



Via Federal Express

August 26, 2015

Mr. Salvatore F. Priore, P.E.
Project Manager
NYSDEC
Division of Environmental Remediation
Remedial Bureau C
625 Broadway, 11th Floor
Albany, NY 12233-7014

**Re: Voluntary Cleanup Program Revised Supplemental RI Progress Report
Former Swivelier Site
33 Route 304, Village of Nanuet, Rockland County, New York
NYSDEC Site No. 3-44-036
EWMA Case No. 205548**

Dear Mr. Priore:

Environmental Waste Management Associates, LLC (EWMA), on behalf of S.F. Properties LLC, has prepared this revised Remedial Investigation Progress Report for the above referenced facility. This report reflects findings of the sampling event conducted on April 29, 2014 as outlined in EWMA's November 25, 2013 Remedial Action Workplan Addendum (RAWA) and approved by New York State Department of Environmental Conservation's (NYSDEC) in the November 25, 2013 RAWA Approval letter (**Appendix 1**). EWMA has reviewed and included a summary of the results from the recent environmental investigation conducted at the former Swivelier facility. A Site Location Map is provided as **Figure 1** and a Site Plan depicting the monitoring well locations, temporary monitoring point locations, and soil gas sampling locations are shown on **Figure 2**.

In accordance with EWMA's November 25, 2013 Remedial Action Workplan Addendum (RAWA) and NYSDEC's November 25, 2013 RAWA Approval letter (**Appendix 1**), EWMA conducted the following activities at the facility:

- Collect semi-annual ground water samples from monitoring wells MW-10D, MW-11D, and MW-13D for VO+10 analysis;
- Installation of eight temporary well points installed to investigate dissolved phase Trichloroethene (TCE) and volatile organic compounds (VOCs); and
- Collection of one soil vapor sample from a temporary soil vapor monitoring point located across West Nyack Road;



A summary of the sampling activities and recommendations based on these sampling activities are provided below.

Monitoring Well Sampling Summary:

On April 29, 2014, EWMA representative collected ground water samples from on-site monitoring wells MW-10D, MW-11D, and MW-13D for VO+10 laboratory analysis. The ground water sampling activities were conducted in accordance with ground water monitoring program previously approved by NYDEC and discussed in the approved August 28, 2013 RAW.

The monitoring wells were purged utilizing a low flow purge rate to insure the wells will not be dewatered to dry conditions and to minimize aeration of volatiles within the well during recharge. A minimum of 3 and a maximum of 5-well volumes were purged from each monitoring well and ground water samples were collected immediately following completion of purge activities. A Grunfos Redi-Flow 2-inch diameter submersible pump equipped with a variable speed control box was utilized to purge the monitoring wells. The Redi-Flow pump and electrical line will be field decontaminated between each well in accordance with pump decontamination procedures.

No sheen or free phase product was observed and no odors were detected during the April 29, 2013 ground water sampling event. The field sampling observations are summarized on the Purge Guide provided in **Appendix 2**.

As illustrated on **Table 1**, concentrations of TCE, cis-1,2-Dichloroethene, and trans-1,2-dichloroethene were detected at monitoring well MW-10D at concentrations above their respective New York State Ambient Water Quality Standard (AWQS) of 5ppb. TCE and cis-1,2-Dichloroethene were also detected above their respective New York State AWQS of 5ppb at monitoring well MW-13D. Sample results from monitoring well MW-11D complied with New York State AWQSs. The laboratory analytical package (E13-03838) is provided in **Appendix 3**.

As illustrated on the Historic Ground Water Results Table (**Table 2**), concentrations of TCE continue to degrade at monitoring wells MW-10D and MW-13D. EWMA recommends conducting annual monitoring of MW-10D and MW-13D to track degradation of TCE and its breakdown products and evaluate future response measures, if any. Since concentrations of TCE have decreased below New York State AWQS at monitoring well MW-11D, no further monitoring of this well is proposed.

Temporary Well Point Sampling

In Spring 2004, New York State Department of Health (NYSDOH) had completed off-site investigations of VOCs in ground water. As part of NYSDOH investigation, soil gas samples, as well as shallow ground water samples from temporary well points, were collected from properties across West Nyack Road. The results of the soil gas samples indicated compliance; however, one ground water sample (GW-02) exhibited levels of TCE at a concentration of 54 ppb, which is above NYSDEC 5 ppb criteria. Based on this information, NYSDEC requested further on-site investigation as the source of the TCE detected across West Nyack Road was not definite.



In accordance with EWMA's November 25, 2013 Remedial Action Workplan Addendum (RAWA) and NYSDEC's November 25, 2013 RAWA Approval letter (**Appendix 1**), EWMA installed seven shallow on-site temporary well points and one shallow off-site temporary well point / soil vapor point to investigate TCE detected in shallow ground water at off-site temporary well point GW-02 installed as part of NYSDOH's 2004 investigation. The temporary well point locations are depicted on **Figure 2**.

Ground water samples were obtained from all eight temporary well points and analyzed for chlorinated volatile organic compounds (cVOCs), via EPA method 8260. The soil vapor sample was analyzed for volatile organic compounds via EPA Method TO 15. The ground water samples and the soil vapor sample were analyzed by Integrated Analytical Laboratories, LLC (IAL) of Randolph, NJ, a New York certified laboratory (Cert. #11402).

Ground water sample results obtained from the temporary well points indicated compliance with the exception of temporary well point TW-5, which exhibited concentrations of TCE and cis-1,2-Dichloroethene at concentrations above their respective New York State AWQS. Results from the soil vapor sample obtained from the TW-8 location did not identify compounds of concern (COCs) associated with the former Swivelier facility. The laboratory analytical results from the temporary well points are illustrated on **Table 1** and depicted on **Figure 2**. The laboratory analytical results from the soil vapor sample are illustrated on **Table 3**. The laboratory analytical packages (E13-03224 and E13-03838) are provided in **Appendix 3**.

Based on the following information, no further offsite assessment of ground water or soil vapor is warranted across West Nyack Road:

- Ground water results obtained from the temporary well point (TP-8) installed across West Nyack Road (near NYSDOH ground water sample location GW-02) indicated compliance with New York State AWQS;
- Ground water results from temporary well points TW-1 and TW-2 installed immediately upgradient of NYSDOH sample location GW-02 also indicated compliance with New York State AWQS; and
- Soil vapor sample obtained from the TW-8 location did not identify contaminants of concern associated with the former Swivelier facility.

Sub-Slab Depressurization System

On January 14, 2004, an inspection of the Property was conducted by representatives of EWMA, the NYSDEC, and the NYSDOH. Four sample locations (Air-1 through Air-4) were chosen for collecting sub-slab vapor and indoor air samples. The sub-slab investigation was conducted by EWMA at the site on February 3, 2004 and representatives from NYSDEC were on-site to observe the sampling protocols.



Sub-Slab Sample #	Indoor Air Sample #	Location in Building (as depicted on proposed sampling location map)	TCE Results (ug/m3)
Air-1	Air-3A	Rockland Gymnastics	Air-1 2.4 Air 3A 0.59
Air-2	Air-1A	Southern portion of Empty space (storage)	Air-2 29 Air 1A ND
Air-3	Air-2A	Northern portion of Empty space (storage)	Air-3 ND Air-2A 1.1
Air-4	Air-4A	Eastern portion of Empty Space (storage)	Air-4 607 Air 4A 1.1
NA	Air-5A	Southern edge of parking lot across from Gym (Exterior)	Air-5A ND

Laboratory results from the indoor air samples were below NYSDOH Air Guide Value NYSDOH CEH BEEI Soil Vapor Intrusion Guidance (SVIG) Table 3.1. The combination of sub-slab and indoor air concentrations when evaluate compared to SVIG Matrix 1, indicate three of the four samples would not require mitigation. However, sample sub-slab soil gas sample location Air-4 and corresponding indoor air sample Air-4A did indicate the need for mitigation.

In March 2008, two separate sub-slab depressurization systems (SSDSs) were installed and activated at the Property. One system is utilized in the eastern portion of the building and consists of eight extraction points and the second system is utilized in the western portion of the building and consists of nine extraction points.

Based on the following information, EWMA believes it to be appropriate to evaluate existing conditions as it relates to vapor intrusion:

- Concentrations of TCE detected in ground water have reduced significantly since 2004;
- The SSDSs have been in operation for approximately 7 years;
- Only one location exhibited TCE in sub-slab that required mitigation; and
- Concentrations in the initial indoor air samples were negligible.

Based on this information, EWMA recommends shutting down the SSDS for a period of 30 days. After 30 days, confirmation sampling of both indoor air and sub slab sampling will be performed. The results will be evaluated with respect to NYSDOH Matrix 1 and the following responses will be initiated.

**Voluntary Cleanup Program
Revised Supplemental RI Progress Report
Former Swivelier Site
33 Route 304, Village of Nanuet, Rockland County, New York
NYSDEC Site No. 3-44-036
EWMA Case No. 205548**

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**Guidance for Evaluating Soil Vapor Intrusion in the State of New York
Soil Vapor / Indoor Air Matrix 1
October 2006**

	Indoor Air Concentration of Compound (mcg/m3)			
Sub-Slab Vapor Concentration of Compound (mcg/m3)	< 0.25	0.25 to 1	1 to < 5.0	5.0 and above
<5	No Further Action	Take Reasonable and practical actions to identify source(s) and reduce exposures	Take Reasonable and practical actions to identify source(s) and reduce exposures	Take Reasonable and practical actions to identify source(s) and reduce exposures
5 to <50	No Further Action	Monitor	Monitor	Mitigate
50 to <250	Monitor	Monitor/Mitigate	Mitigate	Mitigate
250 and above	Mitigate	Mitigate	Mitigate	Mitigate

Should you have any questions or comments, please do not hesitate to contact me at (973) 560-1400, Ext. 173 or Alan.Arico@ewma.com.

Sincerely,
EWMA



Alan R. Arico
Project Manager

Enclosure

cc: Mr. Patrick MaGee, MBC Contractors Inc. (w/enclosure)

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TABLES

Table 1
Ground Water Results Summary
April 29, 2014
Former Swivelier Facility
33 Route 304, Village of Nanuet, Rockland County, New York
NYSDEC Site No. 3-44-036

Sample #: Field ID: Lab ID: Date Sampled: Depth(ft):		TOGs - Table 5 Groundwater Effluent Limitations (Class GA) (ug/L)	TW-1 03838-001 04/29/2014				TW-2 03838-002 04/29/2014				TW-3 03838-003 04/29/2014				TW-4 03838-004 04/29/2014				TW-5 03838-005 04/29/2014			
	CAS		Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Volatiles (ug/L)																						
Dichlorodifluoromethane	75-71-8	5	ND		1.00	0.720	ND		1.00	0.720	ND		1.00	0.720	ND		1.00	0.720	ND		1.00	0.720
Chloromethane	74-87-3	5	ND		1.00	0.638	ND		1.00	0.638	ND		1.00	0.638	ND		1.00	0.638	ND		1.00	0.638
Vinyl chloride	75-01-4	2	ND		1.00	0.490	ND		1.00	0.490	ND		1.00	0.490	ND		1.00	0.490	ND		1.00	0.490
Bromomethane	74-83-9	5	ND		1.00	0.602	ND		1.00	0.602	ND		1.00	0.602	ND		1.00	0.602	ND		1.00	0.602
Chloroethane	75-00-3	5	ND		1.00	0.637	ND		1.00	0.637	ND		1.00	0.637	ND		1.00	0.637	ND		1.00	0.637
Trichlorofluoromethane	75-69-4	5	ND		1.00	0.730	ND		1.00	0.730	ND		1.00	0.730	ND		1.00	0.730	ND		1.00	0.730
1,1-Dichloroethene	75-35-4	5	ND		1.00	0.568	ND		1.00	0.568	ND		1.00	0.568	ND		1.00	0.568	ND		1.00	0.568
Methylene chloride	75-09-2	5	ND		2.00	1.99	ND		2.00	1.99	ND		2.00	1.99	ND		2.00	1.99	ND		2.00	1.99
trans-1,2-Dichloroethene	156-60-5	5	ND		1.00	0.480	ND		1.00	0.480	ND		1.00	0.480	ND		1.00	0.480	ND		1.00	0.480
1,1-Dichloroethane	75-34-3	5	ND		1.00	0.457	ND		1.00	0.457	ND		1.00	0.457	ND		1.00	0.457	ND		1.00	0.457
cis-1,2-Dichloroethene	156-59-2	5	ND		1.00	0.447	1.14		1.00	0.447	4.33		1.00	0.447	1.50		1.00	0.447	5.21		1.00	0.447
Chloroform	67-66-3	7	ND		1.00	0.736	ND		1.00	0.736	ND		1.00	0.736	ND		1.00	0.736	ND		1.00	0.736
1,1,1-Trichloroethane	71-55-6	5	ND		1.00	0.528	ND		1.00	0.528	ND		1.00	0.528	ND		1.00	0.528	ND		1.00	0.528
Carbon tetrachloride	56-23-5	5	ND		1.00	0.746	ND		1.00	0.746	ND		1.00	0.746	ND		1.00	0.746	ND		1.00	0.746
1,2-Dichloroethane (EDC)	107-06-2	0.6	ND		1.00	0.393	ND		1.00	0.393	ND		1.00	0.393	ND		1.00	0.393	ND		1.00	0.393
Trichloroethene	79-01-6	5	ND		1.00	0.456	4.95		1.00	0.456	3.48		1.00	0.456	0.993	J	1.00	0.456	15.0		1.00	0.456
1,2-Dichloropropane	78-87-5	1	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491
Bromodichloromethane	75-27-4	50	ND		1.00	0.493	ND		1.00	0.493	ND		1.00	0.493	ND		1.00	0.493	ND		1.00	0.493
2-Chloroethyl vinyl ether	110-75-8	NS	ND		5.00	0.469	ND		5.00	0.469	ND		5.00	0.469	ND		5.00	0.469	ND		5.00	0.469
cis-1,3-Dichloropropene	10061-01-5	NS	ND		1.00	0.465	ND		1.00	0.465	ND		1.00	0.465	ND		1.00	0.465	ND		1.00	0.465
trans-1,3-Dichloropropene	10061-02-6	NS	ND		1.00	0.463	ND		1.00	0.463	ND		1.00	0.463	ND		1.00	0.463	ND		1.00	0.463
1,1,2-Trichloroethane	79-00-5	1	ND		1.00	0.478	ND		1.00	0.478	ND		1.00	0.478	ND		1.00	0.478	ND		1.00	0.478
Tetrachloroethene	127-18-4	5	ND		1.00	0.498	ND		1.00	0.498	ND		1.00	0.498	ND		1.00	0.498	ND		1.00	0.498
Dibromochloromethane	124-48-1	50	ND		1.00	0.409	ND		1.00	0.409	ND		1.00	0.409	ND		1.00	0.409	ND		1.00	0.409
Chlorobenzene	108-90-7	5	ND		1.00	0.546	ND		1.00	0.546	ND		1.00	0.546	ND		1.00	0.546	ND		1.00	0.546
Bromoform	75-25-2	50	ND		1.00	0.526	ND		1.00	0.526	ND		1.00	0.526	ND		1.00	0.526	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	79-34-5	5	ND		1.00	0.464	ND		1.00	0.464	ND		1.00	0.464	ND		1.00	0.464	ND		1.00	0.464
1,3-Dichlorobenzene	541-73-1	3	ND		1.00	0.471	ND		1.00	0.471	ND		1.00	0.471	ND		1.00	0.471	ND		1.00	0.471
1,4-Dichlorobenzene	106-46-7	3	ND		1.00	0.407	ND		1.00	0.407	ND		1.00	0.407	ND		1.00	0.407	ND		1.00	0.407
1,2-Dichlorobenzene	95-50-1	3	ND		1.00	0.398	ND		1.00	0.398	ND		1.00	0.398	ND		1.00	0.398	ND		1.00	0.398
TOTAL VO's:		NS	ND			NA	6.09			NA	7.81			NA	2.49	J		NA	20.2			NA

BOLD Conc Indicates a concentration that exceeds applicable criteria.

BOLD RL Indicates RL that exceeds applicable criteria.

BOLD MDL Indicates MDL that exceeds applicable criteria.

NS = No Standard Available

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds.

For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

D = The compound was reported from the Diluted analysis

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

Table 1
Ground Water Results Summary
April 29, 2014
Former Swivelier Facility
33 Route 304, Village of Nanuet, Rockland County, New York
NYSDEC Site No. 3-44-036

Sample #: Field ID: Lab ID: Date Sampled: Depth(ft):		TOGs - Table 5 Groundwater Effluent Limitations (Class GA) (ug/L)	TW-6 03838-006 04/29/2014				TW-7 03838-007 04/29/2014				TW-8 03838-008 04/29/2014				MW-10D 03838-009 04/29/2014				MW-13D 03838-010 04/29/2014			
	CAS		Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Volatiles (ug/L)																						
Dichlorodifluoromethane	75-71-8	5	ND		1.00	0.720	ND		1.00	0.720	ND		1.00	0.720	ND		20.0	14.4	ND		1.00	0.720
Chloromethane	74-87-3	5	ND		1.00	0.638	ND		1.00	0.638	ND		1.00	0.638	ND		20.0	12.8	ND		1.00	0.638
Vinyl chloride	75-01-4	2	ND		1.00	0.490	ND		1.00	0.490	ND		1.00	0.490	ND		20.0	9.80	ND		1.00	0.490
Bromomethane	74-83-9	5	ND		1.00	0.602	ND		1.00	0.602	ND		1.00	0.602	ND		20.0	12.0	ND		1.00	0.602
Chloroethane	75-00-3	5	ND		1.00	0.637	ND		1.00	0.637	ND		1.00	0.637	ND		20.0	12.7	ND		1.00	0.637
Trichlorofluoromethane	75-69-4	5	ND		1.00	0.730	ND		1.00	0.730	ND		1.00	0.730	ND		20.0	14.6	ND		1.00	0.730
1,1-Dichloroethene	75-35-4	5	ND		1.00	0.568	ND		1.00	0.568	ND		1.00	0.568	ND		20.0	11.4	ND		1.00	0.568
Methylene chloride	75-09-2	5	ND		2.00	1.99	ND		2.00	1.99	ND		2.00	1.99	ND		40.0	39.8	ND		2.00	1.99
trans-1,2-Dichloroethene	156-60-5	5	ND		1.00	0.480	ND		1.00	0.480	ND		1.00	0.480	9.60	DJ	20.0	9.60	ND		1.00	0.480
1,1-Dichloroethane	75-34-3	5	ND		1.00	0.457	ND		1.00	0.457	ND		1.00	0.457	ND		20.0	9.14	ND		1.00	0.457
cis-1,2-Dichloroethene	156-59-2	5	ND		1.00	0.447	ND		1.00	0.447	3.61		1.00	0.447	1720	D	20.0	8.94	15.2		1.00	0.447
Chloroform	67-66-3	7	ND		1.00	0.736	ND		1.00	0.736	ND		1.00	0.736	ND		20.0	14.7	ND		1.00	0.736
1,1,1-Trichloroethane	71-55-6	5	ND		1.00	0.528	ND		1.00	0.528	ND		1.00	0.528	ND		20.0	10.6	ND		1.00	0.528
Carbon tetrachloride	56-23-5	5	ND		1.00	0.746	ND		1.00	0.746	ND		1.00	0.746	ND		20.0	14.9	ND		1.00	0.746
1,2-Dichloroethane (EDC)	107-06-2	0.6	ND		1.00	0.393	ND		1.00	0.393	ND		1.00	0.393	ND		20.0	7.86	ND		1.00	0.393
Trichloroethene	79-01-6	5	ND		1.00	0.456	ND		1.00	0.456	0.480	J	1.00	0.456	3700	D	20.0	9.12	36.1		1.00	0.456
1,2-Dichloropropane	78-87-5	1	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491	ND		20.0	9.82	ND		1.00	0.491
Bromodichloromethane	75-27-4	50	ND		1.00	0.493	ND		1.00	0.493	ND		1.00	0.493	ND		20.0	9.86	ND		1.00	0.493
2-Chloroethyl vinyl ether	110-75-8	NS	ND		5.00	0.469	ND		5.00	0.469	ND		5.00	0.469	ND		100	9.38	ND		5.00	0.469
cis-1,3-Dichloropropene	10061-01-5	NS	ND		1.00	0.465	ND		1.00	0.465	ND		1.00	0.465	ND		20.0	9.30	ND		1.00	0.465
trans-1,3-Dichloropropene	10061-02-6	NS	ND		1.00	0.463	ND		1.00	0.463	ND		1.00	0.463	ND		20.0	9.26	ND		1.00	0.463
1,1,2-Trichloroethane	79-00-5	1	ND		1.00	0.478	ND		1.00	0.478	ND		1.00	0.478	ND		20.0	9.56	ND		1.00	0.478
Tetrachloroethene	127-18-4	5	ND		1.00	0.498	ND		1.00	0.498	ND		1.00	0.498	ND		20.0	9.96	ND		1.00	0.498
Dibromochloromethane	124-48-1	50	ND		1.00	0.409	ND		1.00	0.409	ND		1.00	0.409	ND		20.0	8.18	ND		1.00	0.409
Chlorobenzene	108-90-7	5	ND		1.00	0.546	ND		1.00	0.546	ND		1.00	0.546	ND		20.0	10.9	ND		1.00	0.546
Bromoform	75-25-2	50	ND		1.00	0.526	ND		1.00	0.526	ND		1.00	0.526	ND		20.0	10.5	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	79-34-5	5	ND		1.00	0.464	ND		1.00	0.464	ND		1.00	0.464	ND		20.0	9.28	ND		1.00	0.464
1,3-Dichlorobenzene	541-73-1	3	ND		1.00	0.471	ND		1.00	0.471	ND		1.00	0.471	ND		20.0	9.42	ND		1.00	0.471
1,4-Dichlorobenzene	106-46-7	3	ND		1.00	0.407	ND		1.00	0.407	ND		1.00	0.407	ND		20.0	8.14	ND		1.00	0.407
1,2-Dichlorobenzene	95-50-1	3	ND		1.00	0.398	ND		1.00	0.398	ND		1.00	0.398	ND		20.0	7.96	ND		1.00	0.398
TOTAL VO's:		NS	ND			NA	ND			NA	4.09	J		NA	5430	DJ		NA	51.3			NA

BOLD Conc Indicates a concentration that exceeds applicable criteria

BOLD RL Indicates RL that exceeds applicable criteria.

BOLD MDL Indicates MDL that exceeds applicable criteria.

NS = No Standard Available

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds.

For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

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All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

Table 1
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33 Route 304, Village of Nanuet, Rockland County, New York
NYSDEC Site No. 3-44-036

Sample #: Field ID: Lab ID: Date Sampled: Depth(ft):		TOGs - Table 5 Groundwater Effluent Limitations (Class GA) (ug/L)	MW-11D 03838-011 04/29/2014				FB Field Blank 03838-012 04/29/2014				TB Trip Blank 03838-013 04/29/2014			
	CAS		Conc	Q	RL	MDL	Conc	Q	RL	MDL	Conc	Q	RL	MDL
Volatiles (ug/L)														
Dichlorodifluoromethane	75-71-8	5	ND		1.00	0.720	ND		1.00	0.720	ND		1.00	0.720
Chloromethane	74-87-3	5	ND		1.00	0.638	ND		1.00	0.638	ND		1.00	0.638
Vinyl chloride	75-01-4	2	ND		1.00	0.490	ND		1.00	0.490	ND		1.00	0.490
Bromomethane	74-83-9	5	ND		1.00	0.602	ND		1.00	0.602	ND		1.00	0.602
Chloroethane	75-00-3	5	ND		1.00	0.637	ND		1.00	0.637	ND		1.00	0.637
Trichlorofluoromethane	75-69-4	5	ND		1.00	0.730	ND		1.00	0.730	ND		1.00	0.730
1,1-Dichloroethene	75-35-4	5	ND		1.00	0.568	ND		1.00	0.568	ND		1.00	0.568
Methylene chloride	75-09-2	5	ND		2.00	1.99	ND		2.00	1.99	ND		2.00	1.99
trans-1,2-Dichloroethene	156-60-5	5	ND		1.00	0.480	ND		1.00	0.480	ND		1.00	0.480
1,1-Dichloroethane	75-34-3	5	ND		1.00	0.457	ND		1.00	0.457	ND		1.00	0.457
cis-1,2-Dichloroethene	156-59-2	5	ND		1.00	0.447	ND		1.00	0.447	ND		1.00	0.447
Chloroform	67-66-3	7	ND		1.00	0.736	ND		1.00	0.736	ND		1.00	0.736
1,1,1-Trichloroethane	71-55-6	5	ND		1.00	0.528	ND		1.00	0.528	ND		1.00	0.528
Carbon tetrachloride	56-23-5	5	ND		1.00	0.746	ND		1.00	0.746	ND		1.00	0.746
1,2-Dichloroethane (EDC)	107-06-2	0.6	ND		1.00	0.393	ND		1.00	0.393	ND		1.00	0.393
Trichloroethene	79-01-6	5	3.37		1.00	0.456	ND		1.00	0.456	ND		1.00	0.456
1,2-Dichloropropane	78-87-5	1	ND		1.00	0.491	ND		1.00	0.491	ND		1.00	0.491
Bromodichloromethane	75-27-4	50	ND		1.00	0.493	ND		1.00	0.493	ND		1.00	0.493
2-Chloroethyl vinyl ether	110-75-8	NS	ND		5.00	0.469	ND		5.00	0.469	ND		5.00	0.469
cis-1,3-Dichloropropene	10061-01-5	NS	ND		1.00	0.465	ND		1.00	0.465	ND		1.00	0.465
trans-1,3-Dichloropropene	10061-02-6	NS	ND		1.00	0.463	ND		1.00	0.463	ND		1.00	0.463
1,1,2-Trichloroethane	79-00-5	1	ND		1.00	0.478	ND		1.00	0.478	ND		1.00	0.478
Tetrachloroethene	127-18-4	5	ND		1.00	0.498	ND		1.00	0.498	ND		1.00	0.498
Dibromochloromethane	124-48-1	50	ND		1.00	0.409	ND		1.00	0.409	ND		1.00	0.409
Chlorobenzene	108-90-7	5	ND		1.00	0.546	ND		1.00	0.546	ND		1.00	0.546
Bromoform	75-25-2	50	ND		1.00	0.526	ND		1.00	0.526	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	79-34-5	5	ND		1.00	0.464	ND		1.00	0.464	ND		1.00	0.464
1,3-Dichlorobenzene	541-73-1	3	ND		1.00	0.471	ND		1.00	0.471	ND		1.00	0.471
1,4-Dichlorobenzene	106-46-7	3	ND		1.00	0.407	ND		1.00	0.407	ND		1.00	0.407
1,2-Dichlorobenzene	95-50-1	3	ND		1.00	0.398	ND		1.00	0.398	ND		1.00	0.398
TOTAL VO's:		NS	3.37			NA	ND			NA	ND			NA

BOLD Conc Indicates a concentration that exceeds applicable criteria

BOLD RL Indicates RL that exceeds applicable criteria.

BOLD MDL Indicates MDL that exceeds applicable criteria.

NS = No Standard Available

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds.

For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

D = The compound was reported from the Diluted analysis

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

Table 2
Historic Ground Water Results Summary
Former Swivelier Site
33 Route 304, Village of Nanuet, Rockland County, New York
NYSDEC Site No. 3-44-036

	NYSDEC GWQS	5 ppb	No Standard			
Well ID	Sample Date/ Analyte	Trichloroethene (ppb)	TOTAL VO's (ppb)	Iron (ppb)	TOC (ppb)	Chloride (ppb)
MW-11D	11/19/2002	<u>617</u>	635	N/A	N/A	N/A
	9/2/2005	<u>6.86</u>	6.86	71,500	48,300	71,200
	12/21/2005	<u>10.9</u>	24.5	N/A	N/A	N/A
	8/9/2006	2.82	2.82	22,000	11,100	154,000
	3/14/2007	<u>8.72</u>	33.0	8,820	3,770	373,000
	10/16/2007	<u>25</u>	124.0	N/A	N/A	N/A
	5/5/2008	<u>5.29</u>	5.3	N/A	N/A	N/A
	10/29/2008	<u>7.62</u>	7.6	N/A	N/A	N/A
	5/14/2009	<u>6.0</u>	6.0	N/A	N/A	N/A
	11/10/2009	<u>17.0</u>	19.1	N/A	N/A	N/A
	4/29/2014	3.4	3.4	N/A	N/A	N/A
MW-12D	11/19/2002	<u>9.45</u>	9.8	N/A	N/A	N/A
	9/2/2005	ND	ND	37,200	11,100	61,200
	12/21/2005	2.09	3.68	N/A	N/A	N/A
	8/9/2006	ND	ND	31,600	27,800	78,600
	3/13/2007	1.14	9.19	28,200	7,070	240,000
	10/16/2007	ND	ND	N/A	N/A	N/A
	5/2/2008	ND	ND	N/A	N/A	N/A
	10/29/2008	ND	ND	N/A	N/A	N/A
	5/14/2009	0.587	6.09	NA	N/A	N/A
MW-13D	11/19/2002	<u>255</u>	257	N/A	N/A	N/A
	9/2/2005	<u>39.4</u>	39.4	29,700	90,600	15,600
	12/21/2005	<u>9</u>	11	N/A	N/A	N/A
	8/9/2006	<u>32.6</u>	32.6	8,520	8,080	95,100
	3/13/2007	<u>208</u>	214	10,900	3,650	177,000
	10/16/2007	<u>130</u>	219	N/A	N/A	N/A
	5/2/2008	<u>22</u>	32.6	N/A	N/A	N/A
	10/29/2008	<u>4120</u>	5250	N/A	N/A	N/A
	5/14/2009	<u>337</u>	648	N/A	N/A	N/A
	11/10/2009	<u>1.72</u>	26.1	N/A	N/A	N/A
	4/29/2014	<u>36.1</u>	51.3	N/A	N/A	N/A
MW-10D	11/19/2002	N/A	N/A	ND	ND	51,300
	9/2/2005	<u>249</u>	262	8,900	2,830	36,000
	12/21/2005	<u>14500</u>	18900	N/A	N/A	N/A
	8/9/2006	<u>131</u>	132	15,000	10,200	154,000
	3/13/2007	<u>10900</u>	11100	83,100	6,090	61,100
	10/16/2007	<u>861</u>	1090	N/A	N/A	N/A
	5/5/2008	<u>330</u>	388	N/A	N/A	N/A
	10/29/2008	<u>2920</u>	3800	N/A	N/A	N/A
	5/14/2009	<u>4260</u>	6060	N/A	N/A	N/A
	11/10/2009	<u>5000</u>	7010	N/A	N/A	N/A
	4/29/2014	<u>3700</u>	5430	N/A	N/A	N/A

Table 2
Historic Ground Water Results Summary
Former Swivelier Site
33 Route 304, Village of Nanuet, Rockland County, New York
NYSDEC Site No. 3-44-036

	NYSDEC GWQS	5 ppb	No Standard			
Well ID	Sample Date/ Analyte	Trichloroethene (ppb)	TOTAL VO's (ppb)	Iron (ppb)	TOC (ppb)	Chloride (ppb)
MW-1R	11/19/2002	N/A	N/A	ND	1,460	152,000
	9/2/2005	ND	ND	170,000	1,240	170,000
	12/21/2005	ND	N/A	N/A	N/A	N/A
	8/9/2006	ND	N/A	134	1,140	66,400
	3/13/2007	0.77	3.53	116	1,480	102,000
MW-6R	11/19/2002	N/A	N/A	N/A	N/A	N/A
	9/2/2005	ND	ND	5,110	1,980	55,000
	12/21/2005	<u>83.6</u>	106	N/A	N/A	N/A
	8/9/2006	<u>8.14</u>	9.4	25,500	3,500	93,800
	3/13/2007	<u>6.54</u>	202	17,000	10,800	195,000
MW-6I	11/19/2002	N/A	N/A	N/A	N/A	N/A
	9/2/2005	<u>54.7</u>	ND	2,890	1,950	127,000
	12/21/2005	<u>24.5</u>	238	N/A	N/A	N/A
	8/9/2006	<u>33.1</u>	49.1	2,790	6,680	169,000
	3/14/2007	1.95	10.5	1,350	2,630	3,910,000
FIELD	11/19/2002	ND	ND	N/A	N/A	N/A
	9/2/2005	ND	ND	N/A	N/A	N/A
	12/21/2005	ND	N/A	N/A	N/A	N/A
	8/9/2006	ND	N/A	N/A	N/A	N/A
	3/14/2007	ND	2.34	ND	ND	ND
	5/2/2008	ND	ND	N/A	N/A	N/A
	10/29/2008	ND	ND	N/A	N/A	N/A
	5/14/2009	ND	ND	N/A	N/A	N/A
	4/29/2014	ND	ND	N/A	N/A	N/A
TRIP	11/19/2002	ND	ND	N/A	N/A	N/A
	9/2/2005	ND	ND	N/A	N/A	N/A
	12/21/2005	N/A	N/A	N/A	N/A	N/A
	8/9/2006	N/A	N/A	N/A	N/A	N/A
	3/13/2007	ND	ND	N/A	N/A	N/A
	5/2/2008	ND	ND	N/A	N/A	N/A
	10/29/2008	ND	ND	N/A	N/A	N/A
	5/14/2009	ND	ND	N/A	N/A	N/A
	4/29/2014	ND	ND	N/A	N/A	N/A

Notes:

ND - Not Detected

NA - Not Analyzed

NYSDEC - New York State Department of Environmental Conservation

GWQS - Groundwater Quality Standards

Table 3
Exterior Soil Vapor Sample Summary
135 West Nyack Road
Village of Nanuet, Rockland County, New York
(Soil Gas Sample Adjacent to GW-2 TW-8)

Sample Name: IAL ID:		SG (Soil Gas) E14-03224-01		
Compound	CAS#	Q	ug/m3	RL ug/m3
Acetone	67-64-1	D	180	4.8
Benzene	71-43-2	D	6.7	6.4
Bromodichloromethane	75-27-4		ND	13
Bromoform	75-25-2		ND	21
Bromomethane	74-83-9		ND	7.8
1,3-Butadiene	106-99-0		ND	4.4
Chlorobenzene	108-90-7		ND	9.2
Chloroethane	75-00-3		ND	5.3
Chloroform	67-66-3		ND	9.8
Chloromethane	74-87-3		ND	4.1
Carbon disulfide	75-15-0	D	75	6.2
Carbon tetrachloride	56-23-5		ND	2.5
Cyclohexane	110-82-7		ND	6.9
Dibromochloromethane	124-48-1		ND	17
1,2-Dibromoethane	106-93-4		ND	15
1,2-Dichlorobenzene	95-50-1		ND	12
1,3-Dichlorobenzene	541-73-1		ND	12
1,4-Dichlorobenzene	106-46-7		ND	12
Dichlorodifluoromethane	75-71-8		ND	9.9
1,1-Dichloroethane	75-34-3		ND	8.1
1,2-Dichloroethane	107-06-2		ND	8.1
1,1-Dichloroethene	75-35-4		ND	7.9
1,2-Dichloroethene (cis)	156-59-2		ND	7.9
1,2-Dichloroethene (trans)	156-60-5		ND	7.9
1,2-Dichloropropane	78-87-5		ND	9.2
1,3-Dichloropropene (cis)	10061-01-5		ND	9.1
1,3-Dichloropropene (trans)	10061-02-6		ND	9.1
1,3-Dichloropropene - TOTAL	542-75-6		ND	9.1
1,2-Dichlorotetrafluoroethane	76-14-2		ND	14
1,4-Dioxane	123-91-1		ND	7.2
Ethylbenzene	100-41-4		ND	8.7
n-Heptane	142-82-5		ND	8.2
1,3-Hexachlorobutadiene	87-68-3		ND	21
n-Hexane	110-54-3	D	7.4	7.1
Methylene chloride	75-09-2		ND	7.0
Methyl ethyl ketone	78-93-3	D	6.2	5.9
Methyl isobutyl ketone	108-10-1		ND	8.2
Methyl tert-butyl ether	1634-04-4		ND	7.2
Styrene	100-42-5		ND	8.5
Tert-butyl alcohol	75-65-0		ND	6.1
1,1,2,2-Tetrachloroethane	79-34-5		ND	14
Tetrachloroethene	127-18-4		ND	14
Toluene	108-88-3	D	9.8	7.5
1,2,4-Trichlorobenzene	120-82-1		ND	15
1,1,1-Trichloroethane	71-55-6		ND	11
1,1,2-Trichloroethane	79-00-5		ND	11
Trichloroethene	79-01-6		ND	2.5
Trichlorofluoromethane	75-69-4		ND	11
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		ND	15
1,2,4-Trimethylbenzene	95-63-6		ND	9.8
1,3,5-Trimethylbenzene	108-67-8		ND	9.8
2,2,4-Trimethylpentane	540-84-1		ND	9.3
Vinyl bromide	593-60-2		ND	8.7
Vinyl chloride	75-01-4		ND	5.1
Xylenes (m&p)	179601-23-1		ND	8.7
Xylenes (o)	95-47-6		ND	8.7
Xylenes - TOTAL	1330-20-7		ND	8.7

No Exceedances over NYSDOH SVI Guidance

D = Extra dilution required for this compound

**New York State Department of Environmental Conservation Decision Matrices
from Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006**

Decision matrices are risk management tools, developed by the NYSDOH in conjunction with other agencies, to provide guidance on a case-by-case basis about actions that should be taken to address current and potential exposures related to soil vapor intrusion. The matrices are intended to be used when evaluating the results from buildings with full slab foundations.

The NYSDOH has developed two matrices to use as tools in making decisions when soil vapor may be entering buildings. The first decision matrix was originally developed for TCE and the second for PCE. As summarized in the table below (Table 3.3 in the NYSDEC VIG), four chemicals have been assigned to the two matrices to date.

Volatile chemicals and their decision matrices

Chemical	Soil Vapor/Indoor Air Matrix
Carbon tetrachloride	Matrix 1
Trichloroethene (TCE)	Matrix 1
Vinyl chloride	Matrix 1

Chemical	Soil Vapor/Indoor Air Matrix
1,1-Dichloroethene	Matrix 2
cis-1,2-Dichloroethene	Matrix 2
Tetrachloroethene (PCE)	Matrix 2
1,1,1-Trichloroethane (1,1,1-TCA)	Matrix 2

Soil Vapor/Indoor Air Matrix 1

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (µg/m3)	INDOOR AIR CONCENTRATION of COMPOUND (µg/m3)			
	< 0.25	0.25 to < 1	1 to < 5.0	5.0 and above
< 5	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposures	3. Take reasonable and practical actions to identify source(s) and reduce exposures	4. Take reasonable and practical actions to identify source(s) and reduce exposures
5 to < 50	5. No further action	6. MONITOR	7. MONITOR	8. MITIGATE
50 to < 250	9. MONITOR	10. MONITOR / MITIGATE	11. MITIGATE	12. MITIGATE
250 and above	13. MITIGATE	14. MITIGATE	15. MITIGATE	16. MITIGATE

**New York State Department of Environmental Conservation Decision Matrices
from Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006**

Soil Vapor/Indoor Air Matrix 2

SUB-SLAB VAPOR CONCENTRATION of COMPOUND (µg/m3)	INDOOR AIR CONCENTRATION of COMPOUND (µg/m3)			
	< 3	3 to < 30	30 to < 100	100 and above
< 100	1. No further action	2. Take reasonable and practical actions to identify source(s) and reduce exposures	3. Take reasonable and practical actions to identify source(s) and reduce exposures	4. Take reasonable and practical actions to identify source(s) and reduce exposures
100 to < 1,000	5. MONITOR	6. MONITOR / MITIGATE	7. MITIGATE	8. MITIGATE
1,000 and above	9. MITIGATE	10. MITIGATE	11. MITIGATE	12. MITIGATE

Guide to Matrices 1 and 2

No further action:

Given that the compound was not detected in the indoor air sample and that the concentration detected in the sub-slab vapor sample is not expected to significantly affect indoor air quality, no additional actions are needed to address human exposures.

Take reasonable and practical actions to identify source(s) and reduce exposures:

The concentration detected in the indoor air sample is likely due to indoor and/or outdoor sources rather than soil vapor intrusion given the concentration detected in the sub-slab vapor sample. Therefore, steps should be taken to identify potential source(s) and to reduce exposures accordingly (e.g., by keeping containers tightly capped or by storing volatile organic compound-containing products in places where people do not spend much time, such as a garage or outdoor shed). Resampling may be recommended to demonstrate the effectiveness of actions taken to reduce exposures.

MONITOR:

Monitoring, including sub-slab vapor, basement air, lowest occupied living space air, and outdoor air sampling, is needed to determine whether concentrations in the indoor air or sub-slab vapor have changed. Monitoring may also be needed to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined on a site-specific and building-specific basis, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

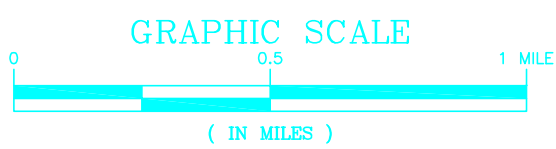
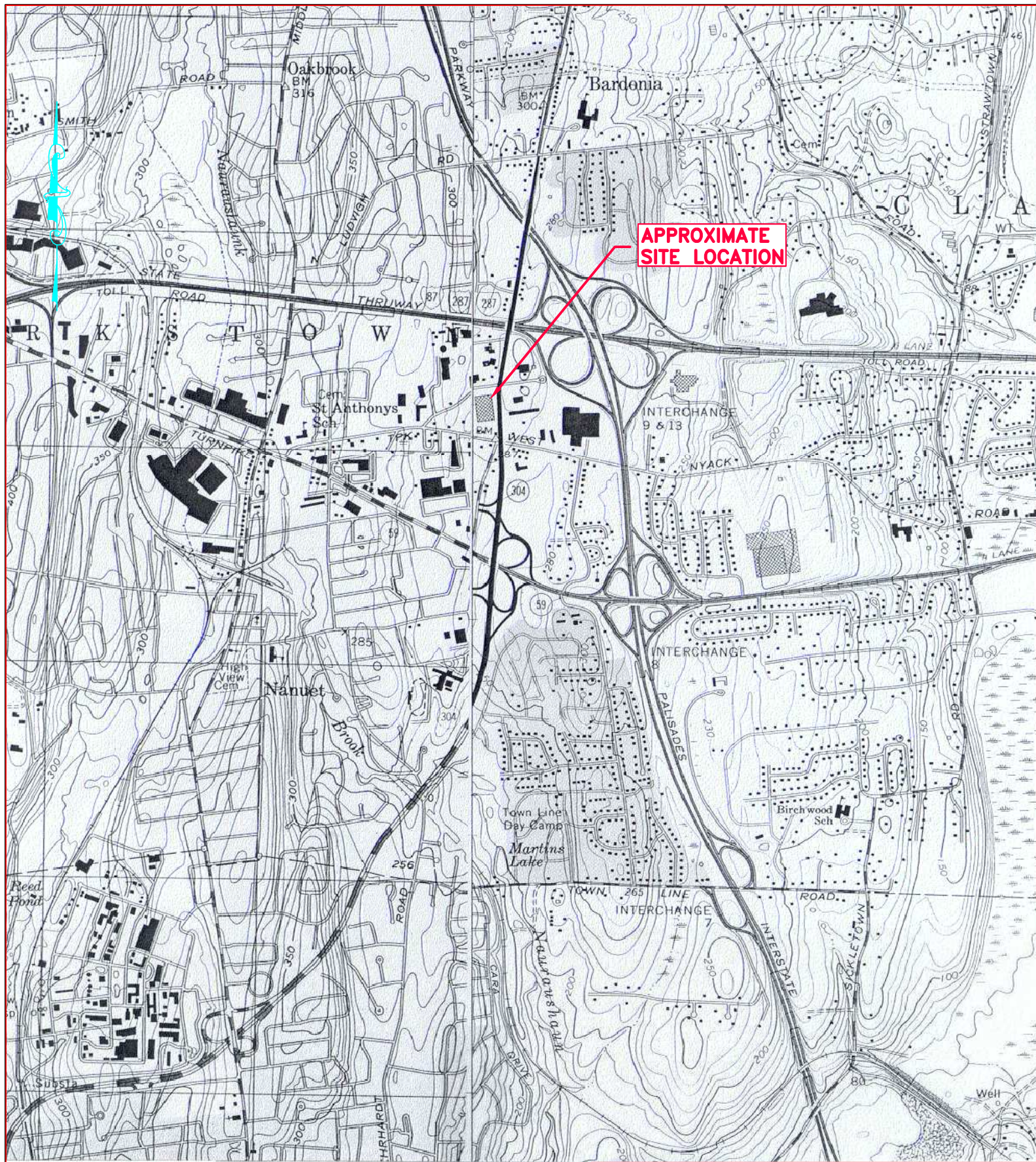
MITIGATE:

Mitigation is needed to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system, and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

MONITOR / MITIGATE:

Monitoring or mitigation may be recommended after considering the magnitude of sub-slab vapor and indoor air concentrations along with building- and site specific conditions.

FIGURES



SOURCE:
USGS PARK RIDGE, N.J.-N.Y. AND NYACK, N.Y. 7.5 MIN QUADS.

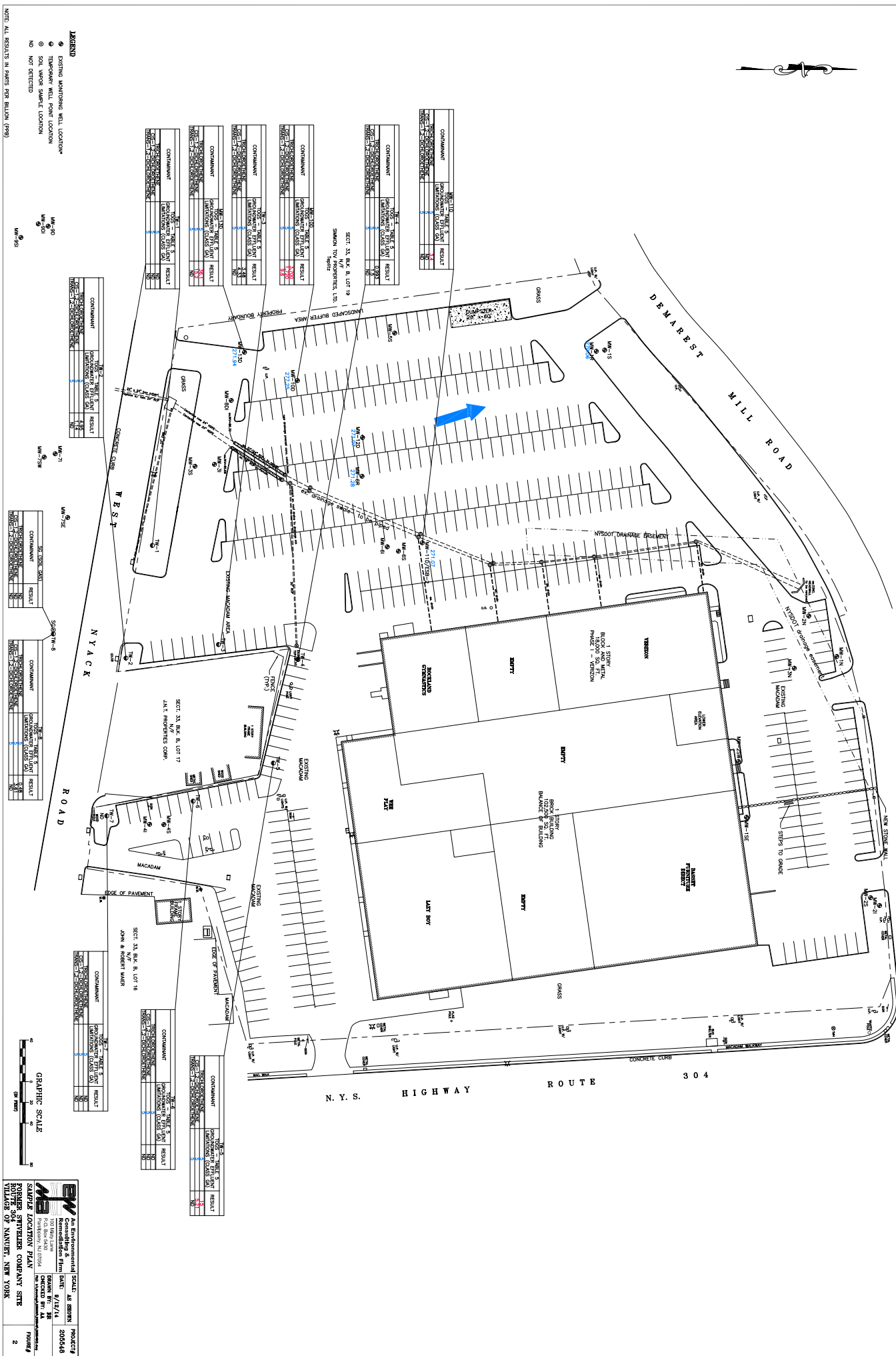
Environmental Waste Management Associates, LLC
P.O. Box 5430
Parsippany, NJ 07054
Tel: (973) 560-1400



SCALE: 1" = 2,000'	PROJECT# 202530
DATE: 6/18/02	
DRAWN BY: DW	
CHECKED BY: AM	
FILE: k:\drawings\202000\202530\2025301.dwg	

SITE LOCATION
FORMER SWIVELIER COMPANY SITE
33 ROUTE 304
VILLAGE OF NANUET, NY

FIGURE#
1



Appendix 1

New York State Department of Environmental Conservation

Division of Environmental Remediation

Remedial Bureau C, 11th Floor

625 Broadway, Albany, New York 12233-7014

Phone: (518) 402-9662 • **Fax:** (518) 402-9679

Website: www.dec.ny.gov



Joe Martens
Commissioner

November 25, 2013

Via Certified Mail & E-Mail

Mr. Patrick, MaGee Partner
MBC Contractors Inc.
P.O. Box 54
Stony Point, New York 10980

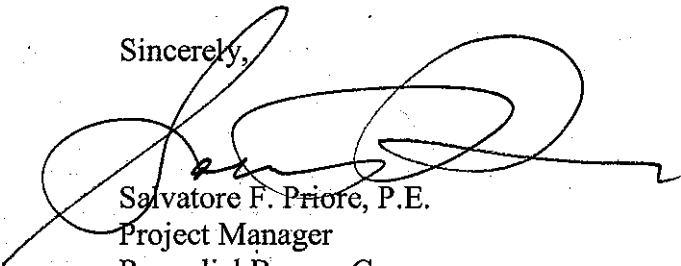
Mr. Alfred Moffit, Project Manager
Environmental Waste Management Associates, LLC
100 Misty Lane
P.O. Box 5430
Parsippany, New Jersey 07054

RE: Former Swivelier Company Site, Site # V00520-3
33 Route 304, Village of Nanuet, Rockland County
Long Term Groundwater Monitoring Program and Revised Work Plan

Dear Mr. MaGee and Mr. Moffit:

The New York State Department of Environmental Conservation (Department) in consultation with the New York State Department of Health has reviewed the above referenced work plan addendum dated November 25, 2013, submitted in response to the Department's November 21st 2013 letter. As was discussed with Mr. Alfred Moffit on November 21, 2013, and in receipt of the revised modifications requested, the Department is hereby approving this work plan for implementation. The Department requires that this program be implemented within thirty (30) days of the approval date of this work plan. If you have any questions or concerns, please contact me at (518) 402-9662 or by e-mail at sfpriore@gw.dec.state.ny.us.

Sincerely,



Salvatore F. Priore, P.E.

Project Manager

Remedial Bureau C

Division of Environmental Remediation

Appendix 2

MONITORING WELL PURGE RECORD - April 29, 2014

SITE NAME: Former Swivilier Property
Location: Village of Nanuet, NY
Job No.: 205548
Sampling Date: 4/29/2014
Personnel: Joe B, Dan M
Weather Condition: 50 degrees, rain

Well No.:	MW 13D	MW-10	MW-11D
Depth of Well (feet):	110	80	110
Well Diameter (inches):	6	4	6
PRE - PURGE DATA			
PID/FID (ppm):	NT	77.9	0.1
Depth to Product (feet):	NT	NT	12.13
Depth to Water (feet):	10.98	6.51	110.00
Volume in Well (gal):	145.46	47.99	143.77
Product Thickness (feet):			
Purge Start Time:	10:15	8:05	12:55
Purge Rate (gal/min):	3.0	1.3	3.0
Purge Method:	redi-flow	redi-flow	redi-flow
pH:	7.76	6.62	8.55
Specific Conductivity (µS):	0.799	0.899	2.78
Dissolved Oxygen (mg/l):	6.47	25.93	3.39
Temperature (°C):	12.52	12.37	12.9
POST PURGE DATA:			
Purge Stop Time:	12:41	10:01	15:19
Total Volume Purged (gal):	436.38	143.97	431.31
Depth to Water (feet):	24.75	56.12	28.30
pH:	7.11	7.12	8.8
Specific Conductivity (µS):	0.802	0.74	1.13
Dissolved Oxygen (mg/l):	5.54	24.23	11.11
Temperature (°C):	12.3	13.6	13.5
PRE-SAMPLING DATA:			
Depth To Water (feet):	12.66	38.97	14.12
POST-SAMPLING DATA:			
Time of Sampling:	13:15	14:00	16:00
Sampling Method:	bailer	bailer	bailer
pH:	9	8.24	9.12
Specific Conductivity (µS):	0.701	0.084	0.48
Dissolved Oxygen (mg/l):	10.1	14.65	6.65
Temperature (°C):	12.6	12.88	12.7

COMMENTS:

ND = Not Detected

Bailer = The sampling device used was a disposable, dedicated, polyethylene bailer.

NT = Not Tested

NS - Not Sampled

Appendix 3



ANALYTICAL DATA REPORT

Environmental Waste Management Associates, LLC.
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054

Project Name: **SWIVELIER - 205548**
IAL Case Number: **E14-03838**

These data have been reviewed and accepted by:

A handwritten signature in black ink, appearing to read "Michael H. Leftin". The signature is written in a cursive, flowing style.

Michael H. Leftin, Ph.D.
Laboratory Director

This report shall not be reproduced, except in its entirety, without the written consent of Integrated Analytical Laboratories, LLC. The test results included in this report relate only to the samples analyzed. The results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.



Sample Summary

IAL Case No.

E14-03838

Client EWMA - HQ

Project SWIVELIER - 205548

Received On 4/30/2014@16:22

<u>Lab ID</u>	<u>Client Sample ID</u>	<u>Depth Top/Bottom</u>	<u>Sampling Time</u>	<u>Matrix</u>	<u># of Container</u>
03838-001	TW-1	n/a	4/29/2014@10:20	Aqueous	4
03838-002	TW-2	n/a	4/29/2014@10:29	Aqueous	4
03838-003	TW-3	n/a	4/29/2014@10:35	Aqueous	4
03838-004	TW-4	n/a	4/29/2014@10:41	Aqueous	4
03838-005	TW-5	n/a	4/29/2014@10:47	Aqueous	4
03838-006	TW-6	n/a	4/29/2014@10:51	Aqueous	4
03838-007	TW-7	n/a	4/29/2014@10:56	Aqueous	4
03838-008	TW-8	n/a	4/29/2014@14:30	Aqueous	4
03838-009	MW-10D	n/a	4/29/2014@14:00	Aqueous	4
03838-010	MW-13D	n/a	4/29/2014@13:15	Aqueous	4
03838-011	MW-11D	n/a	4/29/2014@16:00	Aqueous	4
03838-012	FB	n/a	4/29/2014@12:00	Aqueous	4
03838-013	TB	n/a	4/29/2014	Aqueous	4

INTEGRATED ANALYTICAL LABORATORIES, LLC.

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This report was finalized on May 16, 2014

INTEGRATED ANALYTICAL LABORATORIES, LLC

CASE NARRATIVE

IAL SDG No.: E14-03838

Sample Received Date: 4/30/2014@16:22

Samples were received in good condition with documentation in order.

Cooler temperature was acceptable at 4°C

Client ID	Sample Date	IAL Lab No.	Analysis/Method
TW-1	4/29/2014	03838-001	VO(8260C)
TW-2	4/29/2014	03838-002	VO(8260C)
TW-3	4/29/2014	03838-003	VO(8260C)
TW-4	4/29/2014	03838-004	VO(8260C)
TW-5	4/29/2014	03838-005	VO(8260C)
TW-6	4/29/2014	03838-006	VO(8260C)
TW-7	4/29/2014	03838-007	VO(8260C)
TW-8	4/29/2014	03838-008	VO(8260C)
MW-10D	4/29/2014	03838-009	VO(8260C)
MW-13D	4/29/2014	03838-010	VO(8260C)
MW-11D	4/29/2014	03838-011	VO(8260C)
FB	4/29/2014	03838-012	VO(8260C)
TB	4/29/2014	03838-013	VO(8260C)

Except as noted below, all method specific requirements and QA/QC criteria were met.

Volatile Analysis (8260C):

Sample 03838-009 was analyzed at a 20x dilution due to high concentration of target analytes.

INTEGRATED ANALYTICAL LABORATORIES, LLC.

DEFINITIONS / QUALIFIERS

DATA QUALIFIERS

- B** Indicates the analyte was found in the associated method blank as well as in the sample. It indicates probable laboratory contamination.
- C** Indicates analyte is a common laboratory contaminant.
- D** Indicates analyte was reported from diluted analysis.
- E** Identifies a compound concentration that exceeds the upper level of the calibration range of the instrument.
- J** Indicates an estimated value. This flag is used when the concentration in the sample is below the RL but above the MDL or for qualification of tentatively identified compounds.
- N** Presumptive evidence of a compound from the use of GC/MS library search.
- X** Indicates samples analyzed for total and dissolved metals differ at $\leq 20\%$ RPD.
- Z** Indicates internal standard failure. Sample results are either biased high or biased low.

REPORTING DEFINITIONS

- RL** Reporting Limit. The RL is determined by the lowest concentration in the calibration curve. For most Wet Chemistry methods, the RL is defined by using the PQL.
- MDL** Method Detection Limit as determined according to 40CFR Part 136 Appendix B.
- PQL** Practical Quantitation Limit. Usually defined as a value 3-5 times the MDL.
- ND** Indicates analyte was analyzed for but not detected above the MDL.
- DF** Dilution Factor
- LCS** Laboratory Control Sample
- LCSD** Laboratory Control Sample Duplicate
- MS** Matrix Spike
- MSD** Matrix Spike Duplicate
- DUP** Duplicate

SAMPLE TRACKING

SAMPLE INFORMATION

Carrier (check one):	IAL Courier	Client Courier	FedEx/UPS
	Signature/Company <i>[Signature]</i>	Date 4/30/14	Time 15:30
Relinquished by:	<i>[Signature]</i>	Received by: <i>[Signature]</i>	Date 4/30/14
Relinquished by:	<i>[Signature]</i>	Received by: <i>[Signature]</i>	Time 16:22
Relinquished by:		Received by:	
Relinquished by:		Received by:	
Relinquished by:		Received by:	

Comments:
Any Questions Please
Call Al Moffitt

Lab Case #
3839

PAGE: 1 of 2

CUSTOMER INFO

Company: EWMA-P
Address:
Telephone #:
Fax #:
Project Manager: Al Moffit
EMAIL Address:
Sampled by: Joe B + Dan M.
Project Name: Swivelier
Project Location (State): NY
Bottle Order #: Proj # 205548
COMPLETED BY IAL

REPORTING INFO

REPORT TO:
Address:
Attn: Same
FAX #
INVOICE TO:
Address:
Attn: Same
PO #
Quote #

SAMPLE INFORMATION

Client ID	Depth (ft only)	Sampling		Matrix	# containers	IAL #
		Date	Time			
TW-8		4-29-14	1430	AQ	4	8
MW-10D			1400		1	9
MW-13D			1315		1	10
MW-11D			1600		1	11
FB			1200		1	12
TB			0700		1	13

Known Hazard: Yes or No
Conc. Expected: Low Med High

Sample Matrix

DW - Drinking Water AQ - Aqueous WW - Waste Water OI - Oil
LIQ - Liquid (Specify) S - Soil SL - Sludge SOL - Solid W - Wipe

Please print legibly and fill out completely. Samples cannot be processed and the turnaround time will not start until any ambiguities have been resolved. Turnaround Time starts the following day if samples rec'd at lab > 5PM

*Lab notification is required for RUSH TAT prior to sample arrival. RUSH TAT IS NOT GUARANTEED WITHOUT LAB APPROVAL. **RUSH SURCHARGES WILL APPLY IF ABLE TO ACCOMMODATE

Rush TAT Charge **	Report Format	EDDs
24 hr - 100% ...	NJ Results Only	NJ SRP format
48 hr - 75% ...	NJ Cat A	NYSDEC
72 hr - 50% ...	NJ Reduced	lab approved custom EDD
96 hr - 35% ...	NJ Regulatory	
5 day - 25% ...	NJ Cat B	
6-9 day 10%	15% Surcharge applies	
	Other (describe)	NO EDD/CD REQ'D

Verbal/Fax: Std 2 wk unless otherwise specified.
24 hr** 48 hr** 72 hr** 96 hr** 1 wk**
Other** (specify): std
Hard Copy: Std 3 week * std Other - call for price

Cooler Temp 4 °C

ANALYTICAL PARAMETERS

# BOTTLES & PRESERVATIVES	
Parameter	Preservative
HCL	
HNO3	
H2SO4	
NaOH	
Other	
None	
Reagent	

MDL Req: NJ GWQS NJ IGW NJ SRS

NV TOGS NV CP51 NV Part 375 Restricted NV Part 375 Unrestricted

Other (specify):

Carrier (check one): IAL Courier Client Courier FedEx/UPS

Relinquished by:	Signature/Company	Date	Time	Received by:	Signature/Company	Date	Time
Relinquished by:	<u>Joe B + Dan M.</u>	4/30/14	15:30	Received by:	<u>Al Moffit</u>	4/30/14	15:30
Relinquished by:	<u>Joe B + Dan M.</u>	4/30/14	16:30	Received by:	<u>Al Moffit</u>	4/30/14	16:30
Relinquished by:				Received by:			
Relinquished by:				Received by:			
Relinquished by:				Received by:			

Lab Case #

3830

PAGE: 2 of 2

PROJECT INFORMATION

E14-03838: SWIVELIER - 205548

To: Al Moffit
EWMA - HQ
Fax: 1(973) 560-0400
EMail: Al.Moffit@ewma.com

Report To

EWMA - HQ
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054
Attn: Al Moffit

Bill To

EWMA - HQ
Lanidex Center
100 Misty Lane
Parsippany, NJ 07054
Attn: Al Moffit

Report Format	P.O. #	Received At Lab	TPHC Due	Verbal Due	Hardcopy Due
Category B		Apr 30, 2014 @ 16:22	NA	May 14, 2014	May 21, 2014 *

* Any *Conditional or Hold* status will delay final hardcopy report sent date.

Diskette Req. Not Required

**** QC Requirement (must meet):** NY TOGS Tbl5 (GWEL)

Lab ID	Client Sample ID	Depth	Sampling Time	Matrix	Unit	Field pH/Temp
03838-001	TW-1	NA	04/29/14@10:20	Aqueous	ug/L (ppb)	
03838-002	TW-2	NA	04/29/14@10:29	Aqueous	ug/L (ppb)	
03838-003	TW-3	NA	04/29/14@10:35	Aqueous	ug/L (ppb)	
03838-004	TW-4	NA	04/29/14@10:41	Aqueous	ug/L (ppb)	
03838-005	TW-5	NA	04/29/14@10:47	Aqueous	ug/L (ppb)	
03838-006	TW-6	NA	04/29/14@10:51	Aqueous	ug/L (ppb)	
03838-007	TW-7	NA	04/29/14@10:56	Aqueous	ug/L (ppb)	
03838-008	TW-8	NA	04/29/14@14:30	Aqueous	ug/L (ppb)	
03838-009	MW-10D	NA	04/29/14@14:00	Aqueous	ug/L (ppb)	
03838-010	MW-13D	NA	04/29/14@13:15	Aqueous	ug/L (ppb)	
03838-011	MW-11D	NA	04/29/14@16:00	Aqueous	ug/L (ppb)	
03838-012	FB	NA	04/29/14@12:00	Aqueous	ug/L (ppb)	
03838-013	TB	NA	04/29/14	Aqueous	ug/L (ppb)	

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
001	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
002	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
003	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
004	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
005	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014

PROJECT INFORMATION

E14-03838: SWIVELIER - 205548

Sample #	Test	Status	QA Method	TAT	Holding Time Expires
006	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
007	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
008	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
009	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
010	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
011	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
012	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014
013	601 List Volatiles	Analyze	8260C	STD/2 WKS	5/13/2014
	Low Level TCL VO for 8260+8011 + 15	Cancel	8260C/8011	STD/2 WKS	5/13/2014

Project Notes:

NOTE 1 taken by Ellen on 05/01/2014 09:07

AS PER AL M., RUN FOR TCL VO+15 W/ 8011. NEED NY TOGS GW MDL REQUIREMENTS & CATEGORY B DELIVERABLES.

REV 1 taken by Ellen on 05/01/2014 04:05

AS PER AL M., DO NOT NEED TCL W/ 8011. NEED 601 LIST VOLATILES.

INTEGRATED ANALYTICAL LABORATORIES, LLC

SAMPLE RECEIPT VERIFICATION

CASE NO: **E 14**

03838

CLIENT:

EWMA-P

COOLER TEMPERATURE: 2° - 6°C: ☒

(See Chain of Custody)

Comments

COC: COMPLETE / INCOMPLETE

KEY

☒ = YES/NA

☒ = NO

VOA received: ☐ Encore

☐ IGW - Methanol

(check one) ☐ Terra Core

☐ No Preservative

- ☒ Bottles Intact
- ☒ no-Missing Bottles
- ☒ no-Extra Bottles

- ☒ Sufficient Sample Volume
- ☒ no-headspace/bubbles in VO's
- ☒ Labels intact/correct
- ☒ pH Check (exclude VO's)¹
- ☒ Correct bottles/preservative
- ☒ Sufficient Holding/Prep Time¹

☐ Multiphasic Sample

☐ Sample to be Subcontracted

☒ Chain of Custody is Clear

¹ All samples with "Analyze Immediately" holding times will be analyzed by this laboratory past the holding time. This includes but is not limited to the following tests: pH, Temperature, Free Residual Chlorine, Total Residual Chlorine, Dissolved Oxygen, Sulfite.

ADDITIONAL COMMENTS:

SAMPLE(S) VERIFIED BY:

INITIAL

EA

DATE

4-30-14

CORRECTIVE ACTION REQUIRED:

YES

☐

(SEE BELOW)

NO

☒

If COC is **NOT** clear, **STOP** until you get client to authorize/clarify work.

CLIENT NOTIFIED:

YES

☐

Date/ Time:

NO

☐

PROJECT CONTACT:

SUBCONTRACTED LAB:

DATE SHIPPED:

ADDITIONAL COMMENTS:

VERIFIED/TAKEN BY:

INITIAL

KJ

DATE

5/1/14

Laboratory Custody Chronicle

IAL Case No.

E14-03838

Client EWMA - HQ

Project SWIVELIER - 205548

Received On 4/30/2014@16:22

Department: Volatiles

601 List Volatiles

			<u>Prep. Date</u>	<u>Analyst</u>	<u>Analysis Date</u>	<u>Analyst</u>
"	03838-001	Aqueous	n/a	n/a	5/ 6/14	Barbara
"	-002	"	n/a	n/a	5/ 6/14	Barbara
"	-003	"	n/a	n/a	5/ 6/14	Barbara
"	-004	"	n/a	n/a	5/ 6/14	Barbara
"	-005	"	n/a	n/a	5/ 6/14	Barbara
"	-006	"	n/a	n/a	5/ 6/14	Barbara
"	-007	"	n/a	n/a	5/ 6/14	Barbara
"	-008	"	n/a	n/a	5/ 6/14	Barbara
"	-009	"	n/a	n/a	5/ 6/14	Barbara
"	-010	"	n/a	n/a	5/ 6/14	Barbara
"	-011	"	n/a	n/a	5/ 6/14	Barbara
"	-012	"	n/a	n/a	5/ 6/14	Barbara
"	-013	"	n/a	n/a	5/ 6/14	Barbara

RESULTS SUMMARY REPORT

INTEGRATED ANALYTICAL LABORATORIES, LLC.

SUMMARY REPORT

Client: Environmental Waste Management Associates, LLC.

Project: SWIVELIER - 205548

Lab Case No.: E14-03838

Lab ID:	03838-001	03838-002	03838-003	03838-004
Client ID:	TW-1	TW-2	TW-3	TW-4
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous
Sampled Date	4/29/14	4/29/14	4/29/14	4/29/14
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Volatiles (Units)	(ug/L)			(ug/L)
cis-1,2-Dichloroethene	ND	0.447	1.14 0.447	4.33 0.447
Trichloroethene	ND	0.456	4.95 0.456	3.48 0.456
TOTAL VO's:	ND	6.09	7.81	2.49 J
Lab ID:	03838-005	03838-006	03838-007	03838-008
Client ID:	TW-5	TW-6	TW-7	TW-8
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous
Sampled Date	4/29/14	4/29/14	4/29/14	4/29/14
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Volatiles (Units)	(ug/L)			(ug/L)
cis-1,2-Dichloroethene	5.21	0.447	ND 0.447	3.61 0.447
Trichloroethene	15.0	0.456	ND 0.456	0.480 J 0.456
TOTAL VO's:	20.2	ND	ND	4.09 J
Lab ID:	03838-009	03838-010	03838-011	03838-012
Client ID:	MW-10D	MW-13D	MW-11D	FB
Matrix:	Aqueous	Aqueous	Aqueous	Aqueous
Sampled Date	4/29/14	4/29/14	4/29/14	4/29/14
PARAMETER(Units)	Conc Q MDL	Conc Q MDL	Conc Q MDL	Conc Q MDL
Volatiles (Units)	(ug/L)			(ug/L)
trans-1,2-Dichloroethene	9.60 DJ 9.60	ND 0.480	ND 0.480	ND 0.480
cis-1,2-Dichloroethene	1720 D 8.94	15.2 0.447	ND 0.447	ND 0.447
Trichloroethene	3700 D 9.12	36.1 0.456	3.37 0.456	ND 0.456
TOTAL VO's:	5430 DJ	51.3	3.37	ND
Lab ID:	03838-013			
Client ID:	TB			
Matrix:	Aqueous			
Sampled Date	4/29/14			
PARAMETER(Units)	Conc Q MDL			
Volatiles (Units)	(ug/L)			
TOTAL VO's:	ND			

ND = Analyzed for but Not Detected at the MDL

J = Concentration detected at a value below the RL and above the MDL for target compounds. For non-target compounds (i.e. TICs), qualifier indicates estimated concentrations.

D = The compound was reported from the Diluted analysis

All qualifiers on individual Volatiles & Semivolatiles are carried down through summation.

ANALYTICAL RESULTS

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-001
 Client ID: TW-1
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4174.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	ND		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	ND		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 0

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-002
 Client ID: TW-2
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4175.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	1.14		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	4.95		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 6.09

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-003
 Client ID: TW-3
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4176.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	4.33		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	3.48		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 7.81

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-004
 Client ID: TW-4
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4177.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	1.50		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	0.993	J	1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398
Total Target Compounds (30):	2.49	J		

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-005
 Client ID: TW-5
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4178.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	5.21		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	15.0		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 20.2

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-006
 Client ID: TW-6
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4179.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	ND		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	ND		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 0

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-007
 Client ID: TW-7
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4180.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	ND		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	ND		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 0

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-008
 Client ID: TW-8
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4181.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	3.61		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	0.480	J	1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398
Total Target Compounds (30):	4.09	J		

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-009
 Client ID: MW-10D
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4187.D

GC/MS Column: DB-624
 Sample wt/vol: 0.25mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 20
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		20.0	14.4
Chloromethane	ND		20.0	12.8
Vinyl chloride	ND		20.0	9.80
Bromomethane	ND		20.0	12.0
Chloroethane	ND		20.0	12.7
Trichlorofluoromethane	ND		20.0	14.6
1,1-Dichloroethene	ND		20.0	11.4
Methylene chloride	ND		40.0	39.8
trans-1,2-Dichloroethene	9.60	DJ	20.0	9.60
1,1-Dichloroethane	ND		20.0	9.14
cis-1,2-Dichloroethene	1720	D	20.0	8.94
Chloroform	ND		20.0	14.7
1,1,1-Trichloroethane	ND		20.0	10.6
Carbon tetrachloride	ND		20.0	14.9
1,2-Dichloroethane (EDC)	ND		20.0	7.86
Trichloroethene	3700	D	20.0	9.12
1,2-Dichloropropane	ND		20.0	9.82
Bromodichloromethane	ND		20.0	9.86
2-Chloroethyl vinyl ether	ND		100	9.38
cis-1,3-Dichloropropene	ND		20.0	9.30
trans-1,3-Dichloropropene	ND		20.0	9.26
1,1,2-Trichloroethane	ND		20.0	9.56
Tetrachloroethene	ND		20.0	9.96
Dibromochloromethane	ND		20.0	8.18
Chlorobenzene	ND		20.0	10.9
Bromoform	ND		20.0	10.5
1,1,2,2-Tetrachloroethane	ND		20.0	9.28
1,3-Dichlorobenzene	ND		20.0	9.42
1,4-Dichlorobenzene	ND		20.0	8.14
1,2-Dichlorobenzene	ND		20.0	7.96
Total Target Compounds (30):	5430	DJ		

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-010
 Client ID: MW-13D
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4183.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	15.2		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	36.1		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 51.3

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-011
 Client ID: MW-11D
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4184.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	ND		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	3.37		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 3.37

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-012
 Client ID: FB
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4185.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	ND		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	ND		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 0

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: 03838-013
 Client ID: TB
 Date Received: 04/30/2014
 Date Analyzed: 05/06/2014
 Data file: K4186.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	ND		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	ND		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 0

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

VOLATILE ORGANICS

VOLATILE ORGANICS QC SUMMARY

VOLATILE SURROGATE PERCENT RECOVERY SUMMARY

Date Analyzed: 05/06/2014

Lab Sample ID	Matrix	File ID	SMC1 #	SMC2 #	SMC3 #
BLKA140505b	AQUEOUS	K4169.D	108	99	98
LCSA140505b	AQUEOUS	K4170.D	105	100	103
03838-007MS	AQUEOUS	K4171.D	104	101	100
03838-007MSD	AQUEOUS	K4172.D	102	100	101
03838-001	AQUEOUS	K4174.D	105	99	98
03838-002	AQUEOUS	K4175.D	105	100	98
03838-003	AQUEOUS	K4176.D	106	100	98
03838-004	AQUEOUS	K4177.D	105	100	99
03838-005	AQUEOUS	K4178.D	104	99	97
03838-006	AQUEOUS	K4179.D	106	100	98
03838-007	AQUEOUS	K4180.D	106	100	98
03838-008	AQUEOUS	K4181.D	104	100	99
03838-010	AQUEOUS	K4183.D	106	102	98
03838-011	AQUEOUS	K4184.D	106	99	98
03838-012	AQUEOUS	K4185.D	107	99	98
03838-013	AQUEOUS	K4186.D	110	99	97
03838-009	AQUEOUS	K4187.D	110	100	99

	Concentration	Leachate Aqueous/Meoh	Soil
SMC1 = 1,2-Dichloroethane-d4	50 ppb	59-138	43-133
SMC2 = Toluene-d8	50 ppb	40-133	39-137
SMC3 = Bromofluorobenzene	50 ppb	42-152	45-145

Column to be used to flag recovery values

INTEGRATED ANALYTICAL LABORATORIES

8260

LCS ACCURACY REPORT

Lab ID: LCSA140505b
Date Received: NA
Date Analyzed: 05/06/2014
LCS Data file: K4170.D

GC/MS Column: DB-624
Sample wt/vol: 5mL
Matrix-Units: Aqueous-µg/L
% Moisture: 100
Dilution Factor: 1

Compound	Conc. Add	Blank	LCS Conc.	%Rec.
Dichlorodifluoromethane	50.0	0.0	49.2	98
Chloromethane	50.0	0.0	54.0	108
Vinyl chloride	50.0	0.0	55.5	111
Bromomethane	50.0	0.0	52.8	106
Chloroethane	50.0	0.0	53.7	107
Trichlorofluoromethane	50.0	0.0	52.3	105
Acrolein	150	0.0	138.8	93
1,1-Dichloroethene	50.0	0.0	50.6	101
Acetone	50.0	0.0	50.5	101
Carbon disulfide	50.0	0.0	52.2	104
Vinyl acetate	50.0	0.0	47.8	96
Methylene chloride	50.0	0.0	50.0	100
Acrylonitrile	150.0	0.0	159.9	107
tert-Butyl alcohol (TBA)	100.0	0.0	104.3	104
trans-1,2-Dichloroethene	50.0	0.0	51.1	102
Methyl tert-butyl ether (MTBE)	50.0	0.0	49.6	99
1,1-Dichloroethane	50.0	0.0	51.6	103
Diisopropyl ether (DIPE)	50.0	0.0	51.5	103
cis-1,2-Dichloroethene	50.0	0.0	51.8	104
2,2-Dichloropropane	50.0	0.0	38.1	76
2-Butanone (MEK)	50.0	0.0	46.5	93
Bromochloromethane	50.0	0.0	52.9	106
Chloroform	50.0	0.0	52.0	104
1,1,1-Trichloroethane	50.0	0.0	51.7	103
Carbon tetrachloride	50.0	0.0	51.4	103
1,1-Dichloropropene	50.0	0.0	49.9	100
1,2-Dichloroethane (EDC)	50.0	0.0	53.1	106
Benzene	50.0	0.0	50.3	101
Trichloroethene	50.0	0.0	50.4	101
1,2-Dichloropropane	50.0	0.0	50.1	100
Dibromomethane	50.0	0.0	52.7	105
1,4-Dioxane	1500	0.0	1460	97
Bromodichloromethane	50.0	0.0	52.1	104
2-Chloroethyl vinyl ether	50.0	0.0	51.1	102
cis-1,3-Dichloropropene	50.0	0.0	49.9	100
4-Methyl-2-pentanone (MIBK)	50.0	0.0	54.4	109
Toluene	50.0	0.0	49.3	99
trans-1,3-Dichloropropene	50.0	0.0	50.5	101
1,1,2-Trichloroethane	50.0	0.0	51.7	103
Tetrachloroethene	50.0	0.0	45.9	92
1,3-Dichloropropane	50.0	0.0	52.6	105

INTEGRATED ANALYTICAL LABORATORIES

LCS ACCURACY REPORT

Lab ID: LCSA140505b
 Date Received: NA
 Date Analyzed: 05/06/2014
 LCS Data file: K4170.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 % Moisture: 100
 Dilution Factor: 1

Compound	Conc. Add	Blank	MS Conc.	%Rec.
2-Hexanone	50.0	0.0	48.5	97
Dibromochloromethane	50.0	0.0	53.2	106
1,2-Dibromoethane (EDB)	50.0	0.0	53.0	106
Chlorobenzene	50.0	0.0	48.8	98
1,1,1,2-Tetrachloroethane	50.0	0.0	50.3	101
Ethylbenzene	50.0	0.0	49.1	98
m,p-Xylene	100.0	0.0	98.1	98
o-Xylene	50.0	0.0	49.9	100
Styrene	50.0	0.0	53.4	107
Bromoform	50.0	0.0	53.0	106
Isopropylbenzene	50.0	0.0	49.2	98
1,1,2,2-Tetrachloroethane	50.0	0.0	50.2	100
Bromobenzene	50.0	0.0	50.4	101
1,2,3-Trichloropropane	50.0	0.0	52.8	106
n-Propylbenzene	50.0	0.0	48.9	98
2-Chlorotoluene	50.0	0.0	49.3	99
1,3,5-Trimethylbenzene	50.0	0.0	49.8	100
4-Chlorotoluene	50.0	0.0	49.1	98
tert-Butylbenzene	50.0	0.0	48.9	98
1,2,4-Trimethylbenzene	50.0	0.0	49.8	100
sec-Butylbenzene	50.0	0.0	48.6	97
1,3-Dichlorobenzene	50.0	0.0	48.9	98
4-Isopropyltoluene	50.0	0.0	48.5	97
1,4-Dichlorobenzene	50.0	0.0	49.3	99
n-Butylbenzene	50.0	0.0	48.5	97
1,2-Dichlorobenzene	50.0	0.0	50.4	101
1,2-Dibromo-3-chloropropane	50.0	0.0	55.8	112
1,2,4-Trichlorobenzene	50.0	0.0	48.8	98
Hexachlorobutadiene	50.0	0.0	44.9	90
Naphthalene	50.0	0.0	55.5	111
1,2,3-Trichlorobenzene	50.0	0.0	49.6	99
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	50.6	101
Methyl acetate	50.0	0.0	53.5	107
Cyclohexane	50.0	0.0	48.7	97
Methylcyclohexane	50.0	0.0	46.2	92

Leachate
 Aqueous/Meoh Soil/Sediment

LCS ACCURACY (%REC) 70-130 70-130

* Values outside of QC limits

Up to 10% of the compounds may be out , but must be within 40-160%

INTEGRATED ANALYTICAL LABORATORIES

8260

MS/MSD SPIKE REPORT

Lab ID: 03838-007
 Client ID: TW-7
 Date Received: NA
 Date Analyzed: 05/06/2014
 MS Data file: K4171.D
 MSD Data file: K4172.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 % Moisture: 100
 Dilution Factor: 1
 Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
Dichlorodifluoromethane	50.0	0.0	51.6	103		48.3	97	7		
Chloromethane	50.0	0.0	55.1	110		53.1	106	4		
Vinyl chloride	50.0	0.0	57.1	114		55.4	111	3		
Bromomethane	50.0	0.0	54.3	109		53.3	107	2		
Chloroethane	50.0	0.0	54.6	109		53.0	106	3		
Trichlorofluoromethane	50.0	0.0	54.5	109		51.9	104	5		
Acrolein	150	0.0	126	84		117	78	7		
1,1-Dichloroethene	50.0	0.0	52.8	106		50.3	101	5		
Acetone	50.0	0.0	49.1	98		48.1	96	2		
Carbon disulfide	50.0	0.0	53.7	107		51.7	103	4		
Vinyl acetate	50.0	0.0	50.3	101		48.4	97	4		
Methylene chloride	50.0	0.0	50.8	102		49.7	99	2		
Acrylonitrile	150	0.0	158	105		156	104	1		
tert-Butyl alcohol (TBA)	100	0.0	103.7	104		103.8	104	0		
trans-1,2-Dichloroethene	50.0	0.0	53.0	106		50.9	102	4		
Methyl tert-butyl ether (MTBE)	50.0	0.0	49.7	99		48.7	97	2		
1,1-Dichloroethane	50.0	0.0	53.0	106		51.2	102	3		
Diisopropyl ether (DIPE)	50.0	0.0	52.5	105		50.9	102	3		
cis-1,2-Dichloroethene	50.0	0.0	53.5	107		51.3	103	4		
2,2-Dichloropropane	50.0	0.0	38.9	78		37.4	75	4		
2-Butanone (MEK)	50.0	0.0	47.1	94		45.6	91	3		
Bromochloromethane	50.0	0.0	53.3	107		51.6	103	3		
Chloroform	50.0	0.0	53.6	107		51.7	103	4		
1,1,1-Trichloroethane	50.0	0.0	54.3	109		51.5	103	5		
Carbon tetrachloride	50.0	0.0	53.9	108		51.5	103	5		
1,1-Dichloropropene	50.0	0.0	53.4	107		50.3	101	6		
1,2-Dichloroethane (EDC)	50.0	0.0	54.0	108		52.7	105	2		
Benzene	50.0	0.0	52.1	104		50.4	101	3		
Trichloroethene	50.0	0.0	52.6	105		51.3	103	3		
1,2-Dichloropropane	50.0	0.0	52.6	105		52.2	104	1		
Dibromomethane	50.0	0.0	53.2	106		52.5	105	1		
1,4-Dioxane	1,500	0.0	1449	97		1449	97	0		
Bromodichloromethane	50.0	0.0	53.3	107		52.5	105	2		
2-Chloroethyl vinyl ether	50.0	0.0	52.2	104		52.1	104	0		
cis-1,3-Dichloropropene	50.0	0.0	51.9	104		50.7	101	2		
4-Methyl-2-pentanone (MIBK)	50.0	0.0	54.3	109		54.2	108	0		
Toluene	50.0	0.0	51.9	104		51.0	102	2		
trans-1,3-Dichloropropene	50.0	0.0	51.6	103		51.1	102	1		
1,1,2-Trichloroethane	50.0	0.0	52.4	105		51.8	104	1		
Tetrachloroethene	50.0	0.0	49.1	98		47.3	95	4		
1,3-Dichloropropane	50.0	0.0	53.2	106		52.5	105	1		

INTEGRATED ANALYTICAL LABORATORIES

MS/MSD SPIKE REPORT

Lab ID: 03838-007
 Client ID: TW-7
 Date Received: NA
 Date Analyzed: 05/06/2014
 MS Data file: K4171.D
 MSD Data file: K4172.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 % Moisture: 100
 Dilution Factor: 1
 Dilution Factor: 1

Compound	Conc. Add	Sample	Conc. MS	%Rec. MS	#	Conc. MSD	%Rec. MSD	#	%RPD	#
2-Hexanone	50.0	0.0	47.7	95		47.2	94		1	
Dibromochloromethane	50.0	0.0	53.4	107		53.1	106		1	
1,2-Dibromoethane (EDB)	50.0	0.0	52.7	105		52.6	105		0	
Chlorobenzene	50.0	0.0	51.4	103		50.3	101		2	
1,1,1,2-Tetrachloroethane	50.0	0.0	53.1	106		51.6	103		3	
Ethylbenzene	50.0	0.0	52.1	104		50.4	101		3	
m,p-Xylene	100	0.0	103.9	104		100.0	100		4	
o-Xylene	50.0	0.0	52.9	106		51.1	102		3	
Styrene	50.0	0.0	54.8	110		53.3	107		3	
Bromoform	50.0	0.0	52.7	105		52.7	105		0	
Isopropylbenzene	50.0	0.0	52.7	105		50.8	102		4	
1,1,2,2-Tetrachloroethane	50.0	0.0	51.0	102		49.8	100		2	
Bromobenzene	50.0	0.0	51.0	102		50.0	100		2	
1,2,3-Trichloropropane	50.0	0.0	52.3	105		51.9	104		1	
n-Propylbenzene	50.0	0.0	51.0	102		49.5	99		3	
2-Chlorotoluene	50.0	0.0	51.5	103		49.9	100		3	
1,3,5-Trimethylbenzene	50.0	0.0	52.3	105		50.6	101		3	
4-Chlorotoluene	50.0	0.0	50.6	101		49.4	99		2	
tert-Butylbenzene	50.0	0.0	52.6	105		50.8	102		3	
1,2,4-Trimethylbenzene	50.0	0.0	51.5	103		50.3	101		2	
sec-Butylbenzene	50.0	0.0	51.2	102		49.2	98		4	
1,3-Dichlorobenzene	50.0	0.0	49.6	99		49.0	98		1	
4-Isopropyltoluene	50.0	0.0	50.6	101		48.9	98		3	
1,4-Dichlorobenzene	50.0	0.0	49.5	99		48.8	98		1	
n-Butylbenzene	50.0	0.0	49.9	100		48.3	97		3	
1,2-Dichlorobenzene	50.0	0.0	51.1	102		50.5	101		1	
1,2-Dibromo-3-chloropropane	50.0	0.0	54.3	109		53.9	108		1	
1,2,4-Trichlorobenzene	50.0	0.0	49.6	99		49.6	99		0	
Hexachlorobutadiene	50.0	0.0	46.8	94		45.9	92		2	
Naphthalene	50.0	0.0	55.8	112		56.1	112		1	
1,2,3-Trichlorobenzene	50.0	0.0	51.0	102		50.7	101		1	
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	0.0	54.5	109		51.6	103		5	
Methyl acetate	50.0	0.0	53.1	106		52.1	104		2	
Cyclohexane	50.0	0.0	52.7	105		50.0	100		5	
Methylcyclohexane	50.0	0.0	50.4	101		48.0	96		5	

Leachate

Aqueous/Meoh

Soil

MS/MSD ACCURACY (%REC)

70-130

70-130

MS/MSD PRECISION (RPD)

30

30

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

NC Not calculable

Up to 10% of the compounds may be out , but must be within 40-160%

VOLATILE METHOD BLANK SUMMARY

Lab File ID: K4169.D

Instrument ID: MSD_K

Date Analyzed: 05/06/2014

Time Analyzed: 12:33

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS & MSD:

Client ID	Lab Sample ID	Date Analyzed	Time Analyzed
LCSA140505b	LCSA140505b	05/06/2014	1:01
03838-007MS	03838-007MS	05/06/2014	1:29
03838-007MSD	03838-007MSD	05/06/2014	1:57
TW-1	03838-001	05/06/2014	2:53
TW-2	03838-002	05/06/2014	3:21
TW-3	03838-003	05/06/2014	3:49
TW-4	03838-004	05/06/2014	4:17
TW-5	03838-005	05/06/2014	4:45
TW-6	03838-006	05/06/2014	5:13
TW-7	03838-007	05/06/2014	5:41
TW-8	03838-008	05/06/2014	6:08
MW-13D	03838-010	05/06/2014	7:04
MW-11D	03838-011	05/06/2014	7:32
FB	03838-012	05/06/2014	8:00
TB	03838-013	05/06/2014	8:28
MW-10D	03838-009	05/06/2014	9:59

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K4141.D

BFB Injection Date: 05/05/2014

Inst ID: MSD_K

BFB Injection Time: 11:04

m/z	Ion Abundance Criteria	%Relative Abundance		
50	15 - 40.0% of mass 95	26.6		
75	30.0 - 60.0% of mass 95	49.2		
95	Base peak, 100% relative abundance	100.0		
96	5.0 - 9.0% of mass 95	7.4		
173	Less than 2.0% of mass 174	0.9	(1.1)	1
174	Great than 50.0% of mass 95	80.3		
175	5.0 - 9.0% of mass 174	5.4	(6.7)	1
176	95.0 - 101.0% of mass 174	78.3	(97.5)	1
177	5.0 - 9.0% of mass 176	5.1	(6.5)	2
	1-Value is % mass 174			
	2-Value is % mass 176			

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
ICC100	ICC100	K4146.D	05/05/2014	1:49
ICC001	ICC001	K4142.D	05/05/2014	11:35
ICC002	ICC002	K4143.D	05/05/2014	12:25
ICC005	ICC005	K4144.D	05/05/2014	12:53
ICC020	ICC020	K4145.D	05/05/2014	1:21
ICC150	ICC150	K4147.D	05/05/2014	2:17
ICC200	ICC200	K4148.D	05/05/2014	2:45
ICV100	ICV100	K4150.D	05/05/2014	3:42
BLKA140505a	BLKA140505a	K4153.D	05/05/2014	5:06
103E-R(D)	03589-001	K4154.D	05/05/2014	5:34
LCSA140505a	LCSA140505a	K4155.D	05/05/2014	6:02
04009-001MS	04009-001MS	K4156.D	05/05/2014	6:30
04009-001MSD	04009-001MSD	K4157.D	05/05/2014	6:58
GW-1	04009-001	K4159.D	05/05/2014	7:54
KO1	03843-001	K4162.D	05/05/2014	9:18
KO2	03843-002	K4163.D	05/05/2014	9:46

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

Lab File ID: K4165.D

BFB Injection Date: 05/05/2014

Inst ID: MSD_K

BFB Injection Time: 10:42

m/z	Ion Abundance Criteria	%Relative Abundance		
50	15 - 40.0% of mass 95	25.5		
75	30.0 - 60.0% of mass 95	47.4		
95	Base peak, 100% relative abundance	100.0		
96	5.0 - 9.0% of mass 95	6.0		
173	Less than 2.0% of mass 174	0.9	(1.1)	1
174	Great than 50.0% of mass 95	79.3		
175	5.0 - 9.0% of mass 174	5.5	(6.9)	1
176	95.0 - 101.0% of mass 174	76.9	(97.0)	1
177	5.0 - 9.0% of mass 176	4.7	(6.1)	2
	1-Value is % mass 174	2-Value is % mass 176		

This check applies to the following SAMPLES, MS, MSD, BLANKS and STANDARDS:

Client ID	Lab Sample ID	File ID	Date Analyzed	Time Analyzed
CCV100	CCV100	K4166.D	05/05/2014	11:10
BLKA140505b	BLKA140505b	K4169.D	05/06/2014	12:33
LCSA140505b	LCSA140505b	K4170.D	05/06/2014	1:01
03838-007MS	03838-007MS	K4171.D	05/06/2014	1:29
03838-007MSD	03838-007MSD	K4172.D	05/06/2014	1:57
TW-1	03838-001	K4174.D	05/06/2014	2:53
TW-2	03838-002	K4175.D	05/06/2014	3:21
TW-3	03838-003	K4176.D	05/06/2014	3:49
TW-4	03838-004	K4177.D	05/06/2014	4:17
TW-5	03838-005	K4178.D	05/06/2014	4:45
TW-6	03838-006	K4179.D	05/06/2014	5:13
TW-7	03838-007	K4180.D	05/06/2014	5:41
TW-8	03838-008	K4181.D	05/06/2014	6:08
MW-13D	03838-010	K4183.D	05/06/2014	7:04
MW-11D	03838-011	K4184.D	05/06/2014	7:32
FB	03838-012	K4185.D	05/06/2014	8:00
TB	03838-013	K4186.D	05/06/2014	8:28
MW-10D	03838-009	K4187.D	05/06/2014	9:59

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): K4146.D

Date Analyzed: 05/05/2014

Instrument ID: MSD_K

Time Analyzed: 1:49

50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	257236	6.19	388077	7.01	464304	10.35
UPPER LIMIT	514472	6.69	776154	7.51	928608	10.85
LOWER LIMIT	128618	5.69	194038.5	6.51	232152	9.85
LAB SAMPLE ID						
01 ICC001	248412	6.19	378453	7.02	447938	10.35
02 ICC002	263701	6.19	399211	7.02	475551	10.35
03 ICC005	257363	6.19	388475	7.01	464797	10.35
04 ICC020	250539	6.19	384934	7.01	460772	10.35
05 ICC150	259314	6.19	395945	7.01	477253	10.35
06 ICC200	269141	6.19	405818	7.01	492314	10.35
07 ICV100	266610	6.19	404702	7.01	488182	10.35
08 BLKA140505a	253896	6.19	386789	7.01	457061	10.35
09 03589-001	255491	6.19	389641	7.01	466048	10.35
10 LCSA140505a	256453	6.19	394185	7.01	471925	10.35
11 04009-001MS	260340	6.19	395626	7.01	478028	10.35
12 04009-001MSD	264532	6.19	398211	7.02	478360	10.35
13 04009-001	257168	6.19	393718	7.01	470180	10.35
14 03843-001	259391	6.19	401264	7.02	474149	10.35
15 03843-002	251217	6.19	385679	7.02	460420	10.35
16						
17						
18						
19						
20						
21						
22						

IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

FORM 8

E14-03838 0036

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab File ID (Standard): K4166.D

Date Analyzed: 05/05/2014

Instrument ID: MSD_K

Time Analyzed: 11:10

50UG/L	IS1 AREA #	RT #	IS2 AREA #	RT #	IS3 AREA #	RT #
12 HOUR STD	258719	6.19	390930	7.01	471654	10.35
UPPER LIMIT	517438	6.69	781860	7.51	943308	10.85
LOWER LIMIT	129359.5	5.69	195465	6.51	235827	9.85
LAB SAMPLE ID						
01 BLKA140505b	244610	6.19	382388	7.02	458968	10.35
02 LCSA140505b	242642	6.19	368443	7.01	451339	10.35
03 03838-007MS	250715	6.19	385531	7.01	460064	10.35
04 03838-007MSD	251427	6.19	381911	7.01	458603	10.35
05 03838-001	248518	6.19	388506	7.01	467572	10.35
06 03838-002	244196	6.19	376111	7.01	454469	10.35
07 03838-003	241411	6.19	374543	7.01	451084	10.35
08 03838-004	239821	6.19	372406	7.01	443732	10.35
09 03838-005	241491	6.19	375211	7.01	449330	10.35
10 03838-006	235679	6.19	366149	7.01	439824	10.35
11 03838-007	233160	6.19	365509	7.01	440349	10.35
12 03838-008	236619	6.19	365343	7.01	447014	10.35
13 03838-010	231774	6.19	352145	7.01	435528	10.35
14 03838-011	227502	6.19	353110	7.01	424836	10.35
15 03838-012	232943	6.19	363438	7.01	437789	10.35
16 03838-013	226470	6.19	359103	7.01	429888	10.35
17 03838-009	241593	6.19	374335	7.01	445802	10.35
18						
19						
20						
21						
22						

IS1 = PENTAFLUOROBENZENE

IS2 = 1,4-DIFLUOROBENZENE

IS3 = CHLOROBENZENE-D5

AREA UPPER LIMIT = +100% of internal standard area

AREA LOWER LIMIT = -50% of internal standard area

RT UPPER LIMIT = +0.50 minutes of internal standard RT

RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag values outside QC limits with an asterisk

* Values outside of QC limits.

FORM 8

E14-03838 0037

VOLATILE ORGANICS SAMPLE DATA

(QT Reviewed)

Quant Time: May 06 10:40:31 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration

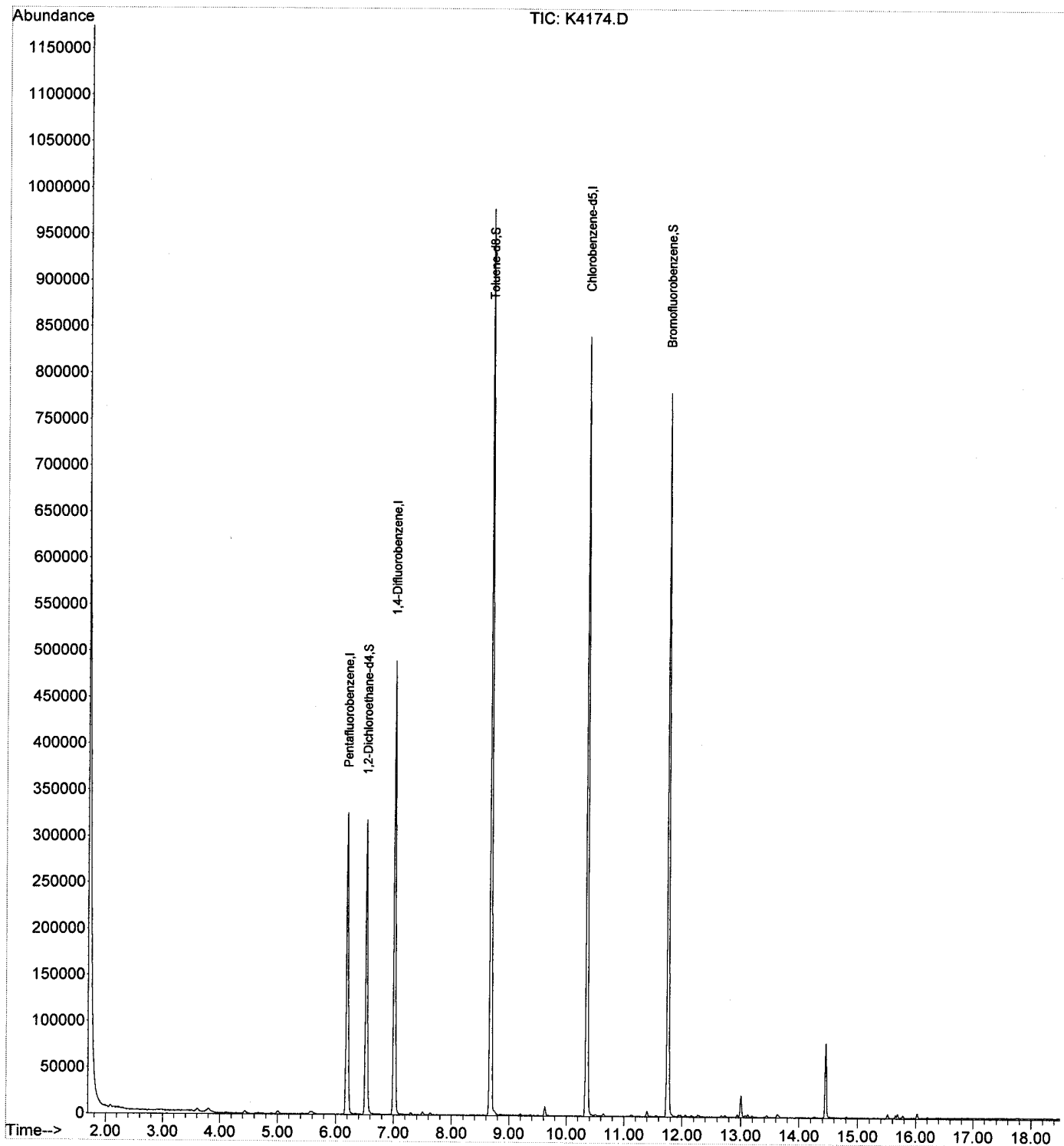
System Monitoring Compounds							
30) 1,2-Dichloroethane-d4	6.53	65	245427	52.31	UG	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.62%	
41) Toluene-d8	8.67	98	648980	49.47	UG	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.94%	
59) Bromofluorobenzene	11.75	95	292140	49.19	UG	0.00	
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.38%	

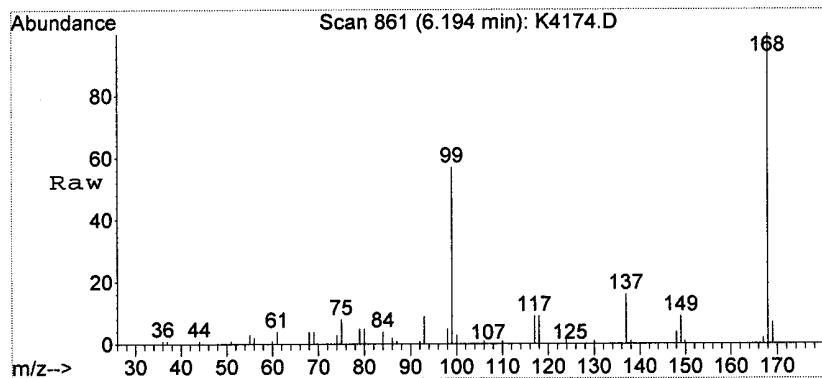
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4174.D
 Acq On : 6 May 2014 2:53 am
 Operator : BARBARA
 Sample : TW-1,03838-001,A,5mL,100
 Misc : EWMA/SWIVELIER_-2,04/29/14,04/30/14,1
 ALS Vial : 33 Sample Multiplier: 1

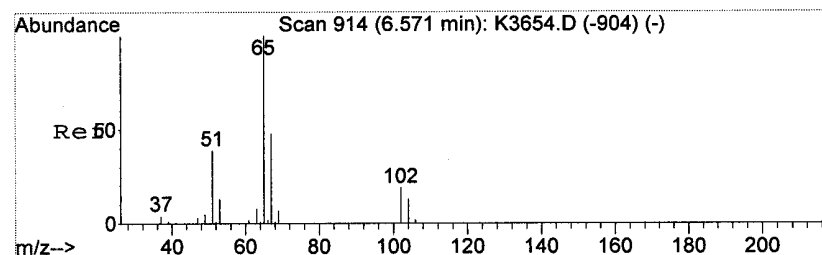
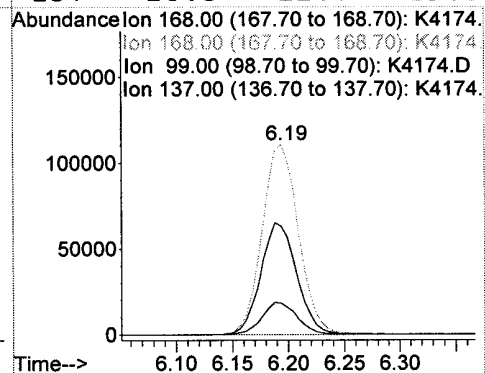
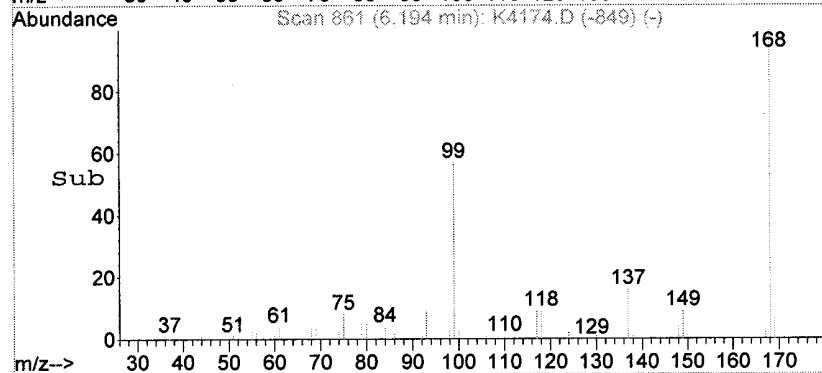
Quant Time: May 06 10:40:31 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration





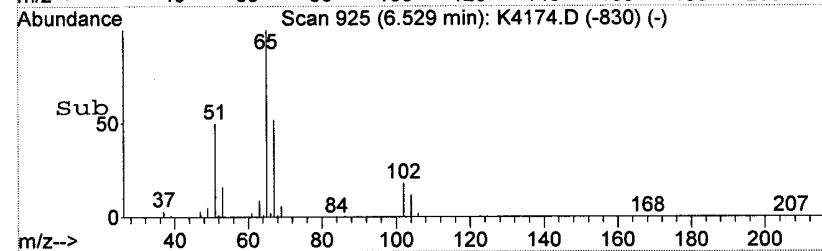
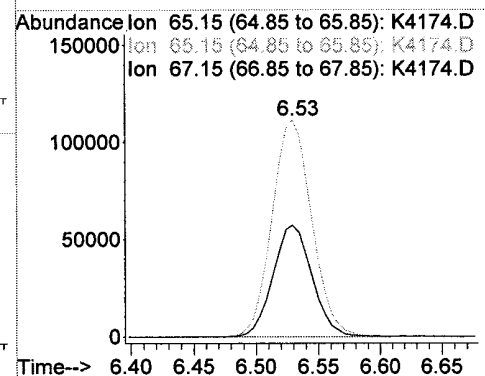
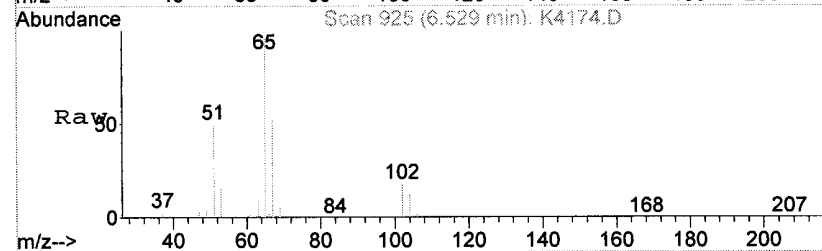
#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. -0.00 min
Lab File: K4174.D
Acq: 6 May 2014 2:53 am

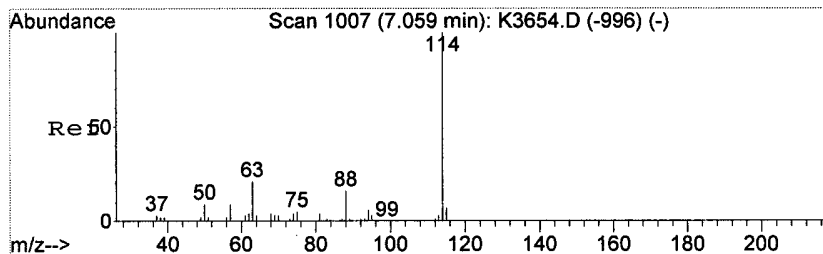
Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	58.2	45.9	68.9
137	16.3	12.7	19.1



#30
1,2-Dichloroethane-d4
Concen: 52.31 UG
RT: 6.53 min Scan# 925
Delta R.T. -0.00 min
Lab File: K4174.D
Acq: 6 May 2014 2:53 am

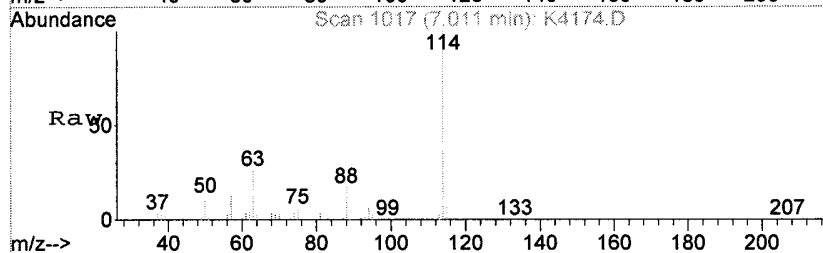
Tgt Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	50.8	40.4	60.6



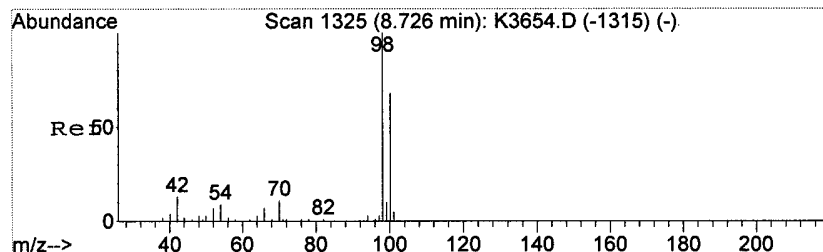
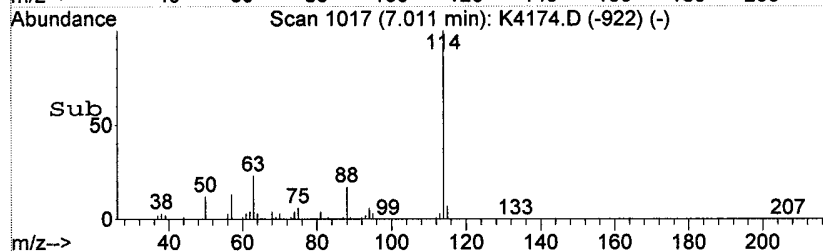
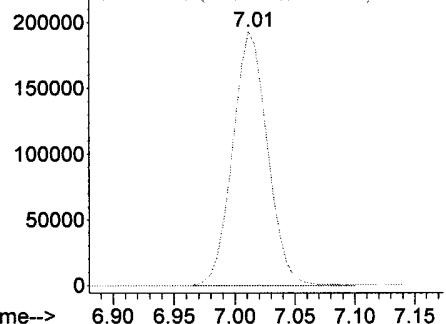


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.01 min Scan# 1017
Delta R.T. -0.00 min
Lab File: K4174.D
Acq: 6 May 2014 2:53 am

Tgt Ion: 114 Resp: 388506
Ion Ratio Lower Upper
114 100
114 100.0 80.0 120.0

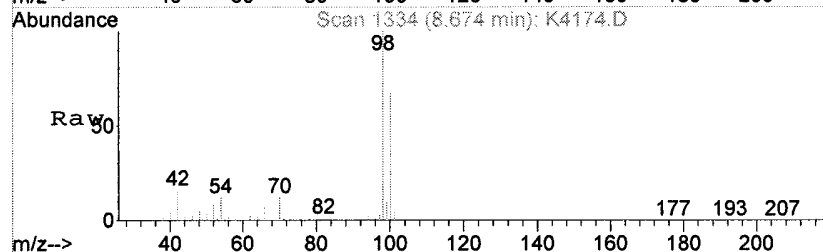


Abundance Ion 114.00 (113.70 to 114.70): K4174.D

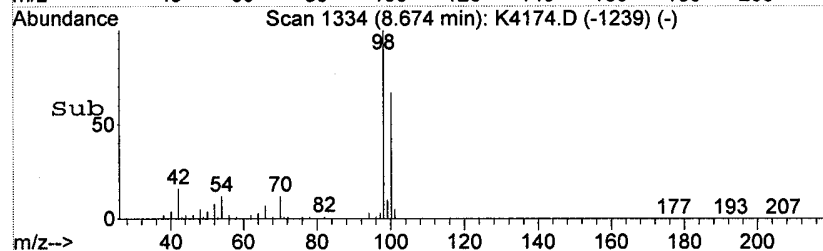
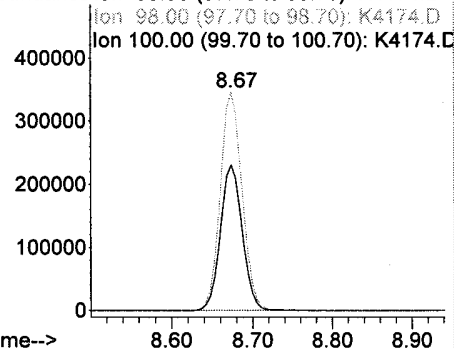


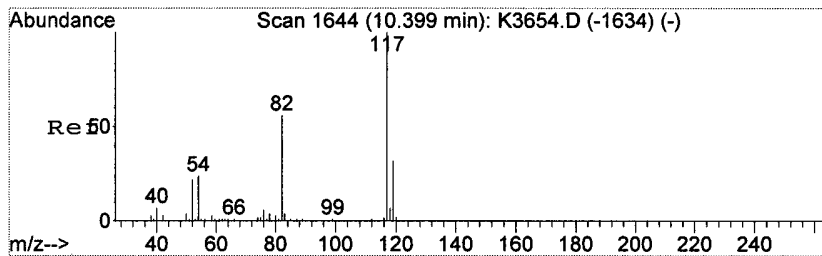
#41
Toluene-d8
Concen: 49.47 UG
RT: 8.67 min Scan# 1334
Delta R.T. -0.00 min
Lab File: K4174.D
Acq: 6 May 2014 2:53 am

Tgt Ion: 98 Resp: 648980
Ion Ratio Lower Upper
98 100
98 100.0 80.0 120.0
100 66.7 51.6 77.4



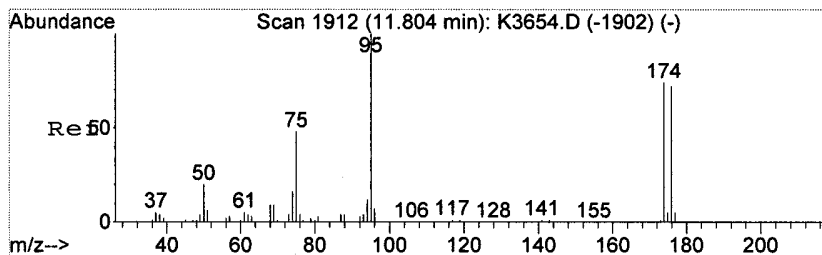
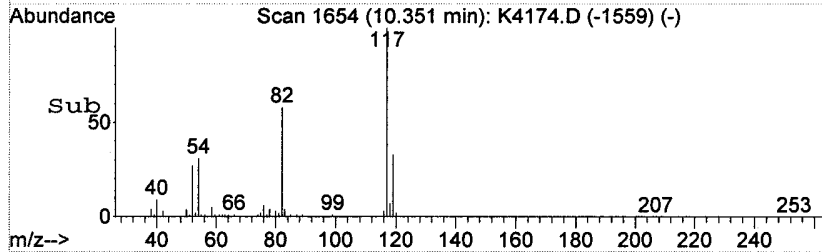
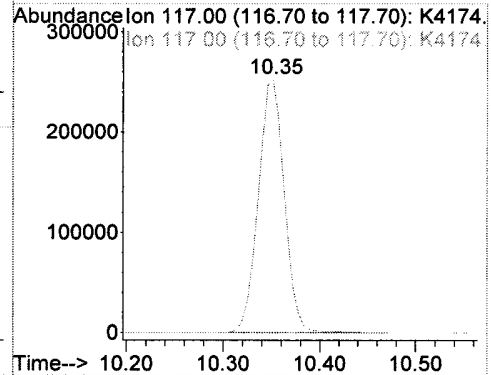
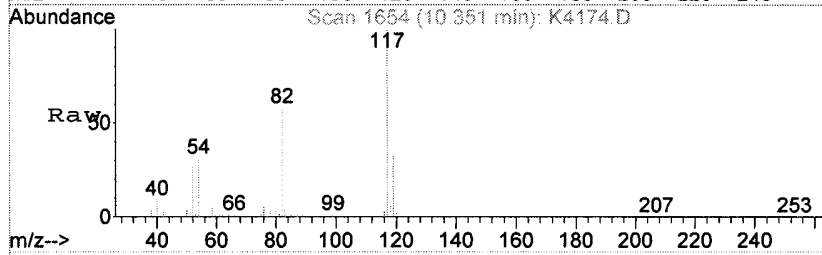
Abundance Ion 98.00 (97.70 to 98.70): K4174.D





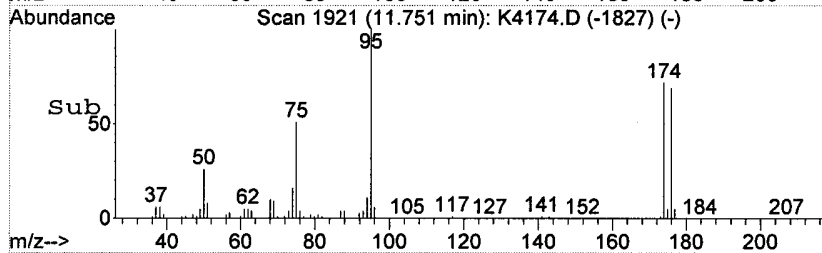
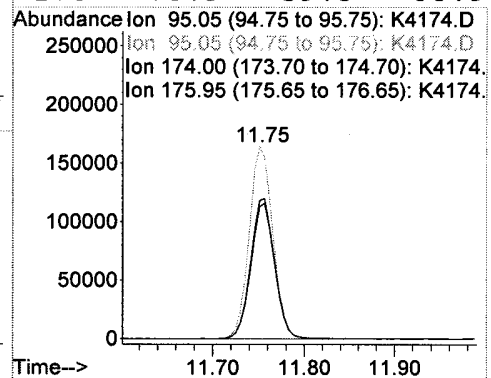
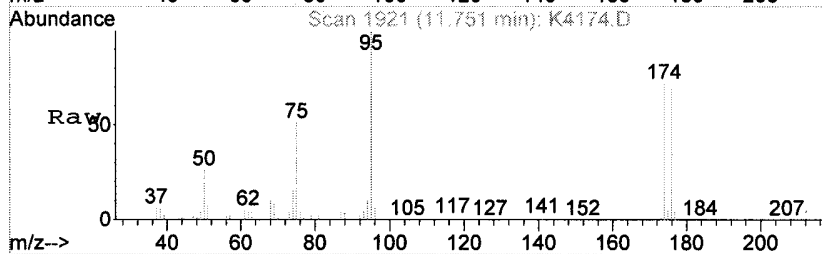
#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1654
Delta R.T. -0.00 min
Lab File: K4174.D
Acq: 6 May 2014 2:53 am

Tgt Ion: 117 Resp: 467572
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0



#59
Bromofluorobenzene
Concen: 49.19 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4174.D
Acq: 6 May 2014 2:53 am

Tgt Ion: 95 Resp: 292140
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.5 61.4 92.0
176 70.9 59.3 88.9



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4175.D
 Acq On : 6 May 2014 3:21 am
 Operator : BARBARA
 Sample : TW-2,03838-002,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 34 Sample Multiplier: 1

Quant Time: May 06 10:42:40 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	244196	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	376111	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	454469	50.00	UG	0.00

System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	241026	52.28	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.56%
41) Toluene-d8	8.67	98	637269	50.18	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.36%
59) Bromofluorobenzene	11.75	95	283572	49.13	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.26%

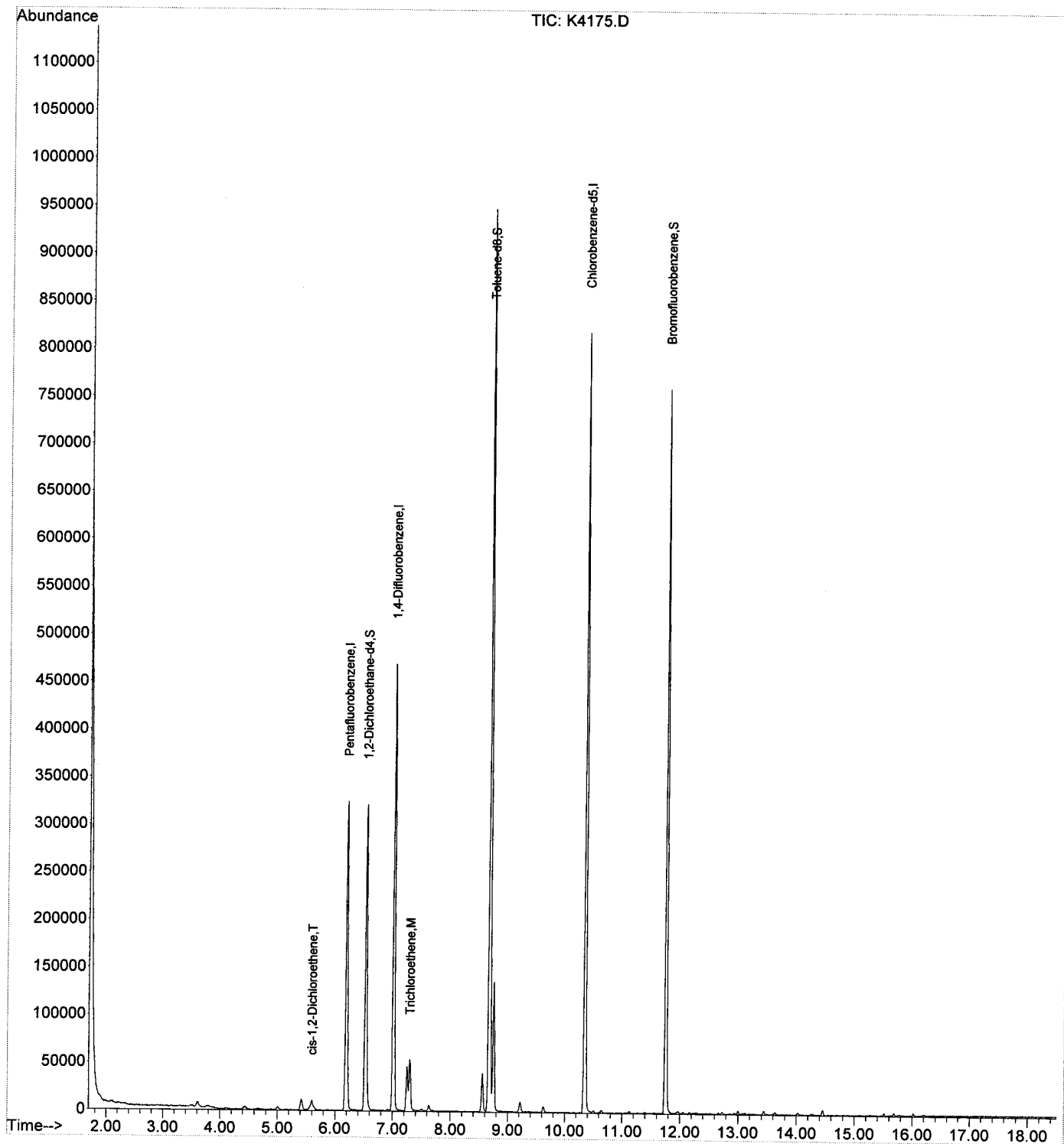
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
20) cis-1,2-Dichloroethene	5.60	96	4420	1.14	UG	# 99
33) Trichloroethene	7.30	95	18012	4.95	UG	# 100

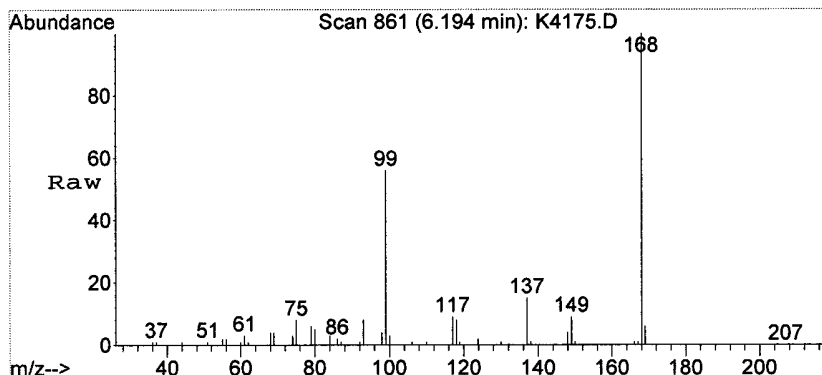
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4175.D
 Acq On : 6 May 2014 3:21 am
 Operator : BARBARA
 Sample : TW-2, 03838-002, A, 5mL, 100
 Misc : EWMA/SWIVELIER_-2, 04/29/14, 04/30/14, 1
 ALS Vial : 34 Sample Multiplier: 1

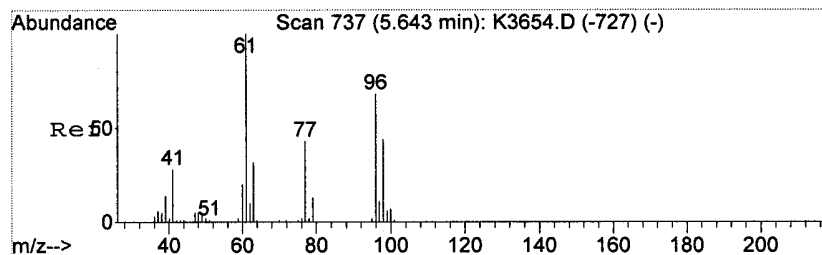
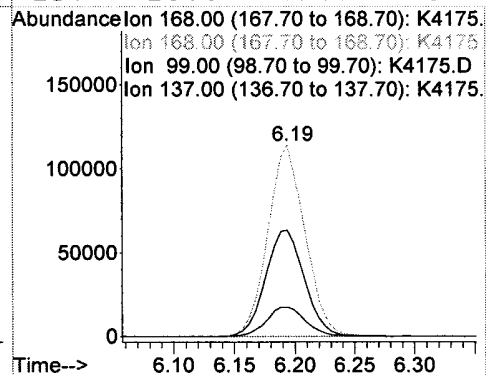
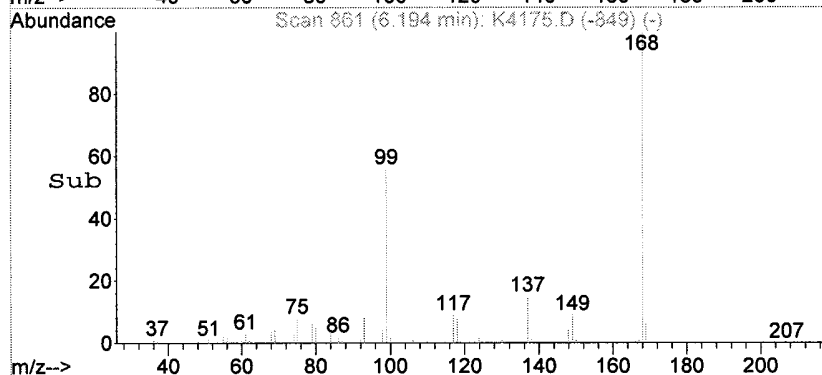
Quant Time: May 06 10:42:40 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration





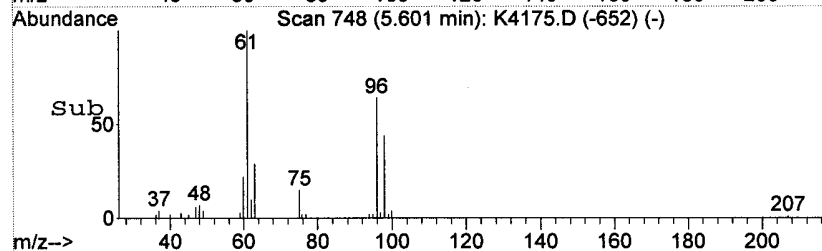
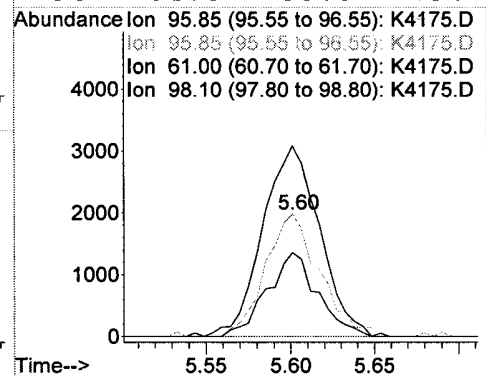
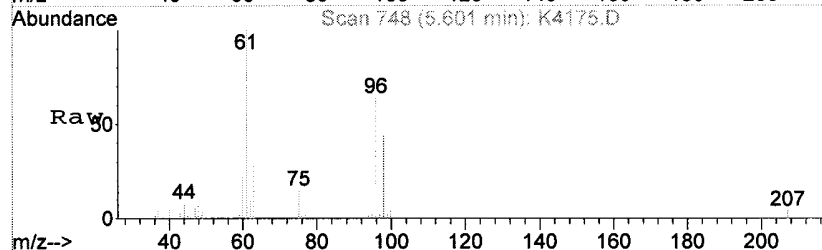
#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. -0.00 min
Lab File: K4175.D
Acq: 6 May 2014 3:21 am

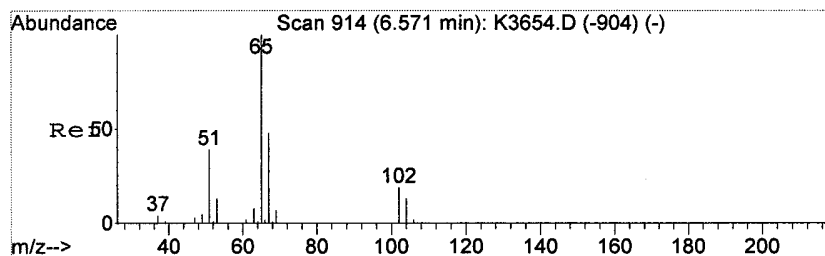
Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	58.1	45.9	68.9
137	16.0	12.7	19.1



#20
cis-1,2-Dichloroethene
Concen: 1.14 UG
RT: 5.60 min Scan# 748
Delta R.T. 0.01 min
Lab File: K4175.D
Acq: 6 May 2014 3:21 am

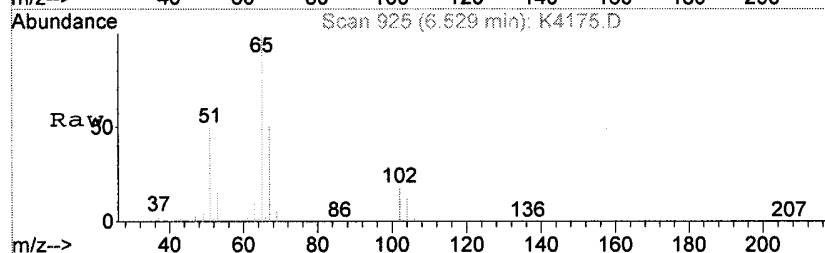
Tgt Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	0.0	0.0	0.0
98	64.0	53.0	79.4



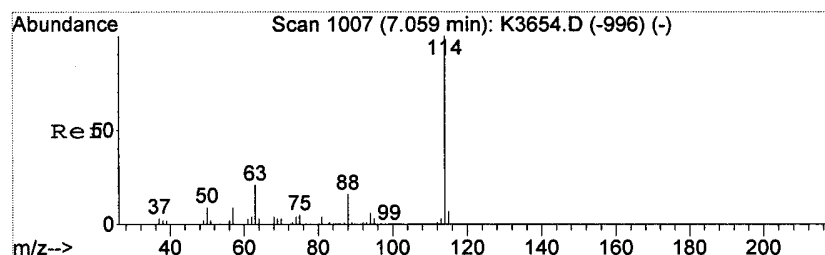
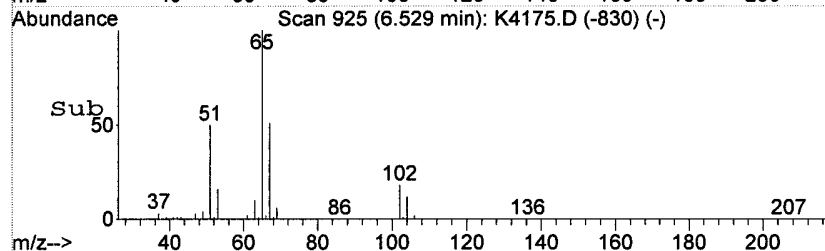
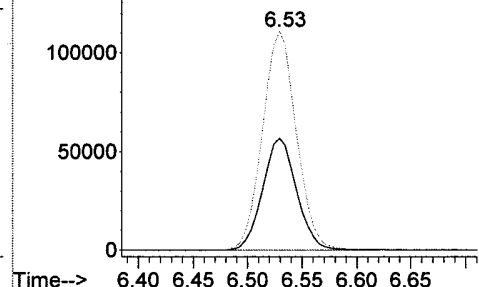


#30
1,2-Dichloroethane-d4
Concen: 52.28 UG
RT: 6.53 min Scan# 925
Delta R.T. 0.00 min
Lab File: K4175.D
Acq: 6 May 2014 3:21 am

Tgt Ion	Resp	Lower	Upper
65	241026		
65	100		
65	100.0	80.0	120.0
67	51.1	40.4	60.6

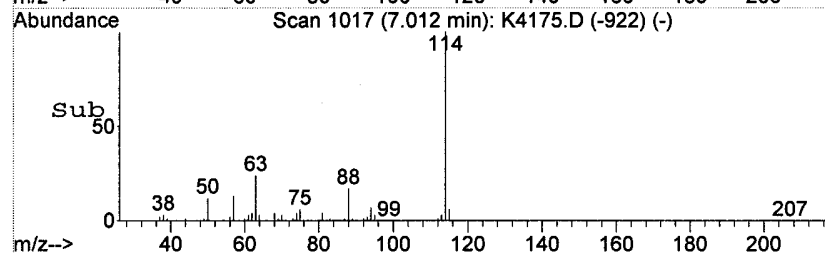
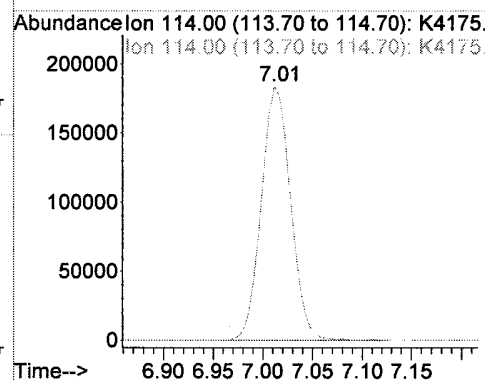
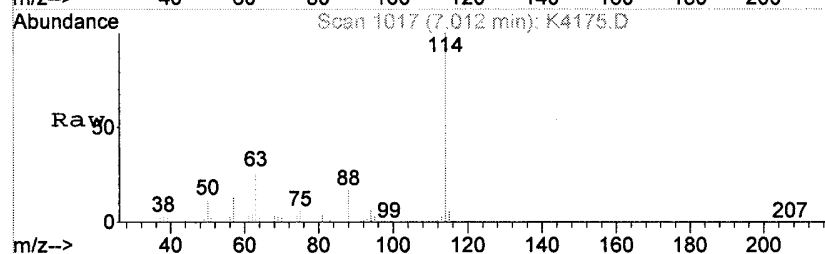


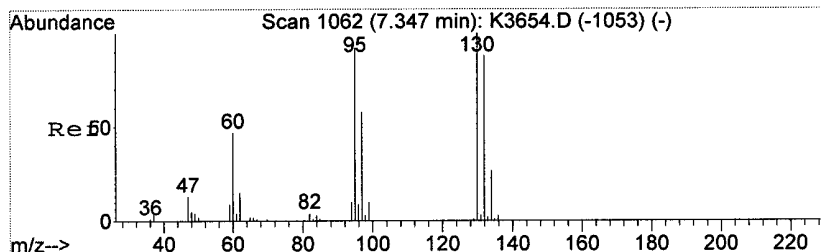
Abundance Ion 65.15 (64.85 to 65.85): K4175.D
150000 Ion 65.15 (64.85 to 65.85): K4175.D
Ion 67.15 (66.85 to 67.85): K4175.D



#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.01 min Scan# 1017
Delta R.T. 0.00 min
Lab File: K4175.D
Acq: 6 May 2014 3:21 am

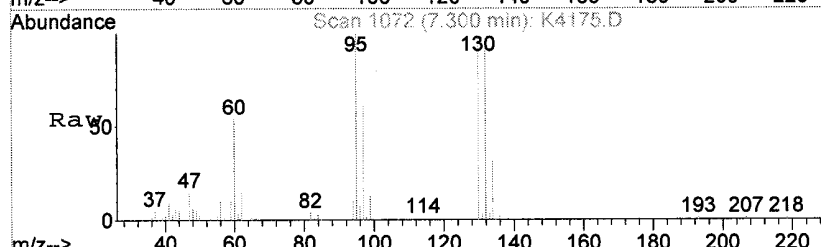
Tgt Ion	Resp	Lower	Upper
114	376111		
114	100		
114	100.0	80.0	120.0



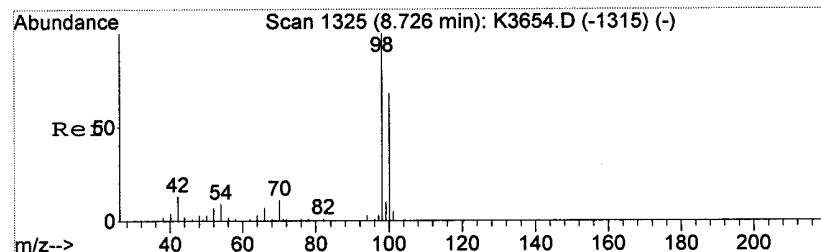
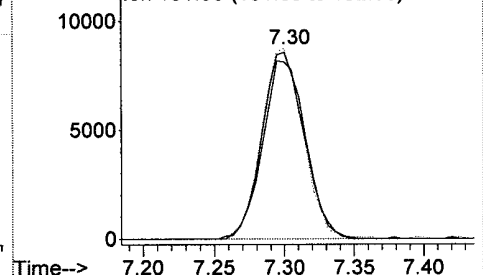
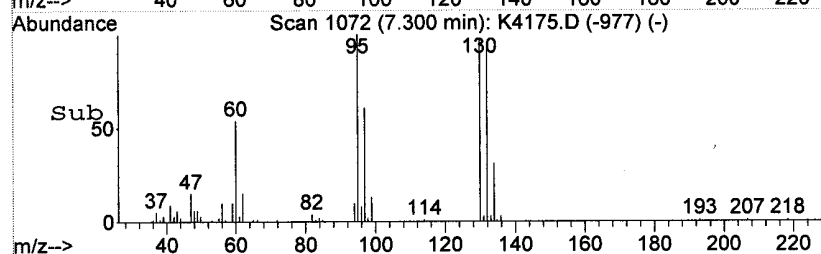


#33
 Trichloroethene
 Concen: 4.95 UG
 RT: 7.30 min Scan# 1072
 Delta R.T. 0.00 min
 Lab File: K4175.D
 Acq: 6 May 2014 3:21 am

Tgt Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
130	101.1	0.0	0.0#
132	0.0	0.0	0.0

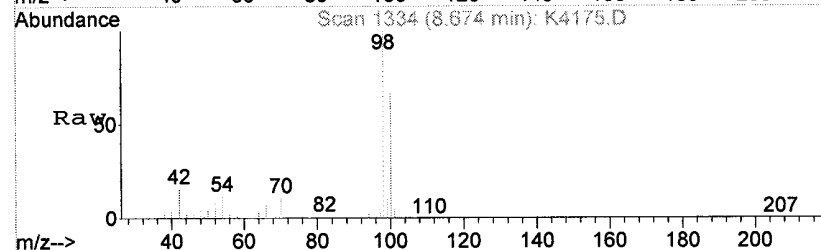


Abundance Ion 94.95 (94.65 to 95.65): K4175.D
 Ion 94.95 (94.65 to 95.65): K4175.D
 Ion 129.90 (129.60 to 130.60): K4175.D
 Ion 131.90 (131.60 to 132.60): K4175.D

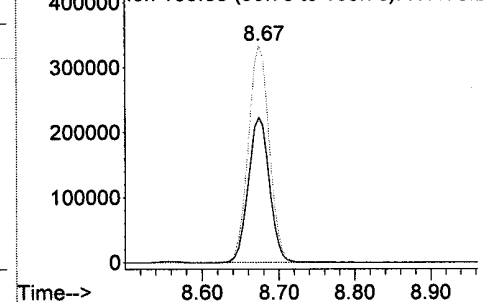
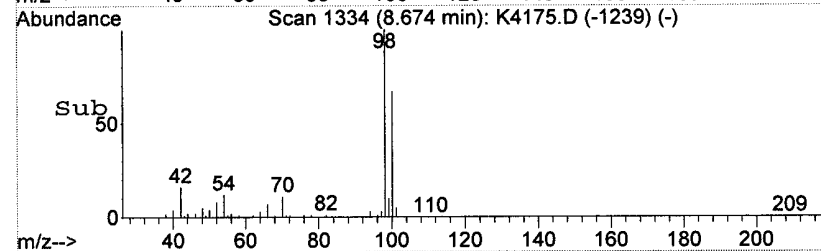


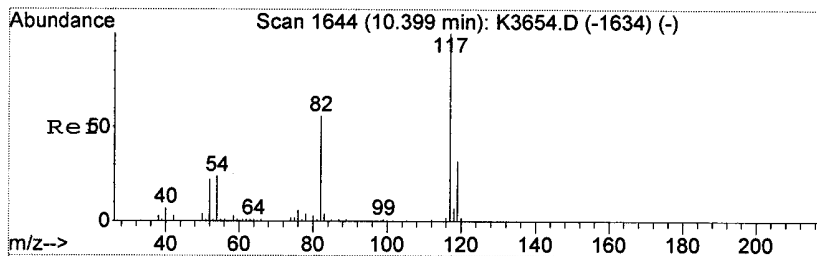
#41
 Toluene-d8
 Concen: 50.18 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. 0.00 min
 Lab File: K4175.D
 Acq: 6 May 2014 3:21 am

Tgt Ion	Ratio	Lower	Upper
98	100		
98	100.0	80.0	120.0
100	67.3	51.6	77.4



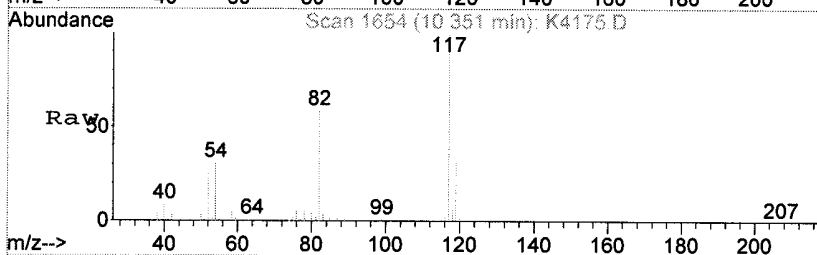
Abundance Ion 98.00 (97.70 to 98.70): K4175.D
 Ion 98.00 (97.70 to 98.70): K4175.D
 Ion 100.00 (99.70 to 100.70): K4175.D



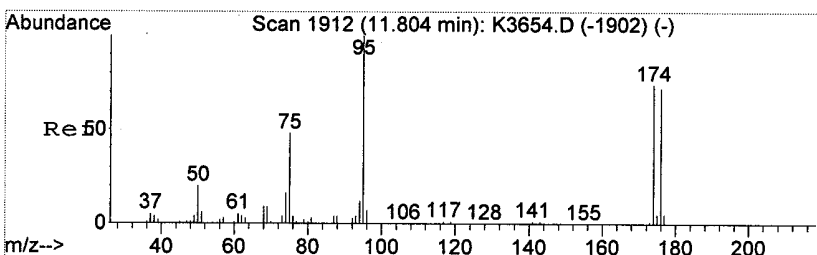
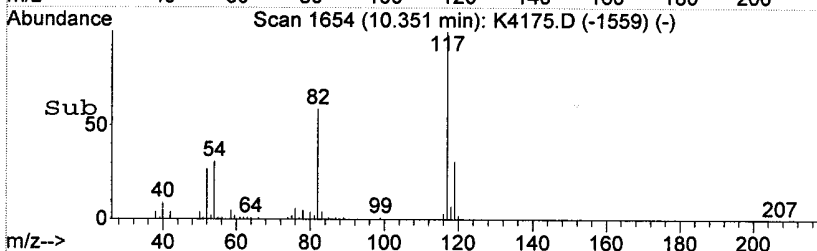
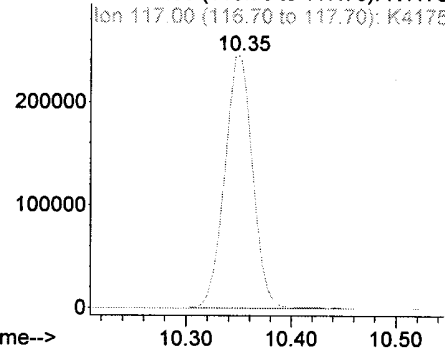


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1654
Delta R.T. 0.00 min
Lab File: K4175.D
Acq: 6 May 2014 3:21 am

Tgt Ion: 117 Resp: 454469
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0

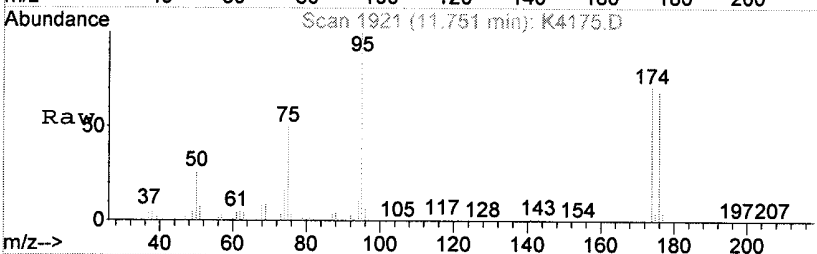


Abundance Ion 117.00 (116.70 to 117.70): K4175.D

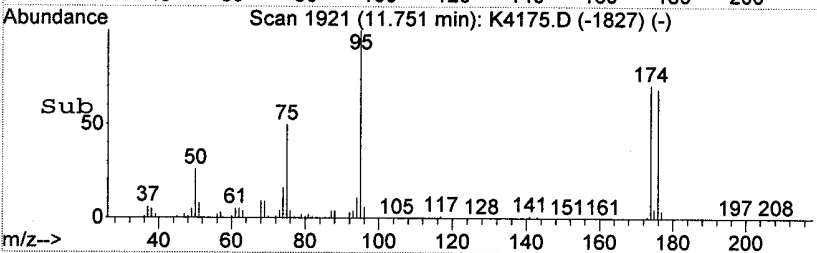
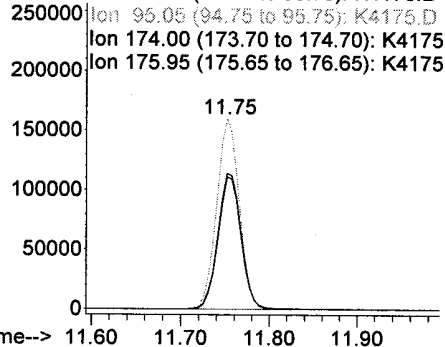


#59
Bromofluorobenzene
Concen: 49.13 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4175.D
Acq: 6 May 2014 3:21 am

Tgt Ion: 95 Resp: 283572
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 72.9 61.4 92.0
176 70.4 59.3 88.9



Abundance Ion 95.05 (94.75 to 95.75): K4175.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4176.D
 Acq On : 6 May 2014 3:49 am
 Operator : BARBARA
 Sample : TW-3,03838-003,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 35 Sample Multiplier: 1

Quant Time: May 06 10:47:16 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	241411	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	374543	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	451084	50.00	UG	0.00

System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	240670	52.81	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.62%
41) Toluene-d8	8.67	98	631697	49.95	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.90%
59) Bromofluorobenzene	11.75	95	279657	48.81	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.62%

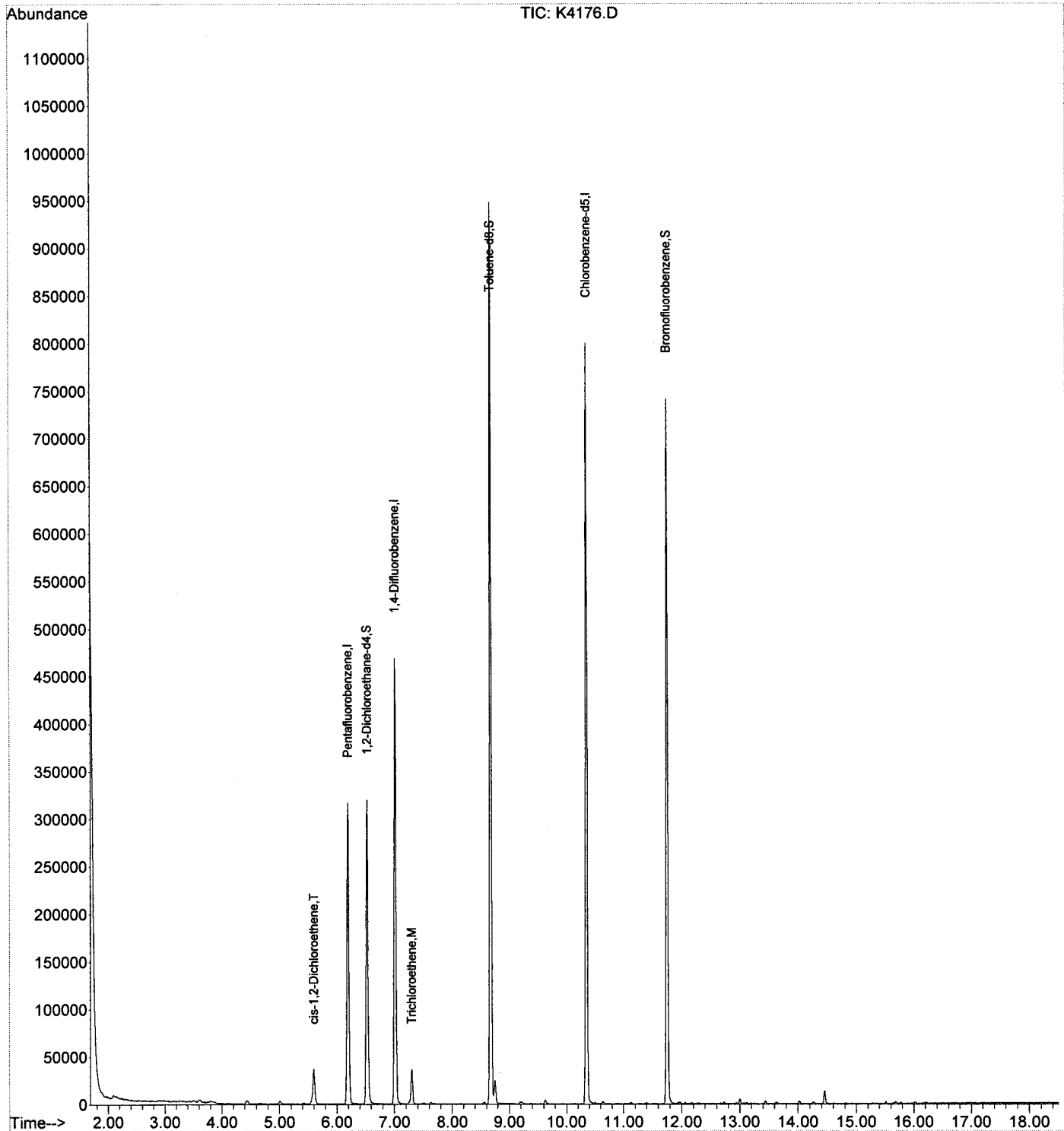
Target Compounds						Qvalue
20) cis-1,2-Dichloroethene	5.60	96	16578	4.33	UG	# 99
33) Trichloroethene	7.30	95	12600	3.48	UG	# 100

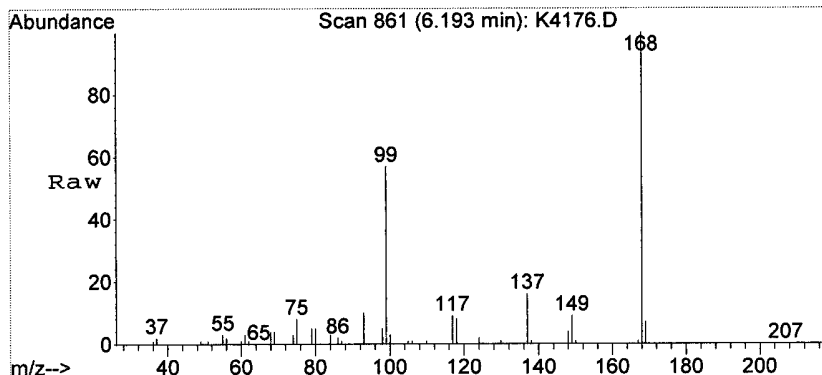
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4176.D
 Acq On : 6 May 2014 3:49 am
 Operator : BARBARA
 Sample : TW-3,03838-003,A,5mL,100
 Misc : EWMA/SWIVELIER_-2,04/29/14,04/30/14,1
 ALS Vial : 35 Sample Multiplier: 1

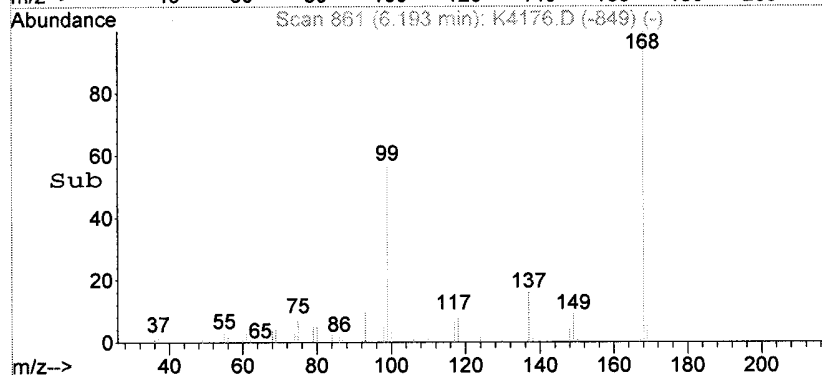
Quant Time: May 06 10:47:16 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration





#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. -0.00 min
Lab File: K4176.D
Acq: 6 May 2014 3:49 am

Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	57.8	45.9	68.9
137	16.1	12.7	19.1

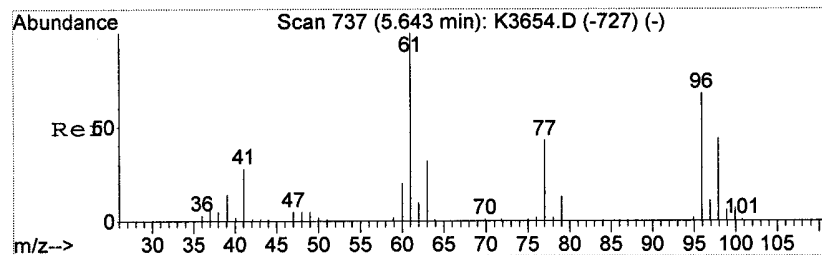
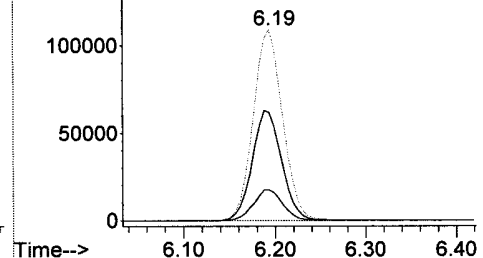


Abundance

Ion 168.00 (167.70 to 168.70): K4176.D

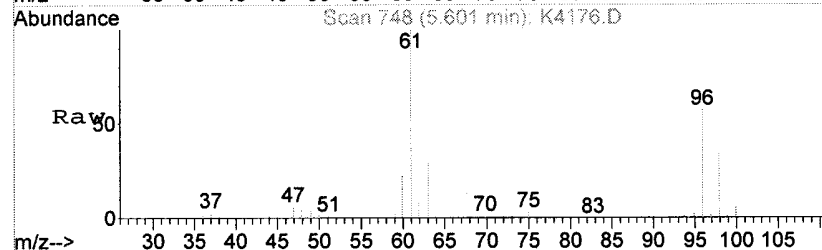
Ion 99.00 (98.70 to 99.70): K4176.D

Ion 137.00 (136.70 to 137.70): K4176.D



#20
cis-1,2-Dichloroethene
Concen: 4.33 UG
RT: 5.60 min Scan# 748
Delta R.T. 0.01 min
Lab File: K4176.D
Acq: 6 May 2014 3:49 am

Tgt Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	171.6	0.0	0.0#
98	64.7	53.0	79.4



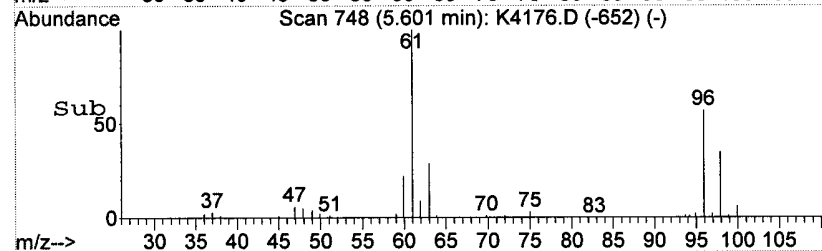
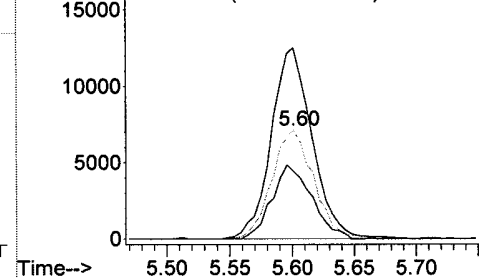
Abundance

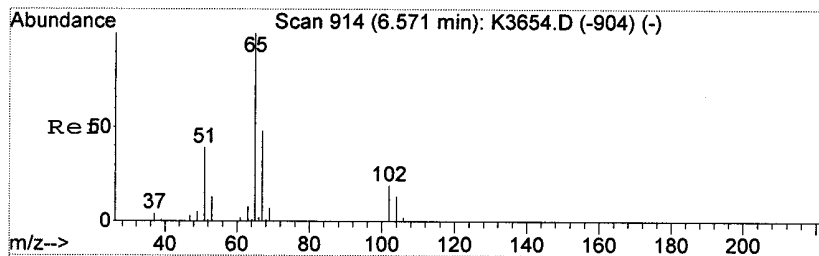
Ion 95.85 (95.55 to 96.55): K4176.D

Ion 95.85 (95.55 to 96.55): K4176.D

Ion 61.00 (60.70 to 61.70): K4176.D

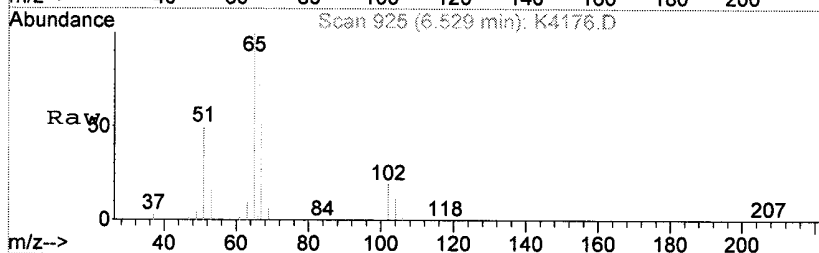
Ion 98.10 (97.80 to 98.80): K4176.D





#30
 1,2-Dichloroethane-d4
 Concen: 52.81 UG
 RT: 6.53 min Scan# 925
 Delta R.T. -0.00 min
 Lab File: K4176.D
 Acq: 6 May 2014 3:49 am

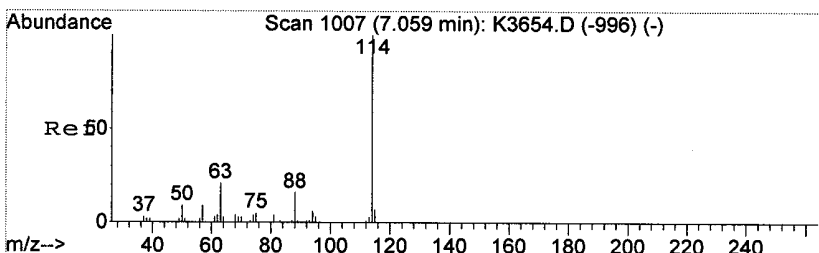
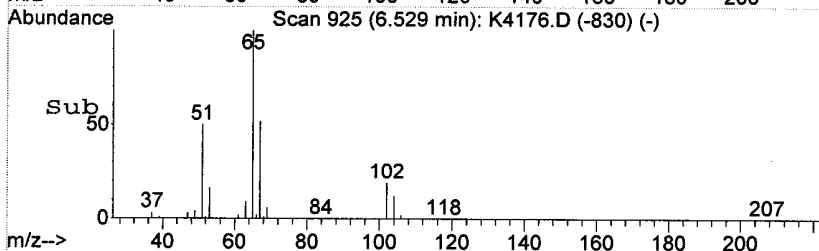
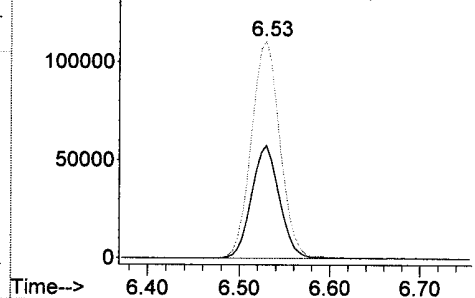
Tgt Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	50.5	40.4	60.6



Abundance Ion 65.15 (64.85 to 65.85): K4176.D

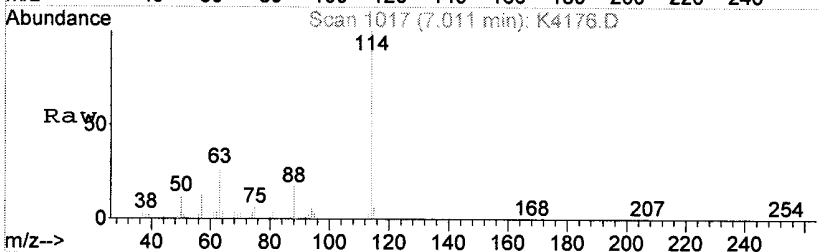
150000 Ion 65.15 (64.85 to 65.85): K4176.D

Ion 67.15 (66.85 to 67.85): K4176.D



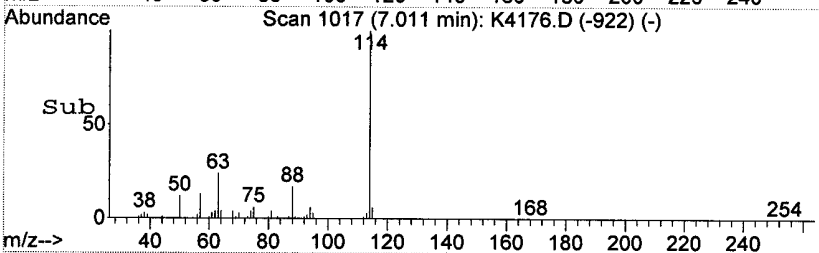
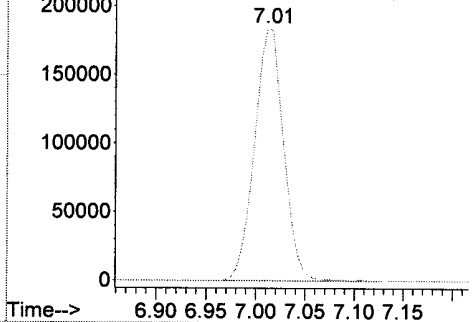
#31
 1,4-Difluorobenzene
 Concen: 50.00 UG
 RT: 7.01 min Scan# 1017
 Delta R.T. -0.00 min
 Lab File: K4176.D
 Acq: 6 May 2014 3:49 am

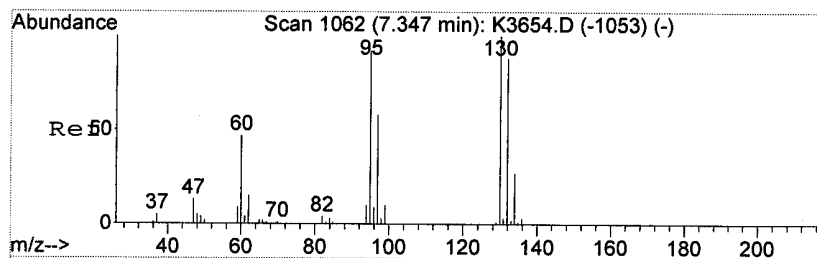
Tgt Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0



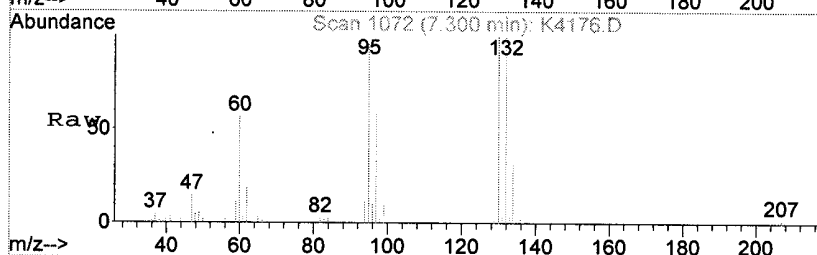
Abundance Ion 114.00 (113.70 to 114.70): K4176.D

200000 Ion 114.00 (113.70 to 114.70): K4176.D

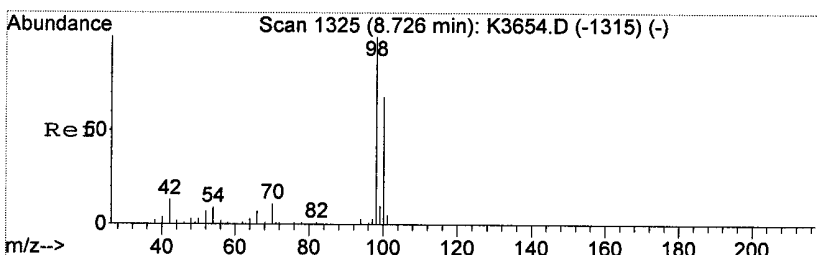
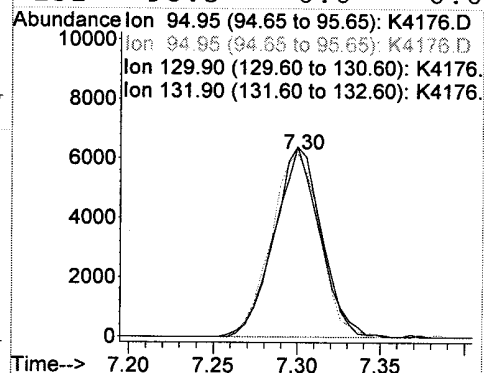
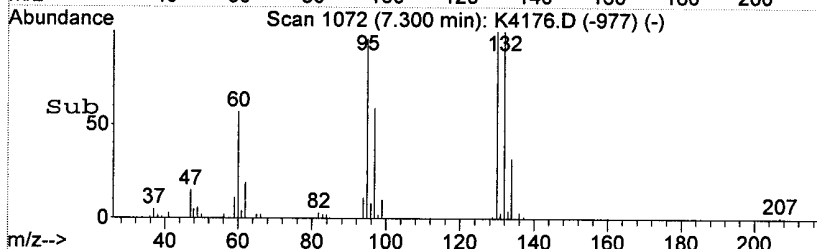




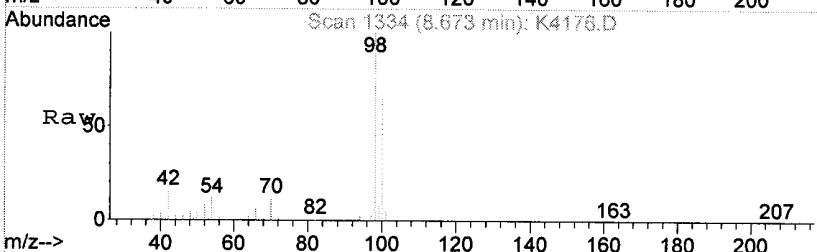
#33
 Trichloroethene
 Concen: 3.48 UG
 RT: 7.30 min Scan# 1072
 Delta R.T. -0.00 min
 Lab File: K4176.D
 Acq: 6 May 2014 3:49 am



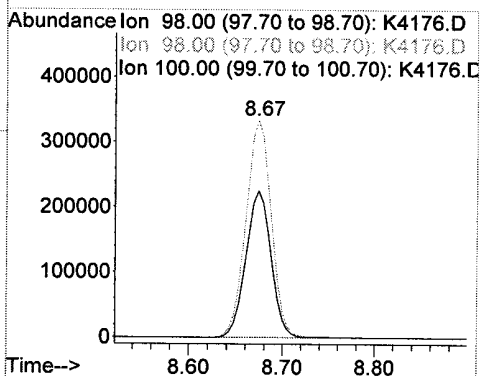
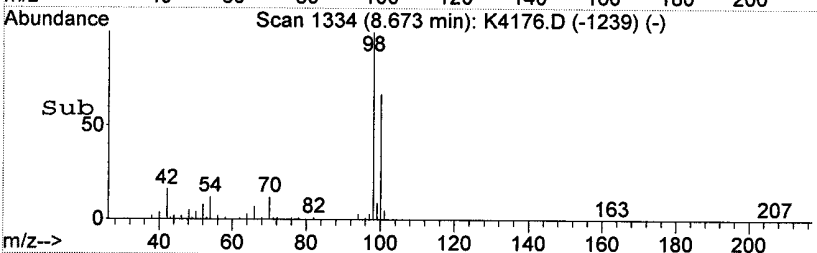
Tgt Ion: 95 Resp: 12600
 Ion Ratio Lower Upper
 95 100
 95 100.0 80.0 120.0
 130 100.6 0.0 0.0#
 132 96.3 0.0 0.0#

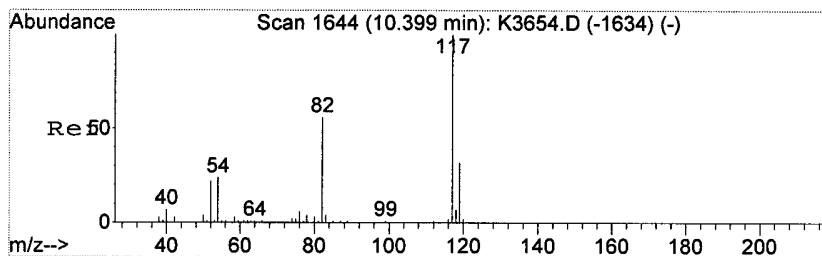


#41
 Toluene-d8
 Concen: 49.95 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. -0.00 min
 Lab File: K4176.D
 Acq: 6 May 2014 3:49 am



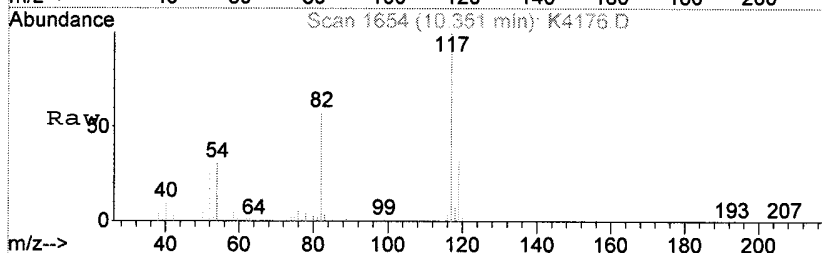
Tgt Ion: 98 Resp: 631697
 Ion Ratio Lower Upper
 98 100
 98 100.0 80.0 120.0
 100 67.0 51.6 77.4



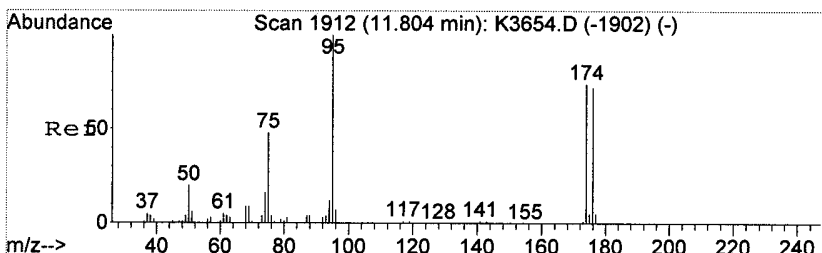
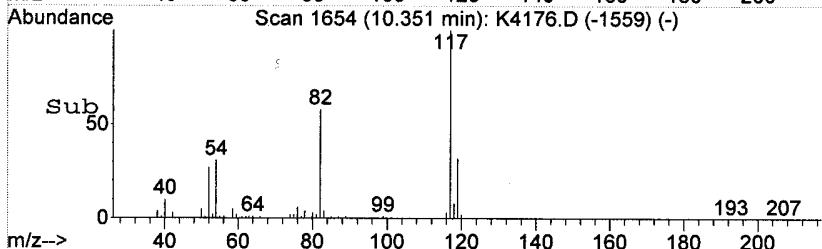
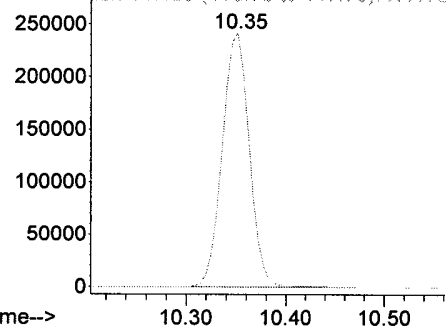


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1654
Delta R.T. -0.00 min
Lab File: K4176.D
Acq: 6 May 2014 3:49 am

Tgt Ion: 117 Resp: 451084
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0

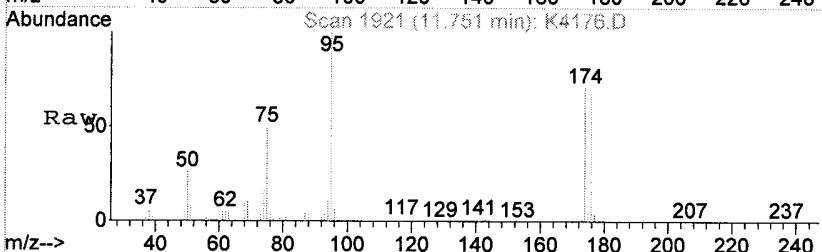


Abundance Ion 117.00 (116.70 to 117.70): K4176.D

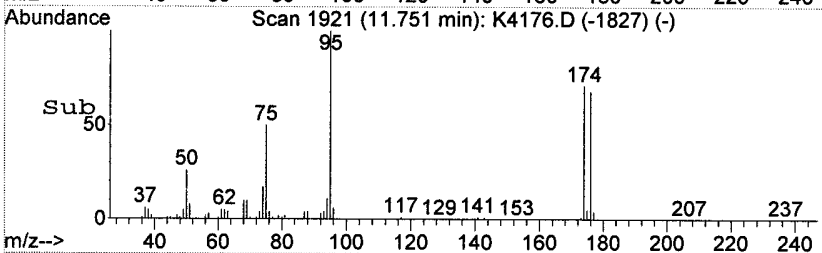
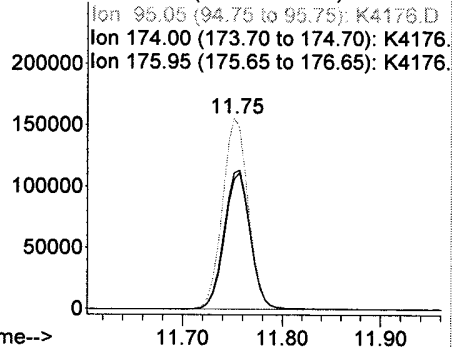


#59
Bromofluorobenzene
Concen: 48.81 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4176.D
Acq: 6 May 2014 3:49 am

Tgt Ion: 95 Resp: 279657
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.8 61.4 92.0
176 70.9 59.3 88.9



Abundance Ion 95.05 (94.75 to 95.75): K4176.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4177.D
 Acq On : 6 May 2014 4:17 am
 Operator : BARBARA
 Sample : TW-4,03838-004,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 36 Sample Multiplier: 1

Quant Time: May 06 10:50:20 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	239821	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	372406	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	443732	50.00	UG	0.00

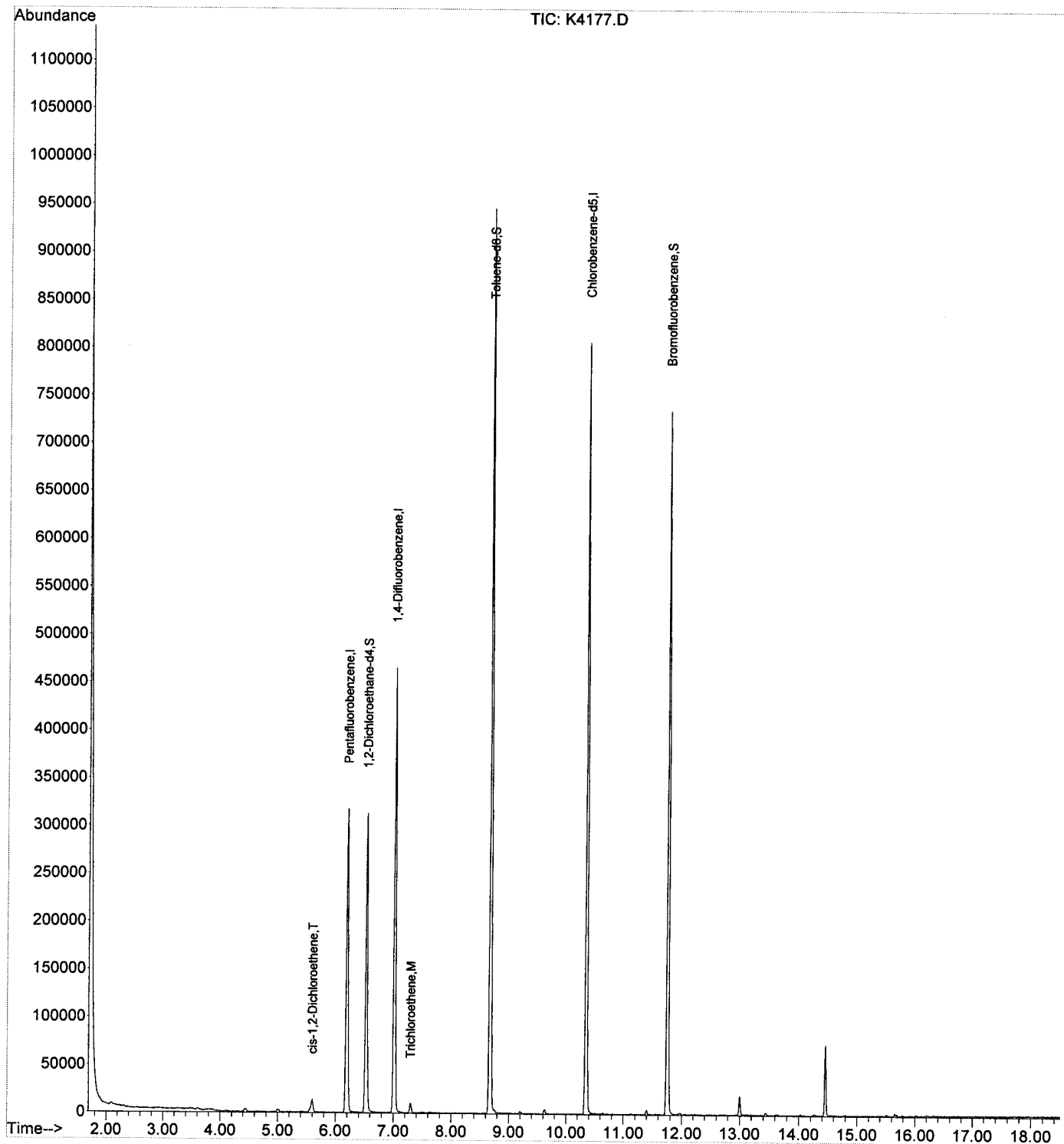
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	236967	52.34	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.68%
41) Toluene-d8	8.67	98	628666	50.00	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%
59) Bromofluorobenzene	11.75	95	278397	49.40	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.80%

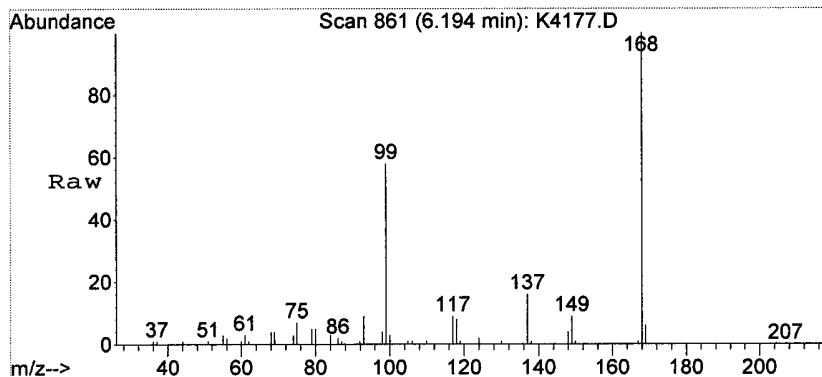
Target Compounds						Qvalue
20) cis-1,2-Dichloroethene	5.60	96	5695	1.50	UG	# 99
33) Trichloroethene	7.30	95	3575	0.99	UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4177.D
Acq On : 6 May 2014 4:17 am
Operator : BARBARA
Sample : TW-4,03838-004,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
ALS Vial : 36 Sample Multiplier: 1

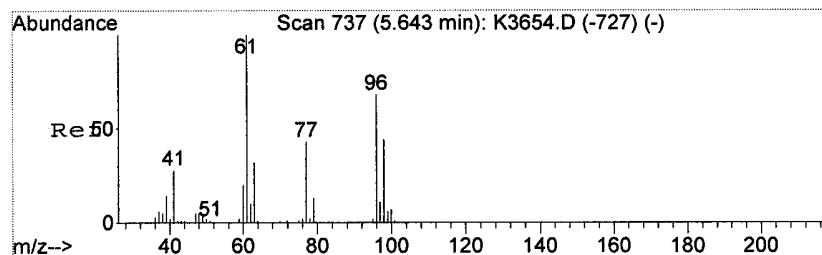
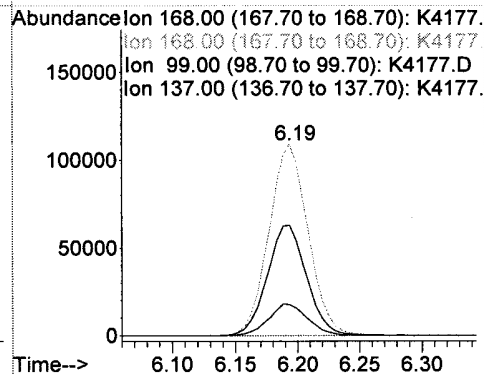
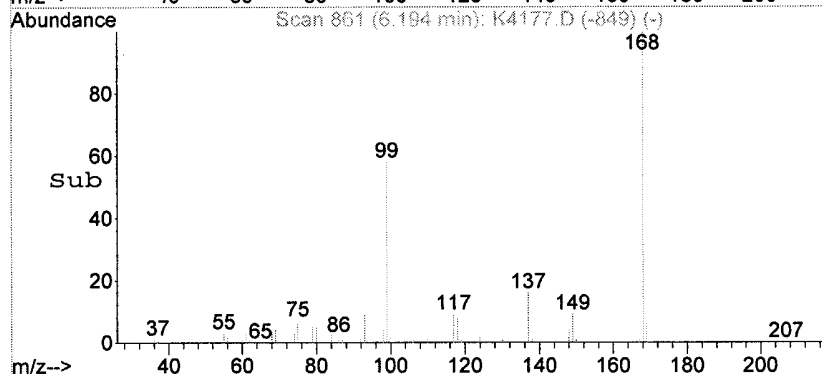
Quant Time: May 06 10:50:20 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration





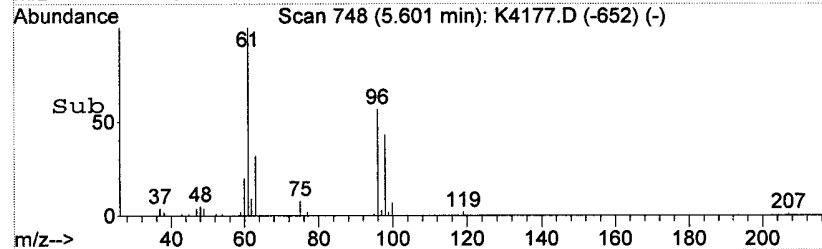
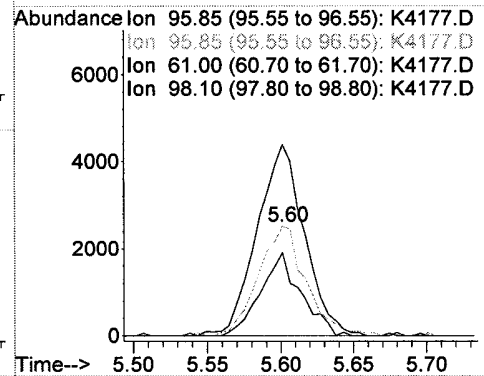
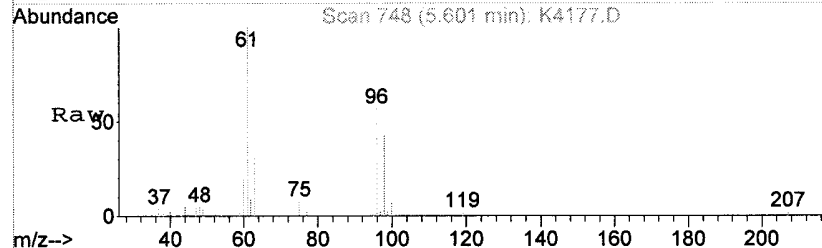
#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. 0.00 min
Lab File: K4177.D
Acq: 6 May 2014 4:17 am

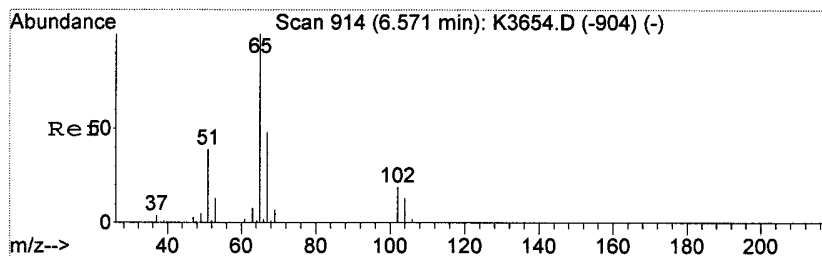
Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	58.0	45.9	68.9
137	16.3	12.7	19.1



#20
cis-1,2-Dichloroethene
Concen: 1.50 UG
RT: 5.60 min Scan# 748
Delta R.T. 0.01 min
Lab File: K4177.D
Acq: 6 May 2014 4:17 am

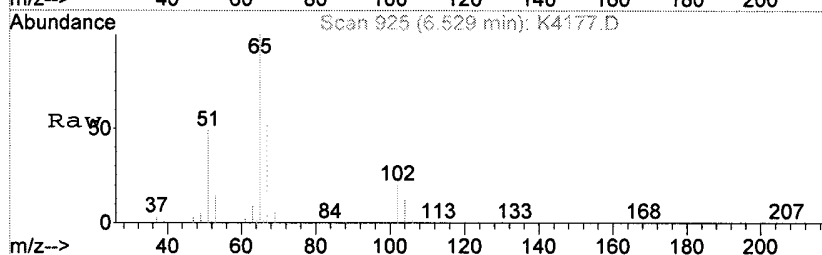
Tgt Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	0.0	0.0	0.0
98	64.3	53.0	79.4



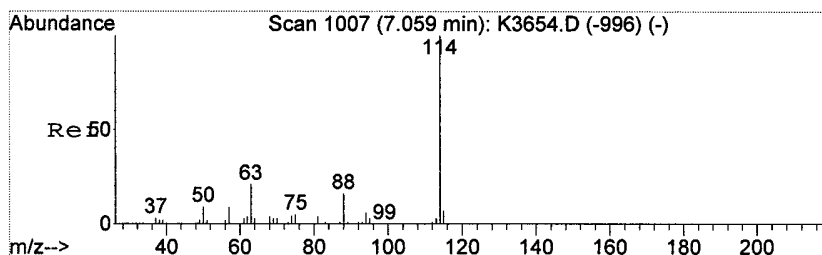
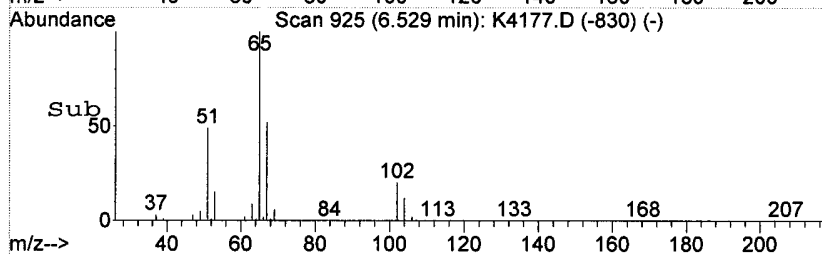
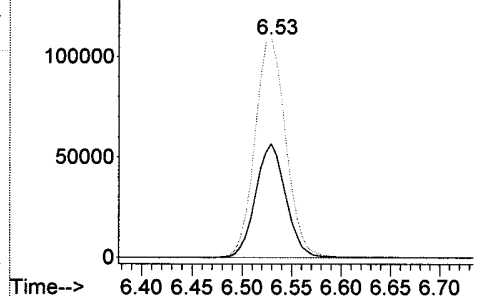


#30
 1,2-Dichloroethane-d4
 Concen: 52.34 UG
 RT: 6.53 min Scan# 925
 Delta R.T. 0.00 min
 Lab File: K4177.D
 Acq: 6 May 2014 4:17 am

Tgt Ion	Resp	Lower	Upper
65	236967		
65	100		
65	100.0	80.0	120.0
67	50.9	40.4	60.6

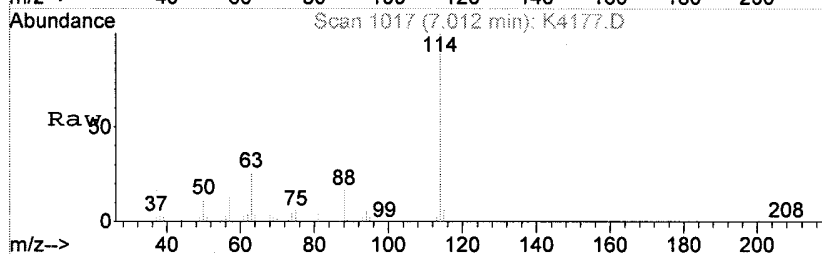


Abundance Ion 65.15 (64.85 to 65.85): K4177.D
 Ion 65.15 (64.85 to 65.85): K4177.D
 Ion 67.15 (66.85 to 67.85): K4177.D

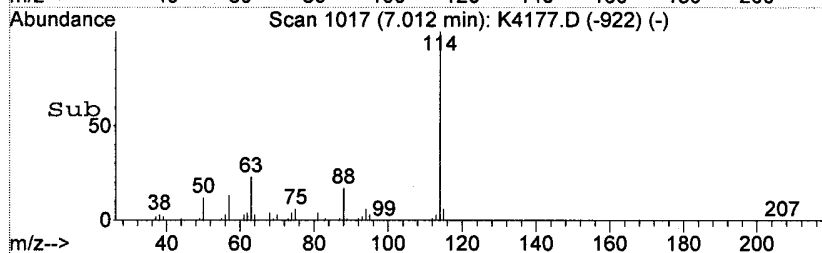
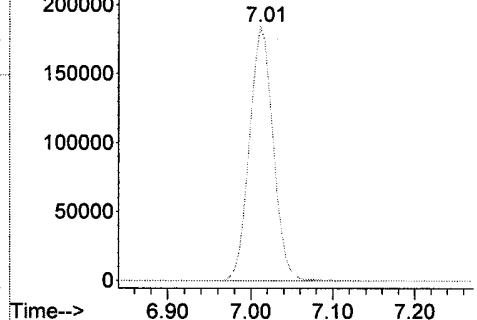


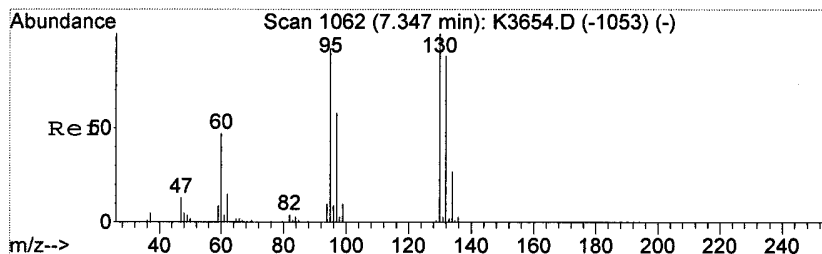
#31
 1,4-Difluorobenzene
 Concen: 50.00 UG
 RT: 7.01 min Scan# 1017
 Delta R.T. 0.00 min
 Lab File: K4177.D
 Acq: 6 May 2014 4:17 am

Tgt Ion	Resp	Lower	Upper
114	372406		
114	100		
114	100.0	80.0	120.0



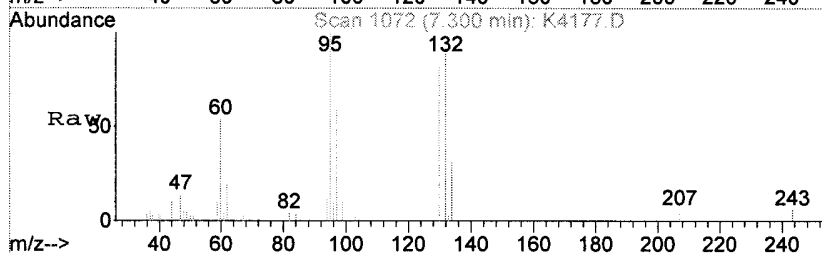
Abundance Ion 114.00 (113.70 to 114.70): K4177.D
 Ion 114.00 (113.70 to 114.70): K4177.D



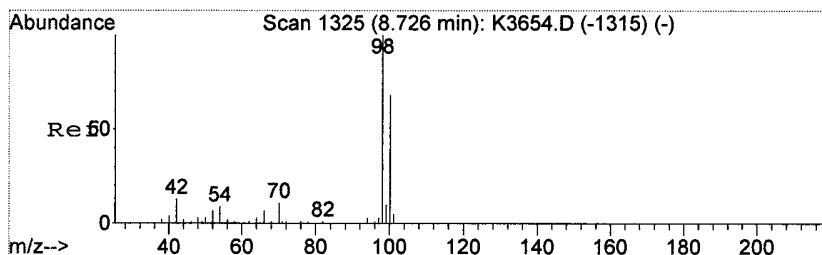
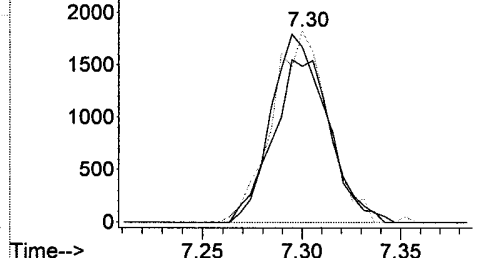
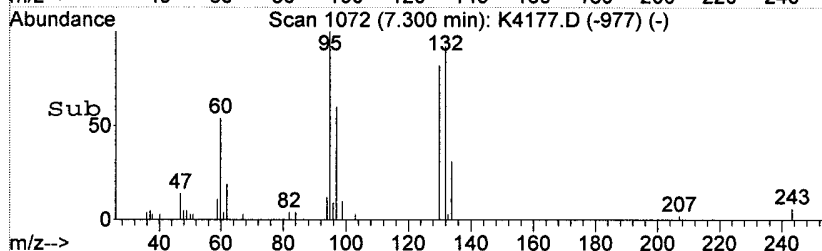


#33
 Trichloroethene
 Concen: 0.99 UG
 RT: 7.30 min Scan# 1072
 Delta R.T. 0.00 min
 Lab File: K4177.D
 Acq: 6 May 2014 4:17 am

Tgt Ion: 95 Resp: 3575
 Ion Ratio Lower Upper
 95 100
 95 100.0 80.0 120.0
 130 0.0 0.0 0.0
 132 0.0 0.0 0.0

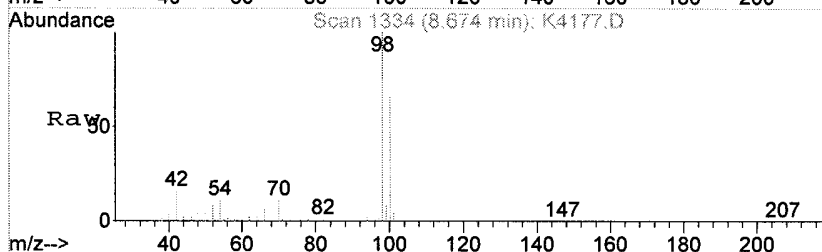


Abundance Ion 94.95 (94.65 to 95.65): K4177.D
 Ion 94.95 (94.65 to 95.65): K4177.D
 Ion 129.90 (129.60 to 130.60): K4177.D
 Ion 131.90 (131.60 to 132.60): K4177.D

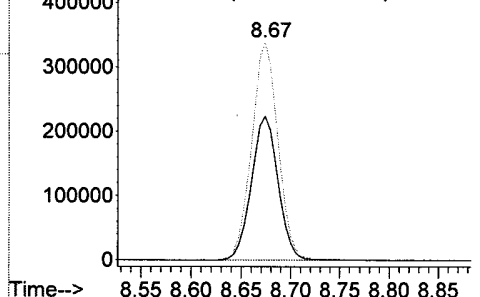
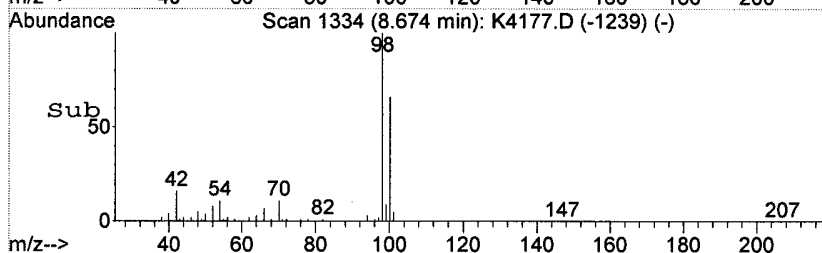


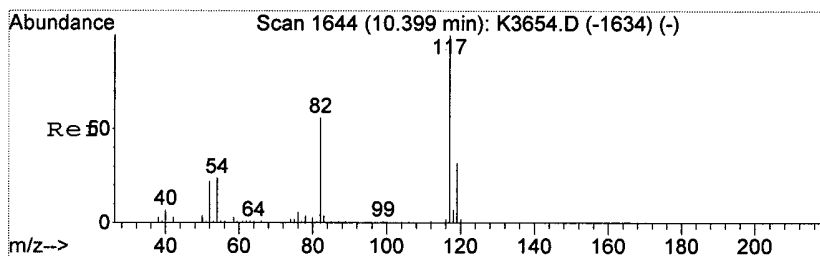
#41
 Toluene-d8
 Concen: 50.00 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. 0.00 min
 Lab File: K4177.D
 Acq: 6 May 2014 4:17 am

Tgt Ion: 98 Resp: 628666
 Ion Ratio Lower Upper
 98 100
 98 100.0 80.0 120.0
 100 66.7 51.6 77.4



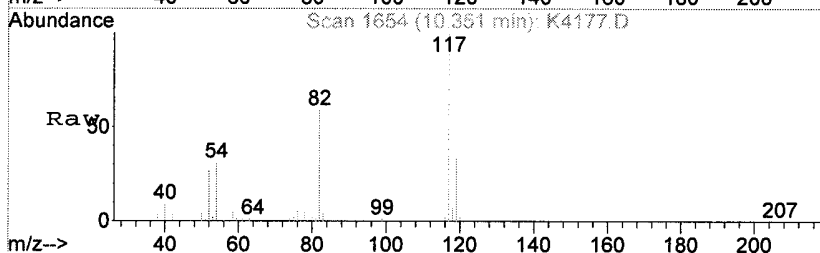
Abundance Ion 98.00 (97.70 to 98.70): K4177.D
 Ion 98.00 (97.70 to 98.70): K4177.D
 Ion 100.00 (99.70 to 100.70): K4177.D



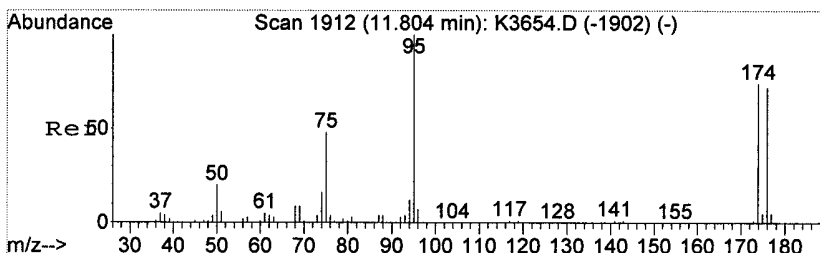
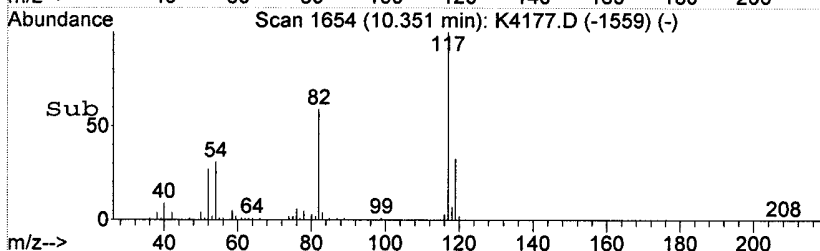
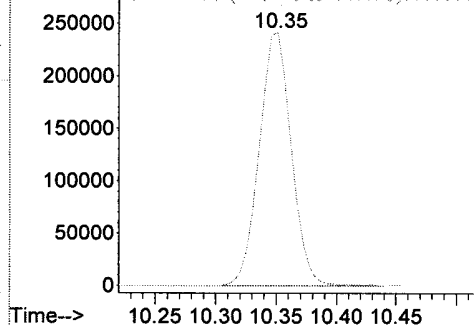


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1654
Delta R.T. 0.00 min
Lab File: K4177.D
Acq: 6 May 2014 4:17 am

Tgt Ion: 117 Resp: 443732
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0

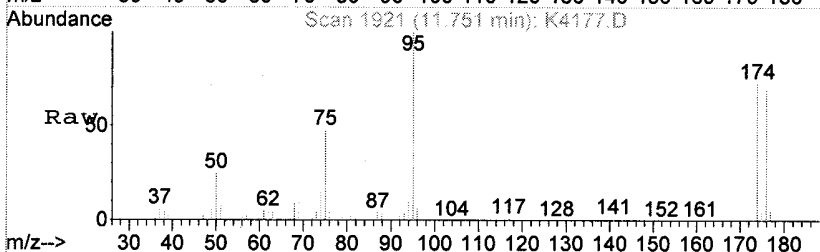


Abundance Ion 117.00 (116.70 to 117.70): K4177.D

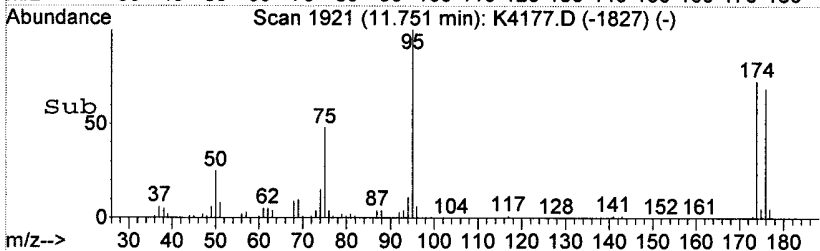
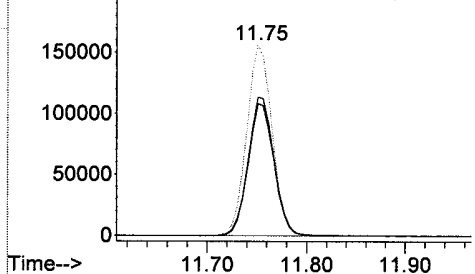


#59
Bromofluorobenzene
Concen: 49.40 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4177.D
Acq: 6 May 2014 4:17 am

Tgt Ion: 95 Resp: 278397
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.3 61.4 92.0
176 70.4 59.3 88.9



Abundance Ion 95.05 (94.75 to 95.75): K4177.D
Ion 95.05 (94.75 to 95.75): K4177.D
Ion 174.00 (173.70 to 174.70): K4177.D
Ion 175.95 (175.65 to 176.65): K4177.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4178.D
 Acq On : 6 May 2014 4:45 am
 Operator : BARBARA
 Sample : TW-5,03838-005,A,5mL,100
 Misc : EWMA/SWIVELIER_2,04/29/14,04/30/14,1
 ALS Vial : 37 Sample Multiplier: 1

Quant Time: May 06 10:54:26 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	241491	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	375211	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	449330	50.00	UG	0.00

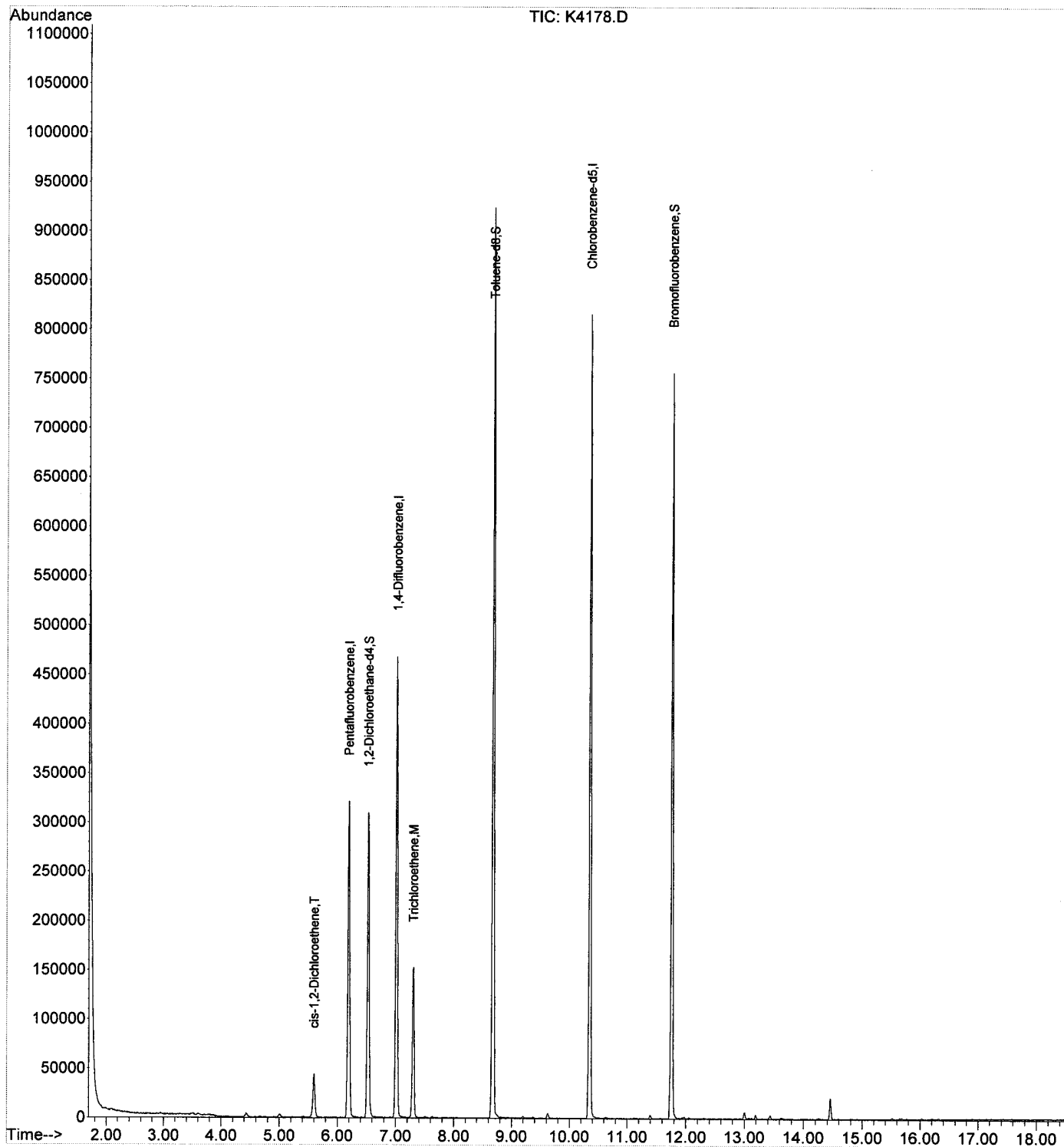
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	238101	52.23	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.46%
41) Toluene-d8	8.67	98	625455	49.37	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.74%
59) Bromofluorobenzene	11.75	95	278047	48.72	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.44%

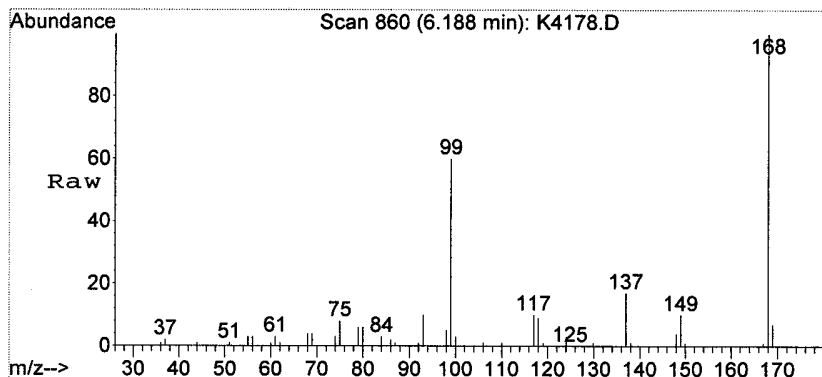
Target Compounds						Qvalue
20) cis-1,2-Dichloroethene	5.60	96	19973	5.21	UG	# 99
33) Trichloroethene	7.29	95	54234	14.95	UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4178.D
Acq On : 6 May 2014 4:45 am
Operator : BARBARA
Sample : TW-5,03838-005,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
ALS Vial : 37 Sample Multiplier: 1

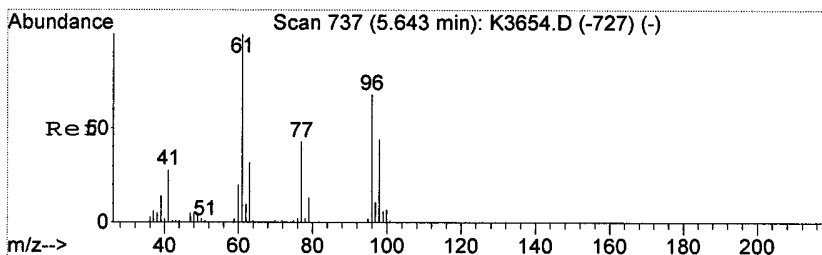
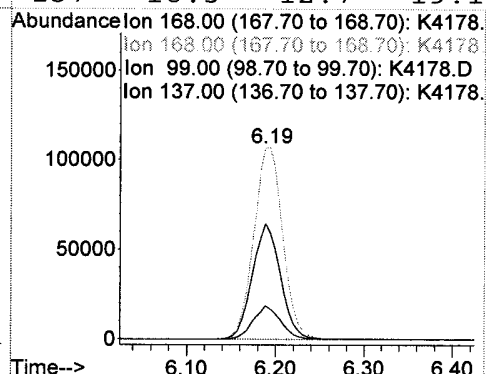
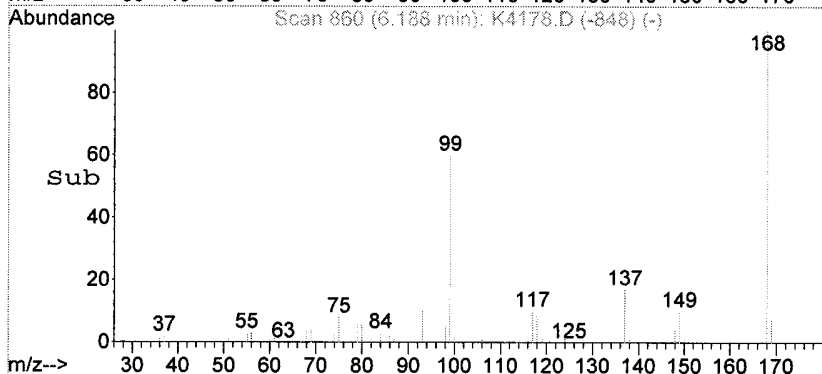
Quant Time: May 06 10:54:26 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration





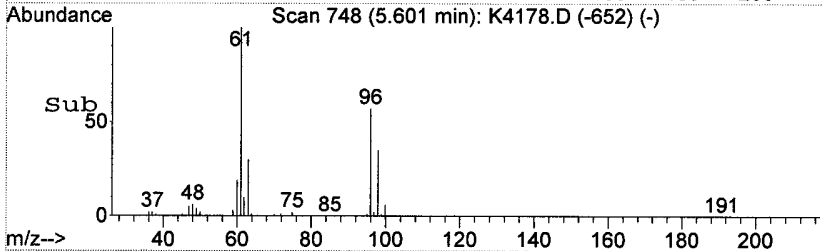
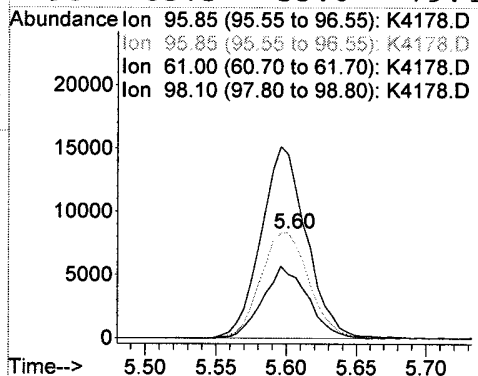
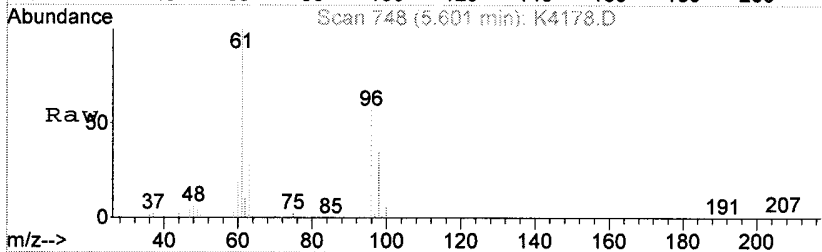
#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 860
Delta R.T. -0.01 min
Lab File: K4178.D
Acq: 6 May 2014 4:45 am

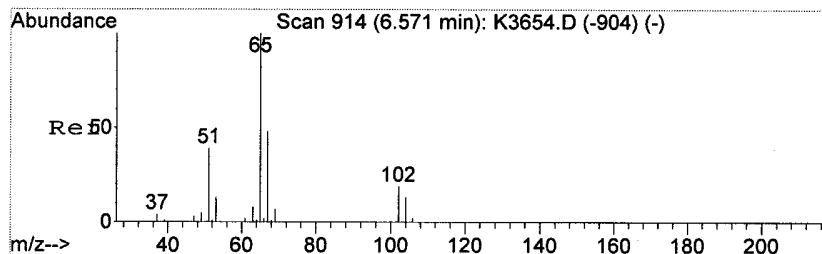
Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	58.5	45.9	68.9
137	16.3	12.7	19.1



#20
cis-1,2-Dichloroethene
Concen: 5.21 UG
RT: 5.60 min Scan# 748
Delta R.T. 0.01 min
Lab File: K4178.D
Acq: 6 May 2014 4:45 am

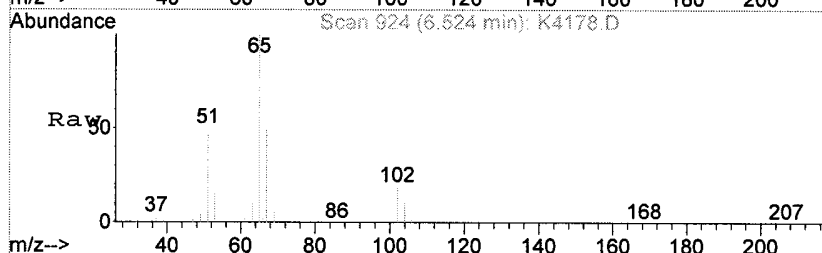
Tgt Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	170.4	0.0	0.0#
98	63.5	53.0	79.4



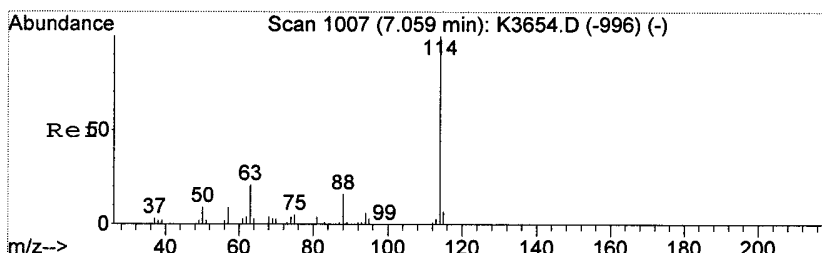
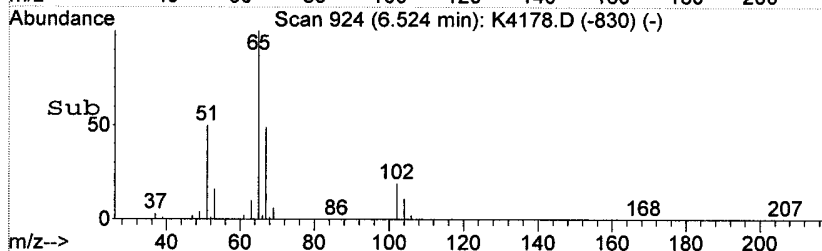
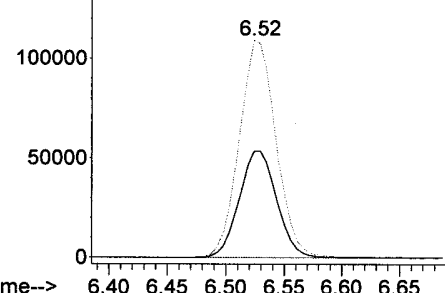


#30
1,2-Dichloroethane-d4
Concen: 52.23 UG
RT: 6.52 min Scan# 924
Delta R.T. -0.01 min
Lab File: K4178.D
Acq: 6 May 2014 4:45 am

Tgt Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	50.1	40.4	60.6

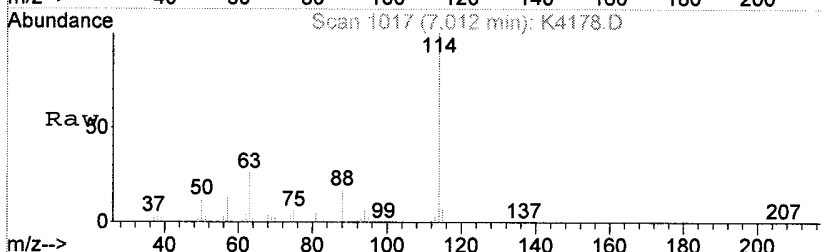


Abundance Ion 65.15 (64.85 to 65.85): K4178.D
150000 Ion 65.15 (64.85 to 65.85): K4178.D
Ion 67.15 (66.85 to 67.85): K4178.D

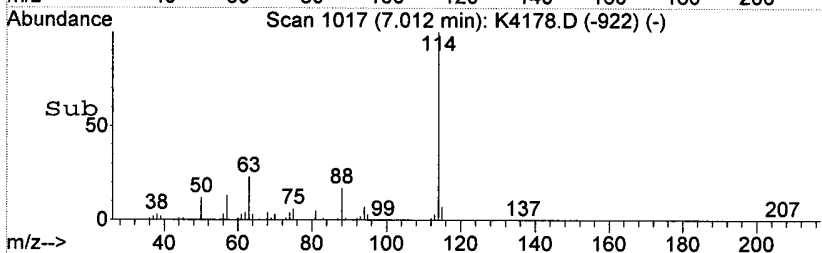
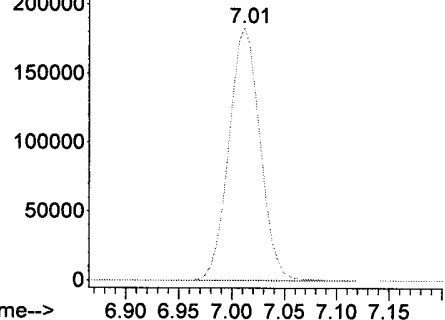


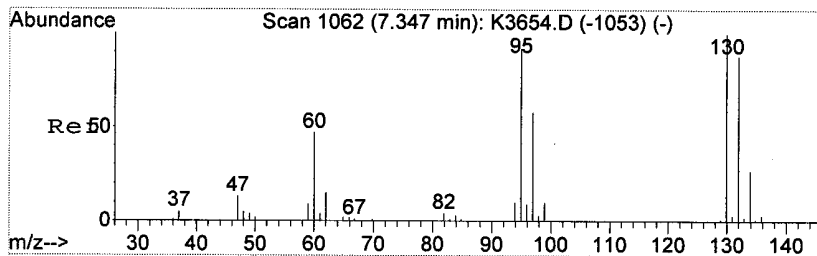
#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.01 min Scan# 1017
Delta R.T. 0.00 min
Lab File: K4178.D
Acq: 6 May 2014 4:45 am

Tgt Ion	Ratio	Lower	Upper
114	100		
114	100.0	80.0	120.0

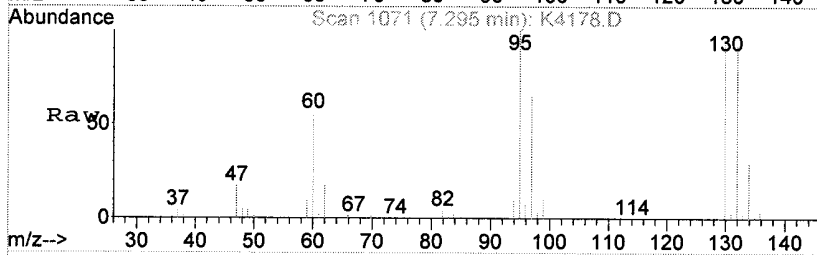


Abundance Ion 114.00 (113.70 to 114.70): K4178.D
200000 Ion 114.00 (113.70 to 114.70): K4178.D

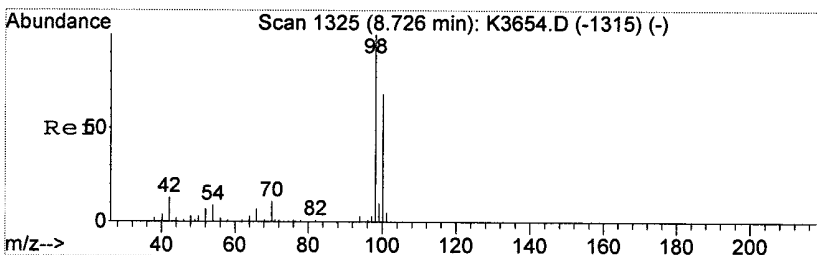
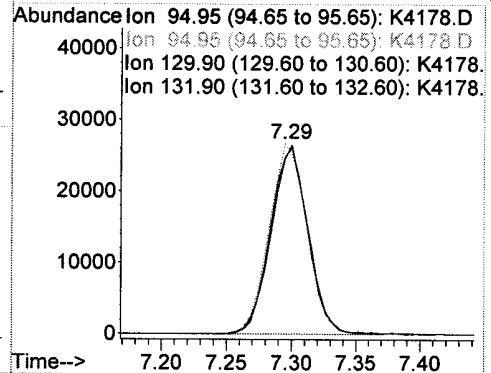
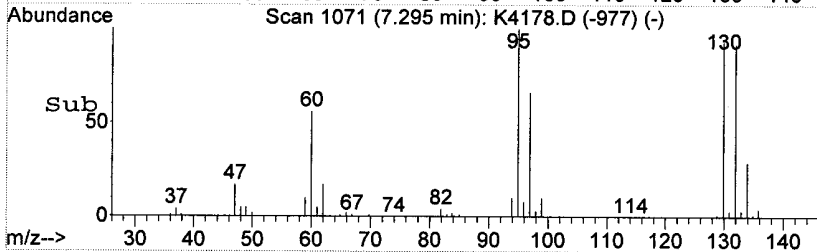




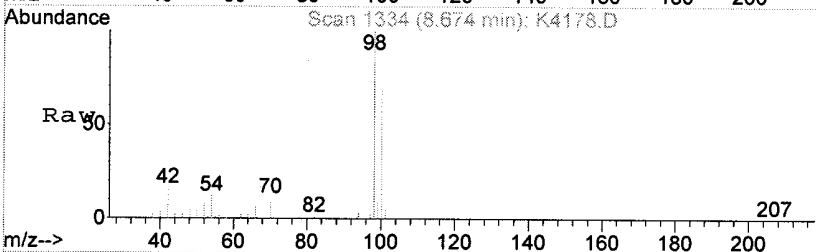
#33
 Trichloroethene
 Concen: 14.95 UG
 RT: 7.29 min Scan# 1071
 Delta R.T. -0.01 min
 Lab File: K4178.D
 Acq: 6 May 2014 4:45 am



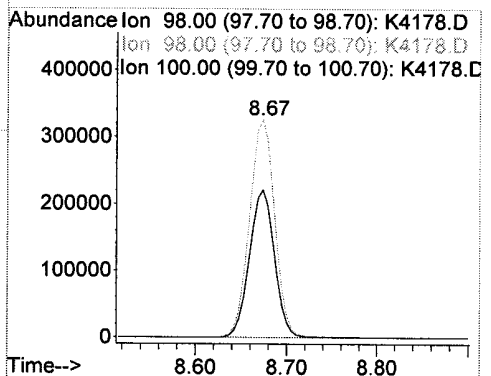
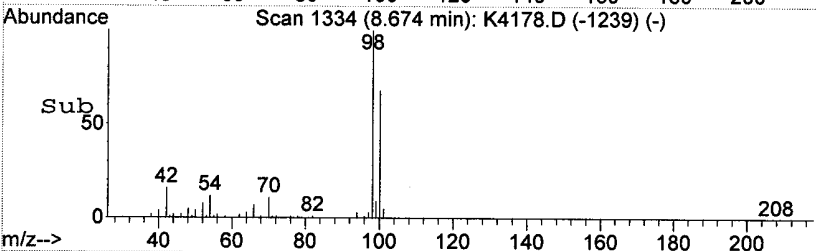
Tgt Ion: 95 Resp: 54234
 Ion Ratio Lower Upper
 95 100
 95 100.0 80.0 120.0
 130 97.3 0.0 0.0#
 132 95.2 0.0 0.0#

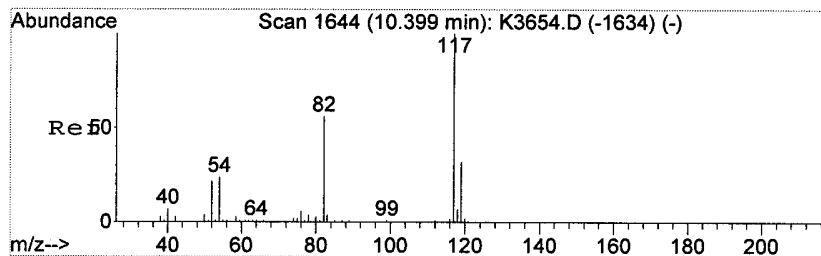


#41
 Toluene-d8
 Concen: 49.37 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. 0.00 min
 Lab File: K4178.D
 Acq: 6 May 2014 4:45 am



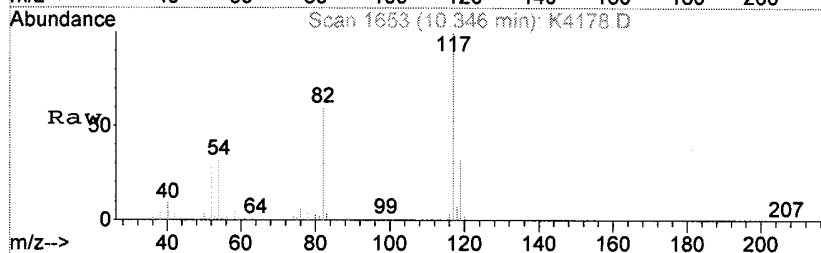
Tgt Ion: 98 Resp: 625455
 Ion Ratio Lower Upper
 98 100
 98 100.0 80.0 120.0
 100 67.3 51.6 77.4



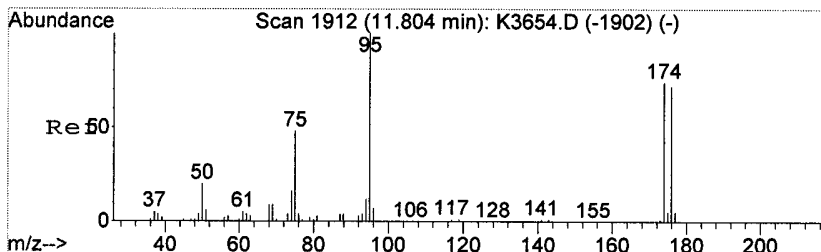
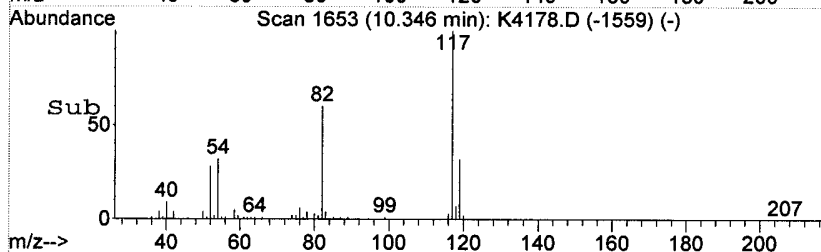
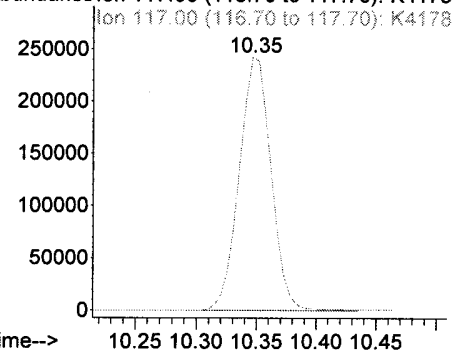


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1653
Delta R.T. -0.01 min
Lab File: K4178.D
Acq: 6 May 2014 4:45 am

Tgt Ion: 117 Resp: 449330
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0

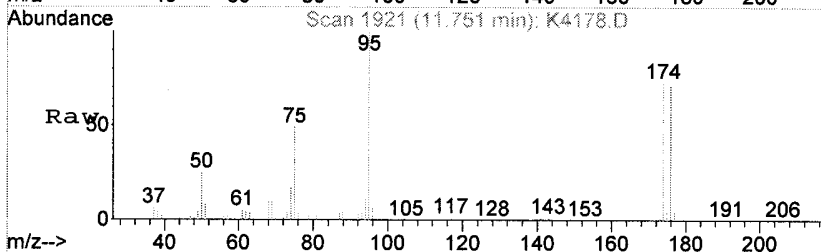


Abundance Ion 117.00 (116.70 to 117.70): K4178.D

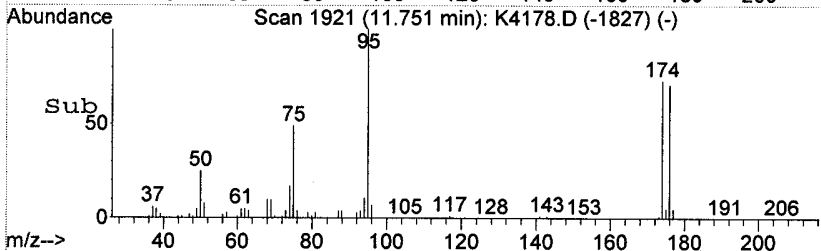
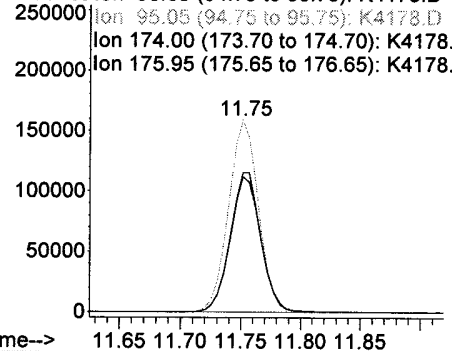


#59
Bromofluorobenzene
Concen: 48.72 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4178.D
Acq: 6 May 2014 4:45 am

Tgt Ion: 95 Resp: 278047
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.8 61.4 92.0
176 71.9 59.3 88.9



Abundance Ion 95.05 (94.75 to 95.75): K4178.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4179.D
Acq On : 6 May 2014 5:13 am
Operator : BARBARA
Sample : TW-6,03838-006,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: May 06 10:59:19 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	235679	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	366149	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	439824	50.00	UG	0.00

System Monitoring Compounds

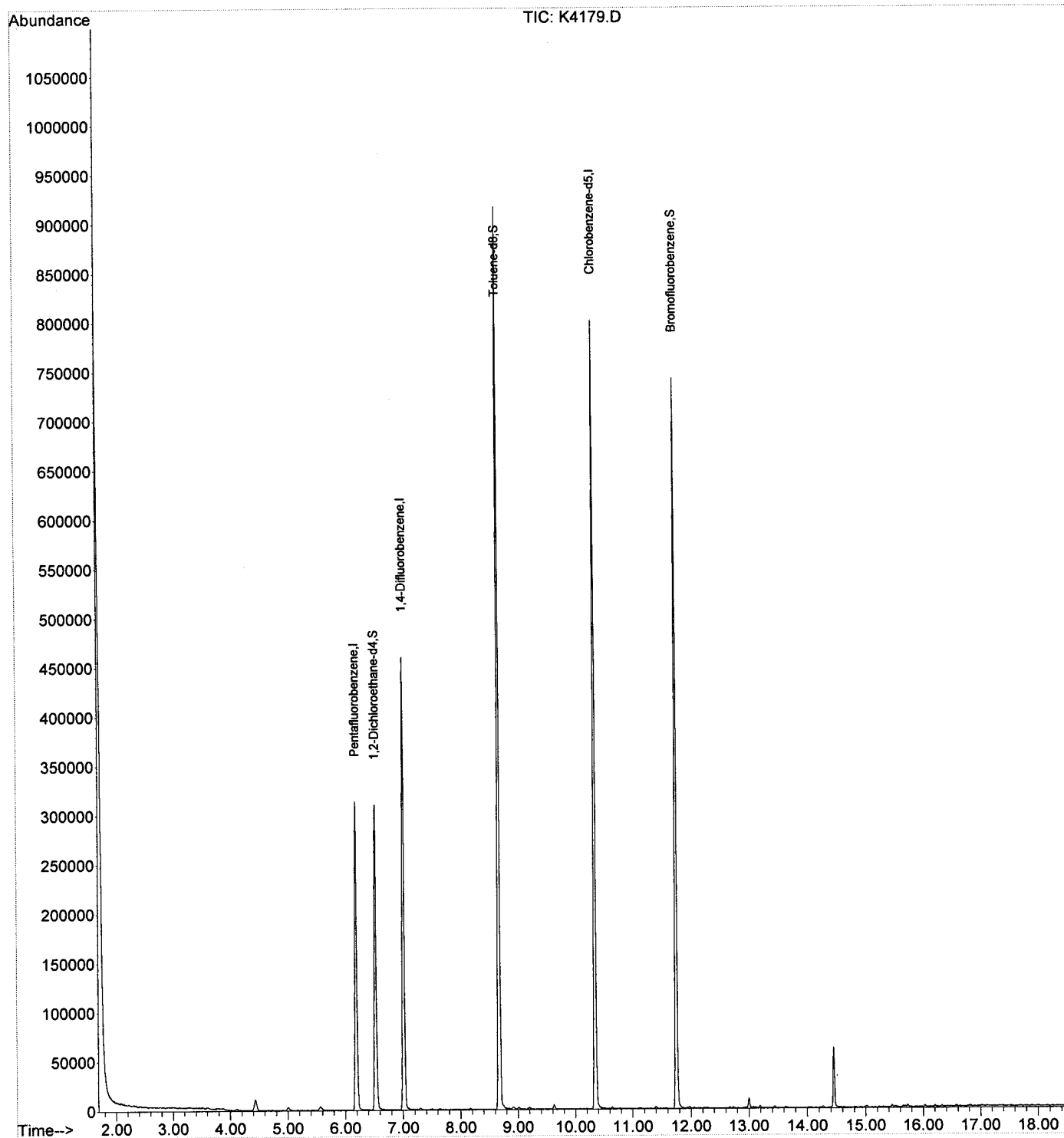
30) 1,2-Dichloroethane-d4	6.53	65	236159	53.08	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.16%
41) Toluene-d8	8.67	98	615923	49.82	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.64%
59) Bromofluorobenzene	11.75	95	272893	48.85	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.70%

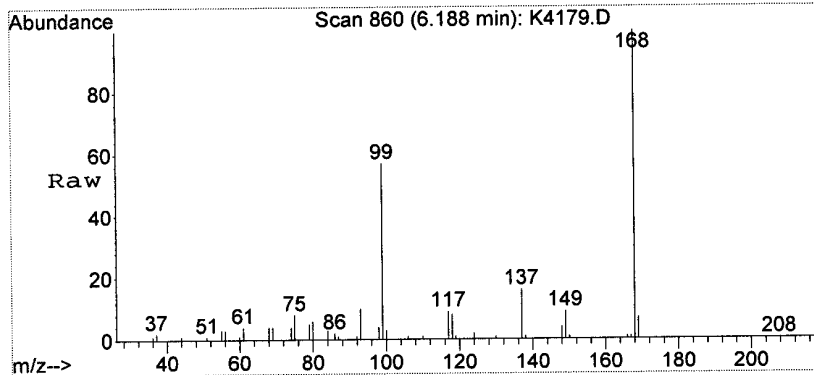
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4179.D
Acq On : 6 May 2014 5:13 am
Operator : BARBARA
Sample : TW-6,03838-006,A,5mL,100
Misc : EWMA/SWIVELIER_2,04/29/14,04/30/14,1
ALS Vial : 38 Sample Multiplier: 1

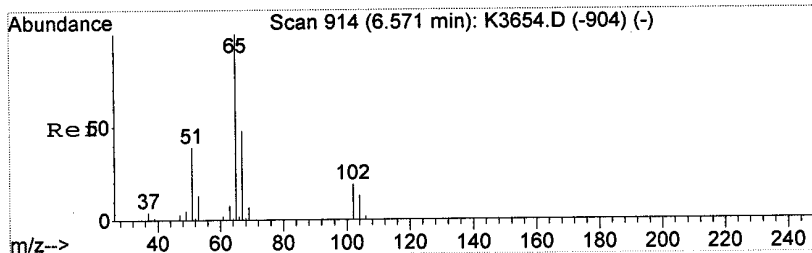
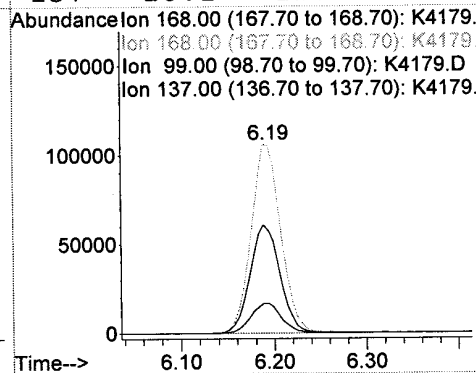
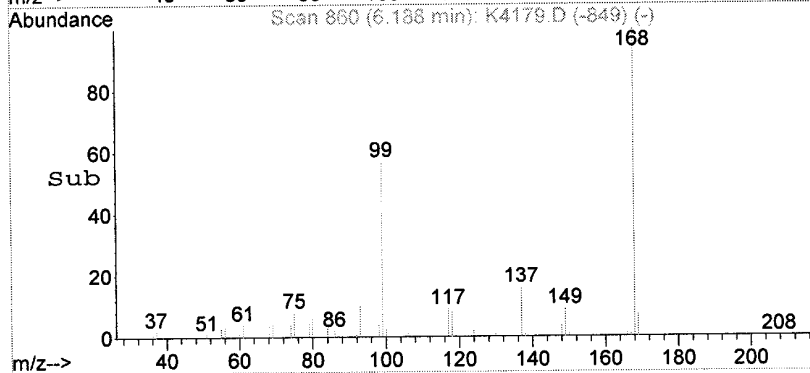
Quant Time: May 06 10:59:19 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration





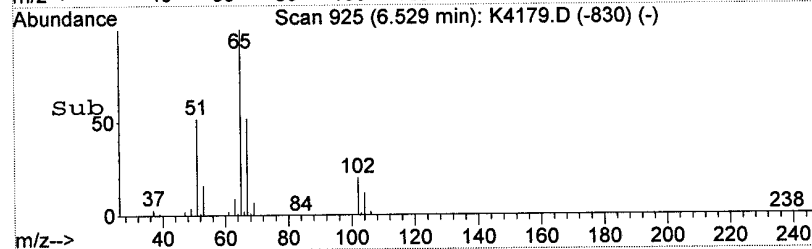
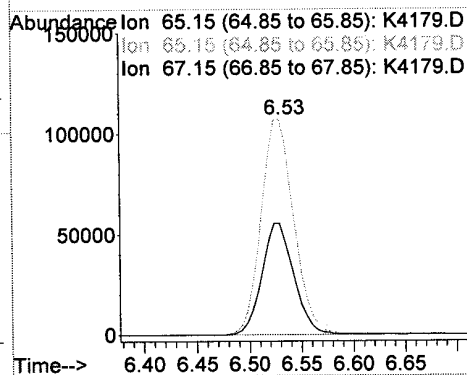
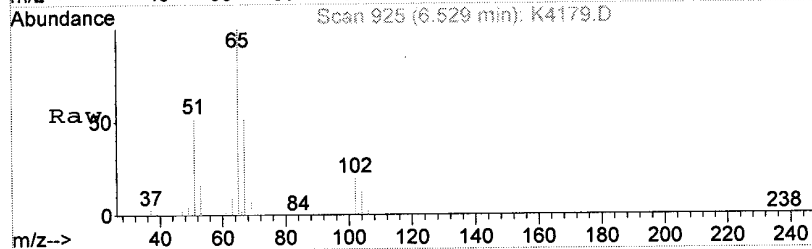
#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 860
Delta R.T. -0.01 min
Lab File: K4179.D
Acq: 6 May 2014 5:13 am

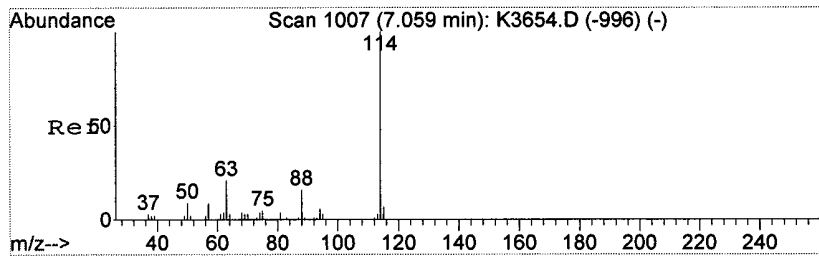
Tgt Ion: 168 Resp: 235679
Ion Ratio Lower Upper
168 100
168 100.0 80.0 120.0
99 0.0 45.9 68.9#
137 16.1 12.7 19.1



#30
1,2-Dichloroethane-d4
Concen: 53.08 UG
RT: 6.53 min Scan# 925
Delta R.T. 0.00 min
Lab File: K4179.D
Acq: 6 May 2014 5:13 am

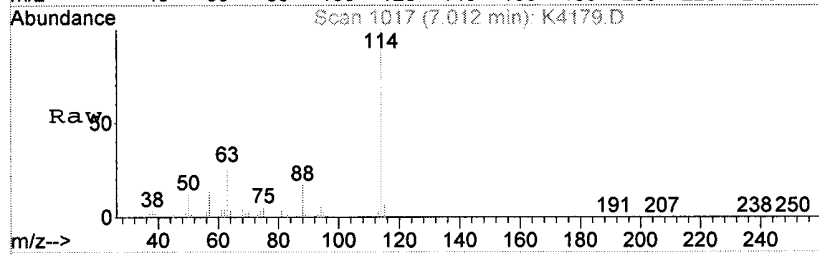
Tgt Ion: 65 Resp: 236159
Ion Ratio Lower Upper
65 100
65 100.0 80.0 120.0
67 50.4 40.4 60.6



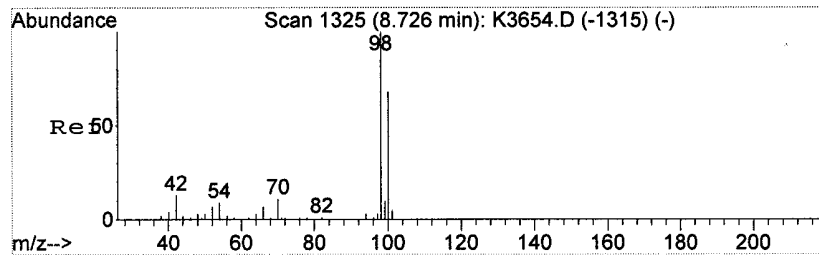
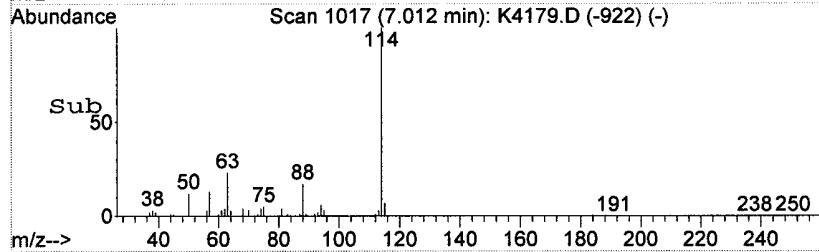
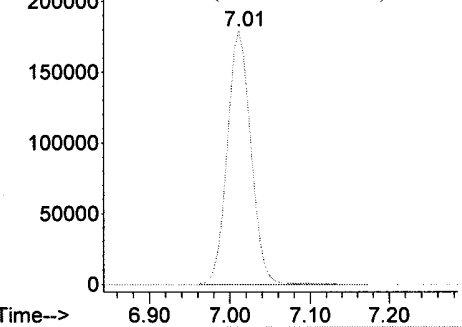


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.01 min Scan# 1017
Delta R.T. 0.00 min
Lab File: K4179.D
Acq: 6 May 2014 5:13 am

Tgt Ion: 114 Resp: 366149
Ion Ratio Lower Upper
114 100
114 100.0 80.0 120.0

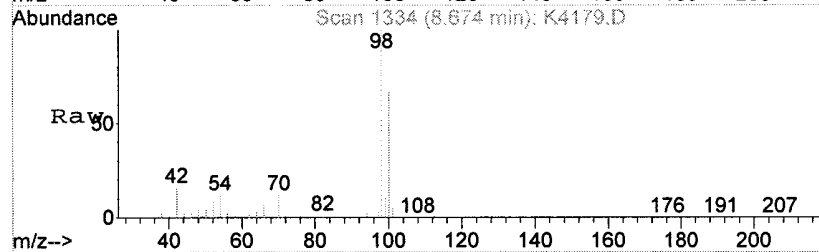


Abundance Ion 114.00 (113.70 to 114.70): K4179.D

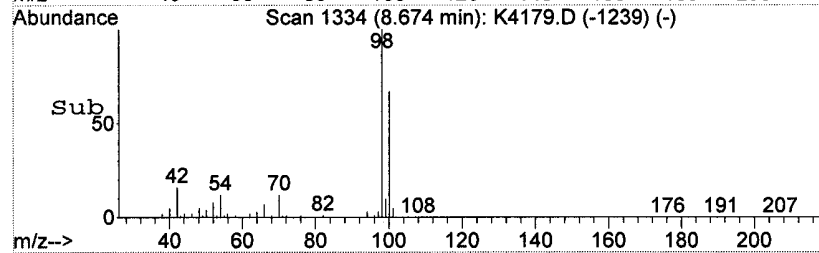
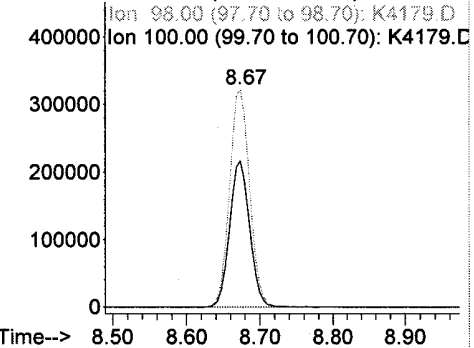


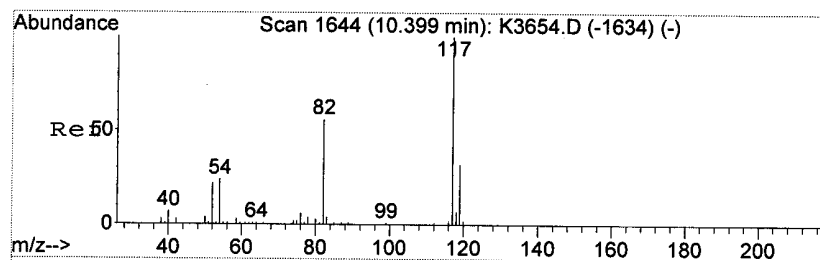
#41
Toluene-d8
Concen: 49.82 UG
RT: 8.67 min Scan# 1334
Delta R.T. 0.00 min
Lab File: K4179.D
Acq: 6 May 2014 5:13 am

Tgt Ion: 98 Resp: 615923
Ion Ratio Lower Upper
98 100
98 100.0 80.0 120.0
100 66.9 51.6 77.4



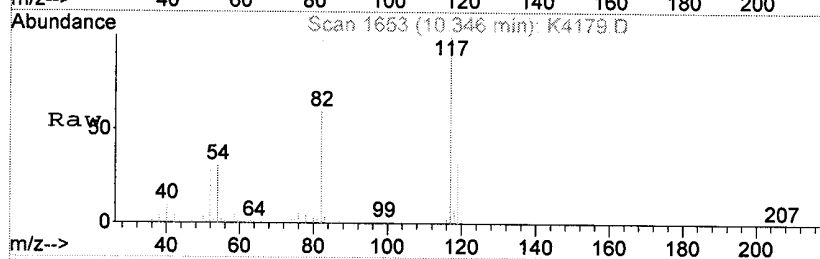
Abundance Ion 98.00 (97.70 to 98.70): K4179.D



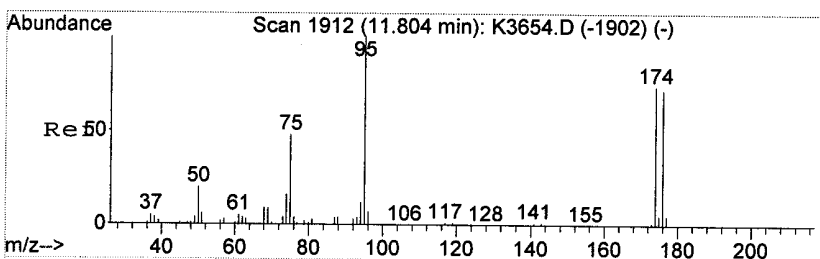
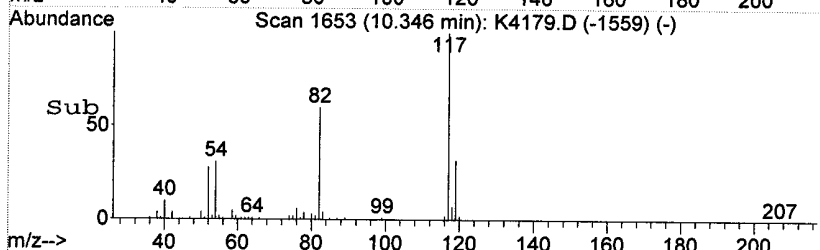
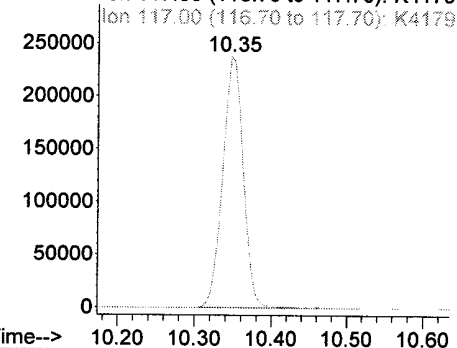


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1653
Delta R.T. -0.01 min
Lab File: K4179.D
Acq: 6 May 2014 5:13 am

Tgt Ion: 117 Resp: 439824
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0

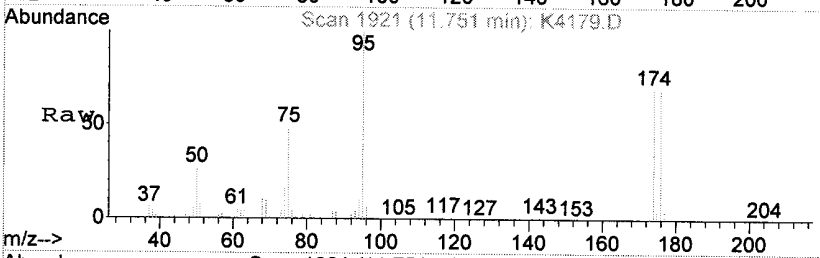


Abundance Ion 117.00 (116.70 to 117.70): K4179.D

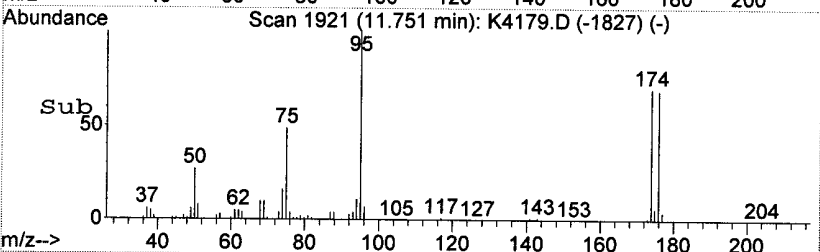
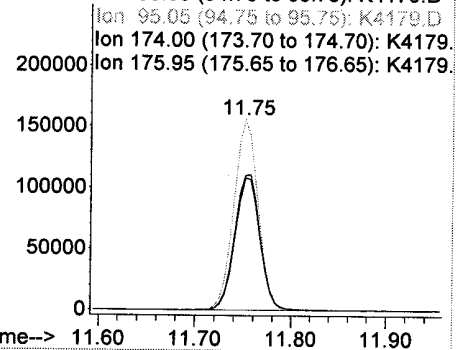


#59
Bromofluorobenzene
Concen: 48.85 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4179.D
Acq: 6 May 2014 5:13 am

Tgt Ion: 95 Resp: 272893
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 74.2 61.4 92.0
176 71.3 59.3 88.9



Abundance Ion 95.05 (94.75 to 95.75): K4179.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4180.D
 Acq On : 6 May 2014 5:41 am
 Operator : BARBARA
 Sample : TW-7,03838-007,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 39 Sample Multiplier: 1

Quant Time: May 06 11:04:36 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	233160	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	365509	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	440349	50.00	UG	0.00

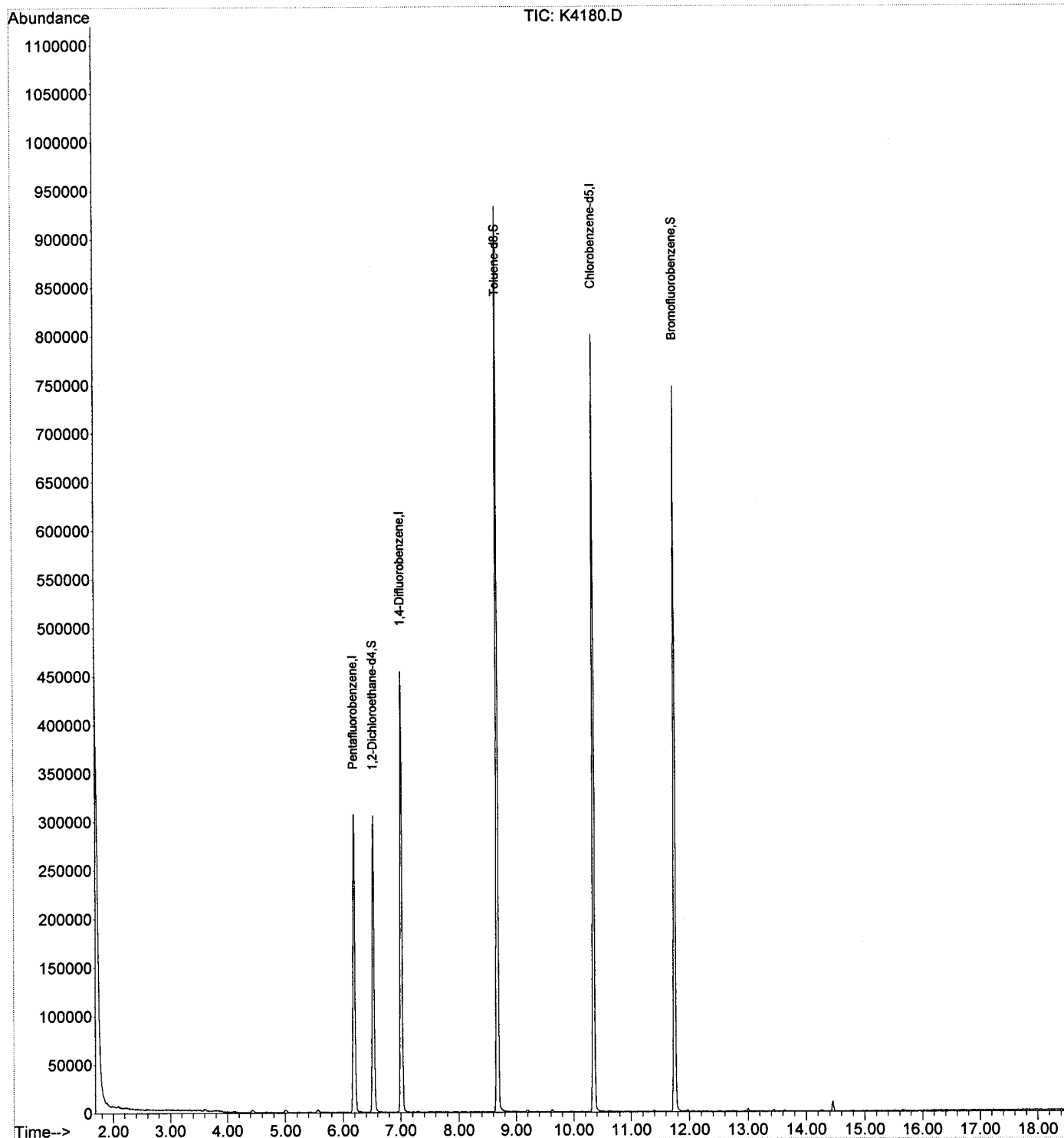
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	234346	53.24	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.48%
41) Toluene-d8	8.67	98	618752	50.14	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.28%
59) Bromofluorobenzene	11.75	95	274427	49.07	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.14%

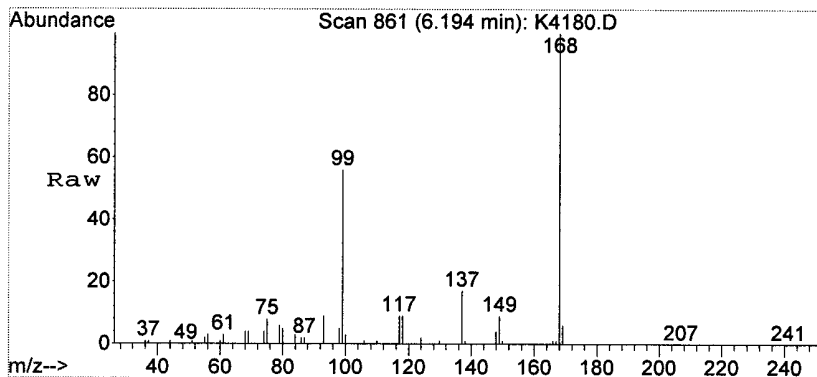
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4180.D
Acq On : 6 May 2014 5:41 am
Operator : BARBARA
Sample : TW-7,03838-007,A,5mL,100
Misc : EWMA/SWIVELIER_-2,04/29/14,04/30/14,1
ALS Vial : 39 Sample Multiplier: 1

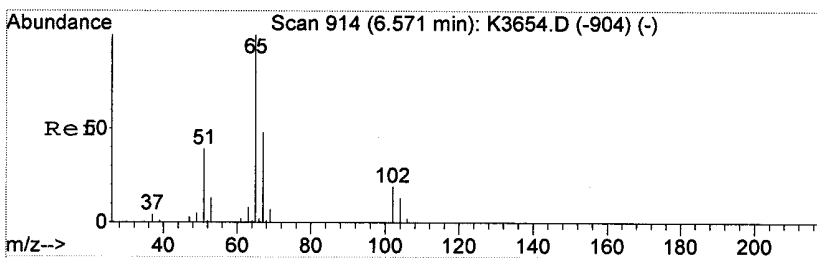
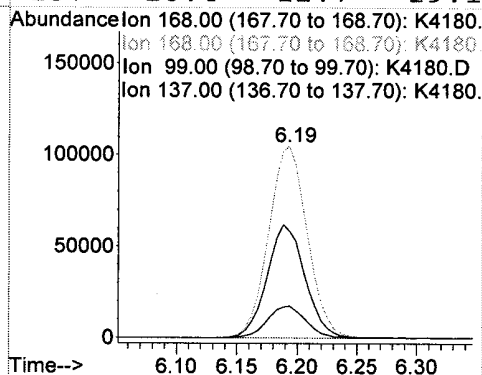
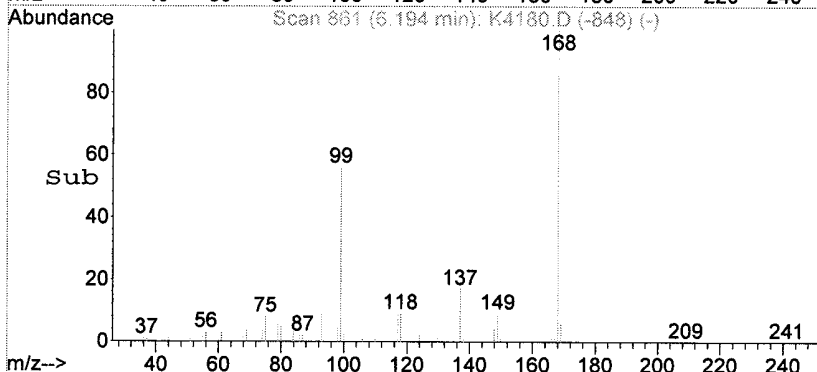
Quant Time: May 06 11:04:36 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration





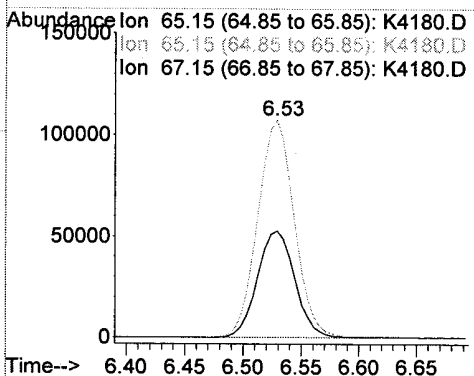
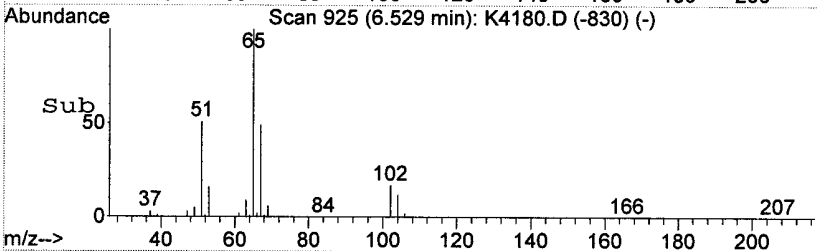
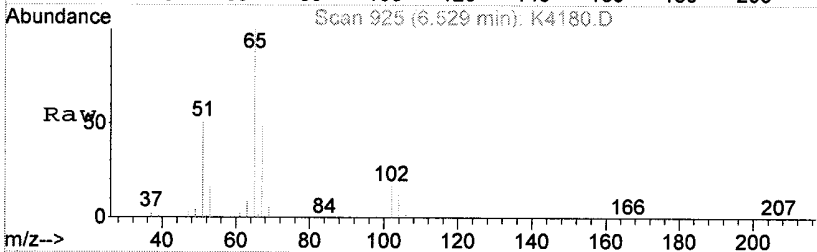
#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. -0.00 min
Lab File: K4180.D
Acq: 6 May 2014 5:41 am

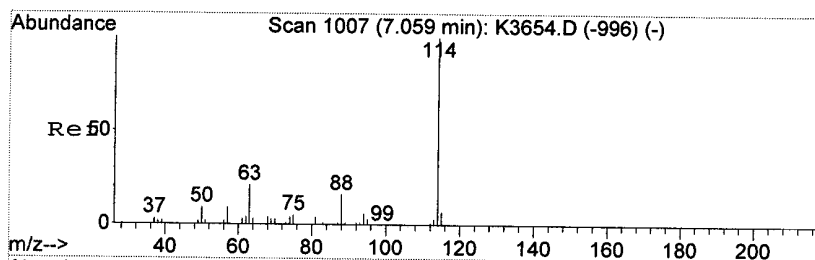
Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	58.2	45.9	68.9
137	16.4	12.7	19.1



#30
1,2-Dichloroethane-d4
Concen: 53.24 UG
RT: 6.53 min Scan# 925
Delta R.T. -0.00 min
Lab File: K4180.D
Acq: 6 May 2014 5:41 am

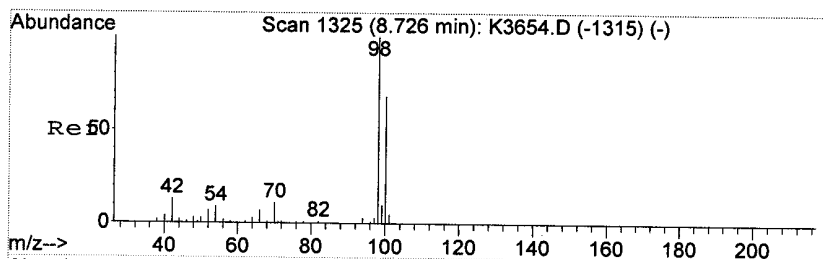
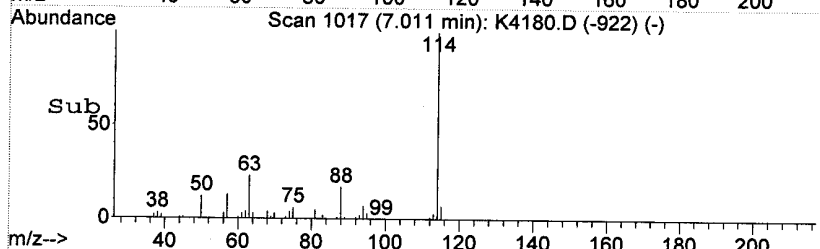
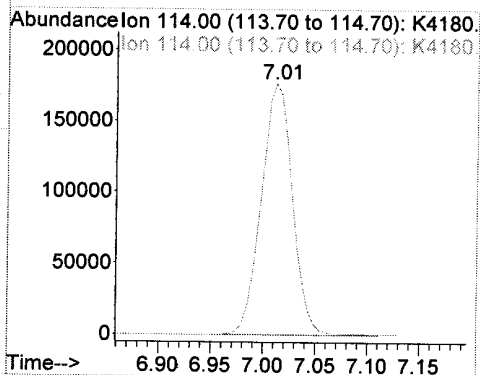
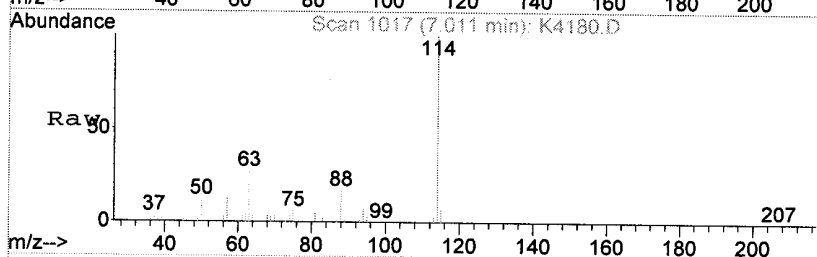
Tgt Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	50.3	40.4	60.6





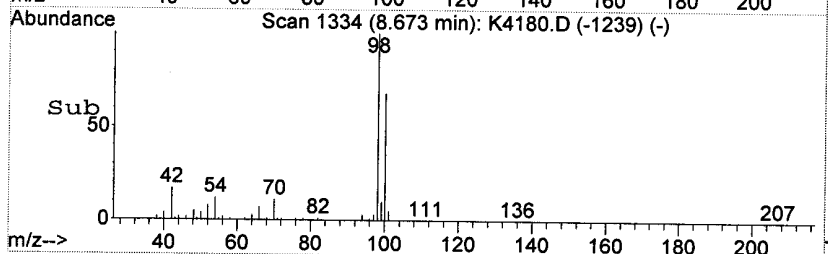
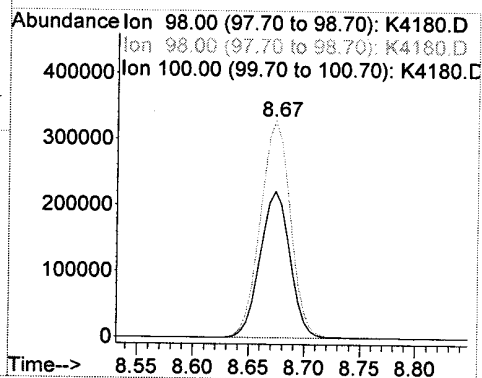
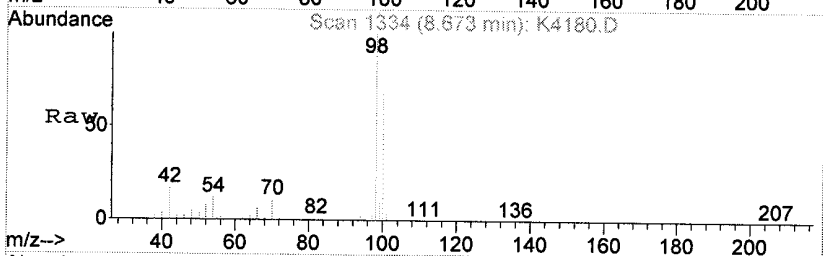
#31
 1,4-Difluorobenzene
 Concen: 50.00 UG
 RT: 7.01 min Scan# 1017
 Delta R.T. -0.00 min
 Lab File: K4180.D
 Acq: 6 May 2014 5:41 am

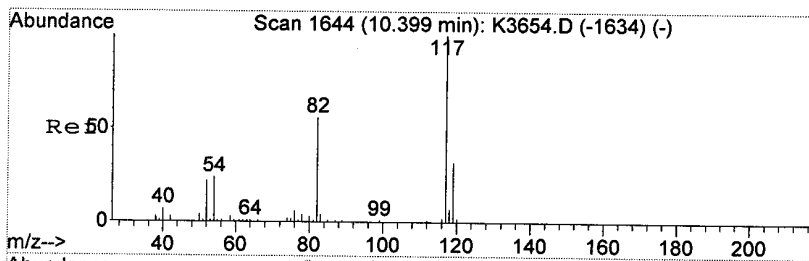
Tgt Ion: 114 Resp: 365509
 Ion Ratio Lower Upper
 114 100
 114 100.0 80.0 120.0



#41
 Toluene-d8
 Concen: 50.14 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. -0.00 min
 Lab File: K4180.D
 Acq: 6 May 2014 5:41 am

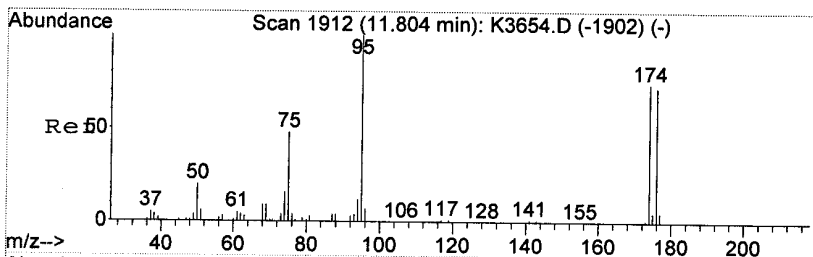
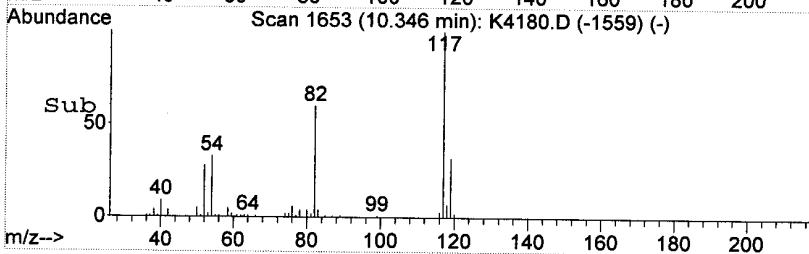
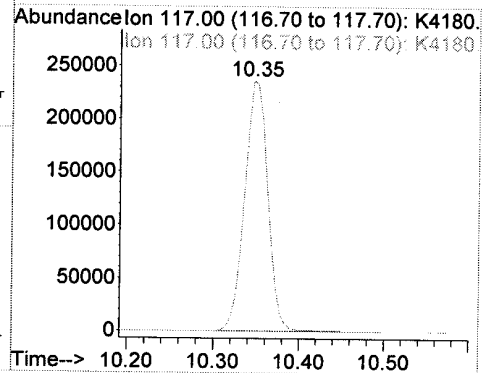
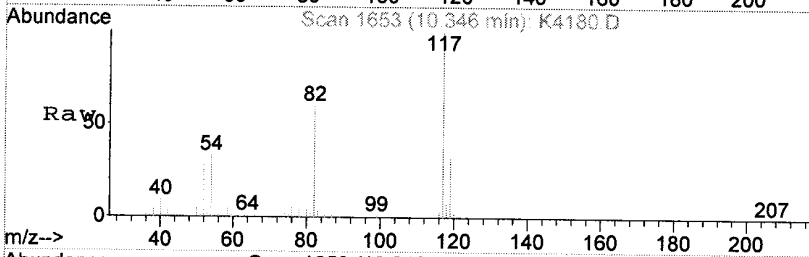
Tgt Ion: 98 Resp: 618752
 Ion Ratio Lower Upper
 98 100
 98 100.0 80.0 120.0
 100 67.2 51.6 77.4





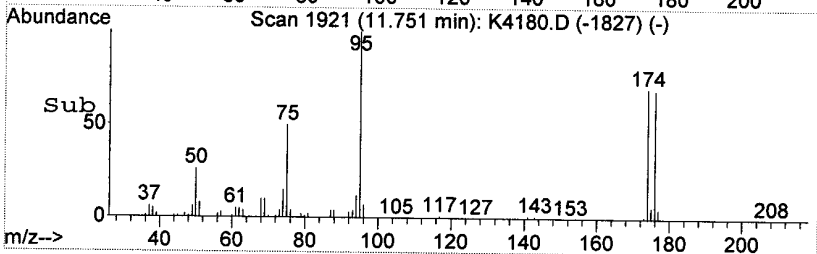
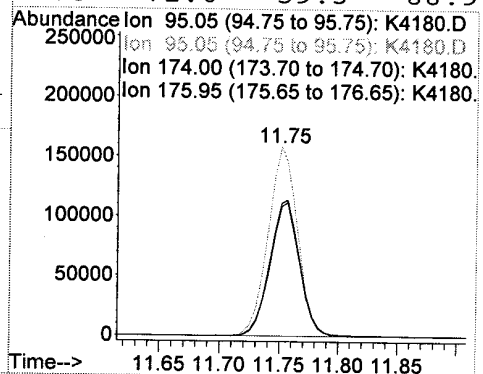
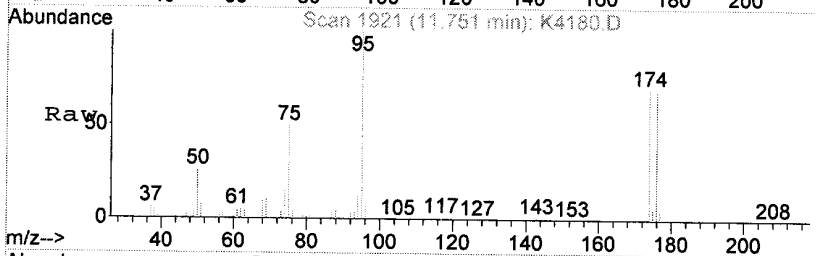
#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1653
Delta R.T. -0.01 min
Lab File: K4180.D
Acq: 6 May 2014 5:41 am

Tgt Ion: 117 Resp: 440349
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0



#59
Bromofluorobenzene
Concen: 49.07 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4180.D
Acq: 6 May 2014 5:41 am

Tgt Ion: 95 Resp: 274427
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.2 61.4 92.0
176 71.0 59.3 88.9



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4181.D
 Acq On : 6 May 2014 6:08 am
 Operator : BARBARA
 Sample : TW-8,03838-008,A,5mL,100
 Misc : EWMA/SWIVELIER_-2,04/29/14,04/30/14,1
 ALS Vial : 40 Sample Multiplier: 1

Quant Time: May 06 12:00:56 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	236619	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	365343	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	447014	50.00	UG	0.00

System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	233346	52.24	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	104.48%
41) Toluene-d8	8.67	98	617573	50.06	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.12%
59) Bromofluorobenzene	11.75	95	280541	49.41	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.82%

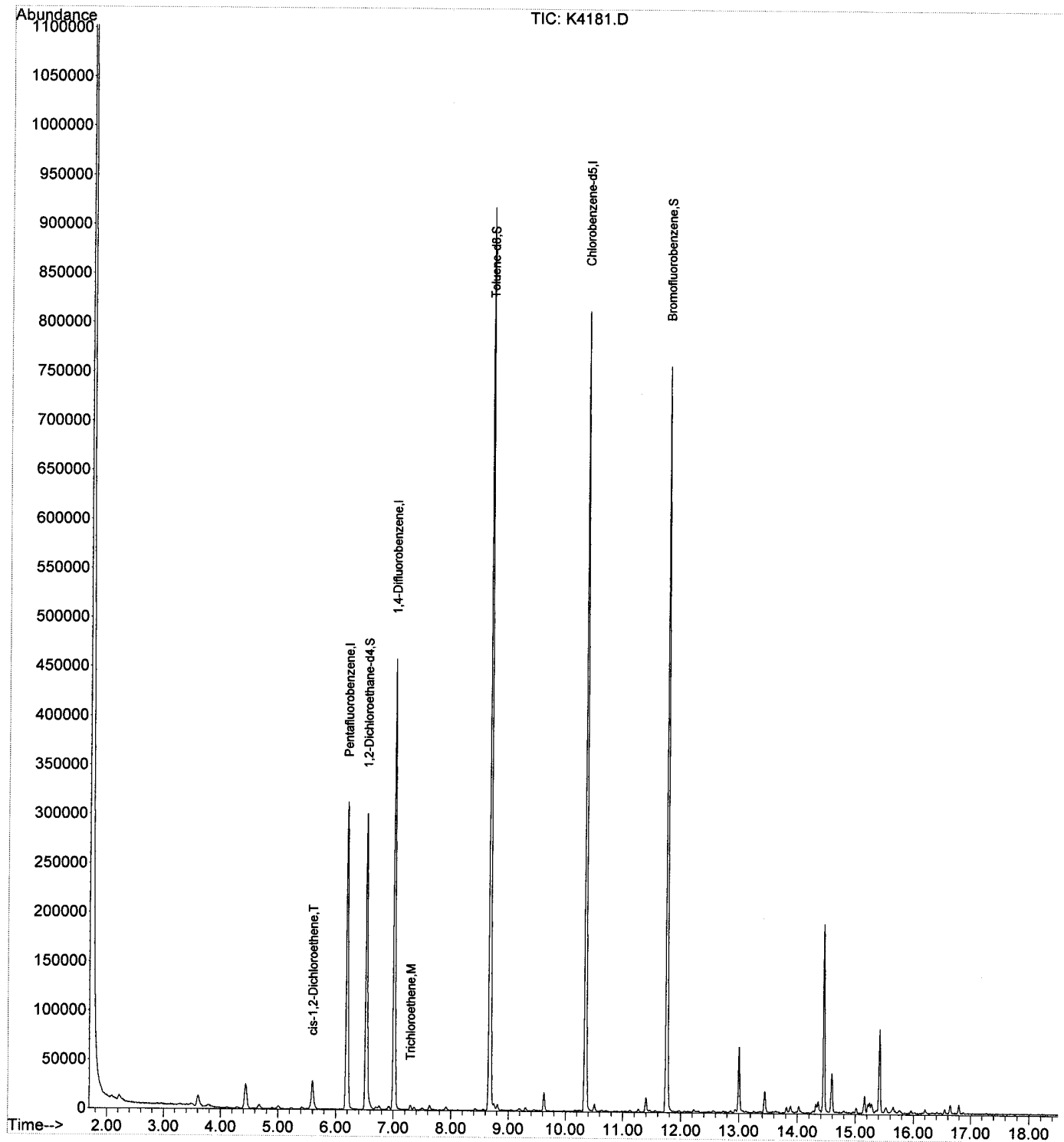
Target Compounds						
20) cis-1,2-Dichloroethene	5.60	96	13539	3.61	UG	Qvalue # 99
33) Trichloroethene	7.29	95	1696	0.48	UG	# 100

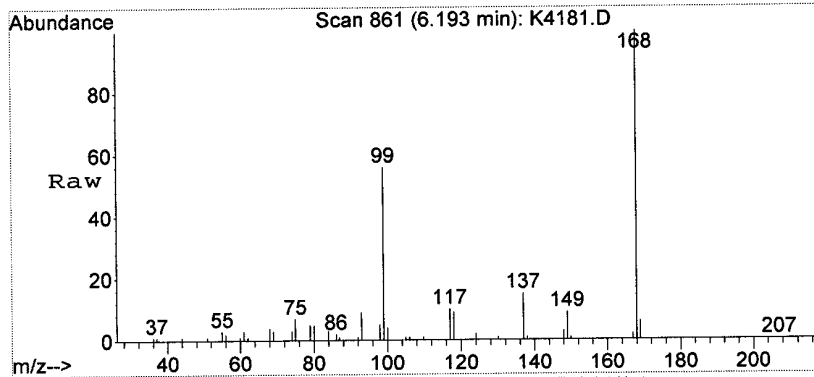
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4181.D
 Acq On : 6 May 2014 6:08 am
 Operator : BARBARA
 Sample : TW-8,03838-008,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 40 Sample Multiplier: 1

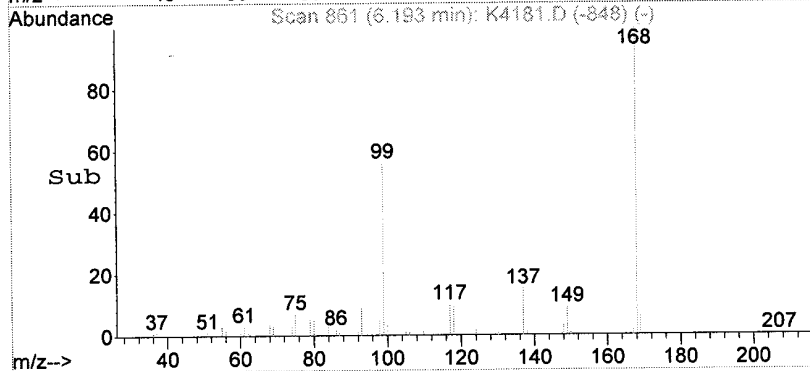
Quant Time: May 06 12:00:56 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration





#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. -0.00 min
Lab File: K4181.D
Acq: 6 May 2014 6:08 am

Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	59.0	45.9	68.9
137	16.1	12.7	19.1

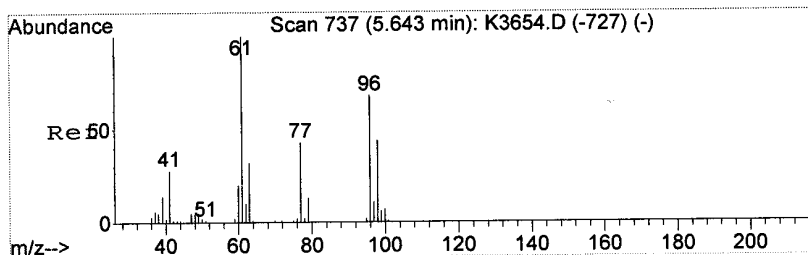
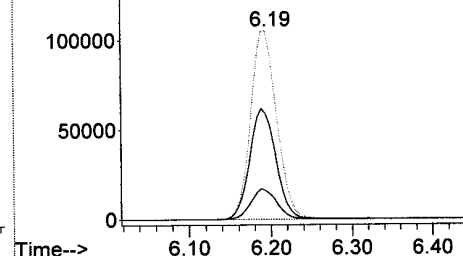


Abundance

Ion 168.00 (167.70 to 168.70): K4181.D

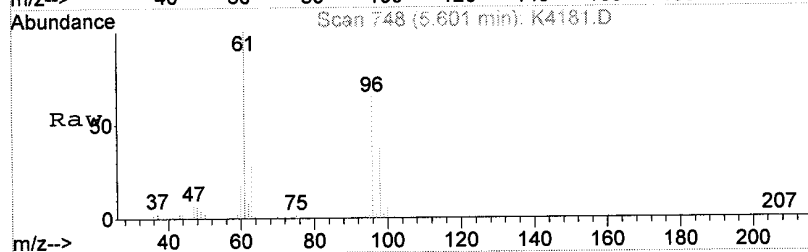
Ion 99.00 (98.70 to 99.70): K4181.D

Ion 137.00 (136.70 to 137.70): K4181.D



#20
cis-1,2-Dichloroethene
Concen: 3.61 UG
RT: 5.60 min Scan# 748
Delta R.T. 0.01 min
Lab File: K4181.D
Acq: 6 May 2014 6:08 am

Tgt Ion	Ratio	Lower	Upper
96	100		
96	100.0	80.0	120.0
61	164.1	0.0	0.0#
98	65.1	53.0	79.4

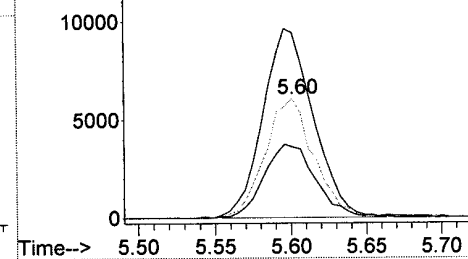
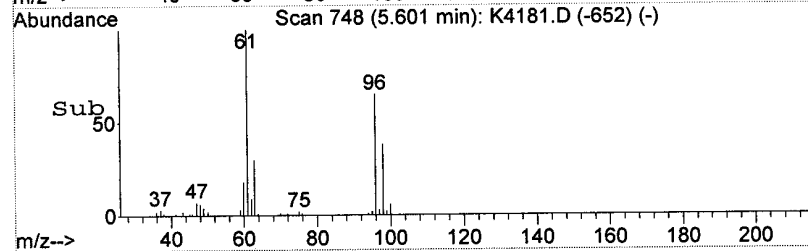


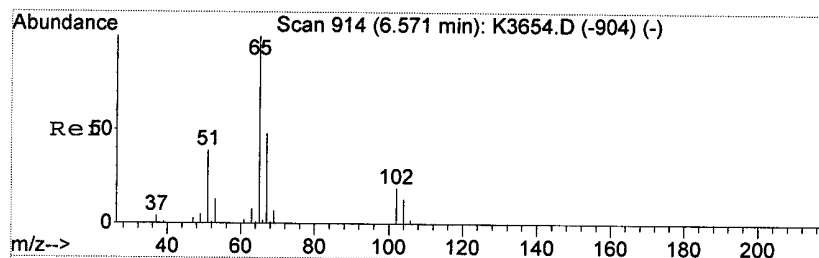
Abundance

Ion 95.85 (95.55 to 96.55): K4181.D

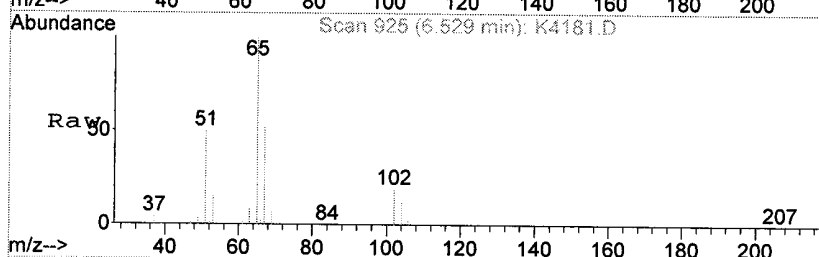
Ion 61.00 (60.70 to 61.70): K4181.D

Ion 98.10 (97.80 to 98.80): K4181.D

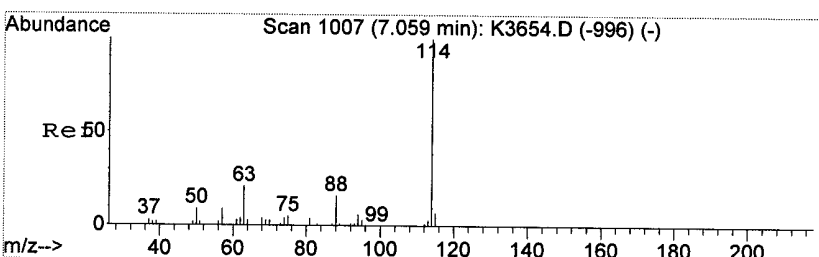
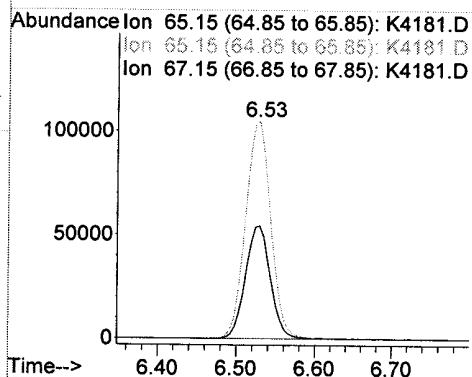
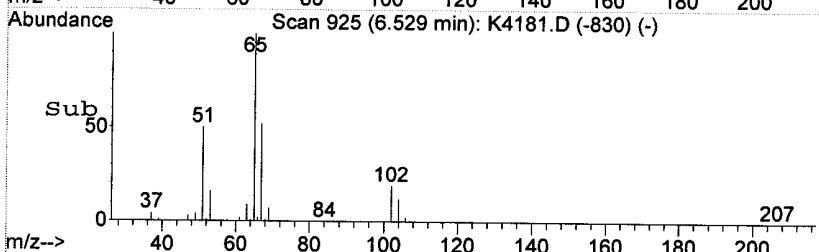




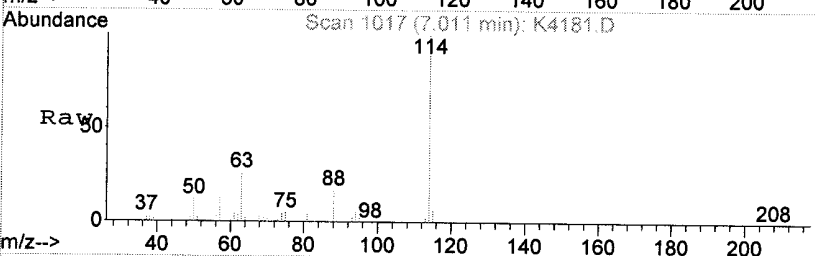
#30
 1,2-Dichloroethane-d4
 Concen: 52.24 UG
 RT: 6.53 min Scan# 925
 Delta R.T. -0.00 min
 Lab File: K4181.D
 Acq: 6 May 2014 6:08 am



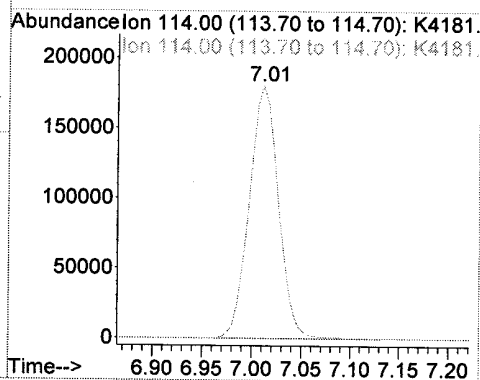
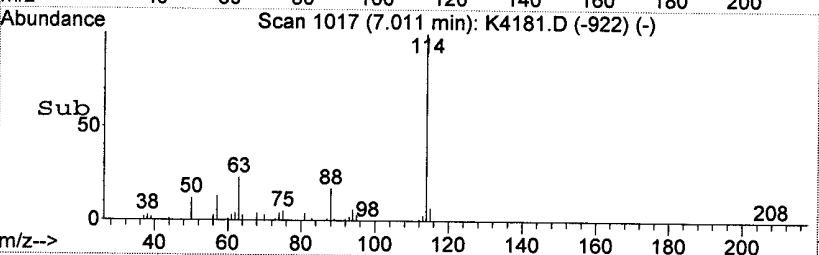
Tgt Ion: 65 Resp: 233346
 Ion Ratio Lower Upper
 65 100
 65 100.0 80.0 120.0
 67 51.4 40.4 60.6

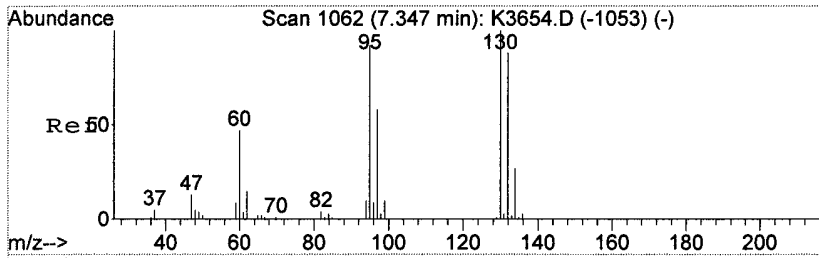


#31
 1,4-Difluorobenzene
 Concen: 50.00 UG
 RT: 7.01 min Scan# 1017
 Delta R.T. -0.00 min
 Lab File: K4181.D
 Acq: 6 May 2014 6:08 am



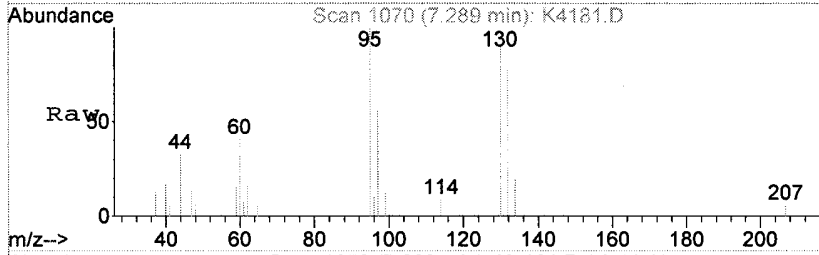
Tgt Ion: 114 Resp: 365343
 Ion Ratio Lower Upper
 114 100
 114 100.0 80.0 120.0



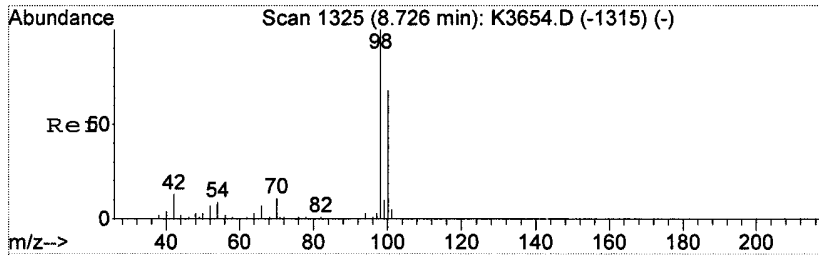
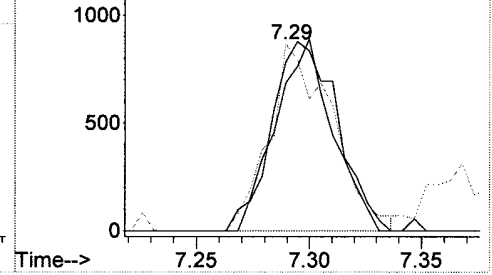
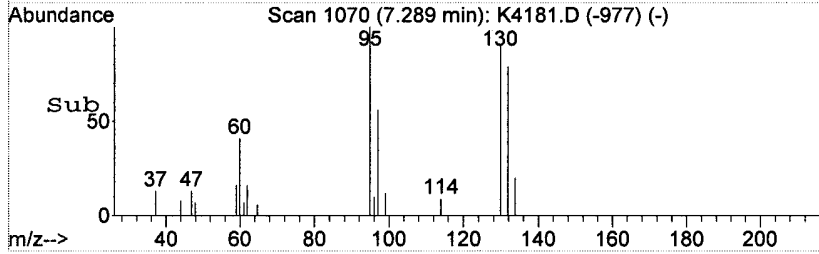


#33
 Trichloroethene
 Concen: 0.48 UG
 RT: 7.29 min Scan# 1070
 Delta R.T. -0.01 min
 Lab File: K4181.D
 Acq: 6 May 2014 6:08 am

Tgt Ion: 95 Resp: 1696
 Ion Ratio Lower Upper
 95 100
 95 100.0 80.0 120.0
 130 105.7 0.0 0.0#
 132 92.6 0.0 0.0#

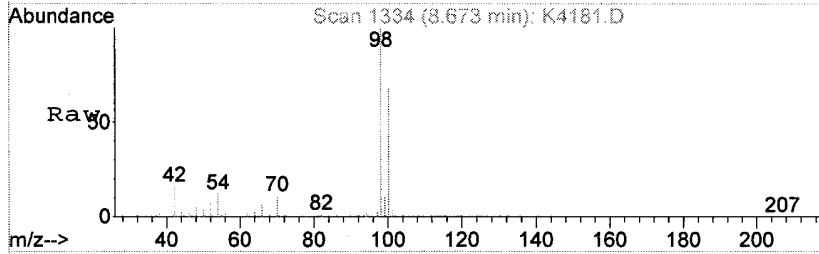


Abundance Ion 94.95 (94.65 to 95.65): K4181.D
 Ion 94.95 (94.65 to 95.65): K4181.D
 Ion 129.90 (129.60 to 130.60): K4181.D
 Ion 131.90 (131.60 to 132.60): K4181.D

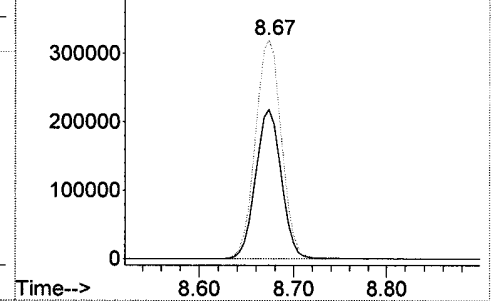
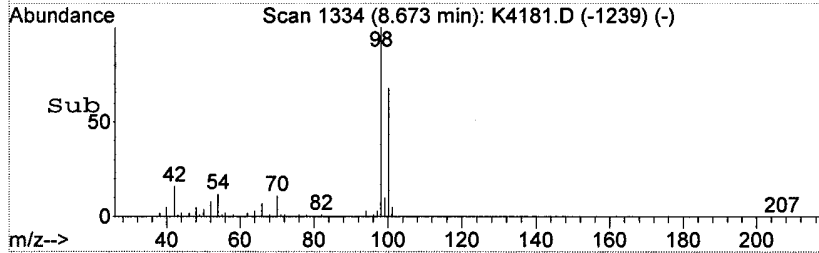


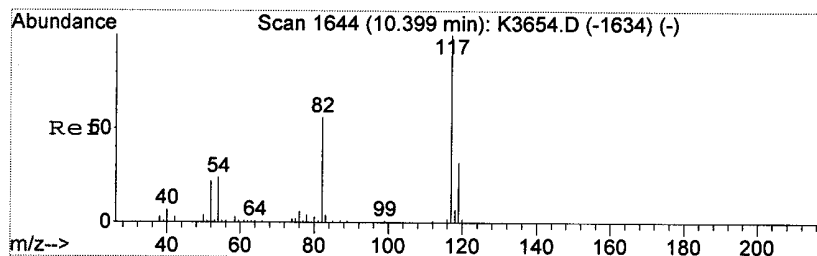
#41
 Toluene-d8
 Concen: 50.06 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. -0.00 min
 Lab File: K4181.D
 Acq: 6 May 2014 6:08 am

Tgt Ion: 98 Resp: 617573
 Ion Ratio Lower Upper
 98 100
 98 100.0 80.0 120.0
 100 67.0 51.6 77.4



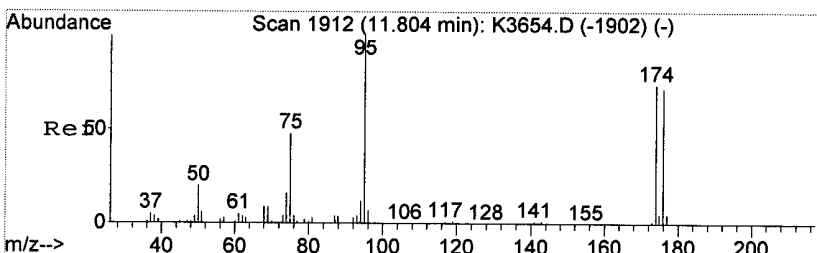
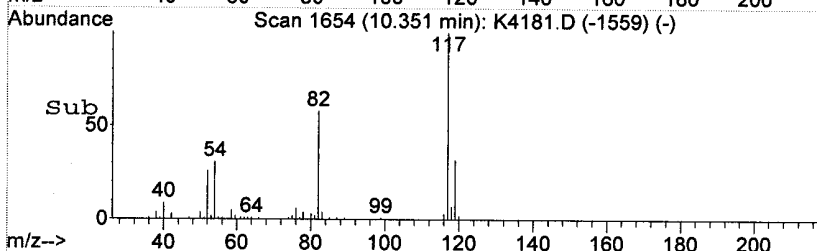
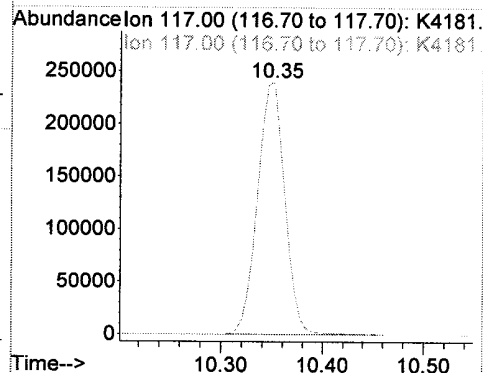
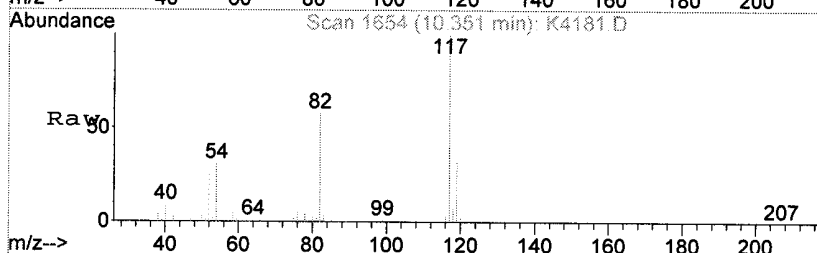
Abundance Ion 98.00 (97.70 to 98.70): K4181.D
 Ion 98.00 (97.70 to 98.70): K4181.D
 Ion 100.00 (99.70 to 100.70): K4181.D





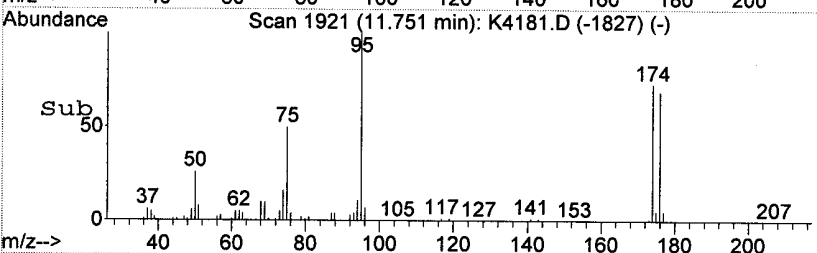
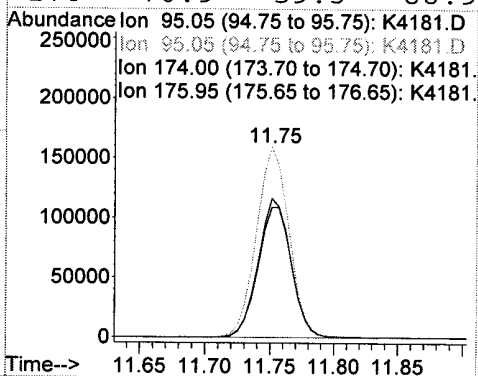
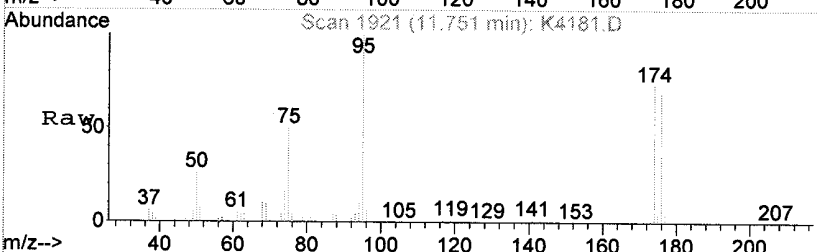
#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1654
Delta R.T. -0.00 min
Lab File: K4181.D
Acq: 6 May 2014 6:08 am

Tgt Ion: 117 Resp: 447014
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0



#59
Bromofluorobenzene
Concen: 49.41 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4181.D
Acq: 6 May 2014 6:08 am

Tgt Ion: 95 Resp: 280541
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 72.9 61.4 92.0
176 70.9 59.3 88.9



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4187.D
 Acq On : 6 May 2014 9:59 am
 Operator : BARBARA
 Sample : MW-10D, 03838-009, A, 0.25mL, 100
 Misc : EWMA/SWIVELIER_2, 04/29/14, 04/30/14, 20
 ALS Vial : 41 Sample Multiplier: 1

Quant Time: May 06 14:41:12 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	241593	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	374335	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	445802	50.00	UG	0.00

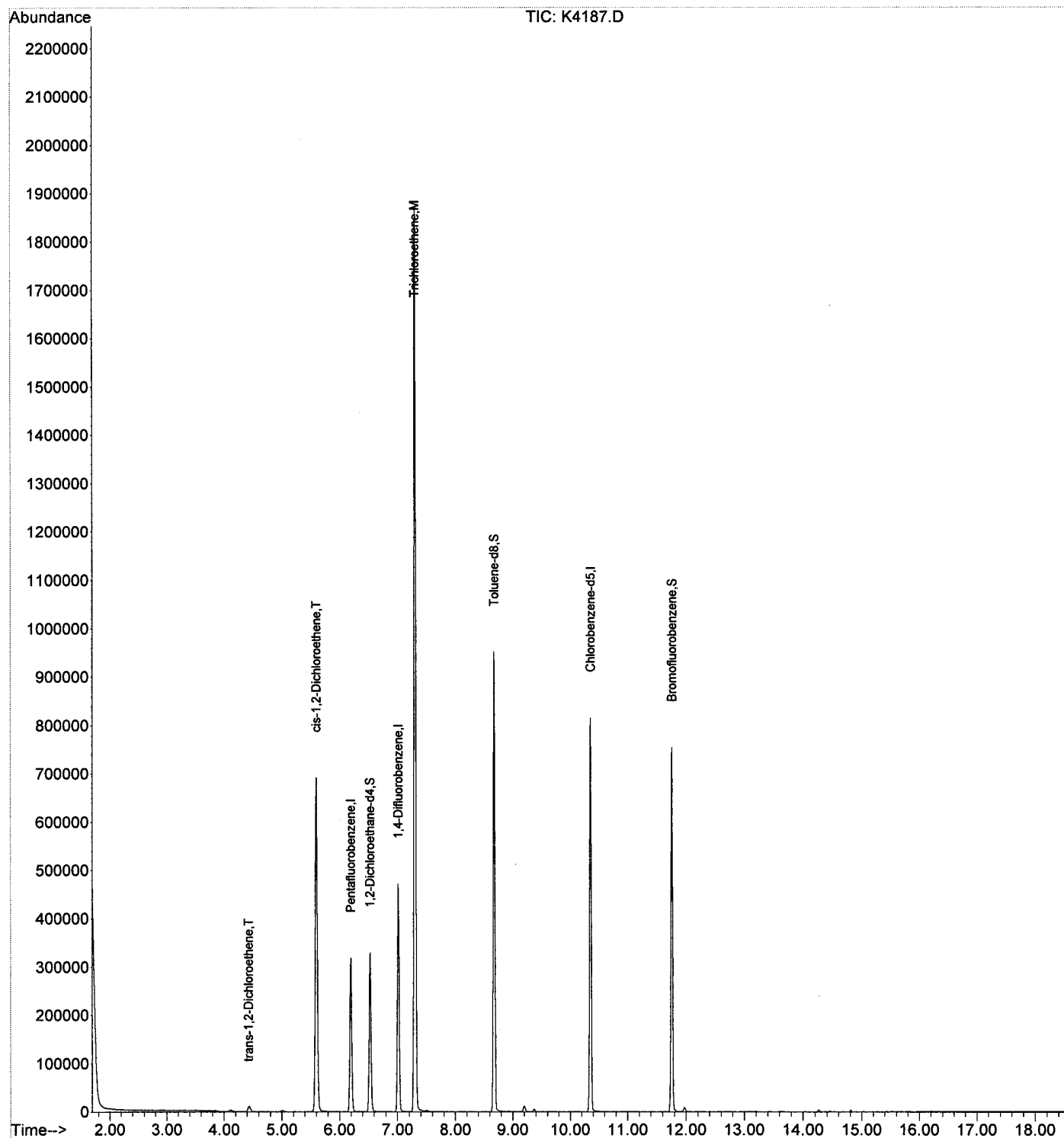
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	250403	54.90	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	109.80%
41) Toluene-d8	8.67	98	628956	49.76	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.52%
59) Bromofluorobenzene	11.76	95	279196	49.31	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.62%

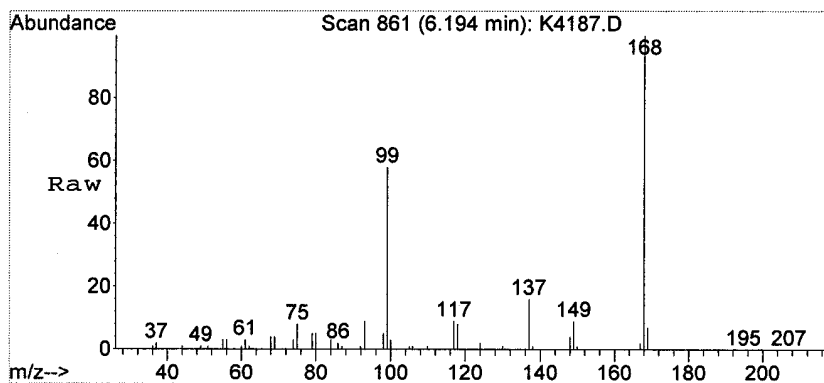
Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
16) trans-1,2-Dichloroethene	4.42	96	1695	0.48	UG	# 72
20) cis-1,2-Dichloroethene	5.60	96	330391	86.18	UG	# 67
33) Trichloroethene	7.30	95	670268	185.21	UG	# 100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4187.D
Acq On : 6 May 2014 9:59 am
Operator : BARBARA
Sample : MW-10D,03838-009,A,0.25mL,100
Misc : EWMA/SWIVELIER_2,04/29/14,04/30/14,20
ALS Vial : 41 Sample Multiplier: 1

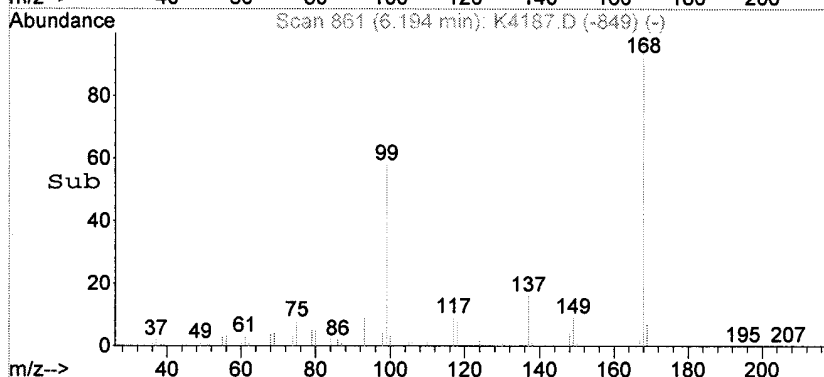
Quant Time: May 06 14:41:12 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration



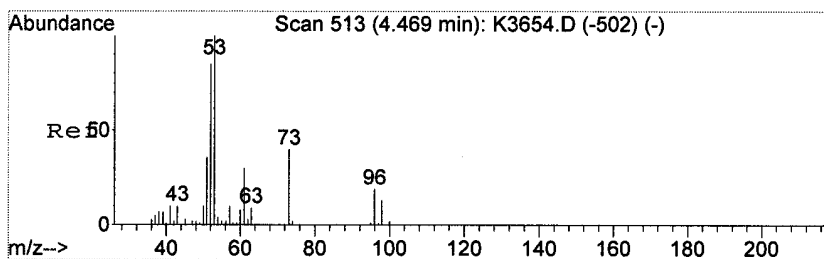
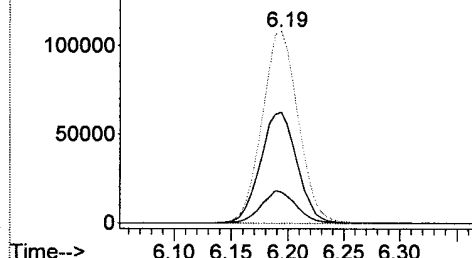


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. -0.00 min
Lab File: K4187.D
Acq: 6 May 2014 9:59 am

Tgt Ion: 168 Resp: 241593
Ion Ratio Lower Upper
168 100
168 100.0 80.0 120.0
99 58.5 45.9 68.9
137 16.2 12.7 19.1

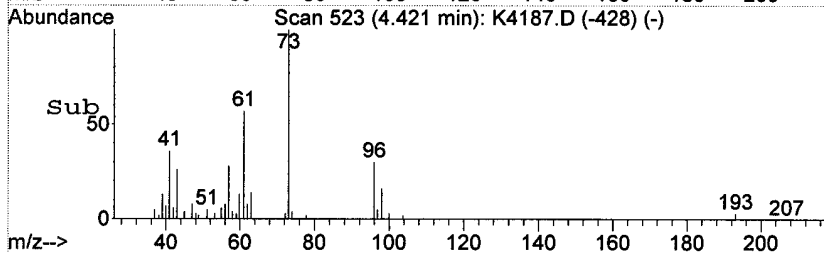
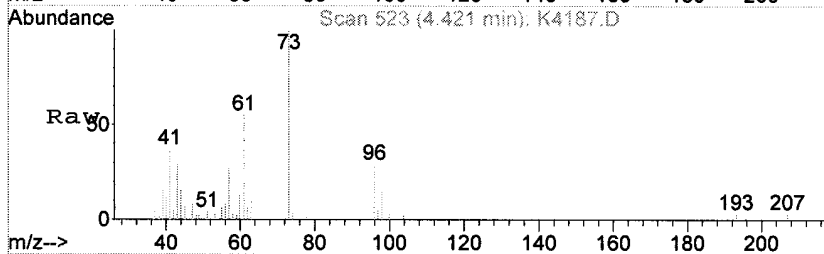


Abundance Ion 168.00 (167.70 to 168.70): K4187.D
Ion 168.00 (167.70 to 168.70): K4187.D
Ion 99.00 (98.70 to 99.70): K4187.D
Ion 137.00 (136.70 to 137.70): K4187.D

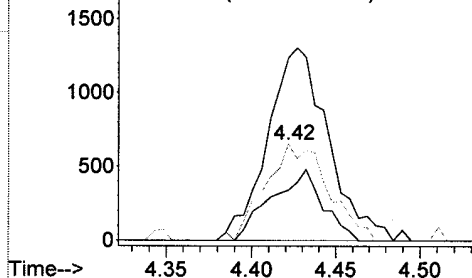


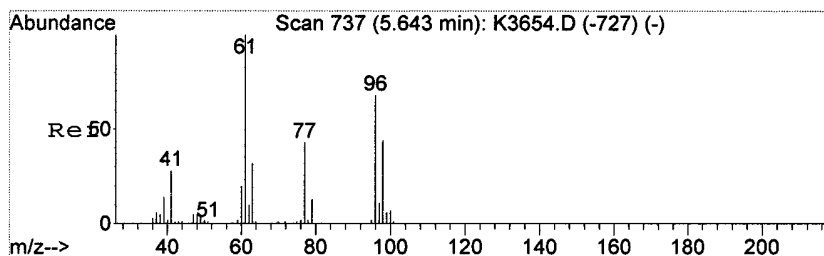
#16
trans-1,2-Dichloroethene
Concen: 0.48 UG
RT: 4.42 min Scan# 523
Delta R.T. -0.00 min
Lab File: K4187.D
Acq: 6 May 2014 9:59 am

Tgt Ion: 96 Resp: 1695
Ion Ratio Lower Upper
96 100
96 100.0 80.0 120.0
61 0.0 0.0 0.0
98 0.0 45.8 68.8#

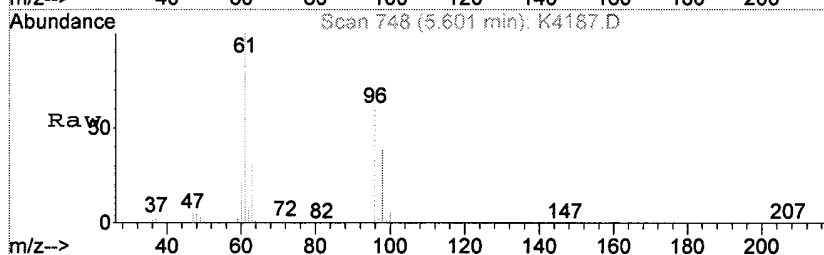


Abundance Ion 96.00 (95.70 to 96.70): K4187.D
Ion 96.00 (95.70 to 96.70): K4187.D
Ion 61.00 (60.70 to 61.70): K4187.D
Ion 98.10 (97.80 to 98.80): K4187.D

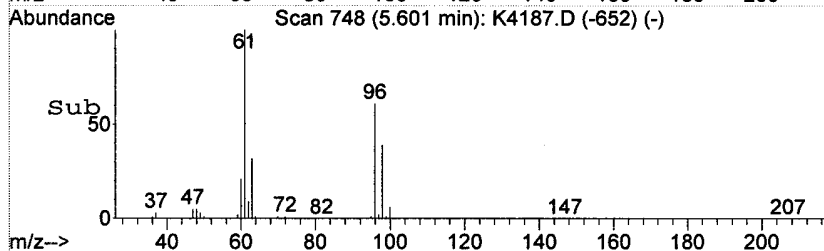




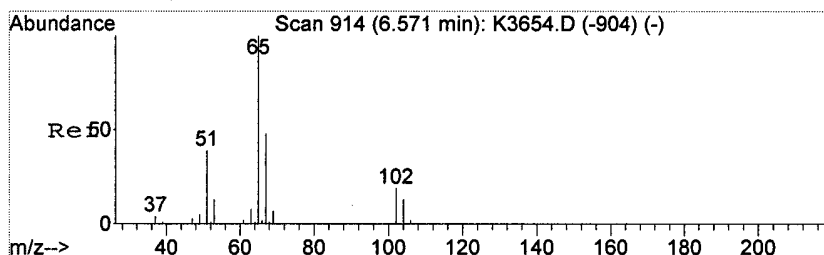
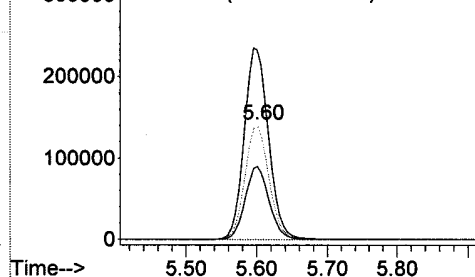
#20
 cis-1,2-Dichloroethene
 Concen: 86.18 UG
 RT: 5.60 min Scan# 748
 Delta R.T. 0.01 min
 Lab File: K4187.D
 Acq: 6 May 2014 9:59 am



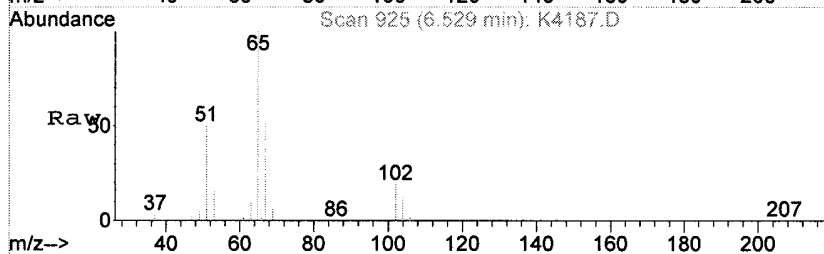
Tgt Ion: 96 Resp: 330391
 Ion Ratio Lower Upper
 96 100
 96 100.0 80.0 120.0
 61 169.2 0.0 0.0#
 98 0.0 53.0 79.4#



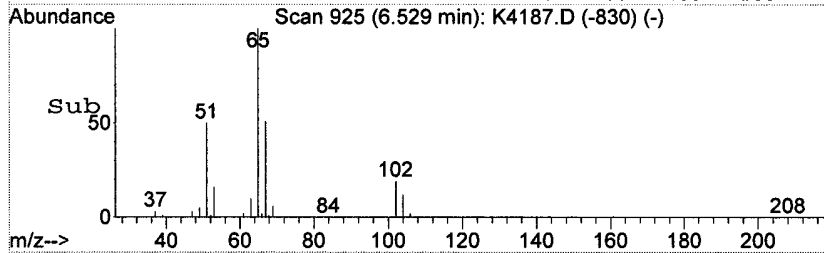
Abundance Ion 95.85 (95.55 to 96.55): K4187.D
 Ion 95.85 (95.55 to 96.55): K4187.D
 Ion 61.00 (60.70 to 61.70): K4187.D
 Ion 98.10 (97.80 to 98.80): K4187.D



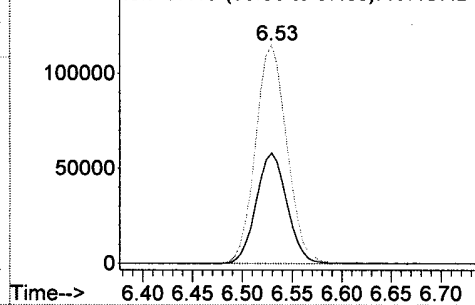
#30
 1,2-Dichloroethane-d4
 Concen: 54.90 UG
 RT: 6.53 min Scan# 925
 Delta R.T. -0.00 min
 Lab File: K4187.D
 Acq: 6 May 2014 9:59 am

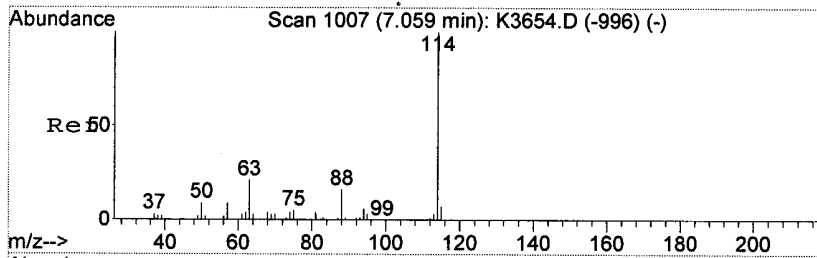


Tgt Ion: 65 Resp: 250403
 Ion Ratio Lower Upper
 65 100
 65 100.0 80.0 120.0
 67 49.7 40.4 60.6



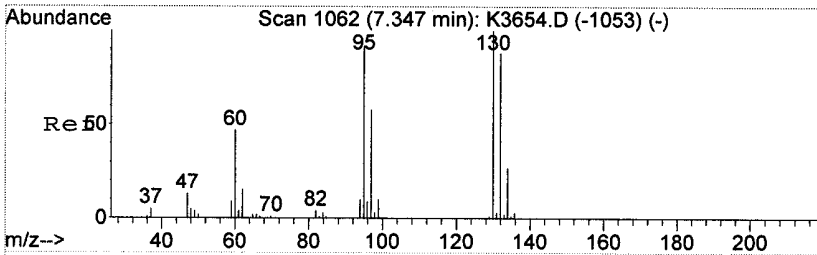
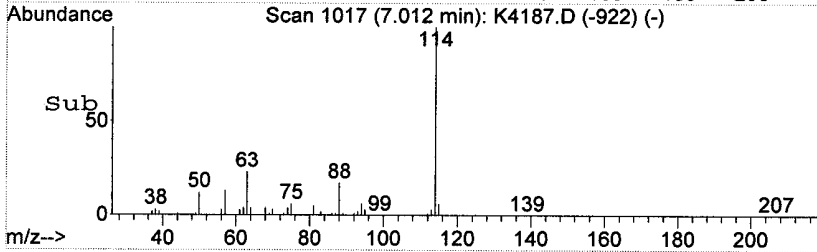
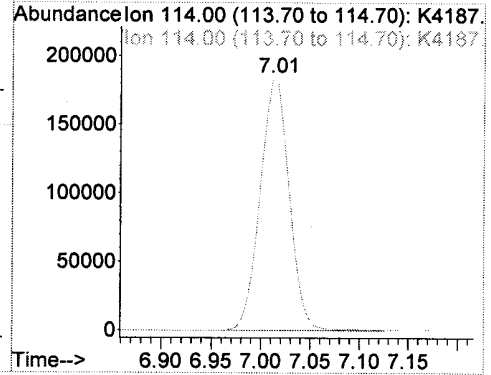
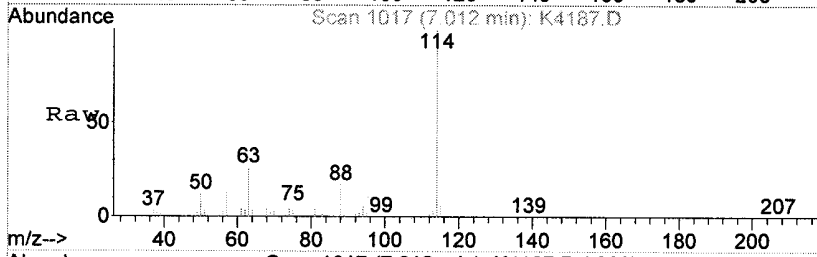
Abundance Ion 65.15 (64.85 to 65.85): K4187.D
 Ion 65.15 (64.85 to 65.85): K4187.D
 Ion 67.15 (66.85 to 67.85): K4187.D





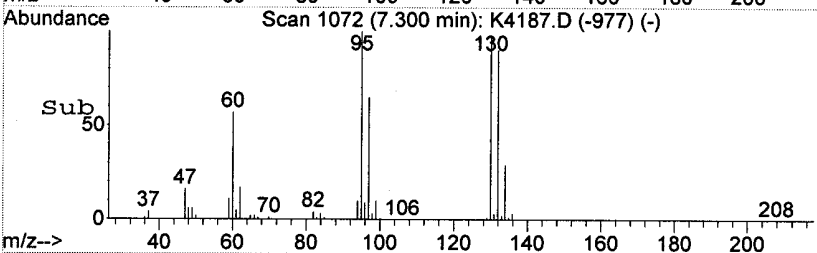
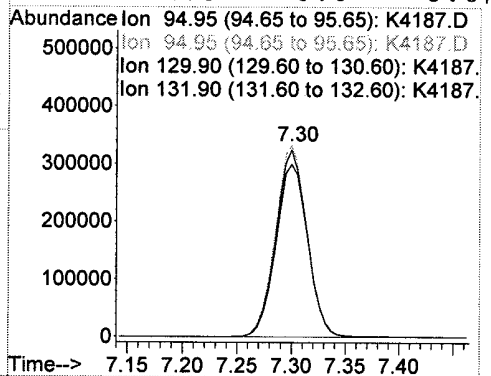
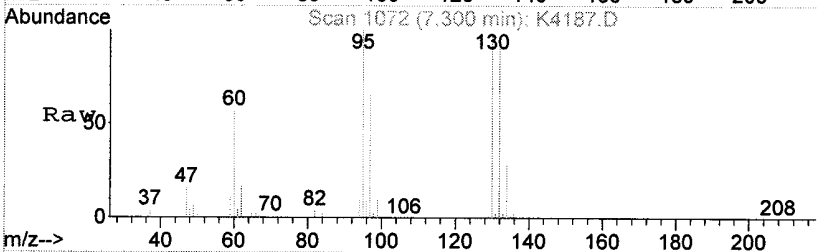
#31
 1,4-Difluorobenzene
 Concen: 50.00 UG
 RT: 7.01 min Scan# 1017
 Delta R.T. 0.00 min
 Lab File: K4187.D
 Acq: 6 May 2014 9:59 am

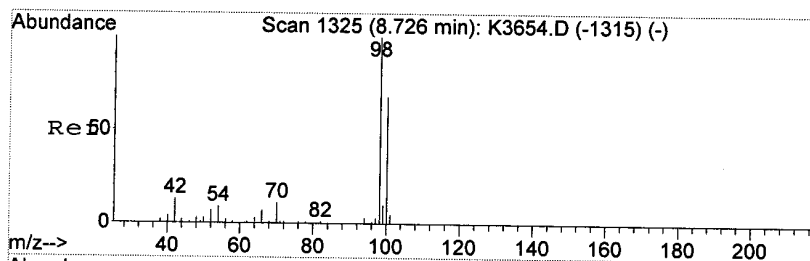
Tgt Ion: 114 Resp: 374335
 Ion Ratio Lower Upper
 114 100
 114 100.0 80.0 120.0



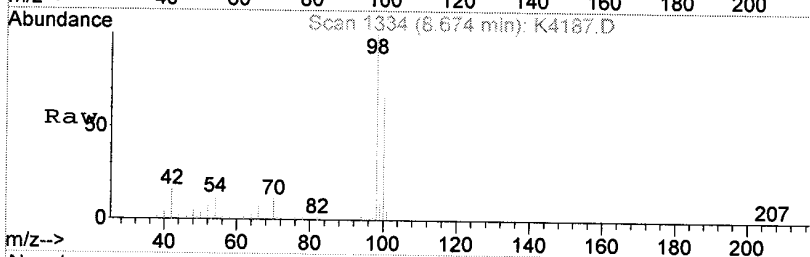
#33
 Trichloroethene
 Concen: 185.21 UG
 RT: 7.30 min Scan# 1072
 Delta R.T. 0.00 min
 Lab File: K4187.D
 Acq: 6 May 2014 9:59 am

Tgt Ion: 95 Resp: 670268
 Ion Ratio Lower Upper
 95 100
 95 100.0 80.0 120.0
 130 97.0 0.0 0.0#
 132 92.0 0.0 0.0#

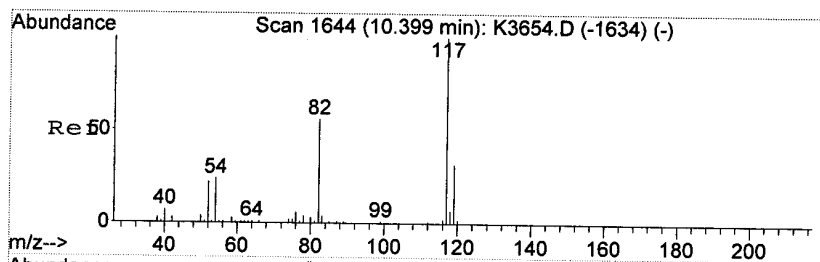
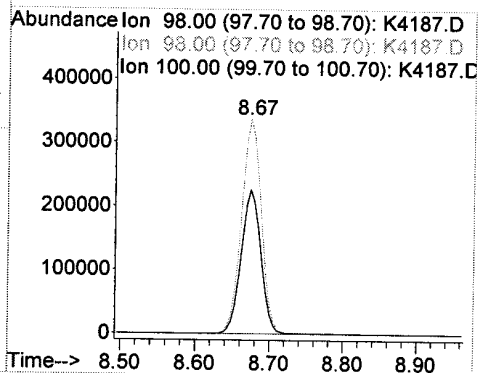
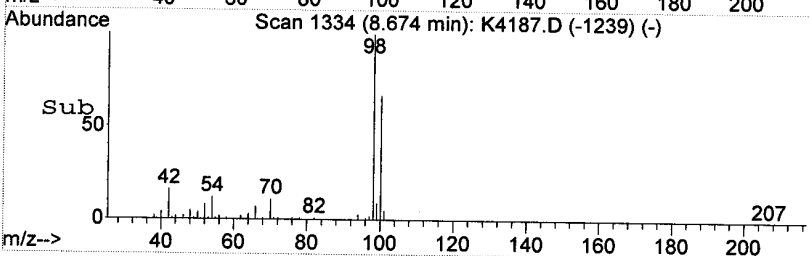




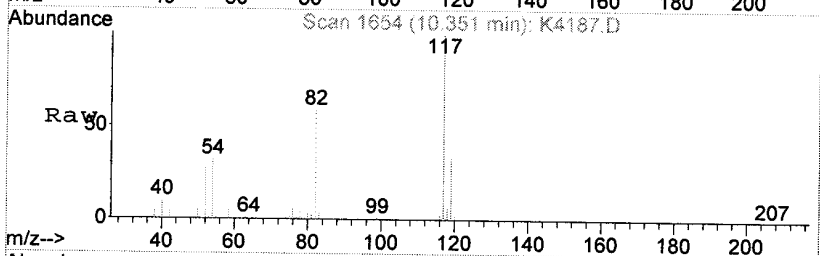
#41
Toluene-d8
Concen: 49.76 UG
RT: 8.67 min Scan# 1334
Delta R.T. -0.00 min
Lab File: K4187.D
Acq: 6 May 2014 9:59 am



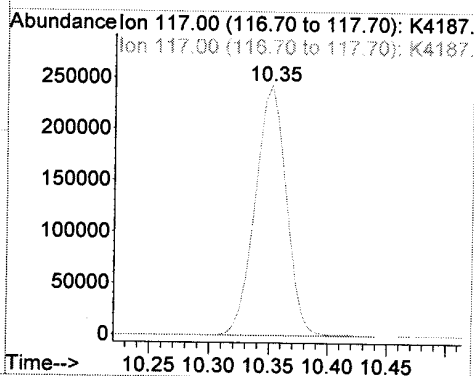
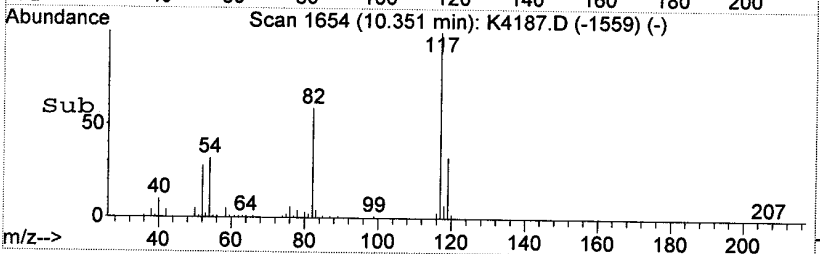
Tgt Ion: 98 Resp: 628956
Ion Ratio Lower Upper
98 100
98 100.0 80.0 120.0
100 66.6 51.6 77.4

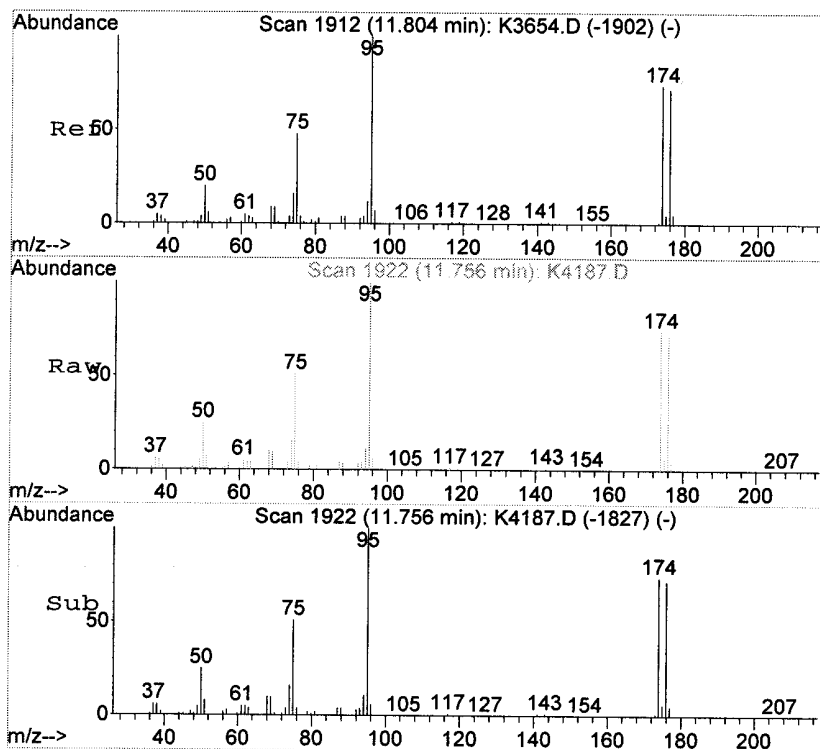


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1654
Delta R.T. -0.00 min
Lab File: K4187.D
Acq: 6 May 2014 9:59 am



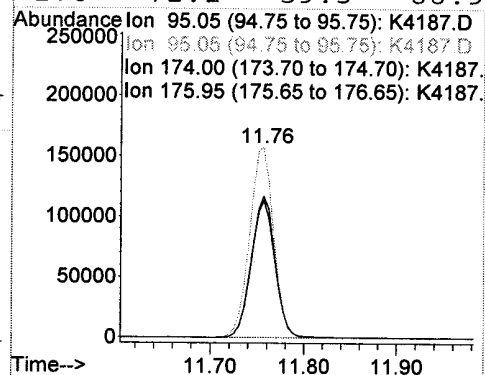
Tgt Ion: 117 Resp: 445802
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0





#59
 Bromofluorobenzene
 Concen: 49.31 UG
 RT: 11.76 min Scan# 1922
 Delta R.T. -0.00 min
 Lab File: K4187.D
 Acq: 6 May 2014 9:59 am

Tgt Ion	Ratio	Lower	Upper
95	100		
95	100.0	80.0	120.0
174	73.6	61.4	92.0
176	71.1	59.3	88.9



Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4183.D
 Acq On : 6 May 2014 7:04 am
 Operator : BARBARA
 Sample : MW-13D,03838-010,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 42 Sample Multiplier: 1

Quant Time: May 06 11:20:53 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

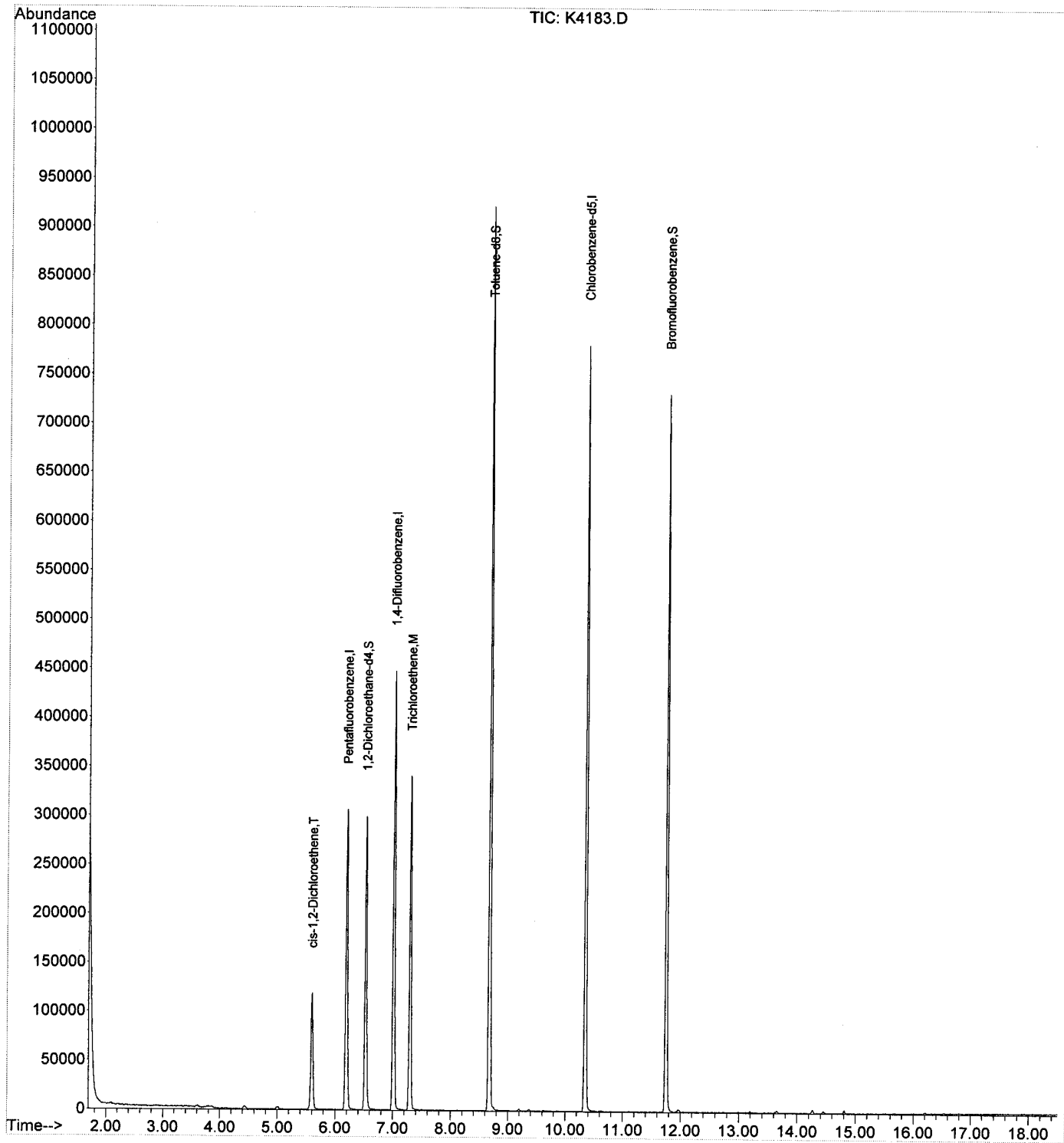
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	231774	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	352145	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	435528	50.00	UG	0.00
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	231082	52.81	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.62%
41) Toluene-d8	8.67	98	606806	51.03	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.06%
59) Bromofluorobenzene	11.75	95	272258	49.22	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.44%
Target Compounds						
20) cis-1,2-Dichloroethene	5.60	96	55941	15.21	UG	# 67
33) Trichloroethene	7.29	95	122939	36.11	UG	# 100

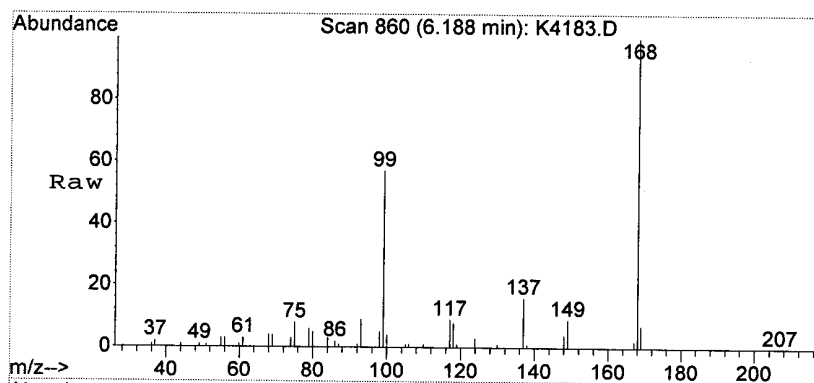
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4183.D
 Acq On : 6 May 2014 7:04 am
 Operator : BARBARA
 Sample : MW-13D, 03838-010, A, 5mL, 100
 Misc : EWMA/SWIVELIER_-2, 04/29/14, 04/30/14, 1
 ALS Vial : 42 Sample Multiplier: 1

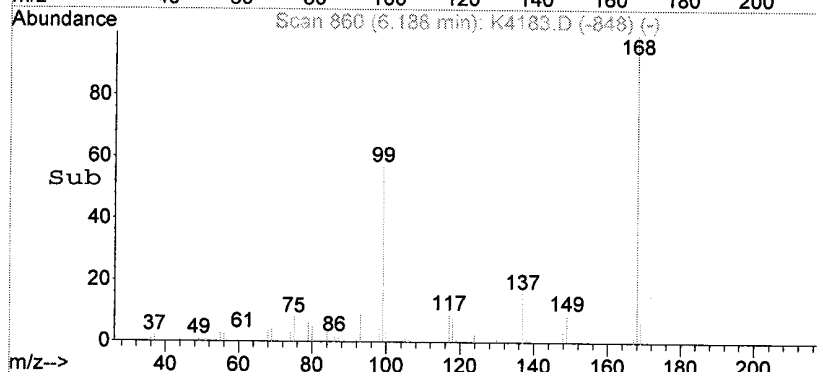
Quant Time: May 06 11:20:53 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration





#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 860
Delta R.T. -0.01 min
Lab File: K4183.D
Acq: 6 May 2014 7:04 am

Tgt Ion	Ratio	Resp	Lower	Upper
168	100	231774		
168	100.0	80.0	120.0	
99	57.9	45.9	68.9	
137	16.0	12.7	19.1	

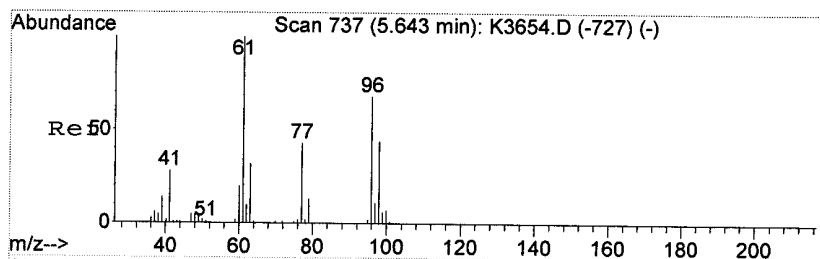
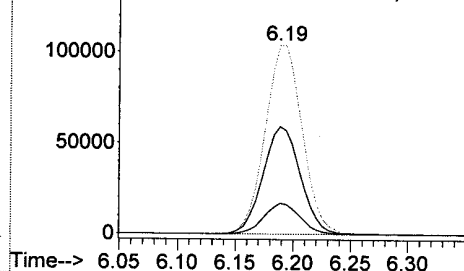


Abundance

Ion 168.00 (167.70 to 168.70): K4183.D

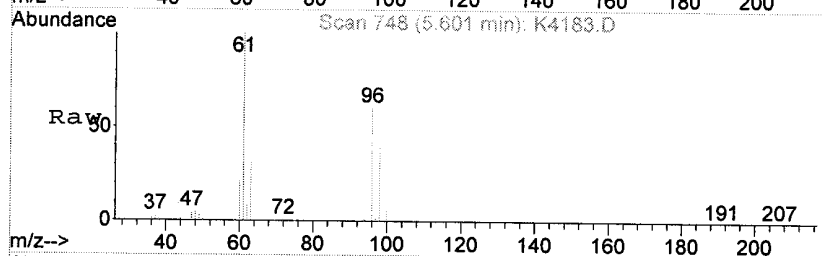
Ion 99.00 (98.70 to 99.70): K4183.D

Ion 137.00 (136.70 to 137.70): K4183.D



#20
cis-1,2-Dichloroethene
Concen: 15.21 UG
RT: 5.60 min Scan# 748
Delta R.T. 0.01 min
Lab File: K4183.D
Acq: 6 May 2014 7:04 am

Tgt Ion	Ratio	Resp	Lower	Upper
96	100	55941		
96	100.0	80.0	120.0	
61	170.0	0.0	0.0#	
98	0.0	53.0	79.4#	

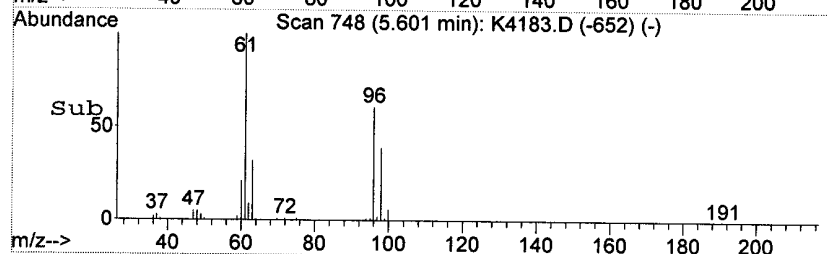
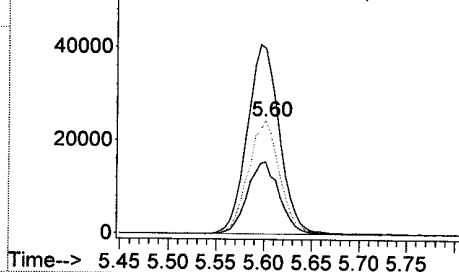


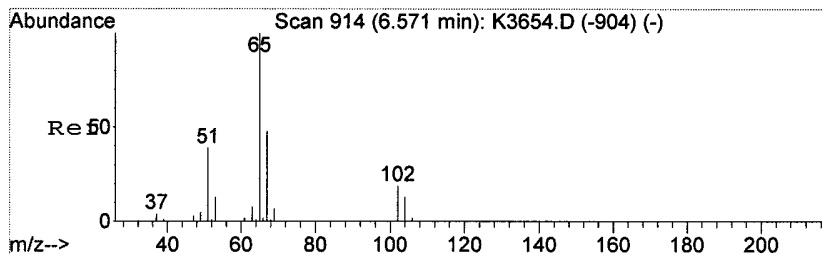
Abundance

Ion 95.85 (95.55 to 96.55): K4183.D

Ion 61.00 (60.70 to 61.70): K4183.D

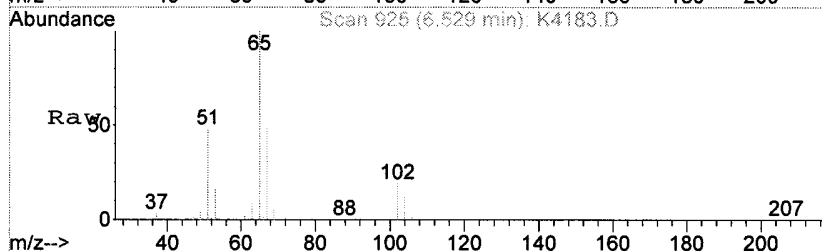
Ion 98.10 (97.80 to 98.80): K4183.D



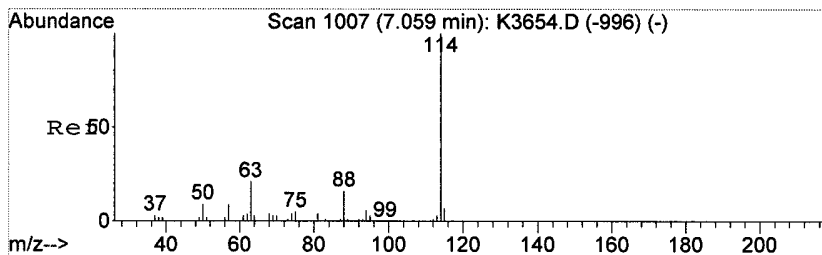
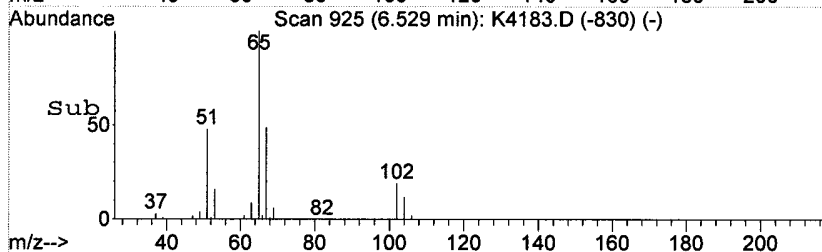
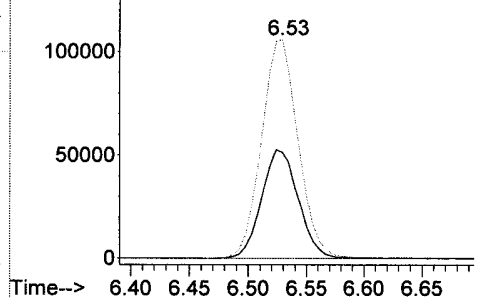


#30
 1,2-Dichloroethane-d4
 Concen: 52.81 UG
 RT: 6.53 min Scan# 925
 Delta R.T. 0.00 min
 Lab File: K4183.D
 Acq: 6 May 2014 7:04 am

Tgt Ion	Resp	Lower	Upper
65	231082		
65	100		
65	100.0	80.0	120.0
67	50.2	40.4	60.6

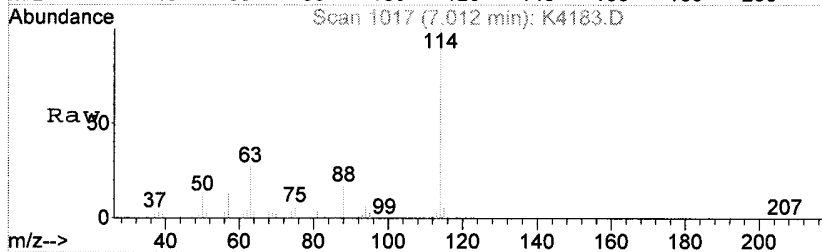


Abundance Ion 65.15 (64.85 to 65.85): K4183.D
 Ion 65.15 (64.85 to 65.85): K4183.D
 Ion 67.15 (66.85 to 67.85): K4183.D

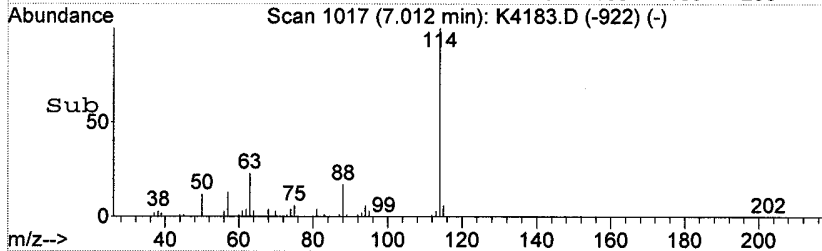
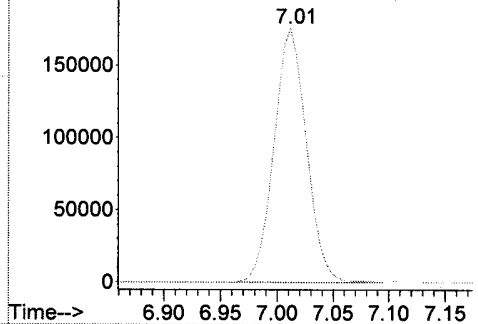


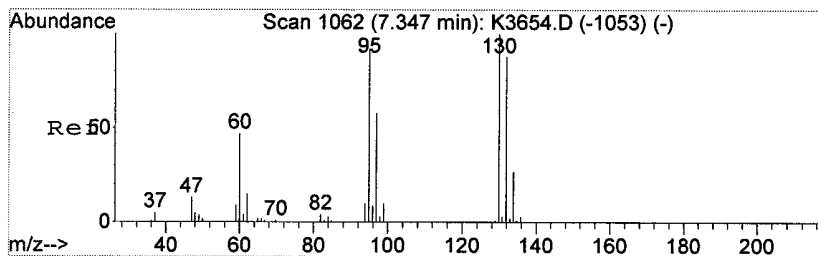
#31
 1,4-Difluorobenzene
 Concen: 50.00 UG
 RT: 7.01 min Scan# 1017
 Delta R.T. 0.00 min
 Lab File: K4183.D
 Acq: 6 May 2014 7:04 am

Tgt Ion	Resp	Lower	Upper
114	352145		
114	100		
114	100.0	80.0	120.0



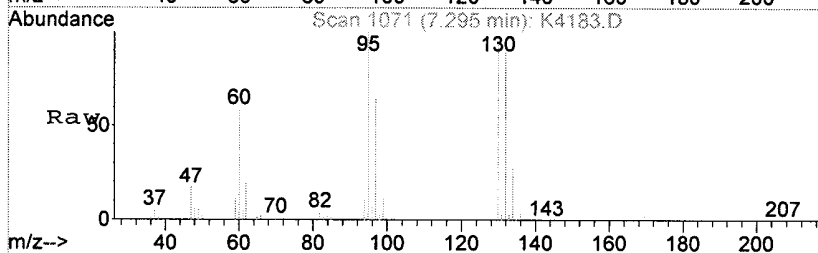
Abundance Ion 114.00 (113.70 to 114.70): K4183.D
 Ion 114.00 (113.70 to 114.70): K4183.D



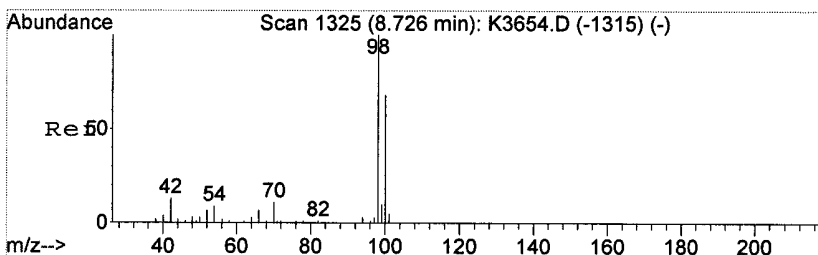
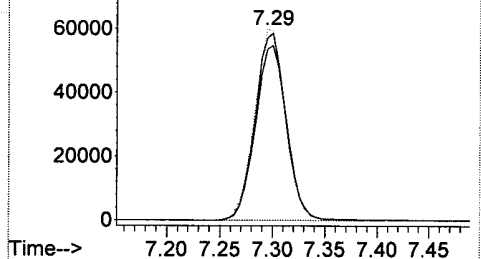
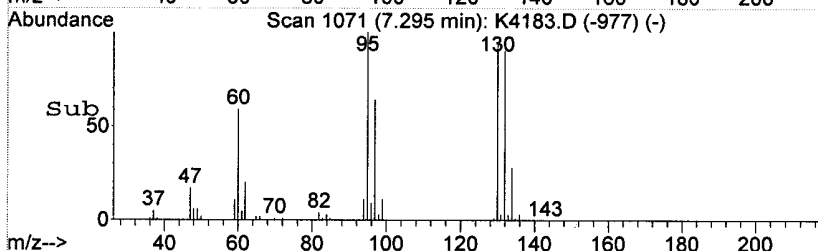


#33
 Trichloroethene
 Concen: 36.11 UG
 RT: 7.29 min Scan# 1071
 Delta R.T. -0.01 min
 Lab File: K4183.D
 Acq: 6 May 2014 7:04 am

Tgt Ion	Ratio	Resp	Lower	Upper
95	100	122939		
95	100.0		80.0	120.0
130	97.6		0.0	0.0#
132	91.8		0.0	0.0#

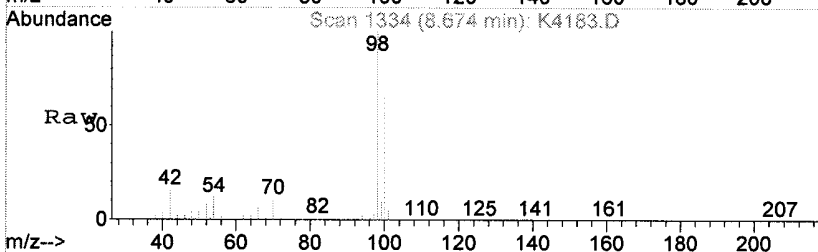


Abundance Ion 94.95 (94.65 to 95.65): K4183.D
 Ion 94.95 (94.65 to 95.65): K4183.D
 Ion 129.90 (129.60 to 130.60): K4183.D
 Ion 131.90 (131.60 to 132.60): K4183.D

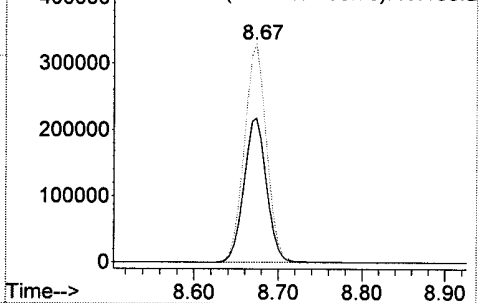
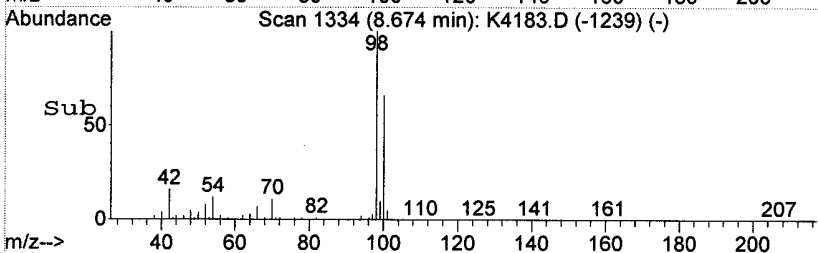


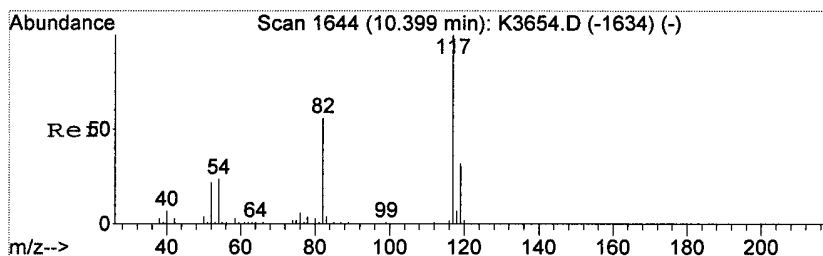
#41
 Toluene-d8
 Concen: 51.03 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. 0.00 min
 Lab File: K4183.D
 Acq: 6 May 2014 7:04 am

Tgt Ion	Ratio	Resp	Lower	Upper
98	100	606806		
98	100.0		80.0	120.0
100	67.0		51.6	77.4



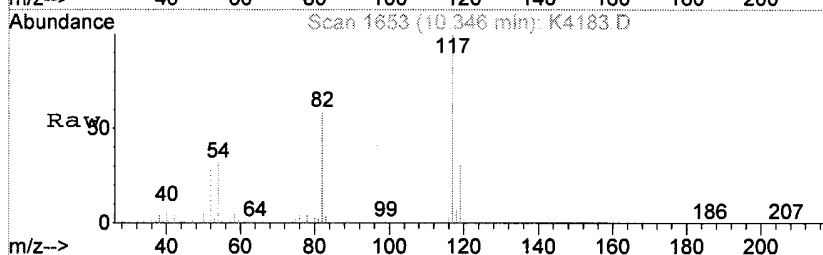
Abundance Ion 98.00 (97.70 to 98.70): K4183.D
 Ion 98.00 (97.70 to 98.70): K4183.D
 Ion 100.00 (99.70 to 100.70): K4183.D



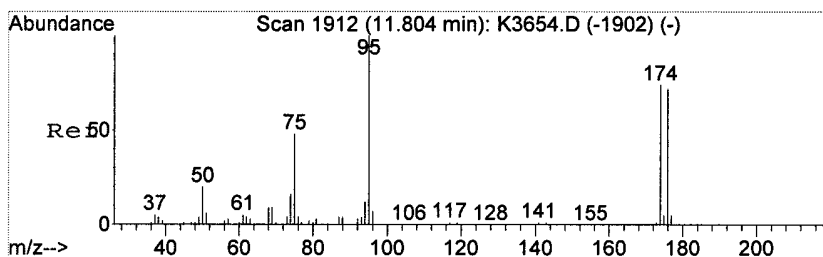
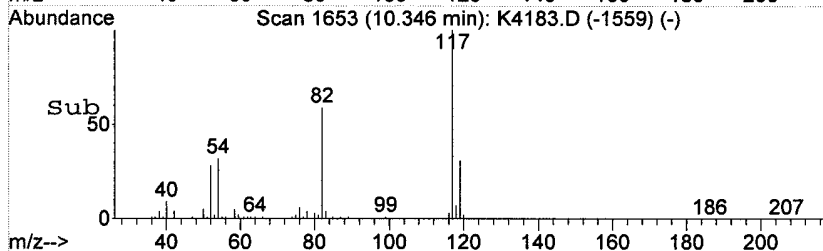
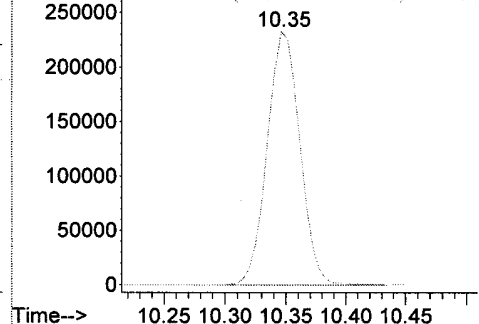


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1653
Delta R.T. -0.01 min
Lab File: K4183.D
Acq: 6 May 2014 7:04 am

Tgt Ion: 117 Resp: 435528
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0

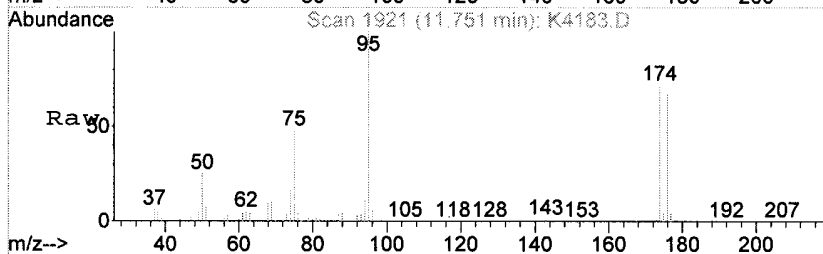


Abundance Ion 117.00 (116.70 to 117.70): K4183.D

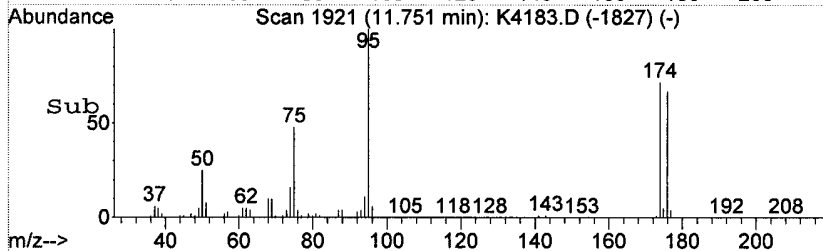
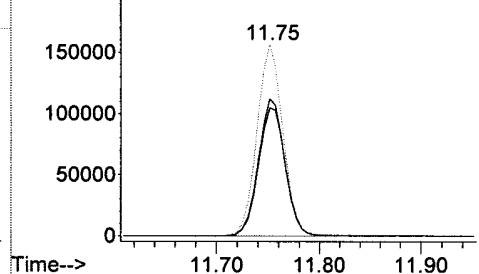


#59
Bromofluorobenzene
Concen: 49.22 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4183.D
Acq: 6 May 2014 7:04 am

Tgt Ion: 95 Resp: 272258
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.1 61.4 92.0
176 69.8 59.3 88.9



Abundance Ion 95.05 (94.75 to 95.75): K4183.D
Ion 95.05 (94.75 to 95.75): K4183.D
Ion 174.00 (173.70 to 174.70): K4183.D
Ion 175.95 (175.65 to 176.65): K4183.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4184.D
Acq On : 6 May 2014 7:32 am
Operator : BARBARA
Sample : MW-11D,03838-011,A,5mL,100
Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
ALS Vial : 43 Sample Multiplier: 1

Quant Time: May 06 11:23:09 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	227502	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	353110	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	424836	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.52	65	228641	53.24	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	106.48%
41) Toluene-d8	8.67	98	593079	49.74	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.48%
59) Bromofluorobenzene	11.75	95	264823	49.08	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.16%

Target Compounds

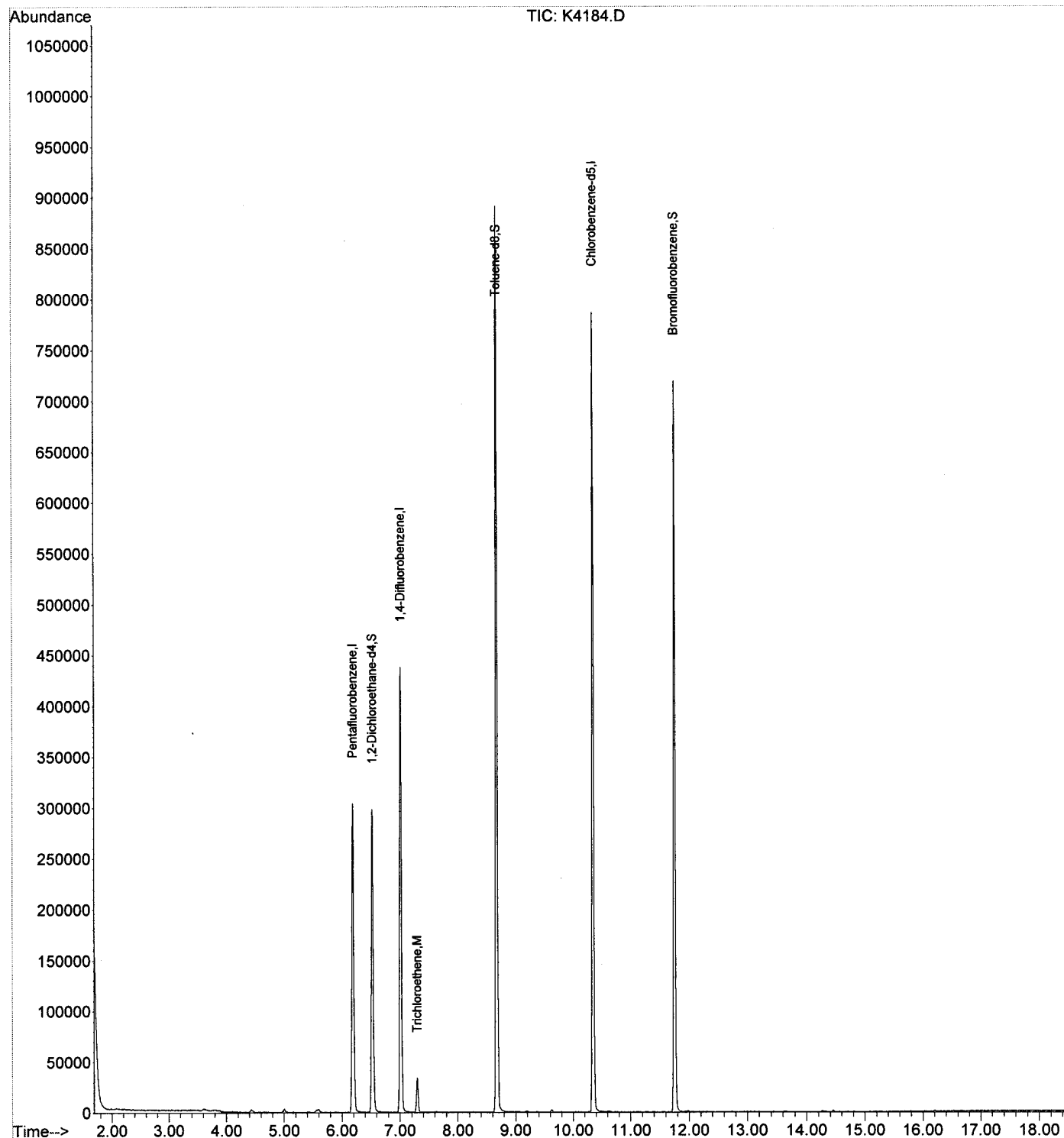
	R.T.	QIon	Response	Conc	Units	Qvalue
33) Trichloroethene	7.29	95	11510	3.37	UG	# 100

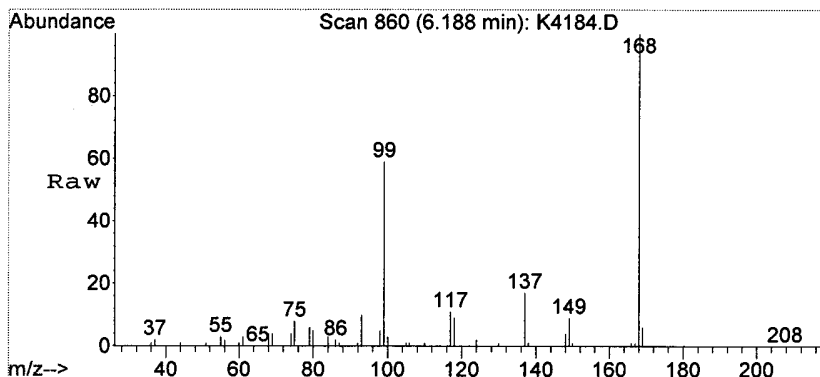
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4184.D
 Acq On : 6 May 2014 7:32 am
 Operator : BARBARA
 Sample : MW-11D, 03838-011, A, 5mL, 100
 Misc : EWMA/SWIVELIER_-2, 04/29/14, 04/30/14, 1
 ALS Vial : 43 Sample Multiplier: 1

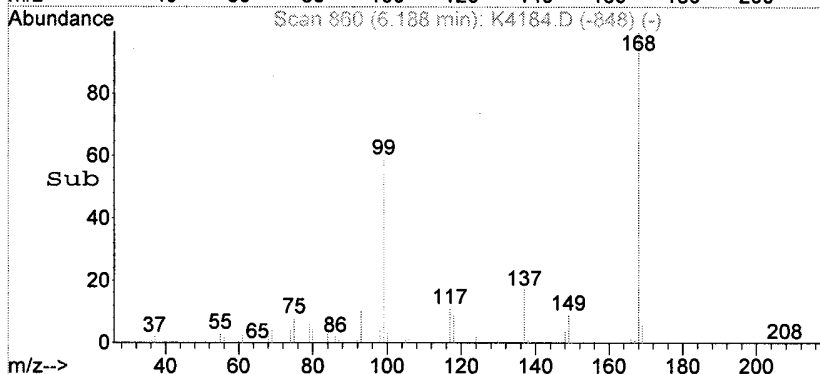
Quant Time: May 06 11:23:09 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration





#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 860
Delta R.T. -0.01 min
Lab File: K4184.D
Acq: 6 May 2014 7:32 am

Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	58.5	45.9	68.9
137	16.1	12.7	19.1

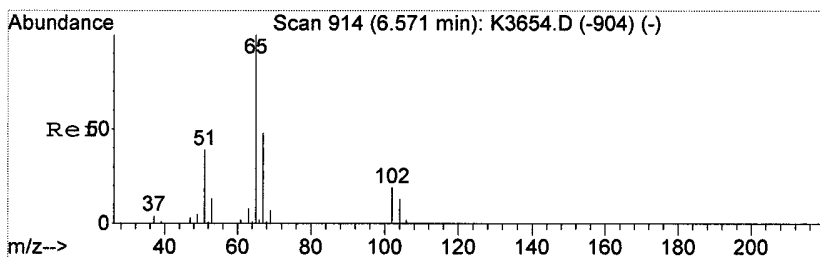
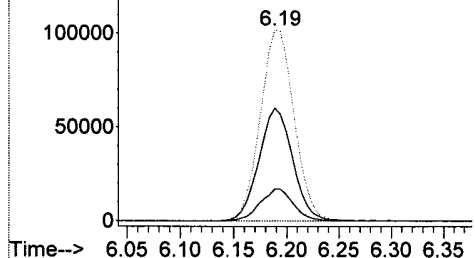


Abundance

Ion 168.00 (167.70 to 168.70): K4184.D

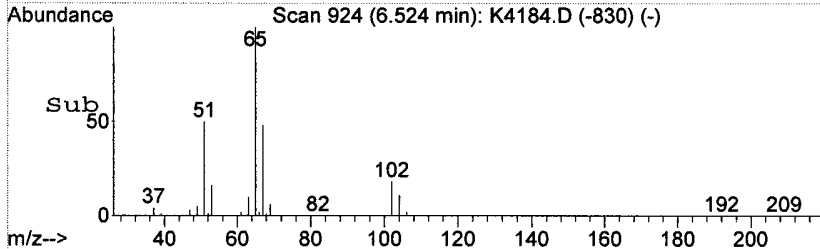
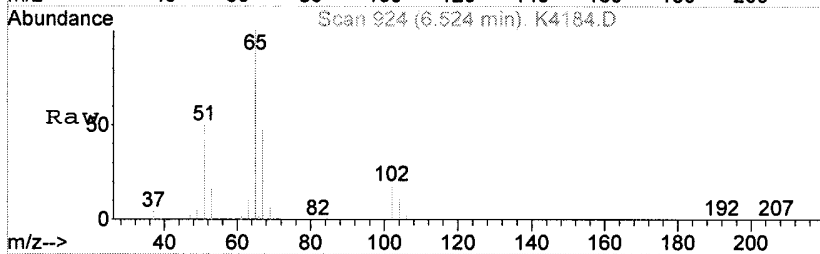
Ion 99.00 (98.70 to 99.70): K4184.D

Ion 137.00 (136.70 to 137.70): K4184.D



#30
1,2-Dichloroethane-d4
Concen: 53.24 UG
RT: 6.52 min Scan# 924
Delta R.T. -0.01 min
Lab File: K4184.D
Acq: 6 May 2014 7:32 am

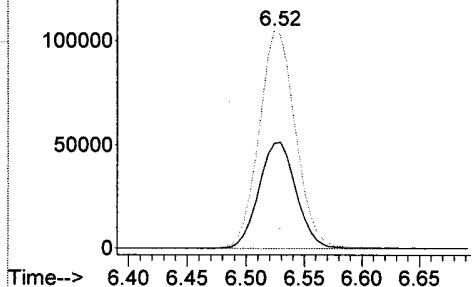
Tgt Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	50.0	40.4	60.6

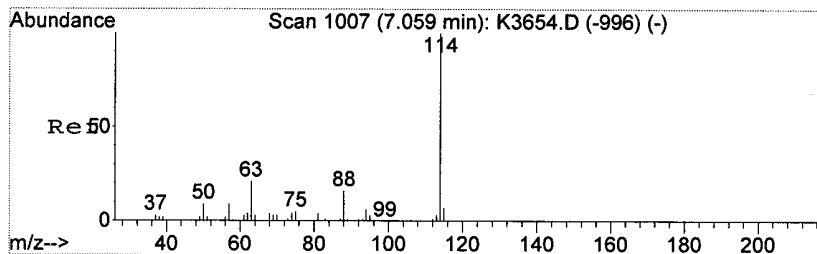


Abundance

Ion 65.15 (64.85 to 65.85): K4184.D

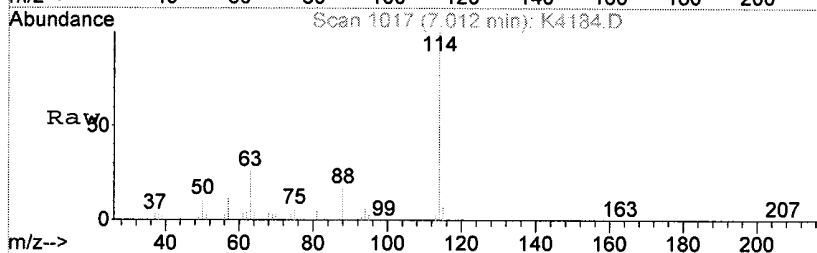
Ion 67.15 (66.85 to 67.85): K4184.D



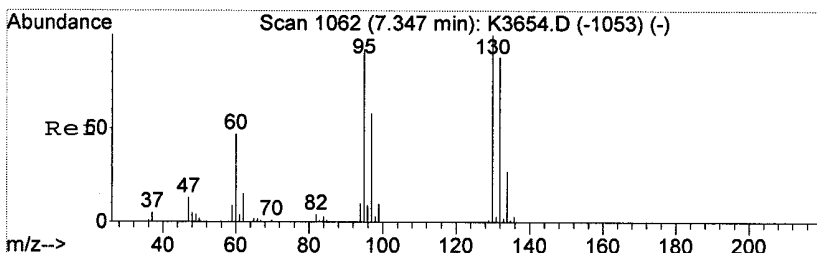
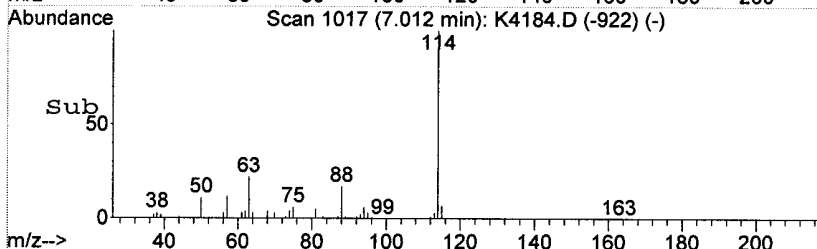
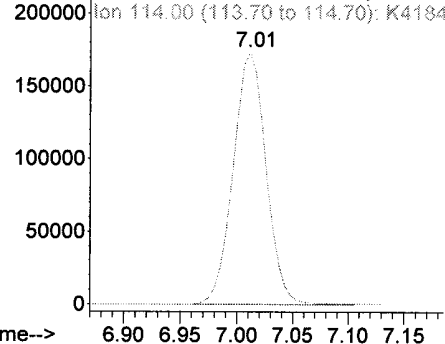


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.01 min Scan# 1017
Delta R.T. 0.00 min
Lab File: K4184.D
Acq: 6 May 2014 7:32 am

Tgt Ion: 114 Resp: 353110
Ion Ratio Lower Upper
114 100
114 100.0 80.0 120.0

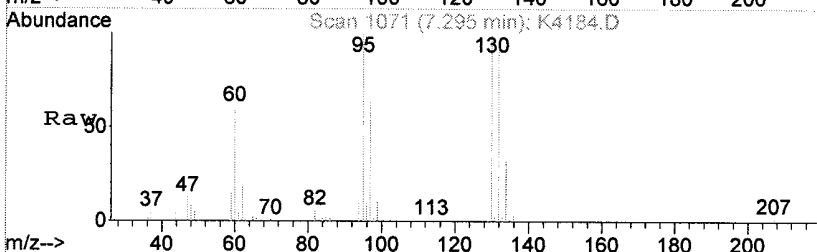


Abundance Ion 114.00 (113.70 to 114.70): K4184.D

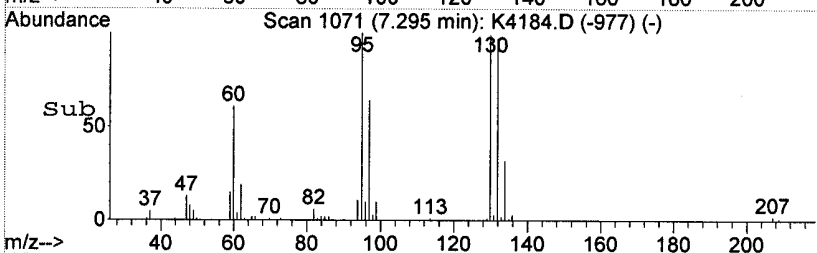
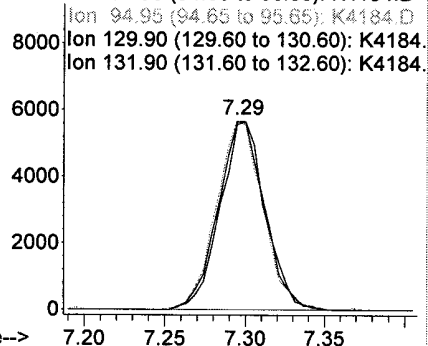


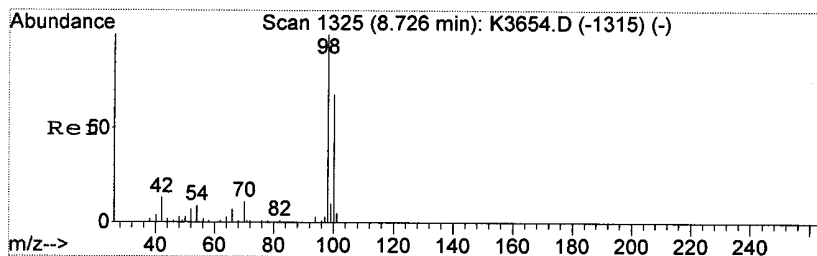
#33
Trichloroethene
Concen: 3.37 UG
RT: 7.29 min Scan# 1071
Delta R.T. -0.01 min
Lab File: K4184.D
Acq: 6 May 2014 7:32 am

Tgt Ion: 95 Resp: 11510
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
130 100.0 0.0 0.0#
132 94.3 0.0 0.0#



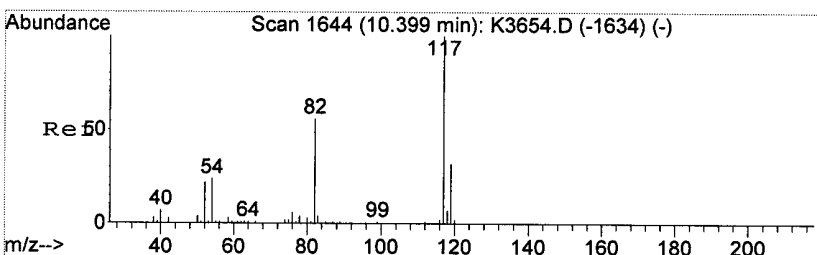
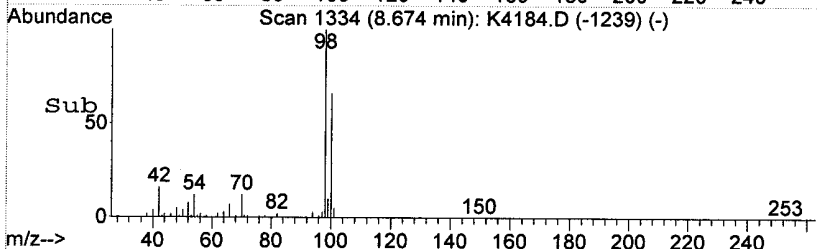
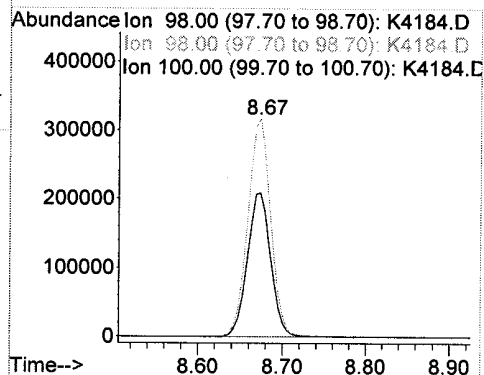
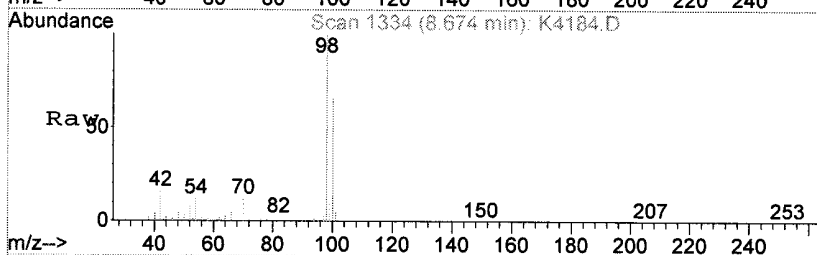
Abundance Ion 94.95 (94.65 to 95.65): K4184.D





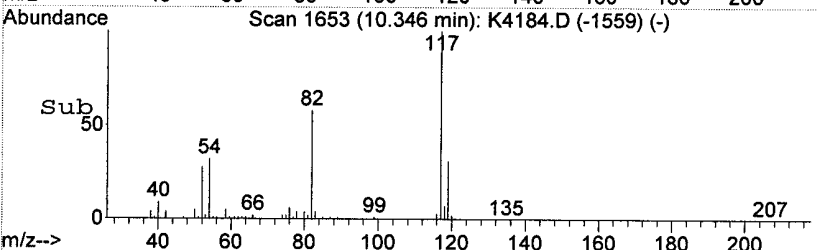
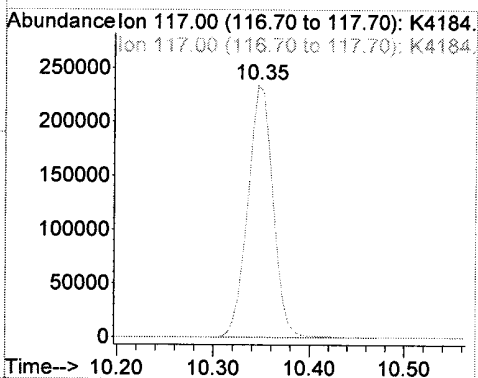
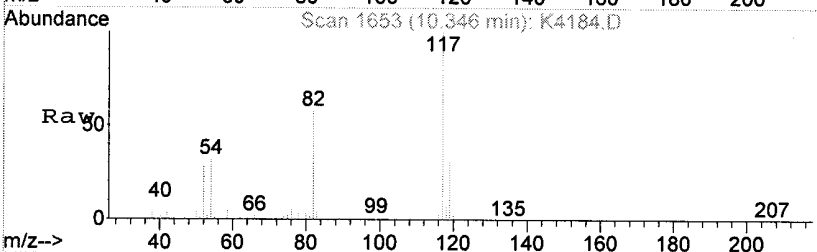
#41
Toluene-d8
Concen: 49.74 UG
RT: 8.67 min Scan# 1334
Delta R.T. 0.00 min
Lab File: K4184.D
Acq: 6 May 2014 7:32 am

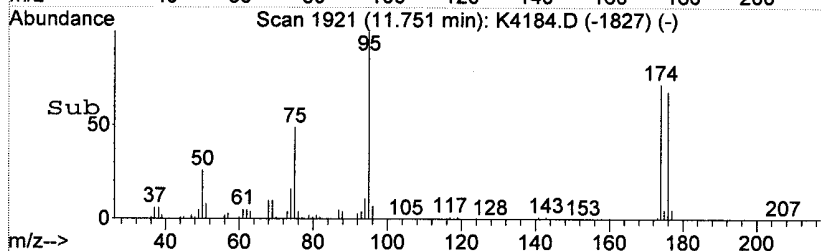
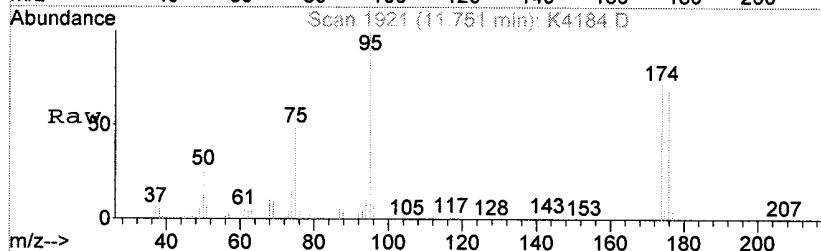
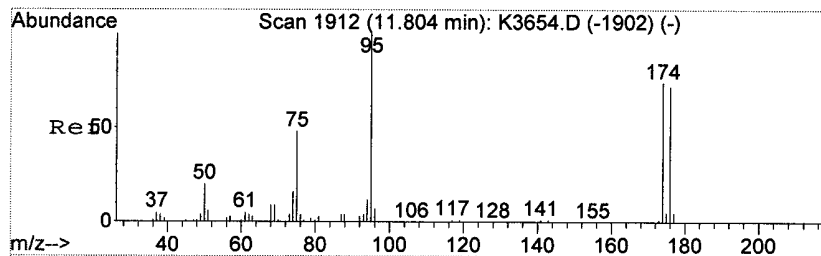
Tgt Ion:	98	Resp:	593079
Ion Ratio	Lower	Upper	
98	100		
98	100.0	80.0	120.0
100	67.0	51.6	77.4



#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1653
Delta R.T. -0.01 min
Lab File: K4184.D
Acq: 6 May 2014 7:32 am

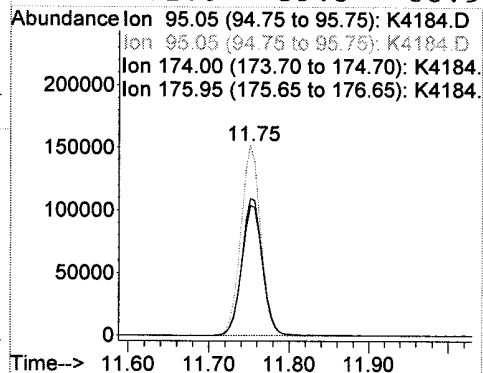
Tgt Ion:	117	Resp:	424836
Ion Ratio	Lower	Upper	
117	100		
117	100.0	80.0	120.0





#59
 Bromofluorobenzene
 Concen: 49.08 UG
 RT: 11.75 min Scan# 1921
 Delta R.T. -0.01 min
 Lab File: K4184.D
 Acq: 6 May 2014 7:32 am

Tgt Ion	Resp	Lower	Upper
95	264823		
95	100		
95	100.0	80.0	120.0
174	73.9	61.4	92.0
176	71.0	59.3	88.9



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4185.D
 Acq On : 6 May 2014 8:00 am
 Operator : BARBARA
 Sample : FB,03838-012,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 44 Sample Multiplier: 1

Quant Time: May 06 11:27:09 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	232943	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	363438	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	437789	50.00	UG	0.00

System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.52	65	236054	53.68	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	107.36%
41) Toluene-d8	8.67	98	608351	49.57	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.14%
59) Bromofluorobenzene	11.75	95	272259	48.96	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.92%

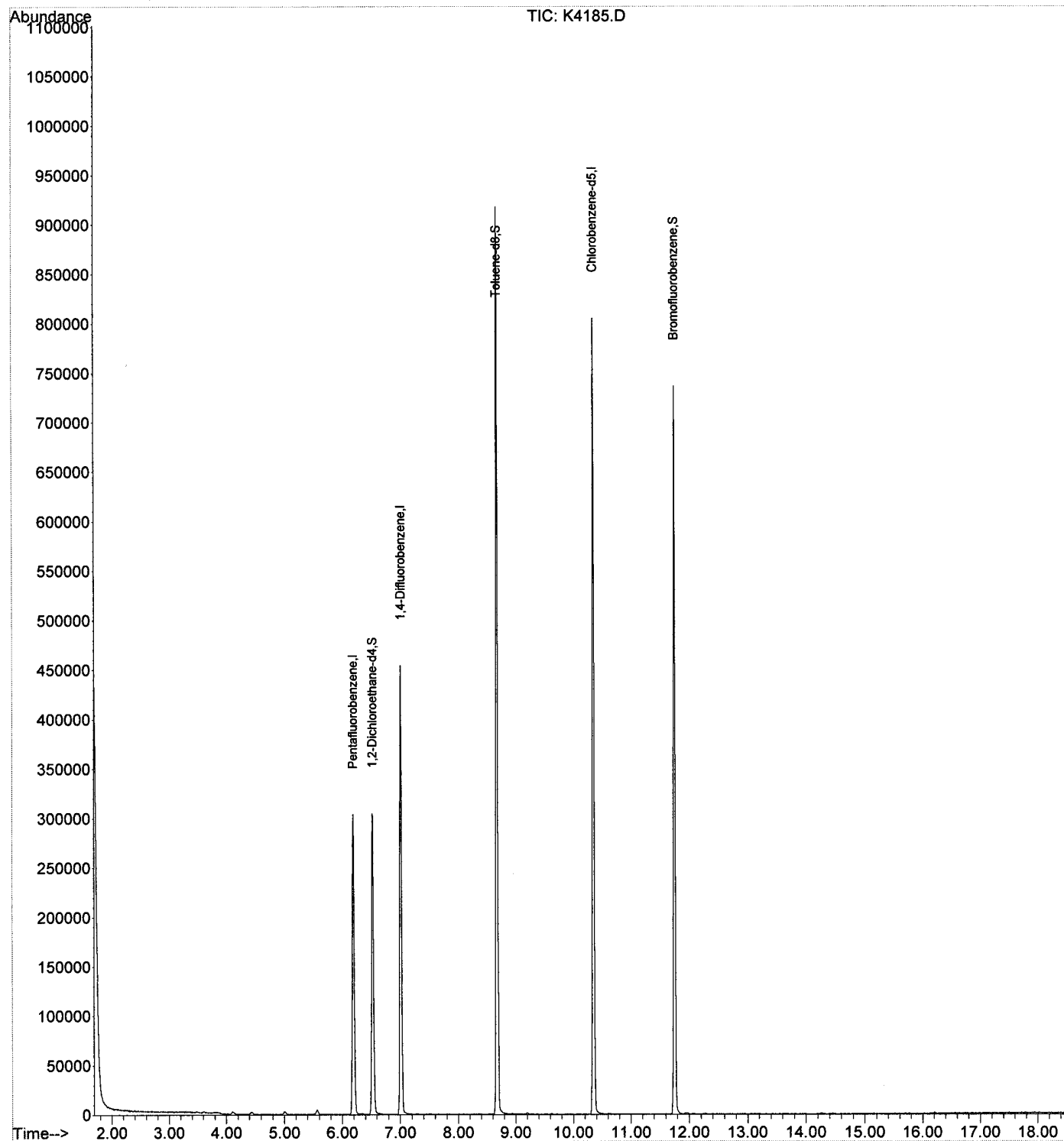
Target Compounds	Qvalue

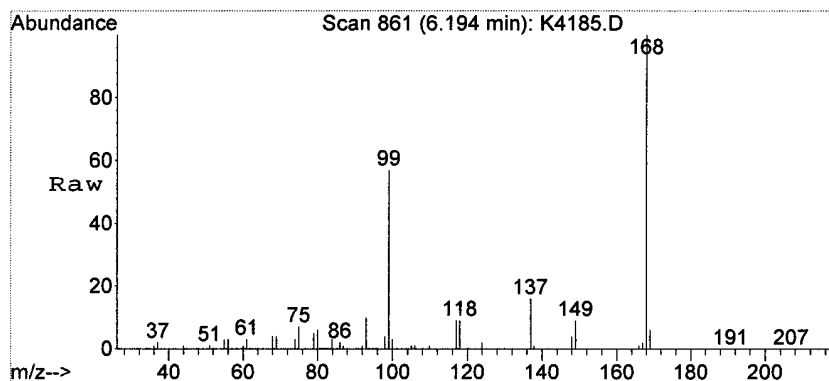
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4185.D
 Acq On : 6 May 2014 8:00 am
 Operator : BARBARA
 Sample : FB,03838-012,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 44 Sample Multiplier: 1

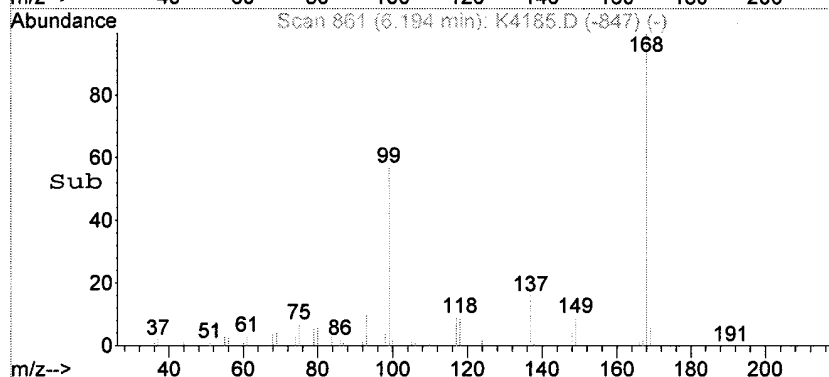
Quant Time: May 06 11:27:09 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration



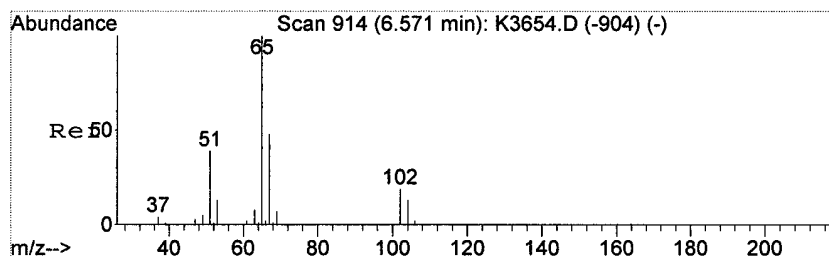
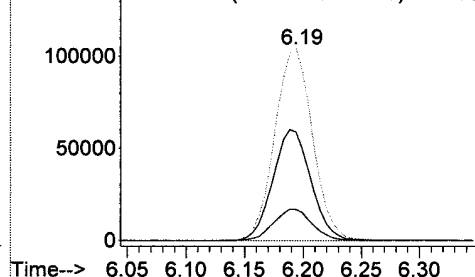


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. 0.00 min
Lab File: K4185.D
Acq: 6 May 2014 8:00 am

Tgt Ion: 168 Resp: 232943
Ion Ratio Lower Upper
168 100
168 100.0 80.0 120.0
99 58.1 45.9 68.9
137 16.5 12.7 19.1

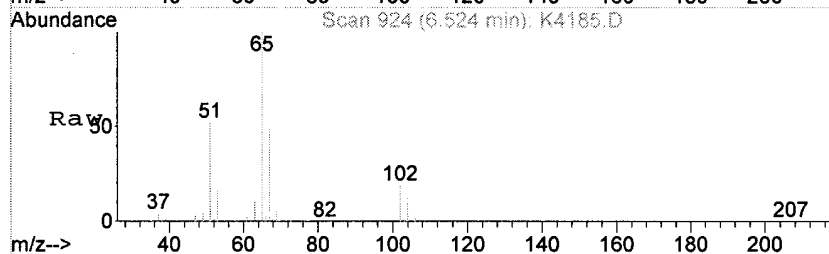


Abundance Ion 168.00 (167.70 to 168.70): K4185.D
Ion 168.00 (167.70 to 168.70): K4185.D
Ion 99.00 (98.70 to 99.70): K4185.D
Ion 137.00 (136.70 to 137.70): K4185.D

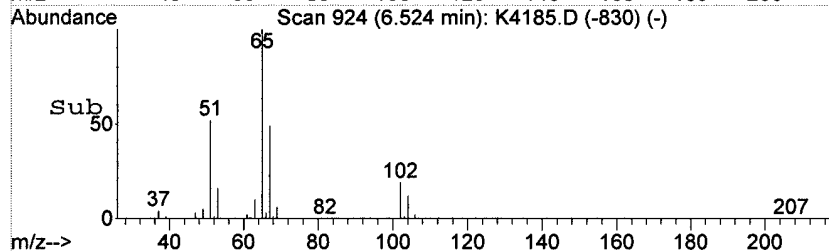
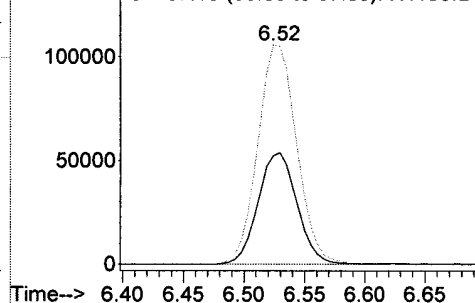


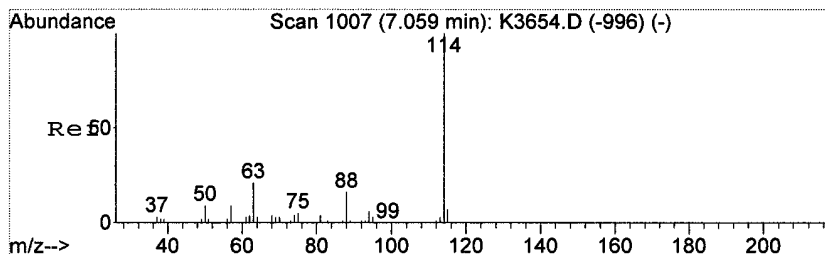
#30
1,2-Dichloroethane-d4
Concen: 53.68 UG
RT: 6.52 min Scan# 924
Delta R.T. -0.01 min
Lab File: K4185.D
Acq: 6 May 2014 8:00 am

Tgt Ion: 65 Resp: 236054
Ion Ratio Lower Upper
65 100
65 100.0 80.0 120.0
67 50.7 40.4 60.6



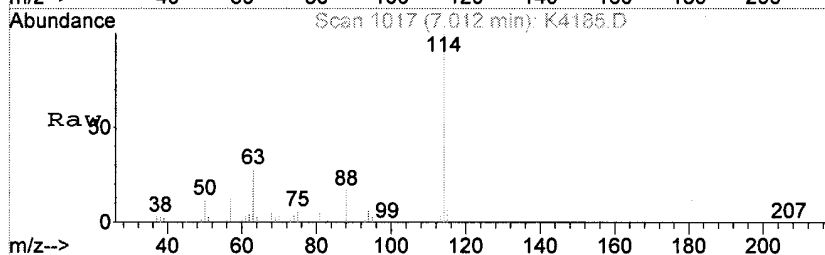
Abundance Ion 65.15 (64.85 to 65.85): K4185.D
Ion 65.15 (64.85 to 65.85): K4185.D
Ion 67.15 (66.85 to 67.85): K4185.D



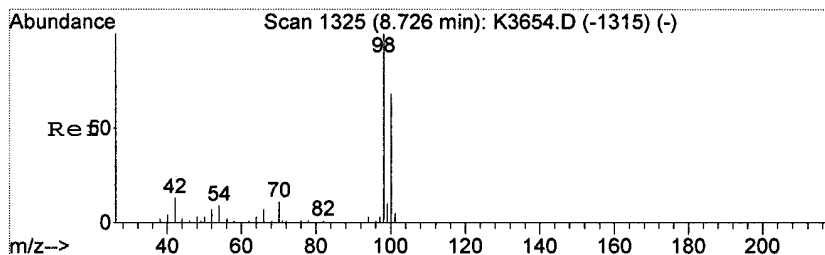
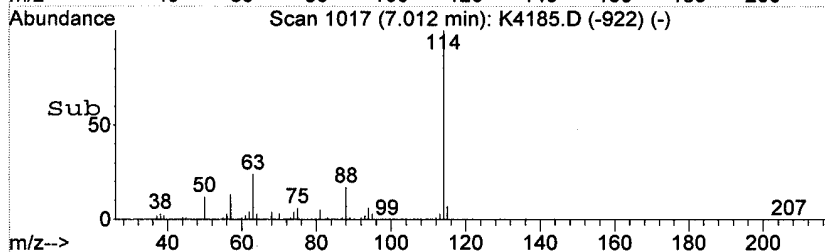
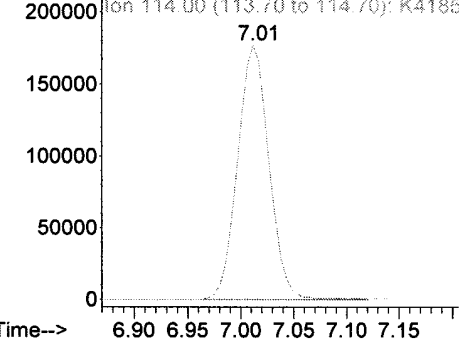


#31
1,4-Difluorobenzene
Concen: 50.00 UG
RT: 7.01 min Scan# 1017
Delta R.T. 0.00 min
Lab File: K4185.D
Acq: 6 May 2014 8:00 am

Tgt Ion: 114 Resp: 363438
Ion Ratio Lower Upper
114 100
114 100.0 80.0 120.0

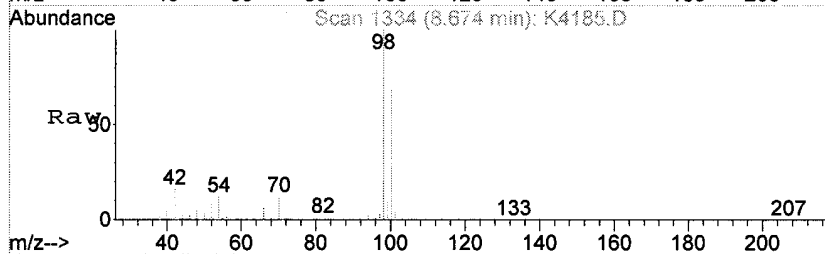


Abundance Ion 114.00 (113.70 to 114.70): K4185.D

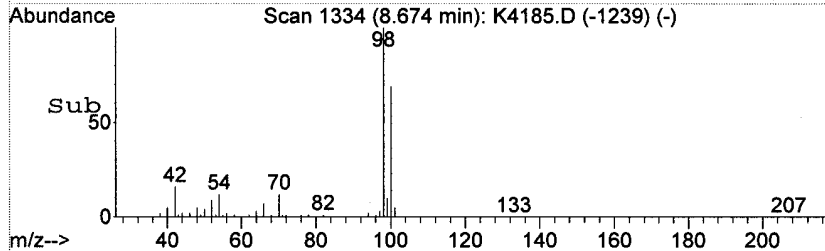
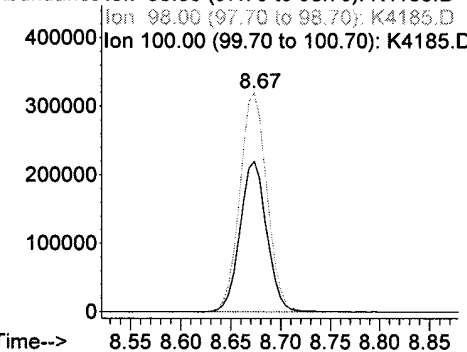


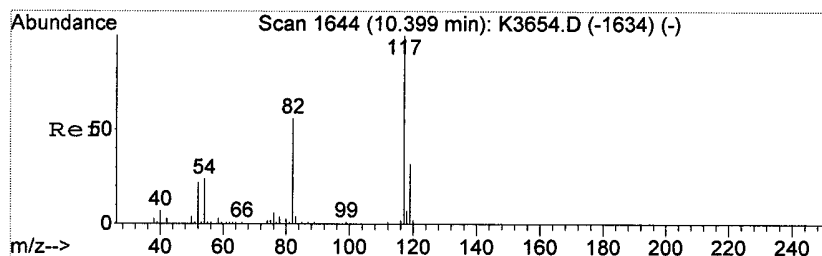
#41
Toluene-d8
Concen: 49.57 UG
RT: 8.67 min Scan# 1334
Delta R.T. 0.00 min
Lab File: K4185.D
Acq: 6 May 2014 8:00 am

Tgt Ion: 98 Resp: 608351
Ion Ratio Lower Upper
98 100
98 100.0 80.0 120.0
100 67.3 51.6 77.4



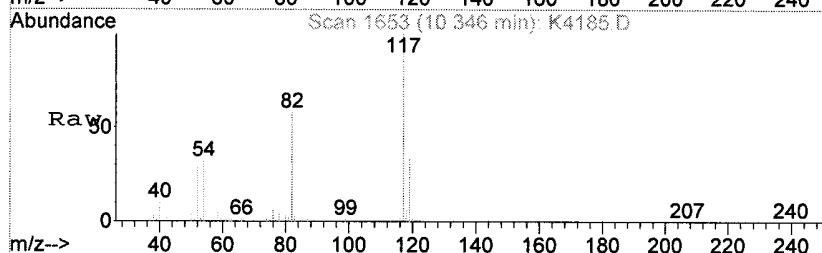
Abundance Ion 98.00 (97.70 to 98.70): K4185.D



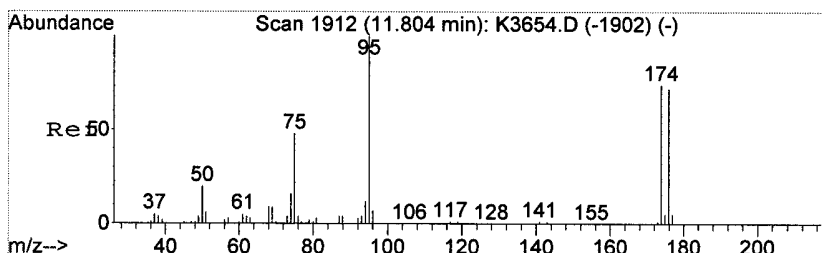
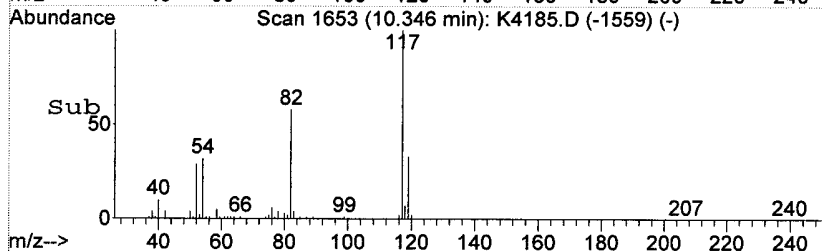
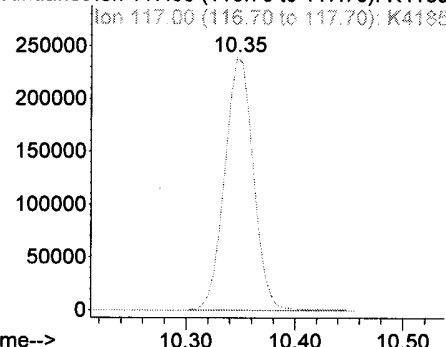


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1653
Delta R.T. -0.01 min
Lab File: K4185.D
Acq: 6 May 2014 8:00 am

Tgt Ion: 117 Resp: 437789
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0

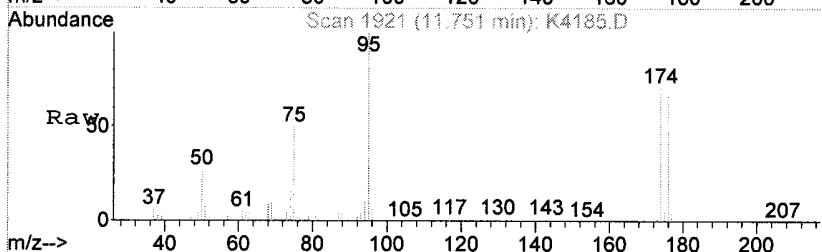


Abundance Ion 117.00 (116.70 to 117.70): K4185.D

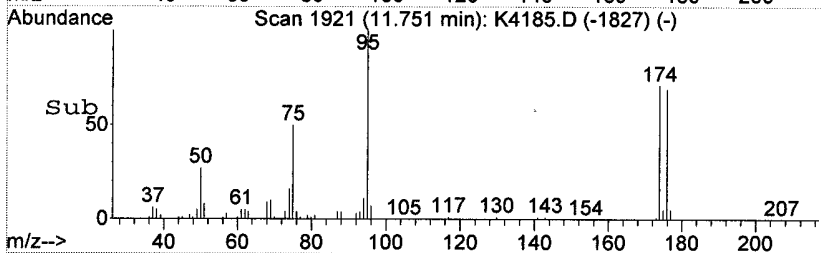
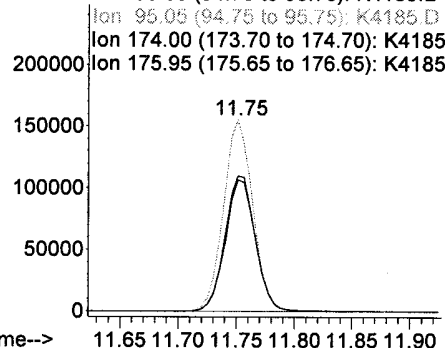


#59
Bromofluorobenzene
Concen: 48.96 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4185.D
Acq: 6 May 2014 8:00 am

Tgt Ion: 95 Resp: 272259
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.0 61.4 92.0
176 70.6 59.3 88.9



Abundance Ion 95.05 (94.75 to 95.75): K4185.D



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4186.D
 Acq On : 6 May 2014 8:28 am
 Operator : BARBARA
 Sample : TB,03838-013,A,5mL,100
 Misc : EWMA/SWIVELIER_-_2,04/29/14,04/30/14,1
 ALS Vial : 45 Sample Multiplier: 1

Quant Time: May 06 11:28:32 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	226470	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	359103	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	429888	50.00	UG	0.00

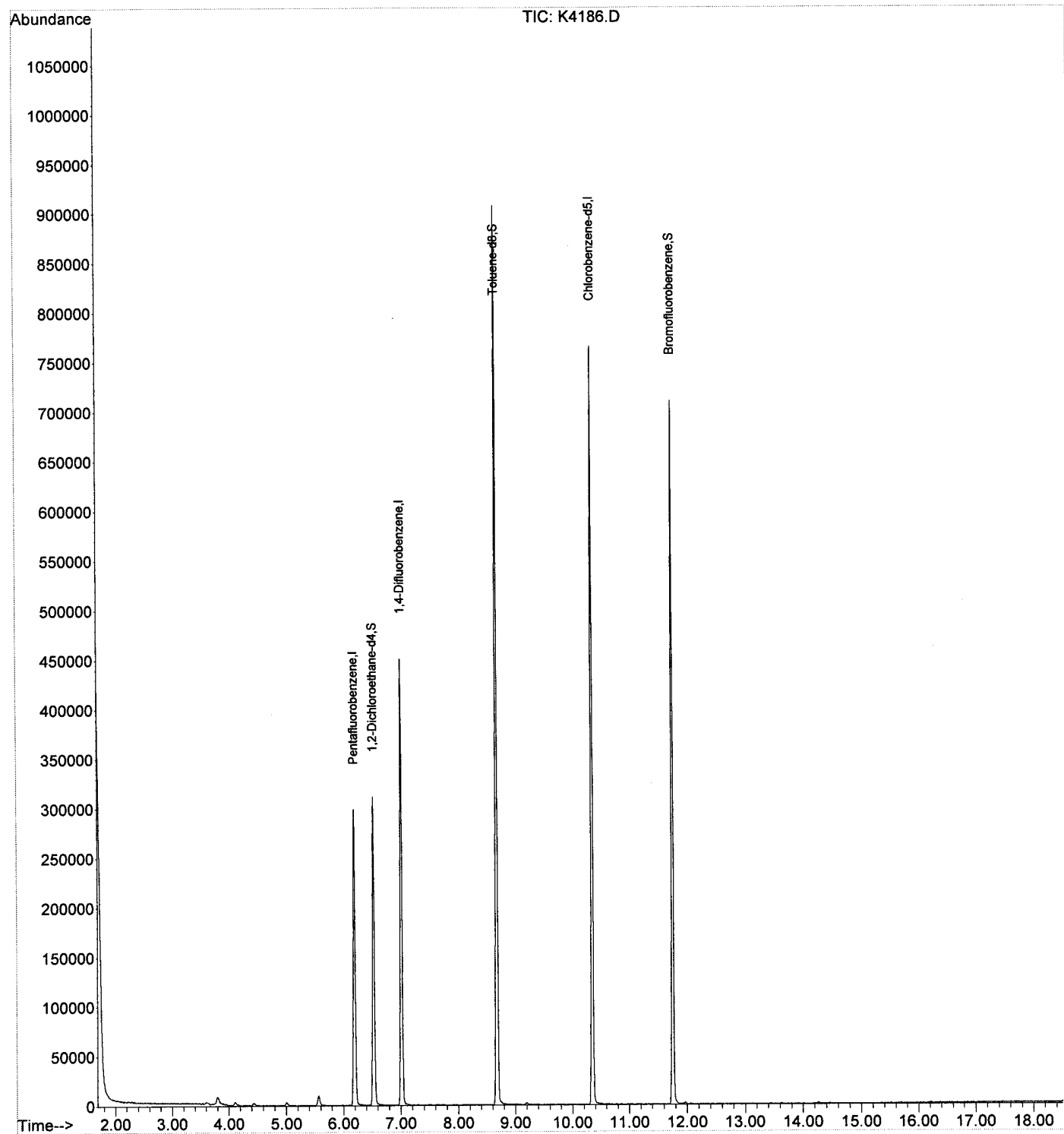
System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	235061	54.98	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	109.96%
41) Toluene-d8	8.67	98	599747	49.46	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.92%
59) Bromofluorobenzene	11.75	95	264327	48.41	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	96.82%

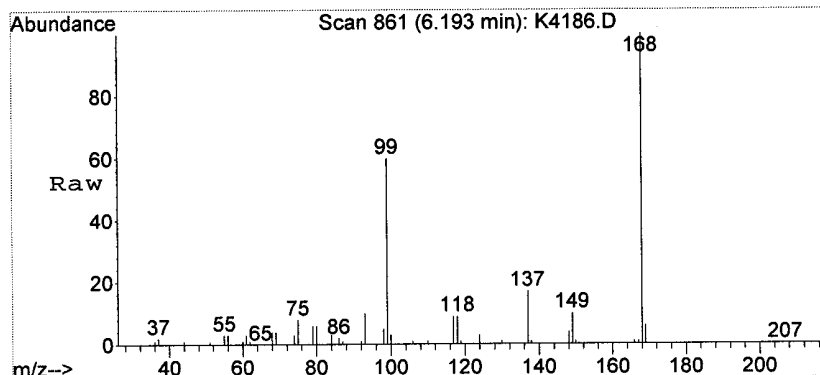
Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4186.D
Acq On : 6 May 2014 8:28 am
Operator : BARBARA
Sample : TB,03838-013,A,5mL,100
Misc : EWMA/SWIVELIER_-2,04/29/14,04/30/14,1
ALS Vial : 45 Sample Multiplier: 1

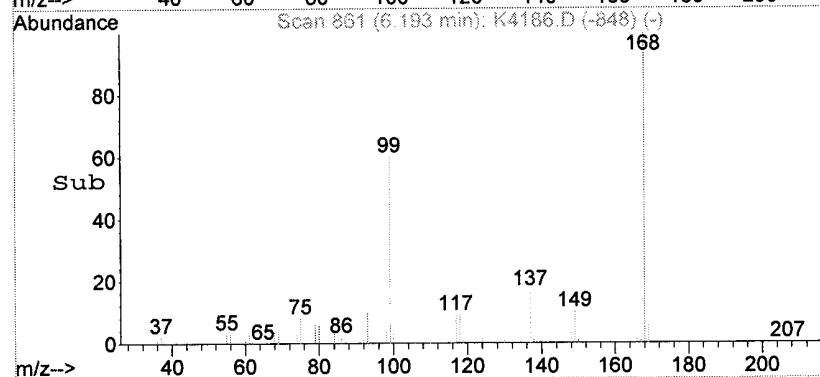
Quant Time: May 06 11:28:32 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration



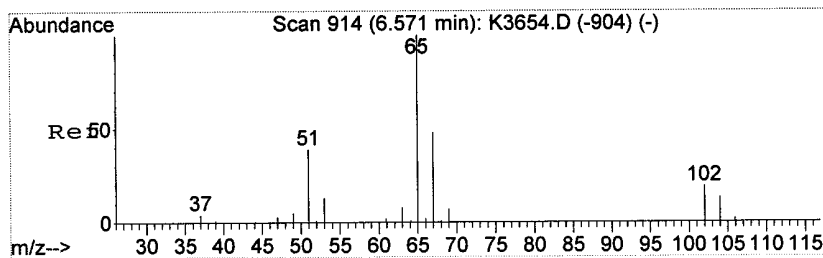
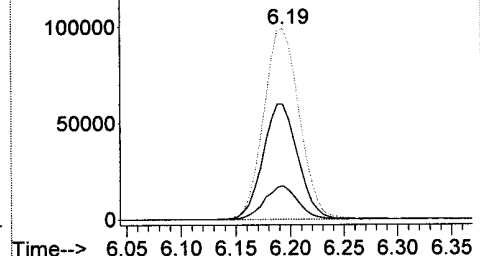


#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. -0.00 min
Lab File: K4186.D
Acq: 6 May 2014 8:28 am

Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	59.1	45.9	68.9
137	16.4	12.7	19.1

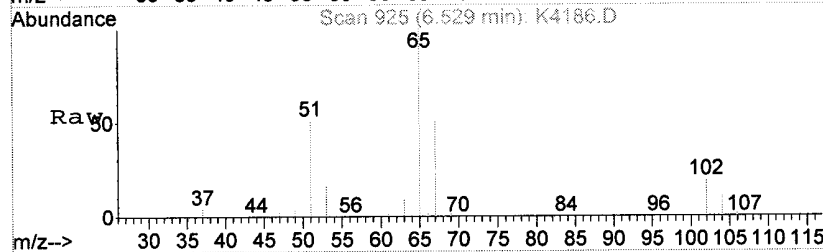


Abundance Ion 168.00 (167.70 to 168.70): K4186.D
Ion 168.00 (167.70 to 168.70): K4186.D
Ion 99.00 (98.70 to 99.70): K4186.D
Ion 137.00 (136.70 to 137.70): K4186.D

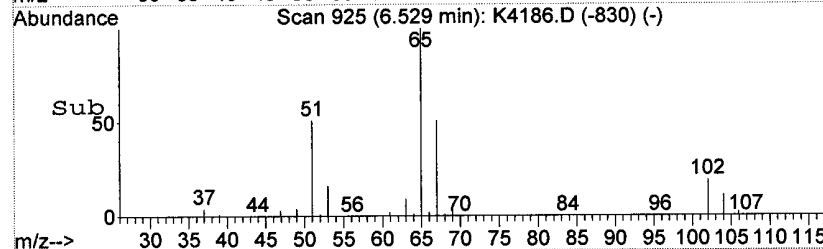
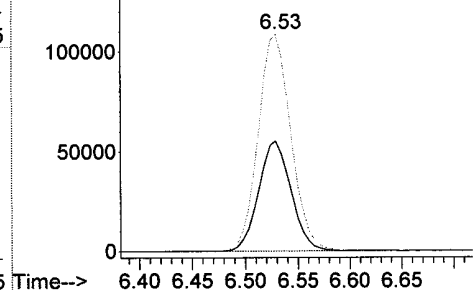


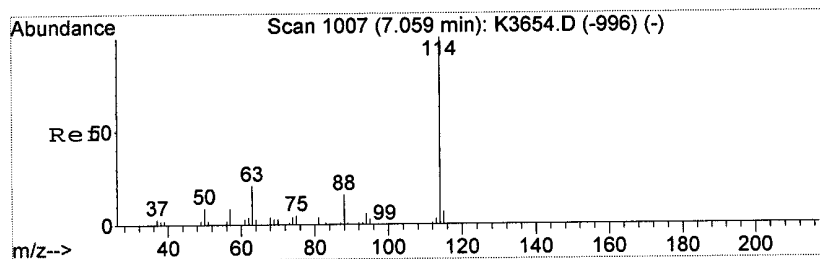
#30
1,2-Dichloroethane-d4
Concen: 54.98 UG
RT: 6.53 min Scan# 925
Delta R.T. -0.00 min
Lab File: K4186.D
Acq: 6 May 2014 8:28 am

Tgt Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	50.3	40.4	60.6



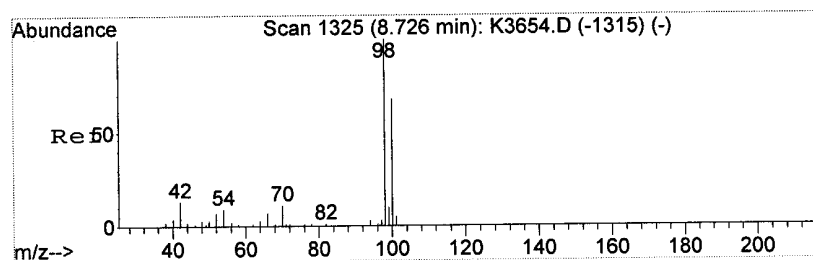
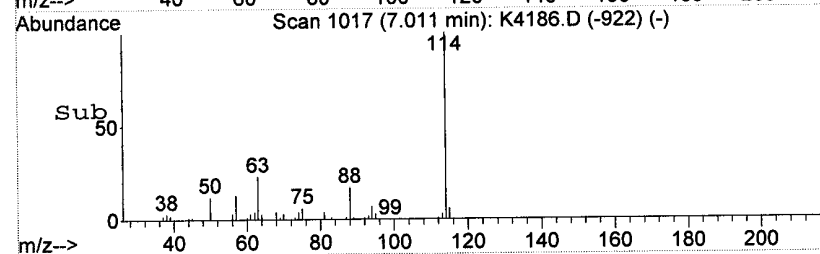
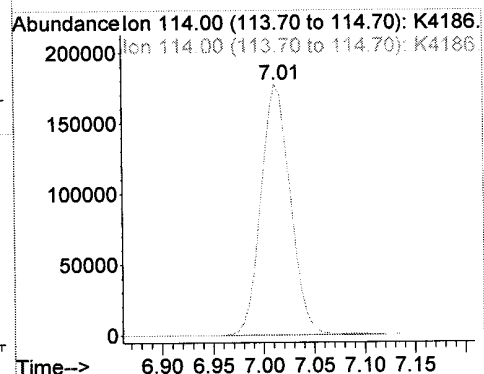
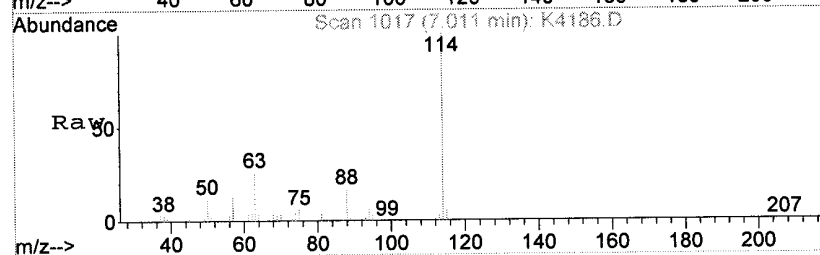
Abundance Ion 65.15 (64.85 to 65.85): K4186.D
Ion 65.15 (64.85 to 65.85): K4186.D
Ion 67.15 (66.85 to 67.85): K4186.D





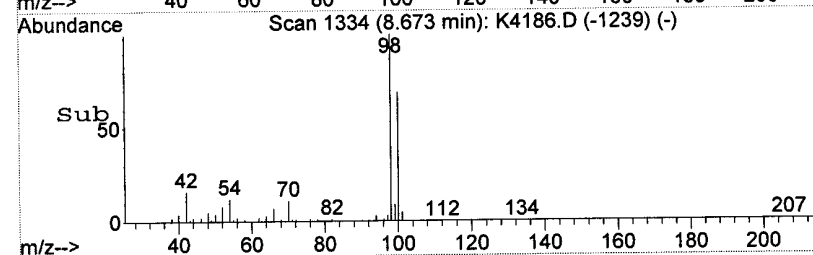
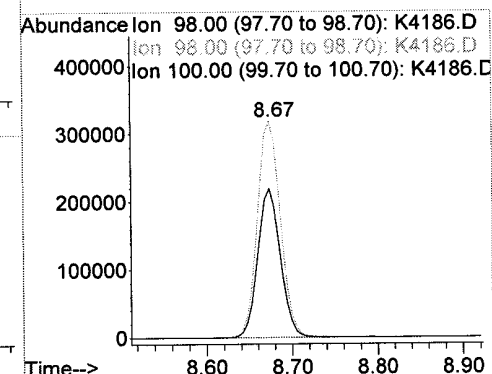
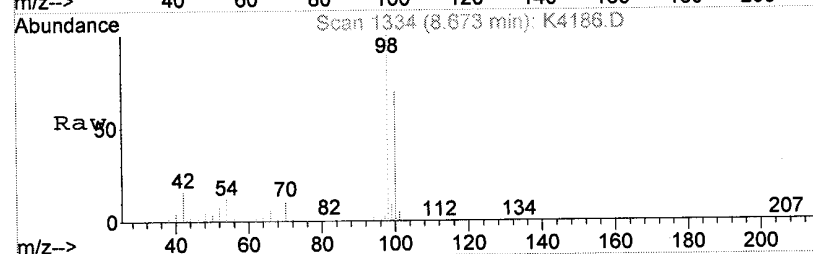
#31
 1,4-Difluorobenzene
 Concen: 50.00 UG
 RT: 7.01 min Scan# 1017
 Delta R.T. -0.00 min
 Lab File: K4186.D
 Acq: 6 May 2014 8:28 am

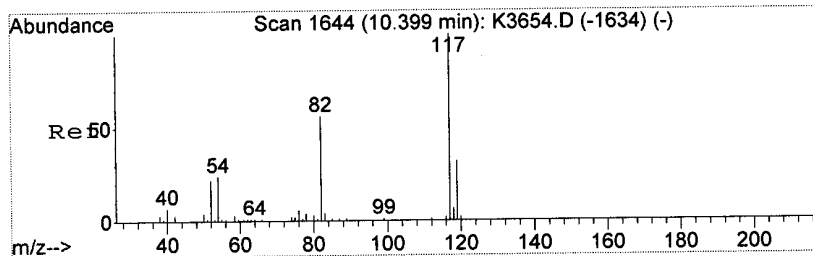
Tgt Ion: 114 Resp: 359103
 Ion Ratio Lower Upper
 114 100
 114 100.0 80.0 120.0



#41
 Toluene-d8
 Concen: 49.46 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. -0.00 min
 Lab File: K4186.D
 Acq: 6 May 2014 8:28 am

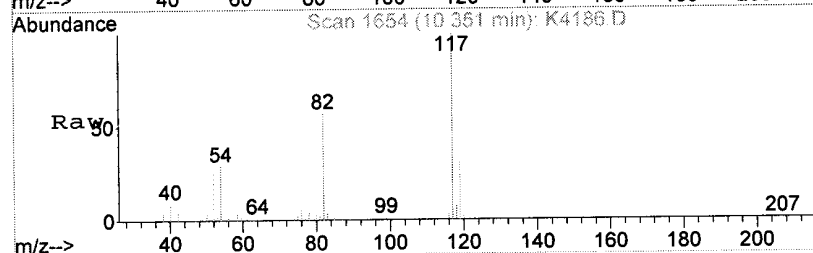
Tgt Ion: 98 Resp: 599747
 Ion Ratio Lower Upper
 98 100
 98 100.0 80.0 120.0
 100 67.3 51.6 77.4



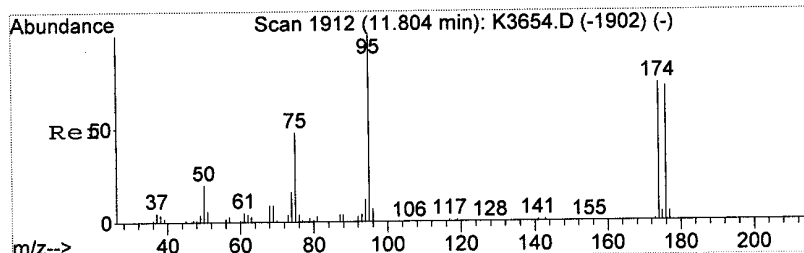
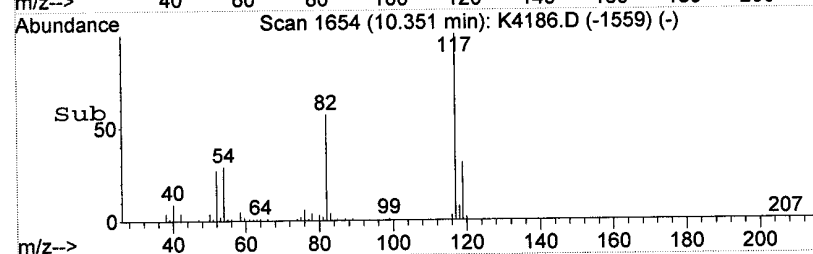
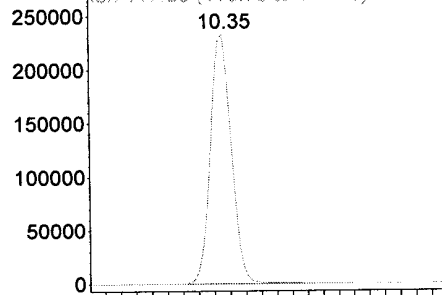


#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1654
Delta R.T. -0.00 min
Lab File: K4186.D
Acq: 6 May 2014 8:28 am

Tgt Ion: 117 Resp: 429888
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0

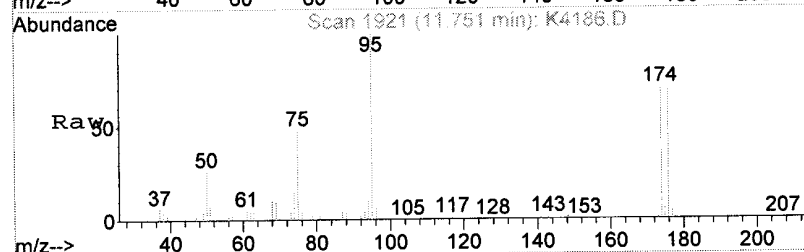


Abundance Ion 117.00 (116.70 to 117.70): K4186.D



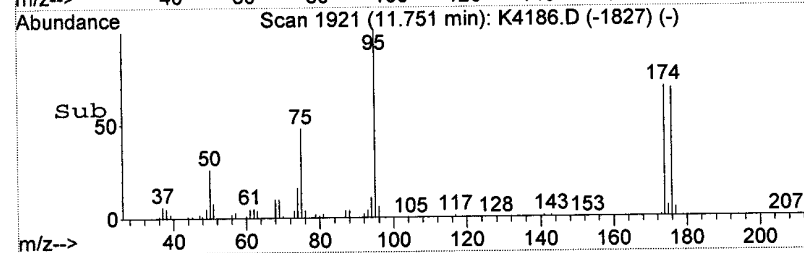
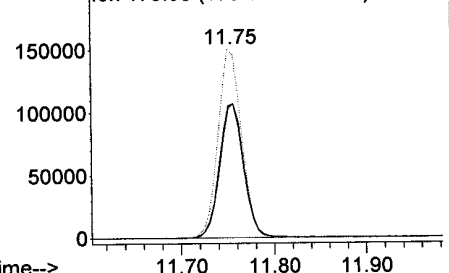
#59
Bromofluorobenzene
Concen: 48.41 UG
RT: 11.75 min Scan# 1921
Delta R.T. -0.01 min
Lab File: K4186.D
Acq: 6 May 2014 8:28 am

Tgt Ion: 95 Resp: 264327
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.0 61.4 92.0
176 70.9 59.3 88.9



Abundance Ion 95.05 (94.75 to 95.75): K4186.D

Ion 95.05 (94.75 to 95.75): K4186.D
Ion 174.00 (173.70 to 174.70): K4186.D
Ion 175.95 (175.65 to 176.65): K4186.D



VOLATILE ORGANICS STANDARDS

Response Factor Report MSD_K

Method Path : C:\MSDCHEM\1\METHODS\
 Method File : K8050514.M
 Title : VOLATILE ORGANICS BY EPA METHOD 624
 Last Update : Mon May 05 15:15:11 2014
 Response Via : Initial Calibration

Calibration Files

1.00=K4142.D 2.00=K4143.D 5.00=K4144.D
 20 =K4145.D 100 =K4146.D 150 =K4147.D 200 =K4148.D

Compound	1.00	2.00	5.00	20	100	150	200	Avg	%RSD
-----ISTD-----									
1) I Pentafluorobenzene									
2) T Dichlorodifluorom	0.711	0.594	0.599	0.613	0.528	0.537	0.524	0.587	11.27
3) P Chloromethane	1.255	1.103	1.029	1.129	1.120	1.139	1.023	1.114	6.99
4) C Vinyl chloride	0.819	0.809	0.783	0.880	0.836	0.861	0.799	0.827	4.21
5) T Bromomethane	0.440	0.392	0.367	0.389	0.355	0.335	0.296	0.368	12.48
6) T Chloroethane	0.583	0.514	0.474	0.512	0.467	0.458	0.410	0.489	11.20
7) T Trichlorofluorome	0.910	0.824	0.773	0.825	0.744	0.754	0.718	0.792	8.24
8) T Acrolein	0.049	0.044	0.040	0.044	0.041	0.038	0.036	0.042	10.57
9) MC 1,1-Dichloroethen	0.628	0.565	0.520	0.542	0.487	0.499	0.463	0.529	10.41
10) T Acetone			0.488	0.463	0.461	0.453	0.400	0.453	7.18
11) T Carbon disulfide	2.082	1.830	1.714	1.899	1.802	1.820	1.711	1.837	6.91
12) T Vinyl acetate	4.272	4.055	3.545	3.932	4.094	4.123	3.725	3.964	6.34
13) T Methylene chlorid		1.068	0.740	0.782	0.789	0.782	0.708	0.812	15.98
14) T Acrylonitrile	0.388	0.358	0.351	0.387	0.389	0.385	0.350	0.372	4.94
15) T tert-Butyl alcoho		0.109	0.088	0.099	0.103	0.101	0.093	0.099	7.78
16) T trans-1,2-Dichlor	0.824	0.734	0.699	0.736	0.728	0.729	0.668	0.731	6.52
17) T Methyl tert-butyl	2.900	2.656	2.200	2.316	2.371	2.342	2.128	2.416	11.18
18) P 1,1-Dichloroethan	1.753	1.615	1.532	1.646	1.674	1.683	1.535	1.634	4.93
19) T Diisopropyl ether	4.645	4.199	3.675	3.988	4.096	4.104	3.727	4.062	7.97
20) T cis-1,2-Dichloroe	0.859	0.771	0.739	0.798	0.828	0.819	0.741	0.793	5.72
21) T 2,2-Dichloropropa	1.035	0.993	0.918	0.976	0.934	0.905	0.820	0.940	7.45
22) T 2-Butanone (MEK)	0.671	0.670	0.621	0.634	0.644	0.642	0.574	0.637	5.21
23) T Bromochloromethan	0.399	0.341	0.327	0.361	0.375	0.374	0.340	0.360	7.01
25) C Chloroform	1.355	1.285	1.192	1.279	1.319	1.322	1.198	1.279	4.88
26) T 1,1,1-Trichloroet	1.163	1.066	1.028	1.121	1.062	1.089	1.011	1.077	4.88
27) T Carbon tetrachlor	1.007	0.908	0.883	0.949	0.890	0.919	0.860	0.917	5.31
28) T 1,1-Dichloroprope	1.137	1.030	0.930	1.023	0.971	1.011	0.943	1.006	6.91
29) T 1,2-Dichloroethan	1.217	1.178	1.074	1.157	1.202	1.210	1.099	1.162	4.83
30) S 1,2-Dichloroethan	0.947	0.939	0.944	0.945	0.942	0.949	0.941	0.944	0.37
-----ISTD-----									
31) I 1,4-Difluorobenzene									
32) M Benzene	2.166	1.995	1.872	1.977	2.027	2.041	1.874	1.993	5.12
33) M Trichloroethene	0.532	0.482	0.456	0.484	0.483	0.493	0.454	0.483	5.39
34) C 1,2-Dichloropropa	0.614	0.621	0.563	0.611	0.640	0.651	0.590	0.613	4.83
35) T Dibromomethane	0.298	0.268	0.253	0.277	0.293	0.292	0.269	0.279	5.90
36) T 1,4-Dioxane	0.004	0.004	0.004	0.004	0.004	0.004		0.004	8.65
37) T Bromodichlorometh	0.654	0.630	0.593	0.646	0.689	0.695	0.638	0.649	5.38
38) T 2-Chloroethyl vin			0.278	0.321	0.372	0.378	0.354	0.341	12.12
39) T cis-1,3-Dichlorop	0.766	0.713	0.700	0.797	0.854	0.873	0.801	0.786	8.32
40) T 4-Methyl-2-pentan		0.631	0.595	0.664	0.711	0.700	0.648	0.658	6.58
41) S Toluene-d8	1.666	1.682	1.687	1.681	1.687	1.701	1.714	1.688	0.92
42) MC Toluene	1.301	1.194	1.095	1.174	1.196	1.212	1.116	1.184	5.71
43) T trans-1,3-Dichlor	0.696	0.698	0.614	0.721	0.783	0.796	0.734	0.720	8.43
44) T 1,1,2-Trichloroet	0.391	0.356	0.309	0.350	0.365	0.369	0.339	0.354	7.25
45) T Tetrachloroethene	0.591	0.520	0.444	0.467	0.447	0.465	0.436	0.481	11.54
46) T 1,3-Dichloropropa	0.740	0.755	0.674	0.744	0.778	0.783	0.724	0.742	4.96
47) T 2-Hexanone			0.507	0.594	0.621	0.613	0.561	0.579	8.06
48) T Dibromochlorometh	0.421	0.427	0.391	0.446	0.489	0.492	0.455	0.446	8.23
49) T 1,2-Dibromoethane	0.423	0.403	0.372	0.419	0.441	0.441	0.406	0.415	5.82
-----ISTD-----									
50) I Chlorobenzene-d5									
51) MP Chlorobenzene	1.210	1.035	0.980	1.046	1.073	1.077	0.985	1.038	7.74
52) T 1,1,1,2-Tetrachlo	0.411	0.353	0.331	0.374	0.399	0.395	0.358	0.374	7.74

53)	C	Ethylbenzene	2.100	1.888	1.708	1.869	1.913	1.934	1.770	1.883	6.64
54)	T	m,p-Xylene	0.793	0.741	0.661	0.723	0.732	0.738	0.677	0.724	6.03
55)	T	o-Xylene	0.780	0.694	0.632	0.711	0.738	0.733	0.669	0.708	6.87
56)	T	Styrene	1.074	1.063	1.017	1.197	1.266	1.255	1.148	1.146	8.56
57)	P	Bromoform	0.216	0.217	0.200	0.226	0.257	0.257	0.239	0.230	9.35
58)	T	Isopropylbenzene	1.889	1.724	1.575	1.762	1.769	1.809	1.664	1.742	5.81
59)	S	Bromofluorobenzen	0.620	0.629	0.630	0.635	0.642	0.646	0.645	0.635	1.52
60)	P	1,1,2,2-Tetrachlo	0.522	0.495	0.428	0.458	0.490	0.477	0.445	0.474	6.81
61)	T	Bromobenzene	0.486	0.421	0.382	0.416	0.434	0.428	0.392	0.423	8.00
62)	T	1,2,3-Trichloropr	0.372	0.373	0.306	0.342	0.365	0.358	0.332	0.350	7.08
63)	T	n-Propylbenzene	2.413	2.163	1.913	2.085	2.099	2.140	1.981	2.113	7.52
64)	T	2-Chlorotoluene	1.446	1.319	1.197	1.281	1.312	1.320	1.209	1.298	6.39
65)	T	1,3,5-Trimethylbe	1.638	1.486	1.361	1.502	1.530	1.543	1.409	1.496	6.07
66)	T	4-Chlorotoluene	1.747	1.581	1.368	1.492	1.535	1.544	1.407	1.525	8.15
67)	T	tert-Butylbenzene	1.258	1.154	1.052	1.176	1.169	1.201	1.100	1.159	5.77
68)	T	1,2,4-Trimethylbe	1.727	1.466	1.381	1.506	1.552	1.550	1.422	1.515	7.47
69)	T	sec-Butylbenzene	2.051	1.813	1.616	1.768	1.728	1.769	1.645	1.770	8.05
70)	T	1,3-Dichlorobenze	0.941	0.832	0.720	0.764	0.808	0.815	0.746	0.804	9.07
71)	T	4-Isopropyltoluen	1.643	1.411	1.325	1.448	1.444	1.466	1.348	1.441	7.21
72)	T	1,4-Dichlorobenze	0.941	0.818	0.735	0.781	0.825	0.828	0.752	0.811	8.36
73)	T	n-Butylbenzene	1.459	1.288	1.149	1.263	1.267	1.293	1.193	1.273	7.64
74)	T	1,2-Dichlorobenze	0.841	0.791	0.704	0.754	0.783	0.782	0.709	0.766	6.31
75)	T	1,2-Dibromo-3-chl	0.070	0.073	0.063	0.073	0.082	0.081	0.075	0.074	8.88
76)	T	1,2,4-Trichlorobe	0.580	0.494	0.456	0.484	0.504	0.506	0.455	0.497	8.43
77)	T	Hexachlorobutadie	0.251	0.202	0.179	0.181	0.173	0.175	0.160	0.189	16.05
78)	T	Naphthalene		1.063	0.999	1.175	1.255	1.224	1.111	1.138	8.62
79)	T	1,2,3-Trichlorobe	0.558	0.440	0.407	0.427	0.455	0.449	0.402	0.448	11.67
80)	T	1,1,2-Trichloro-1		0.254	0.278	0.274	0.240	0.239	0.232	0.253	7.66
81)	T	Methyl acetate	0.485	0.472	0.398	0.424	0.449	0.433	0.402	0.438	7.55
82)	T	Cyclohexane			1.060	0.970	0.860	0.869	0.843	0.920	10.08
83)	T	Methylcyclohexane	0.735	0.669	0.613	0.629	0.578	0.585	0.574	0.626	9.33

 (##) = Out of Range ### Number of calibration levels exceeded format ###

K8050514.M Tue May 06 12:22:42 2014

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4142.D
 Acq On : 5 May 2014 11:35 am
 Operator : BARBARA
 Sample : ICC001, ICC001, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 05 14:50:23 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:49:39 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	248412	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	378453	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	447938	50.00	UG	0.00

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev (Min)
30) 1,2-Dichloroethane-d4		6.53	65	235182	50.22	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.44%	
41) Toluene-d8		8.67	98	630401	49.45	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.90%	
59) Bromofluorobenzene		11.75	95	277680	48.91	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	97.82%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.84	85	3534	1.22	UG	87
3) Chloromethane	2.01	50	6236	1.15	UG	99
4) Vinyl chloride	2.16	62	4069	0.99	UG	89
5) Bromomethane	2.51	94	2188	1.17	UG	91
6) Chloroethane	2.61	64	2898	1.19	UG	99
7) Trichlorofluoromethane	2.92	101	4519m	1.15	UG	
8) Acrolein	3.42	56	4889	23.48	UG	95
9) 1,1-Dichloroethene	3.52	96	3120	1.19	UG	12
10) Acetone	3.60	43	3119	1.33	UG	98
11) Carbon disulfide	3.77	76	10346	1.15	UG	100
12) Vinyl acetate	5.01	43	21222	1.09	UG	1
13) Methylene chloride	4.10	84	7428	1.77	UG	100
14) Acrylonitrile	4.43	53	38541	20.90	UG	100
15) tert-Butyl alcohol (TBA)	4.30	59	990	2.00	UG	93
16) trans-1,2-Dichloroethene	4.42	96	4093	1.14	UG	98
17) Methyl tert-butyl ether (M)	4.44	73	14406	1.22	UG	100
18) 1,1-Dichloroethane	4.93	63	8710	1.08	UG	100
19) Diisopropyl ether (DIPE)	5.01	45	23076	1.16	UG	93
20) cis-1,2-Dichloroethene	5.60	96	4266	1.10	UG	98
21) 2,2-Dichloropropane	5.59	77	5144	1.08	UG	100
22) 2-Butanone (MEK)	5.65	43	3336	1.05	UG	98
23) Bromochloromethane	5.87	128	1982	1.14	UG	38
25) Chloroform	5.97	83	6732	1.07	UG	99
26) 1,1,1-Trichloroethane	6.16	97	5779	1.09	UG	100
27) Carbon tetrachloride	6.34	117	5003	1.11	UG	95
28) 1,1-Dichloropropene	6.35	75	5648	1.15	UG	98
29) 1,2-Dichloroethane (EDC)	6.62	62	6044	1.06	UG	100
32) Benzene	6.58	78	16394	1.10	UG	100
33) Trichloroethene	7.30	95	4027	1.12	UG	100
34) 1,2-Dichloropropane	7.56	63	4651	1.01	UG	100
35) Dibromomethane	7.70	93	2254	1.09	UG	90
36) 1,4-Dioxane	7.72	88	5660	180.89	UG	64
37) Bromodichloromethane	7.87	83	4952	1.02	UG	100
38) 2-Chloroethyl vinyl ether	8.21	63	2087	0.85	UG	100
39) cis-1,3-Dichloropropene	8.37	75	5801	1.00	UG	100
40) 4-Methyl-2-pentanone (MIBK)	8.56	43	4918	1.00	UG	100
42) Toluene	8.75	92	9851	1.12	UG	100
43) trans-1,3-Dichloropropene	9.01	75	5265	0.99	UG	99
44) 1,1,2-Trichloroethane	9.23	83	2956	1.13	UG	52
45) Tetrachloroethene	9.38	166	4470	1.26	UG	82
46) 1,3-Dichloropropane	9.42	76	5598	1.00	UG	98

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4142.D
 Acq On : 5 May 2014 11:35 am
 Operator : BARBARA
 Sample : ICC001, ICC001, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 05 14:50:23 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:49:39 2014
 Response via : Initial Calibration

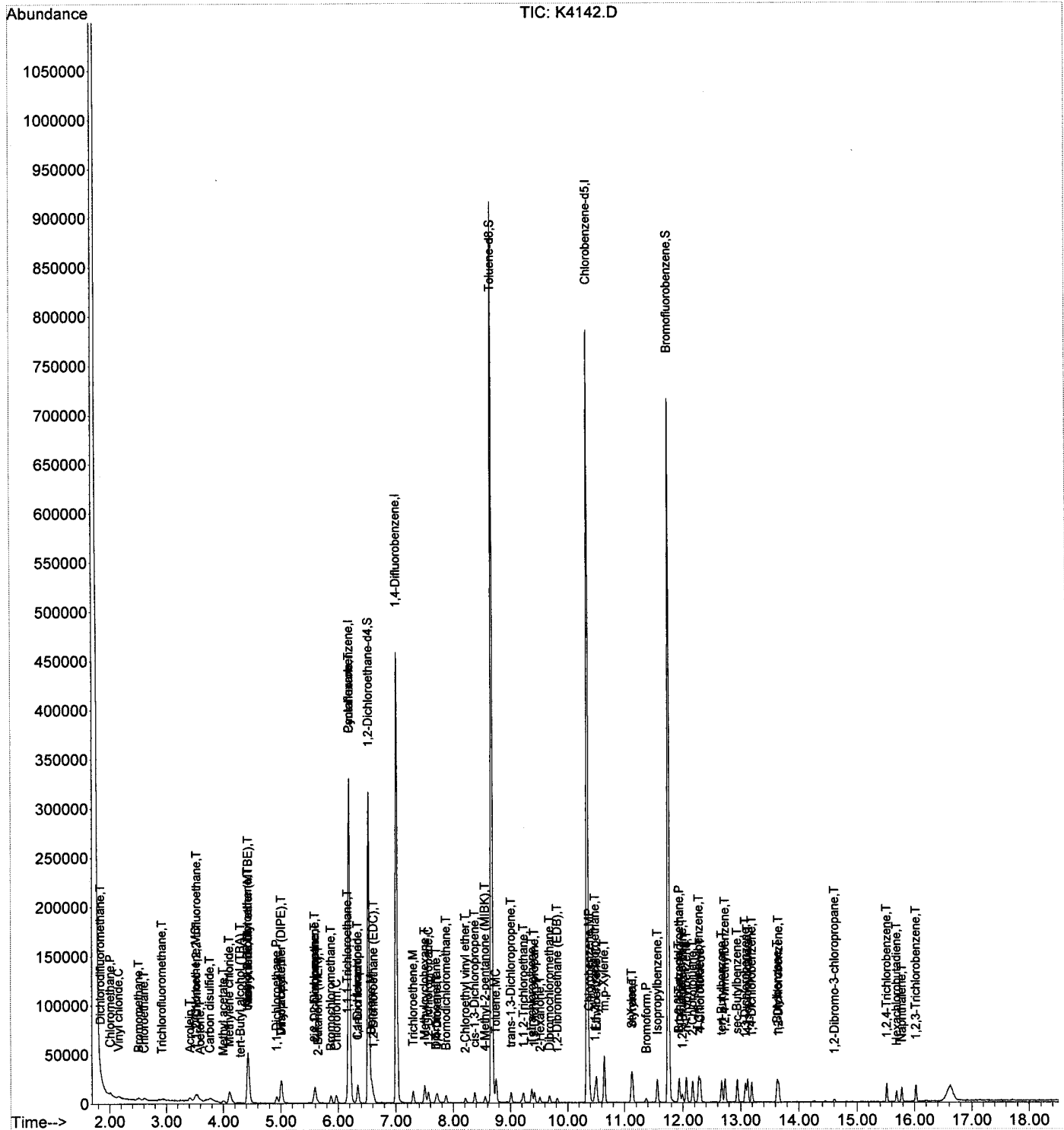
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
47) 2-Hexanone	9.52	43	4321	0.99	UG	# 93
48) Dibromochloromethane	9.68	129	3188	0.96	UG	96
49) 1,2-Dibromoethane (EDB)	9.81	107	3199	1.03	UG	98
51) Chlorobenzene	10.39	112	10838	1.17	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	3684	1.13	UG	94
53) Ethylbenzene	10.51	91	18810	1.14	UG	100
54) m,p-Xylene	10.64	106	14202	2.22	UG	99
55) o-Xylene	11.12	106	6987	1.12	UG	88
56) Styrene	11.14	104	9623	0.95	UG	97
57) Bromoform	11.37	173	1935	0.96	UG	# 100
58) Isopropylbenzene	11.56	105	16926	1.11	UG	100
60) 1,1,2,2-Tetrachloroethane	11.95	83	4677	1.12	UG	# 100
61) Bromobenzene	11.93	156	4354	1.18	UG	# 39
62) 1,2,3-Trichloropropane	11.99	75	3337	1.08	UG	99
63) n-Propylbenzene	12.06	91	21615	1.17	UG	100
64) 2-Chlorotoluene	12.17	91	12951	1.13	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	14674	1.11	UG	100
66) 4-Chlorotoluene	12.30	91	15655	1.17	UG	100
67) tert-Butylbenzene	12.67	119	11270	1.11	UG	98
68) 1,2,4-Trimethylbenzene	12.74	105	15474	1.17	UG	99
69) sec-Butylbenzene	12.94	105	18373	1.18	UG	100
70) 1,3-Dichlorobenzene	13.08	146	8433	1.21	UG	99
71) 4-Isopropyltoluene	13.12	119	14723	1.17	UG	100
72) 1,4-Dichlorobenzene	13.19	146	8432	1.19	UG	100
73) n-Butylbenzene	13.63	91	13067	1.17	UG	99
74) 1,2-Dichlorobenzene	13.65	146	7534	1.11	UG	99
75) 1,2-Dibromo-3-chloropropan	14.60	75	625	0.96	UG	# 37
76) 1,2,4-Trichlorobenzene	15.52	180	5193	1.20	UG	98
77) Hexachlorobutadiene	15.69	225	2253	1.37	UG	100
78) Naphthalene	15.78	128	10217	1.02	UG	100
79) 1,2,3-Trichlorobenzene	16.03	180	4996	1.29	UG	99
80) 1,1,2-Trichloro-1,2,2-trif	3.54	101	1648	0.70	UG	# 1
81) Methyl acetate	4.01	43	4347	1.11	UG	# 99
82) Cyclohexane	6.20	56	16162	1.87	UG	# 71
83) Methylcyclohexane	7.50	83	6581	1.18	UG	# 88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

(QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4142.D
Acq On : 5 May 2014 11:35 am
Operator : BARBARA
Sample : ICC001, ICC001, A, 5mL, 100
Misc : NA, NA, NA, 1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 05 14:50:23 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 14:49:39 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4143.D
 Acq On : 5 May 2014 12:25 pm
 Operator : BARBARA
 Sample : ICC002, ICC002, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 05 14:49:00 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:48:45 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	263701	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	399211	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	475551	50.00	UG	0.00

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev (Min)
30) 1,2-Dichloroethane-d4		6.53	65	247656	49.76	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.52%	
41) Toluene-d8		8.67	98	671402	49.90	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.80%	
59) Bromofluorobenzene		11.76	95	298891	49.46	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.92%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.84	85	6269	2.05	UG	99
3) Chloromethane	2.03	50	11633	2.02	UG	# 84
4) Vinyl chloride	2.16	62	8529	1.94	UG	99
5) Bromomethane	2.52	94	4138	2.12	UG	96
6) Chloroethane	2.62	64	5426	2.12	UG	99
7) Trichlorofluoromethane	2.89	101	8694m	2.11	UG	
8) Acrolein	3.41	56	11483	52.64	UG	# 60
9) 1,1-Dichloroethene	3.53	96	5955	2.19	UG	92
10) Acetone	3.60	43	5933	2.39	UG	98
11) Carbon disulfide	3.80	76	19303	2.03	UG	100
12) Vinyl acetate	5.01	43	42772	2.10	UG	# 1
13) Methylene chloride	4.12	84	11270	2.77	UG	98
14) Acrylonitrile	4.43	53	94326	47.61	UG	# 100
15) tert-Butyl alcohol (TBA)	4.29	59	2310	4.54	UG	99
16) trans-1,2-Dichloroethene	4.43	96	7747	2.04	UG	# 97
17) Methyl tert-butyl ether (M)	4.44	73	28011	2.31	UG	100
18) 1,1-Dichloroethane	4.93	63	17039	2.00	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	44294	2.14	UG	95
20) cis-1,2-Dichloroethene	5.60	96	8133	1.96	UG	# 99
21) 2,2-Dichloropropane	5.60	77	10479	2.11	UG	99
22) 2-Butanone (MEK)	5.64	43	7066	2.12	UG	# 100
23) Bromochloromethane	5.87	128	3595	1.92	UG	# 38
25) Chloroform	5.97	83	13557	2.03	UG	100
26) 1,1,1-Trichloroethane	6.17	97	11246	1.99	UG	# 100
27) Carbon tetrachloride	6.35	117	9579	2.00	UG	95
28) 1,1-Dichloropropene	6.34	75	10861	2.11	UG	# 59
29) 1,2-Dichloroethane (EDC)	6.61	62	12424	2.06	UG	100
32) Benzene	6.59	78	31852	2.04	UG	100
33) Trichloroethene	7.29	95	7692	2.03	UG	# 100
34) 1,2-Dichloropropane	7.56	63	9913	2.05	UG	# 100
35) Dibromomethane	7.70	93	4285	1.95	UG	# 68
36) 1,4-Dioxane	7.72	88	14372	417.46	UG	# 82
37) Bromodichloromethane	7.88	83	10061	1.96	UG	# 66
38) 2-Chloroethyl vinyl ether	8.22	63	4643	1.80	UG	# 100
39) cis-1,3-Dichloropropene	8.38	75	11388	1.82	UG	99
40) 4-Methyl-2-pentanone (MIBK)	8.55	43	10080	1.92	UG	99
42) Toluene	8.75	92	19069	2.07	UG	99
43) trans-1,3-Dichloropropene	9.01	75	11147	1.98	UG	100
44) 1,1,2-Trichloroethane	9.23	83	5692	2.09	UG	95
45) Tetrachloroethene	9.38	166	8300	2.30	UG	96
46) 1,3-Dichloropropane	9.42	76	12049	2.06	UG	99

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4143.D
 Acq On : 5 May 2014 12:25 pm
 Operator : BARBARA
 Sample : ICC002, ICC002, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 05 14:49:00 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:48:45 2014
 Response via : Initial Calibration

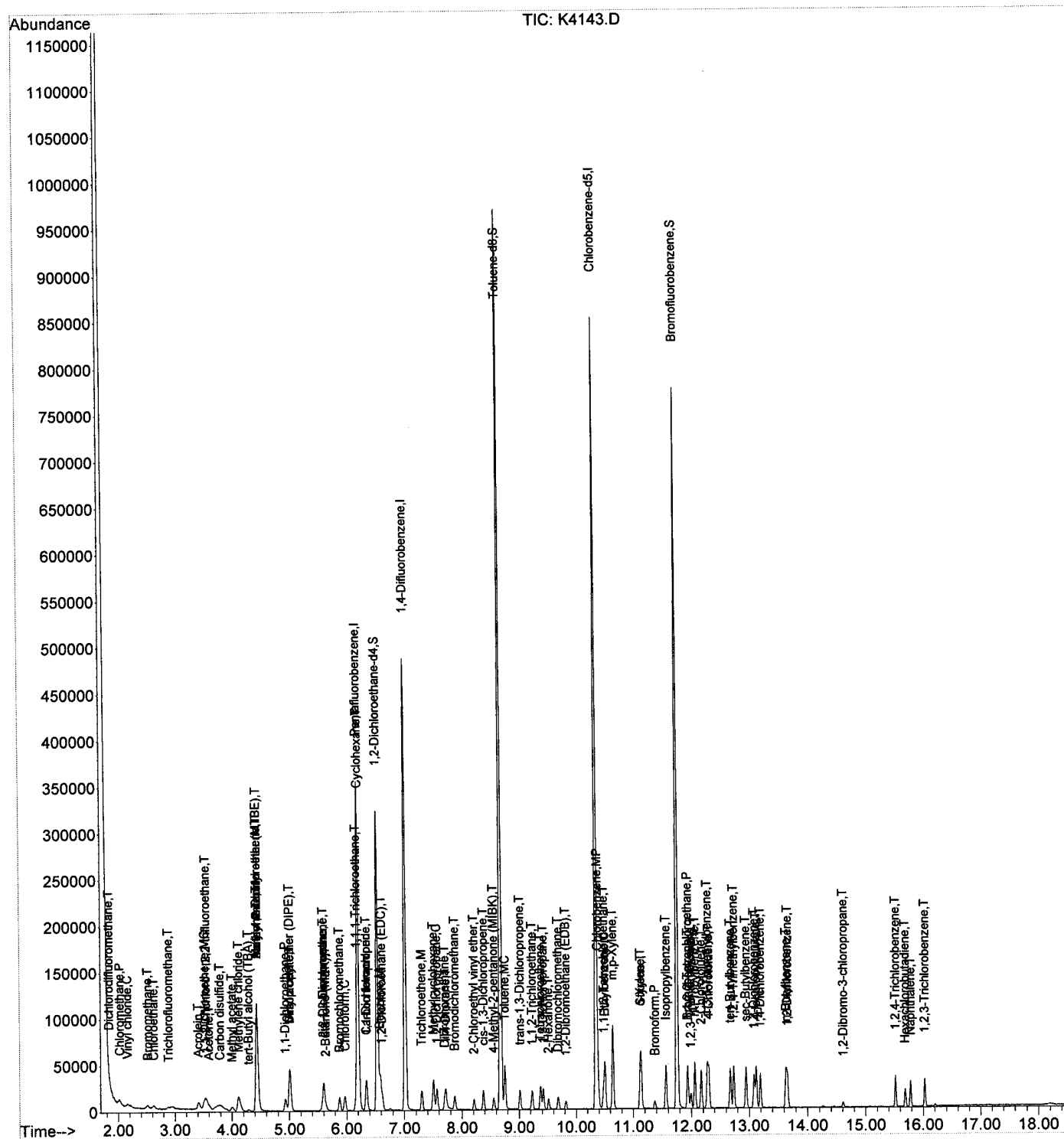
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) 2-Hexanone	9.51	43	8684	1.89	UG	# 95
48) Dibromochloromethane	9.67	129	6814	1.93	UG	96
49) 1,2-Dibromoethane (EDB)	9.82	107	6440	1.97	UG	97
51) Chlorobenzene	10.38	112	19695	2.00	UG	98
52) 1,1,1,2-Tetrachloroethane	10.48	131	6722	1.92	UG	# 68
53) Ethylbenzene	10.51	91	35912	2.06	UG	100
54) m,p-Xylene	10.64	106	28183	4.20	UG	98
55) o-Xylene	11.12	106	13204	2.00	UG	93
56) Styrene	11.14	104	20217	1.83	UG	99
57) Bromoform	11.37	173	4128	1.91	UG	# 100
58) Isopropylbenzene	11.56	105	32796	2.03	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	9419	2.16	UG	# 68
61) Bromobenzene	11.94	156	8007	2.05	UG	94
62) 1,2,3-Trichloropropane	11.99	75	7100	2.21	UG	100
63) n-Propylbenzene	12.06	91	41141	2.13	UG	100
64) 2-Chlorotoluene	12.17	91	25088	2.09	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	28271	2.03	UG	100
66) 4-Chlorotoluene	12.30	91	30070	2.16	UG	100
67) tert-Butylbenzene	12.68	119	21942	2.04	UG	98
68) 1,2,4-Trimethylbenzene	12.74	105	27886	1.98	UG	100
69) sec-Butylbenzene	12.94	105	34480	2.13	UG	100
70) 1,3-Dichlorobenzene	13.08	146	15827	2.18	UG	98
71) 4-Isopropyltoluene	13.12	119	26849	2.01	UG	99
72) 1,4-Dichlorobenzene	13.19	146	15562	2.10	UG	99
73) n-Butylbenzene	13.63	91	24499	2.10	UG	100
74) 1,2-Dichlorobenzene	13.66	146	15043	2.12	UG	99
75) 1,2-Dibromo-3-chloropropan	14.60	75	1391	2.01	UG	# 84
76) 1,2,4-Trichlorobenzene	15.52	180	9394	2.05	UG	98
77) Hexachlorobutadiene	15.69	225	3839	2.27	UG	100
78) Naphthalene	15.78	128	20214	1.86	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	8367	2.05	UG	96
80) 1,1,2-Trichloro-1,2,2-trif	3.56	101	4836	1.93	UG	# 1
81) Methyl acetate	4.00	43	8969	2.23	UG	# 95
82) Cyclohexane	6.21	56	24968	2.72	UG	# 34
83) Methylcyclohexane	7.50	83	12729	2.21	UG	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

(QT Reviewed)

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Data Path : C:\MSDCHEM\1\DATA\05-05-14\  
Data File : K4143.D  
Acq On    : 5 May 2014 12:25 pm  
Operator  : BARBARA  
Sample    : ICC002, ICC002, A, 5mL, 100  
Misc      : NA, NA, NA, 1  
ALS Vial  : 3 Sample Multiplier: 1
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Quant Time: May 05 14:49:00 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 14:48:45 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4144.D
 Acq On : 5 May 2014 12:53 pm
 Operator : BARBARA
 Sample : ICC005, ICC005, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 05 14:48:29 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:47:50 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	257363	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	388475	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	464797	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.53	65	243006	50.04	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.08%
41) Toluene-d8	8.67	98	655488	50.10	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.20%
59) Bromofluorobenzene	11.75	95	292677	49.33	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.66%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.84	85	15422	5.25	UG	100
3) Chloromethane	2.03	50	26495	4.58	UG	99
4) Vinyl chloride	2.17	62	20143	4.56	UG	99
5) Bromomethane	2.51	94	9445	4.94	UG	97
6) Chloroethane	2.62	64	12201	4.84	UG	100
7) Trichlorofluoromethane	2.87	101	19893m	4.93	UG	
8) Acrolein	3.41	56	20469	94.32	UG	# 98
9) 1,1-Dichloroethene	3.52	96	13377	5.05	UG	94
10) Acetone	3.61	43	12569	5.29	UG	98
11) Carbon disulfide	3.80	76	44111	4.63	UG	100
12) Vinyl acetate	5.00	43	91230	4.42	UG	# 1
13) Methylene chloride	4.11	84	19040	4.71	UG	97
14) Acrylonitrile	4.43	53	180845	90.60	UG	# 100
15) tert-Butyl alcohol (TBA)	4.30	59	4512	8.69	UG	# 96
16) trans-1,2-Dichloroethene	4.43	96	17986	4.78	UG	# 98
17) Methyl tert-butyl ether (M)	4.44	73	56632	4.69	UG	100
18) 1,1-Dichloroethane	4.93	63	39420	4.61	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	94575	4.55	UG	95
20) cis-1,2-Dichloroethene	5.60	96	19021	4.55	UG	# 99
21) 2,2-Dichloropropane	5.59	77	23617	4.81	UG	100
22) 2-Butanone (MEK)	5.64	43	15994	4.86	UG	# 99
23) Bromochloromethane	5.87	128	8407	4.44	UG	# 99
25) Chloroform	5.97	83	30684	4.59	UG	99
26) 1,1,1-Trichloroethane	6.16	97	26450	4.71	UG	# 100
27) Carbon tetrachloride	6.34	117	22734	4.80	UG	98
28) 1,1-Dichloropropene	6.35	75	23938	4.66	UG	# 98
29) 1,2-Dichloroethane (EDC)	6.62	62	27639	4.55	UG	99
32) Benzene	6.58	78	72718	4.68	UG	100
33) Trichloroethene	7.29	95	17730	4.72	UG	# 100
34) 1,2-Dichloropropane	7.56	63	21888	4.50	UG	# 100
35) Dibromomethane	7.70	93	9834	4.44	UG	# 70
36) 1,4-Dioxane	7.72	88	33995	1022.27	UG	# 64
37) Bromodichloromethane	7.88	83	23025	4.44	UG	# 98
38) 2-Chloroethyl vinyl ether	8.21	63	10814	4.01	UG	# 100
39) cis-1,3-Dichloropropene	8.38	75	27197	4.24	UG	100
40) 4-Methyl-2-pentanone (MIBK)	8.56	43	23099	4.33	UG	99
42) Toluene	8.75	92	42527	4.62	UG	100
43) trans-1,3-Dichloropropene	9.01	75	23862	4.09	UG	99
44) 1,1,2-Trichloroethane	9.22	83	12011	4.32	UG	97
45) Tetrachloroethene	9.37	166	17260	4.86	UG	97
46) 1,3-Dichloropropane	9.42	76	26170	4.42	UG	98

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4144.D
 Acq On : 5 May 2014 12:53 pm
 Operator : BARBARA
 Sample : ICC005, ICC005, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 05 14:48:29 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:47:50 2014
 Response via : Initial Calibration

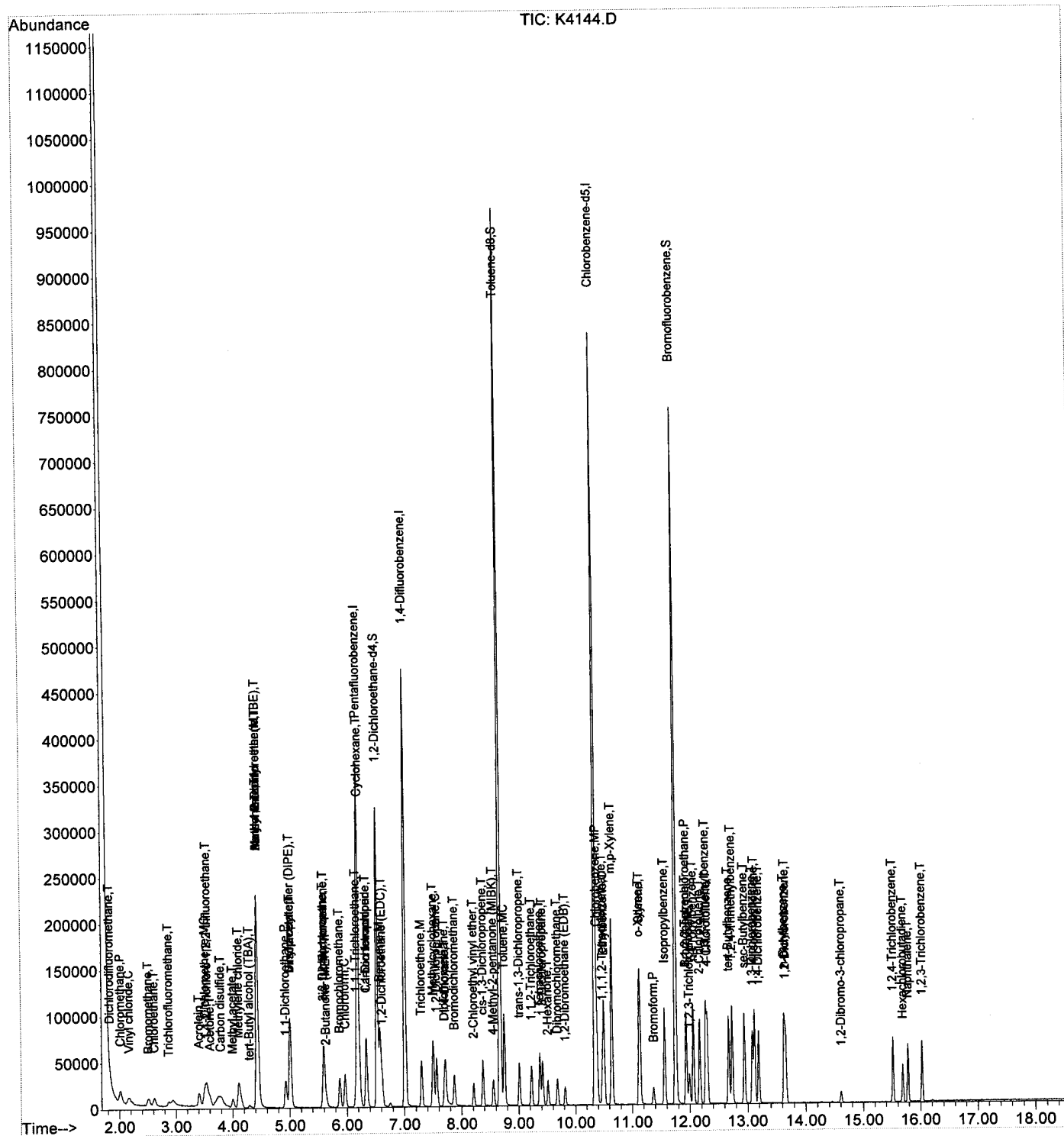
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

47) 2-Hexanone	9.51	43	19686	4.17	UG	# 94
48) Dibromochloromethane	9.68	129	15181	4.18	UG	95
49) 1,2-Dibromoethane (EDB)	9.82	107	14436	4.32	UG	98
51) Chlorobenzene	10.38	112	45554	4.63	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	15364	4.28	UG	93
53) Ethylbenzene	10.51	91	79404	4.52	UG	100
54) m,p-Xylene	10.64	106	61481	9.09	UG	98
55) o-Xylene	11.12	106	29370	4.36	UG	95
56) Styrene	11.14	104	47275	4.13	UG	100
57) Bromoform	11.37	173	9307	4.14	UG	# 100
58) Isopropylbenzene	11.56	105	73227	4.46	UG	100
60) 1,1,2,2-Tetrachloroethane	11.93	83	19889	4.51	UG	# 99
61) Bromobenzene	11.94	156	17740	4.49	UG	97
62) 1,2,3-Trichloropropane	11.99	75	14214	4.33	UG	100
63) n-Propylbenzene	12.06	91	88922	4.57	UG	100
64) 2-Chlorotoluene	12.17	91	55636	4.62	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	63240	4.49	UG	100
66) 4-Chlorotoluene	12.30	91	63576	4.52	UG	100
67) tert-Butylbenzene	12.67	119	48904	4.49	UG	98
68) 1,2,4-Trimethylbenzene	12.73	105	64171	4.51	UG	99
69) sec-Butylbenzene	12.94	105	75092	4.62	UG	100
70) 1,3-Dichlorobenzene	13.08	146	33444	4.58	UG	98
71) 4-Isopropyltoluene	13.12	119	61575	4.58	UG	99
72) 1,4-Dichlorobenzene	13.20	146	34158	4.58	UG	99
73) n-Butylbenzene	13.63	91	53421	4.54	UG	99
74) 1,2-Dichlorobenzene	13.65	146	32733	4.58	UG	98
75) 1,2-Dibromo-3-chloropropan	14.61	75	2932	4.05	UG	# 37
76) 1,2,4-Trichlorobenzene	15.52	180	21204	4.62	UG	94
77) Hexachlorobutadiene	15.69	225	8300	5.04	UG	100
78) Naphthalene	15.78	128	46434	4.11	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	18906	4.61	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.56	101	12909	5.41	UG	# 1
81) Methyl acetate	4.00	43	18520	4.57	UG	# 87
82) Cyclohexane	6.21	56	49290	5.80	UG	# 48
83) Methylcyclohexane	7.50	83	28506	5.08	UG	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4144.D
Acq On : 5 May 2014 12:53 pm
Operator : BARBARA
Sample : ICC005, ICC005, A, 5mL, 100
Misc : NA, NA, NA, 1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 05 14:48:29 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 14:47:50 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4145.D
 Acq On : 5 May 2014 1:21 pm
 Operator : BARBARA
 Sample : ICC020, ICC020, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 14:47:13 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:45:43 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	250539	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	384934	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	460772	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.53	65	236786	50.18	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.36%
41) Toluene-d8	8.67	98	647015	49.81	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.62%
59) Bromofluorobenzene	11.75	95	292539	49.47	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.94%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.84	85	61411	23.21	UG	99
3) Chloromethane	2.03	50	113179	20.17	UG	98
4) Vinyl chloride	2.17	62	88212	21.06	UG	99
5) Bromomethane	2.52	94	38937	21.89	UG	97
6) Chloroethane	2.62	64	51357	21.95	UG	100
7) Trichlorofluoromethane	2.87	101	82679m	22.17	UG	
8) Acrolein	3.41	56	43912	216.36	UG	# 60
9) 1,1-Dichloroethene	3.52	96	54318	22.24	UG	# 89
10) Acetone	3.61	43	46353	20.06	UG	# 98
11) Carbon disulfide	3.80	76	190350	21.09	UG	100
12) Vinyl acetate	5.00	43	394092	19.21	UG	# 1
13) Methylene chloride	4.11	84	78386	19.82	UG	# 98
14) Acrylonitrile	4.43	53	387593	198.92	UG	# 100
15) tert-Butyl alcohol (TBA)	4.31	59	19768	38.22	UG	# 98
16) trans-1,2-Dichloroethene	4.43	96	73713	20.22	UG	# 72
17) Methyl tert-butyl ether (M	4.44	73	232088	19.53	UG	100
18) 1,1-Dichloroethane	4.93	63	164963	19.67	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	399635	19.47	UG	96
20) cis-1,2-Dichloroethene	5.60	96	79993	19.28	UG	# 100
21) 2,2-Dichloropropane	5.59	77	97813	20.91	UG	100
22) 2-Butanone (MEK)	5.64	43	63546	19.71	UG	# 98
23) Bromochloromethane	5.87	128	36133	19.22	UG	# 98
25) Chloroform	5.96	83	128203	19.40	UG	100
26) 1,1,1-Trichloroethane	6.16	97	112376	21.11	UG	# 100
27) Carbon tetrachloride	6.34	117	95057	21.31	UG	97
28) 1,1-Dichloropropene	6.34	75	102567	21.09	UG	# 59
29) 1,2-Dichloroethane (EDC)	6.61	62	115973	19.26	UG	100
32) Benzene	6.58	78	304332	19.51	UG	100
33) Trichloroethene	7.30	95	74561	20.06	UG	# 100
34) 1,2-Dichloropropane	7.56	63	94080	19.09	UG	# 100
35) Dibromomethane	7.70	93	42723	18.92	UG	# 89
36) 1,4-Dioxane	7.72	88	67630	2107.66	UG	# 64
37) Bromodichloromethane	7.87	83	99428	18.75	UG	# 66
38) 2-Chloroethyl vinyl ether	8.21	63	49458	17.26	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	122706	18.67	UG	100
40) 4-Methyl-2-pentanone (MIBK	8.56	43	102206	18.68	UG	98
42) Toluene	8.75	92	180792	19.64	UG	99
43) trans-1,3-Dichloropropene	9.01	75	111032	18.43	UG	99
44) 1,1,2-Trichloroethane	9.22	83	53913	19.16	UG	96
45) Tetrachloroethene	9.37	166	71923	20.91	UG	96
46) 1,3-Dichloropropane	9.42	76	114559	19.12	UG	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4145.D
 Acq On : 5 May 2014 1:21 pm
 Operator : BARBARA
 Sample : ICC020, ICC020, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 14:47:13 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:45:43 2014
 Response via : Initial Calibration

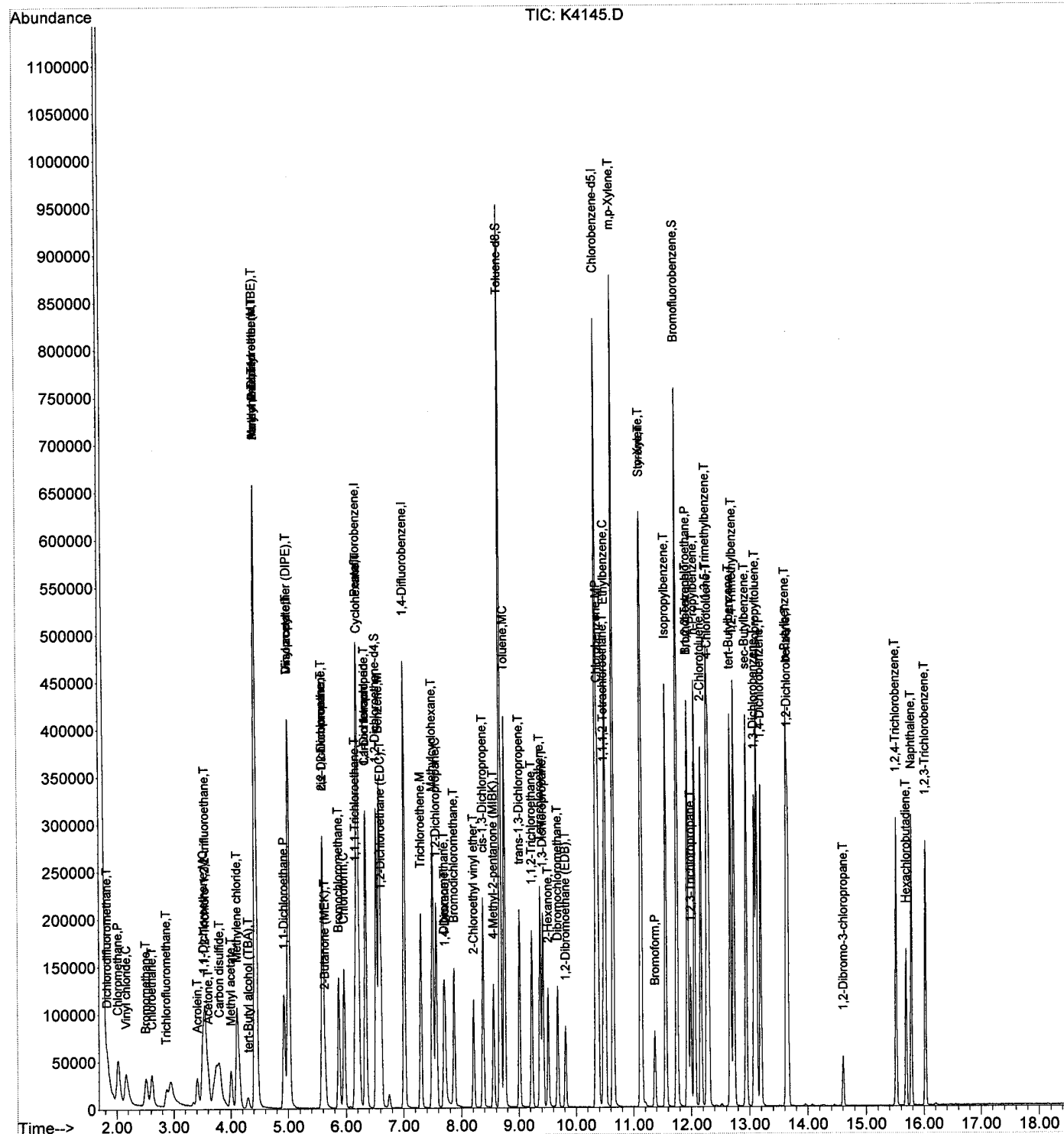
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)

47) 2-Hexanone	9.51	43	91445	19.11	UG	# 94
48) Dibromochloromethane	9.68	129	68623	18.23	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	64471	19.00	UG	98
51) Chlorobenzene	10.38	112	192704	19.48	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	68884	18.72	UG	# 70
53) Ethylbenzene	10.51	91	344389	19.54	UG	100
54) m,p-Xylene	10.64	106	266385	39.49	UG	98
55) o-Xylene	11.12	106	131003	19.25	UG	94
56) Styrene	11.14	104	220672	18.92	UG	100
57) Bromoform	11.37	173	41706	17.62	UG	# 100
58) Isopropylbenzene	11.56	105	324794	19.93	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	84389	18.68	UG	# 100
61) Bromobenzene	11.93	156	76706	19.18	UG	# 40
62) 1,2,3-Trichloropropane	11.99	75	63082	18.77	UG	99
63) n-Propylbenzene	12.06	91	384271	19.86	UG	100
64) 2-Chlorotoluene	12.17	91	236019	19.52	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	276819	19.63	UG	100
66) 4-Chlorotoluene	12.30	91	275020	19.44	UG	100
67) tert-Butylbenzene	12.67	119	216784	20.12	UG	98
68) 1,2,4-Trimethylbenzene	12.73	105	277594	19.41	UG	99
69) sec-Butylbenzene	12.94	105	325809	20.46	UG	100
70) 1,3-Dichlorobenzene	13.08	146	140787	18.91	UG	99
71) 4-Isopropyltoluene	13.12	119	266791	20.05	UG	100
72) 1,4-Dichlorobenzene	13.19	146	143892	18.93	UG	99
73) n-Butylbenzene	13.63	91	232866	19.94	UG	99
74) 1,2-Dichlorobenzene	13.65	146	139009	19.25	UG	99
75) 1,2-Dibromo-3-chloropropan	14.61	75	13486	17.75	UG	# 84
76) 1,2,4-Trichlorobenzene	15.52	180	89215	19.22	UG	96
77) Hexachlorobutadiene	15.69	225	33382	20.93	UG	100
78) Naphthalene	15.78	128	216602	18.73	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	78674	18.78	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.56	101	50504	22.87	UG	# 1
81) Methyl acetate	4.00	43	78055	18.87	UG	# 85
82) Cyclohexane	6.21	56	178809	22.57	UG	# 39
83) Methylcyclohexane	7.50	83	115894	21.76	UG	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4145.D
Acq On : 5 May 2014 1:21 pm
Operator : BARBARA
Sample : ICC020, ICC020, A, 5mL, 100
Misc : NA, NA, NA, 1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 05 14:47:13 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 14:45:43 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4146.D
 Acq On : 5 May 2014 1:49 pm
 Operator : BARBARA
 Sample : ICC100, ICC100, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 14:46:38 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:45:43 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	257236	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	388077	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	464304	50.00	UG	0.00

System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	242267	50.00	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%
41) Toluene-d8	8.67	98	654731	50.00	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%
59) Bromofluorobenzene	11.76	95	297910	50.00	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.00%

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.84	85	271630	100.00	UG	99
3) Chloromethane	2.04	50	576225	100.00	UG	98
4) Vinyl chloride	2.16	62	429996	100.00	UG	99
5) Bromomethane	2.52	94	182590	100.00	UG	96
6) Chloroethane	2.62	64	240233	100.00	UG	100
7) Trichlorofluoromethane	2.87	101	383763m	100.22	UG	
8) Acrolein	3.41	56	62516	300.00	UG	# 60
9) 1,1-Dichloroethene	3.52	96	250780	100.00	UG	87
10) Acetone	3.61	43	237242	100.00	UG	# 97
11) Carbon disulfide	3.79	76	926875	100.00	UG	100
12) Vinyl acetate	5.00	43	2106033	100.00	UG	# 1
13) Methylene chloride	4.11	84	406156	100.00	UG	98
14) Acrylonitrile	4.43	53	600164	300.00	UG	# 100
15) tert-Butyl alcohol (TBA)	4.30	59	106209	200.00	UG	99
16) trans-1,2-Dichloroethene	4.43	96	374285	100.00	UG	# 97
17) Methyl tert-butyl ether (M	4.44	73	1219878	100.00	UG	100
18) 1,1-Dichloroethane	4.93	63	861021	100.00	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	2107237	100.00	UG	97
20) cis-1,2-Dichloroethene	5.60	96	425904	100.00	UG	# 99
21) 2,2-Dichloropropane	5.60	77	480373	100.00	UG	100
22) 2-Butanone (MEK)	5.64	43	331099	100.00	UG	# 98
23) Bromochloromethane	5.87	128	193049	100.00	UG	# 99
25) Chloroform	5.97	83	678416	100.00	UG	100
26) 1,1,1-Trichloroethane	6.16	97	546478	100.00	UG	# 100
27) Carbon tetrachloride	6.34	117	457981	100.00	UG	96
28) 1,1-Dichloropropene	6.34	75	499413	100.00	UG	# 96
29) 1,2-Dichloroethane (EDC)	6.61	62	618374	100.00	UG	100
32) Benzene	6.58	78	1572947	100.00	UG	100
33) Trichloroethene	7.30	95	374798	100.00	UG	# 100
34) 1,2-Dichloropropane	7.57	63	496851	100.00	UG	# 100
35) Dibromomethane	7.70	93	227633	100.00	UG	# 88
36) 1,4-Dioxane	7.72	88	97049	3000.00	UG	# 64
37) Bromodichloromethane	7.87	83	534503	100.00	UG	# 98
38) 2-Chloroethyl vinyl ether	8.21	63	288891	100.00	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	662722	100.00	UG	100
40) 4-Methyl-2-pentanone (MIBK	8.56	43	551641	100.00	UG	98
42) Toluene	8.75	92	927941	100.00	UG	100
43) trans-1,3-Dichloropropene	9.01	75	607344	100.00	UG	99
44) 1,1,2-Trichloroethane	9.23	83	283616	100.00	UG	96
45) Tetrachloroethene	9.37	166	346769	100.00	UG	97
46) 1,3-Dichloropropane	9.42	76	604180	100.00	UG	99

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4146.D
 Acq On : 5 May 2014 1:49 pm
 Operator : BARBARA
 Sample : ICC100, ICC100, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 14:46:38 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:45:43 2014
 Response via : Initial Calibration

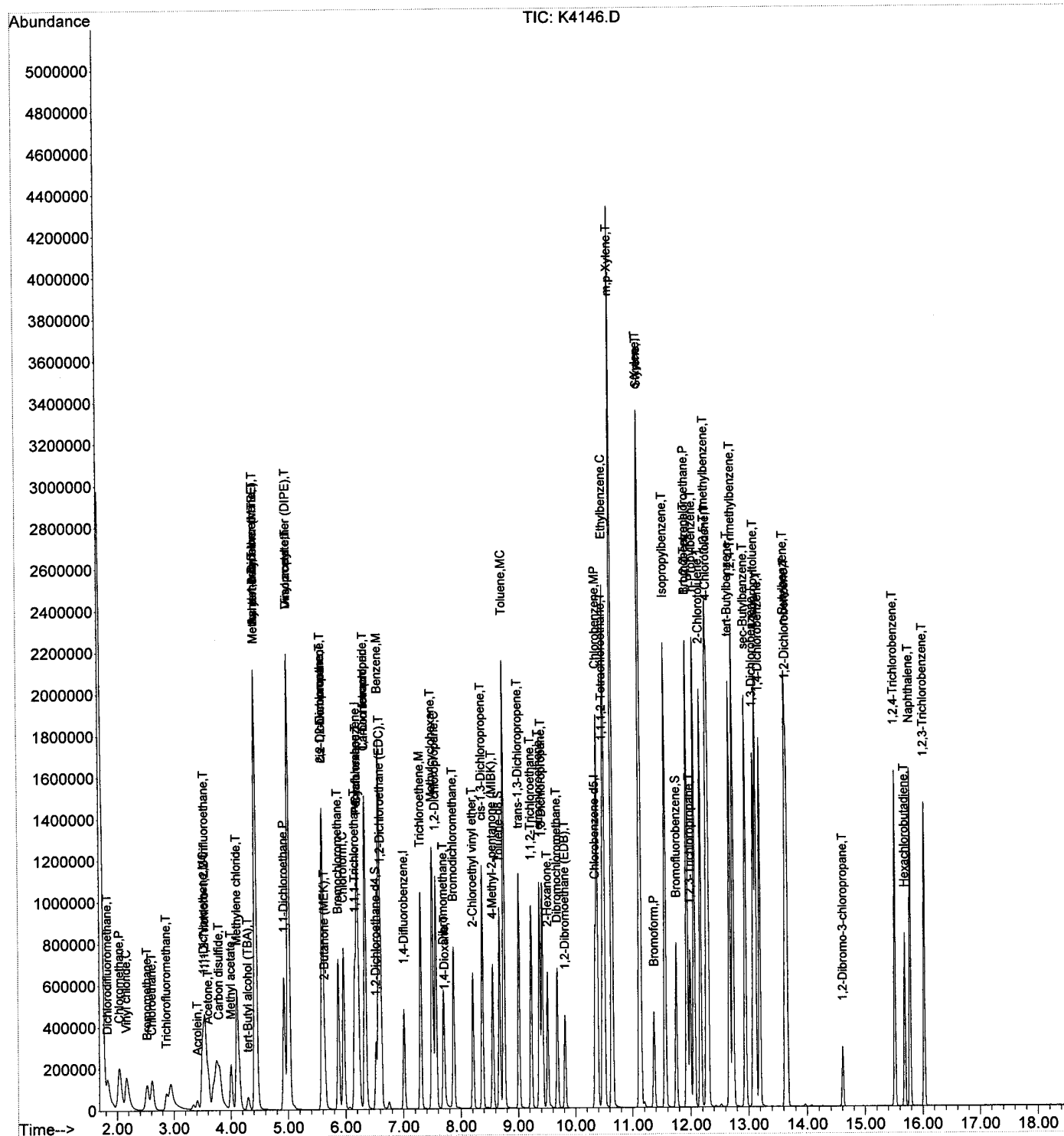
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

47) 2-Hexanone	9.51	43	482367	100.00	UG	# 94
48) Dibromochloromethane	9.68	129	379439	100.00	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	342102	100.00	UG	98
51) Chlorobenzene	10.38	112	996786	100.00	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	370864	100.00	UG	# 70
53) Ethylbenzene	10.51	91	1776106	100.00	UG	100
54) m,p-Xylene	10.65	106	1359499	200.00	UG	99
55) o-Xylene	11.12	106	685702	100.00	UG	94
56) Styrene	11.14	104	1175564	100.00	UG	100
57) Bromoform	11.37	173	238533	100.00	UG	# 100
58) Isopropylbenzene	11.56	105	1642386	100.00	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	455153	100.00	UG	# 99
61) Bromobenzene	11.94	156	402905	100.00	UG	# 40
62) 1,2,3-Trichloropropane	11.99	75	338603	100.00	UG	99
63) n-Propylbenzene	12.06	91	1949576	100.00	UG	100
64) 2-Chlorotoluene	12.17	91	1218400	100.00	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	1420869	100.00	UG	100
66) 4-Chlorotoluene	12.30	91	1425543	100.00	UG	100
67) tert-Butylbenzene	12.67	119	1085845	100.00	UG	98
68) 1,2,4-Trimethylbenzene	12.74	105	1441396	100.00	UG	100
69) sec-Butylbenzene	12.95	105	1604518	100.00	UG	100
70) 1,3-Dichlorobenzene	13.08	146	750416	100.00	UG	99
71) 4-Isopropyltoluene	13.12	119	1340712	100.00	UG	100
72) 1,4-Dichlorobenzene	13.19	146	766018	100.00	UG	99
73) n-Butylbenzene	13.63	91	1176877	100.00	UG	99
74) 1,2-Dichlorobenzene	13.65	146	727552	100.00	UG	98
75) 1,2-Dibromo-3-chloropropan	14.61	75	76548	100.00	UG	# 84
76) 1,2,4-Trichlorobenzene	15.52	180	467748	100.00	UG	96
77) Hexachlorobutadiene	15.69	225	160693	100.00	UG	100
78) Naphthalene	15.78	128	1165436	100.00	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	422202	100.00	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.55	101	222561	100.00	UG	# 1
81) Methyl acetate	4.00	43	416834	100.00	UG	# 85
82) Cyclohexane	6.21	56	798356	100.00	UG	# 37
83) Methylcyclohexane	7.50	83	536631	100.00	UG	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4146.D
Acq On : 5 May 2014 1:49 pm
Operator : BARBARA
Sample : ICC100, ICC100, A, 5mL, 100
Misc : NA, NA, NA, 1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: May 05 14:46:38 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 14:45:43 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4147.D
 Acq On : 5 May 2014 2:17 pm
 Operator : BARBARA
 Sample : ICC150, ICC150, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:51:41 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:50:45 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	259314	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	395945	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	477253	50.00	UG	0.00

System Monitoring Compounds						
30) 1,2-Dichloroethane-d4	6.53	65	246193	50.32	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.64%
41) Toluene-d8	8.67	98	673491	50.61	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.22%
59) Bromofluorobenzene	11.76	95	308257	51.19	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.38%

Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.83	85	418082	132.34	UG	99
3) Chloromethane	2.04	50	885792	151.50	UG	98
4) Vinyl chloride	2.17	62	670108	156.57	UG	99
5) Bromomethane	2.53	94	260504	129.25	UG	96
6) Chloroethane	2.62	64	356400	134.68	UG	100
7) Trichlorofluoromethane	2.94	101	586319m	138.68	UG	
8) Acrolein	3.41	56	78258	347.94	UG	# 60
9) 1,1-Dichloroethene	3.53	96	388490	136.60	UG	88
10) Acetone	3.61	43	352503	144.40	UG	# 97
11) Carbon disulfide	3.80	76	1415770	146.33	UG	100
12) Vinyl acetate	5.00	43	3207749	155.42	UG	# 1
13) Methylene chloride	4.11	84	608578	120.35	UG	98
14) Acrylonitrile	4.43	53	797894	410.80	UG	# 100
15) tert-Butyl alcohol (TBA)	4.31	59	157176	303.82	UG	99
16) trans-1,2-Dichloroethene	4.42	96	567212	146.99	UG	# 97
17) Methyl tert-butyl ether (M)	4.44	73	1822216	141.19	UG	100
18) 1,1-Dichloroethane	4.93	63	1309131	153.54	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	3192727	149.40	UG	97
20) cis-1,2-Dichloroethene	5.60	96	636897	153.70	UG	# 67
21) 2,2-Dichloropropane	5.59	77	704413	139.84	UG	100
22) 2-Butanone (MEK)	5.64	43	499426	148.59	UG	# 98
23) Bromochloromethane	5.87	128	291021	155.68	UG	# 99
25) Chloroform	5.96	83	1028741	154.23	UG	100
26) 1,1,1-Trichloroethane	6.16	97	847235	150.13	UG	# 100
27) Carbon tetrachloride	6.34	117	714883	148.63	UG	96
28) 1,1-Dichloropropene	6.34	75	786406	148.93	UG	# 59
29) 1,2-Dichloroethane (EDC)	6.61	62	940952	155.67	UG	100
32) Benzene	6.58	78	2424104	152.52	UG	100
33) Trichloroethene	7.30	95	585278	151.62	UG	# 100
34) 1,2-Dichloropropane	7.56	63	773803	160.20	UG	# 100
35) Dibromomethane	7.70	93	347115	157.67	UG	# 88
36) 1,4-Dioxane	7.72	88	139257	4336.78	UG	# 64
37) Bromodichloromethane	7.87	83	825081	162.22	UG	# 66
38) 2-Chloroethyl vinyl ether	8.21	63	449056	175.06	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	1037550	171.03	UG	100
40) 4-Methyl-2-pentanone (MIBK)	8.56	43	831058	161.43	UG	98
42) Toluene	8.75	92	1439891	152.54	UG	99
43) trans-1,3-Dichloropropene	9.01	75	945204	169.96	UG	99
44) 1,1,2-Trichloroethane	9.22	83	438815	156.38	UG	95
45) Tetrachloroethene	9.37	166	551843	141.15	UG	97
46) 1,3-Dichloropropane	9.42	76	929489	159.04	UG	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4147.D
 Acq On : 5 May 2014 2:17 pm
 Operator : BARBARA
 Sample : ICC150, ICC150, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 7 Sample Multiplier: 1

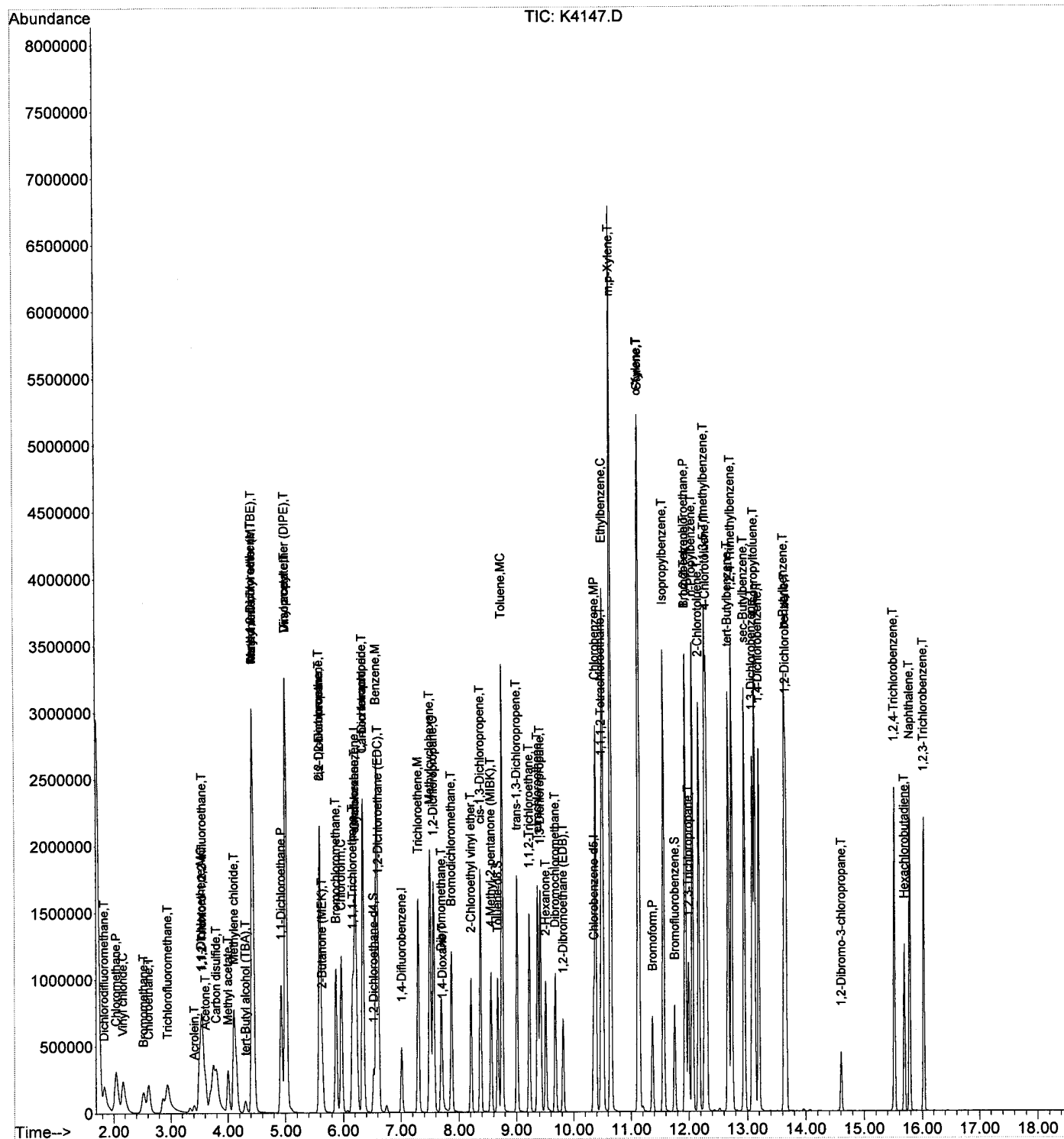
Quant Time: May 05 14:51:41 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:50:45 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) 2-Hexanone	9.51	43	727577	160.05	UG	# 94
48) Dibromochloromethane	9.68	129	584619	169.85	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	523392	160.65	UG	99
51) Chlorobenzene	10.38	112	1542434	151.19	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	565726	158.62	UG	# 70
53) Ethylbenzene	10.51	91	2769736	153.09	UG	100
54) m,p-Xylene	10.65	106	2114559	303.52	UG	99
55) o-Xylene	11.12	106	1049397	154.62	UG	94
56) Styrene	11.14	104	1797247	167.60	UG	99
57) Bromoform	11.37	173	367729	172.54	UG	# 100
58) Isopropylbenzene	11.56	105	2589952	155.59	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	682742	149.44	UG	# 99
61) Bromobenzene	11.94	156	612312	149.98	UG	# 70
62) 1,2,3-Trichloropropane	12.00	75	512431	152.65	UG	99
63) n-Propylbenzene	12.07	91	3064500	150.40	UG	100
64) 2-Chlorotoluene	12.17	91	1890208	151.07	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	2209630	153.98	UG	100
66) 4-Chlorotoluene	12.31	91	2211106	149.97	UG	100
67) tert-Butylbenzene	12.68	119	1719070	155.01	UG	98
68) 1,2,4-Trimethylbenzene	12.74	105	2218951	152.30	UG	100
69) sec-Butylbenzene	12.95	105	2532459	147.81	UG	100
70) 1,3-Dichlorobenzene	13.09	146	1166524	150.33	UG	99
71) 4-Isopropyltoluene	13.12	119	2099613	151.26	UG	100
72) 1,4-Dichlorobenzene	13.20	146	1185408	151.46	UG	99
73) n-Butylbenzene	13.63	91	1851206	150.89	UG	99
74) 1,2-Dichlorobenzene	13.66	146	1119214	151.35	UG	99
75) 1,2-Dibromo-3-chloropropan	14.61	75	115884	167.89	UG	# 84
76) 1,2,4-Trichlorobenzene	15.52	180	723820	150.61	UG	96
77) Hexachlorobutadiene	15.69	225	251068	133.38	UG	100
78) Naphthalene	15.78	128	1751971	163.45	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	642641	147.27	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.56	101	342031	137.07	UG	# 1
81) Methyl acetate	4.00	43	619604	145.71	UG	# 84
82) Cyclohexane	6.21	56	1244414	135.32	UG	# 36
83) Methylcyclohexane	7.50	83	837908	136.15	UG	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4147.D
Acq On : 5 May 2014 2:17 pm
Operator : BARBARA
Sample : ICC150, ICC150, A, 5mL, 100
Misc : NA, NA, NA, 1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 05 14:51:41 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 14:50:45 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4148.D
 Acq On : 5 May 2014 2:45 pm
 Operator : BARBARA
 Sample : ICC200, ICC200, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 15:15:03 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:55:32 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	269141	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	405818	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	492314	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.53	65	253263	49.85	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.70%
41) Toluene-d8	8.67	98	695640	50.77	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.54%
59) Bromofluorobenzene	11.76	95	317447	50.90	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.80%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.83	85	564071	178.61	UG	99
3) Chloromethane	2.04	50	1101364	183.66	UG	98
4) Vinyl chloride	2.16	62	859766	193.23	UG	99
5) Bromomethane	2.53	94	319172	161.22	UG	96
6) Chloroethane	2.61	64	441572	167.93	UG	100
7) Trichlorofluoromethane	2.94	101	772618m	180.98	UG	
8) Acrolein	3.41	56	97312	435.29	UG	# 60
9) 1,1-Dichloroethene	3.54	96	498968	175.15	UG	# 71
10) Acetone	3.61	43	430530	176.56	UG	# 97
11) Carbon disulfide	3.80	76	1842113	186.30	UG	100
12) Vinyl acetate	5.00	43	4010083	187.95	UG	# 1
13) Methylene chloride	4.11	84	761776	174.36	UG	98
14) Acrylonitrile	4.43	53	941575	469.68	UG	# 100
15) tert-Butyl alcohol (TBA)	4.31	59	200396	376.62	UG	99
16) trans-1,2-Dichloroethene	4.42	96	719511	182.83	UG	# 97
17) Methyl tert-butyl ether (M	4.44	73	2290978	176.15	UG	100
18) 1,1-Dichloroethane	4.92	63	1652171	187.85	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	4012459	183.51	UG	97
20) cis-1,2-Dichloroethene	5.60	96	797264	186.67	UG	# 67
21) 2,2-Dichloropropane	5.59	77	882698	174.41	UG	100
22) 2-Butanone (MEK)	5.64	43	617591	180.23	UG	# 98
23) Bromochloromethane	5.87	128	366430	189.34	UG	# 99
25) Chloroform	5.96	83	1289423	187.34	UG	100
26) 1,1,1-Trichloroethane	6.16	97	1088789	187.76	UG	# 100
27) Carbon tetrachloride	6.34	117	926370	187.74	UG	96
28) 1,1-Dichloropropene	6.34	75	1015014	187.37	UG	# 59
29) 1,2-Dichloroethane (EDC)	6.61	62	1182779	189.06	UG	99
32) Benzene	6.58	78	3041944	188.06	UG	100
33) Trichloroethene	7.30	95	736402	187.70	UG	# 100
34) 1,2-Dichloropropane	7.56	63	957714	192.48	UG	# 100
35) Dibromomethane	7.70	93	436253	192.85	UG	# 88
36) 1,4-Dioxane	7.72	88	156601	4692.42	UG	# 64
37) Bromodichloromethane	7.87	83	1036356	196.68	UG	# 98
38) 2-Chloroethyl vinyl ether	8.21	63	574029	207.59	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	1300084	203.69	UG	100
40) 4-Methyl-2-pentanone (MIBK	8.56	43	1052368	197.04	UG	98
42) Toluene	8.75	92	1812239	188.57	UG	99
43) trans-1,3-Dichloropropene	9.01	75	1190693	203.72	UG	99
44) 1,1,2-Trichloroethane	9.22	83	550349	191.38	UG	96
45) Tetrachloroethene	9.37	166	707904	181.21	UG	97
46) 1,3-Dichloropropane	9.42	76	1175540	195.09	UG	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4148.D
 Acq On : 5 May 2014 2:45 pm
 Operator : BARBARA
 Sample : ICC200, ICC200, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 8 Sample Multiplier: 1

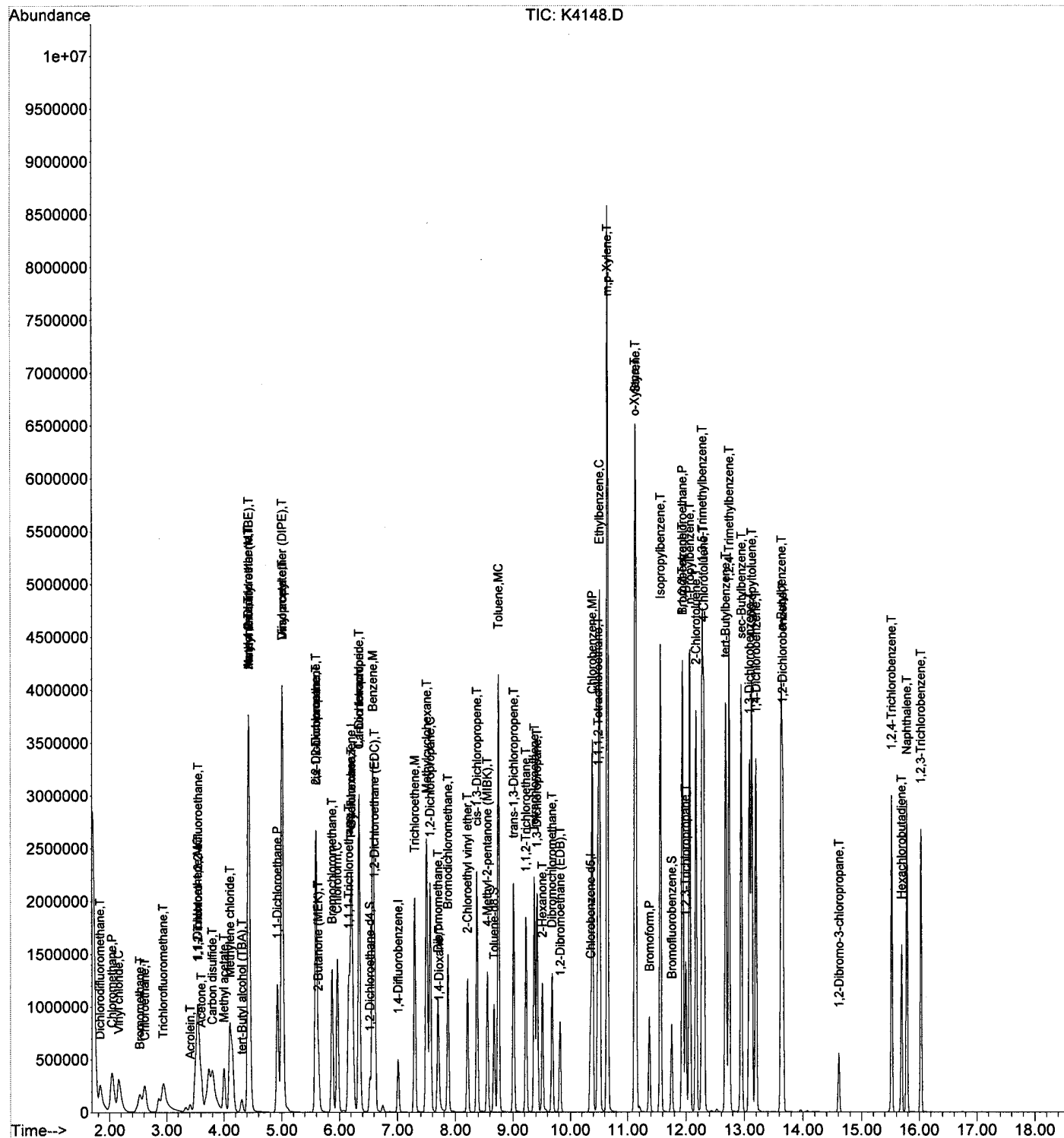
Quant Time: May 05 15:15:03 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 14:55:32 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
47) 2-Hexanone	9.51	43	909935	193.61	UG	# 94
48) Dibromochloromethane	9.68	129	738339	204.08	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	658889	195.81	UG	99
51) Chlorobenzene	10.39	112	1940362	184.13	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	705017	189.81	UG	# 70
53) Ethylbenzene	10.51	91	3486506	186.18	UG	100
54) m,p-Xylene	10.65	106	2665020	370.10	UG	99
55) o-Xylene	11.12	106	1317709	187.26	UG	94
56) Styrene	11.14	104	2261463	200.52	UG	99
57) Bromoform	11.37	173	470239	208.67	UG	# 100
58) Isopropylbenzene	11.56	105	3277284	189.68	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	876481	186.10	UG	# 99
61) Bromobenzene	11.94	156	771082	183.09	UG	# 40
62) 1,2,3-Trichloropropane	11.99	75	652984	188.02	UG	99
63) n-Propylbenzene	12.07	91	3900222	185.48	UG	100
64) 2-Chlorotoluene	12.17	91	2381552	184.30	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	2775347	186.67	UG	100
66) 4-Chlorotoluene	12.31	91	2770856	182.19	UG	100
67) tert-Butylbenzene	12.67	119	2166714	188.35	UG	98
68) 1,2,4-Trimethylbenzene	12.74	105	2801111	185.90	UG	100
69) sec-Butylbenzene	12.95	105	3240086	183.78	UG	100
70) 1,3-Dichlorobenzene	13.09	146	1468739	183.42	UG	98
71) 4-Isopropyltoluene	13.12	119	2654630	185.14	UG	100
72) 1,4-Dichlorobenzene	13.20	146	1481753	183.23	UG	99
73) n-Butylbenzene	13.63	91	2349813	185.49	UG	99
74) 1,2-Dichlorobenzene	13.66	146	1395729	182.69	UG	99
75) 1,2-Dibromo-3-chloropropan	14.61	75	146724	202.05	UG	# 84
76) 1,2,4-Trichlorobenzene	15.52	180	896798	180.77	UG	96
77) Hexachlorobutadiene	15.69	225	315382	165.48	UG	100
78) Naphthalene	15.78	128	2188062	194.40	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	791808	176.44	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.56	101	456808	180.59	UG	# 1
81) Methyl acetate	4.00	43	792276	181.48	UG	# 85
82) Cyclohexane	6.21	56	1659866	179.36	UG	# 36
83) Methylcyclohexane	7.50	83	1130868	180.92	UG	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4148.D
Acq On : 5 May 2014 2:45 pm
Operator : BARBARA
Sample : ICC200, ICC200, A, 5mL, 100
Misc : NA, NA, NA, 1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: May 05 15:15:03 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 14:55:32 2014
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4150.D
 Acq On : 5 May 2014 3:42 pm
 Operator : BARBARA
 Sample : ICV100,ICV100,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 05 16:05:54 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 35% Max. Rel. Area : 200%

Compound		AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	104	0.00
2 T	Dichlorodifluoromethane	0.587	0.540	8.0	106	0.00
3 P	Chloromethane	1.114	1.131	-1.5	105	0.00
4 C	Vinyl chloride	0.827	0.854	-3.3	106	0.00
5 T	Bromomethane	0.368	0.358	2.7	105	0.00
6 T	Chloroethane	0.489	0.478	2.2	106	0.00
7 T	Trichlorofluoromethane	0.792	0.751	5.2	105	0.00
8 T	Acrolein	0.042	0.038	9.5	96	0.00
9 MC	1,1-Dichloroethene	0.529	0.495	6.4	105	-0.01
10 T	Acetone	0.453	0.422	6.8	95	0.00
11 T	Carbon disulfide	1.837	1.794	2.3	103	0.00
12 T	Vinyl acetate	3.964	3.987	-0.6	101	0.00
13 T	Methylene chloride	0.812	0.776	4.4	102	0.00
14 T	Acrylonitrile	0.372	0.362	2.7	97	0.00
15 T	tert-Butyl alcohol (TBA)	0.099	0.100	-1.0	101	-0.01
16 T	trans-1,2-Dichloroethene	0.731	0.717	1.9	102	0.00
17 T	Methyl tert-butyl ether (MT)	2.416	2.312	4.3	101	0.00
18 P	1,1-Dichloroethane	1.634	1.652	-1.1	102	0.00
19 T	Diisopropyl ether (DIPE)	4.062	4.036	0.6	102	0.00
20 T	cis-1,2-Dichloroethene	0.793	0.809	-2.0	101	0.00
21 T	2,2-Dichloropropane	0.940	0.837	11.0	93	0.00
22 T	2-Butanone (MEK)	0.637	0.599	6.0	96	0.00
23 T	Bromochloromethane	0.360	0.372	-3.3	103	0.00
24 T	Tetrahydrofuran	0.000	0.000	0.0	106	0.00
25 C	Chloroform	1.279	1.300	-1.6	102	0.00
26 T	1,1,1-Trichloroethane	1.077	1.065	1.1	104	0.00
27 T	Carbon tetrachloride	0.917	0.895	2.4	104	0.00
28 T	1,1-Dichloropropene	1.006	0.986	2.0	105	0.00
29 T	1,2-Dichloroethane (EDC)	1.162	1.192	-2.6	103	0.00
30 S	1,2-Dichloroethane-d4	0.944	0.940	0.4	103	0.00
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	104	0.00
32 M	Benzene	1.993	2.004	-0.6	103	0.00
33 M	Trichloroethene	0.483	0.482	0.2	104	0.00
34 C	1,2-Dichloropropane	0.613	0.639	-4.2	104	0.00
35 T	Dibromomethane	0.279	0.290	-3.9	103	0.00
36 T	1,4-Dioxane	0.004	0.004	0.0	97	0.00
37 T	Bromodichloromethane	0.649	0.682	-5.1	103	0.00
38 T	2-Chloroethyl vinyl ether	0.341	0.365	-7.0	102	0.00
39 T	cis-1,3-Dichloropropene	0.786	0.840	-6.9	103	0.00
40 T	4-Methyl-2-pentanone (MIBK)	0.658	0.683	-3.8	100	0.00
41 S	Toluene-d8	1.688	1.698	-0.6	105	0.00
42 MC	Toluene	1.184	1.185	-0.1	103	0.00
43 T	trans-1,3-Dichloropropene	0.720	0.771	-7.1	103	0.00
44 T	1,1,2-Trichloroethane	0.354	0.363	-2.5	104	0.00
45 T	Tetrachloroethene	0.481	0.448	6.9	104	0.00

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46 T	1,3-Dichloropropane	0.742	0.773	-4.2	104	0.00
47 T	2-Hexanone	0.579	0.567	2.1	95	0.00
48 T	Dibromochloromethane	0.446	0.483	-8.3	103	0.00
49 T	1,2-Dibromoethane (EDB)	0.415	0.432	-4.1	102	0.00
50 I	Chlorobenzene-d5	1.000	1.000	0.0	105	0.00
51 MP	Chlorobenzene	1.058	1.064	-0.6	104	0.00
52 T	1,1,1,2-Tetrachloroethane	0.374	0.390	-4.3	103	0.00
53 C	Ethylbenzene	1.883	1.877	0.3	103	0.00
54 T	m,p-Xylene	0.724	0.726	-0.3	104	0.00
55 T	o-Xylene	0.708	0.724	-2.3	103	0.00
56 T	Styrene	1.146	1.243	-8.5	103	0.00
57 P	Bromoform	0.230	0.247	-7.4	101	0.00
58 T	Isopropylbenzene	1.742	1.750	-0.5	104	0.00
59 S	Bromofluorobenzene	0.635	0.634	0.2	104	0.00
60 P	1,1,2,2-Tetrachloroethane	0.474	0.462	2.5	99	0.00
61 T	Bromobenzene	0.423	0.423	0.0	103	0.00
62 T	1,2,3-Trichloropropane	0.350	0.351	-0.3	101	0.00
63 T	n-Propylbenzene	2.113	2.066	2.2	103	0.00
64 T	2-Chlorotoluene	1.298	1.286	0.9	103	0.00
65 T	1,3,5-Trimethylbenzene	1.496	1.492	0.3	103	0.00
66 T	4-Chlorotoluene	1.525	1.511	0.9	103	0.00
67 T	tert-Butylbenzene	1.159	1.157	0.2	104	0.00
68 T	1,2,4-Trimethylbenzene	1.515	1.517	-0.1	103	0.00
69 T	sec-Butylbenzene	1.770	1.720	2.8	105	0.00
70 T	1,3-Dichlorobenzene	0.804	0.790	1.7	103	0.00
71 T	4-Isopropyltoluene	1.441	1.419	1.5	103	0.00
72 T	1,4-Dichlorobenzene	0.811	0.804	0.9	102	0.00
73 T	n-Butylbenzene	1.273	1.236	2.9	103	0.00
74 T	1,2-Dichlorobenzene	0.766	0.764	0.3	102	0.00
75 T	1,2-Dibromo-3-chloropropane	0.074	0.079	-6.8	101	0.00
76 T	1,2,4-Trichlorobenzene	0.497	0.486	2.2	101	0.00
77 T	Hexachlorobutadiene	0.189	0.169	10.6	102	0.00
78 T	Naphthalene	1.138	1.202	-5.6	101	0.00
79 T	1,2,3-Trichlorobenzene	0.448	0.433	3.3	100	0.00
80 T	1,1,2-Trichloro-1,2,2-trifl	0.253	0.240	5.1	105	0.00
81 T	Methyl acetate	0.438	0.433	1.1	101	0.00
82 T	Cyclohexane	0.920	0.870	5.4	106	0.00
83 T	Methylcyclohexane	0.626	0.575	8.1	105	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

K8050514.M Tue May 06 12:26:53 2014

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\05-05-14\
 Data File : K4150.D
 Acq On : 5 May 2014 3:42 pm
 Operator : BARBARA
 Sample : ICV100, ICV100, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 05 16:05:54 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	266610	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	404702	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	488182	50.00	UG	0.00

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev (Min)
30) 1,2-Dichloroethane-d4		6.53	65	250673	49.80	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.60%	
41) Toluene-d8		8.67	98	687056	50.28	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	100.56%	
59) Bromofluorobenzene		11.76	95	309295	49.88	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.76%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.84	85	288152	92.11	UG	99
3) Chloromethane	2.04	50	603181	101.54	UG	98
4) Vinyl chloride	2.17	62	455357	103.31	UG	99
5) Bromomethane	2.52	94	191122	97.46	UG	96
6) Chloroethane	2.61	64	255086	97.93	UG	100
7) Trichlorofluoromethane	2.94	101	400382m	94.75	UG	
8) Acrolein	3.41	56	60236	272.00	UG	# 60
9) 1,1-Dichloroethene	3.52	96	263969	93.54	UG	88
10) Acetone	3.61	43	224753	93.04	UG	# 97
11) Carbon disulfide	3.80	76	956806	97.69	UG	100
12) Vinyl acetate	5.00	43	2126058	100.59	UG	# 1
13) Methylene chloride	4.11	84	413827	95.62	UG	98
14) Acrylonitrile	4.43	53	579340	291.73	UG	# 100
15) tert-Butyl alcohol (TBA)	4.30	59	106764	202.55	UG	99
16) trans-1,2-Dichloroethene	4.43	96	382380	98.09	UG	# 97
17) Methyl tert-butyl ether (M)	4.44	73	1232586	95.67	UG	100
18) 1,1-Dichloroethane	4.93	63	880768	101.09	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	2152186	99.37	UG	96
20) cis-1,2-Dichloroethene	5.60	96	431479	101.99	UG	# 67
21) 2,2-Dichloropropane	5.60	77	446490	89.06	UG	100
22) 2-Butanone (MEK)	5.64	43	319215	94.04	UG	# 98
23) Bromochloromethane	5.87	128	198524	103.56	UG	# 99
25) Chloroform	5.97	83	692981	101.64	UG	100
26) 1,1,1-Trichloroethane	6.16	97	568130	98.90	UG	# 100
27) Carbon tetrachloride	6.34	117	477241	97.64	UG	96
28) 1,1-Dichloropropene	6.35	75	525565	97.94	UG	# 96
29) 1,2-Dichloroethane (EDC)	6.61	62	635807	102.59	UG	100
32) Benzene	6.58	78	1622428	100.58	UG	100
33) Trichloroethene	7.30	95	389757	99.62	UG	# 100
34) 1,2-Dichloropropane	7.57	63	517545	104.30	UG	# 100
35) Dibromomethane	7.70	93	235000	104.17	UG	# 88
36) 1,4-Dioxane	7.72	88	94032	2825.36	UG	# 64
37) Bromodichloromethane	7.87	83	552079	105.06	UG	# 66
38) 2-Chloroethyl vinyl ether	8.21	63	295488	107.16	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	680215	106.86	UG	100
40) 4-Methyl-2-pentanone (MIBK)	8.56	43	552617	103.75	UG	98
42) Toluene	8.75	92	959540	100.12	UG	99
43) trans-1,3-Dichloropropene	9.01	75	623906	107.04	UG	99
44) 1,1,2-Trichloroethane	9.23	83	293597	102.38	UG	96
45) Tetrachloroethene	9.38	166	362271	92.99	UG	96
46) 1,3-Dichloropropane	9.42	76	625828	104.15	UG	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4150.D
 Acq On : 5 May 2014 3:42 pm
 Operator : BARBARA
 Sample : ICV100,ICV100,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 05 16:05:54 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

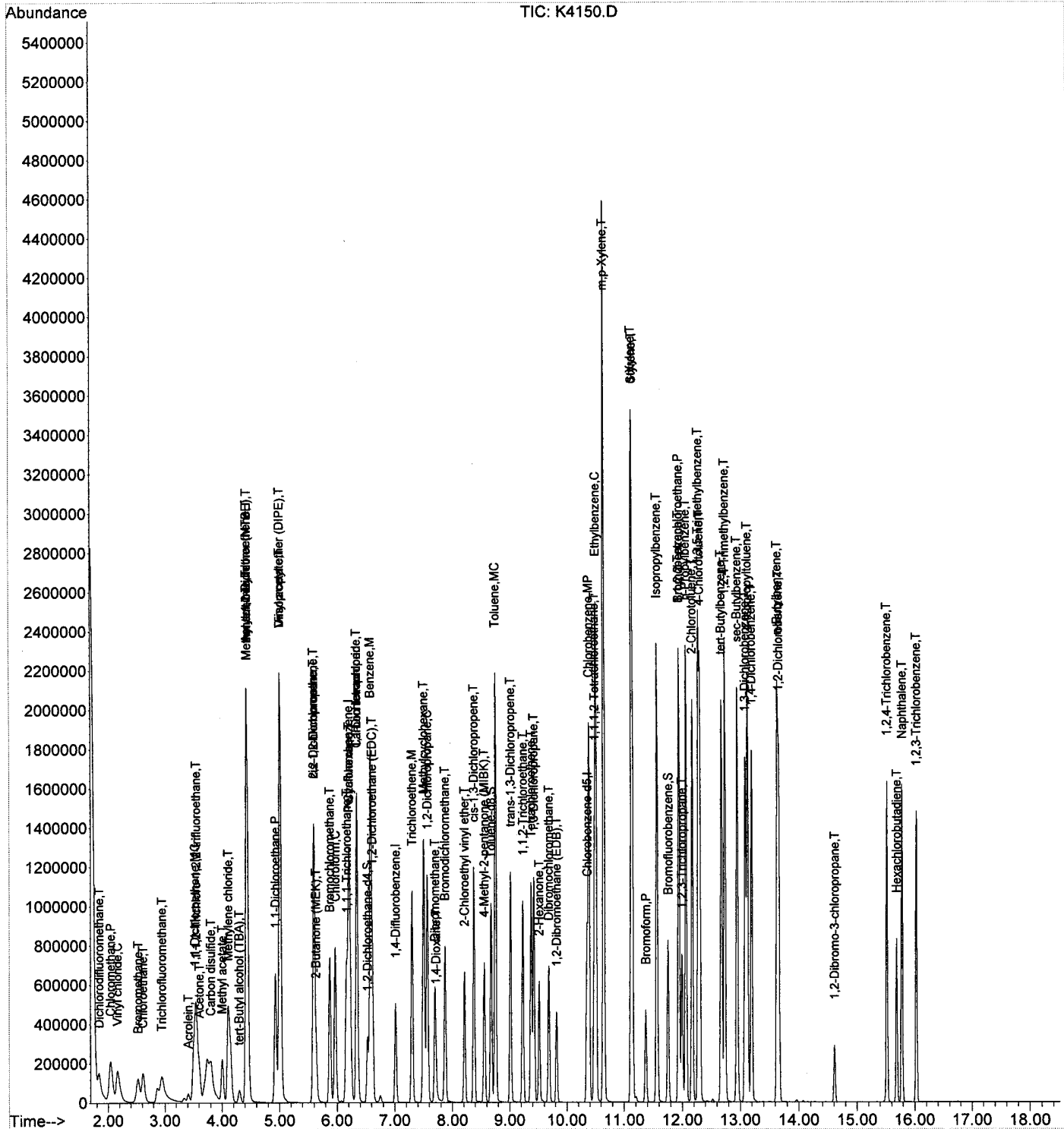
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)

47) 2-Hexanone	9.51	43	459064	97.95	UG	# 94
48) Dibromochloromethane	9.69	129	390671	108.28	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	349293	104.04	UG	99
51) Chlorobenzene	10.39	112	1038963	100.57	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	380360	104.03	UG	# 70
53) Ethylbenzene	10.51	91	1832291	99.65	UG	100
54) m,p-Xylene	10.65	106	1416923	200.58	UG	99
55) o-Xylene	11.12	106	706482	102.18	UG	94
56) Styrene	11.14	104	1213815	108.50	UG	99
57) Bromoform	11.37	173	241562	107.43	UG	# 100
58) Isopropylbenzene	11.56	105	1708861	100.48	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	451336	97.61	UG	# 99
61) Bromobenzene	11.94	156	413344	100.19	UG	# 40
62) 1,2,3-Trichloropropane	11.99	75	342516	100.32	UG	99
63) n-Propylbenzene	12.06	91	2017207	97.76	UG	100
64) 2-Chlorotoluene	12.17	91	1255899	99.12	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	1457125	99.78	UG	100
66) 4-Chlorotoluene	12.30	91	1474951	99.06	UG	100
67) tert-Butylbenzene	12.67	119	1129375	99.84	UG	98
68) 1,2,4-Trimethylbenzene	12.74	105	1480918	100.12	UG	100
69) sec-Butylbenzene	12.95	105	1679479	97.19	UG	100
70) 1,3-Dichlorobenzene	13.08	146	770905	98.25	UG	99
71) 4-Isopropyltoluene	13.12	119	1385173	98.47	UG	100
72) 1,4-Dichlorobenzene	13.20	146	784873	99.07	UG	99
73) n-Butylbenzene	13.63	91	1206330	97.04	UG	99
74) 1,2-Dichlorobenzene	13.66	146	745740	99.67	UG	99
75) 1,2-Dibromo-3-chloropropan	14.61	75	77028	106.81	UG	# 84
76) 1,2,4-Trichlorobenzene	15.52	180	474485	97.80	UG	96
77) Hexachlorobutadiene	15.69	225	164622	89.31	UG	100
78) Naphthalene	15.78	128	1173201	105.61	UG	100
79) 1,2,3-Trichlorobenzene	16.03	180	422381	96.54	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.56	101	234458	95.01	UG	# 1
81) Methyl acetate	4.00	43	422891	99.00	UG	# 85
82) Cyclohexane	6.21	56	849800	94.56	UG	# 36
83) Methylcyclohexane	7.50	83	561620	91.86	UG	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4150.D
Acq On : 5 May 2014 3:42 pm
Operator : BARBARA
Sample : ICV100, ICV100, A, 5mL, 100
Misc : NA, NA, NA, 1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: May 05 16:05:54 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4166.D
 Acq On : 5 May 2014 11:10 pm
 Operator : BARBARA
 Sample : CCV100,CCV100,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 11:36:49 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
 Max. RRF Dev : 35% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Pentafluorobenzene	1.000	1.000	0.0	101	0.00
2 T	Dichlorodifluoromethane	0.587	0.529	9.9	101	0.00
3 P	Chloromethane	1.114	1.169	-4.9	105	0.00
4 C	Vinyl chloride	0.827	0.856	-3.5	103	0.00
5 T	Bromomethane	0.368	0.351	4.6	100	0.00
6 T	Chloroethane	0.489	0.471	3.7	101	0.00
7 T	Trichlorofluoromethane	0.792	0.713	10.0	96	0.00
8 T	Acrolein	0.042	0.045	-7.1	111	0.00
9 MC	1,1-Dichloroethene	0.529	0.495	6.4	102	0.00
10 T	Acetone	0.453	0.431	4.9	94	0.00
11 T	Carbon disulfide	1.837	1.788	2.7	100	0.00
12 T	Vinyl acetate	3.964	3.963	0.0	97	0.00
13 T	Methylene chloride	0.812	0.777	4.3	99	0.00
14 T	Acrylonitrile	0.372	0.410	-10.2	106	0.00
15 T	tert-Butyl alcohol (TBA)	0.099	0.101	-2.0	98	-0.01
16 T	trans-1,2-Dichloroethene	0.731	0.715	2.2	99	0.00
17 T	Methyl tert-butyl ether (MT)	2.416	2.334	3.4	99	0.00
18 P	1,1-Dichloroethane	1.634	1.636	-0.1	98	0.00
19 T	Diisopropyl ether (DIPE)	4.062	4.044	0.4	99	0.00
20 T	cis-1,2-Dichloroethene	0.793	0.800	-0.9	97	0.00
21 T	2,2-Dichloropropane	0.940	0.759	19.3	82	0.00
22 T	2-Butanone (MEK)	0.637	0.611	4.1	95	0.00
23 T	Bromochloromethane	0.360	0.371	-3.1	99	0.00
24 T	Tetrahydrofuran	0.000	0.000	0.0	102	0.00
25 C	Chloroform	1.279	1.296	-1.3	99	0.00
26 T	1,1,1-Trichloroethane	1.077	1.065	1.1	101	0.00
27 T	Carbon tetrachloride	0.917	0.885	3.5	100	0.00
28 T	1,1-Dichloropropene	1.006	0.973	3.3	101	0.00
29 T	1,2-Dichloroethane (EDC)	1.162	1.205	-3.7	101	0.00
30 S	1,2-Dichloroethane-d4	0.944	0.972	-3.0	104	0.00
31 I	1,4-Difluorobenzene	1.000	1.000	0.0	101	0.00
32 M	Benzene	1.993	1.999	-0.3	99	0.00
33 M	Trichloroethene	0.483	0.483	0.0	101	0.00
34 C	1,2-Dichloropropane	0.613	0.628	-2.4	99	0.00
35 T	Dibromomethane	0.279	0.292	-4.7	100	0.00
36 T	1,4-Dioxane	0.004	0.004	0.0	87	0.00
37 T	Bromodichloromethane	0.649	0.674	-3.9	99	0.00
38 T	2-Chloroethyl vinyl ether	0.341	0.362	-6.2	98	0.00
39 T	cis-1,3-Dichloropropene	0.786	0.809	-2.9	95	0.00
40 T	4-Methyl-2-pentanone (MIBK)	0.658	0.726	-10.3	103	0.00
41 S	Toluene-d8	1.688	1.709	-1.2	102	0.00
42 MC	Toluene	1.184	1.168	1.4	98	0.00
43 T	trans-1,3-Dichloropropene	0.720	0.748	-3.9	96	0.00
44 T	1,1,2-Trichloroethane	0.354	0.365	-3.1	101	0.00
45 T	Tetrachloroethene	0.481	0.442	8.1	100	0.00

46 T	1,3-Dichloropropane	0.742	0.779	-5.0	101	0.00
47 T	2-Hexanone	0.579	0.578	0.2	94	0.00
48 T	Dibromochloromethane	0.446	0.473	-6.1	97	0.00
49 T	1,2-Dibromoethane (EDB)	0.415	0.442	-6.5	101	0.00
50 I	Chlorobenzene-d5	1.000	1.000	0.0	102	0.00
51 MP	Chlorobenzene	1.058	1.046	1.1	99	0.00
52 T	1,1,1,2-Tetrachloroethane	0.374	0.383	-2.4	97	0.00
53 C	Ethylbenzene	1.883	1.864	1.0	99	0.00
54 T	m,p-Xylene	0.724	0.713	1.5	99	0.00
55 T	o-Xylene	0.708	0.709	-0.1	98	0.00
56 T	Styrene	1.146	1.223	-6.7	98	0.00
57 P	Bromoform	0.230	0.248	-7.8	98	0.00
58 T	Isopropylbenzene	1.742	1.735	0.4	100	0.00
59 S	Bromofluorobenzene	0.635	0.649	-2.2	103	0.00
60 P	1,1,2,2-Tetrachloroethane	0.474	0.481	-1.5	100	0.00
61 T	Bromobenzene	0.423	0.422	0.2	99	0.00
62 T	1,2,3-Trichloropropane	0.350	0.366	-4.6	102	0.00
63 T	n-Propylbenzene	2.113	2.063	2.4	100	0.00
64 T	2-Chlorotoluene	1.298	1.286	0.9	100	0.00
65 T	1,3,5-Trimethylbenzene	1.496	1.485	0.7	99	0.00
66 T	4-Chlorotoluene	1.525	1.503	1.4	99	0.00
67 T	tert-Butylbenzene	1.159	1.150	0.8	100	0.00
68 T	1,2,4-Trimethylbenzene	1.515	1.507	0.5	99	0.00
69 T	sec-Butylbenzene	1.770	1.702	3.8	100	0.00
70 T	1,3-Dichlorobenzene	0.804	0.788	2.0	99	0.00
71 T	4-Isopropyltoluene	1.441	1.414	1.9	99	0.00
72 T	1,4-Dichlorobenzene	0.811	0.800	1.4	99	0.00
73 T	n-Butylbenzene	1.273	1.236	2.9	99	0.00
74 T	1,2-Dichlorobenzene	0.766	0.764	0.3	99	0.00
75 T	1,2-Dibromo-3-chloropropane	0.074	0.084	-13.5	103	0.00
76 T	1,2,4-Trichlorobenzene	0.497	0.490	1.4	99	0.00
77 T	Hexachlorobutadiene	0.189	0.164	13.2	97	0.00
78 T	Naphthalene	1.138	1.277	-12.2	103	0.00
79 T	1,2,3-Trichlorobenzene	0.448	0.448	0.0	100	0.00
80 T	1,1,2-Trichloro-1,2,2-trifl	0.253	0.240	5.1	102	0.00
81 T	Methyl acetate	0.438	0.461	-5.3	104	0.00
82 T	Cyclohexane	0.920	0.861	6.4	102	0.00
83 T	Methylcyclohexane	0.626	0.564	9.9	99	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

K8050514.M Tue May 06 13:41:12 2014

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4166.D
 Acq On : 5 May 2014 11:10 pm
 Operator : BARBARA
 Sample : CCV100,CCV100,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 11:36:49 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	258719	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	390930	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	471654	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.53	65	251402	51.47	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.94%
41) Toluene-d8	8.67	98	668080	50.61	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	101.22%
59) Bromofluorobenzene	11.76	95	306100	51.10	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.20%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.83	85	273528	90.10	UG	99
3) Chloromethane	2.04	50	604646	104.89	UG	98
4) Vinyl chloride	2.16	62	442681	103.50	UG	99
5) Bromomethane	2.52	94	181701	95.48	UG	96
6) Chloroethane	2.62	64	243471	96.32	UG	100
7) Trichlorofluoromethane	2.95	101	368803m	89.94	UG	
8) Acrolein	3.41	56	69124	321.66	UG	# 60
9) 1,1-Dichloroethene	3.53	96	256194	93.55	UG	88
10) Acetone	3.61	43	222903	95.09	UG	# 97
11) Carbon disulfide	3.80	76	925420	97.36	UG	100
12) Vinyl acetate	5.00	43	2050573	99.98	UG	# 1
13) Methylene chloride	4.11	84	402235	95.78	UG	98
14) Acrylonitrile	4.43	53	635984	330.02	UG	# 100
15) tert-Butyl alcohol (TBA)	4.30	59	104198	203.72	UG	99
16) trans-1,2-Dichloroethene	4.43	96	370126	97.84	UG	# 97
17) Methyl tert-butyl ether (M	4.44	73	1207664	96.60	UG	100
18) 1,1-Dichloroethane	4.93	63	846414	100.11	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	2092275	99.55	UG	96
20) cis-1,2-Dichloroethene	5.60	96	413870	100.81	UG	# 99
21) 2,2-Dichloropropane	5.60	77	392659m	80.71	UG	
22) 2-Butanone (MEK)	5.64	43	315948	95.92	UG	# 100
23) Bromochloromethane	5.87	128	191825	103.11	UG	# 99
25) Chloroform	5.97	83	670506	101.34	UG	100
26) 1,1,1-Trichloroethane	6.16	97	550971	98.84	UG	# 100
27) Carbon tetrachloride	6.34	117	457808	96.52	UG	96
28) 1,1-Dichloropropene	6.35	75	503310	96.65	UG	# 97
29) 1,2-Dichloroethane (EDC)	6.61	62	623293	103.64	UG	100
32) Benzene	6.58	78	1563204	100.32	UG	100
33) Trichloroethene	7.30	95	377625	99.92	UG	# 100
34) 1,2-Dichloropropane	7.57	63	491021	102.44	UG	# 100
35) Dibromomethane	7.70	93	228516	104.86	UG	# 88
36) 1,4-Dioxane	7.72	88	84567	2630.48	UG	# 64
37) Bromodichloromethane	7.87	83	526650	103.76	UG	# 66
38) 2-Chloroethyl vinyl ether	8.21	63	282880	106.20	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	632789	102.92	UG	100
40) 4-Methyl-2-pentanone (MIBK	8.56	43	567685	110.34	UG	98
42) Toluene	8.75	92	913036	98.62	UG	99
43) trans-1,3-Dichloropropene	9.01	75	584864	103.88	UG	99
44) 1,1,2-Trichloroethane	9.23	83	285074	102.91	UG	96
45) Tetrachloroethene	9.37	166	345513	91.81	UG	97
46) 1,3-Dichloropropane	9.42	76	608861	104.89	UG	99

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4166.D
 Acq On : 5 May 2014 11:10 pm
 Operator : BARBARA
 Sample : CCV100,CCV100,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 11:36:49 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

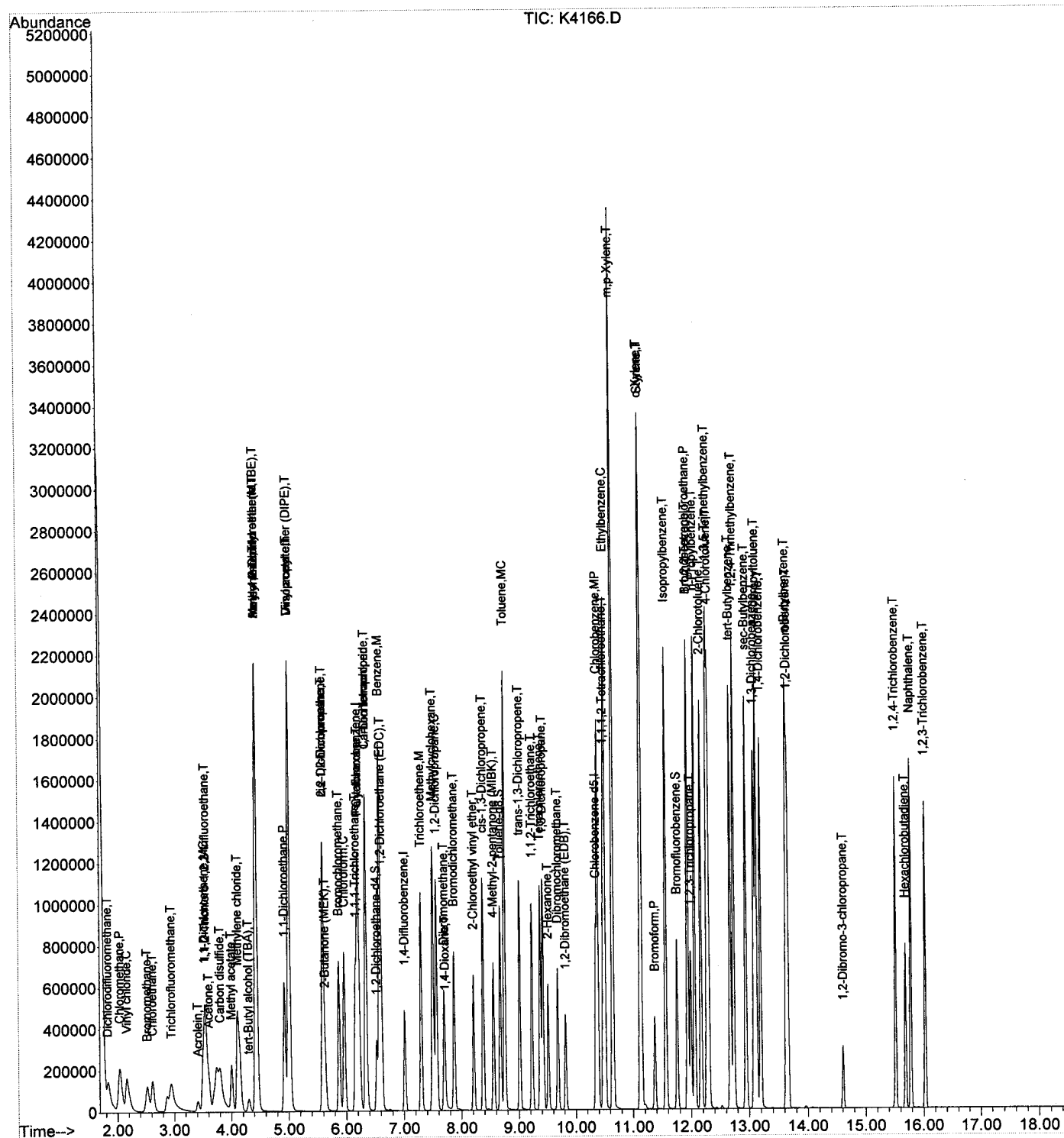
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)

47) 2-Hexanone	9.51	43	452151	99.87	UG	# 94
48) Dibromochloromethane	9.68	129	369527	106.03	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	345439	106.51	UG	99
51) Chlorobenzene	10.38	112	986406	98.83	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	361558	102.35	UG	# 70
53) Ethylbenzene	10.51	91	1758436	98.99	UG	100
54) m,p-Xylene	10.65	106	1345733	197.18	UG	99
55) o-Xylene	11.12	106	668770	100.11	UG	95
56) Styrene	11.14	104	1154025	106.77	UG	99
57) Bromoform	11.37	173	234334	107.87	UG	# 100
58) Isopropylbenzene	11.56	105	1636838	99.62	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	453448	101.50	UG	# 100
61) Bromobenzene	11.94	156	398331	99.93	UG	# 40
62) 1,2,3-Trichloropropane	11.99	75	345017	104.59	UG	99
63) n-Propylbenzene	12.06	91	1946343	97.63	UG	100
64) 2-Chlorotoluene	12.17	91	1212987	99.09	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	1400768	99.29	UG	100
66) 4-Chlorotoluene	12.30	91	1417812	98.56	UG	100
67) tert-Butylbenzene	12.67	119	1085185	99.29	UG	98
68) 1,2,4-Trimethylbenzene	12.74	105	1421540	99.48	UG	99
69) sec-Butylbenzene	12.95	105	1605433	96.16	UG	100
70) 1,3-Dichlorobenzene	13.09	146	743543	98.08	UG	99
71) 4-Isopropyltoluene	13.12	119	1333740	98.13	UG	100
72) 1,4-Dichlorobenzene	13.20	146	755103	98.65	UG	99
73) n-Butylbenzene	13.63	91	1166264	97.10	UG	99
74) 1,2-Dichlorobenzene	13.66	146	720319	99.65	UG	99
75) 1,2-Dibromo-3-chloropropan	14.61	75	78846	113.17	UG	# 84
76) 1,2,4-Trichlorobenzene	15.52	180	462572	98.68	UG	96
77) Hexachlorobutadiene	15.69	225	155166	87.13	UG	100
78) Naphthalene	15.78	128	1204679	112.24	UG	100
79) 1,2,3-Trichlorobenzene	16.03	180	422314	99.91	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.56	101	226650	95.06	UG	# 1
81) Methyl acetate	4.00	43	435039	105.41	UG	# 86
82) Cyclohexane	6.21	56	812009	93.52	UG	# 37
83) Methylcyclohexane	7.50	83	531970	90.06	UG	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4166.D
Acq On : 5 May 2014 11:10 pm
Operator : BARBARA
Sample : CCV100,CCV100,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: May 06 11:36:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration

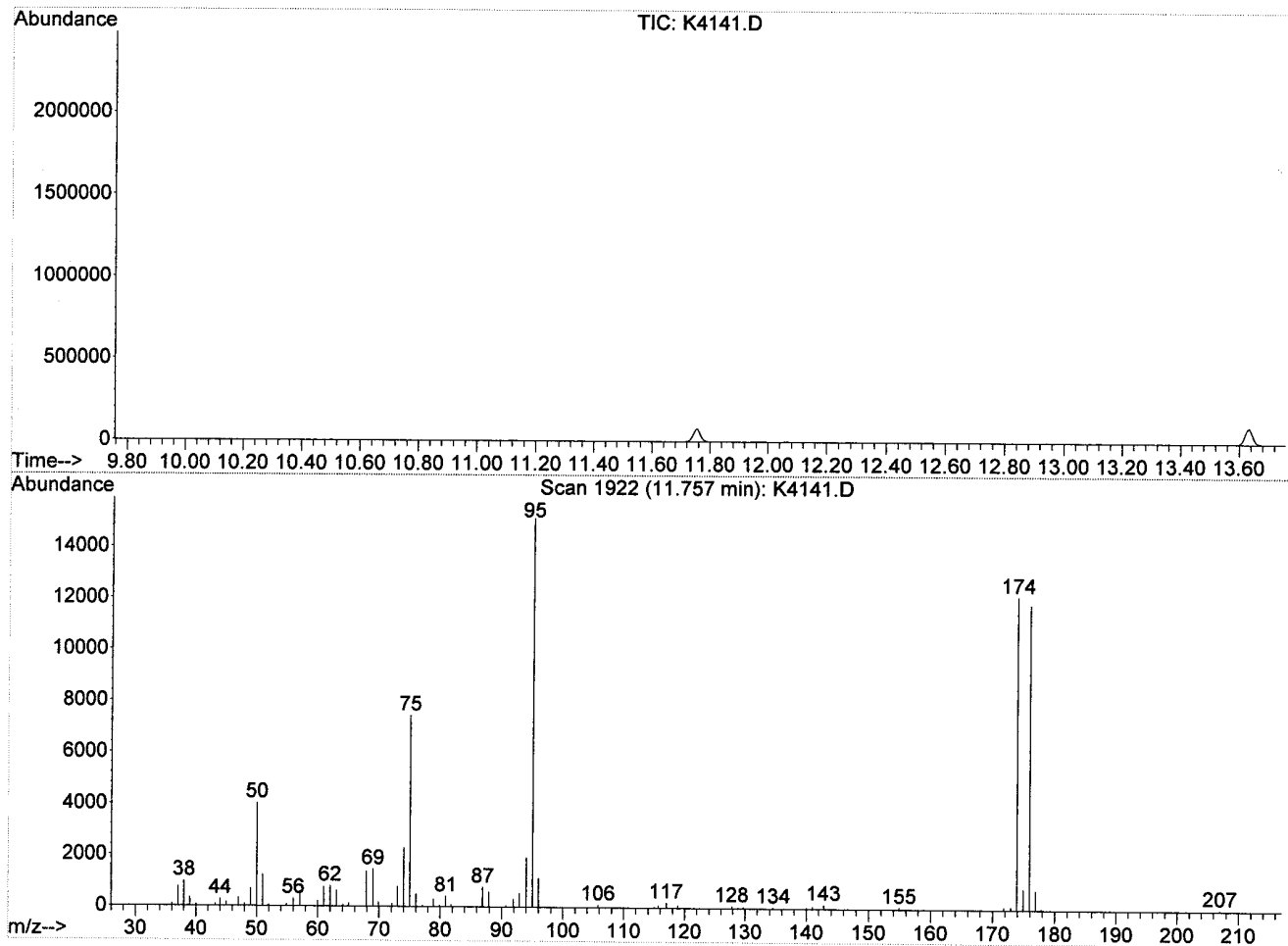


VOLATILE ORGANICS RAW QC DATA

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4141.D
Acq On : 5 May 2014 11:04 am
Operator : BARBARA
Sample : BFBA140505a,BFBA140505a,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 1 Sample Multiplier: 1

Integration File: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\K8050514.M
Title : VOLATILE ORGANICS BY EPA METHOD 624
Last Update : Mon May 05 15:15:11 2014



Spectrum Information: Scan 1922

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	26.6	4028	PASS
75	95	30	60	49.2	7435	PASS
95	95	100	100	100.0	15127	PASS
96	95	5	9	7.4	1123	PASS
173	174	0.00	2	1.1	131	PASS
174	95	50	100	80.3	12148	PASS
175	174	5	9	6.7	812	PASS
176	174	95	101	97.5	11844	PASS
177	176	5	9	6.5	772	PASS

Scan 1923 (11.762 min): K4165.D
 BFBA140505b,BFBA140505b,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.00	1312	49.00	7026	63.00	4541	76.00	4928
37.00	7185	50.00	33800	64.00	430	77.00	821
38.10	6207	51.00	10134	65.10	102	77.90	560
39.10	2762	52.00	430	67.00	373	78.90	2897
40.10	257	55.00	348	68.00	12683	79.90	831
41.10	63	56.00	2326	69.00	11731	80.90	2959
43.10	118	57.00	3858	70.00	947	82.00	614
44.00	937	58.00	155	72.00	580	82.90	80
45.00	1350	60.00	1364	73.00	5635	86.00	140
47.00	2185	61.00	6724	74.00	20336	87.00	5587
48.00	930	62.00	6328	75.00	62904	87.90	5008

Scan 1923 (11.762 min): K4165.D
 BFBA140505b,BFBA140505b,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
90.90	331	106.80	121	127.90	458	143.80	88
92.00	3683	111.80	61	128.90	235	144.90	72
93.00	5452	112.80	85	129.80	328	146.00	102
94.00	14388	114.80	93	130.80	129	146.90	128
95.00	132672	115.80	478	131.80	54	148.00	201
96.00	7938	116.90	955	134.80	172	148.90	94
96.90	298	117.80	498	136.80	189	149.80	107
102.90	50	118.90	592	139.80	156	151.90	56
103.80	449	121.70	59	140.90	1279	153.00	100
104.90	165	123.80	102	141.80	189	153.90	93
105.90	404	125.80	63	142.90	1270	154.90	245

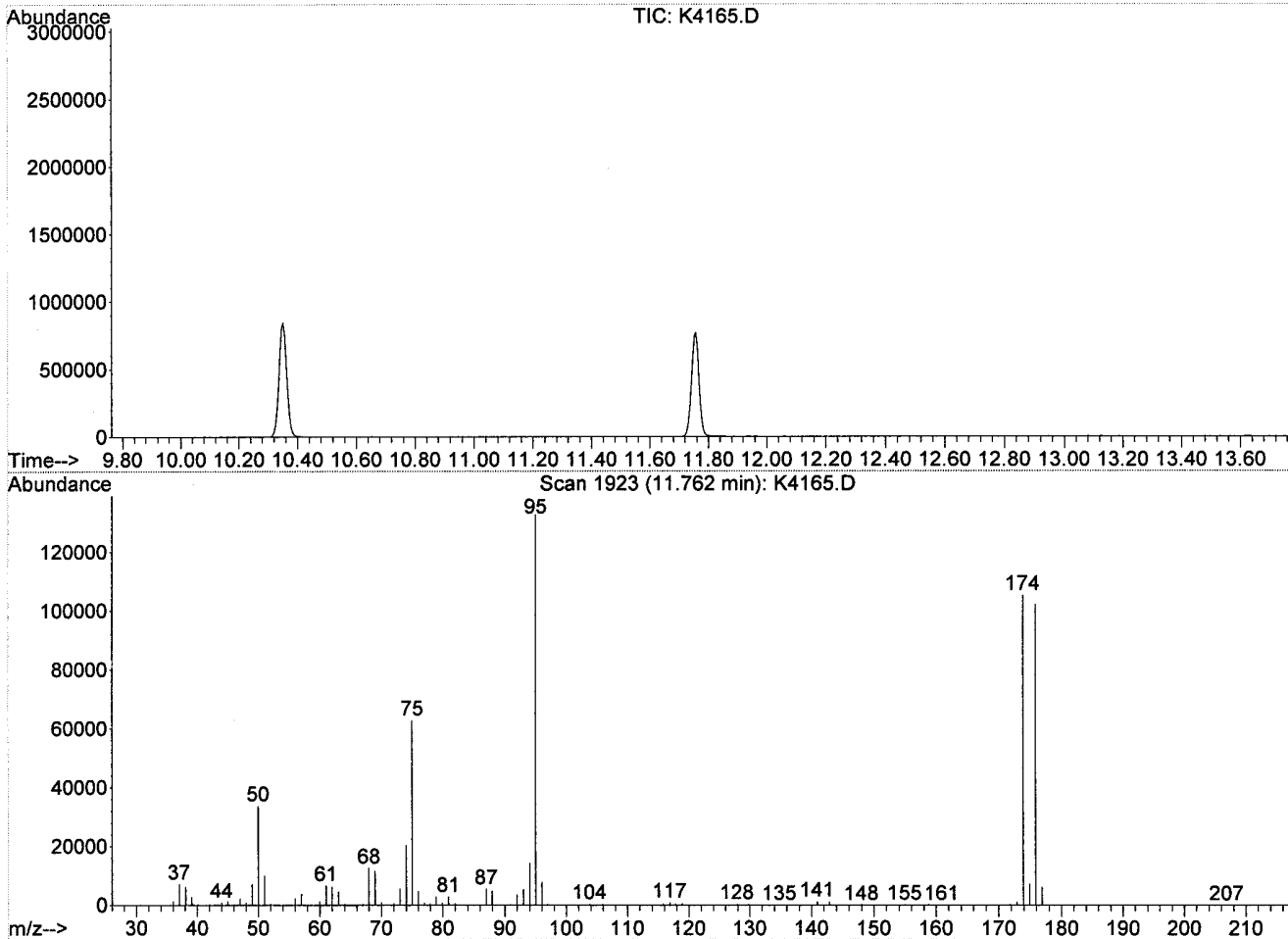
Scan 1923 (11.762 min): K4165.D
 BFBA140505b,BFBA140505b,A,5mL,100

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
155.70	58	175.90	102152				
156.80	205	176.90	6272				
158.80	183	177.90	121				
160.90	155	206.90	93				
169.90	52						
170.30	58						
171.00	61						
171.80	271						
172.90	1125						
173.90	105264						
174.90	7285						

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4165.D
 Acq On : 5 May 2014 10:42 pm
 Operator : BARBARA
 Sample : BFBA140505b,BFBA140505b,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 24 Sample Multiplier: 1

Integration File: LSCINT.P

Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Title : VOLATILE ORGANICS BY EPA METHOD 624
 Last Update : Mon May 05 15:15:11 2014



Spectrum Information: Scan 1923

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	15	40	25.5	33800	PASS
75	95	30	60	47.4	62904	PASS
95	95	100	100	100.0	132672	PASS
96	95	5	9	6.0	7938	PASS
173	174	0.00	2	1.1	1125	PASS
174	95	50	100	79.3	105264	PASS
175	174	5	9	6.9	7285	PASS
176	174	95	101	97.0	102152	PASS
177	176	5	9	6.1	6272	PASS

INTEGRATED ANALYTICAL LABORATORIES

VOLATILE ORGANICS

Lab ID: BLKA140505b
 Client ID: BLKA140505b
 Date Received: NA
 Date Analyzed: 05/06/2014
 Data file: K4169.D

GC/MS Column: DB-624
 Sample wt/vol: 5mL
 Matrix-Units: Aqueous-µg/L
 Dilution Factor: 1
 % Moisture: 100

Compound	Concentration	Q	RL	MDL
Dichlorodifluoromethane	ND		1.00	0.720
Chloromethane	ND		1.00	0.638
Vinyl chloride	ND		1.00	0.490
Bromomethane	ND		1.00	0.602
Chloroethane	ND		1.00	0.637
Trichlorofluoromethane	ND		1.00	0.730
1,1-Dichloroethene	ND		1.00	0.568
Methylene chloride	ND		2.00	1.99
trans-1,2-Dichloroethene	ND		1.00	0.480
1,1-Dichloroethane	ND		1.00	0.457
cis-1,2-Dichloroethene	ND		1.00	0.447
Chloroform	ND		1.00	0.736
1,1,1-Trichloroethane	ND		1.00	0.528
Carbon tetrachloride	ND		1.00	0.746
1,2-Dichloroethane (EDC)	ND		1.00	0.393
Trichloroethene	ND		1.00	0.456
1,2-Dichloropropane	ND		1.00	0.491
Bromodichloromethane	ND		1.00	0.493
2-Chloroethyl vinyl ether	ND		5.00	0.469
cis-1,3-Dichloropropene	ND		1.00	0.465
trans-1,3-Dichloropropene	ND		1.00	0.463
1,1,2-Trichloroethane	ND		1.00	0.478
Tetrachloroethene	ND		1.00	0.498
Dibromochloromethane	ND		1.00	0.409
Chlorobenzene	ND		1.00	0.546
Bromoform	ND		1.00	0.526
1,1,2,2-Tetrachloroethane	ND		1.00	0.464
1,3-Dichlorobenzene	ND		1.00	0.471
1,4-Dichlorobenzene	ND		1.00	0.407
1,2-Dichlorobenzene	ND		1.00	0.398

Total Target Compounds (30): 0

D --- Dilution Performed
 J --- Value Less than RL & greater than MDL
 E --- Exceeds upper level of Calibration curve

B --- Compound detected in Blank
 C --- Common laboratory contamination

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4169.D
 Acq On : 6 May 2014 12:33 am
 Operator : BARBARA
 Sample : BLKA140505b,BLKA140505b,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 28 Sample Multiplier: 1

Quant Time: May 06 10:34:25 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	244610	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.02	114	382388	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	458968	50.00	UG	0.00

System Monitoring Compounds		R.T.	QIon	Response	Conc	Units	Dev(Min)
30) 1,2-Dichloroethane-d4		6.53	65	248382	53.79	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	107.58%	
41) Toluene-d8		8.67	98	640203	49.58	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.16%	
59) Bromofluorobenzene		11.76	95	286744	49.19	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	98.38%	

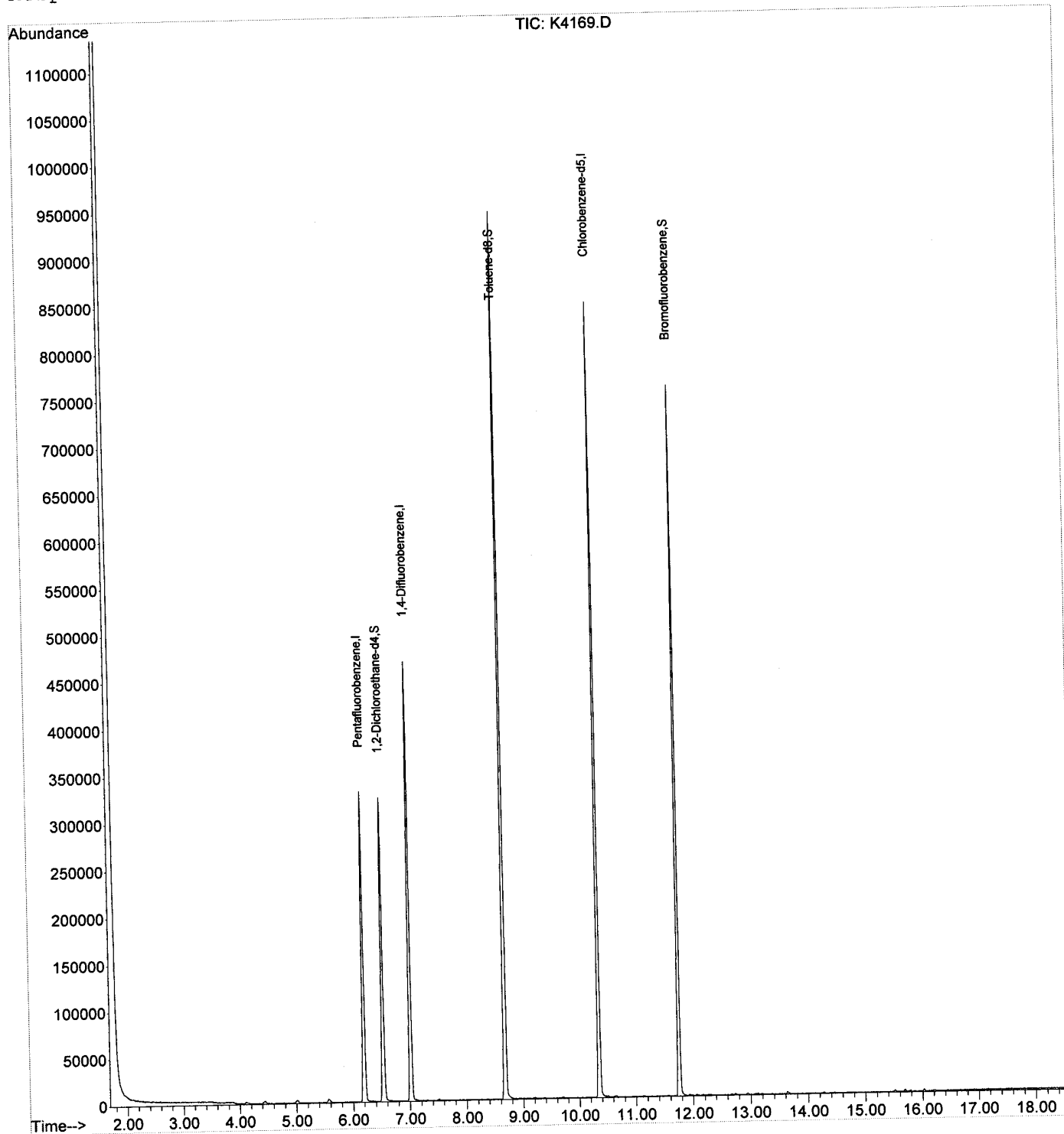
Target Compounds	Qvalue

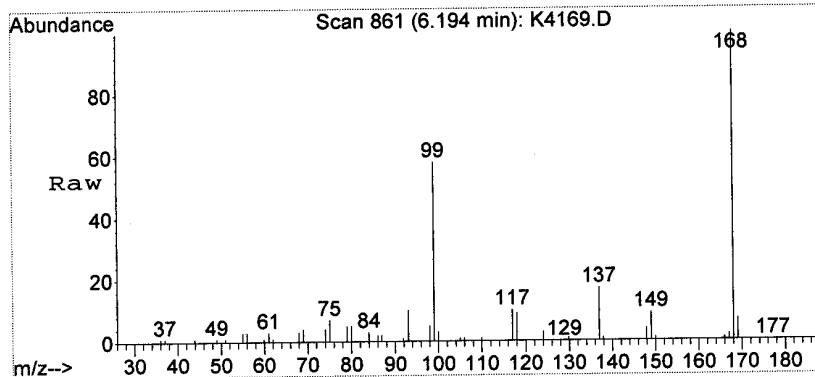
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4169.D
 Acq On : 6 May 2014 12:33 am
 Operator : BARBARA
 Sample : BLKA140505b,BLKA140505b,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 28 Sample Multiplier: 1

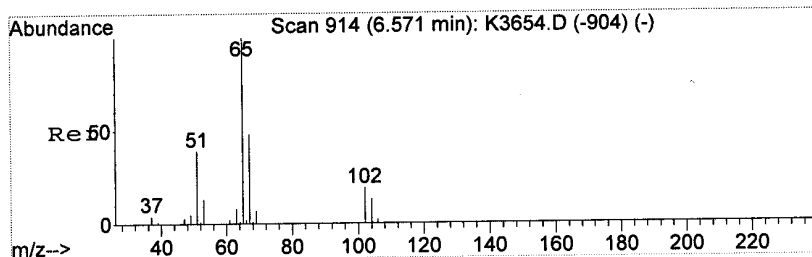
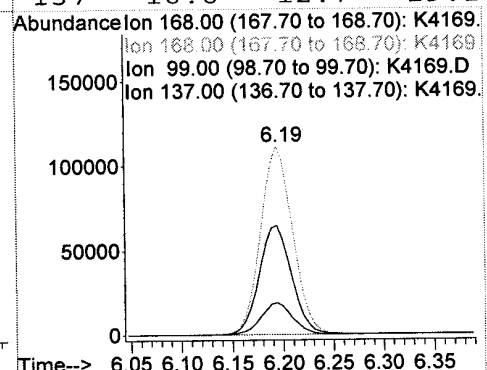
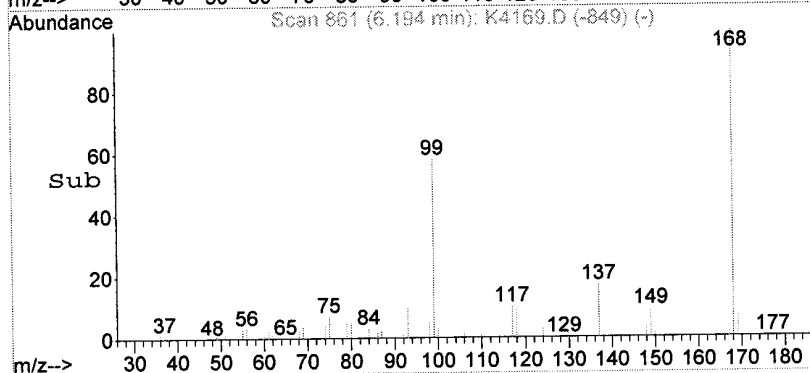
Quant Time: May 06 10:34:25 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration





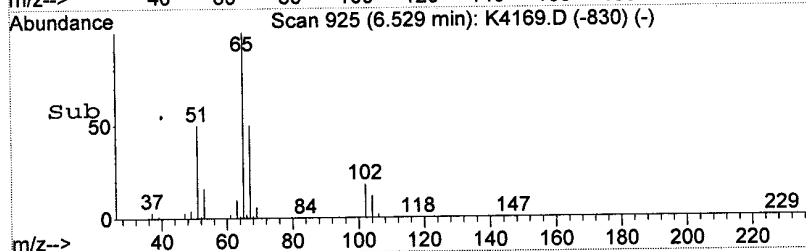
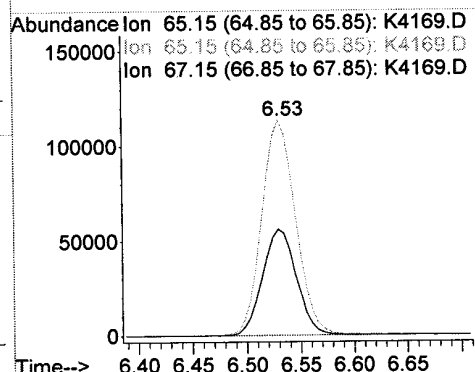
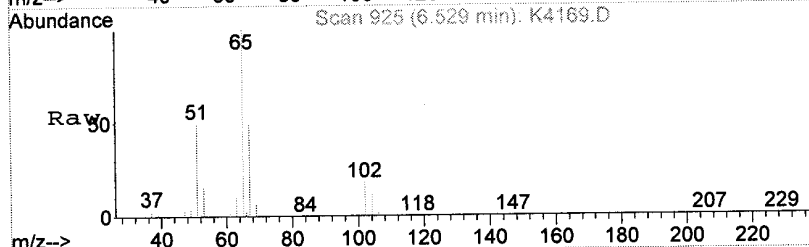
#1
Pentafluorobenzene
Concen: 50.00 UG
RT: 6.19 min Scan# 861
Delta R.T. -0.00 min
Lab File: K4169.D
Acq: 6 May 2014 12:33 am

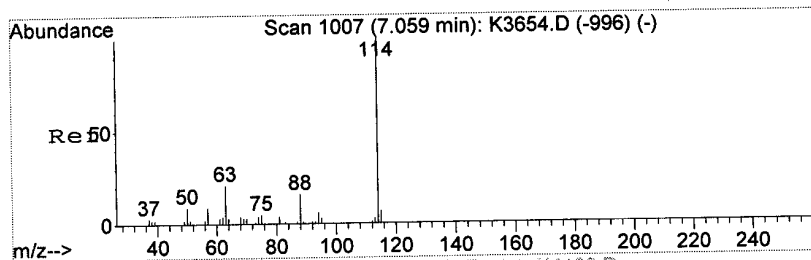
Tgt Ion	Ratio	Lower	Upper
168	100		
168	100.0	80.0	120.0
99	58.7	45.9	68.9
137	16.6	12.7	19.1



#30
1,2-Dichloroethane-d4
Concen: 53.79 UG
RT: 6.53 min Scan# 925
Delta R.T. -0.00 min
Lab File: K4169.D
Acq: 6 May 2014 12:33 am

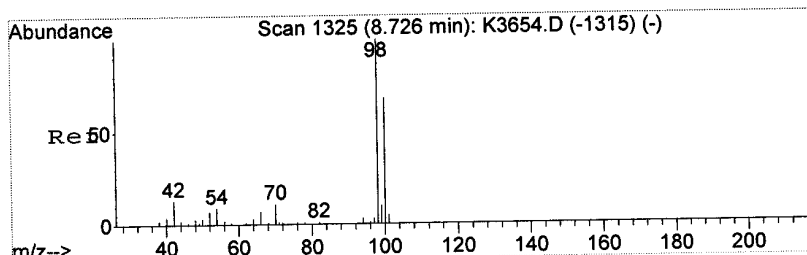
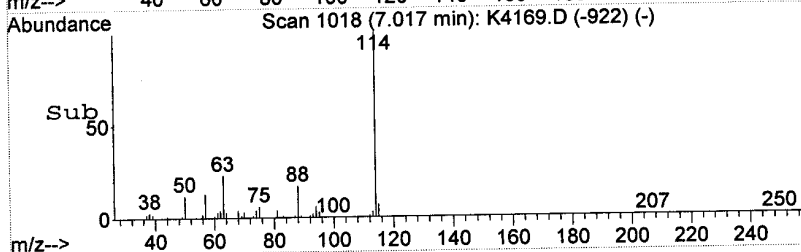
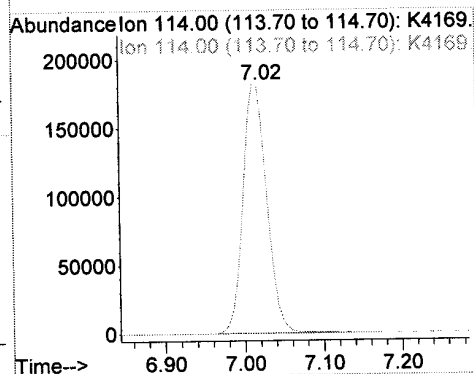
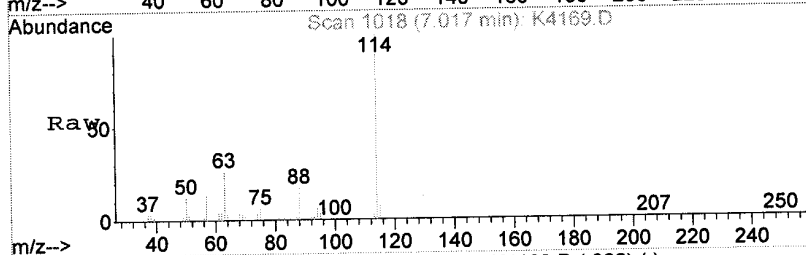
Tgt Ion	Ratio	Lower	Upper
65	100		
65	100.0	80.0	120.0
67	49.8	40.4	60.6





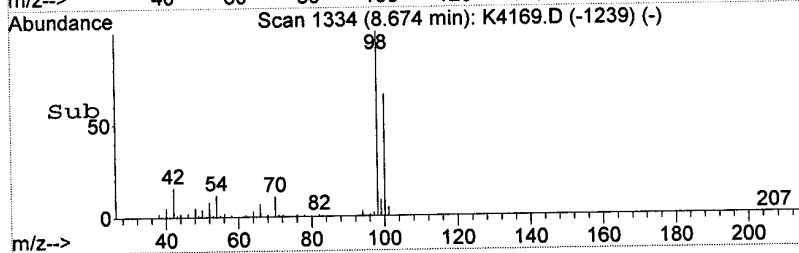
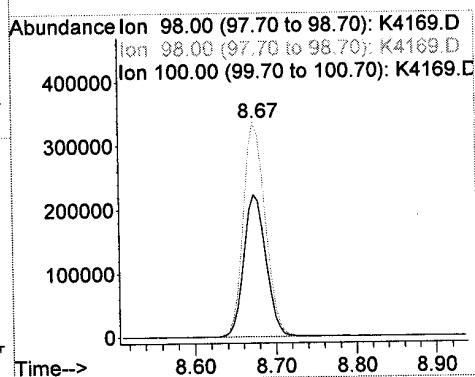
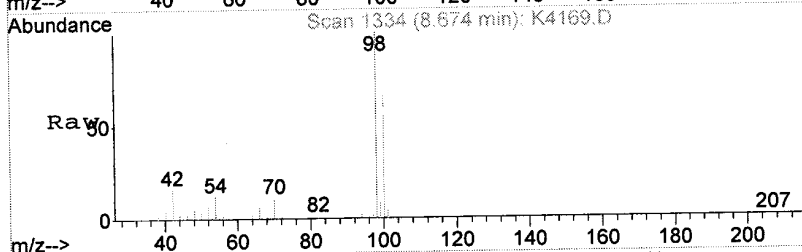
#31
 1,4-Difluorobenzene
 Concen: 50.00 UG
 RT: 7.02 min Scan# 1018
 Delta R.T. 0.01 min
 Lab File: K4169.D
 Acq: 6 May 2014 12:33 am

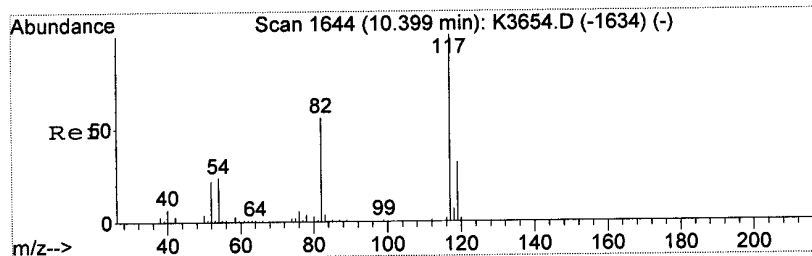
Tgt Ion: 114 Resp: 382388
 Ion Ratio Lower Upper
 114 100
 114 100.0 80.0 120.0



#41
 Toluene-d8
 Concen: 49.58 UG
 RT: 8.67 min Scan# 1334
 Delta R.T. -0.00 min
 Lab File: K4169.D
 Acq: 6 May 2014 12:33 am

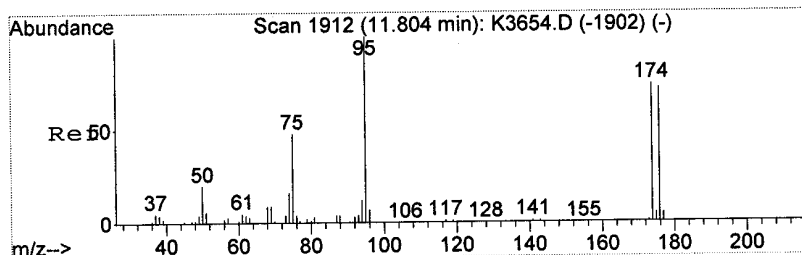
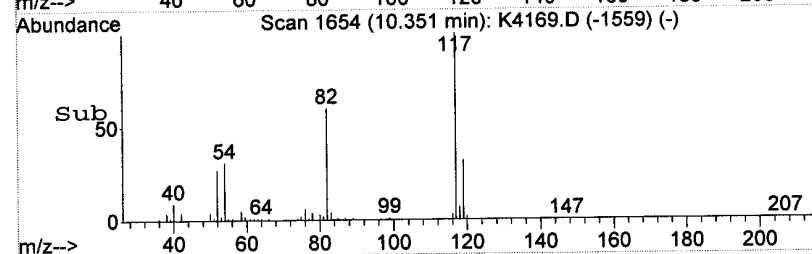
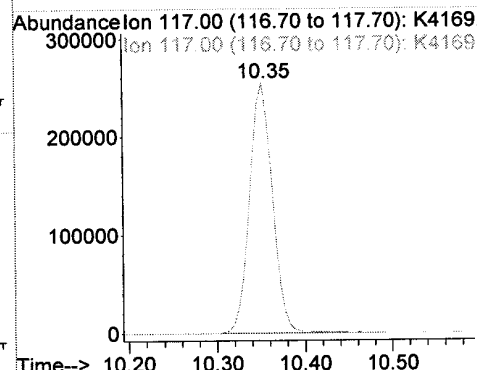
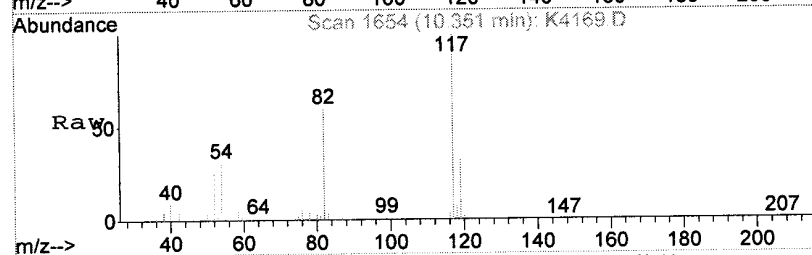
Tgt Ion: 98 Resp: 640203
 Ion Ratio Lower Upper
 98 100
 98 100.0 80.0 120.0
 100 66.7 51.6 77.4





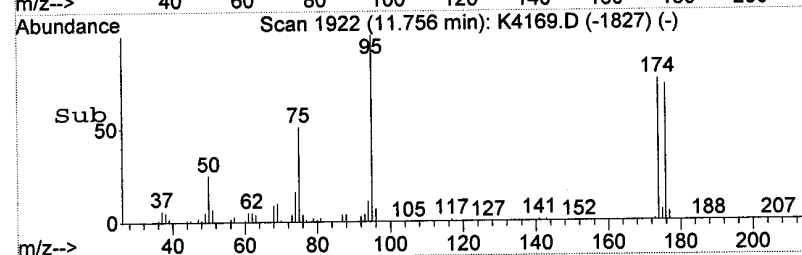
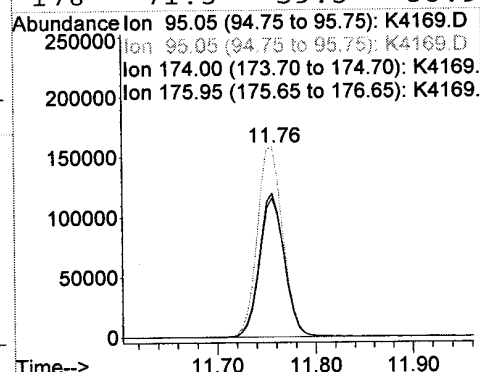
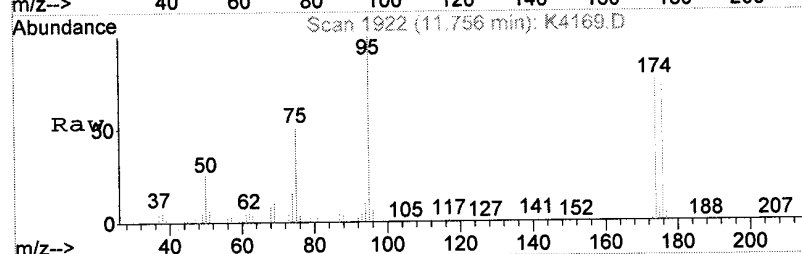
#50
Chlorobenzene-d5
Concen: 50.00 UG
RT: 10.35 min Scan# 1654
Delta R.T. -0.00 min
Lab File: K4169.D
Acq: 6 May 2014 12:33 am

Tgt Ion: 117 Resp: 458968
Ion Ratio Lower Upper
117 100
117 100.0 80.0 120.0



#59
Bromofluorobenzene
Concen: 49.19 UG
RT: 11.76 min Scan# 1922
Delta R.T. -0.00 min
Lab File: K4169.D
Acq: 6 May 2014 12:33 am

Tgt Ion: 95 Resp: 286744
Ion Ratio Lower Upper
95 100
95 100.0 80.0 120.0
174 73.8 61.4 92.0
176 71.3 59.3 88.9



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4170.D
 Acq On : 6 May 2014 1:01 am
 Operator : BARBARA
 Sample : LCSA140505b, LCSA140505b, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: May 06 13:30:57 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	242642	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	368443	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	451339	50.00	UG	0.00

System Monitoring Compounds

30) 1,2-Dichloroethane-d4	6.53	65	241408	52.70	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	105.40%
41) Toluene-d8	8.67	98	621172	49.93	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	99.86%
59) Bromofluorobenzene	11.75	95	295083	51.48	UG	0.00
Spiked Amount	50.000	Range	80 - 120	Recovery	=	102.96%

Target Compounds

						Qvalue
2) Dichlorodifluoromethane	1.83	85	140104	49.21	UG	99
3) Chloromethane	2.03	50	292068	54.02	UG	98
4) Vinyl chloride	2.16	62	222805	55.54	UG	99
5) Bromomethane	2.52	94	94304	52.84	UG	96
6) Chloroethane	2.61	64	127325	53.71	UG	100
7) Trichlorofluoromethane	2.87	101	200973m	52.26	UG	
8) Acrolein	3.41	56	27969	138.77	UG	# 95
9) 1,1-Dichloroethene	3.52	96	130018	50.62	UG	87
10) Acetone	3.61	43	110954	50.47	UG	# 98
11) Carbon disulfide	3.80	76	465115	52.18	UG	100
12) Vinyl acetate	5.01	43	919221	47.79	UG	# 1
13) Methylene chloride	4.11	84	196957	50.01	UG	98
14) Acrylonitrile	4.43	53	289017	159.91	UG	# 100
15) tert-Butyl alcohol (TBA)	4.30	59	50014	104.26	UG	# 93
16) trans-1,2-Dichloroethene	4.43	96	181364	51.12	UG	# 97
17) Methyl tert-butyl ether (M	4.44	73	580947	49.55	UG	100
18) 1,1-Dichloroethane	4.93	63	409216	51.61	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	1014502	51.47	UG	92
20) cis-1,2-Dichloroethene	5.60	96	199390	51.78	UG	# 99
21) 2,2-Dichloropropane	5.60	77	173617	38.05	UG	100
22) 2-Butanone (MEK)	5.64	43	143581	46.48	UG	# 98
23) Bromochloromethane	5.87	128	92286	52.89	UG	# 99
25) Chloroform	5.97	83	322638	52.00	UG	100
26) 1,1,1-Trichloroethane	6.16	97	270242	51.69	UG	# 100
27) Carbon tetrachloride	6.34	117	228586	51.39	UG	96
28) 1,1-Dichloropropene	6.35	75	243600	49.88	UG	# 98
29) 1,2-Dichloroethane (EDC)	6.61	62	299555	53.11	UG	100
32) Benzene	6.58	78	737957	50.25	UG	100
33) Trichloroethene	7.30	95	179340	50.35	UG	# 100
34) 1,2-Dichloropropane	7.57	63	226121	50.06	UG	# 100
35) Dibromomethane	7.70	93	108267	52.72	UG	# 88
36) 1,4-Dioxane	7.72	88	44250	1460.42	UG	# 64
37) Bromodichloromethane	7.87	83	249245	52.10	UG	# 66
38) 2-Chloroethyl vinyl ether	8.21	63	128239	51.08	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	289111	49.89	UG	100
40) 4-Methyl-2-pentanone (MIBK	8.56	43	263886	54.42	UG	98
42) Toluene	8.75	92	429986	49.28	UG	99
43) trans-1,3-Dichloropropene	9.01	75	267915	50.49	UG	99
44) 1,1,2-Trichloroethane	9.22	83	134970	51.70	UG	96
45) Tetrachloroethene	9.37	166	162659	45.86	UG	97
46) 1,3-Dichloropropane	9.42	76	287827	52.61	UG	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4170.D
 Acq On : 6 May 2014 1:01 am
 Operator : BARBARA
 Sample : LCSA140505b, LCSA140505b, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 29 Sample Multiplier: 1

Quant Time: May 06 13:30:57 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

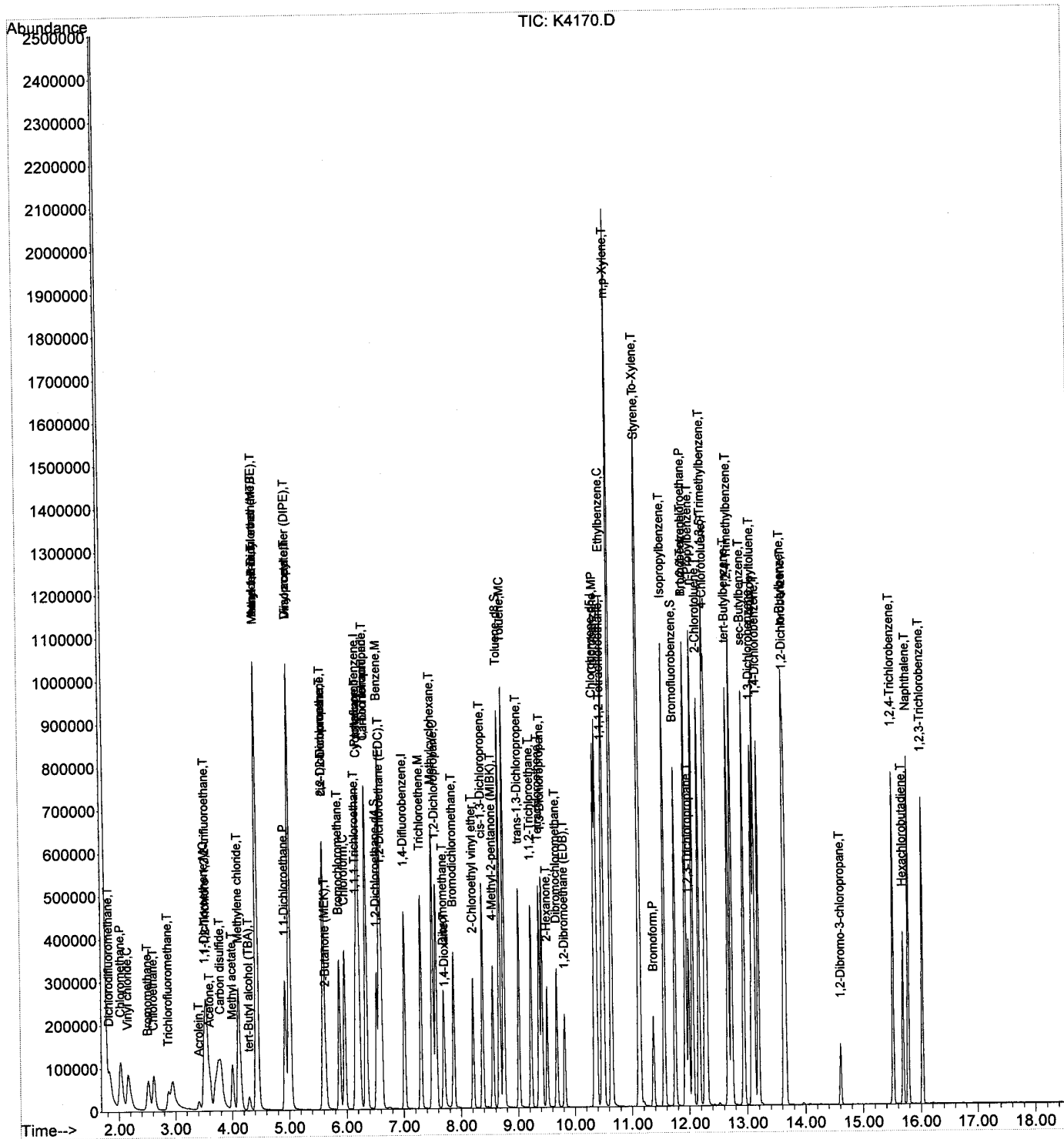
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) 2-Hexanone	9.51	43	207049	48.52	UG	# 95
48) Dibromochloromethane	9.68	129	174567	53.15	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	162108	53.04	UG	99
51) Chlorobenzene	10.38	112	466221	48.81	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	169961	50.28	UG	# 69
53) Ethylbenzene	10.51	91	835312	49.14	UG	100
54) m,p-Xylene	10.65	106	640505	98.07	UG	99
55) o-Xylene	11.12	106	318678	49.85	UG	95
56) Styrene	11.14	104	552411	53.41	UG	99
57) Bromoform	11.37	173	110128	52.98	UG	# 100
58) Isopropylbenzene	11.56	105	774155	49.24	UG	100
60) 1,1,2,2-Tetrachloroethane	11.94	83	214446	50.16	UG	# 100
61) Bromobenzene	11.94	156	192159	50.38	UG	96
62) 1,2,3-Trichloropropane	11.99	75	166711	52.81	UG	99
63) n-Propylbenzene	12.06	91	932539	48.88	UG	100
64) 2-Chlorotoluene	12.17	91	577168	49.27	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	672141	49.79	UG	100
66) 4-Chlorotoluene	12.30	91	675998	49.11	UG	100
67) tert-Butylbenzene	12.67	119	511096	48.87	UG	98
68) 1,2,4-Trimethylbenzene	12.73	105	680401	49.76	UG	99
69) sec-Butylbenzene	12.95	105	776982	48.63	UG	100
70) 1,3-Dichlorobenzene	13.08	146	354363	48.85	UG	99
71) 4-Isopropyltoluene	13.12	119	631316	48.54	UG	99
72) 1,4-Dichlorobenzene	13.19	146	361202	49.31	UG	99
73) n-Butylbenzene	13.63	91	557085	48.47	UG	99
74) 1,2-Dichlorobenzene	13.65	146	348930	50.44	UG	99
75) 1,2-Dibromo-3-chloropropan	14.61	75	37176	55.76	UG	# 83
76) 1,2,4-Trichlorobenzene	15.52	180	218921	48.81	UG	96
77) Hexachlorobutadiene	15.69	225	76542	44.91	UG	100
78) Naphthalene	15.78	128	570017	55.50	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	200772	49.64	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.55	101	115341	50.55	UG	# 1
81) Methyl acetate	4.00	43	211389	53.52	UG	# 85
82) Cyclohexane	6.21	56	404969	48.74	UG	# 38
83) Methylcyclohexane	7.50	83	260870	46.15	UG	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

(QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
Data File : K4170.D
Acq On : 6 May 2014 1:01 am
Operator : BARBARA
Sample : LCSA140505b,LCSA140505b,A,5mL,100
Misc : NA,NA,NA,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: May 06 13:30:57 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4171.D
 Acq On : 6 May 2014 1:29 am
 Operator : BARBARA
 Sample : 03838-007MS,03838-007MS,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 06 13:31:26 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
1) Pentafluorobenzene	6.19	168	250715	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	385531	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	460064	50.00	UG	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev (Min)
30) 1,2-Dichloroethane-d4	6.53	65	245046	51.77	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 103.54%			
41) Toluene-d8	8.67	98	655541	50.36	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.72%			
59) Bromofluorobenzene	11.75	95	292389	50.04	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.08%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.84	85	151905	51.63	UG	99
3) Chloromethane	2.03	50	307904	55.12	UG	98
4) Vinyl chloride	2.16	62	236672	57.10	UG	99
5) Bromomethane	2.52	94	100075	54.27	UG	97
6) Chloroethane	2.62	64	133741	54.60	UG	100
7) Trichlorofluoromethane	2.88	101	216635m	54.52	UG	
8) Acrolein	3.41	56	26163	125.63	UG	# 60
9) 1,1-Dichloroethene	3.53	96	140196	52.83	UG	# 88
10) Acetone	3.60	43	111476	49.07	UG	# 97
11) Carbon disulfide	3.79	76	494690	53.71	UG	# 100
12) Vinyl acetate	5.00	43	999286	50.28	UG	# 1
13) Methylene chloride	4.11	84	206752	50.80	UG	# 98
14) Acrylonitrile	4.43	53	294703	157.81	UG	# 100
15) tert-Butyl alcohol (TBA)	4.30	59	51376	103.65	UG	# 99
16) trans-1,2-Dichloroethene	4.43	96	194279	53.00	UG	# 97
17) Methyl tert-butyl ether (M)	4.44	73	601752	49.67	UG	# 100
18) 1,1-Dichloroethane	4.93	63	434490	53.03	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	1069084	52.49	UG	# 94
20) cis-1,2-Dichloroethene	5.60	96	212934	53.52	UG	# 67
21) 2,2-Dichloropropane	5.60	77	183138	38.84	UG	# 100
22) 2-Butanone (MEK)	5.64	43	150315	47.09	UG	# 98
23) Bromochloromethane	5.87	128	96100	53.31	UG	# 99
25) Chloroform	5.97	83	343424	53.56	UG	# 100
26) 1,1,1-Trichloroethane	6.16	97	293451	54.32	UG	# 100
27) Carbon tetrachloride	6.34	117	247564	53.86	UG	# 96
28) 1,1-Dichloropropene	6.35	75	269299	53.37	UG	# 98
29) 1,2-Dichloroethane (EDC)	6.61	62	314469	53.96	UG	# 100
32) Benzene	6.58	78	800032	52.06	UG	# 100
33) Trichloroethene	7.30	95	195951	52.57	UG	# 100
34) 1,2-Dichloropropane	7.56	63	248499	52.57	UG	# 100
35) Dibromomethane	7.70	93	114384	53.23	UG	# 88
36) 1,4-Dioxane	7.72	88	45943	1449.08	UG	# 64
37) Bromodichloromethane	7.87	83	266985	53.34	UG	# 66
38) 2-Chloroethyl vinyl ether	8.21	63	137194	52.23	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	314392	51.85	UG	# 100
40) 4-Methyl-2-pentanone (MIBK)	8.56	43	275333	54.26	UG	# 98
42) Toluene	8.75	92	473686	51.88	UG	# 99
43) trans-1,3-Dichloropropene	9.01	75	286379	51.58	UG	# 99
44) 1,1,2-Trichloroethane	9.22	83	143205	52.42	UG	# 96
45) Tetrachloroethene	9.37	166	182360	49.14	UG	# 96
46) 1,3-Dichloropropane	9.42	76	304726	53.23	UG	# 99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4171.D
 Acq On : 6 May 2014 1:29 am
 Operator : BARBARA
 Sample : 03838-007MS,03838-007MS,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 06 13:31:26 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

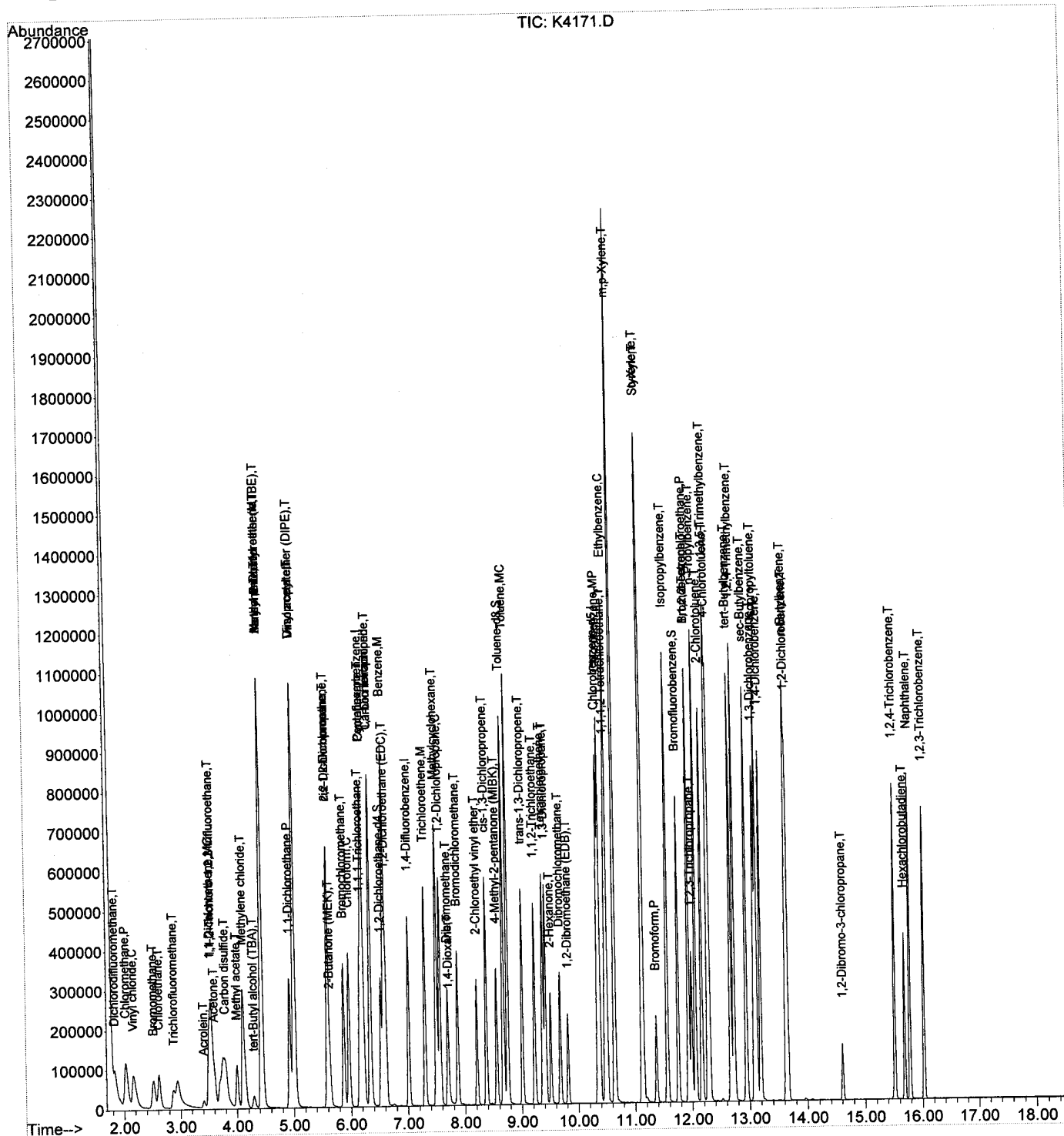
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) 2-Hexanone	9.51	43	212998	47.71	UG	# 95
48) Dibromochloromethane	9.68	129	183361	53.35	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	168642	52.73	UG	99
51) Chlorobenzene	10.38	112	500656	51.42	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	183044	53.12	UG	# 70
53) Ethylbenzene	10.51	91	902040	52.06	UG	100
54) m,p-Xylene	10.65	106	691618	103.89	UG	99
55) o-Xylene	11.12	106	344911	52.93	UG	94
56) Styrene	11.14	104	577308	54.76	UG	99
57) Bromoform	11.37	173	111655	52.69	UG	# 100
58) Isopropylbenzene	11.56	105	844016	52.66	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	222038	50.95	UG	# 100
61) Bromobenzene	11.93	156	198411	51.03	UG	# 40
62) 1,2,3-Trichloropropane	11.99	75	168174	52.26	UG	99
63) n-Propylbenzene	12.06	91	992545	51.04	UG	100
64) 2-Chlorotoluene	12.17	91	614550	51.47	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	719340	52.27	UG	100
66) 4-Chlorotoluene	12.30	91	709883	50.59	UG	100
67) tert-Butylbenzene	12.67	119	560160	52.55	UG	98
68) 1,2,4-Trimethylbenzene	12.73	105	717721	51.49	UG	100
69) sec-Butylbenzene	12.94	105	833906	51.21	UG	100
70) 1,3-Dichlorobenzene	13.08	146	366873	49.61	UG	99
71) 4-Isopropyltoluene	13.12	119	670503	50.58	UG	100
72) 1,4-Dichlorobenzene	13.19	146	369196	49.45	UG	99
73) n-Butylbenzene	13.63	91	584881	49.92	UG	99
74) 1,2-Dichlorobenzene	13.65	146	360180	51.08	UG	99
75) 1,2-Dibromo-3-chloropropan	14.60	75	36892	54.28	UG	# 83
76) 1,2,4-Trichlorobenzene	15.52	180	226705	49.58	UG	97
77) Hexachlorobutadiene	15.69	225	81277	46.79	UG	100
78) Naphthalene	15.78	128	584030	55.79	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	210113	50.96	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.55	101	126682	54.47	UG	# 1
81) Methyl acetate	4.00	43	213664	53.07	UG	# 86
82) Cyclohexane	6.21	56	446547	52.72	UG	# 38
83) Methylcyclohexane	7.50	83	290304	50.39	UG	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4171.D
 Acq On : 6 May 2014 1:29 am
 Operator : BARBARA
 Sample : 03838-007MS,03838-007MS,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 30 Sample Multiplier: 1

Quant Time: May 06 13:31:26 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4172.D
 Acq On : 6 May 2014 1:57 am
 Operator : BARBARA
 Sample : 03838-007MSD,03838-007MSD,A,5mL,100
 Misc : NA,NA,NA,1
 ALS Vial : 31 Sample Multiplier: 1

Quant Time: May 06 13:31:38 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Pentafluorobenzene	6.19	168	251427	50.00	UG	0.00
31) 1,4-Difluorobenzene	7.01	114	381911	50.00	UG	0.00
50) Chlorobenzene-d5	10.35	117	458603	50.00	UG	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
30) 1,2-Dichloroethane-d4	6.53	65	243216	51.24	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 102.48%			
41) Toluene-d8	8.67	98	644804	50.00	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.00%			
59) Bromofluorobenzene	11.75	95	292971	50.30	UG	0.00
Spiked Amount 50.000	Range 80 - 120		Recovery = 100.60%			

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Dichlorodifluoromethane	1.84	85	142370	48.26	UG	99
3) Chloromethane	2.03	50	297332	53.07	UG	98
4) Vinyl chloride	2.16	62	230254	55.39	UG	99
5) Bromomethane	2.52	94	98623	53.33	UG	97
6) Chloroethane	2.61	64	130202	53.00	UG	100
7) Trichlorofluoromethane	2.94	101	206646m	51.86	UG	
8) Acrolein	3.41	56	24535	117.48	UG	# 60
9) 1,1-Dichloroethene	3.52	96	133948	50.33	UG	88
10) Acetone	3.61	43	109492	48.06	UG	# 98
11) Carbon disulfide	3.78	76	477230	51.67	UG	100
12) Vinyl acetate	5.00	43	964964	48.41	UG	# 1
13) Methylene chloride	4.11	84	202887	49.71	UG	98
14) Acrylonitrile	4.43	53	291539	155.67	UG	# 100
15) tert-Butyl alcohol (TBA)	4.30	59	51575	103.76	UG	# 98
16) trans-1,2-Dichloroethene	4.43	96	186964	50.86	UG	# 97
17) Methyl tert-butyl ether (M)	4.44	73	592156	48.74	UG	100
18) 1,1-Dichloroethane	4.93	63	420453	51.17	UG	# 100
19) Diisopropyl ether (DIPE)	5.01	45	1039753	50.90	UG	93
20) cis-1,2-Dichloroethene	5.60	96	204575	51.27	UG	# 99
21) 2,2-Dichloropropane	5.60	77	176822	37.40	UG	100
22) 2-Butanone (MEK)	5.64	43	146046	45.62	UG	# 100
23) Bromochloromethane	5.87	128	93258	51.58	UG	# 99
25) Chloroform	5.97	83	332237	51.67	UG	100
26) 1,1,1-Trichloroethane	6.16	97	279112	51.52	UG	# 100
27) Carbon tetrachloride	6.34	117	237197	51.46	UG	96
28) 1,1-Dichloropropene	6.35	75	254634	50.32	UG	# 59
29) 1,2-Dichloroethane (EDC)	6.61	62	308185	52.73	UG	99
32) Benzene	6.58	78	767243	50.40	UG	100
33) Trichloroethene	7.30	95	189461	51.31	UG	# 100
34) 1,2-Dichloropropane	7.56	63	244562	52.23	UG	# 100
35) Dibromomethane	7.70	93	111787	52.51	UG	# 88
36) 1,4-Dioxane	7.72	88	45507	1448.94	UG	# 64
37) Bromodichloromethane	7.87	83	260104	52.45	UG	# 66
38) 2-Chloroethyl vinyl ether	8.21	63	135630	52.12	UG	# 100
39) cis-1,3-Dichloropropene	8.37	75	304500	50.69	UG	100
40) 4-Methyl-2-pentanone (MIBK)	8.56	43	272205	54.16	UG	98
42) Toluene	8.75	92	460861	50.96	UG	100
43) trans-1,3-Dichloropropene	9.01	75	280780	51.05	UG	99
44) 1,1,2-Trichloroethane	9.23	83	140221	51.81	UG	# 77
45) Tetrachloroethene	9.37	166	174002	47.33	UG	# 96
46) 1,3-Dichloropropane	9.42	76	297434	52.45	UG	99

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\05-05-14\
 Data File : K4172.D
 Acq On : 6 May 2014 1:57 am
 Operator : BARBARA
 Sample : 03838-007MSD, 03838-007MSD, A, 5mL, 100
 Misc : NA, NA, NA, 1
 ALS Vial : 31 Sample Multiplier: 1

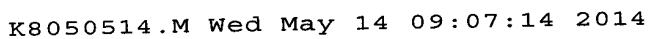
Quant Time: May 06 13:31:38 2014
 Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
 Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
 QLast Update : Mon May 05 15:15:11 2014
 Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev (Min)
47) 2-Hexanone	9.51	43	208635	47.17	UG	# 94
48) Dibromochloromethane	9.68	129	180923	53.14	UG	97
49) 1,2-Dibromoethane (EDB)	9.82	107	166634	52.59	UG	99
51) Chlorobenzene	10.38	112	487836	50.27	UG	100
52) 1,1,1,2-Tetrachloroethane	10.48	131	177143	51.57	UG	# 70
53) Ethylbenzene	10.51	91	870717	50.41	UG	100
54) m,p-Xylene	10.64	106	663394	99.97	UG	99
55) o-Xylene	11.12	106	331714	51.07	UG	94
56) Styrene	11.14	104	559841	53.27	UG	99
57) Bromoform	11.37	173	111332	52.71	UG	# 100
58) Isopropylbenzene	11.56	105	811068	50.77	UG	99
60) 1,1,2,2-Tetrachloroethane	11.94	83	216142	49.76	UG	# 100
61) Bromobenzene	11.94	156	193722	49.98	UG	# 41
62) 1,2,3-Trichloropropane	11.99	75	166512	51.91	UG	99
63) n-Propylbenzene	12.06	91	958652	49.45	UG	100
64) 2-Chlorotoluene	12.17	91	594406	49.94	UG	100
65) 1,3,5-Trimethylbenzene	12.28	105	693405	50.55	UG	100
66) 4-Chlorotoluene	12.30	91	690526	49.37	UG	100
67) tert-Butylbenzene	12.67	119	540068	50.82	UG	98
68) 1,2,4-Trimethylbenzene	12.74	105	699316	50.33	UG	99
69) sec-Butylbenzene	12.94	105	798596	49.20	UG	100
70) 1,3-Dichlorobenzene	13.08	146	361043	48.98	UG	99
71) 4-Isopropyltoluene	13.12	119	646361	48.91	UG	100
72) 1,4-Dichlorobenzene	13.19	146	363265	48.81	UG	100
73) n-Butylbenzene	13.63	91	564070	48.30	UG	99
74) 1,2-Dichlorobenzene	13.65	146	354914	50.50	UG	99
75) 1,2-Dibromo-3-chloropropan	14.61	75	36533	53.93	UG	# 83
76) 1,2,4-Trichlorobenzene	15.52	180	226058	49.60	UG	96
77) Hexachlorobutadiene	15.69	225	79512	45.92	UG	100
78) Naphthalene	15.78	128	585500	56.10	UG	100
79) 1,2,3-Trichlorobenzene	16.02	180	208261	50.67	UG	98
80) 1,1,2-Trichloro-1,2,2-trif	3.56	101	119589	51.59	UG	# 1
81) Methyl acetate	4.00	43	208997	52.08	UG	# 86
82) Cyclohexane	6.21	56	422326	50.02	UG	# 38
83) Methylcyclohexane	7.50	83	275759	48.01	UG	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

(QT Reviewed)

Quant Time: May 06 13:31:38 2014
Quant Method : C:\MSDCHEM\1\METHODS\K8050514.M
Quant Title : VOLATILE ORGANICS BY EPA METHOD 624
QLast Update : Mon May 05 15:15:11 2014
Response via : Initial Calibration



VOLATILE ORGANICS RUN LOGS
STANDARD PREP LOGS

DATE: 5/5/2014

INSTRUMENT: MSD-K

TUNE FILE: BFB_VO-

SEQUENCE FILE:

METHOD/CAL FILE: 8260B

ANALYST: Barbara Berberian

FRACTION: *3m*

BATCH: EA #####

STANDARD	LOG #	CONC.
BFB	L2483	25µg/mL
ISTD/SURR	L2482	150 µg/mL
Primary Mix	L2473	40 µg/mL
Primary Ac/Ac	L2472	1000 µg/mL
1,4-DIOXANE	L2481	10,000 µg/mL
Secondary Mix	L2478	40 µg/mL
Secondary Ac/Ac	L2479	1000 µg/mL

Vial #	Data File	Case #	Samp #	Vol (ml)	% Moist	Test	Method	VIAL #	pH<2?	Status
1	K4141	BFBA140505a		5	100		8260B			11:04
1	K4142	ICC001		5	100		8260B			OK
2	K4143	ICC002		5	100		8260B			OK
3	K4144	ICC005		5	100		8260B			OK
4	K4145	ICC020		5	100		8260B			OK
5	K4146	ICC100		5	100		8260B			OK
6	K4147	ICC150		5	100		8260B			OK
7	K4148	ICC200		5	100		8260B			OK
8	K4149	RB		5	100		8260B			
9	K4150	ICV100		5	100		8260B			OK
10	K4151	RB		5	100		8260B			
11	K4152	RB		5	100		8260B			
12	K4153	BLKA140505a		5	100		8260B			OK
13	K4154	3589	1	2.5	100	TCL VO + 15	8260C	2	YES	OK
14	K4155	LCSA140505a		5	100		8260B			OK
15	K4156	MS		5	100		8260B			OK
16	K4157	MSD		5	100		8260B			OK
17	K4158	RB		5	100		8260B			
18	K4159	4009	1	5	100	TCL VO + 15	8260C	2	YES	OK
19	K4160	3488	1	5	100	Level TCL VO for 8260+8011	8260C/8011	2	YES	CONFIRMS
20	K4161		2	5	100	Level TCL VO for 8260+8011	8260C/8011	2	YES	CONFIRMS
21	K4162	3843	1	5	100	BTEX + MTBE + TBA	8260C	2	YES	OK
22	K4163		2	5	100	BTEX + MTBE + TBA	8260C	2	YES	OK
23	K4164	RB		5	100		8260B			
24	K4165	BFBA140505b		5	100		8260B			10:42
25	K4166	CCV100		5	100		8260B			OK
26	K4167	RB		5	100		8260B			OK
27	K4168	RB		5	100		8260B			
28	K4169	BLKA140505b		5	100		8260B			OK
29	K4170	LCSA140505b		5	100		8260B			OK
30	K4171	3838	7MS	5	100		8260B		YES	OK
31	K4172	3838	7MSD	5	100		8260B		YES	OK
32	K4173	RB		5	100		8260B			
33	K4174	3838	1	5	100	601 List Volatiles	8260C	2	YES	OK
34	K4175	3838	2	5	100	601 List Volatiles	8260C	2	YES	OK
35	K4176	3838	3	5	100	601 List Volatiles	8260C	2	YES	OK
36	K4177	3838	4	5	100	601 List Volatiles	8260C	2	YES	OK
37	K4178	3838	5	5	100	601 List Volatiles	8260C	2	YES	OK

DATE: 5/5/2014

INSTRUMENT: MSD-K ▼

TUNE FILE: BFB_VO-

SEQUENCE FILE:

METHOD/CAL FILE: 8260B ▼

ANALYST: Barbara Berberian ▼

FRACTION: 

BATCH: EA #####

STANDARD	LOG #	CONC.
BFB	L2483	25 µg/mL
ISTD/SURR	L2482	150 µg/mL
Primary Mix	L2473	40 µg/mL
Primary Ac/Ac	L2472	1000 µg/mL
1,4-DIOXANE	L2481	10,000 µg/mL
Secondary Mix	L2478	40 µg/mL
Secondary Ac/Ac	L2479	1000 µg/mL

Vial #	Data File	Case #	Samp #	Vol (ml)	% Moist	Test	Method	VIAL #	pH<2?	Status
38	K4179	3838	6	5	100	601 List Volatiles	8260C	2	YES	OK
39	K4180	3838	7	5	100	601 List Volatiles	8260C	2	YES	OK
40	K4181	3838	8	5	100	601 List Volatiles	8260C	2	YES	OK
41	K4182	3838	9	0.25	100	601 List Volatiles	8260C	2	YES	RR more conc.
42	K4183	3838	10	5	100	601 List Volatiles	8260C	2	YES	OK
43	K4184	3838	11	5	100	601 List Volatiles	8260C	2	YES	OK
44	K4185	3838	12	5	100	601 List Volatiles	8260C	2	YES	OK
45	K4186	3838	13	5	100	601 List Volatiles	8260C	2	YES	OK
46	K4187	3838	9	0.5	100	601 List Volatiles	8260C	2	YES	OK

L2467 Internal Standard for 624 method 150 ppm L24
 1/29/14 Bmb of LS 974 @ 2500 ug/ml made 6/14/13 1.3/c
 4/29/14 Bmb of LS 975 @ 2500 ug/ml made 6/14/13 6/c
 expires 6/14/15 into 50 ml of MeOH

L2468 250 ppm screening work solution.
 pre 2/3/14 100ul (cat # VO-262-12) Lot # M111202005 at 200 ug/ml
 exp 5/3/14 dilut with 1ml MeOH.

L2469 2500 ug/ml BFB from stock for screen. Add to BFB from next in to
 pre 2/3/14 5ml MeOH. (1-Bromo-4-fluorobenzene)
 exp 2/3/15

L2470 500 ppm BFB at in to for screen 1ml of "2469" (250 ppm
 pre 2/3/14 BFB stock) in to 5ml MeOH.
 exp 5/3/14

L2471 Secondary Acrolein / Acrylonitrile @ 10000 ppm
 2/18/14 1ml of ECS-A-038, Lot: 022414
 5/18/14 expires 5/24/14 into 10ml of MeOH

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Acrolein/Acrylonitrile Mix 10,000 ppm (ECS-A-038) Lot: 022414 Exp: 5-24-2014

L2472 Primary Acrolein / Acrylonitrile @ 1000 ppm

135
 2.2.14

AccuStandard 125 Market St. • New Haven, CT 06513 • USA
 Tel: 203-786-5290 • www.accustandard.com
 M-603-M-5X
 Acrolein & Acrylonitrile
 5.0 mg/mL in MeOH:Water 90:10
 Lot: 213111176 2 comps.
 Exp: May 13, 2014 **HIGHLY FLAMMABLE**

1ml of
 AccuStandard
 M-603-M-5X

into 5mls MeOH

expires 5/13/14

L2473

Primary working standard 40 ppm

1.3/05/14 1ml of DWM-588-1 received 8/20/13 exp. 06/30/16

6/05/14 1ml of ECS-A-040 2-chloroethyl vinyl ether @2000ppm

Lot: CVE020 received 12/27/13 exp. 11/17/15

0.4ml of TBA@10.000 LS990 made 11/2/13 exp. 11/12/14

0.4ml of DIPE@10.000ppm LS982, made 8/13/13, exp. 8/13/14

1ml of ECS-A-043 8260 ketones @2000ppm Lot: KTM21 received 12/27/13 exp. 10/11/15

1ml of ECS-A-044 Add#ons #1 2000ppm Lot: AO126, received 12/27/13 exp. 8/31/16

1ml of VO-IALNJ @2000ppm Lot: received 10/2/13 exp. 9/26/16

into 50ml of MeOH

SPEX CertiPrep

Calibrate with Confidence™

Cat# VO-IALNJ-1
Lot# C1130926004
Date Opened _____

Custom

Contains the following in 1 Methanol (Purge & Trap Grade)

2000 µg/mL	1,1,2-Trichlorotrifluoroethane
2000 µg/mL	Cyclohexane
2000 µg/mL	Methyl acetate
2000 µg/mL	Methylcyclohexane

VO-IALNJ-1
C1130926004

DWM-588-1

Lot: CK-1487
Exp: 06/30/2016

VOC Mixture

60 analyte(s) at 2000 µg/mL in methanol

250 Smith St, #0 Kingstown, RI 02852 USA

ECS

Environmental Consulting and Supplies, Inc.
To reorder please call: (800) 327-9559

2-Chloroethyl vinyl ether 2000 ppm (ECS-A-040) Lot: CVE020 Exp: 11-17-2015

Rec. 12/27/13

ECS

Environmental Consulting and Supplies, Inc.
To reorder please call: (800) 327-9559

Method 8260 Add-ons #1 2000 ppm (ECS-A-044) Lot: AO126 Exp: 8-31-2016

Rec. 12/27/13

ECS

Environmental Consulting and Supplies, Inc.
To reorder please call: (800) 327-9559

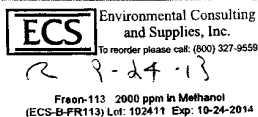
8260 Ketones Mixture 2000 ppm (ECS-A-043) Lot: KTM21 Exp: 10-11-2015

Rec. 12/27/13

L2477

Freon 113 @ 20ppm for 524.2

3/26/14



250ml of ECS Freon 113
1.1, 102411 opened 3/26/14
into 25mls MeOH

exp. 5/24/14

L2478

MTBE/TMA/DIPE @ 500ppm/1000ppm/5000ppm

P. 3/26/14

67.6ul of MTBE neat Sigma-Aldrich Bldg. #

E. 3/26/15

received 3/26/14

19ul of tert-butyl alcohol neat Chem Service

Lot: SHBC 0066V received 11/15/12

6ul of DIPE neat Sigma-Aldrich Bldg. #

received 3/26/14

into 10ml of MeOH

L2479

Secondary Acrolein/Acrylonitrile @ 1000ppm

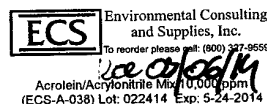
P. 3/26/14

1ml of ECS-A-038, Lot: 022414, exp. 5/24/14

E. 3/26/14

into 10ml of MeOH

1.4



L2480

Secondary source of 40 ppm

P. 3/27/14

98ml of L2478 MTBE/TMA/DIPE @ 500ppm/1000ppm/5000ppm

6/27/14

made 3/26/14 exp. 05/26/15

2mls of ECS-A-049 Add-Ons Mix #3 2000ppm

Lot: A0309 received 01/24/14 exp. 11/16/2015

2mls of ECS-524.2/8260 Main Mix 2000ppm

ECS-A-033 Lot: 524MM20, received 10/09/13 exp. 11/27/14

4mls of Volatiles Gases Mix 1000 ppm ECS-A-013
 Lot: VGM022, received 01/24/14 exp. 11/6/2015
 2mls of M-8260 ADD-10x, received 01/28/14
 exp 04/03/14 into 100ml of MeOH

L24
 P.4
 E.7

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Rec 10/08/13
 524 2/8260 Main Mix 2000 ppm
 (ECS-A-033) Lot: 524MM20 Exp: 11-27-2014

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Method 8260 Add-Ons Mix #3 2000 ppm
 (ECS-A-049) Lot: AO309 Exp: 11-16-2015
 Rec 01/24/14

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Rec 01/24/14
 Volatile Gases Mix 1000 ppm
 (ECS-A-013) Lot: VGM022 Exp: 11-6-2016

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Rec 01/24/14
 Volatile Gases Mix 1000 ppm
 (ECS-A-013) Lot: VGM022 Exp: 11-6-2016

L24
 P.4
 E.7

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Rec 10/08/13
 524 2/8260 Main Mix 2000 ppm
 (ECS-A-033) Lot: 524MM20 Exp: 11-27-2014

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Method 8260 Add-Ons Mix #3 2000 ppm
 (ECS-A-049) Lot: AO309 Exp: 11-16-2015
 Rec 01/24/14

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Rec 01/24/14
 Volatile Gases Mix 1000 ppm
 (ECS-A-013) Lot: VGM022 Exp: 11-6-2016

ECS Environmental Consulting and Supplies, Inc.
 To reorder please call: (800) 327-9559
 Rec 01/24/14
 Volatile Gases Mix 1000 ppm
 (ECS-A-013) Lot: VGM022 Exp: 11-6-2016

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA
 Tel. 203-786-5290 • www.accustandard.com
 M-8260-ADD-10X
 Method 8260 Additions
 2.0 mg/mL in MeOH
 Lot: 213121006
 Exp: Apr 3, 2014
 8 comps.
HIGHLY FLAMMABLE

FOR LABORATORY USE ONLY

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

STORAGE Freeze (<-10° C)

AccuStandard® 125 Market St. • New Haven, CT 06513 • USA
 Tel. 203-786-5290 • www.accustandard.com
 M-8260-ADD-10X
 Method 8260 Additions
 2.0 mg/mL in MeOH
 Lot: 213121006
 Exp: Apr 3, 2014
 8 comps.
HIGHLY FLAMMABLE

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AccuStandard® 125 Market St. • New Haven, CT 06513 • USA
 Tel. 203-786-5290 • www.accustandard.com
 M-8260-ADD-10X
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 2.0 mg/mL in MeOH
 Lot: 213121006
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 M-8260-ADD-10X
 Method 8260 Additions
 2.0 mg/mL in MeOH
 Lot: 213121006
 Exp: Apr 3, 2014
 8 comps.
HIGHLY FLAMMABLE

STORAGE Freeze (<-10° C)



L2481 1,4-dioxane @ 10000 ppm transferred 1ml of
 P. 04/05/14 ECS-A-DIOX received 06/07/13 Lot: 111712
 E. 07/05/14 exp. 11/17/15

L24
 Pre 4
 exp 7
 L24
 Pre 4
 exp 7

1-013

L2482

P 4/11/14

E 7/11/14

0260 internal standard /mmpate 250 up/ml
5ml of LS 974 2500 up/ml made 6/14/13
Op 7/14/14
5ml of LS 973 2500 up/ml made 6/14/13 op.
06/14/14 into 50 ml of MeOH

L2483

P 4/11/14

E 7/11/14

BFD running 25 PPM
0.5 ml of EGS-A-017 lot: BFD 018 received
11/28/12 Op. 10/18/14 into 0.5 ml of MeOH final
volume 1ml

~~L2484~~

L2484

Pre 4/21/14

Op 7/21/14

~~2500 up/ml BFB from stock for screen.~~
700 ppm BFB at in to for screen 1ml of "2469" (2500 ppm BFB stock)
in to 5ml MeOH.

L2485

Pre 4/21/14

Op 6/5/14

YH

250 PPM Screening work solution.
Sol (cat# W-2A2-12) Lot# M11120205 at 2000 up/ml dilute with
1ml MeOH.

1 of

EPA TO-15 DATA PACKAGE

ANALYTICAL DATA PACKAGE FOR THE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY NEW YORK 12233

Integrated Analytical Laboratories, LLC
Project#: Swivelier
SDG #: E14-03224
Date of first sample receipt: 5/1/2014

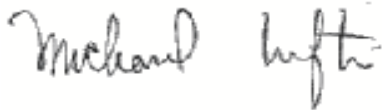
Randolph, NJ 07869
Contract #: NA
NJDEP Certification#: 14751
Date of last sample receipt: 5/1/2014

Client: Environmental Waste Management Associates
Project/Site: Swivelier/NY

Client Sample Number	Laboratory Sample	Sample Location	Date/Time of Collection
SG	E14-03224-01	NA	4/29/2014 12:14

This report shall not be reproduced, except in its entirety, without the written consent of Integrated Analytical Laboratories, LLC. The test results included in this report relate only to the samples analyzed. The results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

Date: May 15, 2014



Lauren Jenkins
Air Division Quality Assurance Officer

Date: May 15, 2014

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Laboratory Acronyms

The following is a list of laboratory acronyms commonly used in EPA Method TO-15 testing:

Acronym	Definition
BLK	Blank/Method Blank
BFB	4-Bromofluorobenzene (Tuning Standard)
CAS Number	Chemical Abstract Service Registry Number
cc	cubic centimeters
CCCVS	Closing Calibration Check Verification Standard
COC	Chain of Custody
DCVS	Daily Calibration Verification Standard
DF	Dilution Factor
EPA	U. S. Environmental Protection Agency (aka USEPA)
"Hg	Inches of Mercury
IA	Indoor Air
IASL	Indoor Air Screening Level
ICAL	Initial Calibration
ICVSS	Initial Calibration Verification Standard
ISTD	Internal Standard
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LCS	Laboratory Control Sample/Spike
LLTO-15	Low Level TO-15
MDL	Method Detection Limit
MDLV	Method Detection Limit Verification
ml	milliliters
ND	Not Detected (at or above RL)
NJDEP	New Jersey Department of Environmental Protection
PM	Project Manager
ppbv	parts per billion, volume-to-volume ratio
PQL	Practical Quantitation Limit - MDLx3
QA	Quality Assurance
QC	Quality Control
RAL	Rapid Action Limit
RL	Reporting Limit
RLLCS	Reporting Limit Laboratory Control Sample
RPD	Relative Percent Difference
RRF	Relative Response Factor
RSD	Relative Standard Deviation
SDG	Sample Delivery Group
SGSL	Soil Gas Screening Levels
SS	Sub Slab
TAT	Turnaround Time
TIC	Tentatively Identified Compound
µg/m ³	micrograms per cubic meter

Section I: Chain of Custody

Section II: Methodology Review

Methodology Summary for Air Collected from Hazardous Waste Site Contract

Laboratory:	Integrated Analytical Lab, LLC	Project No:	Swivelier
Location:	Randolph, NJ	SDG No:	E14-03224

Name	Required Methodology	Indicate Method
Volatile Organics	US EPA TO-15	US EPA Method TO-15

Section III: Case Narrative

CASE NARRATIVE

ANALYTICAL DATA PACKAGE FOR THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ALBANY NEW YORK 12233

Integrated Analytical Laboratories, LLC

Project #: Swivelier

SDG #: E14-03224

Date of first sample receipt: 5/1/2014

Randolph, NJ 07869

Contract#: NA

NJDEP Certification#: 14751

Date of last sample receipt: 5/1/2014

Client: Environmental Waste Management Associates

Project/Site: Swivelier / NY

Client ID	Lab ID	Receipt Date	Analysis Date	DF	Diluted For
SG	E14-03224-01	05/01/2014	05/09/2014	10.0	NA

Sample Receipt: Samples were received in good condition. Documentation was in order.
Samples were received at IAL by: Padraic Jenkins

Sample Preparation: None required.

Sample Analysis:

Hold Time: All within recommended hold times.

Instrument Calibration: Meets method criteria.

Analysis performed by: Jeff Schmitt

Analysis nonconformities: none

Tentatively Identified Compounds: Tentatively Identified Compounds (TICs) are determined using a NIST library search. TICs are reported at 10% of the applicable internal standard. Dilution factors are calculated into the final reported result. Since the compounds found are tentatively identified, the conversion from ppbv to ug/m3 may not be made.

Canister-to-Canister dilutions: none

Dilutions: Dilutions, if necessary, will be conducted directly on the instrument up to a 50x dilution. When dilutions of 100x to 50,000x are necessary, the laboratory must inject a volume of sample into another certified clean canister and add humidified Z-1 zero air to the remainder of the canister volume. Tedlar bags are not used for dilutions.

On-instrument dilutions are conducted as follows:

Dilution Factor	Sample Volume Injected
1	500ml
2.5	200ml
5	100ml
10	50ml
20	25ml
25	20ml
50	10ml

CASE NARRATIVE

ANALYTICAL DATA PACKAGE FOR THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ALBANY NEW YORK 12233

Integrated Analytical Laboratories, LLC

Project #: Swivelier

SDG #: E14-03224

Date of first sample receipt: 5/1/2014

Randolph, NJ 07869

Contract#: NA

NJDEP Certification#: 14751

Date of last sample receipt: 5/1/2014

Client: Environmental Waste Management Associates

Project/Site: Swivelier / NY

Canister-to-canister dilutions are conducted as follows:

A certified clean canister is obtained and evacuated to approximately -30"Hg. Both the clean/dilution canister and sample canister are fitted with a ¼" Swagelok® nut fitting equipped with septa. Depending on dilution factor necessary, a sample aliquot is removed from the canister and injected into the clean canister using 30cc Multifit gas-tight syringe. Once the correct sample aliquot has been transferred, the dilution canister should be connected to the humidified Z-1 zero air supply and filled to ambient pressure (0"Hg).

Dilution Factor	Sample Aliquot	Z-1 Make-up Added
100	60ml	5940ml
1000	6ml	5994ml

If further dilutions need to be made from the dilution canister, they may be made on-instrument. Using a 100x dilution canister, the following on-instrument dilutions can be produced:

Dilution Factor	Sample Volume Injected
100	500ml
250	200ml
500	100ml
1000	50ml
2000	25ml
2500	20ml
5000	10ml

Using a 1000x dilution canister, the following on-instrument dilutions can be produced:

Dilution Factor	Sample Volume Injected
1000	500ml
2500	200ml
5000	100ml
10,000	50ml
20,000	25ml
25,000	20ml
50,000	10ml

If further dilutions need to be made from the dilution canister, beyond 50,000x, a subsequent canister-to-canister dilution must be made using the above prescribed protocol.

CASE NARRATIVE

ANALYTICAL DATA PACKAGE FOR THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ALBANY NEW YORK 12233

Integrated Analytical Laboratories, LLC

Project #: Swivelier

SDG #: E14-03224

Date of first sample receipt: 5/1/2014

Randolph, NJ 07869

Contract#: NA

NJDEP Certification#: 14751

Date of last sample receipt: 5/1/2014

Client: Environmental Waste Management Associates

Project/Site: Swivelier / NY

GC Column and ID: Instrument AA: RTX-1 SN 1119138, Instrument AF: RTX-1 SN 869201

Calibration Standards: Only gas phase standards were used. Primary and second-source standards provided by Scott Specialty Gases / Air Liquide

Working Standards: Primary source standards are created from:
- Scott Gas Cylinder #AAL073524, valid 3/4/13 through 2/10/15
@ 100ppb per compound, with exception of m&p-xylenes @ 200ppb. Standard is directly introduced into the instrument for 40ppbv, 20ppbv, 10ppbv, and 2ppbv concentrations. Dilutions are made accordingly, on instrument, with humidified clean air. The 10ppbv standard is also used for the Daily Calibration Verification Standard (DCVS) and Closing Calibration Verification Standard (CCCVS)

On Instrument AF, a canister for the 0.20ppbv standard is prepared and contains a standard at 1ppbv (2ppbv m&p-xylenes). A 1:5 dilution is made from this canister. This same standard canister is used for the Reporting Limit Laboratory Control Sample (RLLCS).

On Instrument AA, the 0.20ppbv standard is diluted on instrument, using humidified clean air, from the primary source cylinder. This same process is used for the RLLCS.

The second source standard, used as the Initial Calibration Verification Standard (ICVSS) and Laboratory Control Sample (LCS), is introduced into the instrument in the same manner as the primary source standard, using:

- Scott Gas Cylinder #CC358741, valid 6/3/13 through 6/4/14.
@ 100ppb per compound, with exception of m&p-xylenes @ 200ppb.

Internal standards are created from:

- Scott Gas, Cylinder #ALM029426, valid 5/13/2013 through 5/14/2016 or
- Scott Gas, Cylinder #ALM037473, valid 1/9/2013 through 12/28/2013. This cylinder was recertified and is also valid 2/4/2014 through 2/5/2015.
@ 100ppb per compound. Standard is directly introduced into the instrument to reach the 10ppbv concentrations. 1:10 Dilutions are made on instrument with humidified clean air. 50ml of internal standard is added to every standard, method blank, instrument blank, and sample run.

03/25/2014

100 ppbv internal standard mix - prepared in cylinder #ALM029426

10 ppbv per standard/sample - 50 ml injected

100 ppbv calibration standard - prepared in cylinder #AAL073524

40 ppbv standard - 200 ml injected

20 ppbv standard - 100 ml injected

10 ppbv standard* - 50 ml injected

*Standard also used for CCCVS

2 ppbv standard - 10 ml injected

CASE NARRATIVE

ANALYTICAL DATA PACKAGE FOR THE NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION ALBANY NEW YORK 12233

Integrated Analytical Laboratories, LLC

Project #: Swivelier

SDG #: E14-03224

Date of first sample receipt: 5/1/2014

Randolph, NJ 07869

Contract#: NA

NJDEP Certification#: 14751

Date of last sample receipt: 5/1/2014

Client: Environmental Waste Management Associates

Project/Site: Swivelier / NY

0.20 ppbv standard* - 1 ml injected

*Standard also used for RLLCS

04/03/2014

100 ppbv internal standard mix - prepared in cylinder #ALM029426

10 ppbv per standard/sample - 50 ml injected

100 ppbv calibration standard - prepared in cylinder #AAL073524

10 ppbv standard* - 50 ml injected

*Standard also used for DCVS & CCCVS

0.20 ppbv standard* - 1 ml injected

*Standard also used for RLLCS

Method Blank - prepared in canister #SC0227

500 ml injected

05/08/2014

100 ppbv internal standard mix - prepared in cylinder #ALM029426

10 ppbv per standard/sample - 50 ml injected

100 ppbv calibration standard - prepared in cylinder #AAL073524

40 ppbv standard - 200 ml injected

20 ppbv standard - 100 ml injected

10 ppbv standard* - 50 ml injected

*Standard also used for CCCVS

2 ppbv standard - 10 ml injected

0.20 ppbv standard* - 1 ml injected

*Standard also used for RLLCS

05/09/2014

100 ppbv internal standard mix - prepared in cylinder #ALM029426

10 ppbv per standard/sample - 50 ml injected

100 ppbv calibration standard - prepared in cylinder #AAL073524

10 ppbv standard* - 50 ml injected

*Standard also used for DCVS & CCCVS

0.20 ppbv standard* - 1 ml injected

*Standard also used for RLLCS

Method Blank - prepared in canister #SC0227

500 ml injected

Sample E14-03224-01 - sample taken in canister #1769

50 ml sample volume injected, 1x dilution

CASE NARRATIVE

**ANALYTICAL DATA PACKAGE FOR THE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY NEW YORK 12233**

Integrated Analytical Laboratories, LLC

Project #: Swivelier

SDG #: E14-03224

Date of first sample receipt: 5/1/2014

Randolph, NJ 07869

Contract#: NA

NJDEP Certification#: 14751

Date of last sample receipt: 5/1/2014

Client: Environmental Waste Management Associates

Project/Site: Swivelier / NY

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. All conversions are based upon a room temperature of 77°F(25°C) and room pressure of 101.325 kPa (1atm).

I certify that this data package is in compliance with the terms and conditions of this contract, both technically and for completeness, for other than the conditions detailed above. Release of data contained in this hardcopy data package and in the computer-readable data submitted on CD/diskette and by electronic mail has been authorized by the laboratory manager or his designee, as verified by the following signature.



Michael H. Leftin, Ph.D.
Laboratory Director

May 15, 2014
Date

Section IV: Method Detection Limit Summary

METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

Matrix: Air
 Column ID: Restek Rtx-1, 60 meter, 0.32mm ID, 1 um
 Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: Instrument AA)
 Report Prepared by: Jeff Schmitt
 Preparation Date: 7/16/2013

MDL Effective Date: 7/11/2013
 MDL Expiration Date: 7/11/2014
 MDL Analysis Date: 7/11/2013
 Analyst: Jeff Schmitt

Filename	Run #	Date	Time	Filename	Run #	Date	Time
aa6834	Run 1	7/11/2013	12:13	aa6839	Run 6	7/11/2013	14:53
aa6835	Run 2	7/11/2013	12:45	aa6840	Run 7	7/11/2013	15:25
aa6836	Run 3	7/11/2013	13:17				
aa6837	Run 4	7/11/2013	13:49				
aa6838	Run 5	7/11/2013	14:21				

Compound Name	Run 1*	Run 2*	Run 3*	Run 4*	Run 5*	Run 6*	Run 7*	MEAN Value	TRUE Value	Percent Recovery	Std Dev Conc	MDL ppbv	RL ppbv	RL ug/m3	True value/ MDL
Propene	0.235	0.168	0.225	0.240	0.209	0.139	0.233	0.207	0.200	103.5	0.0386	0.121	0.200	0.344	1.65
Dichlorodifluoromethane	0.237	0.220	0.227	0.227	0.235	0.293	0.234	0.239	0.200	120	0.0246	0.0772	0.200	0.989	2.59
Chloromethane	0.191	0.172	0.224	0.247	0.178	0.230	0.096	0.191	0.200	95.5	0.0506	0.159	0.200	0.413	1.26
1,2-Dichlorotetrafluoroethane	0.216	0.198	0.199	0.197	0.203	0.249	0.200	0.209	0.200	104	0.0190	0.0598	0.200	1.40	3.34
Vinyl chloride	0.185	0.169	0.166	0.161	0.162	0.206	0.152	0.172	0.200	85.8	0.0184	0.0577	0.200	0.511	3.47
1,3-Butadiene	0.164	0.154	0.137	0.141	0.154	0.170	0.120	0.149	0.200	74.3	0.0173	0.0542	0.200	0.442	3.69
n-Butane	0.189	0.163	0.162	0.152	0.166	0.197	0.149	0.168	0.200	84.2	0.0181	0.0569	0.200	0.474	3.52
Bromomethane	0.181	0.162	0.160	0.159	0.175	0.192	0.167	0.171	0.200	85.4	0.0124	0.0389	0.200	0.777	5.14
Chloroethane	0.207	0.183	0.180	0.165	0.177	0.209	0.179	0.186	0.200	92.8	0.0162	0.0510	0.200	0.528	3.92
Ethanol	0.0485	0.0301	0.0202	0.0393	0.0509	0.0329	0.0194	0.0345	0.200	17.2	0.0125	0.0394	0.200	0.377	5.08
Vinyl bromide	0.174	0.174	0.163	0.158	0.156	0.199	0.149	0.168	0.200	83.8	0.0167	0.0523	0.200	0.874	3.82
Acrolein	0.0923	0.0758	0.0705	0.0533	0.0671	0.0489	0.0634	0.0673	0.200	33.7	0.0145	0.0454	0.200	0.458	4.40
Acetone	0.203	0.195	0.182	0.161	0.106	0.188	0.089	0.161	0.200	80.3	0.0453	0.142	0.200	0.475	1.41
Trichlorofluoromethane	0.222	0.212	0.209	0.213	0.216	0.271	0.211	0.222	0.200	111	0.0219	0.0688	0.200	1.12	2.91
Isopropanol	0.095	0.123	0.107	0.087	0.101	0.095	0.081	0.099	0.200	49.3	0.0138	0.0432	0.200	0.492	4.63
n-Pentane	0.157	0.151	0.146	0.133	0.128	0.166	0.130	0.144	0.200	72.2	0.0146	0.0458	0.200	0.589	4.37
1,1-Dichloroethene	0.186	0.167	0.170	0.160	0.165	0.200	0.148	0.171	0.200	85.4	0.0170	0.0535	0.200	0.793	3.74
Methylene chloride	0.274	0.264	0.253	0.246	0.250	0.294	0.244	0.261	0.200	130	0.0181	0.0570	0.200	0.695	3.51
Tert-butyl alcohol	0.143	0.129	0.130	0.127	0.116	0.145	0.119	0.130	0.200	64.9	0.0109	0.0343	0.200	0.606	5.83
Allyl Chloride	0.154	0.152	0.140	0.134	0.143	0.173	0.128	0.146	0.200	73.1	0.0149	0.0467	0.200	0.626	4.29
1,1,2-Trichloro-1,2,2-trifluoroethane	0.204	0.201	0.197	0.202	0.204	0.247	0.199	0.208	0.200	104	0.0176	0.0552	0.200	1.53	3.62
Carbon disulfide	0.216	0.201	0.203	0.199	0.197	0.245	0.194	0.208	0.200	104	0.0176	0.0554	0.200	0.623	3.61
1,2-Dichloroethene (trans)	0.176	0.168	0.163	0.156	0.167	0.202	0.152	0.169	0.200	84.5	0.0164	0.0516	0.200	0.793	3.88
1,1-Dichloroethane	0.194	0.186	0.175	0.176	0.185	0.224	0.172	0.188	0.200	93.9	0.0179	0.0562	0.200	0.809	3.56
Methyl tert-butyl ether	0.147	0.136	0.131	0.124	0.128	0.145	0.116	0.133	0.200	66.3	0.0109	0.0343	0.200	0.721	5.83
Methyl ethyl ketone	0.0857	0.0890	0.0512	0.0420	0.0367	0.0163	0.0576	0.0541	0.200	27.0	0.0262	0.0823	0.200	0.590	2.43
1,2-Dichloroethene (cis)	0.171	0.165	0.153	0.148	0.152	0.185	0.144	0.160	0.200	79.8	0.0148	0.0464	0.200	0.793	4.31
Ethyl acetate	0.0866	0.0348	0.0470	0.0775	0.0825	0.0734	0.0670	0.0670	0.200	33.5	0.0192	0.0602	0.200	0.721	3.32
n-Hexane	0.151	0.138	0.138	0.132	0.133	0.160	0.125	0.140	0.200	69.8	0.0119	0.0372	0.200	0.705	5.37
Chloroform	0.202	0.196	0.188	0.198	0.201	0.252	0.194	0.204	0.200	102	0.0216	0.0679	0.200	0.977	2.94
Tetrahydrofuran	0.132	0.122	0.108	0.086	0.104	0.121	0.102	0.111	0.200	55.4	0.0154	0.0483	0.200	0.590	4.14
1,2-Dichloroethane	0.196	0.189	0.189	0.190	0.195	0.233	0.182	0.196	0.200	98.1	0.0169	0.0531	0.200	0.809	3.77
1,1,1-Trichloroethane	0.197	0.190	0.193	0.190	0.196	0.238	0.187	0.199	0.200	99.3	0.0176	0.0552	0.200	1.09	3.62
Benzene	0.167	0.158	0.153	0.150	0.147	0.187	0.143	0.158	0.200	78.9	0.0149	0.0469	0.200	0.639	4.26
Carbon tetrachloride	0.203	0.202	0.197	0.196	0.205	0.251	0.199	0.208	0.200	104	0.0195	0.0611	0.200	1.26	3.27
Cyclohexane	0.145	0.130	0.123	0.124	0.123	0.148	0.116	0.130	0.200	65.0	0.0122	0.0383	0.200	0.688	5.22
1,2-Dichloropropane	0.181	0.178	0.160	0.165	0.165	0.204	0.156	0.173	0.200	86.3	0.0167	0.0523	0.200	0.924	3.82
Bromodichloromethane	0.195	0.187	0.192	0.184	0.184	0.244	0.189	0.196	0.200	98.1	0.0213	0.0669	0.200	1.34	2.99
2,2,4-Trimethylpentane	0.143	0.134	0.129	0.126	0.124	0.153	0.118	0.133	0.200	66.3	0.0122	0.0382	0.200	0.934	5.24
Trichloroethene	0.169	0.162	0.157	0.159	0.159	0.203	0.156	0.166	0.200	83.1	0.0165	0.0518	0.200	1.07	3.86
1,4-Dioxane	0.101	0.0975	0.0865	0.0501	0.0580	0.108	0.0838	0.0836	0.200	41.8	0.0219	0.0689	0.200	0.721	2.90
Methyl methacrylate	0.0850	0.0878	0.0897	0.0725	0.0733	0.0567	0.0776	0.0775	0.200	38.7	0.0114	0.0359	0.200	0.819	5.57
n-Heptane	0.130	0.128	0.122	0.120	0.114	0.143	0.110	0.124	0.200	62.0	0.0109	0.0341	0.200	0.820	5.86
1,3-Dichloropropene (cis)	0.138	0.129	0.121	0.122	0.117	0.134	0.112	0.125	0.200	62.4	0.00936	0.0294	0.200	0.908	6.80
Methyl isobutyl ketone	0.109	0.091	0.091	0.090	0.085	0.112	0.081	0.094	0.200	47.1	0.0117	0.0367	0.200	0.820	5.45
1,3-Dichloropropene (trans)	0.100	0.104	0.100	0.103	0.098	0.129	0.092	0.104	0.200	51.8	0.0117	0.0368	0.200	0.908	5.43
1,1,2-Trichloroethane	0.172	0.167	0.161	0.167	0.164	0.212	0.158	0.172	0.200	85.8	0.0186	0.0585	0.200	1.09	3.42
Toluene	0.141	0.129	0.127	0.121	0.117	0.144	0.112	0.127	0.200	63.6	0.0120	0.0377	0.200	0.754	5.30
Methyl n-butyl ketone	0.027	0.056	0.051	0.035	0.037	0.053	0.046	0.043	0.200	21.7	0.0108	0.0340	0.200	0.818	5.88
Dibromochloromethane	0.174	0.166	0.163	0.165	0.167	0.214	0.163	0.173	0.200	86.5	0.0186	0.0583	0.200	1.70	3.43

METHOD DETECTION LIMIT (MDL) REPORT

Integrated Analytical Laboratories - Randolph, NJ

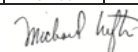
Matrix: Air
 Column ID: Restek Rtx-1, 60 meter, 0.32mm ID, 1 um
 Instrument ID: GC - Agilent 7890A / MS - Agilent 5975C (IAL ID: Instrument AA)
 Report Prepared by: Jeff Schmitt
 Preparation Date: 7/16/2013

MDL Effective Date: 7/11/2013
 MDL Expiration Date: 7/11/2014
 MDL Analysis Date: 7/11/2013
 Analyst: Jeff Schmitt

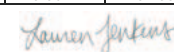
Filename	Run #	Date	Time	Filename	Run #	Date	Time
aa6834	Run 1	7/11/2013	12:13	aa6839	Run 6	7/11/2013	14:53
aa6835	Run 2	7/11/2013	12:45	aa6840	Run 7	7/11/2013	15:25
aa6836	Run 3	7/11/2013	13:17				
aa6837	Run 4	7/11/2013	13:49				
aa6838	Run 5	7/11/2013	14:21				

Compound Name	Run 1*	Run 2*	Run 3*	Run 4*	Run 5*	Run 6*	Run 7*	MEAN Value	TRUE Value	Percent Recovery	Std Dev Conc	MDL ppbv	RL ppbv	RL ug/m3	True value/ MDL
1,2-Dibromoethane	0.154	0.151	0.150	0.151	0.150	0.193	0.145	0.156	0.200	78.1	0.0164	0.0515	0.200	1.54	3.88
Tetrachloroethene	0.179	0.166	0.165	0.161	0.165	0.208	0.159	0.172	0.200	85.9	0.0171	0.0537	0.200	1.36	3.72
Chlorobenzene	0.190	0.152	0.154	0.152	0.147	0.184	0.150	0.161	0.200	80.6	0.0176	0.0553	0.200	0.921	3.62
Ethylbenzene	0.141	0.117	0.111	0.104	0.106	0.123	0.096	0.114	0.200	57.0	0.0148	0.0466	0.200	0.869	4.30
Xylenes (m&p)	0.286	0.222	0.212	0.212	0.200	0.244	0.189	0.224	0.400	55.9	0.0326	0.102	0.400	1.74	1.95
Bromoform	0.177	0.144	0.140	0.150	0.146	0.178	0.149	0.155	0.200	77.4	0.0160	0.0502	0.200	2.07	3.98
Styrene	0.114	0.092	0.087	0.082	0.082	0.095	0.076	0.090	0.200	44.8	0.0126	0.0395	0.200	0.852	5.07
Xylene (o)	0.146	0.115	0.110	0.106	0.102	0.124	0.094	0.114	0.200	56.9	0.0170	0.0533	0.200	0.869	3.75
1,1,2,2-Tetrachloroethane	0.193	0.158	0.151	0.156	0.157	0.193	0.153	0.166	0.200	82.8	0.0186	0.0583	0.200	1.37	3.43
n-Nonane	0.125	0.096	0.092	0.086	0.082	0.099	0.079	0.094	0.200	47.0	0.0157	0.0493	0.200	1.05	4.05
Cumene	0.151	0.119	0.117	0.114	0.110	0.133	0.104	0.121	0.200	60.7	0.0157	0.0493	0.200	0.983	4.06
2-Chlorotoluene	0.142	0.110	0.109	0.103	0.101	0.121	0.092	0.111	0.200	55.5	0.0162	0.0510	0.200	1.04	3.92
n-Propyl benzene	0.133	0.105	0.099	0.095	0.093	0.111	0.088	0.103	0.200	51.6	0.0151	0.0475	0.200	0.982	4.21
4-Ethyltoluene	0.122	0.0909	0.0907	0.0868	0.0828	0.0983	0.0810	0.0933	0.200	46.6	0.0141	0.0443	0.200	0.983	4.52
1,3,5-Trimethylbenzene	0.125	0.0954	0.0929	0.0884	0.0865	0.103	0.0849	0.0965	0.200	48.2	0.0139	0.0435	0.200	0.983	4.60
1,2,4-Trimethylbenzene	0.112	0.0869	0.0833	0.0836	0.0779	0.0933	0.0709	0.0868	0.200	43.4	0.0130	0.0409	0.200	0.983	4.89
Benzyl chloride	0.0597	0.0512	0.0488	0.0479	0.0548	0.0606	0.0483	0.0530	0.200	26.5	0.00539	0.0169	0.200	1.04	11.8
1,3-Dichlorobenzene	0.155	0.121	0.122	0.114	0.110	0.142	0.110	0.125	0.200	62.3	0.0171	0.0536	0.200	1.20	3.73
1,4-Dichlorobenzene	0.138	0.110	0.102	0.100	0.112	0.122	0.0970	0.112	0.200	55.8	0.0145	0.0454	0.200	1.20	4.41
1,2-Dichlorobenzene	0.154	0.117	0.117	0.112	0.113	0.132	0.108	0.122	0.200	60.9	0.0162	0.0510	0.200	1.20	3.92
1,2,4-Trichlorobenzene	0.134	0.102	0.097	0.0998	0.091	0.110	0.082	0.1023	0.200	51.2	0.0165	0.0518	0.200	1.48	3.86
Naphthalene	0.0779	0.0643	0.0642	0.0500	0.0501	0.0660	0.0471	0.0599	0.200	30.0	0.0112	0.0353	0.200	1.05	5.67
1,3-Hexachlorobutadiene	0.197	0.150	0.155	0.155	0.149	0.189	0.153	0.164	0.200	81.9	0.0200	0.0627	0.200	2.13	3.19

Processing Method: C:\MSDCHEM\1\METHODS\AA0710.M
 Initial Calibration: C:\MSDCHEM\1\METHODS\AA0710.M
 Location of this file: P:\Paldata\Pal Reports\TO-15 MDLS



Michael Leftin, Ph.D.
 Laboratory Director



Lauren Jenkins
 Air Division Quality Assurance Officer

Date: July 16, 2013

Date: July 16, 2013

Instrument used for Clean Canister Certification Analysis? YES

Section V: Quality Control Data Summary

BFB Tune Summary

Method Blank

Laboratory Control Sample

Laboratory Sample Duplicate

Internal Standard Area Summary

Data Path: D:\Agilent GCMS\03-25-14\
Data File: AA8981BFB.D
Acq On: 3/25/2014 9:25:00AM
Operator: jls
Sample: BFB
Misc: ALM029426
ALS Vial: 1 **Multiplier:** 1
Integration File: rteint.p
Method: C:\msdchem\1\METHODS\0310.M
Last Update: Mon Mar 10 15:19:47 2014
Spectrum Information:

Pass/Fail	Target Mass	Rel. to Mass	Lower Limit %	Higher Limit %	Raw Abundance	% Relative Abundance
PASS	50	95	8	40	140880	26.9
PASS	75	95	30	66	293886	56.0
PASS	95	95	100	100	524521	100.0
PASS	96	95	5	9	41232	7.9
PASS	173	174	0.00	2	3079	0.7
PASS	174	95	50	100	458217	87.4
PASS	175	174	4	9	29267	6.4
PASS	176	174	93	101	452416	98.7
PASS	177	176	5	9	30467	6.7

Runs with this BFB:

Lab Sample Number	Date File	Field Sample	Date/Time of Sample/Standard Analysis
BFB	AA8981BFB	NA	3/25/2014 9:25:00 AM
40 PPBV STD	AA8982STD01	NA	3/25/2014 11:12:00 AM
20 PPBV STD	AA8983STD02	NA	3/25/2014 11:56:00 AM
10 PPBV STD	AA8984STD03	NA	3/25/2014 12:48:00 PM
2 PPBV STD	AA8985STD04	NA	3/25/2014 2:27:00 PM
0.2 PPBV STD	AA8986STD05	NA	3/25/2014 3:05:00 PM
10 PPBV ICVSS	AA8987ICVSS	NA	3/25/2014 4:55:00 PM

Data Path: D:\Agilent GCMS\04-03-14\
Data File: AA9131BFB.D
Acq On: 4/3/2014 8:42:00AM
Operator: jls
Sample: BFB
Misc: ALM029426
ALS Vial: 1 **Multiplier:** 1
Integration File: rteint.p
Method: C:\msdchem\1\METHODS\0325.M
Last Update: Wed Mar 26 09:33:26 2014
Spectrum Information:

Pass/Fail	Target Mass	Rel. to Mass	Lower Limit %	Higher Limit %	Raw Abundance	% Relative Abundance
PASS	50	95	8	40	130237	25.0
PASS	75	95	30	66	247890	47.6
PASS	95	95	100	100	520531	100.0
PASS	96	95	5	9	33352	6.4
PASS	173	174	0.00	2	3996	0.8
PASS	174	95	50	100	489088	94.0
PASS	175	174	4	9	31452	6.4
PASS	176	174	93	101	489173	100.0
PASS	177	176	5	9	28370	5.8

Runs with this BFB:

Lab Sample Number	Date File	Field Sample	Date/Time of Sample/Standard Analysis
BFB	AA9131BFB	NA	4/3/2014 8:42:00 AM
10 PPBV DCVS	AA9132DCVS	NA	4/3/2014 9:19:00 AM
10 PPBV LCS	AA9133LCS	NA	4/3/2014 11:09:00 AM
METHOD BLANK	AA9134BLK	NA	4/3/2014 11:41:00 AM
02 PPBV RLLCS	AA9135RLLCS	NA	4/3/2014 12:21:00 PM
1588	AA9150	NA	4/3/2014 8:50:00 PM
10 PPBV CCCVS	AA9153CCCVS	NA	4/3/2014 10:26:00 PM

Data Path: D:\Agilent GCMS\05-08-14\
Data File: AA9501BFB.D
Acq On: 5/8/2014 9:11:00AM
Operator: jls
Sample: BFB
Misc: ALM029426
ALS Vial: 1 **Multiplier:** 1
Integration File: rteint.p
Method: C:\msdchem\1\METHODS\0507.M
Last Update: Thu May 08 08:20:28 2014
Spectrum Information:

Pass/Fail	Target Mass	Rel. to Mass	Lower Limit %	Higher Limit %	Raw Abundance	% Relative Abundance
PASS	50	95	8	40	86225	15.4
PASS	75	95	30	66	257685	46.2
PASS	95	95	100	100	558357	100.0
PASS	96	95	5	9	36839	6.6
PASS	173	174	0.00	2	2353	0.5
PASS	174	95	50	100	513984	92.1
PASS	175	174	4	9	37375	7.3
PASS	176	174	93	101	498069	96.9
PASS	177	176	5	9	33516	6.7

Runs with this BFB:

Lab Sample Number	Date File	Field Sample	Date/Time of Sample/Standard Analysis
BFB	AA9501BFB	NA	5/8/2014 9:11:00 AM
40 PPBV STD	AA9502STD01	NA	5/8/2014 10:37:00 AM
20 PPBV STD	AA9503STD02	NA	5/8/2014 11:17:00 AM
10 PPBV STD	AA9504STD03	NA	5/8/2014 11:49:00 AM
2 PPBV STD	AA9505STD04	NA	5/8/2014 12:29:00 PM
0.2 PPBV STD	AA9506STD05	NA	5/8/2014 1:09:00 PM
10 PPBV ICVSS	AA9507ICVSS	NA	5/8/2014 3:43:00 PM

Data Path: D:\Agilent GCMS\05-09-14\
Data File: AA9511BFB.D
Acq On: 5/9/2014 8:56:00AM
Operator: jls
Sample: BFB
Misc: ALM029426
ALS Vial: 1 **Multiplier:** 1
Integration File: rteint.p
Method: C:\msdchem\1\METHODS\0508.M
Last Update: Thu May 08 13:39:35 2014
Spectrum Information:

Pass/Fail	Target Mass	Rel. to Mass	Lower Limit %	Higher Limit %	Raw Abundance	% Relative Abundance
PASS	50	95	8	40	122448	19.2
PASS	75	95	30	66	353173	55.4
PASS	95	95	100	100	636991	100.0
PASS	96	95	5	9	42923	6.7
PASS	173	174	0.00	2	2863	0.6
PASS	174	95	50	100	458048	71.9
PASS	175	174	4	9	33717	7.4
PASS	176	174	93	101	458195	100.0
PASS	177	176	5	9	30888	6.7

Runs with this BFB:

Lab Sample Number	Date File	Field Sample	Date/Time of Sample/Standard Analysis
BFB	AA9511BFB	NA	5/9/2014 8:56:00 AM
10 PPBV DCVS	AA9512DCVS	NA	5/9/2014 10:46:00 AM
10 PPBV LCS	AA9513LCS	NA	5/9/2014 11:22:00 AM
METHOD BLANK	AA9514BLK	NA	5/9/2014 1:14:00 PM
02 PPBV RLLCS	AA9515RLLCS	NA	5/9/2014 3:09:00 PM
E14-03224-01	AA9524	SG	5/9/2014 8:03:00 PM
10 PPBV CCCVS	AA9526CCCVS	NA	5/9/2014 9:07:00 PM

Method Blank Report

Lab Sample Name: METHOD BLANK
Field Sample Name: METHOD BLANK
Matrix: Air
Dilution Factor: 1

Data File: AA9134BLK
Date Analyzed: 4/3/2014
Sample Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Runs with this Method Blank:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 8:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 9:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound	CAS #	Reporting Limit (ppbv)	Concentration (ppbv)
Acetone	67-64-1	0.43	ND
Benzene	71-43-2	0.14	ND
Bromodichloromethane	75-27-4	0.20	ND
Bromoform	75-25-2	0.15	ND
Bromomethane	74-83-9	0.12	ND
1,3-Butadiene	106-99-0	0.16	ND
Chlorobenzene	108-90-7	0.17	ND
Chloroethane	75-00-3	0.15	ND
Chloroform	67-66-3	0.20	ND
Chloromethane	74-87-3	0.48	ND
Carbon disulfide	75-15-0	0.17	ND
Carbon tetrachloride	56-23-5	0.18	ND
Cyclohexane	110-82-7	0.11	ND
Dibromochloromethane	124-48-1	0.17	ND
1,2-Dibromoethane	106-93-4	0.15	ND
1,2-Dichlorobenzene	95-50-1	0.15	ND
1,3-Dichlorobenzene	541-73-1	0.16	ND
1,4-Dichlorobenzene	106-46-7	0.14	ND
Dichlorodifluoromethane	75-71-8	0.23	ND
1,1-Dichloroethane	75-34-3	0.17	ND
1,2-Dichloroethane	107-06-2	0.16	ND
1,1-Dichloroethene	75-35-4	0.16	ND
1,2-Dichloroethene (cis)	156-59-2	0.14	ND
1,2-Dichloroethene (trans)	156-60-5	0.15	ND
1,2-Dichloropropane	78-87-5	0.16	ND
1,3-Dichloropropene (cis)	10061-01-5	0.09	ND
1,3-Dichloropropene (trans)	10061-02-6	0.11	ND
1,2-Dichlorotetrafluoroethane	76-14-2	0.18	ND
1,4-Dioxane	123-91-1	0.21	ND
Ethylbenzene	100-41-4	0.14	ND
n-Heptane	142-82-5	0.10	ND
1,3-Hexachlorobutadiene	87-68-3	0.19	ND
n-Hexane	110-54-3	0.11	ND
Methylene chloride	75-09-2	0.17	0.13
Methyl ethyl ketone	78-93-3	0.25	ND

Method Blank must be less than the Practical Quantitation Limit (PQL).

Method Blank Report

Lab Sample Name: METHOD BLANK
Field Sample Name: METHOD BLANK
Matrix: Air
Dilution Factor: 1

Data File: AA9134BLK
Date Analyzed: 4/3/2014
Sample Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Runs with this Method Blank:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 8:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 9:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound	CAS #	Reporting Limit (ppbv)	Concentration (ppbv)
Methyl isobutyl ketone	108-10-1	0.11	ND
Methyl tert-butyl ether	1634-04-4	0.10	ND
Styrene	100-42-5	0.12	ND
Tert-butyl alcohol	75-65-0	0.10	ND
1,1,2,2-Tetrachloroethane	79-34-5	0.17	ND
Tetrachloroethene	127-18-4	0.16	ND
Toluene	108-88-3	0.11	ND
1,2,4-Trichlorobenzene	120-82-1	0.16	ND
1,1,1-Trichloroethane	71-55-6	0.17	ND
1,1,2-Trichloroethane	79-00-5	0.18	ND
Trichloroethene	79-01-6	0.16	ND
Trichlorofluoromethane	75-69-4	0.21	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.17	ND
1,2,4-Trimethylbenzene	95-63-6	0.12	ND
1,3,5-Trimethylbenzene	108-67-8	0.13	ND
2,2,4-Trimethylpentane	540-84-1	0.11	ND
Vinyl bromide	593-60-2	0.16	ND
Vinyl chloride	75-01-4	0.17	ND
Xylenes (m&p)	179601-23-1	0.31	ND
Xylenes (o)	95-47-6	0.16	ND

Method Blank must be less than the Practical Quantitation Limit (PQL).

Method Blank Report

Lab Sample Name: METHOD BLANK
Field Sample Name: METHOD BLANK
Matrix: Air
Dilution Factor: 1

Data File: AA9514BLK
Date Analyzed: 5/9/2014
Sample Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Runs with this Method Blank:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 8:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound	CAS #	Reporting Limit (ppbv)	Concentration (ppbv)
Acetone	67-64-1	0.43	ND
Benzene	71-43-2	0.14	ND
Bromodichloromethane	75-27-4	0.20	ND
Bromoform	75-25-2	0.15	ND
Bromomethane	74-83-9	0.12	ND
1,3-Butadiene	106-99-0	0.16	ND
Chlorobenzene	108-90-7	0.17	ND
Chloroethane	75-00-3	0.15	ND
Chloroform	67-66-3	0.20	ND
Chloromethane	74-87-3	0.48	ND
Carbon disulfide	75-15-0	0.17	ND
Carbon tetrachloride	56-23-5	0.18	ND
Cyclohexane	110-82-7	0.11	ND
Dibromochloromethane	124-48-1	0.17	ND
1,2-Dibromoethane	106-93-4	0.15	ND
1,2-Dichlorobenzene	95-50-1	0.15	ND
1,3-Dichlorobenzene	541-73-1	0.16	ND
1,4-Dichlorobenzene	106-46-7	0.14	ND
Dichlorodifluoromethane	75-71-8	0.23	ND
1,1-Dichloroethane	75-34-3	0.17	ND
1,2-Dichloroethane	107-06-2	0.16	ND
1,1-Dichloroethene	75-35-4	0.16	ND
1,2-Dichloroethene (cis)	156-59-2	0.14	ND
1,2-Dichloroethene (trans)	156-60-5	0.15	ND
1,2-Dichloropropane	78-87-5	0.16	ND
1,3-Dichloropropene (cis)	10061-01-5	0.09	ND
1,3-Dichloropropene (trans)	10061-02-6	0.11	ND
1,2-Dichlorotetrafluoroethane	76-14-2	0.18	ND
1,4-Dioxane	123-91-1	0.21	ND
Ethylbenzene	100-41-4	0.14	ND
n-Heptane	142-82-5	0.10	ND
1,3-Hexachlorobutadiene	87-68-3	0.19	ND
n-Hexane	110-54-3	0.11	ND
Methylene chloride	75-09-2	0.17	ND
Methyl ethyl ketone	78-93-3	0.25	ND

Method Blank must be less than the Practical Quantitation Limit (PQL).

Method Blank Report

Lab Sample Name: METHOD BLANK
Field Sample Name: METHOD BLANK
Matrix: Air
Dilution Factor: 1

Data File: AA9514BLK
Date Analyzed: 5/9/2014
Sample Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Runs with this Method Blank:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 8:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound	CAS #	Reporting Limit (ppbv)	Concentration (ppbv)
Methyl isobutyl ketone	108-10-1	0.11	ND
Methyl tert-butyl ether	1634-04-4	0.10	ND
Styrene	100-42-5	0.12	ND
Tert-butyl alcohol	75-65-0	0.10	ND
1,1,2,2-Tetrachloroethane	79-34-5	0.17	ND
Tetrachloroethene	127-18-4	0.16	ND
Toluene	108-88-3	0.11	ND
1,2,4-Trichlorobenzene	120-82-1	0.16	ND
1,1,1-Trichloroethane	71-55-6	0.17	ND
1,1,2-Trichloroethane	79-00-5	0.18	ND
Trichloroethene	79-01-6	0.16	ND
Trichlorofluoromethane	75-69-4	0.21	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.17	ND
1,2,4-Trimethylbenzene	95-63-6	0.12	ND
1,3,5-Trimethylbenzene	108-67-8	0.13	ND
2,2,4-Trimethylpentane	540-84-1	0.11	ND
Vinyl bromide	593-60-2	0.16	ND
Vinyl chloride	75-01-4	0.17	ND
Xylenes (m&p)	179601-23-1	0.31	ND
Xylenes (o)	95-47-6	0.16	ND

Method Blank must be less than the Practical Quantitation Limit (PQL).

Laboratory Control Spike

Lab Sample Name: 10 PPBV LCS
Spike Amount: 10 ppbv, except m&p-Xylenes at 20 ppbv

Data File: AA9133LCS
Date Analyzed: 4/3/2014

Runs with this LCS:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 8:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 9:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound	CAS #	Calculated Amount (ppbv)	% Recovery
Acetone	67-64-1	7.9	79
Benzene	71-43-2	8.0	80
Bromodichloromethane	75-27-4	8.3	83
Bromoform	75-25-2	8.4	84
Bromomethane	74-83-9	9.0	90
1,3-Butadiene	106-99-0	8.0	80
Chlorobenzene	108-90-7	10	100
Chloroethane	75-00-3	8.5	85
Chloroform	67-66-3	8.0	80
Chloromethane	74-87-3	12	120
Carbon disulfide	75-15-0	8.1	81
Carbon tetrachloride	56-23-5	6.9	69
Cyclohexane	110-82-7	7.1	71
Dibromochloromethane	124-48-1	9.9	99
1,2-Dibromoethane	106-93-4	9.7	97
1,2-Dichlorobenzene	95-50-1	9.5	95
1,3-Dichlorobenzene	541-73-1	9.7	97
1,4-Dichlorobenzene	106-46-7	11	110
Dichlorodifluoromethane	75-71-8	7.9	79
1,1-Dichloroethane	75-34-3	7.5	75
1,2-Dichloroethane	107-06-2	7.5	75
1,1-Dichloroethene	75-35-4	7.0	70
1,2-Dichloroethene (cis)	156-59-2	8.6	86
1,2-Dichloroethene (trans)	156-60-5	8.3	83
1,2-Dichloropropane	78-87-5	10	100
1,3-Dichloropropene (cis)	10061-01-5	9.7	97
1,3-Dichloropropene (trans)	10061-02-6	8.3	83
1,2-Dichlorotetrafluoroethane	76-14-2	7.3	73
1,4-Dioxane	123-91-1	11	110
Ethylbenzene	100-41-4	8.9	89
n-Heptane	142-82-5	11	110
1,3-Hexachlorobutadiene	87-68-3	8.0	80
n-Hexane	110-54-3	9.1	91
Methylene chloride	75-09-2	8.5	85

LCS recovery must be within 70-130% of the spiked value for 90% of compounds; All compounds must be within 50-150%

Laboratory Control Spike

Lab Sample Name: 10 PPBV LCS
Spike Amount: 10 ppbv, except m&p-Xylenes at 20 ppbv

Data File: AA9133LCS
Date Analyzed: 4/3/2014

Runs with this LCS:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 8:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 9:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound	CAS #	Calculated Amount (ppbv)	% Recovery	
Methyl ethyl ketone	78-93-3	5.6	56	*
Methyl isobutyl ketone	108-10-1	8.9	89	
Methyl tert-butyl ether	1634-04-4	7.5	75	
Styrene	100-42-5	9.9	99	
Tert-butyl alcohol	75-65-0	7.9	79	
1,1,2,2-Tetrachloroethane	79-34-5	11	110	
Tetrachloroethene	127-18-4	9.0	90	
Toluene	108-88-3	9.8	98	
1,2,4-Trichlorobenzene	120-82-1	8.7	87	
1,1,1-Trichloroethane	71-55-6	6.8	68	*
1,1,2-Trichloroethane	79-00-5	9.8	98	
Trichloroethene	79-01-6	8.6	86	
Trichlorofluoromethane	75-69-4	6.8	68	*
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.3	73	
1,2,4-Trimethylbenzene	95-63-6	10.0	100	
1,3,5-Trimethylbenzene	108-67-8	9.9	99	
2,2,4-Trimethylpentane	540-84-1	9.5	95	
Vinyl bromide	593-60-2	7.4	74	
Vinyl chloride	75-01-4	8.3	83	
Xylenes (m&p)	179601-23-1	21	100	
Xylenes (o)	95-47-6	9.7	97	

LCS recovery must be within 70-130% of the spiked value for 90% of compounds; All compounds must be within 50-150%

Laboratory Control Spike

Lab Sample Name: 10 PPBV LCS
Spike Amount: 10 ppbv, except m&p-Xylenes at 20 ppbv

Data File: AA9513LCS
Date Analyzed: 5/9/2014

Runs with this LCS:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 8:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound	CAS #	Calculated Amount (ppbv)	% Recovery
Acetone	67-64-1	12	120
Benzene	71-43-2	8.4	84
Bromodichloromethane	75-27-4	12	120
Bromoform	75-25-2	8.9	89
Bromomethane	74-83-9	9.4	94
1,3-Butadiene	106-99-0	10	100
Chlorobenzene	108-90-7	7.8	78
Chloroethane	75-00-3	9.8	98
Chloroform	67-66-3	11	110
Chloromethane	74-87-3	13	130
Carbon disulfide	75-15-0	8.8	88
Carbon tetrachloride	56-23-5	10	100
Cyclohexane	110-82-7	8.8	88
Dibromochloromethane	124-48-1	11	110
1,2-Dibromoethane	106-93-4	9.9	99
1,2-Dichlorobenzene	95-50-1	9.6	96
1,3-Dichlorobenzene	541-73-1	9.9	99
1,4-Dichlorobenzene	106-46-7	9.6	96
Dichlorodifluoromethane	75-71-8	15	150
1,1-Dichloroethane	75-34-3	10	100
1,2-Dichloroethane	107-06-2	12	120
1,1-Dichloroethene	75-35-4	11	110
1,2-Dichloroethene (cis)	156-59-2	7.9	79
1,2-Dichloroethene (trans)	156-60-5	10	100
1,2-Dichloropropane	78-87-5	11	110
1,3-Dichloropropene (cis)	10061-01-5	11	110
1,3-Dichloropropene (trans)	10061-02-6	11	110
1,2-Dichlorotetrafluoroethane	76-14-2	11	110
1,4-Dioxane	123-91-1	9.7	97
Ethylbenzene	100-41-4	9.1	91
n-Heptane	142-82-5	12	120
1,3-Hexachlorobutadiene	87-68-3	11	110
n-Hexane	110-54-3	9.4	94
Methylene chloride	75-09-2	7.6	76

LCS recovery must be within 70-130% of the spiked value for 90% of compounds; All compounds must be within 50-150%

Laboratory Control Spike

Lab Sample Name: 10 PPBV LCS
Spike Amount: 10 ppbv, except m&p-Xylenes at 20 ppbv

Data File: AA9513LCS
Date Analyzed: 5/9/2014

Runs with this LCS:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 8:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound	CAS #	Calculated Amount (ppbv)	% Recovery
Methyl ethyl ketone	78-93-3	9.4	94
Methyl isobutyl ketone	108-10-1	12	120
Methyl tert-butyl ether	1634-04-4	9.4	94
Styrene	100-42-5	8.8	88
Tert-butyl alcohol	75-65-0	9.5	95
1,1,2,2-Tetrachloroethane	79-34-5	11	110
Tetrachloroethene	127-18-4	8.1	81
Toluene	108-88-3	9.8	98
1,2,4-Trichlorobenzene	120-82-1	9.6	96
1,1,1-Trichloroethane	71-55-6	11	110
1,1,2-Trichloroethane	79-00-5	10	100
Trichloroethene	79-01-6	8.5	85
Trichlorofluoromethane	75-69-4	11	110
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	9.5	95
1,2,4-Trimethylbenzene	95-63-6	11	110
1,3,5-Trimethylbenzene	108-67-8	11	110
2,2,4-Trimethylpentane	540-84-1	11	110
Vinyl bromide	593-60-2	8.2	82
Vinyl chloride	75-01-4	10	100
Xylenes (m&p)	179601-23-1	19	97
Xylenes (o)	95-47-6	11	110

LCS recovery must be within 70-130% of the spiked value for 90% of compounds; All compounds must be within 50-150%

Integrated Analytical Laboratories, LLC

Volatile Organic Compounds by EPA Method TO-15

Laboratory Sample Duplicate Report

SDG Number: E14-02570
IAL Sample ID: E14-02570-01
Matrix: Air
Summa ID: 2931

Date Received: 3/27/14
Date Analyzed: 4/3/14, 4/3/14
Lab Data File#: AA9144, AA9145
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Compound	CAS #	Run1		Run2		Reporting Limits	RPD
		Concentration Reported	Q	Concentration Reported	Q		
		ppbv		ppbv		ppbv	
Chlorobenzene	108-90-7	0.20	U	0.20	U	0.20	0.00%
1,2-Dichlorobenzene	95-50-1	0.20	U	0.20	U	0.20	0.00%
1,3-Dichlorobenzene	541-73-1	0.20	U	0.20	U	0.20	0.00%
1,4-Dichlorobenzene	106-46-7	0.32		0.32		0.20	0.00%
1,2-Dichloroethene (cis)	156-59-2	0.20	U	0.20	U	0.20	0.00%
1,2-Dichloroethene (trans)	156-60-5	0.20	U	0.20	U	0.20	0.00%
Tetrachloroethene	127-18-4	0.20	U	0.20	U	0.20	0.00%
1,2,4-Trichlorobenzene	120-82-1	0.20	U	0.20	U	0.20	0.00%
Trichloroethene	79-01-6	0.20	U	0.20	U	0.20	0.00%
Vinyl chloride	75-01-4	0.20	U	0.20	U	0.20	0.00%

Qualifiers:

J = Duplicate sample does not meet RPD criteria
U = Compound ND or under reporting limit

Integrated Analytical Laboratories, LLC

Volatile Organic Compounds by EPA Method TO-15

Laboratory Sample Duplicate Report

SDG Number: E14-03217
IAL Sample ID: E14-03217-01
Matrix: Air
Summa ID: 1571

Date Received: 4/16/14
Date Analyzed: 4/16/14, 4/16/14
Lab Data File#: AA9371, AA9372
Dilution Factor: 1
Injection Volume: 50ml
GC/MS Column: RTX-1, 0.32 mmID

Compound	CAS #	Run1		Run2		Reporting Limits	RPD
		Concentration Reported	Q	Concentration Reported	Q		
		ppbv		ppbv		ppbv	
Acetone	67-64-1	120		120		2.0	0.00%
Allyl Chloride	107-05-1		2.0 U		2.0 U	2.0	0.00%
Benzene	71-43-2		2.0 U		2.0 U	2.0	0.00%
Bromodichloromethane	75-27-4		2.0 U		2.0 U	2.0	0.00%
Bromoform	75-25-2		2.0 U		2.0 U	2.0	0.00%
Bromomethane	74-83-9		2.0 U		2.0 U	2.0	0.00%
1,3-Butadiene	106-99-0		2.0 U		2.0 U	2.0	0.00%
Chlorobenzene	108-90-7		2.0 U		2.0 U	2.0	0.00%
Chloroethane	75-00-3		2.0 U		2.0 U	2.0	0.00%
Chloroform	67-66-3		2.0 U		2.0 U	2.0	0.00%
Chloromethane	74-87-3		2.0 U		2.0 U	2.0	0.00%
Carbon disulfide	75-15-0		2.0 U		2.0 U	2.0	0.00%
Carbon tetrachloride	56-23-5		2.0 U		2.0 U	2.0	0.00%
2-Chlorotoluene	95-49-8		2.0 U		2.0 U	2.0	0.00%
Cyclohexane	110-82-7		2.0 U		2.0 U	2.0	0.00%
Dibromochloromethane	124-48-1		2.0 U		2.0 U	2.0	0.00%
1,2-Dibromoethane	106-93-4		2.0 U		2.0 U	2.0	0.00%
1,2-Dichlorobenzene	95-50-1		2.0 U		2.0 U	2.0	0.00%
1,3-Dichlorobenzene	541-73-1		2.0 U		2.0 U	2.0	0.00%
1,4-Dichlorobenzene	106-46-7		2.0 U		2.0 U	2.0	0.00%
Dichlorodifluoromethane	75-71-8		2.0 U		2.0 U	2.0	0.00%
1,1-Dichloroethane	75-34-3		2.0 U		2.0 U	2.0	0.00%
1,2-Dichloroethane	107-06-2		2.0 U		2.0 U	2.0	0.00%
1,1-Dichloroethene	75-35-4		2.0 U		2.0 U	2.0	0.00%
1,2-Dichloroethene (cis)	156-59-2		2.0 U		2.0 U	2.0	0.00%
1,2-Dichloroethene (trans)	156-60-5		2.0 U		2.0 U	2.0	0.00%
1,2-Dichloropropane	78-87-5		2.0 U		2.0 U	2.0	0.00%
1,3-Dichloropropene (cis)	10061-01-5		2.0 U		2.0 U	2.0	0.00%
1,3-Dichloropropene (trans)	10061-02-6		2.0 U		2.0 U	2.0	0.00%
1,2-Dichlorotetrafluoroethane	76-14-2		2.0 U		2.0 U	2.0	0.00%
1,4-Dioxane	123-91-1		2.0 U		2.0 U	2.0	0.00%
Ethanol	64-17-5	2.3			2.0 U	2.0	NC
Ethylbenzene	100-41-4		2.0 U		2.0 U	2.0	0.00%
4-Ethyltoluene	622-96-8		2.0 U		2.0 U	2.0	0.00%
n-Heptane	142-82-5		2.0 U		2.0 U	2.0	0.00%
1,3-Hexachlorobutadiene	87-68-3		2.0 U		2.0 U	2.0	0.00%
n-Hexane	110-54-3		2.0 U		2.0 U	2.0	0.00%
Isopropanol	67-63-0	2.6			2.0 U	2.0	NC
Methylene chloride	75-09-2		2.0 U		2.0 U	2.0	0.00%

Qualifiers:

J = Duplicate sample does not meet RPD criteria
U = Compound ND or under reporting limit

SDG Number: E14-03217
 IAL Sample ID: E14-03217-01
 Matrix: Air
 Summa ID: 1571

Date Received: 4/16/14
 Date Analyzed: 4/16/14, 4/16/14
 Lab Data File#: AA9371, AA9372
 Dilution Factor: 1
 Injection Volume: 50ml
 GC/MS Column: RTX-1, 0.32 mmID

Compound	CAS #	Run1		Run2		Reporting Limits	RPD
		Concentration Reported	Q	Concentration Reported	Q		
		ppbv		ppbv		ppbv	
Methyl ethyl ketone	78-93-3	2.0	U	2.0	U	2.0	0.00%
Methyl isobutyl ketone	108-10-1	2.0	U	2.0	U	2.0	0.00%
Methyl methacrylate	80-62-6	2.0	U	2.0	U	2.0	0.00%
Methyl tert-butyl ether	1634-04-4	2.0	U	2.0	U	2.0	0.00%
Styrene	100-42-5	2.0	U	2.0	U	2.0	0.00%
Tert-butyl alcohol	75-65-0	2.0	U	2.0	U	2.0	0.00%
1,1,2,2-Tetrachloroethane	79-34-5	2.0	U	2.0	U	2.0	0.00%
Tetrachloroethene	127-18-4	2.0	U	2.0	U	2.0	0.00%
Tetrahydrofuran	109-99-9	2.0	U	2.0	U	2.0	0.00%
Toluene	108-88-3	2.0	U	2.0	U	2.0	0.00%
1,2,4-Trichlorobenzene	120-82-1	2.0	U	2.0	U	2.0	0.00%
1,1,1-Trichloroethane	71-55-6	2.0	U	2.0	U	2.0	0.00%
1,1,2-Trichloroethane	79-00-5	2.0	U	2.0	U	2.0	0.00%
Trichloroethene	79-01-6	2.0	U	2.0	U	2.0	0.00%
Trichlorofluoromethane	75-69-4	2.0	U	2.0	U	2.0	0.00%
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.0	U	2.0	U	2.0	0.00%
1,2,4-Trimethylbenzene	95-63-6	2.0	U	2.0	U	2.0	0.00%
1,3,5-Trimethylbenzene	108-67-8	2.0	U	2.0	U	2.0	0.00%
2,2,4-Trimethylpentane	540-84-1	2.0	U	2.0	U	2.0	0.00%
Vinyl bromide	593-60-2	2.0	U	2.0	U	2.0	0.00%
Vinyl chloride	75-01-4	2.0	U	2.0	U	2.0	0.00%
Xylenes (m&p)	179601-23-1	4.0	U	4.0	U	4.0	0.00%
Xylenes (o)	95-47-6	2.0	U	2.0	U	2.0	0.00%

RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run 1 per <20 samples submitted.

NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.

Qualifiers:

J = Duplicate sample did not meet RPD criteria
 U = Compound ND or under reporting limit

Internal Standard Area and Retention Time Summary

Lab File ID (Standard): AA9132DCVS

Date Analyzed: 4/3/2014

Instrument: AA

ICAL Date: 3/25/2014

			BROMOCHLOROMETHANE				1,4-DIFLUOROBENZENE				D-5 CHLORO BENZENE			
			Area #		RT		Area #		RT		Area #		RT	
CALIBRATION STANDARD			552707		7.309		1683412		9.286		1571119		14.489	
UPPER LIMIT			773790		7.64		2356777		9.62		2199567		14.82	
LOWER LIMIT			331624		6.98		1010047		8.96		942671		14.16	
Lab ID	DF		Area #	%	RT	+/-	Area #	%	RT	+/-	Area #	%	RT	+/-
Method Blank	AA9134BLK	1.0	421213	-23.79	7.309	0.00	1416659	-15.85	9.289	0.00	1293248	-17.69	14.489	0.00
Reporting Limit Laboratory Control Standard	AA9135RLLCS	1.0	439161	-20.54	7.315	0.01	1399264	-16.88	9.289	0.00	1358043	-13.56	14.489	0.00
Closing Calibration	AA9153CCCVS	1.0	573901	3.83	7.299	-0.01	2152477	27.86	9.286	0.00	2117618	34.78	14.489	0.00

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outside QC limits.

Internal Standard Area and Retention Time Summary

Lab File ID (Standard): AA9512DCVS

Date Analyzed: 5/9/2014

Instrument: AA

ICAL Date: 5/8/2014

			BROMOCHLOROMETHANE				1,4-DIFLUOROBENZENE				D-5 CHLORO BENZENE			
			Area #		RT		Area #		RT		Area #		RT	
CALIBRATION STANDARD			481431		7.637		1669754		9.695		1556018		15.019	
UPPER LIMIT			674003		7.97		2337656		10.03		2178425		15.35	
LOWER LIMIT			288859		7.31		1001852		9.37		933611		14.69	
Lab ID	DF		Area #	%	RT	+/-	Area #	%	RT	+/-	Area #	%	RT	+/-
Method Blank	AA9514BLK	1.0	421746	-12.40	7.634	0.00	1477386	-11.52	9.695	0.00	1365647	-12.23	15.026	0.01
Reporting Limit Laboratory Control Standard	AA9515RLLCS	1.0	465602	-3.29	7.640	0.00	1526385	-8.59	9.695	0.00	1539747	-1.05	15.019	0.00
E14-03224-01	AA9524	1.0	360306	-25.16	7.637	0.00	1171788	-29.82	9.698	0.00	1079137	-30.65	15.019	0.00
Closing Calibration	AA9526CCCVS	1.0	425076	-11.71	7.640	0.00	1477553	-11.51	9.695	0.00	1717475	10.38	15.022	0.00

Difference of Internal Area must be within +/- 40%; Retention Times must be within +/- 0.33 minute.

* Values outside QC limits.

Section VI: Sample Data Summary

Certificate of Analysis

Summary of Results

**Quantitation Reports, Chromatograms,
and Peak Integration Reports**

CERTIFICATE OF ANALYSIS

**ANALYTICAL DATA PACKAGE FOR THE
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ALBANY NEW YORK 12233**

Integrated Analytical Laboratories, LLC
Project#: Swivelier
SDG #: E14-03224
Date of first sample receipt: 5/1/2014

Randolph, NJ 07869
Contract #: NA
NJDEP Certification#: 14751
Date of last sample receipt: 5/1/2014

Client: Environmental Waste Management Associates
100 Misty Lane
Parsippany, NJ 07054

Attention: Attention: Al Moffit

Project/Site: Swivelier/NY

Analysis conducted at: Integrated Analytical laboratories, LLC
273 Franklin Road
Randolph, NJ 07869

Contact: Michael H. Leftin, Ph.D.

NJDEP number: 14751
ELAP lab number: 11402

Sample(s):
E14-03224-01

Samples for this analysis were received in good condition with a chain of custody.

All work recorded herein has been done in accordance with normal professional standards using accepted testing methodologies, quality assurance and quality control procedures except where otherwise agreed to by the client and testing company in writing. Once analysis has been performed on canisters that meets regulatory criteria, samples are recycled for future use, unless other provisions have been made by the client.



Michael H. Leftin, Ph.D.
Laboratory Director

Date: May 15, 2014

Summary of Results

Environmental Waste Management Associates
100 Misty Lane
Parsippany, NJ 07054
Attn: Al Moffit
Project: Swivelier
Site: NY

Report Date: 5/14/14
SDG Number: E14-03224
Date Received: 5/1/14
Date Analyzed: 05/09/14
Data File: AA9524
Summa ID: 1769

Analysis: Volatile Organic Compounds by EPA Method TO-15

Sample Name:			SG		Reporting Limits	
IAL ID:			E14-03224-01			
Compound	CAS #		ppbv	ug/m3	ppbv	ug/m3
Acetone	67-64-1	D	74	180	2.0	4.8
Benzene	71-43-2	D	2.1	6.7	2.0	6.4
Bromodichloromethane	75-27-4		ND	ND	2.0	13
Bromoform	75-25-2		ND	ND	2.0	21
Bromomethane	74-83-9		ND	ND	2.0	7.8
1,3-Butadiene	106-99-0		ND	ND	2.0	4.4
Chlorobenzene	108-90-7		ND	ND	2.0	9.2
Chloroethane	75-00-3		ND	ND	2.0	5.3
Chloroform	67-66-3		ND	ND	2.0	9.8
Chloromethane	74-87-3		ND	ND	2.0	4.1
Carbon disulfide	75-15-0	D	24	75	2.0	6.2
Carbon tetrachloride	56-23-5		ND	ND	0.40	2.5
Cyclohexane	110-82-7		ND	ND	2.0	6.9
Dibromochloromethane	124-48-1		ND	ND	2.0	17
1,2-Dibromoethane	106-93-4		ND	ND	2.0	15
1,2-Dichlorobenzene	95-50-1		ND	ND	2.0	12
1,3-Dichlorobenzene	541-73-1		ND	ND	2.0	12
1,4-Dichlorobenzene	106-46-7		ND	ND	2.0	12
Dichlorodifluoromethane	75-71-8		ND	ND	2.0	9.9
1,1-Dichloroethane	75-34-3		ND	ND	2.0	8.1
1,2-Dichloroethane	107-06-2		ND	ND	2.0	8.1
1,1-Dichloroethene	75-35-4		ND	ND	2.0	7.9
1,2-Dichloroethene (cis)	156-59-2		ND	ND	2.0	7.9
1,2-Dichloroethene (trans)	156-60-5		ND	ND	2.0	7.9
1,2-Dichloropropane	78-87-5		ND	ND	2.0	9.2
1,3-Dichloropropene (cis)	10061-01-5		ND	ND	2.0	9.1
1,3-Dichloropropene (trans)	10061-02-6		ND	ND	2.0	9.1
1,2-Dichlorotetrafluoroethane	76-14-2		ND	ND	2.0	14
1,4-Dioxane	123-91-1		ND	ND	2.0	7.2
Ethylbenzene	100-41-4		ND	ND	2.0	8.7
n-Heptane	142-82-5		ND	ND	2.0	8.2
1,3-Hexachlorobutadiene	87-68-3		ND	ND	2.0	21
n-Hexane	110-54-3	D	2.1	7.4	2.0	7.1
Methylene chloride	75-09-2		ND	ND	2.0	7.0
Methyl ethyl ketone	78-93-3	D	2.1	6.2	2.0	5.9
Methyl isobutyl ketone	108-10-1		ND	ND	2.0	8.2
Methyl tert-butyl ether	1634-04-4		ND	ND	2.0	7.2
Styrene	100-42-5		ND	ND	2.0	8.5
Tert-butyl alcohol	75-65-0		ND	ND	2.0	6.1
1,1,2,2-Tetrachloroethane	79-34-5		ND	ND	2.0	14
Tetrachloroethene	127-18-4		ND	ND	2.0	14
Toluene	108-88-3	D	2.6	9.8	2.0	7.5
1,2,4-Trichlorobenzene	120-82-1		ND	ND	2.0	15
1,1,1-Trichloroethane	71-55-6		ND	ND	2.0	11
1,1,2-Trichloroethane	79-00-5		ND	ND	2.0	11
Trichloroethene	79-01-6		ND	ND	0.46	2.5
Trichlorofluoromethane	75-69-4		ND	ND	2.0	11
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1		ND	ND	2.0	15
1,2,4-Trimethylbenzene	95-63-6		ND	ND	2.0	9.8
1,3,5-Trimethylbenzene	108-67-8		ND	ND	2.0	9.8
2,2,4-Trimethylpentane	540-84-1		ND	ND	2.0	9.3
Vinyl bromide	593-60-2		ND	ND	2.0	8.7
Vinyl chloride	75-01-4		ND	ND	2.0	5.1
Xylenes (m&p)	179601-23-1		ND	ND	2.0	8.7
Xylenes (o)	95-47-6		ND	ND	2.0	8.7

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9524.D
 Acq On : 9 May 2014 8:03 pm
 Operator : jls
 Sample : 03224-01 x 10 dil
 Misc : 1769
 ALS Vial : 14 Sample Multiplier: 1

Quant Time: May 12 10:31:16 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

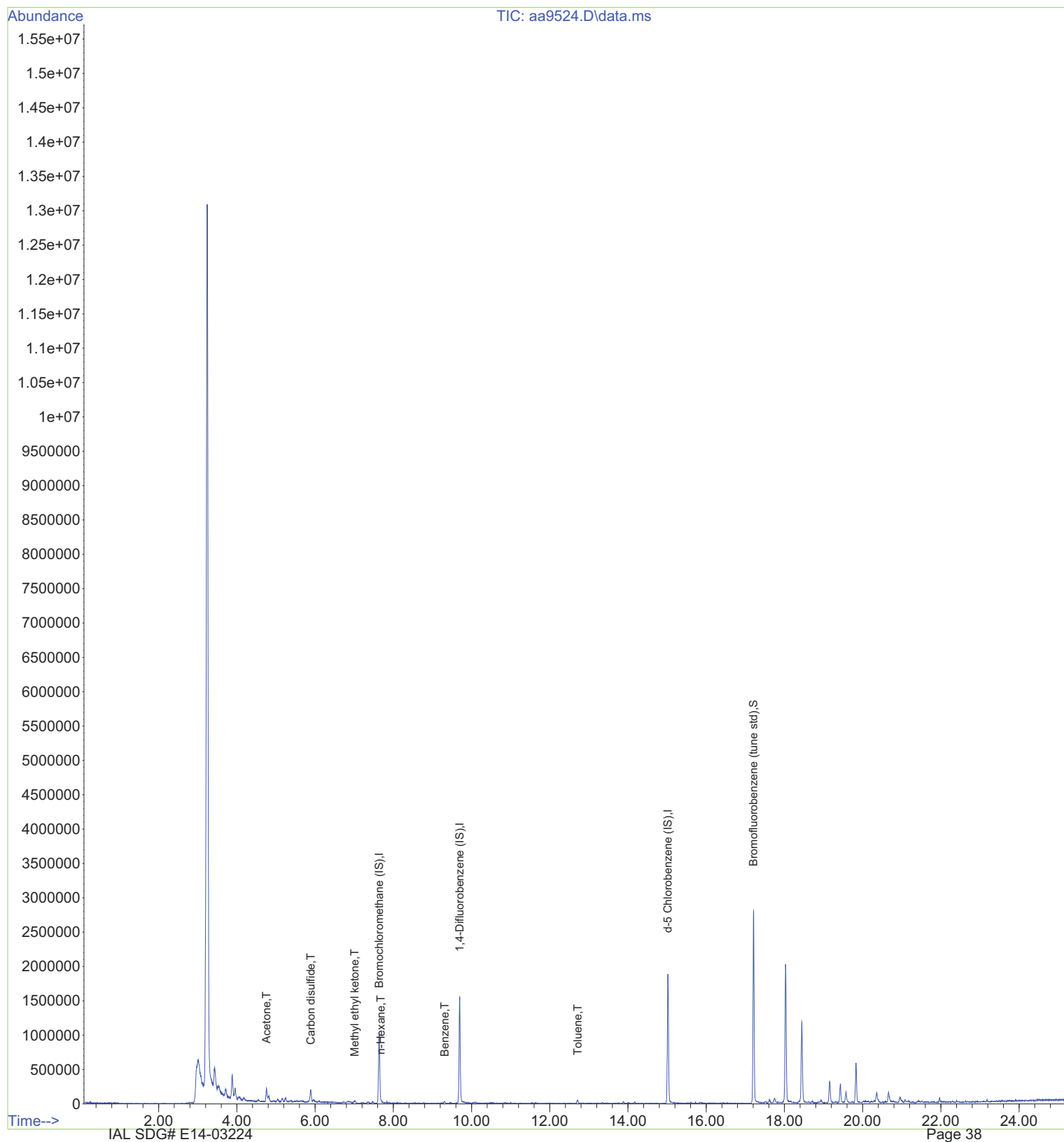
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

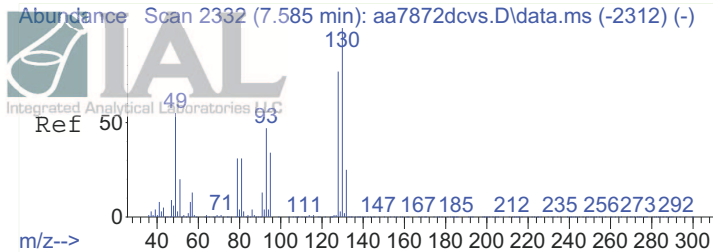
Internal Standards						
1) Bromochloromethane (IS)	7.637	130	360306	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.698	114	1171788	10.00	ppbV	# 0.00
55) d-5 Chlorobenzene (IS)	15.019	117	1079137	10.00	ppbV	# 0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.209	95	1082625	12.88	ppbV	0.00
Target Compounds						
						Qvalue
14) Acetone	4.756	43	317318	7.45	ppbV	# 88
23) Carbon disulfide	5.891	76	300015	2.41	ppbV	# 63
27) Methyl ethyl ketone	7.010	72	3609	0.21	ppbV	95
30) n-Hexane	7.682	57	9796	0.21	ppbV	# 64
35) Benzene	9.315	78	26747	0.21	ppbV	# 91
50) Toluene	12.711	91	39608	0.26	ppbV	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-09-14\
Data File : aa9524.D
Acq On : 9 May 2014 8:03 pm
Operator : jls
Sample : 03224-01 x 10 dil
Misc : 1769
ALS Vial : 14 Sample Multiplier: 1

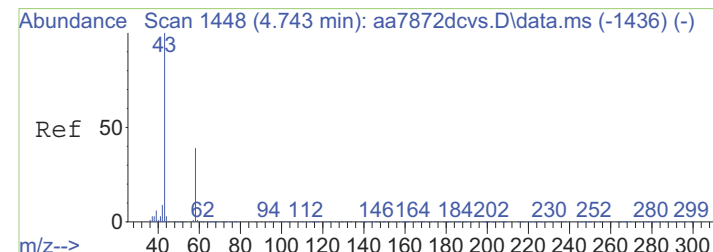
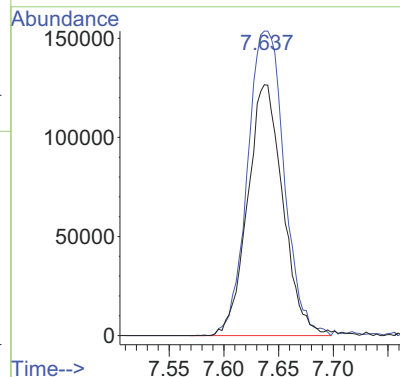
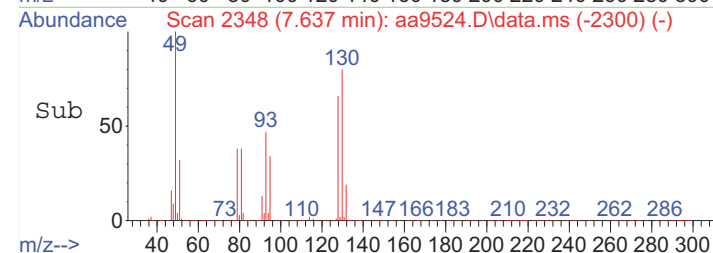
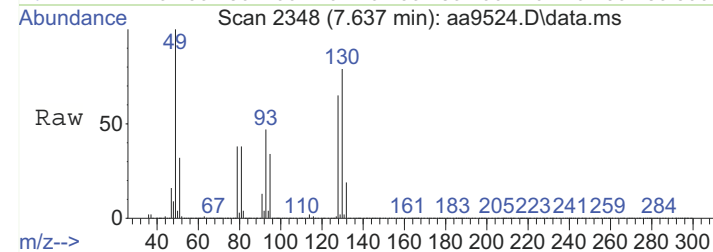
Quant Time: May 12 10:31:16 2014
Quant Method : C:\msdchem\1\METHODS\0508.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Thu May 08 13:39:35 2014
Response via : Initial Calibration





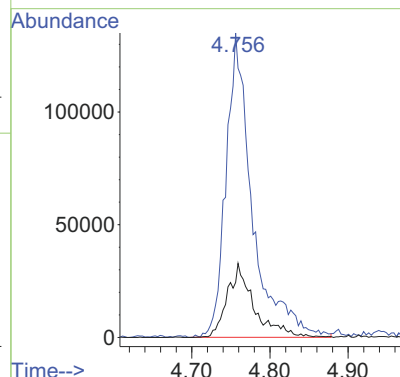
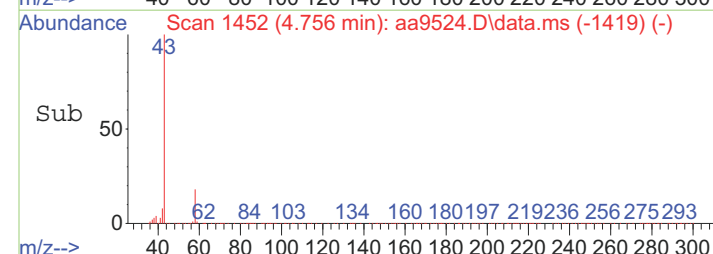
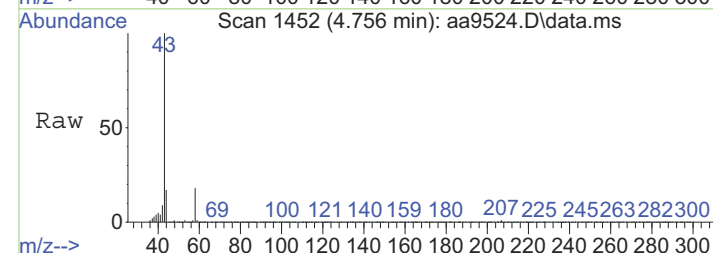
#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 7.637 min Scan# 2348
Delta R.T. 0.003 min
Lab File: aa9524.D
Acq: 9 May 2014 8:03 pm

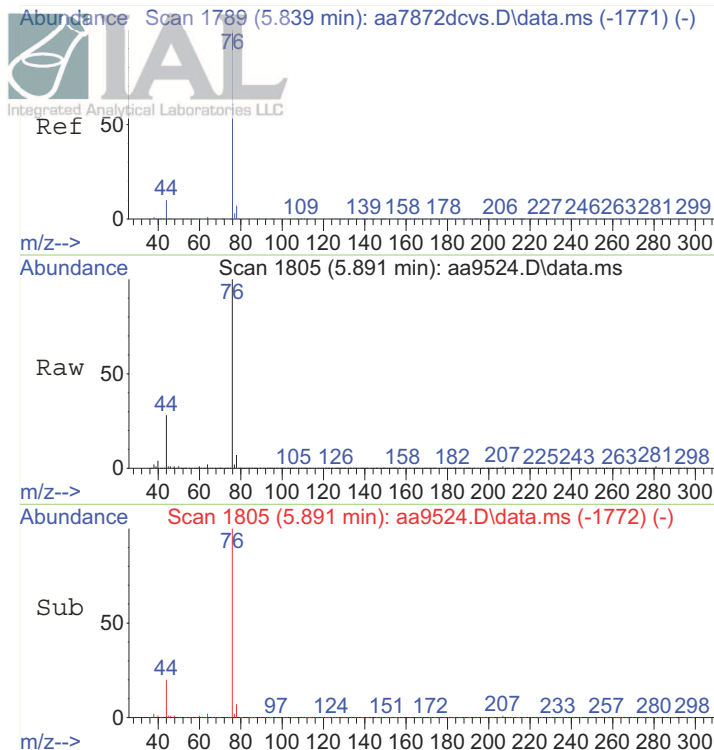
Tgt Ion	130	Resp	360306
Ion Ratio	100	Lower	Upper
128	79.5	62.6	94.0



#14
Acetone
Concen: 7.45 ppbV
RT: 4.756 min Scan# 1452
Delta R.T. 0.006 min
Lab File: aa9524.D
Acq: 9 May 2014 8:03 pm

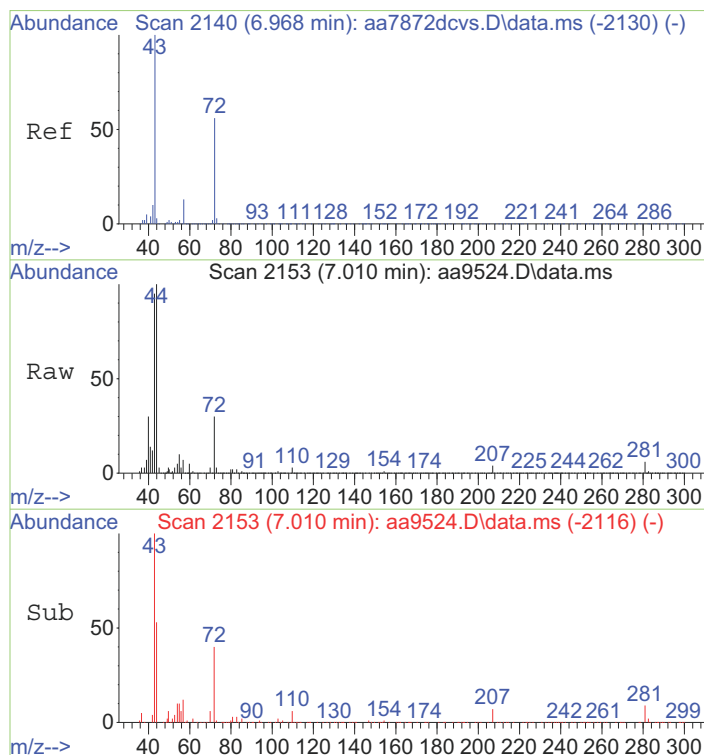
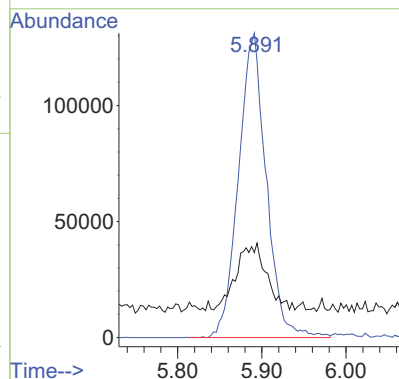
Tgt Ion	43	Resp	317318
Ion Ratio	100	Lower	Upper
58	24.5	24.8	37.2#





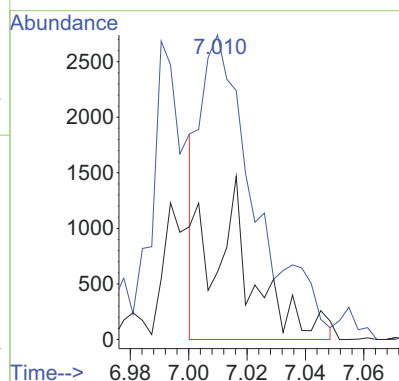
#23
Carbon disulfide
Concen: 2.41 ppbV
RT: 5.891 min Scan# 1805
Delta R.T. 0.006 min
Lab File: aa9524.D
Acq: 9 May 2014 8:03 pm

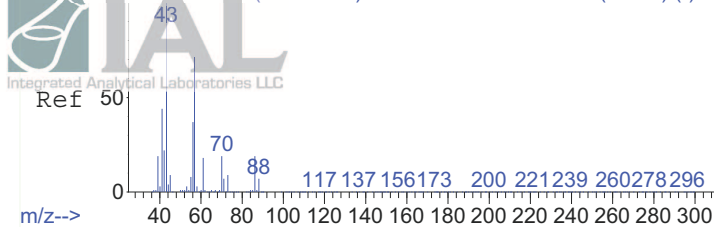
Tgt Ion	76	Resp	300015
Ion Ratio	100	Lower	Upper
44	25.2	8.8	13.2#



#27
Methyl ethyl ketone
Concen: 0.21 ppbV
RT: 7.010 min Scan# 2153
Delta R.T. 0.019 min
Lab File: aa9524.D
Acq: 9 May 2014 8:03 pm

Tgt Ion	72	Resp	3609
Ion Ratio	100	Lower	Upper
57	28.0	24.8	37.2





#30

n-Hexane

Concen: 0.21 ppbV

RT: 7.682 min Scan# 2362

Delta R.T. -0.006 min

Lab File: aa9524.D

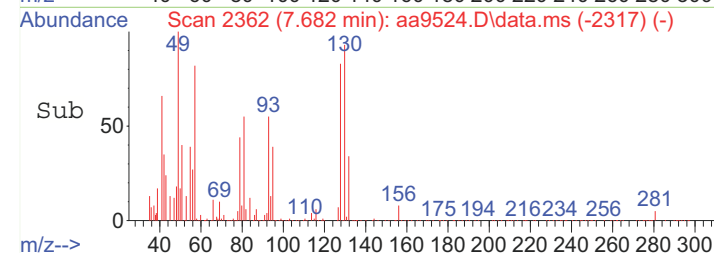
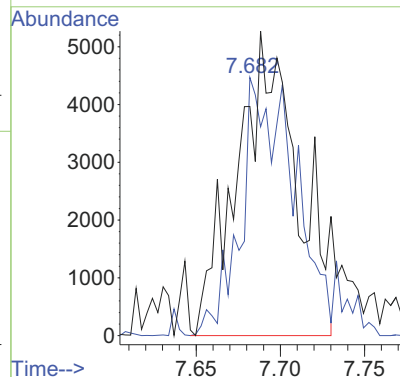
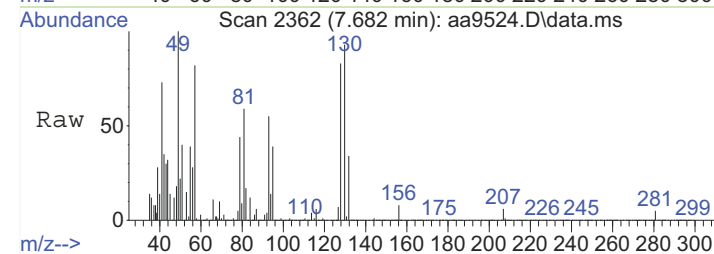
Acq: 9 May 2014 8:03 pm

Tgt Ion: 57 Resp: 9796

Ion Ratio Lower Upper

57 100

41 95.9 53.6 80.4#



#35

Benzene

Concen: 0.21 ppbV

RT: 9.315 min Scan# 2870

Delta R.T. 0.010 min

Lab File: aa9524.D

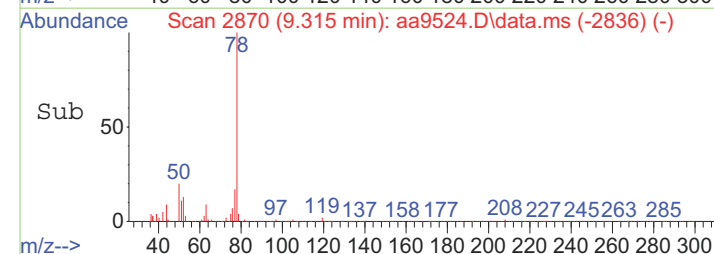
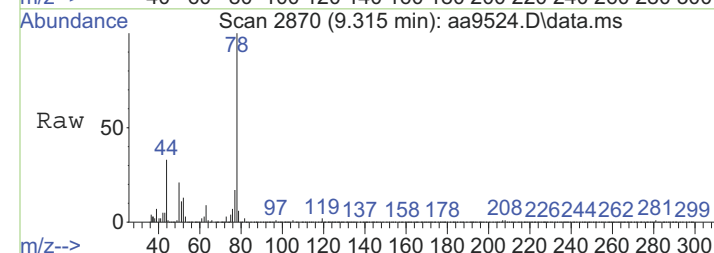
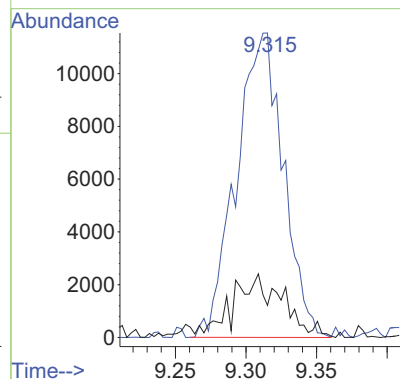
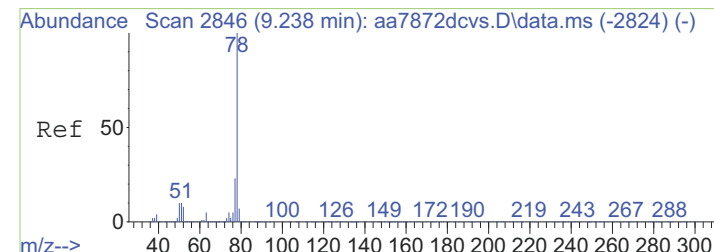
Acq: 9 May 2014 8:03 pm

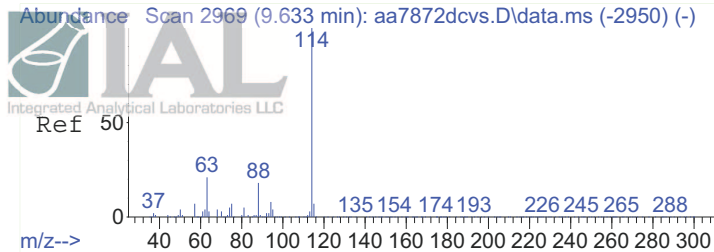
Tgt Ion: 78 Resp: 26747

Ion Ratio Lower Upper

78 100

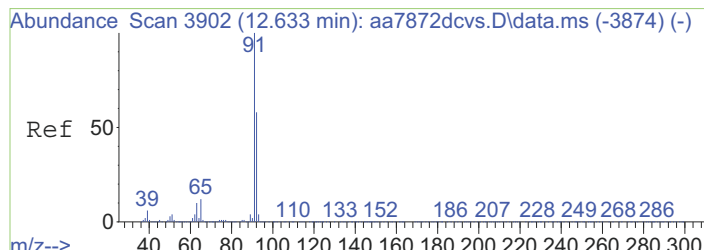
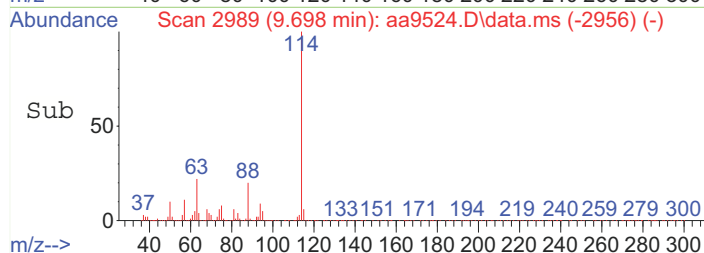
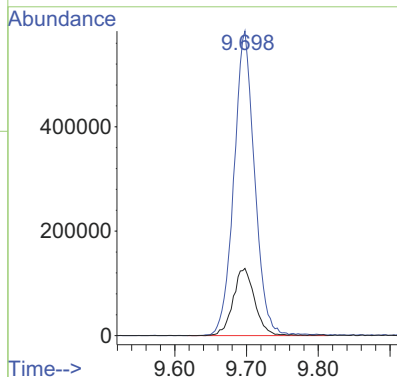
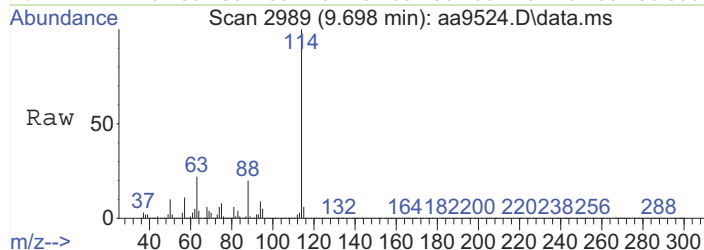
51 12.3 12.8 19.2#





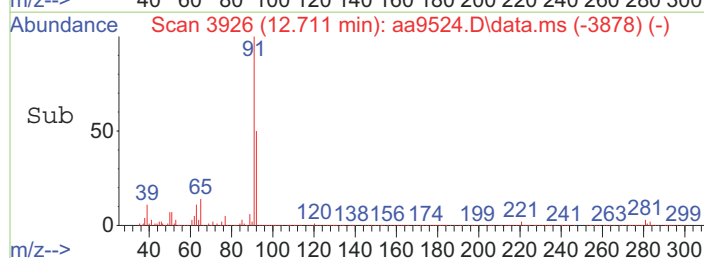
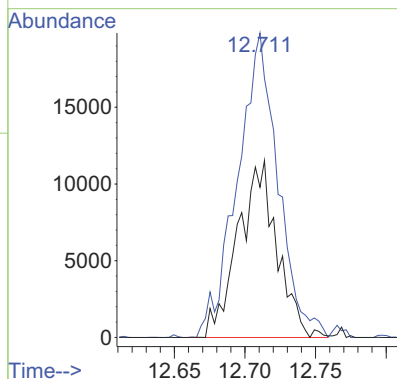
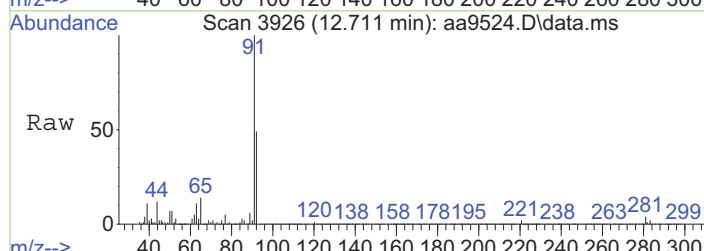
#38
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 9.698 min Scan# 2989
Delta R.T. 0.006 min
Lab File: aa9524.D
Acq: 9 May 2014 8:03 pm

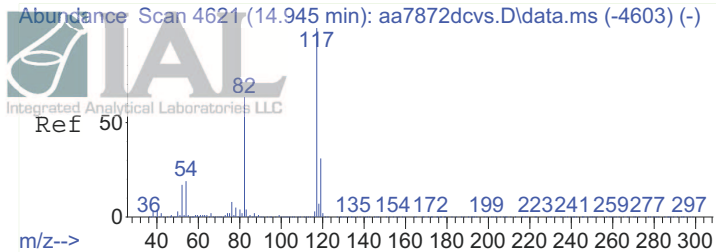
Tgt Ion: 114 Resp: 1171788
Ion Ratio Lower Upper
114 100
63 22.8 10.4 15.6#



#50
Toluene
Concen: 0.26 ppbV
RT: 12.711 min Scan# 3926
Delta R.T. 0.003 min
Lab File: aa9524.D
Acq: 9 May 2014 8:03 pm

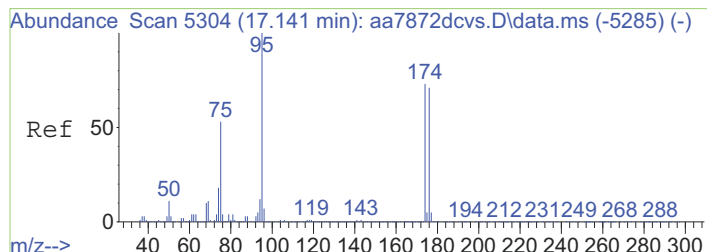
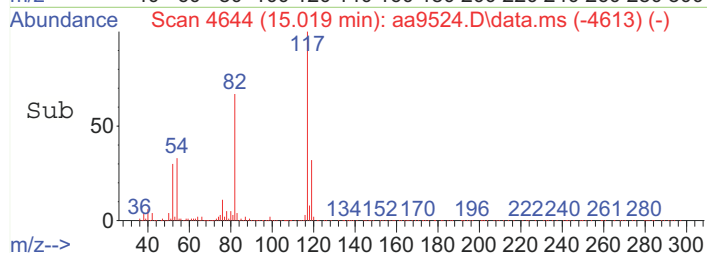
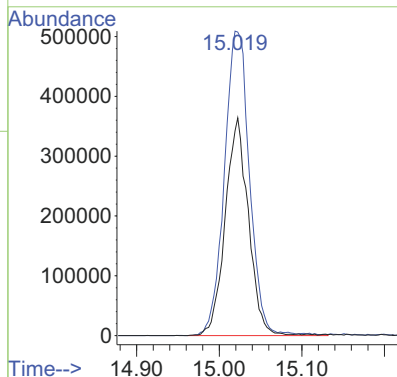
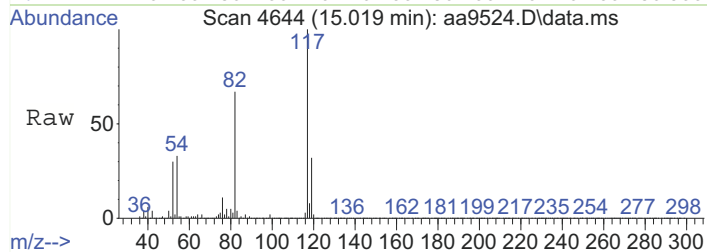
Tgt Ion: 91 Resp: 39608
Ion Ratio Lower Upper
91 100
92 55.2 50.0 75.0





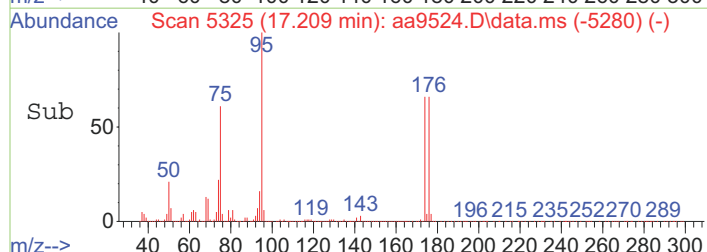
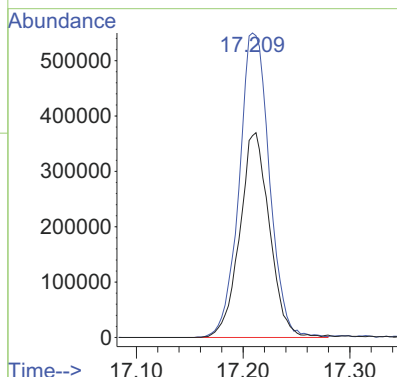
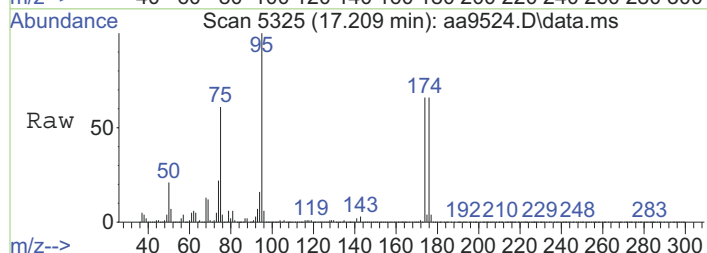
#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 15.019 min Scan# 4644
Delta R.T. 0.000 min
Lab File: aa9524.D
Acq: 9 May 2014 8:03 pm

Tgt Ion: 117 Resp: 1079137
Ion Ratio Lower Upper
117 100
82 65.8 39.2 58.8#



#64
Bromofluorobenzene (tune std)
Concen: 12.88 ppbV
RT: 17.209 min Scan# 5325
Delta R.T. -0.006 min
Lab File: aa9524.D
Acq: 9 May 2014 8:03 pm

Tgt Ion: 95 Resp: 1082625
Ion Ratio Lower Upper
95 100
174 66.1 76.0 114.0#



Section VII: Standards Data

Initial Calibration Data

Continuing Calibration Data

Initial Calibration Data Summary Report

Initial Calibration Curve: 3/25/2014

Initial Calibration Curve: 3/25/2014
Instrument: AA

Date/Time of Calibration: 3/25/2014 15:05
Sample ID: 0325.M

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA8981BFB]	03/25/2014 09:25
40 PPBV STD [AA8982STD01]	03/25/2014 11:12
20 PPBV STD [AA8983STD02]	03/25/2014 11:56
10 PPBV STD [AA8984STD03]	03/25/2014 12:48
2 PPBV STD [AA8985STD04]	03/25/2014 14:27
0.2 PPBV STD [AA8986STD05]	03/25/2014 15:05
10 PPBV ICVSS [AA8987ICVSS]	03/25/2014 16:55

RParameter	RRF 0.2ppbv	RRF 2ppbv	RRF 10ppbv	RRF 20ppbv	RRF 40ppbv	Avg ppbv	% RSD
Bromochloromethane	-----ISTD-----						
1,4-Difluorobenzene	-----ISTD-----						
d-5 Chlorobenzene	-----ISTD-----						
Acetone	1.9	2.5	2.1	1.9	2.0	2.1	13
Allyl Chloride	0.56	0.61	0.53	0.49	0.55	0.55	7.9
Benzene	4.4	5.2	4.1	3.7	4.2	4.3	13
Bromodichloromethane	1.7	1.3	1.1	1.1	1.1	1.3	21
Bromoform	2.1	1.9	1.8	1.7	1.8	1.9	7.6
Bromomethane	0.73	1.5	1.3	1.1	1.1	1.1	26
1,3-Butadiene	0.97	2.1	1.7	1.5	1.5	1.5	26
Chlorobenzene	1.3	1.8	1.6	1.5	1.6	1.5	11
Chloroethane	0.46	0.79	0.64	0.58	0.60	0.61	20
Chloroform	4.0	4.8	3.6	3.2	3.5	3.8	15
Chloromethane	1.1	1.1	1.0	1.7	1.7	1.3	24
Carbon disulfide	5.4	4.9	3.8	3.5	3.8	4.3	19
Carbon tetrachloride	7.7	7.3	5.8	5.2	5.5	6.3	18
2-Chlorotoluene	0.31	0.69	0.71	0.71	0.77	0.64	29
Cyclohexane	2.3	2.4	1.7	2.5	2.7	2.3	16
Dibromochloromethane	0.66	1.6	1.4	1.4	1.5	1.3	29
1,2-Dibromoethane	0.74	1.1	1.0	1.00	1.1	1.00	15
1,2-Dichlorobenzene	1.6	1.8	1.6	1.7	1.8	1.7	4.4
1,3-Dichlorobenzene	1.6	2.0	1.8	1.8	1.9	1.8	7.6
1,4-Dichlorobenzene	1.2	2.1	1.8	1.8	1.9	1.8	18
Dichlorodifluoromethane	0.93	1.0	0.67	0.59	0.60	0.76	26
1,1-Dichloroethane	3.9	3.5	2.6	2.3	2.5	3.0	24
1,2-Dichloroethane	3.5	3.3	2.5	2.3	2.5	2.8	20
1,1-Dichloroethene	3.3	3.1	2.5	2.3	2.5	2.7	16
1,2-Dichloroethene (trans)	1.4	2.5	2.0	1.9	2.1	2.0	20
1,2-Dichloroethene (trans)	1.4	2.6	2.1	2.0	2.1	2.0	20
1,2-Dichloropropane	0.23	0.42	0.39	0.39	0.41	0.37	22
1,3-Dichloropropene (cis)	0.28	0.67	0.64	0.64	0.72	0.59	30
1,3-Dichloropropene (trans)	0.64	0.64	0.62	0.63	0.68	0.64	3.7
1,2-Dichlorotetrafluoroethane	6.9	5.8	4.4	3.9	3.9	5.0	26
1,4-Dioxane	0.12	0.14	0.24	0.25	0.27	0.20	34
Ethanol	0.46	0.68	0.44	0.38	0.38	0.47	26
Ethylbenzene	2.2	2.6	2.3	2.3	2.4	2.4	5.9
4-Ethyltoluene	2.0	3.2	3.0	3.0	3.1	2.9	16

*% RSD (Relative Standard Deviation) must be within 30%

**An exception is made for 2 compounds that must be within 40%

RRF - Relative Response Factor

Initial Calibration Data Summary Report

Initial Calibration Curve: 3/25/2014

Initial Calibration Curve: 3/25/2014
Instrument: AA

Date/Time of Calibration: 3/25/2014 15:05
Sample ID: 0325.M

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA8981BFB]	03/25/2014 09:25
40 PPBV STD [AA8982STD01]	03/25/2014 11:12
20 PPBV STD [AA8983STD02]	03/25/2014 11:56
10 PPBV STD [AA8984STD03]	03/25/2014 12:48
2 PPBV STD [AA8985STD04]	03/25/2014 14:27
0.2 PPBV STD [AA8986STD05]	03/25/2014 15:05
10 PPBV ICVSS [AA8987ICVSS]	03/25/2014 16:55

RParameter	RRF 0.2ppbv	RRF 2ppbv	RRF 10ppbv	RRF 20ppbv	RRF 40ppbv	Avg ppbv	% RSD
n-Heptane	0.17	0.31	0.31	0.31	0.33	0.29	22
1,3-Hexachlorobutadiene	2.5	2.3	2.1	2.1	2.1	2.2	9.0
n-Hexane	1.1	2.3	2.1	1.9	2.1	1.9	24
Isopropanol	1.2	2.0	2.0	1.8	1.9	1.8	20
Methylene chloride	2.0	1.6	1.3	1.1	1.2	1.4	24
Methyl ethyl ketone	0.39	0.21	0.46	0.42	0.53	0.40	30
Methyl isobutyl ketone	0.70	0.83	0.91	0.94	1.0	0.88	14
Methyl methacrylate	0.31	0.65	0.56	0.54	0.55	0.52	24
Methyl tert-butyl ether	2.3	3.3	3.2	3.1	3.3	3.0	14
Styrene	0.93	1.3	1.4	1.5	1.6	1.3	19
Tert-butyl alcohol	1.5	2.8	2.8	2.7	2.9	2.5	24
1,1,2,2-Tetrachloroethane	0.89	1.6	1.4	1.3	1.4	1.3	19
Tetrachloroethene	0.85	1.1	0.96	0.96	1.0	0.99	10
Tetrahydrofuran	0.55	0.49	1.0	1.0	1.1	0.85	36
Toluene	0.91	1.8	1.6	1.6	1.8	1.5	23
1,2,4-Trichlorobenzene	1.9	1.9	1.8	1.8	2.0	1.9	3.3
1,1,1-Trichloroethane	7.2	5.9	4.5	4.0	4.2	5.1	27
1,1,2-Trichloroethane	0.52	0.67	0.58	0.56	0.61	0.59	9.9
Trichloroethene	0.95	0.76	0.63	0.64	0.68	0.73	18
Trichlorofluoromethane	9.4	8.3	6.0	5.4	5.6	6.9	26
1,1,2-Trichloro-1,2,2-trifluoroethane	6.2	5.3	4.2	3.7	3.9	4.6	22
1,2,4-Trimethylbenzene	1.8	2.5	2.5	2.5	2.7	2.4	15
1,3,5-Trimethylbenzene	1.9	2.9	2.6	2.6	2.8	2.6	15
2,2,4-Trimethylpentane	1.4	1.8	1.7	1.7	1.8	1.7	11
Vinyl bromide	1.9	2.2	1.6	1.4	1.5	1.7	17
Vinyl chloride	0.82	1.6	1.3	1.2	1.3	1.2	24
Xylenes (m&p)	0.99	2.1	1.9	1.9	2.0	1.8	26
Xylenes (o)	1.6	2.3	2.0	1.9	2.0	2.0	13

*% RSD (Relative Standard Deviation) must be within 30%

**An exception is made for 2 compounds that must be within 40%

RRF - Relative Response Factor

Method Path : C:\msdchem\1\METHODS\
 Method File : 0325.M
 Title : TO-15 on the Agilent 7890A / 5975C
 Last Update : Wed Mar 26 09:33:26 2014
 Response Via : Initial Calibration

Calibration Files

0.2 =aa8986std05.D 2 =aa8985std04.D 10 =aa8984std03.D 20 =aa8983std02.D 40 =aa8982std01.D

Compound		0.2	2	10	20	40	Avg	%RSD
-----		-----						
1) I	Bromochloromethane...	-----ISTD-----						
2) T	Propene	0.732	1.118	0.756	0.726	0.753	0.817	20.68
3) T	Dichlorodifluoro...	0.934	1.004	0.674	0.585	0.600	0.759	E1 25.77
4) T	Chloromethane	1.104	1.146	1.029	1.667	1.676	1.325	24.13
5) T	1,2-Dichlorotetr...	6.886	5.794	4.426	3.874	3.931	4.982	26.41
6) T	Vinyl chloride	0.821	1.647	1.298	1.214	1.257	1.247	23.54
7) T	1,3-Butadiene	0.973	2.100	1.663	1.466	1.500	1.540	26.31
8) T	n-Butane	1.164	1.989	1.625	1.397	1.450	1.525	20.15
9) T	Bromomethane	0.733	1.537	1.256	1.098	1.082	1.141	25.60
10) T	Chloroethane	0.461	0.794	0.636	0.578	0.599	0.614	19.57
11) T	Ethanol	0.464	0.676	0.440	0.384	0.378	0.468	25.98
12) T	Vinyl bromide	1.860	2.150	1.646	1.437	1.535	1.726	16.50
13) T	Acrolein	0.549	0.656	0.500	0.467	0.468	0.528	14.95
14) T	Acetone	1.873	2.524	2.127	1.901	1.965	2.078	12.90
15) T	Trichlorofluorom...	9.354	8.287	6.045	5.394	5.622	6.941	25.54
16) T	Isopropanol	1.153	1.978	2.002	1.840	1.898	1.774	19.90
17) T	n-Pentane	1.897	2.440	1.769	1.612	1.663	1.876	17.78
18) T	1,1-Dichloroethene	3.310	3.141	2.540	2.291	2.458	2.748	16.34
19) T	Methylene chloride	1.972	1.552	1.309	1.141	1.198	1.434	23.65
20) T	Tert-butyl alcohol	1.458	2.759	2.763	2.726	2.890	2.519	23.67
21) T	Allyl chloride	0.563	0.608	0.525	0.491	0.554	0.548	7.97
22) T	1,1,2-Trichloro-...	6.152	5.250	4.162	3.678	3.930	4.635	22.41
23) T	Carbon disulfide	5.380	4.913	3.802	3.477	3.845	4.283	19.09
24) T	1,2-Dichloroethe...	1.421	2.561	2.125	1.957	2.113	2.035	20.18
25) T	1,1-Dichloroethane	3.932	3.480	2.552	2.298	2.506	2.954	24.09
26) T	Methyl tert-butyl...	2.278	3.280	3.246	3.071	3.301	3.035	14.27
27) T	Methyl ethyl ketone	0.386	0.210	0.457	0.420	0.525	0.400	29.53
28) T	1,2-Dichloroethe...	1.418	2.523	2.033	1.939	2.070	1.997	19.77
29) T	Ethyl acetate	0.260	0.224	0.295	0.365	0.441	0.317	27.32
30) T	n-Hexane	1.141	2.334	2.094	1.899	2.062	1.906	23.87
31) T	Chloroform	4.012	4.751	3.616	3.242	3.491	3.822	15.41
32) T	Tetrahydrofuran	0.548	0.488	1.028	1.026	1.138	0.846	35.85
33) T	1,2-Dichloroethane	3.545	3.332	2.547	2.256	2.450	2.826	20.30
34) T	1,1,1-Trichloroe...	7.224	5.854	4.460	3.970	4.226	5.147	26.64
35) T	Benzene	4.393	5.207	4.106	3.744	4.175	4.325	12.61
36) T	Carbon tetrachlo...	7.667	7.294	5.834	5.193	5.531	6.304	17.54
37) T	Cyclohexane	2.340	2.430	1.731	2.469	2.731	2.340	15.82
-----		-----						
38) I	1,4-Difluorobenzen...	-----ISTD-----						
39) T	1,2-Dichloropropane	0.226	0.419	0.386	0.391	0.413	0.367	21.82
40) T	Bromodichloromet...	1.693	1.341	1.065	1.073	1.134	1.261	21.09
41) T	2,2,4-Trimethylp...	1.381	1.786	1.676	1.701	1.846	1.678	10.69
42) T	Trichloroethene	0.947	0.756	0.630	0.635	0.684	0.730	17.97
43) T	1,4-Dioxane	0.118	0.141	0.240	0.254	0.266	0.204	33.76
44) T	Methyl methacrylate	0.309	0.651	0.564	0.541	0.551	0.523	24.36
45) T	n-Heptane	0.174	0.314	0.306	0.314	0.331	0.288	22.39
46) T	cis-1,3-Dichloro...	0.280	0.670	0.637	0.636	0.715	0.588	29.80
47) T	Methyl isobutyl ...	0.695	0.827	0.910	0.944	1.020	0.879	14.10
48) T	trans-1,3-Dichlo...	0.638	0.644	0.622	0.626	0.682	0.642	3.71
49) T	1,1,2-Trichloroe...	0.516	0.670	0.579	0.556	0.608	0.586	9.90
50) T	Toluene	0.911	1.787	1.584	1.617	1.753	1.530	23.31
51) T	Methyl n-butyl k...	0.428	0.799	0.836	0.897	0.990	0.790	27.19
52) T	Dibromochloromet...	0.661	1.643	1.399	1.370	1.484	1.311	28.87
53) T	1,2-Dibromoethane	0.742	1.124	1.013	0.999	1.098	0.995	15.20
54) T	Tetrachloroethene	0.850	1.118	0.955	0.961	1.041	0.985	10.19
-----		-----						
55) I	d-5 Chlorobenzene ...	-----ISTD-----						
56) T	Chlorobenzene	1.296	1.758	1.556	1.541	1.581	1.546	10.64
57) T	Ethylbenzene	2.196	2.565	2.325	2.300	2.430	2.363	5.93
58) T	Xylenes (m&p)	0.993	2.126	1.926	1.927	2.031	1.801	25.50
59) T	Bromoform	2.079	1.948	1.753	1.740	1.831	1.870	7.65
60) T	Styrene	0.928	1.318	1.419	1.477	1.579	1.344	18.66

IAL SDG# E14-03224

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Method Path : C:\msdchem\1\METHODS\

Method File : 0325.M

61)	T	Xylene (o)	1.563	2.300	1.956	1.946	2.038	1.960	13.49
62)	T	1,1,2,2-Tetrachl...	0.891	1.579	1.360	1.320	1.384	1.307	19.37
63)	T	n-Nonane	0.642	1.021	0.970	0.961	1.042	0.927	17.58
64)	S	Bromofluorobenze...	0.908	0.854	0.859	0.866	0.868	0.871	2.46
65)	T	Cumene	3.366	3.226	2.873	2.866	3.032	3.073	7.15
66)	T	2-Chlorotoluene	0.305	0.693	0.711	0.705	0.767	0.636	29.43
67)	T	n-Propyl benzene	0.634	0.912	0.833	0.835	0.893	0.822	13.46
68)	T	4-Ethyltoluene	2.049	3.155	2.953	3.032	3.141	2.866	16.20
69)	T	1,3,5-Trimethylb...	1.918	2.866	2.608	2.639	2.789	2.564	14.69
70)	T	1,2,4-Trimethylb...	1.782	2.509	2.504	2.548	2.734	2.416	15.16
71)	T	Benzyl chloride	1.104	2.404	2.349	2.416	2.606	2.176	27.89
72)	T	1,3-Dichlorobenzene	1.637	1.982	1.768	1.809	1.948	1.829	7.67
73)	T	1,4-Dichlorobenzene	1.224	2.074	1.805	1.829	1.941	1.774	18.36
74)	T	1,2-Dichlorobenzene	1.646	1.796	1.647	1.676	1.793	1.712	4.48
75)	T	1,2,4-Trichlorob...	1.948	1.906	1.829	1.848	1.976	1.901	3.31
76)	T	Naphthalene	0.316	0.486	0.454	0.451	0.504	0.442	16.76
77)	T	1,3-Hexachlorobu...	2.520	2.332	2.074	2.091	2.074	2.218	9.06

(#) = Out of Range

Data Path : D:\Agilent GCMS\03-14\
 Data File : aa8982std01.D
 Acq On : 25 Mar 2014 11:12 am
 Operator : jls
 Sample : 40 ppbv Std
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 25 14:35:30 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:35:18 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.306	130	406938	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.283	114	1495394	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	14.485	117	1450131	10.00	ppbV	# 0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.656	95	1258008	9.80	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.376	39	1224897	34.34	ppbV	# 1
3) Dichlorodifluoromethane	3.421	85	9773094	31.60	ppbV	99
4) Chloromethane	3.608	50	2728786	32.01	ppbV	# 49
5) 1,2-Dichlorotetrafluor...	3.611	85	6398418	32.16	ppbV	89
6) Vinyl chloride	3.720	62	2045779	34.95	ppbV	98
7) 1,3-Butadiene	3.804	39	2440911	34.04	ppbV	# 64
8) n-Butane	3.827	43	2359493	35.47	ppbV	# 48
9) Bromomethane	4.036	94	1761163	31.85	ppbV	99
10) Chloroethane	4.155	64	975086	34.49	ppbV	# 86
11) Ethanol	4.283	45	615847	32.89	ppbV	# 9
12) Vinyl bromide	4.425	106	2499144	35.75	ppbV	100
13) Acrolein	4.540	56	762355	33.05	ppbV	92
14) Acetone	4.646	43	3198494	35.56	ppbV	# 80
15) Trichlorofluoromethane	4.724	101	9151799	33.12	ppbV	99
16) Isopropanol	4.839	45	3090110	35.11	ppbV	# 62
17) n-Pentane	4.952	43	2706762	33.13	ppbV	# 71
18) 1,1-Dichloroethene	5.241	61	4001661	34.95	ppbV	99
19) Methylene chloride	5.389	84	1949749	34.17	ppbV	# 1
20) Tert-butyl alcohol	5.309	59	4704588	34.95	ppbV	100
21) Allyl chloride	5.444	76	901069	37.47	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.537	101	6397854	34.72	ppbV	97
23) Carbon disulfide	5.579	76	6259073	36.32	ppbV	# 76
24) 1,2-Dichloroethene (tr...	6.132	61	3440134	35.70	ppbV	92
25) 1,1-Dichloroethane	6.331	63	4079428	35.42	ppbV	97
26) Methyl tert-butyl ether	6.360	73	5373683	35.66	ppbV	# 37
27) Methyl ethyl ketone	6.743	72	855286	48.89	ppbV	# 5
28) 1,2-Dichloroethene (cis)	7.154	61	3370120	35.84	ppbV	94
29) Ethyl acetate	7.367	61	718195	39.70	ppbV	# 1
30) n-Hexane	7.174	57	3356233	37.71	ppbV	96
31) Chloroform	7.418	83	5682673	34.68	ppbV	98
32) Tetrahydrofuran	7.846	42	1851842	40.79	ppbV	# 74
33) 1,2-Dichloroethane	8.145	62	3988780	34.18	ppbV	95
34) 1,1,1-Trichloroethane	8.360	97	6878908	33.94	ppbV	99
35) Benzene	8.855	78	6795597	36.79	ppbV	# 61
36) Carbon tetrachloride	9.000	117	9003817	34.25	ppbV	99
37) Cyclohexane	9.039	84	4446090	45.09	ppbV	# 1
39) 1,2-Dichloropropane	9.727	63	2467533	35.60	ppbV	98
40) Bromodichloromethane	10.003	83	6784110	34.32	ppbV	98
41) 2,2,4-Trimethylpentane	9.887	57	11044207	36.64	ppbV	99
42) Trichloroethene	9.997	130	4092461	35.28	ppbV	96
43) 1,4-Dioxane	10.125	88	1589534	41.89	ppbV	# 1
44) Methyl methacrylate	10.193	41	3293057	32.84	ppbV	# 97
45) n-Heptane	10.190	71	1981701	34.77	ppbV	# 1
46) cis-1,3-Dichloropropene	11.035	75	4277159	37.90	ppbV	98
47) Methyl isobutyl ketone	11.048	43	6103007	41.11	ppbV	# 76
48) trans-1,3-Dichloropropene	11.682	75	4078021	35.81	ppbV	# 18
49) 1,1,2-Trichloroethane	11.884	97	3639477	35.82	ppbV	89
50) Toluene	12.154	91	10482956	36.27	ppbV	95
51) Methyl n-butyl ketone	12.530	43	5919746	38.33	ppbV	86

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8982std01.D
 Acq On : 25 Mar 2014 11:12 am
 Operator : jls
 Sample : 40 ppbv Std
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

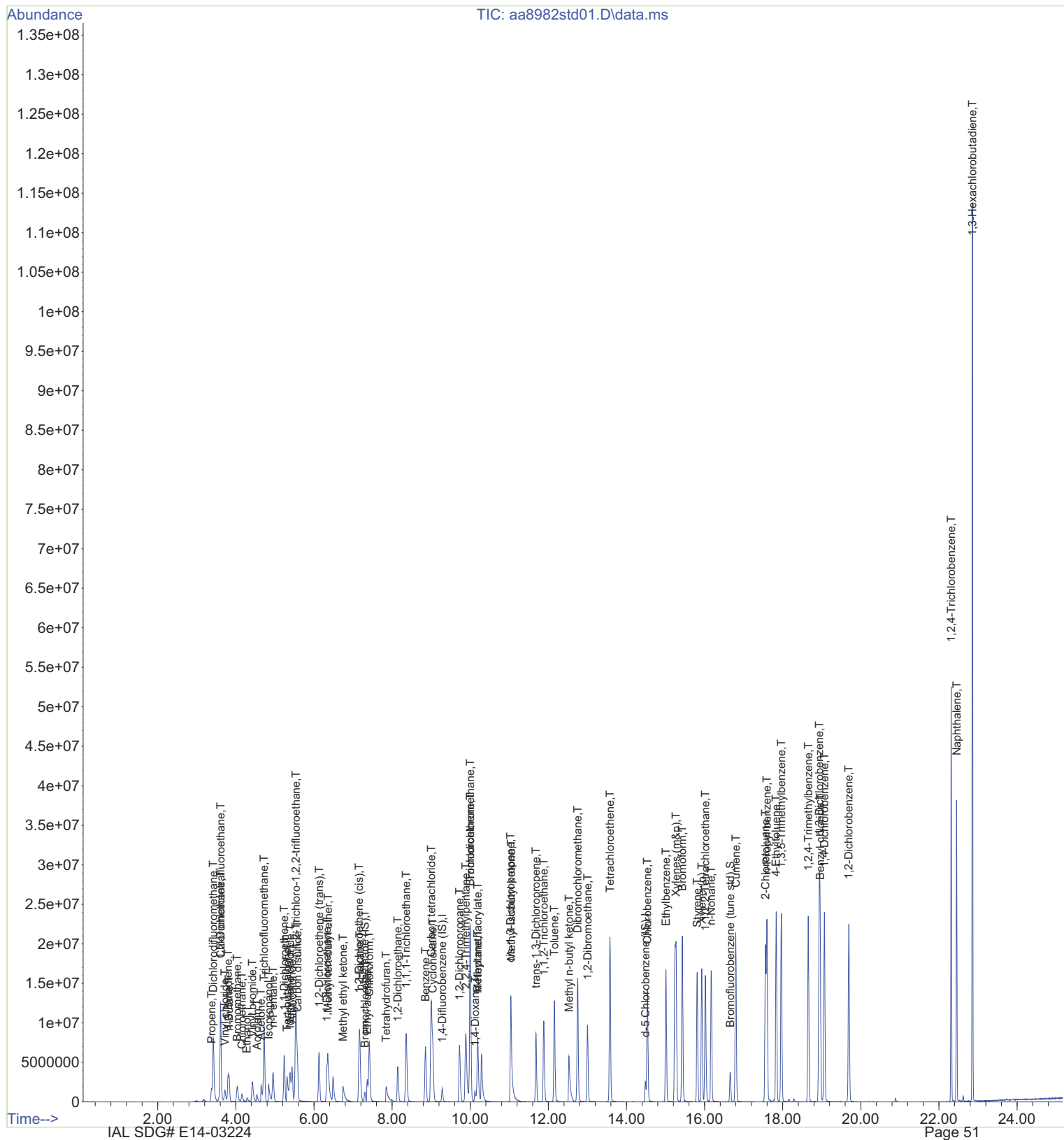
Quant Time: Mar 25 14:35:30 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:35:18 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	12.752	129	8878536	35.41	ppbV	98
53) 1,2-Dibromoethane	13.003	107	6569108	36.24	ppbV	99
54) Tetrachloroethene	13.579	166	6223996	36.12	ppbV	96
56) Chlorobenzene	14.537	112	9167837	34.77	ppbV #	80
57) Ethylbenzene	15.013	91	14097711	35.56	ppbV	99
58) Xylenes (m&p)	15.267	91	23566569	70.30	ppbV	98
59) Bromoform	15.431	173	10619214	35.17	ppbV	96
60) Styrene	15.810	104	9157820	36.70	ppbV	99
61) Xylene (o)	15.929	91	11820815	34.98	ppbV	99
62) 1,1,2,2-Tetrachloroethane	16.019	83	8029887	34.28	ppbV	99
63) n-Nonane	16.170	57	6045980	36.96	ppbV #	43
65) Cumene	16.797	105	17589422	35.57	ppbV	93
66) 2-Chlorotoluene	17.559	126	4446839	36.72	ppbV	86
67) n-Propyl benzene	17.595	120	5182755	36.30	ppbV #	82
68) 4-Ethyltoluene	17.829	105	18222253	34.98	ppbV	100
69) 1,3,5-Trimethylbenzene	17.964	105	16180311	35.60	ppbV	98
70) 1,2,4-Trimethylbenzene	18.656	105	15861047	35.87	ppbV	99
71) Benzyl chloride	18.961	91	15116648	36.14	ppbV	95
72) 1,3-Dichlorobenzene	18.935	146	11301964	36.38	ppbV	98
73) 1,4-Dichlorobenzene	19.067	146	11259079	36.01	ppbV	98
74) 1,2-Dichlorobenzene	19.691	146	10400167	36.29	ppbV	99
75) 1,2,4-Trichlorobenzene	22.311	180	11461016	35.71	ppbV	93
76) Naphthalene	22.453	127	2924796	37.28	ppbV	93
77) 1,3-Hexachlorobutadiene	22.855	225	12032697	33.34	ppbV	88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8982std01.D
 Acq On : 25 Mar 2014 11:12 am
 Operator : jls
 Sample : 40 ppbv Std
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 25 14:35:30 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:35:18 2014
 Response via : Initial Calibration



Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8983std02.D
 Acq On : 25 Mar 2014 11:56 am
 Operator : jls
 Sample : 20 ppbv Std
 Misc : AAL073524
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 25 14:35:08 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:34:46 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.306	130	415370	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.283	114	1479766	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	14.482	117	1383894	10.00	ppbV	# 0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.659	95	1198899	9.59	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.373	39	602935	14.13	ppbV	# 1
3) Dichlorodifluoromethane	3.418	85	4856357	12.50	ppbV	100
4) Chloromethane	3.605	50	1385002	13.22	ppbV	# 49
5) 1,2-Dichlorotetrafluor...	3.605	85	3217943	13.12	ppbV	90
6) Vinyl chloride	3.721	62	1008732	14.60	ppbV	95
7) 1,3-Butadiene	3.804	39	1218132	14.25	ppbV	# 69
8) n-Butane	3.827	43	1160517	14.92	ppbV	# 50
9) Bromomethane	4.039	94	912389	13.56	ppbV	99
10) Chloroethane	4.151	64	480305	14.25	ppbV	# 85
11) Ethanol	4.290	45	318871	14.31	ppbV	# 10
12) Vinyl bromide	4.418	106	1193388	14.37	ppbV	98
13) Acrolein	4.544	56	388276	14.03	ppbV	96
14) Acetone	4.663	43	1579240	15.09	ppbV	# 80
15) Trichlorofluoromethane	4.724	101	4481192	13.18	ppbV	100
16) Isopropanol	4.852	45	1528401	14.80	ppbV	# 60
17) n-Pentane	4.952	43	1339358	13.42	ppbV	# 69
18) 1,1-Dichloroethene	5.238	61	1903180	13.73	ppbV	97
19) Methylene chloride	5.386	84	947988	13.72	ppbV	# 1
20) Tert-butyl alcohol	5.331	59	2264423	14.02	ppbV	100
21) Allyl chloride	5.441	76	407558	14.19	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.537	101	3055454	13.68	ppbV	96
23) Carbon disulfide	5.576	76	2888383	13.93	ppbV	# 70
24) 1,2-Dichloroethene (tr...	6.129	61	1625423	14.08	ppbV	94
25) 1,1-Dichloroethane	6.331	63	1909448	13.68	ppbV	98
26) Methyl tert-butyl ether	6.376	73	2551221	14.17	ppbV	# 46
27) Methyl ethyl ketone	6.765	72	349207	19.13	ppbV	# 1
28) 1,2-Dichloroethene (cis)	7.158	61	1610703	14.45	ppbV	92
29) Ethyl acetate	7.386	61	303093	13.92	ppbV	# 1
30) n-Hexane	7.177	57	1577804	15.35	ppbV	96
31) Chloroform	7.421	83	2693299	13.48	ppbV	98
32) Tetrahydrofuran	7.878	42	852668	17.03	ppbV	# 72
33) 1,2-Dichloroethane	8.142	62	1874387	12.97	ppbV	95
34) 1,1,1-Trichloroethane	8.367	97	3297691	13.25	ppbV	99
35) Benzene	8.855	78	3110299	14.04	ppbV	# 56
36) Carbon tetrachloride	9.000	117	4313653	13.44	ppbV	100
37) Cyclohexane	9.048	84	2051365	20.78	ppbV	# 1
39) 1,2-Dichloropropane	9.733	63	1156521	14.57	ppbV	99
40) Bromodichloromethane	10.007	83	3174562	13.66	ppbV	99
41) 2,2,4-Trimethylpentane	9.897	57	5033272	14.60	ppbV	98
42) Trichloroethene	9.994	130	1879969	13.87	ppbV	98
43) 1,4-Dioxane	10.145	88	750583	19.98	ppbV	# 1
44) Methyl methacrylate	10.190	41	1602563	13.54	ppbV	# 94
45) n-Heptane	10.193	71	930229	14.04	ppbV	# 1
46) cis-1,3-Dichloropropene	11.042	75	1883613	14.58	ppbV	98
47) Methyl isobutyl ketone	11.077	43	2793305	18.12	ppbV	# 71
48) trans-1,3-Dichloropropene	11.688	75	1852726	13.95	ppbV	# 15
49) 1,1,2-Trichloroethane	11.891	97	1645441	13.85	ppbV	90
50) Toluene	12.158	91	4786298	14.39	ppbV	94
51) Methyl n-butyl ketone	12.550	43	2653360	15.34	ppbV	86

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8983std02.D
 Acq On : 25 Mar 2014 11:56 am
 Operator : jls
 Sample : 20 ppbv Std
 Misc : AAL073524
 ALS Vial : 3 Sample Multiplier: 1

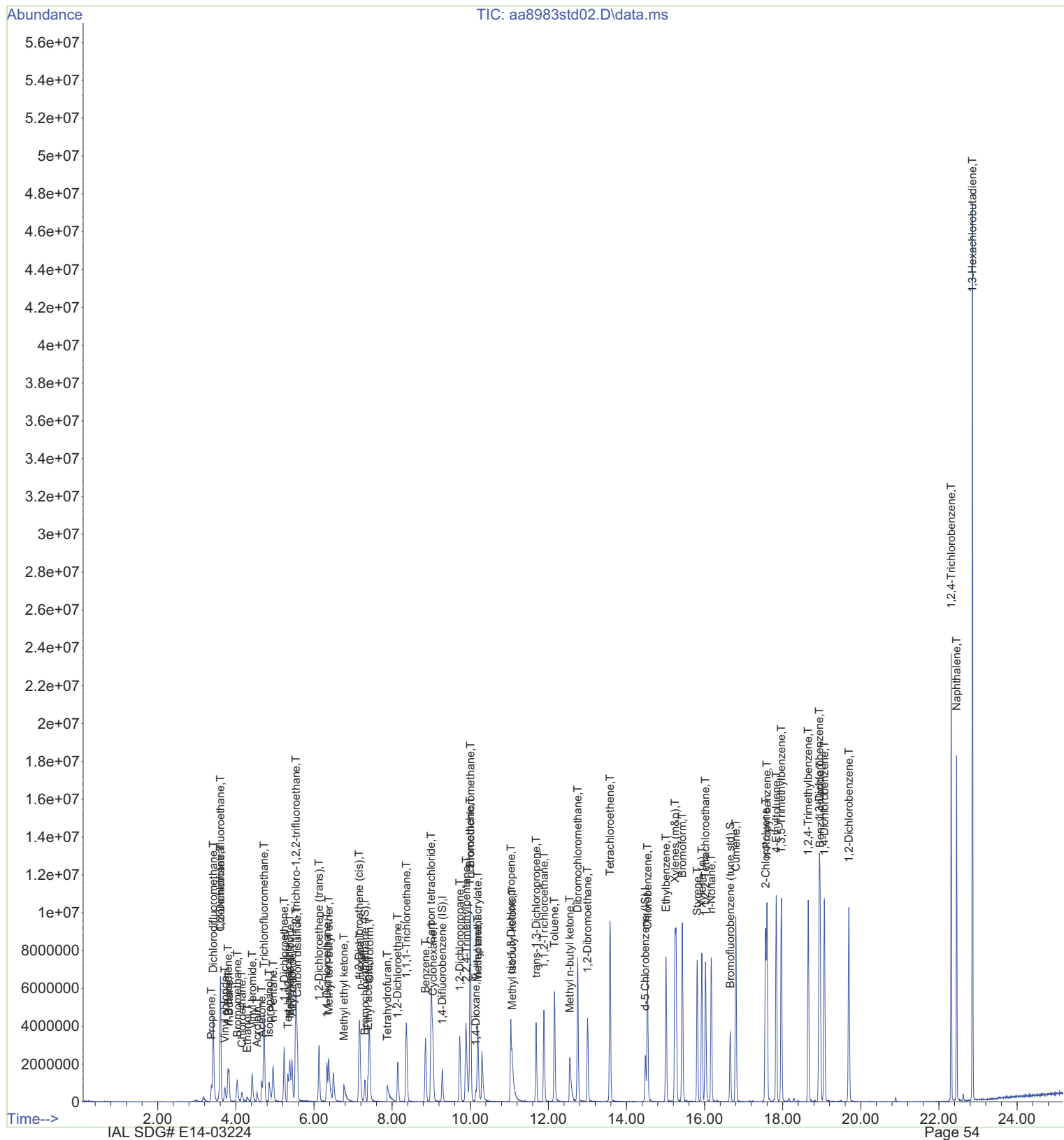
Quant Time: Mar 25 14:35:08 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:34:46 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	12.752	129	4053523	13.81	ppbV	99
53) 1,2-Dibromoethane	13.003	107	2958051	14.03	ppbV	99
54) Tetrachloroethene	13.579	166	2843202	14.30	ppbV	96
56) Chlorobenzene	14.540	112	4264796	14.71	ppbV #	79
57) Ethylbenzene	15.013	91	6366045	14.52	ppbV	99
58) Xylenes (m&p)	15.244	91	10667523	28.59	ppbV #	27
59) Bromoform	15.431	173	4816228	14.36	ppbV	95
60) Styrene	15.810	104	4087186	15.03	ppbV	99
61) Xylene (o)	15.929	91	5386078	14.34	ppbV	100
62) 1,1,2,2-Tetrachloroethane	16.022	83	3654088	13.82	ppbV	99
63) n-Nonane	16.173	57	2659405	14.84	ppbV #	42
65) Cumene	16.800	105	7933256	14.50	ppbV	93
66) 2-Chlorotoluene	17.562	126	1951500	14.61	ppbV	92
67) n-Propyl benzene	17.598	120	2312047	14.73	ppbV #	79
68) 4-Ethyltoluene	17.833	105	8391417	14.60	ppbV	98
69) 1,3,5-Trimethylbenzene	17.968	105	7305440	14.55	ppbV	97
70) 1,2,4-Trimethylbenzene	18.652	105	7052753	14.36	ppbV	99
71) Benzyl chloride	18.958	91	6686785	14.41	ppbV	95
72) 1,3-Dichlorobenzene	18.935	146	5007701	14.62	ppbV	97
73) 1,4-Dichlorobenzene	19.067	146	5062403	14.73	ppbV	98
74) 1,2-Dichlorobenzene	19.694	146	4638403	14.72	ppbV	99
75) 1,2,4-Trichlorobenzene	22.311	180	5114817	14.34	ppbV	92
76) Naphthalene	22.453	127	1249042	14.31	ppbV	96
77) 1,3-Hexachlorobutadiene	22.858	225	5786717	14.48	ppbV	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8983std02.D
 Acq On : 25 Mar 2014 11:56 am
 Operator : jls
 Sample : 20 ppbv Std
 Misc : AAL073524
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Mar 25 14:35:08 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:34:46 2014
 Response via : Initial Calibration



Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8984std03.D
 Acq On : 25 Mar 2014 12:48 pm
 Operator : jls
 Sample : 10 ppbv Std
 Misc : AAL073524
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 25 14:40:50 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:40:37 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.299	130	350053	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.277	114	1364216	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	14.479	117	1247403	10.00	ppbV	# 0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.665	95	1072012	9.94	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.364	39	264490	10.15	ppbV	# 1
3) Dichlorodifluoromethane	3.412	85	2361102	10.88	ppbV	100
4) Chloromethane	3.585	50	360307	7.06	ppbV	94
5) 1,2-Dichlorotetrafluor...	3.605	85	1549387	10.86	ppbV	89
6) Vinyl chloride	3.714	62	454398	10.33	ppbV	98
7) 1,3-Butadiene	3.798	39	582147	10.78	ppbV	# 73
8) n-Butane	3.817	43	568878	10.90	ppbV	# 49
9) Bromomethane	4.029	94	439740	10.97	ppbV	96
10) Chloroethane	4.145	64	222530	10.52	ppbV	# 65
11) Ethanol	4.283	45	153906	10.97	ppbV	# 27
12) Vinyl bromide	4.409	106	576208	10.69	ppbV	98
13) Acrolein	4.537	56	175124	10.45	ppbV	96
14) Acetone	4.672	43	744724	10.65	ppbV	# 69
15) Trichlorofluoromethane	4.714	101	2116152	10.63	ppbV	99
16) Isopropanol	4.872	45	700713	10.46	ppbV	# 59
17) n-Pentane	4.942	43	619280	10.52	ppbV	# 70
18) 1,1-Dichloroethene	5.232	61	889036	10.45	ppbV	98
19) Methylene chloride	5.376	84	458170	10.76	ppbV	# 1
20) Tert-butyl alcohol	5.351	59	967032	9.89	ppbV	100
21) Allyl chloride	5.441	76	183766	10.04	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.540	101	1457076	10.61	ppbV	98
23) Carbon disulfide	5.569	76	1330828	10.25	ppbV	# 64
24) 1,2-Dichloroethene (tr...	6.129	61	743906	10.29	ppbV	95
25) 1,1-Dichloroethane	6.334	63	893361	10.41	ppbV	98
26) Methyl tert-butyl ether	6.396	73	1136180	10.12	ppbV	# 43
27) Methyl ethyl ketone	6.791	72	159976	9.77	ppbV	# 73
28) 1,2-Dichloroethene (cis)	7.151	61	711717	10.09	ppbV	94
29) Ethyl acetate	7.389	61	103414	8.05	ppbV	# 1
30) n-Hexane	7.170	57	733100	10.38	ppbV	97
31) Chloroform	7.415	83	1265647	10.48	ppbV	97
32) Tetrahydrofuran	7.904	42	359974	9.66	ppbV	# 54
33) 1,2-Dichloroethane	8.138	62	891435	10.53	ppbV	94
34) 1,1,1-Trichloroethane	8.363	97	1561280	10.57	ppbV	100
35) Benzene	8.846	78	1437483	10.24	ppbV	# 54
36) Carbon tetrachloride	8.997	117	2042223	10.57	ppbV	99
37) Cyclohexane	9.035	84	606061	7.53	ppbV	# 1
39) 1,2-Dichloropropane	9.720	63	526144	9.73	ppbV	98
40) Bromodichloromethane	10.000	83	1452406	9.76	ppbV	98
41) 2,2,4-Trimethylpentane	9.884	57	2286470	9.63	ppbV	96
42) Trichloroethene	9.987	130	859373	9.69	ppbV	96
43) 1,4-Dioxane	10.164	88	327071	9.47	ppbV	# 30
44) Methyl methacrylate	10.190	41	769105	10.21	ppbV	# 97
45) n-Heptane	10.183	71	416901	9.64	ppbV	# 1
46) cis-1,3-Dichloropropene	11.035	75	869250	9.61	ppbV	99
47) Methyl isobutyl ketone	11.090	43	1241743	9.50	ppbV	# 70
48) trans-1,3-Dichloropropene	11.682	75	848266	9.67	ppbV	# 5
49) 1,1,2-Trichloroethane	11.878	97	789223	9.96	ppbV	87
50) Toluene	12.148	91	2161296	9.59	ppbV	94
51) Methyl n-butyl ketone	12.559	43	1140062	9.21	ppbV	# 83

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8984std03.D
 Acq On : 25 Mar 2014 12:48 pm
 Operator : jls
 Sample : 10 ppbv Std
 Misc : AAL073524
 ALS Vial : 4 Sample Multiplier: 1

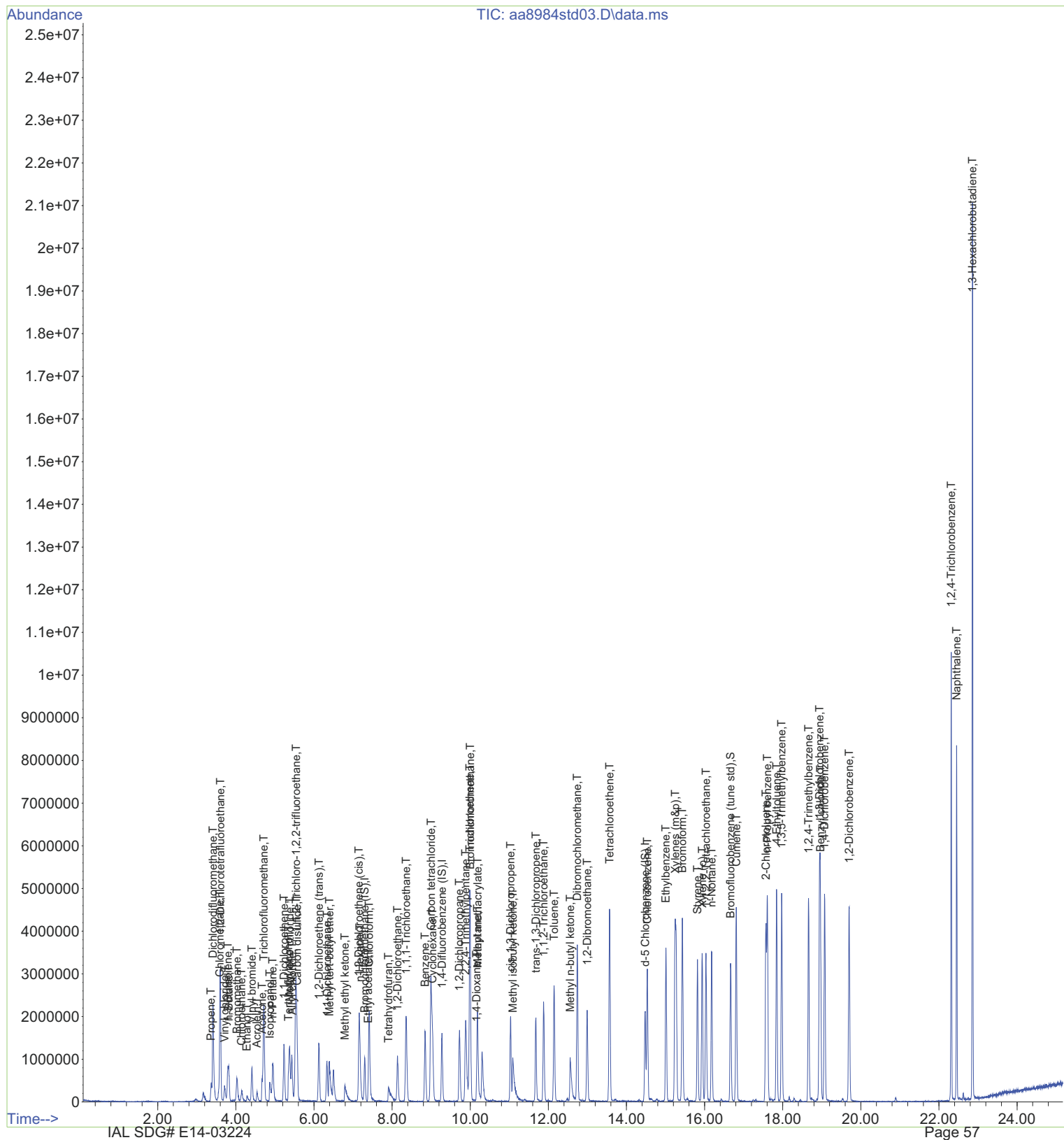
Quant Time: Mar 25 14:40:50 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:40:37 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	12.739	129	1908980	9.87	ppbV	100
53) 1,2-Dibromoethane	12.993	107	1382425	9.77	ppbV	97
54) Tetrachloroethene	13.566	166	1303236	9.69	ppbV	97
56) Chlorobenzene	14.534	112	1941120	9.98	ppbV #	80
57) Ethylbenzene	15.009	91	2900588	9.89	ppbV	99
58) Xylenes (m&p)	15.251	91	4803756	19.63	ppbV	98
59) Bromoform	15.431	173	2186932	9.88	ppbV	96
60) Styrene	15.816	104	1770514	9.52	ppbV	98
61) Xylene (o)	15.939	91	2439513	9.88	ppbV	99
62) 1,1,2,2-Tetrachloroethane	16.035	83	1696589	10.04	ppbV	99
63) n-Nonane	16.183	57	1209650	9.79	ppbV #	42
65) Cumene	16.813	105	3584113	9.83	ppbV	94
66) 2-Chlorotoluene	17.569	126	887259	9.77	ppbV	95
67) n-Propyl benzene	17.607	120	1038652	9.75	ppbV #	77
68) 4-Ethyltoluene	17.842	105	3683639	9.74	ppbV	97
69) 1,3,5-Trimethylbenzene	17.974	105	3253381	9.74	ppbV	97
70) 1,2,4-Trimethylbenzene	18.662	105	3123756	9.65	ppbV	97
71) Benzyl chloride	18.967	91	2929860	9.56	ppbV	94
72) 1,3-Dichlorobenzene	18.942	146	2204900	9.62	ppbV	98
73) 1,4-Dichlorobenzene	19.070	146	2251277	9.71	ppbV	99
74) 1,2-Dichlorobenzene	19.701	146	2054461	9.66	ppbV	99
75) 1,2,4-Trichlorobenzene	22.315	180	2281305	9.71	ppbV	95
76) Naphthalene	22.453	127	566649	9.67	ppbV	95
77) 1,3-Hexachlorobutadiene	22.858	225	2586833	9.97	ppbV	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8984std03.D
 Acq On : 25 Mar 2014 12:48 pm
 Operator : jls
 Sample : 10 ppbv Std
 Misc : AAL073524
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Mar 25 14:40:50 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:40:37 2014
 Response via : Initial Calibration



Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8985std04.D
 Acq On : 25 Mar 2014 2:27 pm
 Operator : jls
 Sample : 2 ppbv Std
 Misc : AAL073524
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 09:33:16 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:59:26 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.312	130	560415	10.00	ppbV	0.01
38) 1,4-Difluorobenzene (IS)	9.290	114	2217459	10.00	ppbV	0.01
55) d-5 Chlorobenzene (IS)	14.489	117	2027595	10.00	ppbV	# 0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.659	95	1730790	9.90	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.373	39	125296	2.60	ppbV	# 1
3) Dichlorodifluoromethane	3.418	85	1125096	2.67	ppbV	100
4) Chloromethane	3.598	50	128478	1.54	ppbV	# 49
5) 1,2-Dichlorotetrafluor...	3.598	85	649446	2.34	ppbV	91
6) Vinyl chloride	3.714	62	184550	2.25	ppbV	100
7) 1,3-Butadiene	3.791	39	235392	2.27	ppbV	# 70
8) n-Butane	3.823	43	222938	2.34	ppbV	# 51
9) Bromomethane	4.029	94	172250	2.29	ppbV	99
10) Chloroethane	4.145	64	88955	2.24	ppbV	89
11) Ethanol	4.299	45	75766	3.30	ppbV	# 71
12) Vinyl bromide	4.415	106	240956	2.40	ppbV	96
13) Acrolein	4.557	56	73580	2.45	ppbV	90
14) Acetone	4.714	43	282867	2.17	ppbV	# 67
15) Trichlorofluoromethane	4.724	101	928820	2.49	ppbV	99
16) Isopropanol	4.920	45	221725	1.77	ppbV	# 49
17) n-Pentane	4.952	43	273519	2.47	ppbV	# 66
18) 1,1-Dichloroethene	5.248	61	352060	2.25	ppbV	96
19) Methylene chloride	5.376	84	173997	2.59	ppbV	# 1
20) Tert-butyl alcohol	5.412	59	309183	1.97	ppbV	100
21) Allyl chloride	5.447	76	68116	2.13	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.550	101	588491	2.33	ppbV	# 64
23) Carbon disulfide	5.573	76	550663	2.31	ppbV	# 56
24) 1,2-Dichloroethene (tr...	6.135	61	287038	2.15	ppbV	98
25) 1,1-Dichloroethane	6.335	63	390026	2.45	ppbV	95
26) Methyl tert-butyl ether	6.447	73	367681	2.13	ppbV	# 70
27) Methyl ethyl ketone	6.868	72	23537	1.08	ppbV	# 13
28) 1,2-Dichloroethene (cis)	7.158	61	282838	2.21	ppbV	94
29) Ethyl acetate	7.454	61	25114	1.23	ppbV	# 1
30) n-Hexane	7.177	57	261564	2.13	ppbV	# 80
31) Chloroform	7.421	83	532527	2.36	ppbV	96
32) Tetrahydrofuran	8.019	42	54720	0.95	ppbV	95
33) 1,2-Dichloroethane	8.151	62	373482	2.33	ppbV	96
34) 1,1,1-Trichloroethane	8.373	97	656125	2.37	ppbV	100
35) Benzene	8.859	78	583577	2.31	ppbV	# 59
36) Carbon tetrachloride	9.013	117	817542	2.27	ppbV	100
37) Cyclohexane	9.055	84	272352	2.11	ppbV	99
39) 1,2-Dichloropropane	9.749	63	185836	1.88	ppbV	90
40) Bromodichloromethane	10.016	83	594759	2.16	ppbV	99
41) 2,2,4-Trimethylpentane	9.900	57	791971	1.88	ppbV	98
42) Trichloroethene	10.007	130	335159	2.09	ppbV	97
43) 1,4-Dioxane	10.261	88	62341	1.30	ppbV	# 47
44) Methyl methacrylate	10.203	41	288836	2.11	ppbV	# 97
45) n-Heptane	10.203	71	139287	1.83	ppbV	# 1
46) cis-1,3-Dichloropropene	11.055	75	297198	1.90	ppbV	98
47) Methyl isobutyl ketone	11.177	43	366960	2.09	ppbV	# 62
48) trans-1,3-Dichloropropene	11.698	75	285489	1.87	ppbV	# 1
49) 1,1,2-Trichloroethane	11.907	97	297293	2.04	ppbV	95
50) Toluene	12.170	91	792396	2.00	ppbV	92
51) Methyl n-butyl ketone	12.640	43	354134	1.70	ppbV	# 54

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8985std04.D
 Acq On : 25 Mar 2014 2:27 pm
 Operator : jls
 Sample : 2 ppbv Std
 Misc : AAL073524
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 09:33:16 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Tue Mar 25 14:59:26 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	12.762	129	728546	2.09	ppbV	93
53) 1,2-Dibromoethane	13.013	107	498305	1.96	ppbV	97
54) Tetrachloroethene	13.585	166	495670	2.03	ppbV	98
56) Chlorobenzene	14.547	112	712735	2.04	ppbV #	83
57) Ethylbenzene	15.022	91	1040239	2.03	ppbV	97
58) Xylenes (m&p)	15.254	91	1724127	3.98	ppbV #	27
59) Bromoform	15.444	173	790142	2.00	ppbV	96
60) Styrene	15.823	104	534440	1.74	ppbV	99
61) Xylene (o)	15.939	91	932639	2.11	ppbV	96
62) 1,1,2,2-Tetrachloroethane	16.035	83	640384	2.06	ppbV	99
63) n-Nonane	16.173	57	414132	1.92	ppbV #	45
65) Cumene	16.807	105	1308078	2.05	ppbV	93
66) 2-Chlorotoluene	17.566	126	281146	1.80	ppbV #	77
67) n-Propyl benzene	17.601	120	369889	1.99	ppbV	92
68) 4-Ethyltoluene	17.845	105	1279447	1.93	ppbV	98
69) 1,3,5-Trimethylbenzene	17.974	105	1162382	1.99	ppbV	95
70) 1,2,4-Trimethylbenzene	18.659	105	1017368	1.87	ppbV	98
71) Benzyl chloride	18.961	91	974910	1.85	ppbV	99
72) 1,3-Dichlorobenzene	18.935	146	803702	2.00	ppbV	98
73) 1,4-Dichlorobenzene	19.074	146	840905	2.03	ppbV	93
74) 1,2-Dichlorobenzene	19.697	146	728504	1.96	ppbV	99
75) 1,2,4-Trichlorobenzene	22.315	180	772749	1.92	ppbV	93
76) Naphthalene	22.453	127	197021	1.97	ppbV	92
77) 1,3-Hexachlorobutadiene	22.861	225	945612	2.05	ppbV	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

ALS Vial : 5 Sample Multiplier: 1

Quant Method : C:\msdchem\1\METHODS\0325.M

QLast update : Tue Mar 25 14:59:26 2014

Response via : Initial Calibration



Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8986std05.D
 Acq On : 25 Mar 2014 3:05 pm
 Operator : jls
 Sample : 0.2 ppbv Std
 Misc : AAL073524
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 09:28:49 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:14:07 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.309	130	566455	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.296	114	2098350	10.00	ppbV	0.02
55) d-5 Chlorobenzene (IS)	14.489	117	1903454	10.00	ppbV	# 0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.662	95	1728386	10.43	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.396	39	8290	0.18	ppbV	# 52
3) Dichlorodifluoromethane	3.418	85	105803	0.23	ppbV	79
4) Chloromethane	3.615	50	12509	0.17	ppbV	# 53
5) 1,2-Dichlorotetrafluor...	3.608	85	78007	0.28	ppbV	93
6) Vinyl chloride	3.721	62	9302	0.13	ppbV	83
7) 1,3-Butadiene	3.820	39	11028	0.13	ppbV	89
8) n-Butane	3.814	43	13190	0.15	ppbV	# 18
9) Bromomethane	4.032	94	8309	0.13	ppbV	# 76
10) Chloroethane	4.155	64	5223	0.15	ppbV	# 56
11) Ethanol	4.325	45	5254	0.20	ppbV	# 81
12) Vinyl bromide	4.431	106	21075	0.24	ppbV	88
13) Acrolein	4.557	56	6215	0.24	ppbV	96
14) Acetone	4.759	43	21220	0.18	ppbV	# 63
15) Trichlorofluoromethane	4.724	101	105978	0.27	ppbV	# 58
16) Isopropanol	4.991	45	13065	0.13	ppbV	90
17) n-Pentane	4.975	43	21488	0.23	ppbV	61
18) 1,1-Dichloroethene	5.245	61	37499	0.24	ppbV	# 83
19) Methylene chloride	5.380	84	22339	0.27	ppbV	99
20) Tert-butyl alcohol	5.557	59	16521	0.13	ppbV	79
21) Allyl chloride	5.454	76	6373	0.21	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.534	101	69698	0.27	ppbV	# 11
23) Carbon disulfide	5.585	76	60951	0.25	ppbV	# 81
24) 1,2-Dichloroethene (tr...	6.135	61	16094	0.16	ppbV	# 52
25) 1,1-Dichloroethane	6.338	63	44550	0.27	ppbV	# 67
26) Methyl tert-butyl ether	6.553	73	25803	0.17	ppbV	79
27) Methyl ethyl ketone	6.978	72	4369	0.24	ppbV	63
28) 1,2-Dichloroethene (cis)	7.164	61	16059	0.16	ppbV	# 51
29) Ethyl acetate	7.576	61	2949	0.18	ppbV	74
30) n-Hexane	7.193	57	12924	0.12	ppbV	98
31) Chloroform	7.431	83	45456	0.21	ppbV	# 60
32) Tetrahydrofuran	8.145	42	6209	0.16	ppbV	96
33) 1,2-Dichloroethane	8.164	62	40163	0.25	ppbV	# 70
34) 1,1,1-Trichloroethane	8.383	97	81837	0.28	ppbV	# 45
35) Benzene	8.855	78	49771	0.24	ppbV	# 61
36) Carbon tetrachloride	9.016	117	86858	0.24	ppbV	82
37) Cyclohexane	9.010	84	26508	0.26	ppbV	71
39) 1,2-Dichloropropane	9.769	63	9479	0.12	ppbV	# 70
40) Bromodichloromethane	10.019	83	71033	0.27	ppbV	88
41) 2,2,4-Trimethylpentane	9.929	57	57960	0.16	ppbV	# 51
42) Trichloroethene	10.010	130	39748	0.26	ppbV	# 63
43) 1,4-Dioxane	10.392	88	4970	0.13	ppbV	96
44) Methyl methacrylate	10.216	41	12971	0.12	ppbV	# 89
45) n-Heptane	10.222	71	7291	0.13	ppbV	71
46) cis-1,3-Dichloropropene	11.064	75	11740	0.10	ppbV	97
47) Methyl isobutyl ketone	11.286	43	29185	0.18	ppbV	96
48) trans-1,3-Dichloropropene	11.704	75	26766	0.20	ppbV	# 74
49) 1,1,2-Trichloroethane	11.907	97	21659	0.18	ppbV	# 60
50) Toluene	12.177	91	38238	0.12	ppbV	# 67
51) Methyl n-butyl ketone	12.752	43	17962	0.11	ppbV	89

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8986std05.D
 Acq On : 25 Mar 2014 3:05 pm
 Operator : jls
 Sample : 0.2 ppbv Std
 Misc : AAL073524
 ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 09:28:49 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:14:07 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	12.759	129	27750	0.10	ppbV #	91
53) 1,2-Dibromoethane	13.019	107	31139	0.15	ppbV #	74
54) Tetrachloroethene	13.585	166	35680	0.17	ppbV #	72
56) Chlorobenzene	14.537	112	49354	0.17	ppbV	87
57) Ethylbenzene	15.029	91	83618	0.19	ppbV	100
58) Xylenes (m&p)	15.270	91	75582	0.22	ppbV #	60
59) Bromoform	15.440	173	79146	0.22	ppbV #	72
60) Styrene	15.813	104	35346	0.14	ppbV #	77
61) Xylene (o)	15.945	91	59486	0.16	ppbV	93
62) 1,1,2,2-Tetrachloroethane	16.042	83	33909	0.14	ppbV #	13
63) n-Nonane	16.190	57	24445	0.15	ppbV	99
65) Cumene	16.807	105	128130	0.22	ppbV #	80
66) 2-Chlorotoluene	17.559	126	11615	0.10	ppbV	99
67) n-Propyl benzene	17.601	120	24132	0.15	ppbV #	57
68) 4-Ethyltoluene	17.842	105	78004	0.14	ppbV	90
69) 1,3,5-Trimethylbenzene	17.971	105	73005	0.15	ppbV	95
70) 1,2,4-Trimethylbenzene	18.656	105	67854	0.15	ppbV #	46
71) Benzyl chloride	18.980	91	42033	0.10	ppbV #	57
72) 1,3-Dichlorobenzene	18.942	146	62323	0.18	ppbV	90
73) 1,4-Dichlorobenzene	19.070	146	46584	0.15	ppbV #	51
74) 1,2-Dichlorobenzene	19.710	146	62671	0.19	ppbV #	75
75) 1,2,4-Trichlorobenzene	22.315	180	74155	0.20	ppbV	100
76) Naphthalene	22.456	127	12021	0.14	ppbV	93
77) 1,3-Hexachlorobutadiene	22.855	225	95917	0.23	ppbV	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Operator : jls

Response via : Initial Calibration



Initial Calibration Data Summary Report

Initial Calibration Curve: 5/8/2014

Initial Calibration Curve: 5/8/2014
Instrument: AA

Date/Time of Calibration: 5/8/2014 13:09
Sample ID: 0508.M

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9501BFB]	05/08/2014 09:11
40 PPBV STD [AA9502STD01]	05/08/2014 10:37
20 PPBV STD [AA9503STD02]	05/08/2014 11:17
10 PPBV STD [AA9504STD03]	05/08/2014 11:49
2 PPBV STD [AA9505STD04]	05/08/2014 12:29
0.2 PPBV STD [AA9506STD05]	05/08/2014 13:09
10 PPBV ICVSS [AA9507ICVSS]	05/08/2014 15:43

RParameter	RRF 0.2ppbv	RRF 2ppbv	RRF 10ppbv	RRF 20ppbv	RRF 40ppbv	Avg ppbv	% RSD
Bromochloromethane	-----ISTD-----						
1,4-Difluorobenzene	-----ISTD-----						
d-5 Chlorobenzene	-----ISTD-----						
Acetone	1.3	1.2	1.2	1.1	1.2	1.2	6.0
Allyl Chloride	0.44	0.46	0.47	0.46	0.48	0.46	3.0
Benzene	3.1	3.9	3.6	3.4	3.7	3.6	8.3
Bromodichloromethane	0.69	0.92	0.90	0.82	0.88	0.84	11
Bromoform	0.72	1.3	1.5	1.4	1.3	1.2	25
Bromomethane	0.78	1.0	1.1	1.0	0.93	0.98	14
1,3-Butadiene	0.55	0.62	0.65	0.60	0.61	0.60	5.9
Chlorobenzene	1.1	1.4	1.5	1.3	1.3	1.3	9.6
Chloroethane	0.48	0.44	0.44	0.41	0.40	0.44	7.4
Chloroform	2.5	3.1	3.0	2.8	2.9	2.9	7.0
Chloromethane	0.082	0.22	0.20	0.17	0.16	0.17	31
Carbon disulfide	4.4	3.4	3.3	3.1	3.1	3.5	15
Carbon tetrachloride	3.2	4.3	4.5	4.3	4.4	4.1	13
2-Chlorotoluene	0.44	0.66	0.72	0.65	0.64	0.62	17
Cyclohexane	1.2	1.5	1.4	1.4	1.5	1.4	11
Dibromochloromethane	0.74	1.1	1.3	1.2	1.2	1.1	19
1,2-Dibromoethane	0.67	0.91	0.96	0.89	0.93	0.87	13
1,2-Dichlorobenzene	1.1	1.5	1.7	1.6	1.5	1.5	15
1,3-Dichlorobenzene	1.2	1.6	1.7	1.5	1.4	1.5	15
1,4-Dichlorobenzene	1.2	1.6	1.8	1.6	1.5	1.5	14
Dichlorodifluoromethane	1.7	1.9	2.2	1.8	2.0	1.9	11
1,1-Dichloroethane	1.6	1.8	1.7	1.6	1.7	1.7	5.2
1,2-Dichloroethane	1.5	1.8	1.7	1.6	1.7	1.7	5.9
1,1-Dichloroethene	1.3	1.6	1.6	1.5	1.6	1.5	8.2
1,2-Dichloroethene (trans)	1.3	1.5	1.5	1.5	1.5	1.5	5.0
1,2-Dichloroethene (trans)	1.3	1.5	1.4	1.3	1.4	1.4	3.9
1,2-Dichloropropane	0.28	0.32	0.28	0.26	0.28	0.29	7.7
1,3-Dichloropropene (cis)	0.42	0.57	0.56	0.53	0.59	0.53	13
1,3-Dichloropropene (trans)	0.35	0.51	0.55	0.54	0.61	0.51	19
1,2-Dichlorotetrafluoroethane	2.9	3.1	3.0	2.6	2.6	2.9	8.0
1,4-Dioxane	0.19	0.25	0.24	0.22	0.23	0.22	11
Ethanol	1.0	1.4	1.3	1.2	1.3	1.2	12
Ethylbenzene	1.4	2.0	2.1	1.8	1.8	1.8	15
4-Ethyltoluene	1.4	2.4	2.7	2.2	2.2	2.2	22

*% RSD (Relative Standard Deviation) must be within 30%

**An exception is made for 2 compounds that must be within 40%

RRF - Relative Response Factor

Initial Calibration Data Summary Report

Initial Calibration Curve: 5/8/2014

Initial Calibration Curve: 5/8/2014
Instrument: AA

Date/Time of Calibration: 5/8/2014 13:09
Sample ID: 0508.M

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9501BFB]	05/08/2014 09:11
40 PPBV STD [AA9502STD01]	05/08/2014 10:37
20 PPBV STD [AA9503STD02]	05/08/2014 11:17
10 PPBV STD [AA9504STD03]	05/08/2014 11:49
2 PPBV STD [AA9505STD04]	05/08/2014 12:29
0.2 PPBV STD [AA9506STD05]	05/08/2014 13:09
10 PPBV ICVSS [AA9507ICVSS]	05/08/2014 15:43

RParameter	RRF 0.2ppbv	RRF 2ppbv	RRF 10ppbv	RRF 20ppbv	RRF 40ppbv	Avg ppbv	% RSD
n-Heptane	0.32	0.41	0.36	0.33	0.39	0.36	10
1,3-Hexachlorobutadiene	1.1	1.7	1.7	1.6	1.3	1.5	19
n-Hexane	1.1	1.4	1.3	1.2	1.4	1.3	9.7
Isopropanol	1.0	1.4	1.3	1.2	1.3	1.2	11
Methylene chloride	2.0	1.2	1.1	1.1	1.0	1.3	33
Methyl ethyl ketone	0.24	0.52	0.55	0.51	0.58	0.48	29
Methyl isobutyl ketone	0.41	0.59	0.53	0.47	0.54	0.51	13
Methyl methacrylate	0.22	0.30	0.28	0.25	0.29	0.27	12
Methyl tert-butyl ether	2.4	2.8	2.9	2.8	2.9	2.8	8.6
Styrene	0.66	1.2	1.4	1.2	1.2	1.1	25
Tert-butyl alcohol	1.3	1.7	1.8	1.7	1.9	1.7	13
1,1,2,2-Tetrachloroethane	0.86	1.2	1.1	0.89	0.81	0.97	17
Tetrachloroethene	0.74	0.91	0.95	0.86	0.83	0.86	9.3
Tetrahydrofuran	0.59	0.77	0.74	0.73	0.81	0.73	11
Toluene	1.0	1.4	1.4	1.3	1.4	1.3	13
1,2,4-Trichlorobenzene	1.0	1.5	1.7	1.6	1.3	1.4	18
1,1,1-Trichloroethane	2.8	3.6	3.7	3.5	3.6	3.4	11
1,1,2-Trichloroethane	0.42	0.54	0.52	0.49	0.52	0.50	9.9
Trichloroethene	0.51	0.64	0.66	0.60	0.62	0.60	9.8
Trichlorofluoromethane	3.8	4.6	4.6	4.3	4.5	4.3	8.1
1,1,2-Trichloro-1,2,2-trifluoroethane	2.7	3.1	3.2	2.9	2.9	3.0	5.8
1,2,4-Trimethylbenzene	1.1	2.1	2.3	2.0	1.9	1.9	23
1,3,5-Trimethylbenzene	1.2	2.1	2.3	1.9	1.9	1.9	23
2,2,4-Trimethylpentane	0.98	1.3	1.1	1.0	1.2	1.1	10
Vinyl bromide	1.0	1.4	1.4	1.4	1.3	1.3	12
Vinyl chloride	0.82	0.86	0.88	0.82	0.79	0.84	4.3
Xylenes (m&p)	1.1	1.7	1.7	1.4	1.5	1.5	17
Xylenes (o)	1.1	1.7	1.7	1.4	1.3	1.4	18

*% RSD (Relative Standard Deviation) must be within 30%

**An exception is made for 2 compounds that must be within 40%

RRF - Relative Response Factor

Method Path : C:\msdchem\1\METHODS\
 Method File : 0508.M
 Title : TO-15 on the Agilent 7890A / 5975C
 Last Update : Thu May 08 13:39:35 2014
 Response Via : Initial Calibration

Calibration Files

0.2 =aa9506std05.D 2 =aa9505std04.D 10 =aa9504std03.D 20 =aa9503std02.D 40 =aa9502std01.D

Compound		0.2	2	10	20	40	Avg	%RSD

1) I	Bromochloromethane...	-----ISTD-----						
2) T	Propene	0.084	0.149	0.145	0.118	0.139	0.127	21.25
3) T	Dichlorodifluoro...	1.676	1.943	2.211	1.769	2.018	1.924	10.92
4) T	Chloromethane	0.082	0.220	0.197	0.173	0.162	0.167	31.32
5) T	1,2-Dichlorotetr...	2.861	3.125	3.027	2.600	2.642	2.851	8.09
6) T	Vinyl chloride	0.822	0.862	0.881	0.821	0.788	0.835	4.39
7) T	1,3-Butadiene	0.548	0.617	0.647	0.602	0.607	0.604	5.97
8) T	n-Butane	0.906	0.943	0.936	0.881	0.900	0.913	2.82
9) T	Bromomethane	0.778	1.033	1.123	1.040	0.929	0.981	13.54
10) T	Chloroethane	0.483	0.441	0.438	0.408	0.403	0.435	7.41
11) T	Ethanol	1.007	1.374	1.269	1.172	1.318	1.228	11.73
12) T	Vinyl bromide	1.031	1.351	1.438	1.382	1.303	1.301	12.19
13) T	Acrolein	0.248	0.341	0.347	0.326	0.348	0.322	13.18
14) T	Acetone	1.287	1.189	1.162	1.089	1.181	1.181	6.00
15) T	Trichlorofluorom...	3.751	4.562	4.642	4.304	4.471	4.346	8.18
16) T	Isopropanol	1.027	1.374	1.269	1.172	1.318	1.232	11.08
17) T	n-Pentane	0.663	1.062	1.030	1.011	1.033	0.960	17.40
18) T	1,1-Dichloroethene	1.320	1.605	1.589	1.486	1.619	1.524	8.24
19) T	Methylene chloride	2.017	1.175	1.094	1.051	1.036	1.275	32.82
20) T	Tert-butyl alcohol	1.315	1.746	1.764	1.731	1.875	1.686	12.77
21) T	Allyl chloride	0.444	0.459	0.474	0.455	0.478	0.462	3.08
22) T	1,1,2-Trichloro-...	2.730	3.132	3.151	2.910	2.925	2.970	5.88
23) T	Carbon disulfide	4.352	3.386	3.293	3.132	3.123	3.457	14.82
24) T	1,2-Dichloroethe...	1.321	1.457	1.400	1.336	1.376	1.378	3.90
25) T	1,1-Dichloroethane	1.607	1.789	1.734	1.580	1.661	1.674	5.21
26) T	Methyl tert-buty...	2.356	2.800	2.921	2.776	2.944	2.760	8.60
27) T	Methyl ethyl ketone	0.237	0.524	0.548	0.511	0.582	0.481	28.85
28) T	1,2-Dichloroethe...	1.332	1.489	1.520	1.490	1.467	1.460	5.05
29) T	Ethyl acetate	0.269	0.341	0.296	0.285	0.330	0.304	10.00
30) T	n-Hexane	1.137	1.429	1.333	1.235	1.432	1.313	9.73
31) T	Chloroform	2.542	3.057	2.975	2.823	2.945	2.869	7.00
32) T	Tetrahydrofuran	0.594	0.773	0.741	0.727	0.805	0.728	11.12
33) T	1,2-Dichloroethane	1.522	1.789	1.705	1.648	1.711	1.675	5.93
34) T	1,1,1-Trichloroe...	2.760	3.630	3.651	3.523	3.587	3.430	11.02
35) T	Benzene	3.112	3.870	3.624	3.419	3.737	3.552	8.35
36) T	Carbon tetrachlo...	3.223	4.340	4.480	4.321	4.372	4.147	12.54
37) T	Cyclohexane	1.158	1.539	1.431	1.363	1.510	1.400	10.84

38) I	1,4-Difluorobenzen...	-----ISTD-----						
39) T	1,2-Dichloropropane	0.283	0.321	0.280	0.260	0.283	0.285	7.76
40) T	Bromodichloromet...	0.690	0.923	0.897	0.815	0.882	0.841	11.13
41) T	2,2,4-Trimethylp...	0.984	1.259	1.129	1.033	1.188	1.119	10.01
42) T	Trichloroethene	0.505	0.638	0.660	0.602	0.617	0.604	9.89
43) T	1,4-Dioxane	0.186	0.245	0.239	0.219	0.233	0.224	10.52
44) T	Methyl methacrylate	0.219	0.300	0.277	0.251	0.294	0.268	12.41
45) T	n-Heptane	0.317	0.405	0.356	0.331	0.387	0.359	10.28
46) T	cis-1,3-Dichloro...	0.416	0.565	0.564	0.533	0.589	0.533	12.86
47) T	Methyl isobutyl ...	0.410	0.587	0.526	0.473	0.541	0.507	13.36
48) T	trans-1,3-Dichlo...	0.350	0.512	0.545	0.537	0.606	0.510	18.77
49) T	1,1,2-Trichloroe...	0.415	0.542	0.518	0.494	0.522	0.498	9.97
50) T	Toluene	1.019	1.413	1.405	1.295	1.359	1.298	12.58
51) T	Methyl n-butyl k...	0.334	0.530	0.520	0.482	0.567	0.486	18.60
52) T	Dibromochloromet...	0.738	1.120	1.259	1.166	1.178	1.092	18.68
53) T	1,2-Dibromoethane	0.669	0.909	0.959	0.887	0.929	0.871	13.26
54) T	Tetrachloroethene	0.736	0.908	0.946	0.864	0.832	0.857	9.39

55) I	d-5 Chlorobenzene ...	-----ISTD-----						
56) T	Chlorobenzene	1.131	1.428	1.457	1.312	1.312	1.328	9.67
57) T	Ethylbenzene	1.373	2.035	2.063	1.823	1.816	1.822	15.15
58) T	Xylenes (m&p)	1.066	1.660	1.671	1.398	1.469	1.453	16.97
59) T	Bromoform	0.718	1.268	1.518	1.385	1.323	1.242	24.78
60) T	Styrene	0.655	1.162	1.378	1.216	1.239	1.130	24.54

IAL SDG# E14-03224

Method Path : C:\msdchem\1\METHODS\
Method File : 0508.M

61)	T	Xylene (o)	1.107	1.691	1.696	1.400	1.280	1.435	17.98
62)	T	1,1,2,2-Tetrachl...	0.857	1.186	1.104	0.894	0.811	0.970	16.95
63)	T	n-Nonane	0.417	0.692	0.658	0.546	0.550	0.573	18.93
64)	S	Bromofluorobenze...	0.756	0.771	0.767	0.759	0.841	0.779	4.50
65)	T	Cumene	1.602	2.480	2.651	2.233	2.137	2.221	18.04
66)	T	2-Chlorotoluene	0.443	0.664	0.717	0.653	0.637	0.623	16.84
67)	T	n-Propyl benzene	0.445	0.725	0.797	0.682	0.686	0.667	19.83
68)	T	4-Ethyltoluene	1.417	2.448	2.655	2.221	2.155	2.179	21.54
69)	T	1,3,5-Trimethylb...	1.195	2.140	2.332	1.930	1.928	1.905	22.63
70)	T	1,2,4-Trimethylb...	1.140	2.050	2.273	1.981	1.930	1.875	22.99
71)	T	Benzyl chloride	0.759	1.476	1.865	1.642	1.551	1.458	28.60
72)	T	1,3-Dichlorobenzene	1.151	1.618	1.736	1.499	1.373	1.475	15.33
73)	T	1,4-Dichlorobenzene	1.183	1.588	1.767	1.645	1.530	1.543	14.21
74)	T	1,2-Dichlorobenzene	1.109	1.544	1.703	1.599	1.479	1.487	15.25
75)	T	1,2,4-Trichlorob...	1.040	1.506	1.706	1.623	1.342	1.443	18.28
76)	T	Naphthalene	0.252	0.374	0.451	0.422	0.368	0.373	20.35
77)	T	1,3-Hexachlorobu...	1.062	1.655	1.720	1.563	1.314	1.463	18.58

(#) = Out of Range

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9502std01.D
 Acq On : 8 May 2014 10:37 am
 Operator : jls
 Sample : 40 ppbv Std
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 12:18:01 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:17:50 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.637	130	628482	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.691	114	2312476	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	15.019	117	2200913	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.215	95	1850403	11.02	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.428	41	348372	42.15	ppbV	99
3) Dichlorodifluoromethane	3.489	85	5074052	40.57	ppbV	99
4) Chloromethane	3.650	52	407265	35.05	ppbV #	15
5) 1,2-Dichlorotetrafluor...	3.698	85	6641832	37.56	ppbV	96
6) Vinyl chloride	3.814	62	1981568	37.06	ppbV	100
7) 1,3-Butadiene	3.914	54	1526180	38.87	ppbV	88
8) n-Butane	3.959	43	2262856	39.64	ppbV	89
9) Bromomethane	4.164	94	2334782	34.35	ppbV	98
10) Chloroethane	4.299	64	1014332	38.16	ppbV	100
11) Ethanol	4.933	45	3314039	43.20	ppbV	100
12) Vinyl bromide	4.595	106	3276096	36.97	ppbV	98
13) Acrolein	4.660	56	874476	41.34	ppbV	98
14) Acetone	4.756	43	2968761	41.98	ppbV	94
15) Trichlorofluoromethane	4.942	101	11238823	39.98	ppbV	100
16) Isopropanol	4.933	45	3314039	43.20	ppbV	100
17) n-Pentane	5.245	43	2597585	40.50	ppbV	97
18) 1,1-Dichloroethene	5.499	61	4070603	42.12	ppbV	98
19) Methylene chloride	5.605	84	2605551	38.65	ppbV	99
20) Tert-butyl alcohol	5.463	59	4713131	42.91	ppbV	100
21) Allyl chloride	5.705	76	1202422	41.18	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.836	101	7353518	38.61	ppbV	97
23) Carbon disulfide	5.888	76	7851884	38.89	ppbV	96
24) 1,2-Dichloroethene (tr...	6.467	61	3459153	40.23	ppbV	100
25) 1,1-Dichloroethane	6.653	63	4176790	40.11	ppbV	95
26) Methyl tert-butyl ether	6.682	73	7402209	41.35	ppbV	100
27) Methyl ethyl ketone	6.994	72	1464303	43.98	ppbV	95
28) 1,2-Dichloroethene (cis)	7.473	96	3689104	39.00	ppbV	85
29) Ethyl acetate	7.666	61	828378	45.34	ppbV	99
30) n-Hexane	7.692	57	3600030	44.62	ppbV	99
31) Chloroform	7.766	83	7404516	40.64	ppbV	97
32) Tetrahydrofuran	8.148	42	2024558	43.91	ppbV	96
33) 1,2-Dichloroethane	8.534	62	4301833	40.83	ppbV	96
34) 1,1,1-Trichloroethane	8.810	97	9018047	40.00	ppbV	99
35) Benzene	9.309	78	9394543	42.45	ppbV	96
36) Carbon tetrachloride	9.476	117	10990301	39.74	ppbV	100
37) Cyclohexane	9.621	56	3795045	43.23	ppbV	98
39) 1,2-Dichloropropane	10.209	63	2616474	41.91	ppbV	98
40) Bromodichloromethane	10.437	83	8161823	41.23	ppbV	97
41) 2,2,4-Trimethylpentane	10.550	57	10991203	43.98	ppbV	96
42) Trichloroethene	10.495	130	5710225	39.15	ppbV	98
43) 1,4-Dioxane	10.457	88	2155523	40.74	ppbV	96
44) Methyl methacrylate	10.550	41	2723447	44.55	ppbV	100
45) n-Heptane	10.846	43	3578913	45.04	ppbV	92
46) cis-1,3-Dichloropropene	11.505	75	5445723	42.93	ppbV	99
47) Methyl isobutyl ketone	11.534	43	5002627	43.31	ppbV	94
48) trans-1,3-Dichloropropene	12.145	75	5605506	44.82	ppbV	94
49) 1,1,2-Trichloroethane	12.354	97	4829988	41.28	ppbV	87
50) Toluene	12.704	91	12571694	40.27	ppbV	99
51) Methyl n-butyl ketone	13.026	43	5248183	45.33	ppbV	91

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9502std01.D
 Acq On : 8 May 2014 10:37 am
 Operator : jls
 Sample : 40 ppbv Std
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 08 12:18:01 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:17:50 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	13.235	129	10893746	38.86	ppbV	99
53) 1,2-Dibromoethane	13.553	107	8590093	40.25	ppbV	99
54) Tetrachloroethene	14.174	166	7694289	36.77	ppbV	97
56) Chlorobenzene	15.084	112	11549195	37.91	ppbV	98
57) Ethylbenzene	15.617	91	15983212	37.37	ppbV	92
58) Xylenes (m&p)	15.884	91	25865827	76.61	ppbV	99
59) Bromoform	15.952	173	11648876	36.46	ppbV	97
60) Styrene	16.389	104	10909968	38.21	ppbV	99
61) Xylene (o)	16.547	91	11265290	33.07	ppbV	93
62) 1,1,2,2-Tetrachloroethane	16.527	83	7139596	32.48	ppbV	98
63) n-Nonane	16.923	57	4839152	36.51	ppbV	94
65) Cumene	17.437	105	18816824	35.02	ppbV	99
66) 2-Chlorotoluene	18.167	126	5609930	37.20	ppbV #	89
67) n-Propyl benzene	18.247	120	6037425	37.10	ppbV	90
68) 4-Ethyltoluene	18.495	105	18970364	35.35	ppbV	95
69) 1,3,5-Trimethylbenzene	18.633	105	16969527	36.18	ppbV	96
70) 1,2,4-Trimethylbenzene	19.325	105	16987090	36.29	ppbV	94
71) Benzyl chloride	19.534	91	13651196	35.38	ppbV	96
72) 1,3-Dichlorobenzene	19.562	146	12088534	33.96	ppbV	100
73) 1,4-Dichlorobenzene	19.681	146	13472814	35.88	ppbV	100
74) 1,2-Dichlorobenzene	20.289	146	13021336	35.84	ppbV	100
75) 1,2,4-Trichlorobenzene	22.720	180	11810366	32.24	ppbV	93
76) Naphthalene	22.836	127	3239760	33.74	ppbV	96
77) 1,3-Hexachlorobutadiene	23.241	225	11567161	32.02	ppbV	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-08-14\
Data File : aa9502std01.D
Acq On : 8 May 2014 10:37 am
Operator : jls
Sample : 40 ppbv Std
Misc : AAL073524
ALS Vial : 2 Sample Multiplier: 1

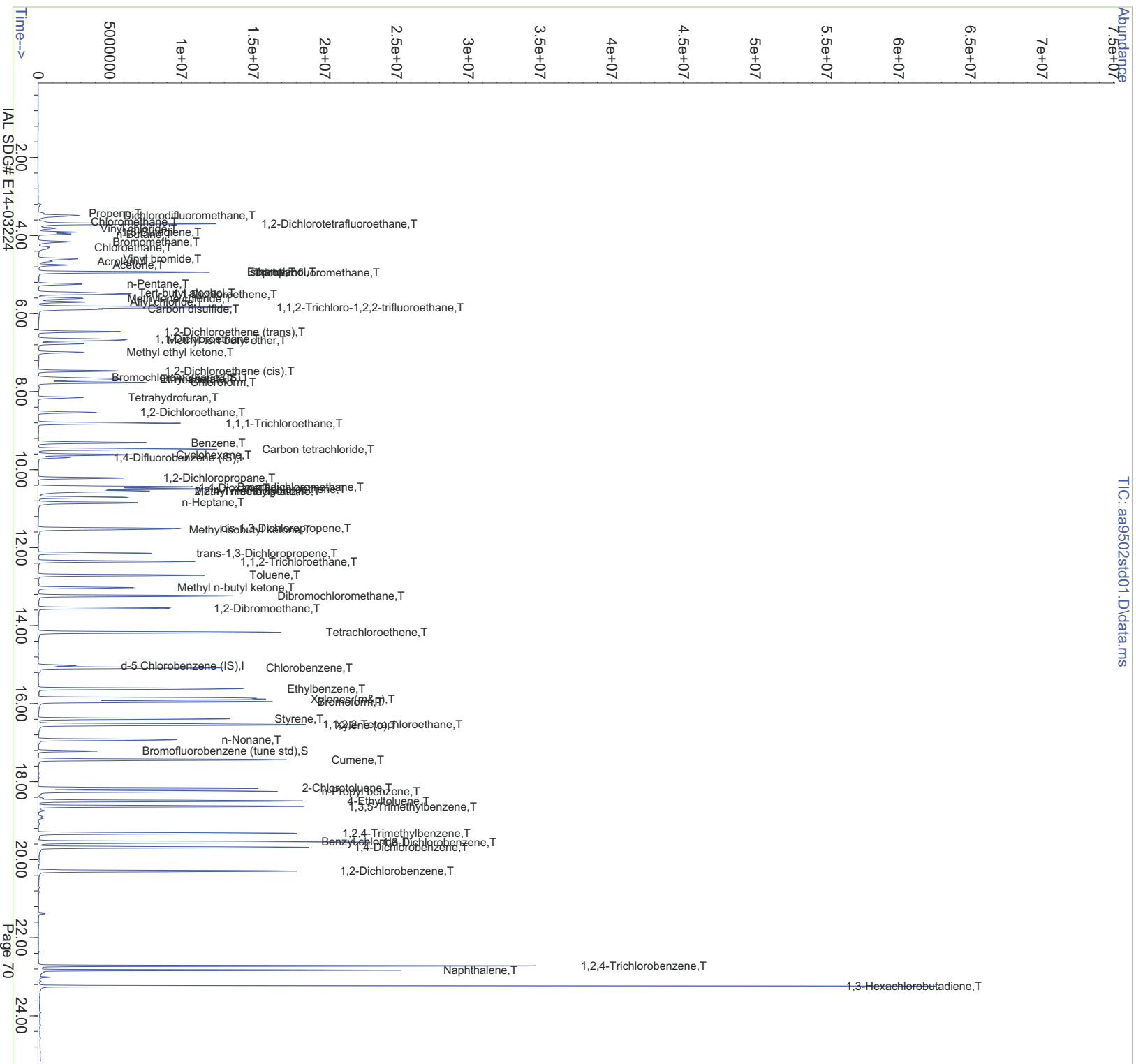
Quant Time: May 08 12:18:01 2014

Quant Method : C:\msdchem\1\METHODS\0507.M

Quant Title : TO-15 on the Agilent 7890A / 5975C

Quant Update : Thu May 08 12:17:50 2014

Response via : Initial Calibration



Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9503std02.D
 Acq On : 8 May 2014 11:17 am
 Operator : jls
 Sample : 20 ppbv Std
 Misc : AAL073524
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 12:17:39 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:16:59 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.637	130	651801	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.691	114	2414503	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	15.022	117	2259975	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.215	95	1716133	9.90	ppbV	0.00
Target Compounds						Qvalue
2) Propene	3.422	41	153575	16.22	ppbV	99
3) Dichlorodifluoromethane	3.486	85	2306625	16.01	ppbV	99
4) Chloromethane	3.644	52	225511	17.58	ppbV	78
5) 1,2-Dichlorotetrafluor...	3.695	85	3389157	17.18	ppbV	99
6) Vinyl chloride	3.814	62	1069982	18.64	ppbV	99
7) 1,3-Butadiene	3.914	54	785053	18.60	ppbV	85
8) n-Butane	3.955	43	1147992	18.82	ppbV	88
9) Bromomethane	4.155	94	1355154	18.51	ppbV	97
10) Chloroethane	4.299	64	531219	18.59	ppbV	100
11) Ethanol	4.933	45	1527689	18.47	ppbV	100
12) Vinyl bromide	4.589	106	1801838	19.23	ppbV	98
13) Acrolein	4.656	56	425572	18.83	ppbV	99
14) Acetone	4.753	43	1419688	18.75	ppbV	92
15) Trichlorofluoromethane	4.936	101	5611027	18.55	ppbV	100
16) Isopropanol	4.933	45	1527689	18.47	ppbV	99
17) n-Pentane	5.242	43	1318317	19.64	ppbV	97
18) 1,1-Dichloroethene	5.492	61	1937417	18.70	ppbV	93
19) Methylene chloride	5.602	84	1370534	19.22	ppbV	88
20) Tert-butyl alcohol	5.460	59	2256490	19.62	ppbV	100
21) Allyl chloride	5.701	76	592772	19.17	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.833	101	3793592	18.47	ppbV	100
23) Carbon disulfide	5.888	76	4083078	19.02	ppbV	98
24) 1,2-Dichloroethene (tr...	6.463	61	1742182	19.09	ppbV	94
25) 1,1-Dichloroethane	6.650	63	2059131	18.22	ppbV	96
26) Methyl tert-butyl ether	6.685	73	3618987	19.01	ppbV	99
27) Methyl ethyl ketone	6.991	72	666637	18.66	ppbV	95
28) 1,2-Dichloroethene (cis)	7.473	96	1942206	19.60	ppbV	92
29) Ethyl acetate	7.659	61	371554	19.23	ppbV	95
30) n-Hexane	7.692	57	1609846	18.53	ppbV	99
31) Chloroform	7.769	83	3680562	18.98	ppbV	98
32) Tetrahydrofuran	8.151	42	947219	19.62	ppbV	96
33) 1,2-Dichloroethane	8.531	62	2147803	19.33	ppbV	96
34) 1,1,1-Trichloroethane	8.811	97	4592197	19.30	ppbV	99
35) Benzene	9.306	78	4456888	18.87	ppbV	94
36) Carbon tetrachloride	9.476	117	5633063	19.29	ppbV	100
37) Cyclohexane	9.618	56	1776463	19.04	ppbV	98
39) 1,2-Dichloropropane	10.212	63	1254284	18.54	ppbV	97
40) Bromodichloromethane	10.437	83	3935582	18.17	ppbV	96
41) 2,2,4-Trimethylpentane	10.553	57	4986694	18.30	ppbV	97
42) Trichloroethene	10.495	130	2905093	18.24	ppbV	97
43) 1,4-Dioxane	10.454	88	1055338	18.28	ppbV	93
44) Methyl methacrylate	10.550	41	1213495	18.12	ppbV	100
45) n-Heptane	10.846	43	1596930	18.55	ppbV	95
46) cis-1,3-Dichloropropene	11.502	75	2573738	18.90	ppbV	100
47) Methyl isobutyl ketone	11.527	43	2285815	18.01	ppbV	93
48) trans-1,3-Dichloropropene	12.145	75	2590763	19.69	ppbV	97
49) 1,1,2-Trichloroethane	12.354	97	2386205	19.08	ppbV	83
50) Toluene	12.707	91	6252567	18.43	ppbV	99
51) Methyl n-butyl ketone	13.026	43	2326376	18.54	ppbV	90

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9503std02.D
 Acq On : 8 May 2014 11:17 am
 Operator : jls
 Sample : 20 ppbv Std
 Misc : AAL073524
 ALS Vial : 3 Sample Multiplier: 1

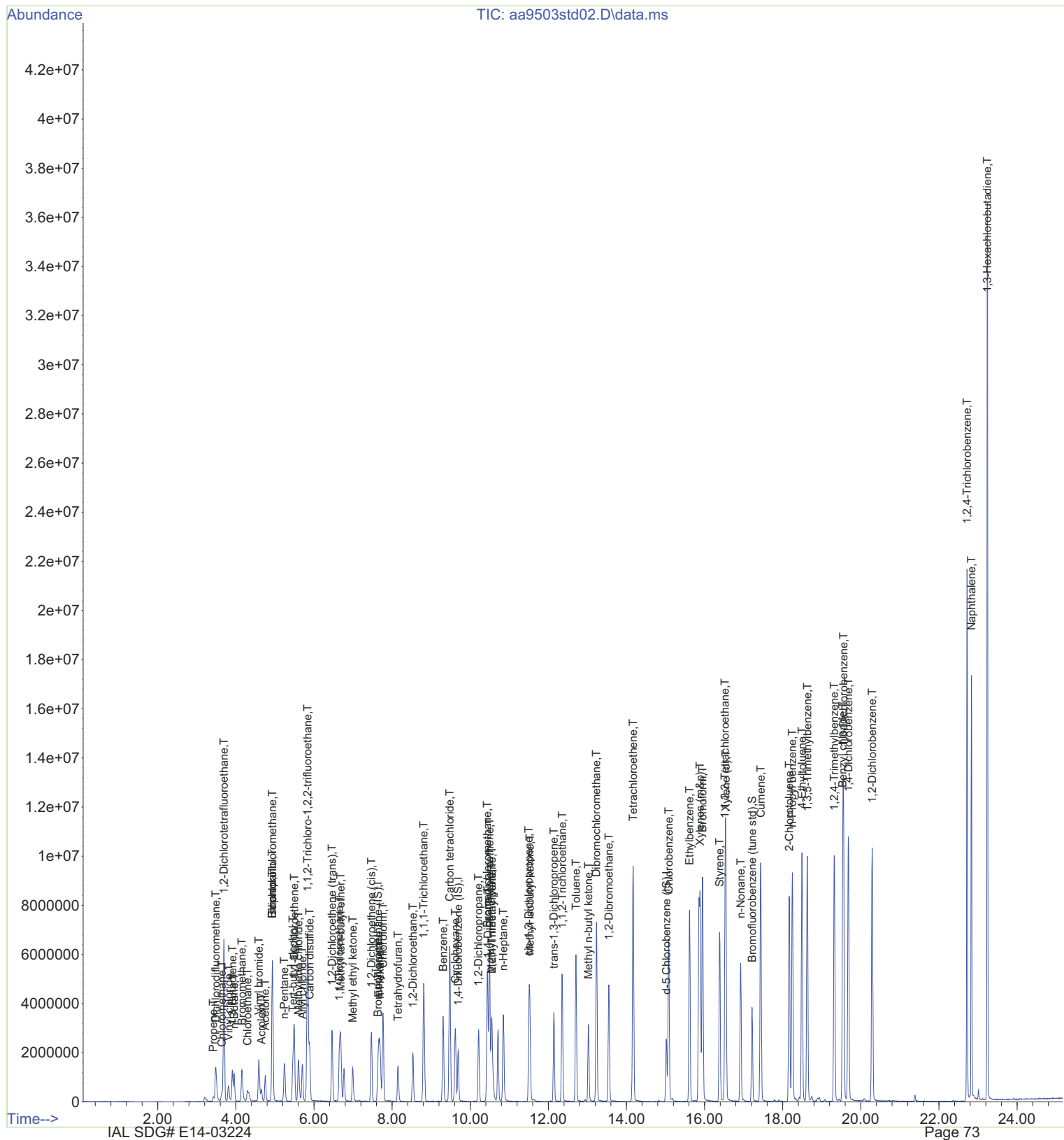
Quant Time: May 08 12:17:39 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:16:59 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	13.232	129	5628386	18.51	ppbV	99
53) 1,2-Dibromoethane	13.550	107	4284021	18.51	ppbV	99
54) Tetrachloroethene	14.170	166	4170425	18.25	ppbV	97
56) Chlorobenzene	15.080	112	5929220	18.01	ppbV	95
57) Ethylbenzene	15.614	91	8241642	17.68	ppbV	92
58) Xylenes (m&p)	15.884	91	12633381	33.46	ppbV	92
59) Bromoform	15.948	173	6260487	18.25	ppbV	97
60) Styrene	16.386	104	5496766	17.65	ppbV	97
61) Xylene (o)	16.547	91	6327236	16.51	ppbV	93
62) 1,1,2,2-Tetrachloroethane	16.524	83	4041204	16.20	ppbV	98
63) n-Nonane	16.923	57	2467921	16.59	ppbV	94
65) Cumene	17.437	105	10091867	16.85	ppbV	98
66) 2-Chlorotoluene	18.167	126	2953262	18.23	ppbV	95
67) n-Propyl benzene	18.247	120	3083465	17.13	ppbV	94
68) 4-Ethyltoluene	18.495	105	10040180	16.74	ppbV	96
69) 1,3,5-Trimethylbenzene	18.630	105	8721988	16.55	ppbV	96
70) 1,2,4-Trimethylbenzene	19.321	105	8955491	17.43	ppbV	95
71) Benzyl chloride	19.537	91	7420196	17.61	ppbV	97
72) 1,3-Dichlorobenzene	19.556	146	6775906	17.27	ppbV	100
73) 1,4-Dichlorobenzene	19.681	146	7436790	18.62	ppbV	100
74) 1,2-Dichlorobenzene	20.289	146	7226240	18.77	ppbV	100
75) 1,2,4-Trichlorobenzene	22.720	180	7334872	19.03	ppbV	94
76) Naphthalene	22.832	127	1906706	18.72	ppbV	98
77) 1,3-Hexachlorobutadiene	23.241	225	7063580	18.17	ppbV	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9503std02.D
 Acq On : 8 May 2014 11:17 am
 Operator : jls
 Sample : 20 ppbv Std
 Misc : AAL073524
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 08 12:17:39 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:16:59 2014
 Response via : Initial Calibration



Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9504std03.D
 Acq On : 8 May 2014 11:49 am
 Operator : jls
 Sample : 10 ppbv Std
 Misc : AAL073524
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 12:17:04 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:16:59 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.634	130	658743	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.691	114	2414869	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	15.019	117	2243417	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.215	95	1720984	10.00	ppbV	0.00
Target Compounds						Qvalue
2) Propene	3.422	41	95672	10.00	ppbV	99
3) Dichlorodifluoromethane	3.486	85	1456172	10.00	ppbV	100
4) Chloromethane	3.634	52	129651	10.00	ppbV	78
5) 1,2-Dichlorotetrafluor...	3.692	85	1993898	10.00	ppbV	96
6) Vinyl chloride	3.814	62	580229	10.00	ppbV	99
7) 1,3-Butadiene	3.910	54	426454	10.00	ppbV	83
8) n-Butane	3.952	43	616527	10.00	ppbV	88
9) Bromomethane	4.158	94	739977	10.00	ppbV	99
10) Chloroethane	4.296	64	288793	10.00	ppbV	99
11) Ethanol	4.933	45	836114	10.00	ppbV	100
12) Vinyl bromide	4.585	106	947146	10.00	ppbV	99
13) Acrolein	4.653	56	228362	10.00	ppbV	99
14) Acetone	4.749	43	765161	10.00	ppbV	93
15) Trichlorofluoromethane	4.936	101	3057791	10.00	ppbV	99
16) Isopropanol	4.933	45	836114	10.00	ppbV	98
17) n-Pentane	5.245	43	678340	10.00	ppbV	98
18) 1,1-Dichloroethene	5.492	61	1046966	10.00	ppbV	96
19) Methylene chloride	5.598	84	720777	10.00	ppbV	91
20) Tert-butyl alcohol	5.460	59	1162054	10.00	ppbV	100
21) Allyl chloride	5.701	76	312548	10.00	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.836	101	2075846	10.00	ppbV	99
23) Carbon disulfide	5.884	76	2169563	10.00	ppbV	98
24) 1,2-Dichloroethene (tr...	6.463	61	922204	10.00	ppbV	95
25) 1,1-Dichloroethane	6.650	63	1142467	10.00	ppbV	97
26) Methyl tert-butyl ether	6.685	73	1924125	10.00	ppbV	100
27) Methyl ethyl ketone	6.991	72	361019	10.00	ppbV	95
28) 1,2-Dichloroethene (cis)	7.473	96	1001297	10.00	ppbV	90
29) Ethyl acetate	7.659	61	195224	10.00	ppbV	99
30) n-Hexane	7.688	57	877941	10.00	ppbV	98
31) Chloroform	7.769	83	1959584	10.00	ppbV	98
32) Tetrahydrofuran	8.151	42	487937	10.00	ppbV	97
33) 1,2-Dichloroethane	8.531	62	1123174	10.00	ppbV	96
34) 1,1,1-Trichloroethane	8.814	97	2405259	10.00	ppbV	100
35) Benzene	9.306	78	2387351	10.00	ppbV	95
36) Carbon tetrachloride	9.476	117	2951405	10.00	ppbV	99
37) Cyclohexane	9.621	56	942798	10.00	ppbV	98
39) 1,2-Dichloropropane	10.212	63	676560	10.00	ppbV	98
40) Bromodichloromethane	10.437	83	2166665	10.00	ppbV	97
41) 2,2,4-Trimethylpentane	10.547	57	2725626	10.00	ppbV	98
42) Trichloroethene	10.492	130	1593308	10.00	ppbV	98
43) 1,4-Dioxane	10.453	88	577391	10.00	ppbV	94
44) Methyl methacrylate	10.550	41	669896	10.00	ppbV	100
45) n-Heptane	10.849	43	860833	10.00	ppbV	96
46) cis-1,3-Dichloropropene	11.505	75	1362096	10.00	ppbV	98
47) Methyl isobutyl ketone	11.527	43	1269177	10.00	ppbV	94
48) trans-1,3-Dichloropropene	12.145	75	1316288	10.00	ppbV	95
49) 1,1,2-Trichloroethane	12.354	97	1250681	10.00	ppbV	86
50) Toluene	12.707	91	3393730	10.00	ppbV	98
51) Methyl n-butyl ketone	13.026	43	1254714	10.00	ppbV	90

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9504std03.D
 Acq On : 8 May 2014 11:49 am
 Operator : jls
 Sample : 10 ppbv Std
 Misc : AAL073524
 ALS Vial : 4 Sample Multiplier: 1

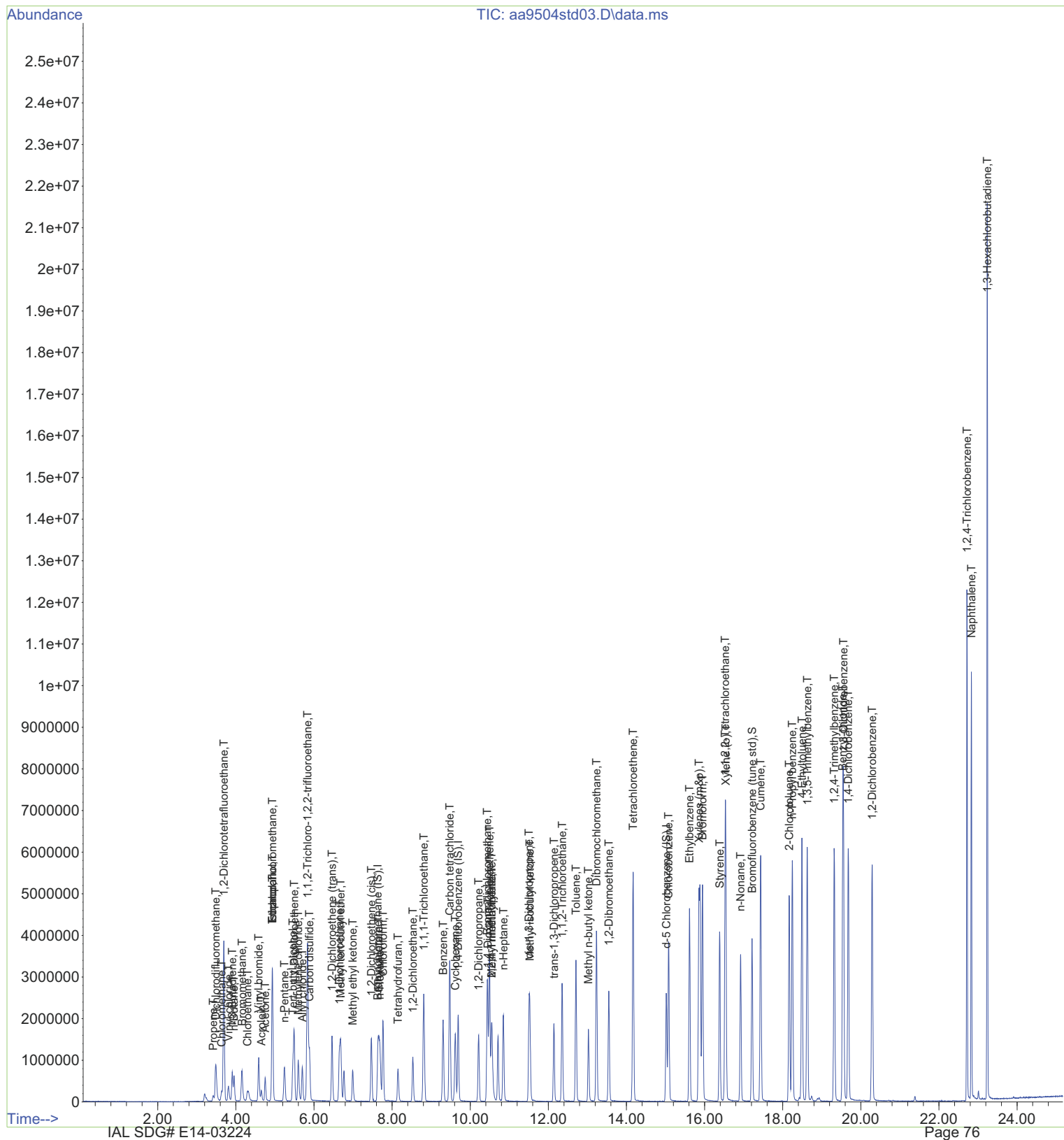
Quant Time: May 08 12:17:04 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:16:59 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	13.231	129	3040764	10.00	ppbV	98
53) 1,2-Dibromoethane	13.547	107	2315224	10.00	ppbV	99
54) Tetrachloroethene	14.174	166	2285108	10.00	ppbV	97
56) Chlorobenzene	15.077	112	3267982	10.00	ppbV	96
57) Ethylbenzene	15.614	91	4627746	10.00	ppbV	93
58) Xylenes (m&p)	15.858	91	7495445	20.00	ppbV	93
59) Bromoform	15.945	173	3406174	10.00	ppbV	96
60) Styrene	16.389	104	3092148	10.00	ppbV	97
61) Xylene (o)	16.543	91	3804765	10.00	ppbV	95
62) 1,1,2,2-Tetrachloroethane	16.527	83	2475945	10.00	ppbV	98
63) n-Nonane	16.919	57	1476968	10.00	ppbV	96
65) Cumene	17.434	105	5946397	10.00	ppbV	97
66) 2-Chlorotoluene	18.167	126	1608420	10.00	ppbV	92
67) n-Propyl benzene	18.247	120	1786890	10.00	ppbV	92
68) 4-Ethyltoluene	18.495	105	5955418	10.00	ppbV	98
69) 1,3,5-Trimethylbenzene	18.630	105	5231689	10.00	ppbV	98
70) 1,2,4-Trimethylbenzene	19.318	105	5098924	10.00	ppbV	95
71) Benzyl chloride	19.537	91	4183069	10.00	ppbV	98
72) 1,3-Dichlorobenzene	19.556	146	3894217	10.00	ppbV	99
73) 1,4-Dichlorobenzene	19.678	146	3964612	10.00	ppbV	100
74) 1,2-Dichlorobenzene	20.289	146	3820945	10.00	ppbV	100
75) 1,2,4-Trichlorobenzene	22.720	180	3826416	10.00	ppbV	93
76) Naphthalene	22.832	127	1011106	10.00	ppbV	97
77) 1,3-Hexachlorobutadiene	23.237	225	3858646	10.00	ppbV	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9504std03.D
 Acq On : 8 May 2014 11:49 am
 Operator : jls
 Sample : 10 ppbv Std
 Misc : AAL073524
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 08 12:17:04 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:16:59 2014
 Response via : Initial Calibration



Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9505std04.D
 Acq On : 8 May 2014 12:29 pm
 Operator : jls
 Sample : 2 ppbv Std
 Misc : AAL073524
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 08 12:55:28 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:18:12 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.634	130	677460	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.691	114	2497913	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	15.019	117	2331668	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.215	95	1798679	9.78	ppbV	0.00
Target Compounds						Qvalue
2) Propene	3.418	41	20149	2.22	ppbV	99
3) Dichlorodifluoromethane	3.479	85	263278	1.94	ppbV	99
4) Chloromethane	3.637	52	29780	2.48	ppbV #	39
5) 1,2-Dichlorotetrafluor...	3.685	85	423446	2.27	ppbV	90
6) Vinyl chloride	3.804	62	116735	2.08	ppbV	97
7) 1,3-Butadiene	3.904	54	83609	1.99	ppbV #	71
8) n-Butane	3.949	43	127716	2.08	ppbV	92
9) Bromomethane	4.155	94	140024	2.01	ppbV	96
10) Chloroethane	4.293	64	59720	2.12	ppbV	97
11) Ethanol	4.933	45	186193	2.19	ppbV #	98
12) Vinyl bromide	4.579	106	183109	1.97	ppbV	99
13) Acrolein	4.653	56	46209	2.00	ppbV	95
14) Acetone	4.749	43	161122	2.08	ppbV	90
15) Trichlorofluoromethane	4.930	101	618067	2.04	ppbV	100
16) Isopropanol	4.933	45	186193	2.19	ppbV	95
17) n-Pentane	5.238	43	143922	2.07	ppbV	98
18) 1,1-Dichloroethene	5.489	61	217459	2.05	ppbV	98
19) Methylene chloride	5.592	84	159177	2.22	ppbV	94
20) Tert-butyl alcohol	5.460	59	236591	1.95	ppbV	100
21) Allyl chloride	5.698	76	62194	1.96	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.830	101	424307	2.09	ppbV	94
23) Carbon disulfide	5.888	76	458733	2.13	ppbV	97
24) 1,2-Dichloroethene (tr...	6.457	61	197346	2.13	ppbV	99
25) 1,1-Dichloroethane	6.647	63	242454	2.16	ppbV	96
26) Methyl tert-butyl ether	6.682	73	379444	1.94	ppbV	98
27) Methyl ethyl ketone	6.987	72	70982	1.91	ppbV	95
28) 1,2-Dichloroethene (cis)	7.466	96	201815	2.00	ppbV	85
29) Ethyl acetate	7.663	61	46201	2.25	ppbV	97
30) n-Hexane	7.685	57	193627	2.14	ppbV	98
31) Chloroform	7.765	83	414248	2.10	ppbV	98
32) Tetrahydrofuran	8.158	42	104782	2.04	ppbV	99
33) 1,2-Dichloroethane	8.531	62	242436	2.12	ppbV	97
34) 1,1,1-Trichloroethane	8.810	97	491869	2.02	ppbV	100
35) Benzene	9.306	78	524324	2.15	ppbV	95
36) Carbon tetrachloride	9.473	117	588062	1.98	ppbV	99
37) Cyclohexane	9.614	56	208479	2.15	ppbV	98
39) 1,2-Dichloropropane	10.216	63	160307	2.34	ppbV	100
40) Bromodichloromethane	10.437	83	461108	2.13	ppbV	98
41) 2,2,4-Trimethylpentane	10.550	57	629042	2.26	ppbV	99
42) Trichloroethene	10.489	130	318605	2.04	ppbV	95
43) 1,4-Dioxane	10.460	88	122155	2.12	ppbV	100
44) Methyl methacrylate	10.553	41	149791	2.19	ppbV	98
45) n-Heptane	10.849	43	202131	2.26	ppbV	89
46) cis-1,3-Dichloropropene	11.505	75	282036	2.01	ppbV	100
47) Methyl isobutyl ketone	11.534	43	293106	2.29	ppbV	92
48) trans-1,3-Dichloropropene	12.138	75	256015	1.82	ppbV	95
49) 1,1,2-Trichloroethane	12.350	97	270624	2.12	ppbV	88
50) Toluene	12.707	91	705921	2.09	ppbV	97
51) Methyl n-butyl ketone	13.029	43	264546	2.03	ppbV	92

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9505std04.D
 Acq On : 8 May 2014 12:29 pm
 Operator : jls
 Sample : 2 ppbv Std
 Misc : AAL073524
 ALS Vial : 5 Sample Multiplier: 1

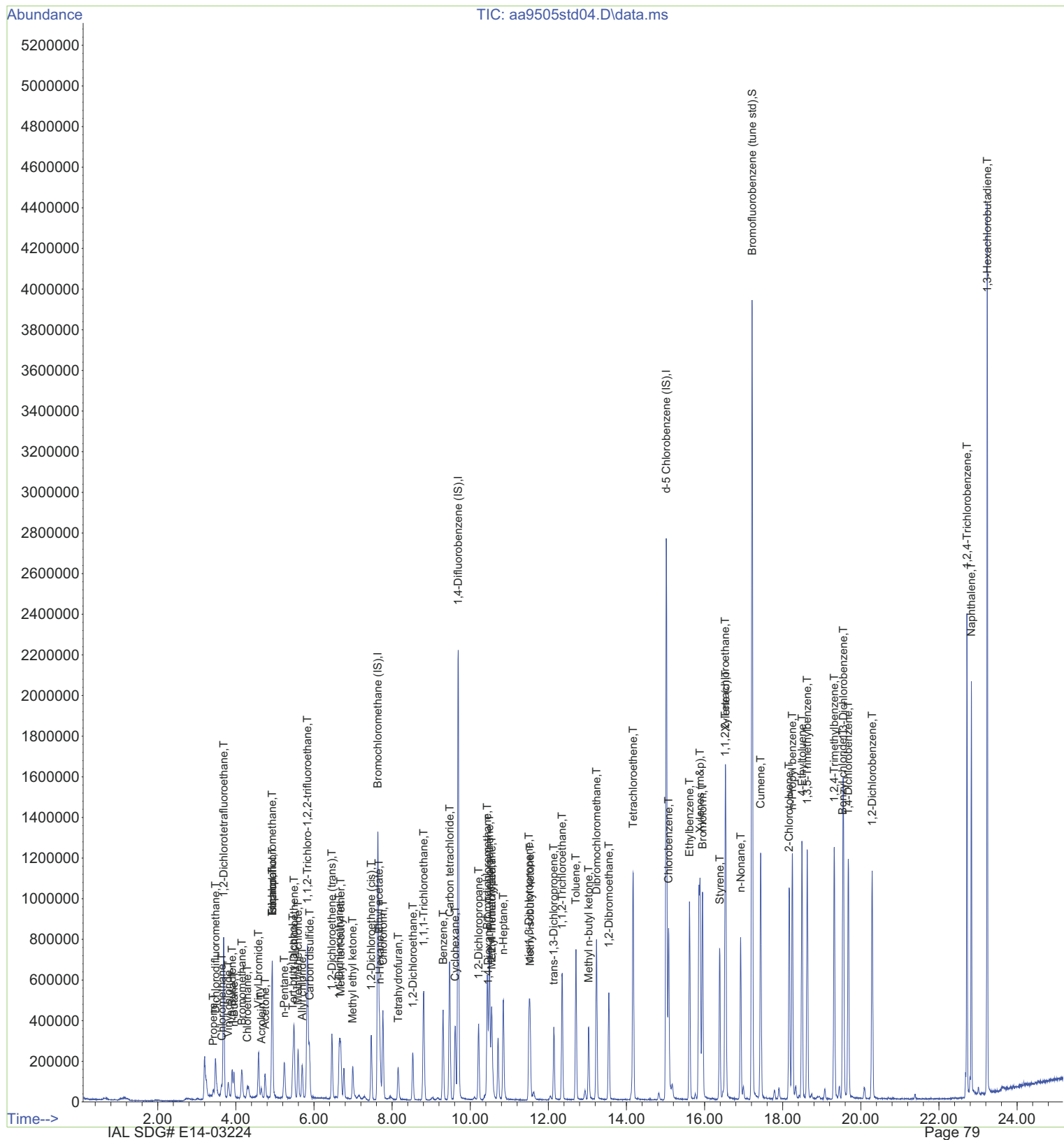
Quant Time: May 08 12:55:28 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:18:12 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	13.235	129	559562	1.87	ppbV	100
53) 1,2-Dibromoethane	13.550	107	453953	1.96	ppbV	98
54) Tetrachloroethene	14.170	166	453768	2.06	ppbV	97
56) Chlorobenzene	15.080	112	665830	2.10	ppbV	97
57) Ethylbenzene	15.614	91	949024	2.14	ppbV	95
58) Xylenes (m&p)	15.884	91	1547767	4.39	ppbV	94
59) Bromoform	15.948	173	591329	1.80	ppbV	95
60) Styrene	16.389	104	541836	1.82	ppbV	98
61) Xylene (o)	16.540	91	788343	2.32	ppbV	94
62) 1,1,2,2-Tetrachloroethane	16.527	83	553126	2.53	ppbV	98
63) n-Nonane	16.923	57	322781	2.37	ppbV	98
65) Cumene	17.434	105	1156578	2.12	ppbV	97
66) 2-Chlorotoluene	18.164	126	309621	1.98	ppbV #	87
67) n-Propyl benzene	18.244	120	337888	2.01	ppbV #	86
68) 4-Ethyltoluene	18.492	105	1141424	2.09	ppbV	98
69) 1,3,5-Trimethylbenzene	18.627	105	997745	2.07	ppbV	99
70) 1,2,4-Trimethylbenzene	19.321	105	956090	1.99	ppbV	98
71) Benzyl chloride	19.537	91	688339	1.75	ppbV	97
72) 1,3-Dichlorobenzene	19.553	146	754598	2.11	ppbV	98
73) 1,4-Dichlorobenzene	19.678	146	740680	1.93	ppbV	99
74) 1,2-Dichlorobenzene	20.289	146	719835	1.94	ppbV	98
75) 1,2,4-Trichlorobenzene	22.717	180	702090	1.93	ppbV	94
76) Naphthalene	22.829	127	174430	1.81	ppbV	99
77) 1,3-Hexachlorobutadiene	23.238	225	771881	2.16	ppbV	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9505std04.D
 Acq On : 8 May 2014 12:29 pm
 Operator : jls
 Sample : 2 ppbv Std
 Misc : AAL073524
 ALS Vial : 5 Sample Multiplier: 1

Quant Time: May 08 12:55:28 2014
 Quant Method : C:\msdchem\1\METHODS\0507.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 12:18:12 2014
 Response via : Initial Calibration



Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9506std05.D
 Acq On : 8 May 2014 1:09 pm
 Operator : jls
 Sample : 0.2 ppbv Std
 Misc : AAL073524
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 11:08:14 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.643	130	706631	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.695	114	2514183	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	15.022	117	2282477	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.219	95	1725729	9.71	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.425	41	1182	0.13	ppbV #	4
3) Dichlorodifluoromethane	3.483	85	23691	0.17	ppbV	97
4) Chloromethane	3.650	52	1163	0.10	ppbV #	60
5) 1,2-Dichlorotetrafluor...	3.692	85	40434	0.20	ppbV	87
6) Vinyl chloride	3.798	62	11617	0.20	ppbV	96
7) 1,3-Butadiene	3.907	54	7743	0.18	ppbV #	74
8) n-Butane	3.952	43	12810	0.20	ppbV	94
9) Bromomethane	4.161	94	10991	0.16	ppbV	90
10) Chloroethane	4.290	64	6833	0.22	ppbV #	64
11) Ethanol	4.933	45	14236	0.16	ppbV #	95
12) Vinyl bromide	4.589	106	14576	0.16	ppbV	93
13) Acrolein	4.643	56	3499	0.15	ppbV #	70
14) Acetone	4.756	43	18185	0.22	ppbV	93
15) Trichlorofluoromethane	4.939	101	53010	0.17	ppbV	100
16) Isopropanol	4.933	45	14519	0.17	ppbV #	69
17) n-Pentane	5.248	43	9369	0.14	ppbV #	84
18) 1,1-Dichloroethene	5.502	61	18650	0.17	ppbV	89
19) Methylene chloride	5.605	84	28505	0.32	ppbV	98
20) Tert-butyl alcohol	5.473	59	18578	0.16	ppbV	100
21) Allyl chloride	5.701	76	6274	0.19	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.843	101	38586	0.18	ppbV	90
23) Carbon disulfide	5.894	76	61512	0.25	ppbV #	86
24) 1,2-Dichloroethene (tr...	6.467	61	18675	0.19	ppbV	97
25) 1,1-Dichloroethane	6.659	63	22718	0.19	ppbV	93
26) Methyl tert-butyl ether	6.695	73	33291	0.17	ppbV	98
27) Methyl ethyl ketone	7.003	72	3355	0.10	ppbV #	84
28) 1,2-Dichloroethene (cis)	7.476	96	18826	0.18	ppbV	84
29) Ethyl acetate	7.679	61	3795	0.18	ppbV #	70
30) n-Hexane	7.698	57	16063	0.17	ppbV	90
31) Chloroform	7.772	83	35929	0.18	ppbV	99
32) Tetrahydrofuran	8.167	42	8392	0.16	ppbV #	60
33) 1,2-Dichloroethane	8.537	62	21507	0.18	ppbV	98
34) 1,1,1-Trichloroethane	8.814	97	39008	0.16	ppbV	93
35) Benzene	9.312	78	43980	0.18	ppbV #	84
36) Carbon tetrachloride	9.476	117	45555	0.16	ppbV	100
37) Cyclohexane	9.624	56	16367	0.17	ppbV	100
39) 1,2-Dichloropropane	10.222	63	14215	0.20	ppbV	98
40) Bromodichloromethane	10.441	83	34689	0.16	ppbV	97
41) 2,2,4-Trimethylpentane	10.550	57	49496	0.18	ppbV	97
42) Trichloroethene	10.502	130	25379	0.17	ppbV	97
43) 1,4-Dioxane	10.466	88	9339	0.17	ppbV #	83
44) Methyl methacrylate	10.563	41	11031	0.16	ppbV #	95
45) n-Heptane	10.852	43	15927	0.18	ppbV	84
46) cis-1,3-Dichloropropene	11.508	75	20907	0.16	ppbV	97
47) Methyl isobutyl ketone	11.531	43	20616	0.16	ppbV	95
48) trans-1,3-Dichloropropene	12.148	75	17612	0.14	ppbV	89
49) 1,1,2-Trichloroethane	12.357	97	20846	0.17	ppbV	90
50) Toluene	12.711	91	51215	0.16	ppbV	98
51) Methyl n-butyl ketone	13.032	43	16800	0.14	ppbV	96

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9506std05.D
 Acq On : 8 May 2014 1:09 pm
 Operator : jls
 Sample : 0.2 ppbv Std
 Misc : AAL073524
 ALS Vial : 7 Sample Multiplier: 1

Quant Time: May 09 11:08:14 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	13.235	129	37126	0.14	ppbV	98
53) 1,2-Dibromoethane	13.553	107	33664	0.15	ppbV	99
54) Tetrachloroethene	14.174	166	37006	0.17	ppbV	92
56) Chlorobenzene	15.087	112	51624	0.17	ppbV	96
57) Ethylbenzene	15.617	91	62695	0.15	ppbV	96
58) Xylenes (m&p)	15.884	91	97342	0.29	ppbV	98
59) Bromoform	15.955	173	32761	0.12	ppbV	99
60) Styrene	16.383	104	29897	0.12	ppbV	98
61) Xylene (o)	16.543	91	50556	0.15	ppbV	97
62) 1,1,2,2-Tetrachloroethane	16.530	83	39144	0.18	ppbV	99
63) n-Nonane	16.926	57	19050	0.15	ppbV	99
65) Cumene	17.434	105	73143	0.14	ppbV	99
66) 2-Chlorotoluene	18.173	126	20227	0.14	ppbV #	83
67) n-Propyl benzene	18.251	120	20314	0.13	ppbV #	79
68) 4-Ethyltoluene	18.489	105	64682	0.13	ppbV	96
69) 1,3,5-Trimethylbenzene	18.630	105	54540	0.13	ppbV	94
70) 1,2,4-Trimethylbenzene	19.318	105	52043	0.12	ppbV	95
71) Benzyl chloride	19.540	91	34662	0.10	ppbV	97
72) 1,3-Dichlorobenzene	19.553	146	52536	0.16	ppbV	96
73) 1,4-Dichlorobenzene	19.685	146	54024	0.15	ppbV	98
74) 1,2-Dichlorobenzene	20.296	146	50615	0.15	ppbV	98
75) 1,2,4-Trichlorobenzene	22.720	180	47455	0.14	ppbV	92
76) Naphthalene	22.829	127	11505	0.14	ppbV	96
77) 1,3-Hexachlorobutadiene	23.238	225	48498	0.15	ppbV	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-08-14\
Data File : aa9506std05.D
Acq On : 18 May 2014 1:09 pm
Operator : Jls
Sample : 0.2 ppbv Std
Misc : AAL073524
ALS Vial : 7 Sample Multiplier: 1

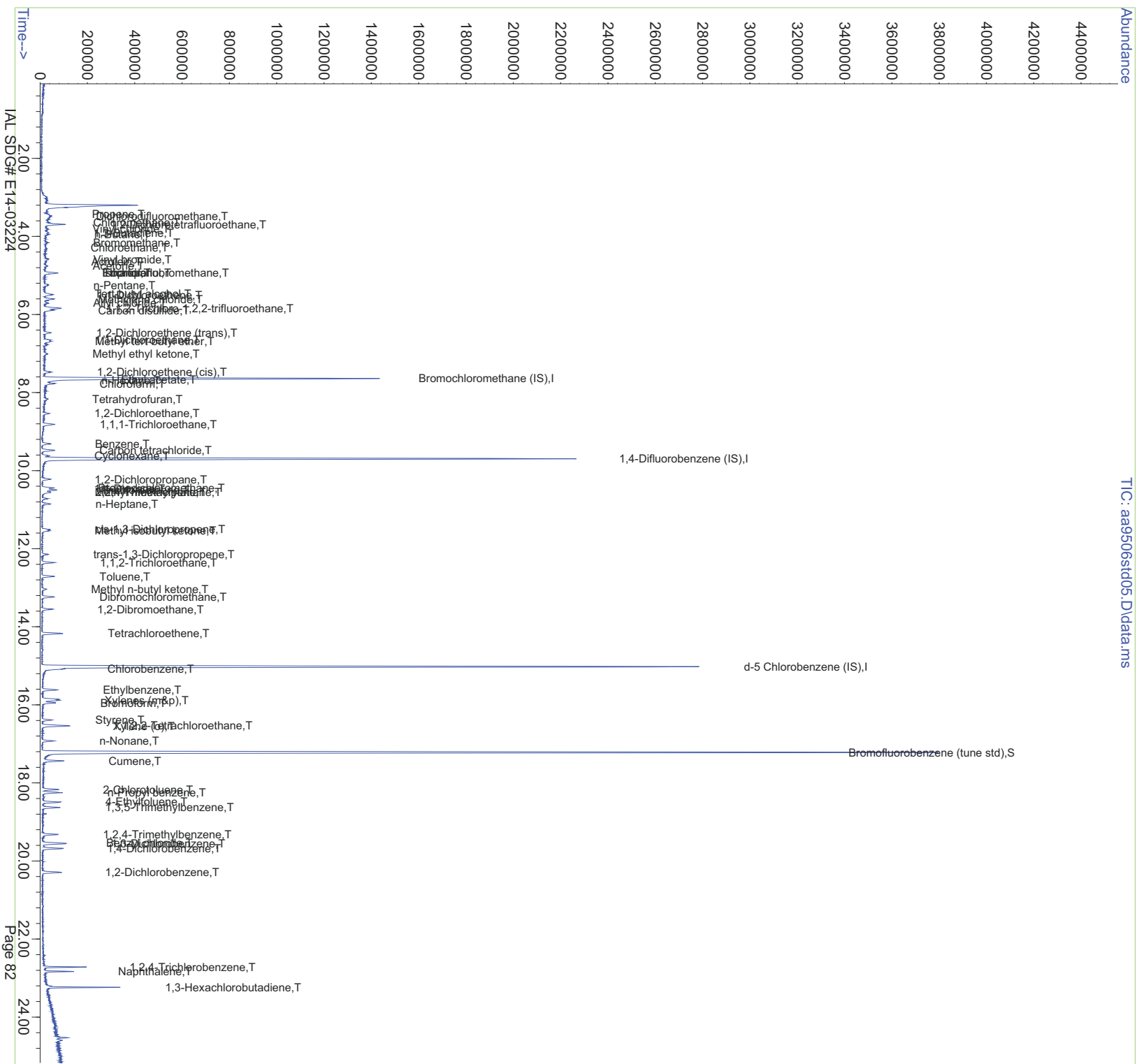
Quant Time: May 09 11:08:14 2014

Quant Method : C:\msdchem\1\METHODS\0508.M

Quant Title : TO-15 on the Agilent 7890A / 5975C

QLast Update : Thu May 08 13:39:35 2014

Response via : Initial Calibration



Continuing Calibration Data Summary Report

Initial Calibration Curve: 3/25/2014
Instrument: AA
Amount of standard injected (ml): 50

Date/Time of Calibration: 4/3/2014 09:19
Sample ID: DCS
Laboratory ID: AA9132DCVS

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 08:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 09:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound Name	Average RRF	Standard RRF	% Difference	Pass/Fail	*
Acetone	2.1	1.8	14	PASS	
Benzene	4.3	3.8	13	PASS	
Bromodichloromethane	1.3	1.3	0.60	PASS	
Bromoform	1.9	1.9	-0.50	PASS	
Bromomethane	1.1	1.2	-2.9	PASS	
1,3-Butadiene	1.5	1.3	13	PASS	
Chlorobenzene	1.5	1.9	-20	PASS	
Chloroethane	0.61	0.58	5.2	PASS	
Chloroform	3.8	3.4	11	PASS	
Chloromethane	1.3	1.7	-29	PASS	
Carbon disulfide	4.3	3.9	8.3	PASS	
Carbon tetrachloride	6.3	4.7	25	PASS	
Cyclohexane	2.3	2.4	-1.2	PASS	
Dibromochloromethane	1.3	1.5	-16	PASS	
1,2-Dibromoethane	1.00	1.2	-17	PASS	
1,2-Dichlorobenzene	1.7	1.9	-13	PASS	
1,3-Dichlorobenzene	1.8	2.2	-18	PASS	
1,4-Dichlorobenzene	1.8	2.2	-24	PASS	
Dichlorodifluoromethane	7.6	6.3	17	PASS	
1,1-Dichloroethane	3.0	2.5	16	PASS	
1,2-Dichloroethane	2.8	2.2	21	PASS	
1,1-Dichloroethene	2.7	1.9	30	PASS	
1,2-Dichloroethene (cis)	2.0	1.9	7.3	PASS	
1,2-Dichloroethene (trans)	2.0	1.7	17	PASS	
1,2-Dichloropropane	0.37	0.46	-25	PASS	
1,3-Dichloropropene (cis)	0.59	0.63	-6.8	PASS	
1,3-Dichloropropene (trans)	0.64	0.60	6.5	PASS	
1,2-Dichlorotetrafluoroethane	5.0	4.0	20	PASS	
1,4-Dioxane	0.20	0.26	-28	PASS	
Ethylbenzene	2.4	2.5	-6.1	PASS	
n-Heptane	0.29	0.33	-13	PASS	
1,3-Hexachlorobutadiene	2.2	2.1	7.1	PASS	
n-Hexane	1.9	2.0	-3.1	PASS	
Methylene chloride	1.4	1.3	11	PASS	
Methyl ethyl ketone	0.40	0.31	22	PASS	
Methyl isobutyl ketone	0.88	0.92	-4.1	PASS	
Methyl tert-butyl ether	3.0	2.2	29	PASS	
Styrene	1.3	1.6	-15	PASS	
Tert-butyl alcohol	2.5	1.9	26	PASS	
1,1,2,2-Tetrachloroethane	1.3	1.6	-20	PASS	
Tetrachloroethene	0.99	1.0	-4.7	PASS	
Toluene	1.5	1.8	-18	PASS	
1,2,4-Trichlorobenzene	1.9	1.8	4.4	PASS	

*%Difference must be within +/- 30%

RRF - Relative Response Factor

Continuing Calibration Data Summary Report

Initial Calibration Curve: 3/25/2014
 Instrument: AA
 Amount of standard injected (ml): 50

Date/Time of Calibration: 4/3/2014 09:19
 Sample ID: DCS
 Laboratory ID: AA9132DCVS

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 08:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 09:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound Name	Average RRF	Standard RRF	% Difference	PassFail	*
1,1,1-Trichloroethane	5.1	3.8	27	PASS	
1,1,2-Trichloroethane	0.59	0.71	-20	PASS	
Trichloroethene	0.73	0.79	-8.6	PASS	
Trichlorofluoromethane	6.9	5.1	27	PASS	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.6	3.9	16	PASS	
1,2,4-Trimethylbenzene	2.4	2.8	-14	PASS	
1,3,5-Trimethylbenzene	2.6	3.0	-17	PASS	
2,2,4-Trimethylpentane	1.7	2.0	-17	PASS	
Vinyl bromide	1.7	1.3	24	PASS	
Vinyl chloride	1.2	1.2	6.8	PASS	
Xylenes (m&p)	1.8	2.2	-22	PASS	
Xylenes (o)	2.0	2.2	-14	PASS	

*%Difference must be within +/- 30%

RRF - Relative Response Factor

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9132dcvs.D
 Acq On : 3 Apr 2014 9:19 am
 Operator : jls
 Sample : 10 ppbv DCVS
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 11:27:28 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane (IS)	1.000	1.000	0.0	158	0.00
2 T	Propene	0.817	0.757	7.3	158	0.01
3 T	Dichlorodifluoromethane	7.594	6.335	16.6	148	0.00
4 T	Chloromethane	1.325	1.715	-29.4	263	0.00
5 T	1,2-Dichlorotetrafluoroetha	4.982	3.973	20.3	142	0.00
6 T	Vinyl chloride	1.247	1.162	6.8	141	0.00
7 T	1,3-Butadiene	1.540	1.340	13.0	127	0.00
8 T	n-Butane	1.525	1.547	-1.4	150	0.00
9 T	Bromomethane	1.141	1.174	-2.9	148	0.00
10 T	Chloroethane	0.614	0.582	5.2	145	0.01
11 T	Ethanol	0.468	0.380	18.8	136	0.00
12 T	Vinyl bromide	1.726	1.315	23.8	126	0.00
13 T	Acrolein	0.528	0.407	22.9	128	0.02
14 T	Acetone	2.078	1.783	14.2	132	0.00
15 T	Trichlorofluoromethane	6.941	5.078	26.8	133	0.00
16 T	Isopropanol	1.774	1.457	17.9	115	0.00
17 T	n-Pentane	1.876	1.773	5.5	158	0.00
18 T	1,1-Dichloroethene	2.748	1.932	29.7	120	0.00
19 T	Methylene chloride	1.434	1.283	10.5	155	0.00
20 T	Tert-butyl alcohol	2.519	1.854	26.4	106	0.00
21 T	Allyl chloride	0.548	0.461	15.9	139	0.00
22 T	1,1,2-Trichloro-1,2,2-trifl	4.635	3.879	16.3	147	0.00
23 T	Carbon disulfide	4.283	3.926	8.3	163	0.00
24 T	1,2-Dichloroethene (trans)	2.035	1.681	17.4	125	0.00
25 T	1,1-Dichloroethane	2.954	2.493	15.6	154	0.00
26 T	Methyl tert-butyl ether	3.035	2.153	29.1	105	0.00
27 T	Methyl ethyl ketone	0.400	0.313	21.8	108	0.01
28 T	1,2-Dichloroethene (cis)	1.997	1.851	7.3	144	0.00
29 T	Ethyl acetate	0.317	0.375	-18.3	200	0.00
30 T	n-Hexane	1.906	1.965	-3.1	148	0.00
31 T	Chloroform	3.822	3.417	10.6	149	0.00
32 T	Tetrahydrofuran	0.846	0.810	4.3	124	0.02
33 T	1,2-Dichloroethane	2.826	2.231	21.1	138	0.01
34 T	1,1,1-Trichloroethane	5.147	3.770	26.8	133	0.00
35 T	Benzene	4.325	3.776	12.7	145	0.00
36 T	Carbon tetrachloride	6.304	4.702	25.4	127	0.00
37 T	Cyclohexane	2.340	2.369	-1.2	216	0.01
38 I	1,4-Difluorobenzene (IS)	1.000	1.000	0.0	123	0.00
39 T	1,2-Dichloropropane	0.367	0.460	-25.3	147	0.01
40 T	Bromodichloromethane	1.261	1.253	0.6	145	0.00
41 T	2,2,4-Trimethylpentane	1.678	1.968	-17.3	145	0.00
42 T	Trichloroethene	0.730	0.793	-8.6	155	0.01
43 T	1,4-Dioxane	0.204	0.262	-28.4	135	0.02
44 T	Methyl methacrylate	0.523	0.648	-23.9	142	0.00
45 T	n-Heptane	0.288	0.325	-12.8	131	0.02
46 T	cis-1,3-Dichloropropene	0.588	0.628	-6.8	122	0.01
47 T	Methyl isobutyl ketone	0.879	0.915	-4.1	124	0.01
48 T	trans-1,3-Dichloropropene	0.642	0.600	6.5	119	0.01
49 T	1,1,2-Trichloroethane	0.586	0.705	-20.3	150	0.02
50 T	Toluene	1.530	1.800	-17.6	140	0.02
51 T	Methyl n-butyl ketone	0.790	0.887	-12.3	131	0.01
52 T	Dibromochloromethane	1.311	1.526	-16.4	135	0.02
53 T	1,2-Dibromoethane	0.995	1.163	-16.9	142	0.01

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9132dcvs.D
 Acq On : 3 Apr 2014 9:19 am
 Operator : jls
 Sample : 10 ppbv DCVS
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 11:27:28 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54 T	Tetrachloroethene	0.985	1.031	-4.7	133	0.02
55 I	d-5 Chlorobenzene (IS)	1.000	1.000	0.0	126	0.00
56 T	Chlorobenzene	1.546	1.859	-20.2	150	0.00
57 T	Ethylbenzene	2.363	2.507	-6.1	136	0.00
58 T	Xylenes (m&p)	1.801	2.200	-22.2	144	0.00
59 T	Bromoform	1.870	1.879	-0.5	135	0.00
60 T	Styrene	1.344	1.551	-15.4	138	0.00
61 T	Xylene (o)	1.960	2.240	-14.3	144	0.00
62 T	1,1,2,2-Tetrachloroethane	1.307	1.570	-20.1	145	0.00
63 T	n-Nonane	0.927	1.047	-12.9	136	0.00
64 S	Bromofluorobenzene (tune st	0.871	0.926	-6.3	136	0.00
65 T	Cumene	3.073	3.335	-8.5	146	-0.01
66 T	2-Chlorotoluene	0.636	0.815	-28.1	144	0.00
67 T	n-Propyl benzene	0.822	1.061	-29.1	160	0.00
68 T	4-Ethyltoluene	2.866	3.435	-19.9	146	0.00
69 T	1,3,5-Trimethylbenzene	2.564	2.998	-16.9	145	0.00
70 T	1,2,4-Trimethylbenzene	2.416	2.752	-13.9	138	0.00
71 T	Benzyl chloride	2.176	2.659	-22.2	143	0.00
72 T	1,3-Dichlorobenzene	1.829	2.153	-17.7	153	0.00
73 T	1,4-Dichlorobenzene	1.774	2.196	-23.8	153	0.00
74 T	1,2-Dichlorobenzene	1.712	1.937	-13.1	148	0.00
75 T	1,2,4-Trichlorobenzene	1.901	1.818	4.4	125	0.00
76 T	Naphthalene	0.442	0.504	-14.0	140	0.00
77 T	1,3-Hexachlorobutadiene	2.218	2.060	7.1	125	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9132dcvs.D
 Acq On : 3 Apr 2014 9:19 am
 Operator : jls
 Sample : 10 ppbv DCVS
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 11:27:28 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.309	130	552707	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.286	114	1683412	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	14.489	117	1571119	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.659	95	1455161	10.63	ppbV	0.00
Target Compounds						Qvalue
2) Propene	3.376	39	418632	9.27	ppbV	95
3) Dichlorodifluoromethane	3.418	85	3501623	8.34	ppbV	100
4) Chloromethane	3.595	50	947835	12.95	ppbV #	85
5) 1,2-Dichlorotetrafluor...	3.605	85	2195696	7.97	ppbV	89
6) Vinyl chloride	3.720	62	642478	9.32	ppbV	98
7) 1,3-Butadiene	3.801	39	740855	8.70	ppbV	98
8) n-Butane	3.823	43	855026	10.14	ppbV	94
9) Bromomethane	4.032	94	649069	10.29	ppbV	98
10) Chloroethane	4.158	64	321909	9.49	ppbV	98
11) Ethanol	4.286	45	209884	8.11	ppbV #	64
12) Vinyl bromide	4.418	106	726599	7.62	ppbV	99
13) Acrolein	4.553	56	224959	7.71	ppbV	89
14) Acetone	4.679	43	985243	8.58	ppbV	97
15) Trichlorofluoromethane	4.717	101	2806737	7.32	ppbV	100
16) Isopropanol	4.875	45	805151	8.21	ppbV #	87
17) n-Pentane	4.952	43	980223	9.45	ppbV	97
18) 1,1-Dichloroethene	5.238	61	1067608	7.03	ppbV	97
19) Methylene chloride	5.376	84	709273	8.95	ppbV	94
20) Tert-butyl alcohol	5.351	59	1024475	7.36	ppbV	100
21) Allyl chloride	5.431	76	254991	8.42	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.544	101	2144153	8.37	ppbV	97
23) Carbon disulfide	5.573	76	2170065	9.17	ppbV	93
24) 1,2-Dichloroethene (tr...	6.129	61	929034	8.26	ppbV	100
25) 1,1-Dichloroethane	6.335	63	1377886	8.44	ppbV	95
26) Methyl tert-butyl ether	6.396	73	1189758	7.09	ppbV	98
27) Methyl ethyl ketone	6.804	72	172834	7.82	ppbV #	72
28) 1,2-Dichloroethene (cis)	7.158	61	1022974	9.27	ppbV	96
29) Ethyl acetate	7.399	61	207275	11.82	ppbV	99
30) n-Hexane	7.174	57	1086015	10.31	ppbV	99
31) Chloroform	7.418	83	1888330	8.94	ppbV	98
32) Tetrahydrofuran	7.923	42	447811	9.58	ppbV #	26
33) 1,2-Dichloroethane	8.151	62	1232912	7.89	ppbV	94
34) 1,1,1-Trichloroethane	8.367	97	2083954	7.33	ppbV	98
35) Benzene	8.855	78	2086876	8.73	ppbV	95
36) Carbon tetrachloride	9.003	117	2598897	7.46	ppbV	100
37) Cyclohexane	9.045	84	1309411	10.12	ppbV	90
39) 1,2-Dichloropropane	9.733	63	774127	12.54	ppbV	95
40) Bromodichloromethane	10.006	83	2110115	9.94	ppbV	96
41) 2,2,4-Trimethylpentane	9.894	57	3313596	11.73	ppbV	95
42) Trichloroethene	10.000	130	1334345	10.85	ppbV	97
43) 1,4-Dioxane	10.180	88	440764	12.86	ppbV	89
44) Methyl methacrylate	10.196	41	1090474	12.38	ppbV #	96
45) n-Heptane	10.199	71	546432	11.28	ppbV	97
46) cis-1,3-Dichloropropene	11.048	75	1056928	10.68	ppbV	100
47) Methyl isobutyl ketone	11.103	43	1541013	10.41	ppbV	98
48) trans-1,3-Dichloropropene	11.694	75	1009627	9.34	ppbV	85
49) 1,1,2-Trichloroethane	11.894	97	1186243	12.03	ppbV	87
50) Toluene	12.164	91	3029536	11.76	ppbV	94
51) Methyl n-butyl ketone	12.572	43	1494004	11.24	ppbV	95

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9132dcvs.D
 Acq On : 3 Apr 2014 9:19 am
 Operator : jls
 Sample : 10 ppbv DCVS
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 04 11:27:28 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	12.756	129	2568473	11.63	ppbV	98
53) 1,2-Dibromoethane	13.006	107	1957788	11.68	ppbV	96
54) Tetrachloroethene	13.585	166	1736104	10.47	ppbV	99
56) Chlorobenzene	14.540	112	2920423	12.02	ppbV	92
57) Ethylbenzene	15.016	91	3939557	10.61	ppbV	96
58) Xylenes (m&p)	15.244	91	6911728	24.43	ppbV	95
59) Bromoform	15.431	173	2952346	10.05	ppbV	96
60) Styrene	15.810	104	2437107	11.54	ppbV	98
61) Xylene (o)	15.932	91	3518954	11.43	ppbV	94
62) 1,1,2,2-Tetrachloroethane	16.029	83	2466027	12.01	ppbV	91
63) n-Nonane	16.173	57	1644847	11.29	ppbV	93
65) Cumene	16.800	105	5239459	10.85	ppbV	95
66) 2-Chlorotoluene	17.559	126	1280556	12.81	ppbV	90
67) n-Propyl benzene	17.601	120	1666665	12.91	ppbV	98
68) 4-Ethyltoluene	17.832	105	5396111	11.98	ppbV	99
69) 1,3,5-Trimethylbenzene	17.964	105	4710984	11.69	ppbV	100
70) 1,2,4-Trimethylbenzene	18.656	105	4323417	11.39	ppbV	97
71) Benzyl chloride	18.958	91	4176994	12.22	ppbV	97
72) 1,3-Dichlorobenzene	18.935	146	3383009	11.77	ppbV	98
73) 1,4-Dichlorobenzene	19.067	146	3450716	12.38	ppbV	97
74) 1,2-Dichlorobenzene	19.697	146	3042662	11.31	ppbV	99
75) 1,2,4-Trichlorobenzene	22.311	180	2856256	9.56	ppbV	93
76) Naphthalene	22.450	127	792384	11.40	ppbV	93
77) 1,3-Hexachlorobutadiene	22.858	225	3237246	9.29	ppbV	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

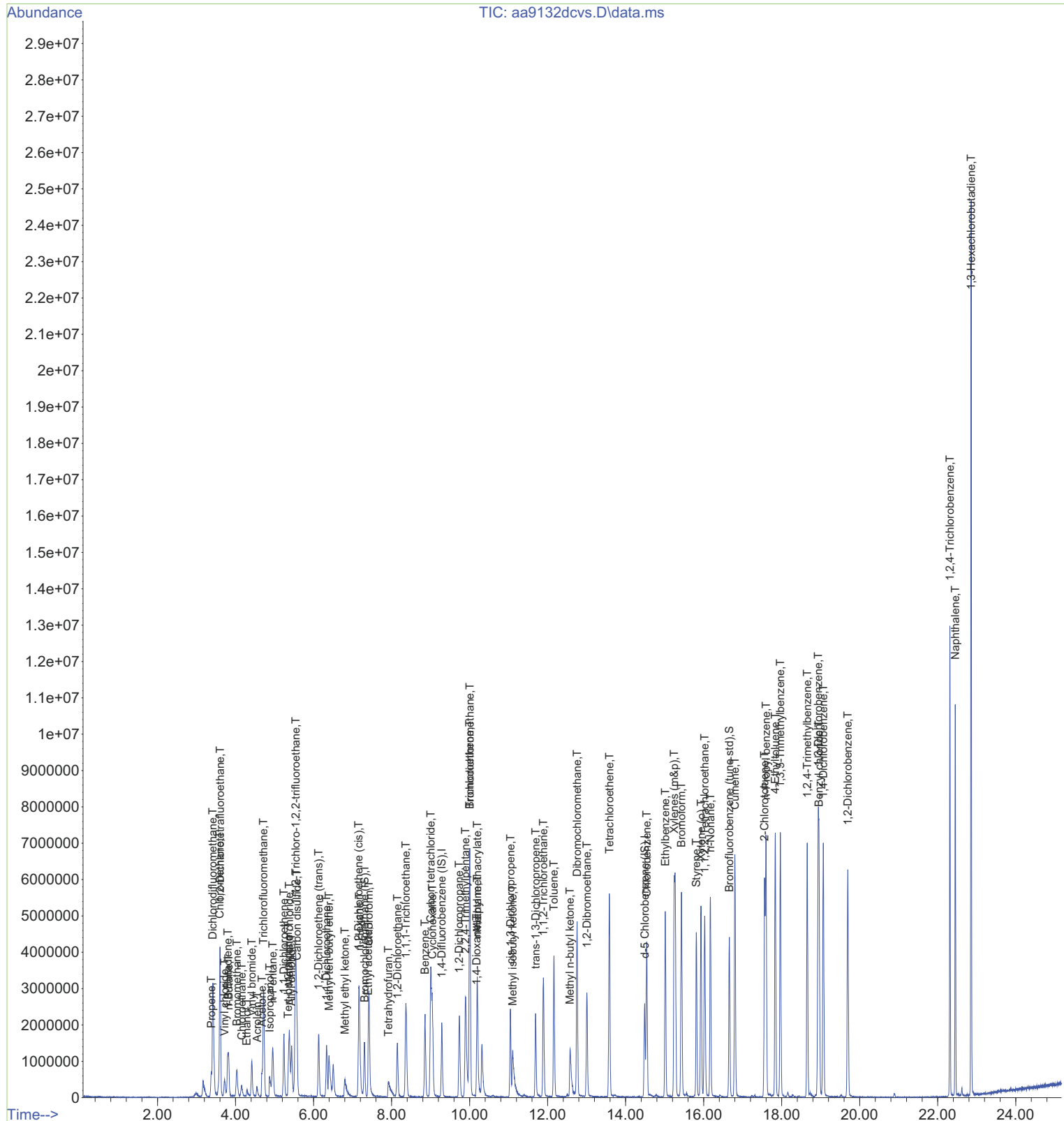
Quant Time: Apr 04 11:27:28 2014

Quant Method : C:\msdchem\1\METHODS\0325.M

Quant Title : T0-15 on the Agilent 7890A / 5975C

QLast Update : Wed Mar 26 09:33:26 2014

Response via : Initial Calibration



Continuing Calibration Data Summary Report

Initial Calibration Curve: 5/8/2014
Instrument: AA
Amount of standard injected (ml): 50

Date/Time of Calibration: 5/9/2014 10:46
Sample ID: DCS
Laboratory ID: AA9512DCVS

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 08:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound Name	Average RRF	Standard RRF	% Difference	Pass/Fail	*
Acetone	1.2	1.2	-1.4	PASS	
Benzene	3.6	2.6	28	PASS	
Bromodichloromethane	0.84	0.84	0.10	PASS	
Bromoform	1.2	1.0	19	PASS	
Bromomethane	0.98	0.82	17	PASS	
1,3-Butadiene	0.60	0.54	11	PASS	
Chlorobenzene	1.3	0.95	28	PASS	
Chloroethane	0.44	0.37	15	PASS	
Chloroform	2.9	2.7	5.8	PASS	
Chloromethane	0.17	0.17	-4.2	PASS	
Carbon disulfide	3.5	2.7	23	PASS	
Carbon tetrachloride	4.1	3.7	11	PASS	
Cyclohexane	1.4	1.1	24	PASS	
Dibromochloromethane	1.1	0.93	15	PASS	
1,2-Dibromoethane	0.87	0.67	23	PASS	
1,2-Dichlorobenzene	1.5	1.3	12	PASS	
1,3-Dichlorobenzene	1.5	1.3	10	PASS	
1,4-Dichlorobenzene	1.5	1.3	14	PASS	
Dichlorodifluoromethane	1.9	2.0	-4.4	PASS	
1,1-Dichloroethane	1.7	1.5	8.3	PASS	
1,2-Dichloroethane	1.7	1.7	-2.9	PASS	
1,1-Dichloroethene	1.5	1.5	2.0	PASS	
1,2-Dichloroethene (cis)	1.5	1.1	26	PASS	
1,2-Dichloroethene (trans)	1.4	1.2	12	PASS	
1,2-Dichloropropane	0.29	0.24	18	PASS	
1,3-Dichloropropene (cis)	0.53	0.45	15	PASS	
1,3-Dichloropropene (trans)	0.51	0.45	12	PASS	
1,2-Dichlorotetrafluoroethane	2.9	2.8	1.5	PASS	
1,4-Dioxane	0.22	0.17	25	PASS	
Ethylbenzene	1.8	1.5	17	PASS	
n-Heptane	0.36	0.33	7.5	PASS	
1,3-Hexachlorobutadiene	1.5	1.4	4.0	PASS	
n-Hexane	1.3	1.1	20	PASS	
Methylene chloride	1.3	0.99	22	PASS	
Methyl ethyl ketone	0.48	0.39	19	PASS	
Methyl isobutyl ketone	0.51	0.50	1.2	PASS	
Methyl tert-butyl ether	2.8	2.2	19	PASS	
Styrene	1.1	0.91	20	PASS	
Tert-butyl alcohol	1.7	1.4	16	PASS	
1,1,2,2-Tetrachloroethane	0.97	0.96	0.90	PASS	
Tetrachloroethene	0.86	0.62	27	PASS	
Toluene	1.3	0.98	24	PASS	
1,2,4-Trichlorobenzene	1.4	1.2	15	PASS	

*%Difference must be within +/- 30%

RRF - Relative Response Factor

Continuing Calibration Data Summary Report

Initial Calibration Curve: 5/8/2014
Instrument: AA
Amount of standard injected (ml): 50

Date/Time of Calibration: 5/9/2014 10:46
Sample ID: DCS
Laboratory ID: AA9512DCVS

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 08:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound Name	Average RRF	Standard RRF	% Difference	PassFail	*
1,1,1-Trichloroethane	3.4	3.2	7.5	PASS	
1,1,2-Trichloroethane	0.50	0.39	21	PASS	
Trichloroethene	0.60	0.44	28	PASS	
Trichlorofluoromethane	4.3	4.3	0.20	PASS	
1,1,2-Trichloro-1,2,2-trifluoroethane	3.0	2.5	17	PASS	
1,2,4-Trimethylbenzene	1.9	1.9	1.3	PASS	
1,3,5-Trimethylbenzene	1.9	1.9	0.80	PASS	
2,2,4-Trimethylpentane	1.1	0.95	15	PASS	
Vinyl bromide	1.3	0.94	28	PASS	
Vinyl chloride	0.84	0.73	13	PASS	
Xylenes (m&p)	1.5	1.3	11	PASS	
Xylenes (o)	1.4	1.4	2.5	PASS	

*%Difference must be within +/- 30%

RRF - Relative Response Factor

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9512dcvs.D
 Acq On : 9 May 2014 10:46 am
 Operator : jls
 Sample : 10 ppbv DCVS
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 15:06:47 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1 I	Bromochloromethane (IS)	1.000	1.000	0.0	73	0.00
2 T	Propene	0.127	0.140	-10.2	70	0.00
3 T	Dichlorodifluoromethane	1.924	2.009	-4.4	66	0.00
4 T	Chloromethane	0.167	0.174	-4.2	65	0.00
5 T	1,2-Dichlorotetrafluoroetha	2.851	2.807	1.5	68	0.00
6 T	Vinyl chloride	0.835	0.731	12.5	61	-0.01
7 T	1,3-Butadiene	0.604	0.540	10.6	61	0.00
8 T	n-Butane	0.913	0.906	0.8	71	0.00
9 T	Bromomethane	0.981	0.819	16.5	53	-0.01
10 T	Chloroethane	0.435	0.370	14.9	62	0.00
11 T	Ethanol	1.228	1.180	3.9	68	0.00
12 T	Vinyl bromide	1.301	0.937	28.0	48	0.00
13 T	Acrolein	0.322	0.271	15.8	57	0.00
14 T	Acetone	1.181	1.197	-1.4	75	0.00
15 T	Trichlorofluoromethane	4.346	4.339	0.2	68	0.00
16 T	Isopropanol	1.232	1.180	4.2	68	0.00
17 T	n-Pentane	0.960	0.937	2.4	67	0.00
18 T	1,1-Dichloroethene	1.524	1.493	2.0	69	0.00
19 T	Methylene chloride	1.275	0.991	22.3	66	0.00
20 T	Tert-butyl alcohol	1.686	1.413	16.2	59	0.00
21 T	Allyl chloride	0.462	0.347	24.9	53	0.00
22 T	1,1,2-Trichloro-1,2,2-trifl	2.970	2.470	16.8	57	0.00
23 T	Carbon disulfide	3.457	2.667	22.9	59	0.00
24 T	1,2-Dichloroethene (trans)	1.378	1.217	11.7	64	0.00
25 T	1,1-Dichloroethane	1.674	1.535	8.3	65	0.00
26 T	Methyl tert-butyl ether	2.760	2.230	19.2	56	0.00
27 T	Methyl ethyl ketone	0.481	0.389	19.1	52	0.00
28 T	1,2-Dichloroethene (cis)	1.460	1.086	25.6	52	0.00
29 T	Ethyl acetate	0.304	0.241	20.7	59	0.00
30 T	n-Hexane	1.313	1.056	19.6	58	0.00
31 T	Chloroform	2.869	2.702	5.8	66	0.00
32 T	Tetrahydrofuran	0.728	0.639	12.2	63	0.00
33 T	1,2-Dichloroethane	1.675	1.723	-2.9	74	0.00
34 T	1,1,1-Trichloroethane	3.430	3.174	7.5	64	0.00
35 T	Benzene	3.552	2.557	28.0	52	0.00
36 T	Carbon tetrachloride	4.147	3.696	10.9	60	0.00
37 T	Cyclohexane	1.400	1.059	24.4	54	0.00
38 I	1,4-Difluorobenzene (IS)	1.000	1.000	0.0	69	0.00
39 T	1,2-Dichloropropane	0.285	0.235	17.5	58	0.00
40 T	Bromodichloromethane	0.841	0.840	0.1	65	0.00
41 T	2,2,4-Trimethylpentane	1.119	0.952	14.9	58	0.00
42 T	Trichloroethene	0.604	0.435	28.0	46	0.00
43 T	1,4-Dioxane	0.224	0.169	24.6	49	0.00
44 T	Methyl methacrylate	0.268	0.288	-7.5	72	0.00
45 T	n-Heptane	0.359	0.332	7.5	64	0.00
46 T	cis-1,3-Dichloropropene	0.533	0.454	14.8	56	0.00
47 T	Methyl isobutyl ketone	0.507	0.501	1.2	66	0.00
48 T	trans-1,3-Dichloropropene	0.510	0.448	12.2	57	0.00
49 T	1,1,2-Trichloroethane	0.498	0.393	21.1	52	0.00
50 T	Toluene	1.298	0.983	24.3	48	0.00
51 T	Methyl n-butyl ketone	0.486	0.472	2.9	63	0.00
52 T	Dibromochloromethane	1.092	0.926	15.2	51	0.00
53 T	1,2-Dibromoethane	0.871	0.669	23.2	48	0.00

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9512dcvs.D
 Acq On : 9 May 2014 10:46 am
 Operator : jls
 Sample : 10 ppbv DCVS
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 15:06:47 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 0% Max. R.T. Dev 0.50min
 Max. RRF Dev : 30% Max. Rel. Area : 500%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
54 T	Tetrachloroethene	0.857	0.623	27.3	46	0.00
55 I	d-5 Chlorobenzene (IS)	1.000	1.000	0.0	69	0.00
56 T	Chlorobenzene	1.328	0.954	28.2	45	0.00
57 T	Ethylbenzene	1.822	1.520	16.6	51	0.00
58 T	Xylenes (m&p)	1.453	1.292	11.1	54	0.03
59 T	Bromoform	1.242	1.010	18.7	46	0.00
60 T	Styrene	1.130	0.907	19.7	46	0.00
61 T	Xylene (o)	1.435	1.399	2.5	57	0.00
62 T	1,1,2,2-Tetrachloroethane	0.970	0.961	0.9	60	0.00
63 T	n-Nonane	0.573	0.564	1.6	59	0.00
64 S	Bromofluorobenzene (tune st	0.779	1.008	-29.4	91	0.00
65 T	Cumene	2.221	2.024	8.9	53	0.00
66 T	2-Chlorotoluene	0.623	0.479	23.1	46	0.00
67 T	n-Propyl benzene	0.667	0.589	11.7	51	0.00
68 T	4-Ethyltoluene	2.179	2.079	4.6	54	0.00
69 T	1,3,5-Trimethylbenzene	1.905	1.889	0.8	56	0.00
70 T	1,2,4-Trimethylbenzene	1.875	1.851	1.3	56	0.00
71 T	Benzyl chloride	1.458	1.580	-8.4	59	0.00
72 T	1,3-Dichlorobenzene	1.475	1.326	10.1	53	0.00
73 T	1,4-Dichlorobenzene	1.543	1.326	14.1	52	0.00
74 T	1,2-Dichlorobenzene	1.487	1.309	12.0	53	0.00
75 T	1,2,4-Trichlorobenzene	1.443	1.226	15.0	50	0.00
76 T	Naphthalene	0.373	0.336	9.9	52	0.00
77 T	1,3-Hexachlorobutadiene	1.463	1.405	4.0	57	0.00

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9512dcvs.D
 Acq On : 9 May 2014 10:46 am
 Operator : jls
 Sample : 10 ppbv DCVS
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 15:06:47 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.637	130	481431	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.695	114	1669754	10.00	ppbV	# 0.00
55) d-5 Chlorobenzene (IS)	15.019	117	1556018	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.212	95	1567859	12.94	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.418	41	67197	11.01	ppbV	69
3) Dichlorodifluoromethane	3.476	85	967416	10.45	ppbV	97
4) Chloromethane	3.631	52	83781	10.43	ppbV	# 38
5) 1,2-Dichlorotetrafluor...	3.685	85	1351180	9.84	ppbV	# 74
6) Vinyl chloride	3.801	62	351933	8.76	ppbV	99
7) 1,3-Butadiene	3.901	54	259888	8.93	ppbV	93
8) n-Butane	3.949	43	435947	9.92	ppbV	94
9) Bromomethane	4.145	94	394348	8.35	ppbV	100
10) Chloroethane	4.293	64	178052	8.51	ppbV	97
11) Ethanol	4.933	45	568090	9.61	ppbV	100
12) Vinyl bromide	4.582	106	450992	7.20	ppbV	100
13) Acrolein	4.650	56	130281	8.41	ppbV	95
14) Acetone	4.750	43	576161	10.13	ppbV	95
15) Trichlorofluoromethane	4.933	101	2089150	9.99	ppbV	100
16) Isopropanol	4.933	45	568090	9.58	ppbV	# 88
17) n-Pentane	5.245	43	451179	9.76	ppbV	100
18) 1,1-Dichloroethene	5.489	61	718837	9.80	ppbV	# 80
19) Methylene chloride	5.595	84	477047	7.77	ppbV	89
20) Tert-butyl alcohol	5.460	59	680220	8.38	ppbV	100
21) Allyl chloride	5.698	76	167042	7.51	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.833	101	1188926	8.32	ppbV	# 78
23) Carbon disulfide	5.878	76	1283764	7.71	ppbV	# 86
24) 1,2-Dichloroethene (tr...	6.460	61	585772	8.83	ppbV	81
25) 1,1-Dichloroethane	6.647	63	738779	9.16	ppbV	97
26) Methyl tert-butyl ether	6.682	73	1073821	8.08	ppbV	100
27) Methyl ethyl ketone	6.987	72	187377	8.10	ppbV	97
28) 1,2-Dichloroethene (cis)	7.466	96	522735	7.44	ppbV	93
29) Ethyl acetate	7.659	61	116086	7.93	ppbV	97
30) n-Hexane	7.685	57	508368	8.04	ppbV	# 82
31) Chloroform	7.762	83	1300629	9.42	ppbV	99
32) Tetrahydrofuran	8.155	42	307534	8.78	ppbV	99
33) 1,2-Dichloroethane	8.528	62	829618	10.29	ppbV	96
34) 1,1,1-Trichloroethane	8.810	97	1528278	9.25	ppbV	99
35) Benzene	9.306	78	1230824	7.20	ppbV	95
36) Carbon tetrachloride	9.473	117	1779213	8.91	ppbV	100
37) Cyclohexane	9.618	56	509934	7.57	ppbV	91
39) 1,2-Dichloropropane	10.216	63	393070	8.25	ppbV	99
40) Bromodichloromethane	10.434	83	1402572	9.98	ppbV	97
41) 2,2,4-Trimethylpentane	10.550	57	1589749	8.51	ppbV	97
42) Trichloroethene	10.489	130	726458	7.20	ppbV	90
43) 1,4-Dioxane	10.450	88	282145	7.54	ppbV	93
44) Methyl methacrylate	10.544	41	481090	10.73	ppbV	# 96
45) n-Heptane	10.846	43	555140	9.26	ppbV	81
46) cis-1,3-Dichloropropene	11.505	75	758567	8.52	ppbV	98
47) Methyl isobutyl ketone	11.531	43	835985	9.87	ppbV	97
48) trans-1,3-Dichloropropene	12.142	75	748515	8.79	ppbV	# 79
49) 1,1,2-Trichloroethane	12.354	97	656281	7.89	ppbV	91
50) Toluene	12.704	91	1641683	7.57	ppbV	96
51) Methyl n-butyl ketone	13.026	43	788161	9.70	ppbV	95

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9512dcvs.D
 Acq On : 9 May 2014 10:46 am
 Operator : jls
 Sample : 10 ppbv DCVS
 Misc : AAL073524
 ALS Vial : 2 Sample Multiplier: 1

Quant Time: May 12 15:06:47 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	13.232	129	1545498	8.47	ppbV	98
53) 1,2-Dibromoethane	13.547	107	1117546	7.69	ppbV	100
54) Tetrachloroethene	14.170	166	1040116	7.27	ppbV	91
56) Chlorobenzene	15.080	112	1484970	7.19	ppbV	87
57) Ethylbenzene	15.617	91	2364540	8.34	ppbV	99
58) Xylenes (m&p)	15.884	91	4020155	17.79	ppbV	97
59) Bromoform	15.948	173	1572020	8.13	ppbV	97
60) Styrene	16.386	104	1410904	8.02	ppbV	97
61) Xylene (o)	16.540	91	2176852	9.75	ppbV	96
62) 1,1,2,2-Tetrachloroethane	16.527	83	1495444	9.90	ppbV	99
63) n-Nonane	16.919	57	877084	9.84	ppbV	94
65) Cumene	17.434	105	3149417	9.11	ppbV	92
66) 2-Chlorotoluene	18.167	126	744582	7.68	ppbV #	63
67) n-Propyl benzene	18.244	120	916503	8.83	ppbV #	71
68) 4-Ethyltoluene	18.495	105	3234942	9.54	ppbV	98
69) 1,3,5-Trimethylbenzene	18.627	105	2939823	9.92	ppbV	95
70) 1,2,4-Trimethylbenzene	19.321	105	2879740	9.87	ppbV	98
71) Benzyl chloride	19.537	91	2458063	10.83	ppbV	92
72) 1,3-Dichlorobenzene	19.553	146	2063384	8.99	ppbV	99
73) 1,4-Dichlorobenzene	19.681	146	2063084	8.59	ppbV	100
74) 1,2-Dichlorobenzene	20.292	146	2037271	8.81	ppbV	99
75) 1,2,4-Trichlorobenzene	22.717	180	1907917	8.50	ppbV	92
76) Naphthalene	22.829	127	523191	9.01	ppbV	97
77) 1,3-Hexachlorobutadiene	23.238	225	2185664	9.60	ppbV	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-09-14\
Data File : aa9512dcvs.D
Acq On : 9 May 2014 10:46 am
Operator : JLS
Sample : 10 ppbv DCVS
Misc : AAL073524
ALS Vial : 2 Sample Multiplier: 1

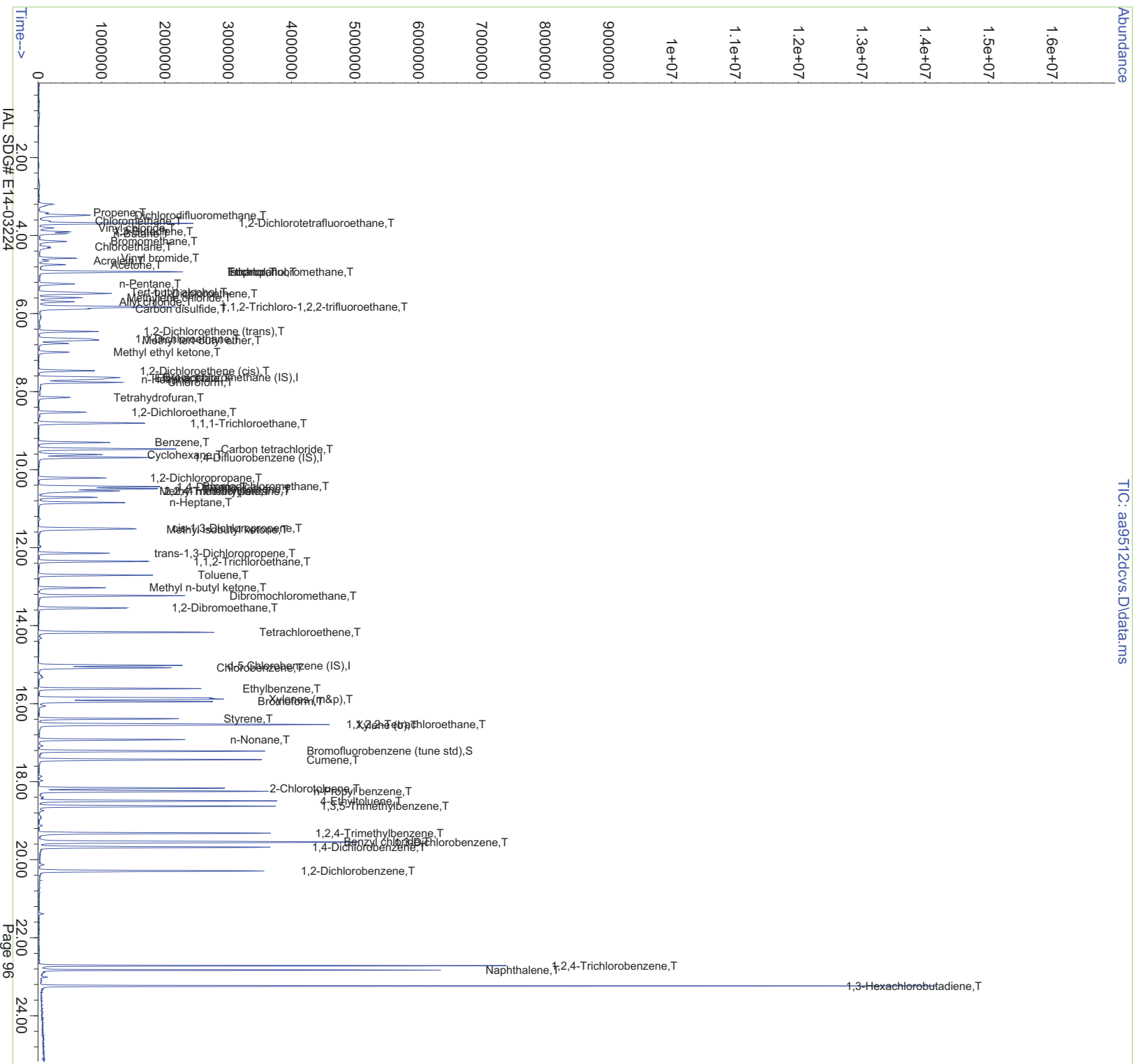
Quant Time: May 12 15:06:47 2014

Quant Method : C:\msdchem\1\METHODS\0508.M

Quant Title : TO-15 on the Agilent 7890A / 5975C

Quant Update : Thu May 08 13:39:35 2014

Response via : Initial Calibration



Section VIII: Raw Quality Control Data Package

BFB Tune Spectra

Method Blank

Laboratory Control Sample

Laboratory Sample Duplicate

Instrument Run Logs

Pressure Gauge Readings (initial and final)

Example Calculations

Screening Data

Clean Canister Certification

Data Path: D:\Agilent GCMS\03-25-14\
Data File: AA8981BFB.D
Acq On: 3/25/2014 9:25:00AM
Operator: jls
Sample: BFB
Misc: ALM029426
ALS Vial: 1 **Multiplier:** 1
Integration File: rteint.p
Method: C:\msdchem\1\METHODS\0310.M
Last Update: Mon Mar 10 15:19:47 2014
Spectrum Information:

PassFail	Target Mass	Rel. to Mass	Lower Limit %	Higher Limit %	Raw Abundance	% Relative Abundance
PASS	50	95	8	40	140880	26.9
PASS	75	95	30	66	293886	56.0
PASS	95	95	100	100	524521	100.0
PASS	96	95	5	9	41232	7.9
PASS	173	174	0.00	2	3079	0.7
PASS	174	95	50	100	458217	87.4
PASS	175	174	4	9	29267	6.4
PASS	176	174	93	101	452416	98.7
PASS	177	176	5	9	30467	6.7

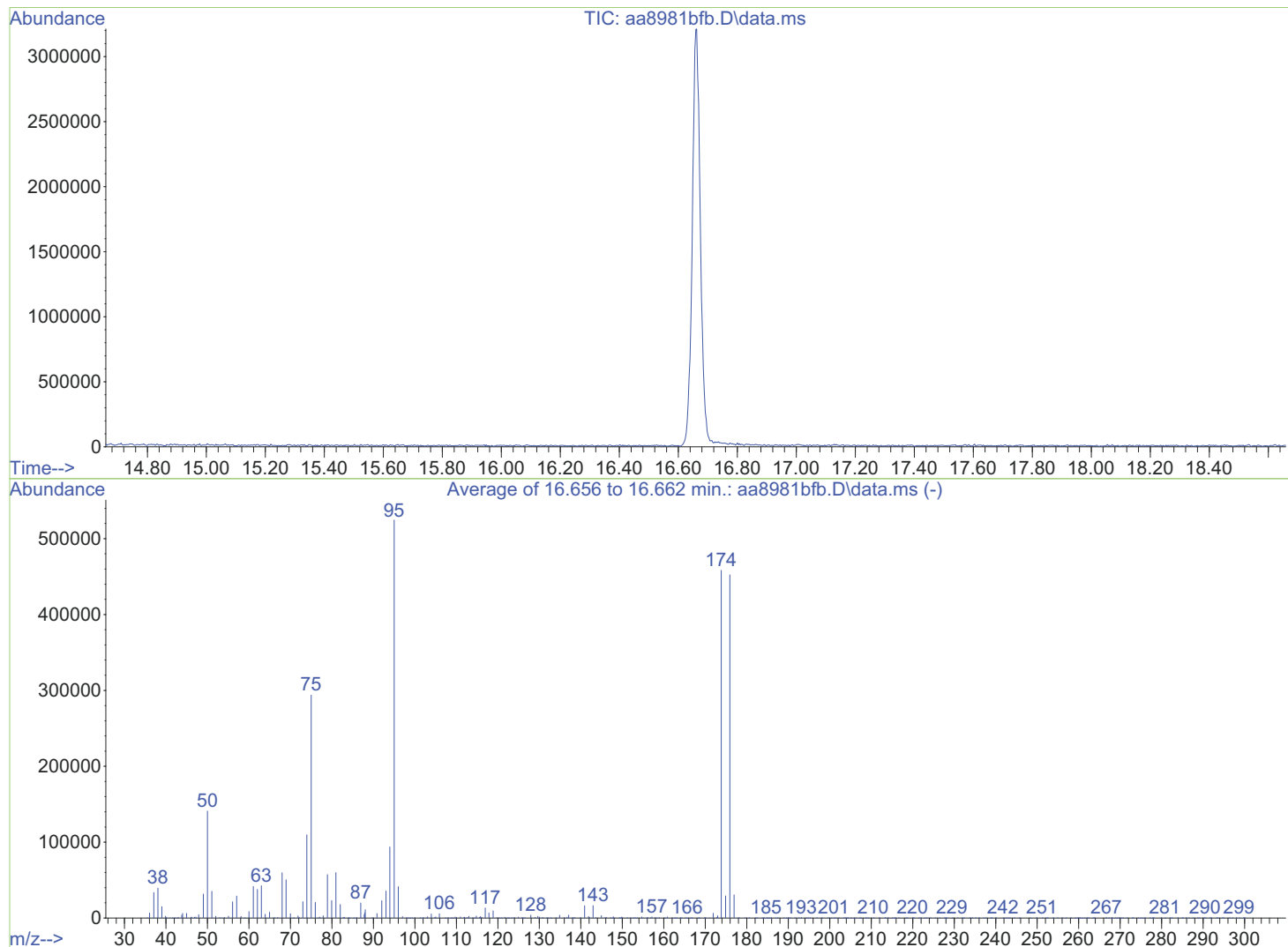
Runs with this BFB:

Lab Sample Number	Date File	Field Sample	Date/Time of Sample/Standard Analysis
BFB	AA8981BFB	NA	3/25/2014 9:25:00 AM
40 PPBV STD	AA8982STD01	NA	3/25/2014 11:12:00 AM
20 PPBV STD	AA8983STD02	NA	3/25/2014 11:56:00 AM
10 PPBV STD	AA8984STD03	NA	3/25/2014 12:48:00 PM
2 PPBV STD	AA8985STD04	NA	3/25/2014 2:27:00 PM
0.2 PPBV STD	AA8986STD05	NA	3/25/2014 3:05:00 PM
10 PPBV ICVSS	AA8987ICVSS	NA	3/25/2014 4:55:00 PM

Data Path : D:\Agilent GCMS\03-25-14\
 Data File : aa8981bfb.D
 Acq On : 25 Mar 2014 9:25 am
 Operator : jls
 Sample : BFB
 Misc : ALM029426
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\0310.M
 Title : TO-15 on the Agilent 7890A / 5975C
 Last Update : Mon Mar 10 15:19:47 2014



AutoFind: Scans 5153, 5154, 5155; Background Corrected with Scan 5138

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	26.9	140880	PASS
75	95	30	66	56.0	293886	PASS
95	95	100	100	100.0	524521	PASS
96	95	5	9	7.9	41232	PASS
173	174	0.00	2	0.7	3079	PASS
174	95	50	100	87.4	458217	PASS
175	174	4	9	6.4	29267	PASS
176	174	93	101	98.7	452416	PASS
177	176	5	9	6.7	30467	PASS

Data Path: D:\Agilent GCMS\04-03-14\
Data File: AA9131BFB.D
Acq On: 4/3/2014 8:42:00AM
Operator: jls
Sample: BFB
Misc: ALM029426
ALS Vial: 1 **Multiplier:** 1
Integration File: rteint.p
Method: C:\msdchem\1\METHODS\0325.M
Last Update: Wed Mar 26 09:33:26 2014
Spectrum Information:

Pass/Fail	Target Mass	Rel. to Mass	Lower Limit %	Higher Limit %	Raw Abundance	% Relative Abundance
PASS	50	95	8	40	130237	25.0
PASS	75	95	30	66	247890	47.6
PASS	95	95	100	100	520531	100.0
PASS	96	95	5	9	33352	6.4
PASS	173	174	0.00	2	3996	0.8
PASS	174	95	50	100	489088	94.0
PASS	175	174	4	9	31452	6.4
PASS	176	174	93	101	489173	100.0
PASS	177	176	5	9	28370	5.8

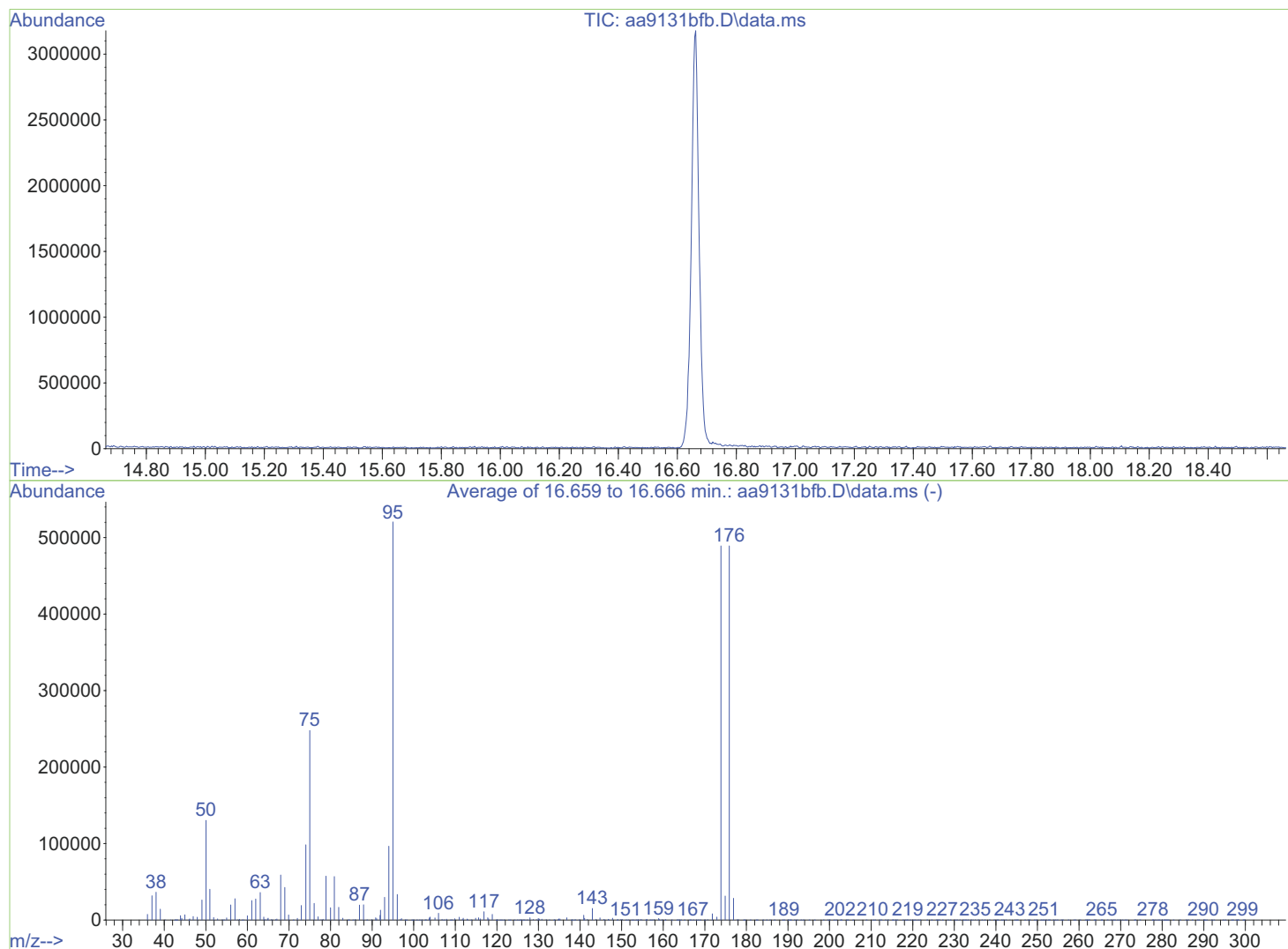
Runs with this BFB:

Lab Sample Number	Date File	Field Sample	Date/Time of Sample/Standard Analysis
BFB	AA9131BFB	NA	4/3/2014 8:42:00 AM
10 PPBV DCVS	AA9132DCVS	NA	4/3/2014 9:19:00 AM
10 PPBV LCS	AA9133LCS	NA	4/3/2014 11:09:00 AM
METHOD BLANK	AA9134BLK	NA	4/3/2014 11:41:00 AM
02 PPBV RLLCS	AA9135RLLCS	NA	4/3/2014 12:21:00 PM
1588	AA9150	NA	4/3/2014 8:50:00 PM
10 PPBV CCCVS	AA9153CCCVS	NA	4/3/2014 10:26:00 PM

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9131bfb.D
 Acq On : 3 Apr 2014 8:42 am
 Operator : jls
 Sample : BFB
 Misc : ALM029426
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\0325.M
 Title : TO-15 on the Agilent 7890A / 5975C
 Last Update : Wed Mar 26 09:33:26 2014



AutoFind: Scans 5154, 5155, 5156; Background Corrected with Scan 5136

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	25.0	130237	PASS
75	95	30	66	47.6	247890	PASS
95	95	100	100	100.0	520531	PASS
96	95	5	9	6.4	33352	PASS
173	174	0.00	2	0.8	3996	PASS
174	95	50	100	94.0	489088	PASS
175	174	4	9	6.4	31452	PASS
176	174	93	101	100.0	489173	PASS
177	176	5	9	5.8	28370	PASS

Data Path: D:\Agilent GCMS\05-08-14\
Data File: AA9501BFB.D
Acq On: 5/8/2014 9:11:00AM
Operator: jls
Sample: BFB
Misc: ALM029426
ALS Vial: 1 **Multiplier:** 1
Integration File: rteint.p
Method: C:\msdchem\1\METHODS\0507.M
Last Update: Thu May 08 08:20:28 2014
Spectrum Information:

PassFail	Target Mass	Rel. to Mass	Lower Limit %	Higher Limit %	Raw Abundance	% Relative Abundance
PASS	50	95	8	40	86225	15.4
PASS	75	95	30	66	257685	46.2
PASS	95	95	100	100	558357	100.0
PASS	96	95	5	9	36839	6.6
PASS	173	174	0.00	2	2353	0.5
PASS	174	95	50	100	513984	92.1
PASS	175	174	4	9	37375	7.3
PASS	176	174	93	101	498069	96.9
PASS	177	176	5	9	33516	6.7

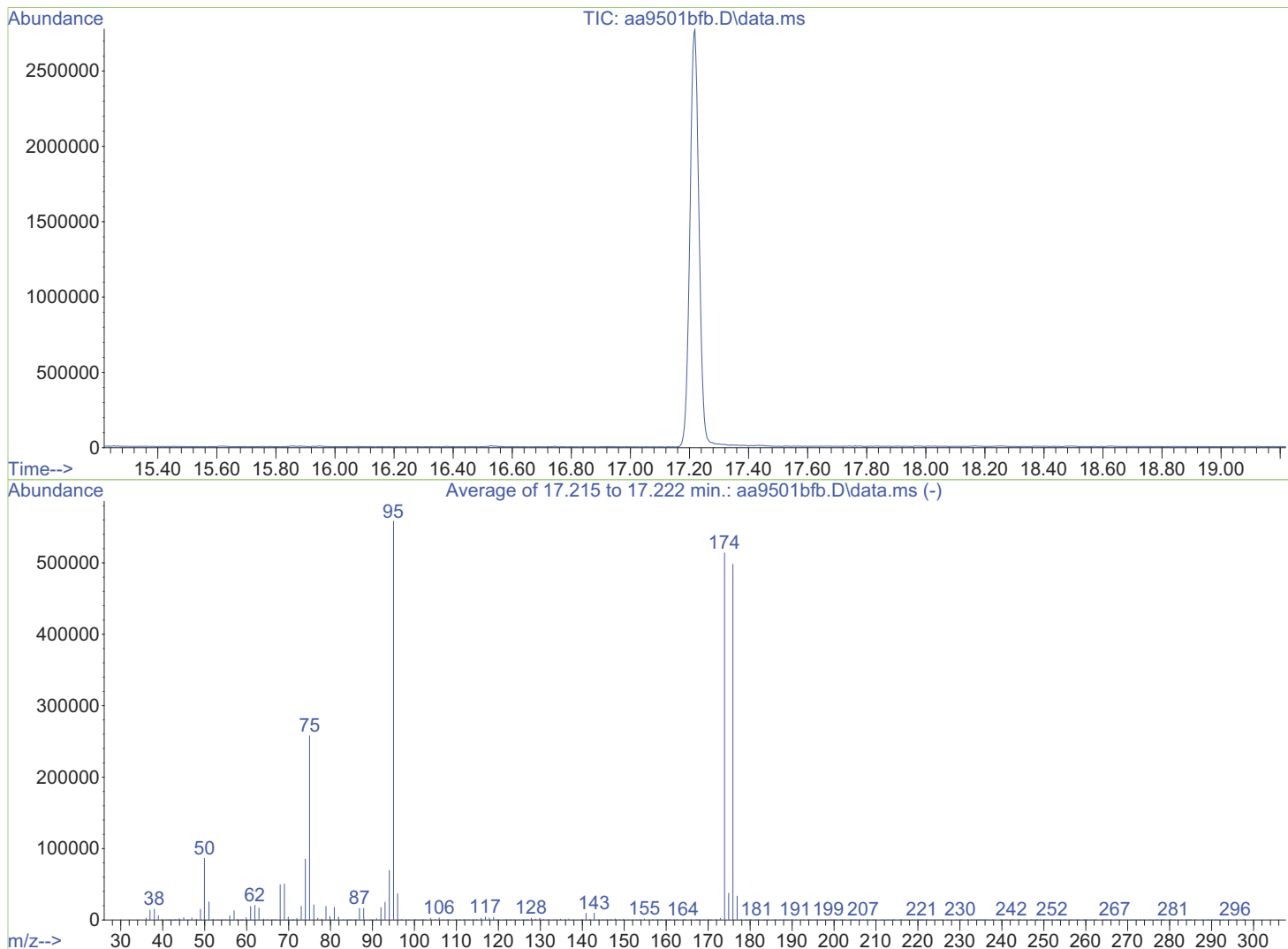
Runs with this BFB:

Lab Sample Number	Date File	Field Sample	Date/Time of Sample/Standard Analysis
BFB	AA9501BFB	NA	5/8/2014 9:11:00 AM
40 PPBV STD	AA9502STD01	NA	5/8/2014 10:37:00 AM
20 PPBV STD	AA9503STD02	NA	5/8/2014 11:17:00 AM
10 PPBV STD	AA9504STD03	NA	5/8/2014 11:49:00 AM
2 PPBV STD	AA9505STD04	NA	5/8/2014 12:29:00 PM
0.2 PPBV STD	AA9506STD05	NA	5/8/2014 1:09:00 PM
10 PPBV ICVSS	AA9507ICVSS	NA	5/8/2014 3:43:00 PM

Data Path : D:\Agilent GCMS\05-08-14\
 Data File : aa9501bfb.D
 Acq On : 8 May 2014 9:11 am
 Operator : jls
 Sample : BFB
 Misc : ALM029426
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\0507.M
 Title : TO-15 on the Agilent 7890A / 5975C
 Last Update : Thu May 08 08:20:28 2014



AutoFind: Scans 5327, 5328, 5329; Background Corrected with Scan 5306

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	15.4	86225	PASS
75	95	30	66	46.2	257685	PASS
95	95	100	100	100.0	558357	PASS
96	95	5	9	6.6	36839	PASS
173	174	0.00	2	0.5	2353	PASS
174	95	50	100	92.1	513984	PASS
175	174	4	9	7.3	37375	PASS
176	174	93	101	96.9	498069	PASS
177	176	5	9	6.7	33516	PASS

Data Path: D:\Agilent GCMS\05-09-14\
Data File: AA9511BFB.D
Acq On: 5/9/2014 8:56:00AM
Operator: jls
Sample: BFB
Misc: ALM029426
ALS Vial: 1 **Multiplier:** 1
Integration File: rteint.p
Method: C:\msdchem\1\METHODS\0508.M
Last Update: Thu May 08 13:39:35 2014
Spectrum Information:

PassFail	Target Mass	Rel. to Mass	Lower Limit %	Higher Limit %	Raw Abundance	% Relative Abundance
PASS	50	95	8	40	122448	19.2
PASS	75	95	30	66	353173	55.4
PASS	95	95	100	100	636991	100.0
PASS	96	95	5	9	42923	6.7
PASS	173	174	0.00	2	2863	0.6
PASS	174	95	50	100	458048	71.9
PASS	175	174	4	9	33717	7.4
PASS	176	174	93	101	458195	100.0
PASS	177	176	5	9	30888	6.7

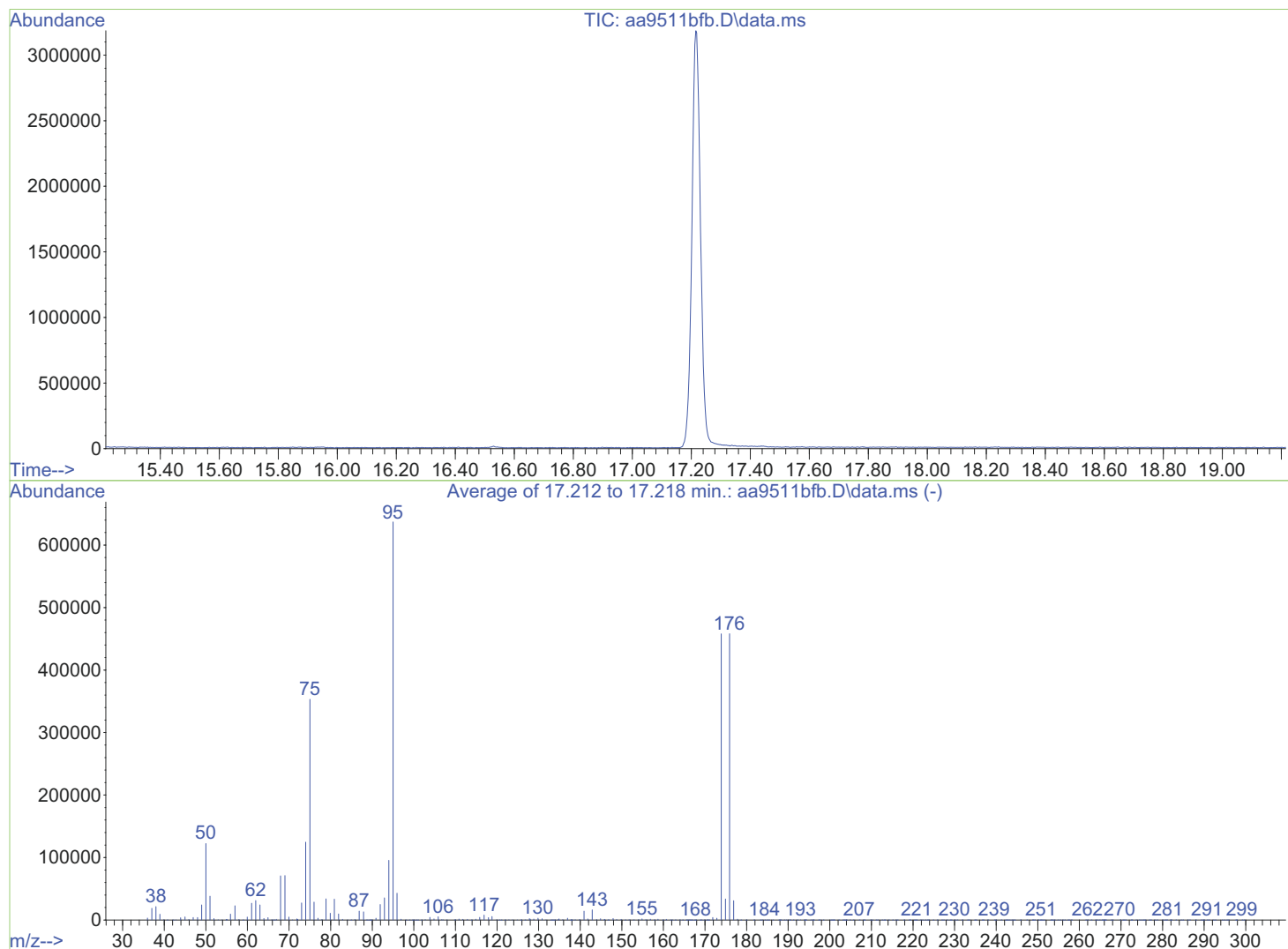
Runs with this BFB:

Lab Sample Number	Date File	Field Sample	Date/Time of Sample/Standard Analysis
BFB	AA9511BFB	NA	5/9/2014 8:56:00 AM
10 PPBV DCVS	AA9512DCVS	NA	5/9/2014 10:46:00 AM
10 PPBV LCS	AA9513LCS	NA	5/9/2014 11:22:00 AM
METHOD BLANK	AA9514BLK	NA	5/9/2014 1:14:00 PM
02 PPBV RLLCS	AA9515RLLCS	NA	5/9/2014 3:09:00 PM
E14-03224-01	AA9524	SG	5/9/2014 8:03:00 PM
10 PPBV CCCVS	AA9526CCCVS	NA	5/9/2014 9:07:00 PM

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9511bfb.D
 Acq On : 9 May 2014 8:56 am
 Operator : jls
 Sample : BFB
 Misc : ALM029426
 ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\0508.M
 Title : TO-15 on the Agilent 7890A / 5975C
 Last Update : Thu May 08 13:39:35 2014



AutoFind: Scans 5326, 5327, 5328; Background Corrected with Scan 5305

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.2	122448	PASS
75	95	30	66	55.4	353173	PASS
95	95	100	100	100.0	636991	PASS
96	95	5	9	6.7	42923	PASS
173	174	0.00	2	0.6	2863	PASS
174	95	50	100	71.9	458048	PASS
175	174	4	9	7.4	33717	PASS
176	174	93	101	100.0	458195	PASS
177	176	5	9	6.7	30888	PASS

Method Blank Report

Lab Sample Name: METHOD BLANK
Field Sample Name: METHOD BLANK
Matrix: Air
Dilution Factor: 1

Data File: AA9134BLK
Date Analyzed: 4/3/2014
Sample Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Runs with this Method Blank:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 8:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 9:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound	CAS #	Reporting Limit (ppbv)	Concentration (ppbv)
Acetone	67-64-1	0.43	ND
Benzene	71-43-2	0.14	ND
Bromodichloromethane	75-27-4	0.20	ND
Bromoform	75-25-2	0.15	ND
Bromomethane	74-83-9	0.12	ND
1,3-Butadiene	106-99-0	0.16	ND
Chlorobenzene	108-90-7	0.17	ND
Chloroethane	75-00-3	0.15	ND
Chloroform	67-66-3	0.20	ND
Chloromethane	74-87-3	0.48	ND
Carbon disulfide	75-15-0	0.17	ND
Carbon tetrachloride	56-23-5	0.18	ND
Cyclohexane	110-82-7	0.11	ND
Dibromochloromethane	124-48-1	0.17	ND
1,2-Dibromoethane	106-93-4	0.15	ND
1,2-Dichlorobenzene	95-50-1	0.15	ND
1,3-Dichlorobenzene	541-73-1	0.16	ND
1,4-Dichlorobenzene	106-46-7	0.14	ND
Dichlorodifluoromethane	75-71-8	0.23	ND
1,1-Dichloroethane	75-34-3	0.17	ND
1,2-Dichloroethane	107-06-2	0.16	ND
1,1-Dichloroethene	75-35-4	0.16	ND
1,2-Dichloroethene (cis)	156-59-2	0.14	ND
1,2-Dichloroethene (trans)	156-60-5	0.15	ND
1,2-Dichloropropane	78-87-5	0.16	ND
1,3-Dichloropropene (cis)	10061-01-5	0.09	ND
1,3-Dichloropropene (trans)	10061-02-6	0.11	ND
1,2-Dichlorotetrafluoroethane	76-14-2	0.18	ND
1,4-Dioxane	123-91-1	0.21	ND
Ethylbenzene	100-41-4	0.14	ND
n-Heptane	142-82-5	0.10	ND
1,3-Hexachlorobutadiene	87-68-3	0.19	ND
n-Hexane	110-54-3	0.11	ND
Methylene chloride	75-09-2	0.17	0.13
Methyl ethyl ketone	78-93-3	0.25	ND

Method Blank must be less than the Practical Quantitation Limit (PQL).

Method Blank Report

Lab Sample Name: METHOD BLANK
Field Sample Name: METHOD BLANK
Matrix: Air
Dilution Factor: 1

Data File: AA9134BLK
Date Analyzed: 4/3/2014
Sample Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Runs with this Method Blank:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 8:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 9:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound	CAS #	Reporting Limit (ppbv)	Concentration (ppbv)
Methyl isobutyl ketone	108-10-1	0.11	ND
Methyl tert-butyl ether	1634-04-4	0.10	ND
Styrene	100-42-5	0.12	ND
Tert-butyl alcohol	75-65-0	0.10	ND
1,1,2,2-Tetrachloroethane	79-34-5	0.17	ND
Tetrachloroethene	127-18-4	0.16	ND
Toluene	108-88-3	0.11	ND
1,2,4-Trichlorobenzene	120-82-1	0.16	ND
1,1,1-Trichloroethane	71-55-6	0.17	ND
1,1,2-Trichloroethane	79-00-5	0.18	ND
Trichloroethene	79-01-6	0.16	ND
Trichlorofluoromethane	75-69-4	0.21	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.17	ND
1,2,4-Trimethylbenzene	95-63-6	0.12	ND
1,3,5-Trimethylbenzene	108-67-8	0.13	ND
2,2,4-Trimethylpentane	540-84-1	0.11	ND
Vinyl bromide	593-60-2	0.16	ND
Vinyl chloride	75-01-4	0.17	ND
Xylenes (m&p)	179601-23-1	0.31	ND
Xylenes (o)	95-47-6	0.16	ND

Method Blank must be less than the Practical Quantitation Limit (PQL).

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9134blk.D
 Acq On : 3 Apr 2014 11:41 am
 Operator : jls
 Sample : Method Blank
 Misc : SC0227
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 04 11:45:09 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

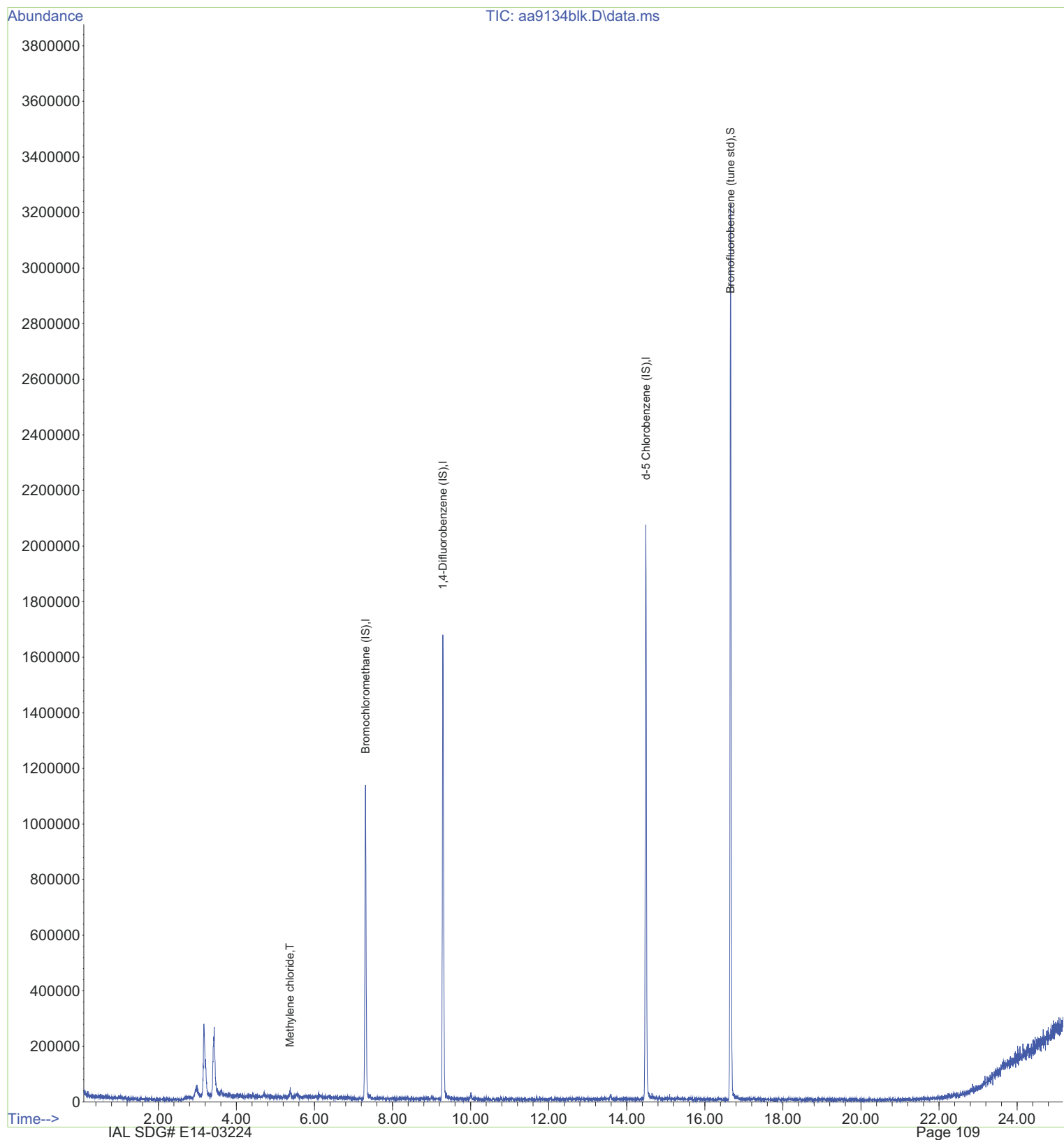
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

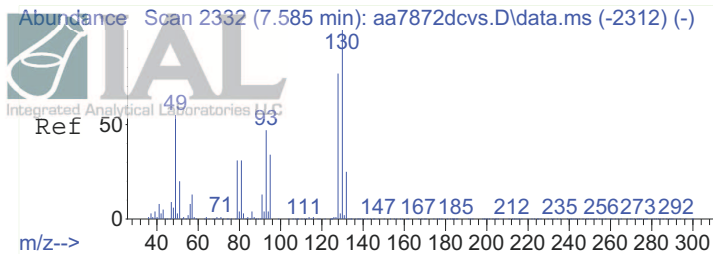
Internal Standards						
1) Bromochloromethane (IS)	7.309	130	421213	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.289	114	1416659	10.00	ppbV	0.01
55) d-5 Chlorobenzene (IS)	14.489	117	1293248	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.659	95	998975	8.87	ppbV	0.00
Target Compounds						
19) Methylene chloride	5.373	84	7659	0.13	ppbV	Qvalue # 72

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\04-03-14\
Data File : aa9134blk.D
Acq On : 3 Apr 2014 11:41 am
Operator : jls
Sample : Method Blank
Misc : SC0227
ALS Vial : 4 Sample Multiplier: 1

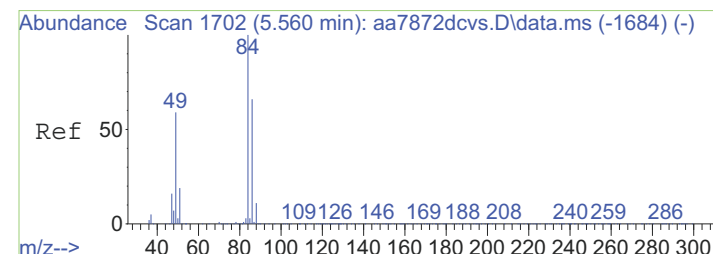
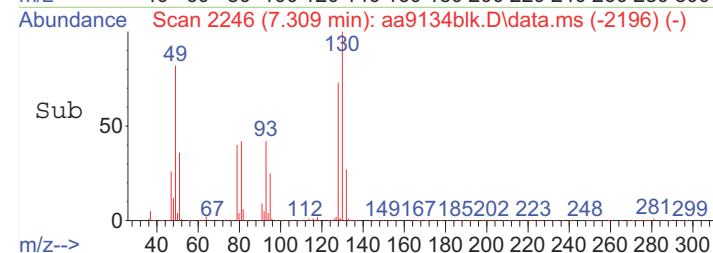
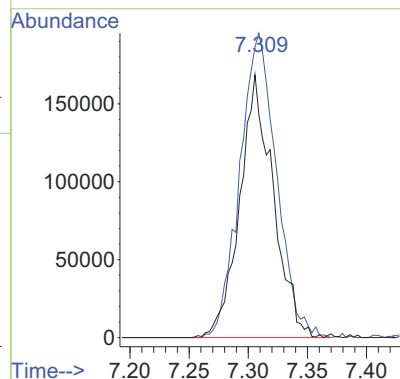
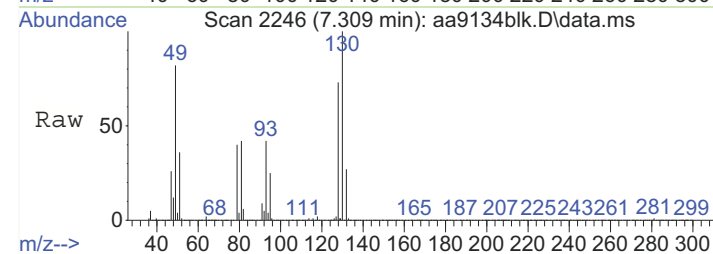
Quant Time: Apr 04 11:45:09 2014
Quant Method : C:\msdchem\1\METHODS\0325.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Mar 26 09:33:26 2014
Response via : Initial Calibration





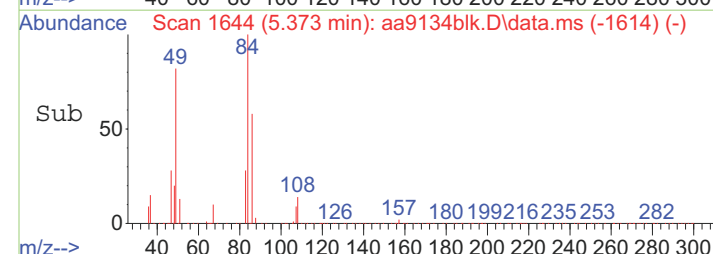
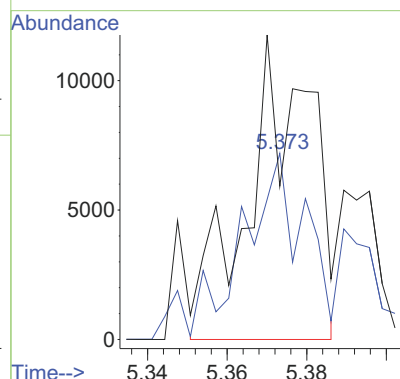
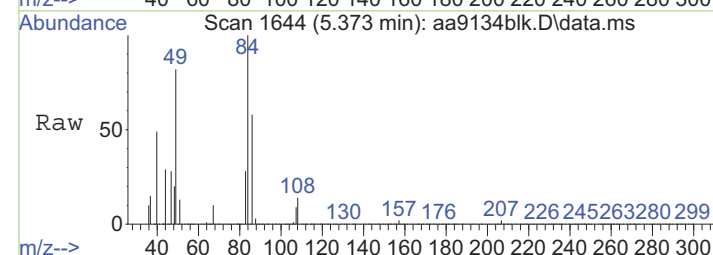
#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 7.309 min Scan# 2246
Delta R.T. 0.010 min
Lab File: aa9134blk.D
Acq: 3 Apr 2014 11:41 am

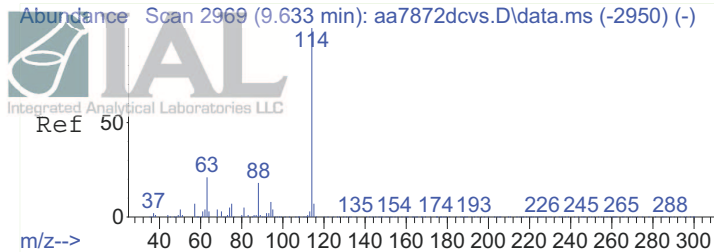
Tgt Ion	130	Resp	421213
Ion Ratio	100	Lower	Upper
128	78.9	62.6	94.0



#19
Methylene chloride
Concen: 0.13 ppbV
RT: 5.373 min Scan# 1644
Delta R.T. -0.003 min
Lab File: aa9134blk.D
Acq: 3 Apr 2014 11:41 am

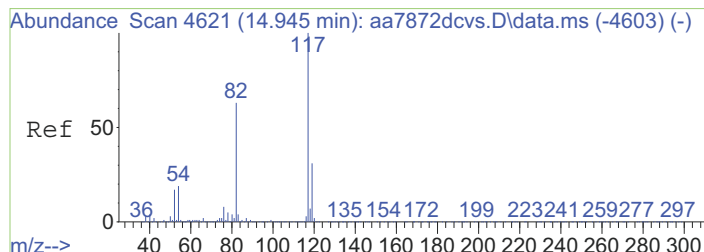
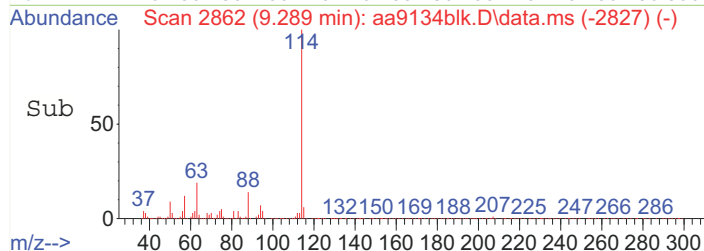
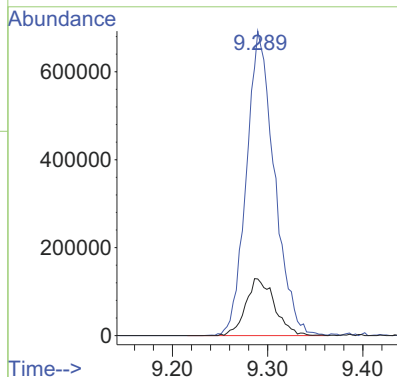
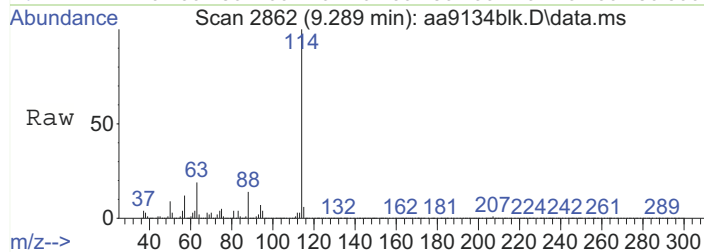
Tgt Ion	84	Resp	7659
Ion Ratio	84	100	
49	197.0	128.0	192.0#





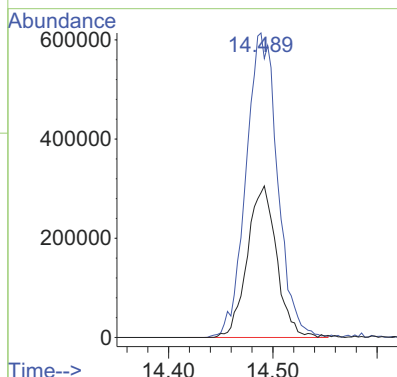
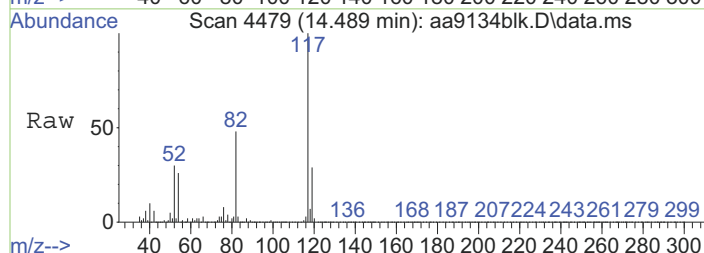
#38
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 9.289 min Scan# 2862
Delta R.T. 0.012 min
Lab File: aa9134blk.D
Acq: 3 Apr 2014 11:41 am

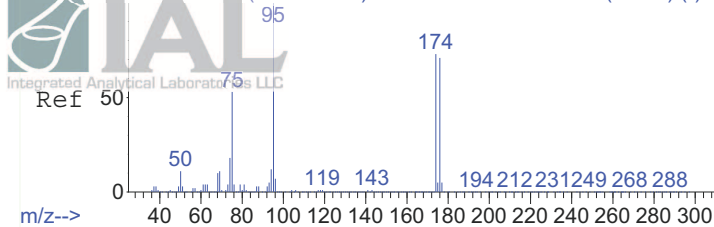
Tgt Ion:114 Resp: 1416659
Ion Ratio Lower Upper
114 100
63 19.2 16.0 24.0



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 14.489 min Scan# 4479
Delta R.T. 0.010 min
Lab File: aa9134blk.D
Acq: 3 Apr 2014 11:41 am

Tgt Ion:117 Resp: 1293248
Ion Ratio Lower Upper
117 100
82 46.2 32.0 48.0





#64

Bromofluorobenzene (tune std)

Concen: 8.87 ppbV

RT: 16.659 min Scan# 5154

Delta R.T. -0.006 min

Lab File: aa9134blk.D

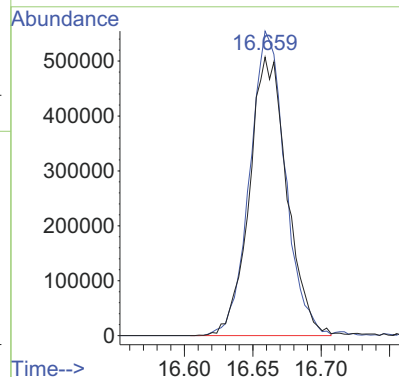
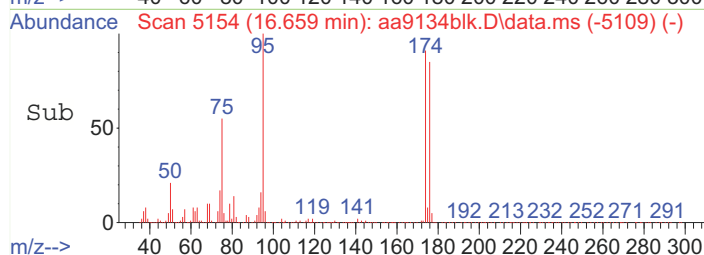
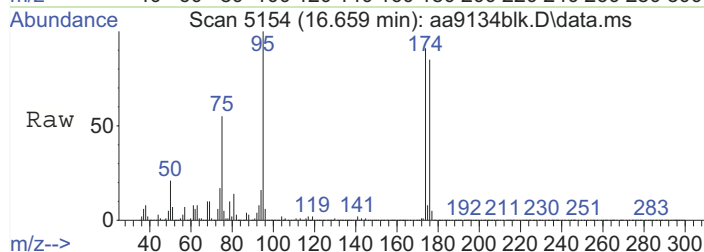
Acq: 3 Apr 2014 11:41 am

Tgt Ion: 95 Resp: 998975

Ion Ratio Lower Upper

95 100

174 97.1 53.6 80.4#



Method Blank Report

Lab Sample Name: METHOD BLANK
Field Sample Name: METHOD BLANK
Matrix: Air
Dilution Factor: 1

Data File: AA9514BLK
Date Analyzed: 5/9/2014
Sample Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Runs with this Method Blank:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 8:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound	CAS #	Reporting Limit (ppbv)	Concentration (ppbv)
Acetone	67-64-1	0.43	ND
Benzene	71-43-2	0.14	ND
Bromodichloromethane	75-27-4	0.20	ND
Bromoform	75-25-2	0.15	ND
Bromomethane	74-83-9	0.12	ND
1,3-Butadiene	106-99-0	0.16	ND
Chlorobenzene	108-90-7	0.17	ND
Chloroethane	75-00-3	0.15	ND
Chloroform	67-66-3	0.20	ND
Chloromethane	74-87-3	0.48	ND
Carbon disulfide	75-15-0	0.17	ND
Carbon tetrachloride	56-23-5	0.18	ND
Cyclohexane	110-82-7	0.11	ND
Dibromochloromethane	124-48-1	0.17	ND
1,2-Dibromoethane	106-93-4	0.15	ND
1,2-Dichlorobenzene	95-50-1	0.15	ND
1,3-Dichlorobenzene	541-73-1	0.16	ND
1,4-Dichlorobenzene	106-46-7	0.14	ND
Dichlorodifluoromethane	75-71-8	0.23	ND
1,1-Dichloroethane	75-34-3	0.17	ND
1,2-Dichloroethane	107-06-2	0.16	ND
1,1-Dichloroethene	75-35-4	0.16	ND
1,2-Dichloroethene (cis)	156-59-2	0.14	ND
1,2-Dichloroethene (trans)	156-60-5	0.15	ND
1,2-Dichloropropane	78-87-5	0.16	ND
1,3-Dichloropropene (cis)	10061-01-5	0.09	ND
1,3-Dichloropropene (trans)	10061-02-6	0.11	ND
1,2-Dichlorotetrafluoroethane	76-14-2	0.18	ND
1,4-Dioxane	123-91-1	0.21	ND
Ethylbenzene	100-41-4	0.14	ND
n-Heptane	142-82-5	0.10	ND
1,3-Hexachlorobutadiene	87-68-3	0.19	ND
n-Hexane	110-54-3	0.11	ND
Methylene chloride	75-09-2	0.17	ND
Methyl ethyl ketone	78-93-3	0.25	ND

Method Blank must be less than the Practical Quantitation Limit (PQL).

Method Blank Report

Lab Sample Name: METHOD BLANK
Field Sample Name: METHOD BLANK
Matrix: Air
Dilution Factor: 1

Data File: AA9514BLK
Date Analyzed: 5/9/2014
Sample Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Runs with this Method Blank:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 8:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound	CAS #	Reporting Limit (ppbv)	Concentration (ppbv)
Methyl isobutyl ketone	108-10-1	0.11	ND
Methyl tert-butyl ether	1634-04-4	0.10	ND
Styrene	100-42-5	0.12	ND
Tert-butyl alcohol	75-65-0	0.10	ND
1,1,2,2-Tetrachloroethane	79-34-5	0.17	ND
Tetrachloroethene	127-18-4	0.16	ND
Toluene	108-88-3	0.11	ND
1,2,4-Trichlorobenzene	120-82-1	0.16	ND
1,1,1-Trichloroethane	71-55-6	0.17	ND
1,1,2-Trichloroethane	79-00-5	0.18	ND
Trichloroethene	79-01-6	0.16	ND
Trichlorofluoromethane	75-69-4	0.21	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.17	ND
1,2,4-Trimethylbenzene	95-63-6	0.12	ND
1,3,5-Trimethylbenzene	108-67-8	0.13	ND
2,2,4-Trimethylpentane	540-84-1	0.11	ND
Vinyl bromide	593-60-2	0.16	ND
Vinyl chloride	75-01-4	0.17	ND
Xylenes (m&p)	179601-23-1	0.31	ND
Xylenes (o)	95-47-6	0.16	ND

Method Blank must be less than the Practical Quantitation Limit (PQL).

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9514blk.D
 Acq On : 9 May 2014 1:14 pm
 Operator : jls
 Sample : Method Blank
 Misc : SC0227
 ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 10:39:32 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.634	130	421746	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.695	114	1477386	10.00	ppbV	# 0.00
55) d-5 Chlorobenzene (IS)	15.026	117	1365647	10.00	ppbV	# 0.00

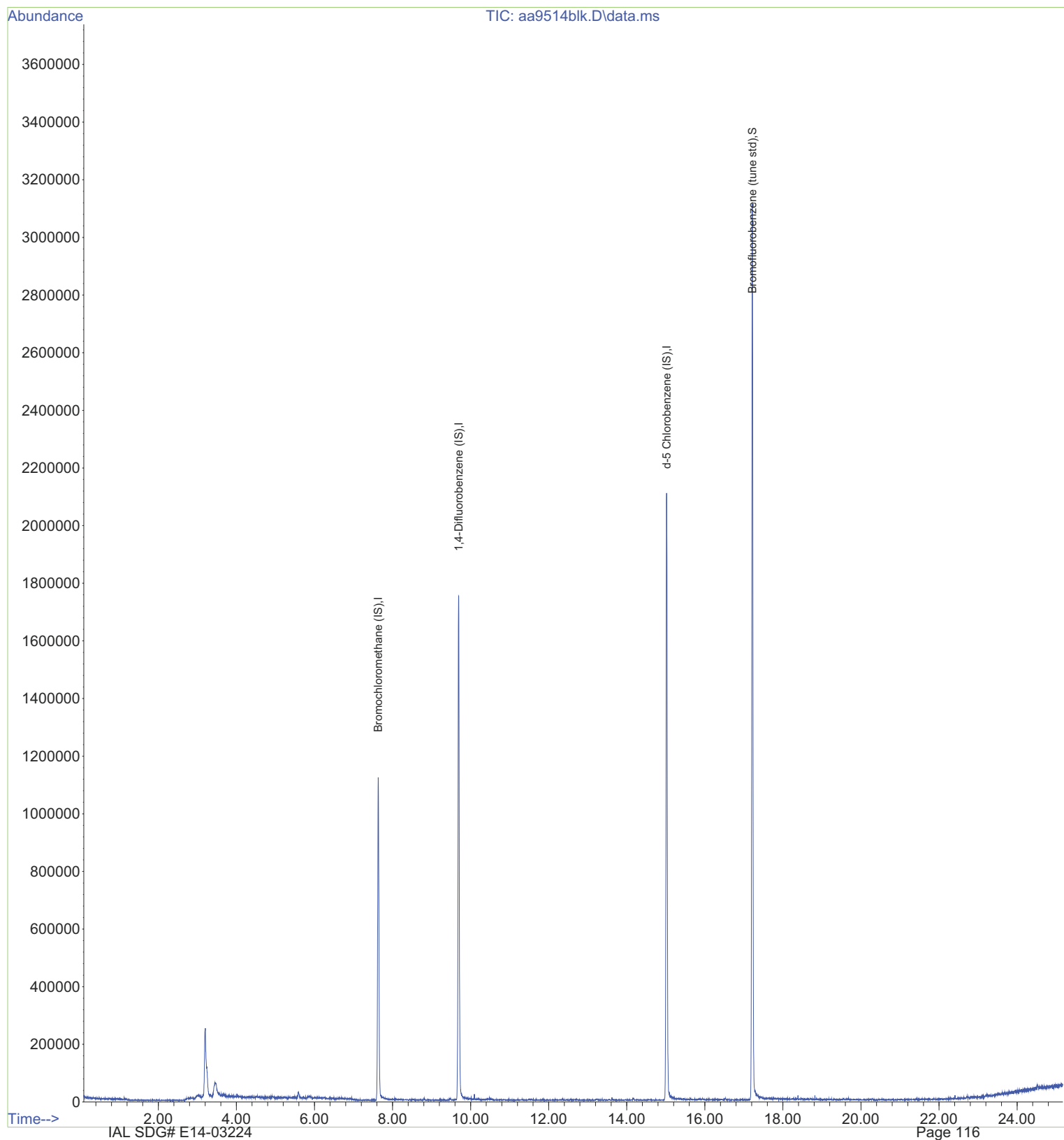
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.215	95	1275431	11.99	ppbV	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-09-14\
Data File : aa9514blk.D
Acq On : 9 May 2014 1:14 pm
Operator : jls
Sample : Method Blank
Misc : SC0227
ALS Vial : 4 Sample Multiplier: 1

Quant Time: May 14 10:39:32 2014
Quant Method : C:\msdchem\1\METHODS\0508.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Thu May 08 13:39:35 2014
Response via : Initial Calibration



Laboratory Control Spike

Lab Sample Name: 10 PPBV LCS
Spike Amount: 10 ppbv, except m&p-Xylenes at 20 ppbv

Data File: AA9133LCS
Date Analyzed: 4/3/2014

Runs with this LCS:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 8:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 9:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound	CAS #	Calculated Amount (ppbv)	% Recovery
Acetone	67-64-1	7.9	79
Benzene	71-43-2	8.0	80
Bromodichloromethane	75-27-4	8.3	83
Bromoform	75-25-2	8.4	84
Bromomethane	74-83-9	9.0	90
1,3-Butadiene	106-99-0	8.0	80
Chlorobenzene	108-90-7	10	100
Chloroethane	75-00-3	8.5	85
Chloroform	67-66-3	8.0	80
Chloromethane	74-87-3	12	120
Carbon disulfide	75-15-0	8.1	81
Carbon tetrachloride	56-23-5	6.9	69
Cyclohexane	110-82-7	7.1	71
Dibromochloromethane	124-48-1	9.9	99
1,2-Dibromoethane	106-93-4	9.7	97
1,2-Dichlorobenzene	95-50-1	9.5	95
1,3-Dichlorobenzene	541-73-1	9.7	97
1,4-Dichlorobenzene	106-46-7	11	110
Dichlorodifluoromethane	75-71-8	7.9	79
1,1-Dichloroethane	75-34-3	7.5	75
1,2-Dichloroethane	107-06-2	7.5	75
1,1-Dichloroethene	75-35-4	7.0	70
1,2-Dichloroethene (cis)	156-59-2	8.6	86
1,2-Dichloroethene (trans)	156-60-5	8.3	83
1,2-Dichloropropane	78-87-5	10	100
1,3-Dichloropropene (cis)	10061-01-5	9.7	97
1,3-Dichloropropene (trans)	10061-02-6	8.3	83
1,2-Dichlorotetrafluoroethane	76-14-2	7.3	73
1,4-Dioxane	123-91-1	11	110
Ethylbenzene	100-41-4	8.9	89
n-Heptane	142-82-5	11	110
1,3-Hexachlorobutadiene	87-68-3	8.0	80
n-Hexane	110-54-3	9.1	91
Methylene chloride	75-09-2	8.5	85

LCS recovery must be within 70-130% of the spiked value for 90% of compounds; All compounds must be within 50-150%

Laboratory Control Spike

Lab Sample Name: 10 PPBV LCS
Spike Amount: 10 ppbv, except m&p-Xylenes at 20 ppbv

Data File: AA9133LCS
Date Analyzed: 4/3/2014

Runs with this LCS:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 8:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 9:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

Compound	CAS #	Calculated Amount (ppbv)	% Recovery	
Methyl ethyl ketone	78-93-3	5.6	56	*
Methyl isobutyl ketone	108-10-1	8.9	89	
Methyl tert-butyl ether	1634-04-4	7.5	75	
Styrene	100-42-5	9.9	99	
Tert-butyl alcohol	75-65-0	7.9	79	
1,1,2,2-Tetrachloroethane	79-34-5	11	110	
Tetrachloroethene	127-18-4	9.0	90	
Toluene	108-88-3	9.8	98	
1,2,4-Trichlorobenzene	120-82-1	8.7	87	
1,1,1-Trichloroethane	71-55-6	6.8	68	*
1,1,2-Trichloroethane	79-00-5	9.8	98	
Trichloroethene	79-01-6	8.6	86	
Trichlorofluoromethane	75-69-4	6.8	68	*
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	7.3	73	
1,2,4-Trimethylbenzene	95-63-6	10.0	100	
1,3,5-Trimethylbenzene	108-67-8	9.9	99	
2,2,4-Trimethylpentane	540-84-1	9.5	95	
Vinyl bromide	593-60-2	7.4	74	
Vinyl chloride	75-01-4	8.3	83	
Xylenes (m&p)	179601-23-1	21	100	
Xylenes (o)	95-47-6	9.7	97	

LCS recovery must be within 70-130% of the spiked value for 90% of compounds; All compounds must be within 50-150%

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa91331cs.D
 Acq On : 3 Apr 2014 11:09 am
 Operator : jls
 Sample : 10 ppbv LCS
 Misc : CC358741
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 11:43:44 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.302	130	485644	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.289	114	1647211	10.00	ppbV	0.01
55) d-5 Chlorobenzene (IS)	14.485	117	1495781	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.659	95	1327258	10.19	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.376	39	335415	8.46	ppbV	91
3) Dichlorodifluoromethane	3.418	85	2923568	7.93	ppbV	100
4) Chloromethane	3.602	50	741058	11.52	ppbV #	49
5) 1,2-Dichlorotetrafluor...	3.602	85	1770467	7.32	ppbV	85
6) Vinyl chloride	3.720	62	504384	8.33	ppbV	98
7) 1,3-Butadiene	3.801	39	595730	7.96	ppbV	97
8) n-Butane	3.820	43	651063	8.79	ppbV	97
9) Bromomethane	4.029	94	499924	9.02	ppbV	96
10) Chloroethane	4.155	64	254294	8.53	ppbV #	85
11) Ethanol	4.290	45	165839	7.29	ppbV #	69
12) Vinyl bromide	4.412	106	622758	7.43	ppbV	99
13) Acrolein	4.553	56	187678	7.32	ppbV	93
14) Acetone	4.672	43	793637	7.86	ppbV	99
15) Trichlorofluoromethane	4.720	101	2301021	6.83	ppbV	99
16) Isopropanol	4.878	45	703399	8.16	ppbV	97
17) n-Pentane	4.952	43	775757	8.51	ppbV	95
18) 1,1-Dichloroethene	5.245	61	935562	7.01	ppbV	99
19) Methylene chloride	5.376	84	589787	8.47	ppbV	86
20) Tert-butyl alcohol	5.360	59	960295	7.85	ppbV	100
21) Allyl chloride	5.437	76	217160	8.16	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.544	101	1652219	7.34	ppbV	97
23) Carbon disulfide	5.576	76	1680419	8.08	ppbV	96
24) 1,2-Dichloroethene (tr...	6.129	61	818654	8.28	ppbV	91
25) 1,1-Dichloroethane	6.338	63	1077586	7.51	ppbV	98
26) Methyl tert-butyl ether	6.396	73	1098160	7.45	ppbV	91
27) Methyl ethyl ketone	6.807	72	109343	5.63	ppbV	99
28) 1,2-Dichloroethene (cis)	7.158	61	830841	8.57	ppbV	92
29) Ethyl acetate	7.405	61	146850	9.53	ppbV	99
30) n-Hexane	7.170	57	838297	9.06	ppbV	99
31) Chloroform	7.418	83	1481253	7.98	ppbV	98
32) Tetrahydrofuran	7.923	42	341520	8.32	ppbV #	22
33) 1,2-Dichloroethane	8.145	62	1024666	7.47	ppbV	96
34) 1,1,1-Trichloroethane	8.370	97	1706792	6.83	ppbV	100
35) Benzene	8.855	78	1683961	8.02	ppbV	93
36) Carbon tetrachloride	9.006	117	2096666	6.85	ppbV	100
37) Cyclohexane	9.042	84	808193	7.11	ppbV #	76
39) 1,2-Dichloropropane	9.736	63	633899	10.49	ppbV	99
40) Bromodichloromethane	10.010	83	1725038	8.30	ppbV	97
41) 2,2,4-Trimethylpentane	9.904	57	2615784	9.46	ppbV	96
42) Trichloroethene	10.003	130	1029532	8.56	ppbV	97
43) 1,4-Dioxane	10.183	88	363460	10.84	ppbV	92
44) Methyl methacrylate	10.196	41	842031	9.77	ppbV	100
45) n-Heptane	10.196	71	500584	10.56	ppbV	82
46) cis-1,3-Dichloropropene	11.042	75	934374	9.65	ppbV	99
47) Methyl isobutyl ketone	11.112	43	1291411	8.91	ppbV	96
48) trans-1,3-Dichloropropene	11.691	75	878879	8.31	ppbV	86
49) 1,1,2-Trichloroethane	11.891	97	949635	9.84	ppbV	90
50) Toluene	12.164	91	2457671	9.75	ppbV	94
51) Methyl n-butyl ketone	12.582	43	1226646	9.43	ppbV	99

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa91331cs.D
 Acq On : 3 Apr 2014 11:09 am
 Operator : jls
 Sample : 10 ppbv LCS
 Misc : CC358741
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 04 11:43:44 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	12.755	129	2145956	9.93	ppbV	98
53) 1,2-Dibromoethane	13.006	107	1590107	9.70	ppbV	97
54) Tetrachloroethene	13.582	166	1461996	9.01	ppbV	97
56) Chlorobenzene	14.543	112	2330156	10.07	ppbV	88
57) Ethylbenzene	15.016	91	3155205	8.92	ppbV	98
58) Xylenes (m&p)	15.247	91	5591186	20.76	ppbV	98
59) Bromoform	15.431	173	2358198	8.43	ppbV	97
60) Styrene	15.816	104	1983225	9.86	ppbV	98
61) Xylene (o)	15.932	91	2836857	9.67	ppbV	97
62) 1,1,2,2-Tetrachloroethane	16.025	83	2177888	11.14	ppbV	97
63) n-Nonane	16.177	57	1498815	10.81	ppbV	93
65) Cumene	16.800	105	4160187	9.05	ppbV	94
66) 2-Chlorotoluene	17.559	126	1042378	10.95	ppbV	88
67) n-Propyl benzene	17.598	120	1328302	10.81	ppbV	96
68) 4-Ethyltoluene	17.836	105	4483643	10.46	ppbV	97
69) 1,3,5-Trimethylbenzene	17.968	105	3778007	9.85	ppbV	100
70) 1,2,4-Trimethylbenzene	18.656	105	3602286	9.97	ppbV	100
71) Benzyl chloride	18.961	91	3475216	10.68	ppbV	97
72) 1,3-Dichlorobenzene	18.932	146	2653036	9.70	ppbV	99
73) 1,4-Dichlorobenzene	19.070	146	2805391	10.57	ppbV	96
74) 1,2-Dichlorobenzene	19.694	146	2442831	9.54	ppbV	99
75) 1,2,4-Trichlorobenzene	22.311	180	2459675	8.65	ppbV	94
76) Naphthalene	22.450	127	649153	9.81	ppbV	92
77) 1,3-Hexachlorobutadiene	22.855	225	2648303	7.98	ppbV	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Integrated Analytical Laboratories LLC



Laboratory Control Spike

Lab Sample Name: 10 PPBV LCS
Spike Amount: 10 ppbv, except m&p-Xylenes at 20 ppbv

Data File: AA9513LCS
Date Analyzed: 5/9/2014

Runs with this LCS:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 8:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound	CAS #	Calculated Amount (ppbv)	% Recovery
Acetone	67-64-1	12	120
Benzene	71-43-2	8.4	84
Bromodichloromethane	75-27-4	12	120
Bromoform	75-25-2	8.9	89
Bromomethane	74-83-9	9.4	94
1,3-Butadiene	106-99-0	10	100
Chlorobenzene	108-90-7	7.8	78
Chloroethane	75-00-3	9.8	98
Chloroform	67-66-3	11	110
Chloromethane	74-87-3	13	130
Carbon disulfide	75-15-0	8.8	88
Carbon tetrachloride	56-23-5	10	100
Cyclohexane	110-82-7	8.8	88
Dibromochloromethane	124-48-1	11	110
1,2-Dibromoethane	106-93-4	9.9	99
1,2-Dichlorobenzene	95-50-1	9.6	96
1,3-Dichlorobenzene	541-73-1	9.9	99
1,4-Dichlorobenzene	106-46-7	9.6	96
Dichlorodifluoromethane	75-71-8	15	150
1,1-Dichloroethane	75-34-3	10	100
1,2-Dichloroethane	107-06-2	12	120
1,1-Dichloroethene	75-35-4	11	110
1,2-Dichloroethene (cis)	156-59-2	7.9	79
1,2-Dichloroethene (trans)	156-60-5	10	100
1,2-Dichloropropane	78-87-5	11	110
1,3-Dichloropropene (cis)	10061-01-5	11	110
1,3-Dichloropropene (trans)	10061-02-6	11	110
1,2-Dichlorotetrafluoroethane	76-14-2	11	110
1,4-Dioxane	123-91-1	9.7	97
Ethylbenzene	100-41-4	9.1	91
n-Heptane	142-82-5	12	120
1,3-Hexachlorobutadiene	87-68-3	11	110
n-Hexane	110-54-3	9.4	94
Methylene chloride	75-09-2	7.6	76

LCS recovery must be within 70-130% of the spiked value for 90% of compounds; All compounds must be within 50-150%

Laboratory Control Spike

Lab Sample Name: 10 PPBV LCS
Spike Amount: 10 ppbv, except m&p-Xylenes at 20 ppbv

Data File: AA9513LCS
Date Analyzed: 5/9/2014

Runs with this LCS:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9511BFB]	05/09/2014 8:56
10 PPBV DCVS [AA9512DCVS]	05/09/2014 10:46
10 PPBV LCS [AA9513LCS]	05/09/2014 11:22
METHOD BLANK [AA9514BLK]	05/09/2014 13:14
02 PPBV RLLCS [AA9515RLLCS]	05/09/2014 15:09
E14-03224-01 [AA9524]	05/09/2014 20:03
10 PPBV CCCVS [AA9526CCCVS]	05/09/2014 21:07

Compound	CAS #	Calculated Amount (ppbv)	% Recovery
Methyl ethyl ketone	78-93-3	9.4	94
Methyl isobutyl ketone	108-10-1	12	120
Methyl tert-butyl ether	1634-04-4	9.4	94
Styrene	100-42-5	8.8	88
Tert-butyl alcohol	75-65-0	9.5	95
1,1,2,2-Tetrachloroethane	79-34-5	11	110
Tetrachloroethene	127-18-4	8.1	81
Toluene	108-88-3	9.8	98
1,2,4-Trichlorobenzene	120-82-1	9.6	96
1,1,1-Trichloroethane	71-55-6	11	110
1,1,2-Trichloroethane	79-00-5	10	100
Trichloroethene	79-01-6	8.5	85
Trichlorofluoromethane	75-69-4	11	110
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	9.5	95
1,2,4-Trimethylbenzene	95-63-6	11	110
1,3,5-Trimethylbenzene	108-67-8	11	110
2,2,4-Trimethylpentane	540-84-1	11	110
Vinyl bromide	593-60-2	8.2	82
Vinyl chloride	75-01-4	10	100
Xylenes (m&p)	179601-23-1	19	97
Xylenes (o)	95-47-6	11	110

LCS recovery must be within 70-130% of the spiked value for 90% of compounds; All compounds must be within 50-150%

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9513lcs.D
 Acq On : 9 May 2014 11:22 am
 Operator : jls
 Sample : 10 ppbv LCS
 Misc : CC358741
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 16:12:33 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.640	130	490225	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.695	114	1556721	10.00	ppbV	0.00
55) d-5 Chlorobenzene (IS)	15.022	117	1688228	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	17.218	95	1260890	9.59	ppbV	0.00
Target Compounds						
						Qvalue
2) Propene	3.422	41	89829	14.45	ppbV	69
3) Dichlorodifluoromethane	3.483	85	1382049	14.66	ppbV	100
4) Chloromethane	3.640	52	107390	13.13	ppbV #	29
5) 1,2-Dichlorotetrafluor...	3.692	85	1555935	11.13	ppbV #	75
6) Vinyl chloride	3.807	62	410651	10.04	ppbV	99
7) 1,3-Butadiene	3.907	54	307255	10.37	ppbV	97
8) n-Butane	3.952	43	498303	11.13	ppbV	96
9) Bromomethane	4.155	94	452647	9.42	ppbV	100
10) Chloroethane	4.290	64	208208	9.77	ppbV	98
11) Ethanol	4.930	45	653836	10.86	ppbV	99
12) Vinyl bromide	4.585	106	525628	8.24	ppbV	98
13) Acrolein	4.656	56	157138	9.96	ppbV	98
14) Acetone	4.753	43	669712	11.56	ppbV	96
15) Trichlorofluoromethane	4.933	101	2390645	11.22	ppbV	100
16) Isopropanol	4.930	45	653836	10.82	ppbV #	88
17) n-Pentane	5.241	43	527751	11.22	ppbV	99
18) 1,1-Dichloroethene	5.489	61	831440	11.13	ppbV #	80
19) Methylene chloride	5.598	84	474657	7.60	ppbV	86
20) Tert-butyl alcohol	5.463	59	783985	9.48	ppbV	100
21) Allyl chloride	5.704	76	191113	8.44	ppbV	100
22) 1,1,2-Trichloro-1,2,2-...	5.833	101	1388292	9.54	ppbV #	79
23) Carbon disulfide	5.884	76	1497739	8.84	ppbV #	88
24) 1,2-Dichloroethene (tr...	6.460	61	686490	10.16	ppbV	82
25) 1,1-Dichloroethane	6.650	63	848216	10.33	ppbV	97
26) Methyl tert-butyl ether	6.685	73	1265920	9.36	ppbV	100
27) Methyl ethyl ketone	6.991	72	221282	9.39	ppbV	100
28) 1,2-Dichloroethene (cis)	7.470	96	564875	7.89	ppbV #	61
29) Ethyl acetate	7.659	61	134264	9.01	ppbV	93
30) n-Hexane	7.682	57	606194	9.42	ppbV	84
31) Chloroform	7.765	83	1512691	10.76	ppbV	99
32) Tetrahydrofuran	8.151	42	359083	10.06	ppbV	96
33) 1,2-Dichloroethane	8.531	62	946873	11.53	ppbV	96
34) 1,1,1-Trichloroethane	8.807	97	1770686	10.53	ppbV	99
35) Benzene	9.306	78	1461343	8.39	ppbV	97
36) Carbon tetrachloride	9.476	117	2055534	10.11	ppbV	100
37) Cyclohexane	9.617	56	605584	8.82	ppbV	92
39) 1,2-Dichloropropane	10.216	63	469944	10.58	ppbV	100
40) Bromodichloromethane	10.437	83	1634526	12.48	ppbV	98
41) 2,2,4-Trimethylpentane	10.547	57	1885459	10.83	ppbV	99
42) Trichloroethene	10.492	130	803718	8.54	ppbV	98
43) 1,4-Dioxane	10.460	88	337236	9.66	ppbV	94
44) Methyl methacrylate	10.550	41	557890	13.35	ppbV #	97
45) n-Heptane	10.846	43	659522	11.80	ppbV #	80
46) cis-1,3-Dichloropropene	11.508	75	900844	10.85	ppbV	100
47) Methyl isobutyl ketone	11.531	43	985080	12.47	ppbV	97
48) trans-1,3-Dichloropropene	12.145	75	887606	11.18	ppbV #	81
49) 1,1,2-Trichloroethane	12.357	97	776688	10.02	ppbV	91
50) Toluene	12.707	91	1972502	9.76	ppbV	97
51) Methyl n-butyl ketone	13.029	43	934825	12.34	ppbV	97

IAL SDG# E14-03224

Data Path : D:\Agilent GCMS\05-09-14\
 Data File : aa9513lcs.D
 Acq On : 9 May 2014 11:22 am
 Operator : jls
 Sample : 10 ppbv LCS
 Misc : CC358741
 ALS Vial : 3 Sample Multiplier: 1

Quant Time: May 13 16:12:33 2014
 Quant Method : C:\msdchem\1\METHODS\0508.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Thu May 08 13:39:35 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
52) Dibromochloromethane	13.235	129	1826346	10.74	ppbV	97
53) 1,2-Dibromoethane	13.550	107	1336340	9.86	ppbV	99
54) Tetrachloroethene	14.170	166	1086660	8.14	ppbV	97
56) Chlorobenzene	15.077	112	1756182	7.83	ppbV	87
57) Ethylbenzene	15.614	91	2801320	9.11	ppbV	100
58) Xylenes (m&p)	15.884	91	4754224	19.39	ppbV	98
59) Bromoform	15.948	173	1865548	8.89	ppbV	97
60) Styrene	16.386	104	1675835	8.78	ppbV	99
61) Xylene (o)	16.543	91	2570737	10.61	ppbV	97
62) 1,1,2,2-Tetrachloroethane	16.527	83	1747991	10.67	ppbV	99
63) n-Nonane	16.923	57	1023973	10.59	ppbV	95
65) Cumene	17.437	105	3728809	9.95	ppbV	93
66) 2-Chlorotoluene	18.167	126	895491	8.52	ppbV #	66
67) n-Propyl benzene	18.247	120	1092595	9.71	ppbV #	72
68) 4-Ethyltoluene	18.495	105	3841040	10.44	ppbV	98
69) 1,3,5-Trimethylbenzene	18.627	105	3455101	10.74	ppbV	96
70) 1,2,4-Trimethylbenzene	19.321	105	3378055	10.67	ppbV	99
71) Benzyl chloride	19.537	91	2918653	11.85	ppbV	93
72) 1,3-Dichlorobenzene	19.556	146	2466427	9.90	ppbV	99
73) 1,4-Dichlorobenzene	19.678	146	2506111	9.62	ppbV	97
74) 1,2-Dichlorobenzene	20.289	146	2401860	9.57	ppbV	99
75) 1,2,4-Trichlorobenzene	22.720	180	2336892	9.59	ppbV	94
76) Naphthalene	22.832	127	628145	9.97	ppbV	95
77) 1,3-Hexachlorobutadiene	23.241	225	2608122	10.56	ppbV	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\05-09-14\
Data File : aa95131cs.D
Acq On : 9 May 2014 11:22 am
Operator : JLS
Sample : 10 ppbv LCS
Misc : CC358741
ALS Vial : 3 Sample Multiplier: 1

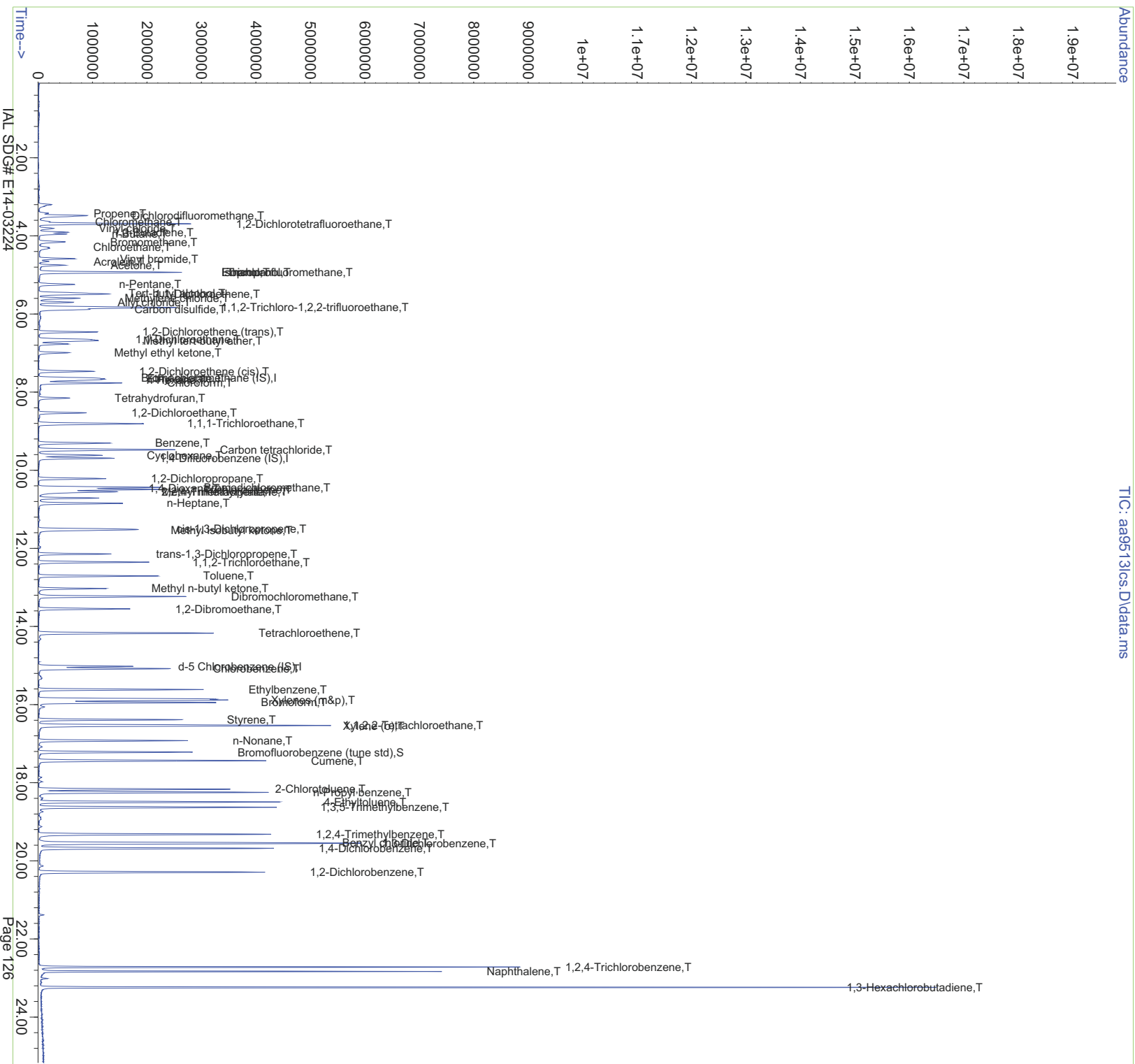
Quant Time: May 13 16:12:33 2014

Quant Method : C:\msdchem\1\METHODS\0508.M

Quant Title : TO-15 on the Agilent 7890A / 5975C

Qlast Update : Thu May 08 13:39:35 2014

Response via : Initial Calibration



Integrated Analytical Laboratories, LLC

Volatile Organic Compounds by EPA Method TO-15

Laboratory Sample Duplicate Report

SDG Number: E14-02570
IAL Sample ID: E14-02570-01
Matrix: Air
Summa ID: 2931

Date Received: 3/27/14
Date Analyzed: 4/3/14, 4/3/14
Lab Data File#: AA9144, AA9145
Dilution Factor: 1
Injection Volume: 500ml
GC/MS Column: RTX-1, 0.32 mmID

Compound	CAS #	Run1	Q	Run2	Q	Reporting	RPD
		Concentration Reported ppbv		Concentration Reported ppbv		Limits ppbv	
Chlorobenzene	108-90-7	0.20	U	0.20	U	0.20	0.00%
1,2-Dichlorobenzene	95-50-1	0.20	U	0.20	U	0.20	0.00%
1,3-Dichlorobenzene	541-73-1	0.20	U	0.20	U	0.20	0.00%
1,4-Dichlorobenzene	106-46-7	0.32		0.32		0.20	0.00%
1,2-Dichloroethene (cis)	156-59-2	0.20	U	0.20	U	0.20	0.00%
1,2-Dichloroethene (trans)	156-60-5	0.20	U	0.20	U	0.20	0.00%
Tetrachloroethene	127-18-4	0.20	U	0.20	U	0.20	0.00%
1,2,4-Trichlorobenzene	120-82-1	0.20	U	0.20	U	0.20	0.00%
Trichloroethene	79-01-6	0.20	U	0.20	U	0.20	0.00%
Vinyl chloride	75-01-4	0.20	U	0.20	U	0.20	0.00%

Qualifiers:

J = Duplicate sample does not meet RPD criteria
U = Compound ND or under reporting limit

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9144.D
 Acq On : 3 Apr 2014 5:38 pm
 Operator : jls
 Sample : 02570-01
 Misc : 2931
 ALS Vial : 13 Sample Multiplier: 1

Quant Time: Apr 04 09:59:12 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

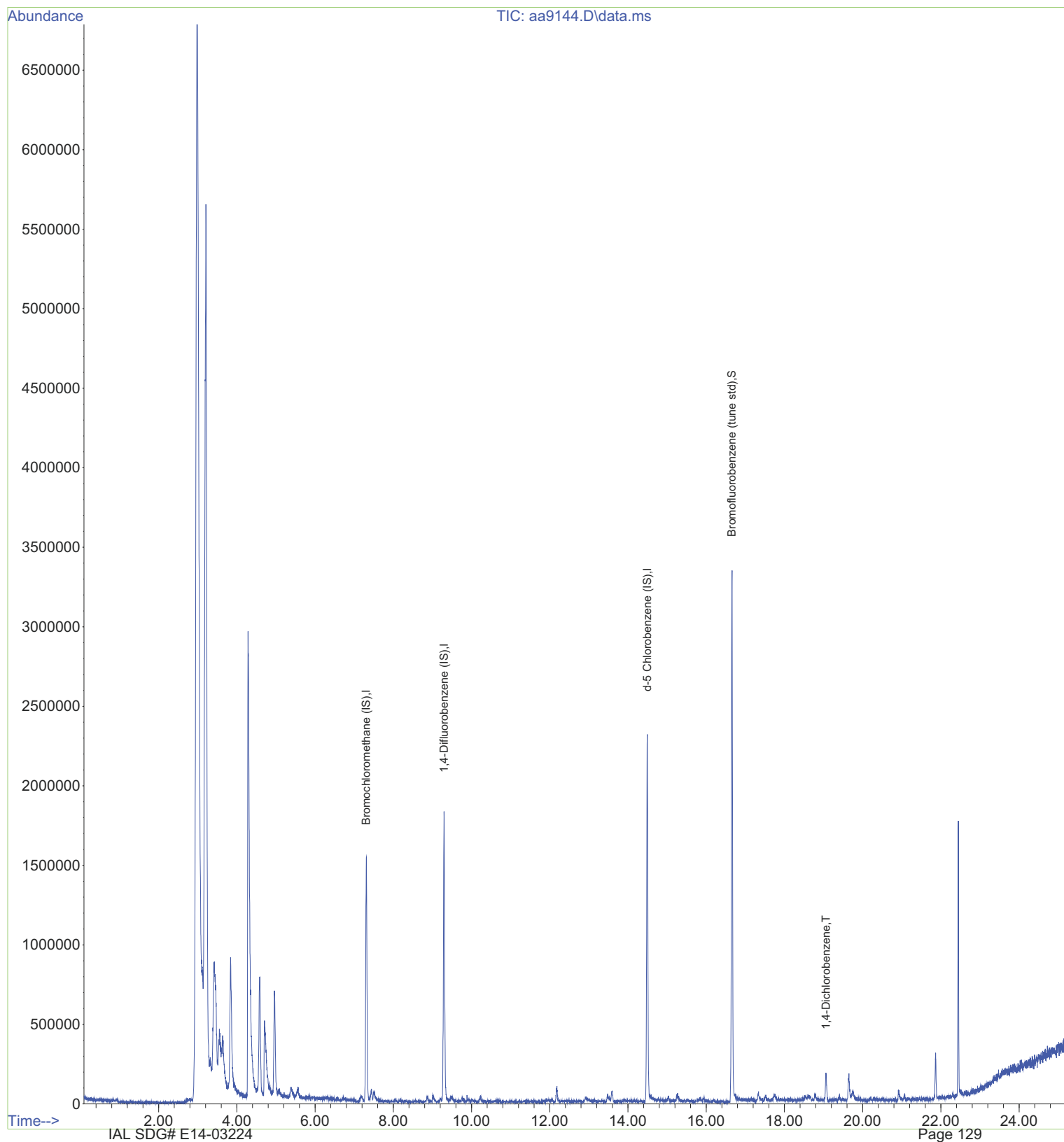
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

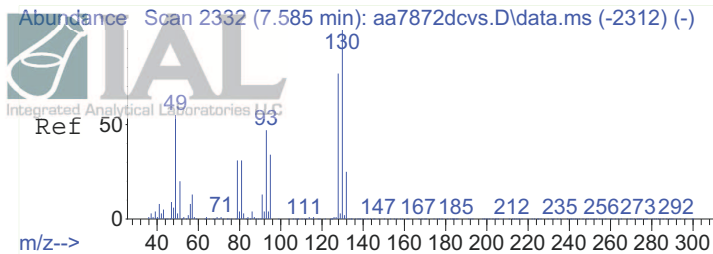
Internal Standards						
1) Bromochloromethane (IS)	7.306	130	584448	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.299	114	1575452	10.00	ppbV	0.02
55) d-5 Chlorobenzene (IS)	14.492	117	1475049	10.00	ppbV	0.01
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.656	95	1055148	8.21	ppbV	0.00
Target Compounds						
73) 1,4-Dichlorobenzene	19.064	146	84939	0.32	ppbV	Qvalue 97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\04-03-14\
Data File : aa9144.D
Acq On : 3 Apr 2014 5:38 pm
Operator : jls
Sample : 02570-01
Misc : 2931
ALS Vial : 13 Sample Multiplier: 1

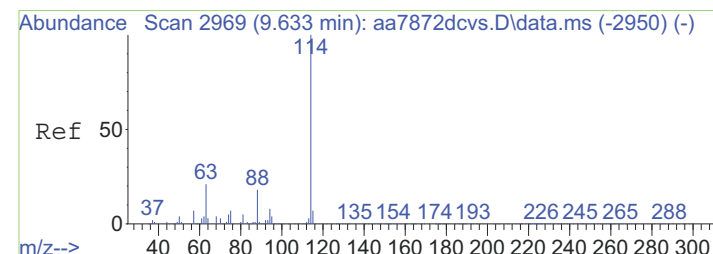
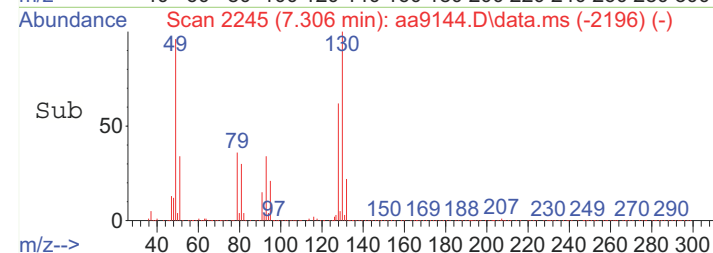
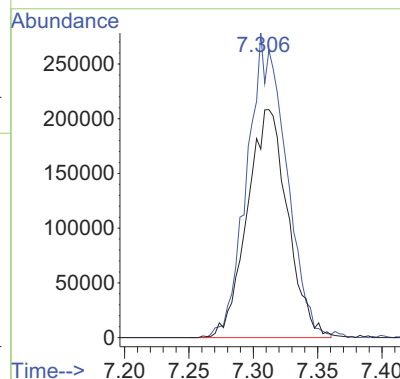
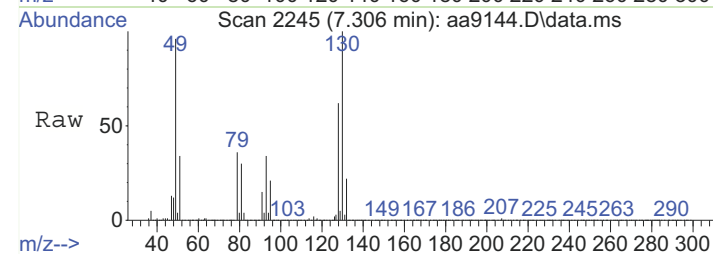
Quant Time: Apr 04 09:59:12 2014
Quant Method : C:\msdchem\1\METHODS\0325.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Mar 26 09:33:26 2014
Response via : Initial Calibration





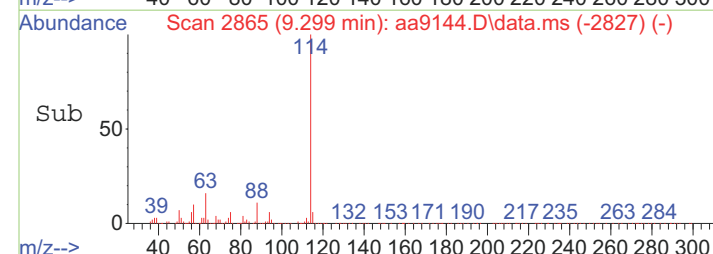
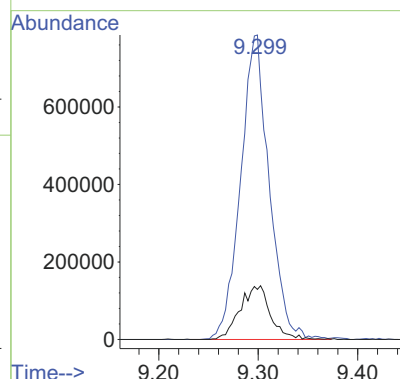
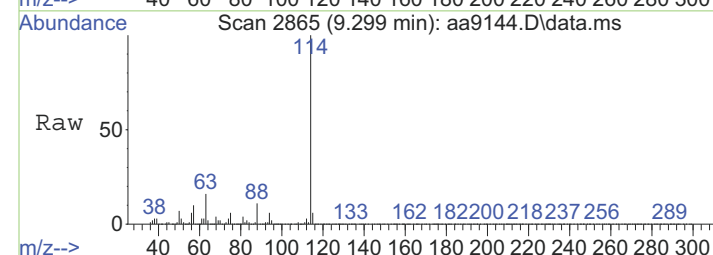
#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 7.306 min Scan# 2245
Delta R.T. 0.007 min
Lab File: aa9144.D
Acq: 3 Apr 2014 5:38 pm

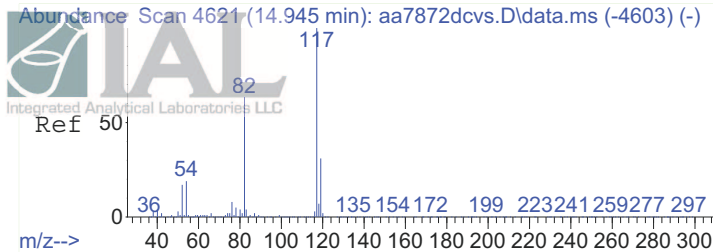
Tgt Ion:130 Resp: 584448
Ion Ratio Lower Upper
130 100
128 78.1 62.6 94.0



#38
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 9.299 min Scan# 2865
Delta R.T. 0.022 min
Lab File: aa9144.D
Acq: 3 Apr 2014 5:38 pm

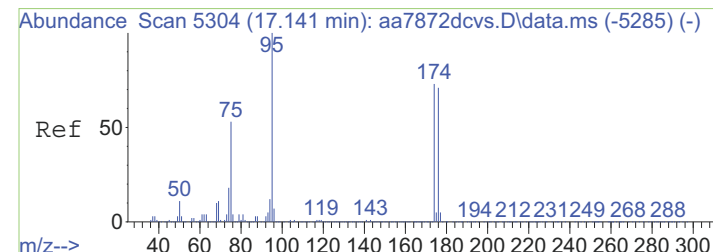
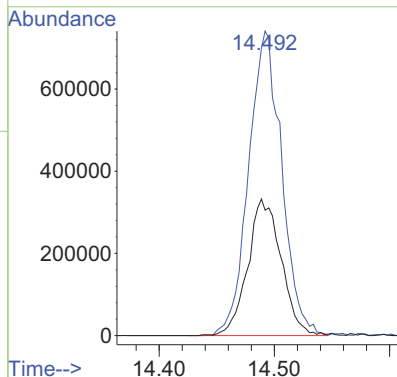
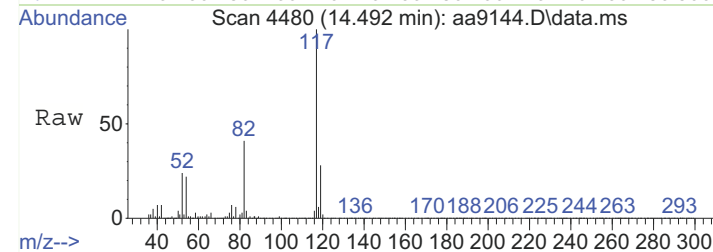
Tgt Ion:114 Resp: 1575452
Ion Ratio Lower Upper
114 100
63 18.8 16.0 24.0





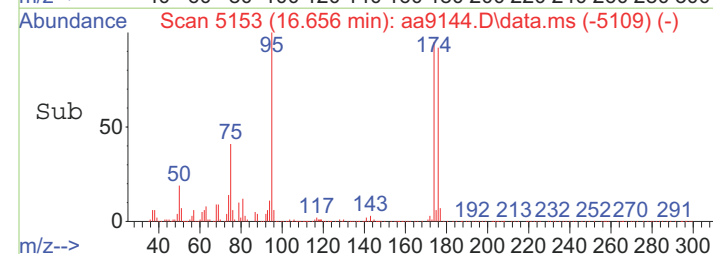
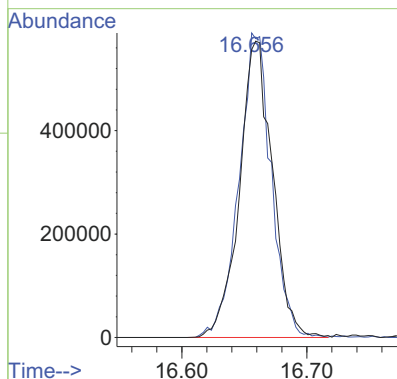
#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 14.492 min Scan# 4480
Delta R.T. 0.013 min
Lab File: aa9144.D
Acq: 3 Apr 2014 5:38 pm

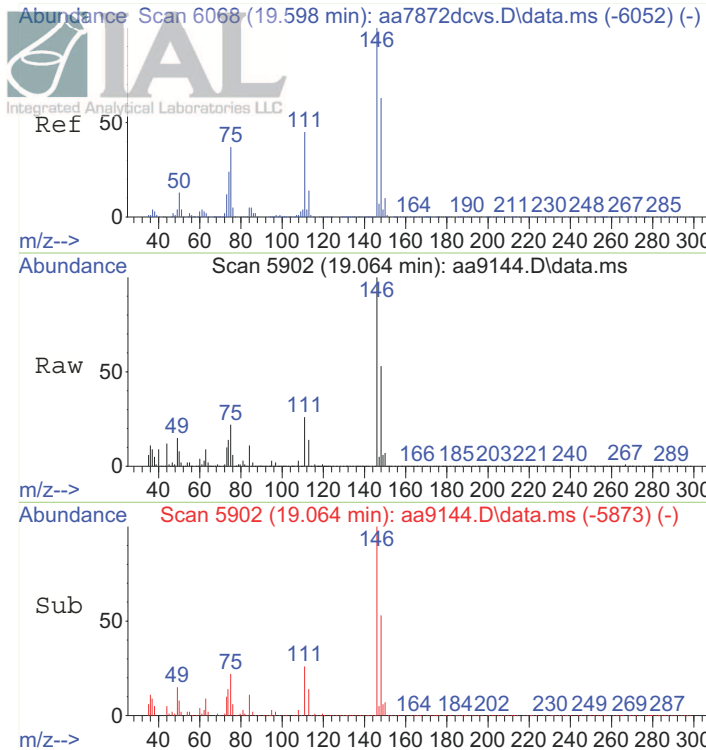
Tgt Ion: 117 Resp: 1475049
Ion Ratio Lower Upper
117 100
82 45.6 32.0 48.0



#64
Bromofluorobenzene (tune std)
Concen: 8.21 ppbV
RT: 16.656 min Scan# 5153
Delta R.T. -0.009 min
Lab File: aa9144.D
Acq: 3 Apr 2014 5:38 pm

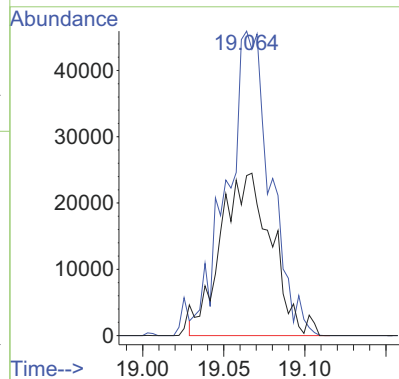
Tgt Ion: 95 Resp: 1055148
Ion Ratio Lower Upper
95 100
174 99.9 53.6 80.4#





#73
 1,4-Dichlorobenzene
 Concen: 0.32 ppbV
 RT: 19.064 min Scan# 5902
 Delta R.T. -0.006 min
 Lab File: aa9144.D
 Acq: 3 Apr 2014 5:38 pm

Tgt Ion	146	148	Ratio	Lower	Upper
Resp	84939				
Ion	100	62.8		52.1	78.1



Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9145.D
 Acq On : 3 Apr 2014 6:10 pm
 Operator : jls
 Sample : 02570-21
 Misc : dup of 02570-01, can 2931
 ALS Vial : 14 Sample Multiplier: 1

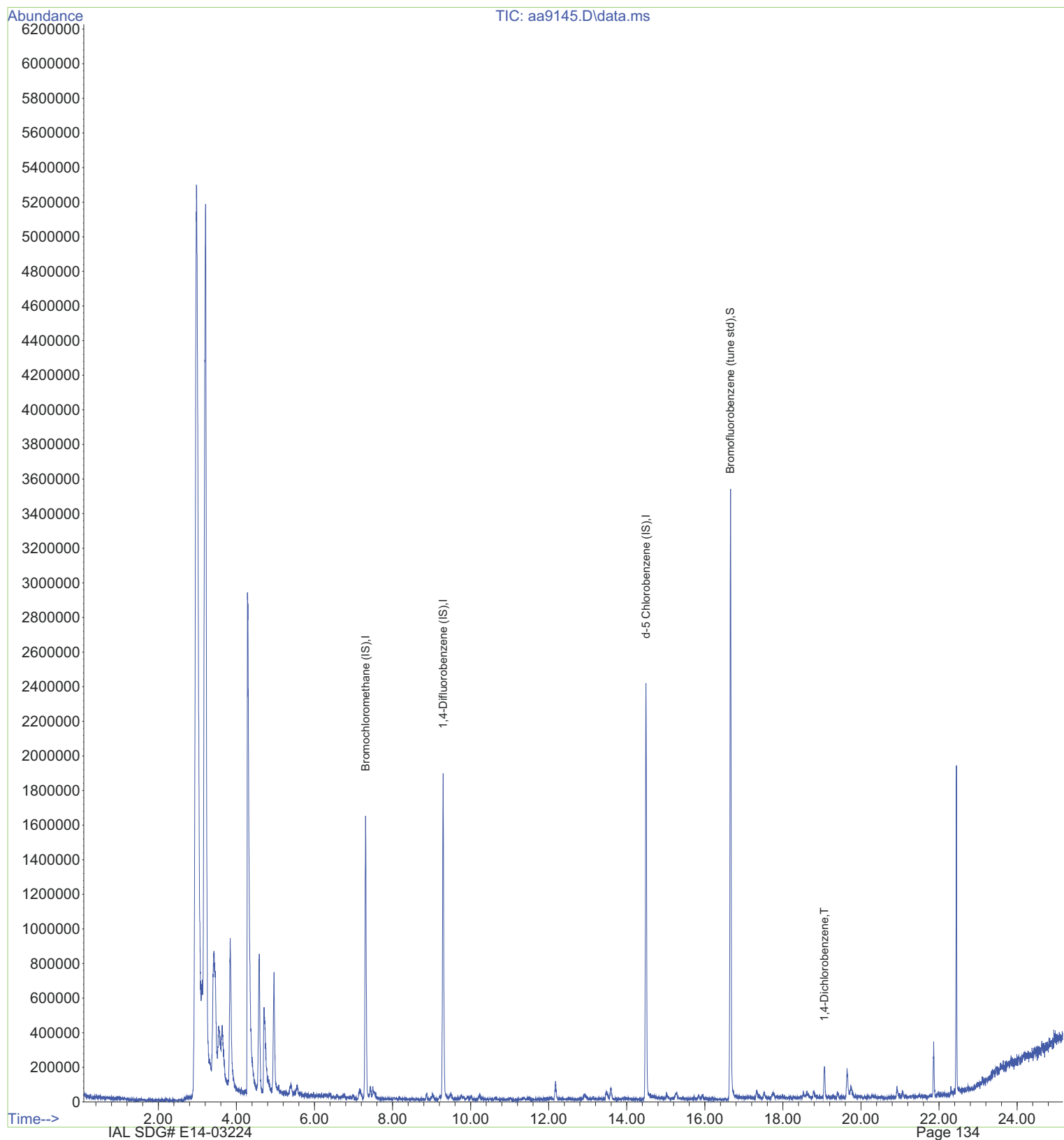
Quant Time: Apr 04 10:01:16 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

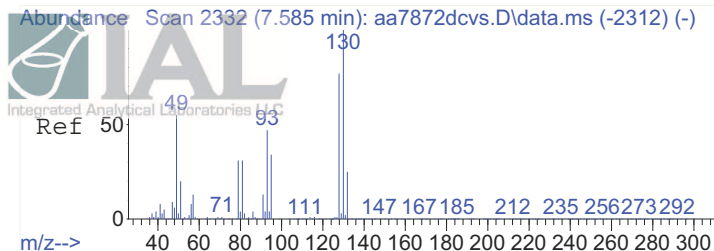
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.309	130	616156	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.296	114	1561214	10.00	ppbV	0.02
55) d-5 Chlorobenzene (IS)	14.492	117	1517554	10.00	ppbV	0.01
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.656	95	1075546	8.14	ppbV	0.00
Target Compounds						
73) 1,4-Dichlorobenzene	19.064	146	86546	0.32	ppbV	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\04-03-14\
Data File : aa9145.D
Acq On : 3 Apr 2014 6:10 pm
Operator : jls
Sample : 02570-21
Misc : dup of 02570-01, can 2931
ALS Vial : 14 Sample Multiplier: 1

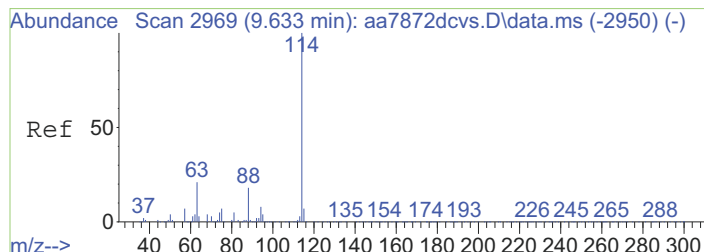
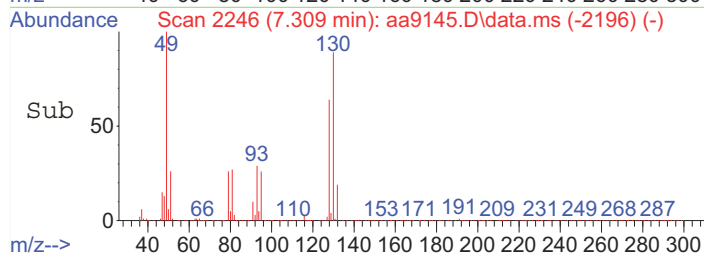
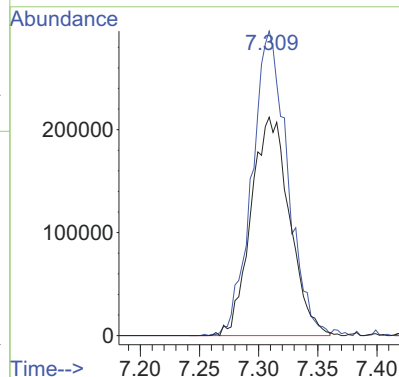
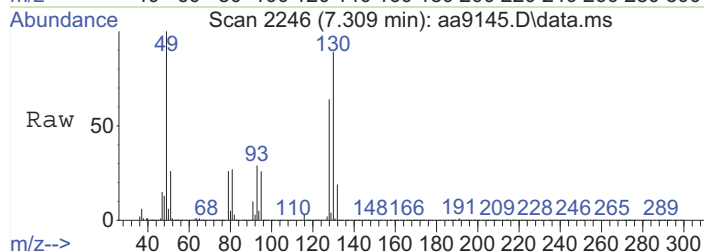
Quant Time: Apr 04 10:01:16 2014
Quant Method : C:\msdchem\1\METHODS\0325.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Mar 26 09:33:26 2014
Response via : Initial Calibration





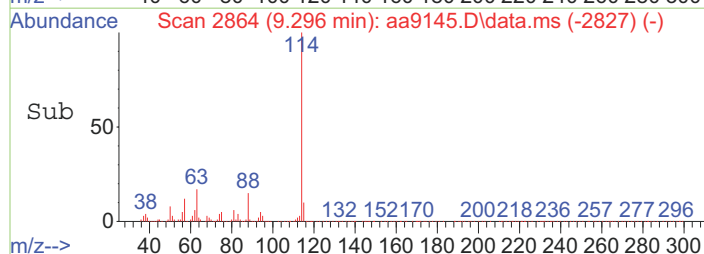
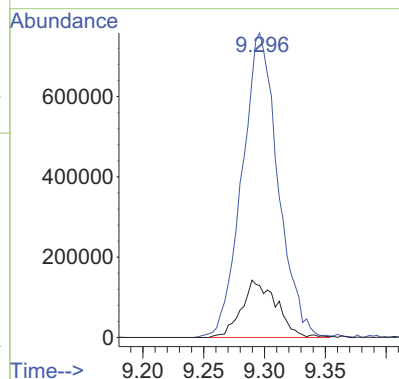
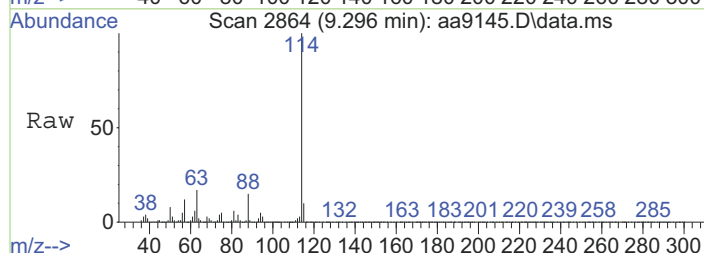
#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 7.309 min Scan# 2246
Delta R.T. 0.010 min
Lab File: aa9145.D
Acq: 3 Apr 2014 6:10 pm

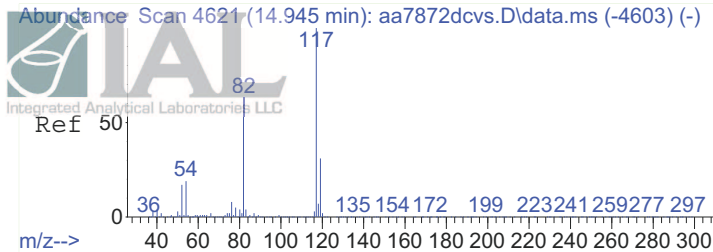
Tgt Ion:130 Resp: 616156
Ion Ratio Lower Upper
130 100
128 78.2 62.6 94.0



#38
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 9.296 min Scan# 2864
Delta R.T. 0.019 min
Lab File: aa9145.D
Acq: 3 Apr 2014 6:10 pm

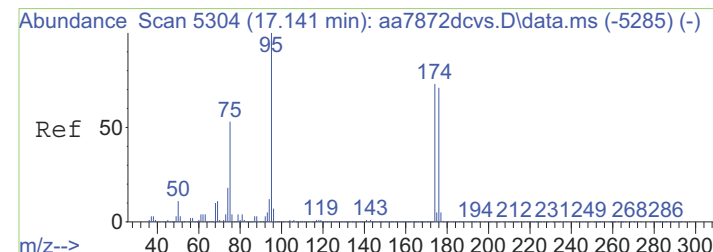
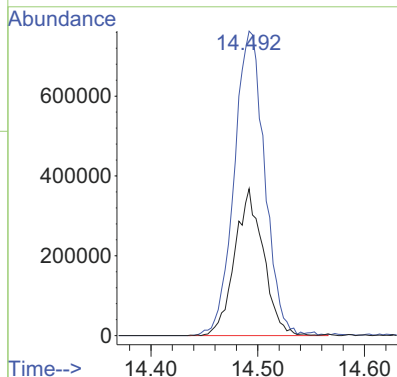
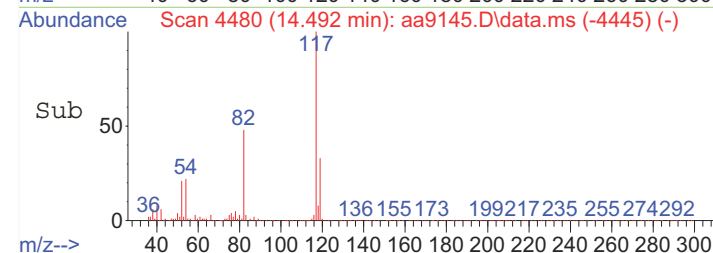
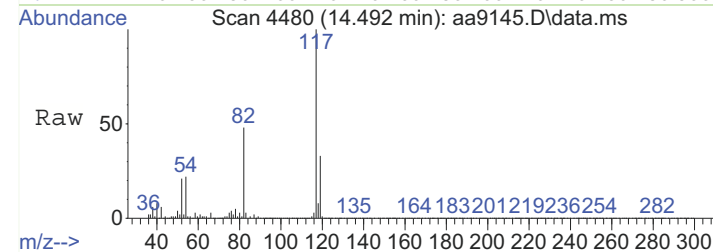
Tgt Ion:114 Resp: 1561214
Ion Ratio Lower Upper
114 100
63 18.0 16.0 24.0





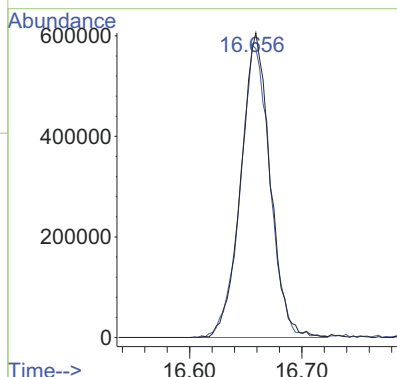
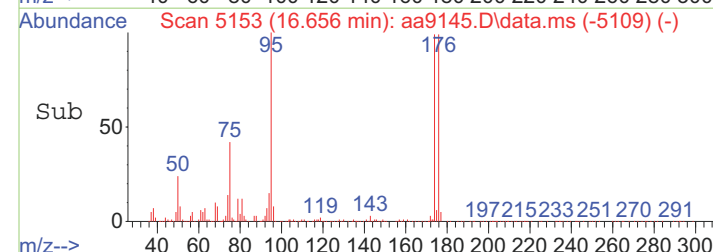
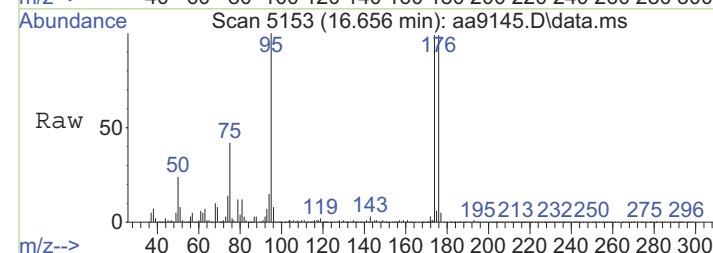
#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 14.492 min Scan# 4480
Delta R.T. 0.013 min
Lab File: aa9145.D
Acq: 3 Apr 2014 6:10 pm

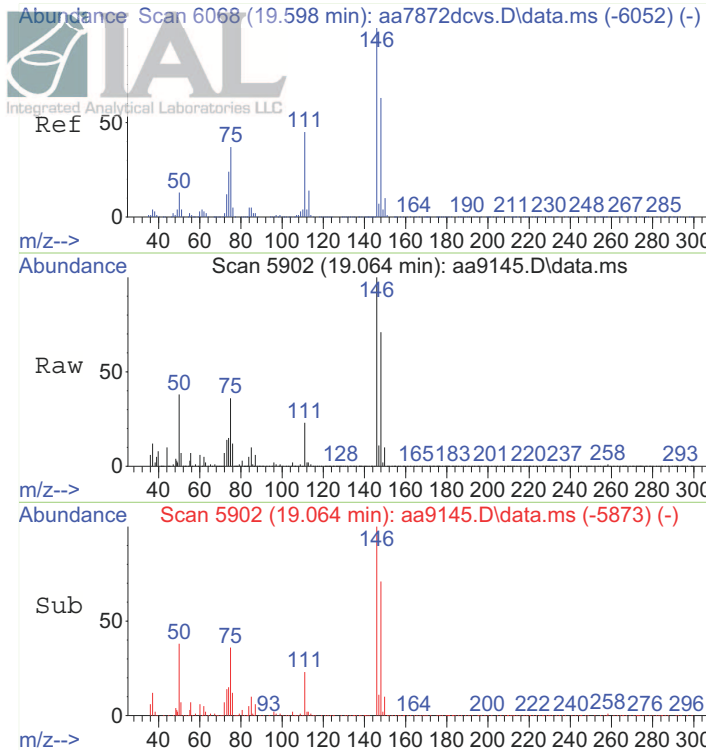
Tgt Ion: 117 Resp: 1517554
Ion Ratio Lower Upper
117 100
82 45.3 32.0 48.0



#64
Bromofluorobenzene (tune std)
Concen: 8.14 ppbV
RT: 16.656 min Scan# 5153
Delta R.T. -0.009 min
Lab File: aa9145.D
Acq: 3 Apr 2014 6:10 pm

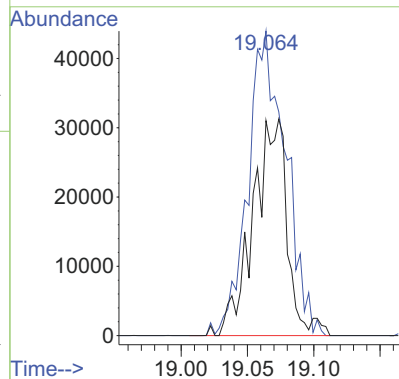
Tgt Ion: 95 Resp: 1075546
Ion Ratio Lower Upper
95 100
174 102.0 53.6 80.4#





#73
 1,4-Dichlorobenzene
 Concen: 0.32 ppbV
 RT: 19.064 min Scan# 5902
 Delta R.T. -0.006 min
 Lab File: aa9145.D
 Acq: 3 Apr 2014 6:10 pm

Tgt Ion	146	148	Ratio	Lower	Upper
146	100				
148	63.3	52.1			78.1



SDG Number: E14-03217
IAL Sample ID: E14-03217-01
Matrix: Air
Summa ID: 1571

Date Received: 4/16/14
Date Analyzed: 4/16/14, 4/16/14
Lab Data File#: AA9371, AA9372
Dilution Factor: 1
Injection Volume: 50ml
GC/MS Column: RTX-1, 0.32 mmID

Compound	CAS #	Run1		Run2		Reporting Limits	RPD
		Concentration Reported	Q	Concentration Reported	Q		
		ppbv		ppbv		ppbv	
Acetone	67-64-1	120		120		2.0	0.00%
Allyl Chloride	107-05-1		2.0 U		2.0 U	2.0	0.00%
Benzene	71-43-2		2.0 U		2.0 U	2.0	0.00%
Bromodichloromethane	75-27-4		2.0 U		2.0 U	2.0	0.00%
Bromoform	75-25-2		2.0 U		2.0 U	2.0	0.00%
Bromomethane	74-83-9		2.0 U		2.0 U	2.0	0.00%
1,3-Butadiene	106-99-0		2.0 U		2.0 U	2.0	0.00%
Chlorobenzene	108-90-7		2.0 U		2.0 U	2.0	0.00%
Chloroethane	75-00-3		2.0 U		2.0 U	2.0	0.00%
Chloroform	67-66-3		2.0 U		2.0 U	2.0	0.00%
Chloromethane	74-87-3		2.0 U		2.0 U	2.0	0.00%
Carbon disulfide	75-15-0		2.0 U		2.0 U	2.0	0.00%
Carbon tetrachloride	56-23-5		2.0 U		2.0 U	2.0	0.00%
2-Chlorotoluene	95-49-8		2.0 U		2.0 U	2.0	0.00%
Cyclohexane	110-82-7		2.0 U		2.0 U	2.0	0.00%
Dibromochloromethane	124-48-1		2.0 U		2.0 U	2.0	0.00%
1,2-Dibromoethane	106-93-4		2.0 U		2.0 U	2.0	0.00%
1,2-Dichlorobenzene	95-50-1		2.0 U		2.0 U	2.0	0.00%
1,3-Dichlorobenzene	541-73-1		2.0 U		2.0 U	2.0	0.00%
1,4-Dichlorobenzene	106-46-7		2.0 U		2.0 U	2.0	0.00%
Dichlorodifluoromethane	75-71-8		2.0 U		2.0 U	2.0	0.00%
1,1-Dichloroethane	75-34-3		2.0 U		2.0 U	2.0	0.00%
1,2-Dichloroethane	107-06-2		2.0 U		2.0 U	2.0	0.00%
1,1-Dichloroethene	75-35-4		2.0 U		2.0 U	2.0	0.00%
1,2-Dichloroethene (cis)	156-59-2		2.0 U		2.0 U	2.0	0.00%
1,2-Dichloroethene (trans)	156-60-5		2.0 U		2.0 U	2.0	0.00%
1,2-Dichloropropane	78-87-5		2.0 U		2.0 U	2.0	0.00%
1,3-Dichloropropene (cis)	10061-01-5		2.0 U		2.0 U	2.0	0.00%
1,3-Dichloropropene (trans)	10061-02-6		2.0 U		2.0 U	2.0	0.00%
1,2-Dichlorotetrafluoroethane	76-14-2		2.0 U		2.0 U	2.0	0.00%
1,4-Dioxane	123-91-1		2.0 U		2.0 U	2.0	0.00%
Ethanol	64-17-5	2.3			2.0 U	2.0	NC
Ethylbenzene	100-41-4		2.0 U		2.0 U	2.0	0.00%
4-Ethyltoluene	622-96-8		2.0 U		2.0 U	2.0	0.00%
n-Heptane	142-82-5		2.0 U		2.0 U	2.0	0.00%
1,3-Hexachlorobutadiene	87-68-3		2.0 U		2.0 U	2.0	0.00%
n-Hexane	110-54-3		2.0 U		2.0 U	2.0	0.00%
Isopropanol	67-63-0	2.6			2.0 U	2.0	NC
Methylene chloride	75-09-2		2.0 U		2.0 U	2.0	0.00%

Qualifiers:

J = Duplicate sample does not meet RPD criteria
U = Compound ND or under reporting limit

SDG Number: E14-03217
 IAL Sample ID: E14-03217-01
 Matrix: Air
 Summa ID: 1571

Date Received: 4/16/14
 Date Analyzed: 4/16/14, 4/16/14
 Lab Data File#: AA9371, AA9372
 Dilution Factor: 1
 Injection Volume: 50ml
 GC/MS Column: RTX-1, 0.32 mmID

Compound	CAS #	Run1		Run2		Reporting Limits	RPD
		Concentration Reported	Q	Concentration Reported	Q		
		ppbv		ppbv		ppbv	
Methyl ethyl ketone	78-93-3	2.0	U	2.0	U	2.0	0.00%
Methyl isobutyl ketone	108-10-1	2.0	U	2.0	U	2.0	0.00%
Methyl methacrylate	80-62-6	2.0	U	2.0	U	2.0	0.00%
Methyl tert-butyl ether	1634-04-4	2.0	U	2.0	U	2.0	0.00%
Styrene	100-42-5	2.0	U	2.0	U	2.0	0.00%
Tert-butyl alcohol	75-65-0	2.0	U	2.0	U	2.0	0.00%
1,1,2,2-Tetrachloroethane	79-34-5	2.0	U	2.0	U	2.0	0.00%
Tetrachloroethene	127-18-4	2.0	U	2.0	U	2.0	0.00%
Tetrahydrofuran	109-99-9	2.0	U	2.0	U	2.0	0.00%
Toluene	108-88-3	2.0	U	2.0	U	2.0	0.00%
1,2,4-Trichlorobenzene	120-82-1	2.0	U	2.0	U	2.0	0.00%
1,1,1-Trichloroethane	71-55-6	2.0	U	2.0	U	2.0	0.00%
1,1,2-Trichloroethane	79-00-5	2.0	U	2.0	U	2.0	0.00%
Trichloroethene	79-01-6	2.0	U	2.0	U	2.0	0.00%
Trichlorofluoromethane	75-69-4	2.0	U	2.0	U	2.0	0.00%
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.0	U	2.0	U	2.0	0.00%
1,2,4-Trimethylbenzene	95-63-6	2.0	U	2.0	U	2.0	0.00%
1,3,5-Trimethylbenzene	108-67-8	2.0	U	2.0	U	2.0	0.00%
2,2,4-Trimethylpentane	540-84-1	2.0	U	2.0	U	2.0	0.00%
Vinyl bromide	593-60-2	2.0	U	2.0	U	2.0	0.00%
Vinyl chloride	75-01-4	2.0	U	2.0	U	2.0	0.00%
Xylenes (m&p)	179601-23-1	4.0	U	4.0	U	4.0	0.00%
Xylenes (o)	95-47-6	2.0	U	2.0	U	2.0	0.00%

RPD must be <25% for all laboratory duplicate samples. Laboratory duplicate samples are run 1 per <20 samples submitted.

NC = The RPD could not be calculated since the compound was only detected in either the parent or duplicate sample.

Qualifiers:

J = Duplicate sample did not meet RPD criteria
 U = Compound ND or under reporting limit

Data Path : D:\Agilent GCMS\04-16-14\
 Data File : aa9371.D
 Acq On : 16 Apr 2014 3:13 pm
 Operator : jls
 Sample : 03217-01 x 10 dil
 Misc : 1571
 ALS Vial : 11 Sample Multiplier: 1

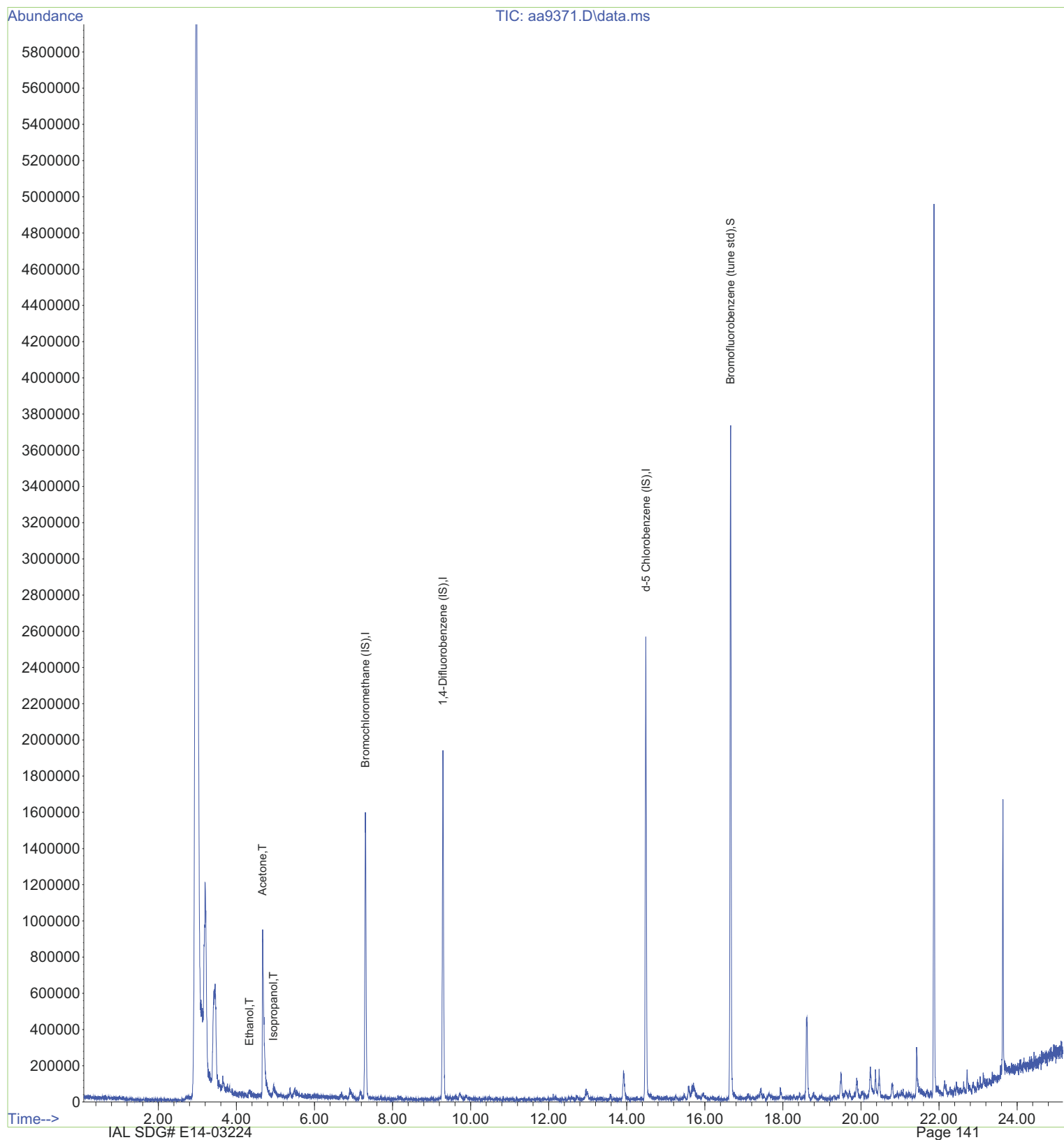
Quant Time: Apr 17 08:49:54 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

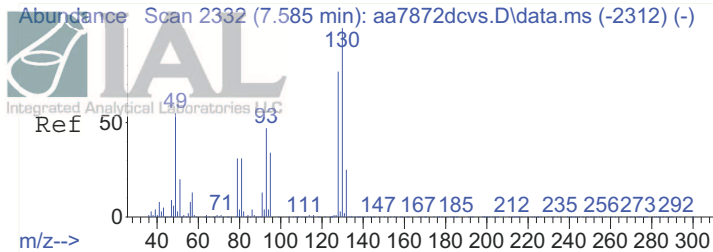
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.302	130	601773	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.289	114	1679674	10.00	ppbV	0.01
55) d-5 Chlorobenzene (IS)	14.489	117	1605830	10.00	ppbV	0.00
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.659	95	1195097	8.54	ppbV	0.00
Target Compounds						
11) Ethanol	4.335	45	6613	0.23	ppbV #	40
14) Acetone	4.669	43	1546161	12.36	ppbV	94
16) Isopropanol	4.949	45	28045	0.26	ppbV #	12

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\04-16-14\
Data File : aa9371.D
Acq On : 16 Apr 2014 3:13 pm
Operator : jls
Sample : 03217-01 x 10 dil
Misc : 1571
ALS Vial : 11 Sample Multiplier: 1

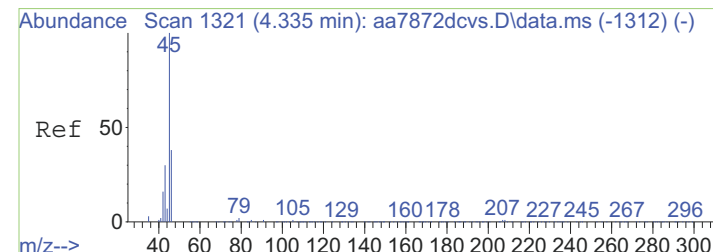
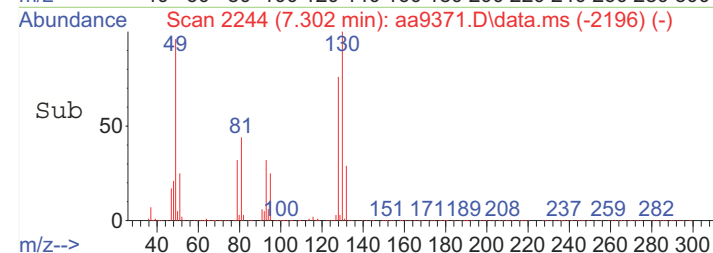
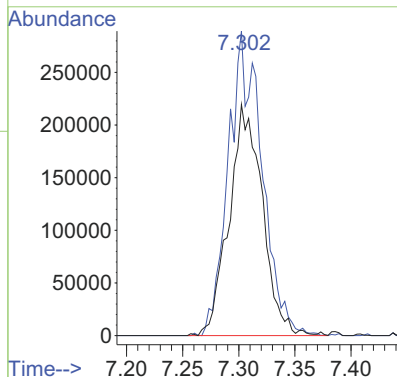
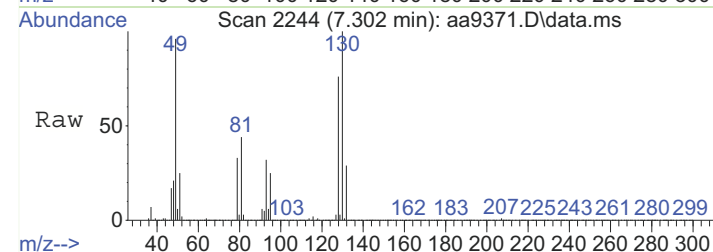
Quant Time: Apr 17 08:49:54 2014
Quant Method : C:\msdchem\1\METHODS\0325.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Mar 26 09:33:26 2014
Response via : Initial Calibration





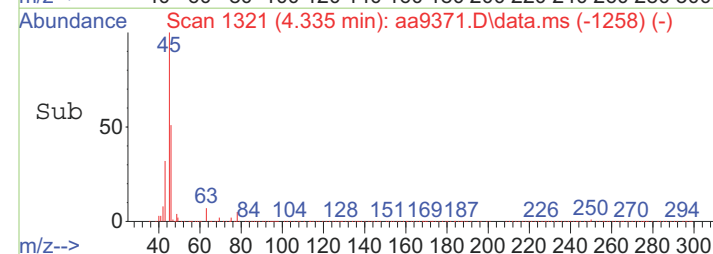
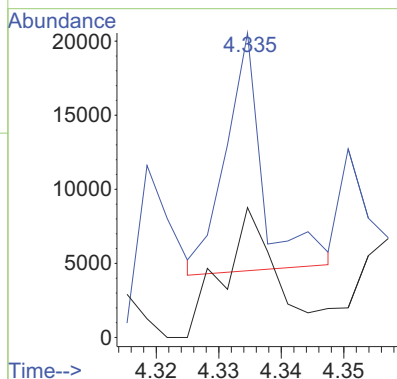
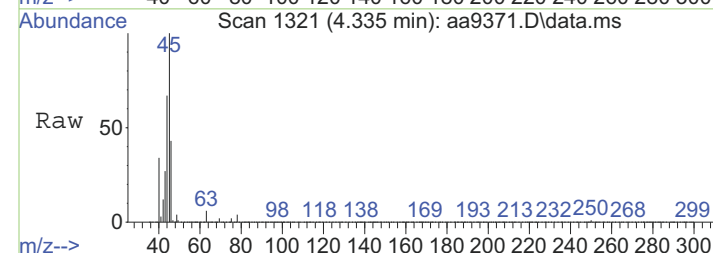
#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 7.302 min Scan# 2244
Delta R.T. 0.003 min
Lab File: aa9371.D
Acq: 16 Apr 2014 3:13 pm

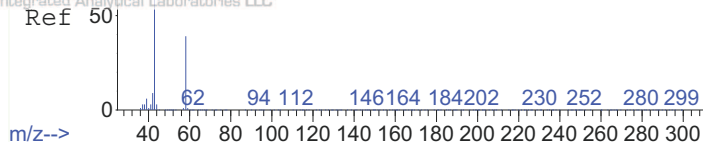
Tgt Ion: 130 Resp: 601773
Ion Ratio Lower Upper
130 100
128 74.7 62.6 94.0



#11
Ethanol
Concen: 0.23 ppbV
RT: 4.335 min Scan# 1321
Delta R.T. 0.052 min
Lab File: aa9371.D
Acq: 16 Apr 2014 3:13 pm

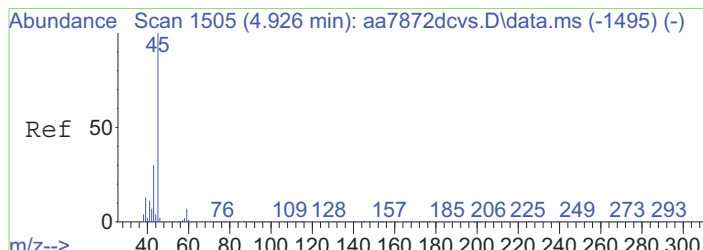
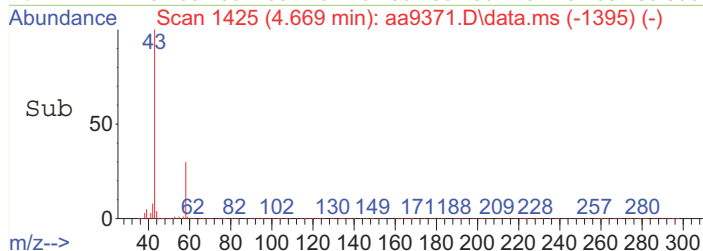
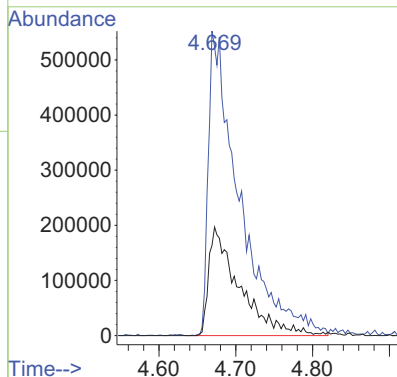
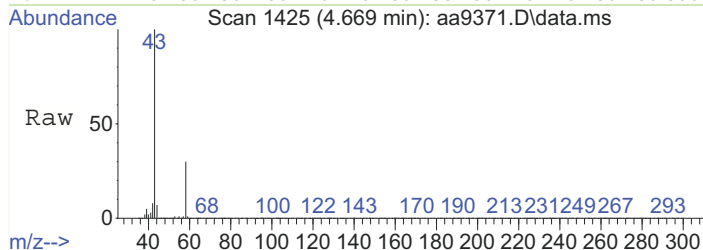
Tgt Ion: 45 Resp: 6613
Ion Ratio Lower Upper
45 100
46 76.9 32.0 48.0#





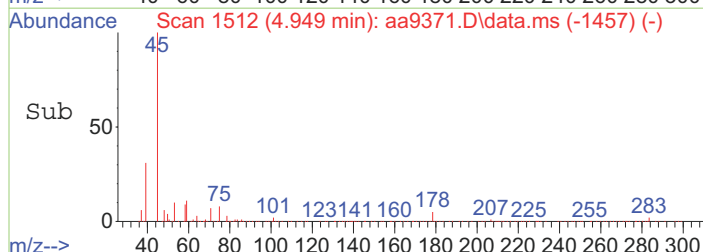
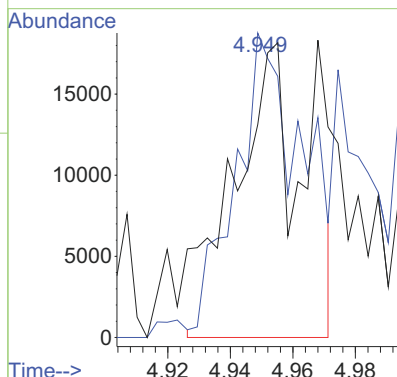
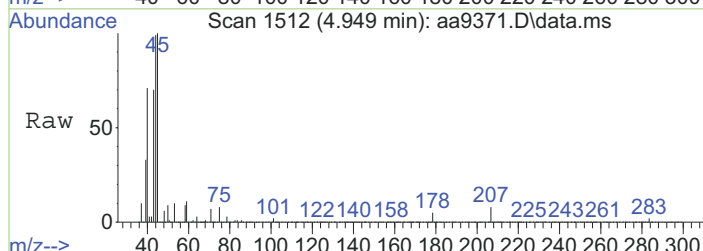
#14
Acetone
Concen: 12.36 ppbV
RT: 4.669 min Scan# 1425
Delta R.T. -0.003 min
Lab File: aa9371.D
Acq: 16 Apr 2014 3:13 pm

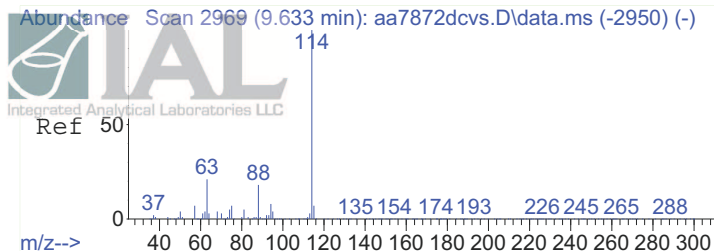
Tgt Ion: 43 Resp: 1546161
Ion Ratio Lower Upper
43 100
58 34.2 24.8 37.2



#16
Isopropanol
Concen: 0.26 ppbV
RT: 4.949 min Scan# 1512
Delta R.T. 0.077 min
Lab File: aa9371.D
Acq: 16 Apr 2014 3:13 pm

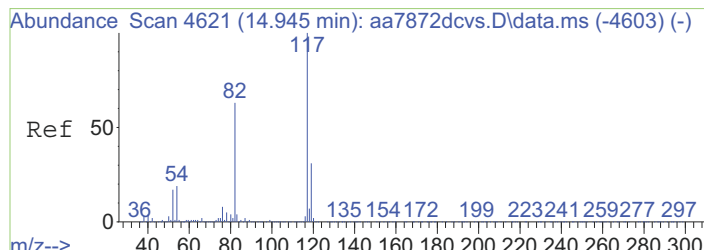
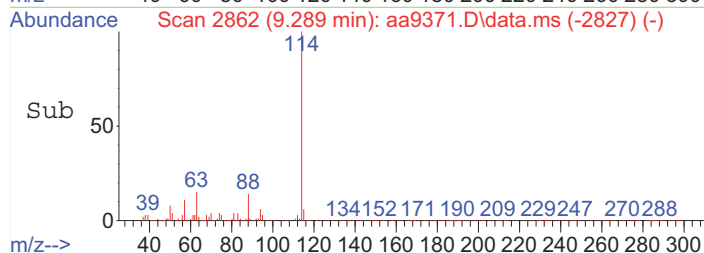
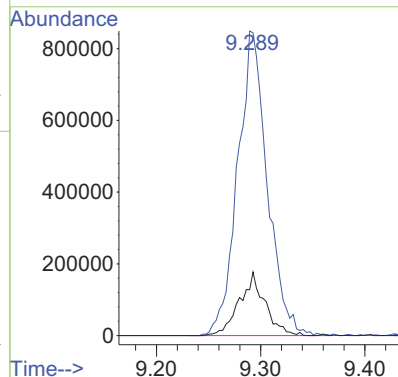
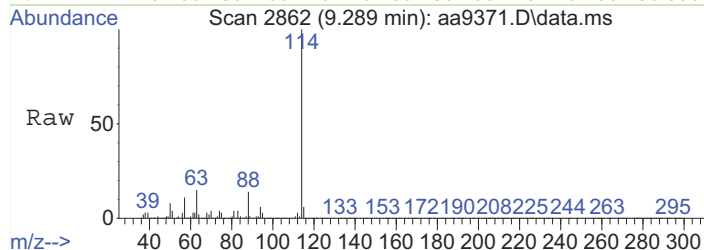
Tgt Ion: 45 Resp: 28045
Ion Ratio Lower Upper
45 100
43 72.8 21.6 32.4#





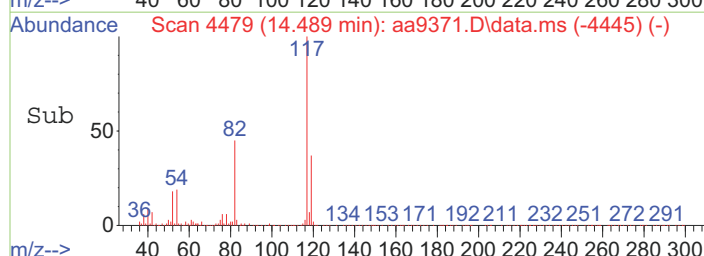
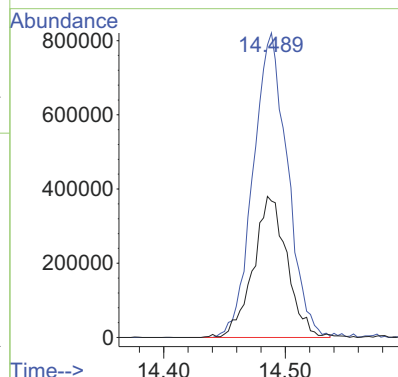
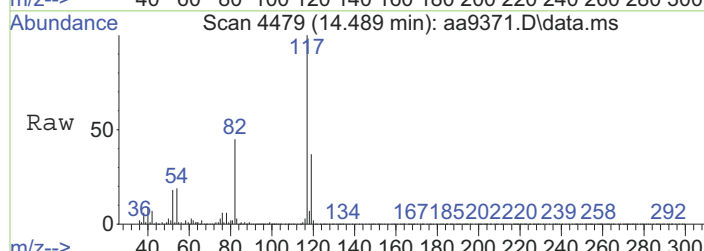
#38
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 9.289 min Scan# 2862
Delta R.T. 0.012 min
Lab File: aa9371.D
Acq: 16 Apr 2014 3:13 pm

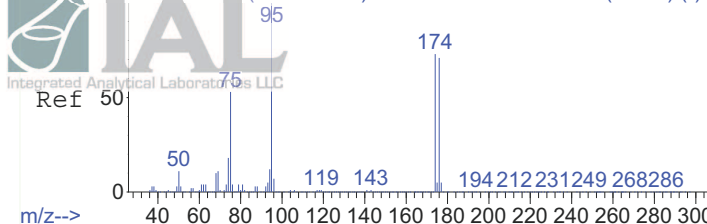
Tgt Ion:114 Resp: 1679674
Ion Ratio Lower Upper
114 100
63 17.9 16.0 24.0



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 14.489 min Scan# 4479
Delta R.T. 0.010 min
Lab File: aa9371.D
Acq: 16 Apr 2014 3:13 pm

Tgt Ion:117 Resp: 1605830
Ion Ratio Lower Upper
117 100
82 44.8 32.0 48.0





#64

Bromofluorobenzene (tune std)

Concen: 8.54 ppbV

RT: 16.659 min Scan# 5154

Delta R.T. -0.006 min

Lab File: aa9371.D

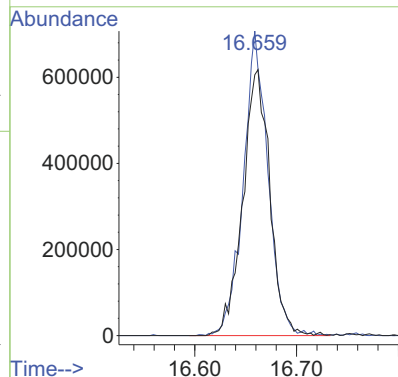
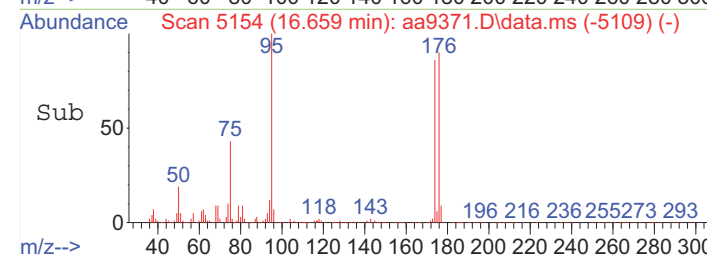
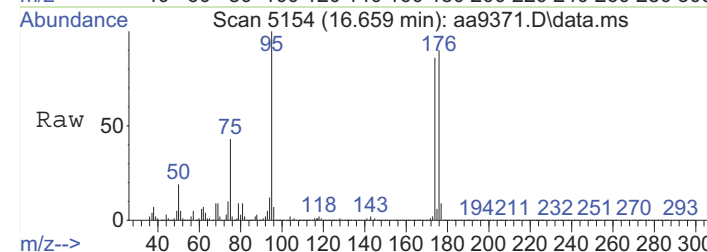
Acq: 16 Apr 2014 3:13 pm

Tgt Ion: 95 Resp: 1195097

Ion Ratio Lower Upper

95 100

174 95.3 53.6 80.4#



Data Path : D:\Agilent GCMS\04-16-14\
 Data File : aa9372.D
 Acq On : 16 Apr 2014 3:45 pm
 Operator : jls
 Sample : 03217-21 x 10 dil
 Misc : dup of 03217-01 x 10 dil, can 1571
 ALS Vial : 12 Sample Multiplier: 1

Quant Time: Apr 17 09:29:22 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

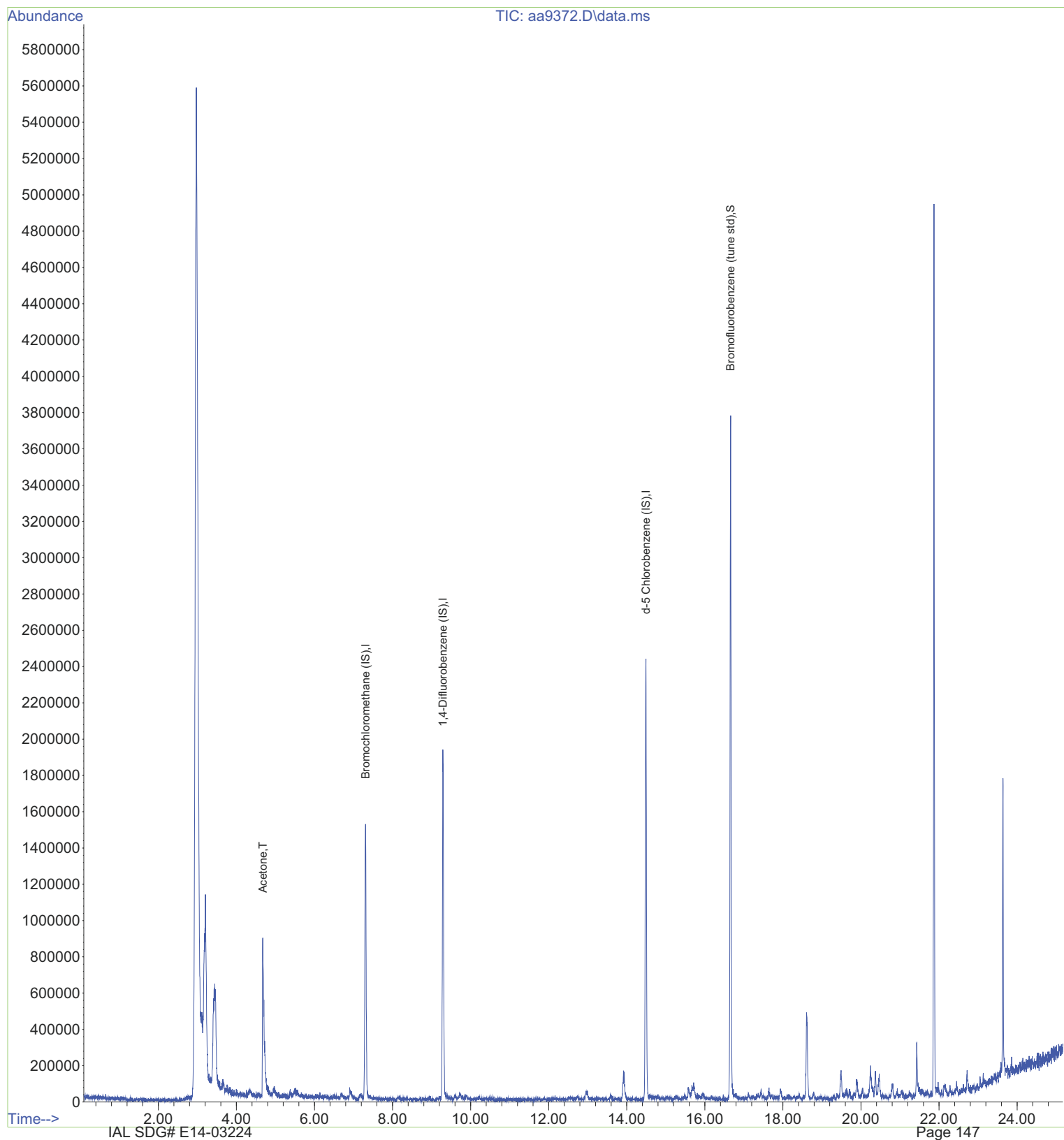
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

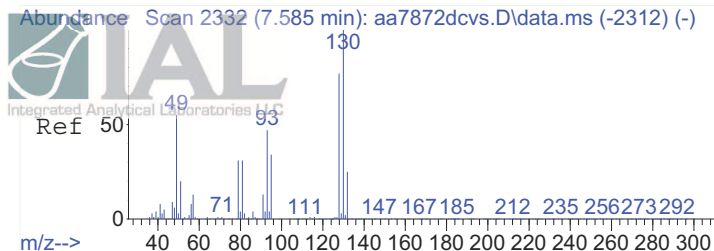
Internal Standards						
1) Bromochloromethane (IS)	7.309	130	632702	10.00	ppbV	0.00
38) 1,4-Difluorobenzene (IS)	9.293	114	1661202	10.00	ppbV	0.02
55) d-5 Chlorobenzene (IS)	14.492	117	1592926	10.00	ppbV	0.01
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.662	95	1196475	8.62	ppbV	0.00
Target Compounds						
						Qvalue
14) Acetone	4.675	43	1533371	11.66	ppbV	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\04-16-14\
Data File : aa9372.D
Acq On : 16 Apr 2014 3:45 pm
Operator : jls
Sample : 03217-21 x 10 dil
Misc : dup of 03217-01 x 10 dil, can 1571
ALS Vial : 12 Sample Multiplier: 1

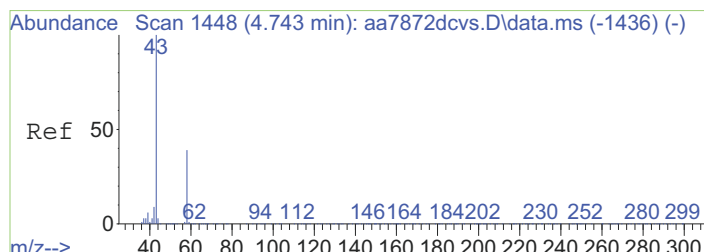
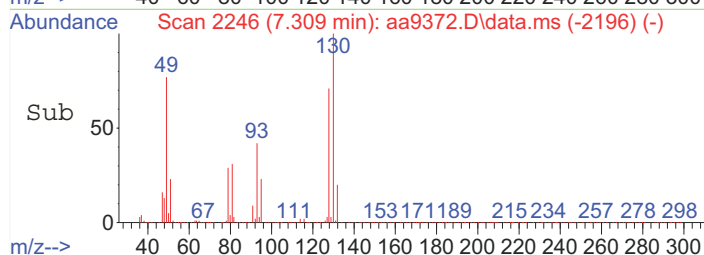
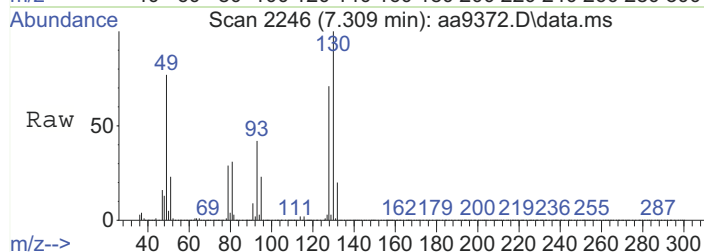
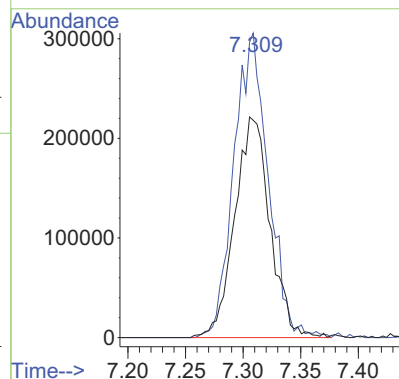
Quant Time: Apr 17 09:29:22 2014
Quant Method : C:\msdchem\1\METHODS\0325.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Mar 26 09:33:26 2014
Response via : Initial Calibration





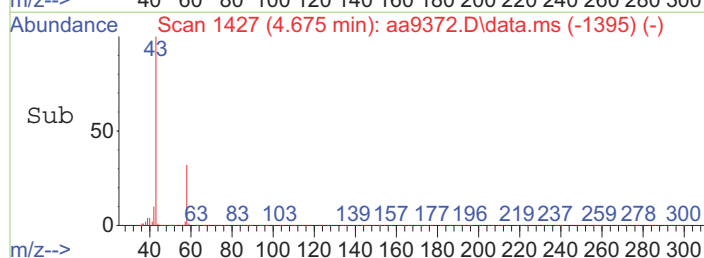
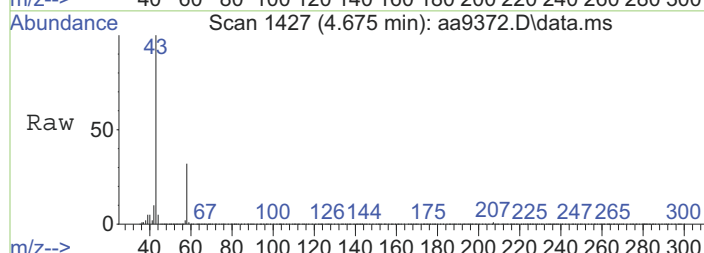
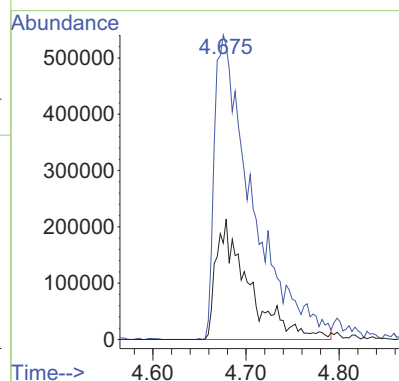
#1
Bromochloromethane (IS)
Concen: 10.00 ppbV
RT: 7.309 min Scan# 2246
Delta R.T. 0.010 min
Lab File: aa9372.D
Acq: 16 Apr 2014 3:45 pm

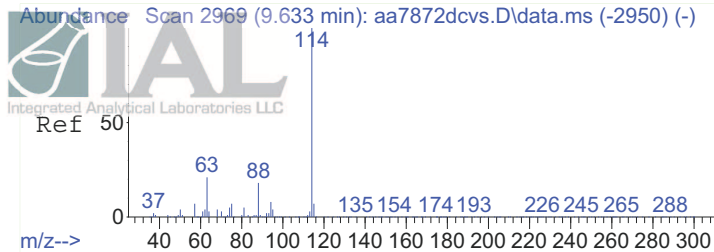
Tgt Ion	130	Resp	632702
Ion Ratio	100	Lower	Upper
128	74.6	62.6	94.0



#14
Acetone
Concen: 11.66 ppbV
RT: 4.675 min Scan# 1427
Delta R.T. 0.003 min
Lab File: aa9372.D
Acq: 16 Apr 2014 3:45 pm

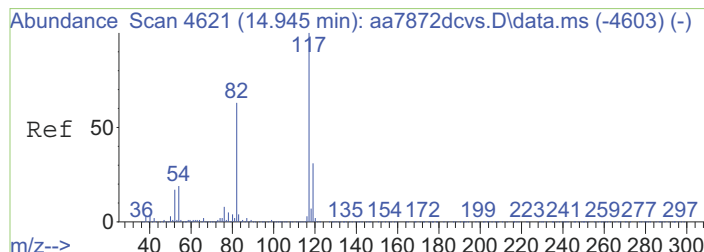
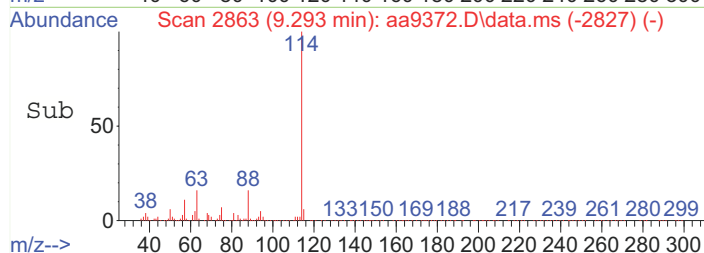
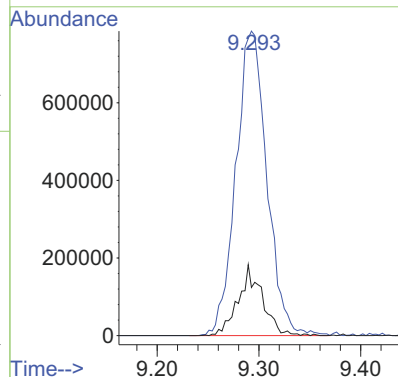
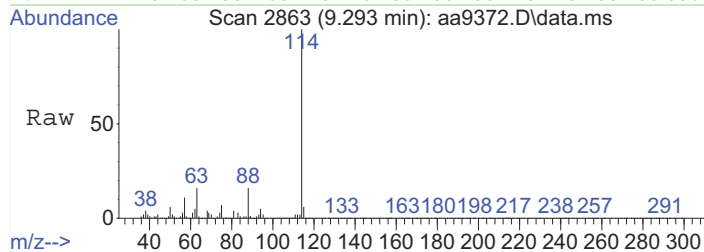
Tgt Ion	43	Resp	1533371
Ion Ratio	100	Lower	Upper
58	34.3	24.8	37.2





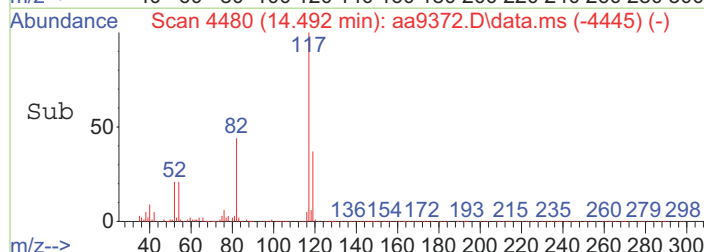
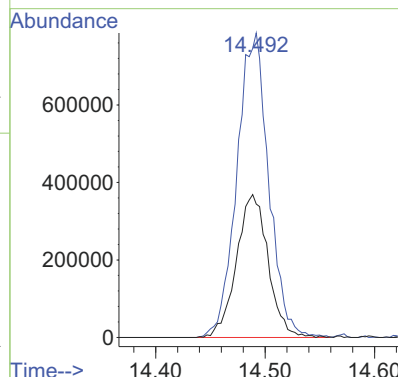
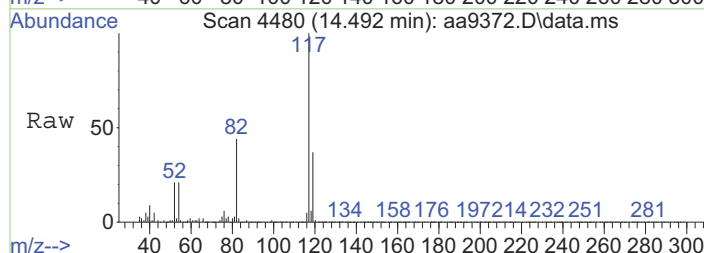
#38
1,4-Difluorobenzene (IS)
Concen: 10.00 ppbV
RT: 9.293 min Scan# 2863
Delta R.T. 0.016 min
Lab File: aa9372.D
Acq: 16 Apr 2014 3:45 pm

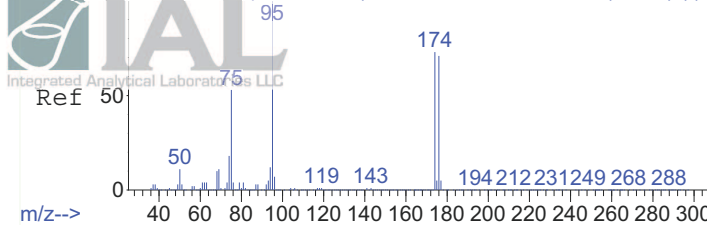
Tgt Ion:114 Resp: 1661202
Ion Ratio Lower Upper
114 100
63 17.9 16.0 24.0



#55
d-5 Chlorobenzene (IS)
Concen: 10.00 ppbV
RT: 14.492 min Scan# 4480
Delta R.T. 0.013 min
Lab File: aa9372.D
Acq: 16 Apr 2014 3:45 pm

Tgt Ion:117 Resp: 1592926
Ion Ratio Lower Upper
117 100
82 46.8 32.0 48.0





#64

Bromofluorobenzene (tune std)

Concen: 8.62 ppbV

RT: 16.662 min Scan# 5155

Delta R.T. -0.003 min

Lab File: aa9372.D

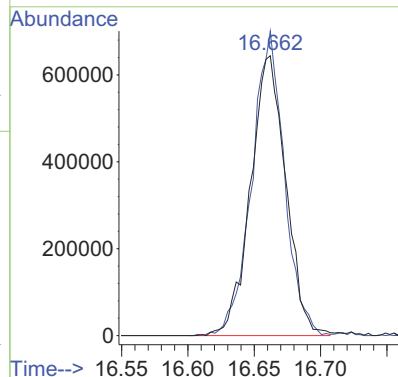
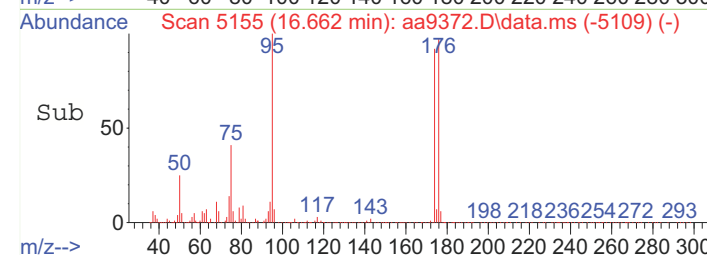
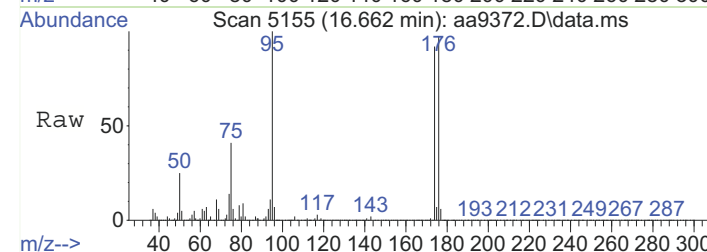
Acq: 16 Apr 2014 3:45 pm

Tgt Ion: 95 Resp: 1196475

Ion Ratio Lower Upper

95 100

174 100.3 53.6 80.4#



**Integrated Analytical Laboratories
GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

Date of Analysis: 5/9/2014
Date of Initial Calibration: 3/25/2014, 5/8/2014
SDG #: E14-03224

File #	Laboratory Sample ID	QC Check	Dilution Factor	Can #	Analyst	Injection Volume (cc)	Comments	Make-up Air		Acquisition		Room		TO-15 Standard	
								Added to canister (cc)	Added for dilution (cc)	Date	Time	Temp	BP "Hg	Working ID	Vendor ID
aa8891bfb	BFB	✓		ALM029426	JLS	50				3/25/2014	9:25	70	30.06		
aa8982std01	40 ppbv Std	✓		AAL073524	JLS	200								3/25/2014	49562697
aa8983std02	20 ppbv Std	✓		AAL073524	JLS	100								3/25/2014	49562697
aa8984std03	10 ppbv Std	✓		AAL073524	JLS	50								3/25/2014	49562697
aa8985std04	2 ppbv Std	✓		AAL073524	JLS	10								3/25/2014	49562697
aa8986std05	0.2 ppbv Std	✓		AAL073524	JLS	1								3/25/2014	49562697
aa8987icvss	10 ppbv ICVSS	✓		CC358741	JLS	50				3/25/2014	16:55				46009001

Analyst Name: Jeff Schmitt

Signature: 

IAL SDG# E14-03224

Supervisor Name: Lauren Jenkins

Signature: 

**Integrated Analytical Laboratories
GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

Date of Analysis: 5/9/2014
Date of Initial Calibration: 3/25/2014, 5/8/2014
SDG #: E14-03224

File #	Laboratory Sample ID	QC Check	Dilution Factor	Can #	Analyst	Injection Volume (cc)	Comments	Make-up Air		Acquisition		Room		TO-15 Standard	
								Added to canister (cc)	Added for dilution (cc)	Date	Time	Temp	BP "Hg	Working ID	Vendor ID
aa9131bfb	BFB	✓		ALM029426	JLS	50				4/3/2014	8:42	70	30.08		
aa9132dcvs	10 ppbv DCVS	✓		AAL073524	JLS	50								3/25/2014	49562697
aa9133lcs	10 ppbv LCS	✓		CC358741	JLS	50									46009001
aa9134blk	Method Blank	✓		SC0227	JLS	500									
aa9135rlcs	0.2 ppbv RLLCS	✓		AAL073524	JLS	1								3/25/2014	49562697
aa9136	01868-13 x 100	✓	100	1765	JLS	5									
aa9138	02569-02 x 10	✓	10	1775	JLS	50									
aa9139	02569-03 x 10	✓	10	1512	JLS	50									
aa9140	02569-04 x 10	✓	10	1603	JLS	50									
aa9141	02569-05 x 10	✓	10	1594	JLS	50									
aa9142	02569-09 x 10	✓	10	1410	JLS	50									
aa9143	02569-10 x 10	✓	10	1362	JLS	50									
aa9144	02570-01	✓		2931	JLS	500									
aa9145	02570-21	✓	dup of 02570-01, can		JLS	500									
aa9146	02570-02	✓		2160	JLS	500									
aa9147	02570-03	✓		3010	JLS										
aa9148	Room Air	✓			JLS										
aa9150	1588	✓			JLS	50									
aa9151	02571-01	✓		3015A	JLS	500									
aa9152	02571-02	✓		3041	JLS	500									
aa9153ccvcs	10 ppbv CCCVS	✓		AAL073524	JLS	50				4/3/2014	22:26			3/25/2014	49562697

Analyst Name: Jeff Schmitt

Signature: *Jeff Schmitt*

IAL SDG# E14-03224

Supervisor Name: Lauren Jenkins

Signature: *Lauren Jenkins*

**Integrated Analytical Laboratories
GC/MS Run Log**

Instrument ID: Agilent 7890A / 5975C
Column: Restek RTX-1 SN 992567

Target Directory: D:\Agilent GCMS\

Date of Analysis: 5/9/2014
Date of Initial Calibration: 3/25/2014, 5/8/2014
SDG #: E14-03224

File #	Laboratory Sample ID	QC Check	Dilution Factor	Can #	Analyst	Injection Volume (cc)	Comments	Make-up Air		Acquisition		Room		TO-15 Standard	
								Added to canister (cc)	Added for dilution (cc)	Date	Time	Temp	BP "Hg	Working ID	Vendor ID
aa9501bfb	BFB	✓		ALM029426	JLS	50				5/8/2014	9:25	72	30.16		
aa9502std01	40 ppbv Std	✓		AAL073524	JLS	200								5/8/2014	49562697
aa9503std02	20 ppbv Std	✓		AAL073524	JLS	100								5/8/2014	49562697
aa9504std03	10 ppbv Std	✓		AAL073524	JLS	50								5/8/2014	49562697
aa9505std04	2 ppbv Std	✓		AAL073524	JLS	10								5/8/2014	49562697
aa9506std05	0.2 ppbv Std	✓		AAL073524	JLS	1								5/8/2014	49562697
aa9507icvss	10 ppbv ICVSS	✓		CC358741	JLS	50				5/8/2014	15:43				46009001
aa9511bfb	BFB	✓		ALM029426	JLS	50				5/9/2014	8:56	71	30.12		
aa9512dcvs	10 ppbv DCVS	✓		AAL073524	JLS	50								5/8/2014	49562697
aa9513lcs	10 ppbv LCS	✓		CC358741	JLS	50									46009001
aa9514blk	Method Blank	✓		SC0227	JLS	500									
aa9515rlcs	0.2 ppbv RLLCS	✓		AAL073524	JLS	1								5/8/2014	49562697
aa9516	2894A	✓			JLS	500									
aa9517	1587	✓			JLS	50									
aa9518	2066	✓			JLS	500									
aa9519	1771	✓			JLS	50									
aa9520	VOA Soil Fridge, Grbx10	✓	10	2937	JLS	50									
aa9521	VOA AQ Fridge, Grbx10	✓	10	3014	JLS	50									
aa9522	VOA Soil Lab, 8hrs x10	✓	10	4860	JLS	50									
aa9523	VOA AQ Lab, 8hrs x10	✓	10	4879	JLS	50									
aa9524	03224-01 x 10	✓	10	1769	JLS	50									
aa9525	Room Air	✓			JLS	500									
aa9526ccvcs	10 ppbv CCCVS	✓		AAL073524	JLS	50				5/9/2014	21:07			5/8/2014	49562697

Analyst Name: Jeff Schmitt

Signature: 

IAL SDG# E14-03224

Supervisor Name: Lauren Jenkins

Signature: 

Example Calculation (EPA TO-15)

$$\frac{\text{Area of Sample}}{\text{Area of Internal Standard}} \times \frac{\text{Concentration of Internal Standard (10 ppbv)}}{\text{Response Factor}} = \text{Concentration of Sample (ppbv)}$$

Conversion from ppbv to $\mu\text{g}/\text{m}^3$

$$\frac{\text{Concentration of Compound (ppbv)}}{24.45} \times \text{Molecular Weight of Compound} = \text{Concentration of Compound } (\mu\text{g}/\text{m}^3)$$

Clean Canister Certification Report

Lab Sample Name: Clean Canister, Batch Master 1588
Field Sample Name: Canister 1588
Sample Volume: 500ml

Data File: AA9150
Date Analyzed: 4/3/2014
Matrix: Air

Canisters associated with this run: 1588,1406,1518,1525,1528,1543,1554,1769(used for E14-03224-01)

Runs with this Clean Canister Certification:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 08:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 09:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

This canister has been certified clean, all compounds are below 0.2 ppbv.

Compound	CAS #	RL (ppbv)	Calculated Amount (ppbv)
Acetone	67-64-1	0.20	ND
Benzene	71-43-2	0.20	ND
Bromodichloromethane	75-27-4	0.20	ND
Bromoform	75-25-2	0.20	ND
Bromomethane	74-83-9	0.20	ND
1,3-Butadiene	106-99-0	0.20	ND
Chlorobenzene	108-90-7	0.20	ND
Chloroethane	75-00-3	0.20	ND
Chloroform	67-66-3	0.20	ND
Chloromethane	74-87-3	0.20	ND
Carbon disulfide	75-15-0	0.20	ND
Carbon tetrachloride	56-23-5	0.20	ND
Cyclohexane	110-82-7	0.20	ND
Dibromochloromethane	124-48-1	0.20	ND
1,2-Dibromoethane	106-93-4	0.20	ND
1,2-Dichlorobenzene	95-50-1	0.20	ND
1,3-Dichlorobenzene	541-73-1	0.20	ND
1,4-Dichlorobenzene	106-46-7	0.20	ND
Dichlorodifluoromethane	75-71-8	0.20	ND
1,1-Dichloroethane	75-34-3	0.20	ND
1,2-Dichloroethane	107-06-2	0.20	ND
1,1-Dichloroethene	75-35-4	0.20	ND
1,2-Dichloroethene (cis)	156-59-2	0.20	ND
1,2-Dichloroethene (trans)	156-60-5	0.20	ND
1,2-Dichloropropane	78-87-5	0.20	ND
1,3-Dichloropropene (cis)	10061-01-5	0.20	ND
1,3-Dichloropropene (trans)	10061-02-6	0.20	ND
1,2-Dichlorotetrafluoroethane	76-14-2	0.20	ND
1,4-Dioxane	123-91-1	0.20	ND
Ethylbenzene	100-41-4	0.20	ND
n-Heptane	142-82-5	0.20	ND
1,3-Hexachlorobutadiene	87-68-3	0.20	ND
n-Hexane	110-54-3	0.20	ND
Methylene chloride	75-09-2	0.20	ND
Methyl ethyl ketone	78-93-3	0.20	ND

Clean Canister Certification Report

Lab Sample Name: Clean Canister, Batch Master 1588
Field Sample Name: Canister 1588
Sample Volume: 500ml

Data File: AA9150
Date Analyzed: 4/3/2014
Matrix: Air

Canisters associated with this run: 1588,1406,1518,1525,1528,1543,1554,1769(used for E14-03224-01)

Runs with this Clean Canister Certification:

Standard/Sample Run	Date/Time of Sample/Standard Injection
BFB [AA9131BFB]	04/03/2014 08:42
10 PPBV DCVS [AA9132DCVS]	04/03/2014 09:19
10 PPBV LCS [AA9133LCS]	04/03/2014 11:09
METHOD BLANK [AA9134BLK]	04/03/2014 11:41
02 PPBV RLLCS [AA9135RLLCS]	04/03/2014 12:21
CLEAN CAN CERTIFICATION, BATCH MASTER 1588 [AA9150]	04/03/2014 20:50
10 PPBV CCCVS [AA9153CCCVS]	04/03/2014 22:26

This canister has been certified clean, all compounds are below 0.2 ppbv.

Compound	CAS #	RL (ppbv)	Calculated Amount (ppbv)
Methyl isobutyl ketone	108-10-1	0.20	ND
Methyl tert-butyl ether	1634-04-4	0.20	ND
Styrene	100-42-5	0.20	ND
Tert-butyl alcohol	75-65-0	0.20	ND
1,1,2,2-Tetrachloroethane	79-34-5	0.20	ND
Tetrachloroethene	127-18-4	0.20	ND
Toluene	108-88-3	0.20	ND
1,2,4-Trichlorobenzene	120-82-1	0.20	ND
1,1,1-Trichloroethane	71-55-6	0.20	ND
1,1,2-Trichloroethane	79-00-5	0.20	ND
Trichloroethene	79-01-6	0.20	ND
Trichlorofluoromethane	75-69-4	0.20	ND
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	0.20	ND
1,2,4-Trimethylbenzene	95-63-6	0.20	ND
1,3,5-Trimethylbenzene	108-67-8	0.20	ND
2,2,4-Trimethylpentane	540-84-1	0.20	ND
Vinyl bromide	593-60-2	0.20	ND
Vinyl chloride	75-01-4	0.20	ND
Xylenes (m&p)	179601-23-1	0.40	ND
Xylenes (o)	95-47-6	0.20	ND

Data Path : D:\Agilent GCMS\04-03-14\
 Data File : aa9150.D
 Acq On : 3 Apr 2014 8:50 pm
 Operator : jls
 Sample : 1588
 Misc : 1406, 1518, 1525, 1528, 1543, 1554, 1769
 ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 04 10:11:06 2014
 Quant Method : C:\msdchem\1\METHODS\0325.M
 Quant Title : TO-15 on the Agilent 7890A / 5975C
 QLast Update : Wed Mar 26 09:33:26 2014
 Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane (IS)	7.312	130	536299	10.00	ppbV	0.01
38) 1,4-Difluorobenzene (IS)	9.296	114	1385828	10.00	ppbV	0.02
55) d-5 Chlorobenzene (IS)	14.492	117	1379813	10.00	ppbV	0.01

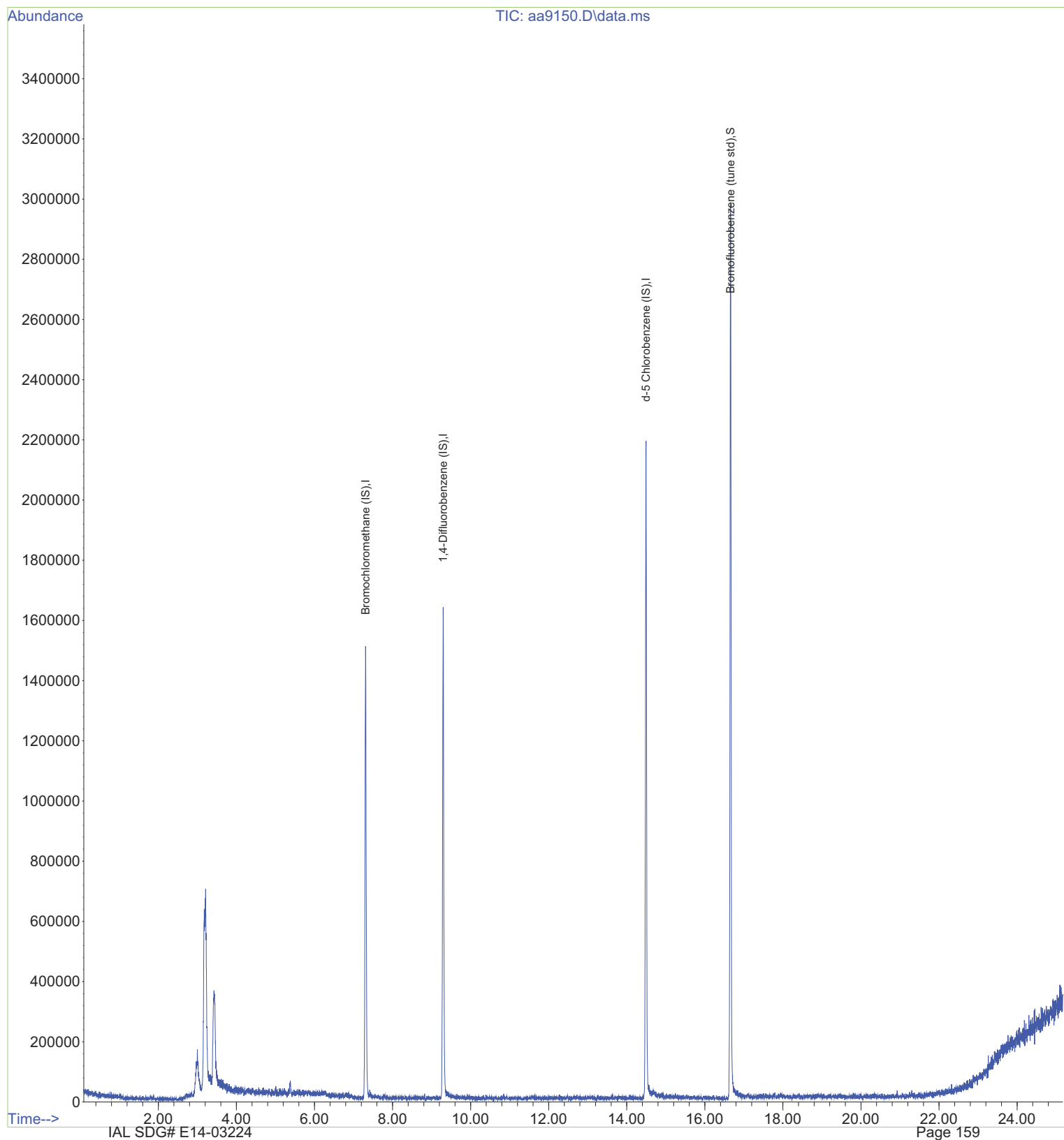
System Monitoring Compounds						
64) Bromofluorobenzene (tu...	16.659	95	960693	7.99	ppbV	0.00

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : D:\Agilent GCMS\04-03-14\
Data File : aa9150.D
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Operator : jls
Sample : 1588
Misc : 1406, 1518, 1525, 1528, 1543, 1554, 1769
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Apr 04 10:11:06 2014
Quant Method : C:\msdchem\1\METHODS\0325.M
Quant Title : TO-15 on the Agilent 7890A / 5975C
QLast Update : Wed Mar 26 09:33:26 2014
Response via : Initial Calibration



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