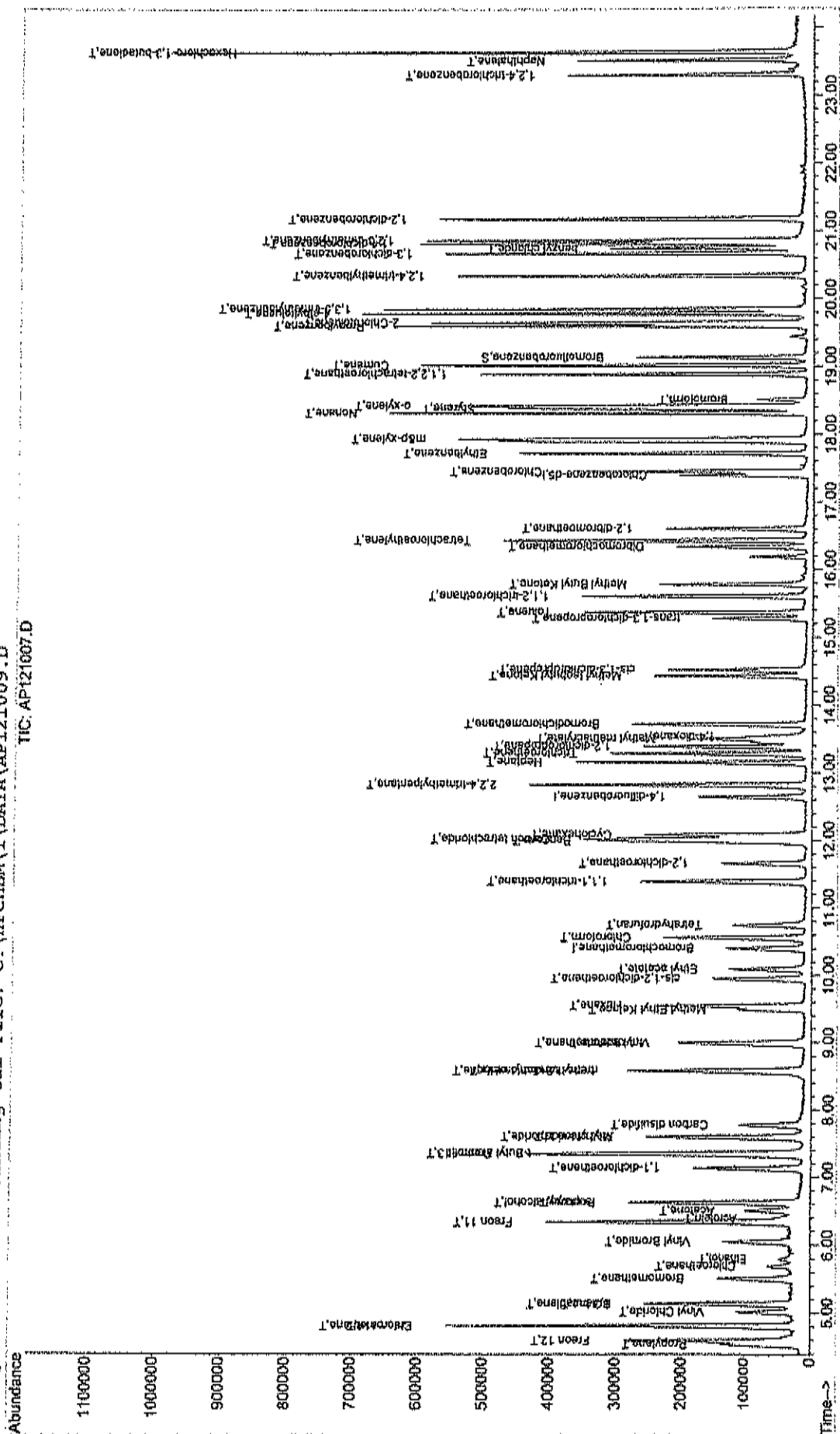
Data File : C:\HPCHEM\1\DATA\API21007.D
Acq On : 10 Dec 2018 12:36 pm
Sample : AUG 1.50
Misc : AD10_LUG
MS Integration Params: RTEINT.P
Quant Time: Dec 11 8:35 2018

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Method      : C:\HPCHEM\1\METHODS\AD10_IUG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 10:26:39 2019
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.1

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Quant Results File: AD10 IUG.RES



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121008.D

Vial: 8

Acq On : 10 Dec 2018 1:17 pm

Operator: RJP

Sample : ALUG_1.25

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 15:17:39 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	46035	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	166935	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	136494	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	102157	1.01	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	101.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	81708	1.21	ppb	100
3) Freon 12	4.59	85	294039	1.17	ppb	98
4) Chloromethane	4.80	50	96373	1.23	ppb	94
5) Freon 114	4.81	85	289713	1.19	ppb	90
6) Vinyl Chloride	5.02	62	80979	1.19	ppb	100
7) Butane	5.13	43	140738	1.18	ppb	94
8) 1,3-butadiene	5.13	39	82084	1.18	ppb	86
9) Bromomethane	5.51	94	96146	1.12	ppb	97
10) Chloroethane	5.68	64	34290	1.17	ppb	97
11) Ethanol	5.79	45	22956	1.18	ppb	89
12) Acrolein	6.40	56	22062m	1.24	ppb	
13) Vinyl Bromide	6.04	106	92106	1.24	ppb	97
14) Freon 11	6.34	101	402839	1.18	ppb	99
15) Acetone	6.51	58	29288	1.11	ppb	# 82
16) Pentane	6.63	42	89245	1.17	ppb	98
17) Isopropyl alcohol	6.62	45	112408	1.10	ppb	# 75
18) 1,1-dichloroethene	7.13	96	77455	1.20	ppb	92
19) Freon 113	7.34	101	189734	1.19	ppb	93
20) t-Butyl alcohol	7.37	59	118793	1.12	ppb	# 71
21) Methylene chloride	7.60	84	79517	1.13	ppb	94
22) Allyl chloride	7.58	41	93424	1.17	ppb	98
23) Carbon disulfide	7.77	76	178637	1.19	ppb	99
24) trans-1,2-dichloroethene	8.57	61	101294	1.24	ppb	98
25) methyl tert-butyl ether	8.59	73	160879	1.18	ppb	70
26) 1,1-dichloroethane	8.99	63	162560	1.19	ppb	96
27) Vinyl acetate	8.97	43	159128	1.26	ppb	97
28) Methyl Ethyl Ketone	9.50	72	33205	1.23	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	100303	1.22	ppb	99
30) Hexane	9.54	57	114842	1.35	ppb	93
31) Ethyl acetate	10.09	43	166972	1.19	ppb	100
32) Chloroform	10.56	83	195273	1.19	ppb	99
33) Tetrahydrofuran	10.74	42	73585	1.19	ppb	96
34) 1,2-dichloroethane	11.66	62	120484	1.21	ppb	97
36) 1,1,1-trichloroethane	11.39	97	177470	1.22	ppb	97
37) Cyclohexane	12.07	56	99605	1.21	ppb	92
38) Carbon tetrachloride	12.02	117	183815	1.20	ppb	98
39) Benzene	11.98	78	225850	1.22	ppb	98
40) Methyl methacrylate	13.50	41	90829	1.30	ppb	98
41) 1,4-dioxane	13.54	88	42413m	1.17	ppb	
42) 2,2,4-trimethylpentane	12.81	57	338723	1.25	ppb	91
43) Heptane	13.15	43	119571	1.27	ppb	98
44) Trichloroethene	13.28	130	98801	1.22	ppb	97
45) 1,2-dichloropropane	13.39	63	97716	1.23	ppb	97

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

AP121008.D AD10_1UG.M

Wed Jan 02 10:31:32 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121008.D

Vial: 8

Acq On : 10 Dec 2018 1:17 pm

Operator: RJP

Sample : A1UG_1.25

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 15:17:39 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	175523	1.21	ppb	99
47) cis-1,3-dichloropropene	14.52	75	117141	1.25	ppb	99
48) trans-1,3-dichloropropene	15.28	75	82909	1.30	ppb	98
49) 1,1,2-trichloroethane	15.60	97	101118	1.20	ppb	96
51) Toluene	15.36	92	134488	1.28	ppb	96
52) Methyl Isobutyl Ketone	14.43	43	134863	1.13	ppb	93
53) Dibromochloromethane	16.33	129	103852	1.20	ppb	100
54) Methyl Butyl Ketone	15.78	43	128681m	1.14	ppb	
55) 1,2-dibromoethane	16.60	107	146004	1.23	ppb	99
56) Tetrachloroethylene	16.42	164	98227	1.23	ppb	99
57) Chlorobenzene	17.44	112	194736	1.23	ppb	98
58) Ethylbenzene	17.71	91	280804	1.28	ppb	99
59) m&p-xylene	17.93	91	505438	2.54	ppb	99
60) Nonane	18.31	43	187685	1.28	ppb	92
61) Styrene	18.38	104	214505	1.28	ppb	94
62) Bromoform	18.51	173	30947m	1.12	ppb	
63) o-xylene	18.41	91	302756	1.20	ppb	99
64) Cumene	19.01	105	324163	1.27	ppb	99
66) 1,1,2,2-tetrachloroethane	18.88	83	252345	1.19	ppb	99
67) Propylbenzene	19.59	120	93703	1.29	ppb	88
68) 2-Chlorotoluene	19.64	126	104969	1.22	ppb	95
69) 4-ethyltoluene	19.77	105	386307	1.25	ppb	99
70) 1,3,5-trimethylbenzene	19.84	105	330648	1.25	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	260467	1.31	ppb	98
72) 1,3-dichlorobenzene	20.66	146	229528	1.24	ppb	98
73) benzyl chloride	20.73	91	205499	1.28	ppb	98
74) 1,4-dichlorobenzene	20.81	146	238181	1.27	ppb	99
75) 1,2,3-trimethylbenzene	20.86	105	298676	1.28	ppb	97
76) 1,2-dichlorobenzene	21.17	146	221125	1.25	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	101645	1.29	ppb	97
78) Naphthalene	23.51	128	226365	1.32	ppb	99
79) Hexachloro-1,3-butadiene	23.63	225	151792	1.22	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP121008.D AD10_1UG.M Wed Jan 02 10:31:32 2019 MSD1

Data File : C:\HPCHEM\1\DATA\AP121008.D
Acq On : 10 Dec 2018 1:17 pm
Sample : ALUG_1.25
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 11 8:36 2018

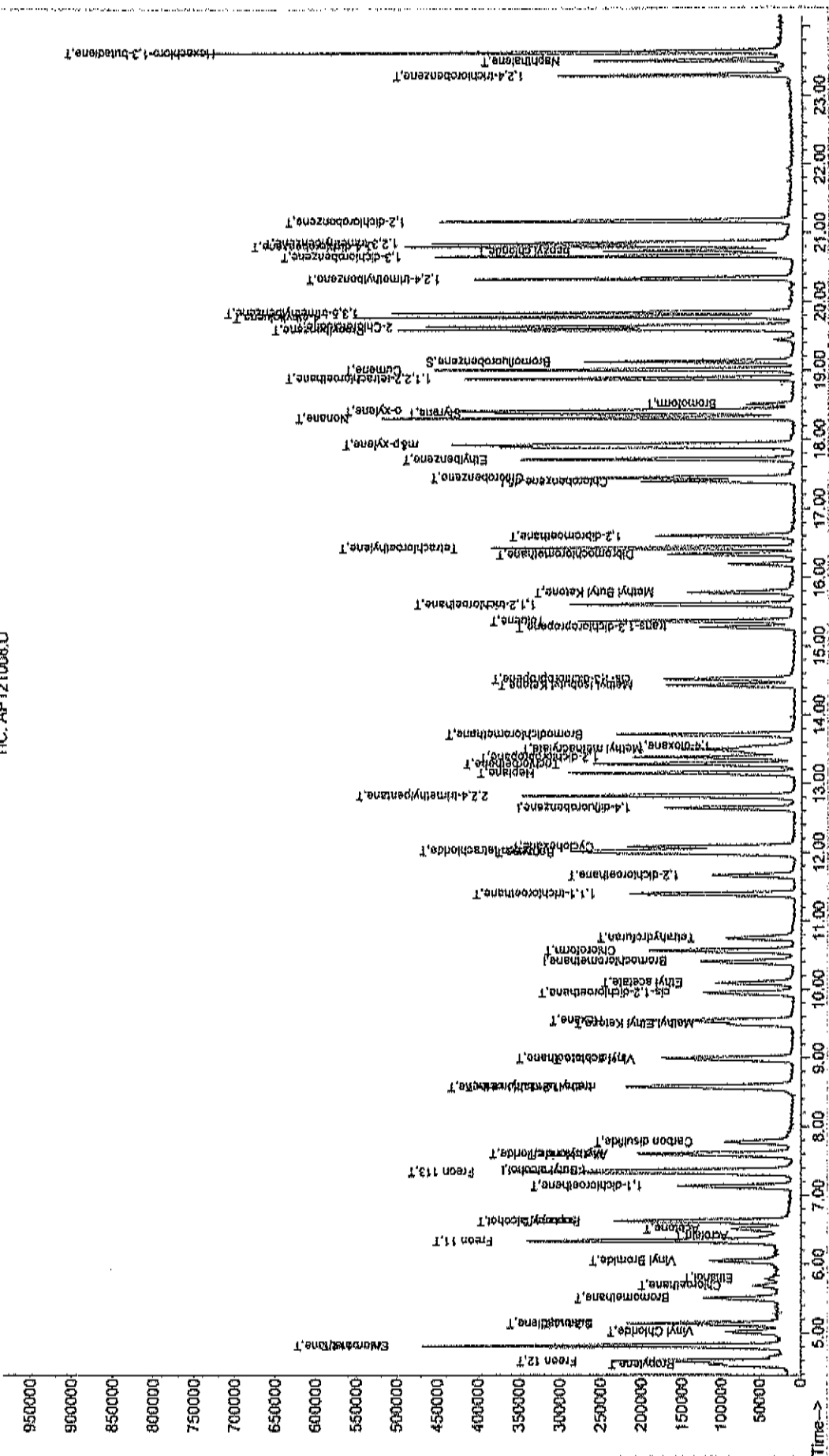
Vial: 8
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 10:26:39 2019
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

Abundance

TIC: AP121008.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121009.D
 Acq On : 10 Dec 2018 1:56 pm
 Sample : ALUG_1.0
 Misc : AD10_1UG

Vial: 9
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 15:17:20 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Dec 10 15:16:52 2018
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	43171	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	160736	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	128767	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	95618	1.00	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	100.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.54	41	63310	1.00	ppb	100
3) Freon 12	4.59	85	235749	1.00	ppb	100
4) Chloromethane	4.80	50	73700	1.00	ppb	96
5) Freon 114	4.81	85	228925	1.00	ppb	90
6) Vinyl Chloride	5.01	62	64013	1.00	ppb	98
7) Butane	5.13	43	112049	1.00	ppb	91
8) 1,3-butadiene	5.13	39	65049	1.00	ppb	87
9) Bromomethane	5.50	94	80467	1.00	ppb	98
10) Chloroethane	5.69	64	27441	1.00	ppb	# 68
11) Ethanol	5.78	45	18848m	1.03	ppb	
12) Acrolein	6.39	56	16622	1.00	ppb	# 55
13) Vinyl Bromide	6.05	106	69624	1.00	ppb	90
14) Freon 11	6.34	101	319993	1.00	ppb	98
15) Acetone	6.51	58	24689	1.00	ppb	93
16) Pentane	6.62	42	71494	1.00	ppb	96
17) Isopropyl alcohol	6.62	45	95793	1.00	ppb	86
18) 1,1-dichloroethene	7.13	96	60762	1.00	ppb	92
19) Freon 113	7.33	101	149697	1.00	ppb	93
20) t-Butyl alcohol	7.36	59	99896	1.00	ppb	# 74
21) Methylene chloride	7.60	84	65794	1.00	ppb	97
22) Allyl chloride	7.58	41	74645	1.00	ppb	99
23) Carbon disulfide	7.77	76	140783	1.00	ppb	93
24) trans-1,2-dichloroethene	8.56	61	76815	1.00	ppb	99
25) methyl tert-butyl ether	8.59	73	128350	1.00	ppb	69
26) 1,1-dichloroethane	9.00	63	127718	1.00	ppb	98
27) Vinyl acetate	8.97	43	118531	1.00	ppb	95
28) Methyl Ethyl Ketone	9.49	72	25401	1.00	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	77064	1.00	ppb	86
30) Hexane	9.54	57	79994	1.00	ppb	# 81
31) Ethyl acetate	10.09	43	132411	1.00	ppb	94
32) Chloroform	10.56	83	154244	1.00	ppb	100
33) Tetrahydrofuran	10.75	42	57923	1.00	ppb	94
34) 1,2-dichloroethane	11.66	62	93568	1.00	ppb	99
36) 1,1,1-trichloroethane	11.39	97	140355	1.00	ppb	98
37) Cyclohexane	12.07	56	79399	1.00	ppb	92
38) Carbon tetrachloride	12.01	117	147677	1.00	ppb	99
39) Benzene	11.98	78	178491	1.00	ppb	98
40) Methyl methacrylate	13.49	41	67506	1.00	ppb	98
41) 1,4-dioxane	13.53	88	34775	1.00	ppb	93
42) 2,2,4-trimethylpentane	12.81	57	260936	1.00	ppb	91
43) Heptane	13.15	43	90819	1.00	ppb	97
44) Trichloroethene	13.28	130	77690	1.00	ppb	100
45) 1,2-dichloropropane	13.39	63	76744	1.00	ppb	98

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

AP121009.D AD10_1UG.M

Wed Jan 02 10:31:36 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121009.D

Vial: 9

Acq On : 10 Dec 2018 1:56 pm

Operator: RJP

Sample : AD10_1.0

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 15:17:20 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	140197	1.00	ppb	100
47) cis-1,3-dichloropropene	14.51	75	89886	1.00	ppb	99
48) trans-1,3-dichloropropene	15.27	75	61494	1.00	ppb	95
49) 1,1,2-trichloroethane	15.60	97	81384	1.00	ppb	100
51) Toluene	15.36	92	99103	1.00	ppb	96
52) Methyl Isobutyl Ketone	14.43	43	112545	1.00	ppb	93
53) Dibromochloromethane	16.34	129	81932	1.00	ppb	100
54) Methyl Butyl Ketone	15.78	43	106133	1.00	ppb	91
55) 1,2-dibromoethane	16.60	107	111656	1.00	ppb	98
56) Tetrachloroethylene	16.43	164	75264	1.00	ppb	98
57) Chlorobenzene	17.44	112	149435	1.00	ppb	97
58) Ethylbenzene	17.71	91	207764	1.00	ppb	99
59) m&p-xylene	17.92	91	374803	2.00	ppb	99
60) Nonane	18.31	43	138676	1.00	ppb	91
61) Styrene	18.38	104	158067	1.00	ppb	97
62) Bromoform	18.51	173	26102	1.00	ppb	96
63) o-xylene	18.41	91	237266	1.00	ppb	99
64) Cumene	19.01	105	240489	1.00	ppb	99
66) 1,1,2,2-tetrachloroethane	18.88	83	199803	1.00	ppb	98
67) Propylbenzene	19.59	120	68413	1.00	ppb	90
68) 2-Chlorotoluene	19.64	126	81320	1.00	ppb	96
69) 4-ethyltoluene	19.77	105	290443	1.00	ppb	100
70) 1,3,5-trimethylbenzene	19.84	105	249594	1.00	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	187530	1.00	ppb	99
72) 1,3-dichlorobenzene	20.66	146	174070	1.00	ppb	99
73) benzyl chloride	20.74	91	151659	1.00	ppb	97
74) 1,4-dichlorobenzene	20.81	146	176551	1.00	ppb	98
75) 1,2,3-trimethylbenzene	20.86	105	219529	1.00	ppb	99
76) 1,2-dichlorobenzene	21.17	146	167179	1.00	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	74108	1.00	ppb	99
78) Naphthalene	23.51	128	161230	1.00	ppb	98
79) Hexachloro-1,3-butadiene	23.63	225	117557	1.00	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP121009.D AD10_1UG.M Wed Jan 02 10:31:36 2019 MSD1

Page 2

Data File : C:\HPCHEM\1\DATA\AP121009.D
 : 10 Dec 2018 1:56 pm
 Sample : A1UG_1.0
 Misc : AD10_1UG
 WMS Integration Params: RTEINT.P
 Quant Time: Dec 11 8:37 2018

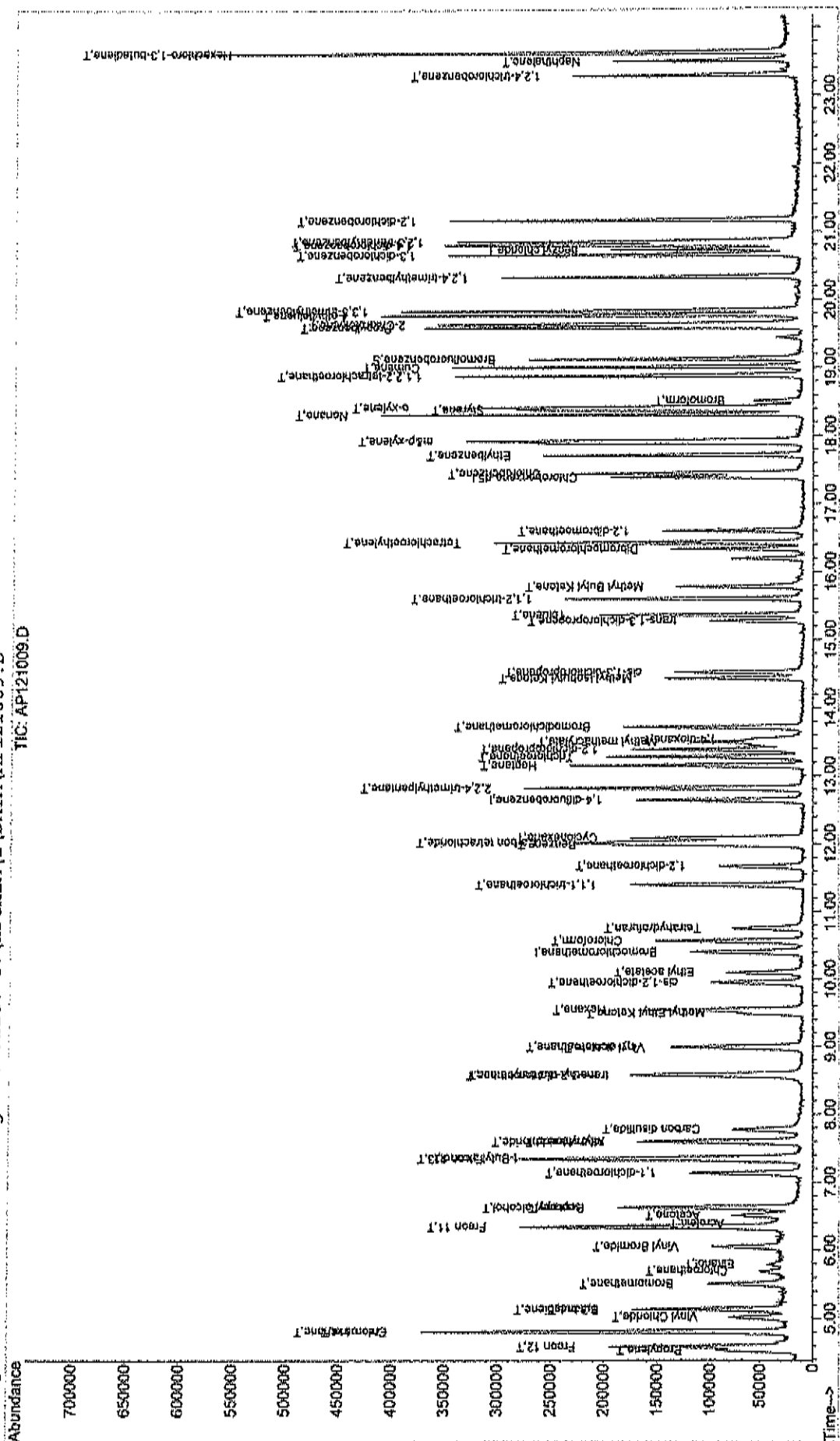
Vial: 9
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10 1UG.RES

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Method      : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 10:26:39 2019
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

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Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121010.D

Vial: 10

Acq On : 10 Dec 2018 2:35 pm

Operator: RJP

Sample : A1UG_0.75

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 15:19:53 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	41117	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	157664	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	125898	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	90349	0.97	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	97.00%

Target Compounds

						Qvalue
2) Propylene	4.53	41	47113	0.78	ppb	96
3) Freon 12	4.59	85	174849	0.78	ppb	99
4) Chloromethane	4.81	50	56816	0.81	ppb	96
5) Freon 114	4.81	85	168196	0.77	ppb	90
6) Vinyl Chloride	5.02	62	46433	0.76	ppb	93
7) Butane	5.13	43	85787	0.80	ppb	96
8) 1,3-butadiene	5.13	39	48791	0.79	ppb	86
9) Bromomethane	5.50	94	58283	0.76	ppb	99
10) Chloroethane	5.69	64	19726	0.75	ppb	90
11) Ethanol	5.80	45	13760	0.79	ppb	88
12) Acrolein	6.40	56	12163m	0.77	ppb	
13) Vinyl Bromide	6.05	106	54099	0.82	ppb	97
14) Freon 11	6.34	101	240717	0.79	ppb	99
15) Acetone	6.51	58	18668m	0.79	ppb	
16) Pentane	6.63	42	52147	0.77	ppb	99
17) Isopropyl alcohol	6.63	45	70460	0.77	ppb	82
18) 1,1-dichloroethene	7.14	96	46087	0.80	ppb	94
19) Freon 113	7.33	101	111856	0.78	ppb	94
20) t-Butyl alcohol	7.37	59	69681	0.73	ppb	# 73
21) Methylene chloride	7.61	84	48127	0.77	ppb	95
22) Allyl chloride	7.58	41	54764	0.77	ppb	98
23) Carbon disulfide	7.78	76	101944	0.76	ppb	99
24) trans-1,2-dichloroethene	8.55	61	57124	0.78	ppb	98
25) methyl tert-butyl ether	8.59	73	89873	0.74	ppb	# 56
26) 1,1-dichloroethane	9.00	63	92916	0.76	ppb	96
27) Vinyl acetate	8.98	43	89060	0.79	ppb	93
28) Methyl Ethyl Ketone	9.50	72	19159	0.79	ppb	# 100
29) cis-1,2-dichloroethene	9.95	61	59287	0.81	ppb	98
30) Hexane	9.55	57	59163	0.78	ppb	83
31) Ethyl acetate	10.09	43	91532	0.73	ppb	99
32) Chloroform	10.56	83	112998	0.77	ppb	98
33) Tetrahydrofuran	10.75	42	39807	0.72	ppb	96
34) 1,2-dichloroethane	11.66	62	68484	0.77	ppb	98
36) 1,1,1-trichloroethane	11.39	97	104579	0.76	ppb	97
37) Cyclohexane	12.08	56	54824	0.70	ppb	91
38) Carbon tetrachloride	12.02	117	104536	0.72	ppb	95
39) Benzene	11.99	78	132578	0.76	ppb	100
40) Methyl methacrylate	13.50	41	47782m	0.72	ppb	
41) 1,4-dioxane	13.54	88	23218	0.68	ppb	94
42) 2,2,4-trimethylpentane	12.81	57	182069	0.71	ppb	89
43) Heptane	13.15	43	63234	0.71	ppb	98
44) Trichloroethene	13.28	130	56435	0.74	ppb	99
45) 1,2-dichloropropane	13.38	63	57571	0.76	ppb	98

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

AP121010.D AD10_1UG.M

Wed Jan 02 10:31:40 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121010.D

Vial: 10

Acq On : 10 Dec 2018 2:35 pm

Operator: RJP

Sample : A1UG_0.75

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 15:19:53 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.72	83	102524	0.75	ppb	100
47) cis-1,3-dichloropropene	14.52	75	61569	0.70	ppb	99
48) trans-1,3-dichloropropene	15.27	75	43896	0.73	ppb	95
49) 1,1,2-trichloroethane	15.60	97	60422	0.76	ppb	99
51) Toluene	15.36	92	68502	0.71	ppb	97
52) Methyl Isobutyl Ketone	14.43	43	72685	0.66	ppb	92
53) Dibromochloromethane	16.33	129	59680	0.75	ppb	98
54) Methyl Butyl Ketone	15.78	43	69095m	0.67	ppb	
55) 1,2-dibromoethane	16.60	107	83191	0.76	ppb	97
56) Tetrachloroethylene	16.43	164	55504	0.75	ppb	99
57) Chlorobenzene	17.45	112	107388	0.74	ppb	96
58) Ethylbenzene	17.71	91	136938	0.67	ppb	99
59) m&p-xylene	17.92	91	248997	1.36	ppb	99
60) Nonane	18.31	43	89354	0.66	ppb	95
61) Styrene	18.39	104	108184	0.70	ppb	97
62) Bromoform	18.51	173	17468	0.68	ppb	# 69
63) o-xylene	18.41	91	161295	0.70	ppb	100
64) Cumene	19.01	105	159014	0.68	ppb	99
66) 1,1,2,2-tetrachloroethane	18.88	83	143518	0.73	ppb	98
67) Propylbenzene	19.59	120	45021	0.67	ppb	86
68) 2-Chlorotoluene	19.64	126	57207	0.72	ppb	91
69) 4-ethyltoluene	19.77	105	187922	0.66	ppb	99
70) 1,3,5-trimethylbenzene	19.84	105	170786	0.70	ppb	98
71) 1,2,4-trimethylbenzene	20.33	105	122064	0.67	ppb	99
72) 1,3-dichlorobenzene	20.66	146	120598	0.71	ppb	98
73) benzyl chloride	20.73	91	102858	0.69	ppb	100
74) 1,4-dichlorobenzene	20.81	146	120012	0.70	ppb	97
75) 1,2,3-trimethylbenzene	20.85	105	140159	0.65	ppb	99
76) 1,2-dichlorobenzene	21.17	146	115453	0.71	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	46453	0.64	ppb	96
78) Naphthalene	23.51	128	113210m	0.72	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	83213	0.72	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

AP121010.D AD10_1UG.M

Wed Jan 02 10:31:41 2019

MSD1

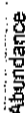
Page 2

[Q1 Reviewed]

Quant Results File: AD10 IUG.RES

Fast update : Wed Jan 02 10:26:39 2019
Response via : Continuing Cal File: C:\P

FIG. AP121010.D



Page 3

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121011.D Vial: 11
 Acq On : 10 Dec 2018 3:13 pm Operator: RJP
 Sample : ALUG_0.50 Inst : MSD #1
 Misc : AD10_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 10 19:18:22 2018 Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Dec 10 15:16:52 2018
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	38340	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	156125	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	116465	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	81020	0.94	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	94.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	30090	0.54	ppb	95
3) Freon 12	4.59	85	116696	0.56	ppb	99
4) Chloromethane	4.81	50	37321	0.57	ppb	98
5) Freon 114	4.81	85	115368	0.57	ppb	88
6) Vinyl Chloride	5.01	62	33785	0.59	ppb	92
7) Butane	5.12	43	56133	0.56	ppb	92
8) 1,3-butadiene	5.13	39	31967	0.55	ppb	84
9) Bromomethane	5.50	94	42619	0.60	ppb	94
10) Chloroethane	5.69	64	13780	0.57	ppb	89
11) Ethanol	5.79	45	9086m	0.56	ppb	
12) Acrolein	6.39	56	8879m	0.60	ppb	
13) Vinyl Bromide	6.04	106	37121	0.60	ppb	92
14) Freon 11	6.34	101	160376	0.56	ppb	98
15) Acetone	6.51	58	13786	0.63	ppb	98
16) Pentane	6.63	42	35277	0.56	ppb	98
17) Isopropyl alcohol	6.62	45	44963	0.53	ppb	# 77
18) 1,1-dichloroethene	7.13	96	32028	0.59	ppb	98
19) Freon 113	7.34	101	74397	0.56	ppb	93
20) t-Butyl alcohol	7.37	59	43448	0.49	ppb	# 73
21) Methylene chloride	7.61	84	30785	0.53	ppb	91
22) Allyl chloride	7.59	41	34579	0.52	ppb	96
23) Carbon disulfide	7.77	76	67603	0.54	ppb	97
24) trans-1,2-dichloroethene	8.56	61	38727	0.57	ppb	97
25) methyl tert-butyl ether	8.59	73	58390	0.51	ppb	61
26) 1,1-dichloroethane	9.00	63	63057	0.56	ppb	97
27) Vinyl acetate	8.98	43	51532	0.49	ppb	88
28) Methyl Ethyl Ketone	9.50	72	11830	0.52	ppb	# 100
29) cis-1,2-dichloroethene	9.95	61	38262	0.56	ppb	96
30) Hexane	9.54	57	37494	0.53	ppb	# 78
31) Ethyl acetate	10.09	43	61175	0.52	ppb	95
32) Chloroform	10.55	83	77036	0.56	ppb	99
33) Tetrahydrofuran	10.76	42	25066	0.49	ppb	# 72
34) 1,2-dichloroethane	11.66	62	46681	0.56	ppb	95
36) 1,1,1-trichloroethane	11.39	97	70417	0.52	ppb	97
37) Cyclohexane	12.08	56	33776	0.44	ppb	89
38) Carbon tetrachloride	12.01	117	71170	0.50	ppb	99
39) Benzene	11.98	78	85060	0.49	ppb	98
40) Methyl methacrylate	13.49	41	28239	0.43	ppb	99
41) 1,4-dioxane	13.55	88	13989m	0.41	ppb	
42) 2,2,4-trimethylpentane	12.81	57	118785	0.47	ppb	87
43) Heptane	13.15	43	39765	0.45	ppb	97
44) Trichloroethene	13.28	130	37967	0.50	ppb	96
45) 1,2-dichloropropane	13.38	63	35852	0.48	ppb	94

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

AP121011.D AD10_1UG.M

Wed Jan 02 10:31:44 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121011.D

Vial: 11

Acq On : 10 Dec 2018 3:13 pm

Operator: RJP

Sample : A1UG_0.50

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 19:18:22 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

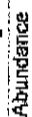
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	67062	0.49	ppb	96
47) cis-1,3-dichloropropene	14.52	75	38631	0.44	ppb	99
48) trans-1,3-dichloropropene	15.27	75	25270	0.42	ppb	90
49) 1,1,2-trichloroethane	15.60	97	39333	0.50	ppb	99
51) Toluene	15.36	92	42189	0.47	ppb	97
52) Methyl Isobutyl Ketone	14.43	43	43256m	0.42	ppb	
53) Dibromochloromethane	16.33	129	38041	0.51	ppb	97
54) Methyl Butyl Ketone	15.78	43	42644m	0.44	ppb	
55) 1,2-dibromoethane	16.59	107	51350	0.51	ppb	93
56) Tetrachloroethylene	16.43	164	36404	0.53	ppb	97
57) Chlorobenzene	17.45	112	68829	0.51	ppb	97
58) Ethylbenzene	17.71	91	84232	0.45	ppb	99
59) m&p-xylene	17.92	91	141164	0.83	ppb	98
60) Nonane	18.31	43	49541	0.39	ppb	91
61) Styrene	18.38	104	65163	0.46	ppb	84
62) Bromoform	18.50	173	10662	0.45	ppb	95
63) o-xylene	18.42	91	97657	0.46	ppb	100
64) Cumene	19.01	105	92884	0.43	ppb	99
66) 1,1,2,2-tetrachloroethane	18.88	83	95303	0.53	ppb	99
67) Propylbenzene	19.59	120	25109	0.41	ppb	74
68) 2-Chlorotoluene	19.64	126	33897	0.46	ppb	# 83
69) 4-ethyltoluene	19.77	105	103335	0.39	ppb	96
70) 1,3,5-trimethylbenzene	19.84	105	96270	0.43	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	69721	0.41	ppb	99
72) 1,3-dichlorobenzene	20.66	146	71401	0.45	ppb	97
73) benzyl chloride	20.73	91	60006	0.44	ppb	99
74) 1,4-dichlorobenzene	20.81	146	71272	0.45	ppb	96
75) 1,2,3-trimethylbenzene	20.86	105	83784m	0.42	ppb	
76) 1,2-dichlorobenzene	21.17	146	71543	0.47	ppb	98
77) 1,2,4-trichlorobenzene	23.29	180	27717	0.41	ppb	100
78) Naphthalene	23.51	128	64467m	0.44	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	52392	0.49	ppb	95

 (#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP121011.D AD10_1UG.M Wed Jan 02 10:31:44 2019 MSD1

Page 2

Quant Results File: AD10 1UG.RES

TIC: AP121019.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121012.D

Vial: 12

Acq On : 10 Dec 2018 3:50 pm

Operator: RJP

Sample : A1UG_0.30

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 19:19:17 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	36267m	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.65	114	145668	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	112511	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	72591m	0.87	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	87.00%

Target Compounds

						Qvalue
2) Propylene	4.53	41	18696	0.35	ppb	100
3) Freon 12	4.59	85	71325	0.36	ppb	99
4) Chloromethane	4.81	50	23889	0.39	ppb	80
5) Freon 114	4.81	85	69446	0.36	ppb	87
6) Vinyl Chloride	5.02	62	19251	0.36	ppb	99
7) Butane	5.14	43	35146	0.37	ppb	97
8) 1,3-butadiene	5.13	39	19973	0.37	ppb	93
9) Bromomethane	5.50	94	23819	0.35	ppb	96
10) Chloroethane	5.68	64	7477m	0.32	ppb	
11) Ethanol	5.79	45	5302m	0.35	ppb	
12) Acrolein	6.42	56	4819m	0.35	ppb	
13) Vinyl Bromide	6.05	106	21079	0.36	ppb	86
14) Freon 11	6.34	101	98567	0.37	ppb	99
15) Acetone	6.51	58	6397m	0.31	ppb	
16) Pentane	6.63	42	21128	0.35	ppb	94
17) Isopropyl alcohol	6.63	45	26480	0.33	ppb	# 64
18) 1,1-dichloroethene	7.14	96	18657	0.37	ppb	93
19) Freon 113	7.34	101	45373	0.36	ppb	92
20) t-Butyl alcohol	7.38	59	26763	0.32	ppb	# 85
21) Methylene chloride	7.60	84	19025m	0.34	ppb	
22) Allyl chloride	7.59	41	19511	0.31	ppb	96
23) Carbon disulfide	7.77	76	42794	0.36	ppb	99
24) trans-1,2-dichloroethene	8.56	61	21728	0.34	ppb	# 35
25) methyl tert-butyl ether	8.59	73	33938	0.31	ppb	64
26) 1,1-dichloroethane	9.01	63	38466	0.36	ppb	90
27) Vinyl acetate	8.97	43	30756	0.31	ppb	84
28) Methyl Ethyl Ketone	9.50	72	7296m	0.34	ppb	
29) cis-1,2-dichloroethene	9.95	61	22262	0.34	ppb	89
30) Hexane	9.53	57	22866	0.34	ppb	# 44
31) Ethyl acetate	10.10	43	33801	0.30	ppb	87
32) Chloroform	10.56	83	46806	0.36	ppb	98
33) Tetrahydrofuran	10.75	42	13793	0.28	ppb	# 65
34) 1,2-dichloroethane	11.67	62	29225	0.37	ppb	97
36) 1,1,1-trichloroethane	11.39	97	42170	0.33	ppb	100
37) Cyclohexane	12.08	56	19096	0.27	ppb	# 72
38) Carbon tetrachloride	12.02	117	42497	0.32	ppb	99
39) Benzene	11.99	78	50247	0.31	ppb	95
40) Methyl methacrylate	13.50	41	16644m	0.27	ppb	
41) 1,4-dioxane	13.56	88	8556m	0.27	ppb	
42) 2,2,4-trimethylpentane	12.81	57	66609	0.28	ppb	88
43) Heptane	13.15	43	22274	0.27	ppb	98
44) Trichloroethene	13.29	130	21961	0.31	ppb	96
45) 1,2-dichloropropane	13.39	63	21812	0.31	ppb	98

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

AP121012.D AD10_1UG.M

Wed Jan 02 10:31:48 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121012.D
 Acq On : 10 Dec 2018 3:50 pm
 Sample : ALUG_0.30
 Misc : AD10_1UG

Vial: 12
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

MS Integration Params: RTEINT.P
 Quant Time: Dec 10 19:19:17 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Dec 10 15:16:52 2018
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D
 DataAcq Meth : 1UG_RUN

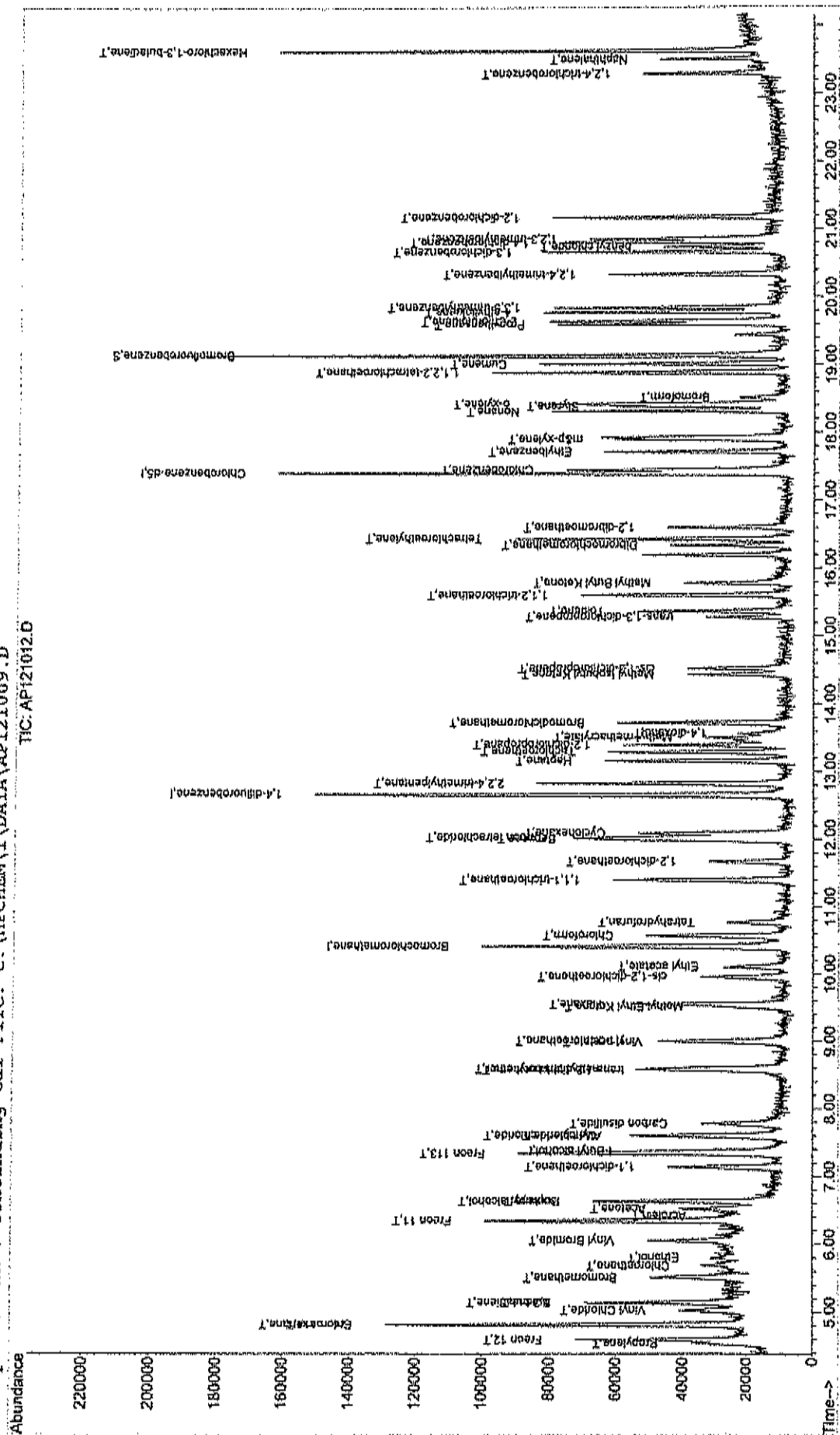
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	39549	0.31	ppb	97
47) cis-1,3-dichloropropene	14.52	75	21009	0.26	ppb	86
48) trans-1,3-dichloropropene	15.28	75	15617	0.28	ppb	96
49) 1,1,2-trichloroethane	15.60	97	23147	0.31	ppb	99
51) Toluene	15.36	92	22711	0.26	ppb	94
52) Methyl Isobutyl Ketone	14.43	43	27158	0.28	ppb	88
53) Dibromochloromethane	16.33	129	22397	0.31	ppb	94
54) Methyl Butyl Ketone	15.77	43	28663	0.31	ppb	87
55) 1,2-dibromoethane	16.60	107	28625	0.29	ppb	96
56) Tetrachloroethylene	16.43	164	21319	0.32	ppb	98
57) Chlorobenzene	17.44	112	41509	0.32	ppb	94
58) Ethylbenzene	17.71	91	45232	0.25	ppb	99
59) m&p-xylene	17.90	91	69634	0.43	ppb	98
60) Nonane	18.31	43	24725	0.20	ppb	94
61) Styrene	18.38	104	30204	0.22	ppb	95
62) Bromoform	18.52	173	6650	0.29	ppb	# 59
63) o-xylene	18.41	91	47853	0.23	ppb	100
64) Cumene	19.01	105	51514	0.25	ppb	98
66) 1,1,2,2-tetrachloroethane	18.88	83	55051	0.32	ppb	99
67) Propylbenzene	19.59	120	15218m	0.25	ppb	
68) 2-Chlorotoluene	19.64	126	17795	0.25	ppb	# 89
69) 4-ethyltoluene	19.77	105	56296	0.22	ppb	94
70) 1,3,5-trimethylbenzene	19.84	105	51014m	0.23	ppb	
71) 1,2,4-trimethylbenzene	20.33	105	37206	0.23	ppb	97
72) 1,3-dichlorobenzene	20.66	146	39115	0.26	ppb	97
73) benzyl chloride	20.74	91	29061	0.22	ppb	94
74) 1,4-dichlorobenzene	20.80	146	36924	0.24	ppb	96
75) 1,2,3-trimethylbenzene	20.85	105	42883m	0.22	ppb	
76) 1,2-dichlorobenzene	21.17	146	38553	0.26	ppb	95
77) 1,2,4-trichlorobenzene	23.30	180	16933m	0.26	ppb	
78) Naphthalene	23.51	128	35890m	0.25	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	28451	0.28	ppb	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP121012.D AD10_1UG.M Wed Jan 02 10:31:48 2019 MSD1

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Quant Results File: AD10 1UG.RES

Quant Results File: AD10 1UG.RES



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121013.D

Vial: 13

Acq On : 10 Dec 2018 4:28 pm

Operator: RJP

Sample : A1UG_0.15

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 19:19:45 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	35117	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	139226	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	103290	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	66734m	0.87	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	87.00%

Target Compounds

						Qvalue
2) Propylene	4.53	41	9877	0.19	ppb	97
3) Freon 12	4.59	85	37155	0.19	ppb	99
4) Chloromethane	4.80	50	10787m	0.18	ppb	
5) Freon 114	4.81	85	35121	0.19	ppb	91
6) Vinyl Chloride	5.01	62	10230	0.20	ppb	66
7) Butane	5.14	43	17631	0.19	ppb	87
8) 1,3-butadiene	5.14	39	10196m	0.19	ppb	
9) Bromomethane	5.50	94	14355	0.22	ppb	88
10) Chloroethane	5.69	64	3768m	0.17	ppb	
11) Ethanol	5.80	45	2773m	0.19	ppb	
12) Acrolein	6.41	58	2494m	0.18	ppb	
13) Vinyl Bromide	6.05	106	11907	0.21	ppb	95
14) Freon 11	6.34	101	50783	0.20	ppb	97
15) Acetone	6.53	58	4445m	0.22	ppb	
16) Pentane	6.63	42	11358	0.20	ppb	96
17) Isopropyl alcohol	6.63	45	14316	0.18	ppb	# 66
18) 1,1-dichloroethene	7.14	96	9623m	0.19	ppb	
19) Freon 113	7.34	101	23427	0.19	ppb	96
20) t-Butyl alcohol	7.37	59	14972	0.18	ppb	# 89
21) Methylene chloride	7.60	84	10075	0.19	ppb	# 86
22) Allyl chloride	7.58	41	10286	0.17	ppb	80
23) Carbon disulfide	7.78	76	24684m	0.22	ppb	
24) trans-1,2-dichloroethene	8.56	61	10454	0.17	ppb	90
25) methyl tert-butyl ether	8.58	73	17840	0.17	ppb	75
26) 1,1-dichloroethane	9.00	63	18318	0.18	ppb	# 48
27) Vinyl acetate	8.97	43	14699	0.15	ppb	98
28) Methyl Ethyl Ketone	9.50	72	3738m	0.18	ppb	
29) cis-1,2-dichloroethene	9.95	61	11269	0.18	ppb	92
30) Hexane	9.55	57	11126m	0.17	ppb	
31) Ethyl acetate	10.10	43	15611	0.15	ppb	98
32) Chloroform	10.57	83	24585	0.20	ppb	99
33) Tetrahydrofuran	10.75	42	7508m	0.16	ppb	
34) 1,2-dichloroethane	11.66	62	14287	0.19	ppb	66
36) 1,1,1-trichloroethane	11.39	97	21419	0.18	ppb	94
37) Cyclohexane	12.07	56	8618	0.13	ppb	# 45
38) Carbon tetrachloride	12.01	117	21936	0.17	ppb	99
39) Benzene	11.98	78	26070	0.17	ppb	95
40) Methyl methacrylate	13.50	41	7514m	0.13	ppb	
41) 1,4-dioxane	13.55	88	4855m	0.16	ppb	
42) 2,2,4-trimethylpentane	12.81	57	32884	0.15	ppb	83
43) Heptane	13.15	43	11152	0.14	ppb	98
44) Trichloroethene	13.28	130	11090	0.16	ppb	97
45) 1,2-dichloropropane	13.39	63	8708	0.13	ppb	88

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

AP121013.D AD10_1UG.M

Wed Jan 02 10:31:52 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121013.D

Vial: 13

Acq On : 10 Dec 2018 4:28 pm

Operator: RJP

Sample : ADUG_0.15

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 19:19:45 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.72	83	19596	0.16	ppb	94
47) cis-1,3-dichloropropene	14.52	75	10203	0.13	ppb	# 58
48) trans-1,3-dichloropropene	15.28	75	7301	0.14	ppb	89
49) 1,1,2-trichloroethane	15.60	97	11766	0.17	ppb	96
51) Toluene	15.36	92	11407	0.14	ppb	100
52) Methyl Isobutyl Ketone	14.44	43	15063	0.17	ppb	77
53) Dibromochloromethane	16.34	129	11011	0.17	ppb	88
54) Methyl Butyl Ketone	15.77	43	14876	0.17	ppb	# 57
55) 1,2-dibromoethane	16.60	107	13157	0.15	ppb	90
56) Tetrachloroethylene	16.43	164	10469	0.17	ppb	100
57) Chlorobenzene	17.45	112	18755	0.16	ppb	99
58) Ethylbenzene	17.72	91	22727	0.14	ppb	97
59) m&p-xylene	17.89	91	30147	0.20	ppb	94
60) Nonane	18.31	43	11656m	0.10	ppb	
61) Styrene	18.38	104	14568m	0.11	ppb	
62) Bromoform	18.51	173	3183m	0.15	ppb	
63) o-xylene	18.42	91	20916	0.11	ppb	92
64) Cumene	19.01	105	22770	0.12	ppb	99
66) 1,1,2,2-tetrachloroethane	18.89	83	27491	0.17	ppb	98
67) Propylbenzene	19.59	120	7216	0.13	ppb	90
68) 2-Chlorotoluene	19.65	126	8286	0.13	ppb	# 68
70) 1,3,5-trimethylbenzene	19.84	105	22380m	0.11	ppb	
71) 1,2,4-trimethylbenzene	20.32	105	16358	0.11	ppb	88
72) 1,3-dichlorobenzene	20.67	146	17436	0.12	ppb	# 87
73) benzyl chloride	20.74	91	13552	0.11	ppb	90
74) 1,4-dichlorobenzene	20.81	146	15599	0.11	ppb	98
75) 1,2,3-trimethylbenzene	20.85	105	19355m	0.11	ppb	
76) 1,2-dichlorobenzene	21.16	146	16264	0.12	ppb	96
77) 1,2,4-trichlorobenzene	23.29	180	8019m	0.13	ppb	
78) Naphthalene	23.51	128	18964m	0.15	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	14364	0.15	ppb	97

Data File : C:\HPCHEM\1\DATA\AP121013.D
Acq On : 10 Dec 2018 4:28 pm
Sample : A1UG 0.15
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 11 8:43 2018

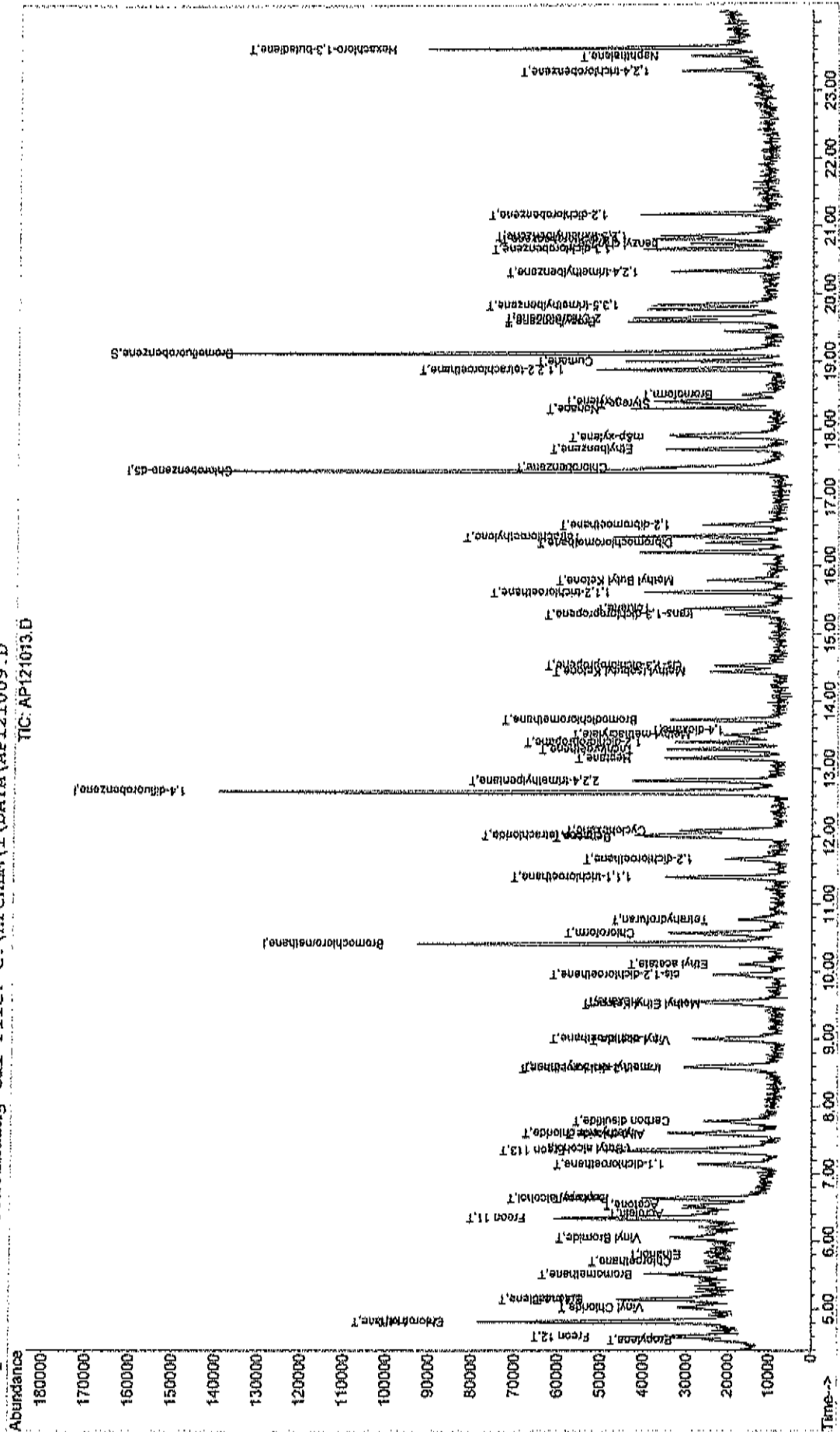
MS Integration Params: REFIN.T.P

Quant Time: Dec 11 8:43 2018

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Method      : C:\HPCHEM\1\METHODS\AD10_1UG.M (PTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 10:26:39 2019
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.
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Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

NC: AP121013.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121014.D

Vial: 14

Acq On : 10 Dec 2018 5:06 pm

Operator: RJP

Sample : ADUG_0.10

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 10 19:20:13 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	36838m ^p	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	138315	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	96803	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	61373m	0.85	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	85.00%

Target Compounds

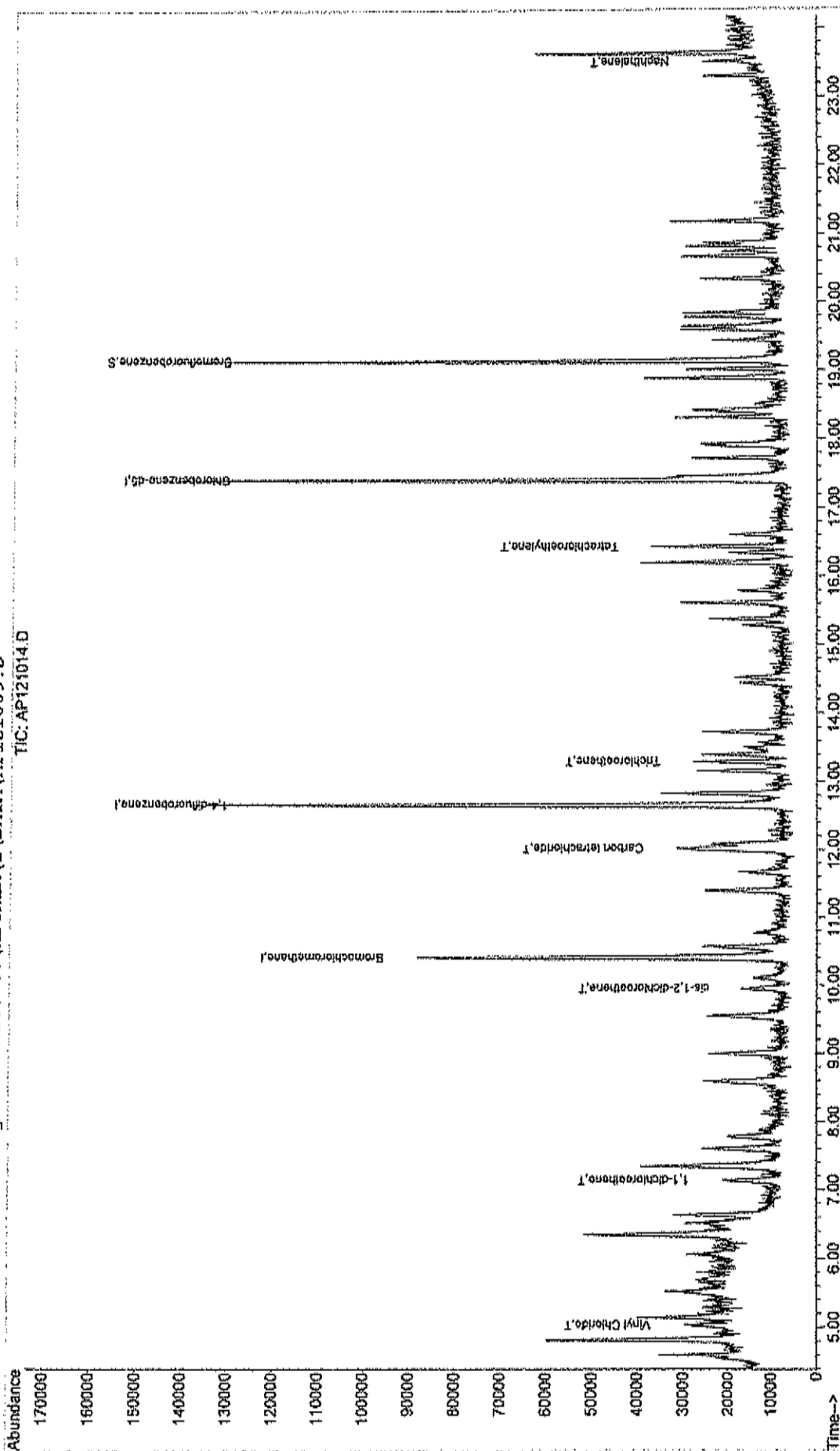
	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	5.02	62	6216m ^p	0.11	ppb	
18) 1,1-dichloroethene	7.14	96	6148m ^j	0.12	ppb	
29) cis-1,2-dichloroethene	9.95	61	7608	0.12	ppb	# 42
38) Carbon tetrachloride	12.01	117	15089	0.12	ppb	95
44) Trichloroethene	13.28	130	7665	0.11	ppb	96
56) Tetrachloroethylene	16.43	164	7325	0.13	ppb	99
78) Naphthalene	23.51	128	12557m ^j	0.10	ppb	

Data File : C:\HPCHEM\1\DATA\AP121014.D
Acq On : 10 Dec 2018 5:06 pm
Sample : A1UG 0.10
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 12 9:20 2018

Vial: 14
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 10:26:39 2019
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121015.D Vial: 15
 Acq On : 10 Dec 2018 5:44 pm Operator: RJP
 Sample : ALUG_0.04 Inst : MSD #1
 Misc : AD10_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 10 19:20:43 2018 Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Dec 10 15:16:52 2018
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	36397m ^p	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	128137	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	95623	1.00	ppb	0.00

System Monitoring Compounds						
65) Bromofluorobenzene	19.12	95	53505m	0.75	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	75.00%

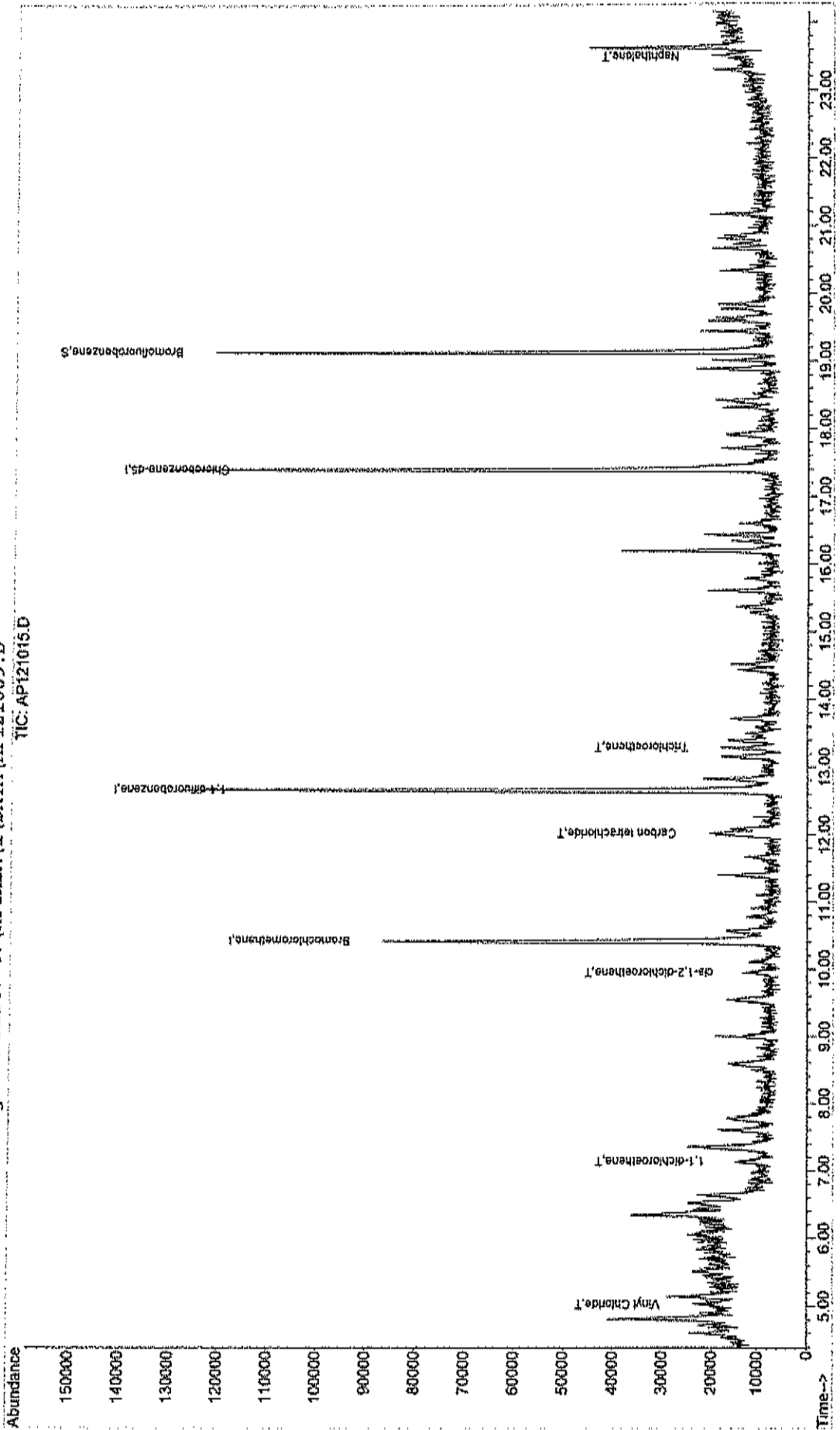
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
6) Vinyl Chloride	5.03	62	3133m ^p	0.06	ppb	
18) 1,1-dichloroethene	7.14	96	2892m ^b	0.06	ppb	
29) cis-1,2-dichloroethene	9.94	61	3273	0.05	ppb	# 48
38) Carbon tetrachloride	12.02	117	7708	0.07	ppb	# 48
44) Trichloroethene	13.28	130	4089	0.07	ppb	# 84
78) Naphthalene	23.51	128	6674m [#]	0.06	ppb	

Data File : C:\HPCHEM\1\DATA\AP121015.D
Acq On : 10 Dec 2018 5:44 pm
Sample : AUG 0.04
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 12 9:21 2018

Vial: 15
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 10:26:39 2019
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121016.D Vial: 16
 Acq On : 10 Dec 2018 6:21 pm Operator: RJP
 Sample : A1UG_0.03 Inst : MSD #1
 Misc : AD10_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 10 19:21:09 2018 Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Dec 10 15:16:52 2018
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D
 DataAcq Meth : 1UG_RUN

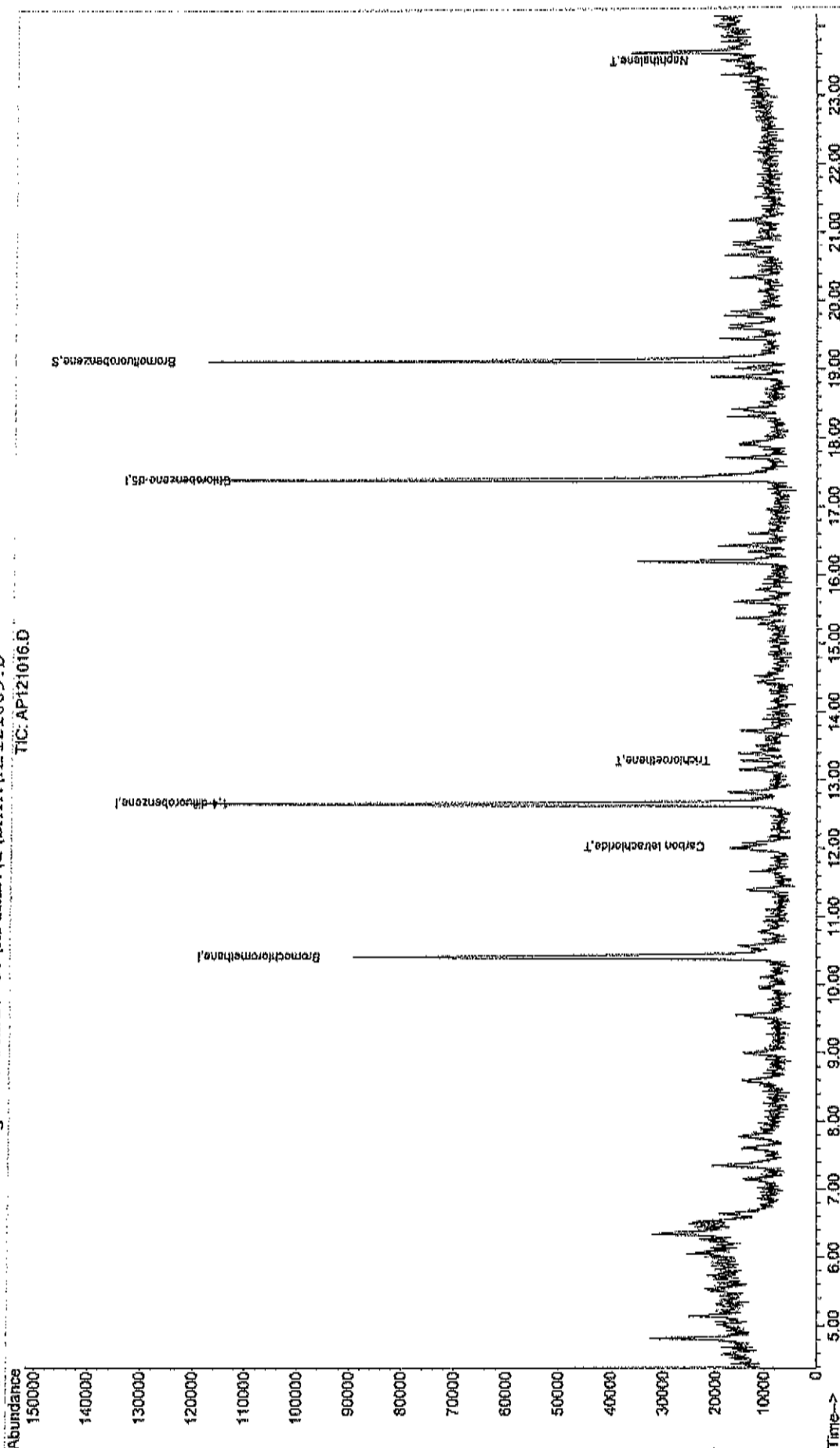
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	35534m ^β	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	131604	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	89159	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	19.13	95	52649m ^β	0.80	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	80.00%
Target Compounds						Qvalue
38) Carbon tetrachloride	12.02	117	5559m ^β	0.05	ppb	
44) Trichloroethene	13.28	130	2823	0.04	ppb	# 74
78) Naphthalene	23.51	128	4186m ^β	0.04	ppb	

Data File : C:\HPCHEM\1\DATA\AP121016.D
Acq On : 10 Dec 2018 6:21 pm
Sample : AUG_0.03
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 12 9:21 2018

Vial: 16
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 10:26:39 2019
Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121017.D Vial: 18
 Acq On : 10 Dec 2018 7:48 pm Operator: RJP
 Sample : A1UG_2.0 Inst : MSD #1
 Misc : AD10_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P
 Quant Time: Dec 11 08:34:21 2018 Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Mon Dec 10 15:16:52 2018
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	46056	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	150745	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	127552	1.00	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
65) Bromofluorobenzene	19.13	95	99983	1.06	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	* 106.00%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	126719	1.88	ppb	97
3) Freon 12	4.59	85	468998	1.86	ppb	100
4) Chloromethane	4.81	50	148200	1.88	ppb	93
5) Freon 114	4.81	85	459569	1.88	ppb	90
6) Vinyl Chloride	5.02	62	124969	1.83	ppb	99
7) Butane	5.13	43	224847	1.88	ppb	94
8) 1,3-butadiene	5.14	39	126098	1.82	ppb	89
9) Bromomethane	5.51	94	153001	1.78	ppb	99
10) Chloroethane	5.69	64	53009	1.81	ppb	99
11) Ethanol	5.78	45	33425	1.72	ppb	96
12) Acrolein	6.40	56	32926	1.86	ppb	84
13) Vinyl Bromide	6.05	106	144362	1.94	ppb	95
14) Freon 11	6.34	101	640878	1.88	ppb	99
15) Acetone	6.51	58	48787	1.85	ppb	# 77
16) Pentane	6.62	42	140359	1.84	ppb	96
17) Isopropyl alcohol	6.62	45	176441	1.73	ppb	# 70
18) 1,1-dichloroethene	7.14	96	124703	1.92	ppb	94
19) Freon 113	7.34	101	297787	1.86	ppb	94
20) t-Butyl alcohol	7.36	59	185757	1.74	ppb	# 70
21) Methylene chloride	7.60	84	130290	1.86	ppb	96
22) Allyl chloride	7.58	41	148698	1.87	ppb	97
23) Carbon disulfide	7.78	76	284970	1.90	ppb	100
24) trans-1,2-dichloroethene	8.56	61	160399	1.96	ppb	99
25) methyl tert-butyl ether	8.58	73	253532	1.85	ppb	69
26) 1,1-dichloroethane	9.00	63	257356	1.89	ppb	98
27) Vinyl acetate	8.98	43	257555	2.04	ppb	97
28) Methyl Ethyl Ketone	9.49	72	58548	2.16	ppb	# 100
29) cis-1,2-dichloroethene	9.95	61	165692	2.02	ppb	97
30) Hexane	9.55	57	171629	2.01	ppb	84
31) Ethyl acetate	10.09	43	267995	1.90	ppb	97
32) Chloroform	10.56	83	308082	1.87	ppb	98
33) Tetrahydrofuran	10.74	42	127034	2.06	ppb	94
34) 1,2-dichloroethane	11.66	62	188308	1.89	ppb	100
36) 1,1,1-trichloroethane	11.39	97	284186	2.16	ppb	98
37) Cyclohexane	12.08	56	173006	2.32	ppb	95
38) Carbon tetrachloride	12.02	117	302414	2.18	ppb	99
39) Benzene	11.98	78	369651	2.21	ppb	98
40) Methyl methacrylate	13.49	41	145246m	2.29	ppb	
41) 1,4-dioxane	13.53	88	76445	2.34	ppb	97
42) 2,2,4-trimethylpentane	12.82	57	572007	2.34	ppb	92
43) Heptane	13.15	43	207541	2.44	ppb	98
44) Trichloroethene	13.28	130	161409	2.22	ppb	98
45) 1,2-dichloropropane	13.39	63	158230	2.20	ppb	98

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

AP121017.D AD10_1UG.M Wed Jan 02 10:32:05 2019 MSDi

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP121017.D

Vial: 18

Acq On : 10 Dec 2018 7:48 pm

Operator: RJP

Sample : A1UG_2.0

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 11 08:34:21 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Mon Dec 10 15:16:52 2018

Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D

DataAcq Meth : 1UG_RUN

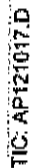
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.72	83	281332	2.14	ppb	100
47) cis-1,3-dichloropropene	14.52	75	203825	2.42	ppb	98
48) trans-1,3-dichloropropene	15.28	75	148555	2.58	ppb	99
49) 1,1,2-trichloroethane	15.60	97	172812	2.26	ppb	100
51) Toluene	15.36	92	238733	2.43	ppb	94
52) Methyl Isobutyl Ketone	14.43	43	255948	2.30	ppb	95
53) Dibromochloromethane	16.33	129	172290	2.12	ppb	97
54) Methyl Butyl Ketone	15.77	43	252297	2.40	ppb	92
55) 1,2-dibromoethane	16.60	107	245937	2.22	ppb	98
56) Tetrachloroethylene	16.43	164	162201	2.18	ppb	100
57) Chlorobenzene	17.45	112	329332	2.22	ppb	98
58) Ethylbenzene	17.71	91	529520	2.57	ppb	99
59) m&p-xylene	17.92	91	913183	4.92	ppb	100
60) Nonane	18.31	43	348952	2.54	ppb	92
61) Styrene	18.38	104	376995	2.41	ppb	96
62) Bromoform	18.50	173	47294	1.83	ppb	97
63) o-xylene	18.42	91	525876	2.24	ppb	100
64) Cumene	19.01	105	603938	2.54	ppb	99
66) 1,1,2,2-tetrachloroethane	18.88	83	422352	2.13	ppb	100
67) Propylbenzene	19.59	120	171666	2.53	ppb	89
68) 2-Chlorotoluene	19.64	126	187782	2.33	ppb	93
69) 4-ethyltoluene	19.78	105	692516	2.41	ppb	99
70) 1,3,5-trimethylbenzene	19.84	105	577833	2.34	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	498146	2.68	ppb	99
72) 1,3-dichlorobenzene	20.66	146	411468	2.39	ppb	98
73) benzyl chloride	20.74	91	372905	2.48	ppb	99
74) 1,4-dichlorobenzene	20.81	146	432442	2.47	ppb	97
75) 1,2,3-trimethylbenzene	20.85	105	557036	2.56	ppb	99
76) 1,2-dichlorobenzene	21.17	146	394088	2.38	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	205004	2.79	ppb	99
78) Naphthalene	23.51	128	453303m	2.84	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	263502	2.26	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP121017.D AD10_1UG.M Wed Jan 02 10:32:06 2019 MSD1

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Quant Results File: AD10_1UG.RES

Last Update : Wed Jan 02 10:26:39 2019
 Response via : Continuing Cal File: C:\HPCHEM\1\DATA\AP121009.D



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CALIBRATION VERIFICATION

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AP122103.D
 Acq On : 21 Dec 2018 11:00 am
 Sample : A1UG_1.0
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P

Vial: 3
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	97	0.00
2 T	Propylene	1.544	1.530	0.9	101	0.00
3 T	Freon 12	5.783	5.175	10.5	92	0.00
4 T	Chloromethane	1.827	2.079	-13.8	118	0.00
5 T	Freon 114	5.605	5.450	2.8	100	0.00
6 T	Vinyl Chloride	1.647	1.635	0.7	107	0.00
7 T	Butane	2.786	3.372	-21.0	126	0.00
8 T	1,3-butadiene	1.589	1.902	-19.7	122	0.00
9 T	Bromomethane	1.995	1.917	3.9	100	0.00
10 T	Chloroethane	0.644	0.760	-18.0	116	0.00
11 T	Ethanol	0.442	0.406	8.1	90	0.00
12 T	Acrolein	0.410	0.423	-3.2	106	0.00
13 T	Vinyl Bromide	1.783	1.663	6.7	100	0.00
14 T	Freon 11	7.901	7.410	6.2	97	0.00
15 T	Acetone	0.613	0.625	-2.0	106	0.00
16 T	Pentane	1.735	1.858	-7.1	109	0.00
17 T	Isopropyl alcohol	2.247	2.374	-5.7	104	0.00
18 T	1,1-dichloroethene	1.582	1.364	13.8	94	0.00
19 T	Freon 113	3.679	3.531	4.0	99	0.00
20 t	t-Butyl alcohol	2.310	2.575	-11.5	108	0.00
21 T	Methylene chloride	1.578	1.355	14.1	86	0.00
22 T	Allyl chloride	1.743	1.641	5.9	92	0.00
23 T	Carbon disulfide	3.506	3.354	4.3	100	0.00
24 T	trans-1,2-dichloroethene	1.863	1.681	9.8	92	0.00
25 T	methyl tert-butyl ether	2.985	2.787	6.6	91	0.00
26 T	1,1-dichloroethane	3.093	3.037	1.8	100	0.00
27 T	Vinyl acetate	2.793	2.431	13.0	86	0.00
28 T	Methyl Ethyl Ketone	0.630	0.618	1.9	102	0.00
29 T	cis-1,2-dichloroethene	1.954	1.631	16.5	89	0.00
30 T	Hexane	1.975	1.892	4.2	99	0.00
31 T	Ethyl acetate	3.011	3.127	-3.9	99	0.00
32 T	Chloroform	3.794	3.533	6.9	96	0.00
33 T	Tetrahydrofuran	1.334	1.298	2.7	94	0.00
34 T	1,2-dichloroethane	2.309	2.143	7.2	96	0.00
35 I	1,4-difluorobenzene	1.000	1.000	0.0	110	0.00
36 T	1,1,1-trichloroethane	0.913	0.764	16.3	96	0.00
37 T	Cyclohexane	0.473	0.387	18.2	86	0.00
38 T	Carbon tetrachloride	1.048	0.840	19.8	100	0.00
39 T	Benzene	1.139	0.924	18.9	91	0.00
40 T	Methyl methacrylate	0.411	0.386	6.1	101	0.00
41 T	1,4-dioxane	0.212	0.237	-11.8	120	0.00
42 T	2,2,4-trimethylpentane	1.624	1.349	16.9	91	0.00
43 T	Heptane	0.565	0.465	17.7	90	0.00
44 T	Trichloroethene	0.549	0.421	23.3	96	0.00
45 T	1,2-dichloropropane	0.476	0.427	10.3	98	0.00
46 T	Bromodichloromethane	0.884	0.907	-2.6	114	0.00
47 T	cis-1,3-dichloropropene	0.546	0.484	11.4	95	0.00
48 T	trans-1,3-dichloropropene	0.385	0.306	20.5	88	0.00
49 T	1,1,2-trichloroethane	0.522	0.462	11.5	100	0.00

(#) = Out of Range

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AP122103.D

Vial: 3

Acq On : 21 Dec 2018 11:00 am

Operator: RJP

Sample : AD10_1.0

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Jan 02 11:45:08 2019

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51 T	Toluene	0.774	0.644	16.8	91	0.00
52 T	Methyl Isobutyl Ketone	0.864	1.027	-18.9	128	0.00
53 T	Dibromochloromethane	0.653	0.910	-39.4#	156#	0.00
54 T	Methyl Butyl Ketone	0.848	1.001	-18.0	132	0.00
55 T	1,2-dibromoethane	0.880	0.784	10.9	98	0.00
56 T	Tetrachloroethylene	0.629	0.541	14.0	101	0.00
57 T	Chlorobenzene	1.191	0.981	17.6	92	0.00
58 T	Ethylbenzene	1.600	1.331	16.8	90	0.00
59 T	m&p-xylene	1.357	1.191	12.2	89	0.00
60 T	Nonane	1.002	0.877	12.5	89	0.00
61 T	Styrene	1.170	1.045	10.7	93	0.00
62 T	Bromoform	0.192	1.031	-437.0#	553#	0.00
63 T	o-xylene	1.711	1.560	8.8	92	0.00
64 T	Cumene	1.805	1.606	11.0	94	0.00
65 S	Bromofluorobenzene	0.684	0.769	-12.4	113	0.00
66 T	1,1,2,2-tetrachloroethane	1.597	1.432	10.3	100	0.00
67 T	Propylbenzene	0.521	0.429	17.7	88	0.00
68 T	2-Chlorotoluene	0.613	0.557	9.1	96	0.00
69 T	4-ethyltoluene	2.062	1.917	7.0	92	0.00
70 T	1,3,5-trimethylbenzene	1.826	1.742	4.6	98	0.00
71 T	1,2,4-trimethylbenzene	1.403	1.277	9.0	95	0.00
72 T	1,3-dichlorobenzene	1.313	1.123	14.5	90	0.00
73 T	benzyl chloride	1.127	1.085	3.7	100	0.00
74 T	1,4-dichlorobenzene	1.314	1.065	18.9	84	0.00
75 T	1,2,3-trimethylbenzene	1.621	1.539	5.1	98	0.00
76 T	1,2-dichlorobenzene	1.269	1.106	12.8	93	0.00
77 T	1,2,4-trichlorobenzene	0.576	0.551	4.3	104	0.00
78 T	Naphthalene	1.374	1.503	-9.4	131	0.00
79 T	Hexachloro-1,3-butadiene	0.913	0.975	-6.8	116	0.00

(#)= Out of Range

SPCC's out = 0 CCC's out = 0

AP122103.D AD10_1UG.M

Wed Jan 02 11:57:16 2019

MSD1

Page 2

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122103.D
 Acq On : 21 Dec 2018 11:00 am
 Sample : ALUG_1.0
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:19 2018

Vial: 3
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.39	128	41855	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.63	114	176484	1.00	ppb	-0.01
50) Chlorobenzene-d5	17.39	117	140076	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	107788	1.12	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	112.00%

Target Compounds

						Qvalue
2) Propylene	4.53	41	64044	0.99	ppb	97
3) Freon 12	4.59	85	216595	0.89	ppb	99
4) Chloromethane	4.80	50	87004	1.14	ppb	99
5) Freon 114	4.81	85	228130	0.97	ppb	82
6) Vinyl Chloride	5.01	62	68446	0.99	ppb	100
7) Butane	5.13	43	141115	1.21	ppb	94
8) 1,3-butadiene	5.13	39	79621	1.20	ppb	78
9) Bromomethane	5.50	94	80256	0.96	ppb	99
10) Chloroethane	5.70	64	31824	1.18	ppb	99
11) Ethanol	5.80	45	16979	0.92	ppb	# 59
12) Acrolein	6.41	56	17684	1.03	ppb	91
13) Vinyl Bromide	6.04	106	69618	0.93	ppb	95
14) Freon 11	6.33	101	310149	0.94	ppb	100
15) Acetone	6.51	58	26146	1.02	ppb	# 79
16) Pentane	6.63	42	77748	1.07	ppb	92
17) Isopropyl alcohol	6.63	45	99368	1.06	ppb	82
18) 1,1-dichloroethene	7.13	96	57091	0.86	ppb	93
19) Freon 113	7.33	101	147773	0.96	ppb	95
20) t-Butyl alcohol	7.36	59	107770	1.11	ppb	# 63
21) Methylene chloride	7.60	84	56705	0.86	ppb	94
22) Allyl chloride	7.58	41	68675	0.94	ppb	# 74
23) Carbon disulfide	7.77	76	140384	0.96	ppb	100
24) trans-1,2-dichloroethene	8.56	61	70349	0.90	ppb	94
25) methyl tert-butyl ether	8.59	73	116630	0.93	ppb	65
26) 1,1-dichloroethane	8.99	63	127117	0.98	ppb	97
27) Vinyl acetate	8.97	43	101757	0.87	ppb	93
28) Methyl Ethyl Ketone	9.49	72	25870	0.98	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	68248	0.83	ppb	98
30) Hexane	9.54	57	79199	0.96	ppb	89
31) Ethyl acetate	10.09	43	130896	1.04	ppb	99
32) Chloroform	10.55	83	147867	0.93	ppb	100
33) Tetrahydrofuran	10.74	42	54339	0.97	ppb	92
34) 1,2-dichloroethane	11.66	62	89694	0.93	ppb	99
36) 1,1,1-trichloroethane	11.38	97	134810	0.84	ppb	99
37) Cyclohexane	12.07	56	68338	0.82	ppb	89
38) Carbon tetrachloride	12.01	117	148292	0.80	ppb	98
39) Benzene	11.98	78	163139	0.81	ppb	98
40) Methyl methacrylate	13.49	41	68154	0.94	ppb	97
41) 1,4-dioxane	13.54	88	41864	1.12	ppb	96
42) 2,2,4-trimethylpentane	12.81	57	238080	0.83	ppb	87
43) Heptane	13.14	43	81989	0.82	ppb	98
44) Trichloroethene	13.28	130	74377	0.77	ppb	97
45) 1,2-dichloropropane	13.38	63	75412	0.90	ppb	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122103.D
 Acq On : 21 Dec 2018 11:00 am
 Sample : ALUG_1.0
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:19 2018

Vial: 3
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	160012	1.03	ppb	100
47) cis-1,3-dichloropropene	14.51	75	85347	0.89	ppb	98
48) trans-1,3-dichloropropene	15.27	75	54071	0.80	ppb	97
49) 1,1,2-trichloroethane	15.60	97	81484	0.88	ppb	97
51) Toluene	15.36	92	90270	0.83	ppb	98
52) Methyl Isobutyl Ketone	14.42	43	143875m	1.19	ppb	
53) Dibromochloromethane	16.33	129	127514m	1.39	ppb	
54) Methyl Butyl Ketone	15.77	43	140271m	1.18	ppb	
55) 1,2-dibromoethane	16.60	107	109778	0.89	ppb	96
56) Tetrachloroethylene	16.42	164	75795	0.86	ppb	95
57) Chlorobenzene	17.44	112	137473	0.82	ppb	97
58) Ethylbenzene	17.70	91	186461	0.83	ppb	100
59) m&p-xylene	17.92	91	333668	1.76	ppb	97
60) Nonane	18.31	43	122784	0.87	ppb	92
61) Styrene	18.37	104	146425	0.89	ppb	96
62) Bromoform	18.50	173	144356	5.37	ppb	99
63) o-xylene	18.41	91	218524	0.91	ppb	97
64) Cumene	19.00	105	224935	0.89	ppb	99
66) 1,1,2,2-tetrachloroethane	18.88	83	200526	0.90	ppb	99
67) Propylbenzene	19.59	120	60061	0.82	ppb	80
68) 2-Chlorotoluene	19.64	126	77955	0.91	ppb	# 84
69) 4-ethyltoluene	19.77	105	268459	0.93	ppb	99
70) 1,3,5-trimethylbenzene	19.83	105	244001	0.95	ppb	97
71) 1,2,4-trimethylbenzene	20.33	105	178910	0.91	ppb	98
72) 1,3-dichlorobenzene	20.65	146	157373	0.86	ppb	98
73) benzyl chloride	20.73	91	151914	0.96	ppb	99
74) 1,4-dichlorobenzene	20.80	146	149151	0.81	ppb	97
75) 1,2,3-trimethylbenzene	20.85	105	215538	0.95	ppb	97
76) 1,2-dichlorobenzene	21.17	146	154950	0.87	ppb	98
77) 1,2,4-trichlorobenzene	23.30	180	77160	0.96	ppb	99
78) Naphthalene	23.51	128	210572	1.09	ppb	98
79) Hexachloro-1,3-butadiene	23.63	225	136531	1.07	ppb	96

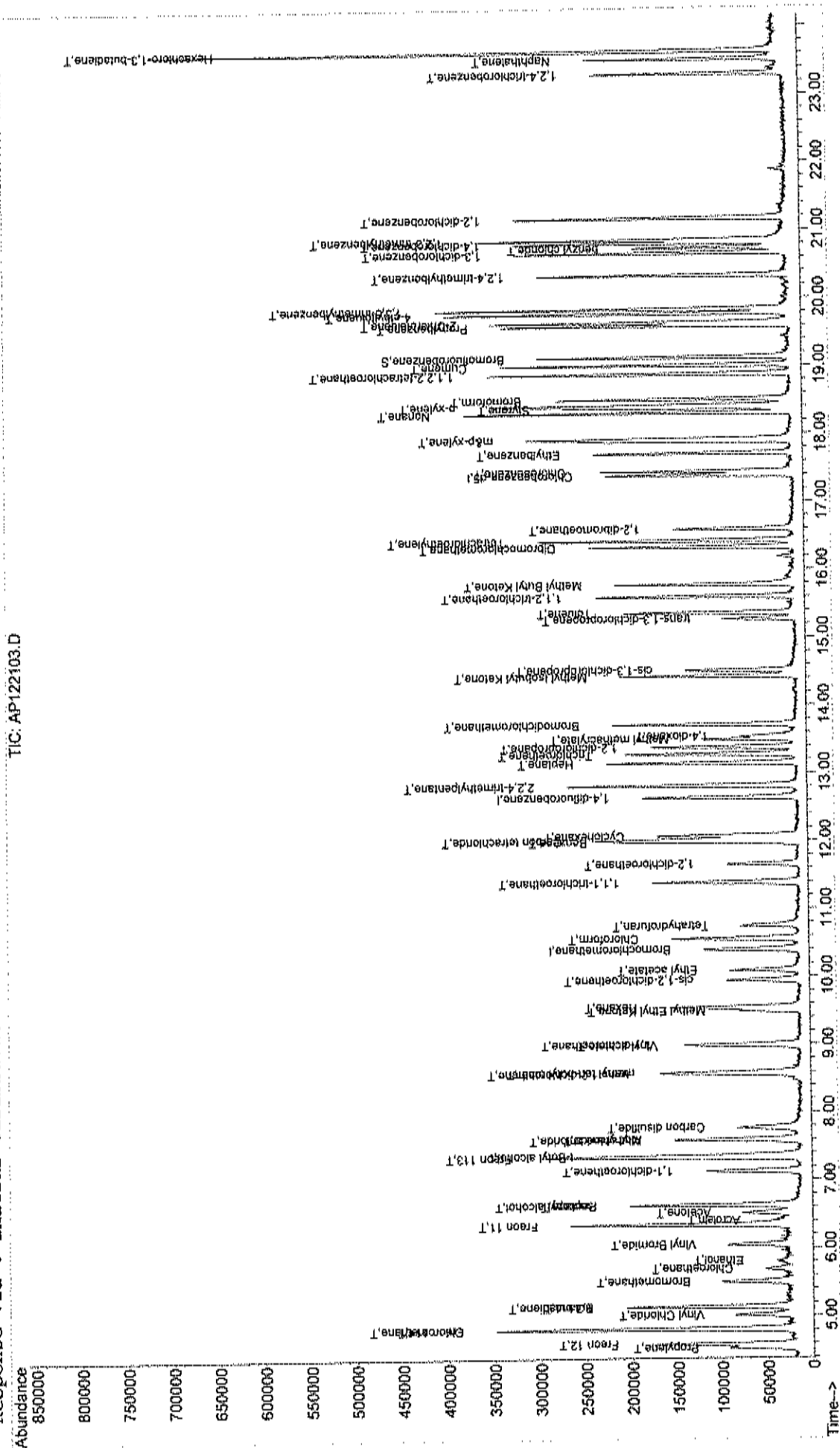
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP122103.D AD10_1UG.M Wed Jan 02 11:57:21 2019 MSD1

Data File : C:\HPCHEM\1\DATA\AP122103.D
 Acq On : 21 Dec 2018 11:00 am
 Sample : A1UG 1.0
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 24 8:07 2018

Vial: 3
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AP122203.D

Vial: 49

Acq On : 22 Dec 2018 10:31 am

Operator: RJP

Sample : AD10_1.0

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Jan 02 11:45:08 2019

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	107	0.00
2 T	Propylene	1.544	1.450	6.1	106	-0.01
3 T	Freon 12	5.783	5.471	5.4	107	0.00
4 T	Chloromethane	1.827	1.737	4.9	109	0.00
5 T	Freon 114	5.605	5.479	2.2	110	0.00
6 T	Vinyl Chloride	1.647	1.478	10.3	107	0.00
7 T	Butane	2.786	2.757	1.0	113	0.00
8 T	1,3-butadiene	1.589	1.544	2.8	109	0.00
9 T	Bromomethane	1.995	1.762	11.7	101	0.00
10 T	Chloroethane	0.644	0.642	0.3	108	-0.01
11 T	Ethanol	0.442	0.431	2.5	106	-0.01
12 T	Acrolein	0.410	0.342	16.6	95	-0.01
13 T	Vinyl Bromide	1.783	1.634	8.4	108	0.00
14 T	Freon 11	7.901	7.317	7.4	105	0.00
15 T	Acetone	0.613	0.538	12.2	100	0.00
16 T	Pentane	1.735	1.538	11.4	99	0.00
17 T	Isopropyl alcohol	2.247	1.973	12.2	95	0.00
18 T	1,1-dichloroethene	1.582	1.351	14.6	103	-0.01
19 T	Freon 113	3.679	3.365	8.5	104	0.00
20 t	t-Butyl alcohol	2.310	2.085	9.7	96	0.00
21 T	Methylene chloride	1.578	1.371	13.1	96	0.00
22 T	Allyl chloride	1.743	1.507	13.5	93	0.00
23 T	Carbon disulfide	3.506	3.156	10.0	103	0.00
24 T	trans-1,2-dichloroethene	1.863	1.674	10.1	100	0.00
25 T	methyl tert-butyl ether	2.985	2.530	15.2	91	0.00
26 T	1,1-dichloroethane	3.093	2.872	7.1	104	0.00
27 T	Vinyl acetate	2.793	2.430	13.0	95	0.00
28 T	Methyl Ethyl Ketone	0.630	0.576	8.6	105	0.00
29 T	cis-1,2-dichloroethene	1.954	1.667	14.7	100	0.00
30 T	Hexane	1.975	1.741	11.8	100	0.00
31 T	Ethyl acetate	3.011	2.695	10.5	94	-0.01
32 T	Chloroform	3.794	3.425	9.7	102	0.00
33 T	Tetrahydrofuran	1.334	1.176	11.8	94	0.00
34 T	1,2-dichloroethane	2.309	2.041	11.6	101	0.00
35 I	1,4-difluorobenzene	1.000	1.000	0.0	117	0.00
36 T	1,1,1-trichloroethane	0.913	0.769	15.8	103	0.00
37 T	Cyclohexane	0.473	0.390	17.5	92	0.00
38 T	Carbon tetrachloride	1.048	0.801	23.6	102	0.00
39 T	Benzene	1.139	0.957	16.0	101	0.00
40 T	Methyl methacrylate	0.411	0.317	22.9	88	0.00
41 T	1,4-dioxane	0.212	0.179	15.6	97	0.00
42 T	2,2,4-trimethylpentane	1.624	1.305	19.6	94	0.00
43 T	Heptane	0.565	0.462	18.2	96	0.00
44 T	Trichloroethene	0.549	0.428	22.0	104	0.00
45 T	1,2-dichloropropane	0.476	0.417	12.4	102	0.00
46 T	Bromodichloromethane	0.884	0.875	1.0	117	0.00
47 T	cis-1,3-dichloropropene	0.546	0.467	14.5	98	0.00
48 T	trans-1,3-dichloropropene	0.385	0.312	19.0	95	0.00
49 T	1,1,2-trichloroethane	0.522	0.448	14.2	104	0.00

(#) = Out of Range

AP122203.D AD10_1UG.M

Wed Jan 02 11:59:18 2019

MSD1

Page 1

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AP122203.D
 Acq On : 22 Dec 2018 10:31 am
 Sample : A1UG_1.0
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P

Vial: 49
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51 T	Toluene	0.774	0.602	22.2	92	0.00
52 T	Methyl Isobutyl Ketone	0.864	0.706	18.3	95	0.00
53 T	Dibromochloromethane	0.653	0.954	-46.1#	176#	0.00
54 T	Methyl Butyl Ketone	0.848	0.654	22.9	93	0.00
55 T	1,2-dibromoethane	0.880	0.729	17.2	99	0.00
56 T	Tetrachloroethylene	0.629	0.516	18.0	104	0.00
57 T	Chlorobenzene	1.191	0.933	21.7	94	0.00
58 T	Ethylbenzene	1.600	1.199	25.1	87	0.00
59 T	m&p-xylene	1.357	1.120	17.5	90	0.00
60 T	Nonane	1.002	0.810	19.2	88	0.00
61 T	Styrene	1.170	0.978	16.4	94	0.00
62 T	Bromoform	0.192	0.955	-397.4#	553#	0.00
63 T	o-xylene	1.711	1.514	11.5	96	0.00
64 T	Cumene	1.805	1.388	23.1	87	0.00
65 S	Bromofluorobenzene	0.684	0.781	-14.2	124	0.00
66 T	1,1,2,2-tetrachloroethane	1.597	1.324	17.1	100	0.00
67 T	Propylbenzene	0.521	0.389	25.3	86	0.00
68 T	2-Chlorotoluene	0.613	0.513	16.3	95	0.00
69 T	4-ethyltoluene	2.062	1.681	18.5	88	0.00
70 T	1,3,5-trimethylbenzene	1.826	1.528	16.3	93	0.00
71 T	1,2,4-trimethylbenzene	1.403	1.007	28.2	81	0.00
72 T	1,3-dichlorobenzene	1.313	1.027	21.8	89	0.00
73 T	benzyl chloride	1.127	0.928	17.7	93	0.00
74 T	1,4-dichlorobenzene	1.314	1.026	21.9	88	0.00
75 T	1,2,3-trimethylbenzene	1.621	1.278	21.2	88	0.00
76 T	1,2-dichlorobenzene	1.269	1.016	19.9	92	0.00
77 T	1,2,4-trichlorobenzene	0.576	0.434	24.7	89	0.00
78 T	Naphthalene	1.374	0.915	33.4#	86	0.00
79 T	Hexachloro-1,3-butadiene	0.913	0.750	17.9	96	0.00

Data File : C:\HPCHEM\1\DATA\AP122203.D

Vial: 49

Acq On : 22 Dec 2018 10:31 am

Operator: RJP

Sample : A1UG_1.0

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 23 08:54:10 2018

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Dec 12 09:22:13 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.39	128	46118	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.63	114	188200	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	151188	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	118098	1.14	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	114.00%

Target Compounds

						Qvalue
2) Propylene	4.52	41	66873	0.94	ppb	99
3) Freon 12	4.58	85	252322	0.95	ppb	100
4) Chloromethane	4.81	50	80089	0.95	ppb	98
5) Freon 114	4.81	85	252683	0.98	ppb	88
6) Vinyl Chloride	5.02	62	68178	0.90	ppb	99
7) Butane	5.13	43	127147	0.99	ppb	92
8) 1,3-butadiene	5.13	39	71194	0.97	ppb	85
9) Bromomethane	5.50	94	81259	0.88	ppb	97
10) Chloroethane	5.69	64	29626	1.00	ppb	95
11) Ethanol	5.79	45	19887m	0.98	ppb	
12) Acrolein	6.40	56	15777	0.83	ppb	# 75
13) Vinyl Bromide	6.05	106	75341	0.92	ppb	96
14) Freon 11	6.33	101	337448	0.93	ppb	99
15) Acetone	6.51	58	24799m	0.88	ppb	
16) Pentane	6.62	42	70927	0.89	ppb	94
17) Isopropyl alcohol	6.62	45	91011	0.88	ppb	# 66
18) 1,1-dichloroethene	7.12	96	62316	0.85	ppb	96
19) Freon 113	7.33	101	155183	0.91	ppb	96
20) t-Butyl alcohol	7.36	59	96149	0.90	ppb	# 62
21) Methylene chloride	7.60	84	63213	0.87	ppb	97
22) Allyl chloride	7.58	41	69483	0.86	ppb	80
23) Carbon disulfide	7.77	76	145565	0.90	ppb	98
24) trans-1,2-dichloroethene	8.56	61	77179	0.90	ppb	# 74
25) methyl tert-butyl ether	8.58	73	116660	0.85	ppb	63
26) 1,1-dichloroethane	8.99	63	132451	0.93	ppb	97
27) Vinyl acetate	8.97	43	112067	0.87	ppb	92
28) Methyl Ethyl Ketone	9.49	72	26578	0.92	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	76869	0.85	ppb	97
30) Hexane	9.54	57	80299	0.88	ppb	84
31) Ethyl acetate	10.08	43	124275	0.90	ppb	99
32) Chloroform	10.56	83	157957	0.90	ppb	98
33) Tetrahydrofuran	10.74	42	54243	0.88	ppb	93
34) 1,2-dichloroethane	11.66	62	94117	0.88	ppb	82
36) 1,1,1-trichloroethane	11.39	97	144788	0.84	ppb	100
37) Cyclohexane	12.07	56	73428	0.82	ppb	91
38) Carbon tetrachloride	12.01	117	150815	0.76	ppb	98
39) Benzene	11.98	78	180133	0.84	ppb	99
40) Methyl methacrylate	13.49	41	59716	0.77	ppb	99
41) 1,4-dioxane	13.53	88	33661	0.84	ppb	96
42) 2,2,4-trimethylpentane	12.81	57	245650	0.80	ppb	87
43) Heptane	13.14	43	86873	0.82	ppb	98
44) Trichloroethene	13.27	130	80547	0.78	ppb	97
45) 1,2-dichloropropane	13.38	63	78401	0.88	ppb	99

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

AP122203.D AD10_1UG.M

Wed Jan 02 11:59:23 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122203.D
 Acq On : 22 Dec 2018 10:31 am
 Sample : A1UG_1.0
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 08:54:10 2018

Vial: 49
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.70	83	164693	0.99	ppb	99
47) cis-1,3-dichloropropene	14.51	75	87942	0.86	ppb	98
48) trans-1,3-dichloropropene	15.27	75	58683	0.81	ppb	99
49) 1,1,2-trichloroethane	15.59	97	84396	0.86	ppb	97
51) Toluene	15.36	92	91010	0.78	ppb	97
52) Methyl Isobutyl Ketone	14.42	43	106785	0.82	ppb	92
53) Dibromochloromethane	16.33	129	144174	1.46	ppb	98
54) Methyl Butyl Ketone	15.77	43	98885	0.77	ppb	88
55) 1,2-dibromoethane	16.59	107	110256	0.83	ppb	97
56) Tetrachloroethylene	16.42	164	78046	0.82	ppb	97
57) Chlorobenzene	17.44	112	140983	0.78	ppb	98
58) Ethylbenzene	17.71	91	181343	0.75	ppb	100
59) m&p-xylene	17.92	91	338737m	1.65	ppb	
60) Nonane	18.30	43	122529	0.81	ppb	91
61) Styrene	18.37	104	147808	0.84	ppb	92
62) Bromoform	18.50	173	144384	4.98	ppb	100
63) o-xylene	18.41	91	228829	0.88	ppb	99
64) Cumene	19.01	105	209838	0.77	ppb	98
66) 1,1,2,2-tetrachloroethane	18.88	83	200117	0.83	ppb	99
67) Propylbenzene	19.59	120	58792	0.75	ppb	80
68) 2-Chlorotoluene	19.64	126	77496	0.84	ppb	# 86
69) 4-ethyltoluene	19.77	105	254158	0.82	ppb	100
70) 1,3,5-trimethylbenzene	19.83	105	230995	0.84	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	152275	0.72	ppb	96
72) 1,3-dichlorobenzene	20.66	146	155231	0.78	ppb	99
73) benzyl chloride	20.73	91	140348	0.82	ppb	97
74) 1,4-dichlorobenzene	20.80	146	155079	0.78	ppb	97
75) 1,2,3-trimethylbenzene	20.85	105	193177	0.79	ppb	98
76) 1,2-dichlorobenzene	21.17	146	153609	0.80	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	65618m	0.75	ppb	
78) Naphthalene	23.51	128	138279m	0.67	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	113335	0.82	ppb	98

Response via : Initial Calibration

Quant Results File: AD10 AUG.RES

TIC: AP122203.D



Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AP122304.D

Vial: 4

Acq On : 23 Dec 2018 11:48 am

Operator: RJP

Sample : ALUG_1.0

Inst : MSD #1

Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Jan 02 11:45:08 2019

Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min

Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane	1.000	1.000	0.0	96	0.00
2 T	Propylene	1.544	1.554	-0.6	102	0.00
3 T	Freon 12	5.783	6.016	-4.0	106	0.00
4 T	Chloromethane	1.827	1.991	-9.0	113	0.00
5 T	Freon 114	5.605	5.938	-5.9	108	0.00
6 T	Vinyl Chloride	1.647	1.634	0.8	106	0.00
7 T	Butane	2.786	2.858	-2.6	106	0.00
8 T	1,3-butadiene	1.589	1.676	-5.5	107	0.00
9 T	Bromomethane	1.995	2.041	-2.3	106	0.00
10 T	Chloroethane	0.644	0.662	-2.8	100	0.00
11 T	Ethanol	0.442	0.485	-9.7	107	0.00
12 T	Acrolein	0.410	0.479	-16.8	120	0.00
13 T	Vinyl Bromide	1.783	1.828	-2.5	109	0.00
14 T	Freon 11	7.901	8.247	-4.4	107	0.00
15 T	Acetone	0.613	0.562	8.3	95	0.00
16 T	Pentane	1.735	1.721	0.8	100	0.00
17 T	Isopropyl alcohol	2.247	2.099	6.6	91	0.00
18 T	1,1-dichloroethene	1.582	1.496	5.4	103	0.00
19 T	Freon 113	3.679	3.825	-4.0	106	0.00
20 t	t-Butyl alcohol	2.310	2.124	8.1	89	0.00
21 T	Methylene chloride	1.578	1.519	3.7	96	0.00
22 T	Allyl chloride	1.743	1.686	3.3	94	0.00
23 T	Carbon disulfide	3.506	3.484	0.6	103	0.00
24 T	trans-1,2-dichloroethene	1.863	1.833	1.6	99	0.00
25 T	methyl tert-butyl ether	2.985	2.774	7.1	90	0.00
26 T	1,1-dichloroethane	3.093	3.142	-1.6	102	0.00
27 T	Vinyl acetate	2.793	2.594	7.1	91	0.00
28 T	Methyl Ethyl Ketone	0.630	0.647	-2.7	106	0.00
29 T	cis-1,2-dichloroethene	1.954	1.744	10.7	94	0.01
30 T	Hexane	1.975	1.942	1.7	101	0.02
31 T	Ethyl acetate	3.011	3.011	0.0	95	0.00
32 T	Chloroform	3.794	3.824	-0.8	103	0.00
33 T	Tetrahydrofuran	1.334	1.342	-0.6	97	0.00
34 T	1,2-dichloroethane	2.309	2.302	0.3	102	0.00
35 I	1,4-difluorobenzene	1.000	1.000	0.0	107	0.01
36 T	1,1,1-trichloroethane	0.913	0.849	7.0	104	0.00
37 T	Cyclohexane	0.473	0.443	6.3	96	0.01
38 T	Carbon tetrachloride	1.048	0.915	12.7	107	0.00
39 T	Benzene	1.139	1.056	7.3	102	0.00
40 T	Methyl methacrylate	0.411	0.345	16.1	88	0.00
41 T	1,4-dioxane	0.212	0.182	14.2	90	0.00
42 T	2,2,4-trimethylpentane	1.624	1.467	9.7	97	0.00
43 T	Heptane	0.565	0.493	12.7	94	0.00
44 T	Trichloroethene	0.549	0.474	13.7	105	0.00
45 T	1,2-dichloropropane	0.476	0.470	1.3	106	0.00
46 T	Bromodichloromethane	0.884	0.983	-11.2	121	0.00
47 T	cis-1,3-dichloropropene	0.546	0.504	7.7	97	0.01
48 T	trans-1,3-dichloropropene	0.385	0.346	10.1	97	0.00
49 T	1,1,2-trichloroethane	0.522	0.525	-0.6	111	0.00

(#)= Out of Range

AP122304.D AD10_1UG.M

Wed Jan 02 12:01:27 2019

MSD1

Page 1

Evaluate Continuing Calibration Report

Data File : C:\HPCHEM\1\DATA\AP122304.D Vial: 4
 Acq On : 23 Dec 2018 11:48 am Operator: RJP
 Sample : AD10_1.0 Inst : MSD #1
 Misc : AD10_1UG Multiplr: 1.00
 MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 150%

	Compound	AvgRFP	CCRF	%Dev	Area%	Dev(min)
51 T	Toluene	0.774	0.694	10.3	97	0.00
52 T	Methyl Isobutyl Ketone	0.864	0.740	14.4	91	0.00
53 T	Dibromochloromethane	0.653	1.079	-65.2#	182#	0.00
54 T	Methyl Butyl Ketone	0.848	0.667	21.3	87	0.00
55 T	1,2-dibromoethane	0.880	0.847	3.8	105	0.00
56 T	Tetrachloroethylene	0.629	0.564	10.3	104	0.00
57 T	Chlorobenzene	1.191	1.055	11.4	98	0.00
58 T	Ethylbenzene	1.600	1.372	14.2	91	0.00
59 T	m&p-xylene	1.357	1.320	2.7	97	0.00
60 T	Nonane	1.002	0.928	7.4	93	0.00
61 T	Styrene	1.170	1.114	4.8	97	0.00
62 T	Bromoform	0.192	1.061	-452.6#	562#	0.00
63 T	o-xylene	1.711	1.744	-1.9	102	0.00
64 T	Cumene	1.805	1.617	10.4	93	0.00
65 S	Bromofluorobenzene	0.684	0.745	-8.9	108	0.00
66 T	1,1,2,2-tetrachloroethane	1.597	1.507	5.6	104	0.00
67 T	Propylbenzene	0.521	0.446	14.4	90	0.00
68 T	2-Chlorotoluene	0.613	0.606	1.1	103	0.00
69 T	4-ethyltoluene	2.062	1.909	7.4	91	0.00
70 T	1,3,5-trimethylbenzene	1.826	1.784	2.3	99	0.00
71 T	1,2,4-trimethylbenzene	1.403	1.173	16.4	86	0.00
72 T	1,3-dichlorobenzene	1.313	1.146	12.7	91	0.00
73 T	benzyl chloride	1.127	1.023	9.2	93	0.00
74 T	1,4-dichlorobenzene	1.314	1.167	11.2	91	0.00
75 T	1,2,3-trimethylbenzene	1.621	1.431	11.7	90	0.00
76 T	1,2-dichlorobenzene	1.269	1.142	10.0	94	0.00
77 T	1,2,4-trichlorobenzene	0.576	0.460	20.1	86	0.00
78 T	Naphthalene	1.374	0.985	28.3	84	0.00
79 T	Hexachloro-1,3-butadiene	0.913	0.845	7.4	99	0.00

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122304.D
 Acq On : 23 Dec 2018 11:48 am
 Sample : ALUG_1.0
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 12:51:07 2018

Vial: 4
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	41655	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	172484	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	138320	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	103095	1.09	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	109.00%

Target Compounds

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.54	41	64733	1.01	ppb	95
3) Freon 12	4.59	85	250613	1.04	ppb	99
4) Chloromethane	4.80	50	82949	1.09	ppb	93
5) Freon 114	4.81	85	247359	1.06	ppb	89
6) Vinyl Chloride	5.01	62	68055	0.99	ppb	100
7) Butane	5.13	43	119065	1.03	ppb	93
8) 1,3-butadiene	5.13	39	69834	1.05	ppb	80
9) Bromomethane	5.51	94	85017	1.02	ppb	95
10) Chloroethane	5.69	64	27577	1.03	ppb	94
11) Ethanol	5.79	45	20198m	1.10	ppb	
12) Acrolein	6.41	56	19942m	1.17	ppb	
13) Vinyl Bromide	6.04	106	76152	1.03	ppb	99
14) Freon 11	6.34	101	343511	1.04	ppb	100
15) Acetone	6.51	58	23421	0.92	ppb	# 82
16) Pentane	6.63	42	71672	0.99	ppb	99
17) Isopropyl alcohol	6.62	45	87420	0.93	ppb	# 68
18) 1,1-dichloroethene	7.13	96	62301	0.95	ppb	94
19) Freon 113	7.33	101	159348	1.04	ppb	93
20) t-Butyl alcohol	7.37	59	88495	0.92	ppb	# 84
21) Methylene chloride	7.61	84	63258	0.96	ppb	99
22) Allyl chloride	7.59	41	70244	0.97	ppb	96
23) Carbon disulfide	7.78	76	145139	0.99	ppb	99
24) trans-1,2-dichloroethene	8.57	61	76339	0.98	ppb	96
25) methyl tert-butyl ether	8.58	73	115555	0.93	ppb	# 59
26) 1,1-dichloroethane	8.99	63	130886	1.02	ppb	99
27) Vinyl acetate	8.97	43	108067	0.93	ppb	96
28) Methyl Ethyl Ketone	9.50	72	26953m	1.03	ppb	
29) cis-1,2-dichloroethene	9.95	61	72649	0.89	ppb	95
30) Hexane	9.56	57	80901	0.98	ppb	85
31) Ethyl acetate	10.10	43	125407	1.00	ppb	90
32) Chloroform	10.56	83	159288	1.01	ppb	100
33) Tetrahydrofuran	10.75	42	55900	1.01	ppb	92
34) 1,2-dichloroethane	11.66	62	95873	1.00	ppb	100
36) 1,1,1-trichloroethane	11.38	97	146394	0.93	ppb	99
37) Cyclohexane	12.08	56	76481	0.94	ppb	94
38) Carbon tetrachloride	12.02	117	157877	0.87	ppb	100
39) Benzene	11.98	78	182225	0.93	ppb	98
40) Methyl methacrylate	13.50	41	59549	0.84	ppb	98
41) 1,4-dioxane	13.54	88	31353	0.86	ppb	95
42) 2,2,4-trimethylpentane	12.82	57	253118	0.90	ppb	88
43) Heptane	13.15	43	85027	0.87	ppb	97
44) Trichloroethene	13.28	130	81790	0.86	ppb	99
45) 1,2-dichloropropane	13.39	63	81106	0.99	ppb	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122304.D
 Acq On : 23 Dec 2018 11:48 am
 Sample : A1UG_1.0
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 12:51:07 2018

Vial: 4
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	169539	1.11	ppb	99
47) cis-1,3-dichloropropene	14.52	75	86977	0.92	ppb	99
48) trans-1,3-dichloropropene	15.27	75	59750	0.90	ppb	94
49) 1,1,2-trichloroethane	15.60	97	90488	1.01	ppb	98
51) Toluene	15.36	92	95994	0.90	ppb	96
52) Methyl Isobutyl Ketone	14.43	43	102379	0.86	ppb	92
53) Dibromochloromethane	16.33	129	149195	1.65	ppb	99
54) Methyl Butyl Ketone	15.78	43	92288	0.79	ppb	89
55) 1,2-dibromoethane	16.60	107	117204	0.96	ppb	96
56) Tetrachloroethylene	16.42	164	77954	0.90	ppb	100
57) Chlorobenzene	17.44	112	145984	0.89	ppb	95
58) Ethylbenzene	17.71	91	189817	0.86	ppb	98
59) m&p-xylene	17.93	91	365174m	1.95	ppb	
60) Nonane	18.31	43	128357	0.93	ppb	93
61) Styrene	18.38	104	154086	0.95	ppb	95
62) Bromoform	18.51	173	146714	5.53	ppb	100
63) o-xylene	18.41	91	241285	1.02	ppb	99
64) Cumene	19.01	105	223722	0.90	ppb	98
66) 1,1,2,2-tetrachloroethane	18.88	83	208494	0.94	ppb	100
67) Propylbenzene	19.59	120	61641	0.86	ppb	92
68) 2-Chlorotoluene	19.64	126	83824	0.99	ppb	92
69) 4-ethyltoluene	19.77	105	264070	0.93	ppb	98
70) 1,3,5-trimethylbenzene	19.84	105	246760	0.98	ppb	98
71) 1,2,4-trimethylbenzene	20.33	105	162201	0.84	ppb	99
72) 1,3-dichlorobenzene	20.66	146	158446	0.87	ppb	97
73) benzyl chloride	20.74	91	141456	0.91	ppb	100
74) 1,4-dichlorobenzene	20.81	146	161435	0.89	ppb	97
75) 1,2,3-trimethylbenzene	20.86	105	197990	0.88	ppb	99
76) 1,2-dichlorobenzene	21.17	146	157965	0.90	ppb	98
77) 1,2,4-trichlorobenzene	23.30	180	63605m	0.80	ppb	
78) Naphthalene	23.51	128	136184m	0.72	ppb	
79) Hexachloro-1,3-butadiene	23.64	225	116913	0.93	ppb	98

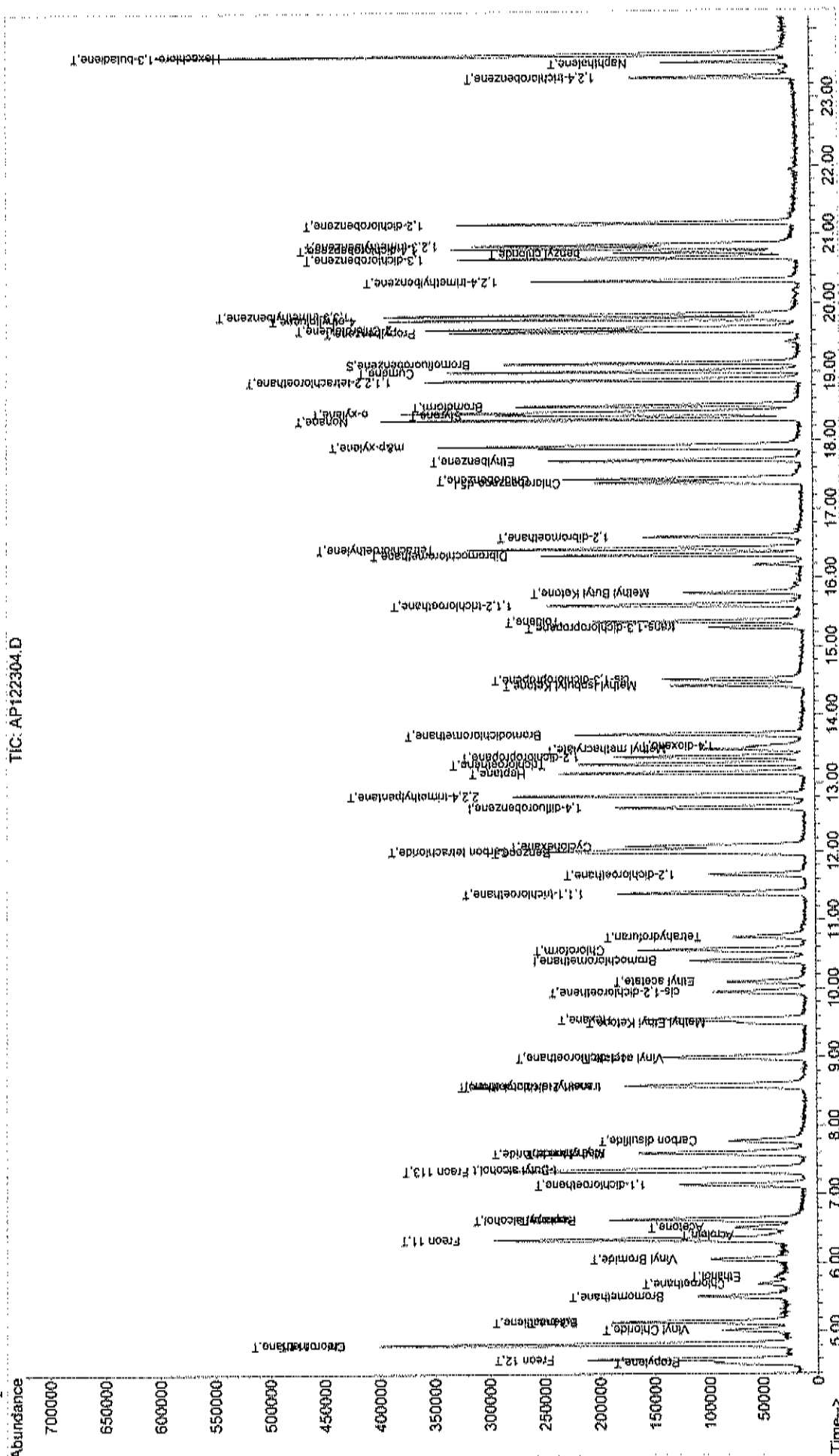
(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP122304.D AD10_1UG.M Wed Jan 02 12:01:32 2019 MSD1

Data File : C:\HPCHEM\1\DATA\AP122304.D
Acq On : 23 Dec 2018 11:48 am
Sample : AD10_1.0
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 26 14:08 2018

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

RAW DATA

BFB

Data File : C:\HPCHEM\1\DATA\AP121002.D

Vial: 2

Acq On : 10 Dec 2018 8:35 am

Operator: RJP

Sample : BFB1UG

Inst : MSD #1

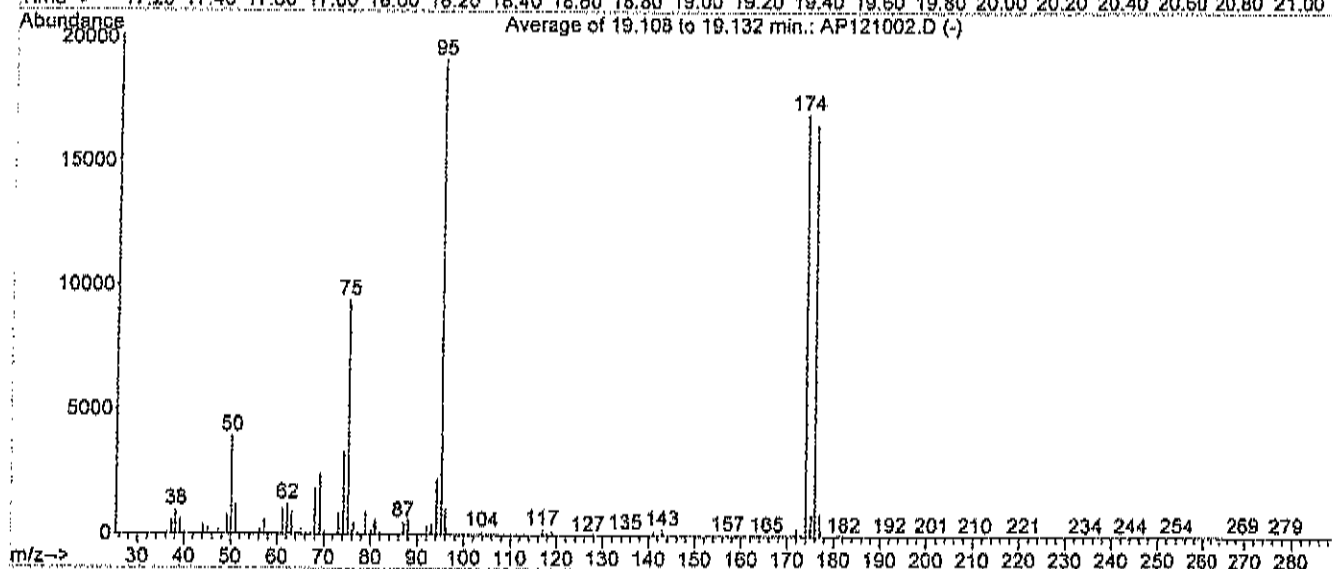
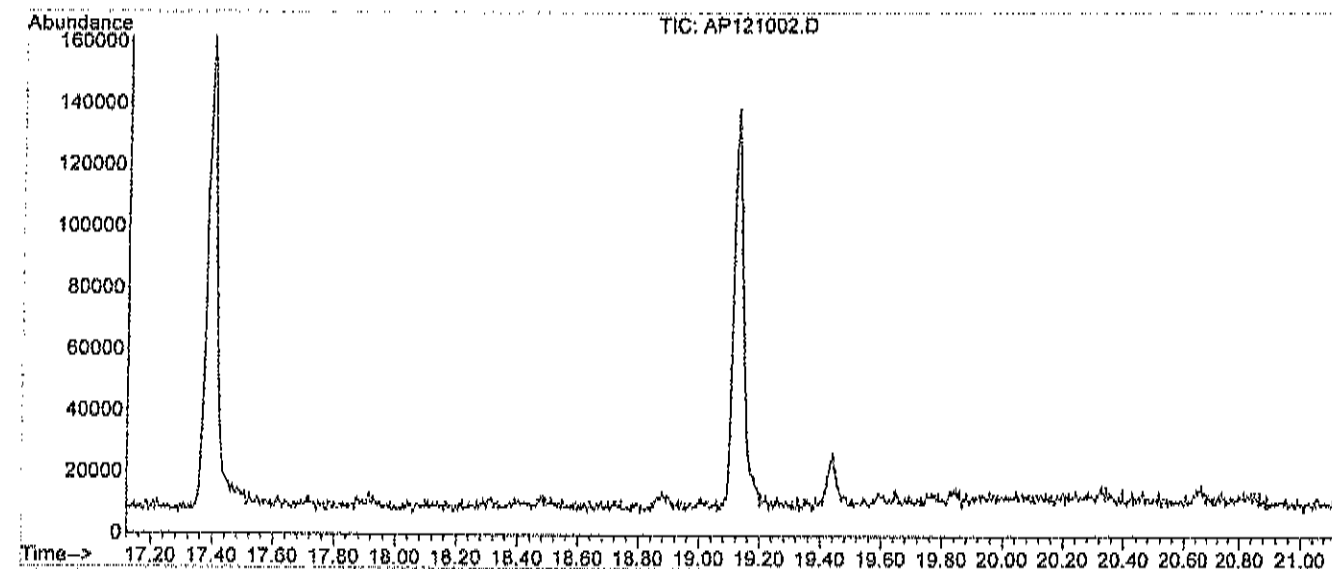
Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 19.108 to 19.132 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.6	3949	PASS
75	95	30	66	49.3	9444	PASS
95	95	100	100	100.0	19169	PASS
96	95	5	9	5.7	1101	PASS
173	174	0.00	2	0.5	88	PASS
174	95	50	120	88.7	16998	PASS
175	174	4	9	5.2	885	PASS
176	174	95	101	97.8	16627	PASS
177	176	5	9	5.7	944	PASS

BFB

Data File : C:\HPCHEM\1\DATA\AP122101.D

Vial: 1

Acq On : 21 Dec 2018 7:20 am

Operator: RJP

Sample : BFB1UG

Inst : MSD #1

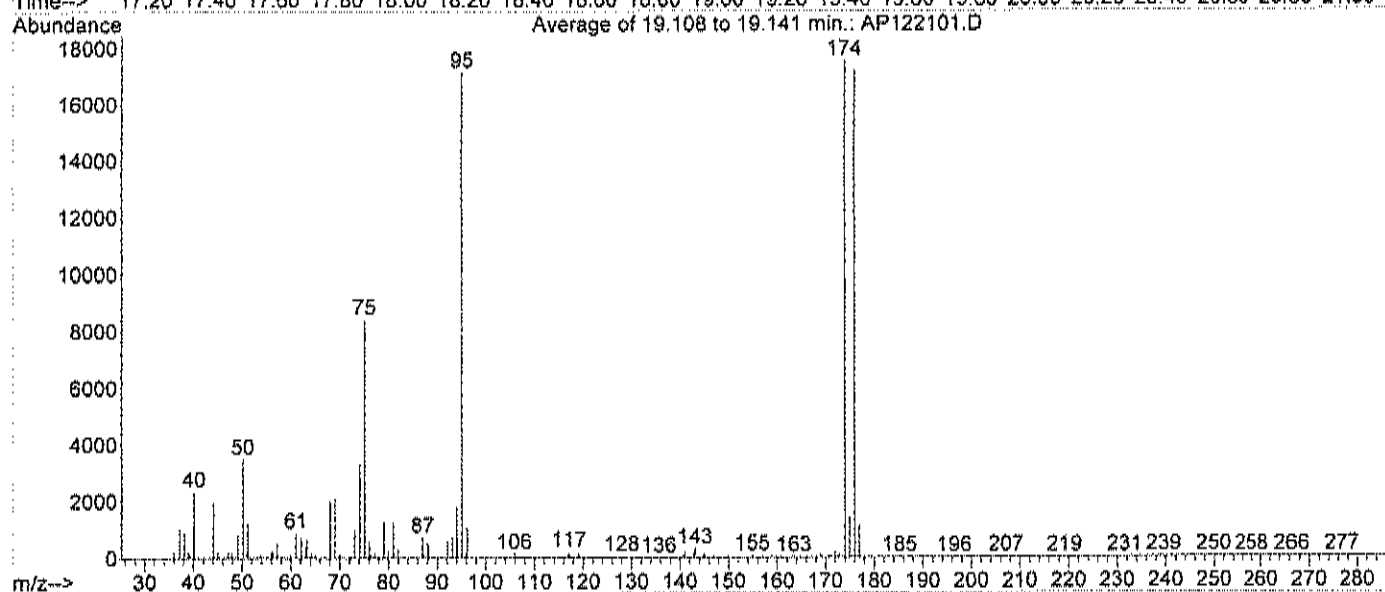
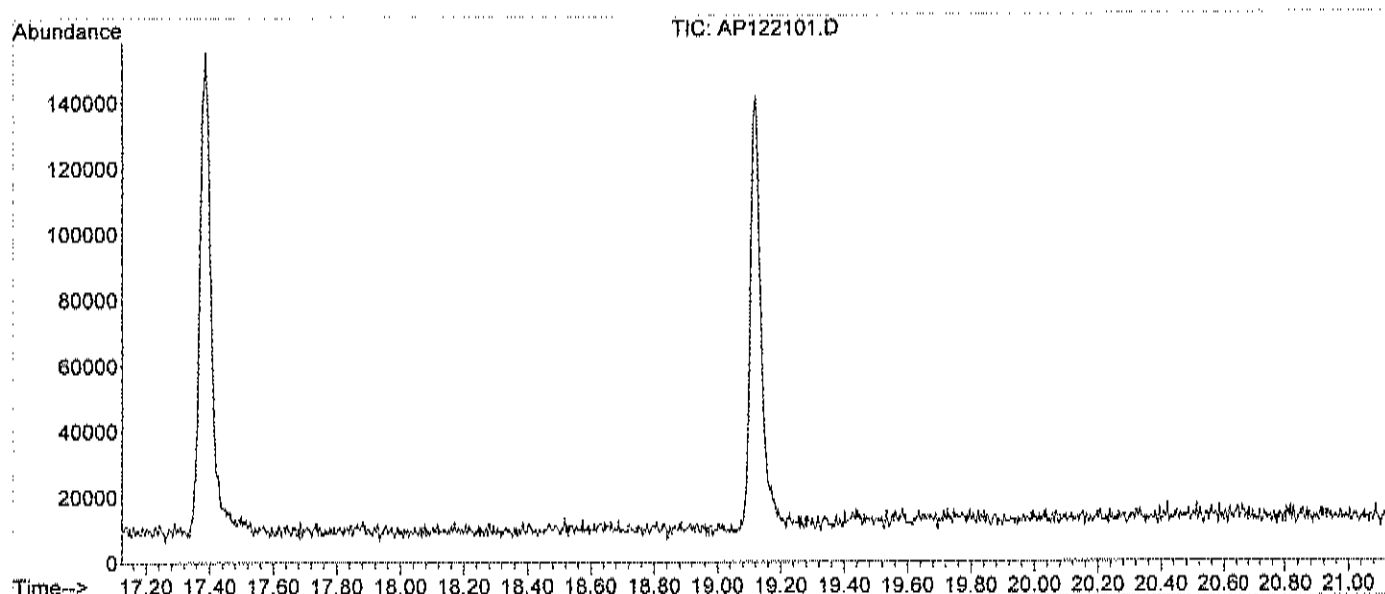
Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 19.108 to 19.141 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.4	3504	PASS
75	95	30	66	49.2	8433	PASS
95	95	100	100	100.0	17139	PASS
96	95	5	9	6.2	1055	PASS
173	174	0.00	2	0.7	117	PASS
174	95	50	120	102.3	17526	PASS
175	174	4	9	8.1	1426	PASS
176	174	95	101	98.4	17249	PASS
177	176	5	9	6.8	1169	PASS

Data File : C:\HPCHEM\1\DATA\AP122201.D

Vial: 47

Acq On : 22 Dec 2018 9:05 am

Operator: RJP

Sample : BFB1UG

Inst : MSD #1

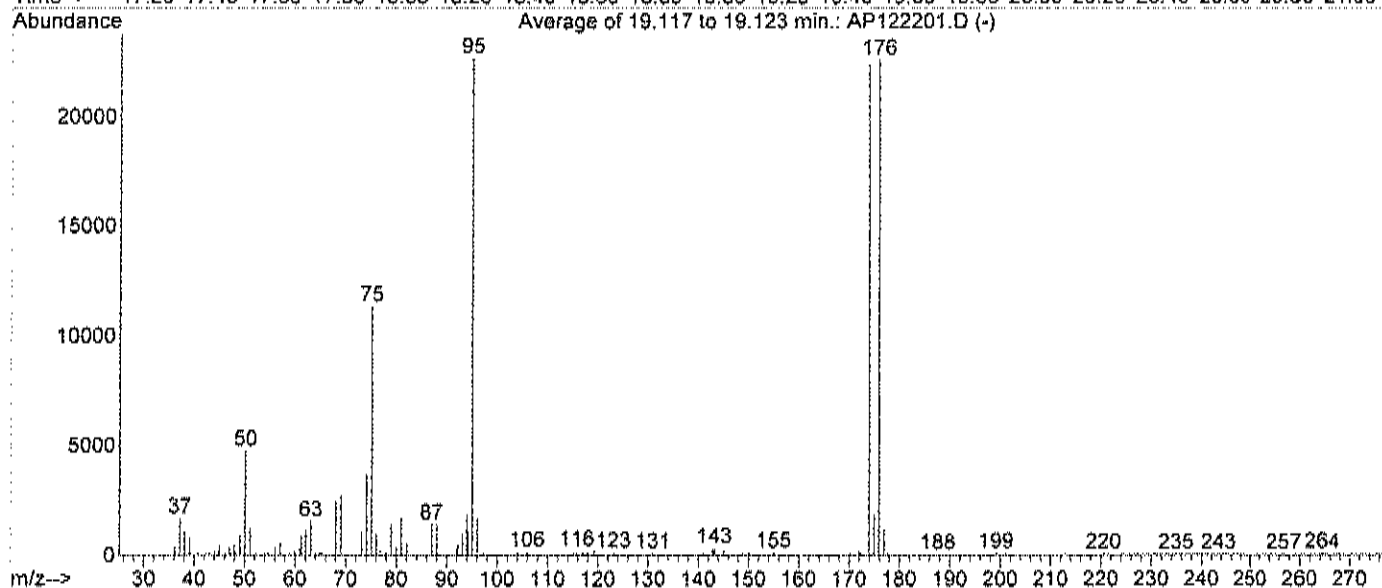
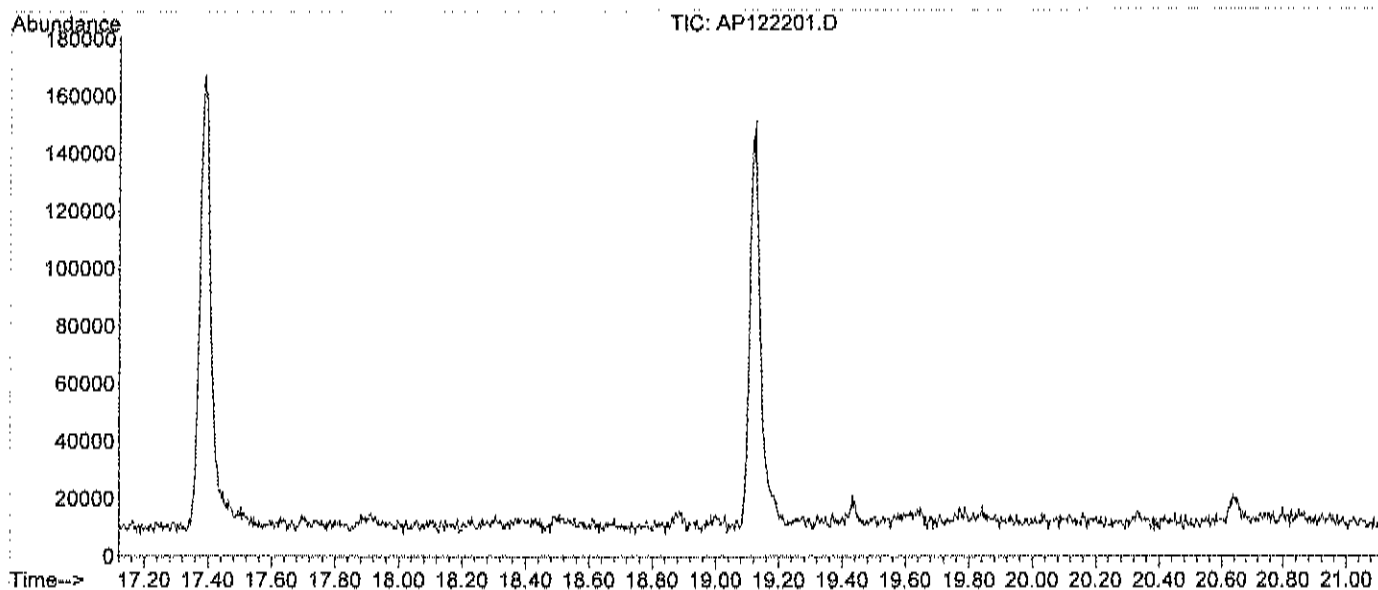
Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 19.117 to 19.123 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	21.0	4773	PASS
75	95	30	66	50.0	11345	PASS
95	95	100	100	100.0	22693	PASS
96	95	5	9	7.3	1654	PASS
173	174	0.00	2	0.4	88	PASS
174	95	50	120	98.7	22408	PASS
175	174	4	9	8.3	1858	PASS
176	174	95	101	101.0	22629	PASS
177	176	5	9	5.1	1165	PASS

Data File : C:\HPCHEM\1\DATA\AP122301.D

Vial: 1

Acq On : 23 Dec 2018 9:05 am

Operator: RJP

Sample : BFB1UG

Inst : MSD #1

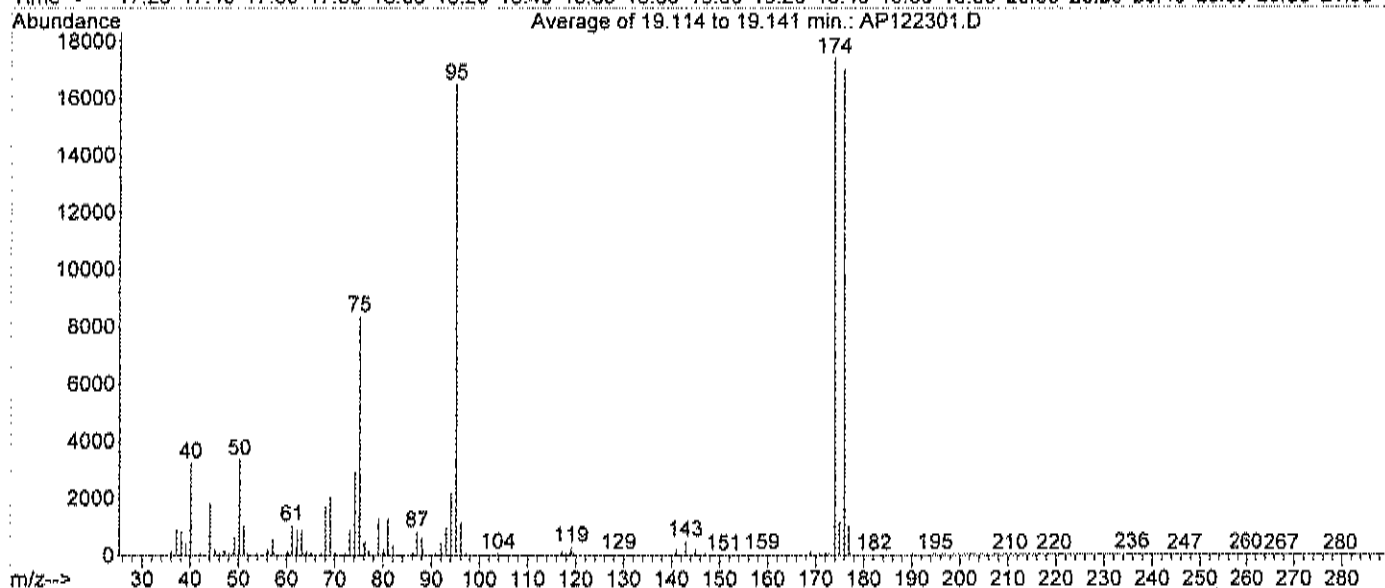
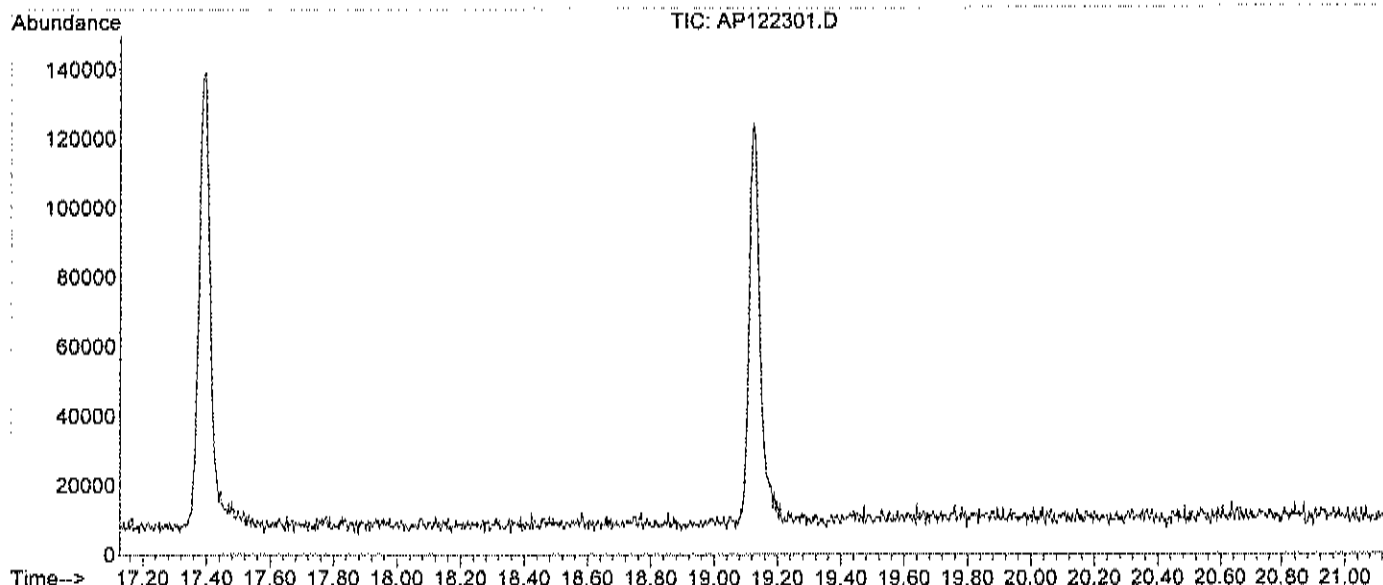
Misc : AD10_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration



Spectrum Information: Average of 19.114 to 19.141 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.3	3353	PASS
75	95	30	66	50.8	8371	PASS
95	95	100	100	100.0	16492	PASS
96	95	5	9	7.2	1186	PASS
173	174	0.00	2	0.2	34	PASS
174	95	50	120	105.5	17402	PASS
175	174	4	9	6.6	1157	PASS
176	174	95	101	97.7	16997	PASS
177	176	5	9	6.1	1030	PASS

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

RAW QC DATA

ANALYTICAL QC SUMMARY REPORT

Project: IKEA-RED HOOK

TestCode: 1uGM3 T015

[illegible]

Qualifiers:	.	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits	
S	Spike Recovery outside accepted recovery limits					

CLIENT: SOIL MECHANICS

Work Order: C1812057

Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122118	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166944						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.15	0.15									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122118	SampleType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166944						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropane	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Sample ID: AMB1UG-122218	SampleType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166962						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	< 0.15	0.15									
1,1,2,2-Tetrachloroethane	< 0.15	0.15									
1,1,2-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
1,2,4-Trichlorobenzene	< 0.15	0.15									
1,2,4-Trimethylbenzene	< 0.15	0.15									
1,2-Dibromoethane	< 0.15	0.15									
1,2-Dichlorobenzene	< 0.15	0.15									
1,2-Dichloroethane	< 0.15	0.15									
1,2-Dichloropropane	< 0.15	0.15									
1,3,5-Trimethylbenzene	< 0.15	0.15									
1,3-butadiene	< 0.15	0.15									
1,3-Dichlorobenzene	< 0.15	0.15									
1,4-Dichlorobenzene	< 0.15	0.15									
1,4-Dioxane	< 0.30	0.30									
2,2,4-trimethylpentane	< 0.15	0.15									
4-ethyltoluene	< 0.15	0.15									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122218	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166962						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Acetone	< 0.30	0.30									
Allyl chloride	< 0.15	0.15									
Benzene	< 0.15	0.15									
Benzyl chloride	< 0.15	0.15									
Bromodichloromethane	< 0.15	0.15									
Bromoform	< 0.15	0.15									
Bromomethane	< 0.15	0.15									
Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.15	0.15									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									
Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122218	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166962						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Sample ID: AMB1UG-122318	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	< 0.15	0.15									
1,1,2,2-Tetrachloroethane	< 0.15	0.15									
1,1,2-Trichloroethane	< 0.15	0.15									
1,1-Dichloroethane	< 0.15	0.15									
1,1-Dichloroethene	< 0.15	0.15									
1,2,4-Trichlorobenzene	< 0.15	0.15									
1,2,4-Trimethylbenzene	< 0.15	0.15									
1,2-Dibromoethane	< 0.15	0.15									
1,2-Dichlorobenzene	< 0.15	0.15									
1,2-Dichloroethane	< 0.15	0.15									
1,2-Dichloropropane	< 0.15	0.15									

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122318	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	< 0.15	0.15									
1,3-butadiene	< 0.15	0.15									
1,3-Dichlorobenzene	< 0.15	0.15									
1,4-Dichlorobenzene	< 0.15	0.15									
1,4-Dioxane	< 0.30	0.30									
2,2,4-trimethylpentane	< 0.15	0.15									
4-ethyltoluene	< 0.15	0.15									
Acetone	< 0.30	0.30									
Allyl chloride	< 0.15	0.15									
Benzene	< 0.15	0.15									
Benzyl chloride	< 0.15	0.15									
Bromodichloromethane	< 0.15	0.15									
Bromoform	< 0.15	0.15									
Bromomethane	< 0.15	0.15									
Carbon disulfide	< 0.15	0.15									
Carbon tetrachloride	< 0.15	0.15									
Chlorobenzene	< 0.15	0.15									
Chloroethane	< 0.15	0.15									
Chloroform	< 0.15	0.15									
Chloromethane	< 0.15	0.15									
cis-1,2-Dichloroethene	< 0.15	0.15									
cis-1,3-Dichloropropene	< 0.15	0.15									
Cyclohexane	< 0.15	0.15									
Dibromochloromethane	< 0.15	0.15									
Ethyl acetate	< 0.15	0.15									
Ethylbenzene	< 0.15	0.15									
Freon 11	< 0.15	0.15									
Freon 113	< 0.15	0.15									
Freon 114	< 0.15	0.15									
Freon 12	< 0.15	0.15									
Heptane	< 0.15	0.15									

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: AMB1UG-122318	SampType: MBLK	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167006						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Hexachloro-1,3-butadiene	< 0.15	0.15									
Hexane	< 0.15	0.15									
Isopropyl alcohol	< 0.15	0.15									
m&p-Xylene	< 0.30	0.30									
Methyl Butyl Ketone	< 0.30	0.30									
Methyl Ethyl Ketone	< 0.30	0.30									
Methyl Isobutyl Ketone	< 0.30	0.30									
Methyl tert-butyl ether	< 0.15	0.15									
Methylene chloride	< 0.15	0.15									
o-Xylene	< 0.15	0.15									
Propylene	< 0.15	0.15									
Styrene	< 0.15	0.15									
Tetrachloroethylene	< 0.15	0.15									
Tetrahydrofuran	< 0.15	0.15									
Toluene	< 0.15	0.15									
trans-1,2-Dichloroethene	< 0.15	0.15									
trans-1,3-Dichloropropene	< 0.15	0.15									
Trichloroethene	< 0.15	0.15									
Vinyl acetate	< 0.15	0.15									
Vinyl Bromide	< 0.15	0.15									
Vinyl chloride	< 0.15	0.15									

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122105.D
 Acq On : 21 Dec 2018 12:54 pm
 Sample : AMB1UG-122118
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:21 2018

Vial: 5
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	41054	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	164857	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	109403	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	54835m	0.73	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%

Target Compounds

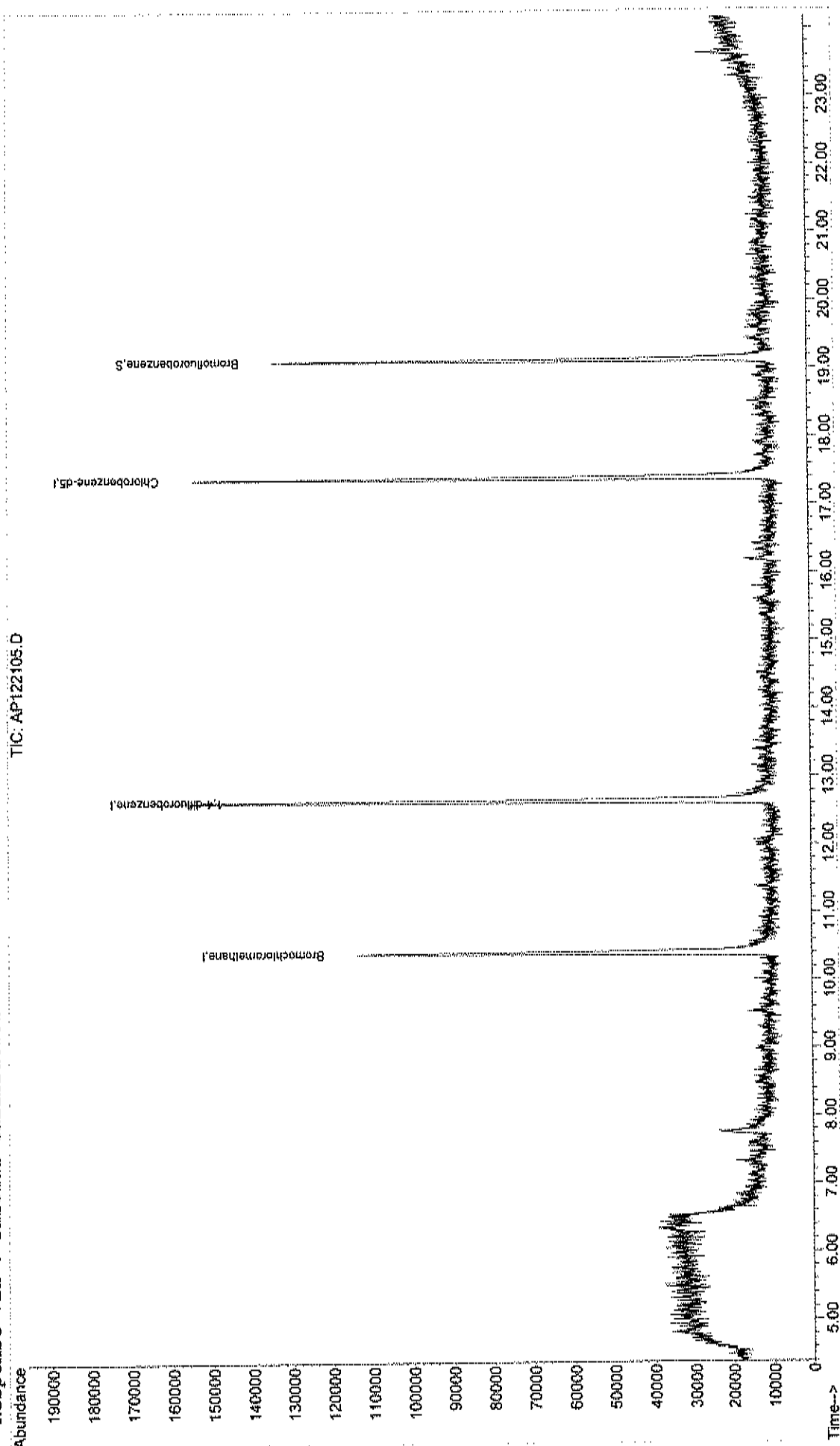
Qvalue

Data File : C:\HPCHEM\1\DATA\AP122105.D
Acq On : 21 Dec 2018 12:54 pm
Sample : AMB1UG-122118
Misc : AD10 1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 24 8:08 2018

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\AP122205.D
 Acq On : 22 Dec 2018 11:49 am
 Sample : AMB1UG-122218
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 08:54:12 2018

Vial: 51
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.39	128	39458	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	165471	1.00	ppb	0.00
50) Chlorobenzene-d5	17.38	117	109578	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	53177m	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%

Target Compounds

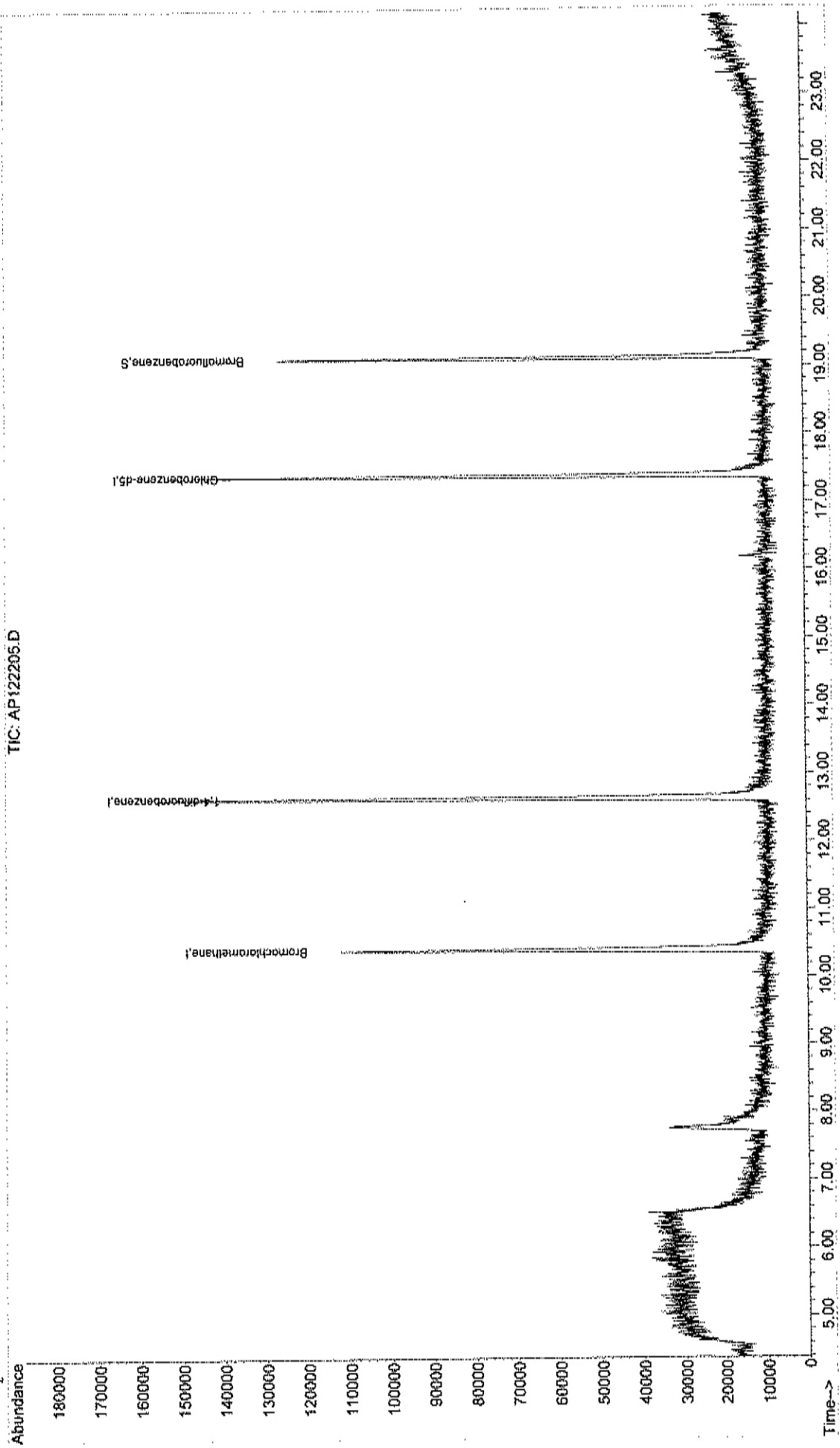
Qvalue

Data File : C:\HPCHEM\1\DATA\AP122205.D
Acq On : 22 Dec 2018 11:49 am
Sample : AMBIUG-122218
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 24 8:11 2018

Vial: 51
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122306.D
 Acq On : 23 Dec 2018 1:53 pm
 Sample : AMB1UG-122318
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 26 14:09:25 2018

Vial: 6
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	39205	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	161242	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	107833	1.00	ppb	0.00

System Monitoring Compounds

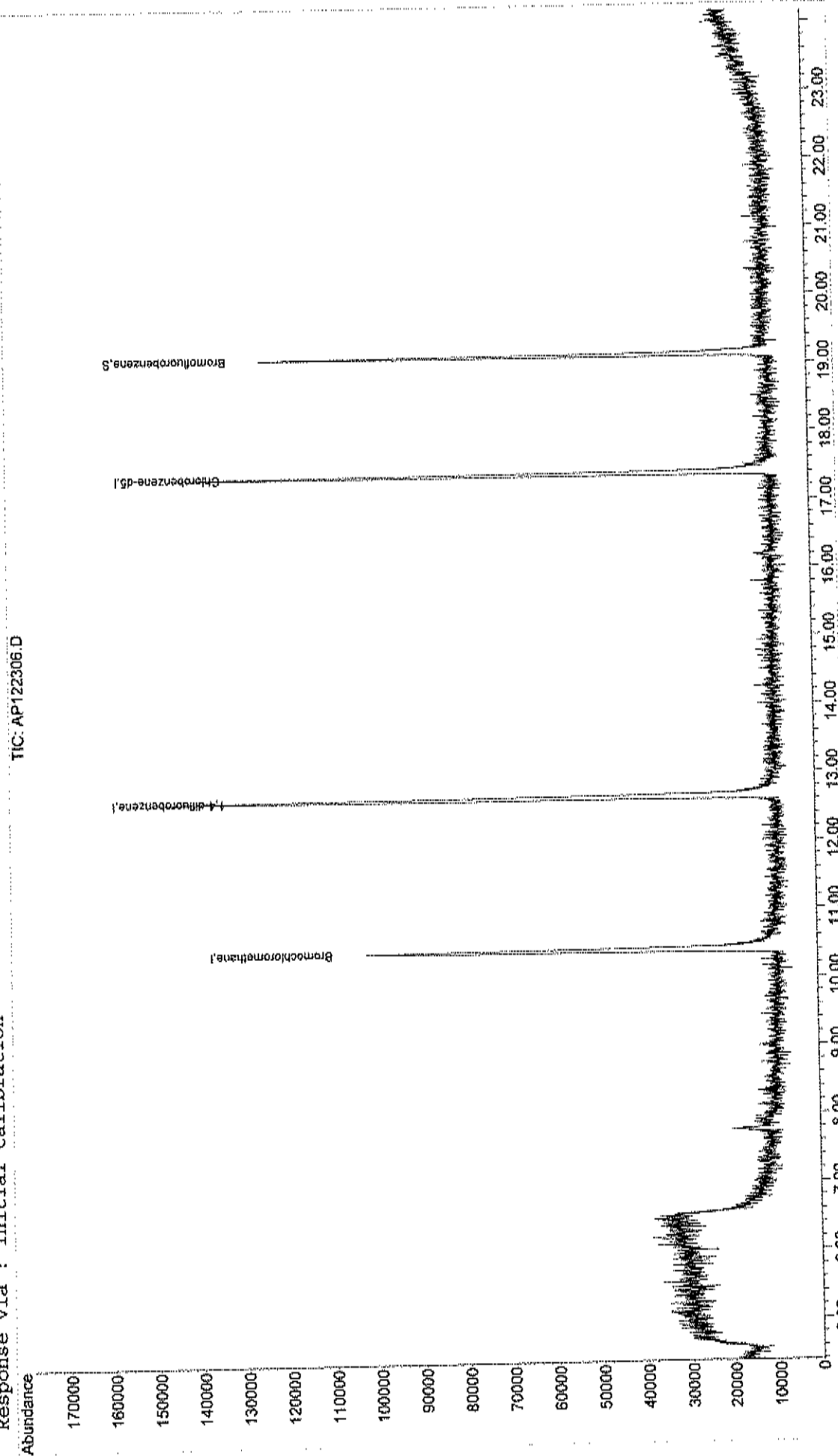
65) Bromofluorobenzene	19.12	95	53089m	0.72	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	72.00%

Target Compounds Qvalue

Data File : C:\HPCHEM\1\DATA\AP122306.D
Acq On : 23 Dec 2018 1:53 pm
Sample : AMB1UG-122318
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 26 14:10 2018

Vial: 6
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





Date: 02-Jan-19

ANALYTICAL QC SUMMARY REPORT

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS		SampType: MS	TestCode: 1ugM3_TO15		Units: ppbV	Prep Date:		RunNo: 14492			
Client ID: SVW-15		Batch ID: R14492	TestNo: TO-15			Analysis Date: 12/21/2018		SeqNo: 166960			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	1.000	0.15	1	0.17	83.0	70	130				
1,1,2,2-Tetrachloroethane	0.7700	0.15	1	0	77.0	70	130				
1,1,2-Trichloroethane	0.8500	0.15	1	0	85.0	70	130				
1,1-Dichloroethane	0.8300	0.15	1	0	83.0	70	130				
1,1-Dichloroethene	0.7500	0.15	1	0	75.0	70	130				
1,2,4-Trichlorobenzene	0.7800	0.15	1	0	78.0	70	130				
1,2,4-Trimethylbenzene	0.7900	0.15	1	0	79.0	70	130				
1,2-Dibromoethane	0.8100	0.15	1	0	81.0	70	130				
1,2-Dichlorobenzene	0.8100	0.15	1	0	81.0	70	130				
1,2-Dichloroethane	0.7900	0.15	1	0	79.0	70	130				
1,2-Dichloropropane	0.8300	0.15	1	0	83.0	70	130				
1,3,5-Trimethylbenzene	0.8000	0.15	1	0	80.0	70	130				
1,3-butadiene	0.9400	0.15	1	0	94.0	70	130				
1,3-Dichlorobenzene	0.8600	0.15	1	0	86.0	70	130				
1,4-Dichlorobenzene	0.7700	0.15	1	0	77.0	70	130				
1,4-Dioxane	0.8900	0.30	1	0	89.0	70	130				
2,2,4-trimethylpentane	0.7800	0.15	1	0	78.0	70	130				
4-ethyltoluene	0.7800	0.15	1	0	78.0	70	130				
Acetone	3.360	0.30	1	2.88	48.0	70	130				S
Allyl chloride	0.8300	0.15	1	0	83.0	70	130				
Benzene	0.8600	0.15	1	0	86.0	70	130				
Benzyl chloride	0.7800	0.15	1	0	78.0	70	130				
Bromodichloromethane	0.9400	0.15	1	0	94.0	70	130				
Bromoform	4.360	0.15	1	0	436	70	130				S
Bromomethane	0.8200	0.15	1	0	82.0	70	130				

Qualifiers: J Results reported are not blank corrected
S Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS		SampType: MS		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14492	
Client ID: SVW-15		Batch ID: R14492		TestNo: TO-15		Analysis Date: 12/21/2018		SeqNo: 166960			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	1.370	0.15	1	0.58	79.0	70	130				
Carbon tetrachloride	0.7900	0.15	1	0	79.0	70	130				
Chlorobenzene	0.7300	0.15	1	0	73.0	70	130				
Chloroethane	0.8800	0.15	1	0	88.0	70	130				
Chloroform	1.150	0.15	1	0.37	78.0	70	130				
Chloromethane	0.9700	0.15	1	0	97.0	70	130				
cis-1,2-Dichloroethene	0.7700	0.15	1	0	77.0	70	130				
cis-1,3-Dichloropropene	0.8000	0.15	1	0	80.0	70	130				
Cyclohexane	0.8900	0.15	1	0	89.0	70	130				S
Dibromochloromethane	1.400	0.15	1	0	140	70	130				
Ethyl acetate	0.9000	0.15	1	0	90.0	70	130				
Ethylbenzene	0.7100	0.15	1	0	71.0	70	130				
Freon 11	3.160	0.15	1	2.56	60.0	70	130				S
Freon 113	0.9000	0.15	1	0	90.0	70	130				
Freon 114	0.9100	0.15	1	0	91.0	70	130				
Freon 12	1.300	0.15	1	0.55	75.0	70	130				
Heptane	0.8100	0.15	1	0	81.0	70	130				
Hexachloro-1,3-butadiene	0.8400	0.15	1	0	84.0	70	130				
Hexane	0.9500	0.15	1	0	95.0	70	130				
Isopropyl alcohol	1.460	0.15	1	0	146	70	130				S
m&p-Xylene	1.490	0.30	2	0	74.5	70	130				
Methyl Butyl Ketone	0.7600	0.30	1	0	76.0	70	130				
Methyl Ethyl Ketone	0.9100	0.30	1	0	91.0	70	130				
Methyl Isobutyl Ketone	0.8500	0.30	1	0	85.0	70	130				
Methyl tert-butyl ether	0.7600	0.15	1	0	76.0	70	130				
Methylene chloride	1.320	0.15	1	0.6	72.0	70	130				
o-Xylene	0.7900	0.15	1	0	79.0	70	130				
Propylene	1.390	0.15	1	0	139	70	130				S
Styrene	0.7400	0.15	1	0	74.0	70	130				
Tetrachloroethylene	3.640	0.15	1	2.88	76.0	70	130				
Tetrahydrofuran	0.8400	0.15	1	0	84.0	70	130				

Qualifiers: J Results reported are not blank corrected
S Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS	SampType: MS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: SVW-15	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166960						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	1.030	0.15	1	0.27	76.0	70	130				
trans-1,2-Dichloroethene	0.8300	0.15	1	0	83.0	70	130				
trans-1,3-Dichloropropene	0.7900	0.15	1	0	79.0	70	130				
Trichloroethene	0.8000	0.15	1	0	80.0	70	130				
Vinyl acetate	0.7600	0.15	1	0	76.0	70	130				
Vinyl Bromide	0.8500	0.15	1	0	85.0	70	130				
Vinyl chloride	0.8200	0.15	1	0	82.0	70	130				

Sample ID: C1812057-016A MS	SampType: MSD	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14492						
Client ID: SVW-15	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166961						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	0.9500	0.15	1	0.17	78.0	70	130	1	5.13	30	
1,1,2,2-Tetrachloroethane	0.7200	0.15	1	0	72.0	70	130	0.77	6.71	30	
1,1,2-Trichloroethane	0.8100	0.15	1	0	81.0	70	130	0.85	4.82	30	
1,1-Dichloroethane	0.9600	0.15	1	0	96.0	70	130	0.83	14.5	30	
1,1-Dichloroethene	0.8800	0.15	1	0	88.0	70	130	0.75	16.0	30	
1,2,4-Trichlorobenzene	0.7200	0.15	1	0	72.0	70	130	0.78	8.00	30	
1,2,4-Trimethylbenzene	0.7300	0.15	1	0	73.0	70	130	0.79	7.89	30	
1,2-Dibromoethane	0.8000	0.15	1	0	80.0	70	130	0.81	1.24	30	
1,2-Dichlorobenzene	0.7500	0.15	1	0	75.0	70	130	0.81	7.69	30	
1,2-Dichloroethane	0.9100	0.15	1	0	91.0	70	130	0.79	14.1	30	
1,2-Dichloropropane	0.8500	0.15	1	0	85.0	70	130	0.83	2.38	30	
1,3,5-Trimethylbenzene	0.7200	0.15	1	0	72.0	70	130	0.8	10.5	30	
1,3-butadiene	1.100	0.15	1	0	110	70	130	0.94	15.7	30	
1,3-Dichlorobenzene	0.7700	0.15	1	0	77.0	70	130	0.86	11.0	30	
1,4-Dichlorobenzene	0.7100	0.15	1	0	71.0	70	130	0.77	8.11	30	
1,4-Dioxane	0.7300	0.30	1	0	73.0	70	130	0.89	19.8	30	
2,2,4-trimethylpentane	0.7800	0.15	1	0	78.0	70	130	0.78	0	30	
4-ethyltoluene	0.7400	0.15	1	0	74.0	70	130	0.78	5.26	30	

Qualifiers: Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS		SampType: MSD		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14492	
Client ID: SVW-15		Batch ID: R14492		TestNo: TO-15		Analysis Date: 12/22/2018		SeqNo: 166961			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	3.510	0.30	1	2.88	63.0	70	130	3.36	4.37	30	S
Allyl chloride	0.9500	0.15	1	0	95.0	70	130	0.83	13.5	30	
Benzene	0.8700	0.15	1	0	87.0	70	130	0.86	1.16	30	
Benzyl chloride	0.7600	0.15	1	0	76.0	70	130	0.78	2.60	30	
Bromodichloromethane	0.9500	0.15	1	0	95.0	70	130	0.94	1.06	30	
Bromoform	4.300	0.15	1	0	430	70	130	4.36	1.39	30	S
Bromomethane	0.9600	0.15	1	0	90.0	70	130	0.82	9.30	30	
Carbon disulfide	1.440	0.15	1	0.58	86.0	70	130	1.37	4.98	30	
Carbon tetrachloride	0.7800	0.15	1	0	78.0	70	130	0.79	1.27	30	
Chlorobenzene	0.7000	0.15	1	0	70.0	70	130	0.73	4.20	30	
Chloroethane	1.030	0.15	1	0	103	70	130	0.88	15.7	30	
Chloroform	1.210	0.15	1	0.37	84.0	70	130	1.15	5.08	30	
Chloromethane	1.050	0.15	1	0	105	70	130	0.97	7.92	30	
cis-1,2-Dichloroethene	0.8800	0.15	1	0	88.0	70	130	0.77	13.3	30	
cis-1,3-Dichloropropene	0.7800	0.15	1	0	78.0	70	130	0.8	2.53	30	
Cyclohexane	0.8800	0.15	1	0	88.0	70	130	0.89	1.13	30	
Dibromochloromethane	1.420	0.15	1	0	142	70	130	1.4	1.42	30	S
Ethyl acetate	0.8900	0.15	1	0	89.0	70	130	0.9	1.12	30	
Ethylbenzene	0.7000	0.15	1	0	70.0	70	130	0.71	1.42	30	
Freon 11	3.050	0.15	1	2.56	49.0	70	130	3.16	3.54	30	S
Freon 113	0.9800	0.15	1	0	98.0	70	130	0.9	8.51	30	
Freon 114	1.000	0.15	1	0	100	70	130	0.91	9.42	30	
Freon 12	1.360	0.15	1	0.55	81.0	70	130	1.3	4.51	30	
Heptane	0.8100	0.15	1	0	81.0	70	130	0.81	0	30	
Hexachloro-1,3-butadiene	0.8100	0.15	1	0	81.0	70	130	0.84	3.64	30	
Hexane	1.030	0.15	1	0	103	70	130	0.95	8.08	30	
Isopropyl alcohol	1.410	0.15	1	0	141	70	130	1.46	3.48	30	S
m&p-Xylene	1.440	0.30	2	0	72.0	70	130	1.49	3.41	30	
Methyl Butyl Ketone	0.7300	0.30	1	0	73.0	70	130	0.76	4.03	30	
Methyl Ethyl Ketone	0.9100	0.30	1	0	91.0	70	130	0.91	0	30	
Methyl Isobutyl Ketone	0.7500	0.30	1	0	75.0	70	130	0.85	12.5	30	

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 ND Estimated Value above quantitation range
 E Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: C1812057-016A MS		SampType: MSD		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14492			
Client ID: SVW-15		Batch ID: R14492		TestNo: TO-15		Analysis Date: 12/22/2018						SeqNo: 166961	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual		
Methyl tert-butyl ether	0.7400	0.15	1	0	74.0	70	130	0.76	2.67	30			
Methylene chloride	1.410	0.15	1	0.6	81.0	70	130	1.32	6.59	30			
o-Xylene	0.7500	0.15	1	0	75.0	70	130	0.79	5.19	30			
Propylene	1.460	0.15	1	0	146	70	130	1.39	4.91	30	S		
Styrene	0.7200	0.15	1	0	72.0	70	130	0.74	2.74	30			
Tetrachloroethylene	3.310	0.15	1	2.88	43.0	70	130	3.64	9.50	30	S		
Tetrahydrofuran	0.8100	0.15	1	0	81.0	70	130	0.84	3.64	30			
Toluene	1.030	0.15	1	0.27	76.0	70	130	1.03	0	30			
trans-1,2-Dichloroethene	0.9100	0.15	1	0	91.0	70	130	0.83	9.20	30			
trans-1,3-Dichloropropene	0.7500	0.15	1	0	75.0	70	130	0.79	5.19	30			
Trichloroethene	0.7900	0.15	1	0	79.0	70	130	0.8	1.26	30			
Vinyl acetate	0.8400	0.15	1	0	84.0	70	130	0.76	10.0	30			
Vinyl Bromide	0.9600	0.15	1	0	96.0	70	130	0.85	12.2	30			
Vinyl chloride	0.9800	0.15	1	0	98.0	70	130	0.82	17.8	30			

Qualifiers:	Results reported are not blank corrected		Estimated Value above quantitation range		Holding times for preparation or analysis exceeded	
	J	Analyte detected below quantitation limit	E	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
			ND			
	S	Spike Recovery outside accepted recovery limits				

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122119.D
 Acq On : 21 Dec 2018 11:17 pm
 Sample : C1812057-016A MS
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:35 2018

Vial: 5
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	44237m	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	167031	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	152272	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	101899	0.98	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	98.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	94961	1.39	ppb	98
3) Freon 12	4.58	85	331925	1.30	ppb	99
4) Chloromethane	4.80	50	78091	0.97	ppb	96
5) Freon 114	4.80	85	224522	0.91	ppb	86
6) Vinyl Chloride	5.01	62	59677	0.82	ppb	97
7) Butane	5.13	43	136420	1.11	ppb	95
8) 1,3-butadiene	5.12	39	65873	0.94	ppb	81
9) Bromomethane	5.50	94	72031	0.82	ppb	99
10) Chloroethane	5.69	64	25126	0.88	ppb	92
11) Ethanol	5.79	45	25243	1.29	ppb	90
12) Acrolein	6.40	56	17313m	0.95	ppb	
13) Vinyl Bromide	6.05	106	66837	0.85	ppb	100
14) Freon 11	6.34	101	1102891	3.16	ppb	98
15) Acetone	6.51	58	91116	3.36	ppb	90
16) Pentane	6.63	42	98740	1.29	ppb	94
17) Isopropyl alcohol	6.61	45	144879	1.46	ppb	95
18) 1,1-dichloroethene	7.13	96	52197	0.75	ppb	90
19) Freon 113	7.34	101	145820	0.90	ppb	94
20) t-Butyl alcohol	7.36	59	110040	1.08	ppb	# 64
21) Methylene chloride	7.61	84	92016	1.32	ppb	97
22) Allyl chloride	7.59	41	63718	0.83	ppb	100
23) Carbon disulfide	7.77	76	211802	1.37	ppb	96
24) trans-1,2-dichloroethene	8.57	61	68198	0.83	ppb	97
25) methyl tert-butyl ether	8.59	73	100820	0.76	ppb	62
26) 1,1-dichloroethane	9.00	63	113843	0.83	ppb	100
27) Vinyl acetate	8.97	43	93546	0.76	ppb	99
28) Methyl Ethyl Ketone	9.49	72	25276	0.91	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	66614	0.77	ppb	98
30) Hexane	9.54	57	83240	0.95	ppb	90
31) Ethyl acetate	10.09	43	120309	0.90	ppb	92
32) Chloroform	10.56	83	193579	1.15	ppb	99
33) Tetrahydrofuran	10.75	42	49445	0.84	ppb	96
34) 1,2-dichloroethane	11.66	62	80719	0.79	ppb	97
36) 1,1,1-trichloroethane	11.39	97	151800	1.00	ppb	99
37) Cyclohexane	12.07	56	70288	0.89	ppb	88
38) Carbon tetrachloride	12.01	117	138047	0.79	ppb	99
39) Benzene	11.98	78	164405	0.86	ppb	99
40) Methyl methacrylate	13.49	41	55423	0.81	ppb	97
41) 1,4-dioxane	13.54	88	31649	0.89	ppb	94
42) 2,2,4-trimethylpentane	12.82	57	212137	0.78	ppb	88
43) Heptane	13.15	43	76863	0.81	ppb	97
44) Trichloroethene	13.28	130	73634	0.80	ppb	97
45) 1,2-dichloropropane	13.38	63	65673	0.83	ppb	97

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122119.D
 Acq On : 21 Dec 2018 11:17 pm
 Sample : C1812057-016A MS
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:35 2018

Vial: 5
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

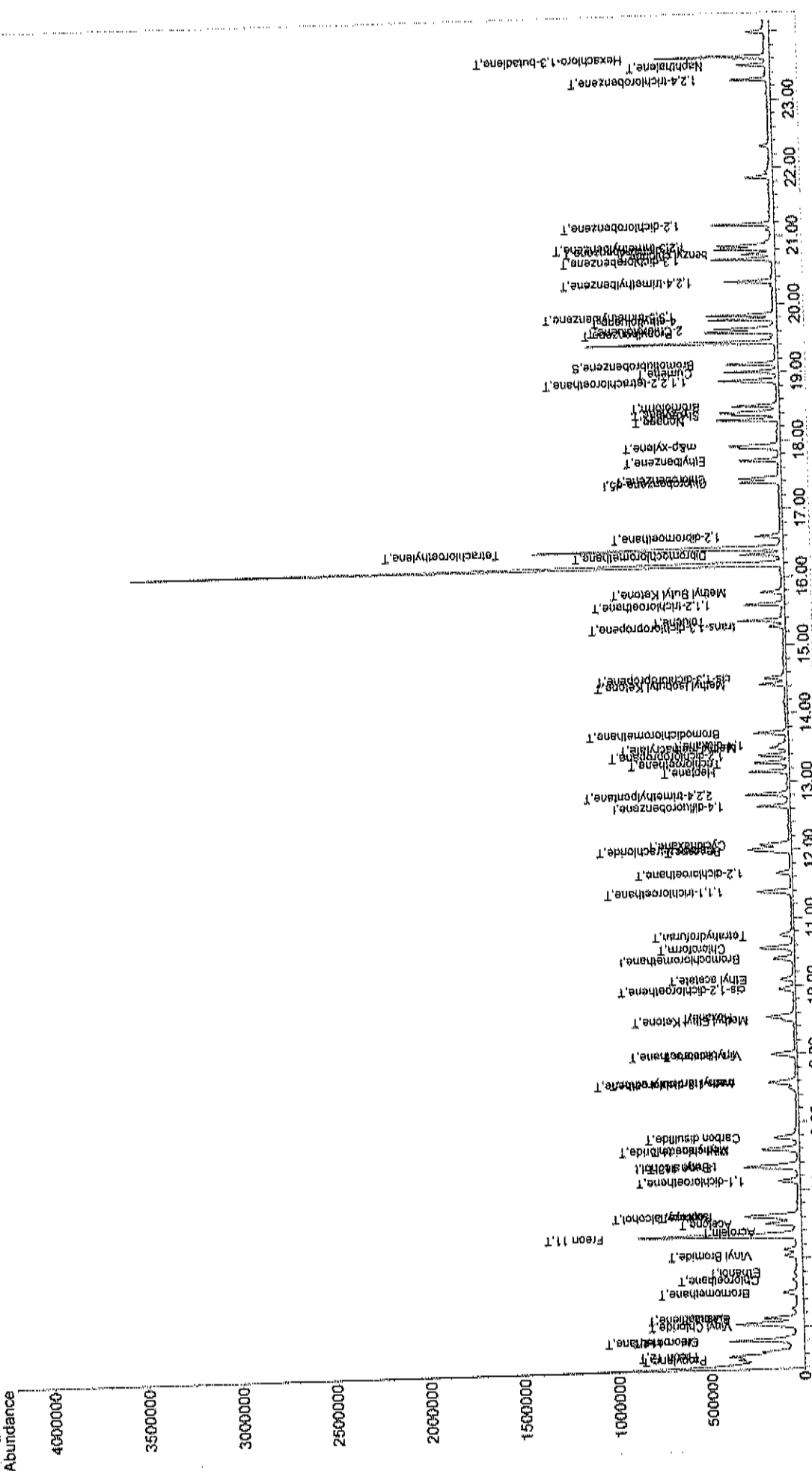
Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	139083	0.94	ppb	100
47) cis-1,3-dichloropropene	14.51	75	73119	0.80	ppb	98
48) trans-1,3-dichloropropene	15.27	75	51070	0.79	ppb	93
49) 1,1,2-trichloroethane	15.60	97	74072	0.85	ppb	99
51) Toluene	15.36	92	121702	1.03	ppb	95
52) Methyl Isobutyl Ketone	14.43	43	112303	0.85	ppb	94
53) Dibromochloromethane	16.33	129	138971	1.40	ppb	99
54) Methyl Butyl Ketone	15.77	43	98281	0.76	ppb	87
55) 1,2-dibromoethane	16.59	107	107998	0.81	ppb	99
56) Tetrachloroethylene	16.42	164	348577	3.64	ppb	97
57) Chlorobenzene	17.44	112	131774	0.73	ppb	97
58) Ethylbenzene	17.71	91	172325	0.71	ppb	100
59) m&p-xylene	17.92	91	307347	1.49	ppb	97
60) Nonane	18.31	43	109188	0.72	ppb	92
61) Styrene	18.38	104	131908	0.74	ppb	96
62) Bromoform	18.50	173	127289	4.36	ppb	99
63) o-xylene	18.42	91	205966	0.79	ppb	98
64) Cumene	19.01	105	195500	0.71	ppb	98
66) 1,1,2,2-tetrachloroethane	18.88	83	186801	0.77	ppb	100
67) Propylbenzene	19.59	120	72412	0.91	ppb	88
68) 2-Chlorotoluene	19.64	126	75514	0.81	ppb	90
69) 4-ethyltoluene	19.77	105	246054	0.78	ppb	98
70) 1,3,5-trimethylbenzene	19.84	105	222558	0.80	ppb	99
71) 1,2,4-trimethylbenzene	20.33	105	169261	0.79	ppb	97
72) 1,3-dichlorobenzene	20.65	146	172150	0.86	ppb	98
73) benzyl chloride	20.73	91	134254	0.78	ppb	98
74) 1,4-dichlorobenzene	20.81	146	154931	0.77	ppb	97
75) 1,2,3-trimethylbenzene	20.86	105	194608	0.79	ppb	100
76) 1,2-dichlorobenzene	21.17	146	156509	0.81	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	68658	0.78	ppb	98
78) Naphthalene	23.51	128	162552m	0.78	ppb	97
79) Hexachloro-1,3-butadiene	23.63	225	116366	0.84	ppb	97

Data File : C:\HPCHEM\1\DATA\AP122119.D
Acq On : 21 Dec 2018 11:17 pm
Sample : C1812057-016A MS
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:11 2018
Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: AD10_1UG.RES

TC: AP122119.D



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122120.D
 Acq On : 22 Dec 2018 12:04 am
 Sample : C1812057-016A MSD
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:36 2018

Vial: 6
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	41707	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	175000	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	148642	1.00	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
65) Bromofluorobenzene	19.12	95	100816	0.99	ppb	0.00
Spiked Amount	1.000	Range 70 - 130	Recovery	=	99.00%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	94082	1.46	ppb	95
3) Freon 12	4.58	85	328047	1.36	ppb	99
4) Chloromethane	4.80	50	80253	1.05	ppb	97
5) Freon 114	4.80	85	234250	1.00	ppb	88
6) Vinyl Chloride	5.02	62	66999	0.98	ppb	95
7) Butane	5.13	43	147857	1.27	ppb	98
8) 1,3-butadiene	5.13	39	72942	1.10	ppb	82
9) Bromomethane	5.50	94	74982	0.90	ppb	94
10) Chloroethane	5.69	64	27516	1.03	ppb	100
11) Ethanol	5.79	45	28741	1.56	ppb	86
12) Acrolein	6.41	56	16955	0.99	ppb	90
13) Vinyl Bromide	6.04	106	71351	0.96	ppb	97
14) Freon 11	6.34	101	1005461	3.05	ppb	99
15) Acetone	6.51	58	89728	3.51	ppb	92
16) Pentane	6.63	42	96510	1.33	ppb	98
17) Isopropyl alcohol	6.62	45	131851	1.41	ppb	# 82
18) 1,1-dichloroethene	7.13	96	58230	0.88	ppb	95
19) Freon 113	7.33	101	149803	0.98	ppb	95
20) t-Butyl alcohol	7.36	59	101264	1.05	ppb	# 65
21) Methylene chloride	7.60	84	92747	1.41	ppb	99
22) Allyl chloride	7.59	41	68799	0.95	ppb	98
23) Carbon disulfide	7.77	76	209935	1.44	ppb	97
24) trans-1,2-dichloroethene	8.57	61	70861	0.91	ppb	96
25) methyl tert-butyl ether	8.58	73	92486	0.74	ppb	67
26) 1,1-dichloroethane	9.00	63	124311	0.96	ppb	98
27) Vinyl acetate	8.98	43	97967	0.84	ppb	88
28) Methyl Ethyl Ketone	9.50	72	23967	0.91	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	71365	0.88	ppb	98
30) Hexane	9.55	57	84861	1.03	ppb	93
31) Ethyl acetate	10.09	43	111685	0.89	ppb	96
32) Chloroform	10.56	83	191016	1.21	ppb	99
33) Tetrahydrofuran	10.75	42	45100	0.81	ppb	93
34) 1,2-dichloroethane	11.66	62	87679	0.91	ppb	99
36) 1,1,1-trichloroethane	11.39	97	152520	0.95	ppb	99
37) Cyclohexane	12.08	56	73221	0.88	ppb	91
38) Carbon tetrachloride	12.02	117	142812	0.78	ppb	99
39) Benzene	11.98	78	174277	0.87	ppb	99
40) Methyl methacrylate	13.50	41	55927m	0.78	ppb	
41) 1,4-dioxane	13.55	88	27268	0.73	ppb	84
42) 2,2,4-trimethylpentane	12.82	57	221464	0.78	ppb	87
43) Heptane	13.15	43	80397	0.81	ppb	98
44) Trichloroethene	13.28	130	75770	0.79	ppb	99
45) 1,2-dichloropropane	13.39	63	71135	0.85	ppb	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122120.D
 Acq On : 22 Dec 2018 12:04 am
 Sample : C1812057-016A MSD
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:36 2018

Vial: 6
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	147052	0.95	ppb	99
47) cis-1,3-dichloropropene	14.52	75	74424	0.78	ppb	99
48) trans-1,3-dichloropropene	15.27	75	50460	0.75	ppb	93
49) 1,1,2-trichloroethane	15.60	97	73625	0.81	ppb	98
51) Toluene	15.36	92	118517	1.03	ppb	95
52) Methyl Isobutyl Ketone	14.43	43	96909	0.75	ppb	90
53) Dibromochloromethane	16.33	129	137520	1.42	ppb	98
54) Methyl Butyl Ketone	15.77	43	91525m 250	0.73	ppb	
55) 1,2-dibromoethane	16.59	107	104363	0.80	ppb	97
56) Tetrachloroethylene	16.42	164	309682	3.31	ppb	98
57) Chlorobenzene	17.44	112	124664	0.70	ppb	100
58) Ethylbenzene	17.71	91	166026	0.70	ppb	99
59) m&p-xylene	17.92	91	290031	1.44	ppb	# 66
60) Nonane	18.31	43	100952	0.68	ppb	93
61) Styrene	18.38	104	125655m 250	0.72	ppb	
62) Bromoform	18.51	173	122688	4.30	ppb	100
63) o-xylene	18.42	91	191290	0.75	ppb	98
64) Cumene	19.01	105	180864	0.67	ppb	98
66) 1,1,2,2-tetrachloroethane	18.88	83	171170	0.72	ppb	98
67) Propylbenzene	19.59	120	63050	0.81	ppb	88
68) 2-Chlorotoluene	19.64	126	70524	0.77	ppb	# 88
69) 4-ethyltoluene	19.77	105	226476	0.74	ppb	99
70) 1,3,5-trimethylbenzene	19.83	105	195626	0.72	ppb	98
71) 1,2,4-trimethylbenzene	20.33	105	151949	0.73	ppb	98
72) 1,3-dichlorobenzene	20.66	146	150337	0.77	ppb	98
73) benzyl chloride	20.73	91	126581	0.76	ppb	97
74) 1,4-dichlorobenzene	20.81	146	137804	0.71	ppb	96
75) 1,2,3-trimethylbenzene	20.86	105	169877	0.71	ppb	100
76) 1,2-dichlorobenzene	21.17	146	141155	0.75	ppb	96
77) 1,2,4-trichlorobenzene	23.29	180	61787	0.72	ppb	98
78) Naphthalene	23.51	128	150500m 250	0.74	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	109334	0.81	ppb	98

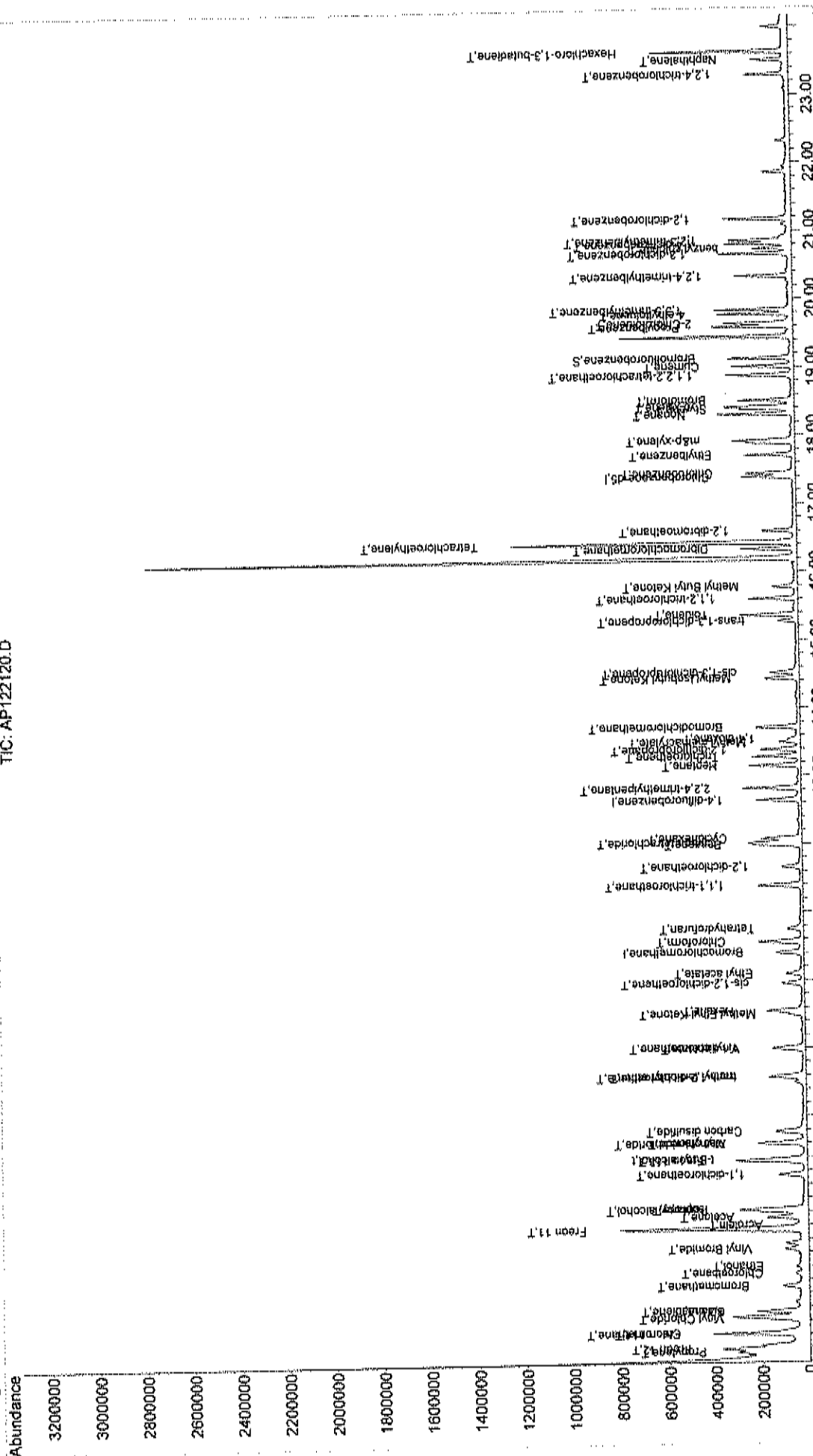
Data File : C:\HPCHEM\1\DATA\AP122120.D
Acq On : 22 Dec 2018 12:04 am
Sample : C1812057-016A MSD
Misc : AD10_LUG
MS Integration Params: RTEINT.P
Quant Time: Dec 27 10:12 2018

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Method      : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

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TIC: AP122120.D





Date: 02-Jan-19

ANALYTICAL QC SUMMARY REPORT

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122118	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 168945						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.8300	0.15	1	0	83.0	70	130				
1,1,2,2-Tetrachloroethane	0.8800	0.15	1	0	88.0	70	130				
1,1,2-Trichloroethane	0.8700	0.15	1	0	87.0	70	130				
1,1-Dichloroethane	0.9500	0.15	1	0	95.0	70	130				
1,1-Dichloroethene	0.8800	0.15	1	0	88.0	70	130				
1,2,4-Trichlorobenzene	0.8700	0.15	1	0	87.0	70	130				
1,2,4-Trimethylbenzene	0.8200	0.15	1	0	82.0	70	130				
1,2-Dibromoethane	0.8800	0.15	1	0	88.0	70	130				
1,2-Dichlorobenzene	0.8800	0.15	1	0	88.0	70	130				
1,2-Dichloroethane	0.9400	0.15	1	0	94.0	70	130				
1,2-Dichloropropane	0.8400	0.15	1	0	84.0	70	130				
1,3,5-Trimethylbenzene	0.9000	0.15	1	0	90.0	70	130				
1,3-butadiene	0.9600	0.15	1	0	96.0	70	130				
1,3-Dichlorobenzene	0.8300	0.15	1	0	83.0	70	130				
1,4-Dichlorobenzene	0.8200	0.15	1	0	82.0	70	130				
1,4-Dioxane	0.9900	0.30	1	0	99.0	70	130				
2,2,4-trimethylpentane	0.8000	0.15	1	0	80.0	70	130				
4-ethyltoluene	0.8500	0.15	1	0	85.0	70	130				
Acetone	0.8700	0.30	1	0	87.0	70	130				
Allyl chloride	0.9200	0.15	1	0	92.0	70	130				
Benzene	0.8300	0.15	1	0	83.0	70	130				
Benzyl chloride	0.9400	0.15	1	0	94.0	70	130				
Bromodichloromethane	1.000	0.15	1	0	100	70	130				
Bromoform	5.410	0.15	1	0	541	70	130				
Bromomethane	0.9400	0.15	1	0	94.0	70	130				

S

Qualifiers: . Results reported are not blank corrected
J Analytic detected below quantitation limit
S Spike Recovery outside accepted recovery limits

E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection

H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122118		SampType: LCS		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14492	
Client ID: ZZZZZ		Batch ID: R14492		TestNo: TO-15		Analysis Date: 12/21/2018		SeqNo: 166945			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	0.9200	0.15	1	0	92.0	70	130				
Carbon tetrachloride	0.7700	0.15	1	0	77.0	70	130				
Chlorobenzene	0.8000	0.15	1	0	80.0	70	130				
Chloroethane	0.9400	0.15	1	0	94.0	70	130				
Chloroform	0.9300	0.15	1	0	93.0	70	130				
Chloromethane	1.000	0.15	1	0	100	70	130				
cis-1,2-Dichloroethene	0.8600	0.15	1	0	86.0	70	130				
cis-1,3-Dichloropropene	0.8500	0.15	1	0	85.0	70	130				
Cyclohexane	0.8100	0.15	1	0	81.0	70	130				
Dibromochloromethane	1.400	0.15	1	0	140	70	130				S
Ethyl acetate	0.9700	0.15	1	0	97.0	70	130				
Ethylbenzene	0.7700	0.15	1	0	77.0	70	130				
Freon 11	0.9600	0.15	1	0	96.0	70	130				
Freon 113	0.9300	0.15	1	0	93.0	70	130				
Freon 114	0.9600	0.15	1	0	96.0	70	130				
Freon 12	0.9300	0.15	1	0	93.0	70	130				
Heptane	0.8000	0.15	1	0	80.0	70	130				
Hexachloro-1,3-butadiene	0.9600	0.15	1	0	96.0	70	130				
Hexane	0.9000	0.15	1	0	90.0	70	130				
Isopropyl alcohol	0.9800	0.15	1	0	98.0	70	130				
m&p-Xylene	1.670	0.30	2	0	83.5	70	130				
Methyl Butyl Ketone	1.030	0.30	1	0	103	70	130				
Methyl Ethyl Ketone	0.9800	0.30	1	0	98.0	70	130				
Methyl Isobutyl Ketone	1.050	0.30	1	0	105	70	130				
Methyl tert-butyl ether	0.9000	0.15	1	0	90.0	70	130				
Methylene chloride	0.8700	0.15	1	0	87.0	70	130				
o-Xylene	0.9100	0.15	1	0	91.0	70	130				
Propylene	0.9300	0.15	1	0	93.0	70	130				
Styrene	0.8600	0.15	1	0	86.0	70	130				
Tetrachloroethylene	0.8200	0.15	1	0	82.0	70	130				
Tetrahydrofuran	0.9900	0.15	1	0	99.0	70	130				

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122118	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/21/2018	SeqNo: 166945						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	0.7900	0.15	1	0	79.0	70	130				
trans-1,2-Dichloroethene	0.9300	0.15	1	0	93.0	70	130				
trans-1,3-Dichloropropene	0.7800	0.15	1	0	78.0	70	130				
Trichloroethene	0.7700	0.15	1	0	77.0	70	130				
Vinyl acetate	0.9200	0.15	1	0	92.0	70	130				
Vinyl Bromide	0.9500	0.15	1	0	95.0	70	130				
Vinyl chloride	0.9000	0.15	1	0	90.0	70	130				

Sample ID: ALCS1UG-122218	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166963						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	0.8600	0.15	1	0	86.0	70	130				
1,1,2,2-Tetrachloroethane	0.8600	0.15	1	0	86.0	70	130				
1,1,2-Trichloroethane	0.8700	0.15	1	0	87.0	70	130				
1,1-Dichloroethane	0.9500	0.15	1	0	95.0	70	130				
1,1-Dichloroethene	0.8800	0.15	1	0	88.0	70	130				
1,2,4-Trichlorobenzene	0.8100	0.15	1	0	81.0	70	130				
1,2,4-Trimethylbenzene	0.7600	0.15	1	0	76.0	70	130				
1,2-Dibromoethane	0.8500	0.15	1	0	85.0	70	130				
1,2-Dichlorobenzene	0.8200	0.15	1	0	82.0	70	130				
1,2-Dichloroethane	0.8900	0.15	1	0	89.0	70	130				
1,2-Dichloropropane	0.8700	0.15	1	0	87.0	70	130				
1,3,5-Trimethylbenzene	0.8600	0.15	1	0	86.0	70	130				
1,3-butadiene	1.000	0.15	1	0	100	70	130				
1,3-Dichlorobenzene	0.8000	0.15	1	0	80.0	70	130				
1,4-Dichlorobenzene	0.7800	0.15	1	0	78.0	70	130				
1,4-Dioxane	0.8800	0.30	1	0	88.0	70	130				
2,2,4-trimethylpentane	0.8200	0.15	1	0	82.0	70	130				
4-ethyltoluene	0.8400	0.15	1	0	84.0	70	130				

Qualifiers: J Results reported are not blank corrected E Estimated Value above quantitation range H Holding times for preparation or analysis exceeded
 S Analyte detected below quantitation limit ND Not Detected at the Limit of Detection R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122218	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166963						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	0.8600	0.30	1	0	86.0	70	130				
Allyl chloride	0.9300	0.15	1	0	93.0	70	130				
Benzene	0.8300	0.15	1	0	83.0	70	130				
Benzyl chloride	0.8300	0.15	1	0	83.0	70	130				
Bromodichloromethane	0.9600	0.15	1	0	96.0	70	130				
Bromoform	5.110	0.15	1	0	511	70	130				S
Bromomethane	0.9200	0.15	1	0	92.0	70	130				
Carbon disulfide	0.9400	0.15	1	0	94.0	70	130				
Carbon tetrachloride	0.7800	0.15	1	0	78.0	70	130				
Chlorobenzene	0.7900	0.15	1	0	79.0	70	130				
Chloroethane	1.020	0.15	1	0	102	70	130				
Chloroform	0.9300	0.15	1	0	93.0	70	130				
Chloromethane	0.9800	0.15	1	0	98.0	70	130				
cis-1,2-Dichloroethene	0.8700	0.15	1	0	87.0	70	130				
cis-1,3-Dichloropropene	0.8500	0.15	1	0	85.0	70	130				
Cyclohexane	0.8300	0.15	1	0	83.0	70	130				S
Dibromochloromethane	1.540	0.15	1	0	154	70	130				
Ethyl acetate	0.9400	0.15	1	0	94.0	70	130				
Ethylbenzene	0.7600	0.15	1	0	76.0	70	130				
Freon 11	0.9500	0.15	1	0	95.0	70	130				
Freon 113	0.9600	0.15	1	0	96.0	70	130				
Freon 114	0.9900	0.15	1	0	99.0	70	130				
Freon 12	0.9800	0.15	1	0	98.0	70	130				
Heptane	0.8000	0.15	1	0	80.0	70	130				
Hexachloro-1,3-butadiene	0.8500	0.15	1	0	85.0	70	130				
Hexane	0.9500	0.15	1	0	95.0	70	130				
Isopropyl alcohol	0.9500	0.15	1	0	95.0	70	130				
m&p-Xylene	1.680	0.30	2	0	84.0	70	130				
Methyl Butyl Ketone	0.8000	0.30	1	0	80.0	70	130				
Methyl Ethyl Ketone	0.9400	0.30	1	0	94.0	70	130				
Methyl Isobutyl Ketone	0.8900	0.30	1	0	89.0	70	130				

Qualifiers: Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122218	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 165963						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.8900	0.15	1	0	89.0	70	130				
Methylene chloride	0.8900	0.15	1	0	89.0	70	130				
o-Xylene	0.9000	0.15	1	0	90.0	70	130				
Propylene	0.9500	0.15	1	0	95.0	70	130				
Styrene	0.8700	0.15	1	0	87.0	70	130				
Tetrachloroethylene	0.8400	0.15	1	0	84.0	70	130				
Tetrahydrofuran	0.8600	0.15	1	0	86.0	70	130				
Toluene	0.8000	0.15	1	0	80.0	70	130				
trans-1,2-Dichloroethene	0.9300	0.15	1	0	93.0	70	130				
trans-1,3-Dichloropropene	0.8200	0.15	1	0	82.0	70	130				
Trichloroethene	0.7700	0.15	1	0	77.0	70	130				
Vinyl acetate	0.8800	0.15	1	0	88.0	70	130				
Vinyl Bromide	0.9500	0.15	1	0	95.0	70	130				
Vinyl chloride	0.9100	0.15	1	0	91.0	70	130				

Sample ID: ALCS1UG-122318	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167007						
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD RefVal	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9400	0.15	1	0	94.0	70	130				
1,1,2,2-Tetrachloroethane	0.9800	0.15	1	0	98.0	70	130				
1,1,2-Trichloroethane	0.9600	0.15	1	0	96.0	70	130				
1,1-Dichloroethane	1.060	0.15	1	0	106	70	130				
1,1-Dichloroethene	1.000	0.15	1	0	100	70	130				
1,2,4-Trichlorobenzene	0.7600	0.15	1	0	76.0	70	130				
1,2,4-Trimethylbenzene	0.8500	0.15	1	0	85.0	70	130				
1,2-Dibromoethane	0.9600	0.15	1	0	96.0	70	130				
1,2-Dichlorobenzene	0.9500	0.15	1	0	95.0	70	130				
1,2-Dichloroethane	1.050	0.15	1	0	105	70	130				
1,2-Dichloropropane	0.9700	0.15	1	0	97.0	70	130				

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122318		SampType: LCS		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14495	
Client ID: ZZZZZ		Batch ID: R14495		TestNo: TO-15				Analysis Date: 12/23/2018		SeqNo: 167007	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	0.9700	0.15	1	0	97.0	70	130				
1,3-butadiene	1.120	0.15	1	0	112	70	130				
1,3-Dichlorobenzene	0.9200	0.15	1	0	92.0	70	130				
1,4-Dichlorobenzene	0.9400	0.15	1	0	94.0	70	130				
1,4-Dioxane	0.9100	0.30	1	0	91.0	70	130				
2,2,4-trimethylpentane	0.9000	0.15	1	0	90.0	70	130				
4-ethyltoluene	0.9700	0.15	1	0	97.0	70	130				
Acetone	0.9100	0.30	1	0	91.0	70	130				
Allyl chloride	1.060	0.15	1	0	106	70	130				
Benzene	0.9300	0.15	1	0	93.0	70	130				
Benzyl chloride	0.9600	0.15	1	0	96.0	70	130				
Bromodichloromethane	1.110	0.15	1	0	111	70	130				
Bromoform	5.700	0.15	1	0	570	70	130				
Bromomethane	1.030	0.15	1	0	103	70	130				
Carbon disulfide	1.040	0.15	1	0	104	70	130				
Carbon tetrachloride	0.8700	0.15	1	0	87.0	70	130				
Chlorobenzene	0.9000	0.15	1	0	90.0	70	130				
Chloroethane	1.090	0.15	1	0	109	70	130				
Chloroform	1.060	0.15	1	0	106	70	130				
Chloromethane	1.070	0.15	1	0	107	70	130				
cis-1,2-Dichloroethene	0.9900	0.15	1	0	99.0	70	130				
cis-1,3-Dichloropropene	0.9500	0.15	1	0	95.0	70	130				
Cyclohexane	0.9000	0.15	1	0	90.0	70	130				
Dibromochloromethane	1.720	0.15	1	0	172	70	130				
Ethyl acetate	1.050	0.15	1	0	105	70	130				
Ethylbenzene	0.8900	0.15	1	0	89.0	70	130				
Freon 11	1.080	0.15	1	0	108	70	130				
Freon 113	1.070	0.15	1	0	107	70	130				
Freon 114	1.110	0.15	1	0	111	70	130				
Freon 12	1.100	0.15	1	0	110	70	130				
Heptane	0.8800	0.15	1	0	88.0	70	130				

Qualifiers: . Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits

H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UG-122318	SampType: LCS	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14495						
Client ID: ZZZZZ	Batch ID: R14495	TestNo: TO-15		Analysis Date: 12/23/2018	SeqNo: 167007						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	0.9400	0.15	1	0	94.0	70	130				
Hexane	0.9900	0.15	1	0	99.0	70	130				
Isopropyl alcohol	0.9500	0.15	1	0	95.0	70	130				
m&p-Xylene	1.970	0.30	2	0	98.5	70	130				
Methyl Butyl Ketone	0.7900	0.30	1	0	79.0	70	130				
Methyl Ethyl Ketone	0.9000	0.30	1	0	90.0	70	130				
Methyl Isobutyl Ketone	0.8500	0.30	1	0	85.0	70	130				
Methyl tert-butyl ether	0.9700	0.15	1	0	97.0	70	130				
Methylene chloride	1.010	0.15	1	0	101	70	130				
o-Xylene	1.030	0.15	1	0	103	70	130				
Propylene	1.090	0.15	1	0	109	70	130				
Styrene	0.9900	0.15	1	0	99.0	70	130				
Tetrachloroethylene	0.9400	0.15	1	0	94.0	70	130				
Tetrahydrofuran	1.040	0.15	1	0	104	70	130				
Toluene	0.9300	0.15	1	0	93.0	70	130				
trans-1,2-Dichloroethene	1.040	0.15	1	0	104	70	130				
trans-1,3-Dichloropropene	0.9000	0.15	1	0	90.0	70	130				
Trichloroethene	0.8700	0.15	1	0	87.0	70	130				
Vinyl acetate	1.010	0.15	1	0	101	70	130				
Vinyl Bromide	1.020	0.15	1	0	102	70	130				
Vinyl chloride	1.060	0.15	1	0	106	70	130				

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122104.D
 Acq On : 21 Dec 2018 12:17 pm
 Sample : ALCS1UG-122118
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:20 2018

Vial: 4
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.39	128	43161	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.63	114	182136	1.00	ppb	-0.01
50) Chlorobenzene-d5	17.38	117	141181	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	106271	1.10	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	110.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	61988	0.93	ppb	92
3) Freon 12	4.58	85	232454	0.93	ppb	99
4) Chloromethane	4.80	50	78970	1.00	ppb	95
5) Freon 114	4.80	85	233172	0.96	ppb	88
6) Vinyl Chloride	5.01	62	63996	0.90	ppb	99
7) Butane	5.13	43	117214	0.97	ppb	# 86
8) 1,3-butadiene	5.13	39	66094	0.96	ppb	87
9) Bromomethane	5.50	94	80637	0.94	ppb	100
10) Chloroethane	5.68	64	26105	0.94	ppb	# 87
11) Ethanol	5.79	45	19031	1.00	ppb	87
12) Acrolein	6.39	56	16304	0.92	ppb	93
13) Vinyl Bromide	6.04	106	72852	0.95	ppb	96
14) Freon 11	6.33	101	326346	0.96	ppb	99
15) Acetone	6.51	58	22923	0.87	ppb	# 76
16) Pentane	6.62	42	72966	0.97	ppb	96
17) Isopropyl alcohol	6.61	45	95066	0.98	ppb	# 81
18) 1,1-dichloroethene	7.12	96	60029	0.88	ppb	95
19) Freon 113	7.32	101	147515	0.93	ppb	94
20) t-Butyl alcohol	7.36	59	105761	1.06	ppb	# 65
21) Methylene chloride	7.59	84	59320	0.87	ppb	93
22) Allyl chloride	7.57	41	69221	0.92	ppb	97
23) Carbon disulfide	7.76	76	139943	0.92	ppb	94
24) trans-1,2-dichloroethene	8.55	61	74392	0.93	ppb	98
25) methyl tert-butyl ether	8.58	73	115508	0.90	ppb	64
26) 1,1-dichloroethane	8.98	63	126754	0.95	ppb	97
27) Vinyl acetate	8.97	43	110333	0.92	ppb	88
28) Methyl Ethyl Ketone	9.48	72	26722	0.98	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	72922	0.86	ppb	98
30) Hexane	9.53	57	76930	0.90	ppb	82
31) Ethyl acetate	10.08	43	125399	0.97	ppb	98
32) Chloroform	10.55	83	152119	0.93	ppb	100
33) Tetrahydrofuran	10.74	42	56933	0.99	ppb	82
34) 1,2-dichloroethane	11.65	62	94143	0.94	ppb	94
36) 1,1,1-trichloroethane	11.38	97	137658	0.83	ppb	97
37) Cyclohexane	12.07	56	69946	0.81	ppb	91
38) Carbon tetrachloride	12.01	117	146971	0.77	ppb	98
39) Benzene	11.98	78	171869	0.83	ppb	100
40) Methyl methacrylate	13.48	41	61116	0.82	ppb	100
41) 1,4-dioxane	13.53	88	38163	0.99	ppb	94
42) 2,2,4-trimethylpentane	12.81	57	236927	0.80	ppb	87
43) Heptane	13.14	43	82830	0.80	ppb	99
44) Trichloroethene	13.27	130	77347	0.77	ppb	96
45) 1,2-dichloropropane	13.38	63	73202	0.84	ppb	100

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

AP122104.D AD10_1UG.M

Wed Jan 02 11:53:54 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122104.D
 Acq On : 21 Dec 2018 12:17 pm
 Sample : ALCS1UG-122118
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:20 2018

Vial: 4
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

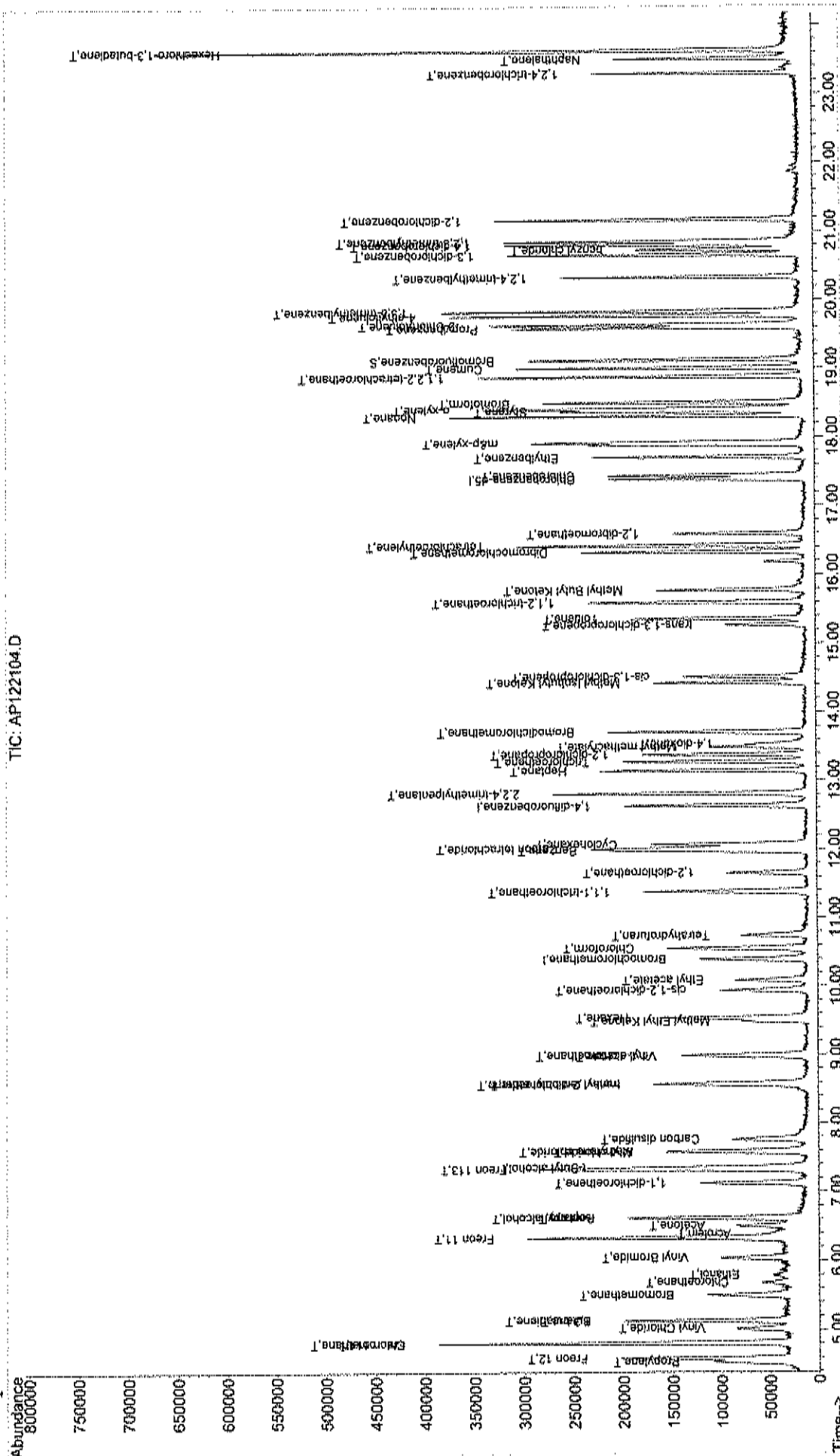
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.70	83	161801	1.00	ppb	99
47) cis-1,3-dichloropropene	14.51	75	84932	0.85	ppb	98
48) trans-1,3-dichloropropene	15.26	75	54738	0.78	ppb	92
49) 1,1,2-trichloroethane	15.59	97	82710	0.87	ppb	98
51) Toluene	15.35	92	86791	0.79	ppb	95
52) Methyl Isobutyl Ketone	14.42	43	128371	1.05	ppb	94
53) Dibromochloromethane	16.33	129	129509m	1.40	ppb	
54) Methyl Butyl Ketone	15.77	43	123834	1.03	ppb	90
55) 1,2-dibromoethane	16.59	107	109587	0.88	ppb	97
56) Tetrachloroethylene	16.42	164	72906	0.82	ppb	100
57) Chlorobenzene	17.44	112	135038	0.80	ppb	97
58) Ethylbenzene	17.70	91	174872	0.77	ppb	100
59) m&p-xylene	17.92	91	320637	1.67	ppb	96
60) Nonane	18.30	43	115852	0.82	ppb	94
61) Styrene	18.37	104	141487	0.86	ppb	96
62) Bromoform	18.50	173	146455	5.41	ppb	99
63) o-xylene	18.41	91	220743	0.91	ppb	99
64) Cumene	19.00	105	210820	0.83	ppb	98
66) 1,1,2,2-tetrachloroethane	18.87	83	198509	0.88	ppb	99
67) Propylbenzene	19.59	120	58970	0.80	ppb	94
68) 2-Chlorotoluene	19.64	126	75401	0.87	ppb	90
69) 4-ethyltoluene	19.77	105	248410	0.85	ppb	99
70) 1,3,5-trimethylbenzene	19.83	105	230748	0.90	ppb	98
71) 1,2,4-trimethylbenzene	20.32	105	161600	0.82	ppb	98
72) 1,3-dichlorobenzene	20.66	146	154405	0.83	ppb	97
73) benzyl chloride	20.73	91	149416	0.94	ppb	98
74) 1,4-dichlorobenzene	20.80	146	151935	0.82	ppb	97
75) 1,2,3-trimethylbenzene	20.85	105	195688	0.86	ppb	97
76) 1,2-dichlorobenzene	21.17	146	156828	0.88	ppb	98
77) 1,2,4-trichlorobenzene	23.30	180	70708	0.87	ppb	98
78) Naphthalene	23.51	128	169841	0.88	ppb	99
79) Hexachloro-1,3-butadiene	23.63	225	123472	0.96	ppb	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP122104.D AD10_1UG.M Wed Jan 02 11:53:54 2019 MSD1

Data File : C:\HPCHEM\1\DATA\AP122104.D
Acq On : 21 Dec 2018 12:17 pm
Sample : ALCS1UG-122118
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 24 8:08 2018

Vial: 4
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122204.D
 Acq On : 22 Dec 2018 11:13 am
 Sample : ALCS1UG-122218
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 08:54:11 2018

Vial: 50
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.39	128	43772	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.63	114	185144	1.00	ppb	0.00
50) Chlorobenzene-d5	17.38	117	144393	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	113220	1.15	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	115.00%

Target Compounds

						Qvalue
2) Propylene	4.53	41	64291	0.95	ppb	96
3) Freon 12	4.59	85	247750	0.98	ppb	99
4) Chloromethane	4.80	50	78046	0.98	ppb	99
5) Freon 114	4.80	85	242651	0.99	ppb	89
6) Vinyl Chloride	5.01	62	65871	0.91	ppb	100
7) Butane	5.13	43	126392	1.04	ppb	94
8) 1,3-butadiene	5.13	39	69231	1.00	ppb	84
9) Bromomethane	5.50	94	79950	0.92	ppb	98
10) Chloroethane	5.69	64	28751	1.02	ppb	97
11) Ethanol	5.78	45	18176	0.94	ppb	93
12) Acrolein	6.40	56	17121	0.95	ppb	# 79
13) Vinyl Bromide	6.04	106	73910	0.95	ppb	96
14) Freon 11	6.34	101	327393	0.95	ppb	99
15) Acetone	6.51	58	23165	0.86	ppb	# 78
16) Pentane	6.62	42	71243	0.94	ppb	98
17) Isopropyl alcohol	6.62	45	93061	0.95	ppb	# 79
18) 1,1-dichloroethene	7.12	96	60887	0.88	ppb	96
19) Freon 113	7.33	101	154432	0.96	ppb	93
20) t-Butyl alcohol	7.35	59	96064	0.95	ppb	# 63
21) Methylene chloride	7.59	84	61164	0.89	ppb	96
22) Allyl chloride	7.58	41	70669	0.93	ppb	97
23) Carbon disulfide	7.77	76	143776	0.94	ppb	98
24) trans-1,2-dichloroethene	8.56	61	75448	0.93	ppb	95
25) methyl tert-butyl ether	8.58	73	116621	0.89	ppb	63
26) 1,1-dichloroethane	8.99	63	129147	0.95	ppb	97
27) Vinyl acetate	8.96	43	107388	0.88	ppb	97
28) Methyl Ethyl Ketone	9.49	72	26013	0.94	ppb	# 100
29) cis-1,2-dichloroethene	9.94	61	74654	0.87	ppb	98
30) Hexane	9.54	57	82285	0.95	ppb	85
31) Ethyl acetate	10.08	43	124286	0.94	ppb	97
32) Chloroform	10.55	83	153838	0.93	ppb	100
33) Tetrahydrofuran	10.74	42	50184	0.86	ppb	97
34) 1,2-dichloroethane	11.66	62	90309	0.89	ppb	99
36) 1,1,1-trichloroethane	11.38	97	145586	0.86	ppb	98
37) Cyclohexane	12.07	56	72385	0.83	ppb	92
38) Carbon tetrachloride	12.01	117	151429	0.78	ppb	99
39) Benzene	11.98	78	175077	0.83	ppb	93
40) Methyl methacrylate	13.49	41	59884	0.79	ppb	96
41) 1,4-dioxane	13.54	88	34483	0.88	ppb	94
42) 2,2,4-trimethylpentane	12.81	57	245973	0.82	ppb	89
43) Heptane	13.15	43	83594	0.80	ppb	97
44) Trichloroethene	13.27	130	78313	0.77	ppb	98
45) 1,2-dichloropropane	13.38	63	76498	0.87	ppb	98

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122204.D
 Acq On : 22 Dec 2018 11:13 am
 Sample : ALCS1UG-122218
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 08:54:11 2018

Vial: 50
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

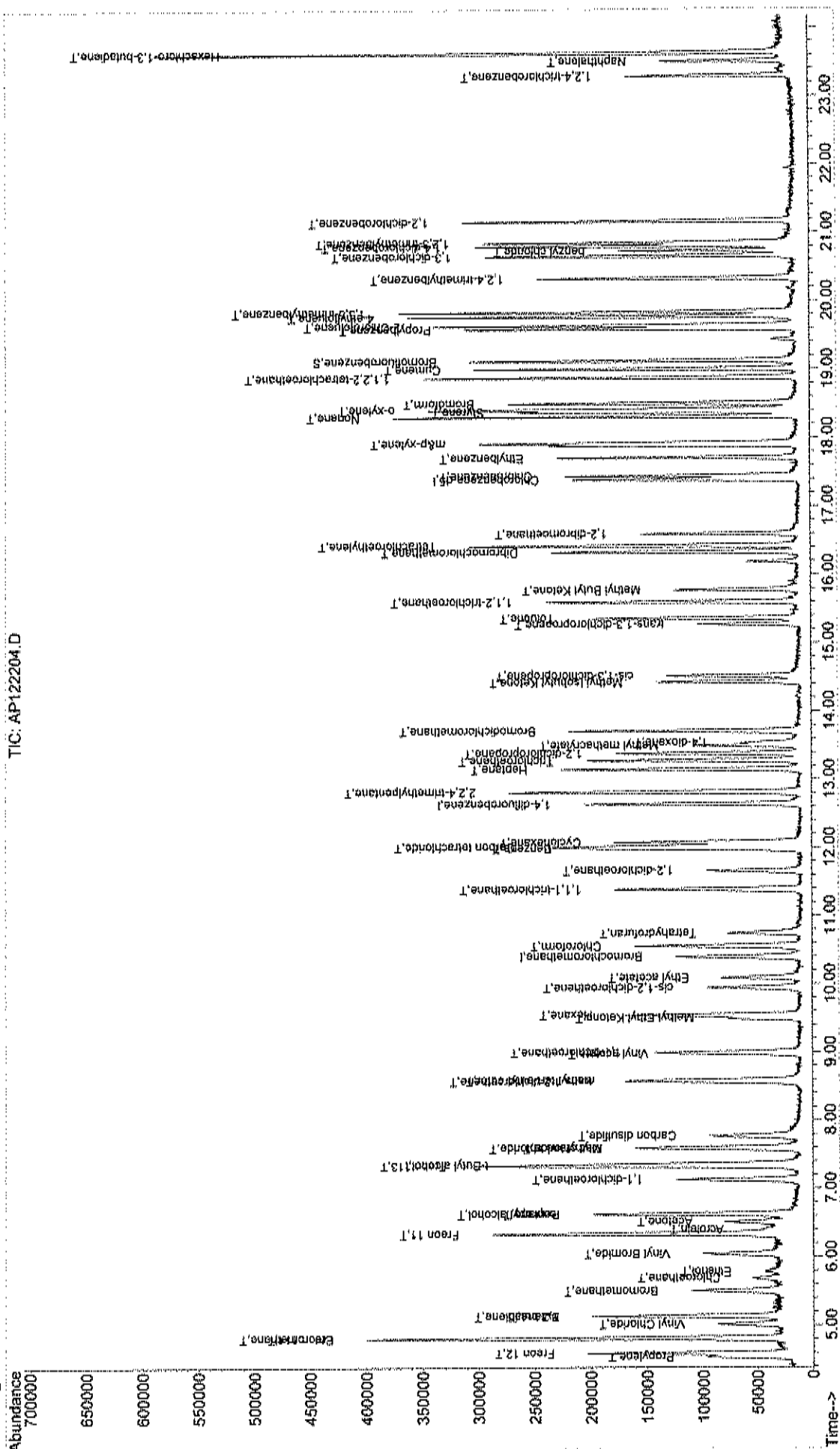
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	157687	0.96	ppb	97
47) cis-1,3-dichloropropene	14.51	75	85506	0.85	ppb	97
48) trans-1,3-dichloropropene	15.27	75	58404	0.82	ppb	97
49) 1,1,2-trichloroethane	15.59	97	84177	0.87	ppb	97
51) Toluene	15.35	92	89419	0.80	ppb	96
52) Methyl Isobutyl Ketone	14.42	43	110579	0.89	ppb	93
53) Dibromochloromethane	16.33	129	144802	1.54	ppb	98
54) Methyl Butyl Ketone	15.77	43	97620	0.80	ppb	88
55) 1,2-dibromoethane	16.59	107	108640	0.85	ppb	98
56) Tetrachloroethylene	16.42	164	76112	0.84	ppb	100
57) Chlorobenzene	17.44	112	135952	0.79	ppb	97
58) Ethylbenzene	17.70	91	176366	0.76	ppb	100
59) m&p-xylene	17.92	91	329629	1.68	ppb	98
60) Nonane	18.30	43	115991	0.80	ppb	94
61) Styrene	18.37	104	146662	0.87	ppb	95
62) Bromoform	18.50	173	141441	5.11	ppb	99
63) o-xylene	18.41	91	222588	0.90	ppb	98
64) Cumene	19.00	105	207761	0.80	ppb	99
66) 1,1,2,2-tetrachloroethane	18.87	83	197848	0.86	ppb	99
67) Propylbenzene	19.59	120	59787	0.80	ppb	92
68) 2-Chlorotoluene	19.63	126	75117	0.85	ppb	92
69) 4-ethyltoluene	19.77	105	248904	0.84	ppb	100
70) 1,3,5-trimethylbenzene	19.83	105	227343	0.86	ppb	100
71) 1,2,4-trimethylbenzene	20.32	105	153346	0.76	ppb	98
72) 1,3-dichlorobenzene	20.66	146	150755	0.80	ppb	98
73) benzyl chloride	20.73	91	134987	0.83	ppb	96
74) 1,4-dichlorobenzene	20.81	146	148839	0.78	ppb	98
75) 1,2,3-trimethylbenzene	20.85	105	182114	0.78	ppb	94
76) 1,2-dichlorobenzene	21.16	146	149884	0.82	ppb	98
77) 1,2,4-trichlorobenzene	23.29	180	67219m	0.81	ppb	
78) Naphthalene	23.51	128	134562m	0.68	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	112084	0.85	ppb	97

Data File : C:\HPCHEM\1\DATA\AP122204.D
Acq On : 22 Dec 2018 11:13 am
Sample : ALCS1UG-122218
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 24 8:11 2018

Vial: 50
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122305.D
 Acq On : 23 Dec 2018 1:16 pm
 Sample : ALCS1UG-122318
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 14:46:12 2018

Vial: 5
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	40666	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.63	114	174878	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	136917	1.00	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
65) Bromofluorobenzene	19.12	95	103655	1.11	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	111.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	68269	1.09	ppb	98
3) Freon 12	4.59	85	258294	1.10	ppb	99
4) Chloromethane	4.80	50	79550	1.07	ppb	95
5) Freon 114	4.80	85	253540	1.11	ppb	89
6) Vinyl Chloride	5.01	62	71121	1.06	ppb	98
7) Butane	5.13	43	122962	1.09	ppb	94
8) 1,3-butadiene	5.12	39	72619	1.12	ppb	82
9) Bromomethane	5.50	94	83677	1.03	ppb	99
10) Chloroethane	5.69	64	28433	1.09	ppb	96
11) Ethanol	5.78	45	16356	0.91	ppb	89
12) Acrolein	6.40	56	17115	1.03	ppb	87
13) Vinyl Bromide	6.04	106	73845	1.02	ppb	92
14) Freon 11	6.34	101	348267	1.08	ppb	98
15) Acetone	6.51	58	22816	0.91	ppb	# 81
16) Pentane	6.62	42	73246	1.04	ppb	98
17) Isopropyl alcohol	6.61	45	86957	0.95	ppb	# 63
18) 1,1-dichloroethene	7.12	96	64459	1.00	ppb	95
19) Freon 113	7.33	101	160115	1.07	ppb	94
20) t-Butyl alcohol	7.36	59	92279	0.98	ppb	# 66
21) Methylene chloride	7.60	84	65006	1.01	ppb	97
22) Allyl chloride	7.58	41	75161	1.06	ppb	96
23) Carbon disulfide	7.77	76	147652	1.04	ppb	91
24) trans-1,2-dichloroethene	8.55	61	78731	1.04	ppb	98
25) methyl tert-butyl ether	8.58	73	117759	0.97	ppb	61
26) 1,1-dichloroethane	9.00	63	133604	1.06	ppb	98
27) Vinyl acetate	8.97	43	114299	1.01	ppb	96
28) Methyl Ethyl Ketone	9.48	72	23157	0.90	ppb	# 100
29) cis-1,2-dichloroethene	9.93	61	78935	0.99	ppb	99
30) Hexane	9.54	57	79144	0.99	ppb	81
31) Ethyl acetate	10.08	43	128343	1.05	ppb	# 70
32) Chloroform	10.55	83	164276	1.06	ppb	100
33) Tetrahydrofuran	10.74	42	56619	1.04	ppb	92
34) 1,2-dichloroethane	11.66	62	98863	1.05	ppb	98
36) 1,1,1-trichloroethane	11.38	97	149832	0.94	ppb	95
37) Cyclohexane	12.07	56	74253	0.90	ppb	91
38) Carbon tetrachloride	12.01	117	159097	0.87	ppb	98
39) Benzene	11.98	78	185451	0.93	ppb	98
40) Methyl methacrylate	13.49	41	61509	0.86	ppb	99
41) 1,4-dioxane	13.53	88	33755	0.91	ppb	96
42) 2,2,4-trimethylpentane	12.81	57	256221	0.90	ppb	88
43) Heptane	13.15	43	86977	0.88	ppb	97
44) Trichloroethene	13.28	130	83601	0.87	ppb	98
45) 1,2-dichloropropane	13.38	63	80558	0.97	ppb	98

(#) = qualifier out of range (m) = manual integration
 AP122305.D AD10_1UG.M Wed Jan 02 11:54:24 2019

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AP122305.D
 Acq On : 23 Dec 2018 1:16 pm
 Sample : ALCS1UG-122318
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 14:46:12 2018

Vial: 5
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

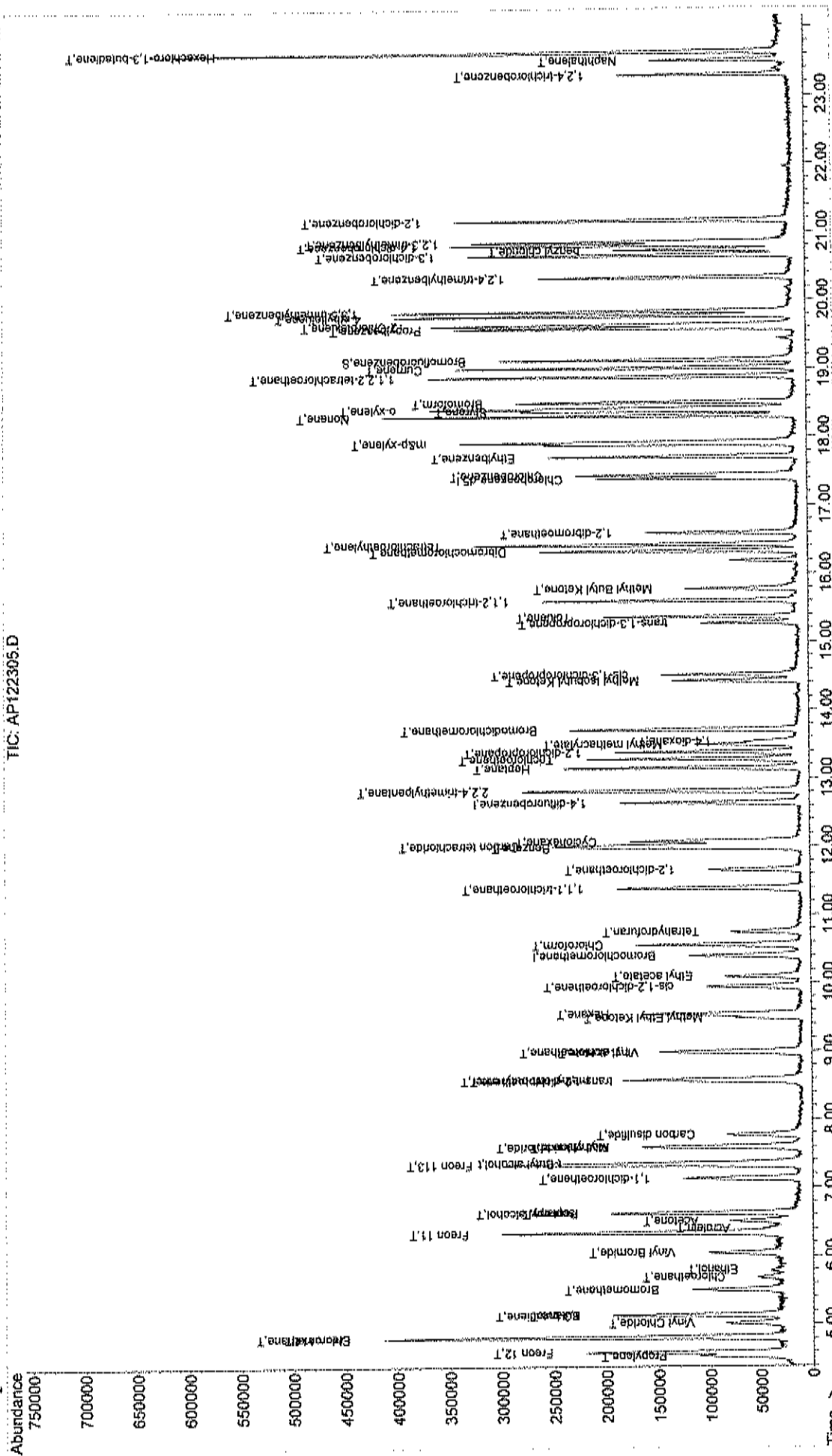
Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	171008	1.11	ppb	99
47) cis-1,3-dichloropropene	14.51	75	90362	0.95	ppb	99
48) trans-1,3-dichloropropene	15.27	75	60803	0.90	ppb	94
49) 1,1,2-trichloroethane	15.60	97	87535	0.96	ppb	96
51) Toluene	15.36	92	98741	0.93	ppb	98
52) Methyl Isobutyl Ketone	14.42	43	100911	0.85	ppb	94
53) Dibromochloromethane	16.33	129	153809	1.72	ppb	100
54) Methyl Butyl Ketone	15.77	43	91707	0.79	ppb	90
55) 1,2-dibromoethane	16.60	107	115753	0.96	ppb	97
56) Tetrachloroethylene	16.42	164	81186	0.94	ppb	99
57) Chlorobenzene	17.44	112	146308	0.90	ppb	96
58) Ethylbenzene	17.71	91	195700	0.89	ppb	100
59) m&p-xylene	17.92	91	365449	1.97	ppb	99
60) Nonane	18.31	43	130394	0.95	ppb	92
61) Styrene	18.38	104	158566	0.99	ppb	96
62) Bromoform	18.51	173	149671	5.70	ppb	99
63) o-xylene	18.41	91	241219	1.03	ppb	99
64) Cumene	19.01	105	225013	0.91	ppb	99
66) 1,1,2,2-tetrachloroethane	18.88	83	213439	0.98	ppb	99
67) Propylbenzene	19.59	120	62147	0.87	ppb	87
68) 2-Chlorotoluene	19.64	126	84513	1.01	ppb	# 89
69) 4-ethyltoluene	19.77	105	273123	0.97	ppb	100
70) 1,3,5-trimethylbenzene	19.84	105	241274	0.97	ppb	97
71) 1,2,4-trimethylbenzene	20.33	105	163984	0.85	ppb	97
72) 1,3-dichlorobenzene	20.66	146	166118	0.92	ppb	98
73) benzyl chloride	20.73	91	148370	0.96	ppb	99
74) 1,4-dichlorobenzene	20.80	146	169045	0.94	ppb	98
75) 1,2,3-trimethylbenzene	20.85	105	201933	0.91	ppb	95
76) 1,2-dichlorobenzene	21.17	146	165634	0.95	ppb	98
77) 1,2,4-trichlorobenzene	23.29	180	59798	0.76	ppb	100
78) Naphthalene	23.51	128	144874m	0.77	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	117127	0.94	ppb	96

Data File : C:\HPCHEM\1\DATA\AP122305.D
Acq On : 23 Dec 2018 1:16 pm
Sample : ALC51UG-122318
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 26 14:08 2018

Vial: 5
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration





Date: 02-Jan-19

ANALYTICAL QC SUMMARY REPORT

CLIENT: SOIL MECHANICS

Work Order: C1812057

Project: KEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122118	SampType: LCSD	TestCode: 1ugM3_TO15	Units: ppbV	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166946						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.8900	0.15	1	0	89.0	70	130	0.83	6.98	30	
1,1,2,2-Tetrachloroethane	0.9200	0.15	1	0	92.0	70	130	0.88	4.44	30	
1,1,2-Trichloroethane	0.9400	0.15	1	0	94.0	70	130	0.87	7.73	30	
1,1-Dichloroethane	0.9900	0.15	1	0	99.0	70	130	0.95	4.12	30	
1,1-Dichloroethene	0.8900	0.15	1	0	89.0	70	130	0.86	1.13	30	
1,2,4-Trichlorobenzene	0.7200	0.15	1	0	72.0	70	130	0.87	18.9	30	
1,2,4-Trimethylbenzene	0.8100	0.15	1	0	81.0	70	130	0.82	1.23	30	
1,2-Dibromoethane	0.8900	0.15	1	0	89.0	70	130	0.88	1.13	30	
1,2-Dichlorobenzene	0.8900	0.15	1	0	89.0	70	130	0.88	1.13	30	
1,2-Dichloroethane	0.9400	0.15	1	0	94.0	70	130	0.94	0	30	
1,2-Dichloropropane	0.9400	0.15	1	0	94.0	70	130	0.84	11.2	30	
1,3,5-Trimethylbenzene	0.9100	0.15	1	0	91.0	70	130	0.9	1.10	30	
1,3-butadiene	1.010	0.15	1	0	101	70	130	0.96	5.08	30	
1,3-Dichlorobenzene	0.8700	0.15	1	0	87.0	70	130	0.83	4.71	30	
1,4-Dichlorobenzene	0.8600	0.15	1	0	86.0	70	130	0.82	4.76	30	
1,4-Dioxane	0.9200	0.30	1	0	92.0	70	130	0.99	7.33	30	
2,2,4-trimethylpentane	0.8500	0.15	1	0	85.0	70	130	0.8	6.06	30	
4-ethyltoluene	0.8900	0.15	1	0	89.0	70	130	0.85	4.60	30	
Acetone	0.9000	0.30	1	0	90.0	70	130	0.87	3.39	30	
Allyl chloride	0.9000	0.15	1	0	90.0	70	130	0.92	2.20	30	
Benzene	0.8700	0.15	1	0	87.0	70	130	0.83	4.71	30	
Benzyl chloride	0.9200	0.15	1	0	92.0	70	130	0.94	2.15	30	
Bromodichloromethane	1.050	0.15	1	0	105	70	130	1	4.88	30	
Bromoform	5.410	0.15	1	0	541	70	130	5.41	0	30	S
Bromomethane	0.9500	0.15	1	0	95.0	70	130	0.94	1.06	30	

Qualifiers:	Results reported are not blank corrected	E	Estimated Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limit	ND	Not Detected at the Limit of Detection	R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits				

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122118		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14492	
Client ID: ZZZZZ		Batch ID: R14492		TestNo: TO-15		Analysis Date: 12/22/2018		SeqNo: 166946			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Carbon disulfide	0.9600	0.15	1	0	96.0	70	130	0.92	4.26	30	
Carbon tetrachloride	0.8200	0.15	1	0	82.0	70	130	0.77	6.29	30	
Chlorobenzene	0.8500	0.15	1	0	85.0	70	130	0.8	6.06	30	
Chloroethane	1.040	0.15	1	0	104	70	130	0.94	10.1	30	
Chloroform	0.9700	0.15	1	0	97.0	70	130	0.93	4.21	30	
Chloromethane	1.020	0.15	1	0	102	70	130	1	1.98	30	
cis-1,2-Dichloroethene	0.8800	0.15	1	0	88.0	70	130	0.86	2.30	30	
cis-1,3-Dichloropropene	0.8900	0.15	1	0	89.0	70	130	0.85	4.60	30	
Cyclohexane	0.8300	0.15	1	0	83.0	70	130	0.81	2.44	30	
Dibromochloromethane	1.630	0.15	1	0	163	70	130	1.4	15.2	30	S
Ethyl acetate	1.010	0.15	1	0	101	70	130	0.97	4.04	30	
Ethylbenzene	0.8600	0.15	1	0	80.0	70	130	0.77	3.82	30	
Freon 11	0.9600	0.15	1	0	98.0	70	130	0.96	2.06	30	
Freon 113	0.9900	0.15	1	0	99.0	70	130	0.93	6.25	30	
Freon 114	1.030	0.15	1	0	103	70	130	0.96	7.04	30	
Freon 12	1.010	0.15	1	0	101	70	130	0.93	8.25	30	
Heptane	0.8400	0.15	1	0	84.0	70	130	0.8	4.88	30	
Hexachloro-1,3-butadiene	0.9500	0.15	1	0	95.0	70	130	0.96	1.05	30	
Hexane	0.9600	0.15	1	0	96.0	70	130	0.9	6.45	30	
Isopropyl alcohol	0.9600	0.15	1	0	96.0	70	130	0.98	2.06	30	
m&p-Xylene	1.760	0.30	2	0	88.0	70	130	1.67	5.25	30	
Methyl Butyl Ketone	0.8100	0.30	1	0	81.0	70	130	1.03	23.9	30	
Methyl Ethyl Ketone	1.000	0.30	1	0	100	70	130	0.98	2.02	30	
Methyl Isobutyl Ketone	0.8700	0.30	1	0	87.0	70	130	1.05	18.8	30	
Methyl tert-butyl ether	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	
Methylene chloride	0.8800	0.15	1	0	88.0	70	130	0.87	1.14	30	
o-Xylene	0.9400	0.15	1	0	94.0	70	130	0.91	3.24	30	
Propylene	0.9800	0.15	1	0	99.0	70	130	0.93	6.25	30	
Styrene	0.9000	0.15	1	0	90.0	70	130	0.86	4.55	30	
Tetrachloroethylene	0.8900	0.15	1	0	89.0	70	130	0.82	8.19	30	
Tetrahydrofuran	0.9600	0.15	1	0	96.0	70	130	0.99	3.08	30	

Qualifiers: J Results reported are not blank corrected E Estimated Value above quantitation range H Holding times for preparation or analysis exceeded
 S Analyte detected below quantitation limit ND Not Detected at the Limit of Detection R RPD outside accepted recovery limits
 Spike Recovery outside accepted recovery limits

CLIENT: SOIL MECHANICS
Work Order: C1812057
Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122118	SampType: LCSD	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14492						
Client ID: ZZZZZ	Batch ID: R14492	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166946						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Toluene	0.8300	0.15	1	0	83.0	70	130	0.79	4.94	30	
trans-1,2-Dichloroethene	0.9800	0.15	1	0	98.0	70	130	0.93	5.24	30	
trans-1,3-Dichloropropene	0.8800	0.15	1	0	88.0	70	130	0.78	12.0	30	
Trichloroethene	0.8400	0.15	1	0	84.0	70	130	0.77	8.70	30	
Vinyl acetate	0.8900	0.15	1	0	89.0	70	130	0.92	3.31	30	
Vinyl Bromide	0.9700	0.15	1	0	97.0	70	130	0.95	2.08	30	
Vinyl chloride	0.9400	0.15	1	0	94.0	70	130	0.9	4.35	30	

Sample ID: ALCS1UGD-122218	SampType: LCSD	TestCode: 1ugM3_TO15	Units: ppbv	Prep Date:	RunNo: 14493						
Client ID: ZZZZZ	Batch ID: R14493	TestNo: TO-15		Analysis Date: 12/22/2018	SeqNo: 166964						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

1,1,1-Trichloroethane	0.8600	0.15	1	0	86.0	70	130	0.86	0	30	
1,1,2,2-Tetrachloroethane	0.8700	0.15	1	0	87.0	70	130	0.86	1.16	30	
1,1,2-Trichloroethane	0.8900	0.15	1	0	89.0	70	130	0.87	2.27	30	
1,1-Dichloroethane	0.8700	0.15	1	0	87.0	70	130	0.95	8.79	30	
1,1-Dichloroethene	0.8000	0.15	1	0	80.0	70	130	0.88	9.52	30	
1,2,4-Trichlorobenzene	0.7800	0.15	1	0	78.0	70	130	0.81	3.77	30	
1,2,4-Trimethylbenzene	0.7400	0.15	1	0	74.0	70	130	0.76	2.67	30	
1,2-Dibromoethane	0.8600	0.15	1	0	86.0	70	130	0.85	1.17	30	
1,2-Dichlorobenzene	0.8300	0.15	1	0	83.0	70	130	0.82	1.21	30	
1,2-Dichloroethane	0.8800	0.15	1	0	88.0	70	130	0.89	1.13	30	
1,2-Dichloropropane	0.8900	0.15	1	0	89.0	70	130	0.87	2.27	30	
1,3,5-Trimethylbenzene	0.9100	0.15	1	0	91.0	70	130	0.86	5.65	30	
1,3-butadiene	0.9200	0.15	1	0	92.0	70	130	1	8.33	30	
1,3-Dichlorobenzene	0.8100	0.15	1	0	81.0	70	130	0.8	1.24	30	
1,4-Dichlorobenzene	0.7900	0.15	1	0	79.0	70	130	0.78	1.27	30	
1,4-Dioxane	0.7100	0.30	1	0	71.0	70	130	0.88	21.4	30	
2,2,4-trimethylpentane	0.7800	0.15	1	0	78.0	70	130	0.82	5.00	30	
4-ethyltoluene	0.8700	0.15	1	0	87.0	70	130	0.84	3.51	30	

Qualifiers: Results reported are not blank corrected
J Analyte detected below quantitation limit
S Spike Recovery outside accepted recovery limits
E Estimated Value above quantitation range
ND Not Detected at the Limit of Detection
H Holding times for preparation or analysis exceeded
R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122218		SampleType: LCSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14493	
Client ID: ZZZZZ		Batch ID: R14493		TestNo: TO-15		Analysis Date: 12/22/2018		SeqNo: 166964			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	0.8900	0.30	1	0	80.0	70	130	0.86	7.23	30	
Allyl chloride	0.8100	0.15	1	0	81.0	70	130	0.93	13.8	30	
Benzene	0.8200	0.15	1	0	82.0	70	130	0.83	1.21	30	
Benzyl chloride	0.8100	0.15	1	0	81.0	70	130	0.83	2.44	30	
Bromodichloromethane	0.9900	0.15	1	0	99.0	70	130	0.96	3.08	30	
Bromoform	5.010	0.15	1	0	501	70	130	5.11	1.98	30	S
Bromomethane	0.8200	0.15	1	0	82.0	70	130	0.92	11.5	30	
Carbon disulfide	0.8400	0.15	1	0	84.0	70	130	0.94	11.2	30	
Carbon tetrachloride	0.7800	0.15	1	0	78.0	70	130	0.78	0	30	
Chlorobenzene	0.8000	0.15	1	0	80.0	70	130	0.79	1.26	30	
Chloroethane	0.9300	0.15	1	0	93.0	70	130	1.02	9.23	30	
Chloroform	0.9000	0.15	1	0	90.0	70	130	0.93	3.28	30	
Chloromethane	0.8900	0.15	1	0	89.0	70	130	0.98	9.63	30	
cis-1,2-Dichloroethene	0.7800	0.15	1	0	78.0	70	130	0.87	10.9	30	
cis-1,3-Dichloropropene	0.8400	0.15	1	0	84.0	70	130	0.85	1.18	30	
Cyclohexane	0.7900	0.15	1	0	79.0	70	130	0.83	4.94	30	
Dibromochloromethane	1.540	0.15	1	0	154	70	130	1.54	0	30	S
Ethyl acetate	0.8700	0.15	1	0	87.0	70	130	0.94	7.73	30	
Ethylbenzene	0.7600	0.15	1	0	76.0	70	130	0.76	0	30	
Freon 11	0.9100	0.15	1	0	91.0	70	130	0.95	4.30	30	
Freon 113	0.8800	0.15	1	0	88.0	70	130	0.96	8.70	30	
Freon 114	0.8900	0.15	1	0	89.0	70	130	0.99	10.6	30	
Freon 12	0.8800	0.15	1	0	88.0	70	130	0.98	10.8	30	
Heptane	0.7700	0.15	1	0	77.0	70	130	0.8	3.82	30	
Hexachloro-1,3-butadiene	0.8600	0.15	1	0	86.0	70	130	0.85	1.17	30	
Hexane	0.8200	0.15	1	0	82.0	70	130	0.95	14.7	30	
Isopropyl alcohol	0.7700	0.15	1	0	77.0	70	130	0.95	20.9	30	
m&p-Xylene	1.660	0.30	2	0	83.0	70	130	1.68	1.20	30	
Methyl Butyl Ketone	0.6400	0.30	1	0	64.0	70	130	0.8	22.2	30	S
Methyl Ethyl Ketone	0.8300	0.30	1	0	83.0	70	130	0.94	12.4	30	
Methyl Isobutyl Ketone	0.7500	0.30	1	0	75.0	70	130	0.89	17.1	30	

Qualifiers: - Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122218		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14493	
Client ID: ZZZZZ		Batch ID: R14493		TestNo: TO-15				Analysis Date: 12/22/2018		SeqNo: 166964	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Methyl tert-butyl ether	0.7900	0.15	1	0	79.0	70	130	0.89	11.9	30	
Methylene chloride	0.8400	0.15	1	0	84.0	70	130	0.89	5.78	30	
o-Xylene	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	
Propylene	0.8100	0.15	1	0	81.0	70	130	0.95	15.9	30	
Styrene	0.8800	0.15	1	0	88.0	70	130	0.87	1.14	30	
Tetrachloroethylene	0.8400	0.15	1	0	84.0	70	130	0.84	0	30	
Tetrahydrofuran	0.7900	0.15	1	0	79.0	70	130	0.86	8.48	30	
Toluene	0.7900	0.15	1	0	79.0	70	130	0.8	1.26	30	
trans-1,2-Dichloroethene	0.8500	0.15	1	0	85.0	70	130	0.93	8.99	30	
trans-1,3-Dichloropropene	0.8000	0.15	1	0	80.0	70	130	0.82	2.47	30	
Trichloroethene	0.8000	0.15	1	0	80.0	70	130	0.77	3.82	30	
Vinyl acetate	0.7800	0.15	1	0	78.0	70	130	0.88	12.0	30	
Vinyl Bromide	0.8300	0.15	1	0	83.0	70	130	0.95	13.5	30	
Vinyl chloride	0.8100	0.15	1	0	81.0	70	130	0.91	11.6	30	

Sample ID: ALCS1UGD-122318		SampType: LCSD	TestCode: 1ugM3_TO15		Units: ppbV	Prep Date:		RunNo: 14495			
Client ID: ZZZZZ		Batch ID: R14495	TestNo: TO-15			Analysis Date: 12/24/2018		SeqNo: 167008			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1-Trichloroethane	0.9200	0.15	1	0	92.0	70	130	0.94	2.15	30	
1,1,2,2-Tetrachloroethane	1.000	0.15	1	0	100	70	130	0.98	2.02	30	
1,1,2-Trichloroethane	1.000	0.15	1	0	100	70	130	0.96	4.08	30	
1,1-Dichloroethane	1.000	0.15	1	0	100	70	130	1.06	5.83	30	
1,1-Dichloroethene	0.8800	0.15	1	0	88.0	70	130	1	12.8	30	
1,2,4-Trichlorobenzene	0.8500	0.15	1	0	85.0	70	130	0.76	11.2	30	
1,2,4-Trimethylbenzene	0.8700	0.15	1	0	87.0	70	130	0.85	2.33	30	
1,2-Dibromoethane	0.9500	0.15	1	0	95.0	70	130	0.96	1.05	30	
1,2-Dichlorobenzene	0.9300	0.15	1	0	93.0	70	130	0.95	2.13	30	
1,2-Dichloroethane	0.9900	0.15	1	0	99.0	70	130	1.05	5.88	30	
1,2-Dichloropropane	0.9700	0.15	1	0	97.0	70	130	0.97	0	30	

Qualifiers: J Results reported are not blank corrected E Estimated Value above quantitation range H Holding times for preparation or analysis exceeded
 S Analyte detected below quantitation limit ND Not Detected at the Limit of Detection R RPD outside accepted recovery limits
 Spike Recovery outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCS1UGD-122318		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbV		Prep Date:		RunNo: 14495	
Client ID: ZZZZ		Batch ID: R14495		TestNo: TO-15				Analysis Date: 12/24/2018		SeqNo: 167008	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,3,5-Trimethylbenzene	1.000	0.15	1	0	100	70	130	0.97	3.05	30	
1,3-butadiene	1.010	0.15	1	0	101	70	130	1.12	10.3	30	
1,3-Dichlorobenzene	0.9200	0.15	1	0	92.0	70	130	0.92	0	30	
1,4-Dichlorobenzene	0.9300	0.15	1	0	93.0	70	130	0.94	1.07	30	
1,4-Dioxane	0.9400	0.30	1	0	94.0	70	130	0.91	3.24	30	
2,2,4-Trimethylpentane	0.9300	0.15	1	0	93.0	70	130	0.9	3.28	30	
4-ethyltoluene	0.9900	0.15	1	0	99.0	70	130	0.97	2.04	30	
Acetone	0.9400	0.30	1	0	94.0	70	130	0.91	3.24	30	
Allyl chloride	0.8900	0.15	1	0	89.0	70	130	1.06	17.4	30	
Benzene	0.8900	0.15	1	0	89.0	70	130	0.93	4.40	30	
Benzyl chloride	0.9300	0.15	1	0	93.0	70	130	0.96	3.17	30	
Bromodichloromethane	1.110	0.15	1	0	111	70	130	1.11	0	30	
Bromoform	5.540	0.15	1	0	554	70	130	5.7	2.85	30	S
Bromomethane	0.8900	0.15	1	0	89.0	70	130	1.03	14.6	30	
Carbon disulfide	0.9800	0.15	1	0	98.0	70	130	1.04	5.94	30	
Carbon tetrachloride	0.8700	0.15	1	0	87.0	70	130	0.87	0	30	
Chlorobenzene	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	
Chloroethane	0.9900	0.15	1	0	99.0	70	130	1.09	9.62	30	
Chloroform	1.020	0.15	1	0	102	70	130	1.06	3.85	30	
Chloromethane	1.000	0.15	1	0	100	70	130	1.07	6.76	30	
cis-1,2-Dichloroethene	0.9300	0.15	1	0	93.0	70	130	0.99	6.25	30	
cis-1,3-Dichloropropene	0.9100	0.15	1	0	91.0	70	130	0.95	4.30	30	
Cyclohexane	0.9200	0.15	1	0	92.0	70	130	0.9	2.20	30	
Dibromochloromethane	1.700	0.15	1	0	170	70	130	1.72	1.17	30	S
Ethyl acetate	1.020	0.15	1	0	102	70	130	1.05	2.90	30	
Ethylbenzene	0.8300	0.15	1	0	83.0	70	130	0.89	6.98	30	
Freon 11	1.030	0.15	1	0	103	70	130	1.08	4.74	30	
Freon 113	1.020	0.15	1	0	102	70	130	1.07	4.78	30	
Freon 114	1.000	0.15	1	0	100	70	130	1.11	10.4	30	
Freon 12	0.9900	0.15	1	0	99.0	70	130	1.1	10.5	30	
Heptane	0.8700	0.15	1	0	87.0	70	130	0.88	1.14	30	

Qualifiers: J Results reported are not blank corrected
 S Analyte detected below quantitation limit
 R Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

CLIENT: SOIL MECHANICS
 Work Order: C1812057
 Project: IKEA-RED HOOK

TestCode: 1ugM3_TO15

Sample ID: ALCSTUGD-122318		SampType: LCSD		TestCode: 1ugM3_TO15		Units: ppbv		Prep Date:		RunNo: 14495	
Client ID: ZZZZZ		Batch ID: R14495		TestNo: TO-15		Analysis Date: 12/24/2018		SeqNo: 167008			
Analyte	Result	PQL	SPK value	SPK RefVal	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexachloro-1,3-butadiene	0.9700	0.15	1	0	97.0	70	130	0.94	3.14	30	
Hexane	0.9700	0.15	1	0	97.0	70	130	0.99	2.04	30	
Isopropyl alcohol	0.8600	0.15	1	0	86.0	70	130	0.95	9.94	30	
m&p-Xylene	1.990	0.30	2	0	99.5	70	130	1.97	1.01	30	
Methyl Butyl Ketone	0.7200	0.30	1	0	72.0	70	130	0.79	9.27	30	
Methyl Ethyl Ketone	0.9800	0.30	1	0	98.0	70	130	0.9	8.51	30	
Methyl Isobutyl Ketone	0.8200	0.30	1	0	82.0	70	130	0.85	3.59	30	
Methyl tert-butyl ether	0.9100	0.15	1	0	91.0	70	130	0.97	6.38	30	
Methylene chloride	0.9200	0.15	1	0	92.0	70	130	1.01	9.33	30	
o-Xylene	1.050	0.15	1	0	105	70	130	1.03	1.92	30	
Propylene	0.9200	0.15	1	0	92.0	70	130	1.09	16.9	30	
Styrene	1.020	0.15	1	0	102	70	130	0.99	2.99	30	
Tetrachloroethylene	0.9300	0.15	1	0	93.0	70	130	0.94	1.07	30	
Tetrahydrofuran	0.9900	0.15	1	0	99.0	70	130	1.04	4.93	30	
Toluene	0.8900	0.15	1	0	89.0	70	130	0.93	4.40	30	
trans-1,2-Dichloroethene	0.9700	0.15	1	0	97.0	70	130	1.04	6.97	30	
trans-1,3-Dichloropropene	0.9000	0.15	1	0	90.0	70	130	0.9	0	30	
Trichloroethene	0.8800	0.15	1	0	88.0	70	130	0.87	1.14	30	
Vinyl acetate	0.8800	0.15	1	0	88.0	70	130	1.01	13.8	30	
Vinyl Bromide	0.9600	0.15	1	0	96.0	70	130	1.02	6.06	30	
Vinyl chloride	0.9100	0.15	1	0	91.0	70	130	1.06	15.2	30	

Qualifiers: Results reported are not blank corrected
 J Analyte detected below quantitation limit
 S Spike Recovery outside accepted recovery limits
 E Estimated Value above quantitation range
 ND Not Detected at the Limit of Detection
 H Holding times for preparation or analysis exceeded
 R RPD outside accepted recovery limits

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122323.D
 Acq On : 24 Dec 2018 12:43 am
 Sample : ALCS1UGD-122318
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 26 14:09:42 2018

Vial: 21
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	38541	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	158924	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	127920	1.00	ppb	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
65) Bromofluorobenzene	19.13	95	97042	1.11	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	111.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	54526	0.92	ppb	97
3) Freon 12	4.59	85	220574	0.99	ppb	99
4) Chloromethane	4.81	50	70538	1.00	ppb	88
5) Freon 114	4.81	85	216602	1.00	ppb	87
6) Vinyl Chloride	5.02	62	57883	0.91	ppb	98
7) Butane	5.13	43	102757	0.96	ppb	92
8) 1,3-butadiene	5.13	39	61729	1.01	ppb	83
9) Bromomethane	5.51	94	68341	0.89	ppb	95
10) Chloroethane	5.68	64	24528	0.99	ppb	# 59
11) Ethanol	5.79	45	15388	0.90	ppb	76
12) Acrolein	6.41	56	13794	0.87	ppb	91
13) Vinyl Bromide	6.05	106	66046	0.96	ppb	96
14) Freon 11	6.34	101	314311	1.03	ppb	99
15) Acetone	6.50	58	22105	0.94	ppb	86
16) Pentane	6.63	42	63397	0.95	ppb	95
17) Isopropyl alcohol	6.62	45	74312	0.86	ppb	# 69
18) 1,1-dichloroethene	7.14	96	53828	0.88	ppb	91
19) Freon 113	7.33	101	144458	1.02	ppb	93
20) t-Butyl alcohol	7.36	59	78282	0.88	ppb	# 59
21) Methylene chloride	7.60	84	55790	0.92	ppb	97
22) Allyl chloride	7.59	41	59872	0.89	ppb	91
23) Carbon disulfide	7.78	76	131962	0.98	ppb	93
24) trans-1,2-dichloroethene	8.56	61	69547	0.97	ppb	97
25) methyl tert-butyl ether	8.58	73	104865	0.91	ppb	59
26) 1,1-dichloroethane	9.00	63	118676	1.00	ppb	99
27) Vinyl acetate	8.98	43	94415	0.88	ppb	96
28) Methyl Ethyl Ketone	9.50	72	23756	0.98	ppb	# 100
29) cis-1,2-dichloroethene	9.95	61	69923	0.93	ppb	97
30) Hexane	9.55	57	73626	0.97	ppb	83
31) Ethyl acetate	10.09	43	118777	1.02	ppb	97
32) Chloroform	10.56	83	149155	1.02	ppb	98
33) Tetrahydrofuran	10.76	42	50656	0.99	ppb	91
34) 1,2-dichloroethane	11.66	62	87842	0.99	ppb	97
36) 1,1,1-trichloroethane	11.39	97	133298	0.92	ppb	98
37) Cyclohexane	12.08	56	68902	0.92	ppb	90
38) Carbon tetrachloride	12.02	117	144358	0.87	ppb	99
39) Benzene	11.98	78	160902	0.89	ppb	99
40) Methyl methacrylate	13.49	41	57274	0.88	ppb	98
41) 1,4-dioxane	13.54	88	31624	0.94	ppb	98
42) 2,2,4-trimethylpentane	12.81	57	239775	0.93	ppb	89
43) Heptane	13.15	43	78456	0.87	ppb	97
44) Trichloroethene	13.28	130	76770	0.88	ppb	99
45) 1,2-dichloropropane	13.38	63	73452	0.97	ppb	99

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

AP122323.D AD10_1UG.M

Wed Jan 02 11:54:31 2019

MSD1

Page 1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122323.D
 Acq On : 24 Dec 2018 12:43 am
 Sample : ALCS1UGD-122318
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 26 14:09:42 2018

Vial: 21
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

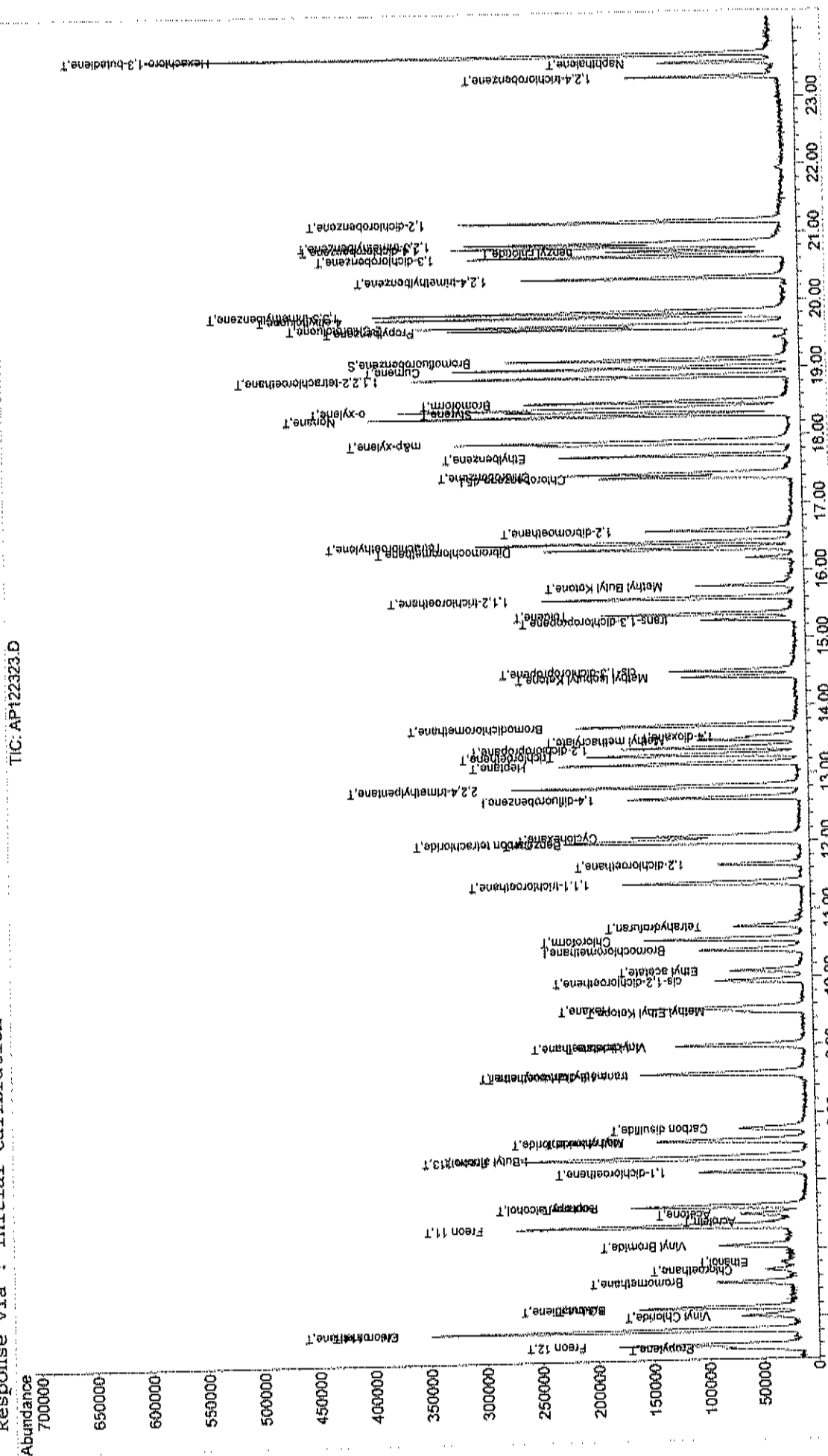
Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	155657	1.11	ppb	97
47) cis-1,3-dichloropropene	14.52	75	79257	0.91	ppb	97
48) trans-1,3-dichloropropene	15.27	75	55039	0.90	ppb	99
49) 1,1,2-trichloroethane	15.60	97	83020	1.00	ppb	99
51) Toluene	15.36	92	87723	0.89	ppb	97
52) Methyl Isobutyl Ketone	14.42	43	90947	0.82	ppb	91
53) Dibromochloromethane	16.33	129	142184	1.70	ppb	98
54) Methyl Butyl Ketone	15.78	43	78292m (m)	0.72	ppb	
55) 1,2-dibromoethane	16.60	107	106841	0.95	ppb	98
56) Tetrachloroethylene	16.42	164	74795	0.93	ppb	100
57) Chlorobenzene	17.44	112	137774	0.90	ppb	94
58) Ethylbenzene	17.71	91	170063	0.83	ppb	98
59) m&p-xylene	17.92	91	344762m (m)	1.99	ppb	
60) Nonane	18.31	43	123035	0.96	ppb	92
61) Styrene	18.38	104	152760	1.02	ppb	90
62) Bromoform	18.50	173	135835	5.54	ppb	99
63) o-xylene	18.41	91	229434	1.05	ppb	99
64) Cumene	19.01	105	209229	0.91	ppb	97
66) 1,1,2,2-tetrachloroethane	18.88	83	203556	1.00	ppb	100
67) Propylbenzene	19.59	120	58200	0.87	ppb	84
68) 2-Chlorotoluene	19.64	126	80620	1.03	ppb	# 82
69) 4-ethyltoluene	19.77	105	261304	0.99	ppb	98
70) 1,3,5-trimethylbenzene	19.84	105	234365	1.00	ppb	96
71) 1,2,4-trimethylbenzene	20.33	105	155608	0.87	ppb	94
72) 1,3-dichlorobenzene	20.66	146	154457	0.92	ppb	97
73) benzyl chloride	20.74	91	134467	0.93	ppb	98
74) 1,4-dichlorobenzene	20.81	146	155634	0.93	ppb	98
75) 1,2,3-trimethylbenzene	20.85	105	192126	0.93	ppb	96
76) 1,2-dichlorobenzene	21.17	146	150999	0.93	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	62757m (m)	0.85	ppb	
78) Naphthalene	23.51	128	122709m (m)	0.70	ppb	
79) Hexachloro-1,3-butadiene	23.64	225	113326	0.97	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP122323.D AD10_1UG.M Wed Jan 02 11:54:31 2019 MSD1

Data File : C:\HPCHEM\1\DATA\AP122323.D
 Acq On : 24 Dec 2018 12:43 am
 Sample : ALCS1UGD-122318
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 26 14:10 2018
 Vial: 21
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00
 Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Jan 02 11:45:08 2019
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA\AP122223.D
 Acq On : 22 Dec 2018 11:37 pm
 Sample : ALCS1UGD-122218
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 08:54:30 2018

Vial: 69
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	39545	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	159583	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	126472	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	96641	1.12	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	112.00%

Target Compounds

	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.54	41	49267	0.81	ppb	98
3) Freon 12	4.59	85	201596	0.88	ppb	99
4) Chloromethane	4.81	50	64521	0.89	ppb	91
5) Freon 114	4.82	85	196621	0.89	ppb	88
6) Vinyl Chloride	5.03	62	52841	0.81	ppb	99
7) Butane	5.14	43	93925	0.85	ppb	89
8) 1,3-butadiene	5.13	39	58041	0.92	ppb	79
9) Bromomethane	5.52	94	64438	0.82	ppb	100
10) Chloroethane	5.69	64	23708	0.93	ppb	97
11) Ethanol	5.80	45	15736m esp	0.90	ppb	
12) Acrolein	6.40	56	12918	0.80	ppb	85
13) Vinyl Bromide	6.05	106	58539	0.83	ppb	97
14) Freon 11	6.34	101	283791	0.91	ppb	97
15) Acetone	6.51	58	19407	0.80	ppb	# 85
16) Pentane	6.63	42	57045	0.83	ppb	98
17) Isopropyl alcohol	6.63	45	68126	0.77	ppb	# 67
18) 1,1-dichloroethene	7.13	96	50077	0.80	ppb	94
19) Freon 113	7.34	101	127860	0.88	ppb	95
20) t-Butyl alcohol	7.38	59	68664	0.75	ppb	# 67
21) Methylene chloride	7.61	84	52164	0.84	ppb	99
22) Allyl chloride	7.60	41	55598	0.81	ppb	97
23) Carbon disulfide	7.78	76	116521	0.84	ppb	100
24) trans-1,2-dichloroethene	8.57	61	62374	0.85	ppb	97
25) methyl tert-butyl ether	8.59	73	93598	0.79	ppb	66
26) 1,1-dichloroethane	9.00	63	106851	0.87	ppb	97
27) Vinyl acetate	8.99	43	86320	0.78	ppb	93
28) Methyl Ethyl Ketone	9.50	72	20696	0.83	ppb	# 100
29) cis-1,2-dichloroethene	9.95	61	60546	0.78	ppb	96
30) Hexane	9.56	57	63824	0.82	ppb	# 78
31) Ethyl acetate	10.10	43	103652	0.87	ppb	96
32) Chloroform	10.56	83	135006	0.90	ppb	100
33) Tetrahydrofuran	10.76	42	41738	0.79	ppb	97
34) 1,2-dichloroethane	11.67	62	80635	0.88	ppb	97
36) 1,1,1-trichloroethane	11.40	97	125028	0.86	ppb	98
37) Cyclohexane	12.08	56	59389	0.79	ppb	86
38) Carbon tetrachloride	12.02	117	131013	0.78	ppb	100
39) Benzene	11.99	78	148458	0.82	ppb	99
40) Methyl methacrylate	13.51	41	47003	0.72	ppb	91
41) 1,4-dioxane	13.55	88	24050	0.71	ppb	94
42) 2,2,4-trimethylpentane	12.82	57	202871	0.78	ppb	84
43) Heptane	13.16	43	69148	0.77	ppb	96
44) Trichloroethene	13.29	130	69983	0.80	ppb	97
45) 1,2-dichloropropane	13.39	63	67378	0.89	ppb	99

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

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122223.D
 Acq On : 22 Dec 2018 11:37 pm
 Sample : ALCS1UGD-122218
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 23 08:54:30 2018

Vial: 69
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.72	83	139989	0.99	ppb	98
47) cis-1,3-dichloropropene	14.52	75	72831	0.84	ppb	99
48) trans-1,3-dichloropropene	15.27	75	49070	0.80	ppb	99
49) 1,1,2-trichloroethane	15.60	97	74093	0.89	ppb	98
51) Toluene	15.37	92	77766	0.79	ppb	97
52) Methyl Isobutyl Ketone	14.43	43	81770m	0.75	ppb	
53) Dibromochloromethane	16.34	129	127200	1.54	ppb	99
54) Methyl Butyl Ketone	15.78	43	69054m	0.64	ppb	
55) 1,2-dibromoethane	16.60	107	96207	0.86	ppb	98
56) Tetrachloroethylene	16.43	164	66731	0.84	ppb	97
57) Chlorobenzene	17.45	112	120927	0.80	ppb	96
58) Ethylbenzene	17.72	91	153084	0.76	ppb	99
59) m&p-xylene	17.93	91	285494	1.66	ppb	99
60) Nonane	18.31	43	103089	0.81	ppb	92
61) Styrene	18.39	104	129623	0.88	ppb	95
62) Bromoform	18.51	173	121518	5.01	ppb	100
63) o-xylene	18.42	91	195206	0.90	ppb	99
64) Cumene	19.01	105	181245	0.79	ppb	98
66) 1,1,2,2-tetrachloroethane	18.88	83	176167	0.87	ppb	99
67) Propylbenzene	19.60	120	61489	0.93	ppb	90
68) 2-Chlorotoluene	19.64	126	70047	0.90	ppb	92
69) 4-ethyltoluene	19.78	105	226183	0.87	ppb	100
70) 1,3,5-trimethylbenzene	19.84	105	209123	0.91	ppb	100
71) 1,2,4-trimethylbenzene	20.34	105	131421	0.74	ppb	98
72) 1,3-dichlorobenzene	20.66	146	134762	0.81	ppb	99
73) benzyl chloride	20.74	91	115940	0.81	ppb	97
74) 1,4-dichlorobenzene	20.81	146	130679	0.79	ppb	97
75) 1,2,3-trimethylbenzene	20.86	105	161970	0.79	ppb	98
76) 1,2-dichlorobenzene	21.18	146	132970	0.83	ppb	99
77) 1,2,4-trichlorobenzene	23.30	180	56578m	0.78	ppb	
78) Naphthalene	23.51	128	104546m	0.60	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	98894	0.86	ppb	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed
 AP122223.D AD10_1UG.M Wed Jan 02 11:54:20 2019 MSD1

Quantitation Report (QT Reviewed)

Data File : C:\HPCHEM\1\DATA\AP122223.D
Acq On : 22 Dec 2018 11:37 pm
Sample : ALCS1UGD-122218
Misc : AD10_1UG
MMS Integration Params: RTEINT.P
Quant Time: Dec 24 8:12 2018

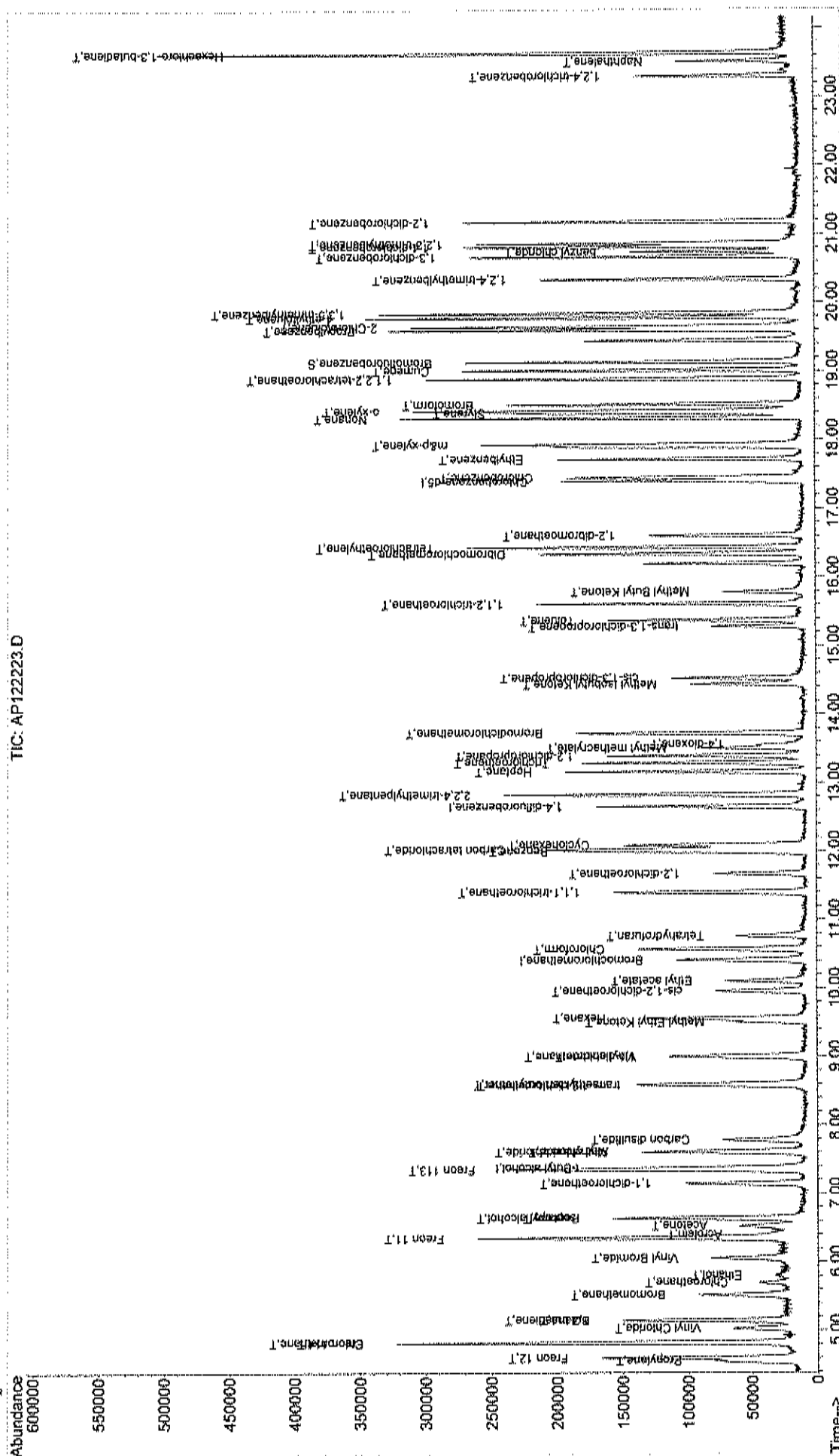
Vial: 69
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AD10 IUG.RES

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Method      : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title       : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration

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Data File : C:\HPCHEM\1\DATA\AP122129.D
 Acq On : 22 Dec 2018 6:04 am
 Sample : ALCS1UGD-122118
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:45 2018

Vial: 13
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.40	128	39569	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.64	114	162023	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	129410	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.12	95	95822	1.08	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	108.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Propylene	4.53	41	60537	0.99	ppb	96
3) Freon 12	4.59	85	230996	1.01	ppb	100
4) Chloromethane	4.81	50	73698	1.02	ppb	79
5) Freon 114	4.81	85	228415	1.03	ppb	88
6) Vinyl Chloride	5.02	62	61587	0.94	ppb	100
7) Butane	5.14	43	114545	1.04	ppb	91
8) 1,3-butadiene	5.14	39	63582	1.01	ppb	86
9) Bromomethane	5.51	94	75378	0.95	ppb	100
10) Chloroethane	5.69	64	26477	1.04	ppb	# 68
11) Ethanol	5.79	45	17017	0.97	ppb	84
12) Acrolein	6.40	56	15351	0.95	ppb	# 77
13) Vinyl Bromide	6.05	106	68264	0.97	ppb	94
14) Freon 11	6.34	101	307189	0.98	ppb	99
15) Acetone	6.51	58	21842	0.90	ppb	# 79
16) Pentane	6.63	42	67505	0.98	ppb	98
17) Isopropyl alcohol	6.62	45	85673	0.96	ppb	# 74
18) 1,1-dichloroethene	7.14	96	55490	0.89	ppb	96
19) Freon 113	7.34	101	143666	0.99	ppb	94
20) t-Butyl alcohol	7.37	59	89640	0.98	ppb	# 64
21) Methylene chloride	7.60	84	55250	0.88	ppb	95
22) Allyl chloride	7.59	41	61933	0.90	ppb	94
23) Carbon disulfide	7.78	76	133773	0.96	ppb	94
24) trans-1,2-dichloroethene	8.57	61	72330	0.98	ppb	98
25) methyl tert-butyl ether	8.59	73	105853	0.90	ppb	61
26) 1,1-dichloroethane	9.00	63	121198	0.99	ppb	100
27) Vinyl acetate	8.98	43	97855	0.89	ppb	95
28) Methyl Ethyl Ketone	9.51	72	24839	1.00	ppb	# 100
29) cis-1,2-dichloroethene	9.95	61	68330	0.88	ppb	98
30) Hexane	9.55	57	75358	0.96	ppb	85
31) Ethyl acetate	10.10	43	120035	1.01	ppb	97
32) Chloroform	10.56	83	144895	0.97	ppb	98
33) Tetrahydrofuran	10.75	42	50878	0.96	ppb	96
34) 1,2-dichloroethane	11.66	62	86330	0.94	ppb	100
36) 1,1,1-trichloroethane	11.39	97	132360	0.89	ppb	97
37) Cyclohexane	12.08	56	63573	0.83	ppb	87
38) Carbon tetrachloride	12.02	117	138776	0.82	ppb	99
39) Benzene	11.98	78	161356	0.87	ppb	97
40) Methyl methacrylate	13.50	41	53289	0.80	ppb	96
41) 1,4-dioxane	13.54	88	31717	0.92	ppb	92
42) 2,2,4-trimethylpentane	12.81	57	223645	0.85	ppb	86
43) Heptane	13.15	43	77012	0.84	ppb	98
44) Trichloroethene	13.28	130	74798	0.84	ppb	98
45) 1,2-dichloropropane	13.39	63	72536	0.94	ppb	99

(#) = qualifier out of range (m) = manual integration
 AP122129.D AD10_1UG.M Wed Jan 02 11:54:09 2019

MSD1

Page 1

Data File : C:\HPCHEM\1\DATA\AP122129.D
 Acq On : 22 Dec 2018 6:04 am
 Sample : ALCS1UGD-122118
 Misc : AD10_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Dec 22 09:29:45 2018

Vial: 13
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AD10_1UG.RES

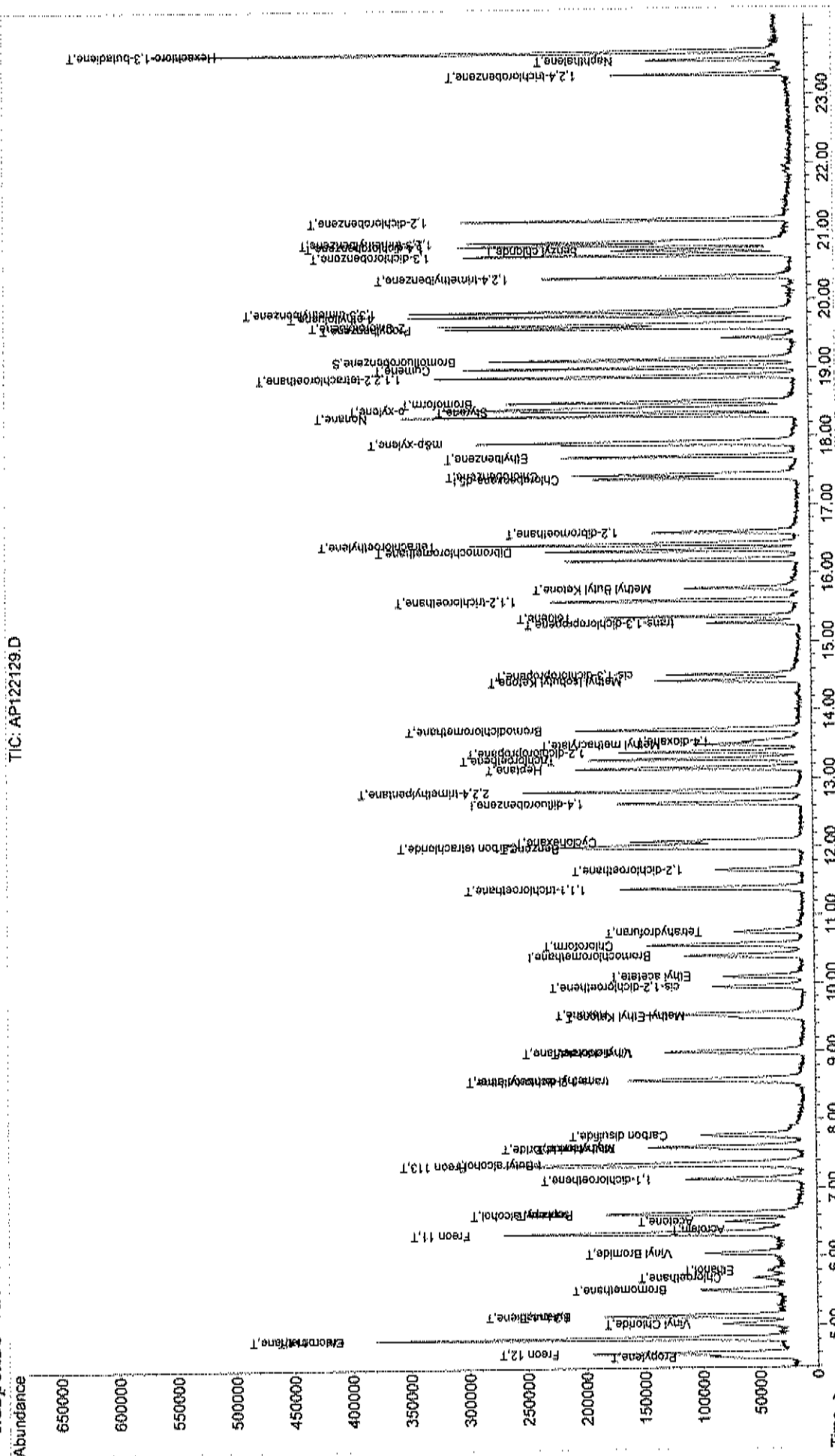
Quant Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Wed Dec 12 09:22:13 2018
 Response via : Initial Calibration
 DataAcq Meth : 1UG_RUN

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
46) Bromodichloromethane	13.71	83	150682	1.05	ppb	99
47) cis-1,3-dichloropropene	14.52	75	78648	0.89	ppb	99
48) trans-1,3-dichloropropene	15.27	75	54762	0.88	ppb	98
49) 1,1,2-trichloroethane	15.60	97	79197	0.94	ppb	99
51) Toluene	15.36	92	82941	0.83	ppb	98
52) Methyl Isobutyl Ketone	14.43	43	97131	0.87	ppb	94
53) Dibromochloromethane	16.33	129	137676	1.63	ppb	100
54) Methyl Butyl Ketone	15.77	43	89223	0.81	ppb	85
55) 1,2-dibromoethane	16.60	107	101664	0.89	ppb	96
56) Tetrachloroethylene	16.42	164	72413	0.89	ppb	99
57) Chlorobenzene	17.44	112	131465	0.85	ppb	94
58) Ethylbenzene	17.71	91	165185	0.80	ppb	99
59) m&p-xylene	17.92	91	309305	1.76	ppb	100
60) Nonane	18.31	43	107756	0.83	ppb	93
61) Styrene	18.38	104	135665	0.90	ppb	95
62) Bromoform	18.51	173	134393	5.41	ppb	98
63) o-xylene	18.41	91	208771	0.94	ppb	98
64) Cumene	19.01	105	195105	0.84	ppb	97
66) 1,1,2,2-tetrachloroethane	18.88	83	189865	0.92	ppb	99
67) Propylbenzene	19.59	120	58570	0.87	ppb	99
68) 2-Chlorotoluene	19.64	126	71313	0.90	ppb	99
69) 4-ethyltoluene	19.77	105	237346	0.89	ppb	98
70) 1,3,5-trimethylbenzene	19.84	105	214800	0.91	ppb	96
71) 1,2,4-trimethylbenzene	20.33	105	146204	0.81	ppb	97
72) 1,3-dichlorobenzene	20.66	146	147347	0.87	ppb	98
73) benzyl chloride	20.73	91	134015	0.92	ppb	97
74) 1,4-dichlorobenzene	20.81	146	146769	0.86	ppb	96
75) 1,2,3-trimethylbenzene	20.86	105	177894	0.85	ppb	96
76) 1,2-dichlorobenzene	21.17	146	145475	0.89	ppb	98
77) 1,2,4-trichlorobenzene	23.30	180	53567	0.72	ppb	100
78) Naphthalene	23.51	128	131868m	0.74	ppb	
79) Hexachloro-1,3-butadiene	23.63	225	111764	0.95	ppb	97

Data File : C:\HPCHEM\1\DATA\AP122129.D
Acq On : 22 Dec 2018 6:04 am
Sample : ALCS1UGD-122118
Misc : AD10_1UG
MS Integration Params: RTEINT.P
Quant Time: Dec 24 8:09 2018

Vial: 13
Operator: RJP
Inst : MSD #1
Multiplr: 1.00
Quant Results File: AD10_1UG.RES

Method : C:\HPCHEM\1\METHODS\AD10_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Jan 02 11:45:08 2019
Response via : Initial Calibration



GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

INJECTION LOG

Injection Log

Directory: C:\HPCHEM\1\DATA

Internal Standard Stock # A2587
 Standard Stock # A2589
 Misc Info A2587 Injected
 Method Ref: EPA TO-15 / Jan. 1999

Line	Vial	FileName	Multiplier	SampleName		
1	1	Ap120401.d	1.	BFB1UG	AO05_1UG	4 Dec 2018 09:40
2	2	Ap120402.d	1.	A1UG	AO05_1UG	4 Dec 2018 10:32
3	3	Ap120403.d	1.	A1UG_1.0	AO05_1UG	4 Dec 2018 11:12
4	4	Ap120404.d	1.	ALCS1UG-120418	AO05_1UG	4 Dec 2018 11:53
5	5	Ap120405.d	1.	AMB1UG-120418	AO05_1UG	4 Dec 2018 12:30
6	6	Ap120406.d	1.	C1811057-001A 20x	AO05_1UG	4 Dec 2018 13:37
7	7	Ap120407.d	1.	C1811057-001A	AO05_1UG	4 Dec 2018 14:55
8	8	Ap120408.d	1.	C1811055-001A 81x	AO05_1UG	4 Dec 2018 15:43
9	9	Ap120409.d	1.	C1811055-001A 810x	AO05_1UG	4 Dec 2018 16:20
10	10	Ap120410.d	1.	C1811055-003A 243x	AO05_1UG	4 Dec 2018 16:59
11	11	Ap120411.d	1.	C1811055-003A 2430x	AO05_1UG	4 Dec 2018 17:36
12	12	Ap120412.d	1.	C1811055-003A 9720x	AO05_1UG	4 Dec 2018 18:13
13	13	Ap120413.d	1.	C1811057-001A 81x	AO05_1UG	4 Dec 2018 18:53
14	14	Ap120414.d	1.	C1811057-001A 810x	AO05_1UG	4 Dec 2018 19:29
15	15	Ap120415.d	1.	C1811057-002A 90x	AO05_1UG	4 Dec 2018 20:06
16	16	Ap120416.d	1.	C1811057-007A 540x	AO05_1UG	4 Dec 2018 20:43
17	17	Ap120417.d	1.	C1811060-001A 810x	AO05_1UG	4 Dec 2018 21:19
18	18	Ap120418.d	1.	C1811057-008A	AO05_1UG	4 Dec 2018 22:00
19	19	Ap120419.d	1.	C1812006-001A	AO05_1UG	4 Dec 2018 22:39
20	20	Ap120420.d	1.	ALCS1UGD-120418	AO05_1UG	4 Dec 2018 23:19
21	21	Ap120421.d	1.	ALCS1UG	AO05_1UG	4 Dec 2018 23:59
22	22	Ap120422.d	1.	C1811057-008A 10x	AO05_1UG	5 Dec 2018 00:36
23	23	Ap120423.d	1.	C1811057	AO05_1UG-008A 40x	5 Dec 2018 01:12
24	24	Ap120424.d	1.	C1812006-001A 10x	AO05_1UG	5 Dec 2018 01:49
25	25	Ap120425.d	1.	C1812006-001A 40x	AO05_1UG	5 Dec 2018 02:26
26	26	Ap120426.d	1.	C1811057-008A 90x	AO05_1UG	5 Dec 2018 10:07
27		Ap120427.d	1.	No MS or GC data present		
28	1	Ap121001.d	1.	BFB1UG	AO05_1UG	10 Dec 2018 07:48
29	2	Ap121002.d	1.	BFB1UG	AD10_1UG	10 Dec 2018 08:35
30	3	Ap121003.d	1.	A1UG	AD10_1UG	10 Dec 2018 09:27
31	4	Ap121004.d	1.	A1UG	AD10_1UG	10 Dec 2018 10:07
32	5	Ap121005.d	1.	A1UG	AD10_1UG	10 Dec 2018 11:12
33	6	Ap121006.d	1.	A1UG	AD10_1UG	10 Dec 2018 11:55
34	7	Ap121007.d	1.	A1UG_1.50	AD10_1UG	10 Dec 2018 12:36
35	8	Ap121008.d	1.	A1UG_1.25	AD10_1UG	10 Dec 2018 13:17
36	9	Ap121009.d	1.	A1UG_1.0	AD10_1UG	10 Dec 2018 13:56
37	10	Ap121010.d	1.	A1UG_0.75	AD10_1UG	10 Dec 2018 14:35
38	11	Ap121011.d	1.	A1UG_0.50	AD10_1UG	10 Dec 2018 15:13
39	12	Ap121012.d	1.	A1UG_0.30	AD10_1UG	10 Dec 2018 15:50
40	13	Ap121013.d	1.	A1UG_0.15	AD10_1UG	10 Dec 2018 16:28
41	14	Ap121014.d	1.	A1UG_0.10	AD10_1UG	10 Dec 2018 17:06
42	15	Ap121015.d	1.	A1UG_0.04	AD10_1UG	10 Dec 2018 17:44
43	16	Ap121016.d	1.	A1UG_0.03	AD10_1UG	10 Dec 2018 18:21
44	18	Ap121017.d	1.	A1UG_2.0	AD10_1UG	10 Dec 2018 19:48
45		Ap121018.d	1.	No MS or GC data present		
46	1	Ap121101.d	1.	BFB1UG	AD10_1UG	11 Dec 2018 09:11
47	2	Ap121102.d	1.	A1UG	AD10_1UG	11 Dec 2018 10:01
48	3	Ap121103.d	1.	A1UG_1.0	AD10_1UG	11 Dec 2018 10:41
49	4	Ap121104.d	1.	ALCS1UG-121118	AD10_1UG	11 Dec 2018 11:20
50	5	Ap121105.d	1.	AMB1UG-121118	AD10_1UG	11 Dec 2018 11:58
51	21	Ap121106.d	1.	WAC121118A	AD10_1UG	11 Dec 2018 12:44
52	22	Ap121107.d	1.	WAC121118B	AD10_1UG	11 Dec 2018 13:22
53	23	Ap121108.d	1.	WAC121118C	AD10_1UG	11 Dec 2018 14:00
54	24	Ap121109.d	1.	WAC121118D	AD10_1UG	11 Dec 2018 14:40
55	25	Ap121110.d	1.	WAC121118E	AD10_1UG	11 Dec 2018 15:18

Injection Log

Instrument # 1
 Internal Standard Stock # A2911
 Standard Stock # A2912
 LCS Stock # A2913
 Method Ref: EPA TO-15 / Jan. 1999
 Misc Info _____ Injected _____

Directory: C:\HPCHEM\1\DATA

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
166	4	Ap122004.d	1.	ALCS1UG-122018	AD10_1UG	20 Dec 2018 13:40
167	5	Ap122005.d	1.	AMB1UG-122018	AD10_1UG	20 Dec 2018 14:16
168	6	Ap122006.d	1.	C1812045-001A	AD10_1UG	20 Dec 2018 15:57
169	7	Ap122007.d	1.	C1812045-002A	AD10_1UG	20 Dec 2018 16:40
170	8	Ap122008.d	1.	C1812043-001A	AD10_1UG	20 Dec 2018 17:23
171	9	Ap122009.d	1.	C1812043-002A	AD10_1UG	20 Dec 2018 18:05
172	10	Ap122010.d	1.	C1812043-003A	AD10_1UG	20 Dec 2018 18:47
173	11	Ap122011.d	1.	C1812043-004A	AD10_1UG	20 Dec 2018 19:28
174	12	Ap122012.d	1.	C1812045-001A 10x	AD10_1UG	20 Dec 2018 20:54
175	13	Ap122013.d	1.	C1812045-002A 10x	AD10_1UG	20 Dec 2018 21:31
176	14	Ap122014.d	1.	C1812043-001A 10x	AD10_1UG	20 Dec 2018 22:09
177	15	Ap122015.d	1.	C1812043-002A 10x	AD10_1UG	20 Dec 2018 22:46
178	16	Ap122016.d	1.	C1812043-003A 10x	AD10_1UG	20 Dec 2018 23:24
179	17	Ap122017.d	1.	C1812043-004A 5x	AD10_1UG	21 Dec 2018 00:02
180	18	Ap122018.d	1.		AD10_1UG	21 Dec 2018 00:43
181	1	Ap122101.d	1.	BFB1UG	AD10_1UG	21 Dec 2018 07:20
182	2	Ap122102.d	1.	A1UG	AD10_1UG	21 Dec 2018 10:20
183	3	Ap122103.d	1.	A1UG_1.0	AD10_1UG	21 Dec 2018 11:00
184	4	Ap122104.d	1.	ALCS1UG-122118	AD10_1UG	21 Dec 2018 12:17
185	5	Ap122105.d	1.	AMB1UG-122118	AD10_1UG	21 Dec 2018 12:54
186	6	Ap122106.d	1.	C1812048-001A	AD10_1UG	21 Dec 2018 14:12
187	7	Ap122107.d	1.	C1812048-002A	AD10_1UG	21 Dec 2018 14:52
188	8	Ap122108.d	1.	C1812048-003A	AD10_1UG	21 Dec 2018 15:56
189	9	Ap122109.d	1.	C1812048-004A	AD10_1UG	21 Dec 2018 16:36
190	10	Ap122110.d	1.	C1812048-005A	AD10_1UG	21 Dec 2018 17:15
191	11	Ap122111.d	1.	C1812058-001A	AD10_1UG	21 Dec 2018 17:56
192	12	Ap122112.d	1.	C1812058-002A	AD10_1UG	21 Dec 2018 18:36
193	13	Ap122113.d	1.	C1812059-001A	AD10_1UG	21 Dec 2018 19:16
194	14	Ap122114.d	1.	C1812059-002A	AD10_1UG	21 Dec 2018 19:55
195	1	Ap122115.d	1.	C1812057-019A	AD10_1UG	21 Dec 2018 20:32
196	2	Ap122116.d	1.	C1812057-017A	AD10_1UG	21 Dec 2018 21:13
197	3	Ap122117.d	1.	C1812057-018A	AD10_1UG	21 Dec 2018 21:53
198	4	Ap122118.d	1.	C1812057-016A	AD10_1UG	21 Dec 2018 22:33
199	5	Ap122119.d	1.	C1812057-016A MS	AD10_1UG	21 Dec 2018 23:17
200	6	Ap122120.d	1.	C1812057-016A MSD	AD10_1UG	22 Dec 2018 00:04
201	5	Ap122121.d	1.	C1812057-001A	AD10_1UG	22 Dec 2018 00:44
202	6	Ap122122.d	1.	C1812057-002A	AD10_1UG	22 Dec 2018 01:24
203	7	Ap122123.d	1.	C1812057-003A	AD10_1UG	22 Dec 2018 02:04
204	8	Ap122124.d	1.	C1812057-004A	AD10_1UG	22 Dec 2018 02:44
205	9	Ap122125.d	1.	C1812057-005A	AD10_1UG	22 Dec 2018 03:25
206	10	Ap122126.d	1.	C1812057-006A	AD10_1UG	22 Dec 2018 04:04
207	11	Ap122127.d	1.	C1812057-007A	AD10_1UG	22 Dec 2018 04:45
208	12	Ap122128.d	1.	C1812057-008A	AD10_1UG	22 Dec 2018 05:25
209	13	Ap122129.d	1.	ALCS1UGD-122118	AD10_1UG	22 Dec 2018 06:04
210	14	Ap122130.d	1.	ALCS1UG	AD10_1UG	22 Dec 2018 06:44
211	41	Ap122131.d	1.	C1812057-009A	AD10_1UG	22 Dec 2018 07:24
212	42	Ap122132.d	1.	C1812057	AD10_1UG-010A	22 Dec 2018 08:04
213		Ap122133.d	1.	No MS or GC data present		
214	47	Ap122201.d	1.	BFB1UG	AD10_1UG	22 Dec 2018 09:05
215	48	Ap122202.d	1.	A1UG	AD10_1UG	22 Dec 2018 09:51
216	49	Ap122203.d	1.	A1UG_1.0	AD10_1UG	22 Dec 2018 10:31
217	50	Ap122204.d	1.	ALCS1UG-122218	AD10_1UG	22 Dec 2018 11:13
218	51	Ap122205.d	1.	AMB1UG-122218	AD10_1UG	22 Dec 2018 11:49
219	52	Ap122206.d	1.	C1812057-010A	AD10_1UG	22 Dec 2018 12:32
220	53	Ap122207.d	1.	C1812057-011A	AD10_1UG	22 Dec 2018 13:15

Injection Log

Directory: C:\HPCHEM\1\DATA

Instrument # 1
 Internal Standard Stock # A2911
 Standard Stock # A2912
 LCS Stock # A2913
 Method Ref: EPA TO-15 / Jan. 1999
 Misc Info
 Injected

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
221	54	Ap122208.d	1.	C1812057-012A	AD10_1UG	22 Dec 2018 13:58
222	55	Ap122209.d	1.	C1812057-013A	AD10_1UG	22 Dec 2018 14:37
223	56	Ap122210.d	1.	C1812057-014A	AD10_1UG	22 Dec 2018 15:17
224	57	Ap122211.d	1.	C1812057-015A	AD10_1UG	22 Dec 2018 15:59
225	58	Ap122212.d	1.	C1812048-001A 5x	AD10_1UG	22 Dec 2018 16:36
226	59	Ap122213.d	1.	C1812048-002A 5x	AD10_1UG	22 Dec 2018 17:14
227	60	Ap122214.d	1.	C1812048-003A 10x	AD10_1UG	22 Dec 2018 17:53
228	61	Ap122215.d	1.	C1812048-004A 10x	AD10_1UG	22 Dec 2018 18:32
229	62	Ap122216.d	1.	C1812048-005A 9x	AD10_1UG	22 Dec 2018 19:11
230	63	Ap122217.d	1.	C1812048-005A 180x	AD10_1UG	22 Dec 2018 19:49
231	64	Ap122218.d	1.	C1812058-001A 10x	AD10_1UG	22 Dec 2018 20:27
232	65	Ap122219.d	1.	C1812059-001A 10x	AD10_1UG	22 Dec 2018 21:05
233	66	Ap122220.d	1.	C1812059-002A 10x	AD10_1UG	22 Dec 2018 21:43
234	67	Ap122221.d	1.	C1812057-017A 5x	AD10_1UG	22 Dec 2018 22:20
235	68	Ap122222.d	1.	C1812057-018A 5x	AD10_1UG	22 Dec 2018 22:58
236	69	Ap122223.d	1.	ALCS1UGD-122218	AD10_1UG	22 Dec 2018 23:37
237	70	Ap122224.d	1.	ALCS1U	AD10_1UG	23 Dec 2018 00:17
238	71	Ap122225.d	1.	C1812057-001A 5x	AD10_1UG	23 Dec 2018 00:54
239	72	Ap122226.d	1.	C1812057-002A 5x	AD10_1UG	23 Dec 2018 01:31
240	73	Ap122227.d	1.	C1812057-004A 10x	AD10_1UG	23 Dec 2018 02:08
241	74	Ap122228.d	1.	C1812057-004A 40x	AD10_1UG	23 Dec 2018 02:45
242	75	Ap122229.d	1.	C1812057-005A 10x	AD10_1UG	23 Dec 2018 03:22
243	76	Ap122230.d	1.	C1812057	AD10_1UG-005A 40x	23 Dec 2018 03:59
244	77	Ap122231.d	1.	C1812057-006A 5x	AD10_1UG	23 Dec 2018 04:36
245	78	Ap122232.d	1.	C1812057-007A 5x	AD10_1UG	23 Dec 2018 05:14
246	79	Ap122233.d	1.	C1812057-008A 5x	AD10_1UG	23 Dec 2018 05:53
247	80	Ap122234.d	1.	C1812057-009A 10x	AD10_1UG	23 Dec 2018 06:32
248	81	Ap122235.d	1.	C1812057-009A 40x	AD10_1UG	23 Dec 2018 07:09
249		Ap122236.d	1.	No MS or GC data present		
250	1	Ap122301.d	1.	BFB1UG	AD10_1UG	23 Dec 2018 09:05
251	2	Ap122302.d	1.	A1UG	AD10_1UG	23 Dec 2018 10:28
252	3	Ap122303.d	1.	A1UG	AD10_1UG	23 Dec 2018 11:08
253	4	Ap122304.d	1.	A1UG_1.0	AD10_1UG	23 Dec 2018 11:48
254	5	Ap122305.d	1.	ALCS1UG-122318	AD10_1UG	23 Dec 2018 13:16
255	6	Ap122306.d	1.	AMB1UG-122318	AD10_1UG	23 Dec 2018 13:53
256	7	Ap122307.d	1.	C1812059-001A 40x	AD10_1UG	23 Dec 2018 14:30
257	8	Ap122308.d	1.	C1812057-010A 9x	AD10_1UG	23 Dec 2018 15:10
258	9	Ap122309.d	1.	C1812057-010A 90x	AD10_1UG	23 Dec 2018 15:47
259	10	Ap122310.d	1.	C1812057-011A 10x	AD10_1UG	23 Dec 2018 16:25
260	11	Ap122311.d	1.	C1812057	AD10_1UG	23 Dec 2018 17:02
261	12	Ap122312.d	1.	C1812057-012A 5x	AD10_1UG	23 Dec 2018 17:41
262	13	Ap122313.d	1.	C1812057-013A 9x	AD10_1UG	23 Dec 2018 18:21
263	14	Ap122314.d	1.	C1812057-013A 90x	AD10_1UG	23 Dec 2018 18:59
264	15	Ap122315.d	1.	C1812057-013A 180x	AD10_1UG	23 Dec 2018 19:38
265	16	Ap122316.d	1.	C1812057-014A 9x	AD10_1UG	23 Dec 2018 20:18
266	17	Ap122317.d	1.	C1812057-014A 90x	AD10_1UG	23 Dec 2018 20:55
267	18	Ap122318.d	1.	C1812057-014A 180x	AD10_1UG	23 Dec 2018 21:33
268	19	Ap122319.d	1.	C1812057-015A 9x	AD10_1UG	23 Dec 2018 22:13
269	20	Ap122320.d	1.	C1812057-015A 90x	AD10_1UG	23 Dec 2018 22:49
270	21	Ap122321.d	1.	C1812057-015A 180x	AD10_1UG	23 Dec 2018 23:26
271	21	Ap122322.d	1.	C1812057	AD10_1UG	24 Dec 2018 00:03
272	21	Ap122323.d	1.	ALCS1UGD-122318	AD10_1UG	24 Dec 2018 00:43
273	22	Ap122324.d	1.	C1812057-011A 90x	AD10_1UG	24 Dec 2018 07:47
274	23	Ap122325.d	1.	C1812057	AD10_1UG-014A 270x	24 Dec 2018 08:25
275	24	Ap122326.d	1.		AD10_1UG	26 Dec 2018 13:34

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

STANDARDS LOG

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-2311	12/08/17	12/15/17	TO15 SULF	A0270	1 ppm	1.5	30	50	ZZ	
A-2312			H2S	A0269	10 ppm	↓	↓	500		
A-2313			TO15 10G IS	A2304	500 ppb	0.9	45	1.0		
A-2314			STD	A2305	↓	↓	↓	↓		
A-2315	↓	↓	LCS	A2306	↓	↓	↓	↓		
A-2316	12/04/17	12/04/18	TO15 IS	FF-8482	LINDE	2000 psig	2000 psig	1 PPM	ZZ	
A-2317	12/13/17	12/12/18	STOCK TO15 STD	FF-47281	LINDE	2200 psig	2200 psig	1 PPM	ZZ	
A-2318	12/18/17	12/18/18	TO15 LCS	A1807	1 ppm	A1807 STD IS NOW	LCS		ZZ	
A-2319	12/16/17	12/28/17	TO15 IS	A2316	1 ppm	1.5	30	50	M	
A-2320			STD	A2317	↓	↓	↓	↓		
A-2321			LCS	A2318	↓	↓	↓	↓		
A-2322			4 PCA	9519	1 ppm	1.5	↓	50		
A-2323			4 PCA	A2322	500 ppb	3.0	↓	5		
A-2324			FORM	A0974	11.5 ppm	0.20	45	50		
A-2325			SILOX	A018409	500 ppm	3.0	30	↓		
A-2326			SULF	A0270	1 ppm	1.5	↓	↓		
A-2327			H2S	A0269	10 ppm	↓	↓	500		
A-2328			TO15 10G IS	A2319	500 ppb	0.9	45	1.0		
A-2329			STD	A2320	↓	↓	↓	↓		
A-2330			LCS	A2321	↓	↓	↓	↓		
A-2331	↓	↓	M							

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-2877	11/26/18	12/3/18	TO15 1ug LCS	A2868	50 ppb	0.9	45	1	WD	
A-2878	12/4/18	12/11/18	TO15 IS	A2316	1 ppm	1.5	30	50	WD	
A-2879			STD	A2317						
A-2880			LCS	A2318						
A-2881			4PCH	A2636	0.847 ppm	1.8	30	50		
A-2882			4PCHS	A2881	50 ppb	3.0	30	5		
A-2883			FORM	A2331	11.9 ppm	0.19	45	50		
A-2884			SILUX	A2571 A2623	449 ppb 500 ppb	3.34 3.0	30	50		
A-2885			SULF	A2573	1 ppm	1.5	30	50		
A-2886			H2S	A2572	10.2 ppm	1.47	30	500		
A-2887			TO15 1ug IS	A2878	50 ppb	0.9	45	1		
A-2888			STD	A2879						
A-2889			LCS	A2880						
A-2890	12/11/18	12/18/18	TO15 IS	A2316	1 ppm	1.5	30	50	WD	
A-2891			STD	A2317						
A-2892			LCS	A2318						
A-2893			4PCH	A2636	0.847 ppm	1.8	30	50		
A-2894			4PCHS	A2893	50 ppb	3.0	30	5		
A-2895			FORM	A2331	11.9 ppm	0.19	45	50		
A-2896			SILUX	A2571 A2623	449 ppb 500 ppb	3.34 3.0	30	50		
A-2897			SULF	A2573	1 ppm	1.5	30	50		

Std #	Date Prep	Date Exp	Description	Stock #	Stock Conc	Initial Vol (psig)	Final Vol (psia)	Final Conc (ppb)	Prep by	Chkd by
A-2898	12/11/18	12/18/18	TO15 H2S	A2572	102 ppm	1.47	30	500	WD	
A-2899			TO15 146 IS	A2890	50 ppb	0.9	45	1		
A-2900			STD	A2891						
A-2901			LCS	A2892						
A-2902	12/18/18	12/25/18	TO15 IS	A236	1 ppm	1.5	30	50	WD	
A-2903			STD	A237						
A-2904			LCS	A238						
A-2905			4PC4	A236	0.847 ppm	1.8	30	50		
A-2906			4PC45	A2905	50 ppb	3.0	30	5		
A-2907			FORM	A231	11.9 ppm	0.19	45	50		
A-2908			SILOX	A231 A203	444 ppb 500 ppb	3.34 3.0	30	50		
A-2909			SULF	A2573	1 ppm	1.5	30	50		
A-2910			H2S	A2572	102 ppm	1.47	30	500		
A-2911			TO15 146 IS	A2902	50 ppb	0.9	45	1		
A-2912			STD	A2903						
A-2913			LCS	A2904						
A-2914	12/26/18	12/19	TO15 IS	A236	1 ppm	1.5	30	50	WD	
A-2915			STD	A237						
A-2916			LCS	A238						
A-2917			4PC4	A236	0.847 ppm	1.8	30	50		
A-2918			4PC45	A2917	50 ppb	3.0	30	5		

GC/MS VOLATILES-WHOLE AIR

METHOD TO-15

CANISTER CLEANING LOG

Centek Laboratories, LLC

Instrument: Entech 3100

QC Canister Cleaning Logbook

Canister Number	Canister Size	QC Can Number	# of Cycles	Int & Date Cleaned	QC Batch Number	Detection Limits	Leak Test 24hr Int & Date
232	1.4	193	20	8/16/18	WA-081718A	1pg + 0.20	+ 30 8/17/18
541							+ 30
358							+ 30
496							+ 30
133							+ 30
195							+ 30
286		141			B		+ 30
333							+ 30
564							+ 30
324							+ 30
223							+ 30
141						b	+ 30
							+ 30
484	1.4	1196	20	8/19/18	WA-082018A	1pg + 0.20	+ 30 8/20/18
1207							+ 30
211							+ 30
214							+ 30
1196							+ 30
487		1207			B		+ 30
217							+ 30
1206							+ 30
1208							+ 30
1204							+ 30
							+ 30
							+ 30

QC Canister Cleaning Logbook

Instrument: Entech 3100

[illegible]

Instrument: Entech 3100

Canister Number	Canister Size	QC Can Number	# of Cycles	Int & Date Cleaned	QC Batch Number	Detection Limits	Leak Test 24hr Int & Date
240	1L	316	20	11/26/18	WAC 112518A	1,970.20	+ 30 + 12/3/18 730
1179							+ 30 +
233							+ 30 +
285							+ 30 +
316							+ 30 +
554		87					+ 30 +
542							+ 30 +
352							+ 30 +
353							+ 30 +
87							+ 30 +
328		1190		11/27/18			+ 30 +
1185							+ 30 +
232							+ 30 +
86							+ 30 +
1190							+ 30 +
192		363					+ 30 +
541							+ 30 +
95							+ 30 +
422							+ 30 +
363							+ 30 +
290		287					+ 30 +
85							+ 30 +
92							+ 30 +
317							+ 30 +
287							+ 30 +

Data File : C:\HPCHEM\1\DATA2\2018AUG\AP082032.D Vial: 25
Acq On : 21 Aug 2018 6:34 am Operator: RJP
Sample : WAC082018A Inst : MSD #1
Misc : A719_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 21 09:13:19 2018 Quant Results File: A719_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A719_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Jul 19 19:13:29 2018
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.46	128	42136	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.70	114	186019	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	124403	1.00	ppb	0.00

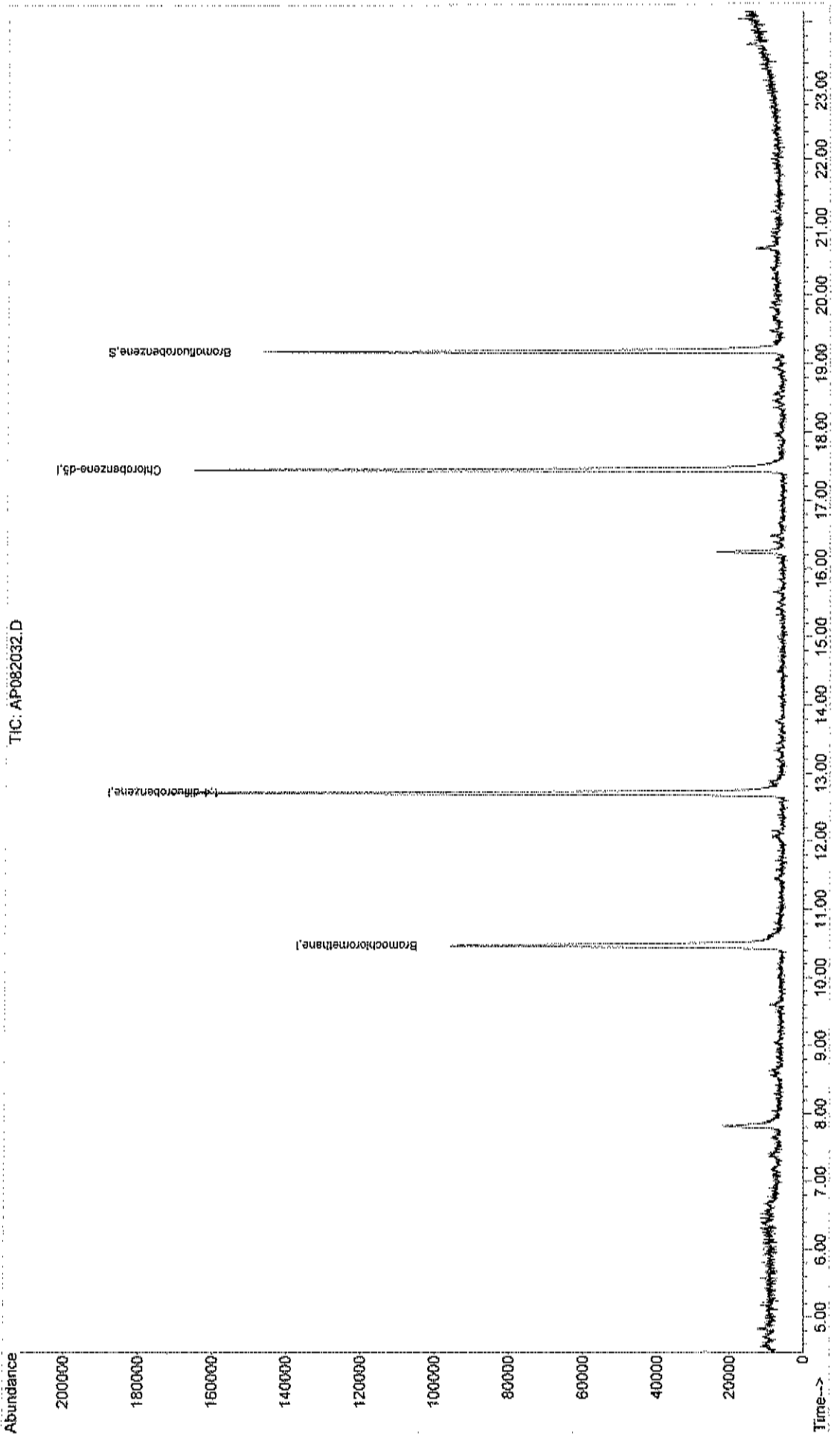
System Monitoring Compounds

65) Bromofluorobenzene	19.18	95	62131m	0.72	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	72.00%

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA2\2018AUG\AP082032.D
 Acq On : 21 Aug 2018 6:34 am Vial: 25
 Sample : WAC082018A Operator: RJP
 Misc : A719_IUG Inst : MSD #1
 MS Integration Params: RTEINT.P Multiplr: 1.00
 Quant Time: Nov 14 13:13 2018 Quant Results File: A719_1UG.RES
 Method : C:\HPCHEM\1\METHODS\A103_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Jan 04 06:26:27 2019
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\2018AUG\AP082033.D Vial: 26
Acq On : 21 Aug 2018 7:12 am Operator: RJP
Sample : WAC082018B Inst : MSD #1
Misc : A719_1UG Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Aug 21 09:13:27 2018 Quant Results File: A719_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\A719_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Thu Jul 19 19:13:29 2018
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.47	128	38280	1.00	ppb	0.02
35) 1,4-difluorobenzene	12.71	114	162071	1.00	ppb	0.00
50) Chlorobenzene-d5	17.45	117	111483	1.00	ppb	0.01

System Monitoring Compounds

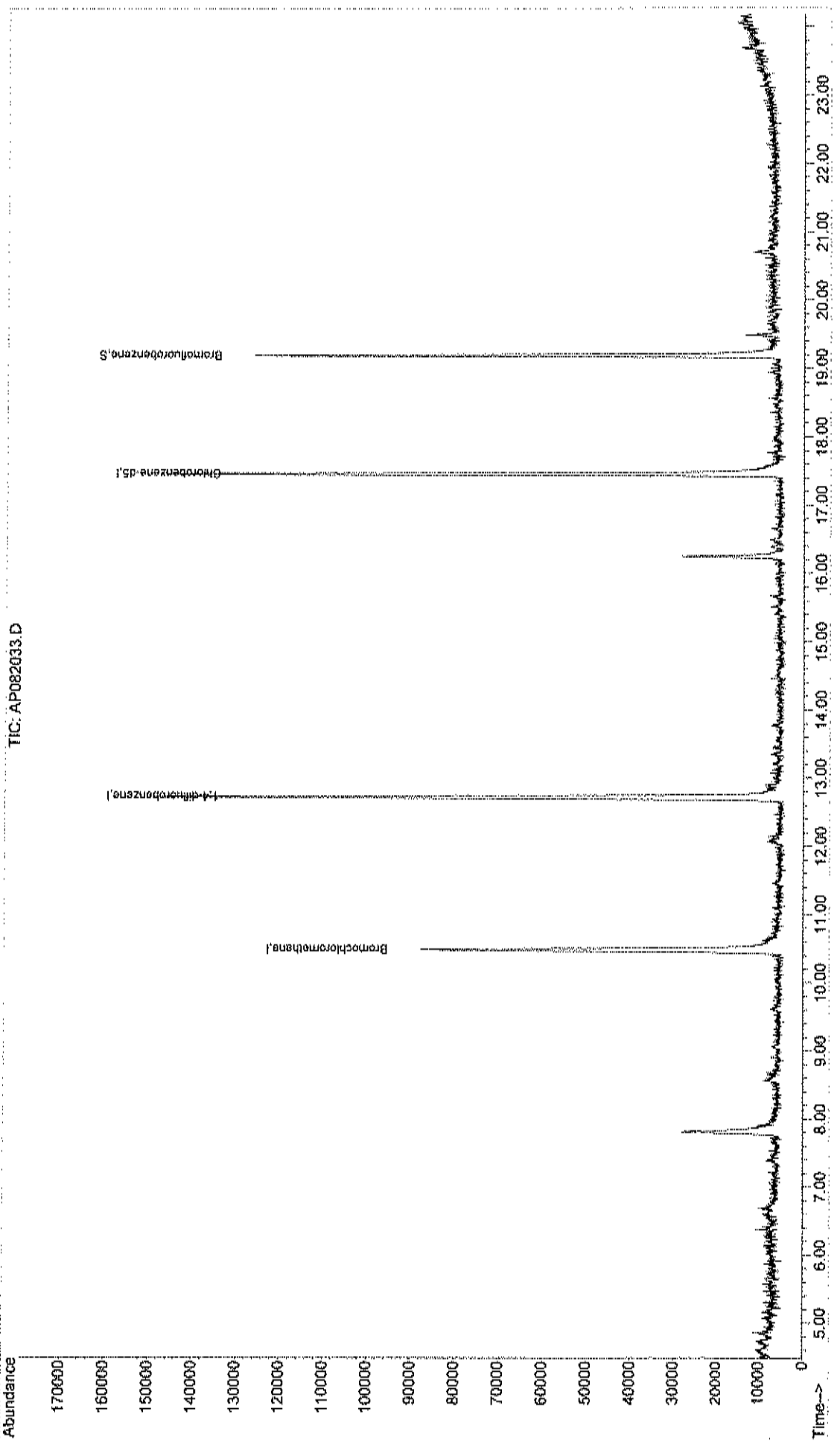
65) Bromofluorobenzene	19.18	95	56251m	0.73	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA2\2018AUG\AP082033.D
 Acq On : 21 Aug 2018 7:12 am Vial: 26
 Sample : WAC082018B Operator: RJP
 Misc : A719_1UG Inst : MSD #1
 MS Integration Params: RTEINT.P Multiplr: 1.00
 Quant Time: Nov 14 13:14 2018 Quant Results File: A719_1UG.RES

Method : C:\HPCHEM\1\METHODS\A103_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Jan 04 06:26:27 2019
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\AP111913.D

Vial: 27

Acq On : 19 Nov 2018 8:05 pm

Operator: RJP

Sample : WAC111918G

Inst : MSD #1

Misc : AO05_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 20 09:01:55 2018

Quant Results File: AO05_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AO05_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Oct 31 09:54:53 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.42	128	29817	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.66	114	134697	1.00	ppb	0.00
50) Chlorobenzene-d5	17.40	117	93097	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	42692	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA2\AP111913.D

Acq On : 19 Nov 2018 8:05 pm

Sample : WAC111918G

Misc : AO05_1UG

MS Integration Params: RTEINT.P

Quant Time: Nov 20 9:01 2018

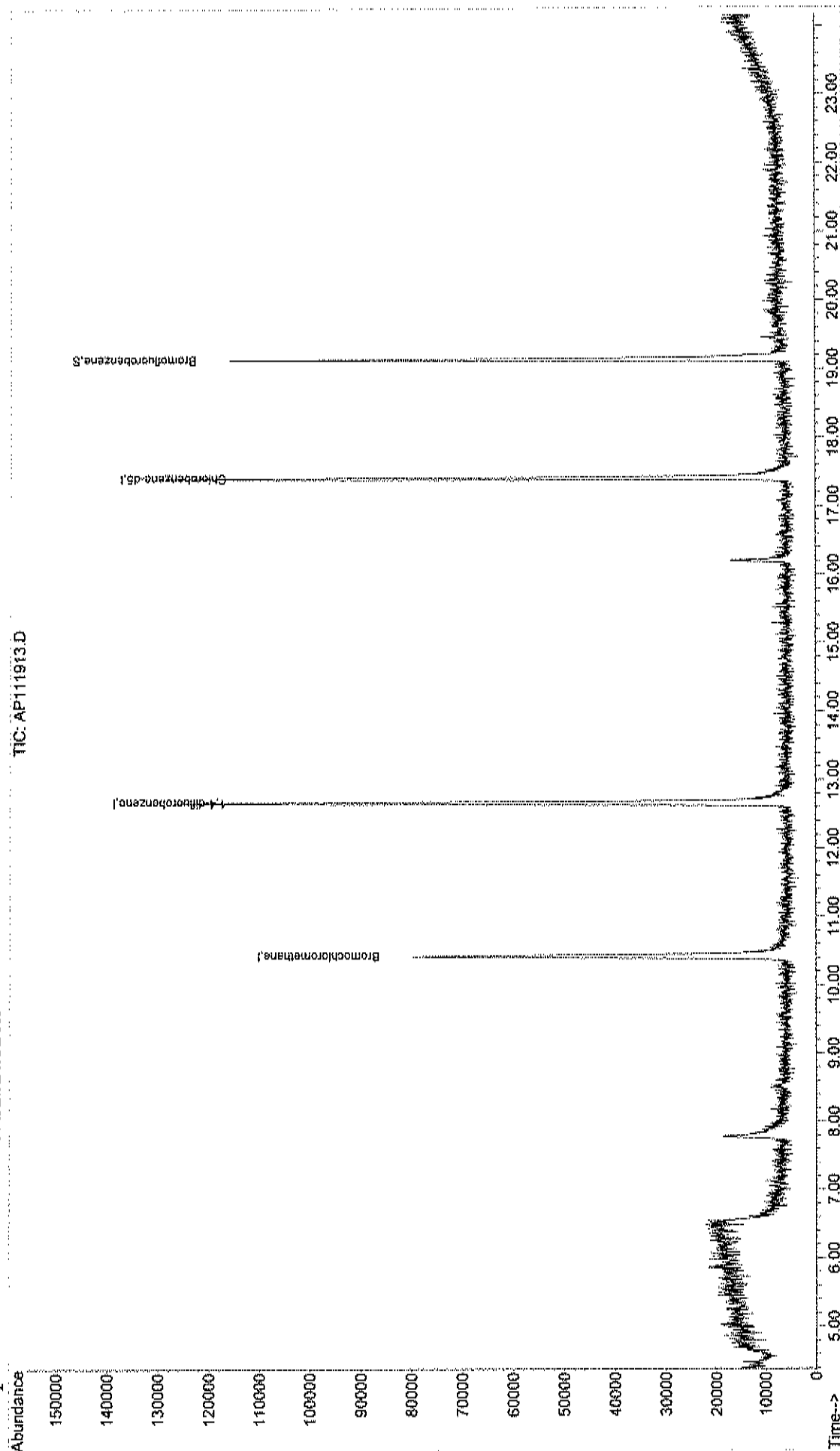
Quant Results File: AO05_1UG.RES

Method : C:\HPCHEM\1\METHODS\A103_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 04 06:26:27 2019

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\AP111914.D
Acq On : 19 Nov 2018 8:43 pm
Sample : WAC111918H
Misc : AO05_1UG
MS Integration Params: RTEINT.P
Quant Time: Nov 20 09:01:56 2018

Vial: 28
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: AO05_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AO05_1UG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Wed Oct 31 09:54:53 2018
Response via : Initial Calibration
DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.42	128	30309	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.66	114	130877	1.00	ppb	0.00
50) Chlorobenzene-d5	17.41	117	91443	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.14	95	43432	0.74	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	74.00%

Target Compounds

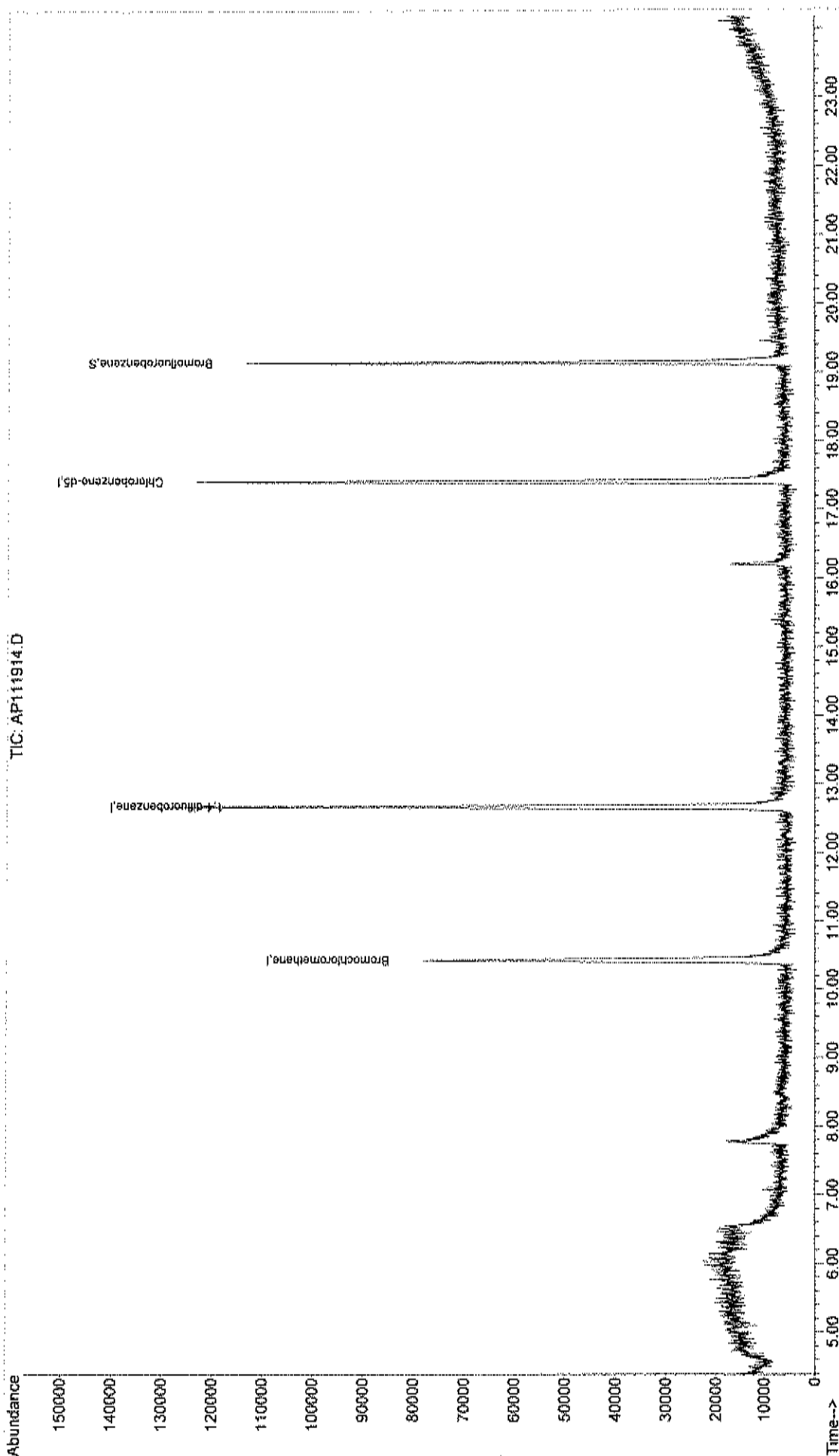
Qvalue

Data File : C:\HPCHEM\1\DATA2\AP111914.D
 Acq On : 19 Nov 2018 8:43 pm
 Sample : WAC111918H
 Misc : AO05_1UG
 MS Integration Params: RTEINT.P
 Quant Time: Nov 20 9:01 2018

Vial: 28
 Operator: RJP
 Inst : MSD #1
 Multiplr: 1.00

Quant Results File: AO05_1UG.RES

Method : C:\HPCHEM\1\METHODS\A103_1UG.M (RTE Integrator)
 Title : TO-15 VOA Standards for 5 point calibration
 Last Update : Fri Jan 04 06:26:27 2019
 Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\AP111915.D

Vial: 29

Acq On : 19 Nov 2018 9:21 pm

Operator: RJP

Sample : WAC111918I

Inst : MSD #1

Misc : AO05_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 20 09:01:57 2018

Quant Results File: AO05_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AO05_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Oct 31 09:54:53 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.41	128	30245	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.66	114	128295	1.00	ppb	0.00
50) Chlorobenzene-d5	17.40	117	88986	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.13	95	41996	0.73	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	73.00%

Target Compounds

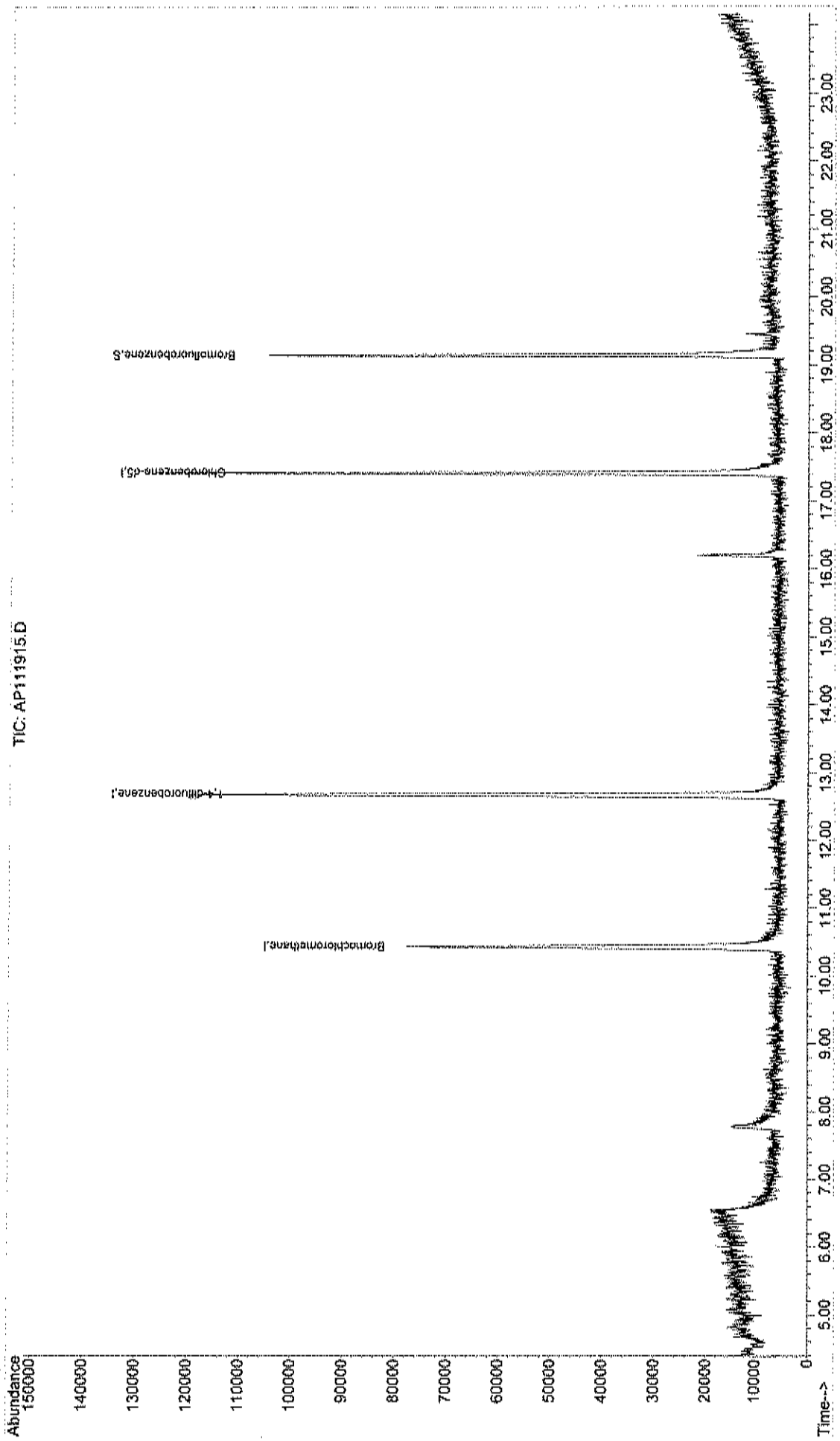
Qvalue

Data File : C:\HPCHEM\1\DATA2\AP111915.D
Acq On : 19 Nov 2018 9:21 pm
Sample : WAC111918I
Misc : A005_IUG
MS Integration Params: RTEINT.P
Quant Time: Nov 20 9:01 2018

Vial: 29
Operator: RJP
Inst : MSD #1
Multiplr: 1.00

Quant Results File: A005_IUG.RES

Method : C:\HPCHEM\1\METHODS\A103_IUG.M (RTE Integrator)
Title : TO-15 VOA Standards for 5 point calibration
Last Update : Fri Jan 04 06:26:27 2019
Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\AP112813.D

Vial: 2

Acq On : 28 Nov 2018 7:03 pm

Operator: RJP

Sample : WAC112818B

Inst : MSD #1

Misc : AO05_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Nov 29 08:46:05 2018

Quant Results File: AO05_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AO05_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Oct 31 09:54:53 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.42	128	31608	1.00	ppb	0.00
35) 1,4-difluorobenzene	12.65	114	131509	1.00	ppb	0.00
50) Chlorobenzene-d5	17.39	117	96891	1.00	ppb	0.00

System Monitoring Compounds

65) Bromofluorobenzene	19.14	95	46159	0.74	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	74.00%

Target Compounds

Qvalue

Data File : C:\HPCHEM\1\DATA2\AP112813.D

Acq On : 28 Nov 2018 7:03 pm

Sample : WAC112818B

Misc : AO05_1UG

MS Integration Params: RTEINT.P

Quant Time: Nov 29 8:46 2018

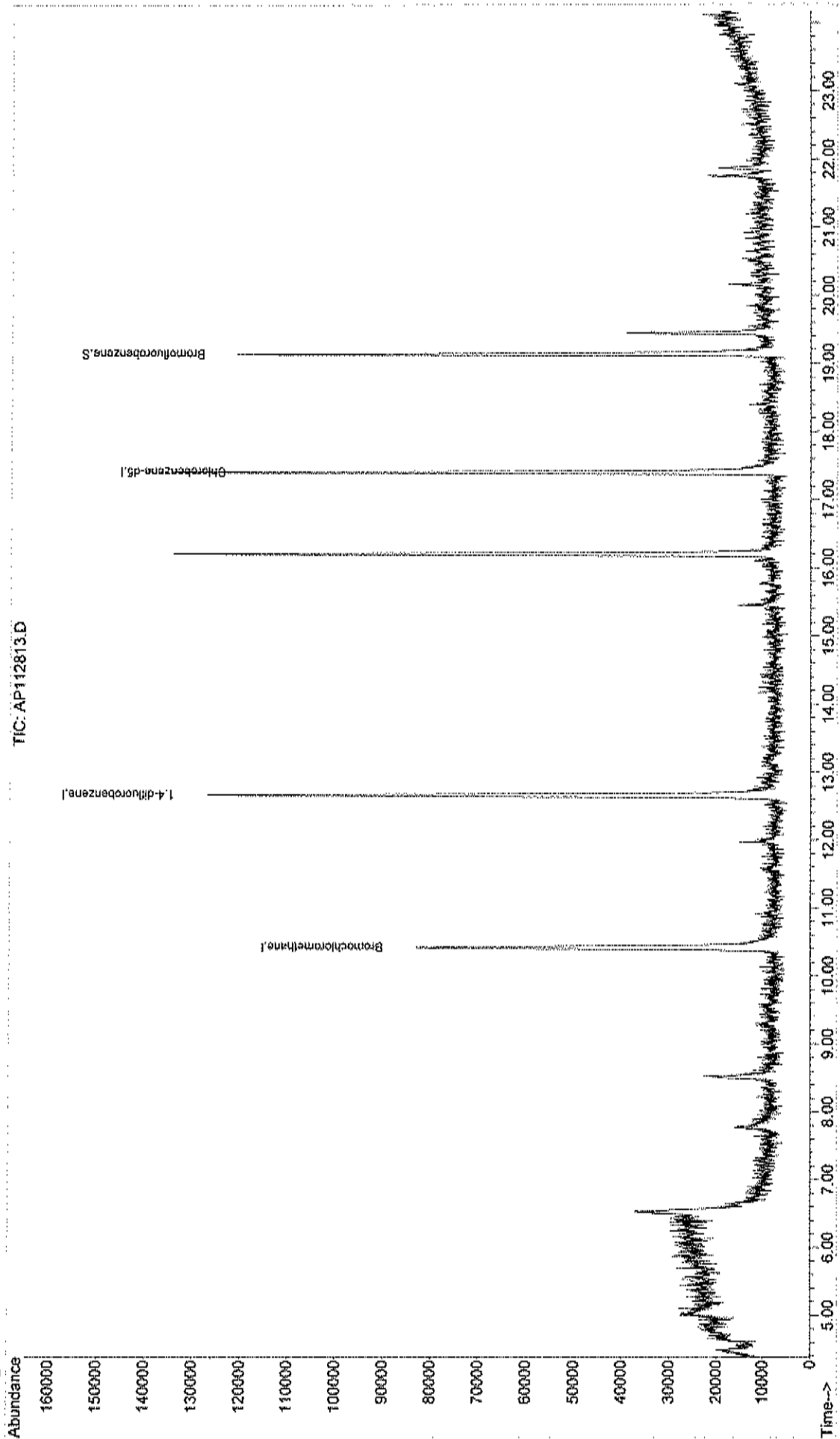
Quant Results File: AO05_1UG.RES

Method : C:\HPCHEM\1\METHODS\A103_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 04 06:26:27 2019

Response via : Initial Calibration



Data File : C:\HPCHEM\1\DATA2\AP112814.D

Vial: 3

Acq On : 28 Nov 2018 7:40 pm

Operator: RJP

Sample : WAC112818C

Inst : MSD #1

Misc : AO05_1UG

Multiplr: 1.00

MS Integration Params: RTEINT.P

Quant Time: Dec 03 13:59:58 2018

Quant Results File: AO05_1UG.RES

Quant Method : C:\HPCHEM\1\METHODS\AO05_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Wed Oct 31 09:54:53 2018

Response via : Initial Calibration

DataAcq Meth : 1UG_RUN

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Bromochloromethane	10.42	128	29887	1.00	ppb	0.01
35) 1,4-difluorobenzene	12.65	114	125101	1.00	ppb	0.00
50) Chlorobenzene-d5	17.40	117	91682	1.00	ppb	0.00
System Monitoring Compounds						
65) Bromofluorobenzene	19.14	95	42068	0.71	ppb	0.00
Spiked Amount	1.000	Range	70 - 130	Recovery	=	71.00%
Target Compounds						
15) Acetone	6.52	58	2341	0.13	ppb	Qvalue # 47

Data File : C:\HPCHEM\1\DATA2\AP112814.D

Acq On : 28 Nov 2018 7:40 pm

Sample : WAC112818C

Misc : A005_1UG

MS Integration Params: RTEINT.P

Quant Time: Dec 3 13:59 2018

Quant Results File: A005_1UG.RES

Method

: C:\HPCHEM\1\METHODS\A103_1UG.M (RTE Integrator)

Title : TO-15 VOA Standards for 5 point calibration

Last Update : Fri Jan 04 06:26:27 2019

Response via : Initial Calibration

