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DATE: 30 May 2014

TO: David Mickunas, U.S. EPA/ERT Work Assignment Manager

THROUGH: Dennis Miller, SERAS Acting Program Manager

FROM: Yi-Hua Lin, SERAS Task Leader

SUBJECT: Middlefield-Ellis-Whisman Soil Gas Study Site, Mountain View, California (CA)
WA # SERAS-220 - Trip Report – 26 April to 9 May 2014 Mobilization

BACKGROUND

The Middlefield-Ellis-Whisman (MEW) Superfund Study Area (or MEW Site) is comprised of three National Priorities List (NPL) or Superfund sites: Fairchild Semiconductor Corp. – Mountain View Superfund site; Raytheon Company Superfund site; and Intel Corp. – Mountain View Superfund site; several other facilities; and portions of the former Naval Air Station (NAS) Moffett Field Superfund site. The "MEW Superfund Study Area" itself is not listed on the National Priorities List (NPL).

The MEW Site was home to several manufacturing and industrial facilities, including semiconductor and other electronics manufacturing facilities and metal finishing facilities. While in operation, these former facilities required the storage, handling, and use of a variety of chemicals, particularly volatile organic compounds (VOCs). The primary chemicals of concern at the MEW Site are trichloroethene (TCE) and its degradation products: cis-1,2-dichloroethene (DCE) and vinyl chloride. During operations, some of the chemicals leaked or were otherwise released to the ground, impacting soil and groundwater. In 1981 and 1982, investigations in the area of these facilities indicated that significant levels of contaminants had been released to the soil and groundwater.

The primary contaminants of concern are TCE and other VOCs in groundwater and the potential migration to indoor air (vapor intrusion pathway). The soil has been cleaned up to meet the soil cleanup standards. The contamination addressed in the MEW Record of Decision is both facility-specific and regional. Each individual MEW Company is responsible for investigation, cleanup, and source control for soil and groundwater contamination at their individual facility-specific properties south of U.S. Highway 101. Contaminated groundwater that has bypassed the source control areas and has mixed together with other contaminated groundwater from other source areas is considered part of the regional groundwater contamination plume, or the "regional plume."

The MEW Regional Groundwater Remediation Program systems south and north of U.S. Highway 101 (South and North of 101) are designed to contain and clean up contaminated groundwater where the contaminated plume has mixed together with other contaminated groundwater and where the source of contamination has not been identified. The Navy and NASA both operate groundwater extraction and treatment systems to contain and clean up contaminated groundwater at their areas of responsibility on Moffett Field, in addition to the MEW regional groundwater system operating north of 101 on Moffett Field.

It is important to note that groundwater currently is not used for drinking water or other potable uses. Groundwater in the area is, however, a potential future source of drinking water and therefore groundwater cleanup standards have been established.

OBSERVATIONS AND ACTIVITIES

SERAS personnel mobilized to the Site on 26 April 2014. Upon arrival at the Site, all equipment and instruments were prepared for analytical and monitoring activities. The scope of work included on-site analyses of soil gas/sewer gas samples, stationary monitoring of indoor air from government building units and underground tunnels at the Moffett Federal Airfield facility (Figure 1) and residential units in the vicinity of the MEW area. The VOCs

of primary concern for both analytical and monitoring activities were PCE, TCE and its breakdown products.

Soil Gas/Sewer Gas Sampling. ERT and SERAS personnel collected samples into 1-liter (L) Tedlar® bags from soil gas wells previously installed by EPA Region 9and sewer gas from sewer lines in the MEW area. Tedlar® bag sampling was conducted in accordance with ERT/SERAS standard operating procedure (SOP) #2102, *Tedlar® Bag Sampling*. One hundred and twenty-seven soil gas/sewer samples were collected, one hundred of which were collected from sewer lines during the site activities.

Volatile Organic Compound Analysis

Between 1 May to 8 May 2014, one hundred sewer samples and twenty-seven soil gas samples were collected by ERT and SERAS personnel in 1-L Tedlar® bags. Refer to Table 1: *Summary of Tedlar® Bag Sampling Event*, for sample collection information. All soil gas/sewer samples were delivered under chains of custody (COC) to the EPA's mobile laboratory for on-site analysis. On-site VOC analysis was performed by SERAS personnel using an Agilent® gas chromatograph/mass spectrometer (GC/MS) located in the EPA's mobile laboratory. All samples were analyzed in accordance with SERAS SOP # 1741, *Field Analysis of VOCs in Gaseous Phase Samples by GC/MS Loop Injection.*

The GC/MS field report indicates that the data (i.e., Tedlar® bag data) are definitive in nature. Verification of definitive data is performed by confirming the quantitation and identification of each compound, verifying that all required standards are analyzed and meet the criteria stated in the SOP, verifying that replicate analyses have been performed, and all SOP criteria have been met and verified. The complete analytical report can be found in Appendix A.

Air Monitoring for Dichloroethene, Trichloroethene, and Tetrachloroethene

From 28 April to 7 May 2014, real-time indoor air monitoring for DCE, TCE and tetrachloroethene (PCE) was conducted in government building and residential units by SERAS personnel using the ECA Trace Atmospheric Gas Analyzer (TAGA) mass spectrometer/mass spectrometer (MS/MS) located in the EPA's mobile laboratory. Air monitoring of several underground tunnels located between buildings at the Moffett Federal Airfield facility was also performed. An iRobot PackBot 510 (Figure 2) was employed to monitor an underground tunnel stemming from Building 10 toward Severyns Avenue (Figure 3). The robot was lowered into the underground tunnel with the TAGA 300 feet Teflon® hose attached. The robot was then guided remotely (Figure 4) along the tunnel while VOCs was monitored by the TAGA instrument.

Monitoring, screening in nature was in accordance with SERAS SOP #1711, *Trace Atmospheric Gas Analyzer (TAGA) IIe.* Description of the actual procedures used for all monitoring events can be found in the Final Analytical TAGA Report (Appendix B).

Meteorological Data

SERAS personnel obtained unedited local climatological data from a certified, permanent station located at the Moffett Federal Airfield in Mountain View, CA. Data were provided by the United States Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Data Center. Data averages were collected for the following parameters: wind speed, wind direction, barometric pressure, temperature, and rainfall. Data were collected to cover periods before and after the 28 April and 7 May 2014 sampling events. The compiled meteorological data are presented in the Final Analytical TAGA Report (Appendix B).

RESULTS

All results in this report are reported in part per billion by volume (ppbv) and to two significant figures. The GC/MS results are also reported in microgram per cubic meter ($\mu g/m^3$).

The VOC samples collected in Tedlar® bags were analyzed on-site in the mobile laboratory by GC/MS. Fifteen compounds comprised the GC/MS target compound list. Being the primary compounds of interest, PCE, TCE and

its breakdown products are the only compounds summarized in this report.

The results for all soil gas/sewer gas samples collected in Tedlar® bags are summarized in Table 2. The two highest concentrations of vinyl chloride detected are as follows: sample number (#) 02129 at 1.7 ppbv (4.4 µg/m^3) and sample # 02135 at 0.97 ppbv (2.5 µg/m^3). The five highest concentrations of 1,1-dichloroethene detected are as follows: sample # 02222 at 39 ppbv (,150 µg/m^3), sample # 02223 at 14 ppbv (55 µg/m^3), sample # 02216 at 8.9 ppbv (35 µg/m^3), sample #02217 at 8.8 ppbv (35 µg/m^3), and sample # 02215 at 6.3 ppbv (25 µg/m^3). The five highest concentrations of trans-1,2-dichloroethene detected are as follows: sample # 02197 at 18 ppbv (72 µg/m^3), sample # 02222 at 7.3 ppbv (29 µg/m^3), sample # 02195 at 6.0 ppbv (24 µg/m^3), sample # 02196 at 5.4 ppbv (22 µg/m^3), and sample # 02216 at 5.4 ppbv (22 µg/m^3). The five .highest concentrations of 1,1-dichloroethane detected are as follows: sample # 02222 at 59 ppbv (240 µg/m^3), sample # 02223 at 15 ppbv (59 µg/m^3), sample # 02216 at 4.5 ppbv (18 µg/m^3), sample # 02217 at 4.5 ppbv (18 µg/m^3), and sample # 02127 at 3.7 ppbv (15 µg/m^3). The five highest concentrations of cis-1,2-dichloroethene detected are as follows: sample # 02197 at 190 ppbv (760 µg/m^3), sample # 02222 at 160 ppbv (620 µg/m^3), sample # 02216 at 69 ppbv (270 µg/m^3), sample # 02217 at 67 ppbv (270 µg/m^3), and both sample # 02145 and sample # 02179 at 58 ppbv (230µg/m^3). The five highest concentrations of 1,1,1-trichloroethane detected are as follows: sample # 02222 at 7.3 ppbv (40 µg/m^3),), sample # 02234 at 5.2 ppbv (28 µg/m^3), sample # 02231 at 4.9 ppbv (27 µg/m^3), sample # 02223 at 3.4 ppbv (18 µg/m^3, and sample # 02227 at 3.3 ppbv (18 µg/m^3). The five highest concentrations of TCE detected are as follows: sample # 02222 at 3,700 ppbv (20,000 µg/m^3), sample # 02223 at 1,200 ppbv (6,200 µg/m^3), sample # 02216 at 300 ppbv (1,600 µg/m^3), 02217 at 290 ppbv (1,600 µg/m^3), and sample # 02227 at 270 ppbv (1,400 µg/m^3). The five highest concentrations of PCE detected are as follows: sample # 02197 at 36 ppbv (250 µg/m^3), sample # 02135 at 26 ppbv (180 µg/m^3), sample # 02216 and sample # 02217 both at 23 ppbv (160 µg/m^3), and sample # 02127 at 21 ppbv (150 µg/m^3). A complete discussion of the GC/MS results is presented in Appendix A, the GC/MS Analytical Report.

The TAGA MS/MS system was used to survey the indoor air of eighteen units. During each survey, a one-minute average was measured in various room, floor drains, and areas specified by the WAM. A summary of each survey results are presented in Table 3. Of the eighteen units surveyed, the highest average concentration of DCE detected was 1.4 ppbv at grate four in Unit BLD 10. The highest average concentration of TCE detected was 13 ppbv at grate four in Unit BLD 10. The highest average concentration of PCE detected was 3.2 ppbv at the floor drain in bathroom in Unit BLD 126.

An investigation was performed in Unit 54, during which the inlet end of the TAGA hose is moved slowly through selected portions of the unit. During this continuous monitoring, the highest instantaneous maximum concentration of TCE detected was 6.3 ppbv at 13.071 minutes while sweeping the storage room. There was no instantaneous maximum concentration detected above the QL for DCE and PCE. Graphical results of the survey for Unit 54 Investigation are presented in Figure 5.

Continuous monitoring surveys were performed in the underground tunnel connecting Units BLD 148, 149, 150, 151, 152, 153, 154, 155, and 156. During the survey of this underground tunnel, the highest instantaneous maximum concentration of DCE detected was 1.8 ppbv at 8.491 minutes at tunnel 154 toward tunnel 155 (2014LV137). The highest instantaneous maximum concentration of TCE detected was 1.5 ppbv at 6.698 minutes at tunnel 153 toward tunnel 152 (2014LV136) and at 8.855 minutes at tunnel 154 toward tunnel 155 (2014LV137). There was no instantaneous maximum concentration detected above the QL for PCE. Graphical results are presented in Figure 6 for the surveys of this underground tunnel.

The underground tunnel stemming from Unit BLD 10 was surveyed with the aid of iRobot. Graphical results of the survey from Unit BLD 10 to a wall inside the underground tunnel are presented in Figure 7. The highest instantaneous maximum concentration of TCE detected was 1.2 ppbv at 10.788 minutes after robot passed 75 feet inside the tunnel. There was no instantaneous maximum concentration detected above the QL for DCE and PCE. Graphical results of the underground tunnel survey from the parking lot at Severyns Avenue toward Unit BLD 10 (see Figure 3) are presented in Figure 8. The highest instantaneous maximum concentration of TCE detected was 17.2 ppbv at 9.415 minutes while holding position at 50 feet into the tunnel. The highest instantaneous maximum concentration of DCE was 2.5 ppbv at 6.572 minutes when robot reached the tunnel floor. There was no highest instantaneous maximum concentration detected above the QL for PCE.

Future Activities

No future site mobilizations are scheduled at this time.

cc: Central File WA SERAS-220 (with attachment)
Electronic File - I:\Archive\SERAS\220\D\TR\053014
Dennis Miller, SERAS Acting Program Manager (cover page only)

TABLE 1
Summary of Tedlar Bag Sampling Event
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Sample #	Location	Matrix	Collection	Sample Date	Sample Time	Remarks
02121	F5-012	Sewer Gas	Grab	5/1/2014	14:02	
02122	E5-005/51183	Sewer Gas	Grab	5/1/2014	14:26	
02123	F5-036	Sewer Gas	Grab	5/1/2014	14:45	
02124	F5-038	Sewer Gas	Grab	5/1/2014	14:52	
02125	2193293	Sewer Gas	Grab	5/1/2014	14:59	
02126	F6-004	Sewer Gas	Grab	5/1/2014	15:10	
02127	F6-002	Sewer Gas	Grab	5/1/2014	15:17	
02128	F6-006/117232	Sewer Gas	Grab	5/1/2014	15:33	
02129	F6-010	Sewer Gas	Grab	5/1/2014	15:46	
02130	F6-021	Sewer Gas	Grab	5/1/2014	15:57	
02131	F6-023	Sewer Gas	Grab	5/1/2014	16:02	
02132	F6-019	Sewer Gas	Grab	5/1/2014	16:08	
02133	F6-025	Sewer Gas	Grab	5/1/2014	16:17	
02134	F6-027	Sewer Gas	Grab	5/1/2014	16:25	
02135	F6-029	Sewer Gas	Grab	5/1/2014	16:32	
02136	F6-031	Sewer Gas	Grab	5/1/2014	16:39	
02137	F6-033	Sewer Gas	Grab	5/1/2014	16:51	
02138	SG-29-5	Soil Gas	Grab	5/2/2014	13:03	
02139	SG-29-10	Soil Gas	Grab	5/2/2014	13:03	
02140	SG-22-10	Soil Gas	Grab	5/2/2014	13:24	
02141	SG-22-5	Soil Gas	Grab	5/2/2014	13:24	
02142	SG-23-5	Soil Gas	Grab	5/2/2014	13:43	
02143	SG-23-10	Soil Gas	Grab	5/2/2014	13:41	
02144	SG-21-7	Soil Gas	Grab	5/2/2014	13:52	
02145	SG-20-10	Soil Gas	Grab	5/2/2014	14:00	

TABLE 1 continued
Summary of Tedlar Bag Sampling Event
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Sample #	Location	Matrix	Collection	Sample Date	Sample Time	Remarks
02146	SG-20-5	Soil Gas	Grab	5/2/2014	14:01	
02147	SG-19-5	Soil Gas	Grab	5/2/2014	14:09	
02148	SG-19-10	Soil Gas	Grab	5/2/2014	14:18	
02149	SG-18-10	Soil Gas	Grab	5/2/2014	14:31	
02150	SG-18-5	Soil Gas	Grab	5/2/2014	14:30	
02151	F6-053	Sewer Gas	Grab	5/2/2014	14:46	
02152	F6-069	Sewer Gas	Grab	5/2/2014	14:52	
02153	G6-006	Sewer Gas	Grab	5/2/2014	14:58	
02154	G6-006	Sewer Gas	Grab	5/2/2014	15:07	
02155	G6-024	Sewer Gas	Grab	5/2/2014	15:13	
02156	G6-036	Sewer Gas	Grab	5/2/2014	15:21	
02157	G6-034	Sewer Gas	Grab	5/2/2014	15:27	
02158	G6-038	Sewer Gas	Grab	5/2/2014	15:29	
02159	G6-017	Sewer Gas	Grab	5/2/2014	15:44	
02160	G6-012	Sewer Gas	Grab	5/2/2014	15:58	
02161	G6-010	Sewer Gas	Grab	5/2/2014	16:04	
02162	F6-057	Sewer Gas	Grab	5/2/2014	16:10	
02163	F6-055	Sewer Gas	Grab	5/2/2014	16:16	
02164	F6-031	Sewer Gas	Grab	5/2/2014	16:22	
02165	F6-017	Sewer Gas	Grab	5/2/2014	16:40	
02166	F6-113	Sewer Gas	Grab	5/2/2014	16:46	
02167	F6-013	Sewer Gas	Grab	5/2/2014	16:55	
02168	F6-012	Sewer Gas	Grab	5/2/2014	16:59	
02169	F6-011	Sewer Gas	Grab	5/2/2014	17:04	
02171	SG-20-5	Soil Gas	Grab	5/5/2014	09:06	

TABLE 1 continued
Summary of Tedlar Bag Sampling Event
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Sample #	Location	Matrix	Collection	Sample Date	Sample Time	Remarks
02172	SG-20-10	Sewer Gas	Grab	5/5/2014	09:06	
02173	F6-009	Soil Gas	Grab	5/5/2014	09:33	
02174	F6-007	Soil Gas	Grab	5/5/2014	09:38	
02175	F6-005	Soil Gas	Grab	5/5/2014	09:44	
02176	F6-003	Soil Gas	Grab	5/5/2014	09:50	
02177	F6-001	Soil Gas	Grab	5/5/2014	09:53	
02178	F5-064	Soil Gas	Grab	5/5/2014	10:00	
02179	F5-062	Soil Gas	Grab	5/5/2014	10:06	
02180	F5-060	Soil Gas	Grab	5/5/2014	10:13	
02181	F5-058	Soil Gas	Grab	5/5/2014	10:20	
02182	F5-056	Soil Gas	Grab	5/5/2014	10:25	
02183	F5-054	Soil Gas	Grab	5/5/2014	10:30	
02184	F5-011	Soil Gas	Grab	5/5/2014	10:39	
02185	F5-051	Soil Gas	Grab	5/5/2014	10:45	
02186	F5-071	Soil Gas	Grab	5/5/2014	10:52	
02187	F5-069	Soil Gas	Grab	5/5/2014	10:53	
02188	F5-073	Soil Gas	Grab	5/5/2014	10:58	
02189	F5-075	Soil Gas	Grab	5/5/2014	11:03	
02190	F5-067	Soil Gas	Grab	5/5/2014	11:20	
02191	F5-049	Soil Gas	Grab	5/5/2014	11:31	
02192	F5-047	Soil Gas	Grab	5/5/2014	11:36	
02193	F5-074	Soil Gas	Grab	5/5/2014	11:43	
02194	F5-050	Soil Gas	Grab	5/5/2014	11:50	
02195	F5-034	Soil Gas	Grab	5/5/2014	11:54	
02196	F5-032	Soil Gas	Grab	5/5/2014	11:59	

TABLE 1 continued
Summary of Tedlar Bag Sampling Event
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Sample #	Location	Matrix	Collection	Sample Date	Sample Time	Remarks
02197	F5-030	Sewer Gas	Grab	5/5/2014	12:04	
02198	F5-052A	Sewer Gas	Grab	5/5/2014	12:21	
02199	F5-052B	Sewer Gas	Grab	5/5/2014	12:26	
02200	F5-004	Sewer Gas	Grab	5/5/2014	14:10	
02201	F5-006	Sewer Gas	Grab	5/5/2014	14:16	
02202	F5-010	Sewer Gas	Grab	5/5/2014	14:21	
02203	F5-024	Sewer Gas	Grab	5/6/2014	09:27	
02204	F5-026	Sewer Gas	Grab	5/6/2014	09:32	
02205	F5-028	Sewer Gas	Grab	5/6/2014	09:39	
02206	F5-022	Sewer Gas	Grab	5/6/2014	09:44	
02207	F5-046	Sewer Gas	Grab	5/6/2014	09:55	
02208	F5-048	Sewer Gas	Grab	5/6/2014	10:00	
02209	F5-009	Sewer Gas	Grab	5/6/2014	10:04	
02210	F5-007	Sewer Gas	Grab	5/6/2014	10:09	
02211	F5-045	Sewer Gas	Grab	5/6/2014	10:18	
02212	F5-041	Sewer Gas	Grab	5/6/2014	10:22	
02213	F5-043	Sewer Gas	Grab	5/6/2014	10:28	
02214	D5-016	Sewer Gas	Grab	5/6/2014	11:25	
02215	D5-029	Sewer Gas	Grab	5/6/2014	11:40	
02216	D5-025	Sewer Gas	Grab	5/6/2014	11:44	
02217	D5-027	Sewer Gas	Grab	5/6/2014	11:49	
02218	E5-014	Sewer Gas	Grab	5/6/2014	12:21	
02219	E5-016	Sewer Gas	Grab	5/6/2014	12:27	
02220	E5-003	Sewer Gas	Grab	5/6/2014	12:35	
02221	E5-005	Sewer Gas	Grab	5/6/2014	12:42	

TABLE 1 continued
Summary of Tedlar Bag Sampling Event
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Sample #	Location	Matrix	Collection	Sample Date	Sample Time	Remarks
02222	B16-05	Sewer Gas	Grab	5/7/2014	11:02	
02223	B16-04	Sewer Gas	Grab	5/7/2014	11:09	
02224	B16-03	Sewer Gas	Grab	5/7/2014	11:16	
02225	B16-02	Sewer Gas	Grab	5/7/2014	11:23	
02227	SGW-4	Soil Gas	Grab	5/7/2014	13:06	
02228	SGW-9	Soil Gas	Grab	5/7/2014	13:12	
02229	SGW-8	Soil Gas	Grab	5/7/2014	13:20	
02230	SGW-7	Soil Gas	Grab	5/7/2014	13:27	
02231	SGW-6	Soil Gas	Grab	5/7/2014	13:35	
02232	SGW-5	Soil Gas	Grab	5/7/2014	13:42	
02233	SGW-1	Soil Gas	Grab	5/7/2014	14:00	
02234	SGW-2	Soil Gas	Grab	5/7/2014	14:13	
02235	F6-067	Sewer Gas	Grab	5/8/2014	09:37	
02236	F6-065	Sewer Gas	Grab	5/8/2014	09:43	
02237	F6-063	Sewer Gas	Grab	5/8/2014	09:48	
02238	F6-077	Sewer Gas	Grab	5/8/2014	09:56	
02239	G6-002	Sewer Gas	Grab	5/8/2014	10:01	
02240	G6-004	Sewer Gas	Grab	5/8/2014	10:06	
02241	G6-022	Sewer Gas	Grab	5/8/2014	10:13	
02242	G6-020	Sewer Gas	Grab	5/8/2014	10:18	
02243	G6-013	Sewer Gas	Grab	5/8/2014	10:24	
02244	G6-044	Sewer Gas	Grab	5/8/2014	10:36	
02245	G6-032	Sewer Gas	Grab	5/8/2014	10:50	
02246	G6-030	Sewer Gas	Grab	5/8/2014	10:55	
02247	G6-013	Sewer Gas	Grab	5/8/2014	11:04	
02248	G6-011	Sewer Gas	Grab	5/8/2014	11:08	
02249	G6-009	Sewer Gas	Grab	5/8/2014	11:13	

TABLE 3
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Units BLD 150 and 151
File: 2014LV135 Acquired on 28 April 2014 at 11:15:35

		Dichloroethene	Trichloroethene	Tetrachloroethene
Detection Limits - DL:		0.21	0.13	0.13
Quantitation Limits - QL:		0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
K - L	Sump at tunnel 151	0.87	0.90	DL=0.13
O - P	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
Q - R	30 mL/min spike	5.9	6.0	6.1

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Units BLD 153 and 154 File: 2014LV136 Acquired on 28 April 2014 at 12:10:26				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
H - I	Sump at tunnel 153	1.1	1.2	DL=0.13
M - N	Sump at tunnel 154	0.85	0.90	DL=0.13
R - S	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
T - U	30 mL/min spike	4.2	4.7	5.1

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Units BLD 155 and 156
File: 2014LV137 Acquired on 28 April 2014 at 12:44:27

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
H - I	Sump at tunnel 156	0.53J	0.71	DL=0.13
M - N	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
O - P	30 mL/min spike	6.0	6.0	6.0

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 45 File: 2014LV138 Acquired on 28 April 2014 at 13:37:23				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
D - E	Room 101A	0.26J	0.73	0.20J
F - G	Room 102A	0.42J	1.3	0.34J
H - I	Room 102	DL=0.21	0.59	0.16J
J - K	Room 101	DL=0.21	0.33J	DL=0.13
L - M	Grated area	0.32J	1.3	0.28J
O - P	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
Q - R	30 mL/min spike	6.3	6.4	6.3

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 3 Survey One File: 2014LV139 Acquired on 28 April 2014 at 14:32:12				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
D - E	Room 128	DL=0.21	DL=0.13	DL=0.13
F - G	Room 127	DL=0.21	DL=0.13	DL=0.13
H - I	Room 128A	DL=0.21	DL=0.13	DL=0.13
J - K	Room 125	DL=0.21	DL=0.13	DL=0.13
L - M	Room 126	DL=0.21	DL=0.13	DL=0.13
N - O	Room 124	DL=0.21	DL=0.13	DL=0.13
P - Q	Room C110	DL=0.21	DL=0.13	DL=0.13
R - S	Room C106	DL=0.21	DL=0.13	DL=0.13
T - U	Room 122	DL=0.21	DL=0.13	DL=0.13
V - W	Room R104M	DL=0.21	DL=0.13	DL=0.13
X - Y	Room R103W	DL=0.21	DL=0.13	DL=0.13
Z - AA	Room C111	DL=0.21	DL=0.13	DL=0.13
BB - CC	Room C112	DL=0.21	DL=0.13	DL=0.13
DD - EE	Room J123	DL=0.21	DL=0.13	DL=0.13
FF - GG	Room C105	DL=0.21	DL=0.13	DL=0.13
HH - II	Room 121	DL=0.21	DL=0.13	DL=0.13
JJ - KK	Room 101B	DL=0.21	DL=0.13	DL=0.13
LL - MM	Room 101A	DL=0.21	DL=0.13	DL=0.13
NN - OO	Room C113	DL=0.21	DL=0.13	DL=0.13
QQ - RR	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
SS - TT	30 mL/min spike	6.7	6.5	6.0

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 3 Survey Two File: 2014LV140 Acquired on 28 April 2014 at 15:42:49				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
D - E	Room R105A	DL=0.21	DL=0.13	DL=0.13
F - G	Room R105B	DL=0.21	DL=0.13	DL=0.13
H - I	Room C114	DL=0.21	DL=0.13	DL=0.13
J - K	Room R105W	DL=0.21	DL=0.13	DL=0.13
L - M	Room 110	DL=0.21	DL=0.13	DL=0.13
N - O	Room 111	DL=0.21	DL=0.13	DL=0.13
P - Q	Room 109	DL=0.21	DL=0.13	DL=0.13
R - S	Room C103	DL=0.21	0.16J	DL=0.13
T - U	Room 108	DL=0.21	0.23J	DL=0.13
V - W	Room 106	DL=0.21	0.19J	DL=0.13
X - Y	Room 107	DL=0.21	0.46	DL=0.13
Z - AA	Room 102	DL=0.21	DL=0.13	DL=0.13
BB - CC	Room 103	DL=0.21	DL=0.13	DL=0.13
DD - EE	Room 104A	DL=0.21	DL=0.13	DL=0.13
FF - GG	Room 105	DL=0.21	DL=0.13	DL=0.13
HH - II	Room L101	DL=0.21	DL=0.13	DL=0.13
JJ - KK	Room R106M	DL=0.21	0.13J	DL=0.13
MM - NN	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
OO - PP	30 mL/min spike	6.5	6.6	6.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for the Unit BLD 3 Survey Three File: 2014LV141 Acquired on 28 April 2014 at 16:43:36				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
D - E	Room C104	DL=0.21	DL=0.13	DL=0.13
F - G	Room 115	DL=0.21	DL=0.13	DL=0.13
H - I	Room R101W	0.39J	2.1	DL=0.13
J - K	Room 113	DL=0.21	DL=0.13	DL=0.13
L - M	Room 110	DL=0.21	DL=0.13	DL=0.13
N - O	Room R102M	DL=0.21	DL=0.13	DL=0.13
P - Q	Room 120	DL=0.21	DL=0.13	DL=0.13
R - S	Room 122	DL=0.21	DL=0.13	DL=0.13
T - U	Floor drain in room R101W	0.29J	1.6	DL=0.13
W - X	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
Y - Z	30 mL/min spike	6.2	6.3	5.8

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 16 Survey One File: 2014LV148 Acquired on 29 April 2014 at 09:40:37				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.23	0.11	0.14
	Quantitation Limits - QL:	0.77	0.35	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.23	DL=0.11	DL=0.14
D - E	Room R101	DL=0.23	DL=0.11	DL=0.14
F - G	Room 101	DL=0.23	DL=0.11	DL=0.14
H - I	Room 103	DL=0.23	DL=0.11	DL=0.14
J - K	Room 102	DL=0.23	DL=0.11	DL=0.14
L - M	Room 104	DL=0.23	DL=0.11	DL=0.14
N - O	Room 105	DL=0.23	DL=0.11	DL=0.14
P - Q	Room 106	DL=0.23	DL=0.11	DL=0.14
R - S	Room R102	DL=0.23	DL=0.11	DL=0.14
T - U	Room 106A	DL=0.23	DL=0.11	DL=0.14
V - W	Room 108	DL=0.23	DL=0.11	DL=0.14
X - Y	Room 109	DL=0.23	DL=0.11	DL=0.14
Z - AA	Room C109	DL=0.23	DL=0.11	DL=0.14
BB - CC	Room 110	DL=0.23	DL=0.11	DL=0.14
DD - EE	Room C101	DL=0.23	DL=0.11	DL=0.14
HH - II	Room 110A	DL=0.23	0.23J	0.16J
JJ - KK	Room 111	DL=0.23	DL=0.11	DL=0.14
LL - MM	Room 113	DL=0.23	0.20J	DL=0.14
NN - OO	Room 116	DL=0.23	0.33J	DL=0.14
PP - QQ	Room 117	DL=0.23	0.14J	DL=0.14
RR - SS	Room 114	DL=0.23	0.20J	DL=0.14
UU - VV	Post-exit ambient	0.84	0.88	0.85
WW - XX	30 mL/min spike	6.0	7.0	7.3

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 16 Survey Two File: 2014LV149 Acquired on 29 April 2014 at 10:39:12				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.23	0.11	0.14
	Quantitation Limits - QL:	0.77	0.35	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.23	DL=0.11	DL=0.14
D - E	Room 112	DL=0.23	0.29J	0.25J
F - G	Room 115	DL=0.23	0.16J	DL=0.14
I - J	Post-exit ambient	DL=0.23	DL=0.11	DL=0.14
K - L	30 mL/min spike	6.6	7.2	7.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 567
File: 2014LV150 Acquired on 29 April 2014 at 11:16:38

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.23	0.11	0.14
	Quantitation Limits - QL:	0.77	0.35	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.23	DL=0.11	DL=0.14
D - E	Cage 2 in room 104	DL=0.23	0.16J	DL=0.14
F - G	Room 106	DL=0.23	0.18J	DL=0.14
H - I	Room 105	DL=0.23	0.32J	DL=0.14
J - K	Room R101	DL=0.23	0.19J	DL=0.14
L - M	Floor drain in room R101	DL=0.23	0.50	DL=0.14
N - O	Room 106A	DL=0.23	0.26J	DL=0.14
P - Q	Cage 1 in room 104	DL=0.23	0.15J	DL=0.14
R - S	Room 101	DL=0.23	0.28J	DL=0.14
T - U	Room 103	DL=0.23	0.48	DL=0.14
V - W	Room 102	DL=0.23	0.49	DL=0.14
X - Y	Office	DL=0.23	0.40	DL=0.14
AA - BB	Post-exit ambient	DL=0.23	DL=0.11	DL=0.14
CC - DD	30 mL/min spike	7.1	7.3	6.9

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 126 File: 2014LV151 Acquired on 29 April 2014 at 11:56:23				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.23	0.11	0.14
	Quantitation Limits - QL:	0.77	0.35	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.23	DL=0.11	DL=0.14
D - E	Room 104	DL=0.23	0.44	0.48
F - G	Floor drain in room 104	0.48J	0.95	2.1
H - I	Bathroom	DL=0.23	0.34J	0.40J
J - K	Floor drain in bathroom	0.82	1.5	3.2
L - M	Room 106	DL=0.23	0.44	0.54
N - O	Room 106A	0.26J	0.45	0.52
P - Q	Room 103	0.24J	0.44	0.49
R - S	Room 103A	0.38J	0.66	0.75
T - U	Room 103B	0.34J	0.54	0.62
V - W	Room 103C	0.33J	0.53	0.61
X - Y	Room 103D	0.24J	0.43	0.49
Z - AA	Room 103E	DL=0.23	0.40	0.44J
BB - CC	Room 101	0.23J	0.64	0.57
DD - EE	Room 102	0.24J	0.47	0.53
GG - HH	Post-exit ambient	DL=0.23	DL=0.11	DL=0.14
II - JJ	30 mL/min spike	7.1	7.4	6.9

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 10 File: 2014LV158 Acquired on 30 April 2014 at 08:36:16				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room 106	DL=0.24	0.20J	DL=0.20
F - G	Floor drain in room 106	DL=0.24	0.22J	DL=0.20
H - I	Room 102	DL=0.24	0.63	DL=0.20
J - K	Room 103	DL=0.24	0.94	DL=0.20
L - M	Floor drain in room 103	0.46J	1.6	DL=0.20
N - O	Room 104	DL=0.24	0.38J	DL=0.20
P - Q	Grate one in room 104	DL=0.24	0.61	DL=0.20
R - S	Grate two in room 104	DL=0.24	0.34J	DL=0.20
T - U	Grate three in room 104	DL=0.24	0.36J	DL=0.20
V - W	Grate four in room 104	DL=0.24	0.31J	DL=0.20
X - Y	Grate five in room 104	DL=0.24	0.29J	DL=0.20
AA - BB	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
CC - DD	30 mL/min spike	7.5	8.5	9.0

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 14 Survey One File: 2014LV159 Acquired on 30 April 2014 at 09:26:31				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room 118	DL=0.24	0.22J	DL=0.20
F - G	Room 116	DL=0.24	DL=0.16	DL=0.20
H - I	Room R104	DL=0.24	0.19J	DL=0.20
J - K	Room R103	DL=0.24	DL=0.16	DL=0.20
L - M	Room 117	DL=0.24	DL=0.16	DL=0.20
N - O	Room 115	DL=0.24	DL=0.16	DL=0.20
P - Q	Room 114	DL=0.24	DL=0.16	DL=0.20
R - S	Room L101	DL=0.24	DL=0.16	DL=0.20
T - U	Room 106	DL=0.24	DL=0.16	DL=0.20
V - W	Room 113	DL=0.24	DL=0.16	DL=0.20
X - Y	Room 112	DL=0.24	DL=0.16	DL=0.20
Z - AA	Room 111	DL=0.24	DL=0.16	DL=0.20
BB - CC	Room 110	DL=0.24	DL=0.16	DL=0.20
DD - EE	Room 109	DL=0.24	DL=0.16	DL=0.20
FF - GG	Room 108	DL=0.24	DL=0.16	DL=0.20
HH - II	Room 107	DL=0.24	DL=0.16	DL=0.20
LL - MM	Room C101	DL=0.24	DL=0.16	DL=0.20
PP - QQ	Room 101	DL=0.24	DL=0.16	DL=0.20
RR - SS	Room 104	DL=0.24	DL=0.16	DL=0.20
TT - UU	Room 105	DL=0.24	DL=0.16	DL=0.20
WW - XX	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
YY - ZZ	30 mL/min spike	6.9	7.4	7.6

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 14 Survey Two
File: 2014LV161 Acquired on 30 April 2014 at 10:30:17

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room 102	DL=0.24	DL=0.16	DL=0.20
F - G	Room 103	DL=0.24	DL=0.16	DL=0.20
H - I	Room R101W	DL=0.24	DL=0.16	DL=0.20
J - K	Room R102M	DL=0.24	DL=0.16	DL=0.20
N - O	Crawl space one	DL=0.24	0.83	DL=0.20
Q - R	Crawl space two	DL=0.24	0.28J	DL=0.20
S - T	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
U - V	30 mL/min spike	9.6	10.	10.

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-239A Survey One File: 2014LV162 Acquired on 30 April 2014 at 11:19:52				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room 120	DL=0.24	0.18J	DL=0.20
F - G	Room 125	DL=0.24	DL=0.16	DL=0.20
H - I	Floor drain in room 120	DL=0.24	DL=0.16	DL=0.20
J - K	Room 122	DL=0.24	0.22J	DL=0.20
L - M	Grate in room 122	DL=0.24	DL=0.16	DL=0.20
N - O	Basement	DL=0.24	DL=0.16	DL=0.20
P - Q	Sump	DL=0.24	DL=0.16	DL=0.20
R - S	Room C102	DL=0.24	0.42J	DL=0.20
T - U	Room 120-1	DL=0.24	DL=0.16	DL=0.20
V - W	Room C101	DL=0.24	DL=0.16	DL=0.20
X - Y	Room 141	DL=0.24	0.19J	DL=0.20
Z - AA	Room E101	DL=0.24	DL=0.16	DL=0.20
CC - DD	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
EE - FF	30 mL/min spike	8.6	9.4	9.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-239A Survey Two File: 2014LV163 Acquired on 30 April 2014 at 12:07:56				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room C104	DL=0.24	DL=0.16	DL=0.20
F - G	Room 120-3	DL=0.24	DL=0.16	DL=0.20
H - I	Grate in room 120-3	DL=0.24	DL=0.16	DL=0.20
J - K	Room R102	DL=0.24	0.18J	DL=0.20
L - M	Floor drain in room R102	DL=0.24	0.24J	DL=0.20
N - O	Room R121	DL=0.24	0.26J	DL=0.20
P - Q	Floor drain in room R121	DL=0.24	0.31J	DL=0.20
R - S	Room U102	DL=0.24	DL=0.16	DL=0.20
T - U	Grate in room U102	DL=0.24	DL=0.16	DL=0.20
V - W	Room U101	DL=0.24	DL=0.16	DL=0.20
X - Y	Floor drain in room U101	DL=0.24	DL=0.16	DL=0.20
AA - BB	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
CC - DD	30 mL/min spike	9.2	9.4	9.3

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-239 Survey One
File: 2014LV164 Acquired on 30 April 2014 at 13:44:03

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
C - D	Room 089	DL=0.24	DL=0.16	DL=0.20
E - F	Room 017	DL=0.24	DL=0.16	DL=0.20
G - H	Room 015	DL=0.24	DL=0.16	DL=0.20
I - J	Room 013	DL=0.24	DL=0.16	DL=0.20
K - L	Room 012B	DL=0.24	DL=0.16	DL=0.20
M - N	Room 012A	DL=0.24	DL=0.16	DL=0.20
O - P	Room 086	DL=0.24	DL=0.16	DL=0.20
Q - R	Room B39	DL=0.24	DL=0.16	DL=0.20
S - T	Room 019	DL=0.24	DL=0.16	DL=0.20
U - V	Room B34	DL=0.24	DL=0.16	DL=0.20
W - X	Room B32	DL=0.24	DL=0.16	DL=0.20
Y - Z	Room B33	DL=0.24	DL=0.16	DL=0.20
AA - BB	Room B35	DL=0.24	DL=0.16	DL=0.20
CC - DD	Room B30	DL=0.24	DL=0.16	DL=0.20
EE - FF	Room B37	DL=0.24	DL=0.16	DL=0.20
GG - HH	Room 37C	DL=0.24	DL=0.16	DL=0.20
II - JJ	Room 37B	DL=0.24	DL=0.16	DL=0.20
KK - LL	Room 37D	DL=0.24	DL=0.16	DL=0.20
MM - NN	Room 37A	DL=0.24	DL=0.16	DL=0.20
OO - PP	Room 37E	DL=0.24	DL=0.16	DL=0.20
QQ - RR	Room B49	DL=0.24	DL=0.16	DL=0.20
SS - TT	Room B50	DL=0.24	DL=0.16	DL=0.20
UU - VV	Room R001	DL=0.24	DL=0.16	DL=0.20
WW - XX	Floor drain one in room R001	DL=0.24	DL=0.16	DL=0.20
YY - ZZ	Floor drain two in room R001	DL=0.24	DL=0.16	DL=0.20
AB - CB	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
DB - EB	30 mL/min spike	7.2	7.4	7.4

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-239 Survey Two File: 2014LV166 Acquired on 30 April 2014 at 14:49:57				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room R002	DL=0.24	DL=0.16	DL=0.20
F - G	Floor drain in room R102	DL=0.24	DL=0.16	DL=0.20
H - I	Library room 053	DL=0.24	DL=0.16	DL=0.20
J - K	Library storage room	DL=0.24	DL=0.16	DL=0.20
M - N	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
O - P	30 mL/min spike	7.3	7.3	7.3

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit 54 File: 2014LV167 Acquired on 30 April 2014 at 16:10:52				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Living room	DL=0.24	DL=0.16	DL=0.20
F - G	Kitchen	DL=0.24	0.18J	DL=0.20
H - I	Storage	DL=0.24	0.30J	DL=0.20
J - K	Laundry room	DL=0.24	DL=0.16	DL=0.20
L - M	Water heater drain in laundry room	DL=0.24	0.28J	DL=0.20
N - O	Bathroom	DL=0.24	DL=0.16	DL=0.20
P - Q	Bedroom one	DL=0.24	DL=0.16	DL=0.20
R - S	Bedroom two	DL=0.24	DL=0.16	DL=0.20
V - W	Crawl space	DL=0.24	DL=0.16	DL=0.20
X - Y	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
Z - AA	30 mL/min spike	7.7	7.3	7.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit 129 File: 2014LV169 Acquired on 30 April 2014 at 17:27:06				
		Dichloroethene	Trichloroethene	Tetrachloroethene
Detection Limits - DL:		0.24	0.16	0.20
Quantitation Limits - QL:		0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Kitchen	DL=0.24	DL=0.16	DL=0.20
F - G	Dining room	DL=0.24	DL=0.16	DL=0.20
H - I	Living room	DL=0.24	DL=0.16	DL=0.20
J - K	Bathroom	DL=0.24	DL=0.16	DL=0.20
L - M	Master bedroom	DL=0.24	DL=0.16	DL=0.20
N - O	Bedroom	DL=0.24	DL=0.16	DL=0.20
P - Q	Crawl space	DL=0.24	DL=0.16	DL=0.20
R - S	Garage	DL=0.24	0.92	DL=0.20
U - V	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
W - X	30 mL/min spike	8.2	8.1	7.9

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit 135 File: 2014LV170 Acquired on 30 April 2014 at 17:55:27				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Crawl space	DL=0.24	DL=0.16	DL=0.20
G - H	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
I - J	30 mL/min spike	8.7	8.2	7.9

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit 89 File: 2014LV171 Acquired on 30 April 2014 at 18:28:09				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Kitchen	DL=0.24	DL=0.16	DL=0.20
F - G	Study	DL=0.24	DL=0.16	DL=0.20
H - I	Laundry room	DL=0.24	DL=0.16	DL=0.20
J - K	Bathroom	DL=0.24	DL=0.16	DL=0.20
L - M	Living room	DL=0.24	DL=0.16	DL=0.20
N - O	Dining room	DL=0.24	DL=0.16	DL=0.20
P - Q	Garage	DL=0.24	DL=0.16	DL=0.20
R - S	Crawl space	DL=0.24	DL=0.16	DL=0.20
U - V	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
W - X	30 mL/min spike	8.6	8.0	7.5

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 10 File: 2014LV178 Acquired on 01 May 2014 at 09:58:12				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.098	0.13	0.18
	Quantitation Limits - QL:	0.33	0.44	0.60
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.098	DL=0.13	DL=0.18
D - E	Grate one	0.33	2.2	DL=0.18
F - G	Grate two	0.76	6.0	DL=0.18
H - I	Grate three	1.2	11.	DL=0.18
J - K	Grate four	1.4	13.	DL=0.18
M - N	Post-exit ambient	DL=0.098	DL=0.13	DL=0.18
O - P	30 mL/min spike	5.2	5.4	5.4

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-239 File: 2014LV179 Acquired on 01 May 2014 at 10:54:45				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.098	0.13	0.18
	Quantitation Limits - QL:	0.33	0.44	0.60
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.098	DL=0.13	DL=0.18
D - E	Room B002	DL=0.098	DL=0.13	DL=0.18
F - G	Room 75	DL=0.098	DL=0.13	DL=0.18
H - I	Room 73	DL=0.098	DL=0.13	DL=0.18
J - K	Room 71	DL=0.098	DL=0.13	DL=0.18
L - M	Room 67	DL=0.098	DL=0.13	DL=0.18
N - O	Elevator shaft (V002)	DL=0.098	DL=0.13	DL=0.18
Q - R	Post-exit ambient	DL=0.098	DL=0.13	DL=0.18
S - T	30 mL/min spike	6.2	5.9	5.9

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 3 Survey One File: 2014LV184 Acquired on 02 May 2014 at 08:15:06				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.14	0.18	0.25
	Quantitation Limits - QL:	0.45	0.58	0.82
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.14	DL=0.18	DL=0.25
D - E	Room R106M	DL=0.14	0.26J	DL=0.25
F - G	Room 129	0.15J	1.1	DL=0.25
H - I	Floor drain in room R106M	DL=0.14	0.24J	DL=0.25
J - K	Room R105B	DL=0.14	DL=0.18	DL=0.25
M - N	Room R105W	DL=0.14	DL=0.18	DL=0.25
O - P	Floor drain in room R105W	DL=0.14	DL=0.18	DL=0.25
R - S	Crawl space	DL=0.14	0.94	DL=0.25
T - U	Post-exit ambient	DL=0.14	DL=0.18	DL=0.25
V - W	30 mL/min spike	6.0	6.1	6.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 3 Survey Two File: 2014LV185 Acquired on 02 May 2014 at 09:13:40				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.14	0.18	0.25
	Quantitation Limits - QL:	0.45	0.58	0.82
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.14	DL=0.18	DL=0.25
D - E	Boiler room	DL=0.14	DL=0.18	DL=0.25
F - G	Boiler room sump	DL=0.14	DL=0.18	DL=0.25
H - I	Room C110 floor drain one	DL=0.14	DL=0.18	DL=0.25
J - K	Room C110 floor drain two	DL=0.14	DL=0.18	DL=0.25
L - M	Room C110 floor drain three	DL=0.14	DL=0.18	DL=0.25
N - O	Room C110 floor drain four	0.24J	2.6	DL=0.25
P - Q	Room C110 floor drain five	0.61	7.4	DL=0.25
R - S	Room C110 floor drain six	DL=0.14	DL=0.18	DL=0.25
T - U	Room C106 floor drain seven	DL=0.14	DL=0.18	DL=0.25
V - W	Room C106 floor drain eight	DL=0.14	DL=0.18	DL=0.25
Y - Z	Post-exit ambient	DL=0.14	DL=0.18	DL=0.25
AA - BB	30 mL/min spike	5.3	5.2	5.1

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit 53 File: 2014LV194 Acquired on 05 May 2014 at 15:14:35				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.062	0.054	0.071
	Quantitation Limits - QL:	0.21	0.18	0.24
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.062	DL=0.054	DL=0.071
D - E	Bedroom one	DL=0.062	DL=0.054	DL=0.071
F - G	Bedroom two	DL=0.062	DL=0.054	DL=0.071
H - I	Bathroom	DL=0.062	DL=0.054	DL=0.071
J - K	Living room	DL=0.062	DL=0.054	DL=0.071
L - M	Kitchen	DL=0.062	DL=0.054	DL=0.071
N - O	Laundry room	DL=0.062	DL=0.054	0.18J
P - Q	Bedroom three	DL=0.062	DL=0.054	0.19J
S - T	Post-exit ambient	DL=0.062	DL=0.054	DL=0.071
U - V	30 mL/min spike	5.8	5.7	6.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-211 Survey One File: 2014LV200 Acquired on 06 May 2014 at 13:54:48				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.12	0.14	0.14
	Quantitation Limits - QL:	0.39	0.48	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.12	DL=0.14	DL=0.14
D - E	Room 106	DL=0.12	DL=0.14	DL=0.14
F - G	Room 113	DL=0.12	DL=0.14	DL=0.14
H - I	Room 114	DL=0.12	DL=0.14	DL=0.14
J - K	Room 116	DL=0.12	DL=0.14	DL=0.14
L - M	Room 118	DL=0.12	DL=0.14	DL=0.14
N - O	Room 112	DL=0.12	DL=0.14	DL=0.14
P - Q	Men's room	DL=0.12	DL=0.14	DL=0.14
R - S	Men's room floor drain	DL=0.12	DL=0.14	DL=0.14
U - V	Post-exit ambient	DL=0.12	DL=0.14	DL=0.14
W - X	30 mL/min spike	8.2	8.0	8.2

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-211 Survey Two File: 2014LV201 Acquired on 06 May 2014 at 14:34:50				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.12	0.14	0.14
	Quantitation Limits - QL:	0.39	0.48	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.12	DL=0.14	DL=0.14
D - E	Room 119	DL=0.12	DL=0.14	DL=0.14
F - G	Room 120	DL=0.12	DL=0.14	DL=0.14
H - I	Room 122	DL=0.12	DL=0.14	DL=0.14
J - K	Co-ed bathroom	DL=0.12	DL=0.14	DL=0.14
L - M	Women's bathroom	DL=0.12	DL=0.14	DL=0.14
N - O	Hangar entry	DL=0.12	DL=0.14	DL=0.14
P - Q	Elevator shaft	DL=0.12	DL=0.14	DL=0.14
S - T	Post-exit ambient	DL=0.12	DL=0.14	DL=0.14
U - V	30 mL/min spike	7.3	7.0	7.1

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-211 Survey Three File: 2014LV202 Acquired on 06 May 2014 at 15:06:54				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.12	0.14	0.14
	Quantitation Limits - QL:	0.39	0.48	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.12	DL=0.14	DL=0.14
D - E	Room 129	DL=0.12	DL=0.14	DL=0.14
F - G	Room 133	DL=0.12	DL=0.14	DL=0.14
H - I	Room 130-A	DL=0.12	DL=0.14	DL=0.14
J - K	Room 135	DL=0.12	DL=0.14	DL=0.14
L - M	Room 136	DL=0.12	DL=0.14	DL=0.14
N - O	Room 137	DL=0.12	DL=0.14	DL=0.14
P - Q	Room 138	DL=0.12	DL=0.14	DL=0.14
T - U	Post-exit ambient	DL=0.12	DL=0.14	DL=0.14
V - W	30 mL/min spike	7.5	7.2	7.3

Concentrations are given in parts per billion by volume

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD N-144 File: 2014LV203 Acquired on 06 May 2014 at 15:52:00				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.12	0.14	0.14
	Quantitation Limits - QL:	0.39	0.48	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.12	DL=0.14	DL=0.14
D - E	Room 171	DL=0.12	DL=0.14	DL=0.14
F - G	Room 172	DL=0.12	DL=0.14	DL=0.14
H - I	Room 160	DL=0.12	DL=0.14	DL=0.14
L - M	Room 140	DL=0.12	DL=0.14	DL=0.14
N - O	Room 61 (cafeteria)	DL=0.12	DL=0.14	DL=0.14
P - Q	Room 152	DL=0.12	DL=0.14	DL=0.14
R - S	Room 151	DL=0.12	DL=0.14	DL=0.14
T - U	Room 142	DL=0.12	DL=0.14	DL=0.14
V - W	Room 141	DL=0.12	DL=0.14	DL=0.14
X - Y	Room 140W	DL=0.12	DL=0.14	DL=0.14
Z - AA	Floor drain in room 140W	DL=0.12	DL=0.14	DL=0.14
BB - CC	Room 104M	DL=0.12	DL=0.14	DL=0.14
DD - EE	Floor drain in room 140M	DL=0.12	DL=0.14	DL=0.14
HH - II	Room 120	DL=0.12	0.20J	DL=0.14
KK - LL	Post-exit ambient	DL=0.12	DL=0.14	DL=0.14
MM - NN	30 mL/min spike	6.1	5.8	5.9

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit BLD 596 File: 2014LV208 Acquired on 07 May 2014 at 09:11:40				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.11	0.10	0.12
	Quantitation Limits - QL:	0.38	0.34	0.41
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.11	DL=0.10	DL=0.12
D - E	Bathroom one	DL=0.11	0.48	DL=0.12
F - G	Floor drain in bathroom one	DL=0.11	0.33J	DL=0.12
H - I	Floor drain in janitor's closet	DL=0.11	0.66	DL=0.12
J - K	Bathroom two	DL=0.11	0.30J	DL=0.12
L - M	Area one	DL=0.11	0.19J	DL=0.12
N - O	Area two	DL=0.11	0.20J	DL=0.12
P - Q	Service area	DL=0.11	0.19J	DL=0.12
R - S	Area three	DL=0.11	0.21J	DL=0.12
T - U	Utility room	DL=0.11	0.23J	DL=0.12
V - W	Storage/kitchen	DL=0.11	0.21J	DL=0.12
X - Y	Office	DL=0.11	0.24J	DL=0.12
Z - AA	Closet in the office	DL=0.11	0.29J	DL=0.12
BB - CC	Freezer one	DL=0.11	0.29J	DL=0.12
DD - EE	Freezer two	DL=0.11	0.12J	DL=0.12
FF - GG	Storage one	DL=0.11	0.23J	DL=0.12
II - JJ	Post-exit ambient	DL=0.11	DL=0.10	DL=0.12
KK - LL	30 mL/min spike	7.1	6.3	6.0

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

TABLE 3 continued
Summary of TAGA MS/MS Survey Results
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

TAGA Target Compound Summary for Unit 44 File: 2014LV212 Acquired on 07 May 2014 at 14:52:28				
		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.078	0.13	0.16
	Quantitation Limits - QL:	0.26	0.43	0.53
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.078	DL=0.13	DL=0.16
D - E	Kitchen	DL=0.078	DL=0.13	DL=0.16
F - G	Storage one	DL=0.078	DL=0.13	DL=0.16
H - I	Storage two	DL=0.078	DL=0.13	DL=0.16
J - K	Laundry	DL=0.078	DL=0.13	DL=0.16
L - M	Living room	DL=0.078	DL=0.13	DL=0.16
N - O	Bedroom one	DL=0.078	DL=0.13	DL=0.16
P - Q	Bedroom two	DL=0.078	DL=0.13	DL=0.16
R - S	Bedroom three	DL=0.078	DL=0.13	DL=0.16
T - U	Bathroom	DL=0.078	DL=0.13	DL=0.16
W - X	Post-exit ambient	DL=0.078	DL=0.13	DL=0.16
Y - Z	30 mL/min spike	7.2	6.9	7.0

Concentrations are given in parts per billion by volume

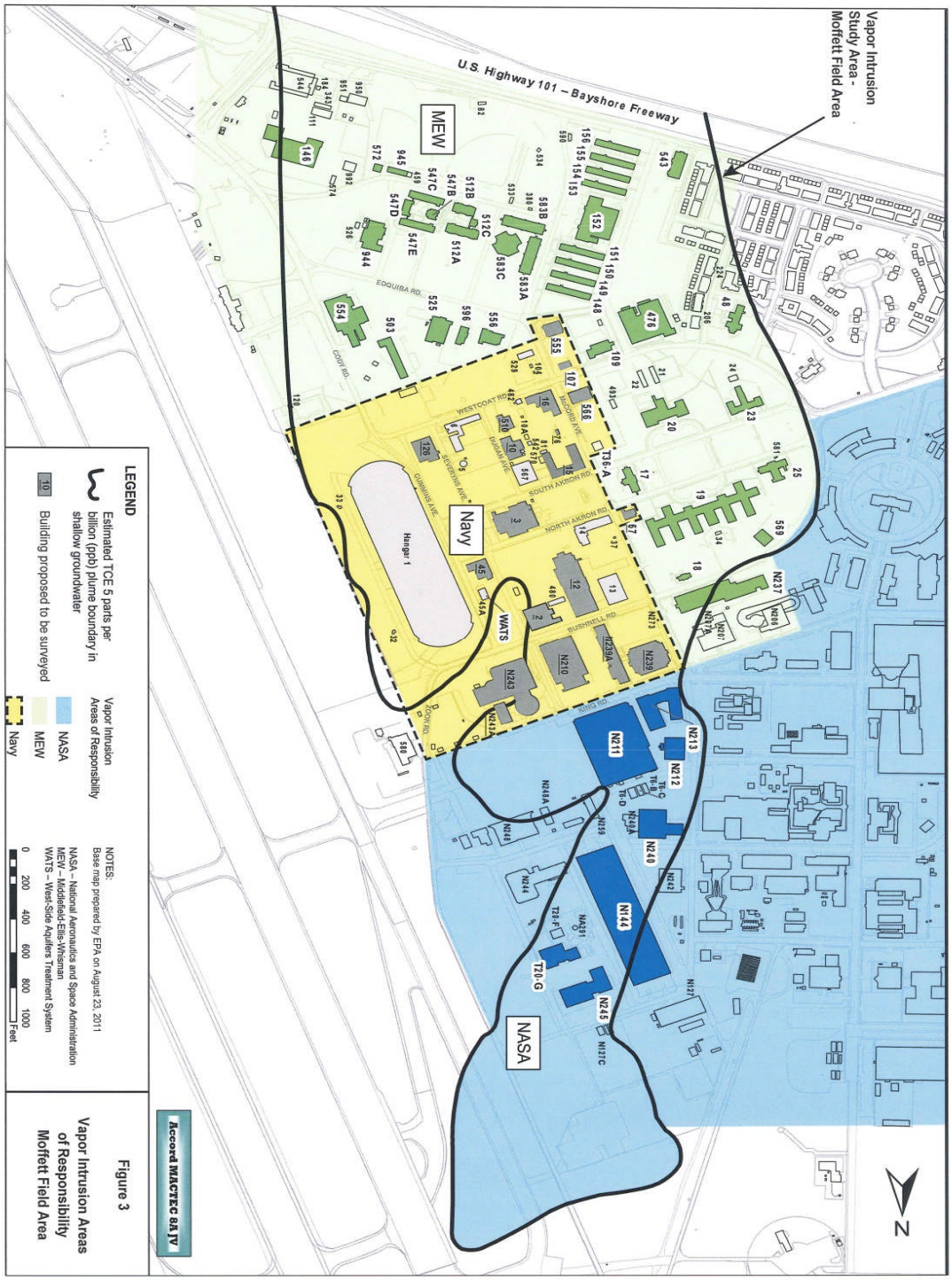

Figure 1 Map of Moffett Federal Airfield (adapted from Mactec 20111024 draft report http://navydocs.nuqu.org/DraftMoffettBuildingSurveyPlan20111024.pdf accessed on 23 May, 2014)

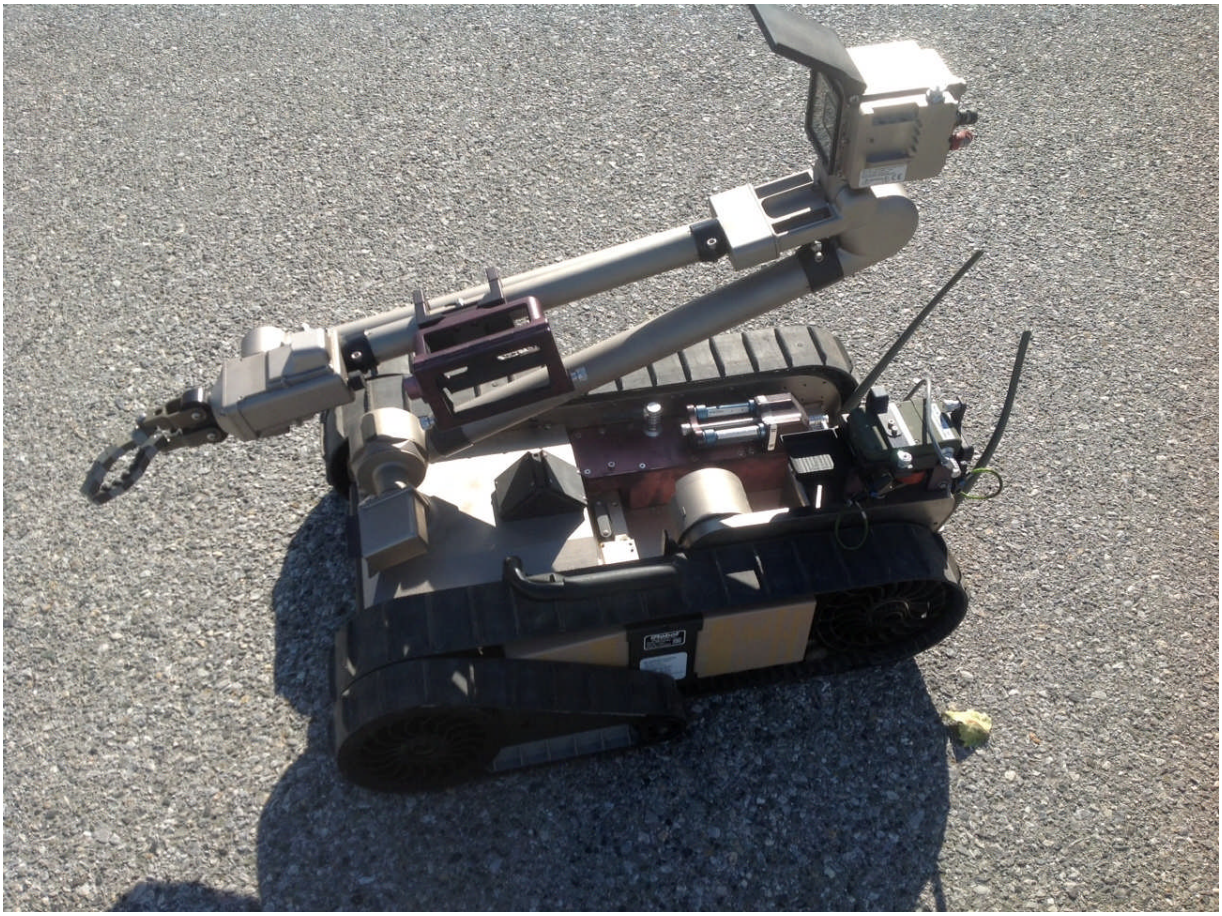

Figure 2 iRobot PackBot 510

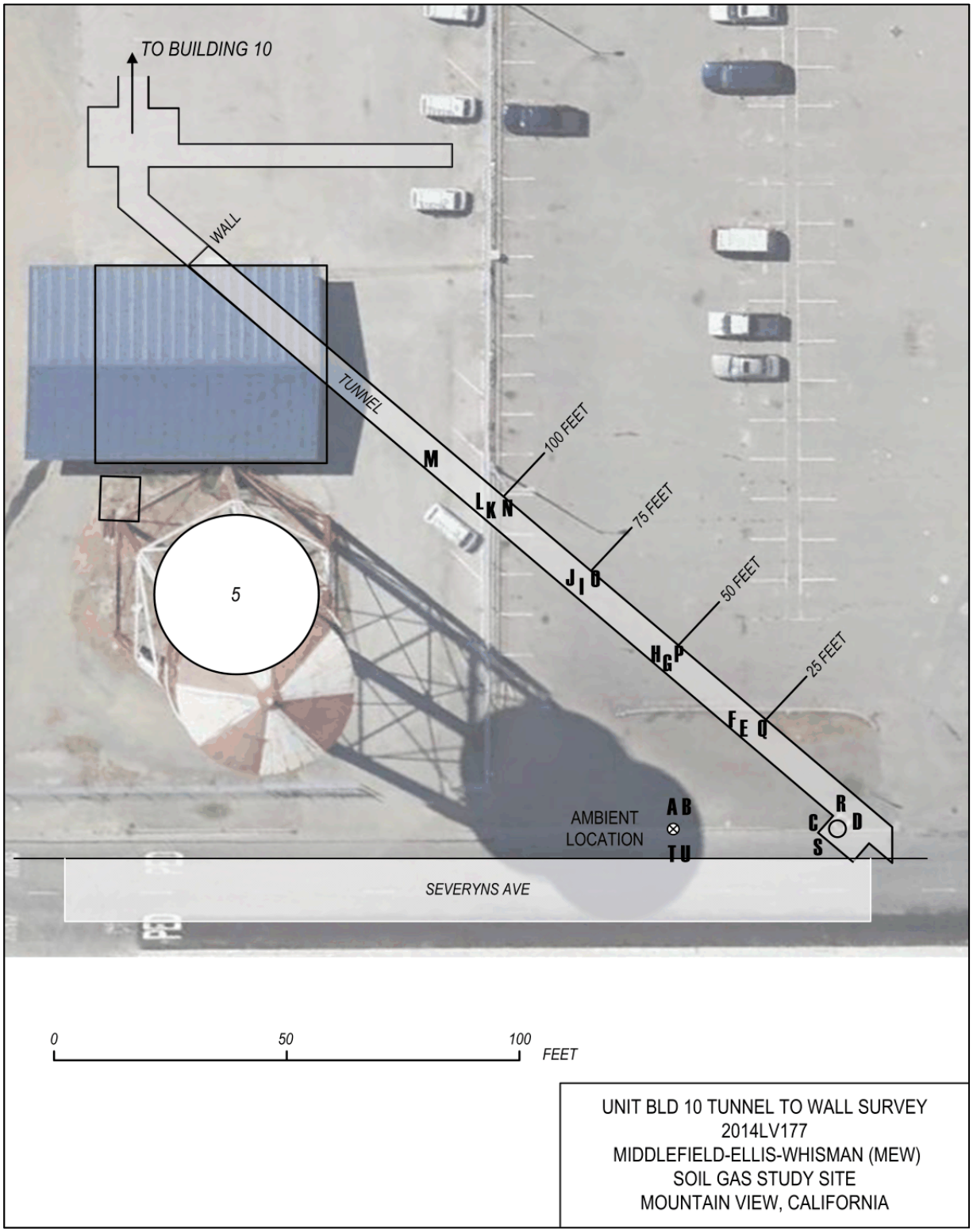

Figure 3 Unit BLD 10 Underground Tunnel

Figure 4 iRobot PackBot 510 Controller

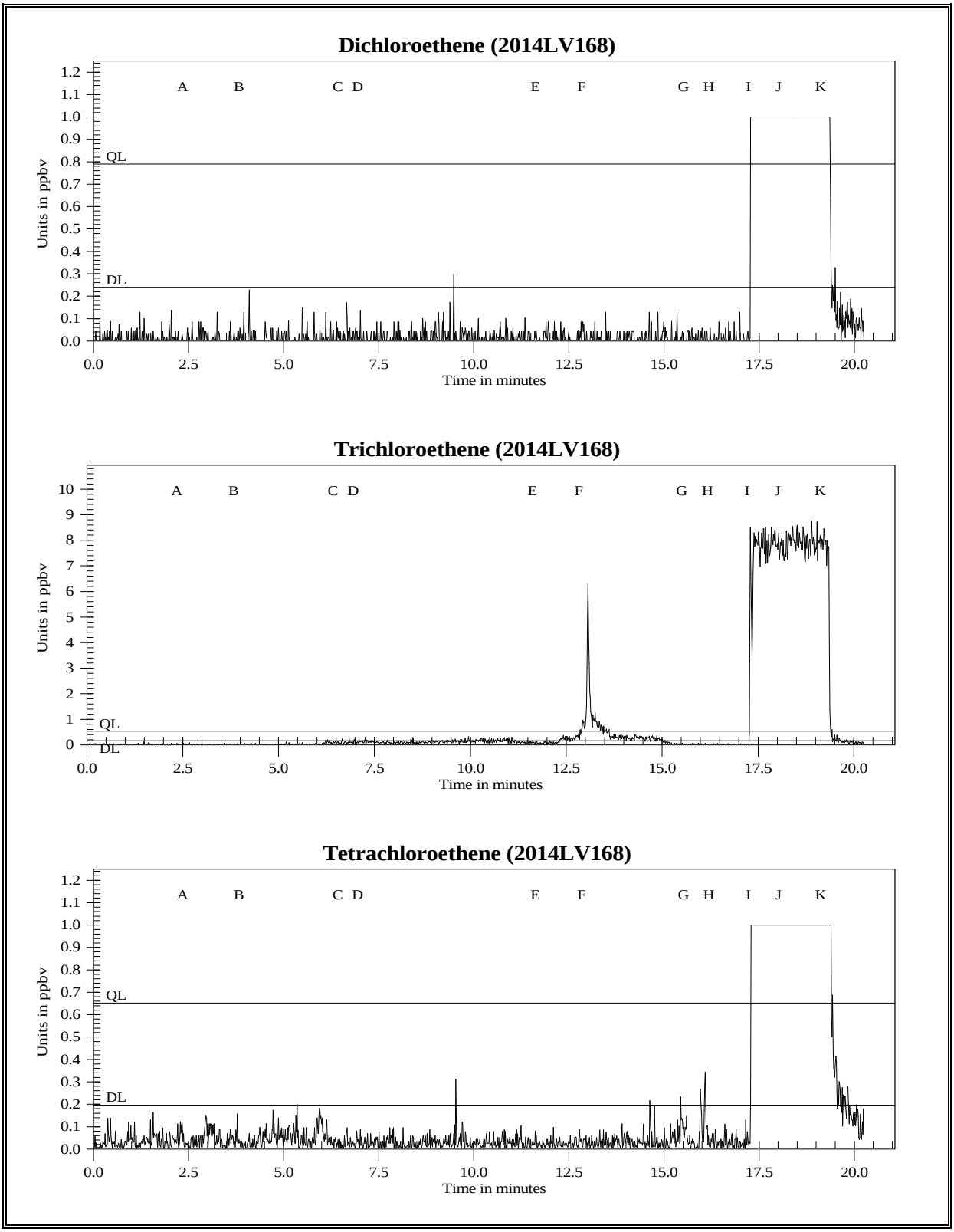

Figure 5Graphical Results of Unit 54 Investigation for Dichloroethene, Trichloroethene, and Tetrachloroethene

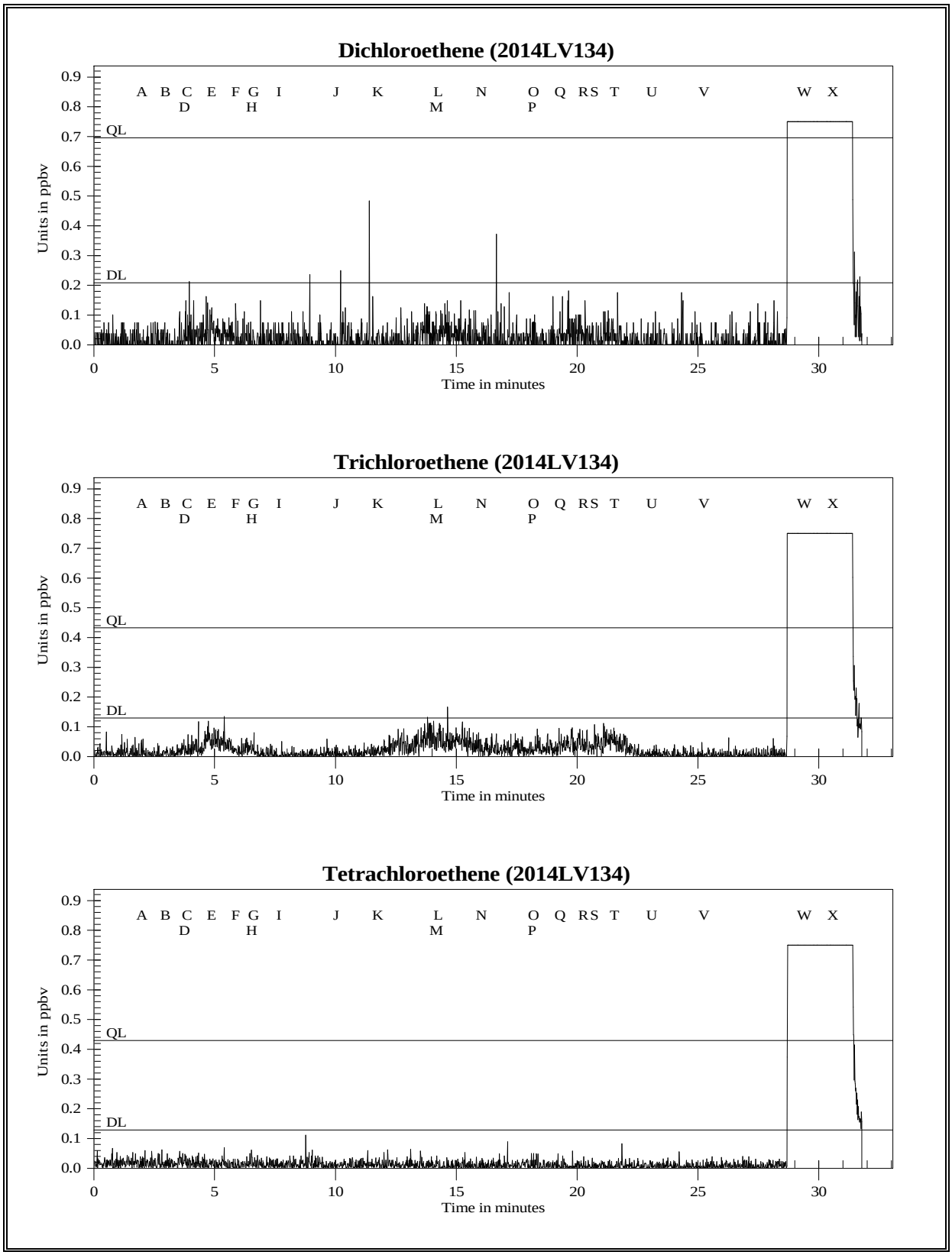

Figure 6 Graphical Results for Underground Tunnel Survey of Units BLD 148, 149, and 150 for Dichloroethene, Trichloroethene, and Tetrachloroethene

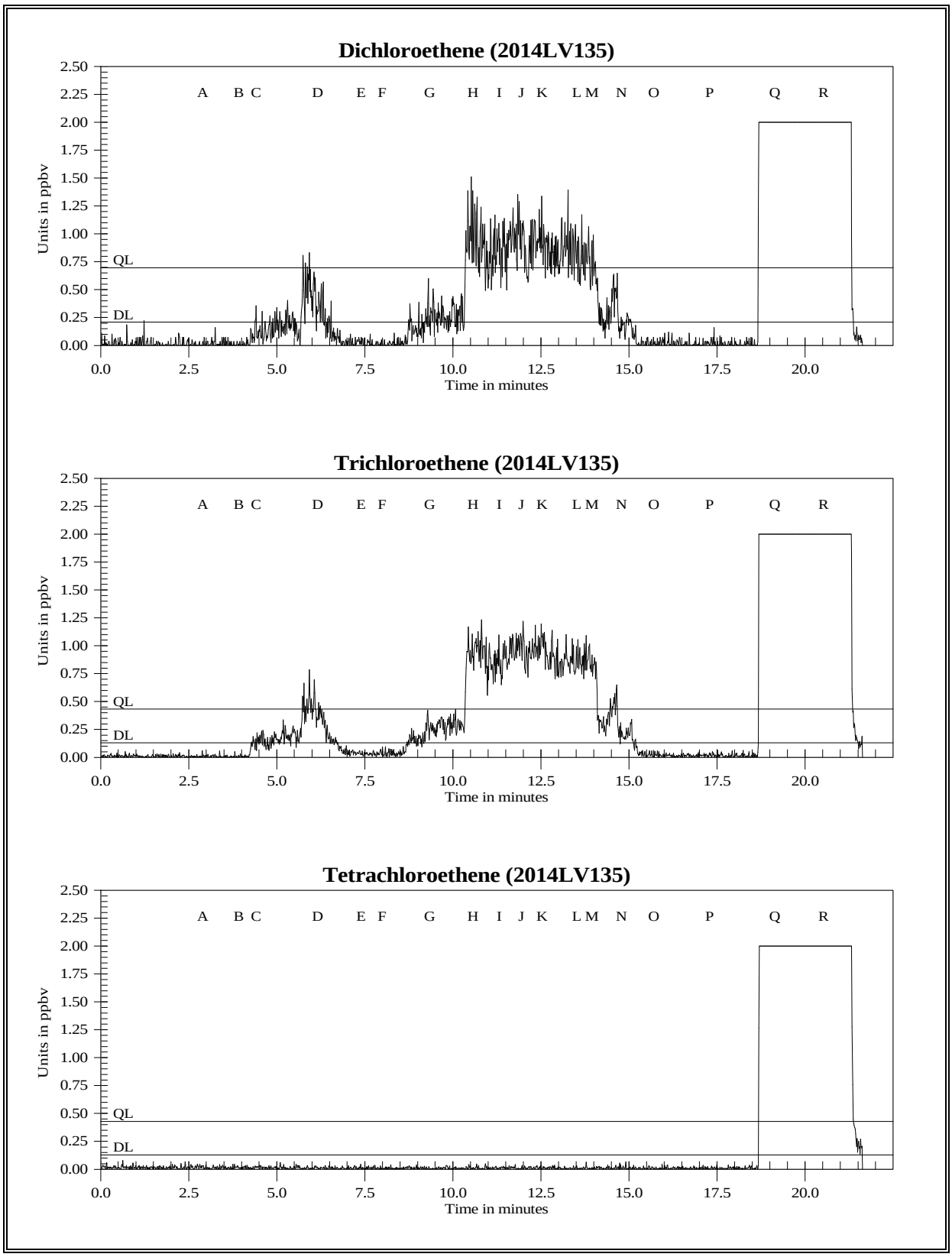

Figure 6 continued Graphical Results for Underground Tunnel Survey of Units BLD 150, and 151 for Dichloroethene, Trichloroethene, and Tetrachloroethene

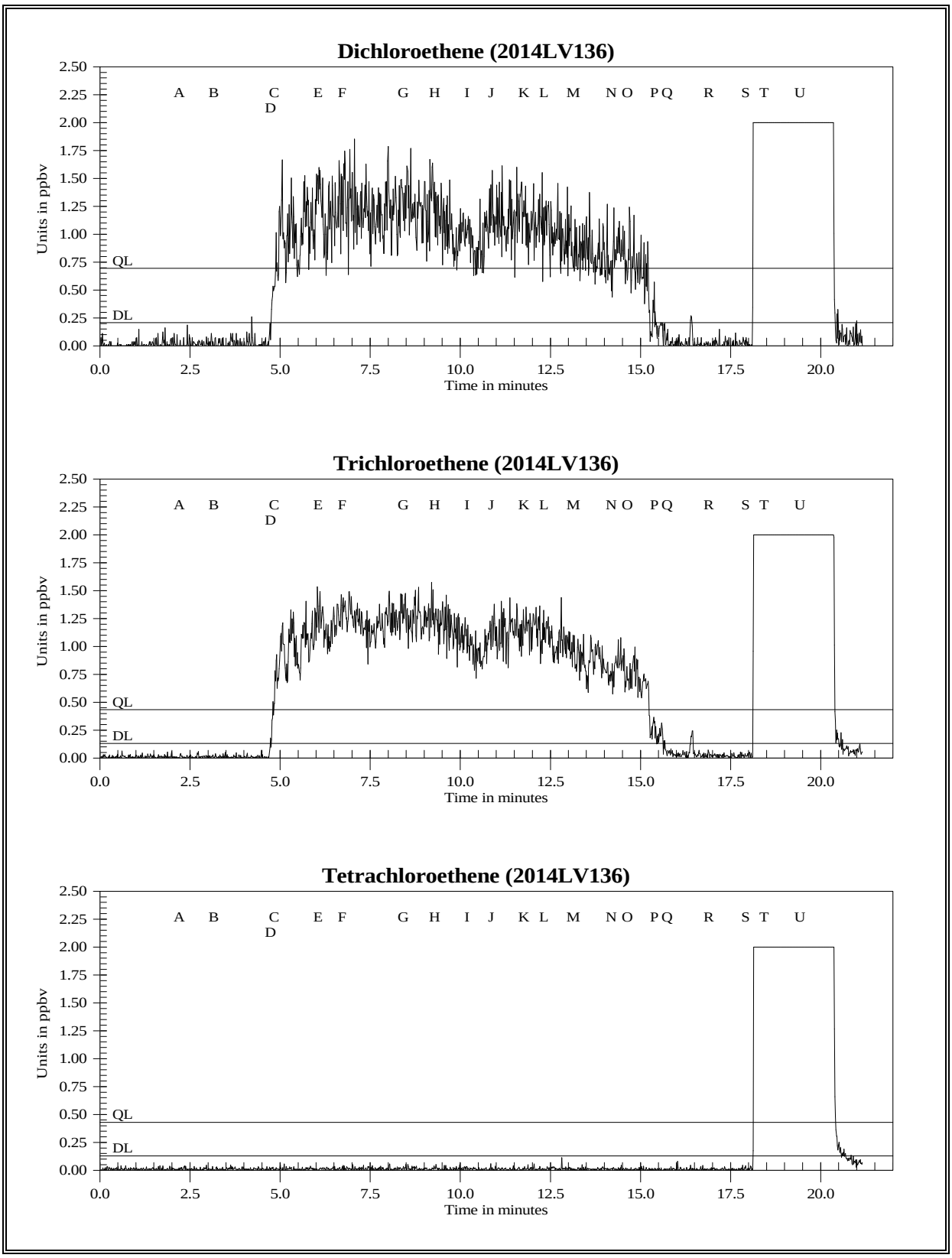

Figure 6 continued Graphical Results for Underground Tunnel Survey of Units BLD 153 and 154 for Dichloroethene, Trichloroethene, and Tetrachloroethene

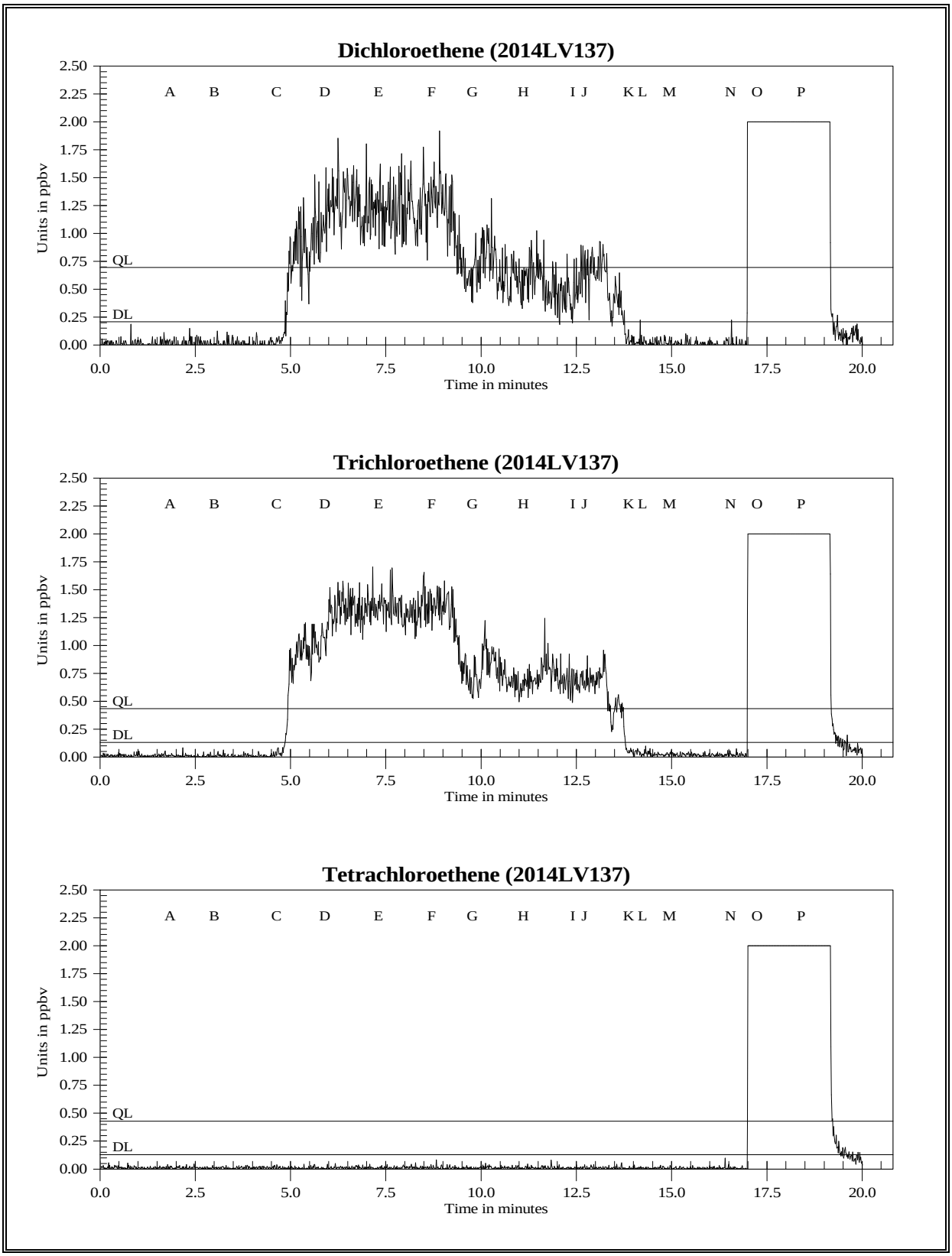

Figure 6 continued Graphical Results for Underground Tunnel Survey of Units BLD 155 and 156 for Dichloroethene, Trichloroethene, and Tetrachloroethene

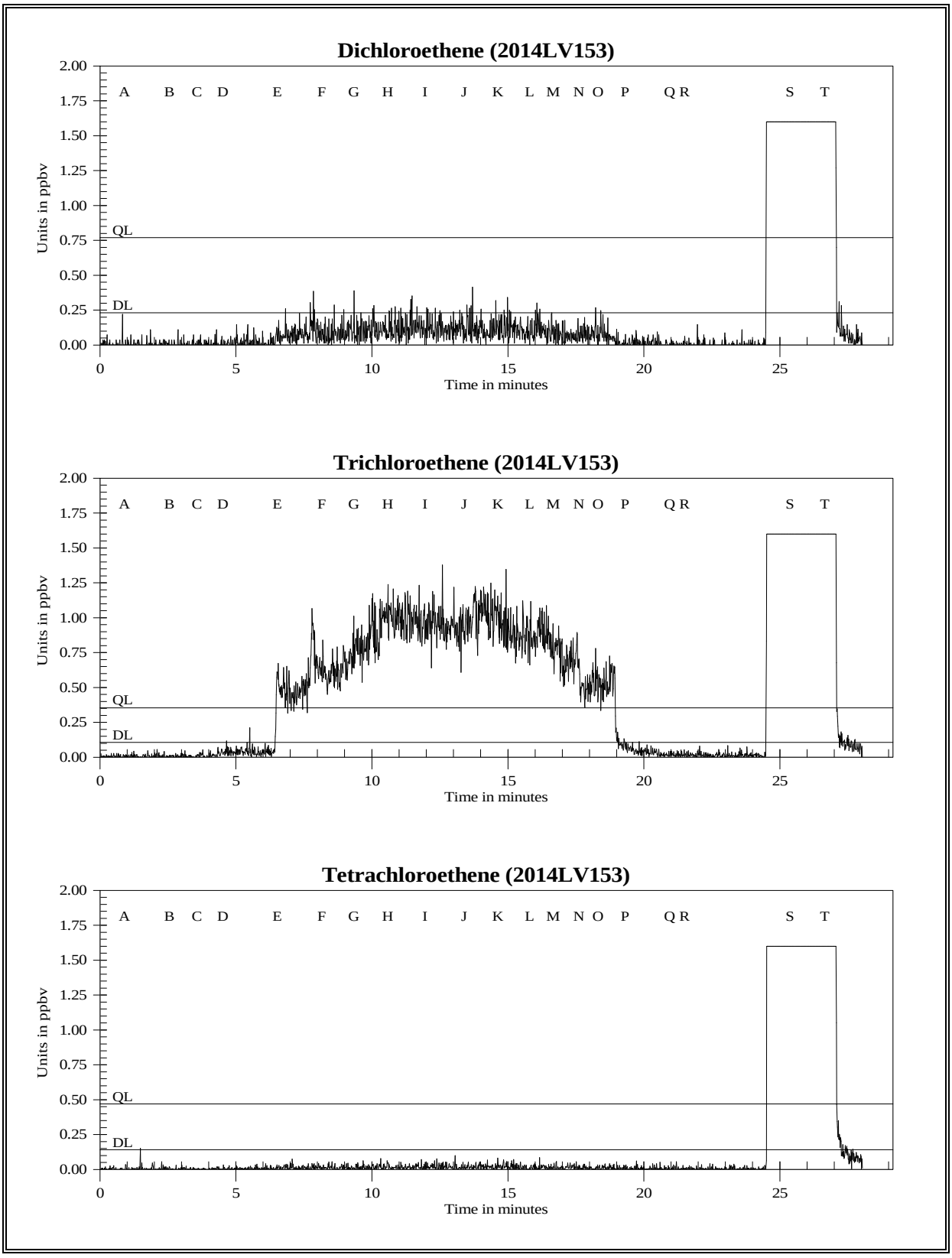

Figure 7 Graphical Results of Unit BLD 10 Tunnel to Wall Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

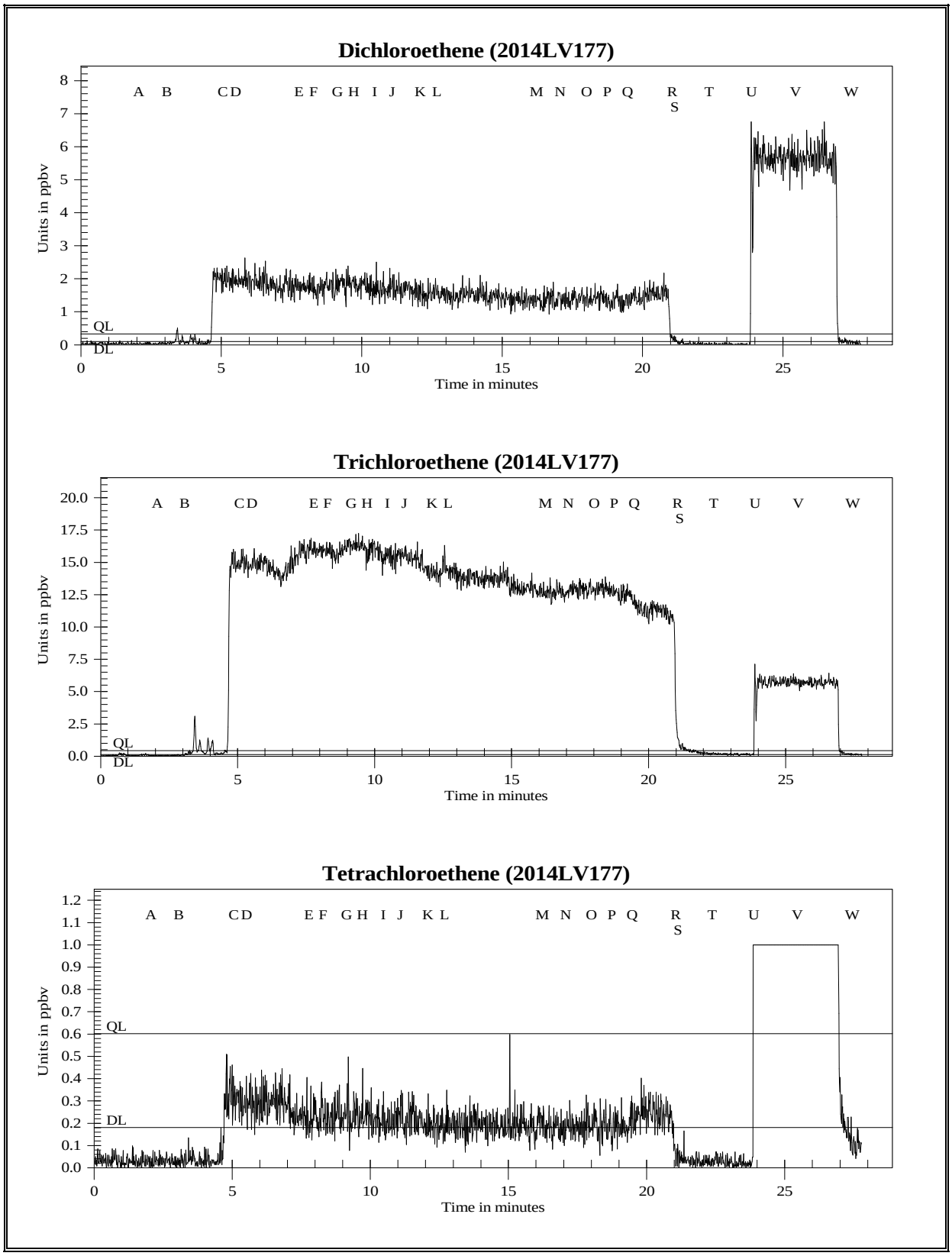

Figure 8 Graphical Results of Underground Tunnel Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene (from parking lot to wall)

APPENDIX A

GC/MS Analytical Report

Middlefield-Ellis-Whisman Soil Gas Study

May 2014

GC/MS ANALYTICAL REPORT
MIDDLEFIELD-ELLIS-WHISMAN SOIL GAS STUDY
MOUNTAIN VIEW, CALIFORNIA
MAY 2014

U.S. EPA Work Assignment No.: SERAS-220
LOCKHEED MARTIN Work Order No.: SER00220
U.S. EPA Contract No.: EP-W-09-031

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5/15/2014
Date

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for

Patrick Mulrooney
Acting SERAS Program Manager

5/16/2014
Date

CONTENTS

PAGE

1.0 INTRODUCTION 1

2.0 PROCEDURES 1
- 2.1 Soil Gas/Sewer Gas Analysis 1
- 2.2 Tuning and Calibration Standards 1
- 2.3 Compound Identification and Quantitation 2
- 2.4 Quality Assurance/Quality Control 2

3.0 RESULTS 3

4.0 DISCUSSION OF RESULTS 3

LIST OF TABLES

Table 1 Summary of Chain of Custody Records
Table 2 Instrument Conditions for Analysis of Volatile Organic Compounds
Table 3 Concentrations and Quantitation Ions for Air Toxic Standards
Table 4 Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Table 5 Replicate Summary for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples

APPENDICES

Appendix A Chain of Custody Records
Appendix B Certificates of Analysis
Appendix C Calibration Data
Appendix D Quantitation Reports

1.0 INTRODUCTION

The Environmental Protection Agency/Environmental Response Team Center (EPA/ERT) issued Work Assignment #SERAS-0220 to Lockheed Martin under the Scientific, Engineering, Response, and Analytical Services (SERAS) contract to provide analytical services at the Middlefield-Ellis-Whisman Soil Gas Study Site in Mountain View, California (CA).

An Agilent®7890 gas chromatograph and 5975C mass spectrometer (GC/MS) were used to perform volatile organic compound (VOC) analysis of soil gas samples collected in one-liter (L) Tedlar® bags. Fifteen compounds comprised the target compound list (TCL): vinyl chloride, 1,1-dichloroethene, methyl tert butyl ether, trans-1,2-dichloroethene, 1,1-dichlorethane, cis-1,2-dichloroethene, 1,1,1-trichloroethane, benzene, trichloroethene (TCE), toluene, tetrachloroethene (PCE), ethyl benzene, m,p-xylene and o-xylene.

On-site analyses occurred from 01May 2014 to 08 May 2014 on 127 samples collected by SERAS personnel. Analysis was performed in accordance with SERAS Standard Operating Procedure (SOP) #1741, *Field Analysis of VOCs in Gaseous Phase Samples by GC/MSD Loop Injection.* All analytical data met definitive data (DD) requirements as per EPA Method TO-15 modified for Tedlar® bag samples. Table 1 details the samples by chain of custody (COC) record, number of samples, sampled and received dates, sample matrix, and analysis. Copies of the COC records are included in Appendix A.

2.0 PROCEDURES

A Tedlar® bag was attached to the sample introduction port of the heated dual loop injection apparatus. One of the loops was filled with a sample and the other loop with internal standard. The content of both loops were simultaneously injected onto the head of the column for subsequent analysis by GC/MS. The Agilent ChemStation® data system was used to evaluate and process the data. Table 2 lists the operating conditions of the dual loop injection apparatus and the GC/MS system.

2.1 Soil Gas/Sewer Gas Analysis

An aliquot of sample was directly introduced into the first loop of the injection apparatus from a Tedlar® bag or syringe using the sample introduction port. The second loop was filled from a SUMMA® canister containing the internal standard. The loops were switched in line with the carrier gas to inject the sample and internal standard into the GC/MS system.

The GC oven was temperature programmed to focus the sample on the head of the column and to achieve quick separation of the VOCs in the samples, which were then detected by the MS detector. Comparing their retention times and mass spectra with those of the 500 parts per billion by volume (ppbv) reference standard permits identification of the VOCs in the sample.

2.2 Tuning and Calibration Standards

All certified standards were obtained from commercial vendors and the certificates of analysis (COAs) are presented in Appendix B. The standards' cylinder numbers, concentrations, and compound quantitation ions used are presented in Table 3.

Mass spectrometer tuning was checked daily and re-tuned as needed. Five milliliters (mL) of p-bromofluorobenzene (BFB) at one part per million by volume (ppmv) were analyzed to validate the mass spectrometer tuning parameters.

The primary and secondary standards both contained 15 target compounds in a balance of nitrogen. Both standards were based on actual concentration values.

The internal standard mix consisted of bromochloromethane, 1,4-difluorobenzene, and chlorobenzene-d_5 each at approximately one ppmv. Fifty microliters (µL) of the internal standard, equivalent to 10 ppbv were added to all standards, blanks, and samples.

After the instrument performance check standard criteria were met, the GC/MS was calibrated with a minimum of five concentrations that spanned the monitoring range of interest in an initial calibration sequence to determine sensitivity and linearity of the instrument's response for the target compounds. Samples were analyzed in the 24-hour period after meeting the acceptance criteria for the initial calibration.

A continuing calibration verification (CCV) standard at the mid-point concentration and a low level continuing calibration verification (LLCCV) standard at the lowest point concentration were analyzed as daily calibration verification check standards. Samples were analyzed in the 24-hour period after meeting the acceptance criteria for the daily CCV and LLCCV standards.

2.3 Compound Identification and Quantitation

VOCs in the samples were identified and quantitated using the Agilent ChemStation® software. The software uses mass spectra reference libraries and extracted ion chromatograms matched with retention time windows to identify and quantify target compounds. The report format prints the internal standards, identified compound, calculated concentration, mass spectra (both raw and background subtracted), quantitation, and qualifier ion chromatograms.

The reporting limit (RL) for each compound was calculated using the following equation:

$$RL\,(ppbv) = Lowest\,Calibration\,Standard\,(ppbv) \times Dilution\,Factor\,(DF)$$

Dilution of the sample was performed when target compounds exceeded the upper range of the initial calibration. The dilution was documented in the injection logbook and the dilution factor was calculated using the following equation:

$$DF = \frac{Final\ Sample\,Volume\,(mL)}{Initial\ Sample\,Volume\,(mL)}$$

The target compound results were calculated using the following equation:

$$Concentration\,(ppbv) = Analytical\,Concentration\,of\,Compound\,(ppbv) \times DF$$

2.4 Quality Assurance/Quality Control

The following Quality Assurance/Quality Control (QA/QC) procedures were performed for this assignment:

- The GC/MS was tuned, as needed, with perfluorotributylamine (PFTBA) to meet ion abundance criteria for BFB listed in the BFB report included in the calibration data section (Appendix C).
- One six-point initial calibration (ICAL) and continuing calibrations were prepared, analyzed, and acceptance criteria verified prior to sample analysis. Evaluations for the ICAL, CCV, and LLCCV standards are in the calibration data section (Appendix C).
- Immediately following an ICAL, the initial calibration verification (ICV) standard was prepared from the secondary standard, analyzed, and acceptance criteria verified. Evaluation of the ICV standard is in the calibration data section (Appendix C).
- During the 24-hour analytical period, at least one laboratory control sample (LCS) was prepared from the secondary standard, analyzed, and acceptance criteria verified.

Evaluation for the LCS results is in the calibration data section (Appendix C).

- Method blanks (MB) were analyzed after the calibration standard(s) and before samples were analyzed to assess possible laboratory contamination and/or carryover. When necessary blanks were analyzed to minimize carryover from standards or samples with high levels of target or non-target VOCs.

- Internal standards from all analyses were evaluated and acceptance criteria verified. Evaluation for the internal standards is in the calibration data section (Appendix C).

- The lowest standard used in the initial calibration was used for calculating the RL.

- During the 24-hour analytical period, at least one replicate sample was analyzed and acceptance criteria verified. Evaluations for the replicate samples are in the quantitation report section (Appendix D)

- The following is a list of the QA/QC flags used in qualifying the results:

  U - None detected at or above the RL.

All applicable data qualifiers were inserted into the results table.

3.0 RESULTS

All results are reported in ppbv and microgram per cubic meter ($\mu g/m^3$) and to two significant figures. Target compound results are presented in Table 4. Results for the replicates are presented in Table 5.

The COC records are found in Appendix A. The COAs, for all standards used are found in Appendix B. The calibration package for each day of analysis is included in Appendix C. This package includes copies of the injection logbook # SERAS-L-0351, BFB tune reports, internal standard evaluations, initial and continuing calibration reports, ICV and LCS evaluation reports, and all standard quantitation reports. Quantitation reports for the blanks and samples are included in Appendix D.

All quantitation reports list the retention times, quantitation ions, peak areas, and concentrations of target compounds in ppbv. Calculated concentrations are generated using the average relative response factor from the initial calibration curve for each target compound.

4.0 DISCUSSION OF RESULTS

One hundred and twenty seven samples were collected and analyzed on site by SERAS personnel from 01 May to 8 May 2014. Twenty seven of the 127 samples collected were from soil gas probes and the remaining samples were collected from sewer locations. Samples were taken to Mobile Laboratory 1554 and analyzed on site by an Agilent GC/MS. Preliminary results were reported to the Work Assignment Manager (WAM) daily.

The ICAL and the ICV standards of 16 April 2014 were reviewed and found to meet acceptance criteria for all target compounds.

CCV and LLCCV standards were analyzes on 01, 02, 05, 06, 07 and 08 May 2014. They were all reviewed and found to meet acceptance criteria. Daily LCS and MB were analyzed. They were all reviewed and found to meet acceptance criteria.

All internal standards from analyses performed on 01, 02, 05, 06, 07 and 08 May 2014 were within the 40 percent range. Seven replicate samples were analyzed on 01, 02, 05, 06, 07 and 08 May 2014 and results are listed in Table 5. The relative percent differences ranged from 0 to 19.

Of the 17 samples analyzed on 01 May 2014, the highest concentrations for TCE for sample numbers 02129 and 02127 were detected at 160 ppbv (870 µg/m^3) and 160 ppbv (860 µg/m^3), respectively. Sample numbers 02135 and 02127 contained the highest concentrations for PCE at 26 ppbv (180 µg/m^3) and 21 ppbv (150 µg/m^3), respectively. The highest results for cis-1,2-dichloroethene for sample numbers 02127 and 02129 were found at 52 ppbv (210 µg/m^3) and 50 ppbv (200 µg/m^3), respectively.

Of the 32 samples analyzed on 02 May 2014, sample number 02145 contained the highest concentration for TCE at 26 ppbv (140 µg/m^3) and cis-1, 2-dichloroethene at 58 ppbv (230 µg/m^3). Sample number 02164, contained the highest result for PCE at 7.0 ppbv (47 µg/m^3).

Of the 32 samples analyzed on 05 May 2014, TCE, PCE and cis-1,2-dichloroethene were found in sample number 02197 at concentrations of 210 ppbv (1200 µg/m^3), 36 ppbv (250 µg/m^3) and 190 ppbv (760 µg/m^3), respectively.

Of the 19 samples analyzed on 06 May 2014, TCE, PCE and cis-1,2-dichloroethene were found in sample number 02216 at concentrations of 300 ppbv (1,600 µg/m^3), 23 ppbv (160 µg/m^3) and 69 ppbv (270 µg/m^3), respectively.

Of the 12 samples analyzed on 07 May 2014, sample number 02222 contained the highest concentration of TCE, PCE and cis-1,2-dichloroethene at concentrations of 3,700 ppbv (20,000 µg/m^3), 10 ppbv (69 µg/m^3) and 160 ppbv (620 µg/m^3), respectively.

Of the 15 samples analyzed on 08 May 2014, sample number 02244 contained TCE at 2.5 ppbv (14 µg/m^3) and 1,1,1-trichloroethane at 0.70 ppbv (3.8 µg/m^3). No chlorinated compounds were detected in the rest of the samples.

TABLES

TABLE 1
Summary of Chain of Custody Records
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

COC #	Number of Samples	Date Sampled	Date Received	Matrix	Analysis
0220-0044	17	5-1-2014	5-1-2014	Sewer gas	VOC/SERAS SOP 1741
0220-0045	32	5-2-2014	5-2-2014	Soil gas/ Sewer gas	VOC/SERAS SOP 1741
0220-0046	32	5-5-2014	5-5-2014	Soil gas/ Sewer gas	VOC/SERAS SOP 1741
0220-0047	19	5-6-2014	5-6-2014	Sewer gas	VOC/SERAS SOP 1741
0220-0048	12	5-7-2014	5-7-2014	Soil gas/ Sewer gas	VOC/SERAS SOP 1741
0220-0049	15	5-8-2014	5-8-2014	Sewer gas	VOC/SERAS SOP 1741

TABLE 2
Instrument Conditions for Analysis of Volatile Organic Compounds
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

AGILENT® GC EPA1554

Sample Loop	
Loop Volume	5 mL
Loop Temperature	160°C
Internal Standard Loop	
Loop Volume	50 µL (equivalent to 10ppbv)
Loop Temperature	160°C
GC Inlet	
Gas Type	Helium
Mode	Pulsed Splitless
Temperature	190°C
Pressure	23.099 psi
Pulsed Pressure	50.0 psi
Pulsed Time	0.50 minute
Purge Flow	30.0 mL/minute
Purge Time	0.00 minute
Septum Flow	3.0 mL/minute
Total Flow	34.5 mL/ minute
GC Oven	
Column	Rtx-Volatiles, 20 m x 0.18 mm ID x 2.0 µm df
Mode	Constant Flow
Flow Rate	1.5 mL/ minute
Cryo (CO_2)	On
Quick Cryo Cooling	On
Initial Temperature	-10°C
Ramp 1	
Initial Temperature Hold Time	0.50 minute
Ramp Program	30°C/ minute
Final Temperature	130°C
Final Temperature Hold Time	1 minute
Ramp 2	
Ramp Program	25°C/ minute
Final Temperature	160°C
Final Temperature Hold Time	0.2 minute
Total Run Time	7.57 minute

AGILENT® MS EPA1554

MS Temperatures	
MS Quadrupole	150°C
MS Ion Source	230°C
MS Transfer Line	200°C
MS Tune File	BFB.u
MS Acquisition Mode	Scan/SIM
Solvent Delay	1.25 minute

TABLE 2 continued
Instrument Conditions for Analysis of Volatile Organic Compounds
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

SIMS Parameters

Group 1 Start Time	1.80 min
Ions/Dwell in Group 1	(27/200) (62/200) (64/200)
Group 2 Start Time	2.56 min
Ions/Dwell in Group 2	(61/40) (63/40) (96/40)
Group 3 Start Time	3.15 min
Ions/Dwell in Group 3	(41/30) (53/30) (61/30) (73/30) (96/30) (98/30)
Group 4 Start Time	3.50 min
Ions/Dwell in Group 4	(27/40) (63/40) (65/40)
Group 5 Start Time	3.75 min
Ions/Dwell in Group 5	(49/40) (61/40) (93/40) (96/40) (98/40) (128/40) (130/40)
Group 6 Start Time	4.06 min
Ions/Dwell in Group 6	(61/40) (97/40) (99/40)
Group 7 Start Time	4.25 min
Ions/Dwell in Group 7	(50/30) (63/30) (77/30) (78/30) (88/30) (114/30)
Group 8 Start Time	4.50 min
Ions/Dwell in Group 8	(95/40) (130/40) (132/40)
Group 9 Start Time	5.04 min
Ions/Dwell in Group 9	(91/40) (92/40)
Group 10 Start Time	5.40 min
Ions/Dwell in Group 10	(131/40) (164/40) (166/40)
Group 11 Start Time	5.65 min
Ions/Dwell in Group 11	(82/30) (91/30) (105/30) (106/30) (117/30) (119/30)
Group 12 Start Time	6.28 min
Ions/Dwell in Group 12	(91/30) (105/30) (106/30)

TABLE 3
Concentrations and Quantitation Ions for Air Toxic Standards
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Linde SPECTRA Environmental Gases
Cylinder Number: CC-80994
Certification Date: 14 March 2014
Expiration Date: 14 March 2015

Volatile Organic Compound	Quant Ion	Concentration
Vinyl chloride	62	20.6 ppm
1,1-Dichloroethene	61	19.9 ppm
trans-1,2-Dichloroethene	61	20.1 ppm
1,1-Dichloroethane	63	20.7 ppm
Methyl tert-Butyl Ether	73	20.1 ppm
cis-1,2-Dichloroethene	61	21.1 ppm
1,1,1-Trichloroethane	97	20.2 ppm
Benzene	78	21.0 ppm
Trichloroethene	130	20.2 ppm
Toluene	91	20.8 ppm
Tetrachloroethene	166	20.3 ppm
Ethylbenzene	91	20.8 ppm
p-Xylene	91	10.4 ppm
m-Xylene	91	10.4 ppm
o-Xylene	91	20.7 ppm

Linde SPECTRA Environmental Gases
Cylinder Number: CC-99022
Certification Date: 14 March 2014
Expiration Date: 14 March 2015

Volatile Organic Compound	Quant Ion	Concentration
Vinyl chloride	62	20.7 ppm
1,1-Dichloroethene	61	20.5 ppm
trans-1,2-Dichloroethene	61	20.0 ppm
1,1-Dichloroethane	63	21.0 ppm
Methyl tert-Butyl Ether	73	20.4 ppm
cis-1,2-Dichloroethene	61	21.2 ppm
1,1,1-Trichloroethane	97	20.4 ppm
Benzene	78	21.1 ppm
Trichloroethene	130	20.4 ppm
Toluene	91	20.9 ppm
Tetrachloroethene	166	20.7 ppm
Ethylbenzene	91	21.0 ppm
p-Xylene	91	10.4 ppm
m-Xylene	91	10.4 ppm
o-Xylene	91	21.0 ppm

TABLE 3 continued
Concentrations and Quantitation Ions for Air Toxic Standards
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Linde SPECTRA Environmental Gases

Cylinder Number:	CC82181
Certification Date:	09 September 2013
Expiration Date:	09 September 2014

BFB Compound	Quant Ion	Concentration
4-Bromofluorobenzene	N/A	0.99 ppm

Linde SPECTRA Environmental Gases

Cylinder Number:	CC-256139
Certification Date:	22 August 2013
Expiration Date:	22 August 2014

Internal Standard	Quant Ion	Concentration
Bromochloromethane	49	0.96 ppm
1,4-Difluorobenzene	114	1.01 ppm
Chlorobenzene-d_5	117	1.05 ppm

TABLE 4
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_01MAY004				54_01MAY006				54_01MAY008				54_01MAY009			
Sample Number:	20140501-MB				02121				02122				02123			
Sample Location:	Method Blank				F5-012				E5-005 /51183				F5-036			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	1 May 2014				1 May 2014				1 May 2014				1 May 2014			
Date Analyzed:	1 May 2014				1 May 2014				1 May 2014				1 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	1.3	0.50	5.1	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	0.60	0.50	2.4	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	1.4	0.52	5.6	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	14	0.53	55	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	0.85	0.51	4.6	2.8
Benzene	U	0.53	U	1.7	79	0.53	250	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7	67	0.51	360	2.7
Toluene	U	0.52	U	2.0	1.9	0.52	7.3	2.0	1.6	0.52	5.8	2.0	3.1	0.52	12	2.0
Tetrachloroethene	U	0.51	U	3.4	11	0.51	73	3.4	U	0.51	U	3.4	12	0.51	81	3.4
Ethyl Benzene	U	0.52	U	2.3	2.3	0.52	9.8	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	17	0.52	76	2.3	U	0.52	U	2.3	0.53	0.52	2.3	2.3
o-Xylene	U	0.52	U	2.3	3.5	0.52	15	2.3	U	0.52	U	2.3	0.71	0.52	3.1	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_01MAY010				54_01MAY012				54_01MAY013				54_01MAY014			
Sample Number:	02124				02125				02126				02127			
Sample Location:	F5-038				2193293				F6-004				F6-002			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	1 May 2014				1 May 2014				1 May 2014				1 May 2014			
Date Analyzed:	1 May 2014				1 May 2014				1 May 2014				1 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	1.9	0.50	7.5	2.0	U	0.50	U	2.0	5.8	0.50	23	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	1.1	0.50	4.4	2.0	U	0.50	U	2.0	3.5	0.50	14	2.0
1,1-Dichloroethane	U	0.52	U	2.1	1.3	0.52	5.3	2.1	U	0.52	U	2.1	3.7	0.52	15	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	17	0.53	69	2.1	U	0.53	U	2.1	52	0.53	210	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	0.74	0.51	4.0	2.8	U	0.51	U	2.8	2.3	0.51	12	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	1.7	0.51	9.2	2.7	56	0.51	300	2.7	U	0.51	U	2.7	160	0.51	860	2.7
Toluene	2.3	0.52	8.7	2.0	3.8	0.52	14	2.0	3.7	0.52	14	2.0	14	0.52	52	2.0
Tetrachloroethene	2.1	0.51	14	3.4	6.9	0.51	46	3.4	U	0.51	U	3.4	21	0.51	150	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	1.0	0.52	4.4	2.3	1.3	0.52	5.5	2.3	1.2	0.52	5.0	2.3
o-Xylene	U	0.52	U	2.3	0.89	0.52	3.9	2.3	1.1	0.52	4.8	2.3	1.3	0.52	5.4	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_01MAY015				54_01MAY016				54_01MAY017				54_01MAY018			
Sample Number:	02128				02129				02130				02131			
Sample Location:	F6-006/117232				F6-010				F6-021				F6-023			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	1 May 2014				1 May 2014				1 May 2014				1 May 2014			
Date Analyzed:	1 May 2014				1 May 2014				1 May 2014				1 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	1.7	0.52	4.4	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	5.3	0.50	21	2.0	1.5	0.50	6.0	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	3.7	0.50	15	2.0	0.97	0.50	3.8	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	3.6	0.52	15	2.1	0.89	0.52	3.6	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	2.6	0.53	10	2.1	50	0.53	200	2.1	11	0.53	44	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	2.2	0.51	12	2.8	0.97	0.51	5.3	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	8.6	0.51	46	2.7	160	0.51	870	2.7	47	0.51	250	2.7	0.73	0.51	3.9	2.7
Toluene	2.4	0.52	9.0	2.0	16	0.52	60	2.0	22	0.52	81	2.0	4.3	0.52	16	2.0
Tetrachloroethene	0.93	0.51	6.3	3.4	17	0.51	120	3.4	6.6	0.51	45	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	0.60	0.52	2.6	2.3	0.84	0.52	3.6	2.3	0.72	0.52	3.1	2.3
o-Xylene	0.55	0.52	2.4	2.3	U	0.52	U	2.3	0.84	0.52	3.6	2.3	1.1	0.52	4.7	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_01MAY019				54_01MAY021				54_01MAY022				54_01MAY023			
Sample Number:	02132				02133				02134				02135			
Sample Location:	F6-019				F6-025				F6-027				F6-029			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	1 May 2014				1 May 2014				1 May 2014				1 May 2014			
Date Analyzed:	1 May 2014				1 May 2014				1 May 2014				1 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	0.97	0.52	2.5	1.3
1,1-Dichloroethene	U	0.50	U	2.0	2.3	0.50	9.2	2.0	U	0.50	U	2.0	4.9	0.50	19	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	1.6	0.50	6.4	2.0	U	0.50	U	2.0	4.0	0.50	16	2.0
1,1-Dichloroethane	U	0.52	U	2.1	1.6	0.52	6.5	2.1	U	0.52	U	2.1	3.4	0.52	14	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	17	0.53	69	2.1	U	0.53	U	2.1	25	0.53	100	2.1
1,1,1-Trichloroethane	1.2	0.51	6.3	2.8	0.97	0.51	5.3	2.8	U	0.51	U	2.8	2.1	0.51	11	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	4.1	0.51	22	2.7	60	0.51	320	2.7	U	0.51	U	2.7	88	0.51	470	2.7
Toluene	2.8	0.52	11	2.0	7.7	0.52	29	2.0	2.4	0.52	8.9	2.0	21	0.52	80	2.0
Tetrachloroethene	U	0.51	U	3.4	11	0.51	73	3.4	U	0.51	U	3.4	26	0.51	180	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	0.55	0.52	2.4	2.3	0.61	0.52	2.6	2.3	0.72	0.52	3.1	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_01MAY024				54_01MAY025				54_02MAY004				54_02MAY006			
Sample Number:	02136				02137				20140502-MB				02139			
Sample Location:	F6-031				F6-033				Method Blank				SG-29-10			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	1 May 2014				1 May 2014				2 May 2014				2 May 2014			
Date Analyzed:	1 May 2014				1 May 2014				2 May 2014				2 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	2.4	0.50	9.7	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	2.9	0.50	12	2.0	0.62	0.50	2.5	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	2.0	0.52	8.0	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	12	0.53	46	2.1	2.0	0.53	7.9	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	2.3	0.51	12	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	83	0.51	450	2.7	9.2	0.51	49	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	14	0.52	53	2.0	7.3	0.52	28	2.0	U	0.52	U	2.0	15	0.52	55	2.0
Tetrachloroethene	13	0.51	91	3.4	2.9	0.51	20	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	2.1	0.52	9.2	2.3
m,p-Xylene	U	0.52	U	2.3	0.71	0.52	3.1	2.3	U	0.52	U	2.3	7.8	0.52	34	2.3
o-Xylene	U	0.52	U	2.3	1.0	0.52	4.4	2.3	U	0.52	U	2.3	5.3	0.52	23	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY007				54_02MAY008				54_02MAY009				54_02MAY010			
Sample Number:	02138				02140				02141				02142			
Sample Location:	SG-29-5				SG-22-10				SG-22-5				SG-23-5			
Sample Volume (mL)	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Date Analyzed:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	3.6	0.52	14	2.0	5.2	0.52	20	2.0	3.9	0.52	15	2.0	2.7	0.52	10	2.0
Tetrachloroethene	0.84	0.51	5.7	3.4	0.59	0.51	4.0	3.4	0.92	0.51	6.2	3.4	2.1	0.51	14	3.4
Ethyl Benzene	0.62	0.52	2.7	2.3	0.82	0.52	3.6	2.3	0.73	0.52	3.2	2.3	0.58	0.52	2.5	2.3
m,p-Xylene	2.4	0.52	10	2.3	2.9	0.52	13	2.3	1.6	0.52	6.8	2.3	1.8	0.52	7.9	2.3
o-Xylene	1.7	0.52	7.2	2.3	1.2	0.52	5.3	2.3	1.2	0.52	5.3	2.3	0.90	0.52	3.9	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY011				54_02MAY012				54_02MAY013				54_02MAY014			
Sample Number:	02143				02145				02148				02144			
Sample Location:	SG-23-10				SG-20-10				SG-19-10				SG-21-7			
Sample Volume (mL)	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Date Analyzed:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	0.92	0.50	3.6	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	2.0	0.50	8.0	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	0.55	0.52	2.2	2.1	0.74	0.52	3.0	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	58	0.53	230	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	5.2	0.53	17	1.7	12	0.53	39	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	26	0.51	140	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	4.7	0.52	18	2.0	6.1	0.52	23	2.0	9.4	0.52	36	2.0	4.5	0.52	17	2.0
Tetrachloroethene	U	0.51	U	3.4	0.70	0.51	4.7	3.4	0.90	0.51	6.1	3.4	3.0	0.51	20	3.4
Ethyl Benzene	0.63	0.52	2.7	2.3	0.83	0.52	3.6	2.3	1.0	0.52	4.5	2.3	0.74	0.52	3.2	2.3
m,p-Xylene	4.5	0.52	19	2.3	2.8	0.52	12	2.3	3.2	0.52	14	2.3	3.1	0.52	14	2.3
o-Xylene	0.89	0.52	3.9	2.3	1.1	0.52	4.6	2.3	1.3	0.52	5.7	2.3	1.0	0.52	4.4	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Soil Gas/Sewer Gas Samples
Middlefiled-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY015				54_02MAY016				54_02MAY017				54_02MAY018			
Sample Number:	02146				02147				02149				02150			
Sample Location:	SG-20-5				SG-19-5				SG-18-10				SG-18-5			
Sample Volume (mL)	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Date Analyzed:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	0.91	0.52	3.7	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	0.58	0.51	3.2	2.8	0.61	0.51	3.3	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	6.6	0.51	36	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	2.0	0.52	7.6	2.0	4.5	0.52	17	2.0	14	0.52	54	2.0	17	0.52	65	2.0
Tetrachloroethene	1.3	0.51	8.5	3.4	4.3	0.51	29	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	1.3	0.52	5.5	2.3	3.7	0.52	16	2.3	4.1	0.52	18	2.3
m,p-Xylene	1.9	0.52	8.0	2.3	3.8	0.52	16	2.3	14	0.52	59	2.3	16	0.52	71	2.3
o-Xylene	0.72	0.52	3.1	2.3	1.5	0.52	6.3	2.3	4.1	0.52	18	2.3	5.6	0.52	24	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY019				54_02MAY020				54_02MAY021				54_02MAY022			
Sample Number:	02151				02152				02153				02154			
Sample Location:	F6-053				F6-069				G6-006				G6-006			
Sample Volume (mL)	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Date Analyzed:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	2.5	0.51	13	2.7	0.60	0.51	3.2	2.7	U	0.51	U	2.7
Toluene	0.67	0.52	2.5	2.0	U	0.52	U	2.0	1.5	0.52	5.5	2.0	1.2	0.52	4.4	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	0.58	0.52	2.5	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY023				54_02MAY024				54_02MAY025				54_02MAY026			
Sample Number:	02155				02156				02157				02158			
Sample Location:	G6-024				G6-036				G6-034				G6-038			
Sample Volume (mL)	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Date Analyzed:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	1.9	0.51	10	2.7	1.6	0.51	8.3	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY027				54_02MAY028				54_02MAY029				54_02MAY031			
Sample Number:	02159				02160				02161				02162			
Sample Location:	G6-017				G6-012				G6-010				F6-057			
Sample Volume (mL)	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Date Analyzed:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	1.9	0.51	10	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	5.1	0.51	28	2.7	8.4	0.51	45	2.7
Toluene	0.63	0.52	2.4	2.0	U	0.52	U	2.0	0.57	0.52	2.1	2.0	0.74	0.52	2.8	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY032				54_02MAY033				54_02MAY035				54_02MAY036			
Sample Number:	02163				02164				02166				02167			
Sample Location:	F6-055				F6-031				F6-113				F6-013			
Sample Volume (mL)	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Date Analyzed:	2 May 2014				2 May 2014				2 May 2014				2 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	2.1	0.53	8.4	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	0.58	0.51	3.2	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	0.95	0.51	5.1	2.7	14	0.51	77	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	5.6	0.52	21	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4	7.0	0.51	47	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014
May 2014

Data File:	54_02MAY037				54_02MAY038				54_02MAY039				54_05MAY004			
Sample Number:	02168				02169				02165				20140505-MB			
Sample Location:	F6-012				F6-011				F6-017				Method Blank			
Sample Volume (mL)	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	2 May 2014				2 May 2014				2 May 2014				5 May 2014			
Date Analyzed:	2 May 2014				2 May 2014				2 May 2014				5 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY006				54_05MAY007				54_05MAY009				54_05MAY010			
Sample Number:	02172				02171				02173				02174			
Sample Location:	SG-20-10				SG-20-5				F6-009				F6-007			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Date Analyzed:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	0.84	0.50	3.3	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	1.2	0.50	4.6	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	35	0.53	140	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	16	0.51	87	2.7	7.4	0.51	40	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	4.0	0.52	15	2.0	1.3	0.52	5.0	2.0	0.88	0.52	3.3	2.0	U	0.52	U	2.0
Tetrachloroethene	0.74	0.51	5.0	3.4	1.7	0.51	11	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	0.70	0.52	3.0	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	1.9	0.52	8.4	2.3	1.1	0.52	4.6	2.3	0.90	0.52	3.9	2.3	U	0.52	U	2.3
o-Xylene	0.77	0.52	3.3	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY011				54_05MAY012				54_05MAY013				54_05MAY014			
Sample Number:	02175				02176				02177				02178			
Sample Location:	F6-005				F6-003				F6-001				F5-064			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Date Analyzed:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	0.70	0.51	3.8	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	1.6	0.52	5.9	2.0	5.0	0.52	19	2.0	11	0.52	42	2.0	12	0.52	47	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	0.85	0.52	3.7	2.3	1.2	0.52	5.0	2.3
m,p-Xylene	1.1	0.52	4.7	2.3	1.8	0.52	7.9	2.3	3.1	0.52	14	2.3	4.0	0.52	18	2.3
o-Xylene	U	0.52	U	2.3	1.0	0.52	4.4	2.3	1.9	0.52	8.0	2.3	2.6	0.52	11	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY015				54_05MAY016				54_05MAY017				54_05MAY018			
Sample Number:	02179				02180				02181				02182			
Sample Location:	F5-062				F5-060				F5-058				F5-056			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Date Analyzed:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	1.8	0.50	7.0	2.0	0.60	0.50	2.4	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	58	0.53	230	2.1	4.2	0.53	17	2.1	5.4	0.53	21	2.1	11	0.53	43	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	4.0	0.51	21	2.7	49	0.51	270	2.7	16	0.51	84	2.7	22	0.51	120	2.7
Toluene	6.0	0.52	23	2.0	2.7	0.52	10	2.0	1.8	0.52	6.6	2.0	1.4	0.52	5.1	2.0
Tetrachloroethene	9.2	0.51	62	3.4	21	0.51	140	3.4	12	0.51	82	3.4	17	0.51	110	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	0.66	0.52	2.9	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	0.64	0.52	2.8	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY019	54_05MAY020	54_05MAY021	54_05MAY022
Sample Number:	02183	02184	02185	02186
Sample Location:	F5-054	F5-011	F5-051	F5-071
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	5 May 2014	5 May 2014	5 May 2014	5 May 2014
Date Analyzed:	5 May 2014	5 May 2014	5 May 2014	5 May 2014

Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	1.7	0.53	6.7	2.1	3.6	0.53	14	2.1	2.4	0.53	9.7	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	2.8	0.51	15	2.7	6.0	0.51	32	2.7	3.7	0.51	20	2.7
Toluene	U	0.52	U	2.0	1.2	0.52	4.4	2.0	3.2	0.52	12	2.0	0.92	0.52	3.5	2.0
Tetrachloroethene	U	0.51	U	3.4	1.8	0.51	12	3.4	3.4	0.51	23	3.4	1.3	0.51	8.7	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	0.58	0.52	2.5	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY023	54_05MAY024	54_05MAY025	54_05MAY026
Sample Number:	02187	02188	02189	02190
Sample Location:	F5-069	F5-073	F5-075	F5-067
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	5 May 2014	5 May 2014	5 May 2014	5 May 2014
Date Analyzed:	5 May 2014	5 May 2014	5 May 2014	5 May 2014

Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	1.1	0.53	4.2	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	1.7	0.51	9.1	2.7	U	0.51	U	2.7	U	0.51	U	2.7	0.65	0.51	3.5	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	0.60	0.51	4.1	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	0.56	0.52	2.4	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY027	54_05MAY028	54_05MAY029	54_05MAY030
Sample Number:	02191	02192	02193	02194
Sample Location:	F5-049	F5-047	F5-074	F5-050
Sample Volume (ml):	5	5	5	5
Dilution multiplier:	1	1	1	1
Date Sampled:	5 May 2014	5 May 2014	5 May 2014	5 May 2014
Date Analyzed:	5 May 2014	5 May 2014	5 May 2014	5 May 2014

Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	2.8	0.50	11	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	18	0.53	72	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	3.3	0.51	18	2.7	3.7	0.51	20	2.7	5.1	0.51	27	2.7	33	0.51	180	2.7
Toluene	9.9	0.52	37	2.0	12	0.52	47	2.0	14	0.52	54	2.0	25	0.52	94	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	0.80	0.51	5.4	3.4	6.7	0.51	45	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	0.59	0.52	2.6	2.3	0.55	0.52	2.4	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY031				54_05MAY032				54_05MAY033				54_05MAY034			
Sample Number:	02195				02196				02197				02198			
Sample Location:	F5-034				F5-032				F5-030				F5-052A			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Date Analyzed:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	0.87	0.50	3.4	2.0	2.0	0.50	7.9	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	6.0	0.50	24	2.0	5.4	0.50	22	2.0	18	0.50	72	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	49	0.53	190	2.1	25	0.53	99	2.1	190	0.53	760	2.1	1.1	0.53	4.2	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	71	0.51	380	2.7	55	0.51	300	2.7	210	0.51	1200	2.7	3.4	0.51	18	2.7
Toluene	22	0.52	82	2.0	270	0.52	1000	2.0	3.3	0.52	13	2.0	U	0.52	U	2.0
Tetrachloroethene	14	0.51	97	3.4	14	0.51	96	3.4	36	0.51	250	3.4	0.55	0.51	3.7	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	1.1	0.52	4.9	2.3	0.76	0.52	3.3	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY035				54_05MAY036				54_05MAY037				54_05MAY038			
Sample Number:	02199				02200				02201				02202			
Sample Location:	F5-052B				F5-004				F5-006				F5-010			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Date Analyzed:	5 May 2014				5 May 2014				5 May 2014				5 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	0.86	0.50	3.4	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	8.7	0.53	35	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	9.5	0.51	51	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	1.7	0.51	12	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_06MAY004				54_06MAY006				54_06MAY007				54_06MAY009			
Sample Number:	20140506-MB				02203				02204				02205			
Sample Location:	Method Blank				F5-024				F5-026				F5-028			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Date Analyzed:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	0.67	0.50	2.7	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	6.5	0.53	26	2.1	8.5	0.53	34	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	6.8	0.51	36	2.7	7.4	0.51	40	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	2.2	0.52	8.3	2.0	37	0.52	140	2.0	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4	1.3	0.51	8.6	3.4	1.2	0.51	8.3	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_06MAY010				54_06MAY011				54_06MAY012				54_06MAY013			
Sample Number:	02206				02207				02208				02209			
Sample Location:	F5-022				F5-046				F5-048				F5-009			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Date Analyzed:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_06MAY014				54_06MAY015				54_06MAY016				54_06MAY017			
Sample Number:	02210				02211				02212				02213			
Sample Location:	F5-007				F5-045				F5-041				F5-043			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Date Analyzed:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_06MAY018				54_06MAY019				54_06MAY020				54_06MAY021			
Sample Number:	02214				02215				02216				02217			
Sample Location:	D5-016				D5-029				D5-025				D5-027			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Date Analyzed:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	1.4	0.50	5.4	2.0	6.3	0.50	25	2.0	8.9	0.50	35	2.0	8.8	0.50	35	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	0.84	0.50	3.3	2.0	3.6	0.50	14	2.0	5.4	0.50	22	2.0	5.2	0.50	21	2.0
1,1-Dichloroethane	0.70	0.52	2.8	2.1	2.9	0.52	12	2.1	4.5	0.52	18	2.1	4.5	0.52	18	2.1
cis-1,2-Dichloroethene	11	0.53	43	2.1	44	0.53	170	2.1	69	0.53	270	2.1	67	0.53	270	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	2.2	0.51	12	2.8	3.1	0.51	17	2.8	3.1	0.51	17	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	50	0.51	270	2.7	210	0.51	1100	2.7	300	0.51	1600	2.7	290	0.51	1600	2.7
Toluene	2.3	0.52	8.7	2.0	6.1	0.52	23	2.0	12	0.52	45	2.0	2.3	0.52	8.6	2.0
Tetrachloroethene	3.8	0.51	26	3.4	16	0.51	110	3.4	23	0.51	160	3.4	23	0.51	160	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_06MAY022				54_06MAY023				54_06MAY024				54_06MAY025			
Sample Number:	02218				02219				02220				02221			
Sample Location:	E5-014				E5-016				E5-003				E5-005			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Date Analyzed:	6 May 2014				6 May 2014				6 May 2014				6 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	4.7	0.50	19	2.0	U	0.50	U	2.0	4.9	0.50	19	2.0	3.6	0.50	14	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	2.9	0.50	12	2.0	U	0.50	U	2.0	2.9	0.50	11	2.0	2.3	0.50	9.0	2.0
1,1-Dichloroethane	2.4	0.52	9.7	2.1	U	0.52	U	2.1	2.5	0.52	9.9	2.1	2.2	0.52	8.7	2.1
cis-1,2-Dichloroethene	39	0.53	150	2.1	1.7	0.53	6.6	2.1	36	0.53	140	2.1	35	0.53	140	2.1
1,1,1-Trichloroethane	1.7	0.51	9.1	2.8	U	0.51	U	2.8	1.7	0.51	9.2	2.8	1.3	0.51	7.1	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	160	0.51	850	2.7	11	0.51	61	2.7	150	0.51	820	2.7	120	0.51	660	2.7
Toluene	4.8	0.52	18	2.0	U	0.52	U	2.0	2.8	0.52	10	2.0	3.8	0.52	14	2.0
Tetrachloroethene	13	0.51	88	3.4	0.67	0.51	4.5	3.4	16	0.51	110	3.4	11	0.51	72	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_07MAY005				54_07MAY007				54_07MAY008				54_07MAY009			
Sample Number:	20140507-MB				02223				02222				02224			
Sample Location:	Method Blank				B16-04				B16-05				B16-03			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	7 May 2014				7 May 2014				7 May 2014				7 May 2014			
Date Analyzed:	7 May 2014				7 May 2014				7 May 2014				7 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	14	0.50	55	2.0	39	0.50	150	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	2.3	0.50	9.3	2.0	7.3	0.50	29	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	15	0.52	59	2.1	59	0.52	240	2.1	0.95	0.52	3.8	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	42	0.53	170	2.1	160	0.53	620	2.1	3.3	0.53	13	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	3.4	0.51	18	2.8	7.3	0.51	40	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	1200	0.51	6200	2.7	3700	0.51	20000	2.7	15	0.51	81	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4	3.9	0.51	27	3.4	10	0.51	69	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_07MAY010				54_07MAY012				54_07MAY013				54_07MAY014			
Sample Number:	02225				02227				02228				02229			
Sample Location:	B16-02				SGW-4				SGW-9				SGW-8			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	7 May 2014				7 May 2014				7 May 2014				7 May 2014			
Date Analyzed:	7 May 2014				7 May 2014				7 May 2014				7 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	0.62	0.53	2.5	2.1	0.80	0.53	3.2	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	3.3	0.51	18	2.8	1.5	0.51	8.2	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	25	0.51	130	2.7	270	0.51	1400	2.7	3.8	0.51	20	2.7	U	0.51	U	2.7
Toluene	0.61	0.52	2.3	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	0.84	0.51	5.7	3.4	1.1	0.51	7.7	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_07MAY015				54_07MAY016				54_07MAY017				54_07MAY018			
Sample Number:	02230				02231				02232				02233			
Sample Location:	SGW-7				SGW-6				SGW-5				SGW-1			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	7 May 2014				7 May 2014				7 May 2014				7 May 2014			
Date Analyzed:	7 May 2014				7 May 2014				7 May 2014				7 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	0.57	0.52	2.3	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	1.5	0.51	8.2	2.8	4.9	0.51	27	2.8	1.4	0.51	7.4	2.8	0.98	0.51	5.3	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	50	0.51	270	2.7	140	0.51	760	2.7	11	0.51	57	2.7	29	0.51	160	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	0.60	0.51	4.1	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_07MAY019				54_08MAY004				54_08MAY006				54_08MAY007			
Sample Number:	02234				20140508-MB				02235				02236			
Sample Location:	SGW-2				Method Blank				F6-067				F6-065			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	7 May 2014				8 May 2014				8 May 2014				8 May 2014			
Date Analyzed:	7 May 2014				8 May 2014				8 May 2014				8 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	5.2	0.51	28	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	7.9	0.51	42	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	0.54	0.52	2.0	2.0	0.98	0.52	3.7	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	0.67	0.52	2.9	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_08MAY009				54_08MAY010				54_08MAY011				54_08MAY012			
Sample Number:	02237				02238				02239				02240			
Sample Location:	F6-063				F6-077				G6-002				G6-004			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	8 May 2014				8 May 2014				8 May 2014				8 May 2014			
Date Analyzed:	8 May 2014				8 May 2014				8 May 2014				8 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	0.64	0.52	2.4	2.0	1.4	0.52	5.1	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	0.58	0.52	2.5	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_08MAY013				54_08MAY014				54_08MAY015				54_08MAY016			
Sample Number:	02241				02242				02243				02244			
Sample Location:	G6-022				G6-020				G6-013				G6-044			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	8 May 2014				8 May 2014				8 May 2014				8 May 2014			
Date Analyzed:	8 May 2014				8 May 2014				8 May 2014				8 May 2014			
Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	0.70	0.51	3.8	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7	2.5	0.51	14	2.7
Toluene	0.76	0.52	2.9	2.0	0.98	0.52	3.7	2.0	U	0.52	U	2.0	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	0.54	0.52	2.3	2.3	0.61	0.52	2.6	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_08MAY017				54_08MAY018				54_08MAY019				54_08MAY020			
Sample Number:	02245				02246				02247				02248			
Sample Location:	G6-032				G6-030				G6-013				G6-011			
Sample Volume (ml):	5				5				5				5			
Dilution multiplier:	1				1				1				1			
Date Sampled:	8 May 2014				8 May 2014				8 May 2014				8 May 2014			
Date Analyzed:	8 May 2014				8 May 2014				8 May 2014				8 May 2014			
Compound	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL	Results (ppbv)	RL	Results (µg/m^3)	RL
Vinyl Chloride	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8	U	0.51	U	2.8
Benzene	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7	U	0.51	U	2.7
Toluene	U	0.52	U	2.0	U	0.52	U	2.0	0.61	0.52	2.3	2.0	0.80	0.52	3.0	2.0
Tetrachloroethene	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter (µg/m^3)
U= None detected at or above RL

TABLE 4 continued
Results of Target Compounds for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_08MAY021
Sample Number:	02249
Sample Location:	G6-009
Sample Volume (ml):	5
Dilution multiplier:	1
Date Sampled:	8 May 2014
Date Analyzed:	8 May 2014

Compound	Results (ppbv)	RL	Results ($\mu g/m^3$)	RL
Vinyl Chloride	U	0.52	U	1.3
1,1-Dichloroethene	U	0.50	U	2.0
Methyl Tert Butyl Ether	U	0.50	U	1.8
trans-1,2-Dichloroethene	U	0.50	U	2.0
1,1-Dichloroethane	U	0.52	U	2.1
cis-1,2-Dichloroethene	U	0.53	U	2.1
1,1,1-Trichloroethane	U	0.51	U	2.8
Benzene	U	0.53	U	1.7
Trichloroethene	U	0.51	U	2.7
Toluene	U	0.52	U	2.0
Tetrachloroethene	U	0.51	U	3.4
Ethyl Benzene	U	0.52	U	2.3
m,p-Xylene	U	0.52	U	2.3
o-Xylene	U	0.52	U	2.3

Results and Reporting Limits (RL) are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U= None detected at or above RL

TABLE 5
Replicate Summary for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_01MAY006	54_01MAY007		54_01MAY006	54_01MAY007	
Sample Number:	02121	02121		02121	02121	
Sample Location:	F5-012	F5-012 Rep		F5-012	F5-012 Rep	
Sample Volume (ml):	5	5		5	5	
Dilution multiplier:	1	1		1	1	
Date Sampled:	1 May 2014	1 May 2014		1 May 2014	1 May 2014	
Date Analyzed:	1 May 2014	1 May 2014		1 May 2014	1 May 2014	
Compound	Results (ppbv)	Results (ppbv)	RPD	Results ($\mu g/m^3$)	Results ($\mu g/m^3$)	RPD
Vinyl Chloride	U	U	NC	U	U	NC
1,1-Dichloroethene	U	U	NC	U	U	NC
Methyl Tert Butyl Ether	U	U	NC	U	U	NC
trans-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1-Dichloroethane	U	U	NC	U	U	NC
cis-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1,1-Trichloroethane	U	U	NC	U	U	NC
Benzene	79	79	0	250	250	0
Trichloroethene	U	U	NC	U	U	NC
Toluene	1.9	2.3	19	7.3	8.7	18
Tetrachloroethene	11	12	8.7	73	78	6.6
Ethyl Benzene	2.3	2.4	4.3	9.8	10	2.0
m,p-Xylene	17	18	5.7	76	80	5.1
o-Xylene	3.5	3.7	5.6	15	16	6.5

Results are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U = None detected at or above RL
NC = Not calculable
RPD = Relative Percent Difference

TABLE 5
Replicate Summary for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY029	54_02MAY030		54_02MAY029	54_02MAY030	
Sample Number:	02161	02161		02161	02161	
Sample Location:	G6-010	G6-010 Rep		G6-010	G6-010 Rep	
Sample Volume (ml):	5	5		5	5	
Dilution multiplier:	1	1		1	1	
Date Sampled:	2 May 14	2 May 14		2 May 14	2 May 14	
Date Analyzed:	2 May 14	2 May 14		2 May 14	2 May 14	
Compound	Results (ppbv)	Results (ppbv)	RPD	Results ($\mu g/m^3$)	Results ($\mu g/m^3$)	RPD
Vinyl Chloride	U	U	NC	U	U	NC
1,1-Dichloroethene	U	U	NC	U	U	NC
Methyl Tert Butyl Ether	U	U	NC	U	U	NC
trans-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1-Dichloroethane	U	U	NC	U	U	NC
cis-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1,1-Trichloroethane	1.9	1.8	5.4	10	9.9	1.0
Benzene	U	U	NC	U	U	NC
Trichloroethene	5.1	5.2	1.9	28	28	0
Toluene	0.57	0.64	12	2.1	2.4	13
Tetrachloroethene	U	U	NC	U	U	NC
Ethyl Benzene	U	U	NC	U	U	NC
m,p-Xylene	U	U	NC	U	U	NC
o-Xylene	U	U	NC	U	U	NC

Results are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U = None detected at or above RL
NC = Not calculable
RPD = Relative Percent Difference

TABLE 5
Replicate Summary for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_02MAY033	54_02MAY034		54_02MAY033	54_02MAY034	
Sample Number:	02164	02164		02164	02164	
Sample Location:	F6-031	F6-031 Rep		F6-031	F6-031 Rep	
Sample Volume (ml):	5	5		5	5	
Dilution multiplier:	1	1		1	1	
Date Sampled:	2 May 14	2 May 14		2 May 14	2 May 14	
Date Analyzed:	2 May 14	2 May 14		2 May 14	2 May 14	
Compound	Results (ppbv)	Results (ppbv)	RPD	Results ($\mu g/m^3$)	Results ($\mu g/m^3$)	RPD
Vinyl Chloride	U	U	NC	U	U	NC
1,1-Dichloroethene	U	U	NC	U	U	NC
Methyl Tert Butyl Ether	U	U	NC	U	U	NC
trans-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1-Dichloroethane	U	U	NC	U	U	NC
cis-1,2-Dichloroethene	2.1	2.1	0	8.4	8.2	2.4
1,1,1-Trichloroethane	0.58	0.55	5.3	3.2	3.0	6.5
Benzene	U	U	NC	U	U	NC
Trichloroethene	14	14	0	77	76	1.3
Toluene	5.6	5.5	1.8	21	21	0
Tetrachloroethene	7.0	6.9	1.4	47	47	0
Ethyl Benzene	U	U	NC	U	U	NC
m,p-Xylene	U	U	NC	U	U	NC
o-Xylene	U	U	NC	U	U	NC

Results are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U = None detected at or above RL
NC = Not calculable
RPD = Relative Percent Difference

TABLE 5
Replicate Summary for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_05MAY007	54_05MAY008		54_05MAY007	54_05MAY008	
Sample Number:	02171	02171		02171	02171	
Sample Location:	SG-20-5	SG-20-5 Rep		SG-20-5	SG-20-5 Rep	
Sample Volume (ml):	5	5		5	5	
Dilution multiplier:	1	1		1	1	
Date Sampled:	5 May 14	5 May 14		5 May 14	5 May 14	
Date Analyzed:	5 May 14	5 May 14		5 May 14	5 May 14	
Compound	Results (ppbv)	Results (ppbv)	RPD	Results ($\mu g/m^3$)	Results ($\mu g/m^3$)	RPD
Vinyl Chloride	U	U	NC	U	U	NC
1,1-Dichloroethene	U	U	NC	U	U	NC
Methyl Tert Butyl Ether	U	U	NC	U	U	NC
trans-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1-Dichloroethane	U	U	NC	U	U	NC
cis-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1,1-Trichloroethane	U	U	NC	U	U	NC
Benzene	U	U	NC	U	U	NC
Trichloroethene	7.4	7.4	0.4	40	40	0
Toluene	1.3	1.4	7.4	5.0	5.2	3.9
Tetrachloroethene	1.7	1.7	0	11	12	8.7
Ethyl Benzene	U	U	NC	U	U	NC
m,p-Xylene	1.1	1.1	0	4.6	4.6	0
o-Xylene	U	U	NC	U	U	NC

Results are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U = None detected at or above RL
NC = Not calculable
RPD = Relative Percent Difference

TABLE 5
Replicate Summary for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_06MAY007	54_06MAY008		54_06MAY007	54_06MAY008	
Sample Number:	02204	02204		02204	02204	
Sample Location:	F5-026	F5-026 Rep		F5-026	F5-026 Rep	
Sample Volume (ml):	5	5		5	5	
Dilution multiplier:	1	1		1	1	
Date Sampled:	6 May 14	6 May 14		6 May 14	6 May 14	
Date Analyzed:	6 May 14	6 May 14		6 May 14	6 May 14	
Compound	Results (ppbv)	Results (ppbv)	RPD	Results ($\mu g/m^3$)	Results ($\mu g/m^3$)	RPD
Vinyl Chloride	U	U	NC	U	U	NC
1,1-Dichloroethene	U	U	NC	U	U	NC
Methyl Tert Butyl Ether	U	U	NC	U	U	NC
trans-1,2-Dichloroethene	0.67	0.73	8.6	2.7	2.9	7.1
1,1-Dichloroethane	U	U	NC	U	U	NC
cis-1,2-Dichloroethene	8.5	8.1	5.3	34	32	6.1
1,1,1-Trichloroethane	U	U	NC	U	U	NC
Benzene	U	U	NC	U	U	NC
Trichloroethene	7.4	7.0	5.6	40	37	7.8
Toluene	37	33	11	140	120	15
Tetrachloroethene	1.2	1.1	9	8.3	7.4	11
Ethyl Benzene	U	U	NC	U	U	NC
m,p-Xylene	U	U	NC	U	U	NC
o-Xylene	U	U	NC	U	U	NC

Results are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U = None detected at or above RL
NC = Not calculable
RPD = Relative Percent Difference

TABLE 5
Replicate Summary for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_07MAY010	54_07MAY011		54_07MAY010	54_07MAY011	
Sample Number:	02225	02225		02225	02225	
Sample Location:	B16-02	B16-02 Rep		B16-02	B16-02 Rep	
Sample Volume (ml):	5	5		5	5	
Dilution multiplier:	1	1		1	1	
Date Sampled:	7-May-14	7-May-14		7-May-14	7-May-14	
Date Analyzed:	7-May-14	7-May-14		7-May-14	7-May-14	
Compound	Results (ppbv)	Results (ppbv)	RPD	Results ($\mu g/m^3$)	Results ($\mu g/m^3$)	RPD
Vinyl Chloride	U	U	NC	U	U	NC
1,1-Dichloroethene	U	U	NC	U	U	NC
Methyl Tert Butyl Ether	U	U	NC	U	U	NC
trans-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1-Dichloroethane	U	U	NC	U	U	NC
cis-1,2-Dichloroethene	0.62	0.66	6.3	2.5	2.6	3.9
1,1,1-Trichloroethane	U	U	NC	U	U	NC
Benzene	U	U	NC	U	U	NC
Trichloroethene	25	26	3.9	130	140	7.4
Toluene	0.61	0.66	7.9	2.3	2.5	8.3
Tetrachloroethene	0.84	0.95	12	5.7	6.4	12
Ethyl Benzene	U	U	NC	U	U	NC
m,p-Xylene	U	U	NC	U	U	NC
o-Xylene	U	U	NC	U	U	NC

Results are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U = None detected at or above RL
NC = Not calculable
RPD = Relative Percent Difference

TABLE 5
Replicate Summary for Volatile Organic Compounds in Sewer Gas/Soil Gas Samples
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, CA
May 2014

Data File:	54_08MAY007	54_08MAY008		54_08MAY007	54_08MAY008	
Sample Number:	02236	02236		02236	02236	
Sample Location:	F6-065	F6-065 Rep		F6-065	F6-065 Rep	
Sample Volume (ml):	5	5		5	5	
Dilution multiplier:	1	1		1	1	
Date Sampled:	8 May 14	8 May 14		8 May 14	8 May 14	
Date Analyzed:	8 May 14	8 May 14		8 May 14	8 May 14	
Compound	Results (ppbv)	Results (ppbv)	RPD	Results ($\mu g/m^3$)	Results ($\mu g/m^3$)	RPD
Vinyl Chloride	U	U	NC	U	U	NC
1,1-Dichloroethene	U	U	NC	U	U	NC
Methyl Tert Butyl Ether	U	U	NC	U	U	NC
trans-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1-Dichloroethane	U	U	NC	U	U	NC
cis-1,2-Dichloroethene	U	U	NC	U	U	NC
1,1,1-Trichloroethane	U	U	NC	U	U	NC
Benzene	U	U	NC	U	U	NC
Trichloroethene	U	U	NC	U	U	NC
Toluene	0.98	0.88	11	3.7	3.3	11
Tetrachloroethene	U	U	NC	U	U	NC
Ethyl Benzene	U	U	NC	U	U	NC
m,p-Xylene	0.67	0.60	11	2.9	2.6	11
o-Xylene	U	U	NC	U	U	NC

Results are in part per billion by volume (ppbv) and microgram per cubic meter ($\mu g/m^3$)
U = None detected at or above RL
NC = Not calculable
RPD = Relative Percent Difference

APPENDIX A

Chain of Custody Records

Middlefield-Ellis-Whisman Soil Gas Study

GC/MS Analytical Report

May 2014

USEPA
DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD
Middlefield-Ellis-Whisman(MEW)/NV
Contact Name: Yi-Hua-Lin
Contact Phone: 609-865-4477

No: 0220-0044
Cooler #:
Lab: SERAS-TAGA Mobile Lab-LV
Lab Phone: 609-865-4477

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	02121	F5-012	VOCs	Sewer Gas	5/1/2014	14:02	1	Tedlar Bag
	02122	E5-005/51183	VOCs	Sewer Gas	5/1/2014	14:26	1	Tedlar Bag
	02123	F5-036	VOCs	Sewer Gas	5/1/2014	14:45	1	Tedlar Bag
	02124	F5-038	VOCs	Sewer Gas	5/1/2014	14:52	1	Tedlar Bag
	02125	2193293	VOCs	Sewer Gas	5/1/2014	14:59	1	Tedlar Bag
	02126	F6-004	VOCs	Sewer Gas	5/1/2014	15:10	1	Tedlar Bag
	02127	F6-002	VOCs	Sewer Gas	5/1/2014	15:17	1	Tedlar Bag
	02128	F6-006/117232	VOCs	Sewer Gas	5/1/2014	15:33	1	Tedlar Bag
	02129	F6-010	VOCs	Sewer Gas	5/1/2014	15:46	1	Tedlar Bag
	02130	F6-021	VOCs	Sewer Gas	5/1/2014	15:57	1	Tedlar Bag
	02131	F6-023	VOCs	Sewer Gas	5/1/2014	16:02	1	Tedlar Bag
	02132	F6-019	VOCs	Sewer Gas	5/1/2014	16:08	1	Tedlar Bag
	02133	F6-025	VOCs	Sewer Gas	5/1/2014	16:17	1	Tedlar Bag
	02134	F6-027	VOCs	Sewer Gas	5/1/2014	16:25	1	Tedlar Bag
	02135	F6-029	VOCs	Sewer Gas	5/1/2014	16:32	1	Tedlar Bag
	02136	F6-031	VOCs	Sewer Gas	5/1/2014	16:39	1	Tedlar Bag
	02137	F6-033	VOCs	Sewer Gas	5/1/2014	16:51	1	Tedlar Bag

Special Instructions: VOC analyses by SOP#1741

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All Analysis	K Roesner	5-1-14	[signature]	5/1/2014	17:39						

USEPA
DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD

Middlefield-Ellis-Whisman(MEW)/NV
Contact Name: Yi-Hua-Lin
Contact Phone: 609-865-4477

No: 0220-0045
Cooler #:
Lab: SERAS-TAGA Mobile Lab-LV
Lab Phone: 609-865-4477

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	02138	SG-29-5	VOCs	Soil Gas	5/2/2014	13:03	1	Tedlar Bag
	02139	SG-29-10	VOCs	Soil Gas	5/2/2014	13:03	1	Tedlar Bag
	02140	SG-22-10	VOCs	Soil Gas	5/2/2014	13:24	1	Tedlar Bag
	02141	SG-22-5	VOCs	Soil Gas	5/2/2014	13:24	1	Tedlar Bag
	02142	SG-23-5	VOCs	Soil Gas	5/2/2014	13:43	1	Tedlar Bag
	02143	SG-23-10	VOCs	Soil Gas	5/2/2014	13:41	1	Tedlar Bag
	02144	SG-21-7	VOCs	Soil Gas	5/2/2014	13:52	1	Tedlar Bag
	02145	SG-20-10	VOCs	Soil Gas	5/2/2014	14:00	1	Tedlar Bag
	02146	SG-20-5	VOCs	Soil Gas	5/2/2014	14:01	1	Tedlar Bag
	02147	SG-19-5	VOCs	Soil Gas	5/2/2014	14:09	1	Tedlar Bag
	02148	SG-19-10	VOCs	Soil Gas	5/2/2014	14:18	1	Tedlar Bag
	02149	~~SG-177-10~~ SG-18-10	VOCs	Soil Gas	5/2/2014	14:31	1	Tedlar Bag
	02150	~~SG-177-5~~ SG-18-5	VOCs	Soil Gas	5/2/2014	14:30	1	Tedlar Bag
	02151	F6-053	VOCs	Sewer Gas	5/2/2014	14:46	1	Tedlar Bag
	02152	F6-069	VOCs	Sewer Gas	5/2/2014	14:52	1	Tedlar Bag
	02153	G6-006	VOCs	Sewer Gas	5/2/2014	14:58	1	Tedlar Bag
	02154	G6-006	VOCs	Sewer Gas	5/2/2014	15:07	1	Tedlar Bag
	02155	G6-024	VOCs	Sewer Gas	5/2/2014	15:13	1	Tedlar Bag
	02156	G6-036	VOCs	Sewer Gas	5/2/2014	15:21	1	Tedlar Bag
	02157	G6-034	VOCs	Sewer Gas	5/2/2014	15:27	1	Tedlar Bag

YHL 6/2/14

Special Instructions: SG177-10 + SG177-5 corrected per WAM's emails dated on 5/30/2014 YHL

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All Retrogas	K. Roesner	5-2-14	[illegible]	5/2/14	18:28						

USEPA
DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD
Middlefield-Ellis-Whisman(MEW)/NV
Contact Name: Yi-Hua-Lin
Contact Phone: 609-865-4477

No: 0220-0045
Cooler #:
Lab: SERAS-TAGA Mobile Lab-LV
Lab Phone: 609-865-4477

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	02158	G6-038	VOCs	Sewer Gas	5/2/2014	15:29	1	Tedlar Bag
	02159	G6-017	VOCs	Sewer Gas	5/2/2014	15:44	1	Tedlar Bag
	02160	G6-012	VOCs	Sewer Gas	5/2/2014	15:58	1	Tedlar Bag
	02161	G6-010	VOCs	Sewer Gas	5/2/2014	16:04	1	Tedlar Bag
	02162	F6-057	VOCs	Sewer Gas	5/2/2014	16:10	1	Tedlar Bag
	02163	F6-055	VOCs	Sewer Gas	5/2/2014	16:16	1	Tedlar Bag
	02164	F6-031	VOCs	Sewer Gas	5/2/2014	16:22	1	Tedlar Bag
	02165	F6-017	VOCs	Sewer Gas	5/2/2014	16:40	1	Tedlar Bag
	02166	F6-113	VOCs	Sewer Gas	5/2/2014	16:46	1	Tedlar Bag
	02167	F6-013	VOCs	Sewer Gas	5/2/2014	16:55	1	Tedlar Bag
	02168	F6-012	VOCs	Sewer Gas	5/2/2014	16:59	1	Tedlar Bag
	02169	F6-011	VOCs	Sewer Gas	5/2/2014	17:04	1	Tedlar Bag

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All Relinquished	K Rossi	5-2-14	[illegible]	5/2/2014	18:28						

USEPA
DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD
Middlefield-Ellis-Whisman(MEW)/NV
Contact Name: Yi-Hua-Lin
Contact Phone: 609-865-4477

No: 0220-0046
Cooler #:
Lab: SERAS-TAGA Mobile Lab-LV
Lab Phone: 609-865-4477

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	02171	SG-20-5	VOCs	Soil Gas	5/5/2014	09:06	1	Tedlar Bag
	02172	SG-20-10	VOCs	Soil Gas	5/5/2014	09:06	1	Tedlar Bag
	02173	F6-009	VOCs	Sewer Gas	5/5/2014	09:33	1	Tedlar Bag
	02174	F6-007	VOCs	Sewer Gas	5/5/2014	09:38	1	Tedlar Bag
	02175	F6-005	VOCs	Sewer Gas	5/5/2014	09:44	1	Tedlar Bag
	02176	F6-003	VOCs	Sewer Gas	5/5/2014	09:50	1	Tedlar Bag
	02177	F6-001	VOCs	Sewer Gas	5/5/2014	09:53	1	Tedlar Bag
	02178	F5-064	VOCs	Sewer Gas	5/5/2014	10:00	1	Tedlar Bag
	02179	F5-062	VOCs	Sewer Gas	5/5/2014	10:06	1	Tedlar Bag
	02180	F5-060	VOCs	Sewer Gas	5/5/2014	10:13	1	Tedlar Bag
	02181	F5-058	VOCs	Sewer Gas	5/5/2014	10:20	1	Tedlar Bag
	02182	F5-056	VOCs	Sewer Gas	5/5/2014	10:25	1	Tedlar Bag
	02183	F5-054	VOCs	Sewer Gas	5/5/2014	10:30	1	Tedlar Bag
	02184	F5-011	VOCs	Sewer Gas	5/5/2014	10:39	1	Tedlar Bag
	02185	F5-051	VOCs	Sewer Gas	5/5/2014	10:45	1	Tedlar Bag
	02186	F5-071	VOCs	Sewer Gas	5/5/2014	10:52	1	Tedlar Bag
	02187	F5-069	VOCs	Sewer Gas	5/5/2014	10:53	1	Tedlar Bag
	02188	F5-073	VOCs	Sewer Gas	5/5/2014	10:58	1	Tedlar Bag
	02189	F5-075	VOCs	Sewer Gas	5/5/2014	11:03	1	Tedlar Bag
	02190	F5-067	VOCs	Sewer Gas	5/5/2014	11:20	1	Tedlar Bag

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All Released	K Roesner	5-5-14	[illegible]	5/5/2014	6:28pm						

USEPA
DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD
Middlefield-Ellis-Whisman(MEW)/NV
Contact Name: Yi-Hua-Lin
Contact Phone: 609-865-4477

No: 0220-0046
Cooler #:
Lab: SERAS-TAGA Mobile Lab-LV
Lab Phone: 609-865-4477

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	02191	F5-049	VOCs	Sewer Gas	5/5/2014	11:31	1	Tedlar Bag
	02192	F5-047	VOCs	Sewer Gas	5/5/2014	11:36	1	Tedlar Bag
	02193	F5-074	VOCs	Sewer Gas	5/5/2014	11:43	1	Tedlar Bag
	02194	F5-050	VOCs	Sewer Gas	5/5/2014	11:50	1	Tedlar Bag
	02195	F5-034	VOCs	Sewer Gas	5/5/2014	11:54	1	Tedlar Bag
	02196	F5-032	VOCs	Sewer Gas	5/5/2014	11:59	1	Tedlar Bag
	02197	F5-030	VOCs	Sewer Gas	5/5/2014	12:04	1	Tedlar Bag
	02198	F5-052A	VOCs	Sewer Gas	5/5/2014	12:21	1	Tedlar Bag
	02199	F5-052B	VOCs	Sewer Gas	5/5/2014	12:26	1	Tedlar Bag
	02200	F5-004	VOCs	Sewer Gas	5/5/2014	14:10	1	Tedlar Bag
	02201	F5-006	VOCs	Sewer Gas	5/5/2014	14:16	1	Tedlar Bag
	02202	F5-010	VOCs	Sewer Gas	5/5/2014	14:21	1	Tedlar Bag

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All Released	K Roesner	5-5-14	[illegible]	5/5/2014	6:28pm						

USEPA
DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD
Middlefield-Ellis-Whisman(MEW)/NV
Contact Name: Yi-Hua-Lin
Contact Phone: 609-865-4477

No: 0220-0047
Cooler #:
Lab: SERAS-TAGA Mobile Lab-LV
Lab Phone: 609-865-4477

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	02203	F5-024	VOCs	Sewer Gas	5/6/2014	09:27	1	Tedlar Bag
	02204	F5-026	VOCs	Sewer Gas	5/6/2014	09:32	1	Tedlar Bag
	02205	F5-028	VOCs	Sewer Gas	5/6/2014	09:39	1	Tedlar Bag
	02206	F5-022	VOCs	Sewer Gas	5/6/2014	09:44	1	Tedlar Bag
	02207	F5-046	VOCs	Sewer Gas	5/6/2014	09:55	1	Tedlar Bag
	02208	F5-048	VOCs	Sewer Gas	5/6/2014	10:00	1	Tedlar Bag
	02209	F5-009	VOCs	Sewer Gas	5/6/2014	10:04	1	Tedlar Bag
	02210	F5-007	VOCs	Sewer Gas	5/6/2014	10:09	1	Tedlar Bag
	02211	F5-045	VOCs	Sewer Gas	5/6/2014	10:18	1	Tedlar Bag
	02212	F5-041	VOCs	Sewer Gas	5/6/2014	10:22	1	Tedlar Bag
	02213	F5-043	VOCs	Sewer Gas	5/6/2014	10:28	1	Tedlar Bag
	02214	D5-016	VOCs	Sewer Gas	5/6/2014	11:25	1	Tedlar Bag
	02215	D5-029	VOCs	Sewer Gas	5/6/2014	11:40	1	Tedlar Bag
	02216	D5-025	VOCs	Sewer Gas	5/6/2014	11:44	1	Tedlar Bag
	02217	D5-027	VOCs	Sewer Gas	5/6/2014	11:49	1	Tedlar Bag
	02218	E5-014	VOCs	Sewer Gas	5/6/2014	12:21	1	Tedlar Bag
	02219	E5-016	VOCs	Sewer Gas	5/6/2014	12:27	1	Tedlar Bag
	02220	E5-003	VOCs	Sewer Gas	5/6/2014	12:35	1	Tedlar Bag
	02221	E5-005	VOCs	Sewer Gas	5/6/2014	12:42	1	Tedlar Bag

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All Released	K Roesner	5-6-14	[illegible]	5/6/2014	16:54 pm						

USEPA
DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD
Middlefield-Ellis-Whisman(MEW)/NV
Contact Name: Yi-Hua-Lin
Contact Phone: 609-865-4477

No: 0220-0048
Cooler #:
Lab: SERAS-TAGA Mobile Lab-LV
Lab Phone: 609-865-4477

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	02222	B16-05	VOCs	Soil Gas	5/7/2014	11:02	1	Tedlar Bag
	02223	B16-04	VOCs	Soil Gas	5/7/2014	11:09	1	Tedlar Bag
	02224	B16-03	VOCs	Soil Gas	5/7/2014	11:16	1	Tedlar Bag
	02225	B16-02	VOCs	Soil Gas	5/7/2014	11:23	1	Tedlar Bag
	02227	~~SWG-4~~ SGW-4	VOCs	Soil Gas	5/7/2014	13:06	1	Tedlar Bag
	02228	SGW-9	VOCs	Soil Gas	5/7/2014	13:12	1	Tedlar Bag
	02229	SGW-8	VOCs	Soil Gas	5/7/2014	13:20	1	Tedlar Bag
	02230	SGW-7	VOCs	Soil Gas	5/7/2014	13:27	1	Tedlar Bag
	02231	SGW-6	VOCs	Soil Gas	5/6/2014	13:35	1	Tedlar Bag
	02232	~~SWG-5~~ SGW-5	VOCs	Soil Gas	5/7/2014	13:42	1	Tedlar Bag
	02233	SGW-1	VOCs	Soil Gas	5/7/2014	14:00	1	Tedlar Bag
	02234	SGW-2	VOCs	Soil Gas	5/7/2014	14:13	1	Tedlar Bag

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All Relinquished	L. Roesser	5-7-14	[illegible]	5/7/2014	0523 pm						

USEPA
DateShipped:
CarrierName:
AirbillNo:

CHAIN OF CUSTODY RECORD
Middlefield-Ellis-Whisman(MEW)/NV
Contact Name: Yi-Hua-Lin
Contact Phone: 609-865-4477

No: 0220-0049
Cooler #:
Lab: SERAS-TAGA Mobile Lab-LV
Lab Phone: 609-865-4477

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container
	02235	F6-067	VOCs	Sewer Gas	5/8/2014	09:37	1	Tedlar Bag
	02236	F6-065	VOCs	Sewer Gas	5/8/2014	09:43	1	Tedlar Bag
	02237	F6-063	VOCs	Sewer Gas	5/8/2014	09:48	1	Tedlar Bag
	02238	F6-077	VOCs	Sewer Gas	5/8/2014	09:56	1	Tedlar Bag
	02239	G6-002	VOCs	Sewer Gas	5/8/2014	10:01	1	Tedlar Bag
	02240	G6-004	VOCs	Sewer Gas	5/8/2014	10:06	1	Tedlar Bag
	02241	G6-022	VOCs	Sewer Gas	5/8/2014	10:13	1	Tedlar Bag
	02242	G6-020	VOCs	Sewer Gas	5/8/2014	10:18	1	Tedlar Bag
	02243	G6-013	VOCs	Sewer Gas	5/8/2014	10:24	1	Tedlar Bag
	02244	G6-044	VOCs	Sewer Gas	5/8/2014	10:36	1	Tedlar Bag
	02245	G6-032	VOCs	Sewer Gas	5/8/2014	10:50	1	Tedlar Bag
	02246	G6-030	VOCs	Sewer Gas	5/8/2014	10:55	1	Tedlar Bag
	02247	G6-013	VOCs	Sewer Gas	5/8/2014	11:04	1	Tedlar Bag
	02248	G6-011	VOCs	Sewer Gas	5/8/2014	11:08	1	Tedlar Bag
	02249	G6-009	VOCs	Sewer Gas	5/8/2014	11:13	1	Tedlar Bag

Special Instructions: SERAS SOP #1741

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by	Date	Received by	Date	Time	Items/Reason	Relinquished By	Date	Received by	Date	Time
All analyses	J McCall	5/8/2014	[illegible]	5/8/2014	12:00 pm						

APPENDIX B

Certificates of Analysis

Middlefield-Ellis-Whisman Soil Gas Study

GC/MS Analytical Report

May 2014

THE LINDE GROUP

SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ 08837-3679

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	111418443	**Cylinder Size:**	2A (8" X 47.5")
Production#:	1289804	**Cylinder # :**	CC-80994
Certification Date:	Mar-14-2014	**Cylinder Pressure:**	730 psig
P.O.# :	CC-Scott Thompson	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	24086386	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	1460 Liters
Expiration Date:	Mar-14-2015	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	20.6 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	19.9 ppm
Trans-1,2-Dichloroethylene	156-60-5	20.0 ppm	20.1 ppm
1,1-Dichloroethane	75-34-3	20.0 ppm	20.7 ppm
Methyl Tert-Butyl Ether	1634-04-4	20.0 ppm	20.1 ppm
Cis-1,2-Dichloroethylene	156-59-2	20.0 ppm	21.1 ppm
1,1,1-Trichloroethane	71-55-6	20.0 ppm	20.2 ppm
Benzene	71-43-2	20.0 ppm	21.0 ppm
Trichloroethylene	79-01-6	20.0 ppm	20.2 ppm
Toluene	108-88-3	20.0 ppm	20.8 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	20.3 ppm
Ethylbenzene	100-41-4	20.0 ppm	20.8 ppm
p-xylene	106-42-3	10.0 ppm	10.4 ppm
m-xylene	108-38-3	10.0 ppm	10.4 ppm
o-xylene	95-47-6	20.0 ppm	20.7 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: Mar-14-2014

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

THE LINDE GROUP

SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ 08837-3679

CERTIFICATE OF ANALYSIS

Sales#:	111418443	**Cylinder Size:**	2A (8" X 47.5")
Production#:	1289803	**Cylinder # :**	CC-99022
Certification Date:	Mar-14-2014	**Cylinder Pressure:**	730 psig
P.O.# :	CC-Scott Thompson	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	24086386	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	1460 Liters
Expiration Date:	Mar-14-2015	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	20.7 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	20.5 ppm
Trans-1,2-Dichloroethylene	156-60-5	20.0 ppm	20.0 ppm
1,1-Dichloroethane	75-34-3	20.0 ppm	21.0 ppm
Methyl Tert-Butyl Ether	1634-04-4	20.0 ppm	20.4 ppm
Cis-1,2-Dichloroethylene	156-59-2	20.0 ppm	21.2 ppm
1,1,1-Trichloroethane	71-55-6	20.0 ppm	20.4 ppm
Benzene	71-43-2	20.0 ppm	21.1 ppm
Trichloroethylene	79-01-6	20.0 ppm	20.4 ppm
Toluene	108-88-3	20.0 ppm	20.9 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	20.7 ppm
Ethylbenzene	100-41-4	20.0 ppm	21.0 ppm
p-xylene	106-42-3	10.0 ppm	10.4 ppm
m-xylene	108-38-3	10.0 ppm	10.4 ppm
o-xylene	95-47-6	20.0 ppm	21.0 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: Mar-14-2014

Linde Gas North America LLC

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THE LINDE GROUP

Linde

SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ 08837

CERTIFICATE OF ANALYSIS

Sales#:	110710623	**Cylinder Size:**	2A (8" X 47.5")
Production#:	2898330	**Cylinder # :**	CC-256139
Certification Date:	Aug-22-2013	**Cylinder Pressure:**	1500 psig
P.O.# :	Recert	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	14004551	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	3000 Liter
Expiration Date:	Aug-22-2014	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Bromochloromethane	74-97-5	1.00 ppm	0.96 ppm
1,4-Difluorobenzene	540-36-3	1.00 ppm	1.01 ppm
Chlorobenzene-d5	3114-55-4	1.00 ppm	1.05 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Matthew Booth

DATE: Aug-22-2013

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THE LINDE GROUP

SHIPPED TO: Lockheed Martin
2890 Woodbridge Ave.
Edison, NJ, 08837-3679

CERTIFICATE OF ANALYSIS

Sales#:	110799680	**Cylinder Size:**	2A (8" X 47.5")
Production#:	1270261	**Cylinder # :**	CC-82181
Certification Date:	Sep-09-2013	**Cylinder Pressure:**	2000 psig
P.O.# :	Warranty Replacement	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	24086387	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	4000 Liter
Expiration Date:	Sep-09-2014	**Blend Tolerance:**	10% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	5% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
4-Bromofluorobenzene	460-00-4	1.00 ppm	0.99 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: Sep-09-2013

Linde Gas North America LLC

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www.Lindeus.com

APPENDIX C

Calibration Data

Middlefield-Ellis-Whisman Soil Gas Study

GC/MS Analytical Report

May 2014

4/11/2014 - Friday Sunny
Checked tune @ 125°C, Ratio 100:56:1.6
Checked air + H2O tune N2 con 28 ~ 20%
Created C:\msdchem\1\data\2014\20140411\
Ran BFB - 54_11Apr001.D\~~BFB~~ 20140411-BFB\Tune Check\5mL ok

4/14/2014 MONDAY Sunny.
Checked tune @ 125°C, Ratio 100:58.69:1.08
Checked air + H2O N2 28 ~ 22.86%
Created C:\msdchem\1\data\2014\20140414\
Ran BFB 54_14Apr001.D\20140414-BFB\Tune Check\5mL ok
Ran CCV 54_14Apr002.D\STD\20140414-1\500ppbv CCV 1°\5mL ok
Raised oven temp to 125°C — Passed

4/15/2014 Vent + replaced 2 brandnew filaments.
Pump down system overnight!

4/16/2014 - Did BFB.u tune for new filament.
Checked tune after BFB.u autotune. Ratio 100:57.21:2.27
Checked air + H2O tune N2 28 ~ 23.12% vs 69.
Created C:\msdchem\1\data\2014\20140416\
BFB 54_16Apr001.D\20140416-BFB\Tune Check\5mL OK 95=118683
~~ICAL 10K~~ 54_146Apr002.D\20140416-MB\Method Blank\5mL H2A
54_146Apr003.D\20140416-SB\System Blank\5mL w/o H2A
Ical 10K 54_146Apr004.D\STD20140416-1\10,000ppbv ICAL 1°\5mL
2K 54_146Apr005.D\STD20140416-2\2,000ppbv ICAL 1°\5mL
100 54_146Apr006.D\STD20140416-4\100ppbv ICAL 1°\5mL
500 54_146Apr007.D\STD20140416-3\500ppbv 1° ICAL\5mL
5 54_146Apr008.D\STD20140416-5\5ppbv 1° ICAL\5mL
0.5 54_146Apr009.D\STD20140416-6\0.5ppbv 1° ICAL\5mL
ICV 54_146Apr010.D\STD20140416-7\500ppbv ICV 2°\5mL
MB 54_146Apr011.D\20140416-MB\Method Blank\5mL H2A

Standards Used { ISTD CC 256139 Lot# 042214-08 Exp'd 5/22/14
BFB CC 82181 Lot# 042214-07 "
1° STD CC 80994 Lot# 042214-05 "
2° STD CC 99022 Lot# 042214-06 "

Continued on Page
Read and Understood By
Signed Date Signed Date 4/16/2014

4/16/2014 Continued.

LOD STUDY
54-16Apr012.D\STD20140416-LOD1\1ppbv, 1°, CC80994\5mL
54-16Apr013.D\STD20140416-LOD2\1ppbv, 1°, CC80994\5mL
54-16Apr014.D\STD20140416-LOD3\ " \5mL
54-16Apr015.D\STD20140416-LOD4\ " \5mL
54-16Apr016.D\STD20140416-LOD5\ " \5mL
54-16Apr017.D\STD20140416-LOD6\ " \5mL
54-16Apr018.D\STD20140416-LOD7\ " \5mL
54-16Apr019.D\20140416-LCS\500ppbv, 2°, CC99022\5mL
54-16Apr020.D\STD20140416-LOQ\1ppbv, 2°, CC99022\5mL NG
54-16Apr021.D\STD20140416-LOQ\1ppbv, 2°, CC99022\5mL OK

4/18/2014 Friday P. Sunny / P. Cloudy (4/17/14 - Data Process for ICAL + LOD/LOQ)
Checked tune @ 125°C, Ratio 100:56.37:2.23
Checked air + water tune, N2 28 ~ 12.46%
Created C:\msdchem\1\data\2014\20140418\ 95=13.2048
Ran BFB 54_18Apr001.D\20140418-BFB\Tune Check\5mL 1ppm BFB OK
Ran CCV 54_18Apr002.D\STD20140418-1\500ppbv, 1°, CCV\5mL OK
Ran LLCCV 54_18Apr003.D\STD20140418-3\0.5ppbv, 1°, LLCCV\5mL OK
Ran MB 54_18Apr004.D\20140418-MB\Method Blank\5mL H2A OK
Raised oven temp to 125°C

4/21/2014 Monday, Sunny
Checked tune @ 125°C, Ratio 100:56.15:2.25
Checked air + water tune ion 28 N2 ~ 28.76%
Created C:\msdchem\1\data\2014\20140421\ 95=14.617-6 ppm
Ran BFB 54_21Apr001.D\20140421-BFB\Tune check\5mL OK
CCV 54_21Apr002.D\STD20140421-1\500ppbv, 1°, CCV\5mL OK
LLCCV 54_21Apr003.D\STD20140421-3\0.5ppbv, 1°, LLCCV\5mL Bad Inj
" 54_21Apr004.D\ " \ " \5mL OK
MB 54_21Apr005.D\20140421-MB\Method Blank\5mL New Tedlar Bag check
" 54_21Apr006.D\20140421-MB\ " \ " " "
Raised Oven Temp to 125°C

Continued on Page

Read and Understood By

Signed Date Signed Date

Thursday
5/1/2014 Checked Tune @ 25°C, Ratio - 100:56.36:1.98.
Checked air + water tune ion 28 vs. 69 - 28.54%
Created C:\msdchem\1\data\2014\20140501\
Ran BFB. 54_01May001.D\20140501-BFB\Tune Check\5mL 1ppbv OK
CCV. 54_01May002.D\STD20140501-1\500ppbv, 1°, CCV\5mL OK 95=100/51
LLCCV 54_01May003.D\STD20140501-3\0.5ppbv, LLCCV, 1°\5mL OK
CCV-STD PREP. 975mL HZA + 25mL 1° 20ppm stock, CC80994, Lot 042214-05
LCCV - 1100 steps - Prep STD20140501-2 5ppbv. Exp. 5/22/14.
① 10mL 500ppbv, of STD20140501-1 + 990mL HZA - then Prep 0.5ppbv
② 100mL of STD20140501-2 5ppb + 900mL HZA.
- ISTD CC265139 - Lot# 042214-08 Exp. 5/20/2014
- BFB - CC 821288 Lot # 042214-07 Exp. 5/22/2014
- 2° STD CC 99022 Lot # 042214-06 Exp 5/22/2014

Prep LCS. 975mL HZA + 25mL of 2° STD → LCS 20140501-LCS

Ran - MB 54_01May004.D\20140501-MB\Method Blank\5mL HZA ok
LCS 54_01May005.D\20140501-LCS\500ppbv, 2°, LCS\5mL ok
~~54_01May006.D\02121\F5-012\5mL ok~~
~~54_01May007.D\02121\F5-012 dup\5mL ok~~
54_01May006.D\02121\F5-012\5mL ok
54_01May007.D\02121\F5-012 dup\5mL ok
54_01May008.D\02122\F5-005/51183\5mL ok
54_01May009.D\02123\F5-036\5mL ok
54_01May010.D\02124\F5-038\5mL ok
54_01May011.D\02125\2193293\5mL ~~ok~~ not used.
54_01May012.D\02125\2193293\5mL ok
54_01May013.D\02126\F6-004\5mL ok
54_01May014.D\02127\F6-002\5mL ok
54_01May015.D\02128\F6-006/117232\5mL ok
54_01May016.D\02129\F6-010\5mL ok
54_01May017.D\02130\F6-021\5mL ok
54_01May018.D\02131\F6-023\5mL ok
54_01May019.D\02132\F6-019\5mL ok
54_01May020.D\02132\F6-019\5mL N.G.
54_01May021.D\02133\F6-025\5mL ok
54_01May022.D\02134\F6-027\5mL ok
54_01May023.D\02135\F6-029\5mL ok
54_01May024.D\02136\F6-031\5mL ok
54_01May025.D\02137\F6-033\5mL ok

Continued on Page
Read and Understood
Signed Date Signed Date 5/1/14

5/2/2014. Friday
Checked Tune @ 125°C, Ratio 100 : 53.48 : 1.86.
Checked air + H2O. ion 28 vs 69 - 31.65%.
Created c:\msdchem\1\data\2014\20140502\
Ran BFB. 54_02May001.D\20140502-BFB\Tunecheck\5mL, 1ppm OK
Ran CCV. 54_02May002.D\STD20140502-1\500ppb, 1°, CCV\5mL 96 → 8/552
LLCCV. 54_02May003.D\STD20140502-3\0.5ppb, 1°, LLCCV\5mL OK
MB. 54_02May004.D\20140502-MB\Method Blank\5mL H2O OK
LCS. 54_02May005.D\20140502-LCS\500ppb, 2°, LCS\5mL OK
(all standard prep info. please see p. 79)

54_02May006.D\02139\SG-29-10\5mL limited sample vol. bag flat.
54_02May007.D\02138\SG-29-5\5mL
54_02May008.D\02140\SG-22-10\5mL limited sample vol. bag flat.
54_02May009.D\02141\SG-22-5\5mL
54_02May010.D\02142\SG-23-5\5mL
54_02May011.D\02143\SG-23-10\5mL limited sample vol.
54_02May012.D\02145\SG-20-10\5mL "
54_02May013.D\02148\SG-19-10\5mL "
54_02May014.D\02144\SG-21-7\5mL
54_02May015.D\02146\SG-20-5\5mL
54_02May016.D\02147\SG-19-5\5mL
54_02May017.D\02149\SG-177-10\5mL revised per WBM Dave Mickunas on 5/30/14
54_02May018.D\02150\SG-177-5\5mL
54_02May019.D\02151\F6-053\5mL
54_02May020.D\02152\F6-069\5mL
54_02May021.D\02153\G6-006\5mL
54_02May022.D\02154\G6-006\5mL
54_02May023.D\02155\G6-024\5mL
54_02May024.D\02156\G6-036\5mL
54_02May025.D\02157\G6-034\5mL
54_02May026.D\02158\G6-038\5mL
54_02May027.D\02159\G6-017\5mL
54_02May028.D\02160\G6-012\5mL
54_02May029.D\02161\G6-010\5mL
54_02May030.D\02161\G6-010 dup\5mL

Continued on Page

Read and Understood By
5/2/2014

5/2/2014 (continued)
54_02May031.D\02162\F6-057\5mL
54_02May032.D\02163\F6-055\5mL
54_02May033.D\02164\F6-031\5mL
54_02May034.D\~~02165\F6-017\5mL~~ vm 02164 ~~dup~~ \F6-031 dup\5mL
54_02May035.D\02166\F6-113\5mL
54_02May036.D\02167\F6-013\5mL
54_02May037.D\02168\F6-012\5mL
54_02May038.D\02169\F6-011\5mL
54_02May039.D\02165\F6-017\5mL
Raised Oven to 25°C

5/5/2014 - Monday
Checked Tune @ 25°C Ratio 100:53.31:1.83.
Checked air + water tune ok. iON28 ~ 22.49%
Created C:\msdchem\1\data\2014\20140505\
Ran BFB. 54_05May001.D\20140505BFB\5mL (ppm) OK 95=6757
54_05May002.D\STD20140505-1\500ppbv, 1°, CCV\5mL ok
54_05May003.D\STD20140505-3\0.5ppbv, 1° LLCCV\5mL ok
54_05May004.D\20140505-MB\Method Blank\5mL H2A ok
54_05May005.D\20140505-LCS\500ppbv, 2° LCS\5mL ok
54_05May006.D\02172\SG-20-10\5mL
54_05May007.D\02171\SG-20-5\5mL
54_05May008.D\02171\SG-20-5 dup\5mL
~~54_05May009.D~~ vm
vm 54_05May009.D\02173\F6-009\5mL
54_05May010.D\02174\F6-007\5mL
54_05May012.D\02175\F6-005\5mL
54_05May013.D\02176\F6-003\5mL
54_05May014.D\02177\F6-001\5mL
54_05May015.D\02178\F5-064\5mL
54_05May016.D\02179\F5-062\5mL
54_05May017.D\02180\F5-060\5mL
54_05May018.D\02182\F5-056\5mL
54_05May019.D\02183\F5-054\5mL
54_05May020.D\02184\F5-011\5mL

Continued on Page

Read and Understood By 5/5/2014

Signed Date Signed Date

54_05May009.D\02173\F6-009\5mL
54_05May010.D\02174\F6-007\5mL
54_05May011.D\02175\F6-005\5mL
54_05May012.D\02176\F6-003\5mL
54_05May013.D\02177\F6-001\5mL
54_05May014.D\02178\F5-064\5mL
54_05May015.D\02179\F5-062\5mL
54_05May016.D\02180\F5-060\5mL
54_05May017.D\02181\F5-058\5mL
54_05May018.D\02182\F5-056\5mL
54_05May019.D\02183\F5-054\5mL
54_05May020.D\02184\F5-011\5mL
54_05May021.D\02185\F5-051\5mL
54_05May022.D\02186\F5-071\5mL
54_05May023.D\02187\F5-069\5mL
54_05May024.D\02188\F5-073\5mL
54_05May025.D\02189\F5-075\5mL
54_05May026.D\02190\F5-067\5mL
54_05May027.D\02191\F5-049\5mL
54_05May028.D\02192\F5-047\5mL
54_05May029.D\02193\F5-074\5mL
54_05May030.D\02194\F5-050\5mL
54_05May031.D\02195\F5-034\5mL
54_05May032.D\02196\F5-032\5mL
54_05May033.D\02197\F5-030\5mL
54_05May034.D\02198\F5-052A\5mL
54_05May035.D\02199\F5-052B\5mL
54_05May036.D\02200\F5-004\5mL
54_05May037.D\02201\F5-006\5mL
54_05May038.D\02202\F5-010\5mL
Raised oven temp to 125°C

Continued on Page

Read and Understood By

Signed Date Signed 5/5/2024 Date

5/6/2014 Tuesday
Checked tune @ 25°C, Ratio 100:
Checked air and water tune ion 28 ~ 24.88%
Created C:\msdchem\1\data\2014\20140506\
Ran BFB 54_06May001.D\20140506-BFB\Tune check\5mL\1ppm\ OK
CCV 54_06May002.D\STD20140506-1\500ppbv, 1° CCV\5mL OK 95=7257
LLCCV 54_06May003.D\STD20140506-3\0.5ppbv, 1° CCV\5mL OK
MB 54_06May004.D\20140506-MB\Method Blank\5mL OK
LCS 54_06May005.D\20140506-LCS\500ppbv, 2°, LCS\5mL OK
Samples 54_06May006.D\02203\F5-024\5mL
54_06May007.D\02204\F5-026\5mL
54_06May008.D\02204\F5-026 dup\5mL
54_06May009.D\02205\F5-028\5mL
54_06May010.D\02206\F5-022\5mL
54_06May011.D\02207\F5-046\5mL
54_06May012.D\02208\F5-048\5mL
54_06May013.D\02209\F5-009\5mL
54_06May014.D\02210\F5-007\5mL
54_06May015.D\02211\F5-045\5mL
54_06May016.D\02212\F5-041\5mL
54_06May017.D\02213\F5-043\5mL
54_06May018.D\02214\D5-016\5mL
54_06May019.D\02215\D5-029\5mL
54_06May020.D\02216\D5-025\5mL
54_06May021.D\02217\D5-027\5mL
54_06May022.D\02218\E5-014\5mL
54_06May023.D\02219\E5-016\5mL
54_06May024.D\02220\E5-003\5mL
54_06May025.D\02221\E5-005\5mL
Raised oven temp to 125°C

Continued on Page

Read and Understood By

Signed Date Signed Date 5/6/2014

5/7/2014 Wednesday-
Checked Tune @ 125°C. Ratio - 100:109.56 = 1.52.
Checked air + water tune. N2 28 - 28.51%
Created c:\msdchem\1\data\2014\20140507\
Ran BFB 54_07May001.D\20140507-BFB\Tune Check\5mL (PPMV OK 95=81680
Ran CCV 54_07May002.D\STD20140507-1\500ppbv,1°,CCV\5mL
LLCCV 54_07May003.D\STD20140507-3\0.5ppbv,1°,LLCCV\5mL N.4 Bag leaks
LLCCV 54_07May004.D\STD20140507-3\0.5ppbv,1°,LLCCV\5mL new bag
MB 54_07May005.D\20140507-MB\Method Blank\5mL HPA OK
LCS 54_07May006.D\20140507-LCS\500ppbv,2°,LCS\5mL OK
Samples- 54_07May007.D\02221\B16-08\5mL
54_07May008.D\02222\B16-05\5mL
54_07May009.D\02224\B16-03\5mL
54_07May010.D\02225\B16-02\5mL
54_07May011.D\02225\B16-02 dup\5mL
54_07May012.D\02227\SGW-4\5mL
54_07May013.D\02228\SGW-9\5mL
54_07May014.D\02229\SGW-8\5mL
54_07May015.D\02230\SGW-7\5mL
54_07May016.D\02231\SGW-6\5mL
54_07May017.D\02232\SGW-5\5mL
54_07May018.D\02233\SGW-1\5mL
54_07May019.D\02234\SGW-2\5mL

5/8/2014 Thursday-
Checked Tune @ 125°C - Ratio 100:50.11:17.1
Checked air + water ion 28 ~ 27.24%
Created c:\msdchem\1\data\2014\20140508\
Ran BFB 54_08May001.D\20140508-BFB\Tune Check\5mL (PPMV .95=
CCV 54_08May002.D\STD20140508-1\500ppbv,1°,CCV\5mL OK
LLCCV 54_08May003.D\STD20140508-3\0.5ppbv,1°,LLCCV\5mL OK
MB 54_08May004.D\20140508-MB\Method Blank\5mL HPA OK
LCS 54_08May005.D\20140508-LCS\2°,500ppbv,LCS\5mL OK
Samples. 54_08May006.D\02235\F6-067\5mL
54_08May007.D\02236\F6-065\5mL
54_08May008.D\02236\F6-065 dup\5mL

Continued on Page

Read and Understood By

Signed Date Signed 5/8/2014 Date

PROJECT MEW

Notebook No.

Continued From Page 84

5/8/2014 Thursday (Continued)

54_08May009.D\02237\F6-063\5mL
54_08May010.D\02238\F6-077\5mL
54_08May011.D\02239\G6-002\5mL
54_08May012.D\02240\G6-004\5mL
54_08May013.D\02241\G6-022\5mL
54_08May014.D\02242\G6-020\5mL
54_08May015.D\02243\G6-013\5mL
54_08May016.D\02244\G6-041\5mL
54_08May017.D\02245\G6-032\5mL
54_08May018.D\02246\G6-030\5mL
54_08May019.D\02247\G6-013\5mL
54_08May020.D\02248\G6-011\5mL
54_08May021.D\02249\G6-009\5mL

Raised oven temp to 125°C

5/8/2014

Continued on Page

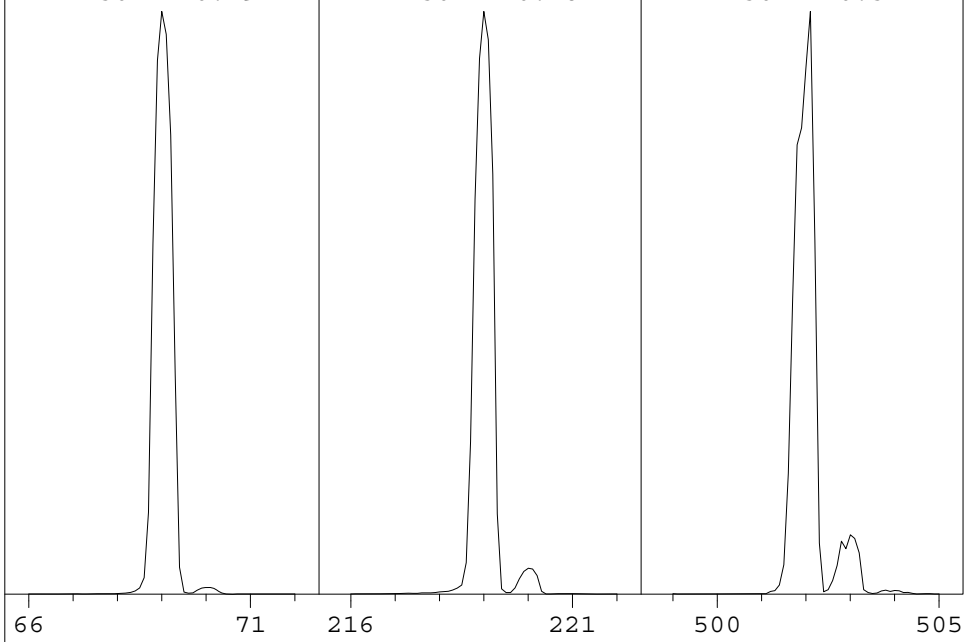
Read and Understood By

Signed Date Signed Date

5975 BFB Dynamic Target Tune

Wed Apr 16 09:14:20 2014 Instrument: GCMS
C:\MSDCHEM\1\5975\bfb.u US91732436

Mass	69.00	Mass	219.00	Mass	502.10
Ab	826050	Ab	469894	Ab	19470
Pw50	0.49	Pw50	0.48	Pw50	0.52

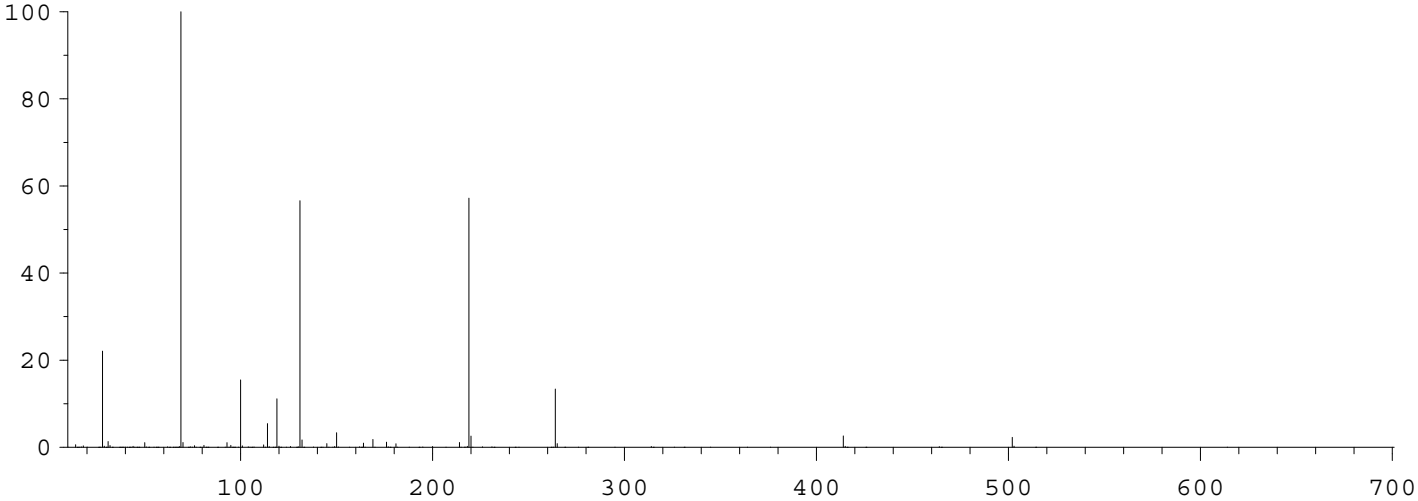


Ion Pol	Pos	MassGain	-791
		MassOffs	-37
Emission	34.6	AmuGain	1593
EIEnrgy	69.9	AmuOffs	129.88
Filament	2	Wid219	-0.029
		DC Pol	Pos
Repeller	19.90		
IonFcus	79.7	HEDEnab	On
EntLens	0.0	EMVolts	1953
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.13e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
142 peaks Base: 69.00 Abundance: 916800



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	916800	100.00	70.00	10108	1.10
219.00	524544	57.21	220.00	23536	4.49
502.00	20816	2.27	503.00	2413	11.59

Air/Water Check: H20~0.35% N2~22.09% O2~0.42% CO2~0.21% N2/H2O~6280.89%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 204777
Repeller Maximum 20 volts using ion 219; Gain Factor 2.05

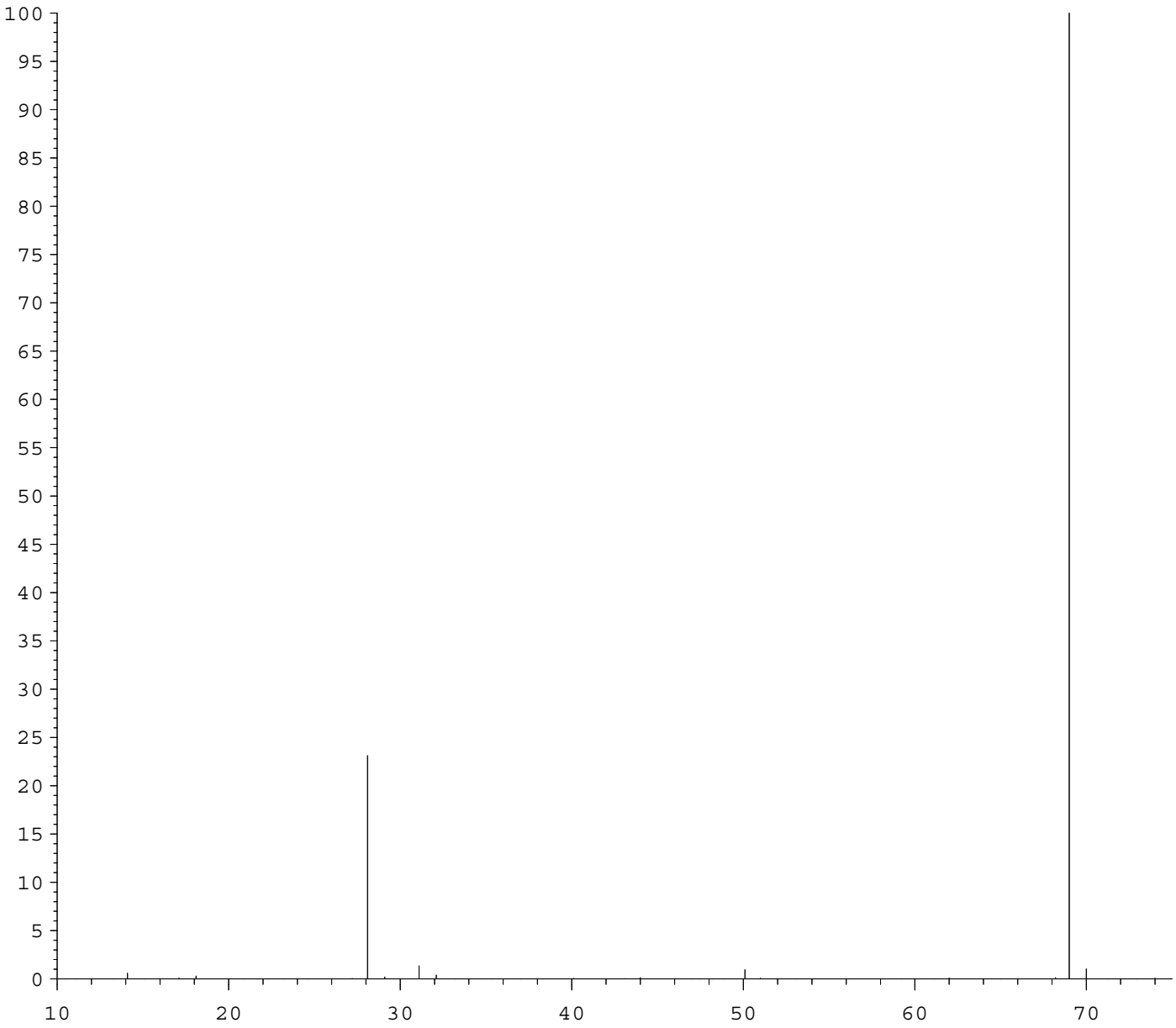
MassGain Values(Samples): -782(3) -767(2) -741(1) -706(0) -636(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.9	129.9	129.9	129.9	129.9	129.9	129.9
Entrance Lens Offset:	16.8	13.8	14.1	13.8	14.1	14.1	14.1
Target Abund(%):	1.0	100.0	55.0	55.0	2.4	2.0	
Actual Tune Abund(%):	1.1	100.0	56.6	57.2	2.6	2.3	

597x Air and Water Check

Instrument: GCMS
Wed Apr 16 10:13:52 2014 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
69 peaks Base: 69.00 Abundance: 939712



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	939712	100.00	70.00	9798	1.04
18.10	2904	0.31	19.10	173	5.96
28.10	217216	23.12	29.10	1866	0.86

Current Params used: bfb.u

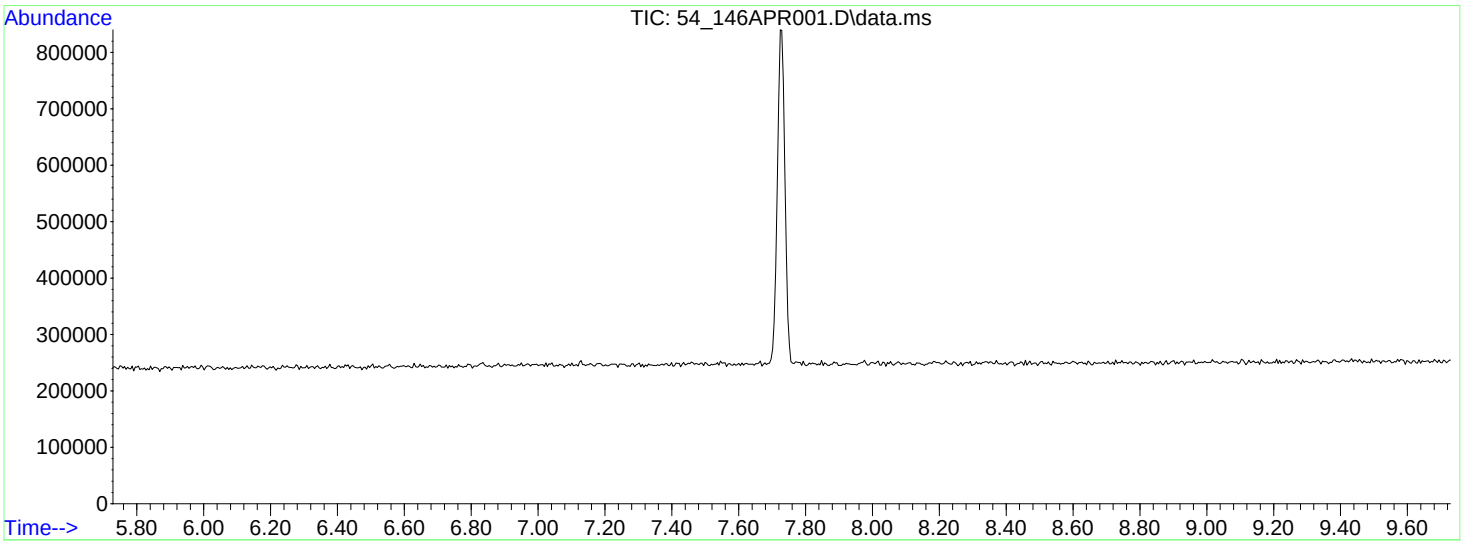
Relative abundances:

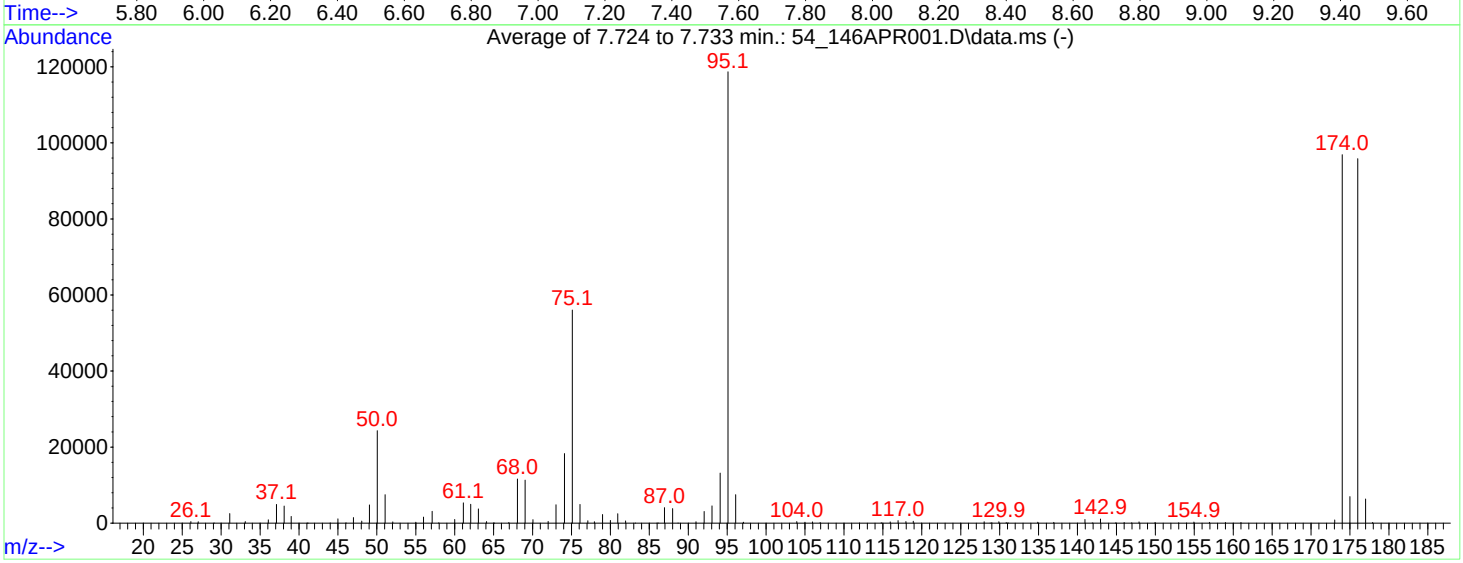
18/69 =	0.31	Water%	(counts=2904)
28/69 =	23.12	Nitrogen%	(counts=217216)
32/69 =	0.40	Oxygen%	(counts=3755)
44/69 =	0.13	Carbon Dioxide%	(counts=1178)
28/18 =	7479.89	Nitrogen/Water%	

Data Path : C:\msdchem\1\DATA\2014\20140416\
Data File : 54 146APR001.D
Acq On : 16 Apr 2014 10:03 am
Operator : yhl
Sample : 20140416-BFB \ Tune Check
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20140409.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 09 12:37:29 2014
Last Update : Mon Apr 14 15:25:05 2014





AutoFind: Scans 903, 904, 905; Background Corrected with Scan 893

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	20.5	24307	PASS
75	95	30	66	47.2	56053	PASS
95	95	100	100	100.0	118683	PASS
96	95	5	9	6.3	7472	PASS
173	174	0.00	2	0.9	860	PASS
174	95	50	120	81.7	96907	PASS
175	174	4	9	7.2	6982	PASS
176	174	93	101	98.9	95821	PASS
177	176	5	9	6.6	6348	PASS

Response Factor Report GCMS

Method Path : C:\msdchem\1\METHODS\
Method File : LOOP20140416.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:05:02 2014
Last Update : Wed Apr 16 13:21:03 2014
Response Via : Initial Calibration

Calibration Files
10A =54_146APR004.D 2000=54_146APR005.D 500 =54_146APR007.D 100 =54_146APR006.D 5 =54_146

	Compound	10A	2000	500	100	5	0.5	Avg	%RSD
1)	ISTDBromochloromethane	----------ISTD----------							
2)	M Vinyl chloride	0.363	0.431	0.367	0.373	0.404	0.344	0.380	8.31
3)	M 1,1-Dichloroet...	0.691	0.886	0.769	0.784	0.758	0.760	0.774	8.17
4)	M Methyl Tert Bu...	1.037	1.324	1.149	1.153	1.152	1.281	1.183	8.79
5)	M trans-1,2-Dich...	0.584	0.760	0.676	0.681	0.695	0.700	0.683	8.37
6)	M 1,1-Dichloroet...	0.693	0.911	0.804	0.817	0.827	0.838	0.815	8.65
7)	M cis-1,2-Dichlo...	0.548	0.722	0.647	0.647	0.653	0.608	0.637	9.00
8)	M 1,1,1-Trichlor...	0.884	1.167	1.058	1.053	1.076	0.964	1.034	9.47
9)	ISTD1,4-Difluorobenzene	----------ISTD----------							
10)	M Benzene	0.369	0.483	0.450	0.445	0.469	0.526	0.457	11.35
11)	M Trichloroethene	0.200	0.260	0.251	0.242	0.258	0.282	0.249	10.97
12)	ISTDChlorobenzene-d5	----------ISTD----------							
13)	M Toluene	0.451	0.578	0.602	0.552	0.668	0.746	0.599	16.81
14)	M Tetrachloroethene	0.280	0.333	0.347	0.310	0.380	0.405	0.342	13.30
15)	M Ethyl Benzene	0.619	0.721	0.768	0.658	0.866	0.936	0.761	15.98
16)	M m, p-Xylene	0.482	0.532	0.585	0.491	0.668	0.748	0.584	18.09
17)	M o-Xylene	0.495	0.542	0.590	0.497	0.678	0.753	0.593	17.58

(#) = Out of Range

LOOP20140416.M Wed Apr 16 13:21:13 2014 ERDUAN

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\data\20140416\54_146APR001.D
Tune Time : 16 Apr 2014 10:03 am

Daily Calibration File : C:\msdchem\1\DATA\2014\20140416\54_146APR007.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		4384	11753	10781
54_146APR004.D	STD2014041	4165	11202	10580
54_146APR005.D	STD2014041	3914	10659	10067
54_146APR006.D	STD2014041	4271	11486	10684
54_146APR007.D	STD2014041	4384	11753	10781
54_146APR008.D	STD2014041	4301	11956	10550
54_146APR009.D	STD2014041	4520	12215	11057
54_146APR010.D	STD2014041	4604	12652	11813
54_146APR011.D	20140416-M	4155	11291	10178
54_146APR012.D	STD2014041	4753	12890	11688
54_146APR013.D	STD2014041	4714	12782	11647
54_146APR014.D	STD2014041	5718	15428	13991
54_146APR015.D	STD2014041	4741	12797	11669
54_146APR016.D	STD2014041	4468	12071	10856
54_146APR017.D	STD2014041	4826	12957	11762
54_146APR018.D	STD2014041	4785	12814	11609
54_146APR019.D	20140416-L	4647	12435	11318
54_146APR020.D	STD2014041	4805	12854	11598
54_146APR021.D	STD2014041	4546	12162	11038

(fails) - fails 24hr time check * - fails criteria

Created: Thu Apr 17 17:58:06 2014 GCMS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR004.D
Acq On : 16 Apr 2014 11:09 am
Operator : yhl
Sample : STD20140416-1 \10000 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 17 15:30:36 2014
Quant Method : C:\Users\ylin\Documents\LOD LOQ20140416\20140416\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:21:03 2014
QLast Update : Wed Apr 16 13:21:03 2014
Response via : Initial Calibration

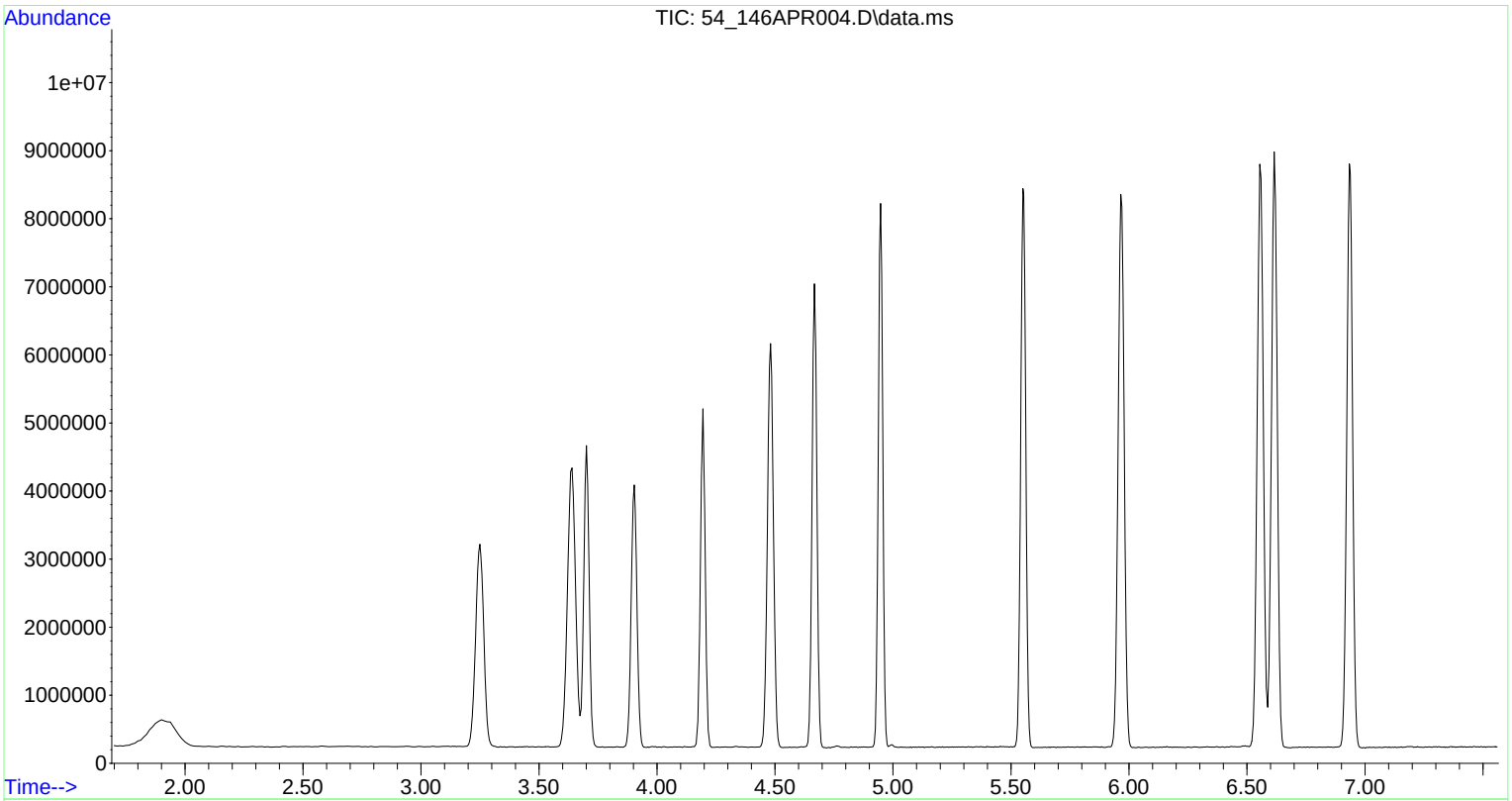
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4165	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.764	114	11202	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10580	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	1558169	9838.39	ppbv #	73
3] 1,1-Dichloroethene	3.247	61	2864384	8879.75	ppbv #	81
4] Methyl Tert Butyl Ether	3.636	73	4338626	8809.07	ppbv #	85
5] trans-1,2-Dichloroethene	3.703	61	2443246	8593.78	ppbv #	76
6] 1,1-Dichloroethane	3.905	63	2987287	8801.87	ppbv #	89
7] cis-1,2-Dichloroethene	4.190	61	2406793	9065.38	ppbv #	75
8] 1,1,1-Trichloroethane	4.483	97	3717716	8635.15	ppbv	96
10] Benzene	4.669	78	4343065	8487.11	ppbv #	92
11] Trichloroethene	4.945	130	2264554	8128.15	ppbv	97
13] Toluene	5.553	91	4967389	7832.22	ppbv	96
14] Tetrachloroethene	5.967	166	3003521	8291.42	ppbv	99
15] Ethyl Benzene	6.556	91	6807541	8452.11	ppbv	99
16] m, p-Xylene	6.617	91	5301500	8576.33	ppbv	97
17] o-Xylene	6.936	91	5422765	8650.58	ppbv	97

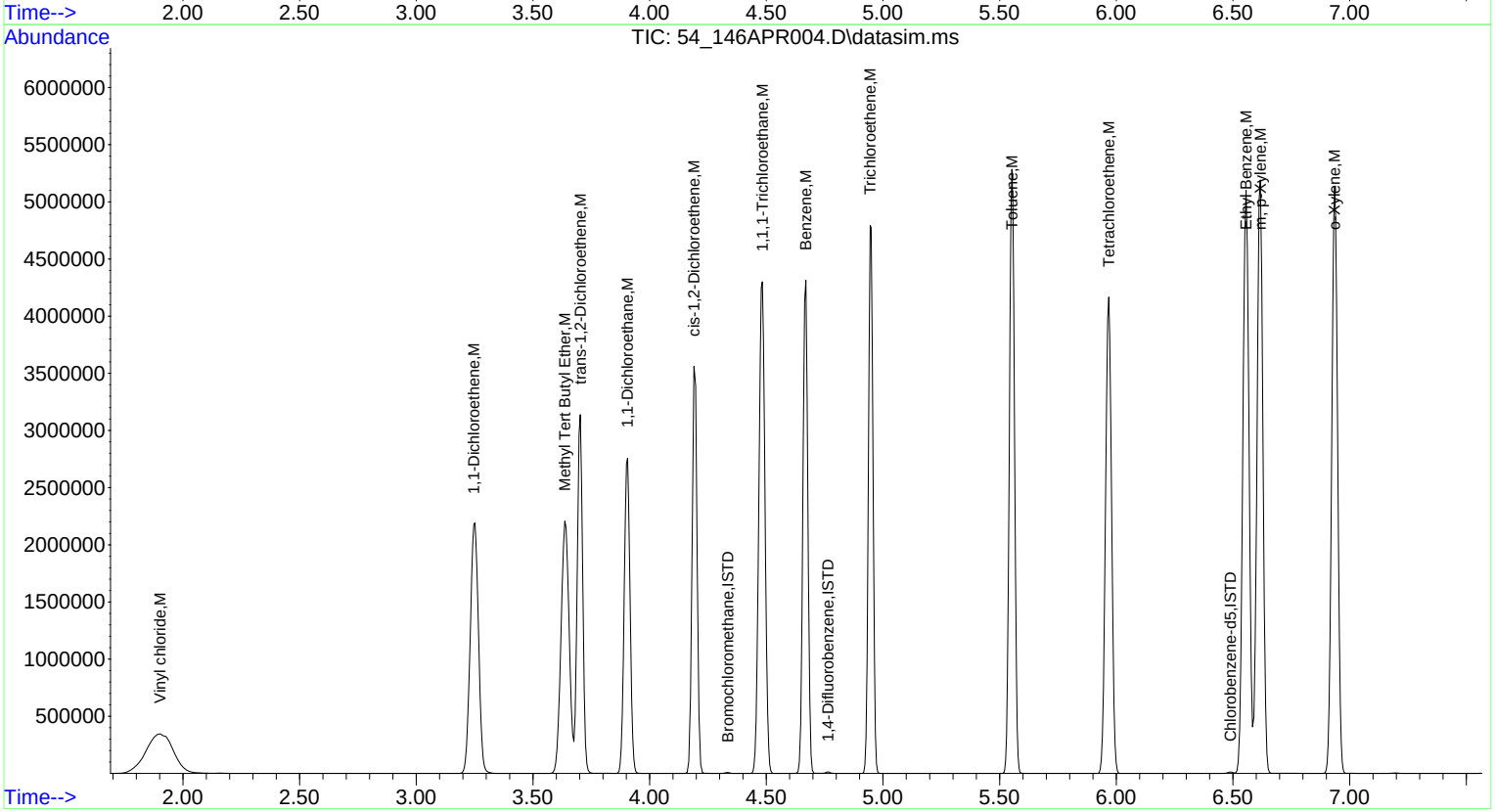
(#) = qualifier out of range (m) = manual integration (+) = signals summed

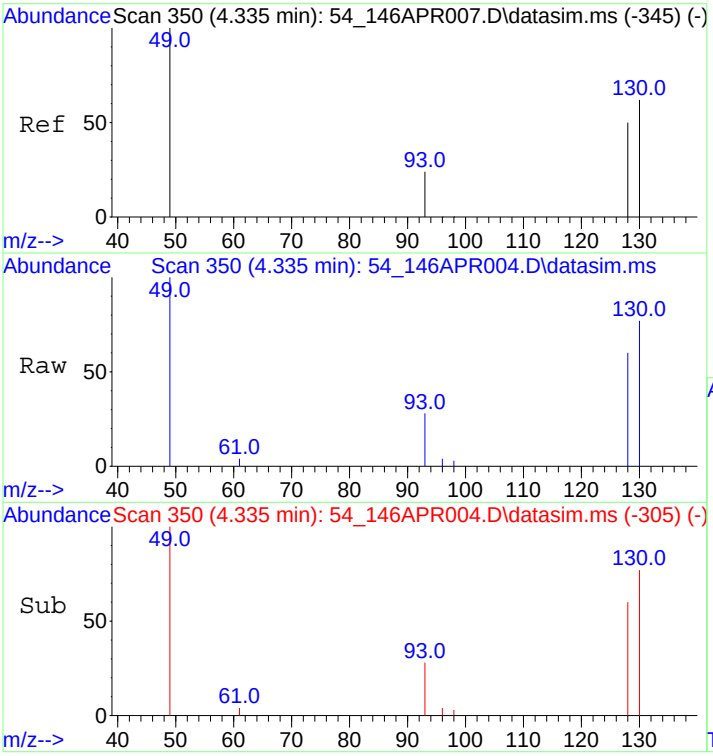
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR004.D
Acq On : 16 Apr 2014 11:09 am
Operator : yhl
Sample : STD20140416-1 \10000 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 17 15:30:36 2014
Quant Method : C:\Users\ylin\Documents\LOD LOQ20140416\20140416\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:21:03 2014
QLast Update : Wed Apr 16 13:21:03 2014
Response via : Initial Calibration



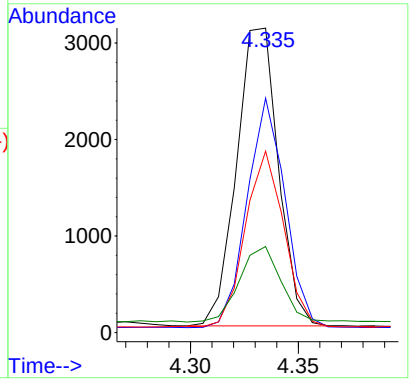


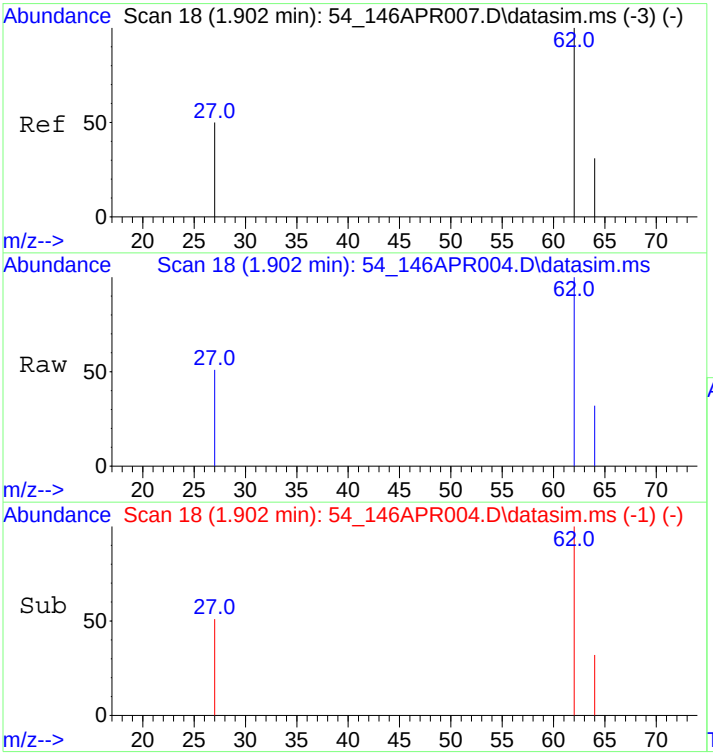


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 49 Resp: 4165

Ion	Ratio	Lower	Upper
49	100		
130	70.0	87.2	130.8#
128	54.3	68.0	102.0#
93	25.8	29.3	43.9#

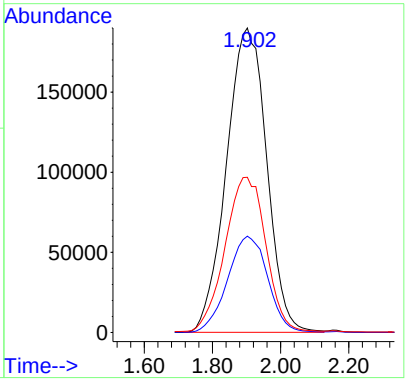


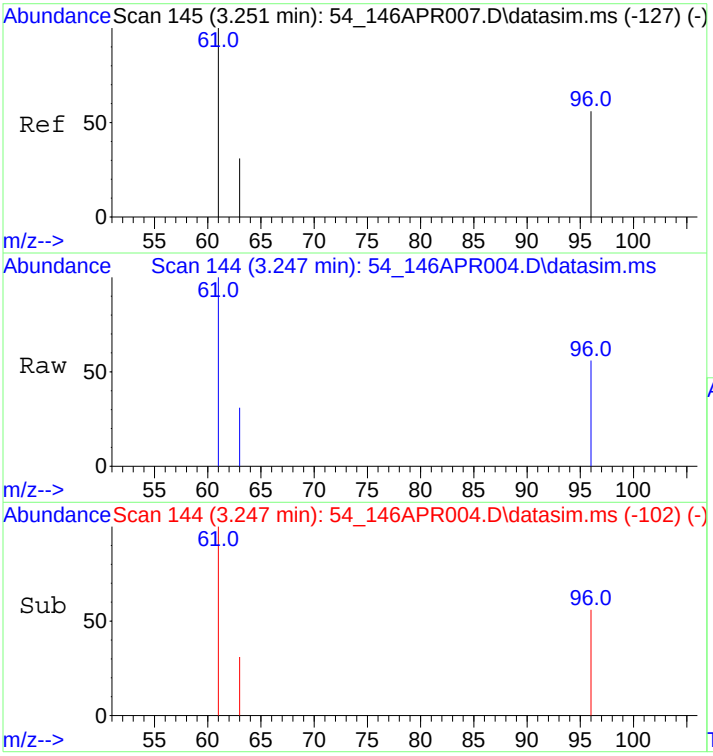


#2
Vinyl chloride
Concen: 9838.39 ppbv
RT: 1.902 min Scan# 18
Delta R.T. 0.000 min
Lab File: 54_146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 62 Resp: 1558169

Ion	Ratio	Lower	Upper
62	100		
64	31.6	26.8	40.2
27	51.0	16.1	24.1#

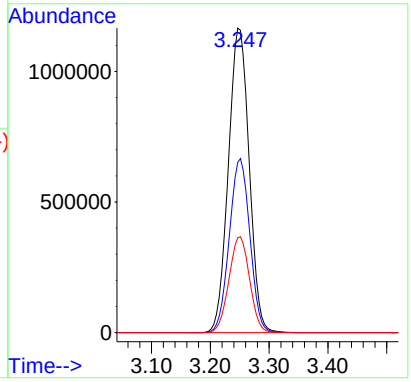


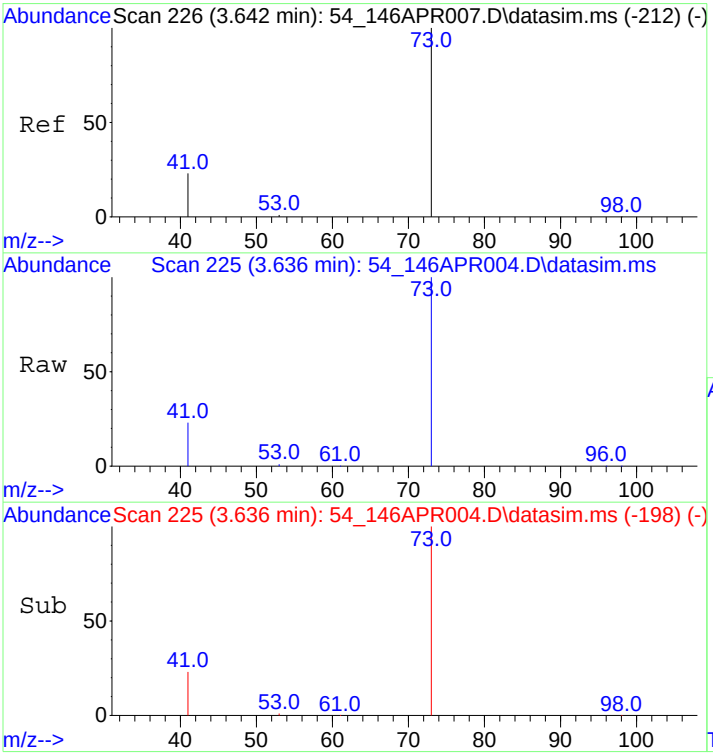


#3
1,1-Dichloroethene
Concen: 8879.75 ppbv
RT: 3.247 min Scan# 144
Delta R.T. -0.004 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 61 Resp: 2864384

Ion	Ratio	Lower	Upper
61	100		
96	56.5	63.4	95.2#
63	31.3	26.2	39.2

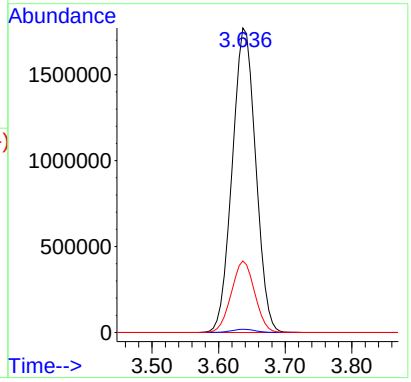


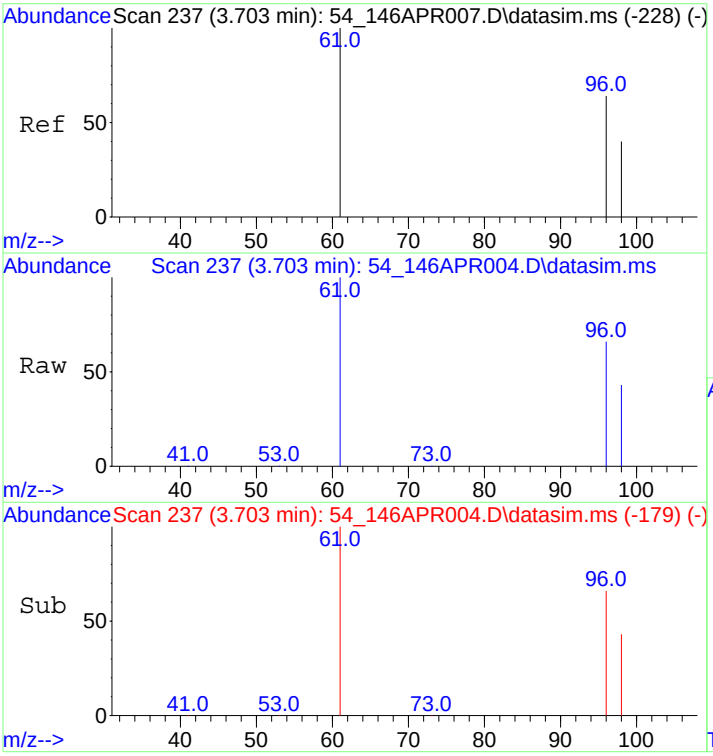


#4
Methyl Tert Butyl Ether
Concen: 8809.07 ppbv
RT: 3.636 min Scan# 225
Delta R.T. -0.006 min
Lab File: 54_146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 73 Resp: 4338626

Ion	Ratio	Lower	Upper
73	100		
53	1.0	1.0	1.4
41	23.3	13.1	19.7#

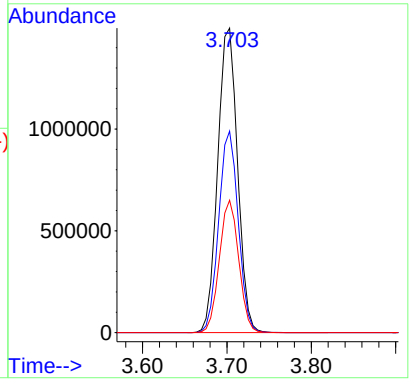


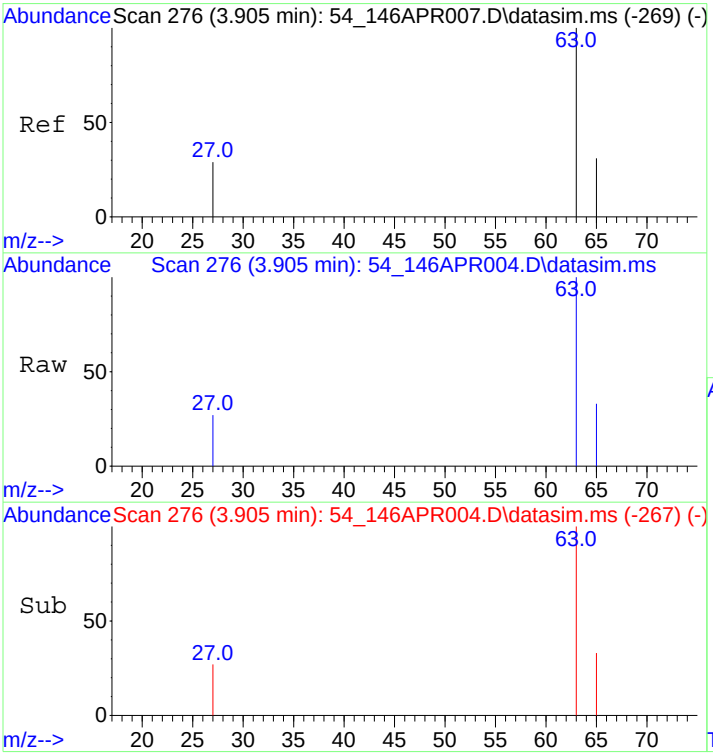


#5
trans-1,2-Dichloroethene
Concen: 8593.78 ppbv
RT: 3.703 min Scan# 237
Delta R.T. 0.000 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 61 Resp: 2443246

Ion	Ratio	Lower	Upper
61	100		
96	65.1	71.4	107.0#
98	42.4	45.8	68.8#

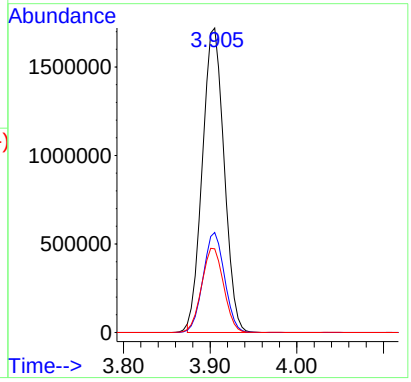


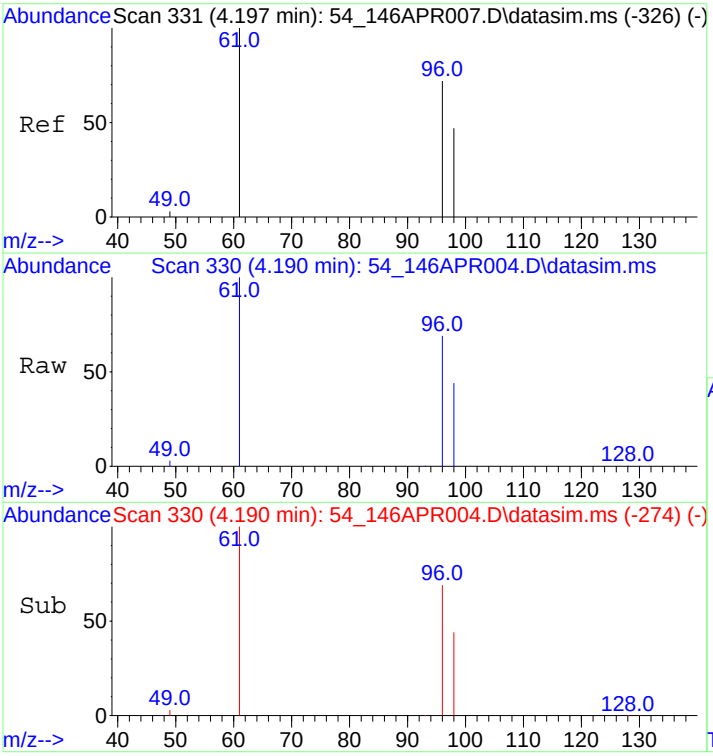


#6
1,1-Dichloroethane
Concen: 8801.87 ppbv
RT: 3.905 min Scan# 276
Delta R.T. 0.000 min
Lab File: 54_146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 63 Resp: 2987287

Ion	Ratio	Lower	Upper
63	100		
65	32.2	26.1	39.1
27	27.8	10.2	15.2#

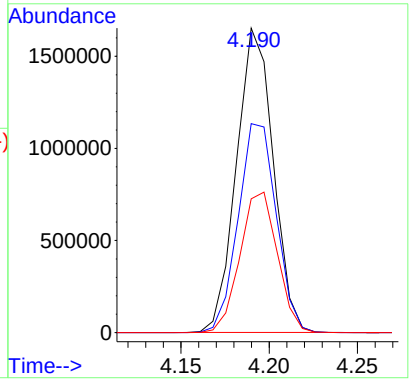


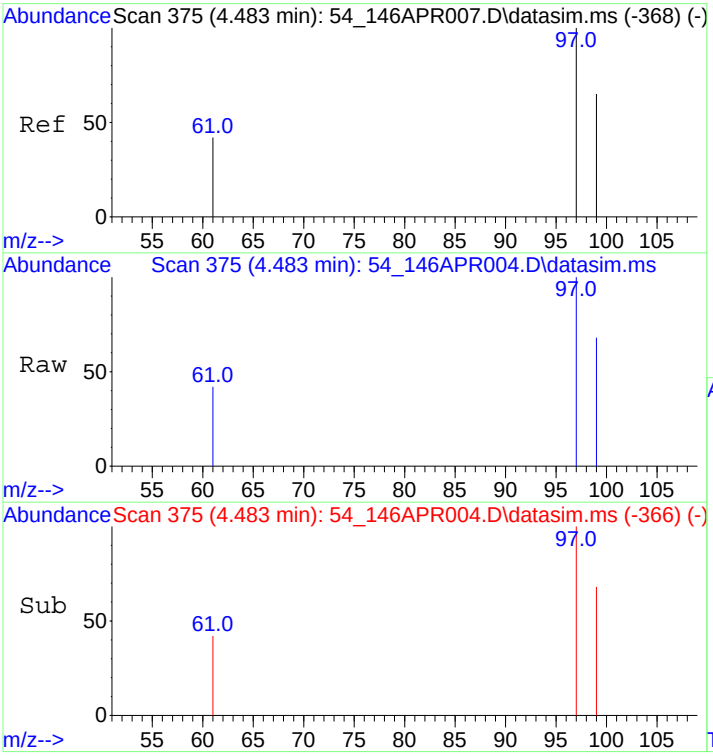


#7
cis-1,2-Dichloroethene
Concen: 9065.38 ppbv
RT: 4.190 min Scan# 330
Delta R.T. -0.007 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 61 Resp: 2406793

Ion	Ratio	Lower	Upper
61	100		
96	71.3	78.5	117.7#
98	47.0	50.6	76.0#

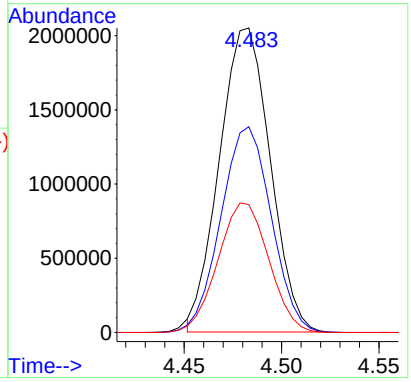


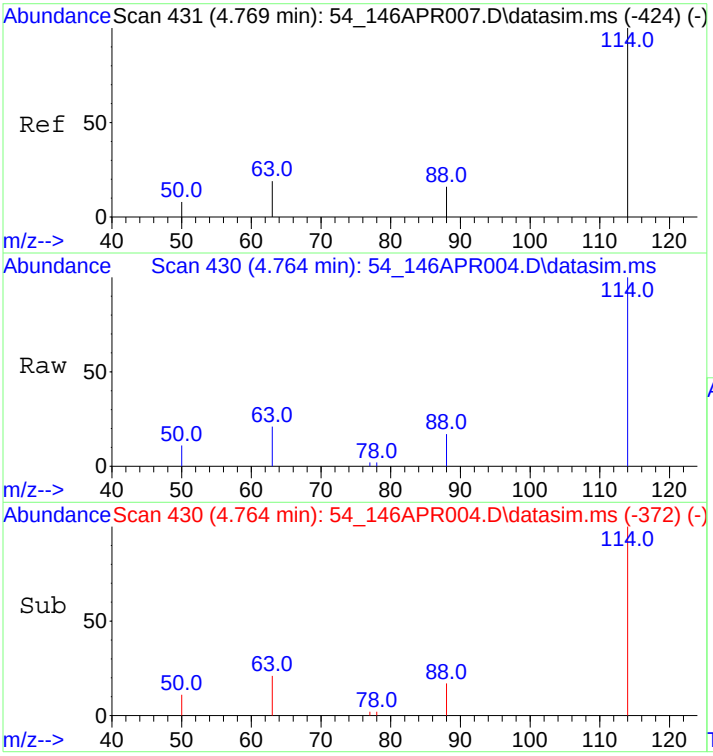


#8
1,1,1-Trichloroethane
Concen: 8635.15 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 97 Resp: 3717716

Ion	Ratio	Lower	Upper
97	100		
99	66.5	52.1	78.1
61	42.1	30.2	45.4

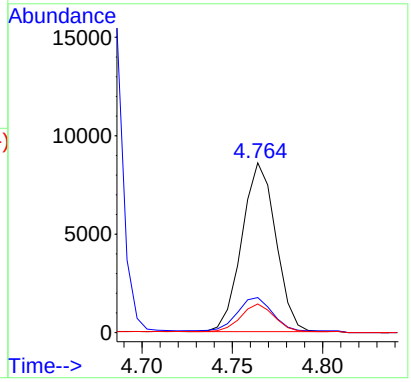


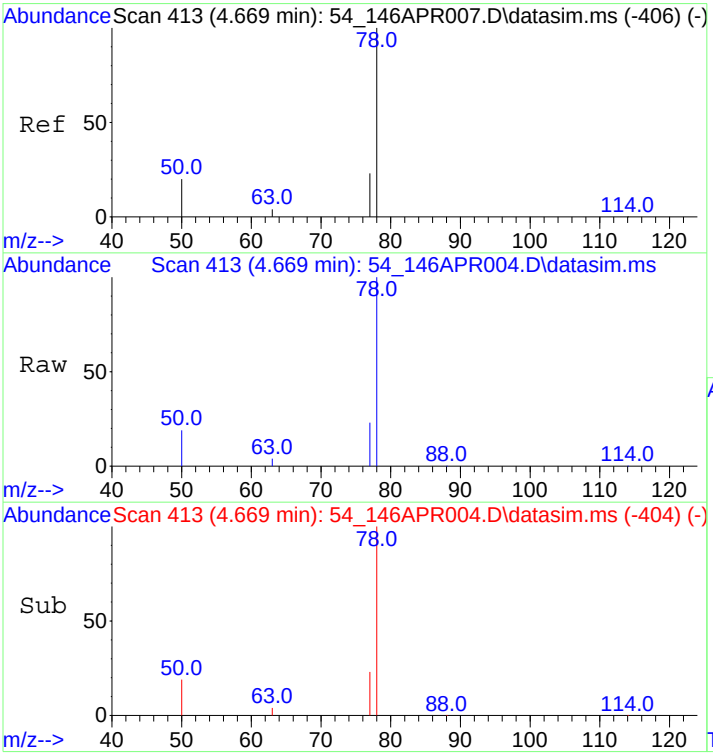


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.764 min Scan# 430
Delta R.T. -0.005 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion:114 Resp: 11202

Ion	Ratio	Lower	Upper
114	100		
63	20.2	12.0	18.0#
88	16.0	11.8	17.8

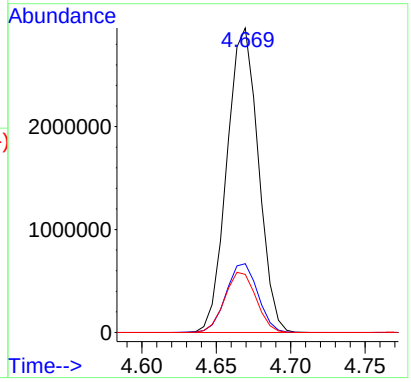


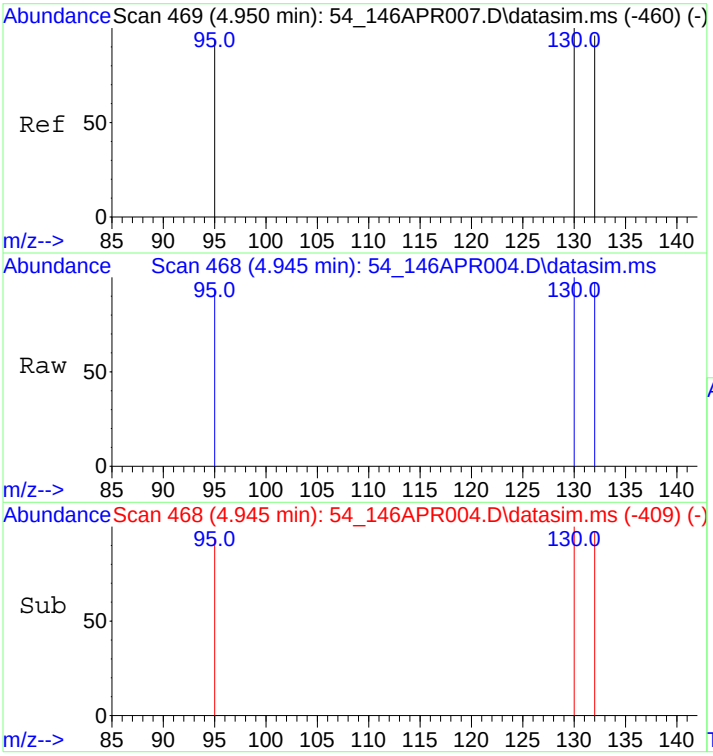


#10
Benzene
Concen: 8487.11 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 78 Resp: 4343065

Ion	Ratio	Lower	Upper
78	100		
77	22.9	18.2	27.2
50	19.8	8.6	13.0#

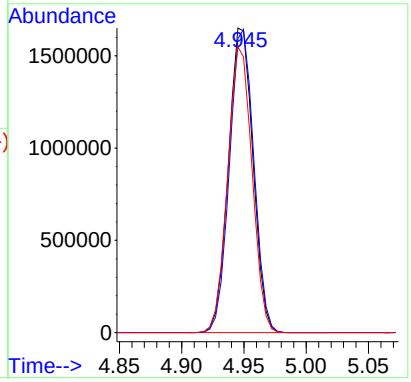


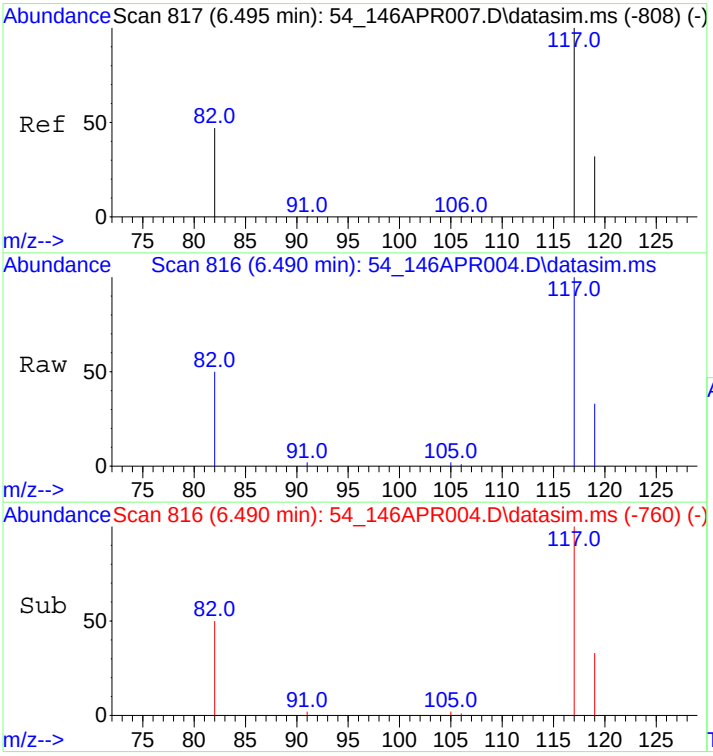


#11
Trichloroethene
Concen: 8128.15 ppbv
RT: 4.945 min Scan# 468
Delta R.T. -0.004 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion:130 Resp: 2264554

Ion	Ratio	Lower	Upper
130	100		
132	98.6	76.9	115.3
95	92.9	76.5	114.7

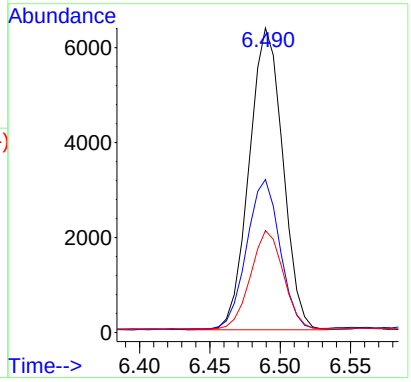


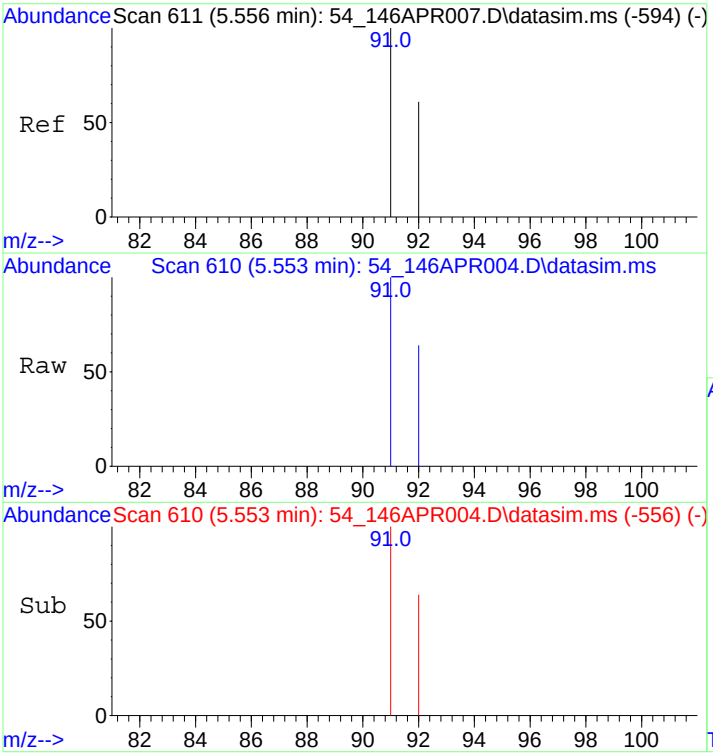


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54_146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion:117 Resp: 10580

Ion	Ratio	Lower	Upper
117	100		
82	48.7	38.0	57.0
119	31.7	27.0	40.4

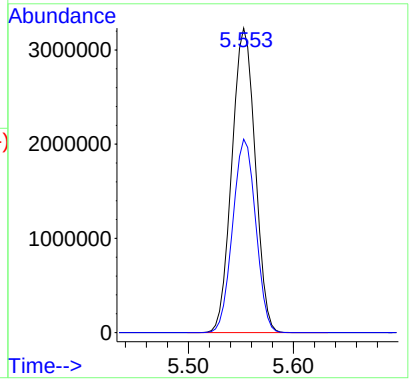


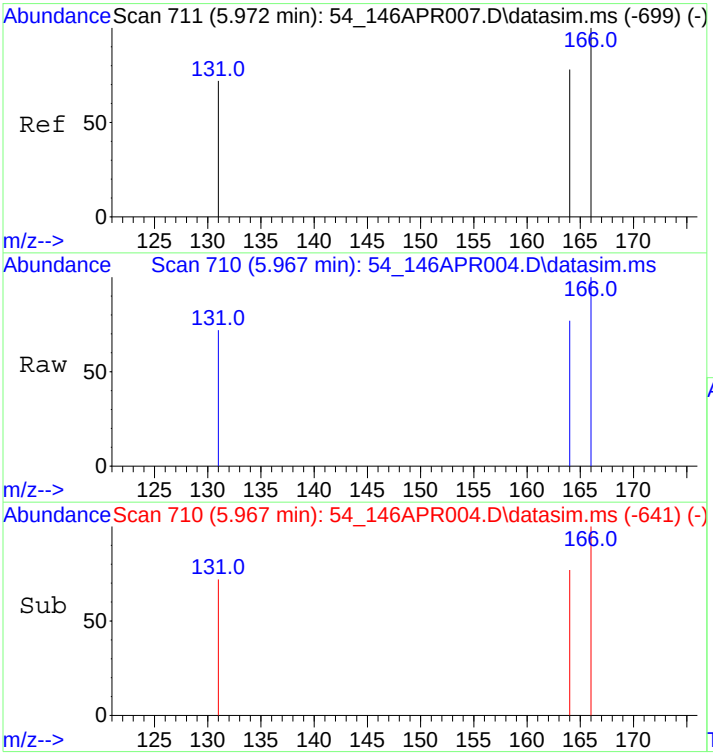


#13
Toluene
Concen: 7832.22 ppbv
RT: 5.553 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 91 Resp: 4967389

Ion	Ratio	Lower	Upper
91	100		
92	62.9	47.8	71.8

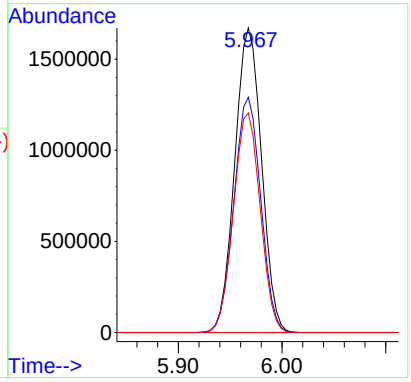


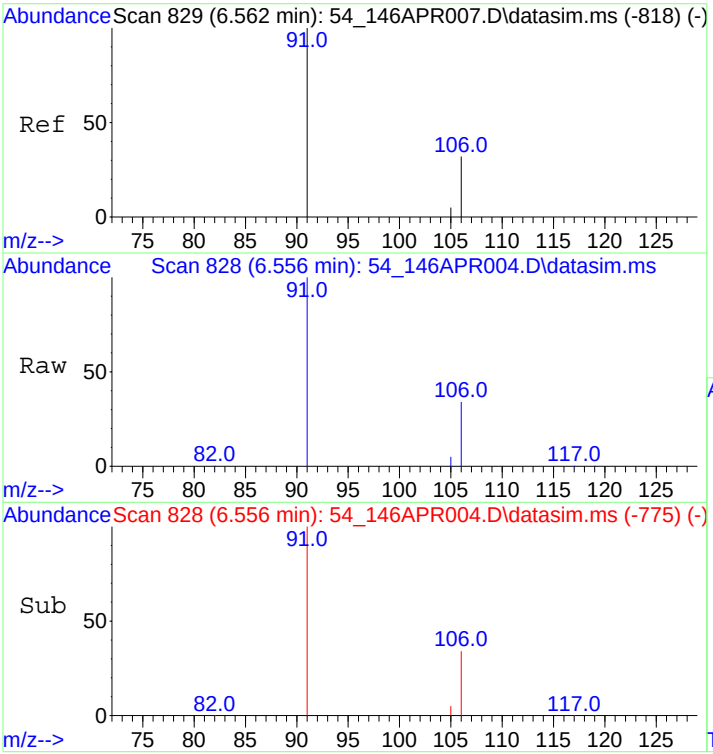


#14
Tetrachloroethene
Concen: 8291.42 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54_146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion:166 Resp: 3003521

Ion	Ratio	Lower	Upper
166	100		
164	77.3	62.6	94.0
131	72.3	58.5	87.7

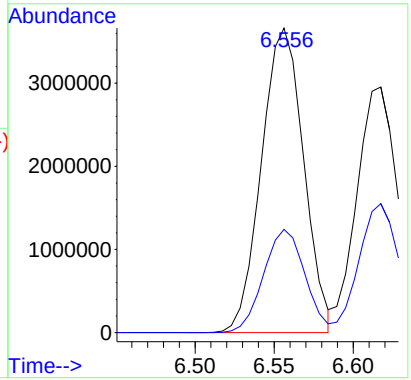


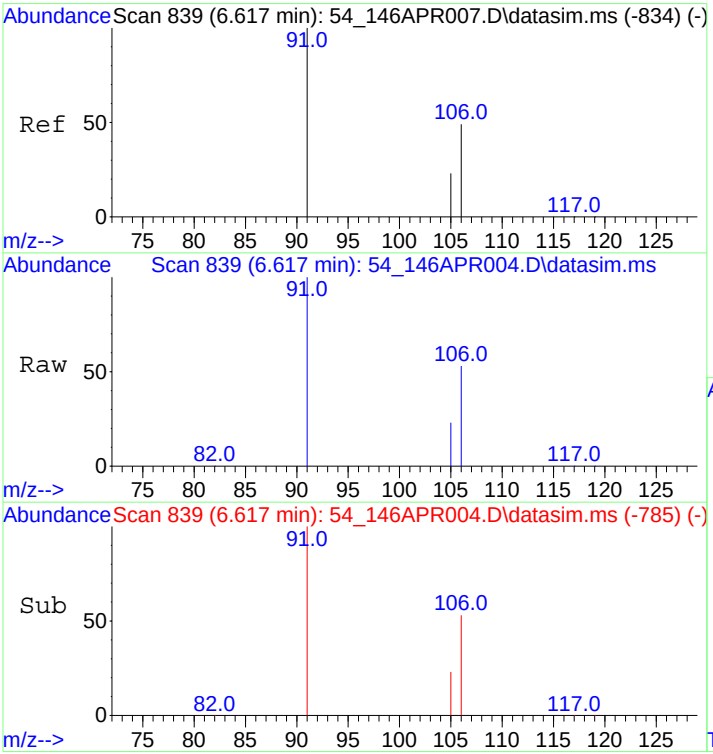


#15
Ethyl Benzene
Concen: 8452.11 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.005 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 91 Resp: 6807541

Ion	Ratio	Lower	Upper
91	100		
106	33.1	26.9	40.3

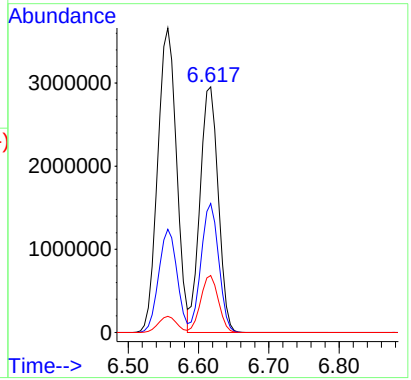


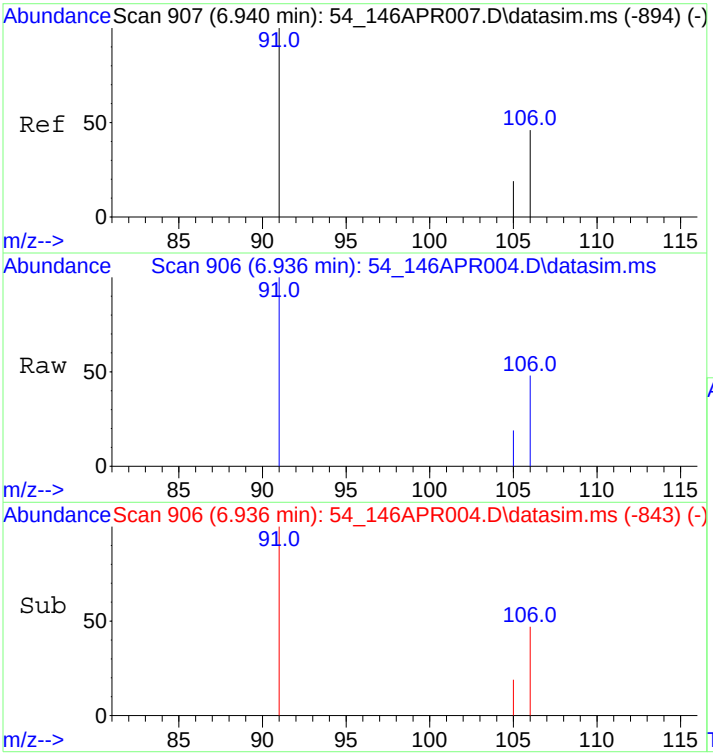


#16
m, p-Xylene
Concen: 8576.33 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 91 Resp: 5301500

Ion	Ratio	Lower	Upper
91	100		
106	51.1	43.1	64.7
105	22.6	18.3	27.5

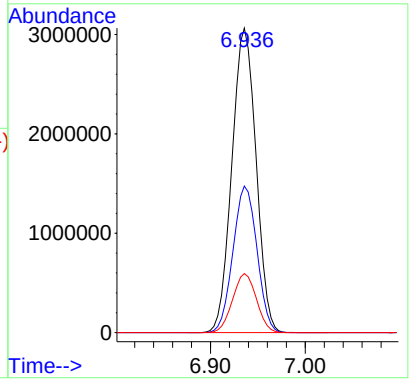




#17
o-Xylene
Concen: 8650.58 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 146APR004.D
Acq: 16 Apr 2014 11:09 am

Tgt Ion: 91 Resp: 5422765

Ion	Ratio	Lower	Upper
91	100		
106	47.8	40.1	60.1
105	19.1	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR005.D
Acq On : 16 Apr 2014 11:20 am
Operator : yhl
Sample : STD20140416-2 \ 2000 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 11:27:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon Apr 14 15:25:06 2014
QLast Update : Wed Apr 16 11:16:29 2014
Response via : Initial Calibration

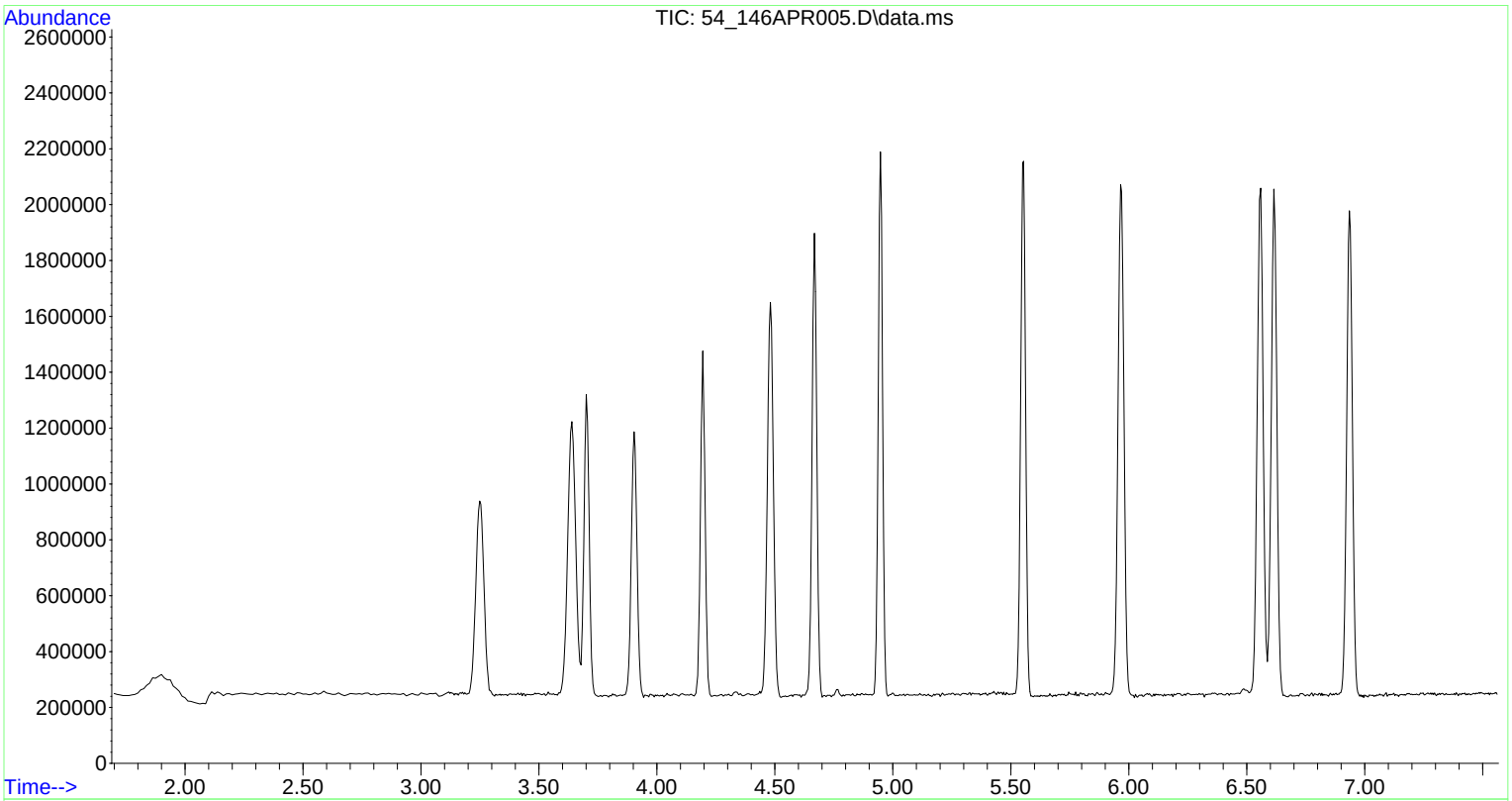
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.335	49	3914	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.764	114	10659	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.489	117	10067	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
2] Vinyl chloride	1.890	62	347577	2444.94	ppbv	#	65
3] 1,1-Dichloroethene	3.251	61	690122	2551.01	ppbv	#	80
4] Methyl Tert Butyl Ether	3.642	73	1041453	2567.13	ppbv	#	85
5] trans-1,2-Dichloroethene	3.703	61	598153	2618.22	ppbv	#	76
6] 1,1-Dichloroethane	3.905	63	737889	2720.50	ppbv	#	88
7] cis-1,2-Dichloroethene	4.190	61	596126	2780.65	ppbv	#	75
8] 1,1,1-Trichloroethane	4.483	97	922776	2667.69	ppbv		97
10] Benzene	4.669	78	1081350	2747.50	ppbv	#	92
11] Trichloroethene	4.950	130	559119	2620.73	ppbv		98
13] Toluene	5.552	91	1210417	2663.33	ppbv		98
14] Tetrachloroethene	5.967	166	680204	2415.80	ppbv		99
15] Ethyl Benzene	6.556	91	1509834	2424.14	ppbv		96
16] m, p-Xylene	6.617	91	1113184	2295.02	ppbv		96
17] o-Xylene	6.937	91	1130092	2266.83	ppbv		96

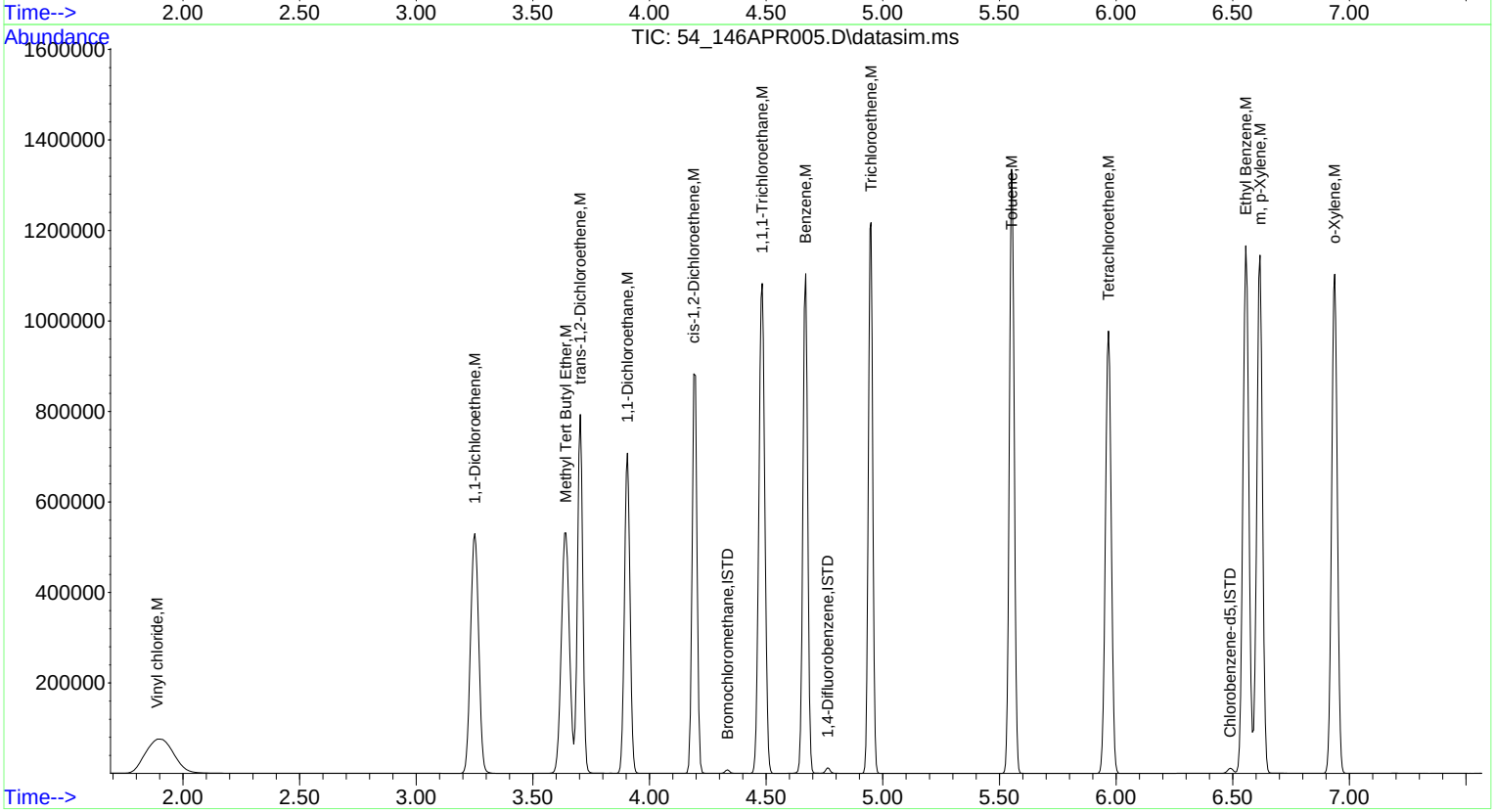
(#) = qualifier out of range (m) = manual integration (+) = signals summed

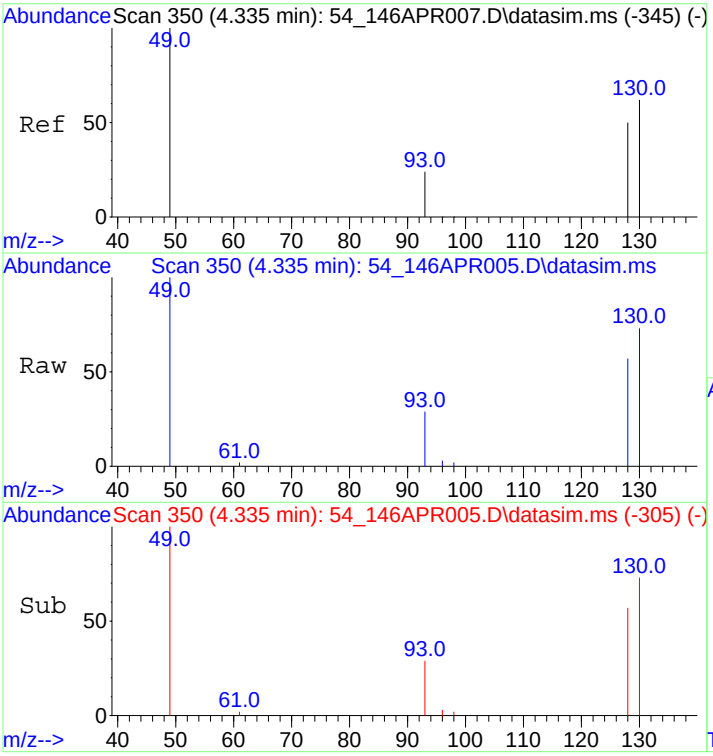
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR005.D
Acq On : 16 Apr 2014 11:20 am
Operator : yhl
Sample : STD20140416-2 \ 2000 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 11:27:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon Apr 14 15:25:06 2014
QLast Update : Wed Apr 16 11:16:29 2014
Response via : Initial Calibration



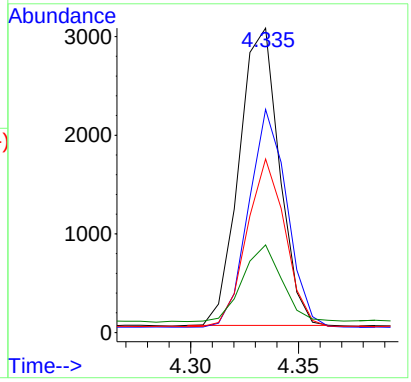


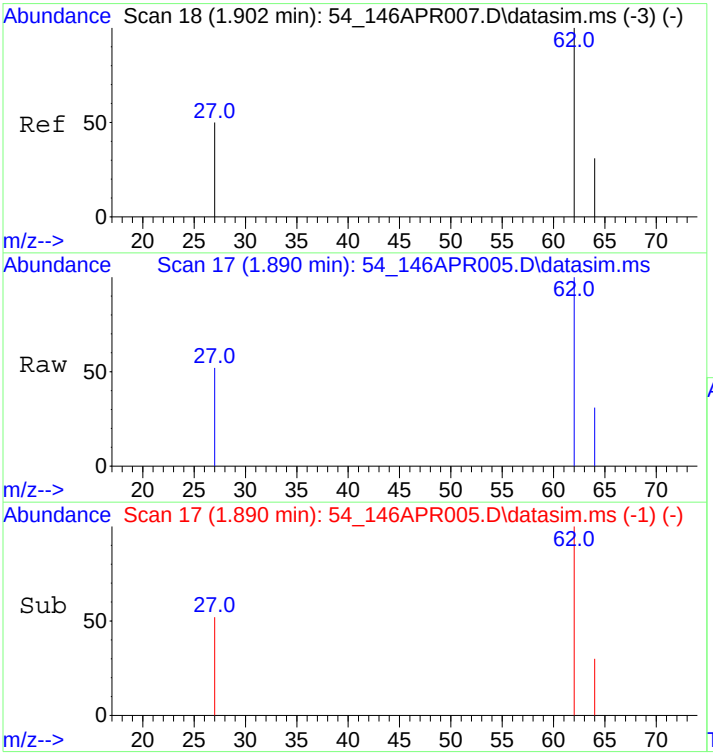


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 49 Resp: 3914

Ion	Ratio	Lower	Upper
49	100		
130	69.4	87.2	130.8#
128	53.8	68.0	102.0#
93	25.0	29.3	43.9#

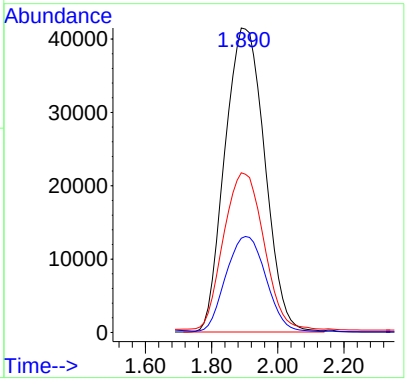


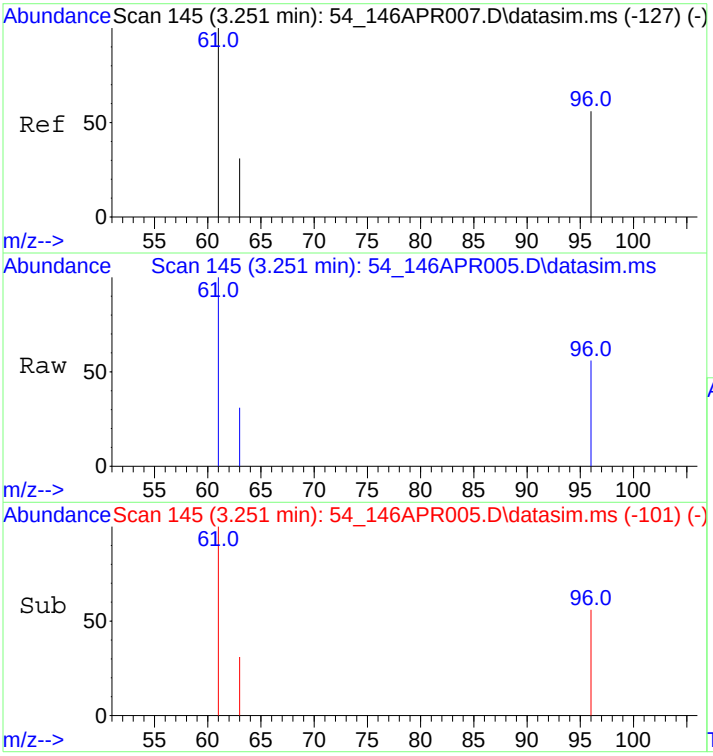


#2
Vinyl chloride
Concen: 2444.94 ppbv
RT: 1.890 min Scan# 17
Delta R.T. -0.013 min
Lab File: 54_146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 62 Resp: 347577

Ion	Ratio	Lower	Upper
62	100		
64	30.2	26.8	40.2
27	58.5	16.1	24.1#

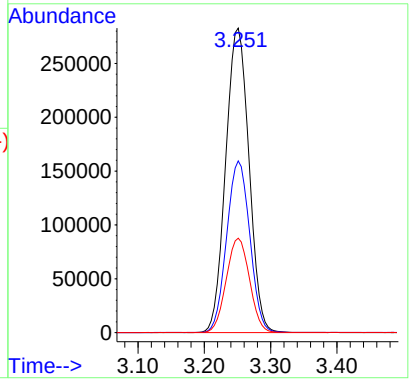


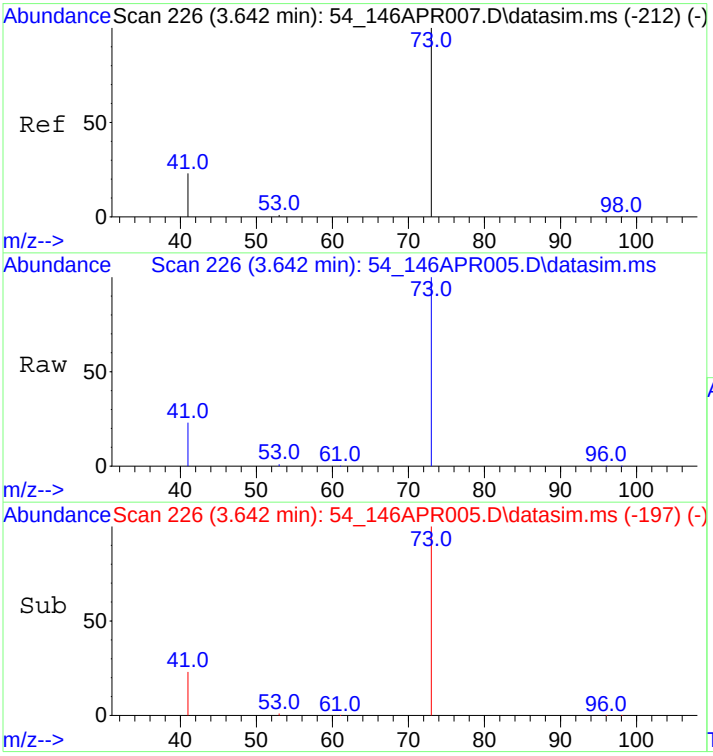


#3
1,1-Dichloroethene
Concen: 2551.01 ppbv
RT: 3.251 min Scan# 145
Delta R.T. 0.004 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 61 Resp: 690122

Ion	Ratio	Lower	Upper
61	100		
96	56.0	63.4	95.2#
63	30.9	26.2	39.2

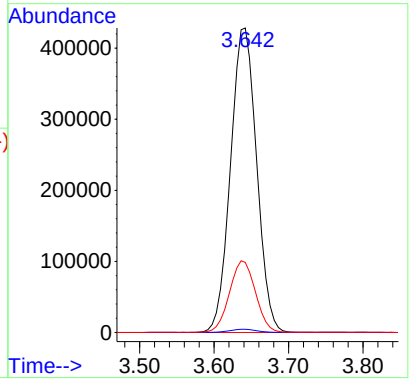


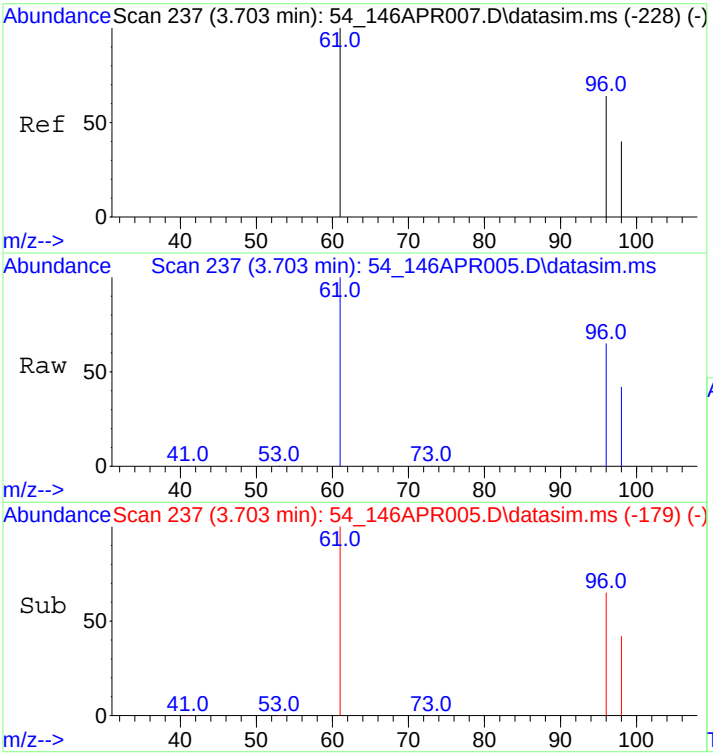


#4
Methyl Tert Butyl Ether
Concen: 2567.13 ppbv
RT: 3.642 min Scan# 226
Delta R.T. 0.005 min
Lab File: 54_146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 73 Resp: 1041453

Ion	Ratio	Lower	Upper
73	100		
53	1.0	1.0	1.4
41	23.3	13.1	19.7#

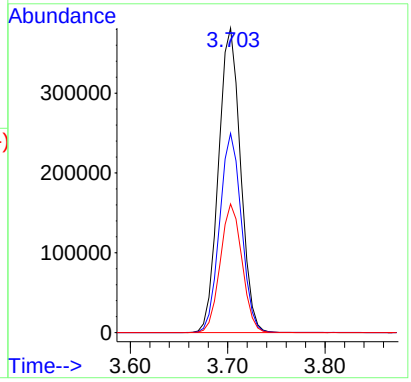


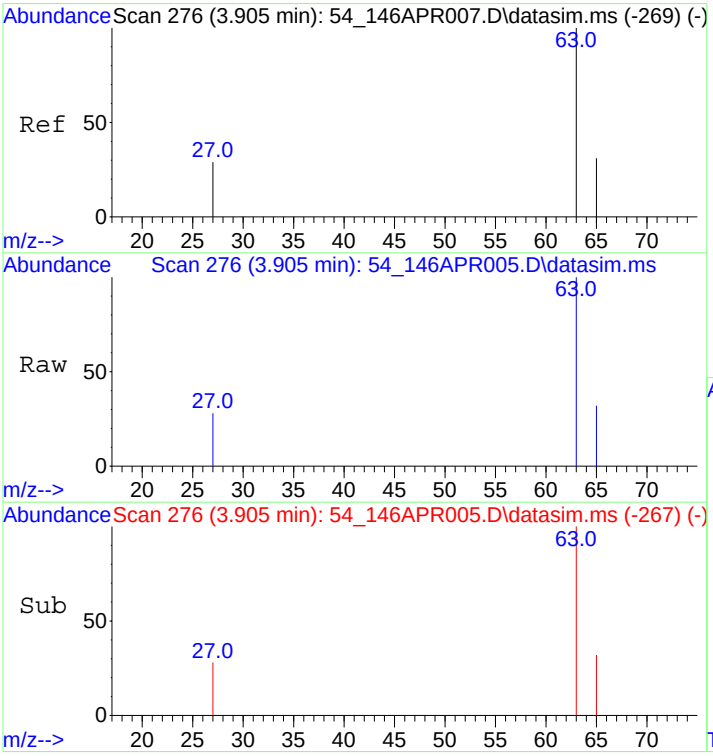


#5
trans-1,2-Dichloroethene
Concen: 2618.22 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.000 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 61 Resp: 598153

Ion	Ratio	Lower	Upper
61	100		
96	64.9	71.4	107.0#
98	41.8	45.8	68.8#

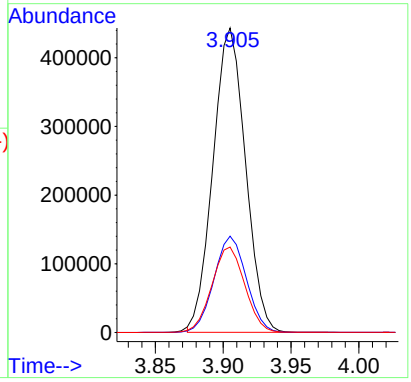


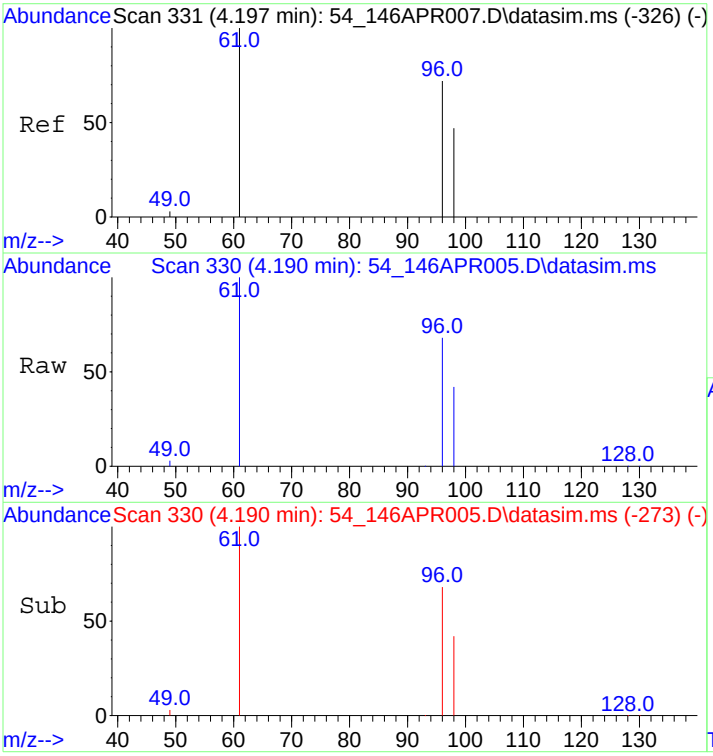


#6
1,1-Dichloroethane
Concen: 2720.50 ppbv
RT: 3.905 min Scan# 276
Delta R.T. -0.000 min
Lab File: 54_146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 63 Resp: 737889

Ion	Ratio	Lower	Upper
63	100		
65	31.4	26.1	39.1
27	28.1	10.2	15.2#

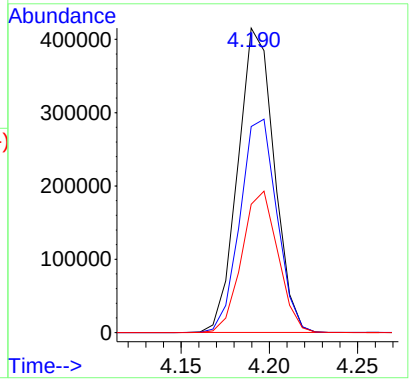


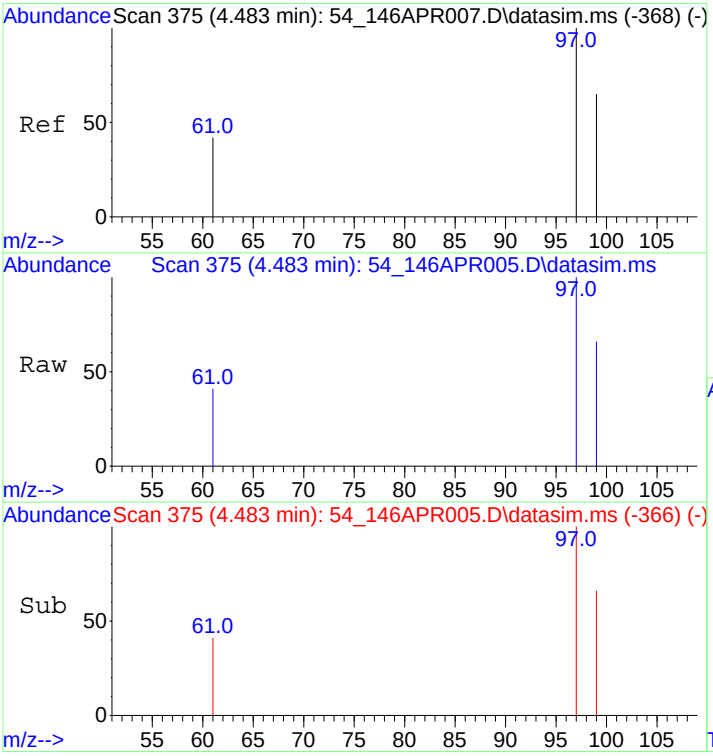


#7
cis-1,2-Dichloroethene
Concen: 2780.65 ppbv
RT: 4.190 min Scan# 330
Delta R.T. -0.000 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 61 Resp: 596126

Ion	Ratio	Lower	Upper
61	100		
96	71.3	78.5	117.7#
98	46.0	50.6	76.0#

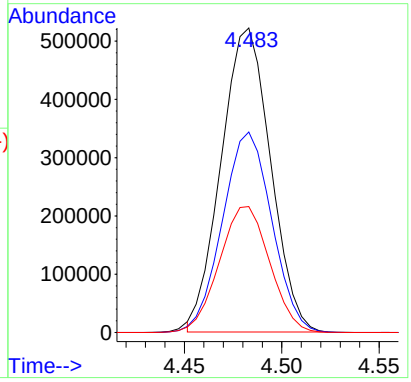


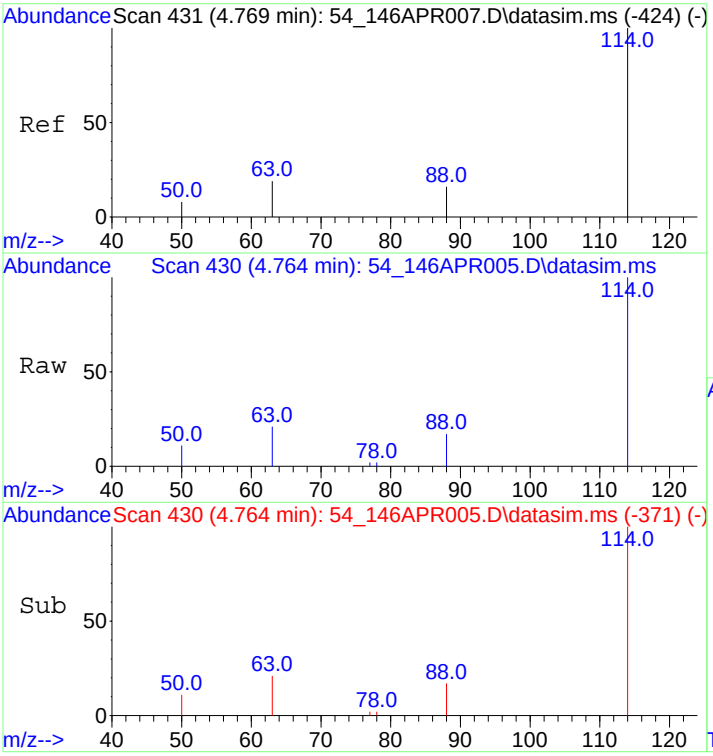


#8
1,1,1-Trichloroethane
Concen: 2667.69 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 97 Resp: 922776

Ion	Ratio	Lower	Upper
97	100		
99	65.3	52.1	78.1
61	41.8	30.2	45.4

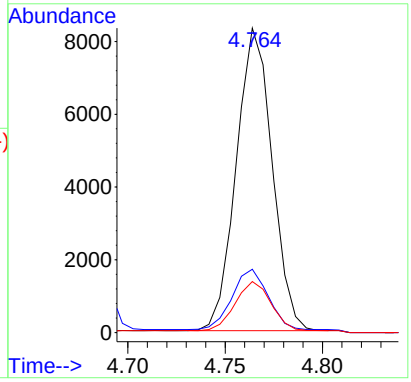


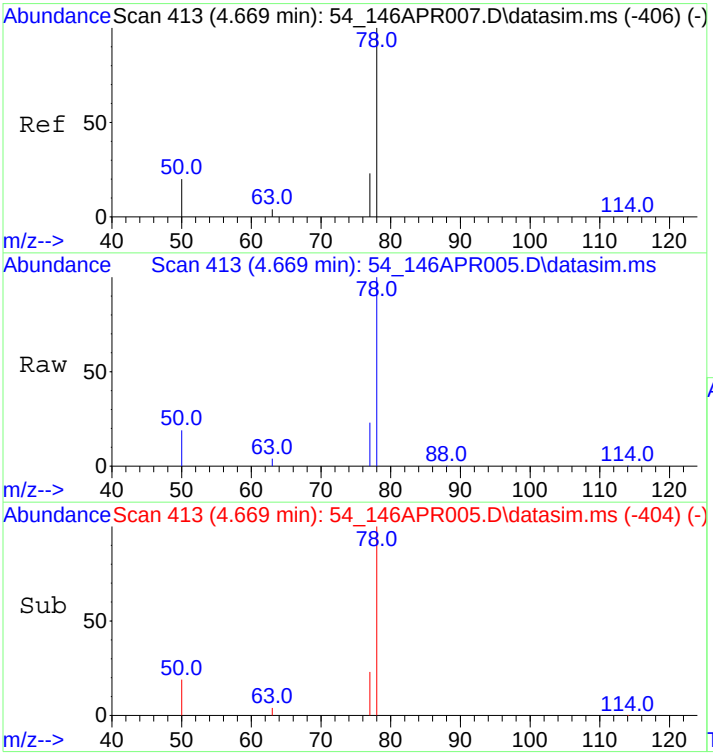


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.764 min Scan# 430
Delta R.T. -0.000 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion:114 Resp: 10659

Ion	Ratio	Lower	Upper
114	100		
63	19.8	12.0	18.0#
88	16.2	11.8	17.8

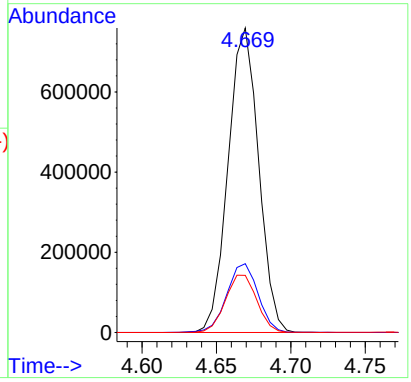


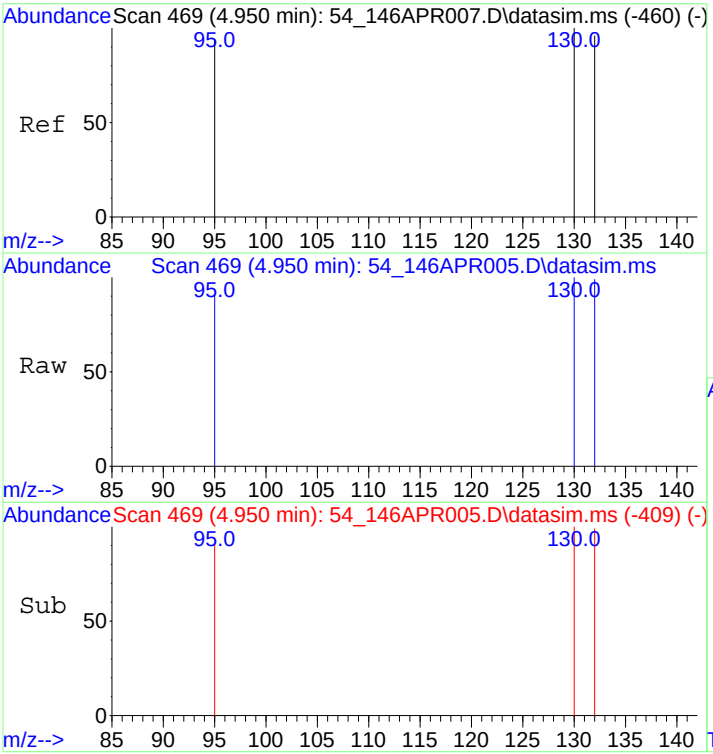


#10
Benzene
Concen: 2747.50 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 78 Resp: 1081350

Ion	Ratio	Lower	Upper
78	100		
77	23.2	18.2	27.2
50	19.4	8.6	13.0#

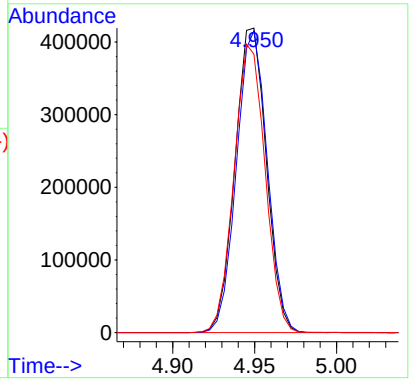


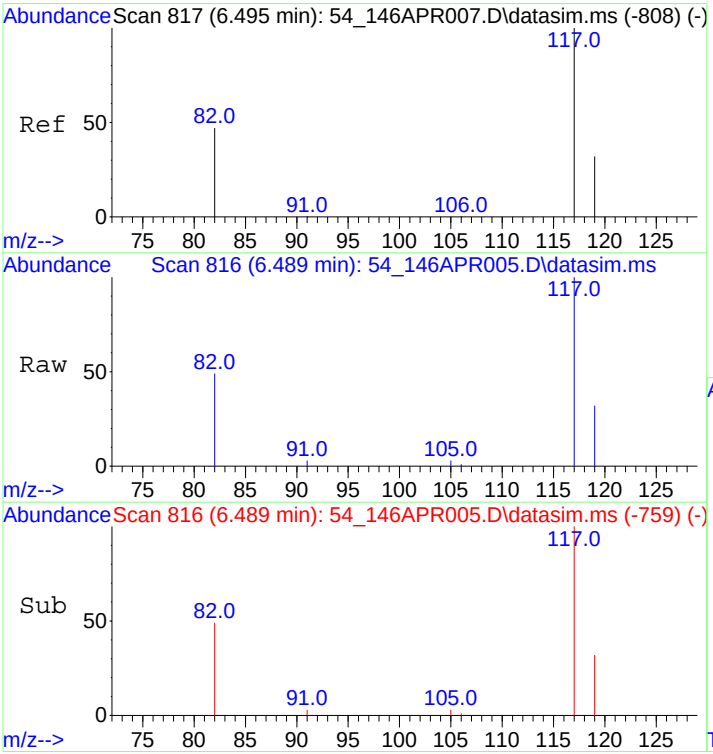


#11
Trichloroethene
Concen: 2620.73 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.004 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion:130 Resp: 559119

Ion	Ratio	Lower	Upper
130	100		
132	97.2	76.9	115.3
95	93.6	76.5	114.7

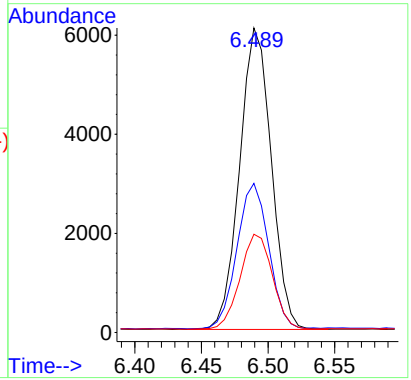


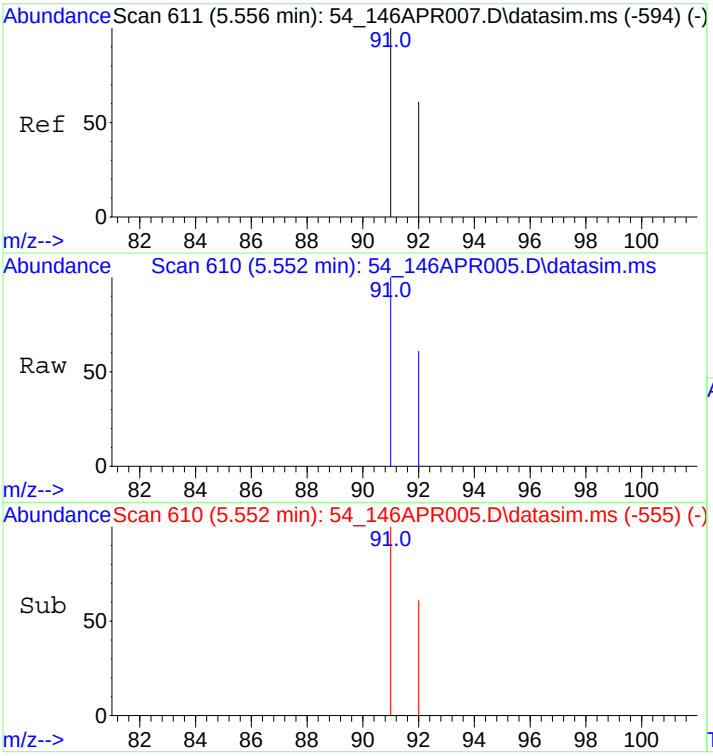


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54_146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion:117 Resp: 10067

Ion	Ratio	Lower	Upper
117	100		
82	48.3	38.0	57.0
119	32.2	27.0	40.4

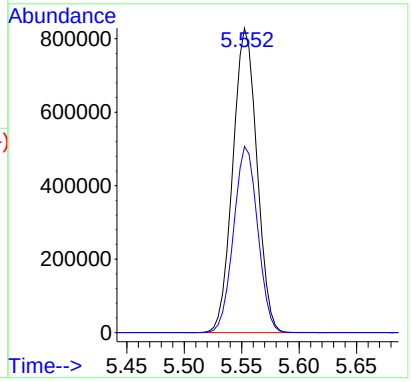


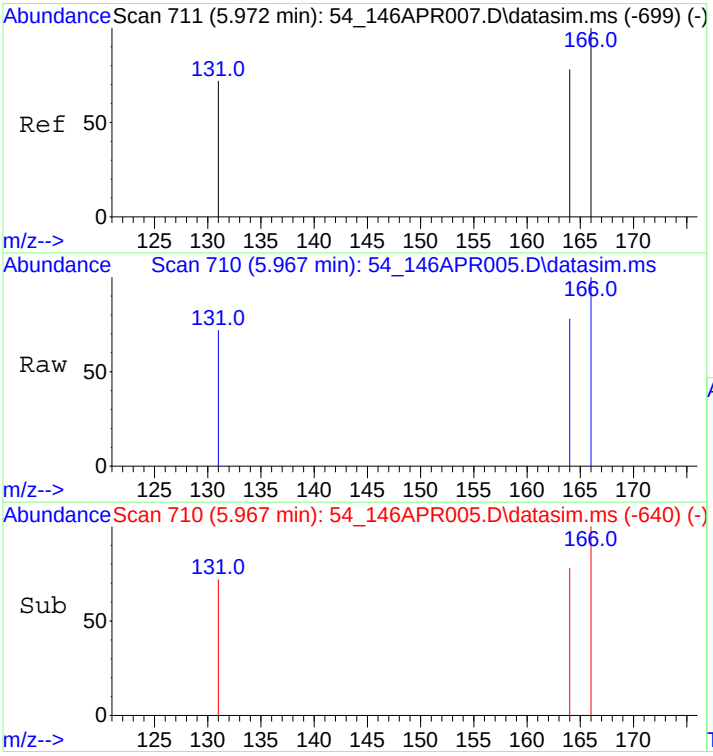


#13
Toluene
Concen: 2663.33 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.000 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 91 Resp: 1210417

Ion	Ratio	Lower	Upper
91	100		
92	61.1	47.8	71.8

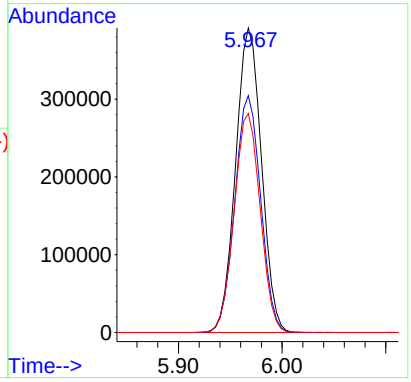


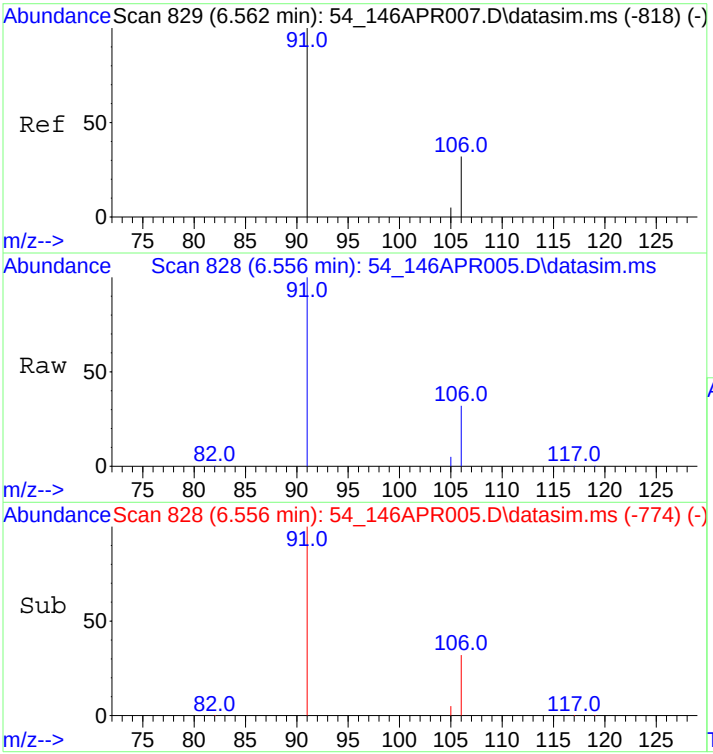


#14
Tetrachloroethene
Concen: 2415.80 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.000 min
Lab File: 54_146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion:166 Resp: 680204

Ion	Ratio	Lower	Upper
166	100		
164	77.8	62.6	94.0
131	72.3	58.5	87.7

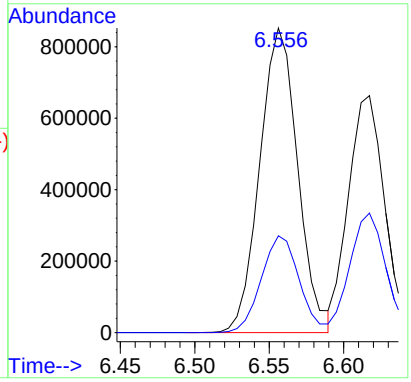


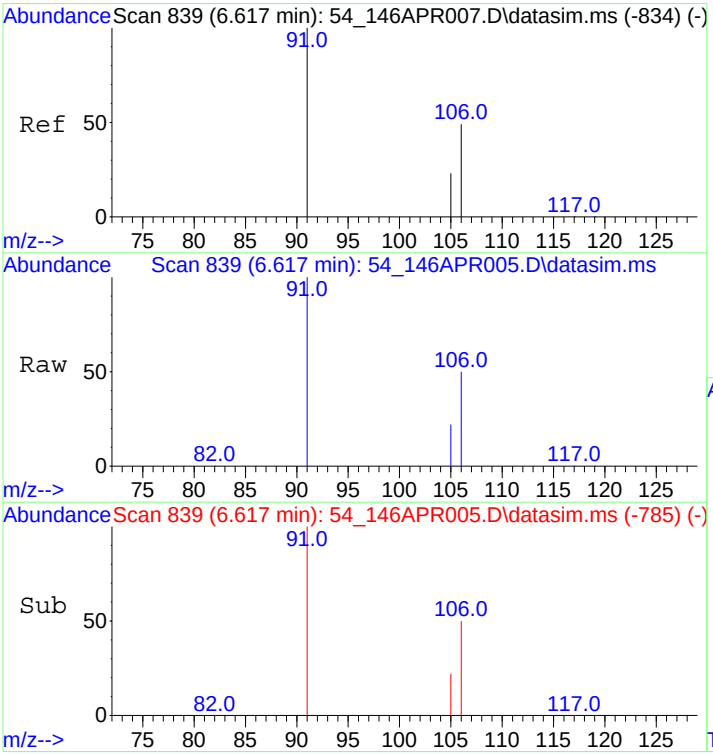


#15
Ethyl Benzene
Concen: 2424.14 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 91 Resp: 1509834

Ion	Ratio	Lower	Upper
91	100		
106	31.3	26.9	40.3

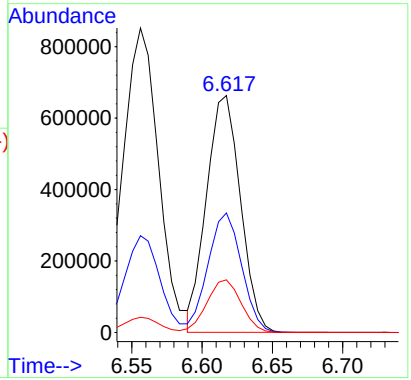


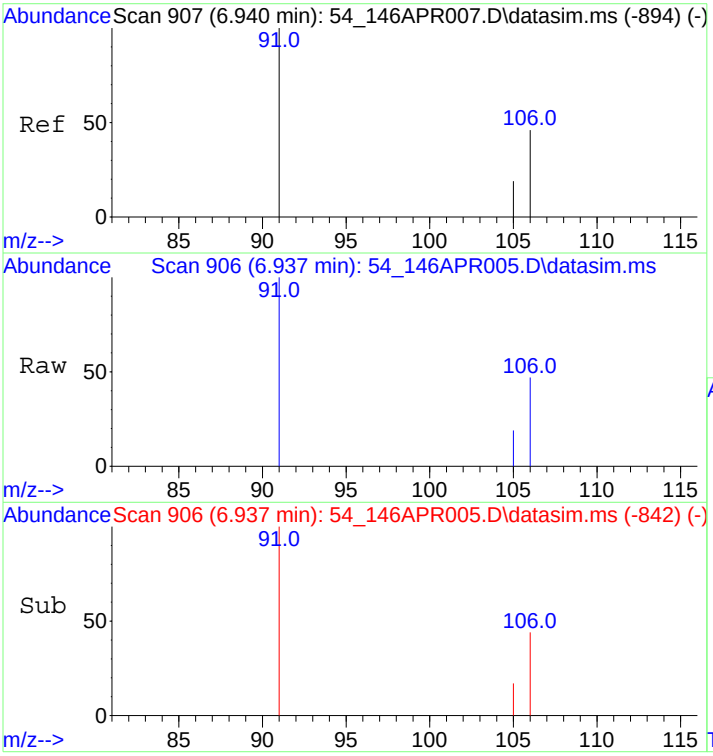


#16
m, p-Xylene
Concen: 2295.02 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 91 Resp: 1113184

Ion	Ratio	Lower	Upper
91	100		
106	50.4	43.1	64.7
105	22.4	18.3	27.5

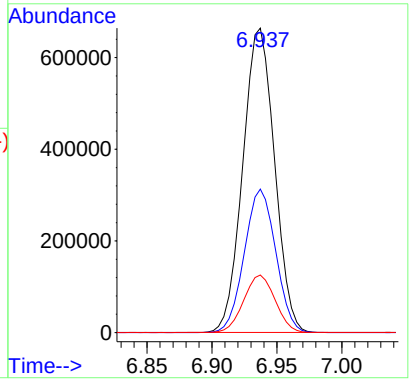




#17
o-Xylene
Concen: 2266.83 ppbv
RT: 6.937 min Scan# 906
Delta R.T. 0.001 min
Lab File: 54 146APR005.D
Acq: 16 Apr 2014 11:20 am

Tgt Ion: 91 Resp: 1130092

Ion	Ratio	Lower	Upper
91	100		
106	46.6	40.1	60.1
105	18.7	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR006.D
Acq On : 16 Apr 2014 11:32 am
Operator : yhl
Sample : STD20140416-4 \100 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 11:38:28 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 11:16:29 2014
QLast Update : Wed Apr 16 11:28:01 2014
Response via : Initial Calibration

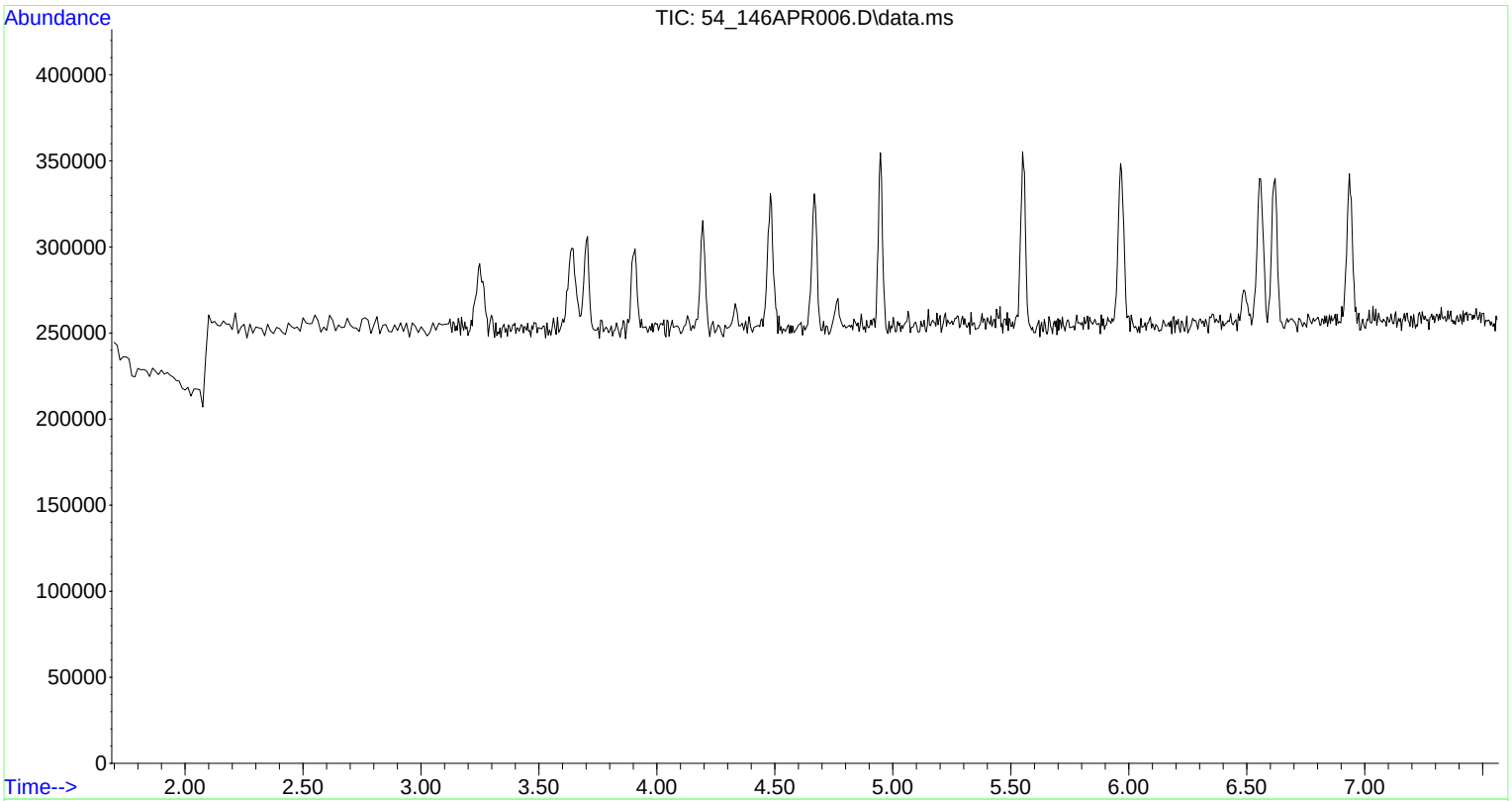
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.335	49	4271	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.764	114	11486	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.489	117	10684	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
2] Vinyl chloride	1.902	62	16416	96.78	ppbv	#	5
3] 1,1-Dichloroethene	3.251	61	33305	98.88	ppbv	#	80
4] Methyl Tert Butyl Ether	3.642	73	49504	98.21	ppbv	#	84
5] trans-1,2-Dichloroethene	3.703	61	29218	101.80	ppbv	#	76
6] 1,1-Dichloroethane	3.905	63	36099	105.41	ppbv	#	87
7] cis-1,2-Dichloroethene	4.190	61	29135	107.46	ppbv	#	74
8] 1,1,1-Trichloroethane	4.483	97	45422	103.71	ppbv		97
10] Benzene	4.669	78	53611	109.52	ppbv	#	85
11] Trichloroethene	4.950	130	28037	106.17	ppbv		99
13] Toluene	5.552	91	61323	111.50	ppbv		99
14] Tetrachloroethene	5.967	166	33620	102.75	ppbv		100
15] Ethyl Benzene	6.556	91	73133	102.19	ppbv		96
16] m, p-Xylene	6.617	91	54544	100.75	ppbv		95
17] o-Xylene	6.937	91	54921	99.09	ppbv		95

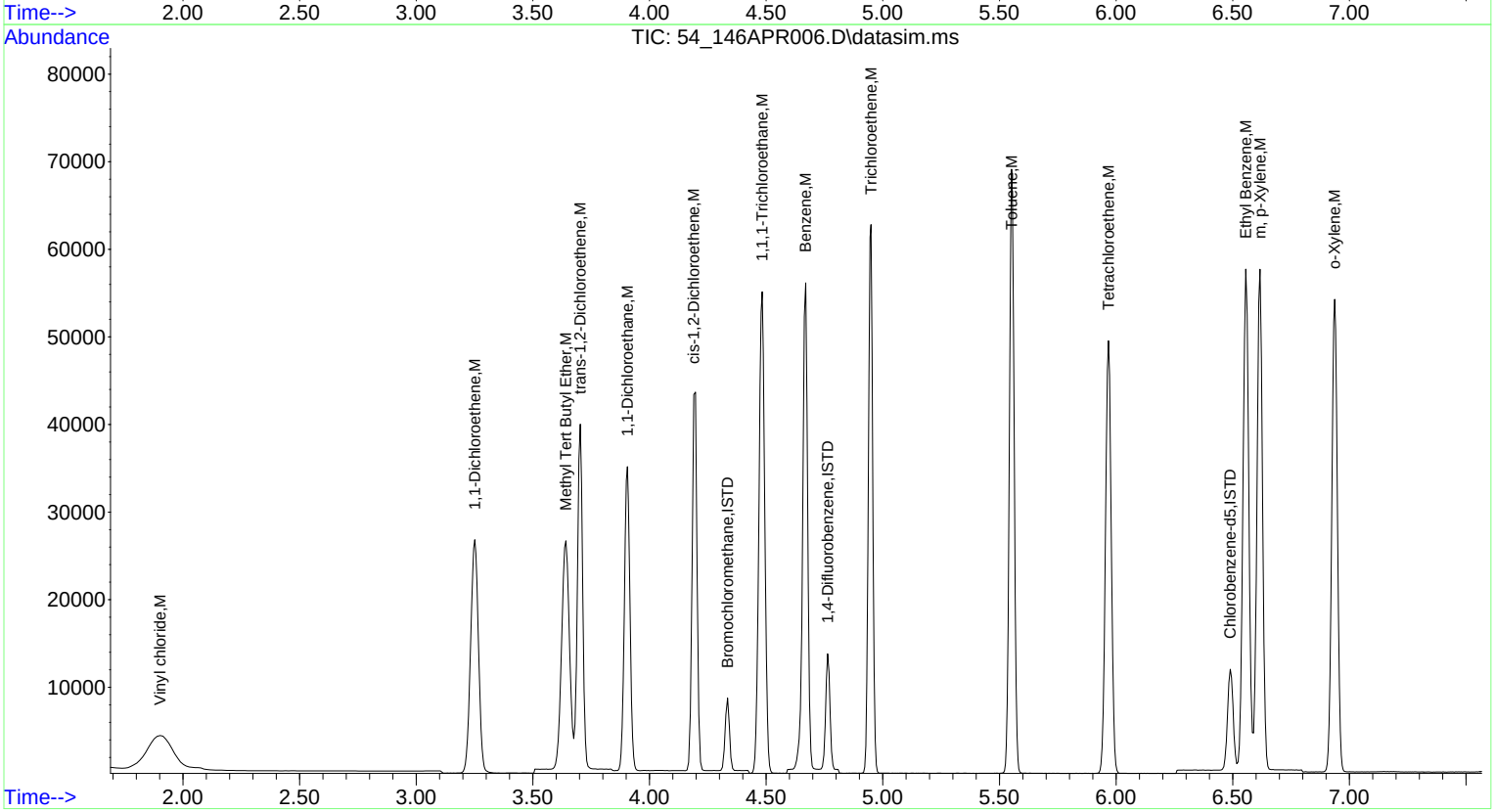
(#) = qualifier out of range (m) = manual integration (+) = signals summed

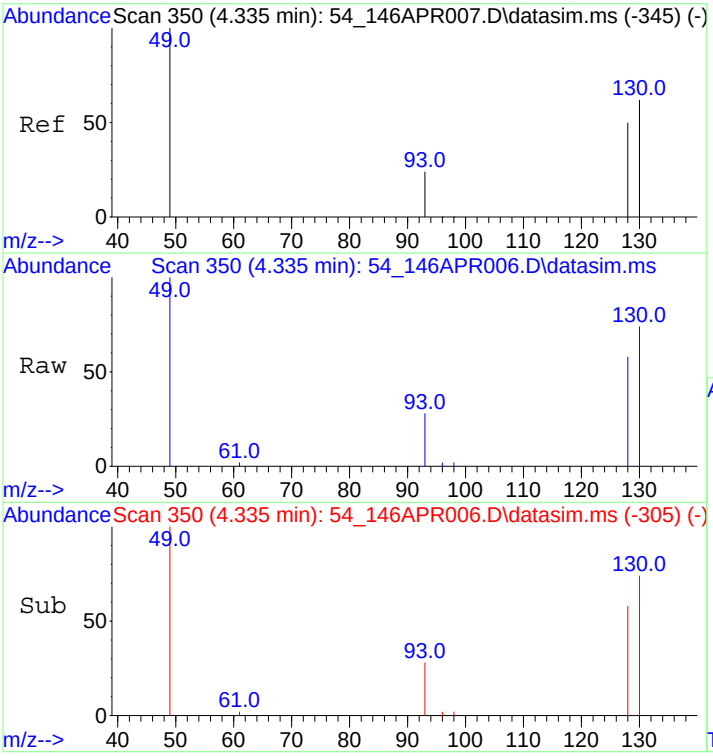
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR006.D
Acq On : 16 Apr 2014 11:32 am
Operator : yhl
Sample : STD20140416-4 \100 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 11:38:28 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 11:16:29 2014
QLast Update : Wed Apr 16 11:28:01 2014
Response via : Initial Calibration



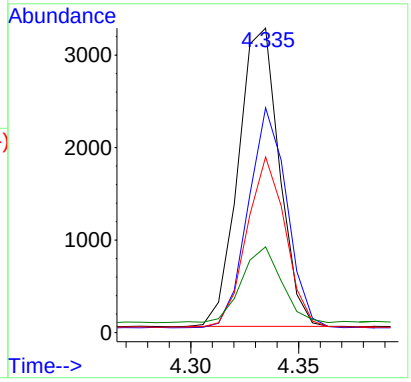


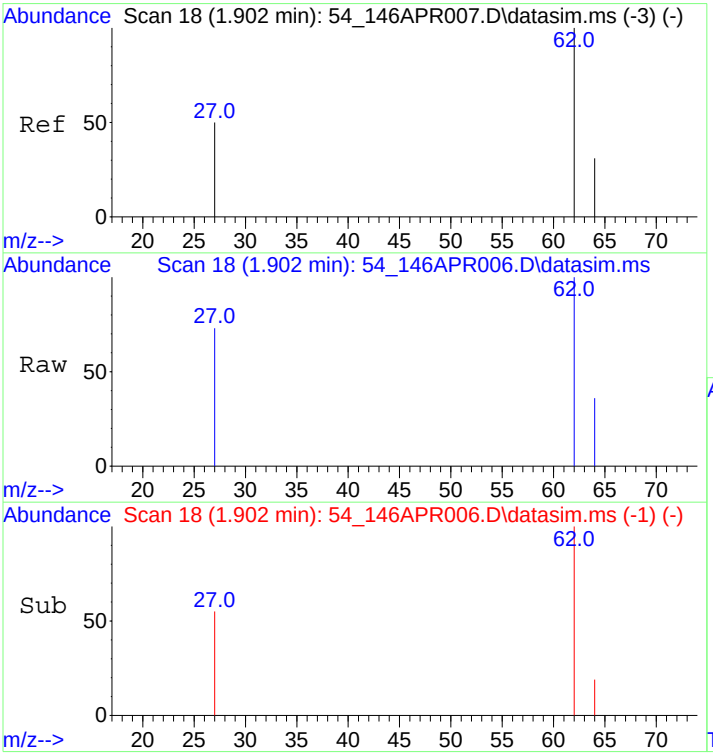


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 49 Resp: 4271

Ion	Ratio	Lower	Upper
49	100		
130	69.2	87.2	130.8#
128	53.4	68.0	102.0#
93	24.4	29.3	43.9#

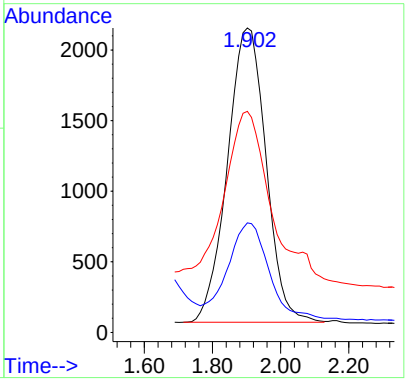


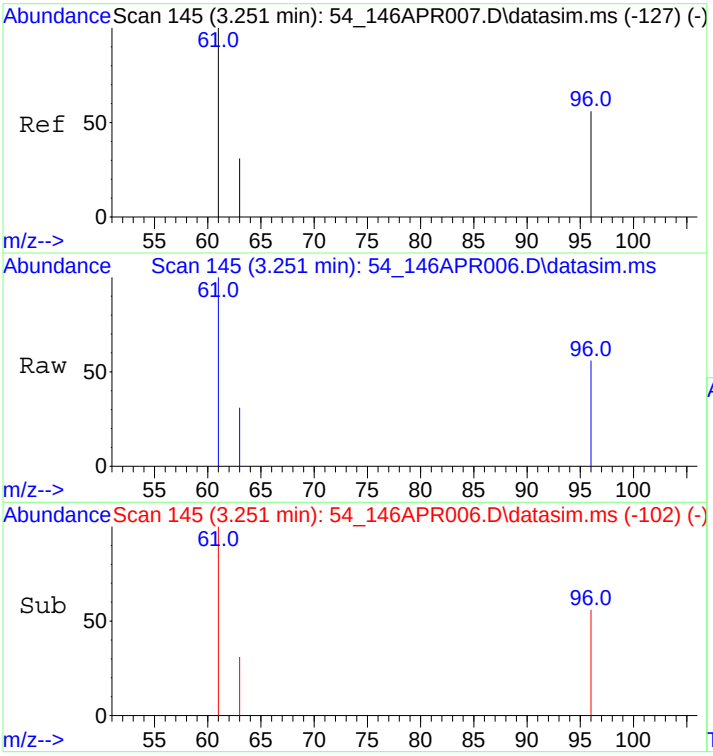


#2
Vinyl chloride
Concen: 96.78 ppbv
RT: 1.902 min Scan# 18
Delta R.T. 0.012 min
Lab File: 54_146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 62 Resp: 16416

Ion	Ratio	Lower	Upper
62	100		
64	36.0	26.8	40.2
27	133.2	16.1	24.1#

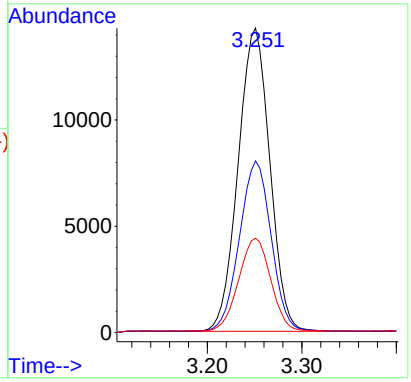


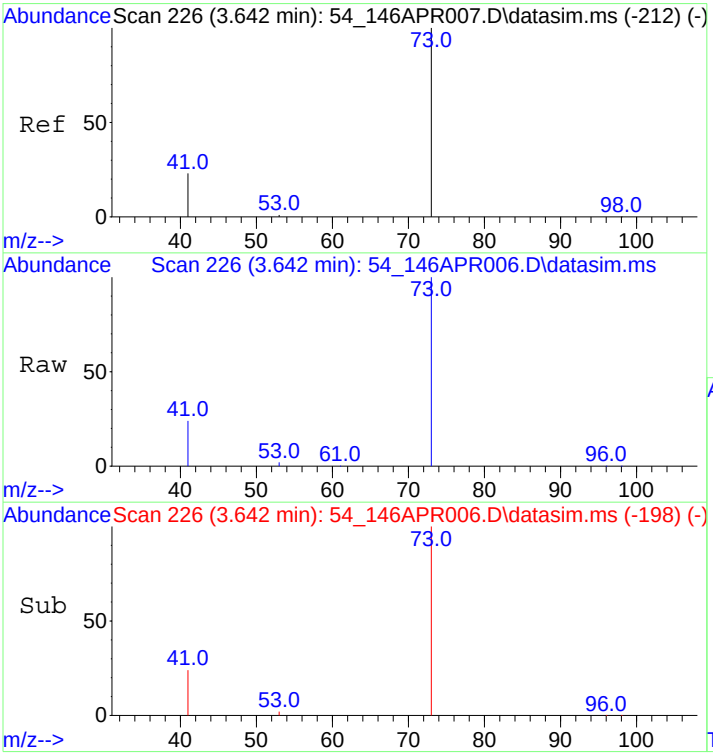


#3
1,1-Dichloroethene
Concen: 98.88 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 61 Resp: 33305

Ion	Ratio	Lower	Upper
61	100		
96	55.9	63.4	95.2#
63	30.8	26.2	39.2

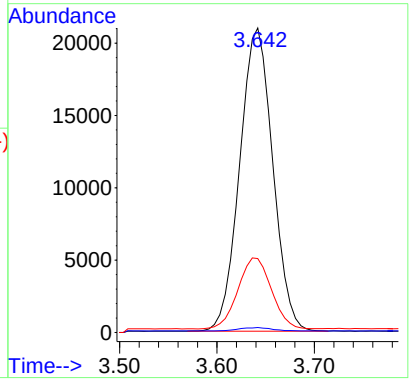


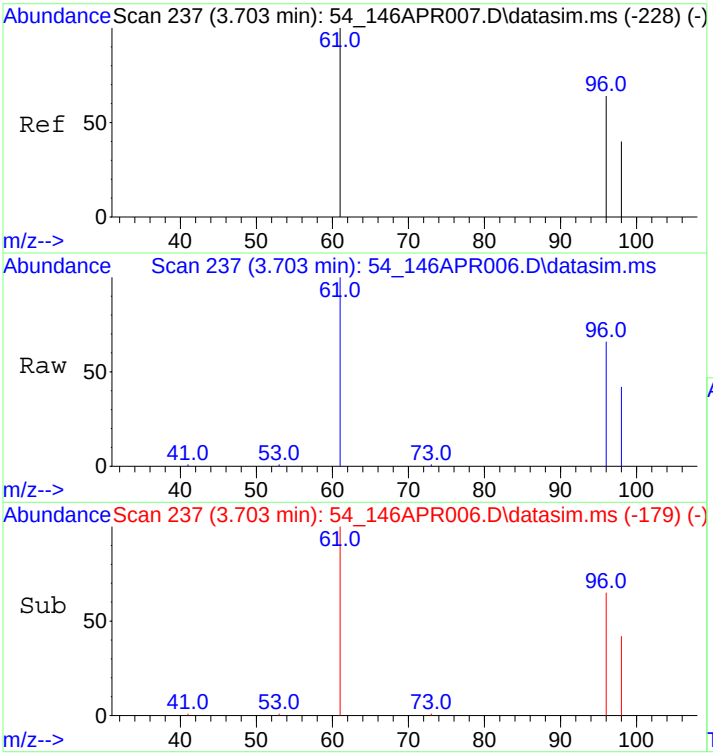


#4
Methyl Tert Butyl Ether
Concen: 98.21 ppbv
RT: 3.642 min Scan# 226
Delta R.T. -0.000 min
Lab File: 54_146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 73 Resp: 49504

Ion	Ratio	Lower	Upper
73	100		
53	1.7	1.0	1.4#
41	23.7	13.1	19.7#

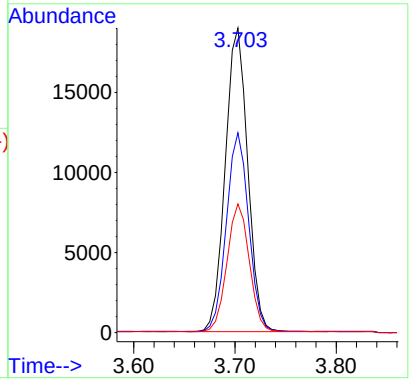


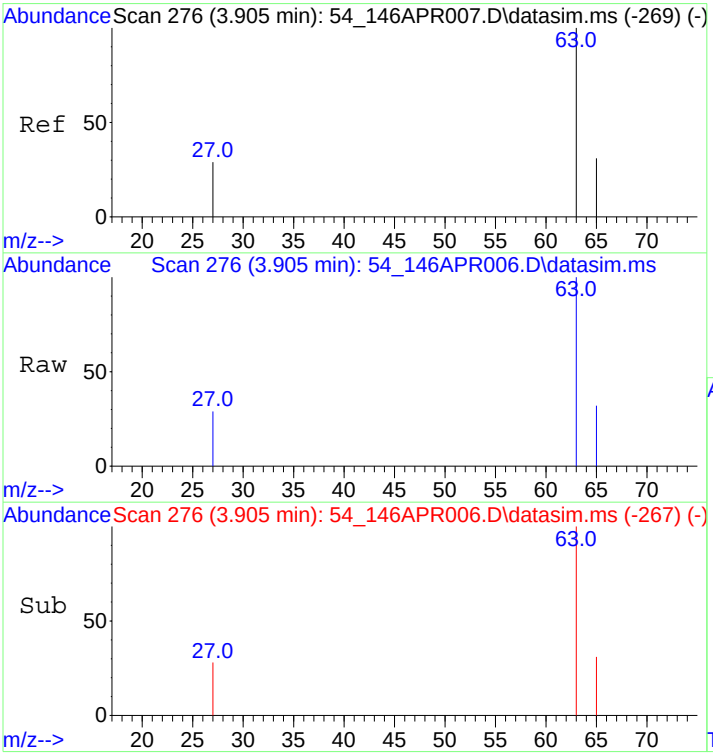


#5
trans-1,2-Dichloroethene
Concen: 101.80 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 61 Resp: 29218

Ion	Ratio	Lower	Upper
61	100		
96	64.8	71.4	107.0#
98	41.7	45.8	68.8#

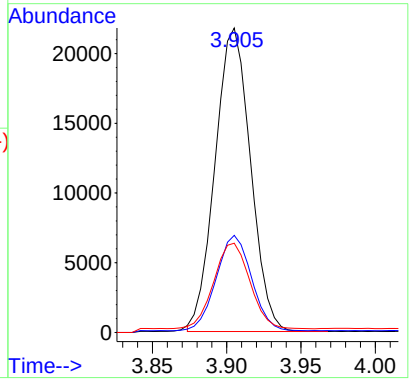


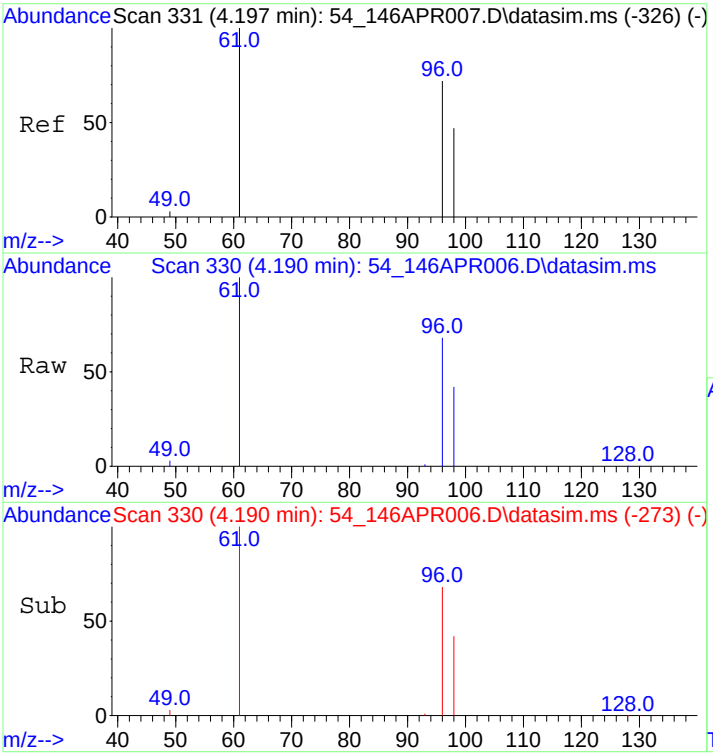


#6
1,1-Dichloroethane
Concen: 105.41 ppbv
RT: 3.905 min Scan# 276
Delta R.T. -0.000 min
Lab File: 54_146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 63 Resp: 36099

Ion	Ratio	Lower	Upper
63	100		
65	31.1	26.1	39.1
27	28.5	10.2	15.2#

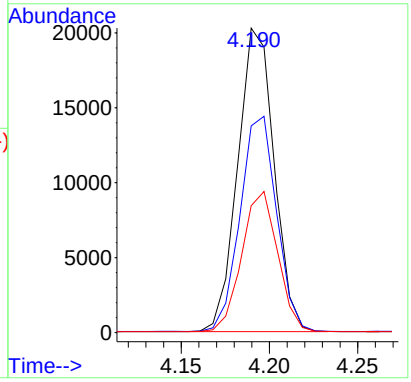


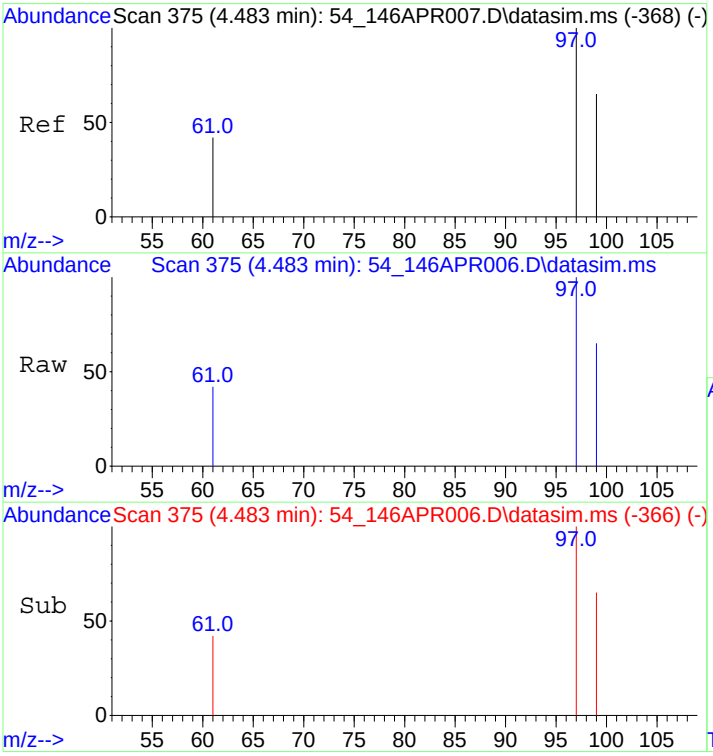


#7
cis-1,2-Dichloroethene
Concen: 107.46 ppbv
RT: 4.190 min Scan# 330
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 61 Resp: 29135

Ion	Ratio	Lower	Upper
61	100		
96	71.1	78.5	117.7#
98	45.5	50.6	76.0#

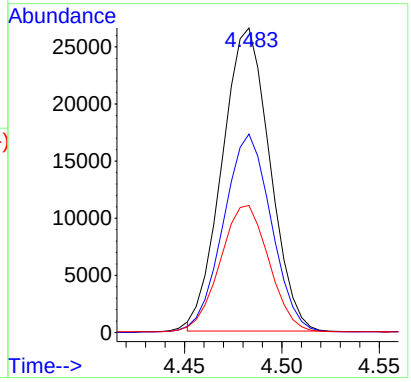


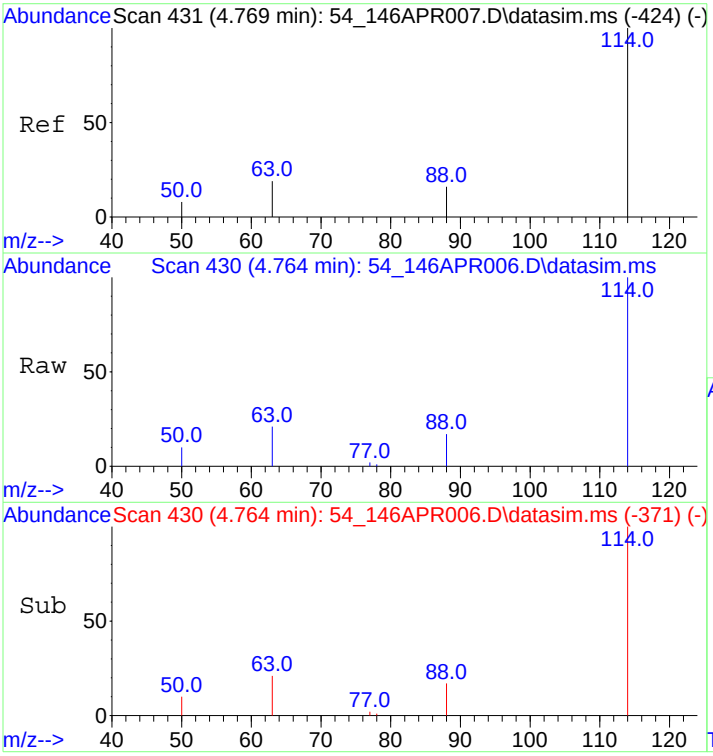


#8
1,1,1-Trichloroethane
Concen: 103.71 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 97 Resp: 45422

Ion	Ratio	Lower	Upper
97	100		
99	64.5	52.1	78.1
61	42.1	30.2	45.4

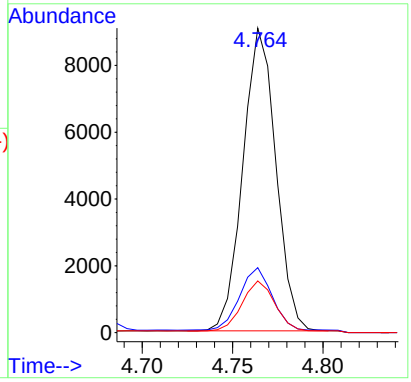


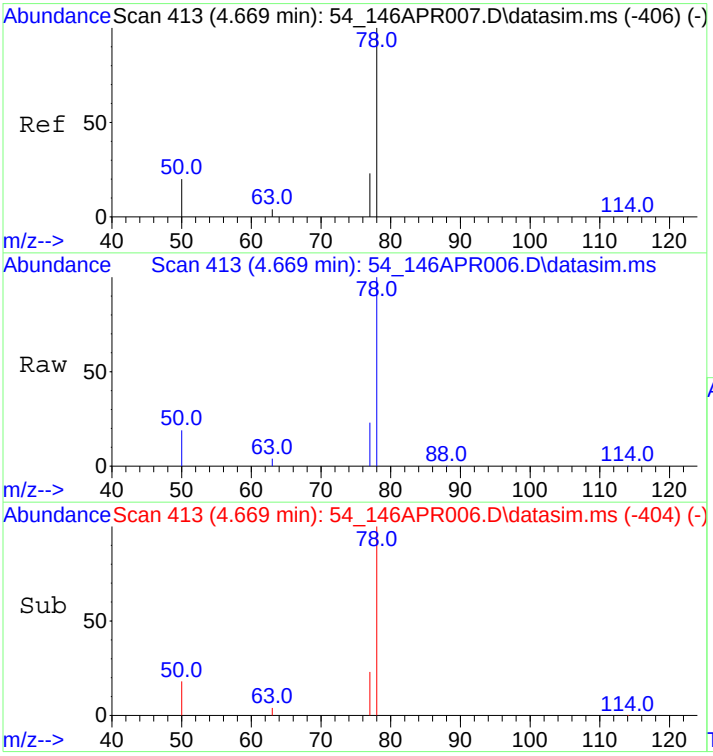


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.764 min Scan# 430
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion:114 Resp: 11486

Ion	Ratio	Lower	Upper
114	100		
63	21.0	12.0	18.0#
88	16.4	11.8	17.8

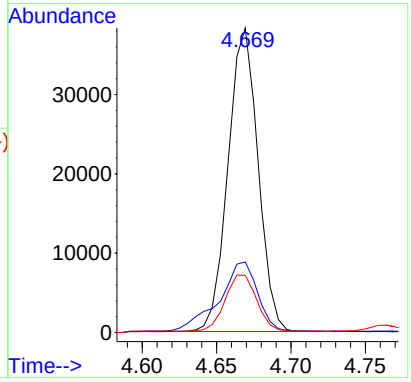


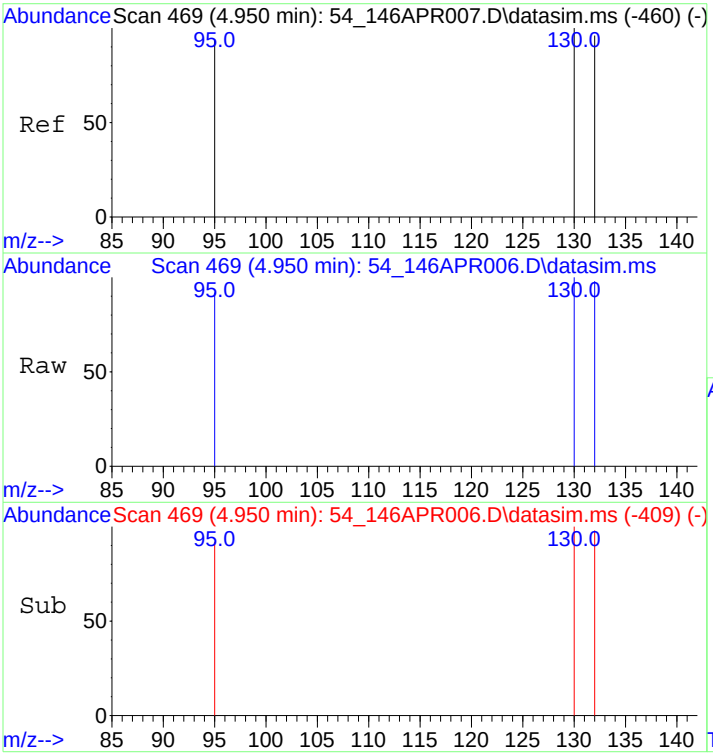


#10
Benzene
Concen: 109.52 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 78 Resp: 53611

Ion	Ratio	Lower	Upper
78	100		
77	28.3	18.2	27.2#
50	19.3	8.6	13.0#

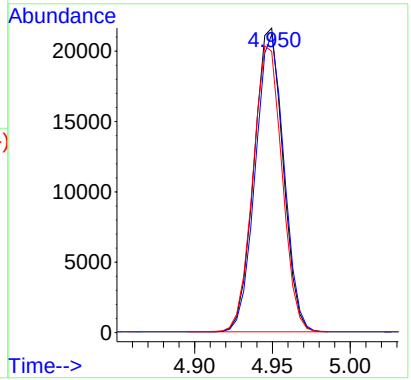


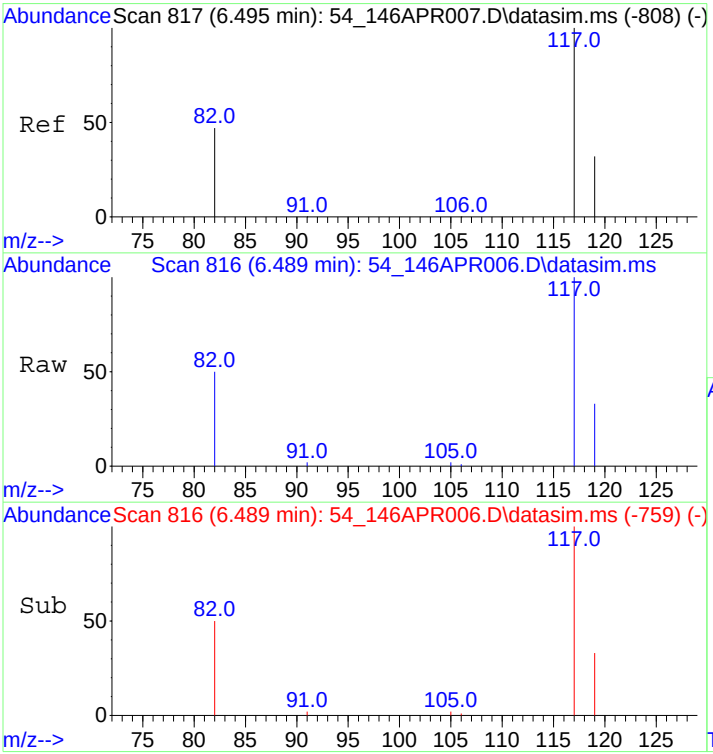


#11
Trichloroethene
Concen: 106.17 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion:130 Resp: 28037

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	94.1	76.5	114.7

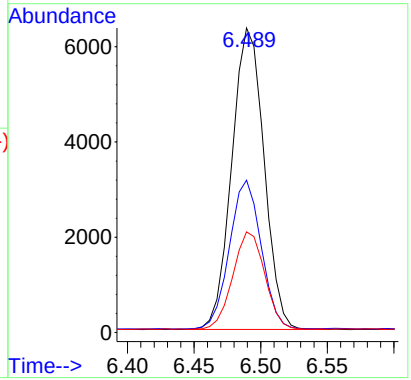


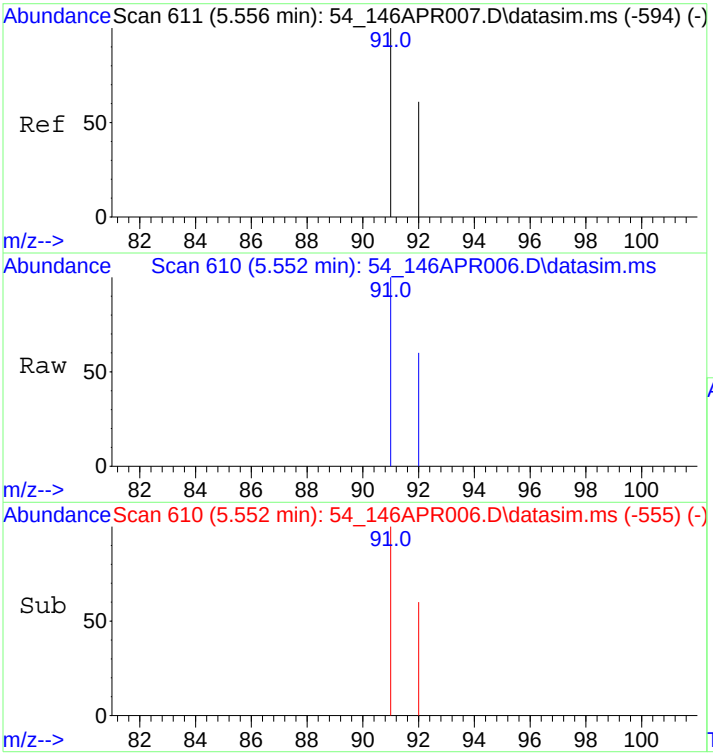


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54_146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion:117 Resp: 10684

Ion	Ratio	Lower	Upper
117	100		
82	48.5	38.0	57.0
119	32.1	27.0	40.4

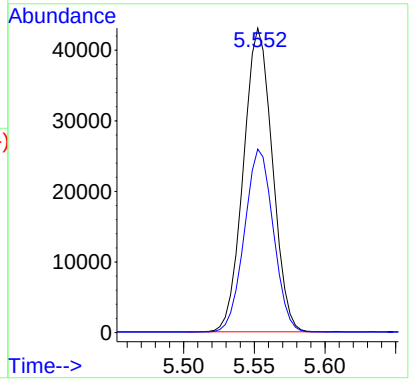


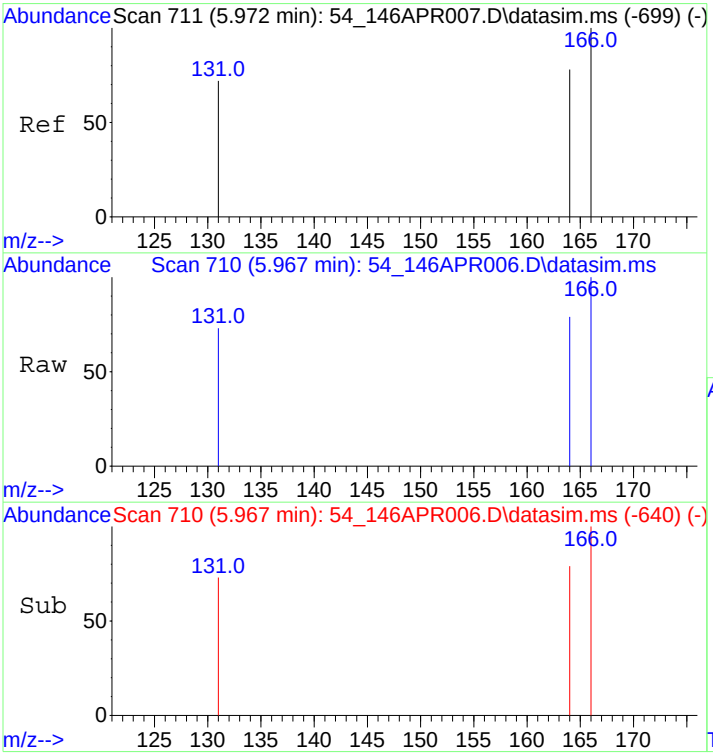


#13
Toluene
Concen: 111.50 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 91 Resp: 61323

Ion	Ratio	Lower	Upper
91	100		
92	60.2	47.8	71.8

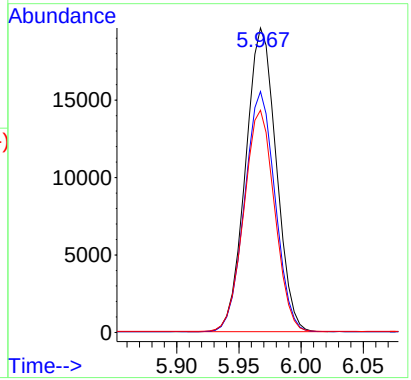


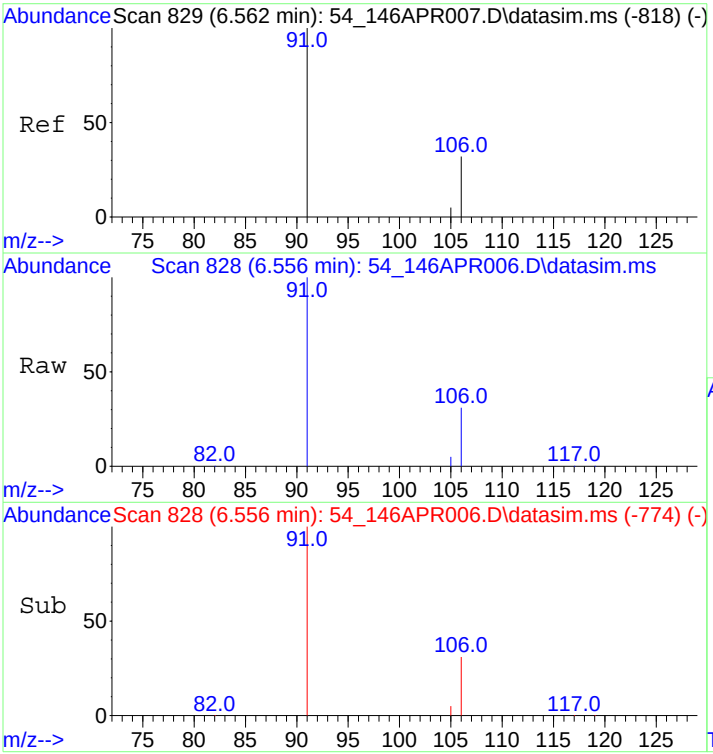


#14
Tetrachloroethene
Concen: 102.75 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.000 min
Lab File: 54_146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion:166 Resp: 33620

Ion	Ratio	Lower	Upper
166	100		
164	78.6	62.6	94.0
131	72.9	58.5	87.7

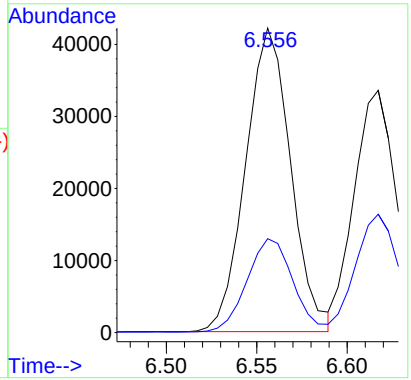


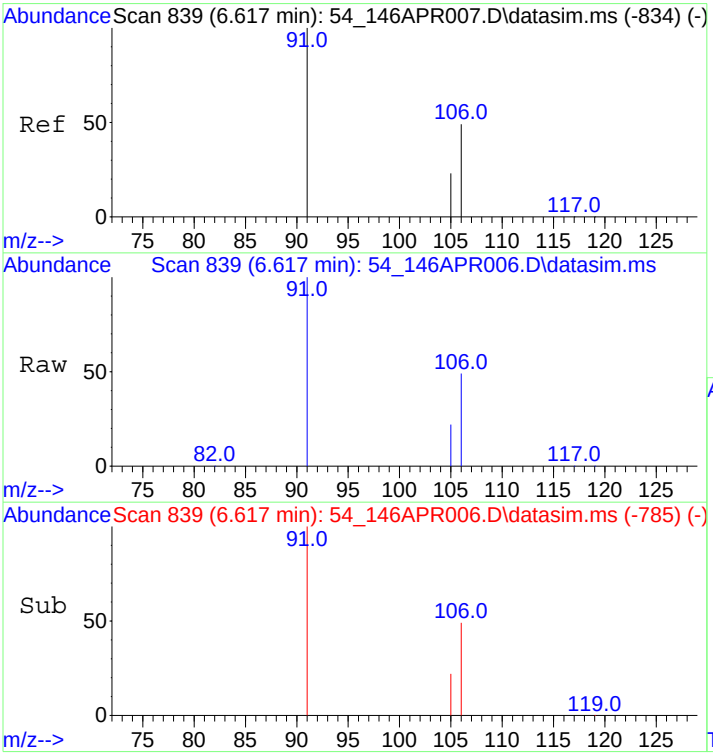


#15
Ethyl Benzene
Concen: 102.19 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 91 Resp: 73133

Ion	Ratio	Lower	Upper
91	100		
106	31.4	26.9	40.3

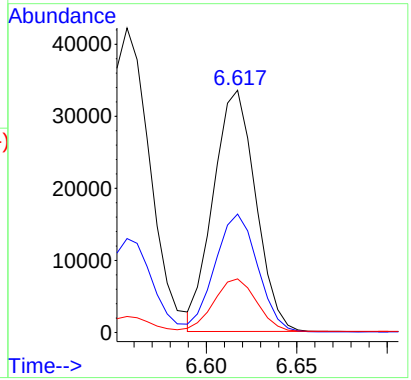


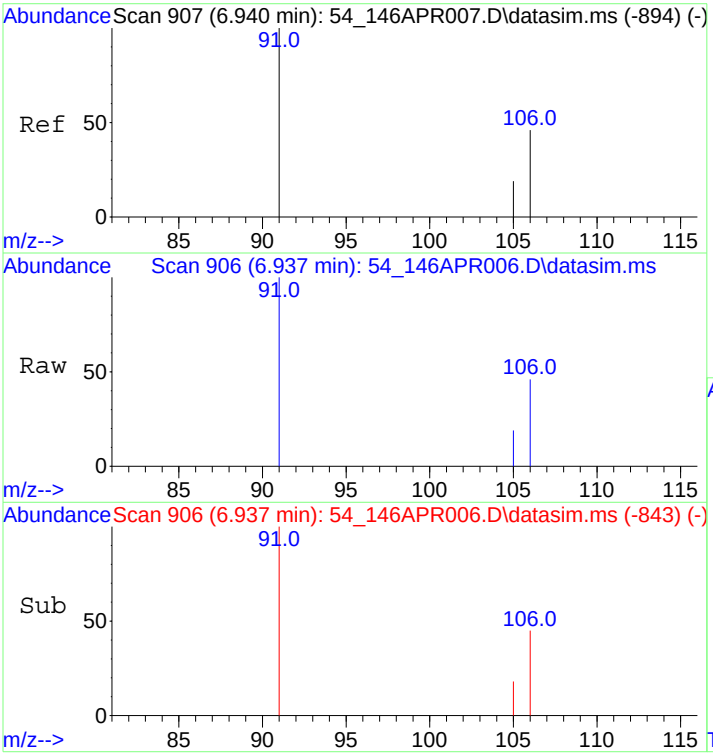


#16
m, p-Xylene
Concen: 100.75 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 91 Resp: 54544

Ion	Ratio	Lower	Upper
91	100		
106	49.1	43.1	64.7
105	22.1	18.3	27.5

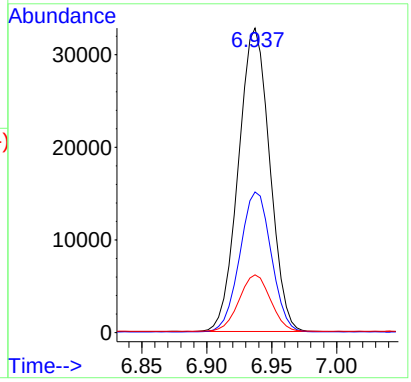




#17
o-Xylene
Concen: 99.09 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.000 min
Lab File: 54 146APR006.D
Acq: 16 Apr 2014 11:32 am

Tgt Ion: 91 Resp: 54921

Ion	Ratio	Lower	Upper
91	100		
106	46.3	40.1	60.1
105	18.7	15.8	23.6



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR007.D
Acq On : 16 Apr 2014 12:46 pm
Operator : yhl
Sample : STD20140416-3 \500 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 12:52:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 11:28:01 2014
QLast Update : Wed Apr 16 11:39:00 2014
Response via : Initial Calibration

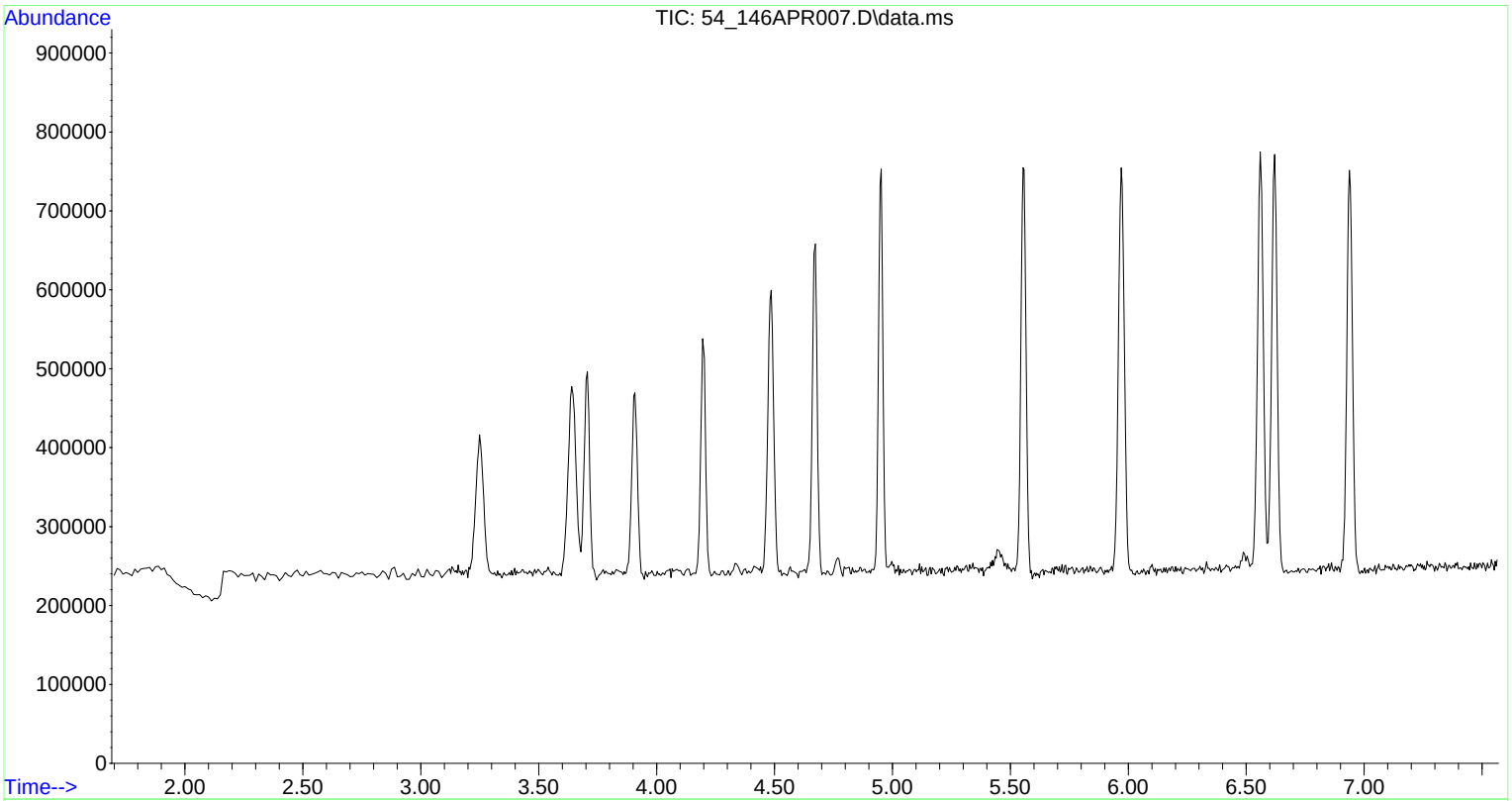
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.335	49	4384	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.769	114	11753	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.495	117	10781	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
2] Vinyl chloride	1.902	62	82812	485.40	ppbv	#	61
3] 1,1-Dichloroethene	3.251	61	167801	486.36	ppbv	#	80
4] Methyl Tert Butyl Ether	3.642	73	253040	492.82	ppbv	#	85
5] trans-1,2-Dichloroethene	3.703	61	148897	503.24	ppbv	#	76
6] 1,1-Dichloroethane	3.905	63	182458	515.86	ppbv	#	87
7] cis-1,2-Dichloroethene	4.197	61	149647	534.42	ppbv	#	74
8] 1,1,1-Trichloroethane	4.483	97	234342	516.65	ppbv		97
10] Benzene	4.669	78	277361	545.91	ppbv	#	90
11] Trichloroethene	4.950	130	149055	542.35	ppbv		99
13] Toluene	5.556	91	337313	593.54	ppbv		99
14] Tetrachloroethene	5.972	166	189934	572.89	ppbv		100
15] Ethyl Benzene	6.562	91	430537	599.65	ppbv		96
16] m, p-Xylene	6.617	91	327948	606.63	ppbv		95
17] o-Xylene	6.940	91	329211	597.12	ppbv		95

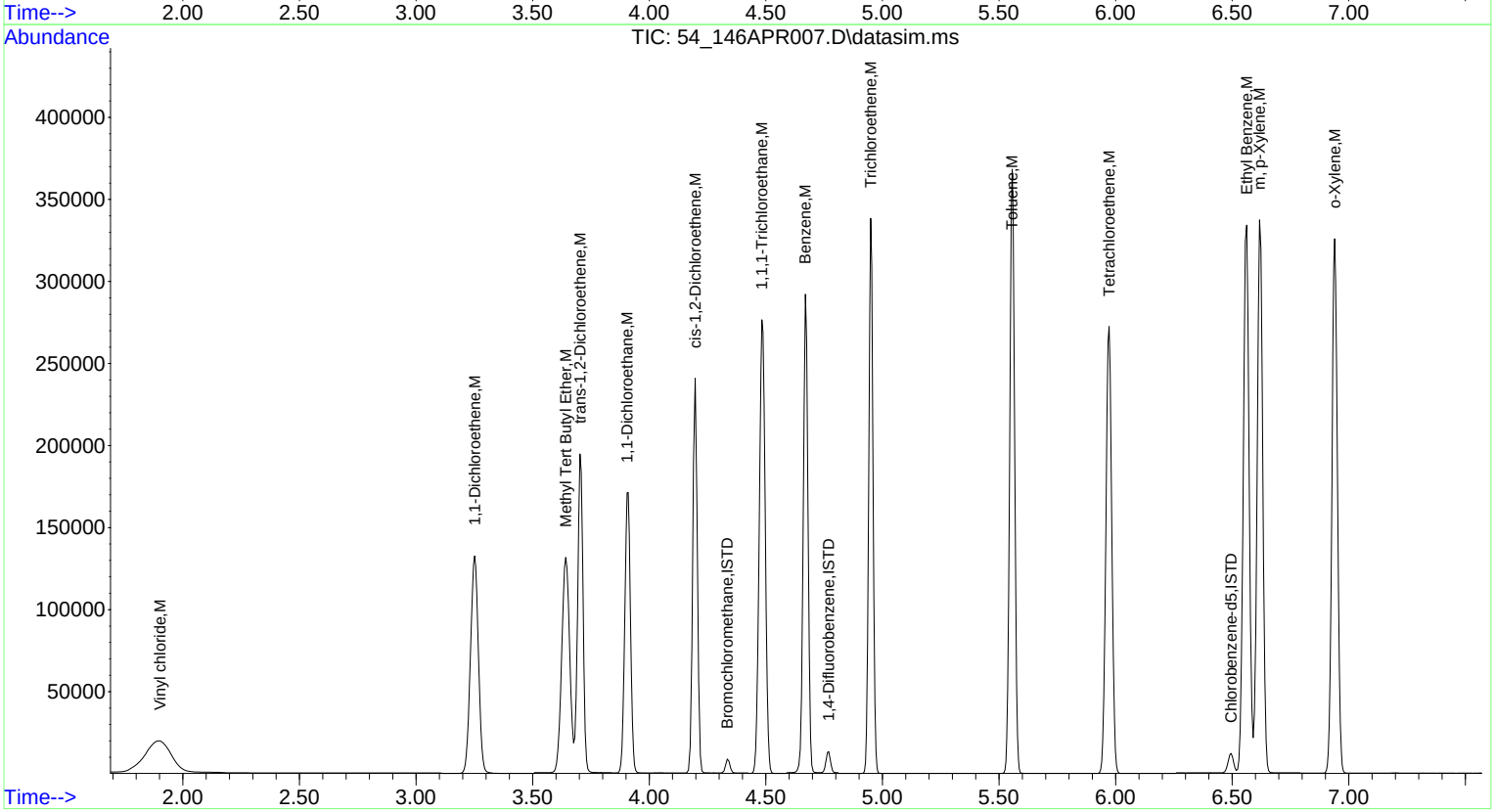
(#) = qualifier out of range (m) = manual integration (+) = signals summed

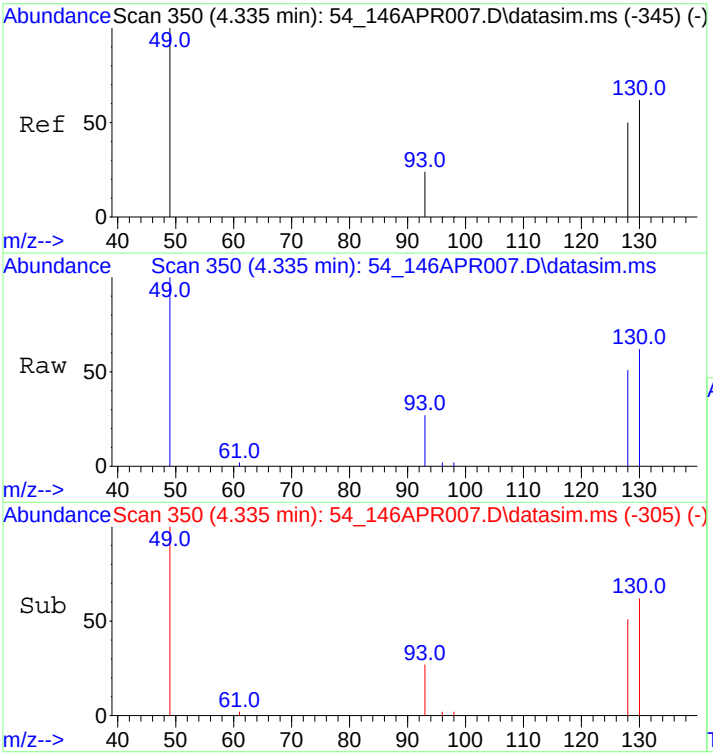
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR007.D
Acq On : 16 Apr 2014 12:46 pm
Operator : yhl
Sample : STD20140416-3 \500 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 12:52:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 11:28:01 2014
QLast Update : Wed Apr 16 11:39:00 2014
Response via : Initial Calibration



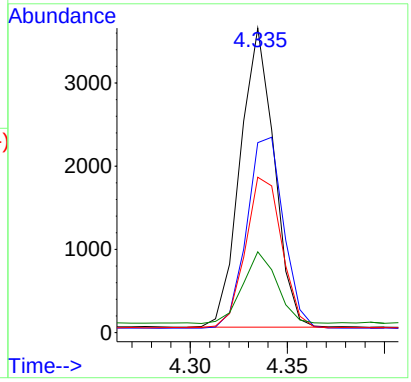


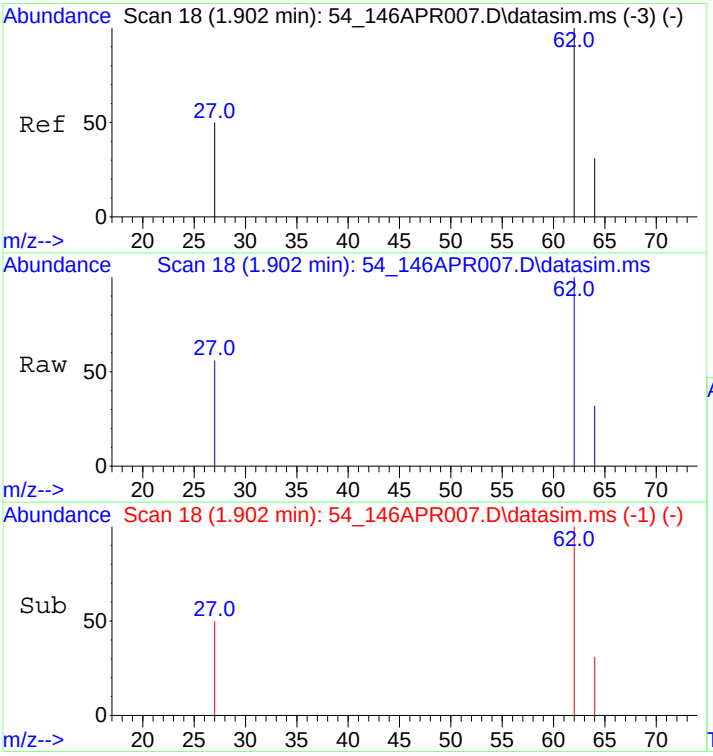


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 49 Resp: 4384

Ion	Ratio	Lower	Upper
49	100		
130	69.2	87.2	130.8#
128	54.1	68.0	102.0#
93	24.1	29.3	43.9#

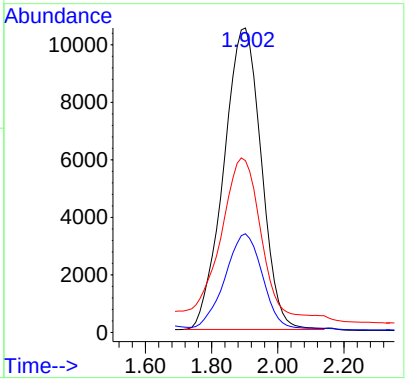


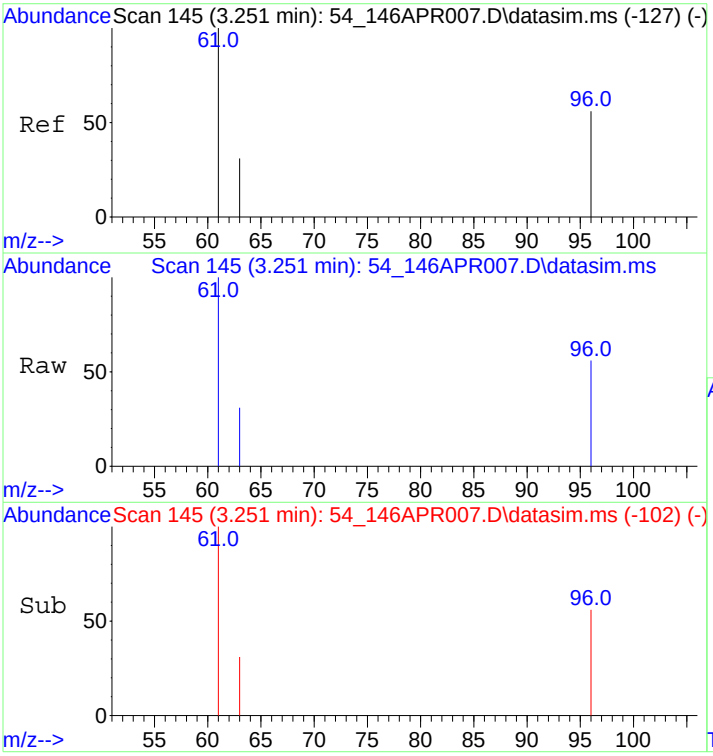


#2
Vinyl chloride
Concen: 485.40 ppbv
RT: 1.902 min Scan# 18
Delta R.T. 0.013 min
Lab File: 54_146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 62 Resp: 82812

Ion	Ratio	Lower	Upper
62	100		
64	33.2	26.8	40.2
27	67.9	16.1	24.1#

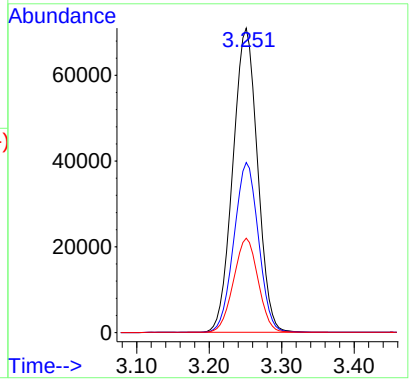


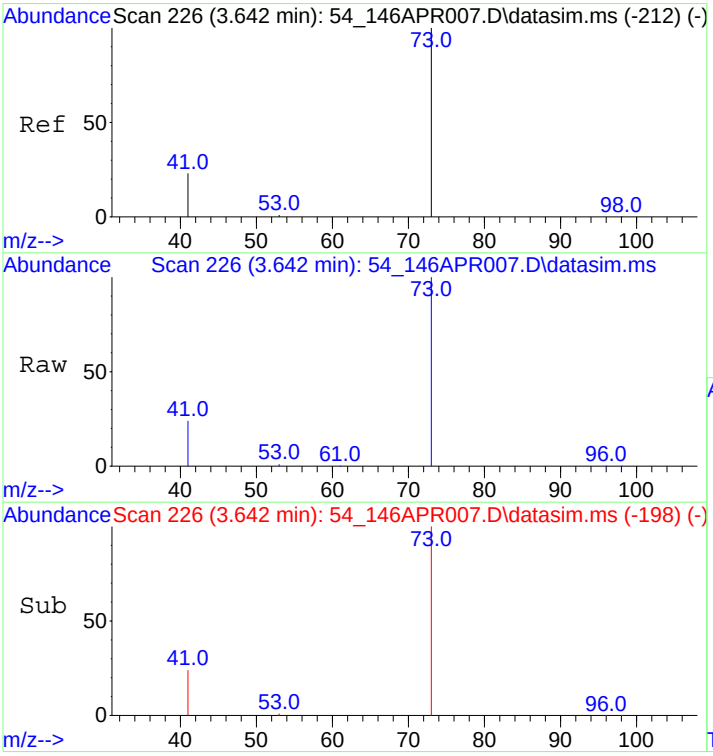


#3
1,1-Dichloroethene
Concen: 486.36 ppbv
RT: 3.251 min Scan# 145
Delta R.T. 0.000 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 61 Resp: 167801

Ion	Ratio	Lower	Upper
61	100		
96	55.6	63.4	95.2#
63	30.8	26.2	39.2

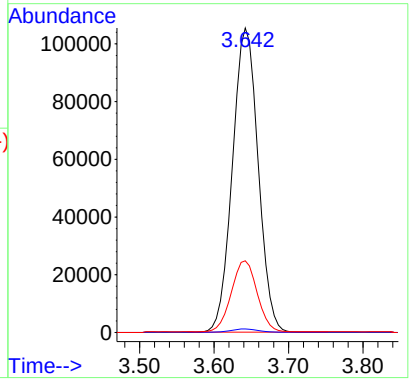


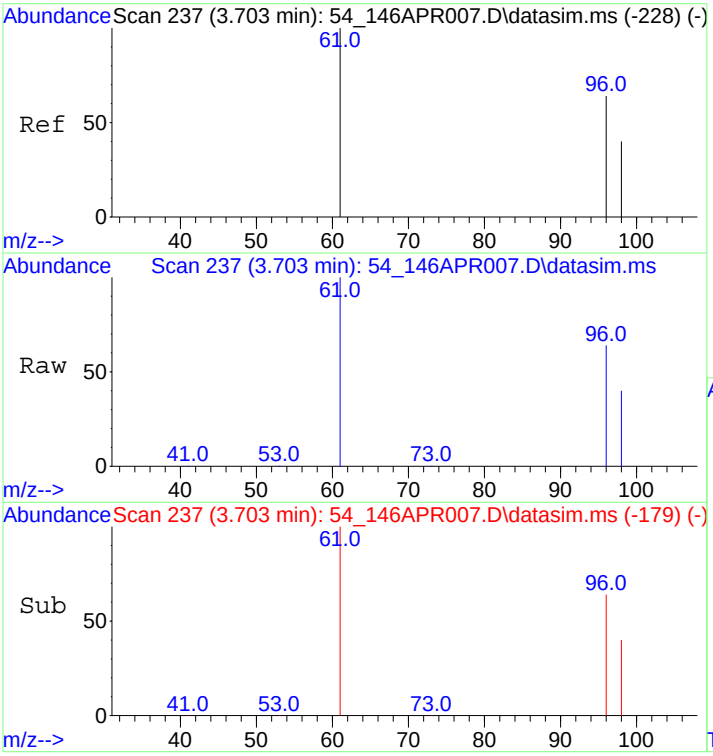


#4
Methyl Tert Butyl Ether
Concen: 492.82 ppbv
RT: 3.642 min Scan# 226
Delta R.T. 0.000 min
Lab File: 54_146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 73 Resp: 253040

Ion	Ratio	Lower	Upper
73	100		
53	1.1	1.0	1.4
41	23.4	13.1	19.7#

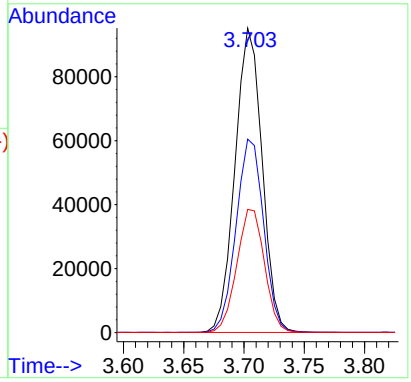


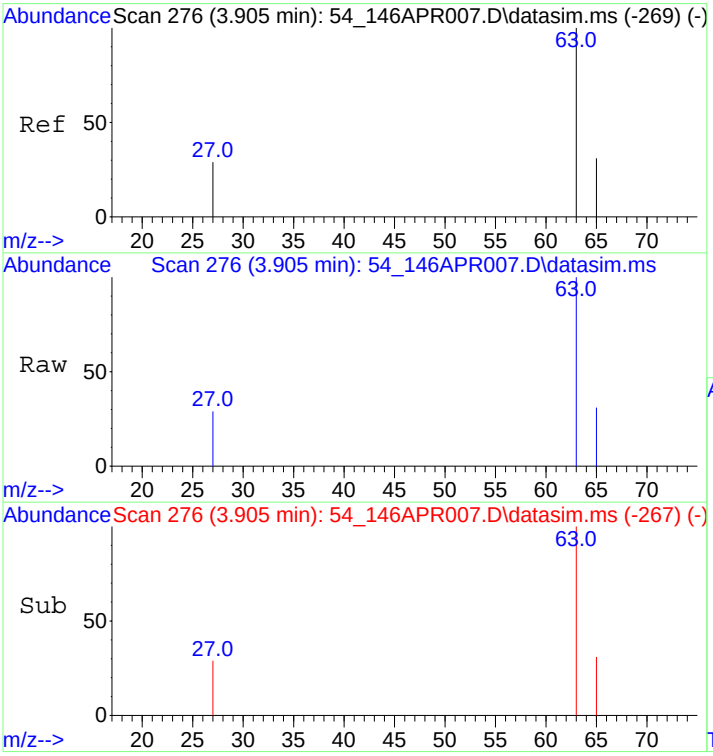


#5
trans-1,2-Dichloroethene
Concen: 503.24 ppbv
RT: 3.703 min Scan# 237
Delta R.T. 0.000 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 61 Resp: 148897

Ion	Ratio	Lower	Upper
61	100		
96	64.5	71.4	107.0#
98	41.4	45.8	68.8#

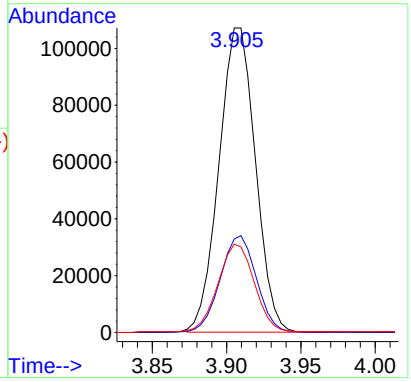


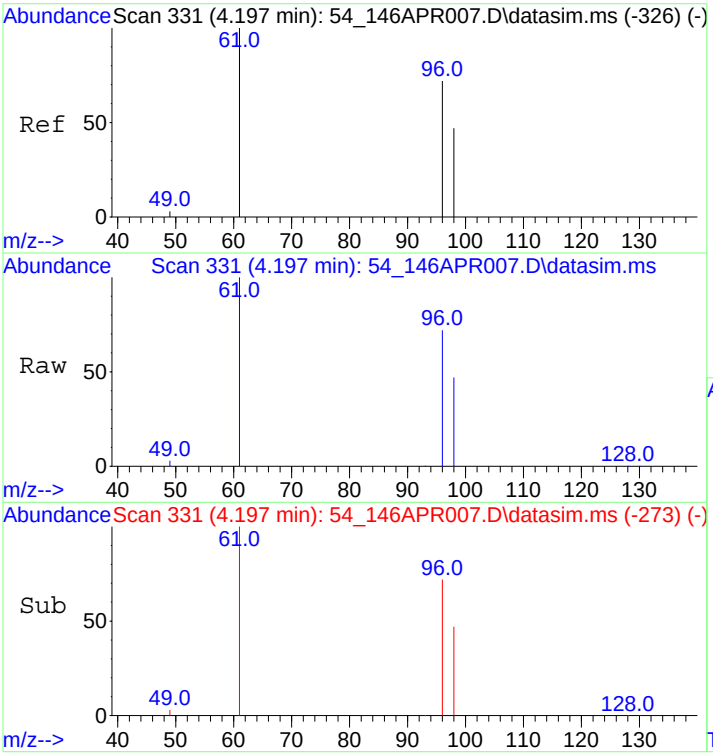


#6
1,1-Dichloroethane
Concen: 515.86 ppbv
RT: 3.905 min Scan# 276
Delta R.T. 0.000 min
Lab File: 54_146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 63 Resp: 182458

Ion	Ratio	Lower	Upper
63	100		
65	31.2	26.1	39.1
27	28.4	10.2	15.2#

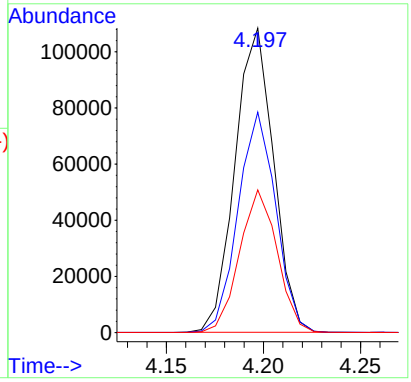


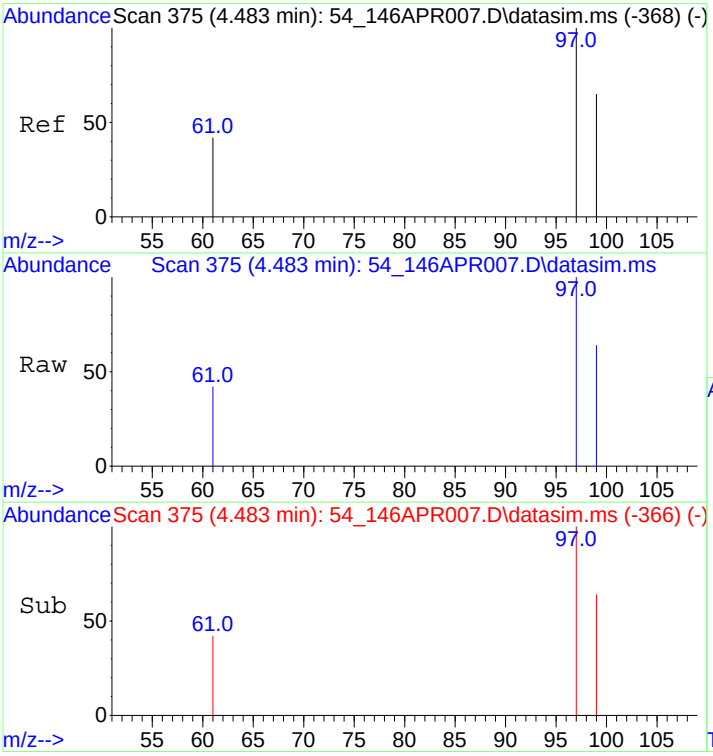


#7
cis-1,2-Dichloroethene
Concen: 534.42 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.007 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 61 Resp: 149647

Ion	Ratio	Lower	Upper
61	100		
96	70.8	78.5	117.7#
98	45.8	50.6	76.0#

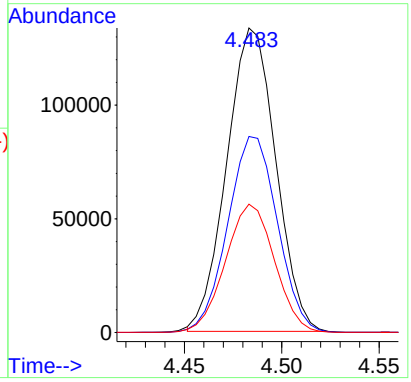


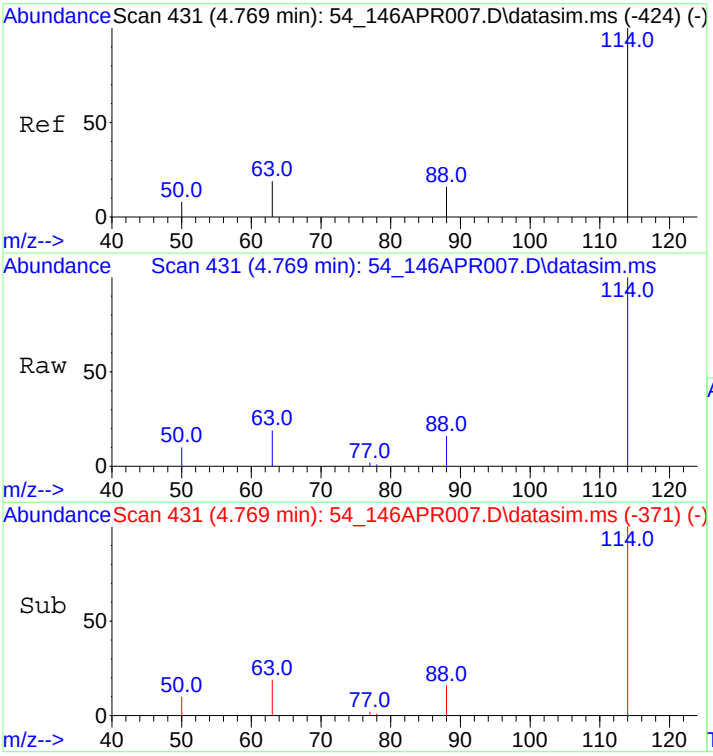


#8
1,1,1-Trichloroethane
Concen: 516.65 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 97 Resp: 234342

Ion	Ratio	Lower	Upper
97	100		
99	64.7	52.1	78.1
61	41.9	30.2	45.4

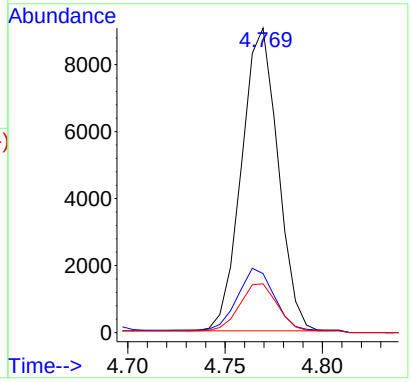


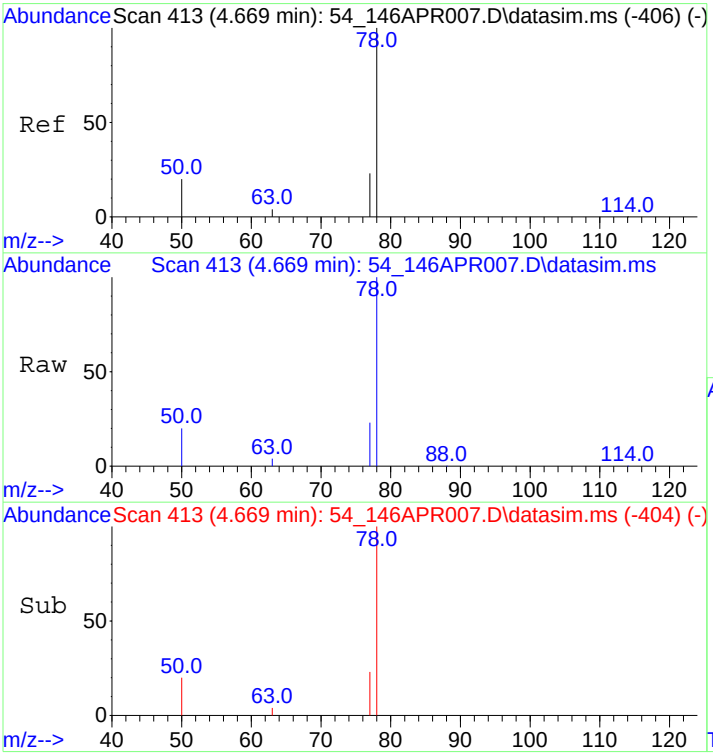


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.006 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion:114 Resp: 11753

Ion	Ratio	Lower	Upper
114	100		
63	20.3	12.0	18.0#
88	16.0	11.8	17.8

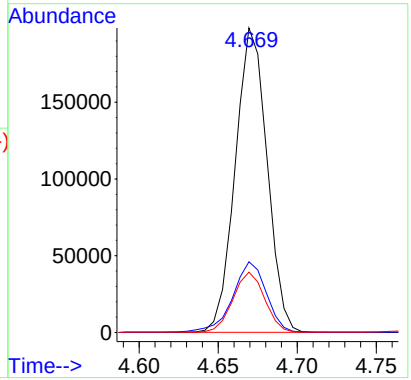


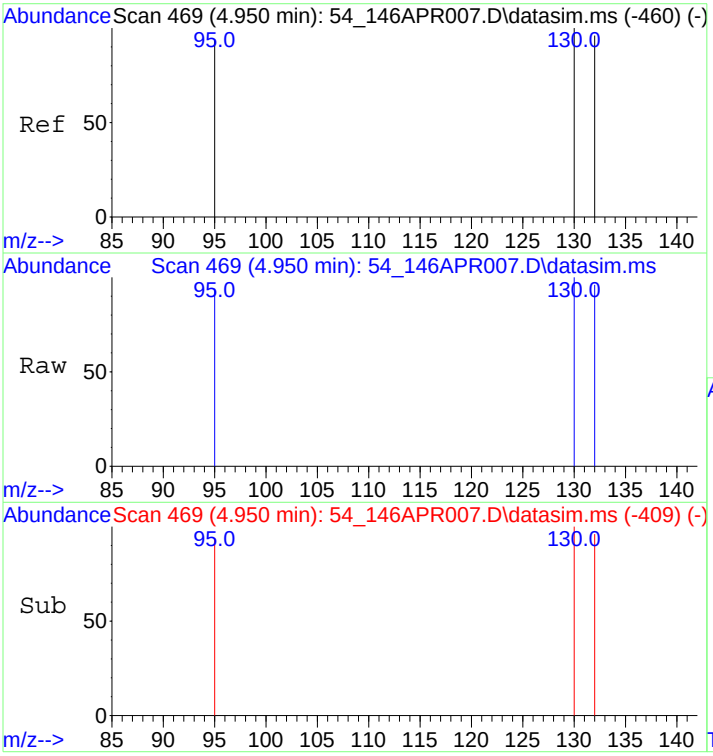


#10
Benzene
Concen: 545.91 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 78 Resp: 277361

Ion	Ratio	Lower	Upper
78	100		
77	24.2	18.2	27.2
50	19.5	8.6	13.0#

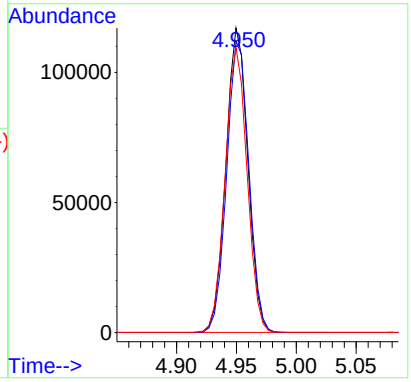


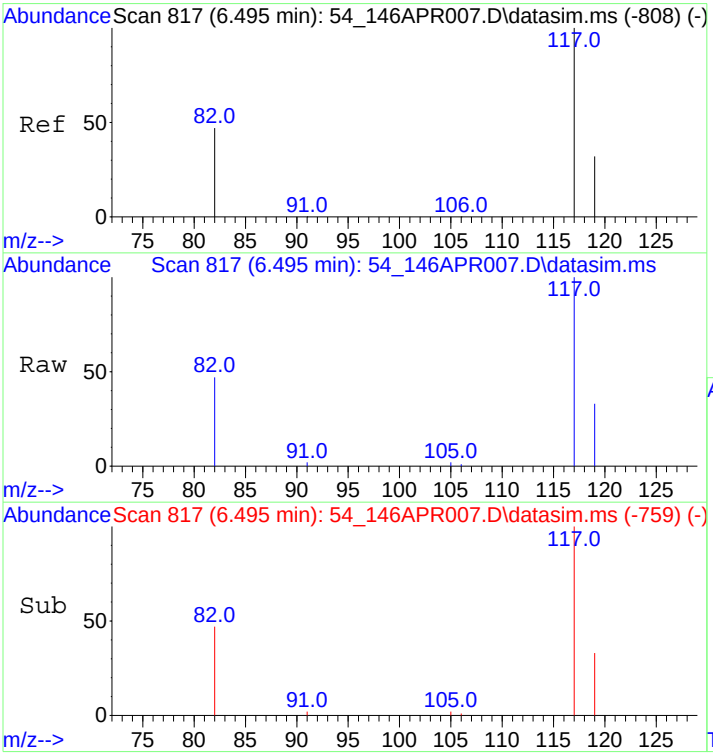


#11
Trichloroethene
Concen: 542.35 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion:130 Resp: 149055

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	93.5	76.5	114.7

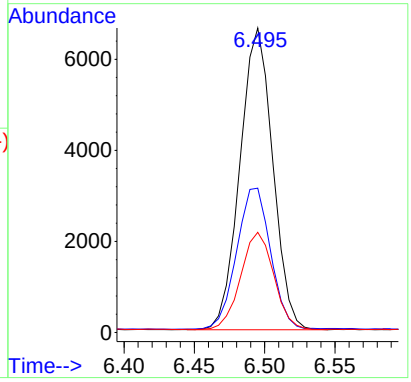


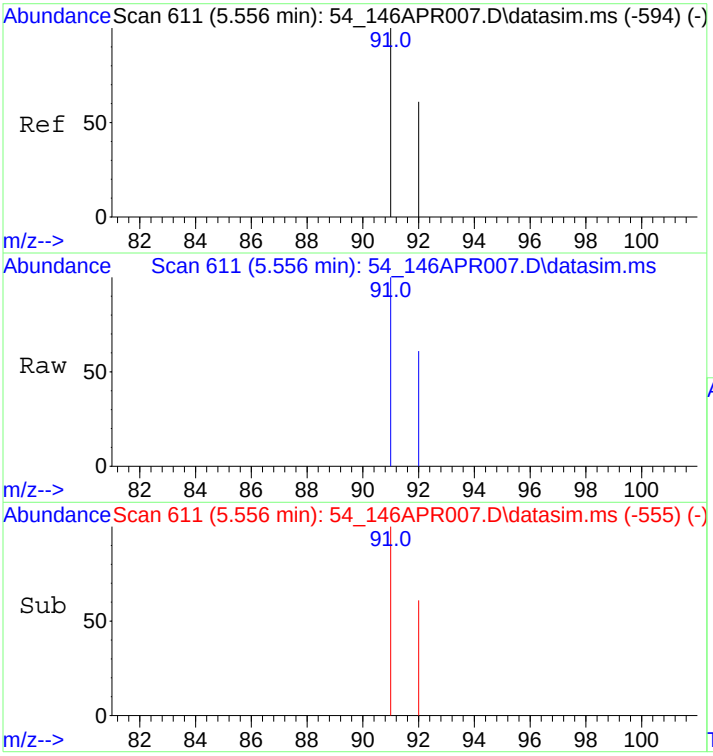


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.006 min
Lab File: 54_146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion:117 Resp: 10781

Ion	Ratio	Lower	Upper
117	100		
82	48.2	38.0	57.0
119	32.5	27.0	40.4

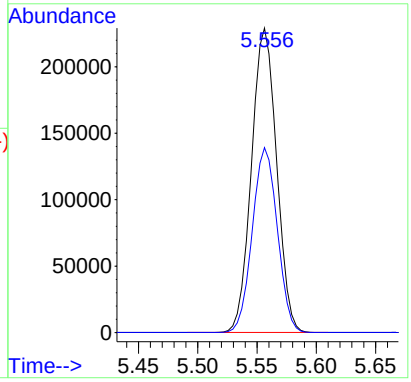


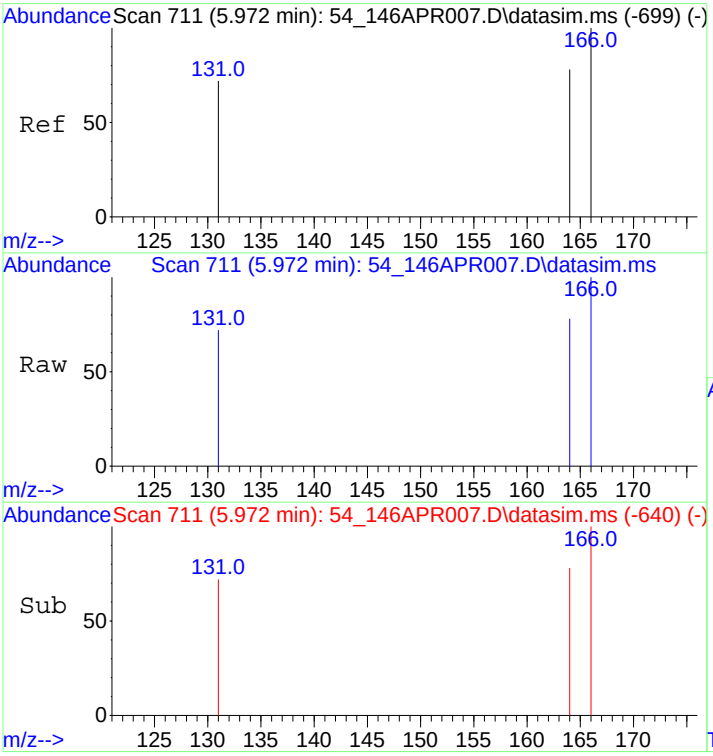


#13
Toluene
Concen: 593.54 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.004 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 91 Resp: 337313

Ion	Ratio	Lower	Upper
91	100		
92	60.5	47.8	71.8

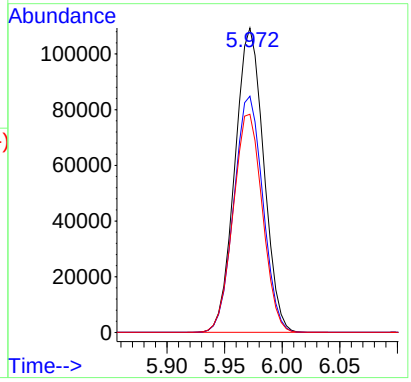


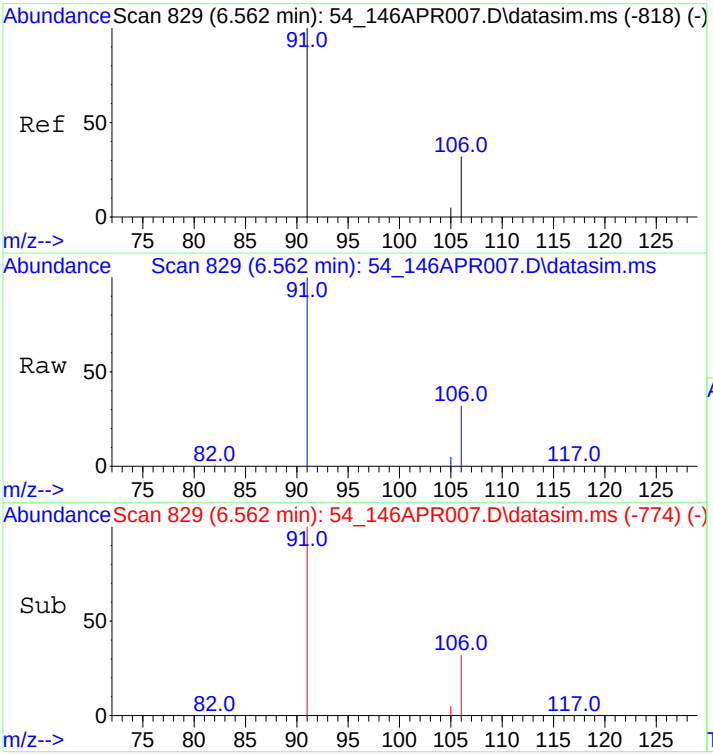


#14
Tetrachloroethene
Concen: 572.89 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.005 min
Lab File: 54_146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion:166 Resp: 189934

Ion	Ratio	Lower	Upper
166	100		
164	78.3	62.6	94.0
131	72.8	58.5	87.7

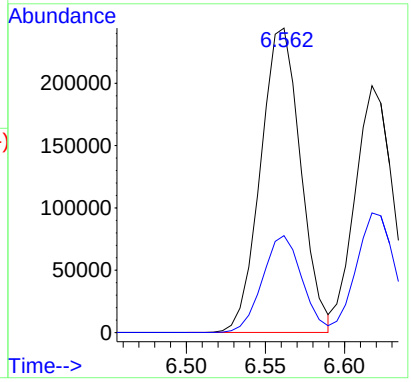


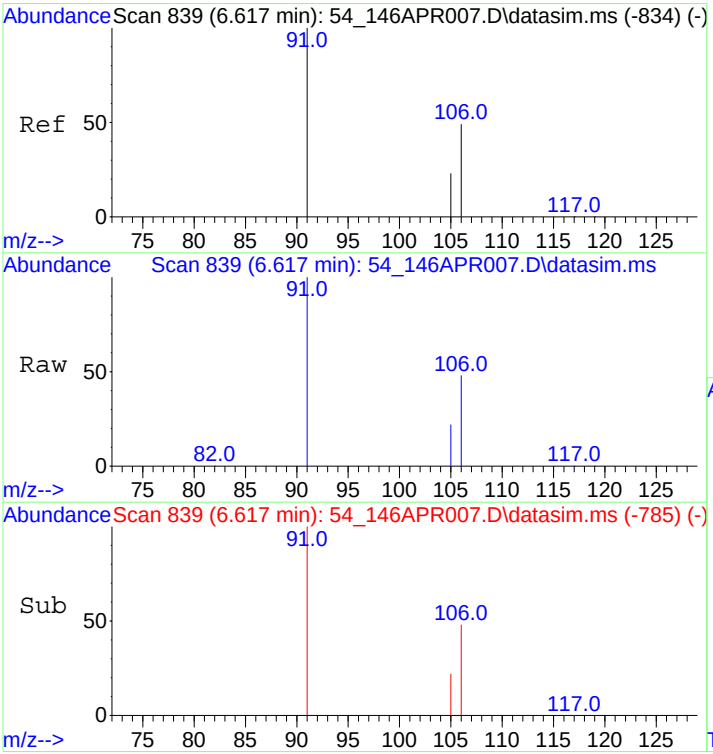


#15
Ethyl Benzene
Concen: 599.65 ppbv
RT: 6.562 min Scan# 829
Delta R.T. 0.006 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 91 Resp: 430537

Ion	Ratio	Lower	Upper
91	100		
106	31.4	26.9	40.3

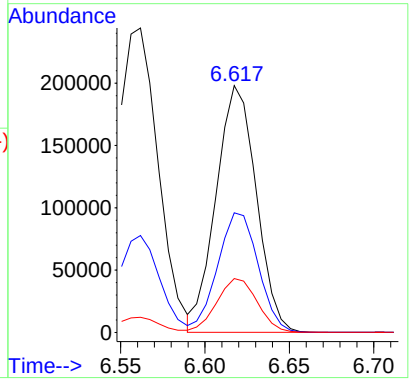


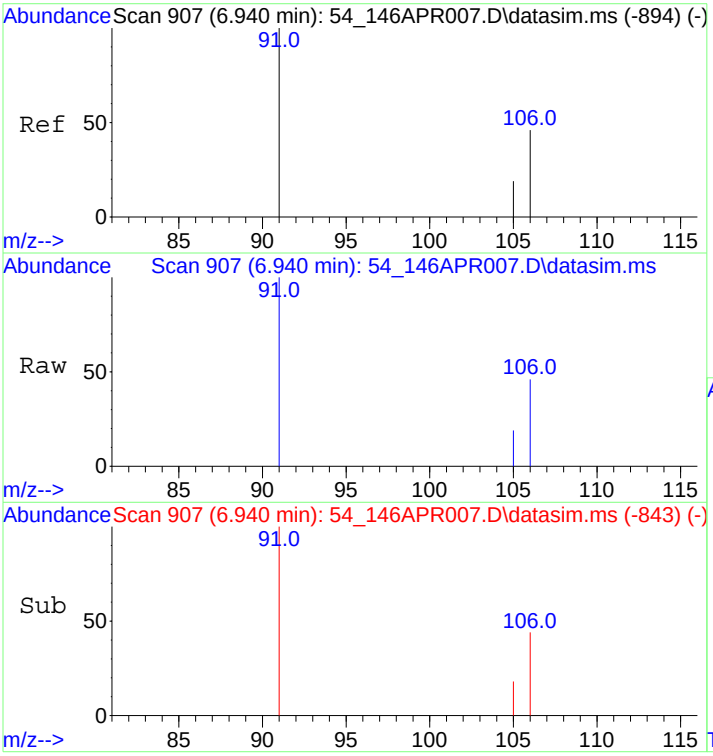


#16
m, p-Xylene
Concen: 606.63 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 91 Resp: 327948

Ion	Ratio	Lower	Upper
91	100		
106	49.1	43.1	64.7
105	21.9	18.3	27.5

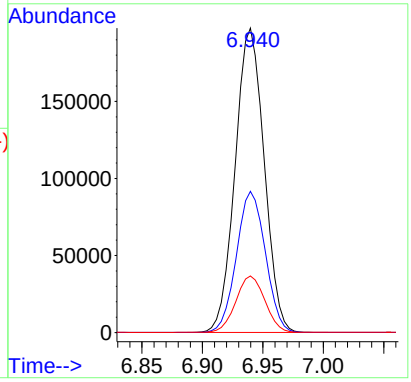




#17
o-Xylene
Concen: 597.12 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.002 min
Lab File: 54 146APR007.D
Acq: 16 Apr 2014 12:46 pm

Tgt Ion: 91 Resp: 329211

Ion	Ratio	Lower	Upper
91	100		
106	46.3	40.1	60.1
105	18.5	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR008.D
Acq On : 16 Apr 2014 12:58 pm
Operator : yhl
Sample : STD20140416-5 \5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:04:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 11:39:00 2014
QLast Update : Wed Apr 16 12:53:34 2014
Response via : Initial Calibration

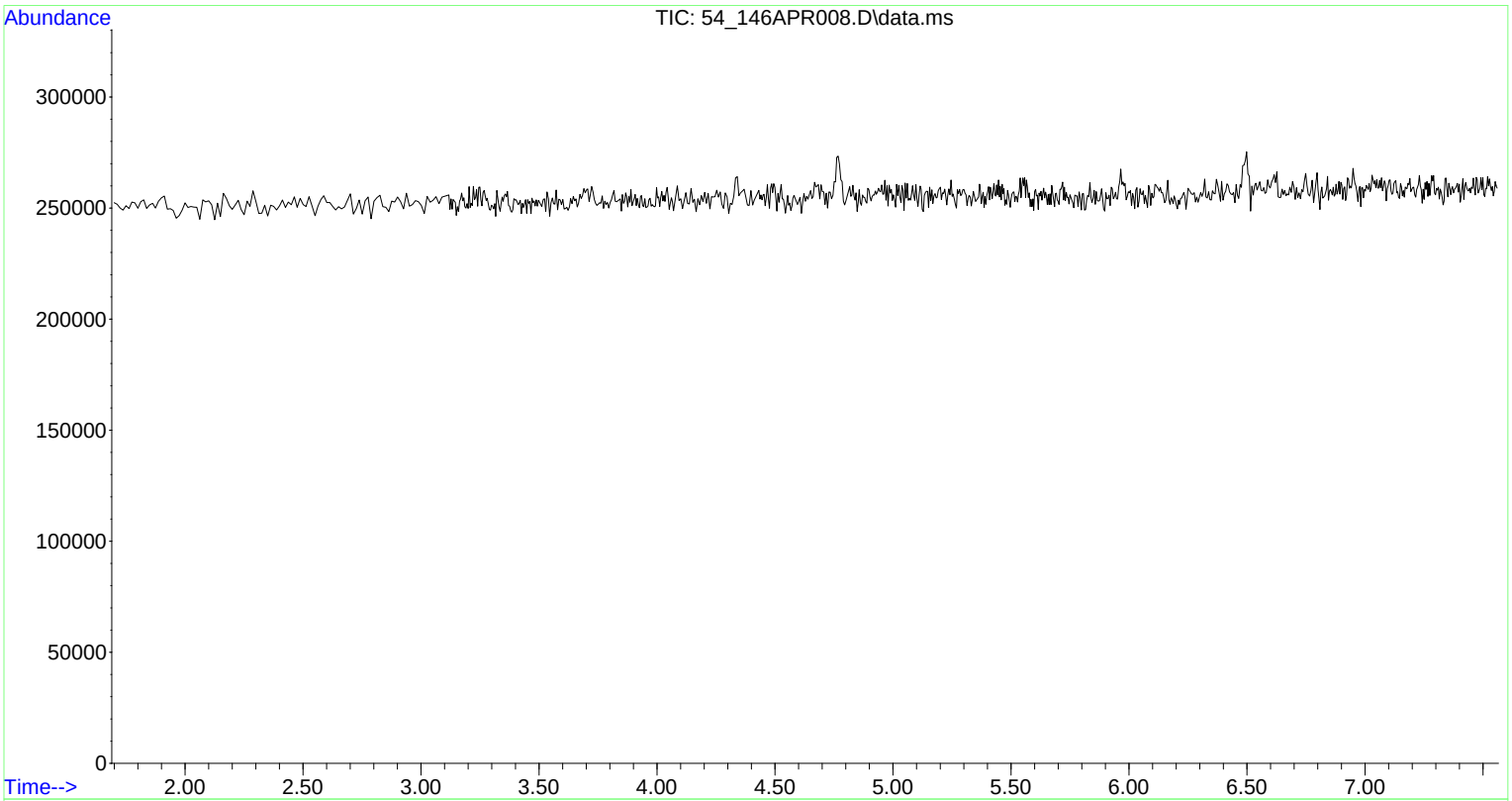
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.335	49	4301	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.764	114	11956	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.495	117	10550	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
2] Vinyl chloride	1.902	62	894	5.42	ppbv	#	47
3] 1,1-Dichloroethene	3.251	61	1623	4.82	ppbv		90
4] Methyl Tert Butyl Ether	3.642	73	2489	4.97	ppbv	#	23
5] trans-1,2-Dichloroethene	3.703	61	1502	5.17	ppbv	#	76
6] 1,1-Dichloroethane	3.905	63	1840	5.31	ppbv	#	87
7] cis-1,2-Dichloroethene	4.197	61	1482	5.38	ppbv	#	76
8] 1,1,1-Trichloroethane	4.483	97	2337	5.22	ppbv		97
10] Benzene	4.669	78	2944	5.64	ppbv	#	91
11] Trichloroethene	4.950	130	1555	5.46	ppbv		100
13] Toluene	5.556	91	3662	6.36	ppbv		98
14] Tetrachloroethene	5.972	166	2035	6.08	ppbv		99
15] Ethyl Benzene	6.556	91	4751	6.51	ppbv		96
16] m, p-Xylene	6.617	91	3667	6.65	ppbv		95
17] o-Xylene	6.940	91	3699	6.60	ppbv		95

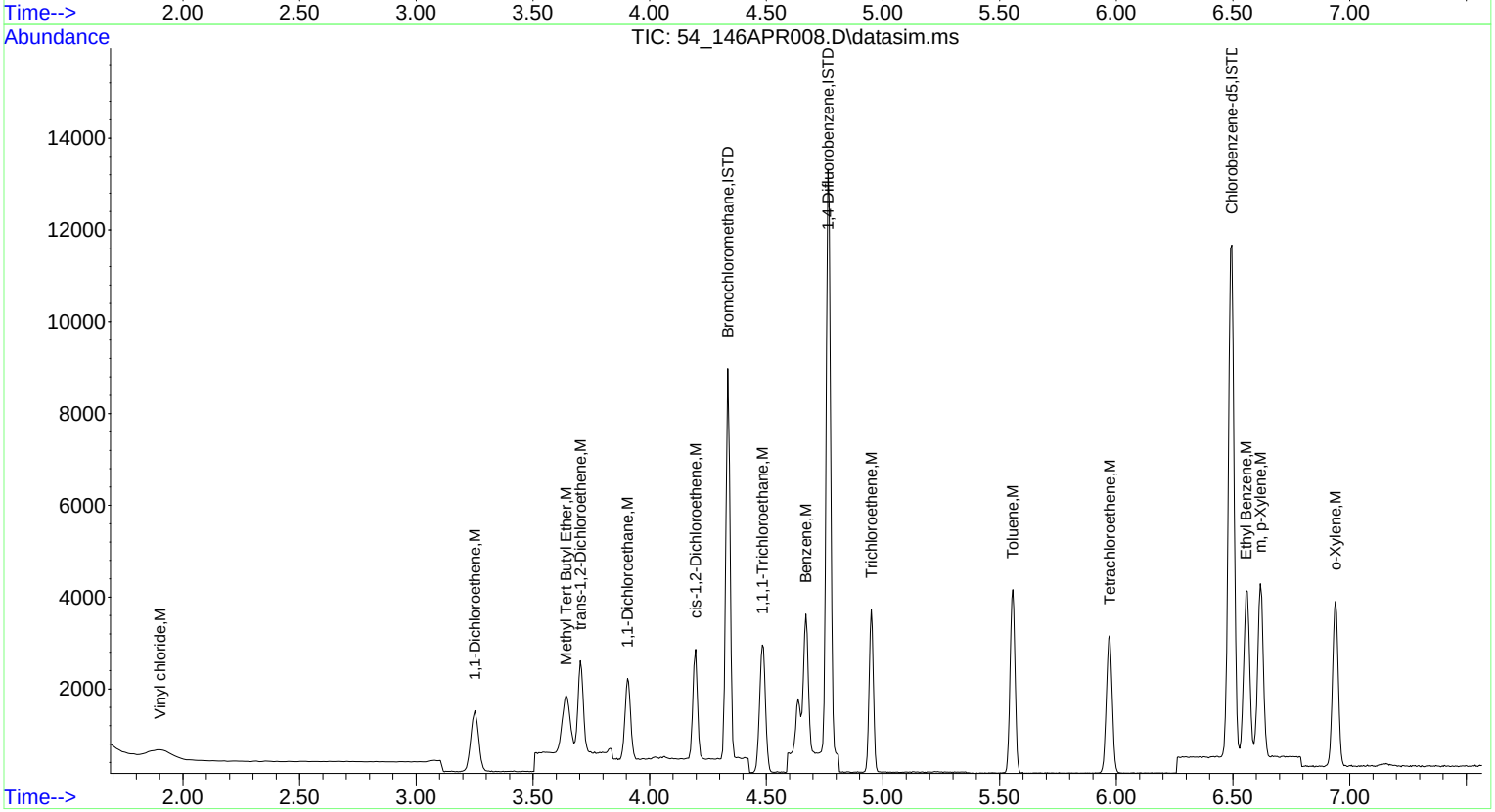
(#) = qualifier out of range (m) = manual integration (+) = signals summed

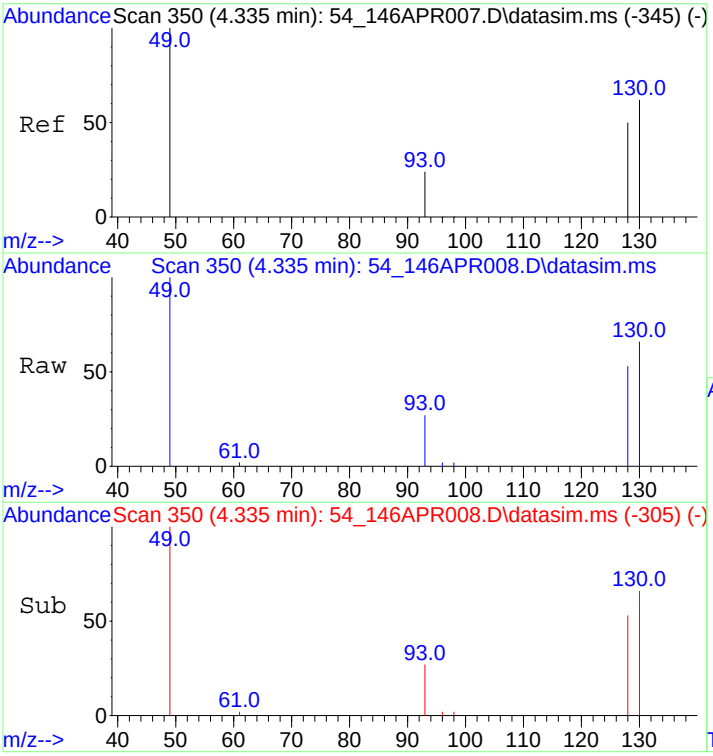
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR008.D
Acq On : 16 Apr 2014 12:58 pm
Operator : yhl
Sample : STD20140416-5 \5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:04:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 11:39:00 2014
QLast Update : Wed Apr 16 12:53:34 2014
Response via : Initial Calibration



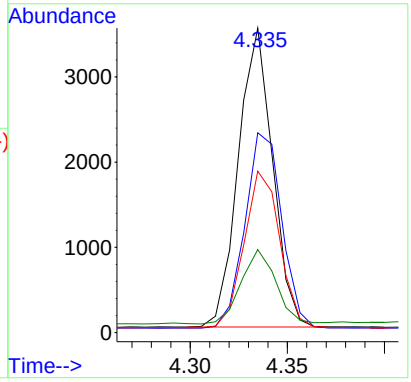


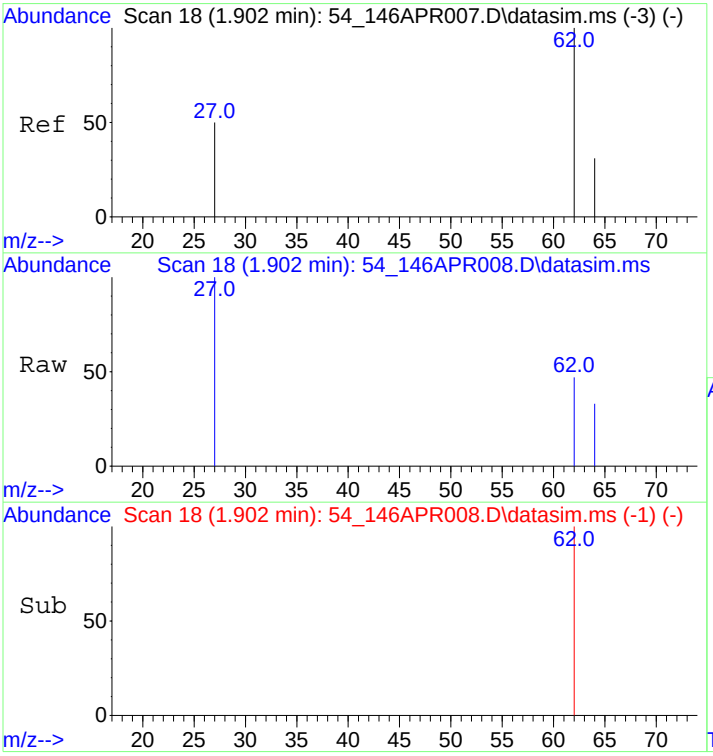


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 49 Resp: 4301

Ion	Ratio	Lower	Upper
49	100		
130	70.4	87.2	130.8#
128	54.3	68.0	102.0#
93	25.3	29.3	43.9#

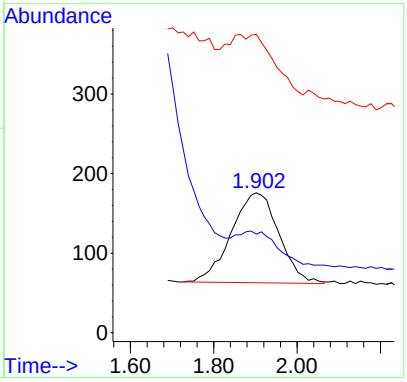


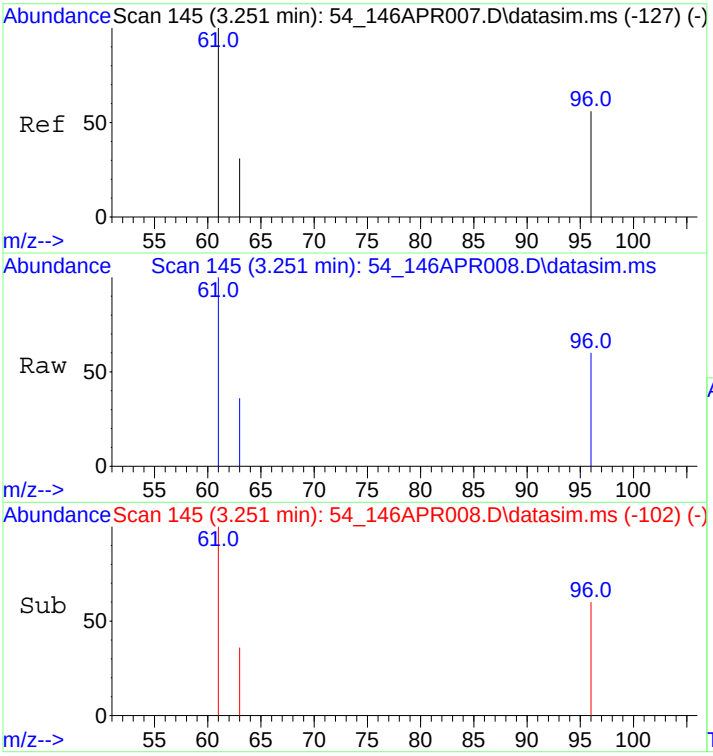


#2
Vinyl chloride
Concen: 5.42 ppbv
RT: 1.902 min Scan# 18
Delta R.T. 0.000 min
Lab File: 54_146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 62 Resp: 894

Ion	Ratio	Lower	Upper
62	100		
64	0.0	26.8	40.2#
27	0.0	16.1	24.1#

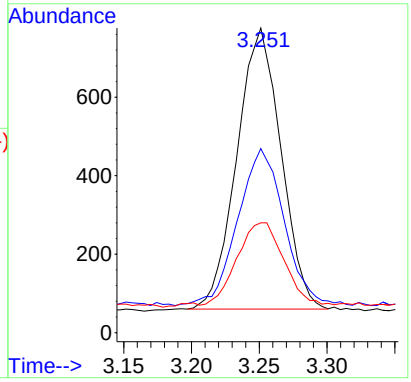


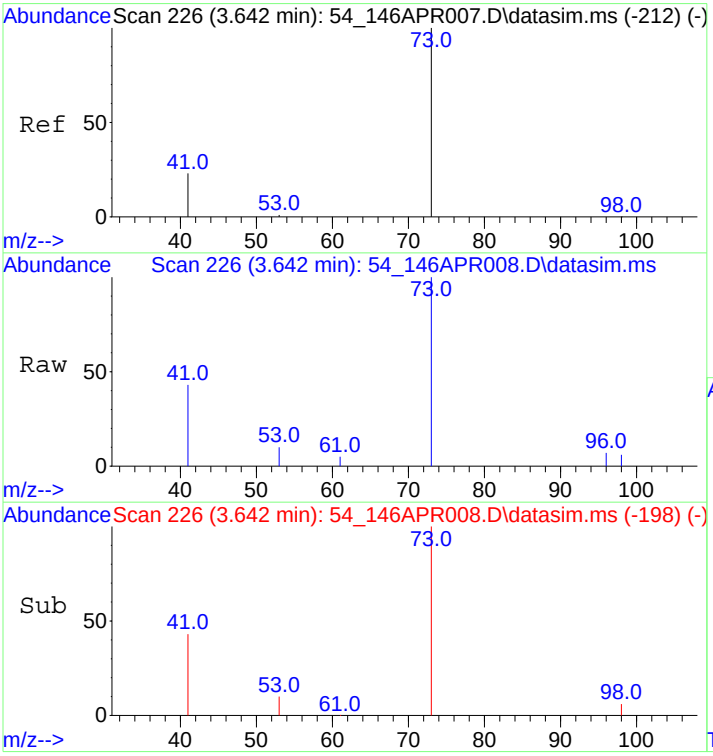


#3
1,1-Dichloroethene
Concen: 4.82 ppbv
RT: 3.251 min Scan# 145
Delta R.T. 0.000 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 61 Resp: 1623

Ion	Ratio	Lower	Upper
61	100		
96	69.2	63.4	95.2
63	37.2	26.2	39.2

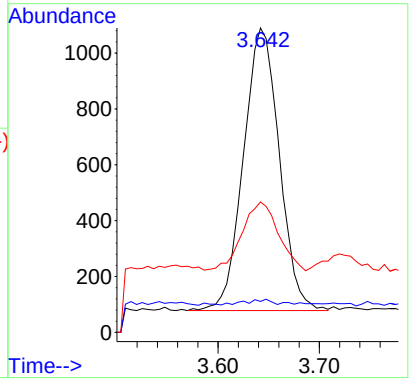


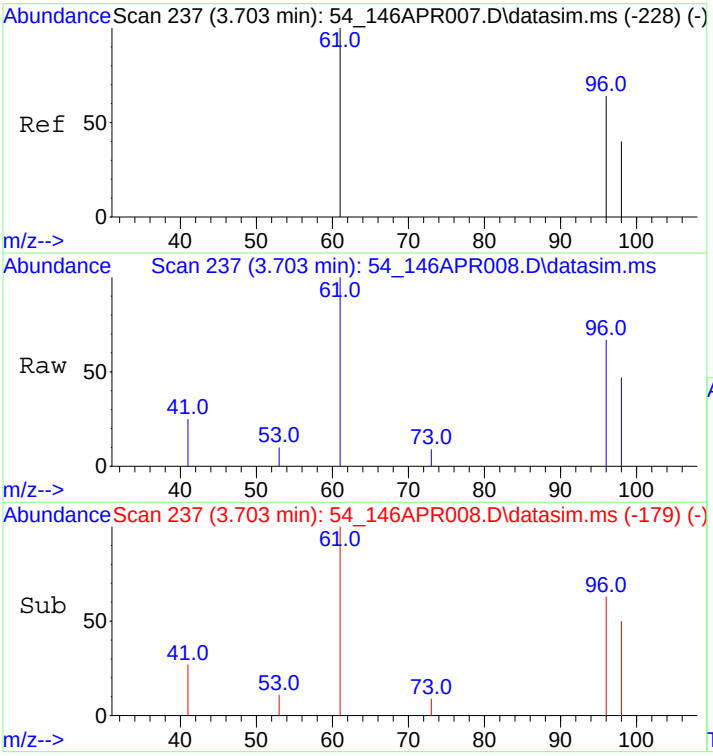


#4
Methyl Tert Butyl Ether
Concen: 4.97 ppbv
RT: 3.642 min Scan# 226
Delta R.T. 0.000 min
Lab File: 54_146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 73 Resp: 2489

Ion	Ratio	Lower	Upper
73	100		
53	3.9	1.0	1.4#
41	51.5	13.1	19.7#

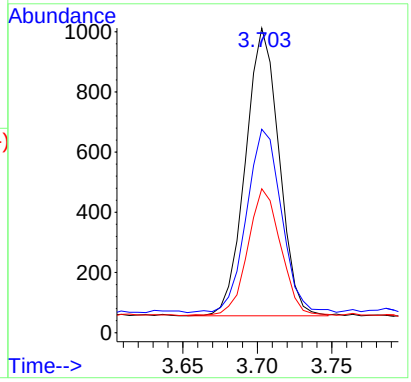


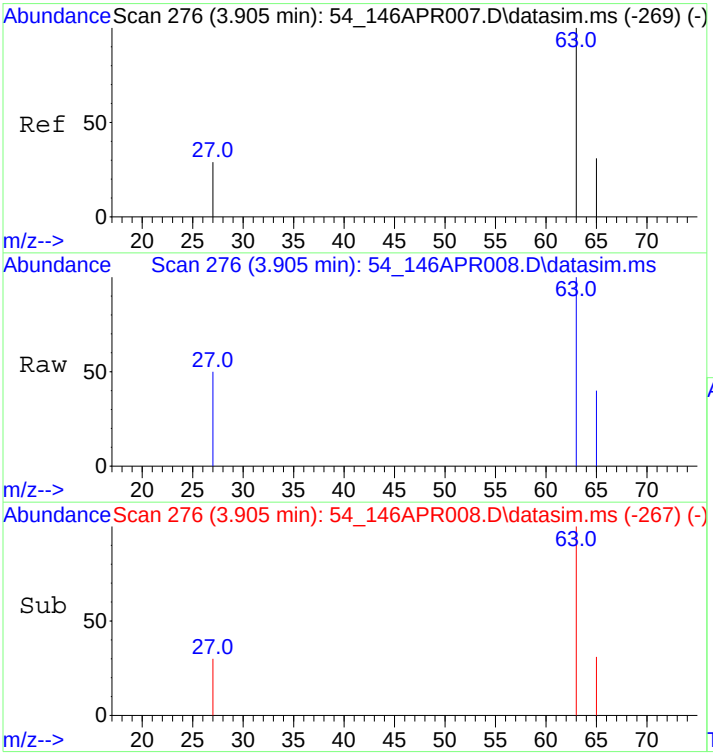


#5
trans-1,2-Dichloroethene
Concen: 5.17 ppbv
RT: 3.703 min Scan# 237
Delta R.T. 0.000 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 61 Resp: 1502

Ion	Ratio	Lower	Upper
61	100		
96	64.6	71.4	107.0#
98	42.7	45.8	68.8#

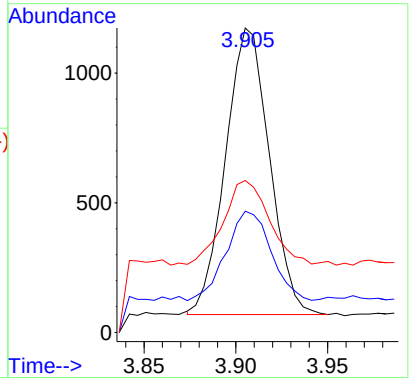


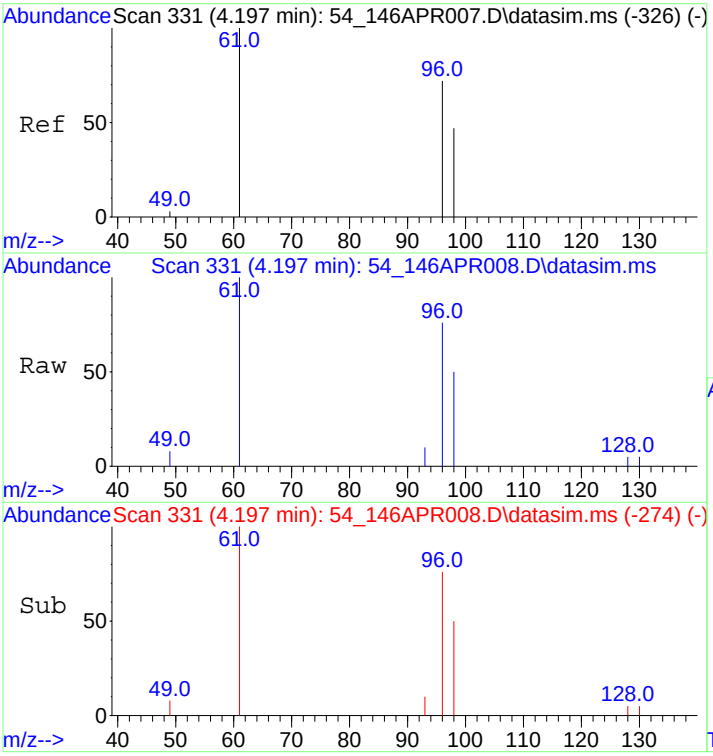


#6
1,1-Dichloroethane
Concen: 5.31 ppbv
RT: 3.905 min Scan# 276
Delta R.T. 0.000 min
Lab File: 54_146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 63 Resp: 1840

Ion	Ratio	Lower	Upper
63	100		
65	31.9	26.1	39.1
27	30.2	10.2	15.2#

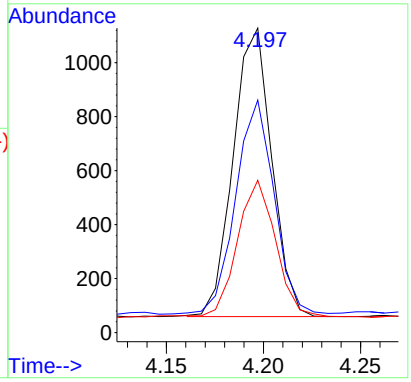


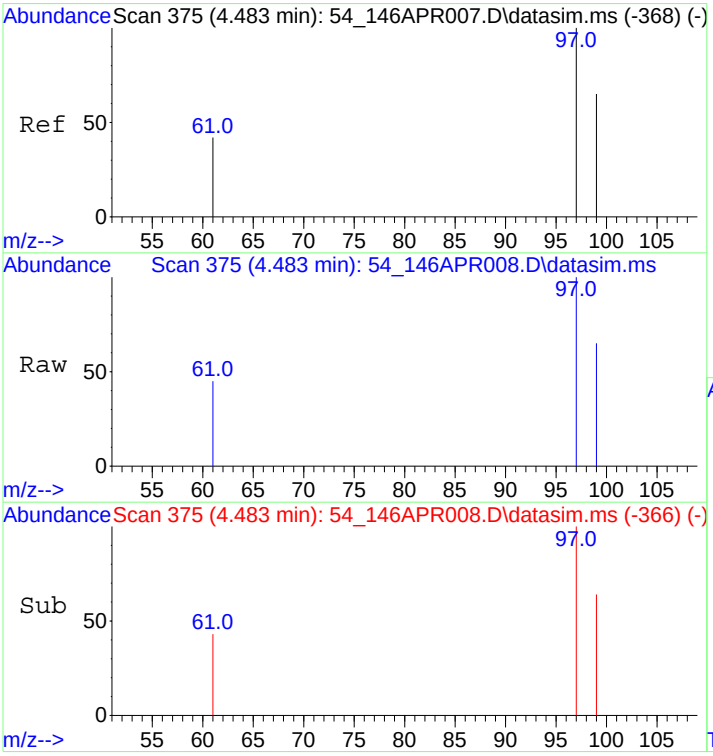


#7
cis-1,2-Dichloroethene
Concen: 5.38 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 61 Resp: 1482

Ion	Ratio	Lower	Upper
61	100		
96	73.8	78.5	117.7#
98	46.2	50.6	76.0#

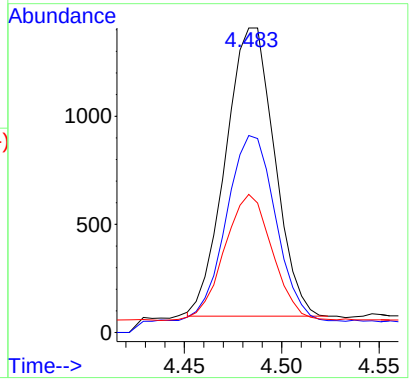


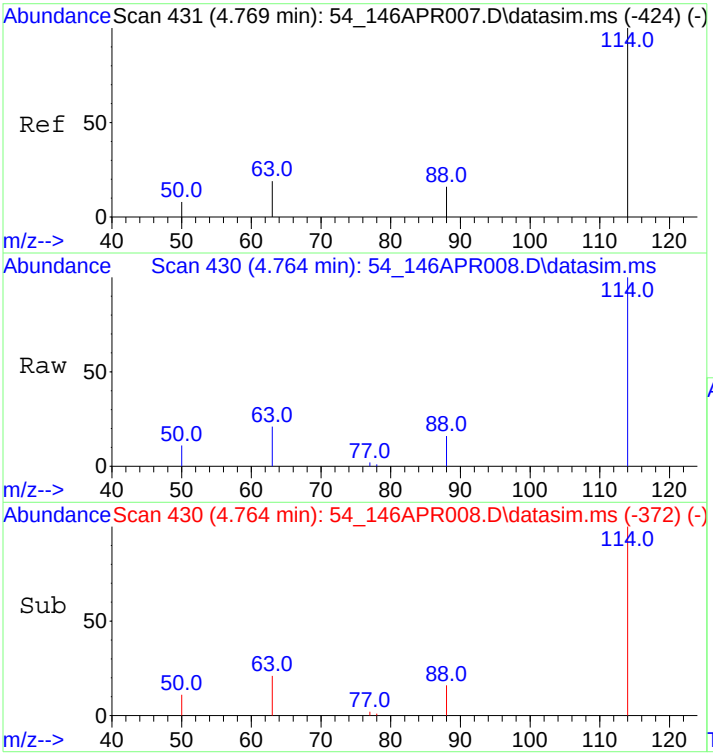


#8
1,1,1-Trichloroethane
Concen: 5.22 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 97 Resp: 2337

Ion	Ratio	Lower	Upper
97	100		
99	64.3	52.1	78.1
61	41.8	30.2	45.4

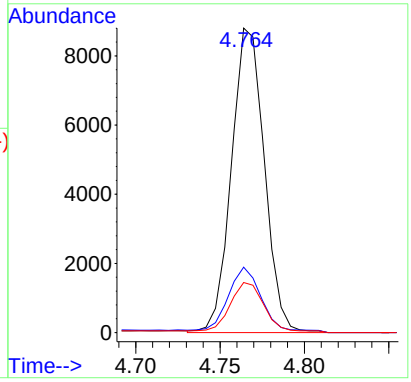


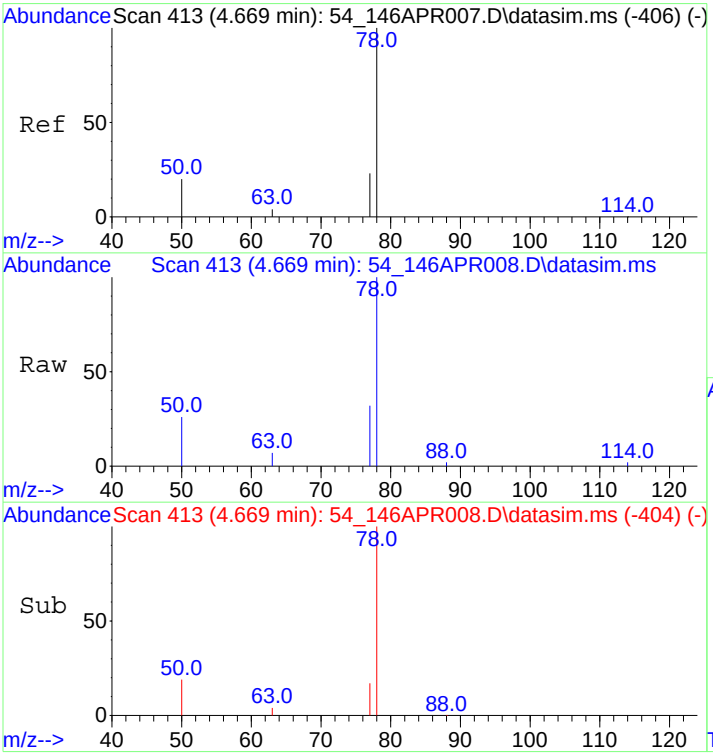


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.764 min Scan# 430
Delta R.T. -0.005 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion:114 Resp: 11956

Ion	Ratio	Lower	Upper
114	100		
63	20.1	12.0	18.0#
88	15.6	11.8	17.8

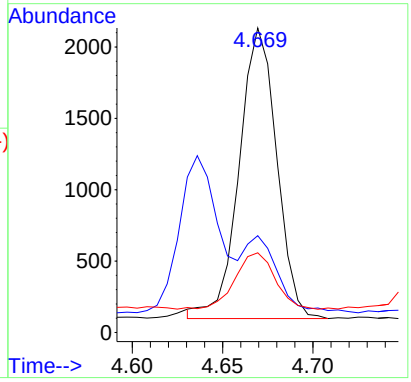


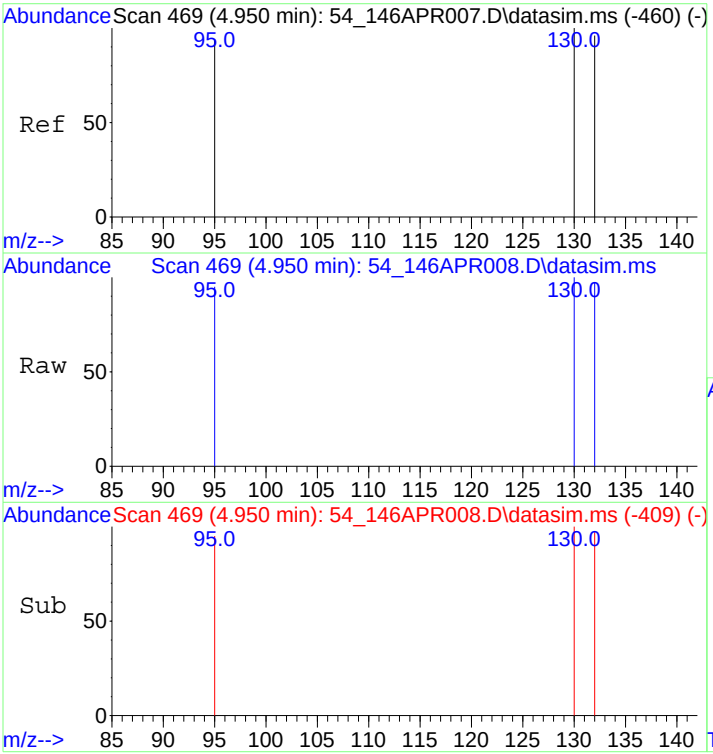


#10
Benzene
Concen: 5.64 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 78 Resp: 2944

Ion	Ratio	Lower	Upper
78	100		
77	23.0	18.2	27.2
50	20.5	8.6	13.0#

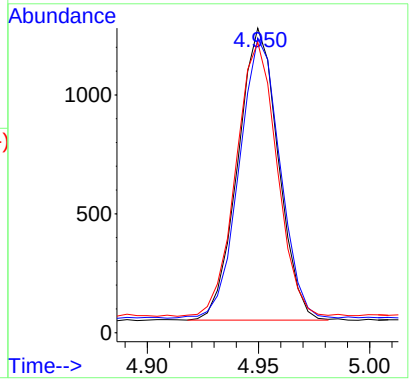


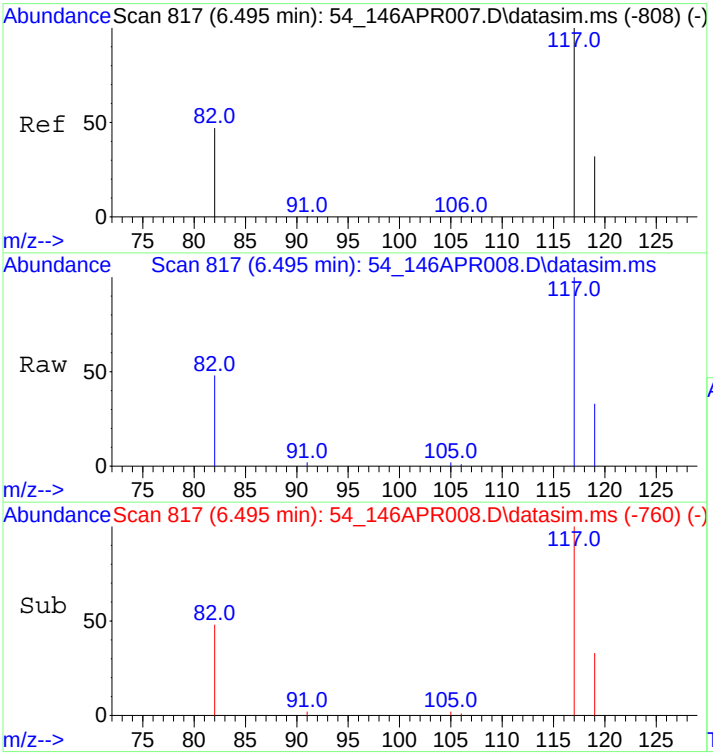


#11
Trichloroethene
Concen: 5.46 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion:130 Resp: 1555

Ion	Ratio	Lower	Upper
130	100		
132	96.3	76.9	115.3
95	94.9	76.5	114.7

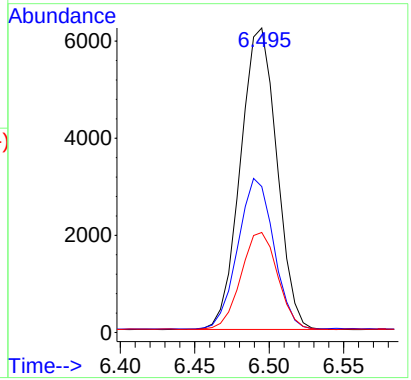


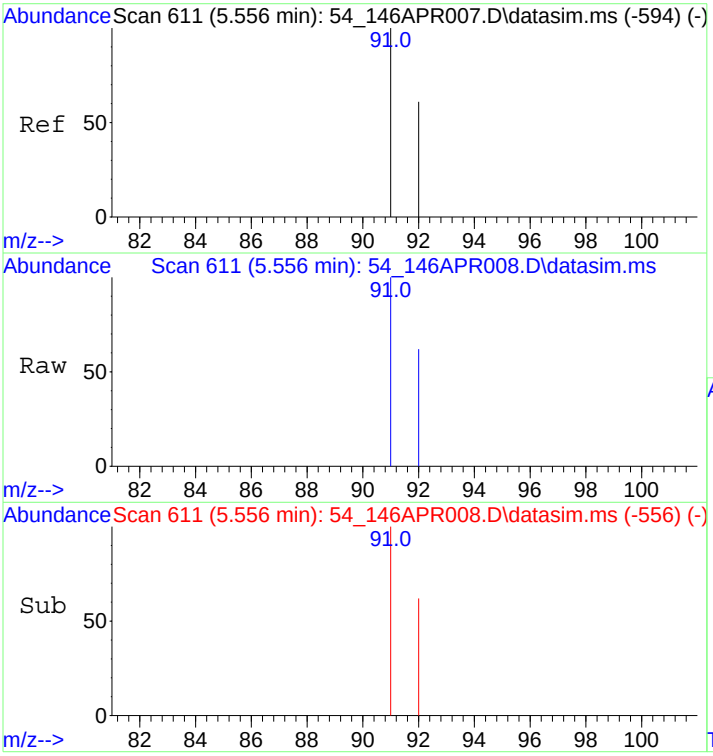


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54_146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion:117 Resp: 10550

Ion	Ratio	Lower	Upper
117	100		
82	49.2	38.0	57.0
119	32.7	27.0	40.4

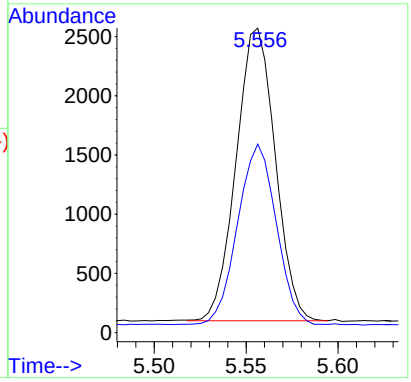


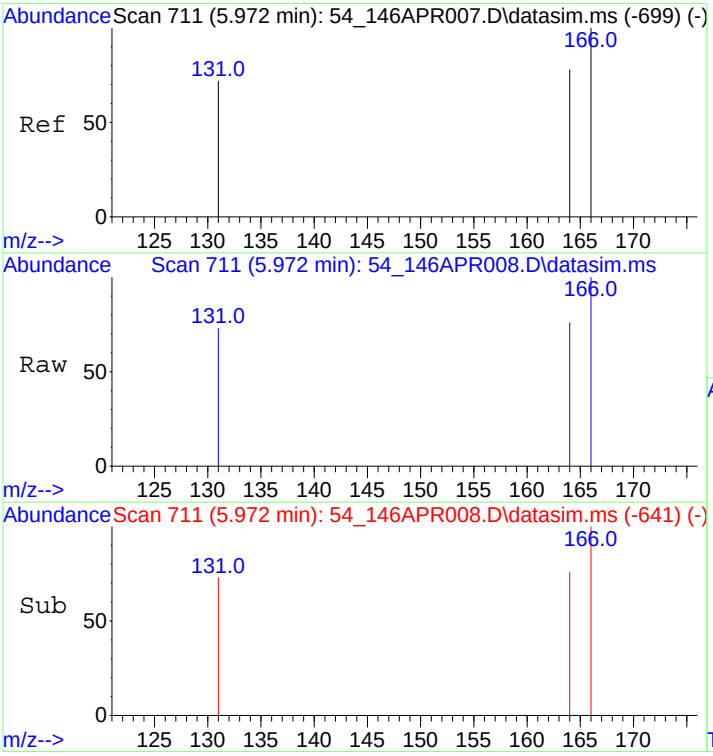


#13
Toluene
Concen: 6.36 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 91 Resp: 3662

Ion	Ratio	Lower	Upper
91	100		
92	61.0	47.8	71.8

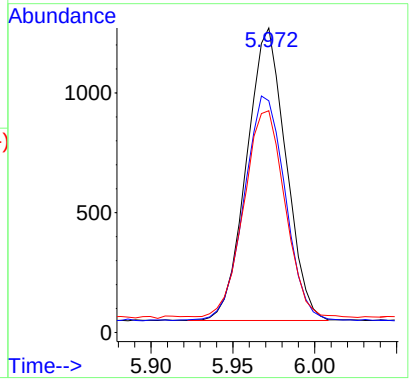


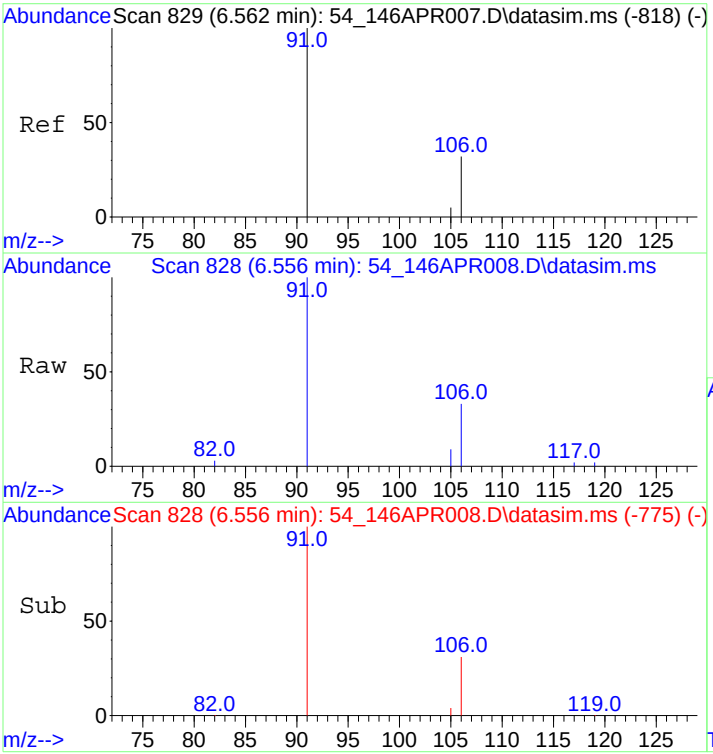


#14
Tetrachloroethene
Concen: 6.08 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion:166 Resp: 2035

Ion	Ratio	Lower	Upper
166	100		
164	80.5	62.6	94.0
131	73.1	58.5	87.7

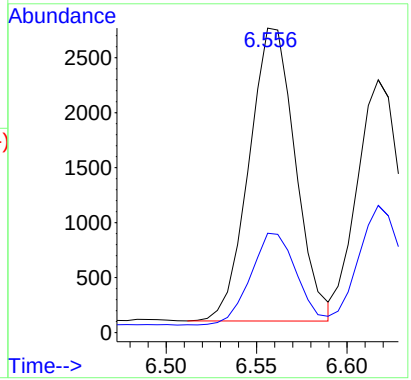


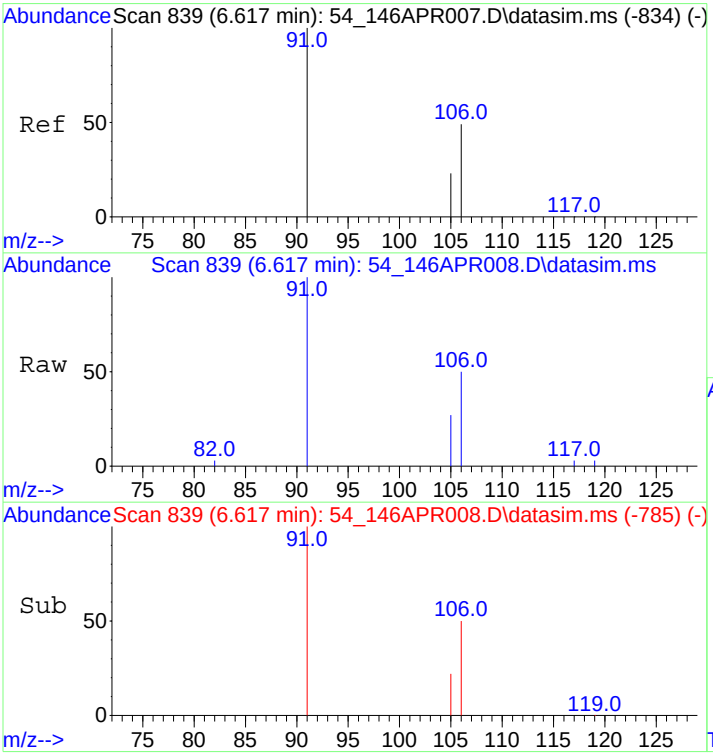


#15
Ethyl Benzene
Concen: 6.51 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.006 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 91 Resp: 4751

Ion	Ratio	Lower	Upper
91	100		
106	31.4	26.9	40.3

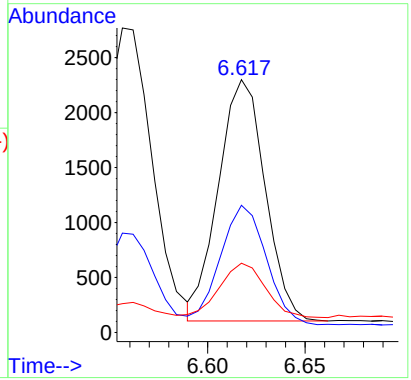


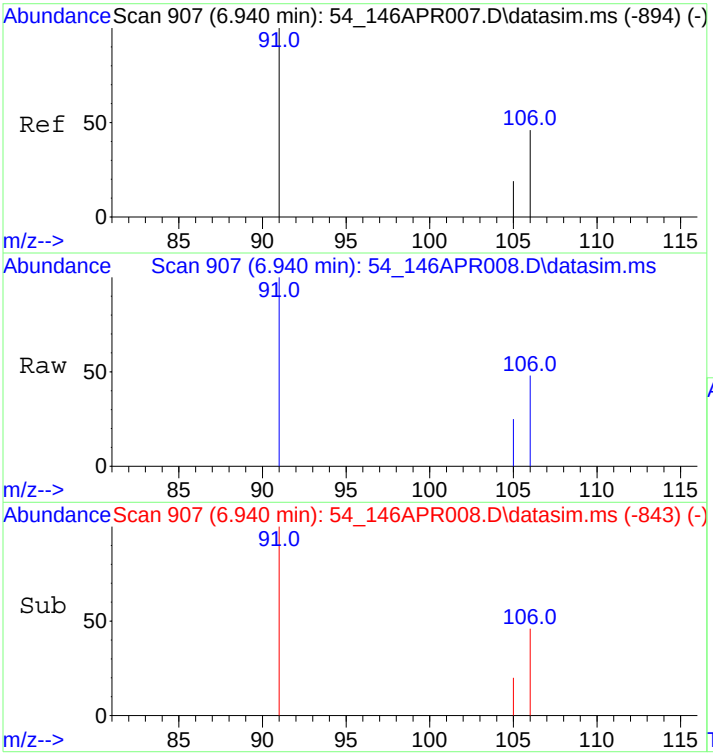


#16
m, p-Xylene
Concen: 6.65 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 91 Resp: 3667

Ion	Ratio	Lower	Upper
91	100		
106	48.8	43.1	64.7
105	22.2	18.3	27.5

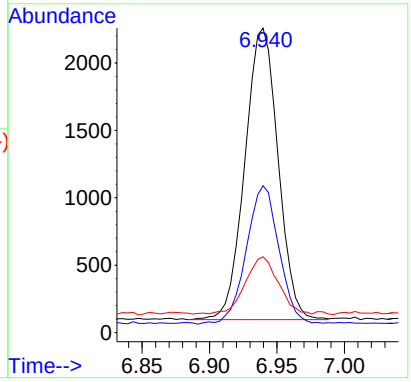




#17
o-Xylene
Concen: 6.60 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.000 min
Lab File: 54 146APR008.D
Acq: 16 Apr 2014 12:58 pm

Tgt Ion: 91 Resp: 3699

Ion	Ratio	Lower	Upper
91	100		
106	45.6	40.1	60.1
105	19.4	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:20:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration

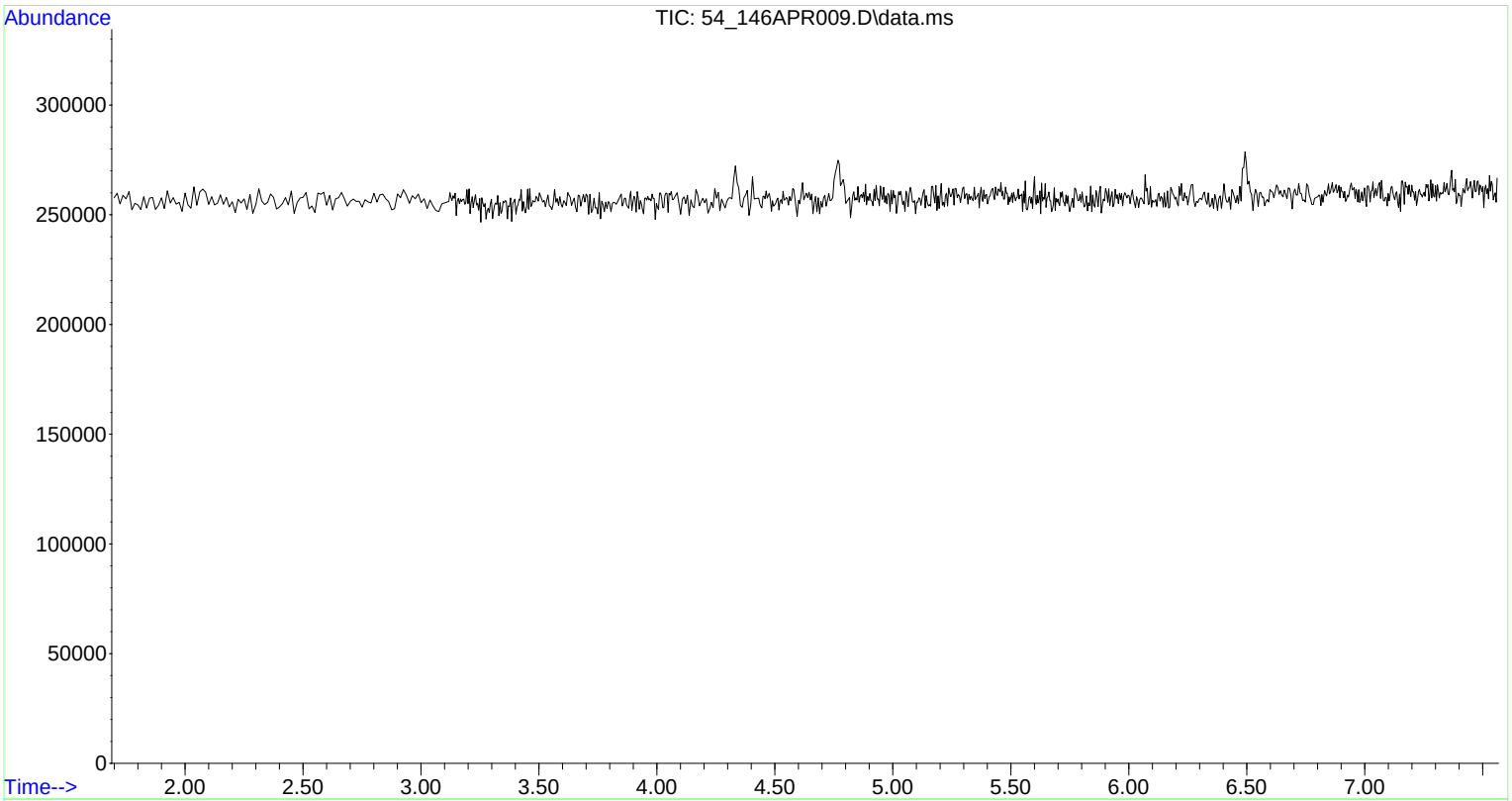
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.335	49	4520	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.769	114	12215	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.495	117	11057	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
2] Vinyl chloride	1.877	62	80m	0.46	ppbv		
3] 1,1-Dichloroethene	3.260	61	171m	0.49	ppbv		
4] Methyl Tert Butyl Ether	3.646	73	291	0.55	ppbv	#	1
5] trans-1,2-Dichloroethene	3.702	61	159	0.52	ppbv	#	29
6] 1,1-Dichloroethane	3.905	63	196	0.54	ppbv	#	84
7] cis-1,2-Dichloroethene	4.197	61	145m	0.50	ppbv		
8] 1,1,1-Trichloroethane	4.483	97	220	0.46	ppbv	#	92
10] Benzene	4.669	78	337	0.62	ppbv	#	47
11] Trichloroethene	4.949	130	174	0.59	ppbv	#	58
13] Toluene	5.552	91	429m	0.68	ppbv		
14] Tetrachloroethene	5.972	166	227	0.62	ppbv	#	73
15] Ethyl Benzene	6.562	91	538	0.67	ppbv		94
16] m, p-Xylene	6.617	91	430	0.71	ppbv	#	93
17] o-Xylene	6.941	91	431	0.70	ppbv	#	88

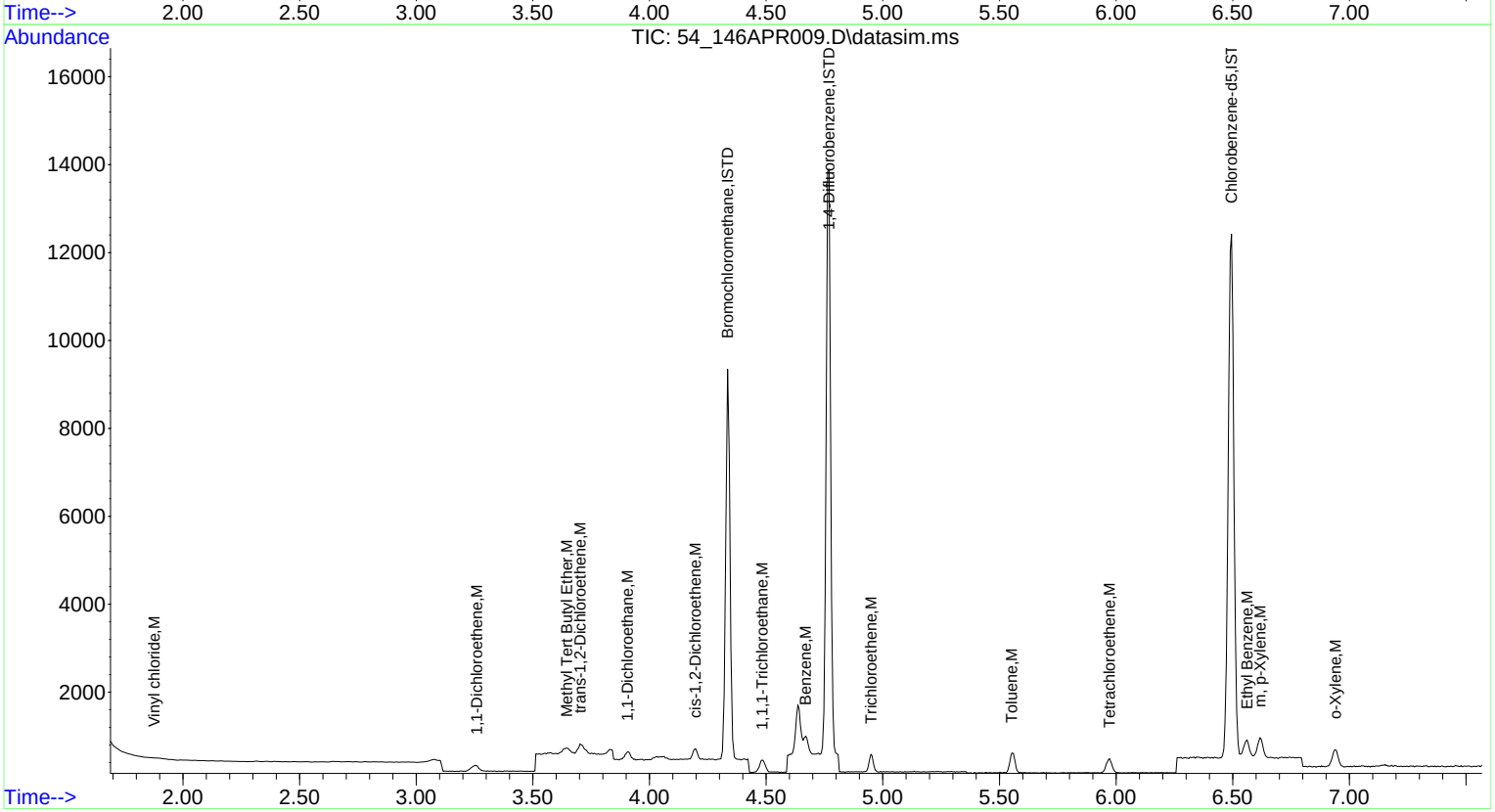
(#) = qualifier out of range (m) = manual integration (+) = signals summed

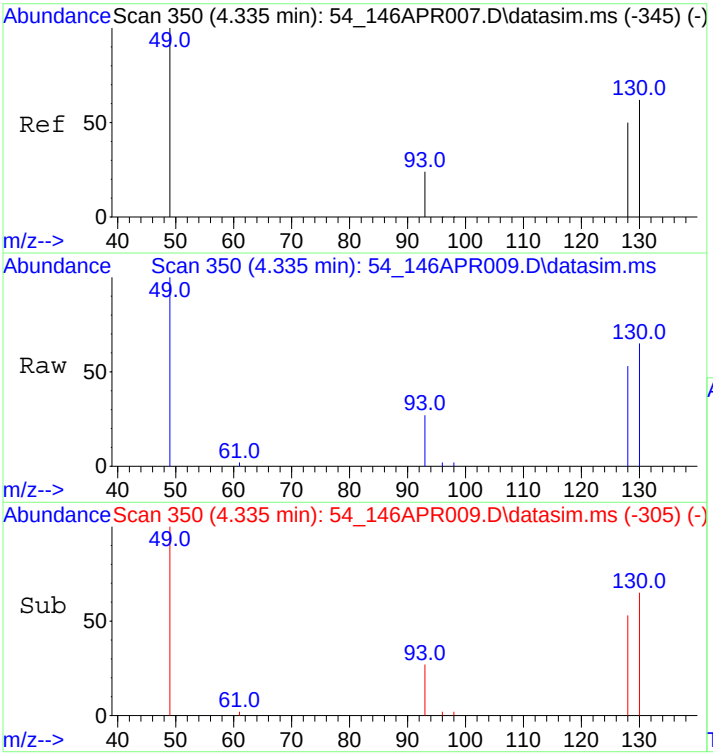
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:20:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration



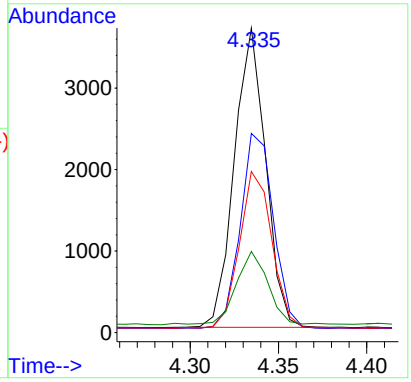


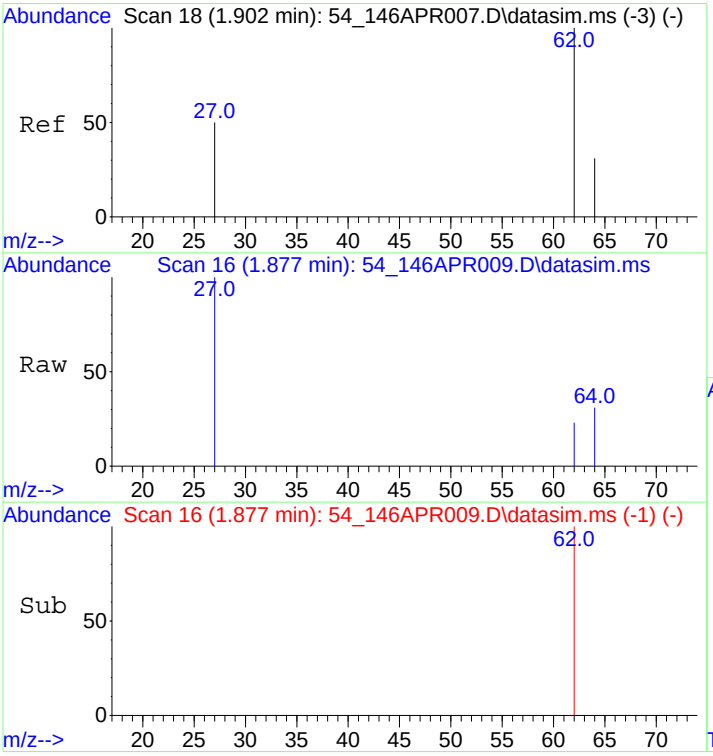


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 49 Resp: 4520

Ion	Ratio	Lower	Upper
49	100		
130	69.1	87.2	130.8#
128	54.2	68.0	102.0#
93	24.4	29.3	43.9#

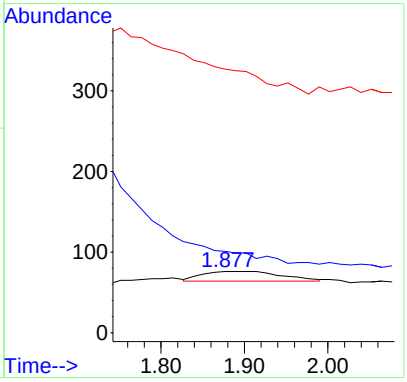




#2
Vinyl chloride
Concen: 0.46 ppbv m
RT: 1.877 min Scan# 16
Delta R.T. -0.025 min
Lab File: 54_146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 62 Resp: 80

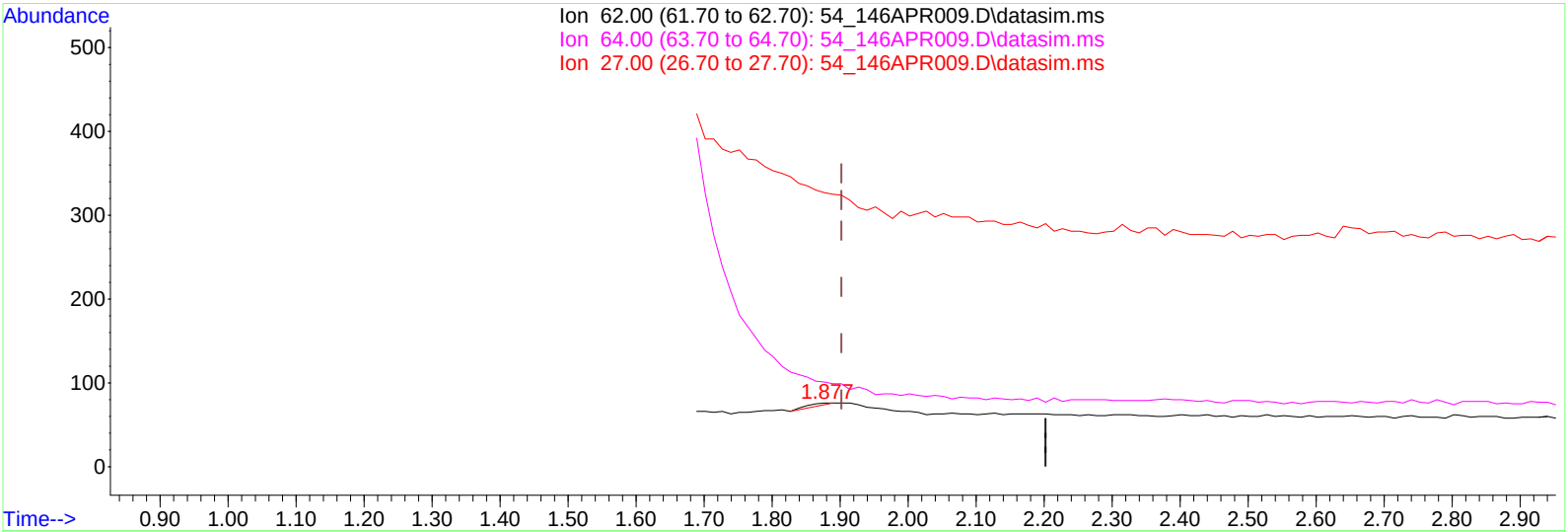
Ion	Ratio	Lower	Upper
62	100		
64	132.9	26.8	40.2#
27	430.3	16.1	24.1#

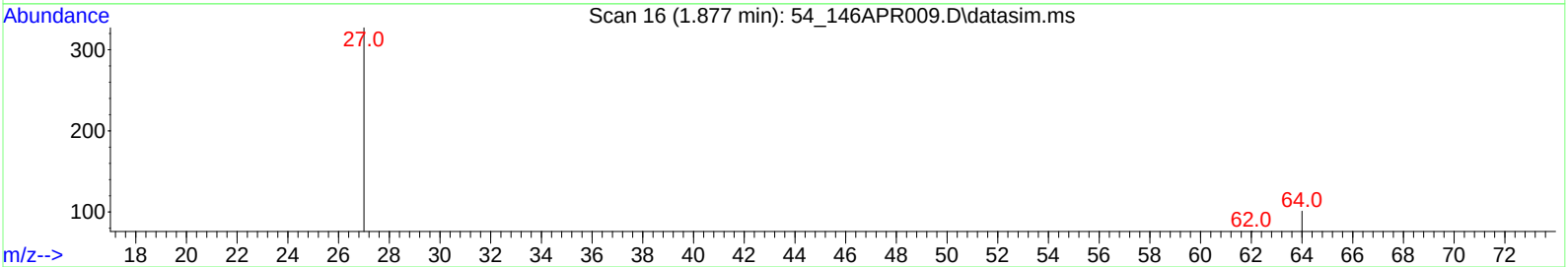


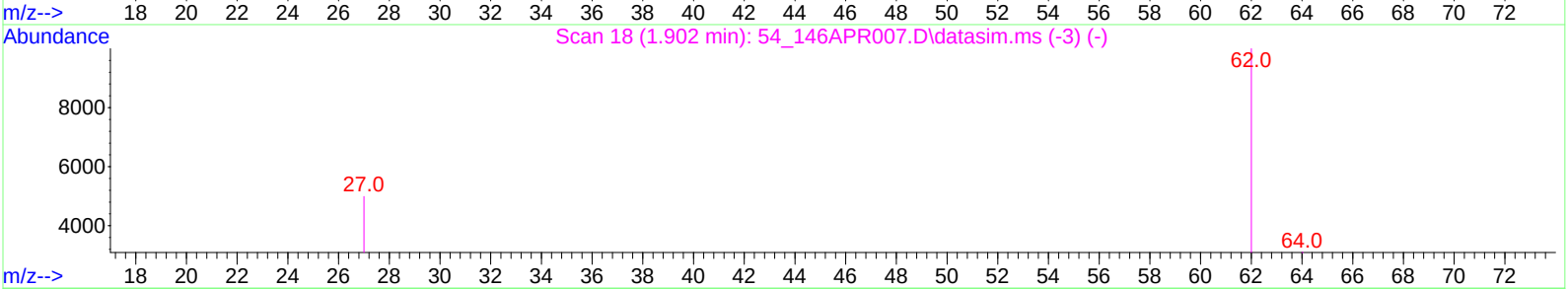
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:16:33 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration







TIC: 54_146APR009.D\data.ms

(2) Vinyl chloride (M)

1.877min (-0.025) 0.06 ppbv

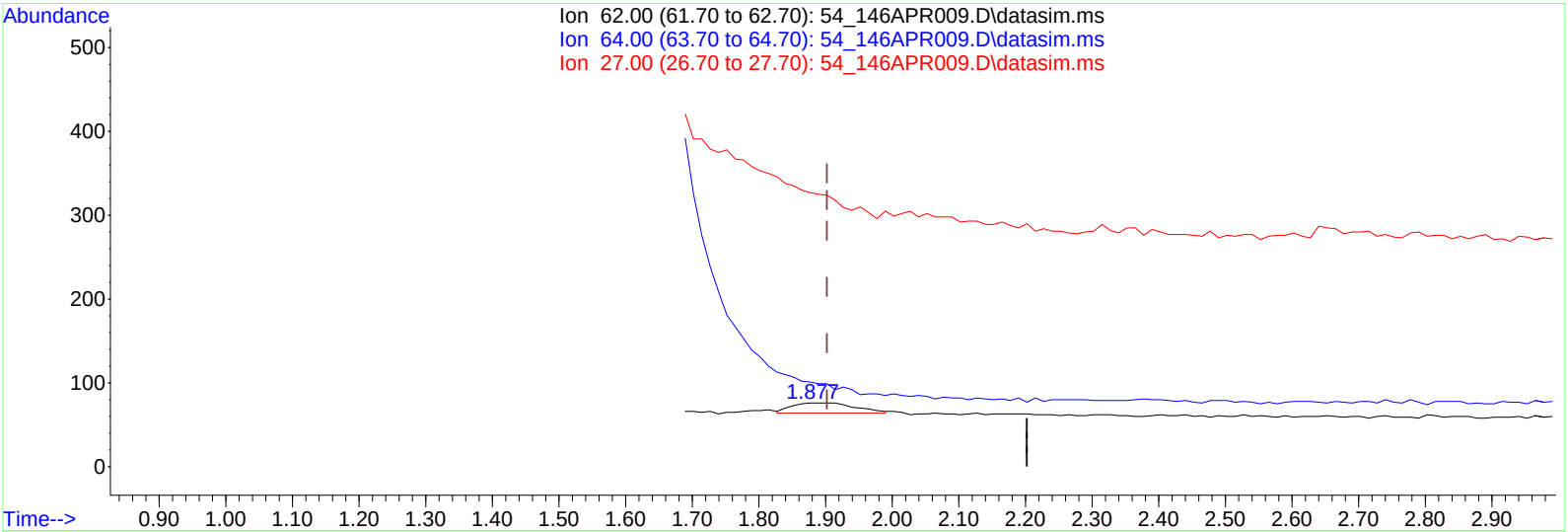
response 11

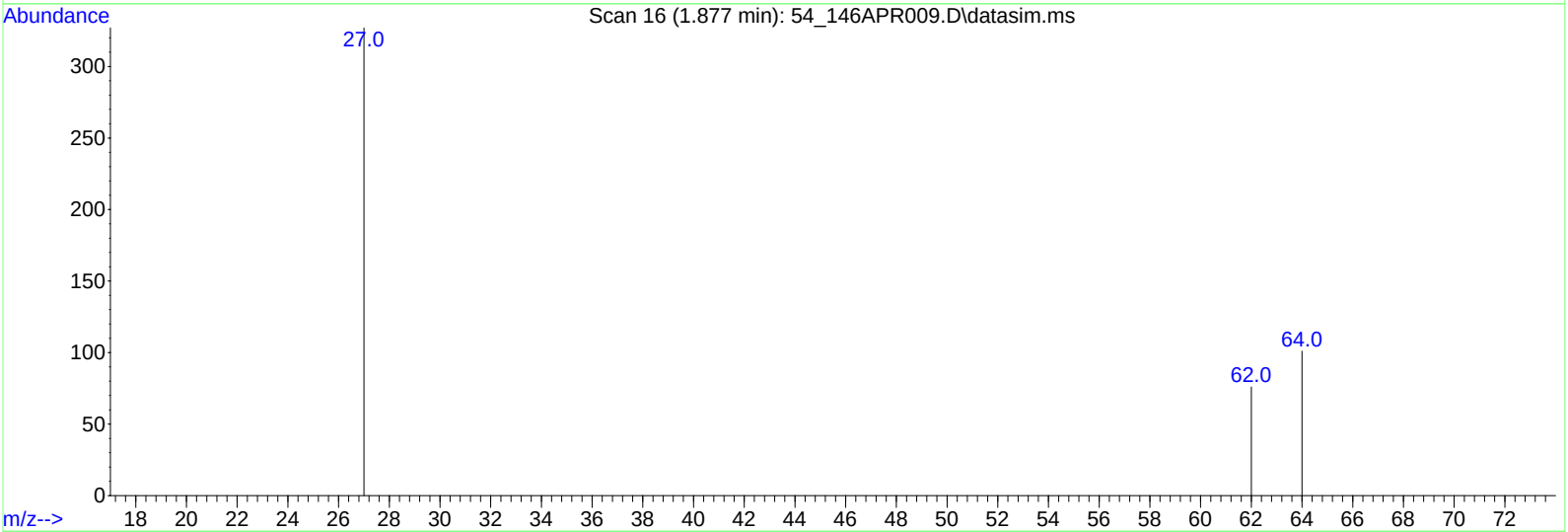
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	0.00#
27.00	20.10	0.00#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:20:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration





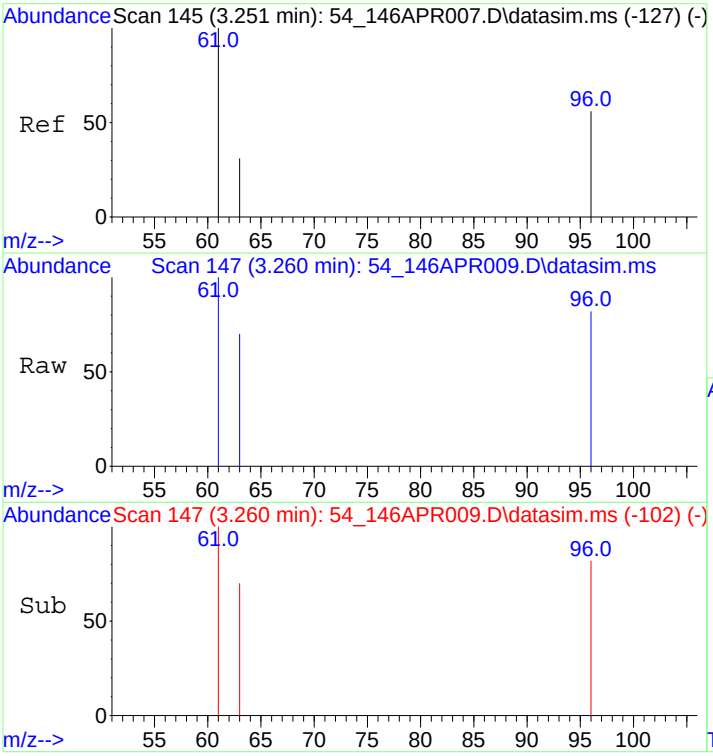
TIC: 54_146APR009.D\data.ms

(2) Vinyl chloride (M)

1.877min (-0.025) 0.46 ppbv m

response 80

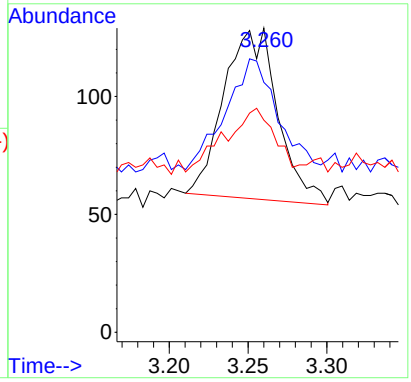
Ion	Exp%	Act%
62.00	100.00	100.00
64.00	33.50	132.89#
27.00	20.10	430.26#
0.00	0.00	0.00

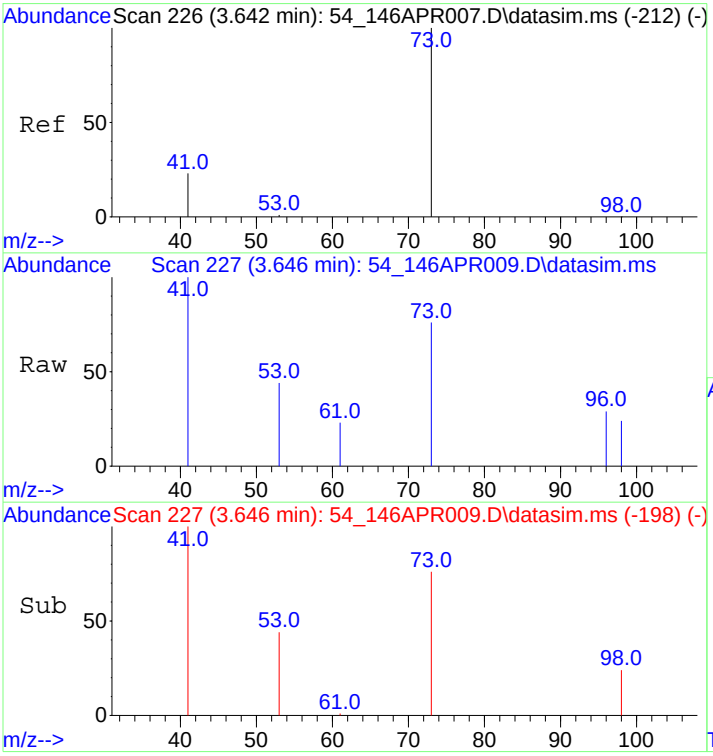


#3
1,1-Dichloroethene
Concen: 0.49 ppbv m
RT: 3.260 min Scan# 147
Delta R.T. 0.009 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 61 Resp: 171

Ion	Ratio	Lower	Upper
61	100		
96	217.5	63.4	95.2#
63	121.6	26.2	39.2#

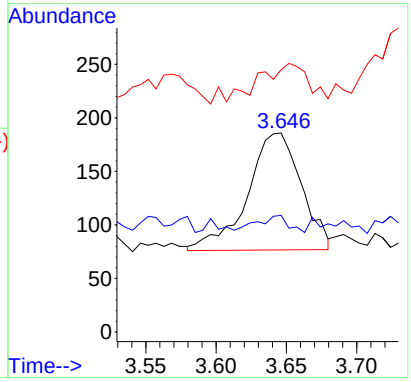




#4
Methyl Tert Butyl Ether
Concen: 0.55 ppbv
RT: 3.646 min Scan# 227
Delta R.T. 0.004 min
Lab File: 54_146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 73 Resp: 291

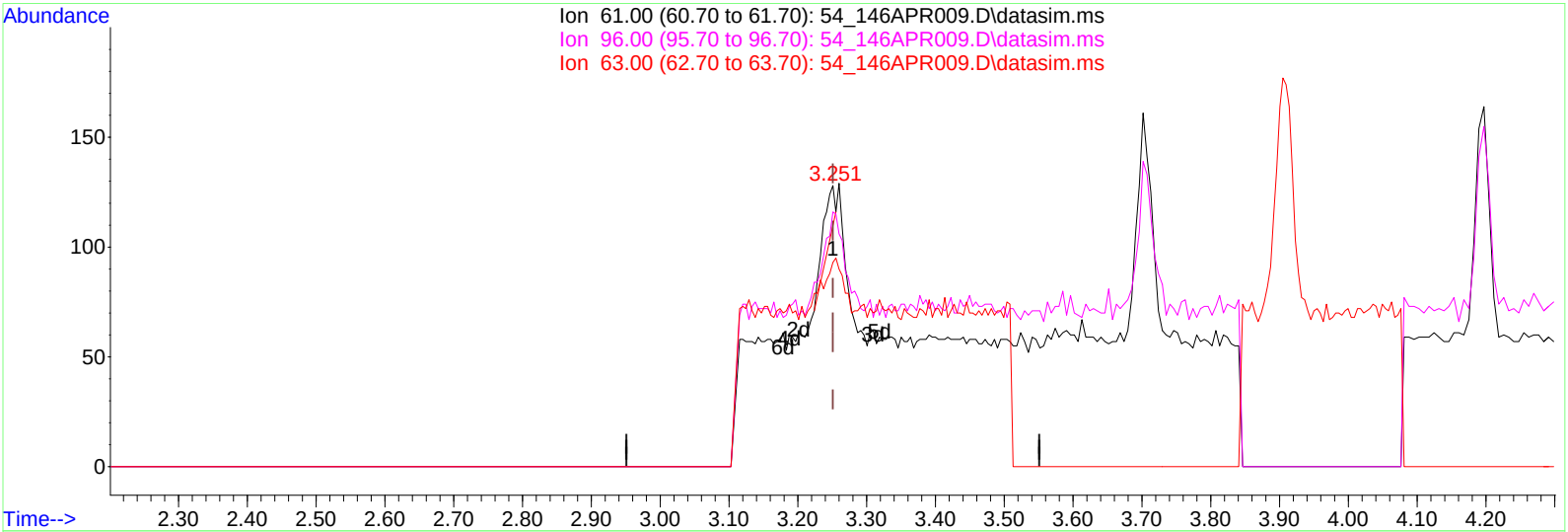
Ion	Ratio	Lower	Upper
73	100		
53	26.8	1.0	1.4#
41	77.3	13.1	19.7#

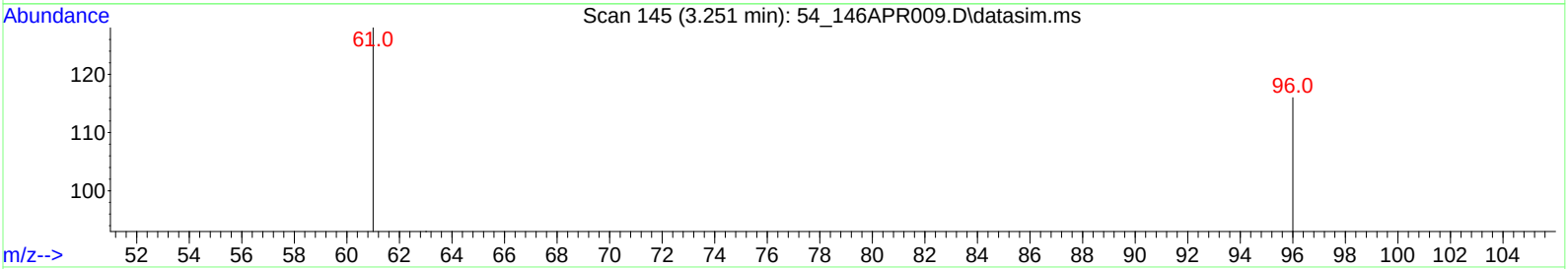


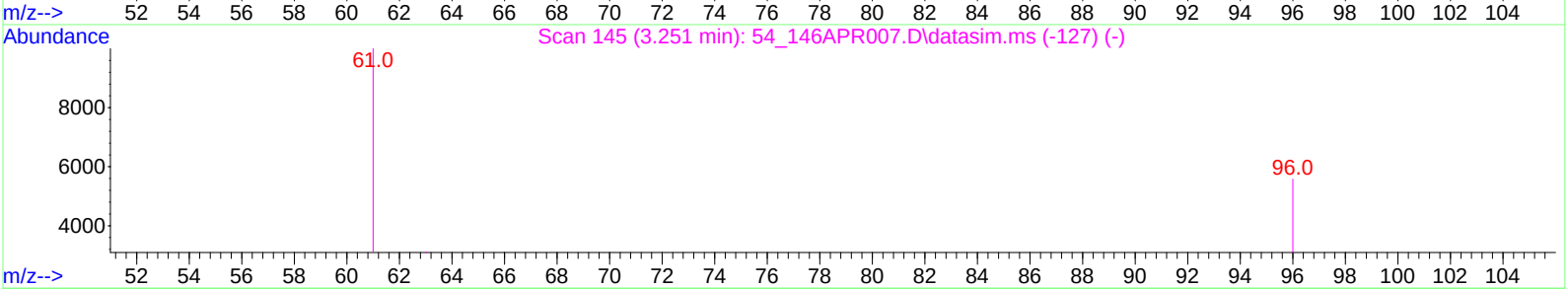
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:16:33 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration







TIC: 54_146APR009.D\data.ms

(3) 1,1-Dichloroethene (M)

3.251min (-0.000) 0.10 ppbv

response 36

Ion	Exp%	Act%
61.00	100	100
96.00	79.30	1033.33#
63.00	32.70	577.78#
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR009.D
Acq On    : 16 Apr 2014   1:09 pm
Operator  : yhl
Sample    : STD20140416-6 \0.5 ppbv ICAL 1°
Misc      : 5 ml \ 16 April 2014
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: Apr 16 13:20:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title  : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration
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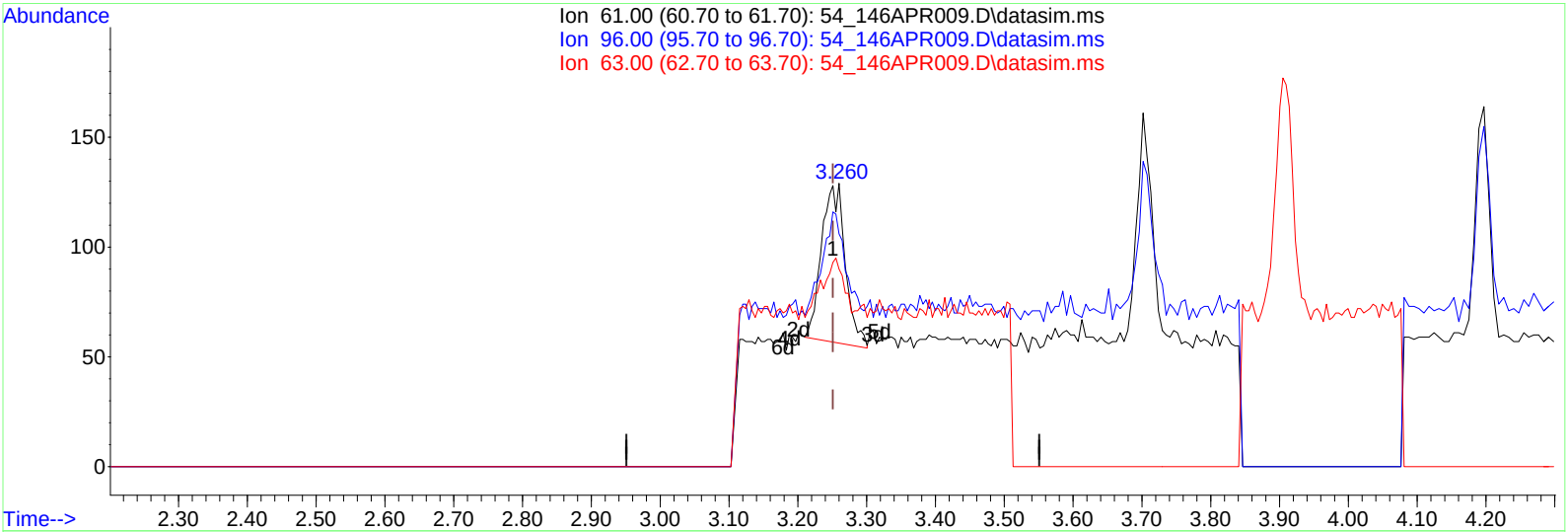
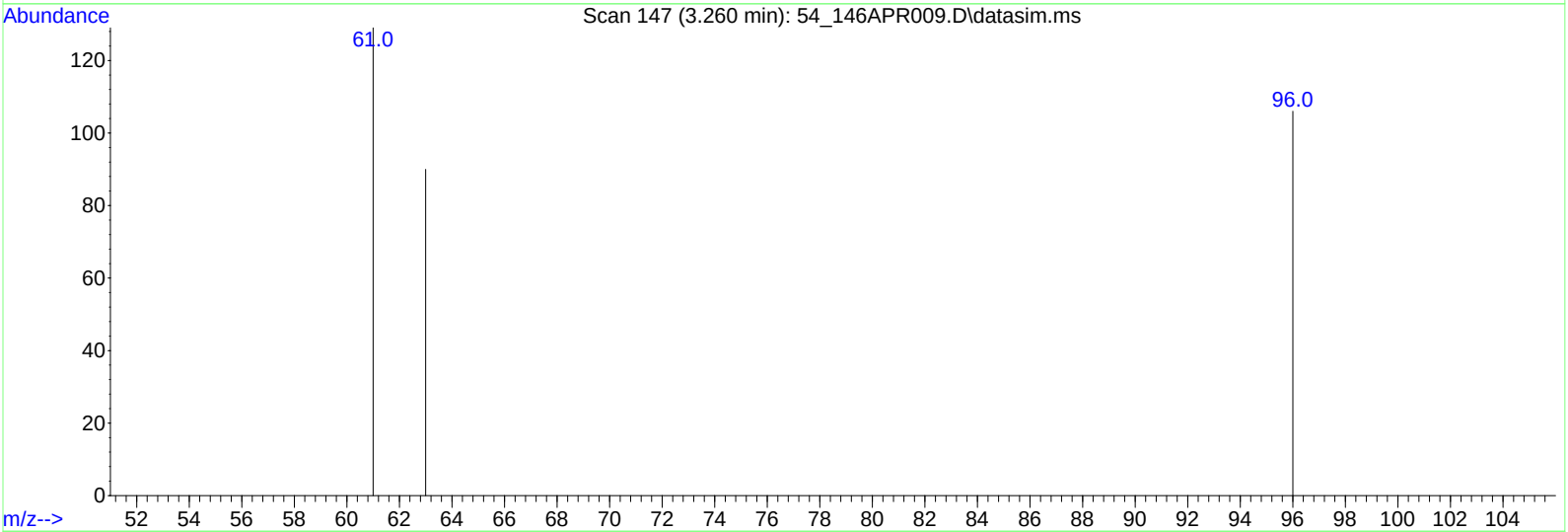




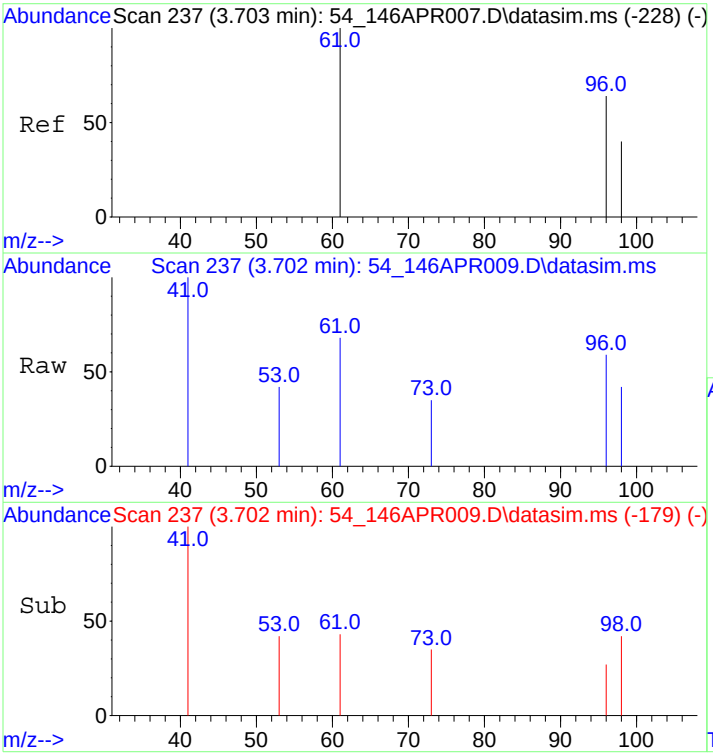
TIC: 54_146APR009.D\data.ms

(3) 1,1-Dichloroethene (M)

3.260min (+ 0.009) 0.49 ppbv m

response 171

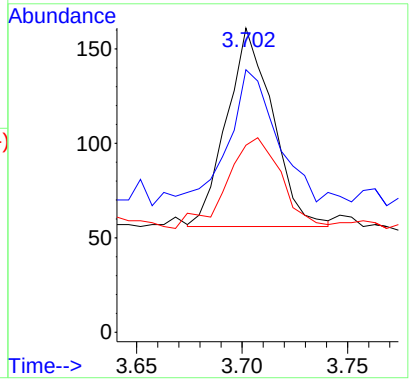
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	79.30	217.54#
63.00	32.70	121.64#
0.00	0.00	0.00

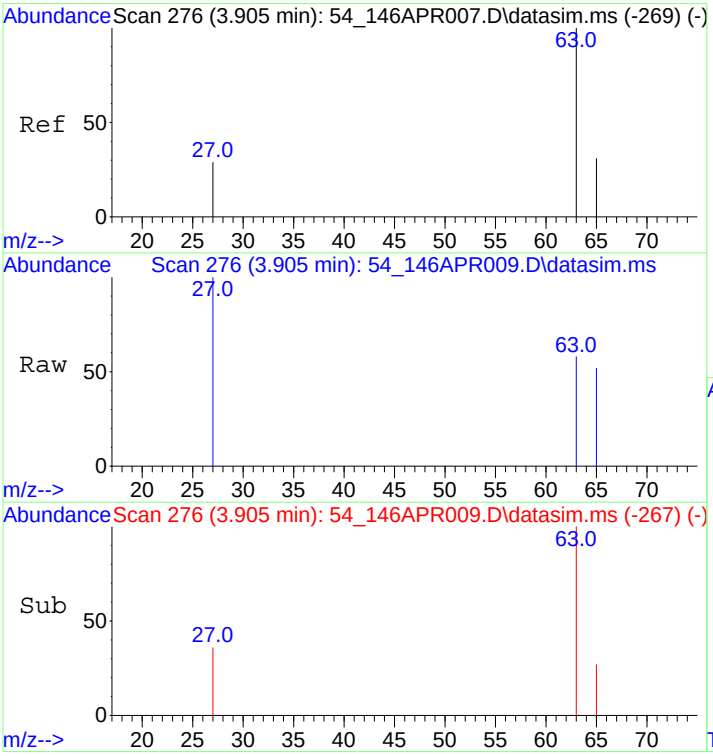


#5
trans-1,2-Dichloroethene
Concen: 0.52 ppbv
RT: 3.702 min Scan# 237
Delta R.T. -0.001 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 61 Resp: 159

Ion	Ratio	Lower	Upper
61	100		
96	67.9	71.4	107.0#
98	164.8	45.8	68.8#

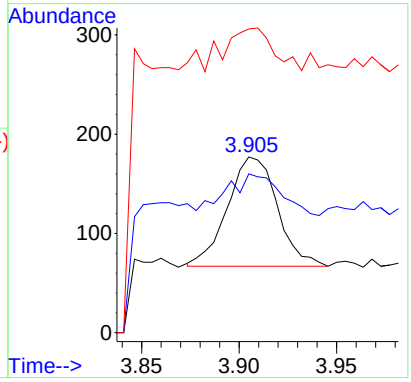


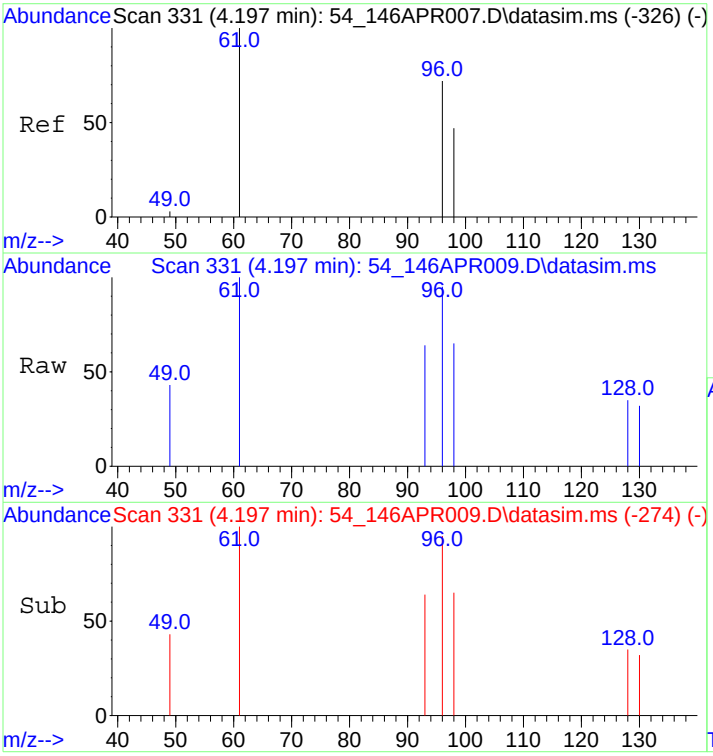


#6
1,1-Dichloroethane
Concen: 0.54 ppbv
RT: 3.905 min Scan# 276
Delta R.T. -0.000 min
Lab File: 54_146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 63 Resp: 196

Ion	Ratio	Lower	Upper
63	100		
65	26.5	26.1	39.1
27	24.0	10.2	15.2#

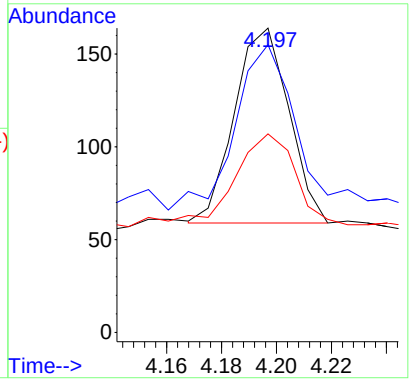


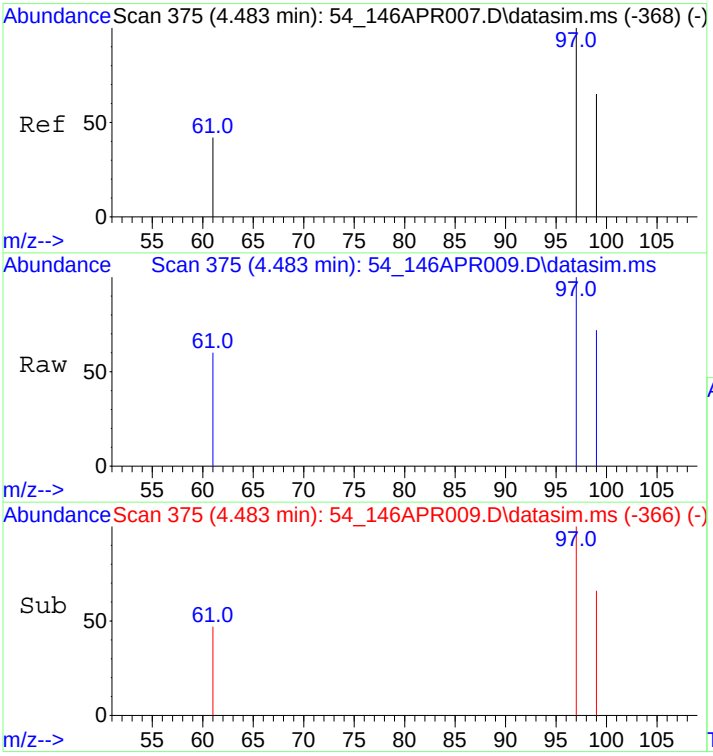


#7
cis-1,2-Dichloroethene
Concen: 0.50 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 61 Resp: 145

Ion	Ratio	Lower	Upper
61	100		
96	335.9	78.5	117.7#
98	243.4	50.6	76.0#

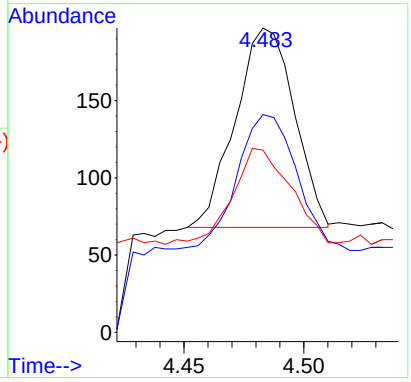




#8
1,1,1-Trichloroethane
Concen: 0.46 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 97 Resp: 220

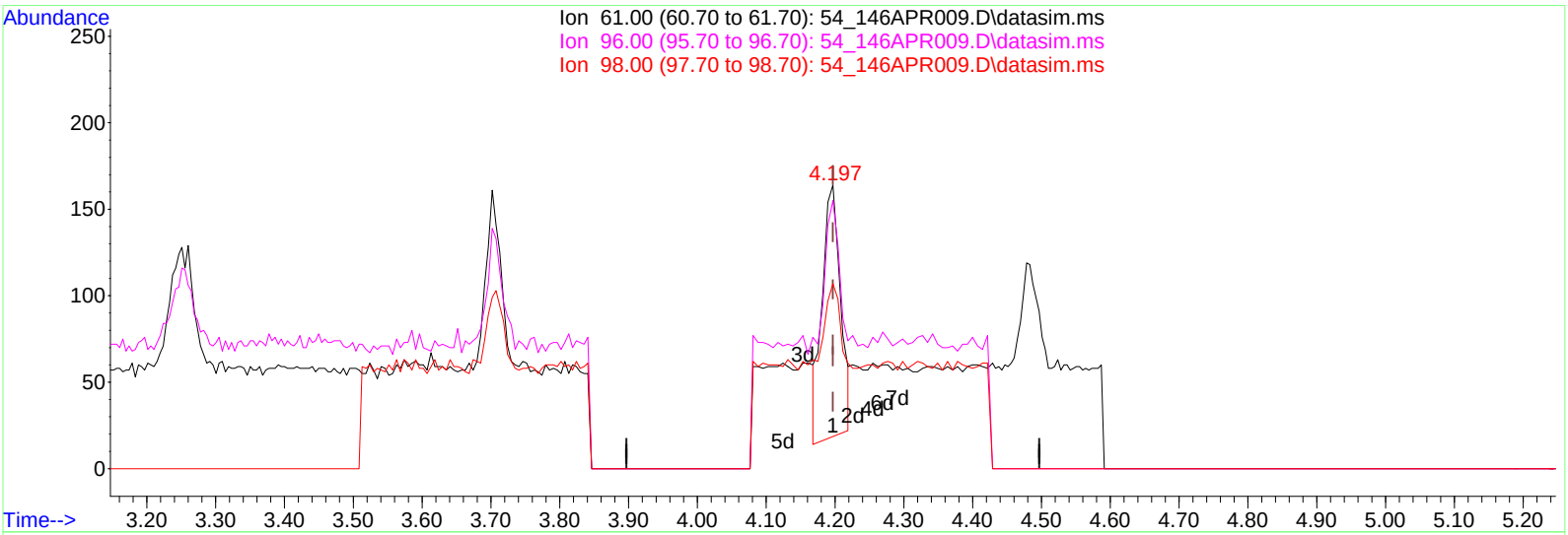
Ion	Ratio	Lower	Upper
97	100		
99	69.1	52.1	78.1
61	45.5	30.2	45.4#

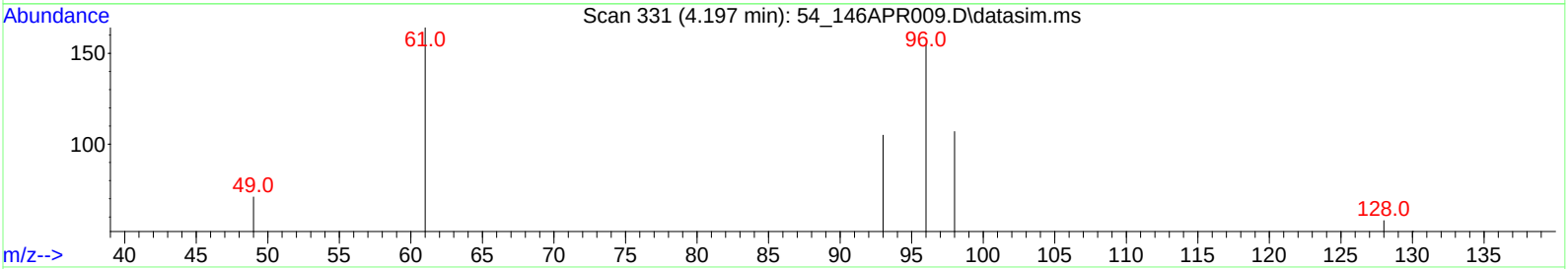


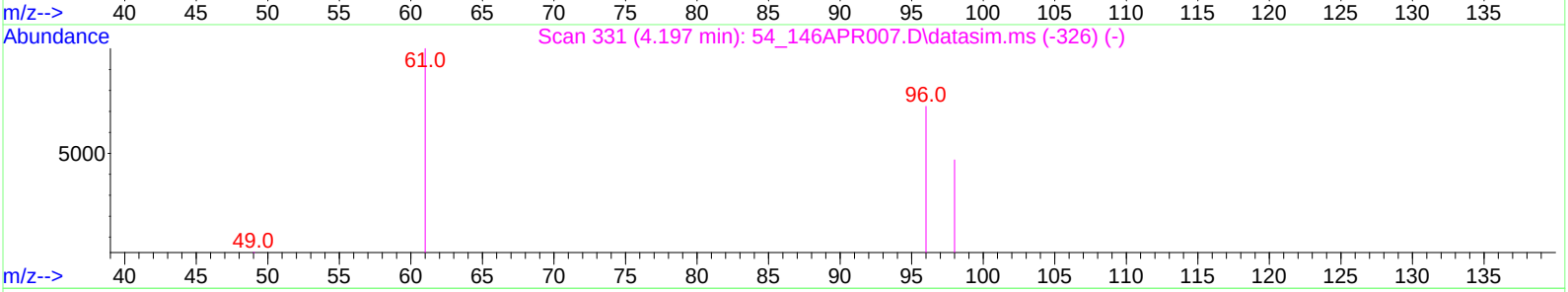
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:16:33 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration







TIC: 54_146APR009.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 0.93 ppbv

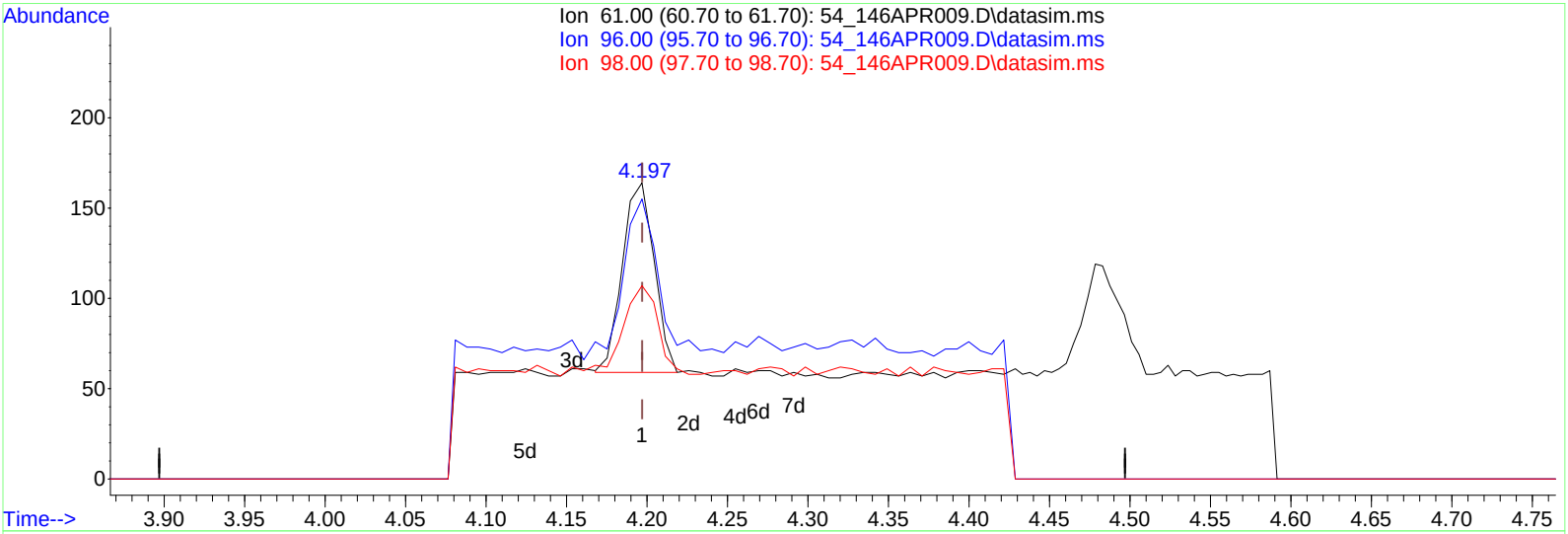
response 270

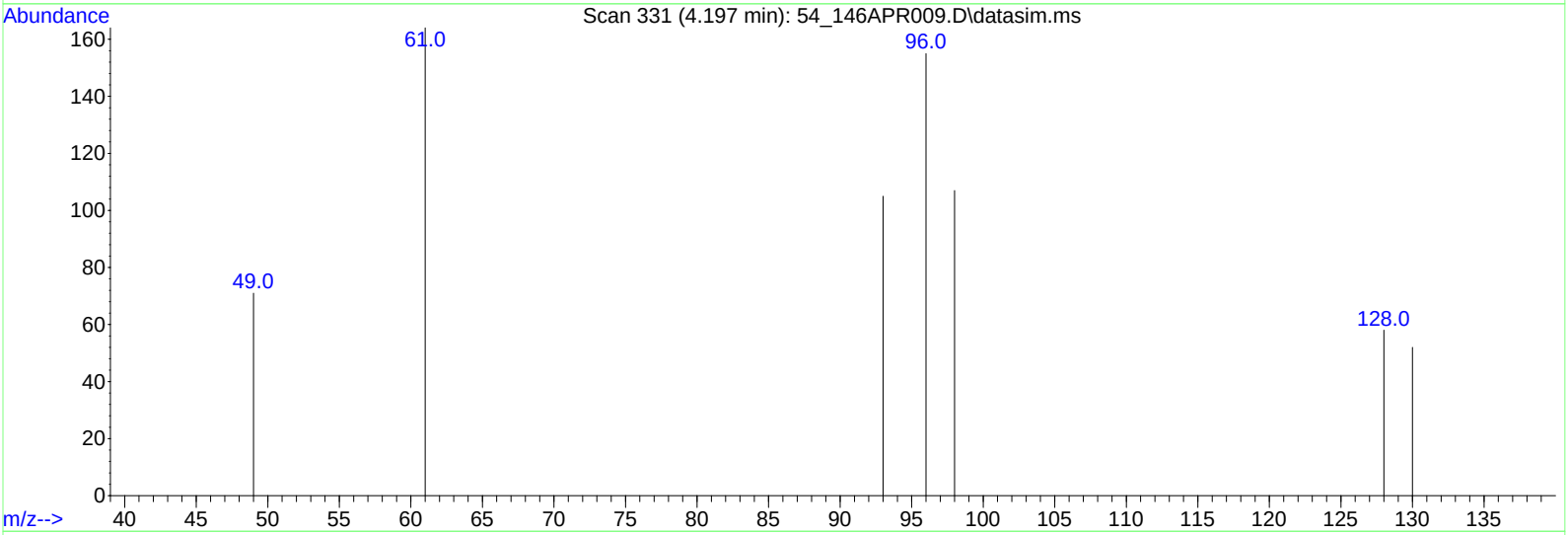
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	180.37#
98.00	63.30	130.74#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:20:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration





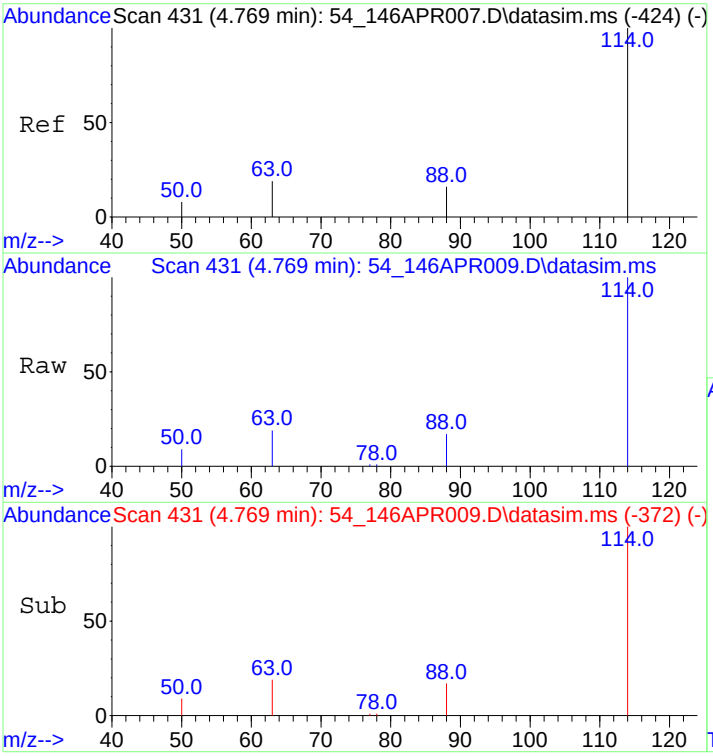
TIC: 54_146APR009.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 0.50 ppbv m

response 145

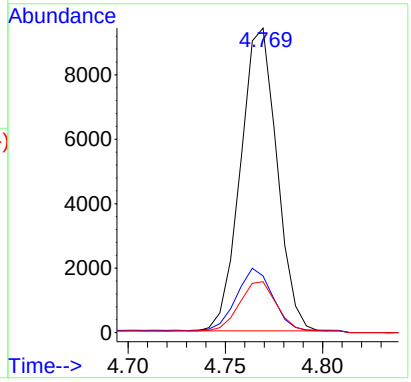
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	98.10	335.86#
98.00	63.30	243.45#
0.00	0.00	0.00

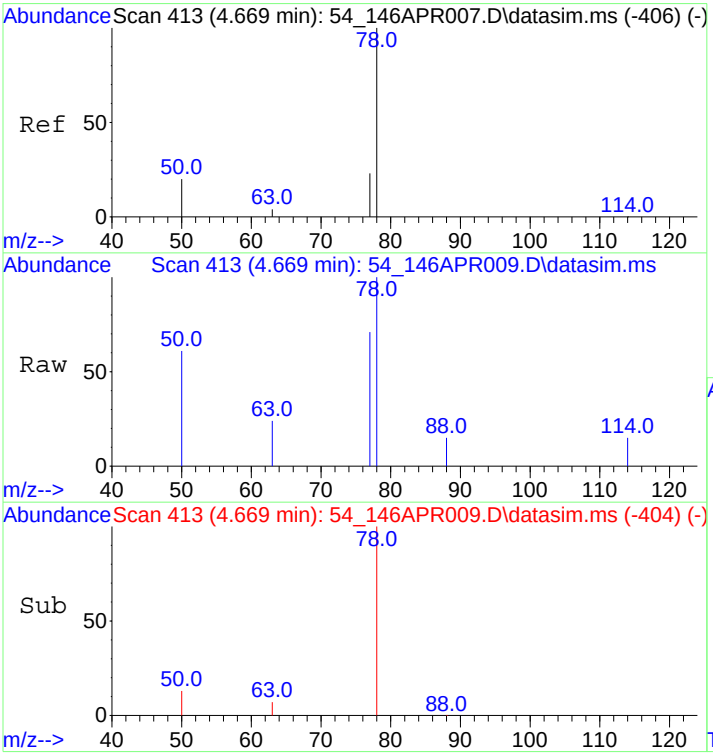


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion:114 Resp: 12215

Ion	Ratio	Lower	Upper
114	100		
63	20.2	12.0	18.0#
88	16.5	11.8	17.8

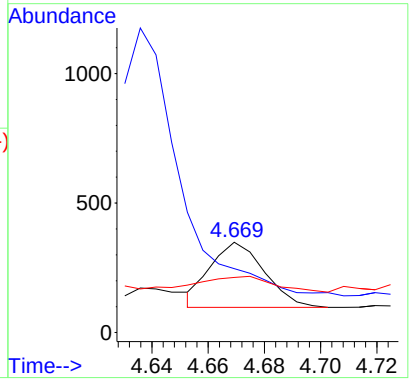


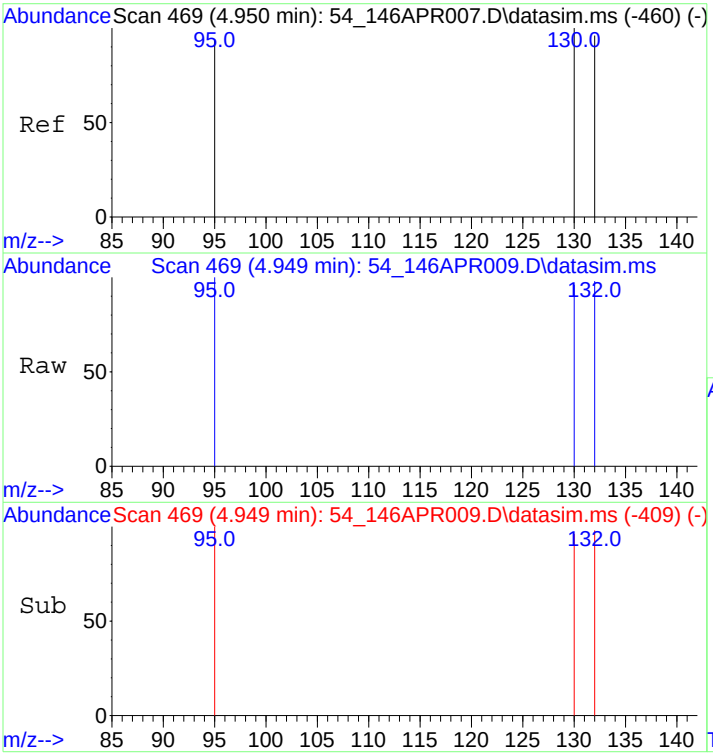


#10
Benzene
Concen: 0.62 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 78 Resp: 337

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.2	27.2#
50	35.3	8.6	13.0#

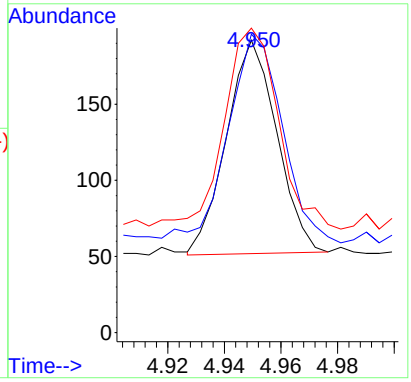


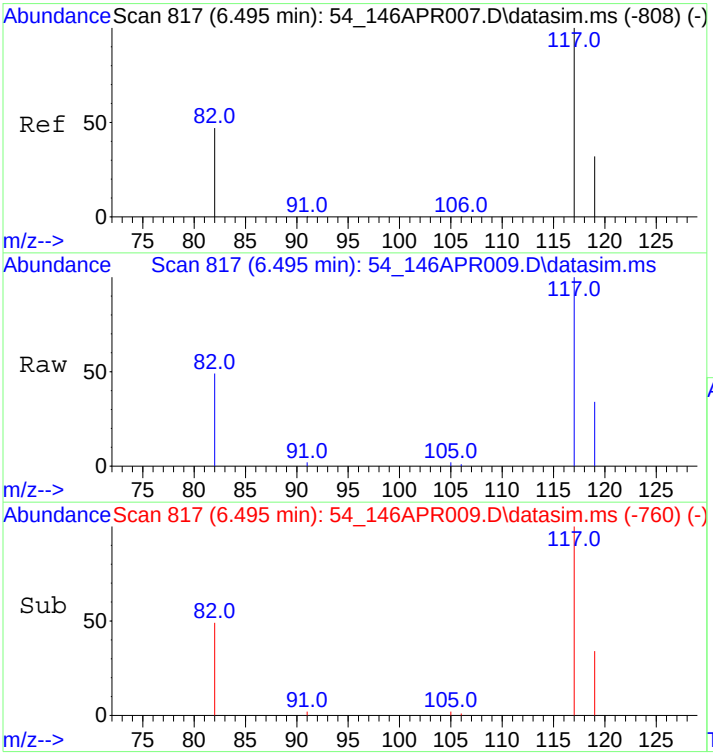


#11
Trichloroethene
Concen: 0.59 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion:130 Resp: 174

Ion	Ratio	Lower	Upper
130	100		
132	174.1	76.9	115.3#
95	100.0	76.5	114.7

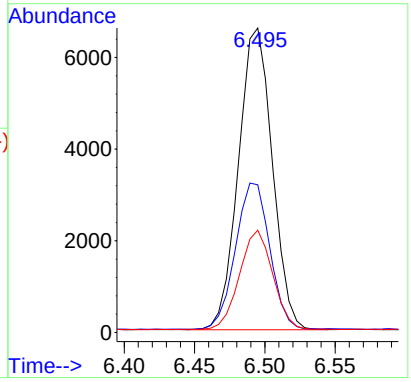


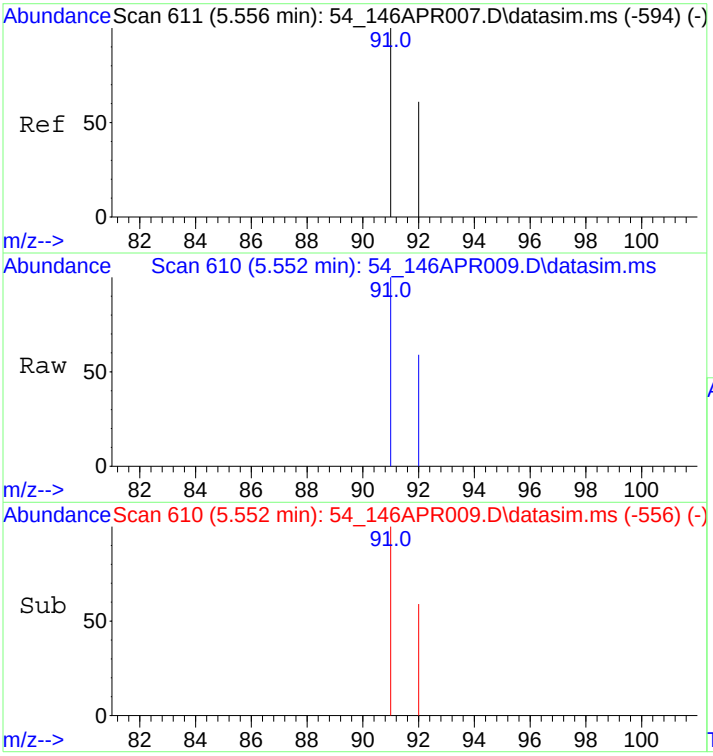


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54_146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion:117 Resp: 11057

Ion	Ratio	Lower	Upper
117	100		
82	49.0	38.0	57.0
119	32.2	27.0	40.4

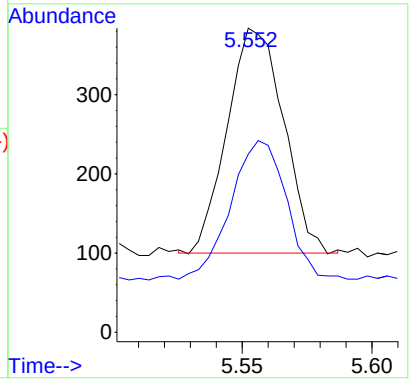


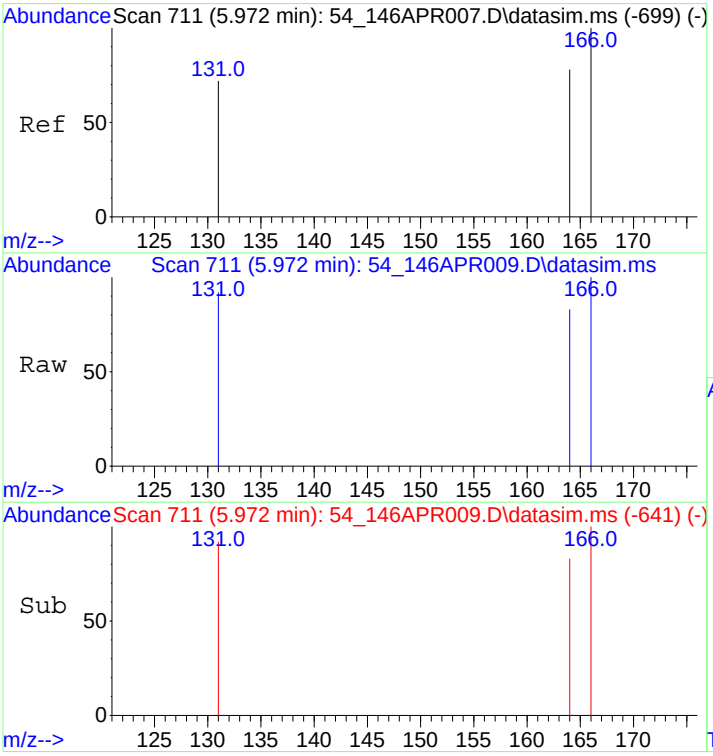


#13
Toluene
Concen: 0.68 ppbv m
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 91 Resp: 429

Ion	Ratio	Lower	Upper
91	100		
92	60.1	47.8	71.8

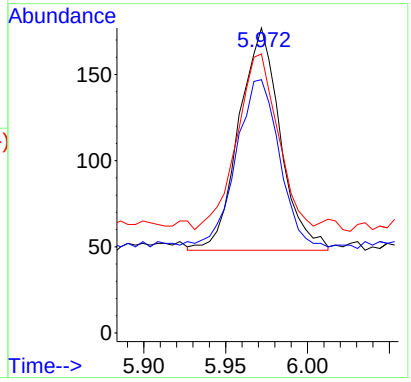




#14
Tetrachloroethene
Concen: 0.62 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion:166 Resp: 227

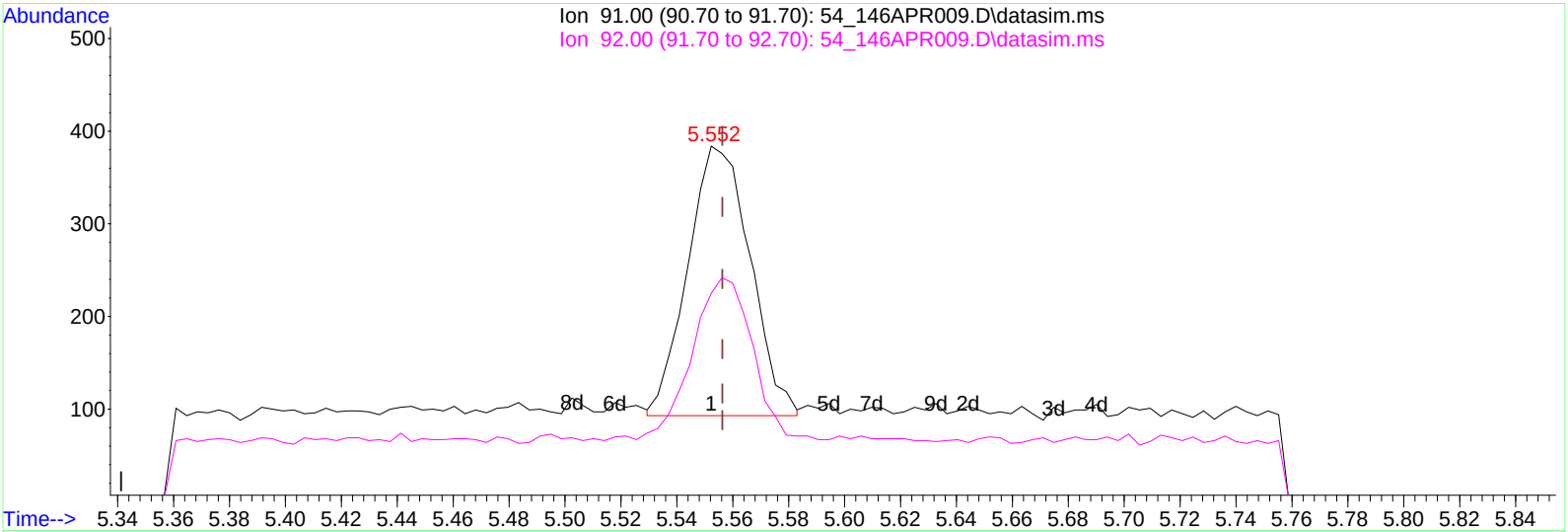
Ion	Ratio	Lower	Upper
166	100		
164	118.9	62.6	94.0#
131	78.0	58.5	87.7

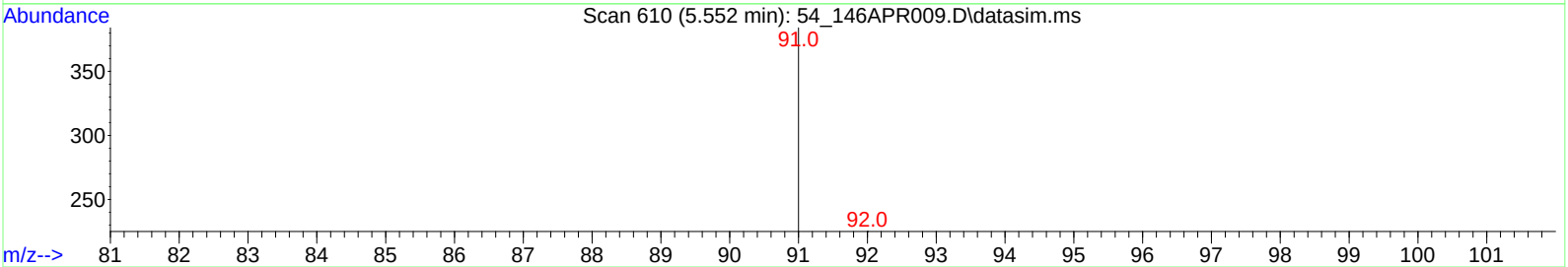


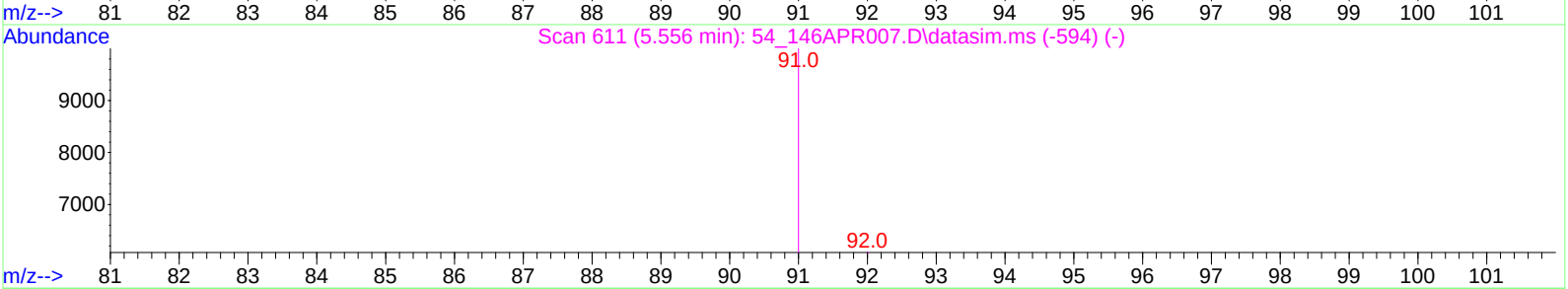
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:16:33 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration







TIC: 54_146APR009.D\data.ms

(13) Toluene (M)

5.552min (-0.004) 0.72 ppbv

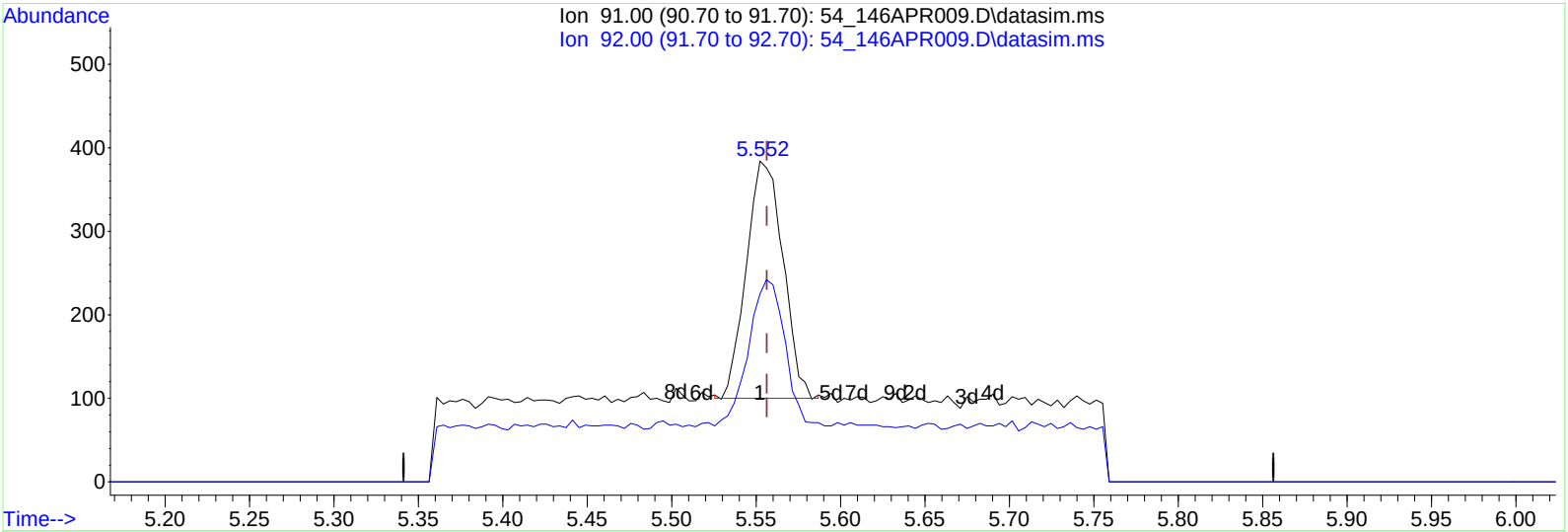
response 451

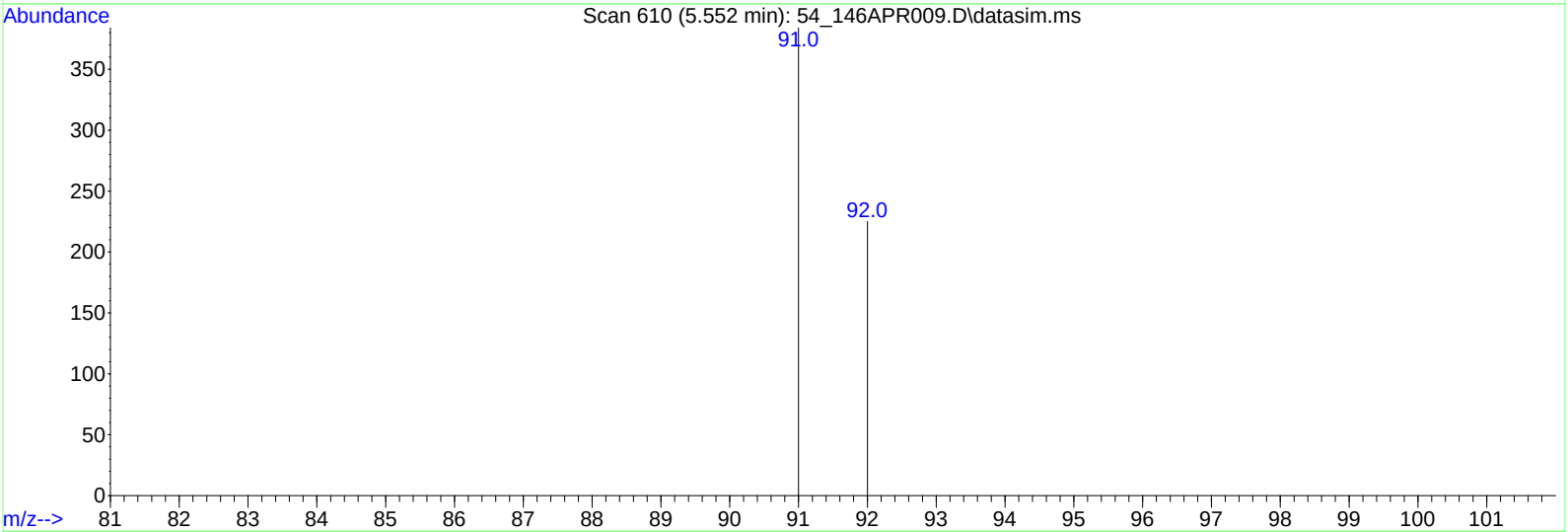
Ion	Exp%	Act%
91.00	100	100
92.00	59.80	57.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR009.D
Acq On : 16 Apr 2014 1:09 pm
Operator : yhl
Sample : STD20140416-6 \0.5 ppbv ICAL 1°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:20:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 12:53:34 2014
QLast Update : Wed Apr 16 13:05:02 2014
Response via : Initial Calibration





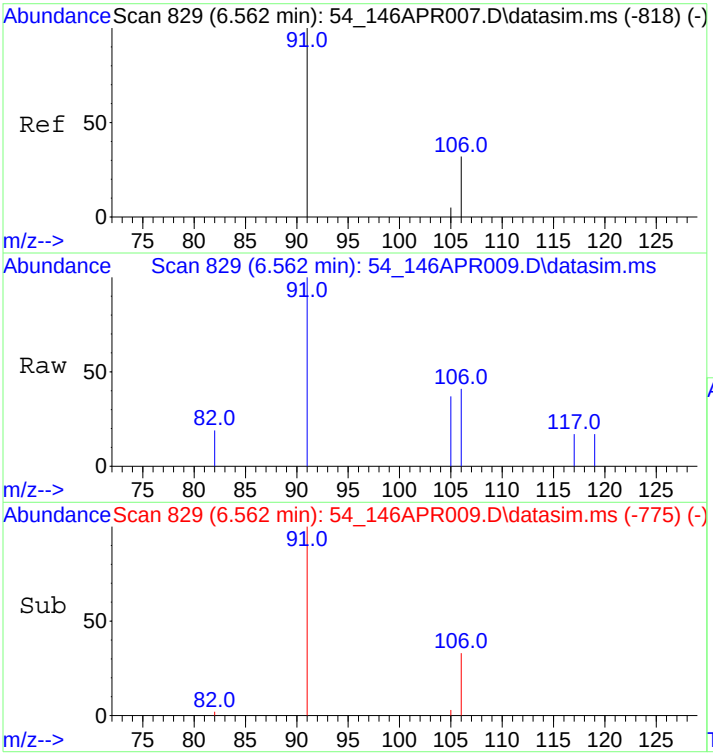
TIC: 54_146APR009.D\data.ms

(13) Toluene (M)

5.552min (-0.004) 0.68 ppbv m

response 429

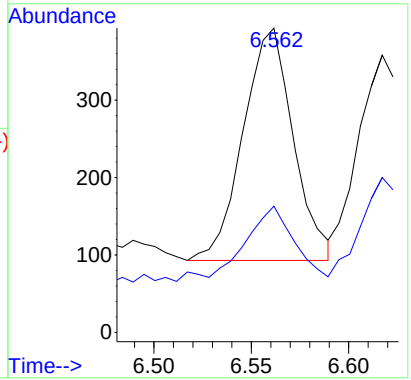
Ion	Exp%	Act%
91.00	100.00	100.00
92.00	59.80	60.14
0.00	0.00	0.00
0.00	0.00	0.00

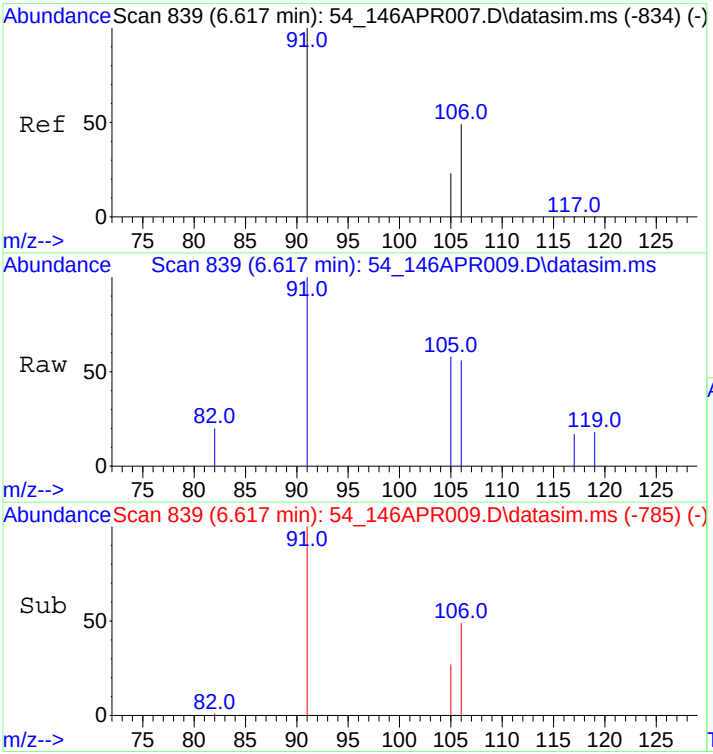


#15
Ethyl Benzene
Concen: 0.67 ppbv
RT: 6.562 min Scan# 829
Delta R.T. -0.000 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 91 Resp: 538

Ion	Ratio	Lower	Upper
91	100		
106	30.3	26.9	40.3

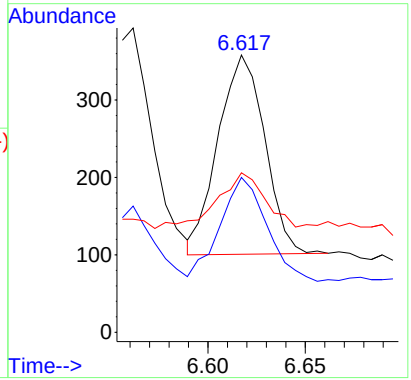


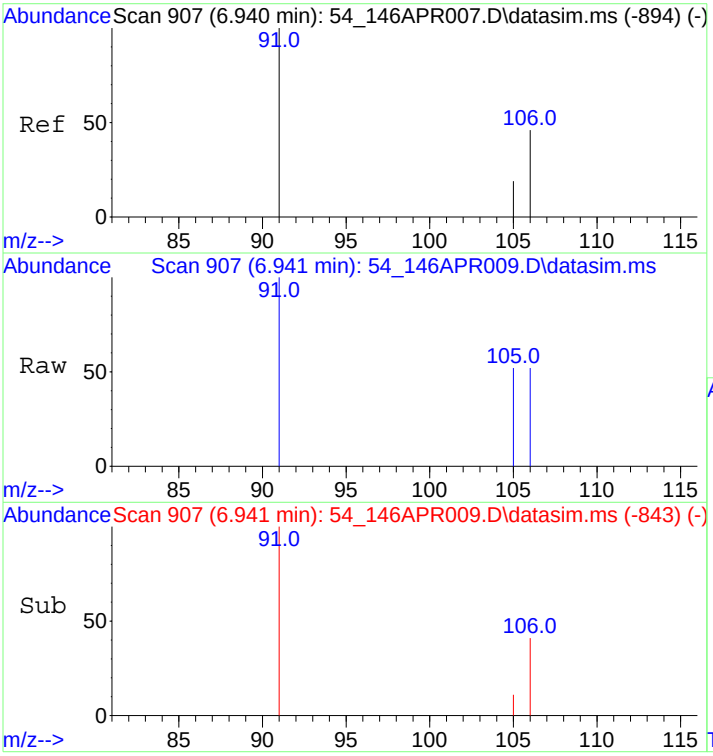


#16
m, p-Xylene
Concen: 0.71 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 91 Resp: 430

Ion	Ratio	Lower	Upper
91	100		
106	53.0	43.1	64.7
105	33.3	18.3	27.5#

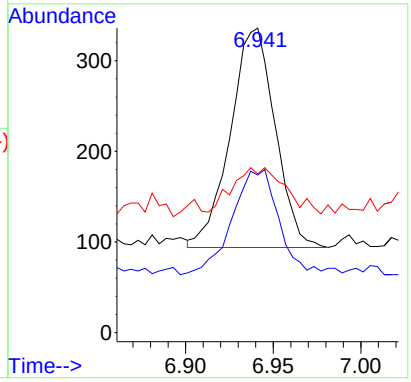




#17
o-Xylene
Concen: 0.70 ppbv
RT: 6.941 min Scan# 907
Delta R.T. 0.001 min
Lab File: 54 146APR009.D
Acq: 16 Apr 2014 1:09 pm

Tgt Ion: 91 Resp: 431

Ion	Ratio	Lower	Upper
91	100		
106	49.4	40.1	60.1
105	1.9	15.8	23.6#



INITIAL CALIBRATION VERIFICATION

Data File 54_146Apr010.D
MDL Standard Number 041614-ICV
MDL Standard Name **STD20140416-7 \ ICV 500 ppbv 2º**
Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 4/16/2014	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %	
Vinyl Chloride	499.70	517.50	96.6	70-130	OK
1,1-Dichloroethene	497.88	512.50	97.1	70-130	OK
Methyl Tert Butyl Ether	487.75	510.00	95.6	70-130	OK
trans-1,2-Dichloroethene	496.01	500.00	99.2	70-130	OK
1,1-Dichloroethane	513.07	525.00	97.7	70-130	OK
cis-1,2-Dichloroethene	532.95	530.00	100.6	70-130	OK
1,1,1-Trichloroethane	512.44	510.00	100.5	70-130	OK
Benzene	501.33	527.50	95.0	70-130	OK
Trichloroethene	491.39	510.00	96.4	70-130	OK
Toluene	487.24	522.50	93.3	70-130	OK
Tetrachloroethene	480.62	517.50	92.9	70-130	OK
Ethyl Benzene	480.52	525.00	91.5	70-130	OK
m,p-Xylene	468.64	520.00	90.1	70-130	OK
o-Xylene	463.51	525.00	88.3	70-130	OK

Secondary Standard Cylinder # CC-99022

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR010.D
Acq On : 16 Apr 2014 1:28 pm
Operator : yhl
Sample : STD20140416-7 \ ICV 500 ppbv 2°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:34:54 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:05:02 2014
QLast Update : Wed Apr 16 13:21:03 2014
Response via : Initial Calibration

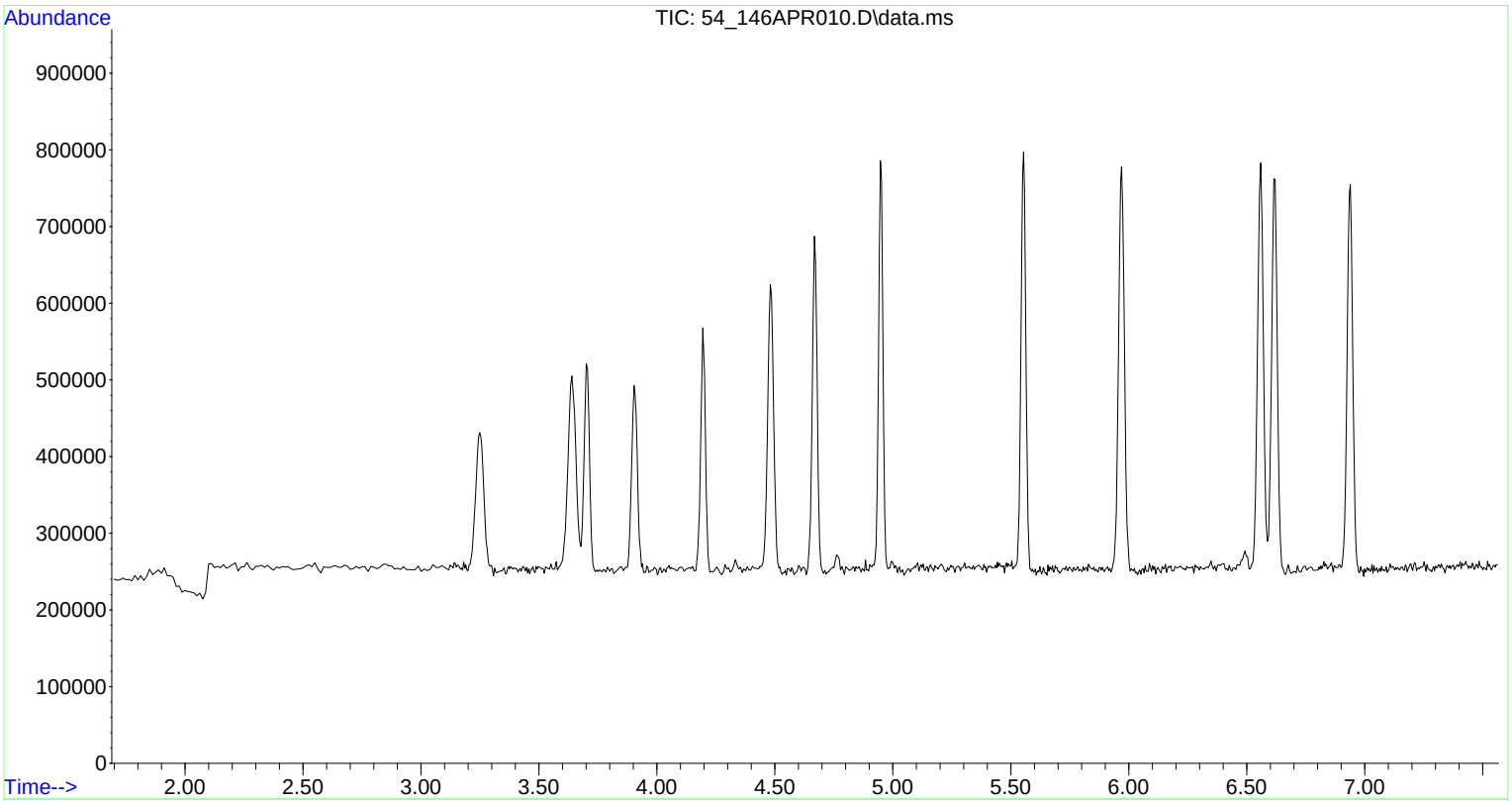
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.335	49	4604	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.764	114	12652	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.495	117	11813	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
2] Vinyl chloride	1.902	62	87482	499.70	ppbv	#	57
3] 1,1-Dichloroethene	3.251	61	177533	497.88	ppbv	#	80
4] Methyl Tert Butyl Ether	3.642	73	265545	487.75	ppbv	#	85
5] trans-1,2-Dichloroethene	3.703	61	155880	496.01	ppbv	#	76
6] 1,1-Dichloroethane	3.905	63	192487	513.07	ppbv	#	87
7] cis-1,2-Dichloroethene	4.197	61	156408	532.95	ppbv	#	75
8] 1,1,1-Trichloroethane	4.483	97	243874	512.44	ppbv		97
10] Benzene	4.669	78	289749	501.33	ppbv	#	91
11] Trichloroethene	4.950	130	154625	491.39	ppbv		99
13] Toluene	5.552	91	345030	487.24	ppbv		99
14] Tetrachloroethene	5.972	166	194391	480.62	ppbv		100
15] Ethyl Benzene	6.556	91	432126	480.52	ppbv		96
16] m, p-Xylene	6.617	91	323455	468.64	ppbv		95
17] o-Xylene	6.937	91	324424	463.51	ppbv		95

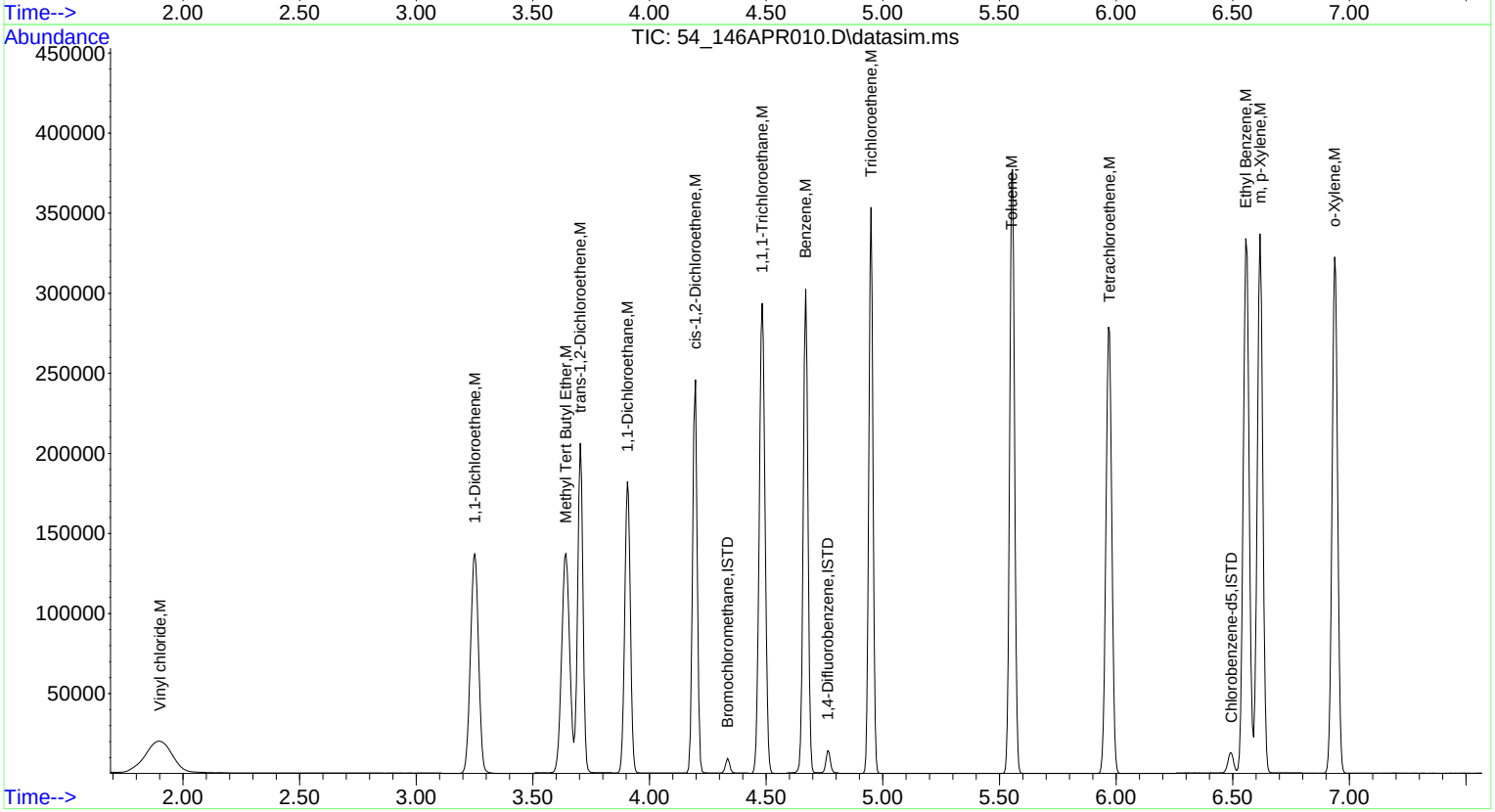
(#) = qualifier out of range (m) = manual integration (+) = signals summed

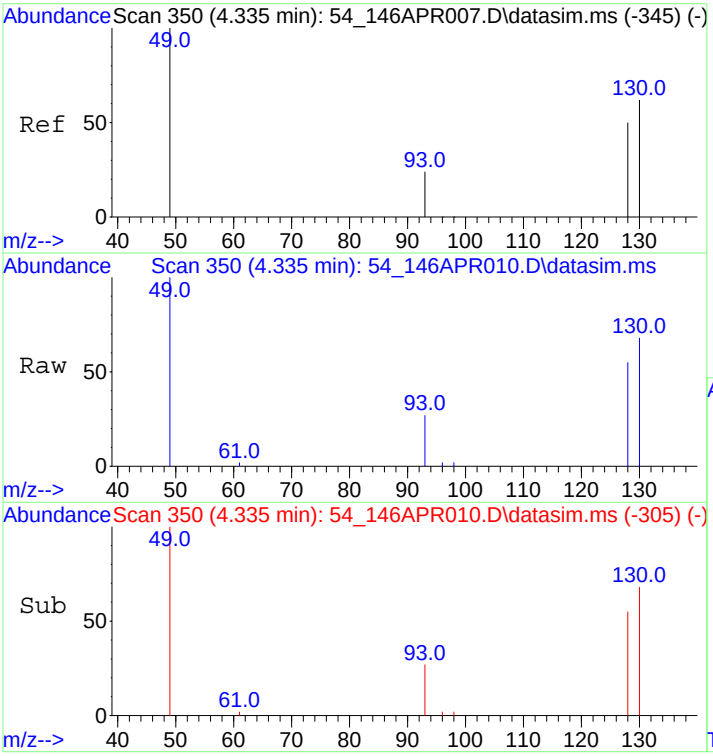
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140416\
Data File : 54 146APR010.D
Acq On : 16 Apr 2014 1:28 pm
Operator : yhl
Sample : STD20140416-7 \ ICV 500 ppbv 2°
Misc : 5 ml \ 16 April 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 16 13:34:54 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:05:02 2014
QLast Update : Wed Apr 16 13:21:03 2014
Response via : Initial Calibration



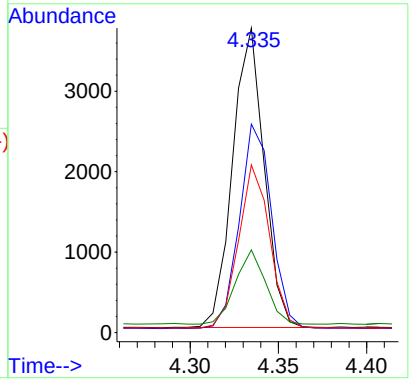


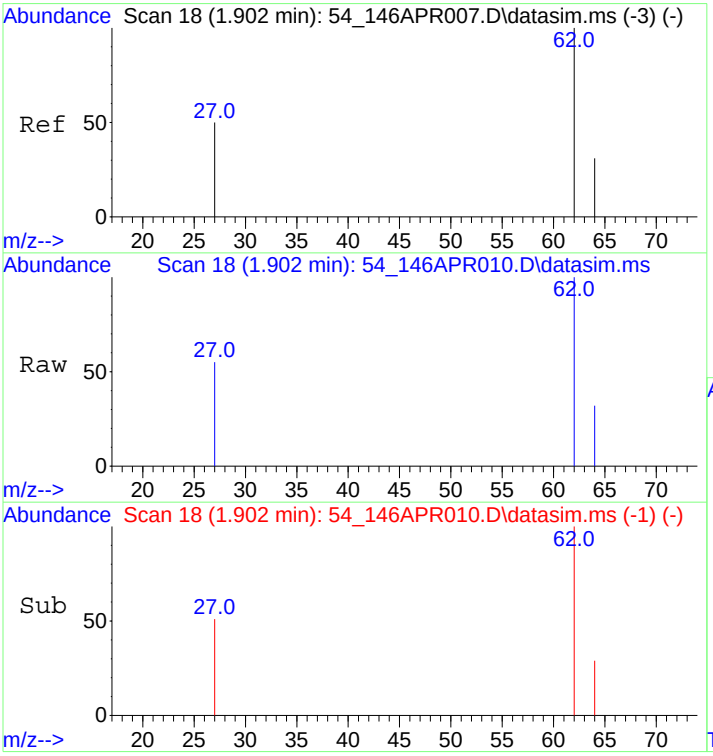


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 49 Resp: 4604

Ion	Ratio	Lower	Upper
49	100		
130	69.5	87.2	130.8#
128	53.8	68.0	102.0#
93	23.9	29.3	43.9#

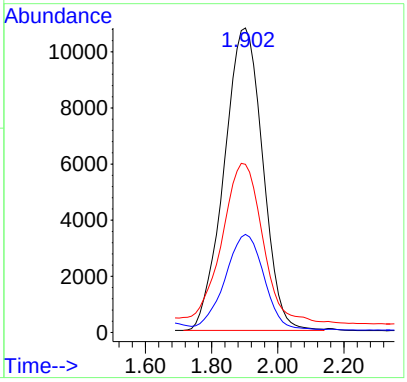


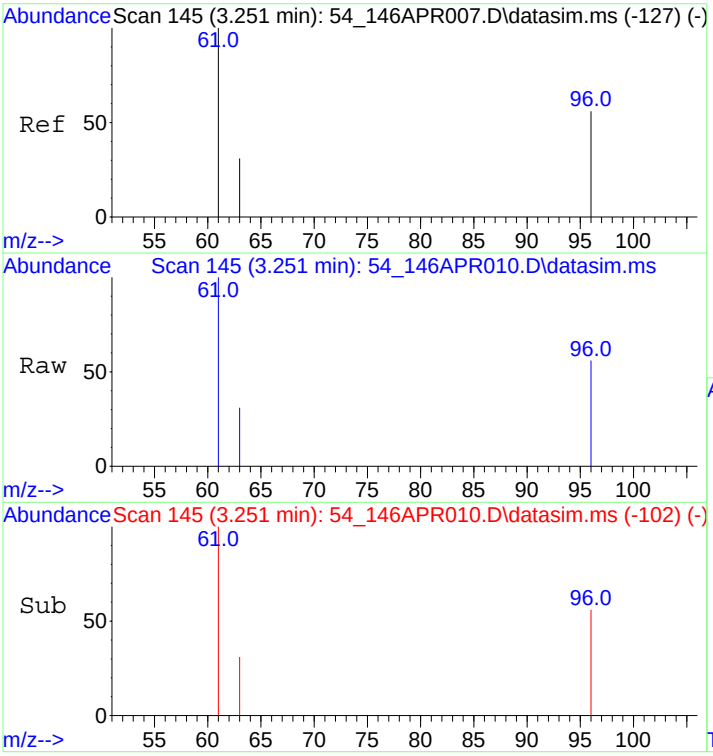


#2
Vinyl chloride
Concen: 499.70 ppbv
RT: 1.902 min Scan# 18
Delta R.T. -0.000 min
Lab File: 54_146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 62 Resp: 87482

Ion	Ratio	Lower	Upper
62	100		
64	28.8	26.8	40.2
27	66.4	16.1	24.1#

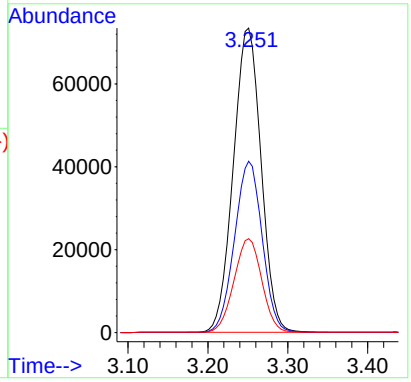


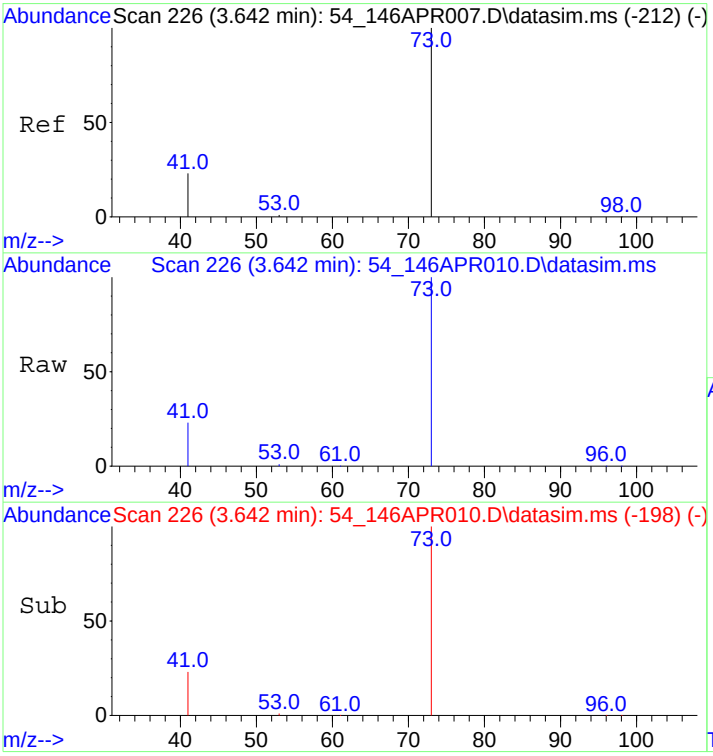


#3
1,1-Dichloroethene
Concen: 497.88 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.000 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 61 Resp: 177533

Ion	Ratio	Lower	Upper
61	100		
96	55.9	63.4	95.2#
63	30.8	26.2	39.2

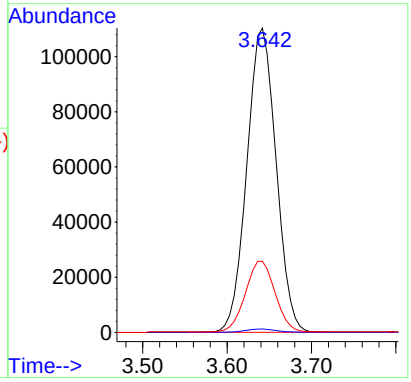


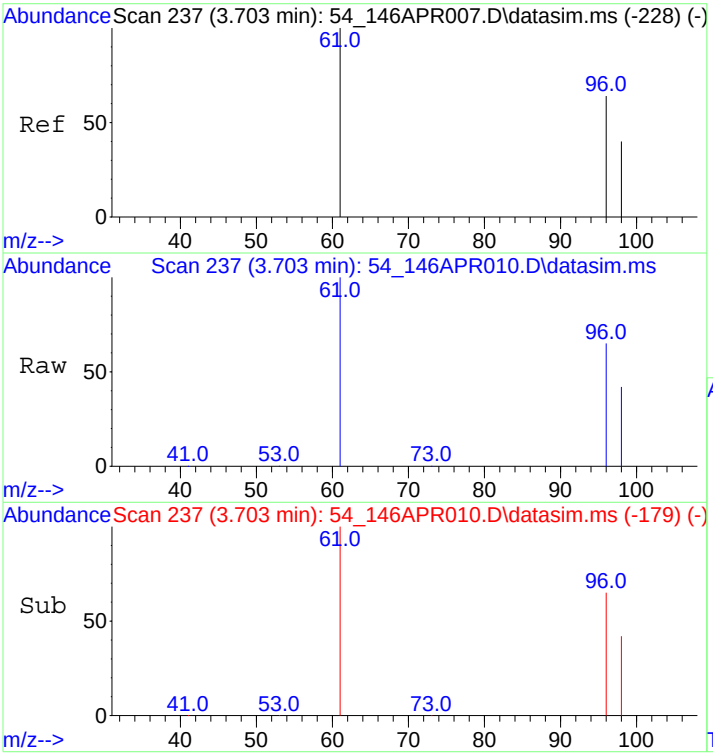


#4
Methyl Tert Butyl Ether
Concen: 487.75 ppbv
RT: 3.642 min Scan# 226
Delta R.T. -0.000 min
Lab File: 54_146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 73 Resp: 265545

Ion	Ratio	Lower	Upper
73	100		
53	1.1	1.0	1.4
41	23.5	13.1	19.7#

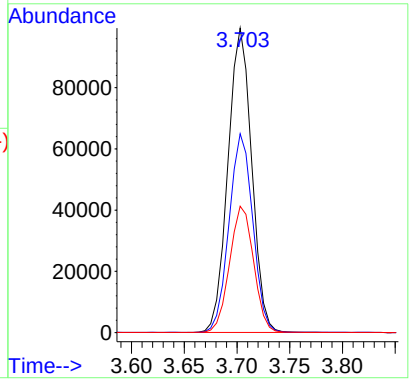


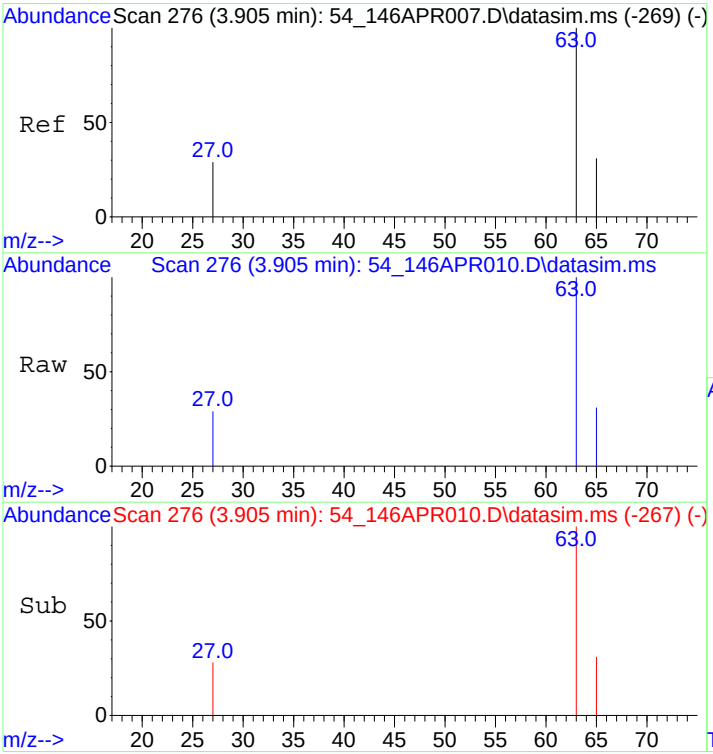


#5
trans-1,2-Dichloroethene
Concen: 496.01 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.000 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 61 Resp: 155880

Ion	Ratio	Lower	Upper
61	100		
96	65.1	71.4	107.0#
98	41.8	45.8	68.8#

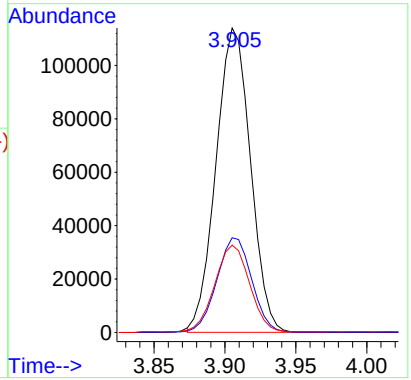


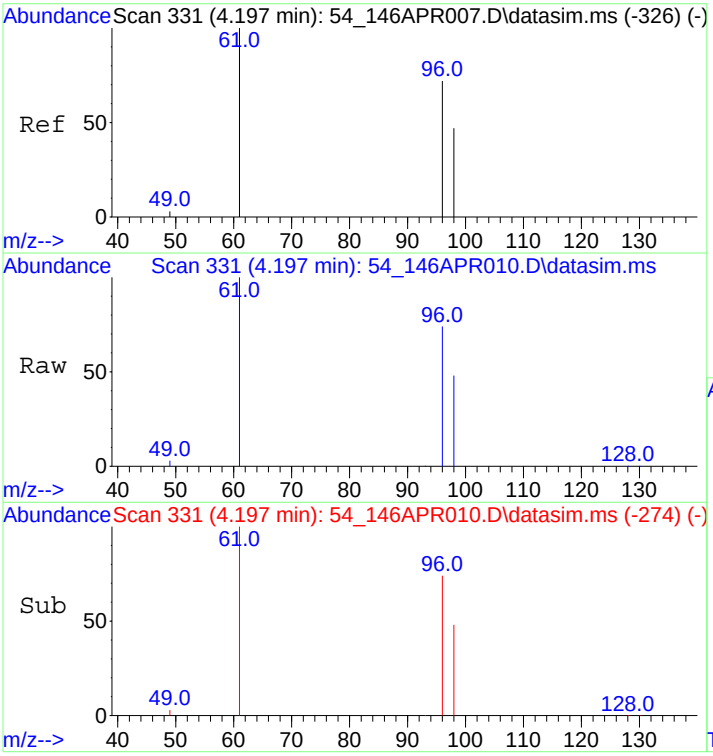


#6
1,1-Dichloroethane
Concen: 513.07 ppbv
RT: 3.905 min Scan# 276
Delta R.T. -0.000 min
Lab File: 54_146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 63 Resp: 192487

Ion	Ratio	Lower	Upper
63	100		
65	31.2	26.1	39.1
27	28.4	10.2	15.2#

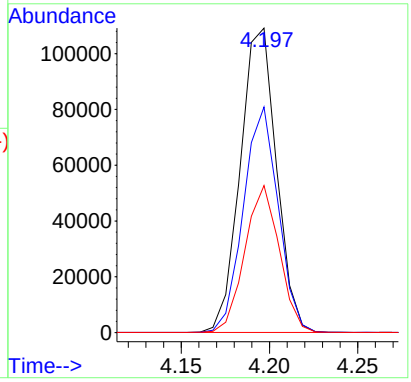


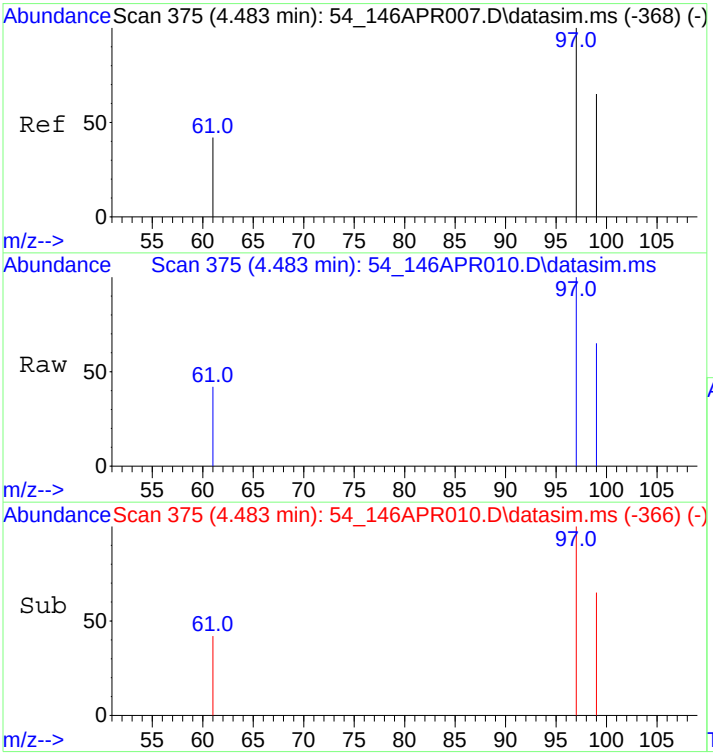


#7
cis-1,2-Dichloroethene
Concen: 532.95 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 61 Resp: 156408

Ion	Ratio	Lower	Upper
61	100		
96	71.1	78.5	117.7#
98	45.8	50.6	76.0#

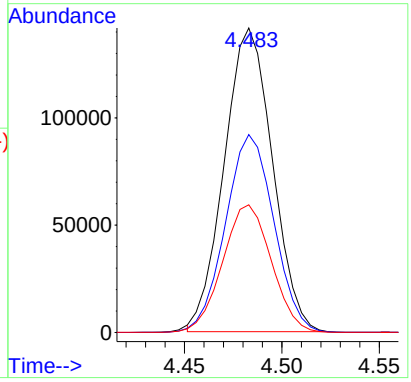


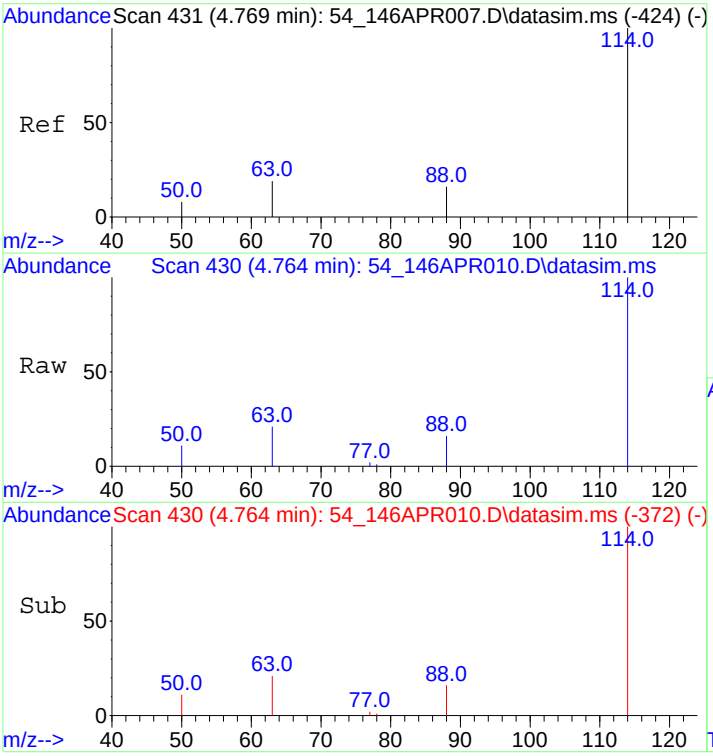


#8
1,1,1-Trichloroethane
Concen: 512.44 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 97 Resp: 243874

Ion	Ratio	Lower	Upper
97	100		
99	64.7	52.1	78.1
61	42.1	30.2	45.4

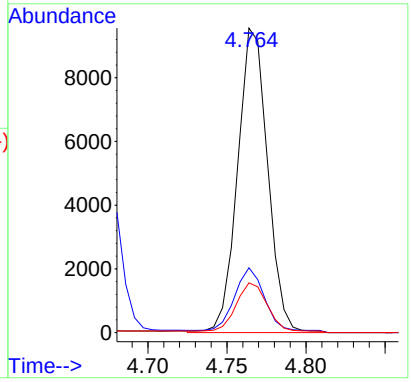


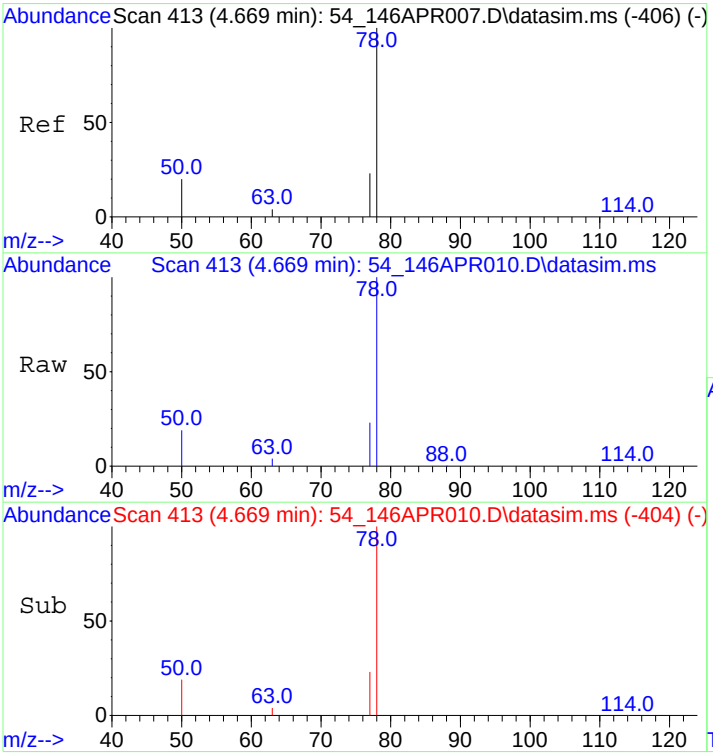


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.764 min Scan# 430
Delta R.T. -0.005 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion:114 Resp: 12652

Ion	Ratio	Lower	Upper
114	100		
63	19.7	12.0	18.0#
88	15.8	11.8	17.8

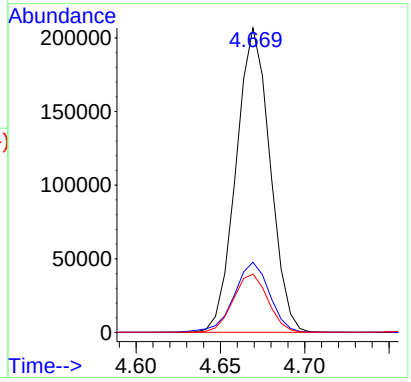


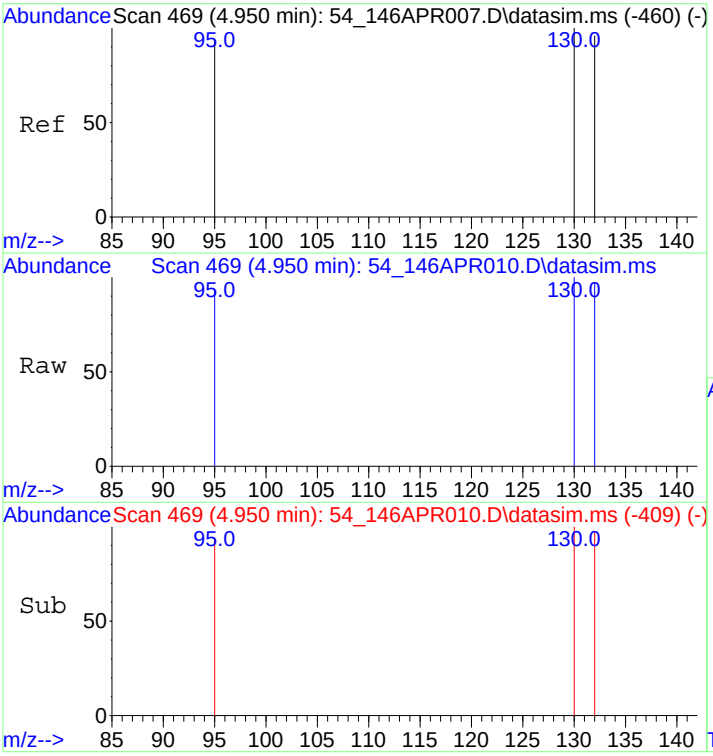


#10
Benzene
Concen: 501.33 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 78 Resp: 289749

Ion	Ratio	Lower	Upper
78	100		
77	23.8	18.2	27.2
50	19.4	8.6	13.0#

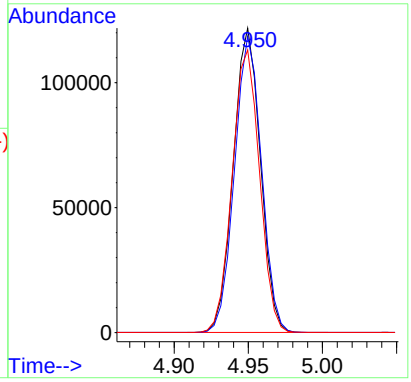


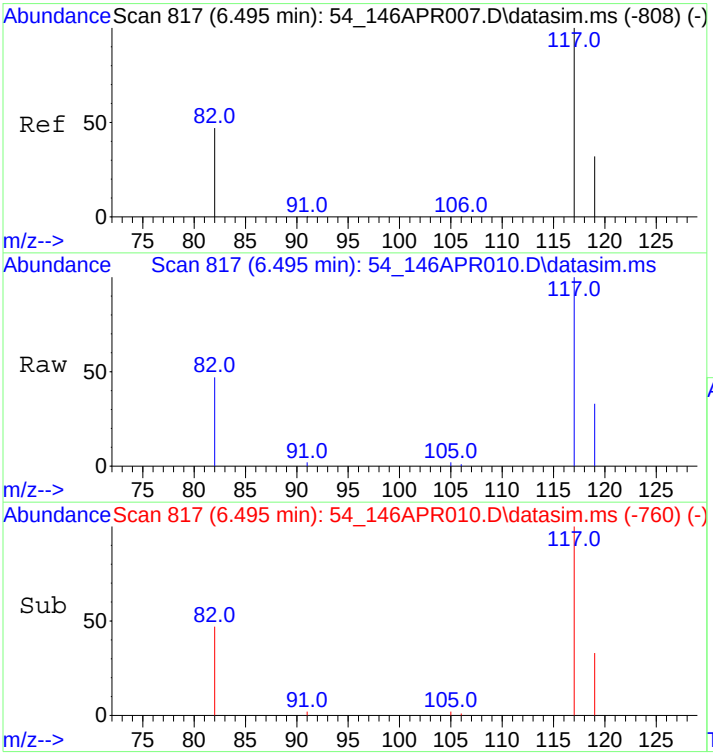


#11
Trichloroethene
Concen: 491.39 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion:130 Resp: 154625

Ion	Ratio	Lower	Upper
130	100		
132	96.8	76.9	115.3
95	93.8	76.5	114.7

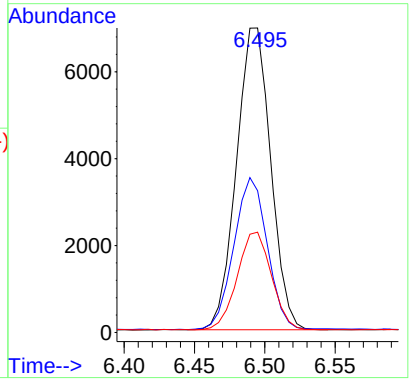


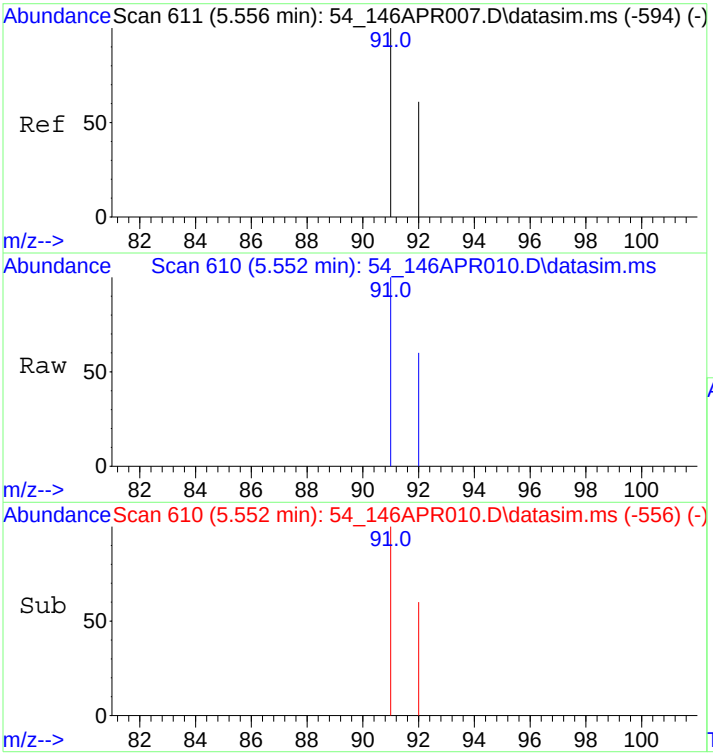


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54_146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion:117 Resp: 11813

Ion	Ratio	Lower	Upper
117	100		
82	49.1	38.0	57.0
119	32.2	27.0	40.4

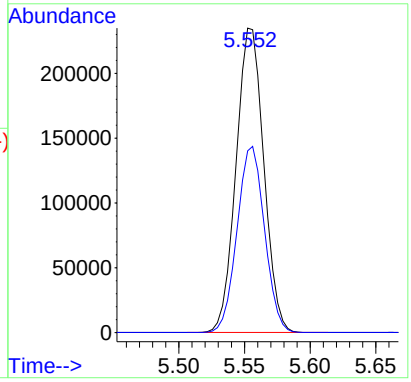


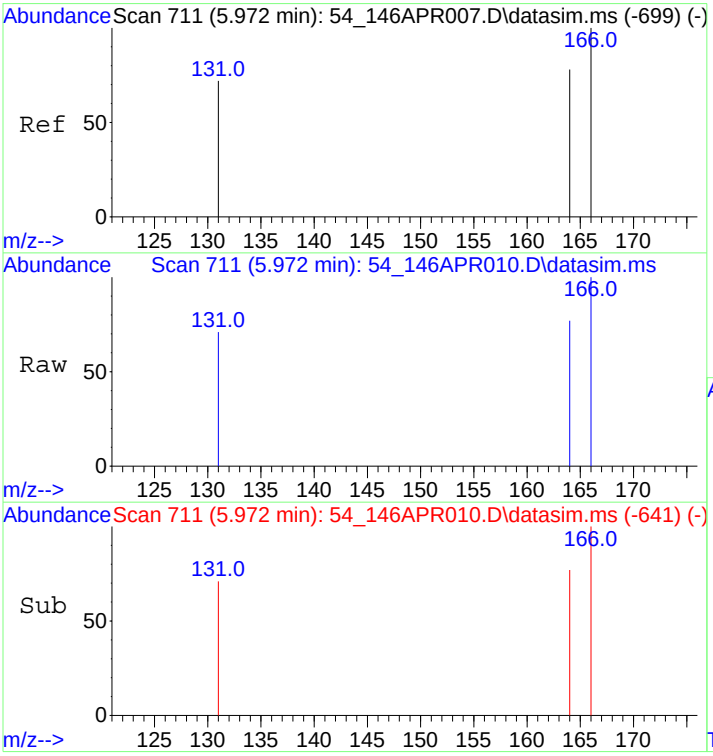


#13
Toluene
Concen: 487.24 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 91 Resp: 345030

Ion	Ratio	Lower	Upper
91	100		
92	60.5	47.8	71.8

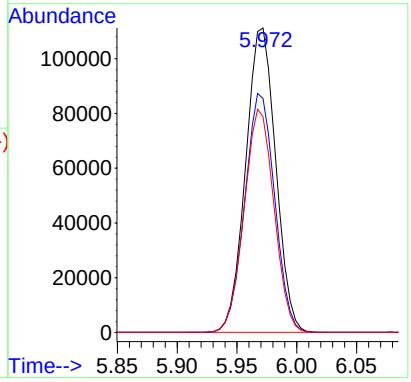


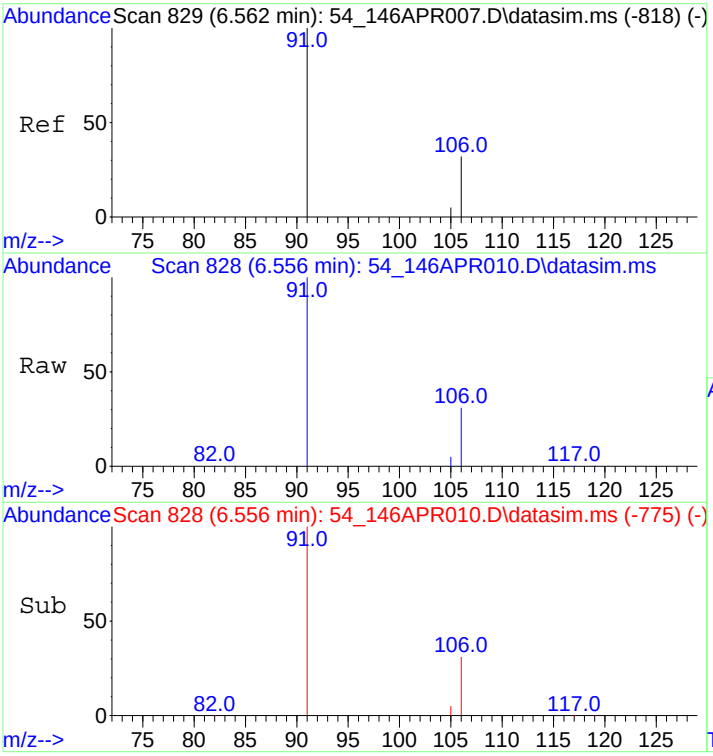


#14
Tetrachloroethene
Concen: 480.62 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion:166 Resp: 194391

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.6	94.0
131	72.8	58.5	87.7

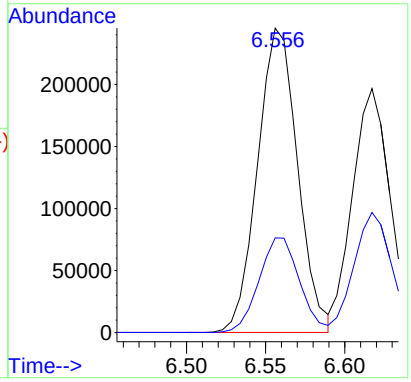


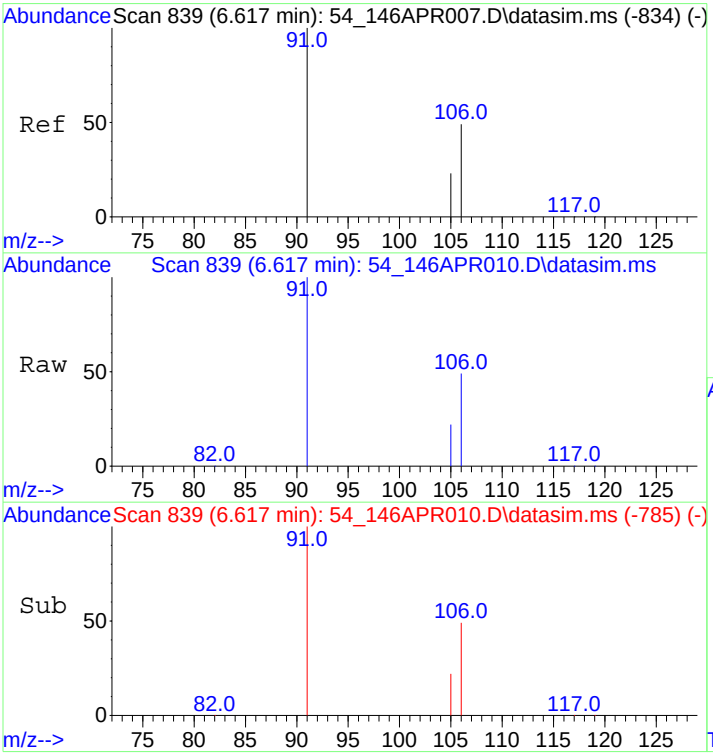


#15
Ethyl Benzene
Concen: 480.52 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.006 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 91 Resp: 432126

Ion	Ratio	Lower	Upper
91	100		
106	31.5	26.9	40.3

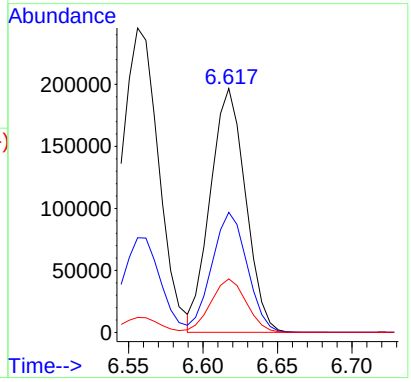


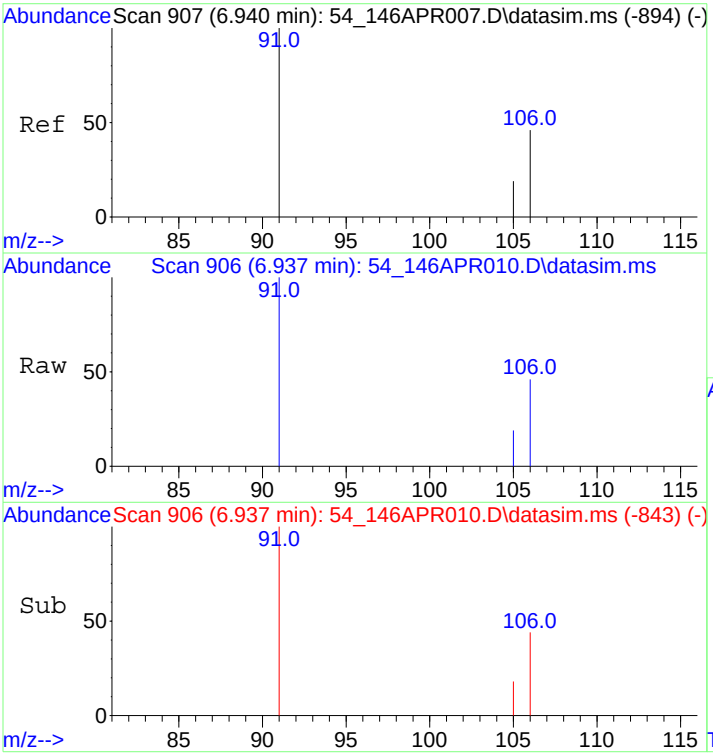


#16
m, p-Xylene
Concen: 468.64 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_146APR010.D
Acq: 16 Apr 2014 1:28 pm

Tgt Ion: 91 Resp: 323455

Ion	Ratio	Lower	Upper
91	100		
106	49.3	43.1	64.7
105	22.1	18.3	27.5

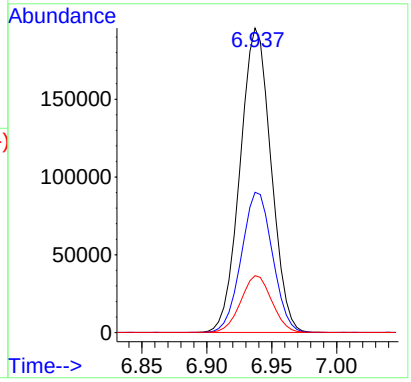




#17
o-Xylene
Concen: 463.51 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 146APR010.D
Acq: 16 Apr 2014 1:28 pm

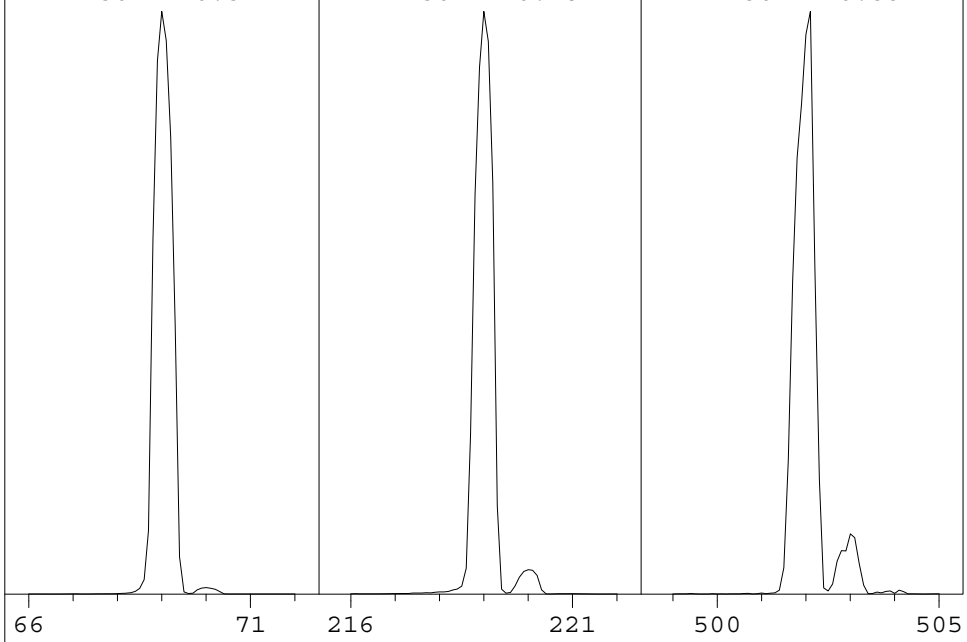
Tgt Ion: 91 Resp: 324424

Ion	Ratio	Lower	Upper
91	100		
106	46.3	40.1	60.1
105	18.6	15.8	23.6



Thu May 01 06:49:19 2014 Instrument: GCMS
C:\msdchem\1\5975\bfb.u US91732436

Mass	Ab	Pw50
69.00	941836	0.51
219.00	536811	0.48
502.10	20297	0.53

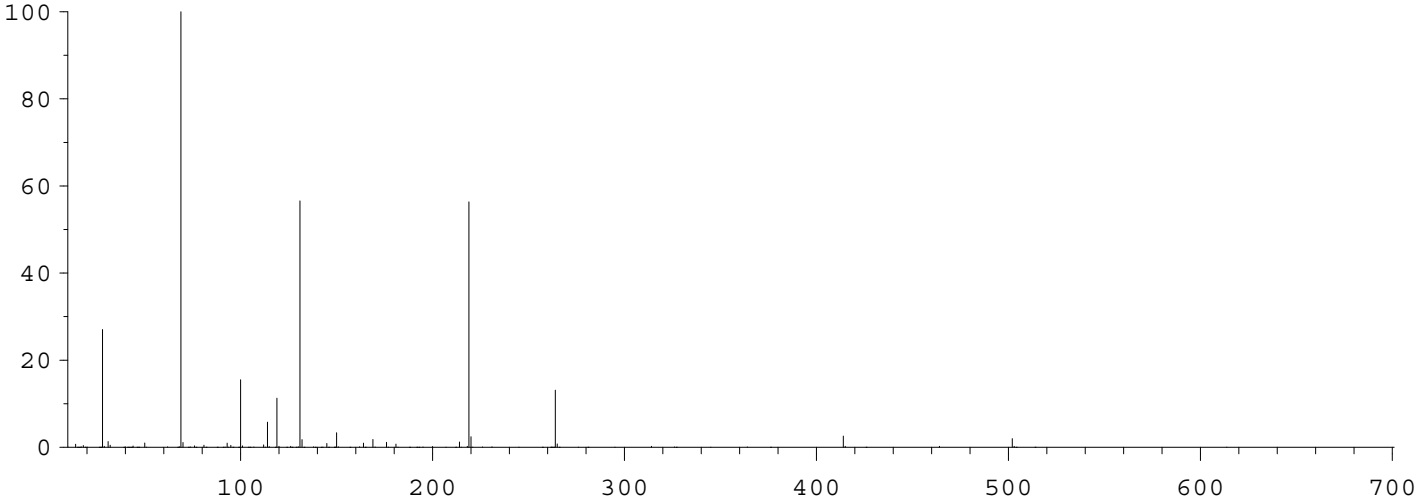


Ion Pol	Pos	MassGain	-791
		MassOffs	-37
Emission	34.6	AmuGain	1593
EIEnrgy	69.9	AmuOffs	129.88
Filament	2	Wid219	-0.029
		DC Pol	Pos
Repeller	19.90		
IonFcus	79.7	HEDEnab	On
EntLens	0.0	EMVolts	1953
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.14e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
123 peaks Base: 69.00 Abundance: 811904



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	811904	100.00	70.00	9125	1.12
219.00	457600	56.36	220.00	19776	4.32
502.00	16053	1.98	503.10	1730	10.78

Air/Water Check: H20~0.42% N2~27.02% O2~0.47% CO2~0.30% N2/H2O~6452.71%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 240603
Repeller Maximum 20 volts using ion 219; Gain Factor 2.41

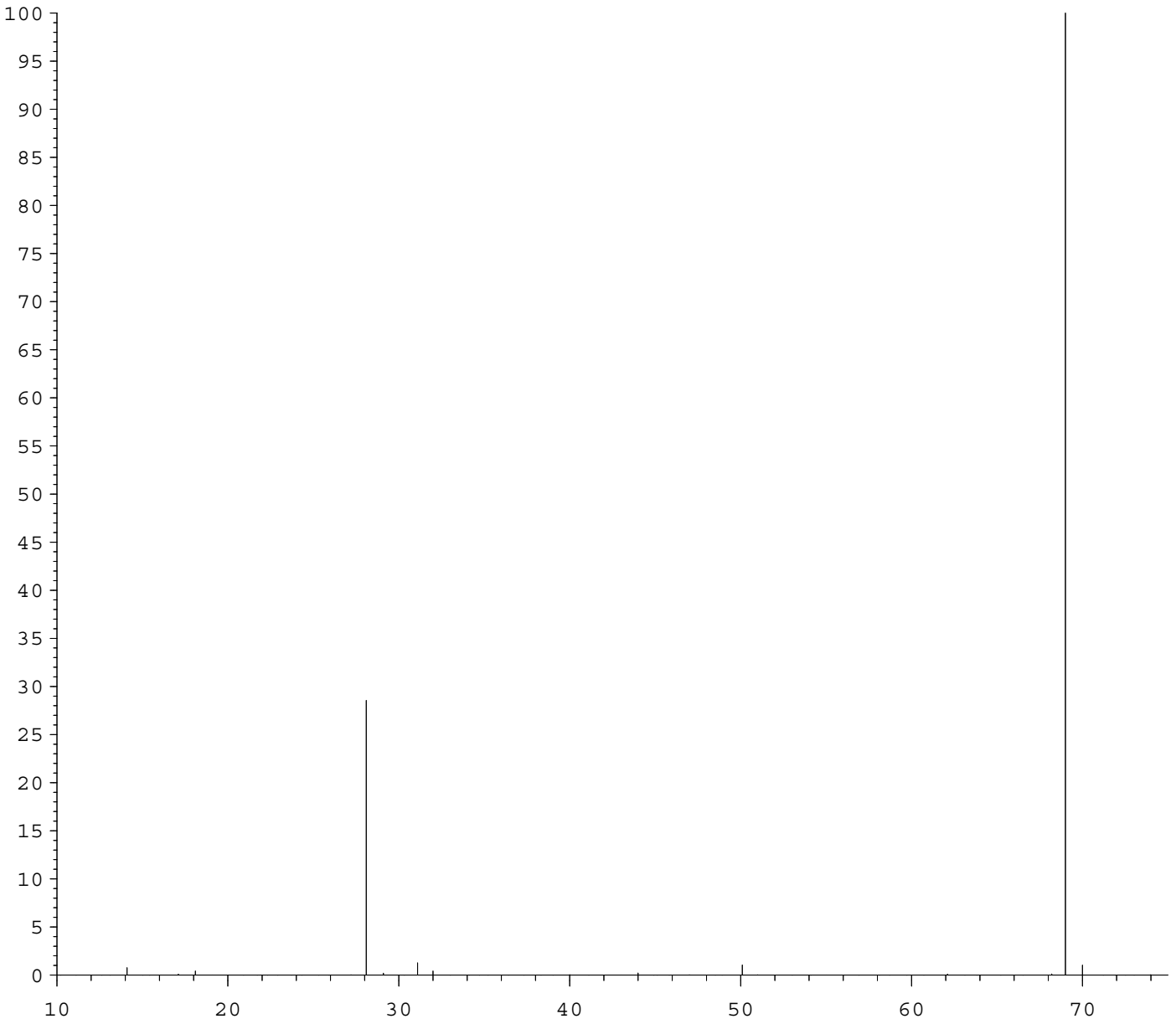
MassGain Values(Samples): -782(3) -767(2) -741(1) -706(0) -636(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.9	129.9	129.9	129.9	129.9	129.9	129.9
Entrance Lens Offset:	16.8	13.8	14.1	13.8	14.1	14.1	14.1
Target Abund(%):	1.0	100.0	55.0	55.0	2.4	2.0	
Actual Tune Abund(%):	1.0	100.0	56.6	56.4	2.6	2.0	

597x Air and Water Check

Instrument: GCMS
Thu May 01 06:52:21 2014 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
74 peaks Base: 69.00 Abundance: 783488



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	783488	100.00	70.00	8143	1.04
18.10	3382	0.43	19.10	136	4.02
28.10	223616	28.54	29.10	1562	0.70

Current Params used: bfb.u

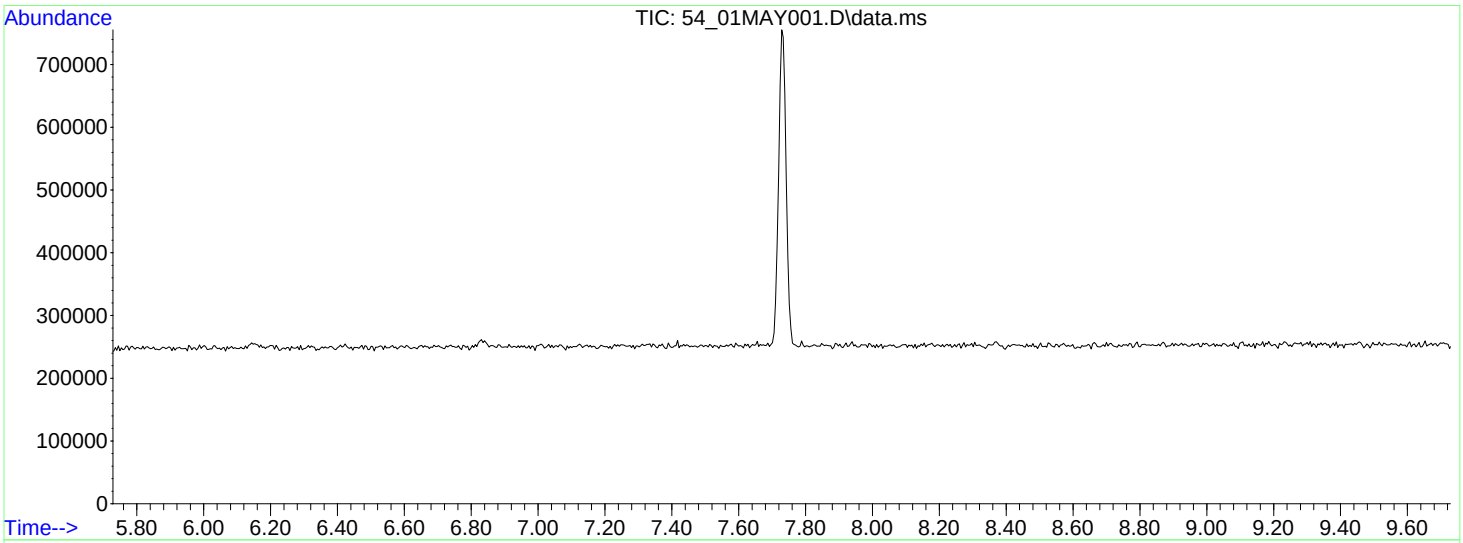
Relative abundances:

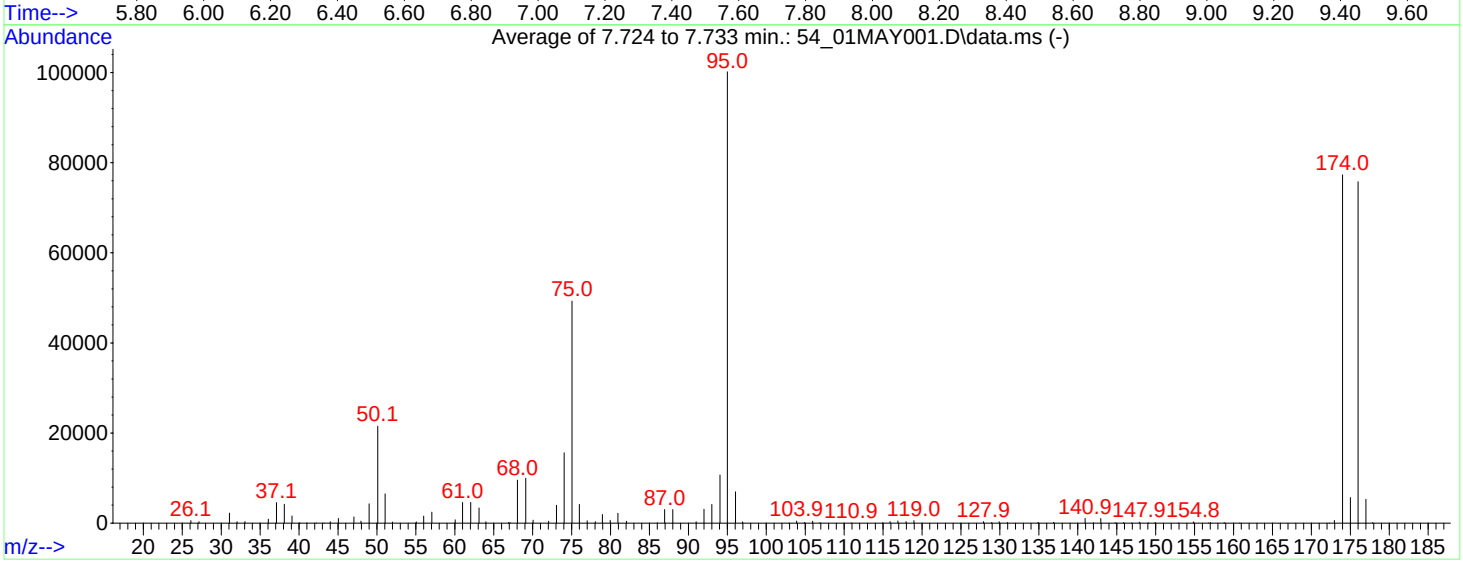
18/69 =	0.43	Water%	(counts=3382)
28/69 =	28.54	Nitrogen%	(counts=223616)
32/69 =	0.43	Oxygen%	(counts=3372)
44/69 =	0.22	Carbon Dioxide%	(counts=1738)
28/18 =	6611.95	Nitrogen/Water%	

Data Path : C:\msdchem\1\DATA\2014\20140430\
Data File : 54 01MAY001.D
Acq On : 1 May 2014 6:58 am
Operator : yhl
Sample : 20140501-BFB \ Tune Check
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20140416.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
Last Update : Wed Apr 30 07:07:11 2014





AutoFind: Scans 903, 904, 905; Background Corrected with Scan 894

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	21.5	21507	PASS
75	95	30	66	49.2	49301	PASS
95	95	100	100	100.0	100181	PASS
96	95	5	9	6.9	6958	PASS
173	174	0.00	2	0.8	594	PASS
174	95	50	120	77.2	77315	PASS
175	174	4	9	7.4	5696	PASS
176	174	93	101	98.0	75779	PASS
177	176	5	9	7.0	5298	PASS

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2014\20140501\54_01MAY001.D
Tune Time : 1 May 2014 6:58 am

Daily Calibration File : C:\msdchem\1\DATA\2014\20140501\54_01MAY002.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		4151	11104	10206
54_01MAY002.D	STD2014050	4151	11104	10206
54_01MAY003.D	STD2014050	5494	14772	13570
54_01MAY004.D	20140501-M	4973	13586	12293
54_01MAY005.D	20140501-L	4970	13298	12339
54_01MAY006.D	02121 \ F5	4511	12338	12284
54_01MAY007.D	02121 \ F5	4747	12774	11970
54_01MAY008.D	02122 \ E5	5329	14476	13308
54_01MAY009.D	02123 \ F5	4788	12900	12174
54_01MAY010.D	02124 \ F5	4391	12023	11278
54_01MAY011.D	02125 \ 21	3014	8019	7703
54_01MAY012.D	02125 \ 21	5128	13865	12824
54_01MAY013.D	02126 \ F6	5025	13595	12266
54_01MAY014.D	02127 \ F6	4944	13266	12257
54_01MAY015.D	02128 \ F6	5495	14826	13612
54_01MAY016.D	02129 \ F6	4898	13230	12099
54_01MAY017.D	02130 \ F6	4627	12236	11230
54_01MAY018.D	02131 \ F6	4695	12392	11420
54_01MAY019.D	02132 \ F6	4795	12709	11622
54_01MAY020.D	02132 / F6	4819	12963	12049
54_01MAY021.D				

```
         02133 / F6            4690      12286      11695
-----------------------------------------------------------------------------
54_01MAY022.D
         02134 / F6            4949      13005      12057
-----------------------------------------------------------------------------
54_01MAY023.D
         02135 / F6            5036      13200      12456
-----------------------------------------------------------------------------
54_01MAY024.D
         02136 / F6            3892      10217       9504
-----------------------------------------------------------------------------
54_01MAY025.D
         02137 / F6            4159      10860      10155
-----------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Fri May 02 10:56:45 2014  GCMS
```

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY002.D
Acq On : 1 May 2014 7:19 am
Operator : yhl
Sample : STD20140501-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:26:07 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Wed Apr 30 07:07:11 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISTD	Bromochloromethane	1.000	1.000	0.0	95	0.00
2	M	Vinyl chloride	0.380	0.401	-5.5	103	0.00
3	M	1,1-Dichloroethene	0.774	0.820	-5.9	101	0.00
4	M	Methyl Tert Butyl Ether	1.183	1.174	0.8	97	0.00
5	M	trans-1,2-Dichloroethene	0.683	0.724	-6.0	101	0.00
6	M	1,1-Dichloroethane	0.815	0.849	-4.2	100	0.00
7	M	cis-1,2-Dichloroethene	0.637	0.685	-7.5	100	0.00
8	M	1,1,1-Trichloroethane	1.034	1.151	-11.3	103	0.00
9	ISTD	1,4-Difluorobenzene	1.000	1.000	0.0	94	0.00
10	M	Benzene	0.457	0.461	-0.9	97	0.00
11	M	Trichloroethene	0.249	0.255	-2.4	96	0.00
12	ISTD	Chlorobenzene-d5	1.000	1.000	0.0	95	0.00
13	M	Toluene	0.599	0.588	1.8	92	0.00
14	M	Tetrachloroethene	0.342	0.334	2.3	91	0.00
15	M	Ethyl Benzene	0.761	0.733	3.7	90	0.00
16	M	m,p-Xylene	0.584	0.566	3.1	92	0.00
17	M	o-Xylene	0.593	0.567	4.4	91	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY002.D
Acq On : 1 May 2014 7:19 am
Operator : yhl
Sample : STD20140501-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:26:07 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Wed Apr 30 07:07:11 2014
Response via : Initial Calibration

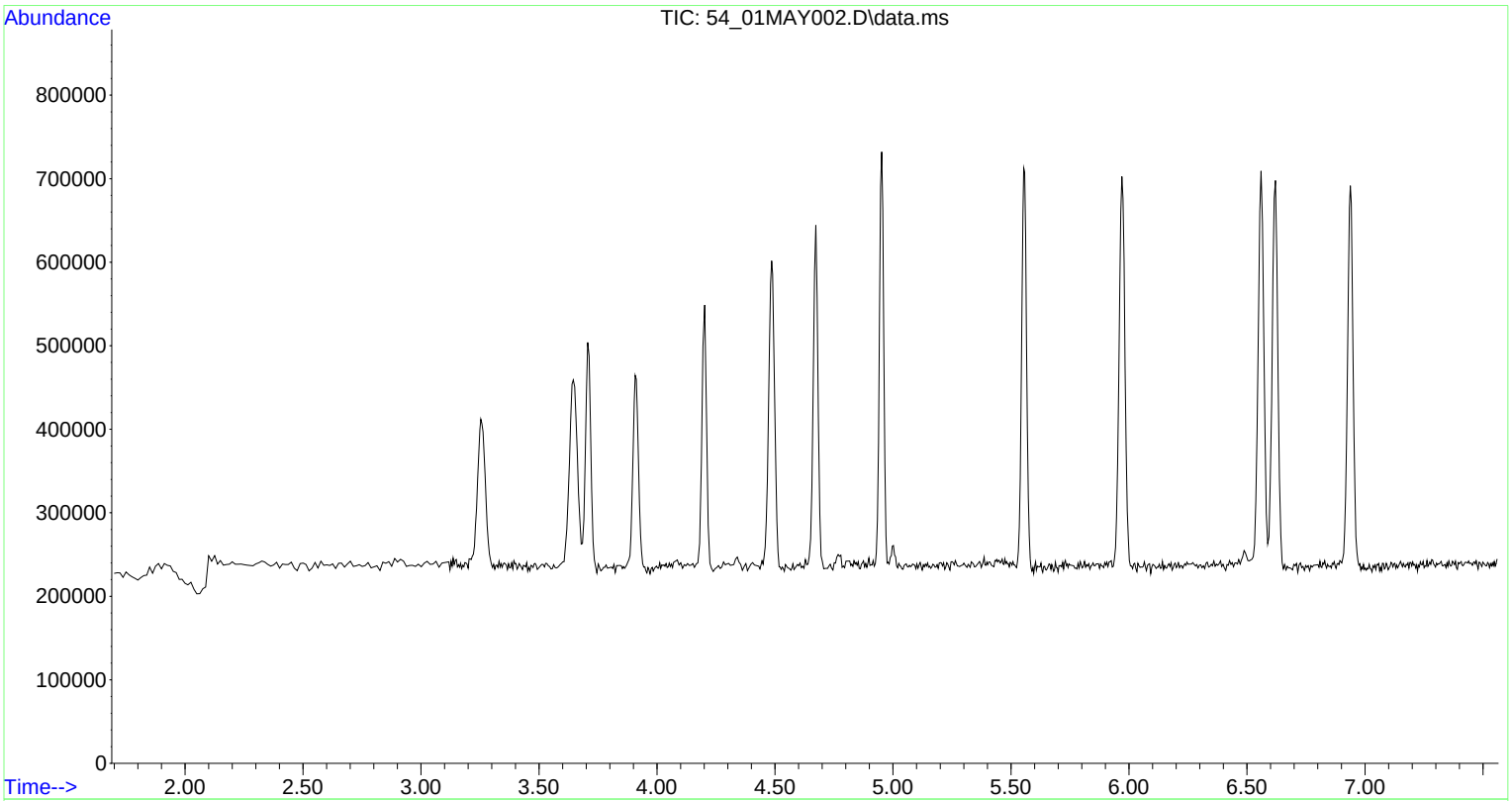
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4151	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11104	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	10206	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.915	62	85688	542.86	ppbv	# 62
3] 1,1-Dichloroethene	3.256	61	169444	527.06	ppbv	# 79
4] Methyl Tert Butyl Ether	3.647	73	244964	499.05	ppbv	# 85
5] trans-1,2-Dichloroethene	3.709	61	150943	532.71	ppbv	# 75
6] 1,1-Dichloroethane	3.910	63	182405	539.26	ppbv	# 87
7] cis-1,2-Dichloroethene	4.197	61	149931	566.63	ppbv	# 74
8] 1,1,1-Trichloroethane	4.488	97	241228	562.19	ppbv	97
10] Benzene	4.675	78	268638	529.60	ppbv	# 90
11] Trichloroethene	4.950	130	143154	518.36	ppbv	99
13] Toluene	5.556	91	311843	509.71	ppbv	100
14] Tetrachloroethene	5.972	166	172988	495.04	ppbv	100
15] Ethyl Benzene	6.556	91	388904	500.55	ppbv	96
16] m,p-Xylene	6.617	91	300384	503.74	ppbv	94
17] o-Xylene	6.940	91	299671	495.56	ppbv	95

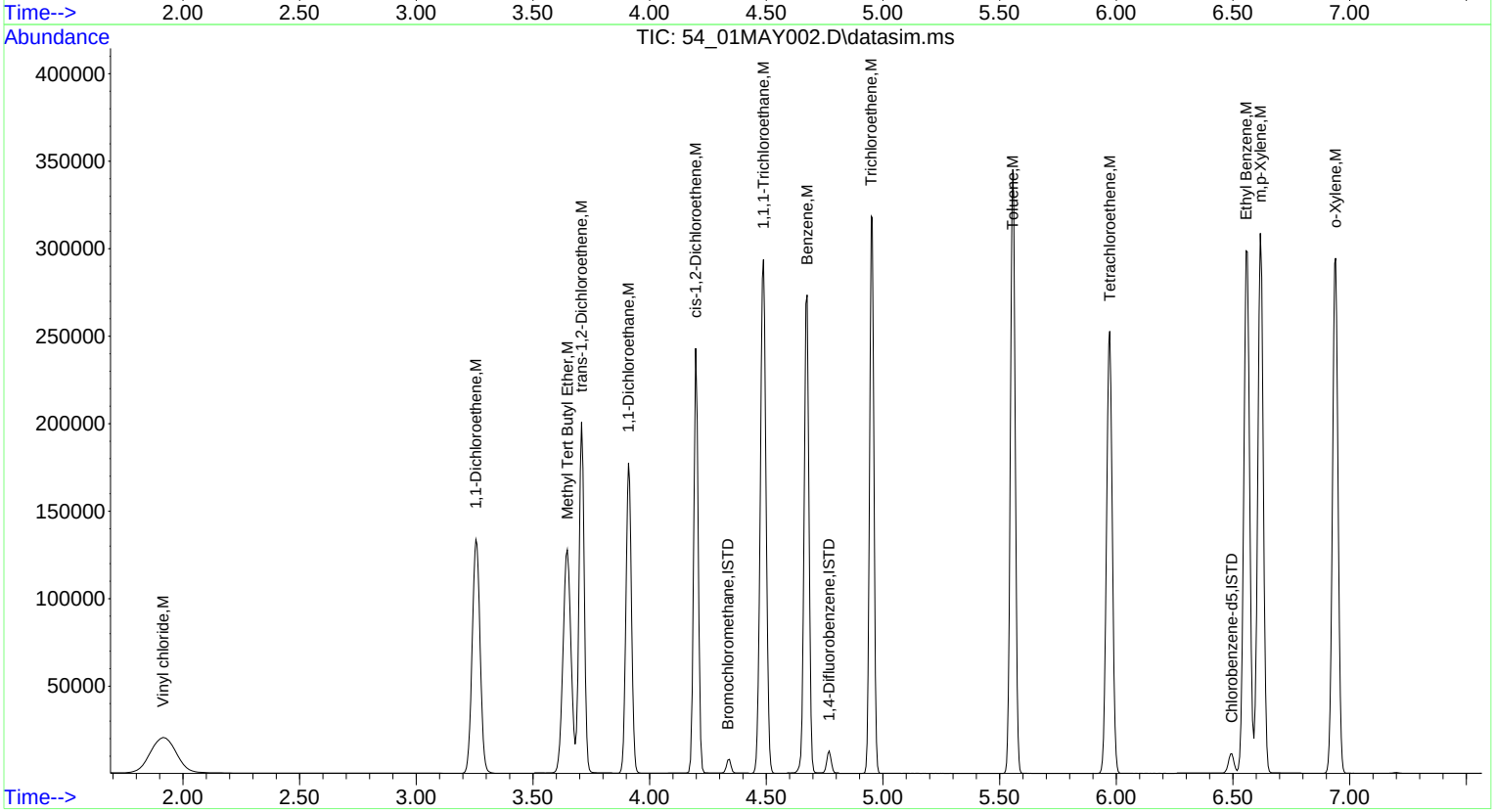
(#) = qualifier out of range (m) = manual integration (+) = signals summed

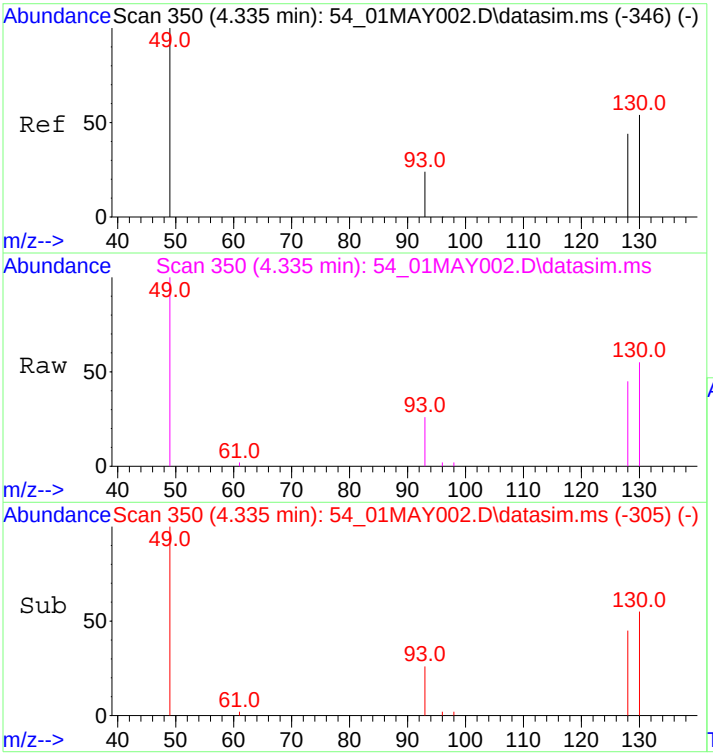
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY002.D
Acq On : 1 May 2014 7:19 am
Operator : yhl
Sample : STD20140501-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:26:07 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Wed Apr 30 07:07:11 2014
Response via : Initial Calibration



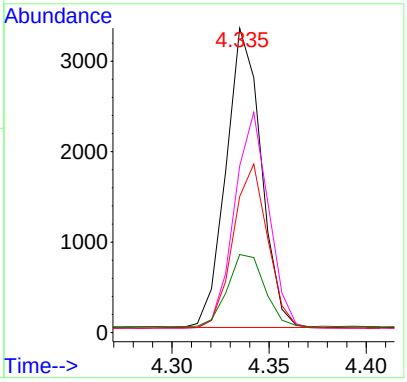


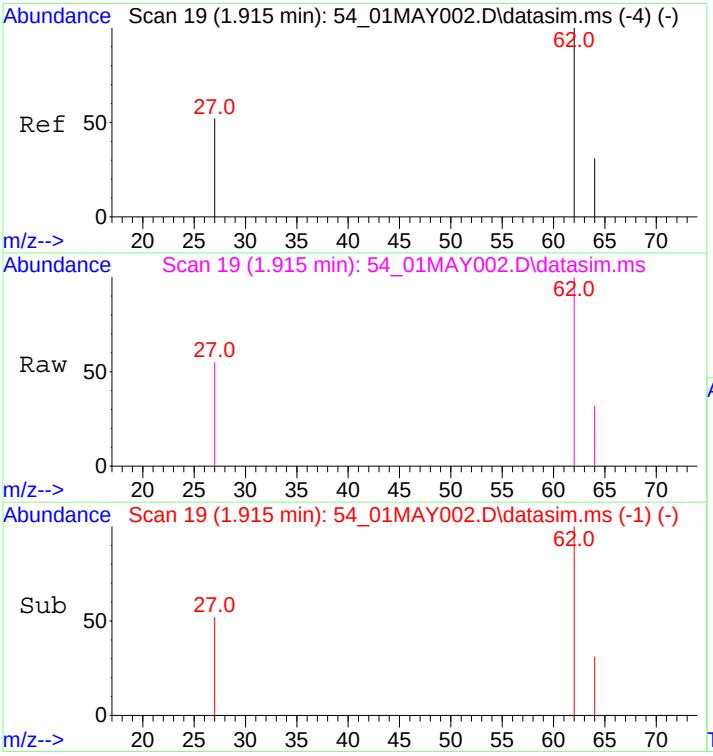


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 49 Resp: 4151

Ion	Ratio	Lower	Upper
49	100		
130	70.2	87.2	130.8#
128	53.8	68.0	102.0#
93	25.5	29.3	43.9#

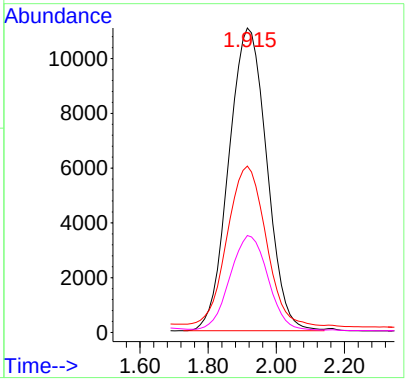


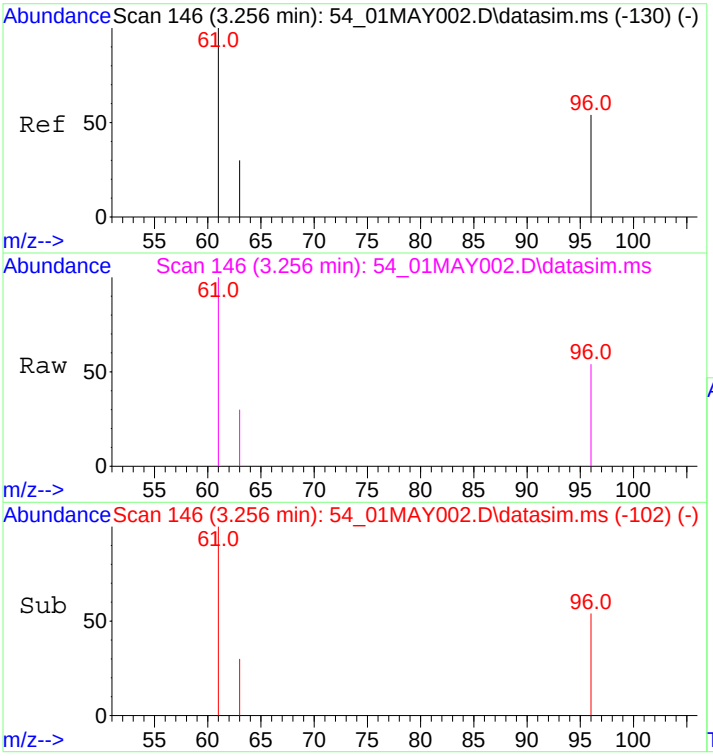


#2
Vinyl chloride
Concen: 542.86 ppbv
RT: 1.915 min Scan# 19
Delta R.T. 0.012 min
Lab File: 54_01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 62 Resp: 85688

Ion	Ratio	Lower	Upper
62	100		
64	33.8	26.8	40.2
27	65.8	16.1	24.1#

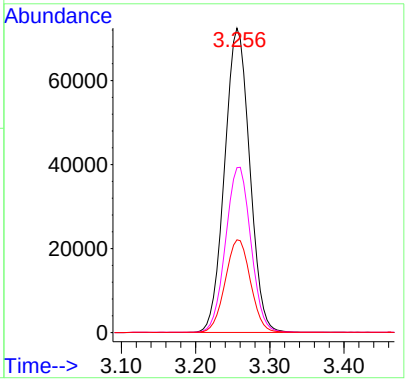


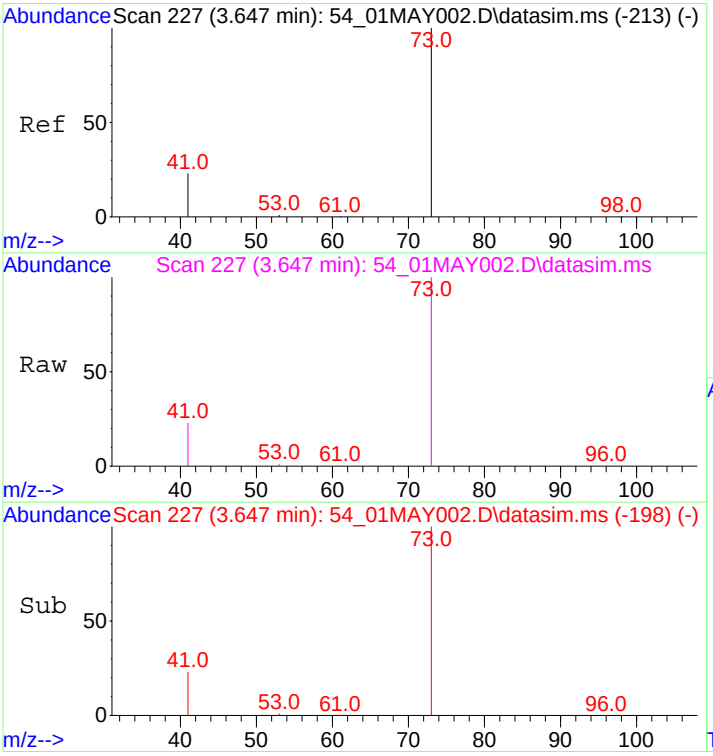


#3
1,1-Dichloroethene
Concen: 527.06 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.004 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 61 Resp: 169444

Ion	Ratio	Lower	Upper
61	100		
96	54.8	63.4	95.2#
63	30.7	26.2	39.2

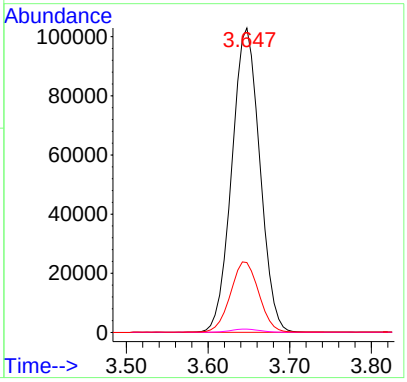


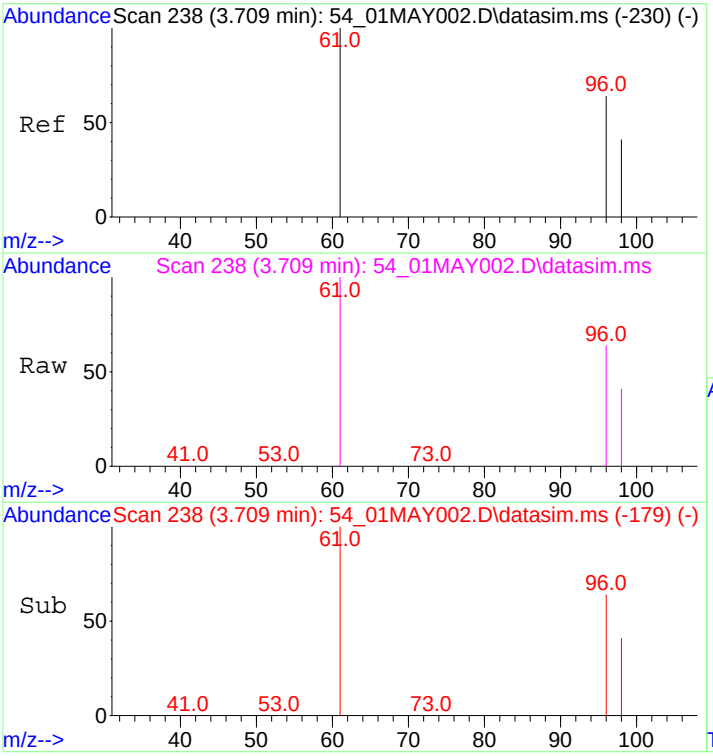


#4
Methyl Tert Butyl Ether
Concen: 499.05 ppbv
RT: 3.647 min Scan# 227
Delta R.T. 0.006 min
Lab File: 54_01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 73 Resp: 244964

Ion	Ratio	Lower	Upper
73	100		
53	1.1	1.0	1.4
41	23.3	13.1	19.7#

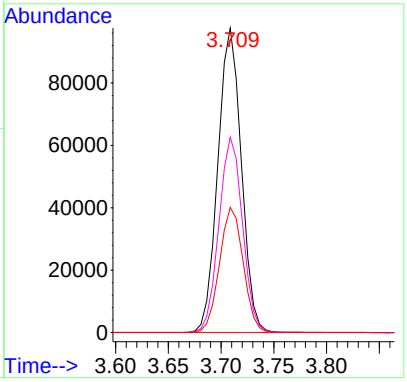


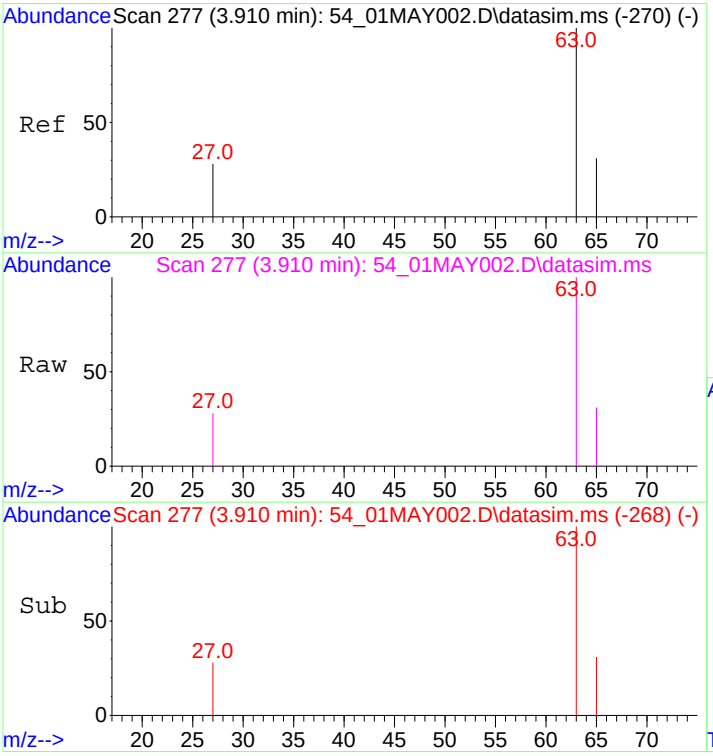


#5
trans-1,2-Dichloroethene
Concen: 532.71 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.006 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 61 Resp: 150943

Ion	Ratio	Lower	Upper
61	100		
96	64.4	71.4	107.0#
98	41.4	45.8	68.8#

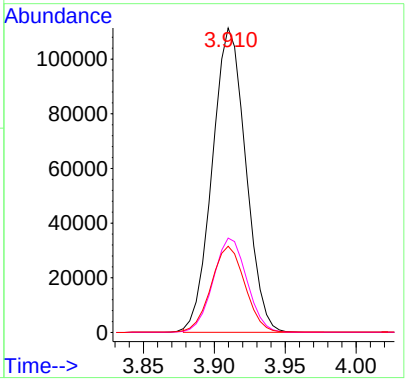


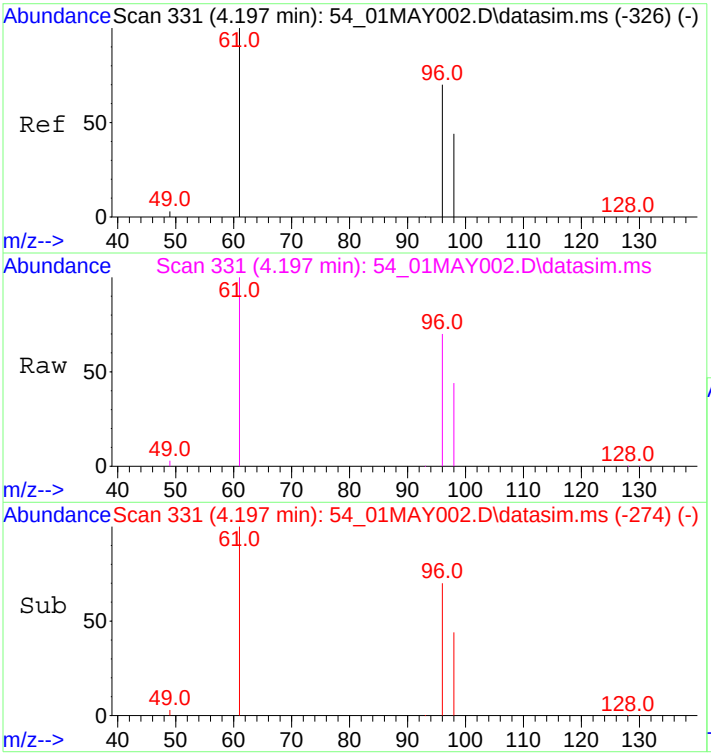


#6
1,1-Dichloroethane
Concen: 539.26 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 63 Resp: 182405

Ion	Ratio	Lower	Upper
63	100		
65	31.1	26.1	39.1
27	28.2	10.2	15.2#

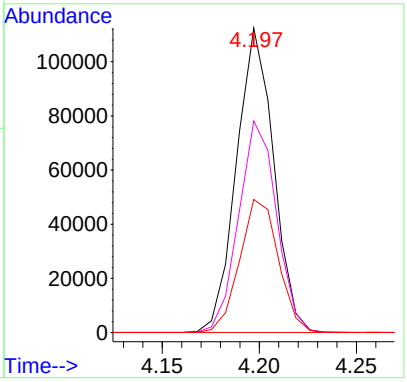


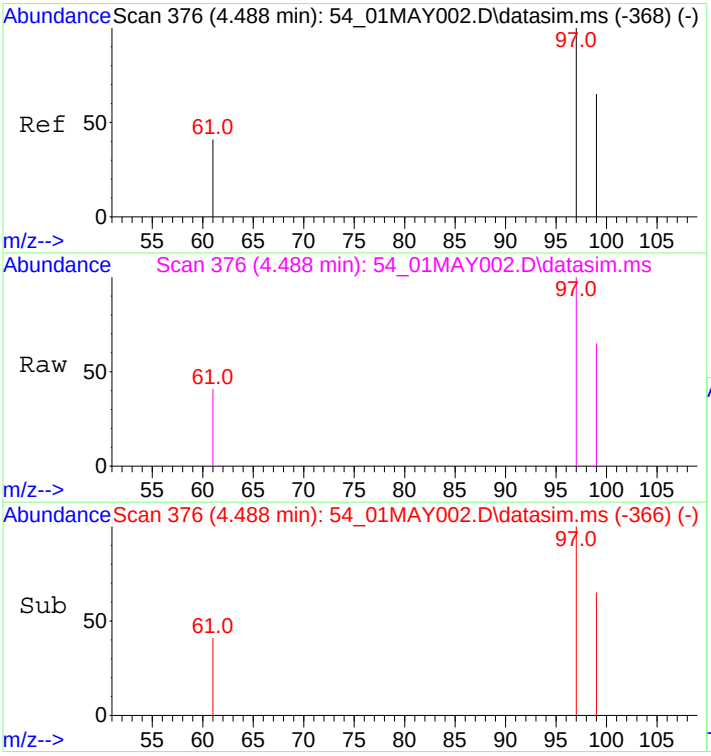


#7
cis-1,2-Dichloroethene
Concen: 566.63 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 61 Resp: 149931

Ion	Ratio	Lower	Upper
61	100		
96	70.8	78.5	117.7#
98	45.7	50.6	76.0#

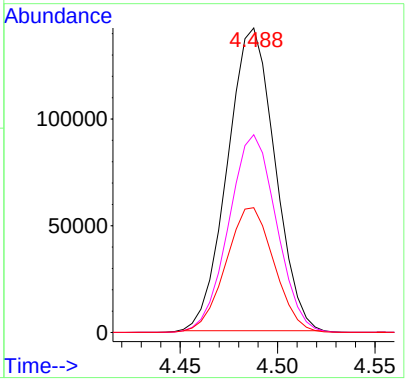


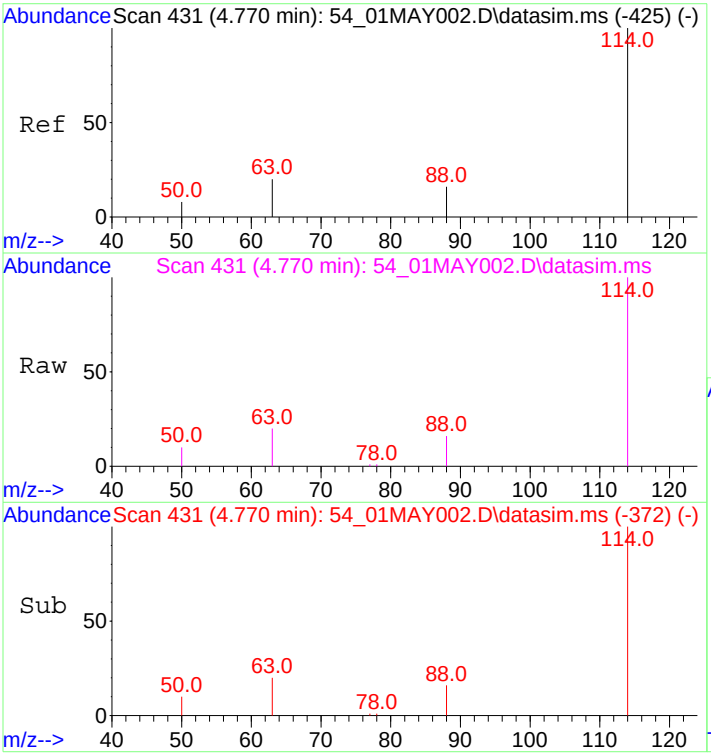


#8
1,1,1-Trichloroethane
Concen: 562.19 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.004 min
Lab File: 54_01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 97 Resp: 241228

Ion	Ratio	Lower	Upper
97	100		
99	64.5	52.1	78.1
61	41.3	30.2	45.4

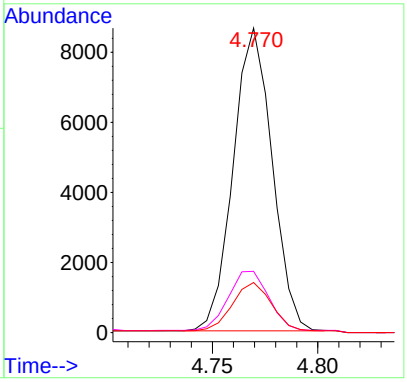


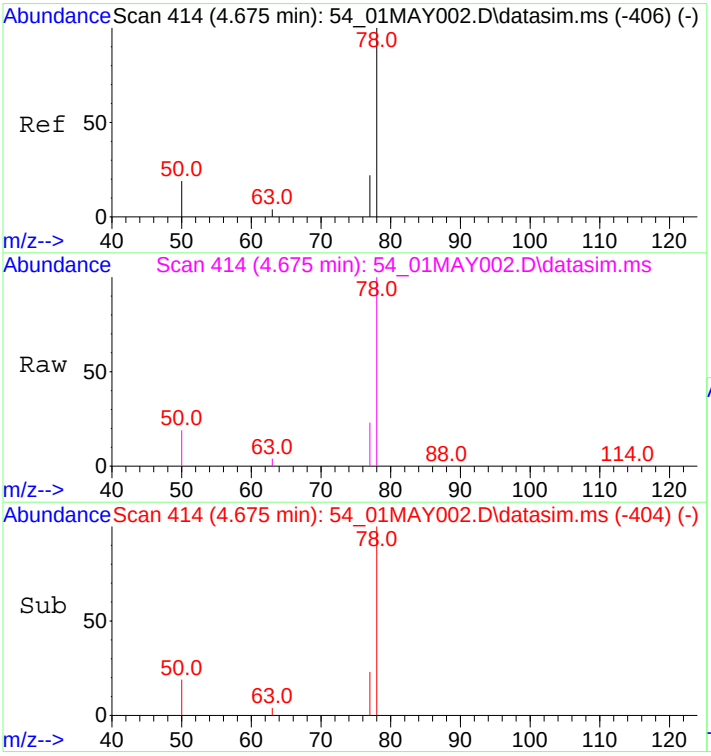


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion:114 Resp: 11104

Ion	Ratio	Lower	Upper
114	100		
63	20.3	12.0	18.0#
88	15.9	11.8	17.8

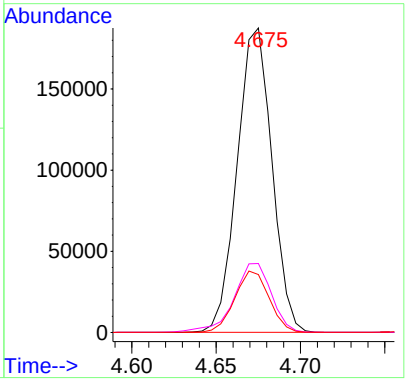


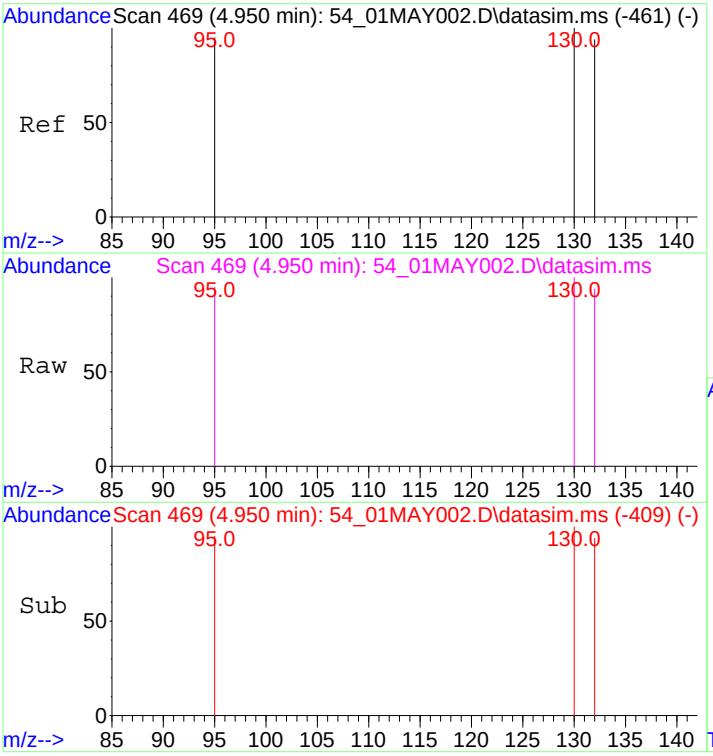


#10
Benzene
Concen: 529.60 ppbv
RT: 4.675 min Scan# 414
Delta R.T. 0.006 min
Lab File: 54_01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 78 Resp: 268638

Ion	Ratio	Lower	Upper
78	100		
77	24.2	18.2	27.2
50	19.9	8.6	13.0#

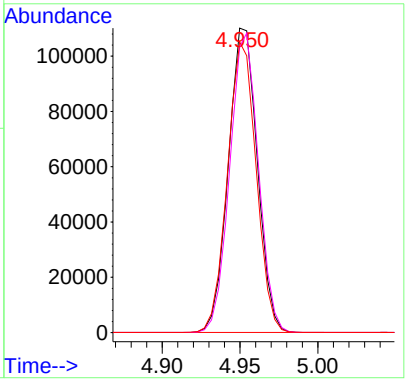


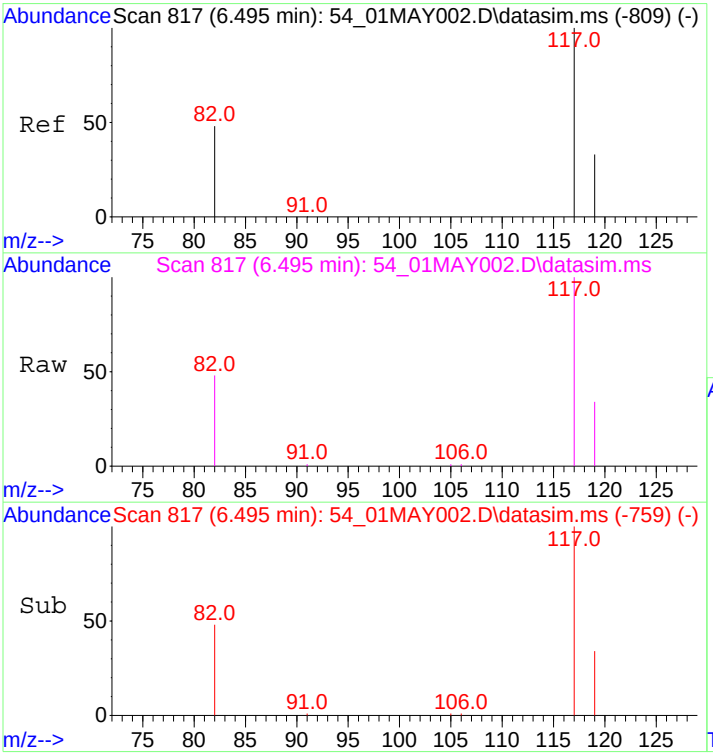


#11
Trichloroethene
Concen: 518.36 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion:130 Resp: 143154

Ion	Ratio	Lower	Upper
130	100		
132	96.8	76.9	115.3
95	94.3	76.5	114.7

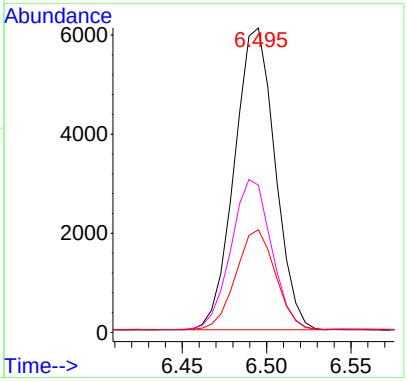


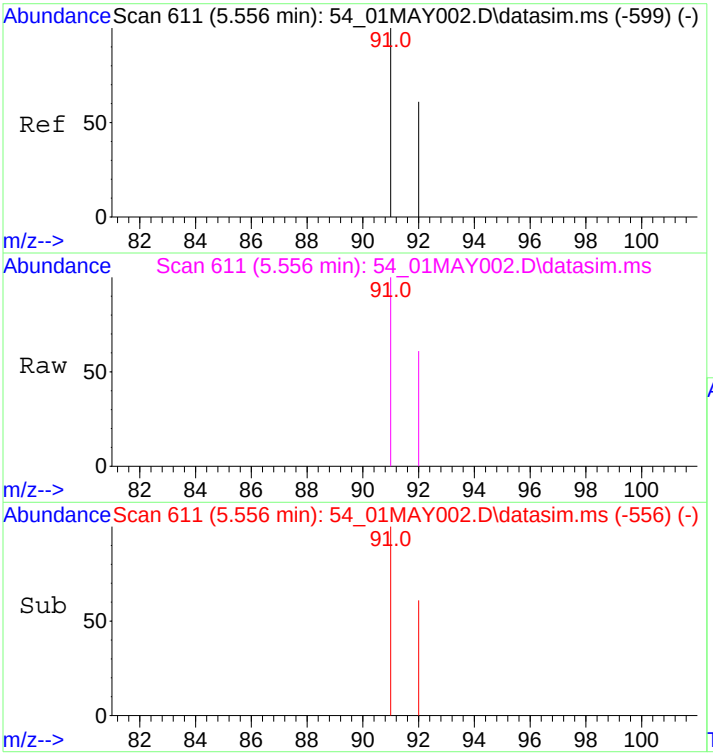


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.006 min
Lab File: 54_01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion:117 Resp: 10206

Ion	Ratio	Lower	Upper
117	100		
82	49.5	38.0	57.0
119	32.4	27.0	40.4

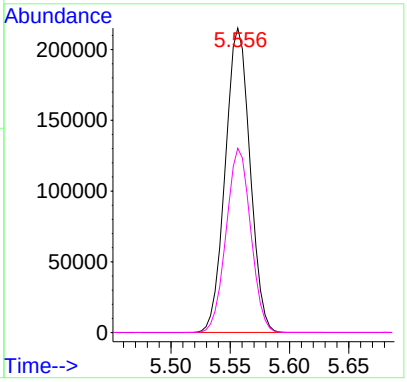


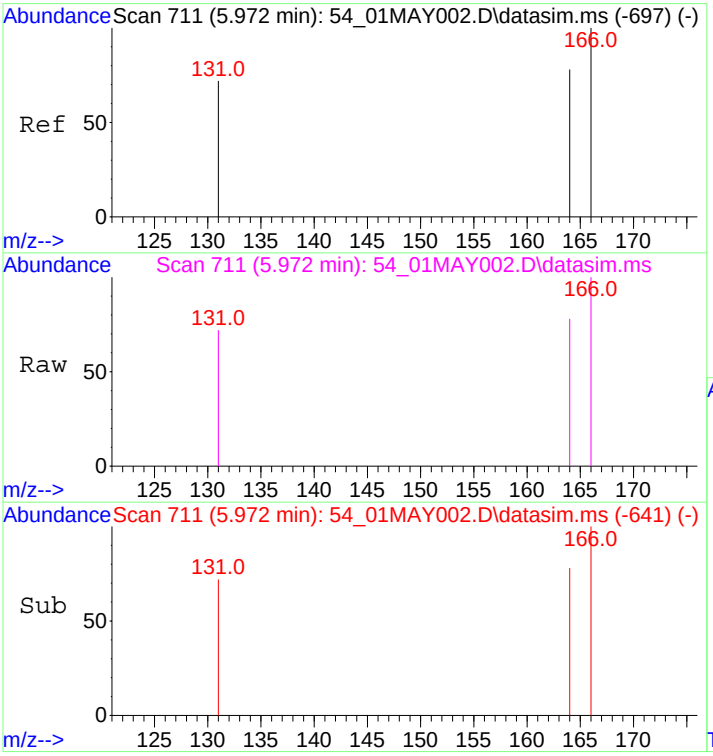


#13
Toluene
Concen: 509.71 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 91 Resp: 311843

Ion	Ratio	Lower	Upper
91	100		
92	60.1	47.8	71.8

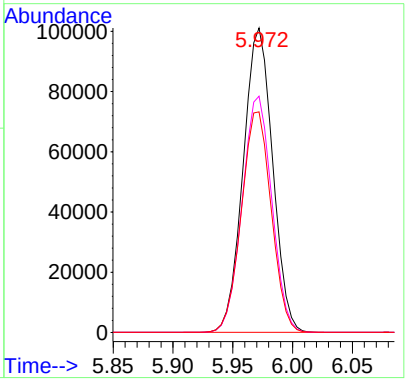


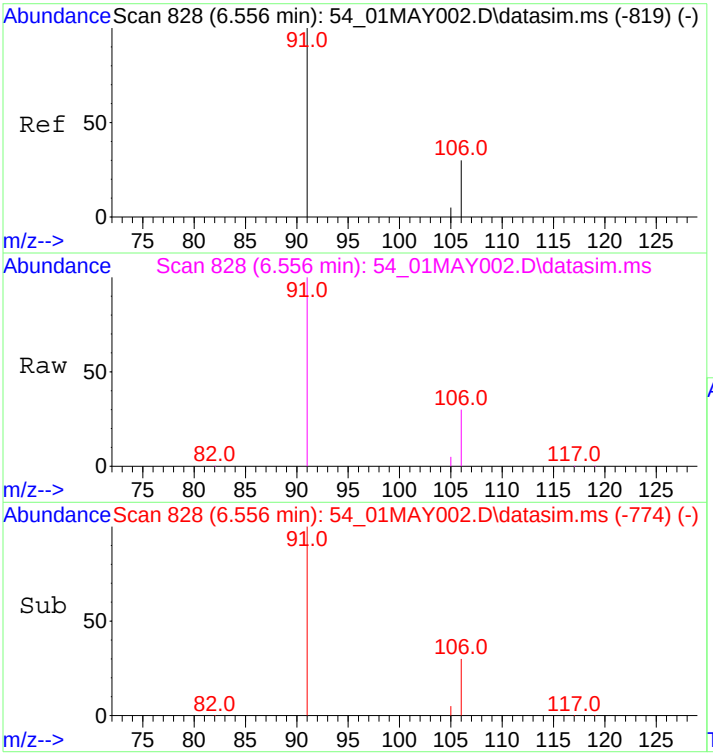


#14
Tetrachloroethene
Concen: 495.04 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion:166 Resp: 172988

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.6	94.0
131	73.4	58.5	87.7

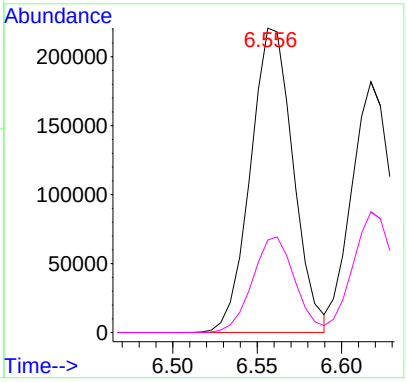


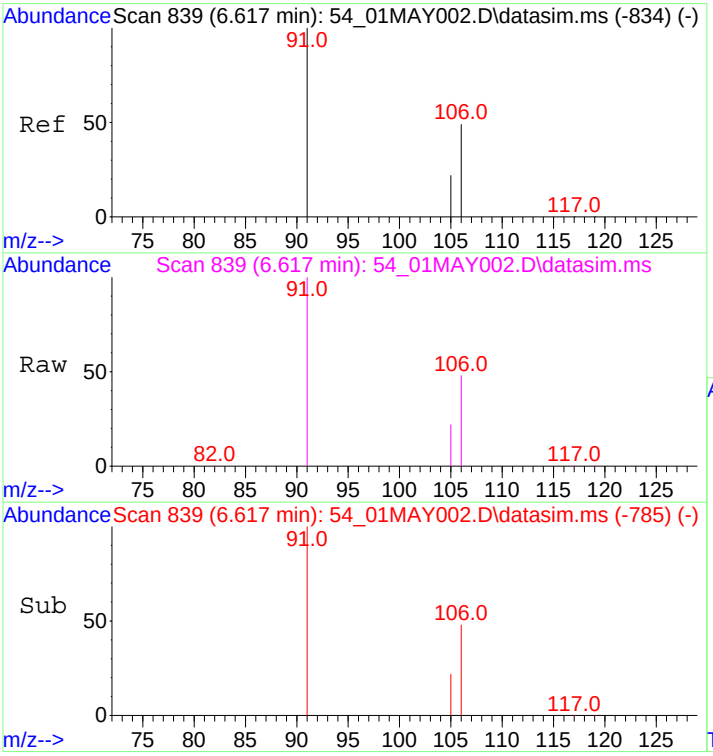


#15
Ethyl Benzene
Concen: 500.55 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 91 Resp: 388904

Ion	Ratio	Lower	Upper
91	100		
106	31.2	26.9	40.3

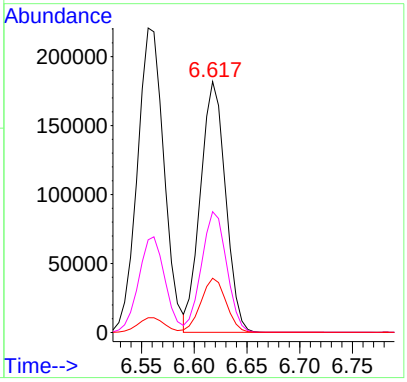


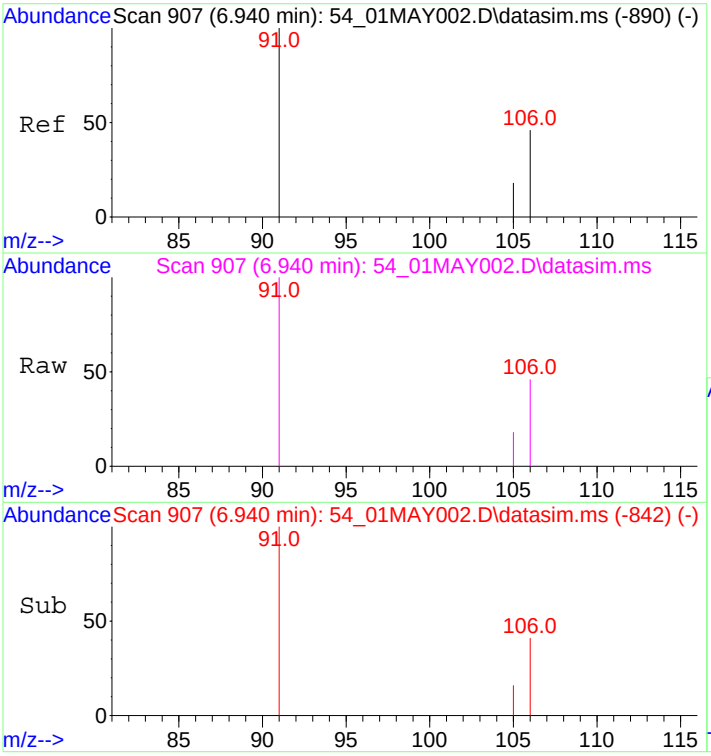


#16
m,p-Xylene
Concen: 503.74 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 91 Resp: 300384

Ion	Ratio	Lower	Upper
91	100		
106	48.5	43.1	64.7
105	21.8	18.3	27.5

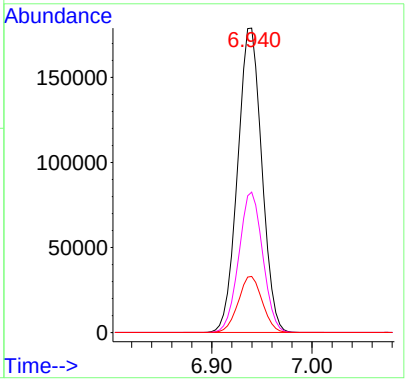




#17
o-Xylene
Concen: 495.56 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.004 min
Lab File: 54 01MAY002.D
Acq: 1 May 2014 7:19 am

Tgt Ion: 91 Resp: 299671

Ion	Ratio	Lower	Upper
91	100		
106	45.8	40.1	60.1
105	18.4	15.8	23.6



LOW LEVEL CALIBRATION VERIFICATION

Data File 54_01May003.D

LLCCV Standard Number 050114-LLCCV

LLCCV Standard Name **STD20140501-3 \LLCCV 0.5 ppbv 1º**

Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/1/2014	Second Source Actual Values ppbv	Difference %	Acceptance Criterion %	
Vinyl Chloride	0.49	0.52	4.9	50	OK
1,1-Dichloroethene	0.47	0.50	5.5	50	OK
Methyl Tert Butyl Ether	0.45	0.50	10.4	50	OK
trans-1,2-Dichloroethene	0.47	0.50	6.5	50	OK
1,1-Dichloroethane	0.48	0.52	7.2	50	OK
cis-1,2-Dichloroethene	0.52	0.53	1.4	50	OK
1,1,1-Trichloroethane	0.48	0.51	5.0	50	OK
Benzene	0.54	0.53	2.9	50	OK
Trichloroethene	0.49	0.51	3.0	50	OK
Toluene	0.57	0.52	9.6	50	OK
Tetrachloroethene	0.46	0.51	9.4	50	OK
Ethyl Benzene	0.51	0.52	1.9	50	OK
m,p-Xylene	0.57	0.52	9.6	50	OK
o-Xylene	0.55	0.52	6.3	50	OK

Primary Standard Cylinder # CC-80994

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY003.D
Acq On : 1 May 2014 7:31 am
Operator : yhl
Sample : STD20140501-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:39:14 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

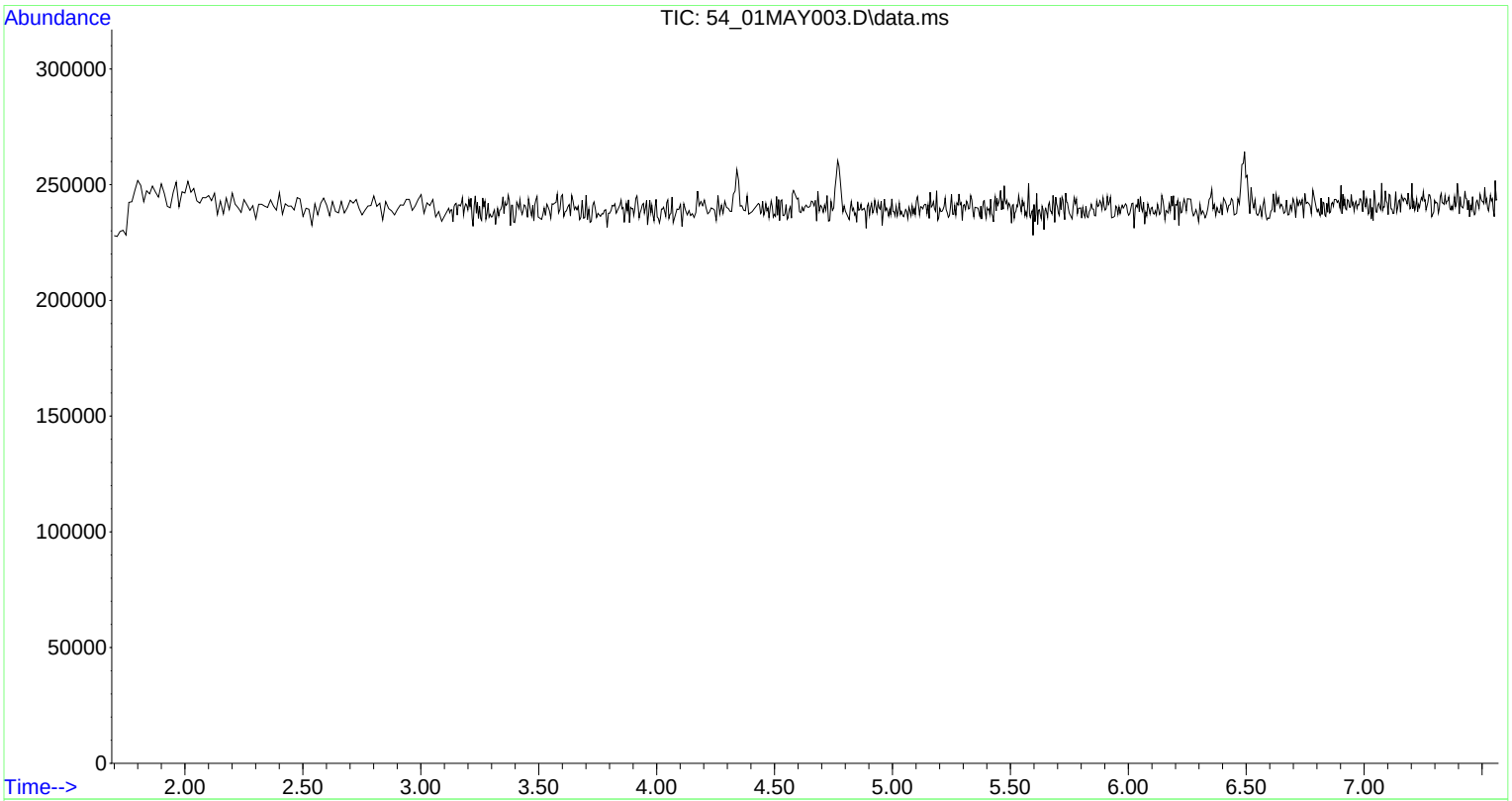
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	5494	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	14772	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	13570	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	103m	0.49	ppbv	
3] 1,1-Dichloroethene	3.265	61	200m	0.47	ppbv	
4] Methyl Tert Butyl Ether	3.647	73	292	0.45	ppbv #	86
5] trans-1,2-Dichloroethene	3.703	61	178	0.47	ppbv #	48
6] 1,1-Dichloroethane	3.914	63	214	0.48	ppbv #	85
7] cis-1,2-Dichloroethene	4.197	61	182	0.52	ppbv #	39
8] 1,1,1-Trichloroethane	4.483	97	271	0.48	ppbv #	95
10] Benzene	4.675	78	366	0.54	ppbv #	57
11] Trichloroethene	4.950	130	180	0.49	ppbv	95
13] Toluene	5.552	91	462	0.57	ppbv	98
14] Tetrachloroethene	5.967	166	216	0.46	ppbv #	88
15] Ethyl Benzene	6.556	91	528	0.51	ppbv	99
16] m,p-Xylene	6.617	91	449	0.57	ppbv	92
17] o-Xylene	6.936	91	440	0.55	ppbv	97

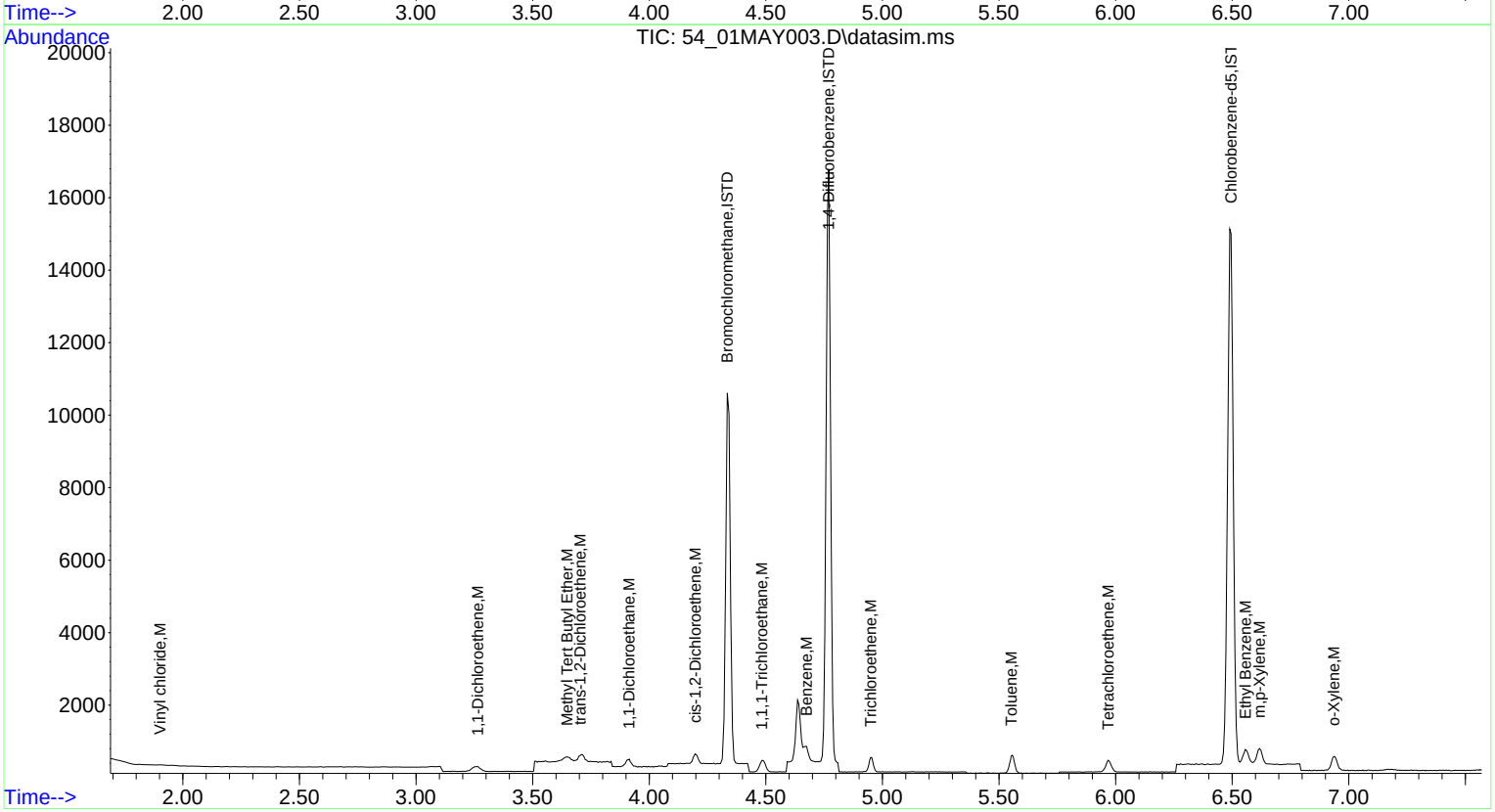
(#) = qualifier out of range (m) = manual integration (+) = signals summed

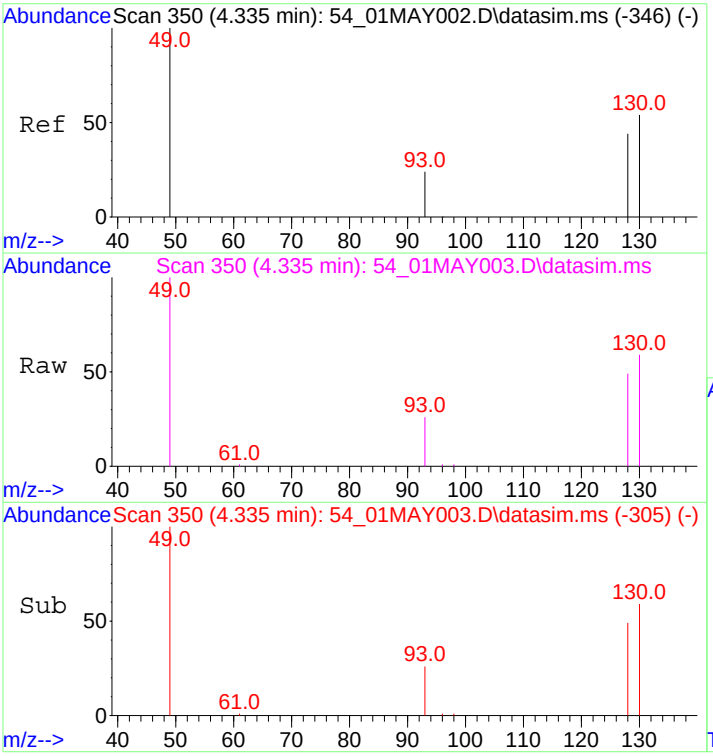
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY003.D
Acq On : 1 May 2014 7:31 am
Operator : yhl
Sample : STD20140501-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:39:14 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



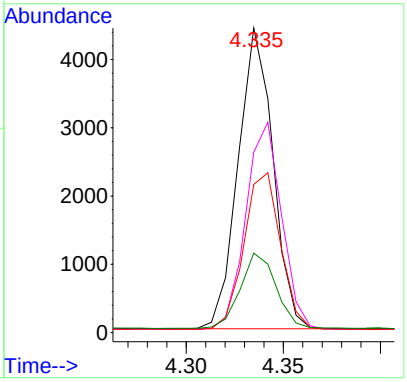


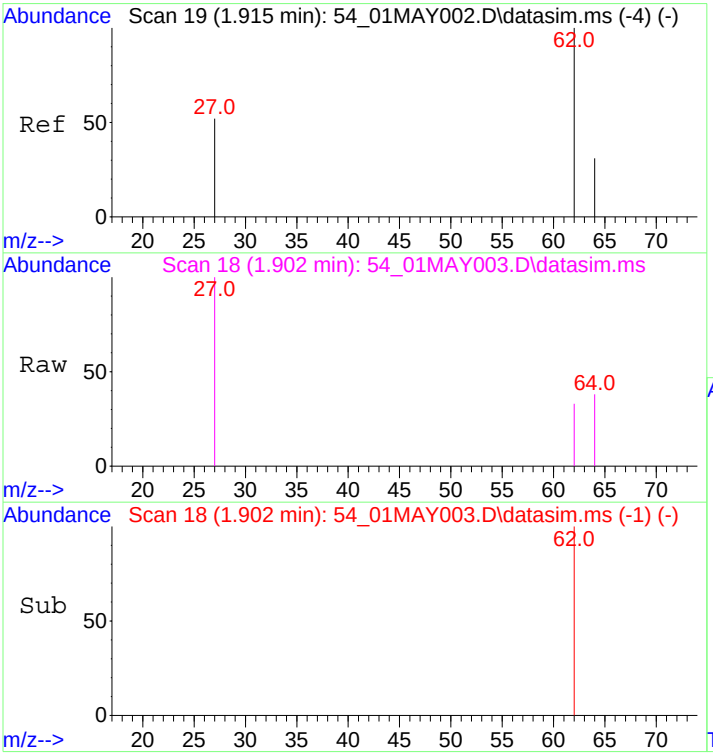


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 49 Resp: 5494

Ion	Ratio	Lower	Upper
49	100		
130	70.5	87.2	130.8#
128	54.7	68.0	102.0#
93	25.6	29.3	43.9#

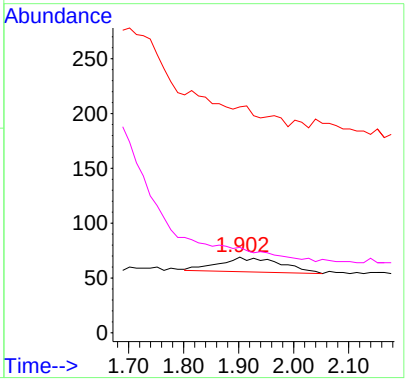




#2
Vinyl chloride
Concen: 0.49 ppbv m
RT: 1.902 min Scan# 18
Delta R.T. -0.013 min
Lab File: 54_01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 62 Resp: 103

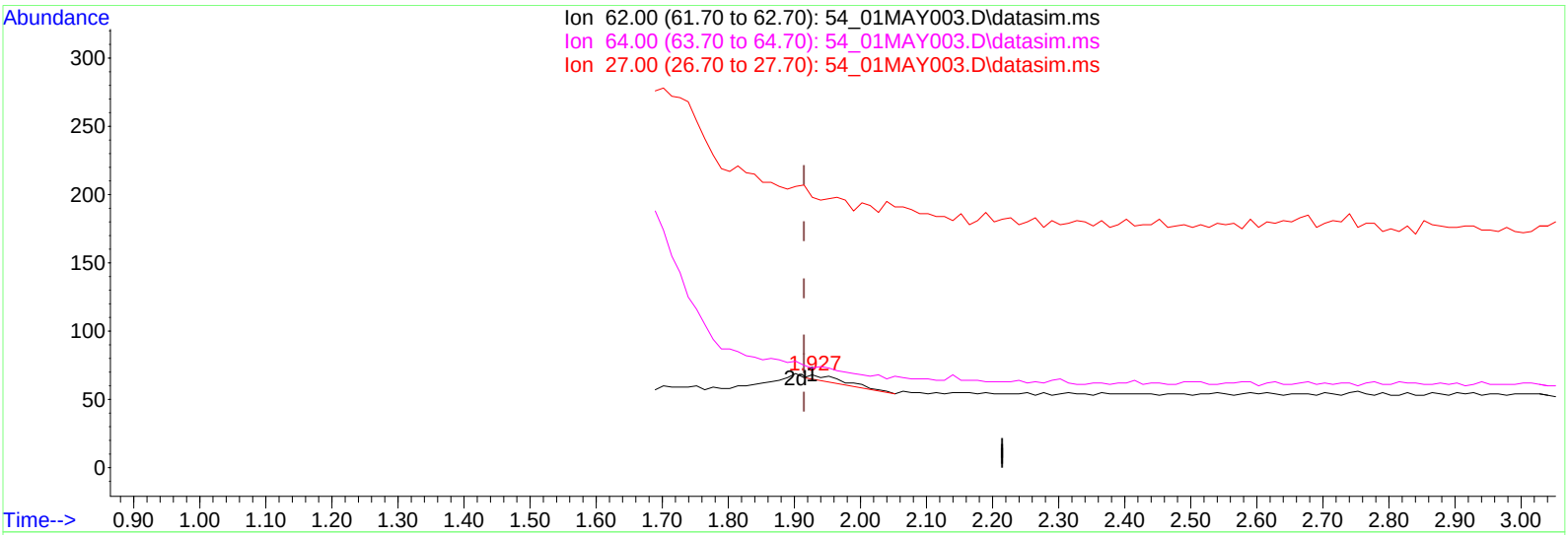
Ion	Ratio	Lower	Upper
62	100		
64	113.0	26.8	40.2#
27	298.6	16.1	24.1#

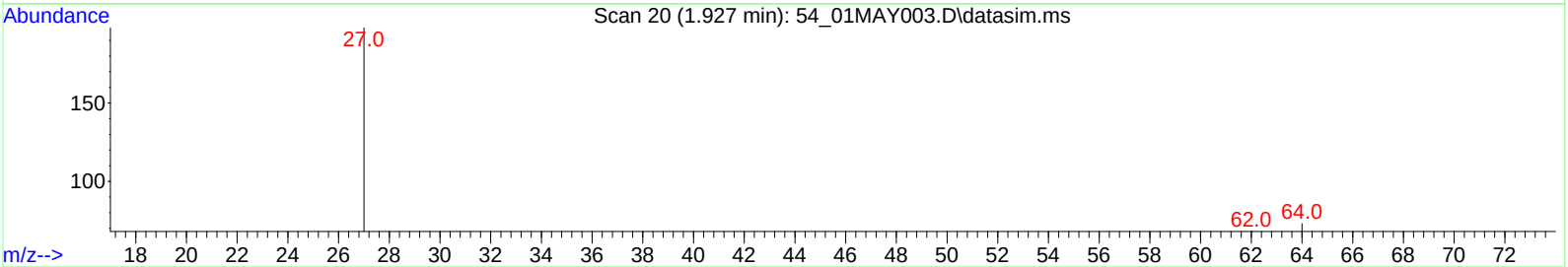


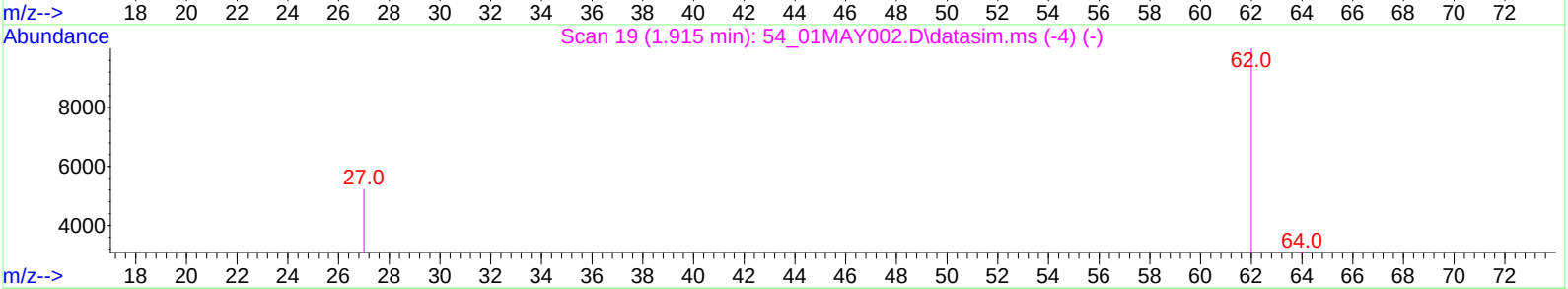
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY003.D
Acq On : 1 May 2014 7:31 am
Operator : yhl
Sample : STD20140501-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:37:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







TIC: 54_01MAY003.D\data.ms

(2) Vinyl chloride (M)

1.927min (+0.012) 0.06 ppbv

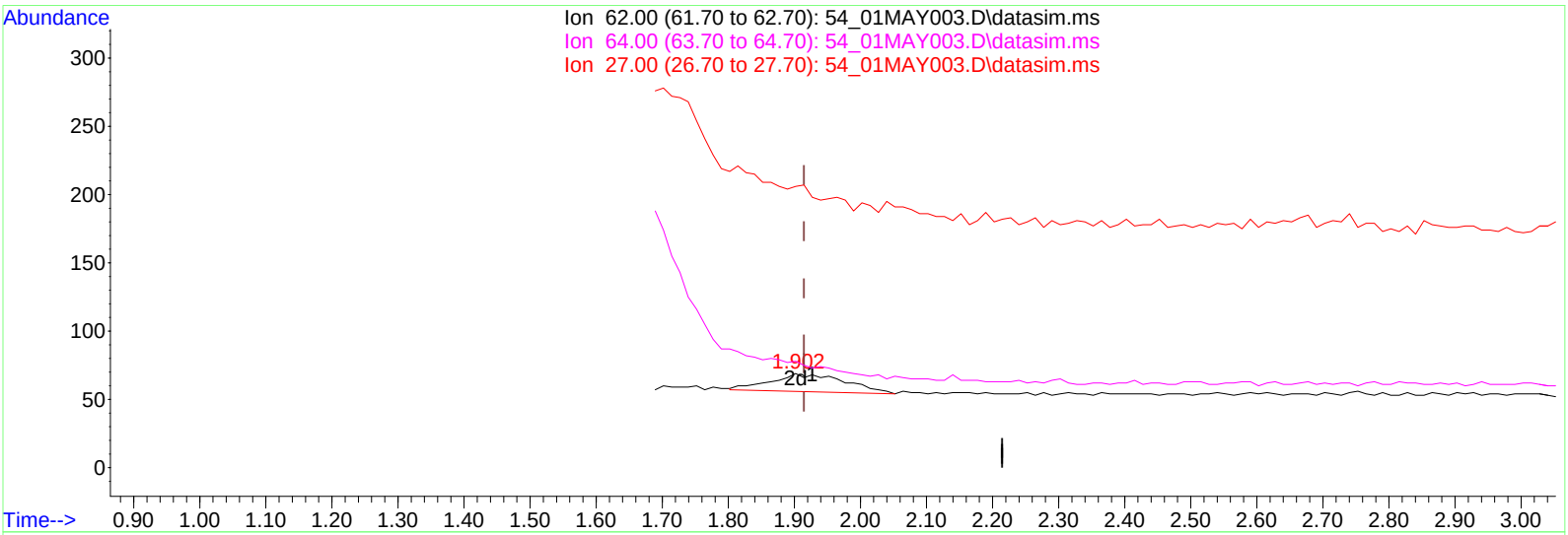
response 12

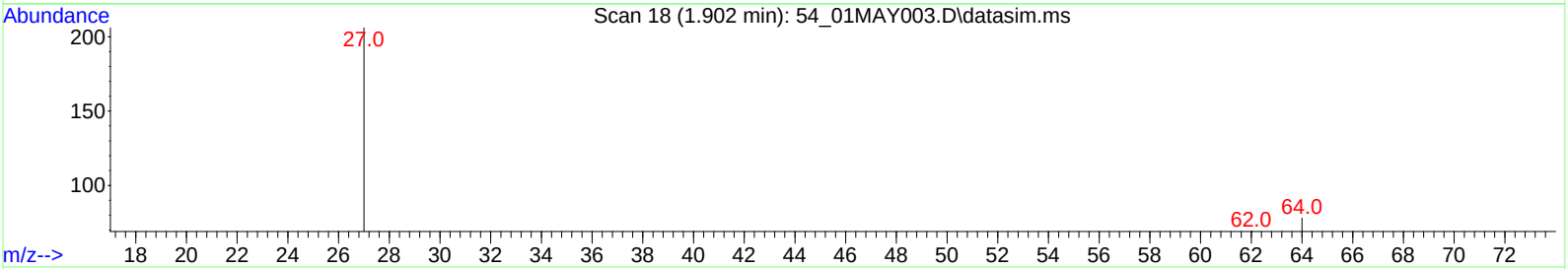
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	0.00#
27.00	20.10	0.00#
0.00	0.00	0.00

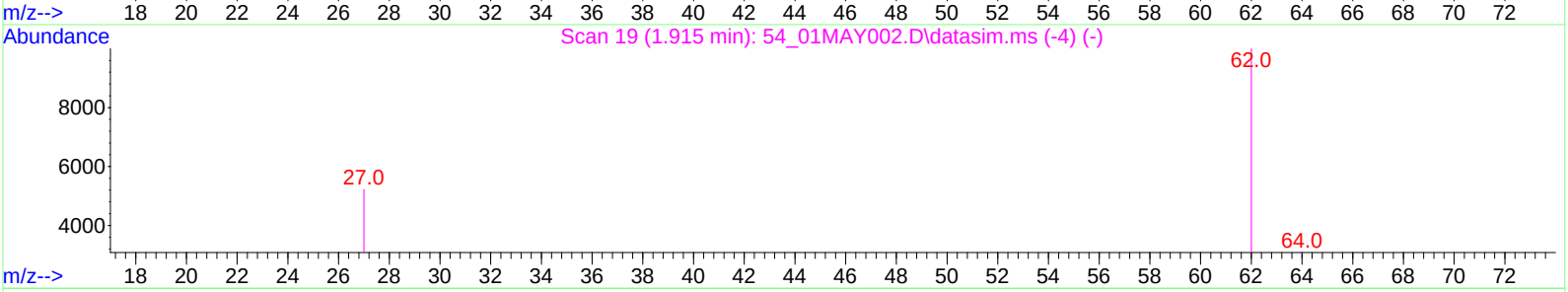
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY003.D
Acq On : 1 May 2014 7:31 am
Operator : yhl
Sample : STD20140501-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:37:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







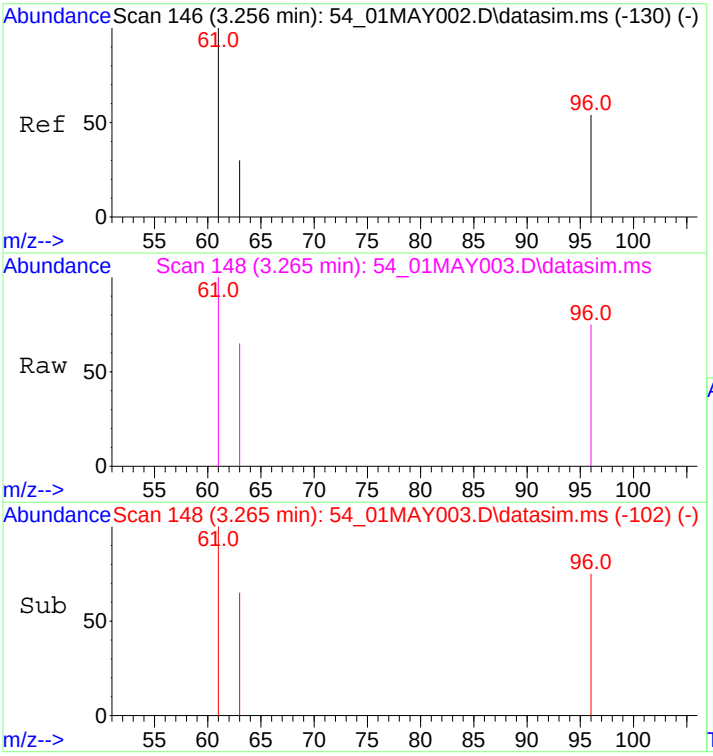
TIC: 54_01MAY003.D\data.ms

(2) Vinyl chloride (M)

1.902min (-0.013) 0.49 ppbv m

response 103

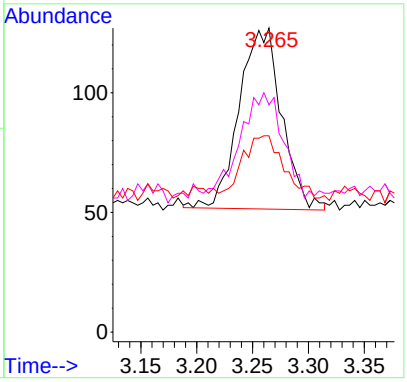
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	113.04#
27.00	20.10	298.55#
0.00	0.00	0.00

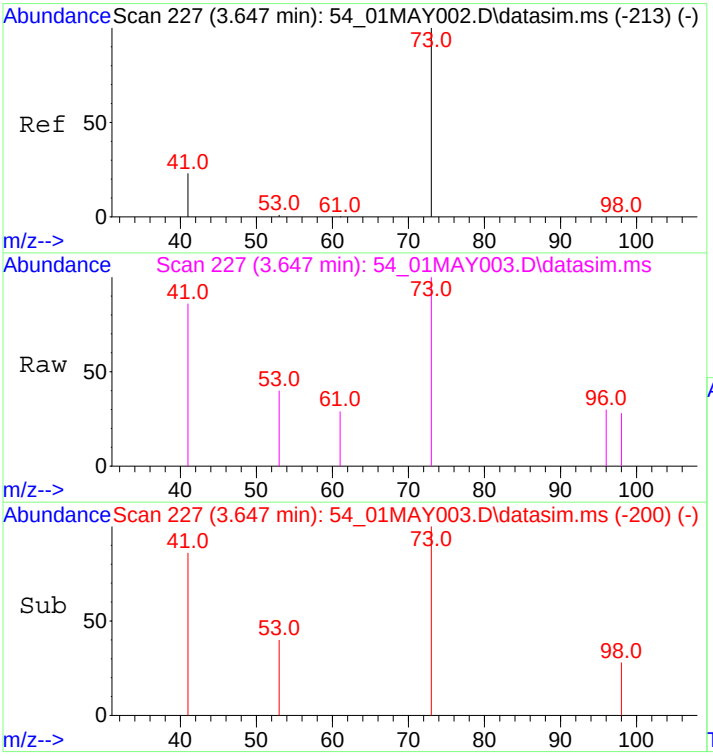


#3
1,1-Dichloroethene
Concen: 0.47 ppbv m
RT: 3.265 min Scan# 148
Delta R.T. 0.009 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 61 Resp: 200

Ion	Ratio	Lower	Upper
61	100		
96	123.5	63.4	95.2#
63	1.5	26.2	39.2#

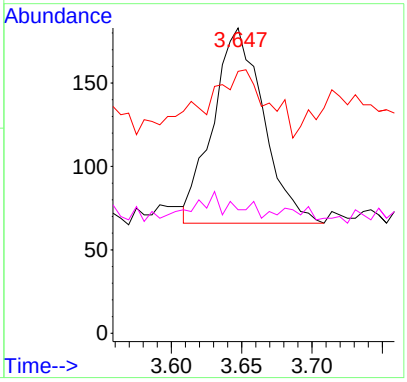




#4
Methyl Tert Butyl Ether
Concen: 0.45 ppbv
RT: 3.647 min Scan# 227
Delta R.T. -0.000 min
Lab File: 54_01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 73 Resp: 292

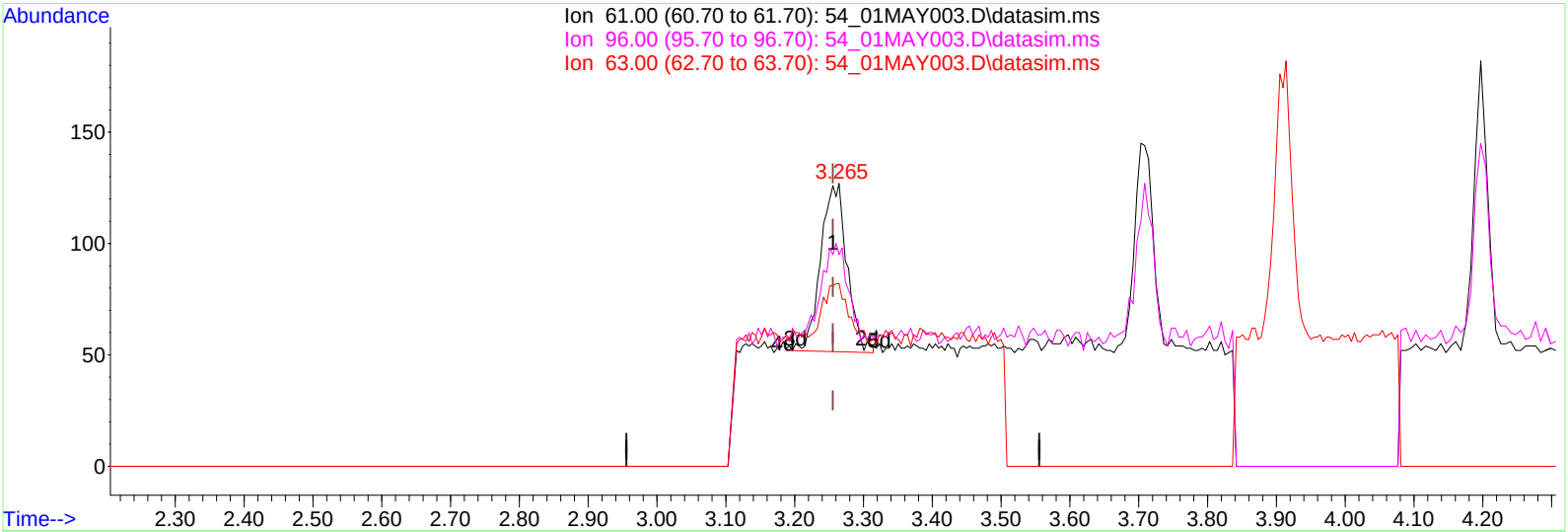
Ion	Ratio	Lower	Upper
73	100		
53	1.0	1.0	1.4
41	9.9	13.1	19.7#

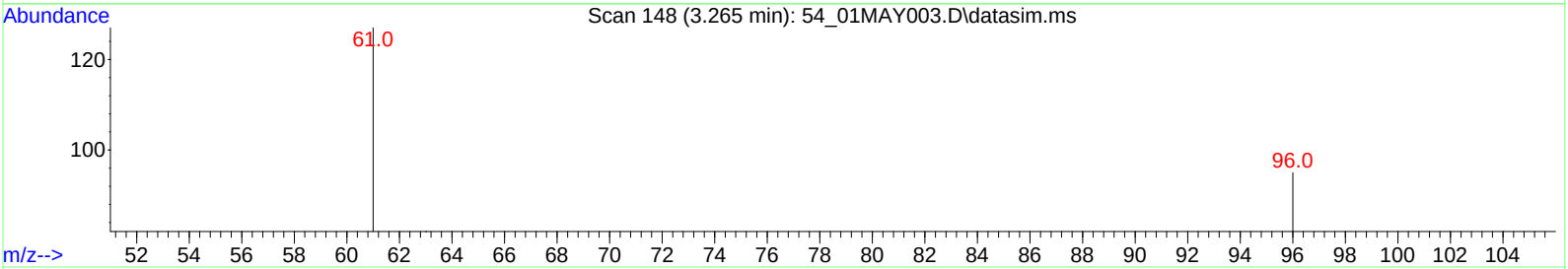


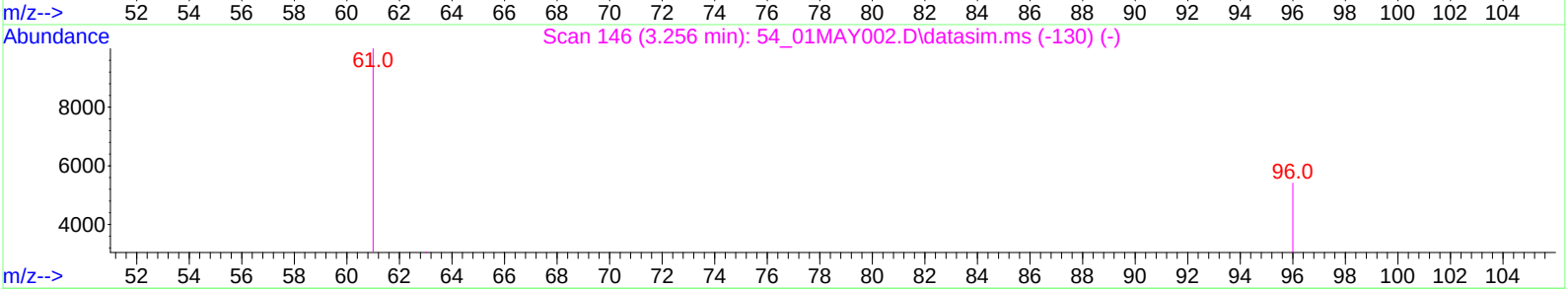
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY003.D
Acq On : 1 May 2014 7:31 am
Operator : yhl
Sample : STD20140501-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:37:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







TIC: 54_01MAY003.D\data.ms

(3) 1,1-Dichloroethene (M)

3.265min (+0.009) 0.47 ppbv m

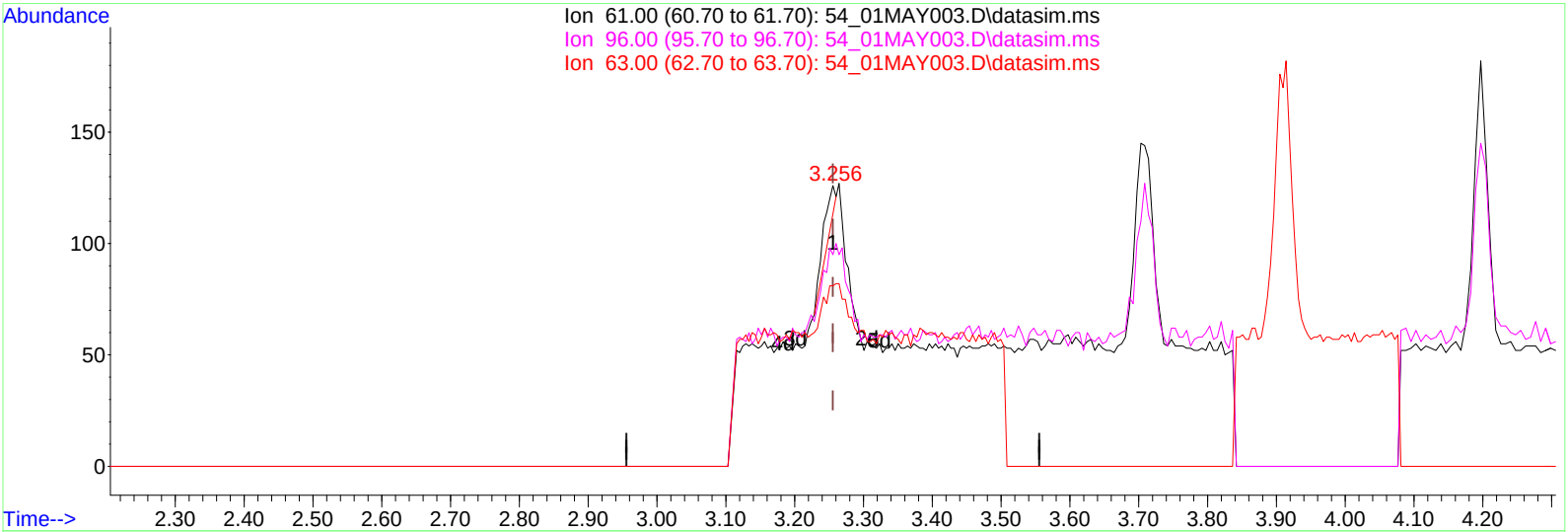
response 200

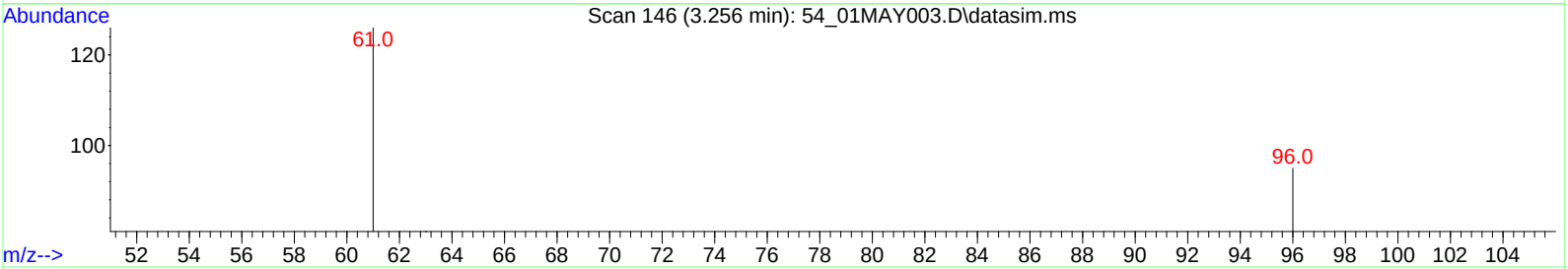
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	123.50#
63.00	32.70	1.50#
0.00	0.00	0.00

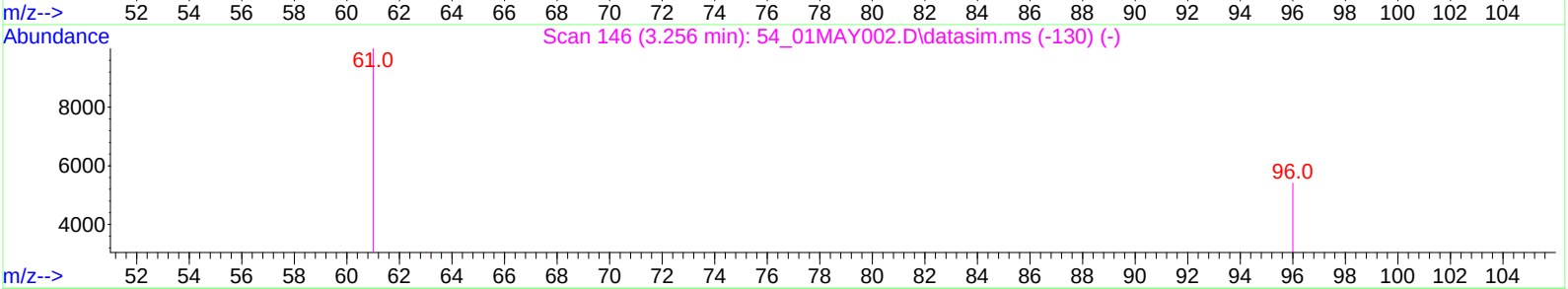
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY003.D
Acq On : 1 May 2014 7:31 am
Operator : yhl
Sample : STD20140501-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:37:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 30 07:07:13 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







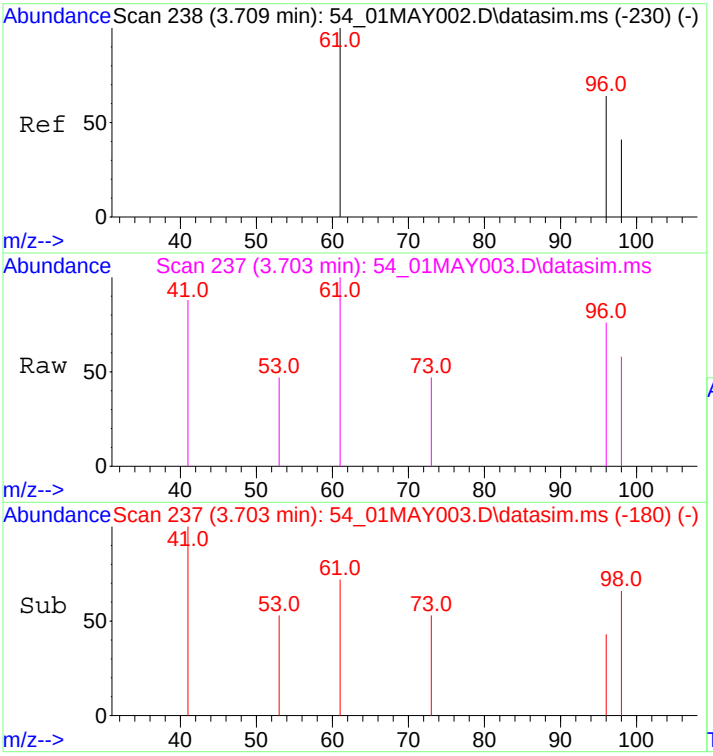
TIC: 54_01MAY003.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (-0.000) 0.08 ppbv

response 32

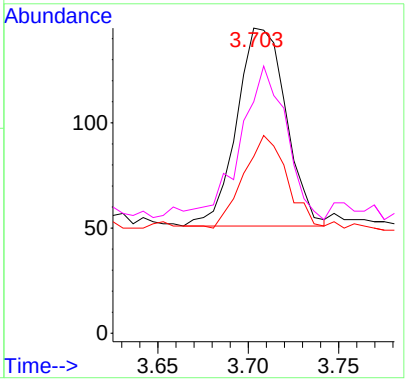
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	771.88#
63.00	32.70	9.38#
0.00	0.00	0.00

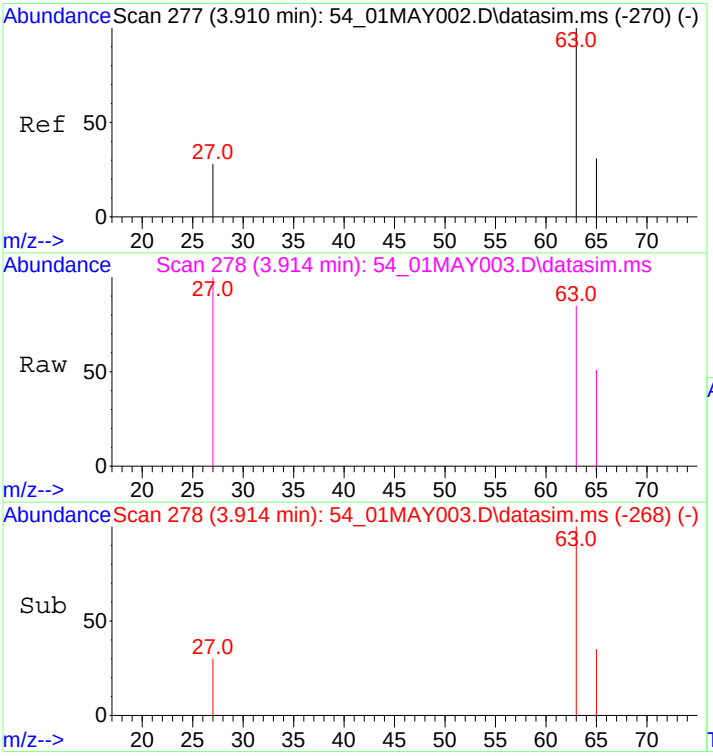


#5
trans-1,2-Dichloroethene
Concen: 0.47 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 61 Resp: 178

Ion	Ratio	Lower	Upper
61	100		
96	153.4	71.4	107.0#
98	77.5	45.8	68.8#

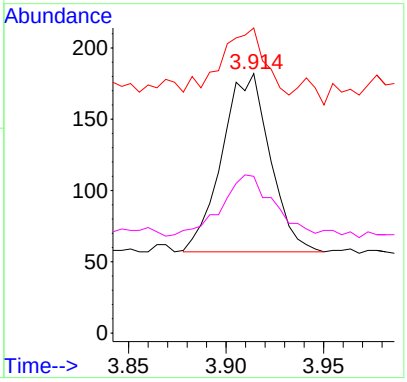


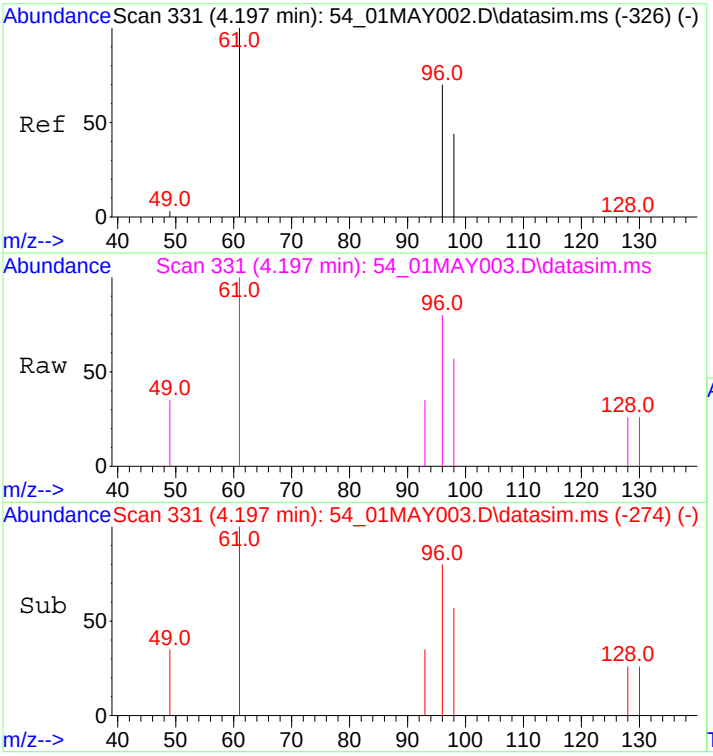


#6
1,1-Dichloroethane
Concen: 0.48 ppbv
RT: 3.914 min Scan# 278
Delta R.T. 0.004 min
Lab File: 54_01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 63 Resp: 214

Ion	Ratio	Lower	Upper
63	100		
65	32.7	26.1	39.1
27	33.2	10.2	15.2#

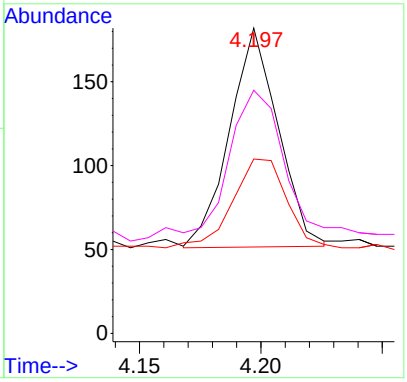


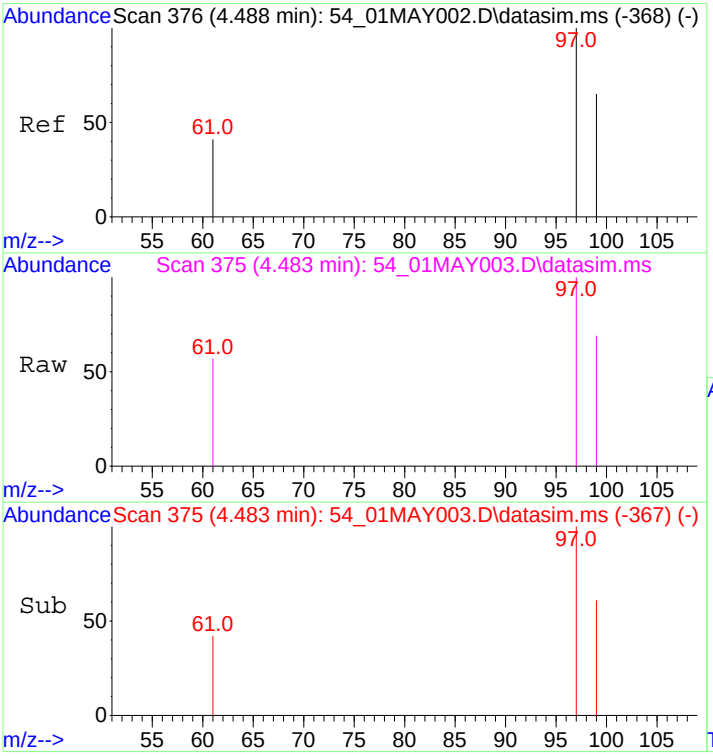


#7
cis-1,2-Dichloroethene
Concen: 0.52 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 61 Resp: 182

Ion	Ratio	Lower	Upper
61	100		
96	156.6	78.5	117.7#
98	113.2	50.6	76.0#

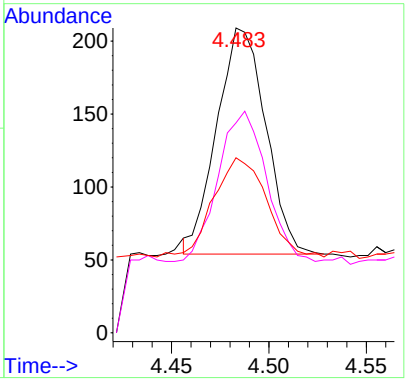


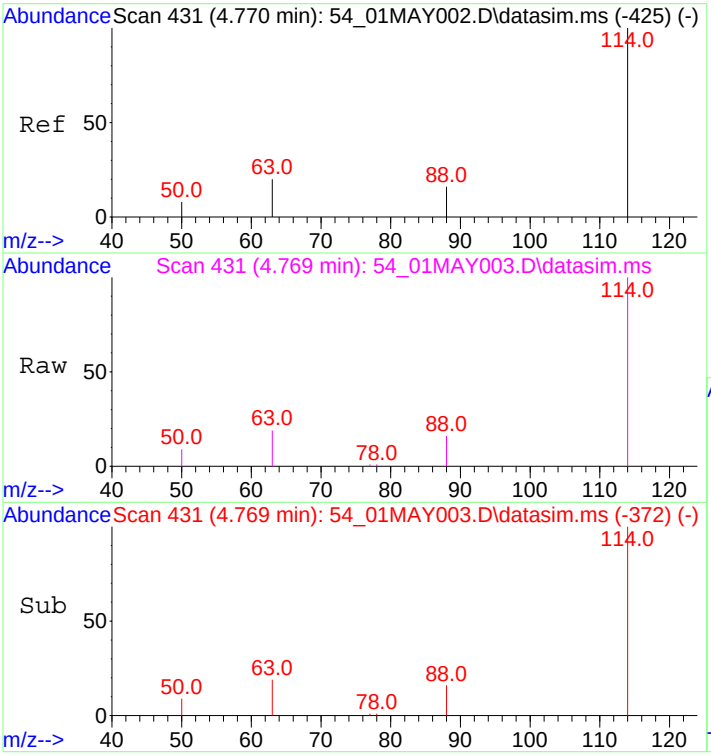


#8
1,1,1-Trichloroethane
Concen: 0.48 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 97 Resp: 271

Ion	Ratio	Lower	Upper
97	100		
99	65.3	52.1	78.1
61	45.4	30.2	45.4#

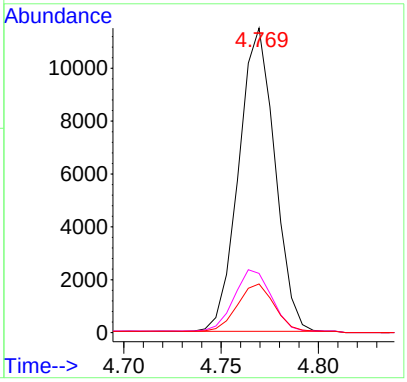


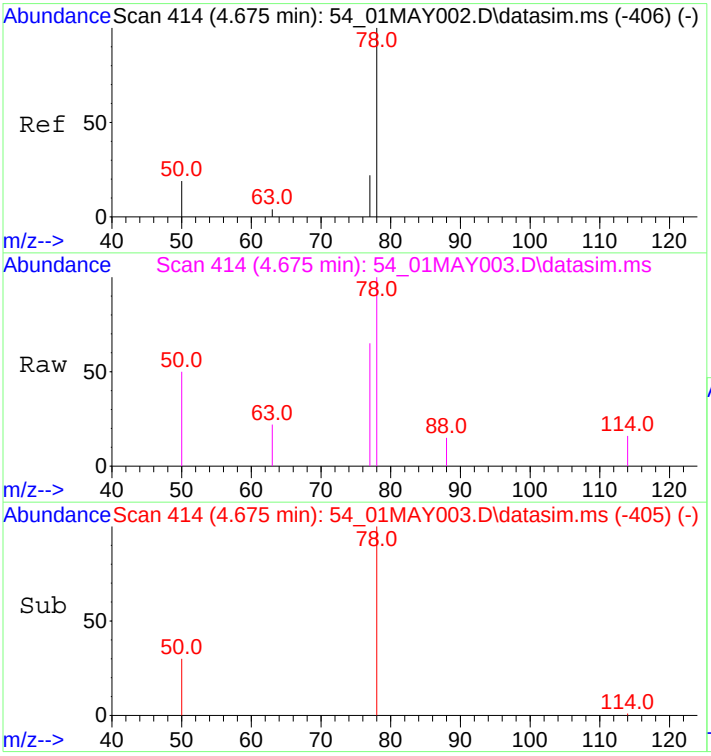


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion:114 Resp: 14772

Ion	Ratio	Lower	Upper
114	100		
63	20.7	12.0	18.0#
88	15.8	11.8	17.8

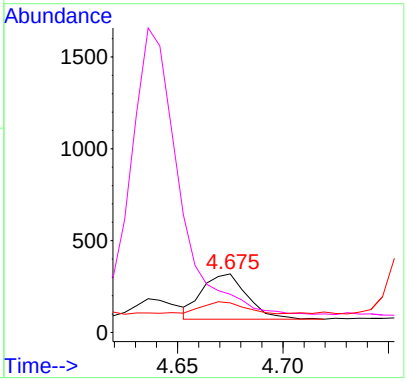


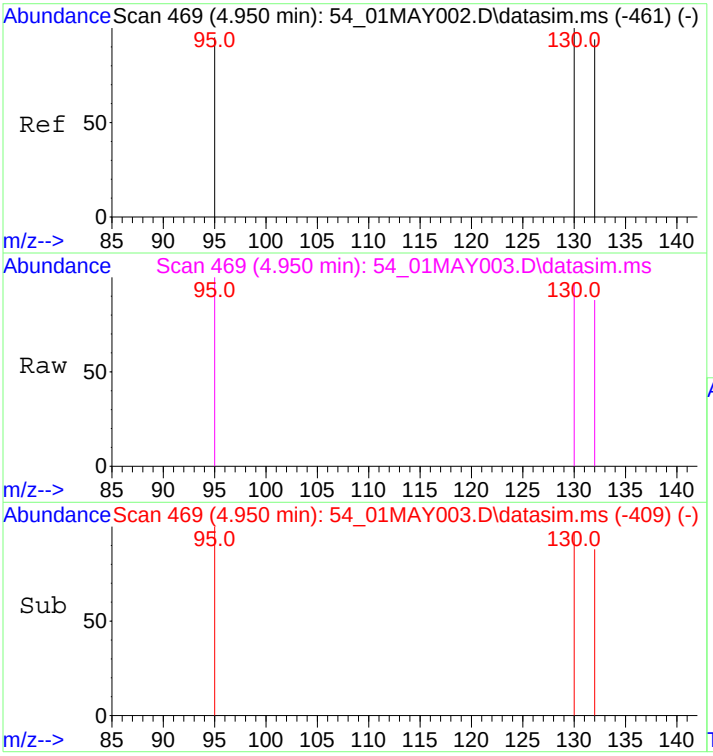


#10
Benzene
Concen: 0.54 ppbv
RT: 4.675 min Scan# 414
Delta R.T. -0.000 min
Lab File: 54_01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 78 Resp: 366

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.2	27.2#
50	23.5	8.6	13.0#

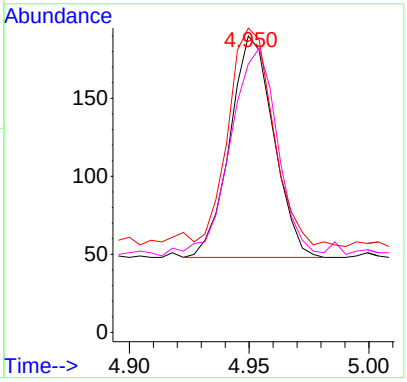


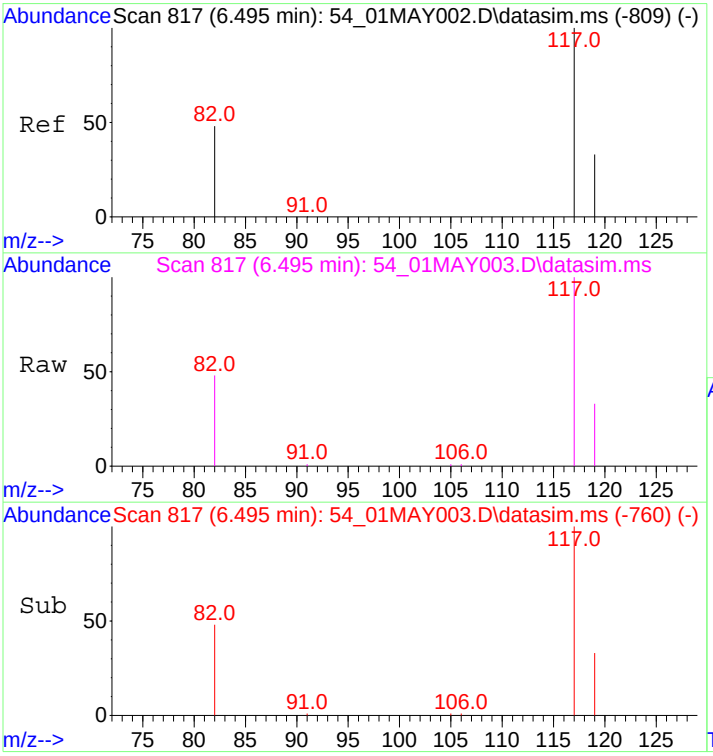


#11
Trichloroethene
Concen: 0.49 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion:130 Resp: 180

Ion	Ratio	Lower	Upper
130	100		
132	101.7	76.9	115.3
95	100.0	76.5	114.7

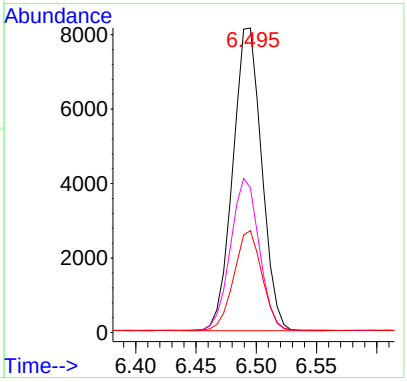


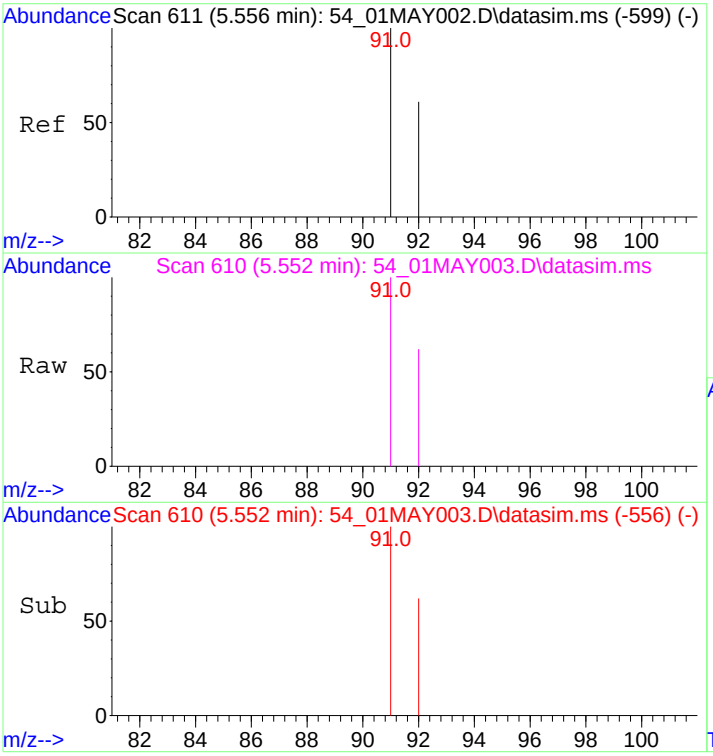


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54_01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion:117 Resp: 13570

Ion	Ratio	Lower	Upper
117	100		
82	49.6	38.0	57.0
119	32.3	27.0	40.4

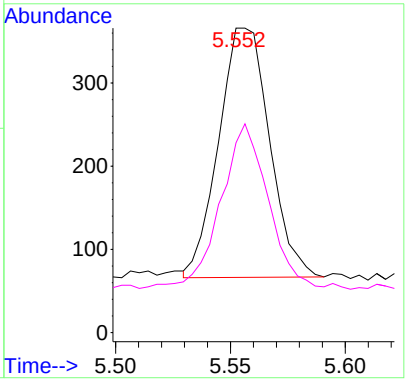


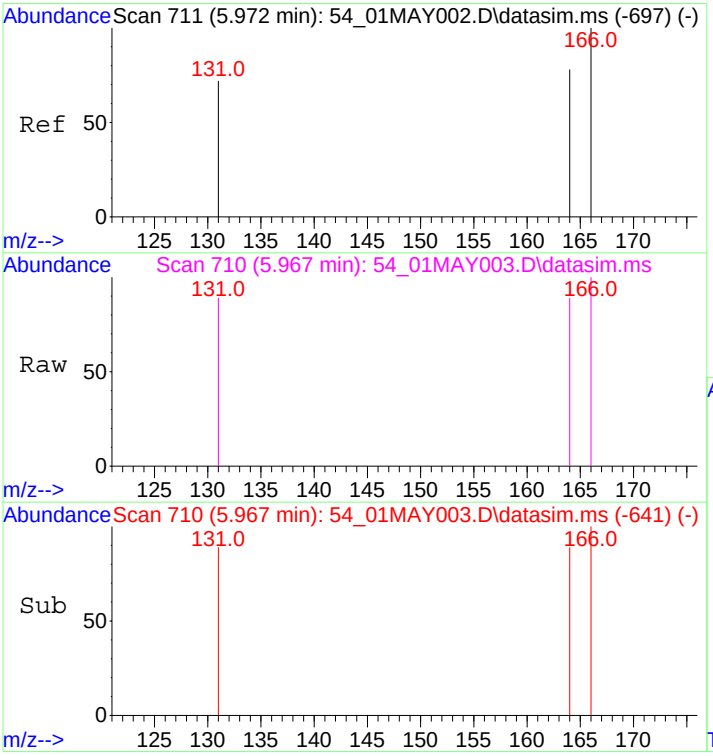


#13
Toluene
Concen: 0.57 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 91 Resp: 462

Ion	Ratio	Lower	Upper
91	100		
92	61.5	47.8	71.8

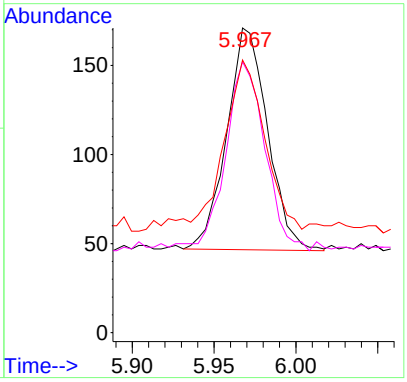


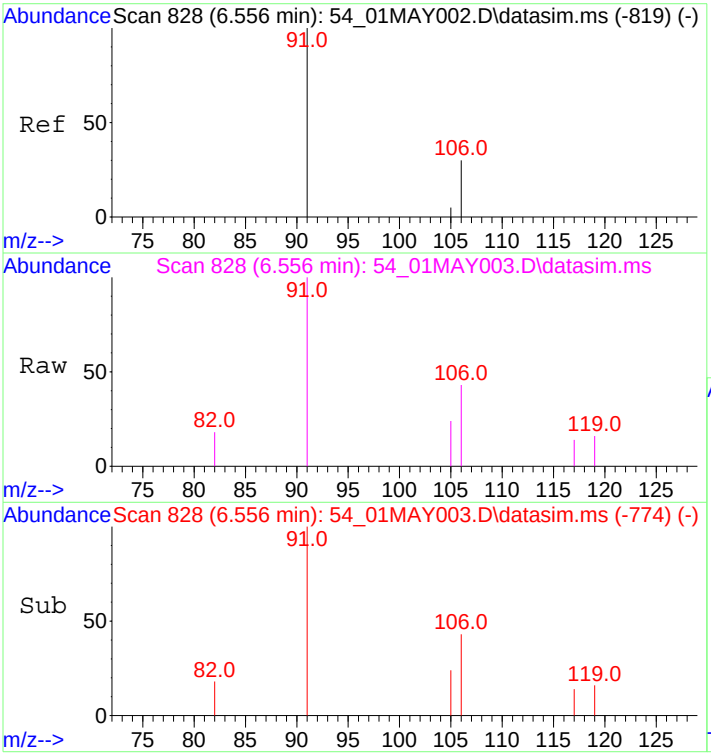


#14
Tetrachloroethene
Concen: 0.46 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion:166 Resp: 216

Ion	Ratio	Lower	Upper
166	100		
164	81.0	62.6	94.0
131	90.7	58.5	87.7#

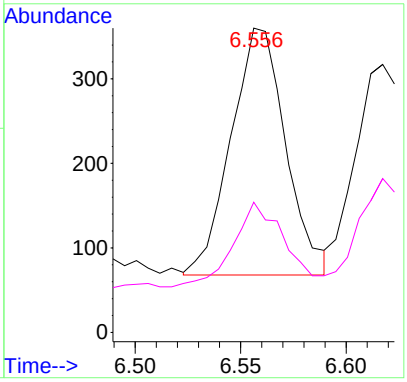


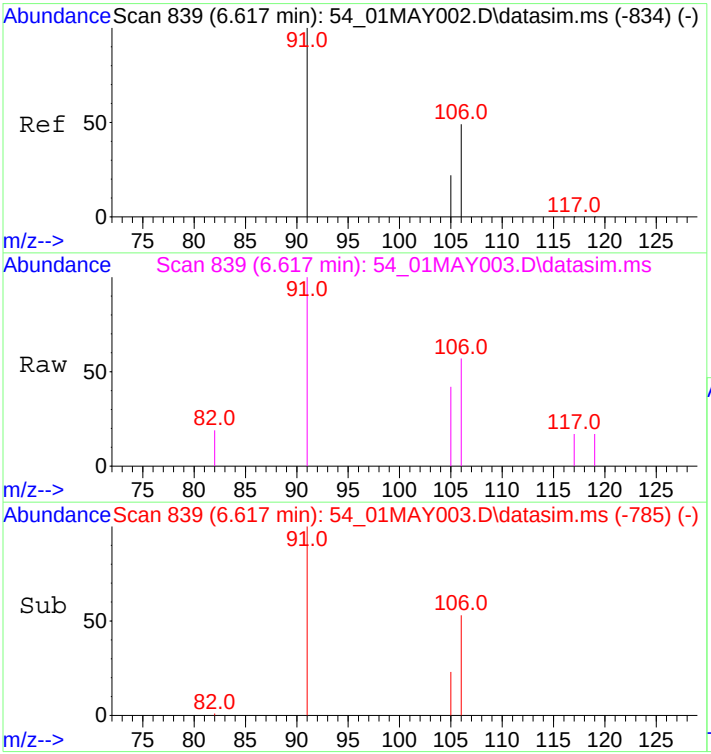


#15
Ethyl Benzene
Concen: 0.51 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 91 Resp: 528

Ion	Ratio	Lower	Upper
91	100		
106	33.0	26.9	40.3

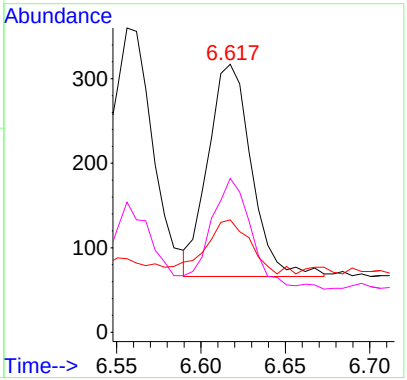


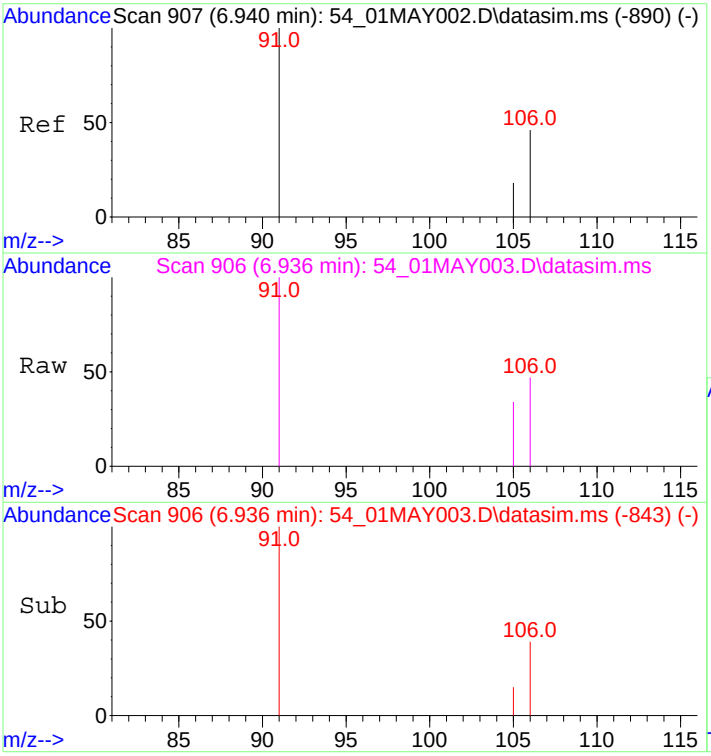


#16
m,p-Xylene
Concen: 0.57 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 91 Resp: 449

Ion	Ratio	Lower	Upper
91	100		
106	48.1	43.1	64.7
105	26.1	18.3	27.5

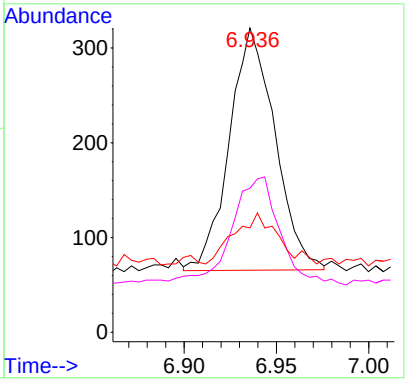




#17
o-Xylene
Concen: 0.55 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 01MAY003.D
Acq: 1 May 2014 7:31 am

Tgt Ion: 91 Resp: 440

Ion	Ratio	Lower	Upper
91	100		
106	47.5	40.1	60.1
105	19.3	15.8	23.6



LABORATORY CONTROL SAMPLE

Data File 54_01May005.D
LCS Standard Number 20140501-LCS
LCS Standard Name **20140501-LCS \ LCS 500 ppbv 2º**
Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/1/2014	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %	
Vinyl Chloride	463.03	517.50	89.5	70-130	OK
1,1-Dichloroethene	457.15	512.50	89.2	70-130	OK
Methyl Tert Butyl Ether	443.28	510.00	86.9	70-130	OK
trans-1,2-Dichloroethene	451.97	500.00	90.4	70-130	OK
1,1-Dichloroethane	460.85	525.00	87.8	70-130	OK
cis-1,2-Dichloroethene	483.73	530.00	91.3	70-130	OK
1,1,1-Trichloroethane	476.85	510.00	93.5	70-130	OK
Benzene	455.37	527.50	86.3	70-130	OK
Trichloroethene	451.97	510.00	88.6	70-130	OK
Toluene	450.18	522.50	86.2	70-130	OK
Tetrachloroethene	448.14	517.50	86.6	70-130	OK
Ethyl Benzene	465.45	525.00	88.7	70-130	OK
m,p-Xylene	461.98	520.00	88.8	70-130	OK
o-Xylene	464.06	525.00	88.4	70-130	OK

Secondary Standard Cylinder # CC-99022

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY005.D
Acq On : 1 May 2014 7:54 am
Operator : yhl
Sample : 20140501-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:27:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

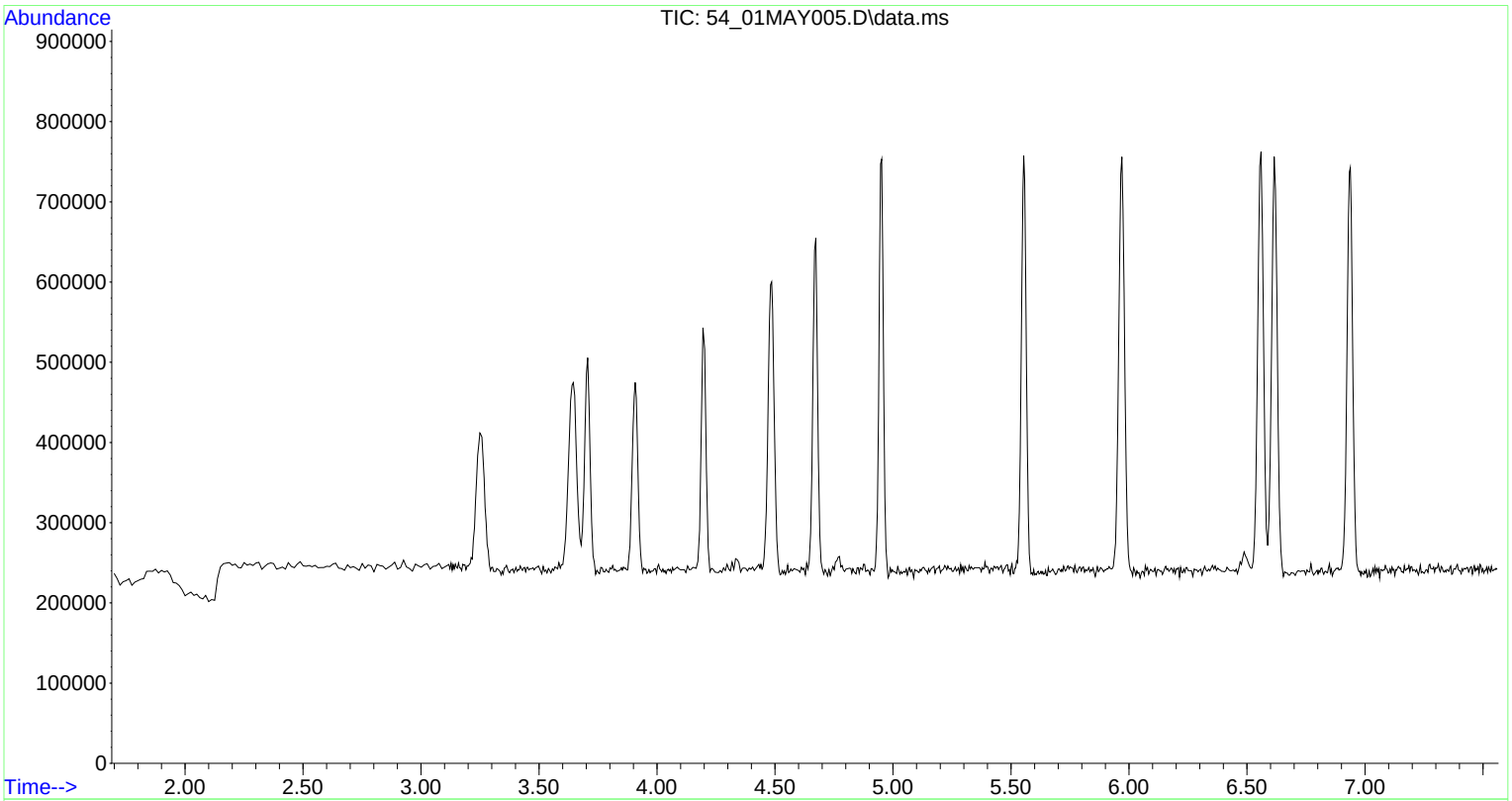
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4970	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	13298	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	12339	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	87507	463.03	ppbv	# 66
3] 1,1-Dichloroethene	3.251	61	175967	457.15	ppbv	# 80
4] Methyl Tert Butyl Ether	3.642	73	260518	443.28	ppbv	# 85
5] trans-1,2-Dichloroethene	3.703	61	153331	451.97	ppbv	# 76
6] 1,1-Dichloroethane	3.910	63	186640	460.85	ppbv	# 87
7] cis-1,2-Dichloroethene	4.197	61	153250	483.73	ppbv	# 75
8] 1,1,1-Trichloroethane	4.483	97	244978	476.85	ppbv	98
10] Benzene	4.669	78	276623	455.37	ppbv	# 91
11] Trichloroethene	4.950	130	149483	451.97	ppbv	99
13] Toluene	5.556	91	332984	450.18	ppbv	100
14] Tetrachloroethene	5.967	166	189326	448.14	ppbv	100
15] Ethyl Benzene	6.556	91	437210	465.45	ppbv	96
16] m,p-Xylene	6.617	91	333053	461.98	ppbv	94
17] o-Xylene	6.936	91	339268	464.06	ppbv	94

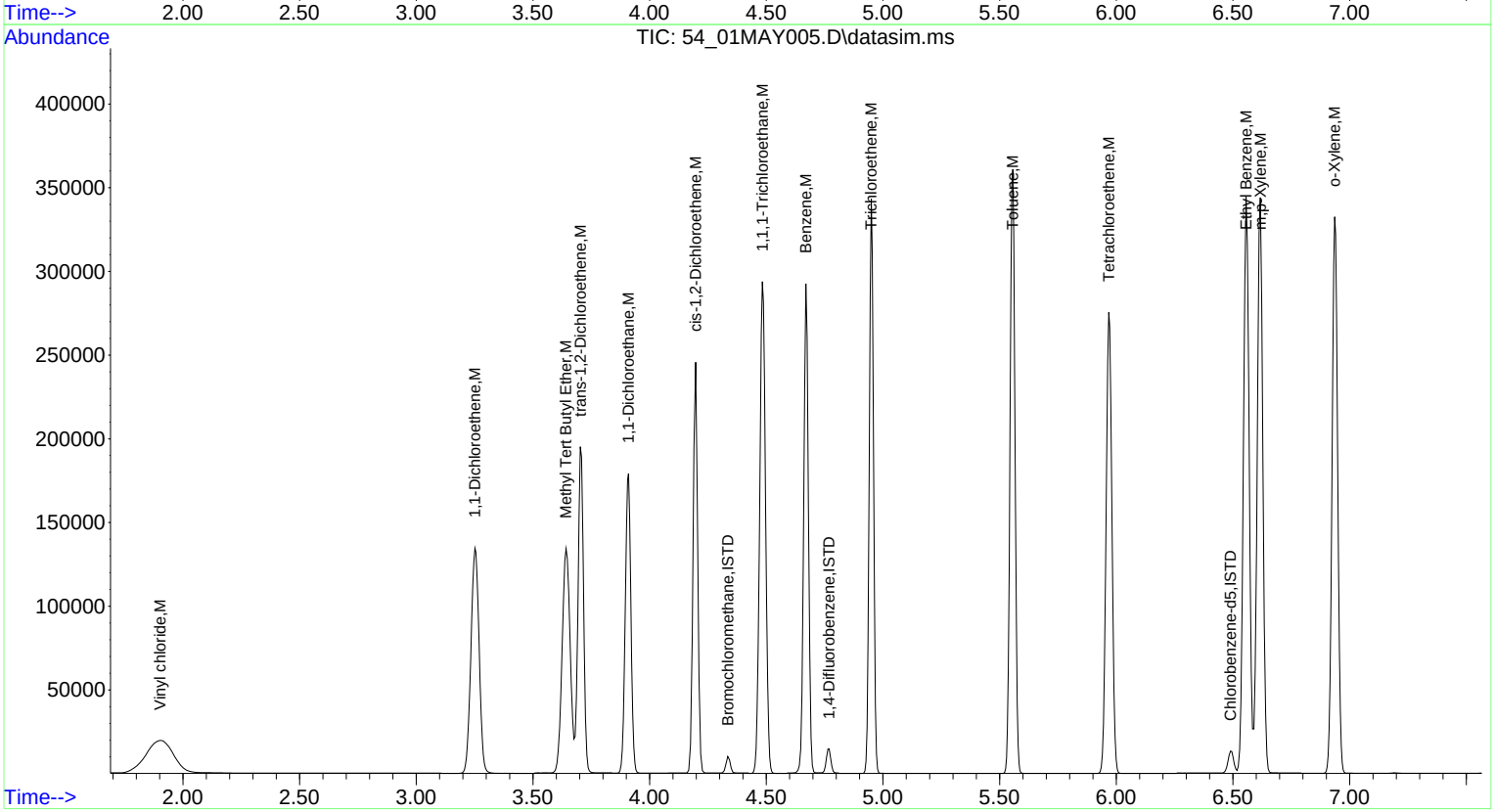
(#) = qualifier out of range (m) = manual integration (+) = signals summed

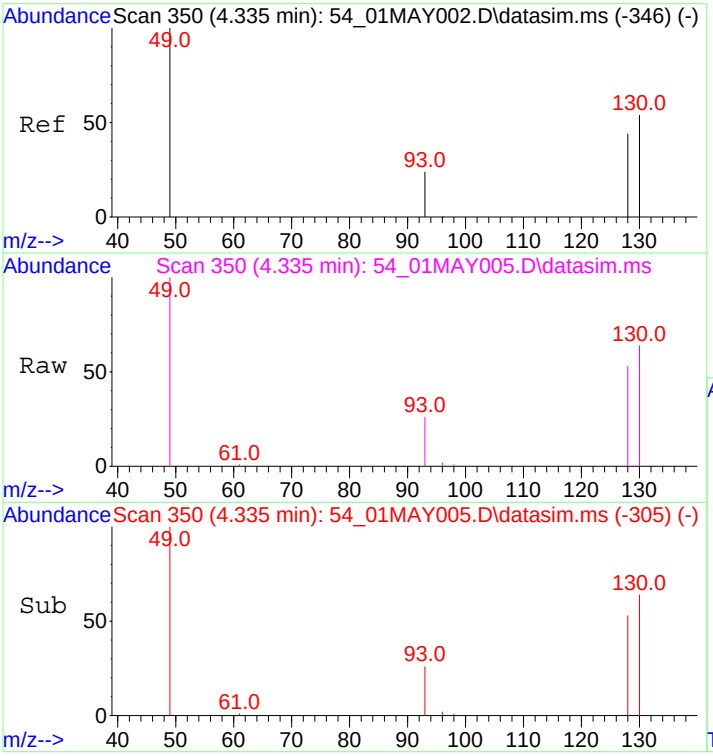
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY005.D
Acq On : 1 May 2014 7:54 am
Operator : yhl
Sample : 20140501-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:27:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



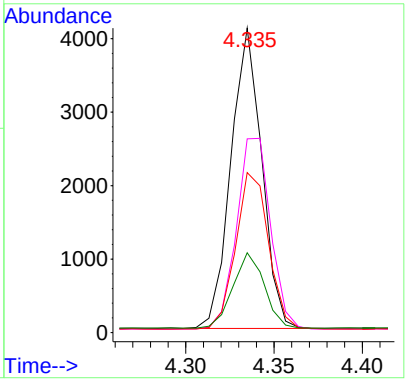


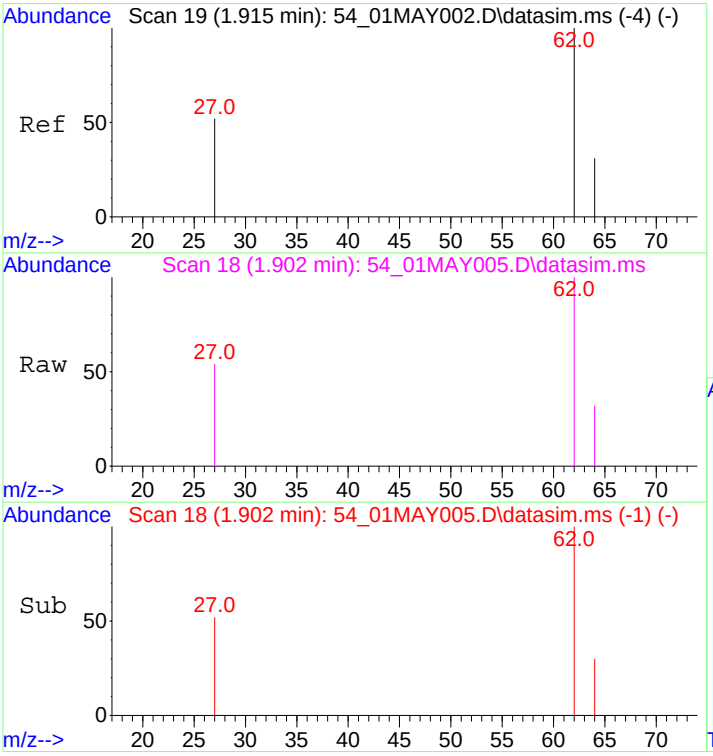


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 49 Resp: 4970

Ion	Ratio	Lower	Upper
49	100		
130	70.2	87.2	130.8#
128	55.3	68.0	102.0#
93	25.6	29.3	43.9#

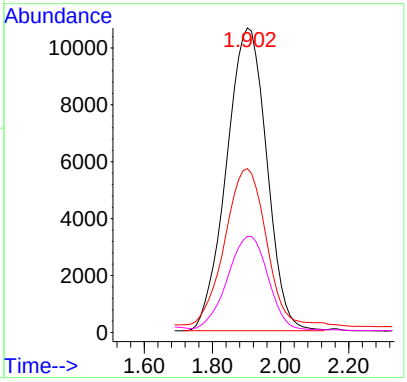


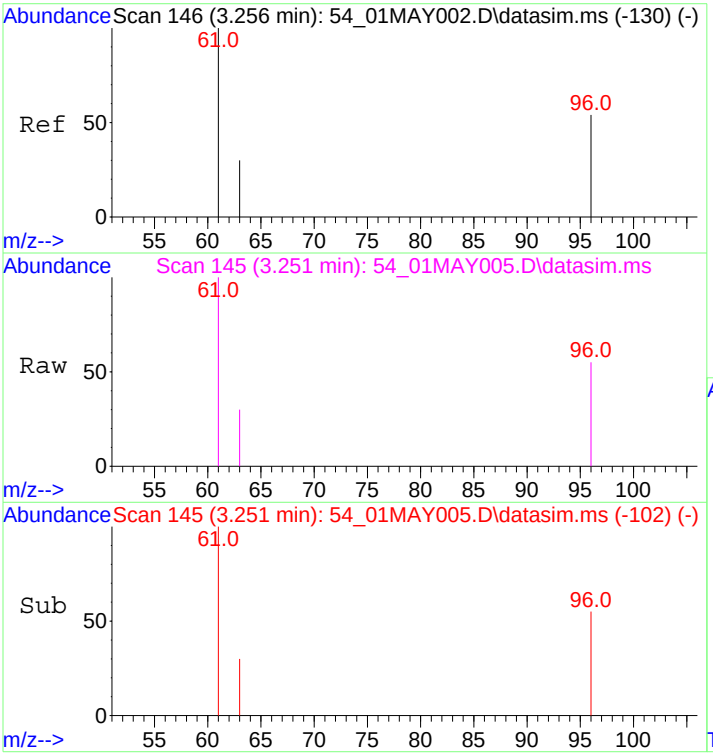


#2
Vinyl chloride
Concen: 463.03 ppbv
RT: 1.902 min Scan# 18
Delta R.T. -0.012 min
Lab File: 54_01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 62 Resp: 87507

Ion	Ratio	Lower	Upper
62	100		
64	32.8	26.8	40.2
27	60.8	16.1	24.1#

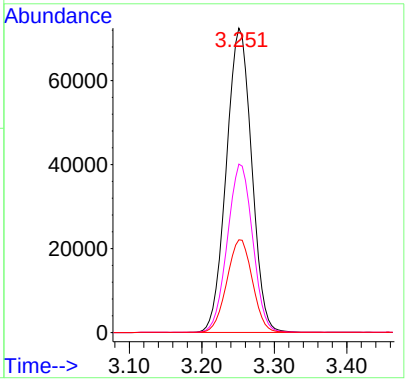


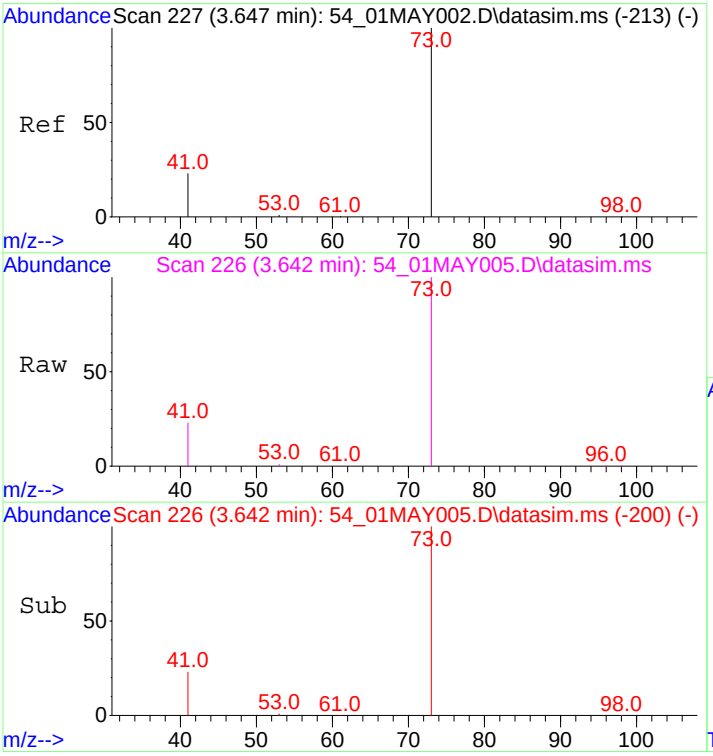


#3
1,1-Dichloroethene
Concen: 457.15 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.004 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 61 Resp: 175967

Ion	Ratio	Lower	Upper
61	100		
96	55.2	63.4	95.2#
63	30.7	26.2	39.2

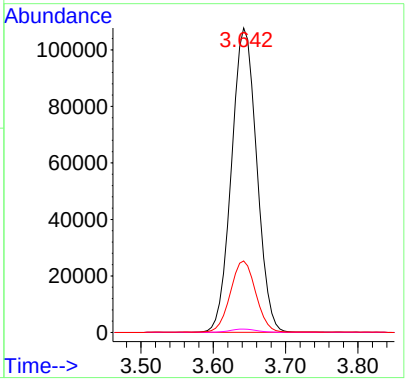


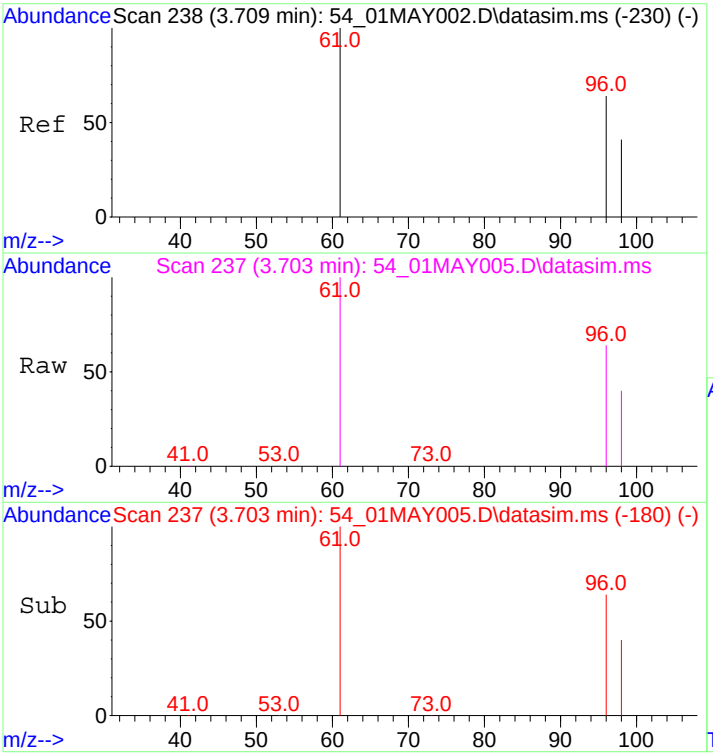


#4
Methyl Tert Butyl Ether
Concen: 443.28 ppbv
RT: 3.642 min Scan# 226
Delta R.T. -0.006 min
Lab File: 54_01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 73 Resp: 260518

Ion	Ratio	Lower	Upper
73	100		
53	1.1	1.0	1.4
41	23.4	13.1	19.7#

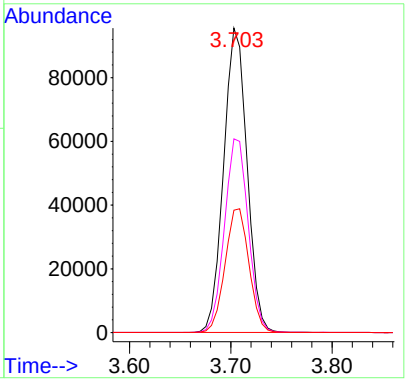


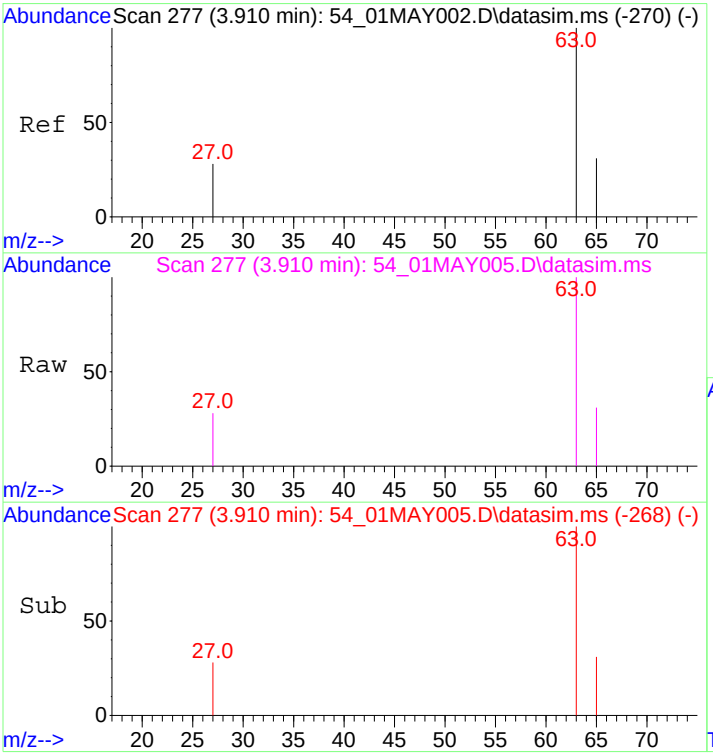


#5
trans-1,2-Dichloroethene
Concen: 451.97 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 61 Resp: 153331

Ion	Ratio	Lower	Upper
61	100		
96	64.7	71.4	107.0#
98	41.5	45.8	68.8#

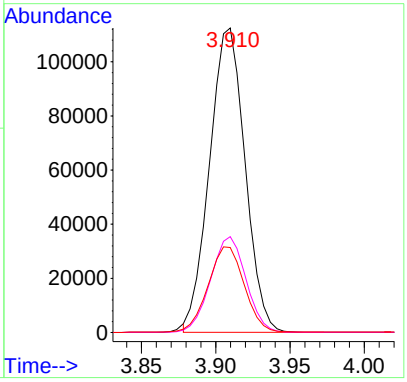


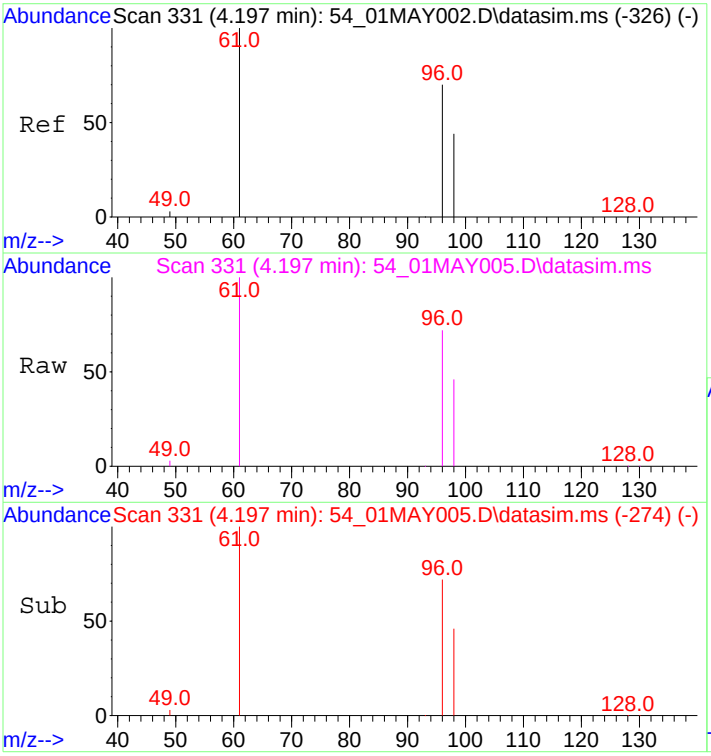


#6
1,1-Dichloroethane
Concen: 460.85 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.000 min
Lab File: 54_01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 63 Resp: 186640

Ion	Ratio	Lower	Upper
63	100		
65	31.1	26.1	39.1
27	28.2	10.2	15.2#

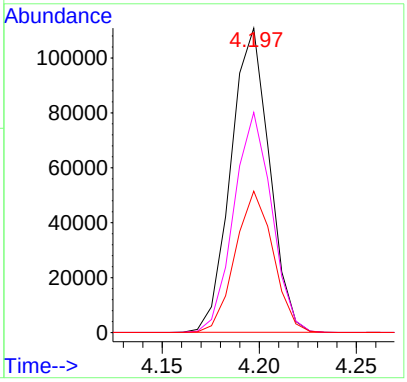


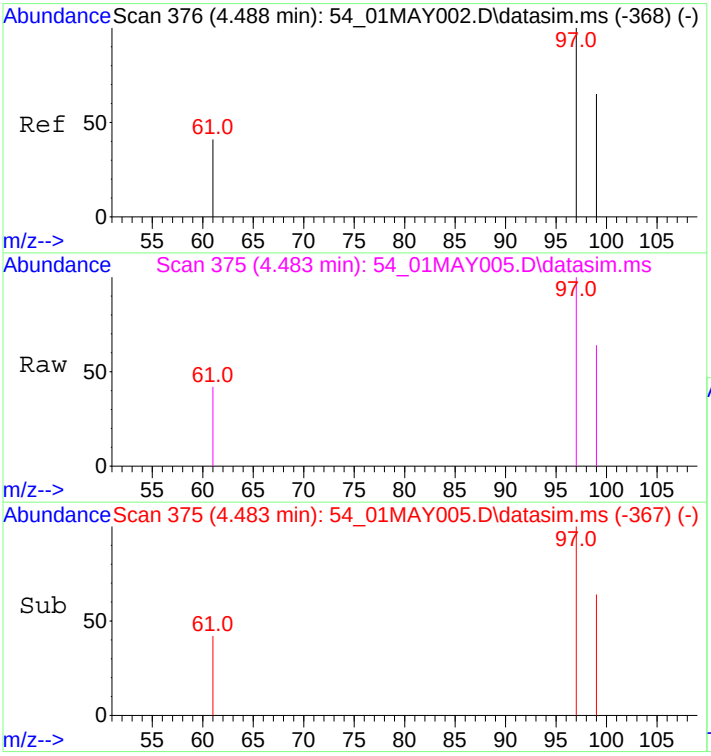


#7
cis-1,2-Dichloroethene
Concen: 483.73 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 61 Resp: 153250

Ion	Ratio	Lower	Upper
61	100		
96	71.1	78.5	117.7#
98	45.8	50.6	76.0#

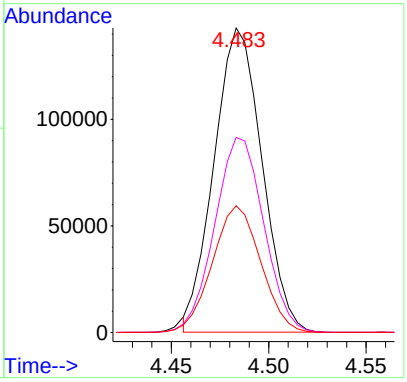


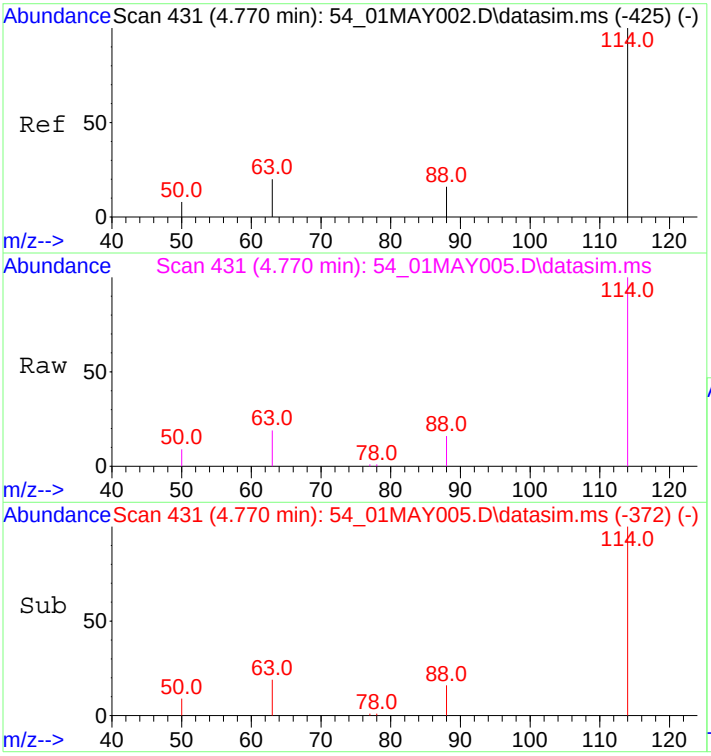


#8
1,1,1-Trichloroethane
Concen: 476.85 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.004 min
Lab File: 54_01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 97 Resp: 244978

Ion	Ratio	Lower	Upper
97	100		
99	64.8	52.1	78.1
61	41.4	30.2	45.4

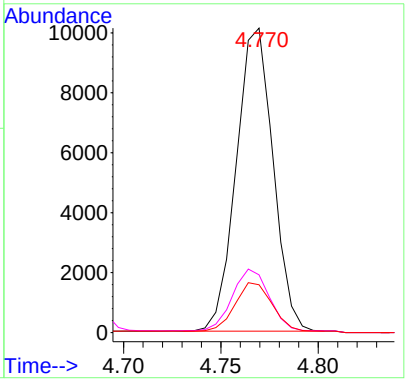


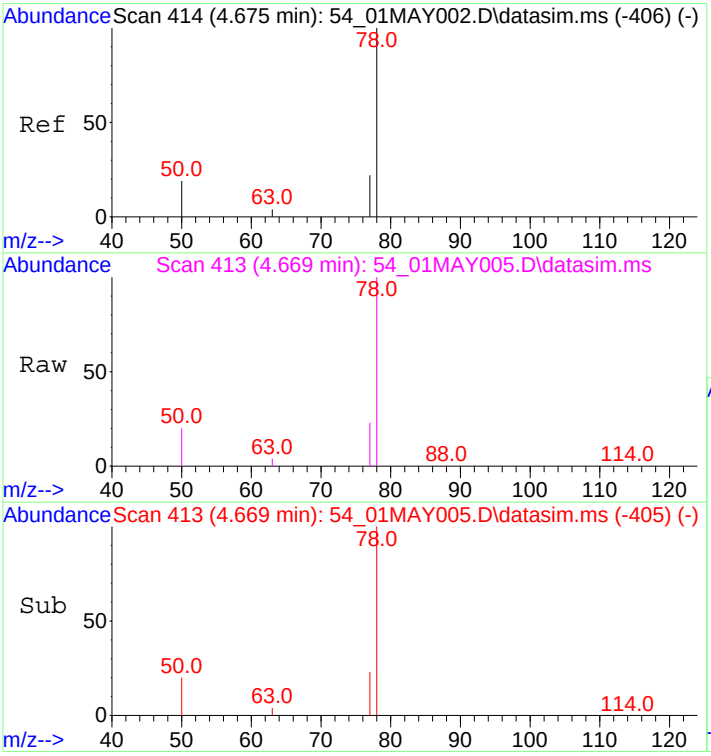


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion:114 Resp: 13298

Ion	Ratio	Lower	Upper
114	100		
63	20.3	12.0	18.0#
88	16.0	11.8	17.8

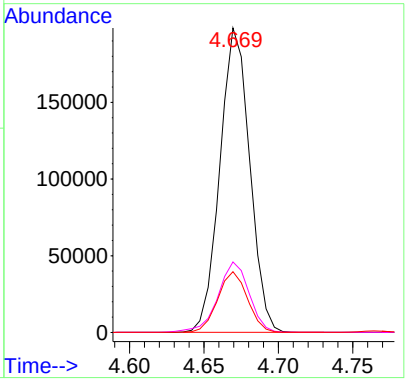


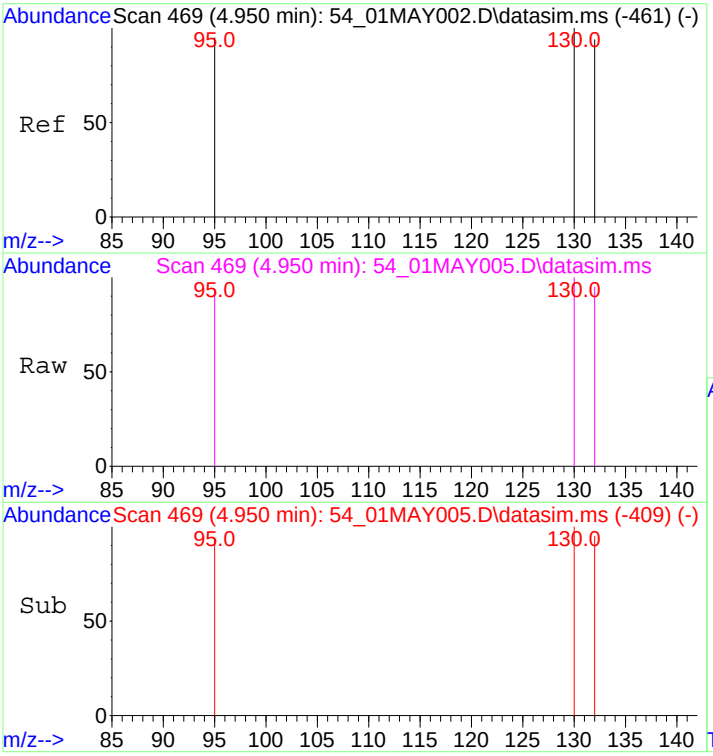


#10
Benzene
Concen: 455.37 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.006 min
Lab File: 54_01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 78 Resp: 276623

Ion	Ratio	Lower	Upper
78	100		
77	23.8	18.2	27.2
50	19.8	8.6	13.0#

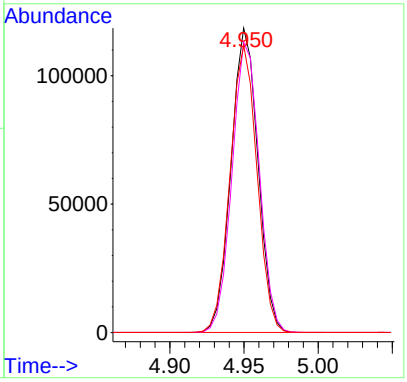


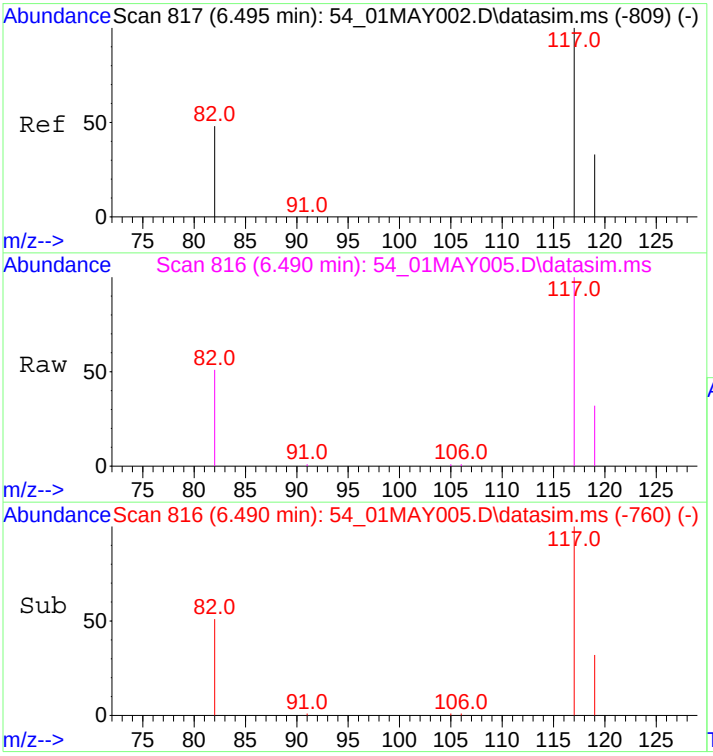


#11
Trichloroethene
Concen: 451.97 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion:130 Resp: 149483

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	94.3	76.5	114.7

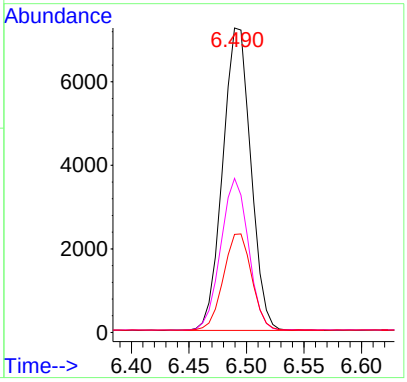


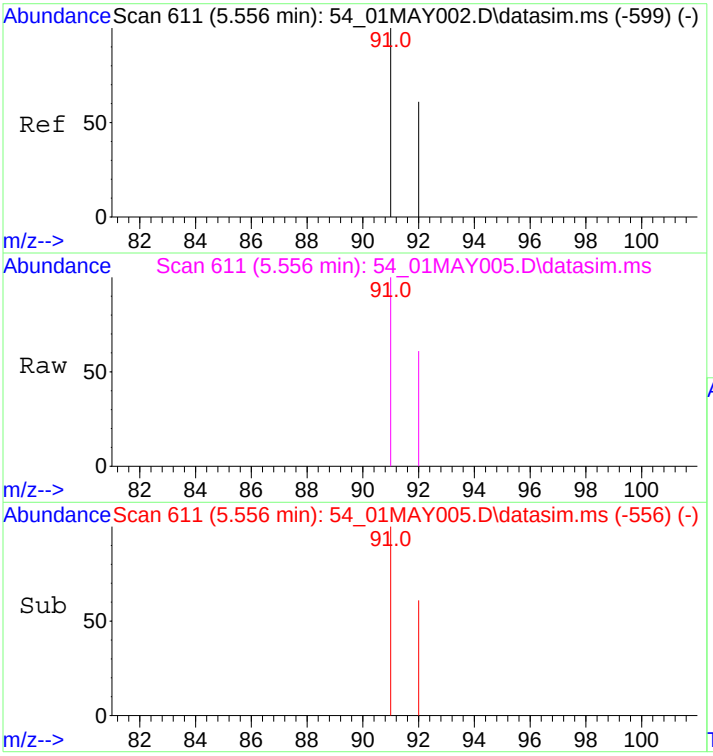


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion:117 Resp: 12339

Ion	Ratio	Lower	Upper
117	100		
82	49.1	38.0	57.0
119	32.2	27.0	40.4

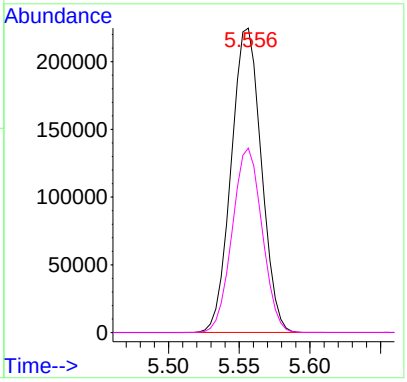


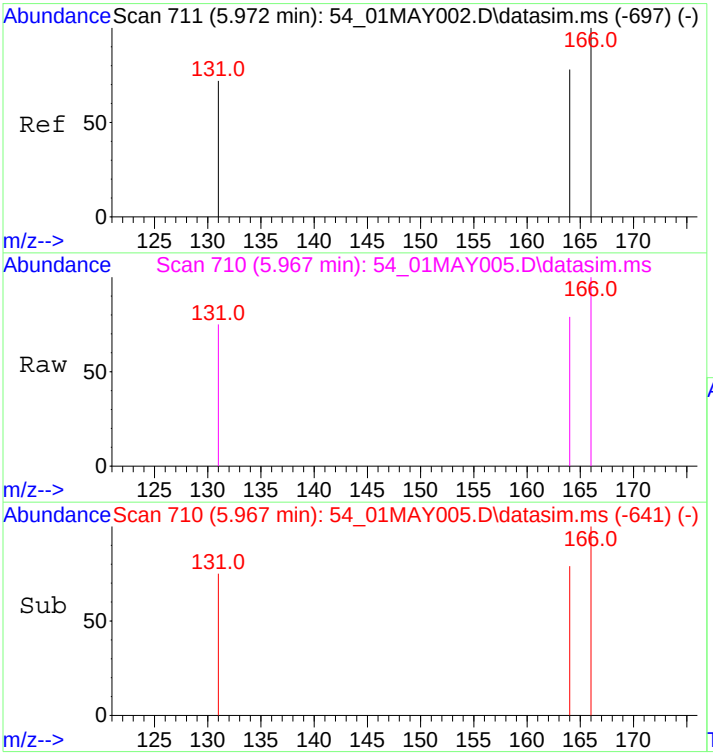


#13
Toluene
Concen: 450.18 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 91 Resp: 332984

Ion	Ratio	Lower	Upper
91	100		
92	60.1	47.8	71.8

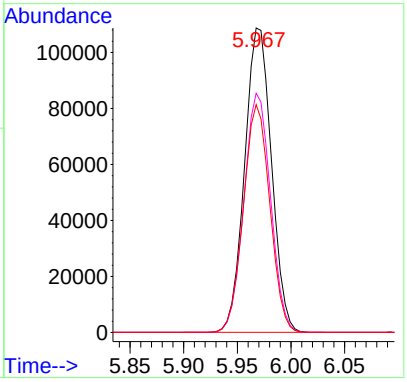


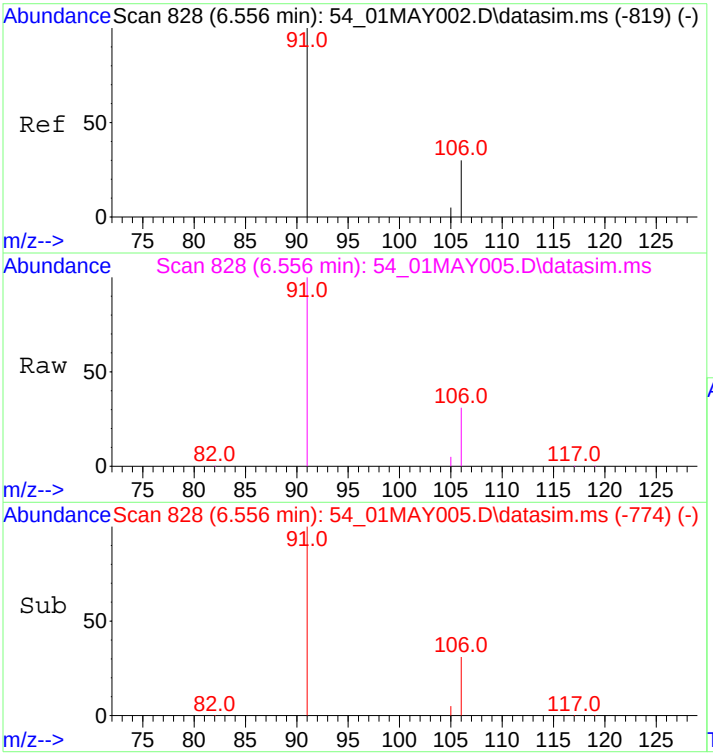


#14
Tetrachloroethene
Concen: 448.14 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54_01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion:166 Resp: 189326

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	73.6	58.5	87.7

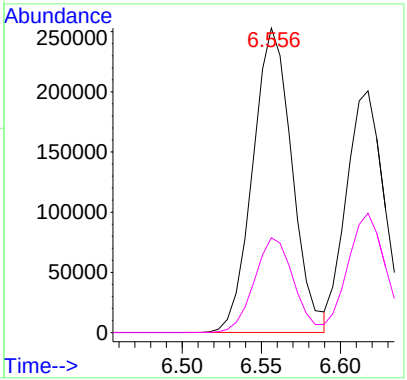


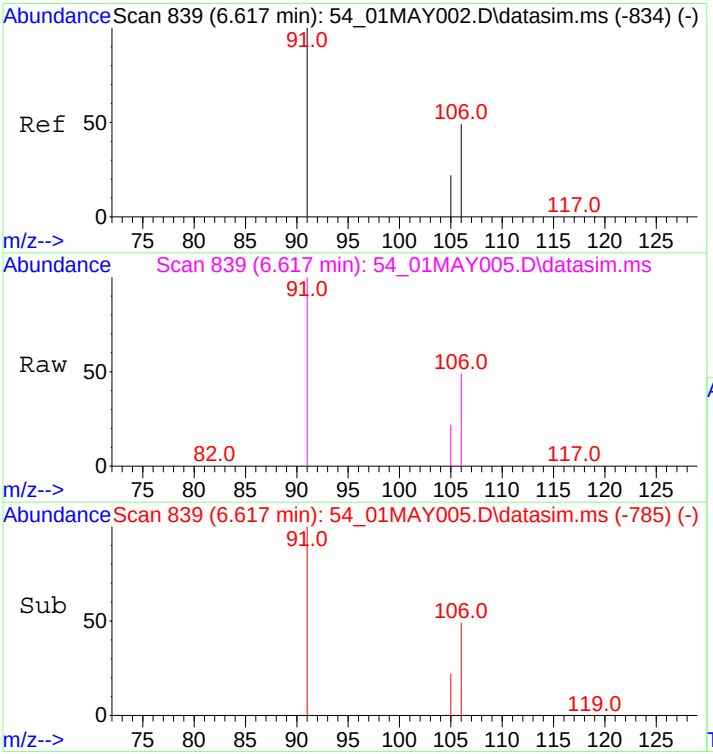


#15
Ethyl Benzene
Concen: 465.45 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 91 Resp: 437210

Ion	Ratio	Lower	Upper
91	100		
106	31.3	26.9	40.3

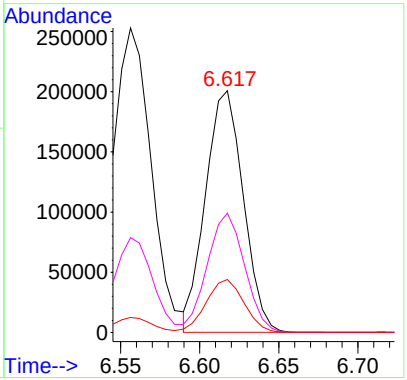


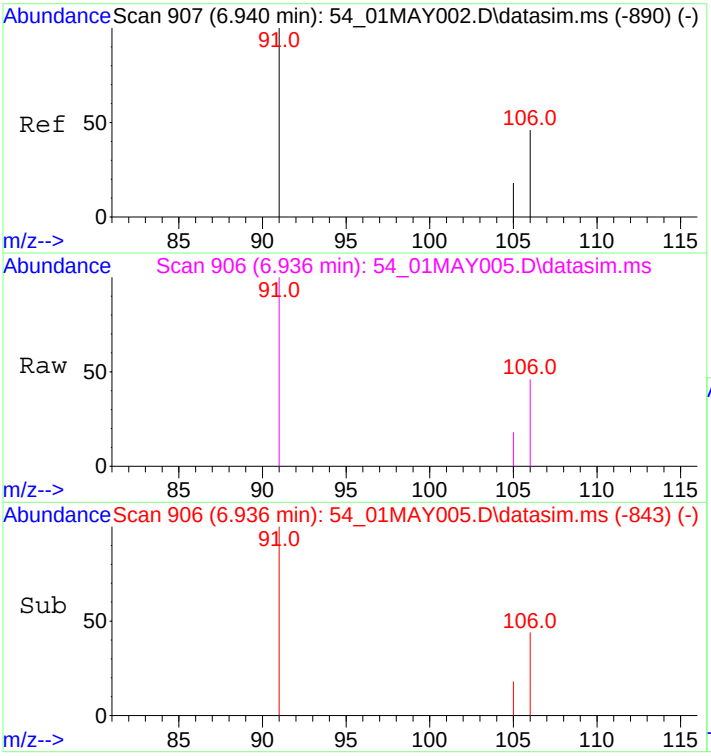


#16
m,p-Xylene
Concen: 461.98 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 91 Resp: 333053

Ion	Ratio	Lower	Upper
91	100		
106	48.6	43.1	64.7
105	21.9	18.3	27.5

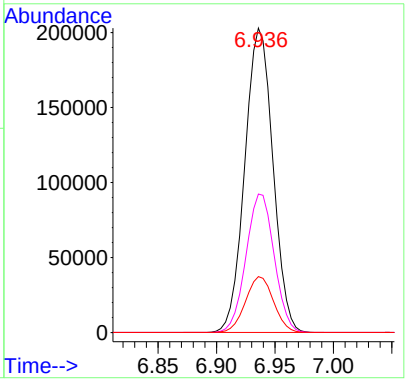




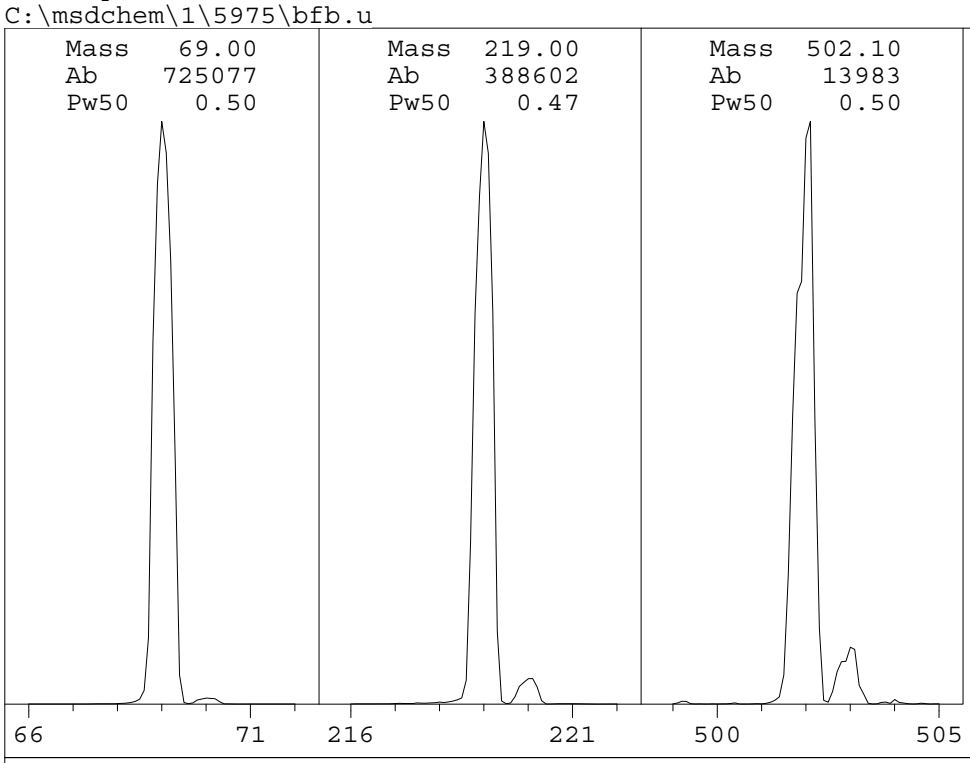
#17
o-Xylene
Concen: 464.06 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 01MAY005.D
Acq: 1 May 2014 7:54 am

Tgt Ion: 91 Resp: 339268

Ion	Ratio	Lower	Upper
91	100		
106	45.6	40.1	60.1
105	18.3	15.8	23.6



Fri May 02 06:51:58 2014 Instrument: GCMS
C:\msdchem\1\5975\bfb.u US91732436

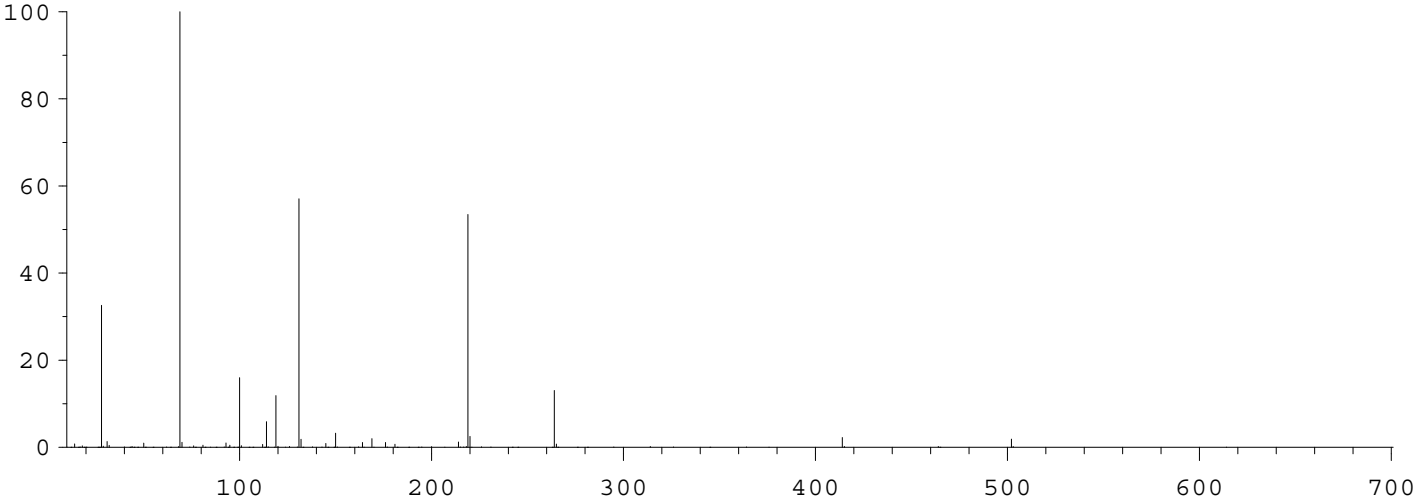


Ion Pol	Pos	MassGain	-791
		MassOffs	-37
Emission	34.6	AmuGain	1593
EIEnrgy	69.9	AmuOffs	129.88
Filament	2	Wid219	-0.029
		DC Pol	Pos
Repeller	19.90		
IonFcus	79.7	HEDEnab	On
EntLens	0.0	EMVolts	1953
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.06e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
108 peaks Base: 69.00 Abundance: 681344



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	681344	100.00	70.00	7868	1.15
219.00	364352	53.48	220.00	17072	4.69
502.10	12674	1.86	503.10	1362	10.75

Air/Water Check: H20~0.33% N2~32.59% O2~0.45% CO2~0.21% N2/H2O~9901.03%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 234969
Repeller Maximum 20 volts using ion 219; Gain Factor 2.35

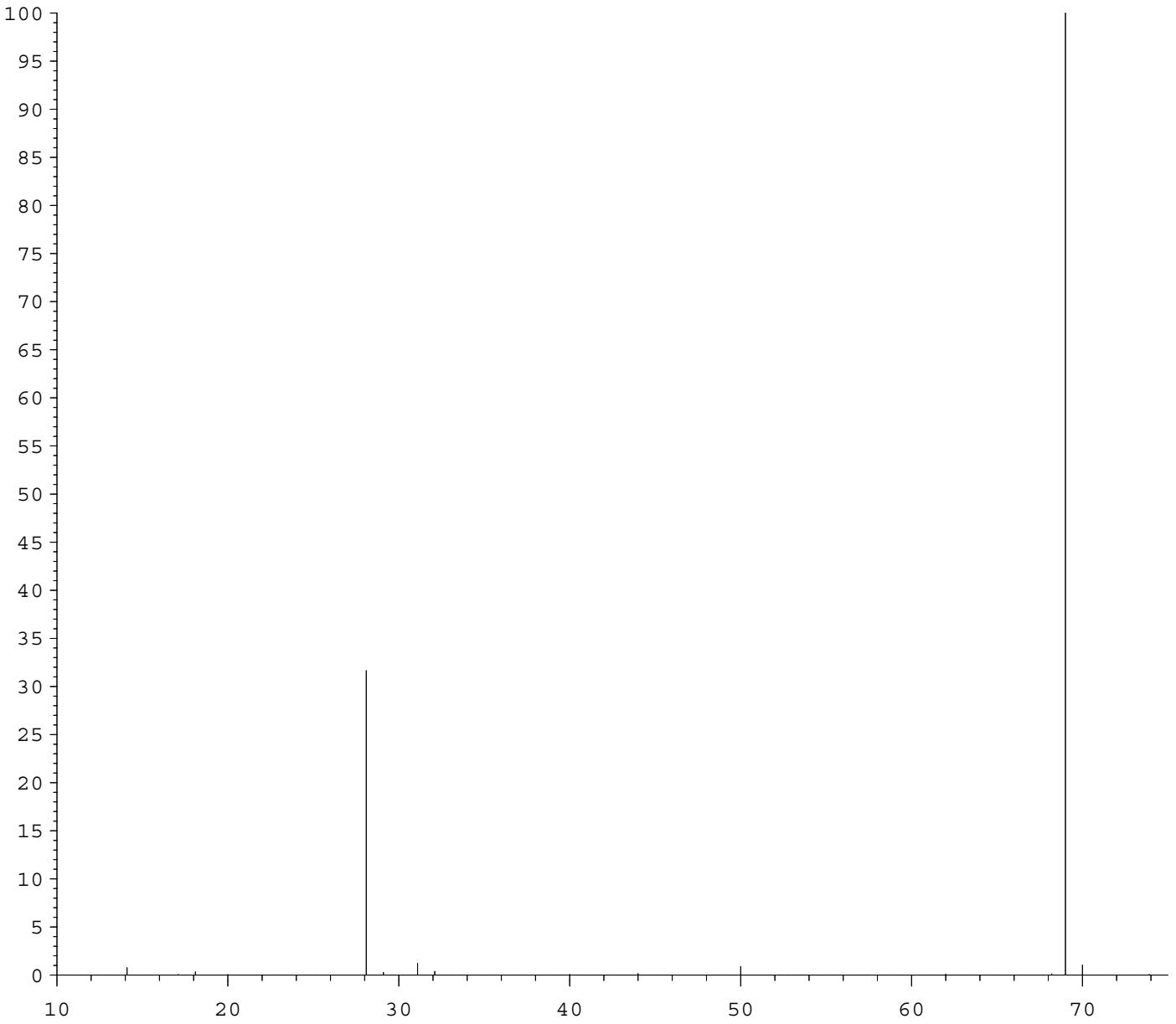
MassGain Values(Samples): -782(3) -767(2) -741(1) -706(0) -636(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.9	129.9	129.9	129.9	129.9	129.9	129.9
Entrance Lens Offset:	16.8	13.8	14.1	13.8	14.1	14.1	14.1
Target Abund(%):	1.0	100.0	55.0	55.0	2.4	2.0	
Actual Tune Abund(%):	1.0	100.0	57.1	53.5	2.3	1.9	

597x Air and Water Check

Instrument: GCMS
Fri May 02 06:55:37 2014 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
74 peaks Base: 69.00 Abundance: 685888



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	685888	100.00	70.00	7346	1.07
18.10	2326	0.34	19.10	190	8.17
28.10	217088	31.65	29.10	1940	0.89

Current Params used: bfb.u

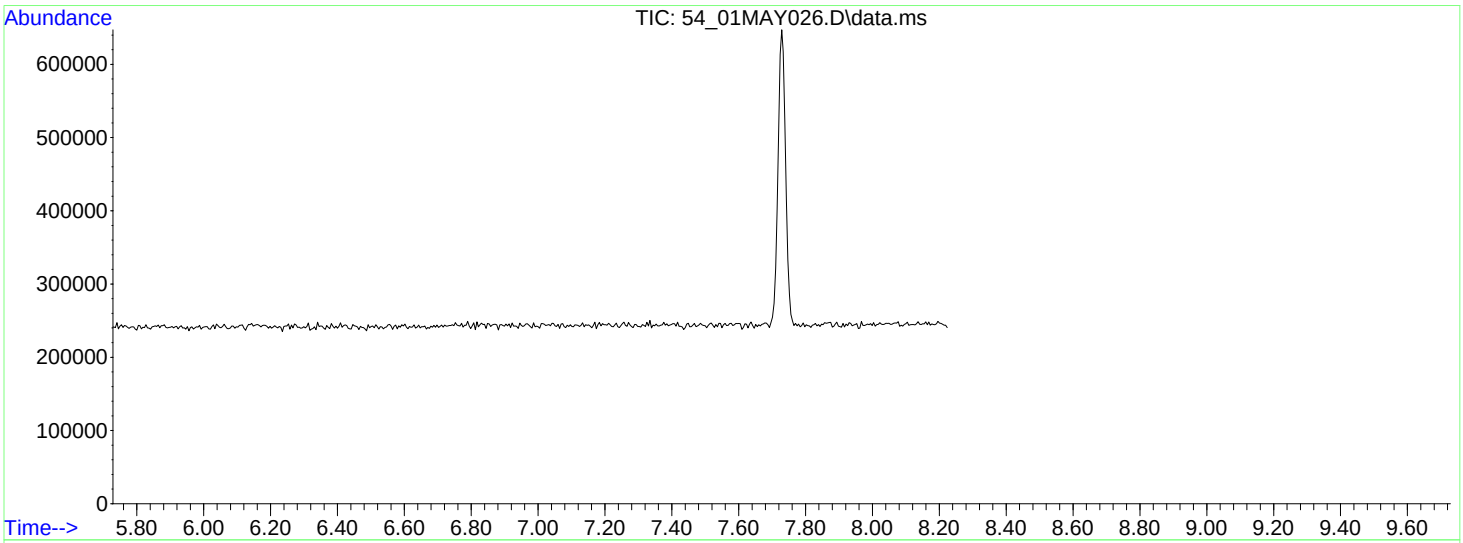
Relative abundances:

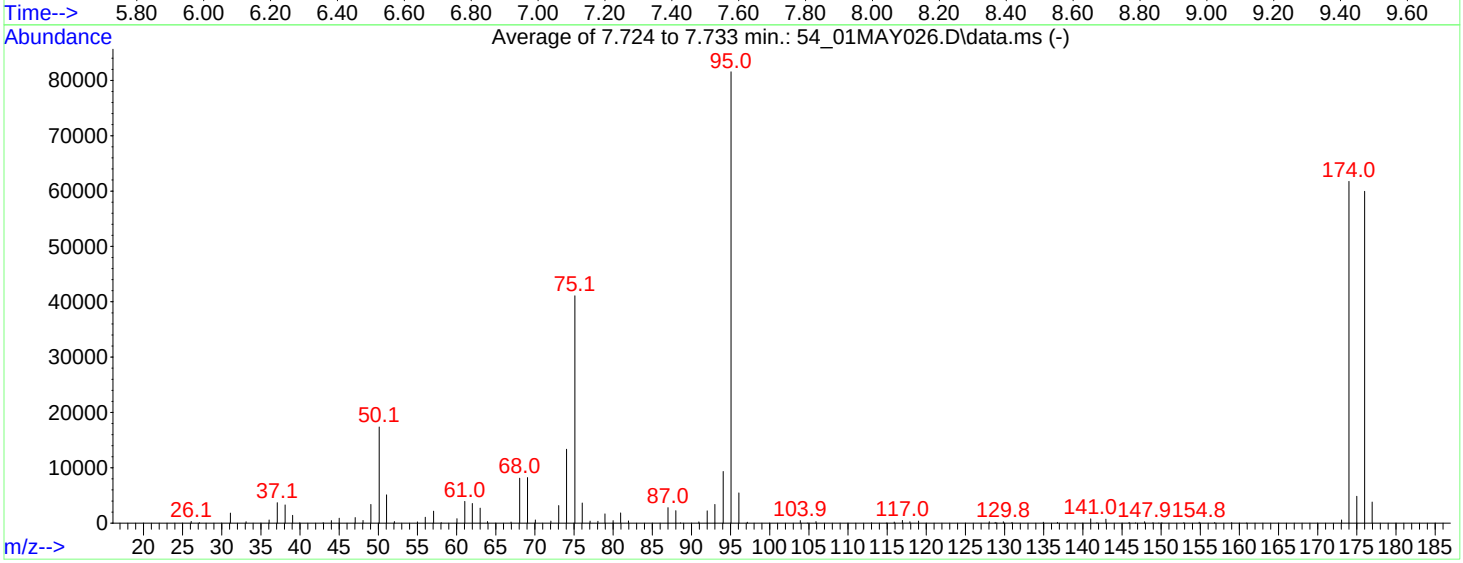
18/69 =	0.34	Water%	(counts=2326)
28/69 =	31.65	Nitrogen%	(counts=217088)
32/69 =	0.40	Oxygen%	(counts=2716)
44/69 =	0.15	Carbon Dioxide%	(counts=1045)
28/18 =	9333.10	Nitrogen/Water%	

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 01MAY026.D
Acq On : 2 May 2014 7:02 am
Operator : YHL
Sample : 20140502-BFB \ Tune Check
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20140416.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
Last Update : Thu May 01 07:31:08 2014





AutoFind: Scans 903, 904, 905; Background Corrected with Scan 895

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	21.3	17384	PASS
75	95	30	66	50.4	41072	PASS
95	95	100	100	100.0	81552	PASS
96	95	5	9	6.7	5462	PASS
173	174	0.00	2	0.9	582	PASS
174	95	50	120	75.7	61747	PASS
175	174	4	9	7.9	4860	PASS
176	174	93	101	97.1	59971	PASS
177	176	5	9	6.4	3811	PASS

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2014\20140502\54_01MAY026.D
Tune Time : 2 May 2014 7:02 am

Daily Calibration File : C:\msdchem\1\DATA\2014\20140502\54_02MAY002.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		4396	11471	10822
54_02MAY002.D	STD2014050	4396	11471	10822
54_02MAY003.D	STD2014050	4339	11271	10352
54_02MAY004.D	20140502-M	4260	10906	10091
54_02MAY005.D	20140502-L	4485	11528	10698
54_02MAY006.D	02139 \ SG	4428	11521	10874
54_02MAY007.D	02138 \ SG	4316	11205	10555
54_02MAY008.D	02140 \ SG	4473	11694	10672
54_02MAY009.D	02141 \ SG	4274	10980	10230
54_02MAY010.D	02142 \ SG	4408	11453	10554
54_02MAY011.D	02143 \ SG	4349	11055	10135
54_02MAY012.D	02145 \ SG	4398	11602	10326
54_02MAY013.D	02148 \ SG	4546	11561	10668
54_02MAY014.D	02144 \ SG	4771	12363	11405
54_02MAY015.D	02146 \ SG	4442	11528	10619
54_02MAY016.D	02147 \ SG	4573	11733	11031
54_02MAY017.D	02149 \ SG	4461	11423	10550
54_02MAY018.D	02150 \ SG	4318	11290	10160
54_02MAY019.D	02151 \ F6	4527	11475	10539
54_02MAY020.D	02152 \ F6	4428	11265	10297
54_02MAY021.D				

```
         02153 \ G6            4594      11671      10461
-----------------------------------------------------------------------------
54_02MAY022.D
         02154 \ G6            4442      11329      10555
-----------------------------------------------------------------------------
54_02MAY023.D
         02155 \ G6            4363      11021      10430
-----------------------------------------------------------------------------
54_02MAY024.D
         02156 \ G6            4152      10653       9562
-----------------------------------------------------------------------------
54_02MAY025.D
         02157 \ G6            4724      11861      10961
-----------------------------------------------------------------------------
54_02MAY026.D
         02158 \ G6            4448      11245      10175
-----------------------------------------------------------------------------
54_02MAY027.D
         02159 \ G6            4716      11730      10543
-----------------------------------------------------------------------------
54_02MAY028.D
         02160 \ G6            4172      10439       9562
-----------------------------------------------------------------------------
54_02MAY029.D
         02161 \ G6            4435      11105      10695
-----------------------------------------------------------------------------
54_02MAY030.D
         02161 \ G6            4358      10751       9715
-----------------------------------------------------------------------------
54_02MAY031.D
         02162 \ F6            4466      11095      10097
-----------------------------------------------------------------------------
54_02MAY032.D
         02163 \ F6            4600      11239      10448
-----------------------------------------------------------------------------
54_02MAY033.D
         02164 \ F6            4250      10412       9527
-----------------------------------------------------------------------------
54_02MAY034.D
         02164 \ F6            4336      10725       9817
-----------------------------------------------------------------------------
54_02MAY035.D
         02166 \ F6            4375      10839       9927
-----------------------------------------------------------------------------
54_02MAY036.D
         02167 \ F6            4547      11150      10102
-----------------------------------------------------------------------------
54_02MAY037.D
         02168 \ F6            4551      11068      10419
-----------------------------------------------------------------------------
54_02MAY038.D
         02169 \ F6            4496      11052      10441
-----------------------------------------------------------------------------
54_02MAY039.D
         02165 \ F6            4501      10991      10284
-----------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Fri May 02 20:19:47 2014  GCMS
```

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY002.D
Acq On : 2 May 2014 7:12 am
Operator : YHL
Sample : 20140502-BFB \ Tune Check
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:19:09 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISTD	Bromochloromethane	1.000	1.000	0.0	100	0.00
2	M	Vinyl chloride	0.380	0.379	0.3	104	0.00
3	M	1,1-Dichloroethene	0.774	0.811	-4.8	106	0.00
4	M	Methyl Tert Butyl Ether	1.183	1.136	4.0	99	0.00
5	M	trans-1,2-Dichloroethene	0.683	0.711	-4.1	106	0.00
6	M	1,1-Dichloroethane	0.815	0.830	-1.8	103	0.00
7	M	cis-1,2-Dichloroethene	0.637	0.672	-5.5	104	0.00
8	M	1,1,1-Trichloroethane	1.034	1.140	-10.3	108	0.00
9	ISTD	1,4-Difluorobenzene	1.000	1.000	0.0	98	0.00
10	M	Benzene	0.457	0.451	1.3	98	0.00
11	M	Trichloroethene	0.249	0.249	0.0	97	0.00
12	ISTD	Chlorobenzene-d5	1.000	1.000	0.0	100	0.00
13	M	Toluene	0.599	0.550	8.2	92	0.00
14	M	Tetrachloroethene	0.342	0.309	9.6	89	0.00
15	M	Ethyl Benzene	0.761	0.675	11.3	88	0.00
16	M	m,p-Xylene	0.584	0.515	11.8	88	0.00
17	M	o-Xylene	0.593	0.517	12.8	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY002.D
Acq On : 2 May 2014 7:12 am
Operator : YHL
Sample : STD20140502-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:19:09 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

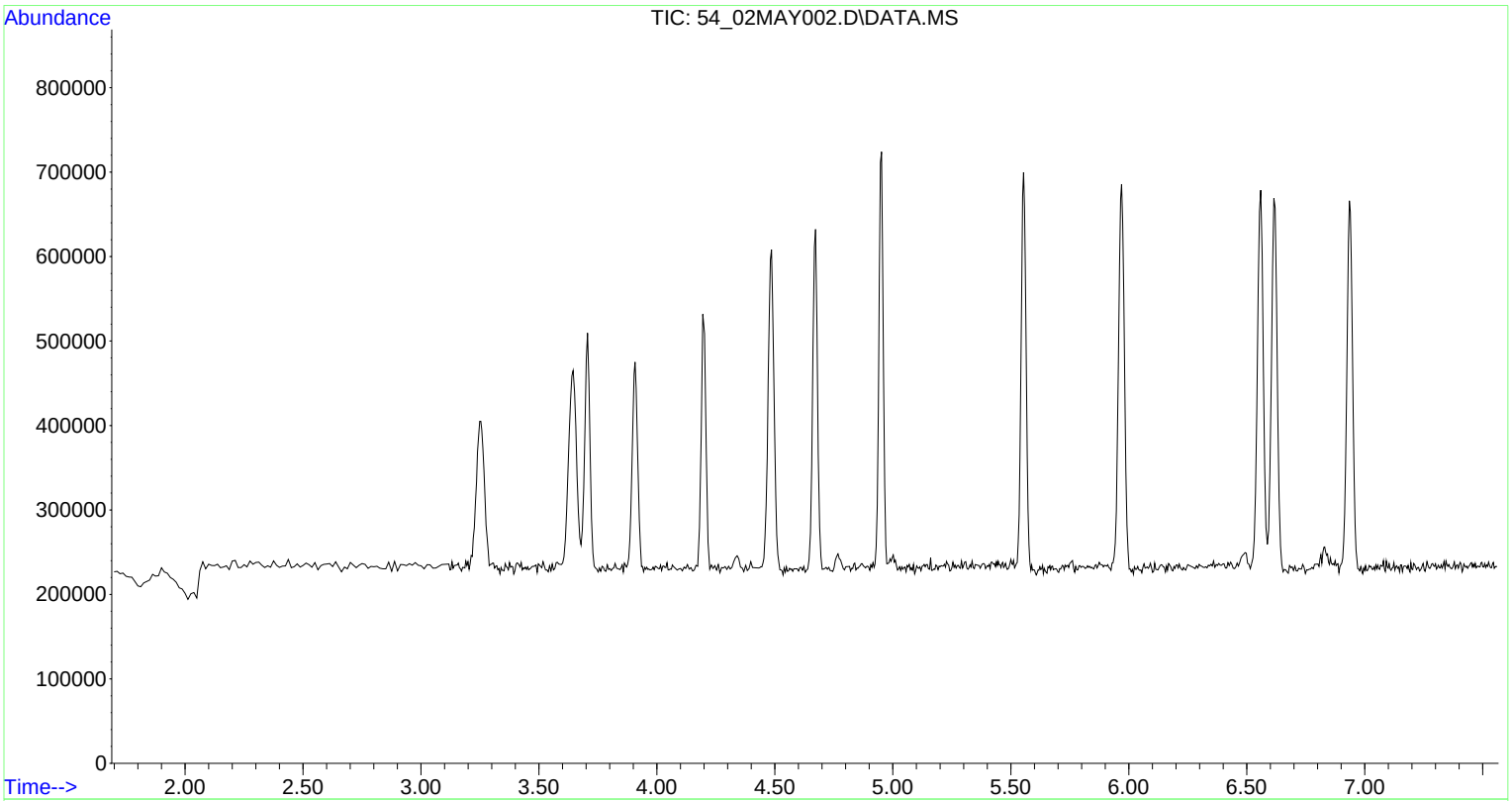
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4396	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11471	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10822	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	85908	513.93	ppbv	# 66
3] 1,1-Dichloroethene	3.251	61	177606	521.66	ppbv	# 78
4] Methyl Tert Butyl Ether	3.642	73	250963	482.77	ppbv	# 83
5] trans-1,2-Dichloroethene	3.703	61	157112	523.58	ppbv	# 75
6] 1,1-Dichloroethane	3.905	63	188712	526.81	ppbv	# 87
7] cis-1,2-Dichloroethene	4.197	61	155799	555.99	ppbv	# 73
8] 1,1,1-Trichloroethane	4.483	97	253072	556.92	ppbv	97
10] Benzene	4.669	78	271478	518.07	ppbv	# 91
11] Trichloroethene	4.950	130	143953	504.57	ppbv	100
13] Toluene	5.556	91	309737	477.45	ppbv	100
14] Tetrachloroethene	5.967	166	169949	458.66	ppbv	99
15] Ethyl Benzene	6.556	91	379683	460.87	ppbv	95
16] m,p-Xylene	6.617	91	289902	458.49	ppbv	93
17] o-Xylene	6.937	91	289570	451.60	ppbv	93

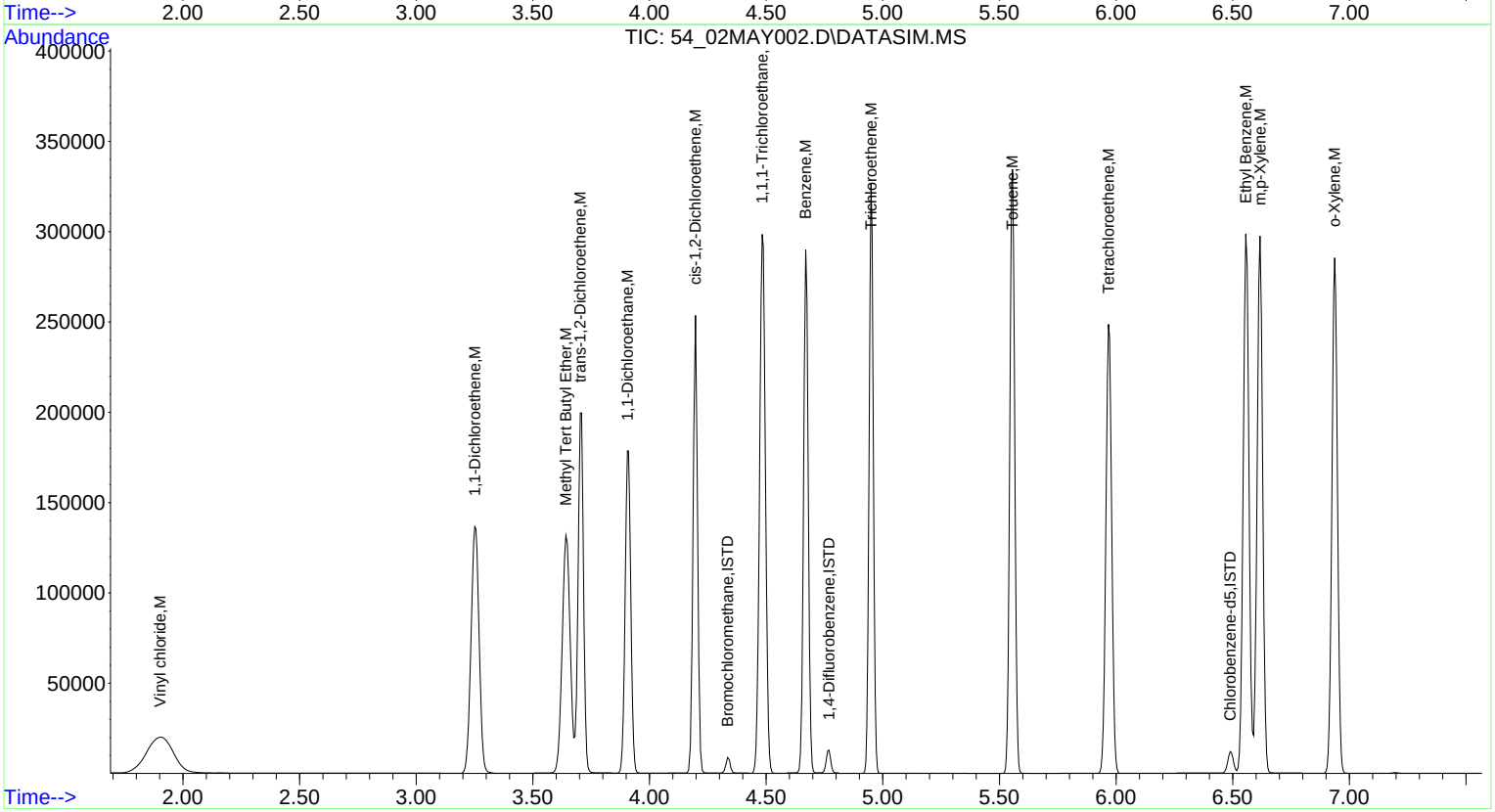
(#) = qualifier out of range (m) = manual integration (+) = signals summed

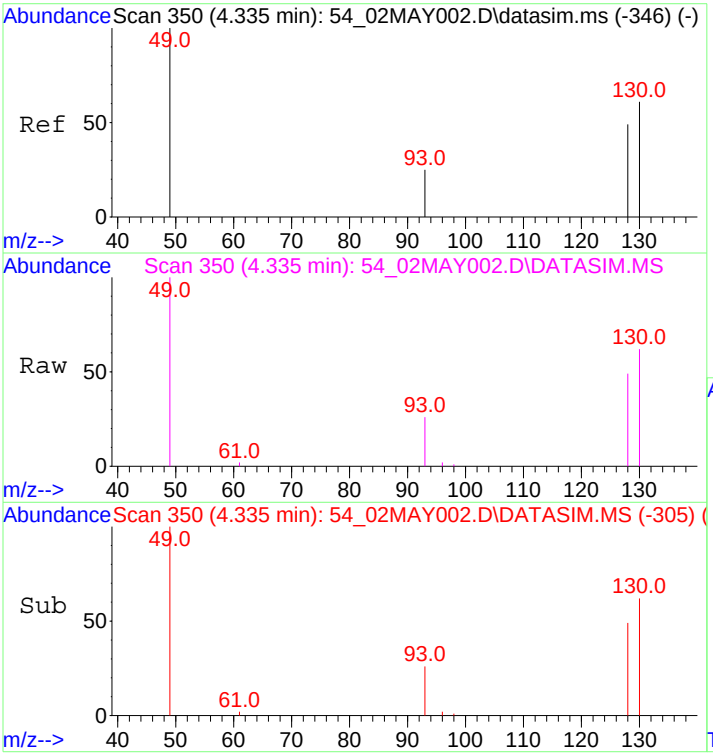
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY002.D
Acq On : 2 May 2014 7:12 am
Operator : YHL
Sample : STD20140502-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:19:09 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



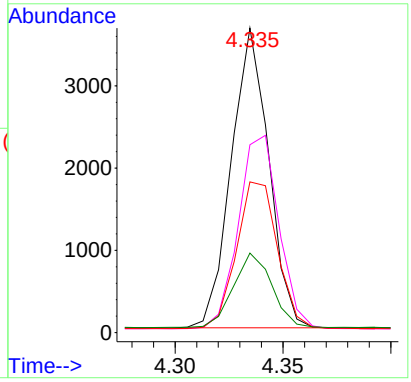


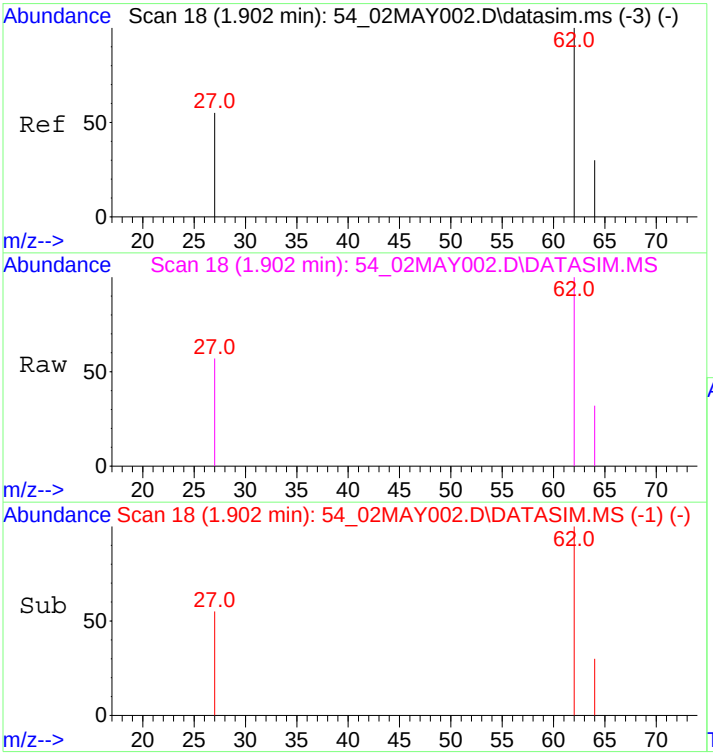


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 49 Resp: 4396

Ion	Ratio	Lower	Upper
49	100		
130	69.9	87.2	130.8#
128	53.6	68.0	102.0#
93	25.3	29.3	43.9#

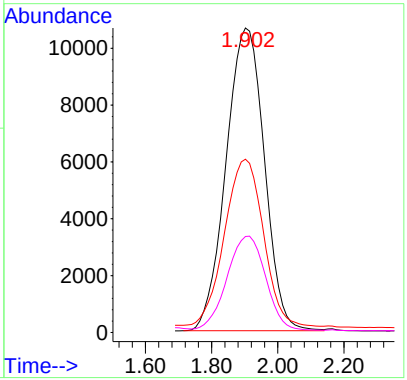


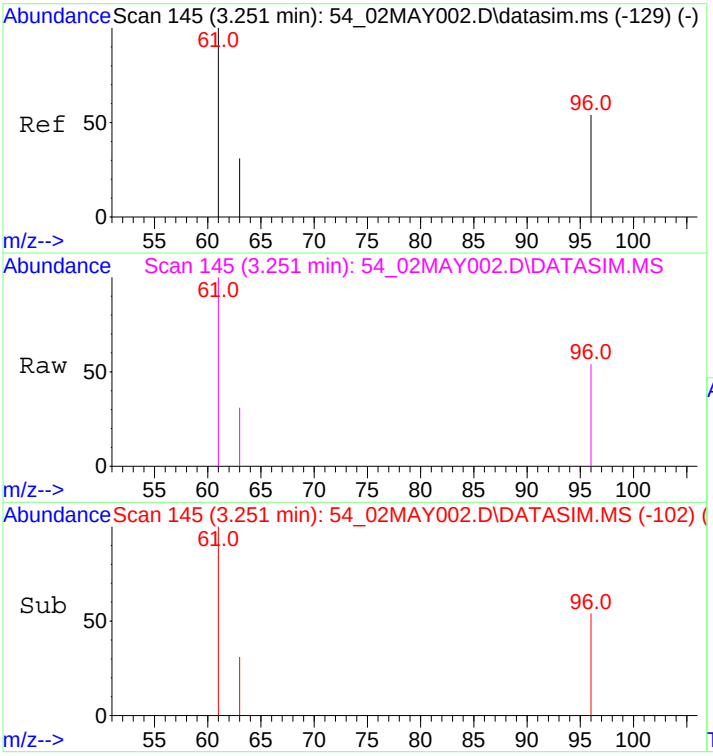


#2
Vinyl chloride
Concen: 513.93 ppbv
RT: 1.902 min Scan# 18
Delta R.T. -0.013 min
Lab File: 54_02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 62 Resp: 85908

Ion	Ratio	Lower	Upper
62	100		
64	33.3	26.8	40.2
27	61.6	16.1	24.1#

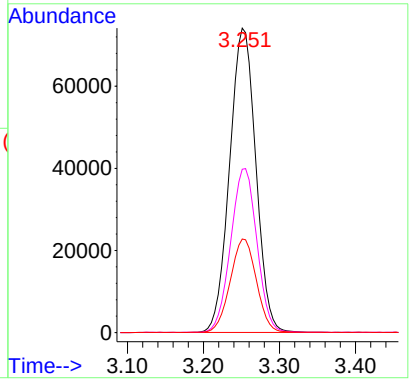


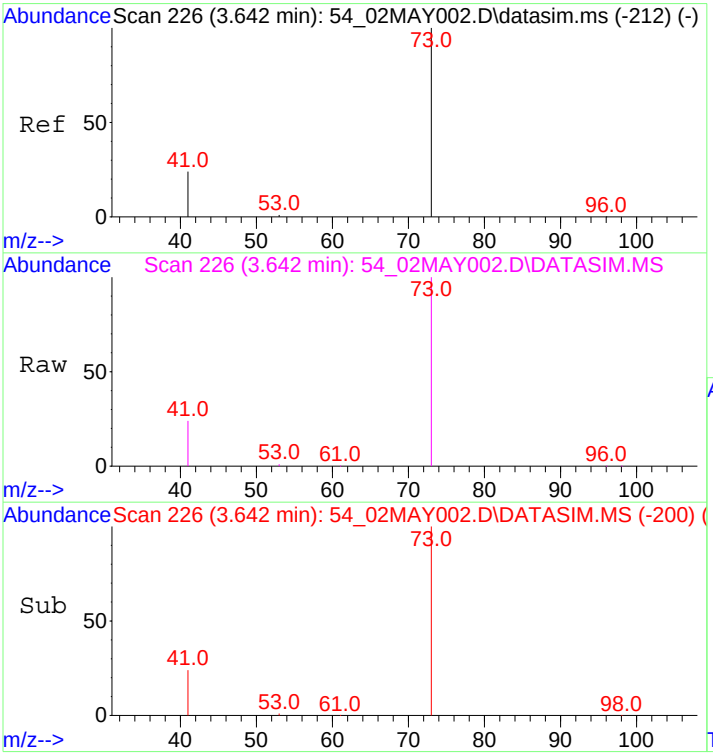


#3
1,1-Dichloroethene
Concen: 521.66 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.005 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 61 Resp: 177606

Ion	Ratio	Lower	Upper
61	100		
96	53.9	63.4	95.2#
63	30.7	26.2	39.2

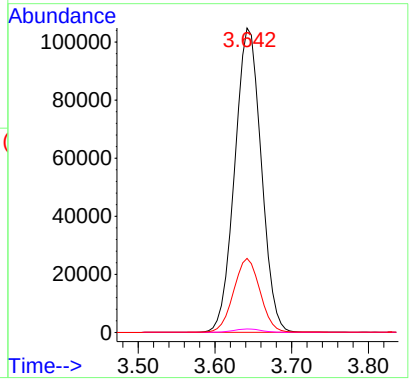


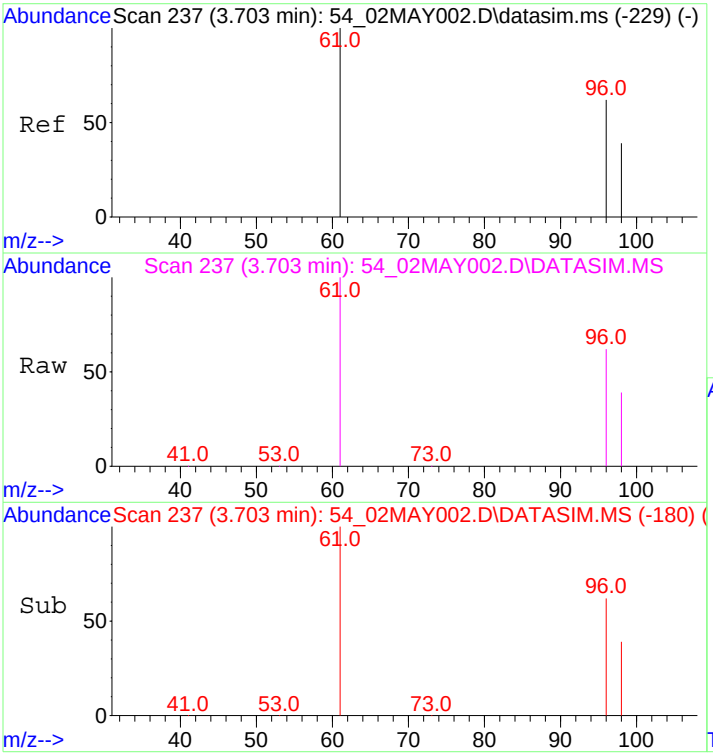


#4
Methyl Tert Butyl Ether
Concen: 482.77 ppbv
RT: 3.642 min Scan# 226
Delta R.T. -0.006 min
Lab File: 54_02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 73 Resp: 250963

Ion	Ratio	Lower	Upper
73	100		
53	1.1	1.0	1.4
41	24.1	13.1	19.7#

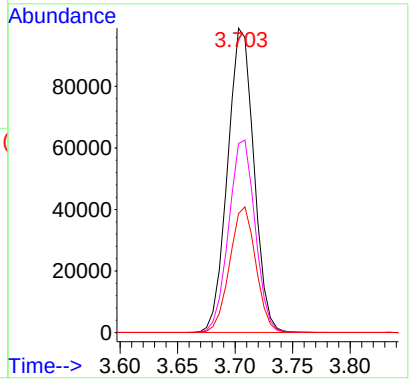


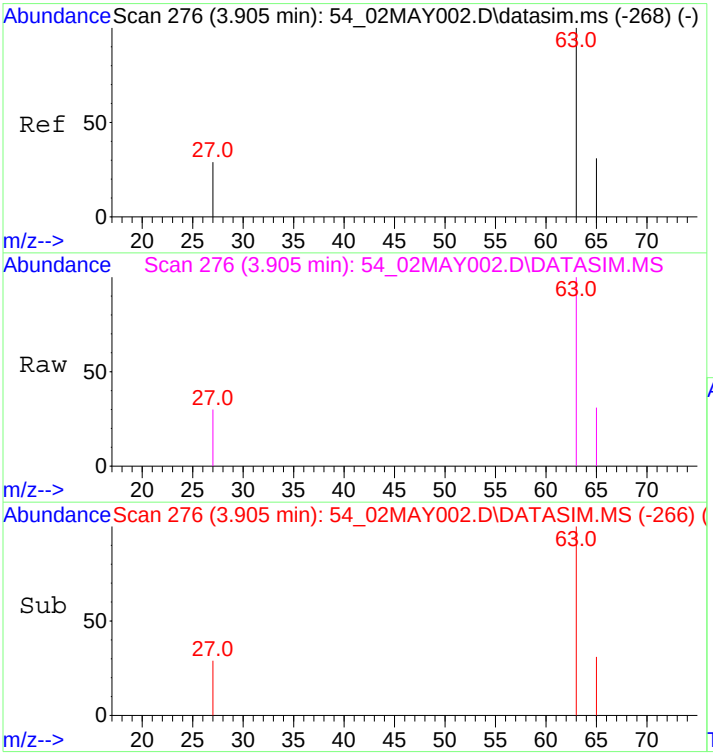


#5
trans-1,2-Dichloroethene
Concen: 523.58 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 61 Resp: 157112

Ion	Ratio	Lower	Upper
61	100		
96	63.7	71.4	107.0#
98	41.0	45.8	68.8#

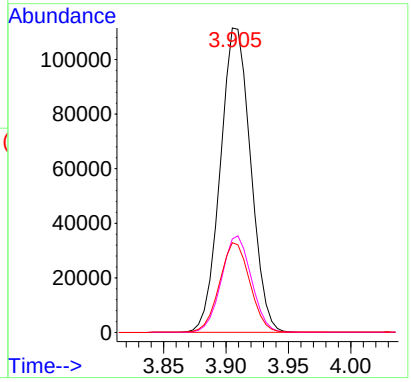


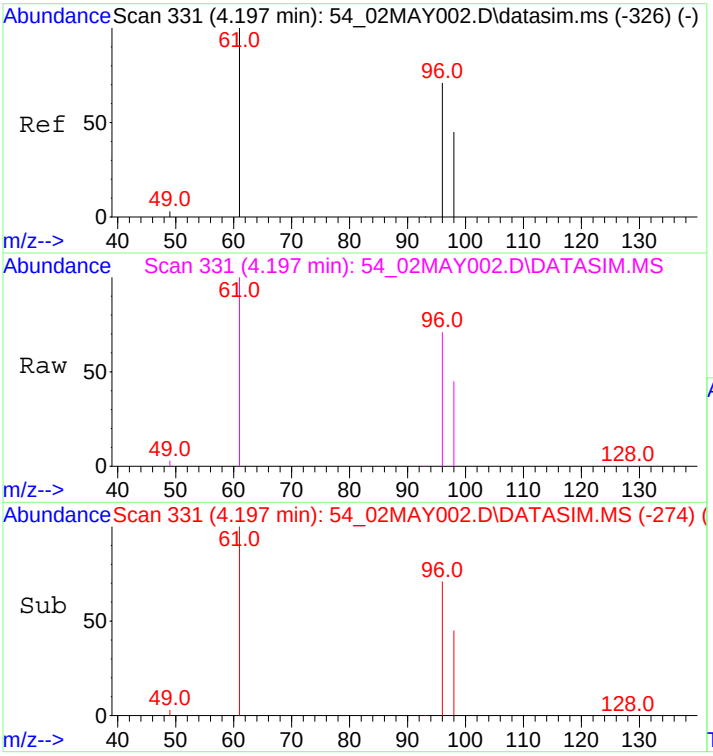


#6
1,1-Dichloroethane
Concen: 526.81 ppbv
RT: 3.905 min Scan# 276
Delta R.T. -0.005 min
Lab File: 54_02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 63 Resp: 188712

Ion	Ratio	Lower	Upper
63	100		
65	31.2	26.1	39.1
27	29.1	10.2	15.2#

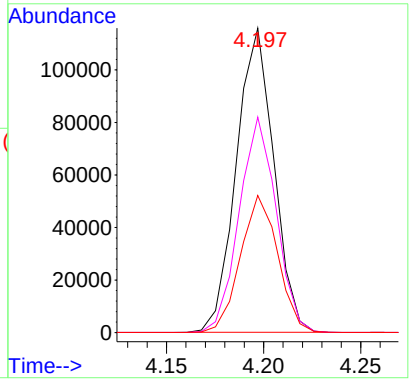


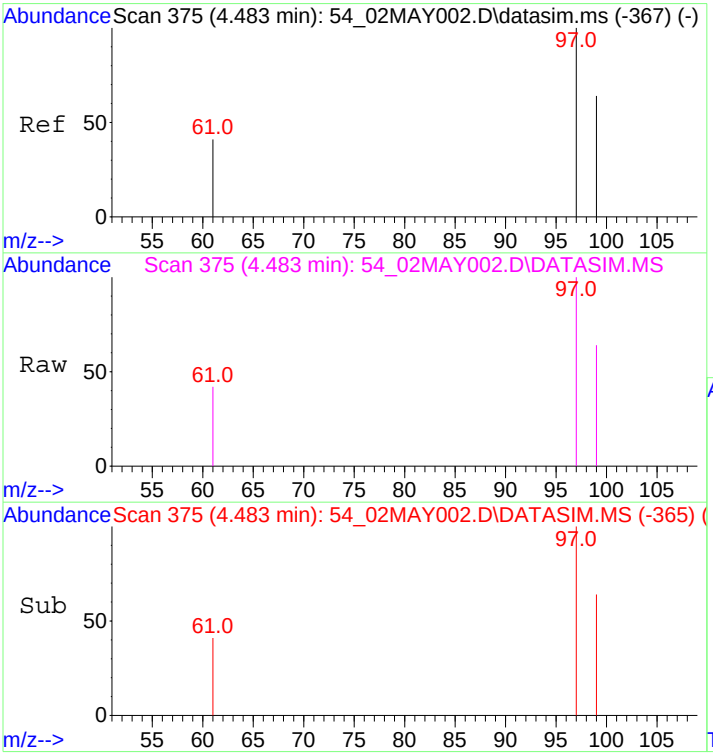


#7
cis-1,2-Dichloroethene
Concen: 555.99 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 61 Resp: 155799

Ion	Ratio	Lower	Upper
61	100		
96	69.9	78.5	117.7#
98	44.9	50.6	76.0#

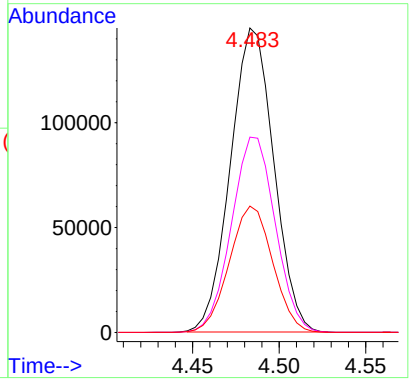


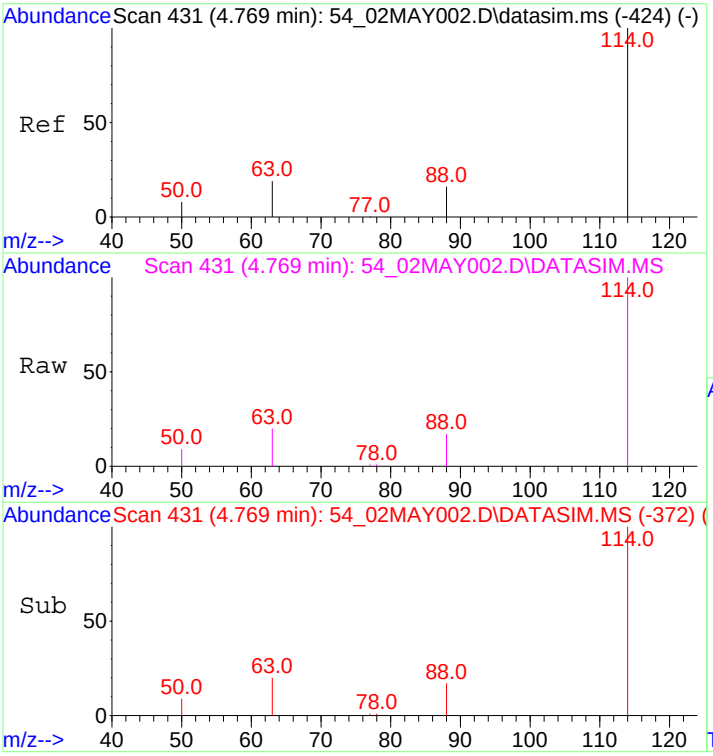


#8
1,1,1-Trichloroethane
Concen: 556.92 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 97 Resp: 253072

Ion	Ratio	Lower	Upper
97	100		
99	64.7	52.1	78.1
61	41.5	30.2	45.4

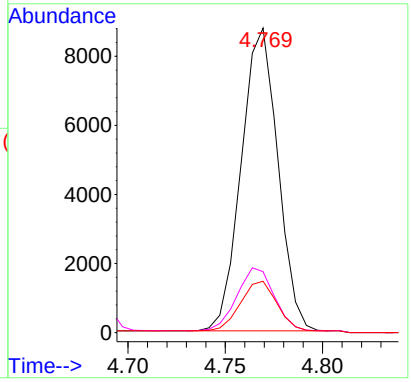


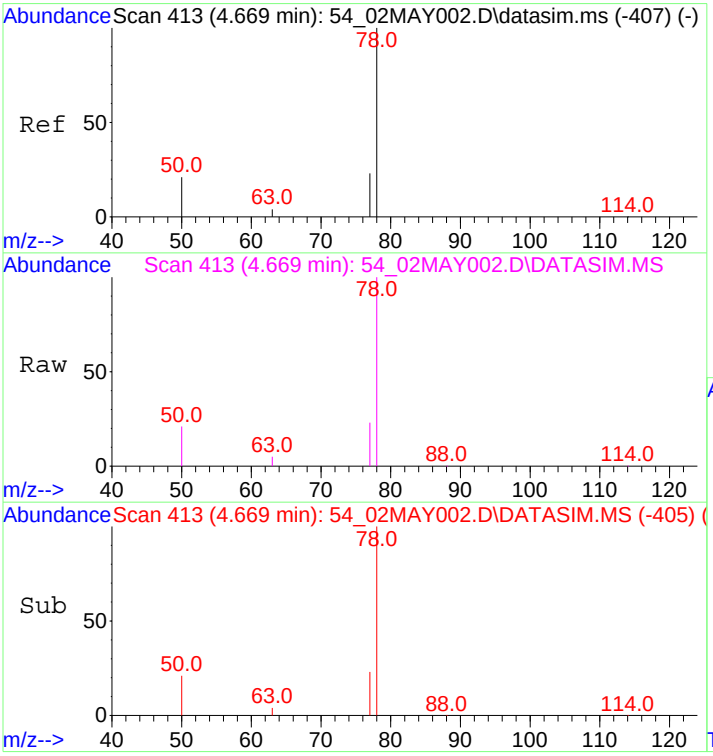


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion:114 Resp: 11471

Ion	Ratio	Lower	Upper
114	100		
63	21.1	12.0	18.0#
88	16.4	11.8	17.8

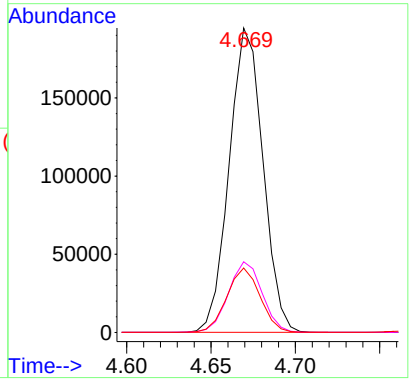


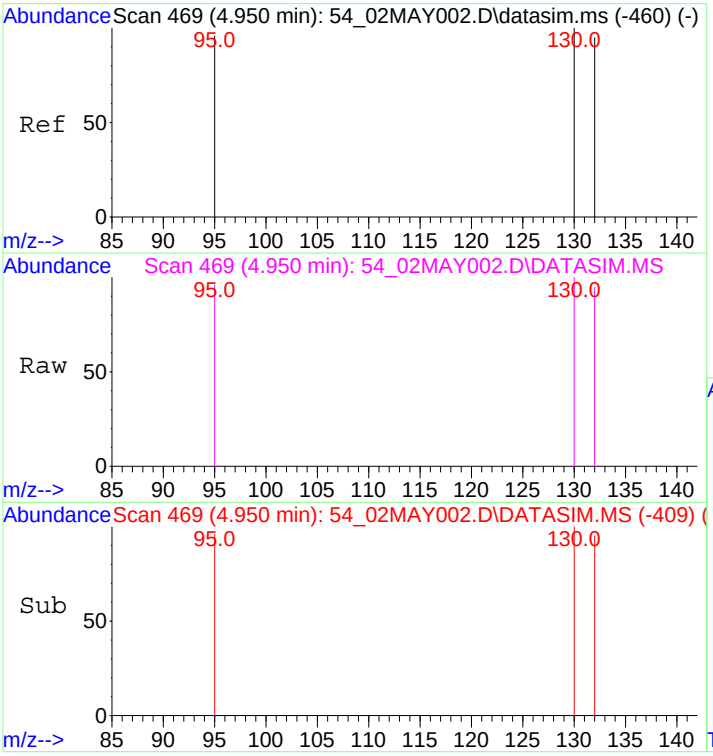


#10
Benzene
Concen: 518.07 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.006 min
Lab File: 54_02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 78 Resp: 271478

Ion	Ratio	Lower	Upper
78	100		
77	23.1	18.2	27.2
50	20.7	8.6	13.0#

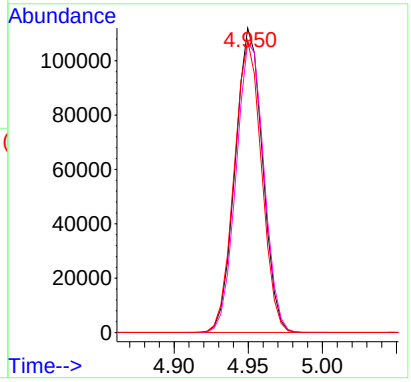


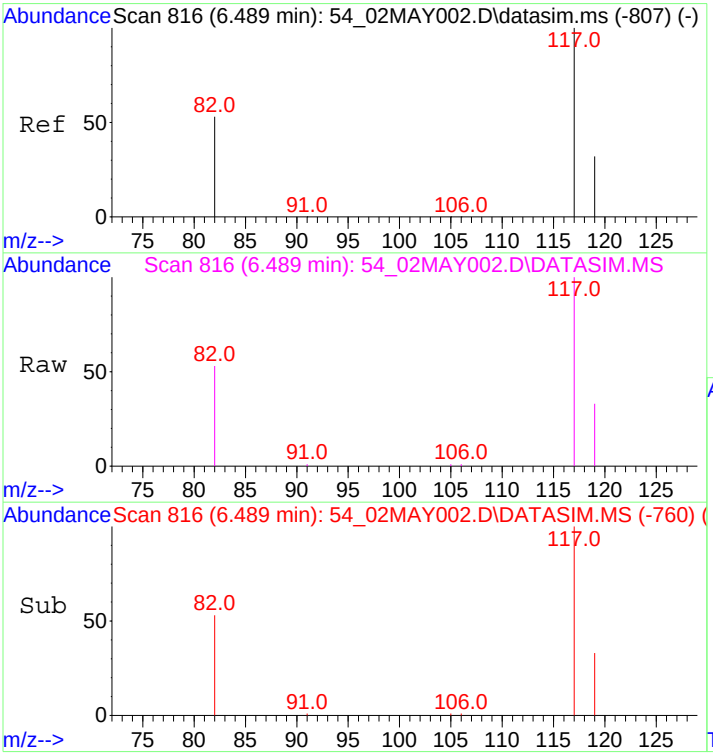


#11
Trichloroethene
Concen: 504.57 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion:130 Resp: 143953

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	95.6	76.5	114.7

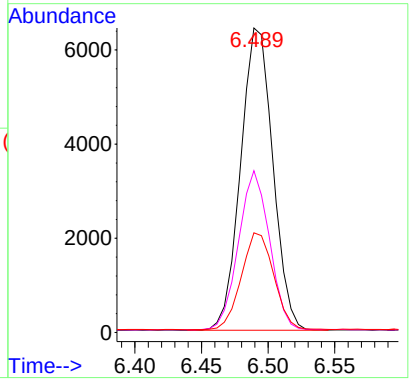


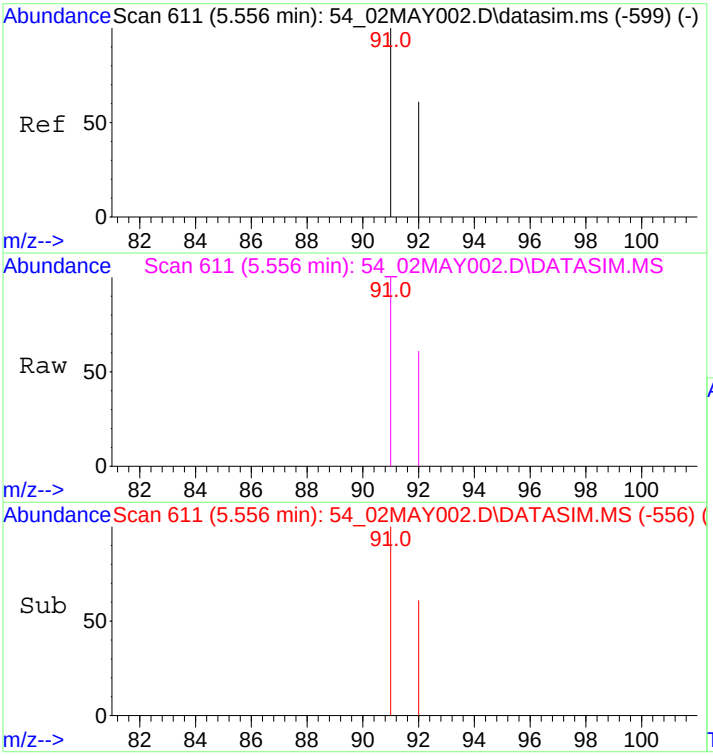


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion:117 Resp: 10822

Ion	Ratio	Lower	Upper
117	100		
82	50.5	38.0	57.0
119	32.2	27.0	40.4

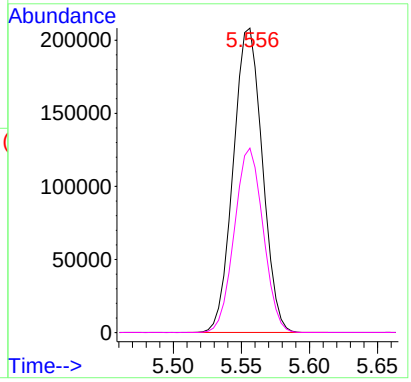


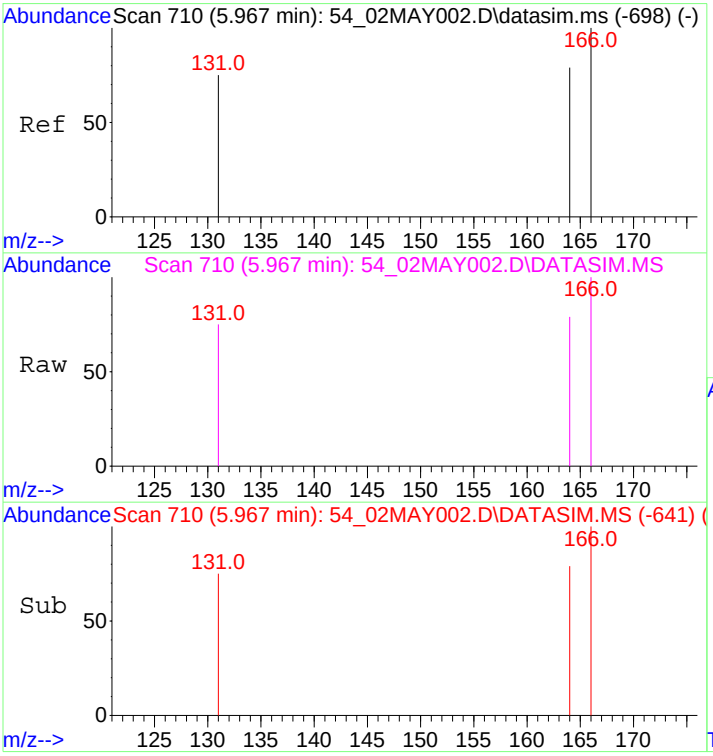


#13
Toluene
Concen: 477.45 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 91 Resp: 309737

Ion	Ratio	Lower	Upper
91	100		
92	59.9	47.8	71.8

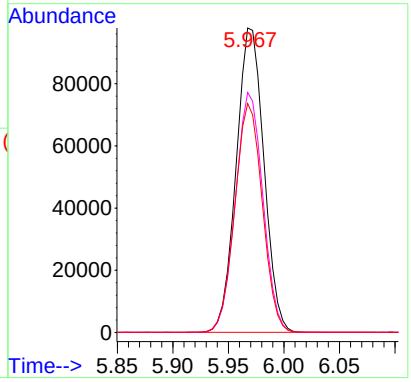


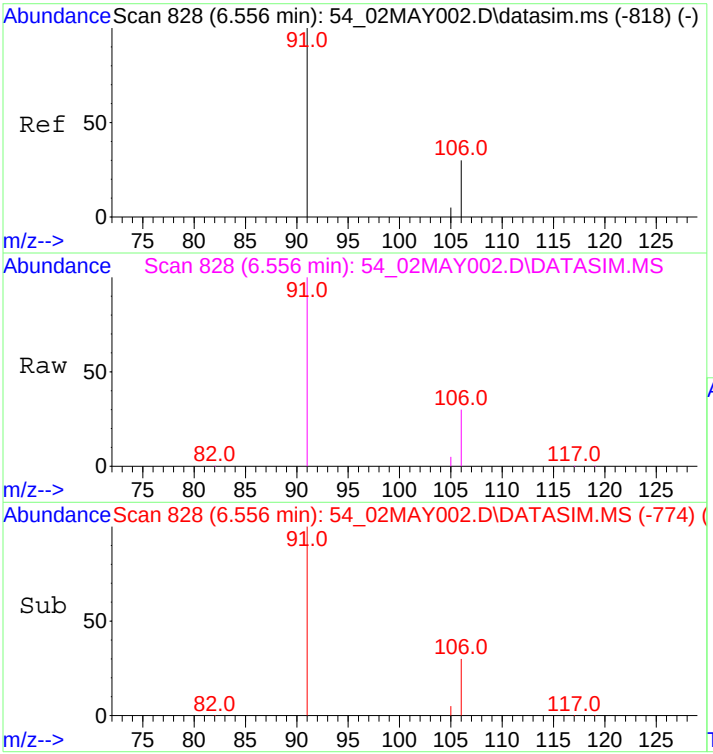


#14
Tetrachloroethene
Concen: 458.66 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion:166 Resp: 169949

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	74.5	58.5	87.7

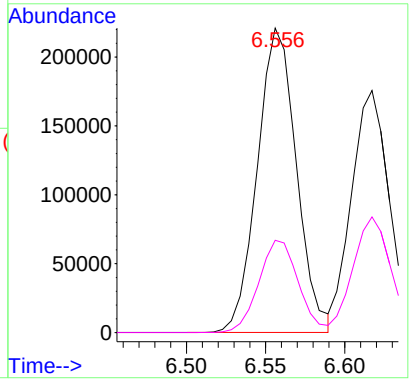


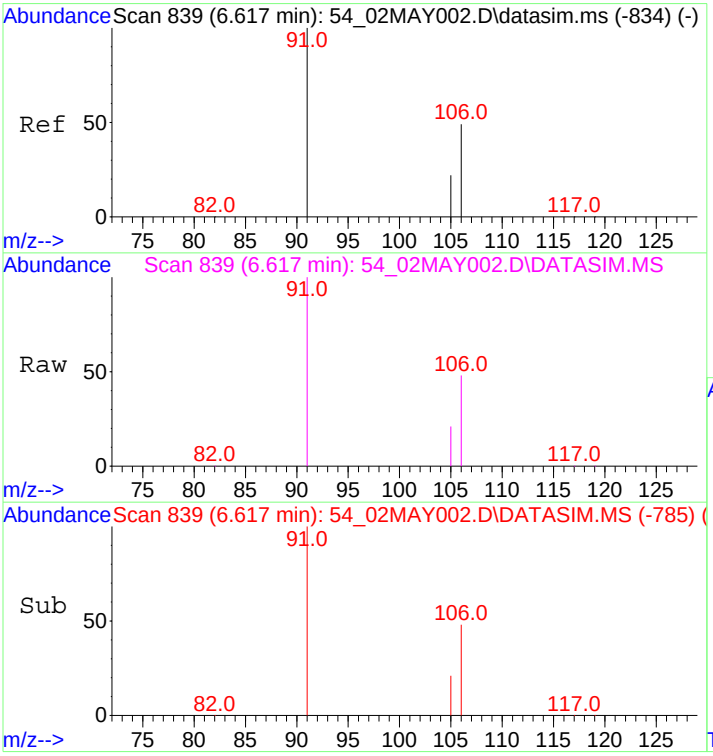


#15
Ethyl Benzene
Concen: 460.87 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 91 Resp: 379683

Ion	Ratio	Lower	Upper
91	100		
106	30.7	26.9	40.3

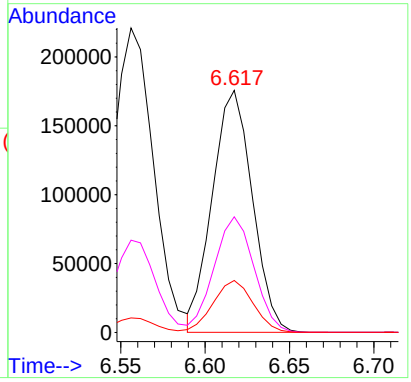


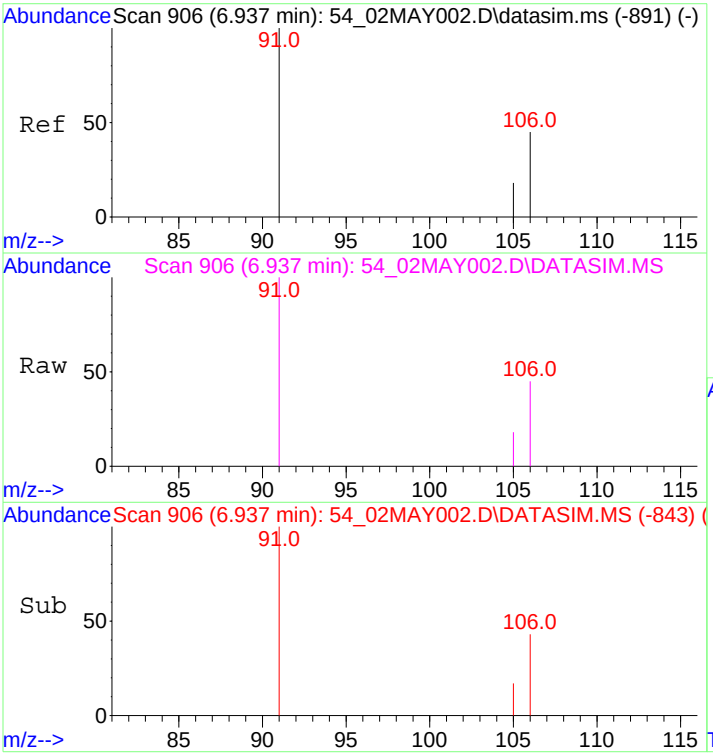


#16
m,p-Xylene
Concen: 458.49 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 91 Resp: 289902

Ion	Ratio	Lower	Upper
91	100		
106	47.6	43.1	64.7
105	21.5	18.3	27.5

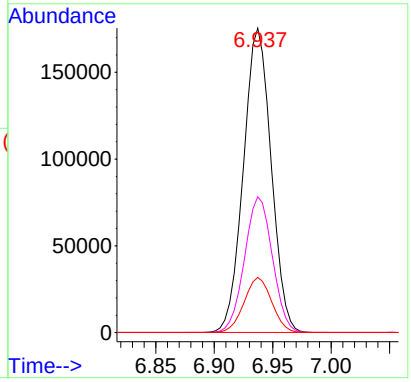




#17
o-Xylene
Concen: 451.60 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 02MAY002.D
Acq: 2 May 2014 7:12 am

Tgt Ion: 91 Resp: 289570

Ion	Ratio	Lower	Upper
91	100		
106	44.8	40.1	60.1
105	18.0	15.8	23.6



LOW LEVEL CALIBRATION VERIFICATION

Data File 54_02May003.D

LLCCV Standard Number 050214-LLCCV

LLCCV Standard Name **STD20140502-3 \LLCCV 0.5 ppbv 1º**

Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/2/2014	Second Source Actual Values ppbv	Difference %	Acceptance Criterion %	
Vinyl Chloride	0.5	0.52	2.9	50	OK
1,1-Dichloroethene	0.5	0.50	0.5	50	OK
Methyl Tert Butyl Ether	0.44	0.50	12.4	50	OK
trans-1,2-Dichloroethene	0.5	0.50	0.5	50	OK
1,1-Dichloroethane	0.51	0.52	1.4	50	OK
cis-1,2-Dichloroethene	0.55	0.53	4.3	50	OK
1,1,1-Trichloroethane	0.54	0.51	6.9	50	OK
Benzene	0.57	0.53	8.6	50	OK
Trichloroethene	0.59	0.51	16.8	50	OK
Toluene	0.62	0.52	19.2	50	OK
Tetrachloroethene	0.51	0.51	0.5	50	OK
Ethyl Benzene	0.53	0.52	1.9	50	OK
m,p-Xylene	0.6	0.52	15.4	50	OK
o-Xylene	0.57	0.52	10.1	50	OK

Primary Standard Cylinder # CC-80994

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:51:38 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration

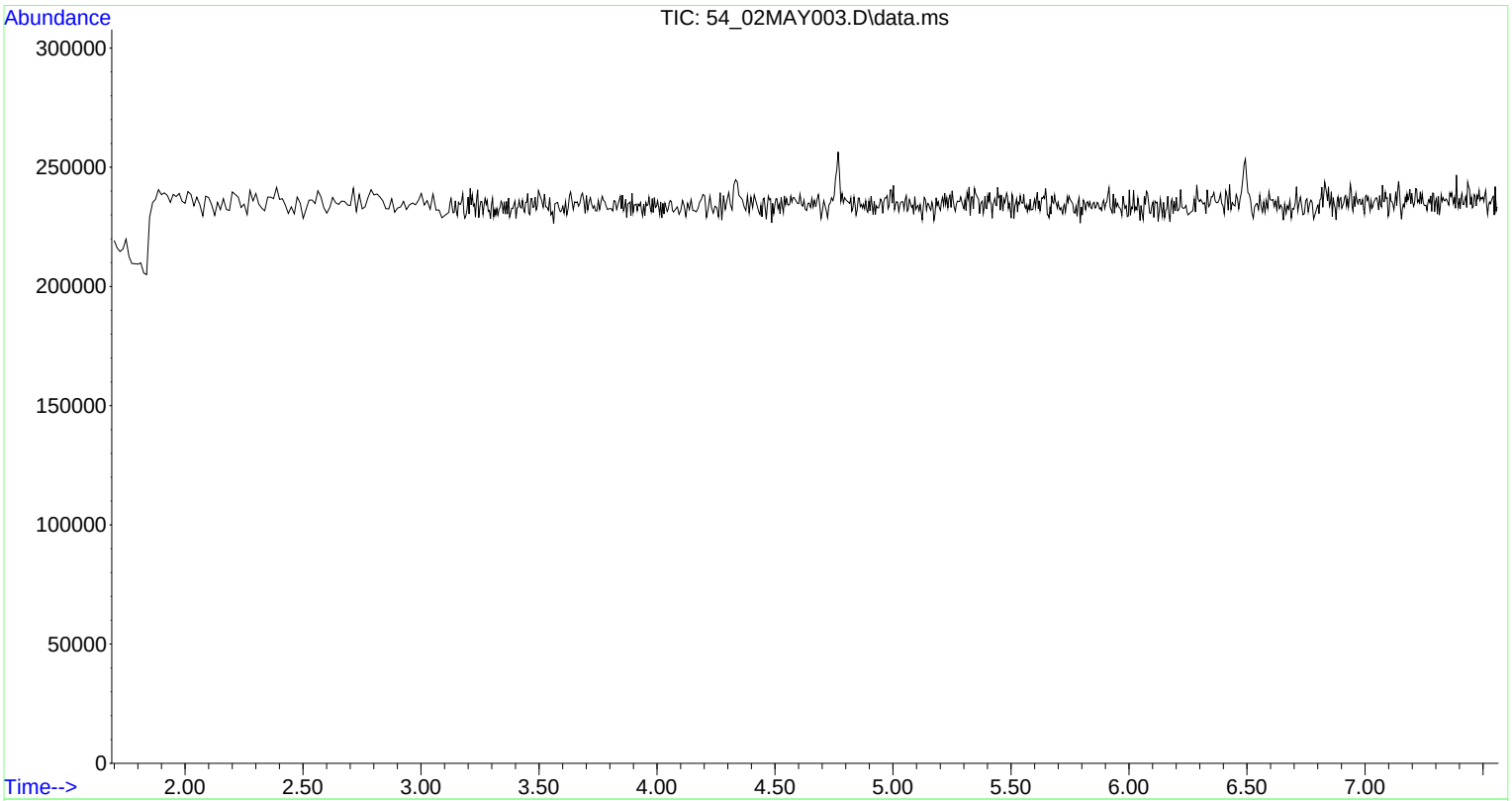
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4339	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11271	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	10352	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	83m	0.50	ppbv	
3] 1,1-Dichloroethene	3.247	61	169	0.50	ppbv	# 21
4] Methyl Tert Butyl Ether	3.648	73	228m	0.44	ppbv	
5] trans-1,2-Dichloroethene	3.709	61	149m	0.50	ppbv	
6] 1,1-Dichloroethane	3.905	63	181	0.51	ppbv	# 94
7] cis-1,2-Dichloroethene	4.197	61	151m	0.55	ppbv	
8] 1,1,1-Trichloroethane	4.488	97	241	0.54	ppbv	100
10] Benzene	4.669	78	293	0.57	ppbv	# 59
11] Trichloroethene	4.950	130	165	0.59	ppbv	# 85
13] Toluene	5.556	91	387m	0.62	ppbv	
14] Tetrachloroethene	5.967	166	181	0.51	ppbv	# 62
15] Ethyl Benzene	6.556	91	419	0.53	ppbv	95
16] m,p-Xylene	6.617	91	362	0.60	ppbv	93
17] o-Xylene	6.936	91	351	0.57	ppbv	92

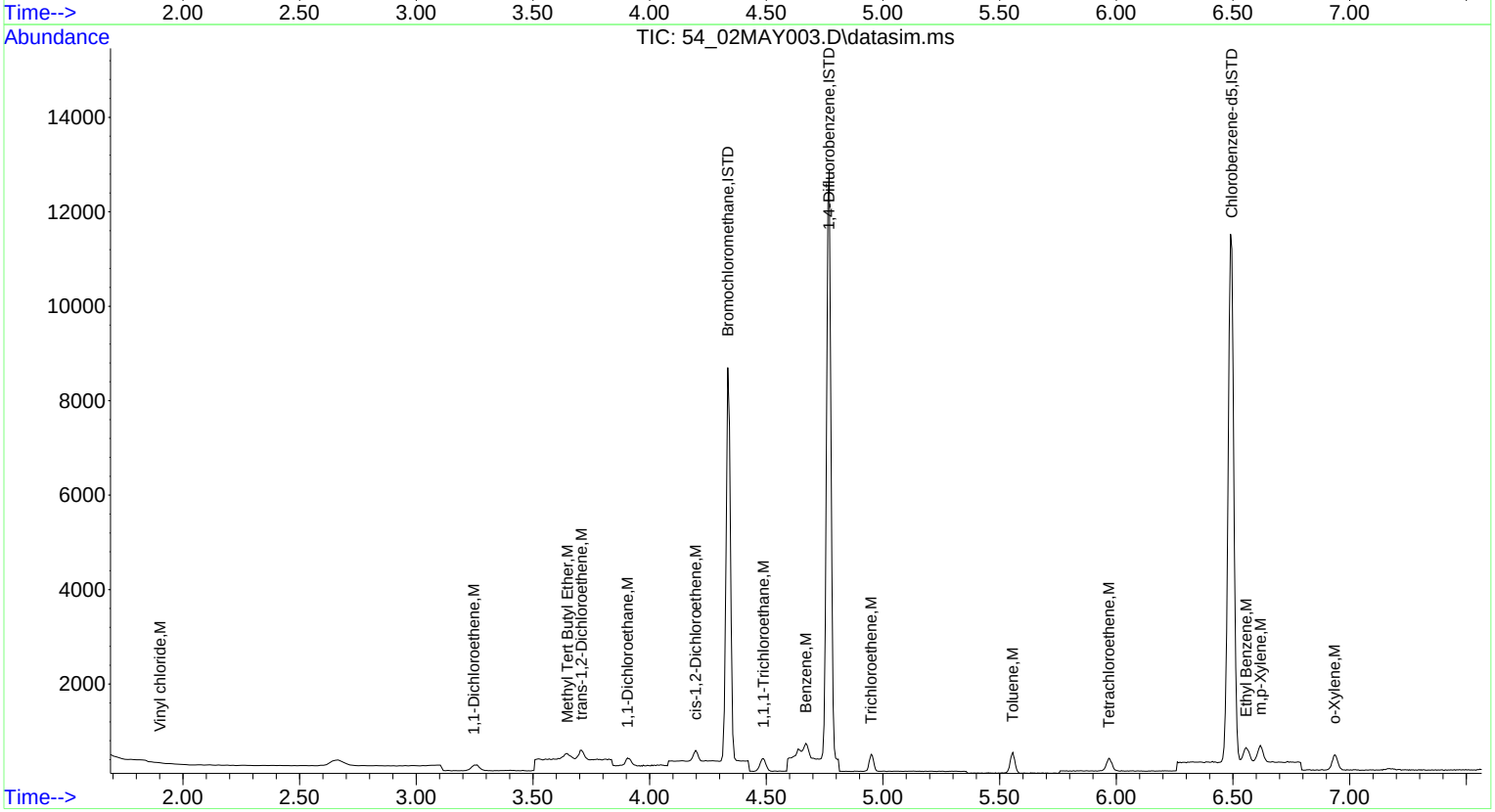
(#) = qualifier out of range (m) = manual integration (+) = signals summed

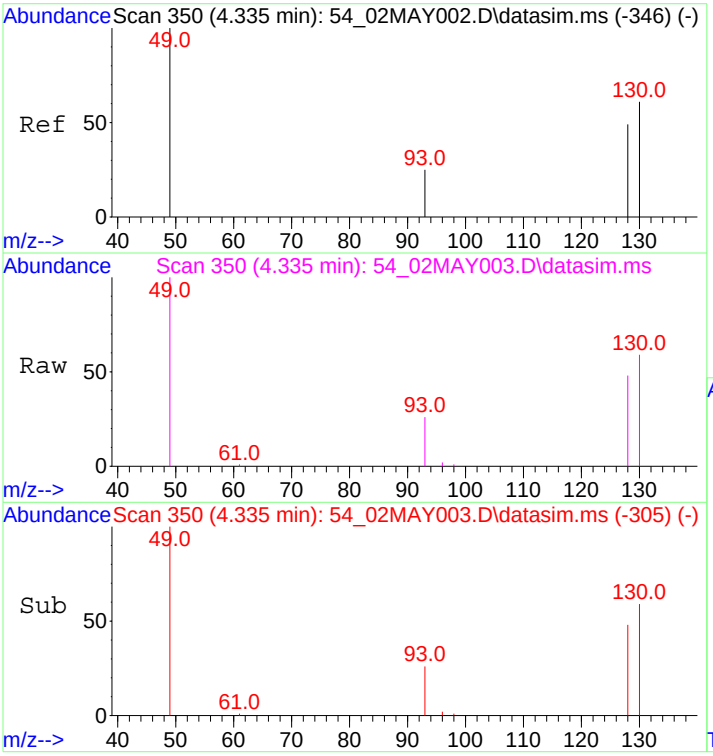
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:51:38 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration



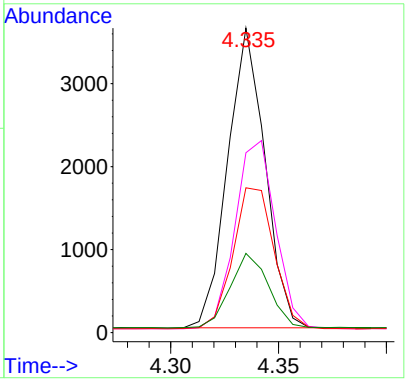


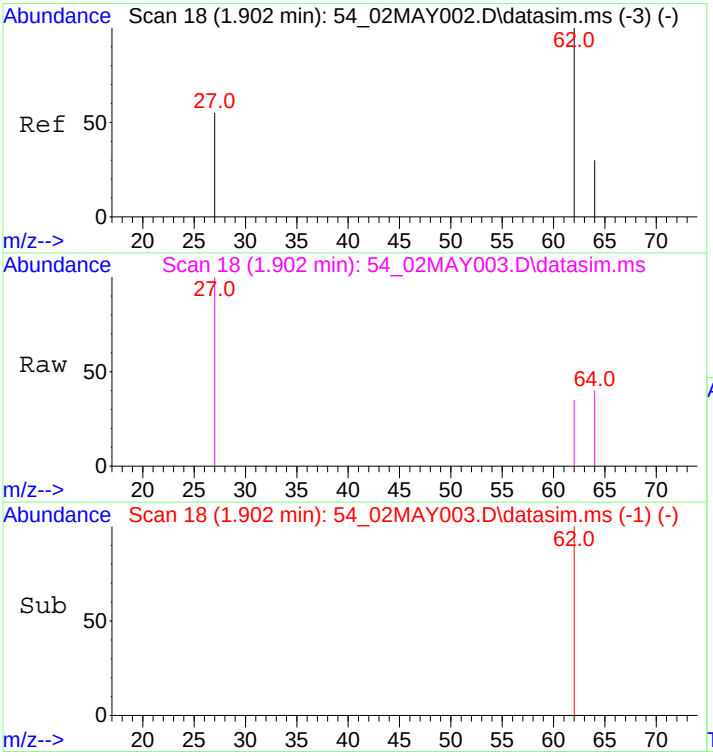


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 49 Resp: 4339

Ion	Ratio	Lower	Upper
49	100		
130	68.3	87.2	130.8#
128	52.0	68.0	102.0#
93	25.4	29.3	43.9#

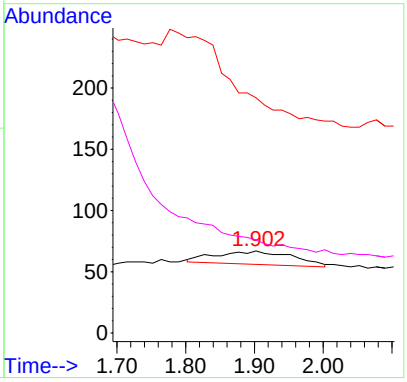




#2
Vinyl chloride
Concen: 0.50 ppbv m
RT: 1.902 min Scan# 18
Delta R.T. 0.000 min
Lab File: 54_02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 62 Resp: 83

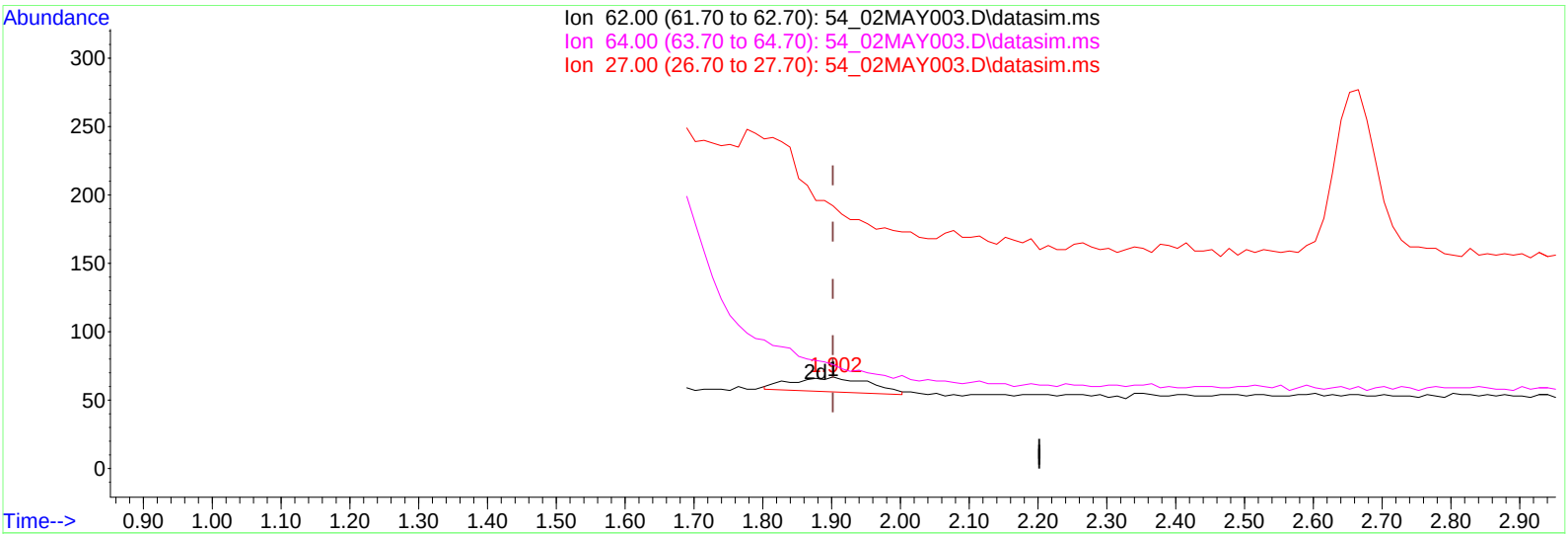
Ion	Ratio	Lower	Upper
62	100		
64	113.4	26.8	40.2#
27	286.6	16.1	24.1#

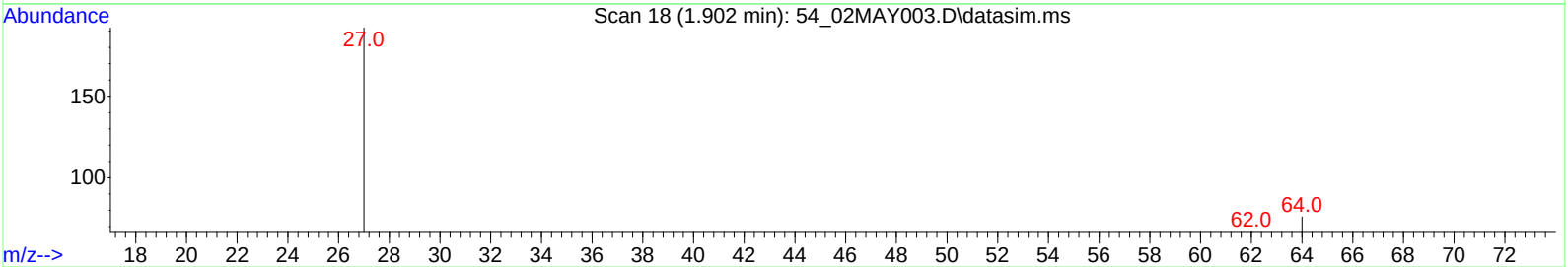


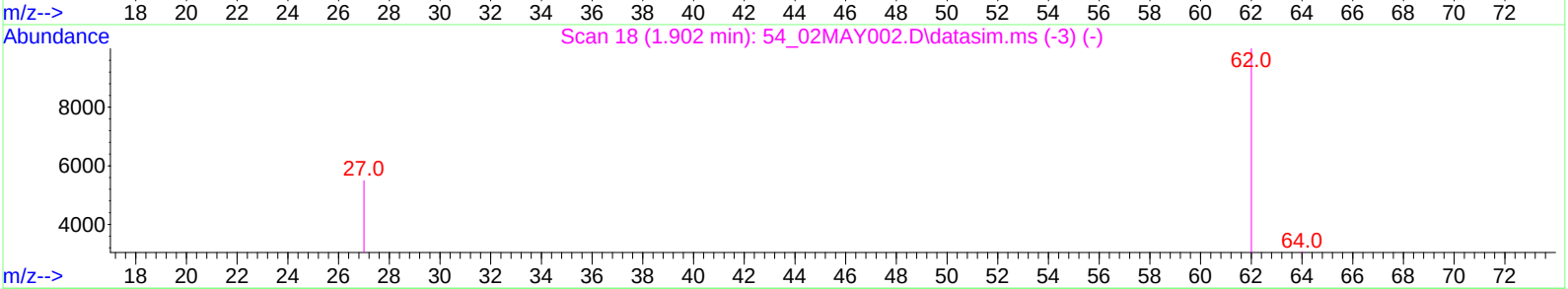
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







TIC: 54_02MAY003.D\data.ms

(2) Vinyl chloride (M)

1.902min (+0.000) 0.50 ppbv m

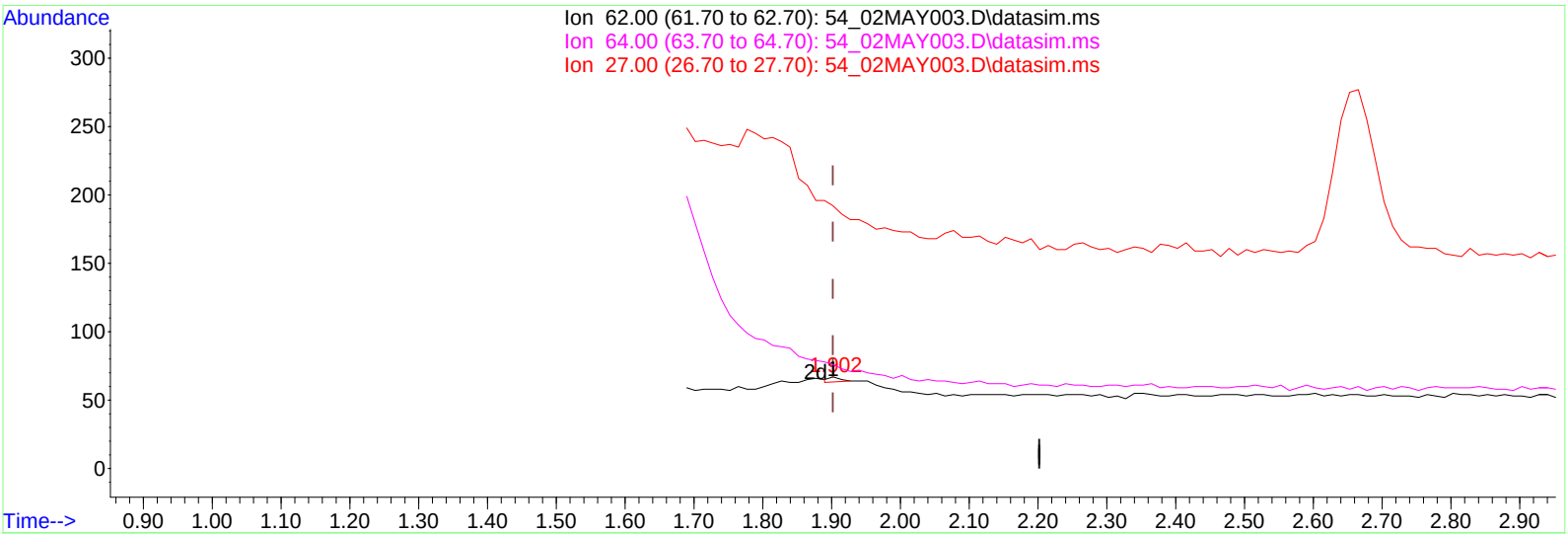
response 83

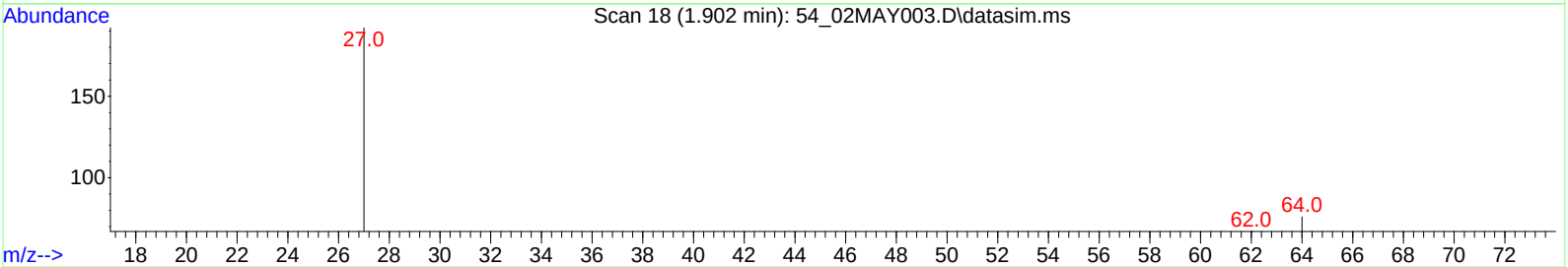
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	113.43#
27.00	20.10	286.57#
0.00	0.00	0.00

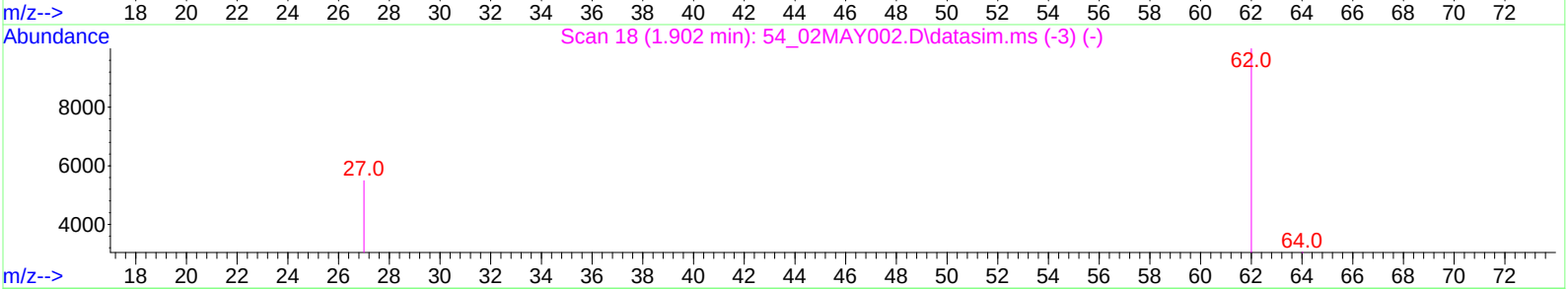
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







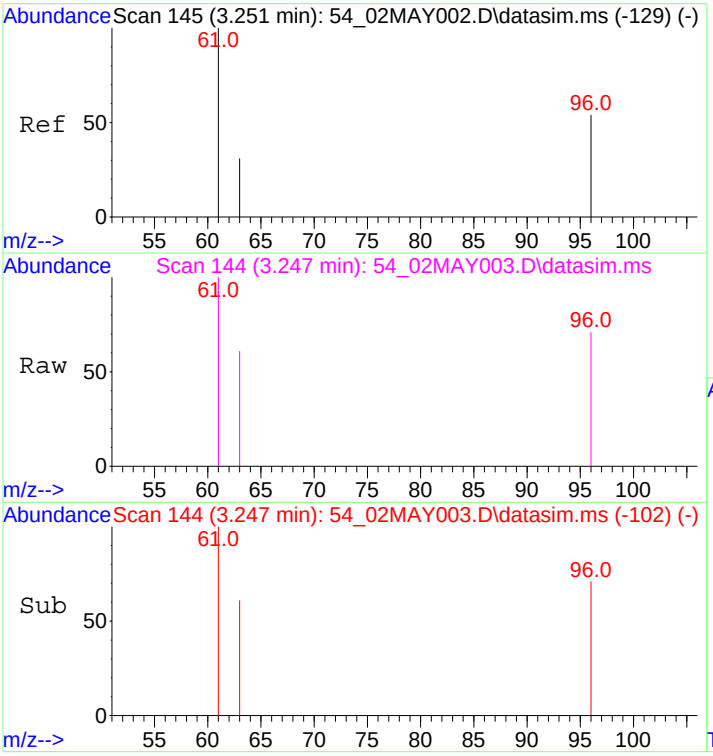
TIC: 54_02MAY003.D\data.ms

(2) Vinyl chloride (M)

1.902min (+0.000) 0.02 ppbv

response 4

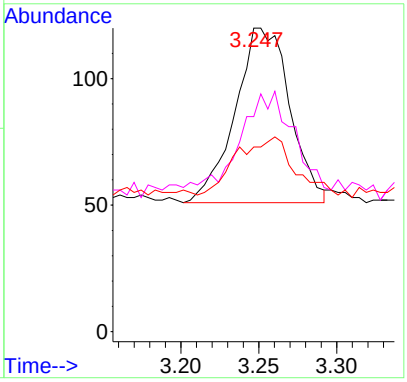
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	0.00#
27.00	20.10	0.00#
0.00	0.00	0.00

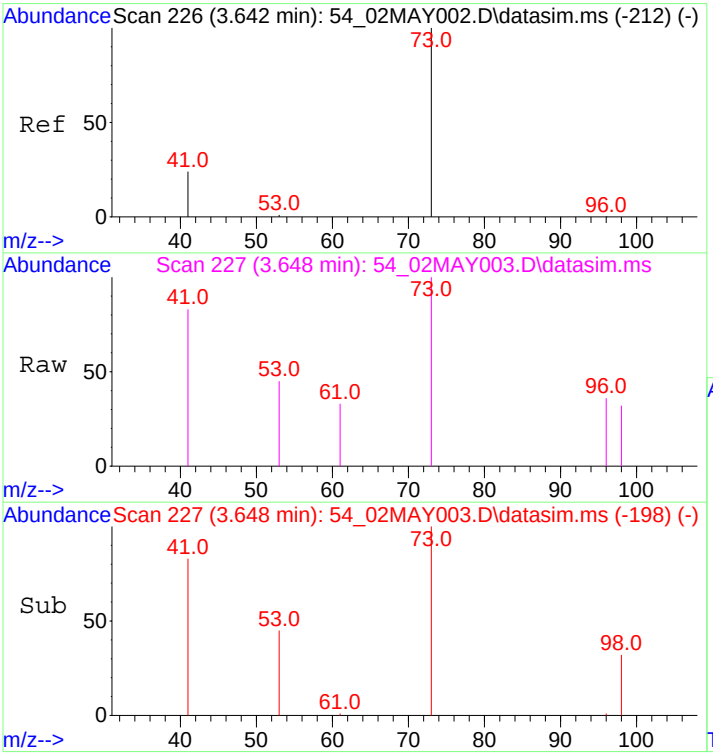


#3
1,1-Dichloroethene
Concen: 0.50 ppbv
RT: 3.247 min Scan# 144
Delta R.T. -0.004 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 61 Resp: 169

Ion	Ratio	Lower	Upper
61	100		
96	0.0	63.4	95.2#
63	3.6	26.2	39.2#

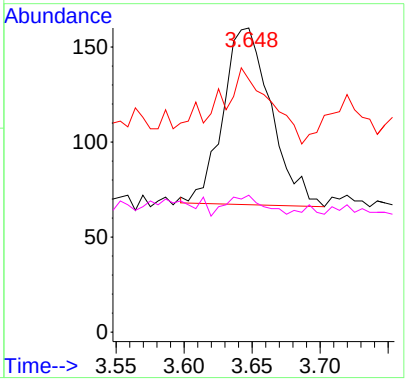




#4
Methyl Tert Butyl Ether
Concen: 0.44 ppbv m
RT: 3.648 min Scan# 227
Delta R.T. 0.006 min
Lab File: 54_02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 73 Resp: 228

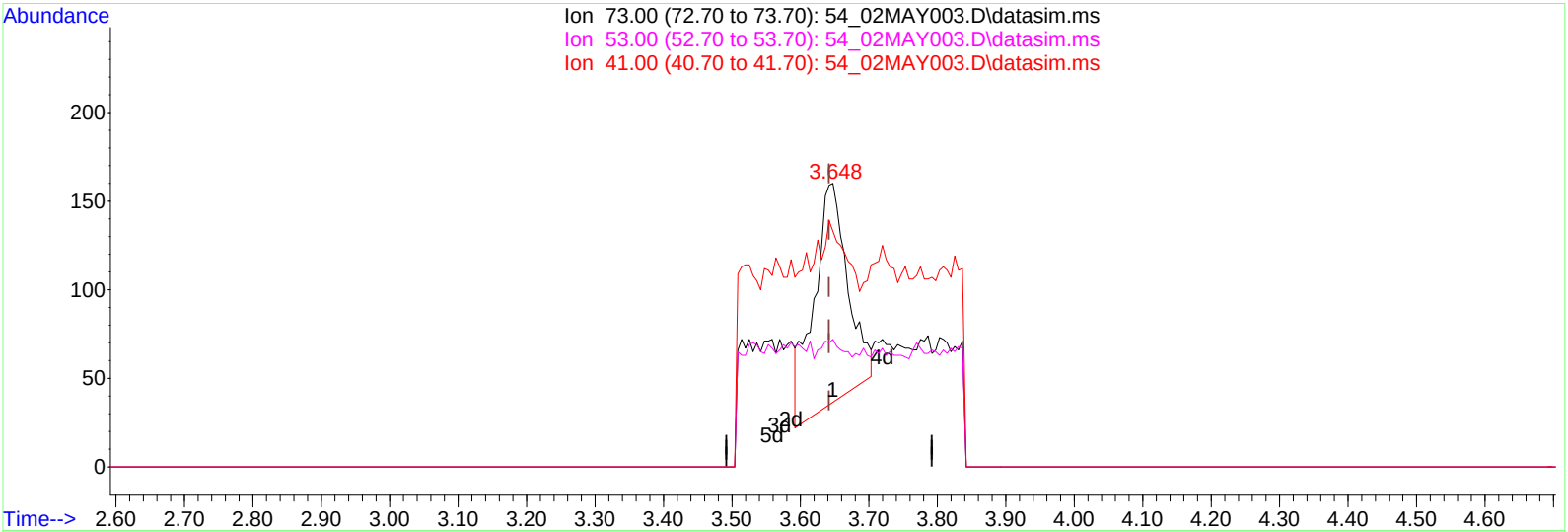
Ion	Ratio	Lower	Upper
73	100		
53	38.2	1.0	1.4#
41	31.6	13.1	19.7#

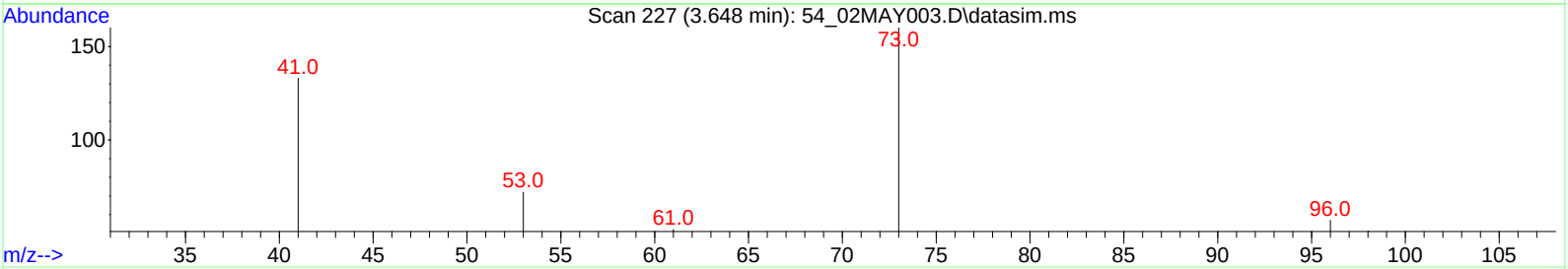


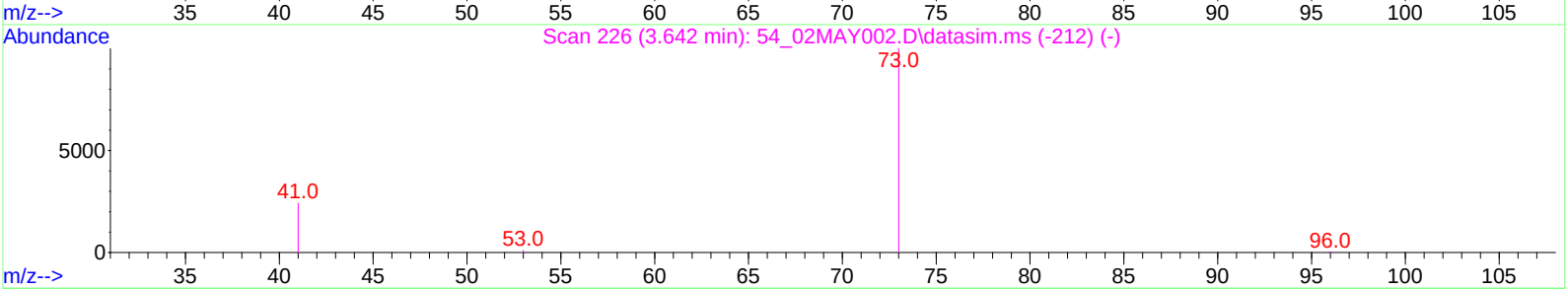
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







TIC: 54_02MAY003.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.648min (+0.006) 0.84 ppbv

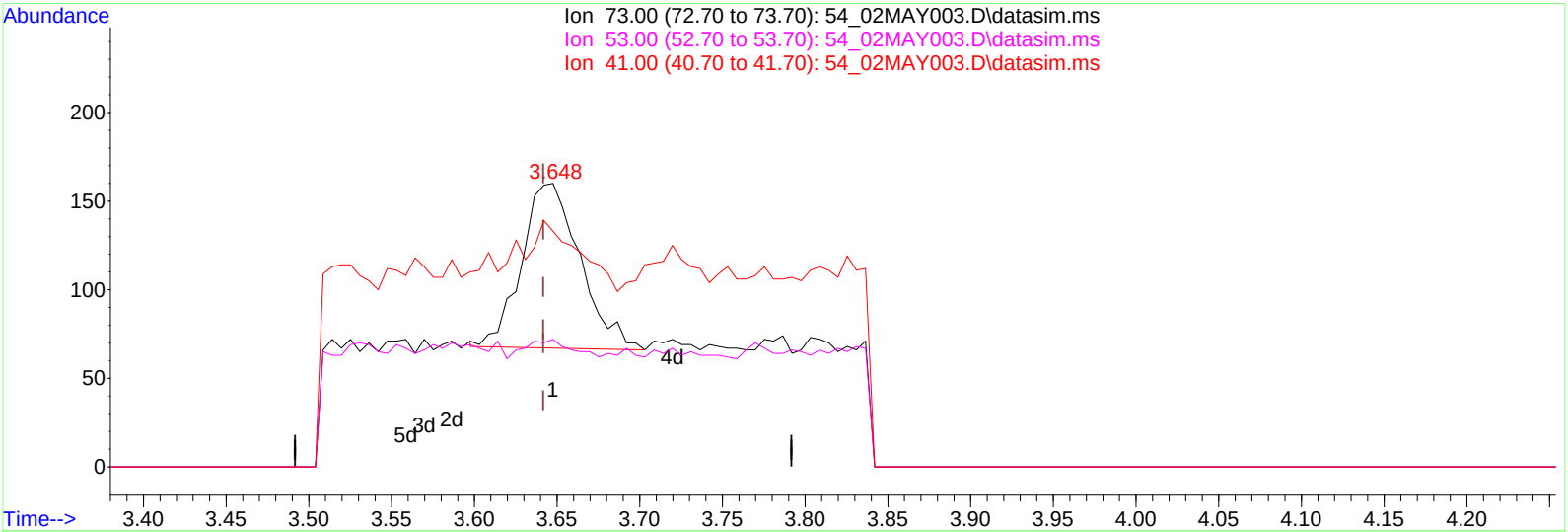
response 433

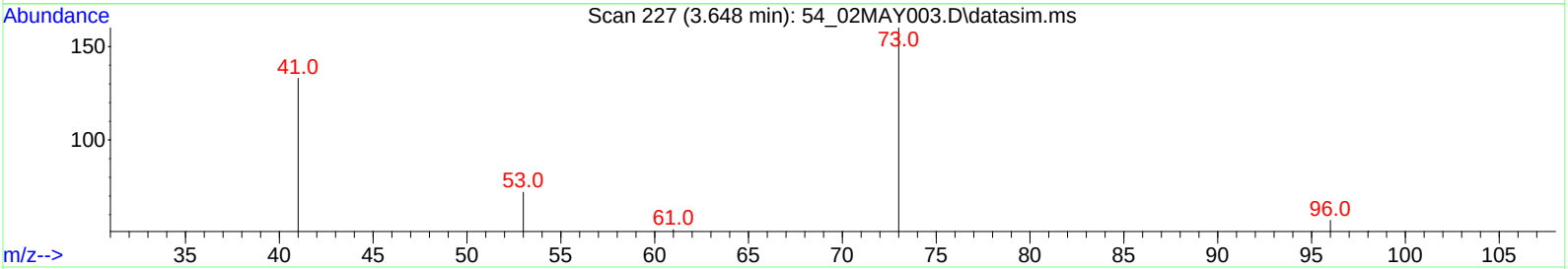
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	20.09#
41.00	16.40	16.63
0.00	0.00	0.00

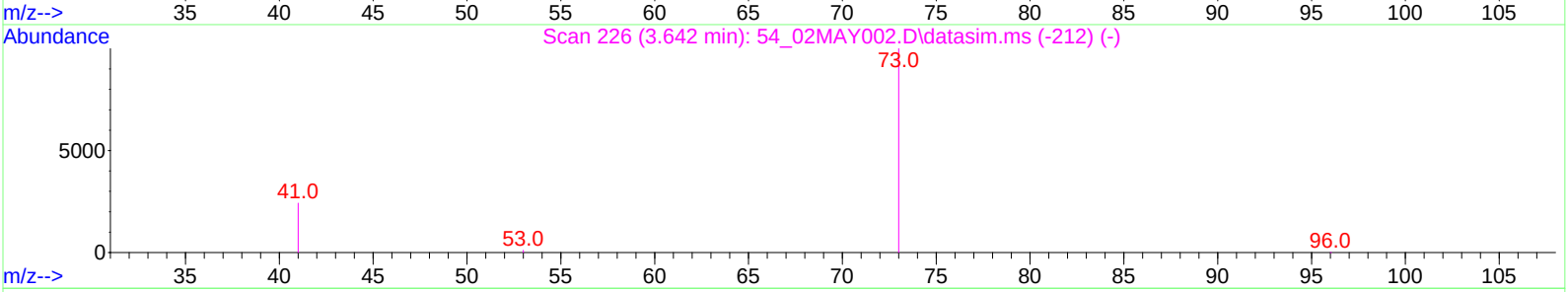
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







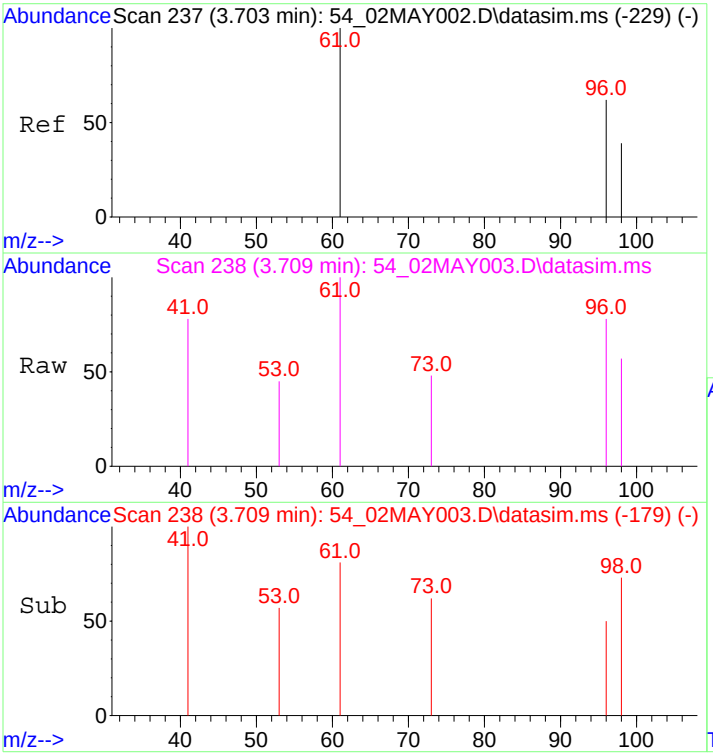
TIC: 54_02MAY003.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.648min (+0.006) 0.44 ppbv m

response 228

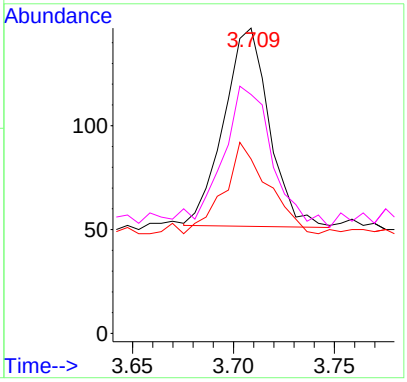
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	38.16#
41.00	16.40	31.58#
0.00	0.00	0.00

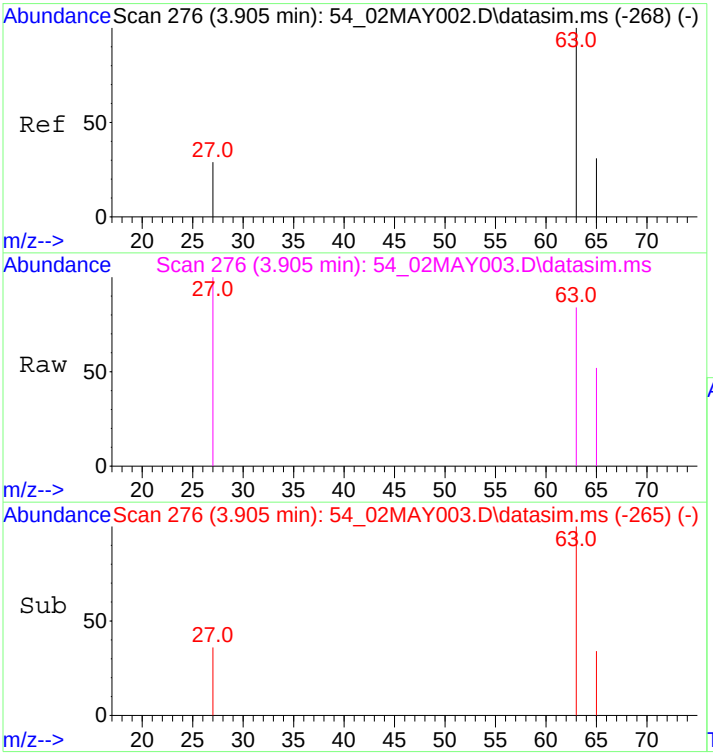


#5
trans-1,2-Dichloroethene
Concen: 0.50 ppbv m
RT: 3.709 min Scan# 238
Delta R.T. 0.006 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 61 Resp: 149

Ion	Ratio	Lower	Upper
61	100		
96	168.5	71.4	107.0#
98	93.3	45.8	68.8#

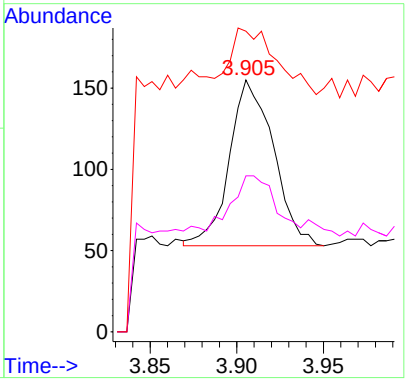




#6
1,1-Dichloroethane
Concen: 0.51 ppbv
RT: 3.905 min Scan# 276
Delta R.T. 0.000 min
Lab File: 54_02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 63 Resp: 181

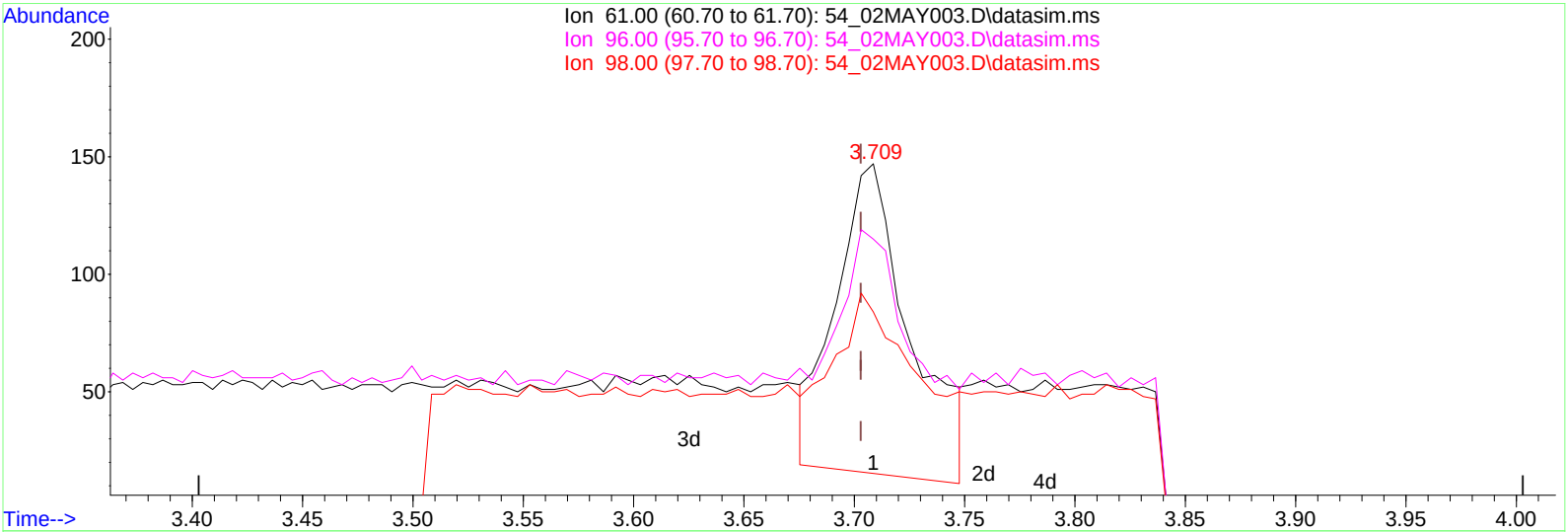
Ion	Ratio	Lower	Upper
63	100		
65	30.9	26.1	39.1
27	6.6	10.2	15.2#

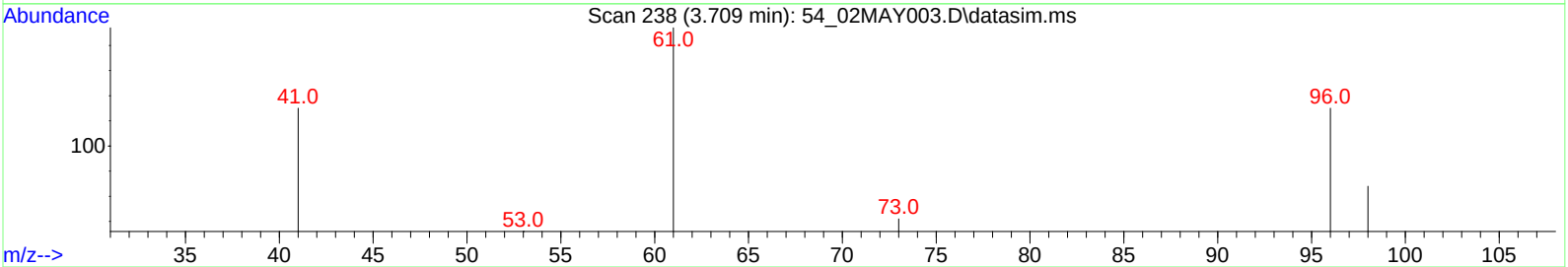


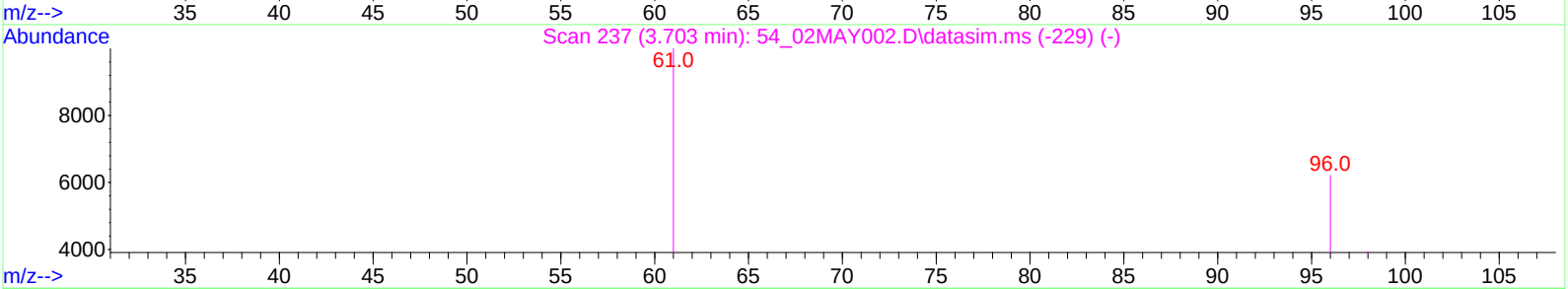
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







TIC: 54_02MAY003.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.709min (+0.006) 1.04 ppbv

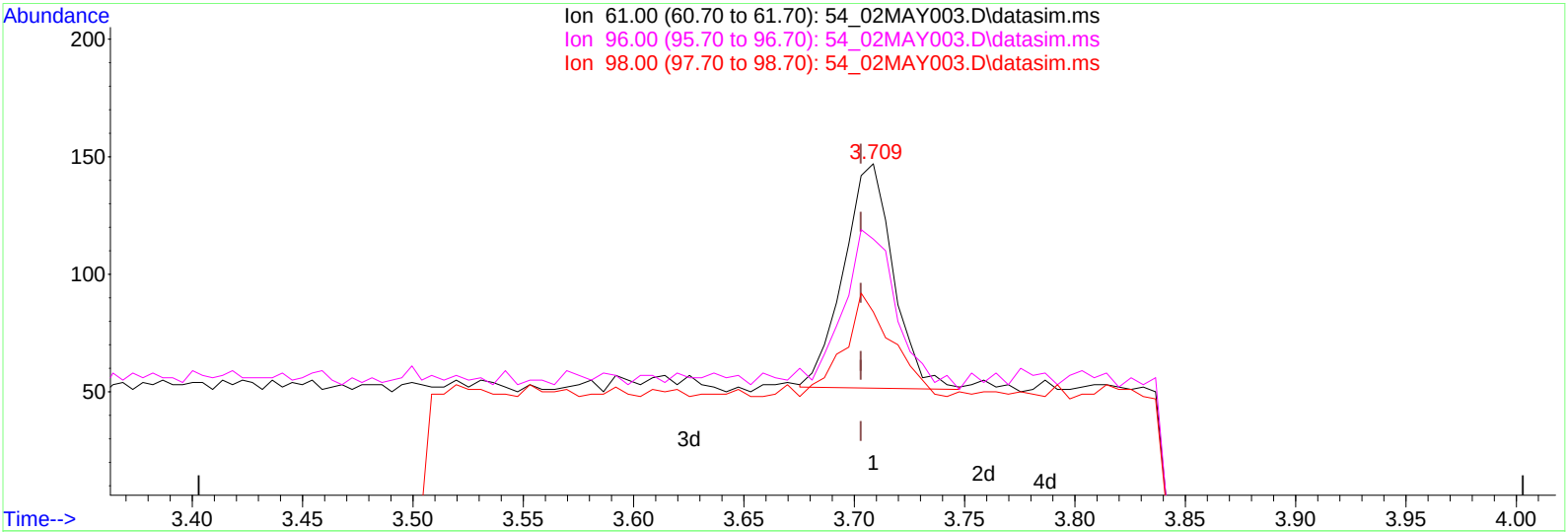
response 308

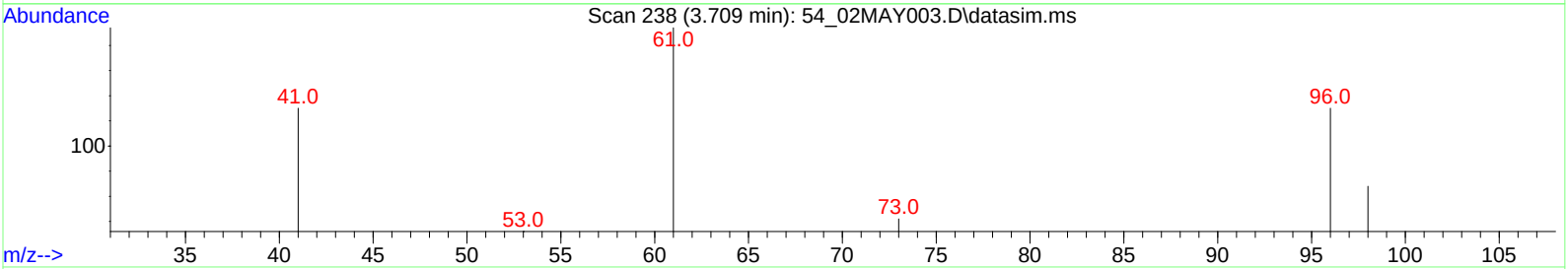
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	81.49
98.00	57.30	45.13#
0.00	0.00	0.00

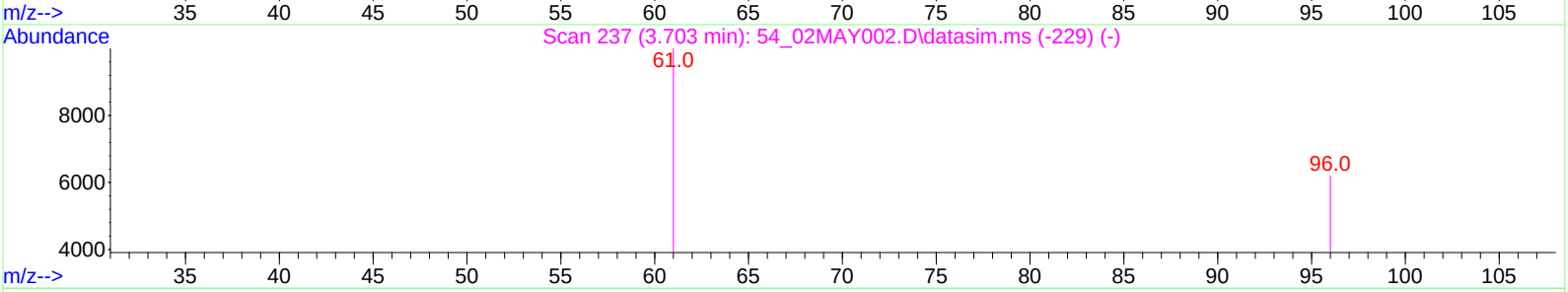
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







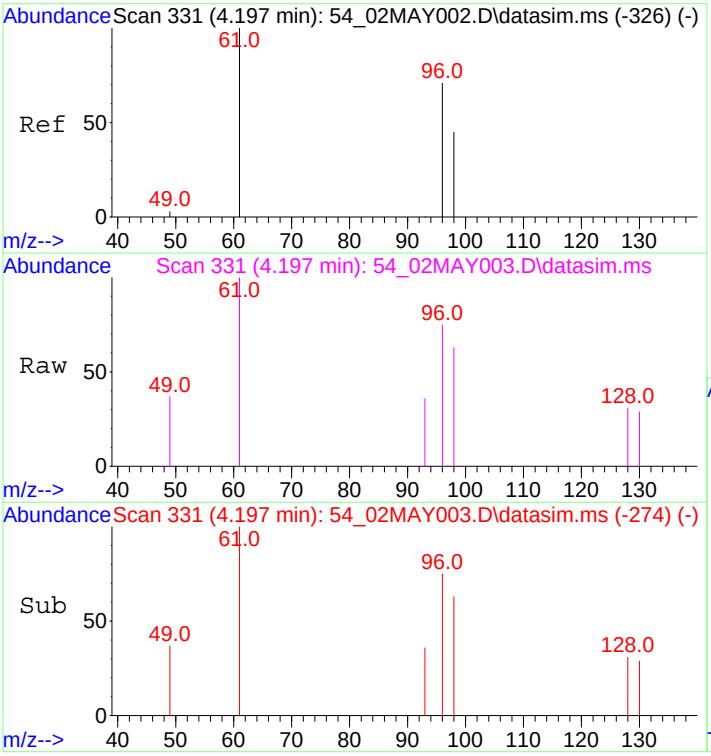
TIC: 54_02MAY003.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.709min (+0.006) 0.50 ppbv m

response 149

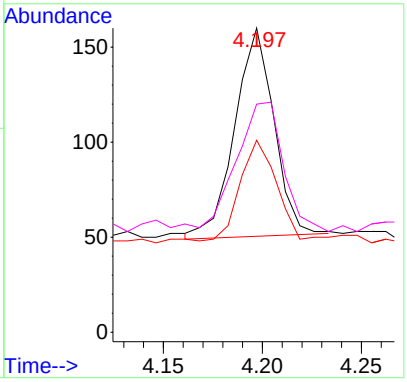
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	168.46#
98.00	57.30	93.29#
0.00	0.00	0.00

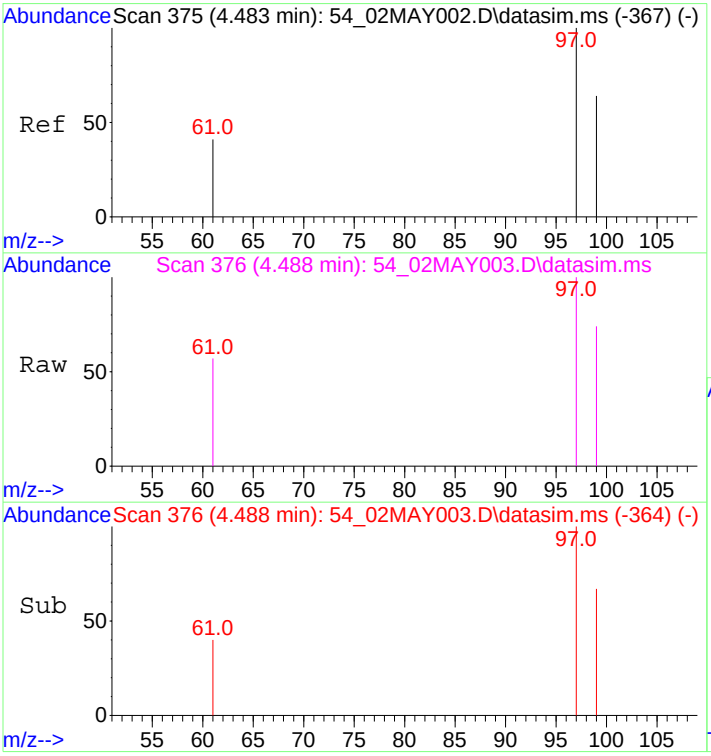


#7
cis-1,2-Dichloroethene
Concen: 0.55 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 61 Resp: 151

Ion	Ratio	Lower	Upper
61	100		
96	211.3	78.5	117.7#
98	141.1	50.6	76.0#

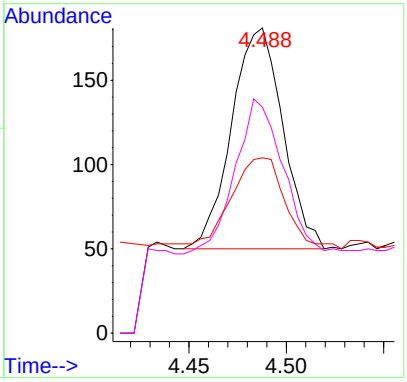




#8
1,1,1-Trichloroethane
Concen: 0.54 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.005 min
Lab File: 54_02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 97 Resp: 241

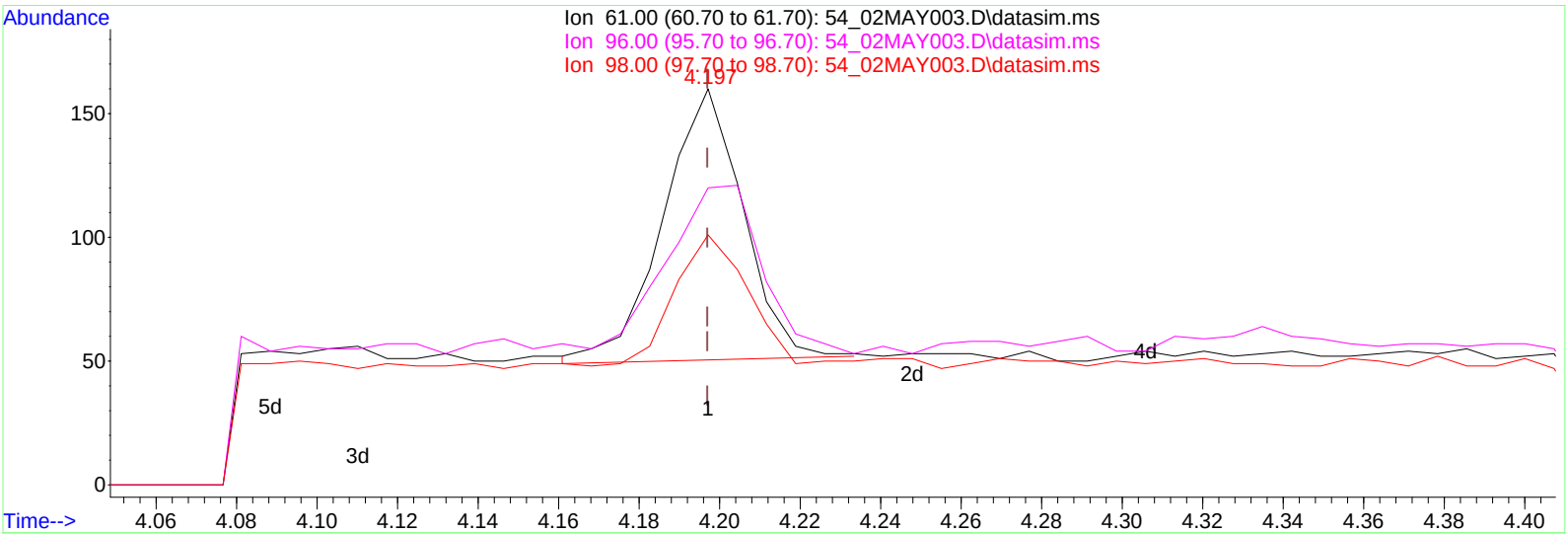
Ion	Ratio	Lower	Upper
97	100		
99	65.1	52.1	78.1
61	37.8	30.2	45.4

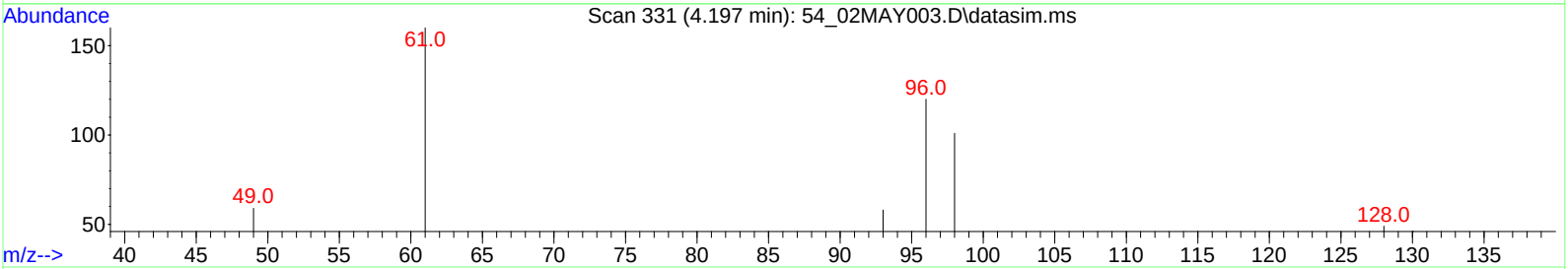


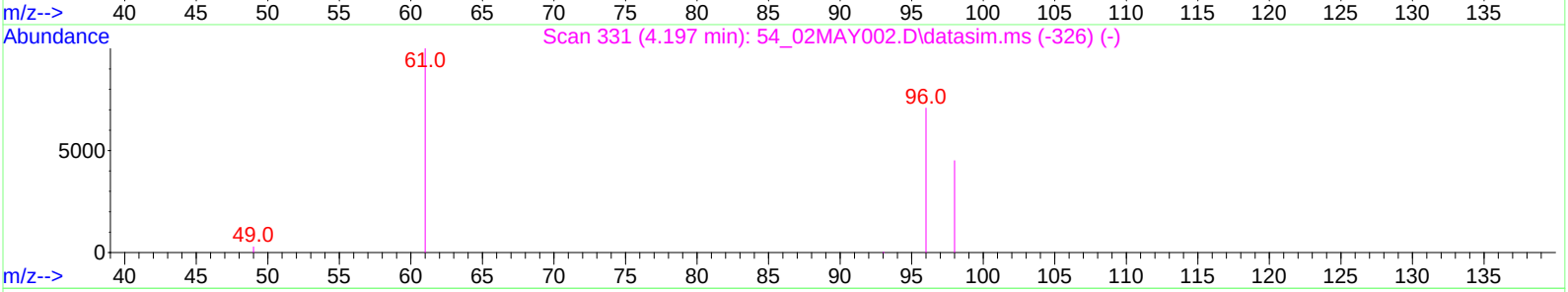
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







TIC: 54_02MAY003.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (+0.000) 0.55 ppbv m

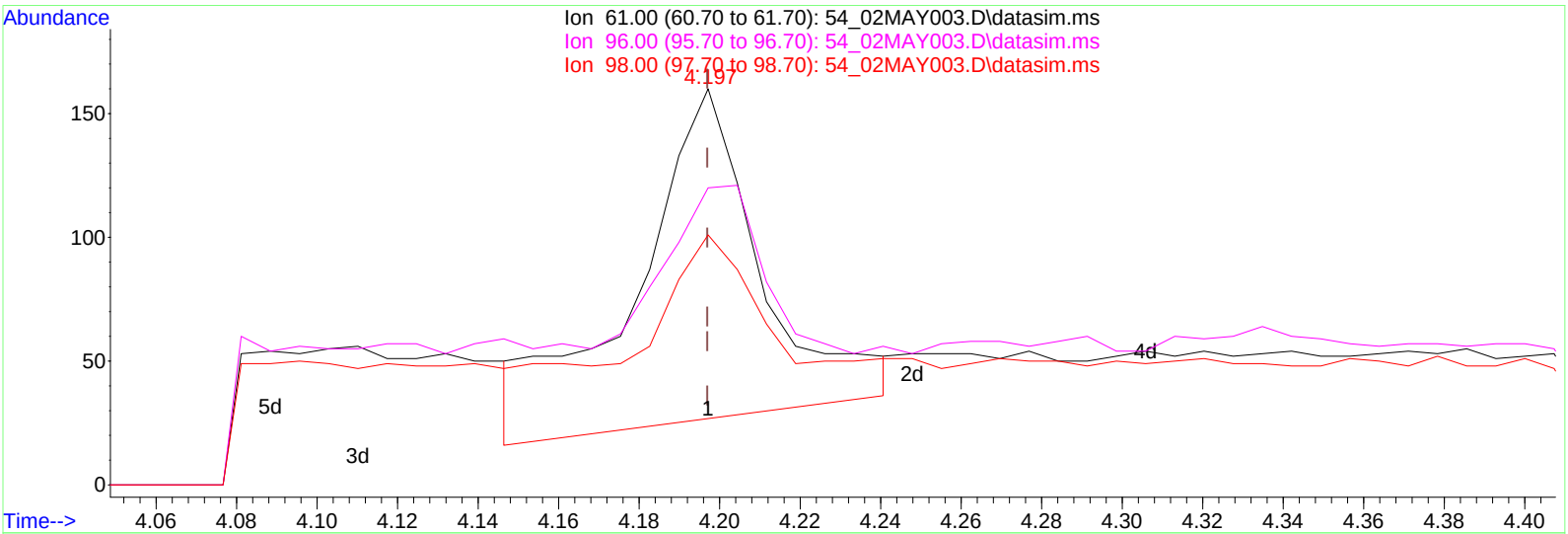
response 151

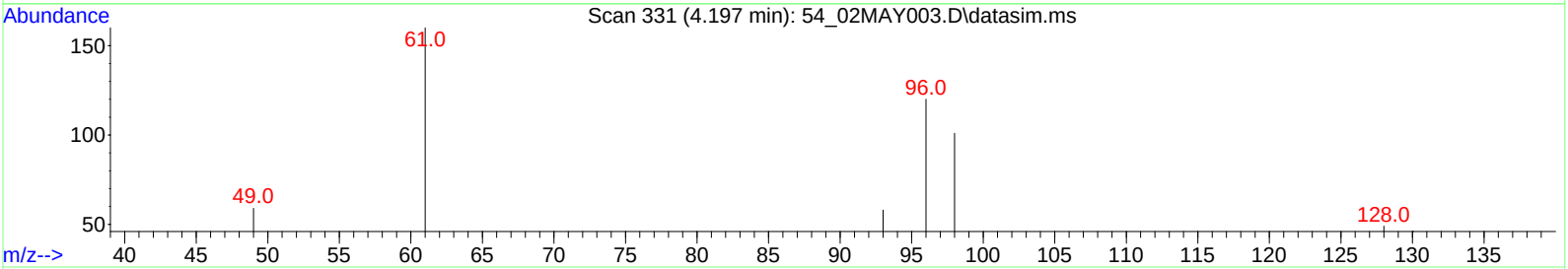
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	211.26#
98.00	63.30	141.06#
0.00	0.00	0.00

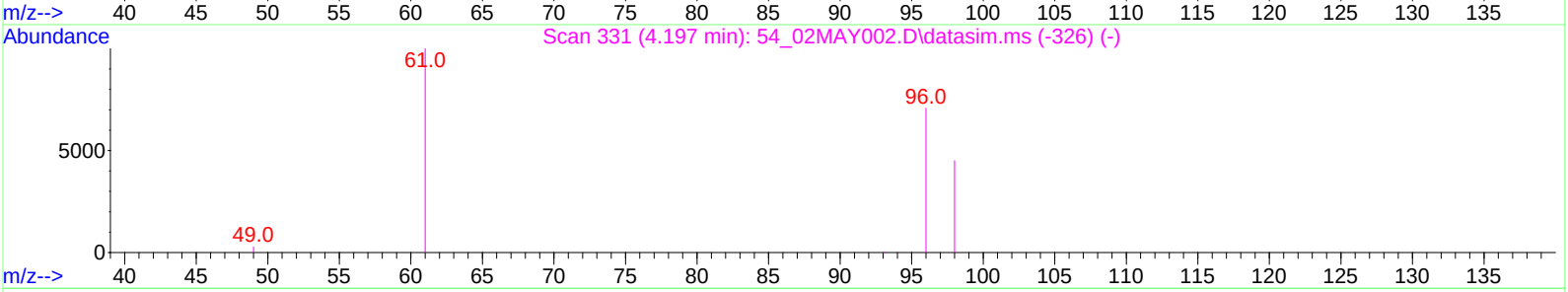
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







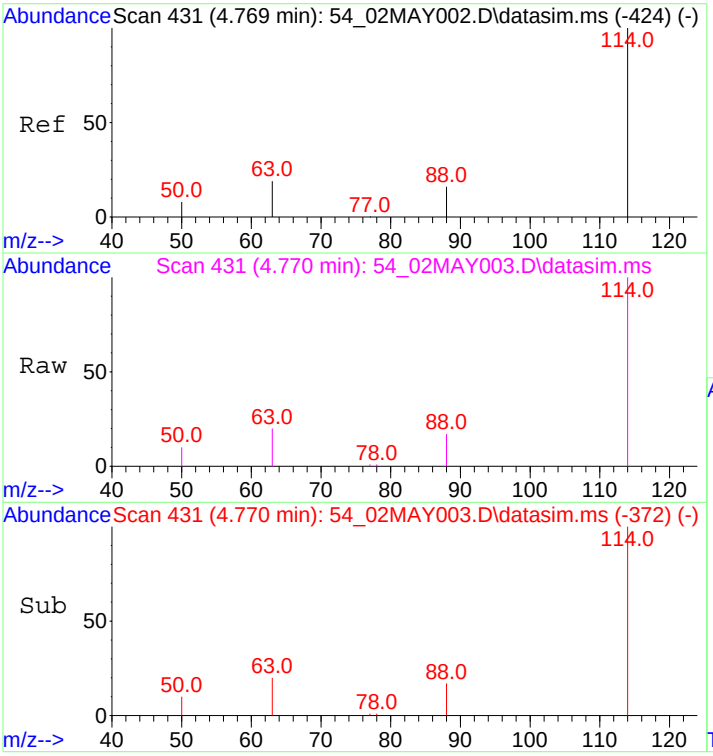
TIC: 54_02MAY003.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (+0.000) 1.06 ppbv

response 292

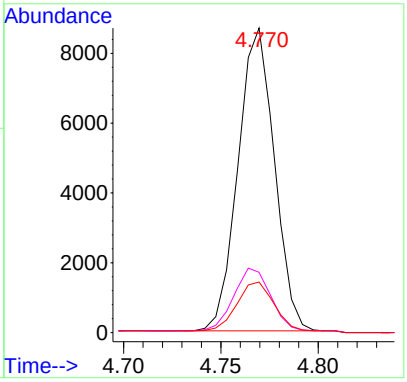
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	109.25
98.00	63.30	72.95
0.00	0.00	0.00

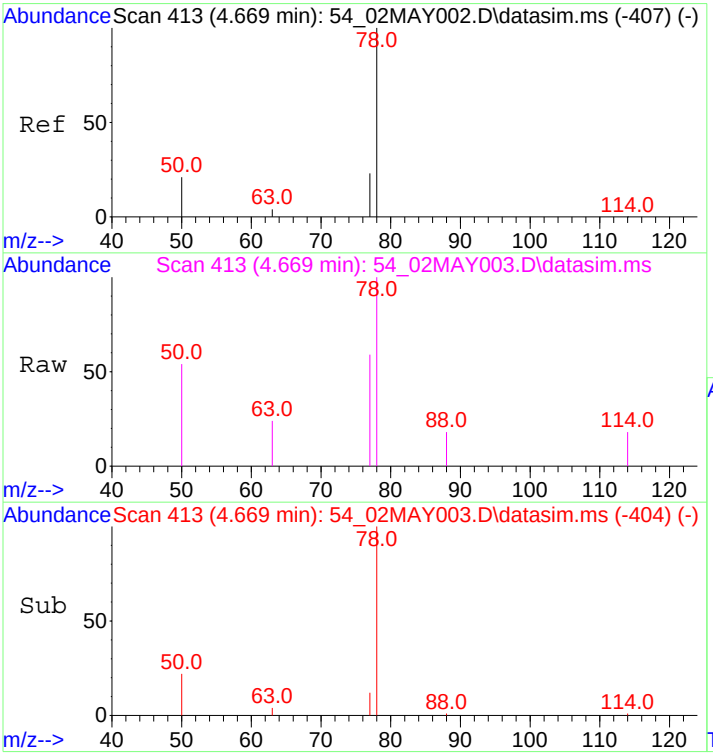


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion:114 Resp: 11271

Ion	Ratio	Lower	Upper
114	100		
63	20.8	12.0	18.0#
88	16.3	11.8	17.8

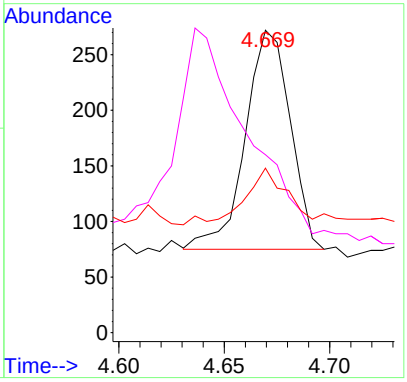


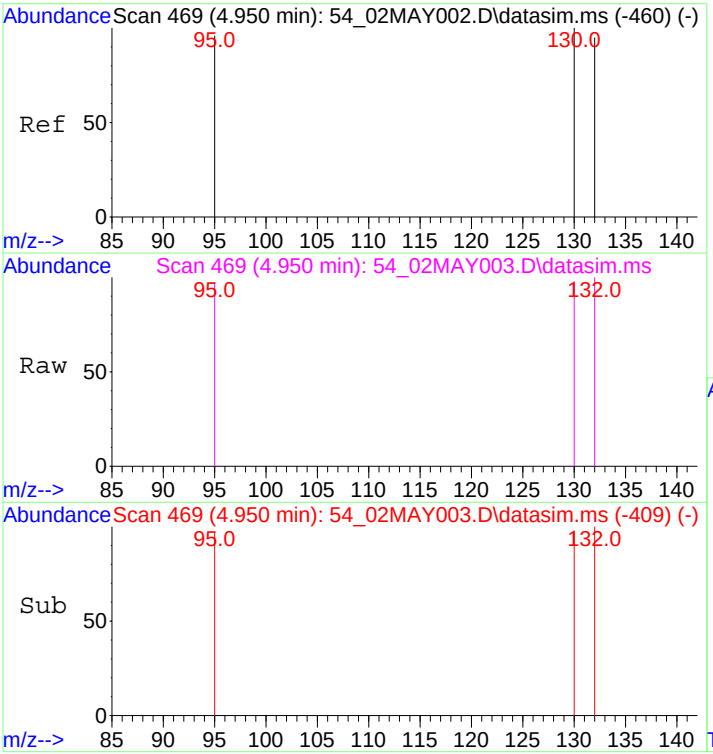


#10
Benzene
Concen: 0.57 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 78 Resp: 293

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.2	27.2#
50	21.2	8.6	13.0#

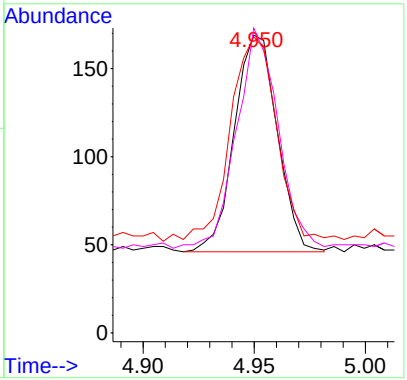


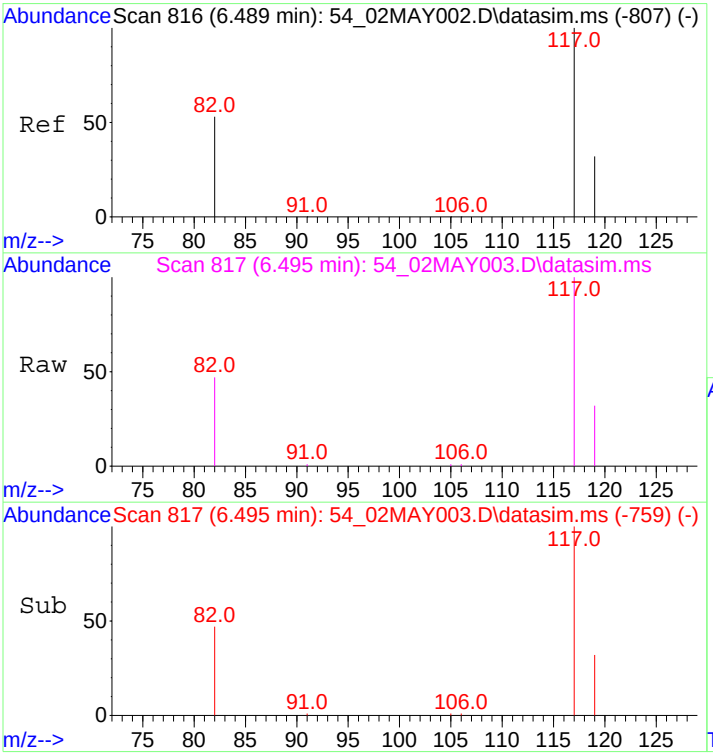


#11
Trichloroethene
Concen: 0.59 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion:130 Resp: 165

Ion	Ratio	Lower	Upper
130	100		
132	120.6	76.9	115.3#
95	100.6	76.5	114.7

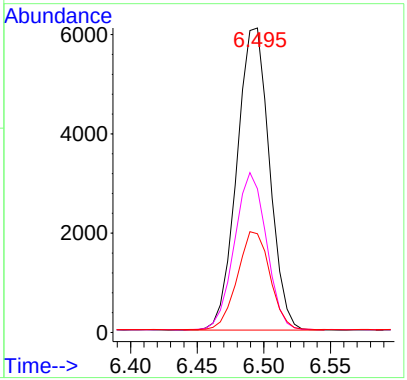


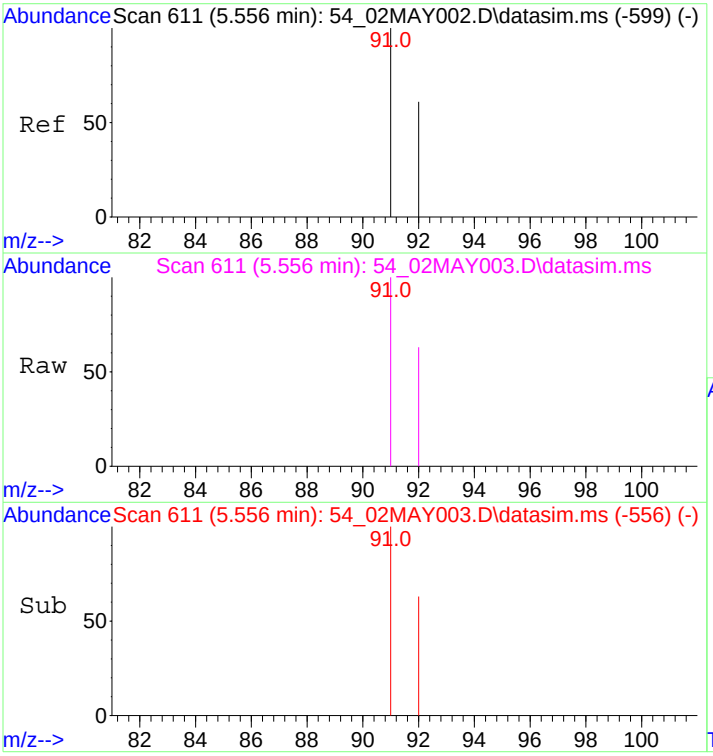


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.006 min
Lab File: 54_02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion:117 Resp: 10352

Ion	Ratio	Lower	Upper
117	100		
82	51.1	38.0	57.0
119	32.5	27.0	40.4

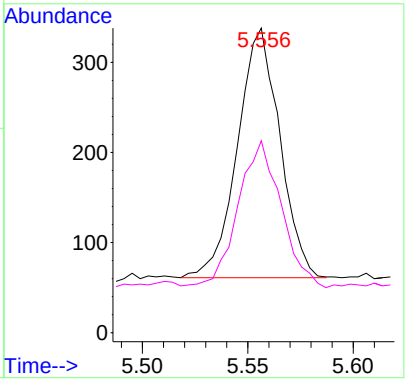


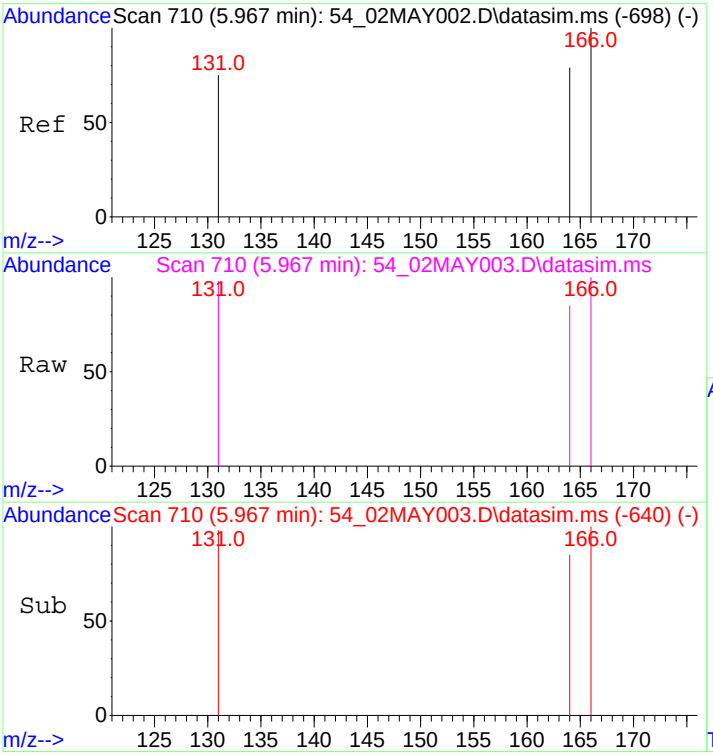


#13
Toluene
Concen: 0.62 ppbv m
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 91 Resp: 387

Ion	Ratio	Lower	Upper
91	100		
92	60.2	47.8	71.8

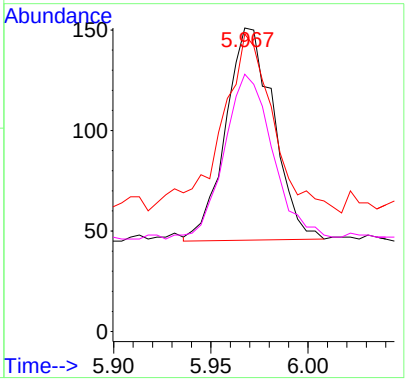




#14
Tetrachloroethene
Concen: 0.51 ppbv
RT: 5.967 min Scan# 710
Delta R.T. 0.000 min
Lab File: 54_02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion:166 Resp: 181

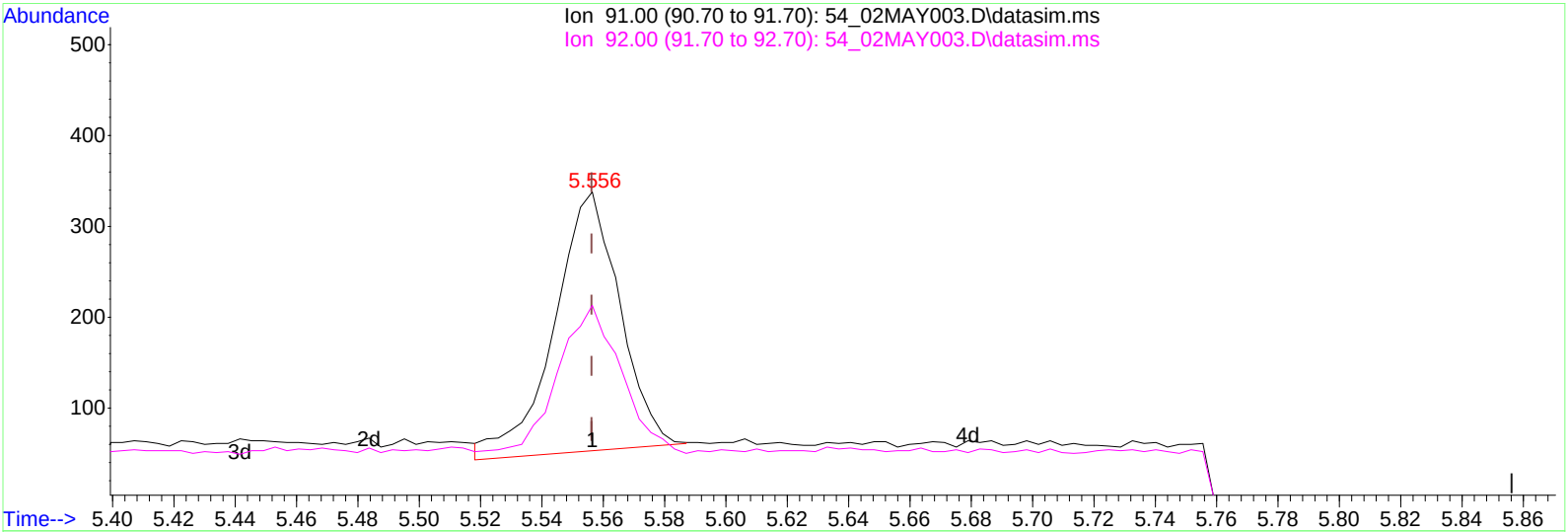
Ion	Ratio	Lower	Upper
166	100		
164	79.0	62.6	94.0
131	138.7	58.5	87.7#

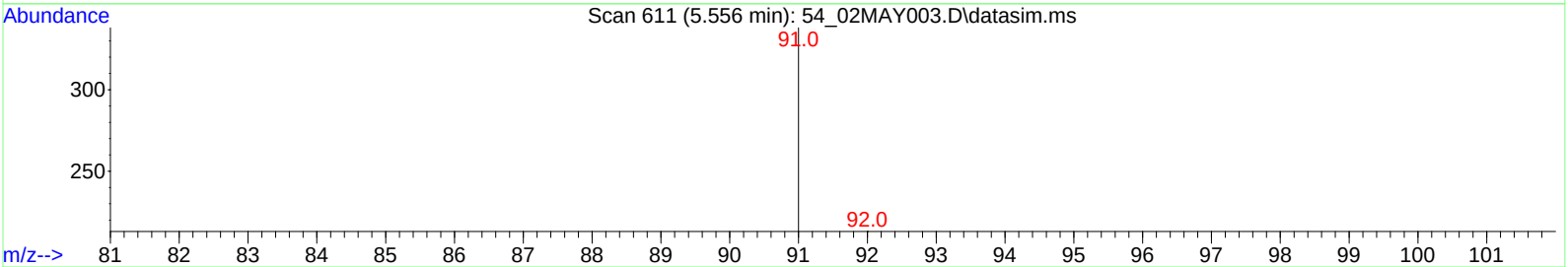


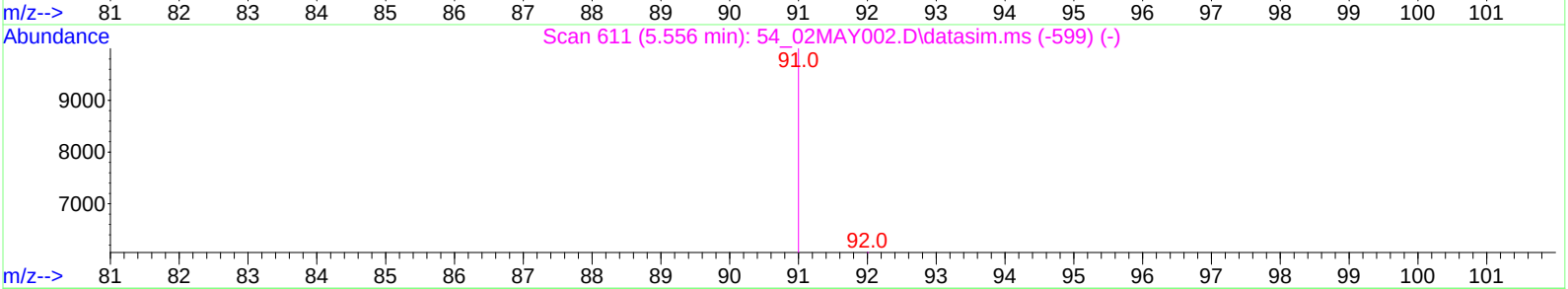
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







TIC: 54_02MAY003.D\data.ms

(13) Toluene (M)

5.556min (+0.000) 0.68 ppbv

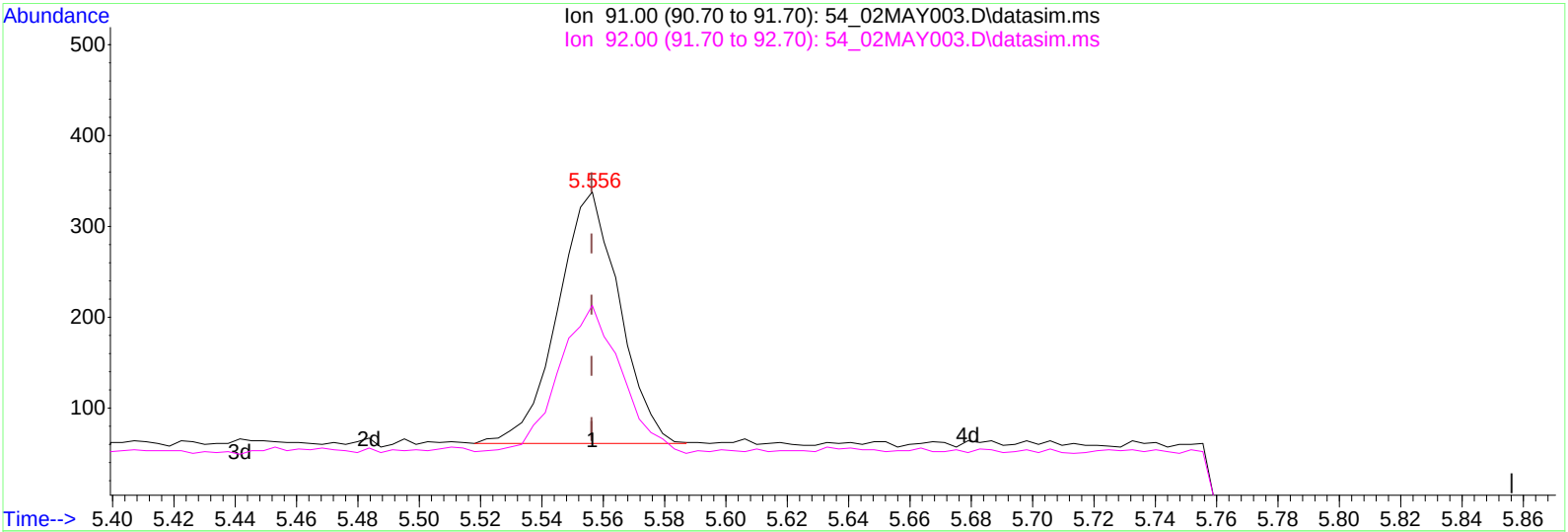
response 425

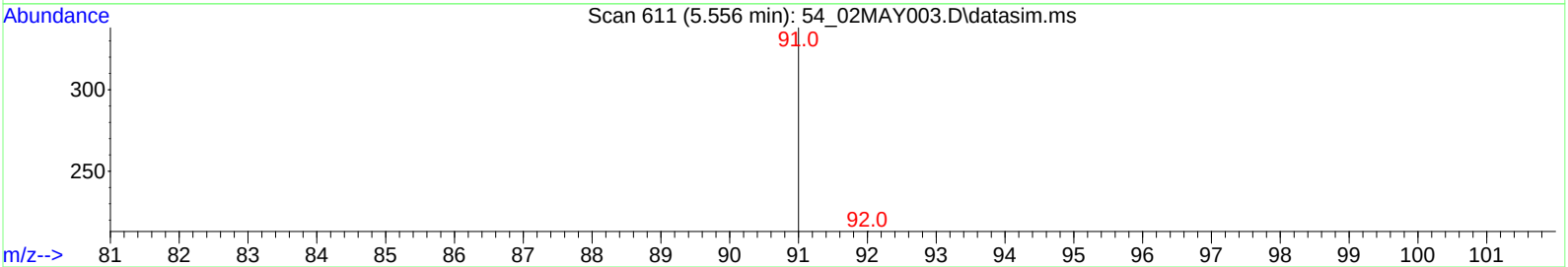
Ion	Exp%	Act%
91.00	100	100
92.00	59.80	54.82
0.00	0.00	0.00
0.00	0.00	0.00

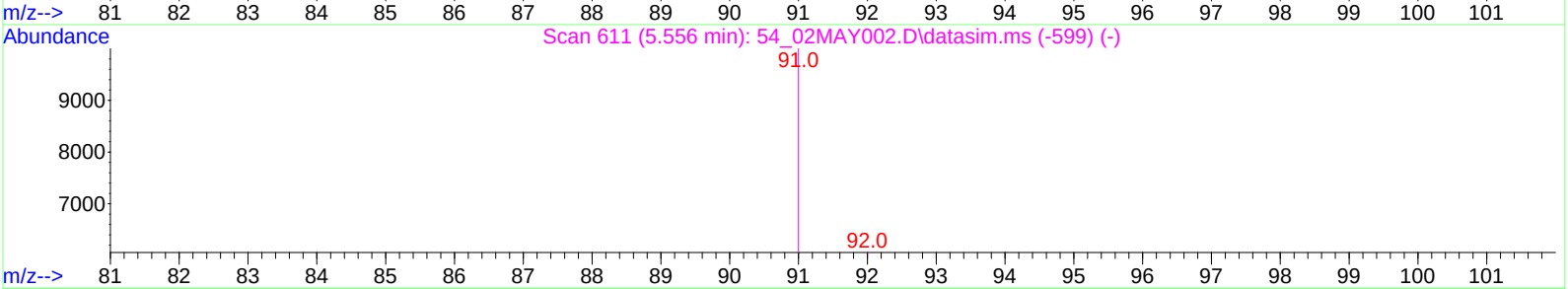
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY003.D
Acq On : 2 May 2014 7:25 am
Operator : YHL
Sample : STD20140502-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:31:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration







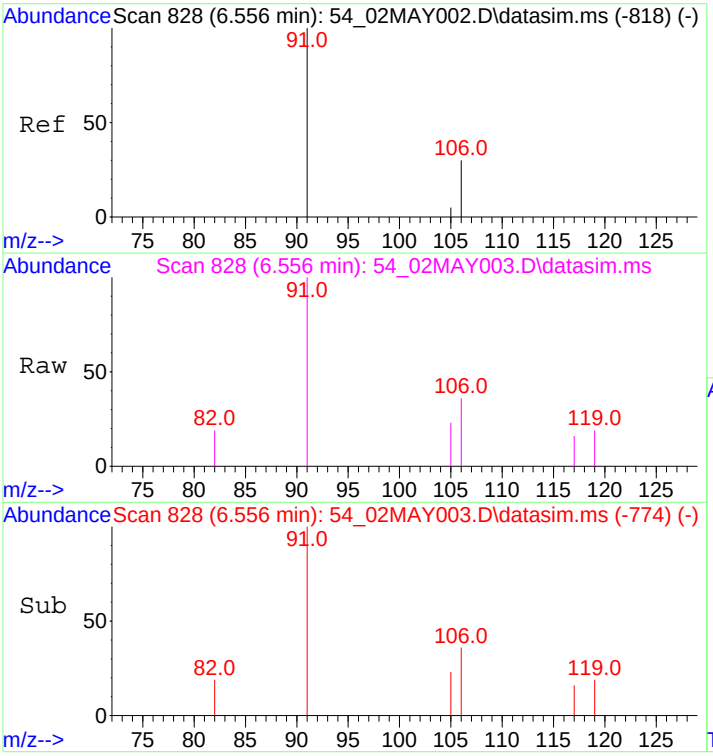
TIC: 54_02MAY003.D\data.ms

(13) Toluene (M)

5.556min (+0.000) 0.62 ppbv m

response 387

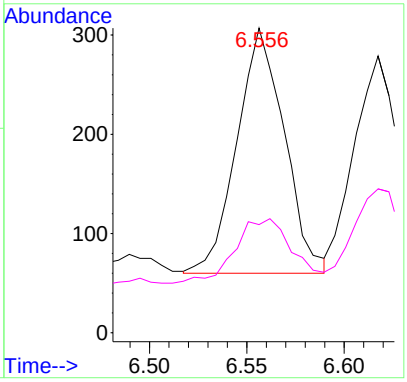
Ion	Exp%	Act%
91.00	100	100
92.00	59.80	60.21
0.00	0.00	0.00
0.00	0.00	0.00

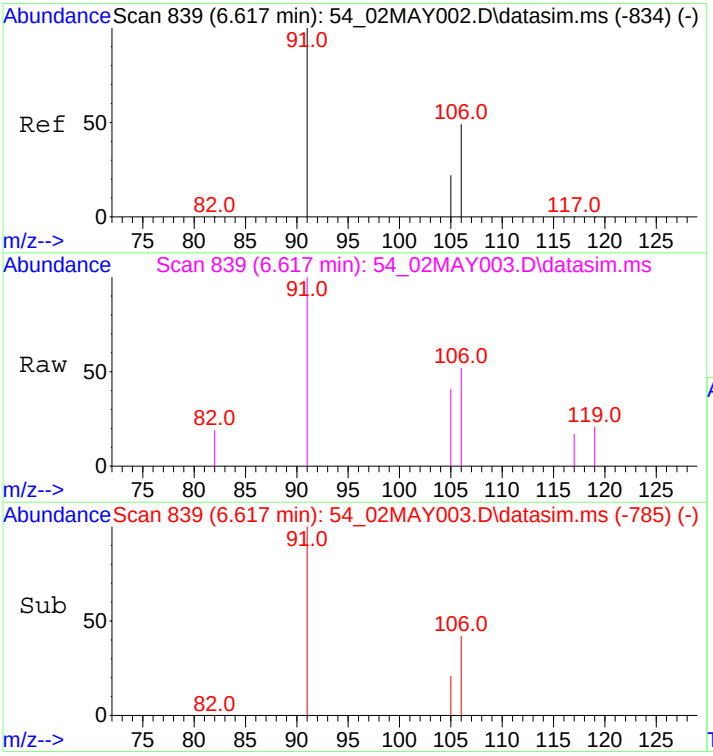


#15
Ethyl Benzene
Concen: 0.53 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 91 Resp: 419

Ion	Ratio	Lower	Upper
91	100		
106	30.8	26.9	40.3

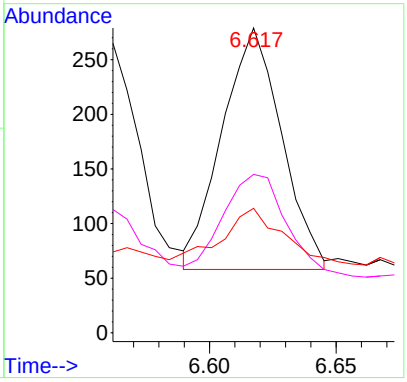


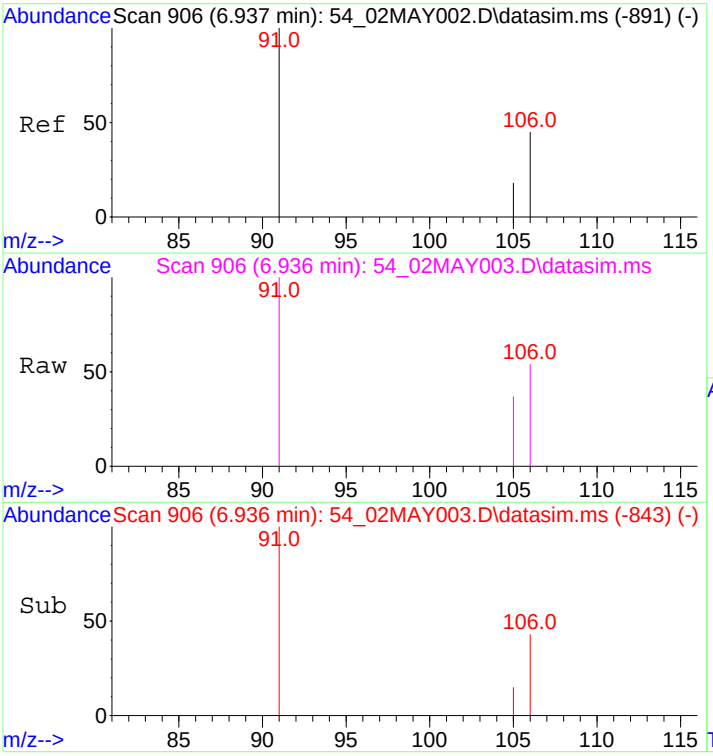


#16
m,p-Xylene
Concen: 0.60 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 91 Resp: 362

Ion	Ratio	Lower	Upper
91	100		
106	48.1	43.1	64.7
105	24.9	18.3	27.5

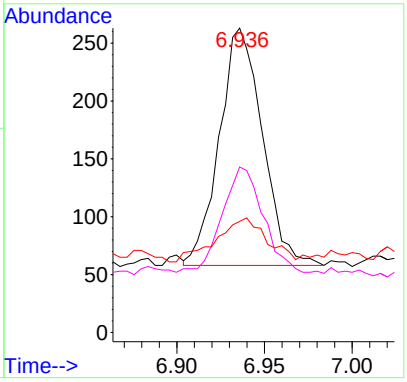




#17
o-Xylene
Concen: 0.57 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54 02MAY003.D
Acq: 2 May 2014 7:25 am

Tgt Ion: 91 Resp: 351

Ion	Ratio	Lower	Upper
91	100		
106	42.7	40.1	60.1
105	20.8	15.8	23.6



LABORATORY CONTROL SAMPLE

Data File 54_02May005.D
LCS Standard Number 20140502-LCS
LCS Standard Name **20140502-LCS \ LCS 500 ppbv 2º**
Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/2/2014	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %	
Vinyl Chloride	514.22	517.50	99.4	70-130	OK
1,1-Dichloroethene	520.26	512.50	101.5	70-130	OK
Methyl Tert Butyl Ether	494.93	510.00	97.0	70-130	OK
trans-1,2-Dichloroethene	504.18	500.00	100.8	70-130	OK
1,1-Dichloroethane	517.96	525.00	98.7	70-130	OK
cis-1,2-Dichloroethene	536.59	530.00	101.2	70-130	OK
1,1,1-Trichloroethane	539.84	510.00	105.9	70-130	OK
Benzene	507.71	527.50	96.2	70-130	OK
Trichloroethene	495.80	510.00	97.2	70-130	OK
Toluene	479.84	522.50	91.8	70-130	OK
Tetrachloroethene	471.69	517.50	91.1	70-130	OK
Ethyl Benzene	481.82	525.00	91.8	70-130	OK
m,p-Xylene	481.32	520.00	92.6	70-130	OK
o-Xylene	479.47	525.00	91.3	70-130	OK

Secondary Standard Cylinder # CC-99022

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY005.D
Acq On : 2 May 2014 7:49 am
Operator : YHL
Sample : 20140502-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 08:14:39 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 07:19:23 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration

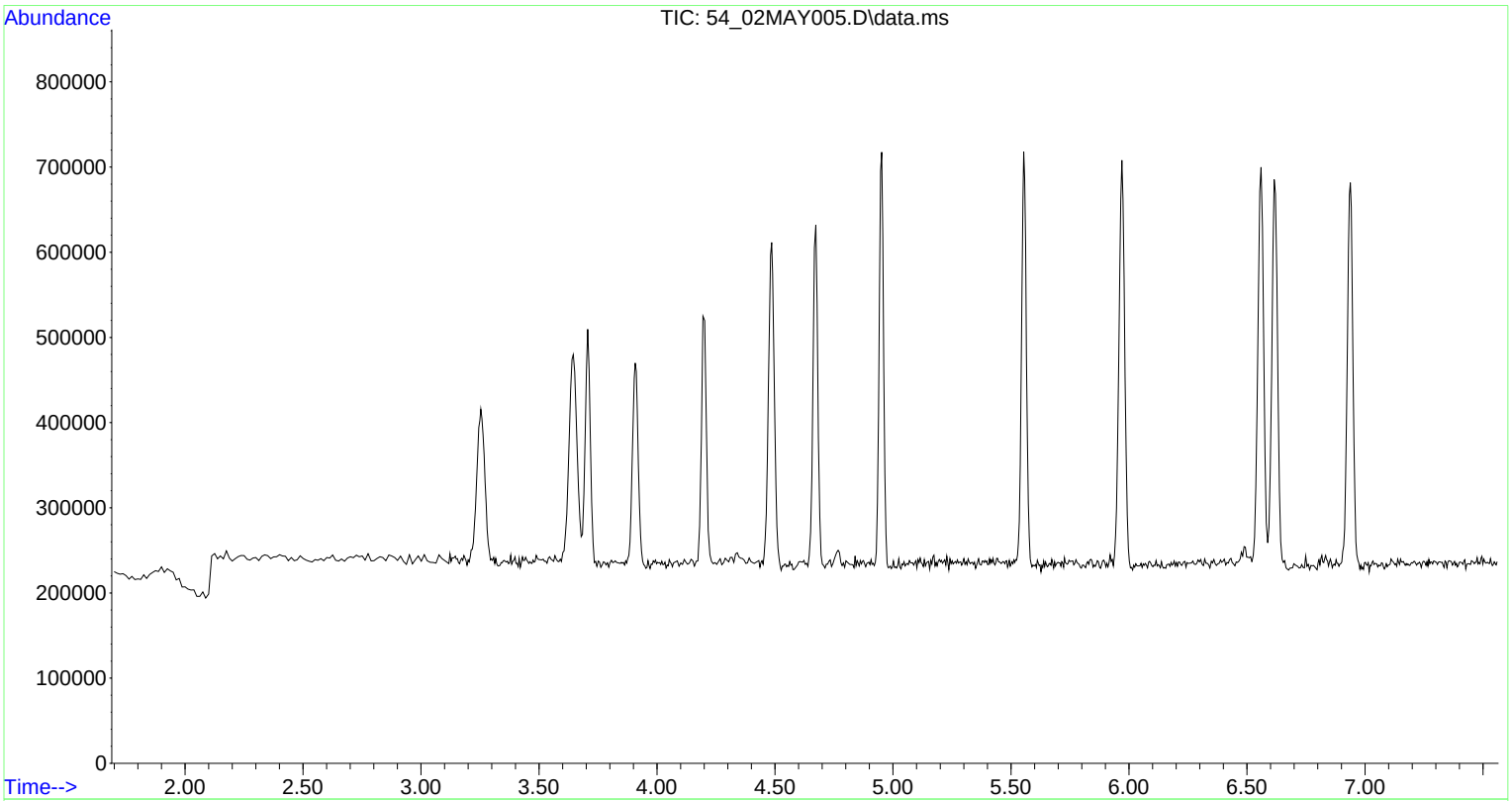
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4485	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11528	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10698	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.915	62	87697	514.22	ppbv	# 65
3] 1,1-Dichloroethene	3.251	61	180717	520.26	ppbv	# 79
4] Methyl Tert Butyl Ether	3.642	73	262488	494.93	ppbv	# 83
5] trans-1,2-Dichloroethene	3.709	61	154354	504.18	ppbv	# 75
6] 1,1-Dichloroethane	3.910	63	189297	517.96	ppbv	# 86
7] cis-1,2-Dichloroethene	4.197	61	153407	536.59	ppbv	# 73
8] 1,1,1-Trichloroethane	4.483	97	250277	539.84	ppbv	97
10] Benzene	4.669	78	267367	507.71	ppbv	# 91
11] Trichloroethene	4.950	130	142153	495.80	ppbv	100
13] Toluene	5.556	91	307720	479.84	ppbv	100
14] Tetrachloroethene	5.972	166	172772	471.69	ppbv	99
15] Ethyl Benzene	6.556	91	392398	481.82	ppbv	95
16] m,p-Xylene	6.617	91	300850	481.32	ppbv	93
17] o-Xylene	6.936	91	303919	479.47	ppbv	93

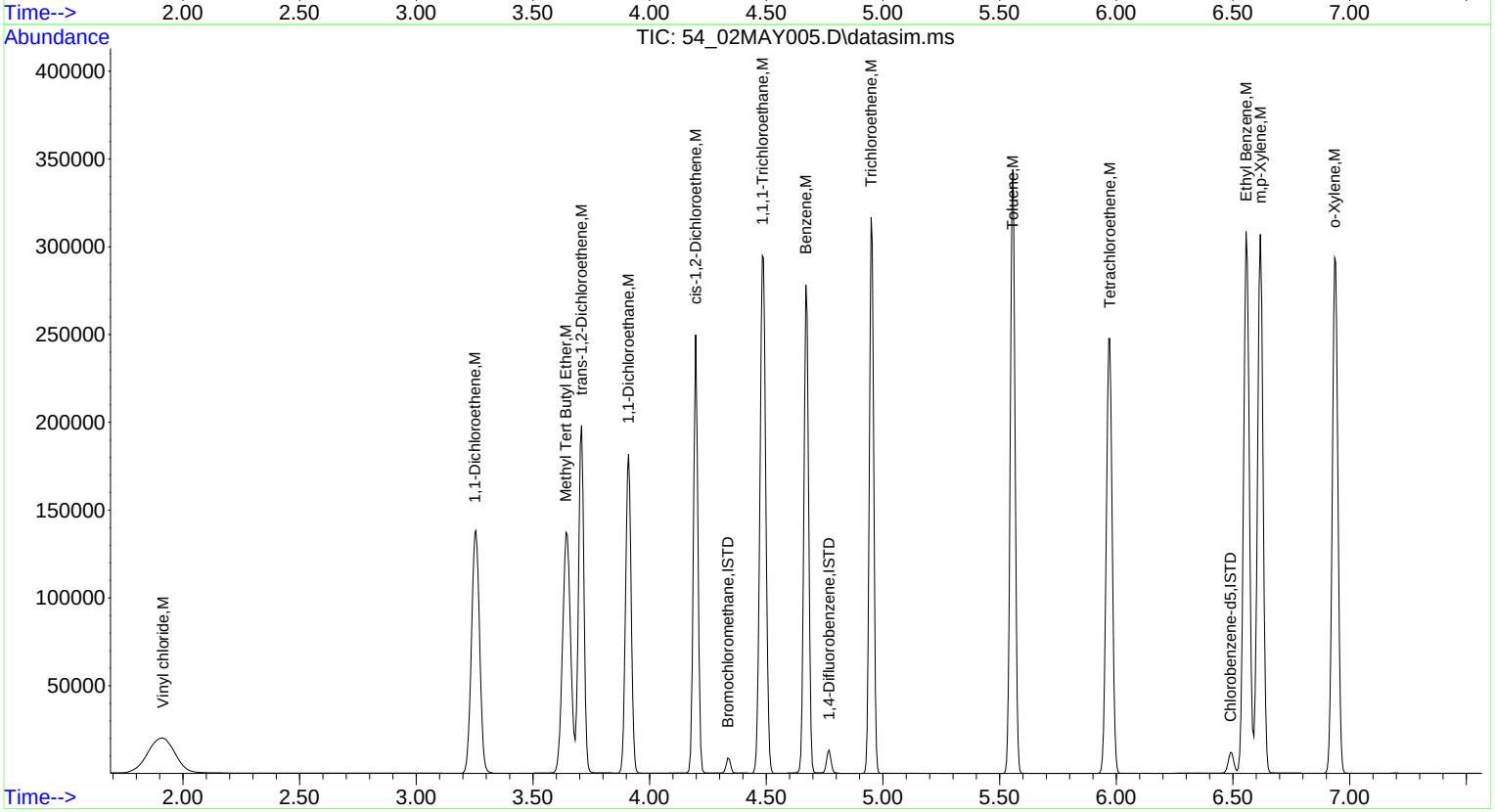
(#) = qualifier out of range (m) = manual integration (+) = signals summed

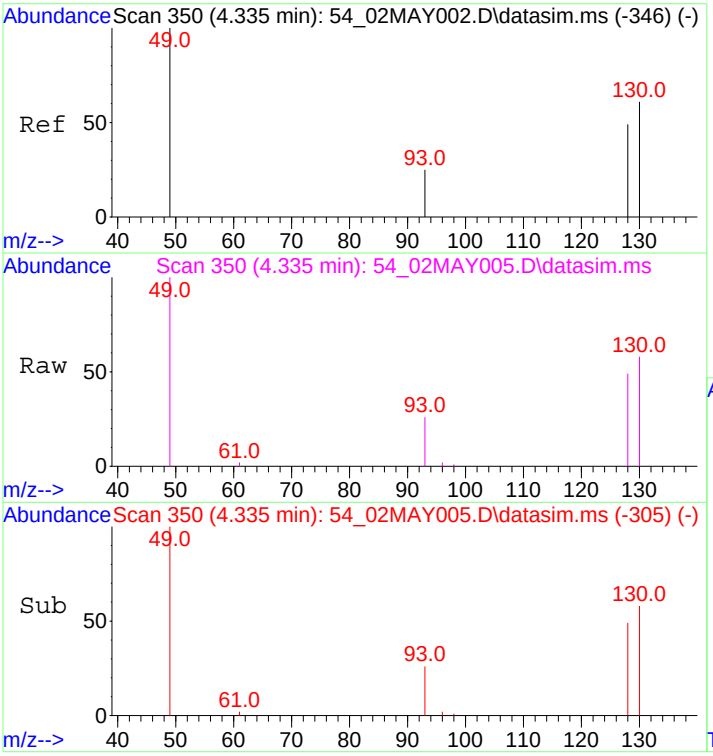
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY005.D
Acq On : 2 May 2014 7:49 am
Operator : YHL
Sample : 20140502-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 08:14:39 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 07:19:23 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration



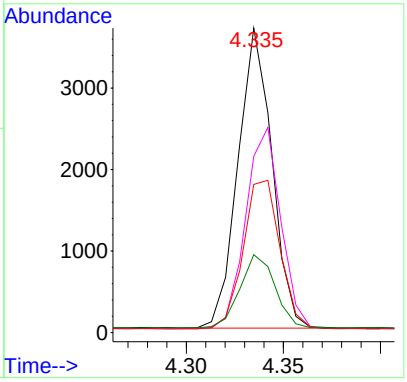


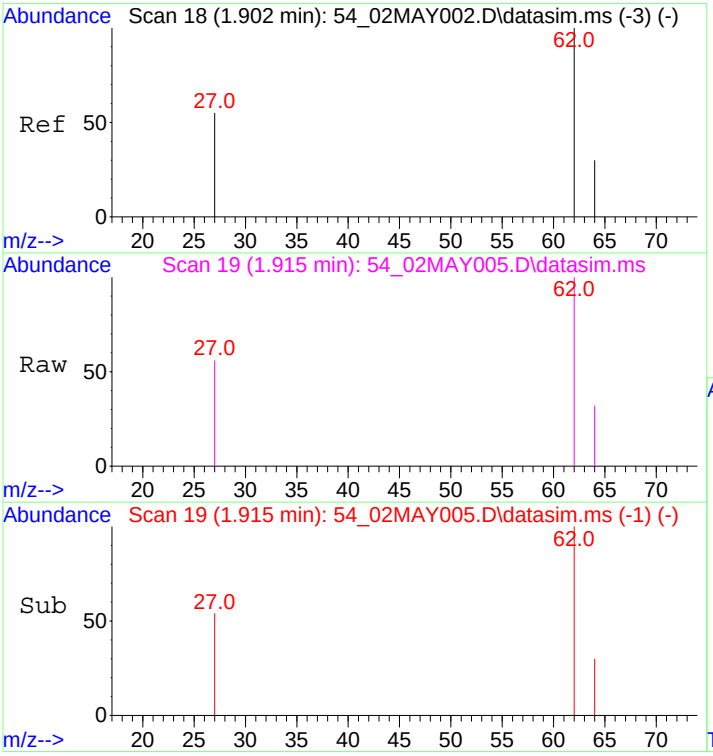


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 49 Resp: 4485

Ion	Ratio	Lower	Upper
49	100		
130	69.0	87.2	130.8#
128	53.6	68.0	102.0#
93	25.1	29.3	43.9#

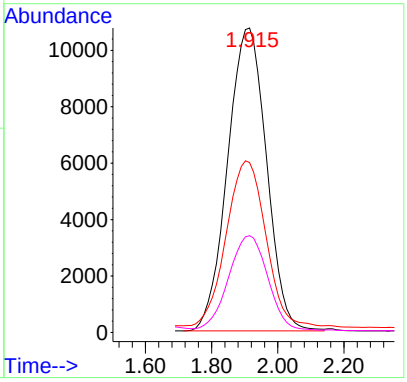


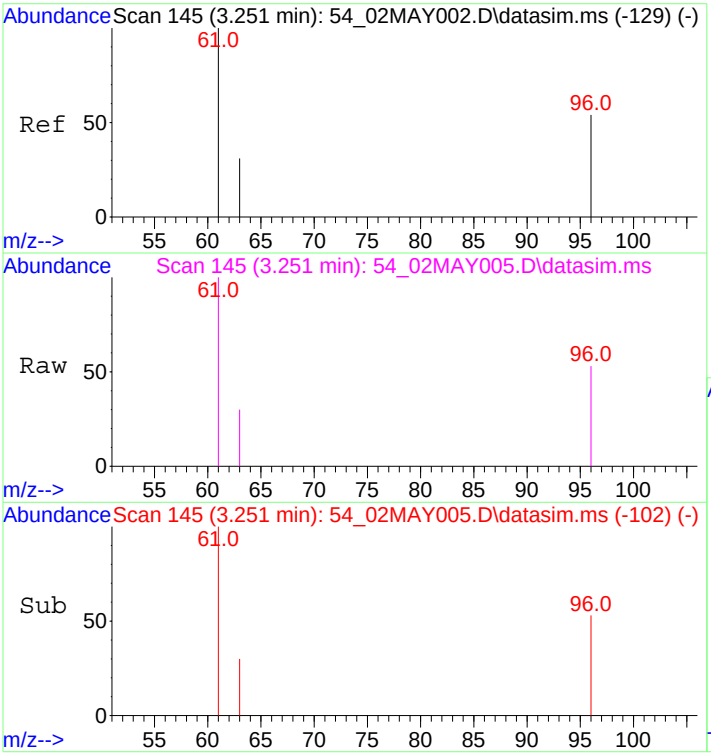


#2
Vinyl chloride
Concen: 514.22 ppbv
RT: 1.915 min Scan# 19
Delta R.T. 0.013 min
Lab File: 54_02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 62 Resp: 87697

Ion	Ratio	Lower	Upper
62	100		
64	28.2	26.8	40.2
27	55.6	16.1	24.1#

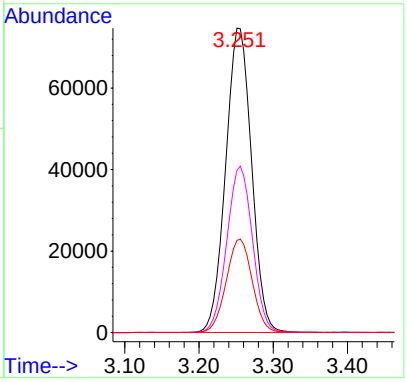


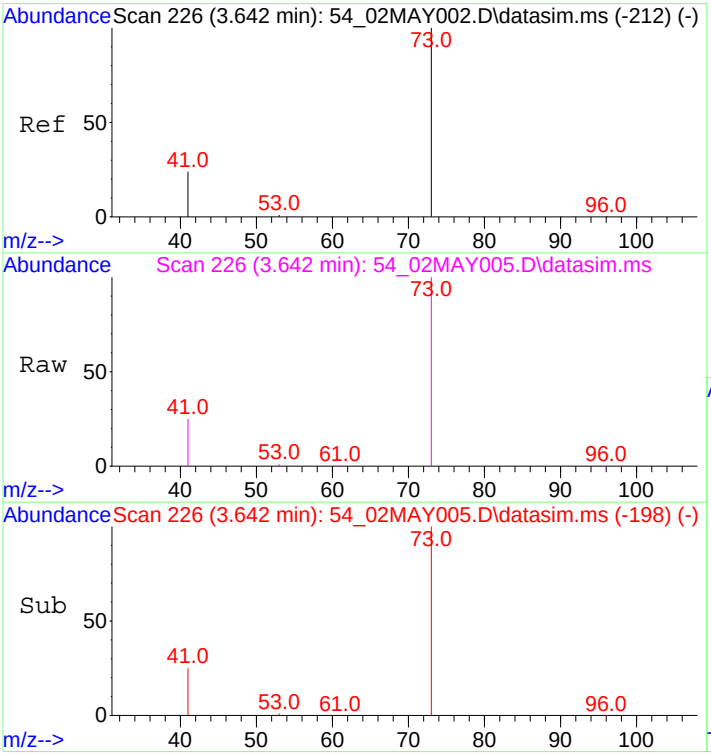


#3
1,1-Dichloroethene
Concen: 520.26 ppbv
RT: 3.251 min Scan# 145
Delta R.T. 0.000 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 61 Resp: 180717

Ion	Ratio	Lower	Upper
61	100		
96	54.1	63.4	95.2#
63	30.7	26.2	39.2

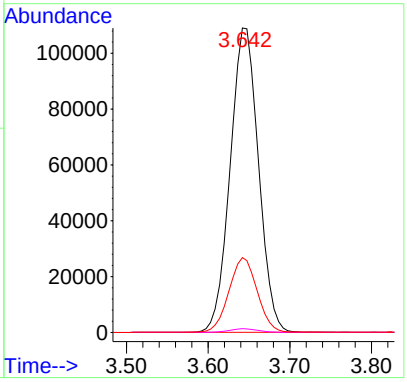


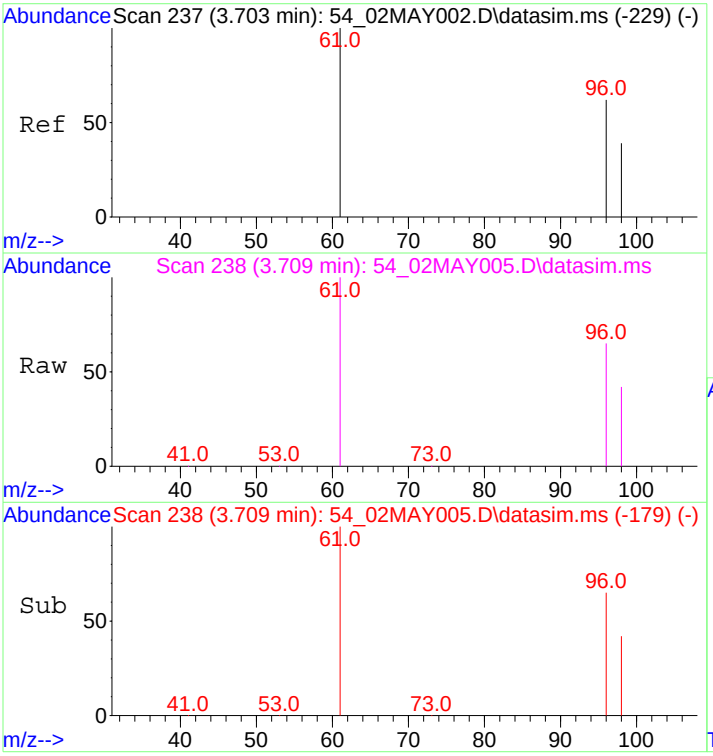


#4
Methyl Tert Butyl Ether
Concen: 494.93 ppbv
RT: 3.642 min Scan# 226
Delta R.T. 0.000 min
Lab File: 54_02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 73 Resp: 262488

Ion	Ratio	Lower	Upper
73	100		
53	1.1	1.0	1.4
41	24.3	13.1	19.7#

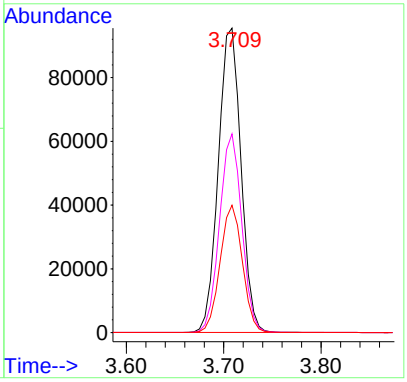


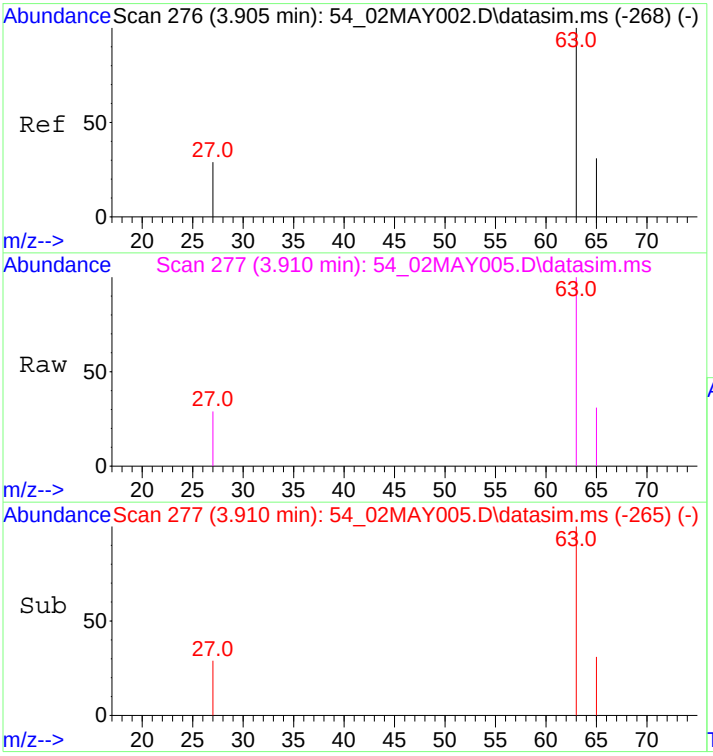


#5
trans-1,2-Dichloroethene
Concen: 504.18 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.006 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 61 Resp: 154354

Ion	Ratio	Lower	Upper
61	100		
96	63.8	71.4	107.0#
98	41.0	45.8	68.8#

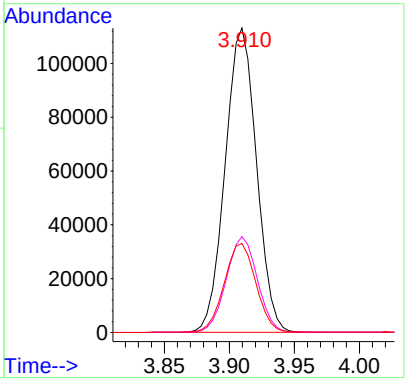


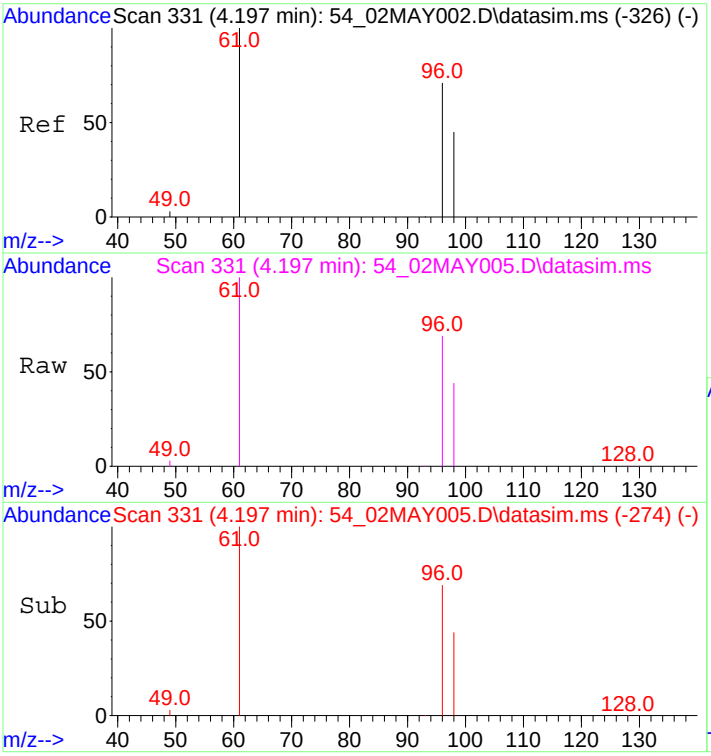


#6
1,1-Dichloroethane
Concen: 517.96 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.005 min
Lab File: 54_02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 63 Resp: 189297

Ion	Ratio	Lower	Upper
63	100		
65	31.1	26.1	39.1
27	29.2	10.2	15.2#

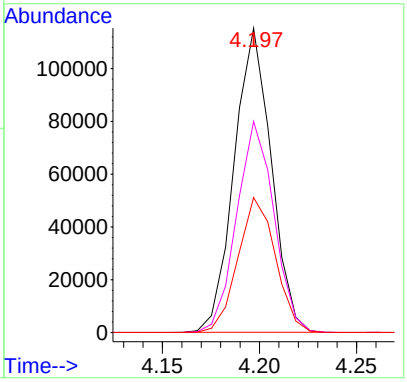


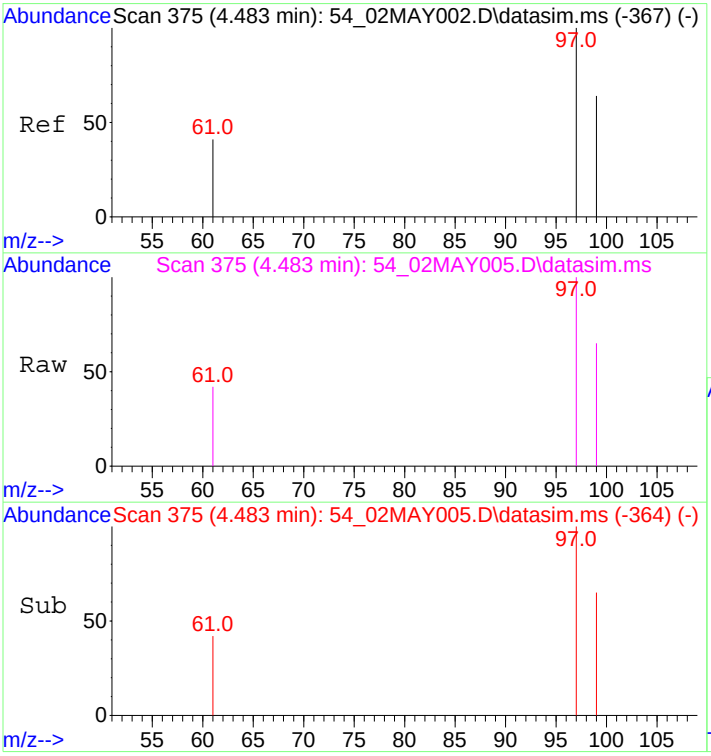


#7
cis-1,2-Dichloroethene
Concen: 536.59 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 61 Resp: 153407

Ion	Ratio	Lower	Upper
61	100		
96	69.7	78.5	117.7#
98	44.9	50.6	76.0#

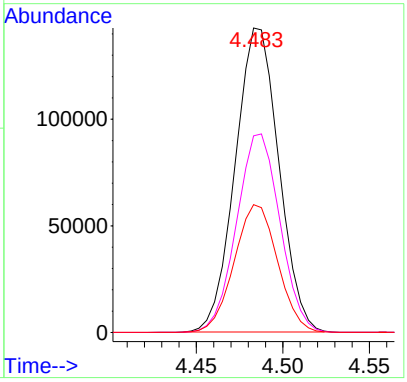


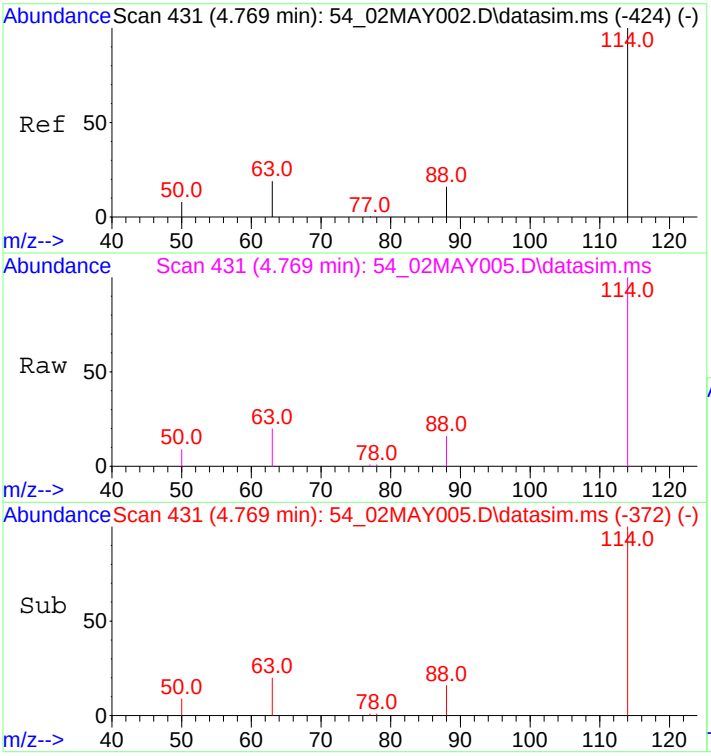


#8
1,1,1-Trichloroethane
Concen: 539.84 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 97 Resp: 250277

Ion	Ratio	Lower	Upper
97	100		
99	64.9	52.1	78.1
61	41.7	30.2	45.4

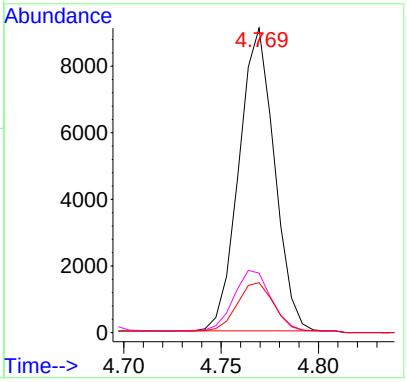


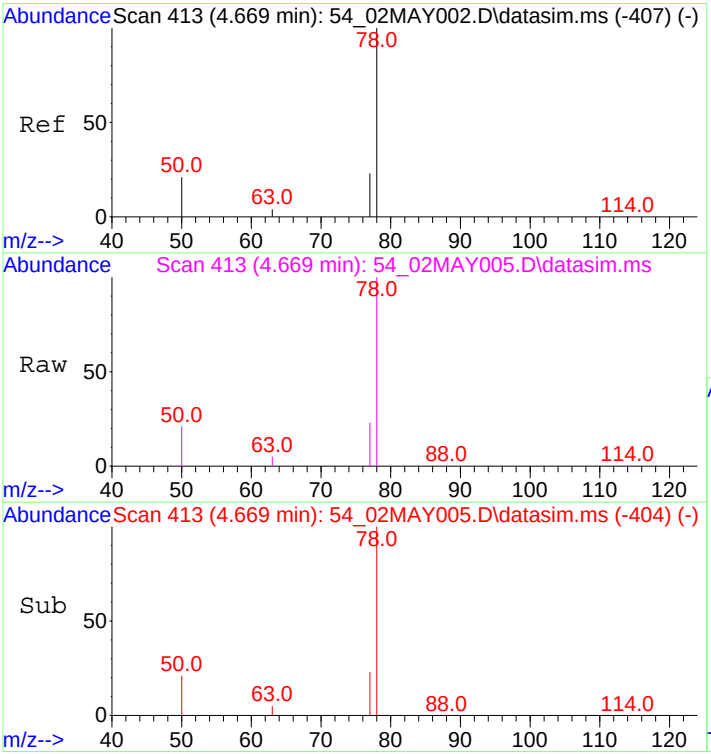


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion:114 Resp: 11528

Ion	Ratio	Lower	Upper
114	100		
63	20.8	12.0	18.0#
88	16.6	11.8	17.8

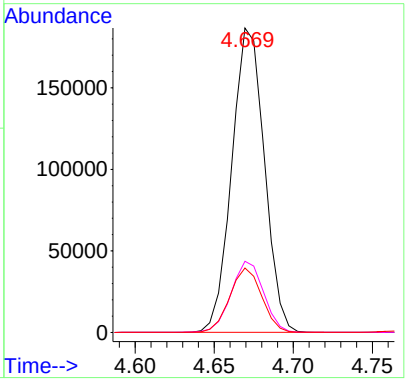


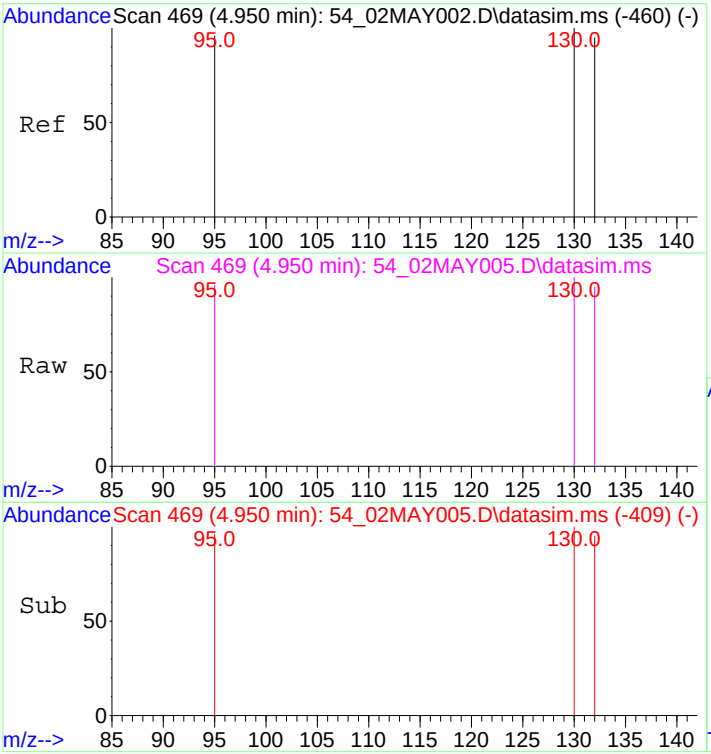


#10
Benzene
Concen: 507.71 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 78 Resp: 267367

Ion	Ratio	Lower	Upper
78	100		
77	23.3	18.2	27.2
50	20.7	8.6	13.0#

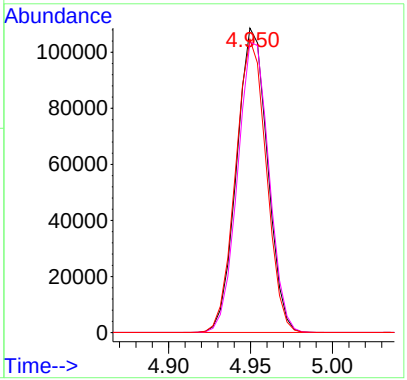


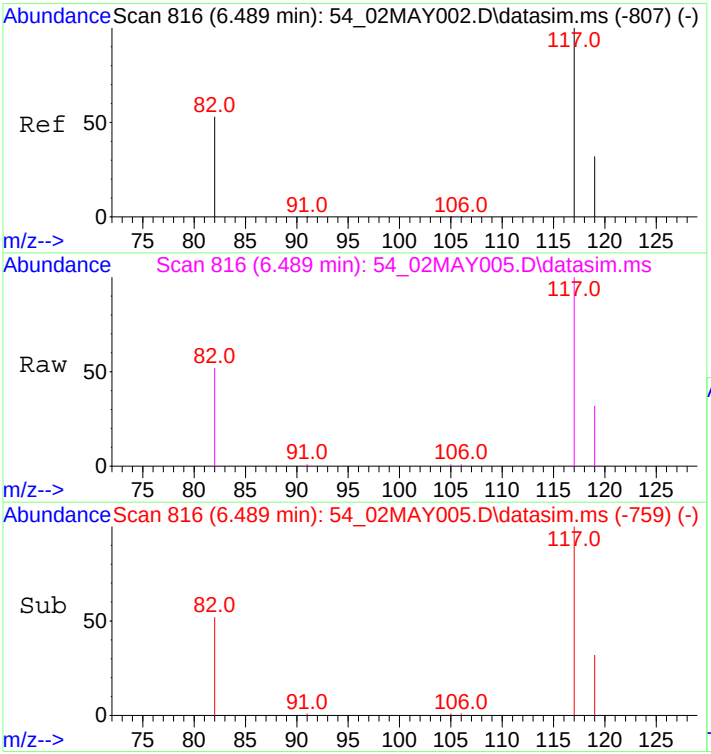


#11
Trichloroethene
Concen: 495.80 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion:130 Resp: 142153

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	95.9	76.5	114.7

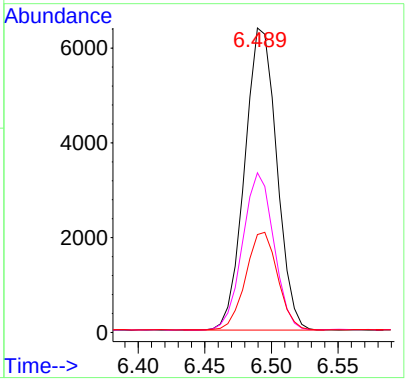


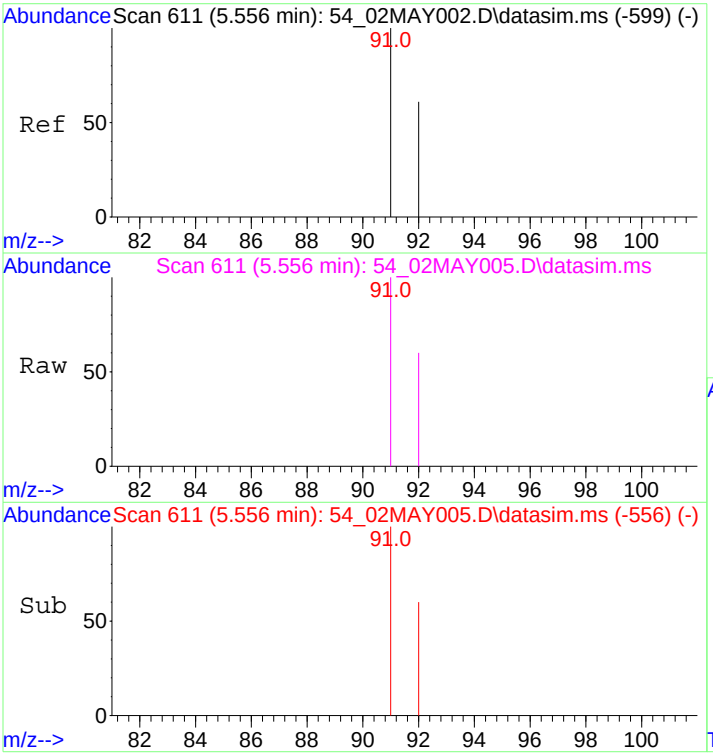


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54_02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion:117 Resp: 10698

Ion	Ratio	Lower	Upper
117	100		
82	50.6	38.0	57.0
119	32.1	27.0	40.4

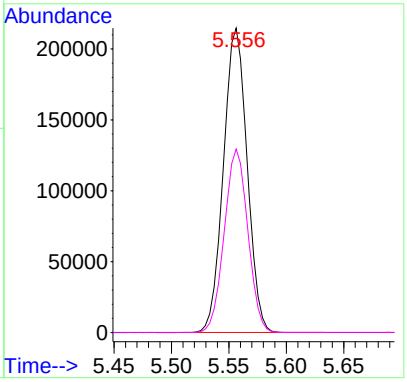


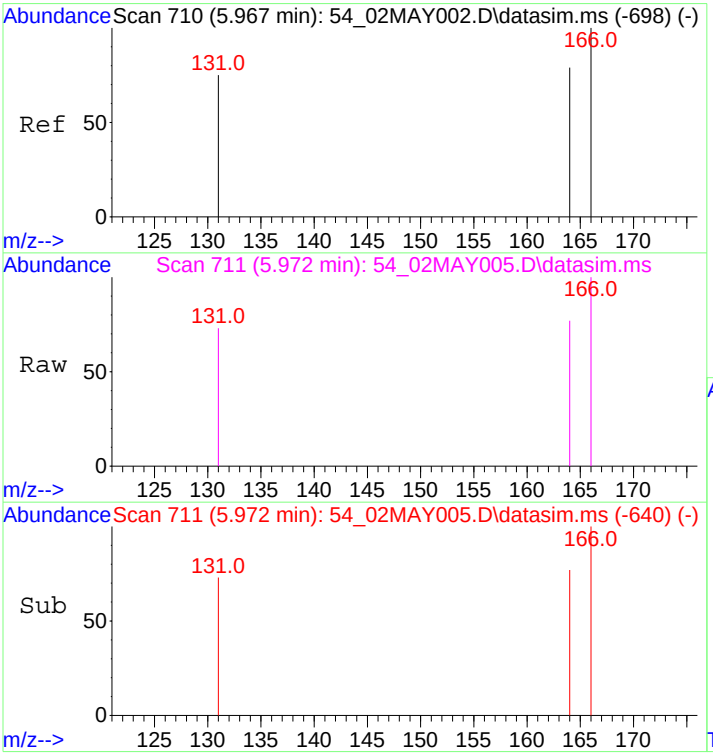


#13
Toluene
Concen: 479.84 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 91 Resp: 307720

Ion	Ratio	Lower	Upper
91	100		
92	59.9	47.8	71.8

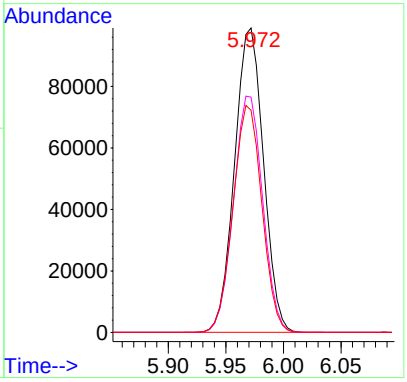


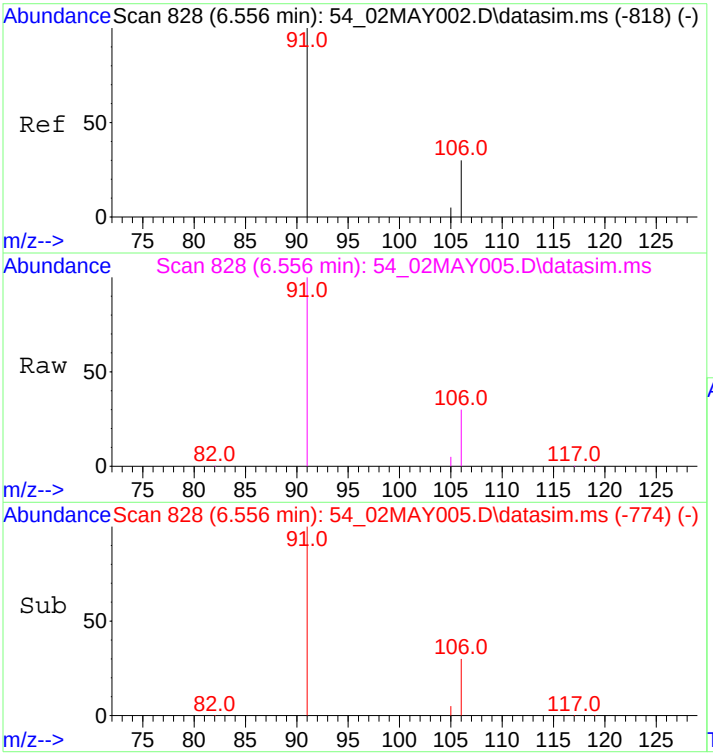


#14
Tetrachloroethene
Concen: 471.69 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.005 min
Lab File: 54_02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion:166 Resp: 172772

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.6	94.0
131	74.5	58.5	87.7

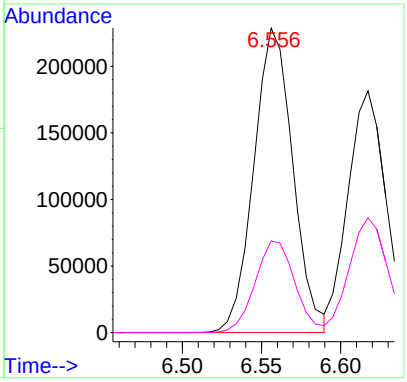


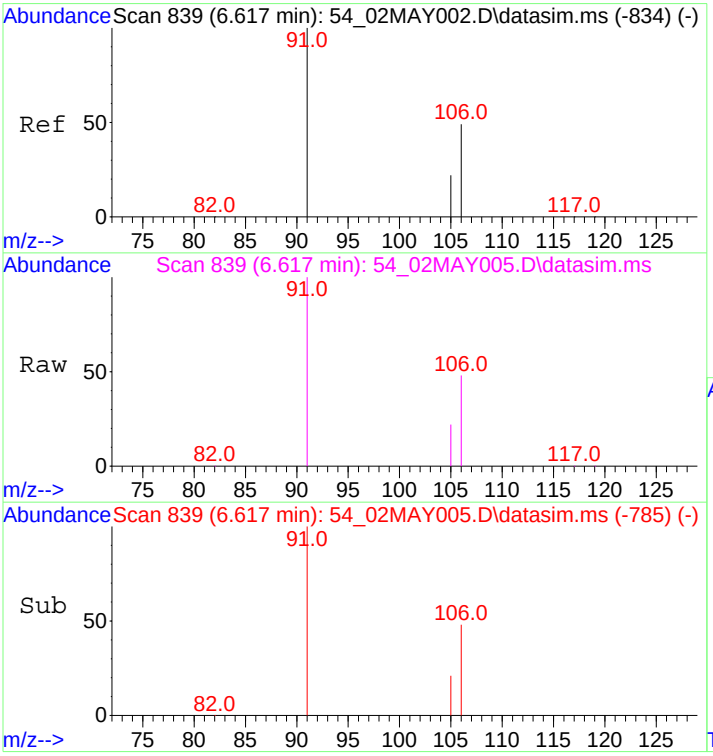


#15
Ethyl Benzene
Concen: 481.82 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 91 Resp: 392398

Ion	Ratio	Lower	Upper
91	100		
106	30.6	26.9	40.3

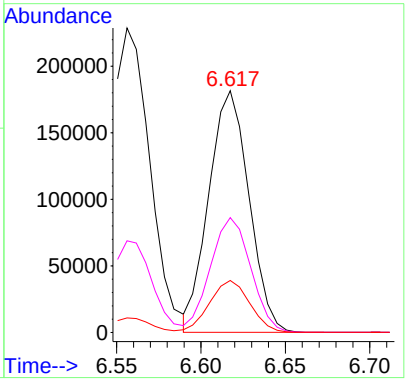


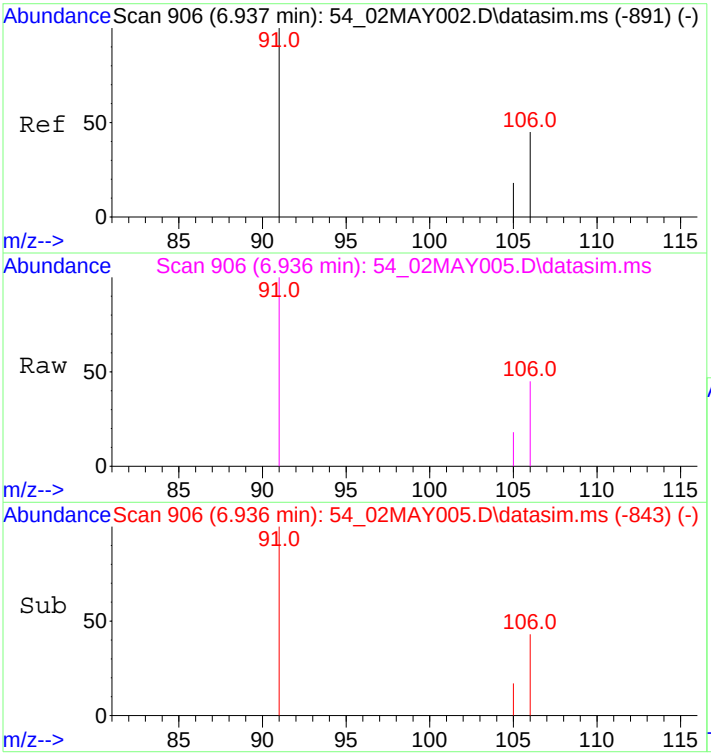


#16
m,p-Xylene
Concen: 481.32 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_02MAY005.D
Acq: 2 May 2014 7:49 am

Tgt Ion: 91 Resp: 300850

Ion	Ratio	Lower	Upper
91	100		
106	47.7	43.1	64.7
105	21.6	18.3	27.5

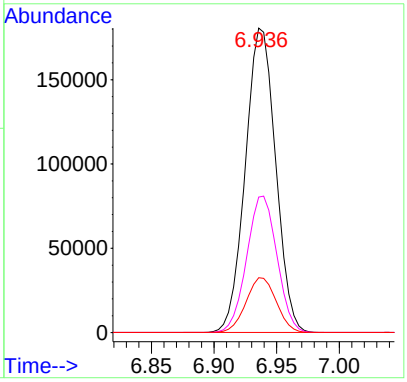




#17
o-Xylene
Concen: 479.47 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54 02MAY005.D
Acq: 2 May 2014 7:49 am

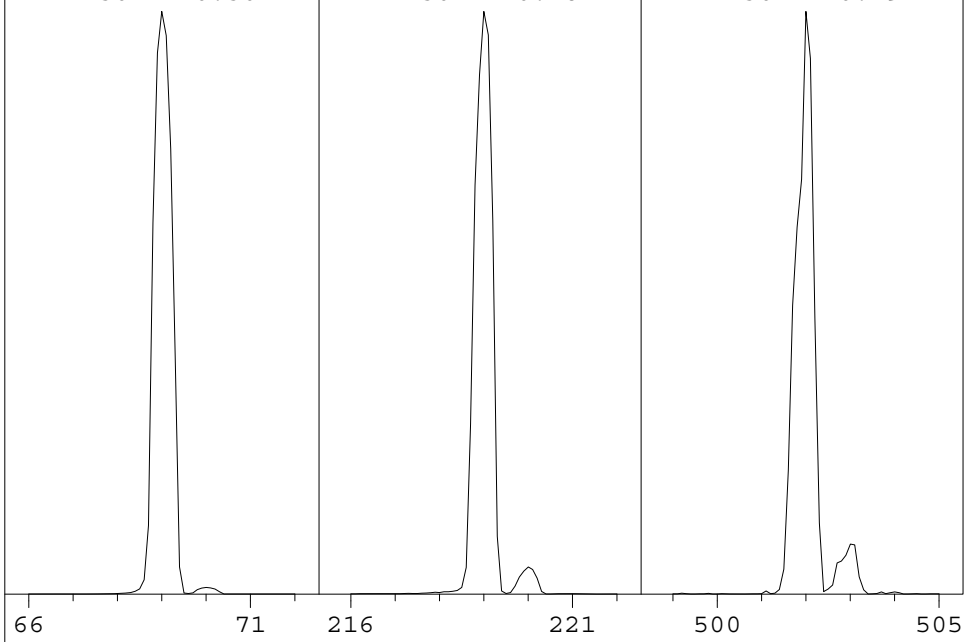
Tgt Ion: 91 Resp: 303919

Ion	Ratio	Lower	Upper
91	100		
106	44.8	40.1	60.1
105	18.0	15.8	23.6



Mon May 05 06:38:44 2014 Instrument: GCMS
C:\msdchem\1\5975\bfb.u US91732436

Mass	Ab	Pw50
69.00	1008317	0.50
219.00	539112	0.48
502.00	20806	0.49

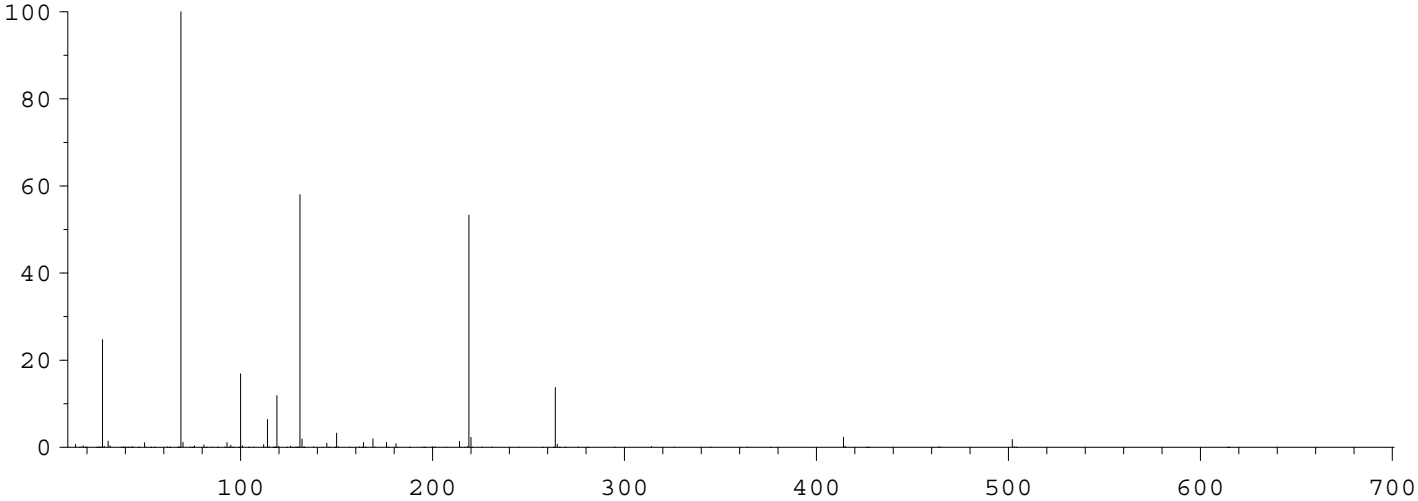


Ion Pol	Pos	MassGain	-791
		MassOffs	-37
Emission	34.6	AmuGain	1593
EIEnrgy	69.9	AmuOffs	129.88
Filament	2	Wid219	-0.029
		DC Pol	Pos
Repeller	19.90		
IonFcus	79.7	HEDEnab	On
EntLens	0.0	EMVolts	1953
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.22e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
125 peaks Base: 69.00 Abundance: 788800



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	788800	100.00	70.00	8982	1.14
219.00	420544	53.31	220.00	18000	4.28
502.00	14442	1.83	503.10	1235	8.55

Air/Water Check: H20~0.33% N2~24.68% O2~0.37% CO2~0.14% N2/H2O~7416.69%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 241453
Repeller Maximum 20 volts using ion 219; Gain Factor 2.41

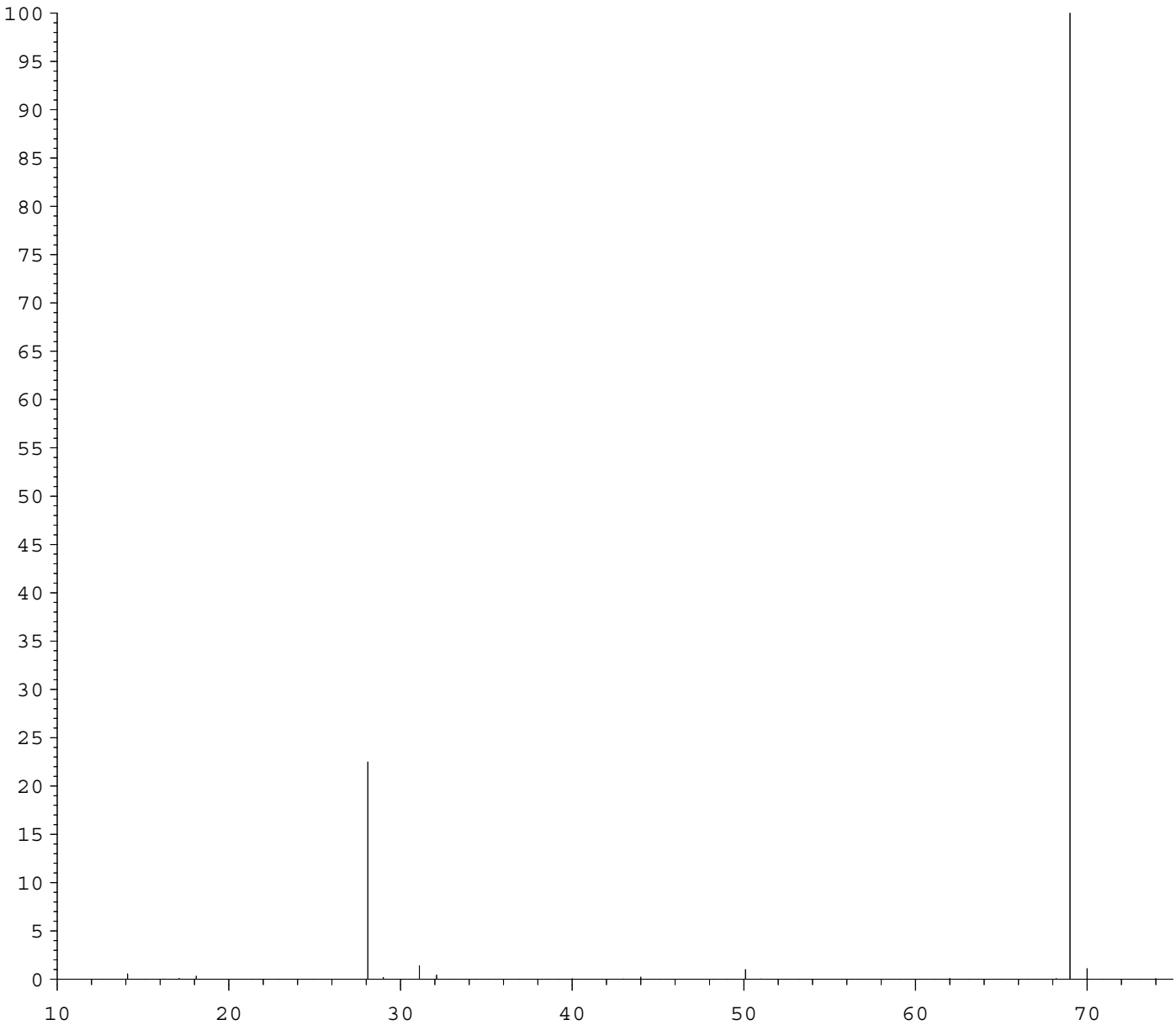
MassGain Values(Samples): -782(3) -767(2) -741(1) -706(0) -636(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.9	129.9	129.9	129.9	129.9	129.9	129.9
Entrance Lens Offset:	16.8	13.8	14.1	13.8	14.1	14.1	14.1
Target Abund(%):	1.0	100.0	55.0	55.0	2.4	2.0	
Actual Tune Abund(%):	1.1	100.0	58.0	53.3	2.3	1.8	

597x Air and Water Check

Instrument: GCMS
Mon May 05 06:49:50 2014 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
73 peaks Base: 69.00 Abundance: 862208



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	862208	100.00	70.00	9599	1.11
18.10	2857	0.33	19.10	221	7.74
28.10	193920	22.49	29.00	1721	0.89

Current Params used: bfb.u

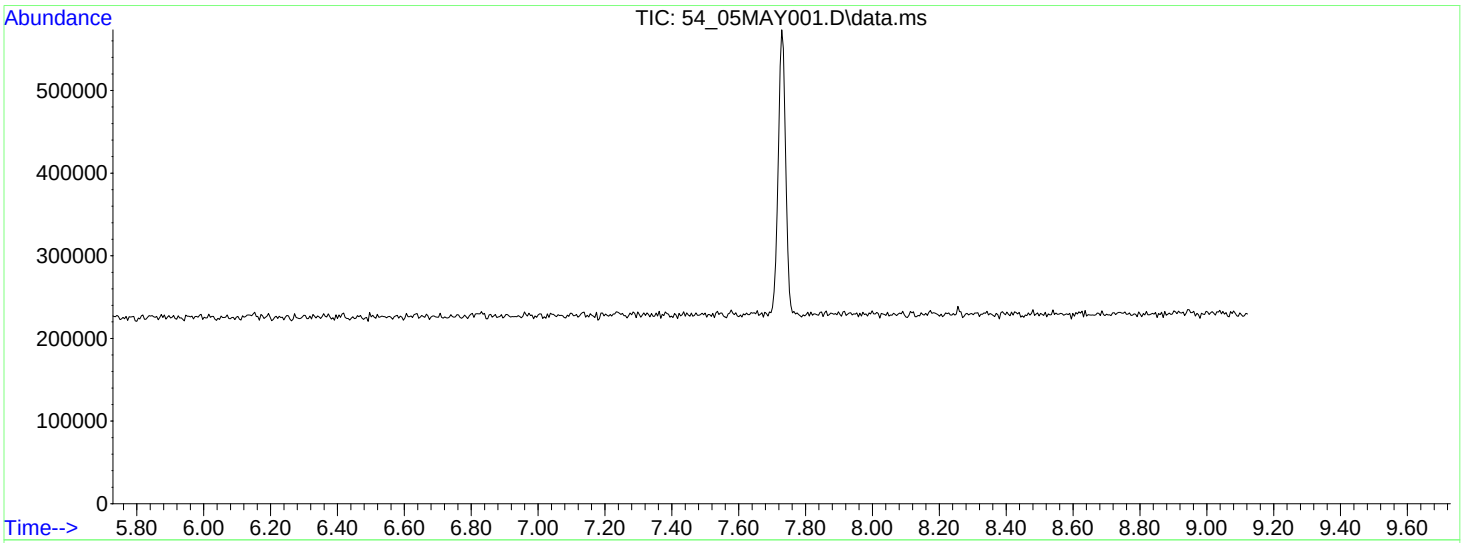
Relative abundances:

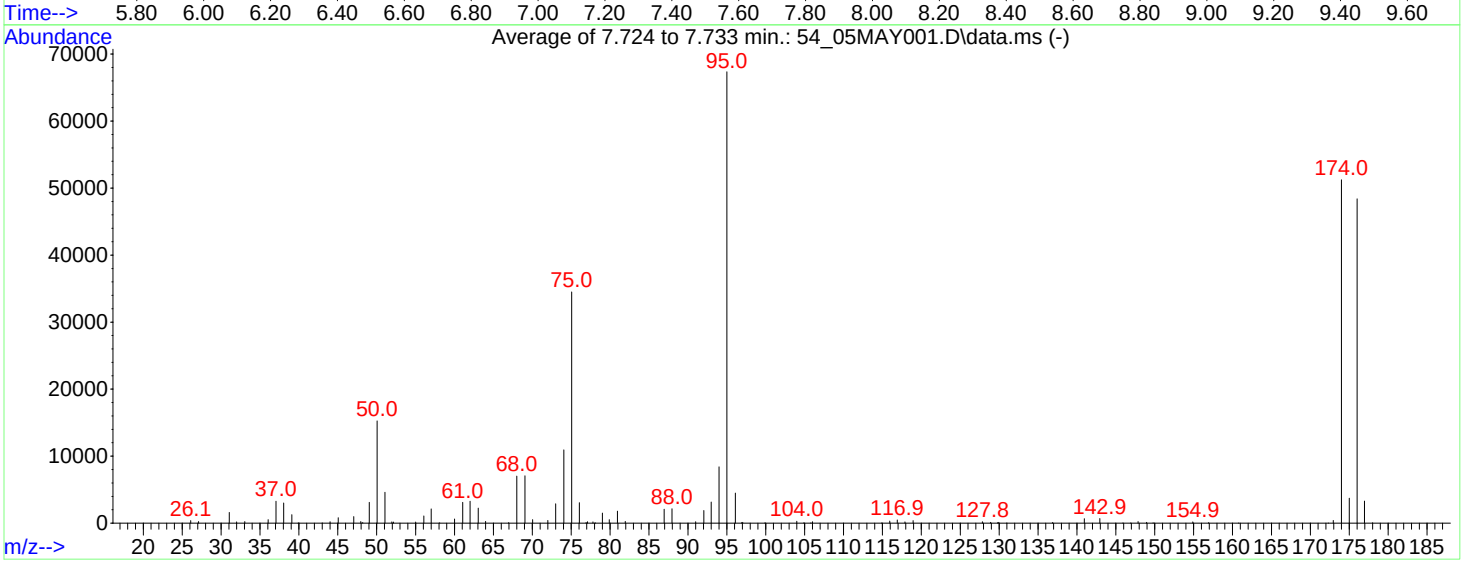
18/69 =	0.33	Water%	(counts=2857)
28/69 =	22.49	Nitrogen%	(counts=193920)
32/69 =	0.43	Oxygen%	(counts=3724)
44/69 =	0.23	Carbon Dioxide%	(counts=1977)
28/18 =	6787.54	Nitrogen/Water%	

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY001.D
Acq On : 5 May 2014 6:57 am
Operator : yhl
Sample : 20140505-BFB \ Tune Check
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20140416.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
Last Update : Fri May 02 10:59:38 2014





AutoFind: Scans 903, 904, 905; Background Corrected with Scan 894

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	22.7	15263	PASS
75	95	30	66	51.2	34493	PASS
95	95	100	100	100.0	67357	PASS
96	95	5	9	6.7	4497	PASS
173	174	0.00	2	0.8	407	PASS
174	95	50	120	76.1	51243	PASS
175	174	4	9	7.3	3724	PASS
176	174	93	101	94.4	48392	PASS
177	176	5	9	6.8	3297	PASS

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2014\20140505\54_05MAY001.D
Tune Time : 5 May 2014 6:57 am

Daily Calibration File : C:\msdchem\1\DATA\2014\20140505\54_05MAY002.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		4200	10439	10156
54_05MAY002.D	STD2014050	4200	10439	10156
54_05MAY003.D	STD2014050	3916	9778	9062
54_05MAY004.D	20140505-M	4393	10795	9986
54_05MAY005.D	20140505-L	4204	10337	9555
54_05MAY006.D	02172 \ SG	3918	9942	9148
54_05MAY007.D	02171 \ SG	4014	9963	9256
54_05MAY008.D	02171 \ SG	3812	9250	8597
54_05MAY009.D	02173 \ F6	4533	11282	10745
54_05MAY010.D	02174 \ F6	4392	10706	10108
54_05MAY011.D	02175 \ F6	4395	10665	9949
54_05MAY012.D	02176 \ F6	4272	10584	9990
54_05MAY013.D	02177 \ F6	4223	10279	9643
54_05MAY014.D	02178 \ F5	4382	10581	10158
54_05MAY015.D	02179 \ F5	4177	10234	9852
54_05MAY016.D	02180 \ F5	4338	10525	10044
54_05MAY017.D	02181 \ F5	4403	10789	10523
54_05MAY018.D	02182 \ F5	4048	9745	9302
54_05MAY019.D	02183 \ F5	4622	11416	10636
54_05MAY020.D	02184 \ F5	4322	10645	9858
54_05MAY021.D				

```
         02185 \ F5            4353      10703       9832
-----------------------------------------------------------------------------
54_05MAY022.D
         02186 \ F5            4171      10235       9407
-----------------------------------------------------------------------------
54_05MAY023.D
         02187 \ F5            4410      10811       9879
-----------------------------------------------------------------------------
54_05MAY024.D
         02188 \ F5            4356      10931       9660
-----------------------------------------------------------------------------
54_05MAY025.D
         02189 \ F5            4439      10700       9921
-----------------------------------------------------------------------------
54_05MAY026.D
         02190 \ F5            4432      10778       9845
-----------------------------------------------------------------------------
54_05MAY027.D
         02191 \ F5            4429      10761      10236
-----------------------------------------------------------------------------
54_05MAY028.D
         02192 \ F5            4323      10430       9491
-----------------------------------------------------------------------------
54_05MAY029.D
         02193 \ F5            4323      10245       9524
-----------------------------------------------------------------------------
54_05MAY030.D
         02194 \ F5            4351      10476      10003
-----------------------------------------------------------------------------
54_05MAY031.D
         02195 \ F5            4447      10632       9849
-----------------------------------------------------------------------------
54_05MAY032.D
         02196 \ F5            4299      10318       9919
-----------------------------------------------------------------------------
54_05MAY033.D
         02197 \ F5            4477      10720      10091
-----------------------------------------------------------------------------
54_05MAY034.D
         02198 \ F5            4539      10808      10019
-----------------------------------------------------------------------------
54_05MAY035.D
         02199 \ F5            4357      10488       9823
-----------------------------------------------------------------------------
54_05MAY036.D
         02200 \ F5            4033       9644       9046
-----------------------------------------------------------------------------
54_05MAY037.D
         02201 \ F5            3895       9492       8650
-----------------------------------------------------------------------------
54_05MAY038.D
         02202 \ F5            3900       9394       8580
-----------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Tue May 06 16:49:22 2014  GCMS
```

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY002.D
Acq On : 5 May 2014 7:09 am
Operator : yhl
Sample : STD20140505-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:15:42 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISTD	Bromochloromethane	1.000	1.000	0.0	96	0.00
2	M	Vinyl chloride	0.380	0.345	9.2	90	0.00
3	M	1,1-Dichloroethene	0.774	0.783	-1.2	98	0.00
4	M	Methyl Tert Butyl Ether	1.183	1.098	7.2	92	0.00
5	M	trans-1,2-Dichloroethene	0.683	0.679	0.6	96	0.00
6	M	1,1-Dichloroethane	0.815	0.784	3.8	93	0.00
7	M	cis-1,2-Dichloroethene	0.637	0.647	-1.6	96	0.00
8	M	1,1,1-Trichloroethane	1.034	1.117	-8.0	101	0.00
9	ISTD	1,4-Difluorobenzene	1.000	1.000	0.0	89	0.00
10	M	Benzene	0.457	0.440	3.7	87	0.00
11	M	Trichloroethene	0.249	0.242	2.8	86	0.00
12	ISTD	Chlorobenzene-d5	1.000	1.000	0.0	94	0.00
13	M	Toluene	0.599	0.539	10.0	84	0.00
14	M	Tetrachloroethene	0.342	0.306	10.5	83	0.00
15	M	Ethyl Benzene	0.761	0.698	8.3	86	0.00
16	M	m,p-Xylene	0.584	0.544	6.8	88	0.00
17	M	o-Xylene	0.593	0.547	7.8	87	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY002.D
Acq On : 5 May 2014 7:09 am
Operator : yhl
Sample : STD20140505-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:15:42 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

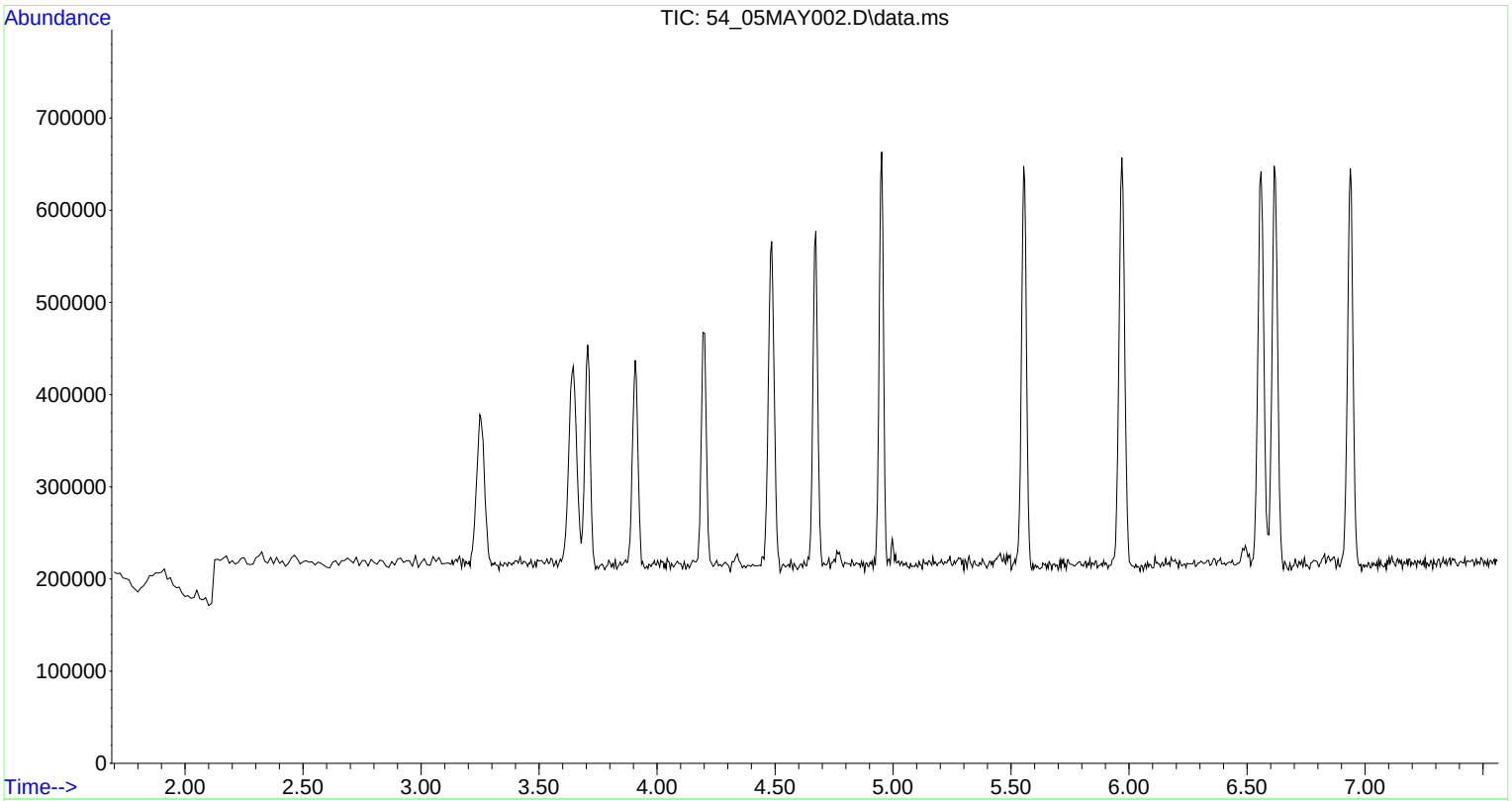
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4200	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10439	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	10156	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	74632	467.30	ppbv #	54
3] 1,1-Dichloroethene	3.251	61	163782	503.50	ppbv #	76
4] Methyl Tert Butyl Ether	3.642	73	231700	466.52	ppbv #	81
5] trans-1,2-Dichloroethene	3.709	61	143263	499.71	ppbv #	72
6] 1,1-Dichloroethane	3.910	63	170443	498.02	ppbv #	85
7] cis-1,2-Dichloroethene	4.197	61	143421	535.70	ppbv #	70
8] 1,1,1-Trichloroethane	4.483	97	236974	545.83	ppbv	97
10] Benzene	4.669	78	241228	505.86	ppbv #	89
11] Trichloroethene	4.950	130	127758	492.08	ppbv	98
13] Toluene	5.556	91	284757	467.73	ppbv	100
14] Tetrachloroethene	5.972	166	157882	454.04	ppbv	99
15] Ethyl Benzene	6.556	91	368856	477.08	ppbv	94
16] m,p-Xylene	6.617	91	287334	484.23	ppbv	92
17] o-Xylene	6.940	91	287450	477.69	ppbv	92

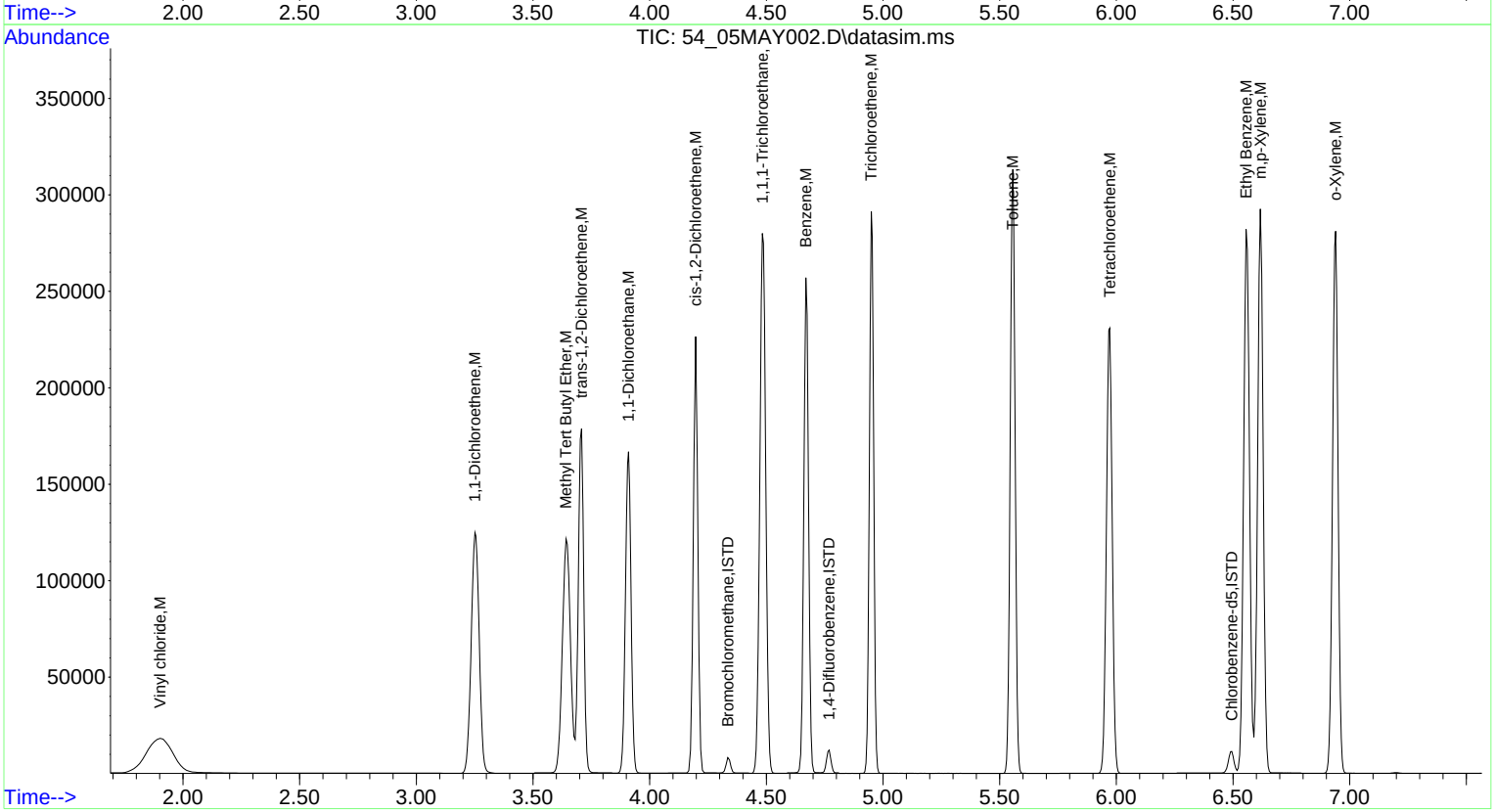
(#) = qualifier out of range (m) = manual integration (+) = signals summed

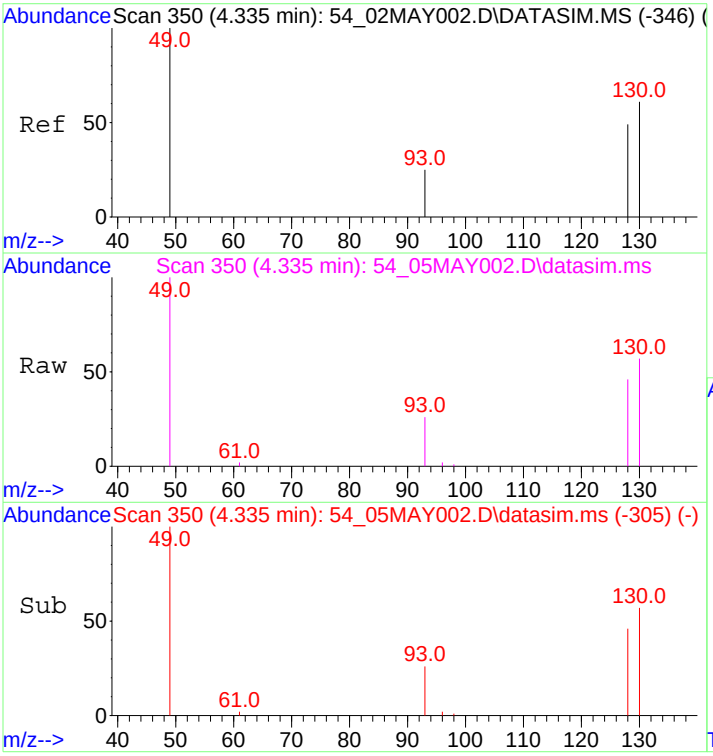
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY002.D
Acq On : 5 May 2014 7:09 am
Operator : yhl
Sample : STD20140505-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:15:42 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



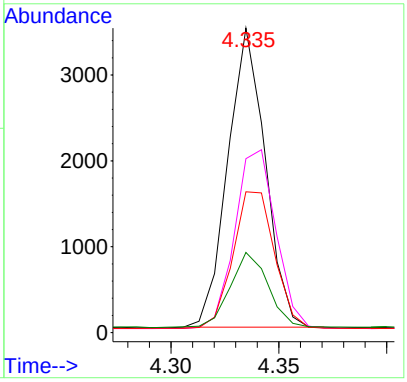


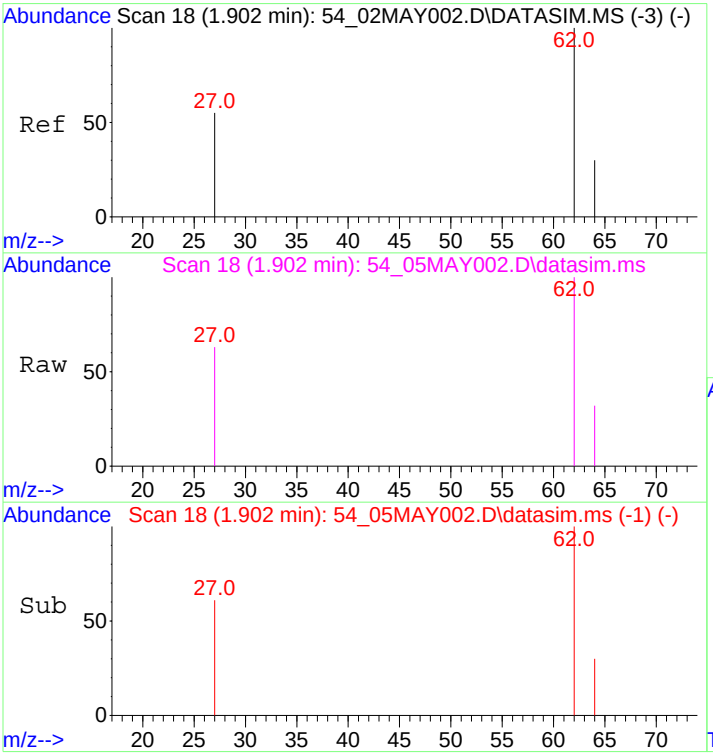


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 49 Resp: 4200

Ion	Ratio	Lower	Upper
49	100		
130	65.7	87.2	130.8#
128	50.9	68.0	102.0#
93	24.9	29.3	43.9#

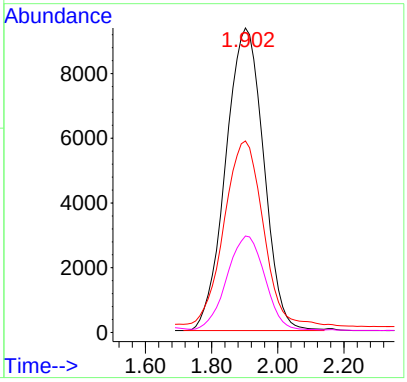


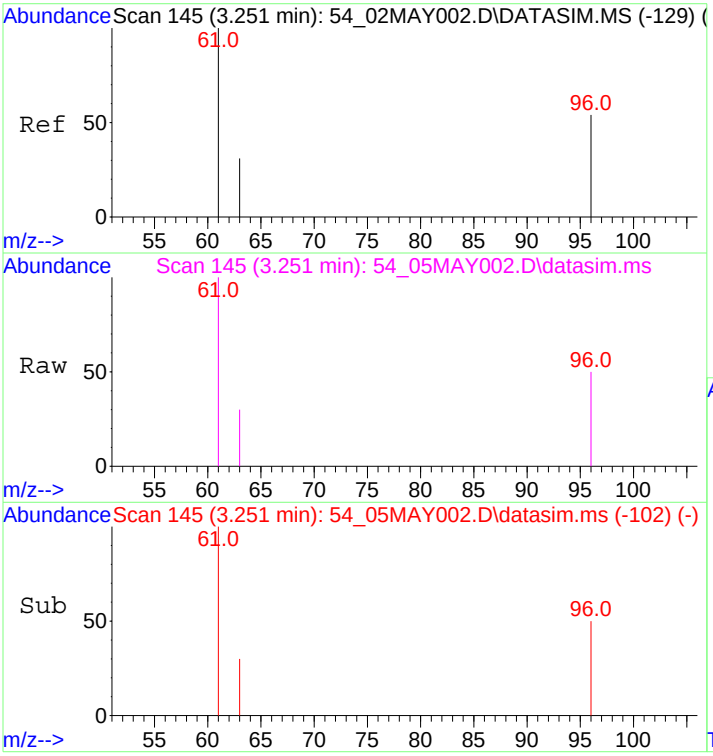


#2
Vinyl chloride
Concen: 467.30 ppbv
RT: 1.902 min Scan# 18
Delta R.T. -0.013 min
Lab File: 54_05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 62 Resp: 74632

Ion	Ratio	Lower	Upper
62	100		
64	31.1	26.8	40.2
27	73.3	16.1	24.1#

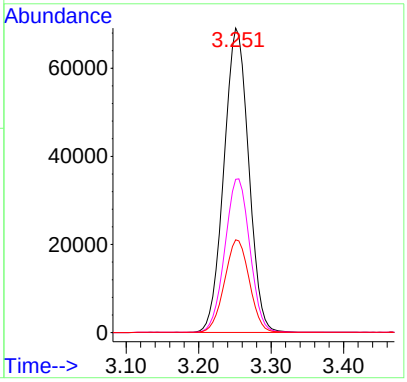


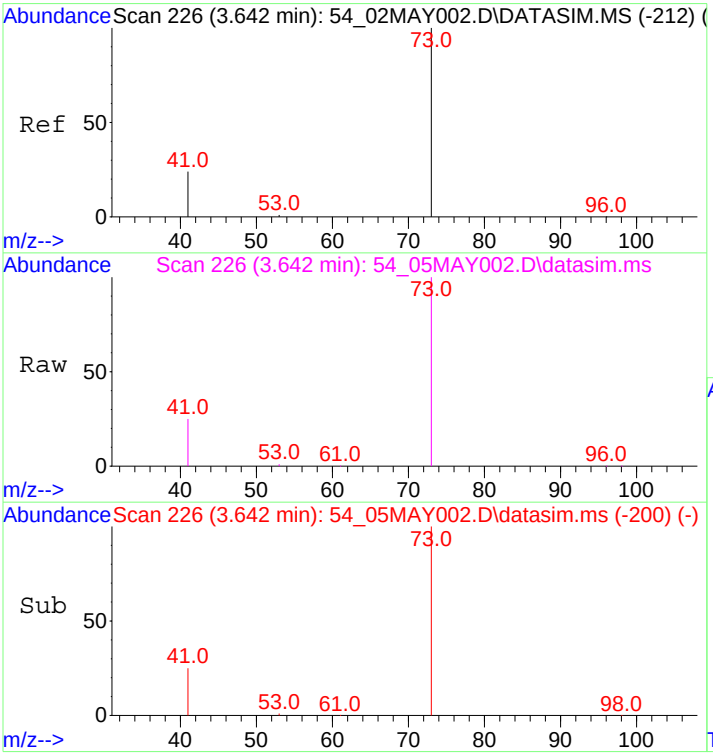


#3
1,1-Dichloroethene
Concen: 503.50 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.005 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 61 Resp: 163782

Ion	Ratio	Lower	Upper
61	100		
96	51.0	63.4	95.2#
63	30.5	26.2	39.2

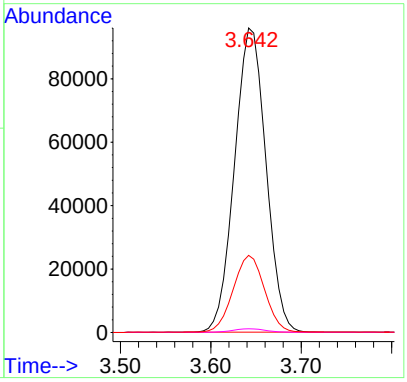


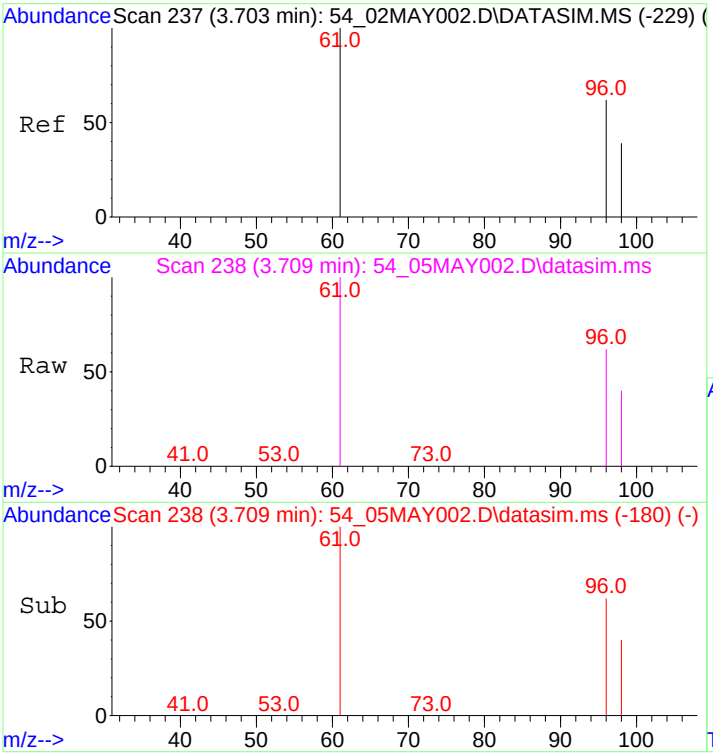


#4
Methyl Tert Butyl Ether
Concen: 466.52 ppbv
RT: 3.642 min Scan# 226
Delta R.T. -0.006 min
Lab File: 54_05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 73 Resp: 231700

Ion	Ratio	Lower	Upper
73	100		
53	1.2	1.0	1.4
41	25.0	13.1	19.7#

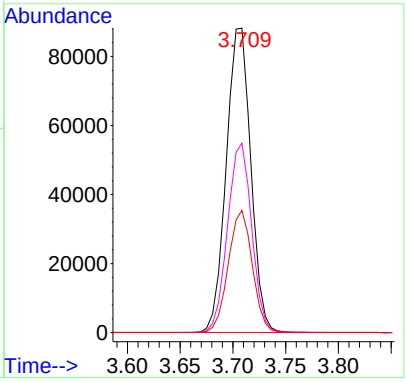


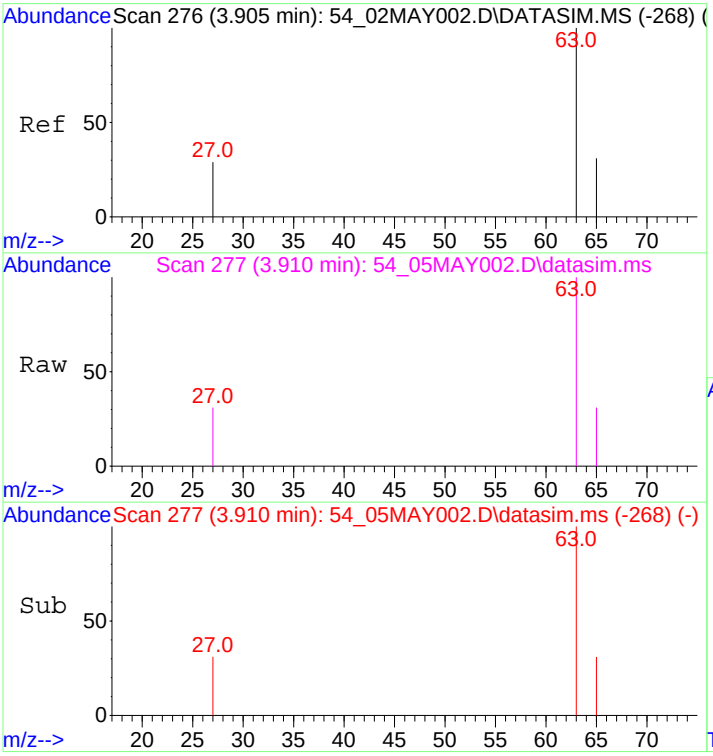


#5
trans-1,2-Dichloroethene
Concen: 499.71 ppbv
RT: 3.709 min Scan# 238
Delta R.T. -0.000 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 61 Resp: 143263

Ion	Ratio	Lower	Upper
61	100		
96	61.0	71.4	107.0#
98	39.0	45.8	68.8#

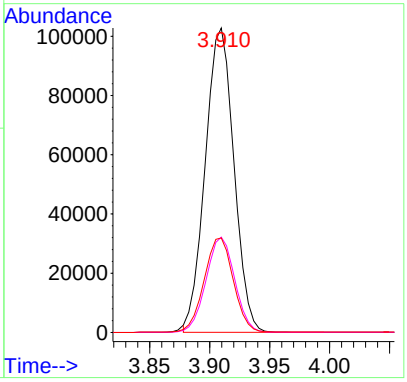


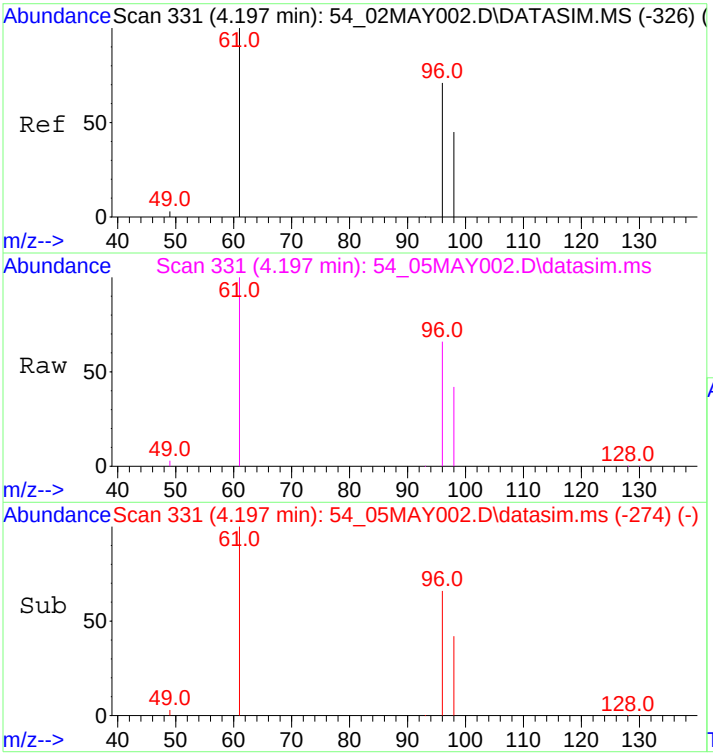


#6
1,1-Dichloroethane
Concen: 498.02 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 63 Resp: 170443

Ion	Ratio	Lower	Upper
63	100		
65	31.1	26.1	39.1
27	31.1	10.2	15.2#

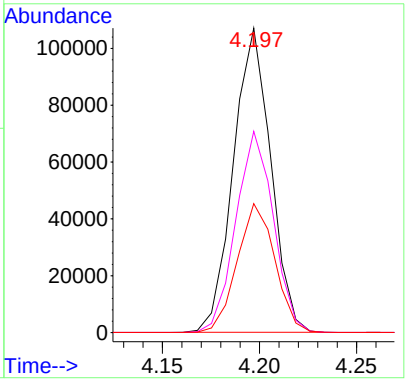


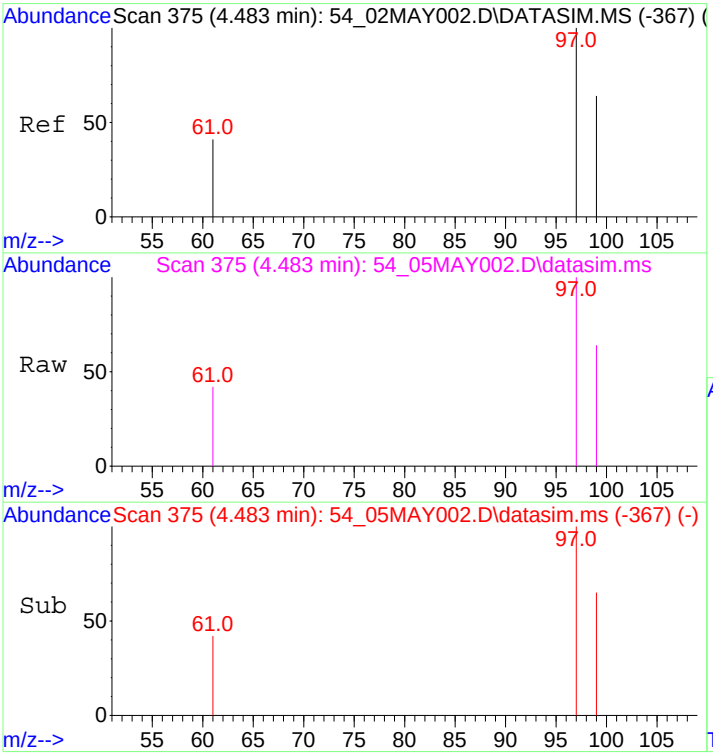


#7
cis-1,2-Dichloroethene
Concen: 535.70 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 61 Resp: 143421

Ion	Ratio	Lower	Upper
61	100		
96	66.3	78.5	117.7#
98	42.7	50.6	76.0#

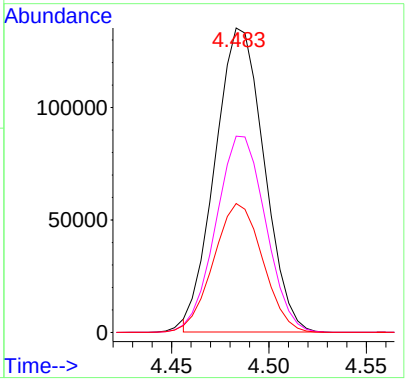


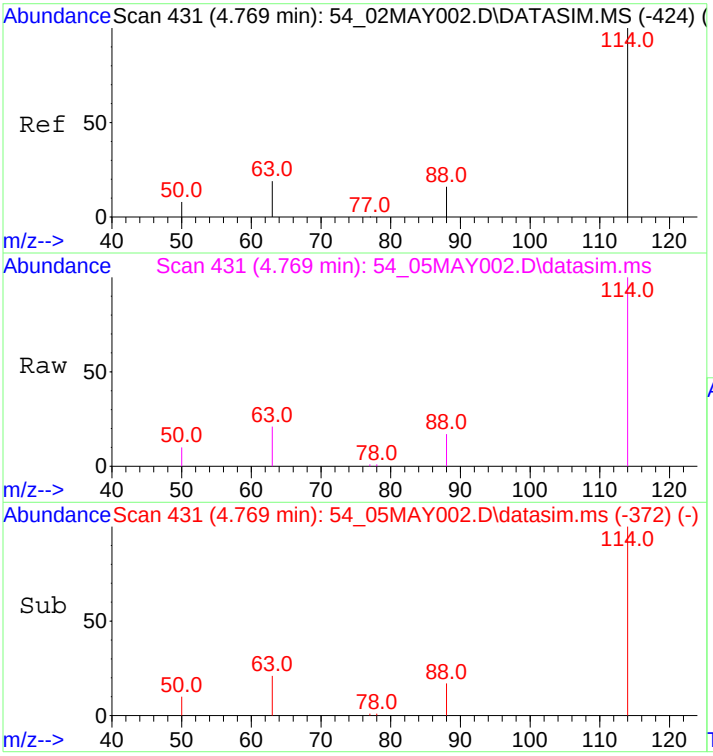


#8
1,1,1-Trichloroethane
Concen: 545.83 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 97 Resp: 236974

Ion	Ratio	Lower	Upper
97	100		
99	64.8	52.1	78.1
61	42.1	30.2	45.4

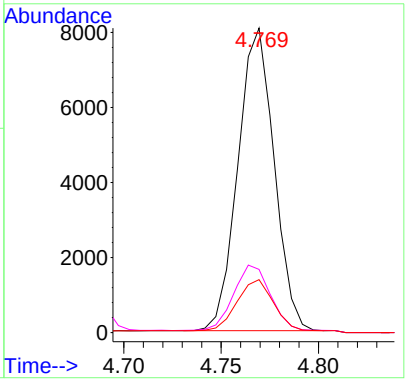


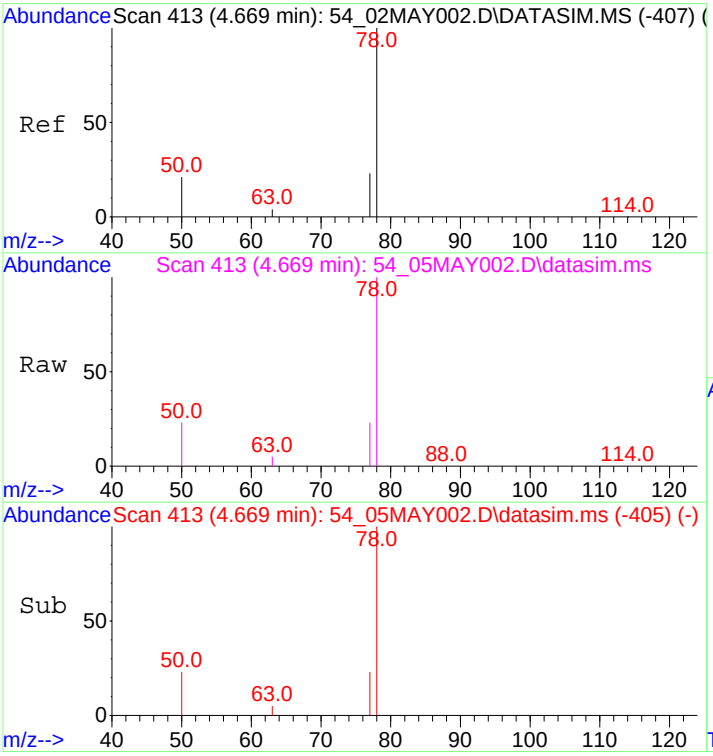


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion:114 Resp: 10439

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.8	11.8	17.8

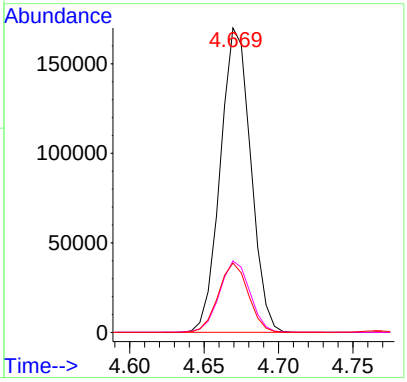


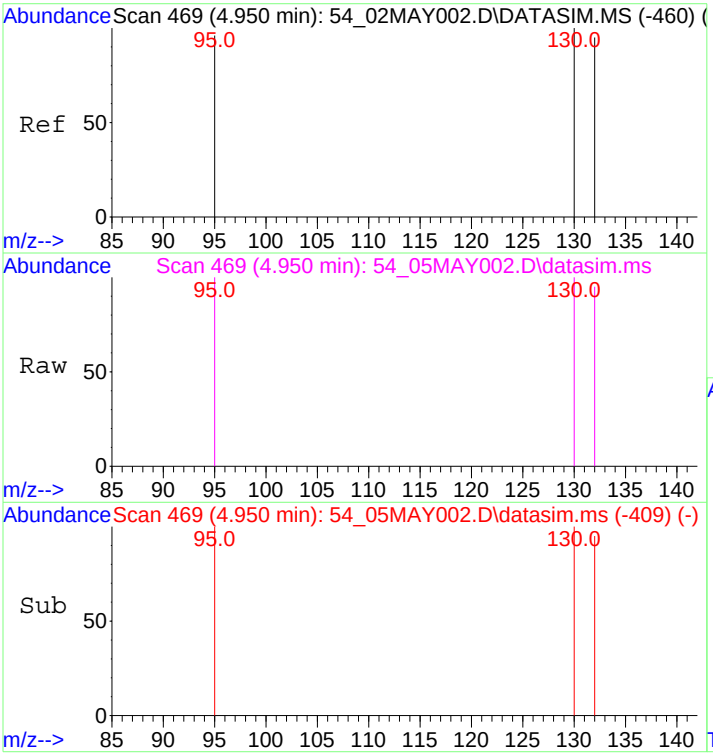


#10
Benzene
Concen: 505.86 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.006 min
Lab File: 54_05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 78 Resp: 241228

Ion	Ratio	Lower	Upper
78	100		
77	23.4	18.2	27.2
50	22.3	8.6	13.0#

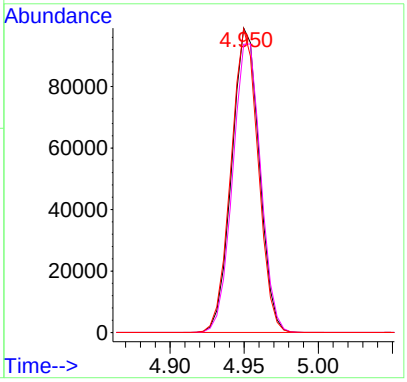


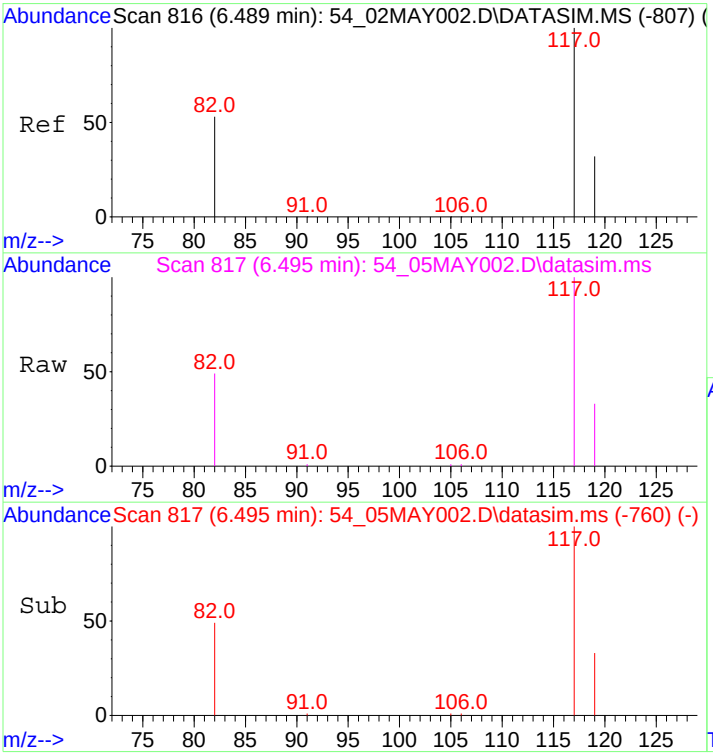


#11
Trichloroethene
Concen: 492.08 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion:130 Resp: 127758

Ion	Ratio	Lower	Upper
130	100		
132	96.6	76.9	115.3
95	98.3	76.5	114.7

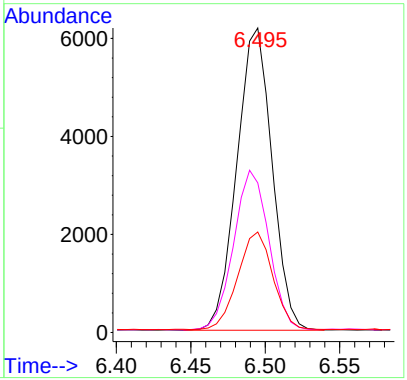


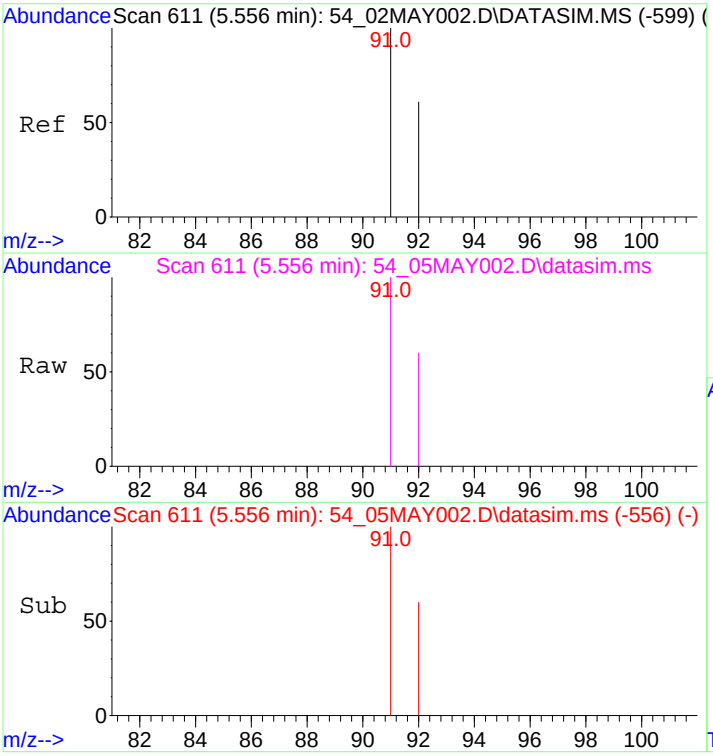


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54_05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion:117 Resp: 10156

Ion	Ratio	Lower	Upper
117	100		
82	52.8	38.0	57.0
119	32.1	27.0	40.4

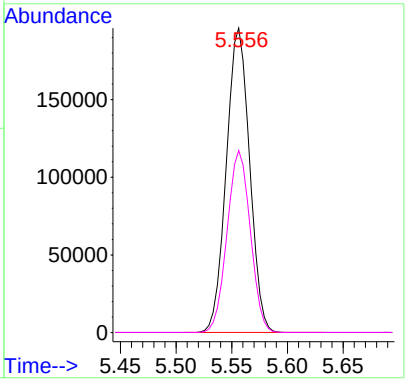


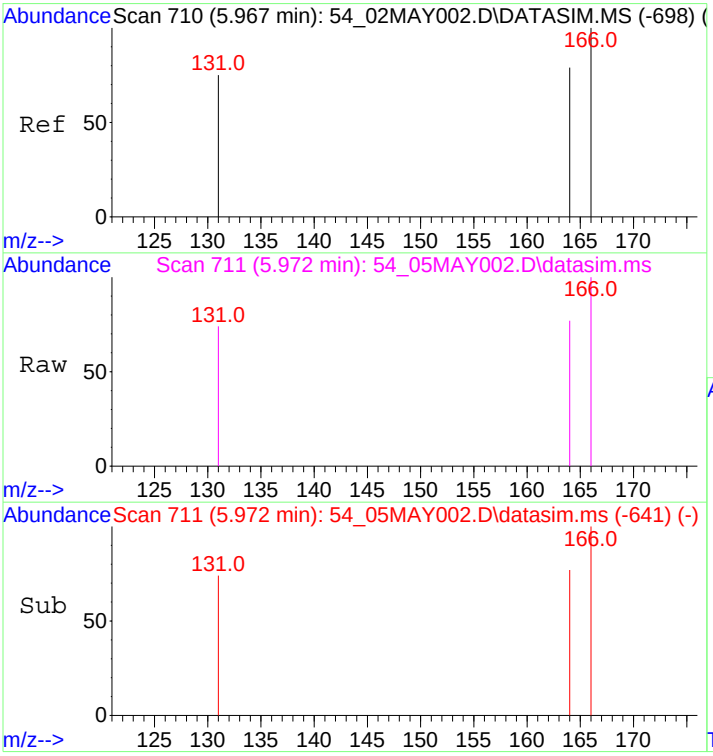


#13
Toluene
Concen: 467.73 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 91 Resp: 284757

Ion	Ratio	Lower	Upper
91	100		
92	59.6	47.8	71.8

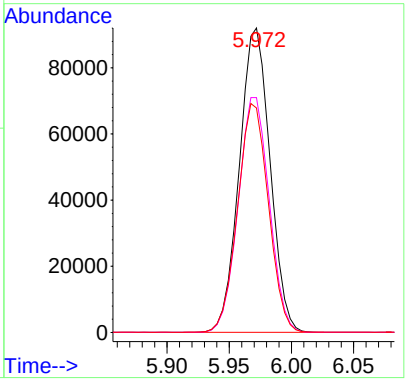


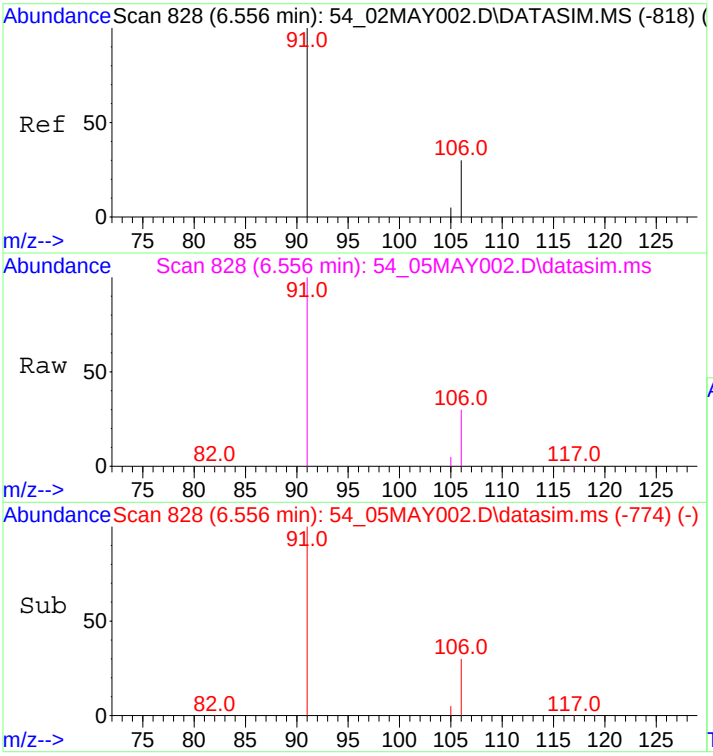


#14
Tetrachloroethene
Concen: 454.04 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion:166 Resp: 157882

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	75.3	58.5	87.7

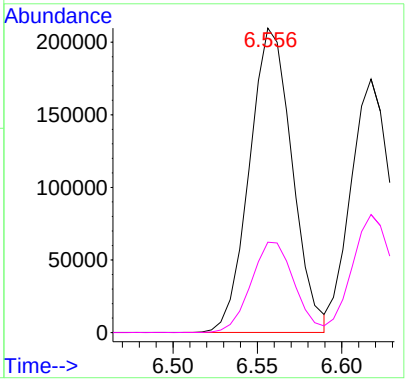


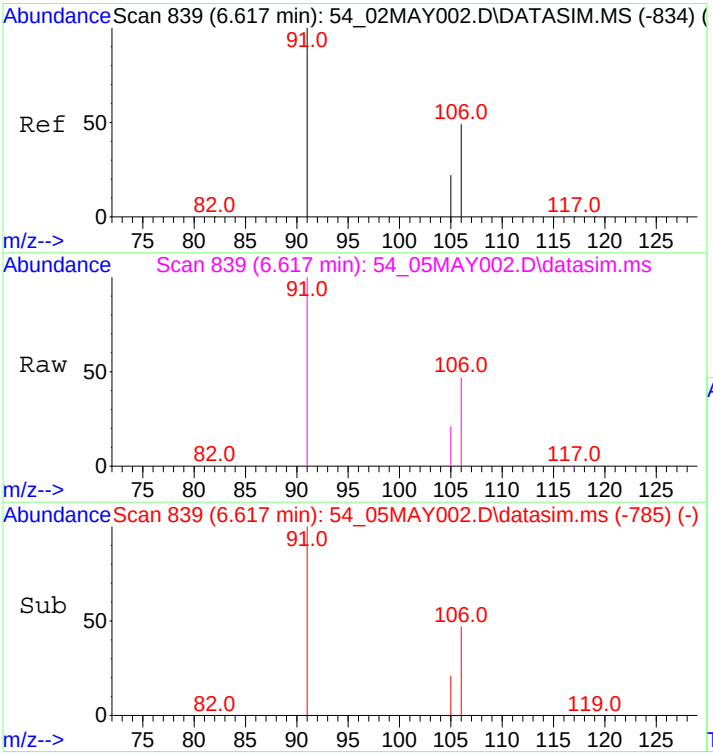


#15
Ethyl Benzene
Concen: 477.08 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 91 Resp: 368856

Ion	Ratio	Lower	Upper
91	100		
106	30.1	26.9	40.3

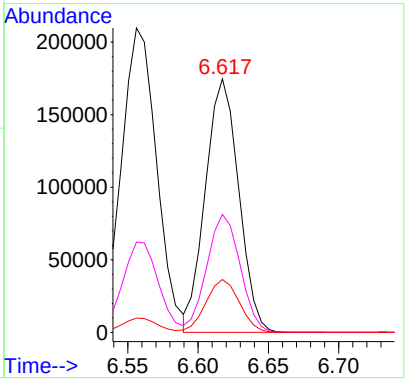


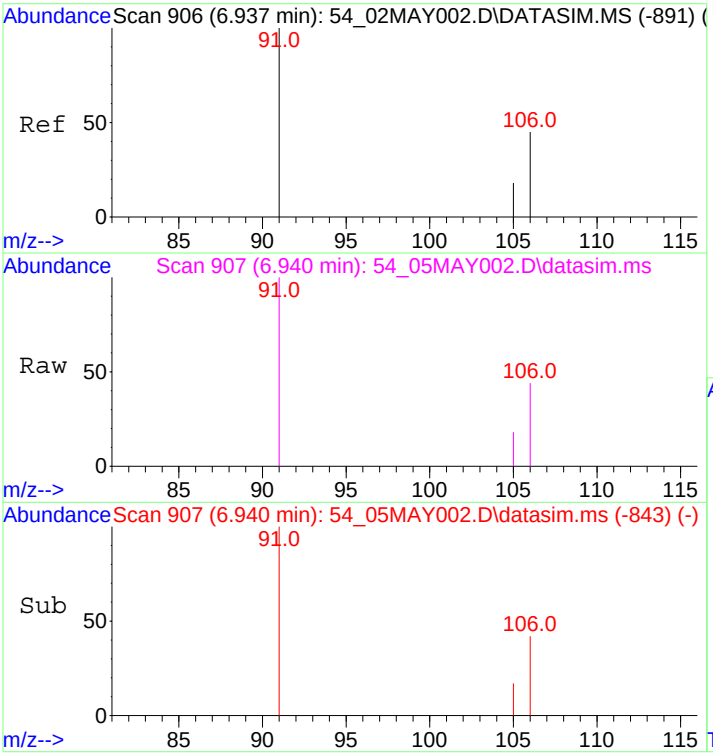


#16
m,p-Xylene
Concen: 484.23 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 91 Resp: 287334

Ion	Ratio	Lower	Upper
91	100		
106	46.5	43.1	64.7
105	21.0	18.3	27.5

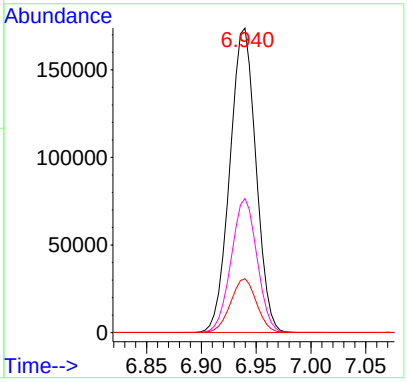




#17
o-Xylene
Concen: 477.69 ppbv
RT: 6.940 min Scan# 907
Delta R.T. -0.000 min
Lab File: 54 05MAY002.D
Acq: 5 May 2014 7:09 am

Tgt Ion: 91 Resp: 287450

Ion	Ratio	Lower	Upper
91	100		
106	43.7	40.1	60.1
105	17.5	15.8	23.6



LOW LEVEL CALIBRATION VERIFICATION

Data File 54_05May003.D

LLCCV Standard Number 050514-LLCCV

LLCCV Standard Name **STD20140505-3 \LLCCV 0.5 ppbv 1º**

Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/5/2014	Second Source Actual Values ppbv	Difference %	Acceptance Criterion %	
Vinyl Chloride	0.5	0.52	2.9	50	OK
1,1-Dichloroethene	0.52	0.50	4.5	50	OK
Methyl Tert Butyl Ether	0.46	0.50	8.5	50	OK
trans-1,2-Dichloroethene	0.55	0.50	9.5	50	OK
1,1-Dichloroethane	0.51	0.52	1.4	50	OK
cis-1,2-Dichloroethene	0.6	0.53	13.7	50	OK
1,1,1-Trichloroethane	0.54	0.51	6.9	50	OK
Benzene	0.57	0.53	8.6	50	OK
Trichloroethene	0.57	0.51	12.9	50	OK
Toluene	0.59	0.52	13.5	50	OK
Tetrachloroethene	0.58	0.51	14.3	50	OK
Ethyl Benzene	0.63	0.52	21.2	50	OK
m,p-Xylene	0.7	0.52	34.6	50	OK
o-Xylene	0.68	0.52	31.4	50	OK

Primary Standard Cylinder # CC-80994

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:32:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

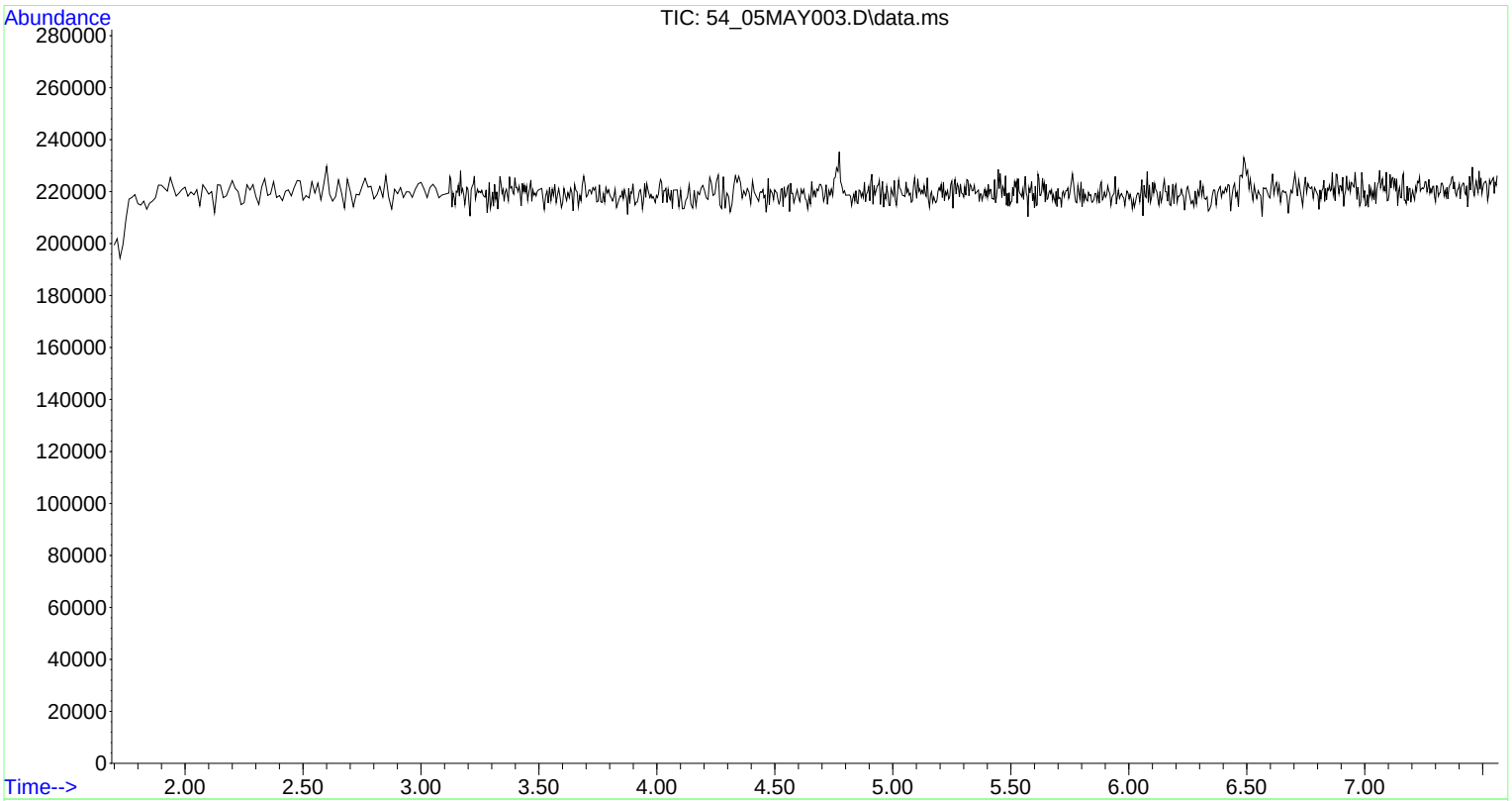
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3916	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9778	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	9062	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.915	62	74m	0.50	ppbv	
3] 1,1-Dichloroethene	3.256	61	157m	0.52	ppbv	
4] Methyl Tert Butyl Ether	3.642	73	211m	0.46	ppbv	
5] trans-1,2-Dichloroethene	3.708	61	147	0.55	ppbv	# 46
6] 1,1-Dichloroethane	3.910	63	162m	0.51	ppbv	
7] cis-1,2-Dichloroethene	4.197	61	150m	0.60	ppbv	
8] 1,1,1-Trichloroethane	4.483	97	220	0.54	ppbv	96
10] Benzene	4.669	78	254	0.57	ppbv	# 53
11] Trichloroethene	4.950	130	139	0.57	ppbv	# 53
13] Toluene	5.556	91	323m	0.59	ppbv	
14] Tetrachloroethene	5.972	166	181	0.58	ppbv	# 44
15] Ethyl Benzene	6.556	91	432	0.63	ppbv	98
16] m,p-Xylene	6.617	91	372	0.70	ppbv	92
17] o-Xylene	6.937	91	365	0.68	ppbv	93

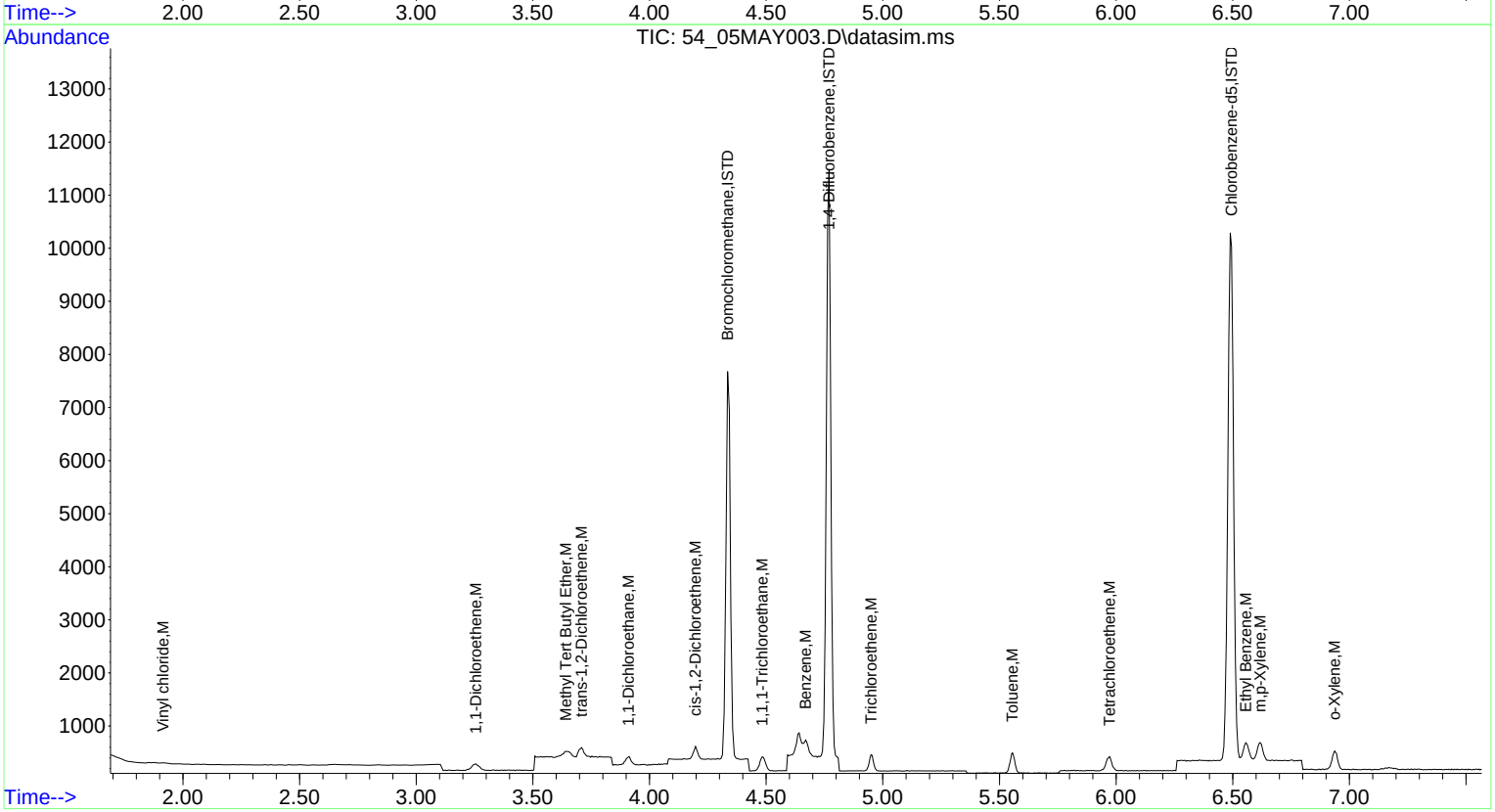
(#) = qualifier out of range (m) = manual integration (+) = signals summed

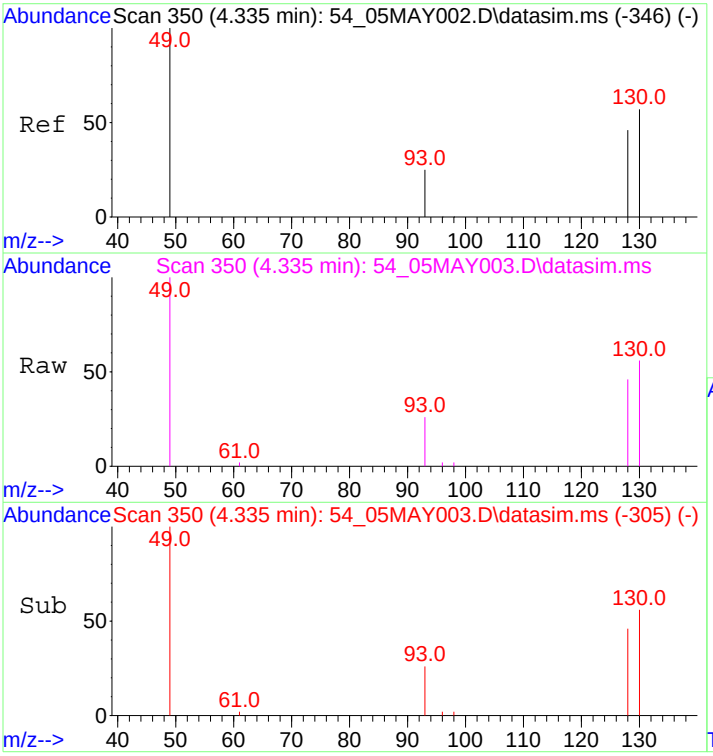
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:32:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



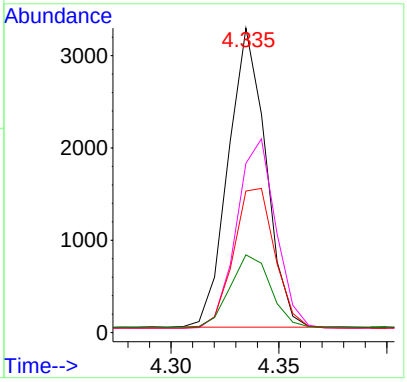


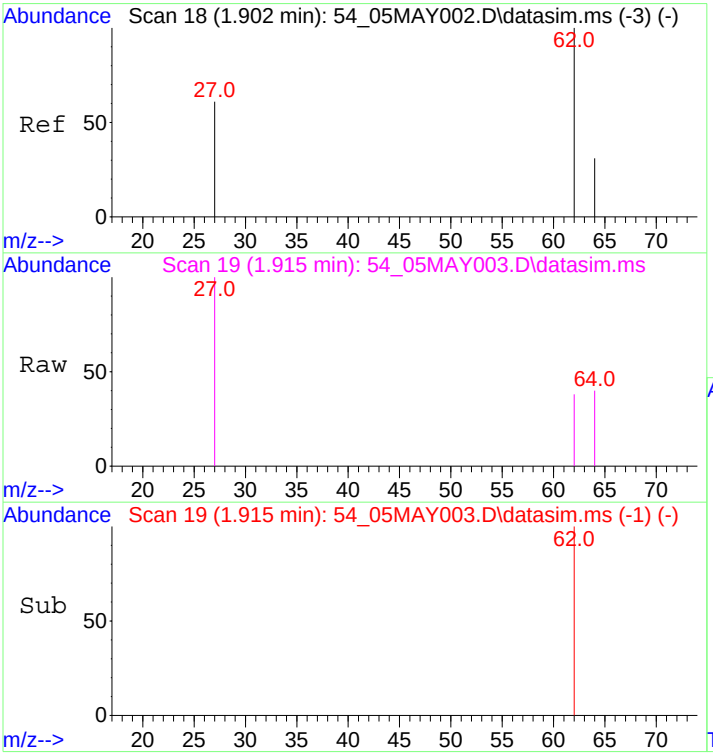


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 49 Resp: 3916

Ion	Ratio	Lower	Upper
49	100		
130	66.0	87.2	130.8#
128	51.7	68.0	102.0#
93	25.8	29.3	43.9#

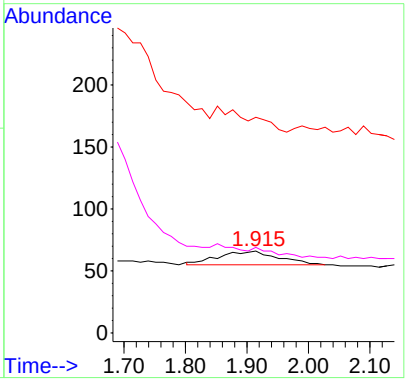




#2
Vinyl chloride
Concen: 0.50 ppbv m
RT: 1.915 min Scan# 19
Delta R.T. 0.012 min
Lab File: 54_05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 62 Resp: 74

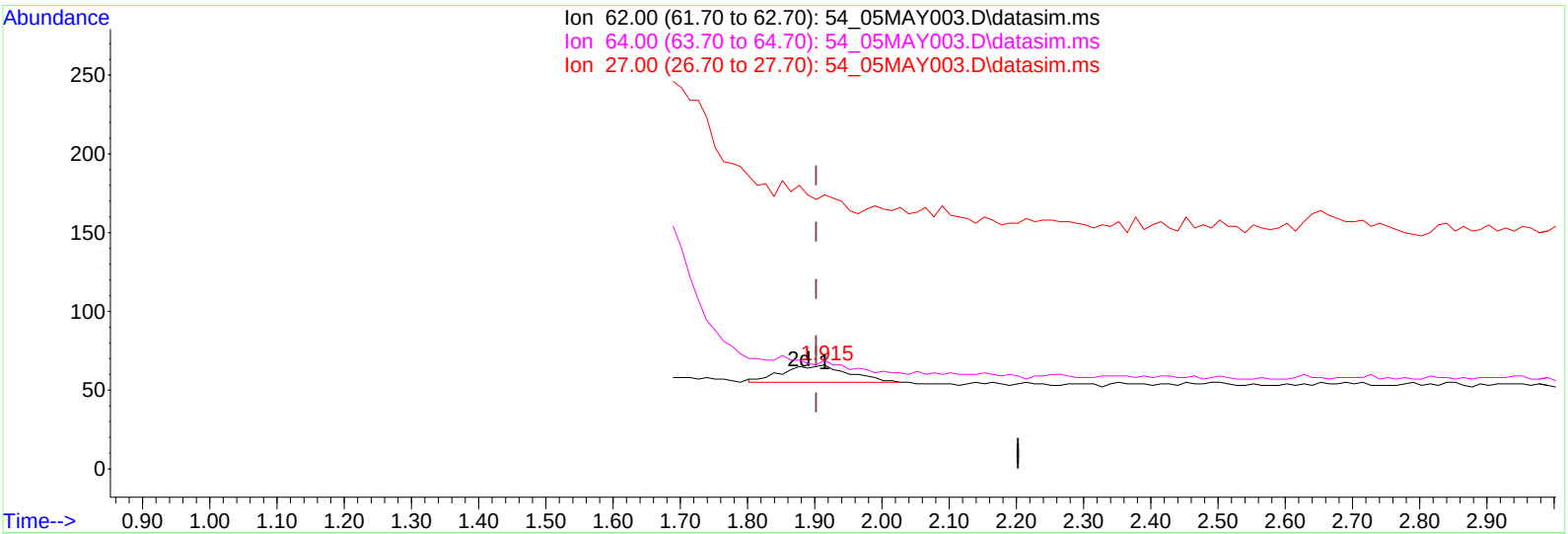
Ion	Ratio	Lower	Upper
62	100		
64	104.5	26.8	40.2#
27	263.6	16.1	24.1#

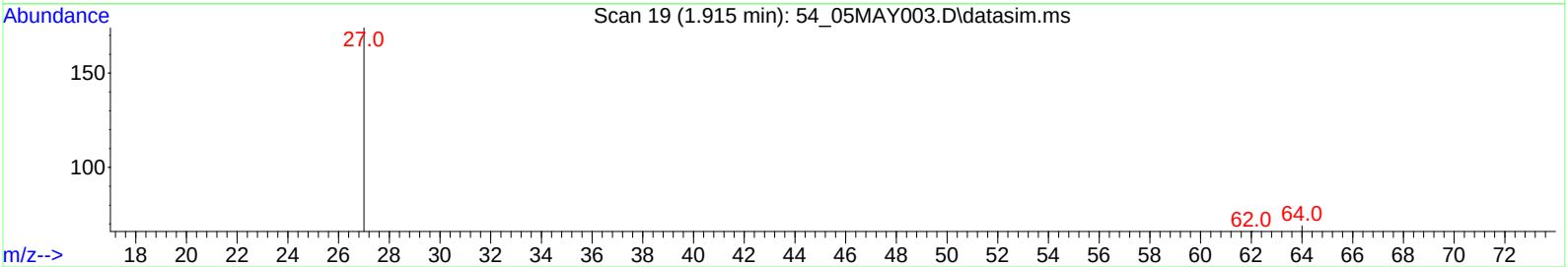


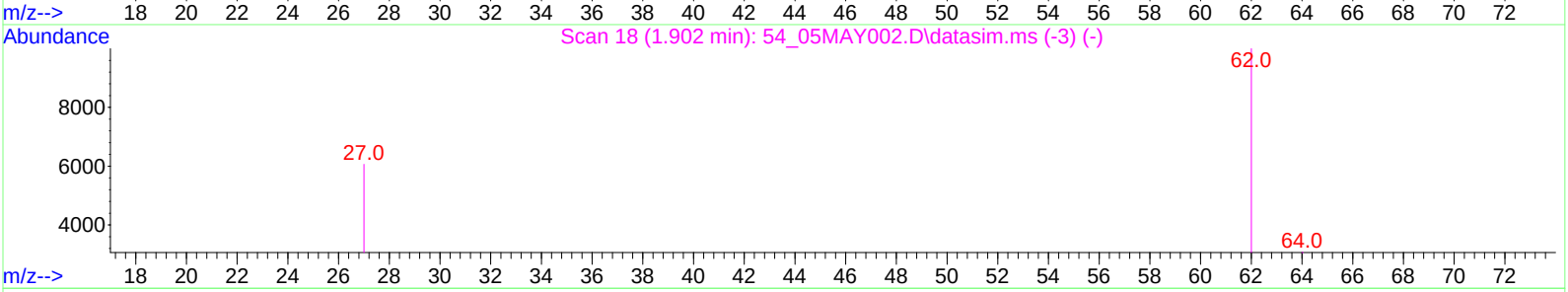
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY003.D\data.ms

(2) Vinyl chloride (M)

1.915min (+0.012) 0.50 ppbv m

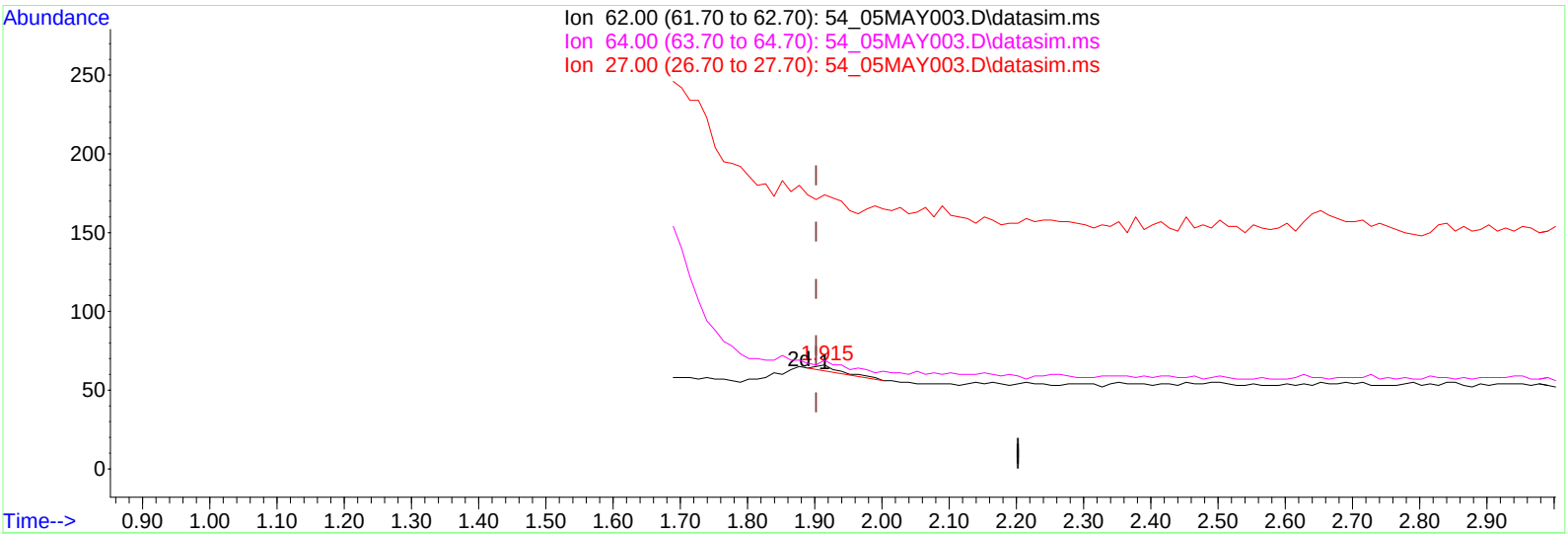
response 74

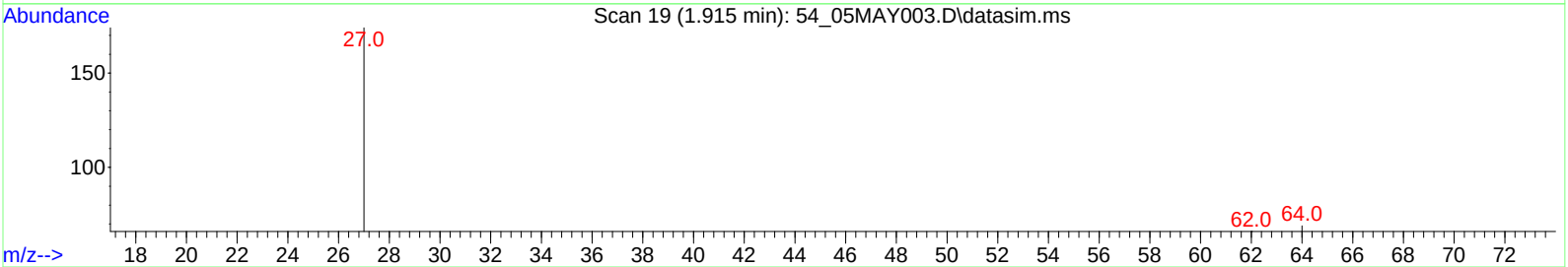
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	104.55#
27.00	20.10	263.64#
0.00	0.00	0.00

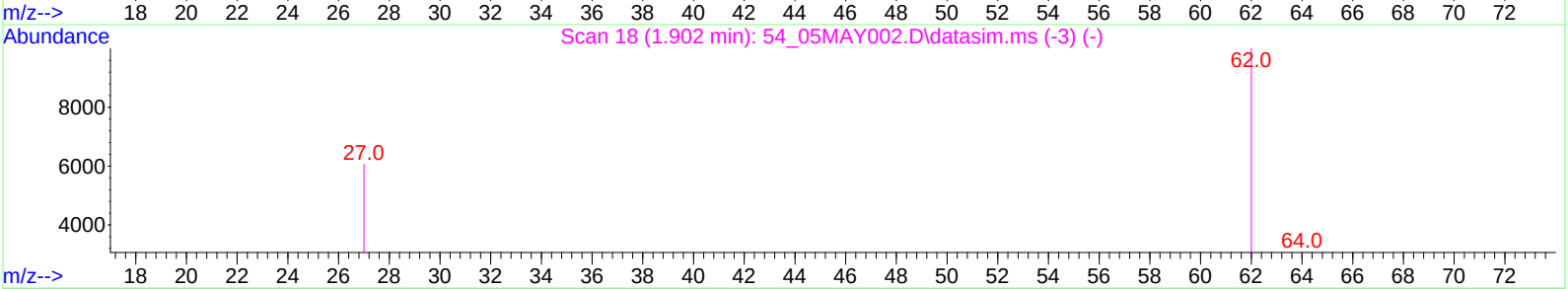
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







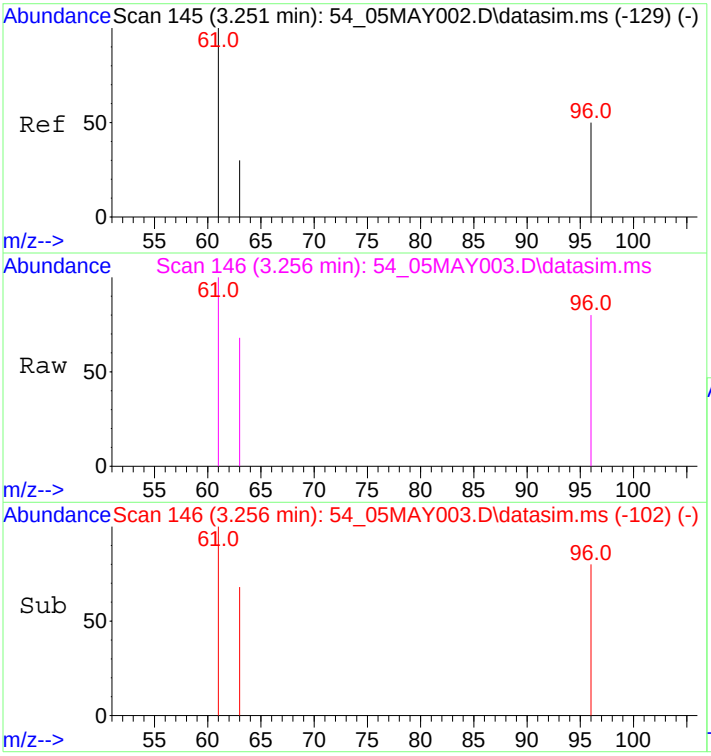
TIC: 54_05MAY003.D\data.ms

(2) Vinyl chloride (M)

1.915min (+0.012) 0.05 ppbv

response 7

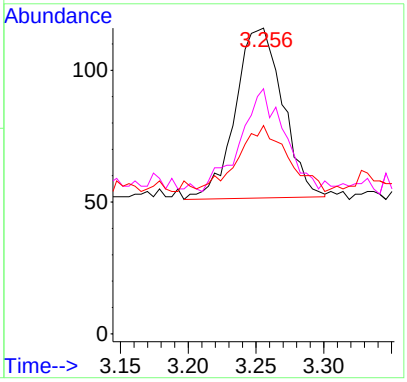
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	0.00#
27.00	20.10	0.00#
0.00	0.00	0.00

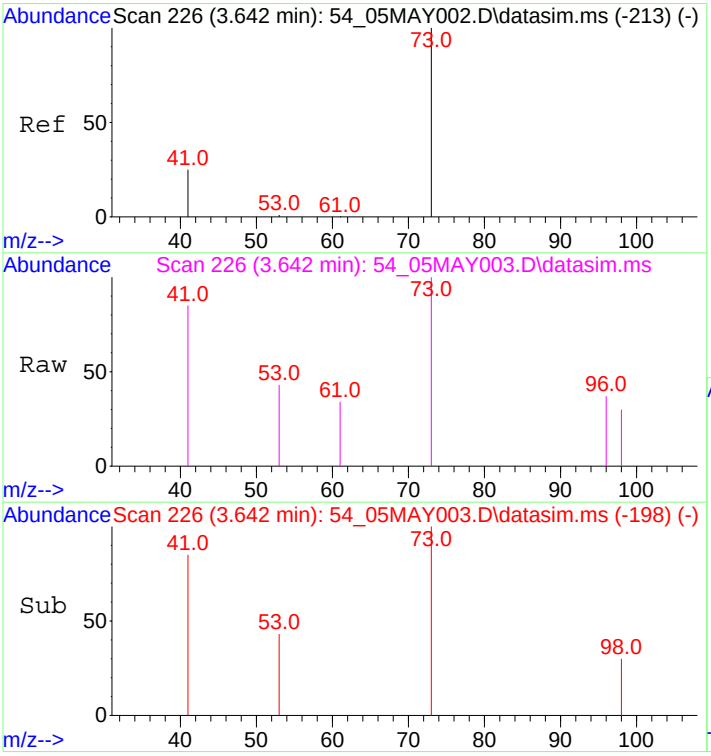


#3
1,1-Dichloroethene
Concen: 0.52 ppbv m
RT: 3.256 min Scan# 146
Delta R.T. 0.004 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 61 Resp: 157

Ion	Ratio	Lower	Upper
61	100		
96	129.9	63.4	95.2#
63	195.5	26.2	39.2#

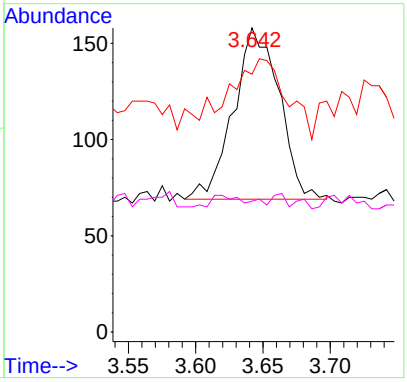




#4
Methyl Tert Butyl Ether
Concen: 0.46 ppbv m
RT: 3.642 min Scan# 226
Delta R.T. -0.000 min
Lab File: 54_05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 73 Resp: 211

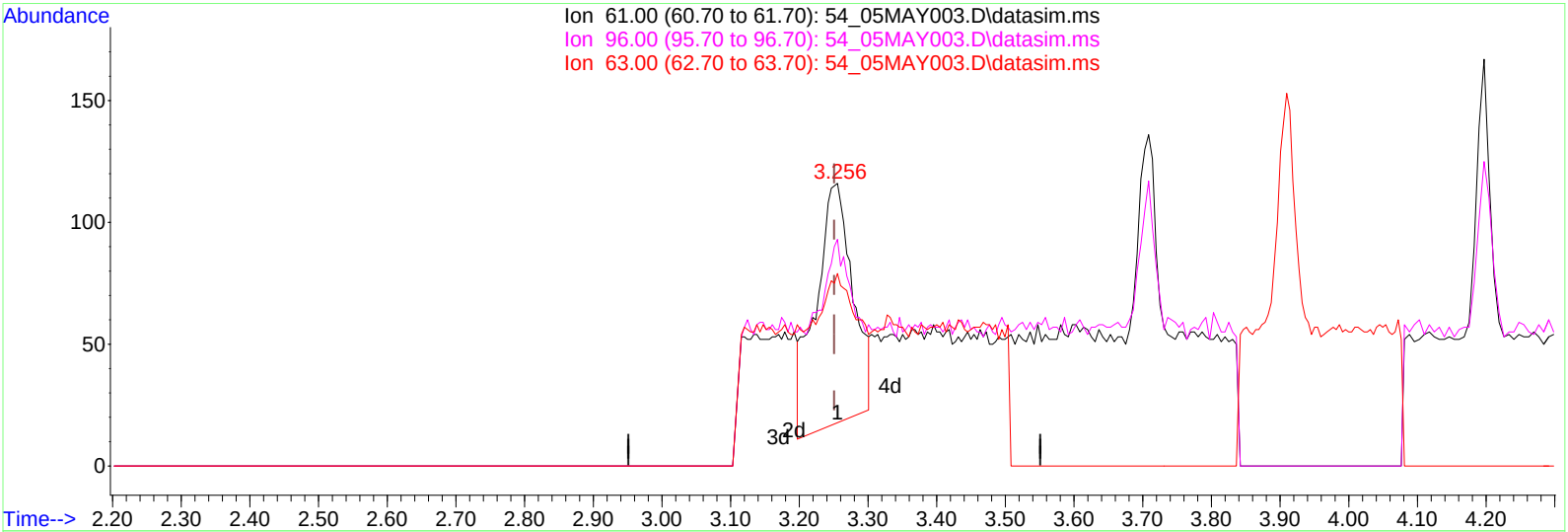
Ion	Ratio	Lower	Upper
73	100		
53	15.2	1.0	1.4#
41	106.2	13.1	19.7#

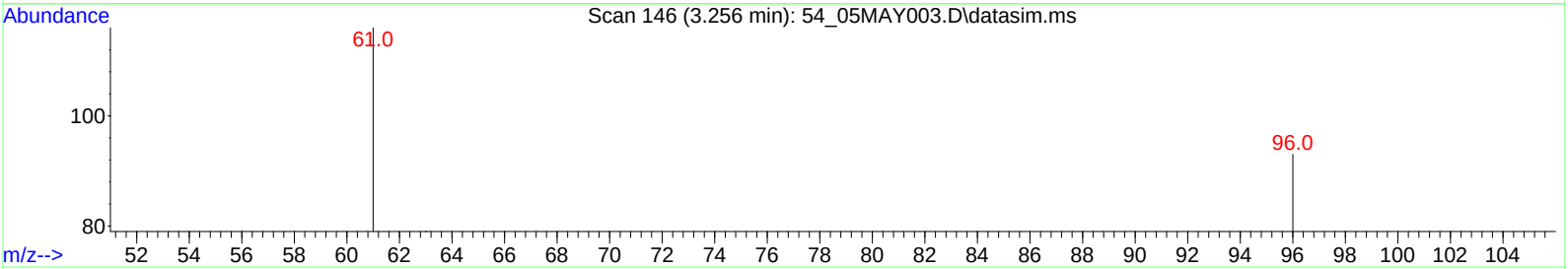


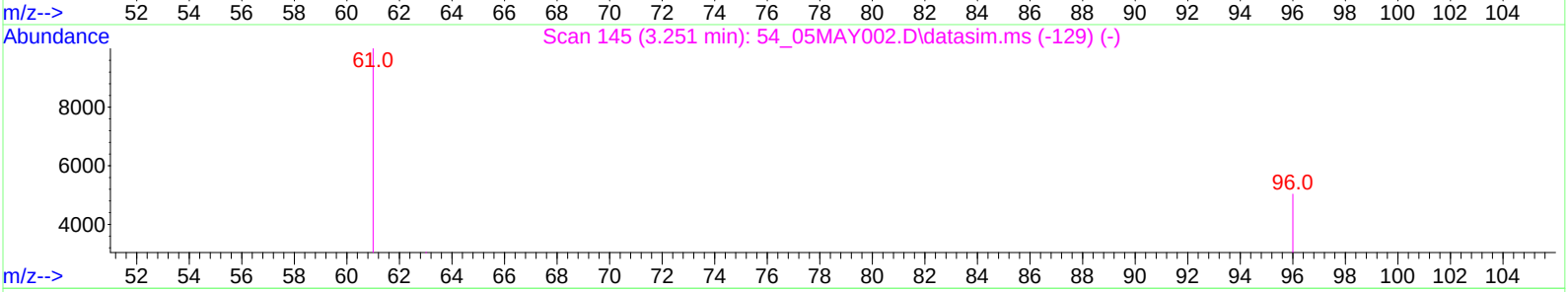
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY003.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (+0.004) 1.23 ppbv

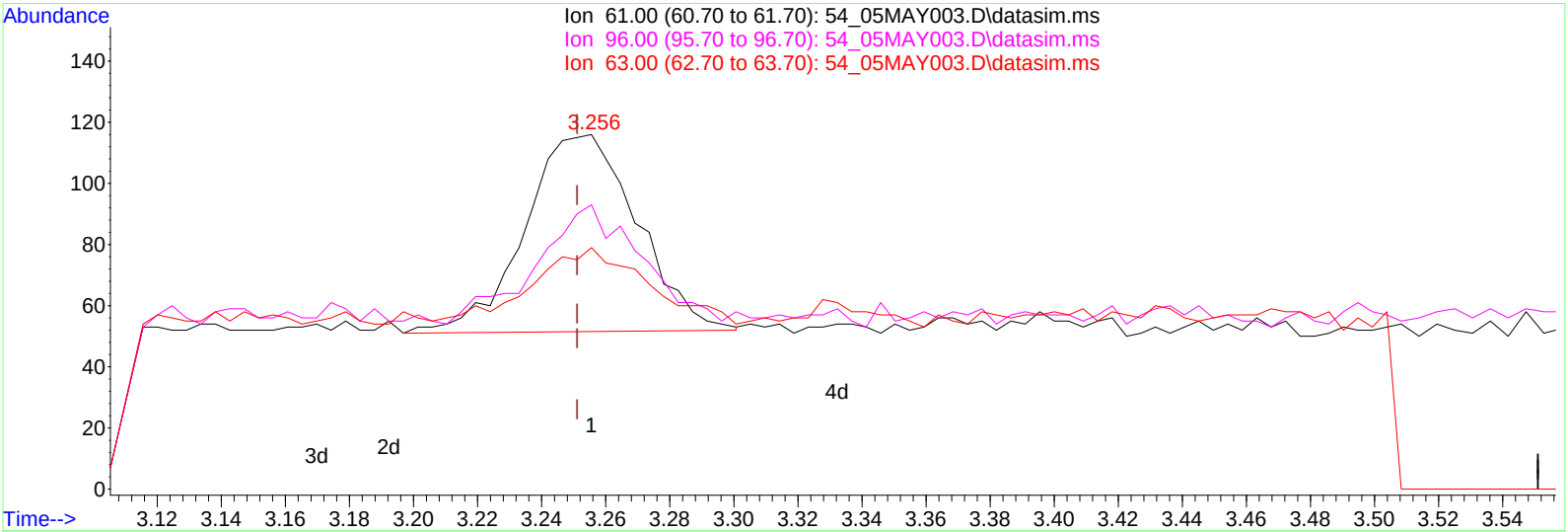
response 372

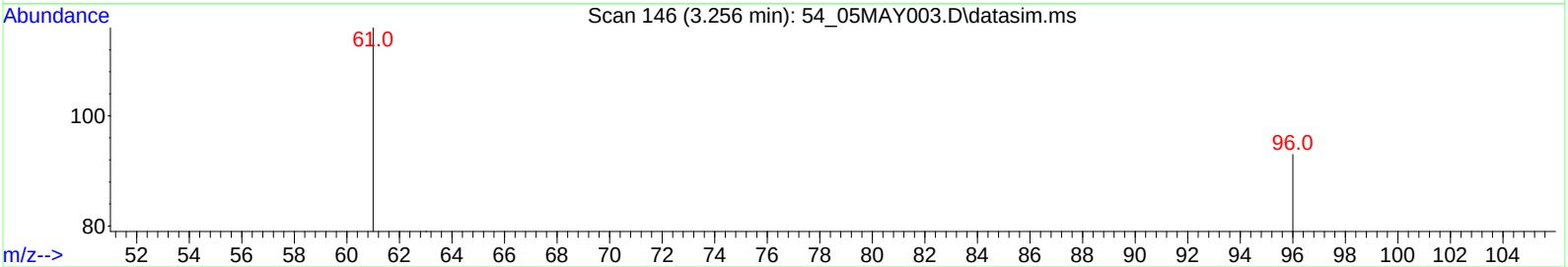
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	54.84#
63.00	32.70	82.53#
0.00	0.00	0.00

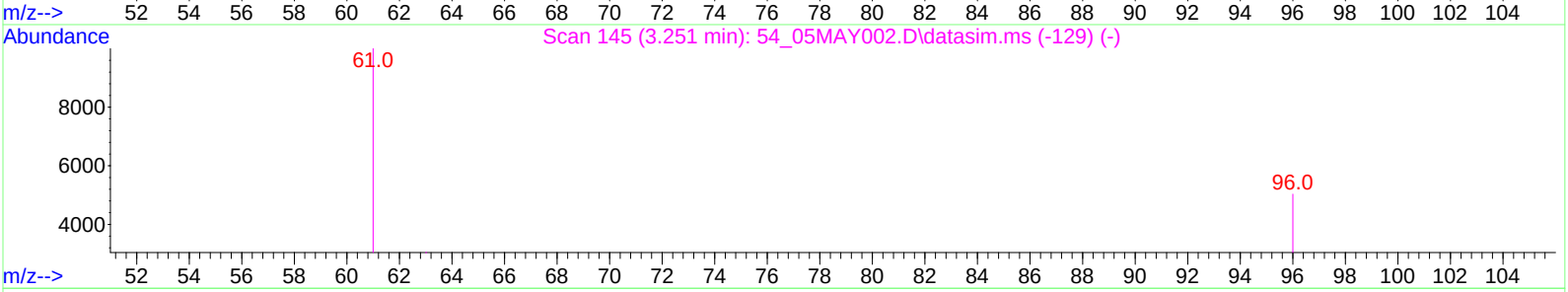
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY003.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (+0.004) 0.52 ppbv m

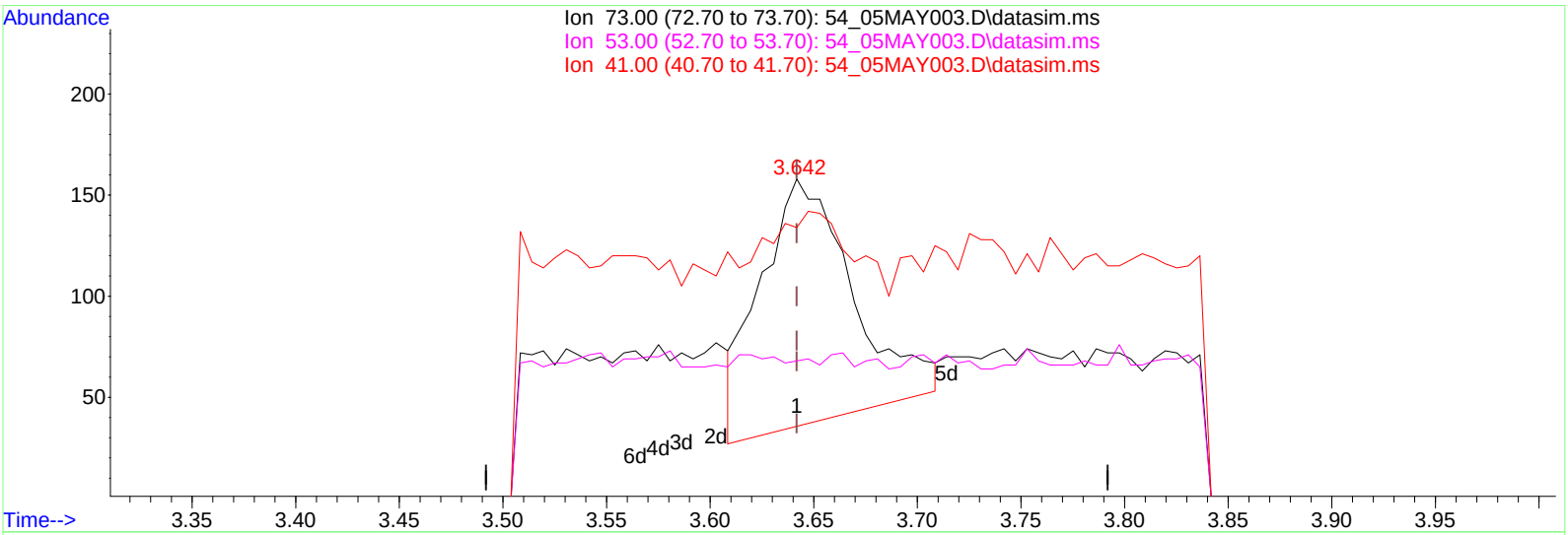
response 157

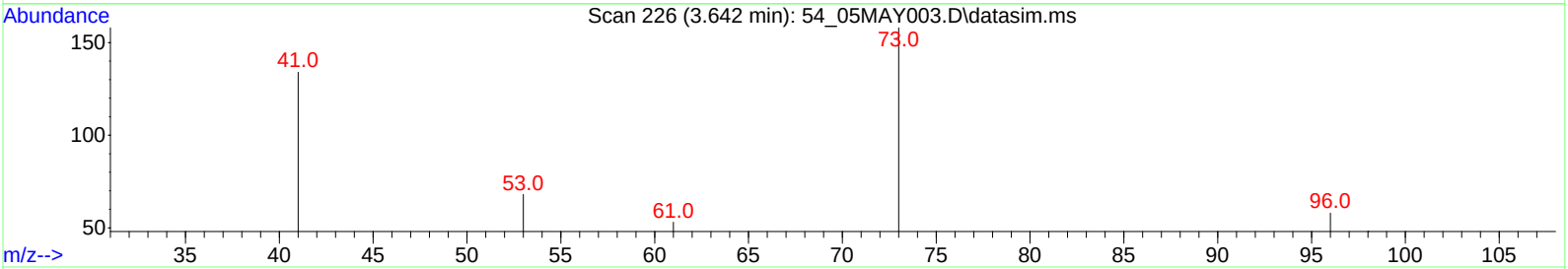
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	129.94#
63.00	32.70	195.54#
0.00	0.00	0.00

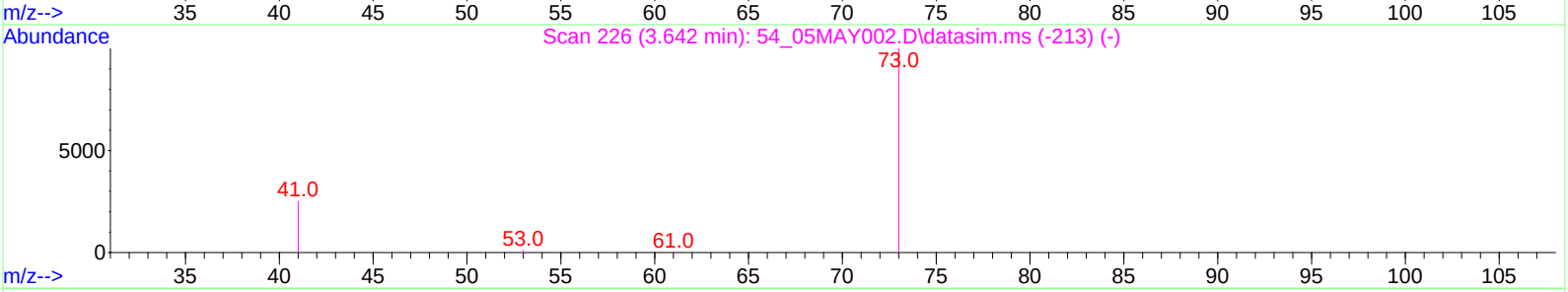
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY003.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.642min (-0.000) 0.82 ppbv

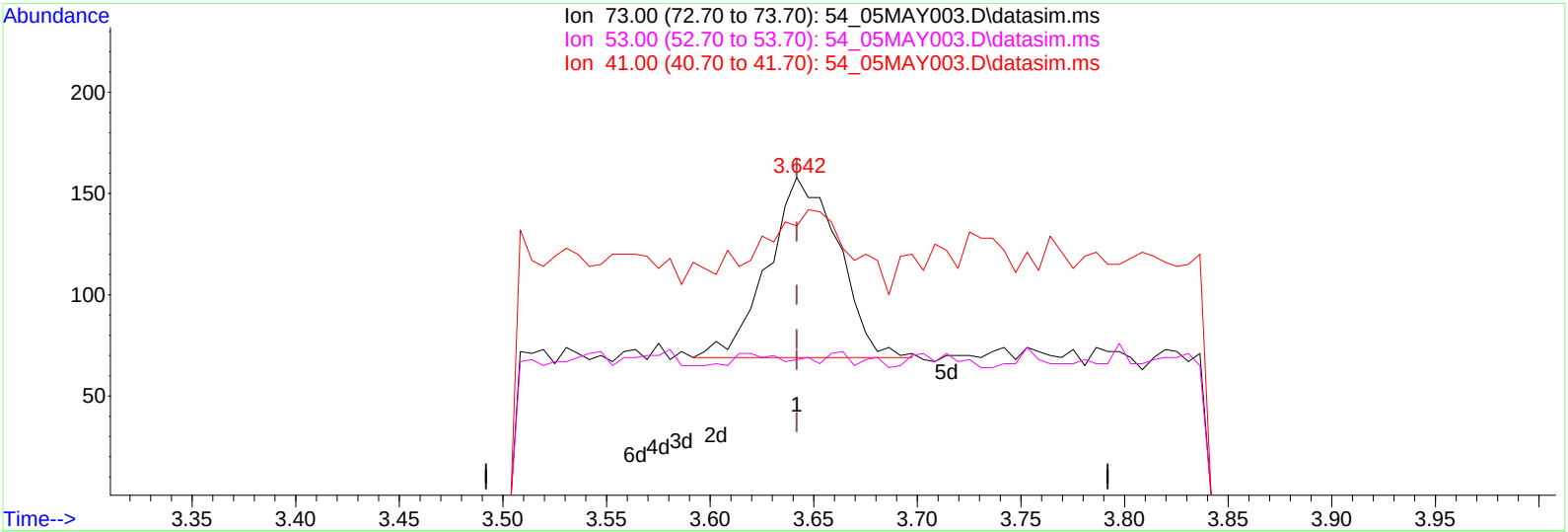
response 379

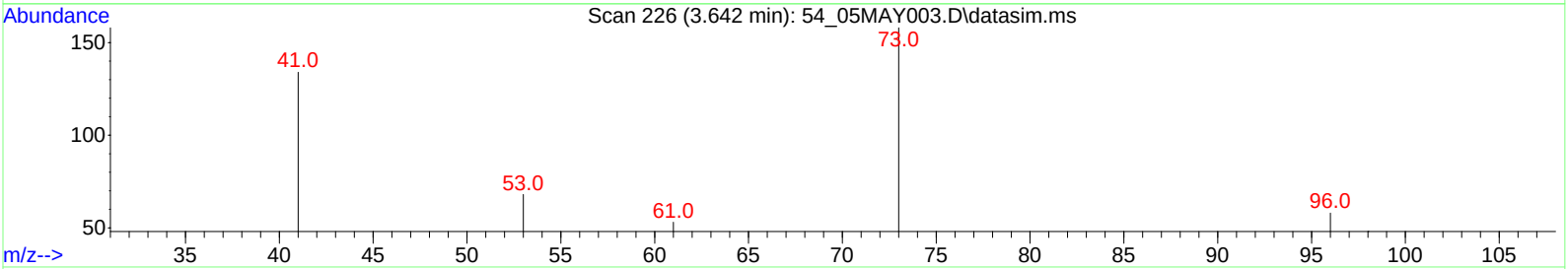
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	8.44#
41.00	16.40	59.10#
0.00	0.00	0.00

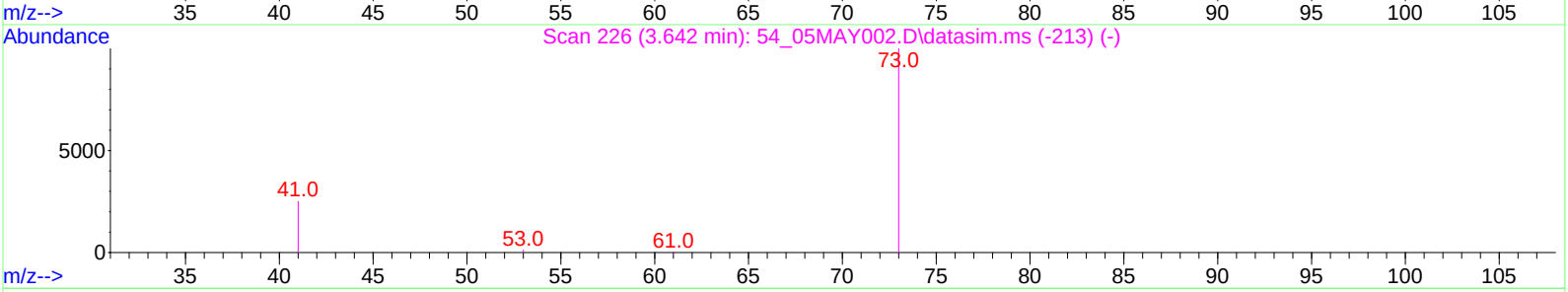
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







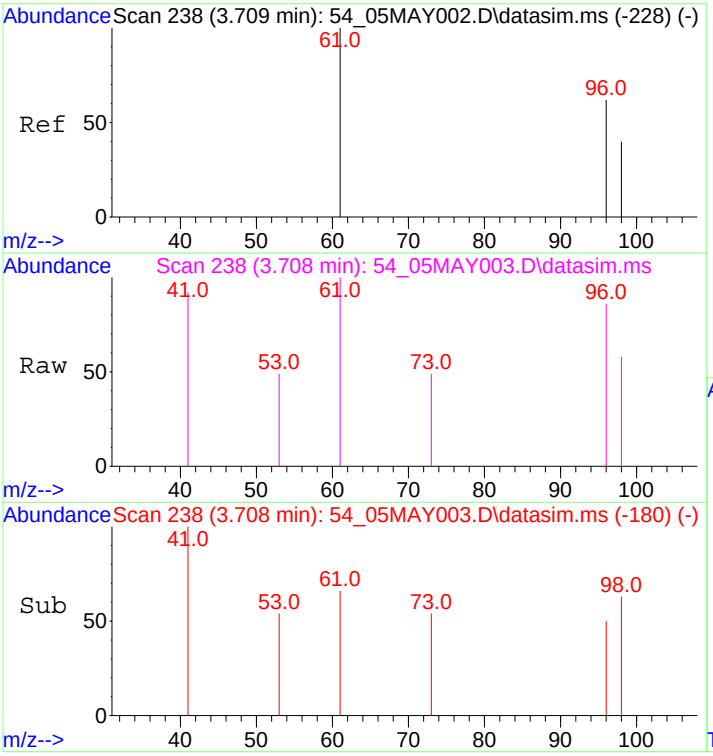
TIC: 54_05MAY003.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.642min (-0.000) 0.46 ppbv m

response 211

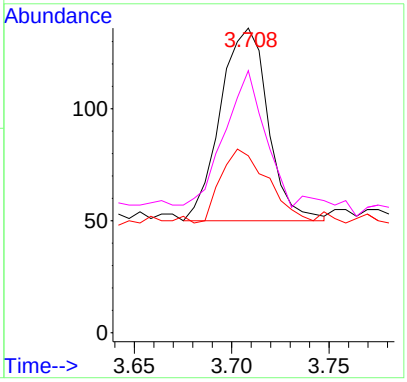
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	15.17#
41.00	16.40	106.16#
0.00	0.00	0.00

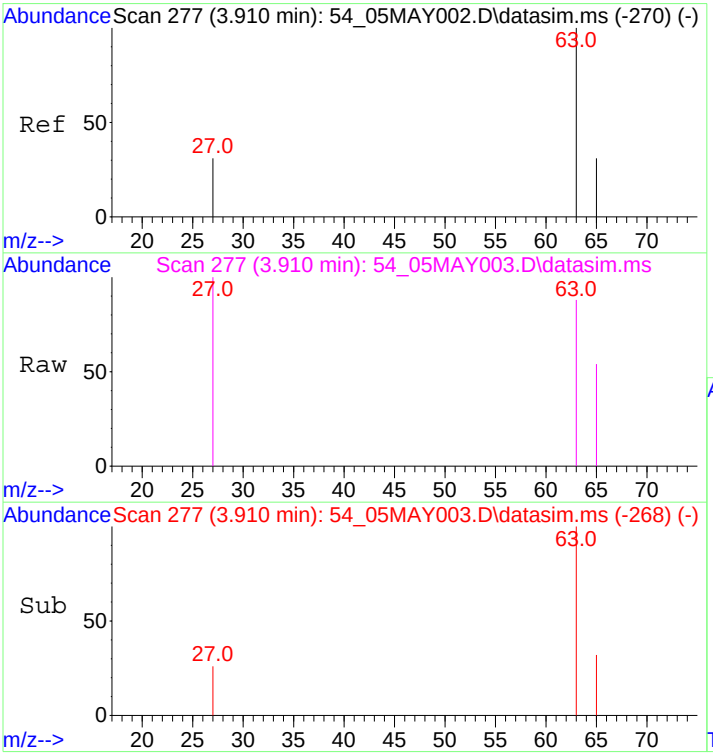


#5
trans-1,2-Dichloroethene
Concen: 0.55 ppbv
RT: 3.708 min Scan# 238
Delta R.T. -0.000 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 61 Resp: 147

Ion	Ratio	Lower	Upper
61	100		
96	146.9	71.4	107.0#
98	87.8	45.8	68.8#

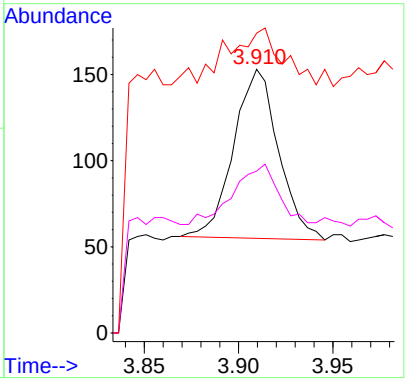




#6
1,1-Dichloroethane
Concen: 0.51 ppbv m
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 63 Resp: 162

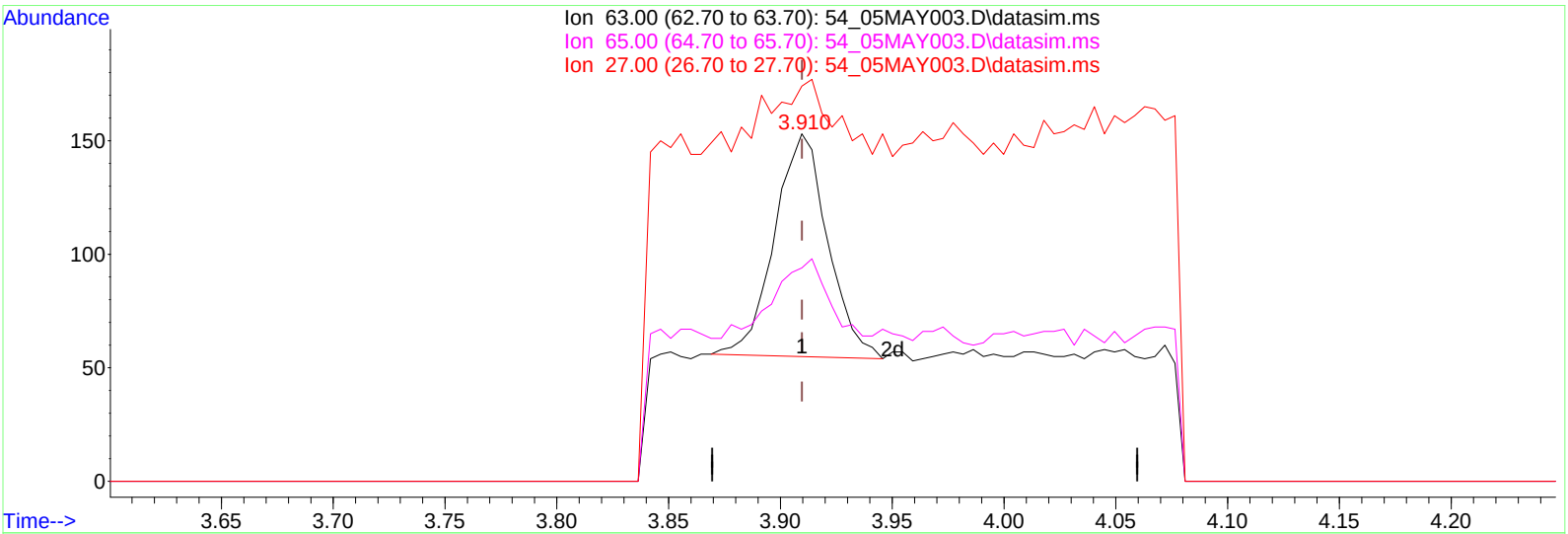
Ion	Ratio	Lower	Upper
63	100		
65	32.1	26.1	39.1
27	19.8	10.2	15.2#

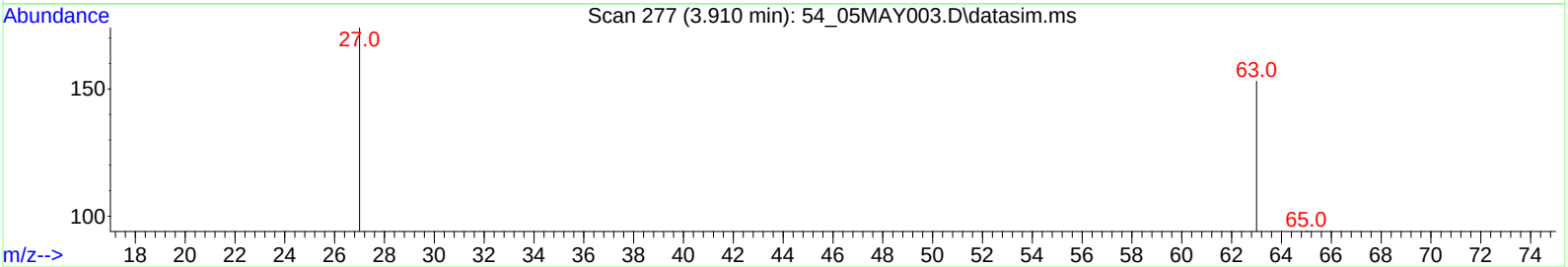


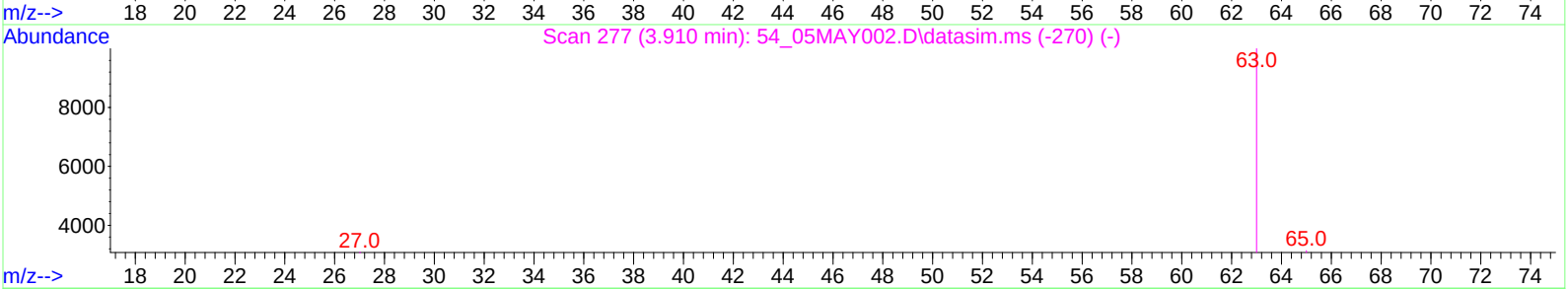
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY003.D\data.ms

(6) 1,1-Dichloroethane (M)

3.910min (-0.000) 0.51 ppbv m

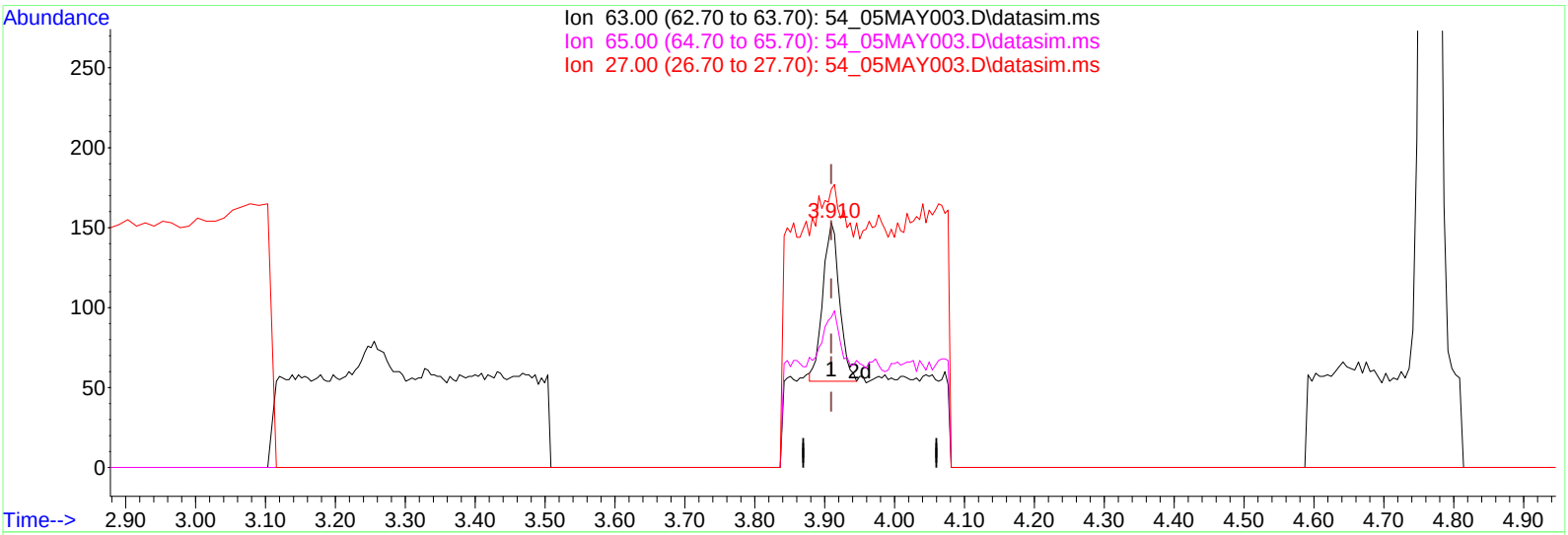
response 162

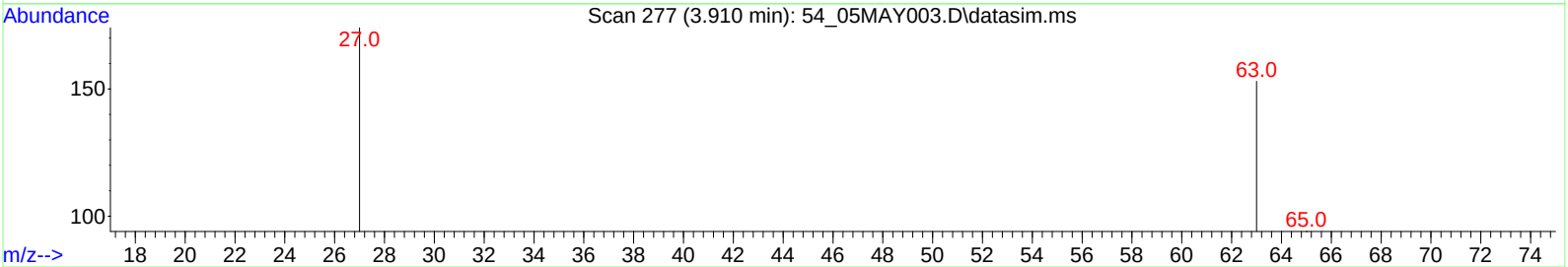
Ion	Exp%	Act%
63.00	100	100
65.00	32.60	32.10
27.00	12.70	19.75#
0.00	0.00	0.00

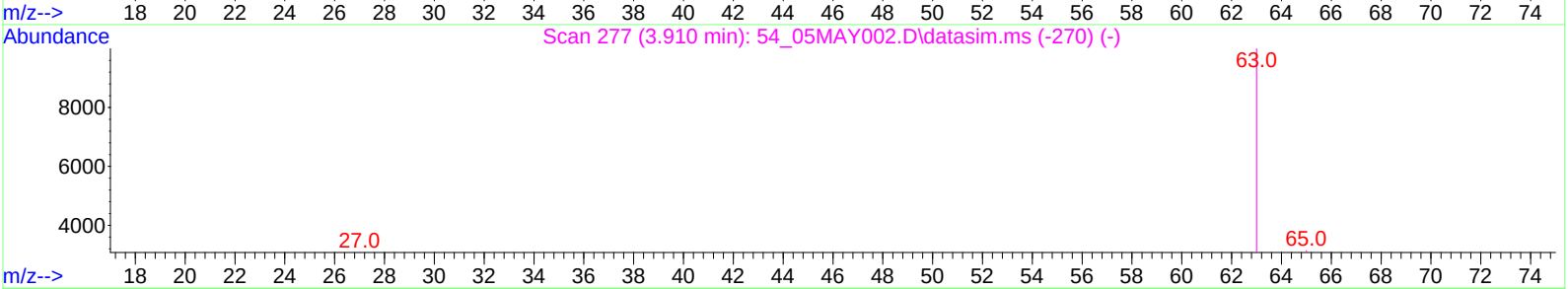
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







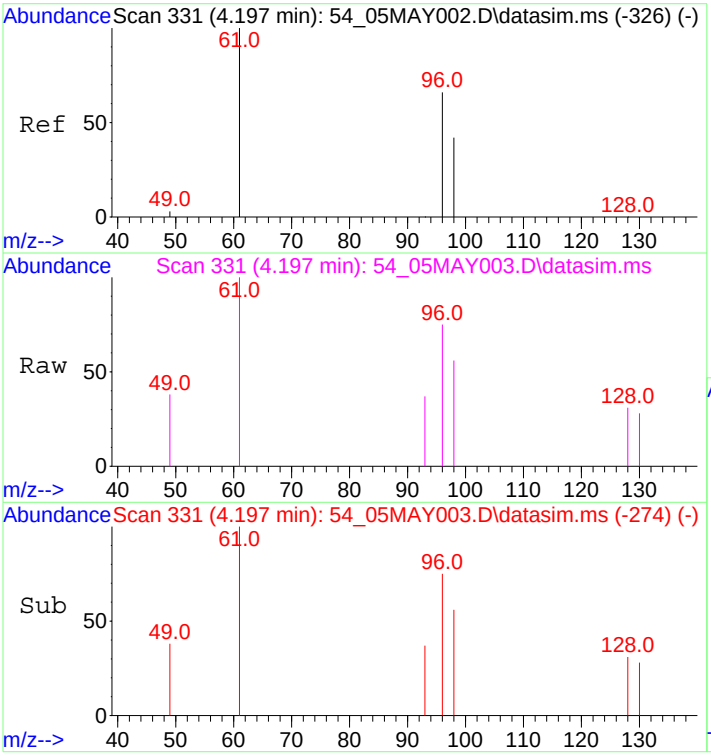
TIC: 54_05MAY003.D\data.ms

(6) 1,1-Dichloroethane (M)

3.910min (-0.000) 0.51 ppbv

response 164

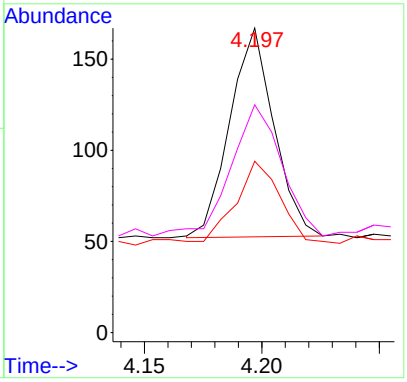
Ion	Exp%	Act%
63.00	100	100
65.00	32.60	31.71
27.00	12.70	19.51#
0.00	0.00	0.00

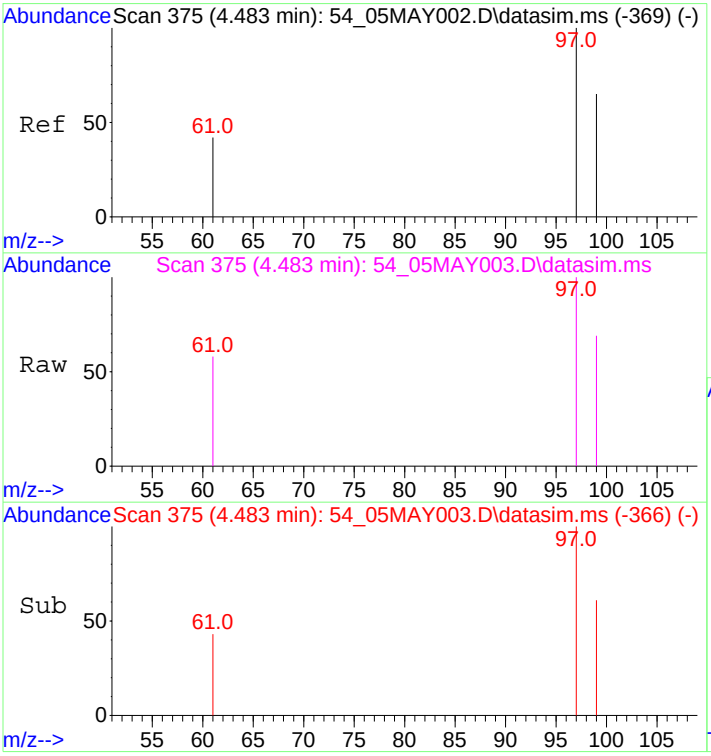


#7
cis-1,2-Dichloroethene
Concen: 0.60 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 61 Resp: 150

Ion	Ratio	Lower	Upper
61	100		
96	176.0	78.5	117.7#
98	108.7	50.6	76.0#

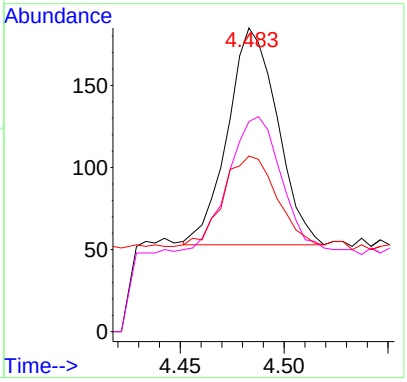




#8
1,1,1-Trichloroethane
Concen: 0.54 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 97 Resp: 220

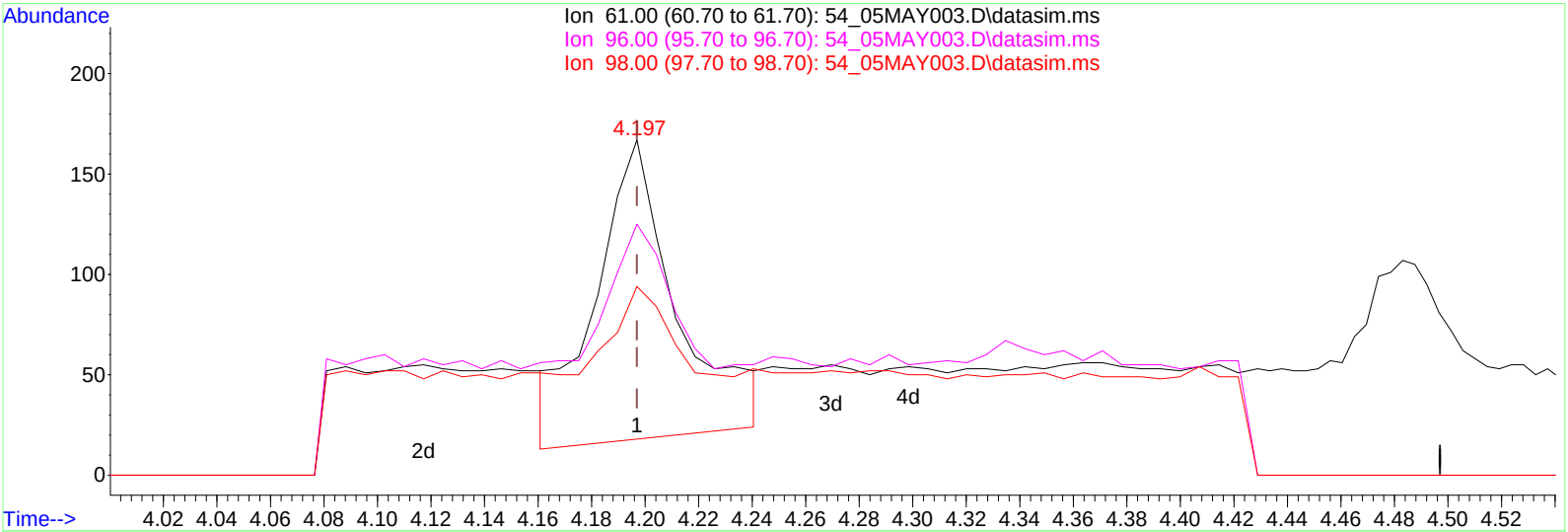
Ion	Ratio	Lower	Upper
97	100		
99	63.6	52.1	78.1
61	43.2	30.2	45.4

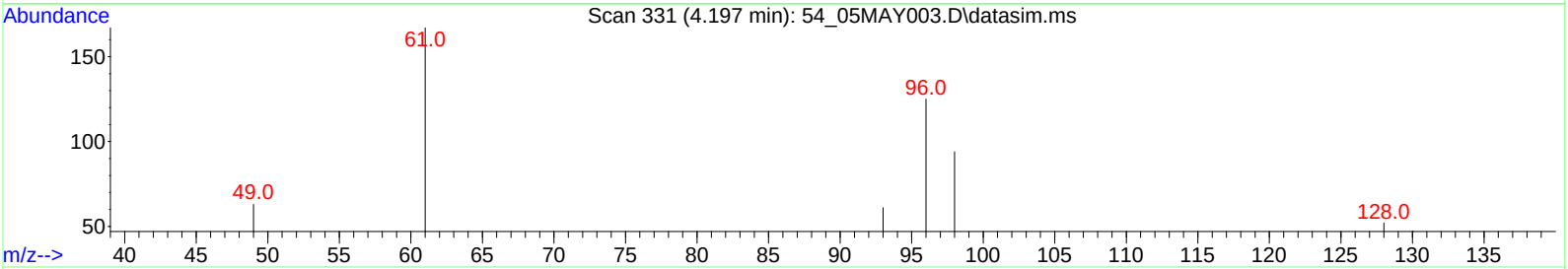


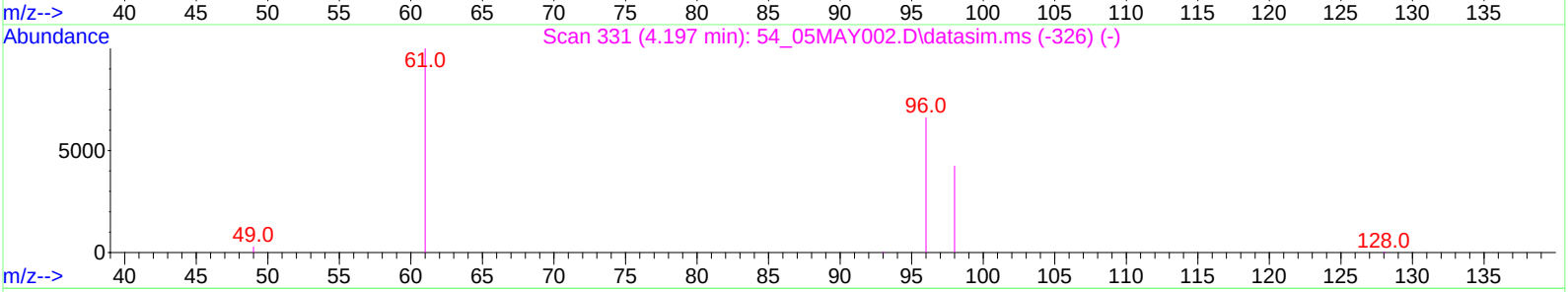
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY003.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 1.25 ppbv

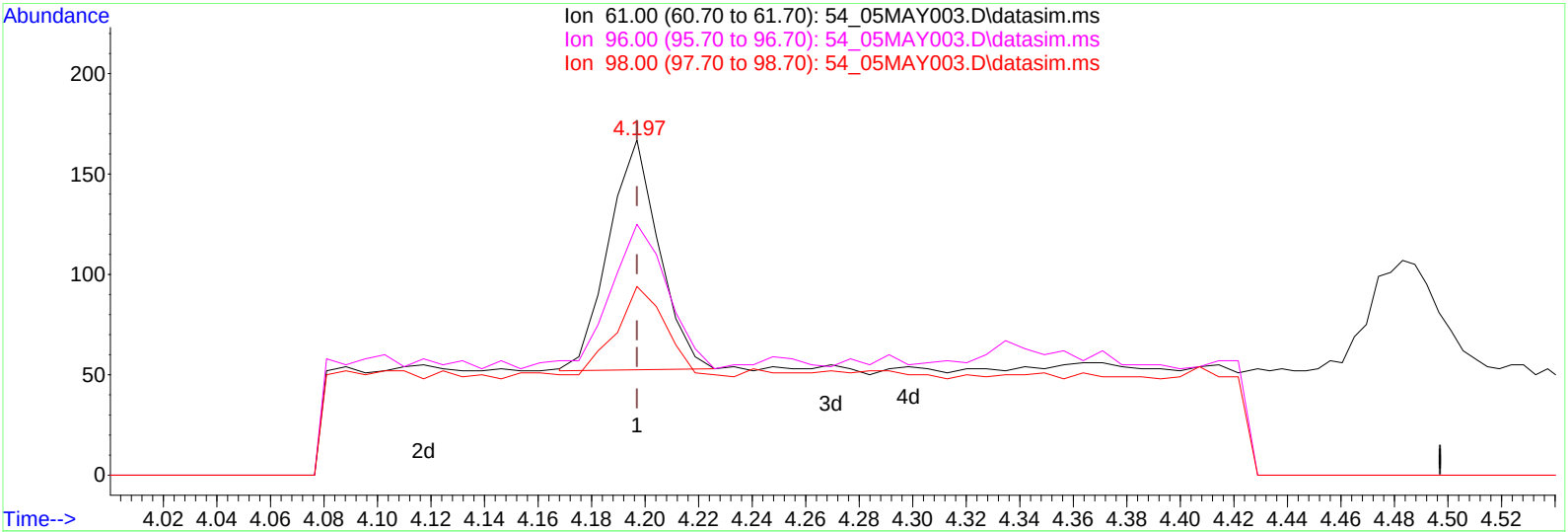
response 313

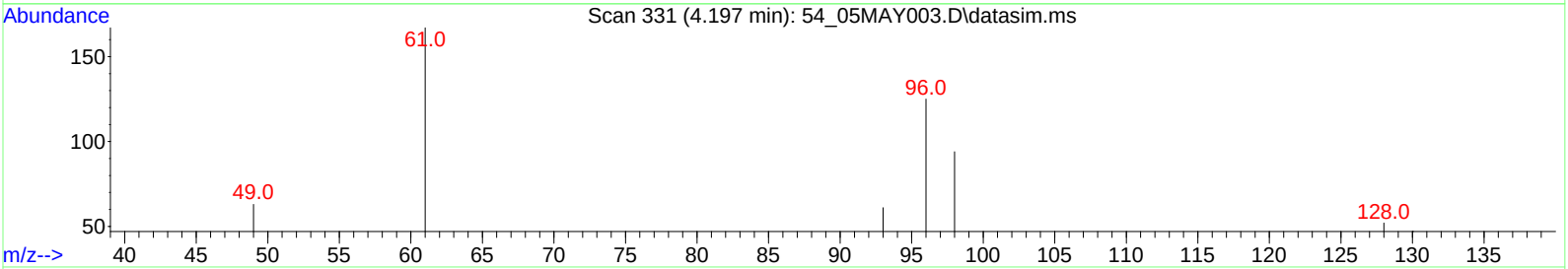
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	84.35
98.00	63.30	52.08
0.00	0.00	0.00

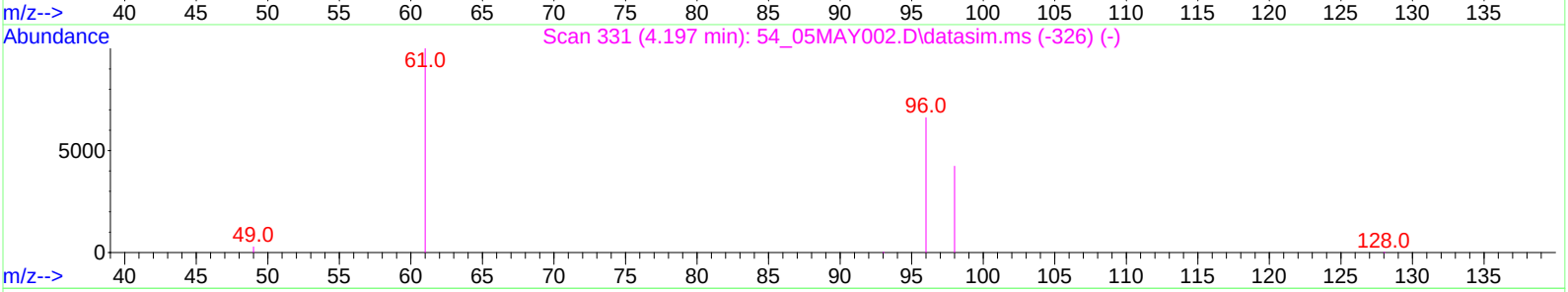
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







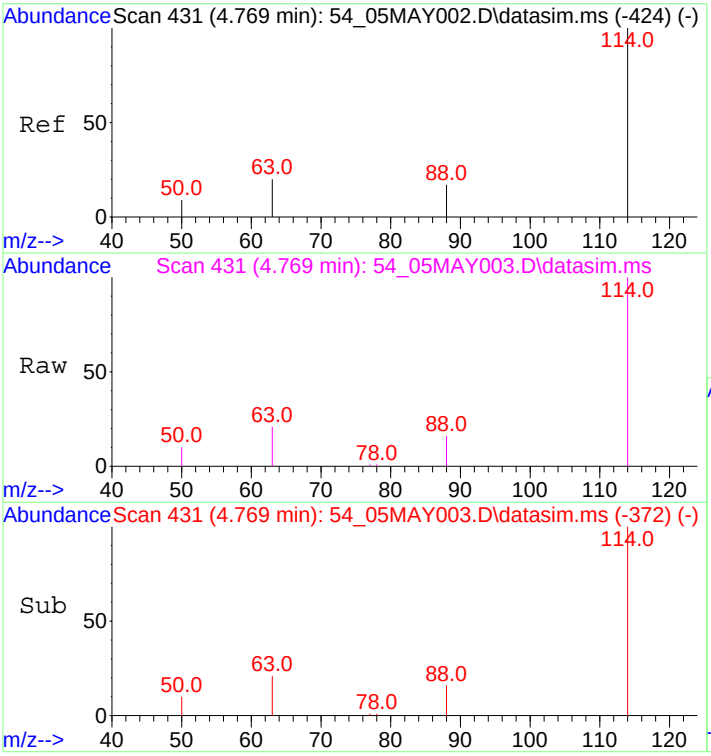
TIC: 54_05MAY003.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 0.60 ppbv m

response 150

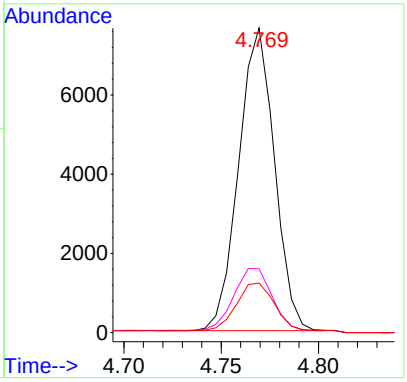
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	176.00#
98.00	63.30	108.67#
0.00	0.00	0.00

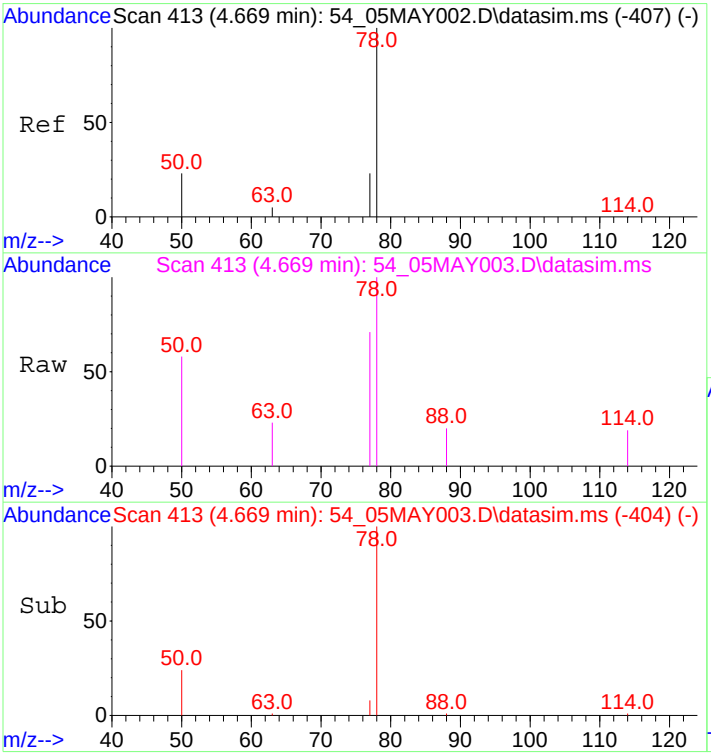


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion:114 Resp: 9778

Ion	Ratio	Lower	Upper
114	100		
63	21.7	12.0	18.0#
88	16.8	11.8	17.8

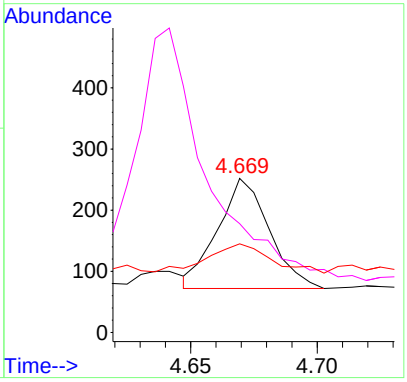


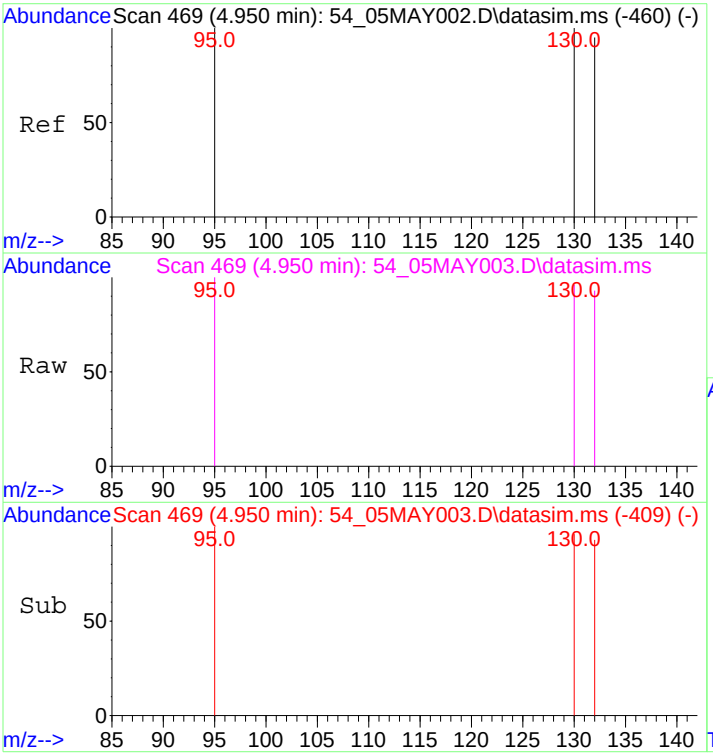


#10
Benzene
Concen: 0.57 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 78 Resp: 254

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.2	27.2#
50	28.7	8.6	13.0#

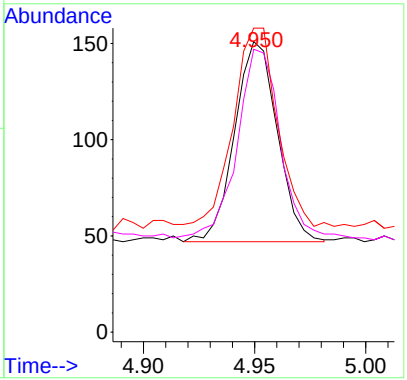


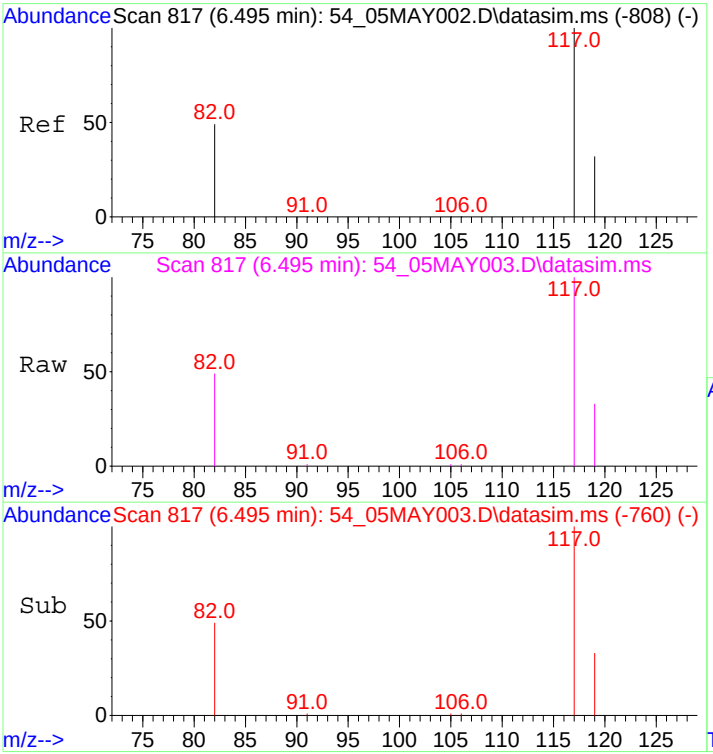


#11
Trichloroethene
Concen: 0.57 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion:130 Resp: 139

Ion	Ratio	Lower	Upper
130	100		
132	97.8	76.9	115.3
95	186.3	76.5	114.7#

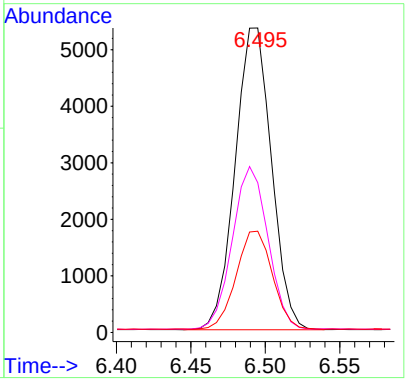


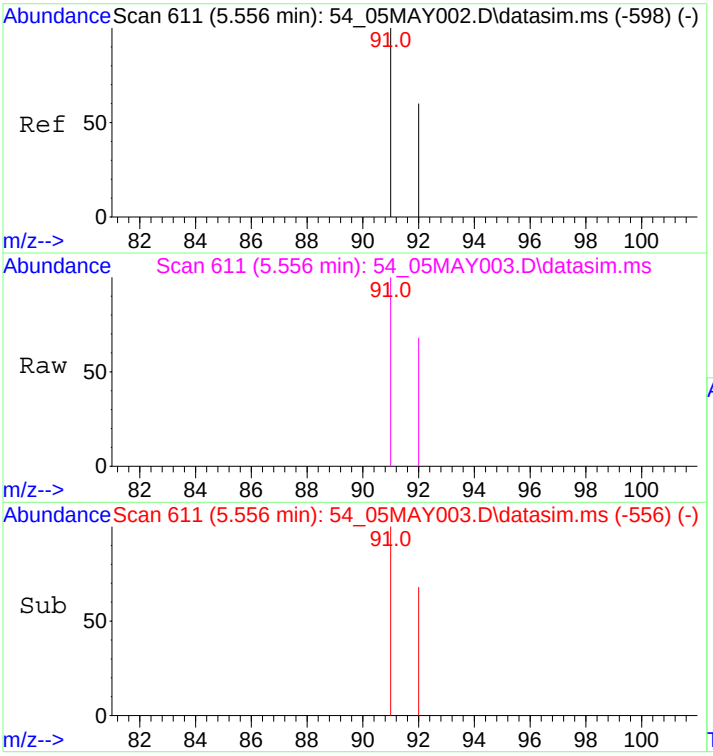


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54_05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion:117 Resp: 9062

Ion	Ratio	Lower	Upper
117	100		
82	53.0	38.0	57.0
119	32.5	27.0	40.4

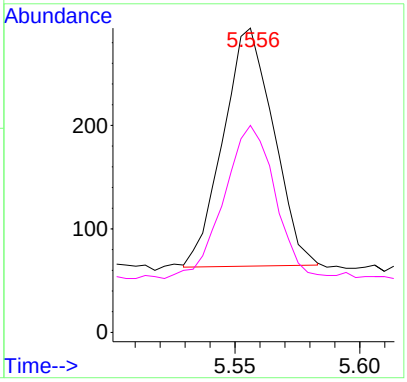


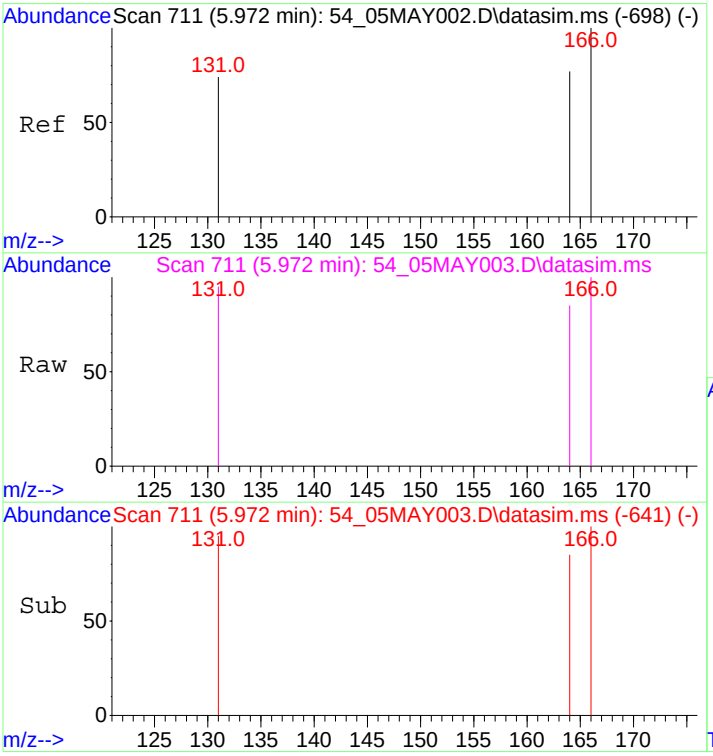


#13
Toluene
Concen: 0.59 ppbv m
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 91 Resp: 323

Ion	Ratio	Lower	Upper
91	100		
92	65.3	47.8	71.8

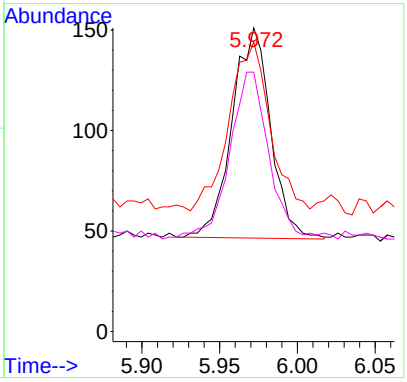




#14
Tetrachloroethene
Concen: 0.58 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion:166 Resp: 181

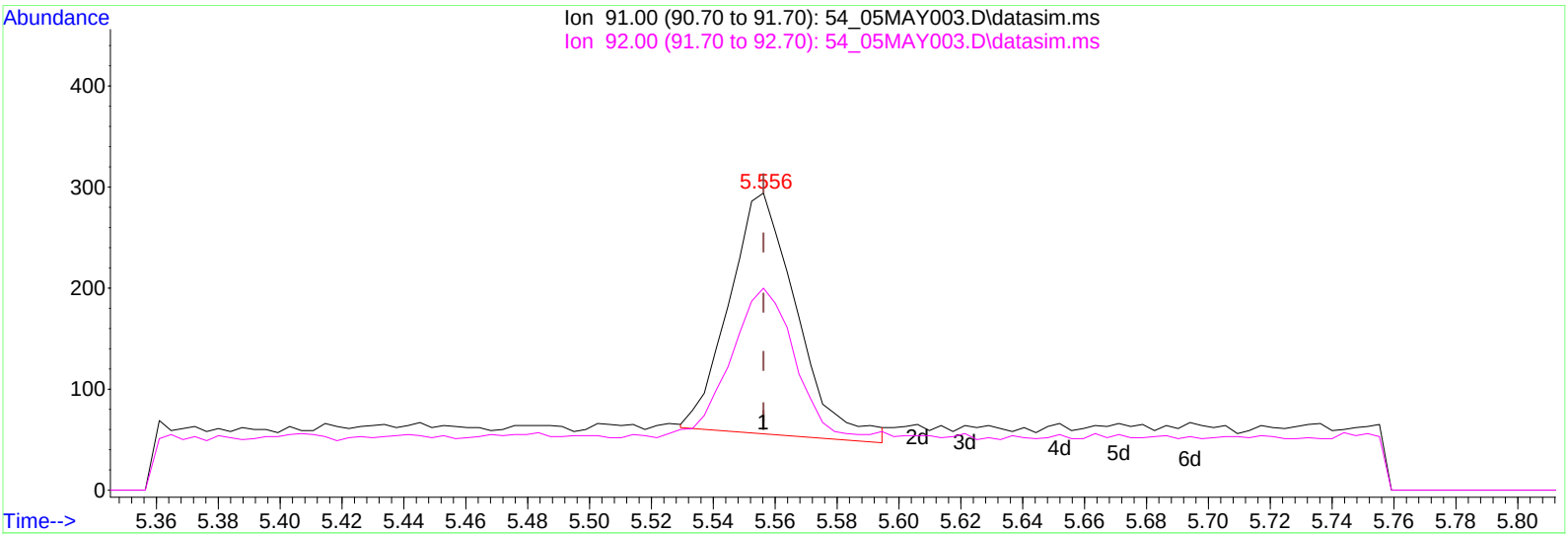
Ion	Ratio	Lower	Upper
166	100		
164	79.6	62.6	94.0
131	169.1	58.5	87.7#

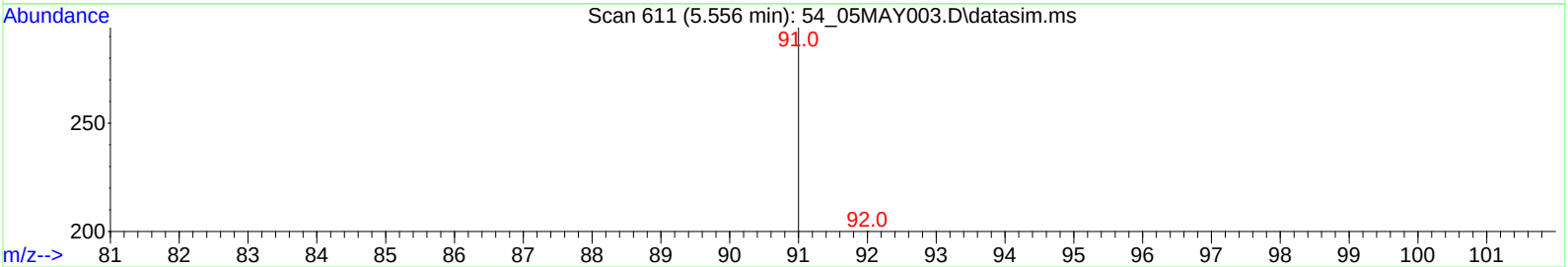


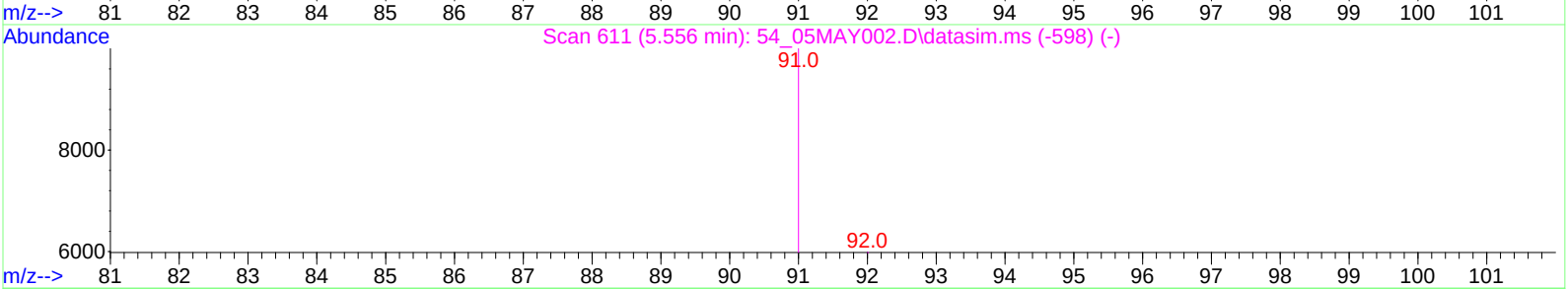
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY003.D\data.ms

(13) Toluene (M)

5.556min (-0.000) 0.66 ppbv

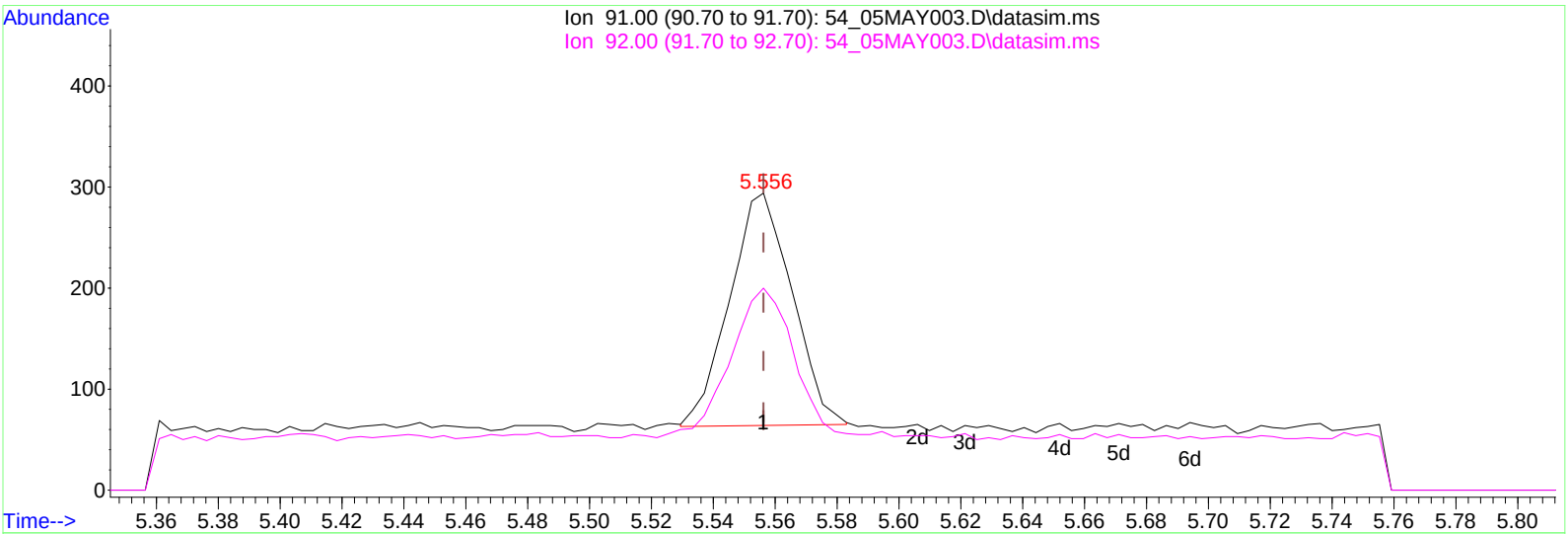
response 359

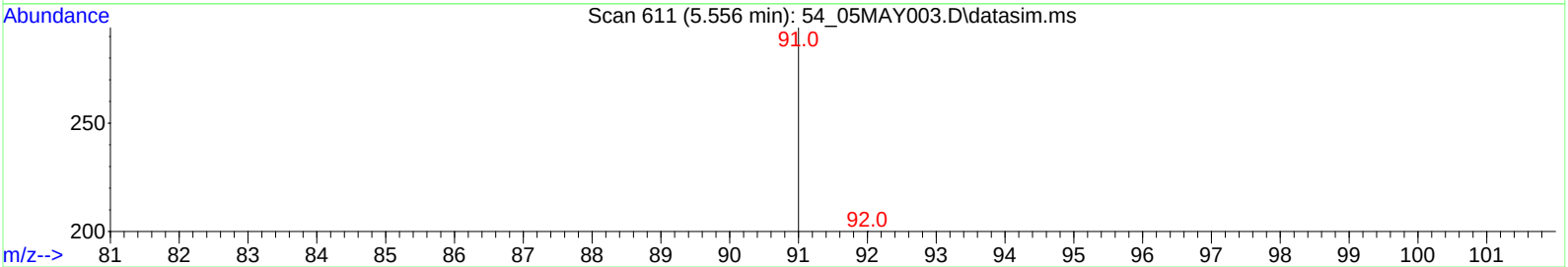
Ion	Exp%	Act%
91.00	100	100
92.00	59.80	58.77
0.00	0.00	0.00
0.00	0.00	0.00

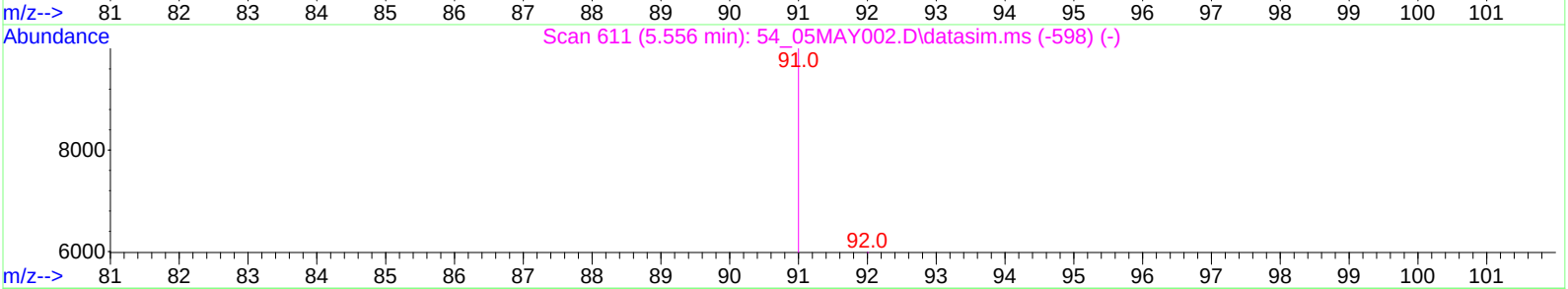
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY003.D
Acq On : 5 May 2014 7:21 am
Operator : yhl
Sample : STD20140505-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:27:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







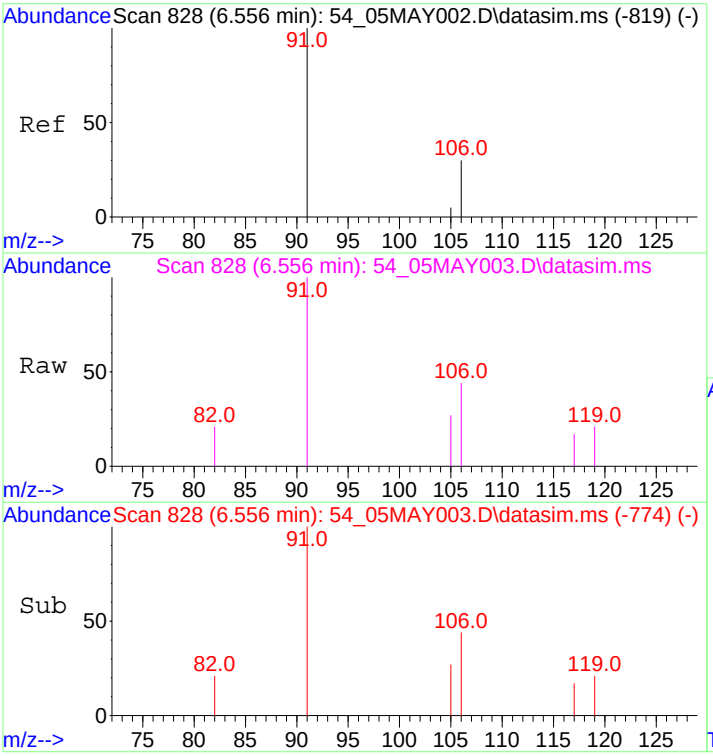
TIC: 54_05MAY003.D\data.ms

(13) Toluene (M)

5.556min (-0.000) 0.59 ppbv m

response 323

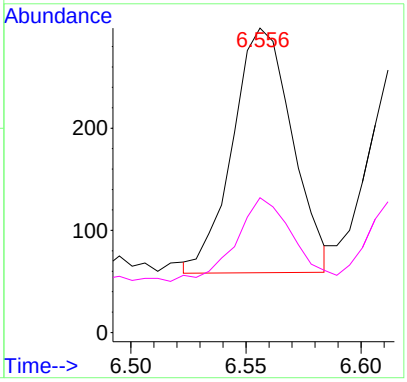
Ion	Exp%	Act%
91.00	100	100
92.00	59.80	65.33
0.00	0.00	0.00
0.00	0.00	0.00

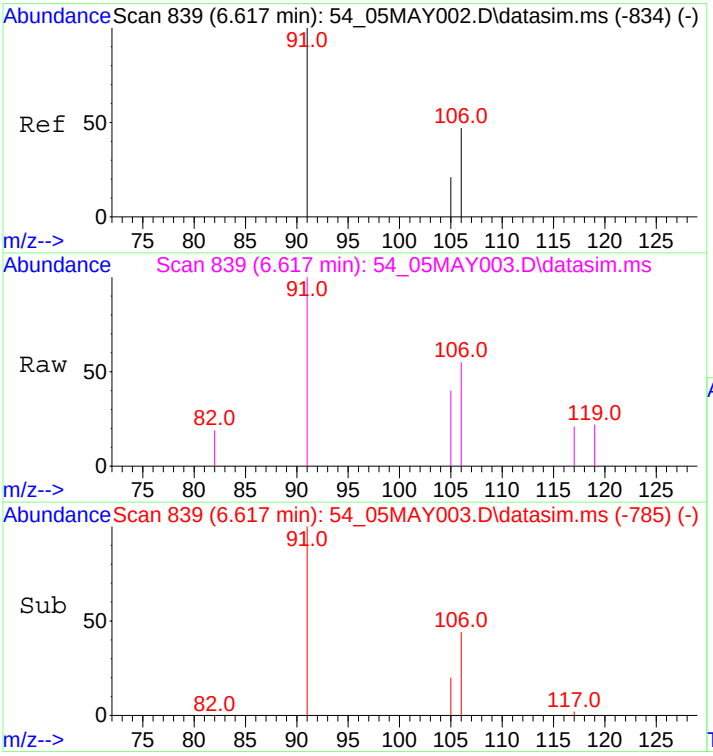


#15
Ethyl Benzene
Concen: 0.63 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 91 Resp: 432

Ion	Ratio	Lower	Upper
91	100		
106	32.6	26.9	40.3

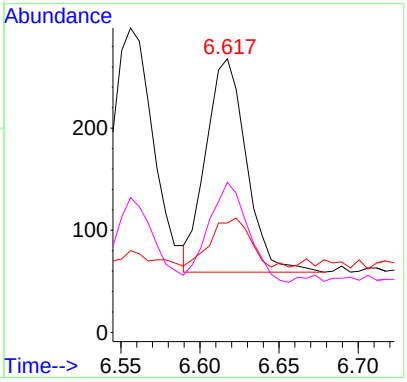


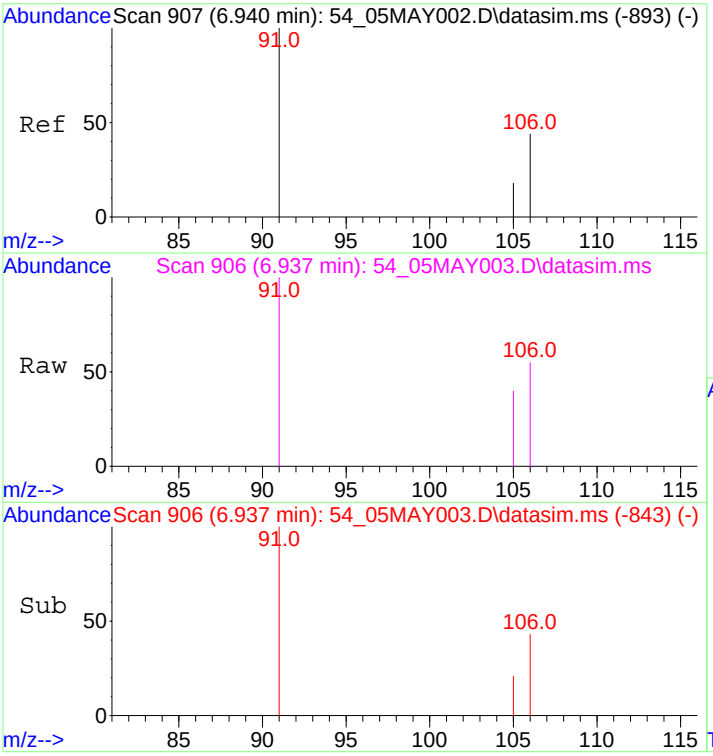


#16
m,p-Xylene
Concen: 0.70 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 91 Resp: 372

Ion	Ratio	Lower	Upper
91	100		
106	45.7	43.1	64.7
105	23.4	18.3	27.5

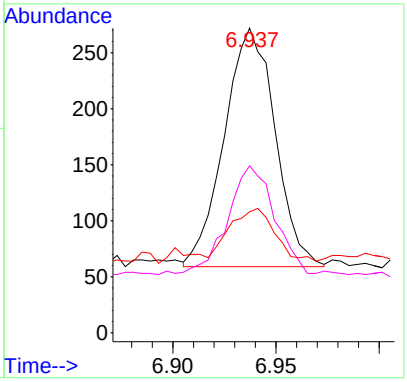




#17
o-Xylene
Concen: 0.68 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 05MAY003.D
Acq: 5 May 2014 7:21 am

Tgt Ion: 91 Resp: 365

Ion	Ratio	Lower	Upper
91	100		
106	44.1	40.1	60.1
105	18.6	15.8	23.6



LABORATORY CONTROL SAMPLE

Data File 54_05May005.D
LCS Standard Number 20140505-LCS
LCS Standard Name **20140505-LCS \ LCS 500 ppbv 2º**
Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/5/2014	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %	
Vinyl Chloride	457.39	517.50	88.4	70-130	OK
1,1-Dichloroethene	497.36	512.50	97.0	70-130	OK
Methyl Tert Butyl Ether	472.12	510.00	92.6	70-130	OK
trans-1,2-Dichloroethene	481.18	500.00	96.2	70-130	OK
1,1-Dichloroethane	489.49	525.00	93.2	70-130	OK
cis-1,2-Dichloroethene	516.27	530.00	97.4	70-130	OK
1,1,1-Trichloroethane	531.74	510.00	104.3	70-130	OK
Benzene	502.86	527.50	95.3	70-130	OK
Trichloroethene	498.05	510.00	97.7	70-130	OK
Toluene	509.51	522.50	97.5	70-130	OK
Tetrachloroethene	516.69	517.50	99.8	70-130	OK
Ethyl Benzene	562.87	525.00	107.2	70-130	OK
m,p-Xylene	573.01	520.00	110.2	70-130	OK
o-Xylene	575.62	525.00	109.6	70-130	OK

Secondary Standard Cylinder # CC-99022

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY005.D
Acq On : 5 May 2014 8:05 am
Operator : yhl
Sample : 20140505-LCS \ 500 ppbv, LCS 2nd Source
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 08:19:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

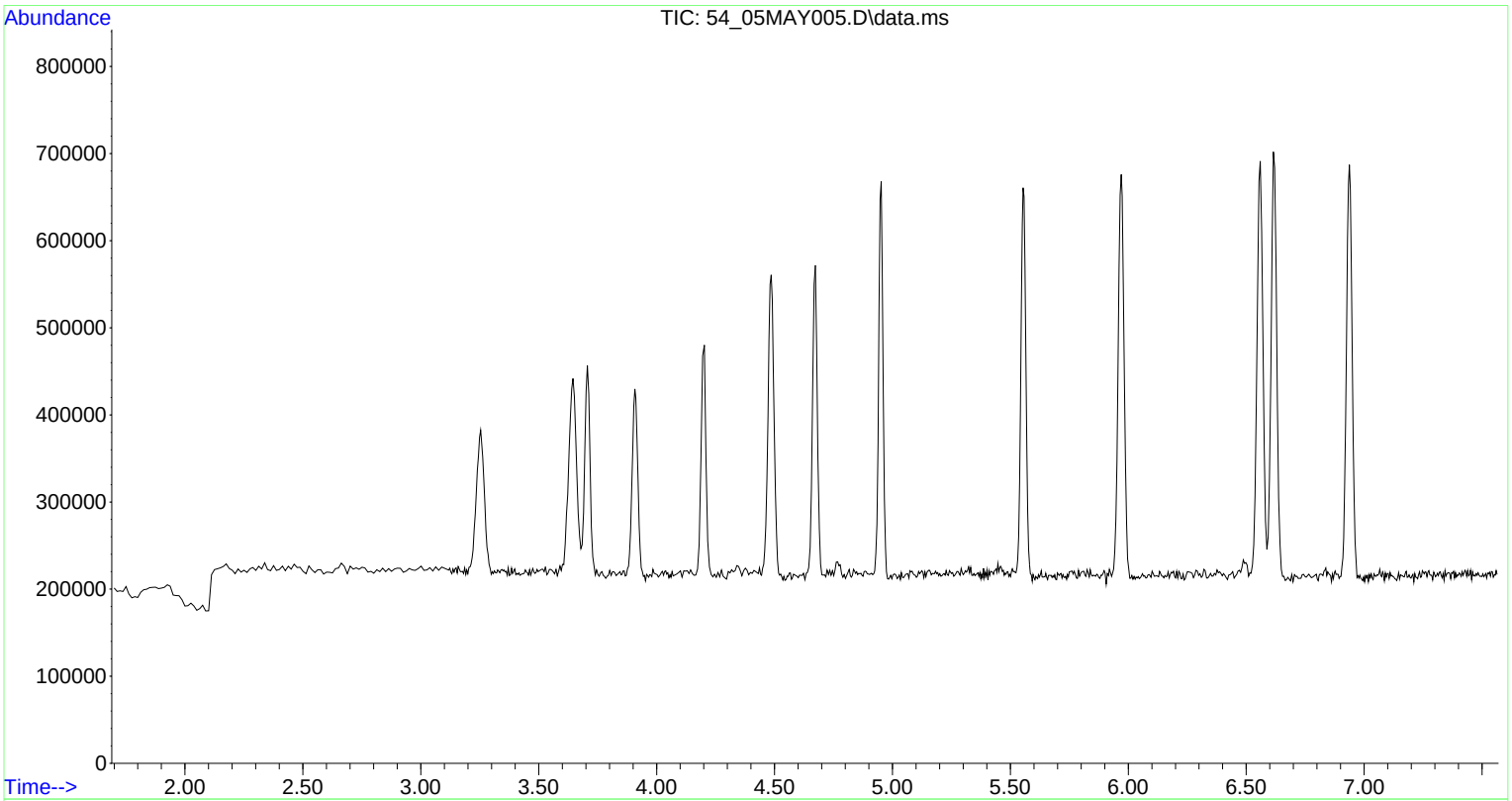
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4204	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10337	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9555	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	73118	457.39	ppbv	# 44
3] 1,1-Dichloroethene	3.251	61	161938	497.36	ppbv	# 77
4] Methyl Tert Butyl Ether	3.642	73	234704	472.12	ppbv	# 81
5] trans-1,2-Dichloroethene	3.709	61	138082	481.18	ppbv	# 73
6] 1,1-Dichloroethane	3.910	63	167686	489.49	ppbv	# 85
7] cis-1,2-Dichloroethene	4.197	61	138349	516.27	ppbv	# 71
8] 1,1,1-Trichloroethane	4.483	97	231076	531.74	ppbv	97
10] Benzene	4.669	78	237456	502.86	ppbv	# 89
11] Trichloroethene	4.950	130	128046	498.05	ppbv	98
13] Toluene	5.556	91	291839	509.51	ppbv	100
14] Tetrachloroethene	5.972	166	169034	516.69	ppbv	99
15] Ethyl Benzene	6.556	91	409432	562.87	ppbv	94
16] m,p-Xylene	6.617	91	319892	573.01	ppbv	92
17] o-Xylene	6.936	91	325879	575.62	ppbv	92

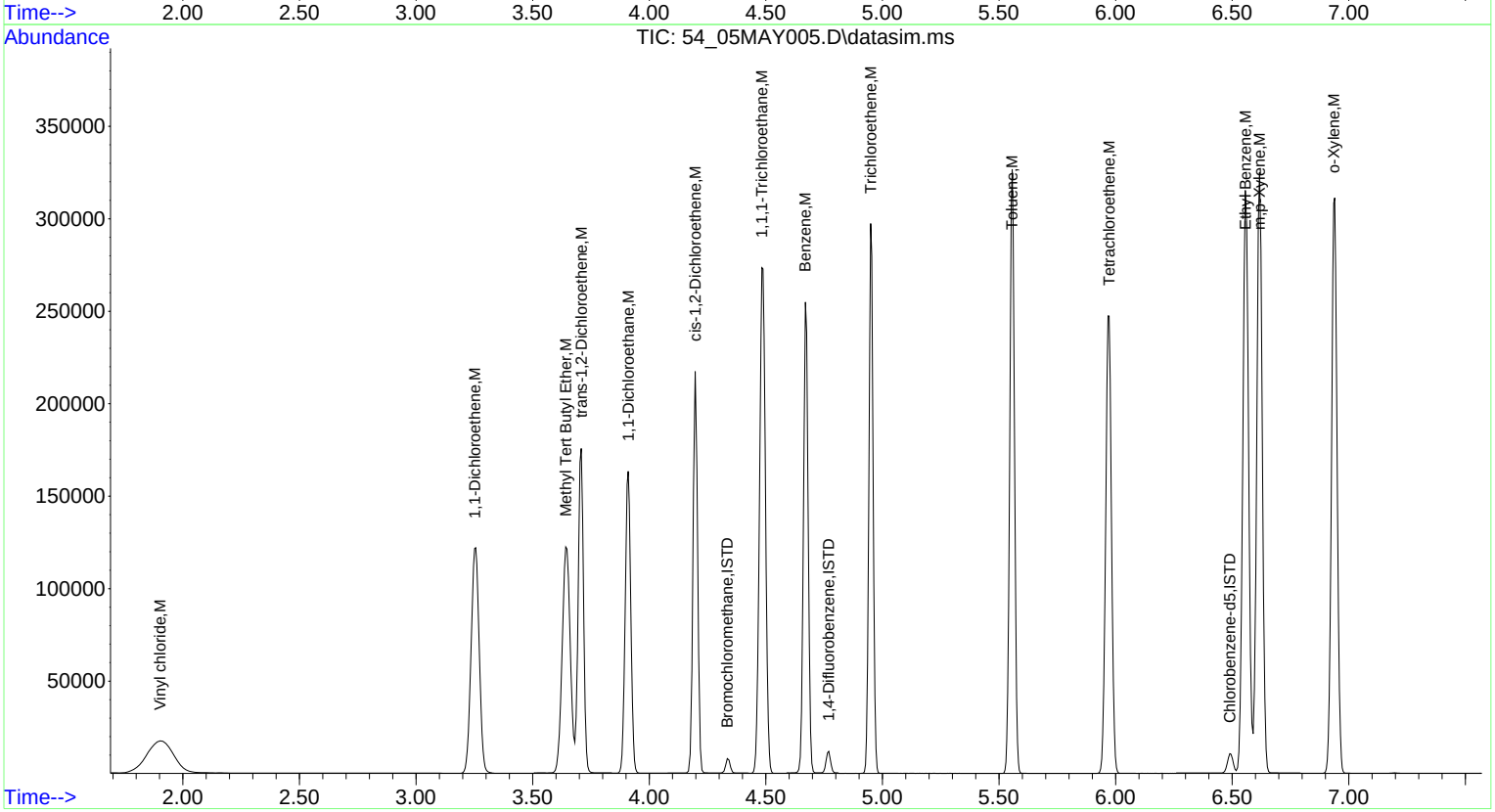
(#) = qualifier out of range (m) = manual integration (+) = signals summed

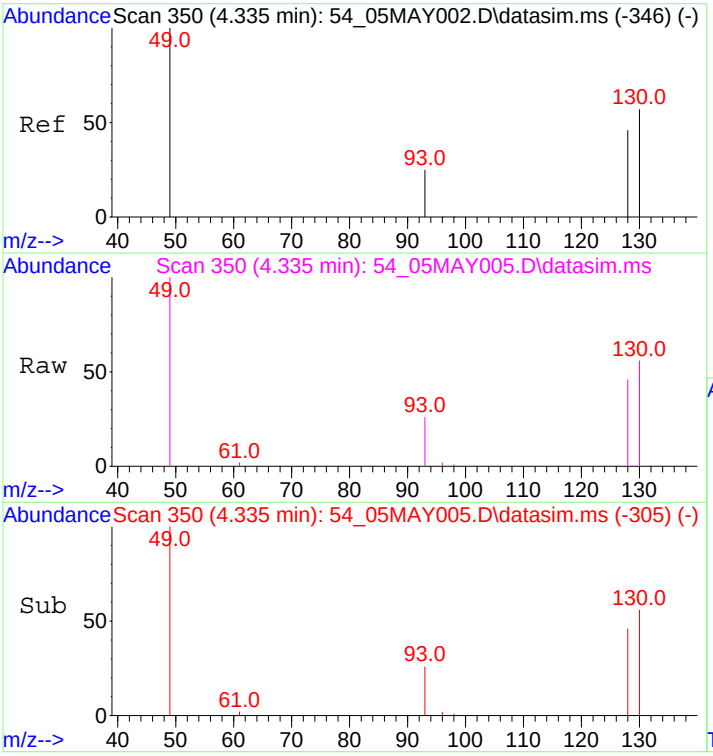
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY005.D
Acq On : 5 May 2014 8:05 am
Operator : yhl
Sample : 20140505-LCS \ 500 ppbv, LCS 2nd Source
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 08:19:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



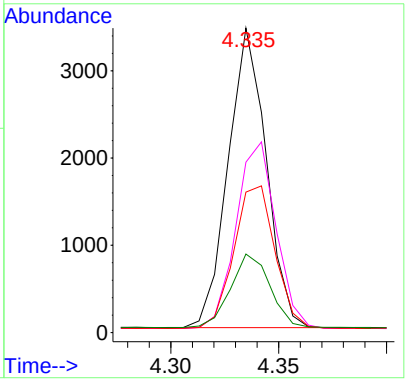


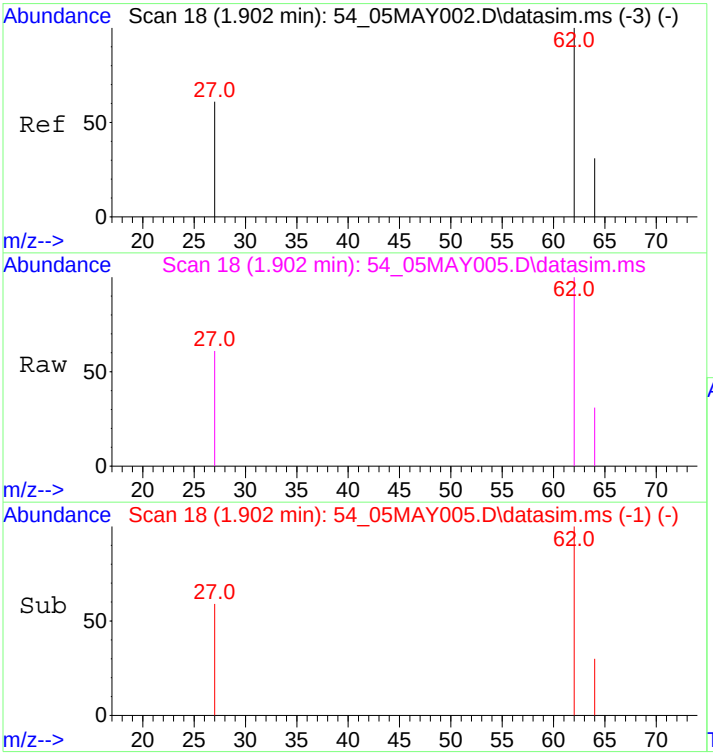


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 49 Resp: 4204

Ion	Ratio	Lower	Upper
49	100		
130	65.5	87.2	130.8#
128	51.6	68.0	102.0#
93	25.5	29.3	43.9#

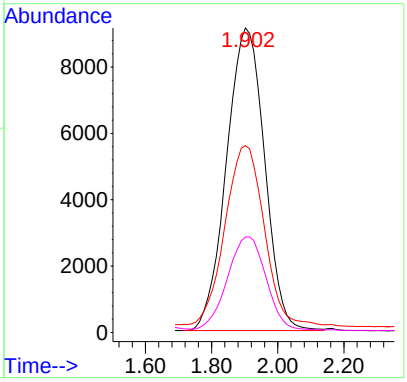


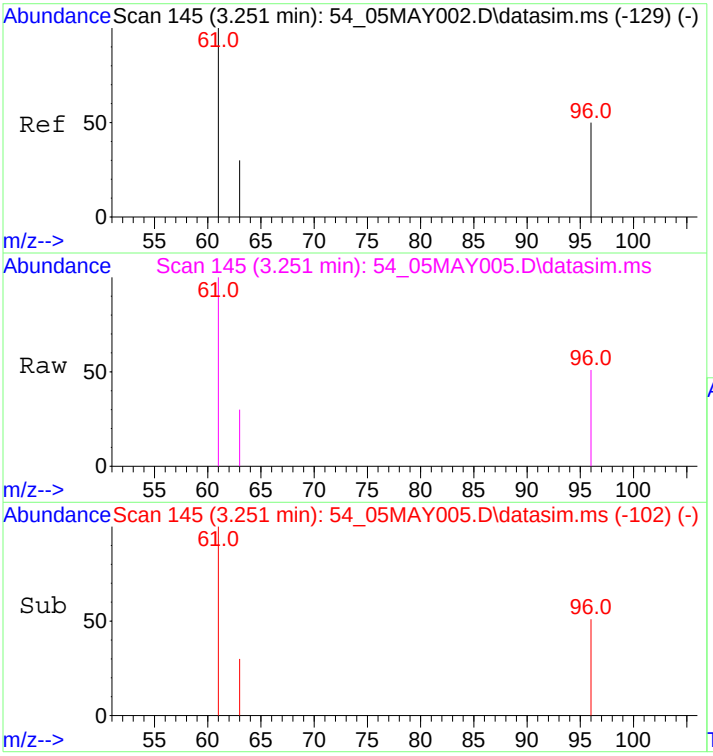


#2
Vinyl chloride
Concen: 457.39 ppbv
RT: 1.902 min Scan# 18
Delta R.T. 0.000 min
Lab File: 54_05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 62 Resp: 73118

Ion	Ratio	Lower	Upper
62	100		
64	20.9	26.8	40.2#
27	71.3	16.1	24.1#

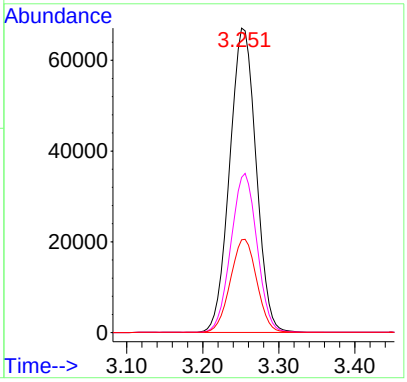


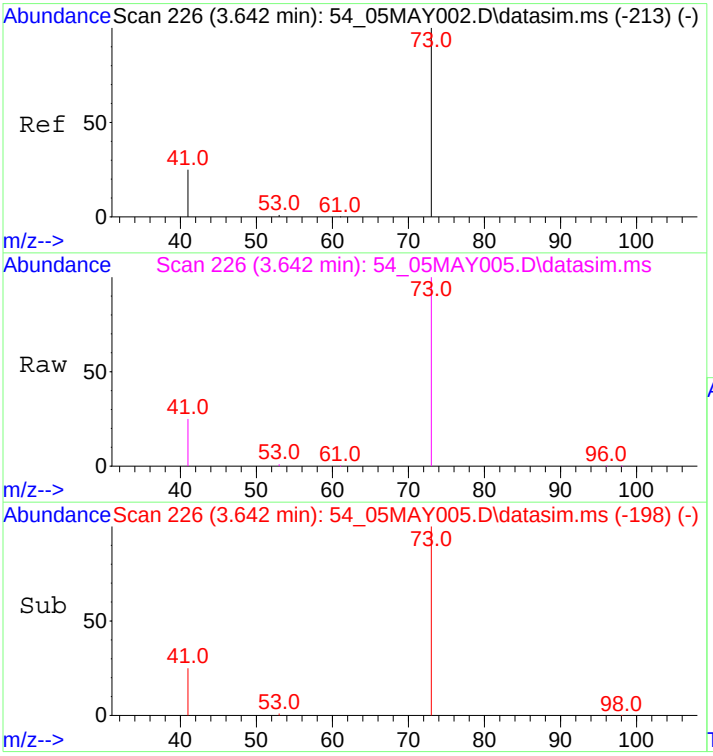


#3
1,1-Dichloroethene
Concen: 497.36 ppbv
RT: 3.251 min Scan# 145
Delta R.T. 0.000 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 61 Resp: 161938

Ion	Ratio	Lower	Upper
61	100		
96	51.7	63.4	95.2#
63	30.6	26.2	39.2

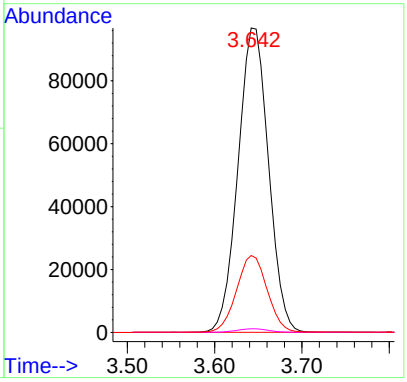


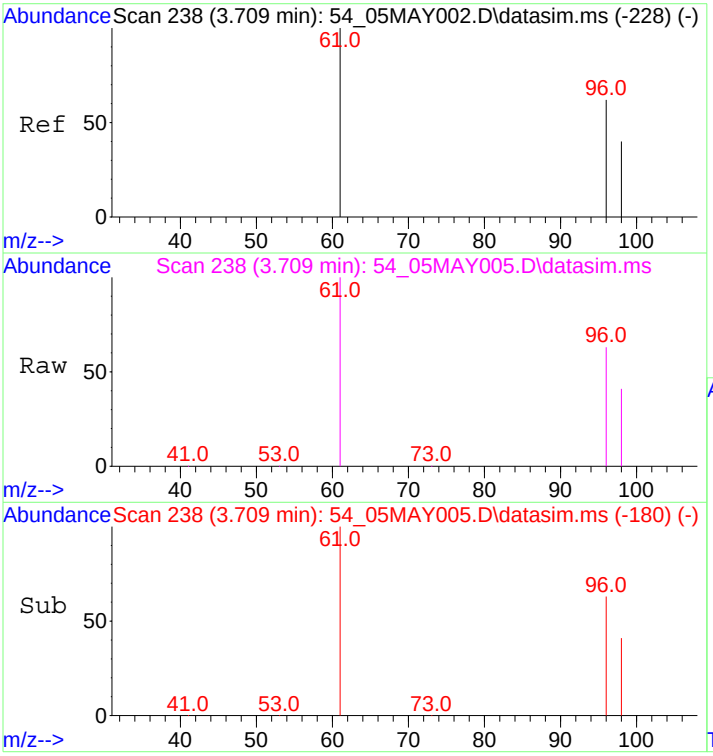


#4
Methyl Tert Butyl Ether
Concen: 472.12 ppbv
RT: 3.642 min Scan# 226
Delta R.T. 0.000 min
Lab File: 54_05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 73 Resp: 234704

Ion	Ratio	Lower	Upper
73	100		
53	1.2	1.0	1.4
41	25.2	13.1	19.7#

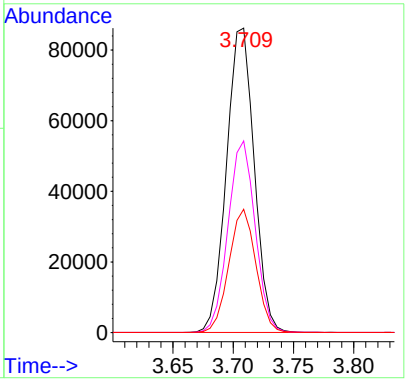


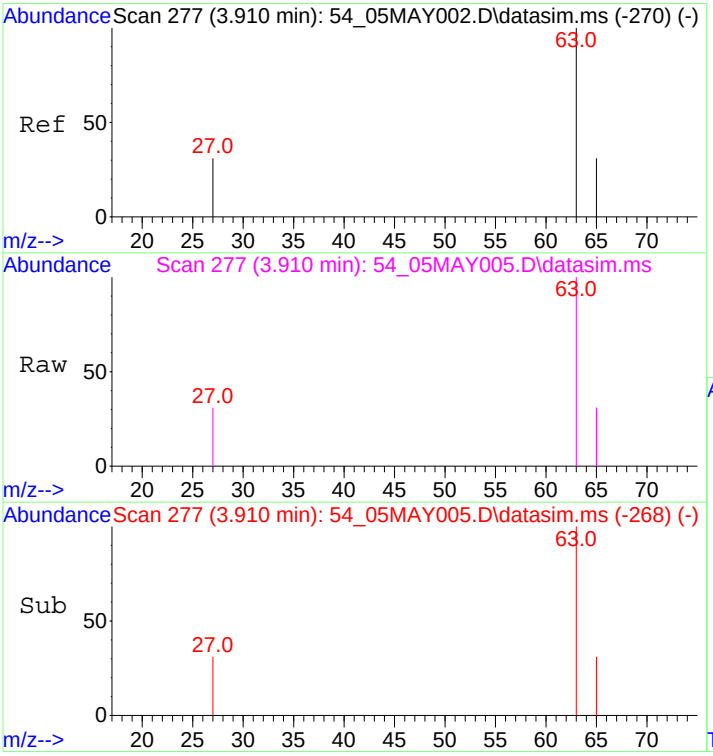


#5
trans-1,2-Dichloroethene
Concen: 481.18 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.000 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 61 Resp: 138082

Ion	Ratio	Lower	Upper
61	100		
96	61.6	71.4	107.0#
98	39.5	45.8	68.8#

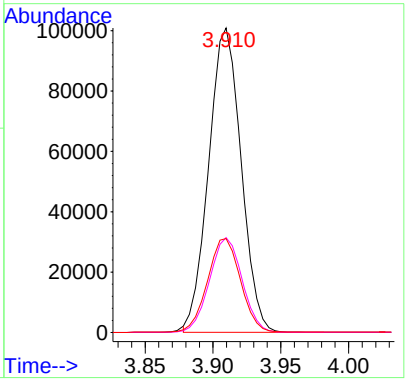


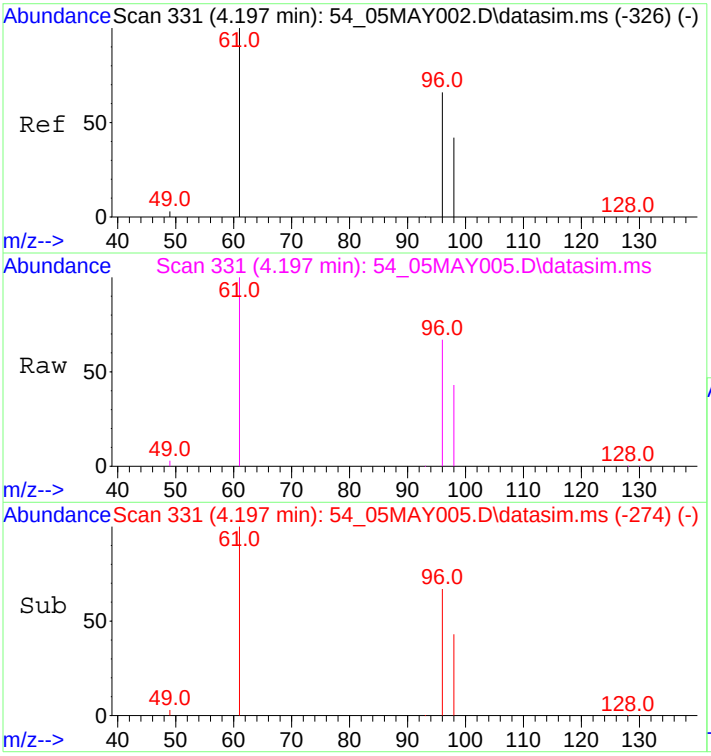


#6
1,1-Dichloroethane
Concen: 489.49 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.000 min
Lab File: 54_05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 63 Resp: 167686

Ion	Ratio	Lower	Upper
63	100		
65	31.1	26.1	39.1
27	30.9	10.2	15.2#

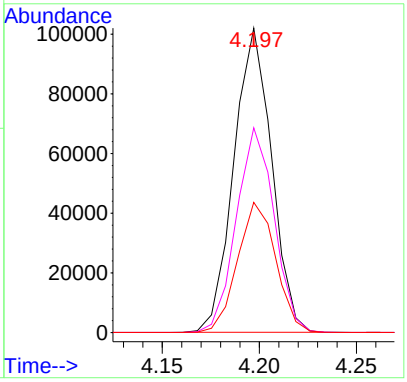


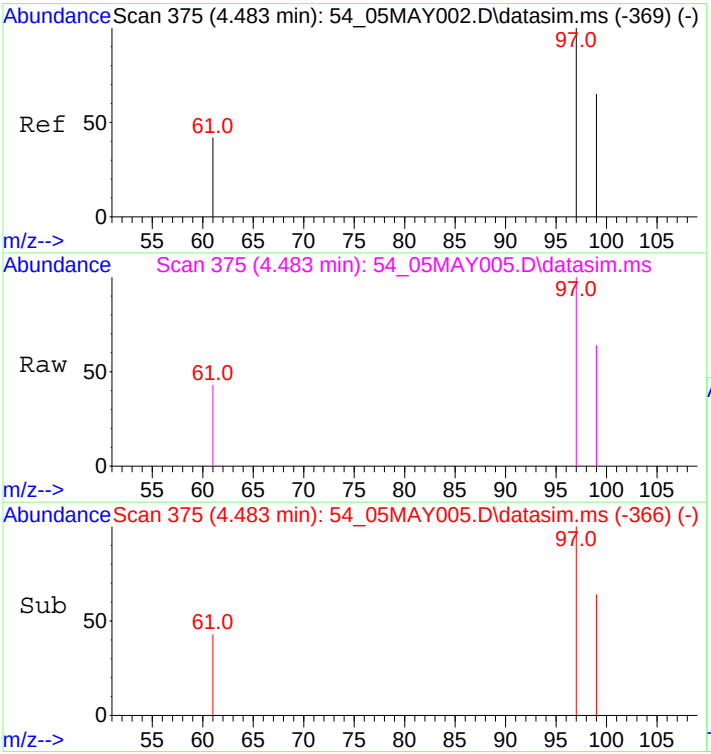


#7
cis-1,2-Dichloroethene
Concen: 516.27 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 61 Resp: 138349

Ion	Ratio	Lower	Upper
61	100		
96	67.3	78.5	117.7#
98	43.3	50.6	76.0#

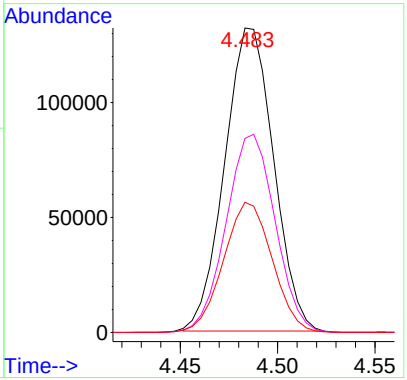


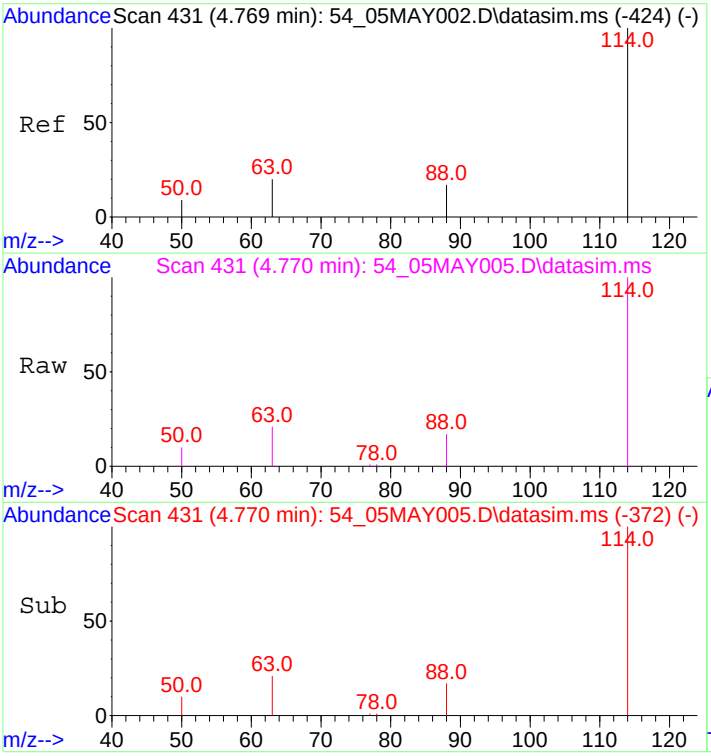


#8
1,1,1-Trichloroethane
Concen: 531.74 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 97 Resp: 231076

Ion	Ratio	Lower	Upper
97	100		
99	64.6	52.1	78.1
61	42.2	30.2	45.4

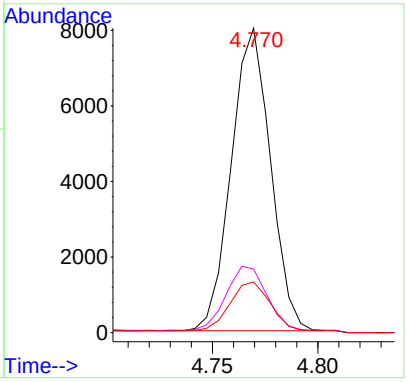


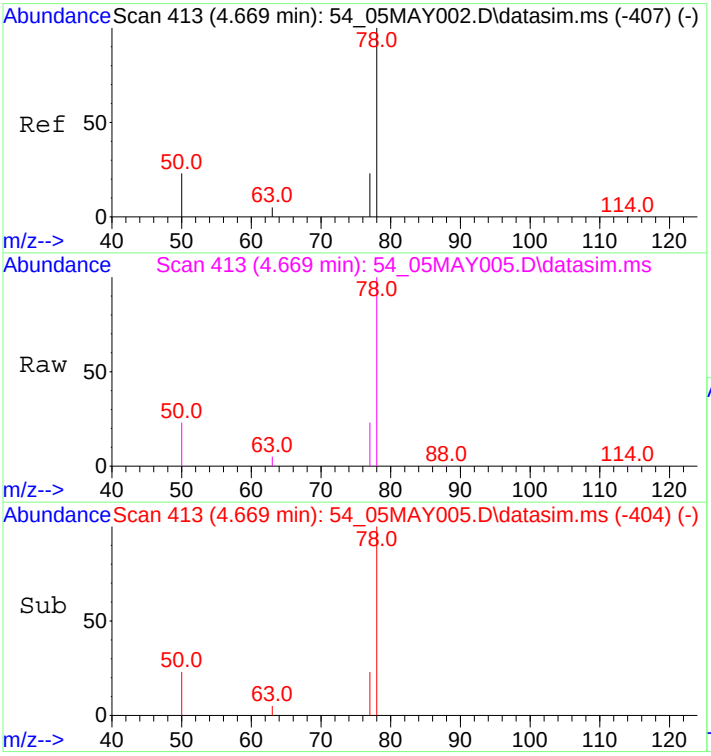


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion:114 Resp: 10337

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.5	11.8	17.8

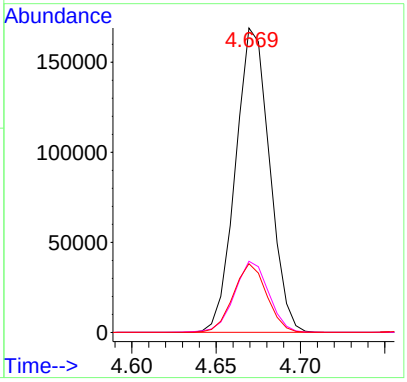


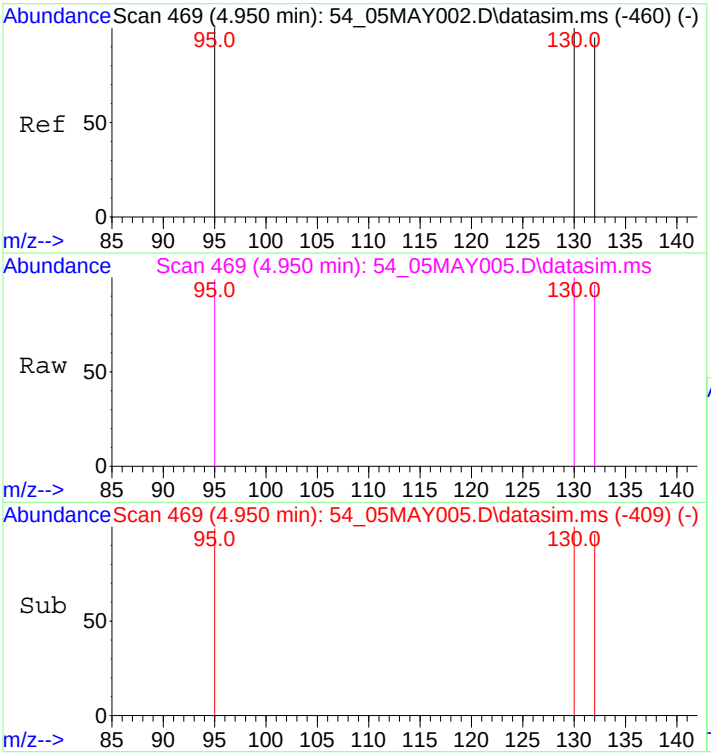


#10
Benzene
Concen: 502.86 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 78 Resp: 237456

Ion	Ratio	Lower	Upper
78	100		
77	23.4	18.2	27.2
50	22.0	8.6	13.0#

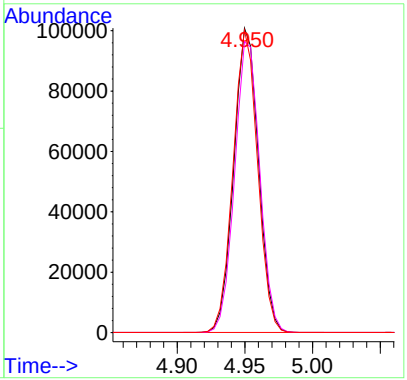


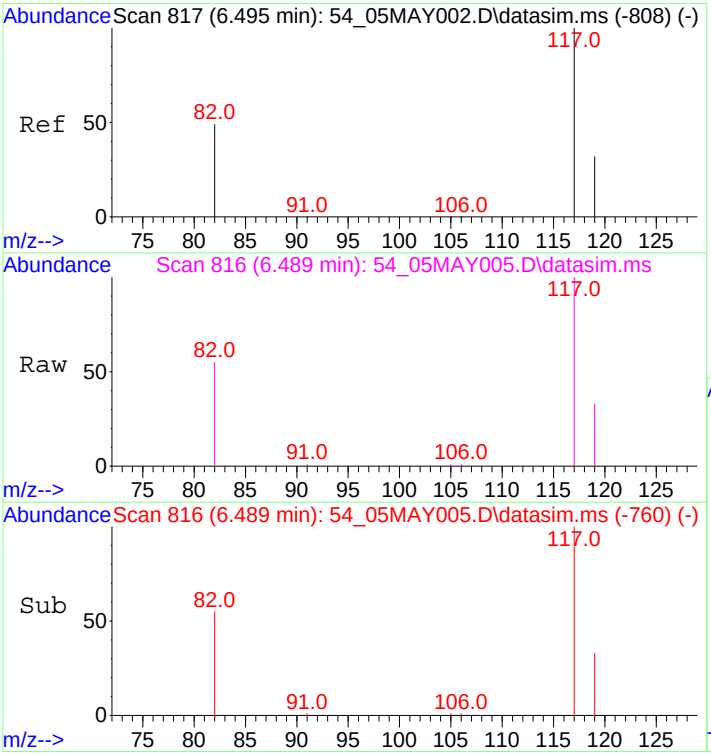


#11
Trichloroethene
Concen: 498.05 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion:130 Resp: 128046

Ion	Ratio	Lower	Upper
130	100		
132	96.8	76.9	115.3
95	98.2	76.5	114.7

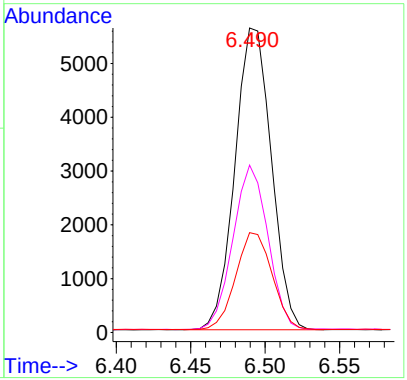


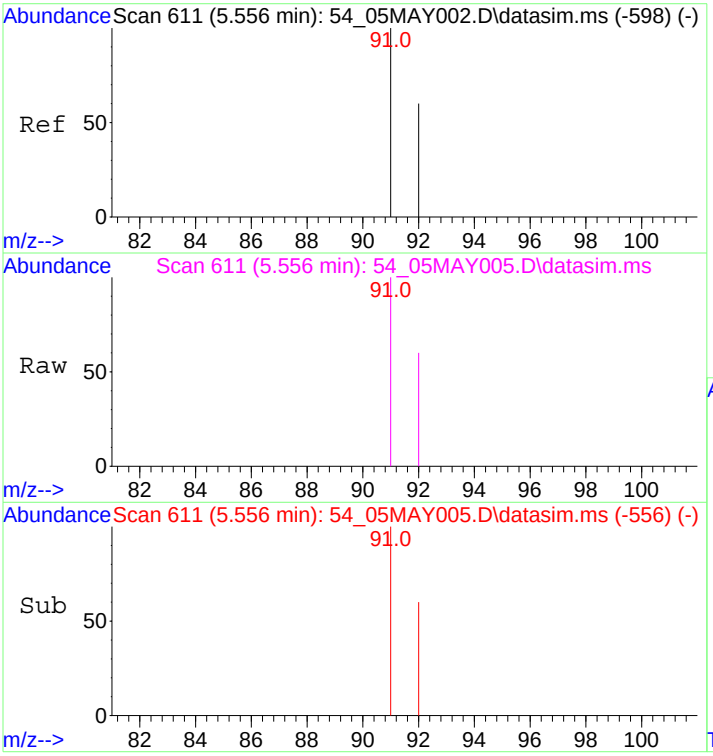


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54_05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion:117 Resp: 9555

Ion	Ratio	Lower	Upper
117	100		
82	52.3	38.0	57.0
119	32.0	27.0	40.4

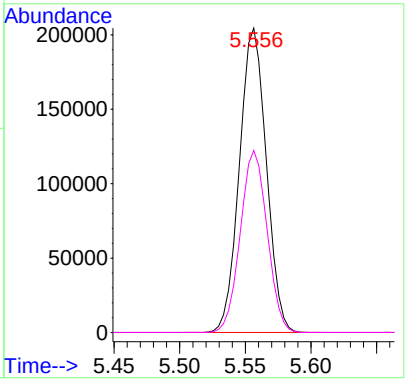


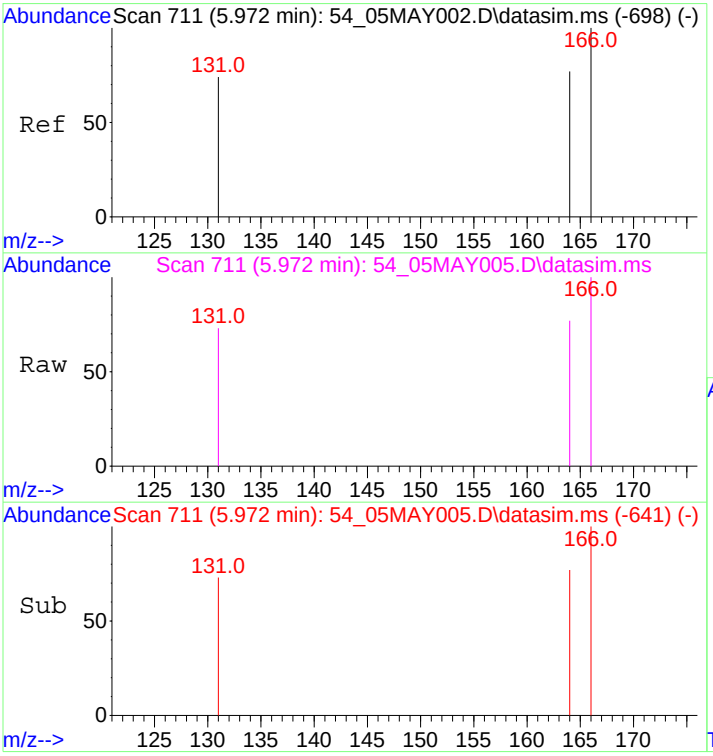


#13
Toluene
Concen: 509.51 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 91 Resp: 291839

Ion	Ratio	Lower	Upper
91	100		
92	59.6	47.8	71.8

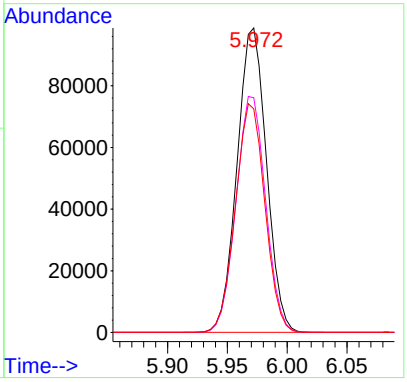


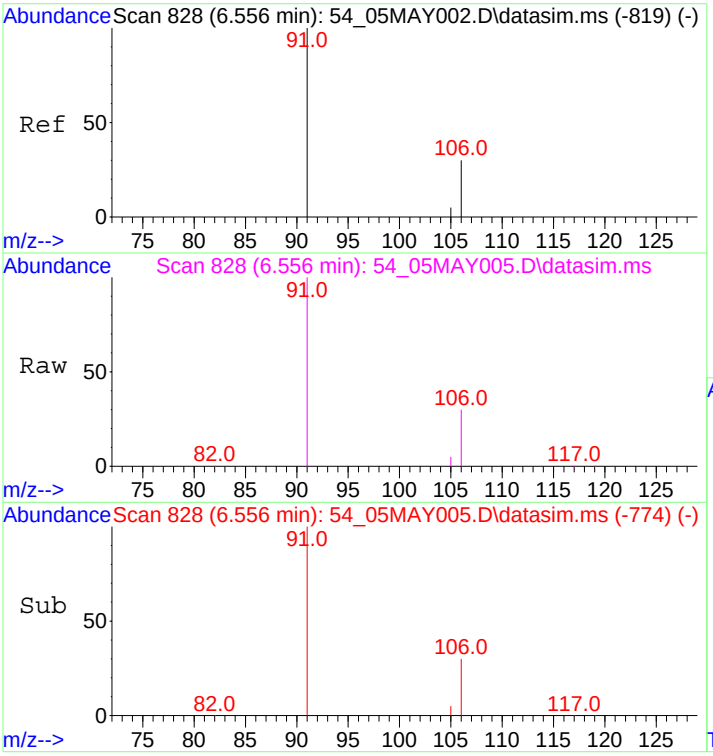


#14
Tetrachloroethene
Concen: 516.69 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion:166 Resp: 169034

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	75.2	58.5	87.7

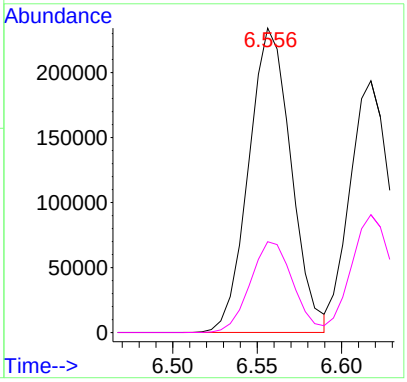


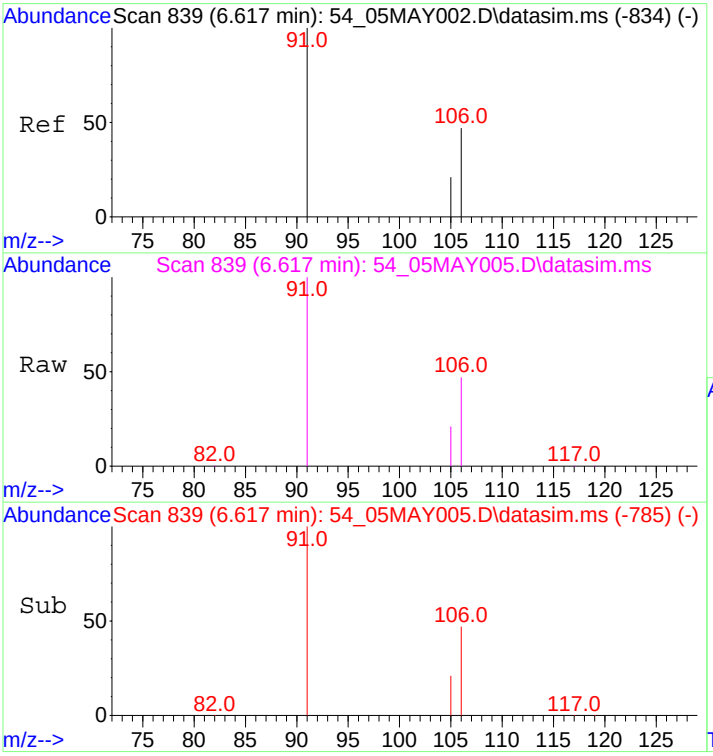


#15
Ethyl Benzene
Concen: 562.87 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 91 Resp: 409432

Ion	Ratio	Lower	Upper
91	100		
106	30.1	26.9	40.3

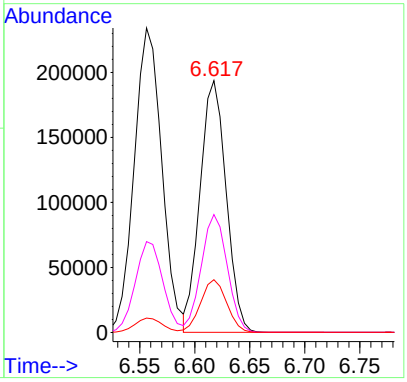


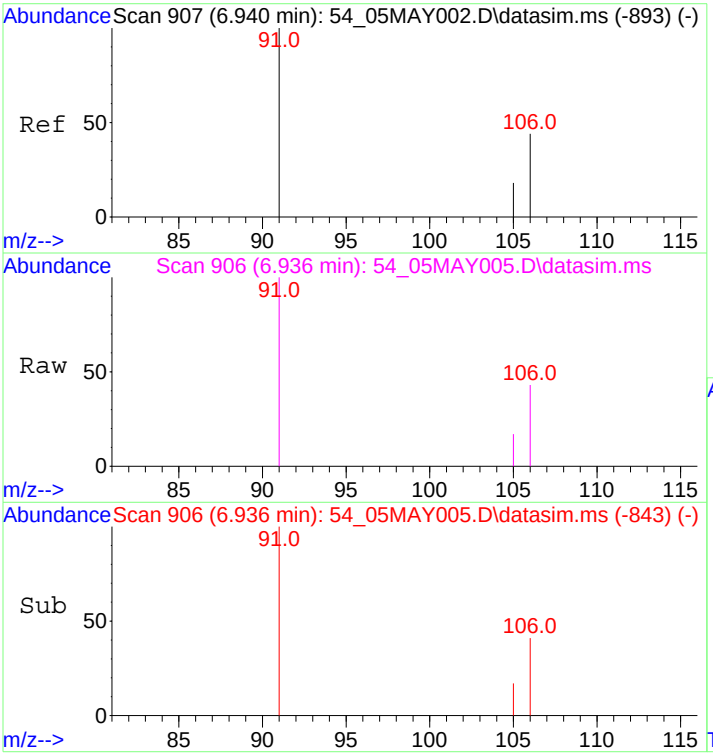


#16
m,p-Xylene
Concen: 573.01 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_05MAY005.D
Acq: 5 May 2014 8:05 am

Tgt Ion: 91 Resp: 319892

Ion	Ratio	Lower	Upper
91	100		
106	46.6	43.1	64.7
105	21.0	18.3	27.5

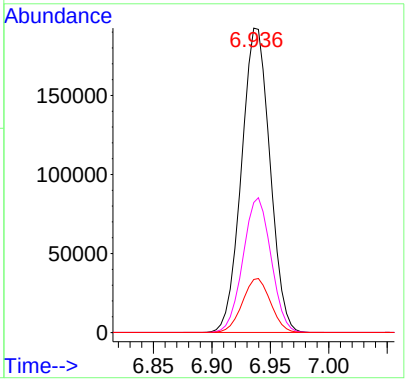




#17
o-Xylene
Concen: 575.62 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 05MAY005.D
Acq: 5 May 2014 8:05 am

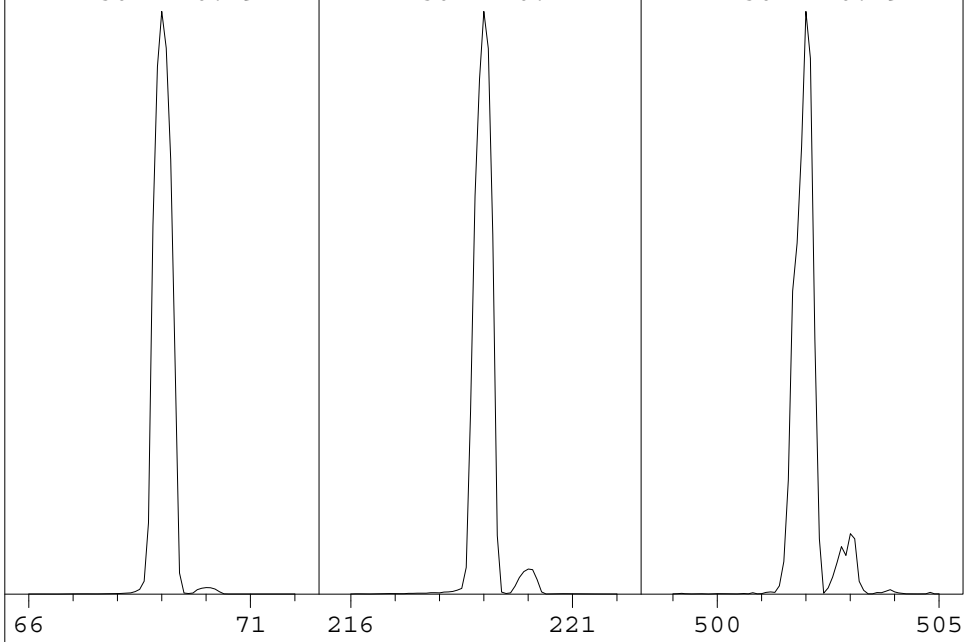
Tgt Ion: 91 Resp: 325879

Ion	Ratio	Lower	Upper
91	100		
106	43.7	40.1	60.1
105	17.5	15.8	23.6



Tue May 06 06:40:21 2014 Instrument: GCMS
C:\msdchem\1\5975\bfb.u US91732436

Mass	Ab	Pw50
69.00	925730	0.49
219.00	484321	0.47
502.00	17345	0.49

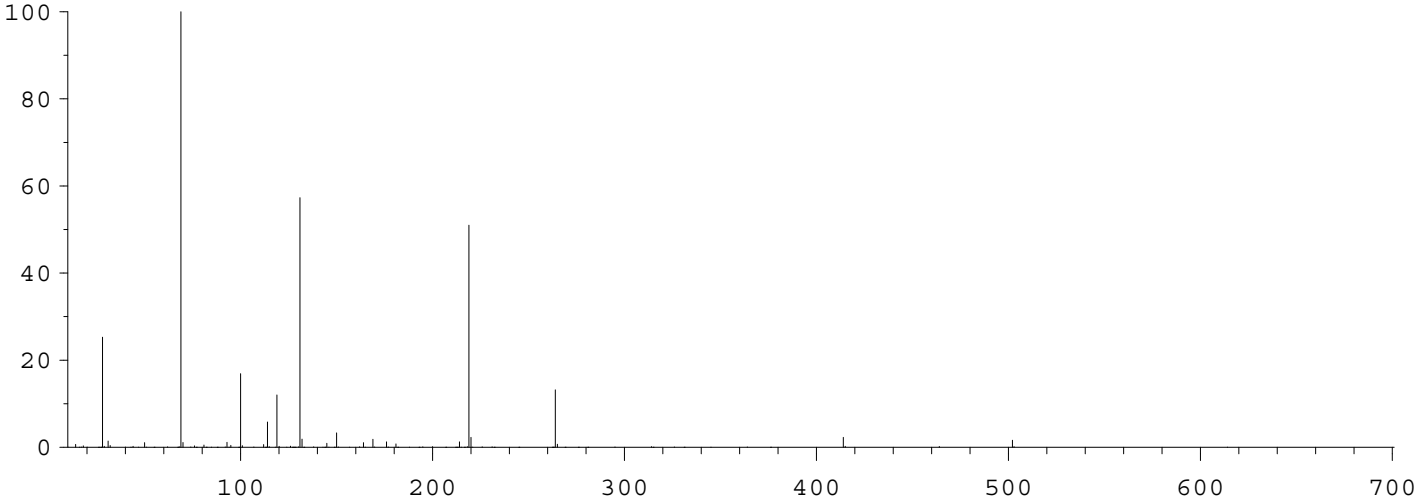


Ion Pol	Pos	MassGain	-791
		MassOffs	-37
Emission	34.6	AmuGain	1593
EIEnrgy	69.9	AmuOffs	129.88
Filament	2	Wid219	-0.029
		DC Pol	Pos
Repeller	19.90		
IonFcus	79.7	HEDEnab	On
EntLens	0.0	EMVolts	1953
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.19e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
111 peaks Base: 69.00 Abundance: 755648



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	755648	100.00	70.00	8561	1.13
219.00	385472	51.01	220.00	17272	4.48
502.10	12236	1.62	503.00	1151	9.41

Air/Water Check: H20~0.35% N2~25.26% O2~0.41% CO2~0.21% N2/H2O~7163.96%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 238215
Repeller Maximum 20 volts using ion 219; Gain Factor 2.38

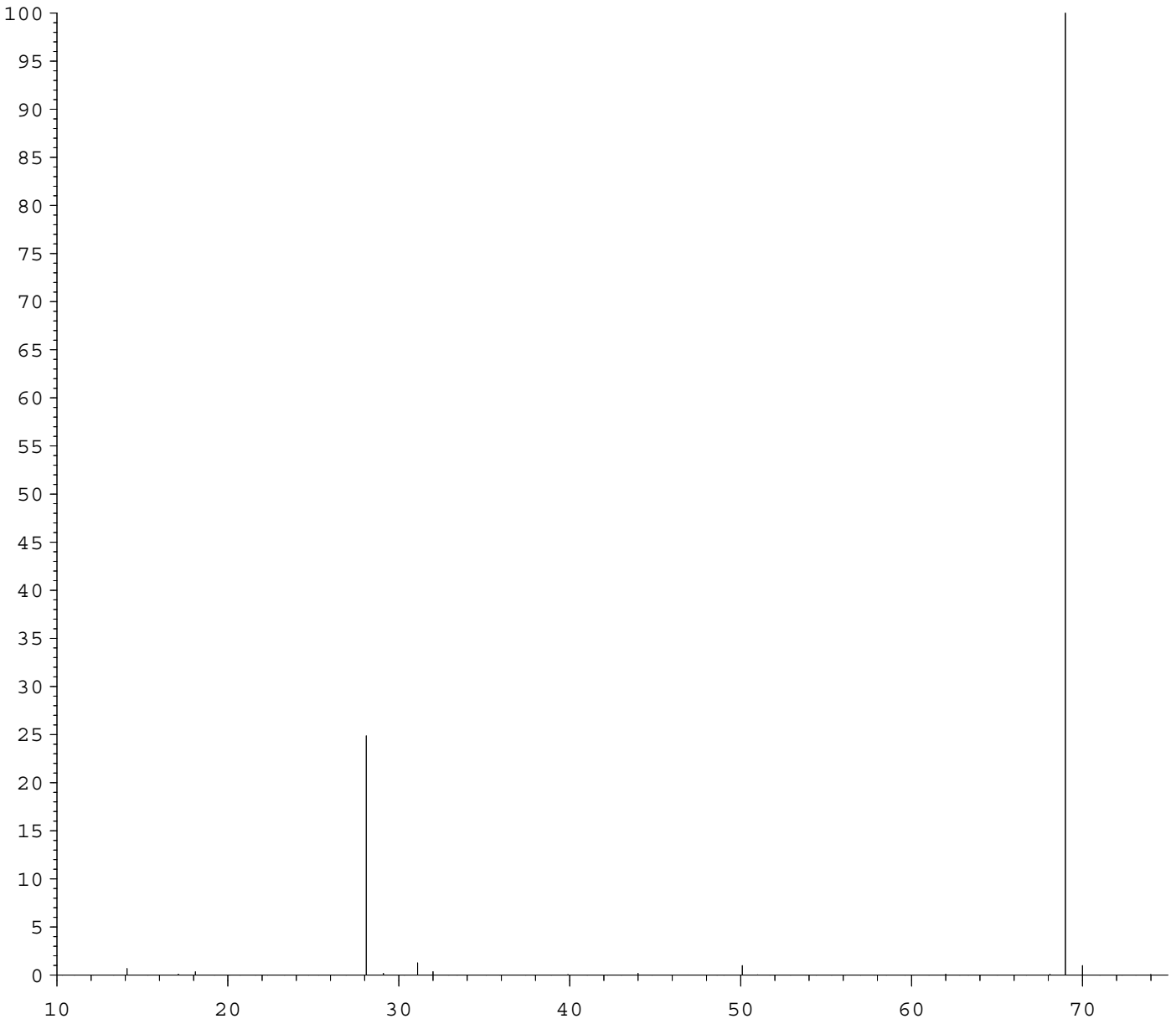
MassGain Values(Samples): -782(3) -767(2) -741(1) -706(0) -636(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.9	129.9	129.9	129.9	129.9	129.9	129.9
Entrance Lens Offset:	16.8	13.8	14.1	13.8	14.1	14.1	14.1
Target Abund(%):	1.0	100.0	55.0	55.0	2.4	2.0	
Actual Tune Abund(%):	1.1	100.0	57.3	51.0	2.3	1.6	

597x Air and Water Check

Instrument: GCMS
Tue May 06 06:42:49 2014 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
73 peaks Base: 69.00 Abundance: 763840



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	763840	100.00	70.00	7666	1.00
18.10	2726	0.36	19.20	102	3.74
28.10	190016	24.88	29.10	1438	0.76

Current Params used: bfb.u

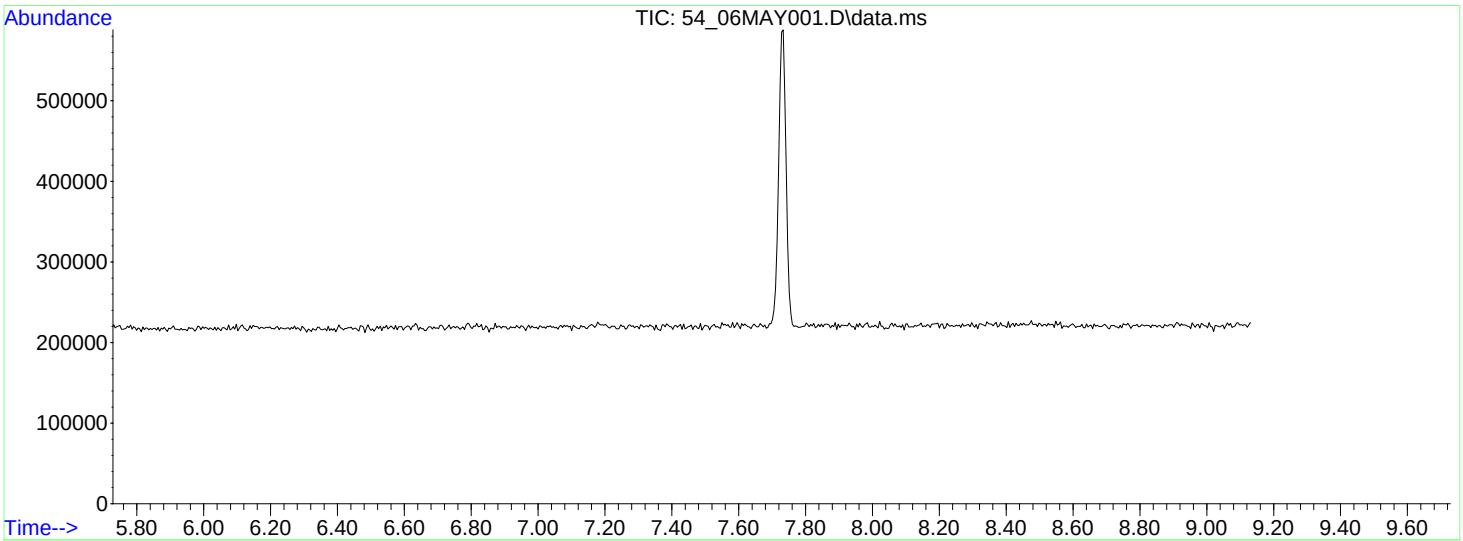
Relative abundances:

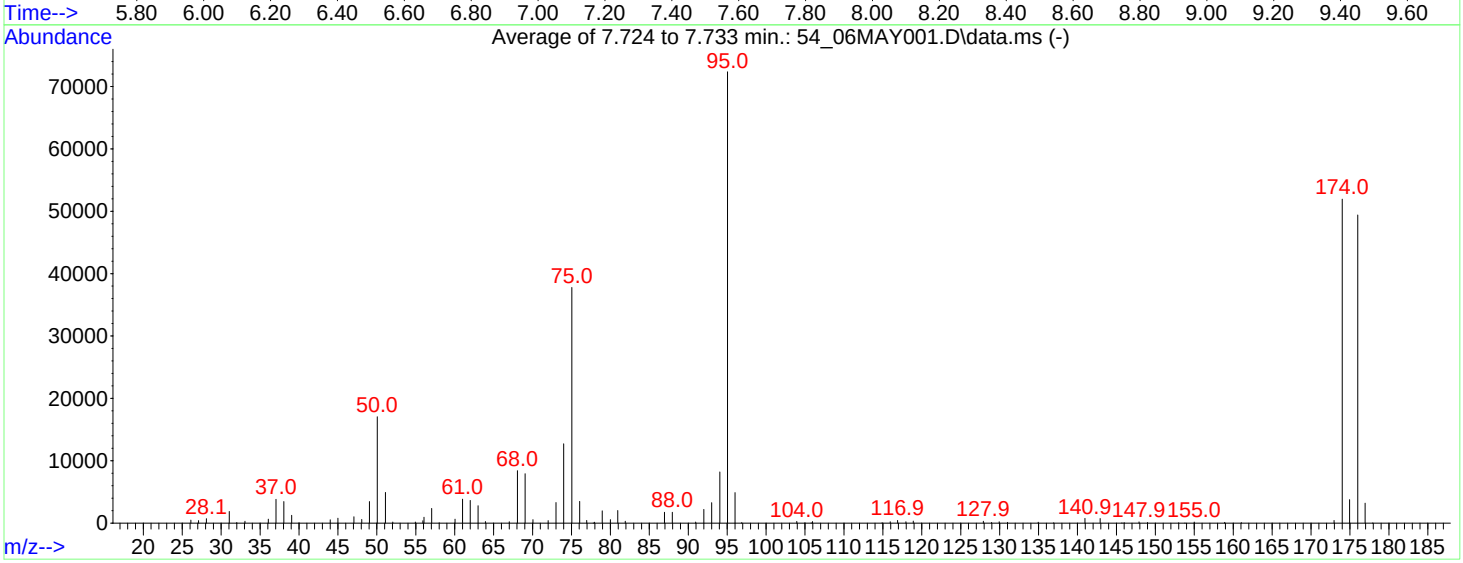
18/69 =	0.36	Water%	(counts=2726)
28/69 =	24.88	Nitrogen%	(counts=190016)
32/69 =	0.38	Oxygen%	(counts=2934)
44/69 =	0.20	Carbon Dioxide%	(counts=1532)
28/18 =	6970.51	Nitrogen/Water%	

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY001.D
Acq On : 6 May 2014 6:51 am
Operator : yhl
Sample : 20140506-BFB \ Tune Check
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20140416.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
Last Update : Mon May 05 15:20:40 2014





AutoFind: Scans 903, 904, 905; Background Corrected with Scan 895

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	23.6	17063	PASS
75	95	30	66	52.2	37792	PASS
95	95	100	100	100.0	72357	PASS
96	95	5	9	6.8	4908	PASS
173	174	0.00	2	0.8	440	PASS
174	95	50	120	71.8	51949	PASS
175	174	4	9	7.3	3782	PASS
176	174	93	101	95.1	49405	PASS
177	176	5	9	6.5	3204	PASS

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2014\20140506\54_06MAY001.D
Tune Time : 6 May 2014 6:51 am

Daily Calibration File : C:\msdchem\1\DATA\2014\20140506\54_06MAY002.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		4276	10290	9651
54_06MAY002.D	STD2014050	4276	10290	9651
54_06MAY003.D	STD2014050	4094	9778	9019
54_06MAY004.D	20140506-M	4135	10021	8884
54_06MAY005.D	20140506-L	4145	10157	9028
54_06MAY006.D	02203 \ F5	4064	9644	9083
54_06MAY007.D	02204 \ F5	4191	9985	9311
54_06MAY008.D	02204 \ F5	4528	10892	10843
54_06MAY009.D	02205 \ F5	4168	9887	8994
54_06MAY010.D	02206 \ F5	3827	9061	8239
54_06MAY011.D	02207 \ F5	4076	9689	8857
54_06MAY012.D	02208 \ F5	4139	9792	9061
54_06MAY013.D	02209 \ F5	3987	9345	8482
54_06MAY014.D	02210 \ F5	3684	8646	7958
54_06MAY015.D	02211 \ F5	3731	8707	7874
54_06MAY016.D	02212 \ F5	3888	9377	8324
54_06MAY017.D	02213 \ F5	4183	9698	8696
54_06MAY018.D	02214 \ D5	3856	8982	8287
54_06MAY019.D	02215 \ D5	3977	9369	8627
54_06MAY020.D	02216 \ D5	4038	9383	8762
54_06MAY021.D				

```
         02217 \ D5            3972       9532       8556
-------------------------------------------------------------------------
54_06MAY022.D
         02218 \ E5            3856       9323       8490
-------------------------------------------------------------------------
54_06MAY023.D
         02219\ E5-            4078       9492       8420
-------------------------------------------------------------------------
54_06MAY024.D
         02220\ E5-            4190       9707       8876
-------------------------------------------------------------------------
54_06MAY025.D
         02221\ E5-            3924       9189       8596
-------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Tue May 06 16:45:43 2014  GCMS
```

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY002.D
Acq On : 6 May 2014 7:08 am
Operator : yhl
Sample : STD20140506-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:14:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISTD	Bromochloromethane	1.000	1.000	0.0	98	0.00
2	M	Vinyl chloride	0.380	0.344	9.5	91	0.00
3	M	1,1-Dichloroethene	0.774	0.787	-1.7	100	0.00
4	M	Methyl Tert Butyl Ether	1.183	1.084	8.4	92	0.00
5	M	trans-1,2-Dichloroethene	0.683	0.678	0.7	98	0.00
6	M	1,1-Dichloroethane	0.815	0.781	4.2	95	0.00
7	M	cis-1,2-Dichloroethene	0.637	0.644	-1.1	97	0.00
8	M	1,1,1-Trichloroethane	1.034	1.120	-8.3	103	0.00
9	ISTD	1,4-Difluorobenzene	1.000	1.000	0.0	88	0.00
10	M	Benzene	0.457	0.442	3.3	86	0.00
11	M	Trichloroethene	0.249	0.241	3.2	84	0.00
12	ISTD	Chlorobenzene-d5	1.000	1.000	0.0	90	0.00
13	M	Toluene	0.599	0.550	8.2	82	0.00
14	M	Tetrachloroethene	0.342	0.311	9.1	80	0.00
15	M	Ethyl Benzene	0.761	0.709	6.8	83	0.00
16	M	m,p-Xylene	0.584	0.553	5.3	85	0.00
17	M	o-Xylene	0.593	0.557	6.1	84	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY002.D
Acq On : 6 May 2014 7:08 am
Operator : yhl
Sample : STD20140506-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:14:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

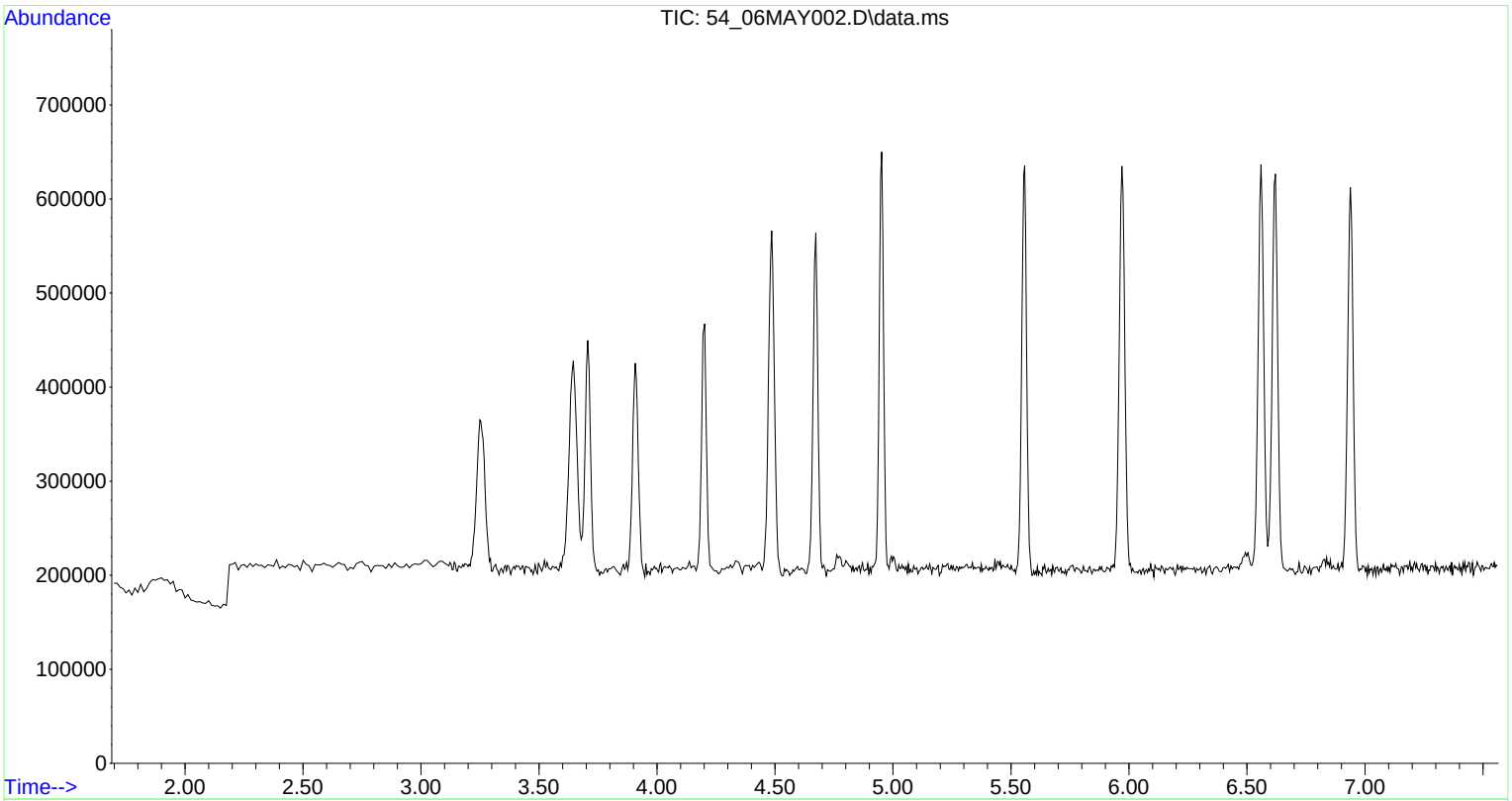
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4276	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10290	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	9651	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.915	62	75667	465.36	ppbv	# 46
3] 1,1-Dichloroethene	3.256	61	167617	506.13	ppbv	# 75
4] Methyl Tert Butyl Ether	3.647	73	232908	460.62	ppbv	# 80
5] trans-1,2-Dichloroethene	3.709	61	145717	499.23	ppbv	# 71
6] 1,1-Dichloroethane	3.910	63	172727	495.72	ppbv	# 84
7] cis-1,2-Dichloroethene	4.197	61	145222	532.79	ppbv	# 69
8] 1,1,1-Trichloroethane	4.488	97	241751	546.94	ppbv	96
10] Benzene	4.669	78	238836	508.09	ppbv	# 88
11] Trichloroethene	4.950	130	125360	489.83	ppbv	98
13] Toluene	5.556	91	275791	476.71	ppbv	100
14] Tetrachloroethene	5.972	166	152320	460.97	ppbv	98
15] Ethyl Benzene	6.556	91	355725	484.17	ppbv	93
16] m,p-Xylene	6.617	91	277428	492.00	ppbv	91
17] o-Xylene	6.940	91	278127	486.39	ppbv	91

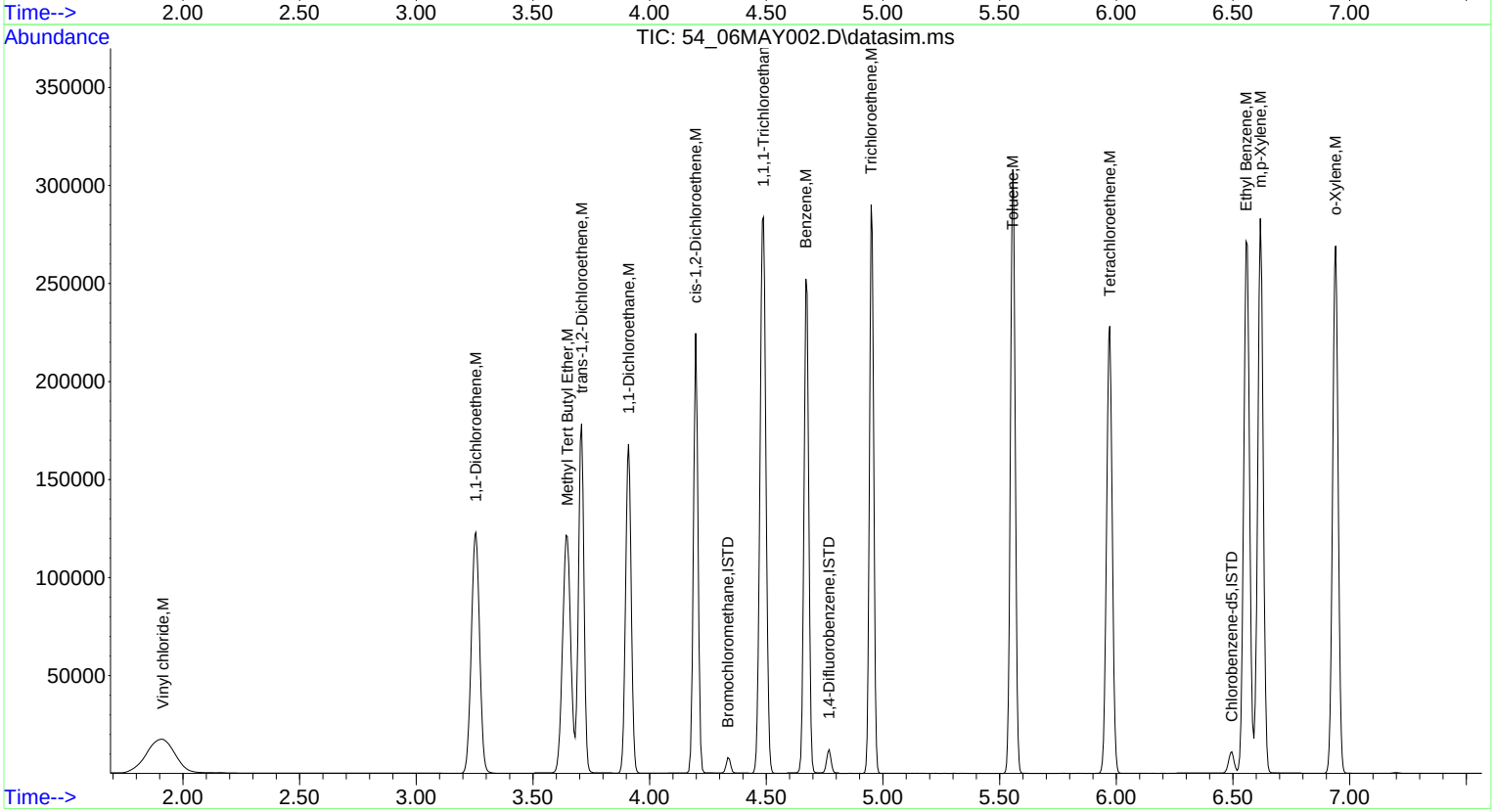
(#) = qualifier out of range (m) = manual integration (+) = signals summed

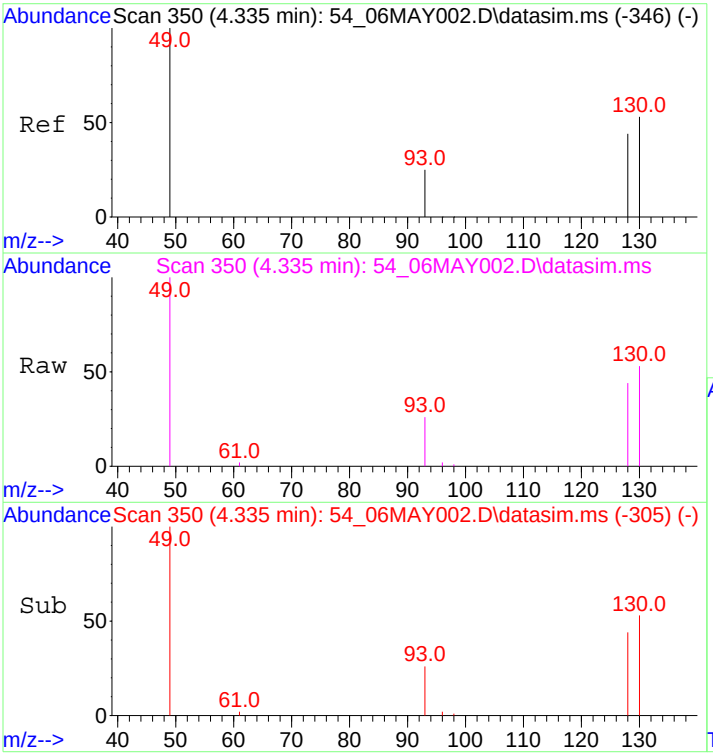
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY002.D
Acq On : 6 May 2014 7:08 am
Operator : yhl
Sample : STD20140506-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:14:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



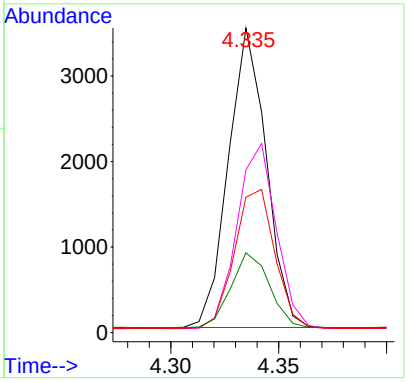


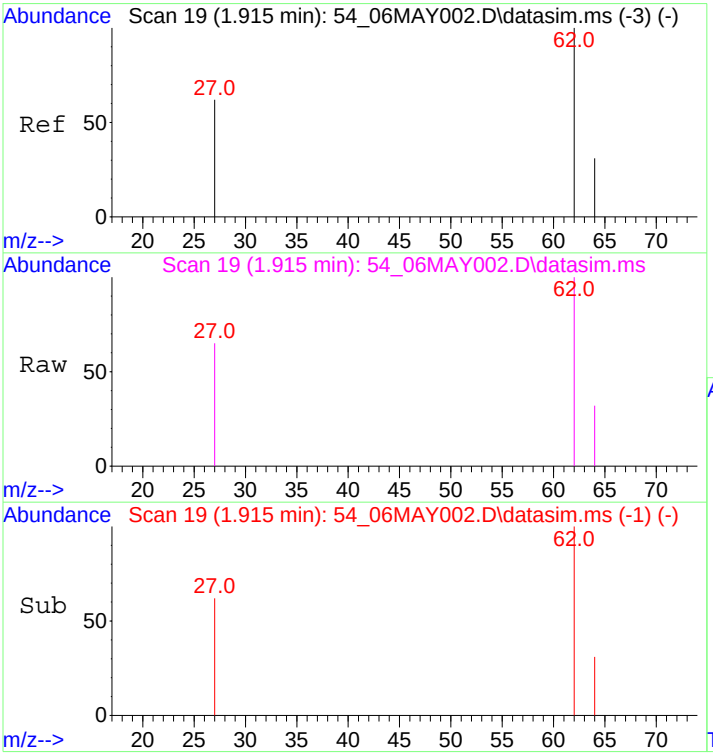


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 49 Resp: 4276

Ion	Ratio	Lower	Upper
49	100		
130	64.2	87.2	130.8#
128	49.7	68.0	102.0#
93	25.4	29.3	43.9#

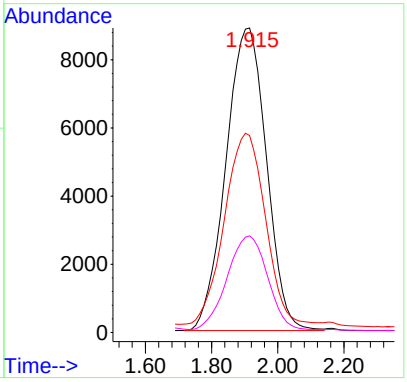


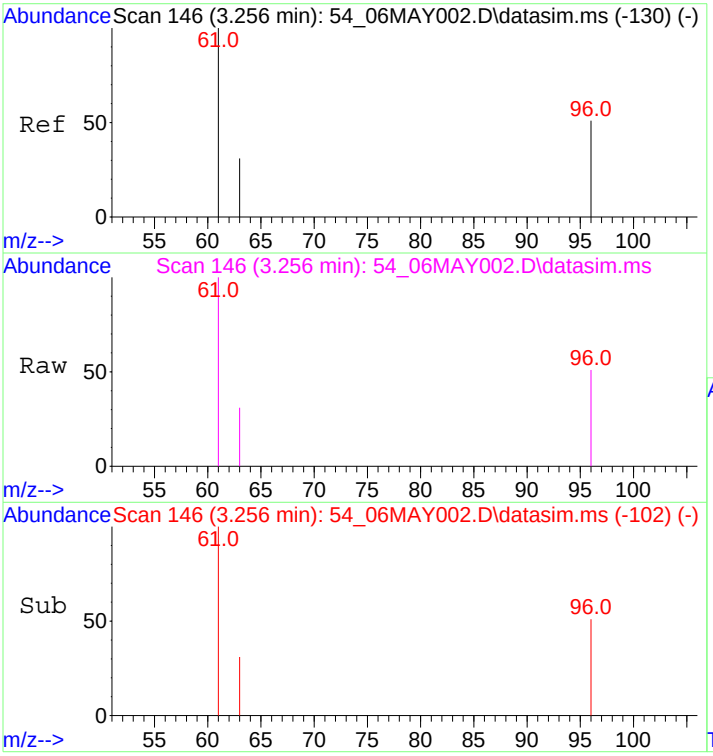


#2
Vinyl chloride
Concen: 465.36 ppbv
RT: 1.915 min Scan# 19
Delta R.T. 0.013 min
Lab File: 54_06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 62 Resp: 75667

Ion	Ratio	Lower	Upper
62	100		
64	29.9	26.8	40.2
27	81.6	16.1	24.1#

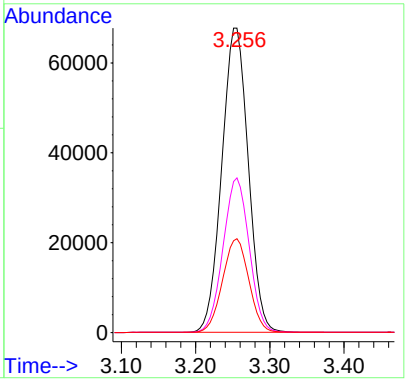


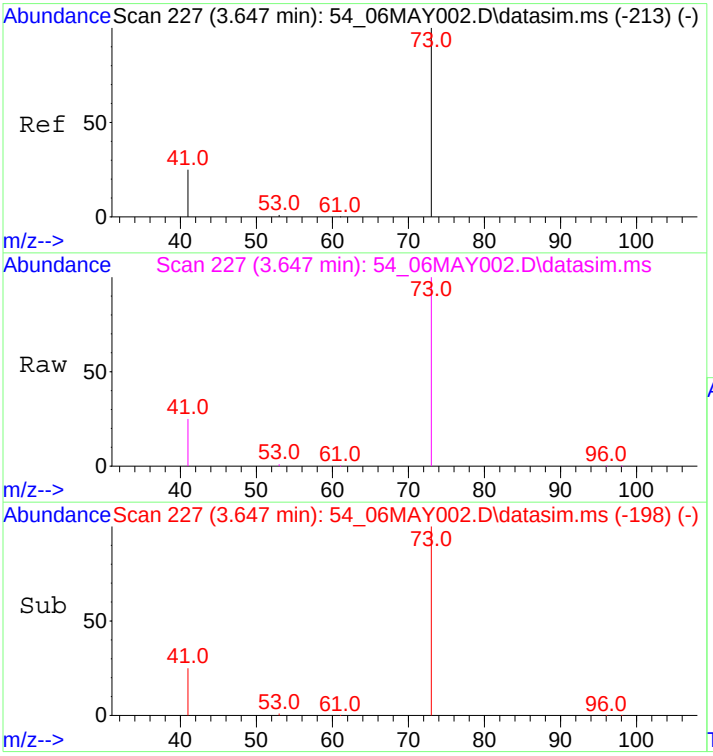


#3
1,1-Dichloroethene
Concen: 506.13 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.005 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 61 Resp: 167617

Ion	Ratio	Lower	Upper
61	100		
96	50.1	63.4	95.2#
63	30.6	26.2	39.2

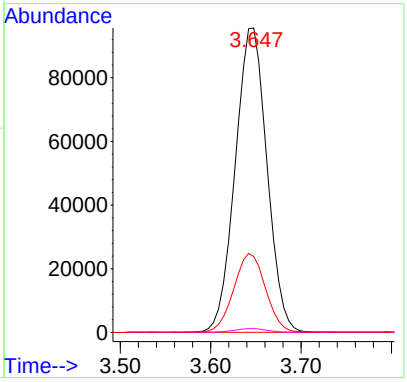


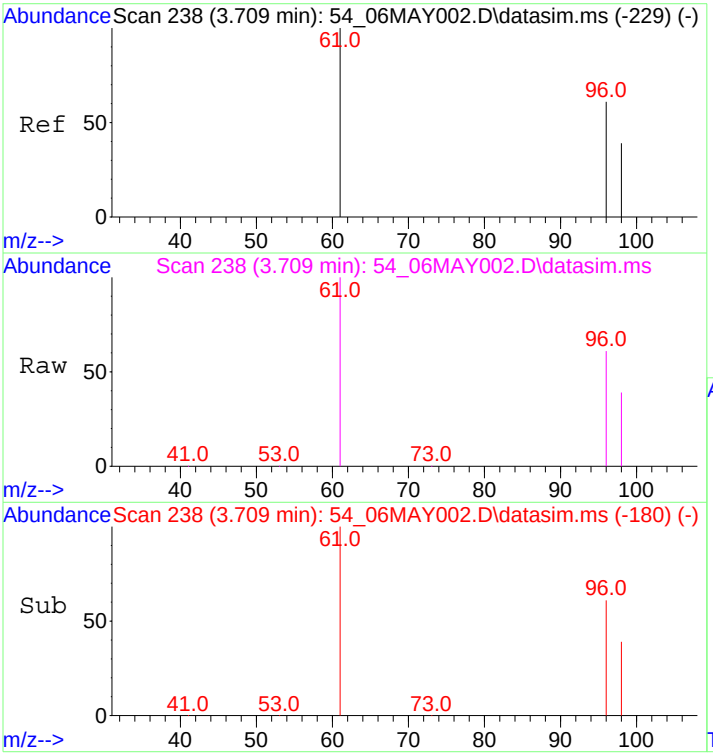


#4
Methyl Tert Butyl Ether
Concen: 460.62 ppbv
RT: 3.647 min Scan# 227
Delta R.T. 0.006 min
Lab File: 54_06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 73 Resp: 232908

Ion	Ratio	Lower	Upper
73	100		
53	1.2	1.0	1.4
41	25.8	13.1	19.7#

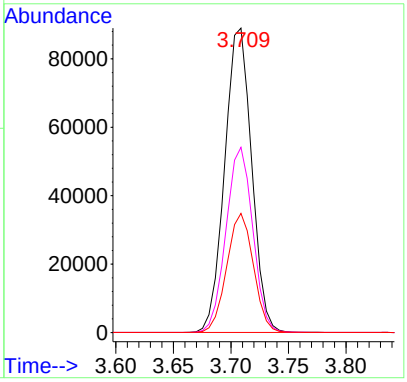


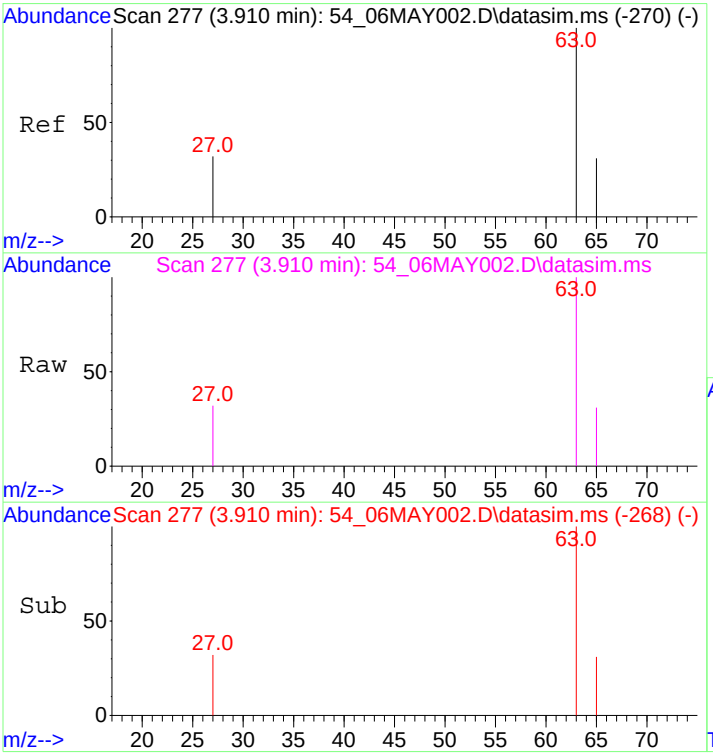


#5
trans-1,2-Dichloroethene
Concen: 499.23 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.000 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 61 Resp: 145717

Ion	Ratio	Lower	Upper
61	100		
96	60.3	71.4	107.0#
98	38.6	45.8	68.8#

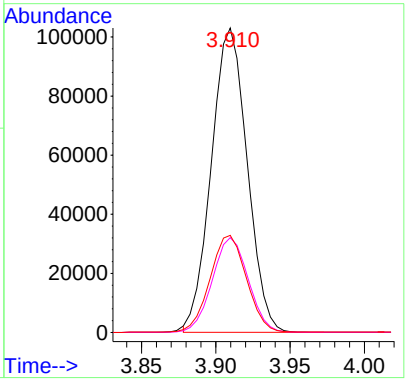


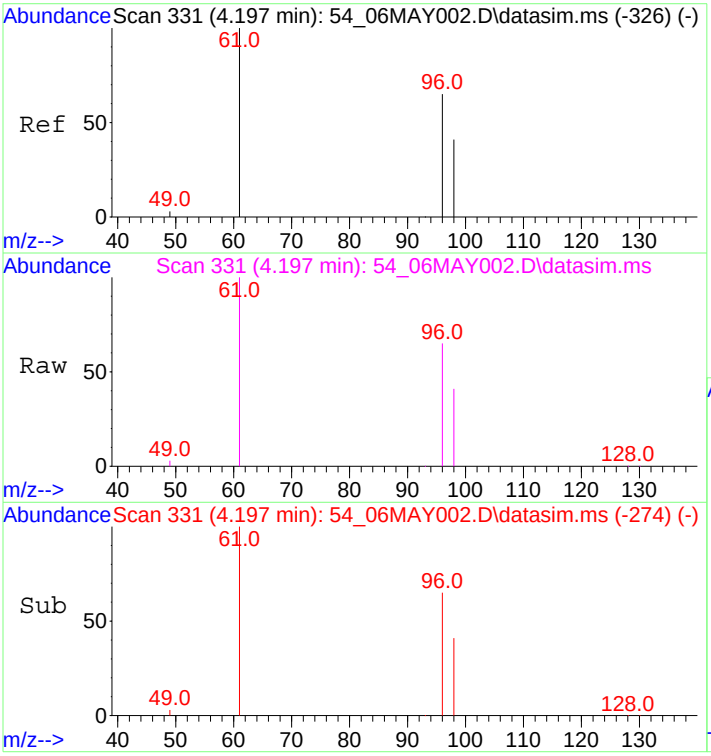


#6
1,1-Dichloroethane
Concen: 495.72 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.000 min
Lab File: 54_06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 63 Resp: 172727

Ion	Ratio	Lower	Upper
63	100		
65	31.0	26.1	39.1
27	32.0	10.2	15.2#

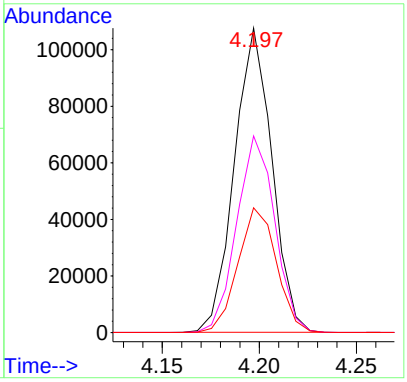


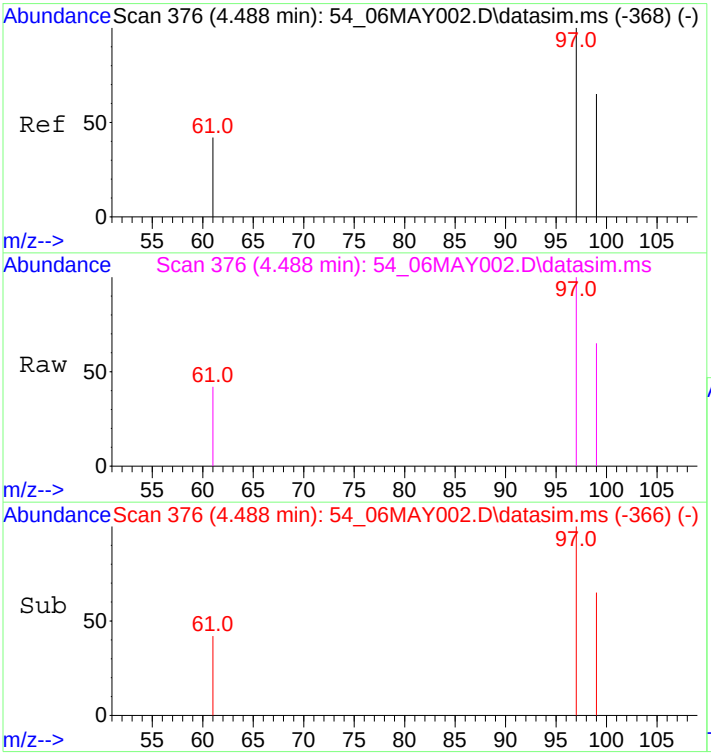


#7
cis-1,2-Dichloroethene
Concen: 532.79 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 61 Resp: 145222

Ion	Ratio	Lower	Upper
61	100		
96	65.5	78.5	117.7#
98	42.0	50.6	76.0#

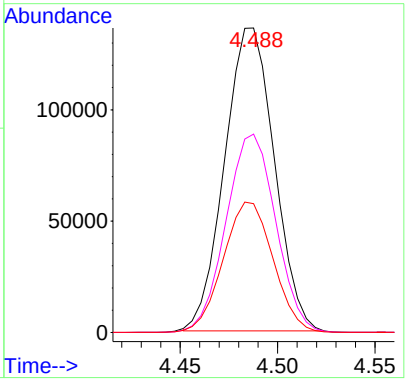


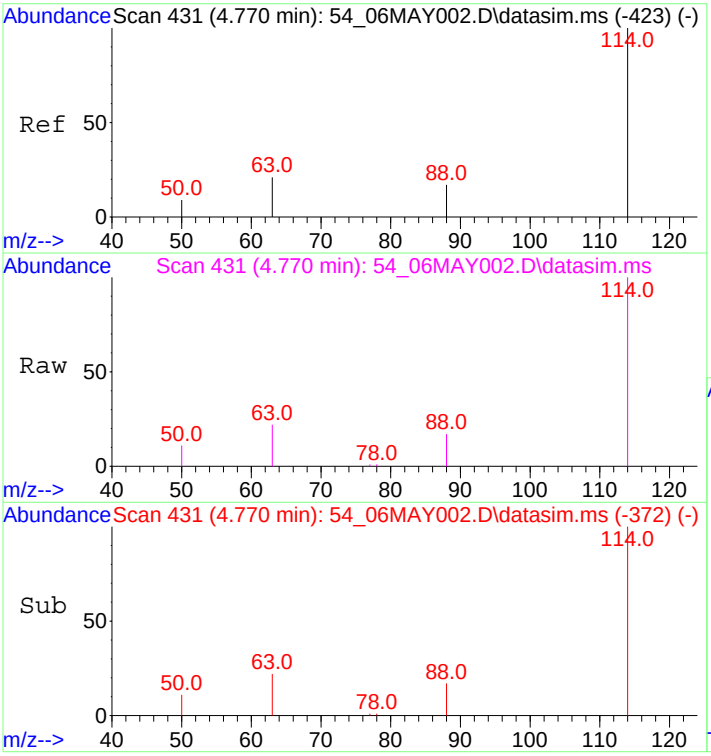


#8
1,1,1-Trichloroethane
Concen: 546.94 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.005 min
Lab File: 54_06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 97 Resp: 241751

Ion	Ratio	Lower	Upper
97	100		
99	64.4	52.1	78.1
61	42.7	30.2	45.4

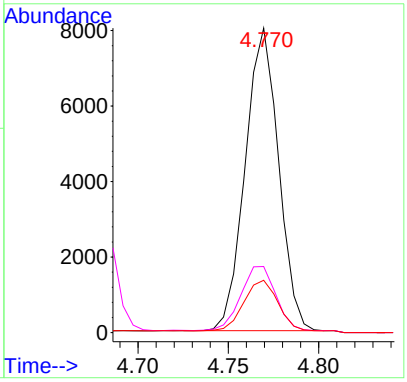


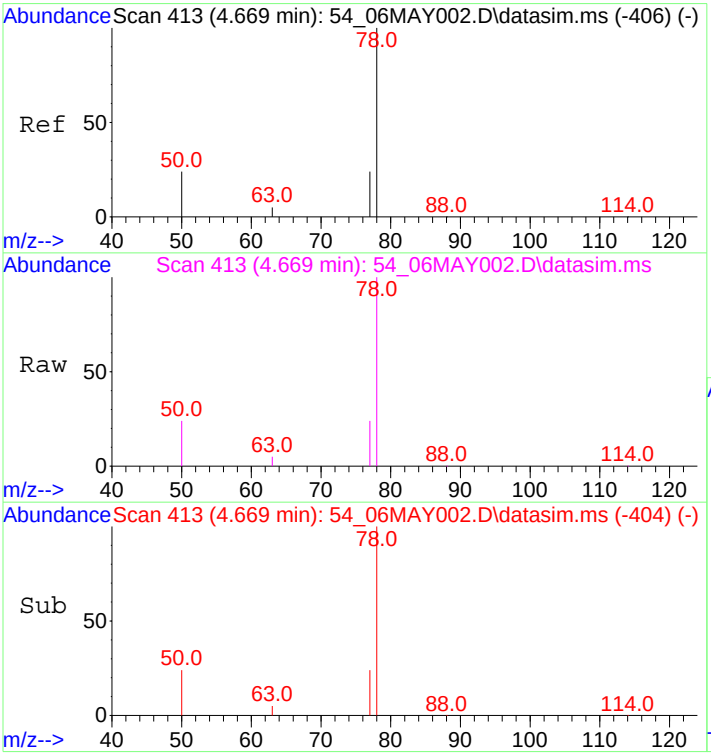


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion:114 Resp: 10290

Ion	Ratio	Lower	Upper
114	100		
63	22.2	12.0	18.0#
88	17.0	11.8	17.8

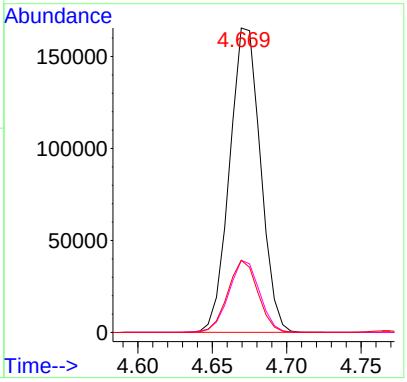


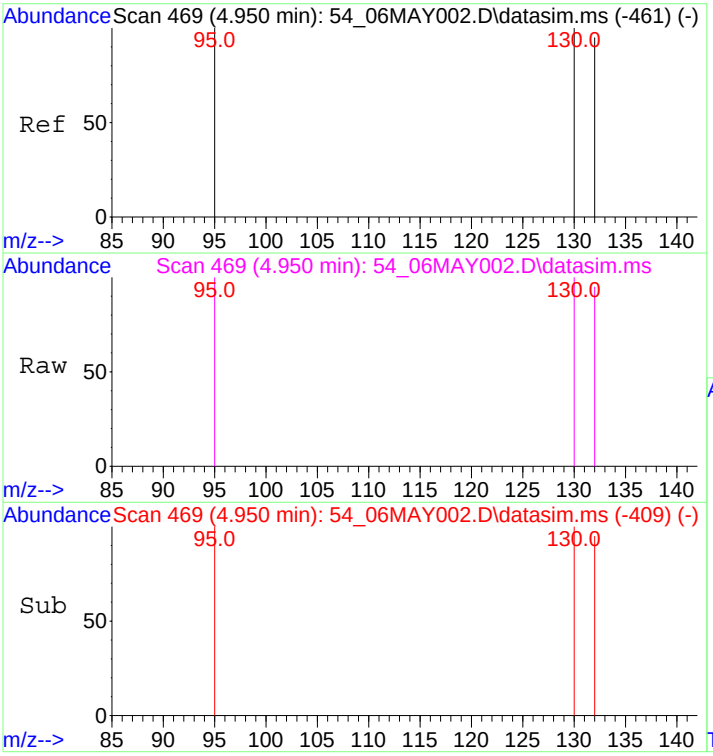


#10
Benzene
Concen: 508.09 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 78 Resp: 238836

Ion	Ratio	Lower	Upper
78	100		
77	23.6	18.2	27.2
50	23.0	8.6	13.0#

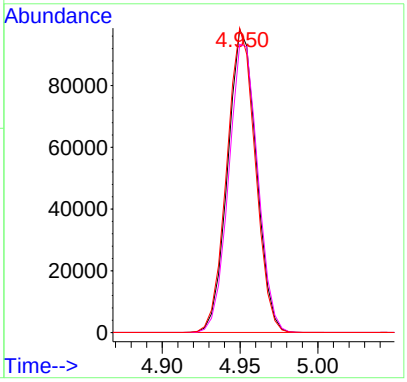


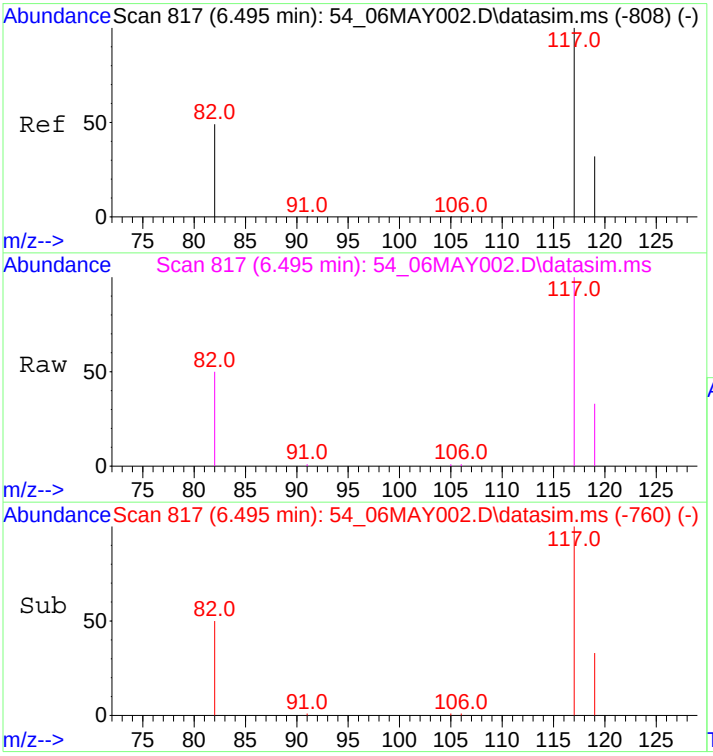


#11
Trichloroethene
Concen: 489.83 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion:130 Resp: 125360

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	99.9	76.5	114.7

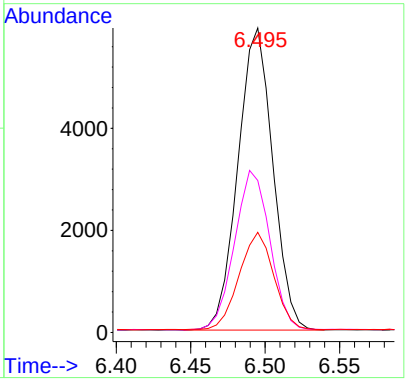


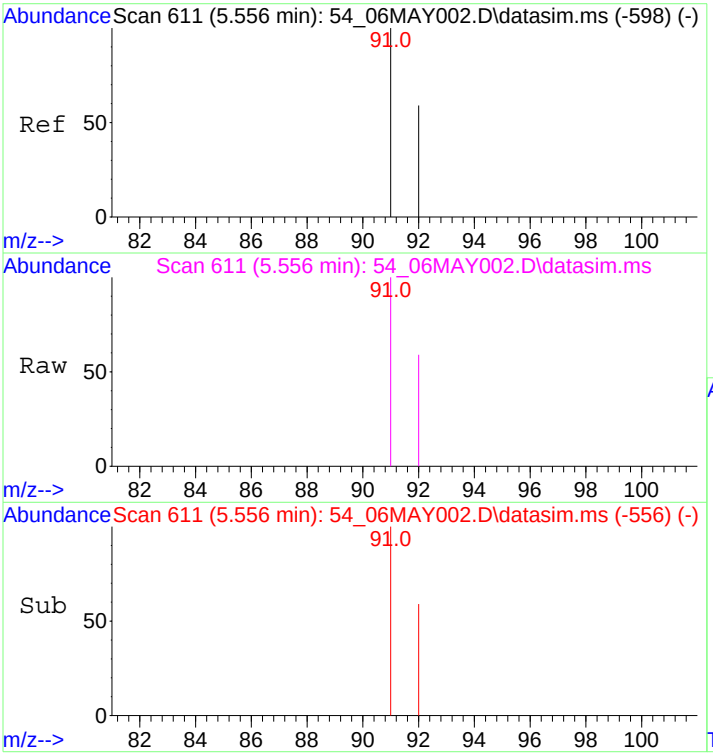


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54_06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion:117 Resp: 9651

Ion	Ratio	Lower	Upper
117	100		
82	53.4	38.0	57.0
119	31.9	27.0	40.4

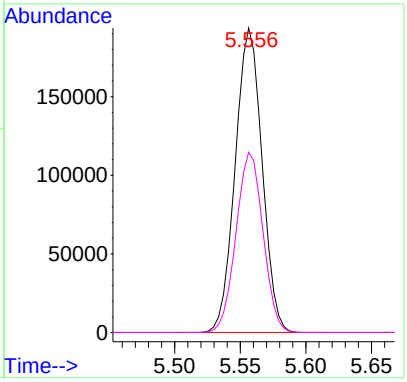


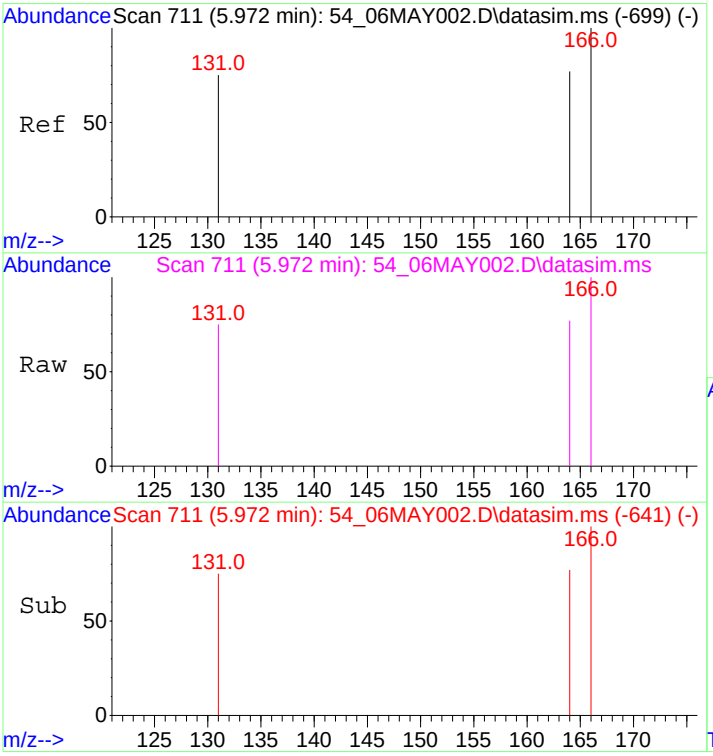


#13
Toluene
Concen: 476.71 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 91 Resp: 275791

Ion	Ratio	Lower	Upper
91	100		
92	59.4	47.8	71.8

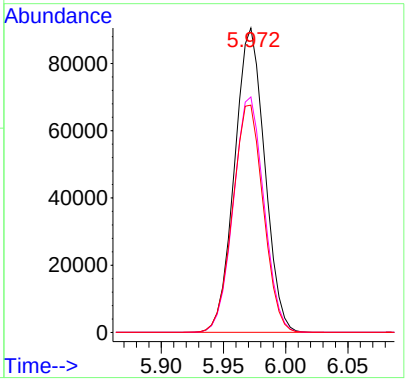


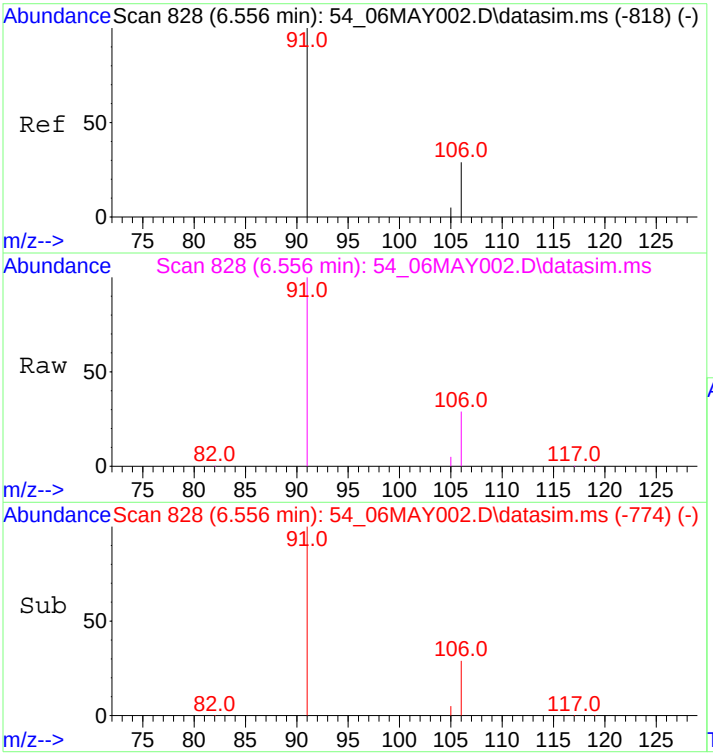


#14
Tetrachloroethene
Concen: 460.97 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion:166 Resp: 152320

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.6	94.0
131	75.8	58.5	87.7

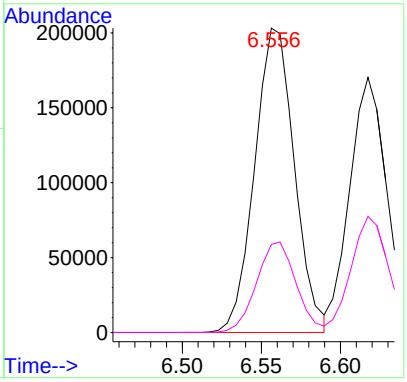


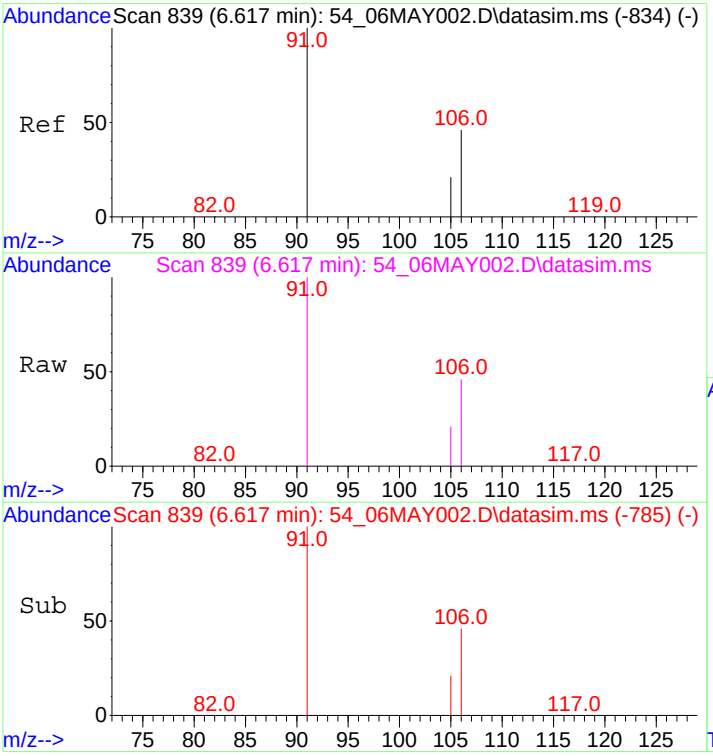


#15
Ethyl Benzene
Concen: 484.17 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 91 Resp: 355725

Ion	Ratio	Lower	Upper
91	100		
106	29.6	26.9	40.3

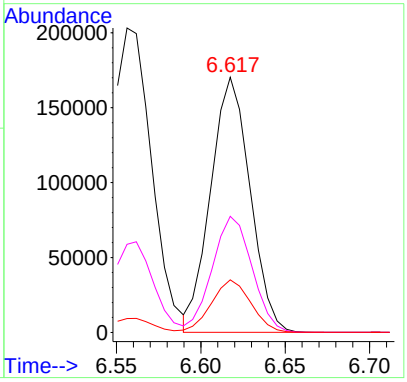


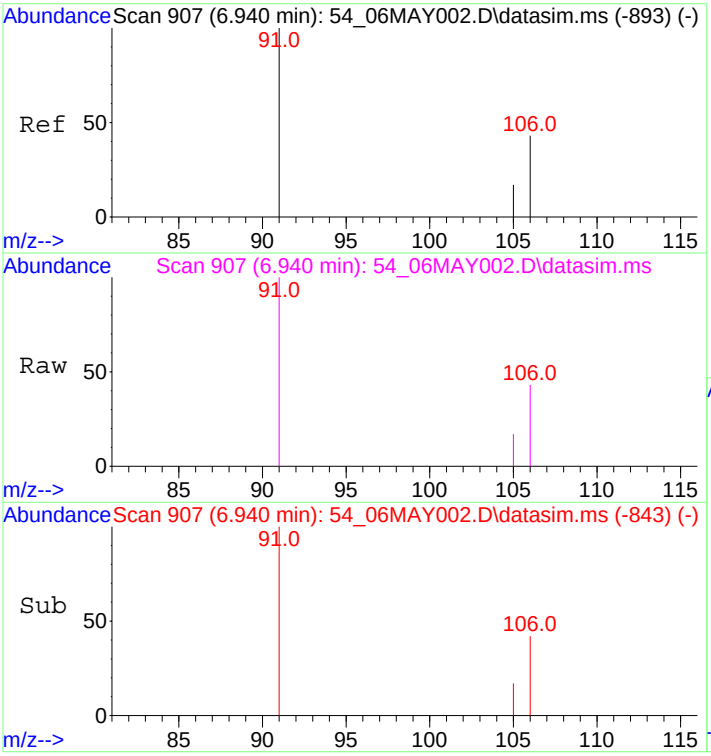


#16
m,p-Xylene
Concen: 492.00 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 91 Resp: 277428

Ion	Ratio	Lower	Upper
91	100		
106	45.9	43.1	64.7
105	20.6	18.3	27.5

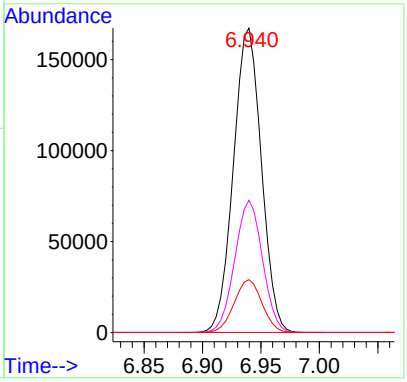




#17
o-Xylene
Concen: 486.39 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.000 min
Lab File: 54 06MAY002.D
Acq: 6 May 2014 7:08 am

Tgt Ion: 91 Resp: 278127

Ion	Ratio	Lower	Upper
91	100		
106	43.1	40.1	60.1
105	17.3	15.8	23.6



LOW LEVEL CALIBRATION VERIFICATION

Data File 54_06May003.D

LLCCV Standard Number 050614-LLCCV

LLCCV Standard Name **STD20140506-3 \LLCCV 0.5 ppbv 1º**

Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/6/2014	Second Source Actual Values ppbv	Difference %	Acceptance Criterion %	
Vinyl Chloride	0.48	0.52	6.8	50	OK
1,1-Dichloroethene	0.52	0.50	4.5	50	OK
Methyl Tert Butyl Ether	0.5	0.50	0.5	50	OK
trans-1,2-Dichloroethene	0.56	0.50	11.4	50	OK
1,1-Dichloroethane	0.54	0.52	4.3	50	OK
cis-1,2-Dichloroethene	0.57	0.53	8.1	50	OK
1,1,1-Trichloroethane	0.6	0.51	18.8	50	OK
Benzene	0.55	0.53	4.8	50	OK
Trichloroethene	0.6	0.51	18.8	50	OK
Toluene	0.61	0.52	17.3	50	OK
Tetrachloroethene	0.61	0.51	20.2	50	OK
Ethyl Benzene	0.6	0.52	15.4	50	OK
m,p-Xylene	0.68	0.52	30.8	50	OK
o-Xylene	0.65	0.52	25.6	50	OK

Primary Standard Cylinder # CC-80994

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 08:06:38 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

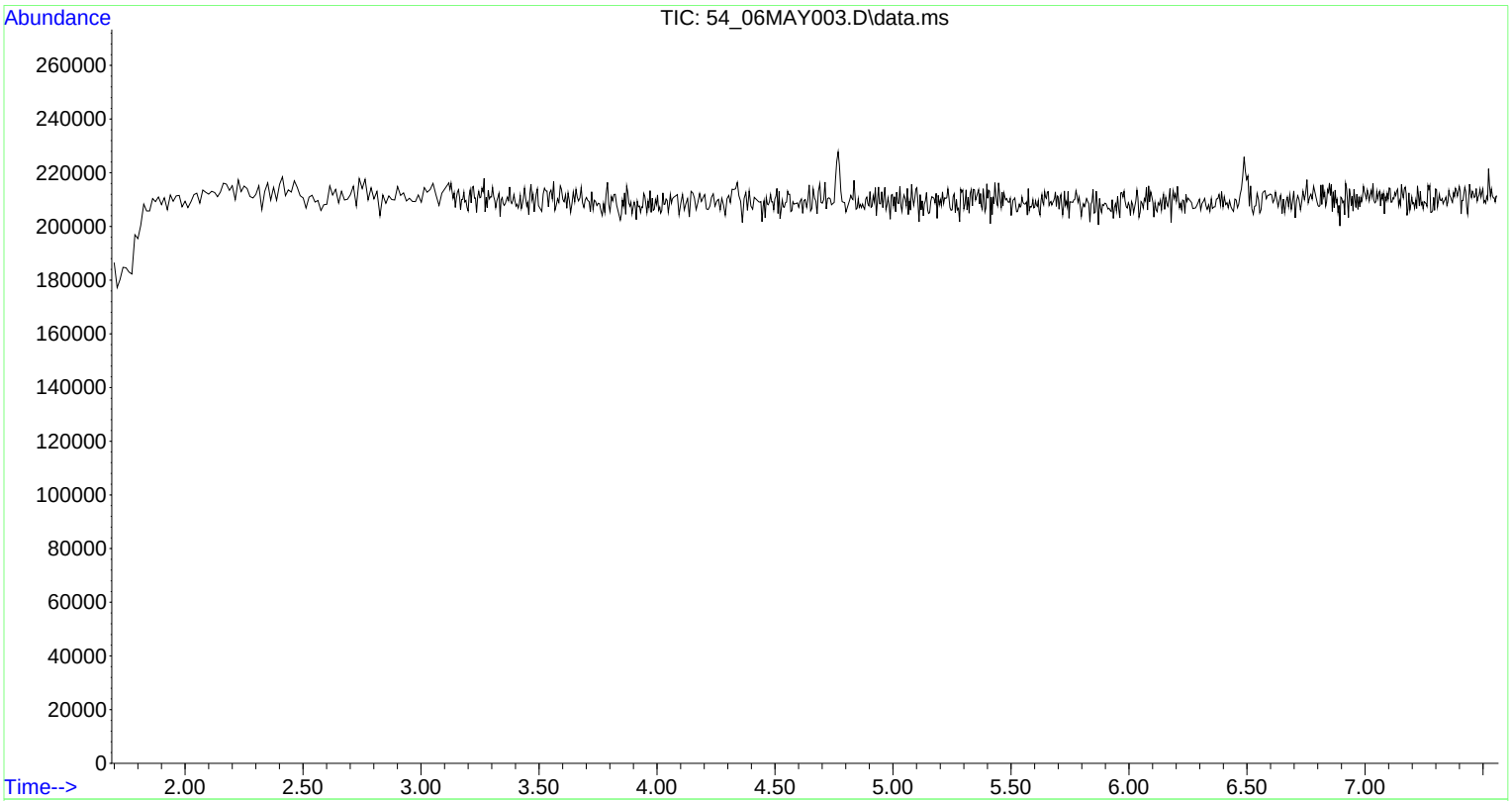
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.335	49	4094	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.769	114	9778	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.495	117	9019	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
2] Vinyl chloride	1.902	62	75m	0.48	ppbv		
3] 1,1-Dichloroethene	3.256	61	166m	0.52	ppbv		
4] Methyl Tert Butyl Ether	3.647	73	242m	0.50	ppbv		
5] trans-1,2-Dichloroethene	3.703	61	156m	0.56	ppbv		
6] 1,1-Dichloroethane	3.910	63	179	0.54	ppbv	#	88
7] cis-1,2-Dichloroethene	4.197	61	148m	0.57	ppbv		
8] 1,1,1-Trichloroethane	4.488	97	252	0.60	ppbv		97
10] Benzene	4.669	78	246m	0.55	ppbv		
11] Trichloroethene	4.954	130	146	0.60	ppbv	#	66
13] Toluene	5.556	91	328	0.61	ppbv		95
14] Tetrachloroethene	5.967	166	188	0.61	ppbv	#	87
15] Ethyl Benzene	6.556	91	414	0.60	ppbv		99
16] m,p-Xylene	6.617	91	359	0.68	ppbv		89
17] o-Xylene	6.940	91	349	0.65	ppbv	#	83

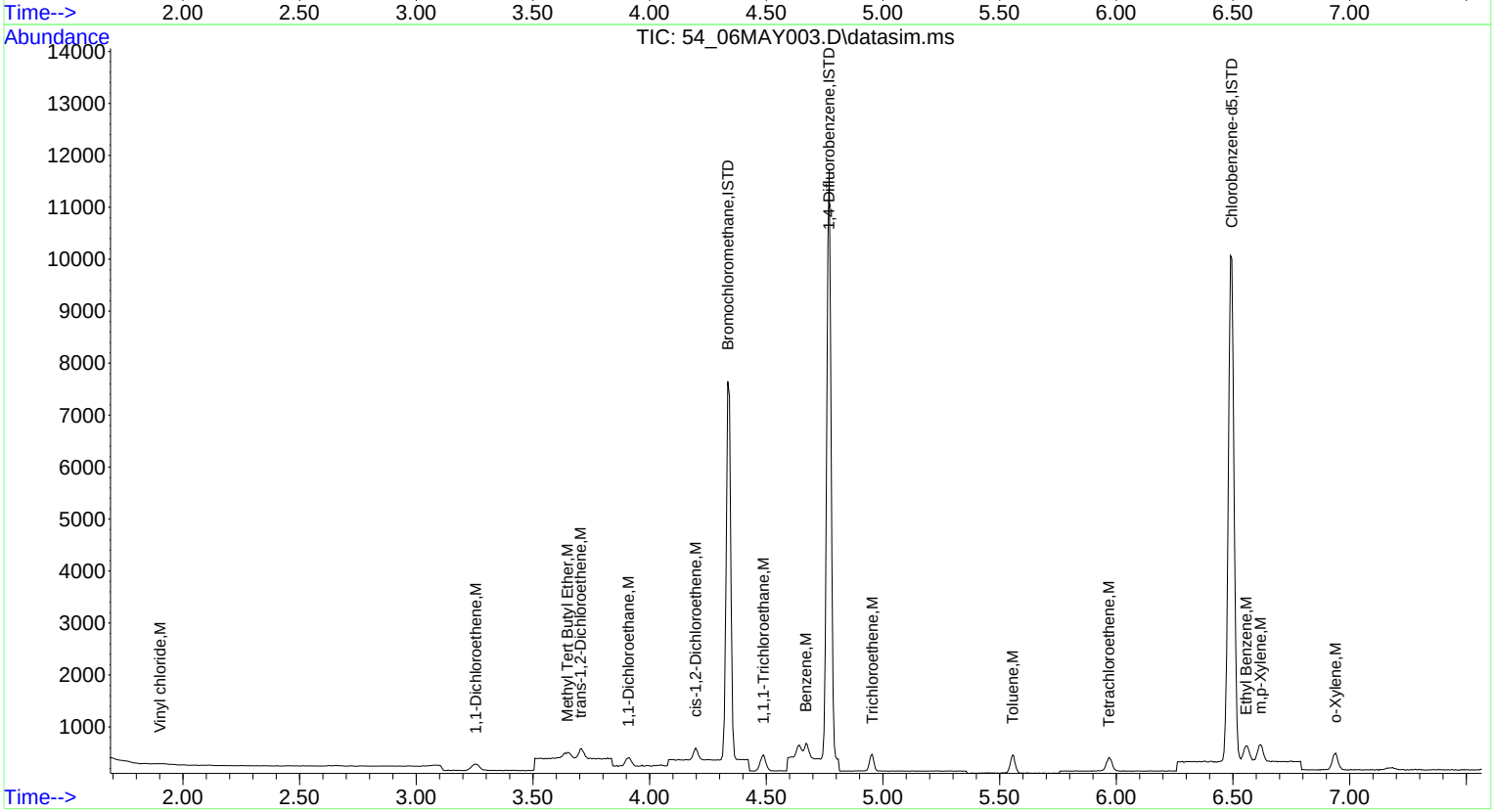
(#) = qualifier out of range (m) = manual integration (+) = signals summed

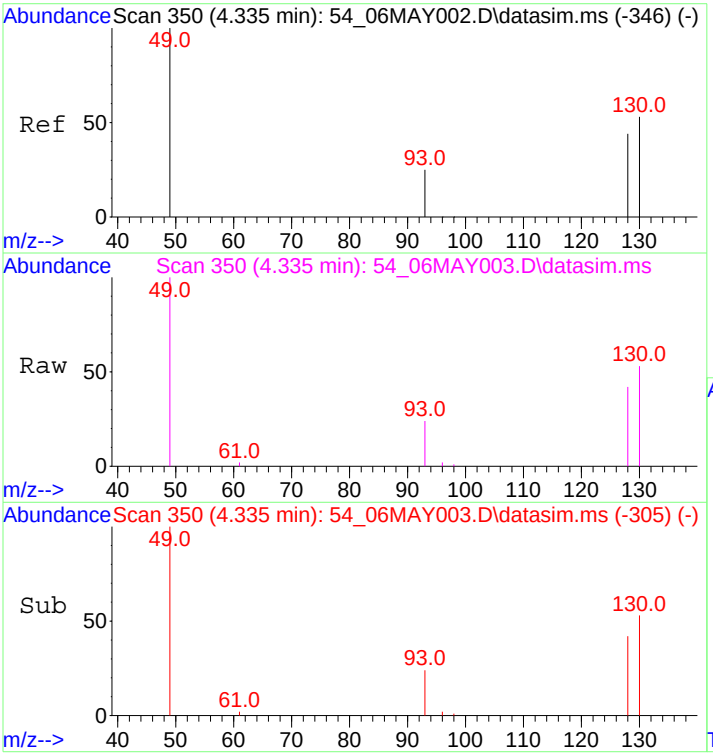
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 08:06:38 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



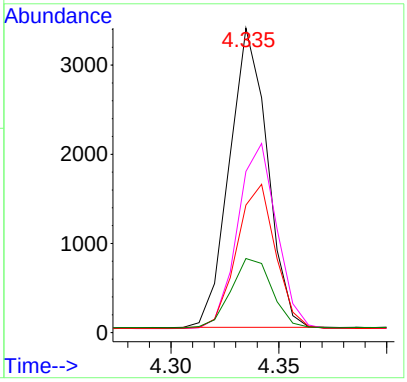


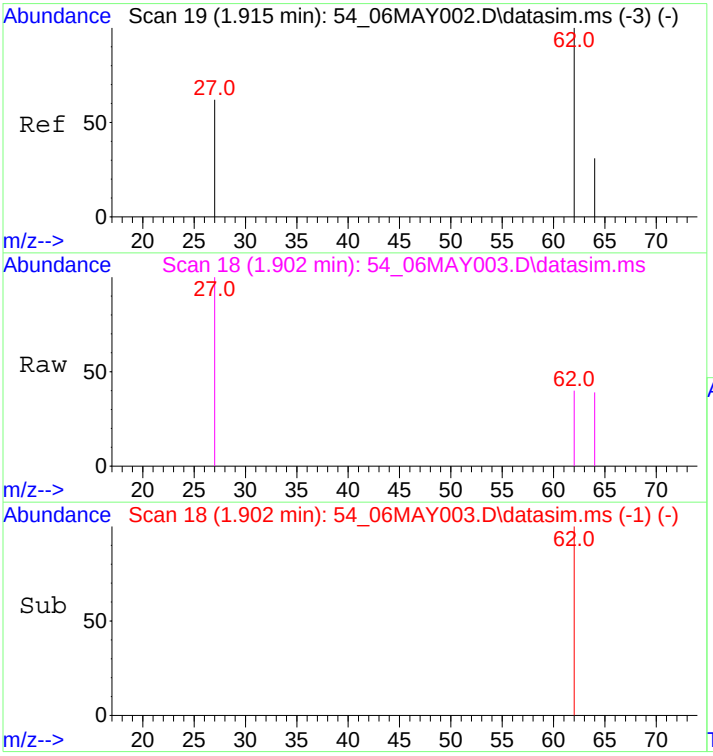


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 49 Resp: 4094

Ion	Ratio	Lower	Upper
49	100		
130	63.9	87.2	130.8#
128	49.6	68.0	102.0#
93	25.1	29.3	43.9#

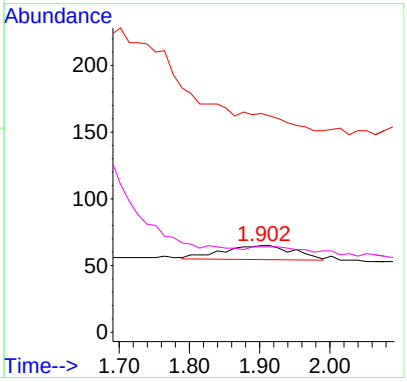




#2
Vinyl chloride
Concen: 0.48 ppbv m
RT: 1.902 min Scan# 18
Delta R.T. 0.000 min
Lab File: 54_06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 62 Resp: 75

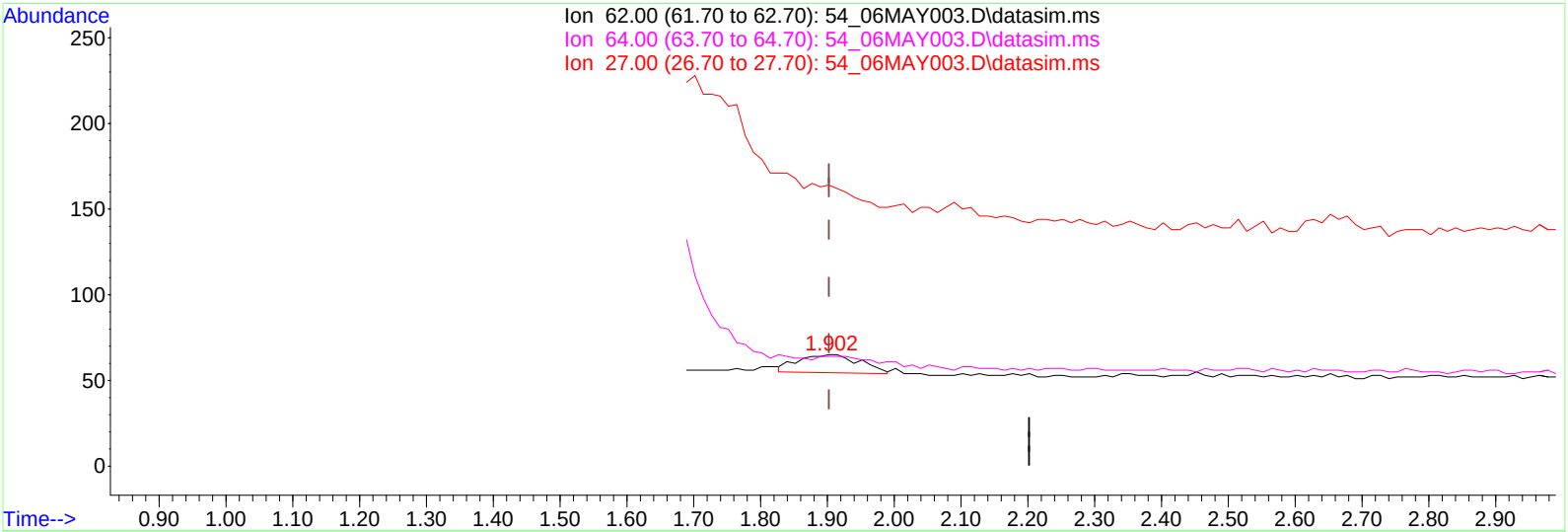
Ion	Ratio	Lower	Upper
62	100		
64	98.5	26.8	40.2#
27	252.3	16.1	24.1#

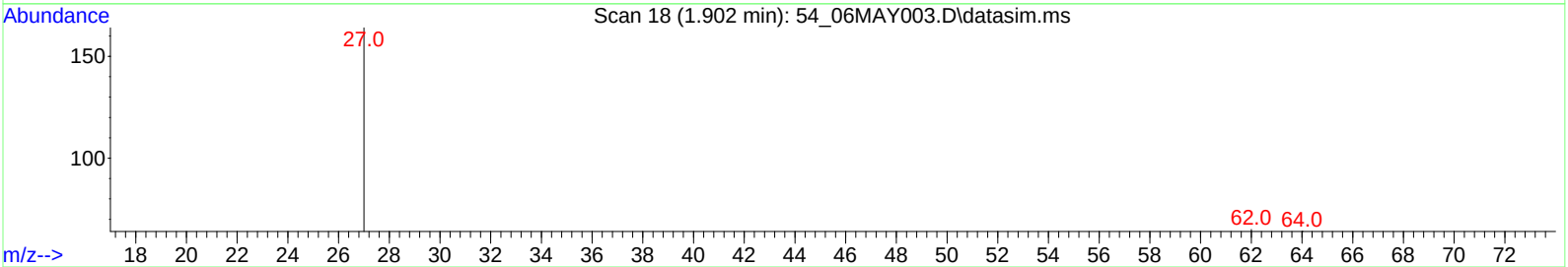


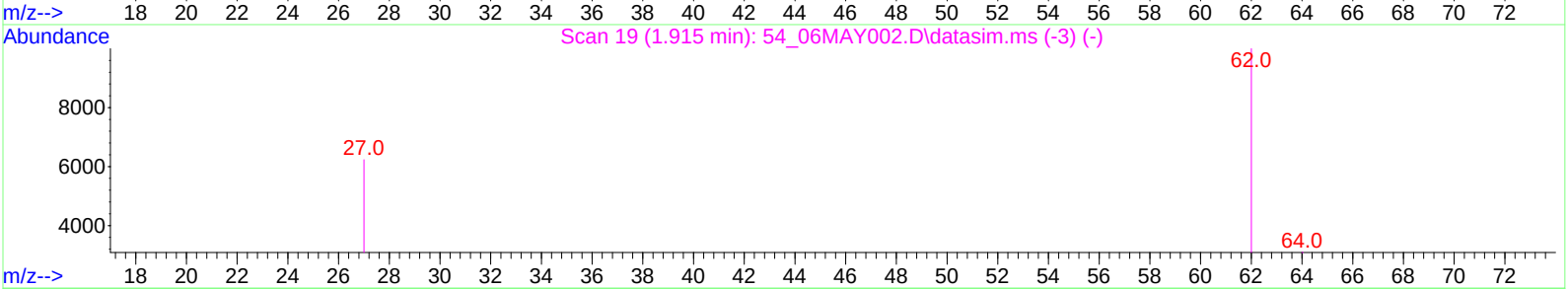
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







TIC: 54_06MAY003.D\data.ms

(2) Vinyl chloride (M)

1.902min (0.000) 0.43 ppbv

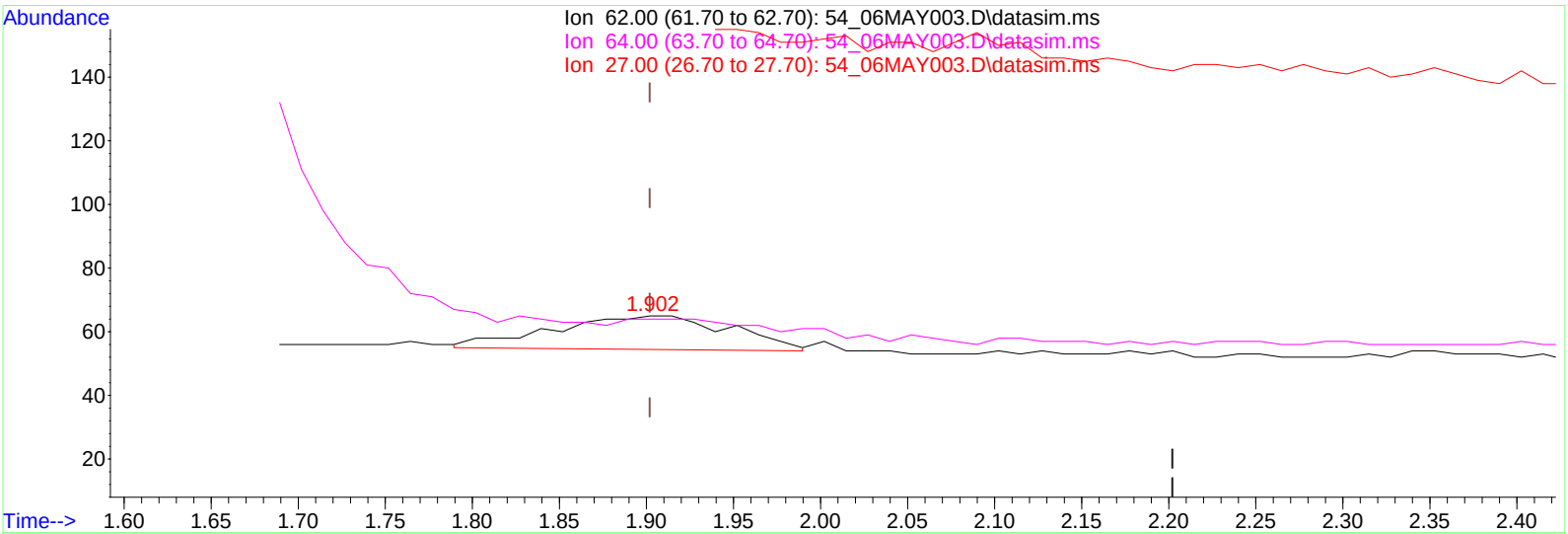
response 67

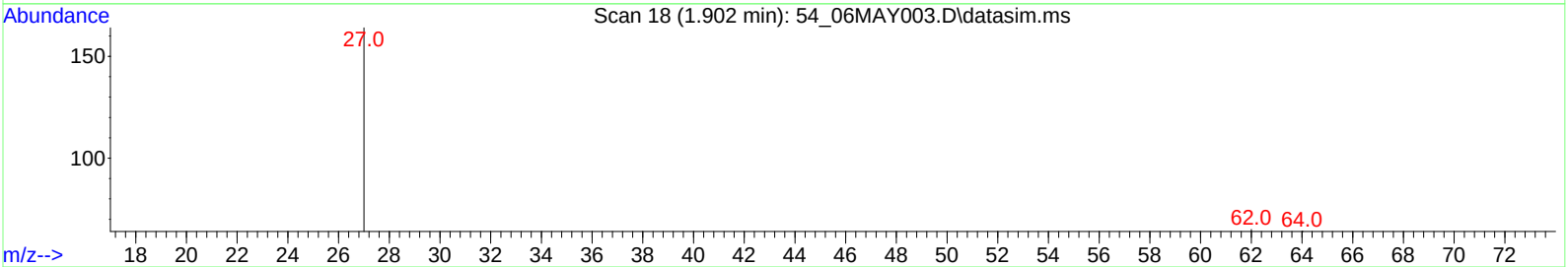
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	0.00#
27.00	20.10	0.00#
0.00	0.00	0.00

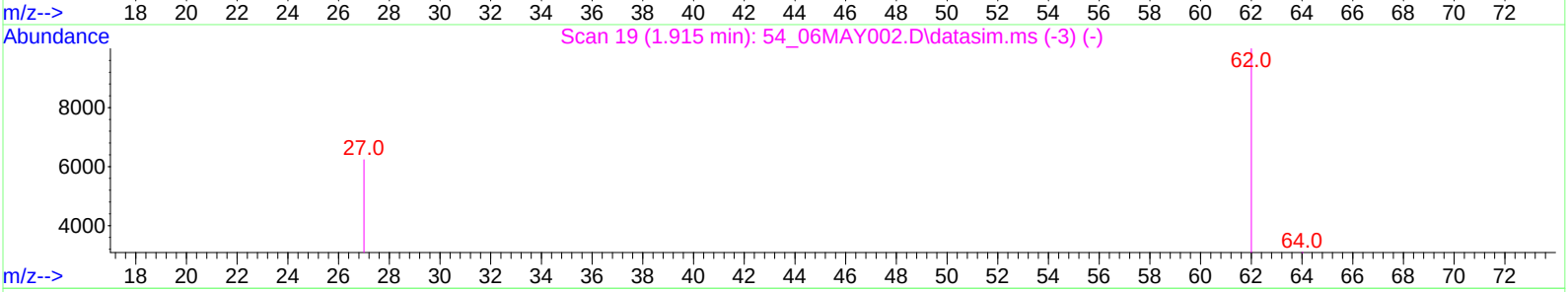
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







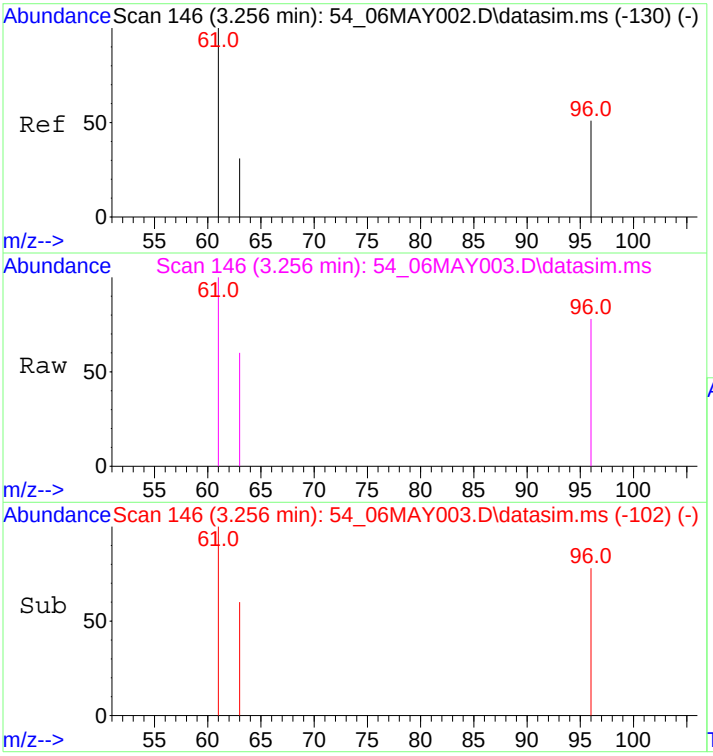
TIC: 54_06MAY003.D\data.ms

(2) Vinyl chloride (M)

1.902min (0.000) 0.48 ppbv m

response 75

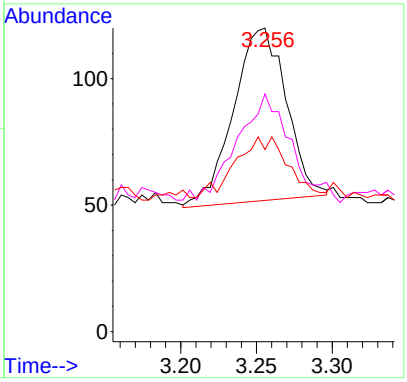
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	98.46#
27.00	20.10	252.31#
0.00	0.00	0.00

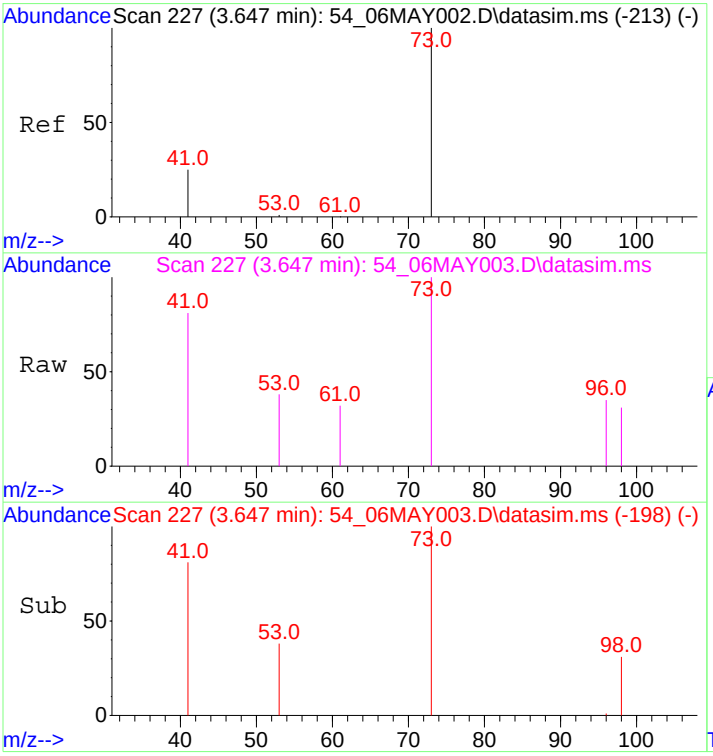


#3
1,1-Dichloroethene
Concen: 0.52 ppbv m
RT: 3.256 min Scan# 146
Delta R.T. 0.005 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 61 Resp: 166

Ion	Ratio	Lower	Upper
61	100		
96	148.2	63.4	95.2#
63	6.6	26.2	39.2#

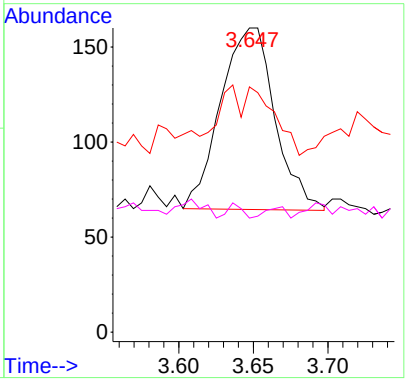




#4
Methyl Tert Butyl Ether
Concen: 0.50 ppbv m
RT: 3.647 min Scan# 227
Delta R.T. 0.006 min
Lab File: 54_06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 73 Resp: 242

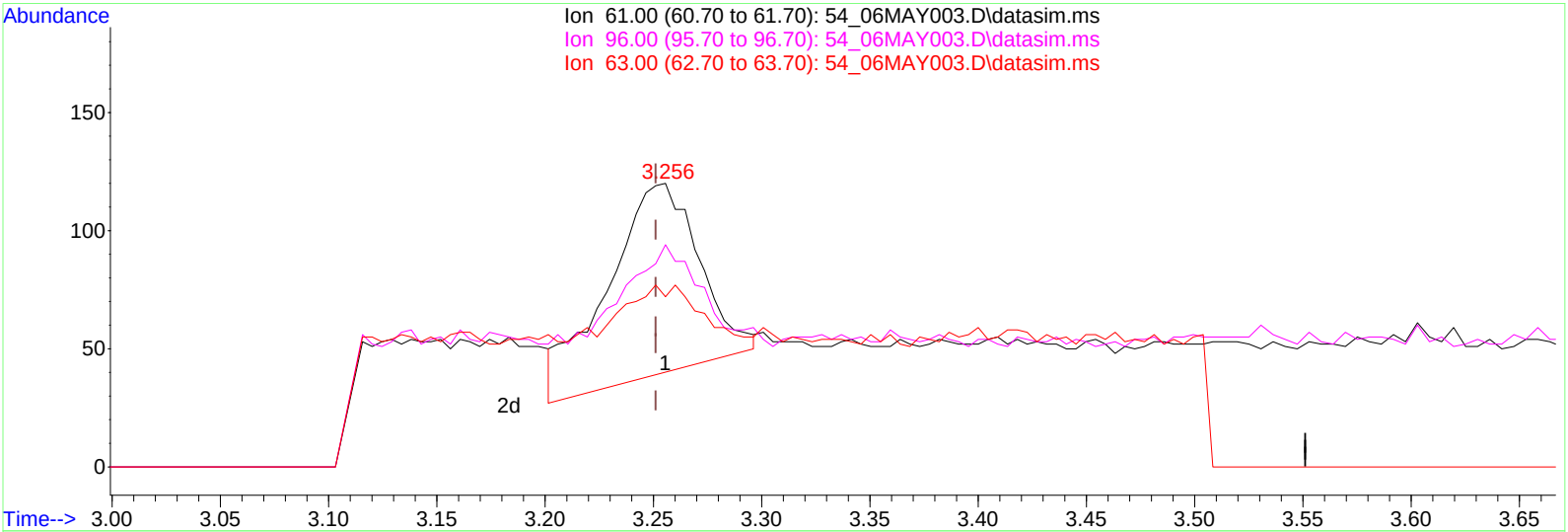
Ion	Ratio	Lower	Upper
73	100		
53	0.0	1.0	1.4#
41	57.4	13.1	19.7#

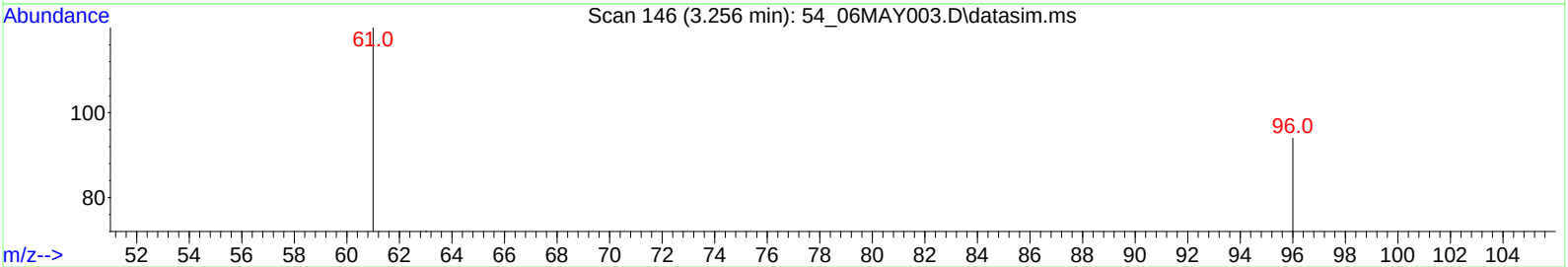


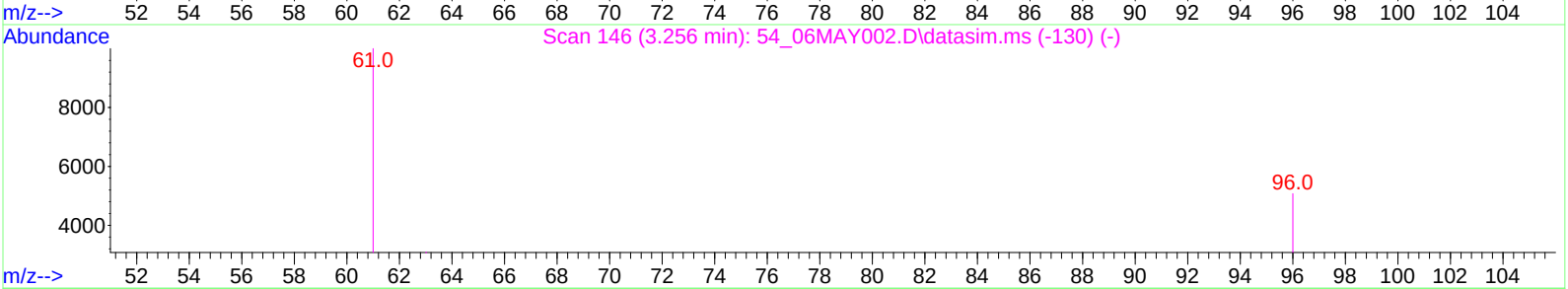
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







TIC: 54_06MAY003.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (+0.005) 0.76 ppbv

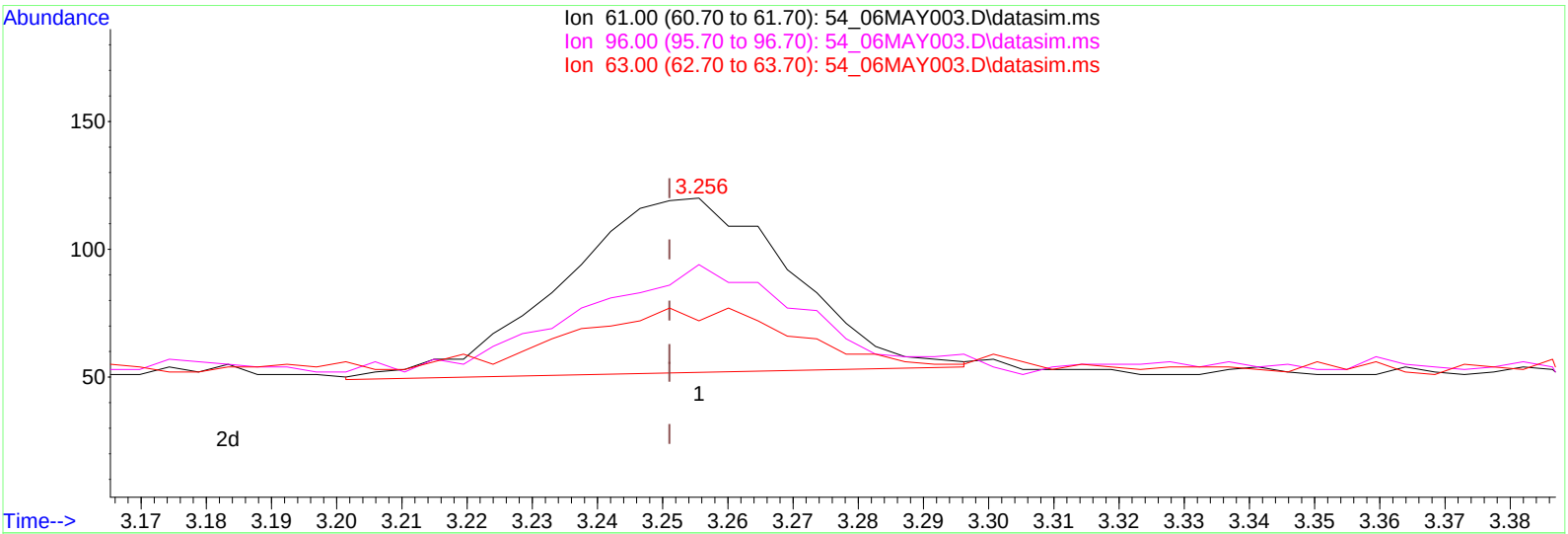
response 240

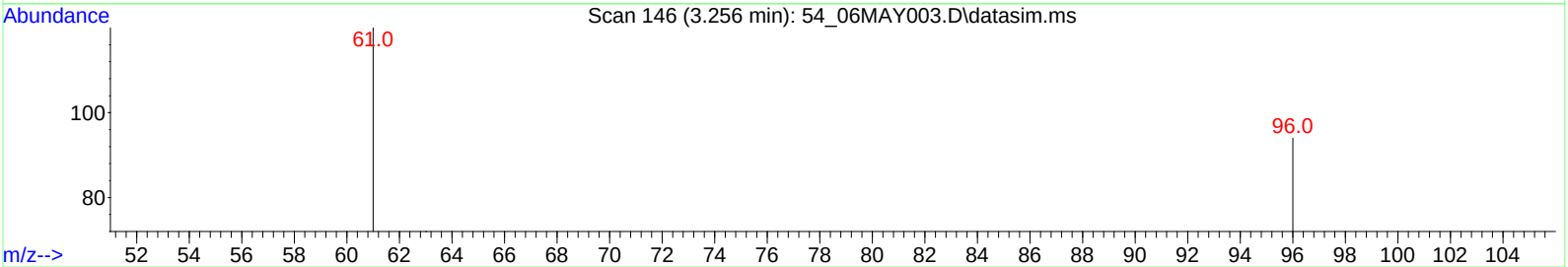
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	102.50#
63.00	32.70	4.58#
0.00	0.00	0.00

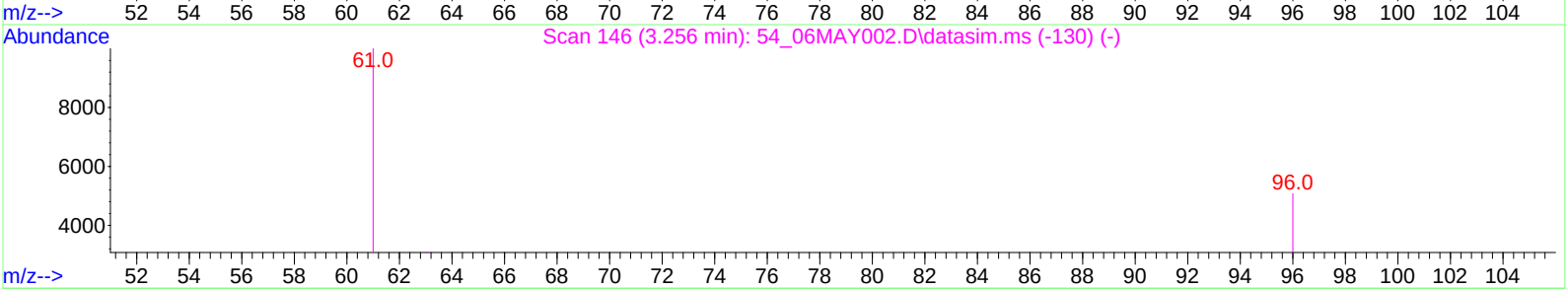
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







TIC: 54_06MAY003.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (+0.005) 0.52 ppbv m

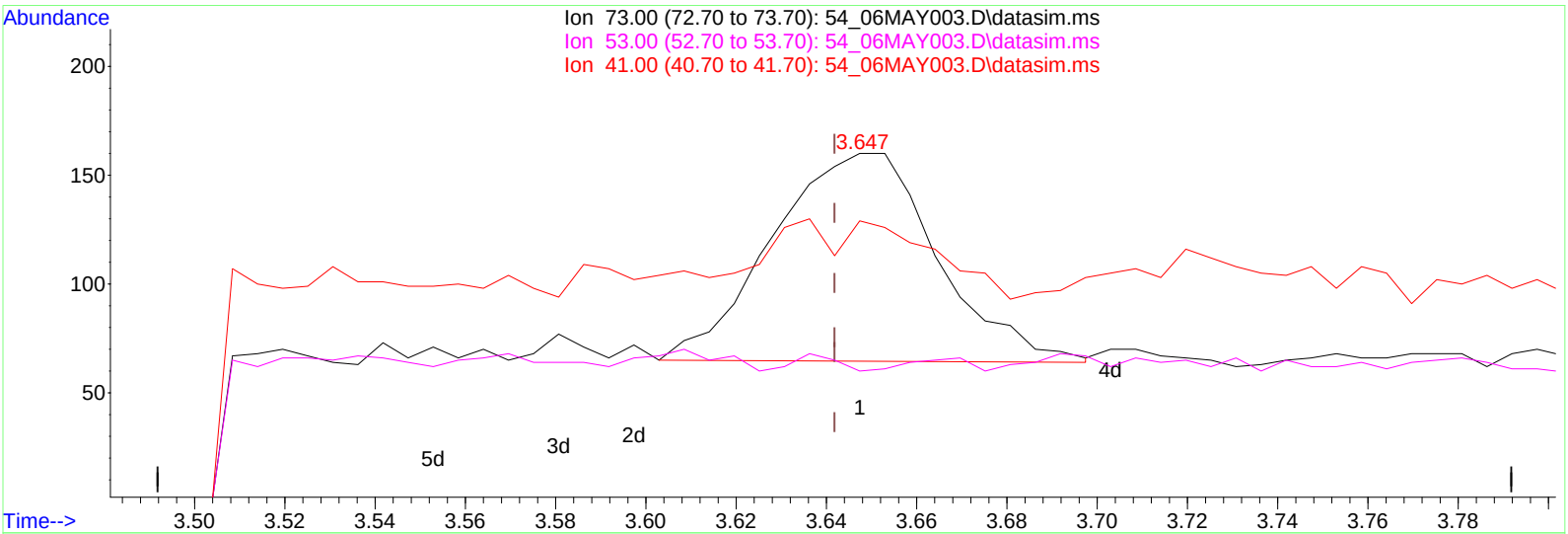
response 166

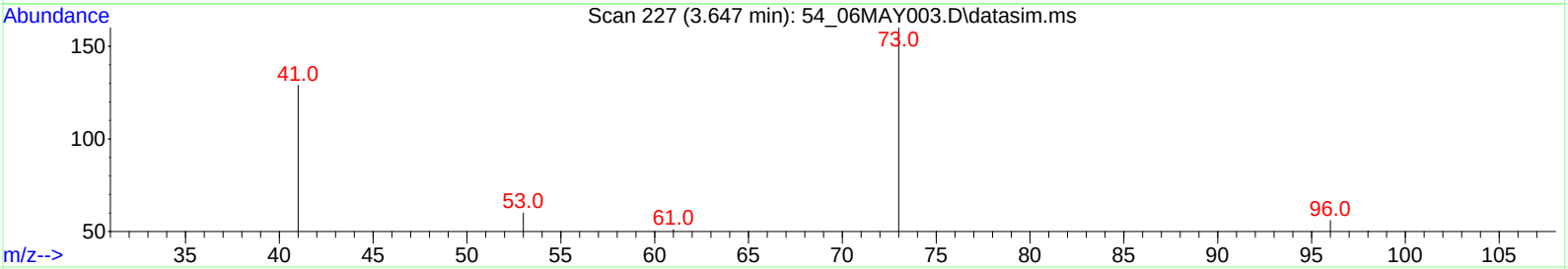
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	148.19#
63.00	32.70	6.63#
0.00	0.00	0.00

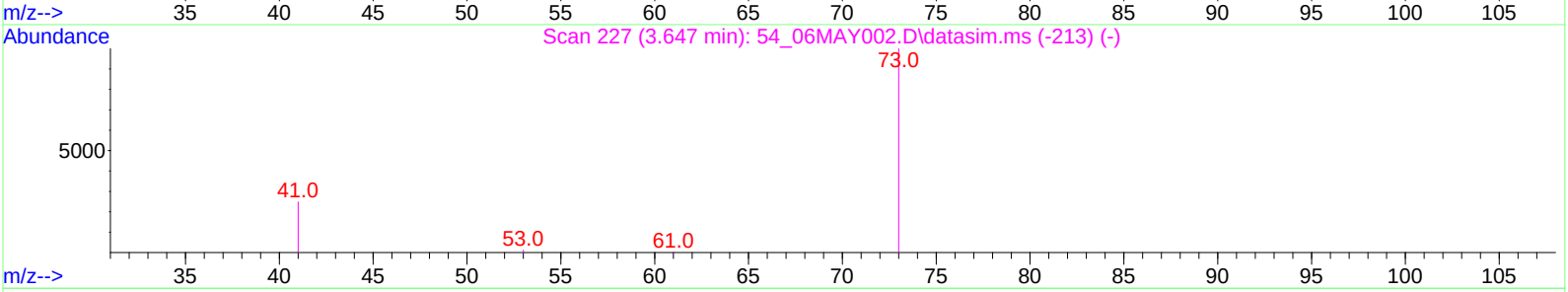
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







TIC: 54_06MAY003.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.647min (+0.006) 0.50 ppbv m

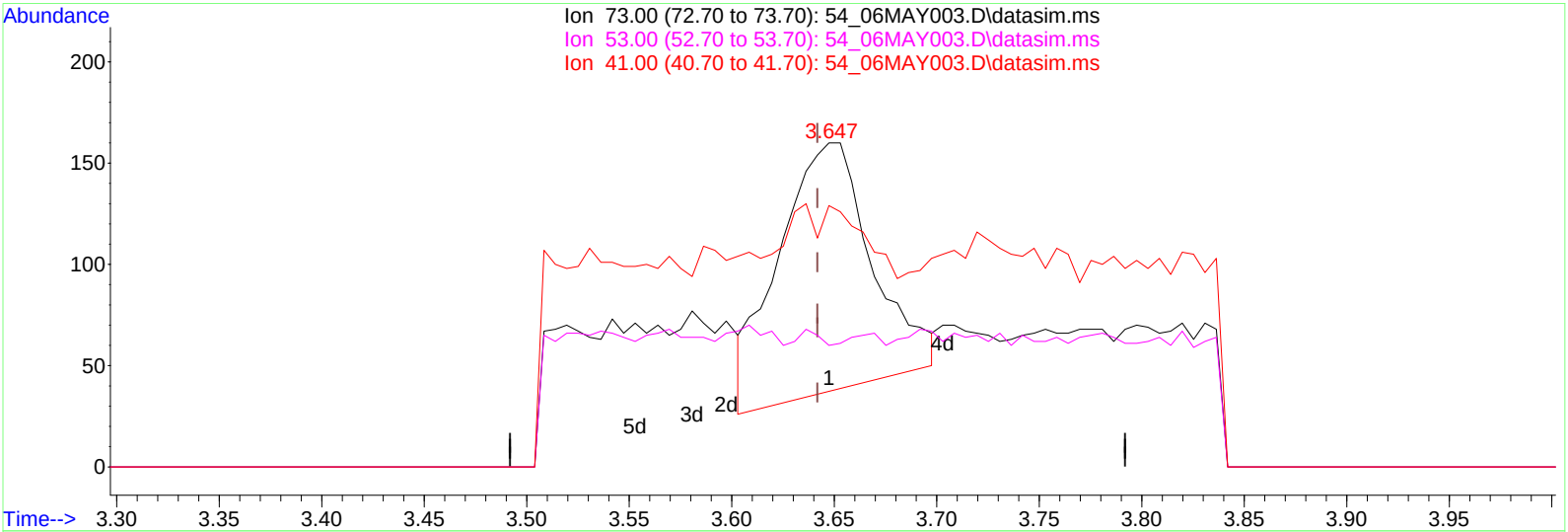
response 242

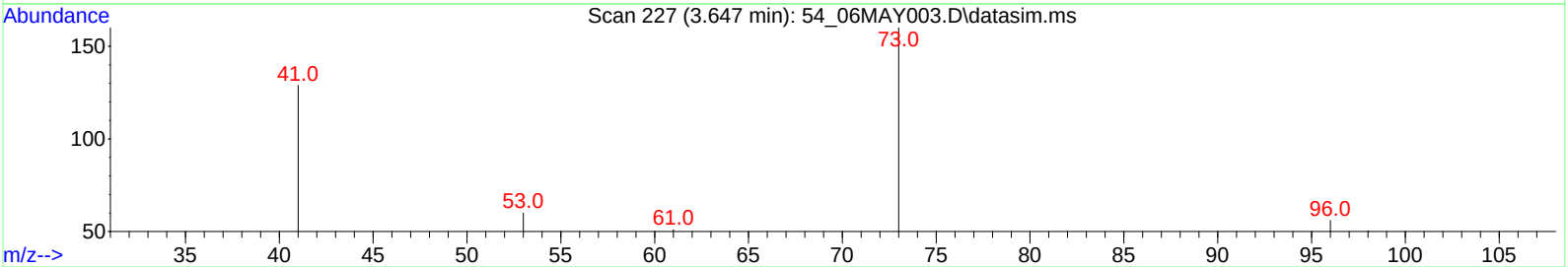
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	0.00#
41.00	16.40	57.44#
0.00	0.00	0.00

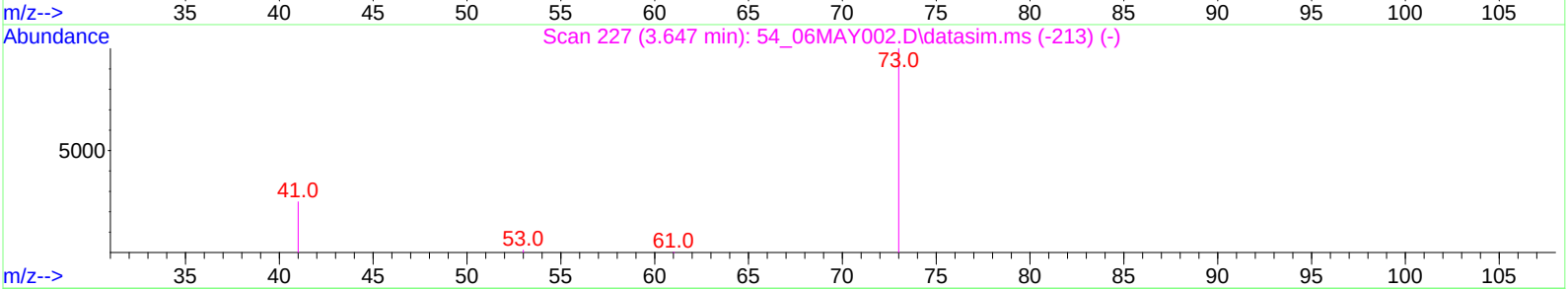
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







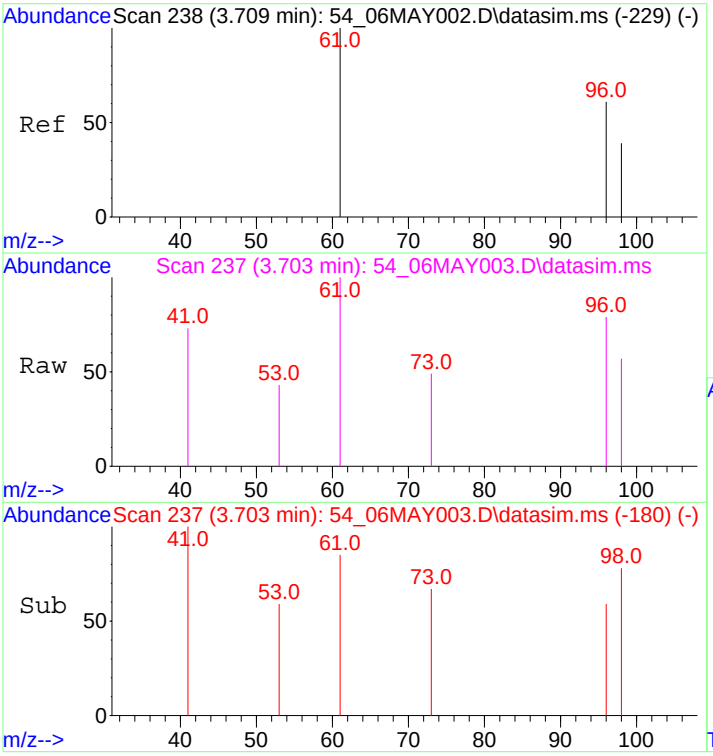
TIC: 54_06MAY003.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.647min (+0.006) 0.81 ppbv

response 393

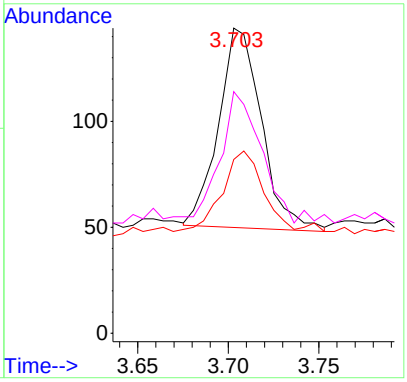
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	0.00#
41.00	16.40	35.37#
0.00	0.00	0.00

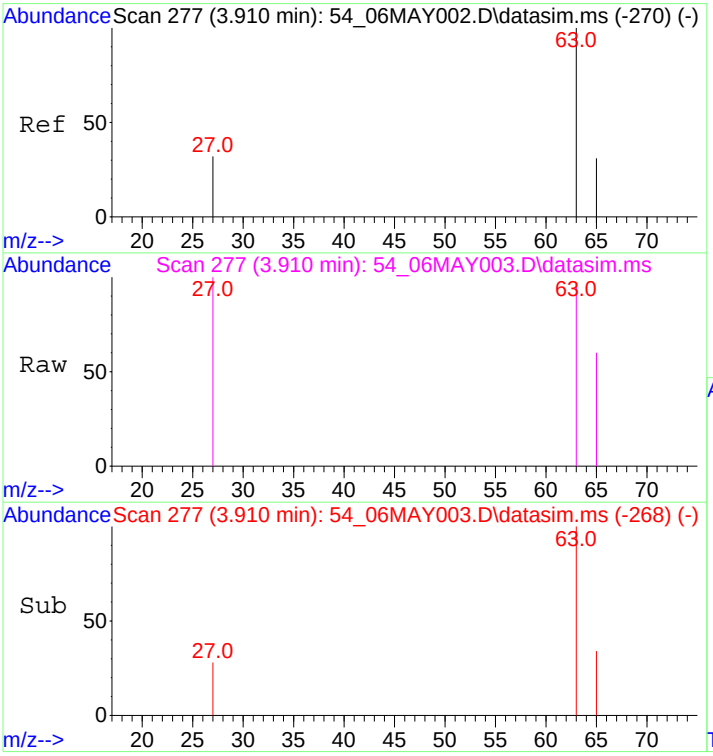


#5
trans-1,2-Dichloroethene
Concen: 0.56 ppbv m
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 61 Resp: 156

Ion	Ratio	Lower	Upper
61	100		
96	137.2	71.4	107.0#
98	98.1	45.8	68.8#

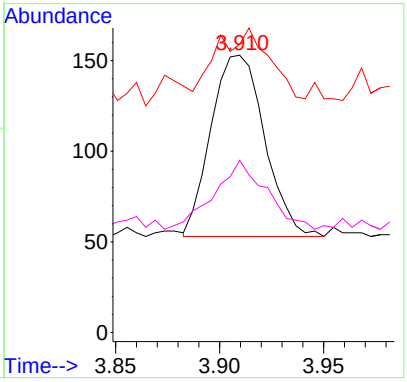




#6
1,1-Dichloroethane
Concen: 0.54 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.000 min
Lab File: 54_06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 63 Resp: 179

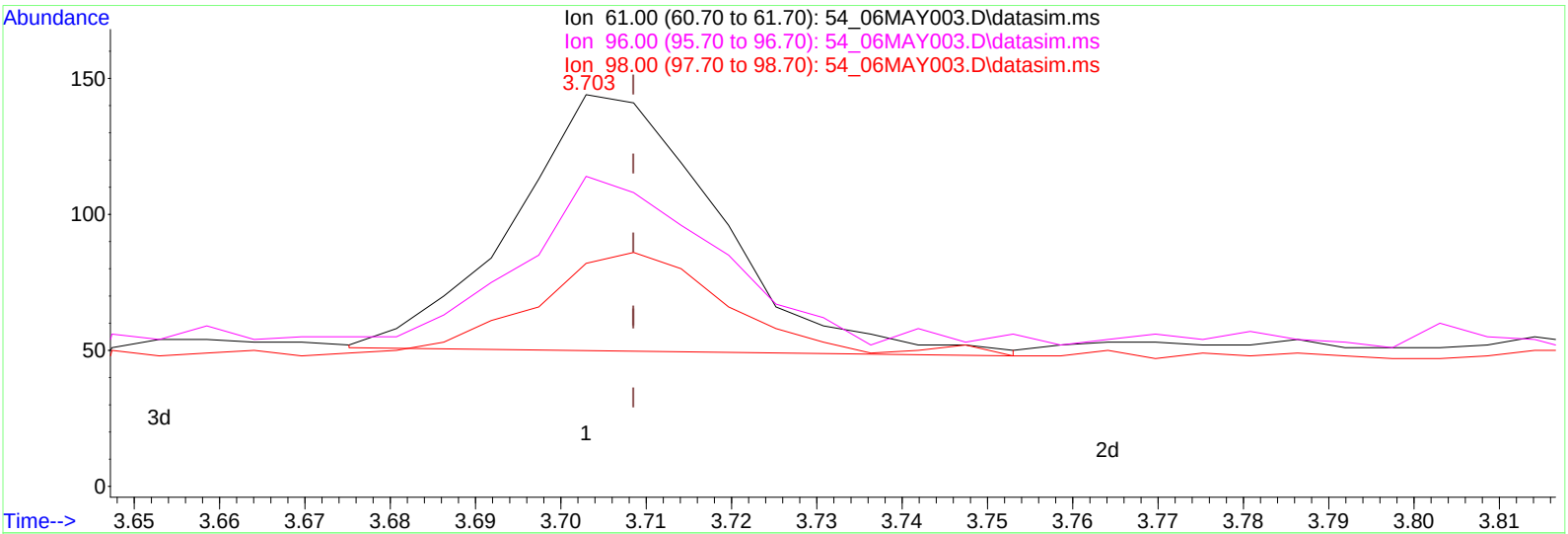
Ion	Ratio	Lower	Upper
63	100		
65	36.3	26.1	39.1
27	22.9	10.2	15.2#

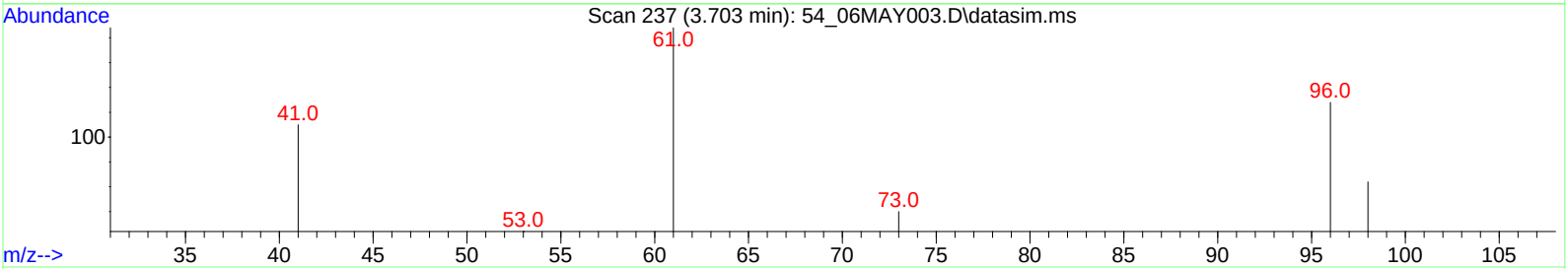


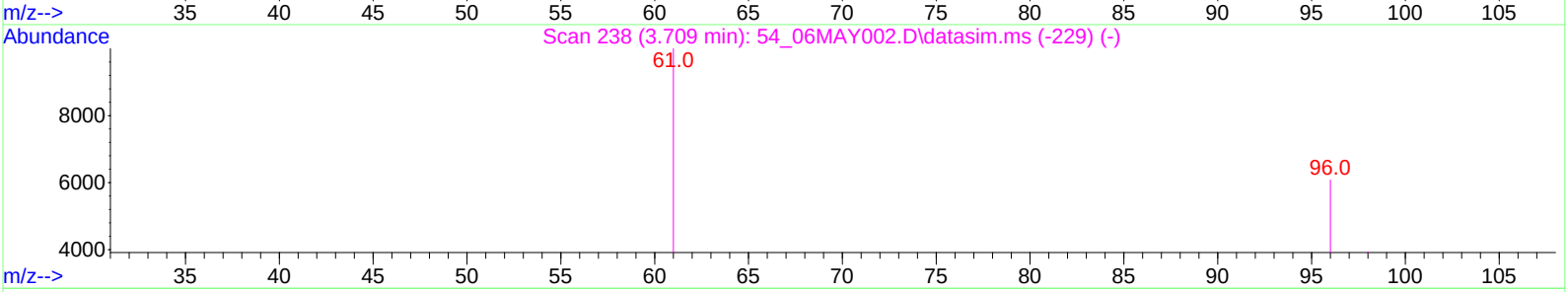
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







TIC: 54_06MAY003.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.703min (-0.006) 0.56 ppbv m

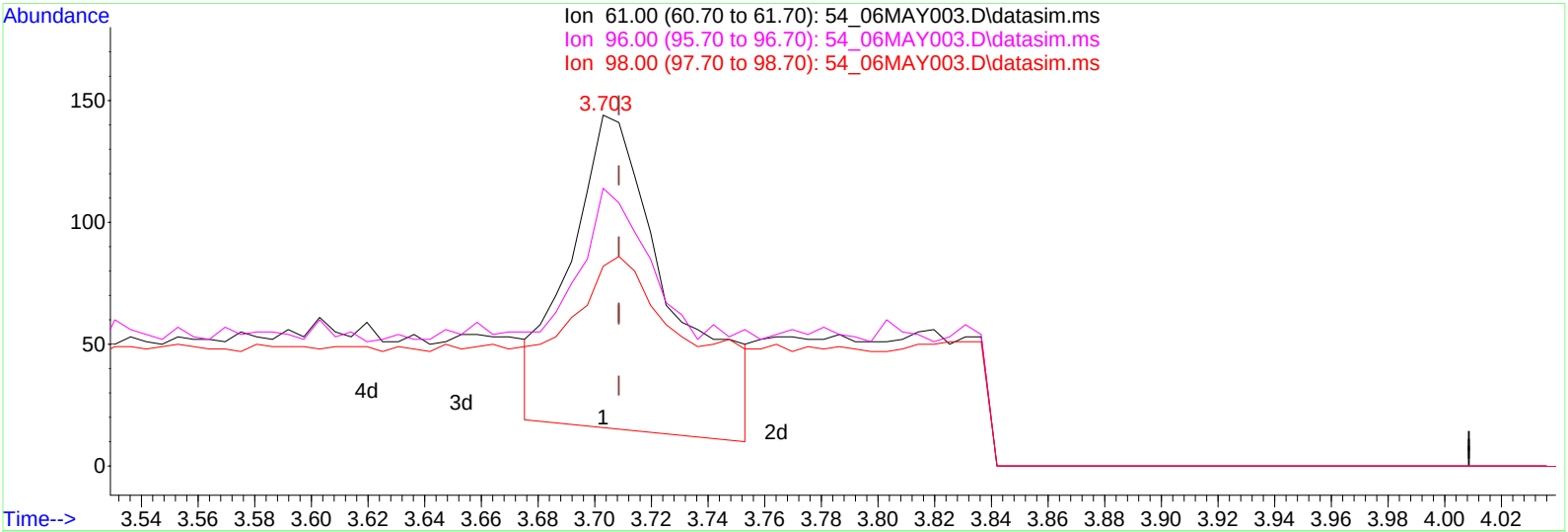
response 156

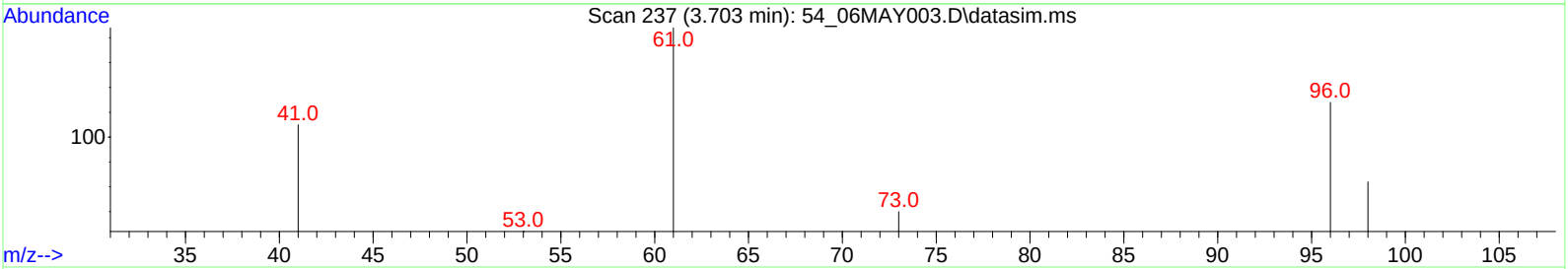
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	137.18#
98.00	57.30	98.08#
0.00	0.00	0.00

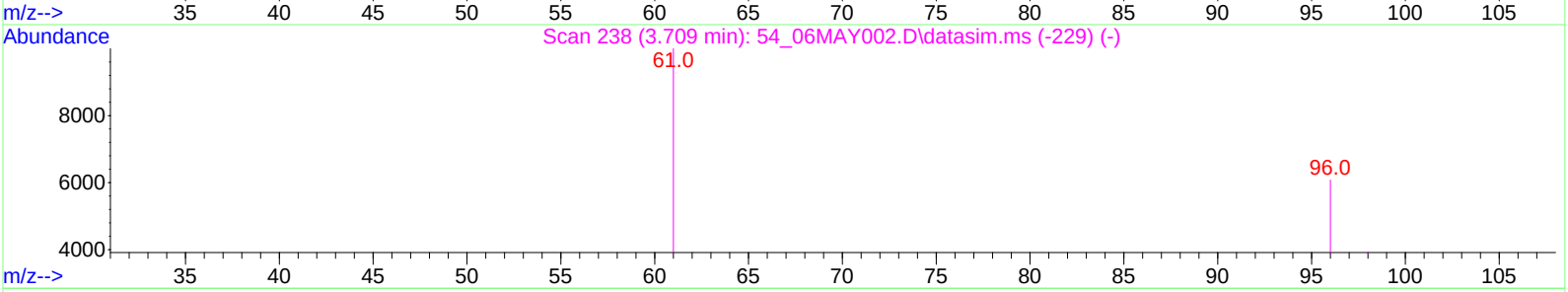
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







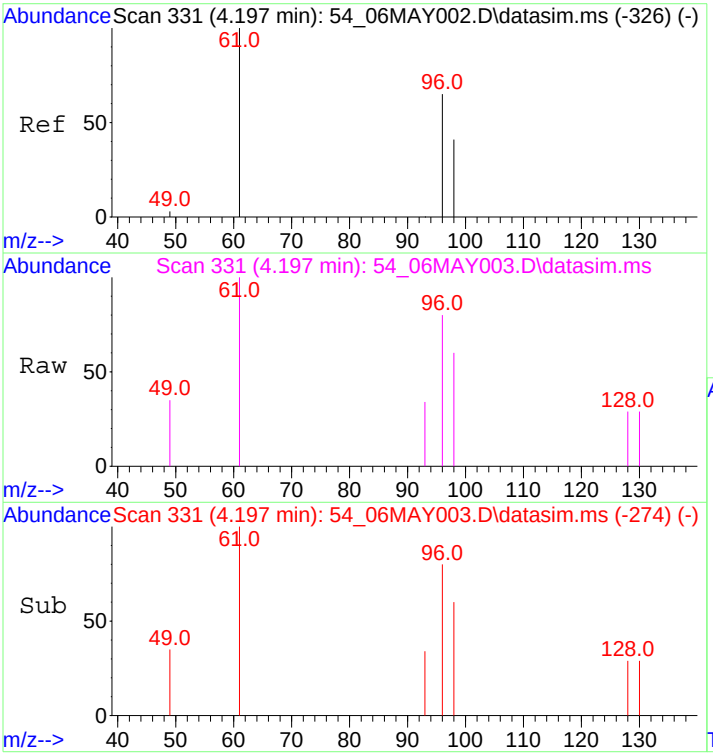
TIC: 54_06MAY003.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.703min (-0.006) 1.14 ppbv

response 319

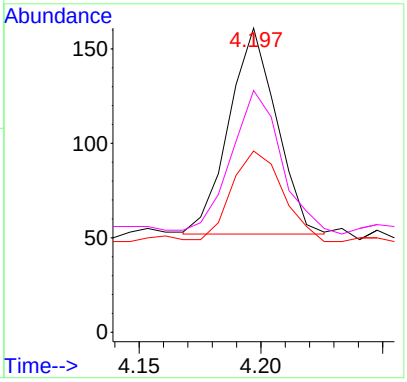
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	67.08#
98.00	57.30	47.96
0.00	0.00	0.00

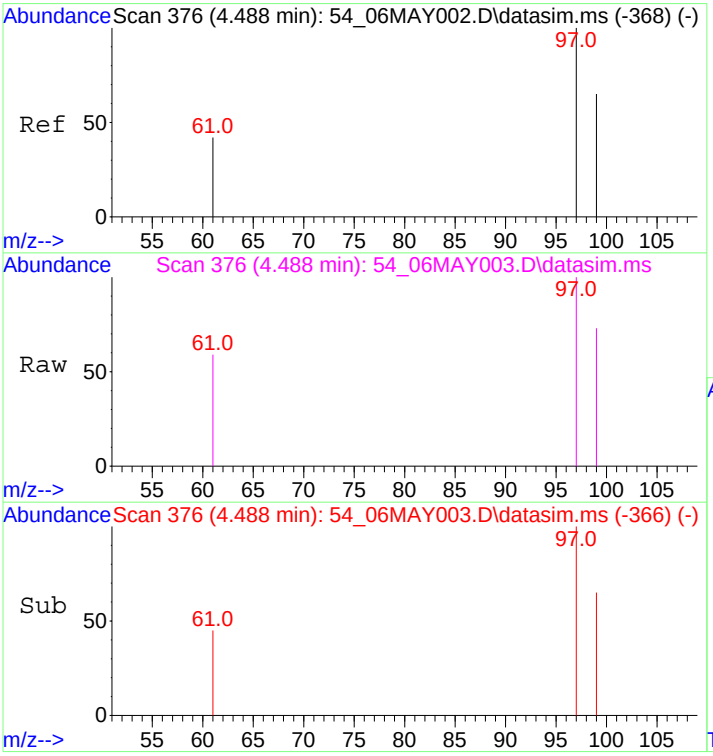


#7
cis-1,2-Dichloroethene
Concen: 0.57 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 61 Resp: 148

Ion	Ratio	Lower	Upper
61	100		
96	211.5	78.5	117.7#
98	89.2	50.6	76.0#

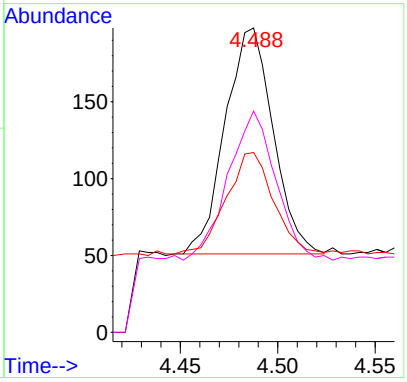




#8
1,1,1-Trichloroethane
Concen: 0.60 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.005 min
Lab File: 54_06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 97 Resp: 252

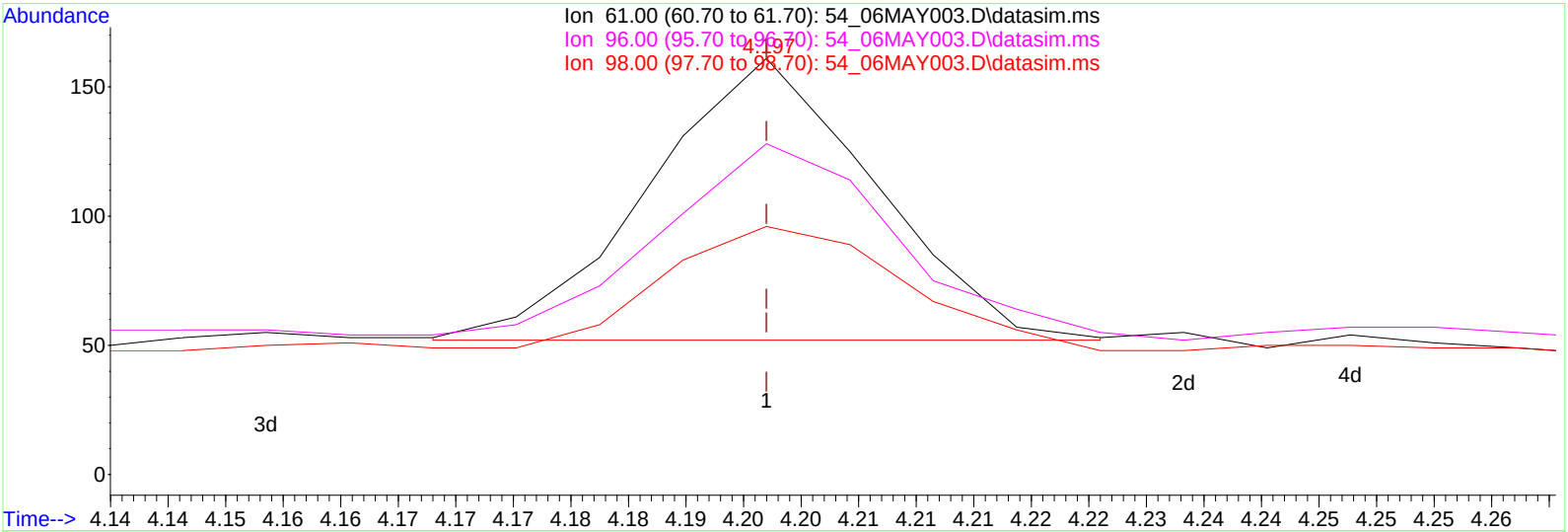
Ion	Ratio	Lower	Upper
97	100		
99	65.1	52.1	78.1
61	42.1	30.2	45.4

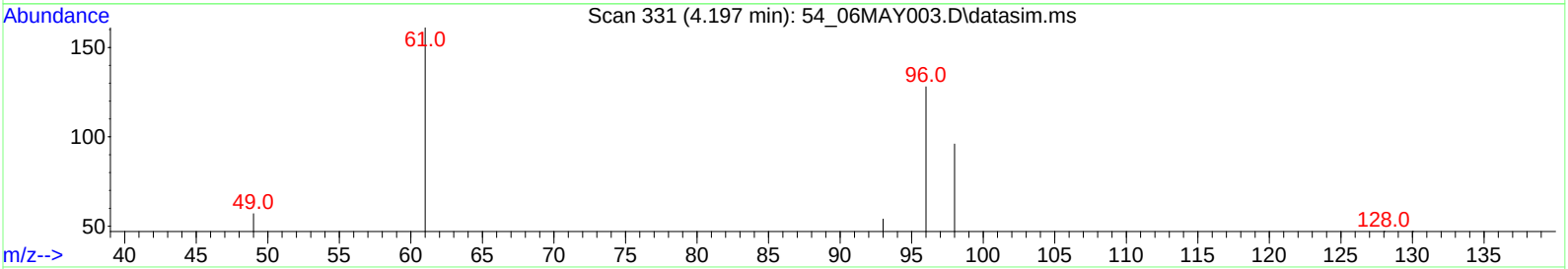


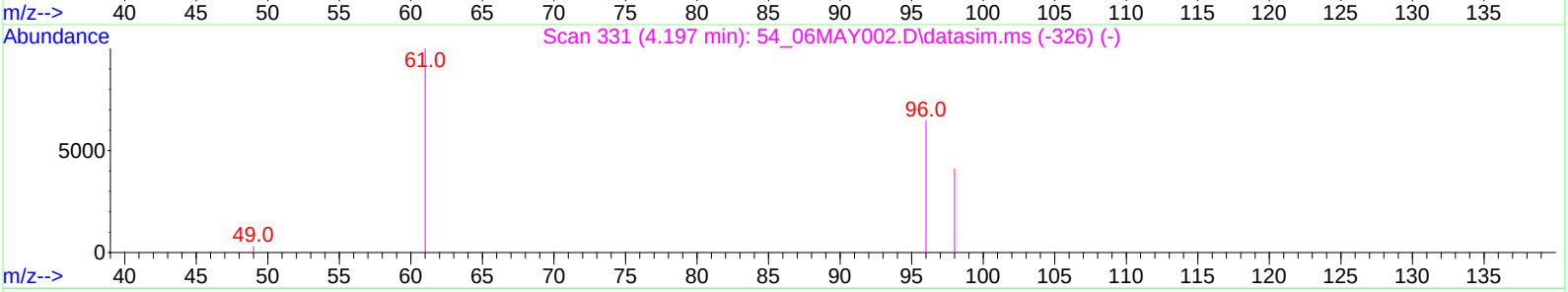
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







TIC: 54_06MAY003.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (0.000) 0.57 ppbv m

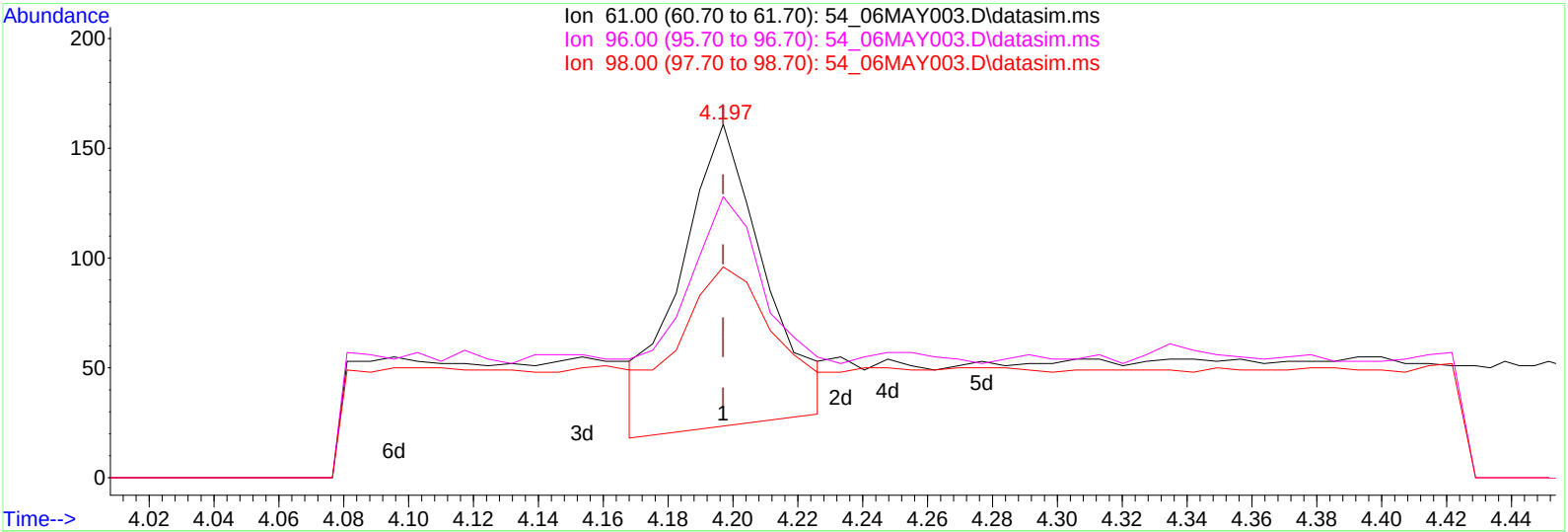
response 148

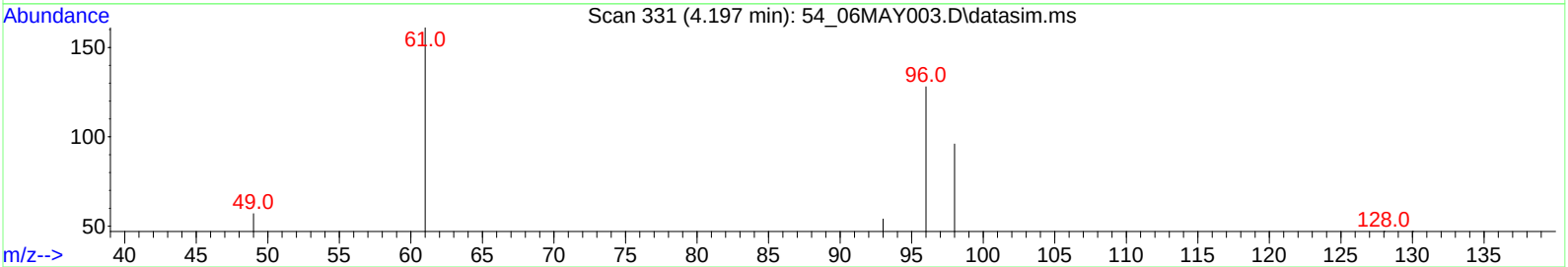
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	211.49#
98.00	63.30	89.19#
0.00	0.00	0.00

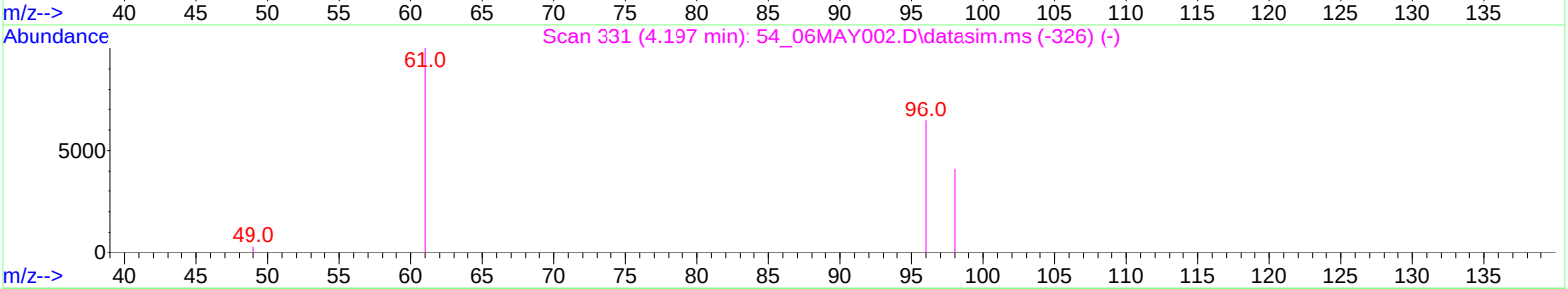
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







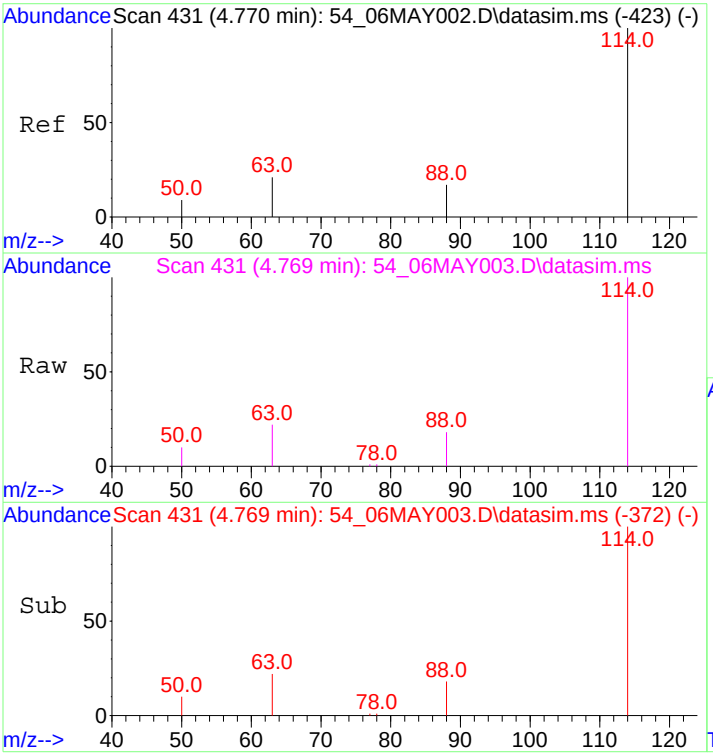
TIC: 54_06MAY003.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (0.000) 0.95 ppbv

response 247

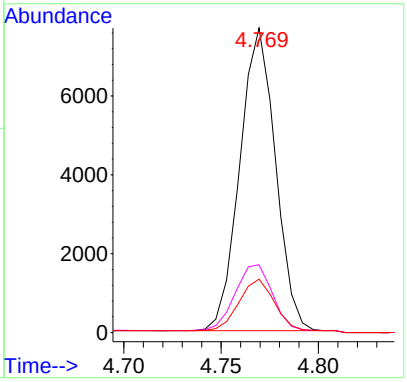
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	126.72#
98.00	63.30	53.44
0.00	0.00	0.00

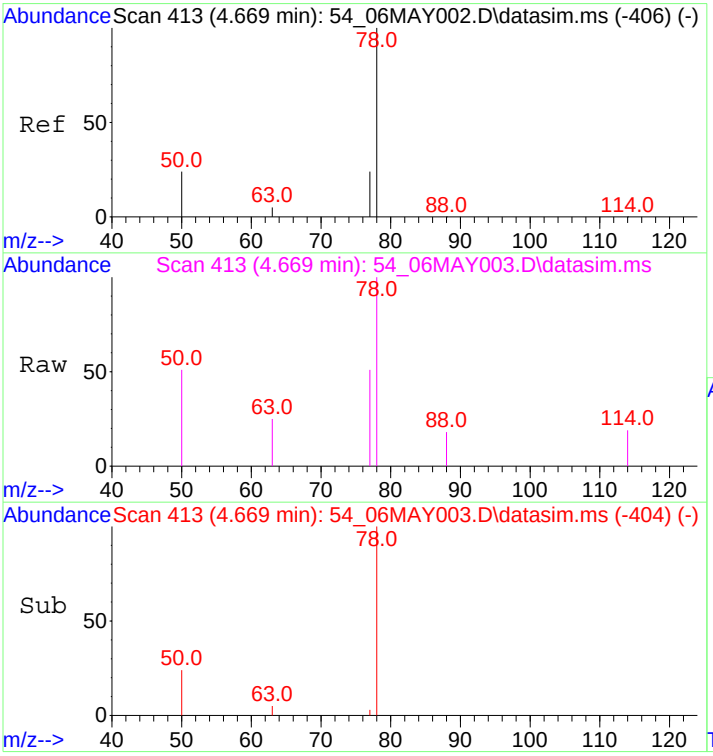


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion:114 Resp: 9778

Ion	Ratio	Lower	Upper
114	100		
63	22.7	12.0	18.0#
88	16.8	11.8	17.8

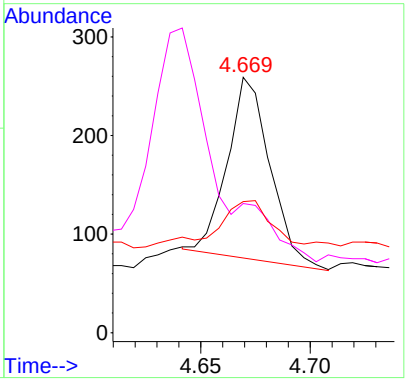




#10
Benzene
Concen: 0.55 ppbv m
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 78 Resp: 246

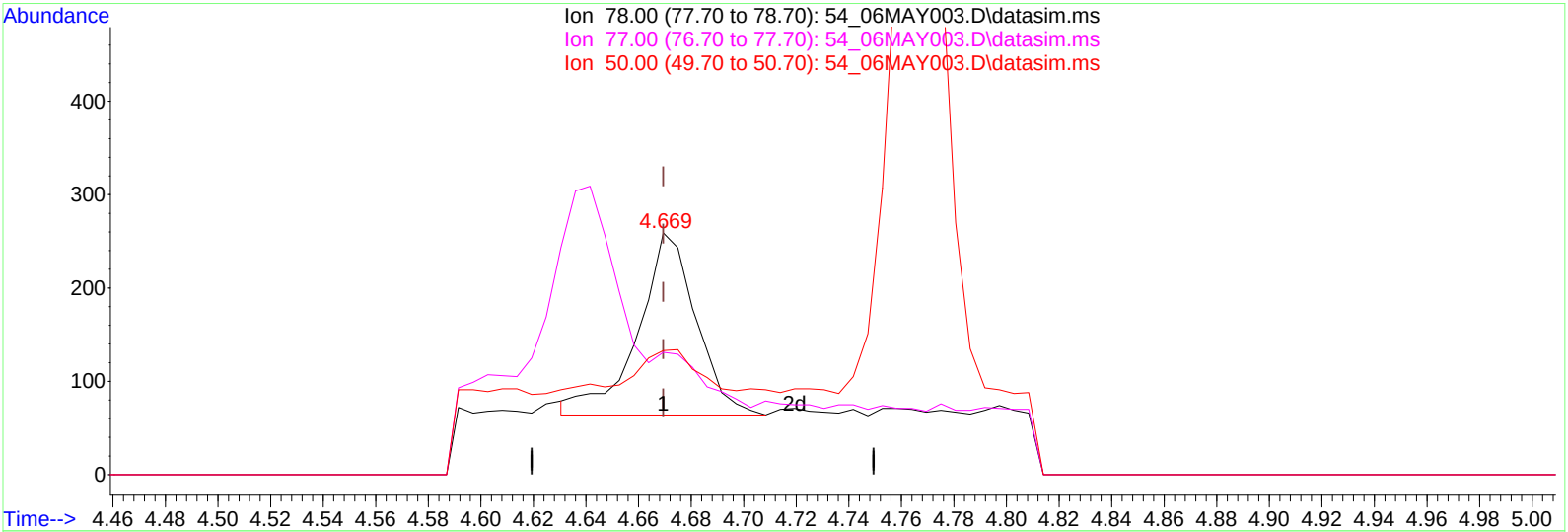
Ion	Ratio	Lower	Upper
78	100		
77	5.3	18.2	27.2#
50	25.6	8.6	13.0#

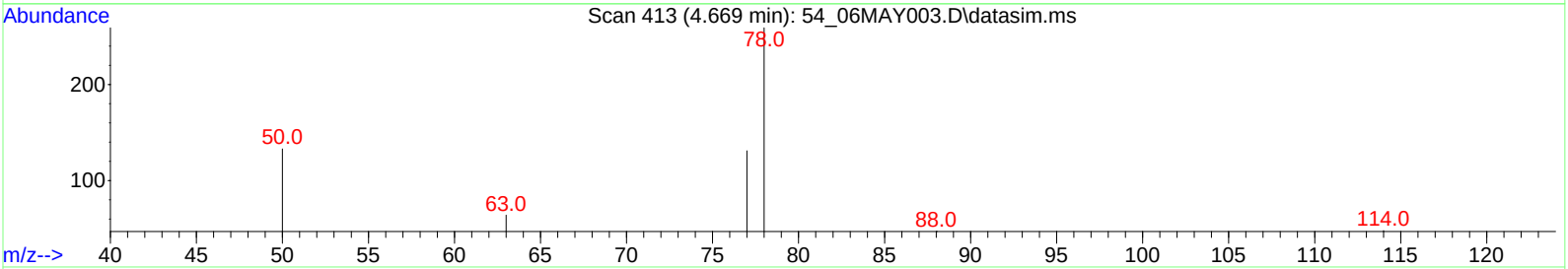


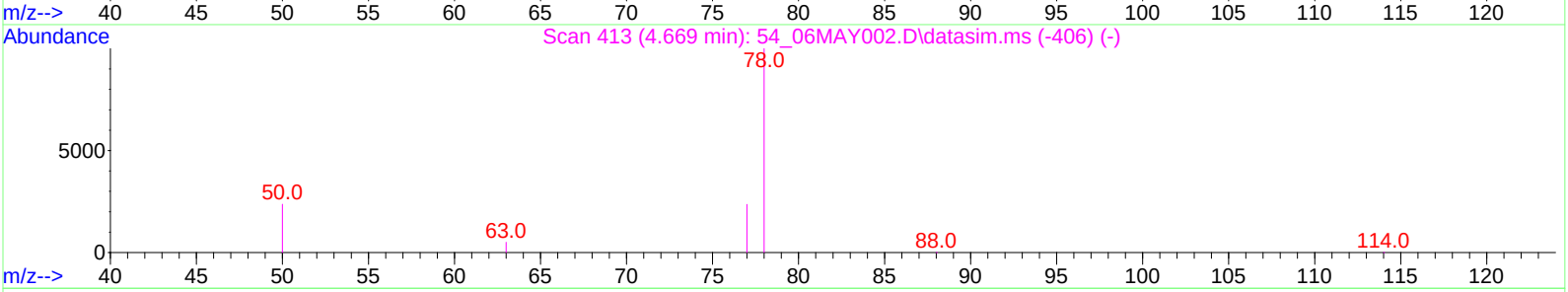
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On : 6 May 2014 7:23 am
Operator : yhl
Sample : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







TIC: 54_06MAY003.D\data.ms

(10) Benzene (M)

4.669min (+0.000) 0.67 ppbv

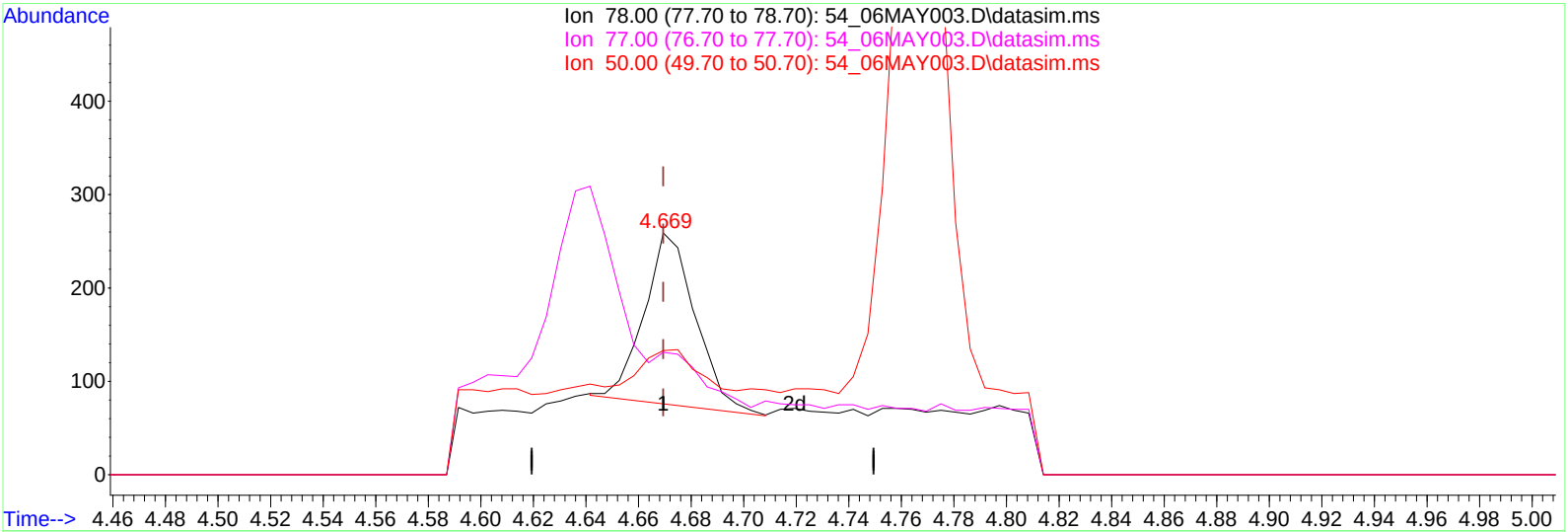
response 300

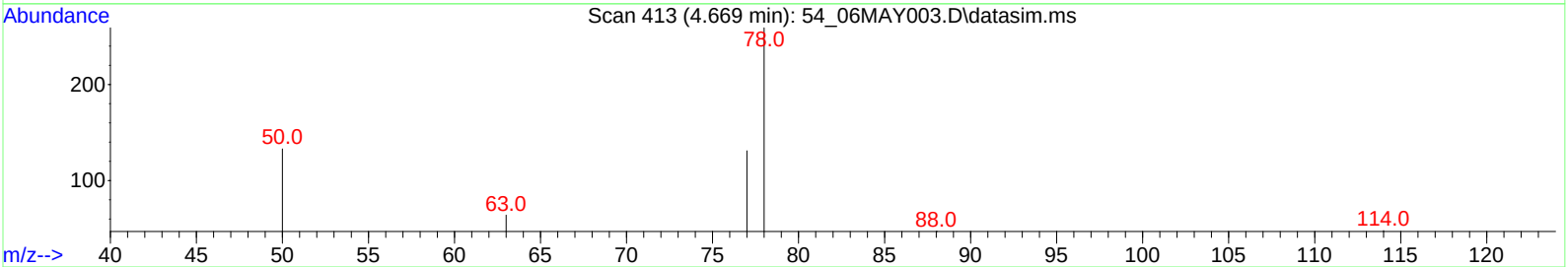
Ion	Exp%	Act%
78.00	100	100
77.00	22.70	4.33#
50.00	10.80	21.00#
0.00	0.00	0.00

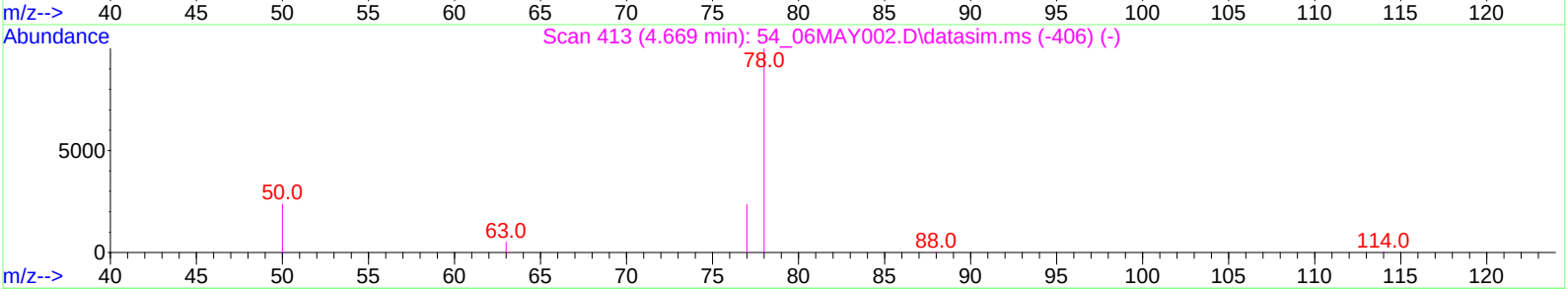
Quantitation Report (Qedit)

```
Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY003.D
Acq On    :  6 May 2014   7:23 am
Operator  : yhl
Sample    : STD20140506-3 \0.5 ppbv LLCCV 1°
Misc      : 5 ml \ 06 May 2014
ALS Vial  : 1   Sample Multiplier: 1

Quant Time: May 06 07:29:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title  : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration
```







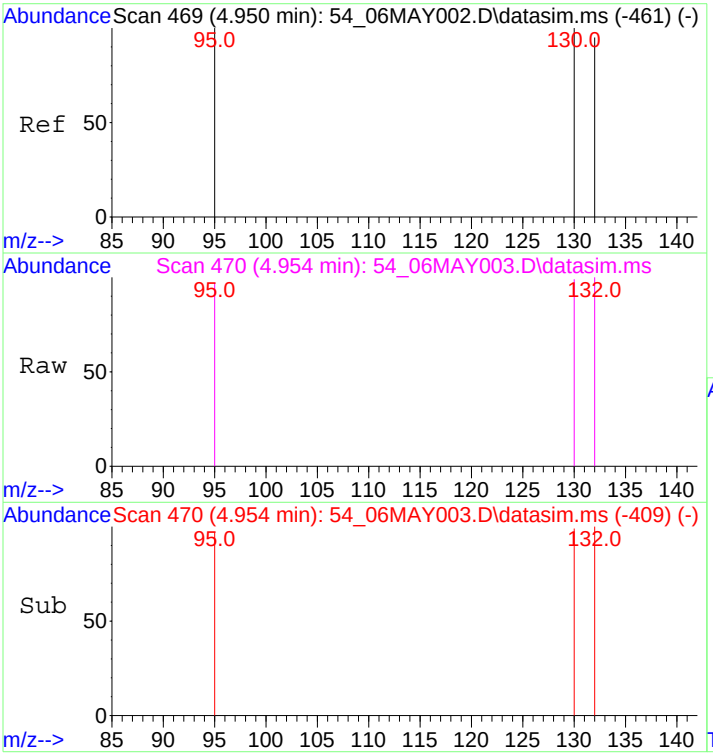
TIC: 54_06MAY003.D\data.ms

(10) Benzene (M)

4.669min (+0.000) 0.55 ppbv m

response 246

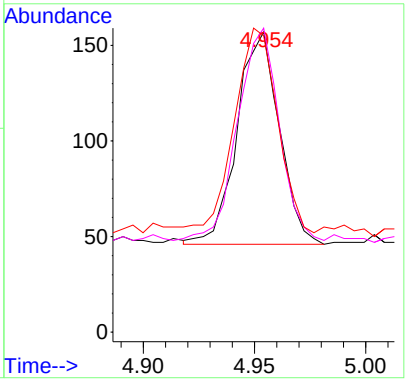
Ion	Exp%	Act%
78.00	100	100
77.00	22.70	5.28#
50.00	10.80	25.61#
0.00	0.00	0.00

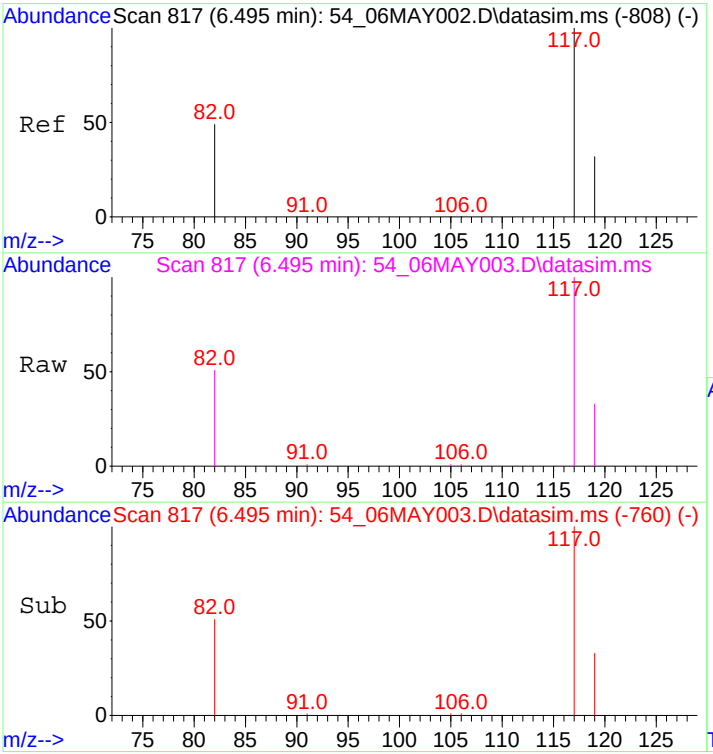


#11
Trichloroethene
Concen: 0.60 ppbv
RT: 4.954 min Scan# 470
Delta R.T. 0.005 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion:130 Resp: 146

Ion	Ratio	Lower	Upper
130	100		
132	98.6	76.9	115.3
95	158.9	76.5	114.7#

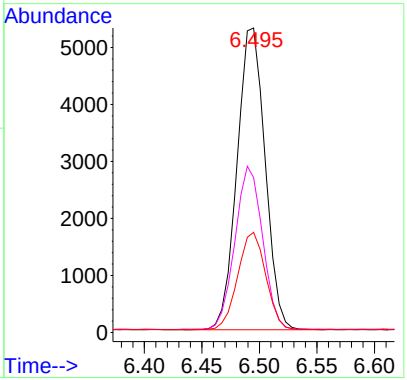


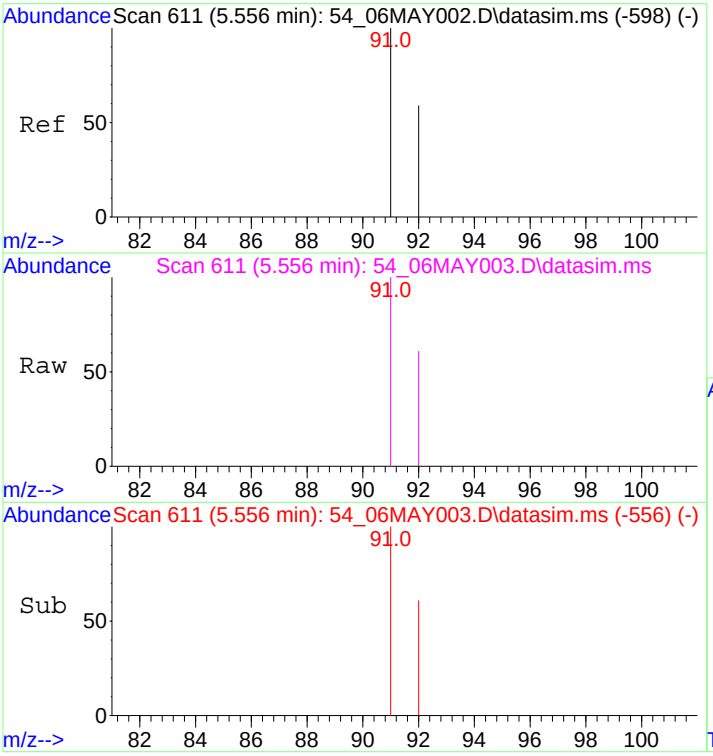


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54_06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion:117 Resp: 9019

Ion	Ratio	Lower	Upper
117	100		
82	53.0	38.0	57.0
119	31.9	27.0	40.4

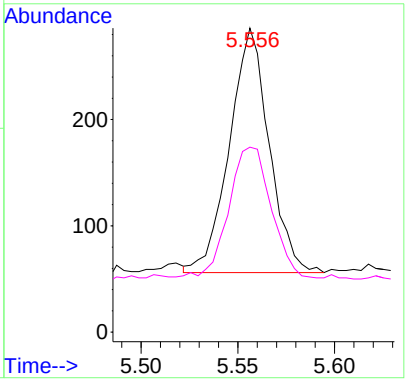


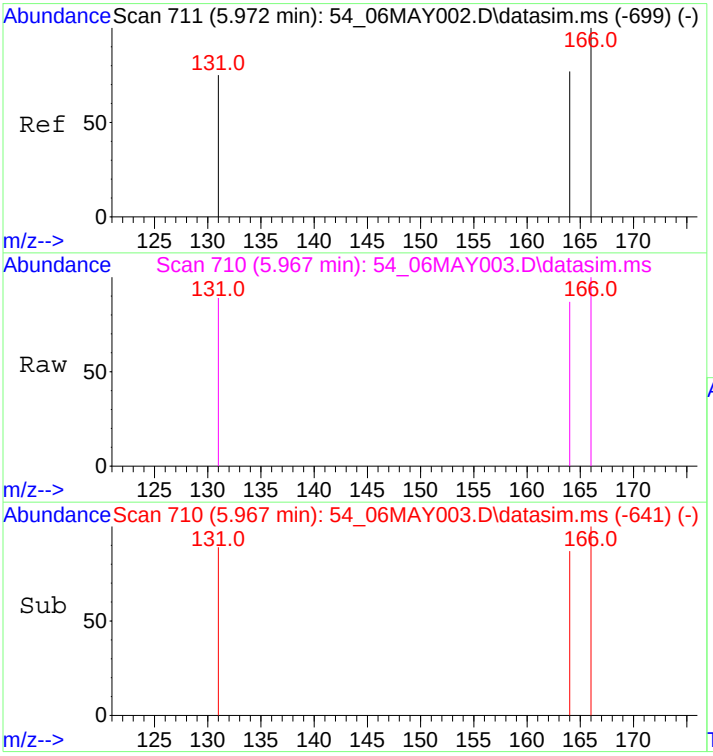


#13
Toluene
Concen: 0.61 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 91 Resp: 328

Ion	Ratio	Lower	Upper
91	100		
92	56.4	47.8	71.8

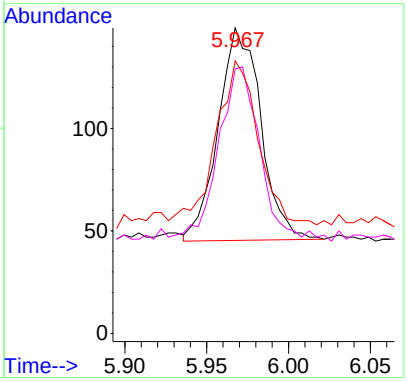


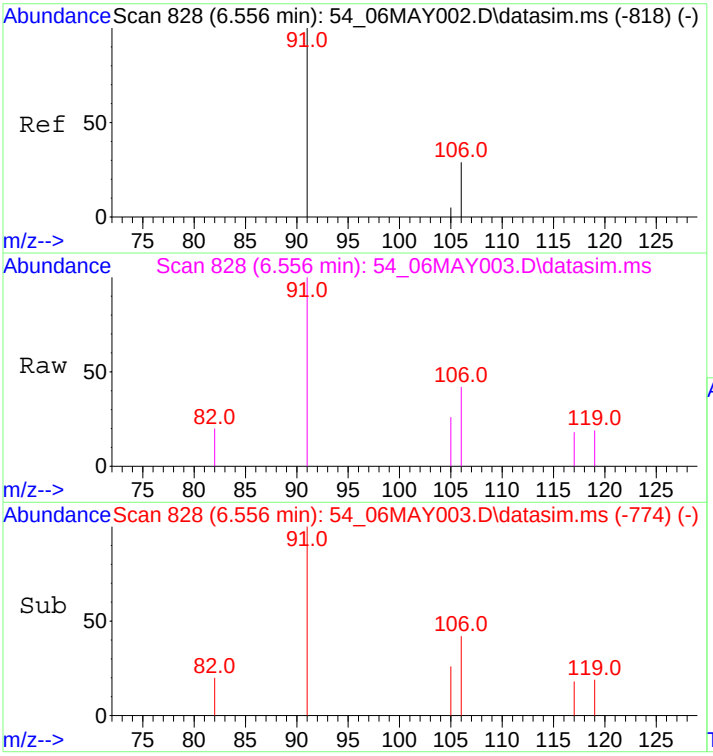


#14
Tetrachloroethene
Concen: 0.61 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion:166 Resp: 188

Ion	Ratio	Lower	Upper
166	100		
164	75.0	62.6	94.0
131	91.5	58.5	87.7#

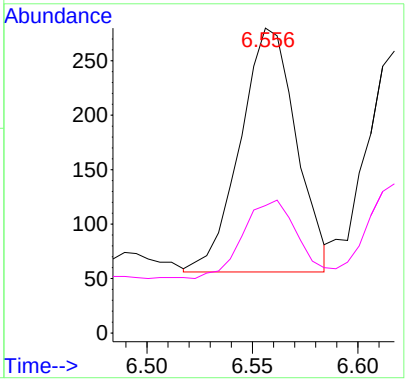


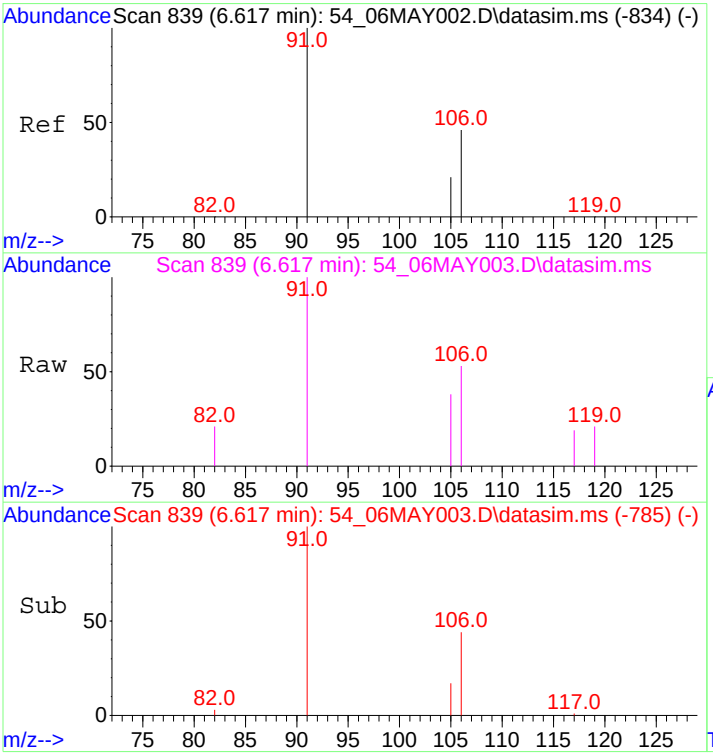


#15
Ethyl Benzene
Concen: 0.60 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 91 Resp: 414

Ion	Ratio	Lower	Upper
91	100		
106	32.9	26.9	40.3

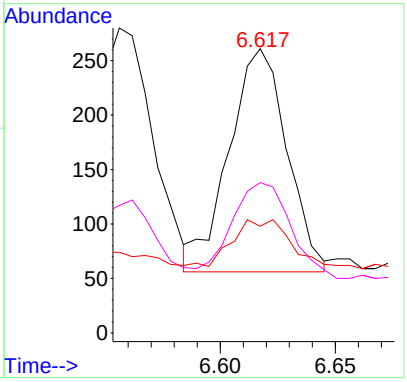


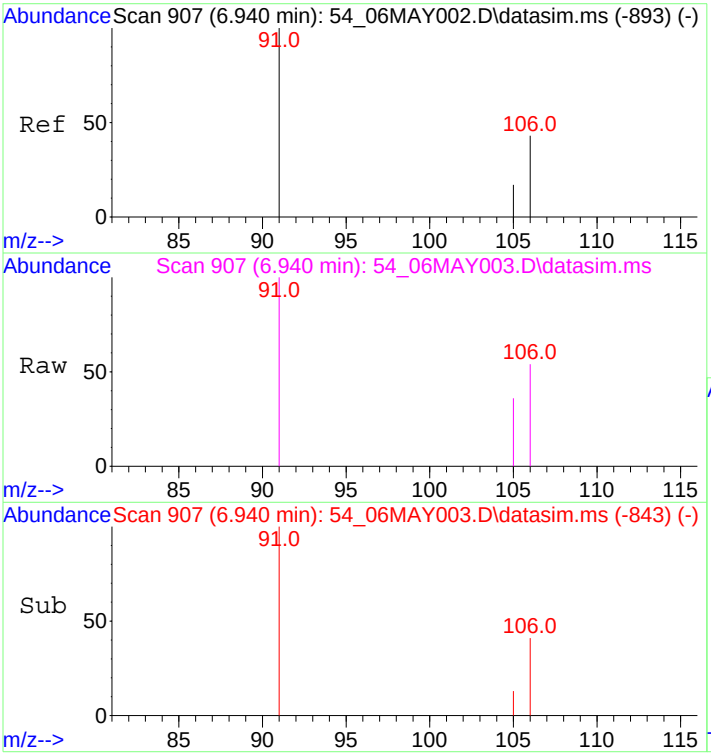


#16
m,p-Xylene
Concen: 0.68 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 91 Resp: 359

Ion	Ratio	Lower	Upper
91	100		
106	44.6	43.1	64.7
105	20.1	18.3	27.5

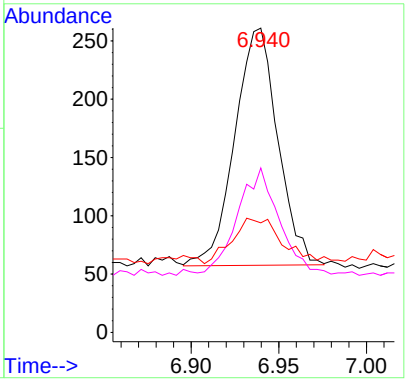




#17
o-Xylene
Concen: 0.65 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.000 min
Lab File: 54 06MAY003.D
Acq: 6 May 2014 7:23 am

Tgt Ion: 91 Resp: 349

Ion	Ratio	Lower	Upper
91	100		
106	43.3	40.1	60.1
105	3.7	15.8	23.6#



LABORATORY CONTROL SAMPLE

Data File 54_06May005.D
LCS Standard Number 20140506-LCS
LCS Standard Name **20140506-LCS \ LCS 500 ppbv 2º**
Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/6/2014	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %	
Vinyl Chloride	451.64	517.50	87.3	70-130	OK
1,1-Dichloroethene	489.79	512.50	95.6	70-130	OK
Methyl Tert Butyl Ether	441.55	510.00	86.6	70-130	OK
trans-1,2-Dichloroethene	484.10	500.00	96.8	70-130	OK
1,1-Dichloroethane	480.57	525.00	91.5	70-130	OK
cis-1,2-Dichloroethene	509.98	530.00	96.2	70-130	OK
1,1,1-Trichloroethane	524.35	510.00	102.8	70-130	OK
Benzene	483.46	527.50	91.7	70-130	OK
Trichloroethene	463.53	510.00	90.9	70-130	OK
Toluene	470.69	522.50	90.1	70-130	OK
Tetrachloroethene	455.38	517.50	88.0	70-130	OK
Ethyl Benzene	470.60	525.00	89.6	70-130	OK
m,p-Xylene	473.36	520.00	91.0	70-130	OK
o-Xylene	468.73	525.00	89.3	70-130	OK

Secondary Standard Cylinder # CC-99022

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY005.D
Acq On : 6 May 2014 7:57 am
Operator : yhl
Sample : 20140506-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 08:20:47 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

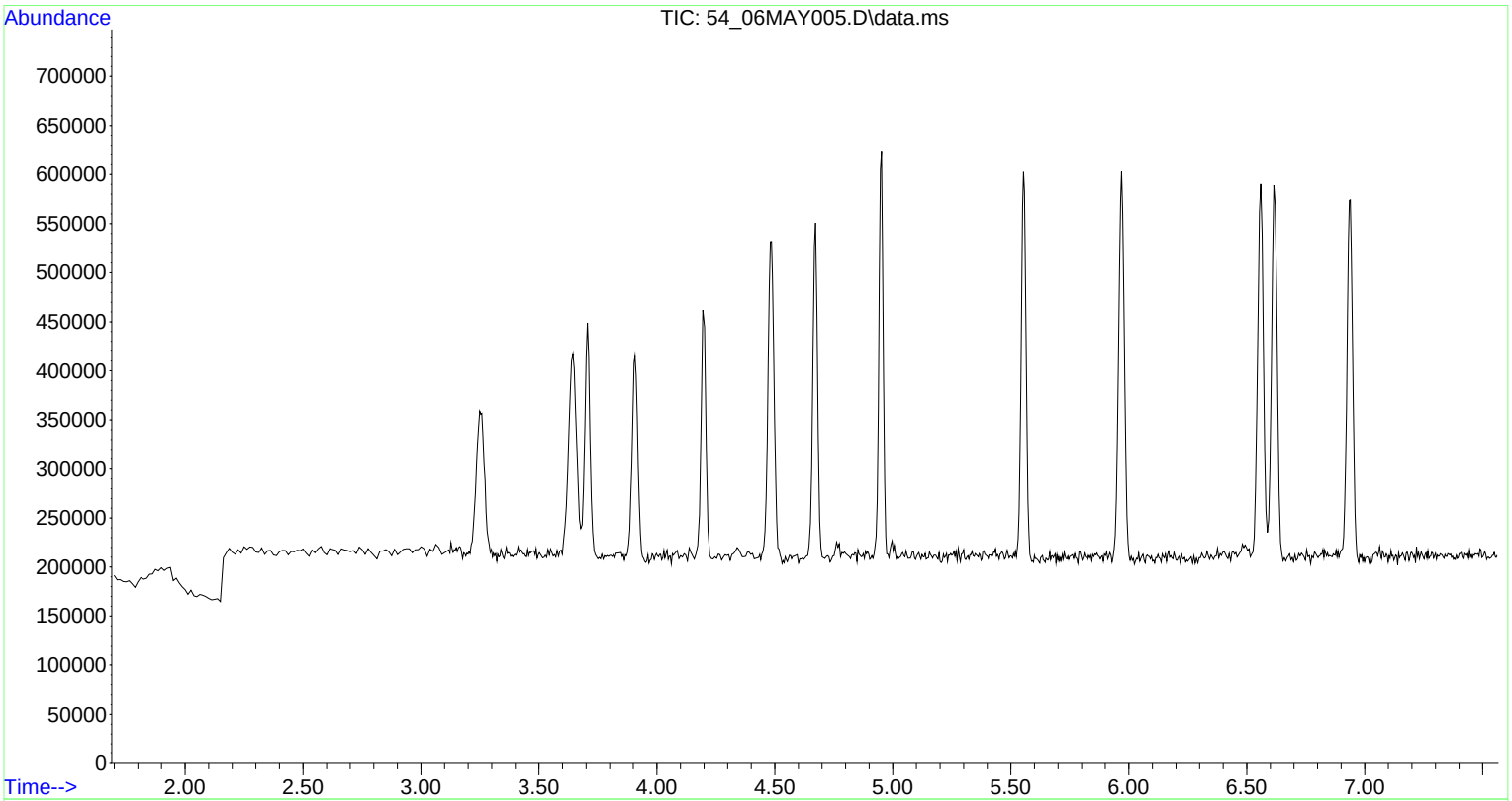
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4145	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10157	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9028	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	71185	451.64	ppbv	# 54
3] 1,1-Dichloroethene	3.251	61	157235	489.79	ppbv	# 76
4] Methyl Tert Butyl Ether	3.641	73	216427	441.55	ppbv	# 79
5] trans-1,2-Dichloroethene	3.707	61	136972	484.10	ppbv	# 71
6] 1,1-Dichloroethane	3.910	63	162319	480.57	ppbv	# 84
7] cis-1,2-Dichloroethene	4.197	61	134745	509.98	ppbv	# 70
8] 1,1,1-Trichloroethane	4.483	97	224665	524.35	ppbv	97
10] Benzene	4.669	78	224318	483.46	ppbv	# 89
11] Trichloroethene	4.949	130	117094	463.53	ppbv	98
13] Toluene	5.556	91	254732	470.69	ppbv	99
14] Tetrachloroethene	5.972	166	140761	455.38	ppbv	98
15] Ethyl Benzene	6.556	91	323432	470.60	ppbv	93
16] m,p-Xylene	6.617	91	249687	473.36	ppbv	91
17] o-Xylene	6.937	91	250728	468.73	ppbv	91

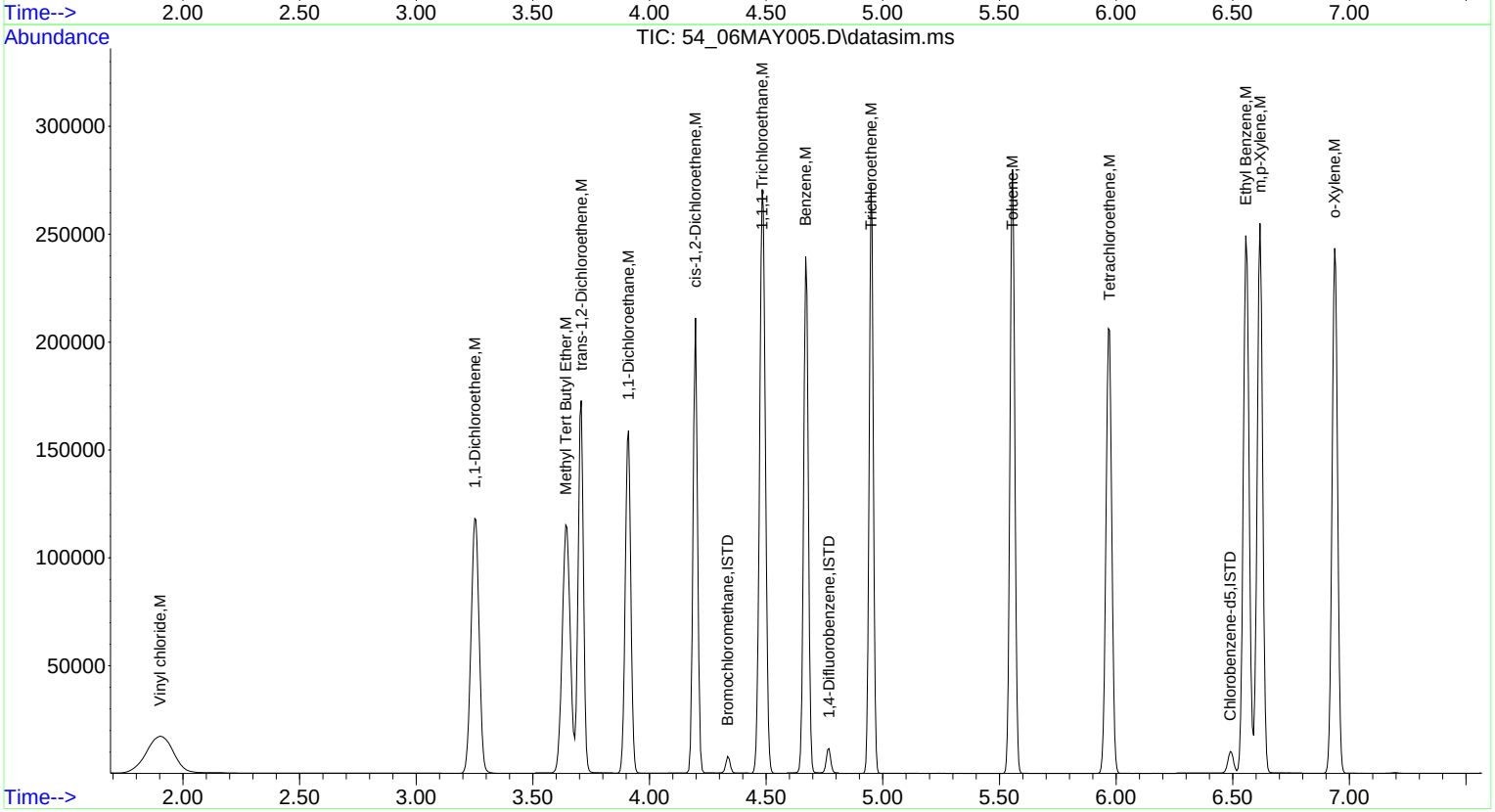
(#) = qualifier out of range (m) = manual integration (+) = signals summed

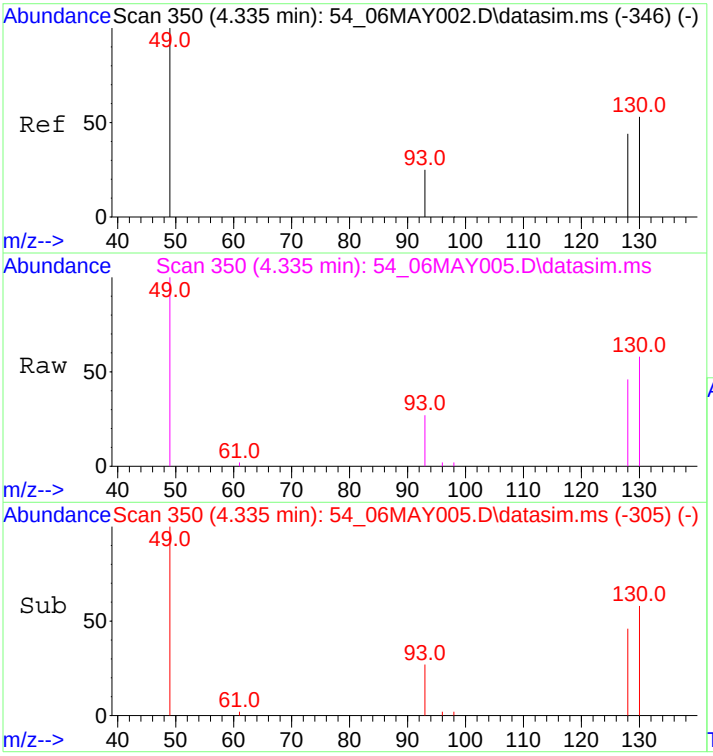
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY005.D
Acq On : 6 May 2014 7:57 am
Operator : yhl
Sample : 20140506-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 08:20:47 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



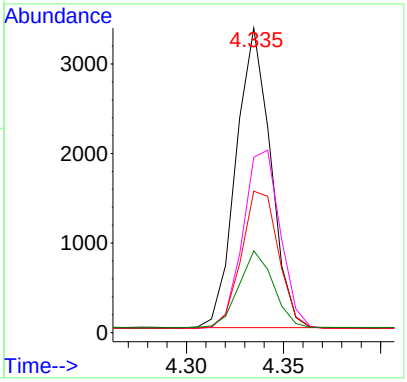


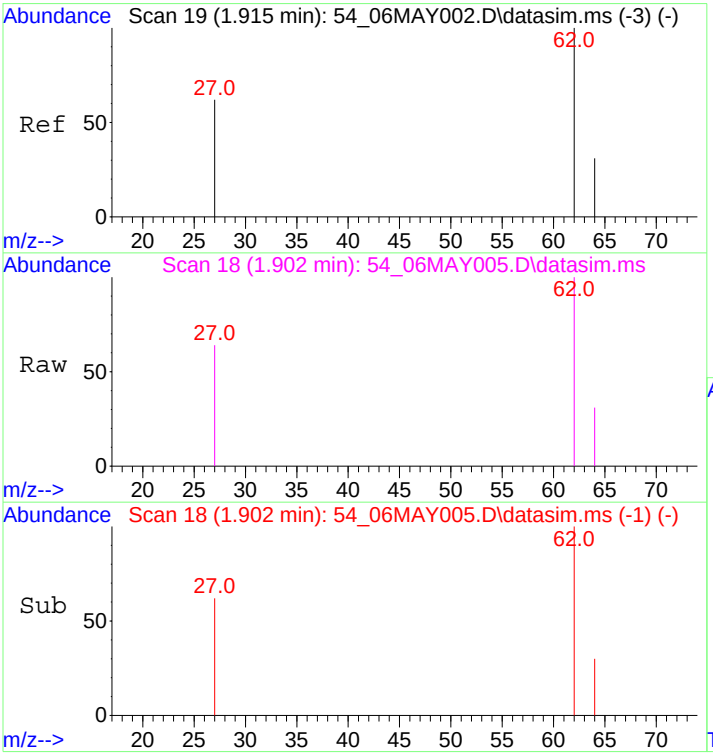


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 49 Resp: 4145

Ion	Ratio	Lower	Upper
49	100		
130	64.2	87.2	130.8#
128	49.4	68.0	102.0#
93	25.9	29.3	43.9#

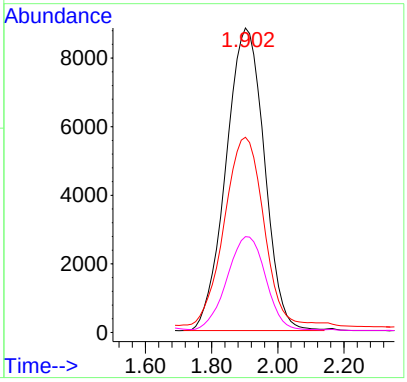


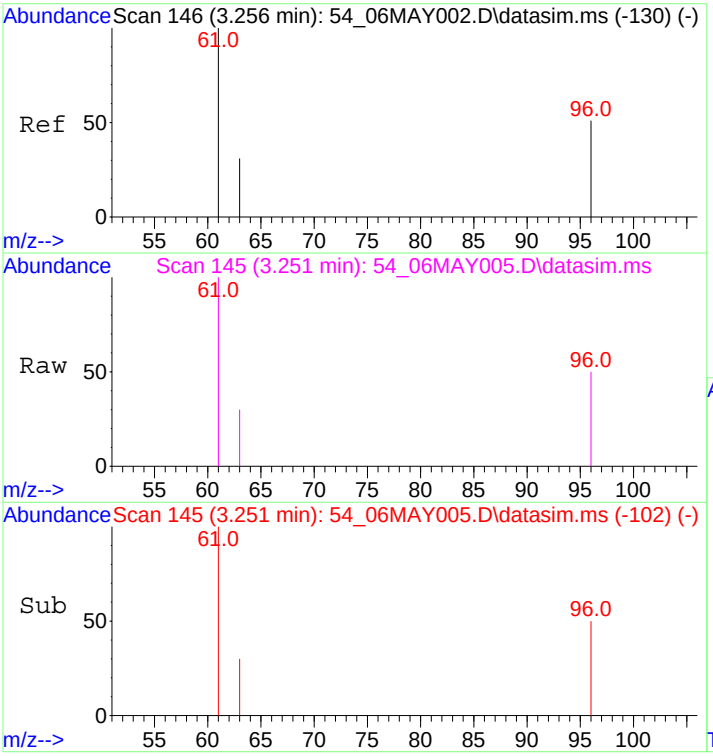


#2
Vinyl chloride
Concen: 451.64 ppbv
RT: 1.902 min Scan# 18
Delta R.T. -0.013 min
Lab File: 54_06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 62 Resp: 71185

Ion	Ratio	Lower	Upper
62	100		
64	30.0	26.8	40.2
27	71.9	16.1	24.1#

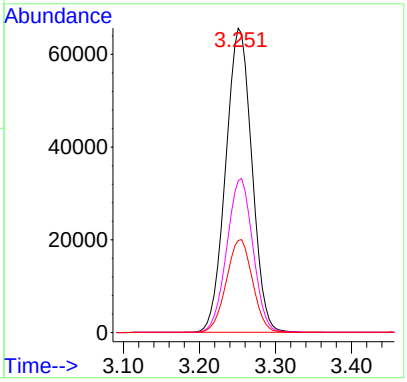


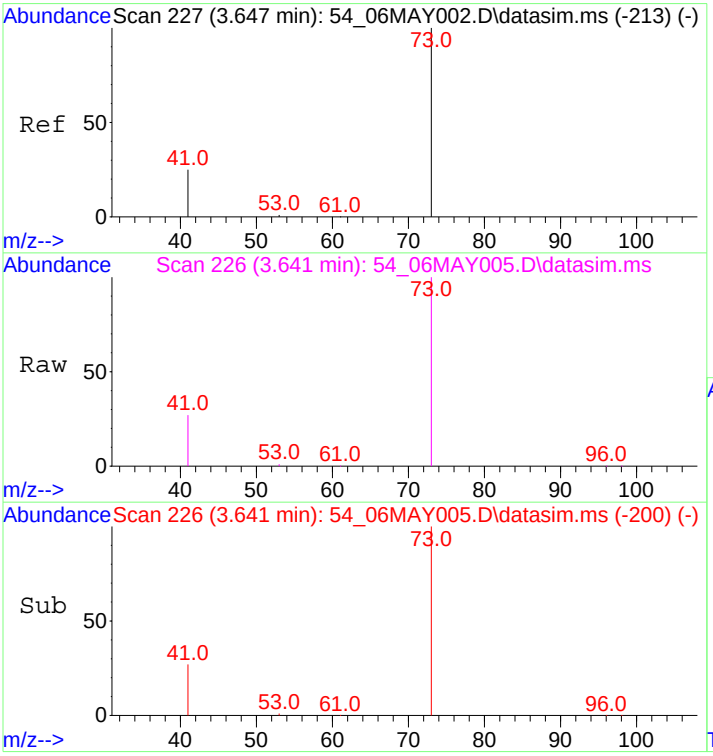


#3
1,1-Dichloroethene
Concen: 489.79 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.005 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 61 Resp: 157235

Ion	Ratio	Lower	Upper
61	100		
96	50.5	63.4	95.2#
63	30.6	26.2	39.2

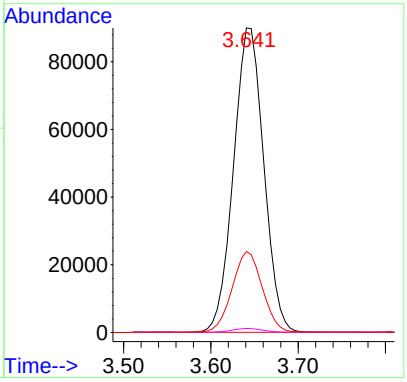


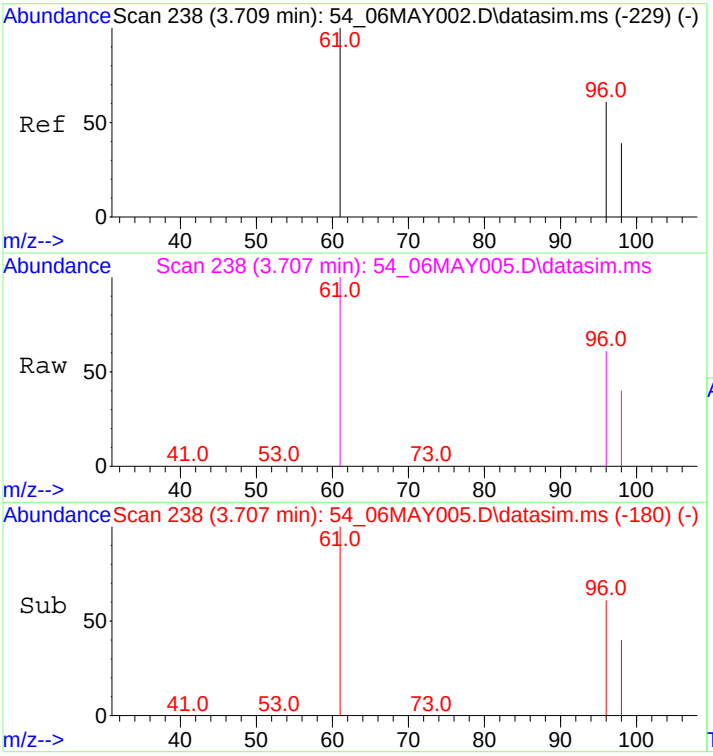


#4
Methyl Tert Butyl Ether
Concen: 441.55 ppbv
RT: 3.641 min Scan# 226
Delta R.T. -0.007 min
Lab File: 54_06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 73 Resp: 216427

Ion	Ratio	Lower	Upper
73	100		
53	1.2	1.0	1.4
41	26.3	13.1	19.7#

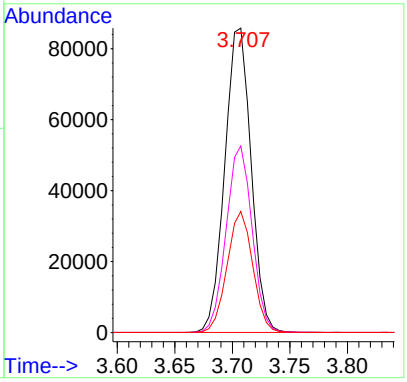


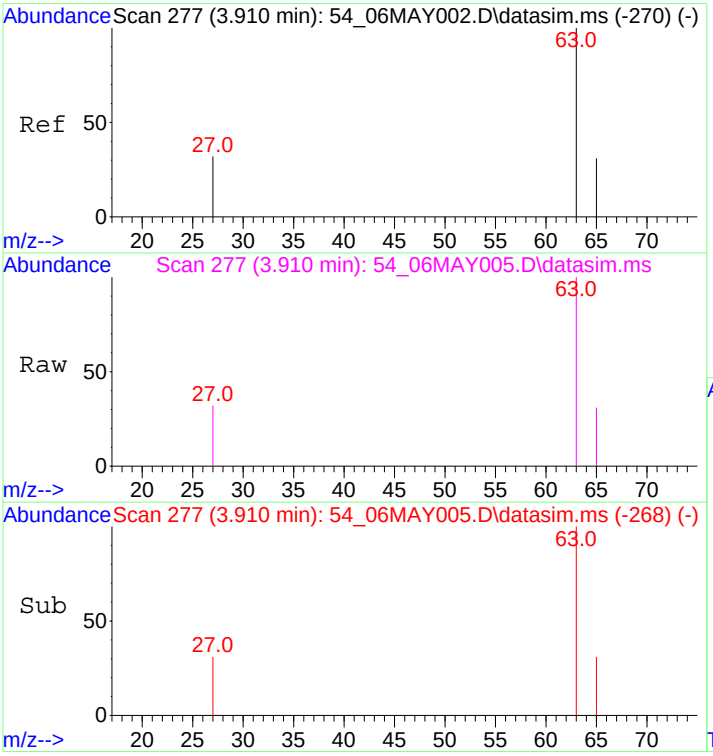


#5
trans-1,2-Dichloroethene
Concen: 484.10 ppbv
RT: 3.707 min Scan# 238
Delta R.T. -0.001 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 61 Resp: 136972

Ion	Ratio	Lower	Upper
61	100		
96	60.4	71.4	107.0#
98	38.6	45.8	68.8#

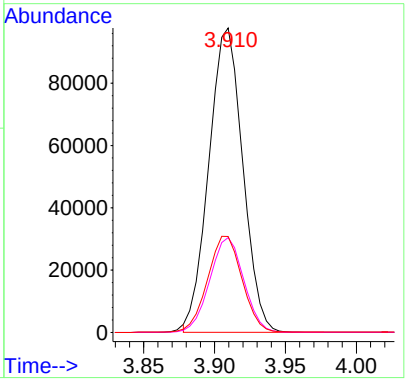


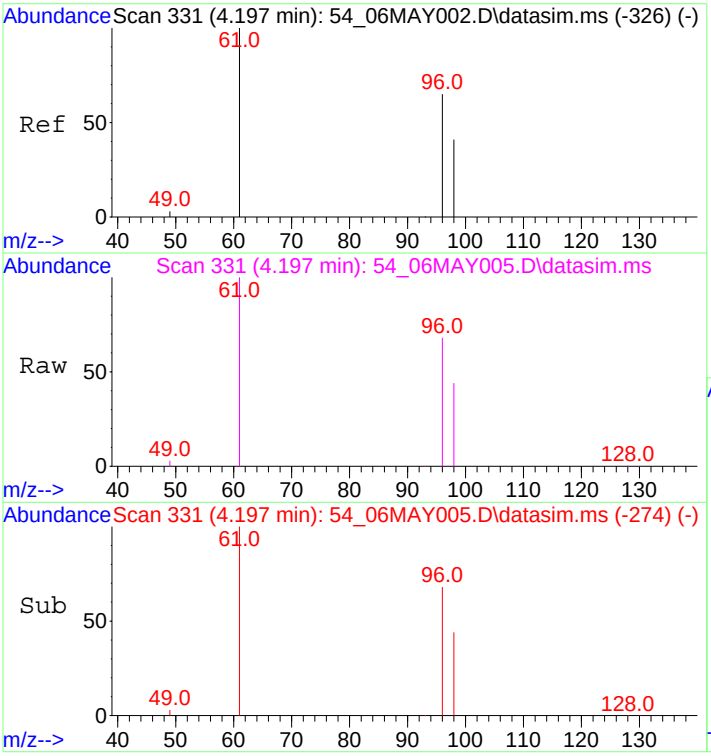


#6
1,1-Dichloroethane
Concen: 480.57 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 63 Resp: 162319

Ion	Ratio	Lower	Upper
63	100		
65	31.1	26.1	39.1
27	31.8	10.2	15.2#

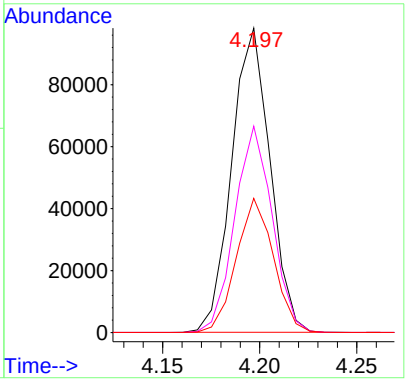


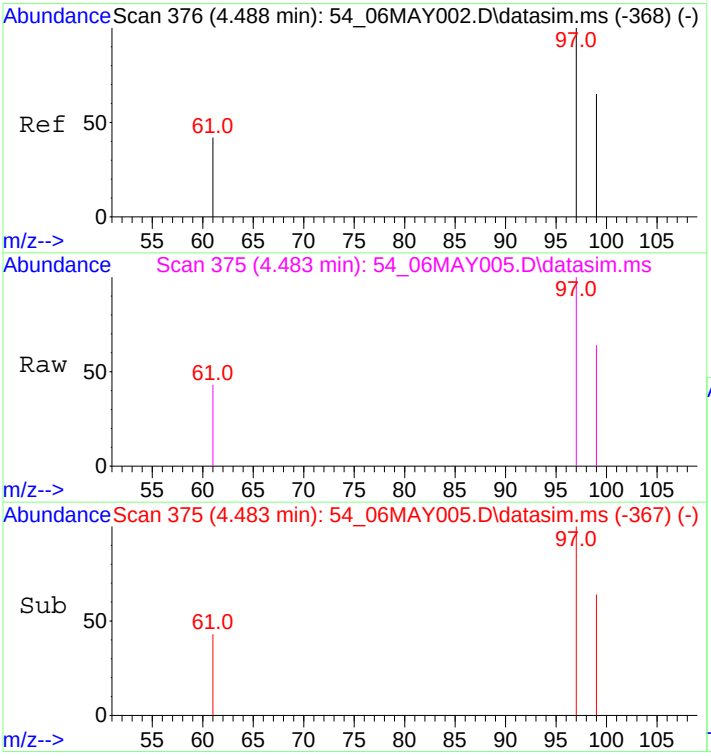


#7
cis-1,2-Dichloroethene
Concen: 509.98 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 61 Resp: 134745

Ion	Ratio	Lower	Upper
61	100		
96	66.2	78.5	117.7#
98	42.7	50.6	76.0#

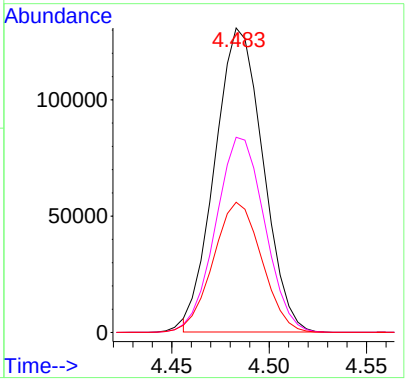


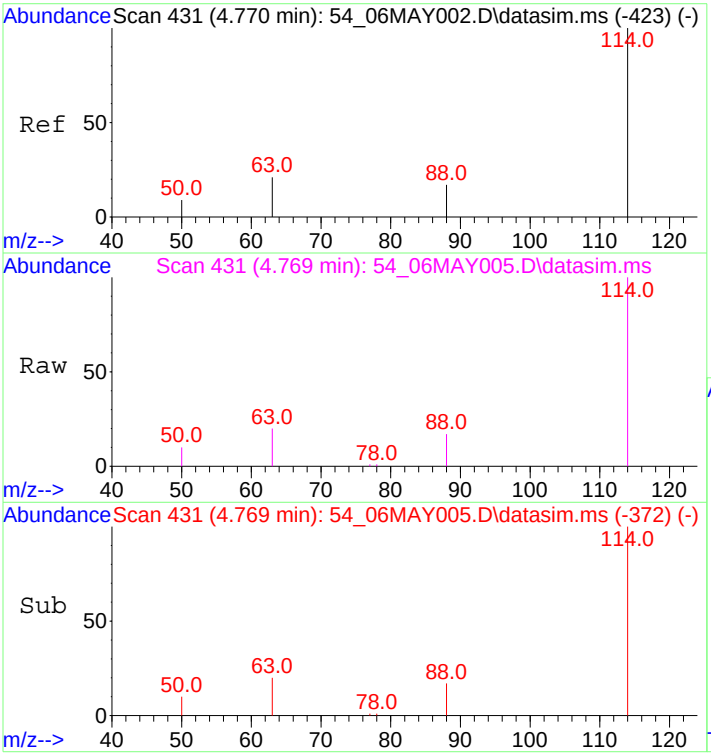


#8
1,1,1-Trichloroethane
Concen: 524.35 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 97 Resp: 224665

Ion	Ratio	Lower	Upper
97	100		
99	64.6	52.1	78.1
61	42.7	30.2	45.4

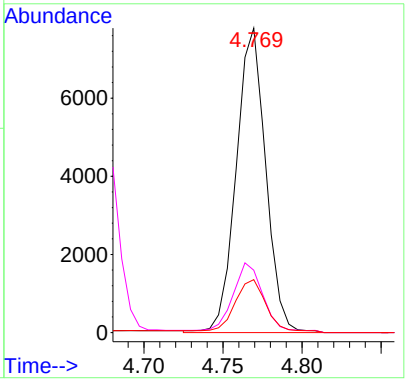


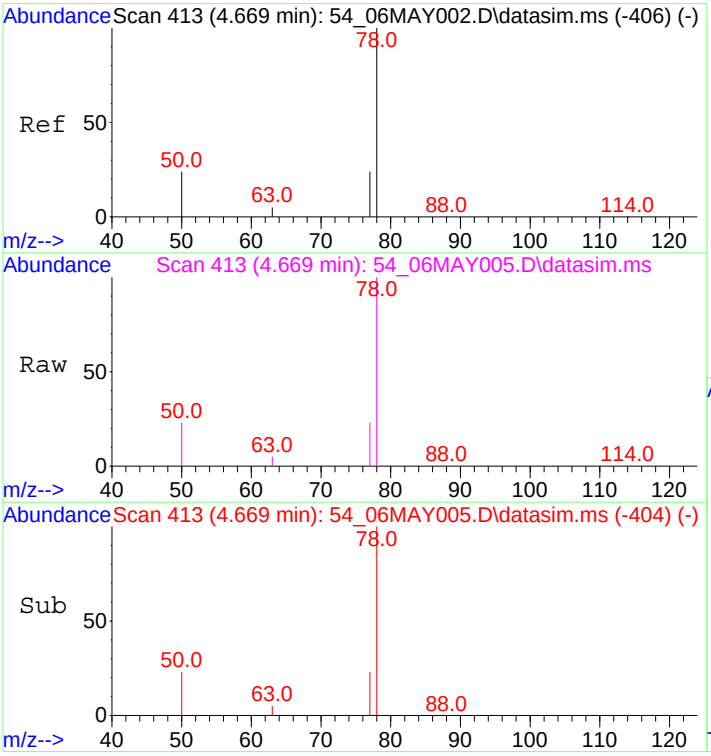


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion:114 Resp: 10157

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.7	11.8	17.8

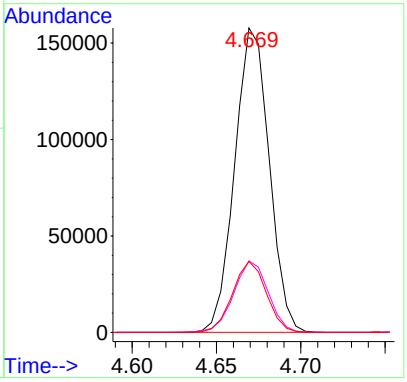


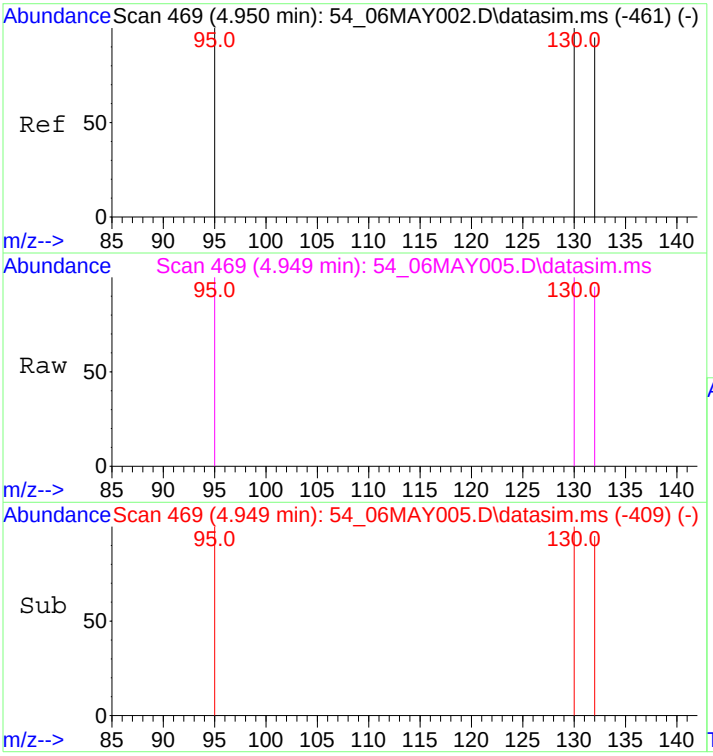


#10
Benzene
Concen: 483.46 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 78 Resp: 224318

Ion	Ratio	Lower	Upper
78	100		
77	23.5	18.2	27.2
50	22.7	8.6	13.0#

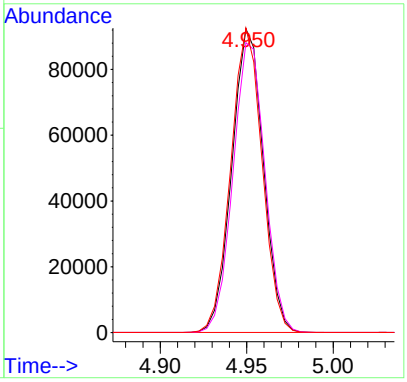


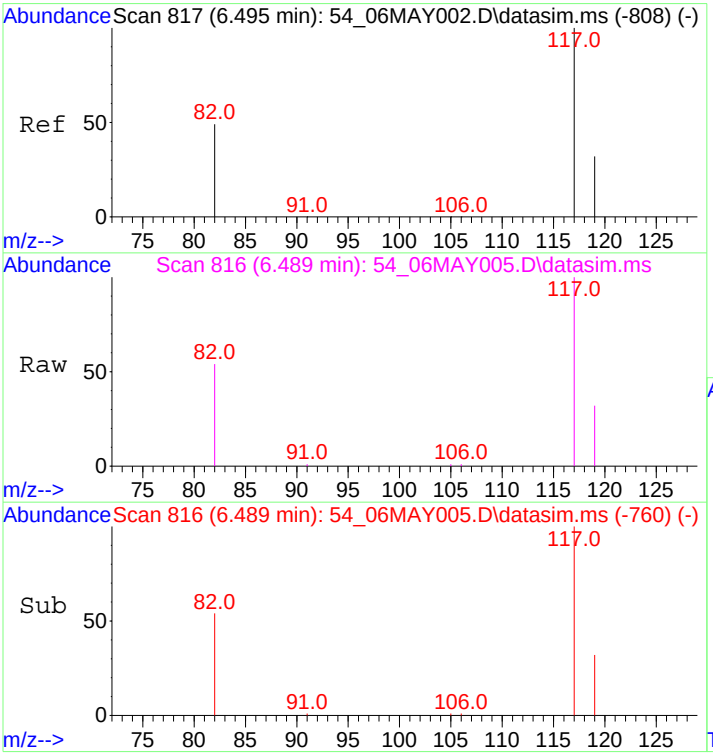


#11
Trichloroethene
Concen: 463.53 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion:130 Resp: 117094

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	99.5	76.5	114.7

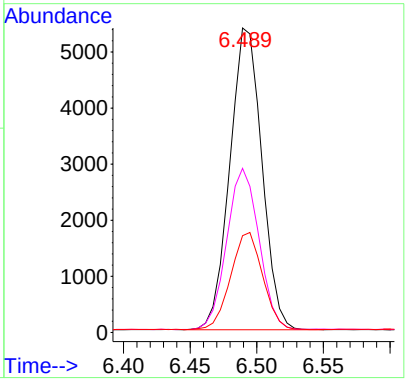


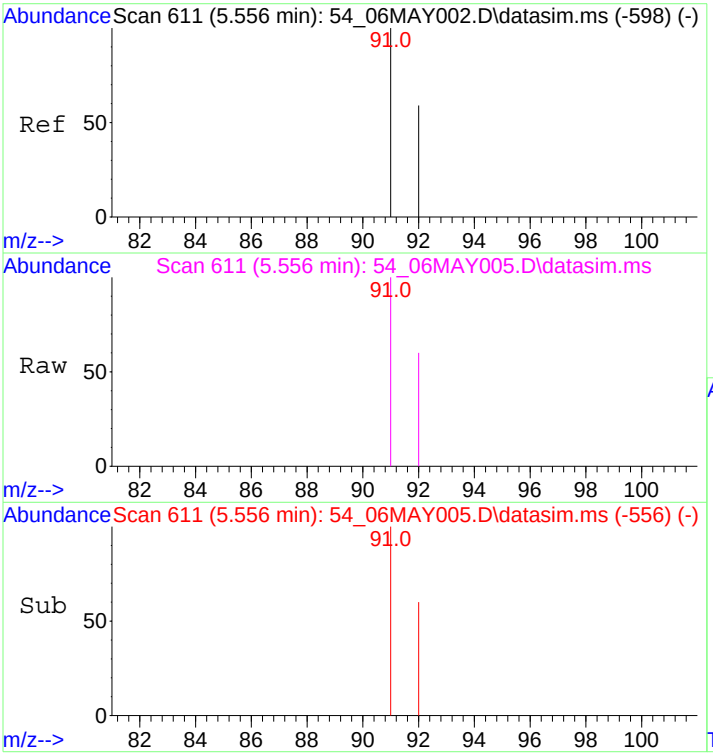


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion:117 Resp: 9028

Ion	Ratio	Lower	Upper
117	100		
82	53.5	38.0	57.0
119	32.1	27.0	40.4

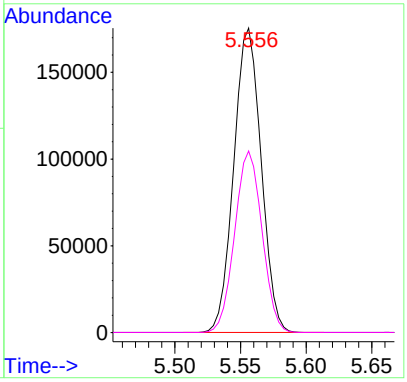


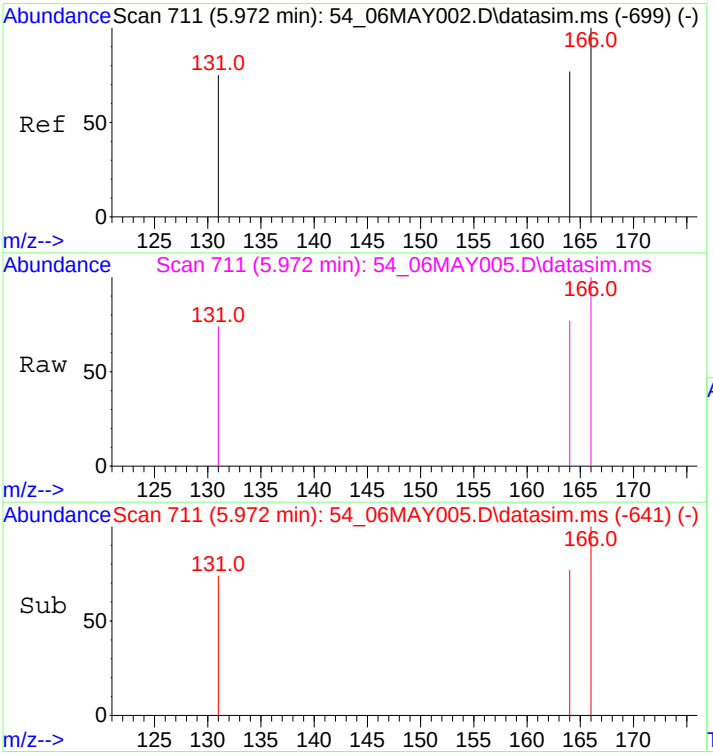


#13
Toluene
Concen: 470.69 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 91 Resp: 254732

Ion	Ratio	Lower	Upper
91	100		
92	59.4	47.8	71.8

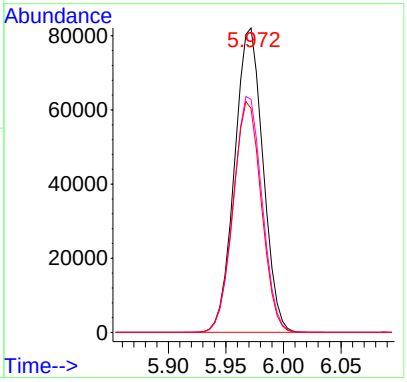


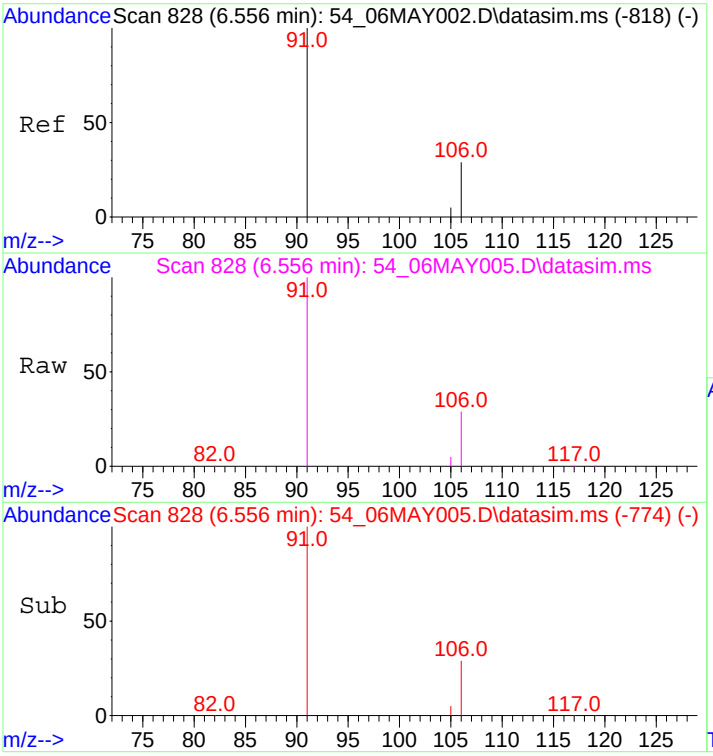


#14
Tetrachloroethene
Concen: 455.38 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion:166 Resp: 140761

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	75.7	58.5	87.7

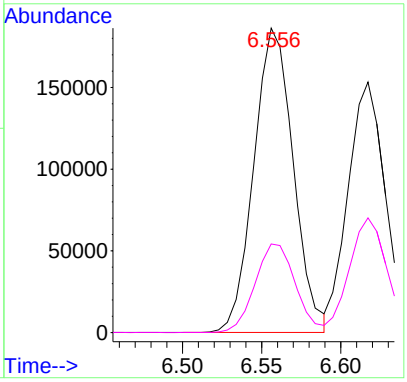


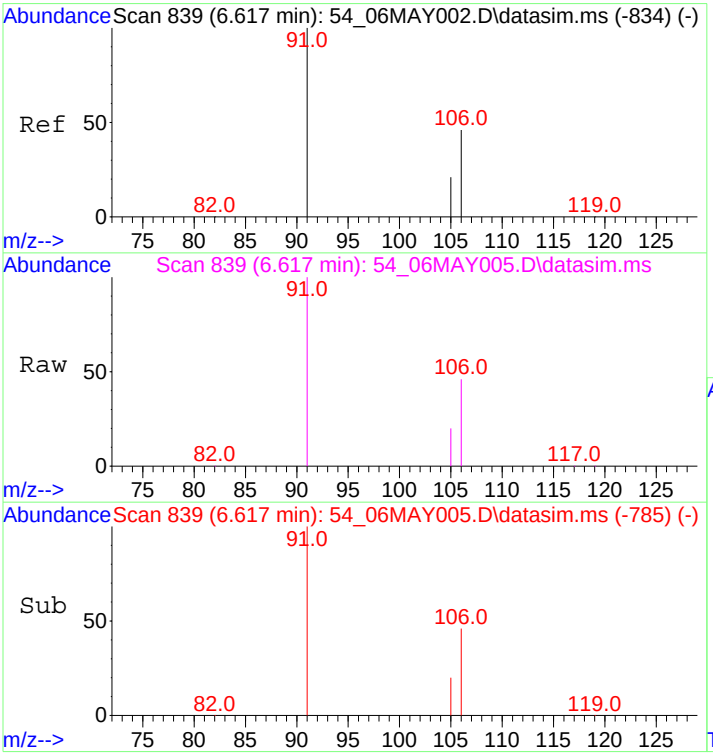


#15
Ethyl Benzene
Concen: 470.60 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 91 Resp: 323432

Ion	Ratio	Lower	Upper
91	100		
106	29.7	26.9	40.3

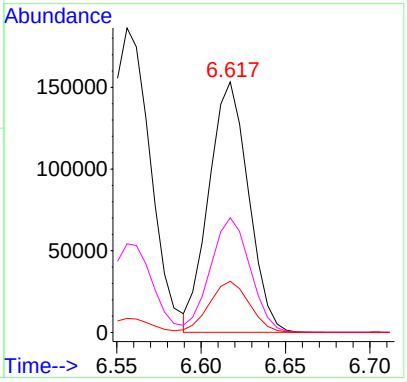


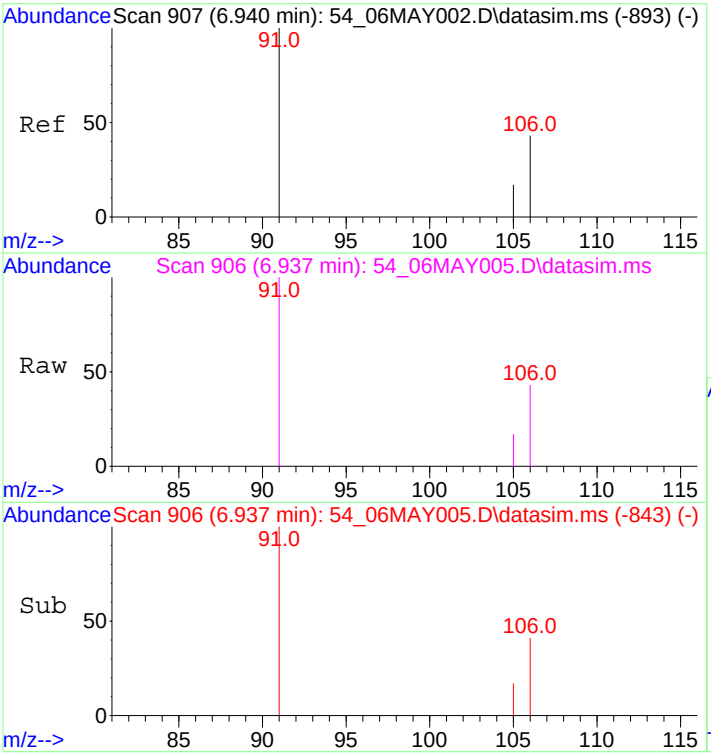


#16
m,p-Xylene
Concen: 473.36 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 91 Resp: 249687

Ion	Ratio	Lower	Upper
91	100		
106	45.9	43.1	64.7
105	20.7	18.3	27.5

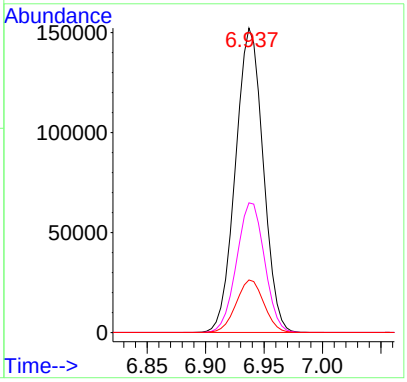




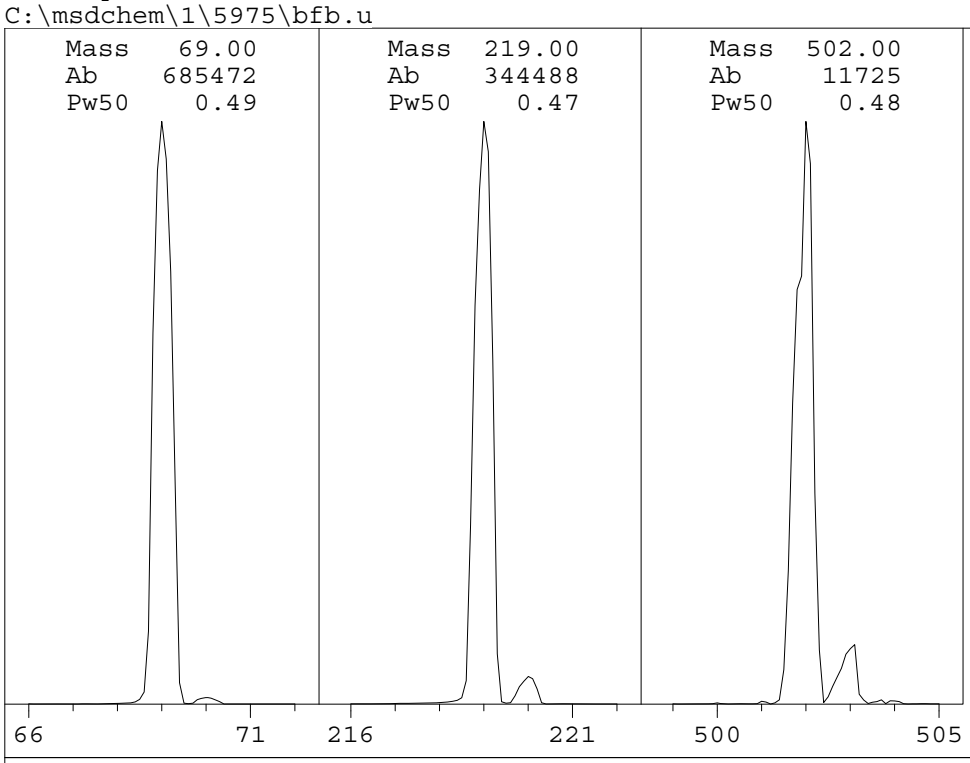
#17
o-Xylene
Concen: 468.73 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 06MAY005.D
Acq: 6 May 2014 7:57 am

Tgt Ion: 91 Resp: 250728

Ion	Ratio	Lower	Upper
91	100		
106	43.1	40.1	60.1
105	17.3	15.8	23.6



Wed May 07 06:38:20 2014 Instrument: GCMS
C:\msdchem\1\5975\bfb.u US91732436

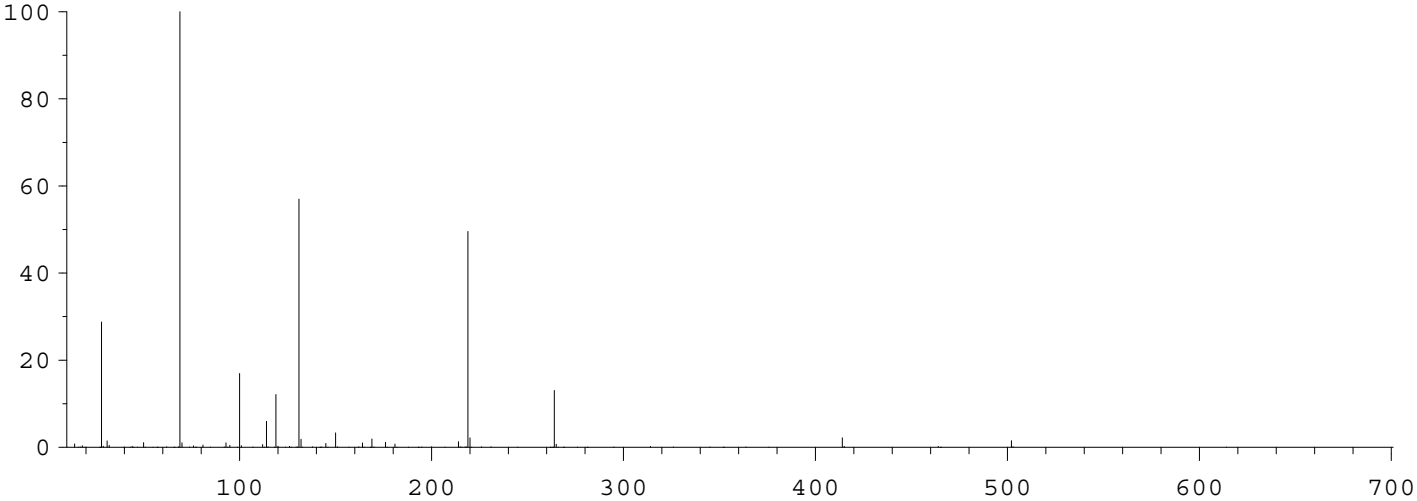


Ion Pol	Pos	MassGain	-791
		MassOffs	-37
Emission	34.6	AmuGain	1593
EIEnrgy	69.9	AmuOffs	129.88
Filament	2	Wid219	-0.029
		DC Pol	Pos
Repeller	19.90		
IonFcus	79.7	HEDEnab	On
EntLens	0.0	EMVolts	1953
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.08e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
109 peaks Base: 69.00 Abundance: 642944



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	642944	100.00	70.00	6745	1.05
219.00	318656	49.56	220.00	14066	4.41
502.10	9747	1.52	503.00	932	9.56

Air/Water Check: H20~0.38% N2~28.78% O2~0.46% CO2~0.21% N2/H2O~7496.92%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 245214
Repeller Maximum 20 volts using ion 219; Gain Factor 2.45

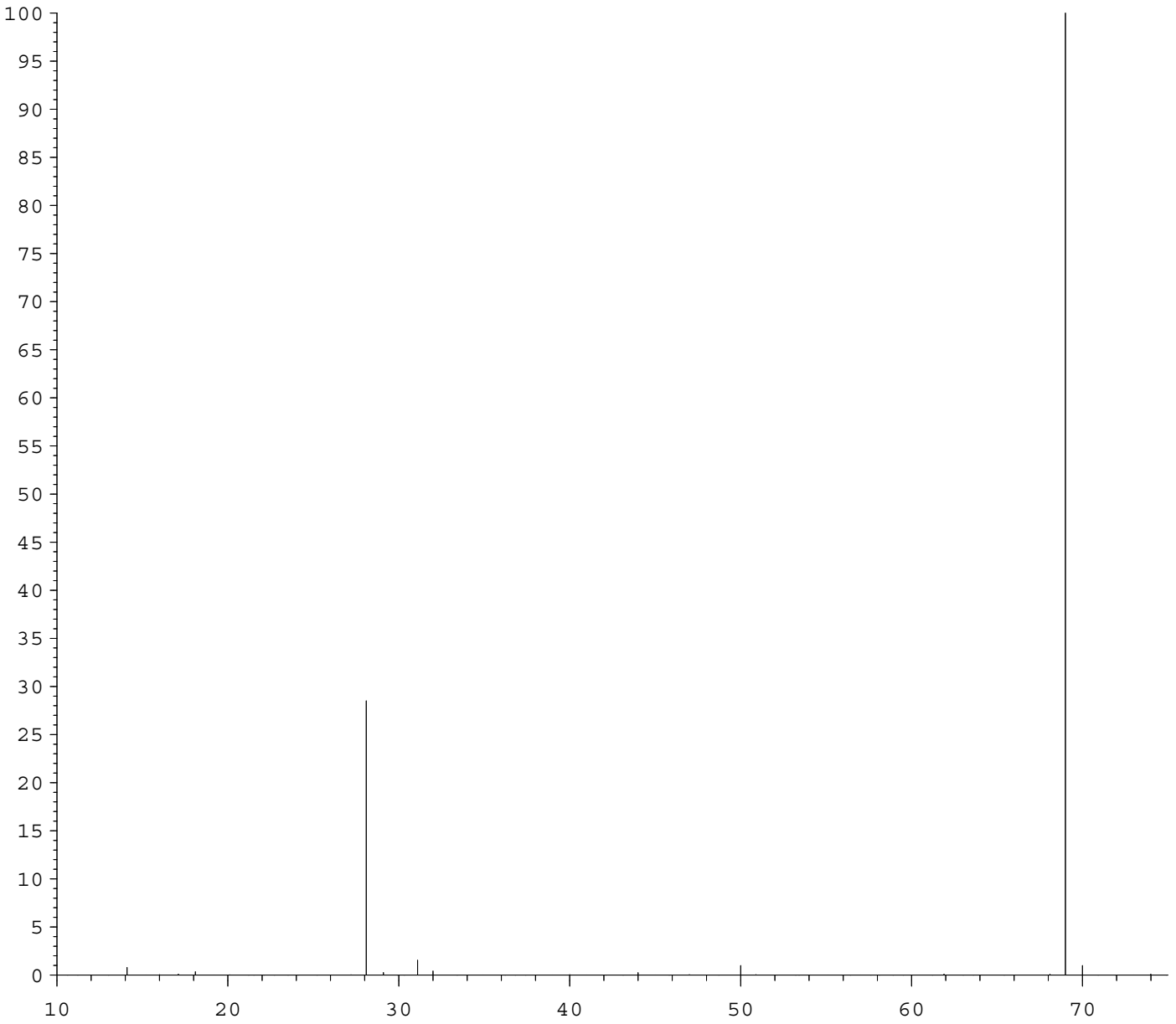
MassGain Values(Samples): -782(3) -767(2) -741(1) -706(0) -636(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.9	129.9	129.9	129.9	129.9	129.9	129.9
Entrance Lens Offset:	16.8	13.8	14.1	13.8	14.1	14.1	14.1
Target Abund(%):	1.0	100.0	55.0	55.0	2.4	2.0	
Actual Tune Abund(%):	1.1	100.0	57.0	49.6	2.2	1.5	

597x Air and Water Check

Instrument: GCMS
Wed May 07 06:40:28 2014 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
74 peaks Base: 69.00 Abundance: 651008



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	651008	100.00	70.00	6495	1.00
18.10	2345	0.36	19.20	90	3.84
28.10	185600	28.51	29.10	1766	0.95

Current Params used: bfb.u

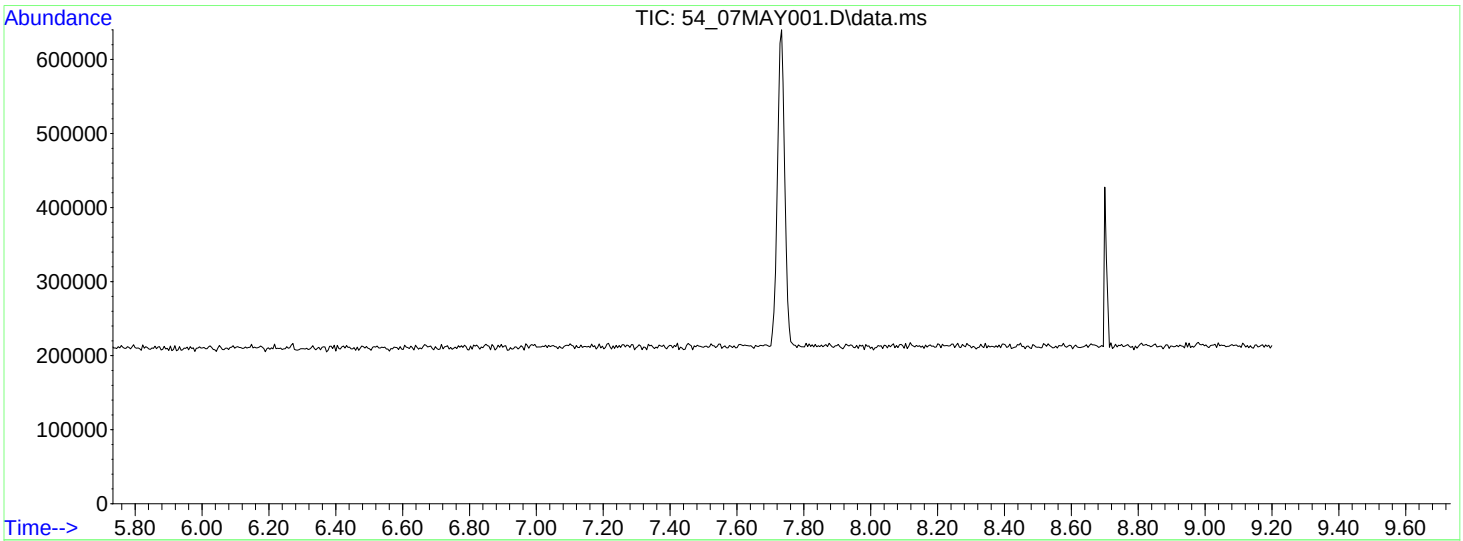
Relative abundances:

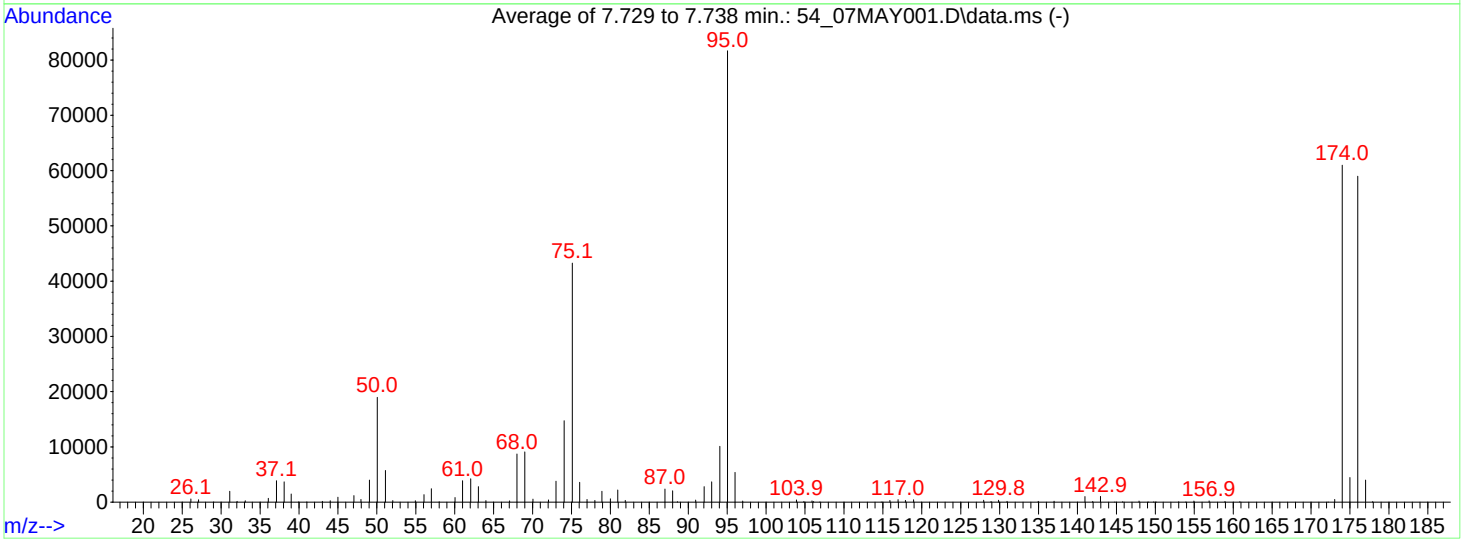
18/69 =	0.36	Water%	(counts=2345)
28/69 =	28.51	Nitrogen%	(counts=185600)
32/69 =	0.42	Oxygen%	(counts=2750)
44/69 =	0.27	Carbon Dioxide%	(counts=1727)
28/18 =	7914.71	Nitrogen/Water%	

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY001.D
Acq On : 7 May 2014 6:51 am
Operator : yhl
Sample : 20140507-BFB \ Tune Check
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20140416.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
Last Update : Tue May 06 16:47:31 2014





AutoFind: Scans 904, 905, 906; Background Corrected with Scan 895

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	23.2	18976	PASS
75	95	30	66	53.0	43253	PASS
95	95	100	100	100.0	81680	PASS
96	95	5	9	6.6	5395	PASS
173	174	0.00	2	0.8	503	PASS
174	95	50	120	74.7	60989	PASS
175	174	4	9	7.3	4457	PASS
176	174	93	101	96.7	58981	PASS
177	176	5	9	6.8	3994	PASS

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2014\20140507\54_07MAY001.D
Tune Time : 7 May 2014 6:51 am

Daily Calibration File : C:\msdchem\1\DATA\2014\20140507\54_07MAY002.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		4008	9437	8911
54_07MAY002.D	STD2014050	4008	9437	8911
54_07MAY003.D	STD2014050	4399	10252	9144
54_07MAY004.D	STD2014050	3893	9282	8038
54_07MAY005.D	20140507-M	4002	9499	8167
54_07MAY006.D	20140507-L	3936	9184	8343
54_07MAY007.D	02223 \ B1	4180	9801	9098
54_07MAY008.D	02222 \ B1	4219	9668	8853
54_07MAY009.D	02224 \ B1	3763	8749	8272
54_07MAY010.D	02225 \ B1	4256	9980	9232
54_07MAY011.D	02225 \ B1	3721	8516	7803
54_07MAY012.D	02227 \ SG	3550	8359	7832
54_07MAY013.D	02228 \ SG	3900	9033	8284
54_07MAY014.D	02229 \ SG	3876	8814	8175
54_07MAY015.D	02230 \ SG	3928	9062	8739
54_07MAY016.D	02231 \ SG	4044	9378	8627
54_07MAY017.D	02232 \ SG	3422	7838	7536
54_07MAY018.D	02233 \ SG	4118	9383	9036
54_07MAY019.D	02234 \ SG	4131	9375	8730

(fails) - fails 24hr time check * - fails criteria

Created: Wed May 07 17:39:18 2014 GCMS

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY002.D
Acq On : 7 May 2014 7:02 am
Operator : yhl
Sample : STD20140507-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 07:08:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 16:47:31 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISTD	Bromochloromethane	1.000	1.000	0.0	91	0.00
2	M	Vinyl chloride	0.380	0.360	5.3	90	0.00
3	M	1,1-Dichloroethene	0.774	0.831	-7.4	99	0.00
4	M	Methyl Tert Butyl Ether	1.183	1.124	5.0	89	0.00
5	M	trans-1,2-Dichloroethene	0.683	0.721	-5.6	98	0.00
6	M	1,1-Dichloroethane	0.815	0.823	-1.0	94	0.00
7	M	cis-1,2-Dichloroethene	0.637	0.682	-7.1	96	0.00
8	M	1,1,1-Trichloroethane	1.034	1.195	-15.6	103	0.00
9	ISTD	1,4-Difluorobenzene	1.000	1.000	0.0	80	0.00
10	M	Benzene	0.457	0.478	-4.6	85	0.00
11	M	Trichloroethene	0.249	0.265	-6.4	85	0.00
12	ISTD	Chlorobenzene-d5	1.000	1.000	0.0	83	0.00
13	M	Toluene	0.599	0.606	-1.2	83	0.00
14	M	Tetrachloroethene	0.342	0.348	-1.8	83	0.00
15	M	Ethyl Benzene	0.761	0.819	-7.6	88	0.00
16	M	m,p-Xylene	0.584	0.645	-10.4	91	0.00
17	M	o-Xylene	0.593	0.652	-9.9	91	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY002.D
Acq On : 7 May 2014 7:02 am
Operator : yhl
Sample : STD20140507-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 07:18:19 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 16:47:32 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration

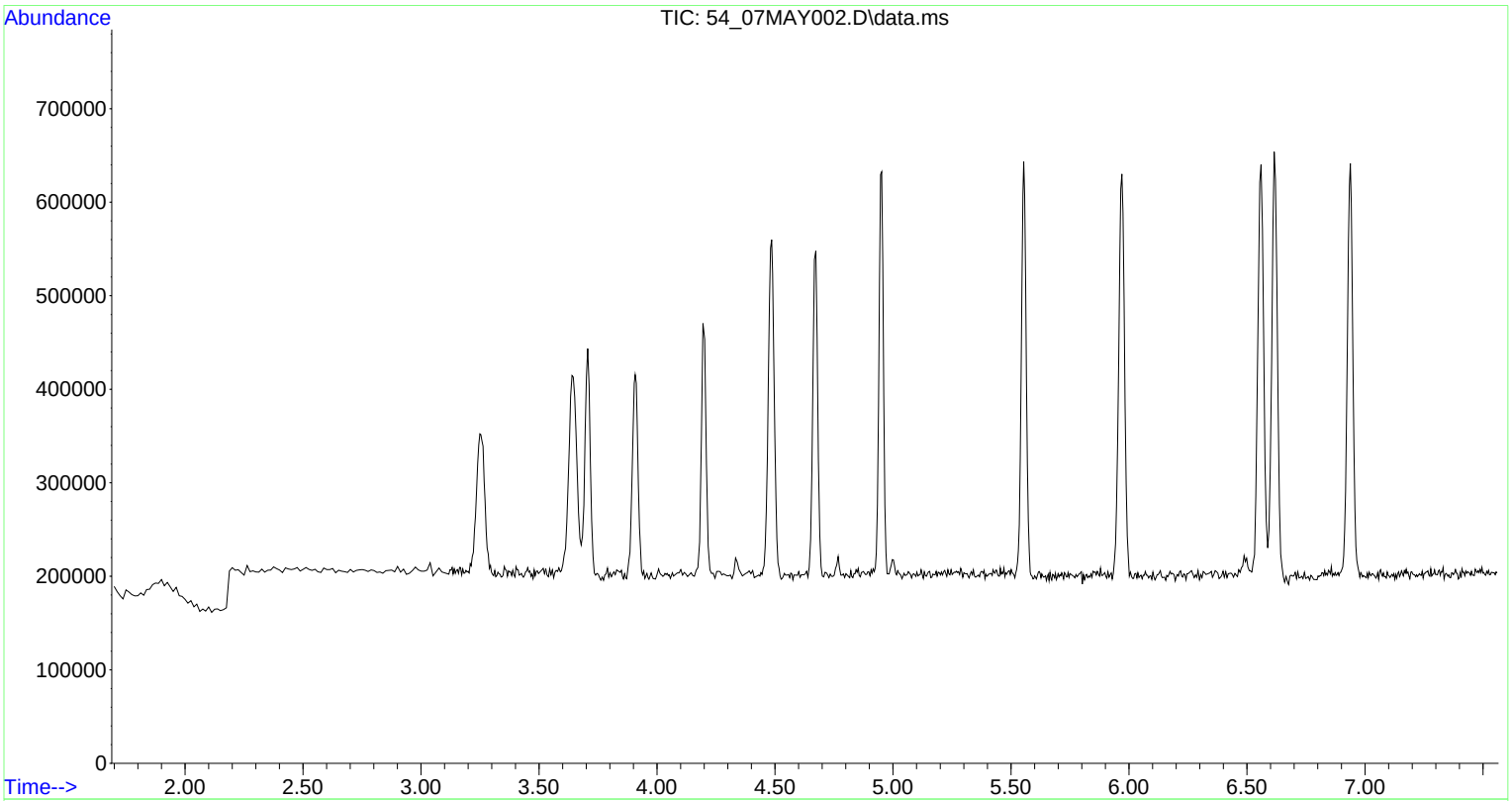
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4008	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9437	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	8911	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	74373	487.99	ppbv	# 32
3] 1,1-Dichloroethene	3.251	61	165848	534.28	ppbv	# 75
4] Methyl Tert Butyl Ether	3.642	73	226277	477.43	ppbv	# 78
5] trans-1,2-Dichloroethene	3.703	61	145280	531.02	ppbv	# 70
6] 1,1-Dichloroethane	3.910	63	170772	522.88	ppbv	# 84
7] cis-1,2-Dichloroethene	4.197	61	144286	564.75	ppbv	# 69
8] 1,1,1-Trichloroethane	4.483	97	241813	583.66	ppbv	96
10] Benzene	4.670	78	236893	549.51	ppbv	# 88
11] Trichloroethene	4.950	130	126097	537.25	ppbv	97
13] Toluene	5.556	91	280746	525.57	ppbv	100
14] Tetrachloroethene	5.972	166	157504	516.24	ppbv	98
15] Ethyl Benzene	6.556	91	379667	559.68	ppbv	93
16] m,p-Xylene	6.617	91	298807	573.92	ppbv	90
17] o-Xylene	6.936	91	300661	569.46	ppbv	91

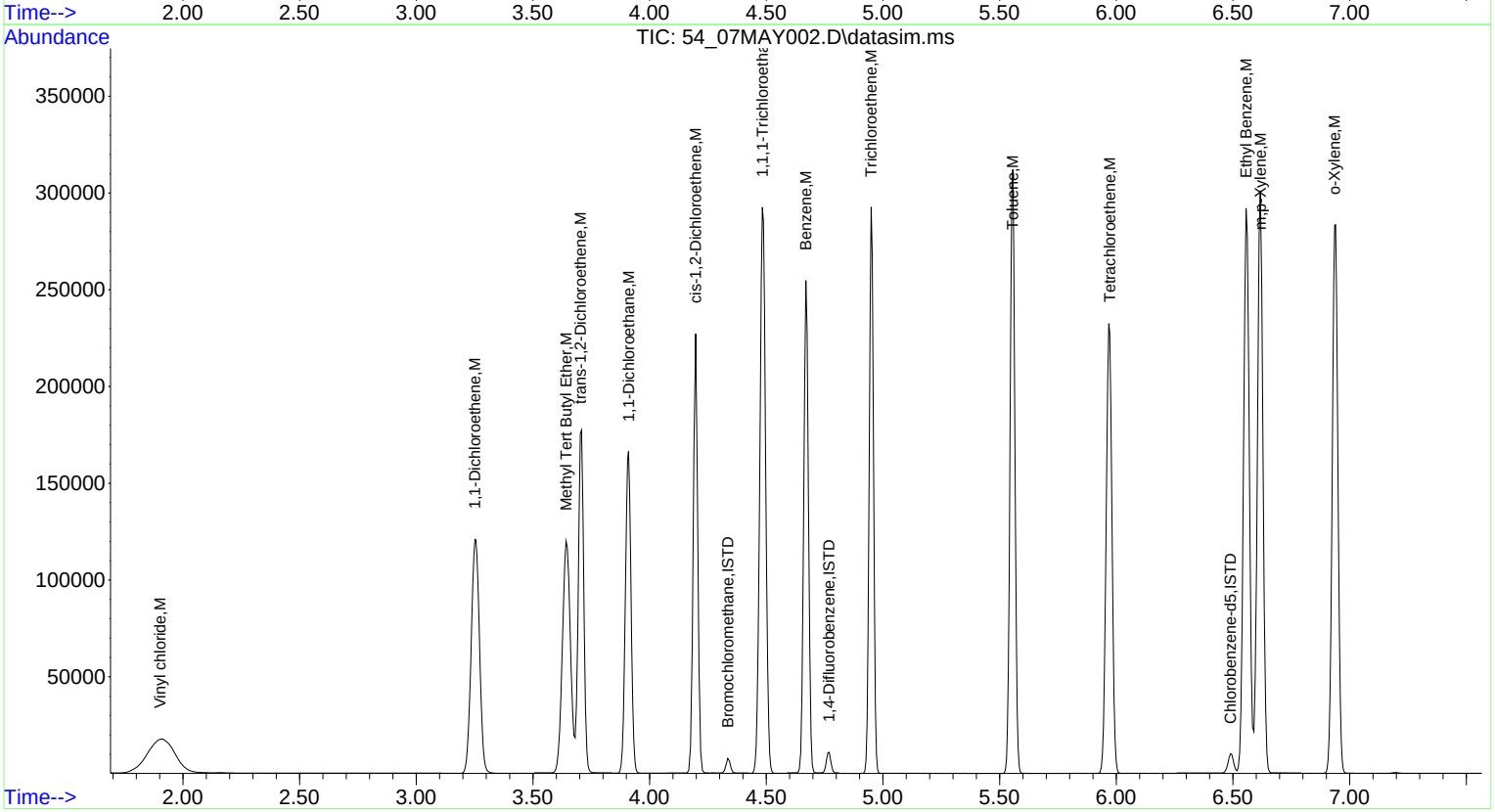
(#) = qualifier out of range (m) = manual integration (+) = signals summed

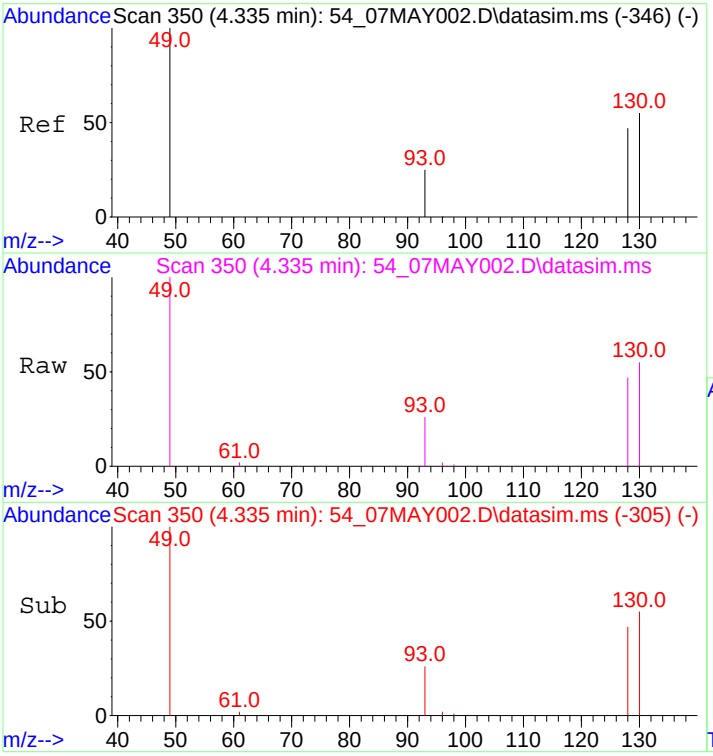
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY002.D
Acq On : 7 May 2014 7:02 am
Operator : yhl
Sample : STD20140507-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 07:18:19 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 16:47:32 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration



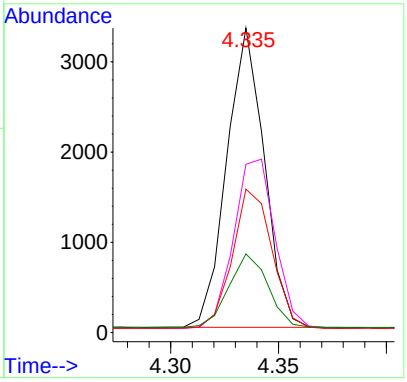


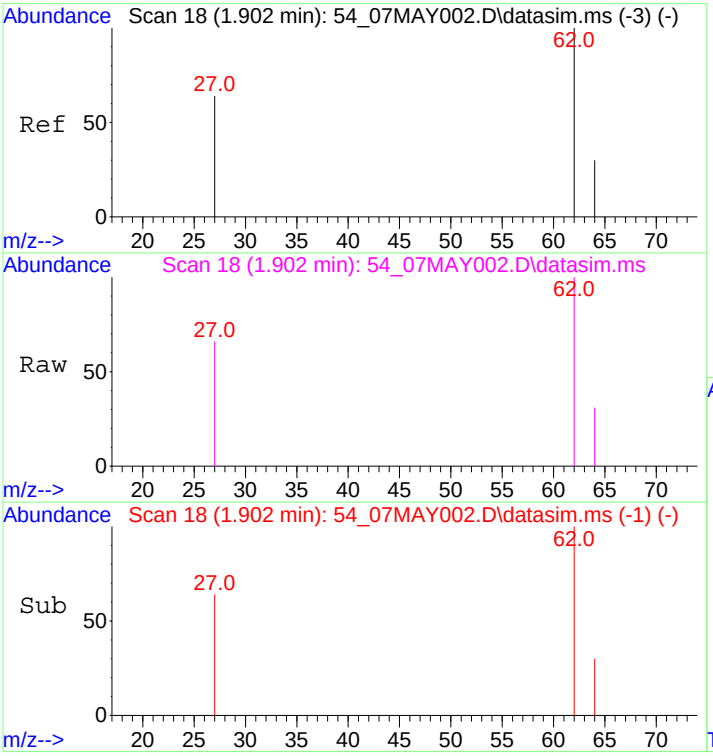


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 49 Resp: 4008

Ion	Ratio	Lower	Upper
49	100		
130	62.5	87.2	130.8#
128	49.1	68.0	102.0#
93	25.8	29.3	43.9#

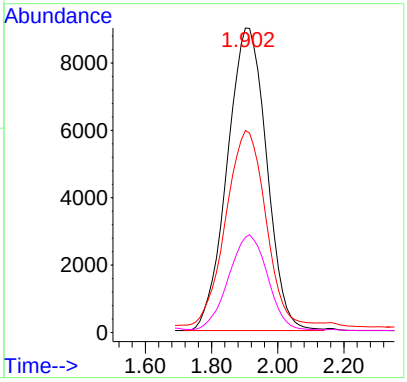


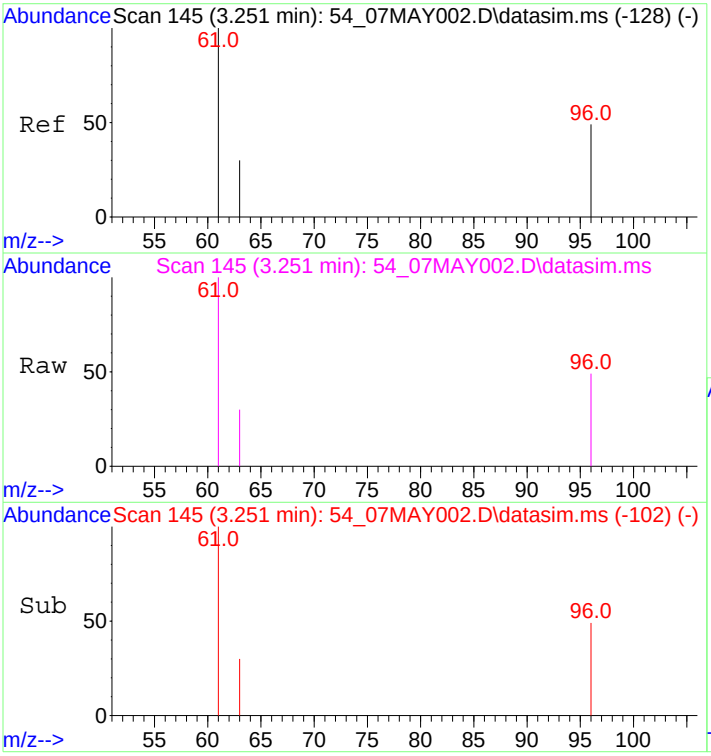


#2
Vinyl chloride
Concen: 487.99 ppbv
RT: 1.902 min Scan# 18
Delta R.T. 0.000 min
Lab File: 54_07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 62 Resp: 74373

Ion	Ratio	Lower	Upper
62	100		
64	37.8	26.8	40.2
27	97.3	16.1	24.1#

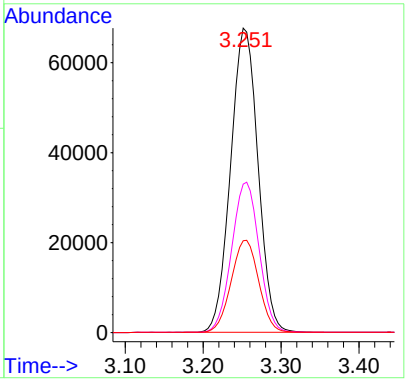


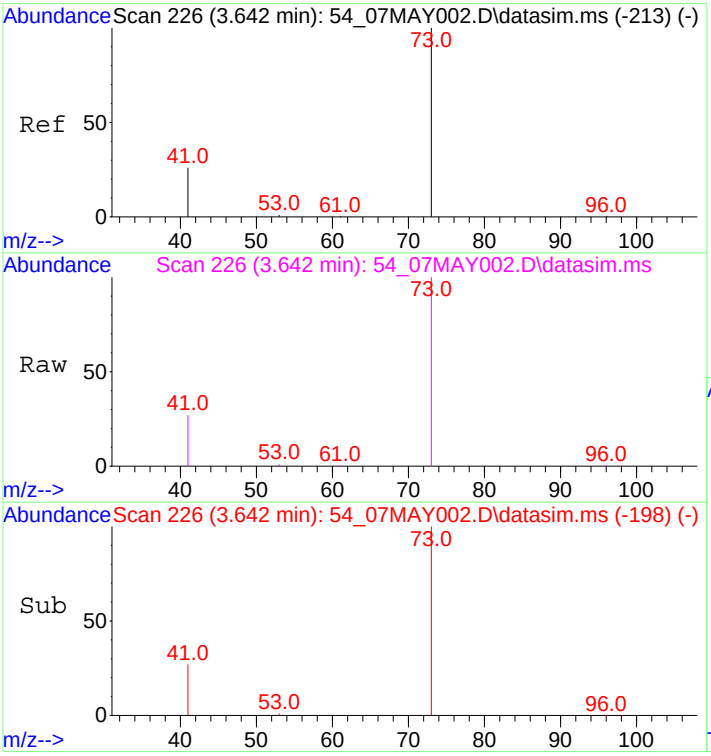


#3
1,1-Dichloroethene
Concen: 534.28 ppbv
RT: 3.251 min Scan# 145
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 61 Resp: 165848

Ion	Ratio	Lower	Upper
61	100		
96	49.4	63.4	95.2#
63	30.5	26.2	39.2

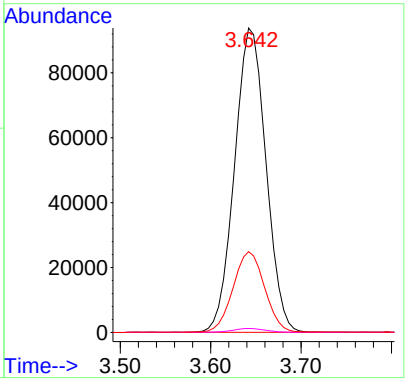


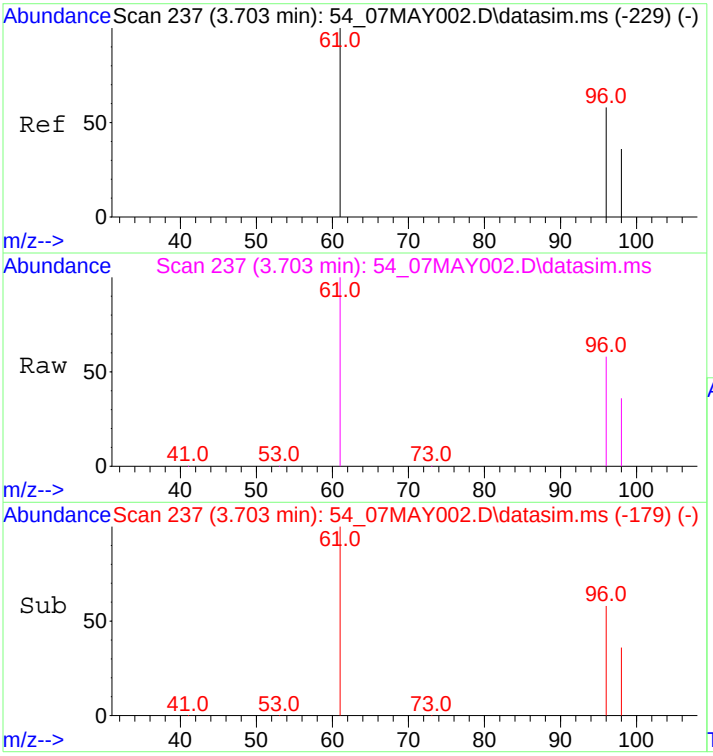


#4
Methyl Tert Butyl Ether
Concen: 477.43 ppbv
RT: 3.642 min Scan# 226
Delta R.T. 0.000 min
Lab File: 54_07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 73 Resp: 226277

Ion	Ratio	Lower	Upper
73	100		
53	1.2	1.0	1.4
41	26.5	13.1	19.7#

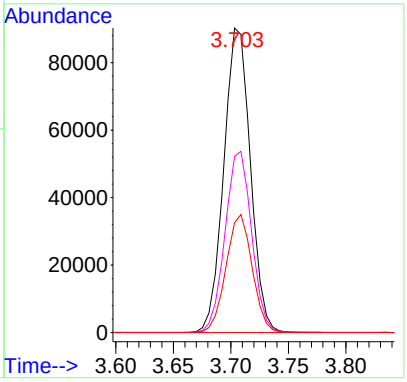


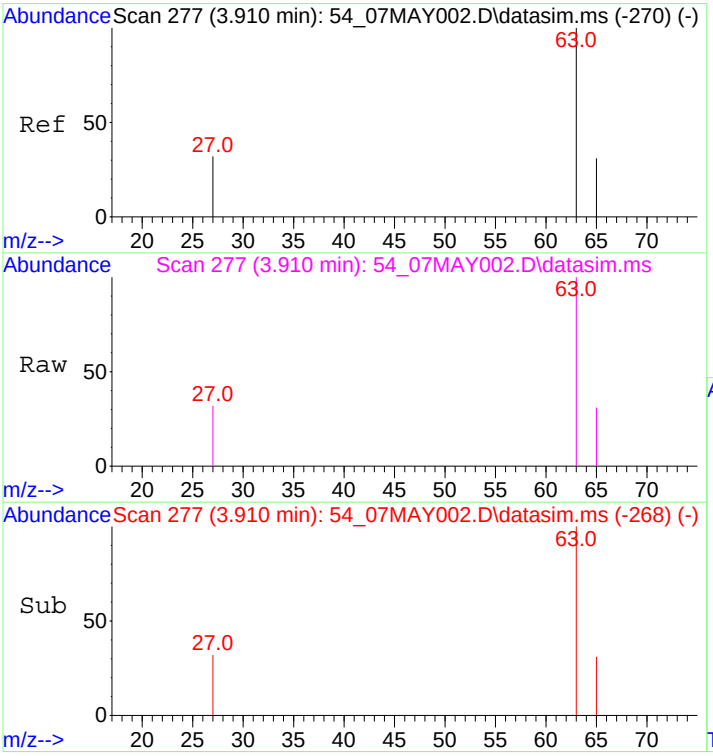


#5
trans-1,2-Dichloroethene
Concen: 531.02 ppbv
RT: 3.703 min Scan# 237
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 61 Resp: 145280

Ion	Ratio	Lower	Upper
61	100		
96	59.4	71.4	107.0#
98	38.1	45.8	68.8#

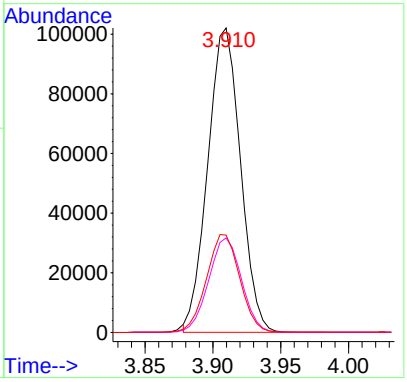


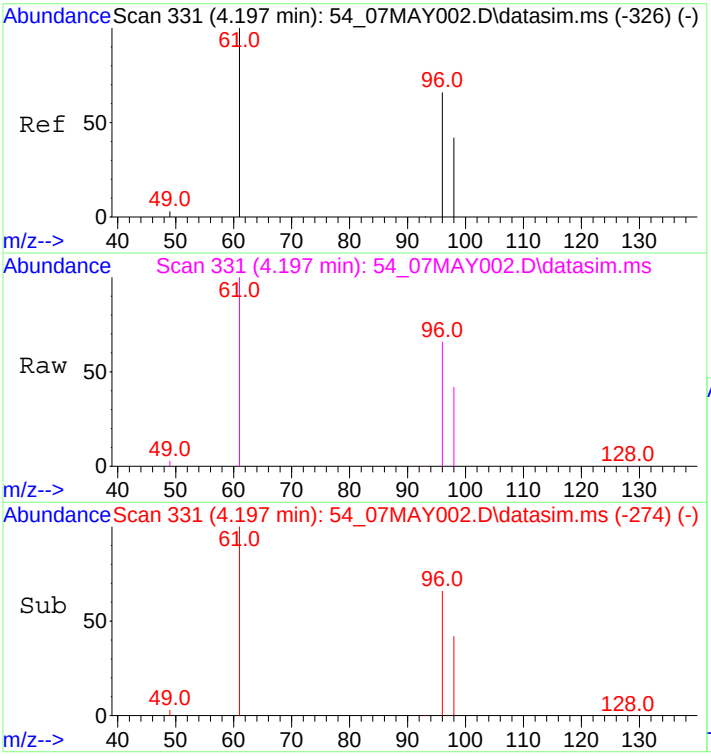


#6
1,1-Dichloroethane
Concen: 522.88 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.000 min
Lab File: 54_07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 63 Resp: 170772

Ion	Ratio	Lower	Upper
63	100		
65	31.0	26.1	39.1
27	32.2	10.2	15.2#

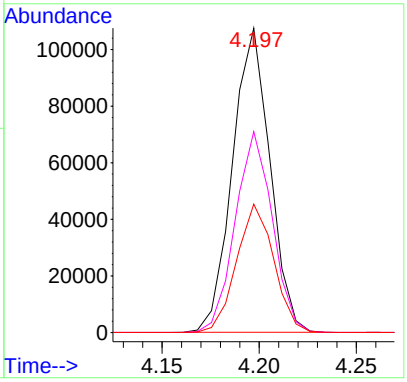


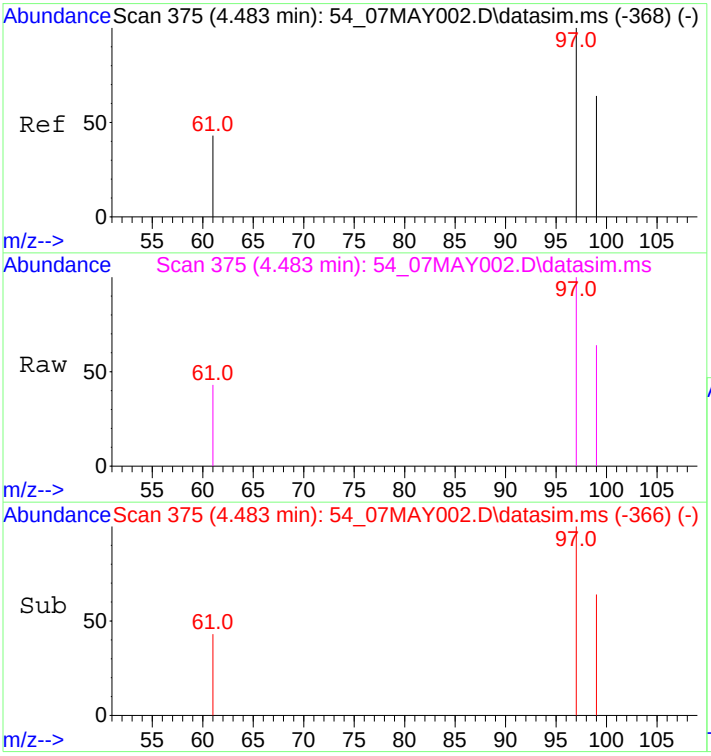


#7
cis-1,2-Dichloroethene
Concen: 564.75 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 61 Resp: 144286

Ion	Ratio	Lower	Upper
61	100		
96	65.3	78.5	117.7#
98	42.0	50.6	76.0#

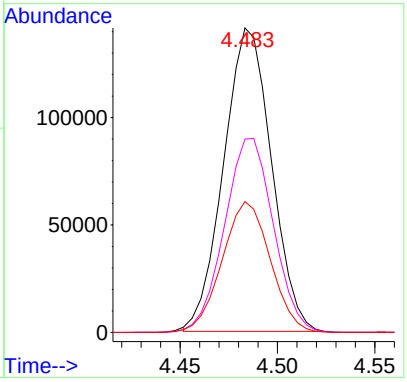


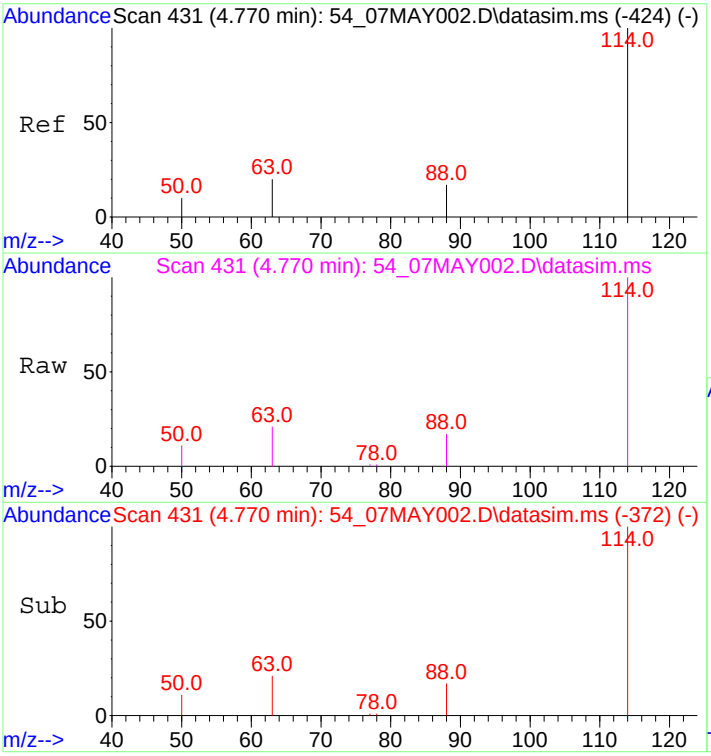


#8
1,1,1-Trichloroethane
Concen: 583.66 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 97 Resp: 241813

Ion	Ratio	Lower	Upper
97	100		
99	64.4	52.1	78.1
61	42.9	30.2	45.4

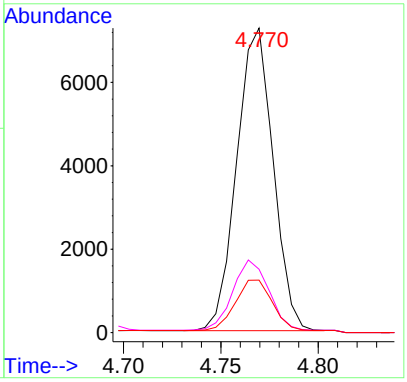


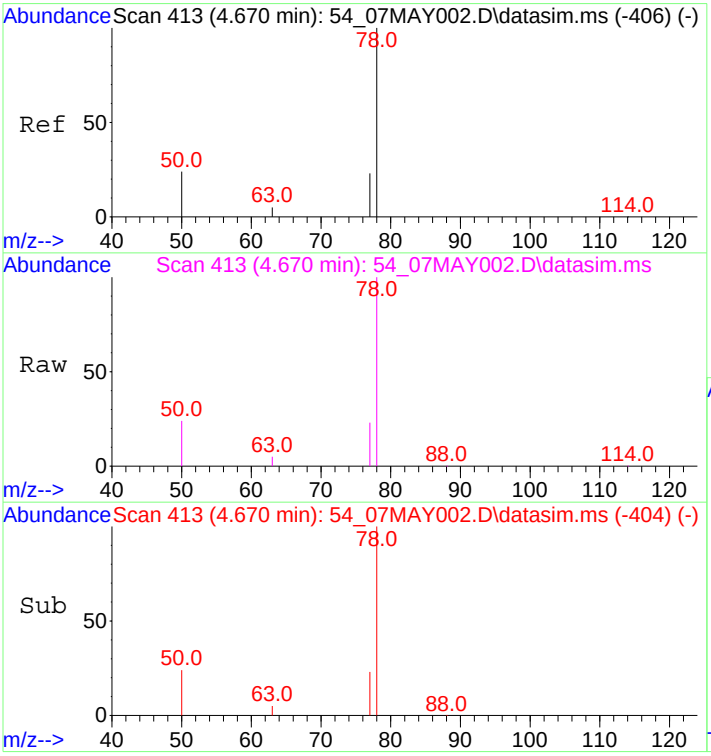


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion:114 Resp: 9437

Ion	Ratio	Lower	Upper
114	100		
63	22.8	12.0	18.0#
88	17.0	11.8	17.8

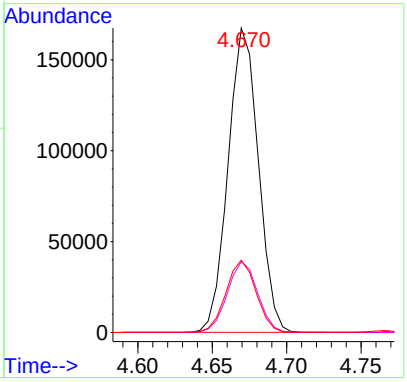


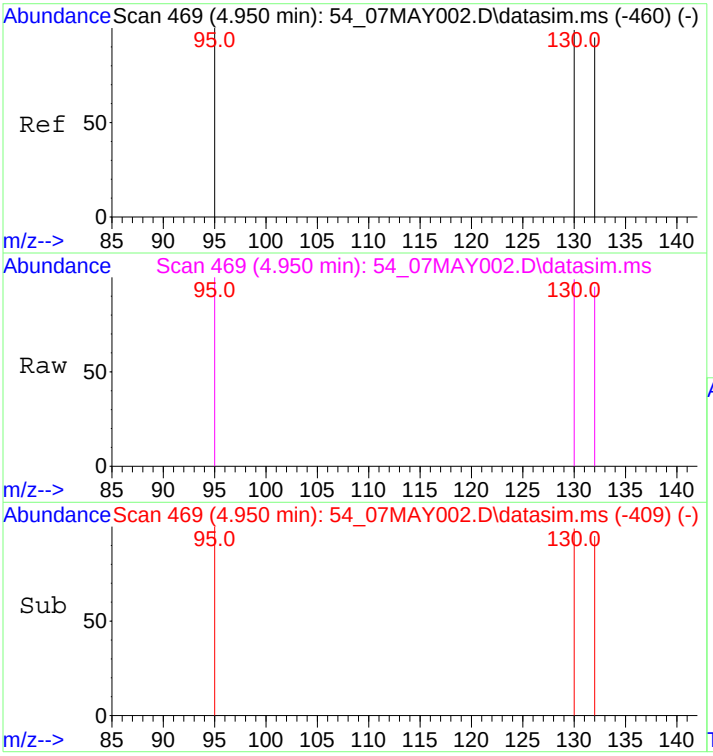


#10
Benzene
Concen: 549.51 ppbv
RT: 4.670 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 78 Resp: 236893

Ion	Ratio	Lower	Upper
78	100		
77	23.2	18.2	27.2
50	23.5	8.6	13.0#

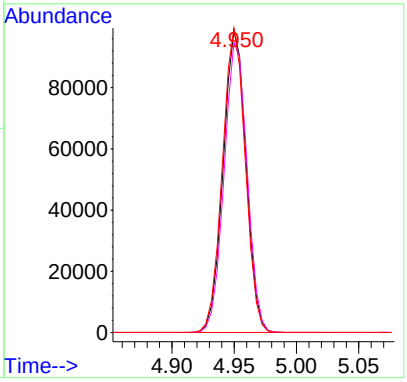


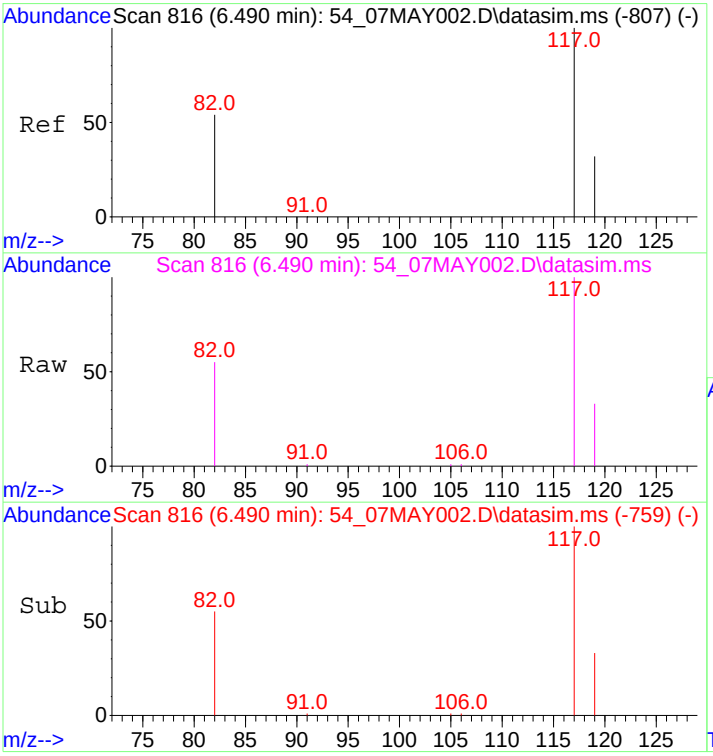


#11
Trichloroethene
Concen: 537.25 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion:130 Resp: 126097

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	100.5	76.5	114.7

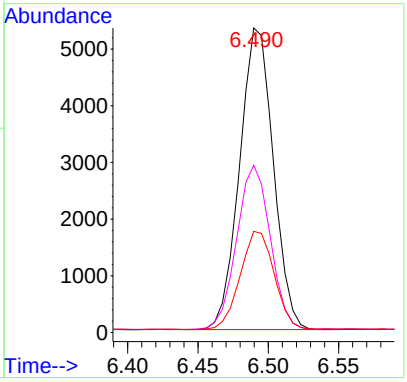


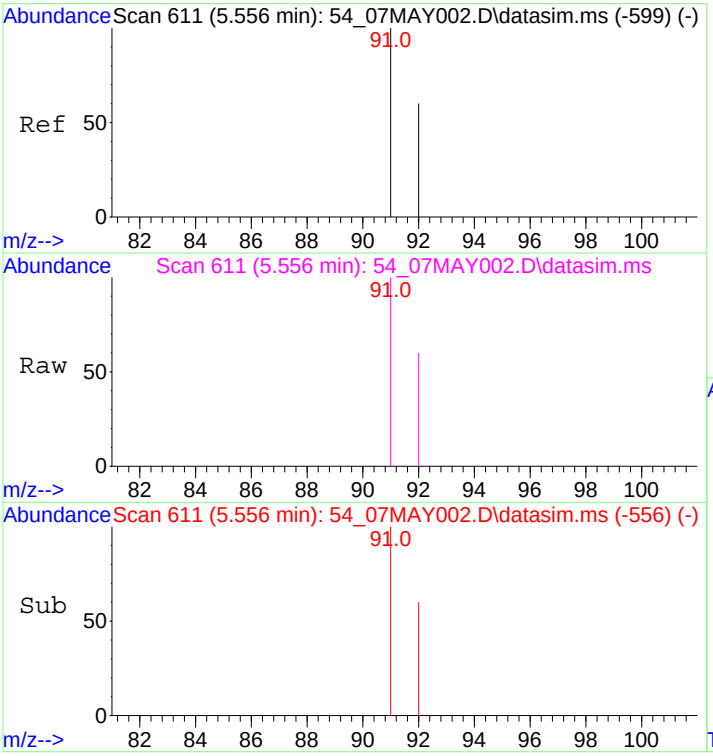


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54_07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion:117 Resp: 8911

Ion	Ratio	Lower	Upper
117	100		
82	53.9	38.0	57.0
119	32.7	27.0	40.4

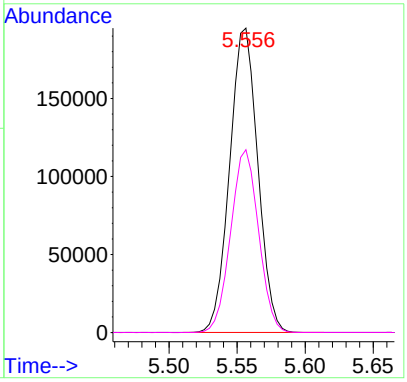


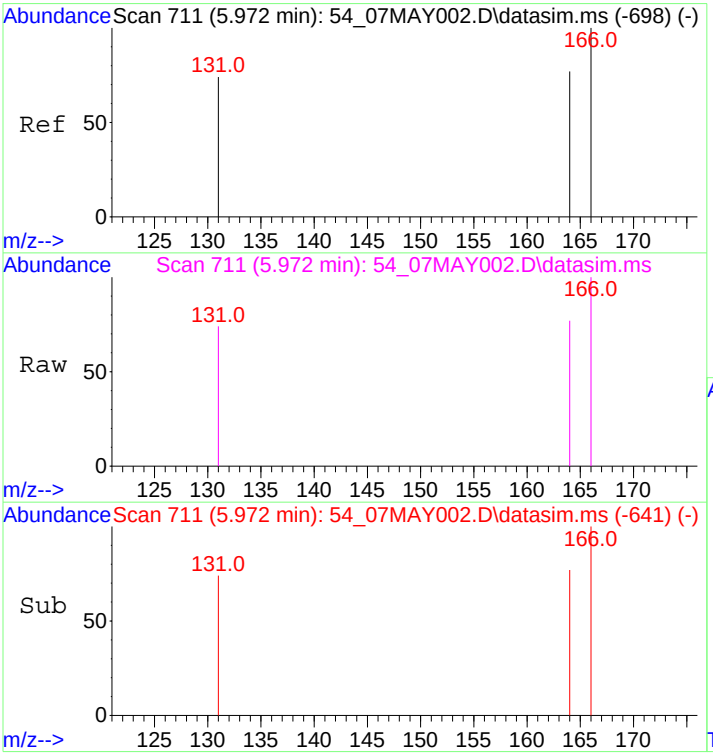


#13
Toluene
Concen: 525.57 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 91 Resp: 280746

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

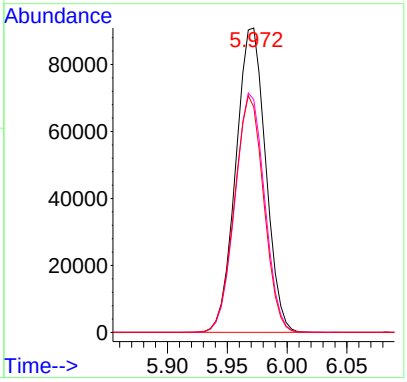


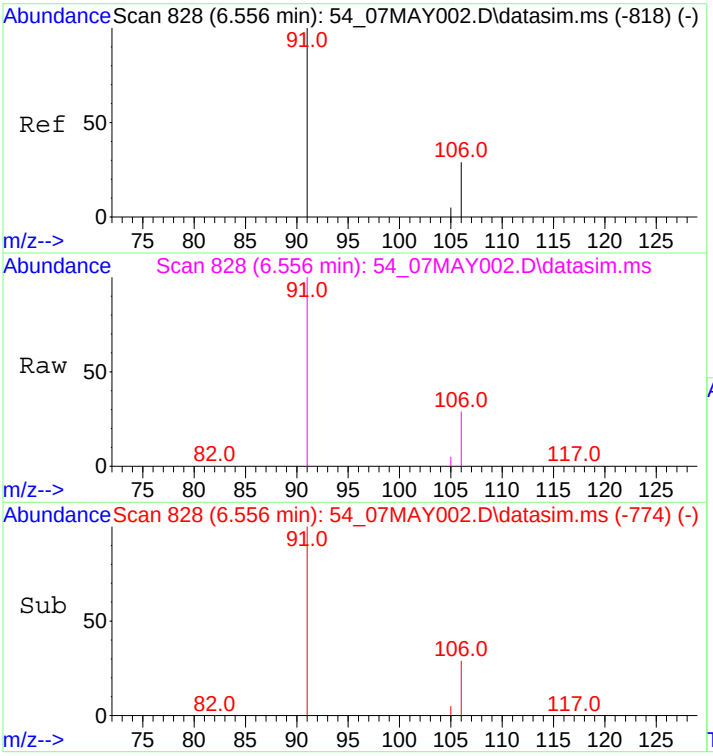


#14
Tetrachloroethene
Concen: 516.24 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion:166 Resp: 157504

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	76.3	58.5	87.7

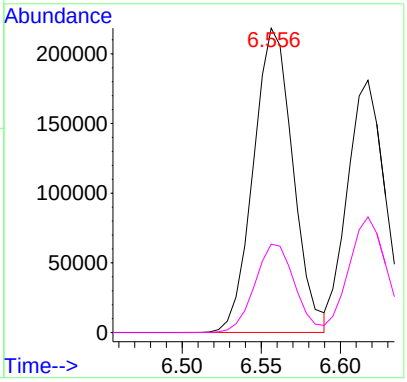


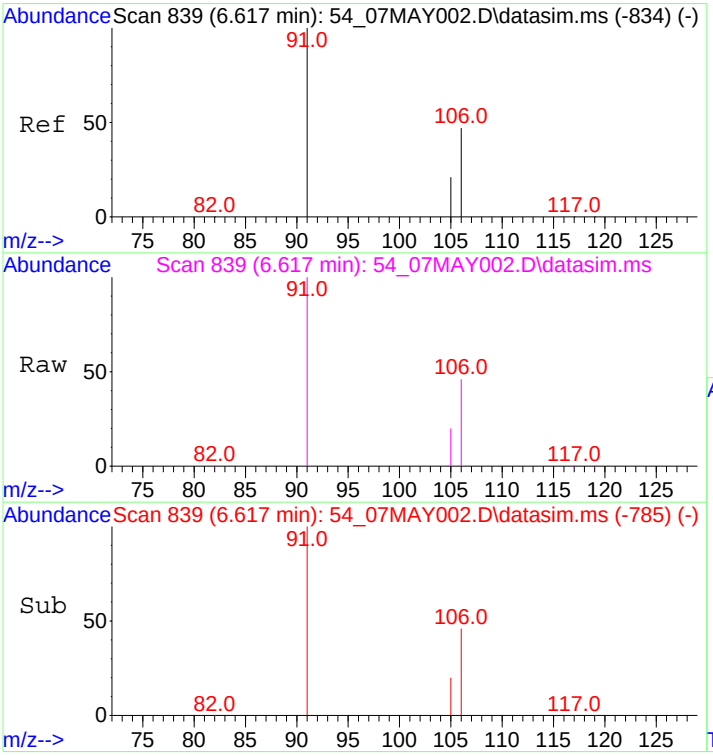


#15
Ethyl Benzene
Concen: 559.68 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 91 Resp: 379667

Ion	Ratio	Lower	Upper
91	100		
106	29.4	26.9	40.3

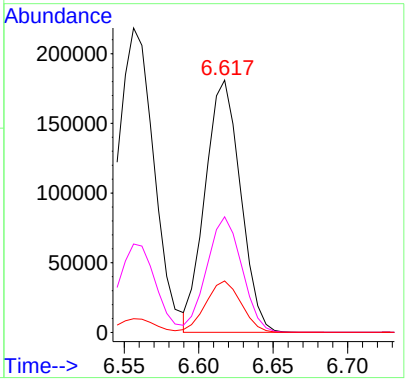


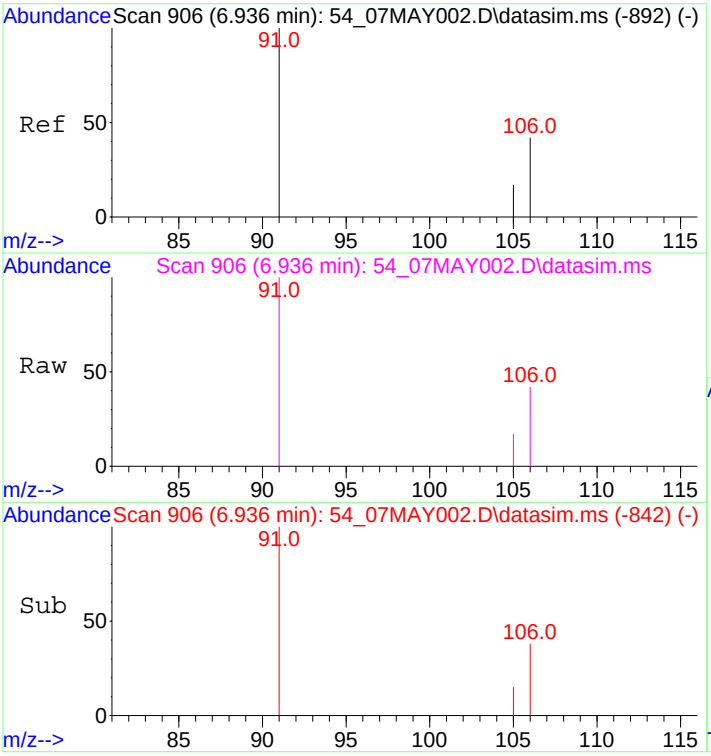


#16
m,p-Xylene
Concen: 573.92 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 91 Resp: 298807

Ion	Ratio	Lower	Upper
91	100		
106	45.4	43.1	64.7
105	20.5	18.3	27.5

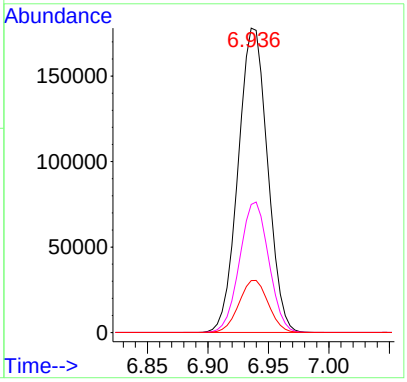




#17
o-Xylene
Concen: 569.46 ppbv
RT: 6.936 min Scan# 906
Delta R.T. 0.000 min
Lab File: 54 07MAY002.D
Acq: 7 May 2014 7:02 am

Tgt Ion: 91 Resp: 300661

Ion	Ratio	Lower	Upper
91	100		
106	42.5	40.1	60.1
105	17.1	15.8	23.6



LOW LEVEL CALIBRATION VERIFICATION

Data File 54_07May004.D

LLCCV Standard Number 051307-LLCCV

LLCCV Standard Name **STD20140507-3 \LLCCV 0.5 ppbv 1º**

Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/7/2014	1º Source Actual Values ppbv	Difference %	Acceptance Criterion %	
Vinyl Chloride	0.46	0.52	10.7	50	OK
1,1-Dichloroethene	0.50	0.50	0.5	50	OK
Methyl Tert Butyl Ether	0.42	0.50	16.4	50	OK
trans-1,2-Dichloroethene	0.55	0.50	9.5	50	OK
1,1-Dichloroethane	0.46	0.52	11.1	50	OK
cis-1,2-Dichloroethene	0.54	0.53	2.4	50	OK
1,1,1-Trichloroethane	0.56	0.51	10.9	50	OK
Benzene	0.55	0.53	4.8	50	OK
Trichloroethene	0.62	0.51	22.8	50	OK
Toluene	0.64	0.52	23.1	50	OK
Tetrachloroethene	0.59	0.51	16.3	50	OK
Ethyl Benzene	0.62	0.52	19.2	50	OK
m,p-Xylene	0.66	0.52	26.9	50	OK
o-Xylene	0.62	0.52	19.8	50	OK

Primary Standard Cylinder # CC-80994

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 07:54:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration

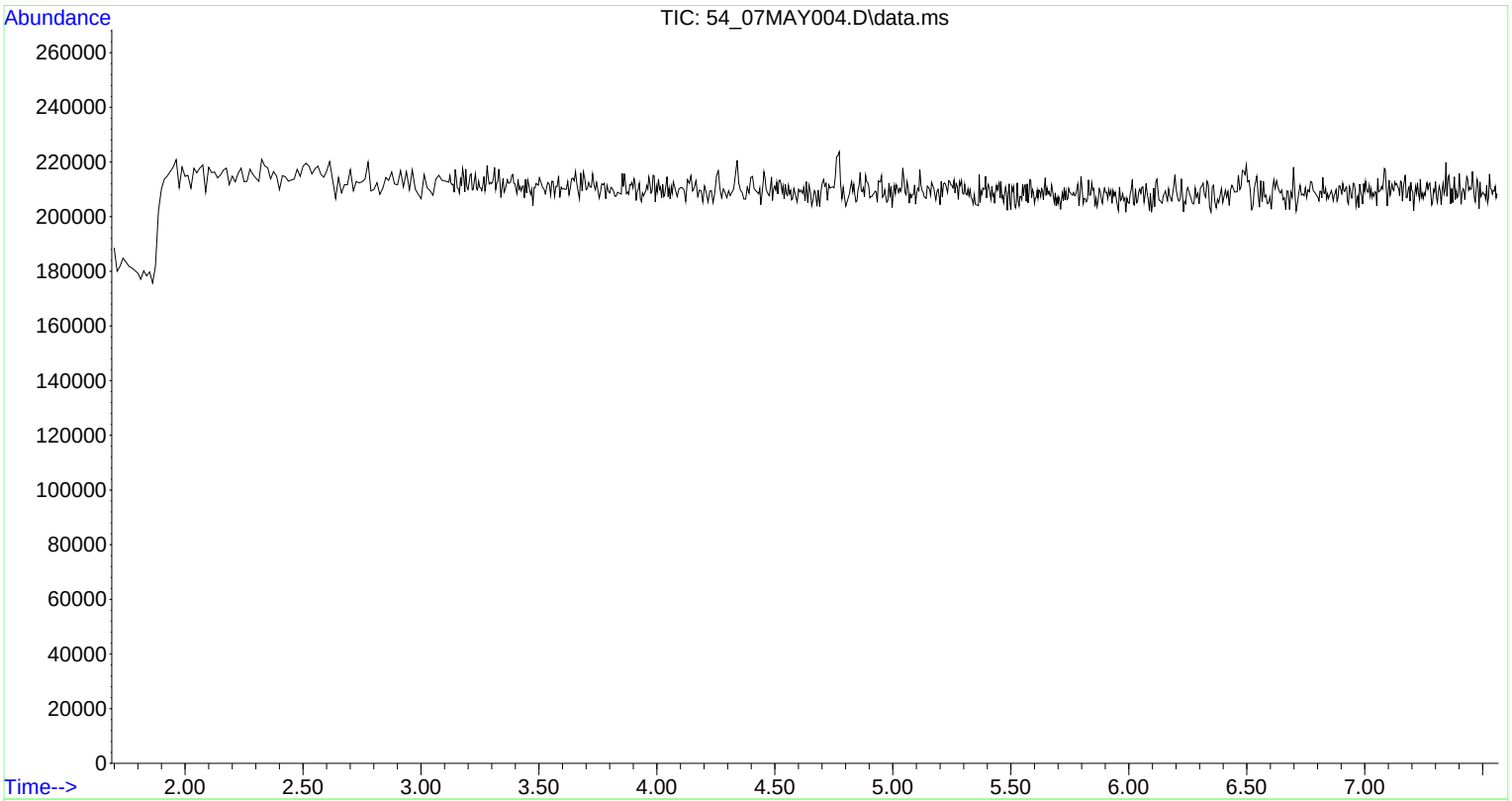
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3893	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9282	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.489	117	8038	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.877	62	68m	0.46	ppbv	
3] 1,1-Dichloroethene	3.251	61	150	0.50	ppbv #	59
4] Methyl Tert Butyl Ether	3.652	73	193m	0.42	ppbv	
5] trans-1,2-Dichloroethene	3.707	61	145	0.55	ppbv #	10
6] 1,1-Dichloroethane	3.910	63	145	0.46	ppbv #	80
7] cis-1,2-Dichloroethene	4.197	61	135m	0.54	ppbv	
8] 1,1,1-Trichloroethane	4.483	97	225	0.56	ppbv #	93
10] Benzene	4.669	78	234	0.55	ppbv #	81
11] Trichloroethene	4.954	130	142	0.62	ppbv	95
13] Toluene	5.556	91	306	0.64	ppbv	100
14] Tetrachloroethene	5.972	166	163	0.59	ppbv	95
15] Ethyl Benzene	6.556	91	380	0.62	ppbv	97
16] m,p-Xylene	6.612	91	312	0.66	ppbv	93
17] o-Xylene	6.937	91	296	0.62	ppbv	90

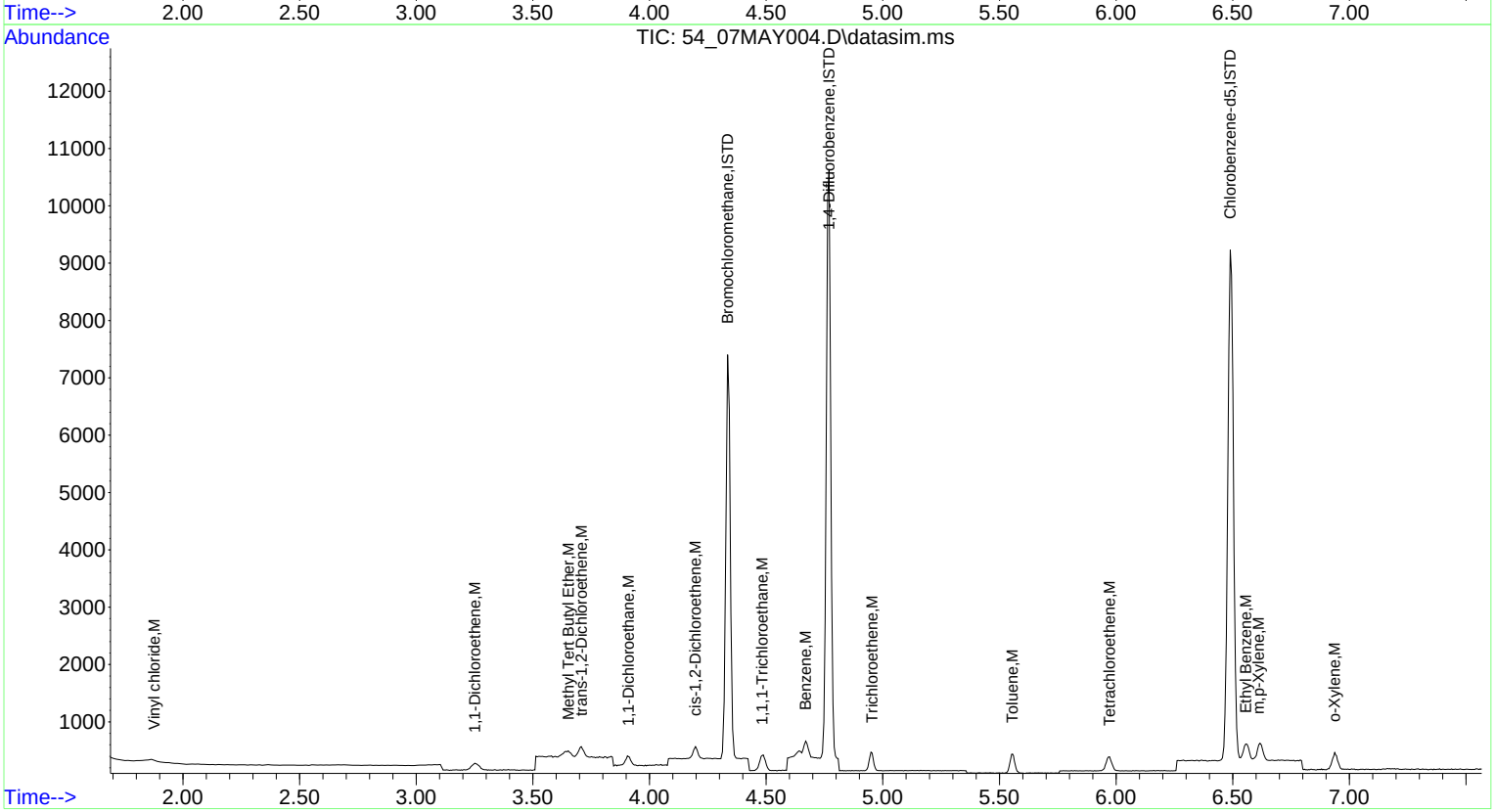
(#) = qualifier out of range (m) = manual integration (+) = signals summed

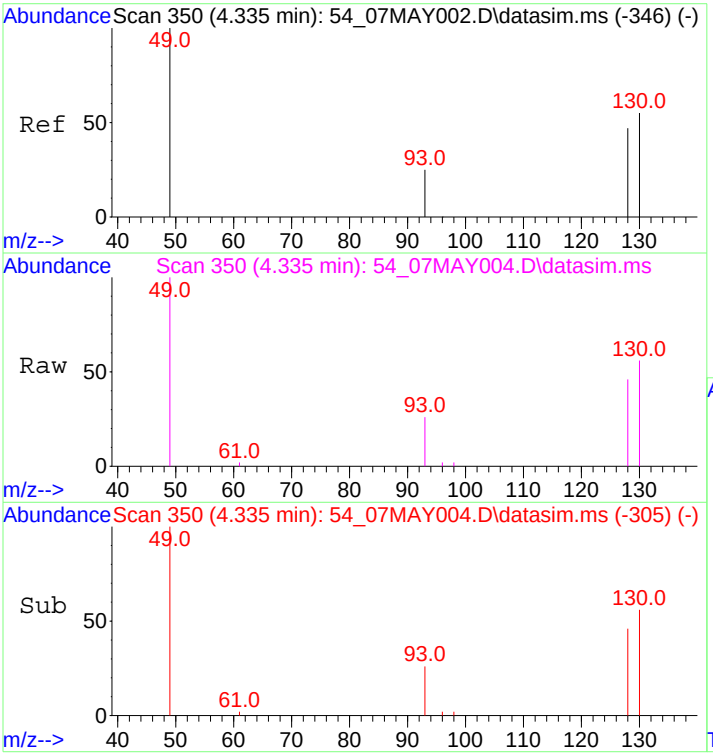
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 07:54:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration



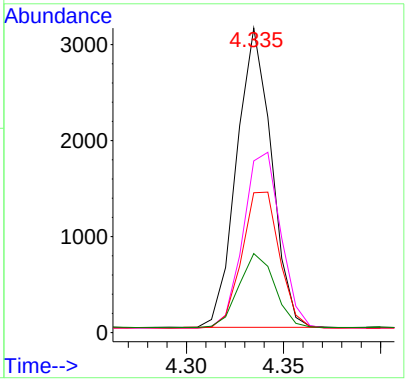


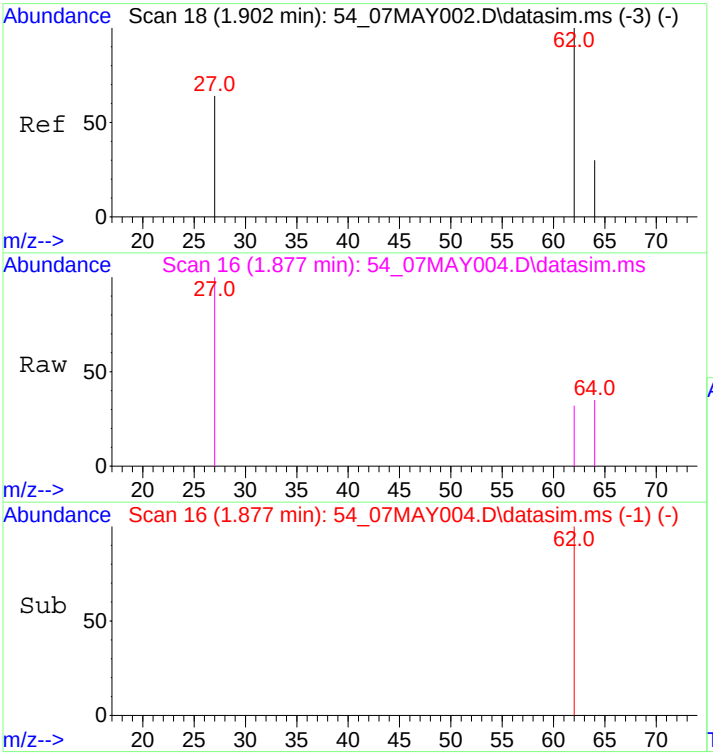


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 49 Resp: 3893

Ion	Ratio	Lower	Upper
49	100		
130	63.5	56.0	84.0
128	49.4	41.6	62.4
93	25.5	22.4	33.6

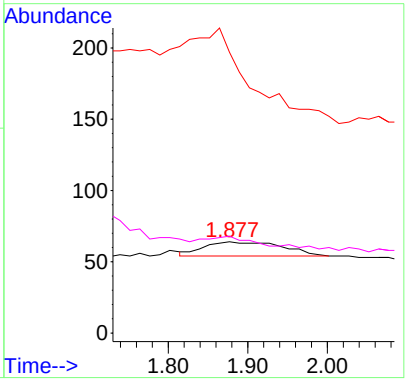




#2
Vinyl chloride
Concen: 0.46 ppbv m
RT: 1.877 min Scan# 16
Delta R.T. -0.025 min
Lab File: 54_07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 62 Resp: 68

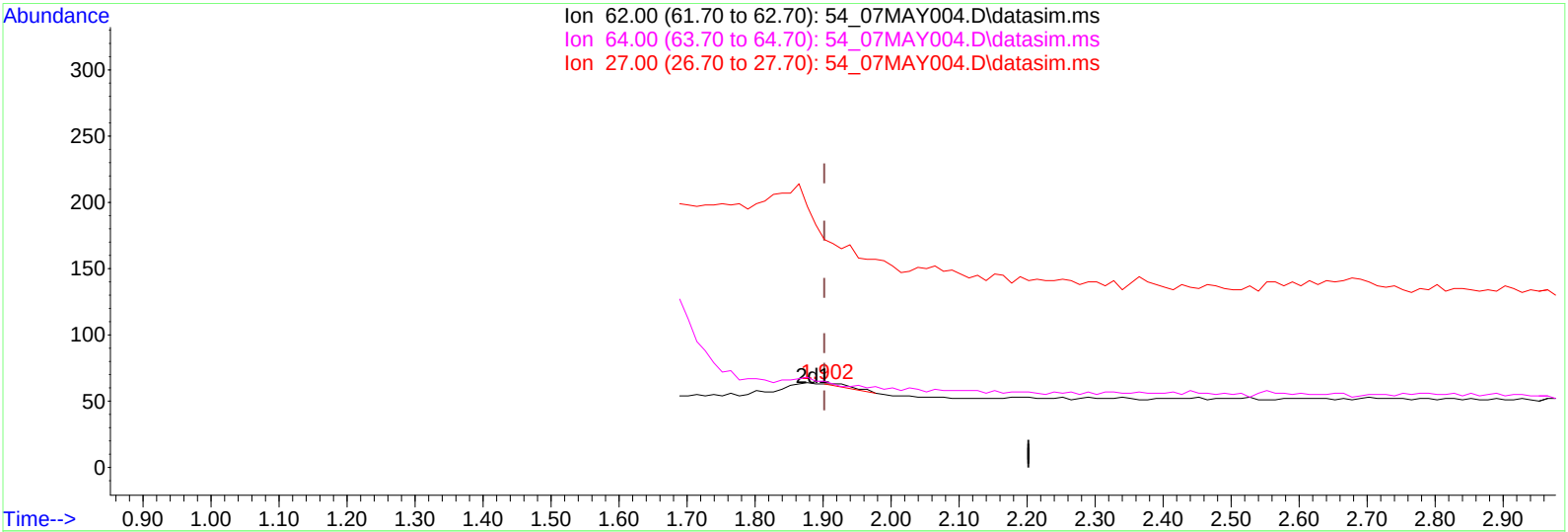
Ion	Ratio	Lower	Upper
62	100		
64	106.3	28.0	42.0#
27	307.8	72.0	108.0#

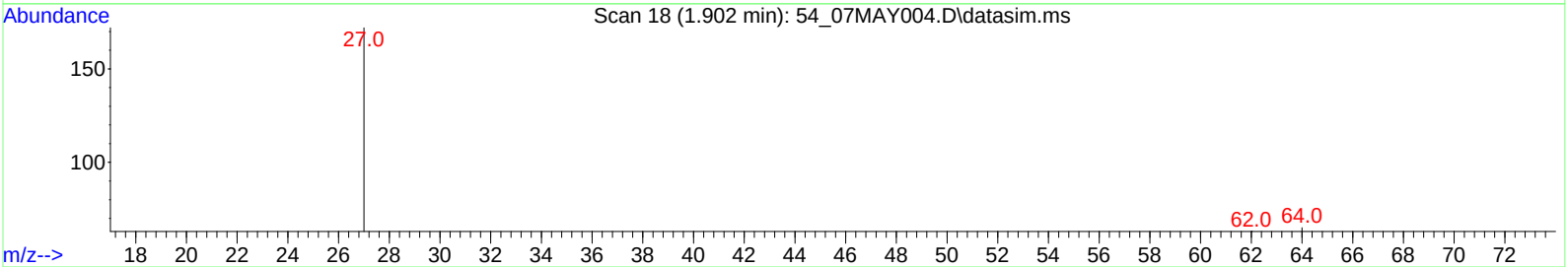


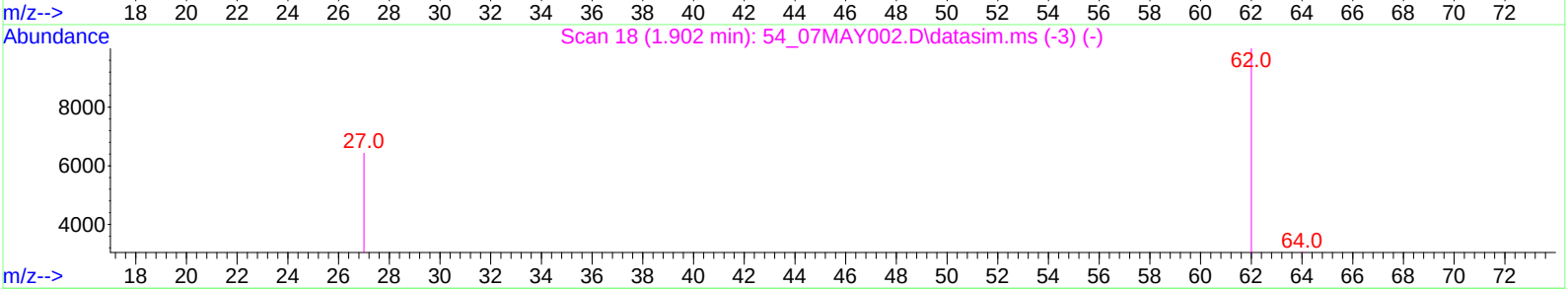
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 07:50:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration







TIC: 54_07MAY004.D\data.ms

(2) Vinyl chloride (M)

1.902min (-0.000) 0.02 ppbv

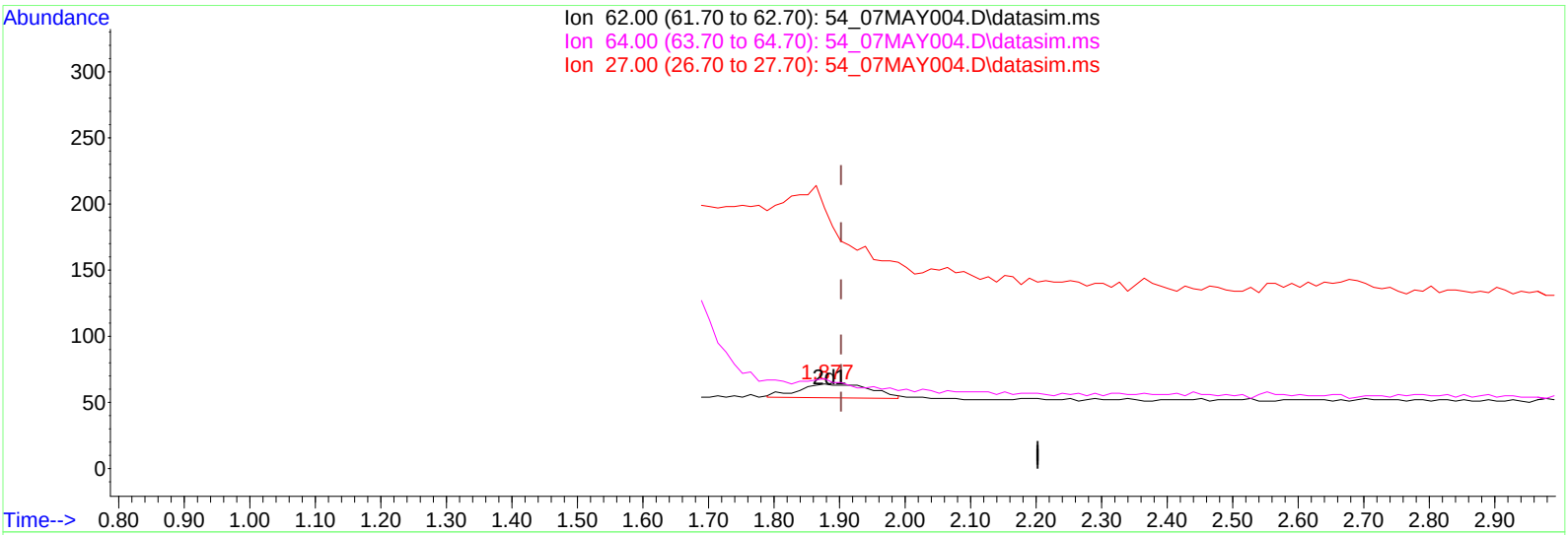
response 3

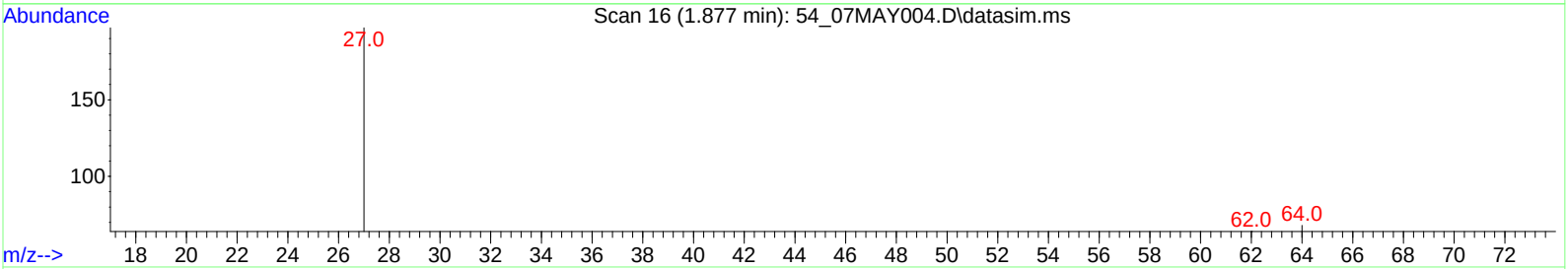
Ion	Exp%	Act%
62.00	100	100
64.00	35.00	0.00#
27.00	90.00	0.00#
0.00	0.00	0.00

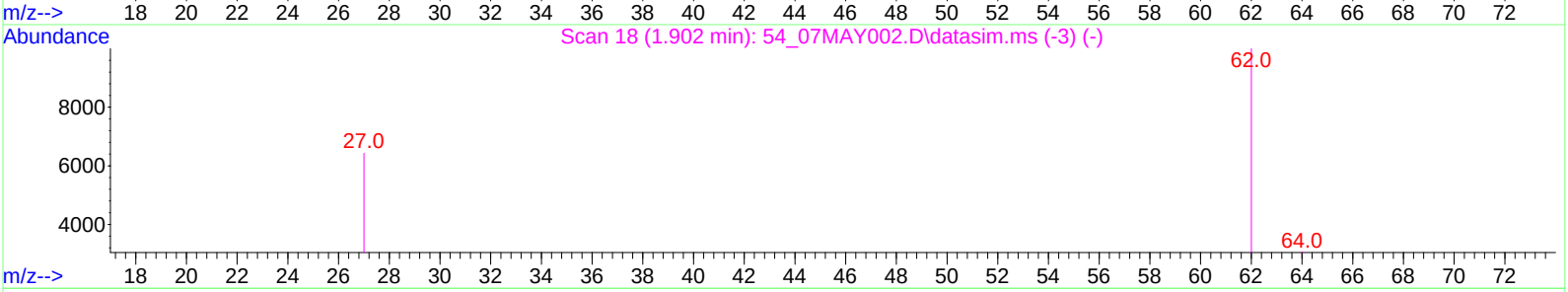
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:15:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







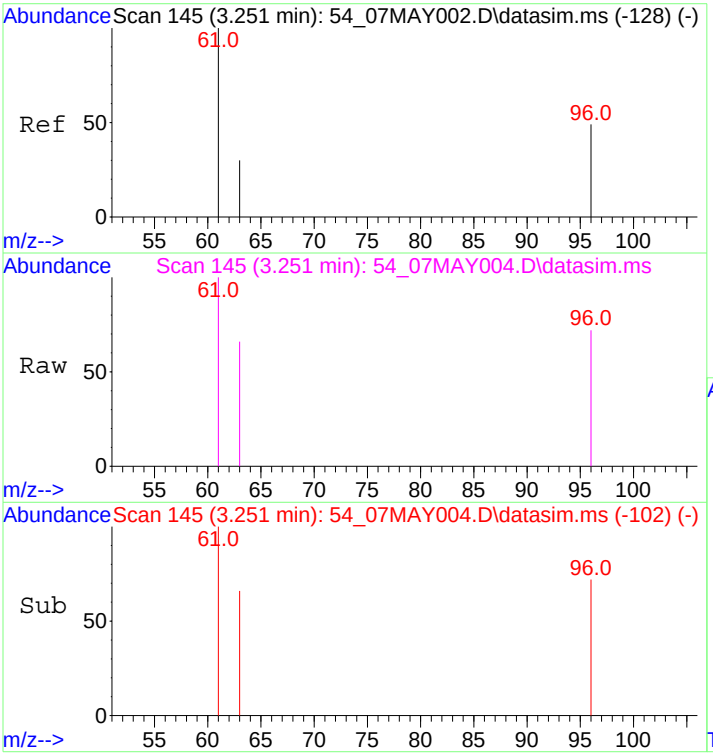
TIC: 54_07MAY004.D\data.ms

(2) Vinyl chloride (M)

1.877min (-0.025) 0.54 ppbv m

response 80

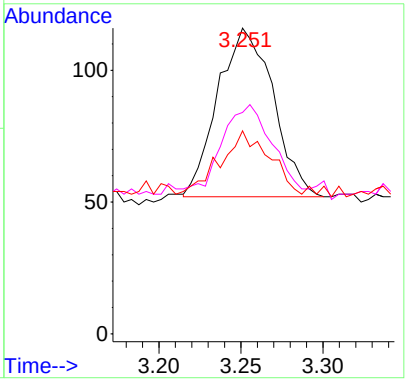
Ion	Exp%	Act%
62.00	100	100
64.00	35.00	106.25#
27.00	90.00	307.81#
0.00	0.00	0.00

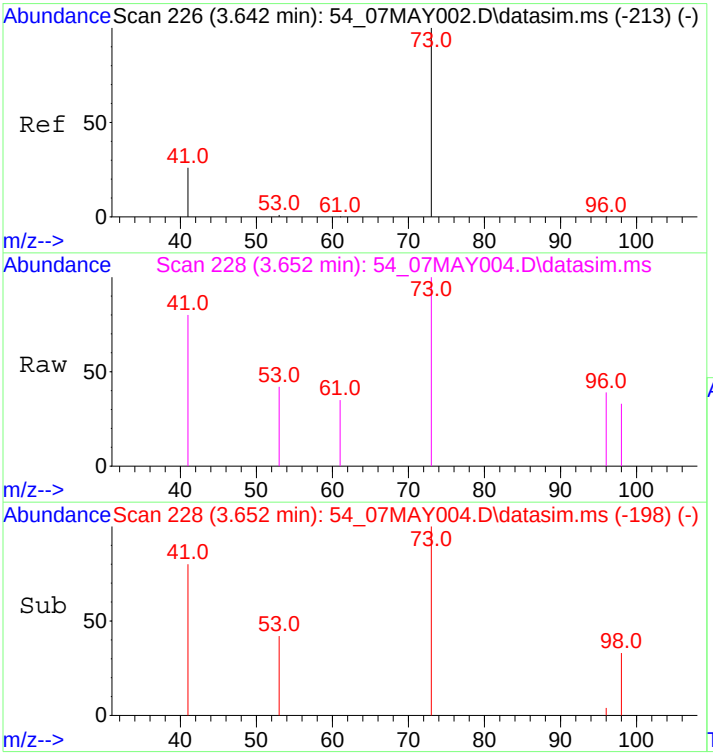


#3
1,1-Dichloroethene
Concen: 0.50 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.000 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 61 Resp: 150

Ion	Ratio	Lower	Upper
61	100		
96	80.0	41.6	62.4#
63	56.7	26.2	39.2#

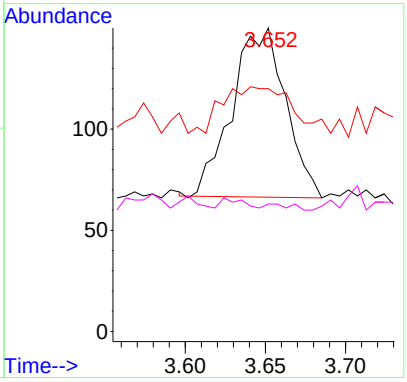




#4
Methyl Tert Butyl Ether
Concen: 0.42 ppbv m
RT: 3.652 min Scan# 228
Delta R.T. 0.010 min
Lab File: 54_07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 73 Resp: 193

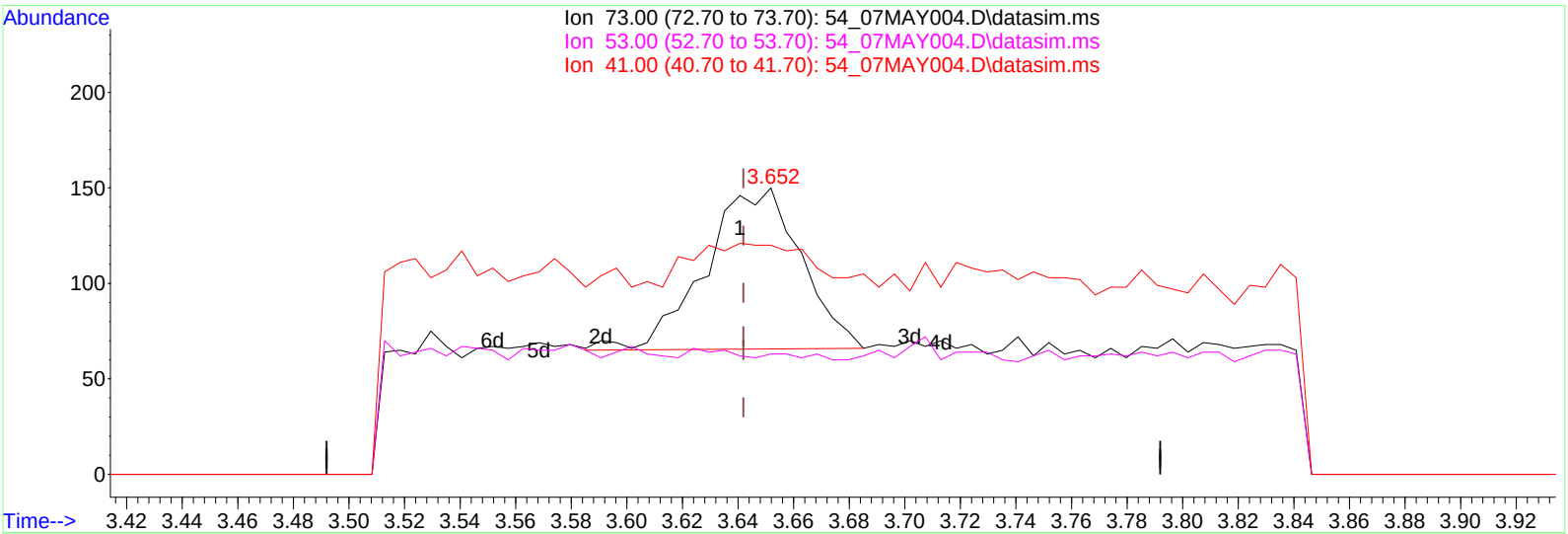
Ion	Ratio	Lower	Upper
73	100		
53	9.8	1.0	1.4#
41	6.2	20.0	30.0#

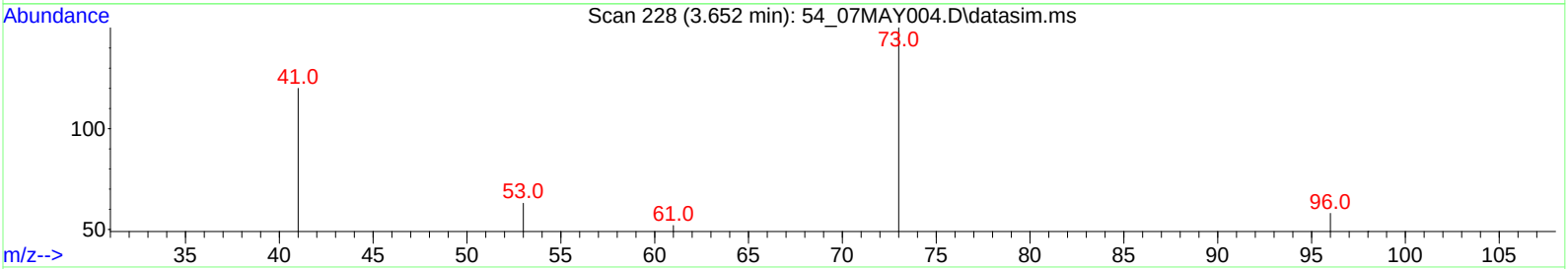


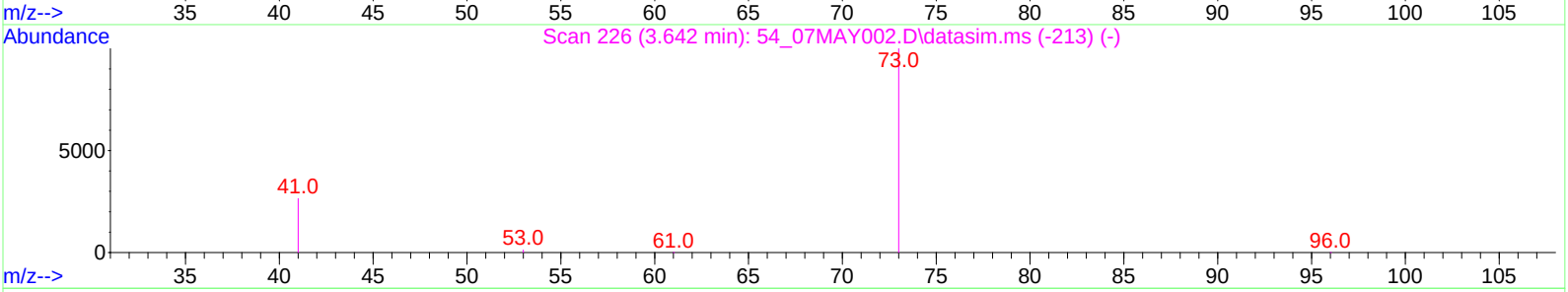
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:15:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_07MAY004.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.652min (+0.010) 0.44 ppbv m

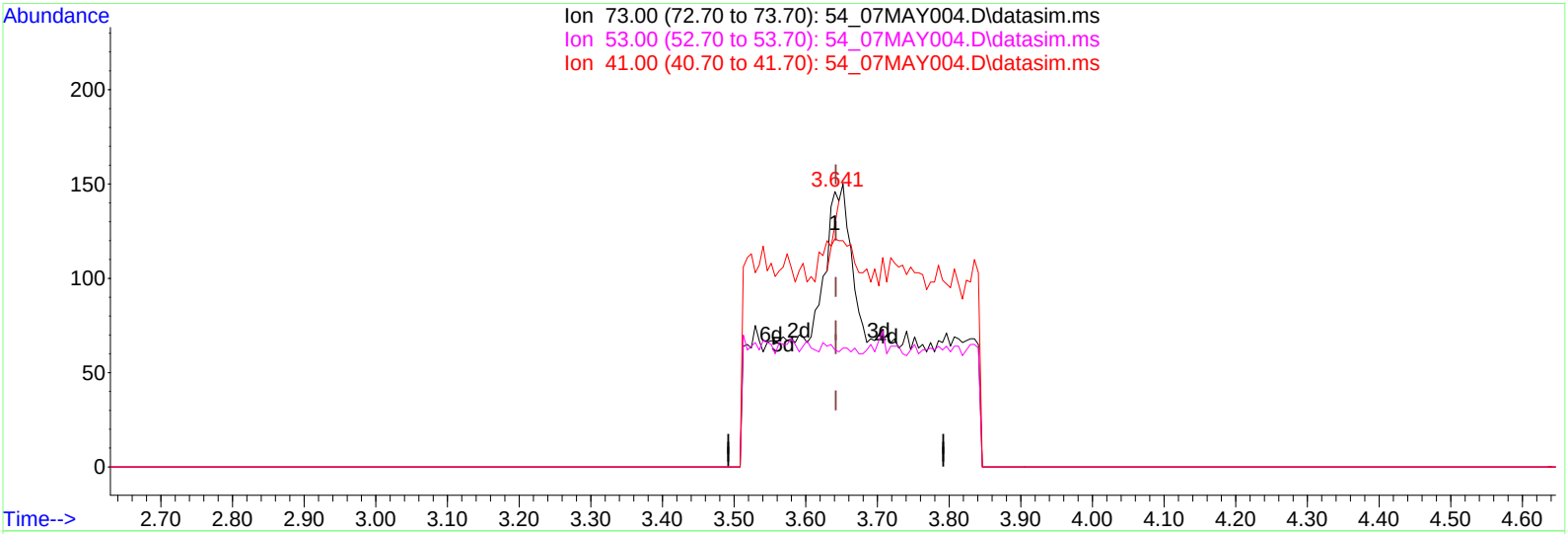
response 201

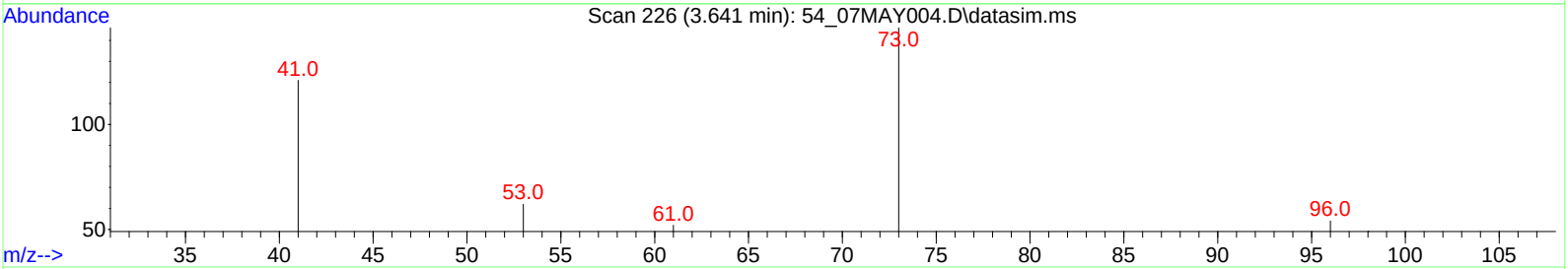
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	9.45#
41.00	25.00	5.97#
0.00	0.00	0.00

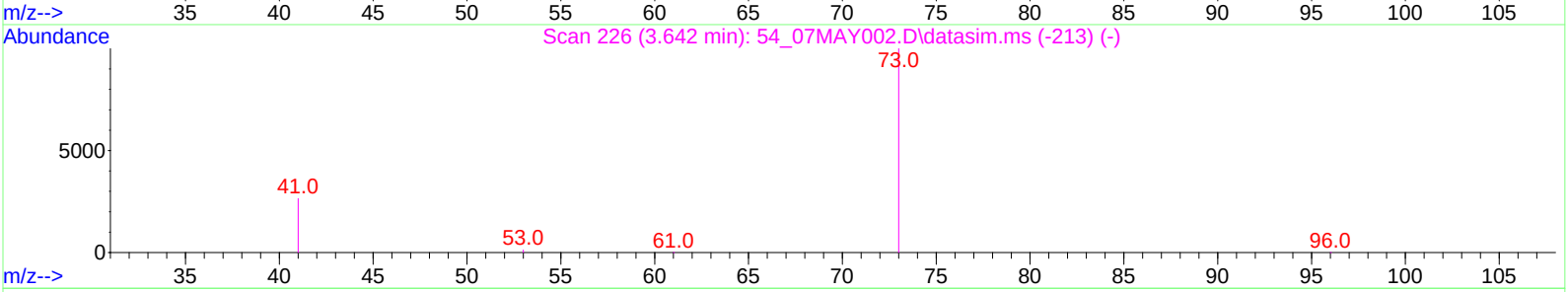
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 07:50:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration







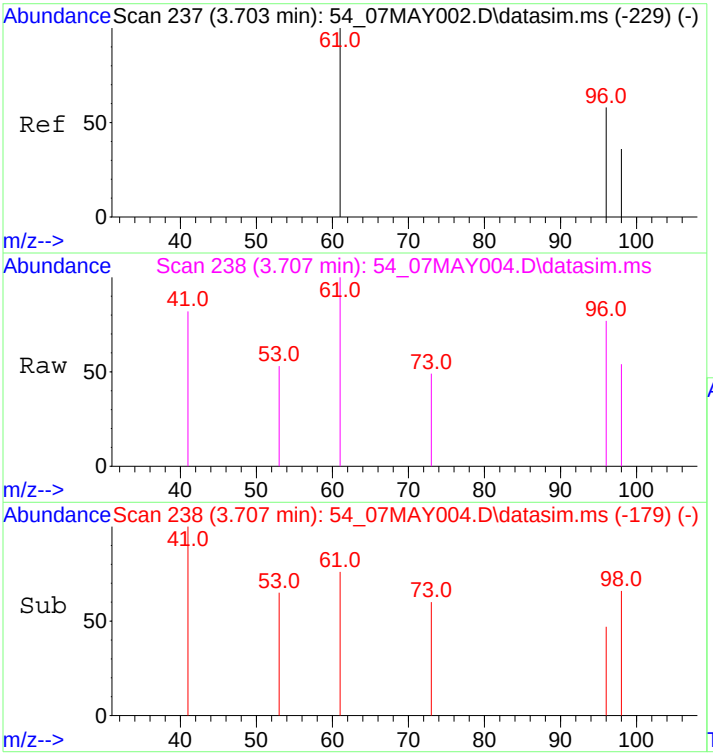
TIC: 54_07MAY004.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.641min (-0.001) 0.07 ppbv

response 32

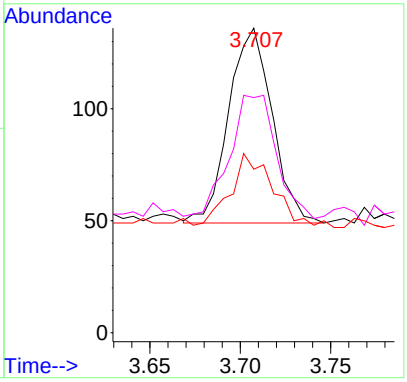
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	59.38#
41.00	25.00	37.50#
0.00	0.00	0.00

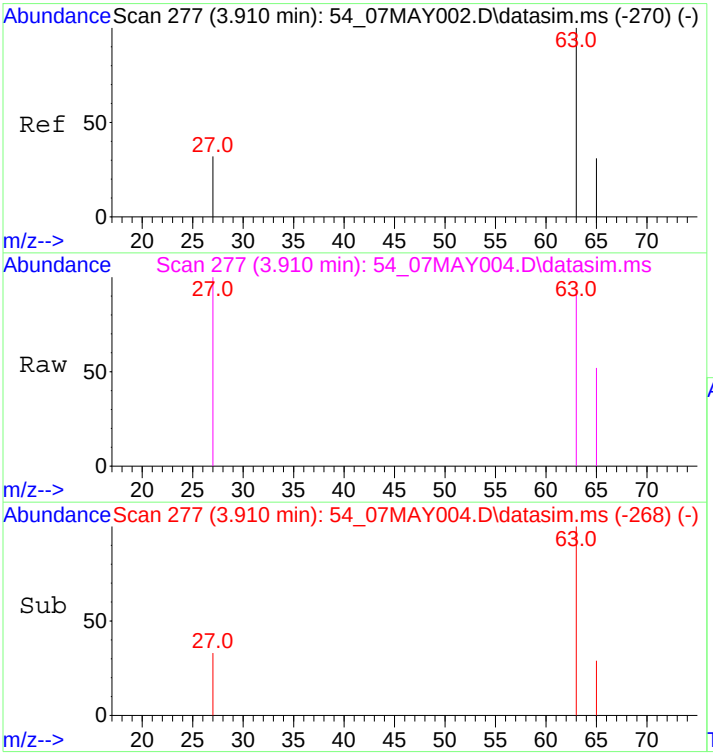


#5
trans-1,2-Dichloroethene
Concen: 0.55 ppbv
RT: 3.707 min Scan# 238
Delta R.T. 0.004 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 61 Resp: 145

Ion	Ratio	Lower	Upper
61	100		
96	171.7	48.0	72.0#
98	37.9	32.0	48.0

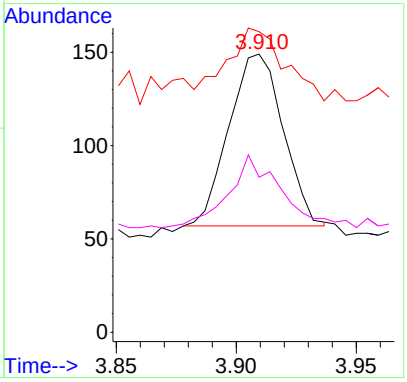


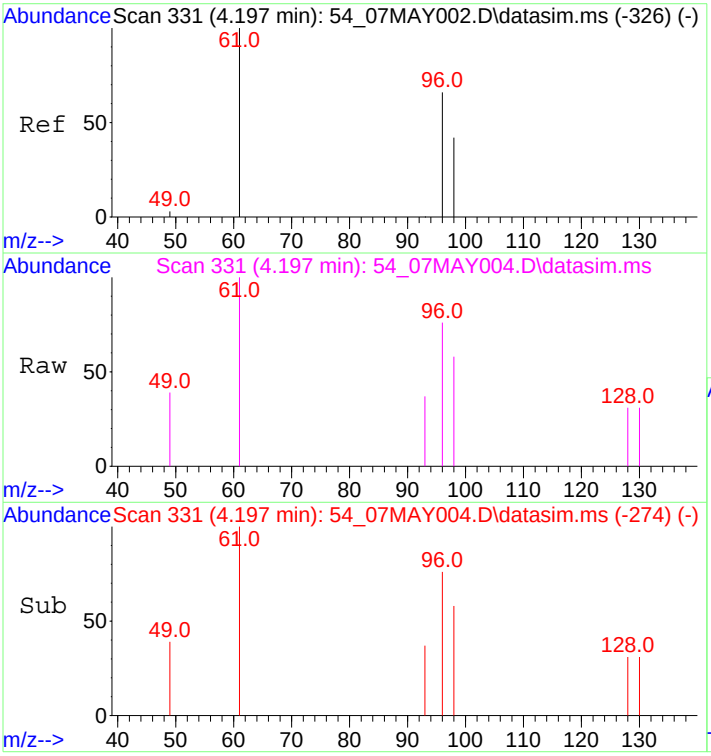


#6
1,1-Dichloroethane
Concen: 0.46 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.001 min
Lab File: 54_07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 63 Resp: 145

Ion	Ratio	Lower	Upper
63	100		
65	40.7	26.1	39.1#
27	44.1	24.0	36.0#

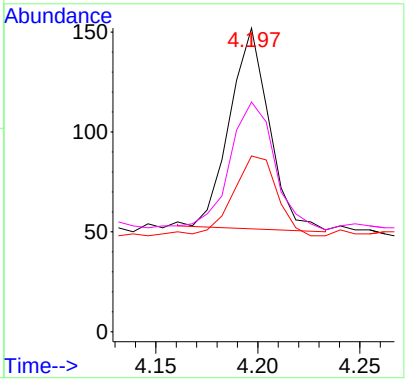


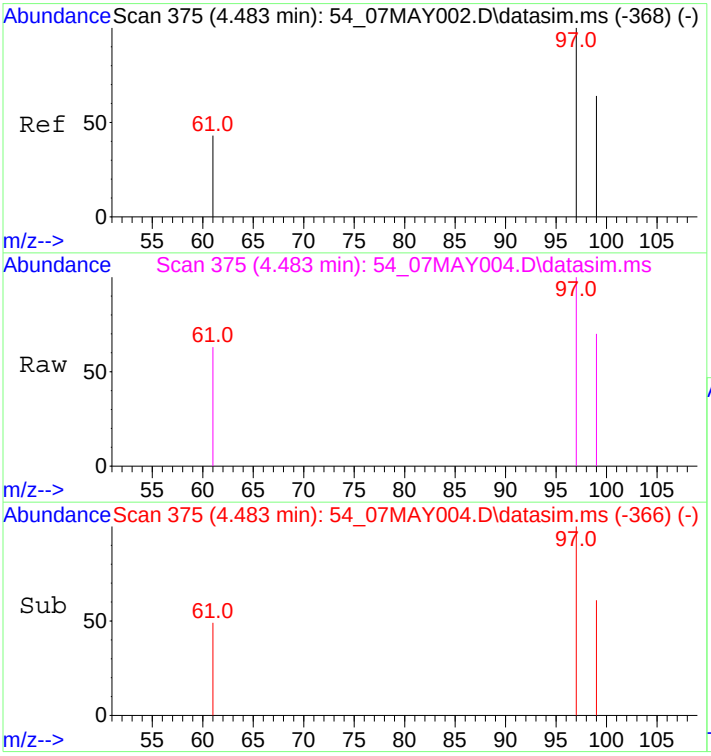


#7
cis-1,2-Dichloroethene
Concen: 0.54 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 61 Resp: 135

Ion	Ratio	Lower	Upper
61	100		
96	271.1	52.0	78.0#
98	77.0	33.6	50.4#

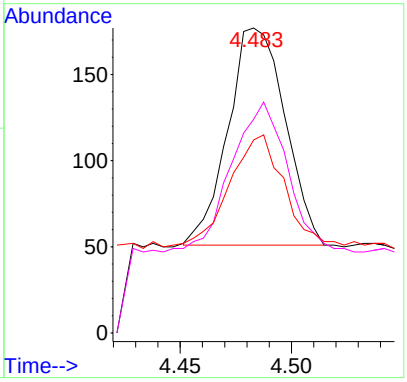




#8
1,1,1-Trichloroethane
Concen: 0.56 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 97 Resp: 225

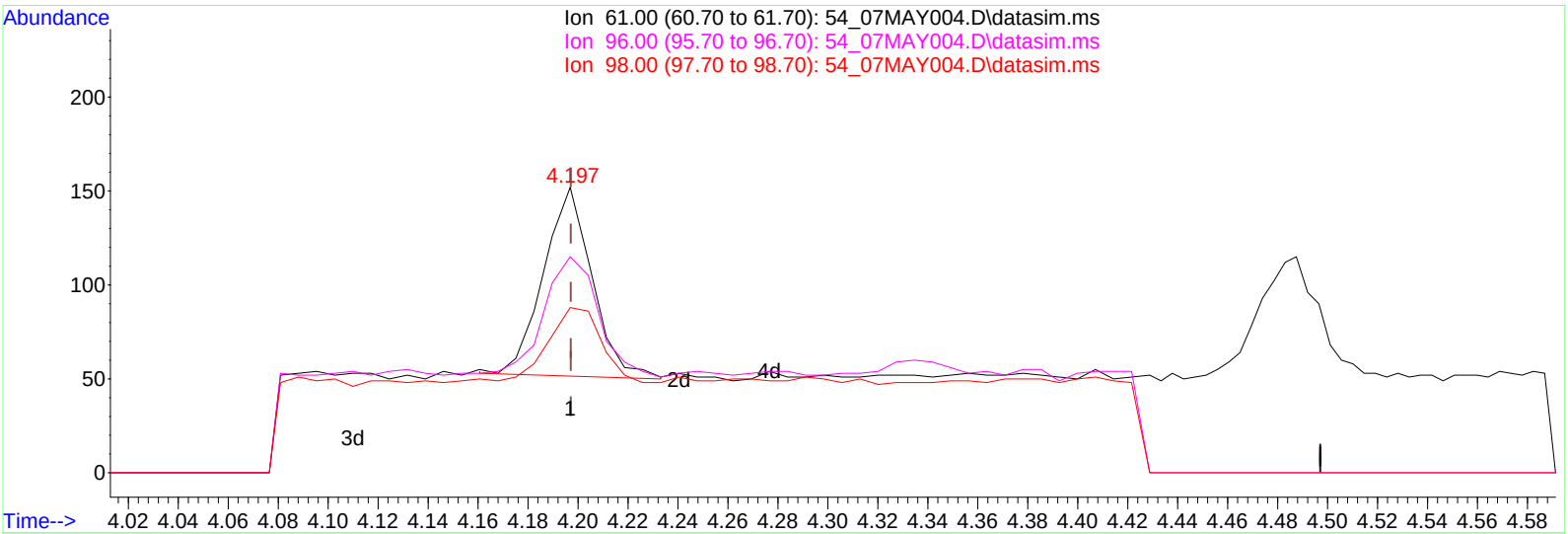
Ion	Ratio	Lower	Upper
97	100		
99	63.6	52.1	78.1
61	47.1	30.2	45.4#

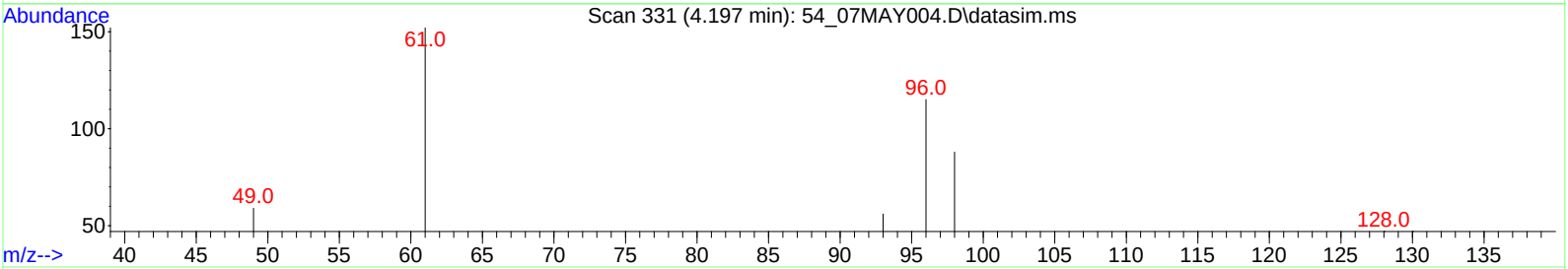


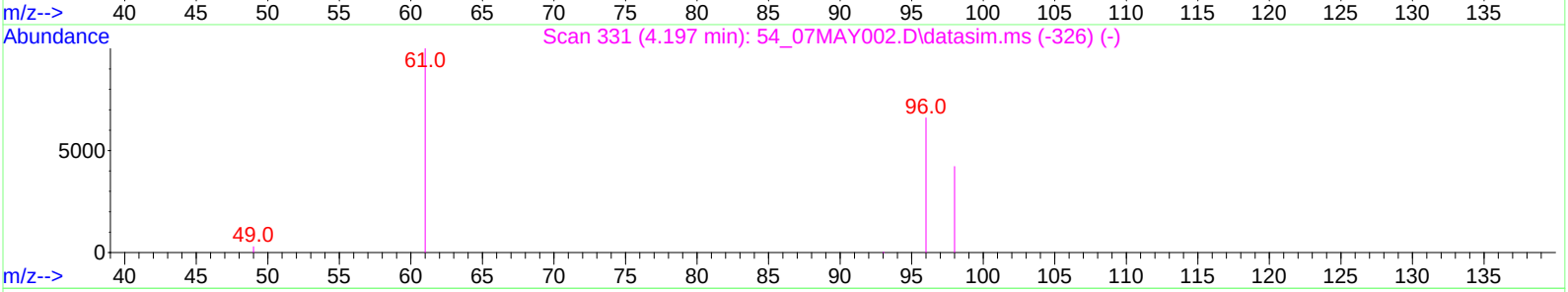
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:15:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_07MAY004.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 0.54 ppbv m

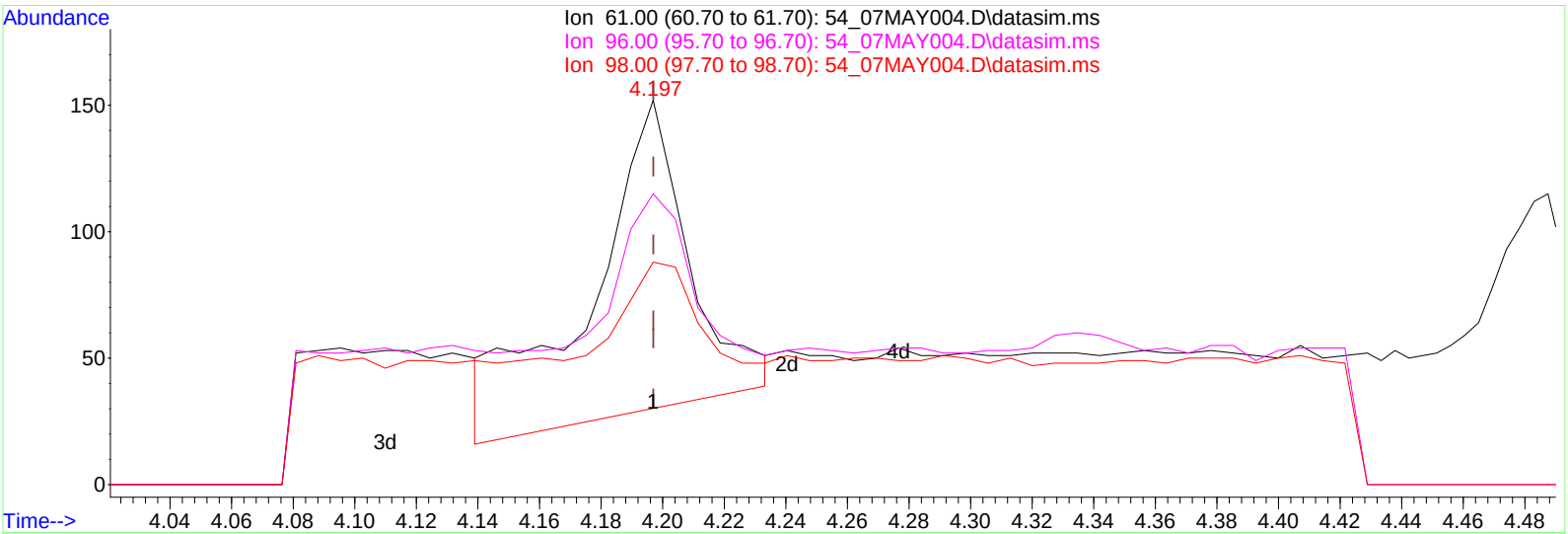
response 135

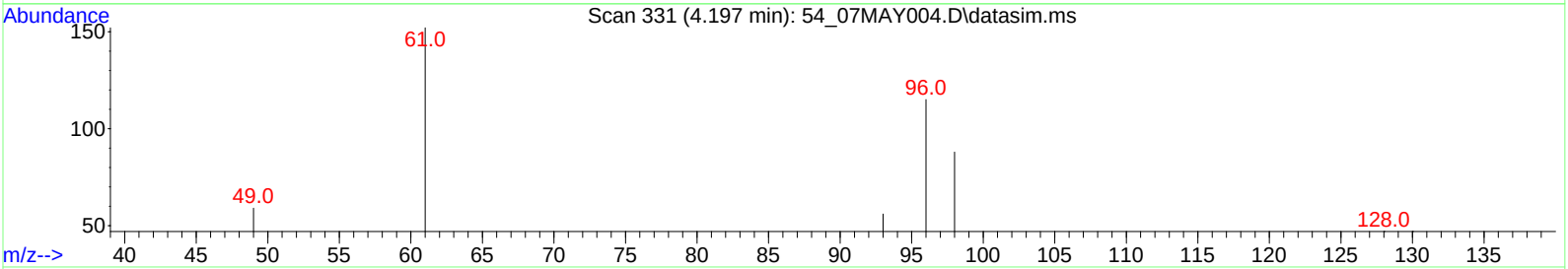
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	271.11#
98.00	42.00	77.04#
0.00	0.00	0.00

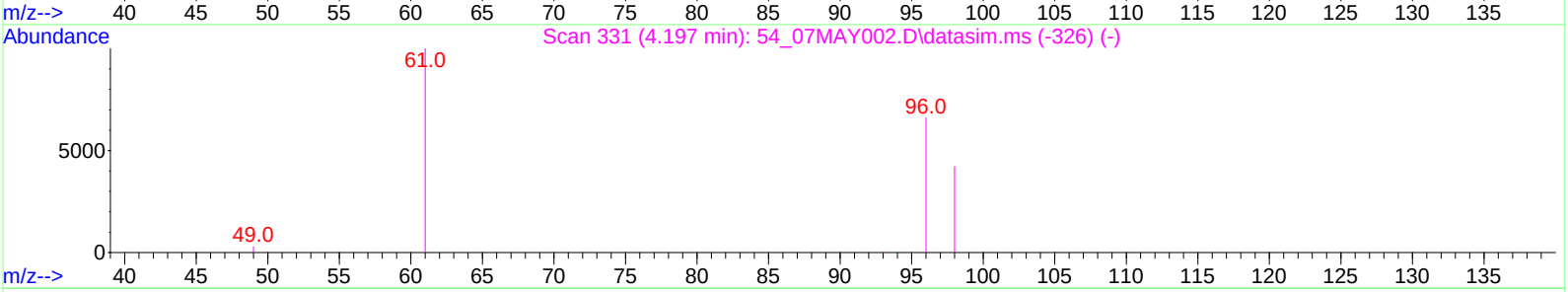
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 07:50:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration







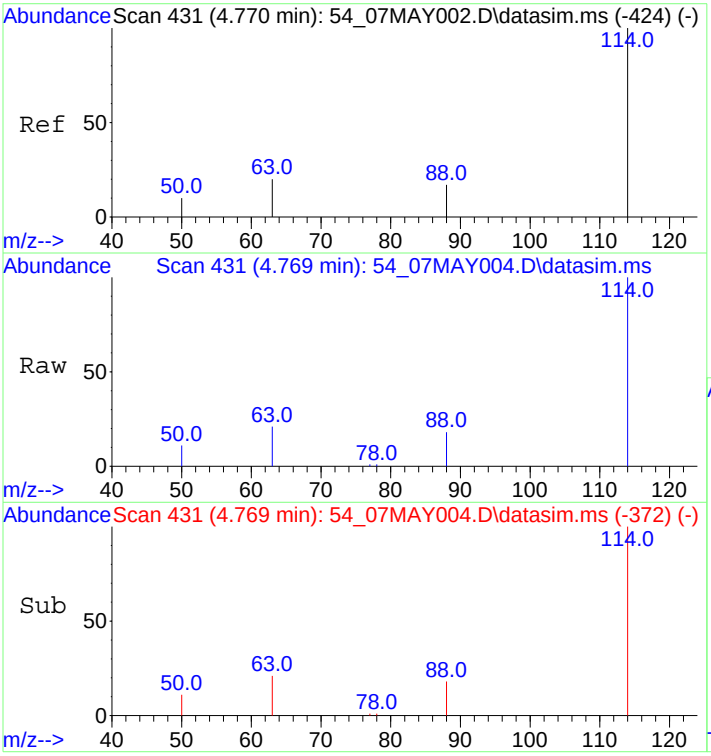
TIC: 54_07MAY004.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 1.10 ppbv

response 273

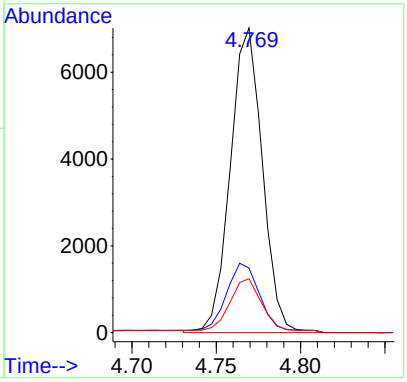
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	134.07#
98.00	42.00	38.10
0.00	0.00	0.00

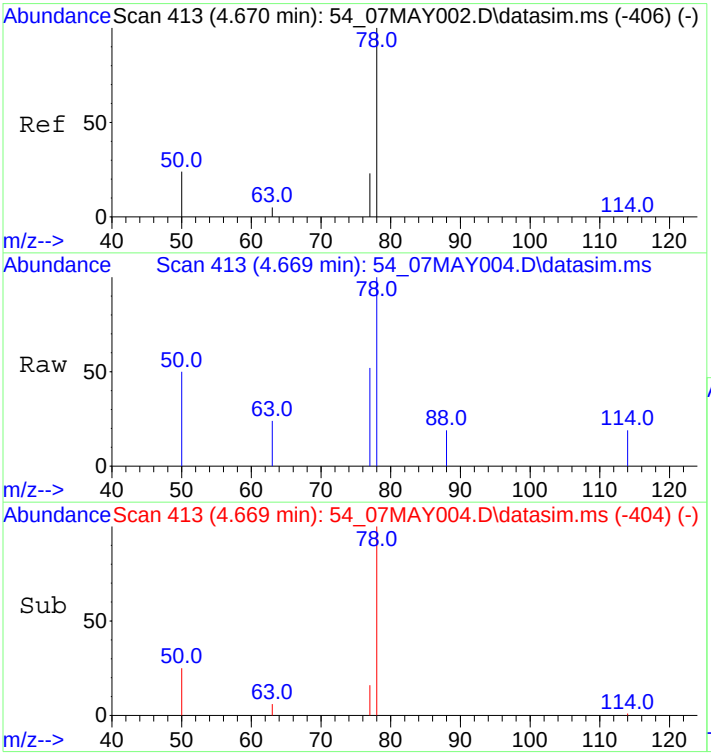


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion:114 Resp: 9282

Ion	Ratio	Lower	Upper
114	100		
63	21.9	17.6	26.4
88	16.5	13.6	20.4

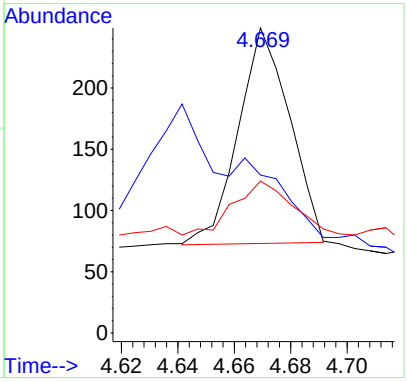




#10
Benzene
Concen: 0.52 ppbv m
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 78 Resp: 222

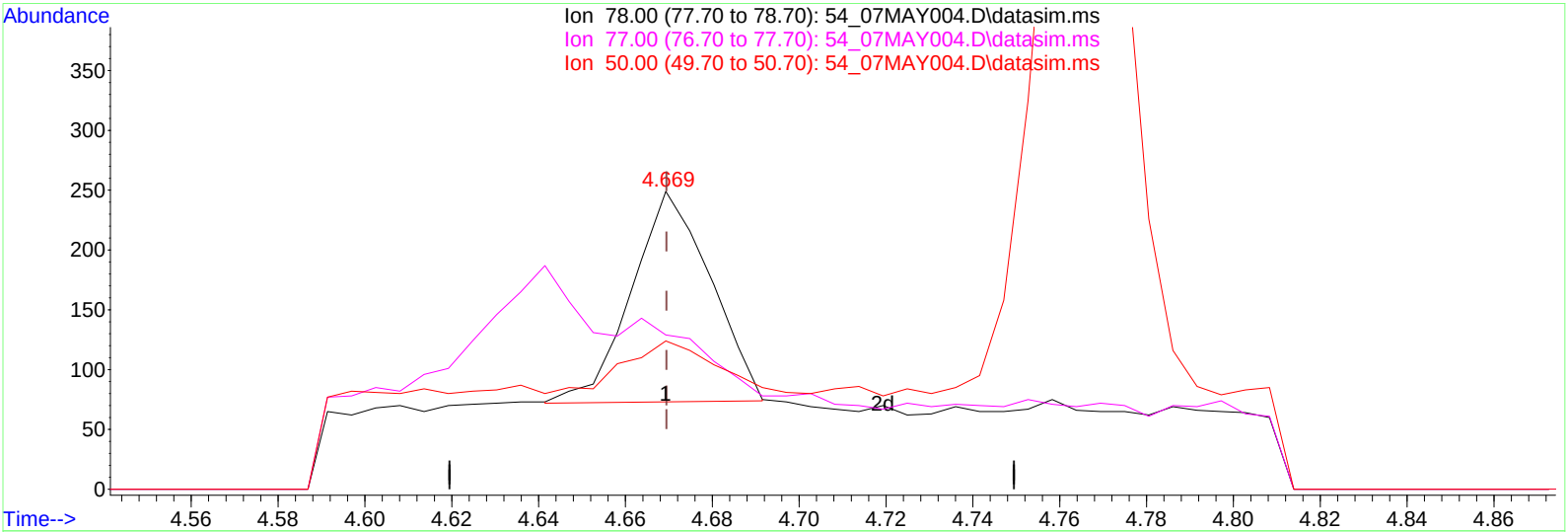
Ion	Ratio	Lower	Upper
78	100		
77	8.6	18.2	27.2#
50	30.2	18.4	27.6#

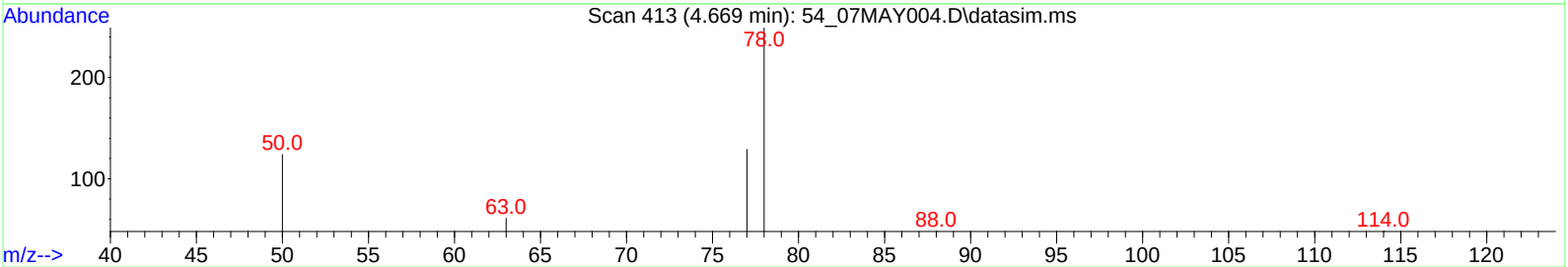


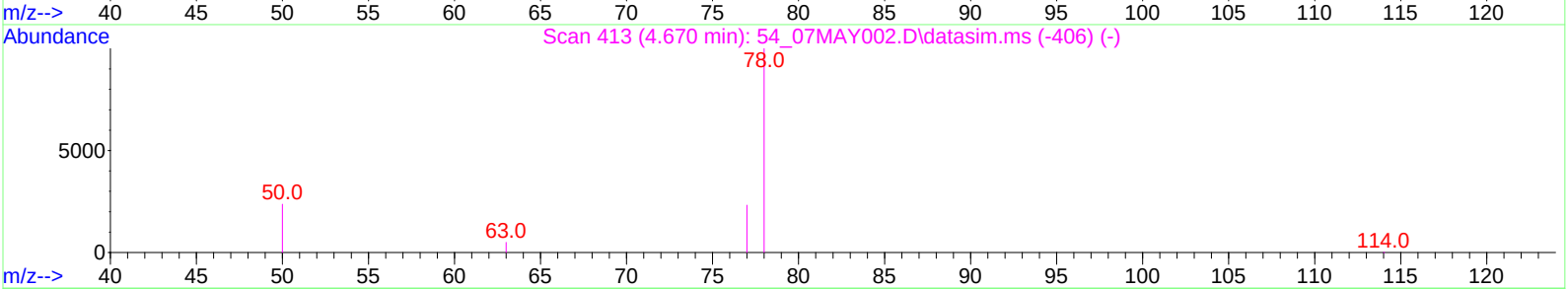
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:15:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_07MAY004.D\data.ms

(10) Benzene (M)

4.669min (-0.000) 0.52 ppbv m

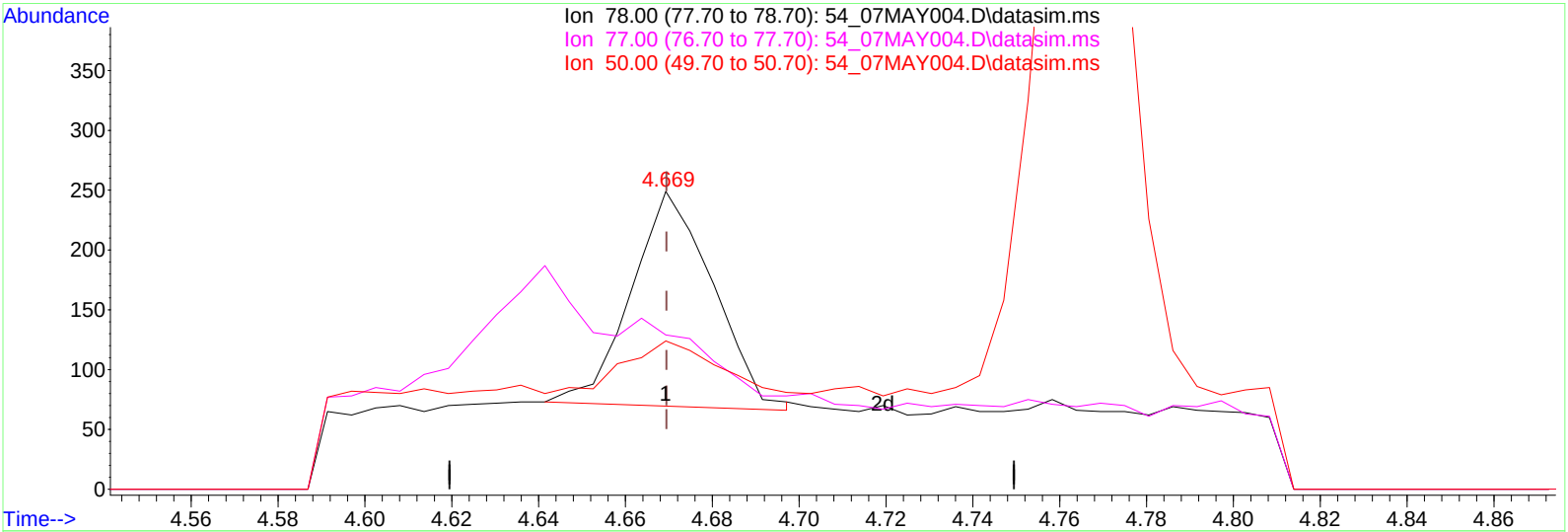
response 222

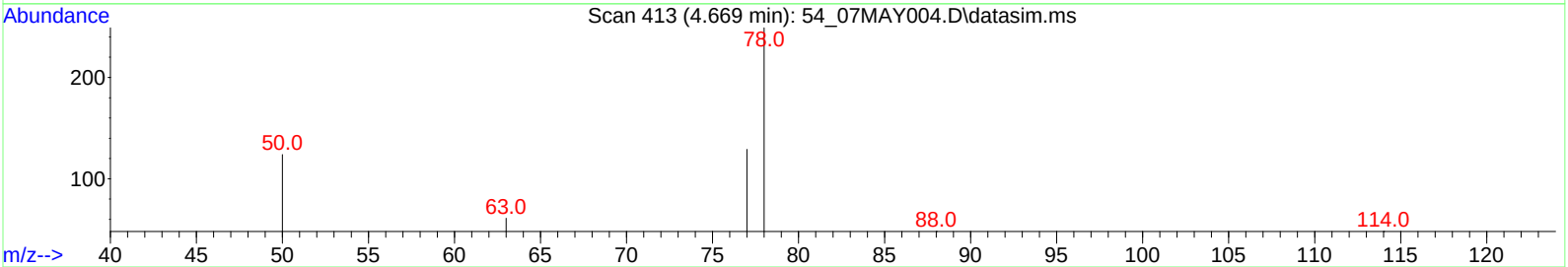
Ion	Exp%	Act%
78.00	100	100
77.00	22.70	8.56#
50.00	23.00	30.18#
0.00	0.00	0.00

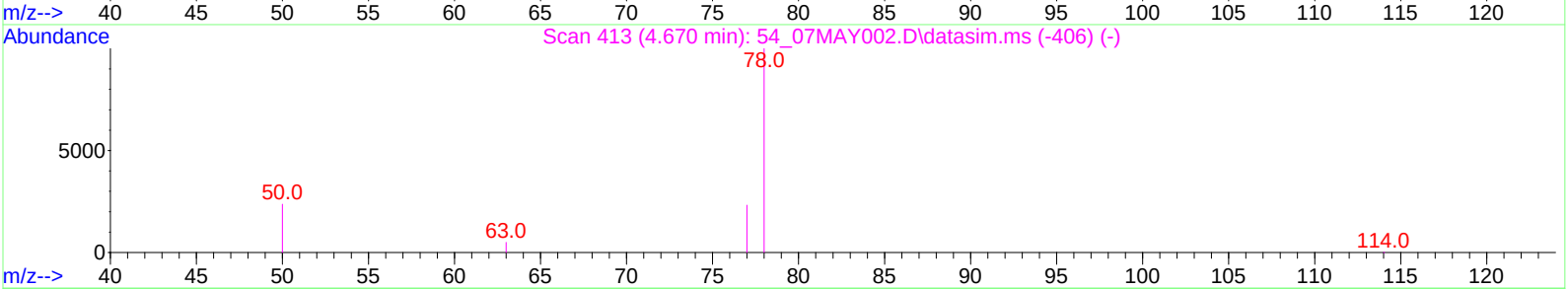
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY004.D
Acq On : 7 May 2014 7:43 am
Operator : yhl
Sample : STD20140507-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:15:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







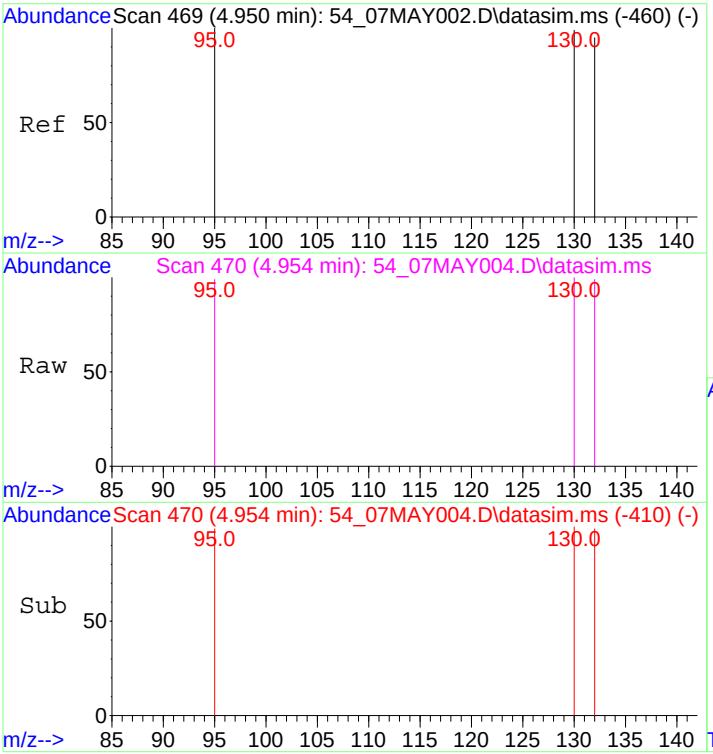
TIC: 54_07MAY004.D\data.ms

(10) Benzene (M)

4.669min (-0.000) 0.55 ppbv

response 234

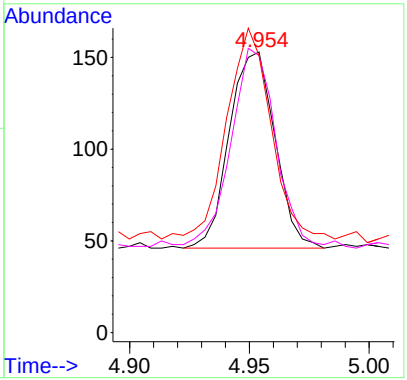
Ion	Exp%	Act%
78.00	100	100
77.00	22.70	8.12#
50.00	23.00	28.63#
0.00	0.00	0.00

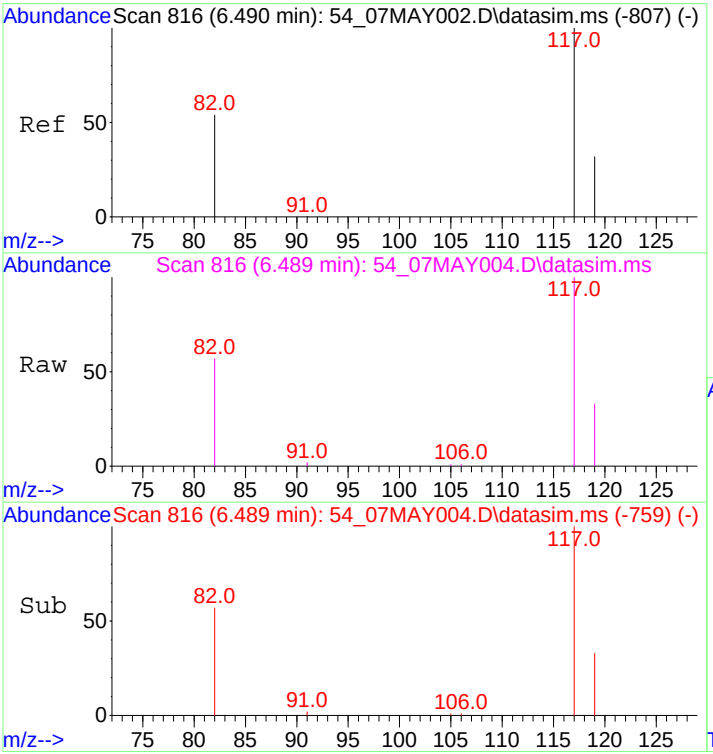


#11
Trichloroethene
Concen: 0.62 ppbv
RT: 4.954 min Scan# 470
Delta R.T. 0.004 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion:130 Resp: 142

Ion	Ratio	Lower	Upper
130	100		
132	95.8	76.9	115.3
95	104.2	76.5	114.7

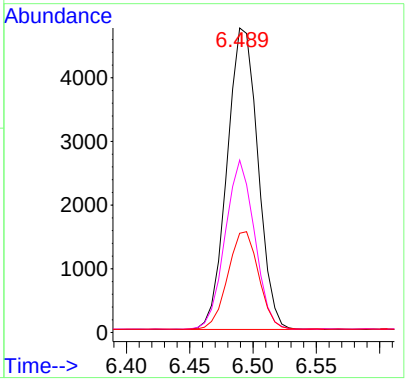


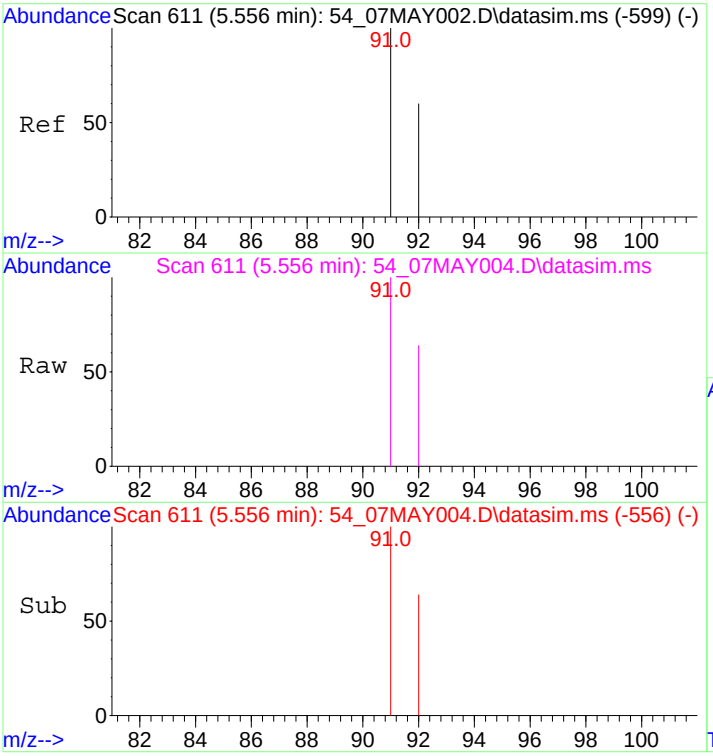


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.001 min
Lab File: 54_07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion:117 Resp: 8038

Ion	Ratio	Lower	Upper
117	100		
82	53.5	38.0	57.0
119	32.5	27.0	40.4

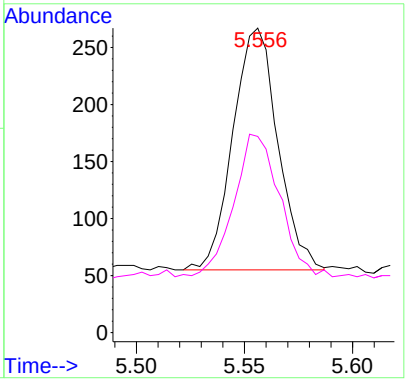


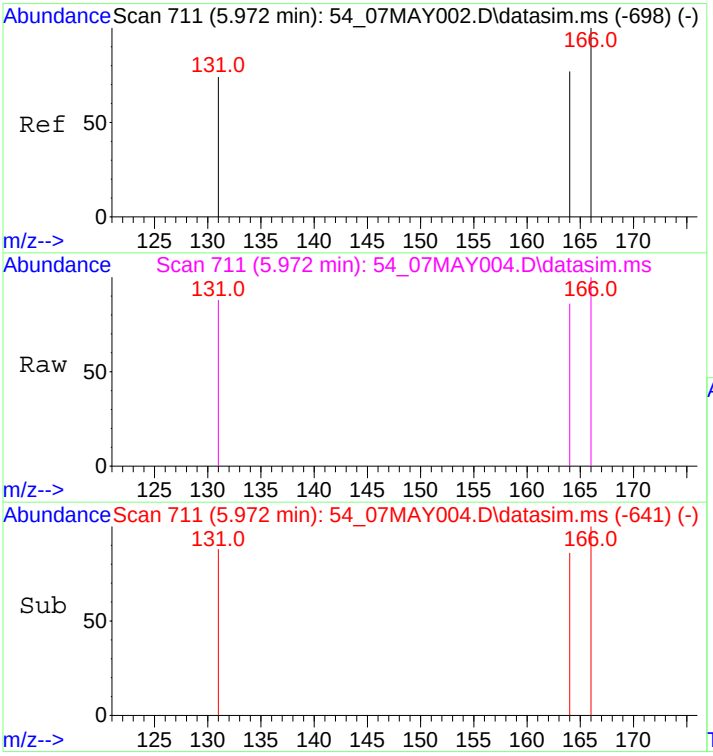


#13
Toluene
Concen: 0.64 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 91 Resp: 306

Ion	Ratio	Lower	Upper
91	100		
92	60.1	47.8	71.8

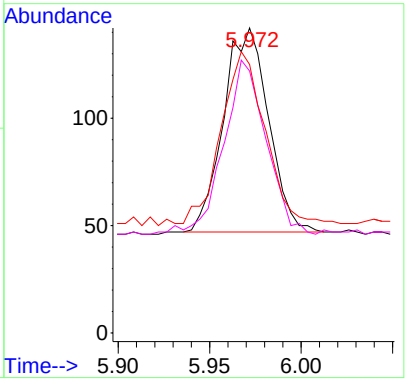


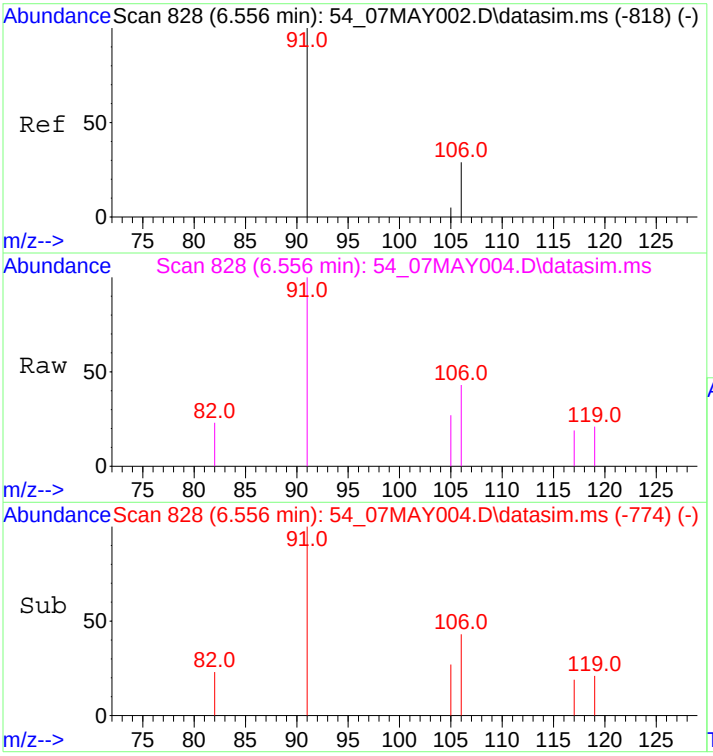


#14
Tetrachloroethene
Concen: 0.59 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion:166 Resp: 163

Ion	Ratio	Lower	Upper
166	100		
164	79.1	62.6	94.0
131	81.6	58.5	87.7

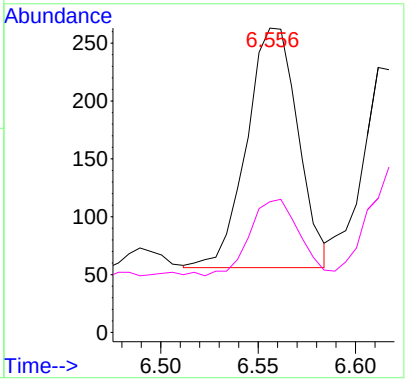


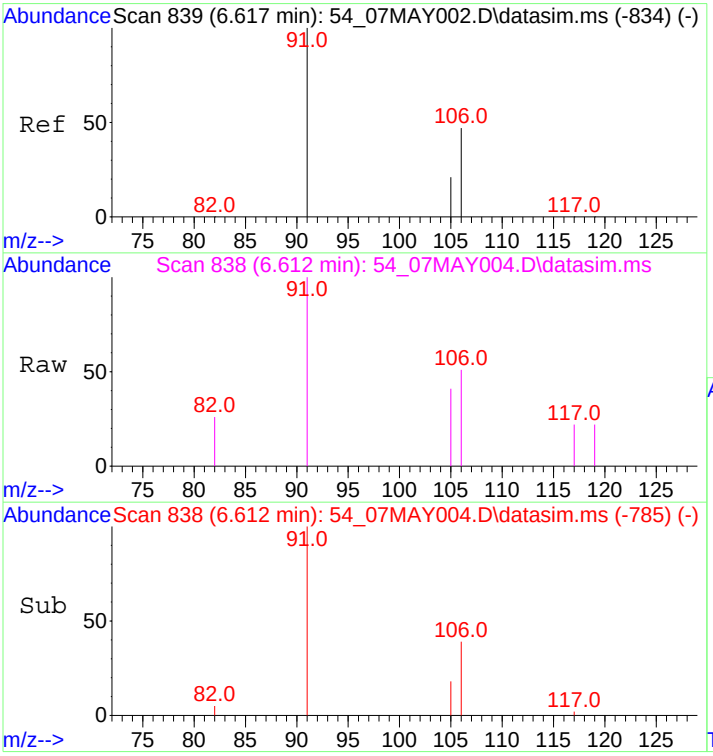


#15
Ethyl Benzene
Concen: 0.62 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 91 Resp: 380

Ion	Ratio	Lower	Upper
91	100		
106	31.8	26.9	40.3

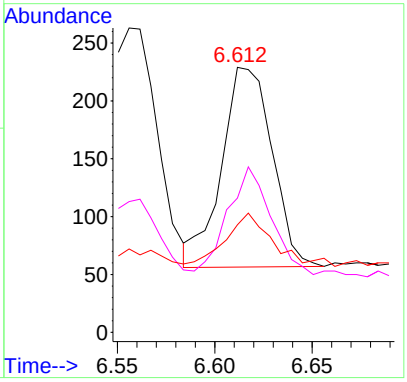


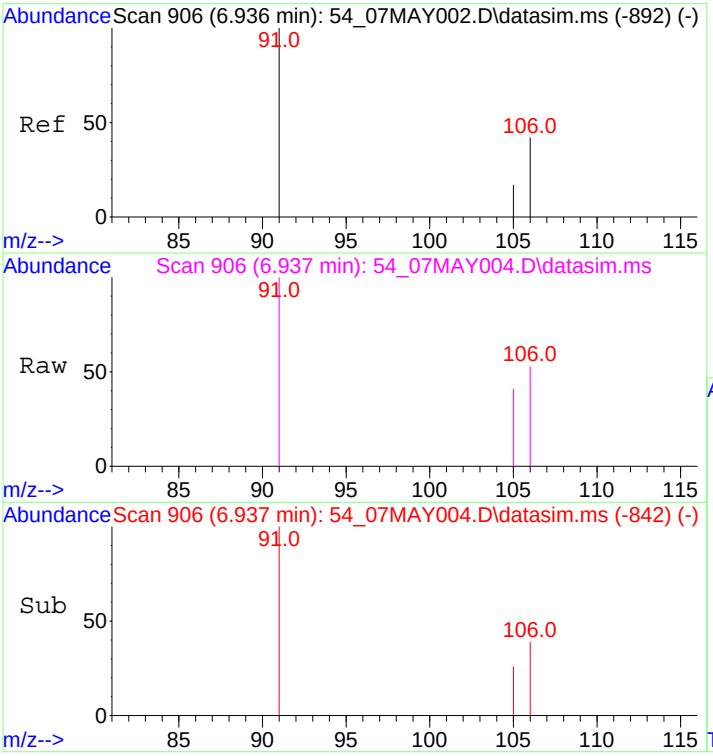


#16
m,p-Xylene
Concen: 0.66 ppbv
RT: 6.612 min Scan# 838
Delta R.T. -0.006 min
Lab File: 54_07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 91 Resp: 312

Ion	Ratio	Lower	Upper
91	100		
106	47.1	43.1	64.7
105	23.7	18.3	27.5

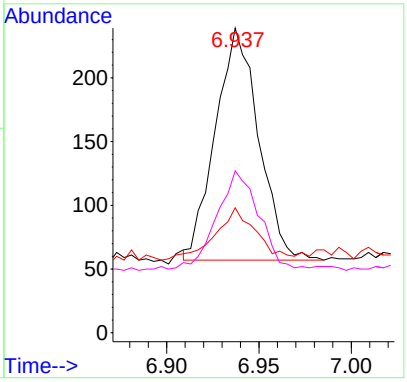




#17
o-Xylene
Concen: 0.62 ppbv
RT: 6.937 min Scan# 906
Delta R.T. 0.001 min
Lab File: 54 07MAY004.D
Acq: 7 May 2014 7:43 am

Tgt Ion: 91 Resp: 296

Ion	Ratio	Lower	Upper
91	100		
106	40.5	40.1	60.1
105	20.3	15.8	23.6



LABORATORY CONTROL SAMPLE

Data File 54_07May006.D
LCS Standard Number 20140507-LCS
LCS Standard Name **STD20140507-LCS \ LCS 500 ppbv 2º**
Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/7/2014	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %	
Vinyl Chloride	427.38	517.50	82.6	70-130	OK
1,1-Dichloroethene	472.07	512.50	92.1	70-130	OK
Methyl Tert Butyl Ether	429.23	510.00	84.2	70-130	OK
trans-1,2-Dichloroethene	455.34	500.00	91.1	70-130	OK
1,1-Dichloroethane	458.16	525.00	87.3	70-130	OK
cis-1,2-Dichloroethene	487.39	530.00	92.0	70-130	OK
1,1,1-Trichloroethane	499.92	510.00	98.0	70-130	OK
Benzene	480.85	527.50	91.2	70-130	OK
Trichloroethene	470.26	510.00	92.2	70-130	OK
Toluene	482.59	522.50	92.4	70-130	OK
Tetrachloroethene	488.12	517.50	94.3	70-130	OK
Ethyl Benzene	529.76	525.00	100.9	70-130	OK
m,p-Xylene	549.31	520.00	105.6	70-130	OK
o-Xylene	555.82	525.00	105.9	70-130	OK

Secondary Standard Cylinder # CC-99022

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY006.D
Acq On : 7 May 2014 8:09 am
Operator : yhl
Sample : 20140507-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:33:30 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

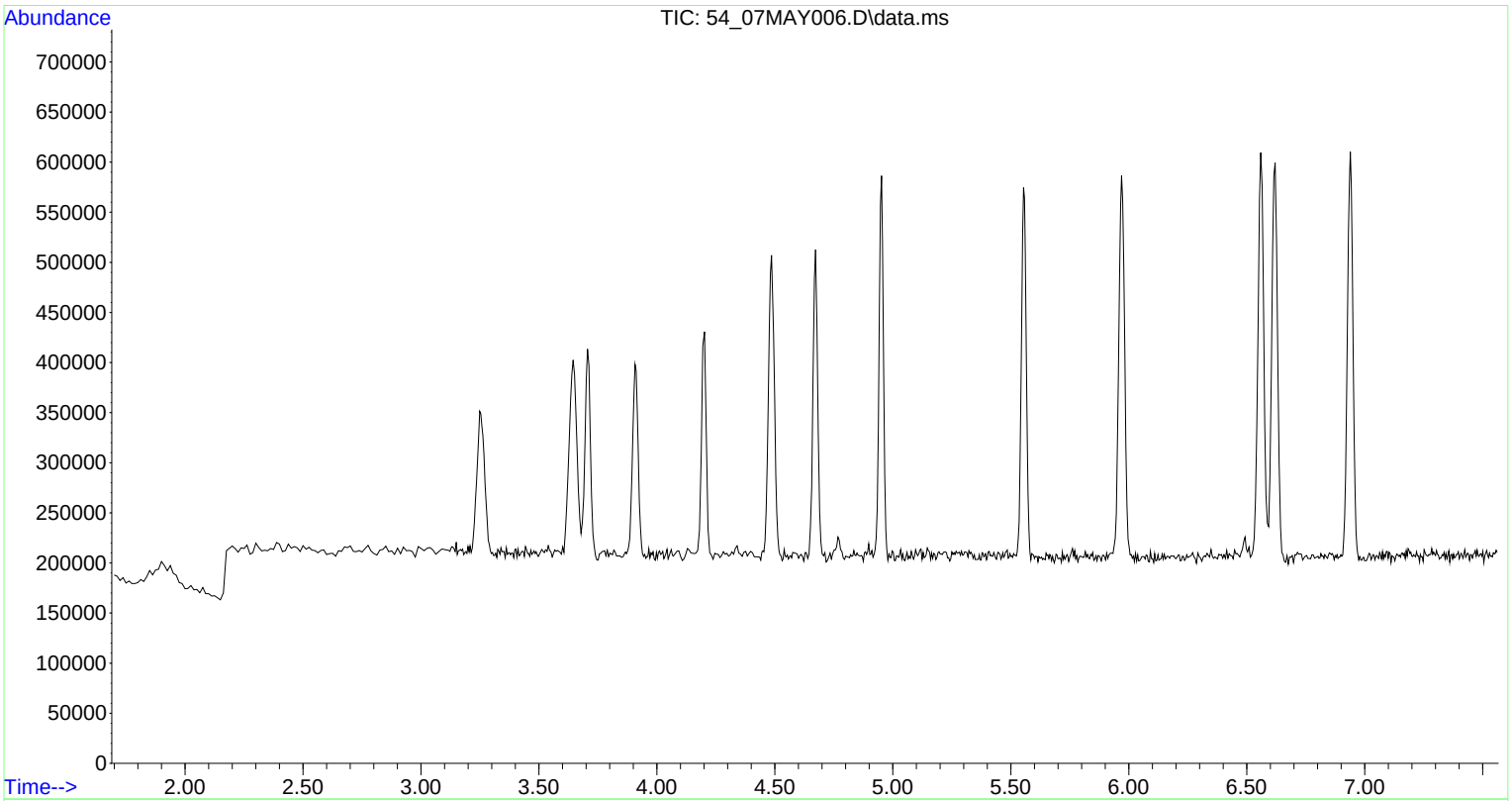
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3936	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9184	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8343	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	63966	427.38	ppbv	89
3] 1,1-Dichloroethene	3.256	61	143905	472.07	ppbv	97
4] Methyl Tert Butyl Ether	3.647	73	199782	429.23	ppbv	96
5] trans-1,2-Dichloroethene	3.708	61	122338	455.34	ppbv	99
6] 1,1-Dichloroethane	3.910	63	146945	458.16	ppbv	97
7] cis-1,2-Dichloroethene	4.197	61	122285	487.39	ppbv	100
8] 1,1,1-Trichloroethane	4.488	97	203398	499.92	ppbv	96
10] Benzene	4.669	78	201737	480.85	ppbv	99
11] Trichloroethene	4.950	130	107415	470.26	ppbv	97
13] Toluene	5.556	91	241358	482.59	ppbv	99
14] Tetrachloroethene	5.972	166	139434	488.12	ppbv	98
15] Ethyl Benzene	6.562	91	336466	529.76	ppbv	93
16] m,p-Xylene	6.617	91	267764	549.31	ppbv	90
17] o-Xylene	6.937	91	274754	555.82	ppbv	91

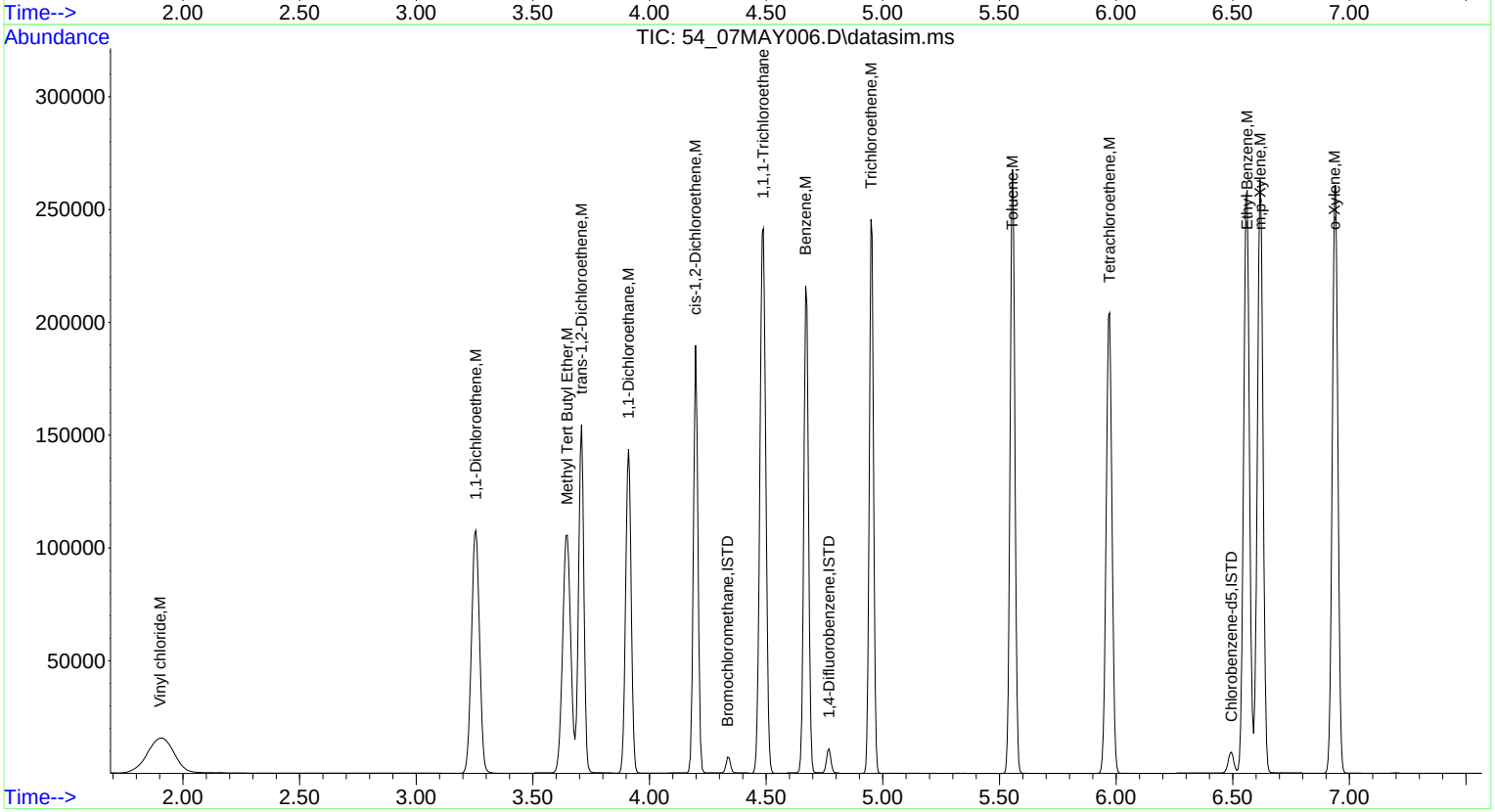
(#) = qualifier out of range (m) = manual integration (+) = signals summed

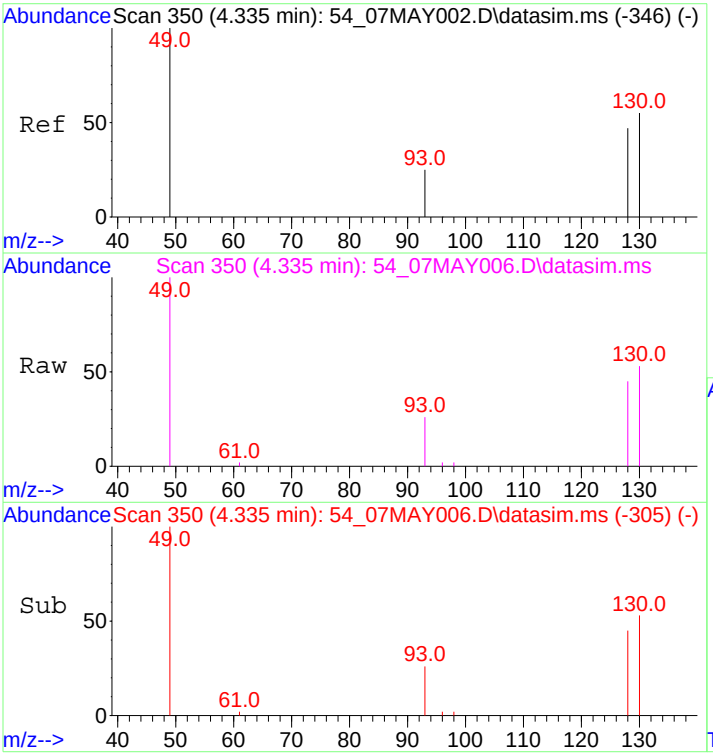
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY006.D
Acq On : 7 May 2014 8:09 am
Operator : yhl
Sample : 20140507-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:33:30 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



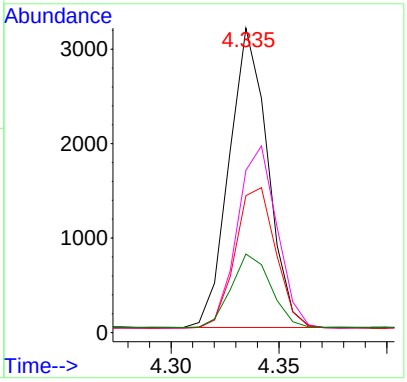


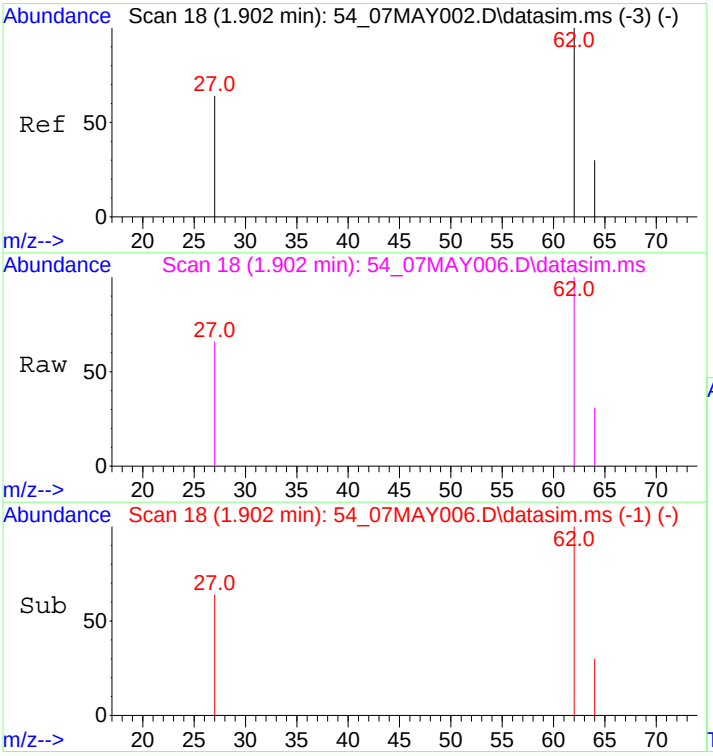


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 49 Resp: 3936

Ion	Ratio	Lower	Upper
49	100		
130	63.0	56.0	84.0
128	49.5	41.6	62.4
93	25.4	22.4	33.6

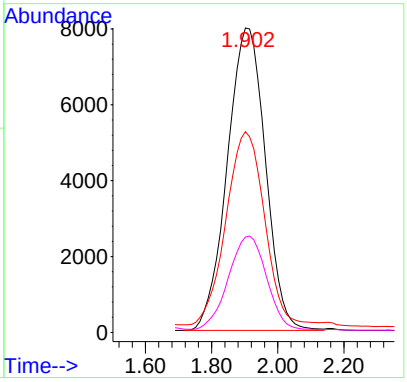


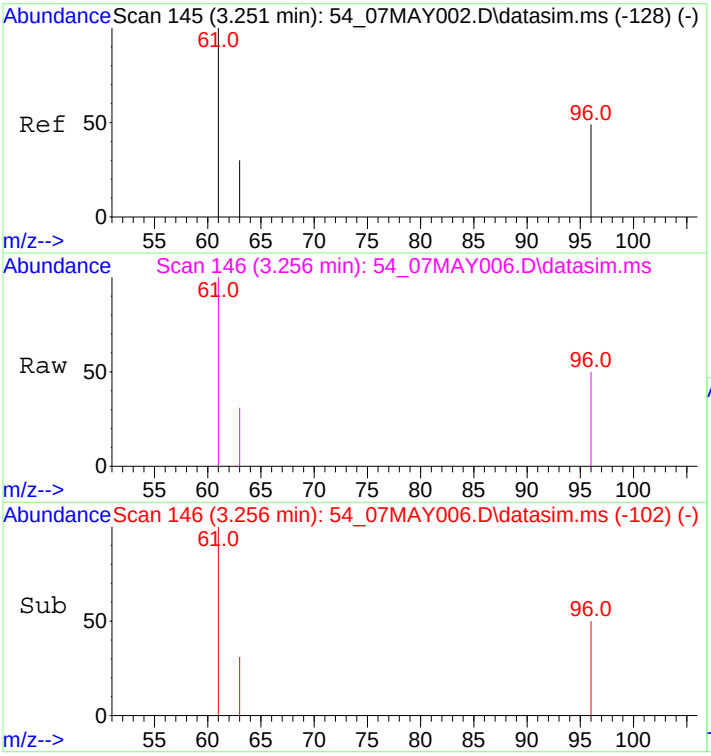


#2
Vinyl chloride
Concen: 427.38 ppbv
RT: 1.902 min Scan# 18
Delta R.T. -0.000 min
Lab File: 54_07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 62 Resp: 63966

Ion	Ratio	Lower	Upper
62	100		
64	29.3	28.0	42.0
27	78.7	72.0	108.0

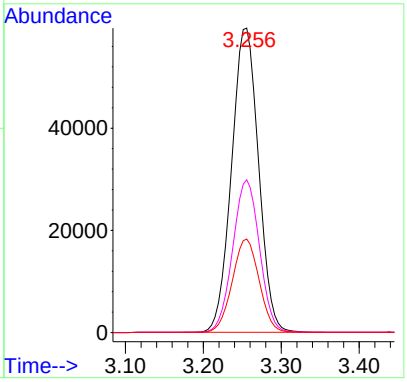


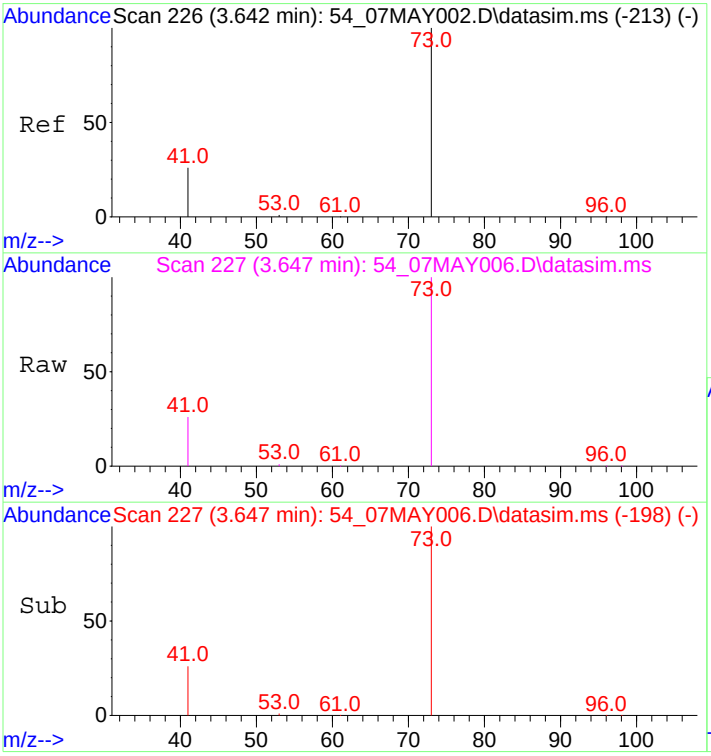


#3
1,1-Dichloroethene
Concen: 472.07 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.004 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 61 Resp: 143905

Ion	Ratio	Lower	Upper
61	100		
96	49.8	41.6	62.4
63	30.5	26.2	39.2

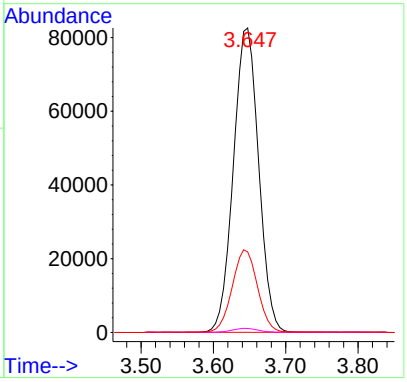


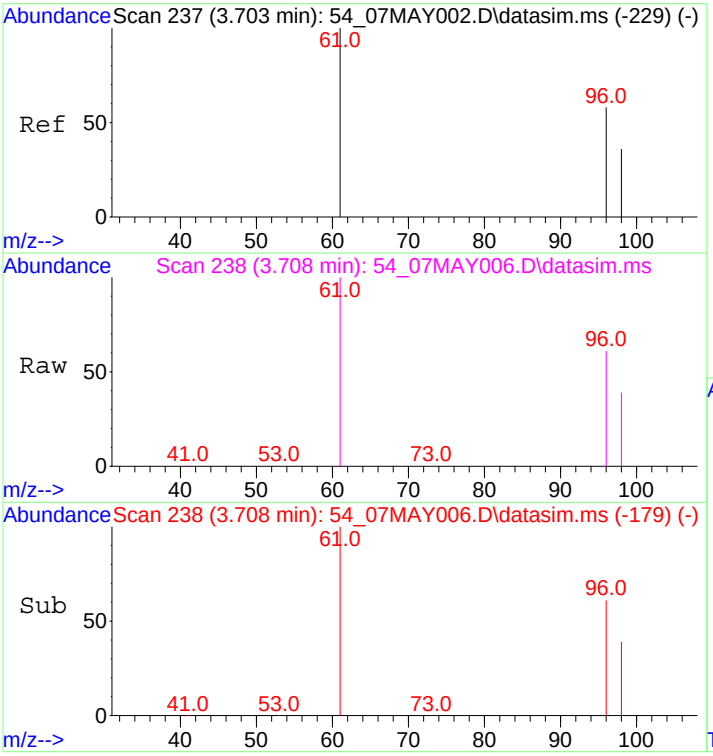


#4
Methyl Tert Butyl Ether
Concen: 429.23 ppbv
RT: 3.647 min Scan# 227
Delta R.T. 0.005 min
Lab File: 54_07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 73 Resp: 199782

Ion	Ratio	Lower	Upper
73	100		
53	1.3	1.0	1.4
41	27.0	20.0	30.0

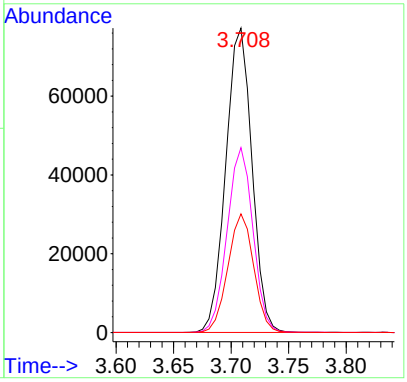


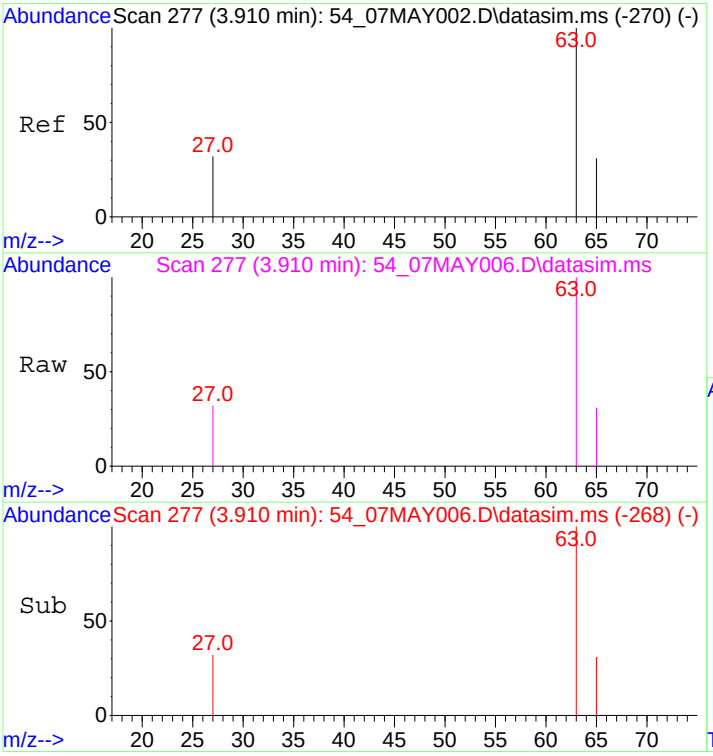


#5
trans-1,2-Dichloroethene
Concen: 455.34 ppbv
RT: 3.708 min Scan# 238
Delta R.T. 0.005 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 61 Resp: 122338

Ion	Ratio	Lower	Upper
61	100		
96	59.8	48.0	72.0
98	38.4	32.0	48.0

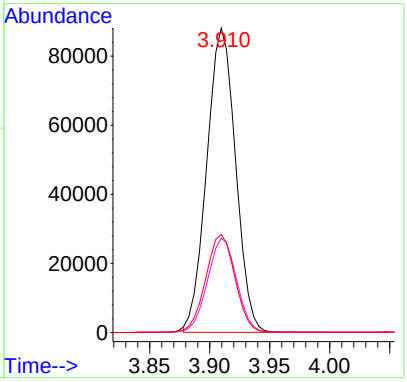


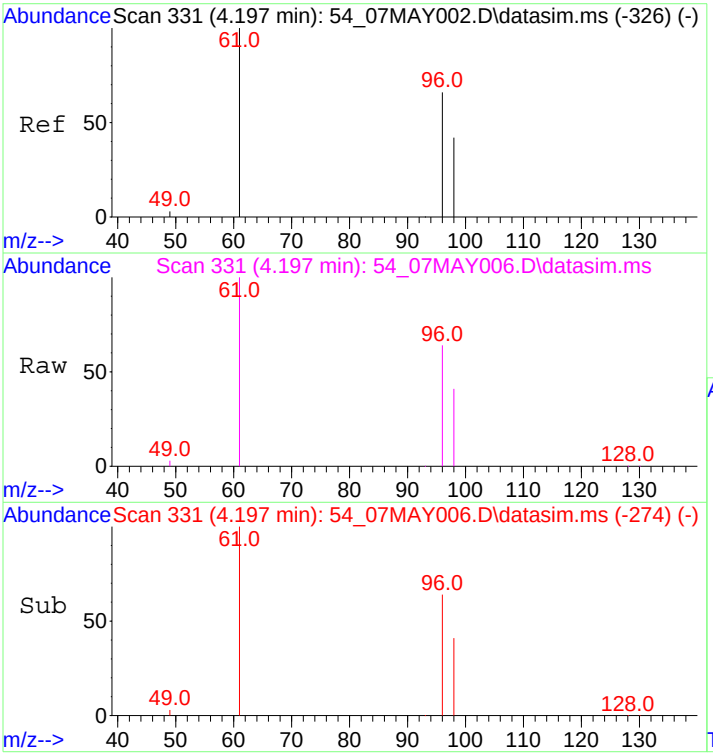


#6
1,1-Dichloroethane
Concen: 458.16 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 63 Resp: 146945

Ion	Ratio	Lower	Upper
63	100		
65	31.0	26.1	39.1
27	32.2	24.0	36.0

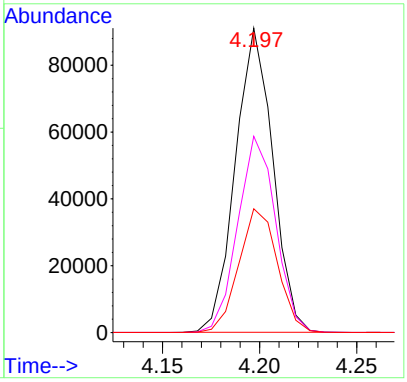


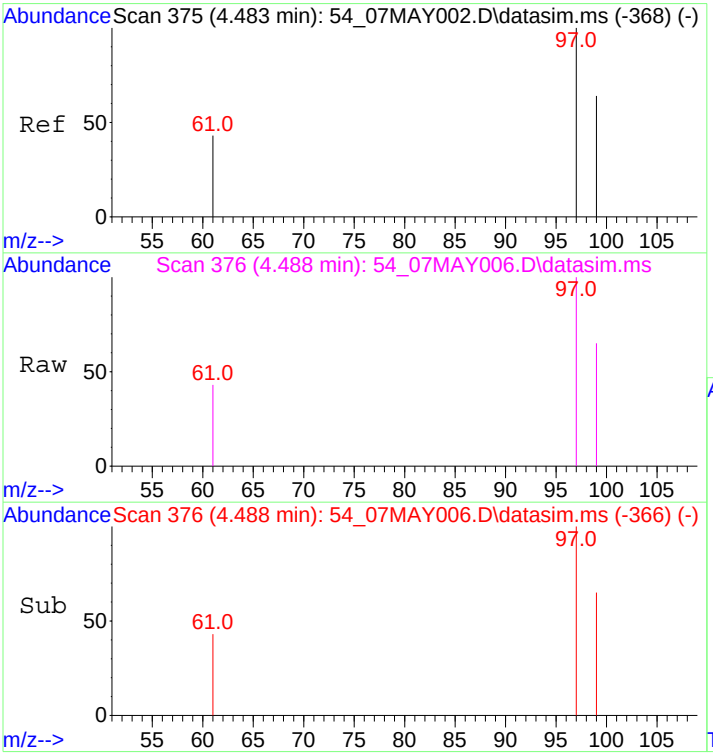


#7
cis-1,2-Dichloroethene
Concen: 487.39 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 61 Resp: 122285

Ion	Ratio	Lower	Upper
61	100		
96	65.2	52.0	78.0
98	42.0	33.6	50.4

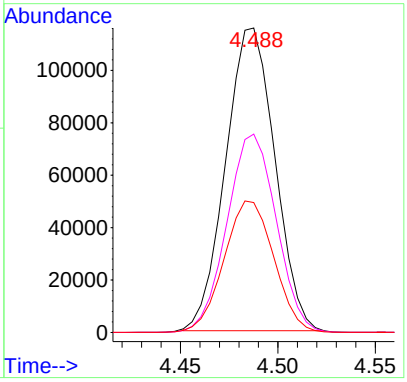


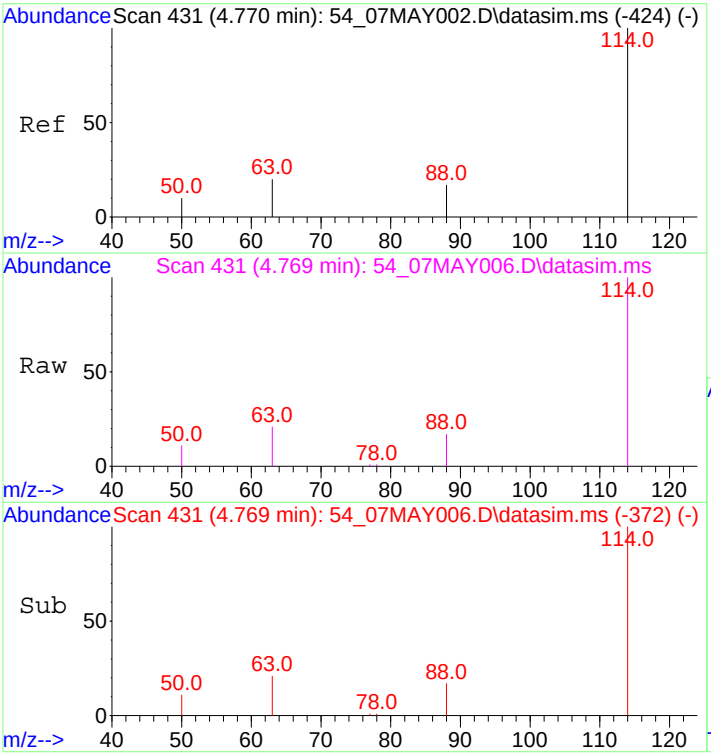


#8
1,1,1-Trichloroethane
Concen: 499.92 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.004 min
Lab File: 54_07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 97 Resp: 203398

Ion	Ratio	Lower	Upper
97	100		
99	64.5	52.1	78.1
61	43.3	30.2	45.4

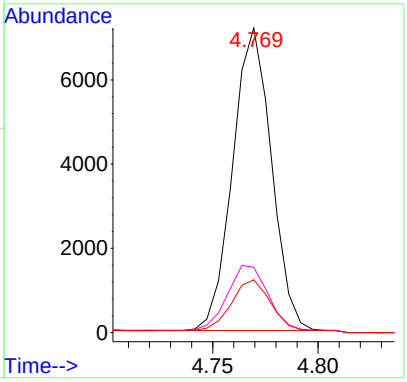


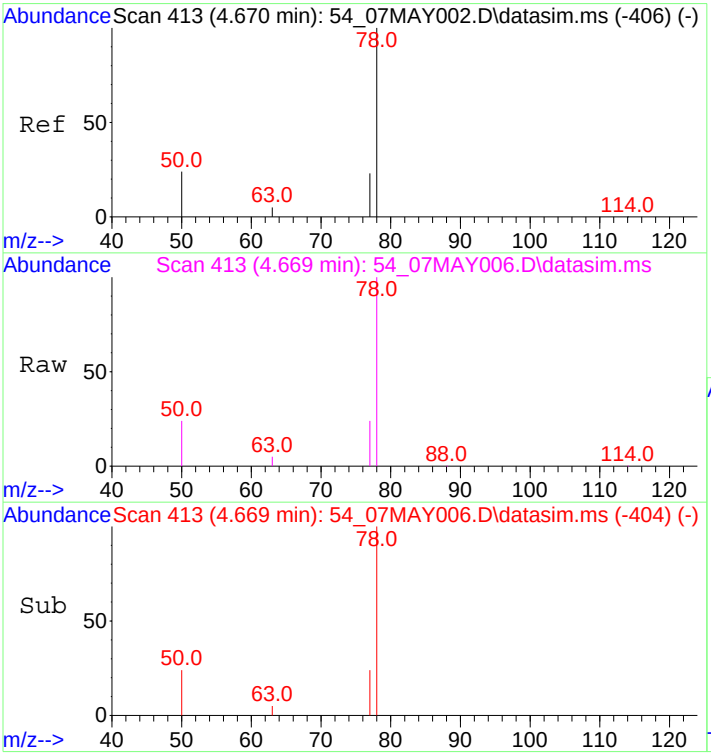


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion:114 Resp: 9184

Ion	Ratio	Lower	Upper
114	100		
63	22.2	17.6	26.4
88	16.9	13.6	20.4

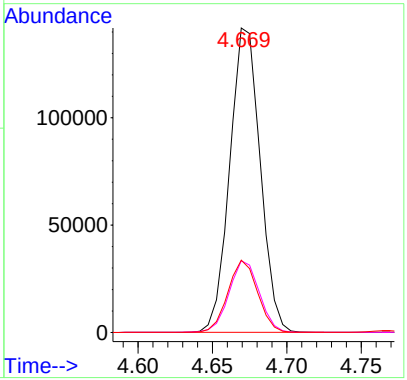


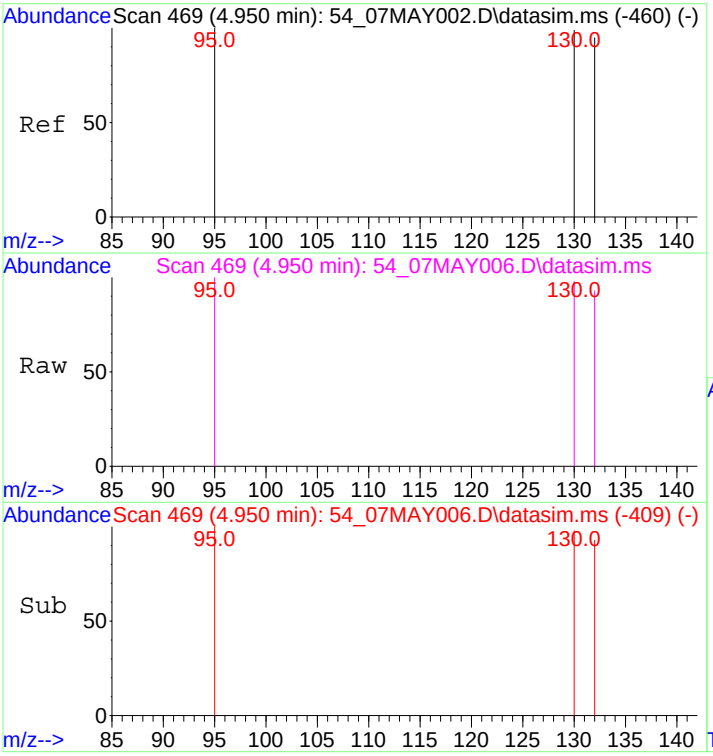


#10
Benzene
Concen: 480.85 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 78 Resp: 201737

Ion	Ratio	Lower	Upper
78	100		
77	23.3	18.2	27.2
50	23.0	18.4	27.6

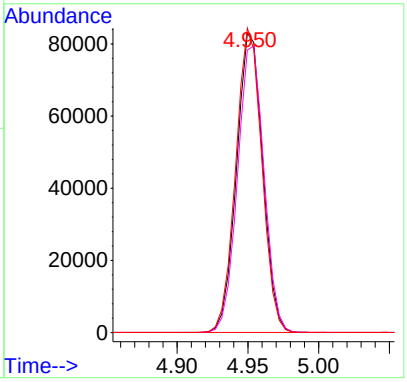


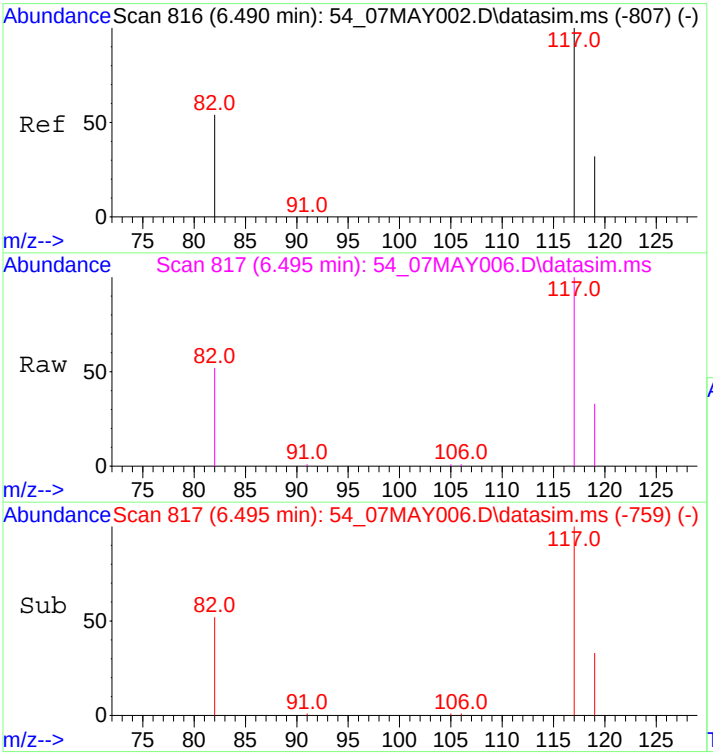


#11
Trichloroethene
Concen: 470.26 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion:130 Resp: 107415

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	100.7	76.5	114.7

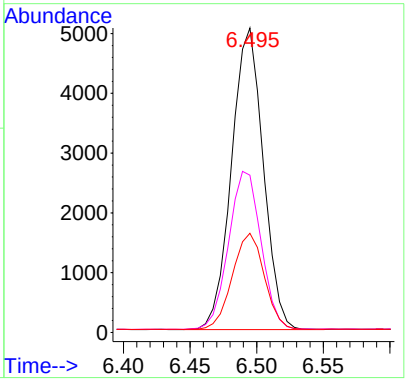


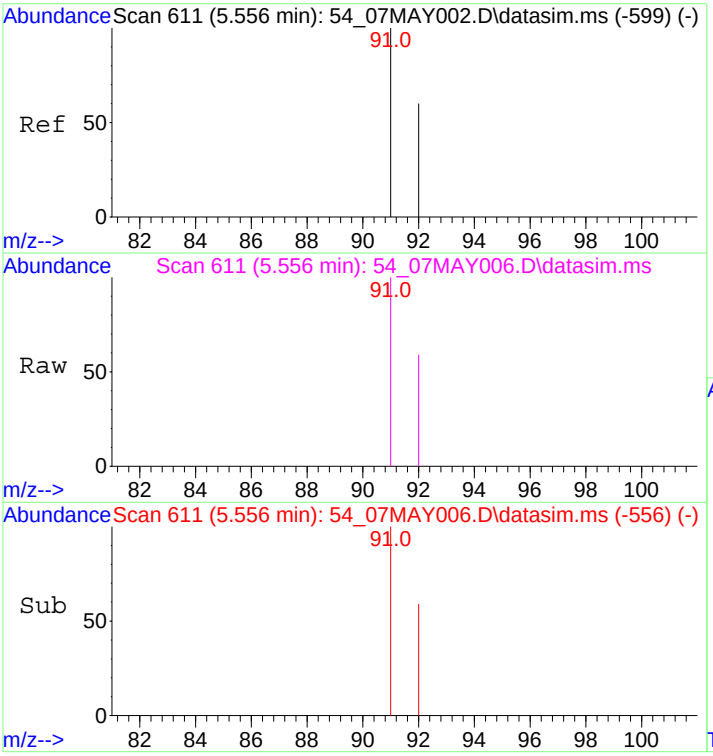


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.005 min
Lab File: 54_07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion:117 Resp: 8343

Ion	Ratio	Lower	Upper
117	100		
82	53.7	38.0	57.0
119	32.2	27.0	40.4

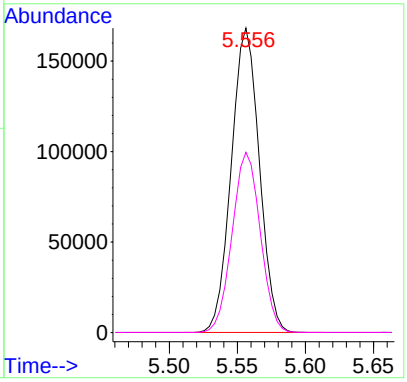


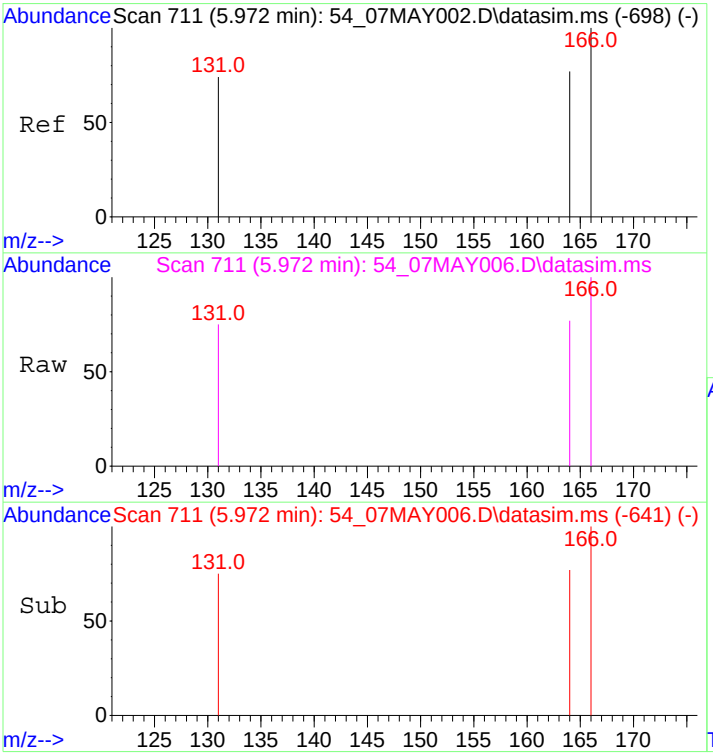


#13
Toluene
Concen: 482.59 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 91 Resp: 241358

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.8	71.8

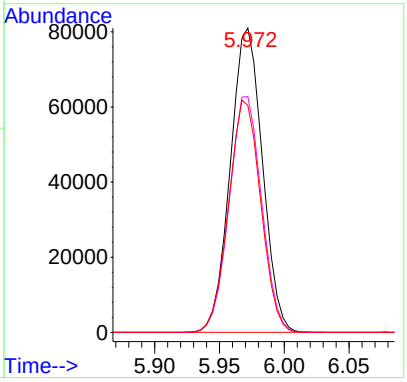


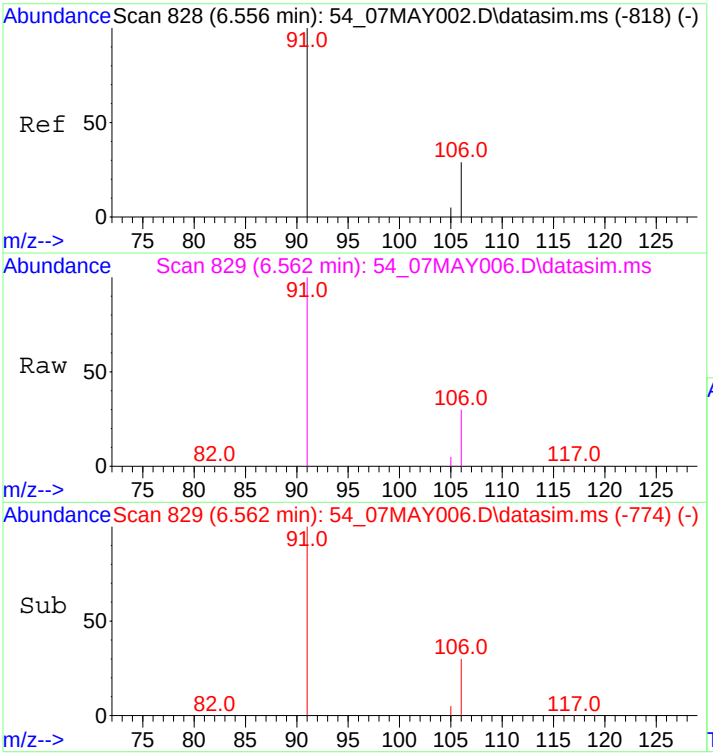


#14
Tetrachloroethene
Concen: 488.12 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion:166 Resp: 139434

Ion	Ratio	Lower	Upper
166	100		
164	78.1	62.6	94.0
131	76.4	58.5	87.7

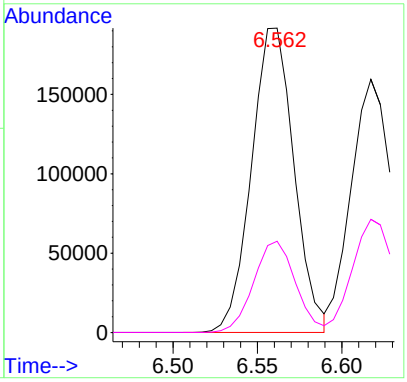


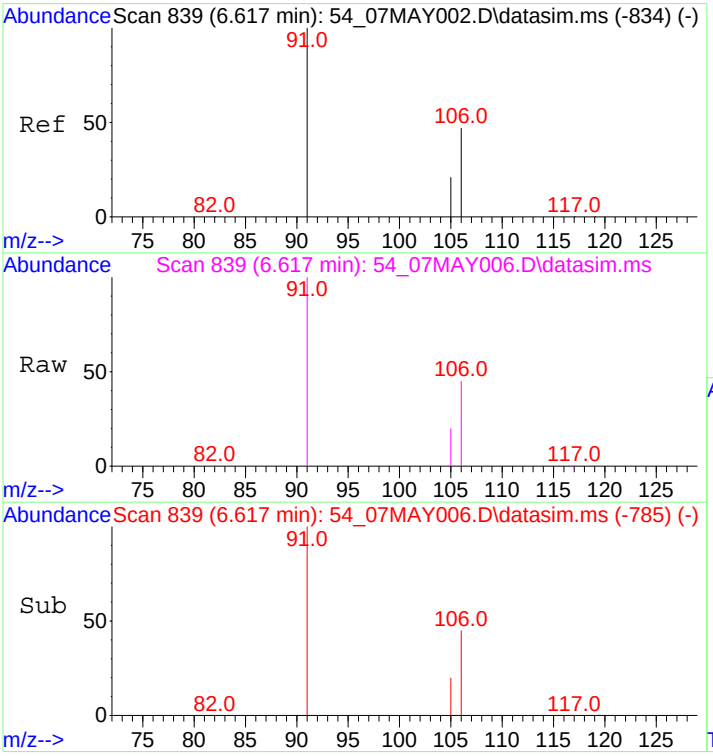


#15
Ethyl Benzene
Concen: 529.76 ppbv
RT: 6.562 min Scan# 829
Delta R.T. 0.005 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 91 Resp: 336466

Ion	Ratio	Lower	Upper
91	100		
106	29.5	26.9	40.3

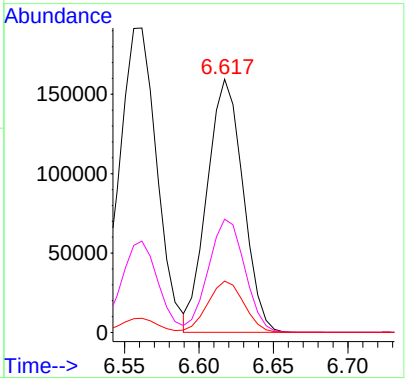


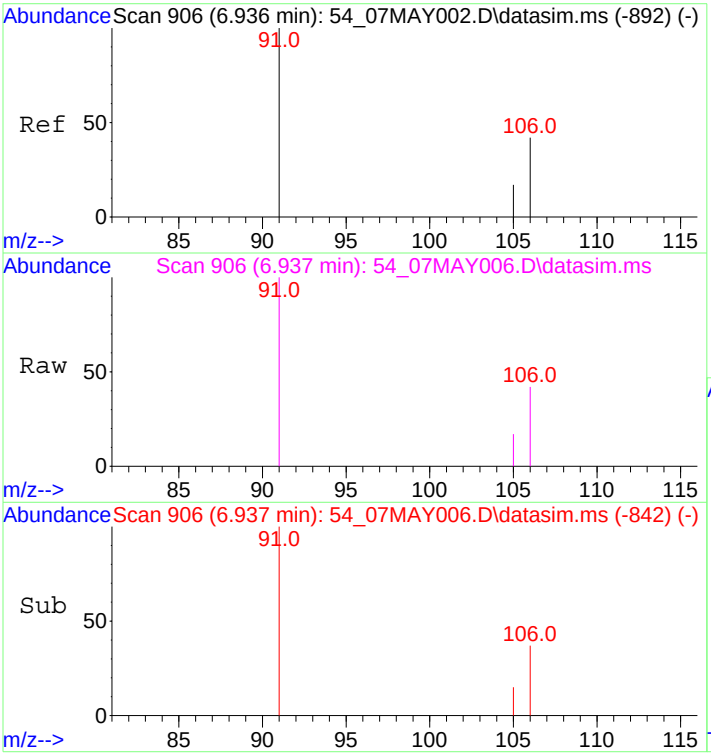


#16
m,p-Xylene
Concen: 549.31 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 91 Resp: 267764

Ion	Ratio	Lower	Upper
91	100		
106	45.3	43.1	64.7
105	20.4	18.3	27.5

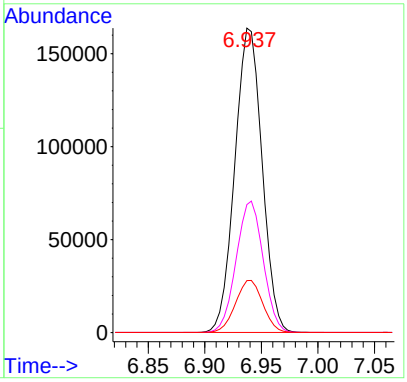




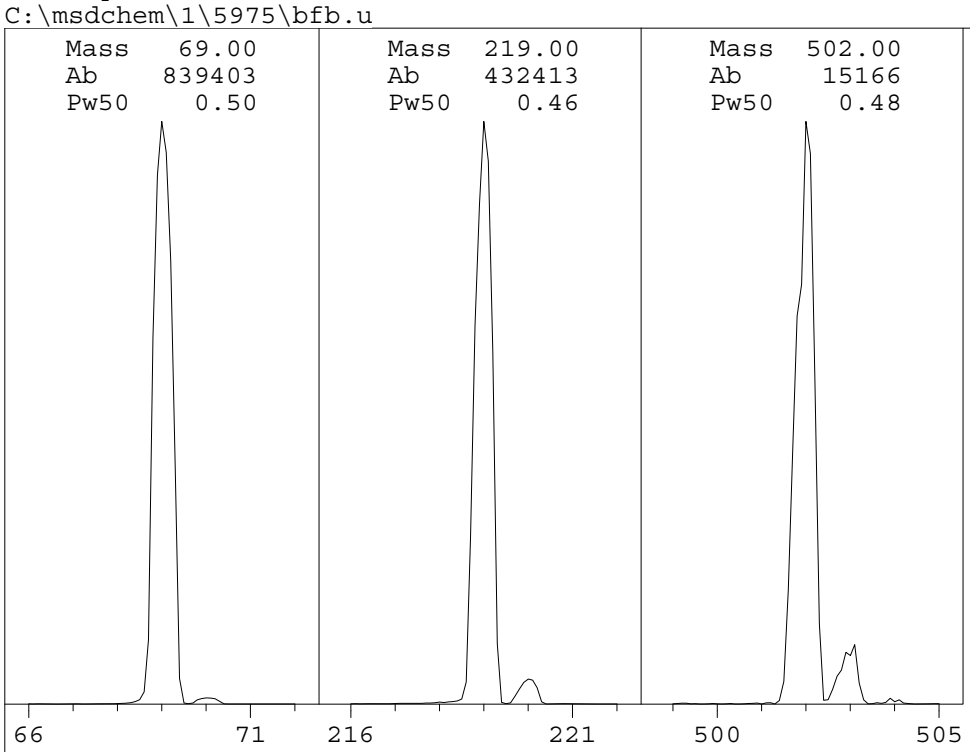
#17
o-Xylene
Concen: 555.82 ppbv
RT: 6.937 min Scan# 906
Delta R.T. 0.001 min
Lab File: 54 07MAY006.D
Acq: 7 May 2014 8:09 am

Tgt Ion: 91 Resp: 274754

Ion	Ratio	Lower	Upper
91	100		
106	42.7	40.1	60.1
105	17.1	15.8	23.6



Thu May 08 06:46:32 2014 Instrument: GCMS
C:\msdchem\1\5975\bfb.u US91732436

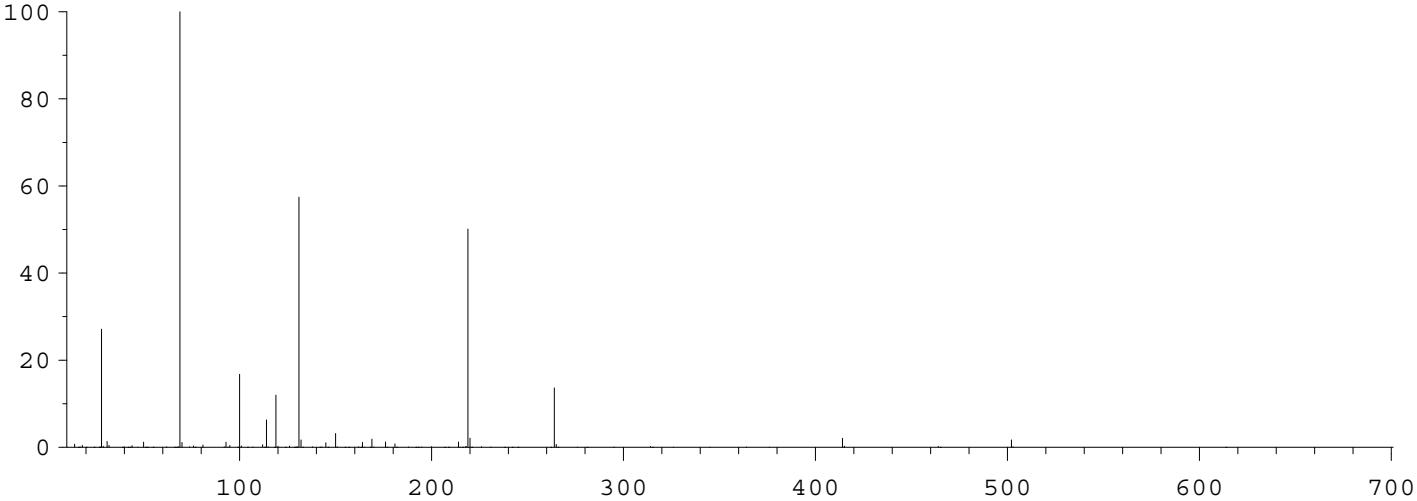


Ion Pol	Pos	MassGain	-791
		MassOffs	-37
Emission	34.6	AmuGain	1593
EIEnrgy	69.9	AmuOffs	129.88
Filament	2	Wid219	-0.029
		DC Pol	Pos
Repeller	19.90		
IonFcus	79.7	HEDEnab	On
EntLens	0.0	EMVolts	1953
EntOffs	Var		
		Samples	8
PFTBA	Open	Averages	3
		Stepsize	0.10

Temperatures and Pressures:

MS Source	230	TurboSpd	100
MS Quad	150	HiVac	1.17e05

Scan: 10.00 - 701.00 Samples: 8 Thresh: 100 Step: 0.10
116 peaks Base: 69.00 Abundance: 670080



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	670080	100.00	70.00	7468	1.11
219.00	335808	50.11	220.00	14177	4.22
502.10	11481	1.71	503.00	876	7.63

Air/Water Check: H20~0.46% N2~27.13% O2~0.47% CO2~0.39% N2/H2O~5949.59%

Ramp Criteria:
Ion Focus Maximum 90 volts using ion 69; EM Gain 244203
Repeller Maximum 20 volts using ion 219; Gain Factor 2.44

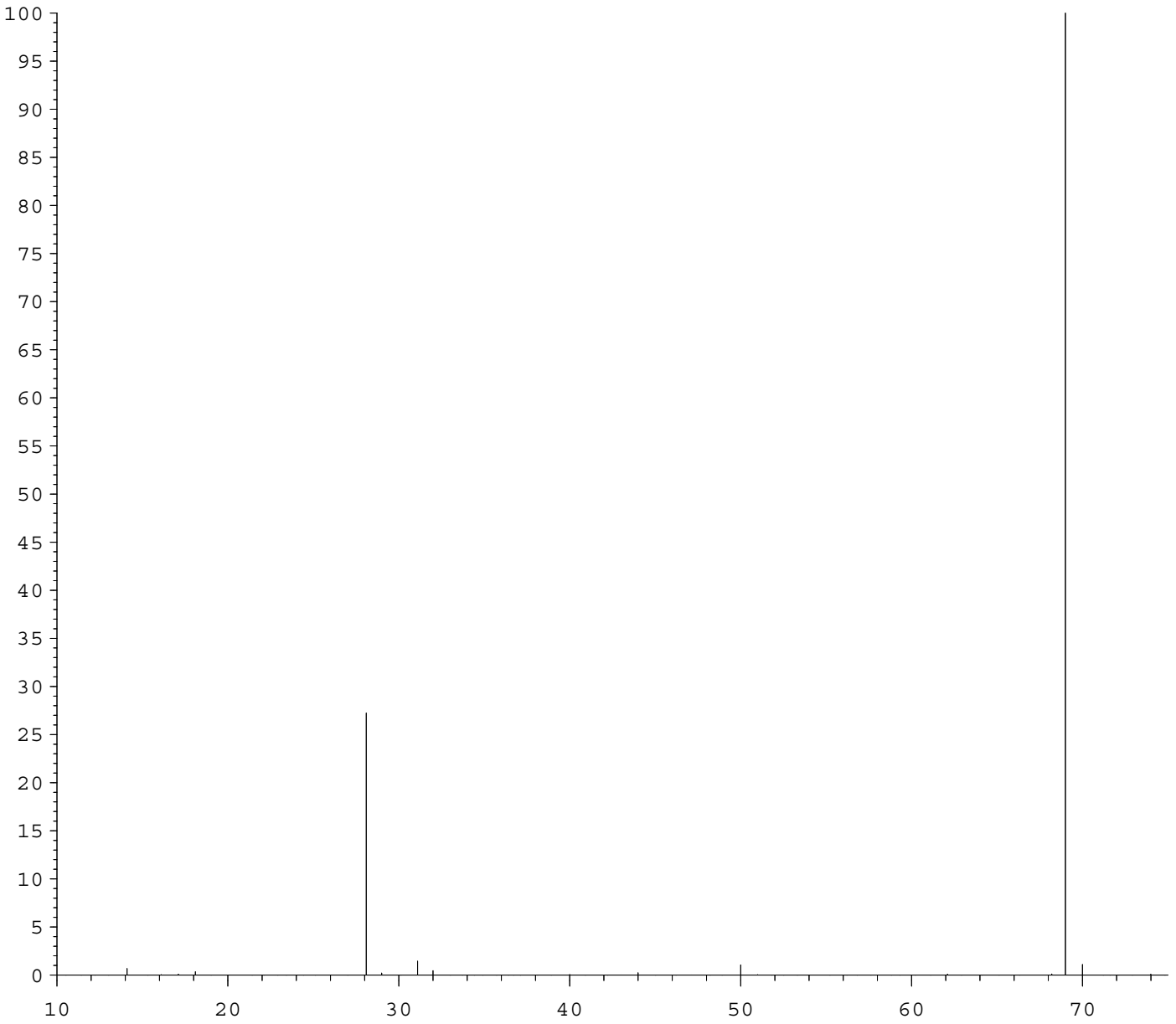
MassGain Values(Samples): -782(3) -767(2) -741(1) -706(0) -636(FS)

TARGET MASS:	50	69	131	219	414	502	1050
Amu Offset:	129.9	129.9	129.9	129.9	129.9	129.9	129.9
Entrance Lens Offset:	16.8	13.8	14.1	13.8	14.1	14.1	14.1
Target Abund(%):	1.0	100.0	55.0	55.0	2.4	2.0	
Actual Tune Abund(%):	1.2	100.0	57.4	50.1	2.0	1.7	

597x Air and Water Check

Instrument: GCMS
Thu May 08 06:48:08 2014 C:\msdchem\1\5975\

Scan: 10.00 - 75.00 Samples: 8 Thresh: 0 Step: 0.10
74 peaks Base: 69.00 Abundance: 661568



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	661568	100.00	70.00	7296	1.10
18.10	2403	0.36	19.00	82	3.41
28.10	180224	27.24	29.00	1417	0.79

Current Params used: bfb.u

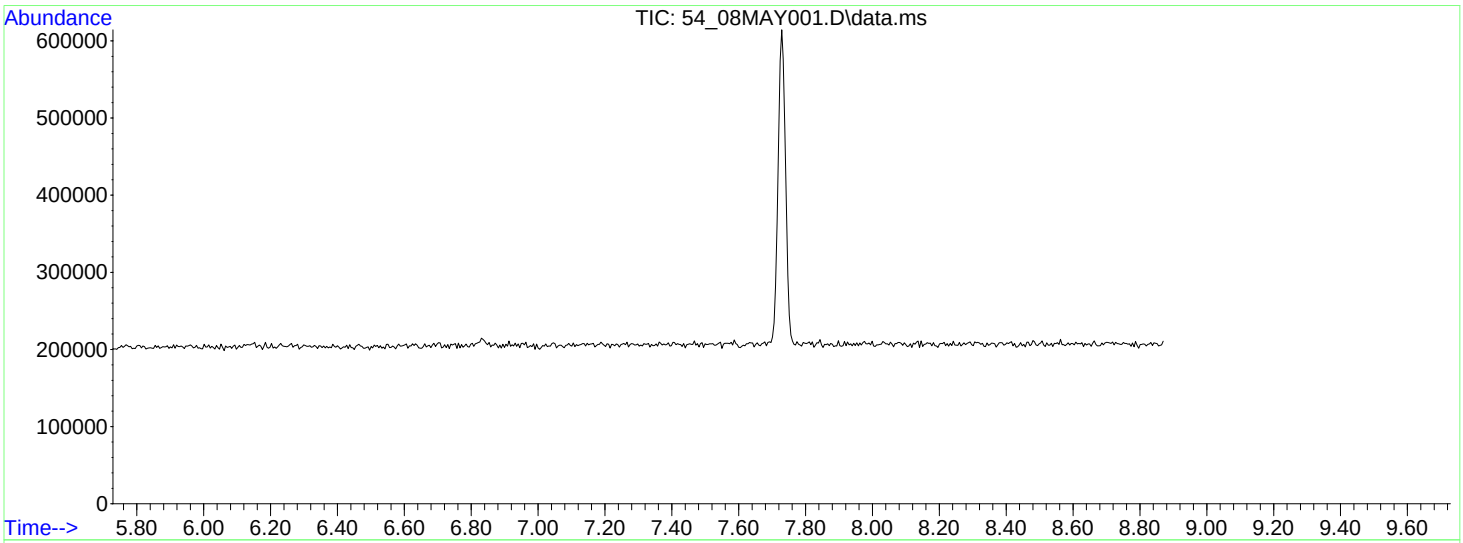
Relative abundances:

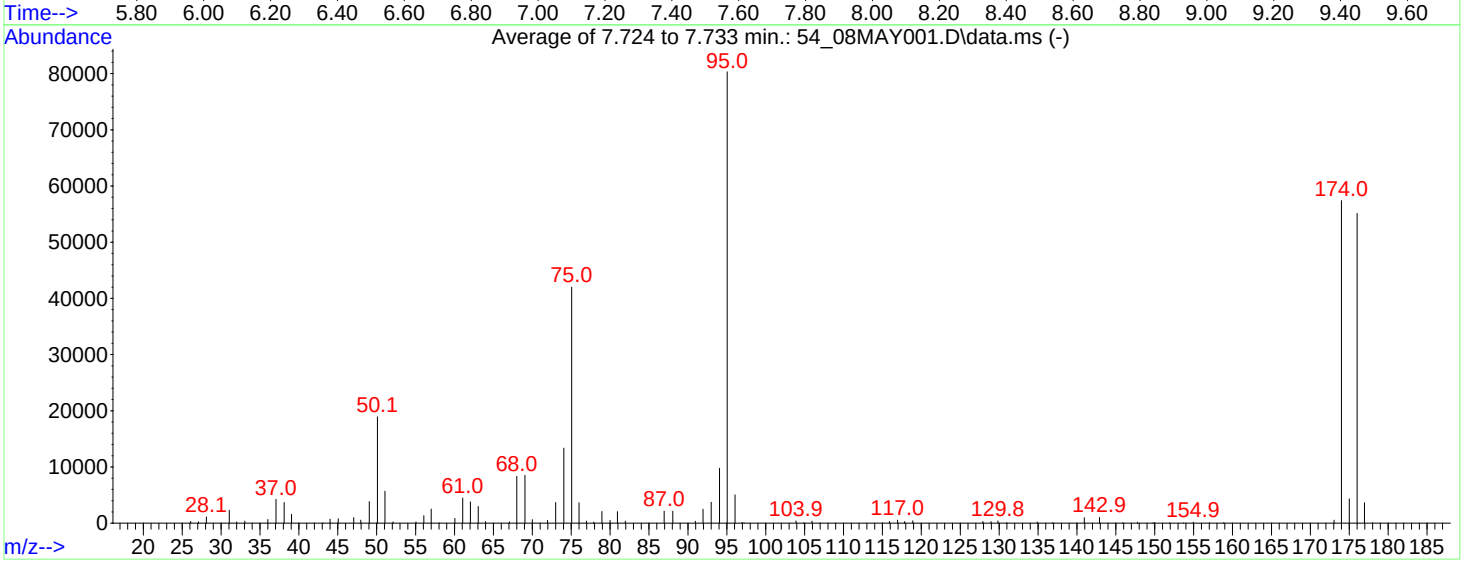
18/69 =	0.36	Water%	(counts=2403)
28/69 =	27.24	Nitrogen%	(counts=180224)
32/69 =	0.47	Oxygen%	(counts=3098)
44/69 =	0.23	Carbon Dioxide%	(counts=1539)
28/18 =	7499.96	Nitrogen/Water%	

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY001.D
Acq On : 8 May 2014 7:08 am
Operator : YHL
Sample : 20140508-BFB \ Tune Check
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\LOOP20140416.M
Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
Last Update : Wed May 07 08:13:45 2014





AutoFind: Scans 903, 904, 905; Background Corrected with Scan 894

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	23.6	18933	PASS
75	95	30	66	52.3	42008	PASS
95	95	100	100	100.0	80325	PASS
96	95	5	9	6.3	5034	PASS
173	174	0.00	2	1.0	559	PASS
174	95	50	120	71.5	57403	PASS
175	174	4	9	7.6	4336	PASS
176	174	93	101	96.0	55120	PASS
177	176	5	9	6.6	3632	PASS

GC/MS QA-QC Check Report

Tune File : C:\msdchem\1\DATA\2014\20140508\54_08MAY001.D
Tune Time : 8 May 2014 7:08 am

Daily Calibration File : C:\msdchem\1\DATA\2014\20140508\54_08MAY002.D

File	Sample	Surrogate Recovery %	Internal Standard Responses	
		3932	9041	8718
54_08MAY002.D	STD2014050	3932	9041	8718
54_08MAY003.D	STD2014050	3802	8745	8001
54_08MAY004.D	20140508-M	3881	8897	8111
54_08MAY005.D	20140508-L	4075	9309	8418
54_08MAY006.D	02235 \ F6	4038	9360	8580
54_08MAY007.D	02236 \ F6	3737	8596	7787
54_08MAY008.D	02236 \ F6	4038	9284	8670
54_08MAY009.D	02237 \ F6	4102	9295	8632
54_08MAY010.D	02238 \ F6	4061	9276	8699
54_08MAY011.D	02239 \G6-	3939	8915	8465
54_08MAY012.D	02240 \G6-	3540	7956	7507
54_08MAY013.D	02241 \G6-	3765	8483	8203
54_08MAY014.D	02242 \G6-	3727	8616	8132
54_08MAY015.D	02243 \G6-	3434	7806	7147
54_08MAY016.D	02244 \G6-	3832	8916	8355
54_08MAY017.D	02245 \G6-	3743	8456	7888
54_08MAY018.D	02246 \G6-	3837	8548	7901
54_08MAY019.D	02247 \G6-	3568	8256	7429
54_08MAY020.D	02248 \G6-	3734	8478	7931
54_08MAY021.D				

```
         02249 \G6-            3741       8353       7825
-----------------------------------------------------------------------------
(fails) - fails 24hr time check   * - fails criteria

    Created: Thu May 08 13:02:42 2014  GCMS
```

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY002.D
Acq On : 8 May 2014 7:20 am
Operator : YHL
Sample : STD20140508-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:26:53 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	ISTD	Bromochloromethane	1.000	1.000	0.0	90	0.00
2	M	Vinyl chloride	0.380	0.328	13.7	80	0.00
3	M	1,1-Dichloroethene	0.774	0.754	2.6	88	0.00
4	M	Methyl Tert Butyl Ether	1.183	1.015	14.2	79	0.00
5	M	trans-1,2-Dichloroethene	0.683	0.648	5.1	86	0.00
6	M	1,1-Dichloroethane	0.815	0.742	9.0	83	0.00
7	M	cis-1,2-Dichloroethene	0.637	0.616	3.3	85	0.00
8	M	1,1,1-Trichloroethane	1.034	1.092	-5.6	93	0.00
9	ISTD	1,4-Difluorobenzene	1.000	1.000	0.0	77	0.00
10	M	Benzene	0.457	0.435	4.8	74	0.00
11	M	Trichloroethene	0.249	0.240	3.6	74	0.00
12	ISTD	Chlorobenzene-d5	1.000	1.000	0.0	81	0.00
13	M	Toluene	0.599	0.530	11.5	71	0.00
14	M	Tetrachloroethene	0.342	0.304	11.1	71	0.00
15	M	Ethyl Benzene	0.761	0.689	9.5	73	0.00
16	M	m,p-Xylene	0.584	0.542	7.2	75	0.00
17	M	o-Xylene	0.593	0.547	7.8	75	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY002.D
Acq On : 8 May 2014 7:20 am
Operator : YHL
Sample : STD20140508-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:26:53 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

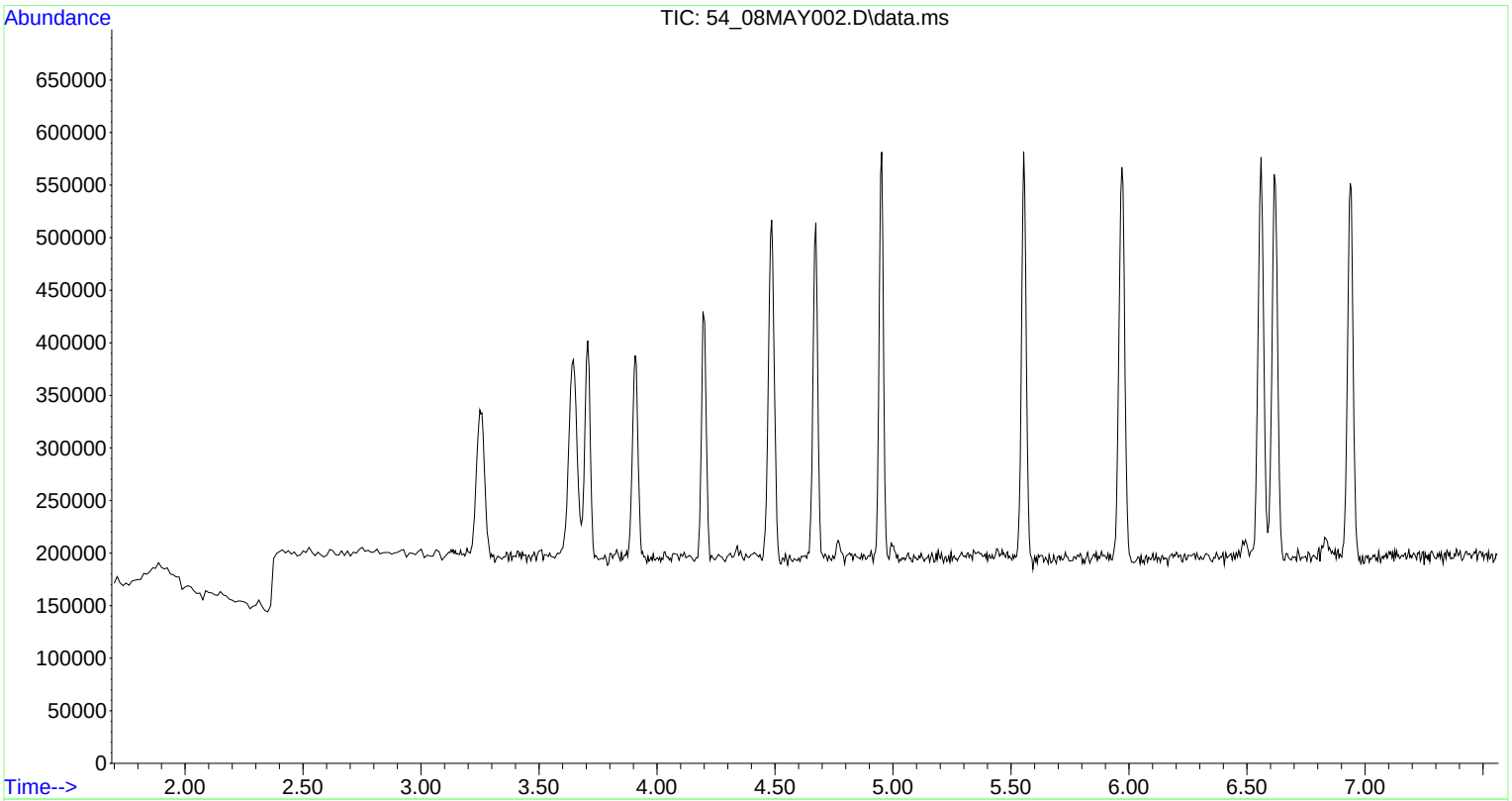
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3932	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	9041	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8718	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.902	62	66320	443.56	ppbv #	77
3] 1,1-Dichloroethene	3.251	61	147705	485.03	ppbv	96
4] Methyl Tert Butyl Ether	3.642	73	200573	431.37	ppbv	97
5] trans-1,2-Dichloroethene	3.709	61	127984	476.84	ppbv	98
6] 1,1-Dichloroethane	3.910	63	151004	471.29	ppbv	96
7] cis-1,2-Dichloroethene	4.197	61	127734	509.63	ppbv	99
8] 1,1,1-Trichloroethane	4.483	97	216848	533.52	ppbv	96
10] Benzene	4.669	78	206467	499.91	ppbv	99
11] Trichloroethene	4.950	130	109689	487.81	ppbv	97
13] Toluene	5.556	91	240299	459.81	ppbv	99
14] Tetrachloroethene	5.972	166	134587	450.89	ppbv	98
15] Ethyl Benzene	6.556	91	312554	470.94	ppbv	92
16] m,p-Xylene	6.617	91	245709	482.38	ppbv	90
17] o-Xylene	6.940	91	246802	477.80	ppbv	90

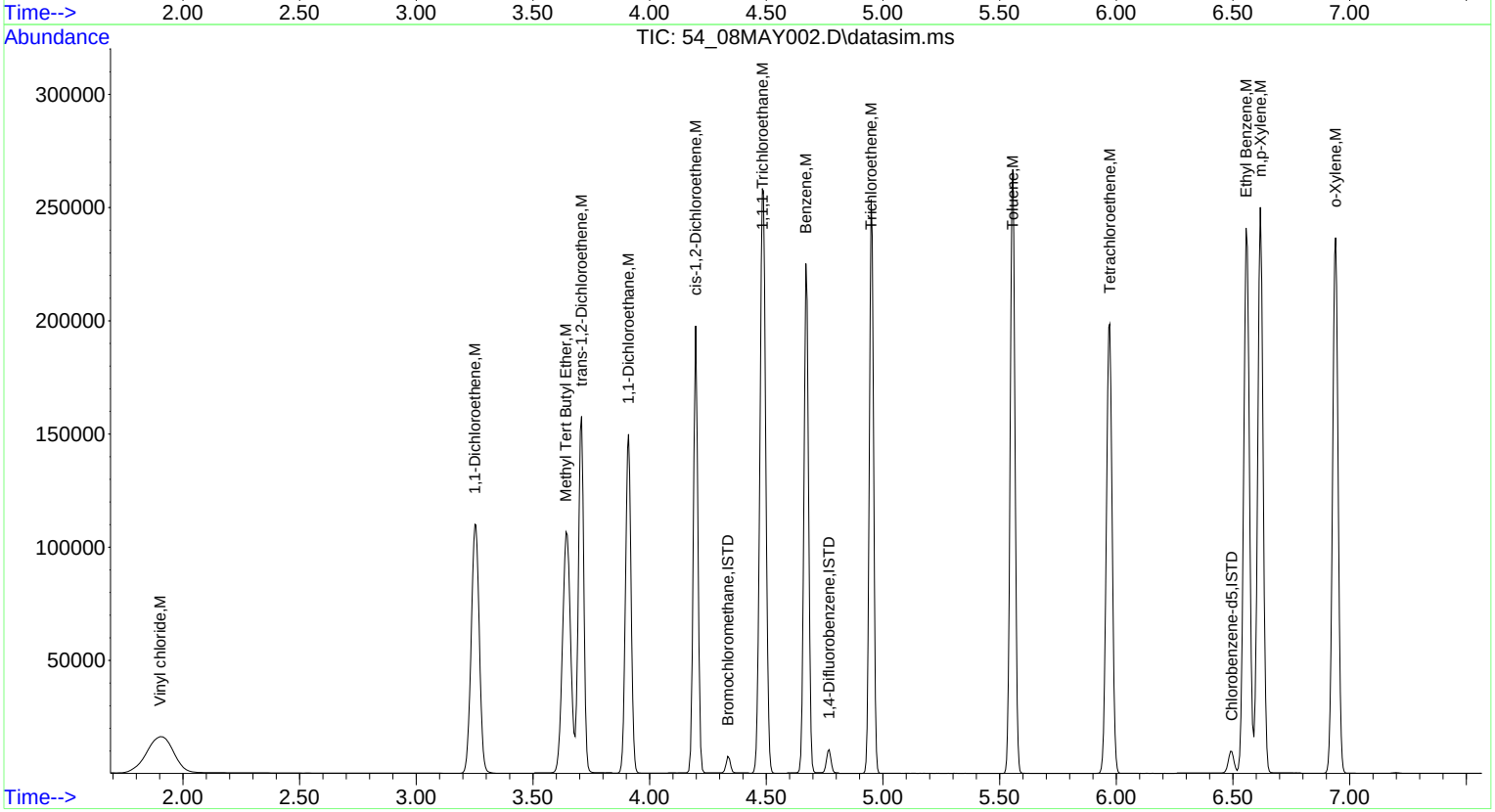
(#) = qualifier out of range (m) = manual integration (+) = signals summed

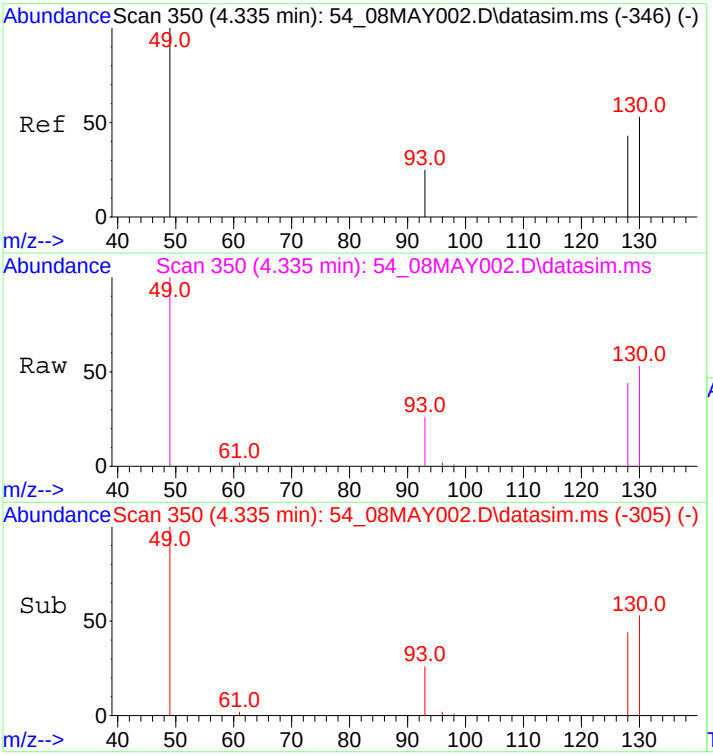
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY002.D
Acq On : 8 May 2014 7:20 am
Operator : YHL
Sample : STD20140508-1 \ 500 ppbv CCV 1° CC80994
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:26:53 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



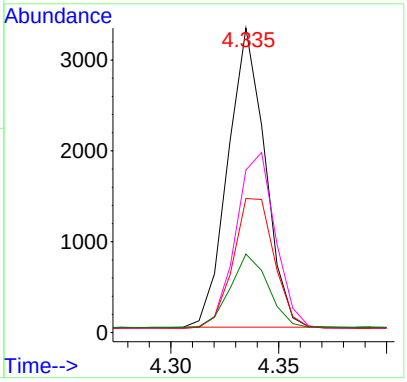


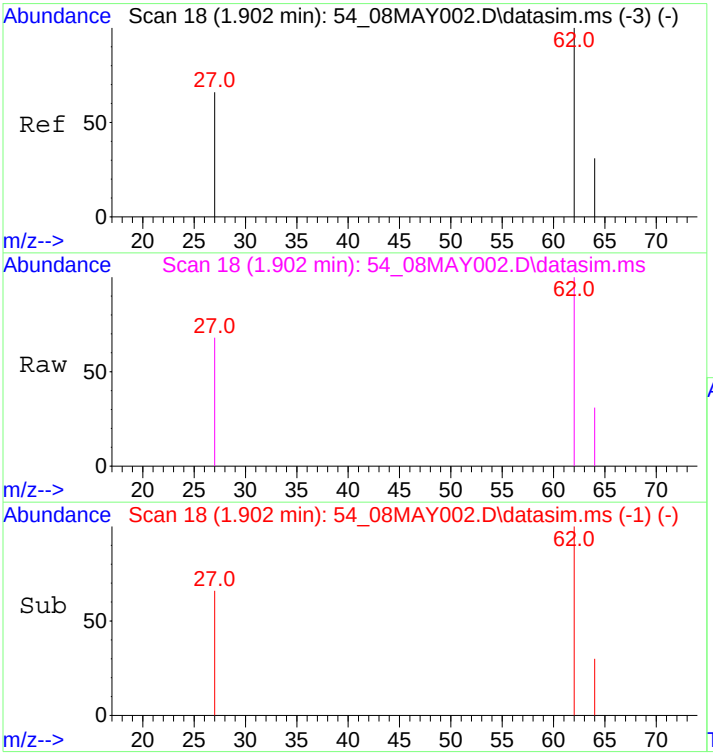


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 49 Resp: 3932

Ion	Ratio	Lower	Upper
49	100		
130	62.9	56.0	84.0
128	48.2	41.6	62.4
93	25.2	22.4	33.6

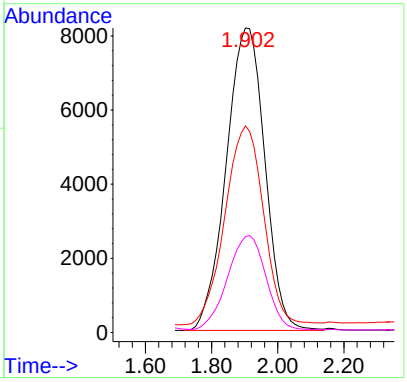


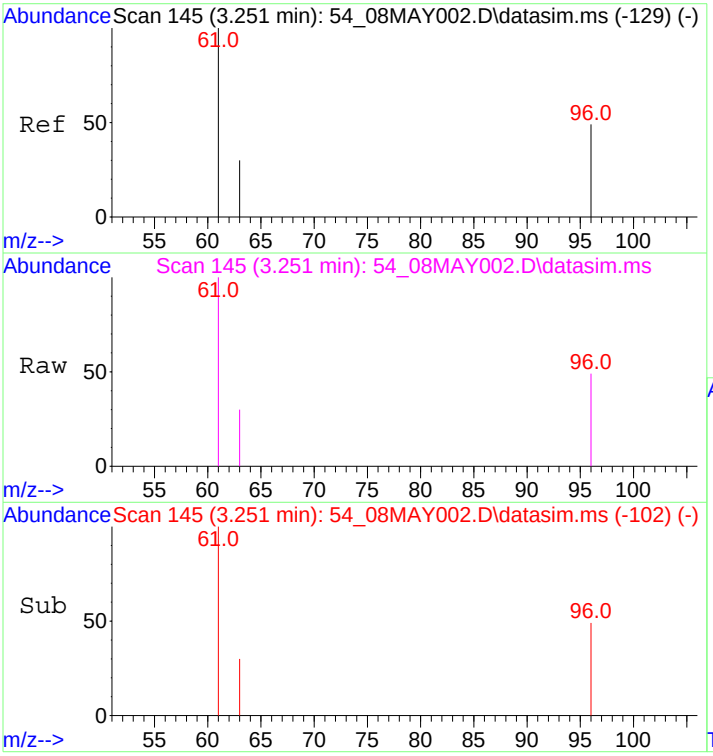


#2
Vinyl chloride
Concen: 443.56 ppbv
RT: 1.902 min Scan# 18
Delta R.T. -0.000 min
Lab File: 54_08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 62 Resp: 66320

Ion	Ratio	Lower	Upper
62	100		
64	26.9	28.0	42.0#
27	64.7	72.0	108.0#

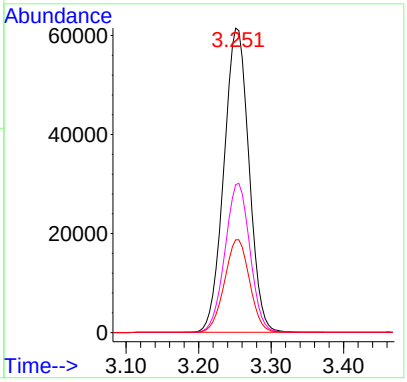


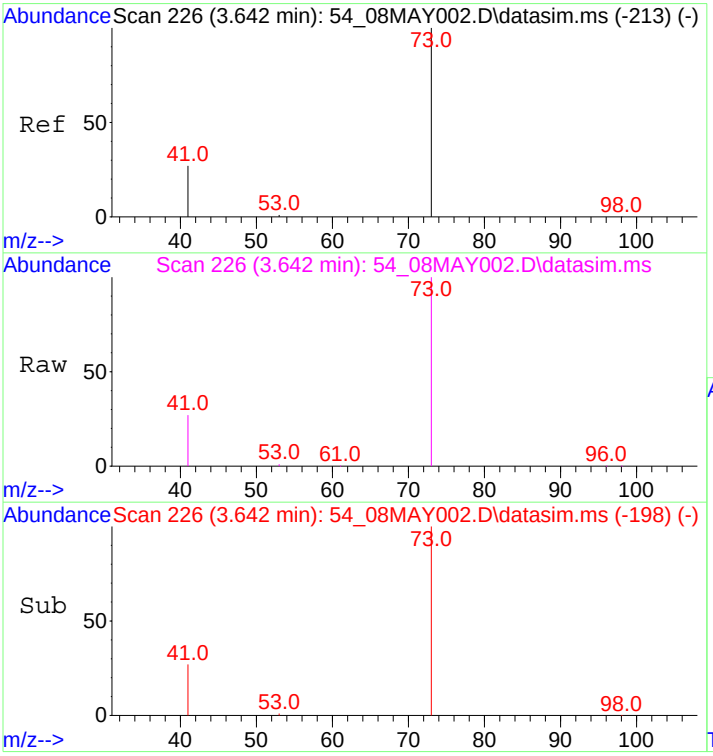


#3
1,1-Dichloroethene
Concen: 485.03 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.000 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 61 Resp: 147705

Ion	Ratio	Lower	Upper
61	100		
96	48.7	41.6	62.4
63	30.5	26.2	39.2

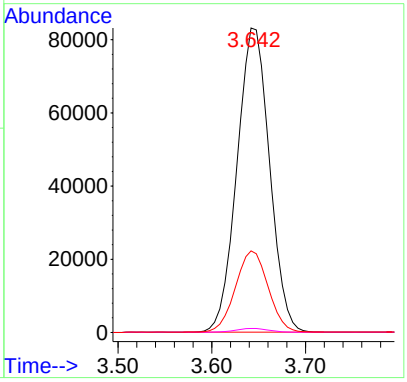


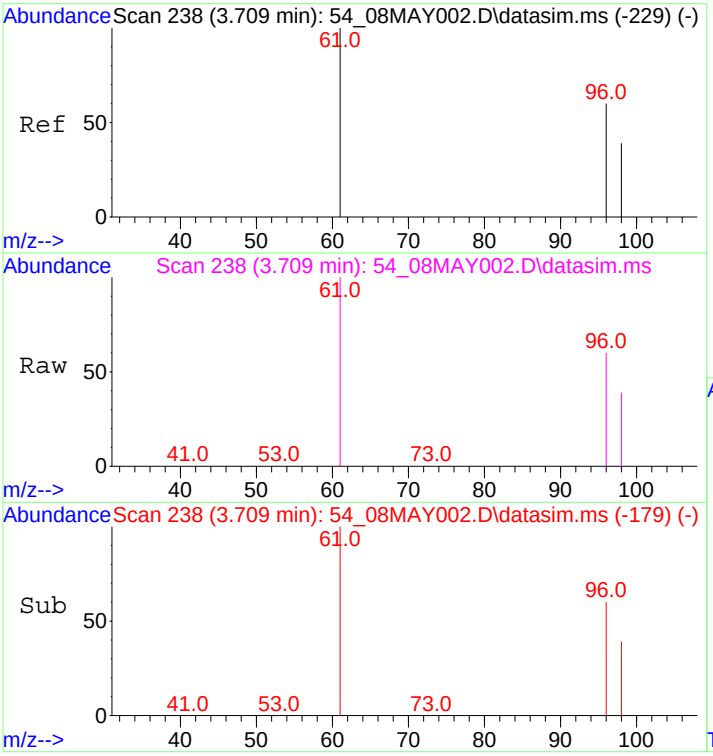


#4
Methyl Tert Butyl Ether
Concen: 431.37 ppbv
RT: 3.642 min Scan# 226
Delta R.T. -0.000 min
Lab File: 54_08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 73 Resp: 200573

Ion	Ratio	Lower	Upper
73	100		
53	1.3	1.0	1.4
41	26.8	20.0	30.0

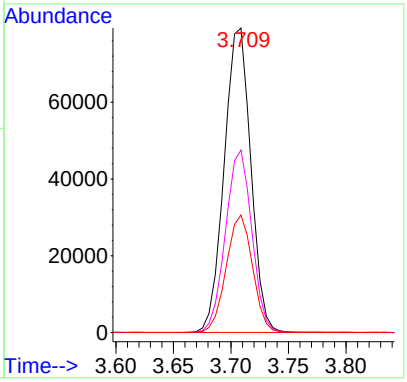


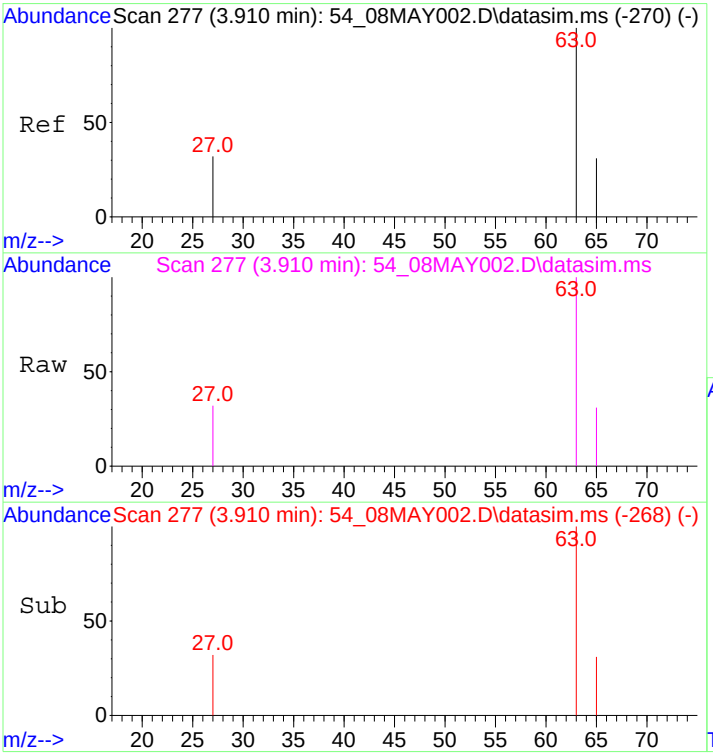


#5
trans-1,2-Dichloroethene
Concen: 476.84 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.006 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 61 Resp: 127984

Ion	Ratio	Lower	Upper
61	100		
96	59.1	48.0	72.0
98	38.0	32.0	48.0

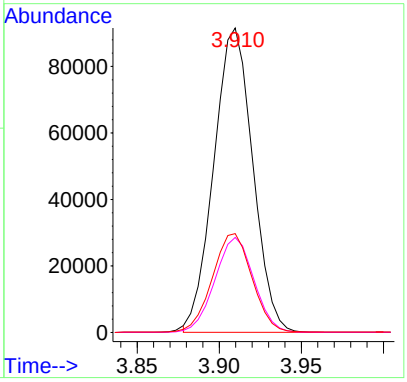


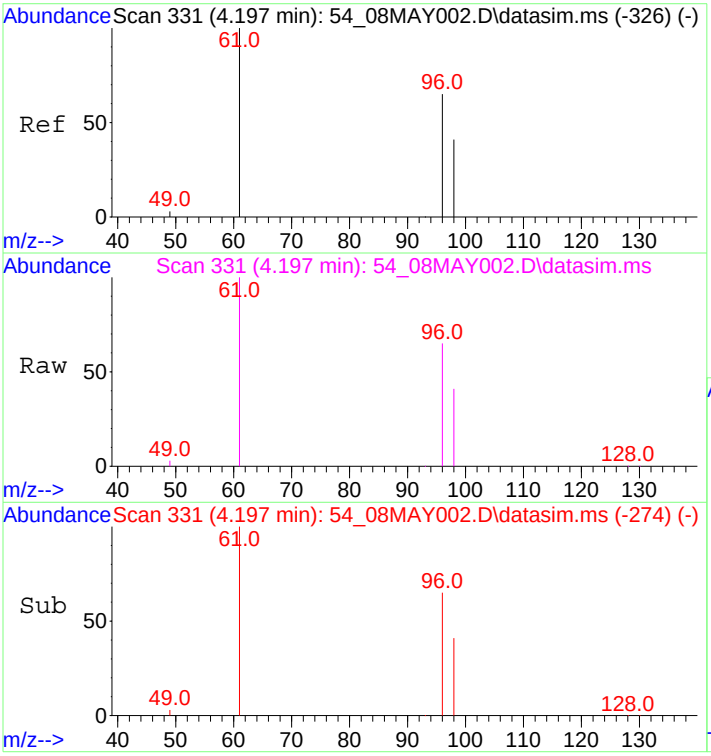


#6
1,1-Dichloroethane
Concen: 471.29 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 63 Resp: 151004

Ion	Ratio	Lower	Upper
63	100		
65	31.0	26.1	39.1
27	32.6	24.0	36.0

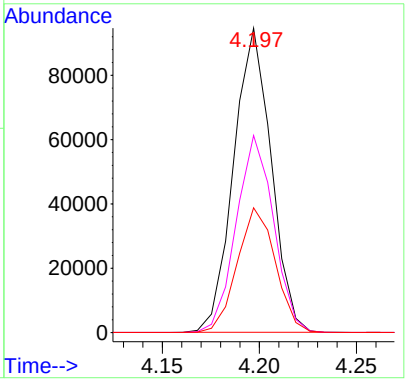


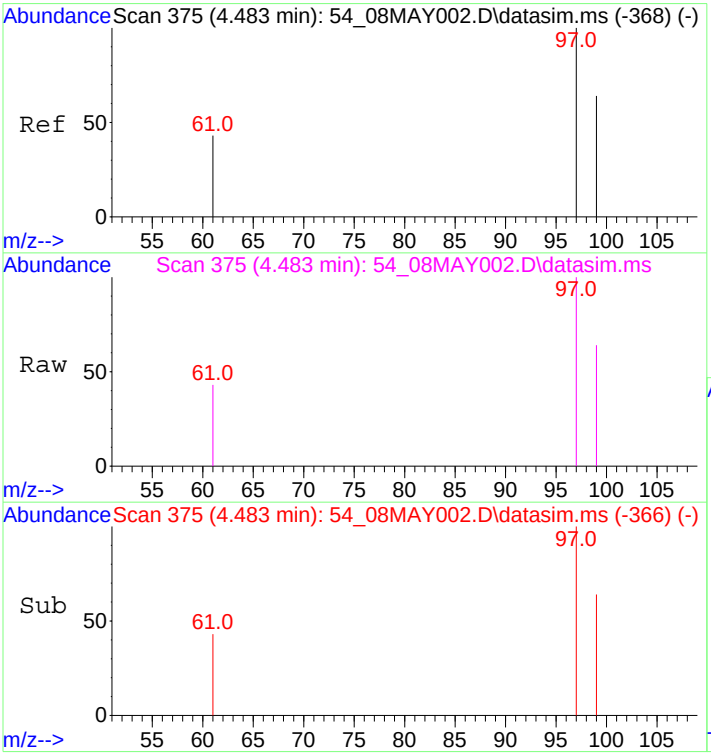


#7
cis-1,2-Dichloroethene
Concen: 509.63 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 61 Resp: 127734

Ion	Ratio	Lower	Upper
61	100		
96	64.4	52.0	78.0
98	41.5	33.6	50.4

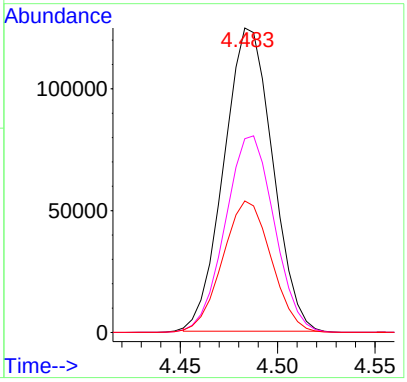


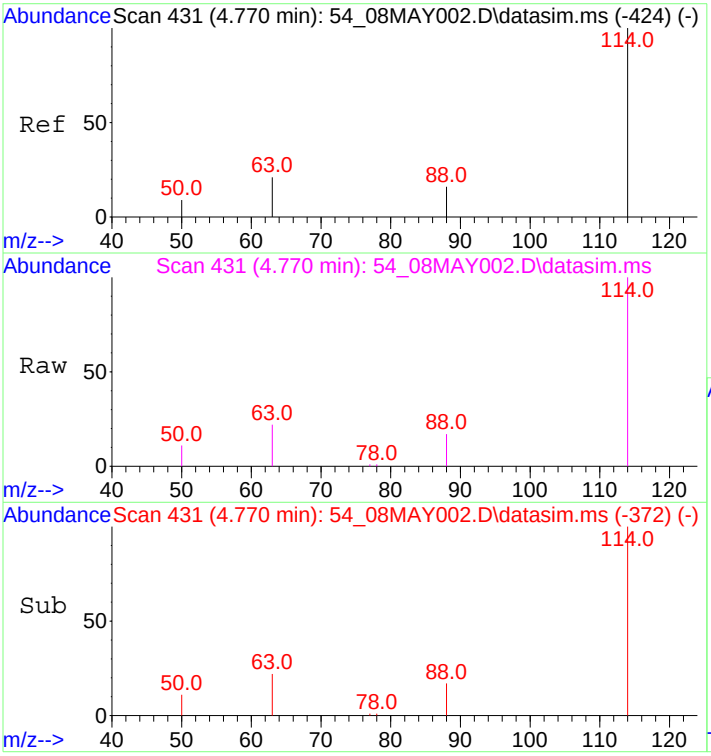


#8
1,1,1-Trichloroethane
Concen: 533.52 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 97 Resp: 216848

Ion	Ratio	Lower	Upper
97	100		
99	64.3	52.1	78.1
61	42.9	30.2	45.4

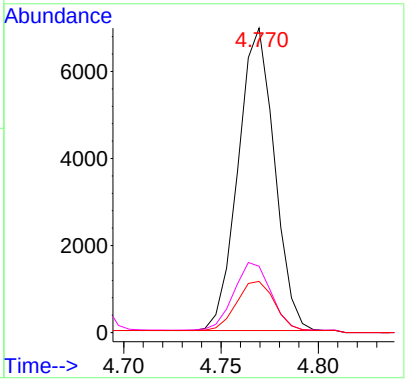


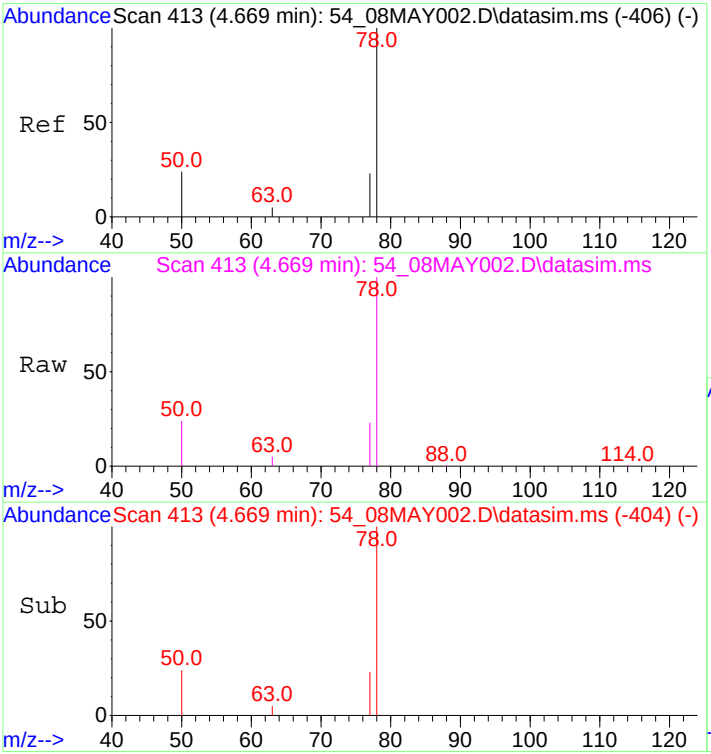


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion:114 Resp: 9041

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	16.9	13.6	20.4

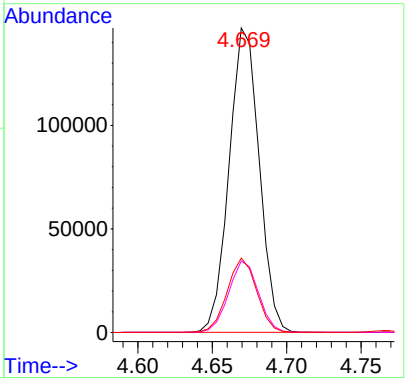


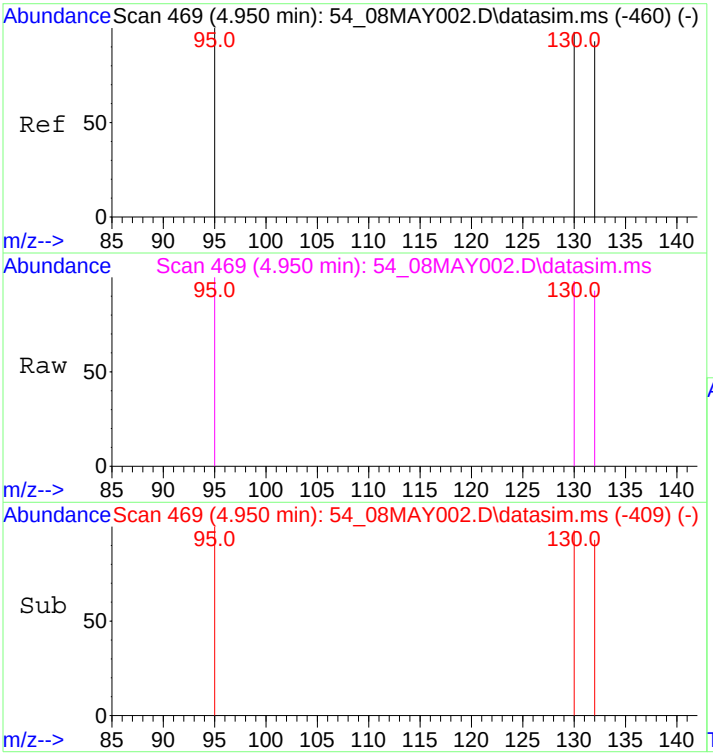


#10
Benzene
Concen: 499.91 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 78 Resp: 206467

Ion	Ratio	Lower	Upper
78	100		
77	23.2	18.2	27.2
50	23.8	18.4	27.6

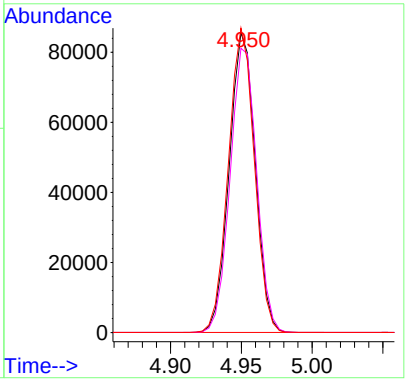


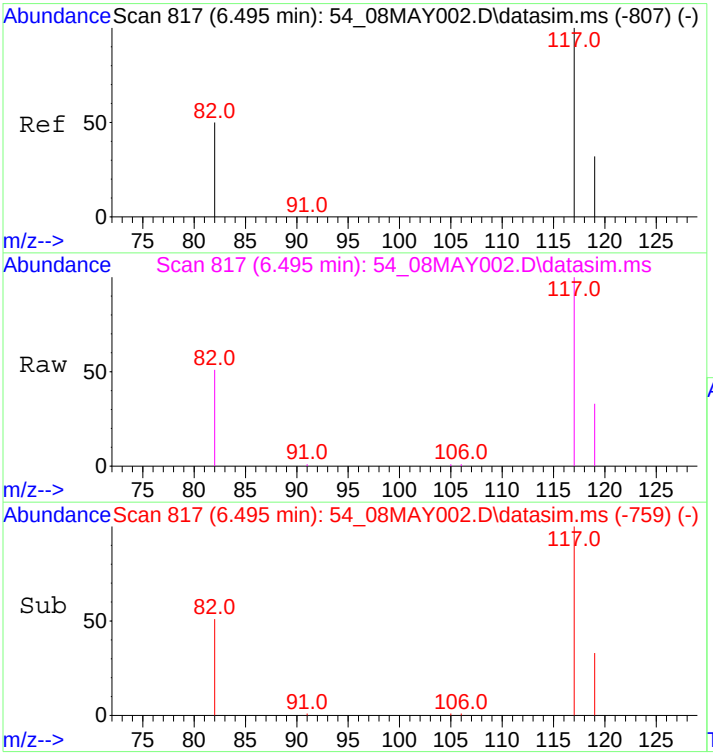


#11
Trichloroethene
Concen: 487.81 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion:130 Resp: 109689

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	101.0	76.5	114.7

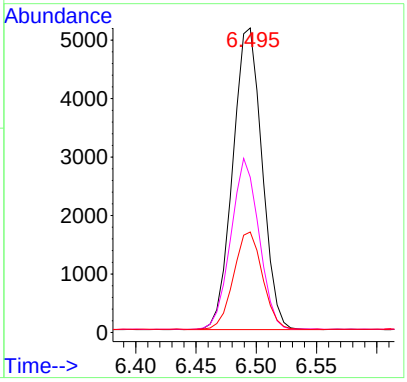


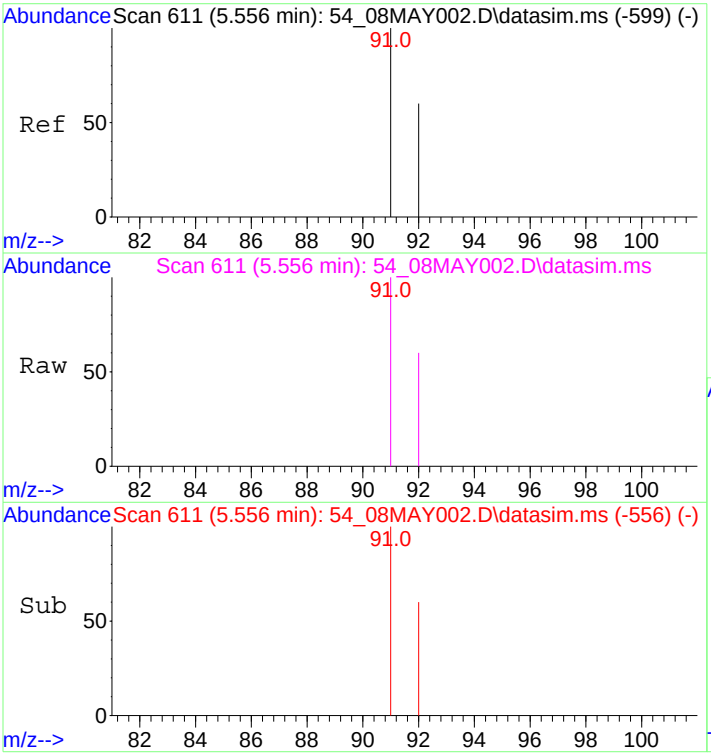


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.005 min
Lab File: 54_08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion:117 Resp: 8718

Ion	Ratio	Lower	Upper
117	100		
82	54.5	38.0	57.0
119	32.0	27.0	40.4

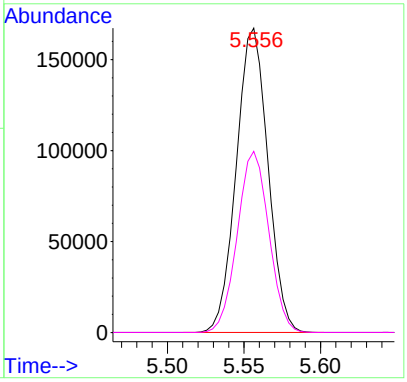


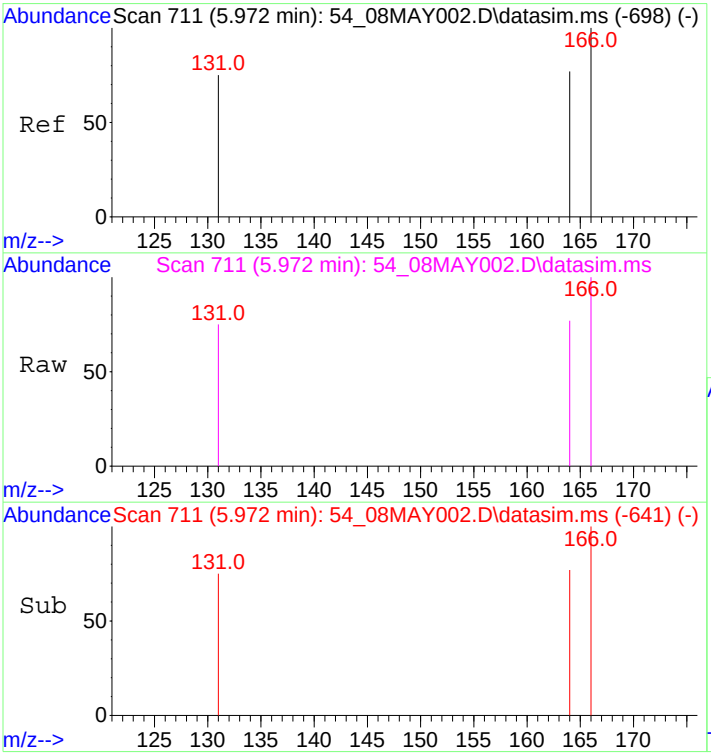


#13
Toluene
Concen: 459.81 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 91 Resp: 240299

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.8	71.8

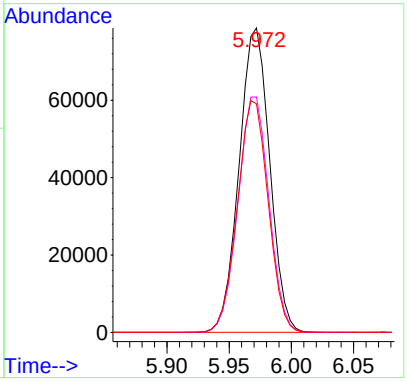


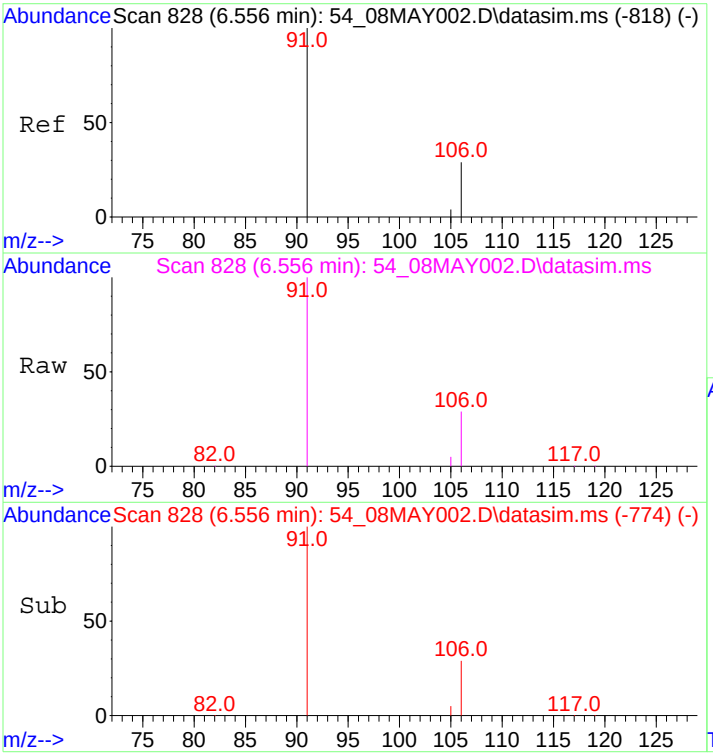


#14
Tetrachloroethene
Concen: 450.89 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion:166 Resp: 134587

Ion	Ratio	Lower	Upper
166	100		
164	78.1	62.6	94.0
131	76.6	58.5	87.7

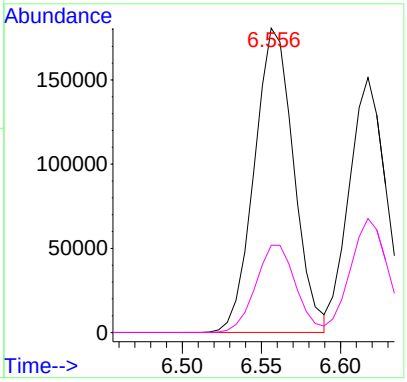


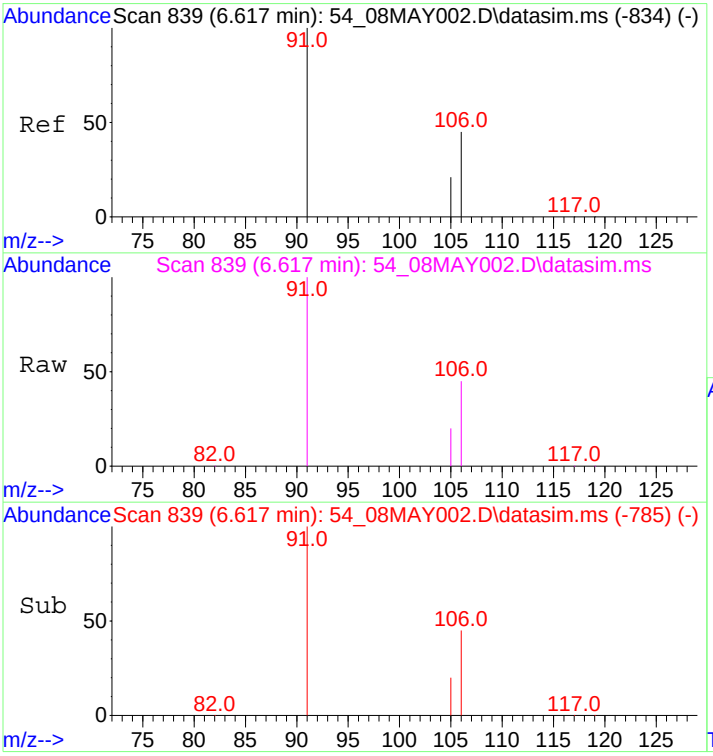


#15
Ethyl Benzene
Concen: 470.94 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 91 Resp: 312554

Ion	Ratio	Lower	Upper
91	100		
106	29.3	26.9	40.3

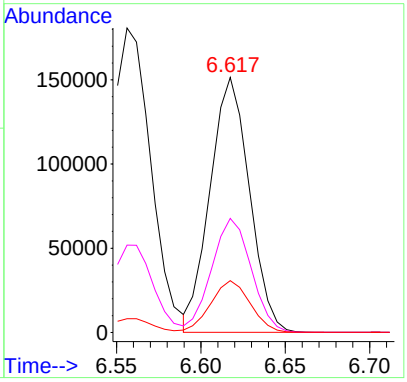


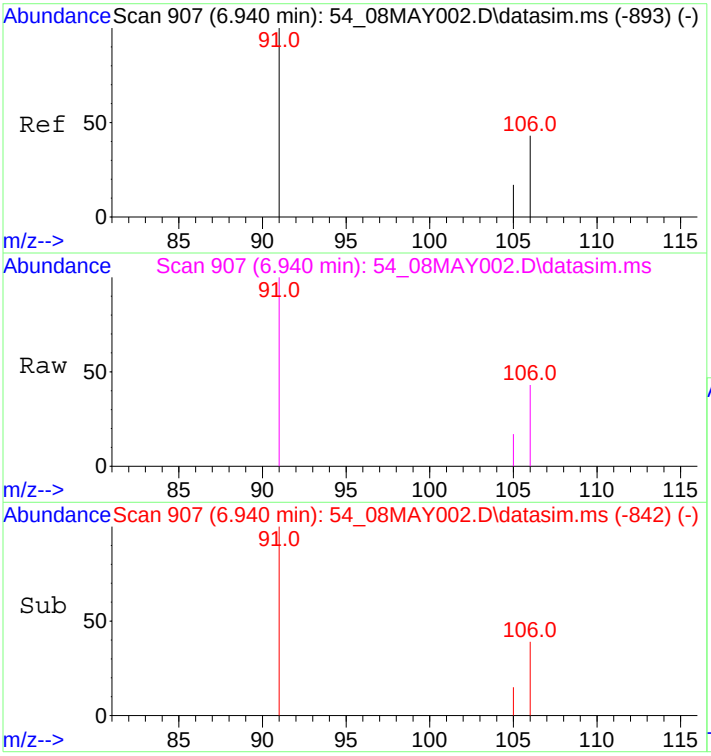


#16
m,p-Xylene
Concen: 482.38 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 91 Resp: 245709

Ion	Ratio	Lower	Upper
91	100		
106	45.0	43.1	64.7
105	20.4	18.3	27.5

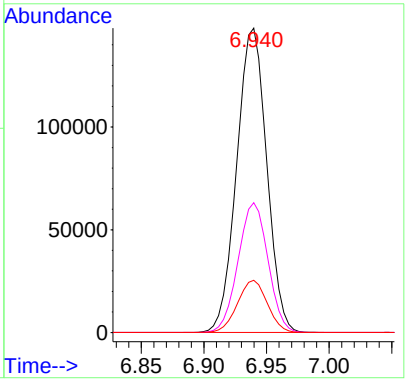




#17
o-Xylene
Concen: 477.80 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.004 min
Lab File: 54 08MAY002.D
Acq: 8 May 2014 7:20 am

Tgt Ion: 91 Resp: 246802

Ion	Ratio	Lower	Upper
91	100		
106	42.4	40.1	60.1
105	17.0	15.8	23.6



LOW LEVEL CALIBRATION VERIFICATION

Data File 54_08May003.D

LLCCV Standard Number 050814-LLCCV

LLCCV Standard Name **STD20140508-3 \LLCCV 0.5 ppbv 1º**

Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/8/2014	Second Source Actual Values ppbv	Difference %	Acceptance Criterion %	
Vinyl Chloride	0.5	0.52	2.9	50	OK
1,1-Dichloroethene	0.5	0.50	0.5	50	OK
Methyl Tert Butyl Ether	0.44	0.50	12.4	50	OK
trans-1,2-Dichloroethene	0.49	0.50	2.5	50	OK
1,1-Dichloroethane	0.49	0.52	5.3	50	OK
cis-1,2-Dichloroethene	0.54	0.53	2.4	50	OK
1,1,1-Trichloroethane	0.5	0.51	1.0	50	OK
Benzene	0.56	0.53	6.7	50	OK
Trichloroethene	0.54	0.51	6.9	50	OK
Toluene	0.57	0.52	9.6	50	OK
Tetrachloroethene	0.57	0.51	12.3	50	OK
Ethyl Benzene	0.61	0.52	17.3	50	OK
m,p-Xylene	0.59	0.52	13.5	50	OK
o-Xylene	0.6	0.52	15.9	50	OK

Primary Standard Cylinder # CC-80994

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:50:20 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

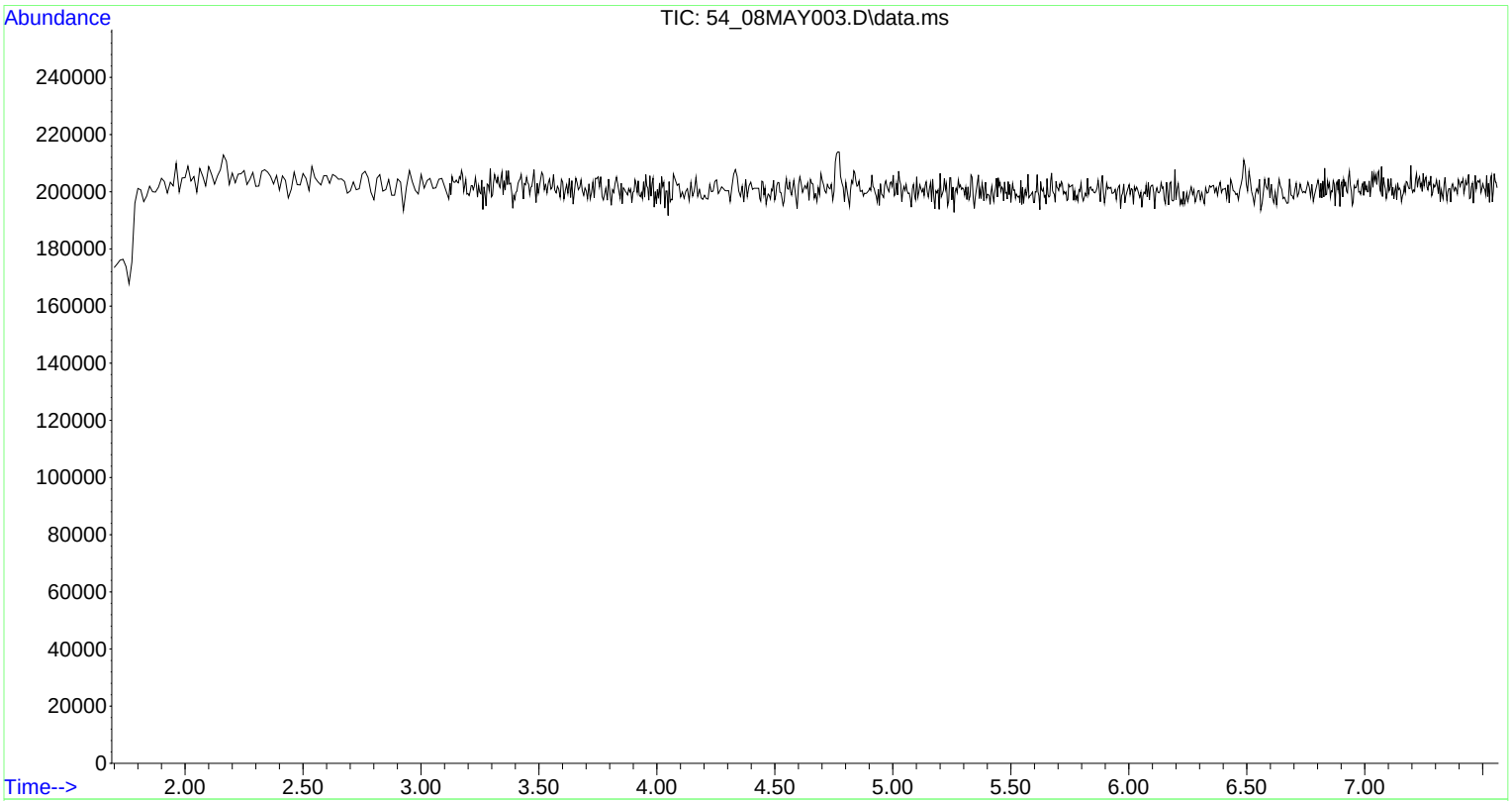
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3802	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	8745	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8001	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.890	62	72m	0.50	ppbv	
3] 1,1-Dichloroethene	3.256	61	148m	0.50	ppbv	
4] Methyl Tert Butyl Ether	3.642	73	197m	0.44	ppbv	
5] trans-1,2-Dichloroethene	3.709	61	126m	0.49	ppbv	
6] 1,1-Dichloroethane	3.910	63	151	0.49	ppbv #	78
7] cis-1,2-Dichloroethene	4.197	61	130	0.54	ppbv #	1
8] 1,1,1-Trichloroethane	4.488	97	197	0.50	ppbv #	91
10] Benzene	4.669	78	224	0.56	ppbv #	69
11] Trichloroethene	4.950	130	118	0.54	ppbv #	72
13] Toluene	5.552	91	273m	0.57	ppbv	
14] Tetrachloroethene	5.967	166	155	0.57	ppbv #	57
15] Ethyl Benzene	6.562	91	372	0.61	ppbv	98
16] m,p-Xylene	6.617	91	277	0.59	ppbv	92
17] o-Xylene	6.937	91	284	0.60	ppbv	89

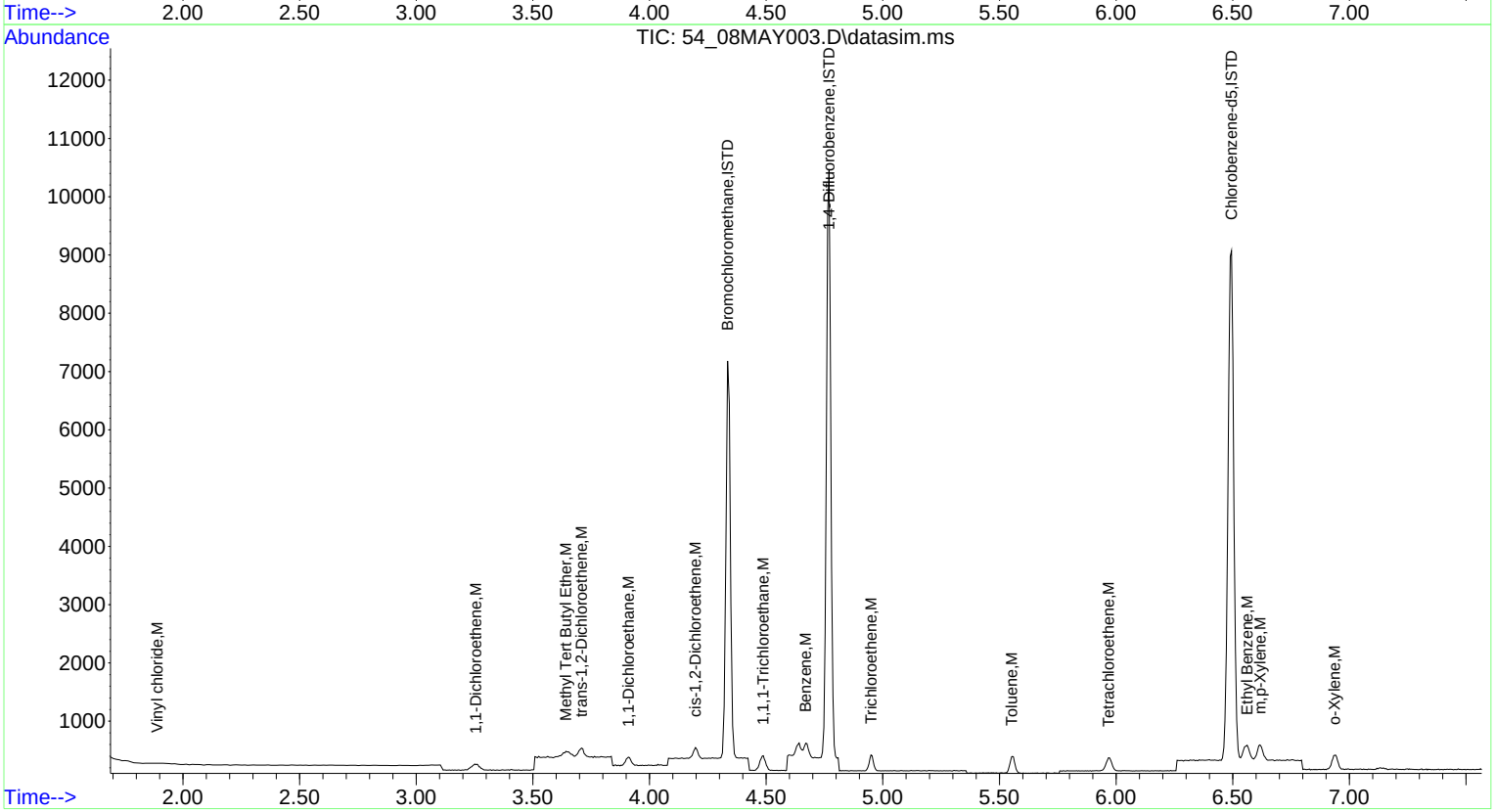
(#) = qualifier out of range (m) = manual integration (+) = signals summed

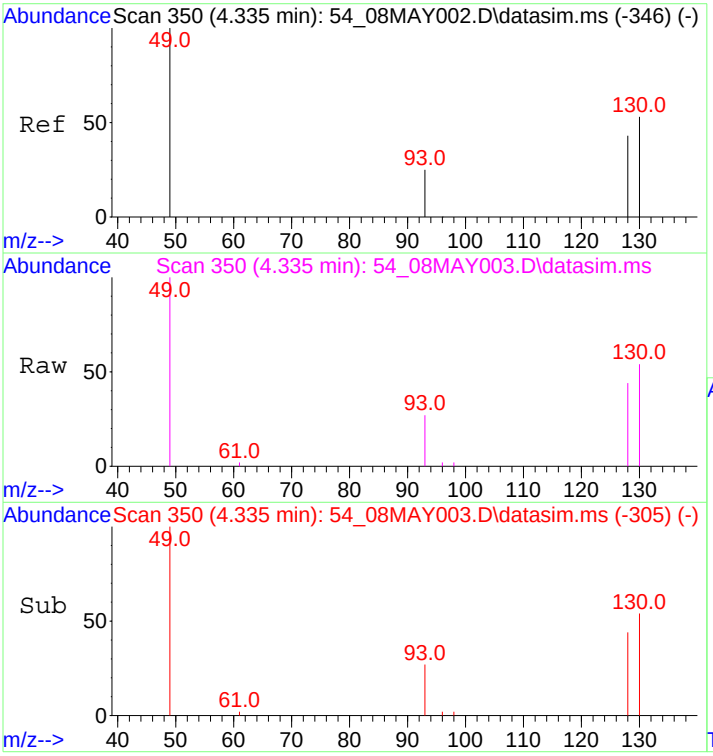
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:50:20 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



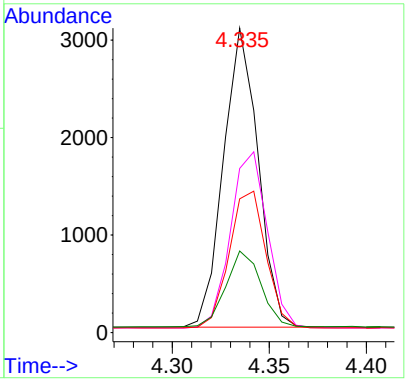


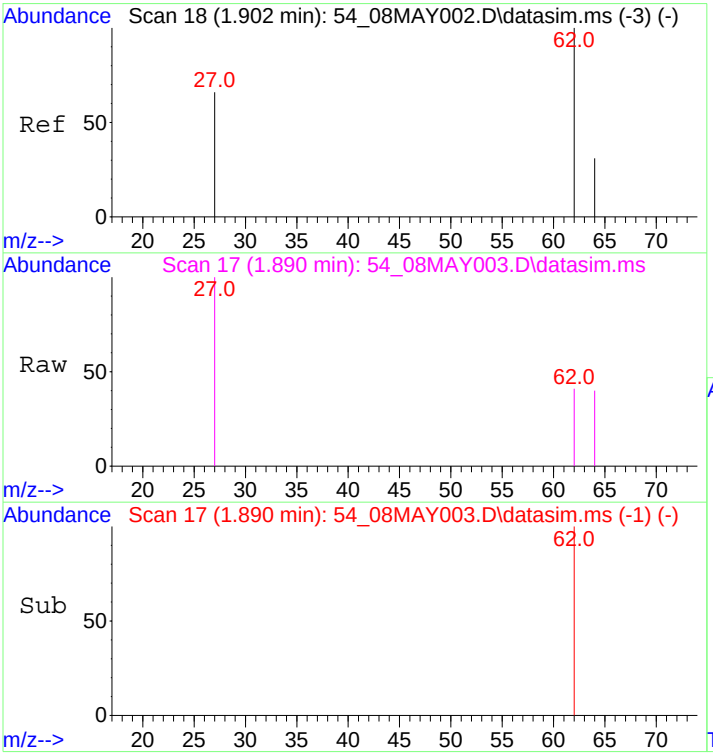


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 49 Resp: 3802

Ion	Ratio	Lower	Upper
49	100		
130	63.0	56.0	84.0
128	48.7	41.6	62.4
93	25.7	22.4	33.6

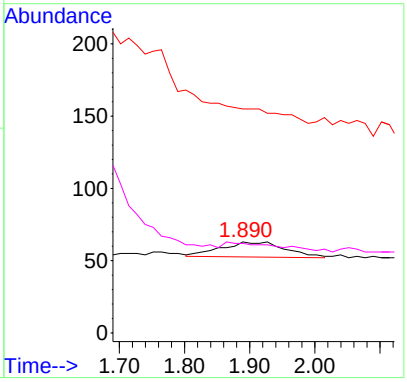




#2
Vinyl chloride
Concen: 0.50 ppbv m
RT: 1.890 min Scan# 17
Delta R.T. -0.013 min
Lab File: 54_08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 62 Resp: 72

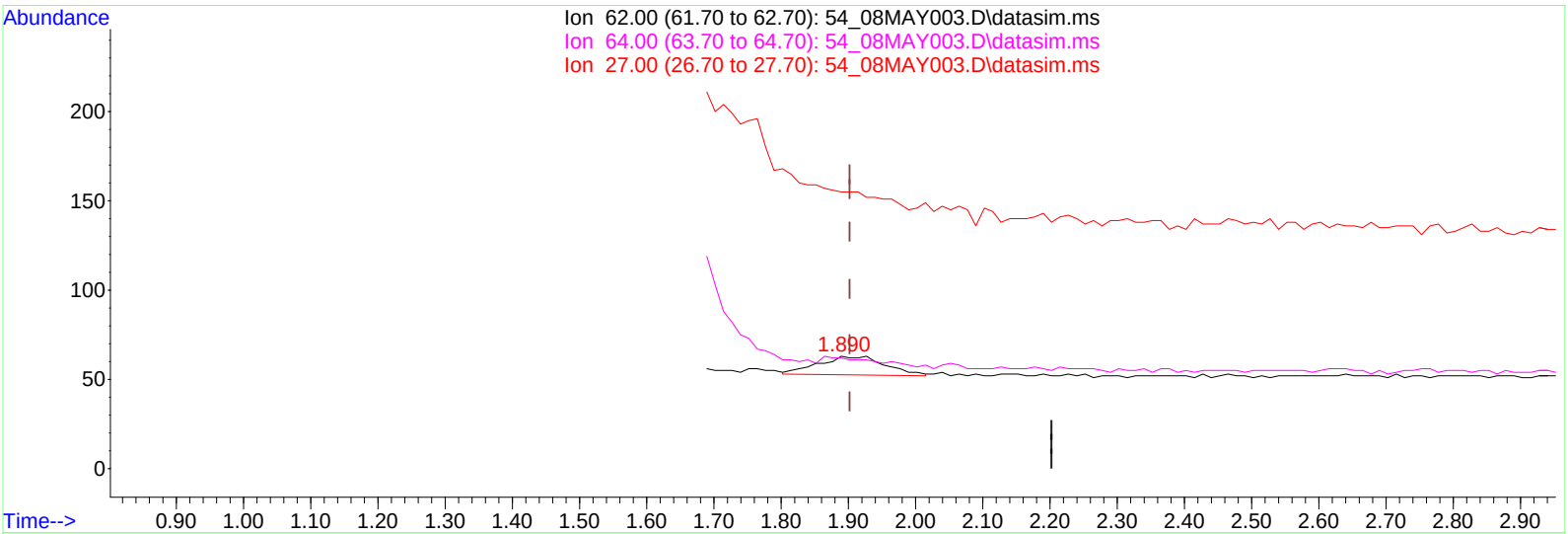
Ion	Ratio	Lower	Upper
62	100		
64	98.4	28.0	42.0#
27	246.0	72.0	108.0#

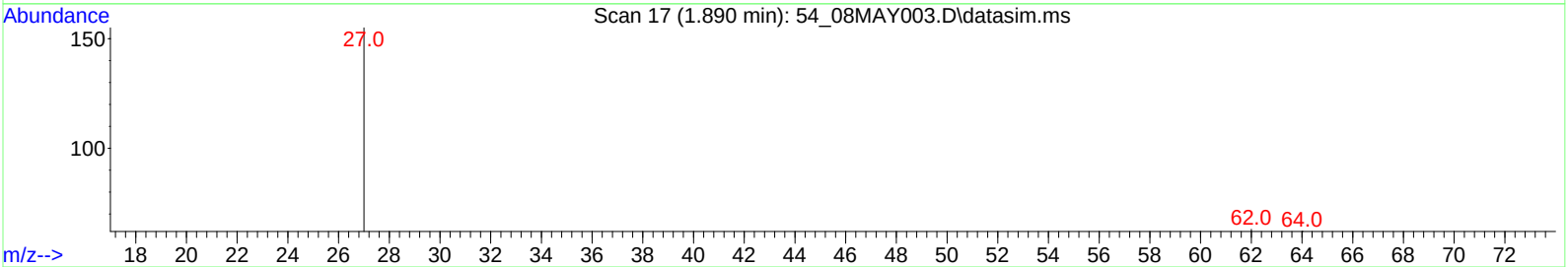


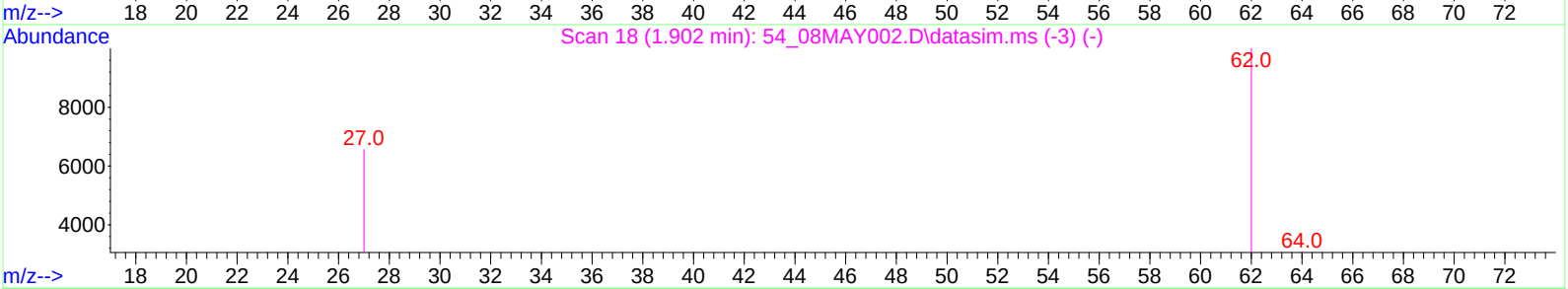
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_08MAY003.D\data.ms

(2) Vinyl chloride (M)

1.890min (-0.013) 0.50 ppbv m

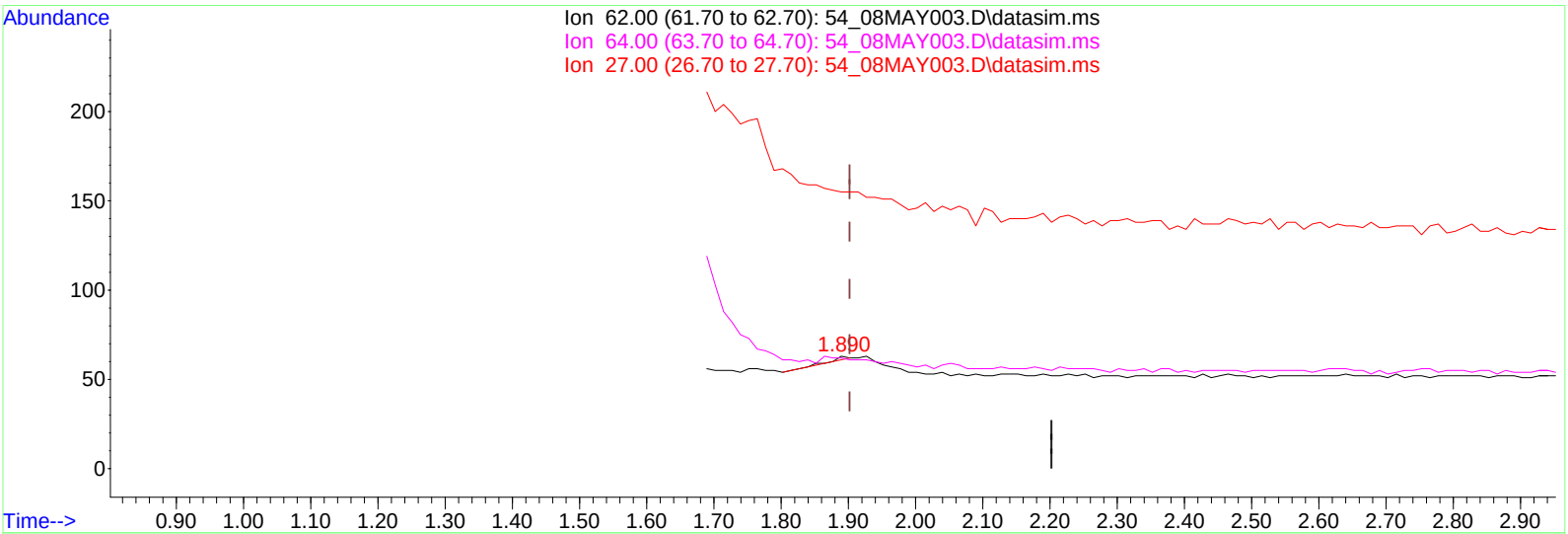
response 72

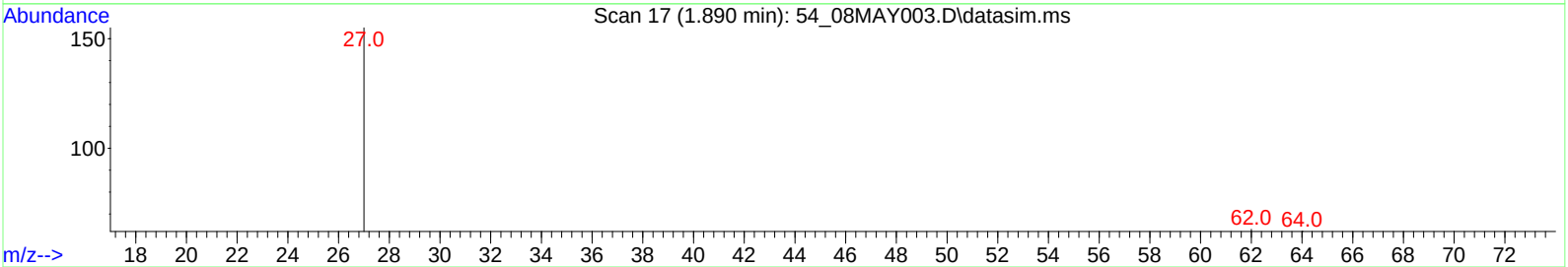
Ion	Exp%	Act%
62.00	100	100
64.00	35.00	98.41#
27.00	90.00	246.03#
0.00	0.00	0.00

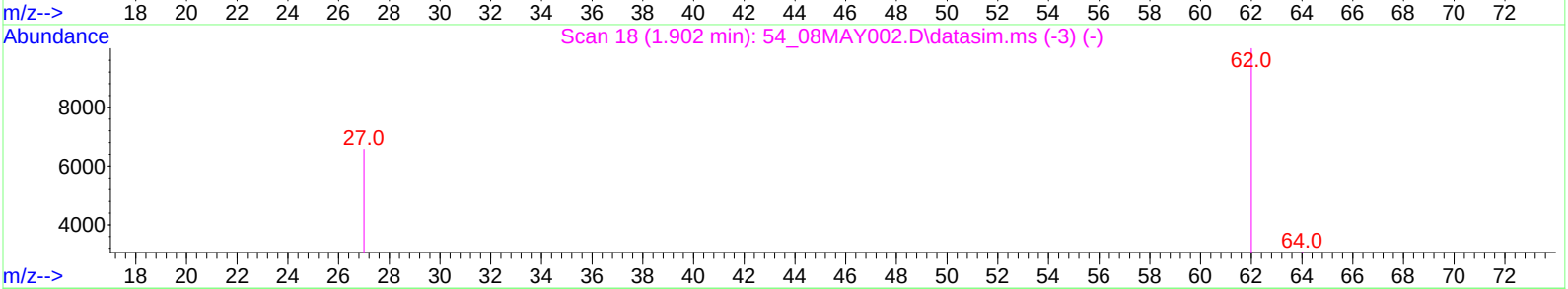
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







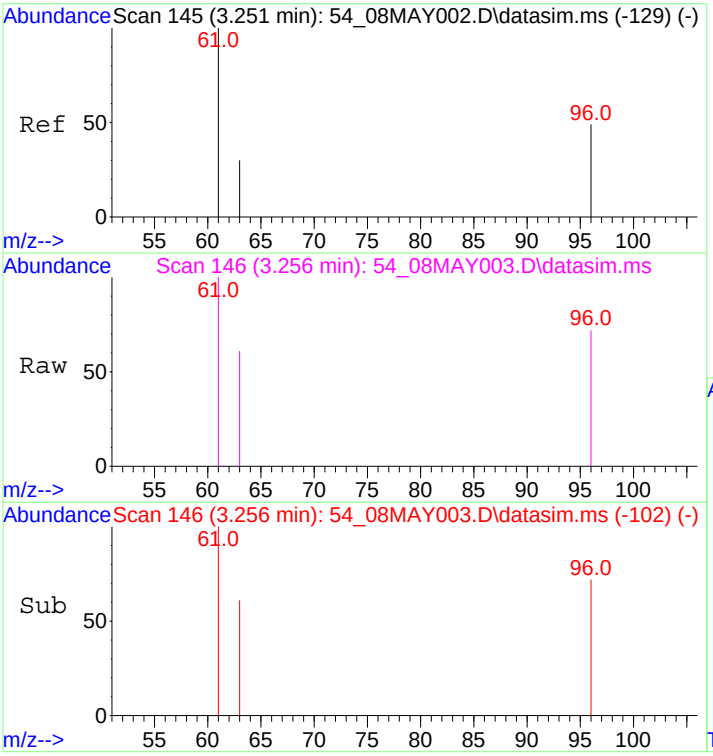
TIC: 54_08MAY003.D\data.ms

(2) Vinyl chloride (M)

1.890min (-0.013) 0.03 ppbv

response 5

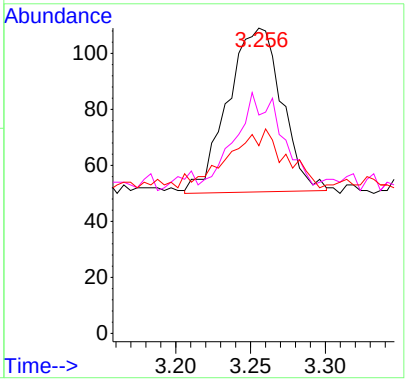
Ion	Exp%	Act%
62.00	100	100
64.00	35.00	0.00#
27.00	90.00	0.00#
0.00	0.00	0.00

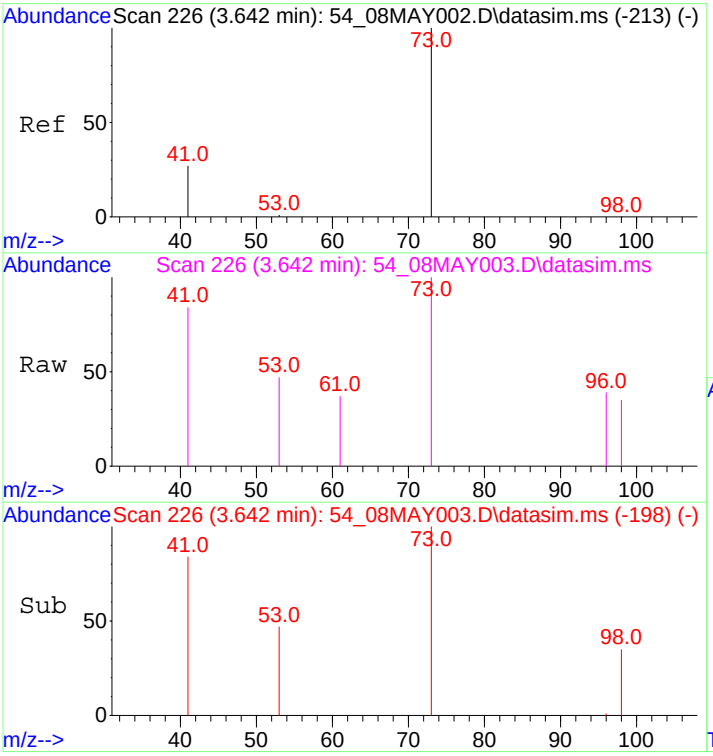


#3
1,1-Dichloroethene
Concen: 0.50 ppbv m
RT: 3.256 min Scan# 146
Delta R.T. 0.004 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 61 Resp: 148

Ion	Ratio	Lower	Upper
61	100		
96	2.7	41.6	62.4#
63	38.5	26.2	39.2

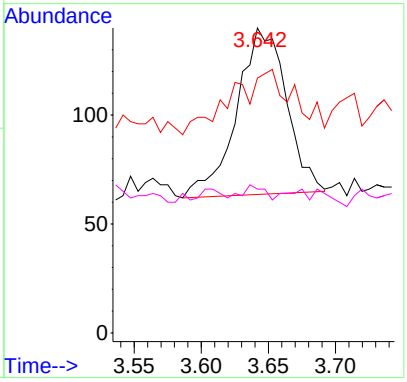




#4
Methyl Tert Butyl Ether
Concen: 0.44 ppbv m
RT: 3.642 min Scan# 226
Delta R.T. -0.000 min
Lab File: 54_08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 73 Resp: 197

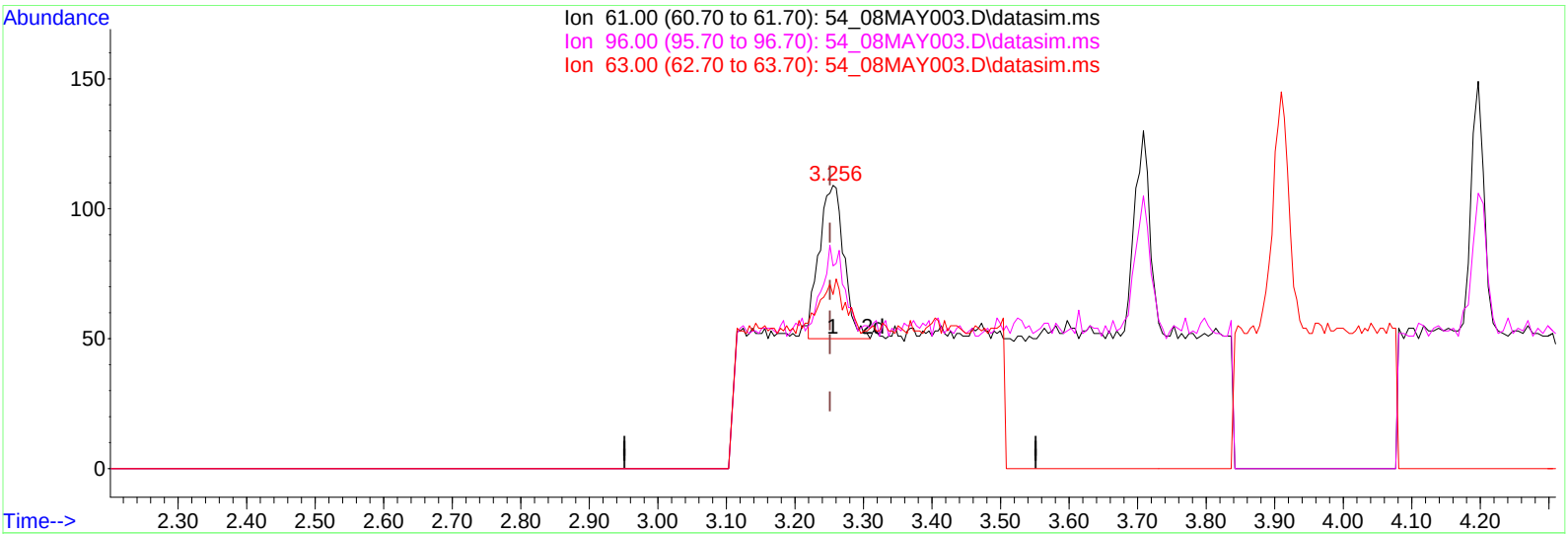
Ion	Ratio	Lower	Upper
73	100		
53	35.5	1.0	1.4#
41	57.4	20.0	30.0#

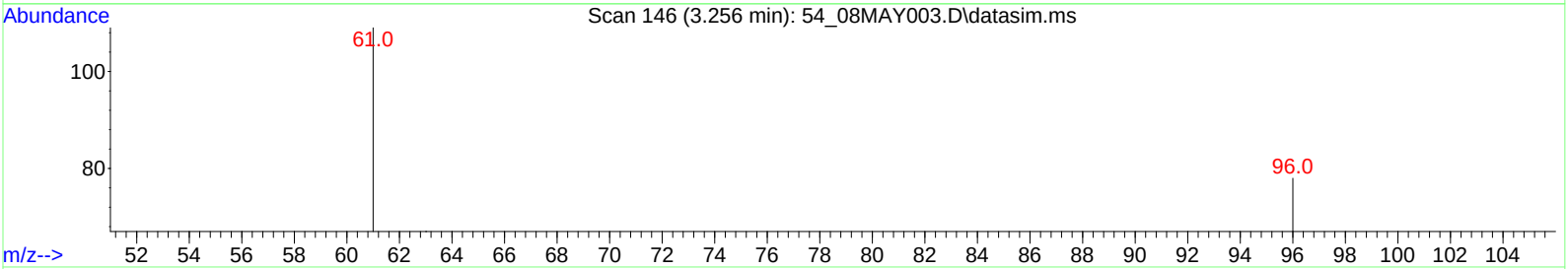


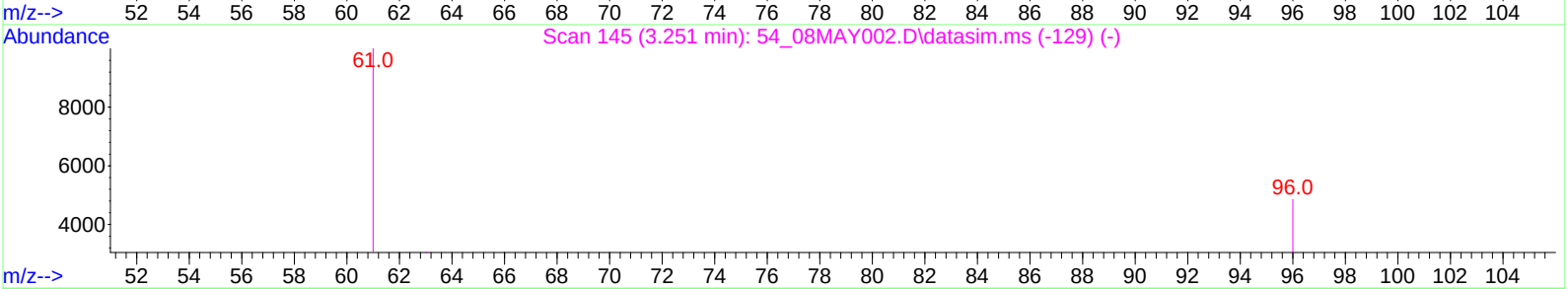
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_08MAY003.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (+0.004) 0.50 ppbv

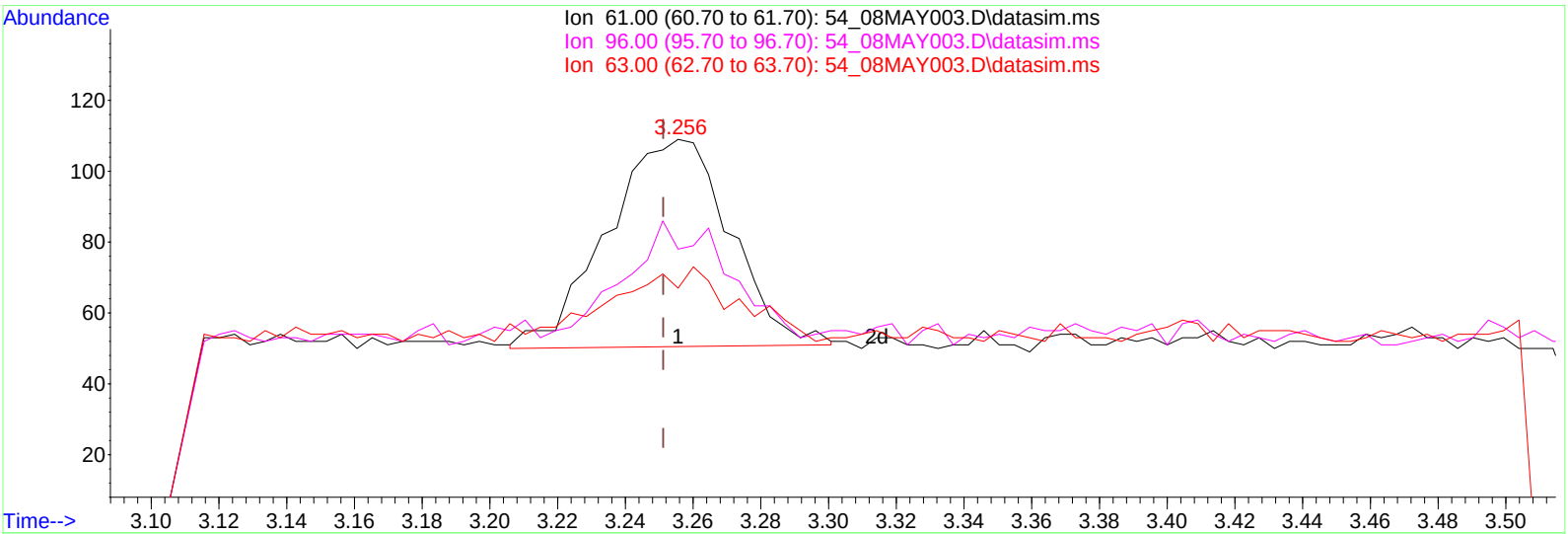
response 147

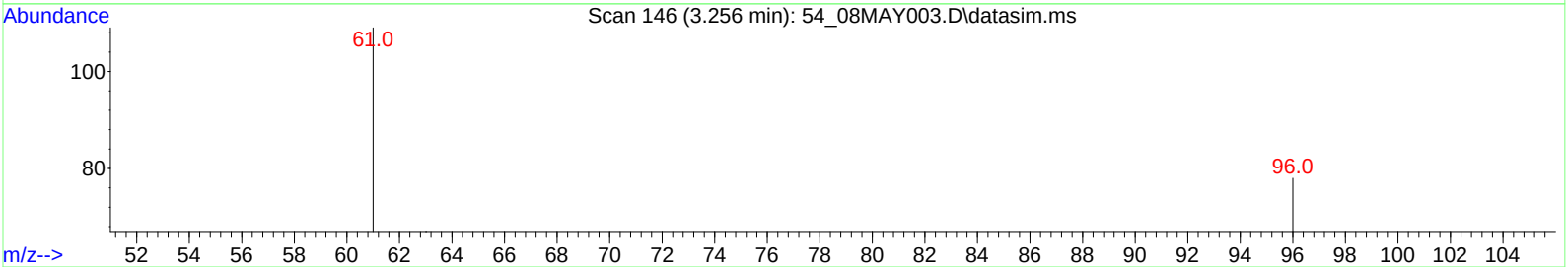
Ion	Exp%	Act%
61.00	100	100
96.00	52.00	2.72#
63.00	32.70	38.78
0.00	0.00	0.00

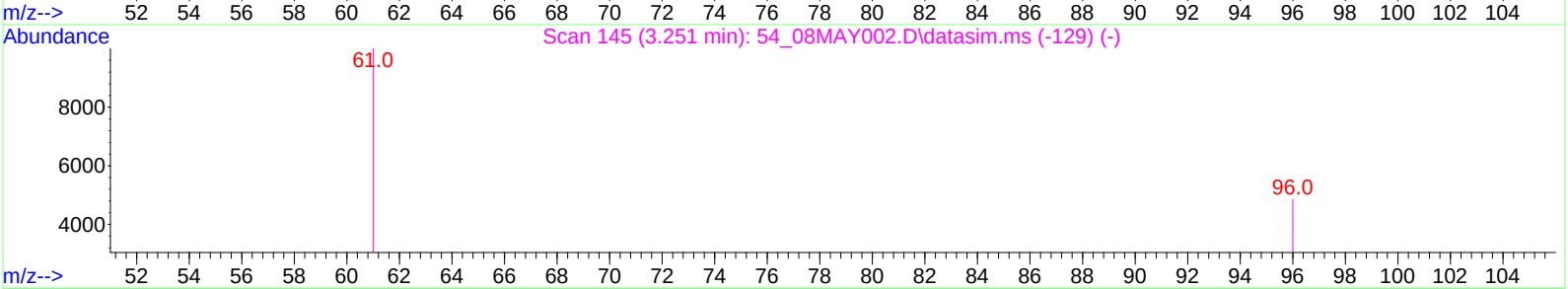
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_08MAY003.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (+0.004) 0.50 ppbv m

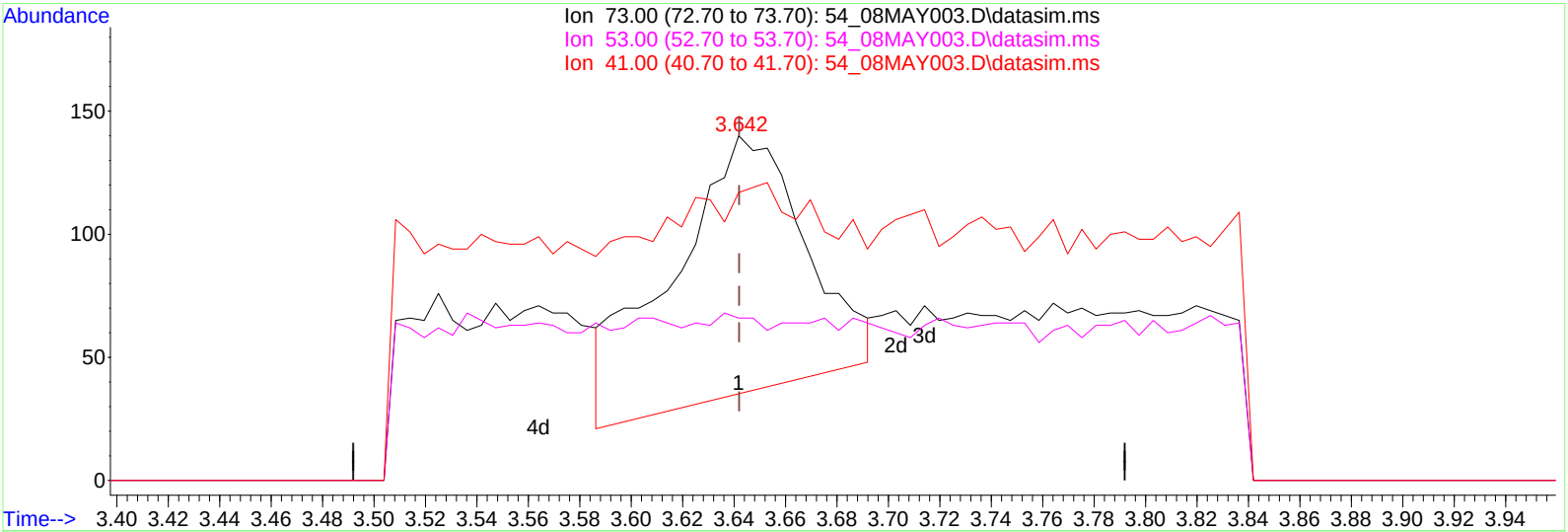
response 148

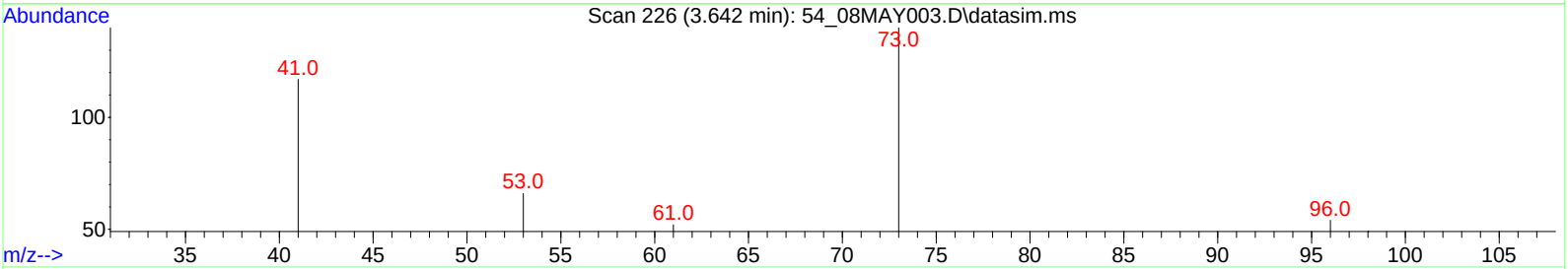
Ion	Exp%	Act%
61.00	100	100
96.00	52.00	2.70#
63.00	32.70	38.51
0.00	0.00	0.00

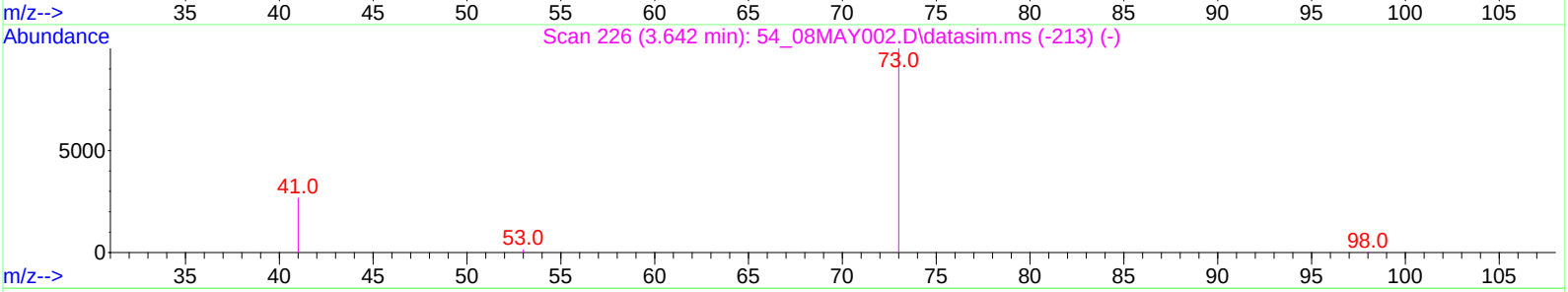
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_08MAY003.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.642min (-0.000) 0.85 ppbv

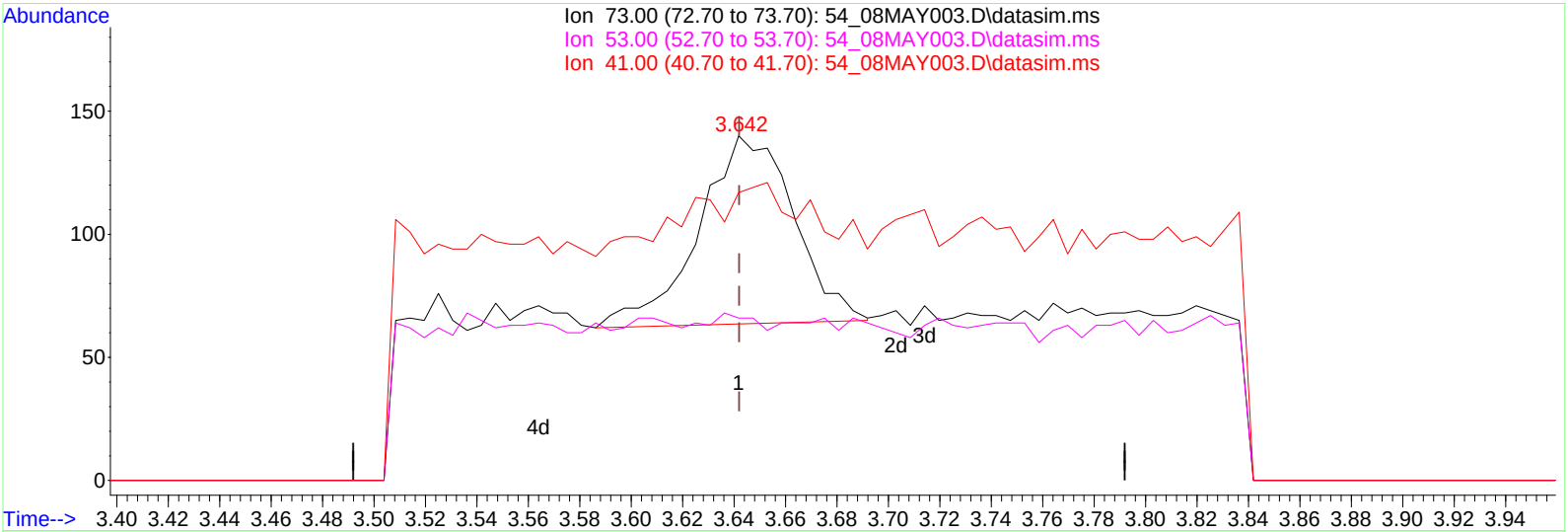
response 381

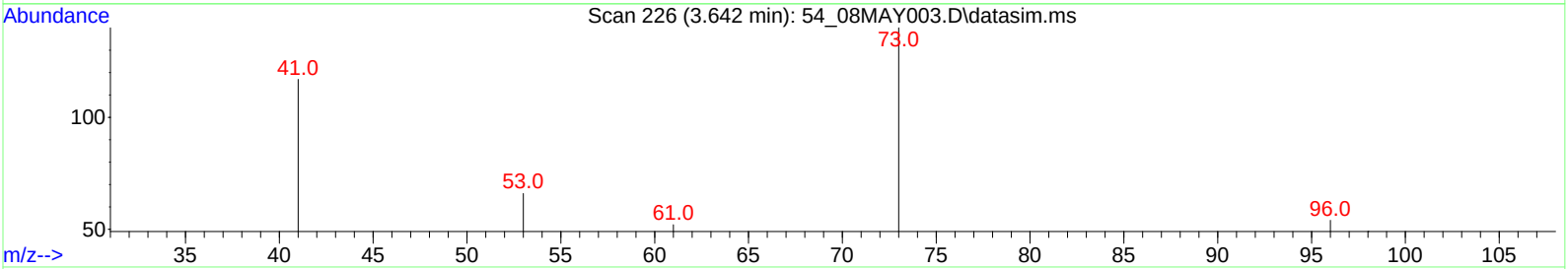
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	18.37#
41.00	25.00	29.66
0.00	0.00	0.00

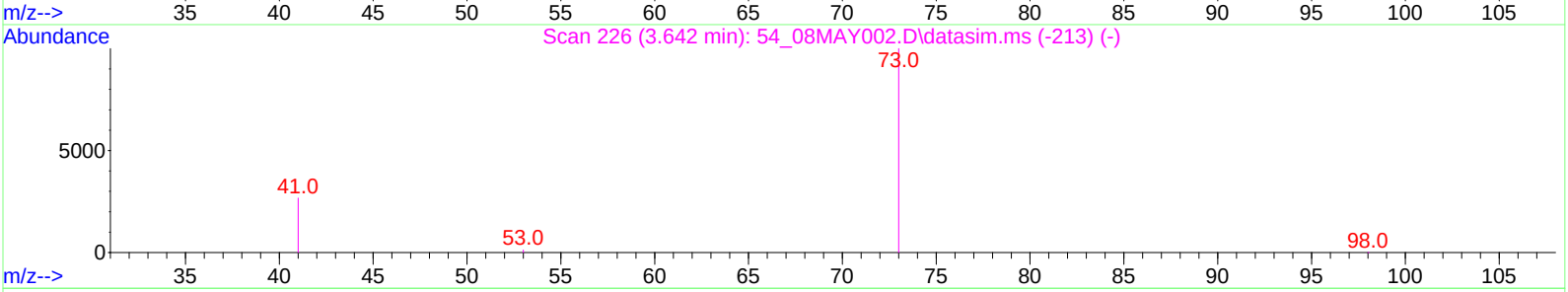
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







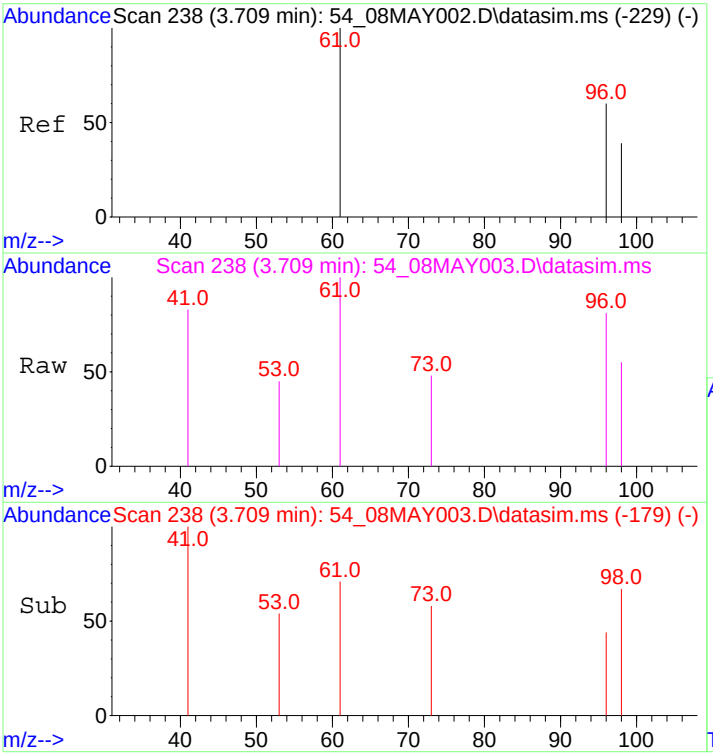
TIC: 54_08MAY003.D\data.ms

(4) Methyl Tert Butyl Ether (M)

3.642min (-0.000) 0.44 ppbv m

response 197

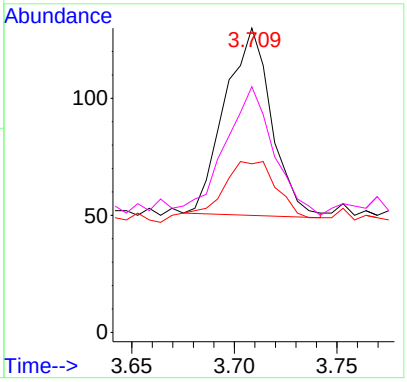
Ion	Exp%	Act%
73.00	100	100
53.00	1.20	35.53#
41.00	25.00	57.36#
0.00	0.00	0.00

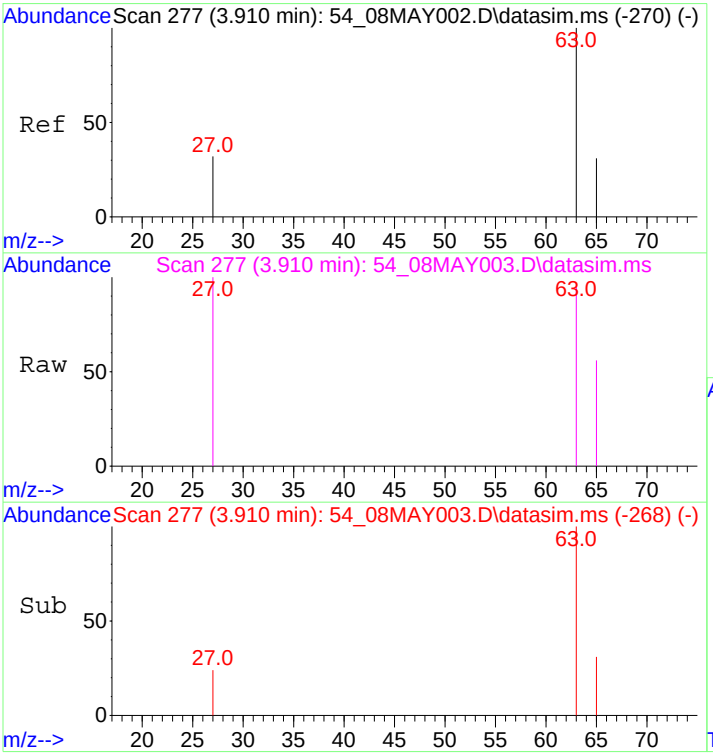


#5
trans-1,2-Dichloroethene
Concen: 0.49 ppbv m
RT: 3.709 min Scan# 238
Delta R.T. 0.006 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 61 Resp: 126

Ion	Ratio	Lower	Upper
61	100		
96	187.3	48.0	72.0#
98	215.9	32.0	48.0#

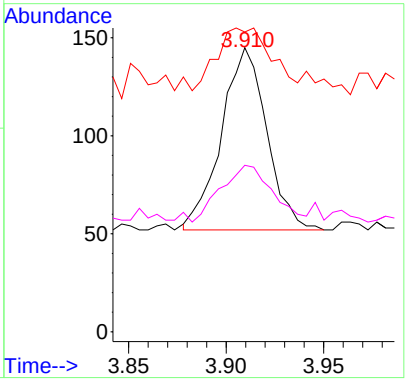




#6
1,1-Dichloroethane
Concen: 0.49 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 63 Resp: 151

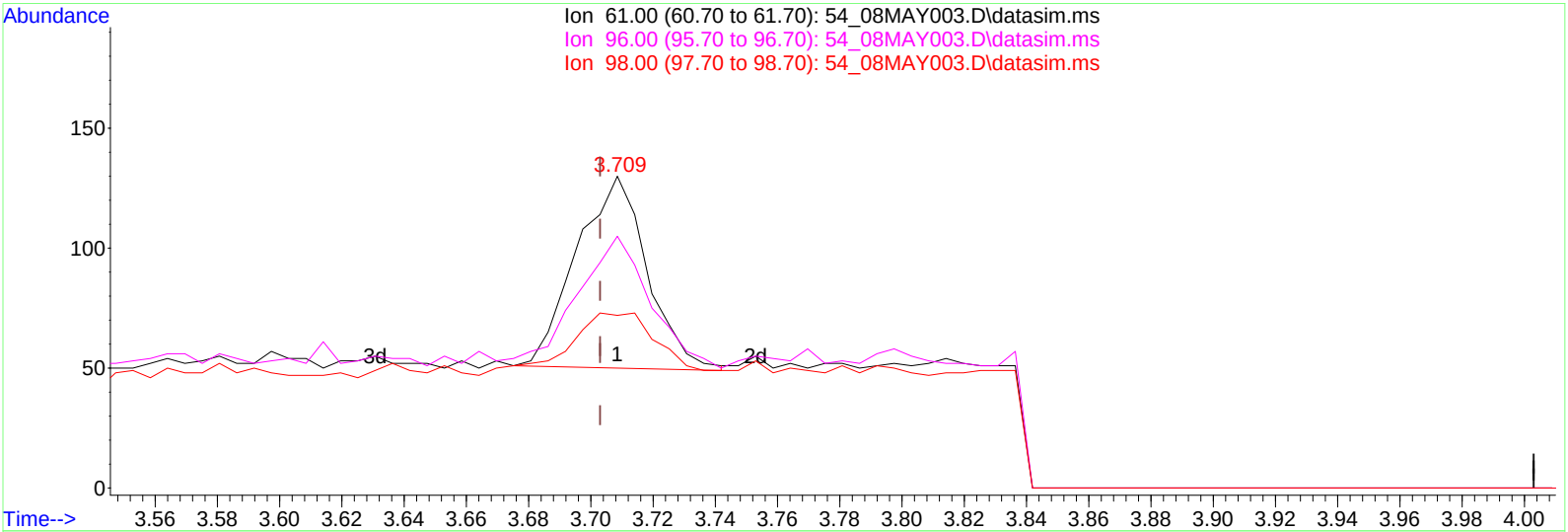
Ion	Ratio	Lower	Upper
63	100		
65	35.1	26.1	39.1
27	7.3	24.0	36.0#

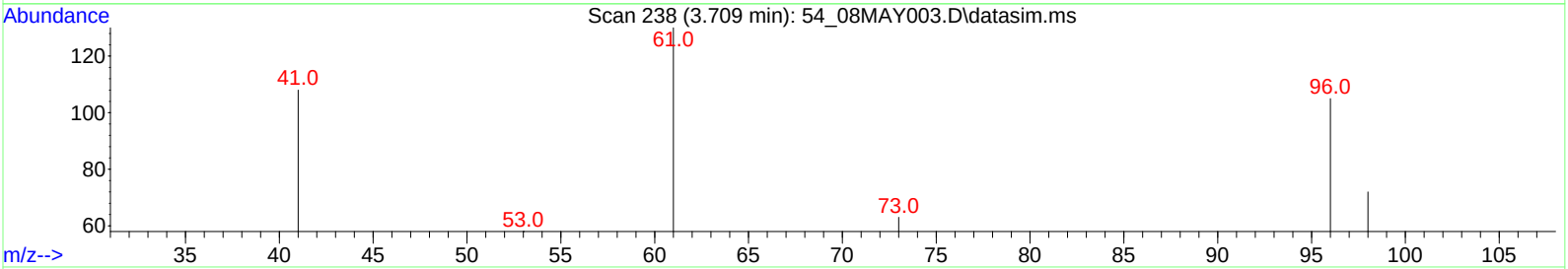


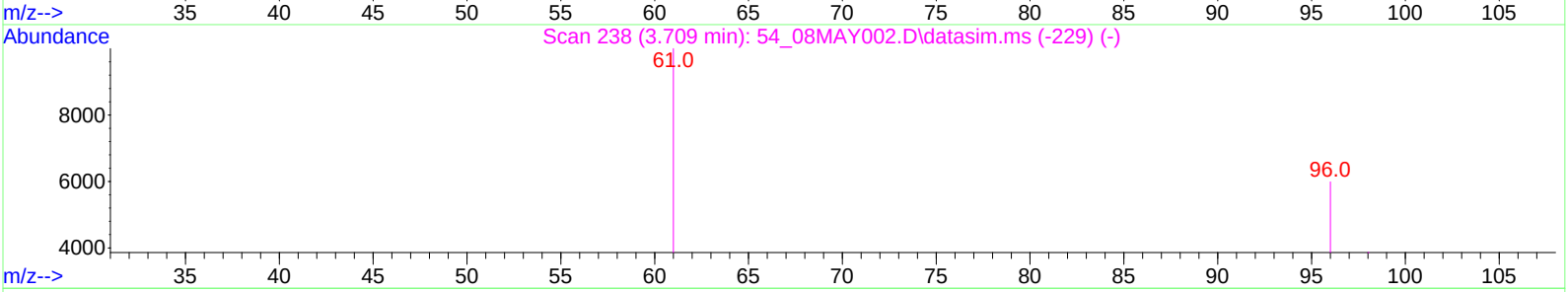
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_08MAY003.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.709min (+0.006) 0.49 ppbv m

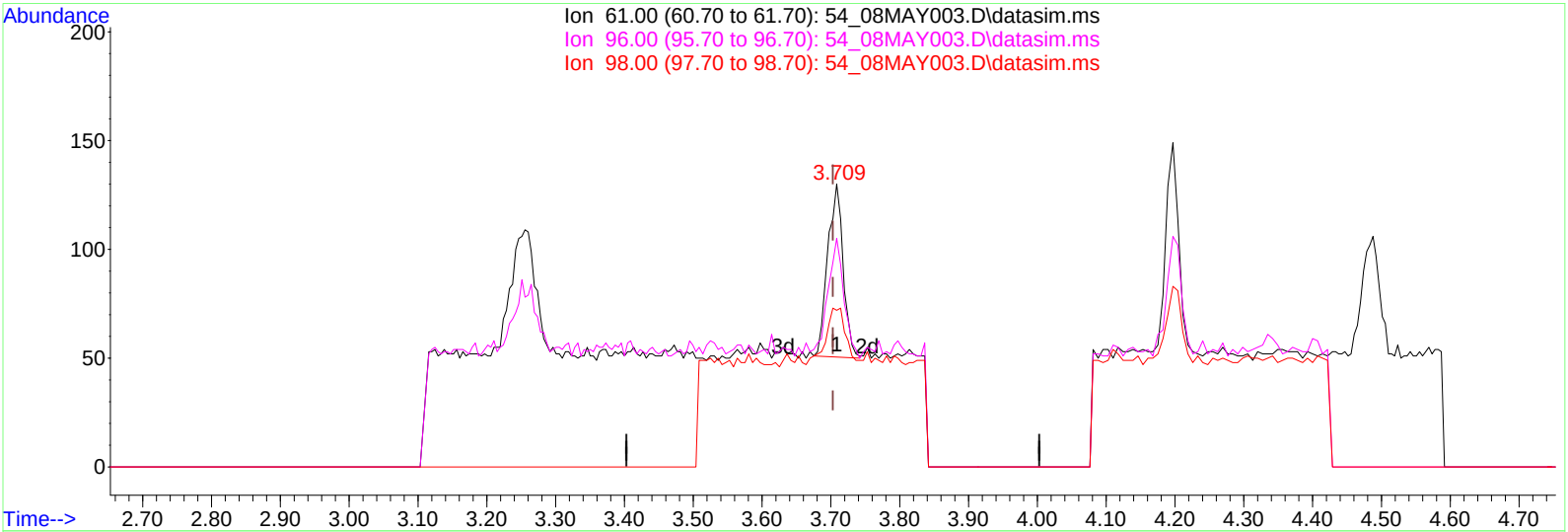
response 126

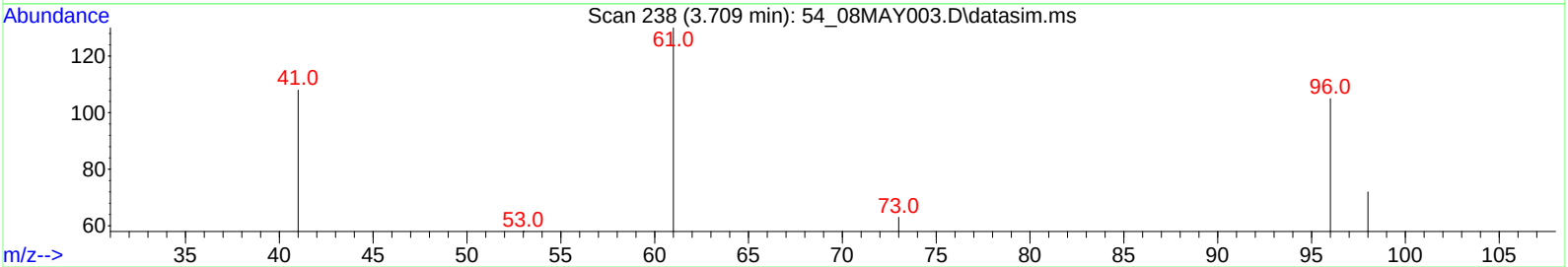
Ion	Exp%	Act%
61.00	100	100
96.00	60.00	187.30#
98.00	40.00	215.87#
0.00	0.00	0.00

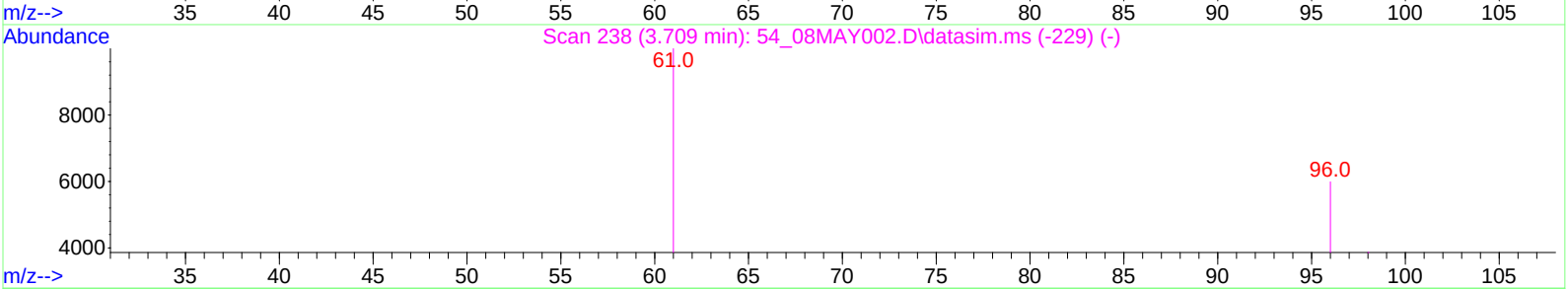
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







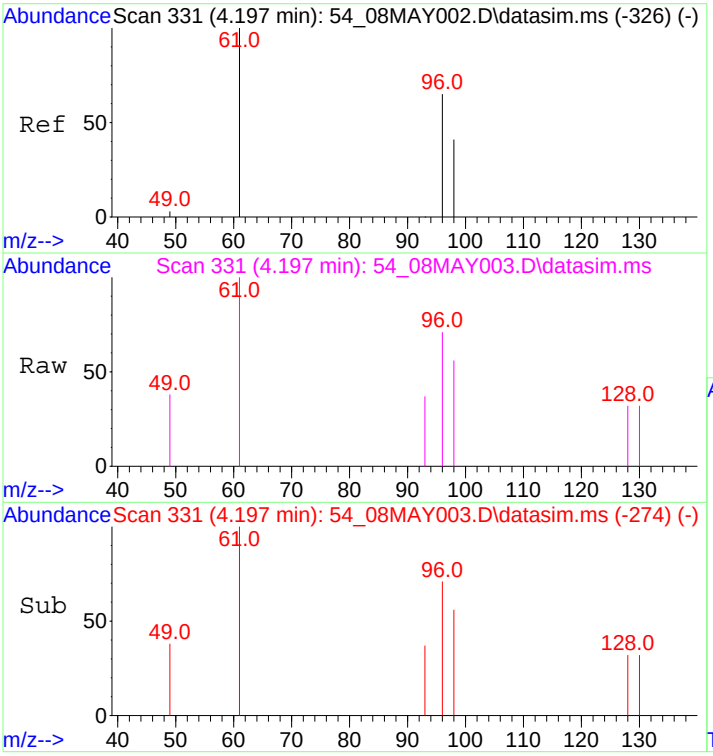
TIC: 54_08MAY003.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.709min (+0.006) 0.48 ppbv

response 124

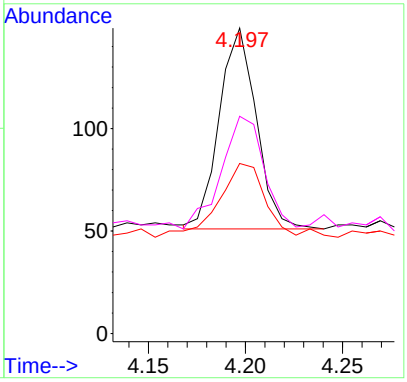
Ion	Exp%	Act%
61.00	100	100
96.00	60.00	190.32#
98.00	40.00	219.35#
0.00	0.00	0.00

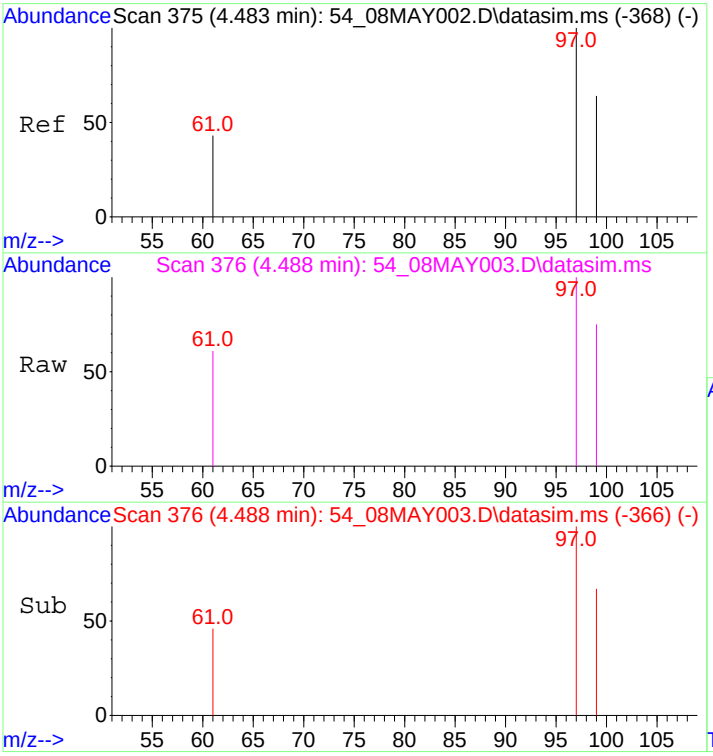


#7
cis-1,2-Dichloroethene
Concen: 0.54 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 61 Resp: 130

Ion	Ratio	Lower	Upper
61	100		
96	151.5	52.0	78.0#
98	203.1	33.6	50.4#

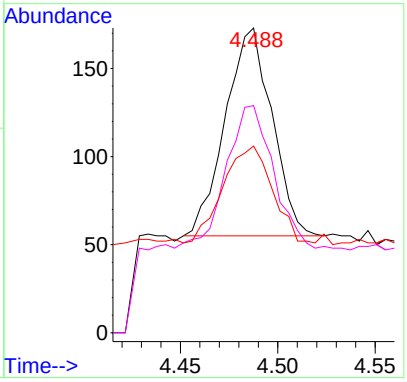


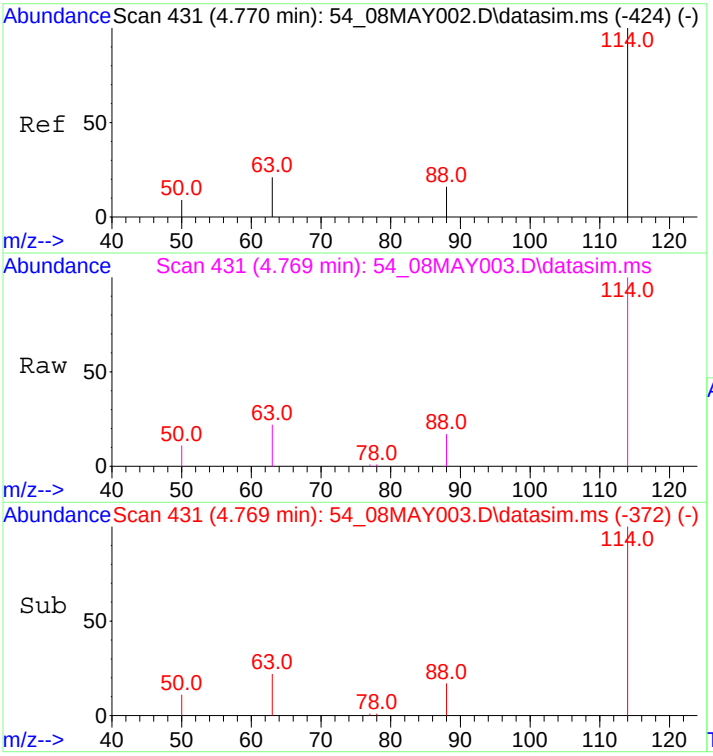


#8
1,1,1-Trichloroethane
Concen: 0.50 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.004 min
Lab File: 54_08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 97 Resp: 197

Ion	Ratio	Lower	Upper
97	100		
99	68.5	52.1	78.1
61	48.7	30.2	45.4#

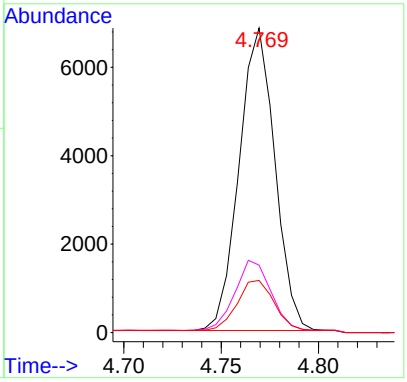


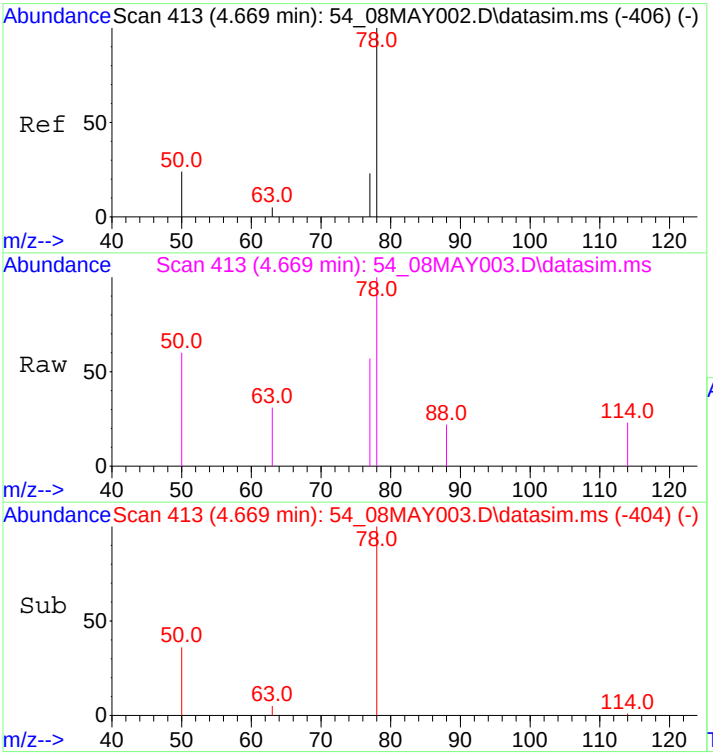


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion:114 Resp: 8745

Ion	Ratio	Lower	Upper
114	100		
63	23.2	17.6	26.4
88	17.1	13.6	20.4

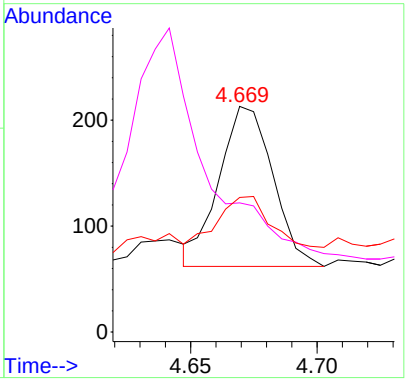


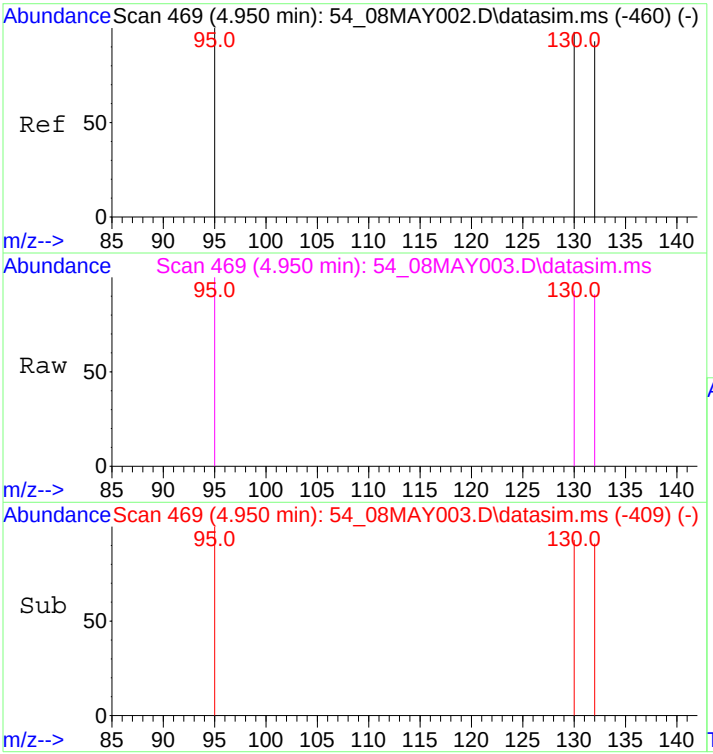


#10
Benzene
Concen: 0.56 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.000 min
Lab File: 54_08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 78 Resp: 224

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.2	27.2#
50	29.9	18.4	27.6#

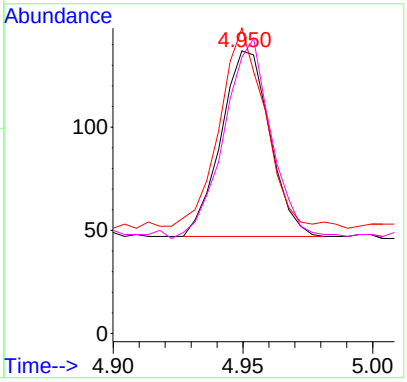


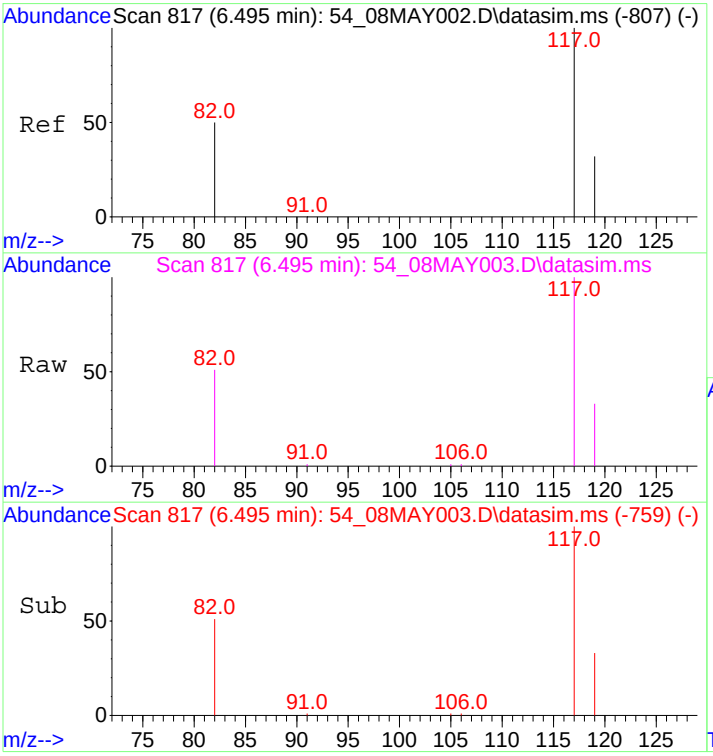


#11
Trichloroethene
Concen: 0.54 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion:130 Resp: 118

Ion	Ratio	Lower	Upper
130	100		
132	147.5	76.9	115.3#
95	99.2	76.5	114.7

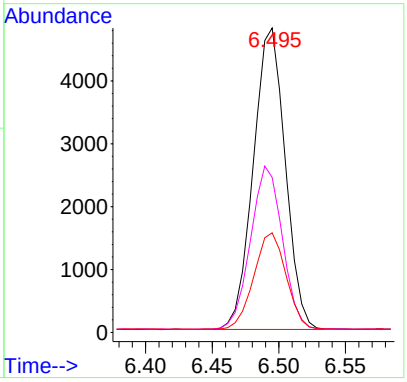


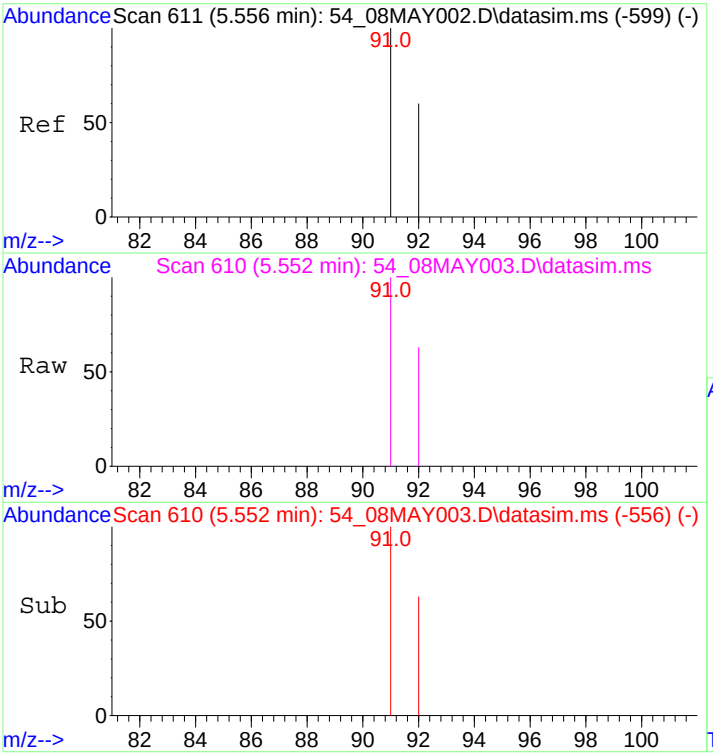


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.005 min
Lab File: 54_08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion:117 Resp: 8001

Ion	Ratio	Lower	Upper
117	100		
82	53.6	38.0	57.0
119	32.4	27.0	40.4

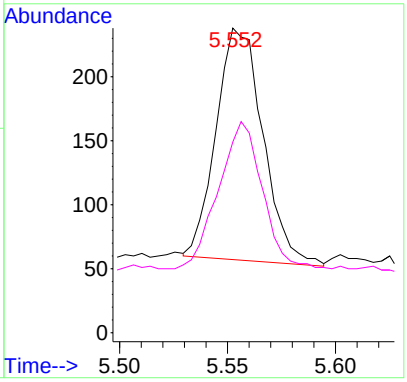


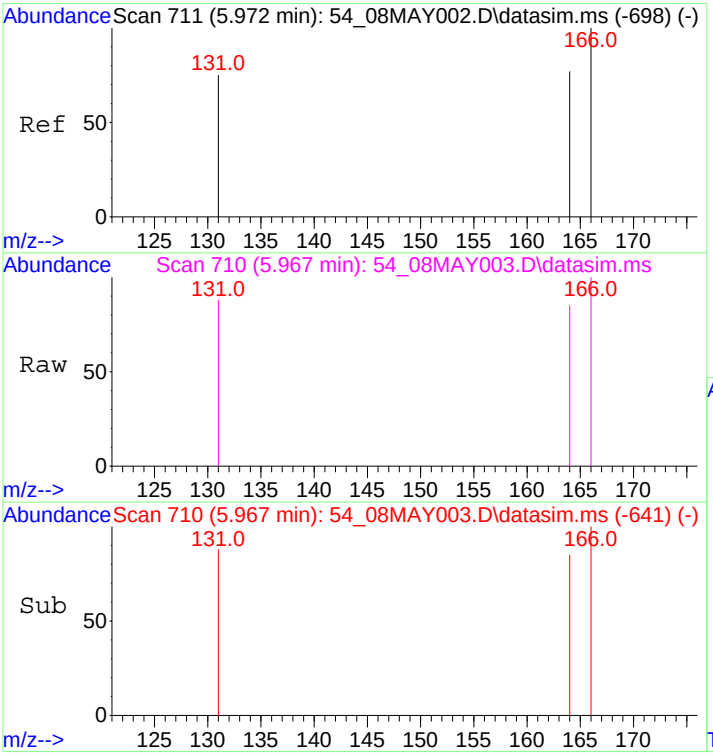


#13
Toluene
Concen: 0.57 ppbv m
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 91 Resp: 273

Ion	Ratio	Lower	Upper
91	100		
92	60.1	47.8	71.8

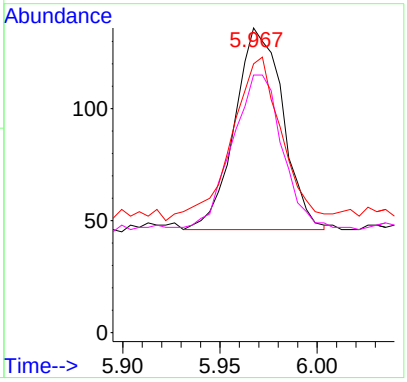




#14
Tetrachloroethene
Concen: 0.57 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion:166 Resp: 155

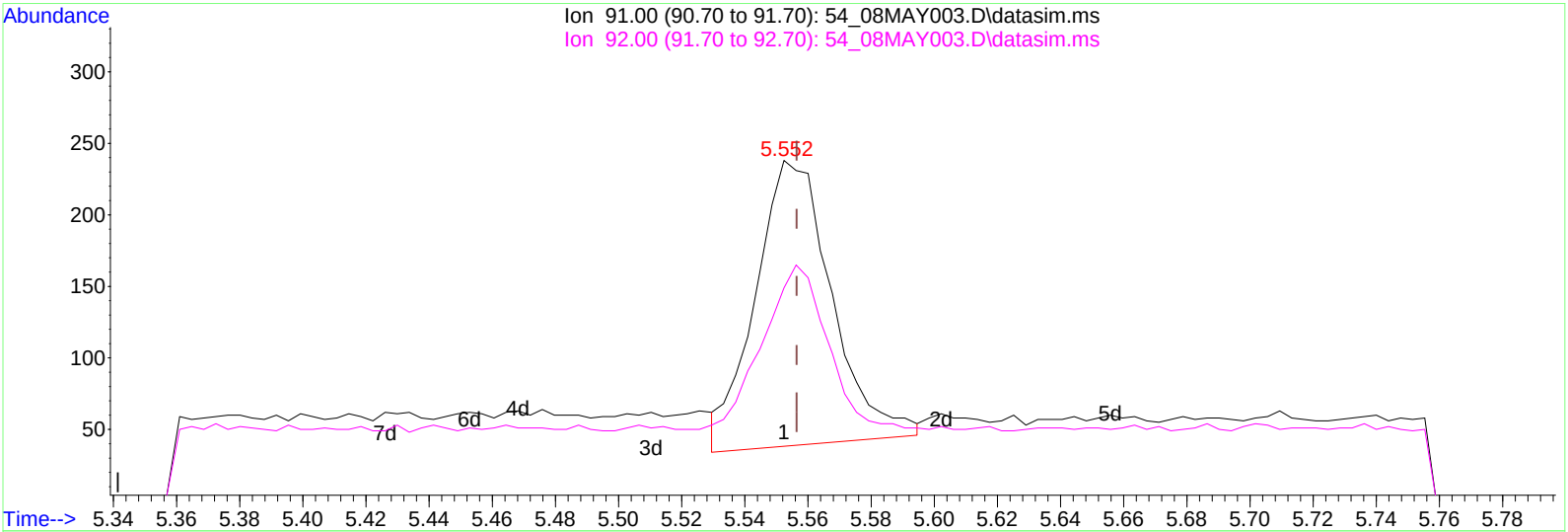
Ion	Ratio	Lower	Upper
166	100		
164	81.9	62.6	94.0
131	143.9	58.5	87.7#

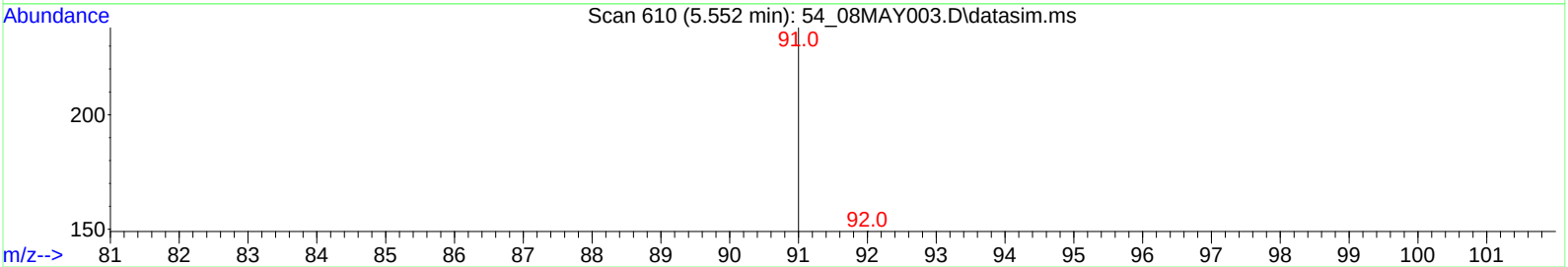


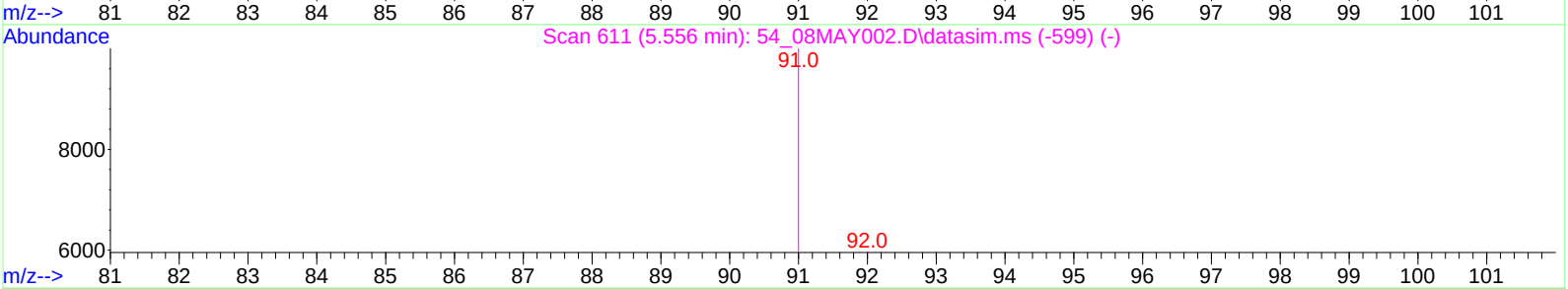
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_08MAY003.D\data.ms

(13) Toluene (M)

5.552min (-0.004) 0.70 ppbv

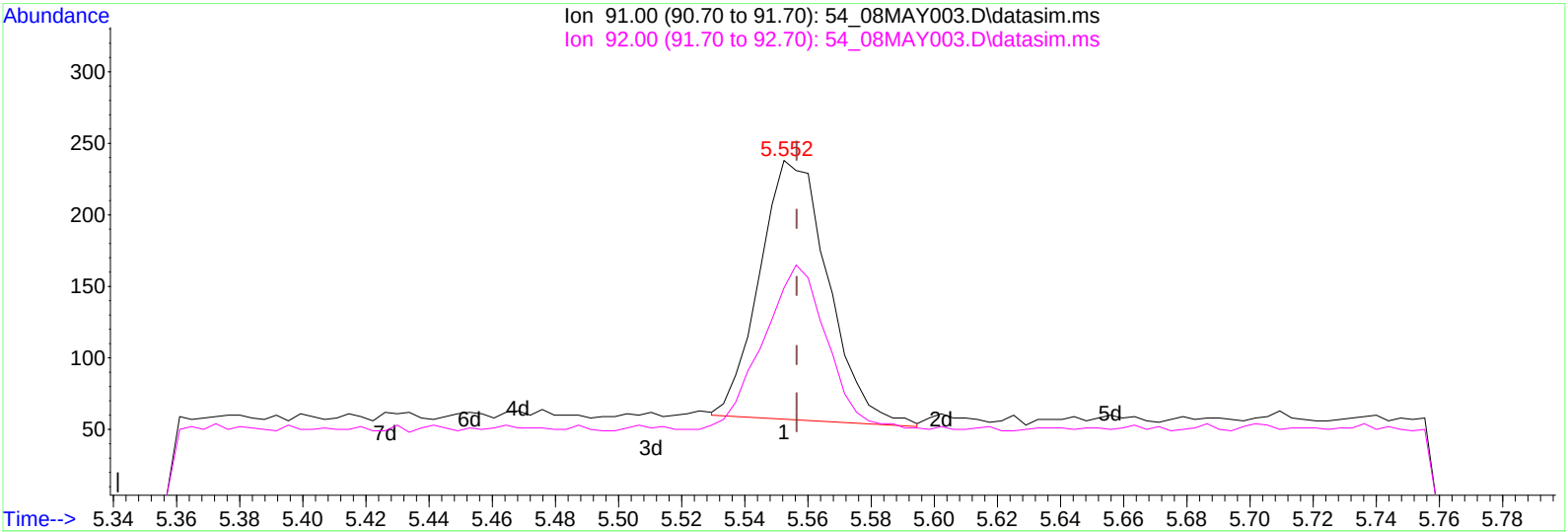
response 335

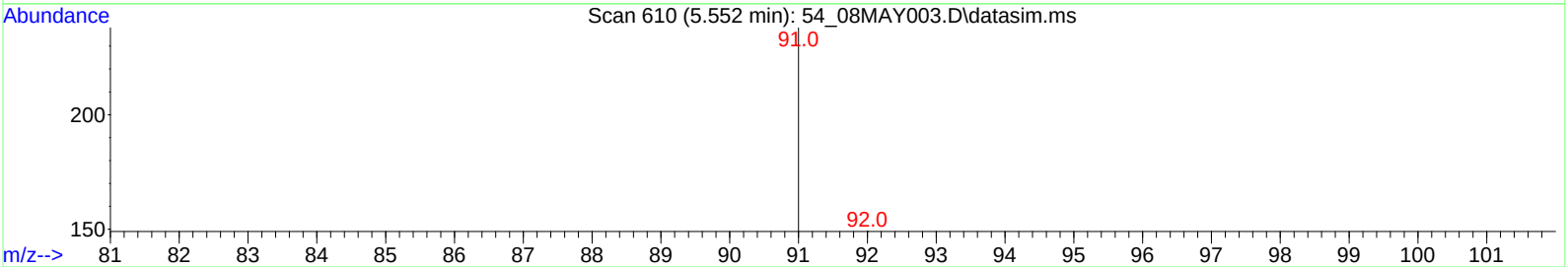
Ion	Exp%	Act%
91.00	100	100
92.00	59.80	48.96
0.00	0.00	0.00
0.00	0.00	0.00

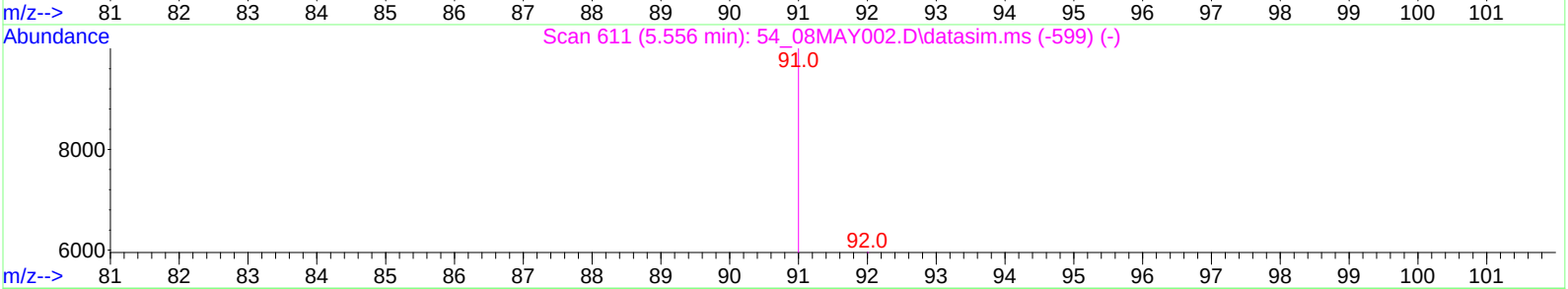
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY003.D
Acq On : 8 May 2014 7:33 am
Operator : YHL
Sample : STD20140508-3 \0.5 ppbv LLCCV 1°
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:39:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







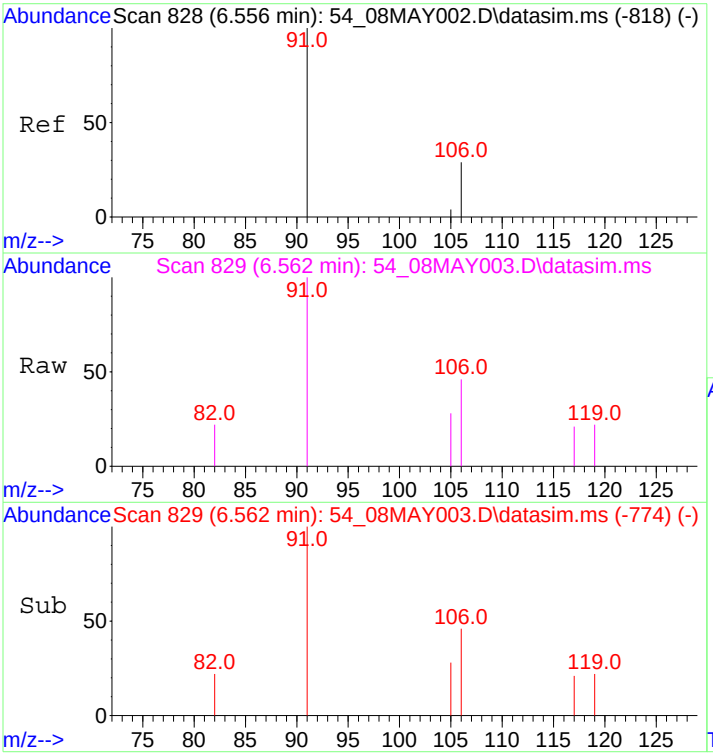
TIC: 54_08MAY003.D\data.ms

(13) Toluene (M)

5.552min (-0.004) 0.57 ppbv m

response 273

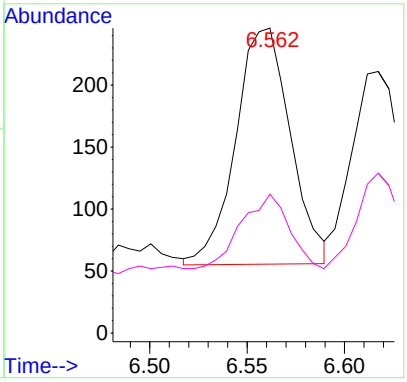
Ion	Exp%	Act%
91.00	100	100
92.00	59.80	60.07
0.00	0.00	0.00
0.00	0.00	0.00

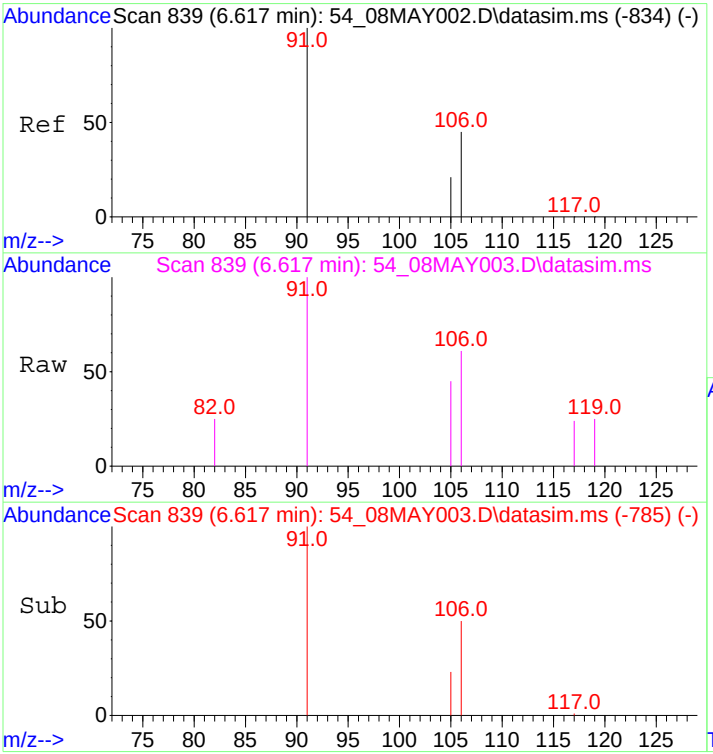


#15
Ethyl Benzene
Concen: 0.61 ppbv
RT: 6.562 min Scan# 829
Delta R.T. 0.005 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 91 Resp: 372

Ion	Ratio	Lower	Upper
91	100		
106	32.3	26.9	40.3

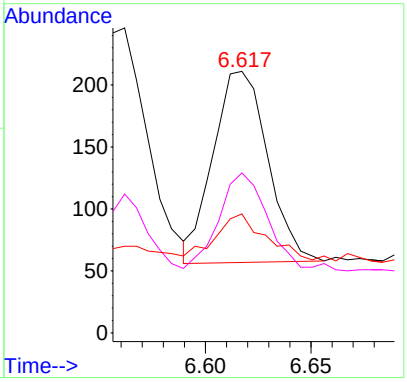


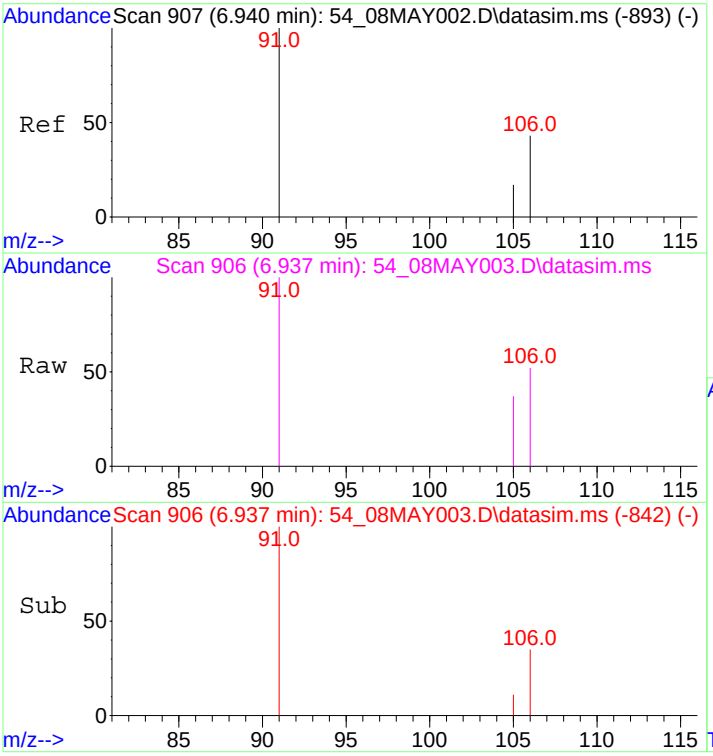


#16
m,p-Xylene
Concen: 0.59 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 91 Resp: 277

Ion	Ratio	Lower	Upper
91	100		
106	46.2	43.1	64.7
105	23.5	18.3	27.5

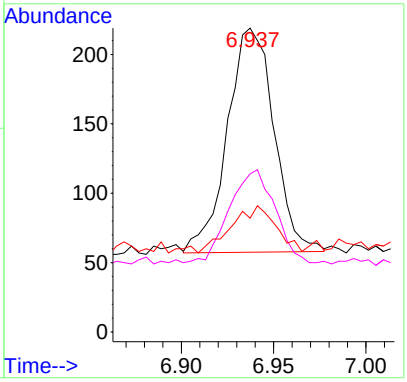




#17
o-Xylene
Concen: 0.60 ppbv
RT: 6.937 min Scan# 906
Delta R.T. 0.001 min
Lab File: 54 08MAY003.D
Acq: 8 May 2014 7:33 am

Tgt Ion: 91 Resp: 284

Ion	Ratio	Lower	Upper
91	100		
106	40.1	40.1	60.1
105	20.1	15.8	23.6



LABORATORY CONTROL SAMPLE

Data File 54_08May005.D
LCS Standard Number 20140508-LCS
LCS Standard Name **20140508-LCS \ LCS 500 ppbv 2º**
Loop Size 5 mL

Sample Mulitplier: Units Date Analyzed	1 ppbv 5/8/2014	Second Source Actual Values ppbv	Recovery %	Acceptance Criterion %
Vinyl Chloride	444.33	517.50	85.9	70-130
1,1-Dichloroethene	494.05	512.50	96.4	70-130
Methyl Tert Butyl Ether	446.42	510.00	87.5	70-130
trans-1,2-Dichloroethene	474.57	500.00	94.9	70-130
1,1-Dichloroethane	476.49	525.00	90.8	70-130
cis-1,2-Dichloroethene	507.68	530.00	95.8	70-130
1,1,1-Trichloroethane	523.81	510.00	102.7	70-130
Benzene	500.39	527.50	94.9	70-130
Trichloroethene	489.63	510.00	96.0	70-130
Toluene	498.43	522.50	95.4	70-130
Tetrachloroethene	499.80	517.50	96.6	70-130
Ethyl Benzene	534.43	525.00	101.8	70-130
m,p-Xylene	549.74	520.00	105.7	70-130
o-Xylene	551.64	525.00	105.1	70-130

Secondary Standard Cylinder # CC-99022

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY005.D
Acq On : 8 May 2014 7:59 am
Operator : YHL
Sample : 20140508-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 08:05:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

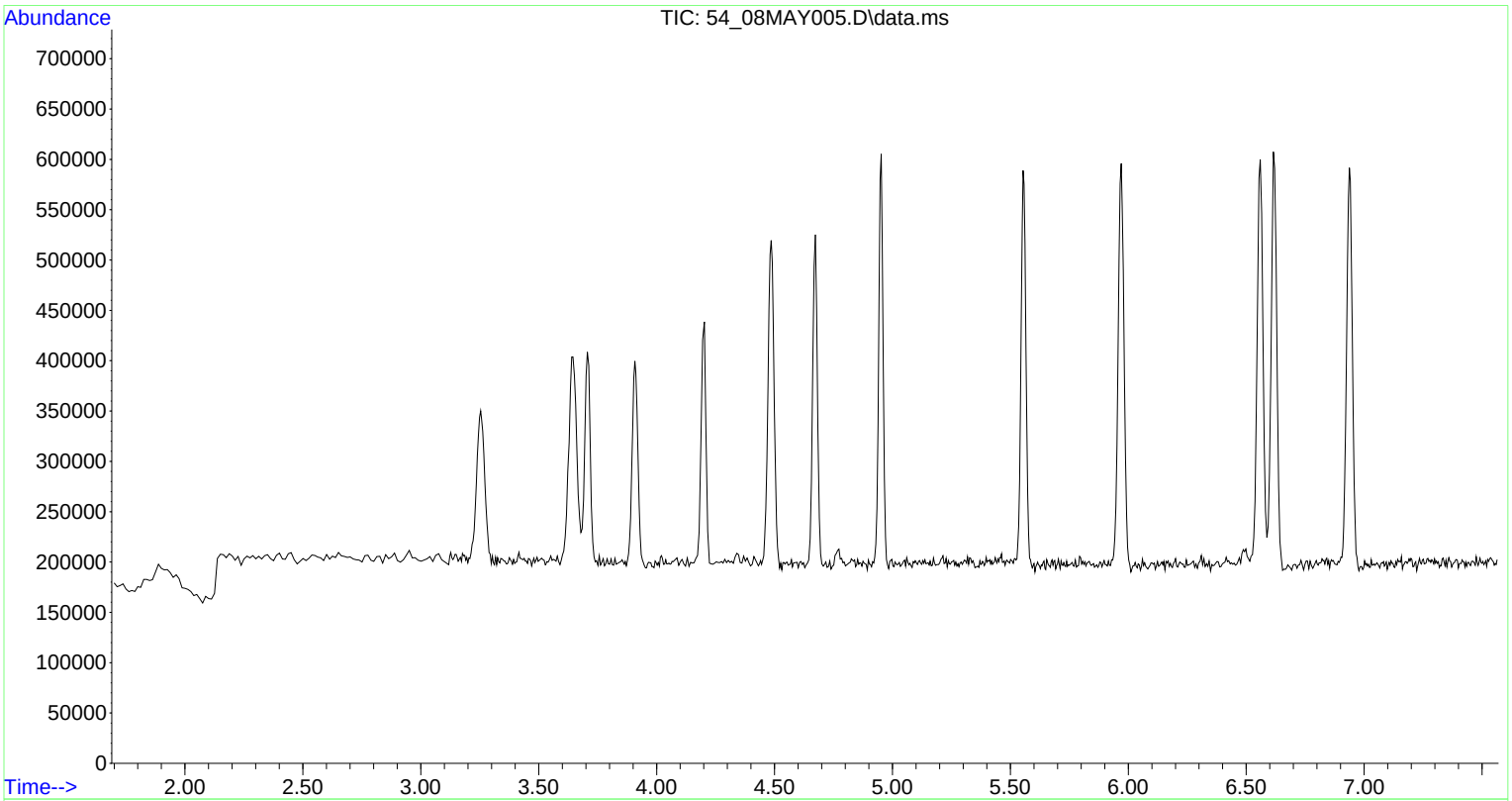
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4075	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	9309	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8418	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.915	62	68850	444.33	ppbv	# 94
3] 1,1-Dichloroethene	3.256	61	155924	494.05	ppbv	96
4] Methyl Tert Butyl Ether	3.647	73	215117	446.42	ppbv	96
5] trans-1,2-Dichloroethene	3.709	61	132008	474.57	ppbv	98
6] 1,1-Dichloroethane	3.910	63	158223	476.49	ppbv	96
7] cis-1,2-Dichloroethene	4.197	61	131873	507.68	ppbv	99
8] 1,1,1-Trichloroethane	4.488	97	220643	523.81	ppbv	96
10] Benzene	4.669	78	212791	500.39	ppbv	99
11] Trichloroethene	4.950	130	113361	489.63	ppbv	97
13] Toluene	5.556	91	251518	498.43	ppbv	99
14] Tetrachloroethene	5.972	166	144053	499.80	ppbv	98
15] Ethyl Benzene	6.556	91	342486	534.43	ppbv	93
16] m,p-Xylene	6.617	91	270380	549.74	ppbv	90
17] o-Xylene	6.940	91	275140	551.64	ppbv	90

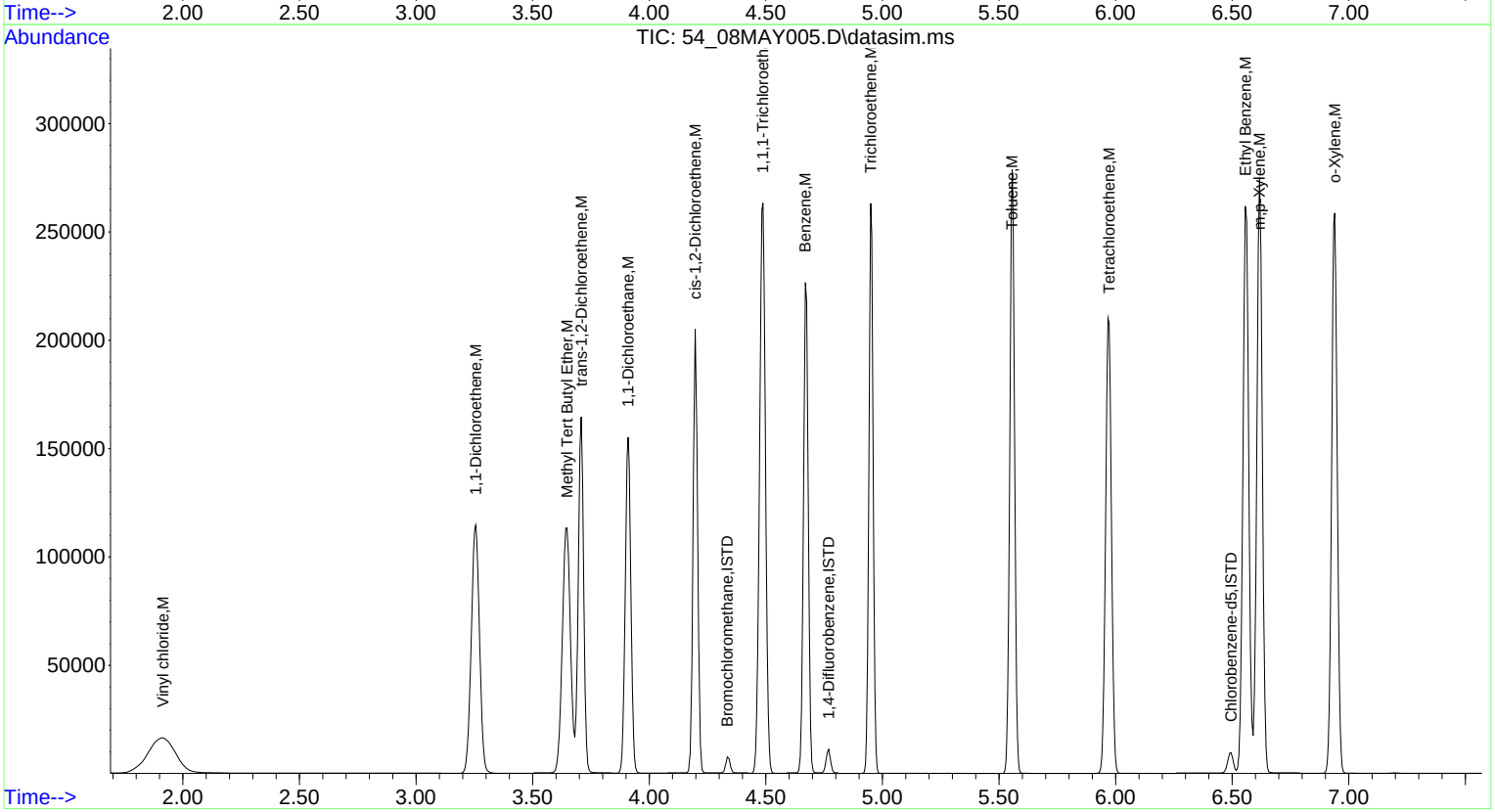
(#) = qualifier out of range (m) = manual integration (+) = signals summed

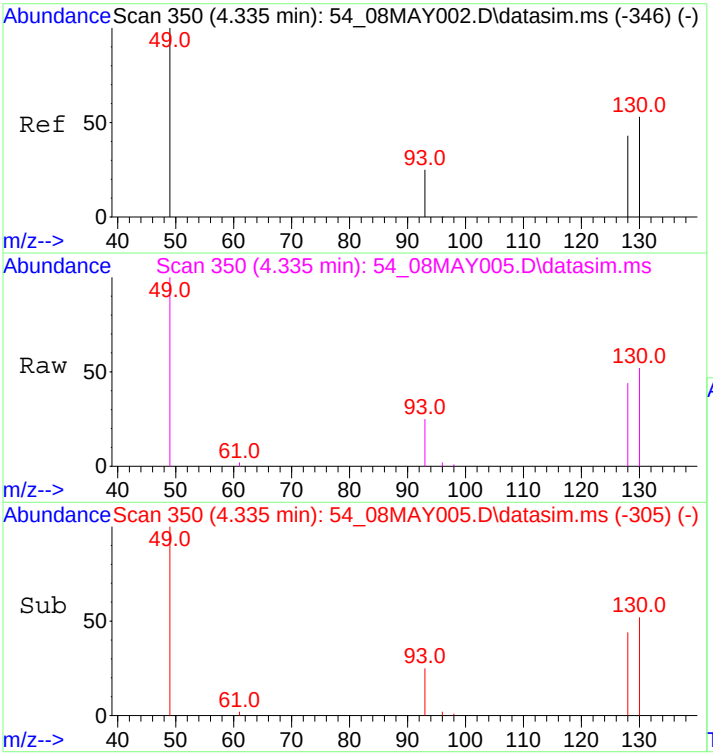
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY005.D
Acq On : 8 May 2014 7:59 am
Operator : YHL
Sample : 20140508-LCS \ 500 ppbv 2° CC 99022
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 08:05:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



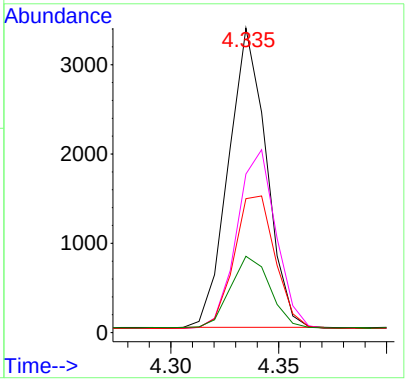


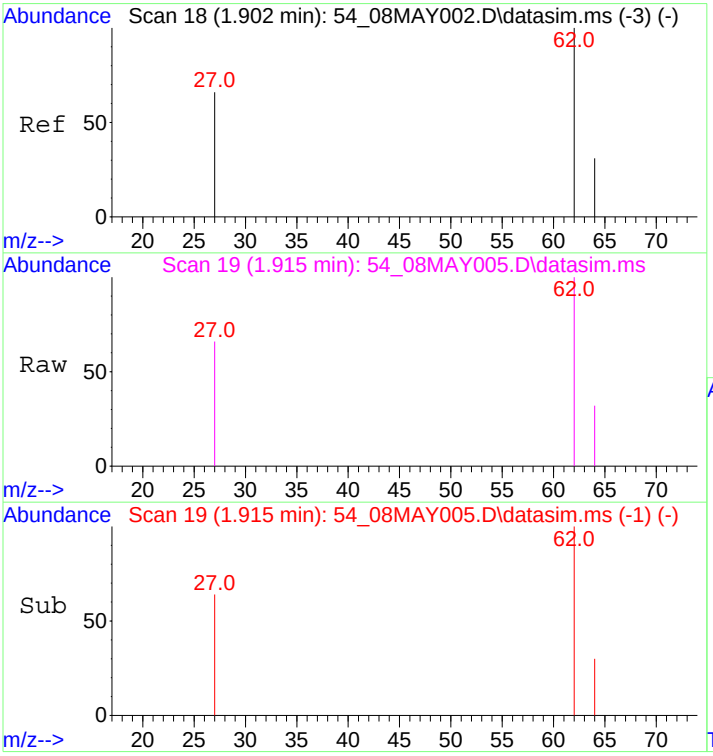


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 49 Resp: 4075

Ion	Ratio	Lower	Upper
49	100		
130	61.8	56.0	84.0
128	48.6	41.6	62.4
93	25.3	22.4	33.6

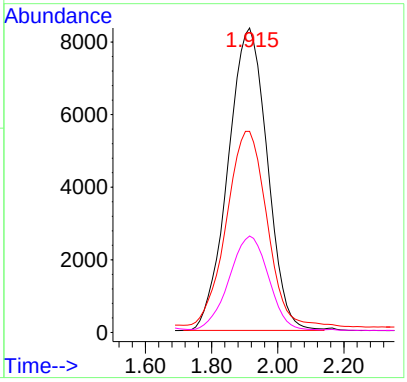


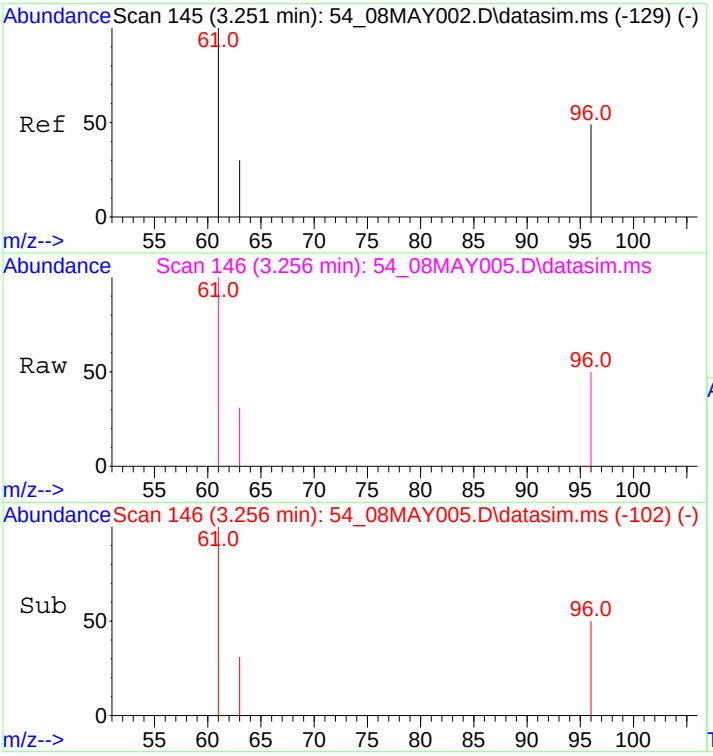


#2
Vinyl chloride
Concen: 444.33 ppbv
RT: 1.915 min Scan# 19
Delta R.T. 0.013 min
Lab File: 54_08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 62 Resp: 68850

Ion	Ratio	Lower	Upper
62	100		
64	23.8	28.0	42.0#
27	90.6	72.0	108.0

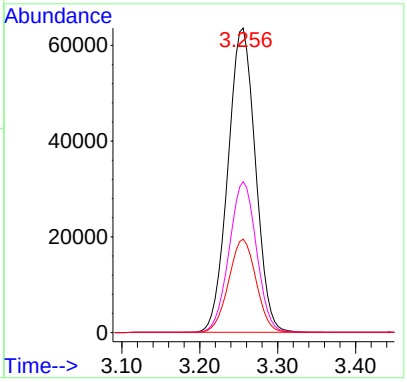


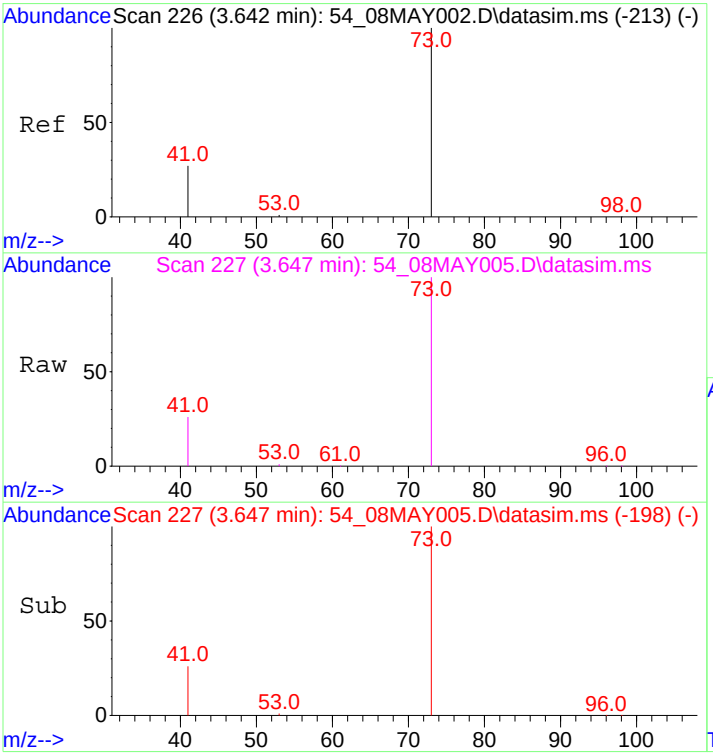


#3
1,1-Dichloroethene
Concen: 494.05 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.005 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 61 Resp: 155924

Ion	Ratio	Lower	Upper
61	100		
96	49.3	41.6	62.4
63	30.5	26.2	39.2

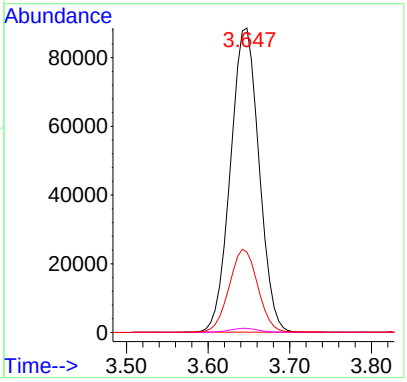


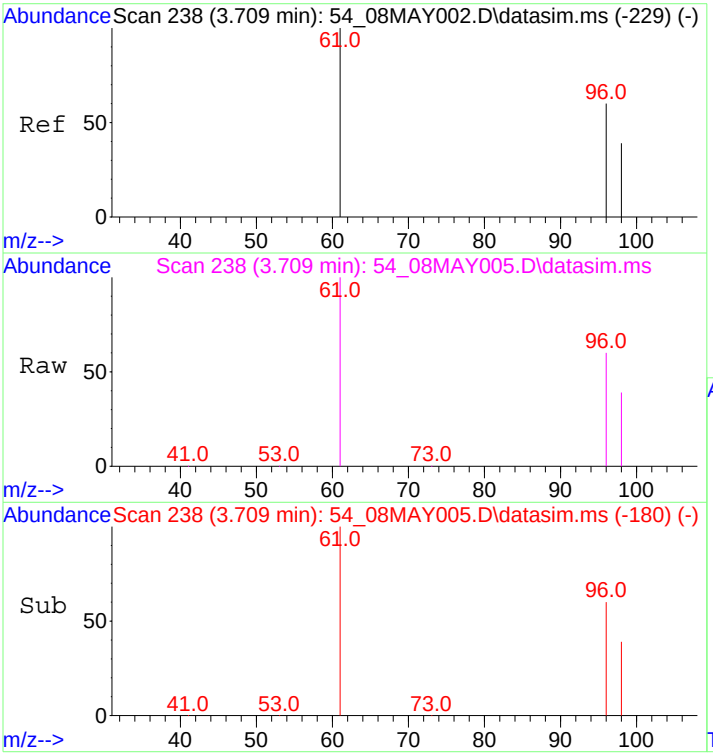


#4
Methyl Tert Butyl Ether
Concen: 446.42 ppbv
RT: 3.647 min Scan# 227
Delta R.T. 0.006 min
Lab File: 54_08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 73 Resp: 215117

Ion	Ratio	Lower	Upper
73	100		
53	1.3	1.0	1.4
41	27.2	20.0	30.0

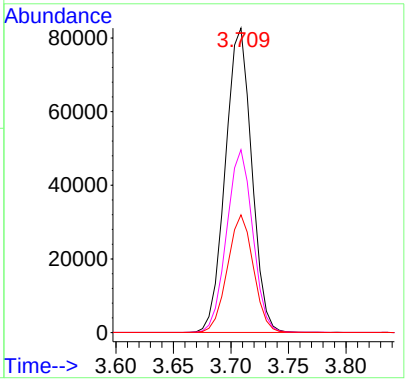


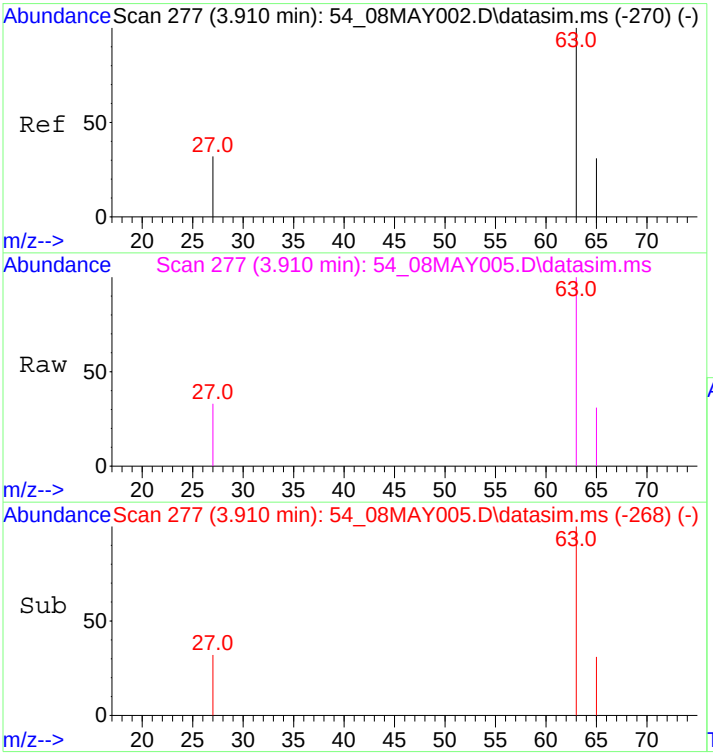


#5
trans-1,2-Dichloroethene
Concen: 474.57 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.000 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 61 Resp: 132008

Ion	Ratio	Lower	Upper
61	100		
96	59.4	48.0	72.0
98	38.1	32.0	48.0

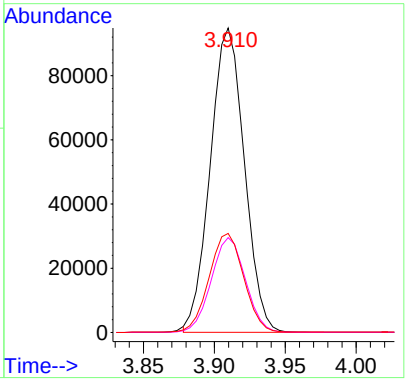


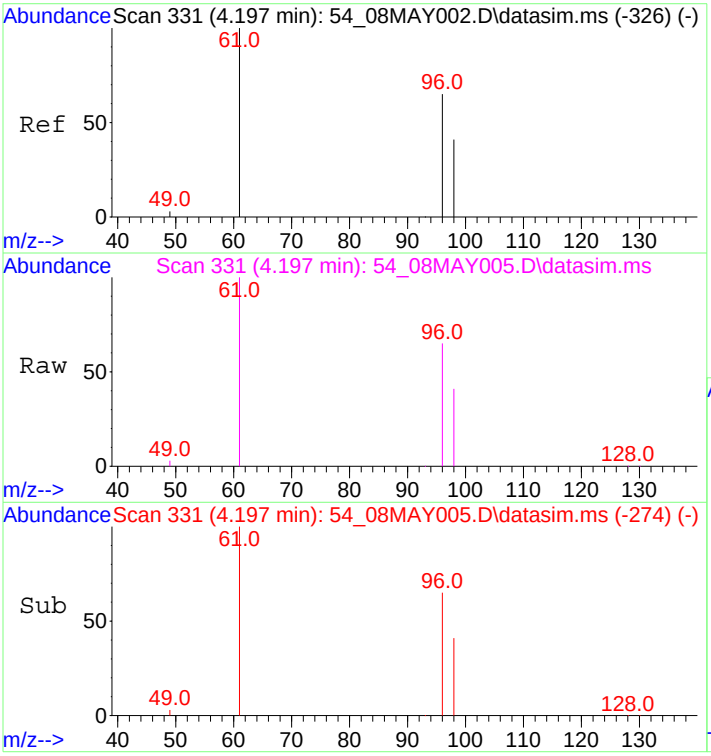


#6
1,1-Dichloroethane
Concen: 476.49 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.000 min
Lab File: 54_08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 63 Resp: 158223

Ion	Ratio	Lower	Upper
63	100		
65	31.0	26.1	39.1
27	32.6	24.0	36.0

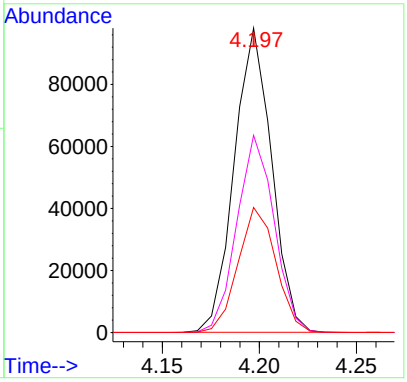


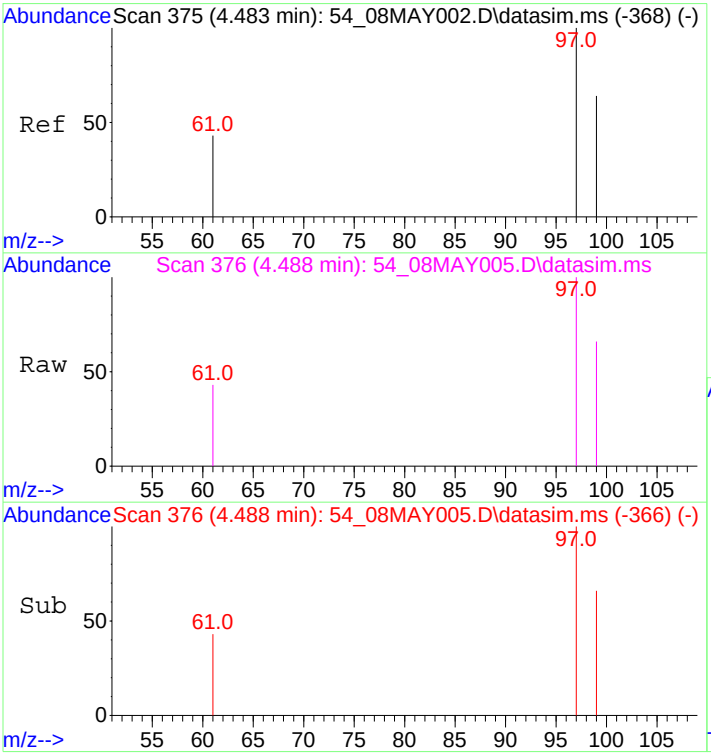


#7
cis-1,2-Dichloroethene
Concen: 507.68 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 61 Resp: 131873

Ion	Ratio	Lower	Upper
61	100		
96	64.6	52.0	78.0
98	41.7	33.6	50.4

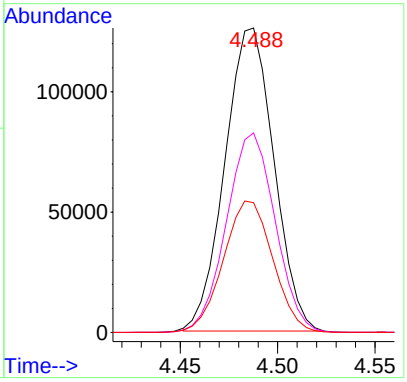


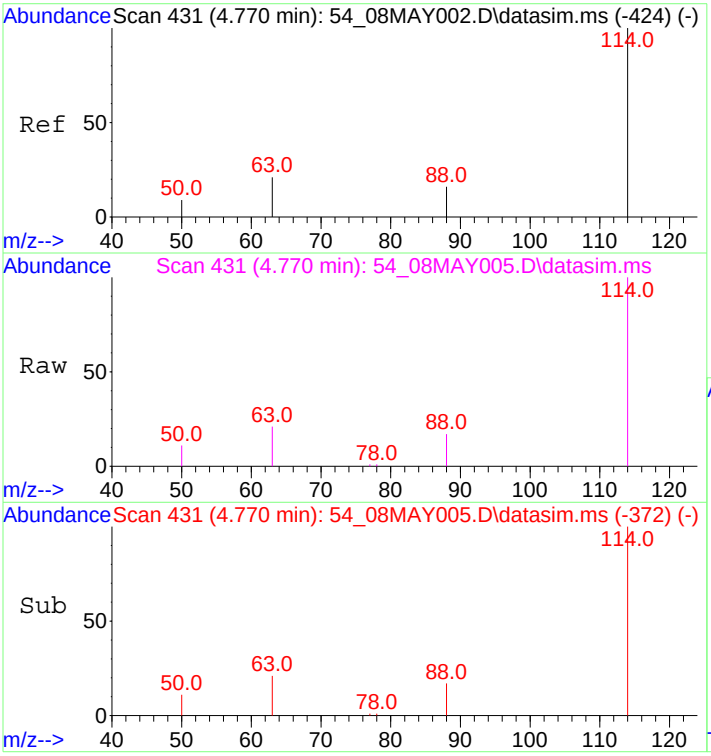


#8
1,1,1-Trichloroethane
Concen: 523.81 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.005 min
Lab File: 54_08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 97 Resp: 220643

Ion	Ratio	Lower	Upper
97	100		
99	64.5	52.1	78.1
61	43.2	30.2	45.4

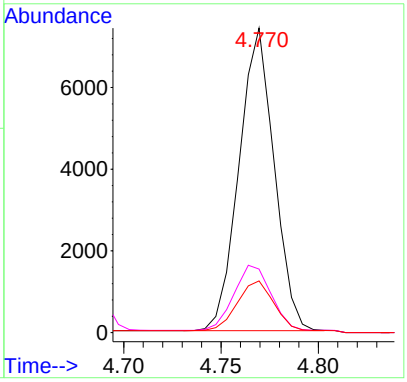


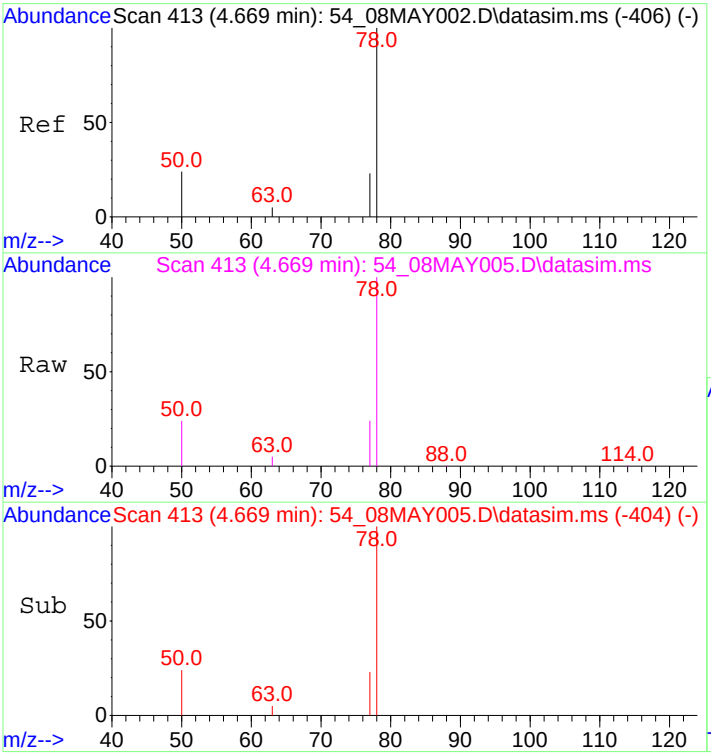


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion:114 Resp: 9309

Ion	Ratio	Lower	Upper
114	100		
63	22.7	17.6	26.4
88	17.0	13.6	20.4

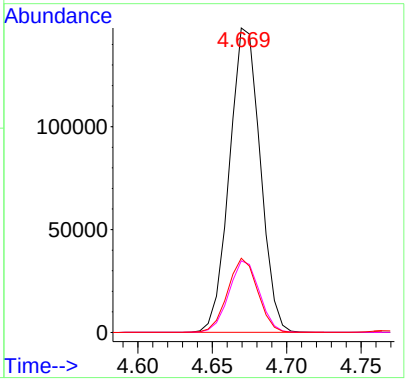


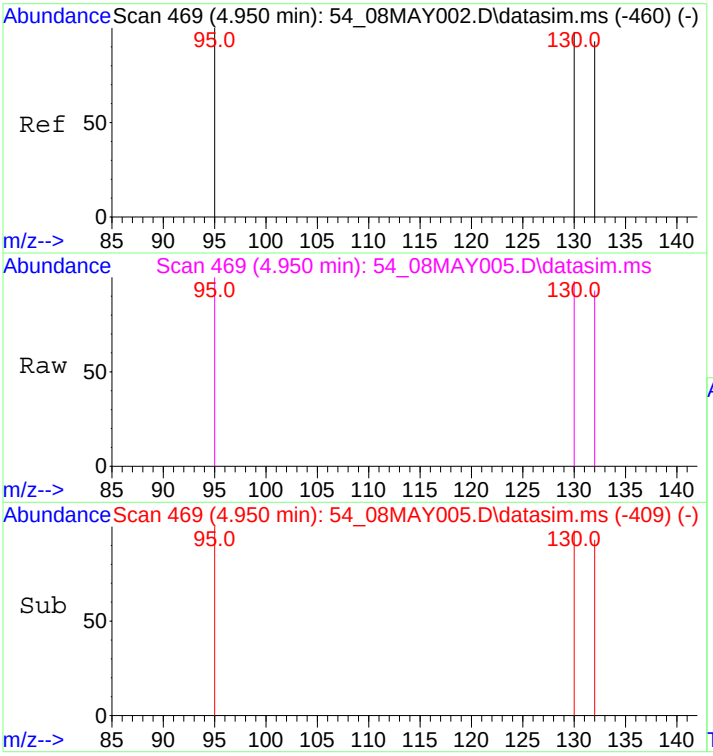


#10
Benzene
Concen: 500.39 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 78 Resp: 212791

Ion	Ratio	Lower	Upper
78	100		
77	23.2	18.2	27.2
50	23.6	18.4	27.6

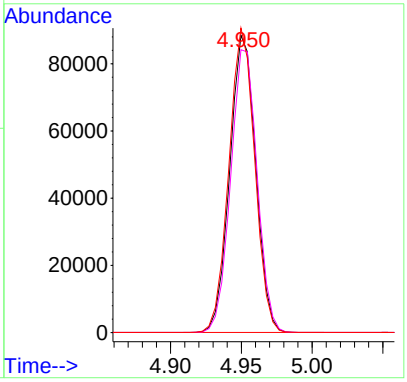


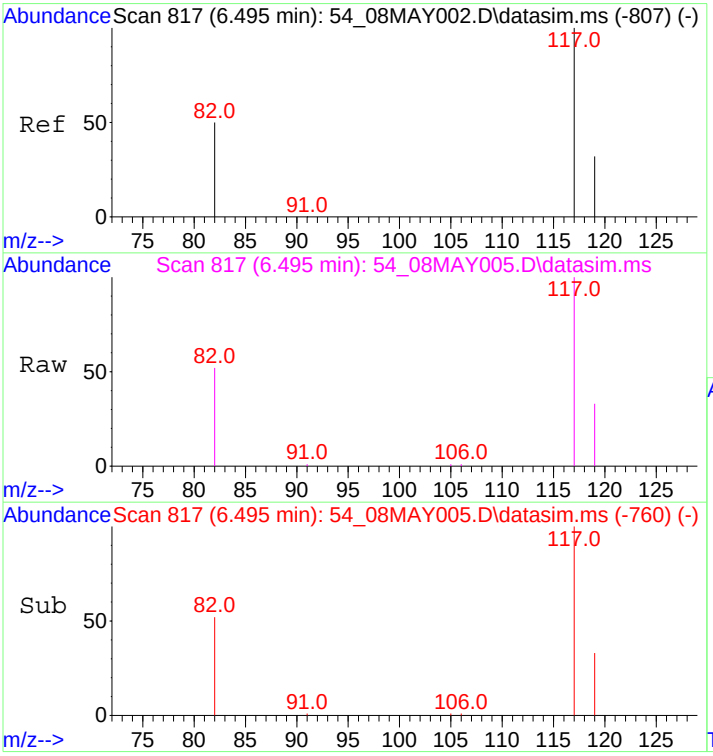


#11
Trichloroethene
Concen: 489.63 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion:130 Resp: 113361

Ion	Ratio	Lower	Upper
130	100		
132	96.8	76.9	115.3
95	101.4	76.5	114.7

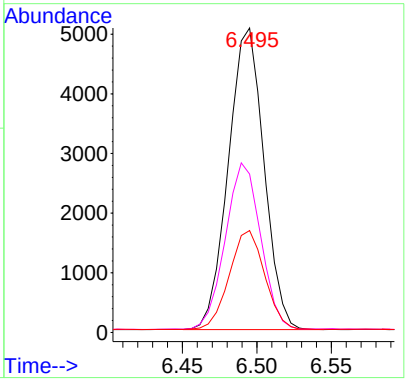


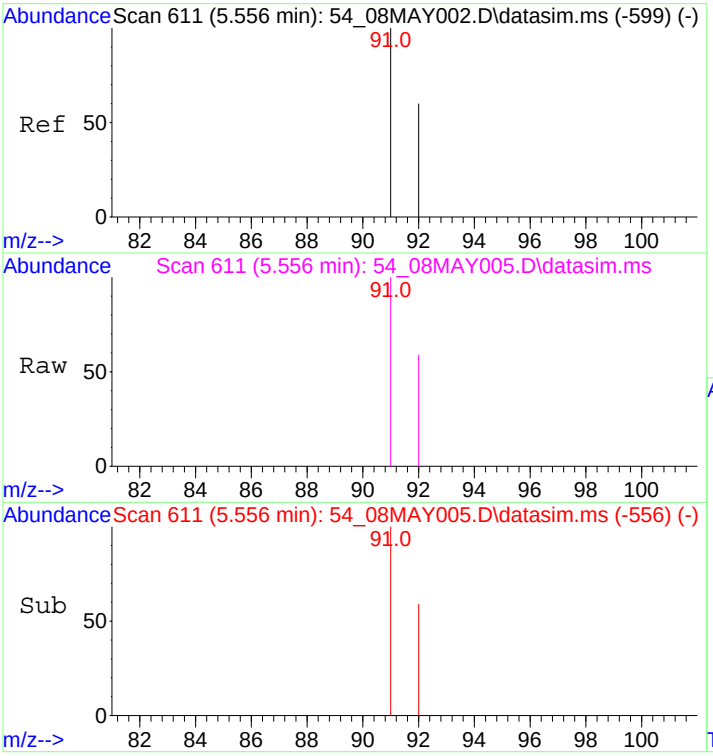


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54_08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion:117 Resp: 8418

Ion	Ratio	Lower	Upper
117	100		
82	54.5	38.0	57.0
119	32.6	27.0	40.4

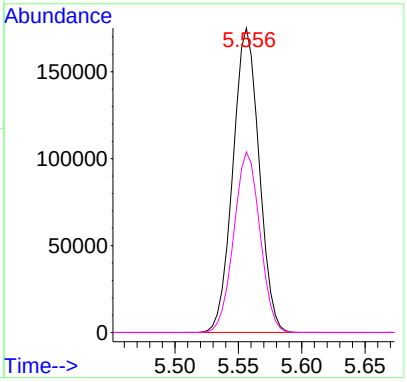


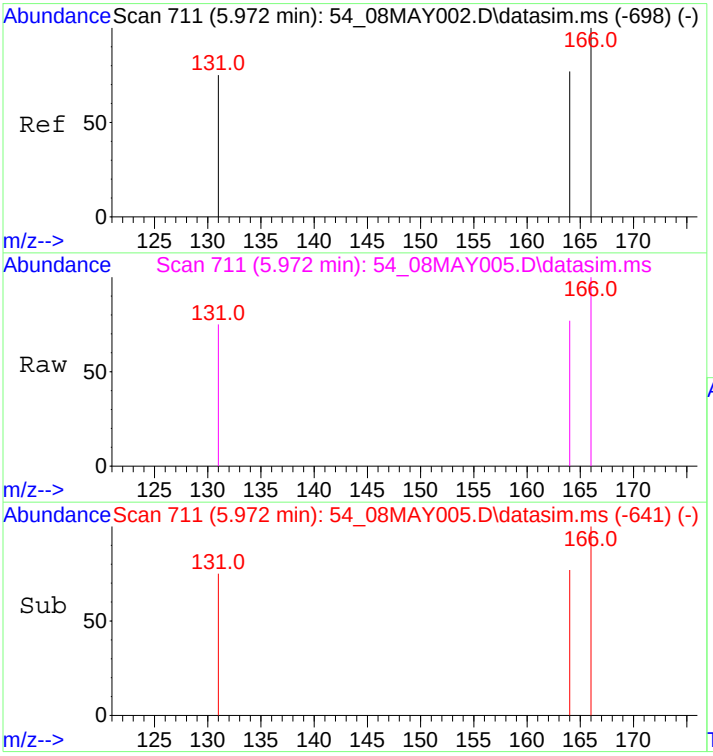


#13
Toluene
Concen: 498.43 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 91 Resp: 251518

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.8	71.8

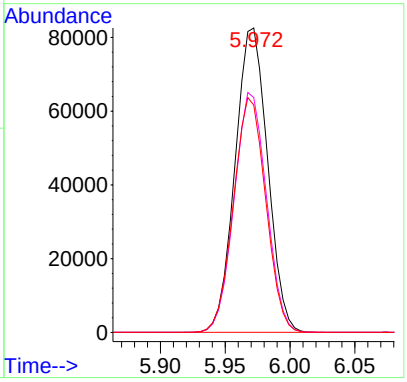


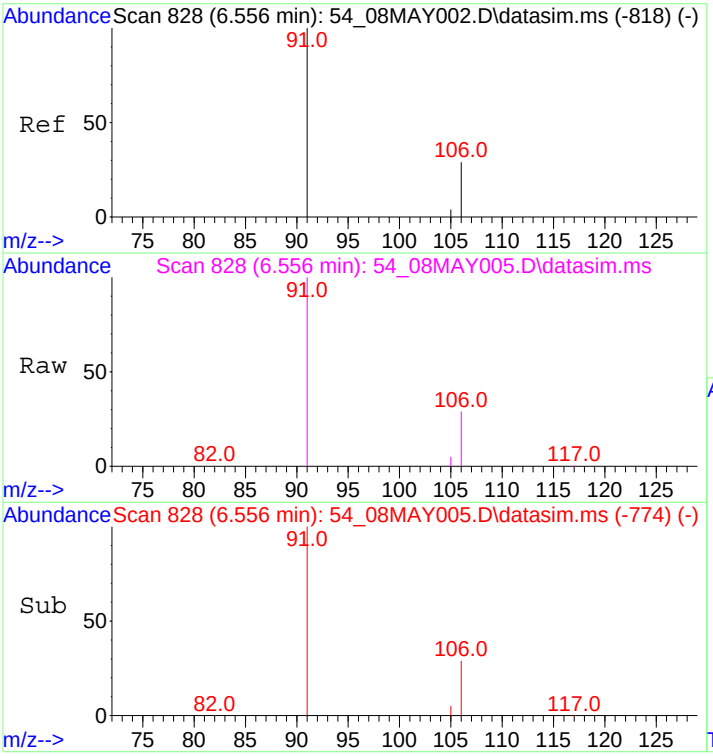


#14
Tetrachloroethene
Concen: 499.80 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion:166 Resp: 144053

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.6	94.0
131	76.5	58.5	87.7

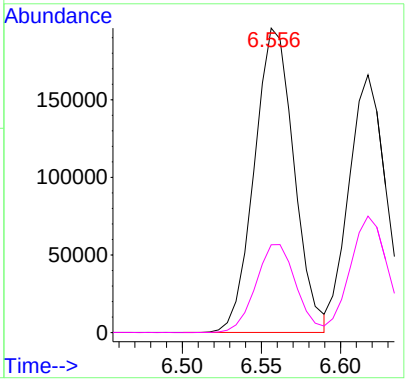


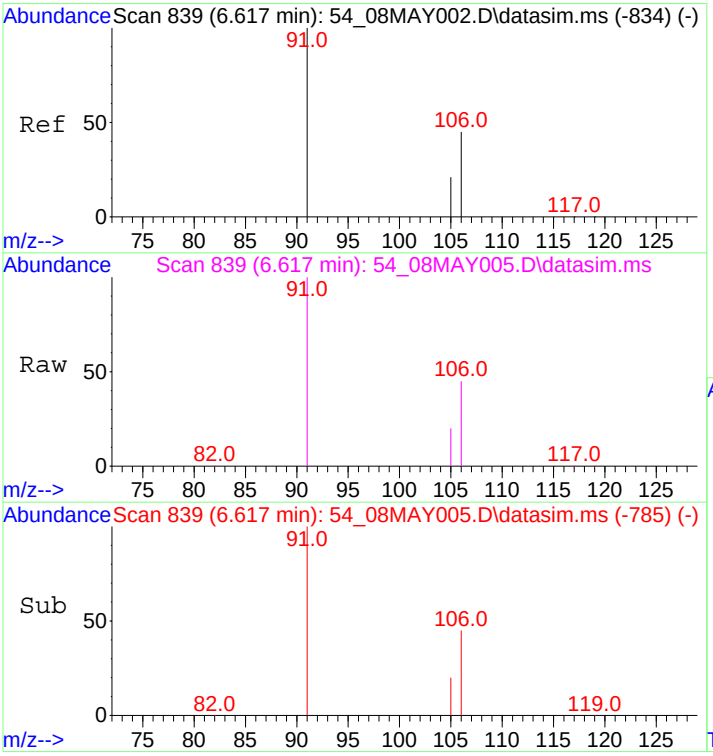


#15
Ethyl Benzene
Concen: 534.43 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 91 Resp: 342486

Ion	Ratio	Lower	Upper
91	100		
106	29.4	26.9	40.3

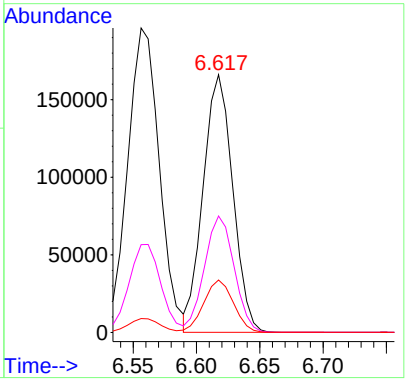


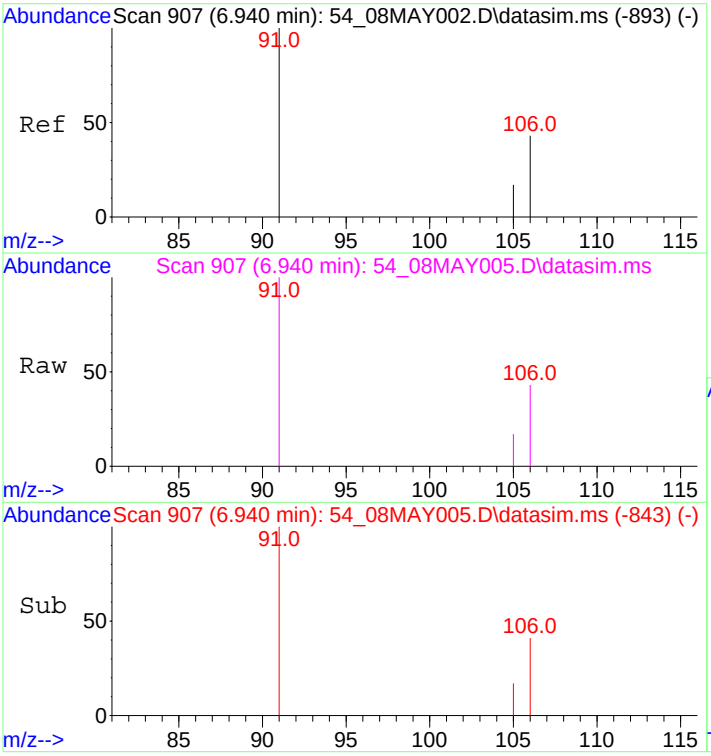


#16
m,p-Xylene
Concen: 549.74 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 91 Resp: 270380

Ion	Ratio	Lower	Upper
91	100		
106	45.3	43.1	64.7
105	20.4	18.3	27.5

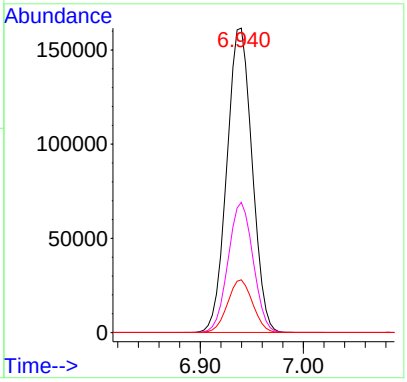




#17
o-Xylene
Concen: 551.64 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.000 min
Lab File: 54 08MAY005.D
Acq: 8 May 2014 7:59 am

Tgt Ion: 91 Resp: 275140

Ion	Ratio	Lower	Upper
91	100		
106	42.3	40.1	60.1
105	17.1	15.8	23.6



APPENDIX D

Quantitation Reports

Middlefield-Ellis-Whisman Soil Gas Study

GC/MS Analytical Report

May 2014

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY004.D
Acq On : 1 May 2014 7:43 am
Operator : yhl
Sample : 20140501-MB \ Method Blank
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:50:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4973	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	13586	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	12293	10.00	ppbv	0.00

System Monitoring Compounds

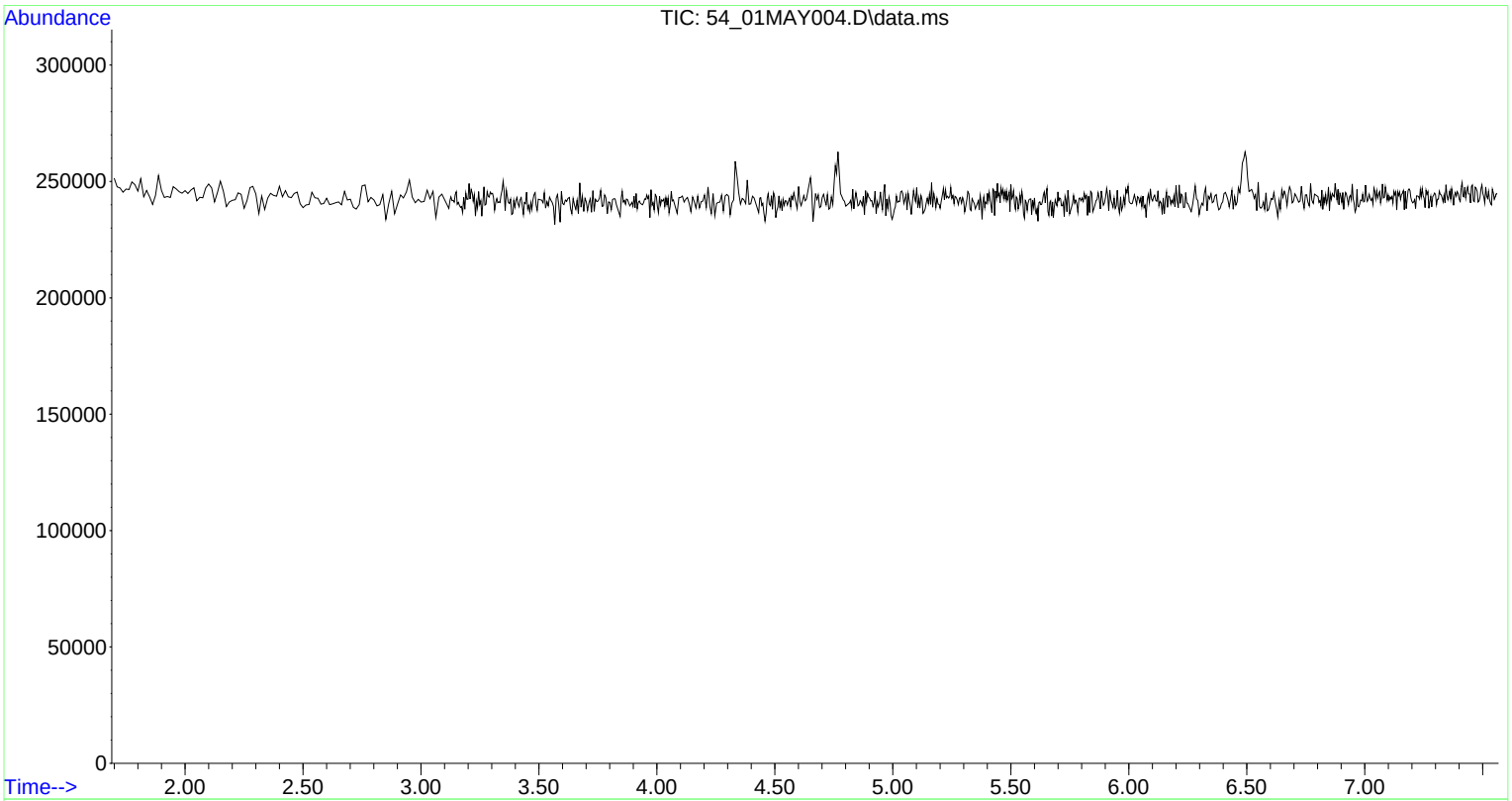
Target Compounds	Qvalue

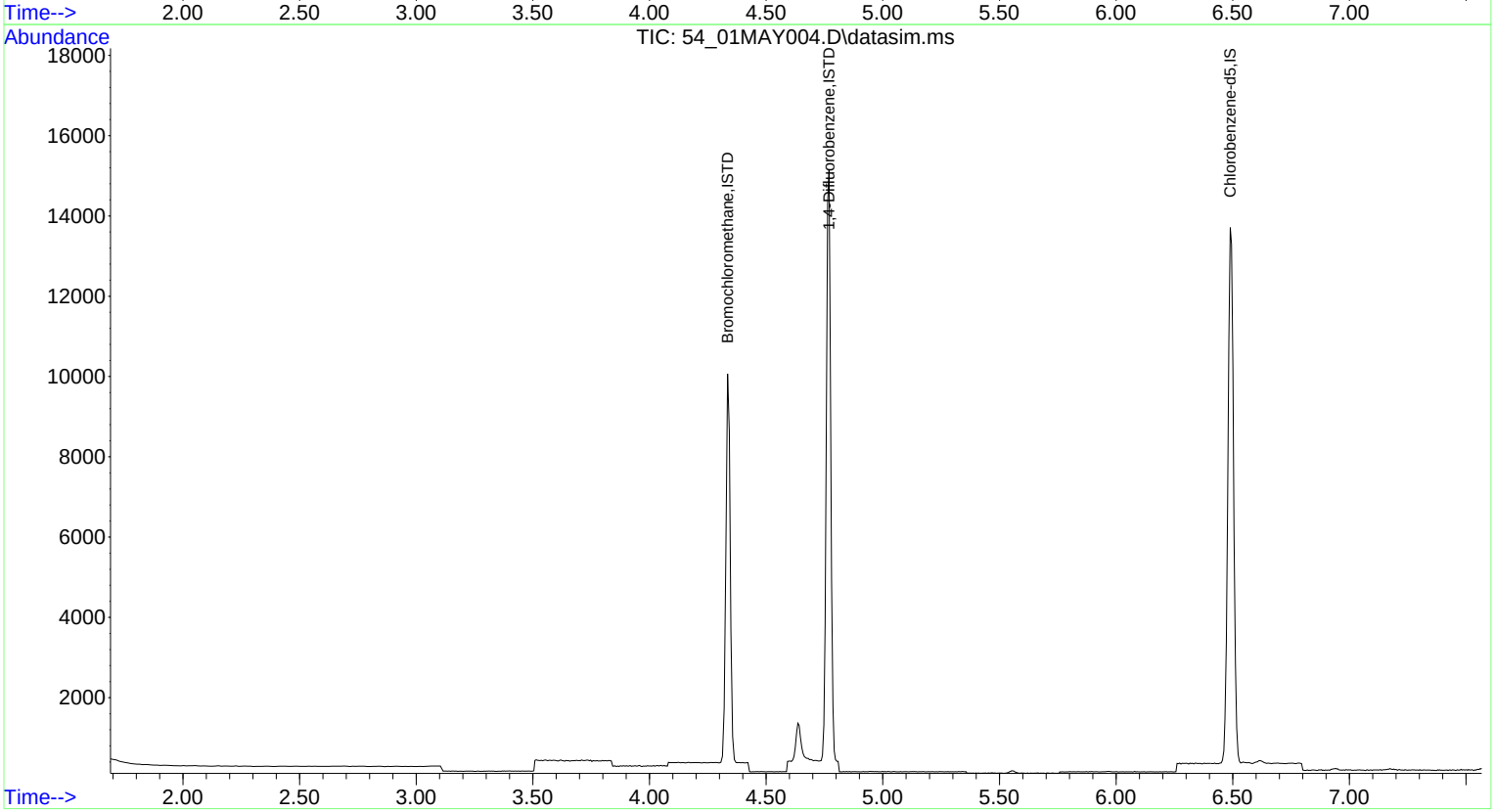
(#) = qualifier out of range (m) = manual integration (+) = signals summed

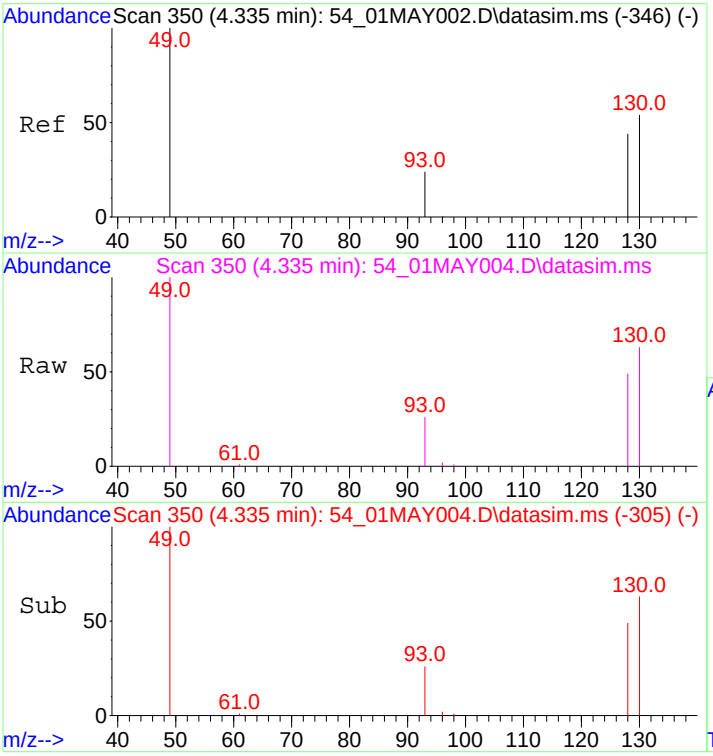
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY004.D
Acq On : 1 May 2014 7:43 am
Operator : yhl
Sample : 20140501-MB \ Method Blank
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 07:50:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



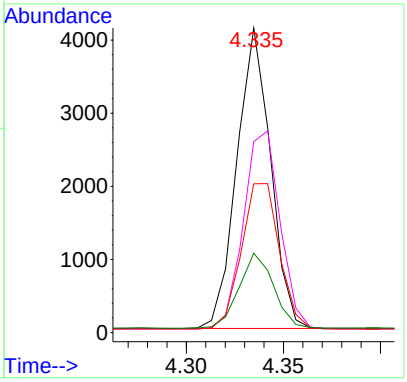


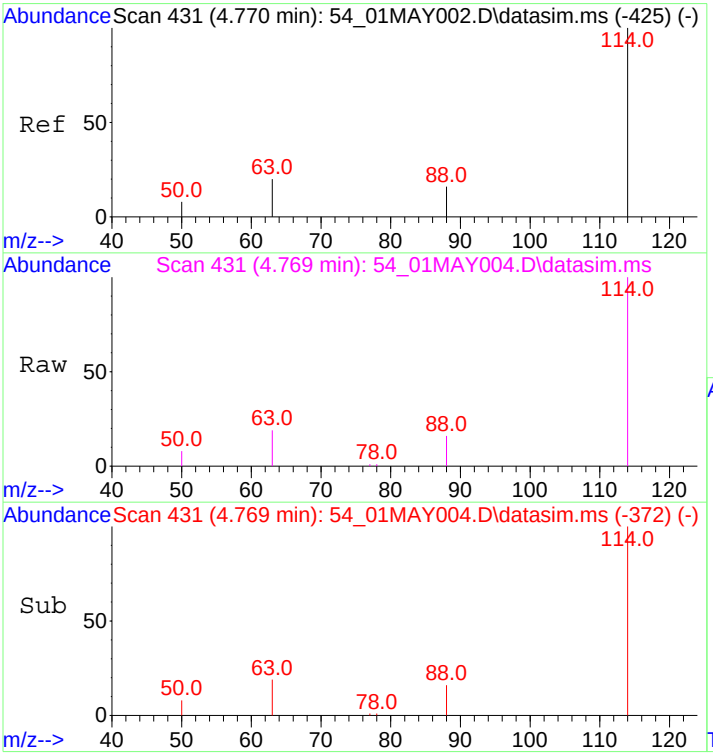


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY004.D
Acq: 1 May 2014 7:43 am

Tgt Ion: 49 Resp: 4973

Ion	Ratio	Lower	Upper
49	100		
130	71.6	87.2	130.8#
128	54.6	68.0	102.0#
93	25.7	29.3	43.9#

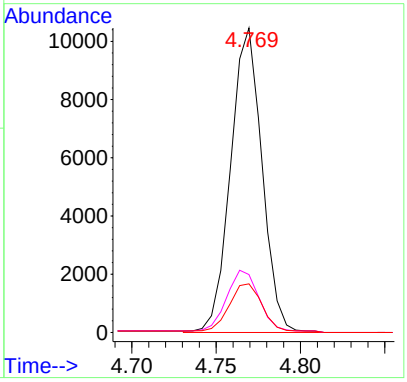


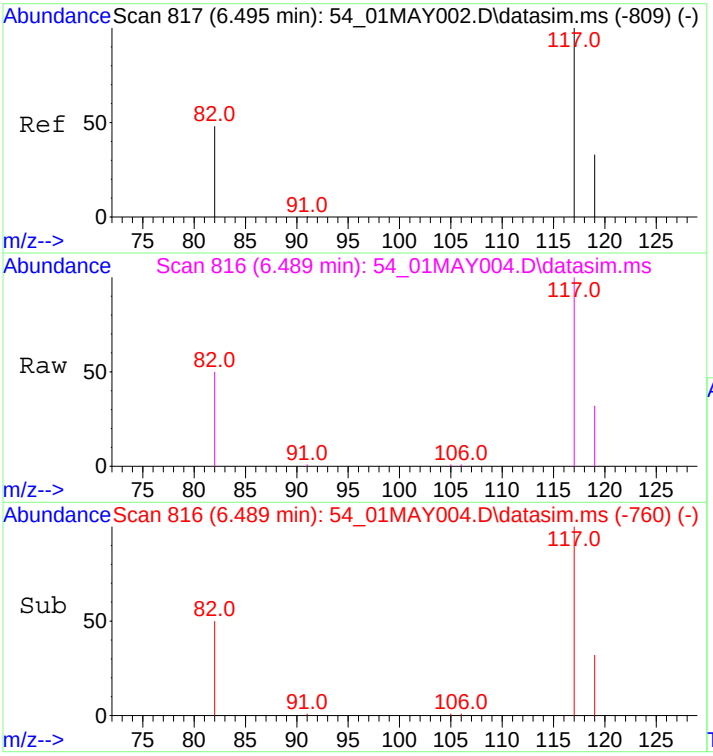


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_01MAY004.D
Acq: 1 May 2014 7:43 am

Tgt Ion:114 Resp: 13586

Ion	Ratio	Lower	Upper
114	100		
63	20.0	12.0	18.0#
88	15.9	11.8	17.8

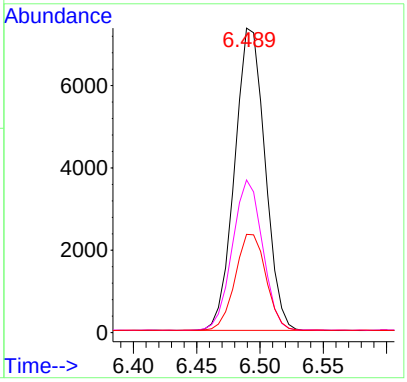




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 01MAY004.D
Acq: 1 May 2014 7:43 am

Tgt Ion:117 Resp: 12293

Ion	Ratio	Lower	Upper
117	100		
82	49.5	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY006.D
Acq On : 1 May 2014 2:26 pm
Operator : yhl
Sample : 02121 \ F5-012
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 14:34:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

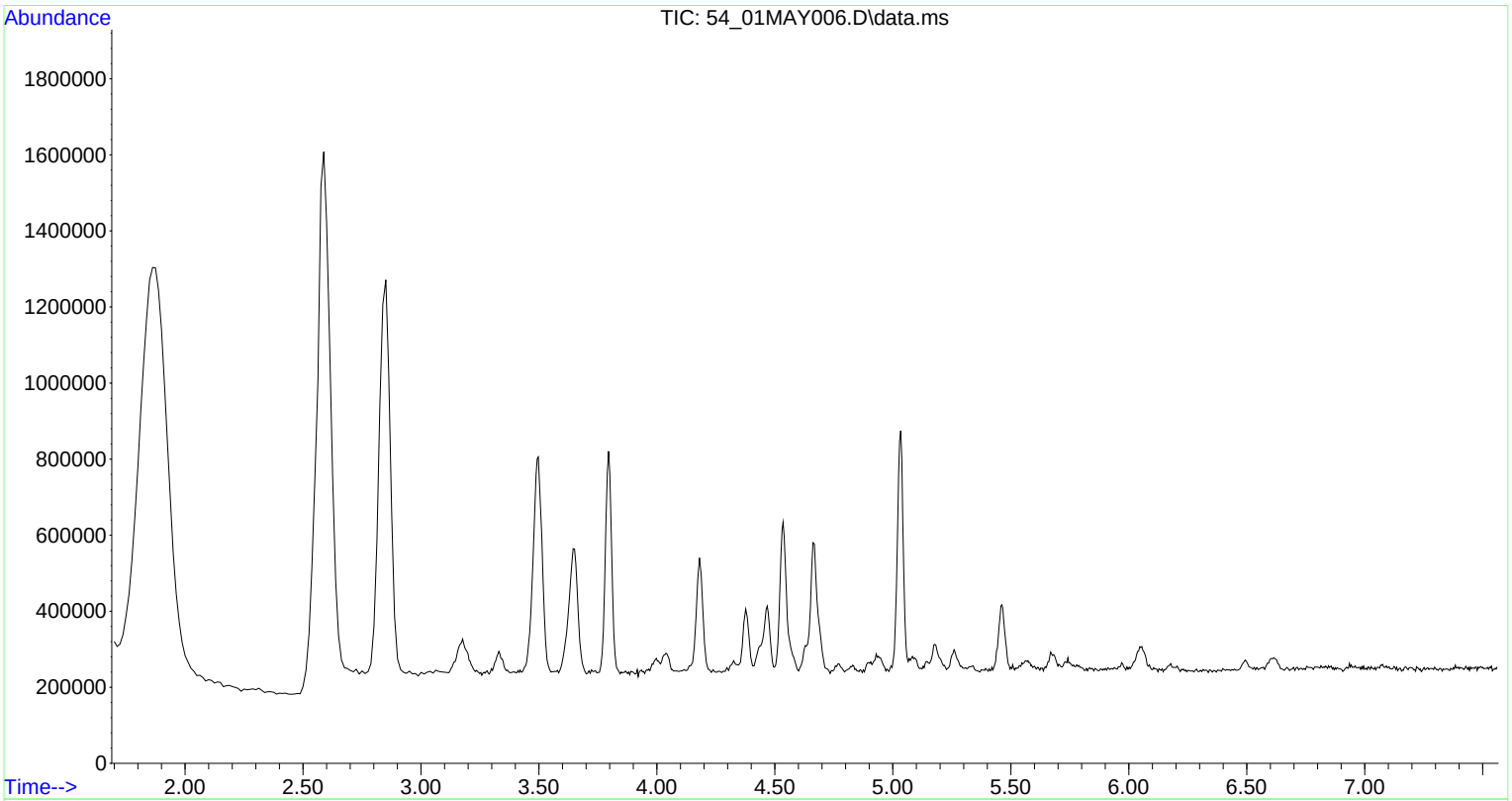
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4511	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	12338	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	12284	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
10] Benzene	4.669	78	44432	78.83	ppbv	# 55
13] Toluene	5.556	91	1432	1.94	ppbv	98
14] Tetrachloroethene	5.972	166	4553	10.83	ppbv	99
15] Ethyl Benzene	6.556	91	2114	2.26	ppbv	95
16] m,p-Xylene	6.617	91	12548	17.48	ppbv	93
17] o-Xylene	6.937	91	2533	3.48	ppbv	94

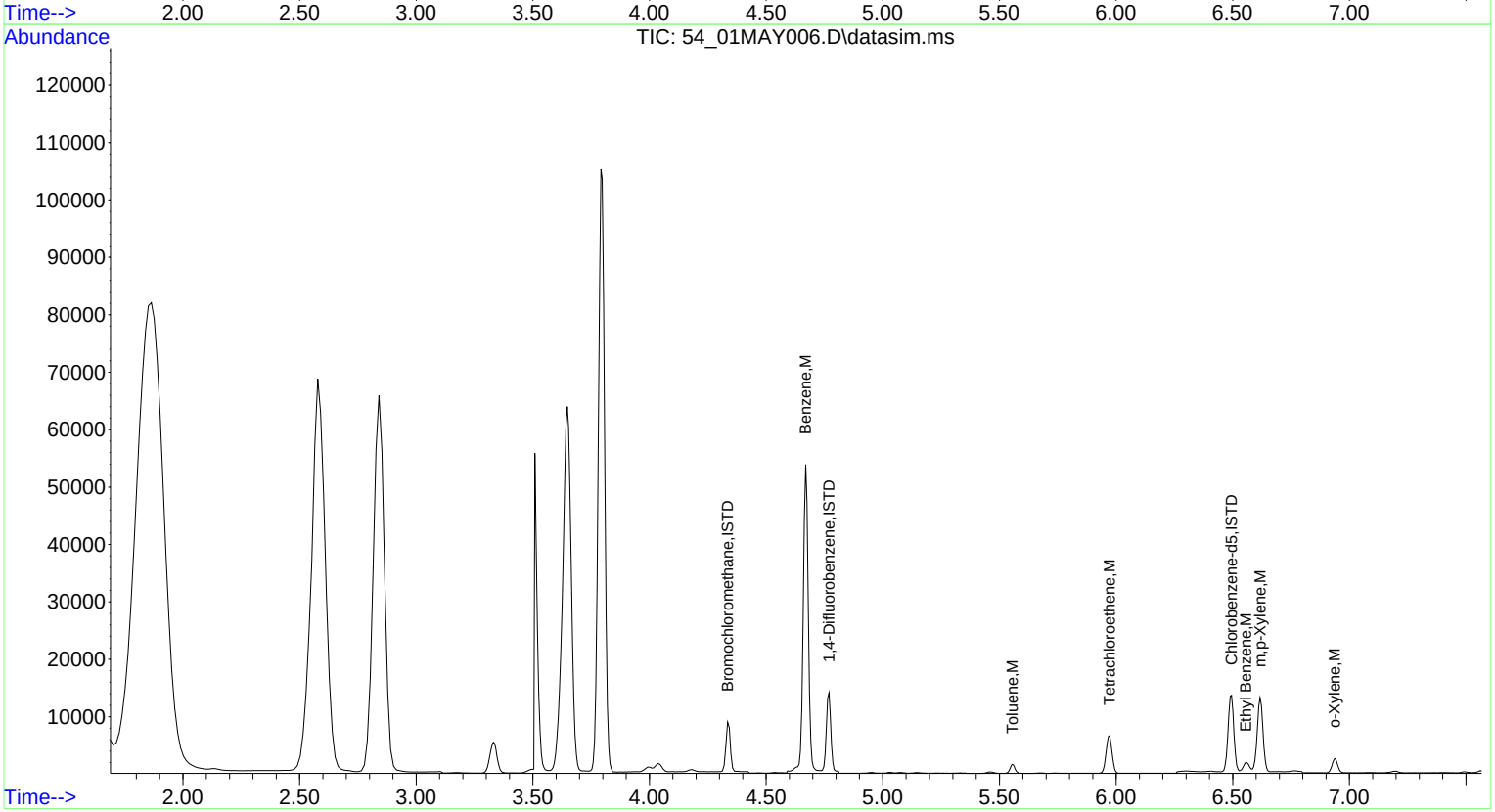
(#) = qualifier out of range (m) = manual integration (+) = signals summed

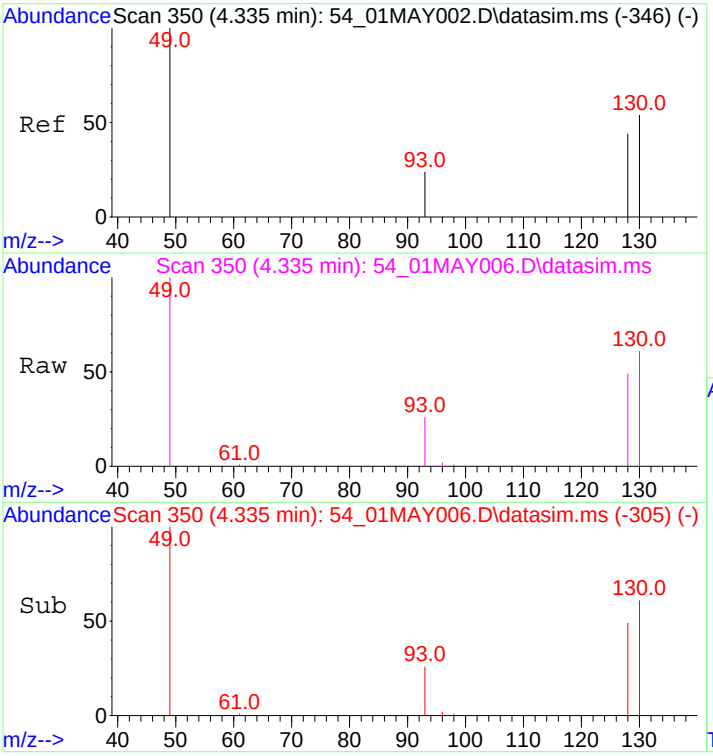
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY006.D
Acq On : 1 May 2014 2:26 pm
Operator : yhl
Sample : 02121 \ F5-012
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 14:34:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



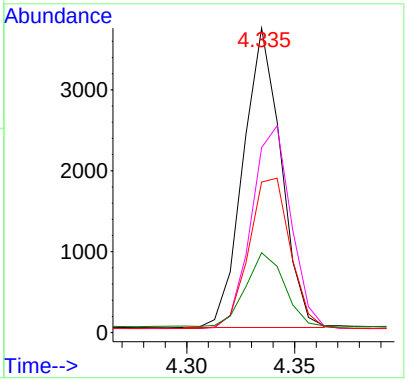


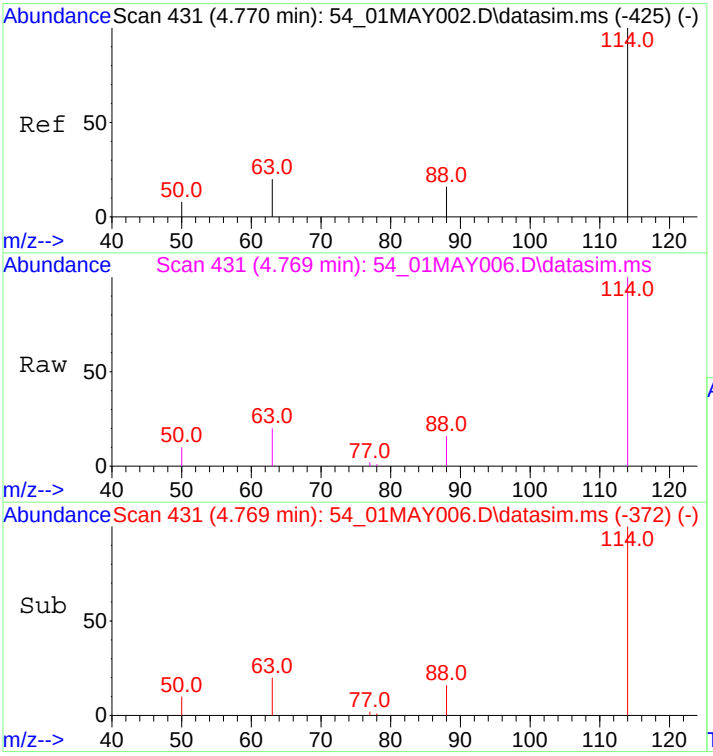


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion: 49 Resp: 4511

Ion	Ratio	Lower	Upper
49	100		
130	70.7	87.2	130.8#
128	54.9	68.0	102.0#
93	25.7	29.3	43.9#

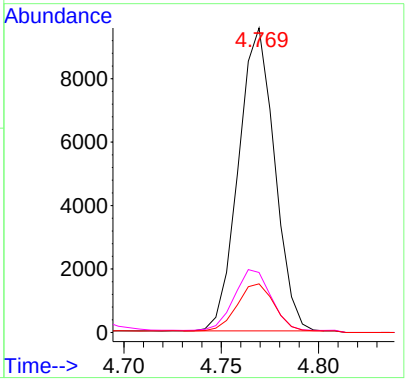


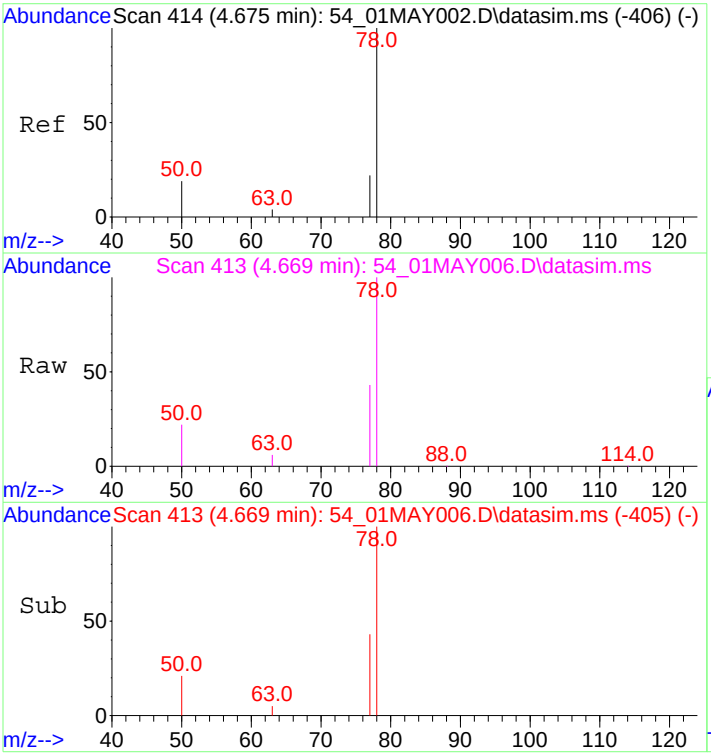


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion:114 Resp: 12338

Ion	Ratio	Lower	Upper
114	100		
63	20.3	12.0	18.0#
88	15.9	11.8	17.8

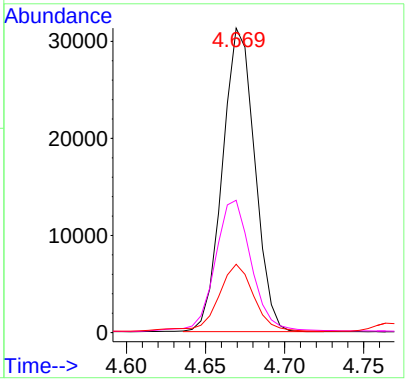


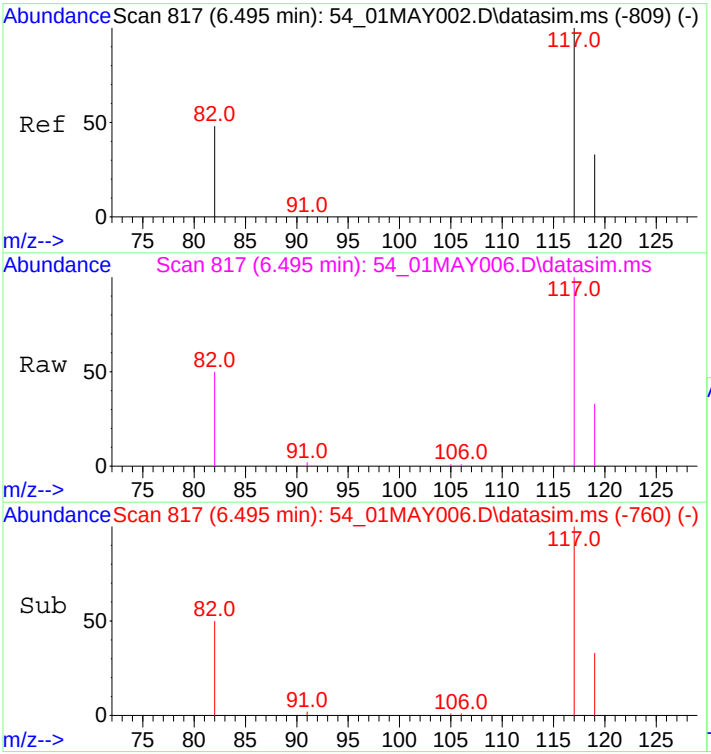


#10
Benzene
Concen: 78.83 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.006 min
Lab File: 54 01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion: 78 Resp: 44432

Ion	Ratio	Lower	Upper
78	100		
77	46.9	18.2	27.2#
50	23.6	8.6	13.0#

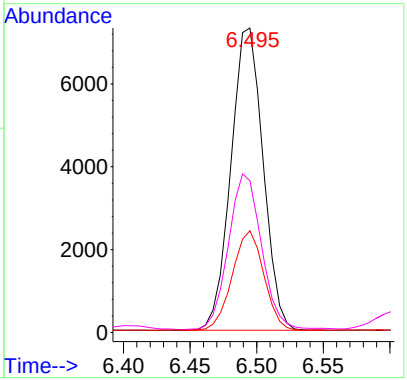


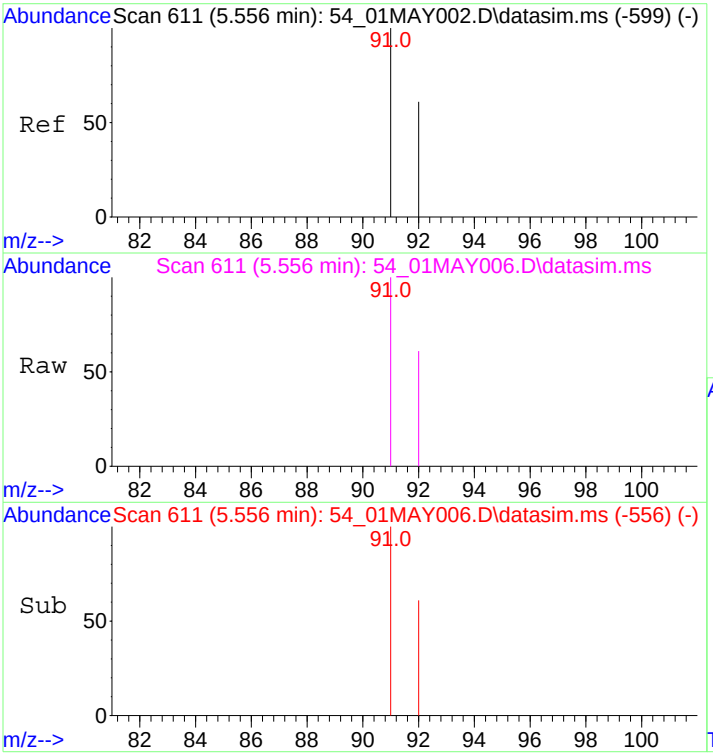


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54_01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion:117 Resp: 12284

Ion	Ratio	Lower	Upper
117	100		
82	54.0	38.0	57.0
119	32.2	27.0	40.4

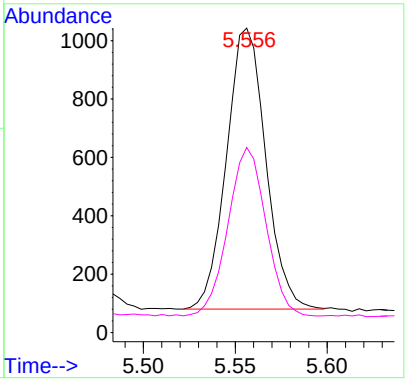


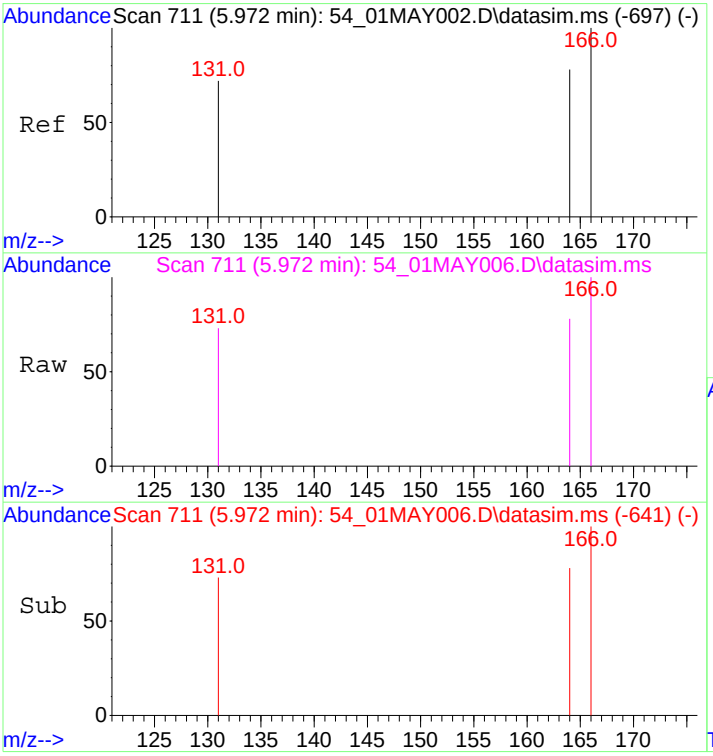


#13
Toluene
Concen: 1.94 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion: 91 Resp: 1432

Ion	Ratio	Lower	Upper
91	100		
92	58.0	47.8	71.8

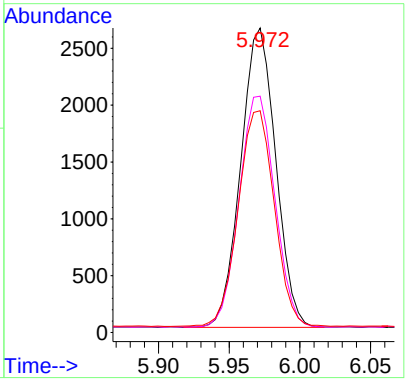


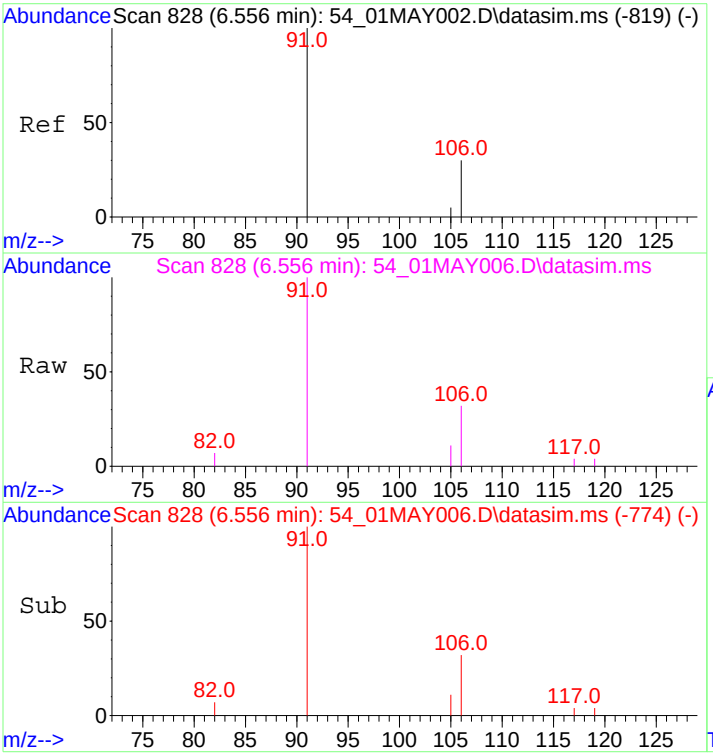


#14
Tetrachloroethene
Concen: 10.83 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion:166 Resp: 4553

Ion	Ratio	Lower	Upper
166	100		
164	79.1	62.6	94.0
131	74.1	58.5	87.7

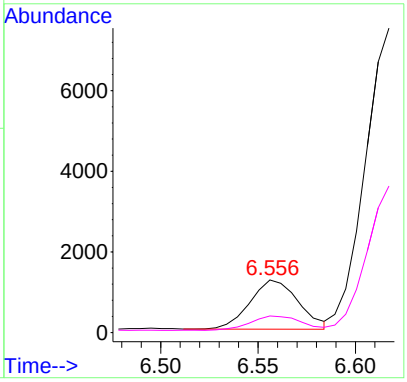


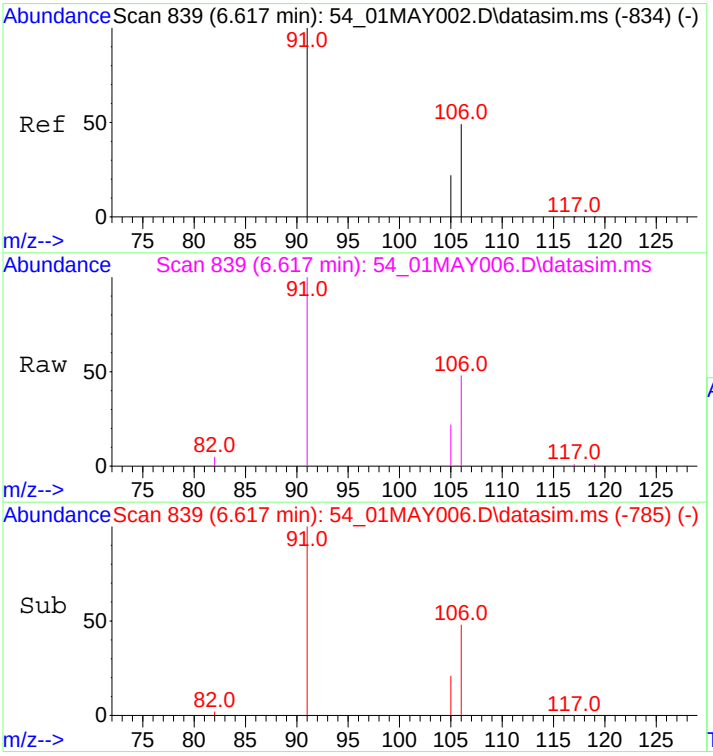


#15
Ethyl Benzene
Concen: 2.26 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion: 91 Resp: 2114

Ion	Ratio	Lower	Upper
91	100		
106	30.8	26.9	40.3

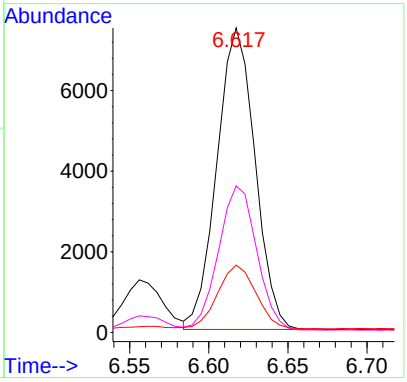


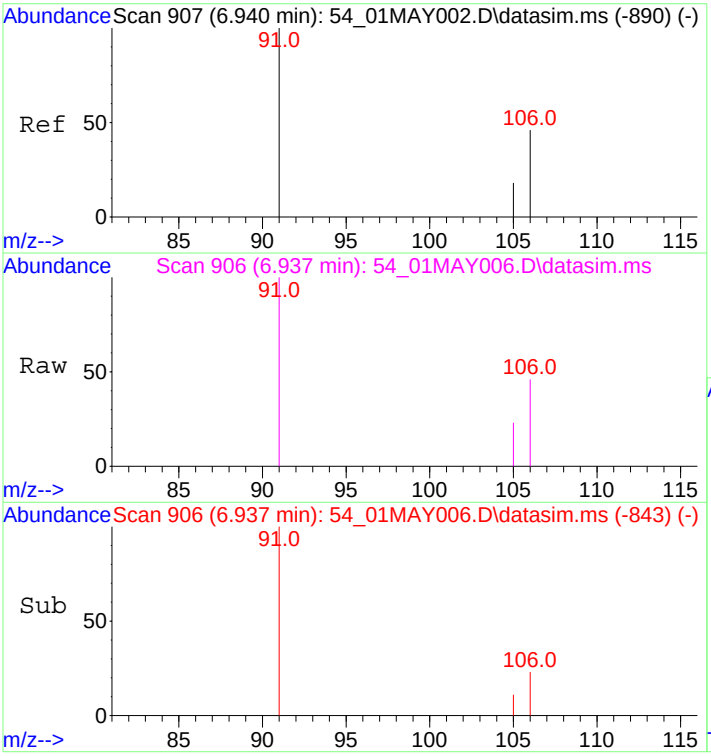


#16
m,p-Xylene
Concen: 17.48 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion: 91 Resp: 12548

Ion	Ratio	Lower	Upper
91	100		
106	47.8	43.1	64.7
105	21.2	18.3	27.5

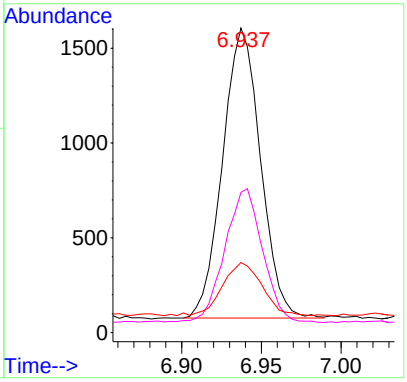




#17
o-Xylene
Concen: 3.48 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 01MAY006.D
Acq: 1 May 2014 2:26 pm

Tgt Ion: 91 Resp: 2533

Ion	Ratio	Lower	Upper
91	100		
106	45.2	40.1	60.1
105	18.8	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY007.D
Acq On : 1 May 2014 2:38 pm
Operator : yhl
Sample : 02121 \ F5-012 dup
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 14:45:35 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

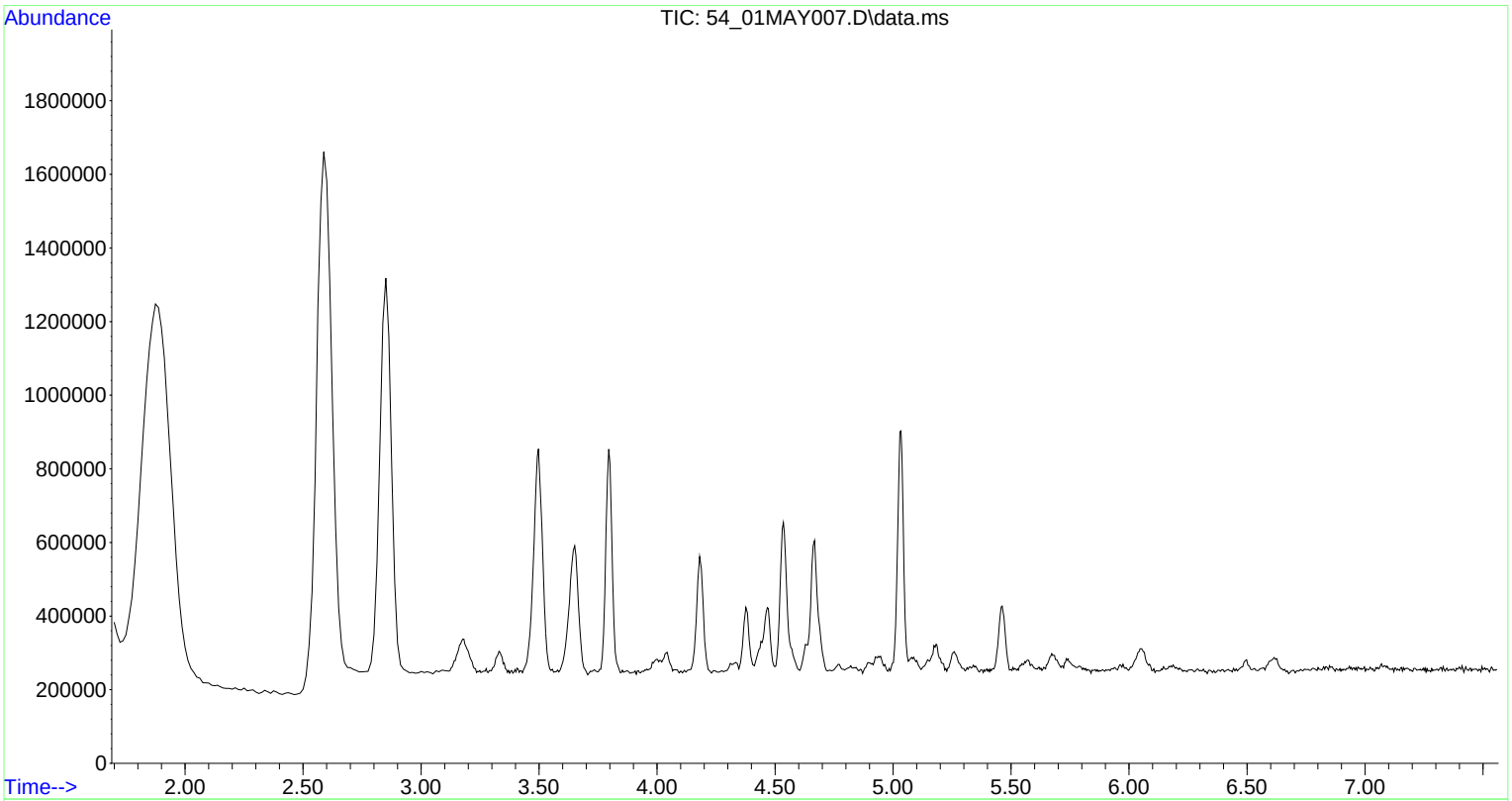
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4747	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	12774	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	11970	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
10] Benzene	4.669	78	46232	79.23	ppbv	# 60
13] Toluene	5.556	91	1661	2.31	ppbv	97
14] Tetrachloroethene	5.972	166	4739	11.56	ppbv	99
15] Ethyl Benzene	6.556	91	2195	2.41	ppbv	96
16] m,p-Xylene	6.617	91	12883	18.42	ppbv	94
17] o-Xylene	6.936	91	2627	3.70	ppbv	96

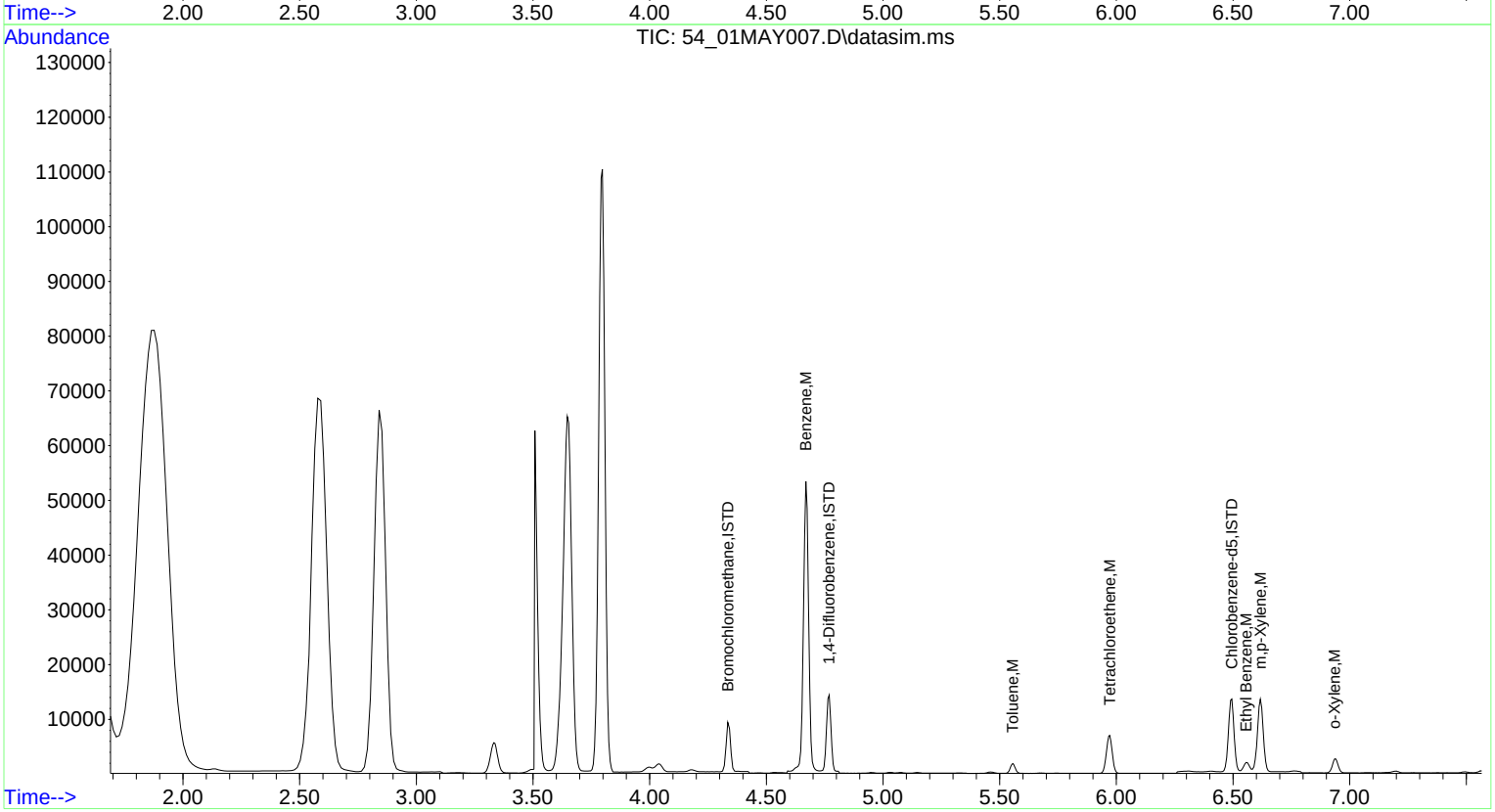
(#) = qualifier out of range (m) = manual integration (+) = signals summed

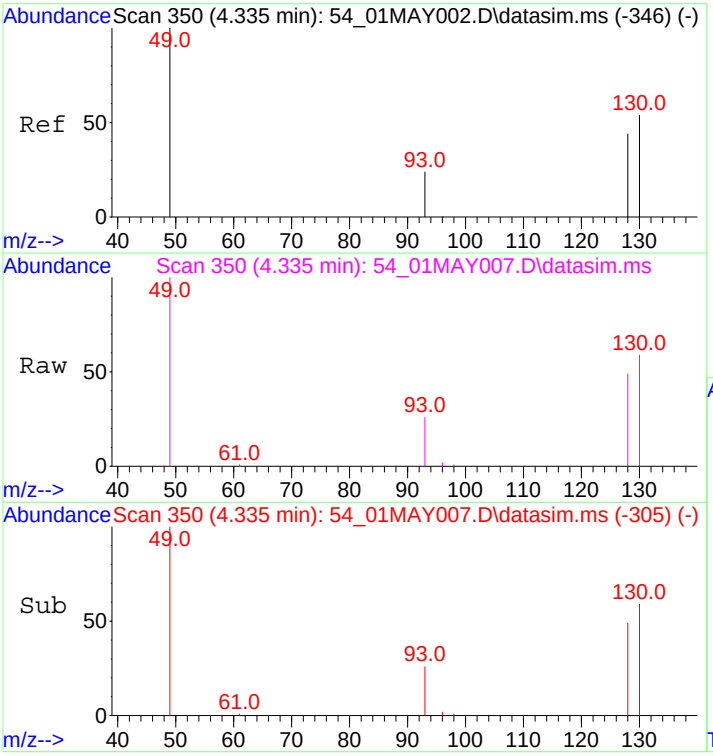
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY007.D
Acq On : 1 May 2014 2:38 pm
Operator : yhl
Sample : 02121 \ F5-012 dup
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 14:45:35 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



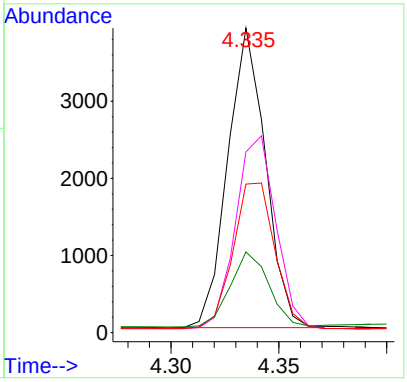


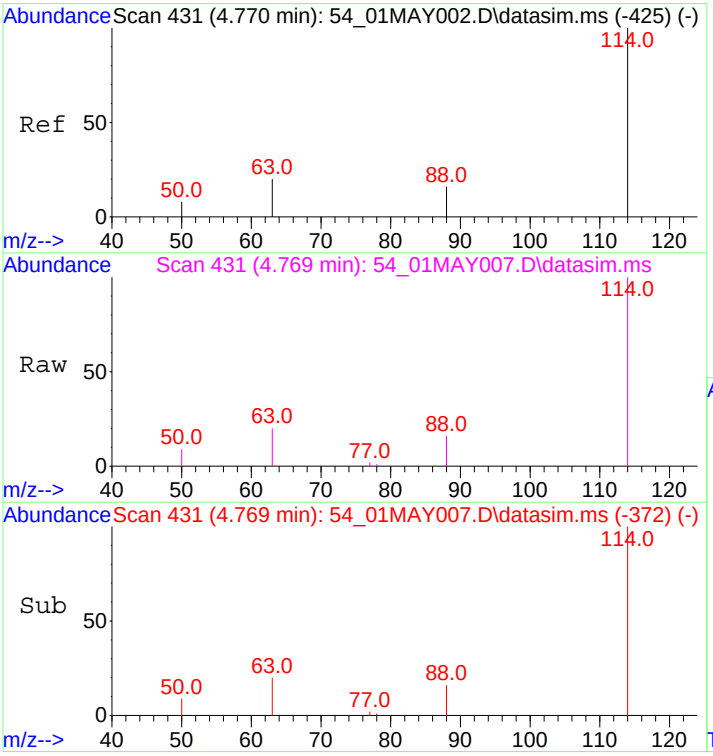


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY007.D
Acq: 1 May 2014 2:38 pm

Tgt Ion: 49 Resp: 4747

Ion	Ratio	Lower	Upper
49	100		
130	68.5	87.2	130.8#
128	53.9	68.0	102.0#
93	25.5	29.3	43.9#

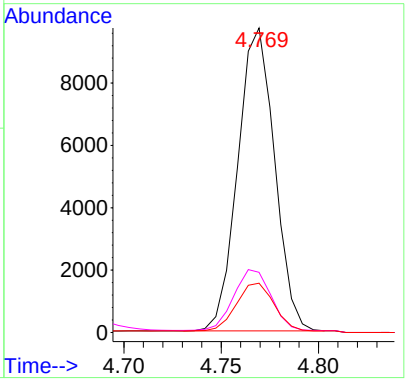


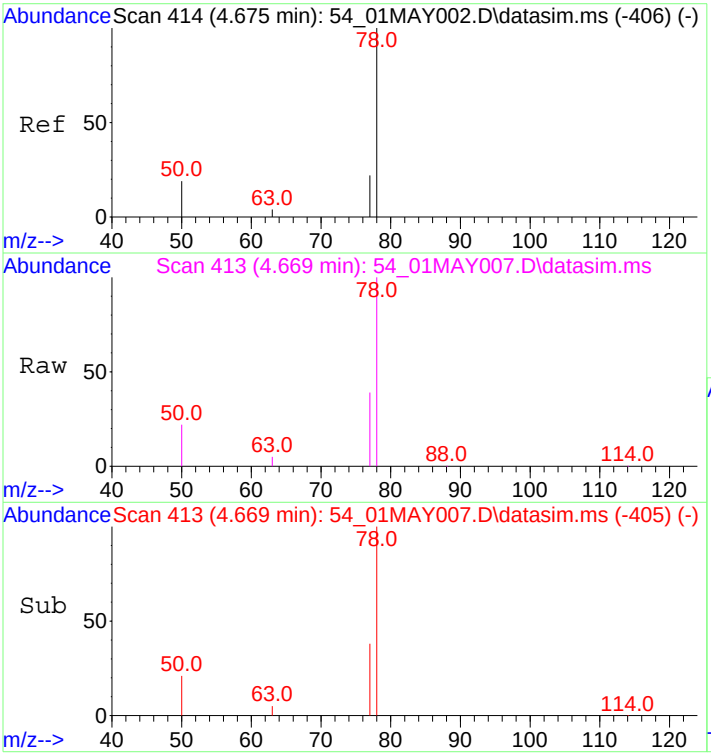


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_01MAY007.D
Acq: 1 May 2014 2:38 pm

Tgt Ion:114 Resp: 12774

Ion	Ratio	Lower	Upper
114	100		
63	20.4	12.0	18.0#
88	16.2	11.8	17.8

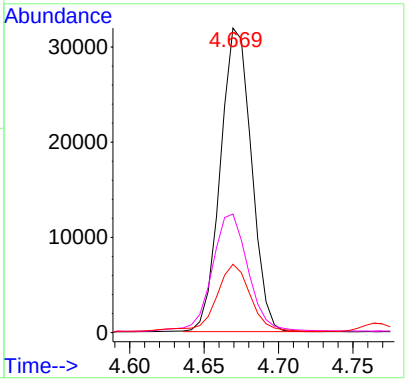


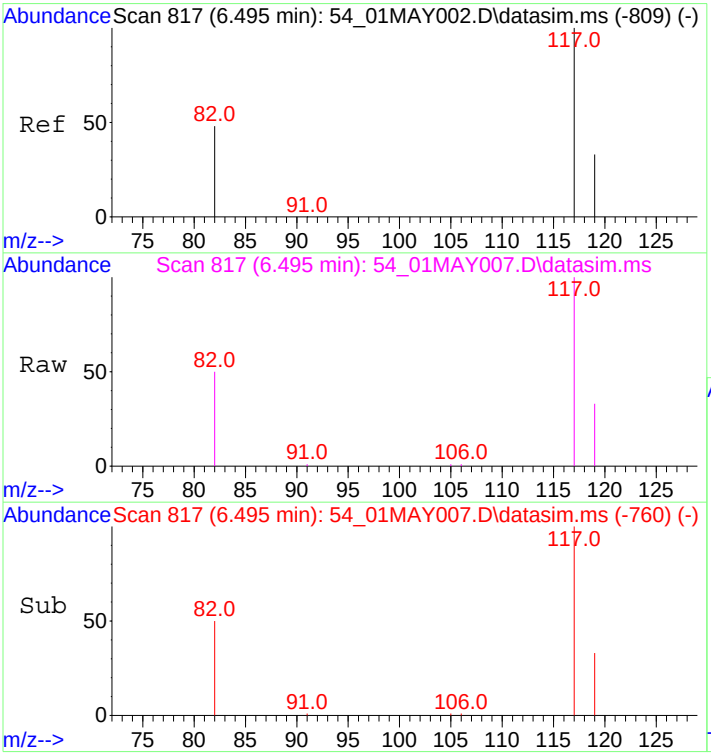


#10
Benzene
Concen: 79.23 ppbv
RT: 4.669 min Scan# 413
Delta R.T. -0.006 min
Lab File: 54 01MAY007.D
Acq: 1 May 2014 2:38 pm

Tgt Ion: 78 Resp: 46232

Ion	Ratio	Lower	Upper
78	100		
77	43.3	18.2	27.2#
50	23.5	8.6	13.0#

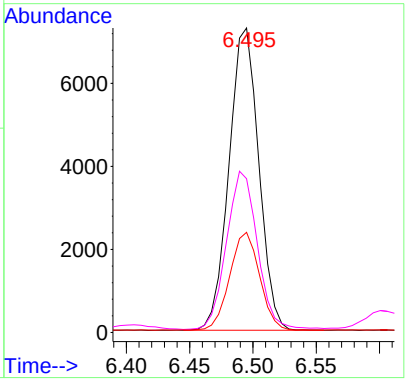


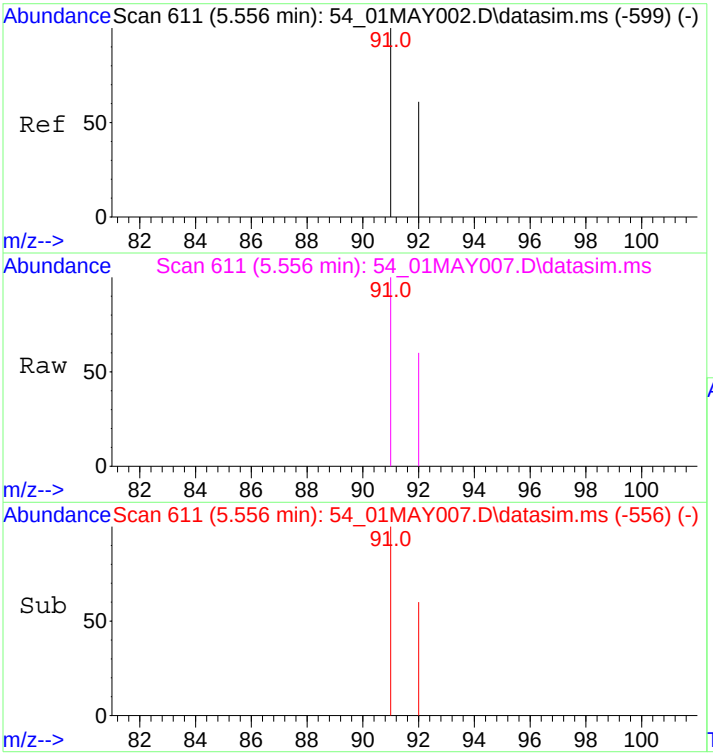


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54_01MAY007.D
Acq: 1 May 2014 2:38 pm

Tgt Ion:117 Resp: 11970

Ion	Ratio	Lower	Upper
117	100		
82	54.3	38.0	57.0
119	32.4	27.0	40.4

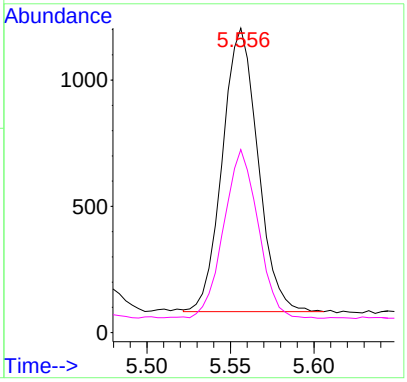


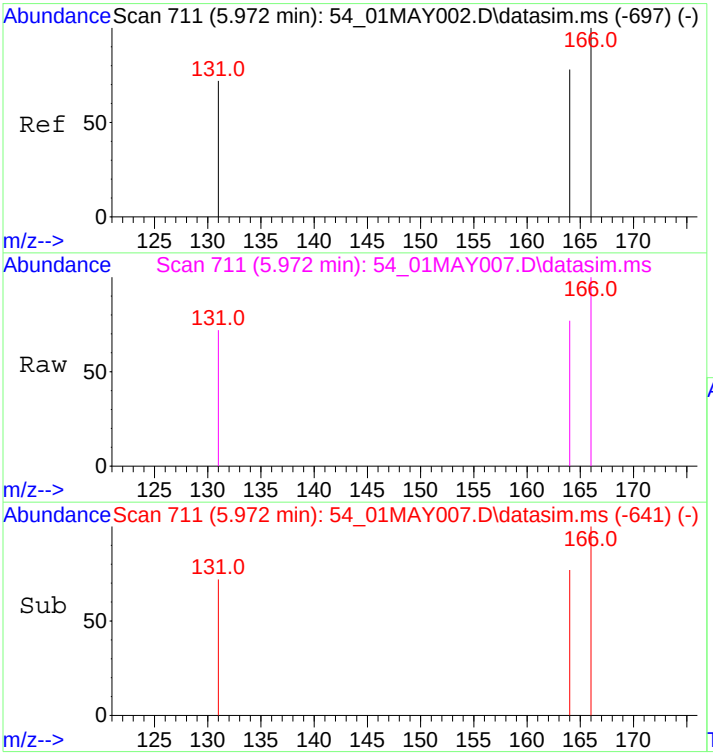


#13
Toluene
Concen: 2.31 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 01MAY007.D
Acq: 1 May 2014 2:38 pm

Tgt Ion: 91 Resp: 1661

Ion	Ratio	Lower	Upper
91	100		
92	57.6	47.8	71.8

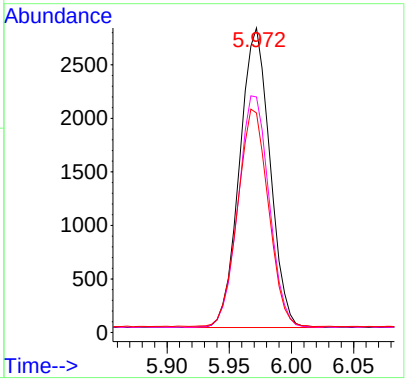


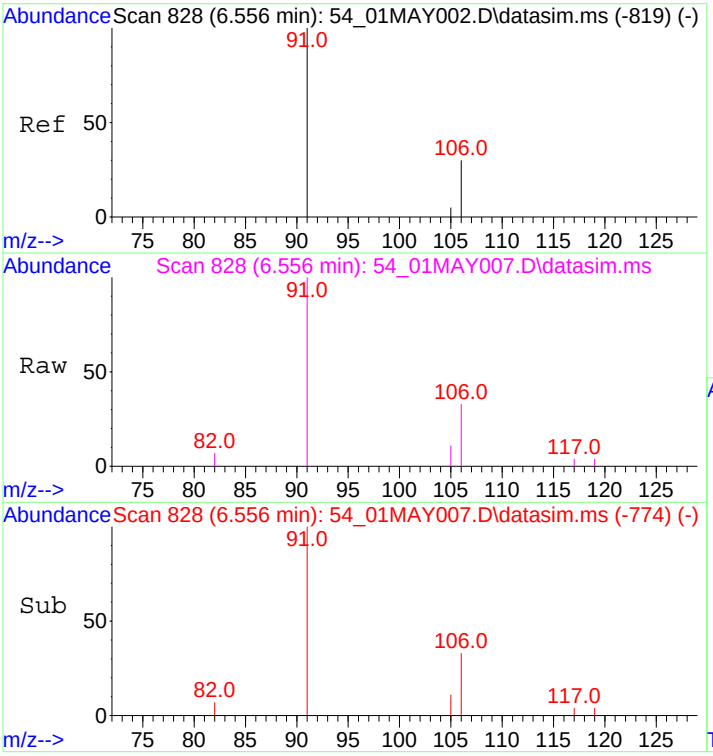


#14
Tetrachloroethene
Concen: 11.56 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_01MAY007.D
Acq: 1 May 2014 2:38 pm

Tgt Ion:166 Resp: 4739

Ion	Ratio	Lower	Upper
166	100		
164	78.8	62.6	94.0
131	73.6	58.5	87.7

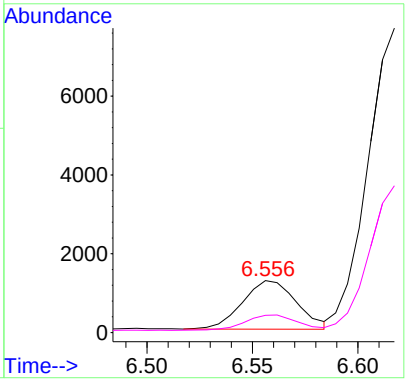


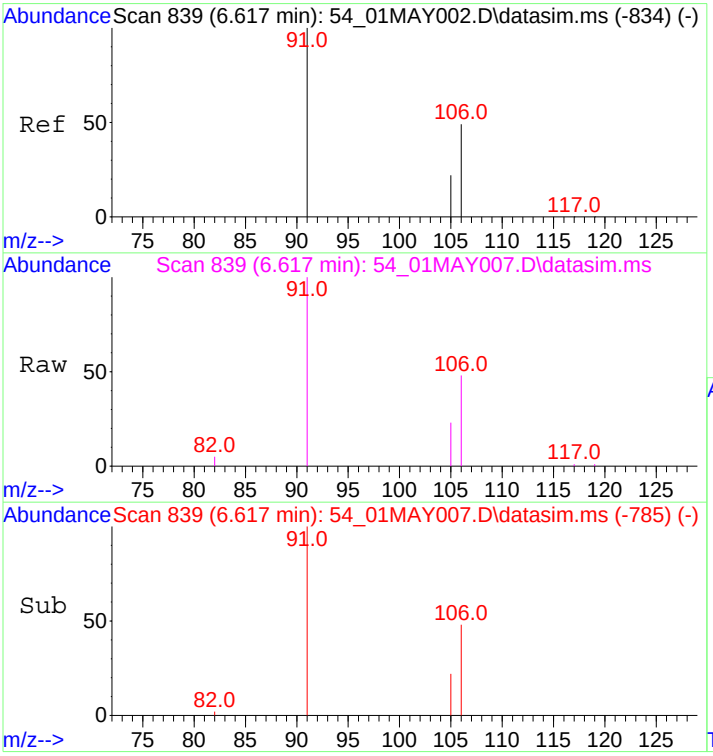


#15
Ethyl Benzene
Concen: 2.41 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54 01MAY007.D
Acq: 1 May 2014 2:38 pm

Tgt Ion: 91 Resp: 2195

Ion	Ratio	Lower	Upper
91	100		
106	31.3	26.9	40.3

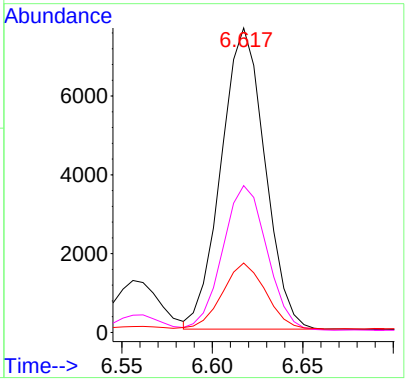




#16
m,p-Xylene
Concen: 18.42 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_01MAY007.D
Acq: 1 May 2014 2:38 pm

Tgt Ion: 91 Resp: 12883

Ion	Ratio	Lower	Upper
91	100		
106	48.5	43.1	64.7
105	21.7	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY008.D
Acq On : 1 May 2014 2:50 pm
Operator : yhl
Sample : 02122 \ E5-005 /51183
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 14:57:35 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

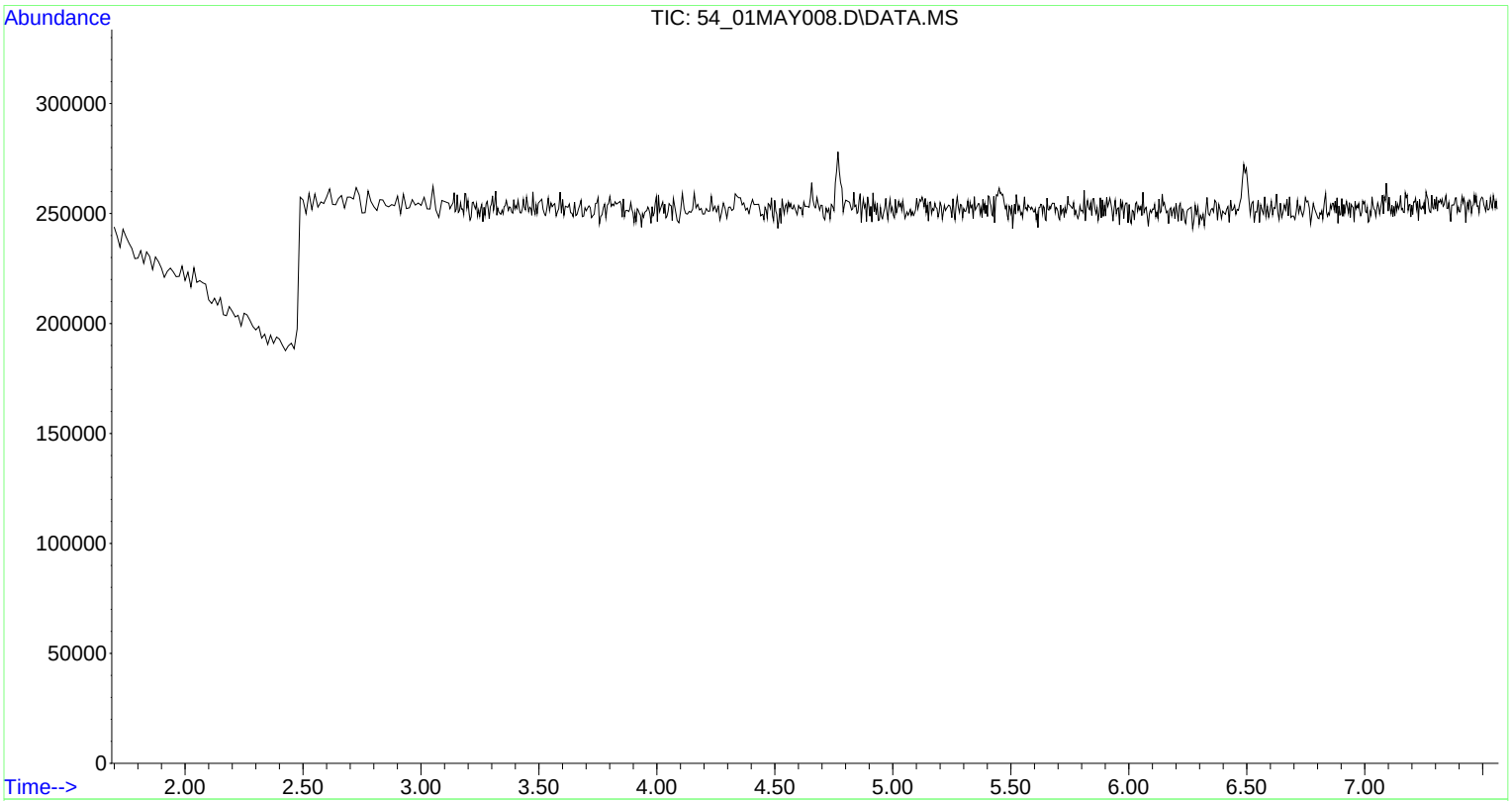
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	5329	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	14476	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	13308	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	1236	1.55	ppbv	100

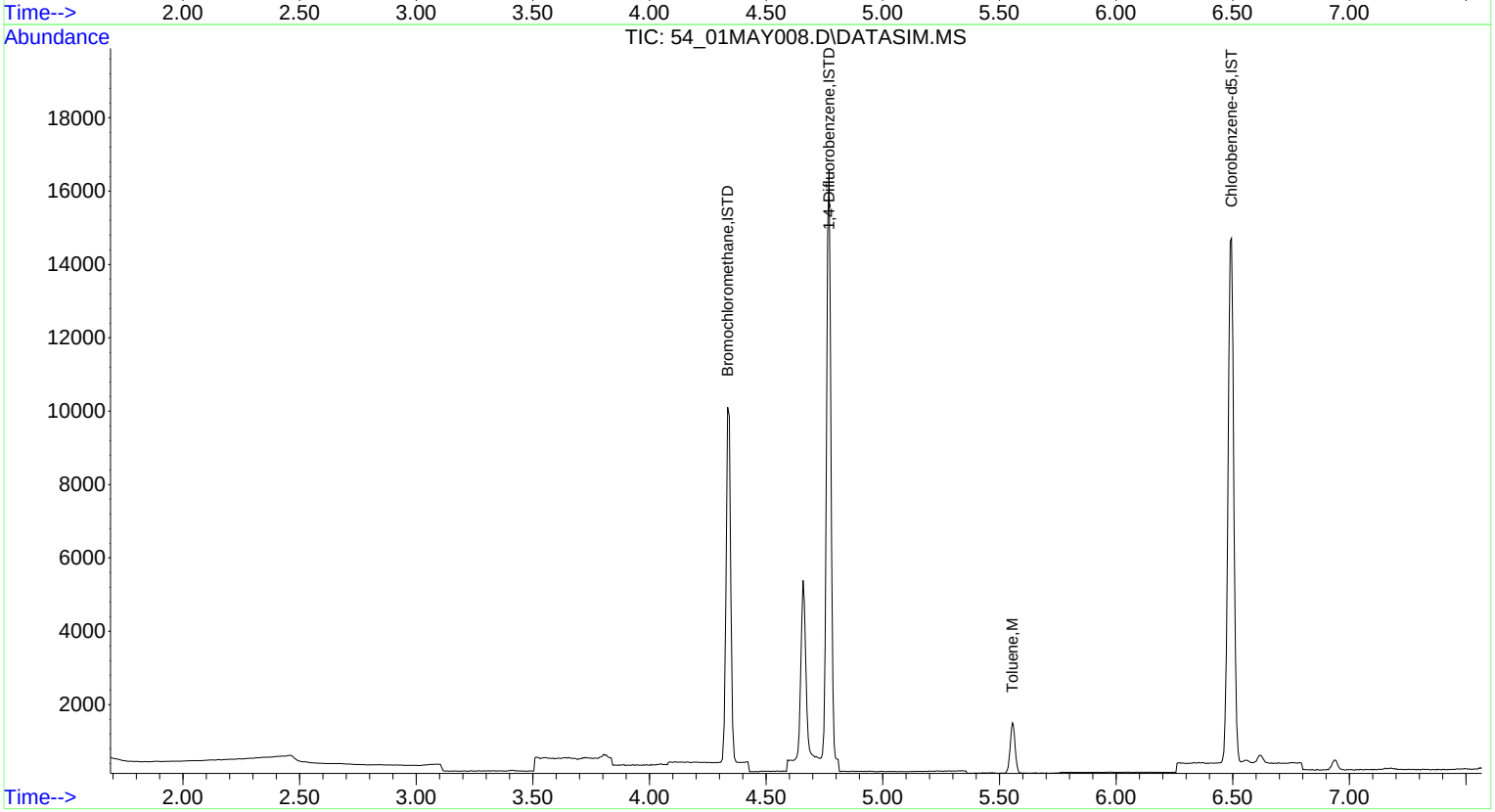
(#) = qualifier out of range (m) = manual integration (+) = signals summed

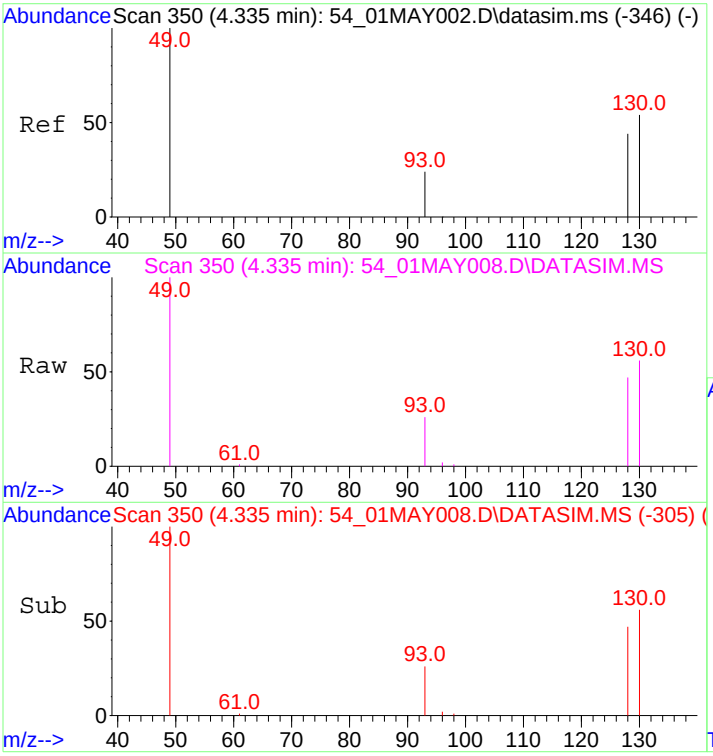
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY008.D
Acq On : 1 May 2014 2:50 pm
Operator : yhl
Sample : 02122 \ E5-005 /51183
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 14:57:35 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



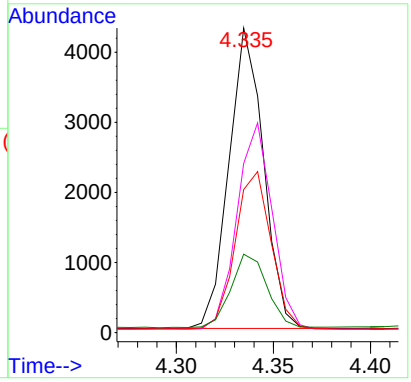


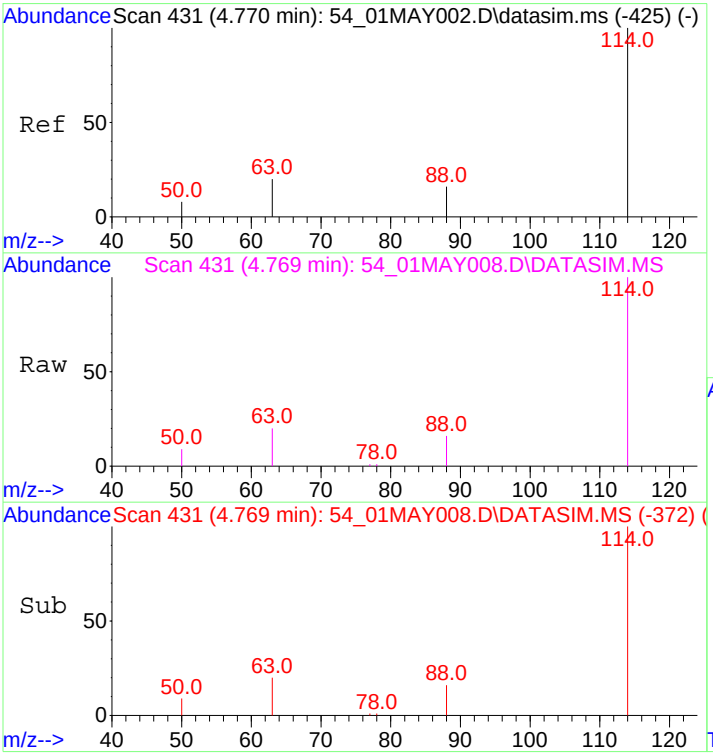


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY008.D
Acq: 1 May 2014 2:50 pm

Tgt Ion: 49 Resp: 5329

Ion	Ratio	Lower	Upper
49	100		
130	70.1	87.2	130.8#
128	54.5	68.0	102.0#
93	25.4	29.3	43.9#

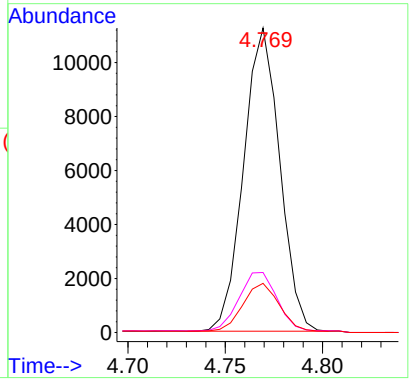


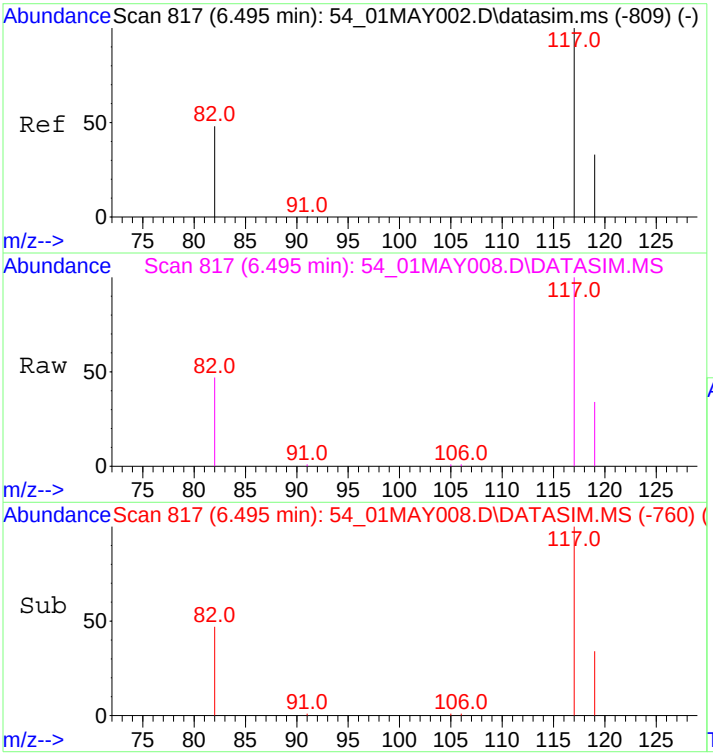


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_01MAY008.D
Acq: 1 May 2014 2:50 pm

Tgt Ion:114 Resp: 14476

Ion	Ratio	Lower	Upper
114	100		
63	20.2	12.0	18.0#
88	15.8	11.8	17.8

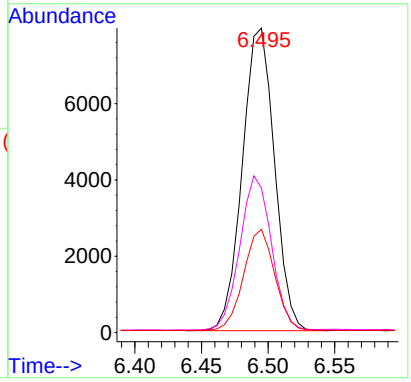


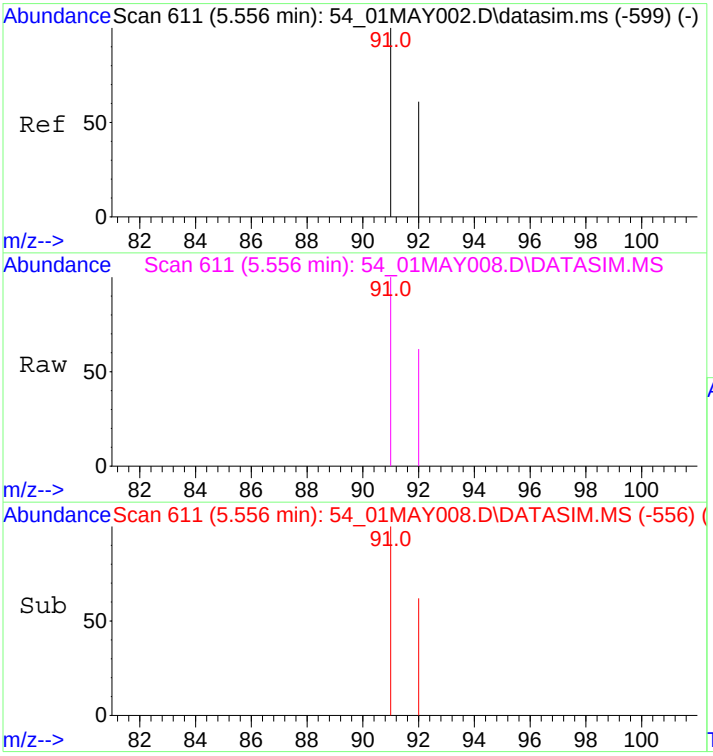


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 01MAY008.D
Acq: 1 May 2014 2:50 pm

Tgt Ion:117 Resp: 13308

Ion	Ratio	Lower	Upper
117	100		
82	49.7	38.0	57.0
119	32.4	27.0	40.4

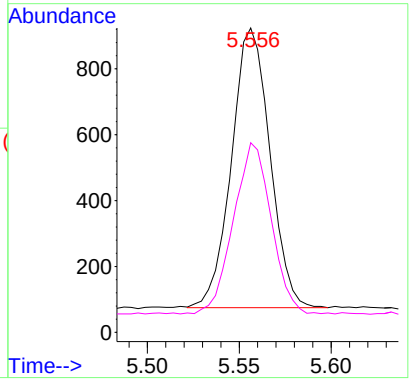




#13
Toluene
Concen: 1.55 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_01MAY008.D
Acq: 1 May 2014 2:50 pm

Tgt Ion: 91 Resp: 1236

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY009.D
Acq On : 1 May 2014 3:11 pm
Operator : yhl
Sample : 02123 \ F5-036
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:22:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

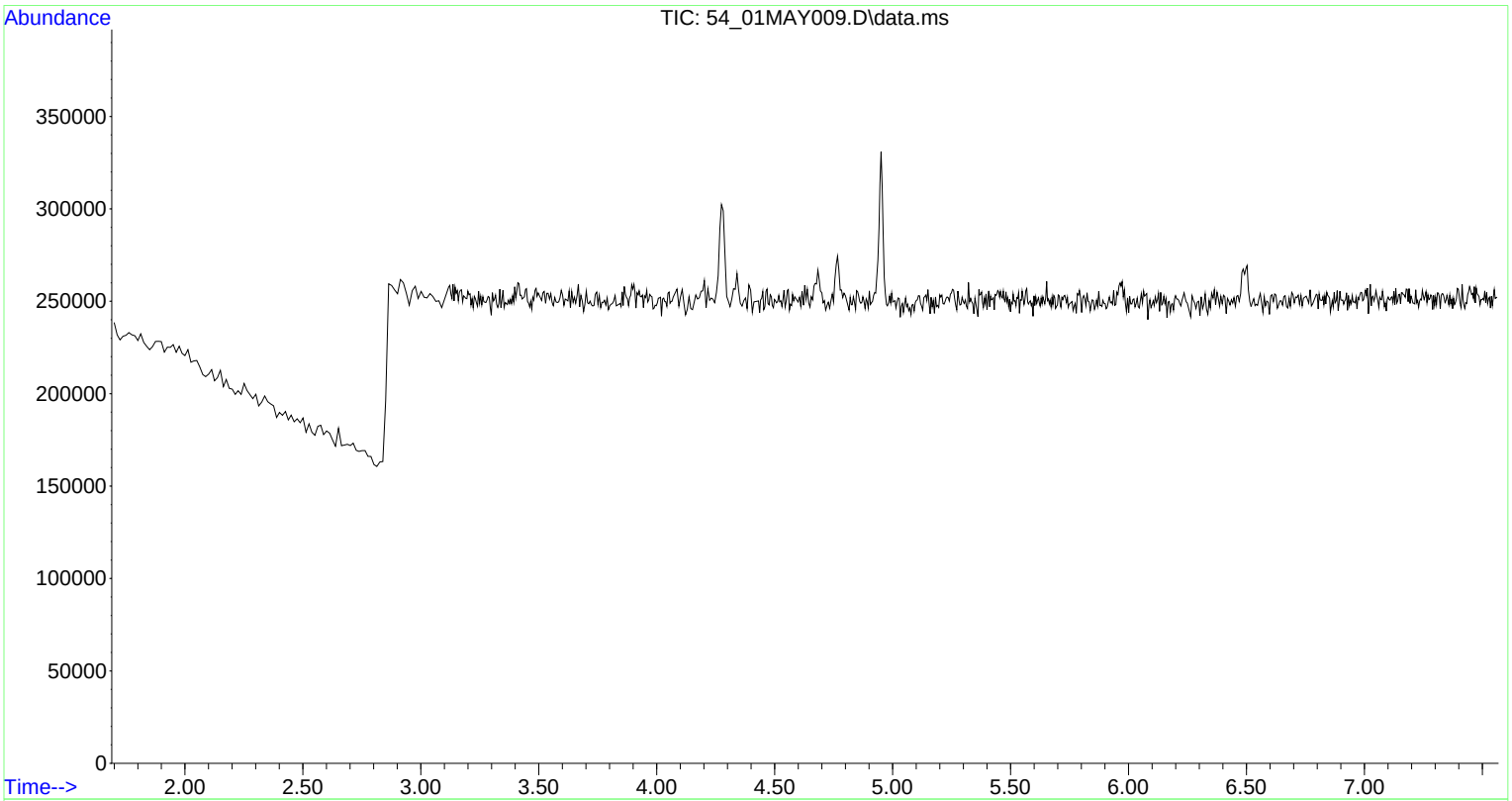
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4788	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.768	114	12900	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.494	117	12174	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.251	61	477	1.29	ppbv	# 66
5] trans-1,2-Dichloroethene	3.709	61	196m	0.60	ppbv	
6] 1,1-Dichloroethane	3.910	63	544	1.39	ppbv	# 78
7] cis-1,2-Dichloroethene	4.197	61	4211	13.80	ppbv	# 74
8] 1,1,1-Trichloroethane	4.483	97	422	0.85	ppbv	98
11] Trichloroethene	4.949	130	21509	67.04	ppbv	99
13] Toluene	5.555	91	2279	3.12	ppbv	99
14] Tetrachloroethene	5.971	166	4963	11.91	ppbv	99
16] m,p-Xylene	6.616	91	378	0.53	ppbv	93
17] o-Xylene	6.935	91	512	0.71	ppbv	95

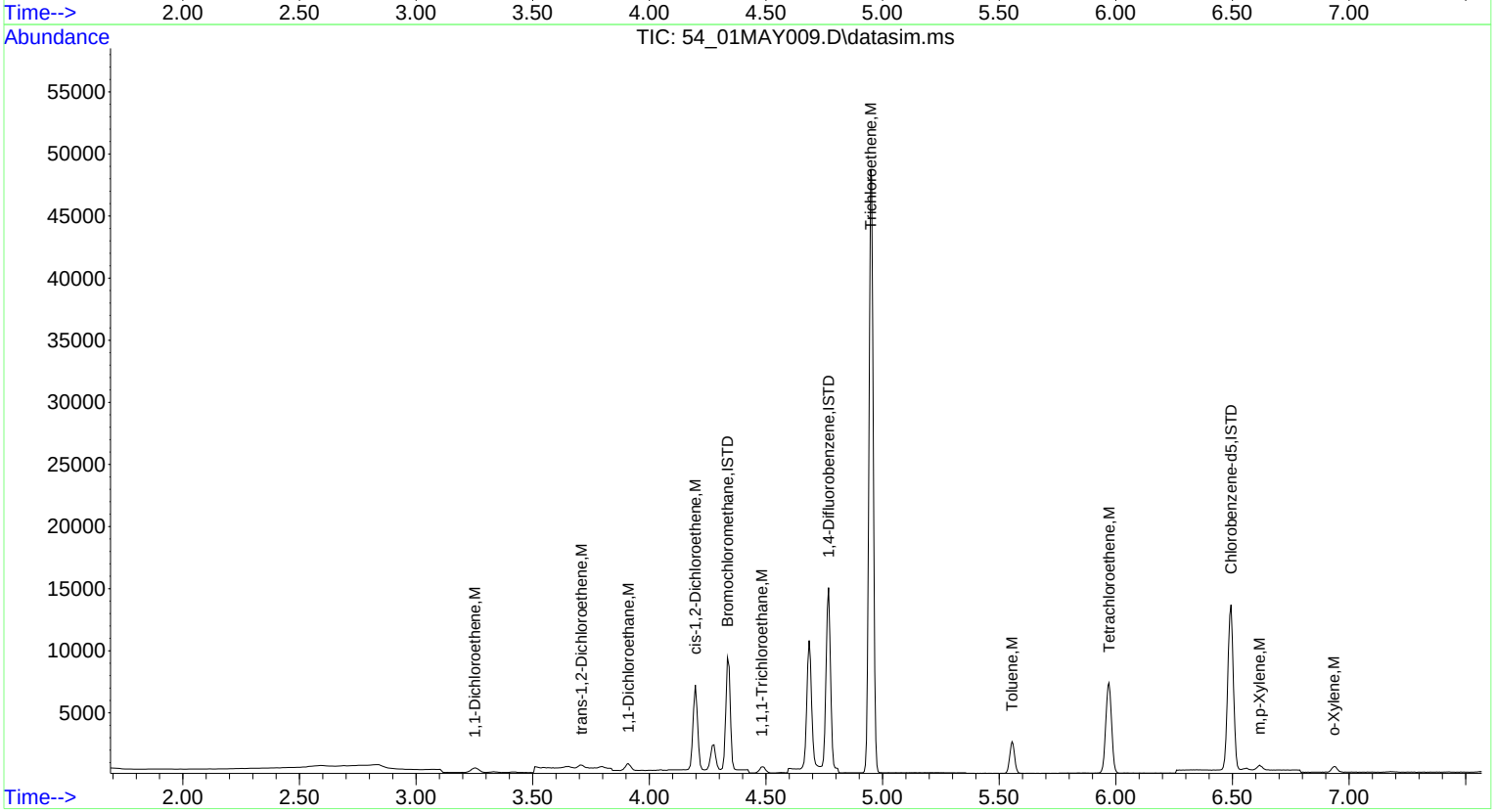
(#) = qualifier out of range (m) = manual integration (+) = signals summed

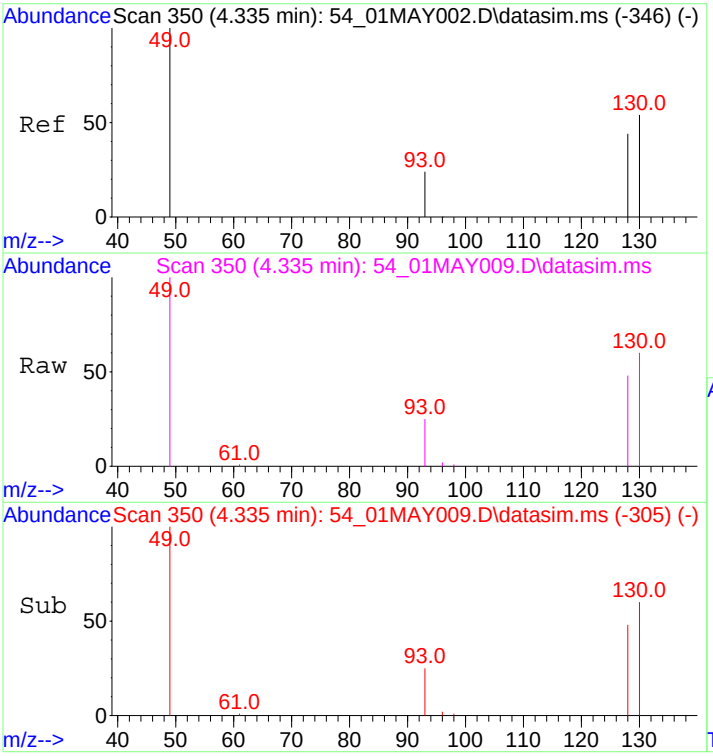
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY009.D
Acq On : 1 May 2014 3:11 pm
Operator : yhl
Sample : 02123 \ F5-036
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:22:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



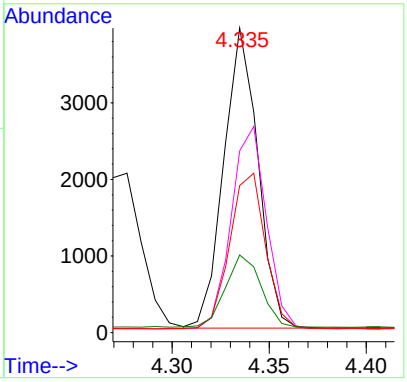


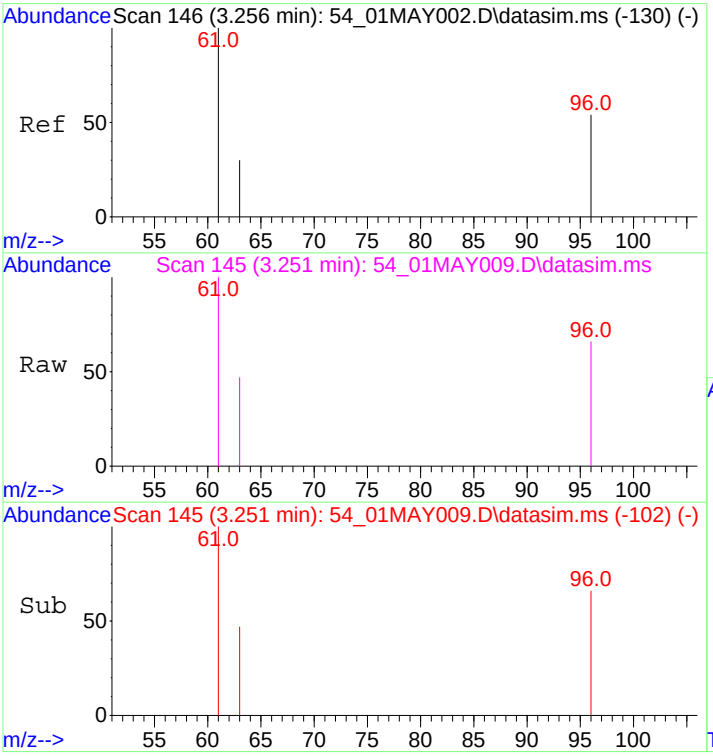


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 49 Resp: 4788

Ion	Ratio	Lower	Upper
49	100		
130	70.0	87.2	130.8#
128	54.1	68.0	102.0#
93	25.0	29.3	43.9#

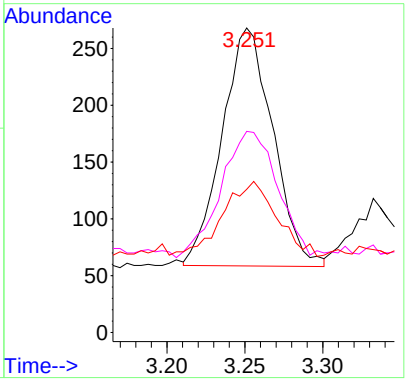


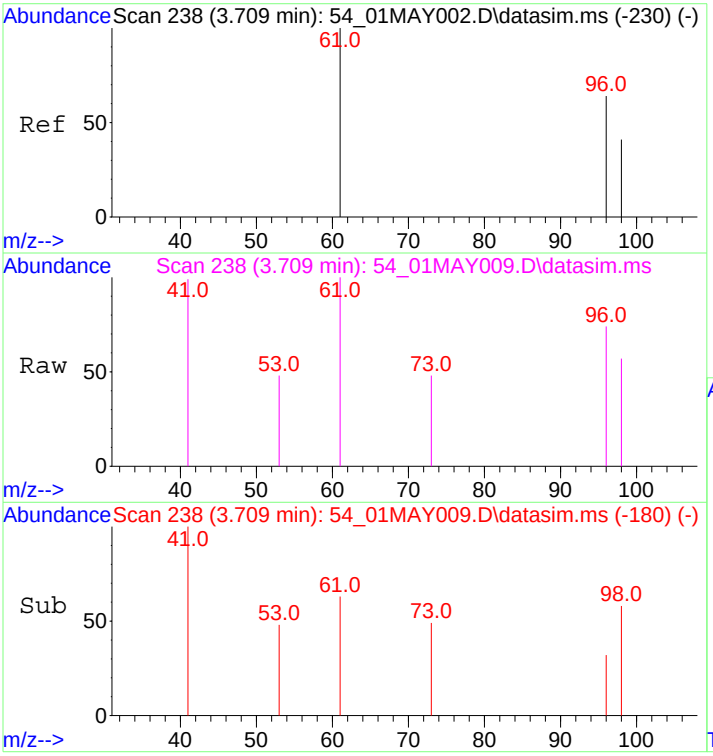


#3
1,1-Dichloroethene
Concen: 1.29 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.005 min
Lab File: 54_01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 61 Resp: 477

Ion	Ratio	Lower	Upper
61	100		
96	103.6	63.4	95.2#
63	4.2	26.2	39.2#

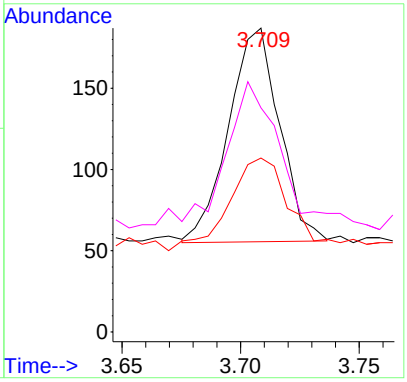


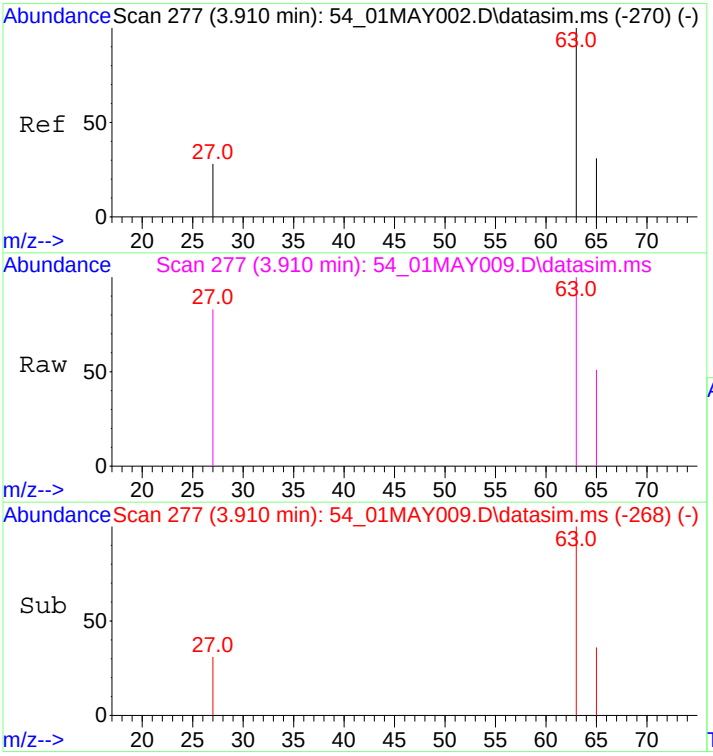


#5
trans-1,2-Dichloroethene
Concen: 0.60 ppbv m
RT: 3.709 min Scan# 238
Delta R.T. -0.000 min
Lab File: 54 01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 61 Resp: 196

Ion	Ratio	Lower	Upper
61	100		
96	160.2	71.4	107.0#
98	86.7	45.8	68.8#

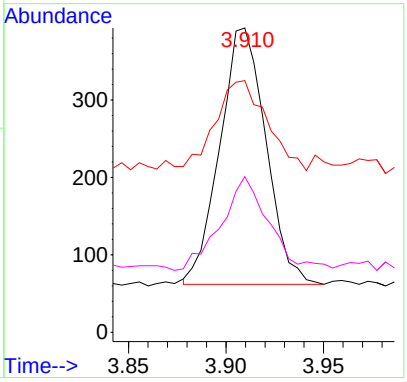




#6
1,1-Dichloroethane
Concen: 1.39 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 63 Resp: 544

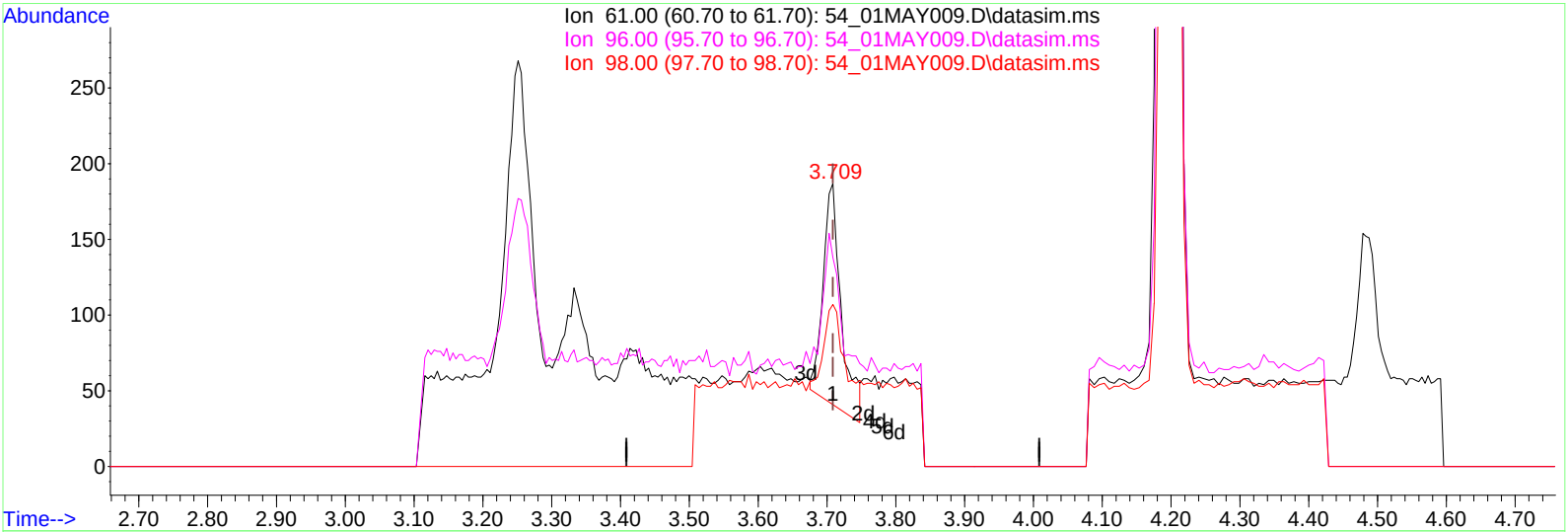
Ion	Ratio	Lower	Upper
63	100		
65	34.9	26.1	39.1
27	39.0	10.2	15.2#

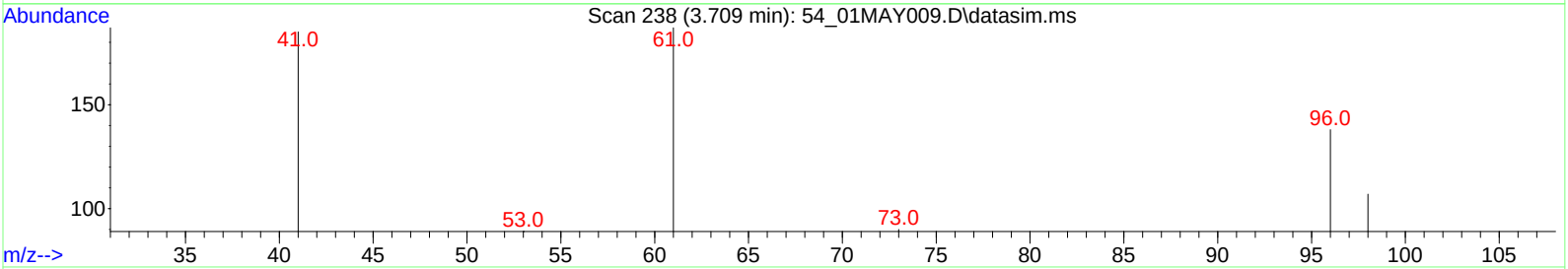


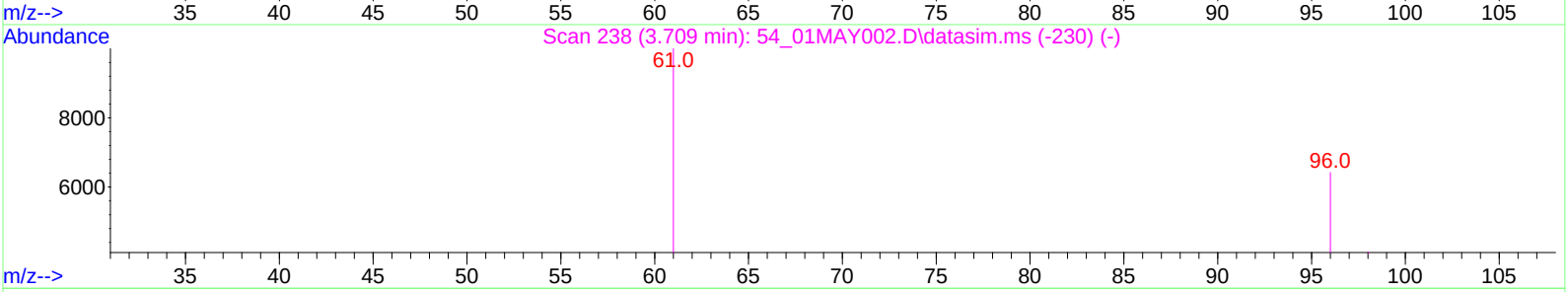
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY009.D
Acq On : 1 May 2014 3:11 pm
Operator : yhl
Sample : 02123 \ F5-036
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:19:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







TIC: 54_01MAY009.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.709min (-0.000) 0.81 ppbv

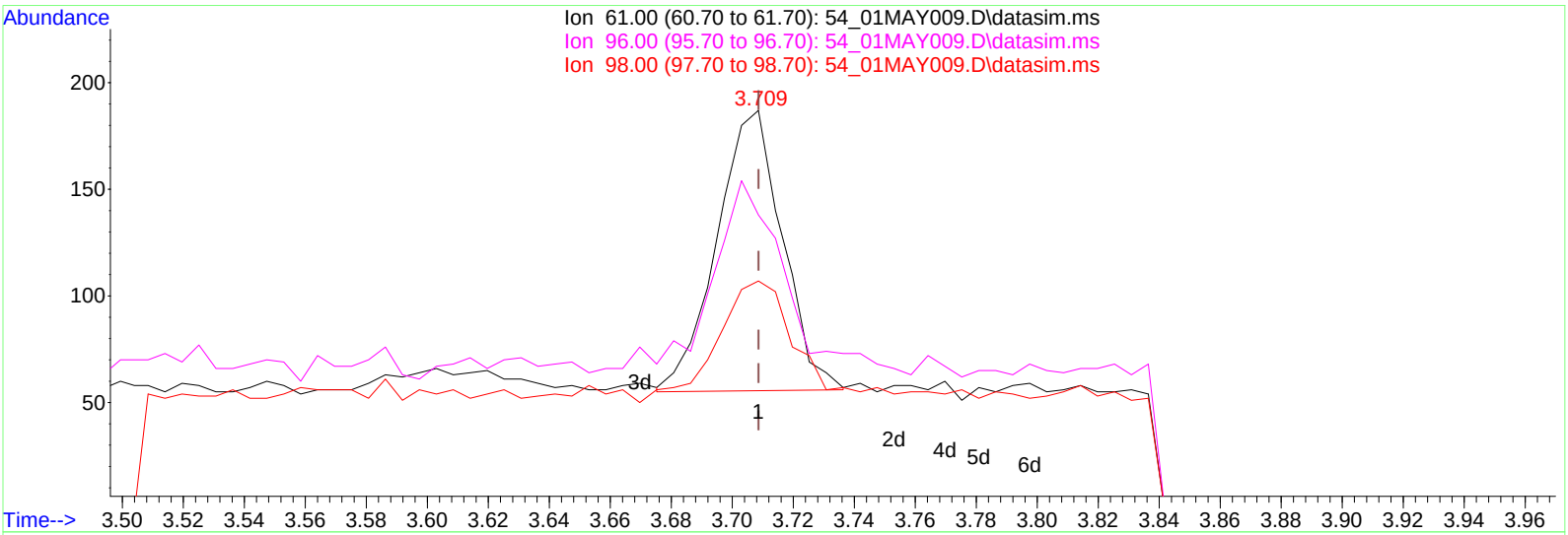
response 264

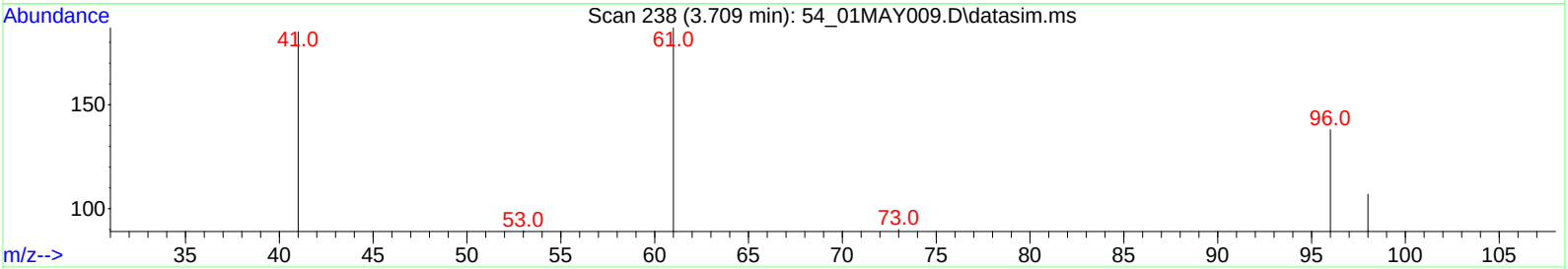
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	118.94#
98.00	57.30	64.39
0.00	0.00	0.00

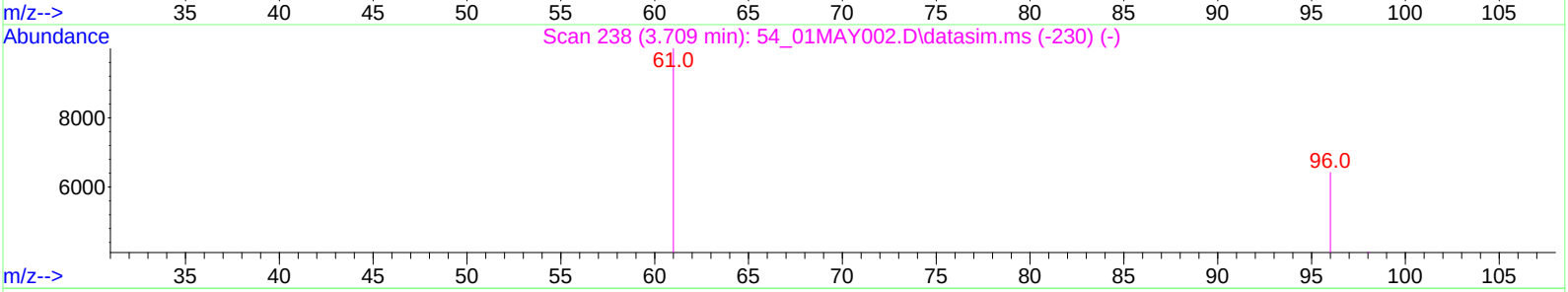
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY009.D
Acq On : 1 May 2014 3:11 pm
Operator : yhl
Sample : 02123 \ F5-036
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:19:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







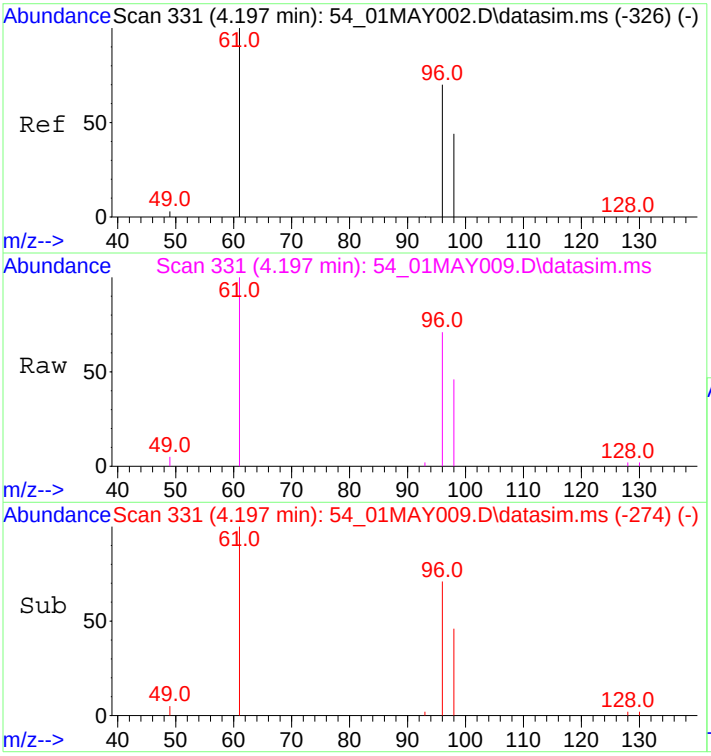
TIC: 54_01MAY009.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.709min (-0.000) 0.60 ppbv m

response 196

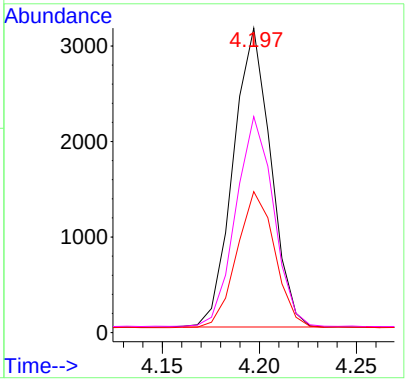
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	160.20#
98.00	57.30	86.73#
0.00	0.00	0.00

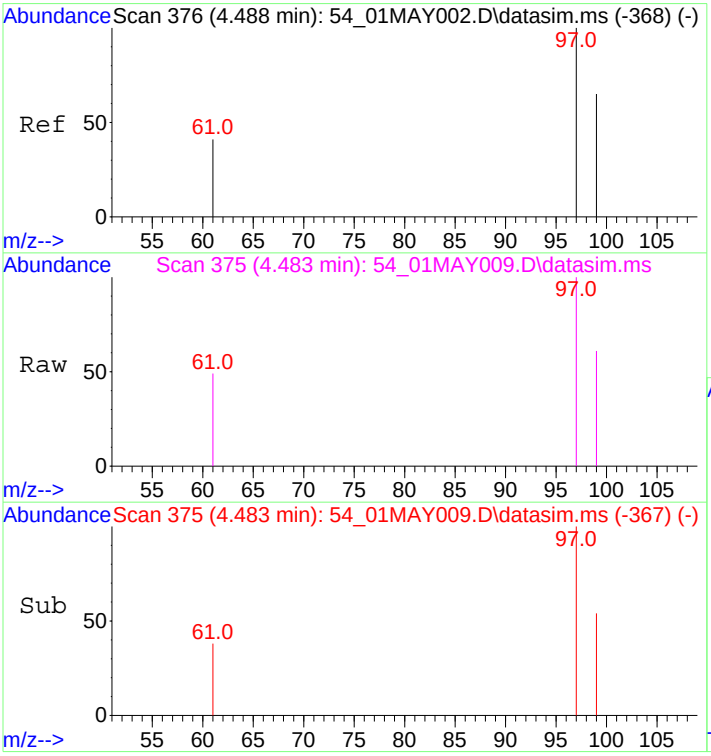


#7
cis-1,2-Dichloroethene
Concen: 13.80 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 61 Resp: 4211

Ion	Ratio	Lower	Upper
61	100		
96	70.4	78.5	117.7#
98	45.6	50.6	76.0#

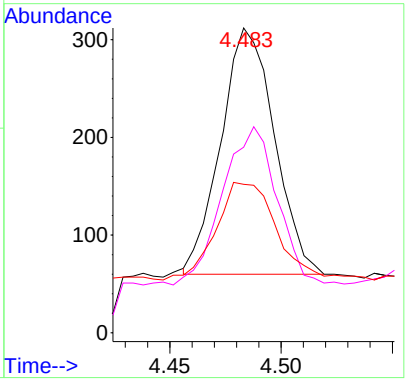


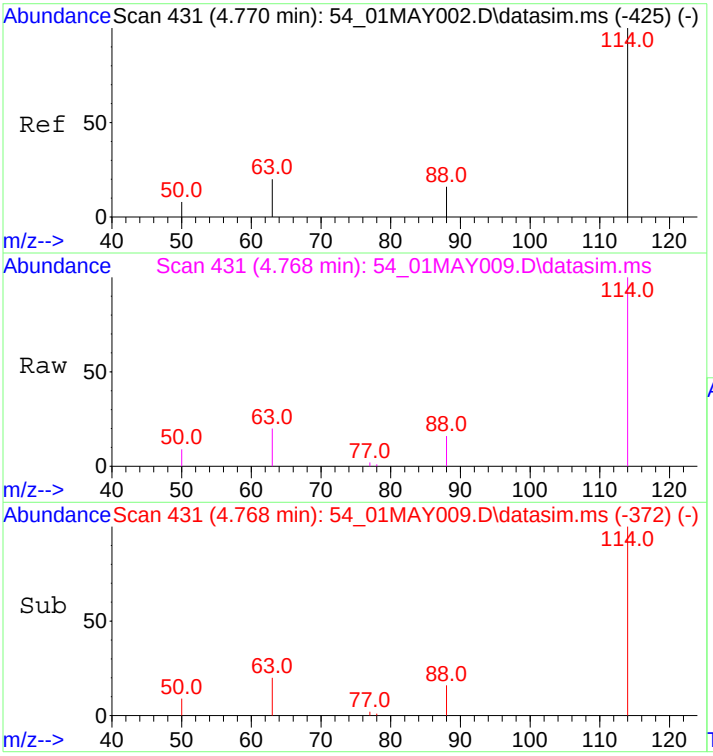


#8
1,1,1-Trichloroethane
Concen: 0.85 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 97 Resp: 422

Ion	Ratio	Lower	Upper
97	100		
99	64.2	52.1	78.1
61	40.0	30.2	45.4

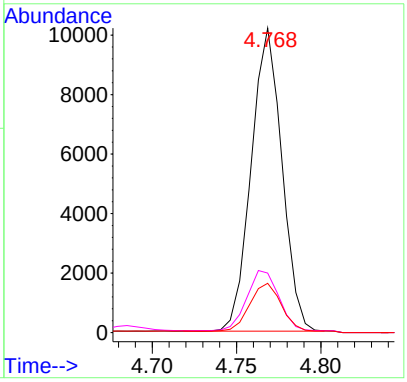


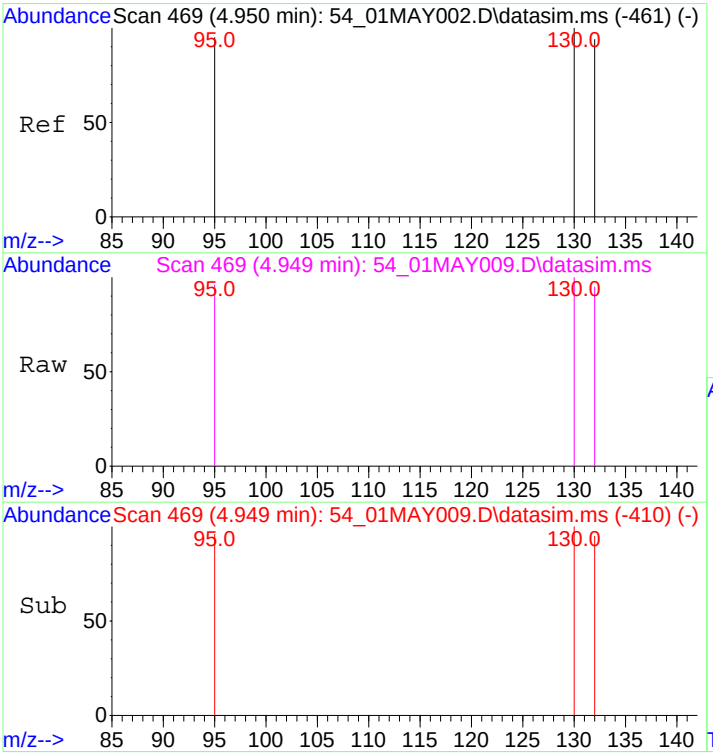


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.768 min Scan# 431
Delta R.T. -0.001 min
Lab File: 54 01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion:114 Resp: 12900

Ion	Ratio	Lower	Upper
114	100		
63	20.5	12.0	18.0#
88	16.0	11.8	17.8

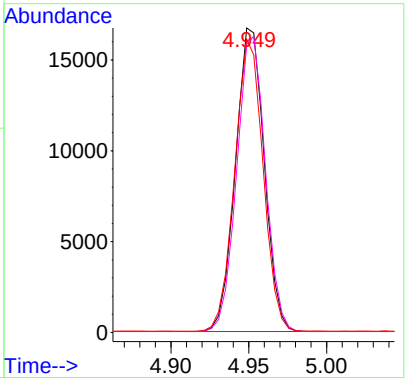


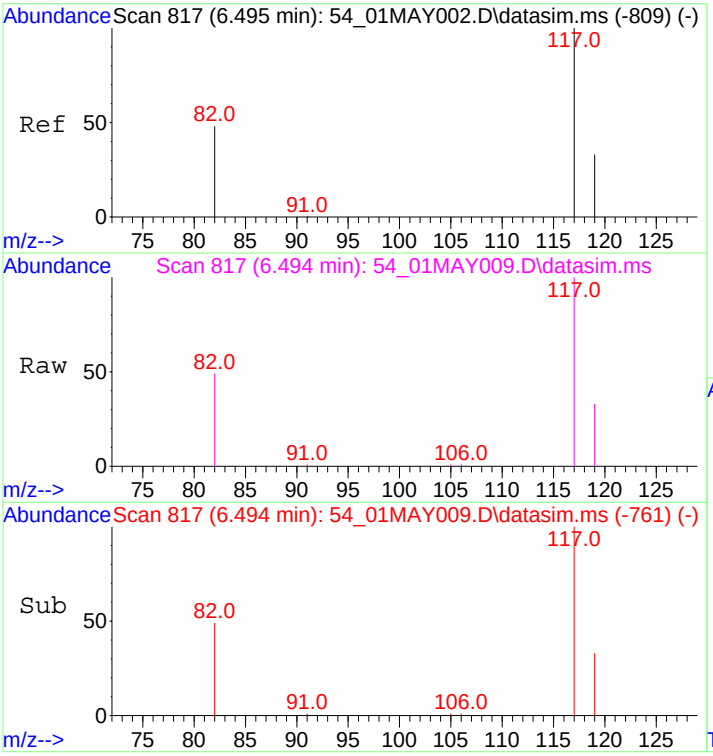


#11
Trichloroethene
Concen: 67.04 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.001 min
Lab File: 54_01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion:130 Resp: 21509

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	94.7	76.5	114.7

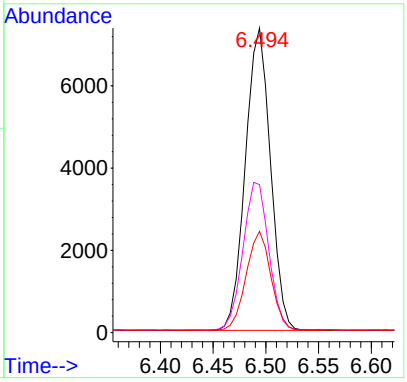


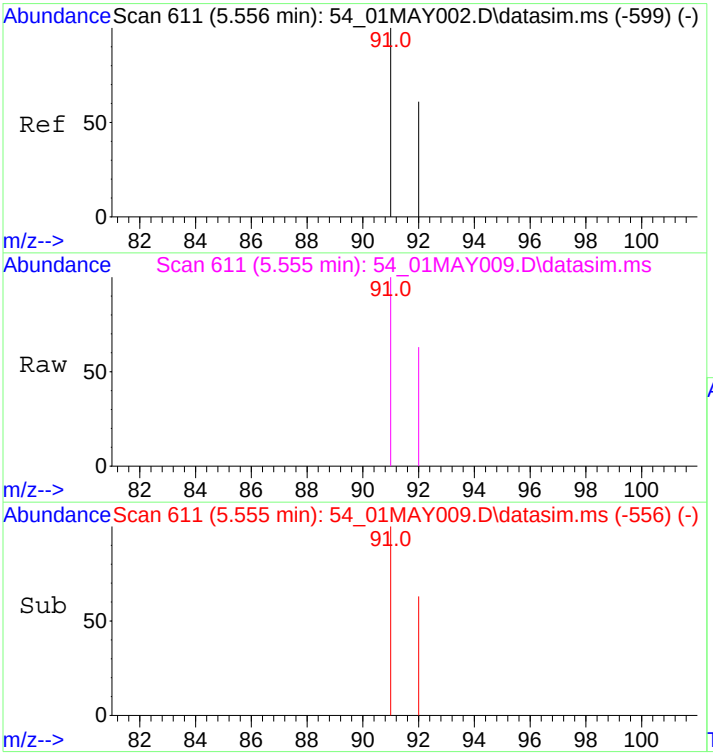


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.494 min Scan# 817
Delta R.T. -0.001 min
Lab File: 54 01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion:117 Resp: 12174

Ion	Ratio	Lower	Upper
117	100		
82	50.1	38.0	57.0
119	32.2	27.0	40.4

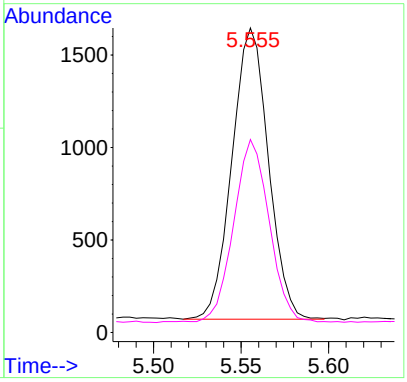


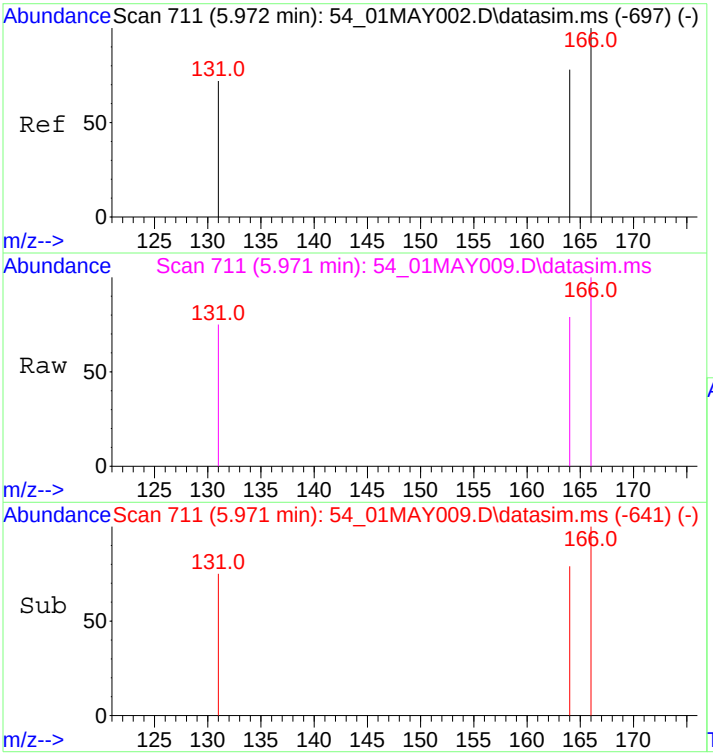


#13
Toluene
Concen: 3.12 ppbv
RT: 5.555 min Scan# 611
Delta R.T. -0.001 min
Lab File: 54_01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 91 Resp: 2279

Ion	Ratio	Lower	Upper
91	100		
92	60.6	47.8	71.8

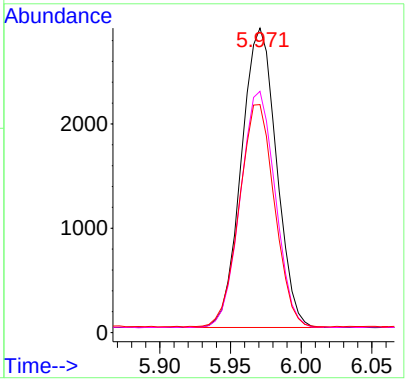


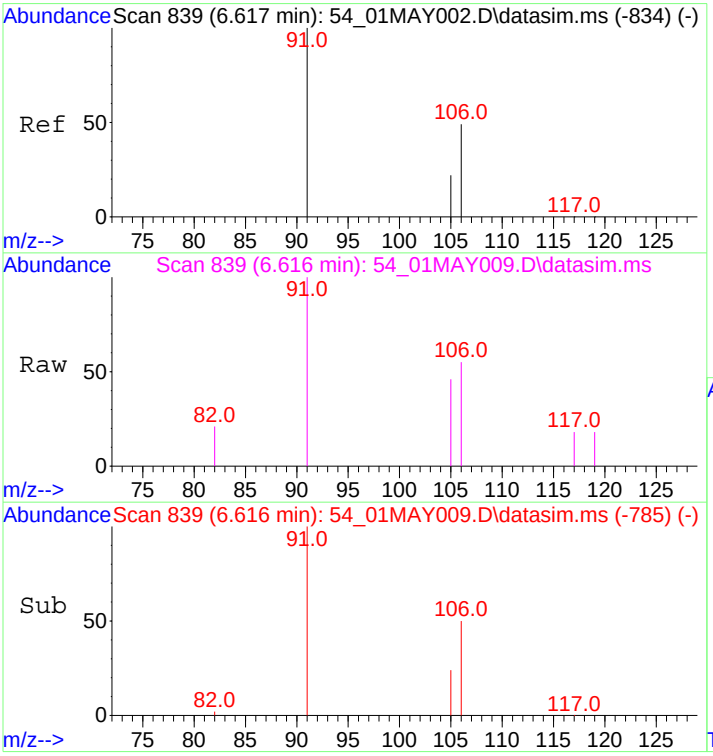


#14
Tetrachloroethene
Concen: 11.91 ppbv
RT: 5.971 min Scan# 711
Delta R.T. -0.001 min
Lab File: 54 01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion:166 Resp: 4963

Ion	Ratio	Lower	Upper
166	100		
164	78.5	62.6	94.0
131	74.4	58.5	87.7

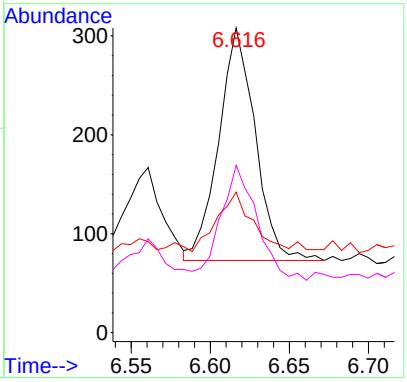


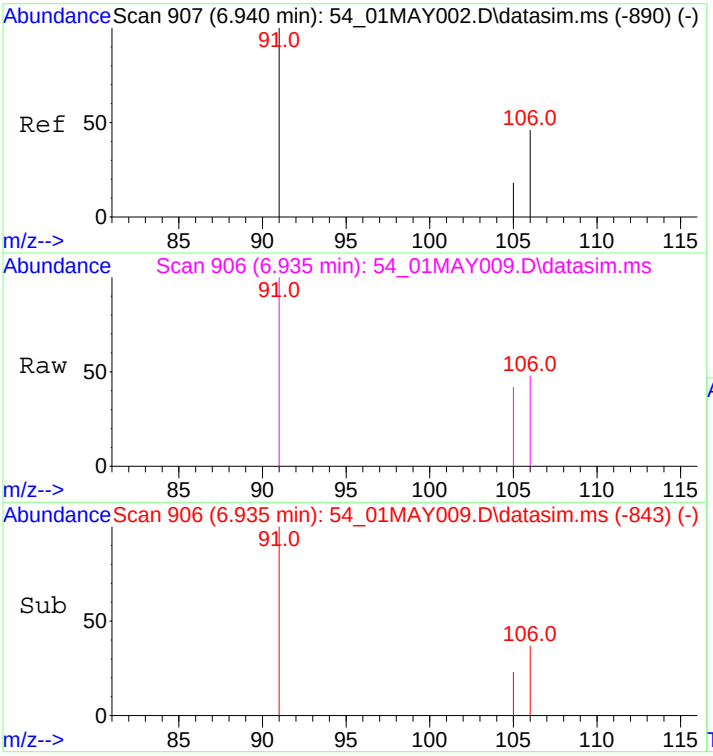


#16
m,p-Xylene
Concen: 0.53 ppbv
RT: 6.616 min Scan# 839
Delta R.T. -0.001 min
Lab File: 54_01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 91 Resp: 378

Ion	Ratio	Lower	Upper
91	100		
106	47.4	43.1	64.7
105	24.6	18.3	27.5

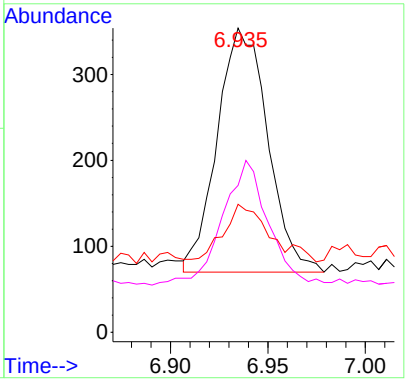




#17
o-Xylene
Concen: 0.71 ppbv
RT: 6.935 min Scan# 906
Delta R.T. -0.005 min
Lab File: 54 01MAY009.D
Acq: 1 May 2014 3:11 pm

Tgt Ion: 91 Resp: 512

Ion	Ratio	Lower	Upper
91	100		
106	45.7	40.1	60.1
105	18.9	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY010.D
Acq On : 1 May 2014 3:22 pm
Operator : yhl
Sample : 02124 \ F5-038
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:47:15 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

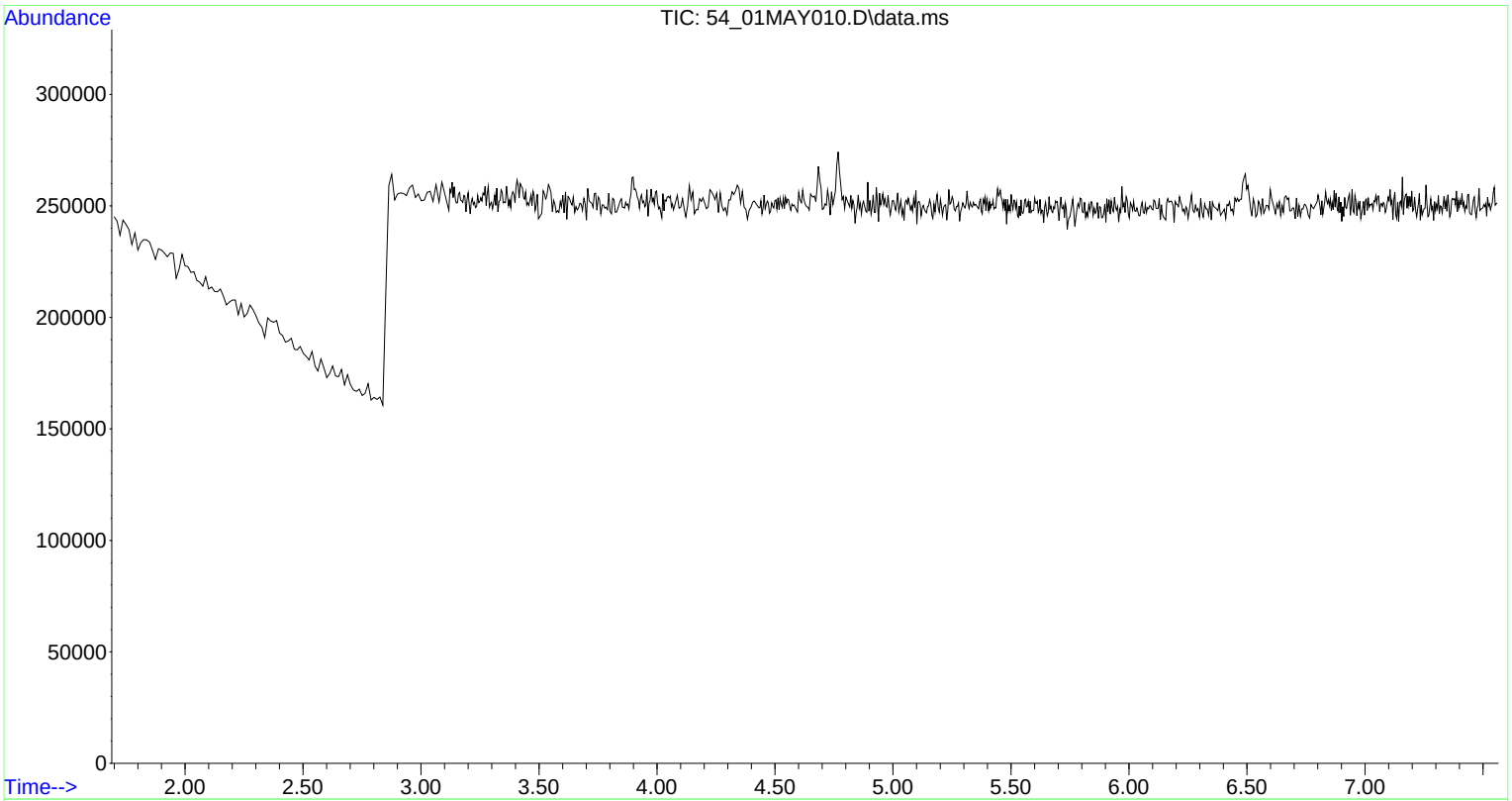
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4391	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	12023	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	11278	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
11] Trichloroethene	4.954	130	512	1.71 ppbv	97
13] Toluene	5.556	91	1553	2.30 ppbv	99
14] Tetrachloroethene	5.972	166	794	2.06 ppbv	99

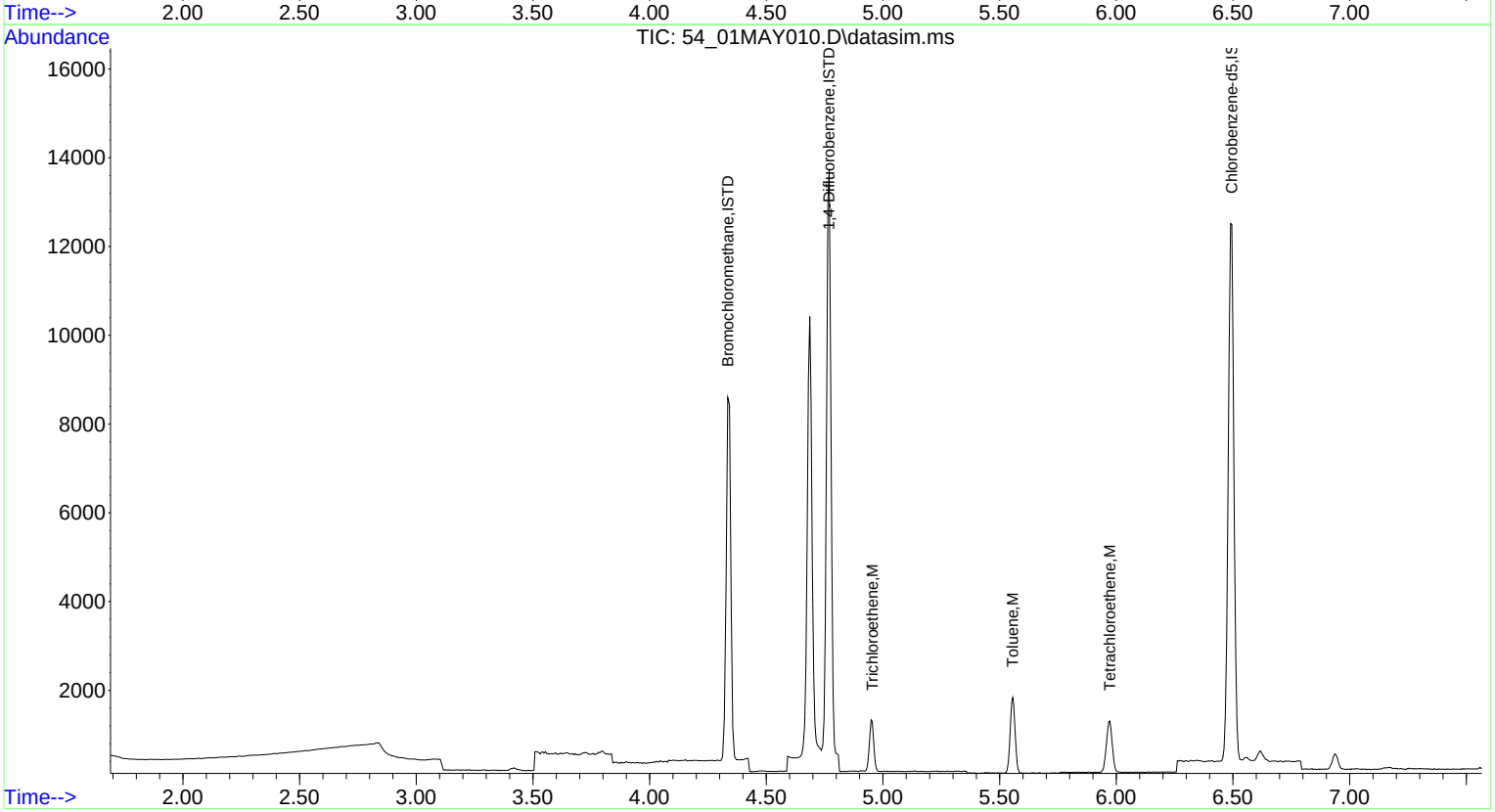
(#) = qualifier out of range (m) = manual integration (+) = signals summed

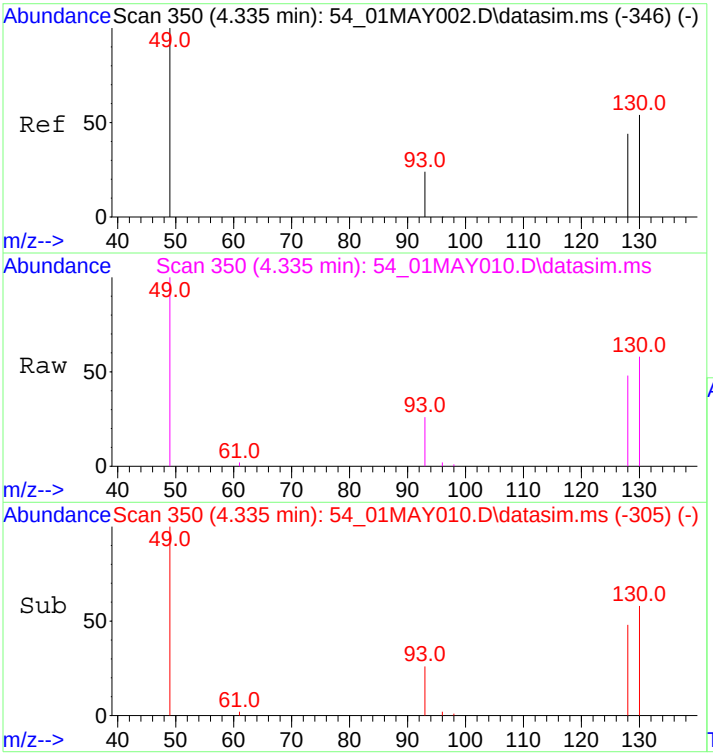
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY010.D
Acq On : 1 May 2014 3:22 pm
Operator : yhl
Sample : 02124 \ F5-038
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:47:15 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



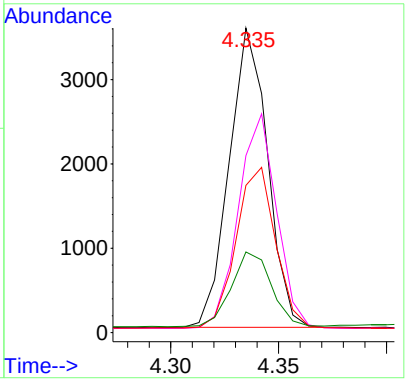


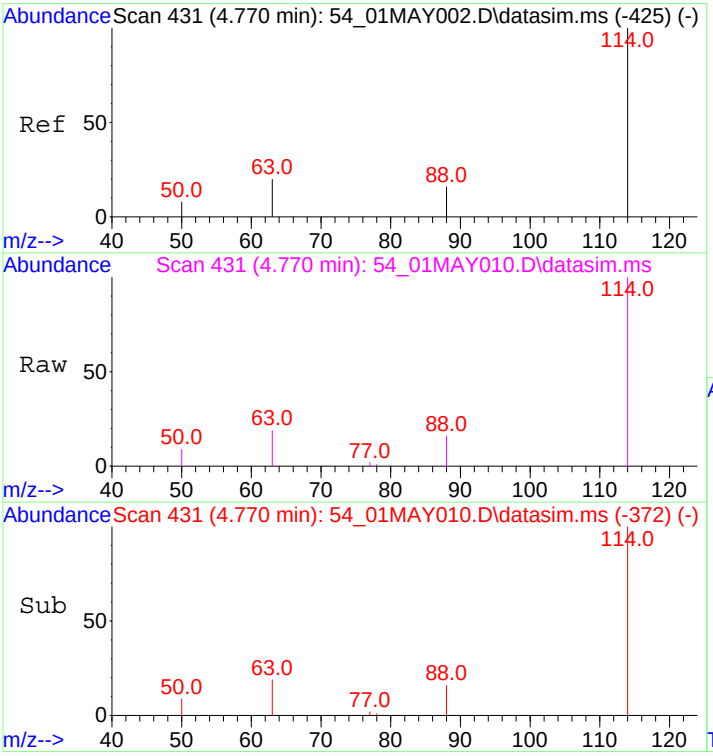


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 01MAY010.D
Acq: 1 May 2014 3:22 pm

Tgt Ion: 49 Resp: 4391

Ion	Ratio	Lower	Upper
49	100		
130	71.6	87.2	130.8#
128	55.2	68.0	102.0#
93	25.7	29.3	43.9#

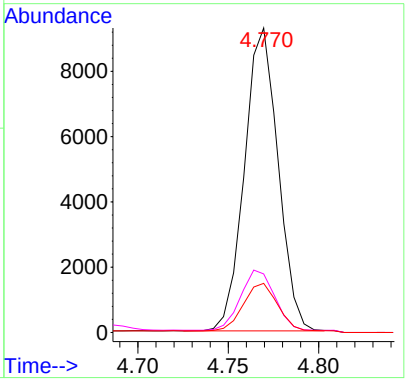


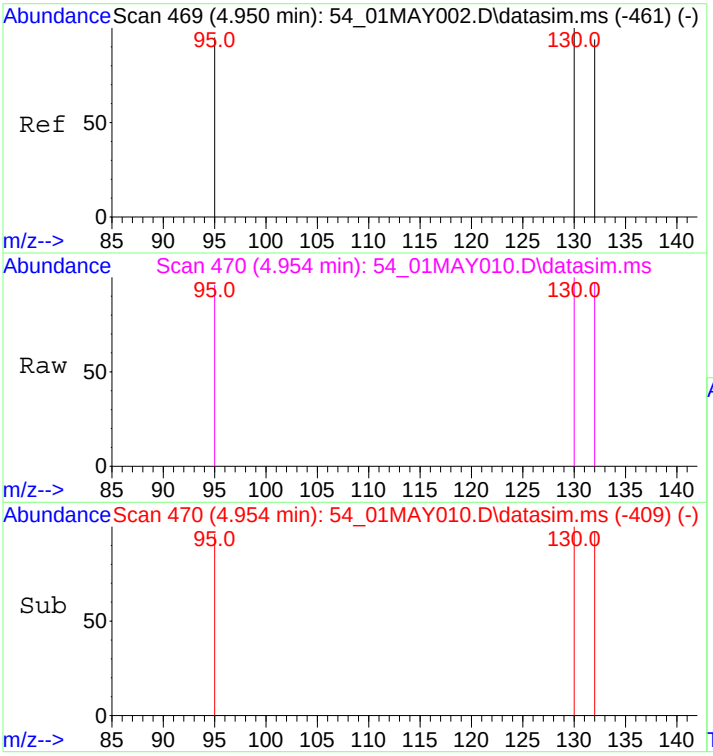


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_01MAY010.D
Acq: 1 May 2014 3:22 pm

Tgt Ion:114 Resp: 12023

Ion	Ratio	Lower	Upper
114	100		
63	20.1	12.0	18.0#
88	15.9	11.8	17.8

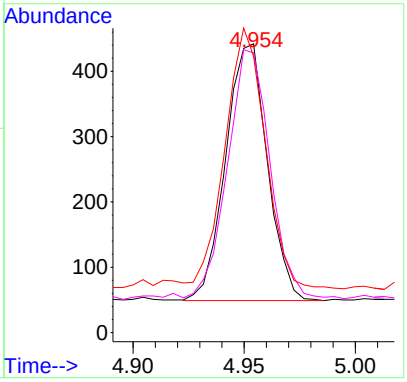


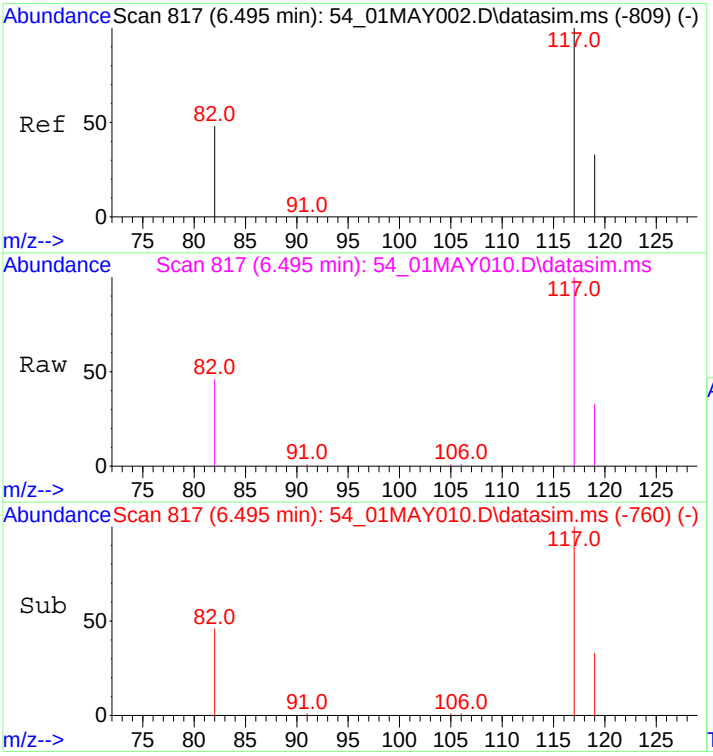


#11
Trichloroethene
Concen: 1.71 ppbv
RT: 4.954 min Scan# 470
Delta R.T. 0.005 min
Lab File: 54 01MAY010.D
Acq: 1 May 2014 3:22 pm

Tgt Ion:130 Resp: 512

Ion	Ratio	Lower	Upper
130	100		
132	98.2	76.9	115.3
95	98.8	76.5	114.7

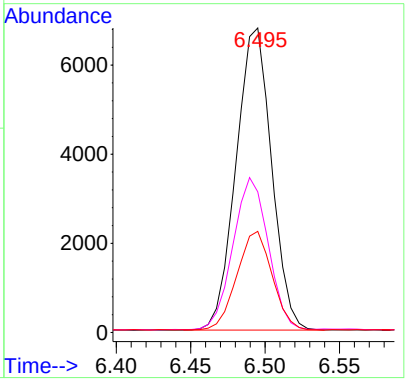


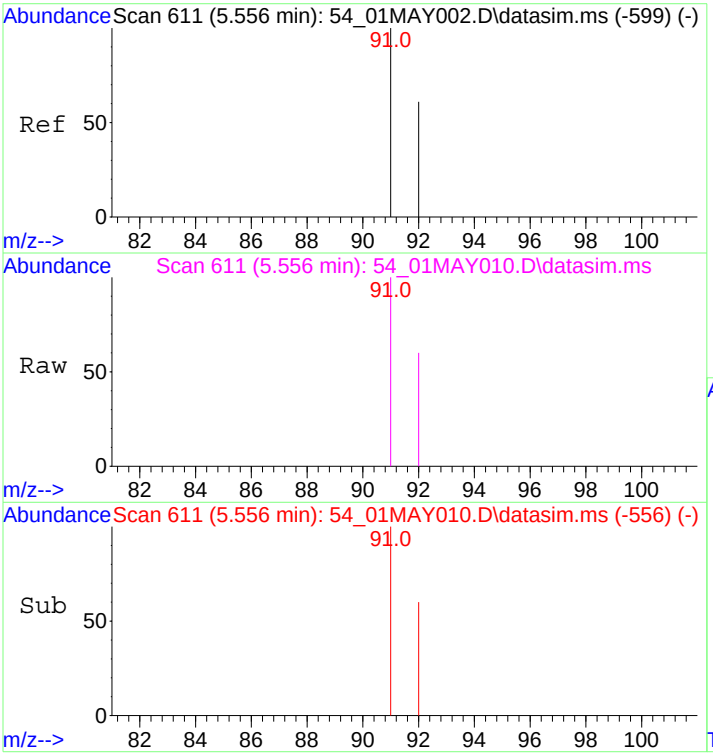


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54_01MAY010.D
Acq: 1 May 2014 3:22 pm

Tgt Ion:117 Resp: 11278

Ion	Ratio	Lower	Upper
117	100		
82	49.6	38.0	57.0
119	32.4	27.0	40.4

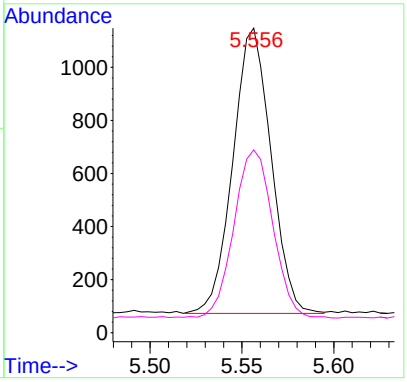


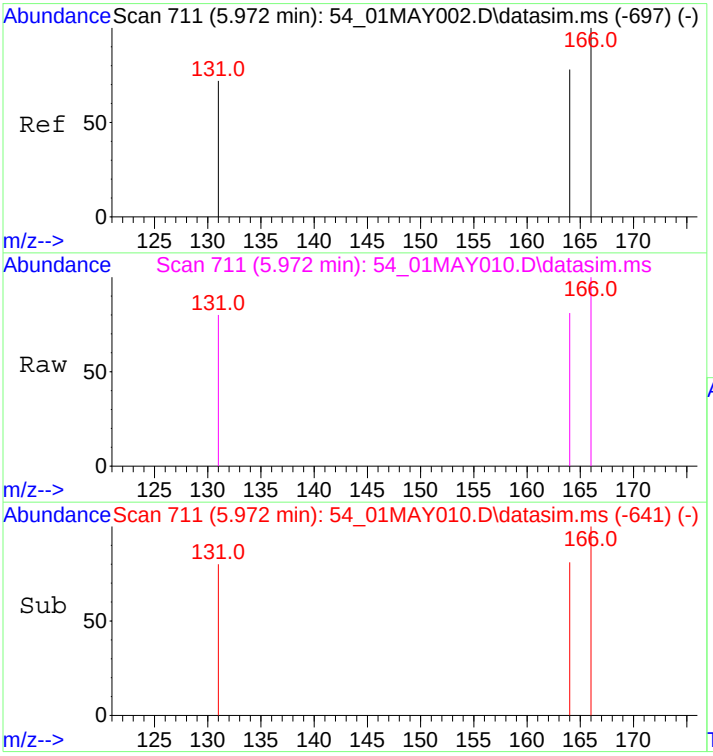


#13
Toluene
Concen: 2.30 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 01MAY010.D
Acq: 1 May 2014 3:22 pm

Tgt Ion: 91 Resp: 1553

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.8	71.8

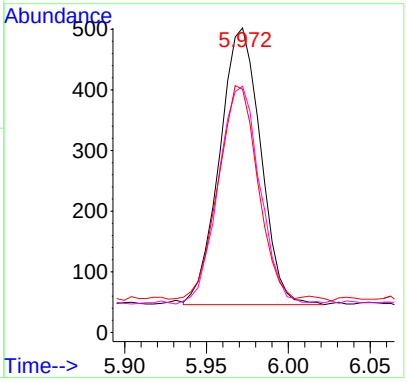




#14
Tetrachloroethene
Concen: 2.06 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_01MAY010.D
Acq: 1 May 2014 3:22 pm

Tgt Ion:166 Resp: 794

Ion	Ratio	Lower	Upper
166	100		
164	79.5	62.6	94.0
131	74.2	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY012.D
Acq On : 1 May 2014 3:53 pm
Operator : yhl
Sample : 02125 \ 2193293
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:01:33 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

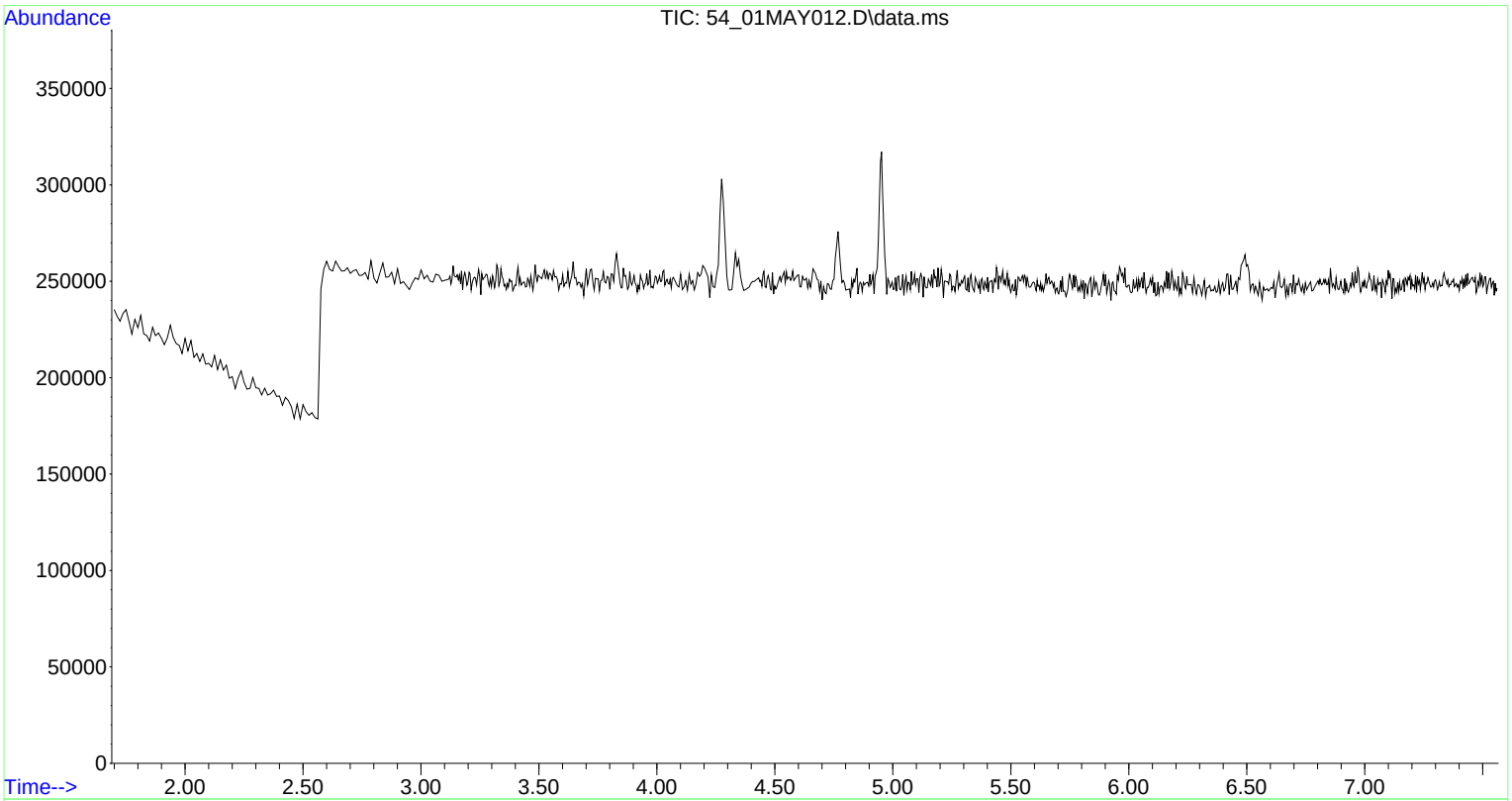
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	5128	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	13865	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	12824	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.256	61	754	1.90	ppbv	# 84
5] trans-1,2-Dichloroethene	3.703	61	391m	1.12	ppbv	
6] 1,1-Dichloroethane	3.905	63	545	1.30	ppbv	# 88
7] cis-1,2-Dichloroethene	4.197	61	5689	17.40	ppbv	# 74
8] 1,1,1-Trichloroethane	4.488	97	393	0.74	ppbv	96
11] Trichloroethene	4.950	130	19271	55.88	ppbv	100
13] Toluene	5.556	91	2922	3.80	ppbv	100
14] Tetrachloroethene	5.972	166	3008	6.85	ppbv	98
16] m,p-Xylene	6.617	91	755	1.01	ppbv	94
17] o-Xylene	6.937	91	675	0.89	ppbv	93

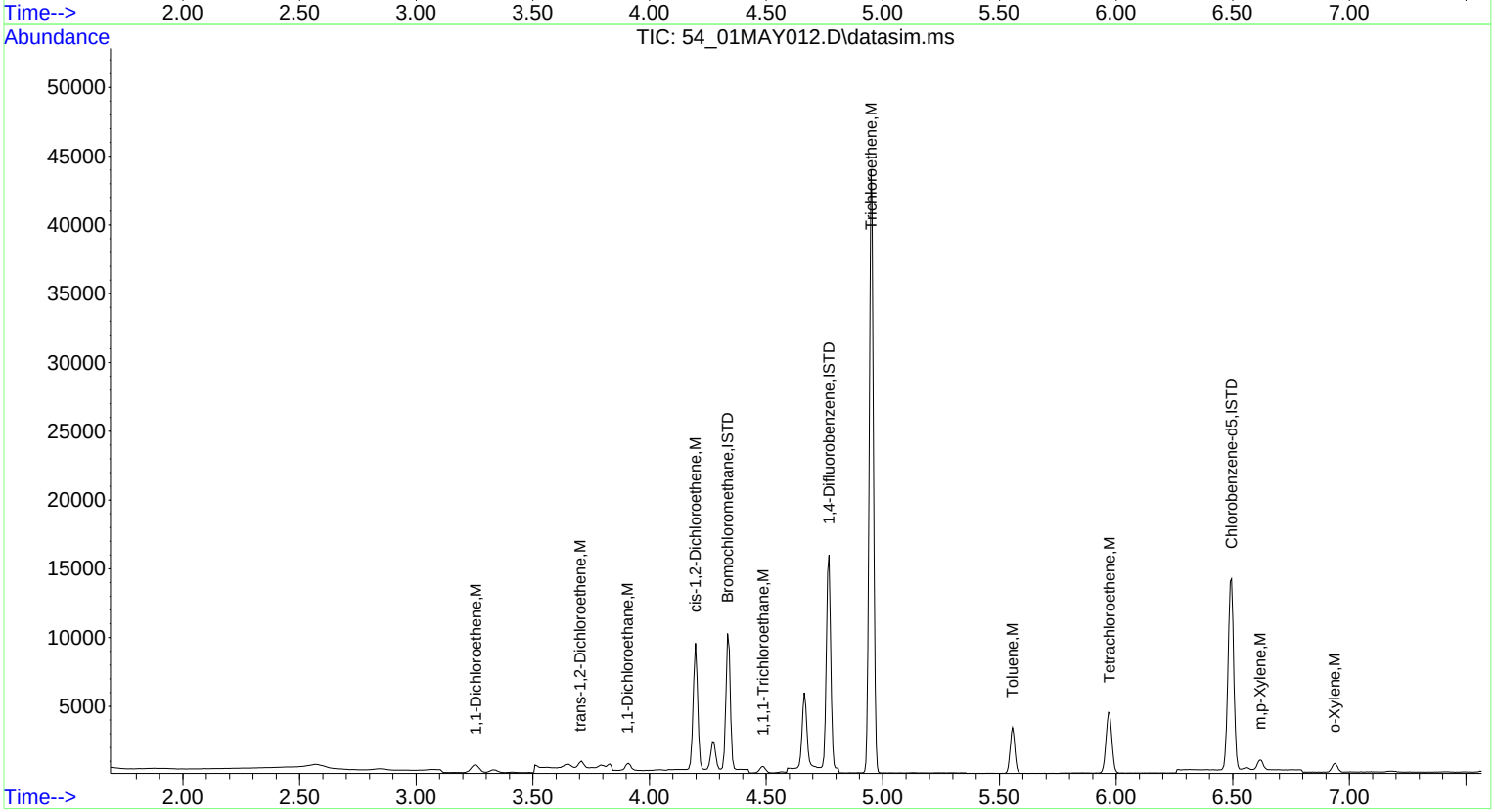
(#) = qualifier out of range (m) = manual integration (+) = signals summed

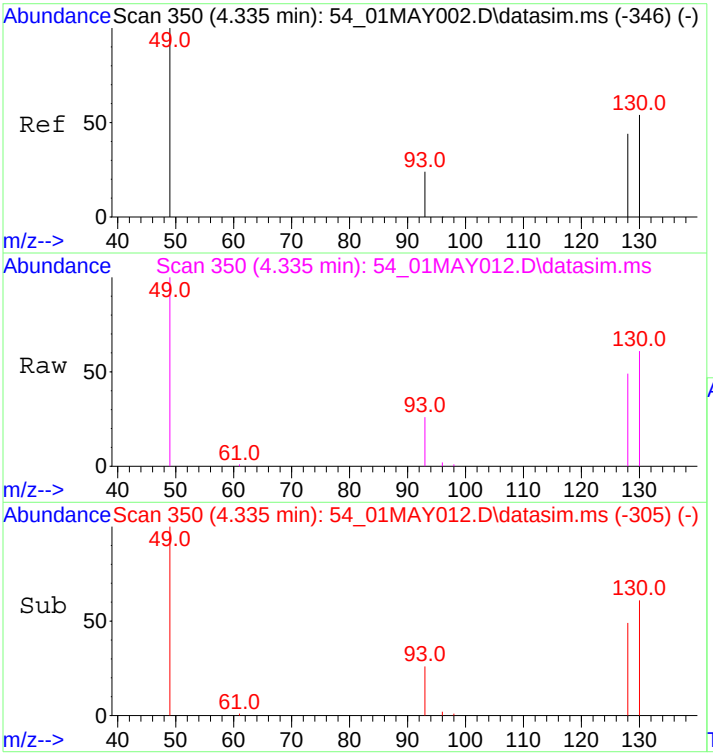
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY012.D
Acq On : 1 May 2014 3:53 pm
Operator : yhl
Sample : 02125 \ 2193293
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:01:33 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



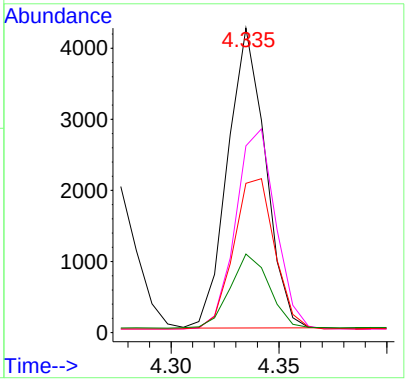


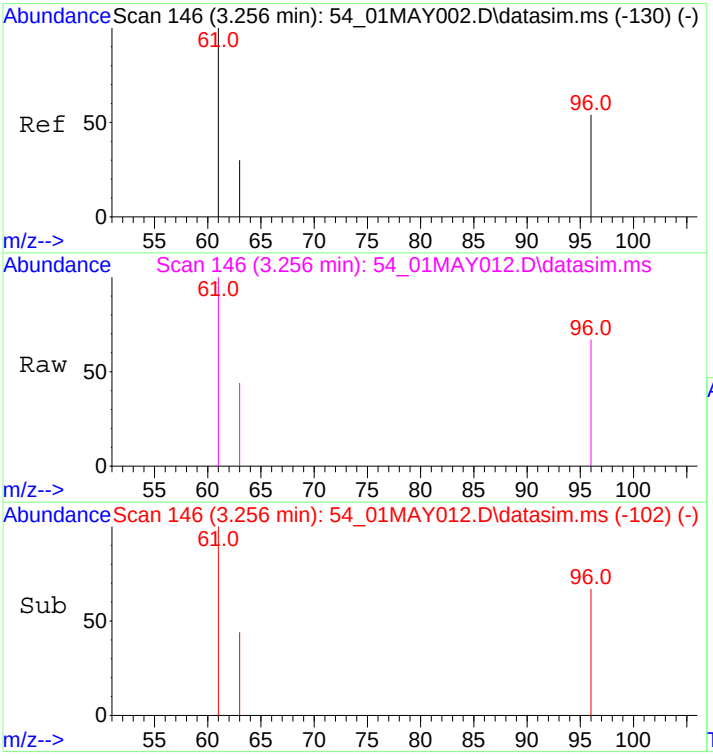


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 49 Resp: 5128

Ion	Ratio	Lower	Upper
49	100		
130	70.9	87.2	130.8#
128	54.9	68.0	102.0#
93	25.3	29.3	43.9#

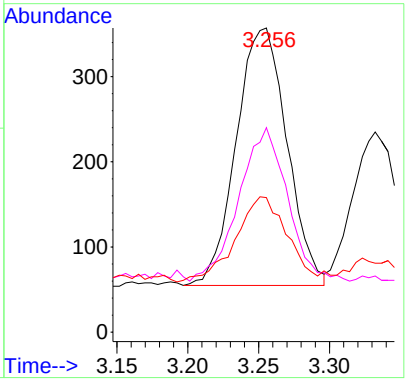


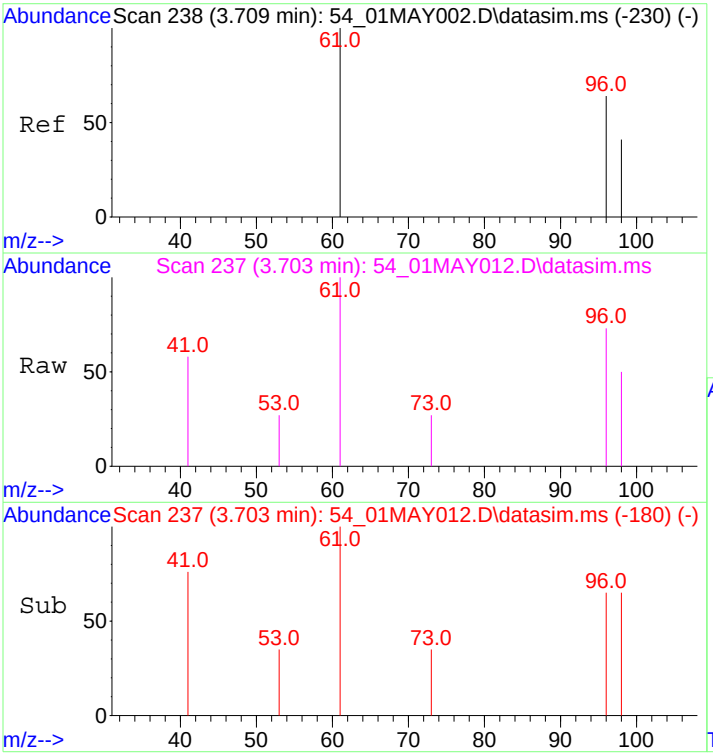


#3
1,1-Dichloroethene
Concen: 1.90 ppbv
RT: 3.256 min Scan# 146
Delta R.T. -0.000 min
Lab File: 54_01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 61 Resp: 754

Ion	Ratio	Lower	Upper
61	100		
96	91.5	63.4	95.2
63	44.8	26.2	39.2#

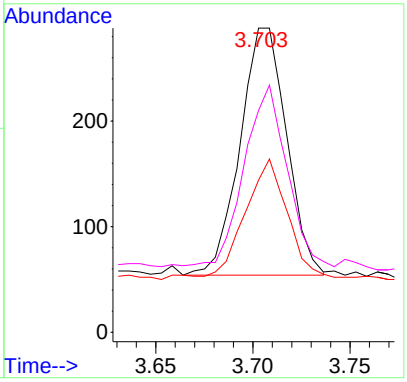


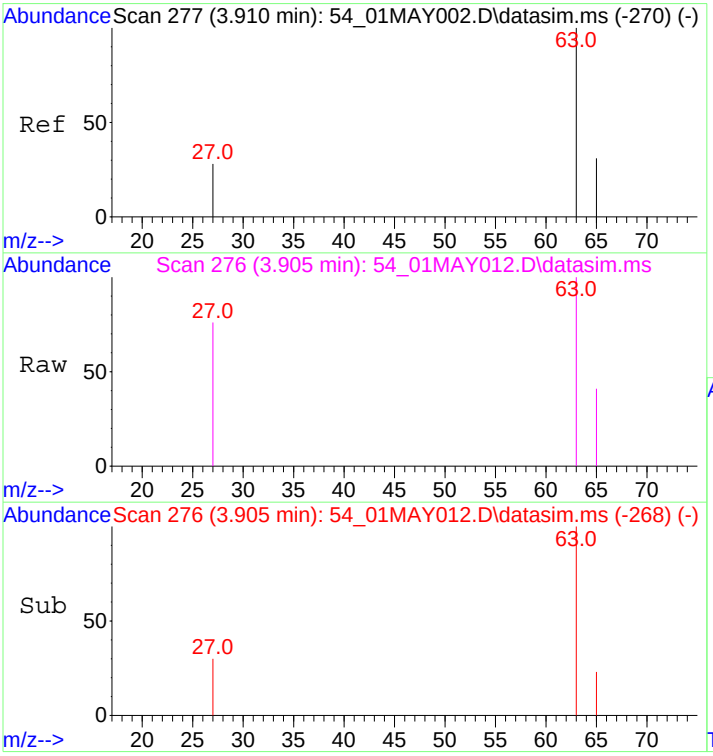


#5
trans-1,2-Dichloroethene
Concen: 1.12 ppbv m
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 61 Resp: 391

Ion	Ratio	Lower	Upper
61	100		
96	68.8	71.4	107.0#
98	95.7	45.8	68.8#

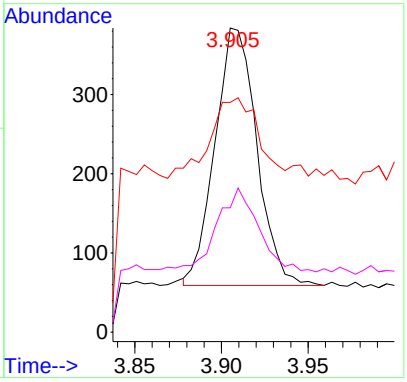




#6
1,1-Dichloroethane
Concen: 1.30 ppbv
RT: 3.905 min Scan# 276
Delta R.T. -0.005 min
Lab File: 54_01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 63 Resp: 545

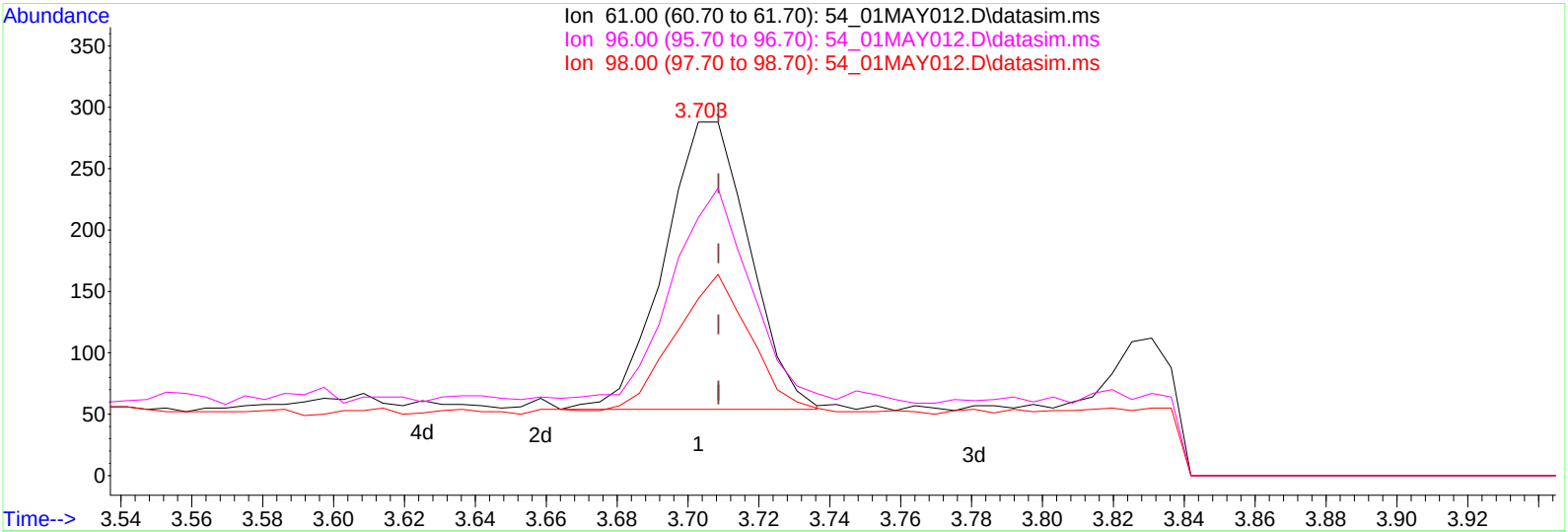
Ion	Ratio	Lower	Upper
63	100		
65	31.6	26.1	39.1
27	28.3	10.2	15.2#

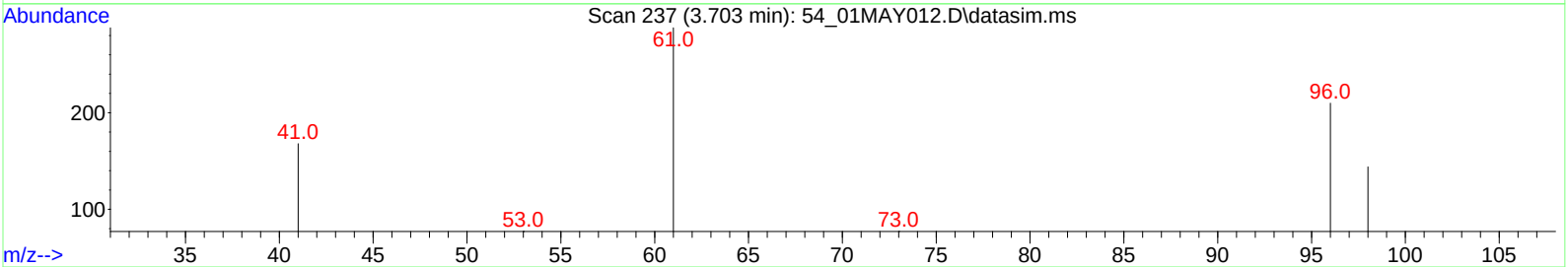


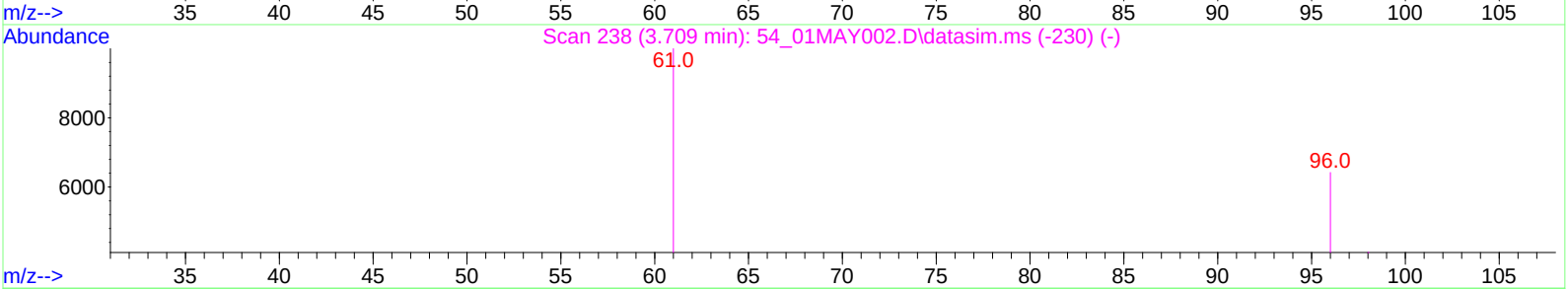
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY012.D
Acq On : 1 May 2014 3:53 pm
Operator : yhl
Sample : 02125 \ 2193293
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:59:54 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







TIC: 54_01MAY012.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.703min (-0.006) 1.12 ppbv m

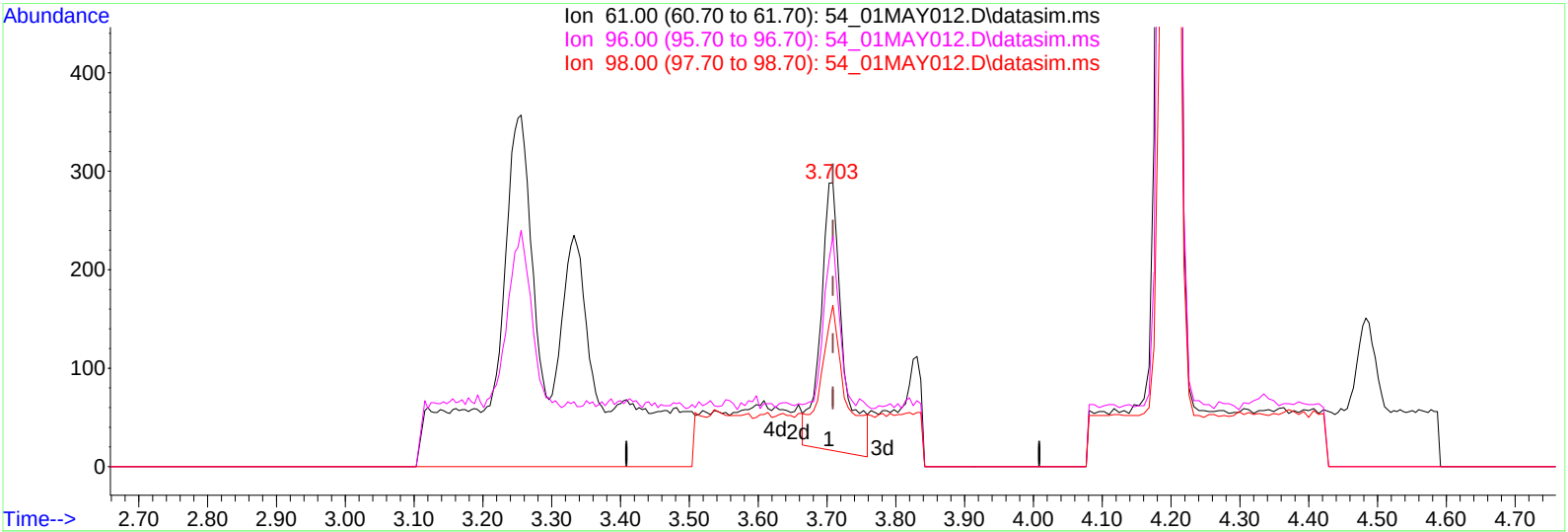
response 391

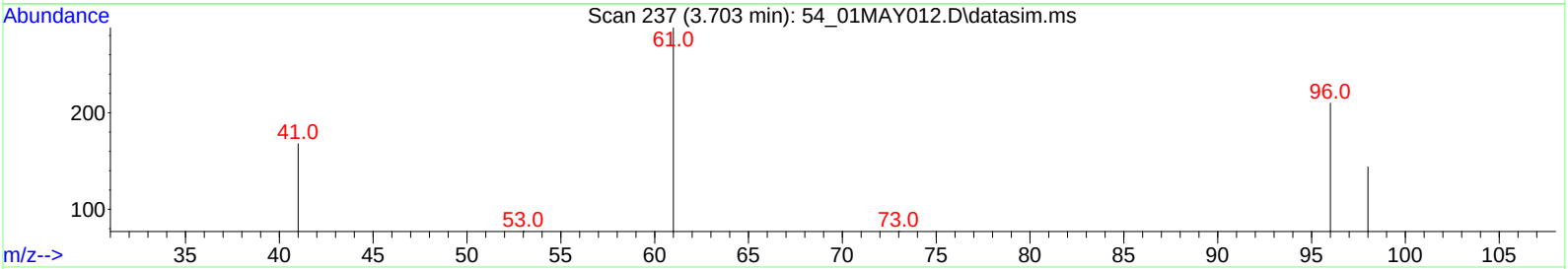
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	68.80#
98.00	57.30	95.65#
0.00	0.00	0.00

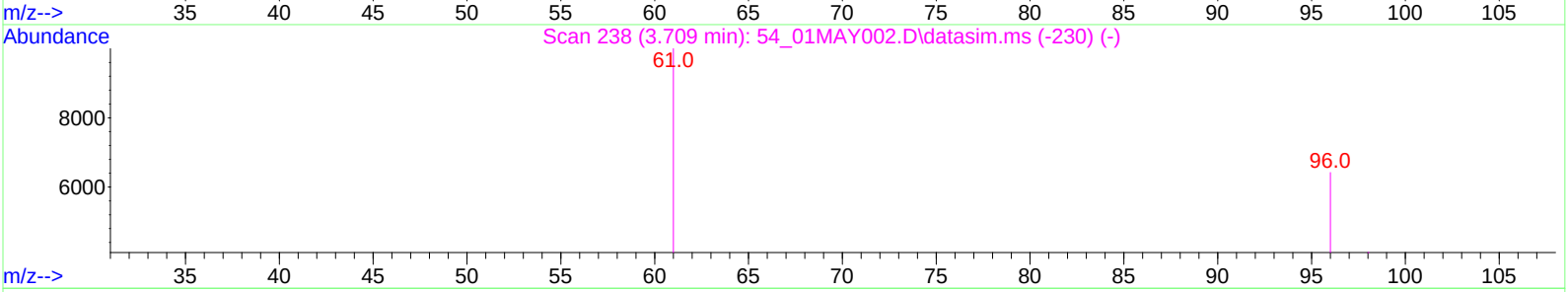
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY012.D
Acq On : 1 May 2014 3:53 pm
Operator : yhl
Sample : 02125 \ 2193293
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 15:59:54 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







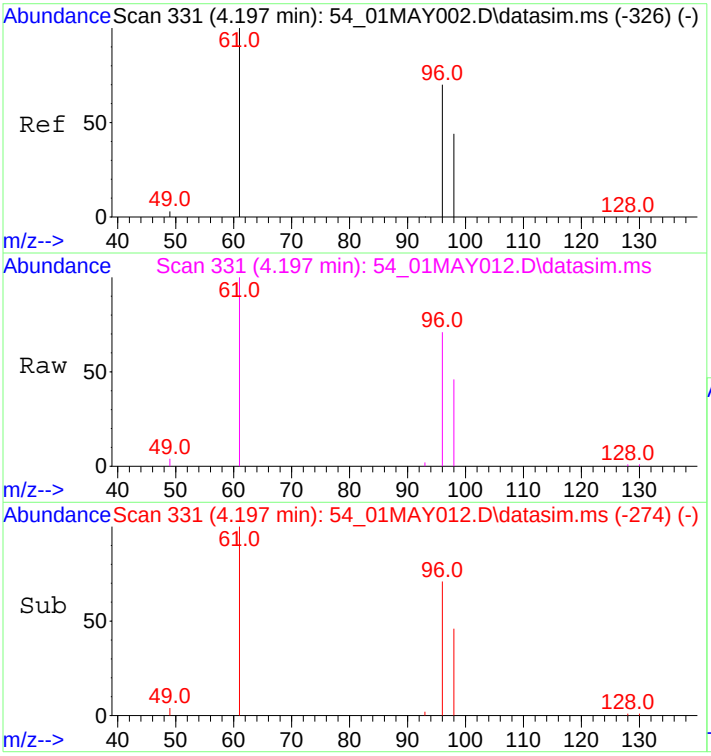
TIC: 54_01MAY012.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.703min (-0.006) 1.74 ppbv

response 609

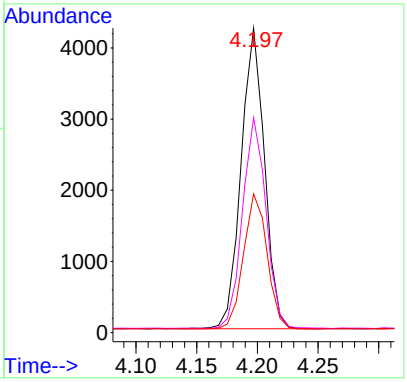
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	44.17#
98.00	57.30	61.41
0.00	0.00	0.00

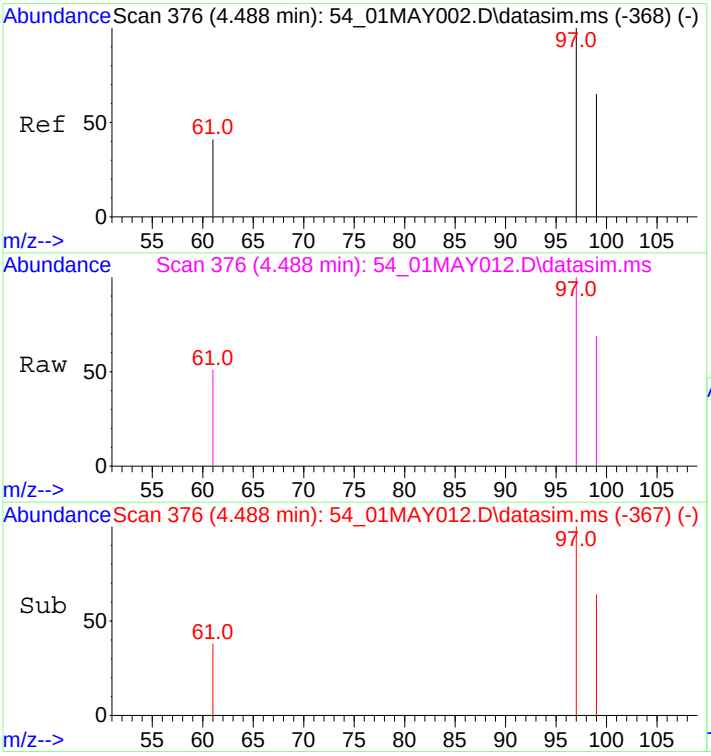


#7
cis-1,2-Dichloroethene
Concen: 17.40 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 61 Resp: 5689

Ion	Ratio	Lower	Upper
61	100		
96	70.1	78.5	117.7#
98	45.2	50.6	76.0#

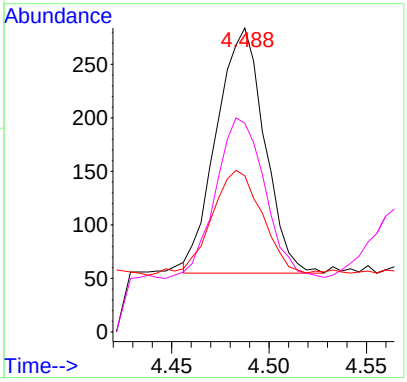


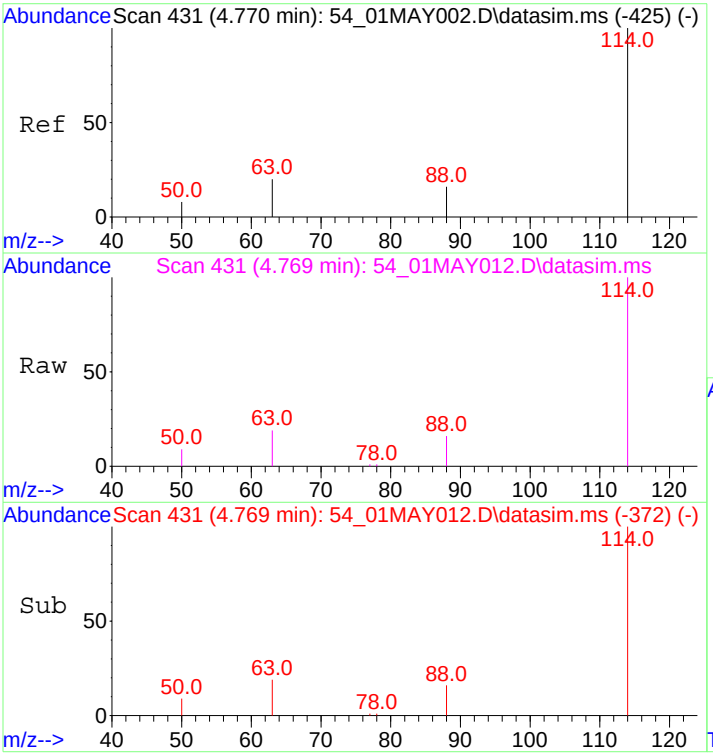


#8
1,1,1-Trichloroethane
Concen: 0.74 ppbv
RT: 4.488 min Scan# 376
Delta R.T. -0.000 min
Lab File: 54_01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 97 Resp: 393

Ion	Ratio	Lower	Upper
97	100		
99	65.9	52.1	78.1
61	42.7	30.2	45.4

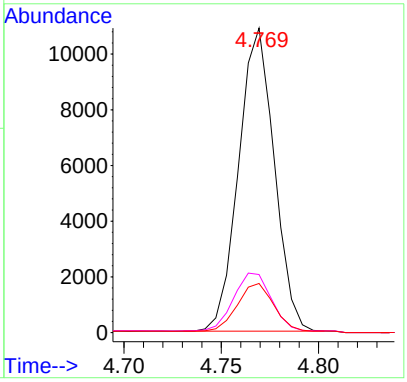


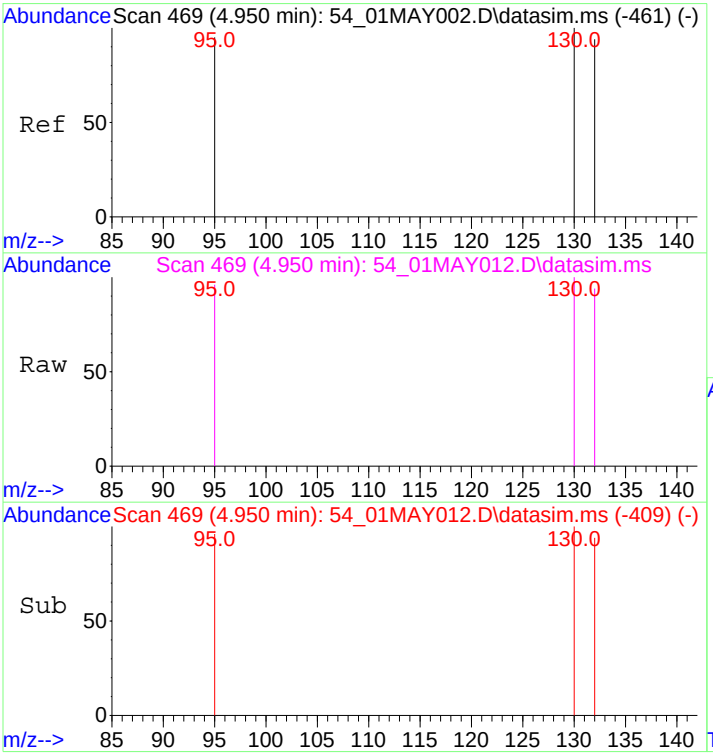


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion:114 Resp: 13865

Ion	Ratio	Lower	Upper
114	100		
63	20.2	12.0	18.0#
88	16.0	11.8	17.8

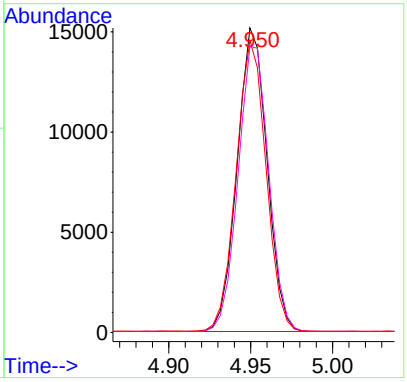


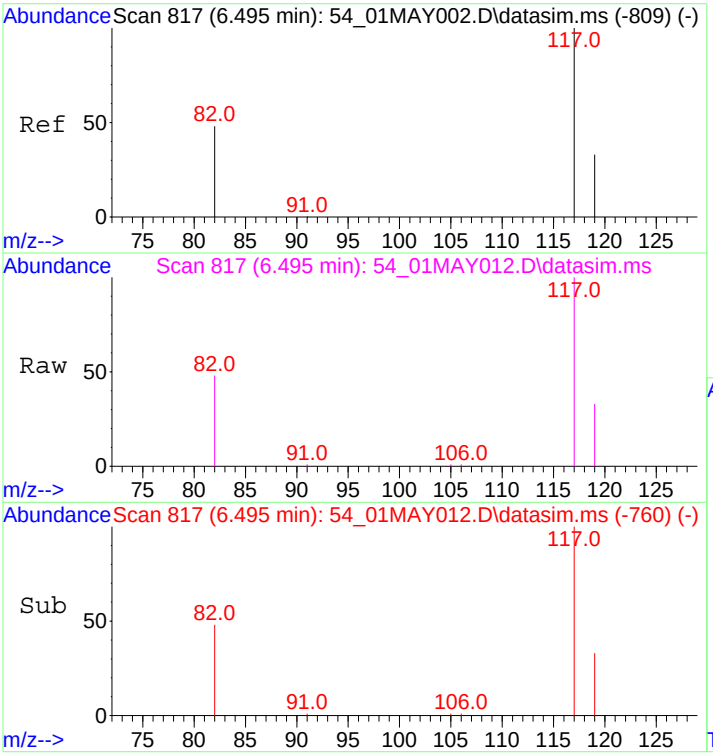


#11
Trichloroethene
Concen: 55.88 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion:130 Resp: 19271

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	95.2	76.5	114.7

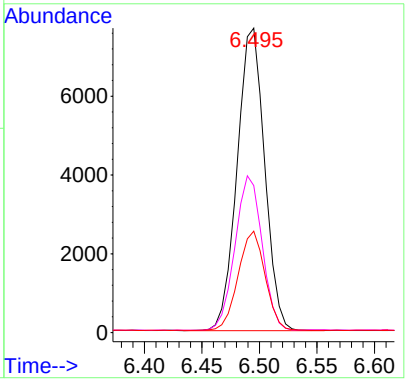


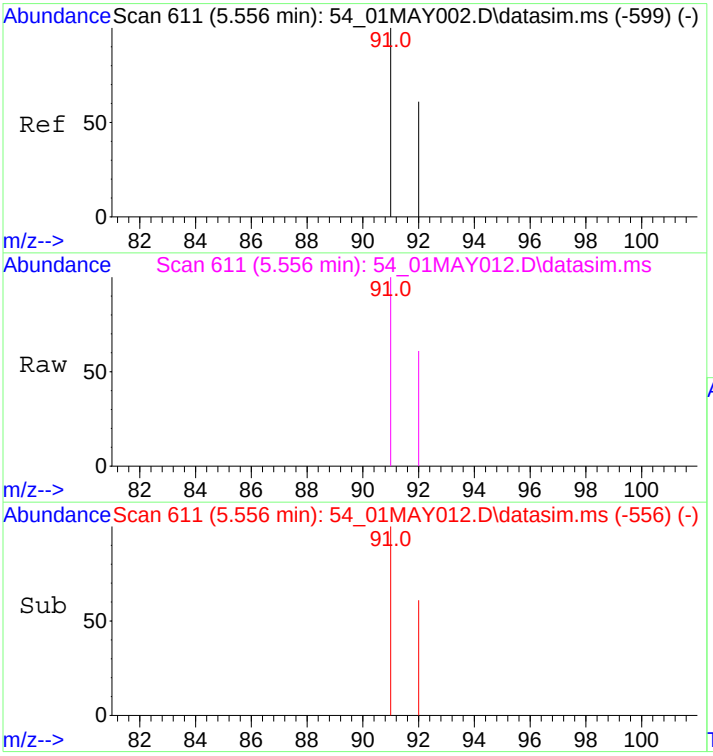


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion:117 Resp: 12824

Ion	Ratio	Lower	Upper
117	100		
82	50.2	38.0	57.0
119	32.1	27.0	40.4

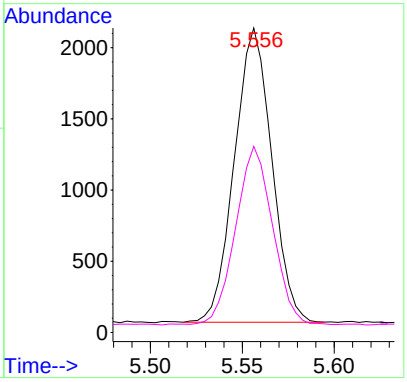


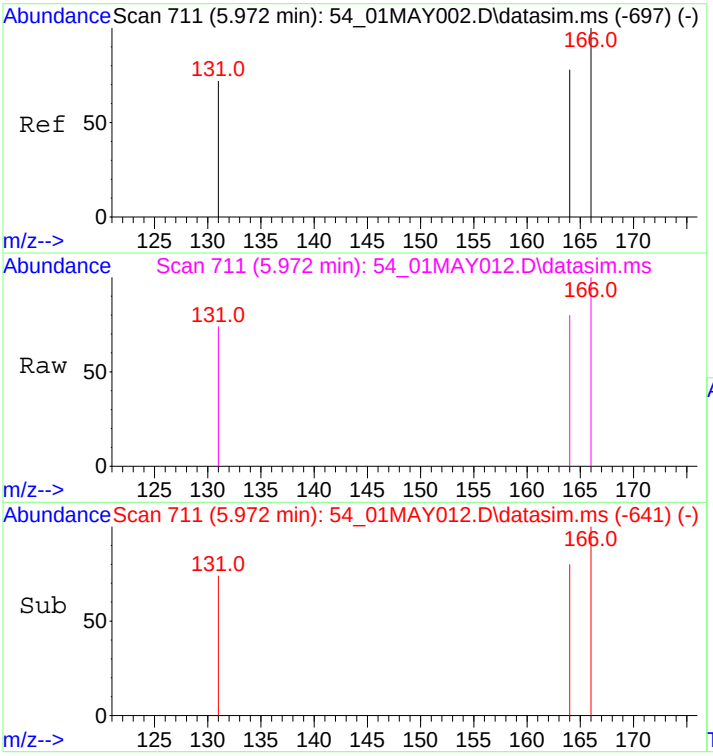


#13
Toluene
Concen: 3.80 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 91 Resp: 2922

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

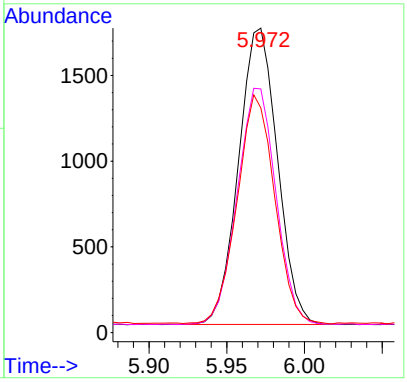


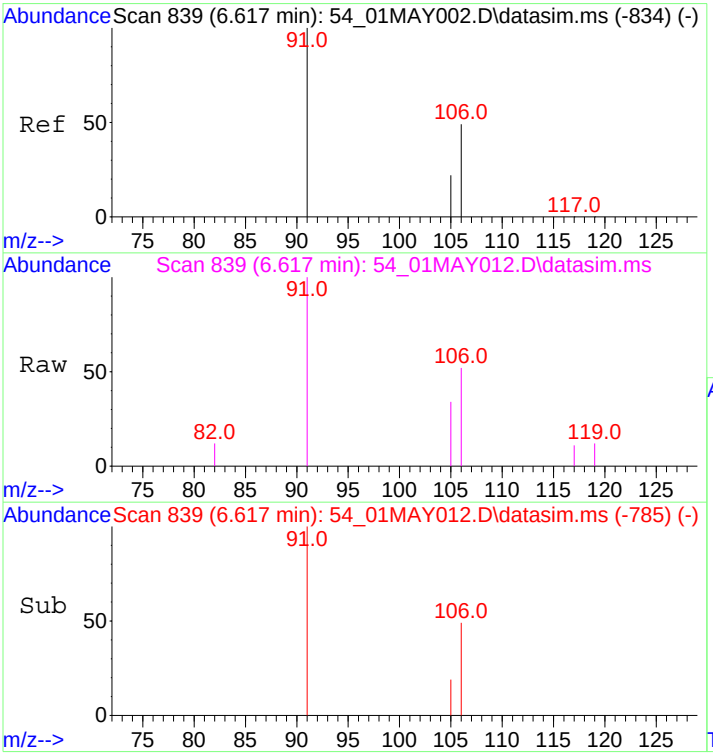


#14
Tetrachloroethene
Concen: 6.85 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion:166 Resp: 3008

Ion	Ratio	Lower	Upper
166	100		
164	79.7	62.6	94.0
131	74.9	58.5	87.7

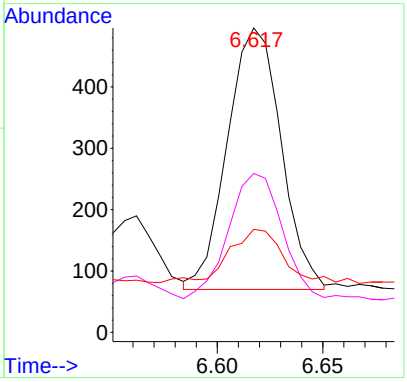


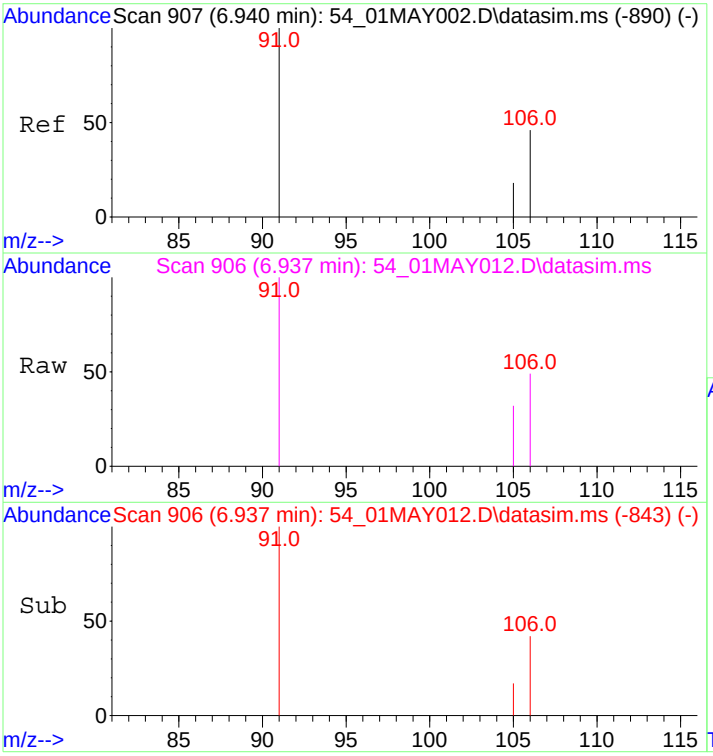


#16
m,p-Xylene
Concen: 1.01 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 91 Resp: 755

Ion	Ratio	Lower	Upper
91	100		
106	48.9	43.1	64.7
105	20.5	18.3	27.5

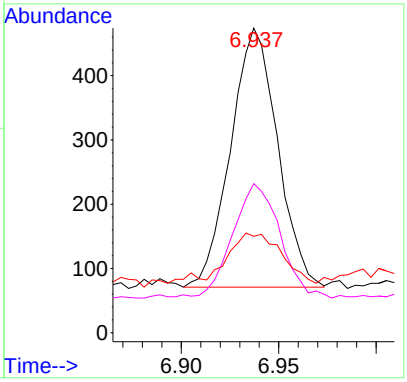




#17
o-Xylene
Concen: 0.89 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 01MAY012.D
Acq: 1 May 2014 3:53 pm

Tgt Ion: 91 Resp: 675

Ion	Ratio	Lower	Upper
91	100		
106	43.9	40.1	60.1
105	21.2	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY013.D
Acq On : 1 May 2014 4:05 pm
Operator : yhl
Sample : 02126 \ F6-004
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:12:00 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

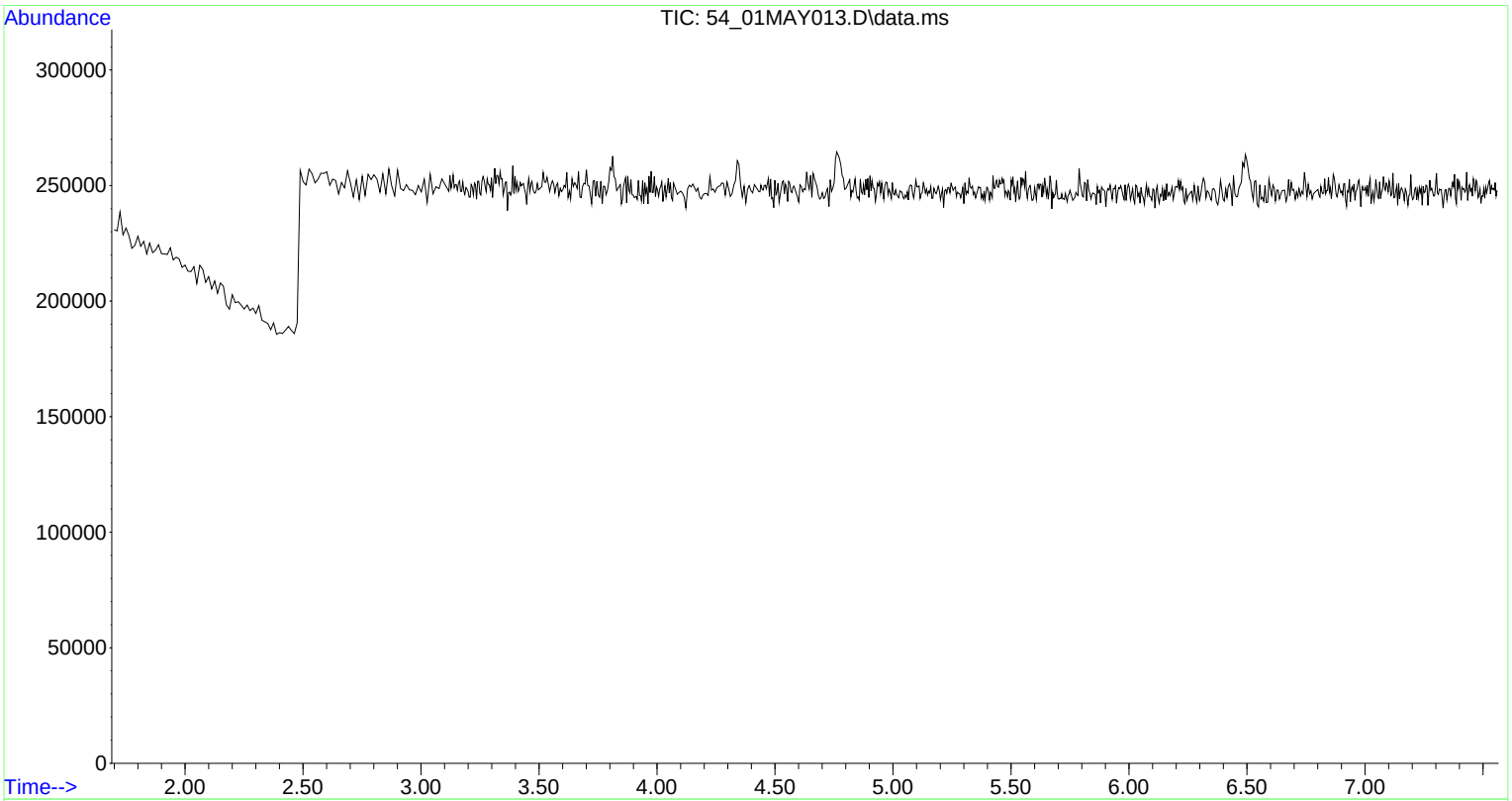
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	5025	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	13595	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	12266	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
13] Toluene	5.556	91	2723	3.70 ppbv	100
16] m,p-Xylene	6.617	91	906	1.26 ppbv	94
17] o-Xylene	6.936	91	808	1.11 ppbv	96

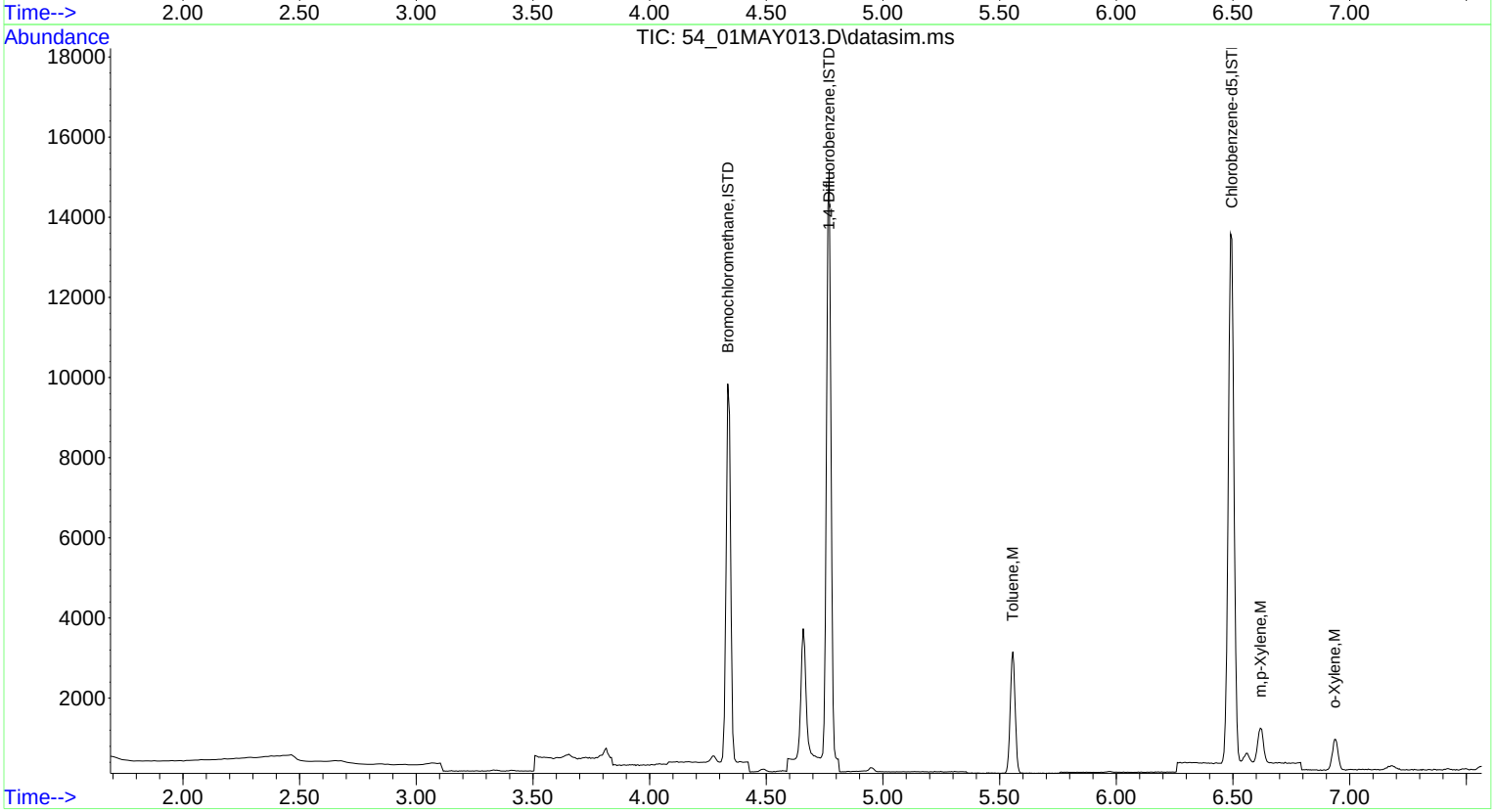
(#) = qualifier out of range (m) = manual integration (+) = signals summed

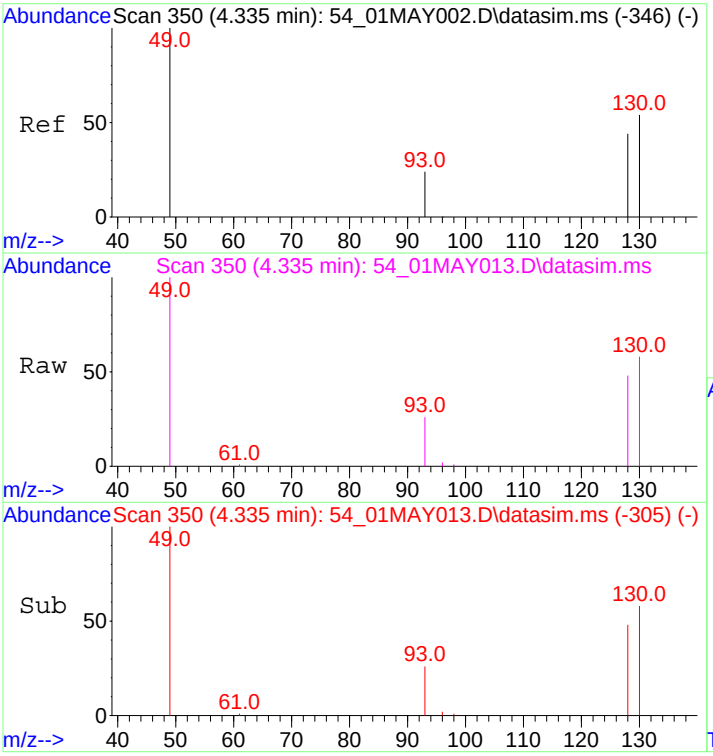
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY013.D
Acq On : 1 May 2014 4:05 pm
Operator : yhl
Sample : 02126 \ F6-004
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:12:00 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



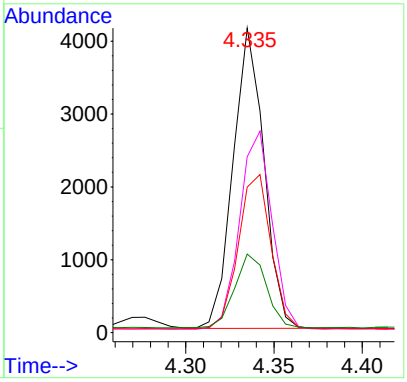


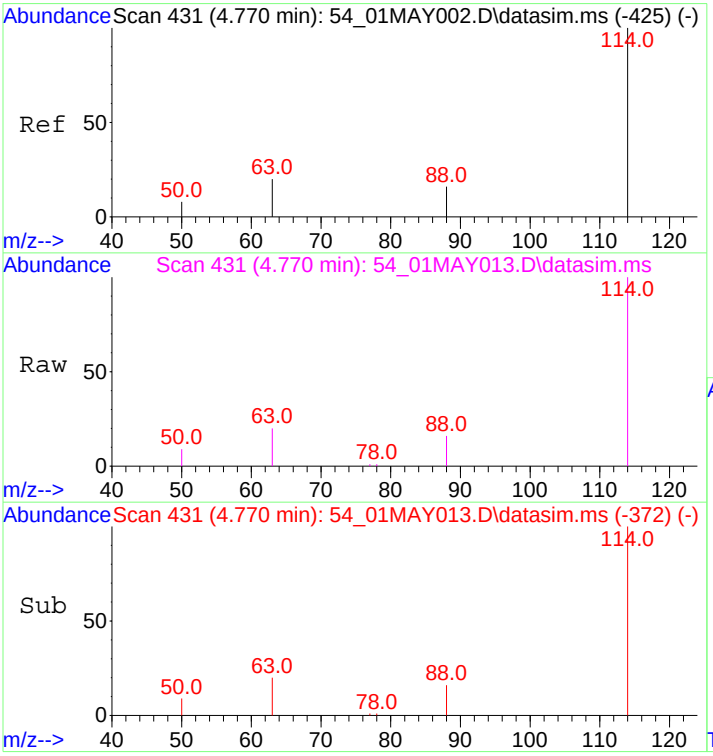


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 01MAY013.D
Acq: 1 May 2014 4:05 pm

Tgt Ion: 49 Resp: 5025

Ion	Ratio	Lower	Upper
49	100		
130	69.0	87.2	130.8#
128	54.3	68.0	102.0#
93	25.4	29.3	43.9#

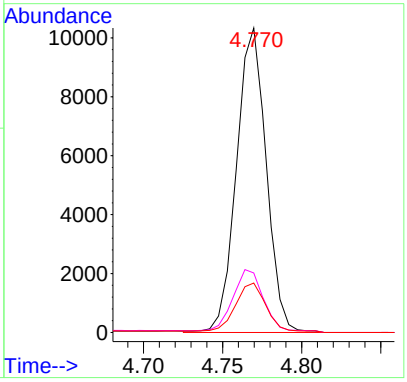


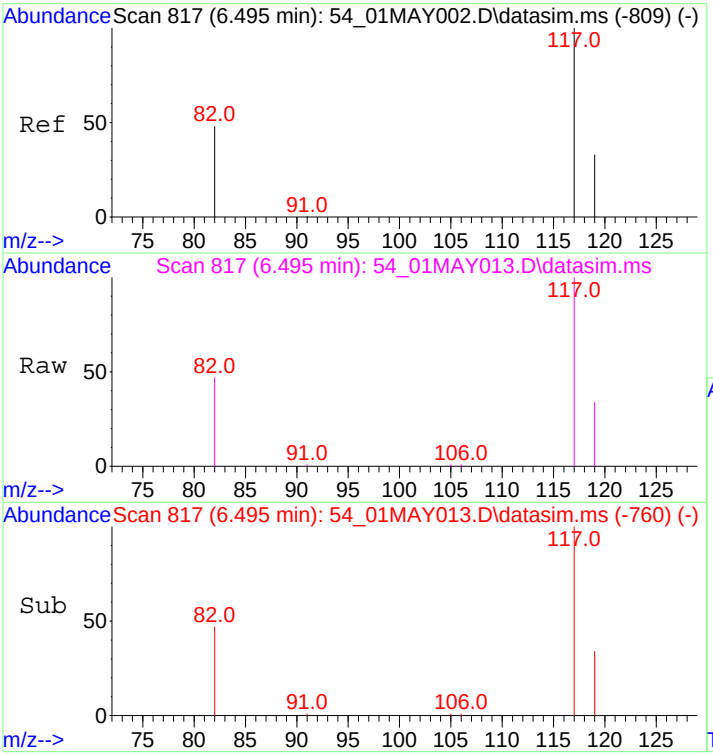


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_01MAY013.D
Acq: 1 May 2014 4:05 pm

Tgt Ion:114 Resp: 13595

Ion	Ratio	Lower	Upper
114	100		
63	20.0	12.0	18.0#
88	15.5	11.8	17.8

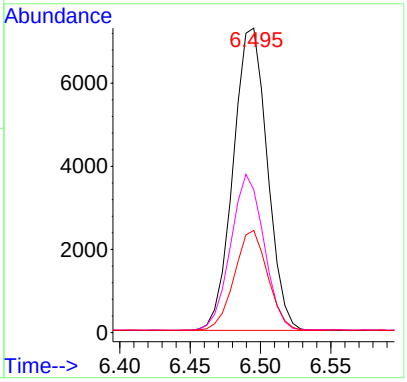


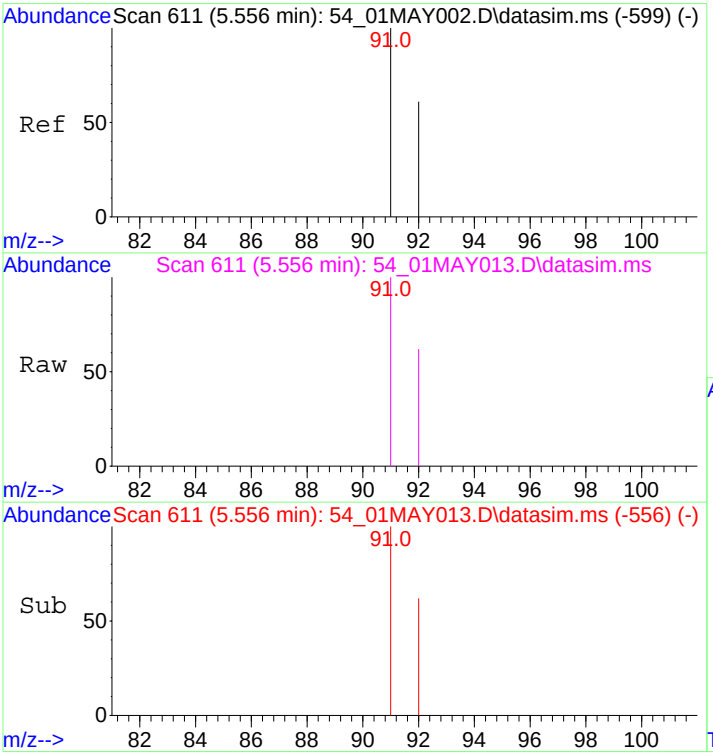


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 01MAY013.D
Acq: 1 May 2014 4:05 pm

Tgt Ion:117 Resp: 12266

Ion	Ratio	Lower	Upper
117	100		
82	50.1	38.0	57.0
119	32.5	27.0	40.4

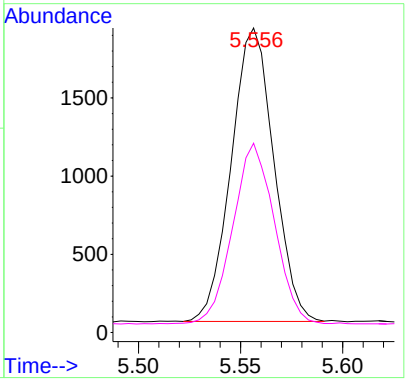


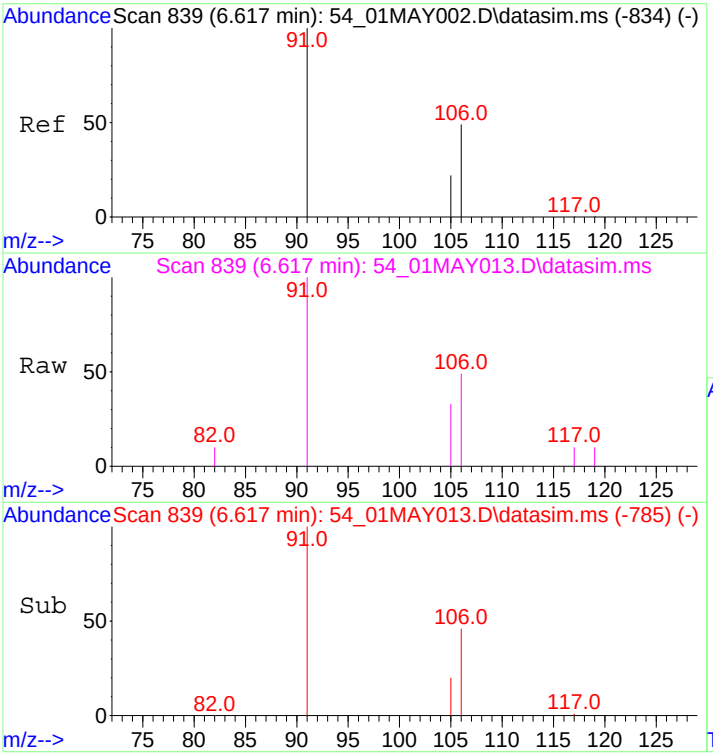


#13
Toluene
Concen: 3.70 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_01MAY013.D
Acq: 1 May 2014 4:05 pm

Tgt Ion: 91 Resp: 2723

Ion	Ratio	Lower	Upper
91	100		
92	60.2	47.8	71.8

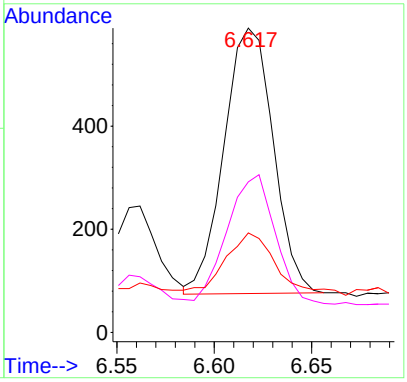


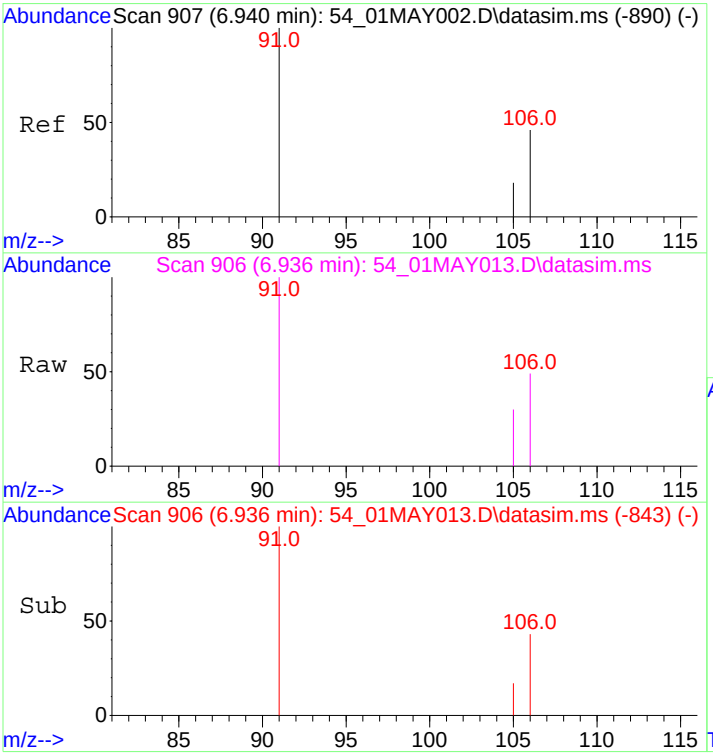


#16
m,p-Xylene
Concen: 1.26 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 01MAY013.D
Acq: 1 May 2014 4:05 pm

Tgt Ion: 91 Resp: 906

Ion	Ratio	Lower	Upper
91	100		
106	47.7	43.1	64.7
105	23.0	18.3	27.5

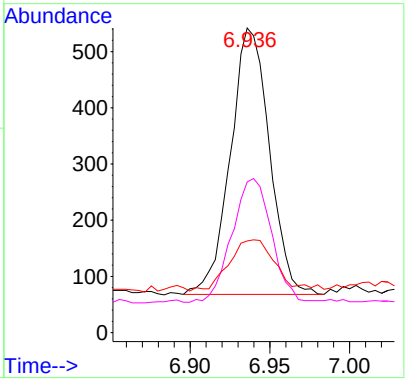




#17
o-Xylene
Concen: 1.11 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54_01MAY013.D
Acq: 1 May 2014 4:05 pm

Tgt Ion: 91 Resp: 808

Ion	Ratio	Lower	Upper
91	100		
106	46.8	40.1	60.1
105	19.8	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY014.D
Acq On : 1 May 2014 4:17 pm
Operator : yhl
Sample : 02127 \ F6-002
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:25:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

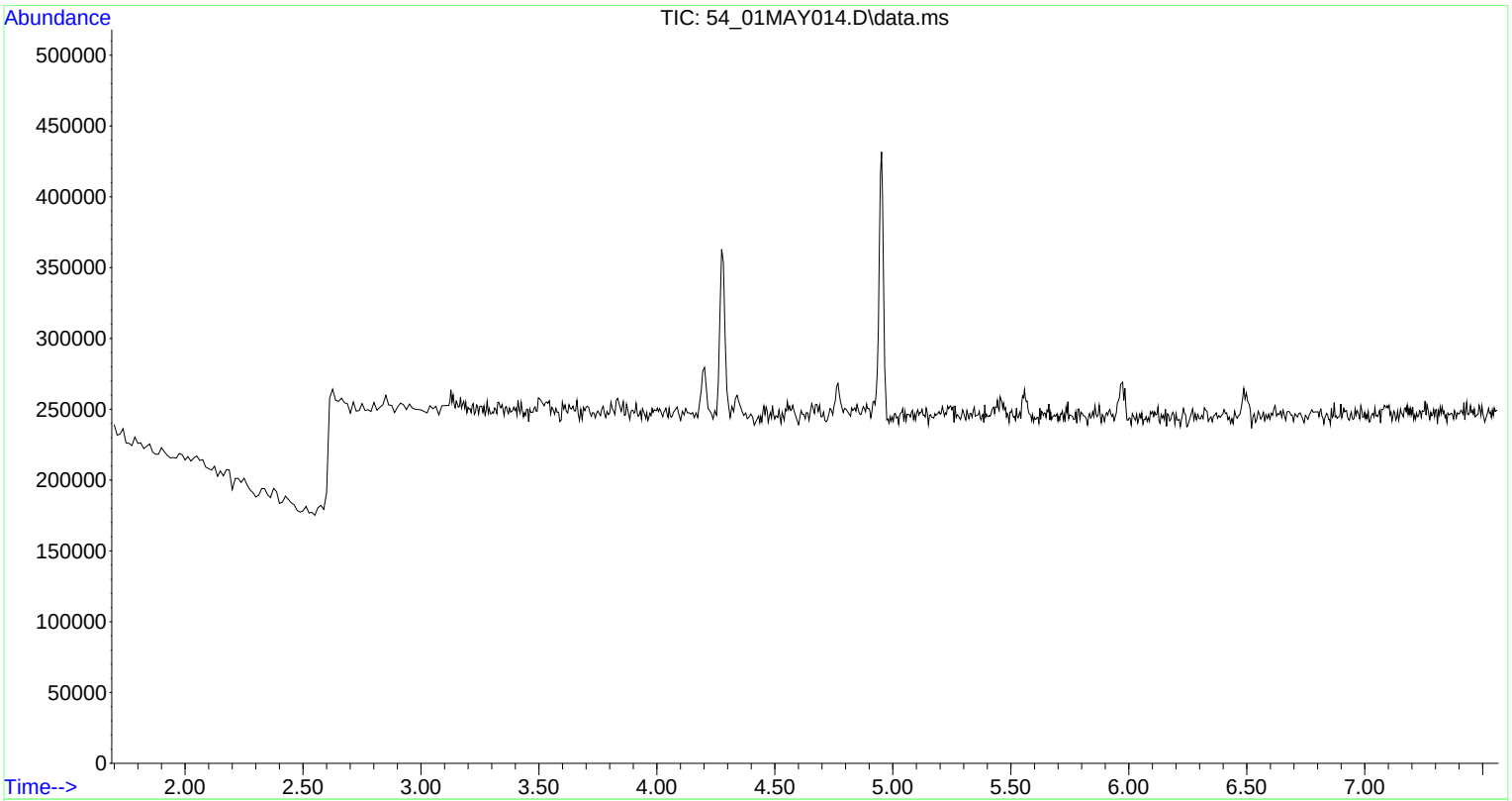
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4944	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	13266	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	12257	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.255	61	2220	5.80	ppbv	# 81
5] trans-1,2-Dichloroethene	3.707	61	1178	3.49	ppbv	# 84
6] 1,1-Dichloroethane	3.909	63	1501	3.73	ppbv	# 86
7] cis-1,2-Dichloroethene	4.197	61	16399	52.04	ppbv	# 74
8] 1,1,1-Trichloroethane	4.487	97	1163	2.28	ppbv	98
11] Trichloroethene	4.949	130	53007	160.66	ppbv	100
13] Toluene	5.556	91	10201	13.88	ppbv	100
14] Tetrachloroethene	5.972	166	8996	21.44	ppbv	100
16] m,p-Xylene	6.617	91	832	1.16	ppbv	# 81
17] o-Xylene	6.937	91	907	1.25	ppbv	96

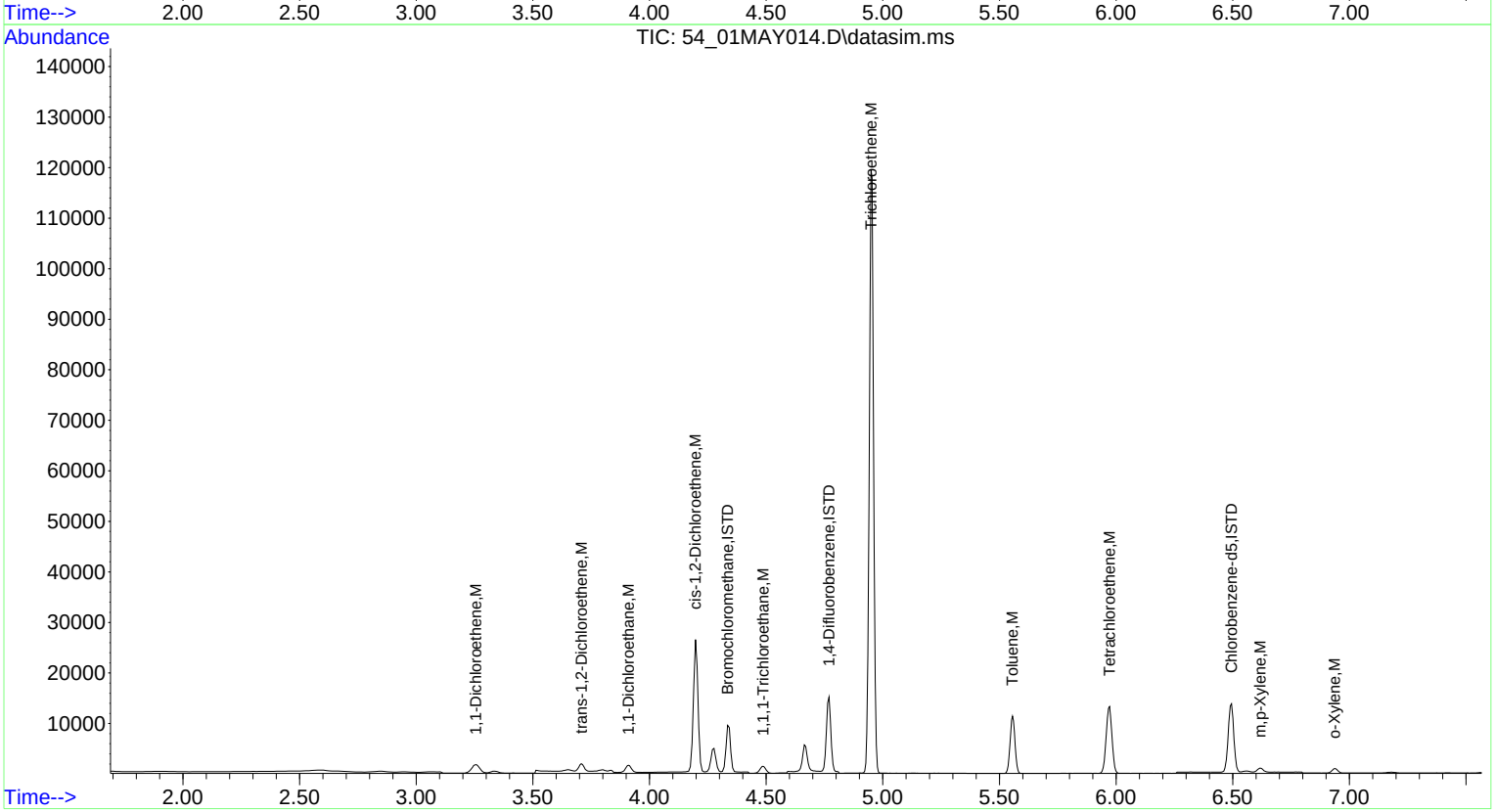
(#) = qualifier out of range (m) = manual integration (+) = signals summed

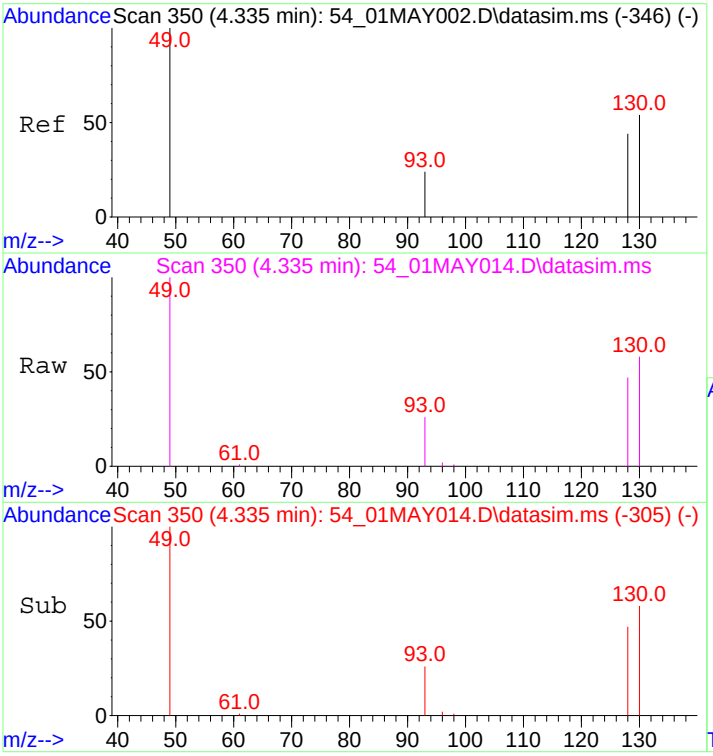
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY014.D
Acq On : 1 May 2014 4:17 pm
Operator : yhl
Sample : 02127 \ F6-002
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:25:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



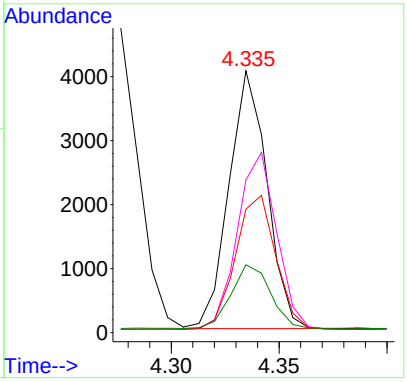


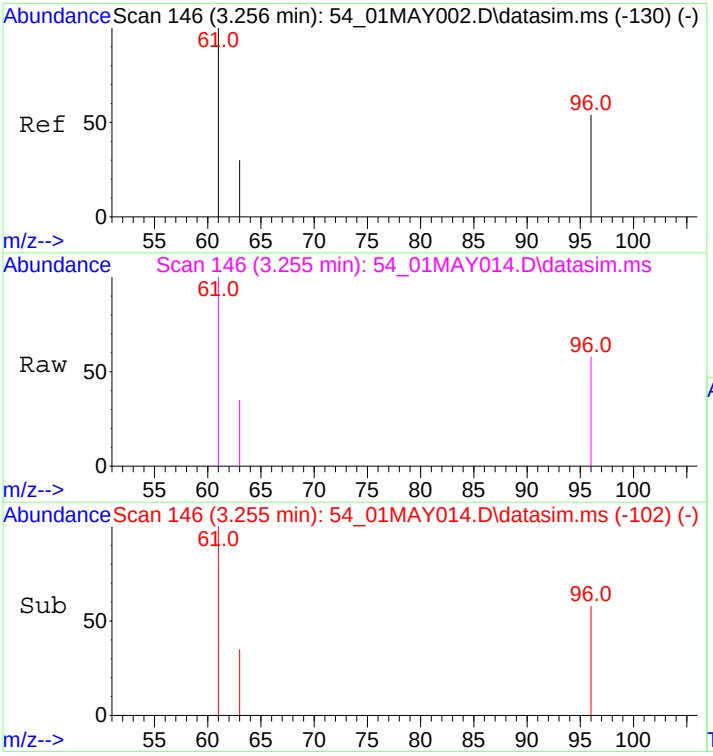


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 49 Resp: 4944

Ion	Ratio	Lower	Upper
49	100		
130	71.0	87.2	130.8#
128	55.2	68.0	102.0#
93	25.5	29.3	43.9#

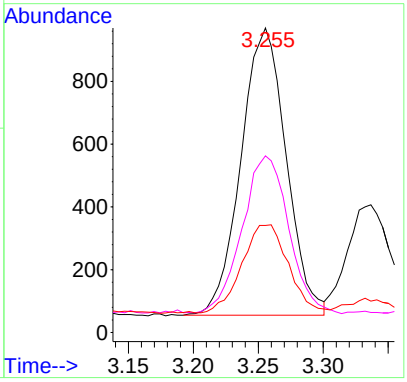


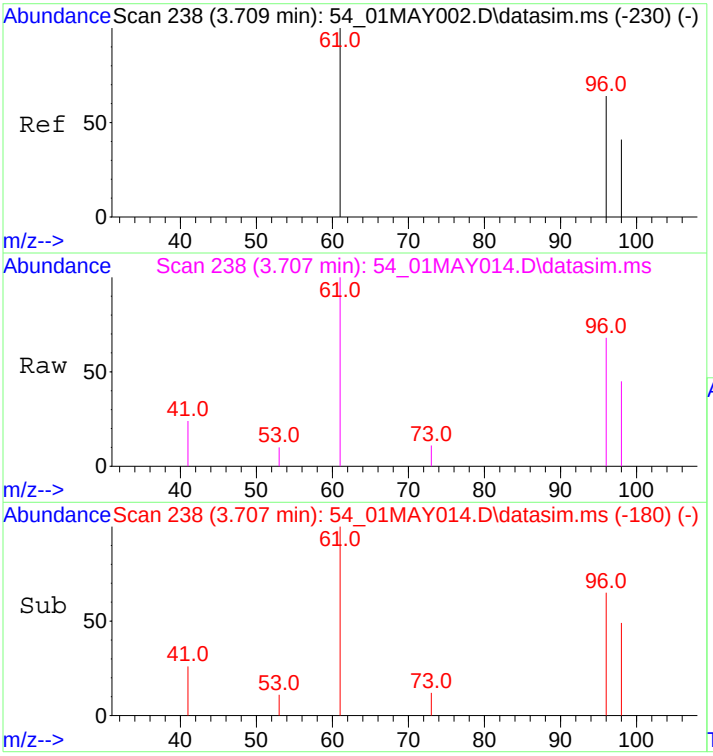


#3
1,1-Dichloroethene
Concen: 5.80 ppbv
RT: 3.255 min Scan# 146
Delta R.T. -0.000 min
Lab File: 54_01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 61 Resp: 2220

Ion	Ratio	Lower	Upper
61	100		
96	56.7	63.4	95.2#
63	31.2	26.2	39.2

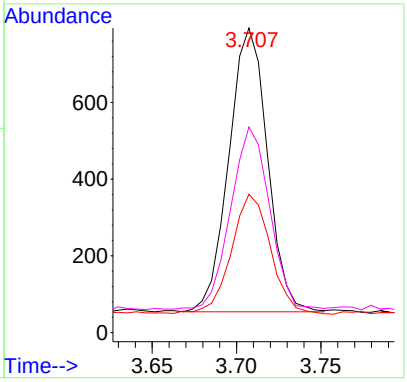


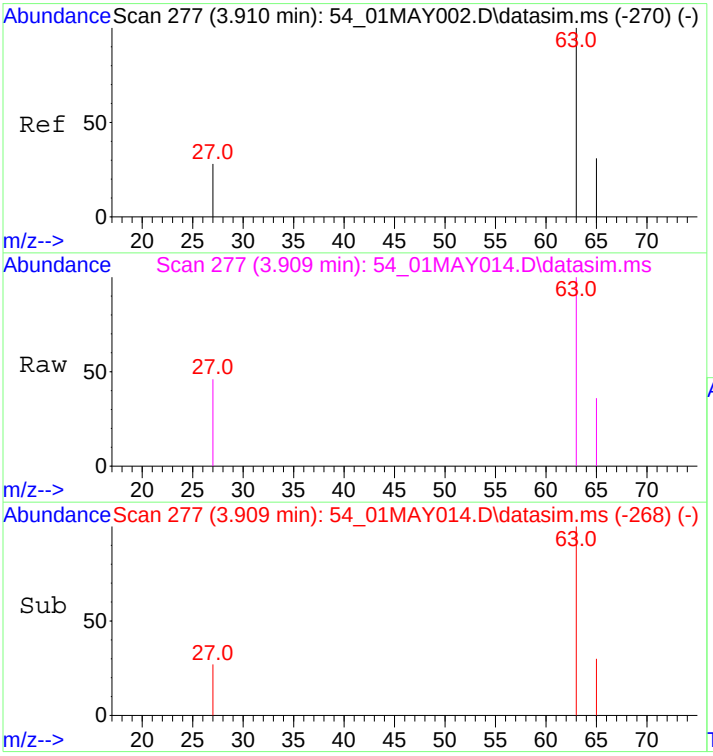


#5
trans-1,2-Dichloroethene
Concen: 3.49 ppbv
RT: 3.707 min Scan# 238
Delta R.T. -0.001 min
Lab File: 54 01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 61 Resp: 1178

Ion	Ratio	Lower	Upper
61	100		
96	75.4	71.4	107.0
98	43.2	45.8	68.8#

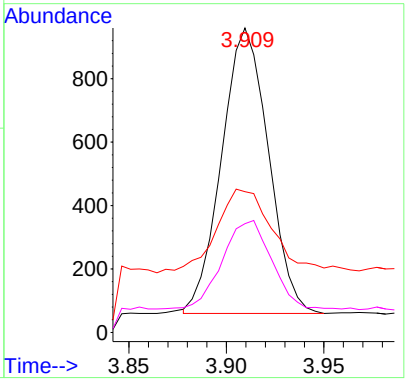


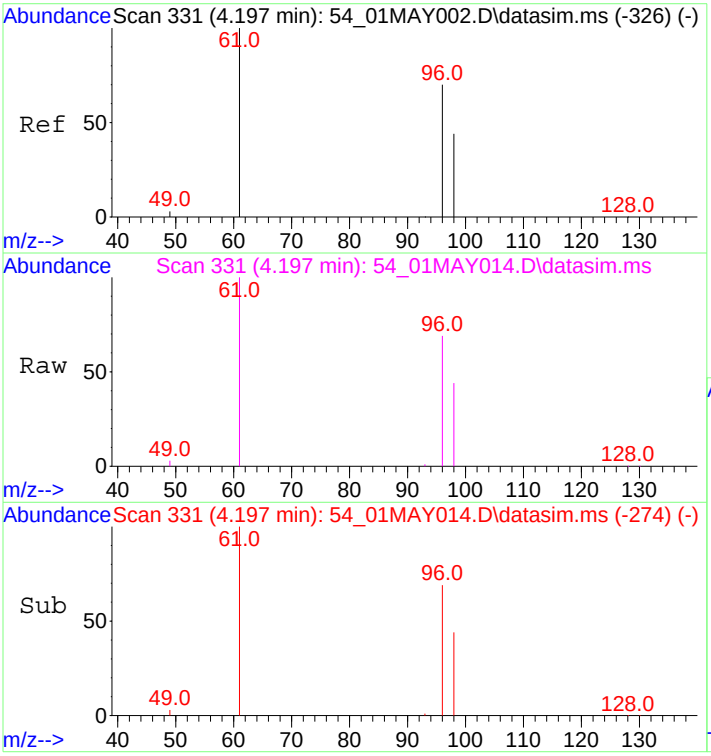


#6
1,1-Dichloroethane
Concen: 3.73 ppbv
RT: 3.909 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 63 Resp: 1501

Ion	Ratio	Lower	Upper
63	100		
65	31.2	26.1	39.1
27	30.0	10.2	15.2#

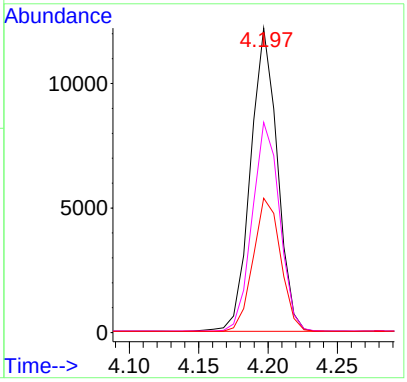


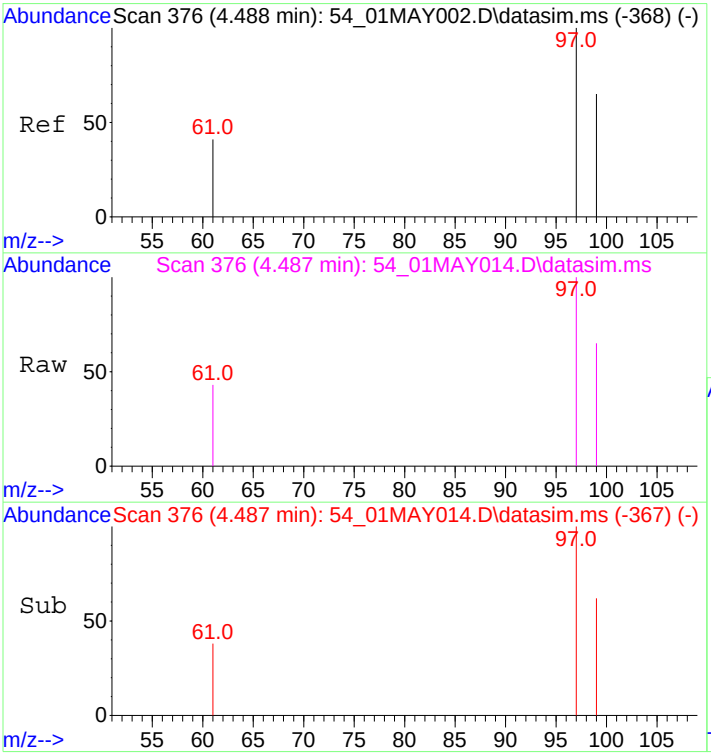


#7
cis-1,2-Dichloroethene
Concen: 52.04 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 61 Resp: 16399

Ion	Ratio	Lower	Upper
61	100		
96	69.9	78.5	117.7#
98	45.1	50.6	76.0#

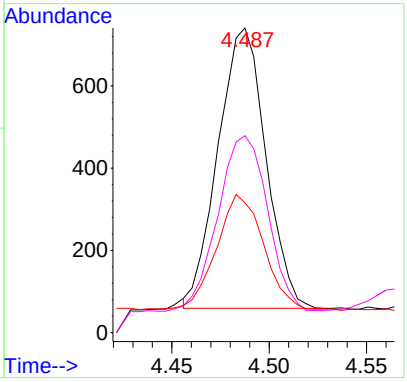


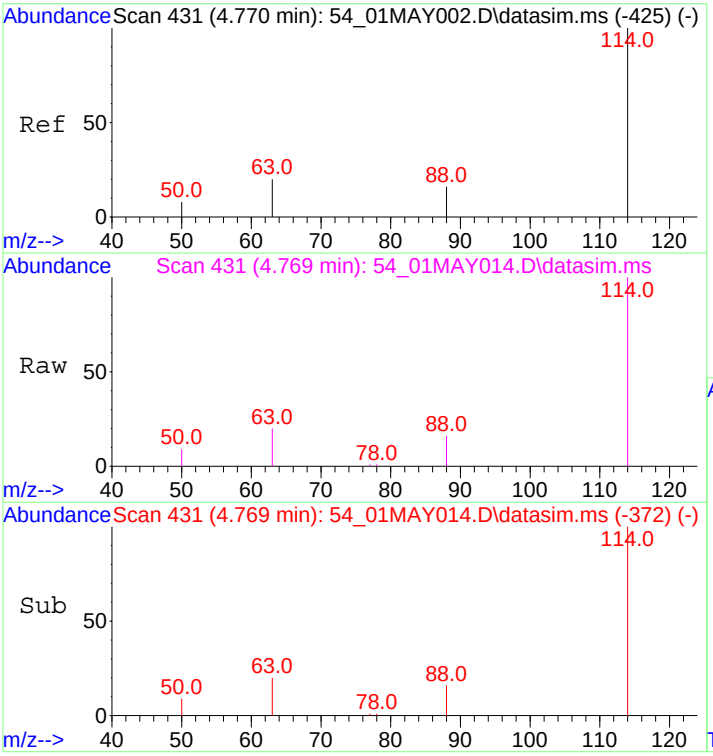


#8
1,1,1-Trichloroethane
Concen: 2.28 ppbv
RT: 4.487 min Scan# 376
Delta R.T. -0.000 min
Lab File: 54_01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 97 Resp: 1163

Ion	Ratio	Lower	Upper
97	100		
99	64.2	52.1	78.1
61	39.7	30.2	45.4

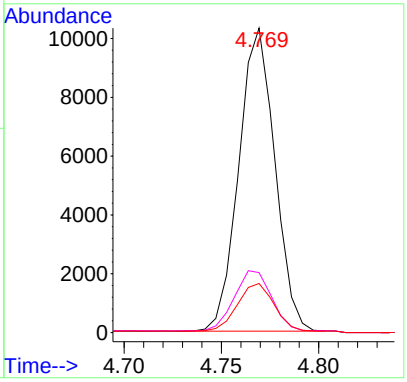


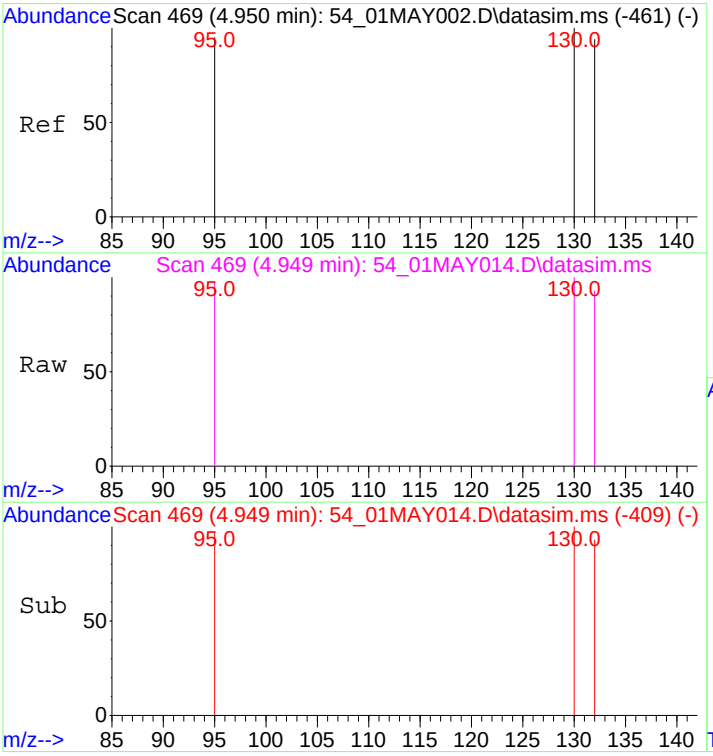


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion:114 Resp: 13266

Ion	Ratio	Lower	Upper
114	100		
63	20.4	12.0	18.0#
88	16.0	11.8	17.8

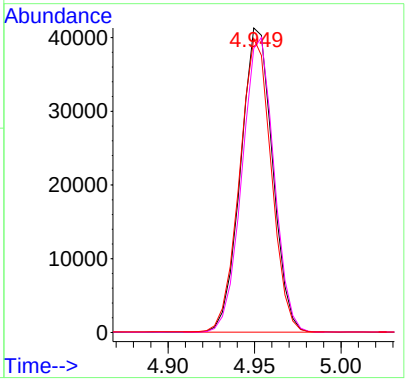


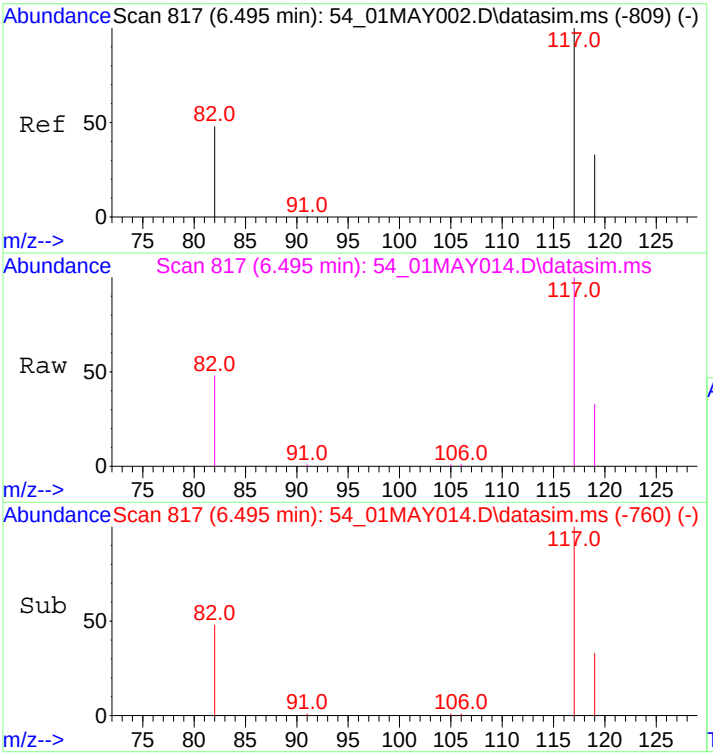


#11
Trichloroethene
Concen: 160.66 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion:130 Resp: 53007

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	95.5	76.5	114.7

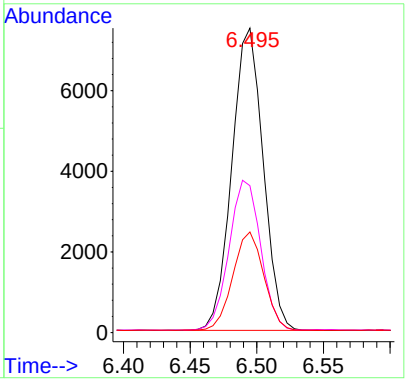


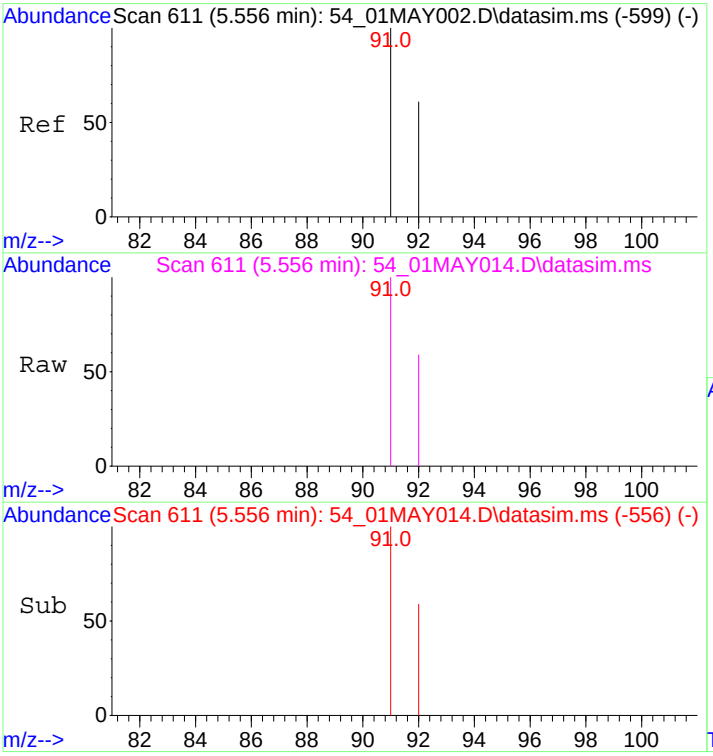


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion:117 Resp: 12257

Ion	Ratio	Lower	Upper
117	100		
82	50.2	38.0	57.0
119	32.1	27.0	40.4

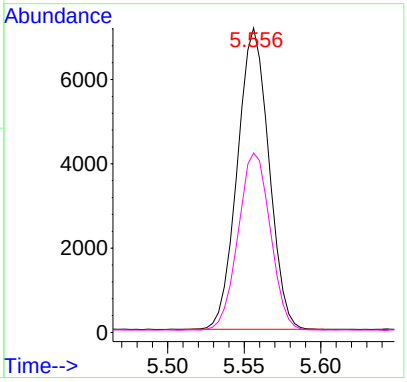


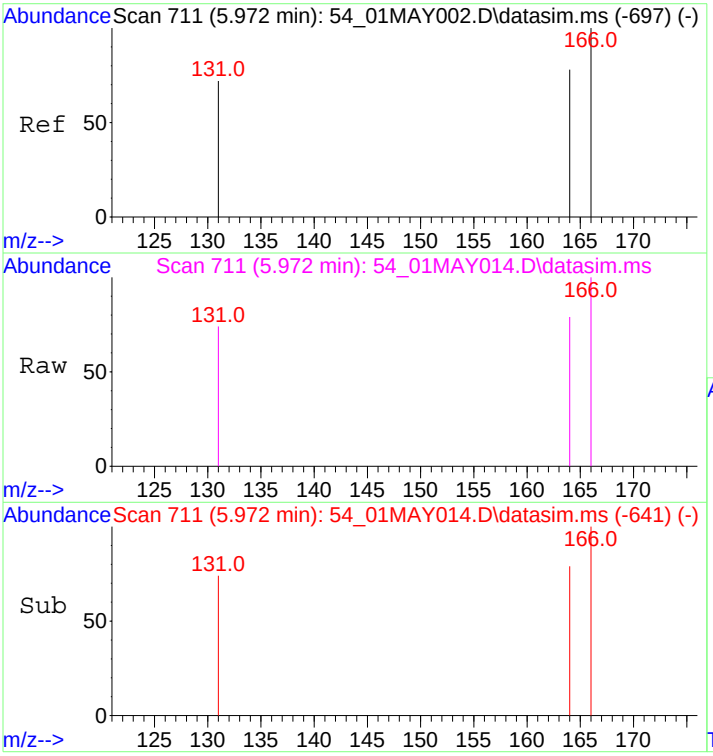


#13
Toluene
Concen: 13.88 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 91 Resp: 10201

Ion	Ratio	Lower	Upper
91	100		
92	60.0	47.8	71.8

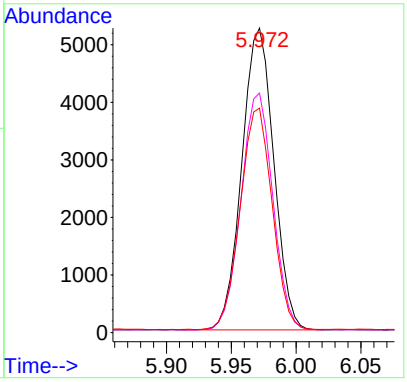


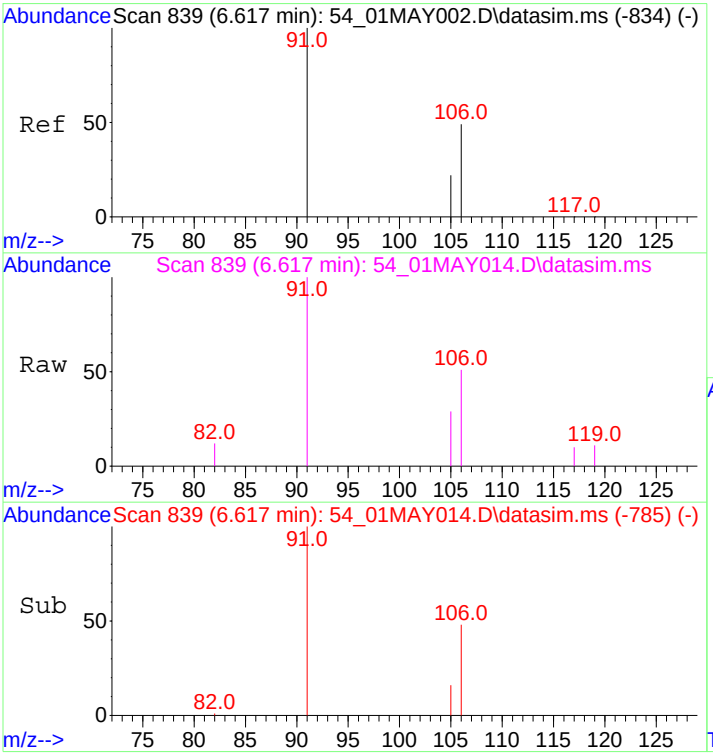


#14
Tetrachloroethene
Concen: 21.44 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion:166 Resp: 8996

Ion	Ratio	Lower	Upper
166	100		
164	78.3	62.6	94.0
131	73.5	58.5	87.7

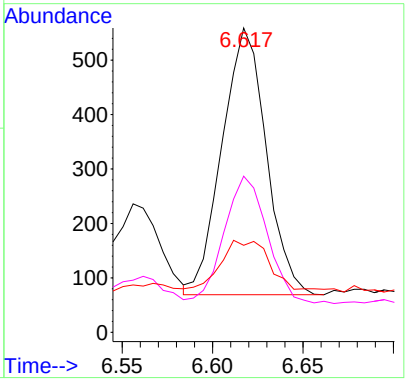


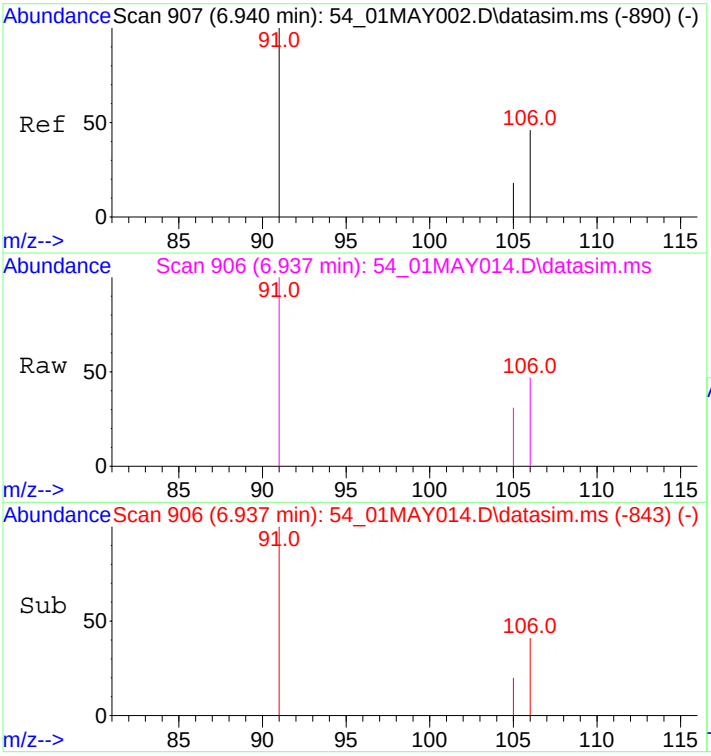


#16
m,p-Xylene
Concen: 1.16 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 91 Resp: 832

Ion	Ratio	Lower	Upper
91	100		
106	47.1	43.1	64.7
105	3.6	18.3	27.5#

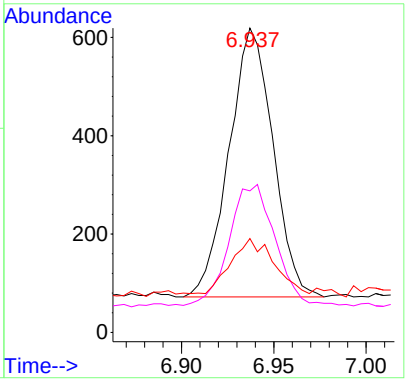




#17
o-Xylene
Concen: 1.25 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 01MAY014.D
Acq: 1 May 2014 4:17 pm

Tgt Ion: 91 Resp: 907

Ion	Ratio	Lower	Upper
91	100		
106	46.1	40.1	60.1
105	19.6	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY015.D
Acq On : 1 May 2014 4:28 pm
Operator : yhl
Sample : 02128 \ F6-006/117232
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:36:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

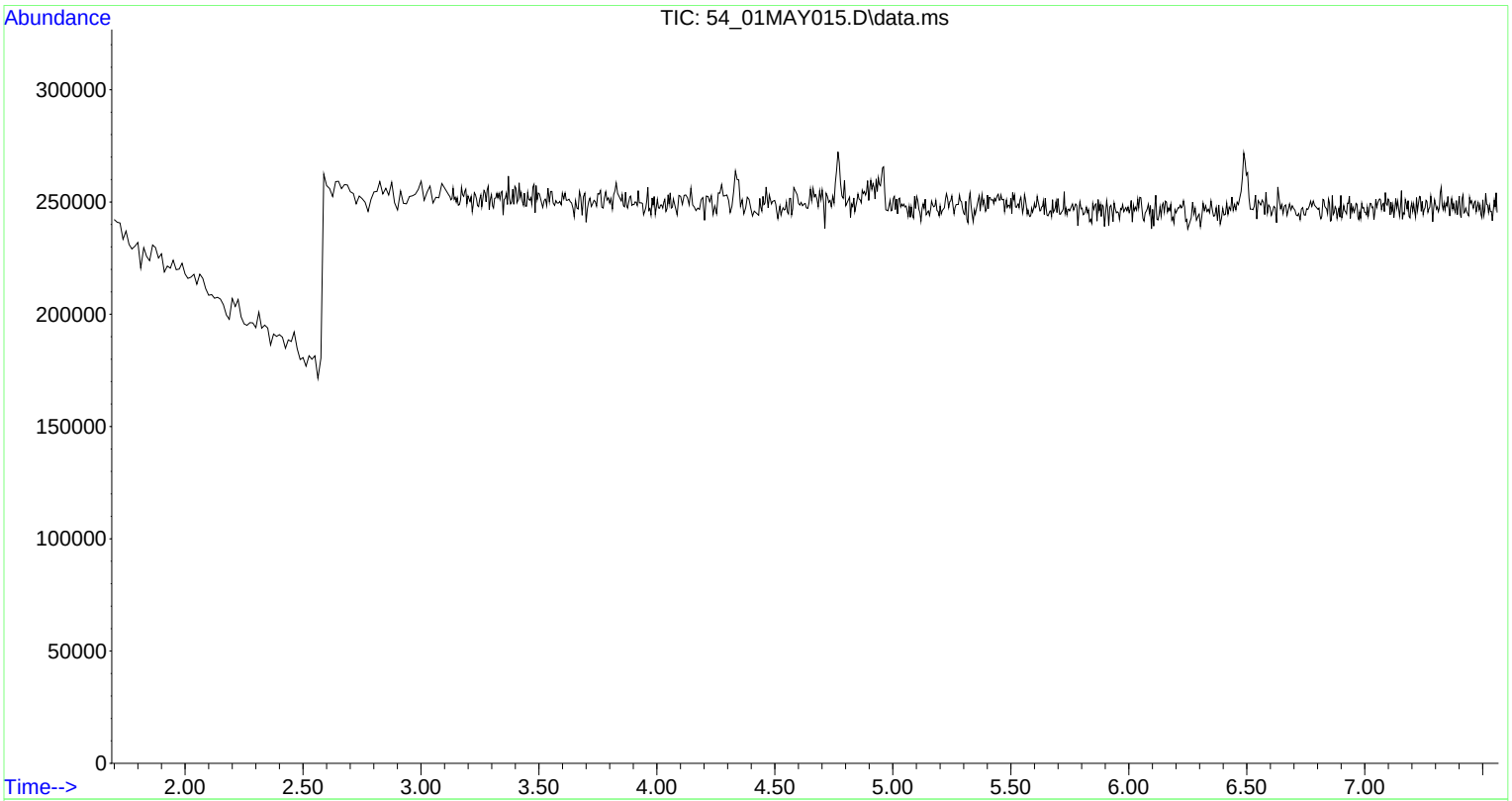
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	5495	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	14826	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	13612	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
7] cis-1,2-Dichloroethene	4.197	61	893	2.55	ppbv	# 74
11] Trichloroethene	4.954	130	3159	8.57	ppbv	98
13] Toluene	5.556	91	1953	2.39	ppbv	100
14] Tetrachloroethene	5.967	166	433	0.93	ppbv	98
17] o-Xylene	6.937	91	442	0.55	ppbv	97

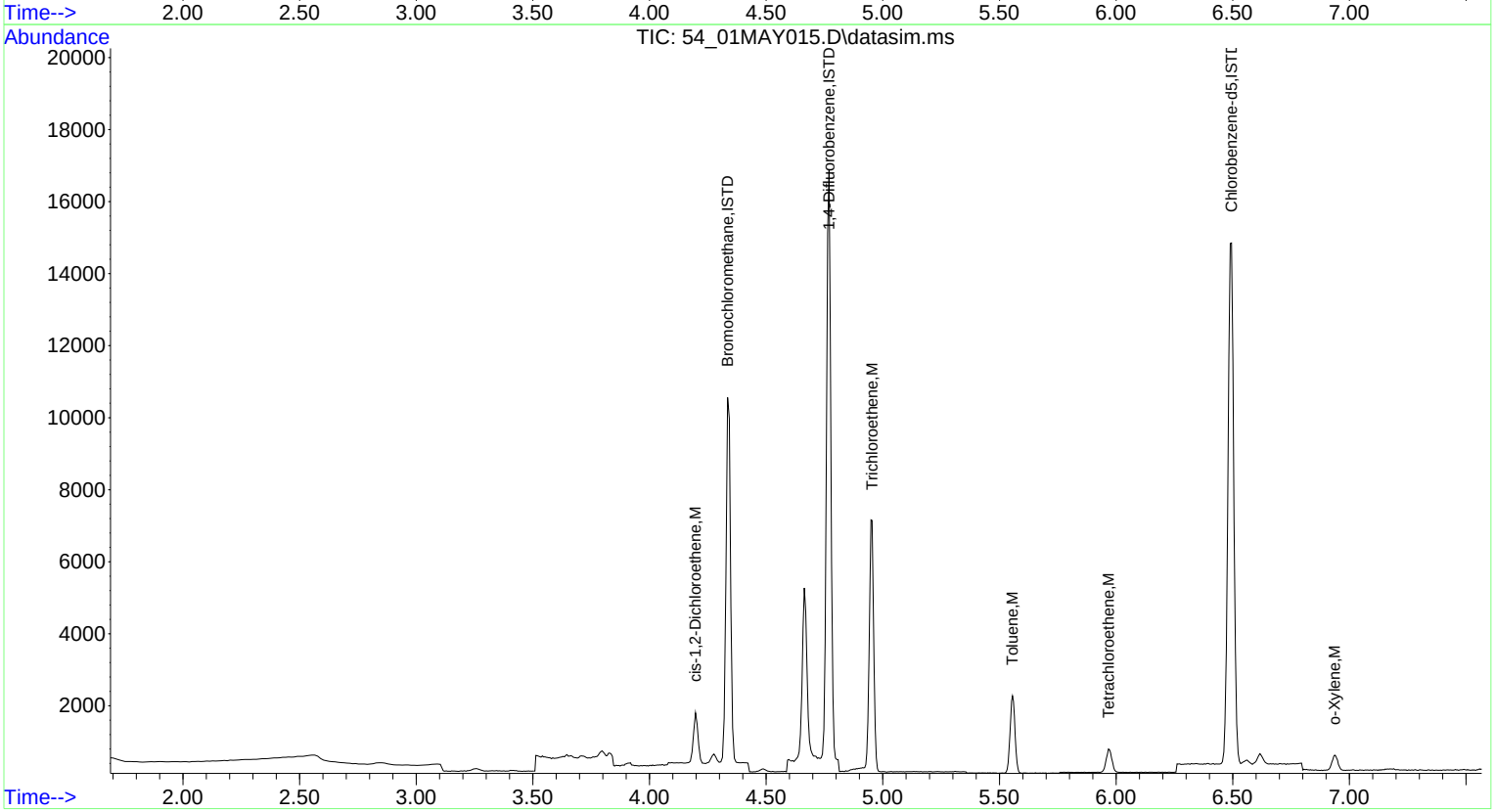
(#) = qualifier out of range (m) = manual integration (+) = signals summed

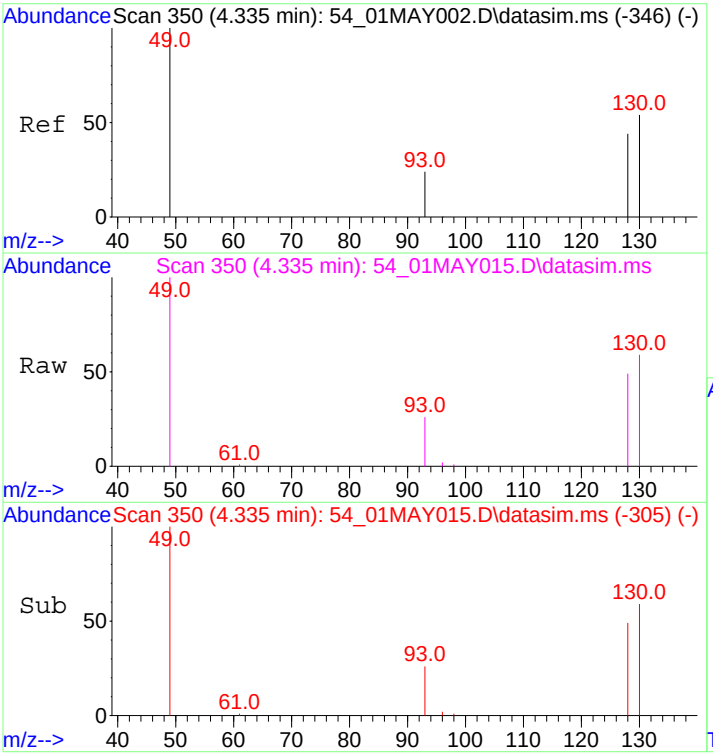
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY015.D
Acq On : 1 May 2014 4:28 pm
Operator : yhl
Sample : 02128 \ F6-006/117232
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:36:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



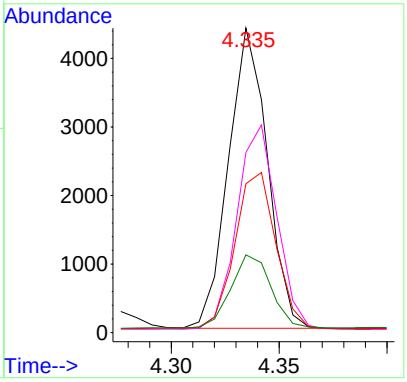


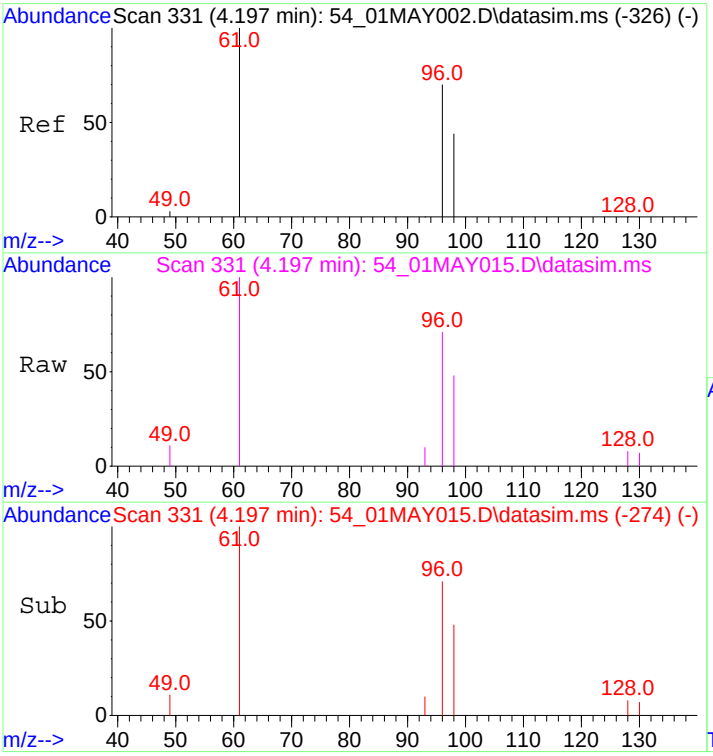


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY015.D
Acq: 1 May 2014 4:28 pm

Tgt Ion: 49 Resp: 5495

Ion	Ratio	Lower	Upper
49	100		
130	70.1	87.2	130.8#
128	54.4	68.0	102.0#
93	25.2	29.3	43.9#

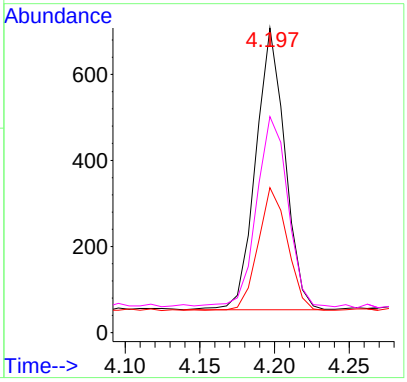


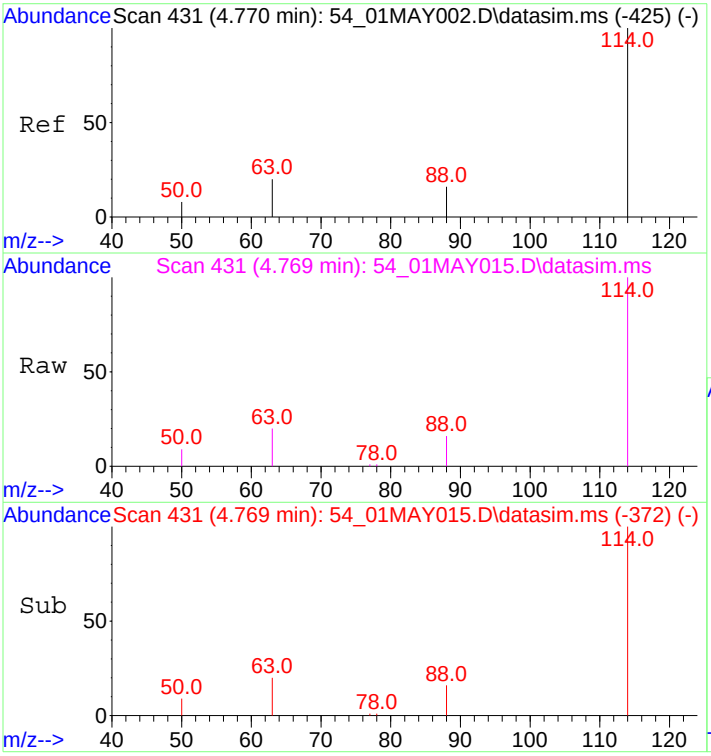


#7
cis-1,2-Dichloroethene
Concen: 2.55 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_01MAY015.D
Acq: 1 May 2014 4:28 pm

Tgt Ion: 61 Resp: 893

Ion	Ratio	Lower	Upper
61	100		
96	71.7	78.5	117.7#
98	43.3	50.6	76.0#

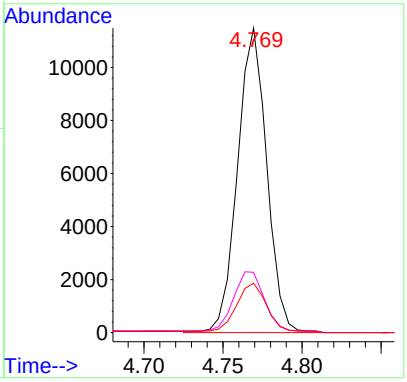


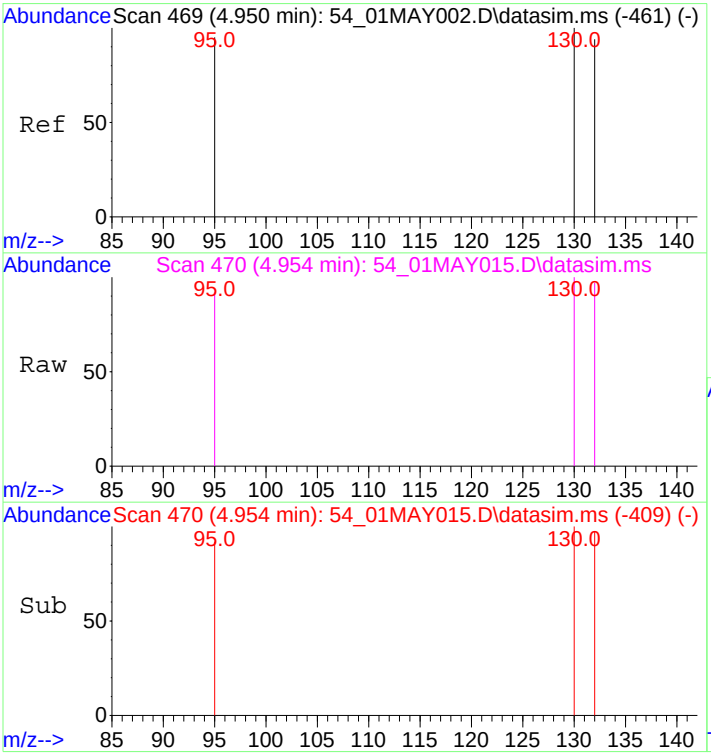


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 01MAY015.D
Acq: 1 May 2014 4:28 pm

Tgt Ion:114 Resp: 14826

Ion	Ratio	Lower	Upper
114	100		
63	20.1	12.0	18.0#
88	15.7	11.8	17.8

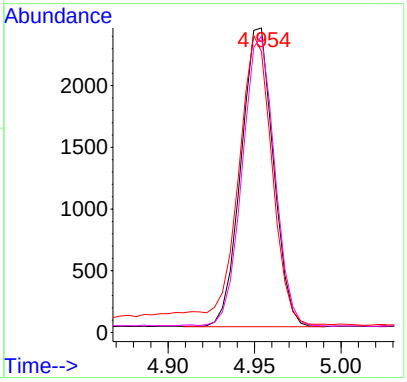


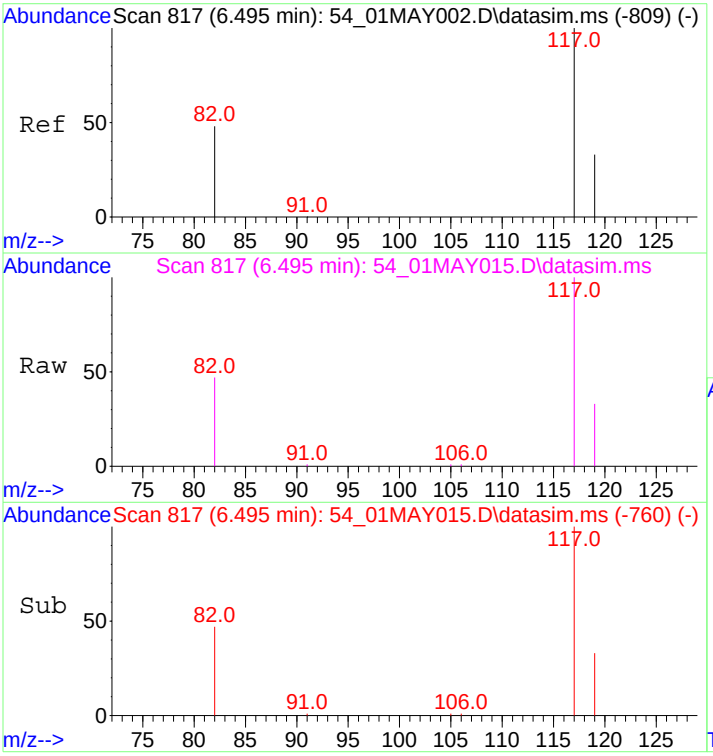


#11
Trichloroethene
Concen: 8.57 ppbv
RT: 4.954 min Scan# 470
Delta R.T. 0.004 min
Lab File: 54_01MAY015.D
Acq: 1 May 2014 4:28 pm

Tgt Ion:130 Resp: 3159

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	98.2	76.5	114.7

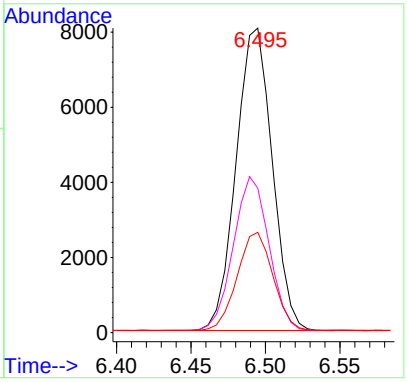


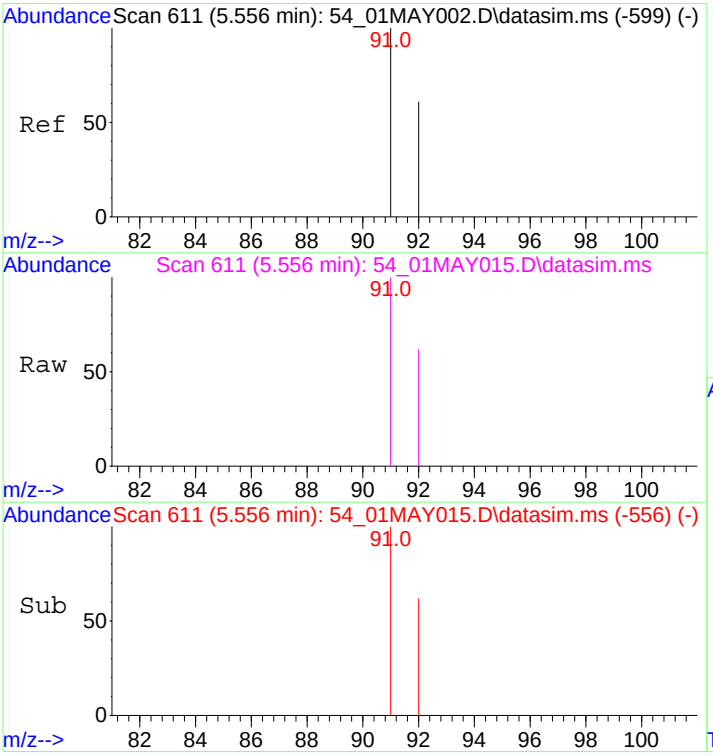


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 01MAY015.D
Acq: 1 May 2014 4:28 pm

Tgt Ion:117 Resp: 13612

Ion	Ratio	Lower	Upper
117	100		
82	49.8	38.0	57.0
119	32.2	27.0	40.4

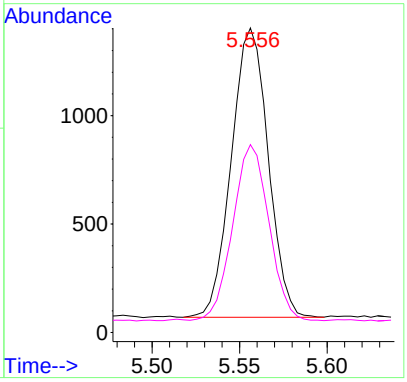


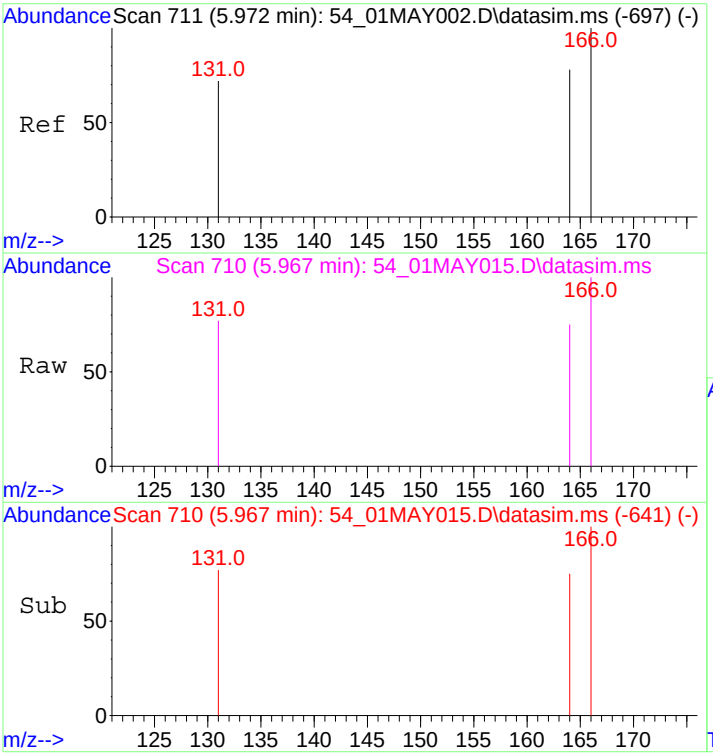


#13
Toluene
Concen: 2.39 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_01MAY015.D
Acq: 1 May 2014 4:28 pm

Tgt Ion: 91 Resp: 1953

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8

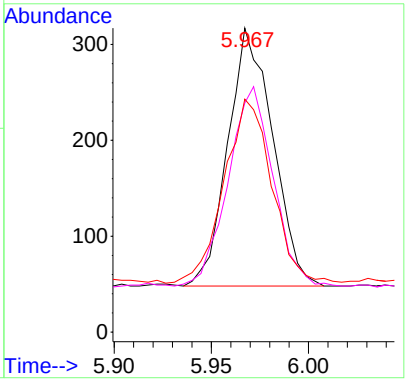


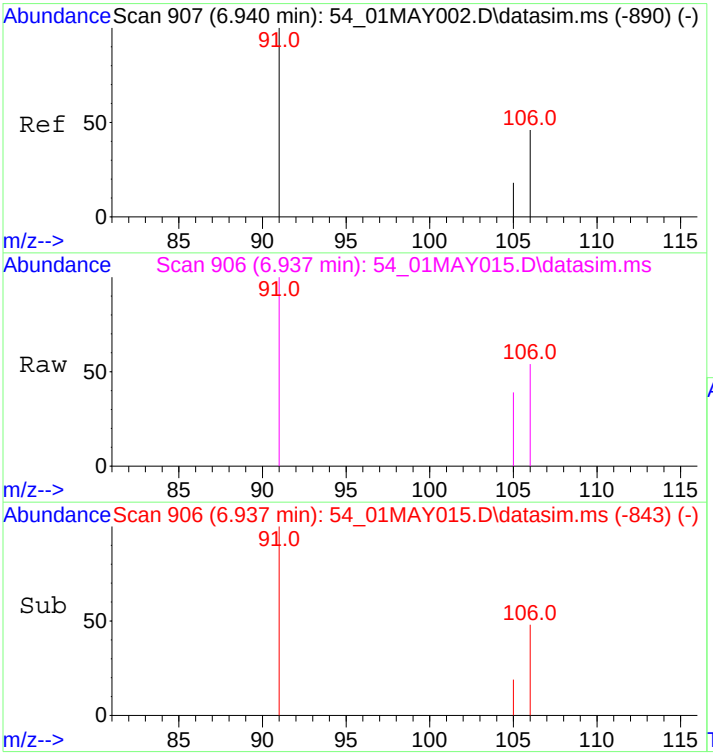


#14
Tetrachloroethene
Concen: 0.93 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 01MAY015.D
Acq: 1 May 2014 4:28 pm

Tgt Ion:166 Resp: 433

Ion	Ratio	Lower	Upper
166	100		
164	76.9	62.6	94.0
131	75.8	58.5	87.7

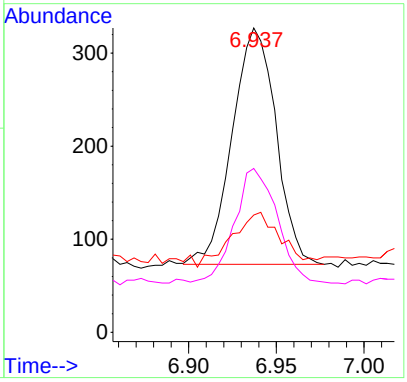




#17
o-Xylene
Concen: 0.55 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54_01MAY015.D
Acq: 1 May 2014 4:28 pm

Tgt Ion: 91 Resp: 442

Ion	Ratio	Lower	Upper
91	100		
106	48.2	40.1	60.1
105	18.3	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY016.D
Acq On : 1 May 2014 4:40 pm
Operator : yhl
Sample : 02129 \ F6-010
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:47:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

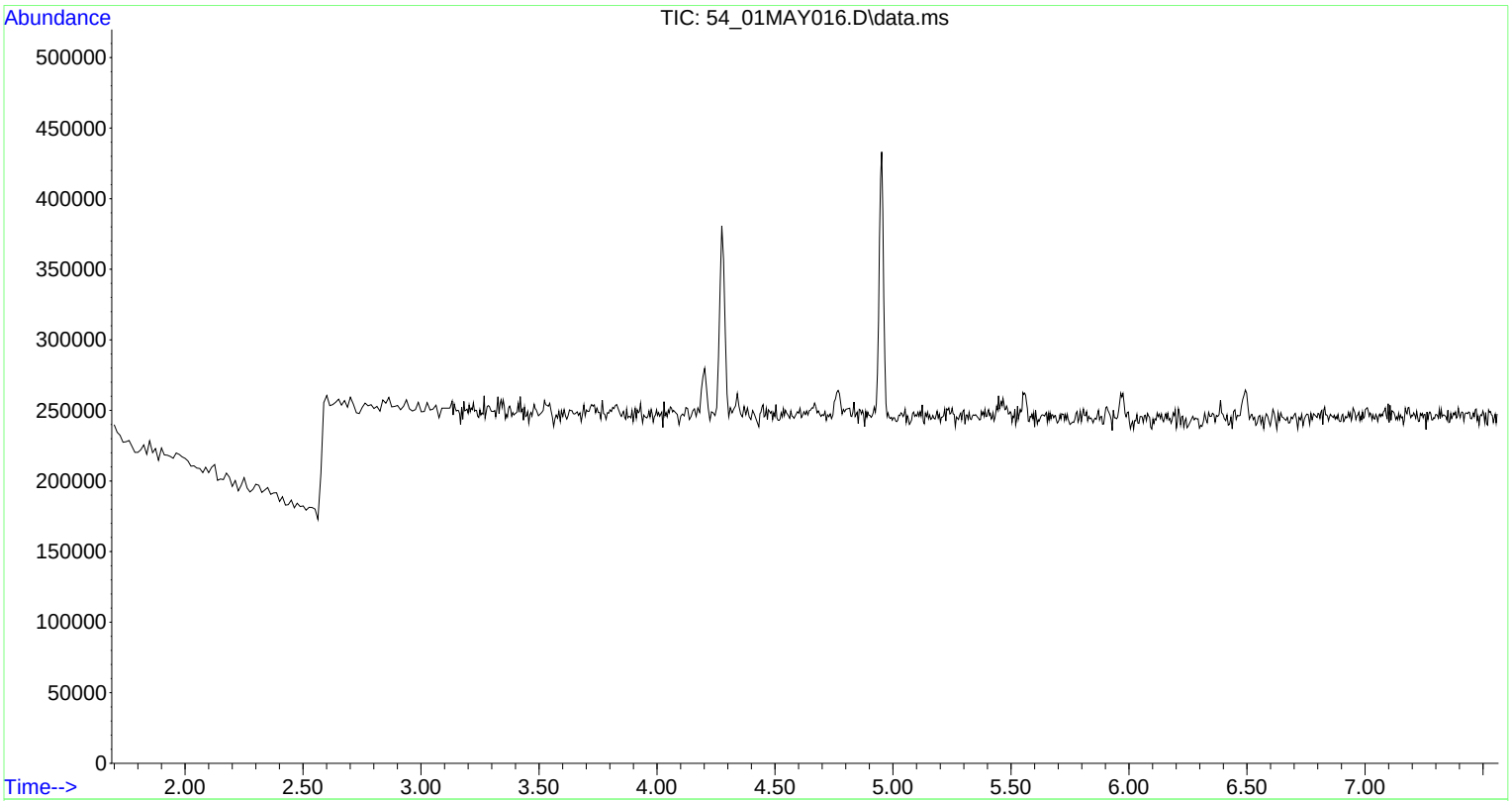
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4898	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	13230	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	12099	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.915	62	323	1.73	ppbv #	47
3] 1,1-Dichloroethene	3.251	61	2018	5.32	ppbv #	72
5] trans-1,2-Dichloroethene	3.709	61	1237	3.70	ppbv #	82
6] 1,1-Dichloroethane	3.910	63	1441	3.61	ppbv #	85
7] cis-1,2-Dichloroethene	4.197	61	15583	49.91	ppbv #	75
8] 1,1,1-Trichloroethane	4.488	97	1089	2.15	ppbv	97
11] Trichloroethene	4.950	130	53008	161.10	ppbv	100
13] Toluene	5.556	91	11499	15.85	ppbv	100
14] Tetrachloroethene	5.972	166	7139	17.23	ppbv	99
16] m,p-Xylene	6.617	91	424	0.60	ppbv	88

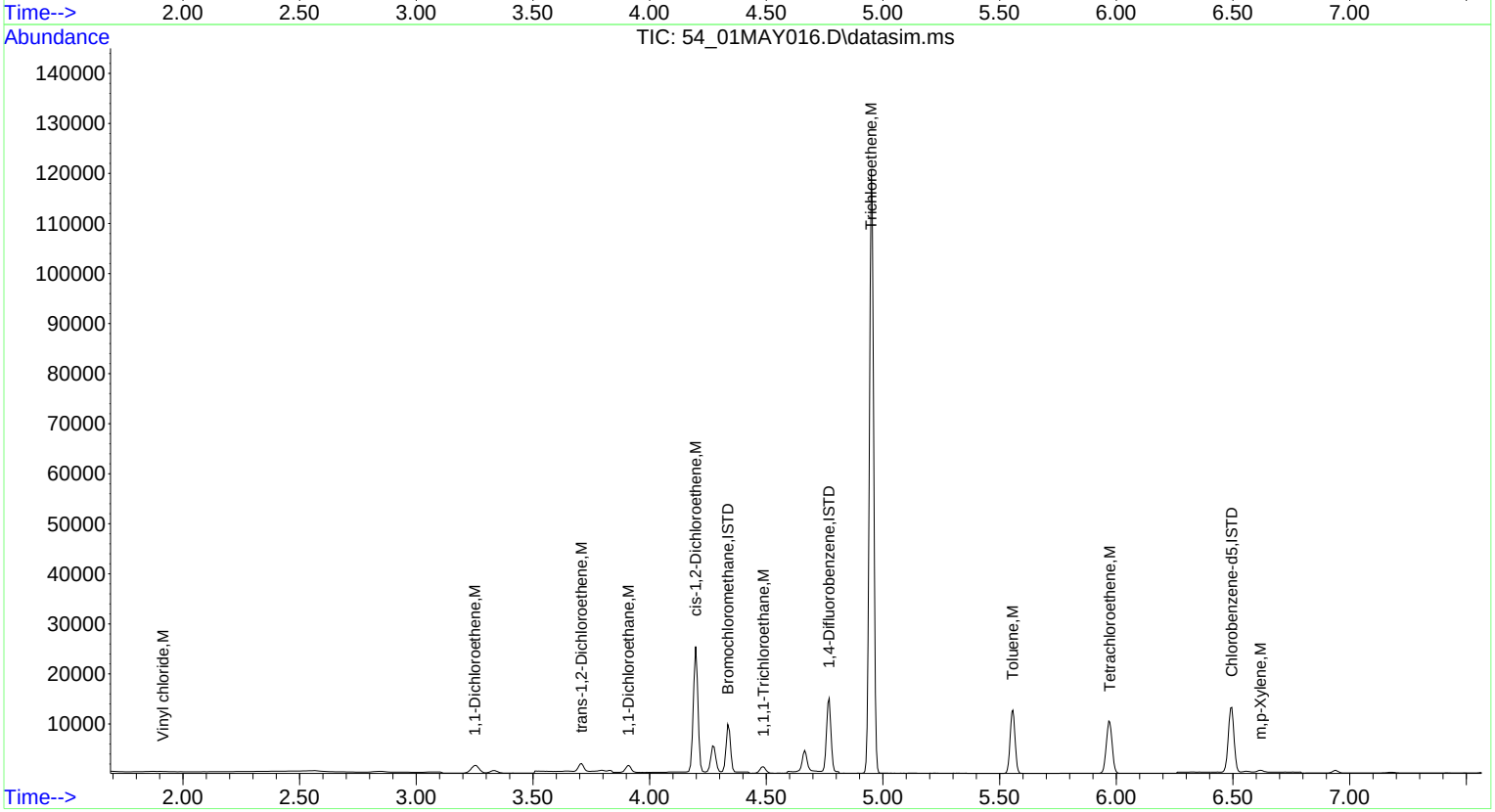
(#) = qualifier out of range (m) = manual integration (+) = signals summed

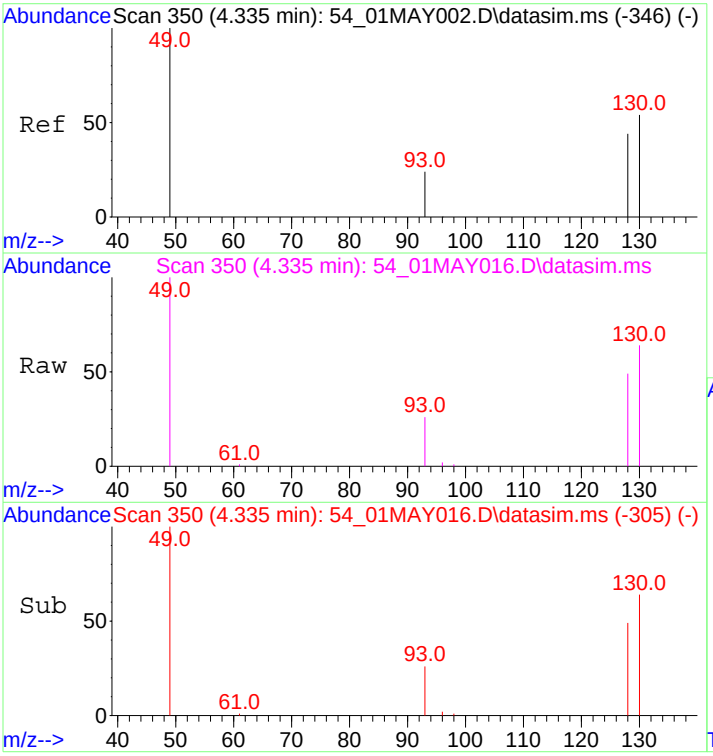
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY016.D
Acq On : 1 May 2014 4:40 pm
Operator : yhl
Sample : 02129 \ F6-010
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:47:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



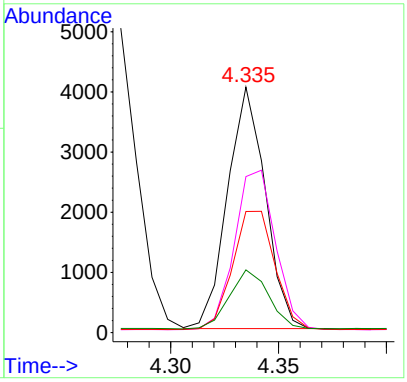


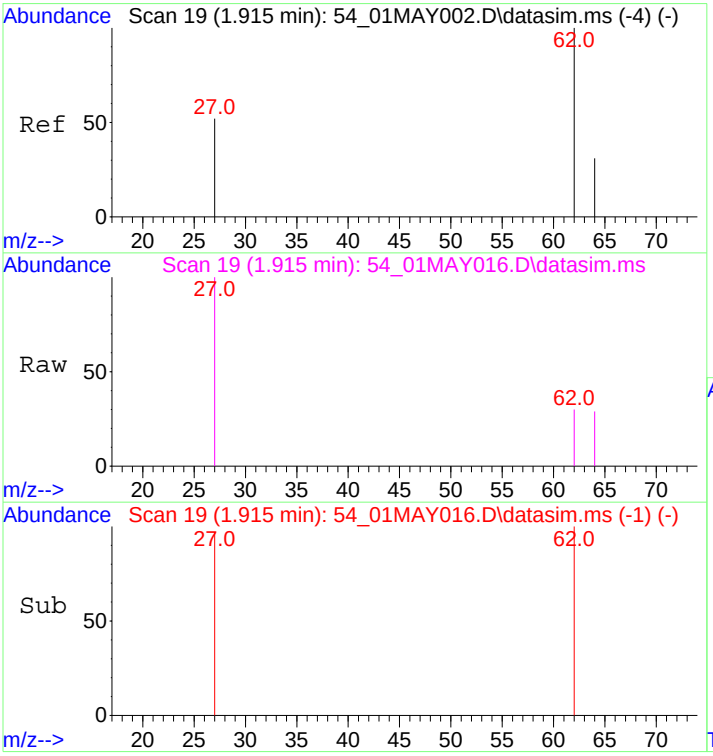


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 49 Resp: 4898

Ion	Ratio	Lower	Upper
49	100		
130	71.6	87.2	130.8#
128	54.9	68.0	102.0#
93	25.4	29.3	43.9#

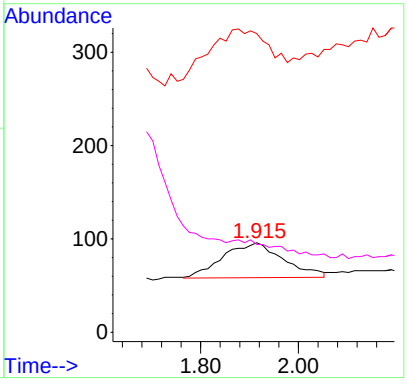


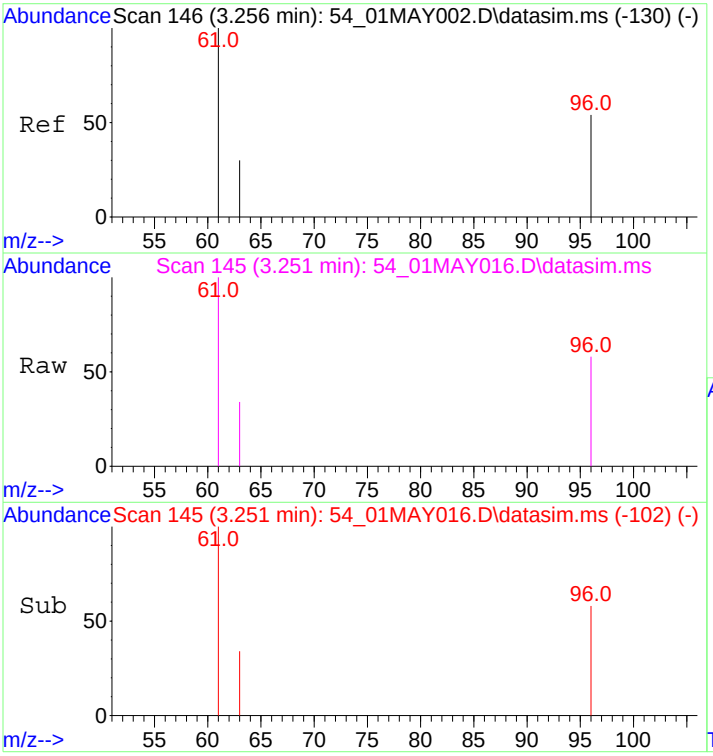


#2
Vinyl chloride
Concen: 1.73 ppbv
RT: 1.915 min Scan# 19
Delta R.T. 0.000 min
Lab File: 54_01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 62 Resp: 323

Ion	Ratio	Lower	Upper
62	100		
64	0.0	26.8	40.2#
27	0.0	16.1	24.1#

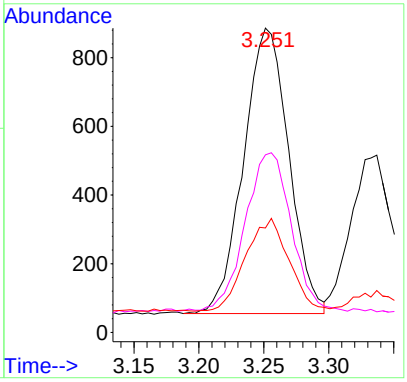


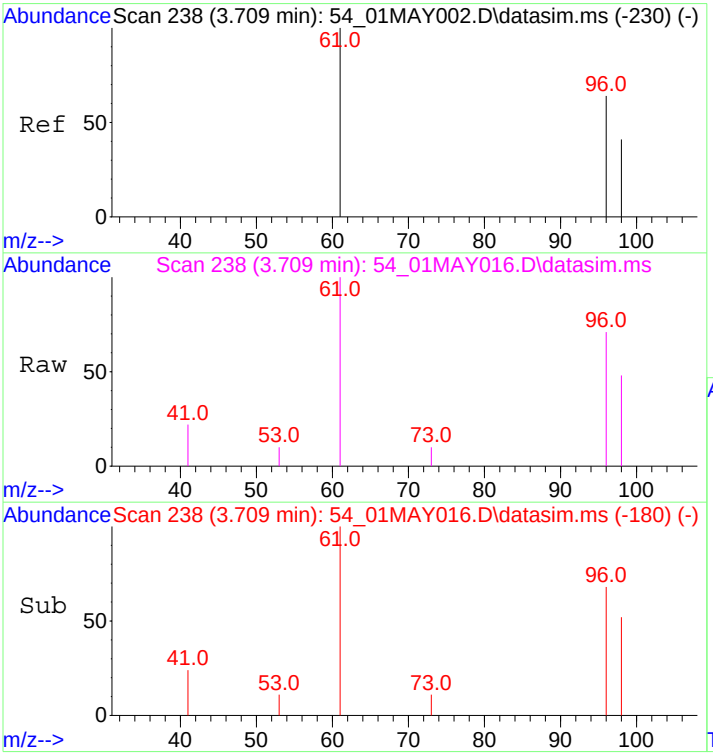


#3
1,1-Dichloroethene
Concen: 5.32 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.004 min
Lab File: 54 01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 61 Resp: 2018

Ion	Ratio	Lower	Upper
61	100		
96	56.1	63.4	95.2#
63	50.2	26.2	39.2#

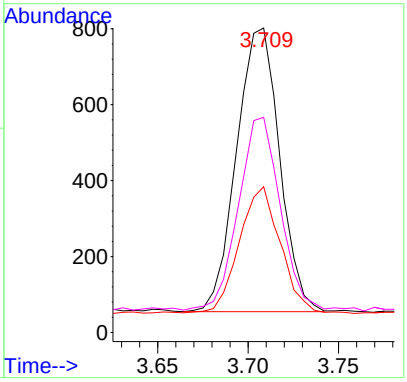


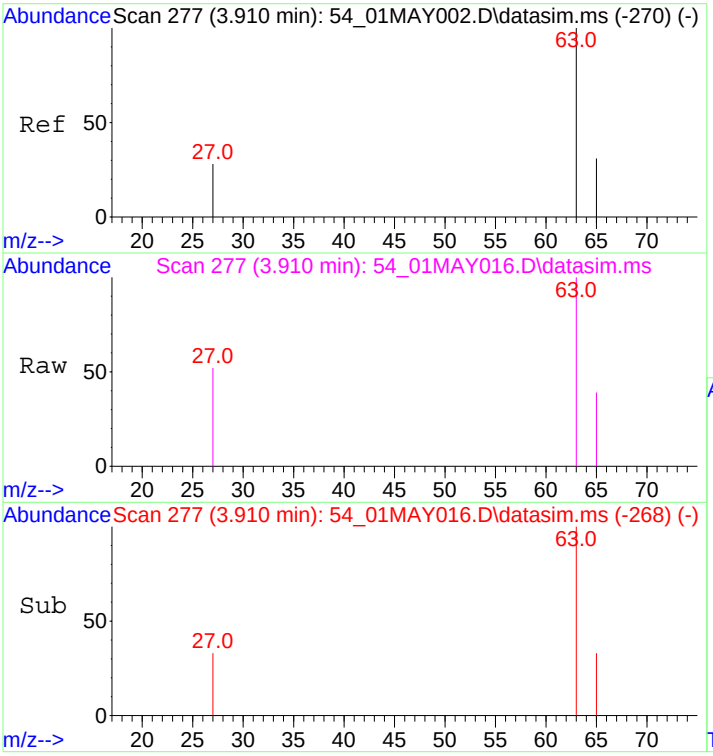


#5
trans-1,2-Dichloroethene
Concen: 3.70 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.000 min
Lab File: 54_01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 61 Resp: 1237

Ion	Ratio	Lower	Upper
61	100		
96	70.6	71.4	107.0#
98	46.4	45.8	68.8

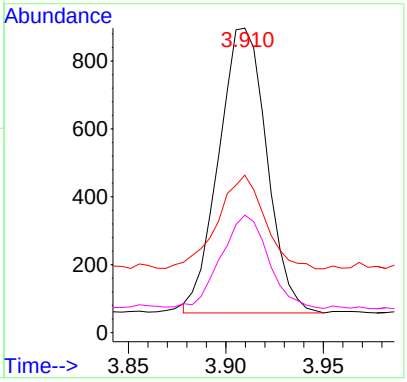


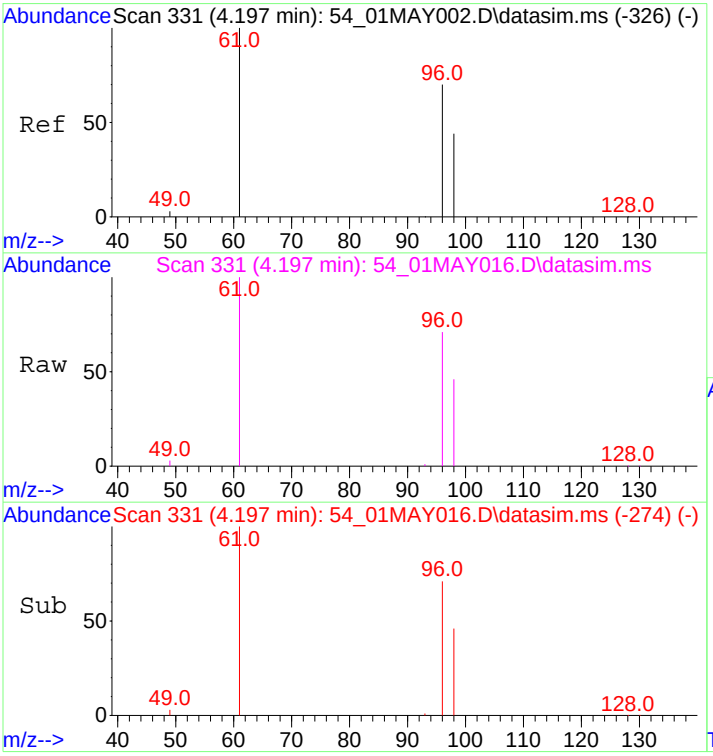


#6
1,1-Dichloroethane
Concen: 3.61 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.000 min
Lab File: 54 01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 63 Resp: 1441

Ion	Ratio	Lower	Upper
63	100		
65	31.7	26.1	39.1
27	31.6	10.2	15.2#

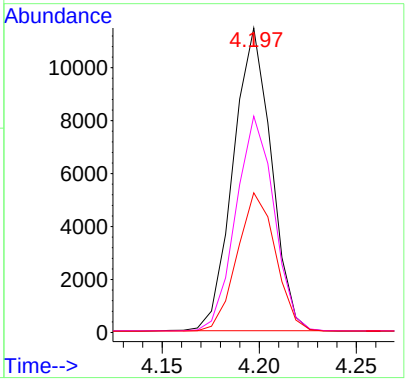


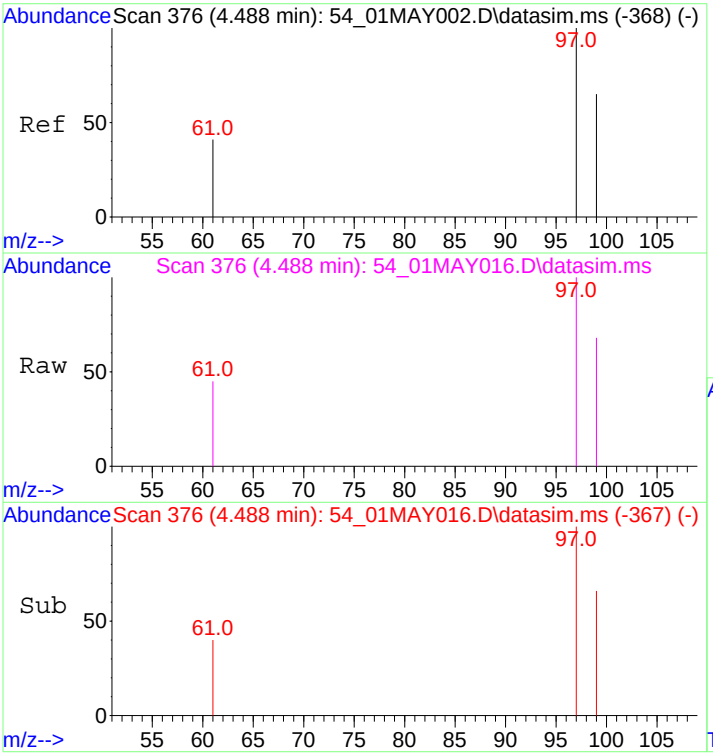


#7
cis-1,2-Dichloroethene
Concen: 49.91 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 61 Resp: 15583

Ion	Ratio	Lower	Upper
61	100		
96	71.1	78.5	117.7#
98	46.1	50.6	76.0#

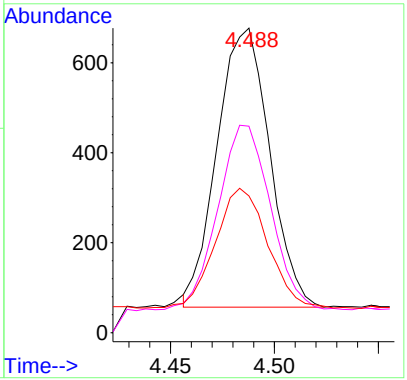


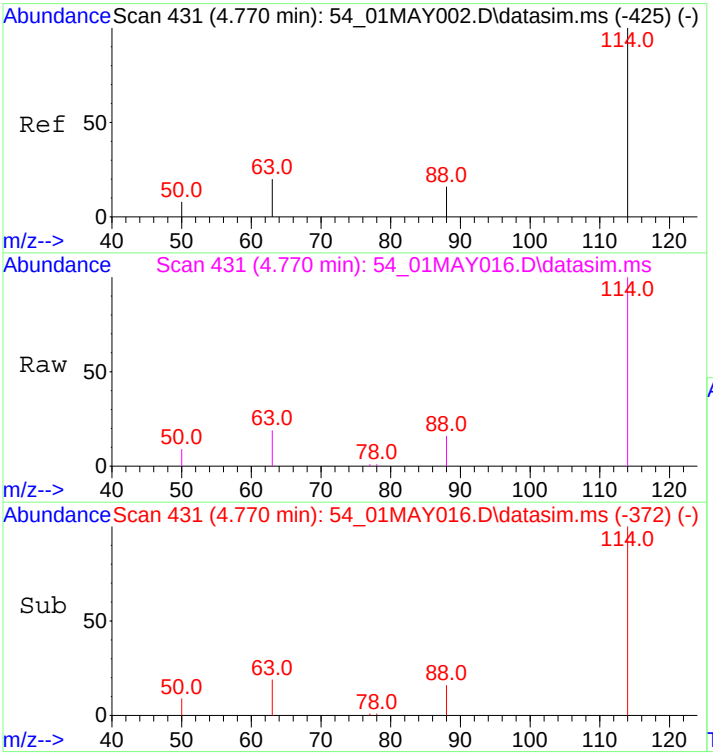


#8
1,1,1-Trichloroethane
Concen: 2.15 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.000 min
Lab File: 54 01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 97 Resp: 1089

Ion	Ratio	Lower	Upper
97	100		
99	65.2	52.1	78.1
61	42.2	30.2	45.4

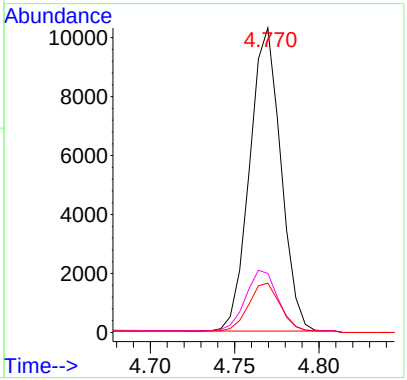


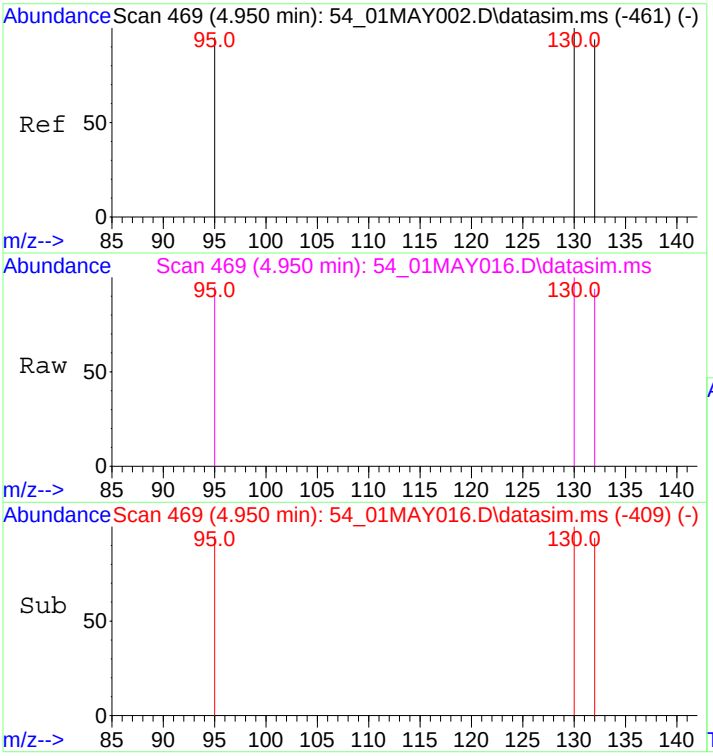


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion:114 Resp: 13230

Ion	Ratio	Lower	Upper
114	100		
63	20.3	12.0	18.0#
88	15.9	11.8	17.8

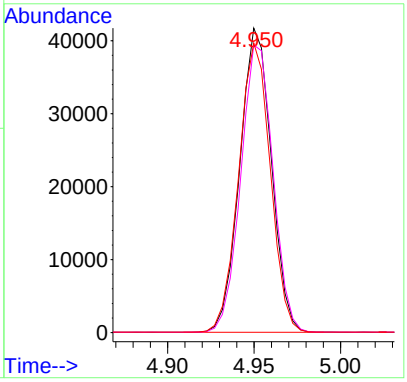


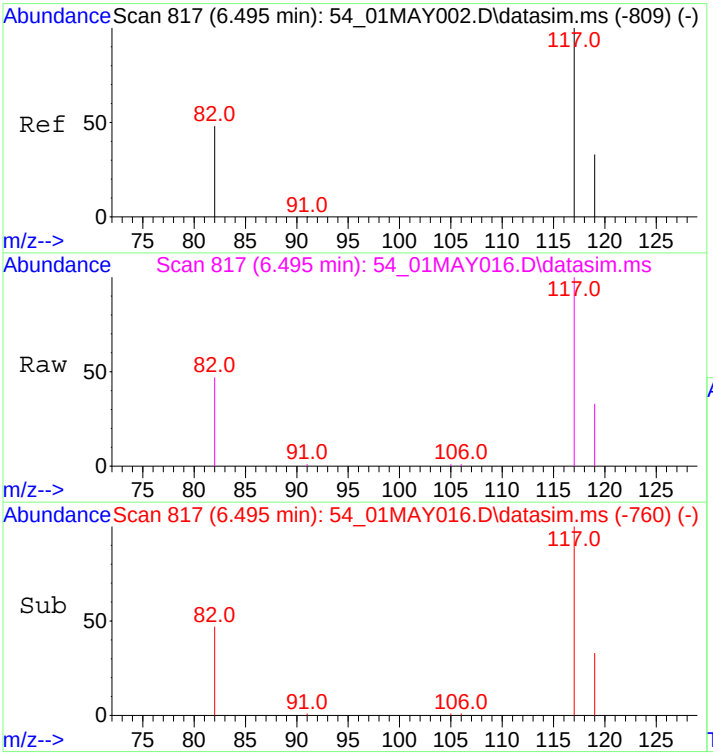


#11
Trichloroethene
Concen: 161.10 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion:130 Resp: 53008

Ion	Ratio	Lower	Upper
130	100		
132	96.3	76.9	115.3
95	95.2	76.5	114.7

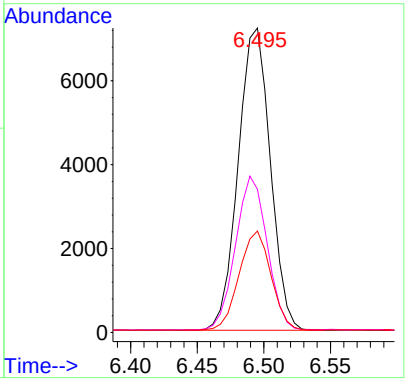


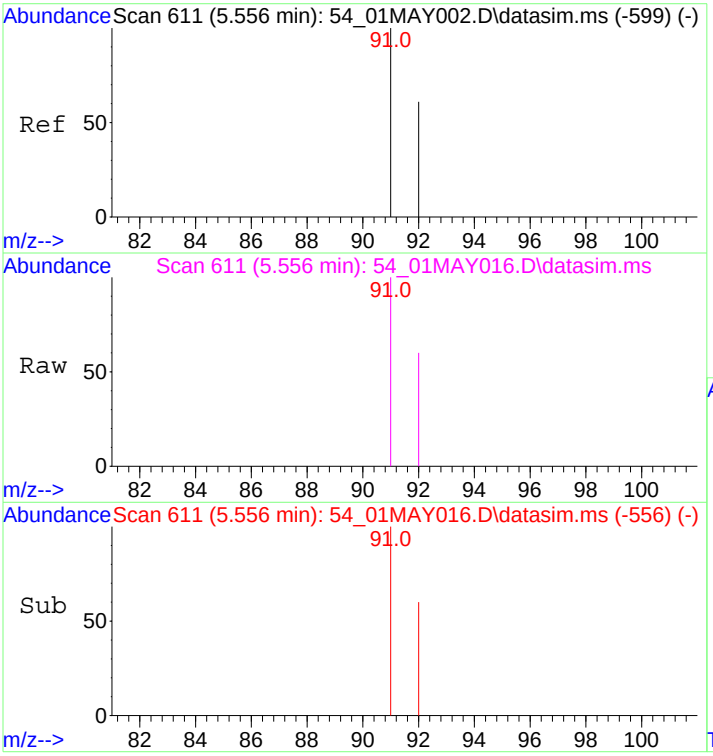


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54_01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion:117 Resp: 12099

Ion	Ratio	Lower	Upper
117	100		
82	50.0	38.0	57.0
119	32.3	27.0	40.4

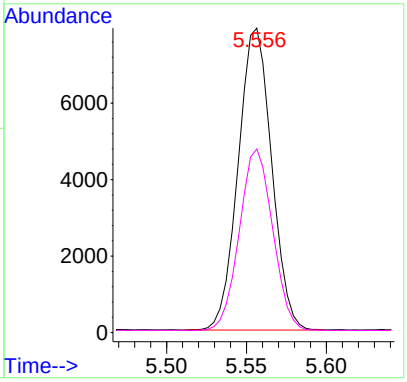


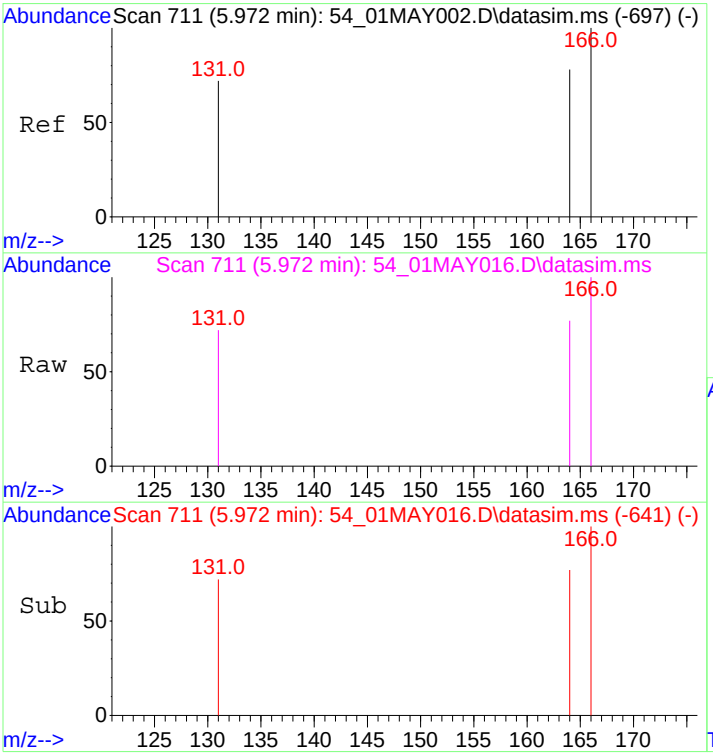


#13
Toluene
Concen: 15.85 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 91 Resp: 11499

Ion	Ratio	Lower	Upper
91	100		
92	59.9	47.8	71.8

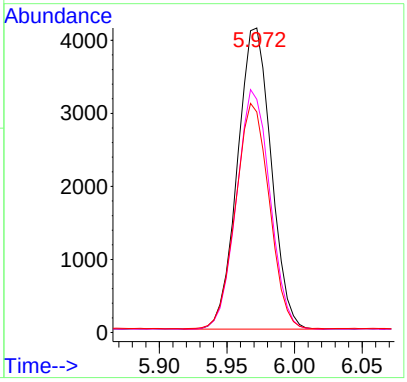


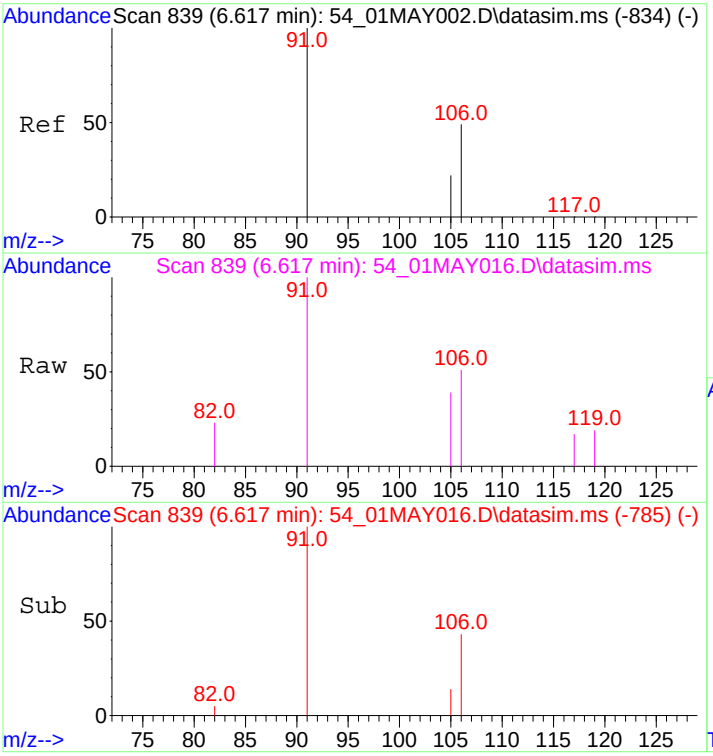


#14
Tetrachloroethene
Concen: 17.23 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion:166 Resp: 7139

Ion	Ratio	Lower	Upper
166	100		
164	78.9	62.6	94.0
131	74.7	58.5	87.7

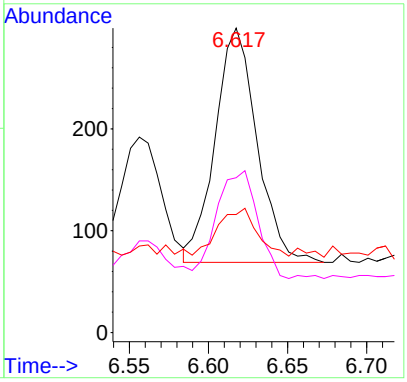




#16
m,p-Xylene
Concen: 0.60 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 01MAY016.D
Acq: 1 May 2014 4:40 pm

Tgt Ion: 91 Resp: 424

Ion	Ratio	Lower	Upper
91	100		
106	44.8	43.1	64.7
105	18.6	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY017.D
Acq On : 1 May 2014 4:52 pm
Operator : yhl
Sample : 02130 \ F6-021
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:00:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

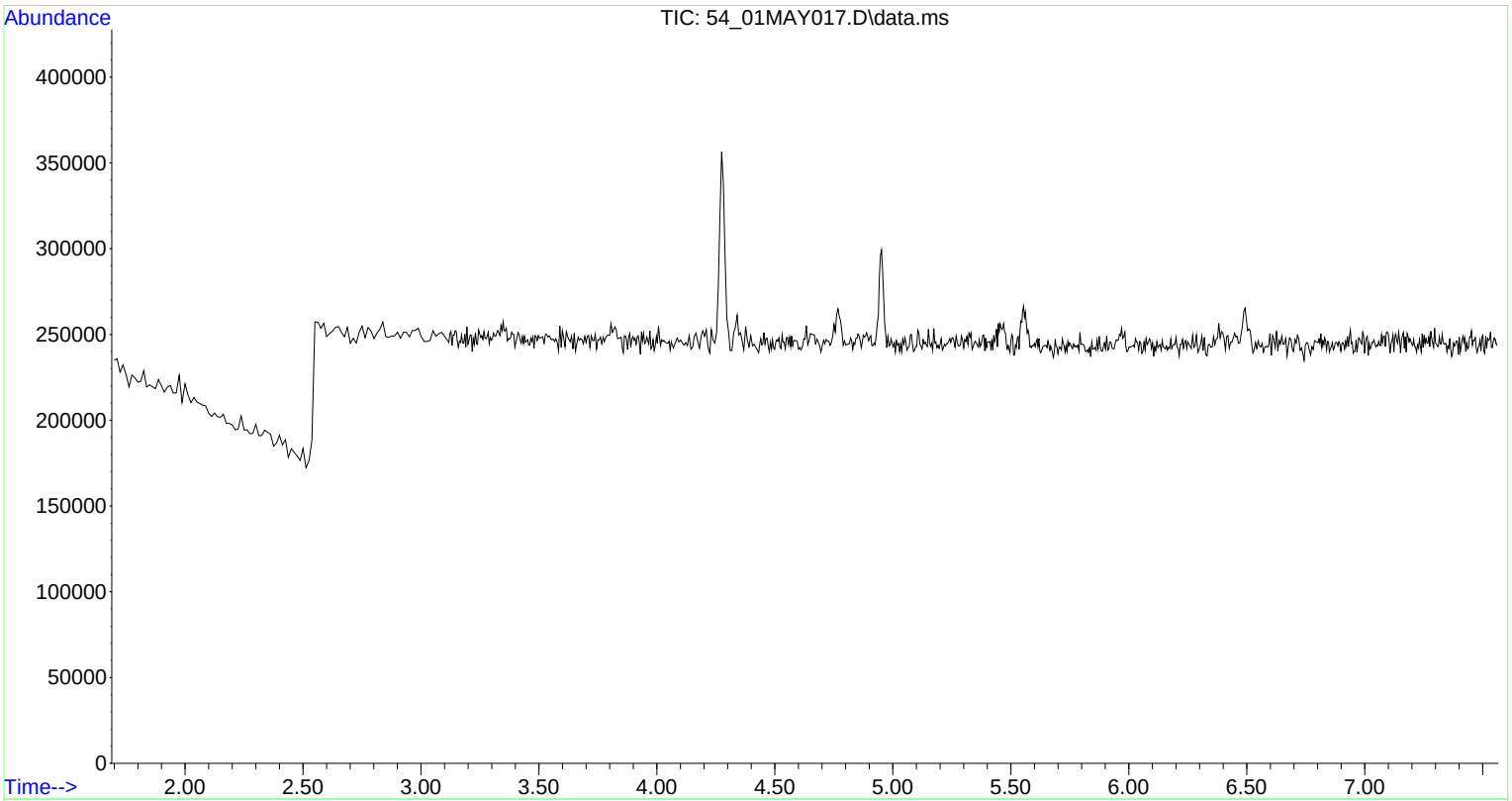
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4627	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	12236	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	11230	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.255	61	545	1.52	ppbv	# 51
5] trans-1,2-Dichloroethene	3.707	61	306m	0.97	ppbv	
6] 1,1-Dichloroethane	3.910	63	337	0.89	ppbv	# 92
7] cis-1,2-Dichloroethene	4.197	61	3241	10.99	ppbv	# 74
8] 1,1,1-Trichloroethane	4.483	97	462	0.97	ppbv	95
11] Trichloroethene	4.949	130	14345	47.14	ppbv	99
13] Toluene	5.556	91	14549	21.61	ppbv	100
14] Tetrachloroethene	5.972	166	2552	6.64	ppbv	98
16] m,p-Xylene	6.617	91	553	0.84	ppbv	94
17] o-Xylene	6.937	91	558	0.84	ppbv	93

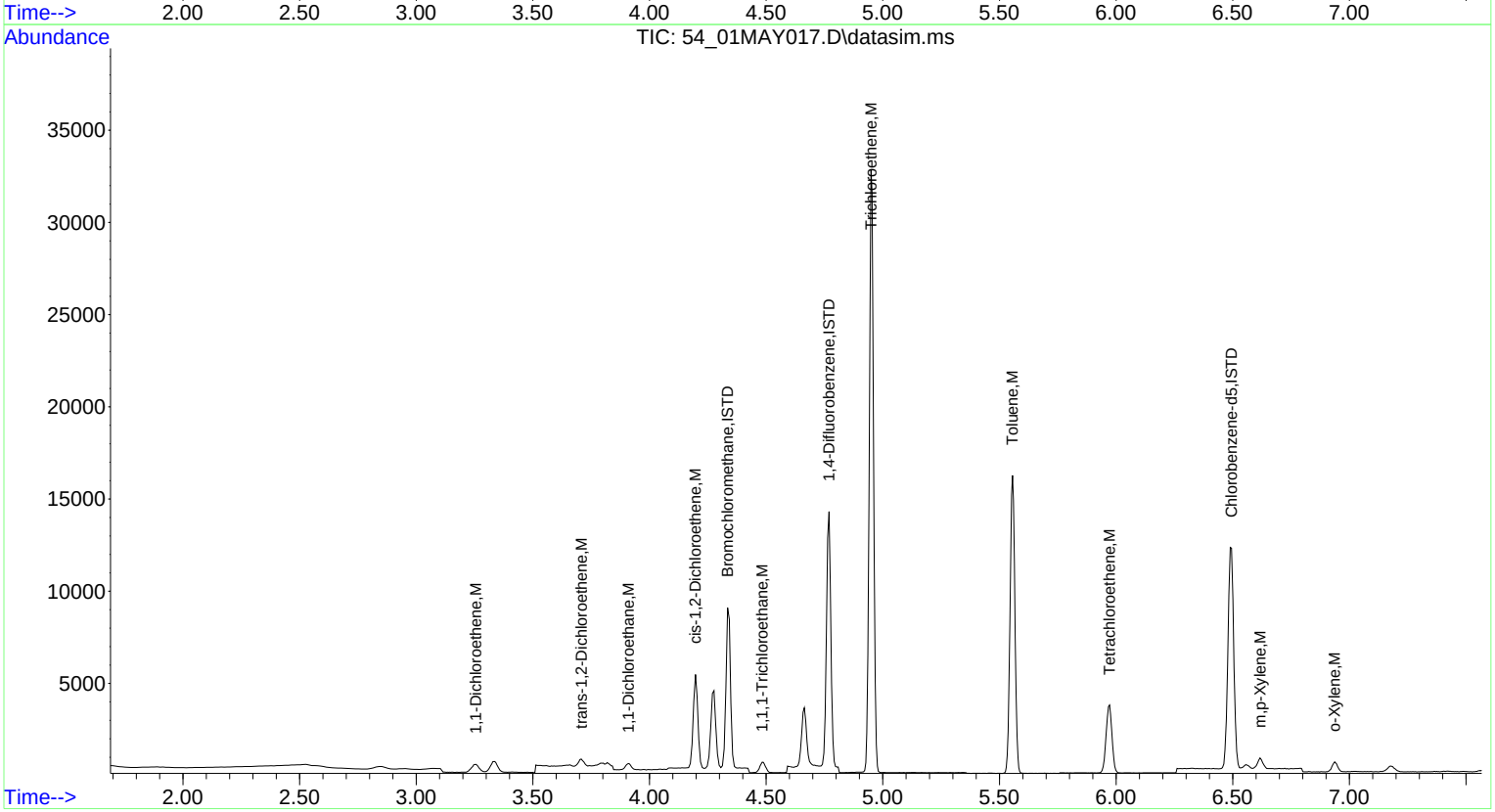
(#) = qualifier out of range (m) = manual integration (+) = signals summed

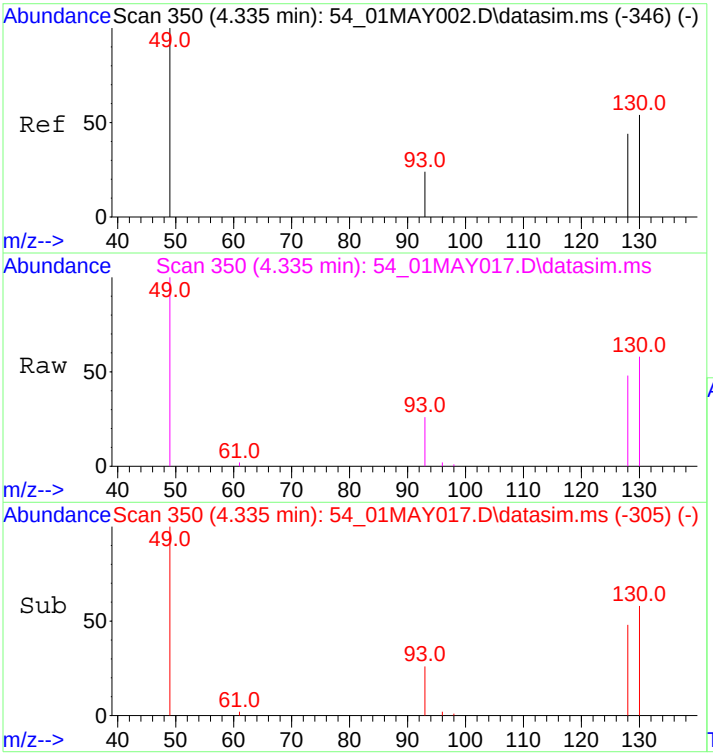
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY017.D
Acq On : 1 May 2014 4:52 pm
Operator : yhl
Sample : 02130 \ F6-021
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:00:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



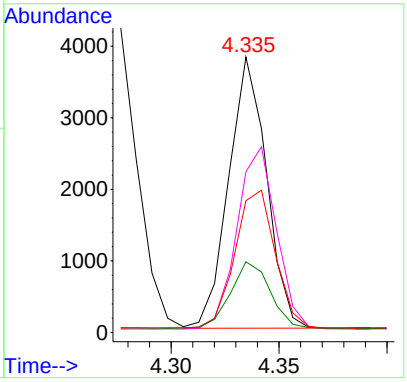


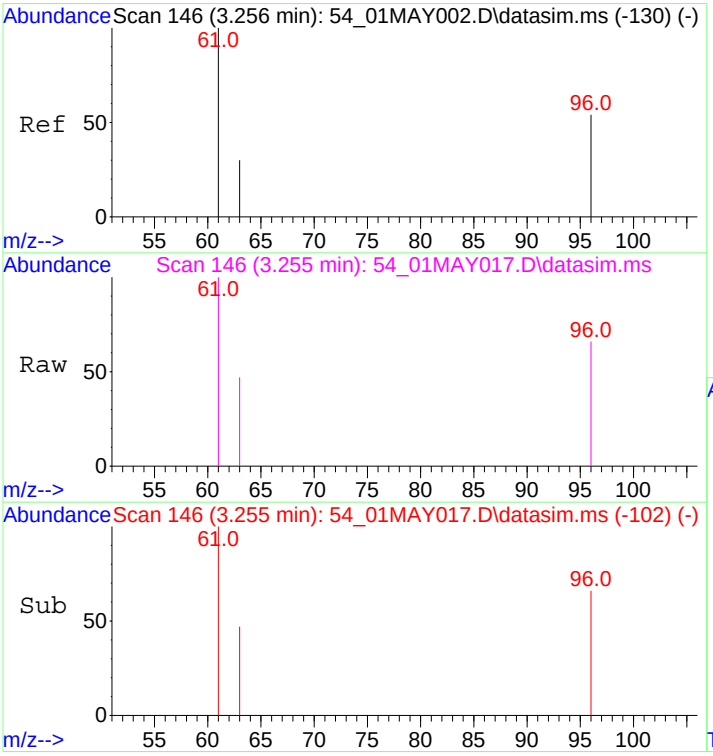


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 49 Resp: 4627

Ion	Ratio	Lower	Upper
49	100		
130	70.0	87.2	130.8#
128	54.3	68.0	102.0#
93	25.6	29.3	43.9#

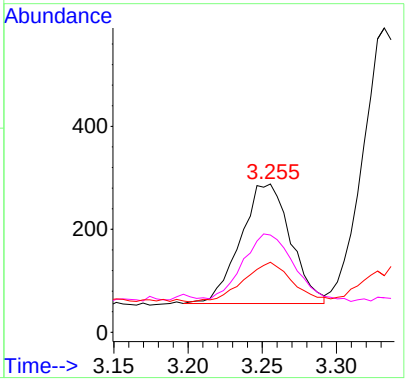


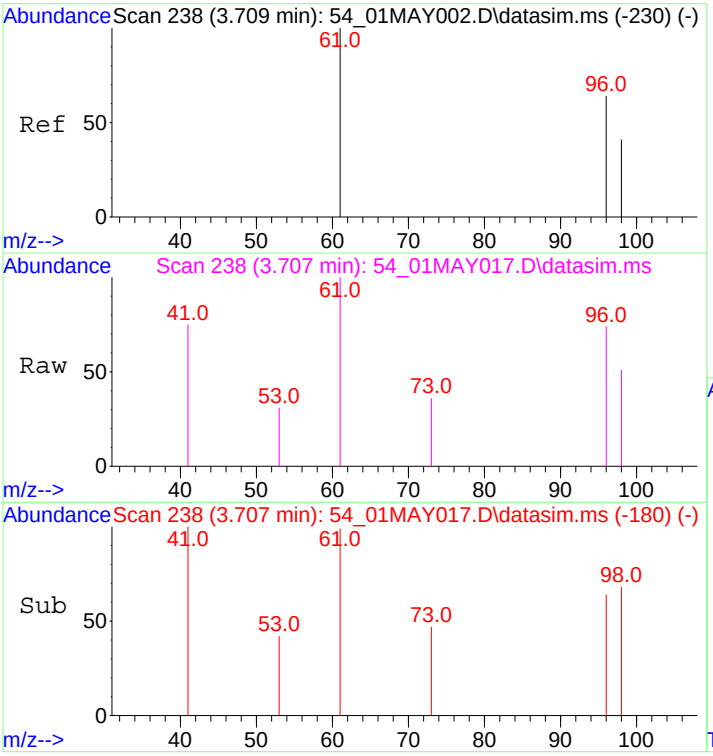


#3
1,1-Dichloroethene
Concen: 1.52 ppbv
RT: 3.255 min Scan# 146
Delta R.T. -0.000 min
Lab File: 54_01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 61 Resp: 545

Ion	Ratio	Lower	Upper
61	100		
96	58.0	63.4	95.2#
63	94.1	26.2	39.2#

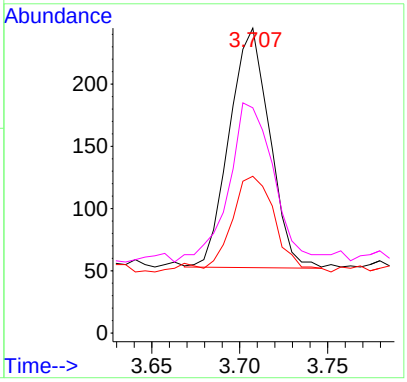


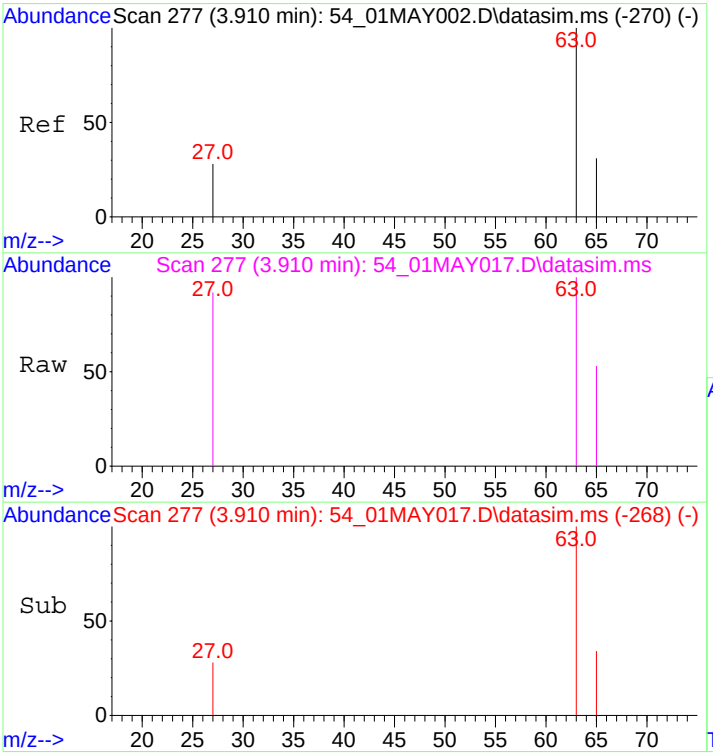


#5
trans-1,2-Dichloroethene
Concen: 0.97 ppbv m
RT: 3.707 min Scan# 238
Delta R.T. -0.001 min
Lab File: 54 01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 61 Resp: 306

Ion	Ratio	Lower	Upper
61	100		
96	73.2	71.4	107.0
98	64.1	45.8	68.8

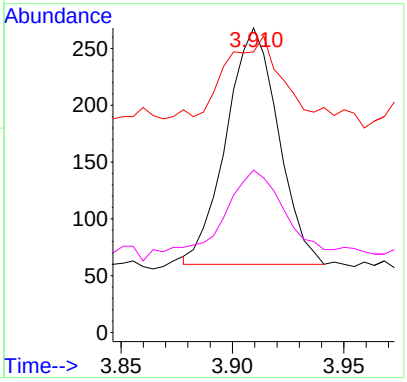




#6
1,1-Dichloroethane
Concen: 0.89 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 63 Resp: 337

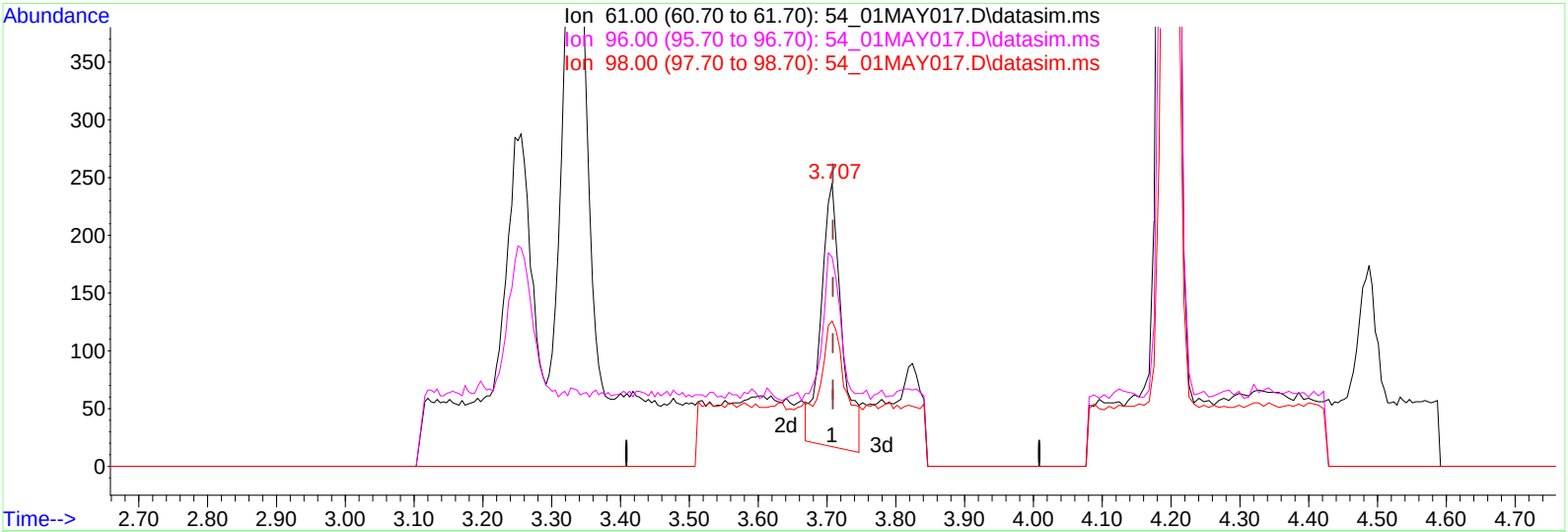
Ion	Ratio	Lower	Upper
63	100		
65	33.2	26.1	39.1
27	3.3	10.2	15.2#

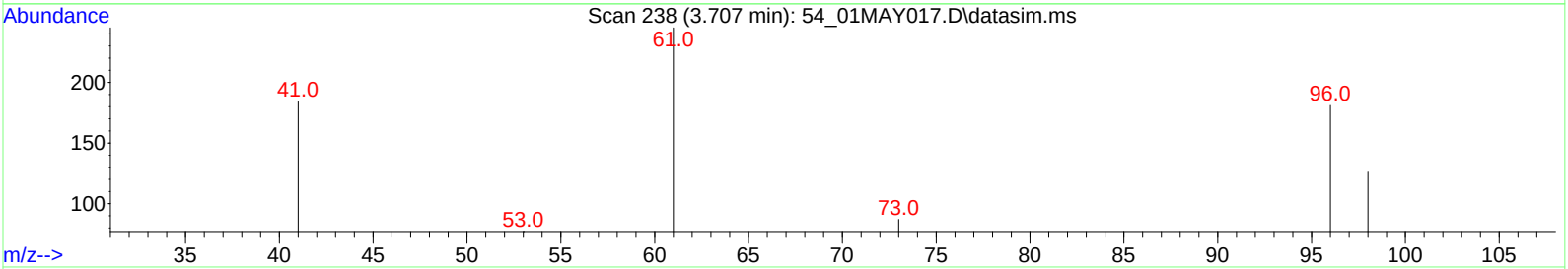


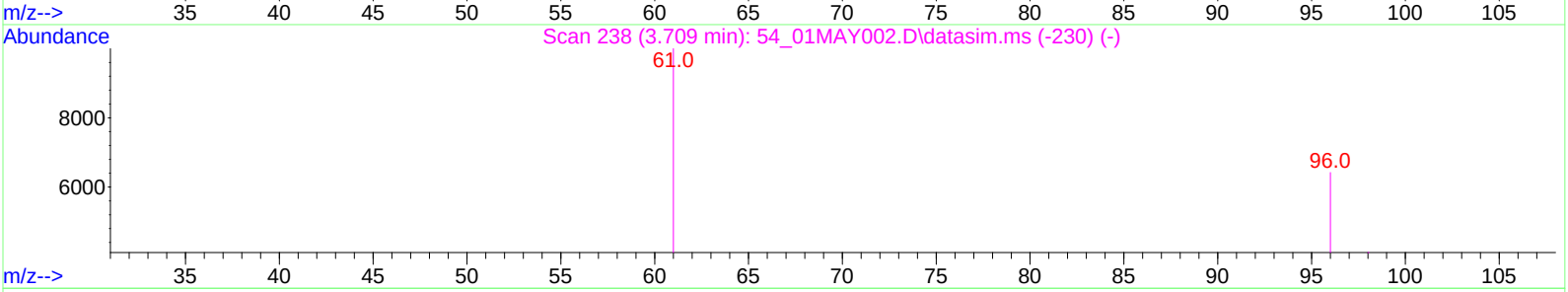
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY017.D
Acq On : 1 May 2014 4:52 pm
Operator : yhl
Sample : 02130 \ F6-021
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:58:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







TIC: 54_01MAY017.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.707min (-0.001) 1.49 ppbv

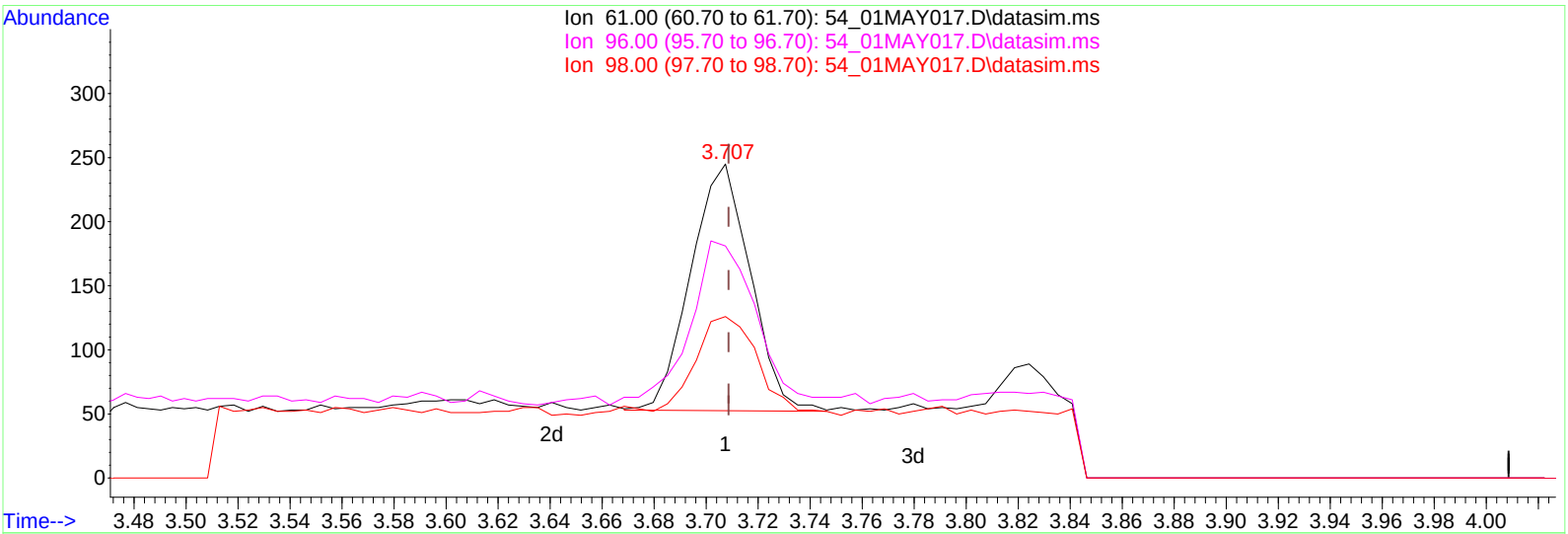
response 472

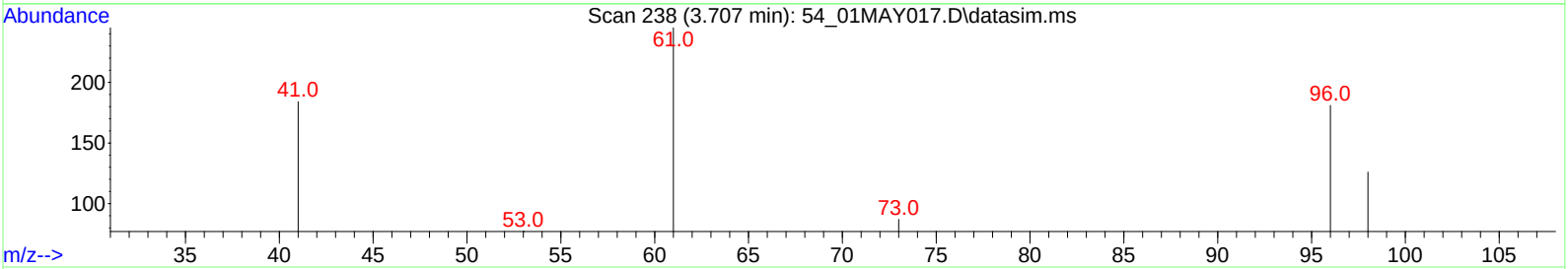
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	47.46#
98.00	57.30	41.53#
0.00	0.00	0.00

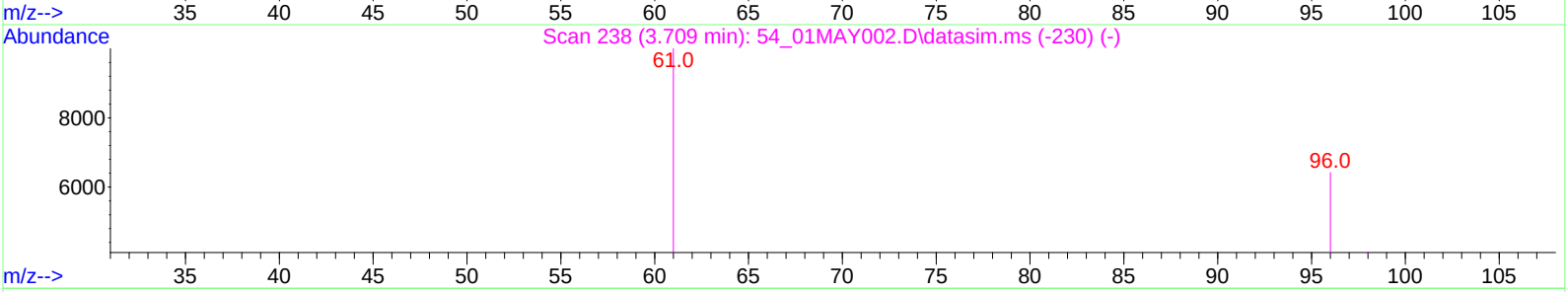
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY017.D
Acq On : 1 May 2014 4:52 pm
Operator : yhl
Sample : 02130 \ F6-021
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 16:58:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







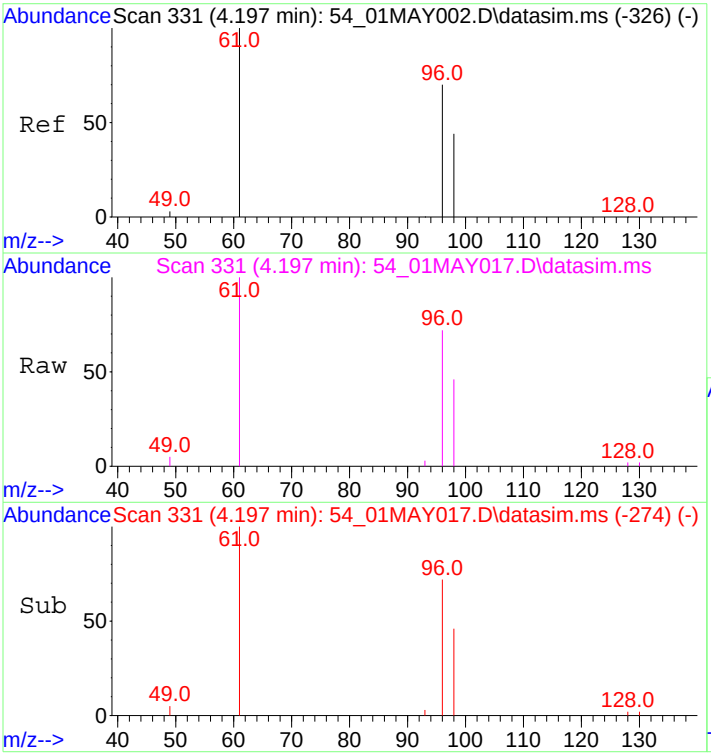
TIC: 54_01MAY017.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.707min (-0.001) 0.97 ppbv m

response 306

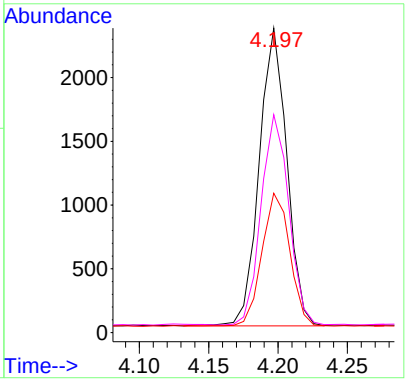
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	73.20
98.00	57.30	64.05
0.00	0.00	0.00

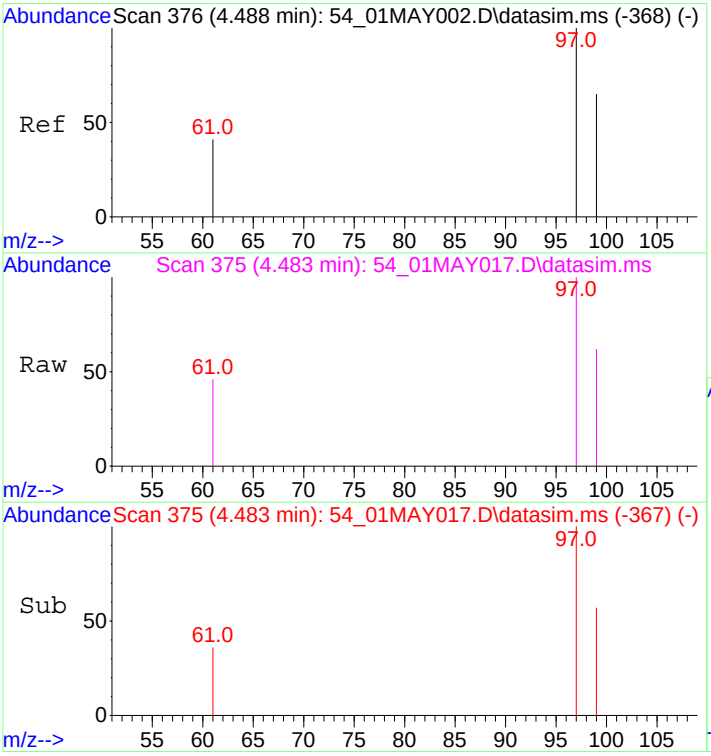


#7
cis-1,2-Dichloroethene
Concen: 10.99 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 61 Resp: 3241

Ion	Ratio	Lower	Upper
61	100		
96	70.5	78.5	117.7#
98	44.6	50.6	76.0#

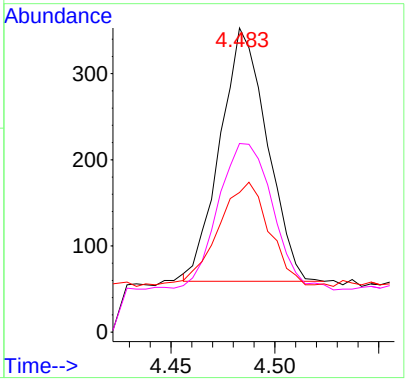


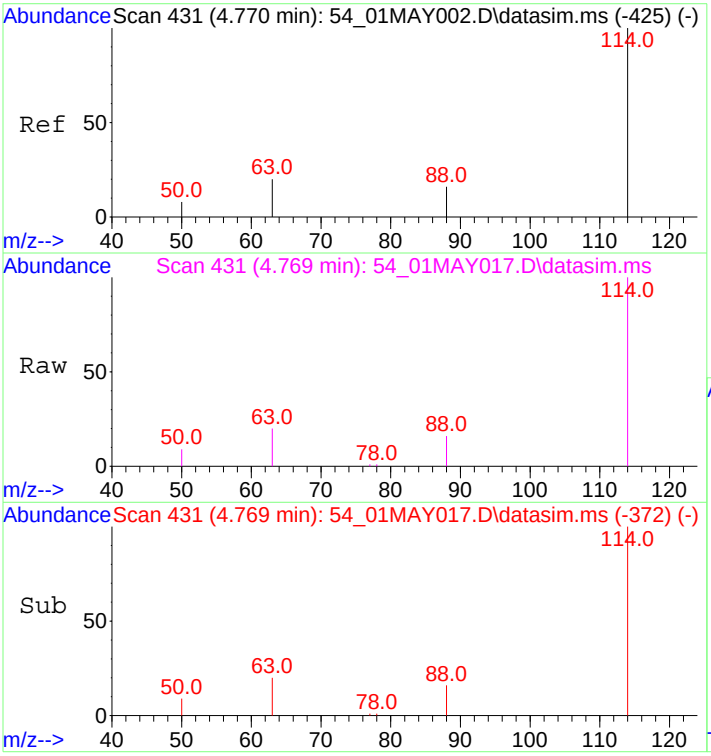


#8
1,1,1-Trichloroethane
Concen: 0.97 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 97 Resp: 462

Ion	Ratio	Lower	Upper
97	100		
99	62.6	52.1	78.1
61	42.9	30.2	45.4

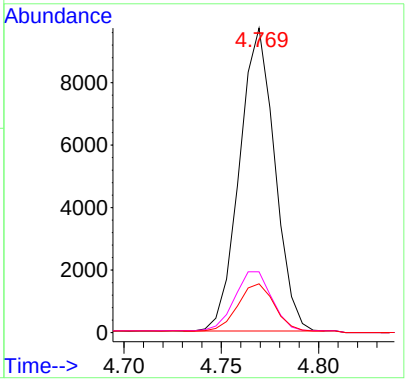


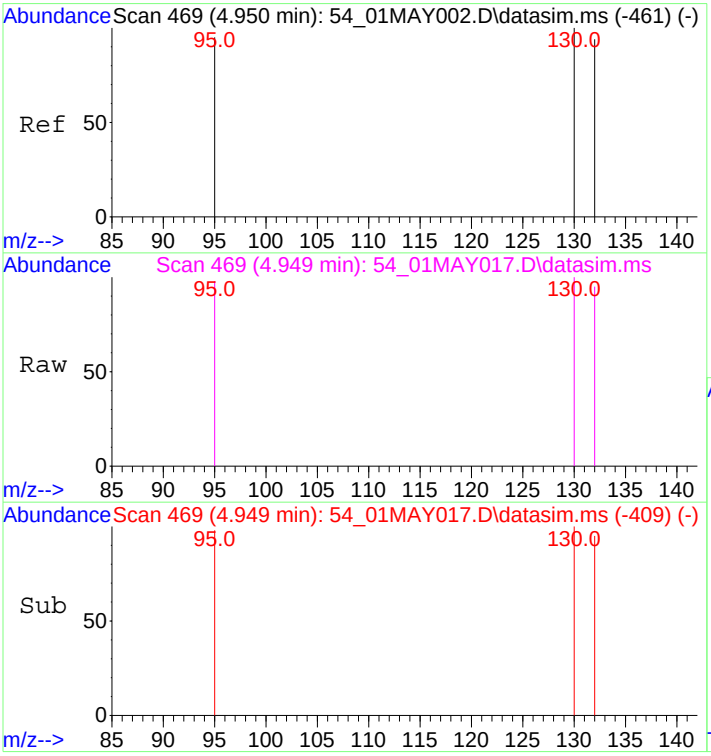


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion:114 Resp: 12236

Ion	Ratio	Lower	Upper
114	100		
63	20.4	12.0	18.0#
88	16.0	11.8	17.8

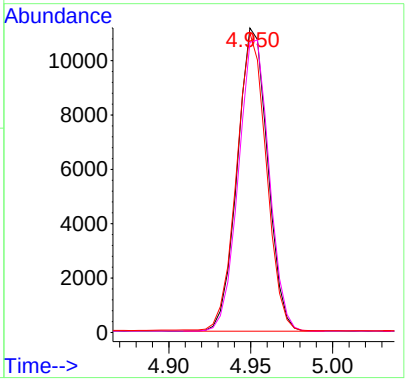


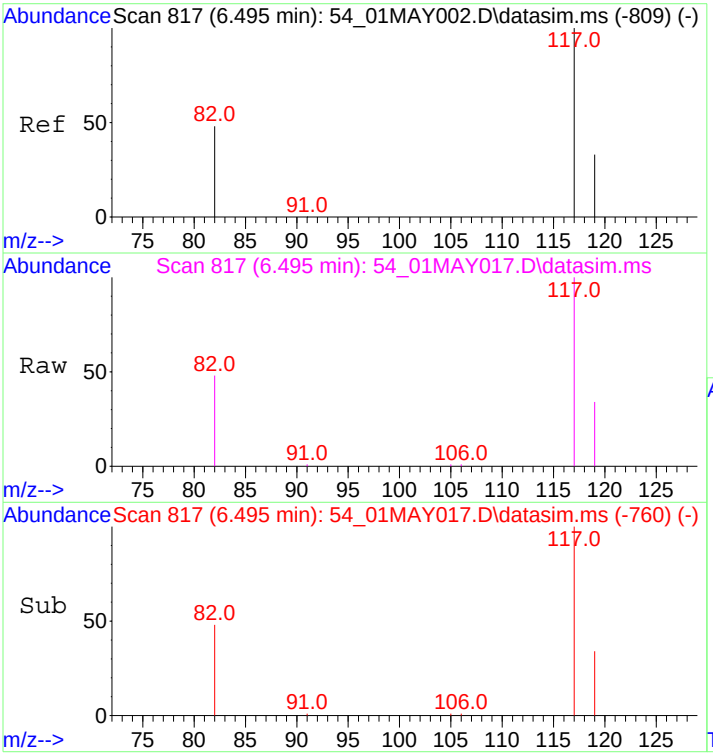


#11
Trichloroethene
Concen: 47.14 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion:130 Resp: 14345

Ion	Ratio	Lower	Upper
130	100		
132	96.9	76.9	115.3
95	96.0	76.5	114.7

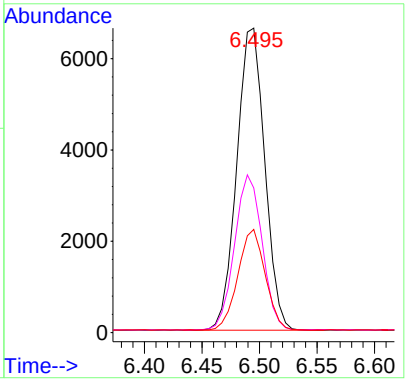


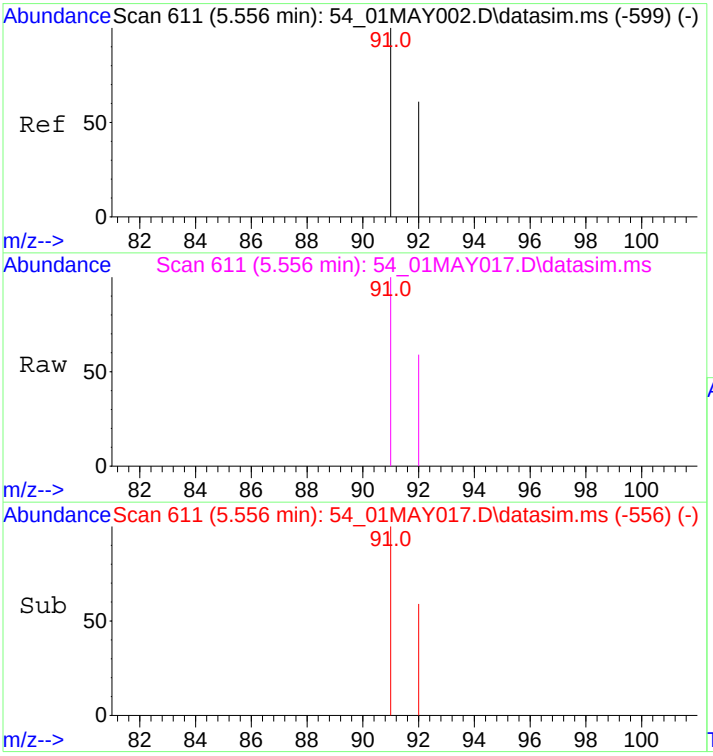


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion:117 Resp: 11230

Ion	Ratio	Lower	Upper
117	100		
82	50.4	38.0	57.0
119	32.5	27.0	40.4

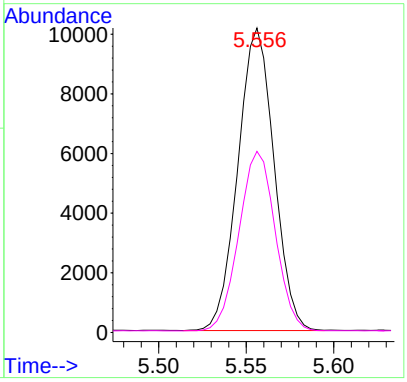


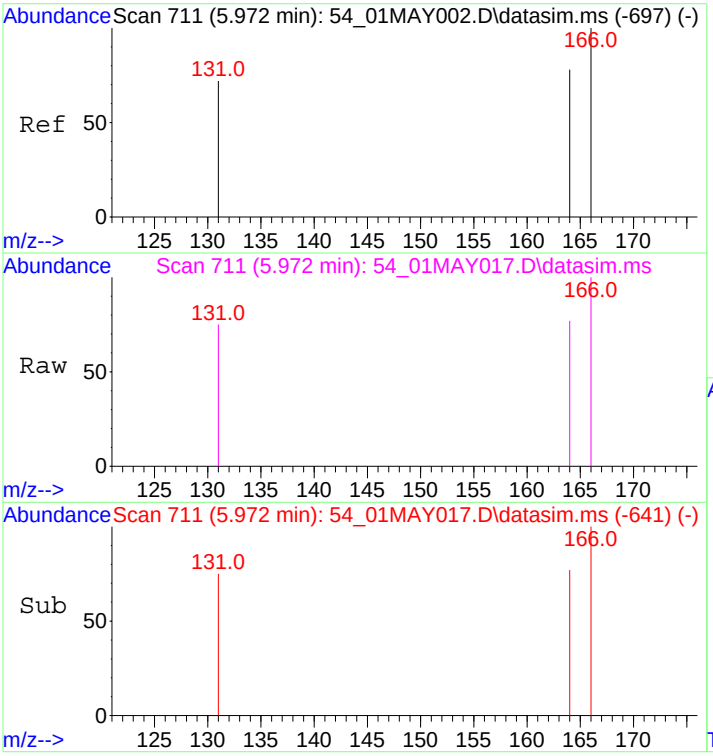


#13
Toluene
Concen: 21.61 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 91 Resp: 14549

Ion	Ratio	Lower	Upper
91	100		
92	59.8	47.8	71.8

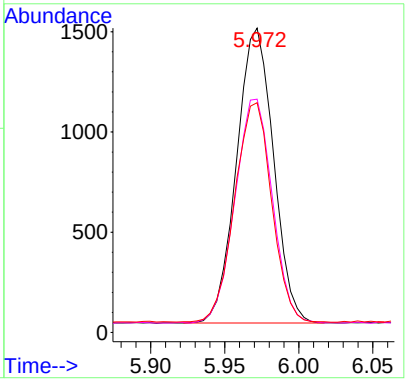


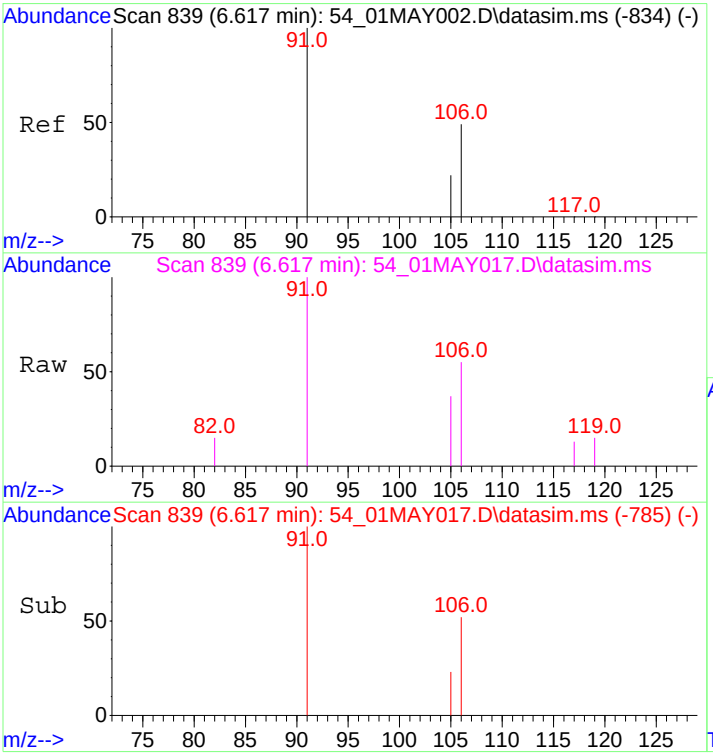


#14
Tetrachloroethene
Concen: 6.64 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion:166 Resp: 2552

Ion	Ratio	Lower	Upper
166	100		
164	77.0	62.6	94.0
131	74.5	58.5	87.7

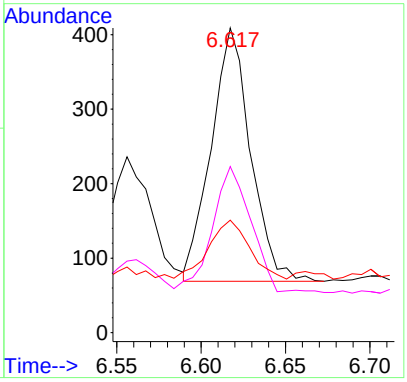


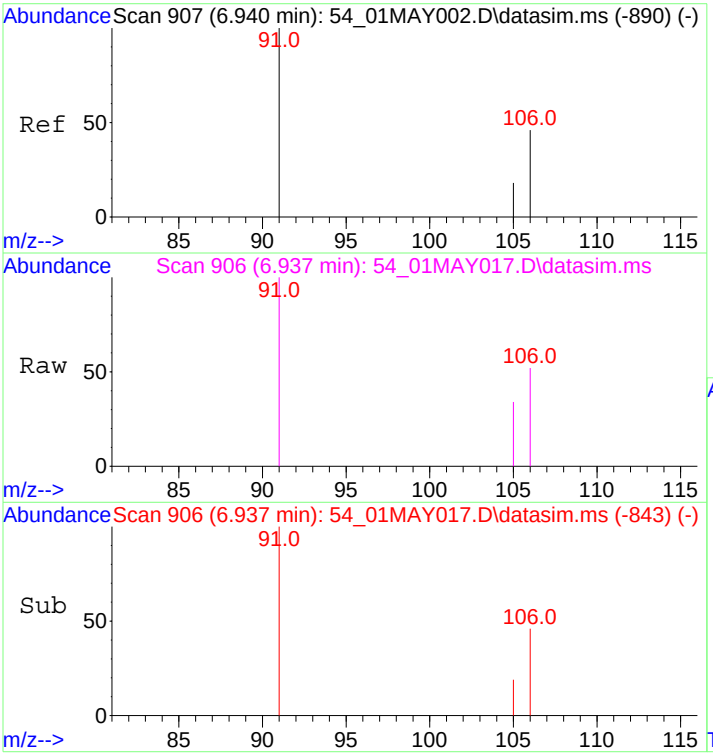


#16
m,p-Xylene
Concen: 0.84 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 91 Resp: 553

Ion	Ratio	Lower	Upper
91	100		
106	48.6	43.1	64.7
105	23.9	18.3	27.5

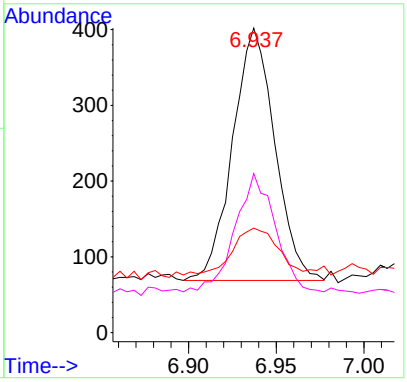




#17
o-Xylene
Concen: 0.84 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 01MAY017.D
Acq: 1 May 2014 4:52 pm

Tgt Ion: 91 Resp: 558

Ion	Ratio	Lower	Upper
91	100		
106	44.3	40.1	60.1
105	18.3	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY018.D
Acq On : 1 May 2014 5:05 pm
Operator : yhl
Sample : 02131 \ F6-023
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:11:25 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

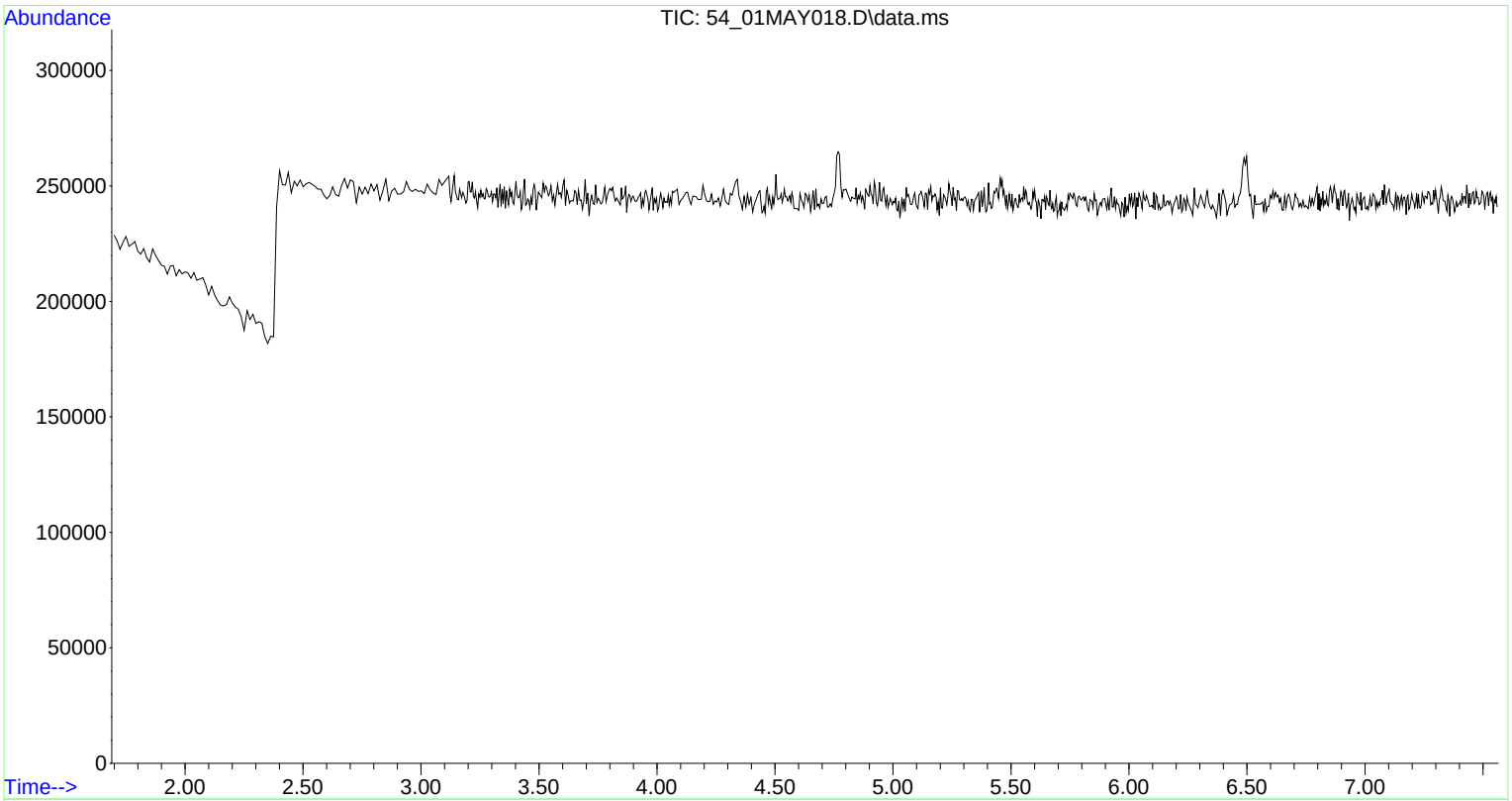
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4695	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	12392	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	11420	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	226	0.73	ppbv	# 84
13] Toluene	5.556	91	2924	4.27	ppbv	100
16] m,p-Xylene	6.617	91	479	0.72	ppbv	91
17] o-Xylene	6.936	91	736	1.09	ppbv	90

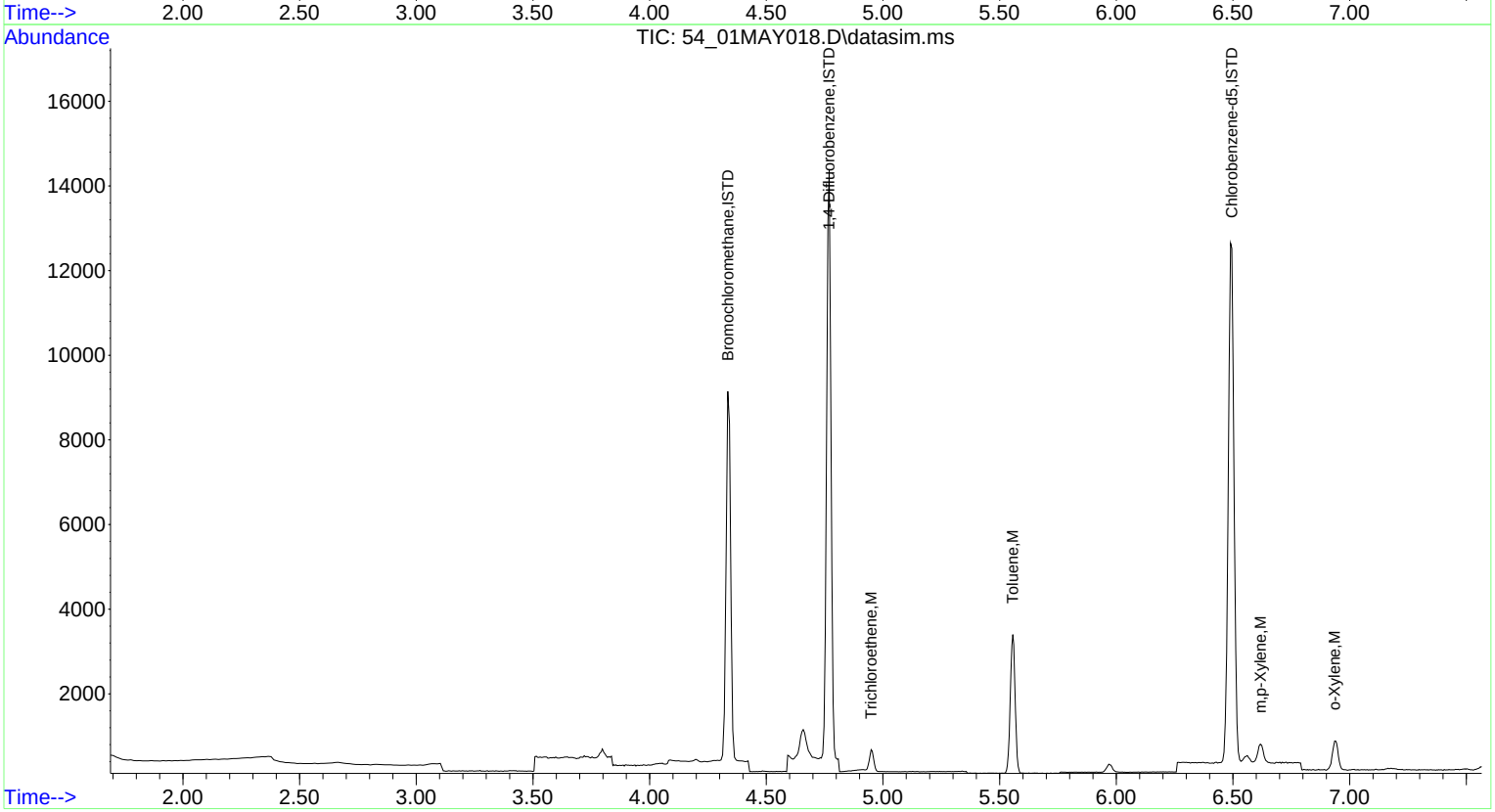
(#) = qualifier out of range (m) = manual integration (+) = signals summed

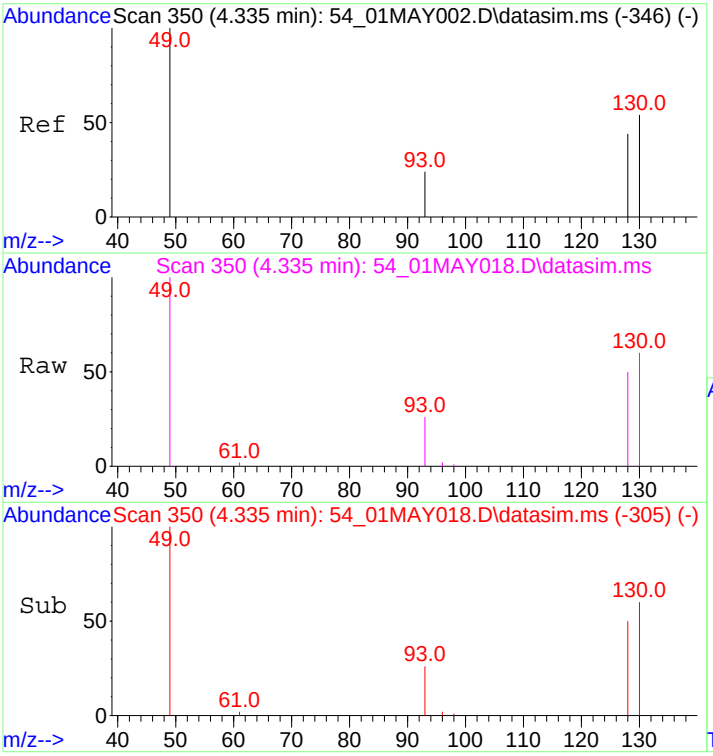
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY018.D
Acq On : 1 May 2014 5:05 pm
Operator : yhl
Sample : 02131 \ F6-023
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:11:25 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



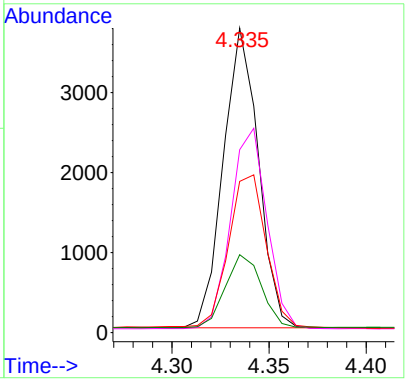


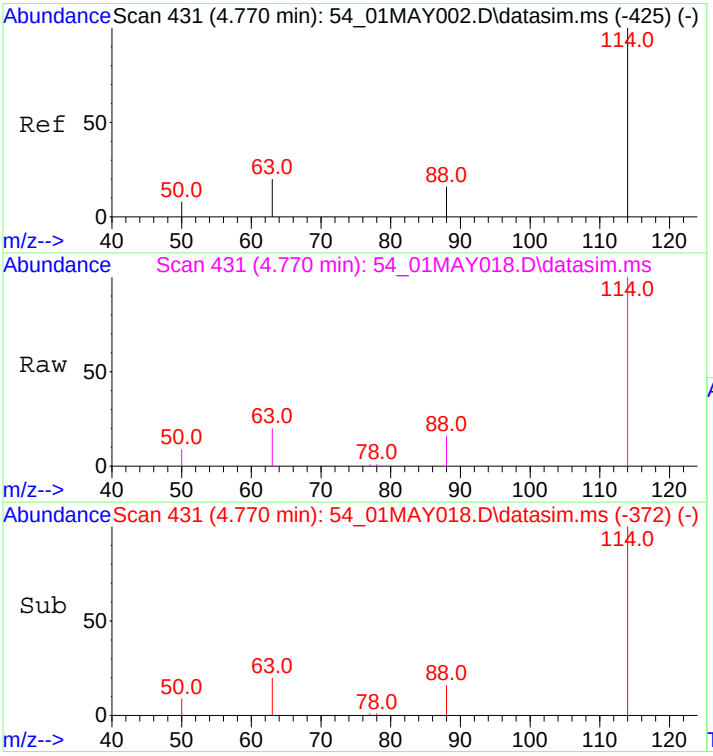


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY018.D
Acq: 1 May 2014 5:05 pm

Tgt Ion: 49 Resp: 4695

Ion	Ratio	Lower	Upper
49	100		
130	69.0	87.2	130.8#
128	54.1	68.0	102.0#
93	25.0	29.3	43.9#

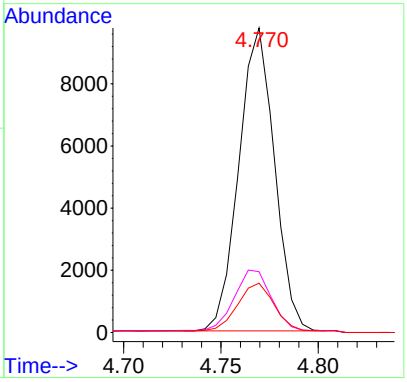


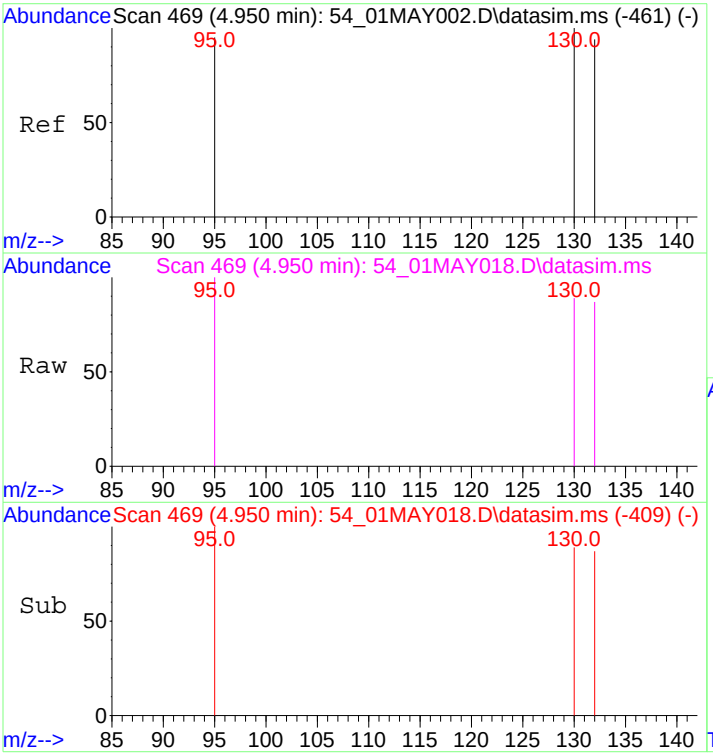


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_01MAY018.D
Acq: 1 May 2014 5:05 pm

Tgt Ion:114 Resp: 12392

Ion	Ratio	Lower	Upper
114	100		
63	20.7	12.0	18.0#
88	16.0	11.8	17.8

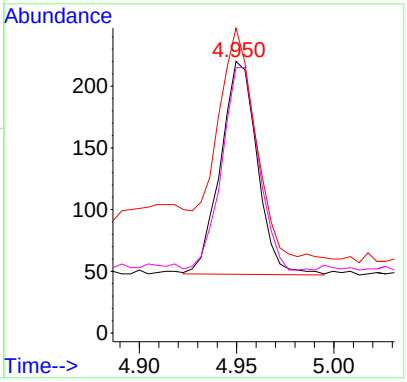


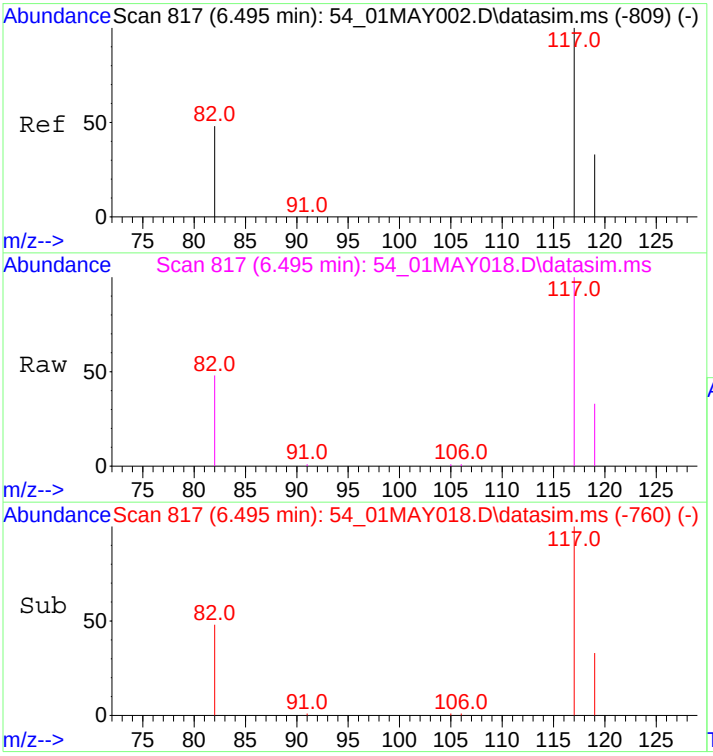


#11
Trichloroethene
Concen: 0.73 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 01MAY018.D
Acq: 1 May 2014 5:05 pm

Tgt Ion:130 Resp: 226

Ion	Ratio	Lower	Upper
130	100		
132	94.7	76.9	115.3
95	125.2	76.5	114.7#

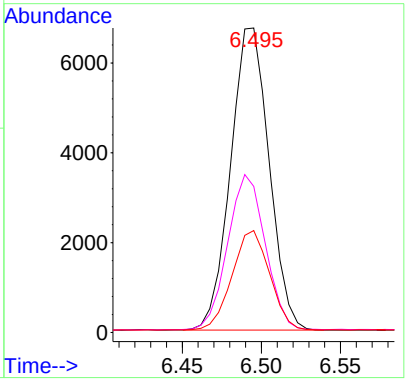


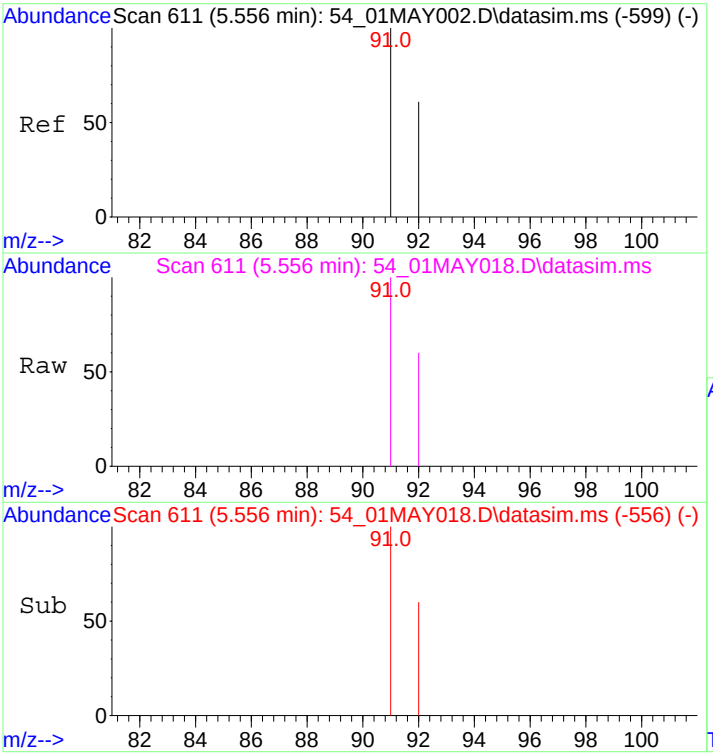


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54_01MAY018.D
Acq: 1 May 2014 5:05 pm

Tgt Ion:117 Resp: 11420

Ion	Ratio	Lower	Upper
117	100		
82	50.1	38.0	57.0
119	32.2	27.0	40.4

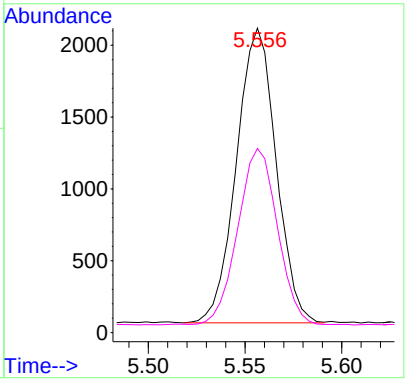


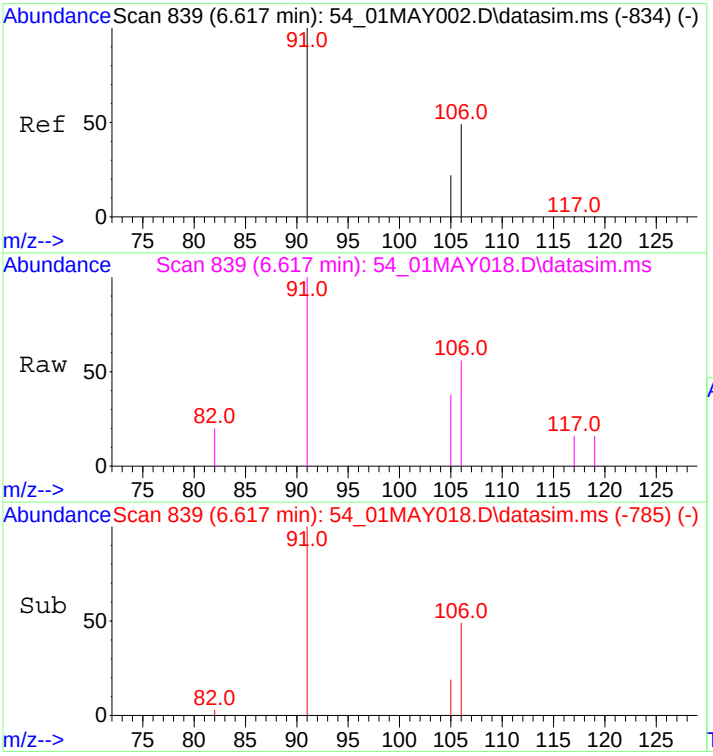


#13
Toluene
Concen: 4.27 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 01MAY018.D
Acq: 1 May 2014 5:05 pm

Tgt Ion: 91 Resp: 2924

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

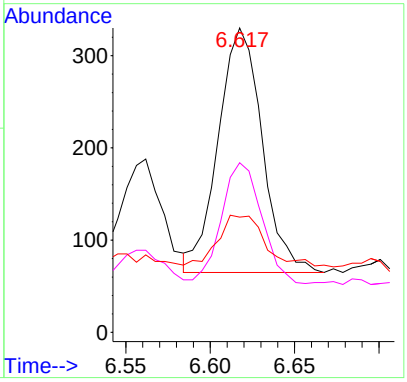


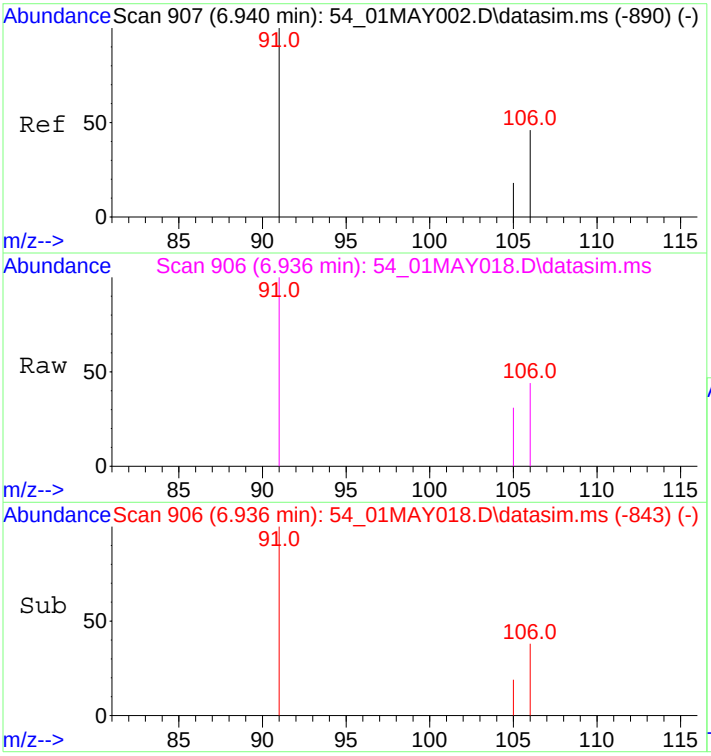


#16
m,p-Xylene
Concen: 0.72 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_01MAY018.D
Acq: 1 May 2014 5:05 pm

Tgt Ion: 91 Resp: 479

Ion	Ratio	Lower	Upper
91	100		
106	45.1	43.1	64.7
105	22.1	18.3	27.5

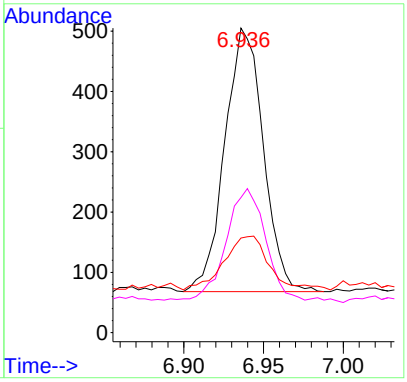




#17
o-Xylene
Concen: 1.09 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 01MAY018.D
Acq: 1 May 2014 5:05 pm

Tgt Ion: 91 Resp: 736

Ion	Ratio	Lower	Upper
91	100		
106	42.5	40.1	60.1
105	22.7	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140501\
Data File : 54 01MAY019.D
Acq On : 1 May 2014 5:16 pm
Operator : yhl
Sample : 02132 \ F6-019
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 00:53:03 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

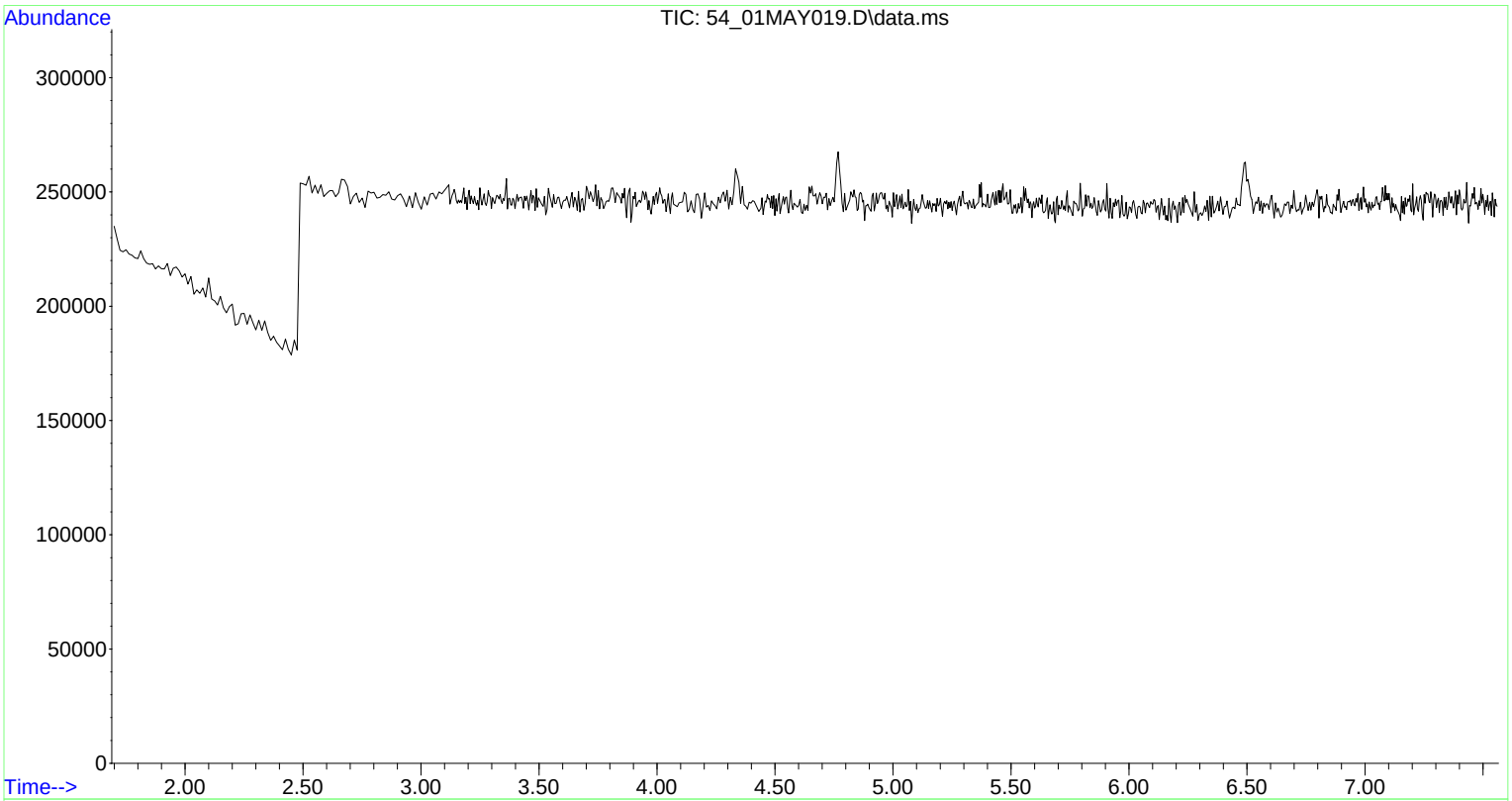
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4795	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	12709	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	11622	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
8] 1,1,1-Trichloroethane	4.483	97	576	1.16 ppbv	94
11] Trichloroethene	4.950	130	1280	4.05 ppbv	100
13] Toluene	5.556	91	1975	2.83 ppbv	100

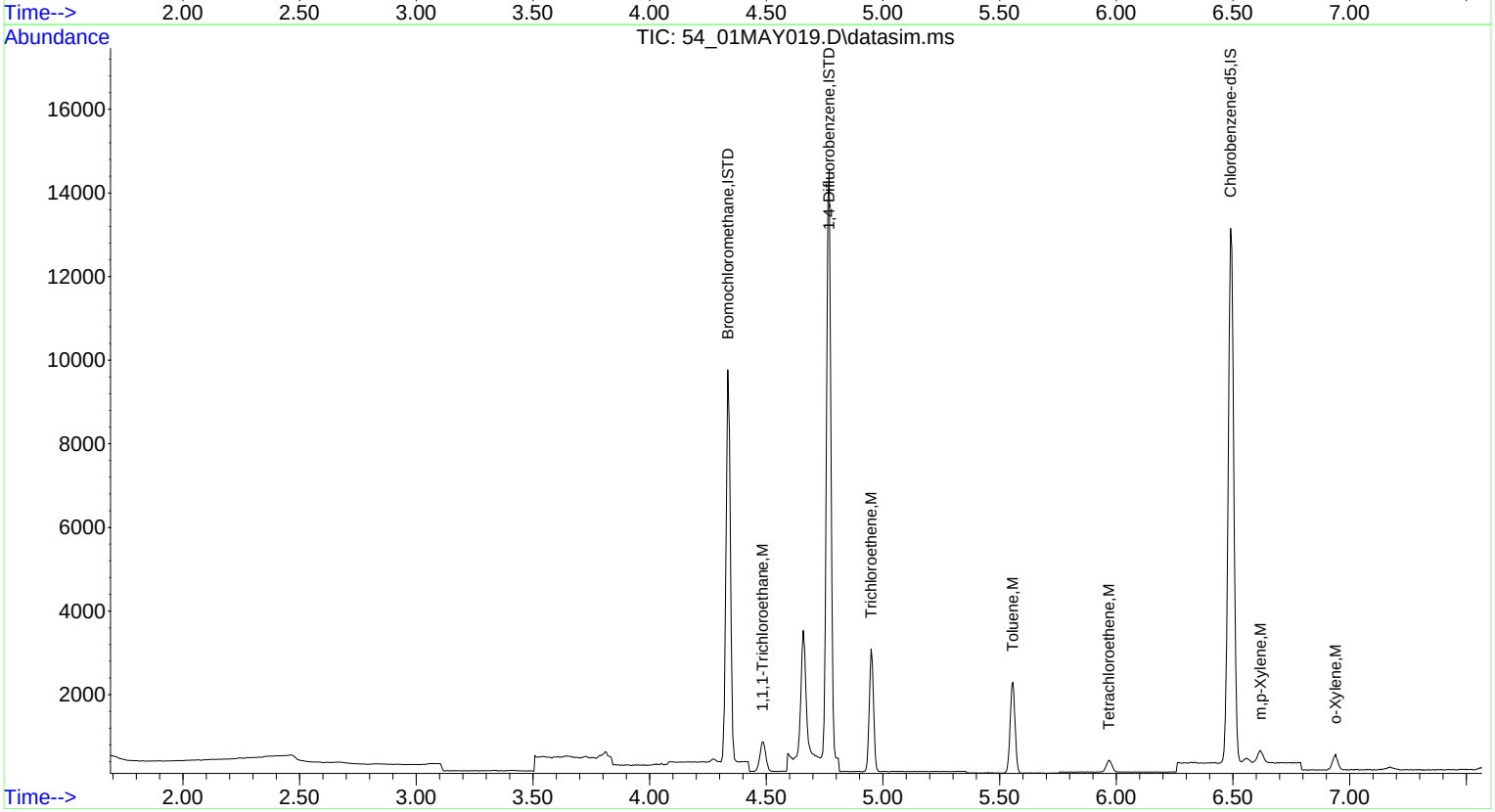
(#) = qualifier out of range (m) = manual integration (+) = signals summed

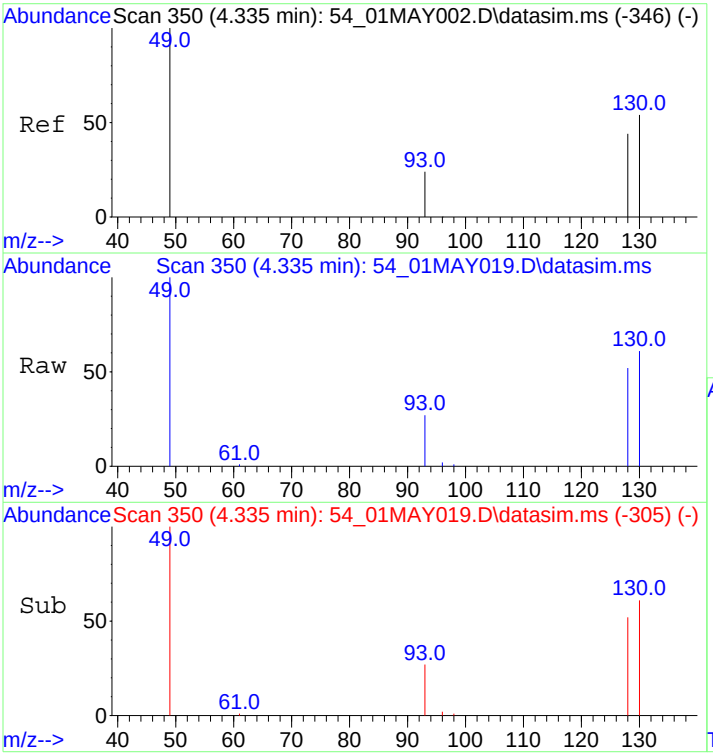
Quantitation Report (QT Reviewed)

Data Path : G:\20140501\
Data File : 54 01MAY019.D
Acq On : 1 May 2014 5:16 pm
Operator : yhl
Sample : 02132 \ F6-019
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 17:48:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



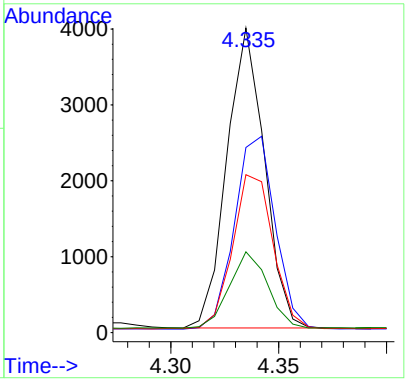


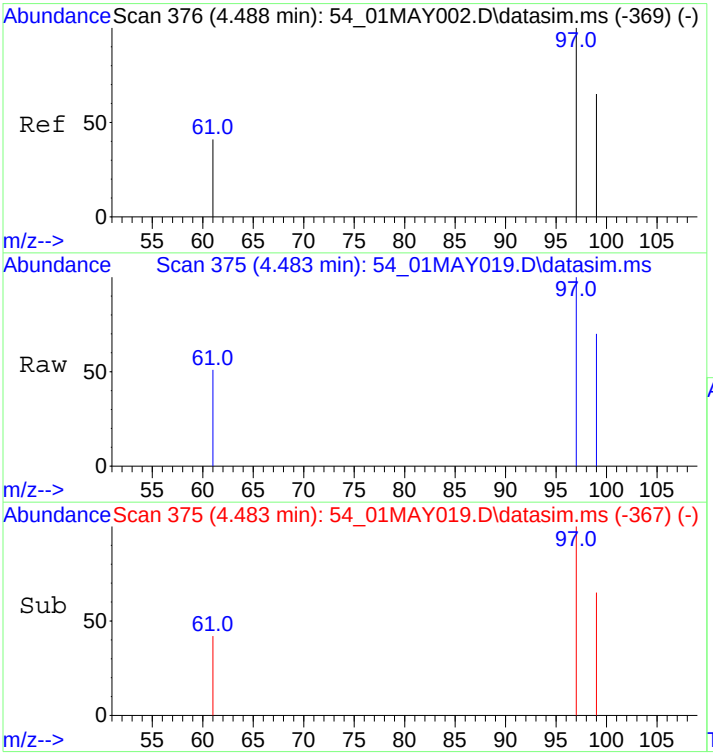


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 01MAY019.D
Acq: 1 May 2014 5:16 pm

Tgt Ion: 49 Resp: 4795

Ion	Ratio	Lower	Upper
49	100		
130	69.9	87.2	130.8#
128	55.5	68.0	102.0#
93	25.8	29.3	43.9#

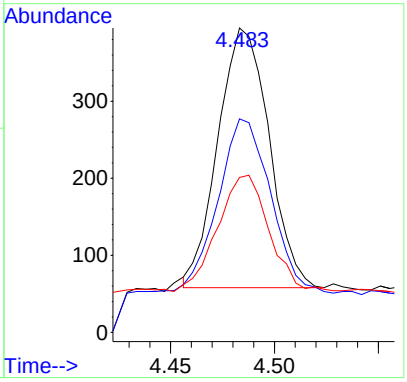


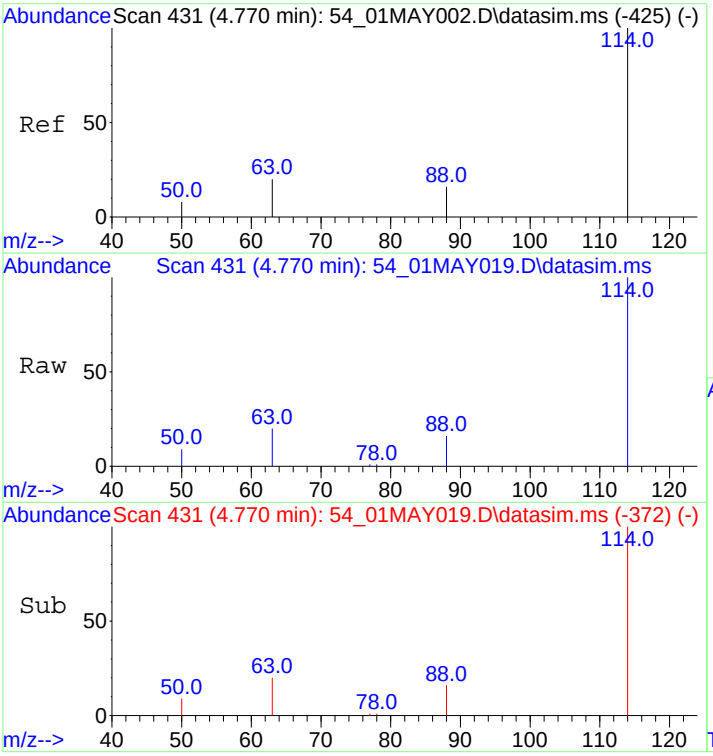


#8
1,1,1-Trichloroethane
Concen: 1.16 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_01MAY019.D
Acq: 1 May 2014 5:16 pm

Tgt Ion: 97 Resp: 576

Ion	Ratio	Lower	Upper
97	100		
99	68.8	52.1	78.1
61	42.2	30.2	45.4

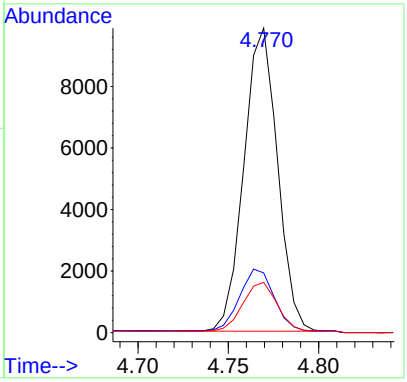


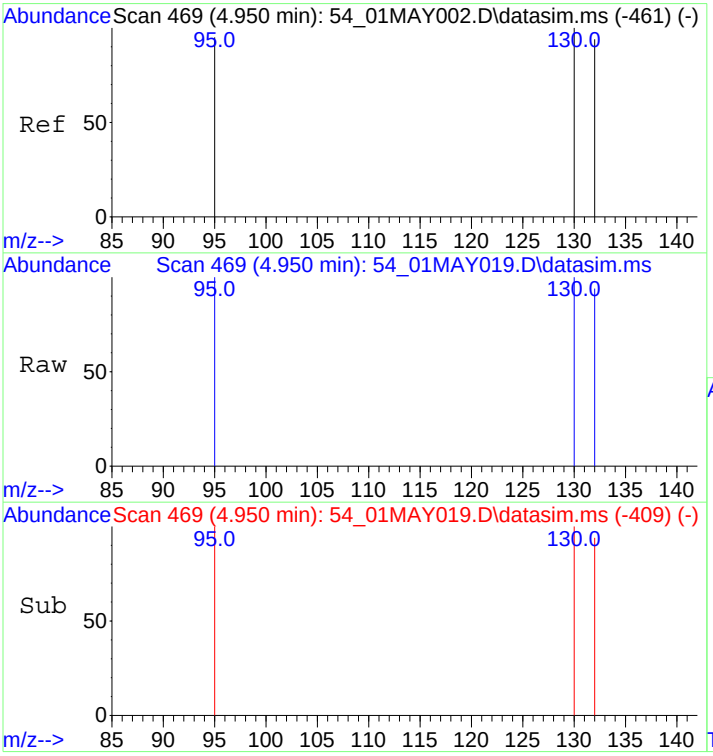


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 01MAY019.D
Acq: 1 May 2014 5:16 pm

Tgt Ion:114 Resp: 12709

Ion	Ratio	Lower	Upper
114	100		
63	21.1	12.0	18.0#
88	16.3	11.8	17.8

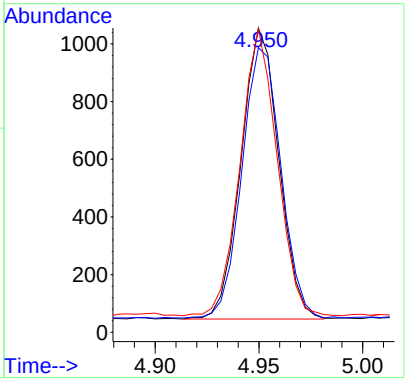


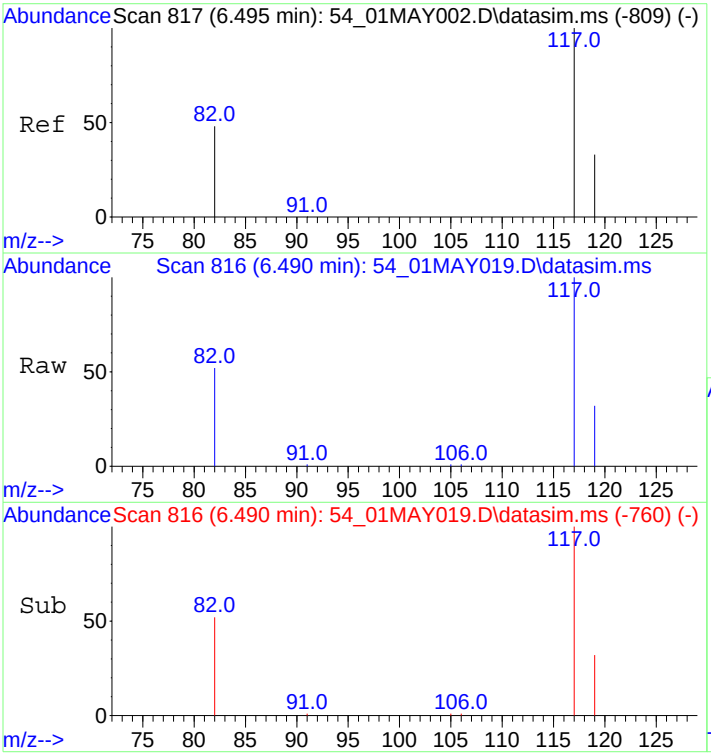


#11
Trichloroethene
Concen: 4.05 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_01MAY019.D
Acq: 1 May 2014 5:16 pm

Tgt Ion:130 Resp: 1280

Ion	Ratio	Lower	Upper
130	100		
132	95.5	76.9	115.3
95	95.6	76.5	114.7

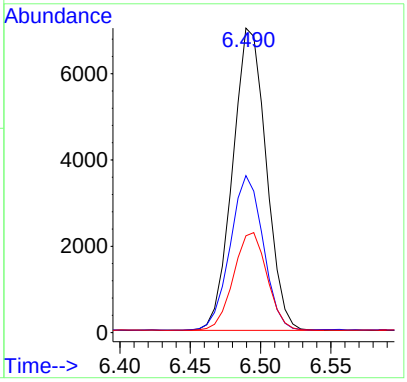


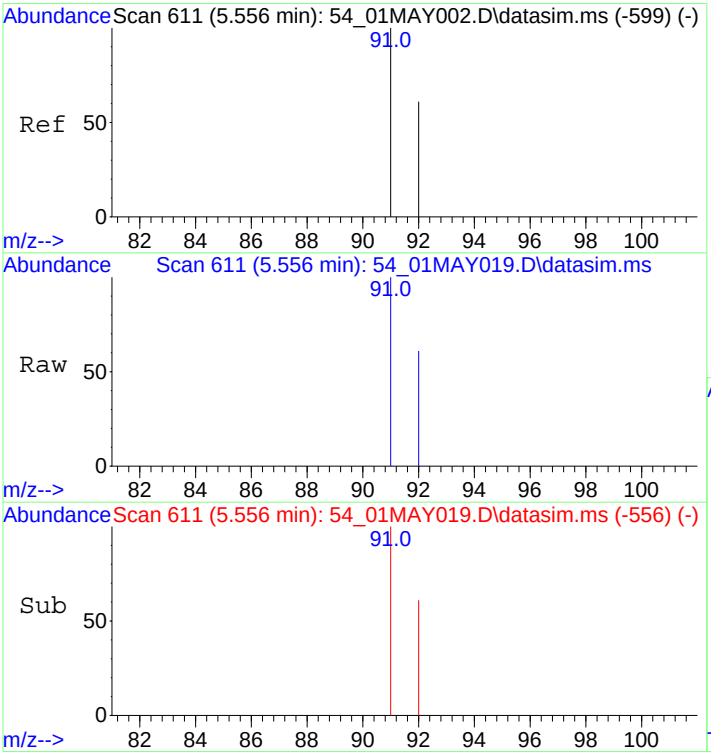


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 01MAY019.D
Acq: 1 May 2014 5:16 pm

Tgt Ion:117 Resp: 11622

Ion	Ratio	Lower	Upper
117	100		
82	50.5	38.0	57.0
119	32.4	27.0	40.4

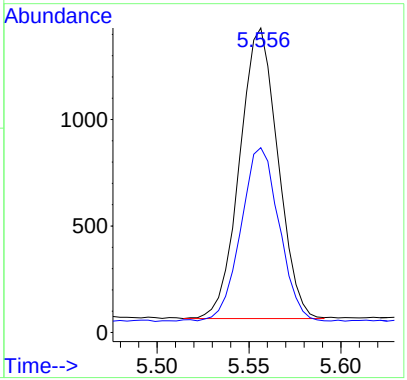




#13
Toluene
Concen: 2.83 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_01MAY019.D
Acq: 1 May 2014 5:16 pm

Tgt Ion: 91 Resp: 1975

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY021.D
Acq On : 1 May 2014 6:06 pm
Operator :
Sample : 02133 / F6-025
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:16:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

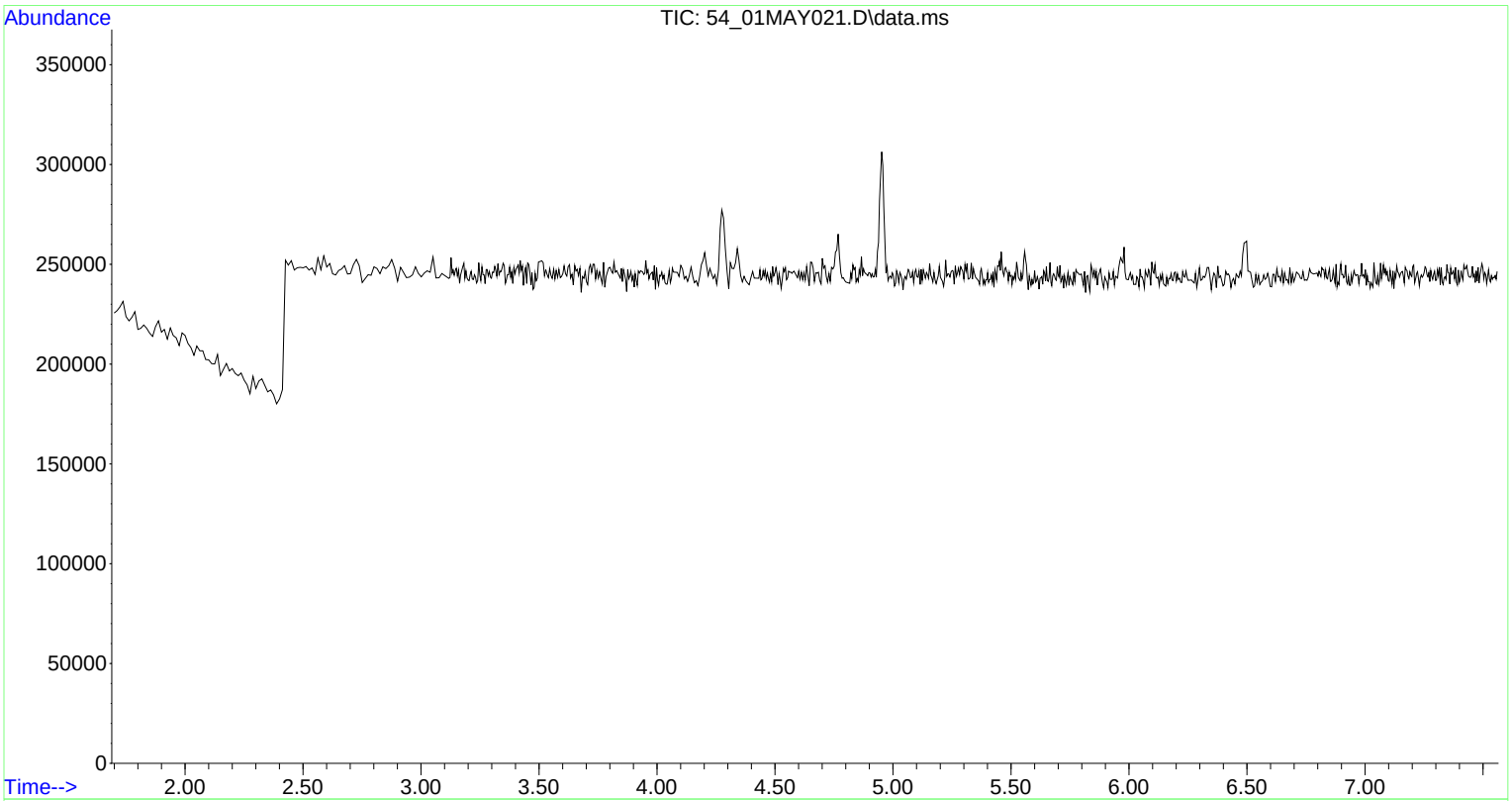
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4690	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	12286	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	11695	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.256	61	840	2.31	ppbv	# 82
5] trans-1,2-Dichloroethene	3.709	61	515	1.61	ppbv	# 69
6] 1,1-Dichloroethane	3.910	63	613	1.60	ppbv	# 83
7] cis-1,2-Dichloroethene	4.197	61	5195	17.38	ppbv	# 74
8] 1,1,1-Trichloroethane	4.488	97	470	0.97	ppbv	97
11] Trichloroethene	4.950	130	18252	59.73	ppbv	100
13] Toluene	5.556	91	5361	7.65	ppbv	99
14] Tetrachloroethene	5.972	166	4297	10.73	ppbv	99
17] o-Xylene	6.940	91	384	0.55	ppbv	92

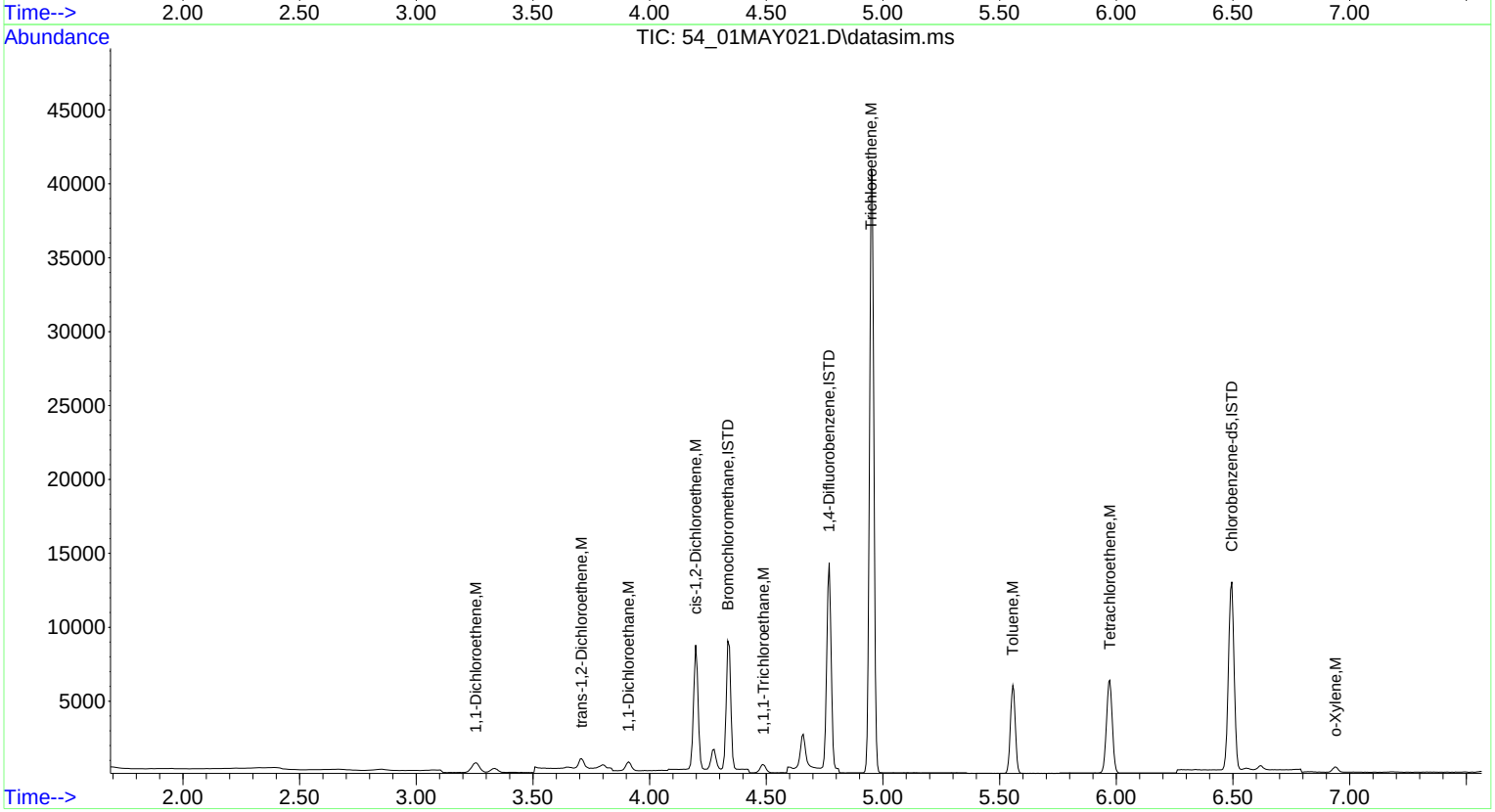
(#) = qualifier out of range (m) = manual integration (+) = signals summed

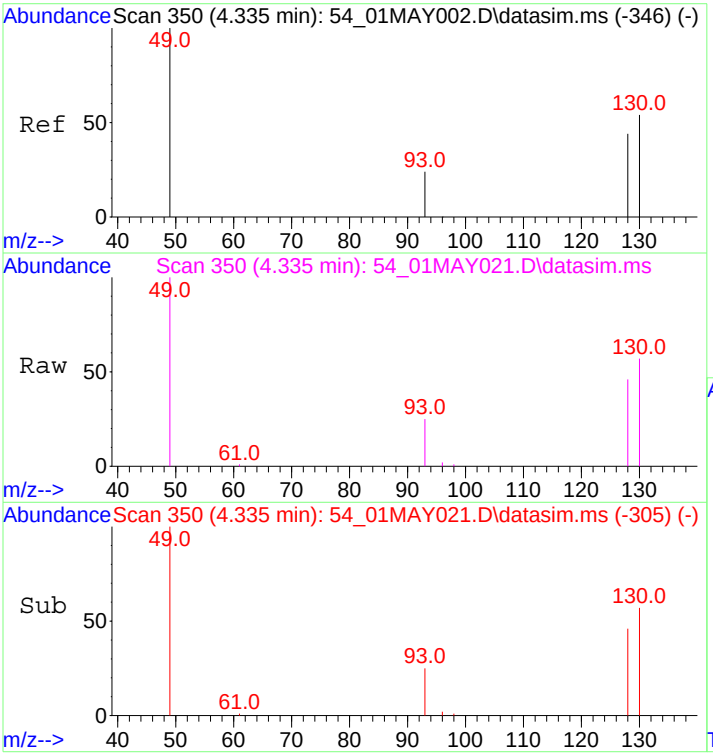
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY021.D
Acq On : 1 May 2014 6:06 pm
Operator :
Sample : 02133 / F6-025
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:16:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



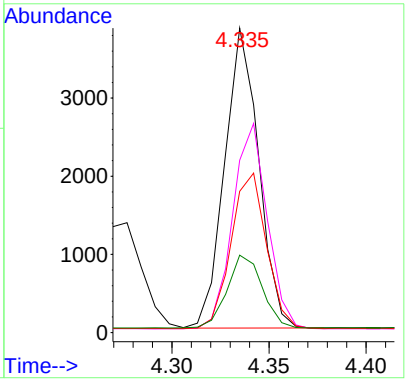


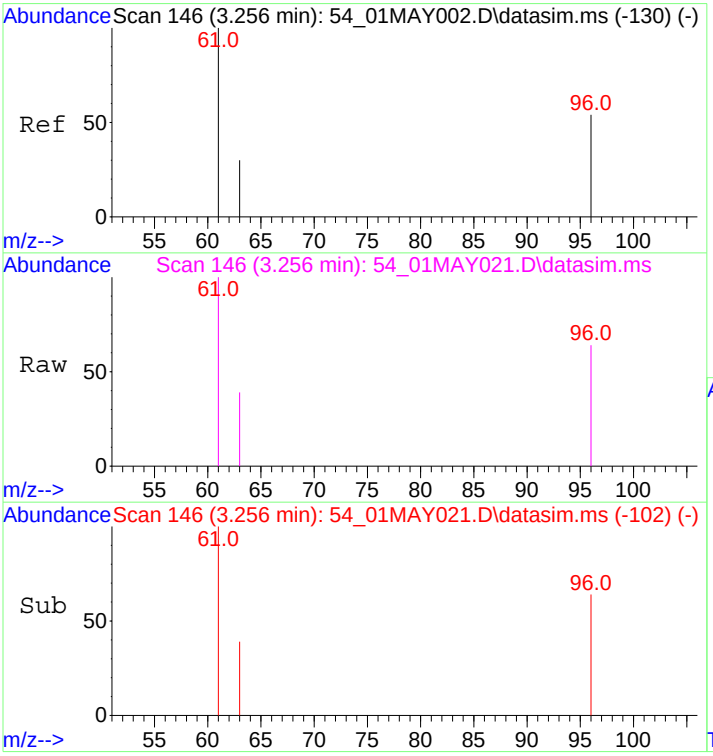


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion: 49 Resp: 4690

Ion	Ratio	Lower	Upper
49	100		
130	69.4	87.2	130.8#
128	54.2	68.0	102.0#
93	24.9	29.3	43.9#

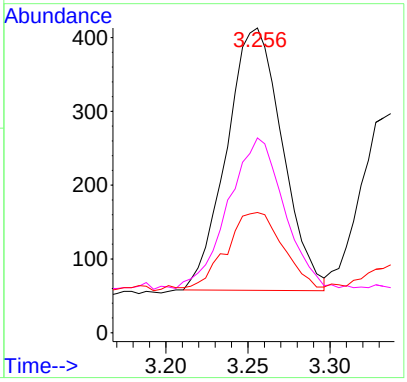


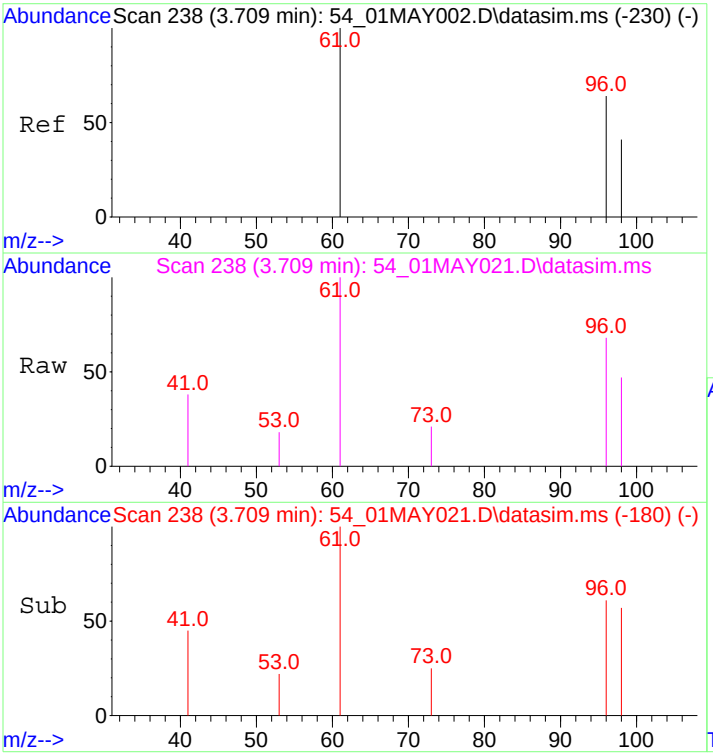


#3
1,1-Dichloroethene
Concen: 2.31 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.000 min
Lab File: 54_01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion: 61 Resp: 840

Ion	Ratio	Lower	Upper
61	100		
96	77.5	63.4	95.2
63	63.7	26.2	39.2#

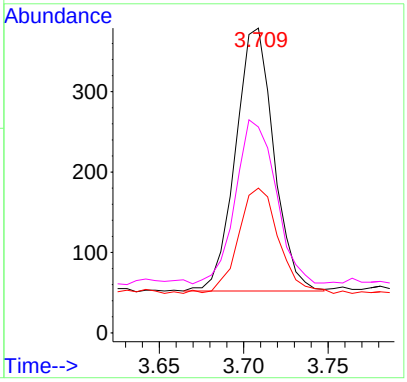


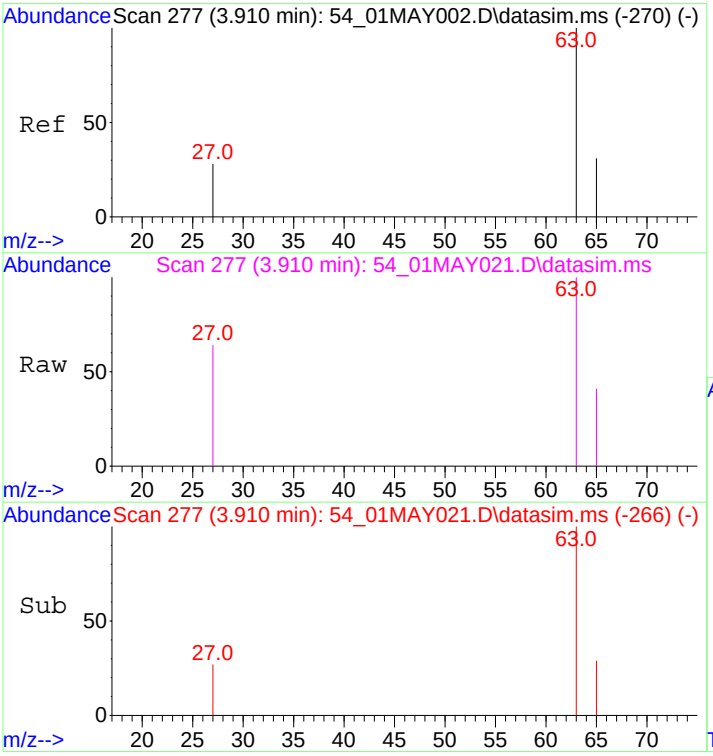


#5
trans-1,2-Dichloroethene
Concen: 1.61 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.000 min
Lab File: 54 01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion: 61 Resp: 515

Ion	Ratio	Lower	Upper
61	100		
96	65.8	71.4	107.0#
98	86.6	45.8	68.8#

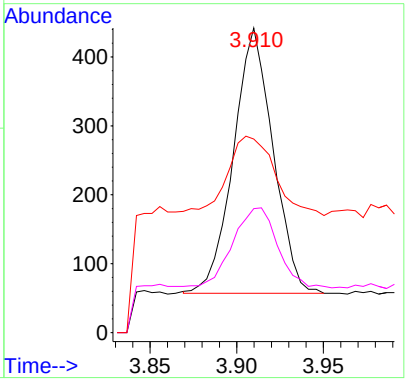


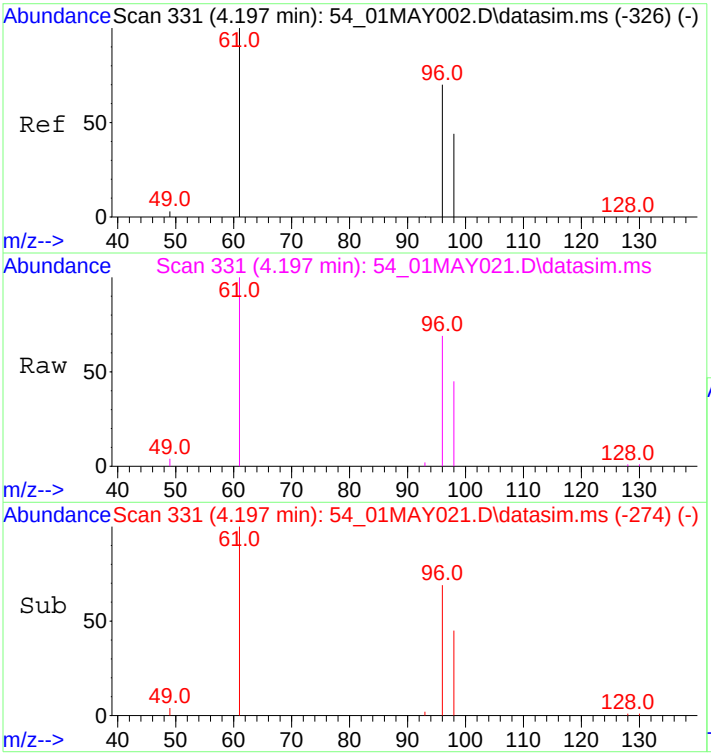


#6
1,1-Dichloroethane
Concen: 1.60 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion: 63 Resp: 613

Ion	Ratio	Lower	Upper
63	100		
65	32.8	26.1	39.1
27	35.9	10.2	15.2#

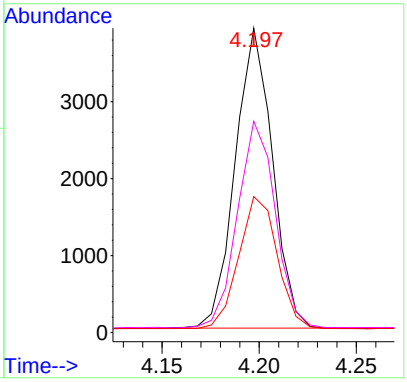


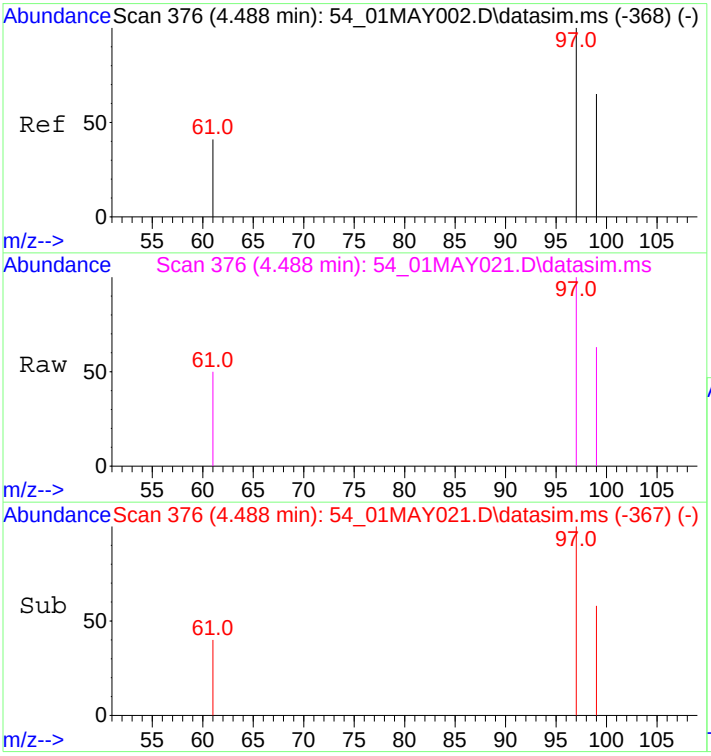


#7
cis-1,2-Dichloroethene
Concen: 17.38 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion: 61 Resp: 5195

Ion	Ratio	Lower	Upper
61	100		
96	70.1	78.5	117.7#
98	45.4	50.6	76.0#

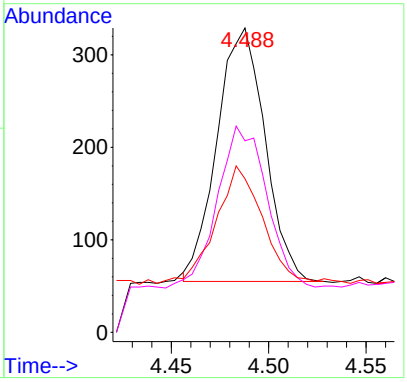


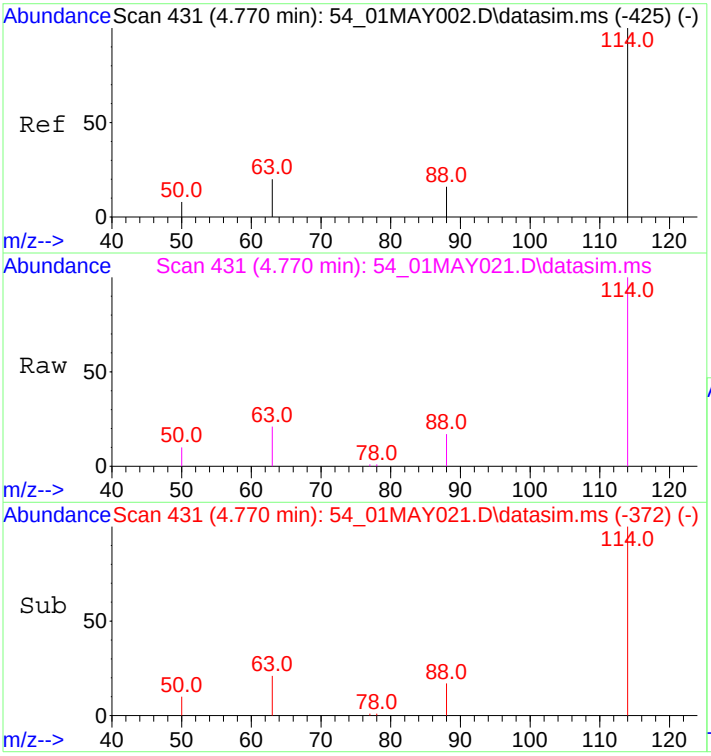


#8
1,1,1-Trichloroethane
Concen: 0.97 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.000 min
Lab File: 54_01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion: 97 Resp: 470

Ion	Ratio	Lower	Upper
97	100		
99	64.3	52.1	78.1
61	42.3	30.2	45.4

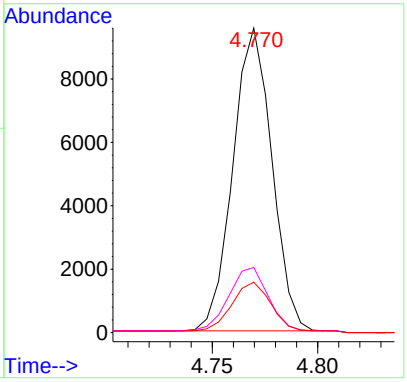


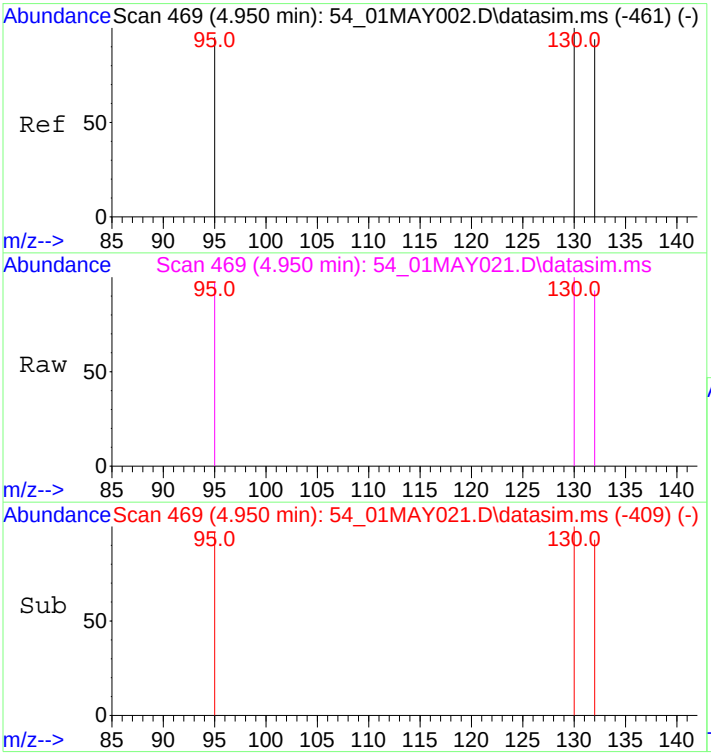


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion:114 Resp: 12286

Ion	Ratio	Lower	Upper
114	100		
63	20.9	12.0	18.0#
88	16.1	11.8	17.8

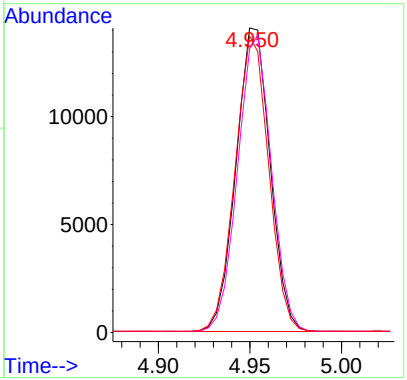


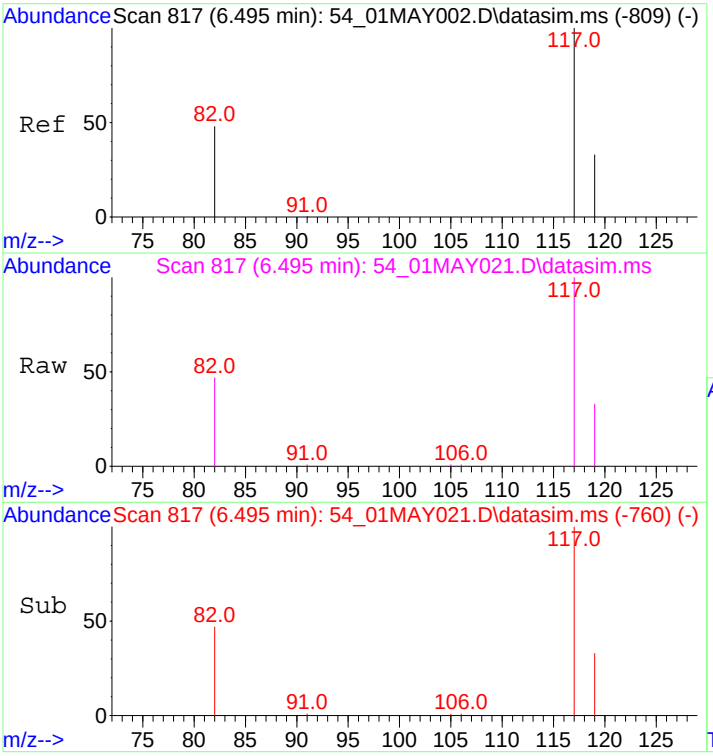


#11
Trichloroethene
Concen: 59.73 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion:130 Resp: 18252

Ion	Ratio	Lower	Upper
130	100		
132	96.2	76.9	115.3
95	95.5	76.5	114.7

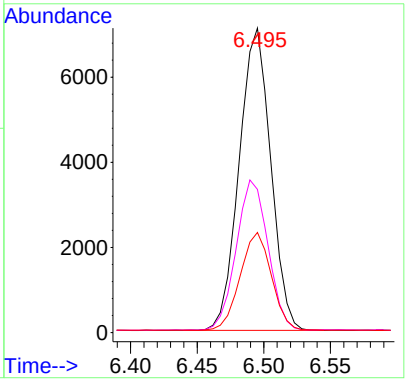


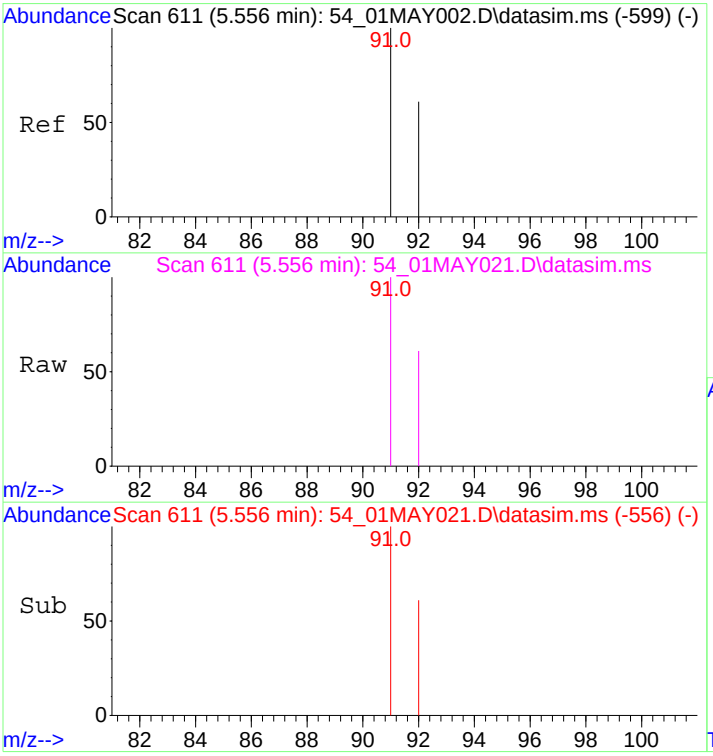


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion:117 Resp: 11695

Ion	Ratio	Lower	Upper
117	100		
82	49.9	38.0	57.0
119	32.2	27.0	40.4

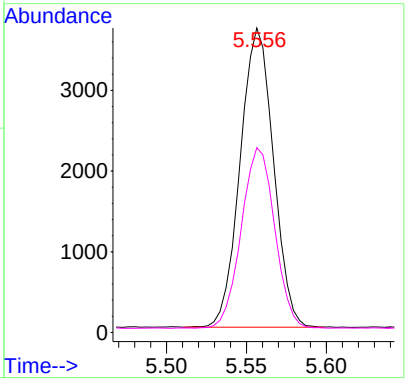


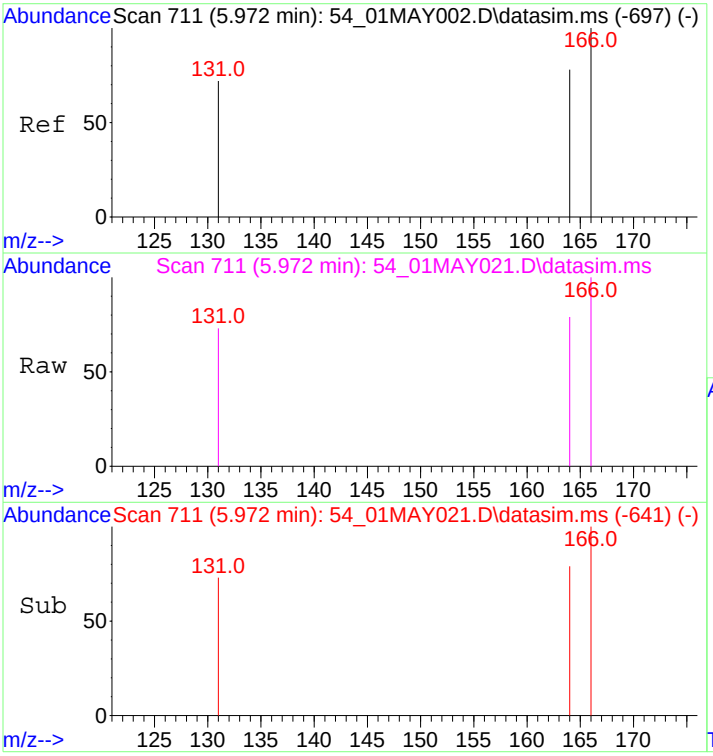


#13
Toluene
Concen: 7.65 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion: 91 Resp: 5361

Ion	Ratio	Lower	Upper
91	100		
92	60.7	47.8	71.8

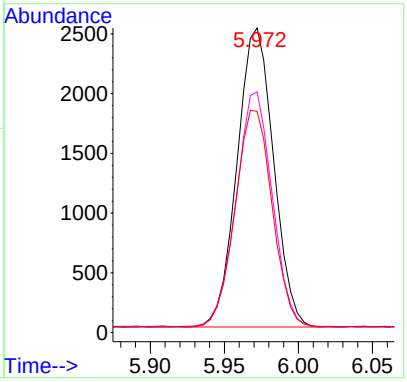


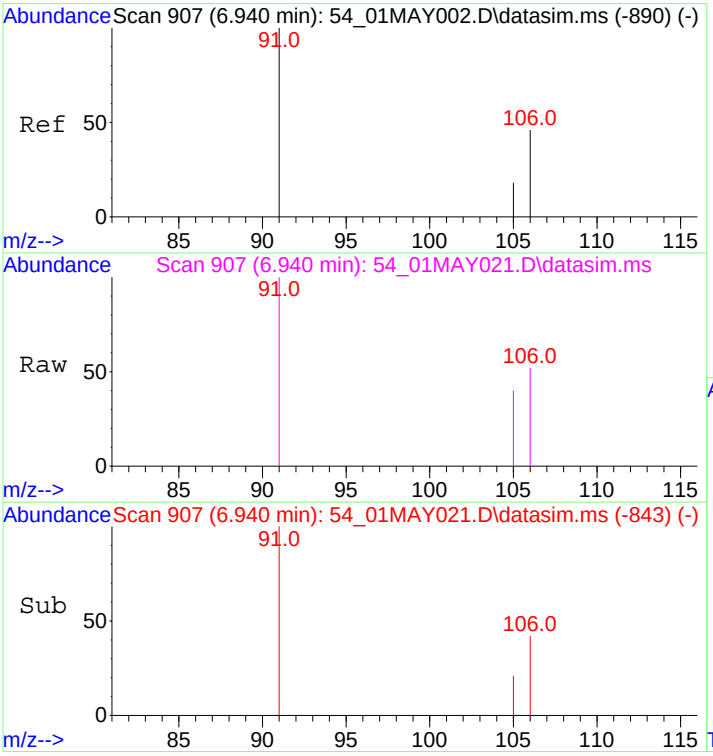


#14
Tetrachloroethene
Concen: 10.73 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54 01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion:166 Resp: 4297

Ion	Ratio	Lower	Upper
166	100		
164	77.8	62.6	94.0
131	73.5	58.5	87.7

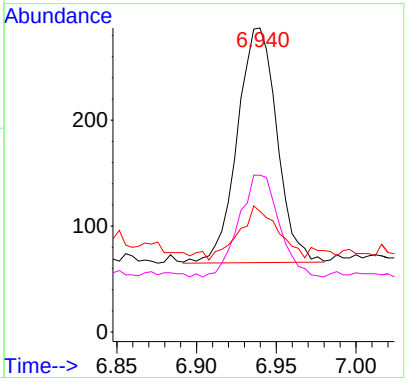




#17
o-Xylene
Concen: 0.55 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.000 min
Lab File: 54_01MAY021.D
Acq: 1 May 2014 6:06 pm

Tgt Ion: 91 Resp: 384

Ion	Ratio	Lower	Upper
91	100		
106	43.8	40.1	60.1
105	22.7	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY022.D
Acq On : 1 May 2014 6:17 pm
Operator :
Sample : 02134 / F6-027
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:28:40 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

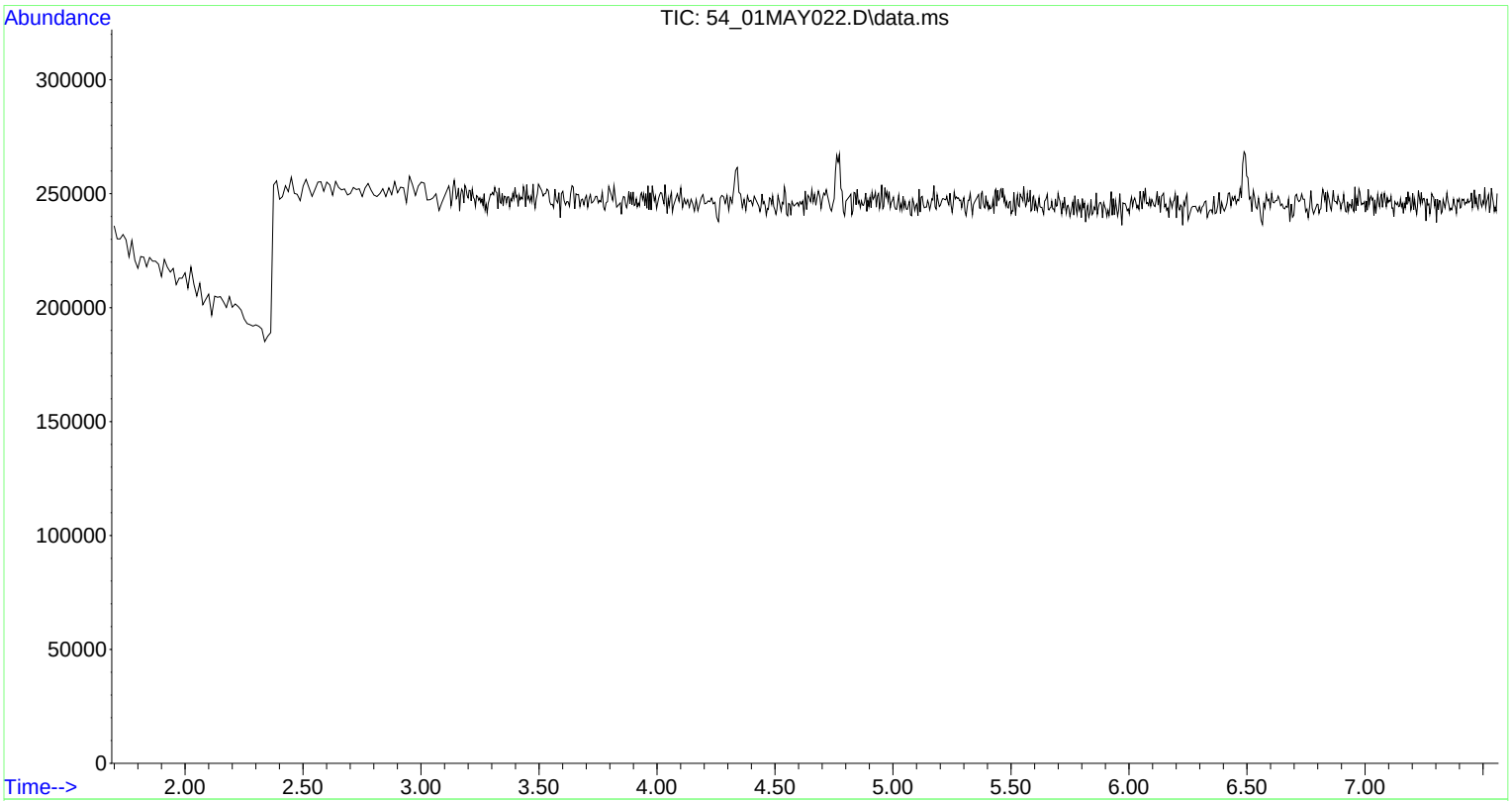
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4949	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	13005	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	12057	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	1706	2.36	ppbv	100
17] o-Xylene	6.936	91	439	0.61	ppbv #	93

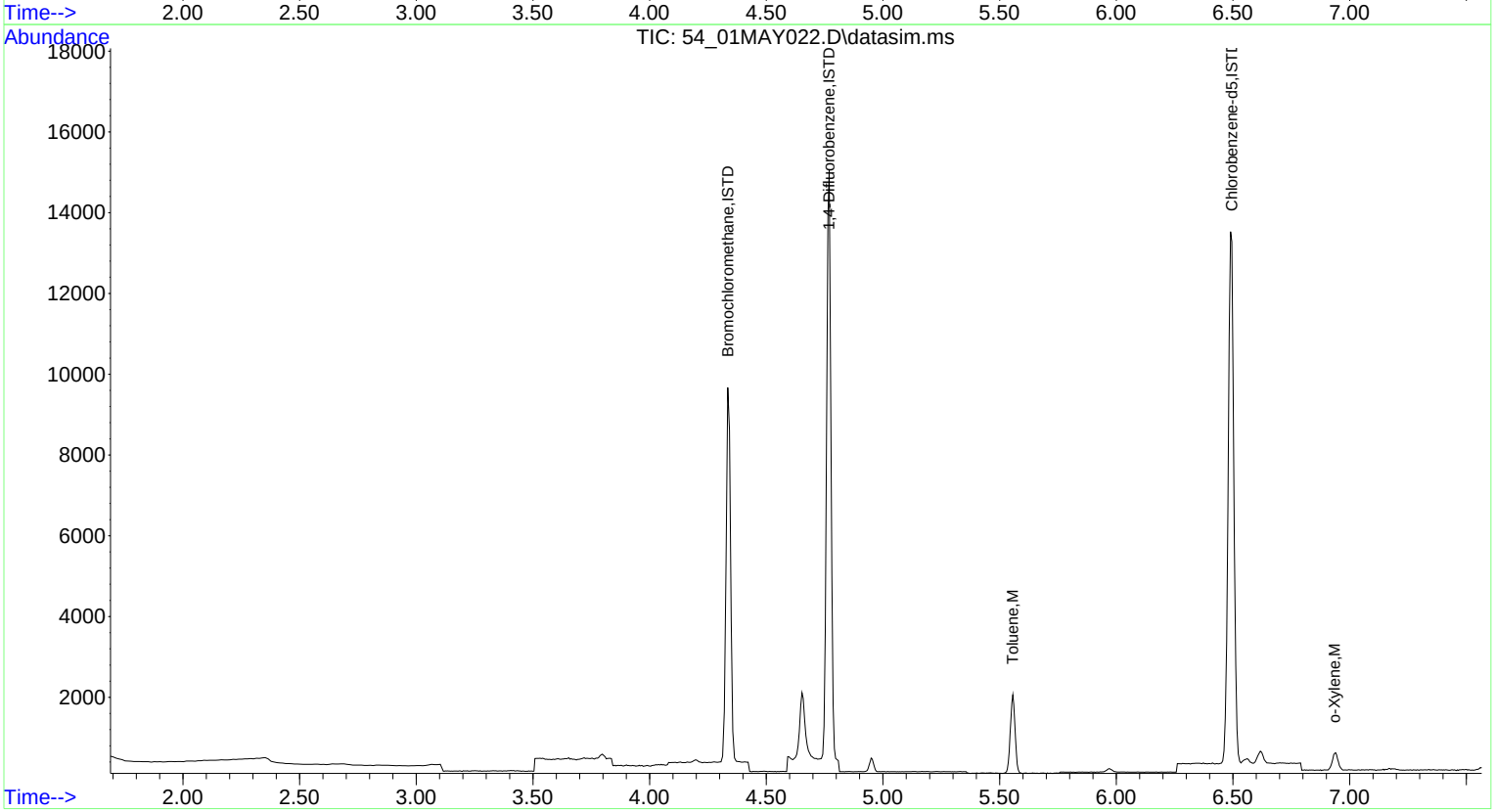
(#) = qualifier out of range (m) = manual integration (+) = signals summed

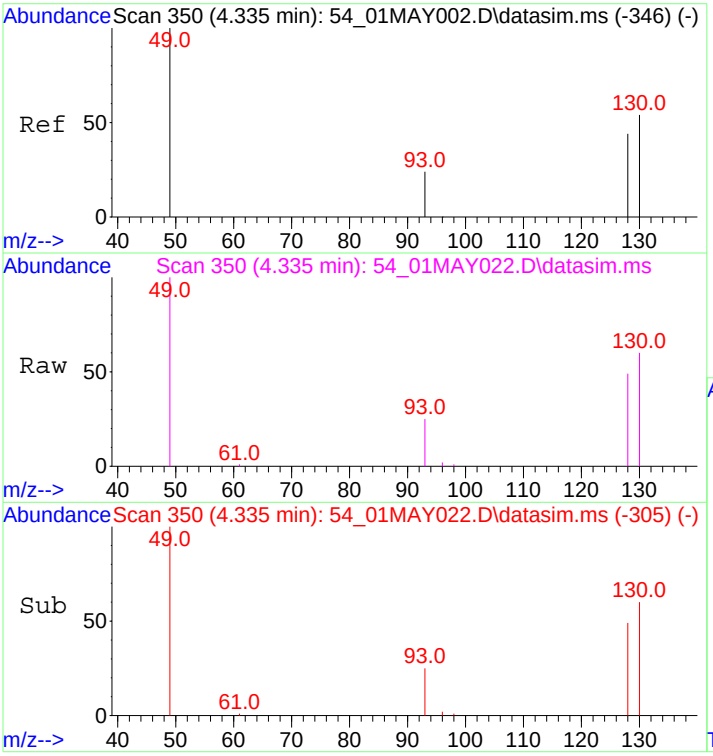
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY022.D
Acq On : 1 May 2014 6:17 pm
Operator :
Sample : 02134 / F6-027
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:28:40 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



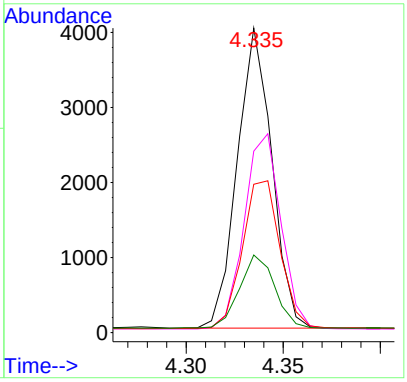


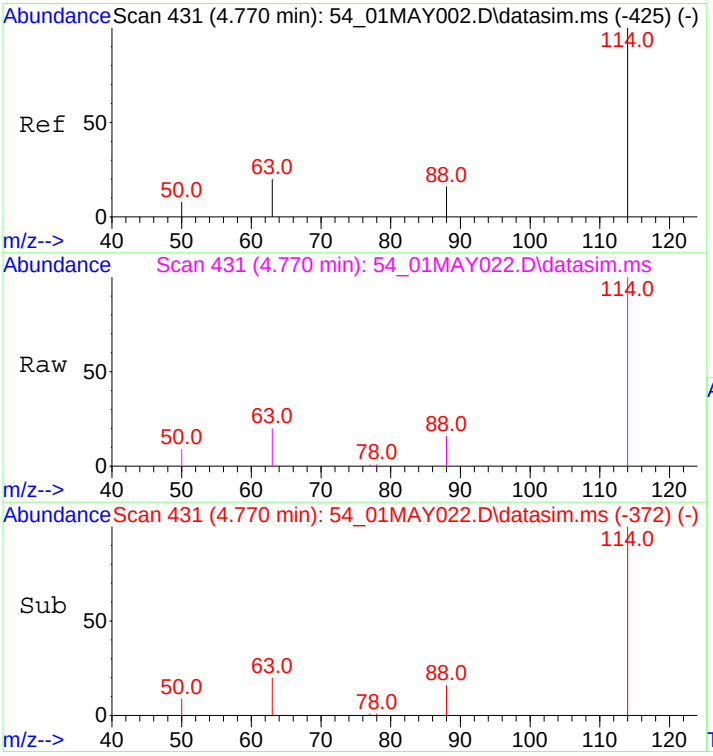


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY022.D
Acq: 1 May 2014 6:17 pm

Tgt Ion: 49 Resp: 4949

Ion	Ratio	Lower	Upper
49	100		
130	69.2	87.2	130.8#
128	54.0	68.0	102.0#
93	24.9	29.3	43.9#

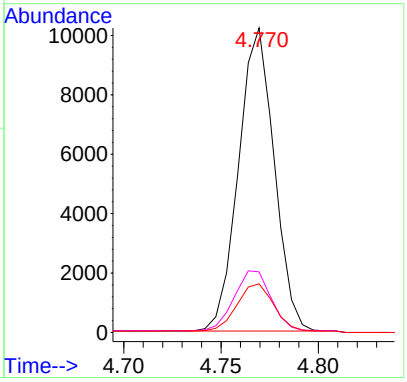


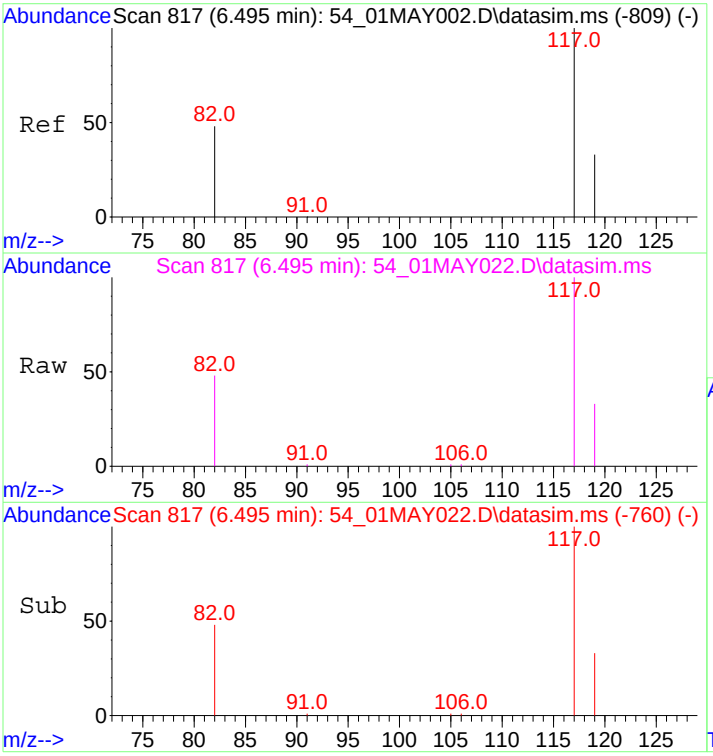


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_01MAY022.D
Acq: 1 May 2014 6:17 pm

Tgt Ion:114 Resp: 13005

Ion	Ratio	Lower	Upper
114	100		
63	22.5	12.0	18.0#
88	16.0	11.8	17.8

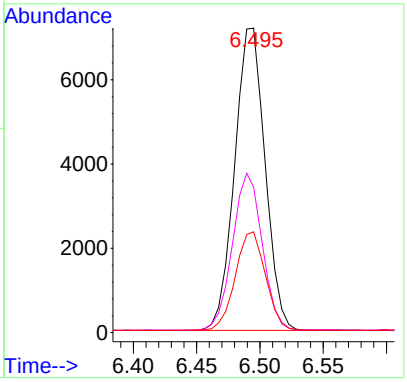


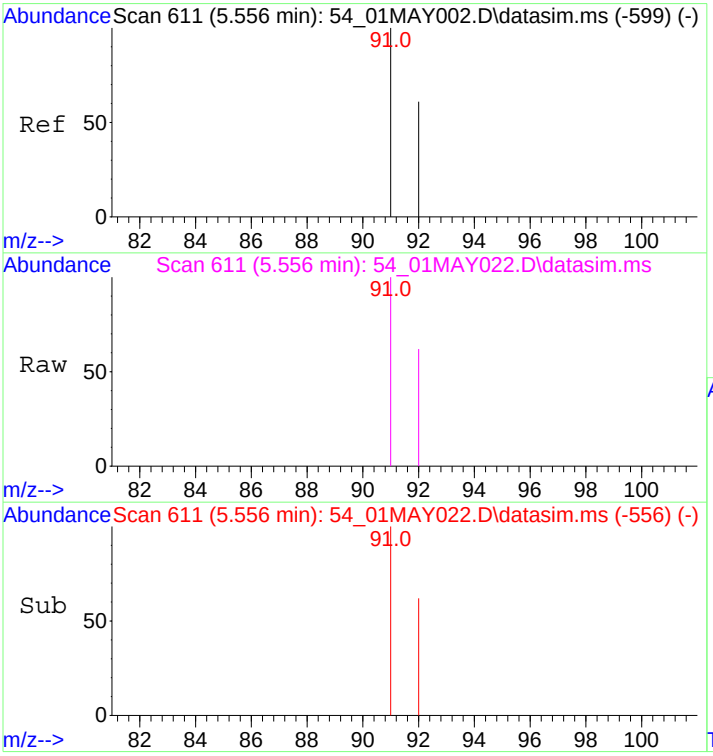


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 01MAY022.D
Acq: 1 May 2014 6:17 pm

Tgt Ion:117 Resp: 12057

Ion	Ratio	Lower	Upper
117	100		
82	50.6	38.0	57.0
119	32.3	27.0	40.4

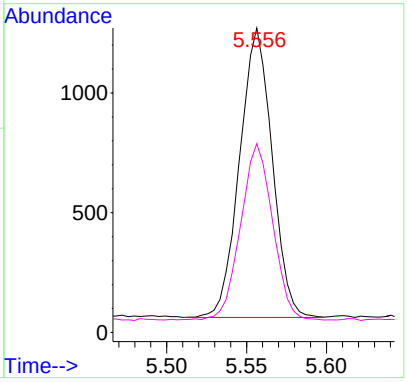


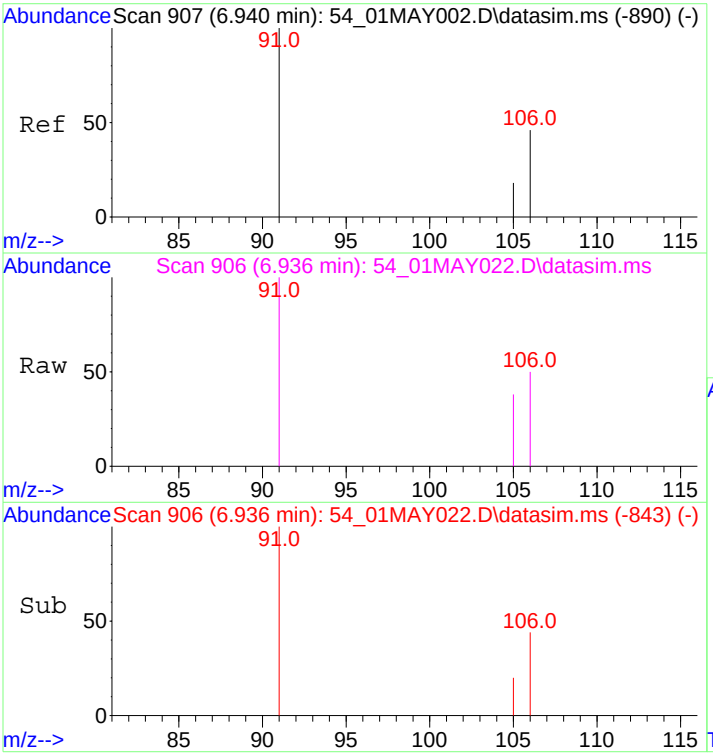


#13
Toluene
Concen: 2.36 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_01MAY022.D
Acq: 1 May 2014 6:17 pm

Tgt Ion: 91 Resp: 1706

Ion	Ratio	Lower	Upper
91	100		
92	60.0	47.8	71.8

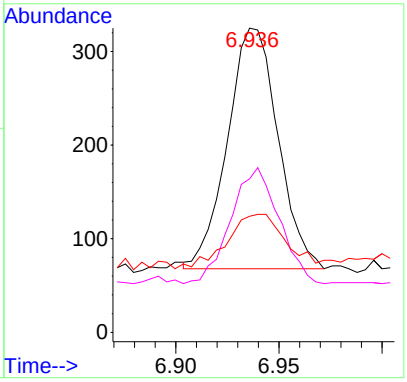




#17
o-Xylene
Concen: 0.61 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 01MAY022.D
Acq: 1 May 2014 6:17 pm

Tgt Ion: 91 Resp: 439

Ion	Ratio	Lower	Upper
91	100		
106	46.5	40.1	60.1
105	24.6	15.8	23.6#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY023.D
Acq On : 1 May 2014 6:29 pm
Operator :
Sample : 02135 / F6-029
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:40:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

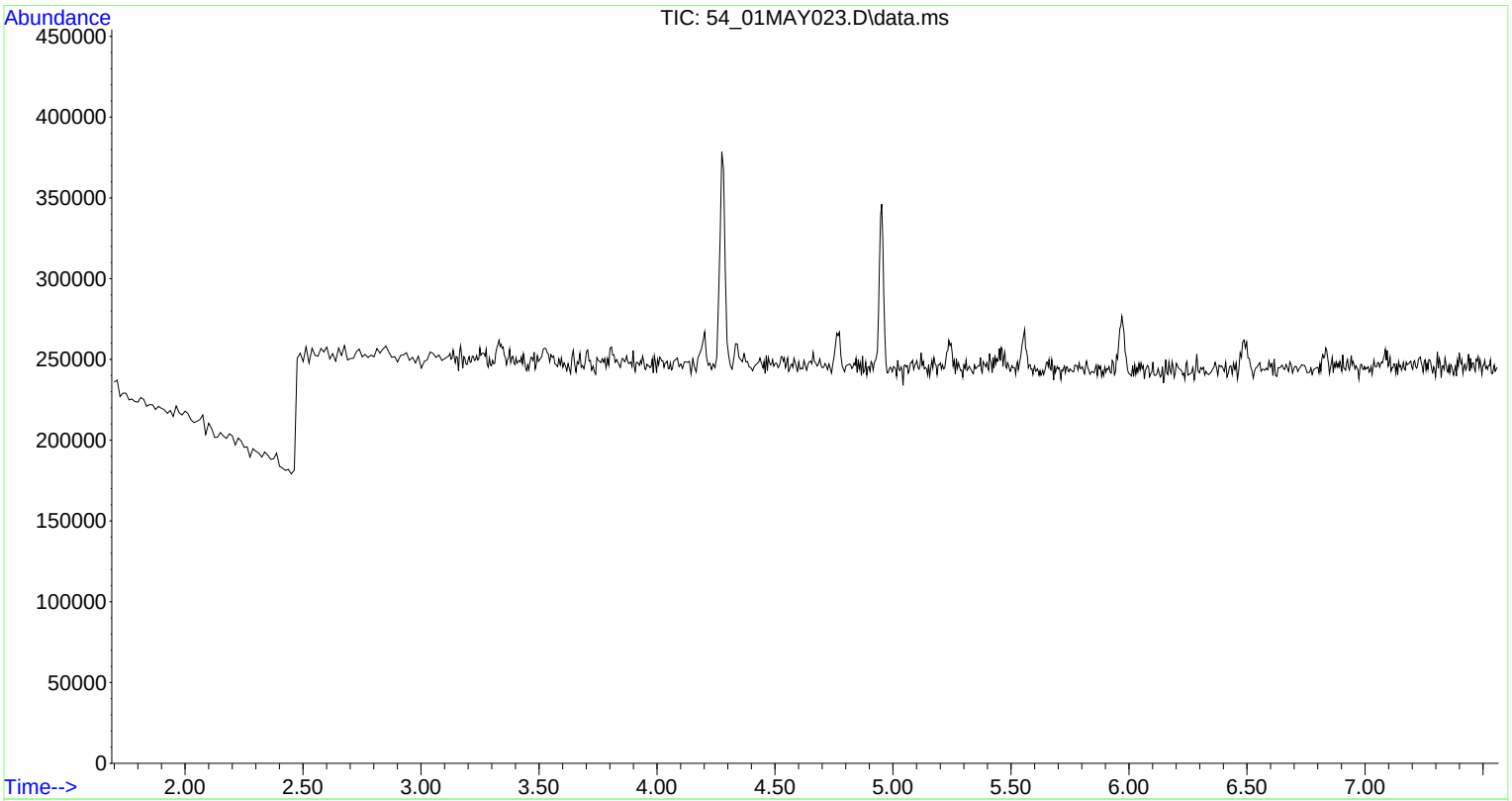
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	5036	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	13200	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	12456	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
2] Vinyl chloride	1.915	62	185m	0.97	ppbv	
3] 1,1-Dichloroethene	3.256	61	1892	4.85	ppbv	# 85
5] trans-1,2-Dichloroethene	3.709	61	1380	4.01	ppbv	# 80
6] 1,1-Dichloroethane	3.910	63	1407	3.43	ppbv	# 85
7] cis-1,2-Dichloroethene	4.197	61	8132	25.33	ppbv	# 74
8] 1,1,1-Trichloroethane	4.483	97	1082	2.08	ppbv	95
11] Trichloroethene	4.950	130	28970	88.24	ppbv	100
13] Toluene	5.556	91	15942	21.35	ppbv	100
14] Tetrachloroethene	5.968	166	11192	26.24	ppbv	99
17] o-Xylene	6.936	91	529	0.72	ppbv	91

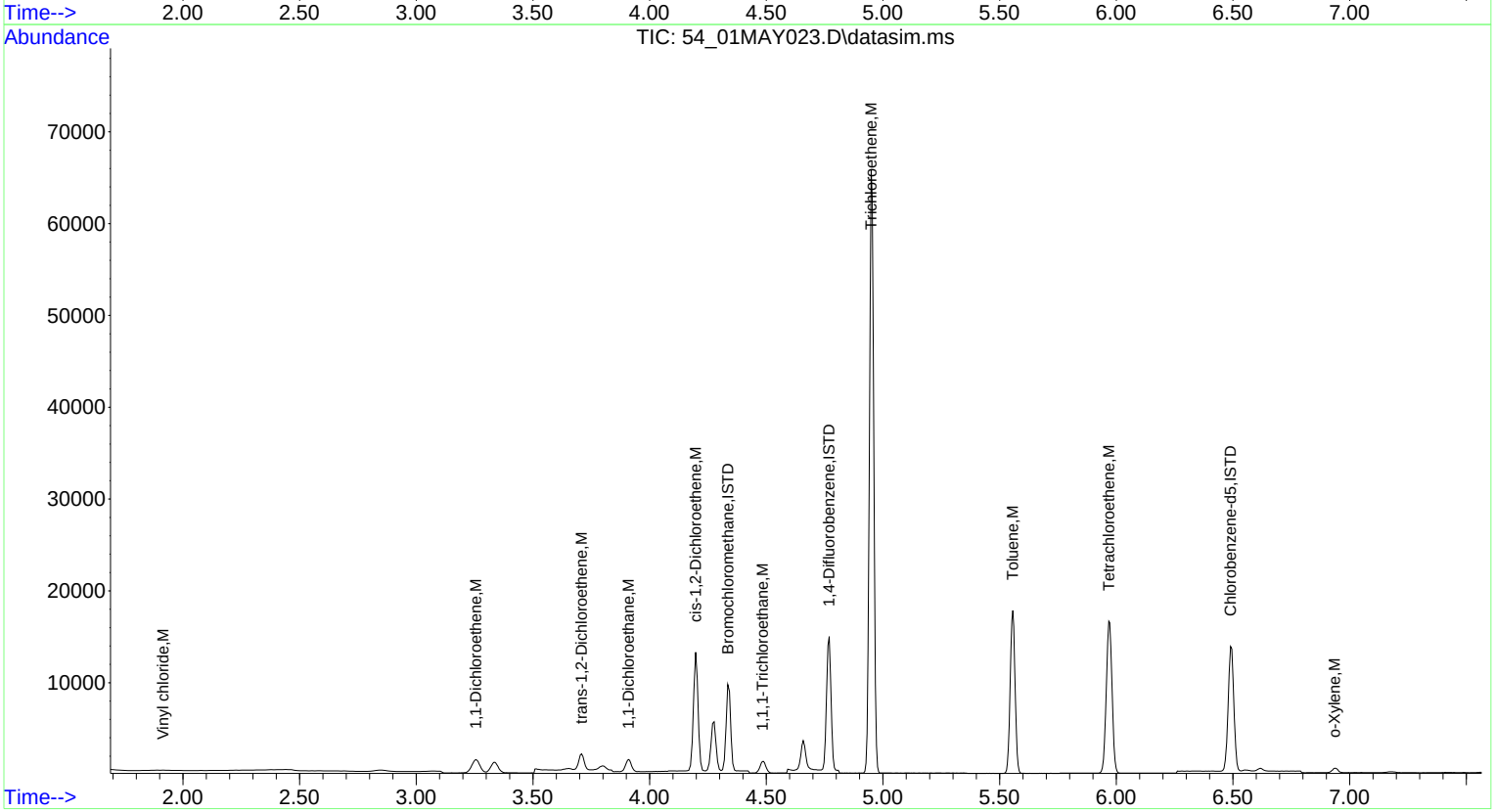
(#) = qualifier out of range (m) = manual integration (+) = signals summed

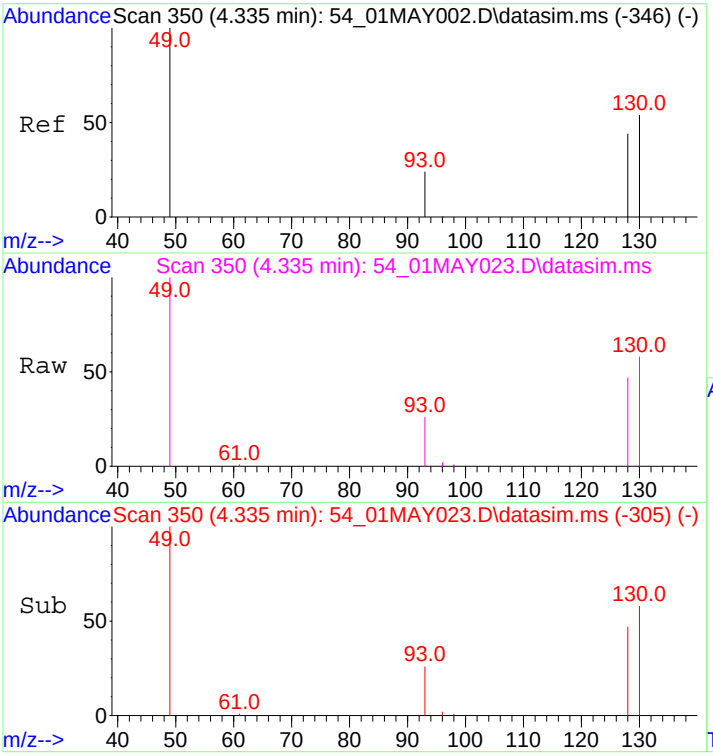
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY023.D
Acq On : 1 May 2014 6:29 pm
Operator :
Sample : 02135 / F6-029
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:40:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



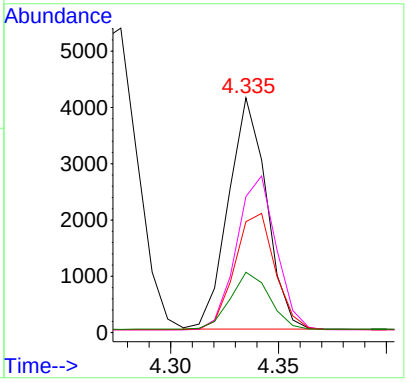


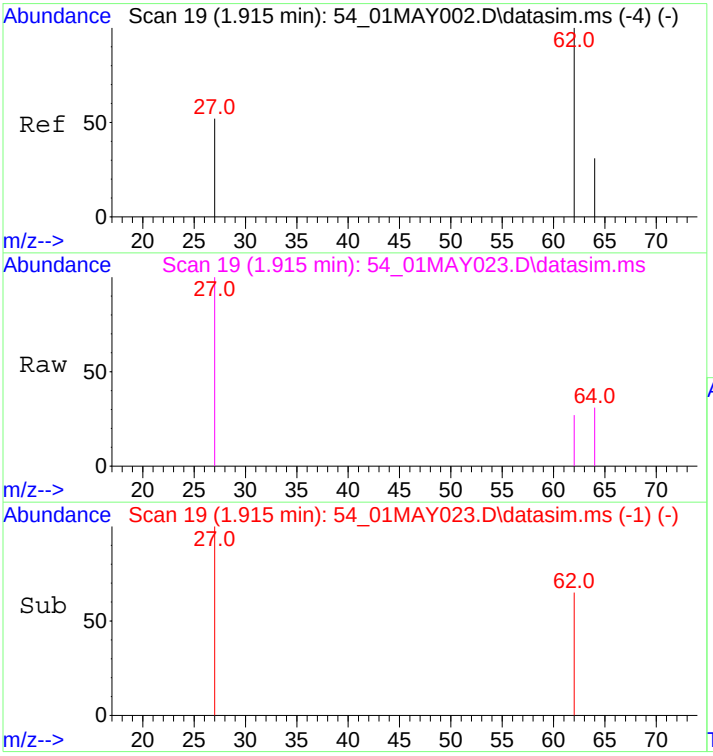


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 49 Resp: 5036

Ion	Ratio	Lower	Upper
49	100		
130	69.5	87.2	130.8#
128	53.5	68.0	102.0#
93	25.4	29.3	43.9#

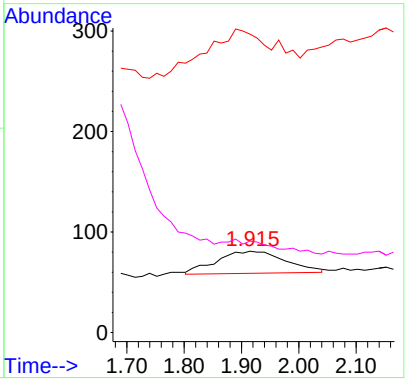




#2
Vinyl chloride
Concen: 0.97 ppbv m
RT: 1.915 min Scan# 19
Delta R.T. 0.000 min
Lab File: 54_01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 62 Resp: 185

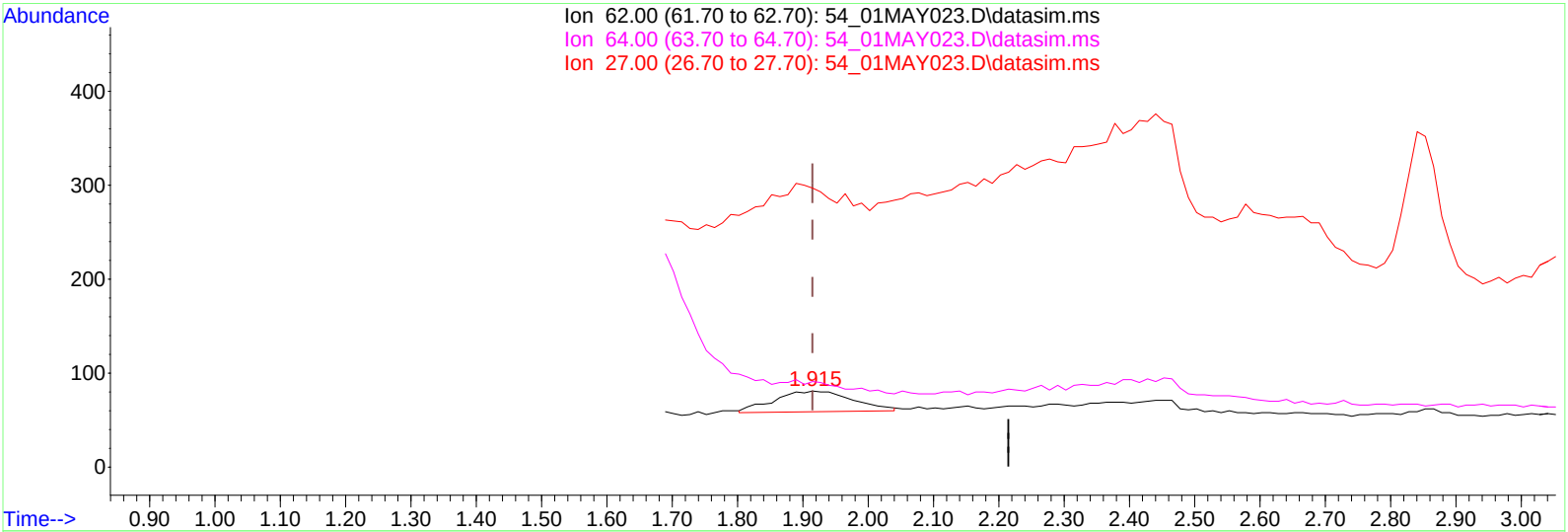
Ion	Ratio	Lower	Upper
62	100		
64	112.3	26.8	40.2#
27	366.7	16.1	24.1#

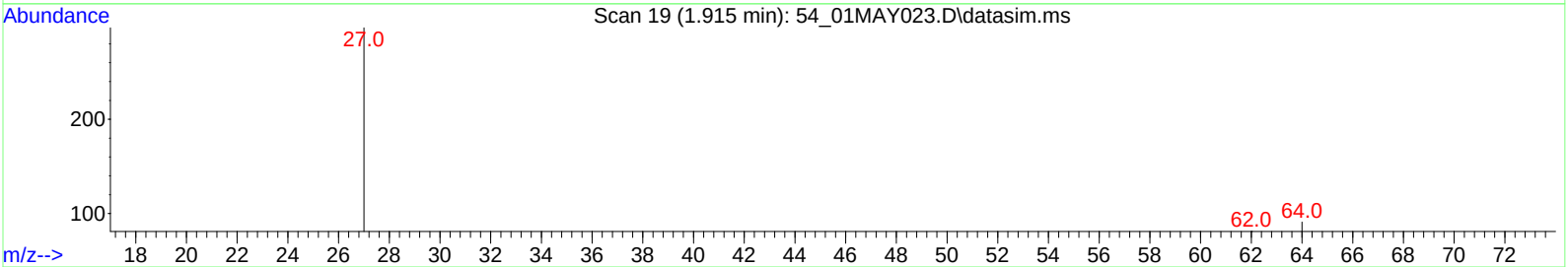


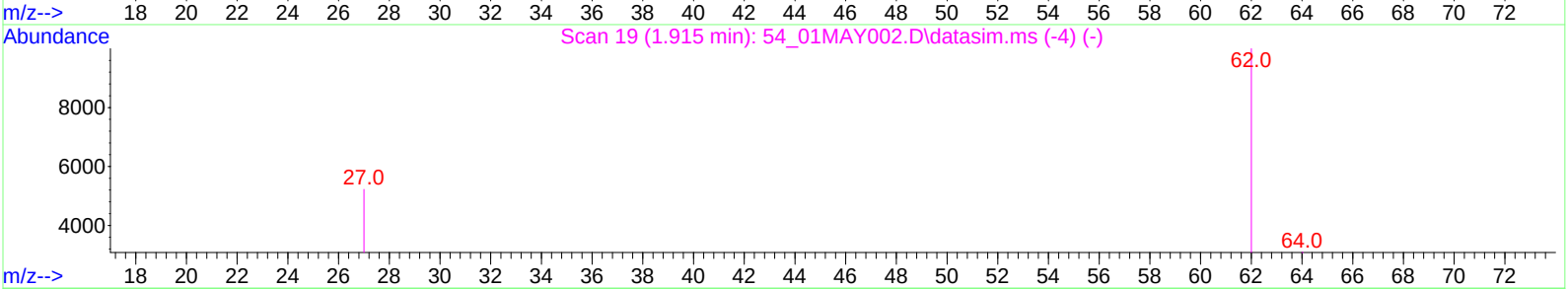
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY023.D
Acq On : 1 May 2014 6:29 pm
Operator :
Sample : 02135 / F6-029
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:35:15 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







TIC: 54_01MAY023.D\data.ms

(2) Vinyl chloride (M)

1.915min (+0.000) 0.97 ppbv m

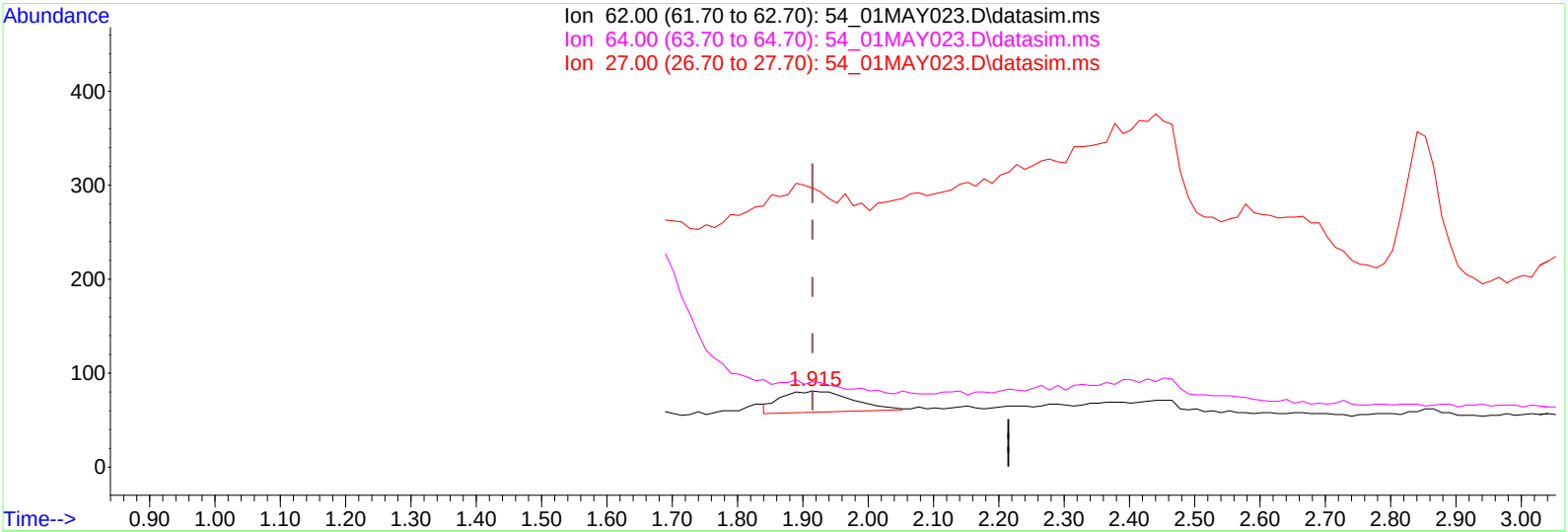
response 185

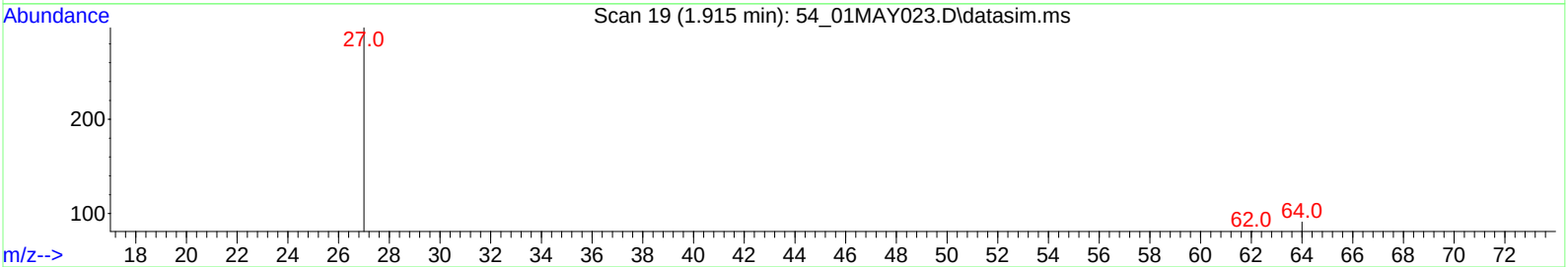
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	112.35#
27.00	20.10	366.67#
0.00	0.00	0.00

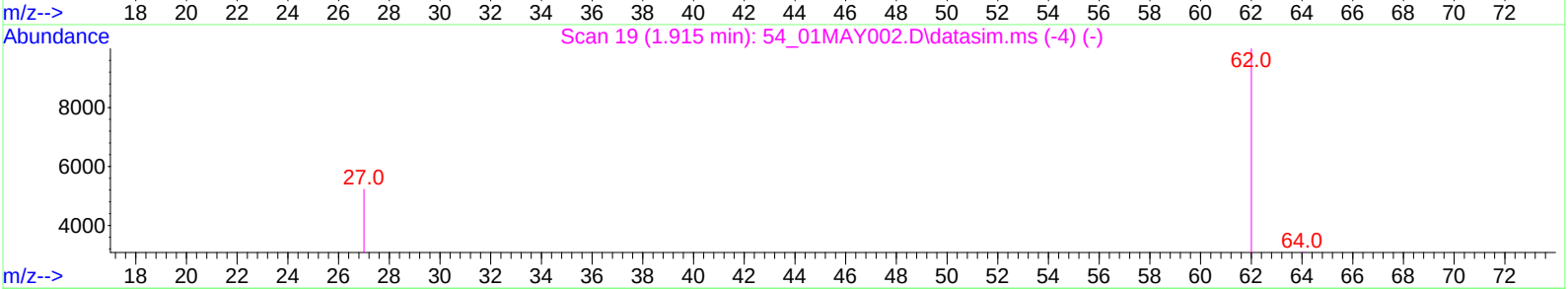
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY023.D
Acq On : 1 May 2014 6:29 pm
Operator :
Sample : 02135 / F6-029
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:35:15 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration







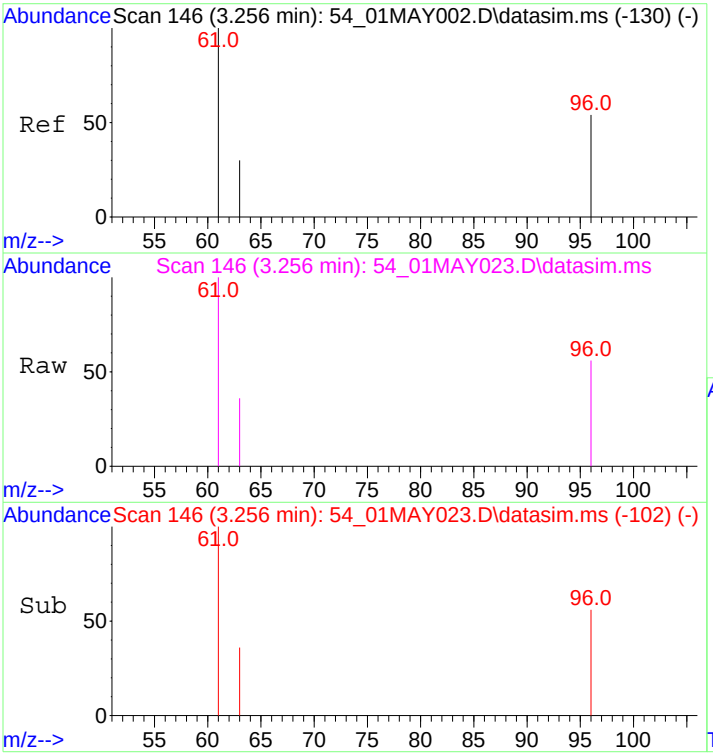
TIC: 54_01MAY023.D\data.ms

(2) Vinyl chloride (M)

1.915min (+0.000) 0.89 ppbv

response 171

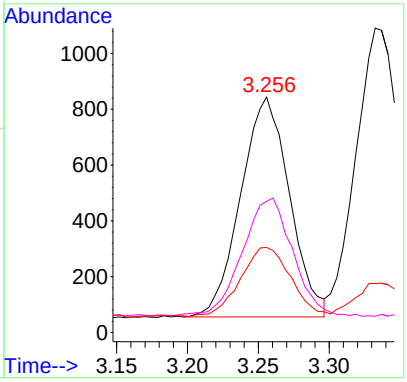
Ion	Exp%	Act%
62.00	100	100
64.00	33.50	0.00#
27.00	20.10	0.00#
0.00	0.00	0.00

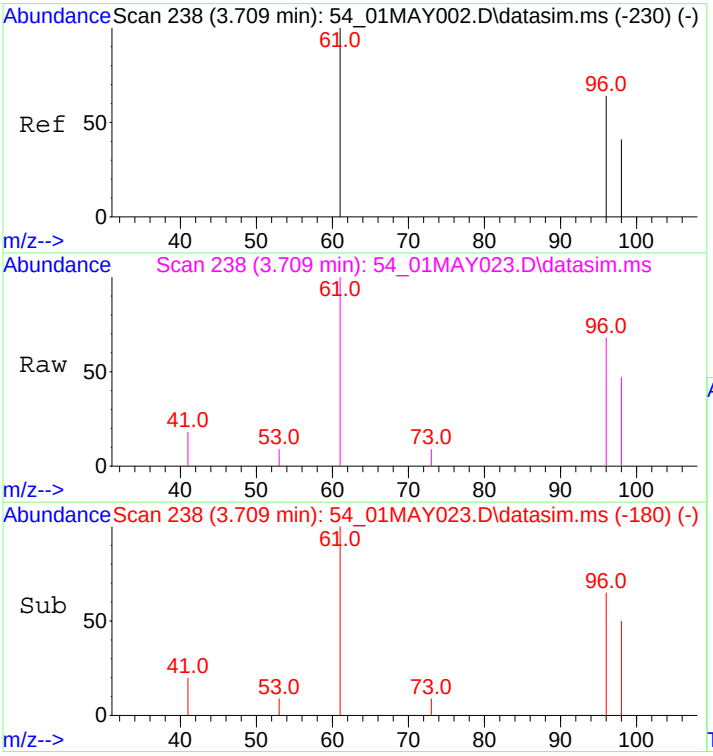


#3
1,1-Dichloroethene
Concen: 4.85 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.000 min
Lab File: 54 01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 61 Resp: 1892

Ion	Ratio	Lower	Upper
61	100		
96	62.2	63.4	95.2#
63	30.2	26.2	39.2

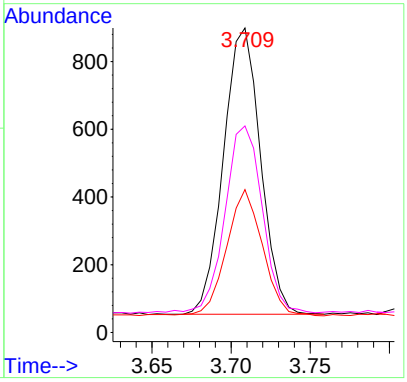


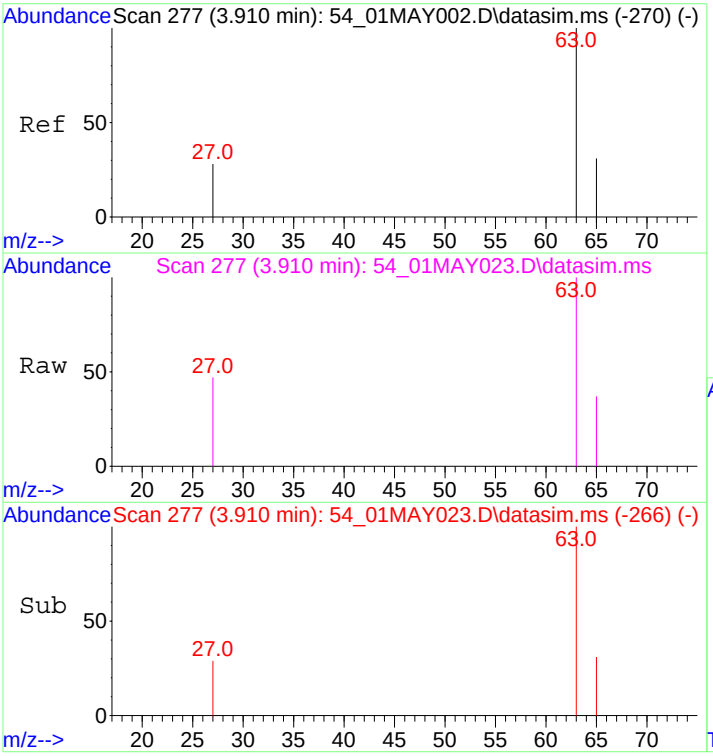


#5
trans-1,2-Dichloroethene
Concen: 4.01 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.000 min
Lab File: 54_01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 61 Resp: 1380

Ion	Ratio	Lower	Upper
61	100		
96	66.2	71.4	107.0#
98	48.0	45.8	68.8

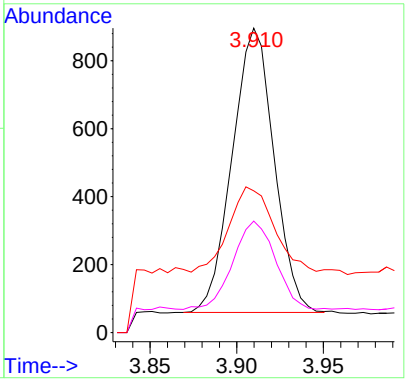


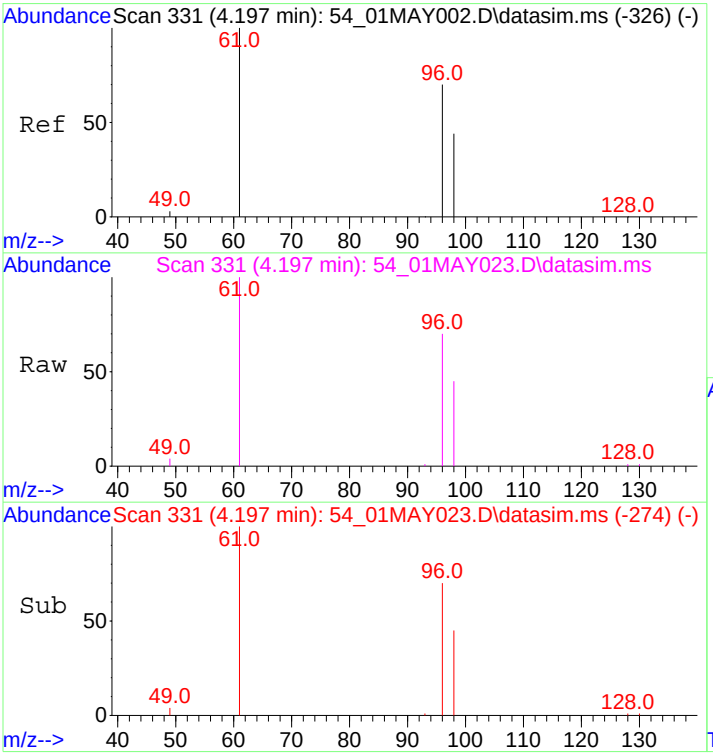


#6
1,1-Dichloroethane
Concen: 3.43 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54 01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 63 Resp: 1407

Ion	Ratio	Lower	Upper
63	100		
65	31.4	26.1	39.1
27	31.9	10.2	15.2#

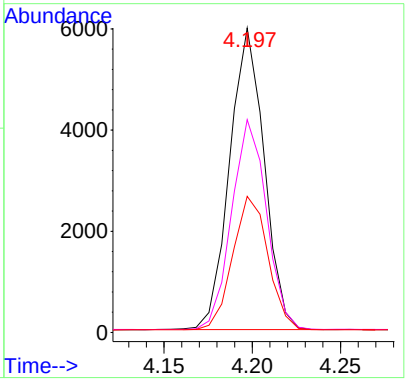


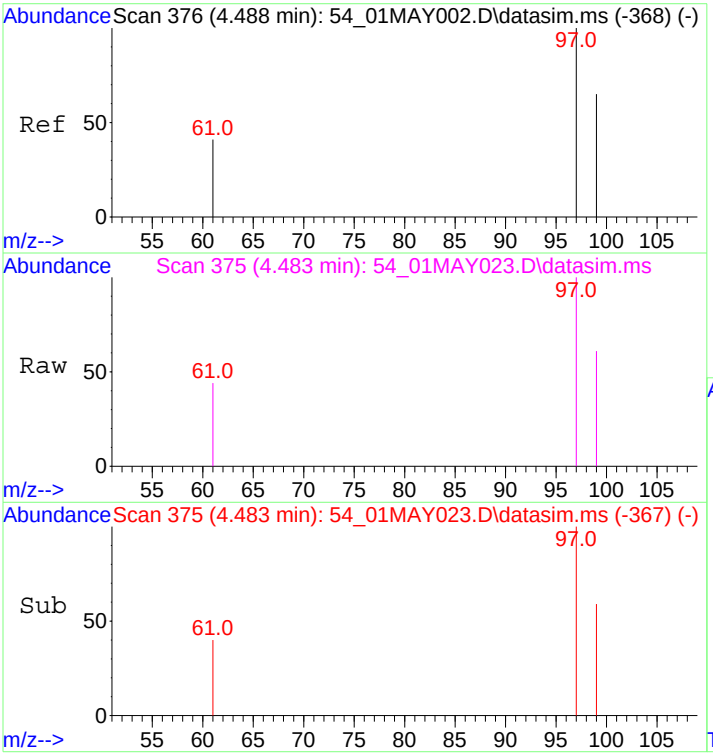


#7
cis-1,2-Dichloroethene
Concen: 25.33 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 61 Resp: 8132

Ion	Ratio	Lower	Upper
61	100		
96	70.2	78.5	117.7#
98	45.2	50.6	76.0#

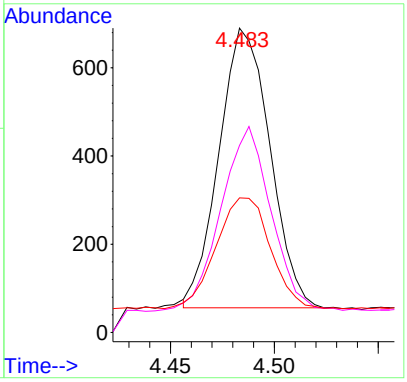


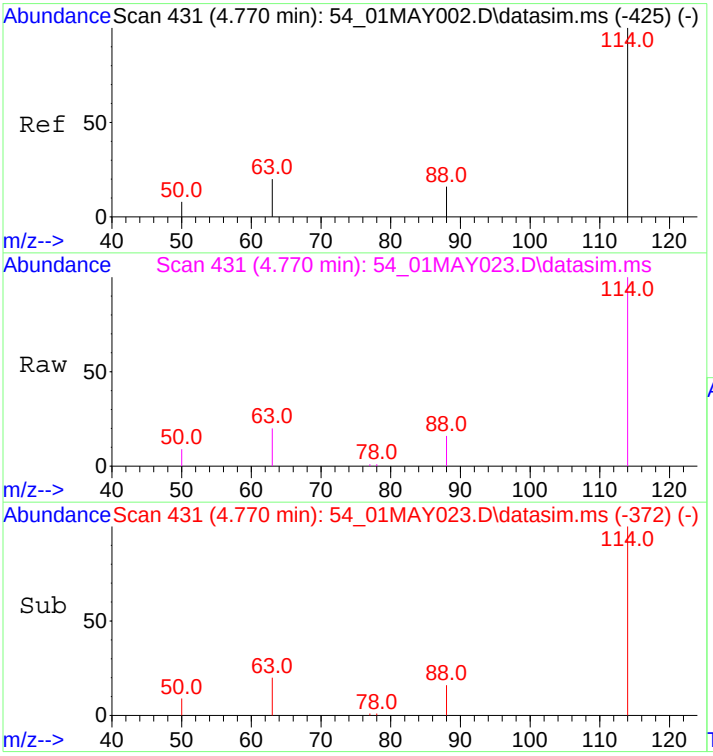


#8
1,1,1-Trichloroethane
Concen: 2.08 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.004 min
Lab File: 54 01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 97 Resp: 1082

Ion	Ratio	Lower	Upper
97	100		
99	62.0	52.1	78.1
61	41.5	30.2	45.4

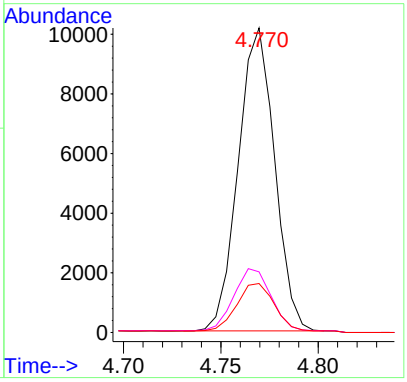


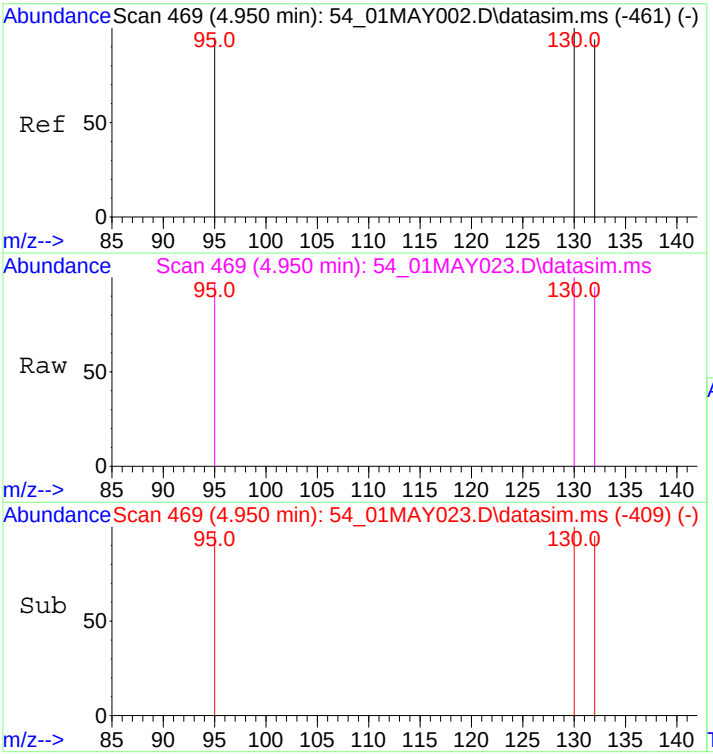


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion:114 Resp: 13200

Ion	Ratio	Lower	Upper
114	100		
63	20.8	12.0	18.0#
88	16.2	11.8	17.8

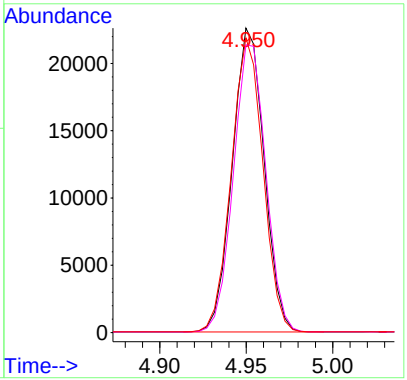


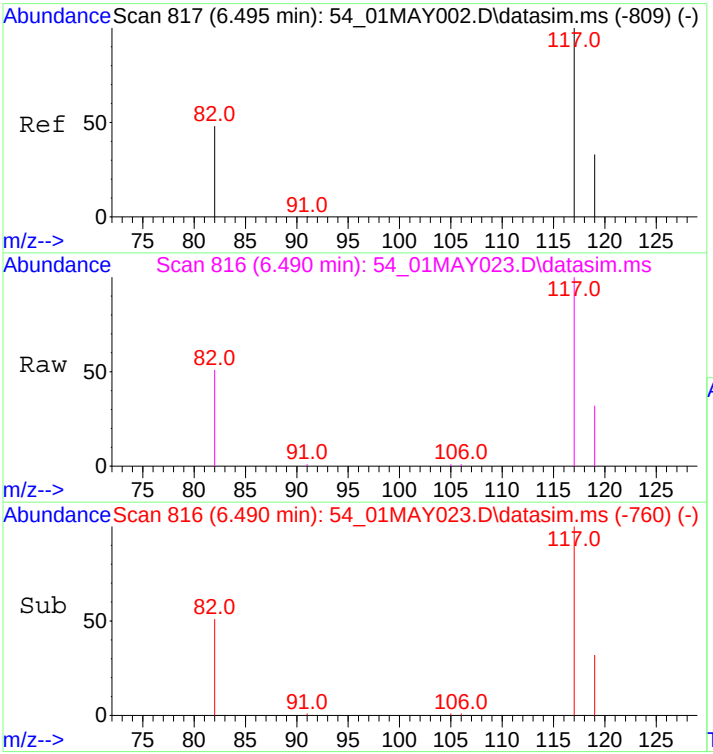


#11
Trichloroethene
Concen: 88.24 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion:130 Resp: 28970

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	95.9	76.5	114.7

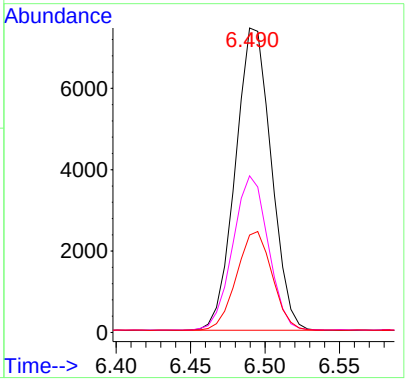


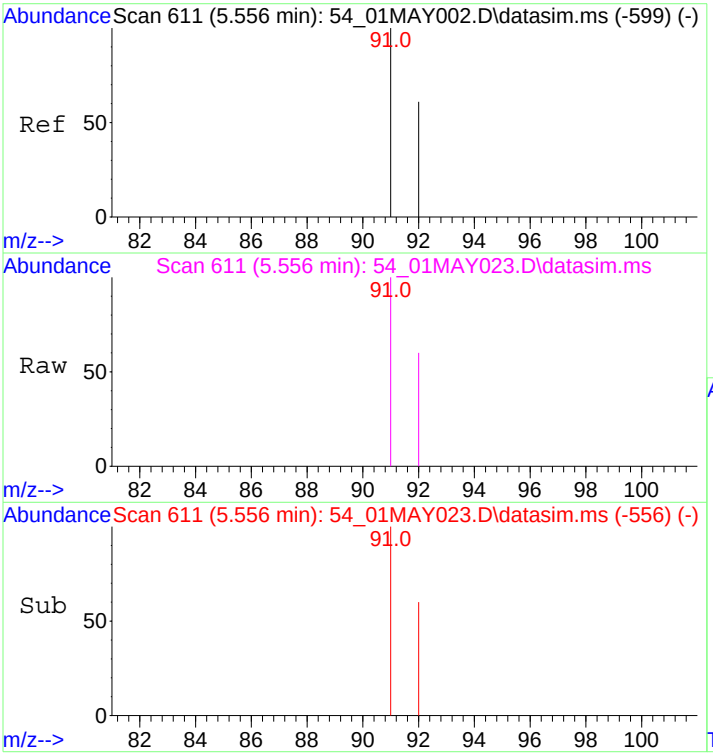


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion:117 Resp: 12456

Ion	Ratio	Lower	Upper
117	100		
82	50.3	38.0	57.0
119	32.4	27.0	40.4

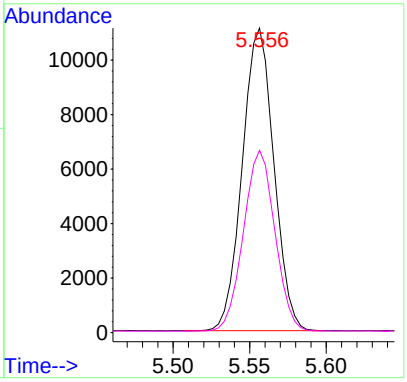


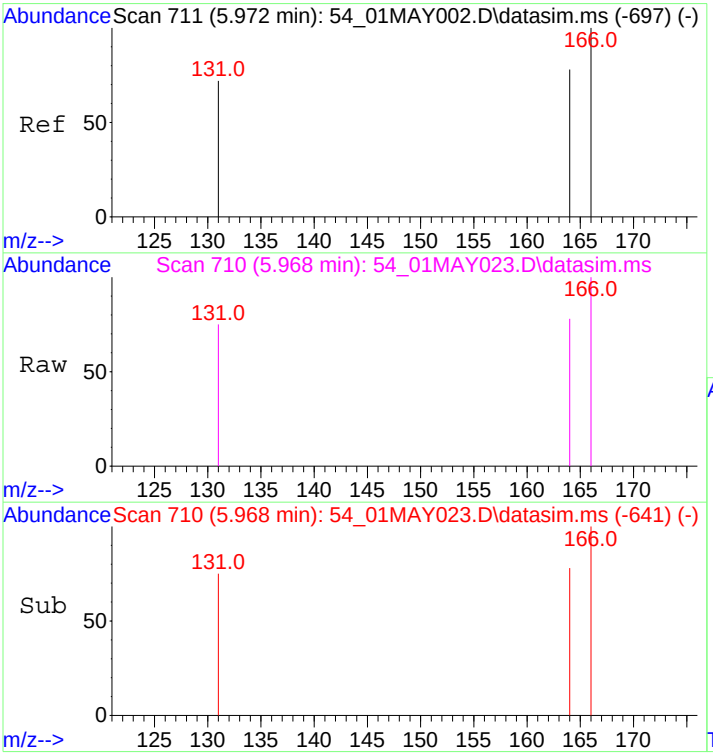


#13
Toluene
Concen: 21.35 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 91 Resp: 15942

Ion	Ratio	Lower	Upper
91	100		
92	59.4	47.8	71.8

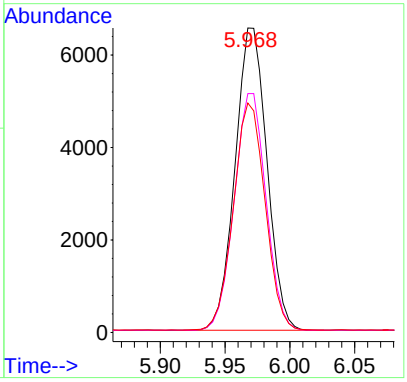


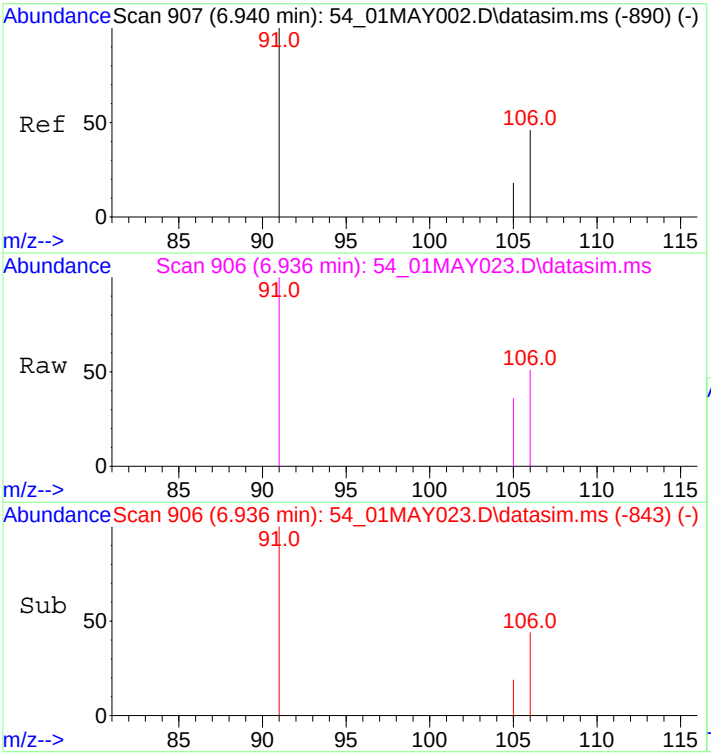


#14
Tetrachloroethene
Concen: 26.24 ppbv
RT: 5.968 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54_01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion:166 Resp: 11192

Ion	Ratio	Lower	Upper
166	100		
164	78.2	62.6	94.0
131	74.7	58.5	87.7

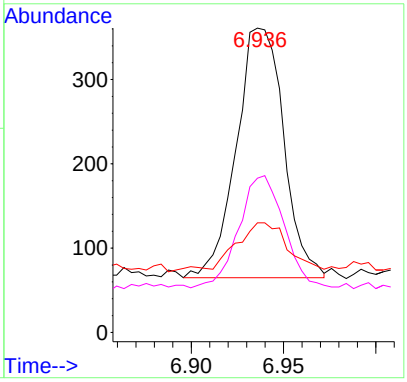




#17
o-Xylene
Concen: 0.72 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 01MAY023.D
Acq: 1 May 2014 6:29 pm

Tgt Ion: 91 Resp: 529

Ion	Ratio	Lower	Upper
91	100		
106	43.1	40.1	60.1
105	21.9	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY024.D
Acq On : 1 May 2014 6:40 pm
Operator :
Sample : 02136 / F6-031
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:48:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

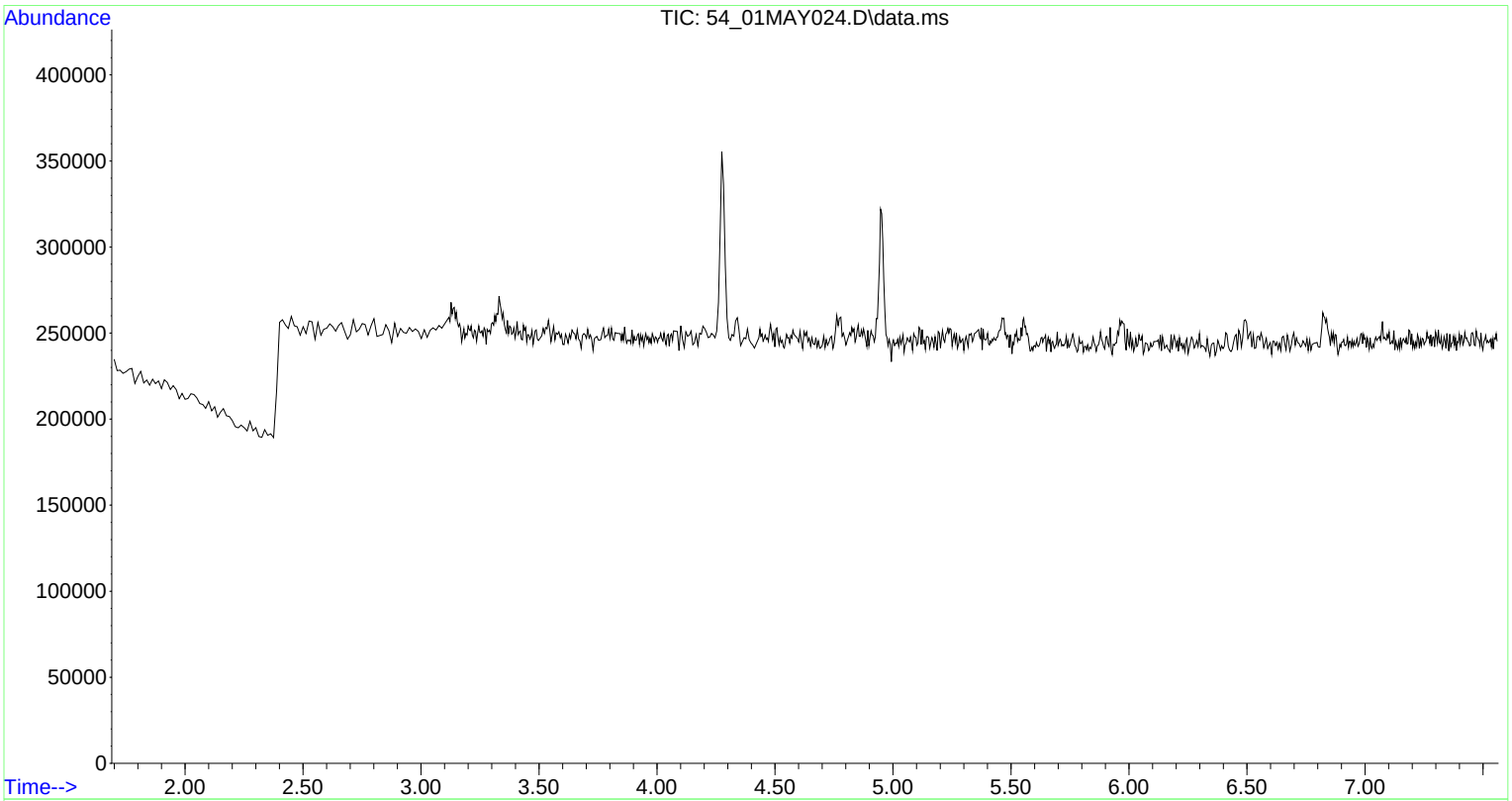
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3892	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10217	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	9504	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.251	61	735	2.44	ppbv	95
5] trans-1,2-Dichloroethene	3.709	61	779	2.93	ppbv #	81
6] 1,1-Dichloroethane	3.910	63	626	1.97	ppbv #	82
7] cis-1,2-Dichloroethene	4.197	61	2856	11.51	ppbv #	73
8] 1,1,1-Trichloroethane	4.488	97	922	2.29	ppbv	95
11] Trichloroethene	4.950	130	21101	83.04	ppbv	100
13] Toluene	5.556	91	8049	14.13	ppbv	100
14] Tetrachloroethene	5.972	166	4359	13.40	ppbv	99

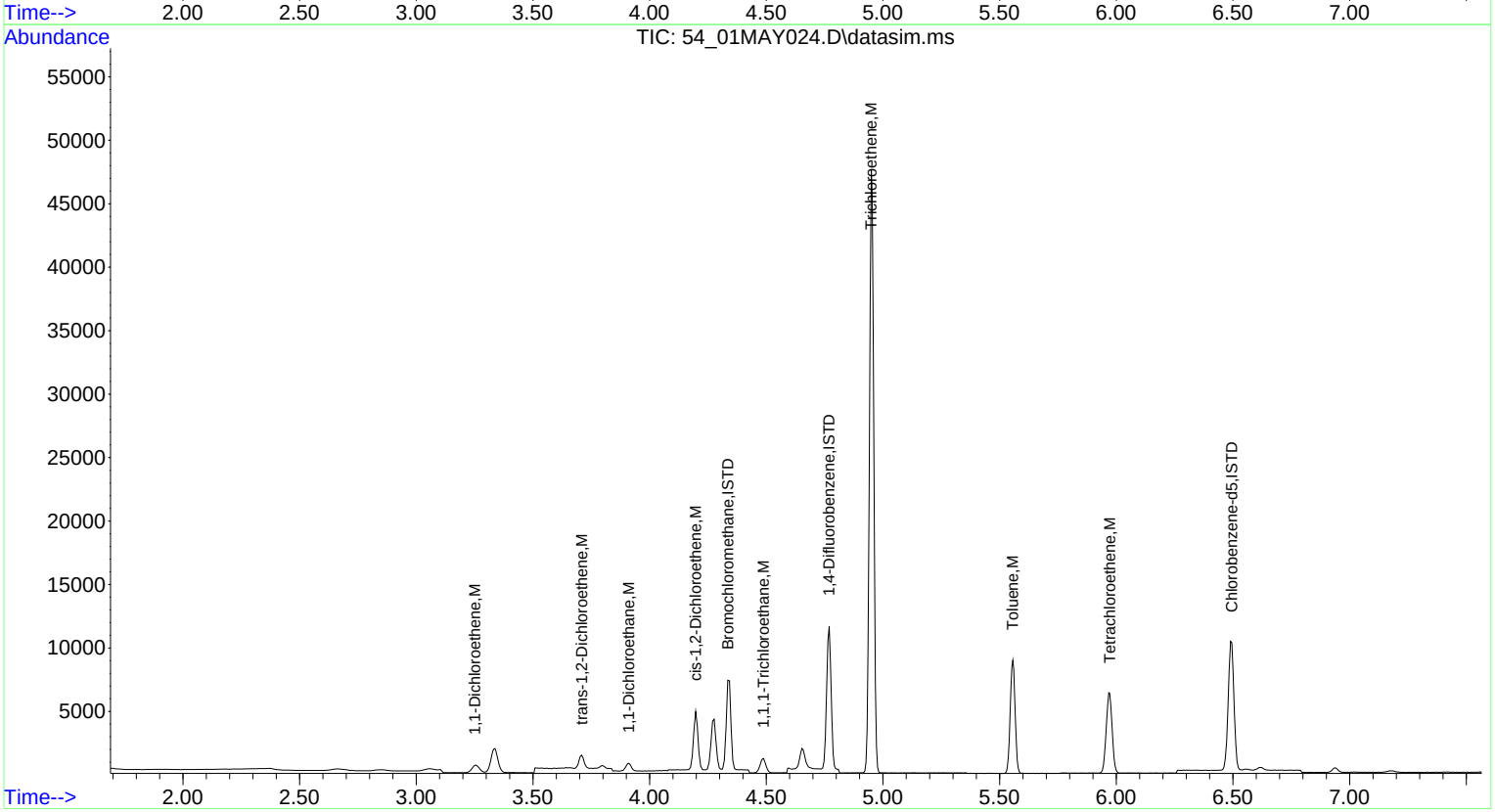
(#) = qualifier out of range (m) = manual integration (+) = signals summed

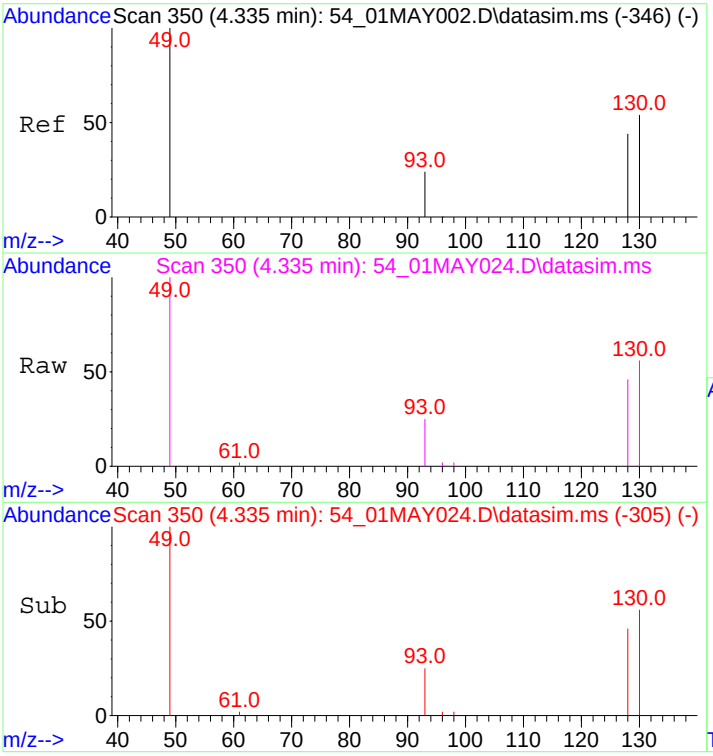
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY024.D
Acq On : 1 May 2014 6:40 pm
Operator :
Sample : 02136 / F6-031
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 18:48:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



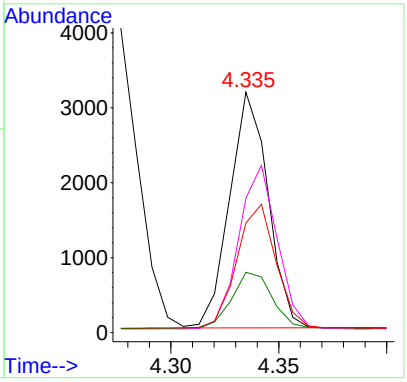


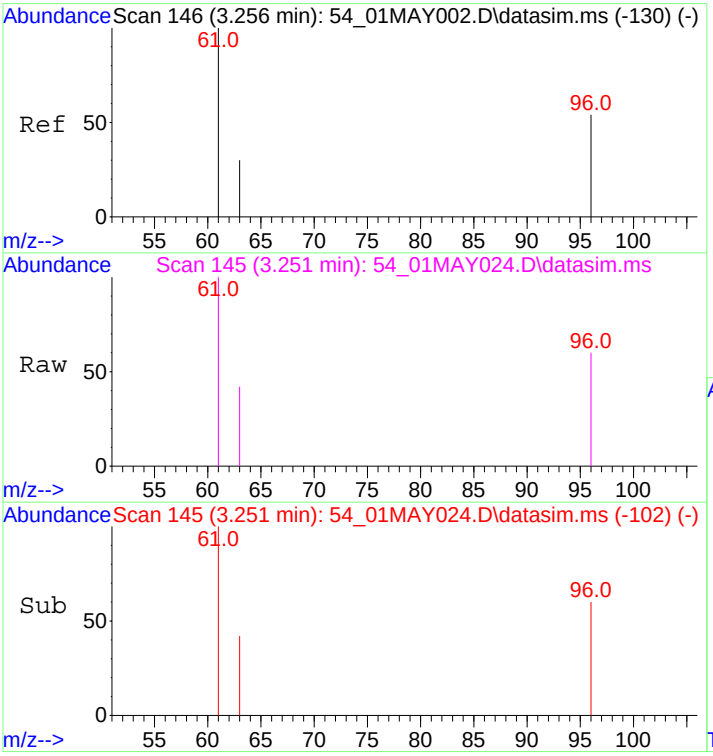


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion: 49 Resp: 3892

Ion	Ratio	Lower	Upper
49	100		
130	69.6	87.2	130.8#
128	53.4	68.0	102.0#
93	24.5	29.3	43.9#

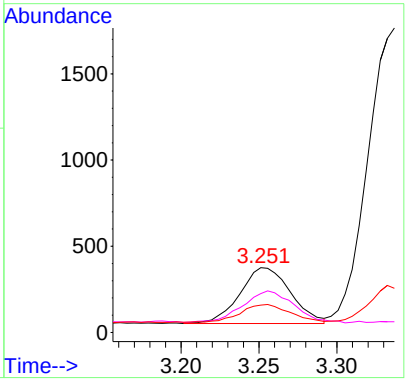


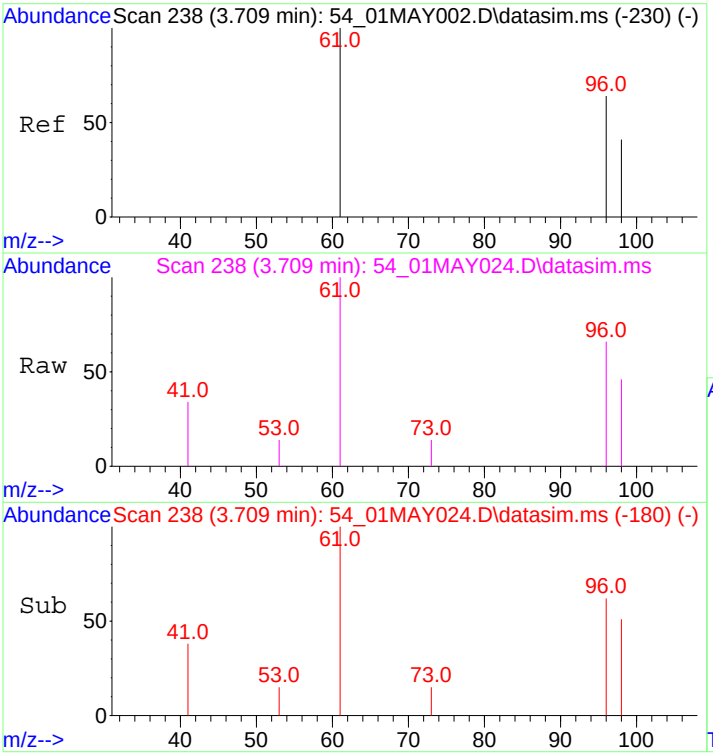


#3
1,1-Dichloroethene
Concen: 2.44 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.005 min
Lab File: 54_01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion: 61 Resp: 735

Ion	Ratio	Lower	Upper
61	100		
96	75.0	63.4	95.2
63	30.1	26.2	39.2

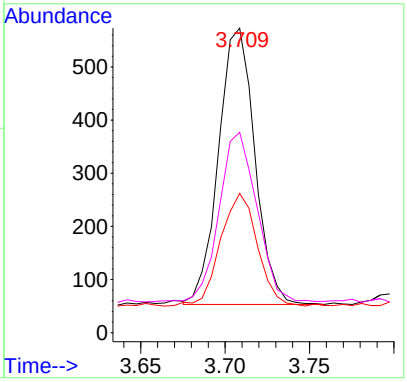


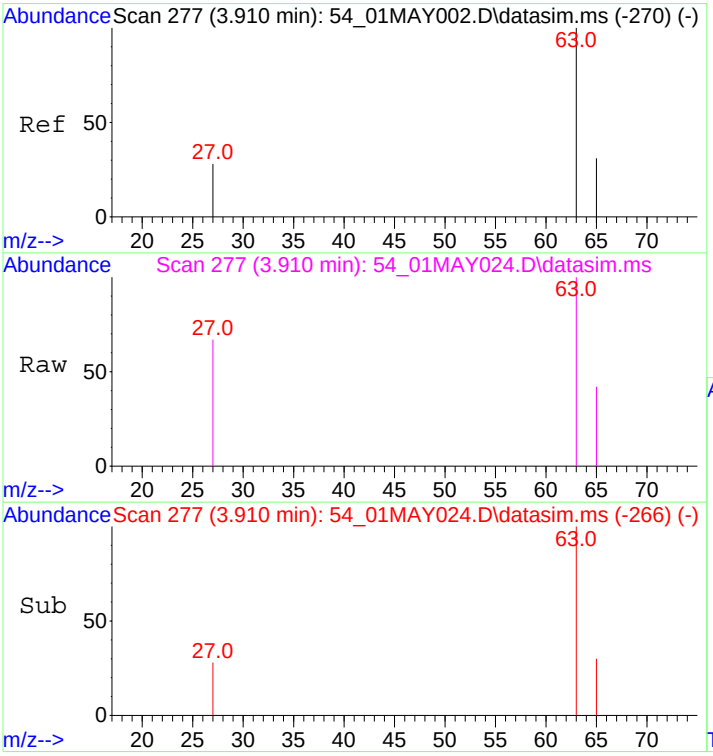


#5
trans-1,2-Dichloroethene
Concen: 2.93 ppbv
RT: 3.709 min Scan# 238
Delta R.T. -0.000 min
Lab File: 54 01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion: 61 Resp: 779

Ion	Ratio	Lower	Upper
61	100		
96	68.4	71.4	107.0#
98	47.0	45.8	68.8

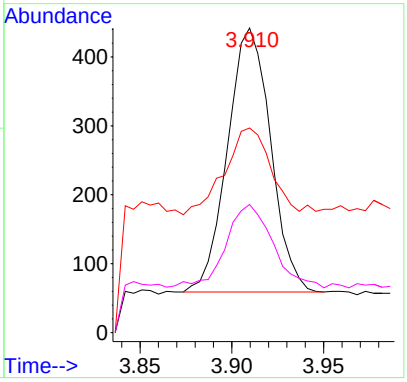


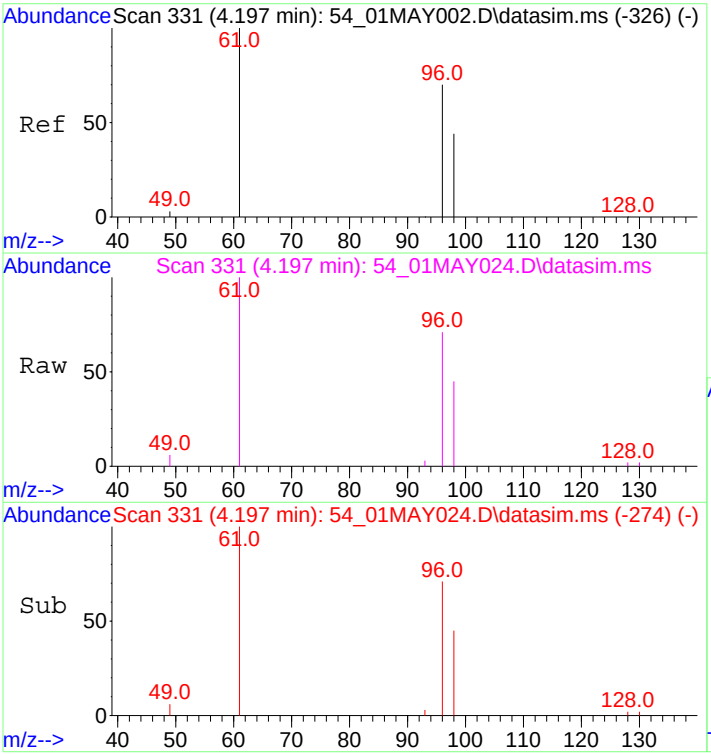


#6
1,1-Dichloroethane
Concen: 1.97 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion: 63 Resp: 626

Ion	Ratio	Lower	Upper
63	100		
65	34.2	26.1	39.1
27	34.8	10.2	15.2#

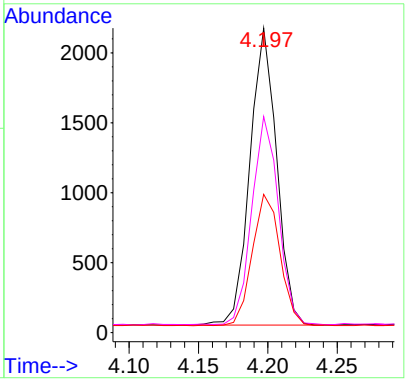


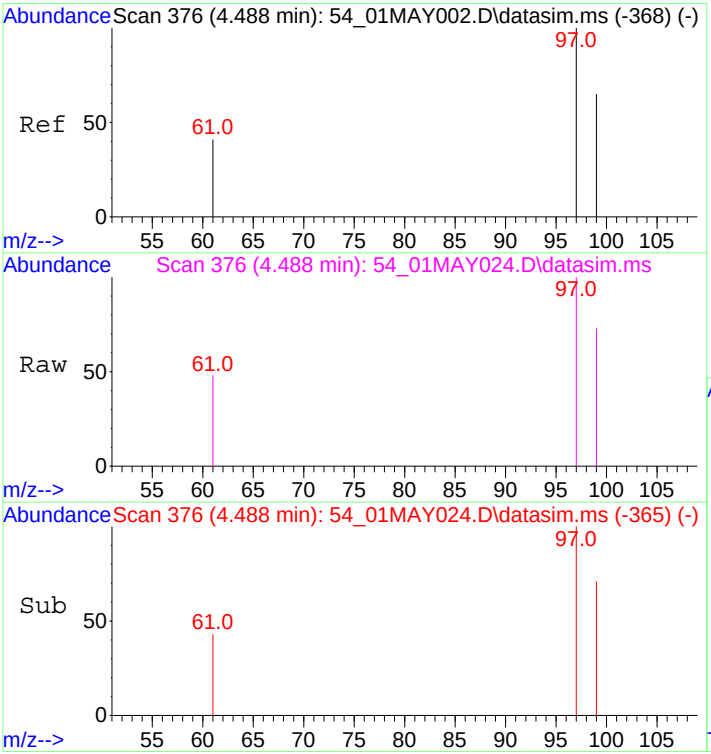


#7
cis-1,2-Dichloroethene
Concen: 11.51 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion: 61 Resp: 2856

Ion	Ratio	Lower	Upper
61	100		
96	69.1	78.5	117.7#
98	45.8	50.6	76.0#

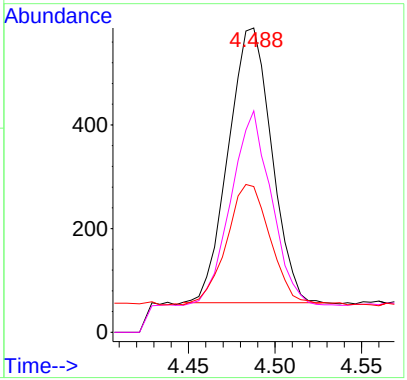


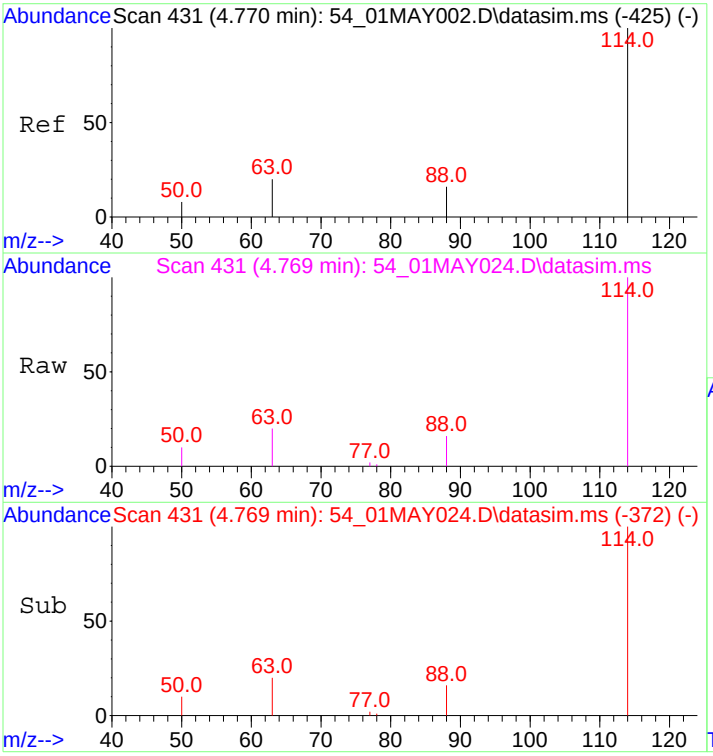


#8
1,1,1-Trichloroethane
Concen: 2.29 ppbv
RT: 4.488 min Scan# 376
Delta R.T. -0.000 min
Lab File: 54_01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion: 97 Resp: 922

Ion	Ratio	Lower	Upper
97	100		
99	66.2	52.1	78.1
61	44.3	30.2	45.4

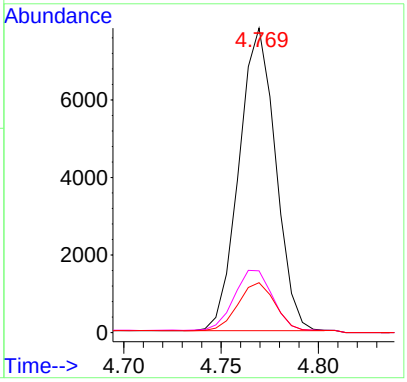


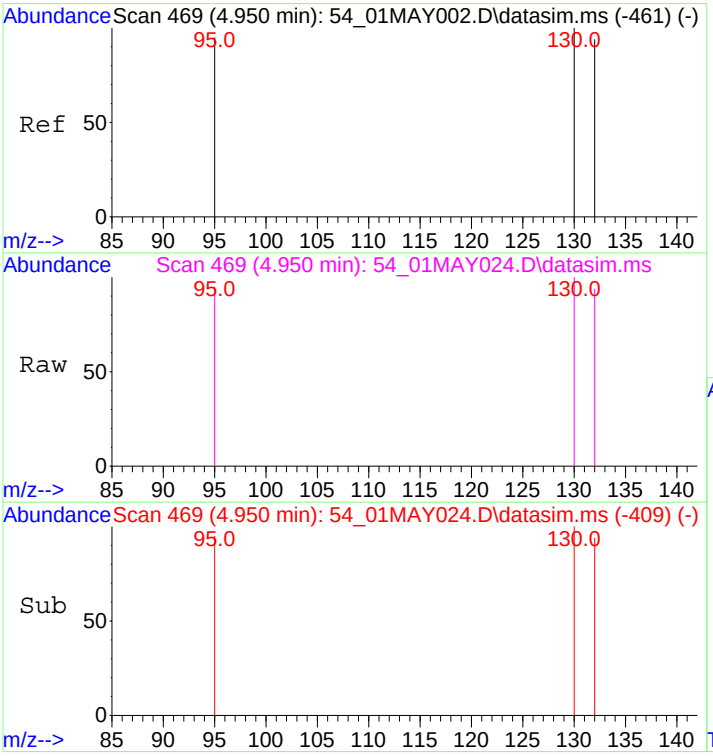


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion:114 Resp: 10217

Ion	Ratio	Lower	Upper
114	100		
63	20.7	12.0	18.0#
88	16.1	11.8	17.8

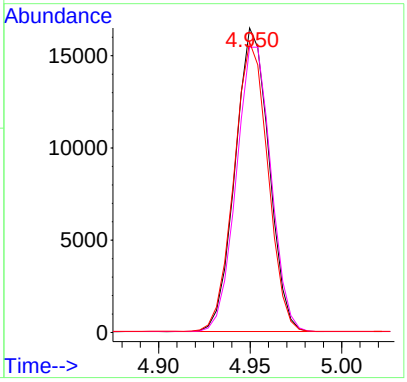


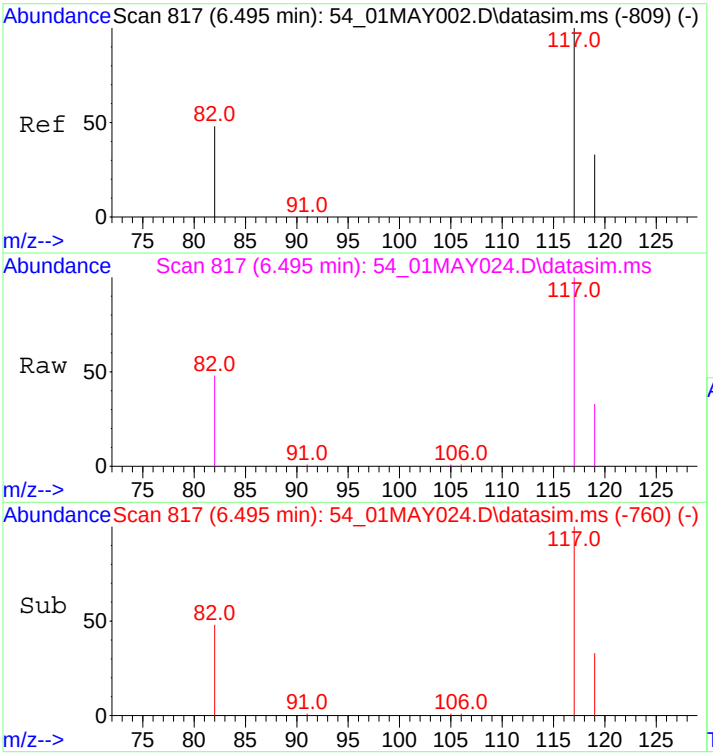


#11
Trichloroethene
Concen: 83.04 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion:130 Resp: 21101

Ion	Ratio	Lower	Upper
130	100		
132	96.1	76.9	115.3
95	95.3	76.5	114.7

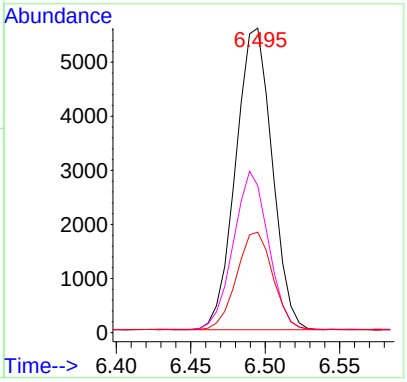


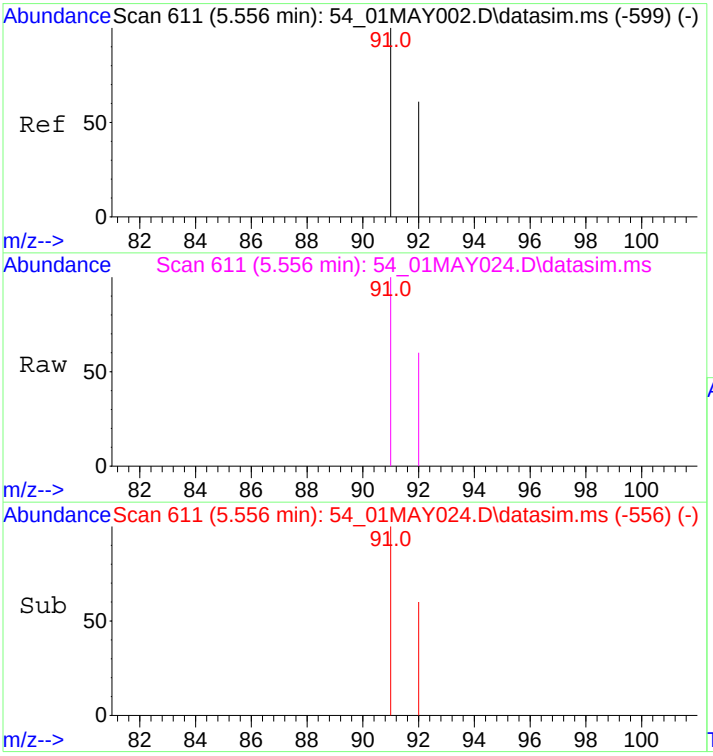


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion:117 Resp: 9504

Ion	Ratio	Lower	Upper
117	100		
82	50.1	38.0	57.0
119	32.1	27.0	40.4

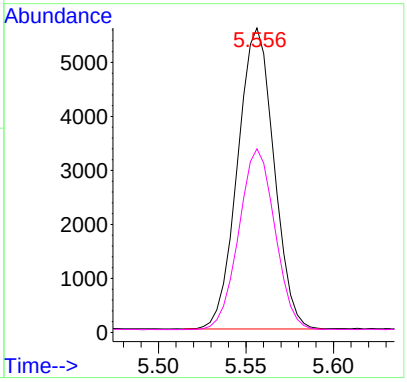


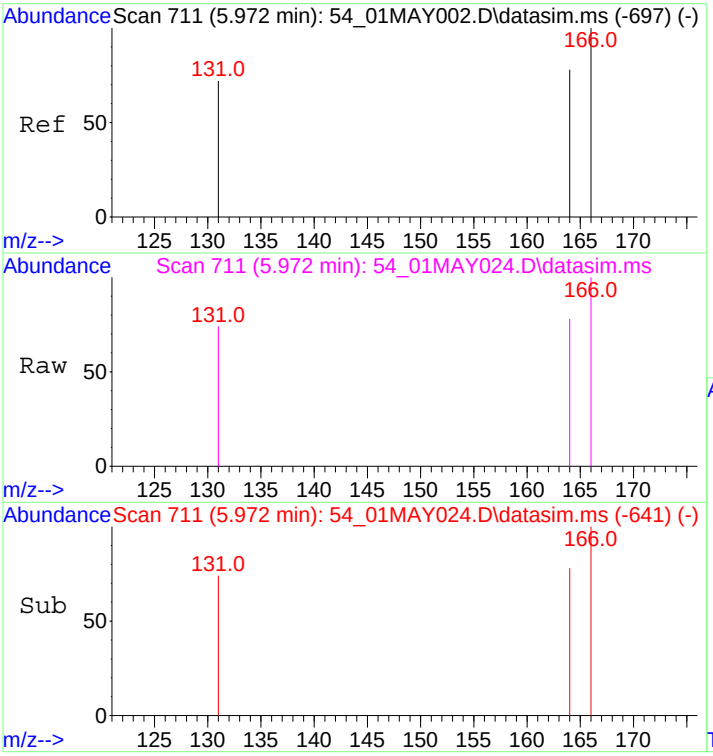


#13
Toluene
Concen: 14.13 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion: 91 Resp: 8049

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8

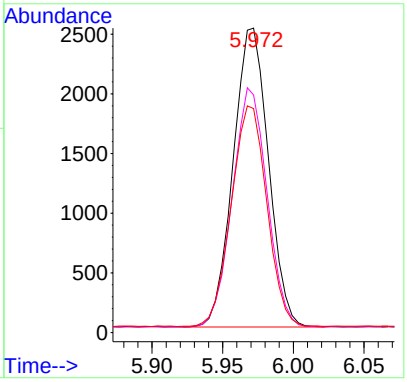




#14
Tetrachloroethene
Concen: 13.40 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 01MAY024.D
Acq: 1 May 2014 6:40 pm

Tgt Ion:166 Resp: 4359

Ion	Ratio	Lower	Upper
166	100		
164	78.8	62.6	94.0
131	74.2	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY025.D
Acq On : 1 May 2014 6:51 pm
Operator :
Sample : 02137 / F6-033
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 19:00:41 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration

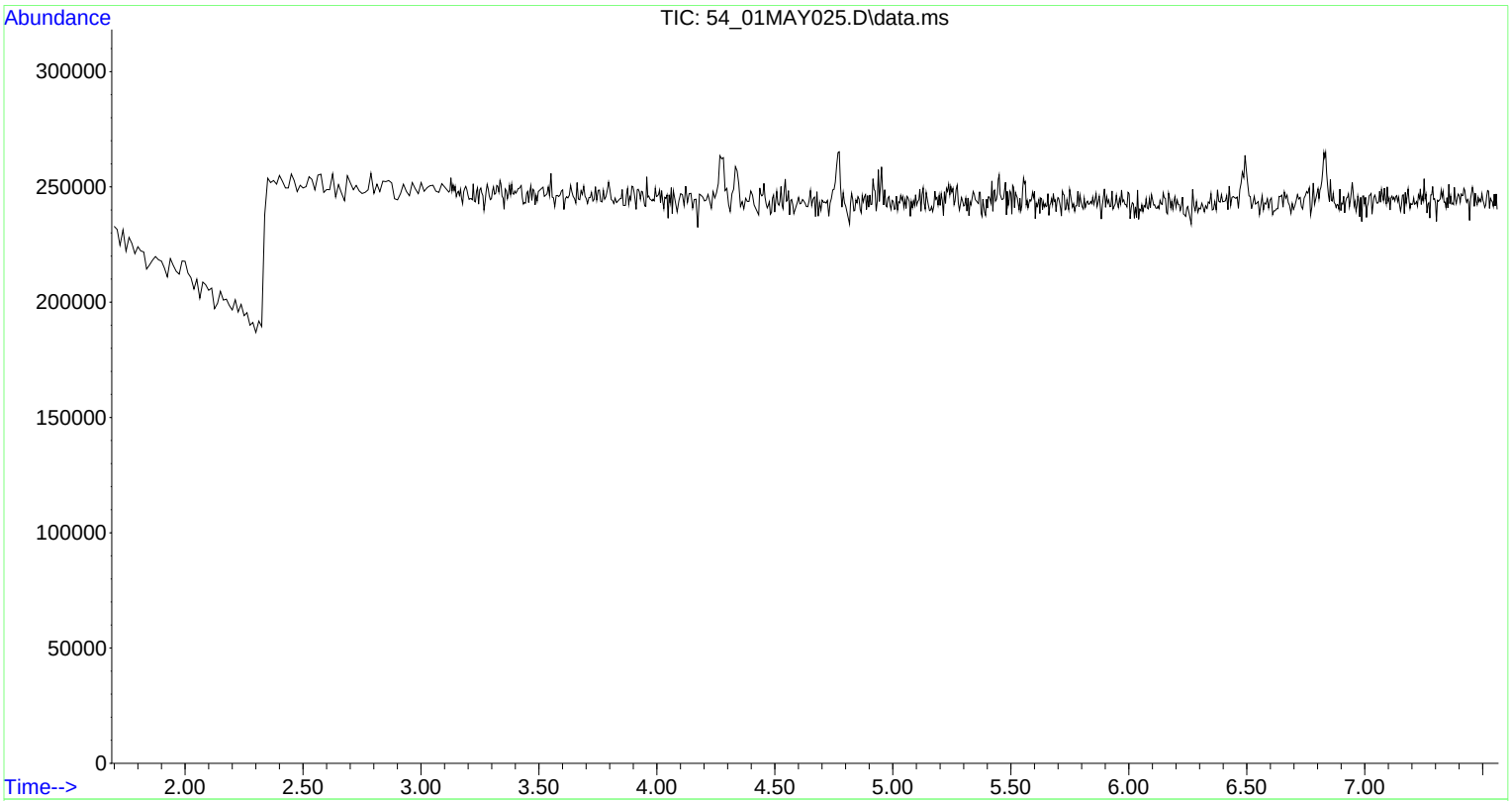
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4159	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10860	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	10155	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5] trans-1,2-Dichloroethene	3.703	61	177	0.62	ppbv	# 28
7] cis-1,2-Dichloroethene	4.197	61	528	1.99	ppbv	# 75
11] Trichloroethene	4.950	130	2487	9.21	ppbv	98
13] Toluene	5.556	91	4451	7.31	ppbv	99
14] Tetrachloroethene	5.972	166	1014	2.92	ppbv	99
16] m,p-Xylene	6.617	91	420	0.71	ppbv	88
17] o-Xylene	6.941	91	605	1.01	ppbv	94

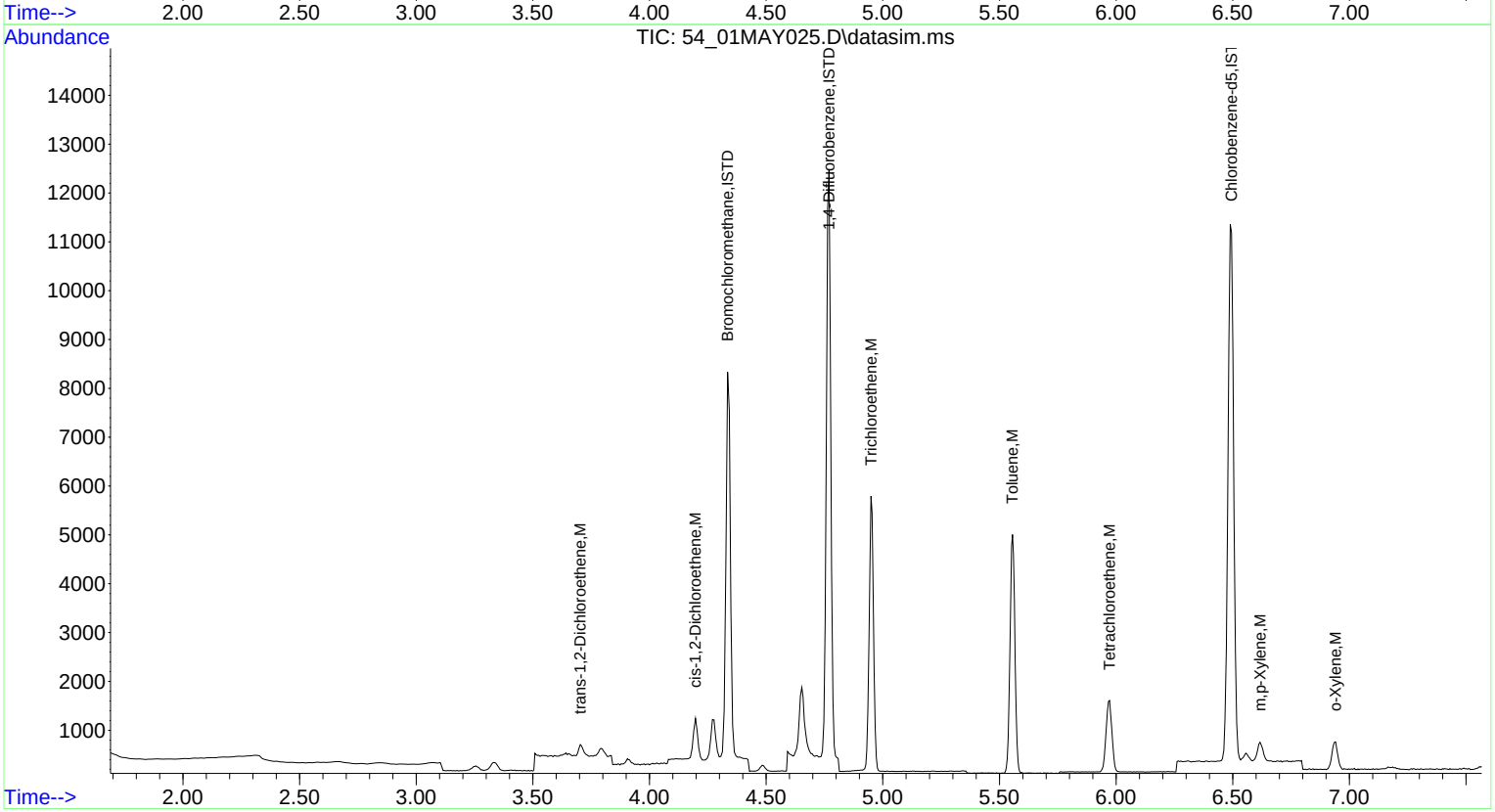
(#) = qualifier out of range (m) = manual integration (+) = signals summed

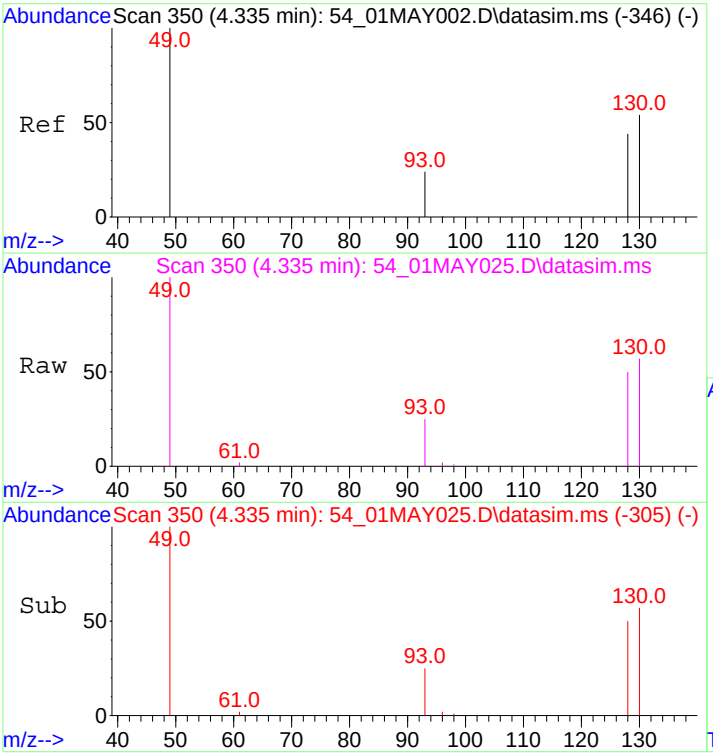
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140501\
Data File : 54 01MAY025.D
Acq On : 1 May 2014 6:51 pm
Operator :
Sample : 02137 / F6-033
Misc : 5 ml \ 01 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 01 19:00:41 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Thu May 01 07:31:08 2014
Response via : Initial Calibration



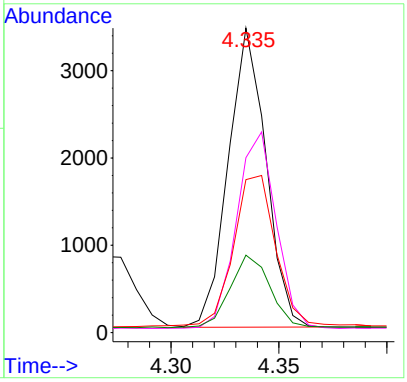


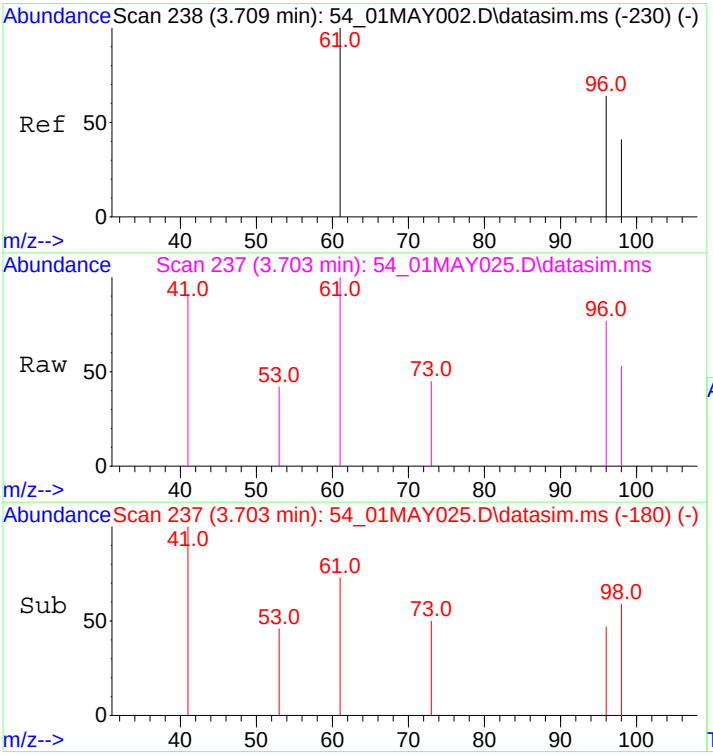


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion: 49 Resp: 4159

Ion	Ratio	Lower	Upper
49	100		
130	69.0	87.2	130.8#
128	60.1	68.0	102.0#
93	25.8	29.3	43.9#

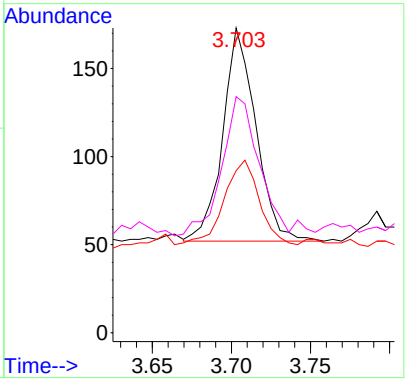


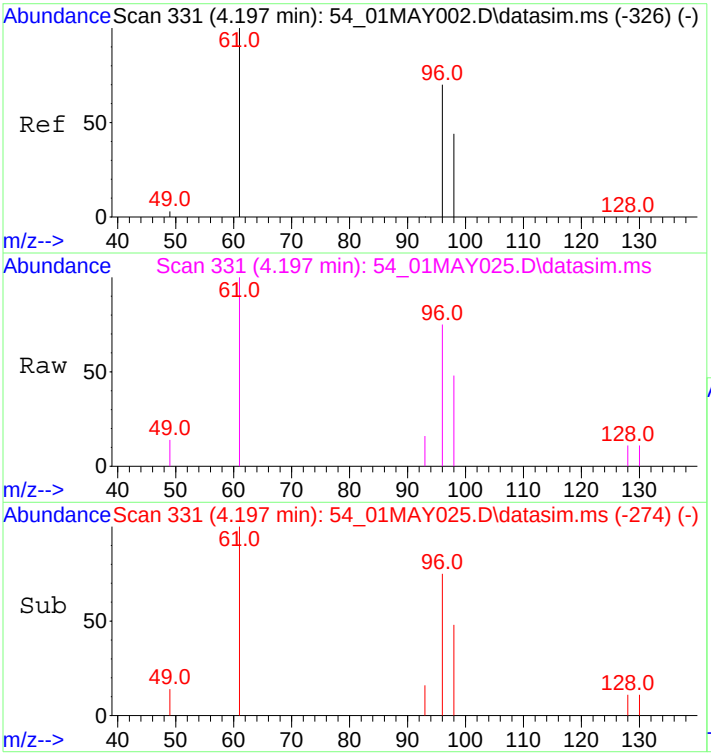


#5
trans-1,2-Dichloroethene
Concen: 0.62 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54_01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion: 61 Resp: 177

Ion	Ratio	Lower	Upper
61	100		
96	72.9	71.4	107.0
98	174.0	45.8	68.8#

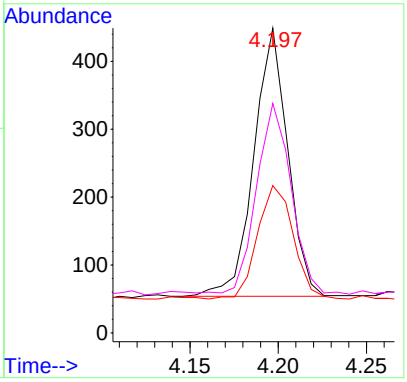


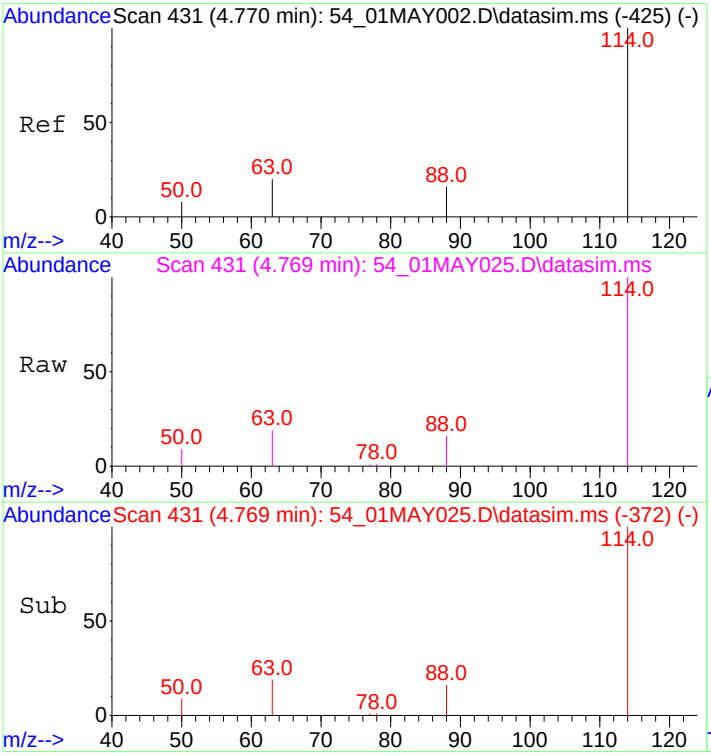


#7
cis-1,2-Dichloroethene
Concen: 1.99 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion: 61 Resp: 528

Ion	Ratio	Lower	Upper
61	100		
96	71.6	78.5	117.7#
98	81.3	50.6	76.0#

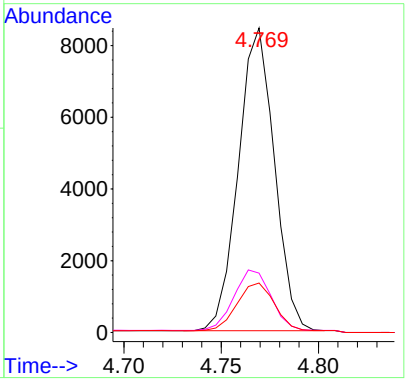


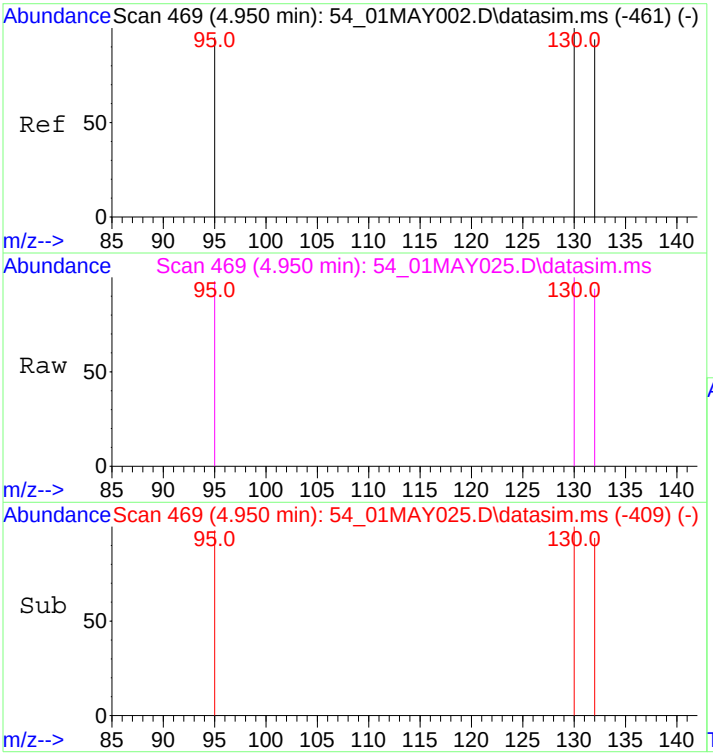


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion:114 Resp: 10860

Ion	Ratio	Lower	Upper
114	100		
63	20.6	12.0	18.0#
88	16.4	11.8	17.8

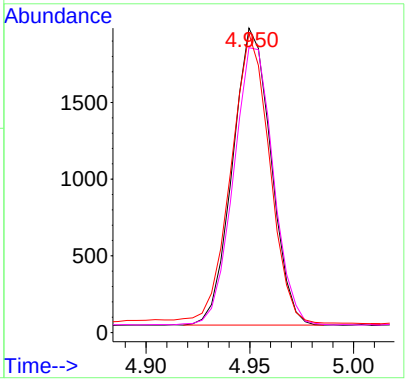


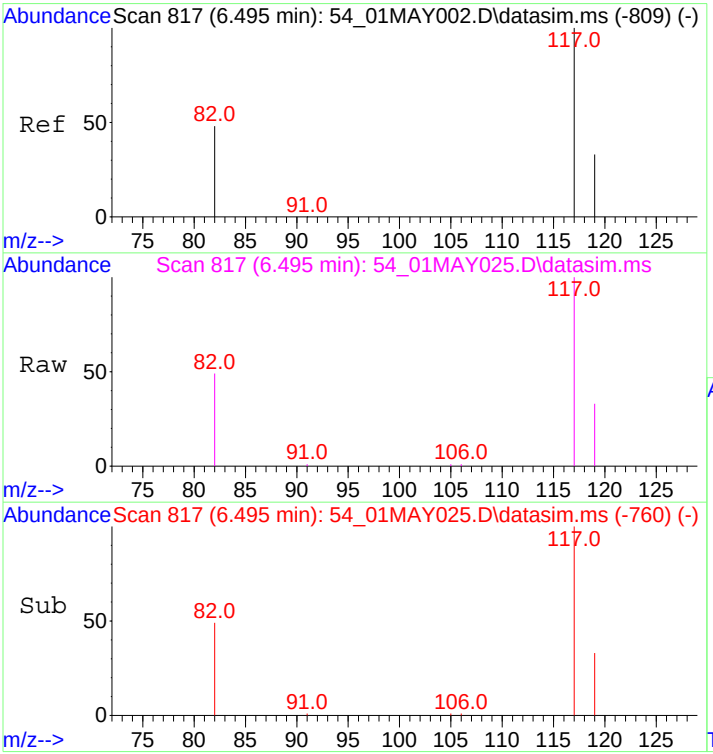


#11
Trichloroethene
Concen: 9.21 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion:130 Resp: 2487

Ion	Ratio	Lower	Upper
130	100		
132	96.6	76.9	115.3
95	98.8	76.5	114.7

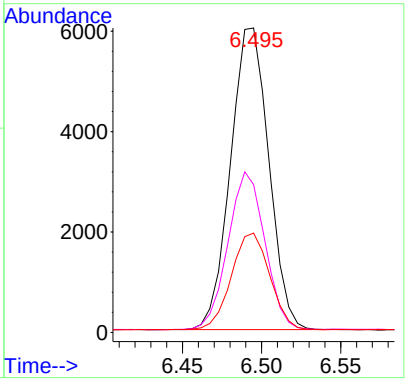


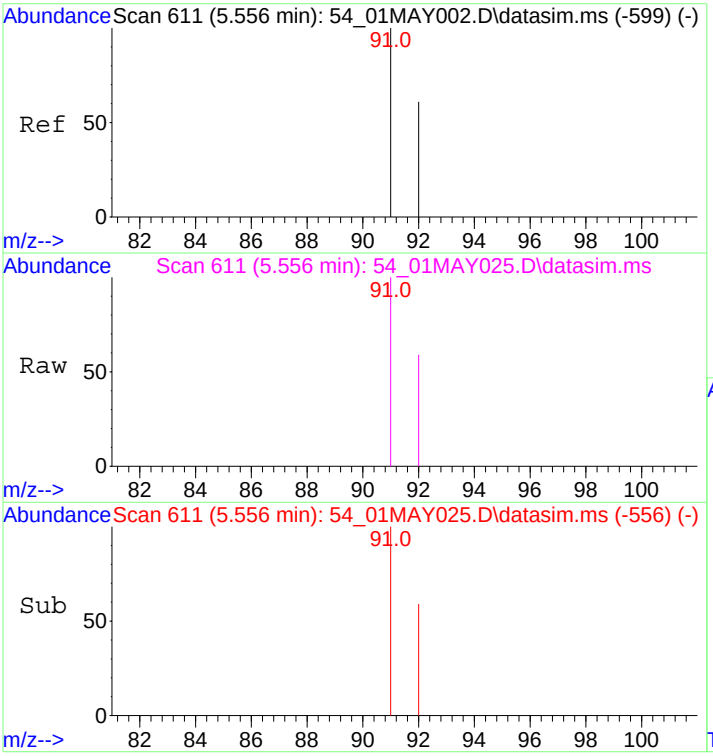


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54_01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion:117 Resp: 10155

Ion	Ratio	Lower	Upper
117	100		
82	50.4	38.0	57.0
119	32.2	27.0	40.4

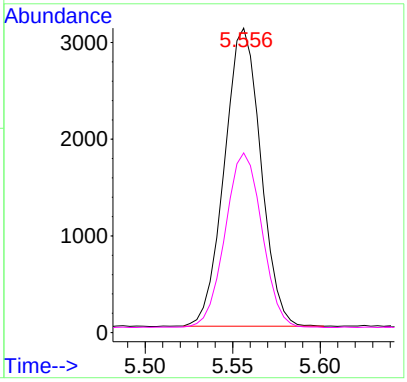


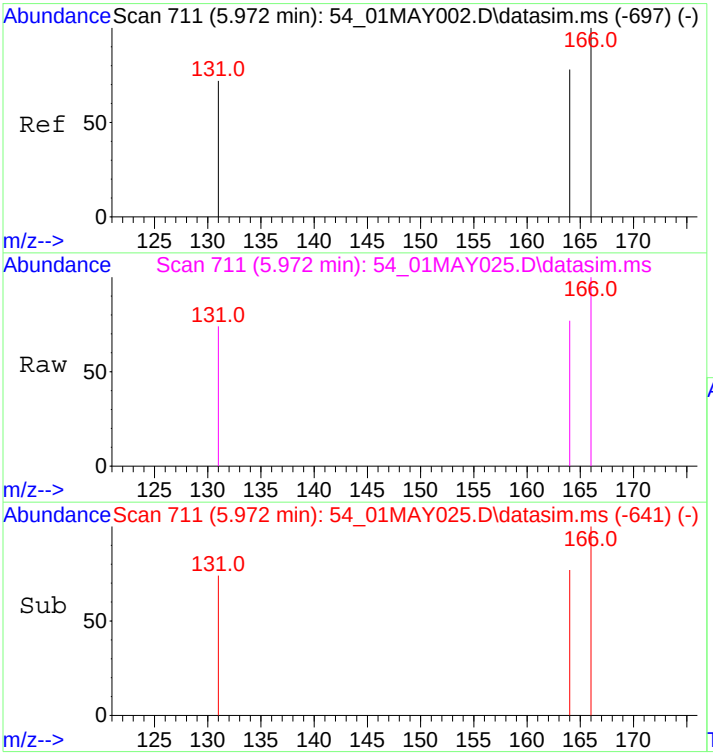


#13
Toluene
Concen: 7.31 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion: 91 Resp: 4451

Ion	Ratio	Lower	Upper
91	100		
92	59.1	47.8	71.8

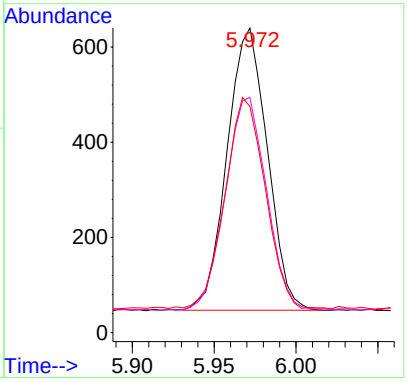


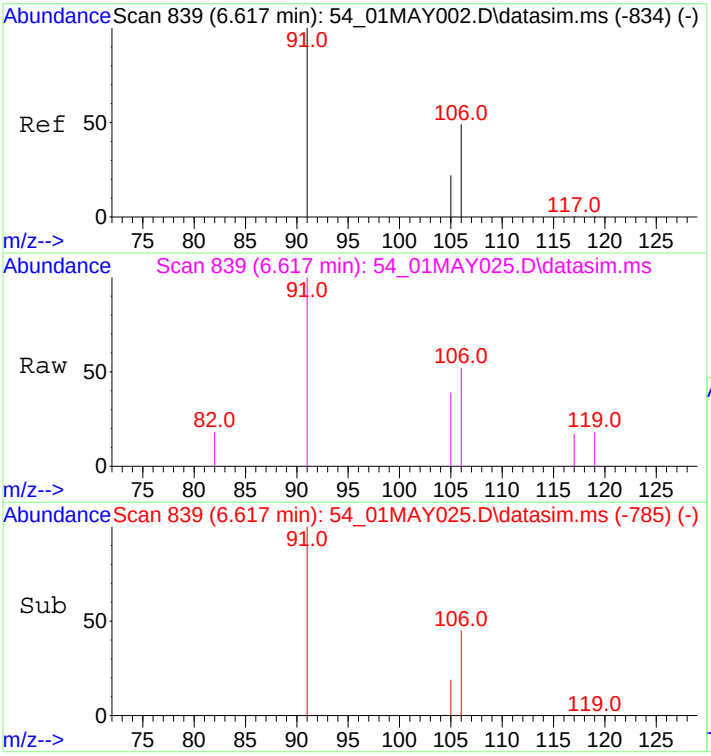


#14
Tetrachloroethene
Concen: 2.92 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion:166 Resp: 1014

Ion	Ratio	Lower	Upper
166	100		
164	77.0	62.6	94.0
131	74.2	58.5	87.7

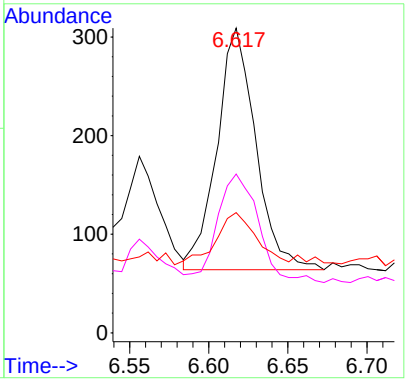


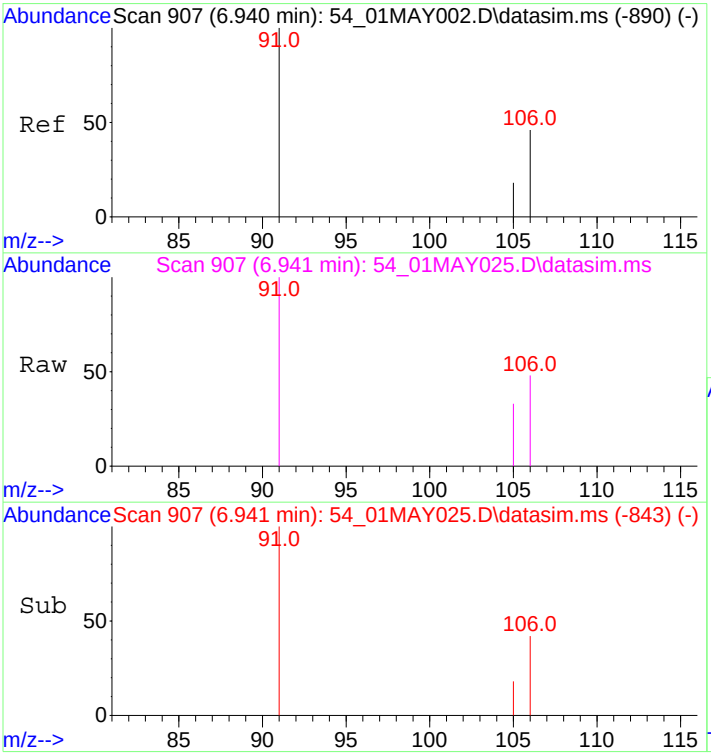


#16
m,p-Xylene
Concen: 0.71 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion: 91 Resp: 420

Ion	Ratio	Lower	Upper
91	100		
106	44.5	43.1	64.7
105	18.6	18.3	27.5

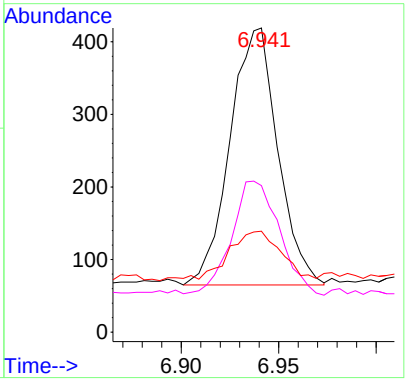




#17
o-Xylene
Concen: 1.01 ppbv
RT: 6.941 min Scan# 907
Delta R.T. 0.001 min
Lab File: 54_01MAY025.D
Acq: 1 May 2014 6:51 pm

Tgt Ion: 91 Resp: 605

Ion	Ratio	Lower	Upper
91	100		
106	44.5	40.1	60.1
105	20.5	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY004.D
Acq On : 2 May 2014 7:36 am
Operator : YHL
Sample : 20140502-MB \ Method Blank
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:43:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 07:19:23 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4260	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10906	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10091	10.00	ppbv	0.00

System Monitoring Compounds

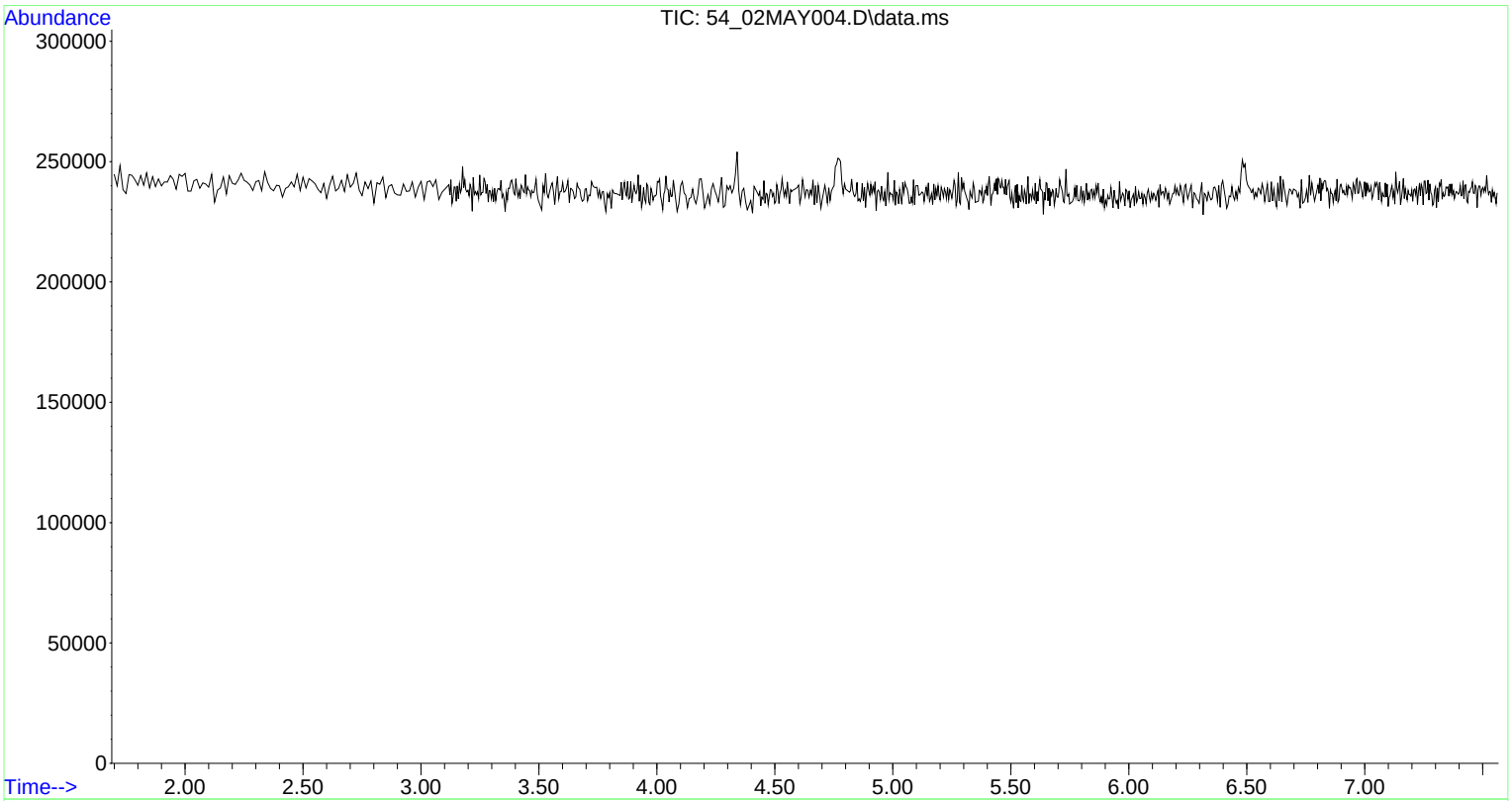
Target Compounds	Qvalue

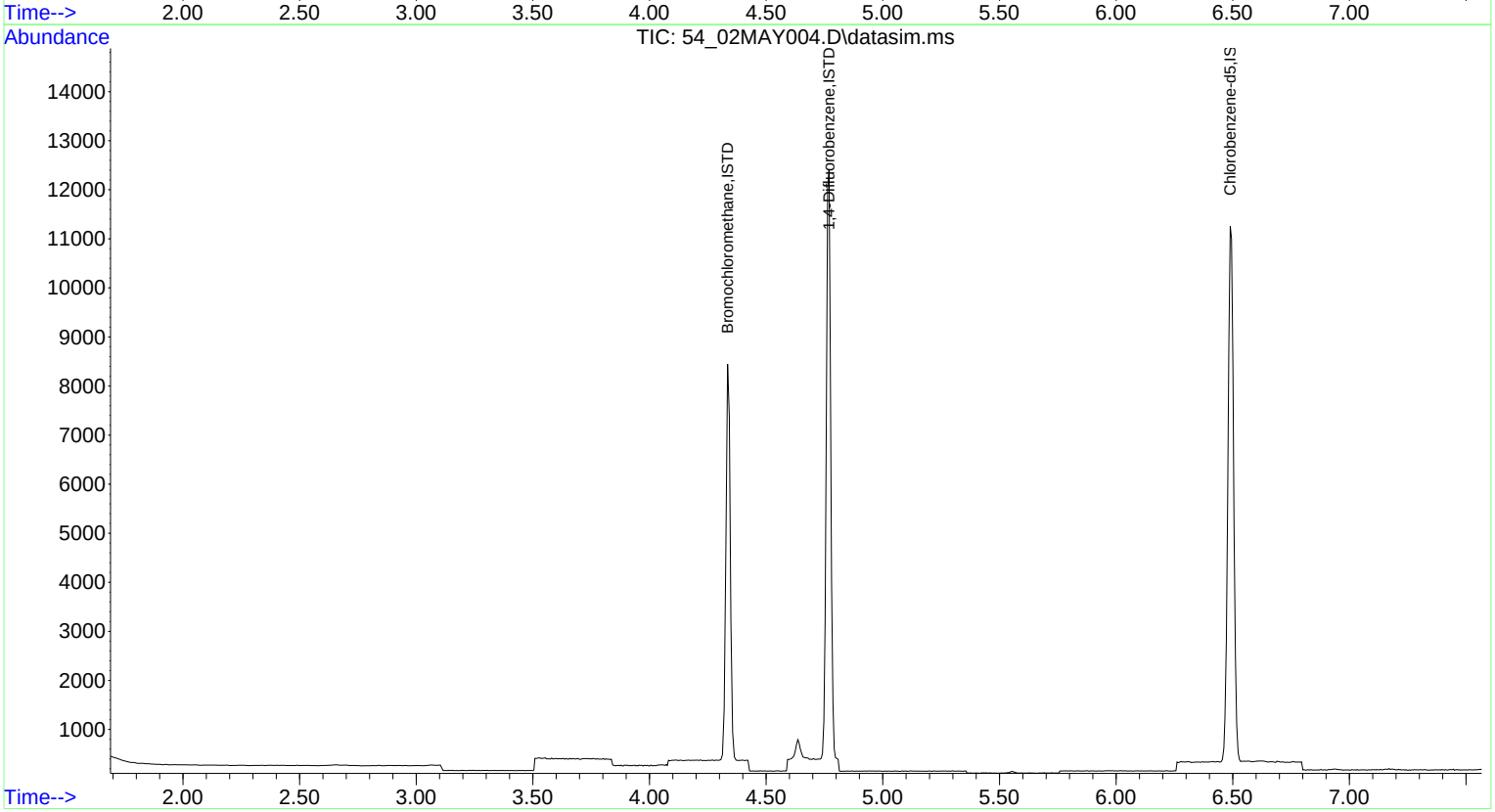
(#) = qualifier out of range (m) = manual integration (+) = signals summed

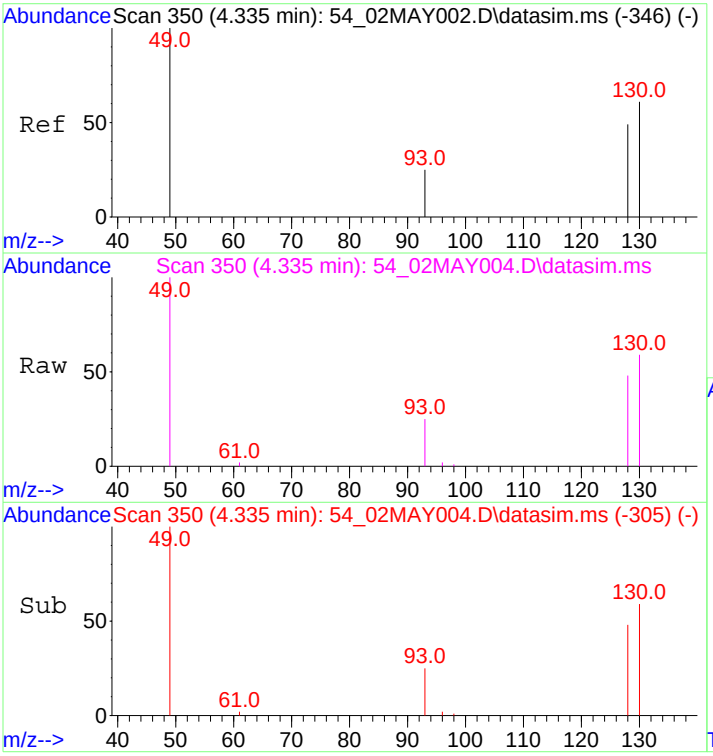
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY004.D
Acq On : 2 May 2014 7:36 am
Operator : YHL
Sample : 20140502-MB \ Method Blank
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 07:43:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 07:19:23 2014
QLast Update : Fri May 02 07:19:22 2014
Response via : Initial Calibration



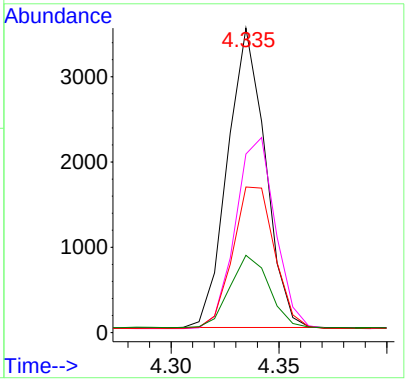


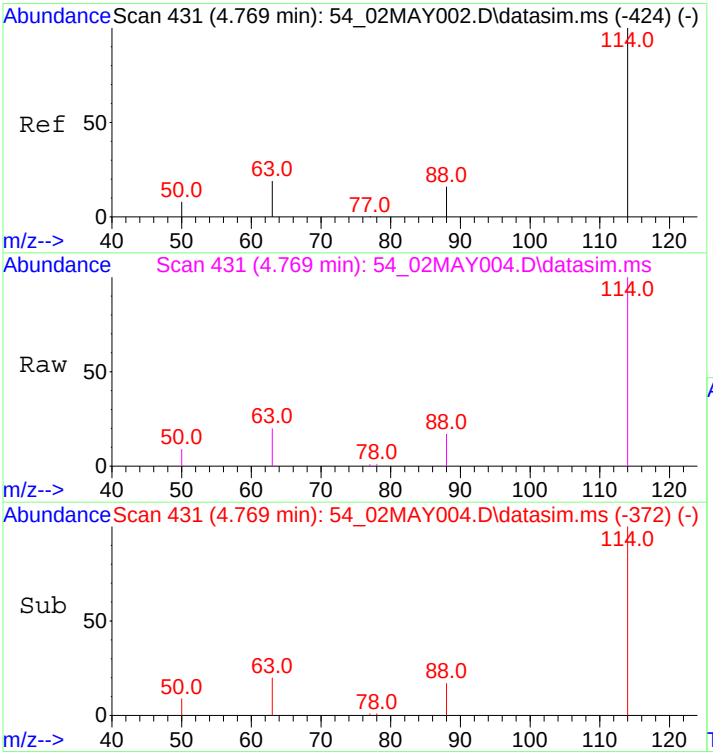


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY004.D
Acq: 2 May 2014 7:36 am

Tgt Ion: 49 Resp: 4260

Ion	Ratio	Lower	Upper
49	100		
130	67.7	87.2	130.8#
128	52.8	68.0	102.0#
93	25.5	29.3	43.9#

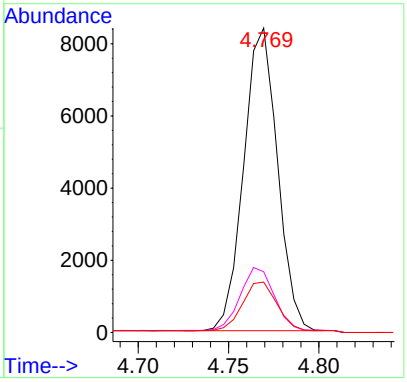


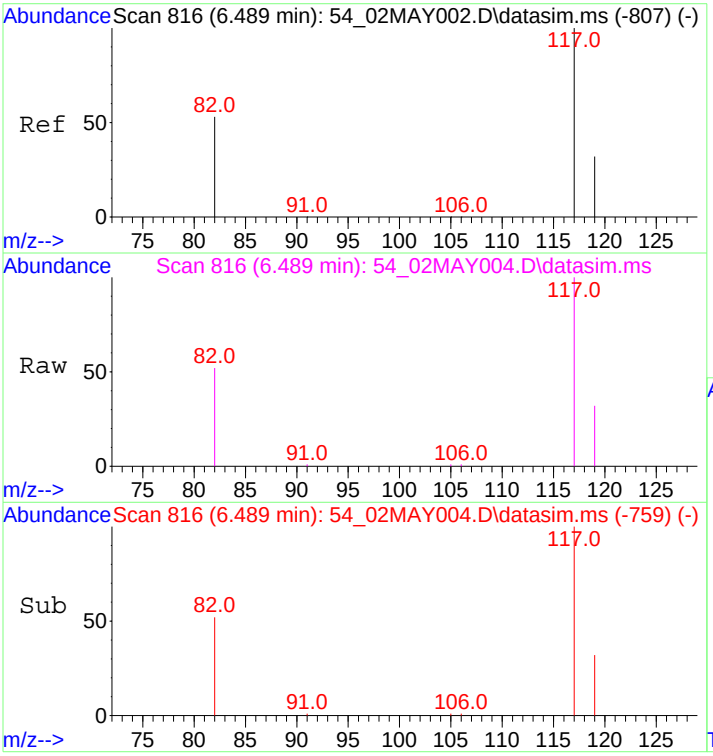


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY004.D
Acq: 2 May 2014 7:36 am

Tgt Ion:114 Resp: 10906

Ion	Ratio	Lower	Upper
114	100		
63	20.8	12.0	18.0#
88	16.4	11.8	17.8

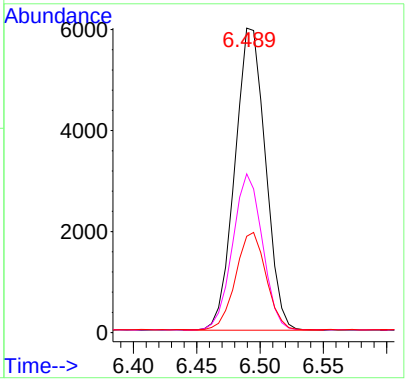




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY004.D
Acq: 2 May 2014 7:36 am

Tgt Ion:117 Resp: 10091

Ion	Ratio	Lower	Upper
117	100		
82	50.3	38.0	57.0
119	31.9	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY006.D
Acq On : 2 May 2014 1:33 pm
Operator : YHL
Sample : 02139 \ SG-29-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 13:53:06 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 07:19:23 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

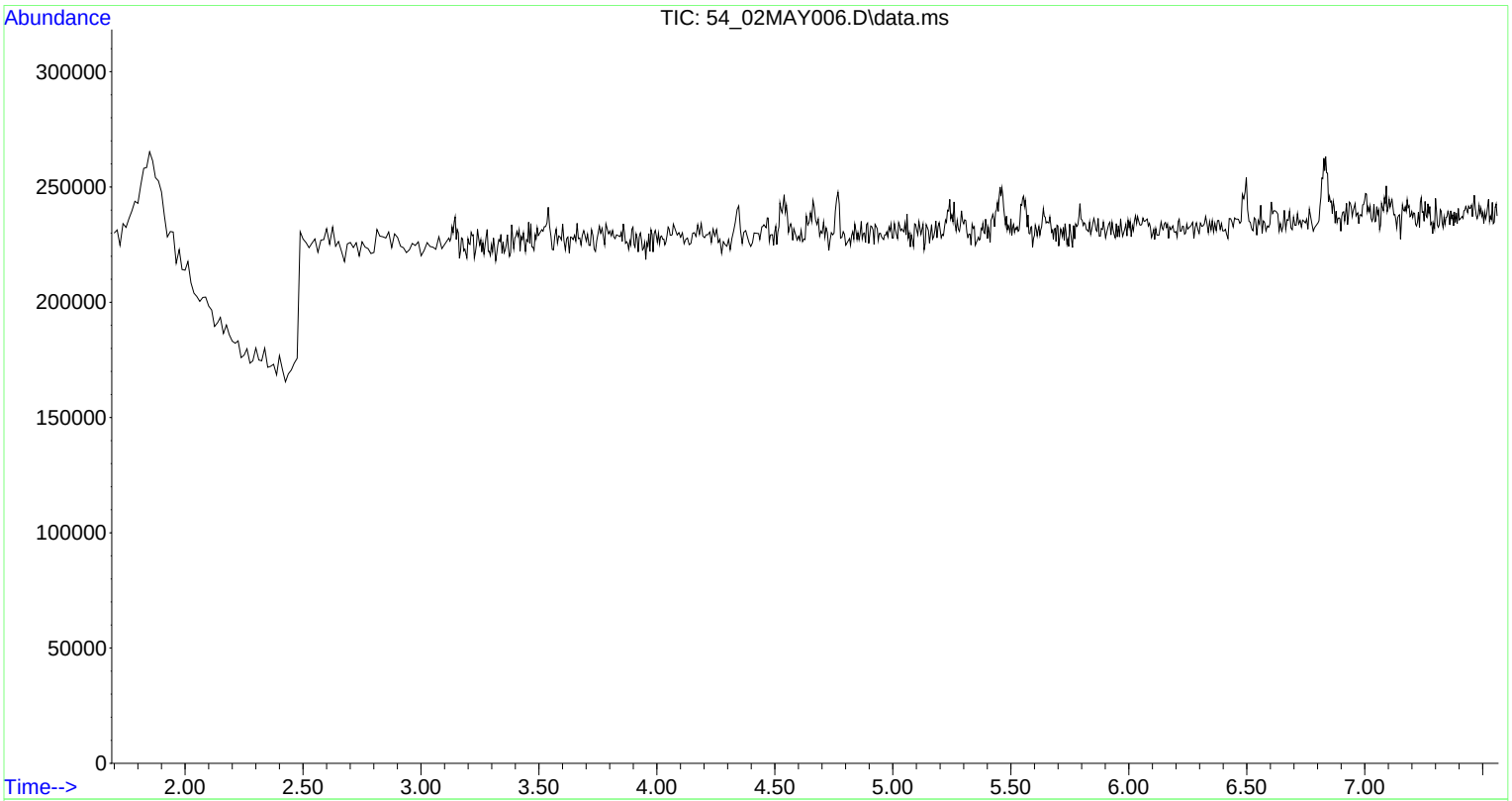
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4428	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11521	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10874	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
13] Toluene	5.556	91	9574	14.69 ppbv	100
15] Ethyl Benzene	6.556	91	1756	2.12 ppbv	95
16] m,p-Xylene	6.617	91	4923	7.75 ppbv	93
17] o-Xylene	6.937	91	3424	5.31 ppbv	94

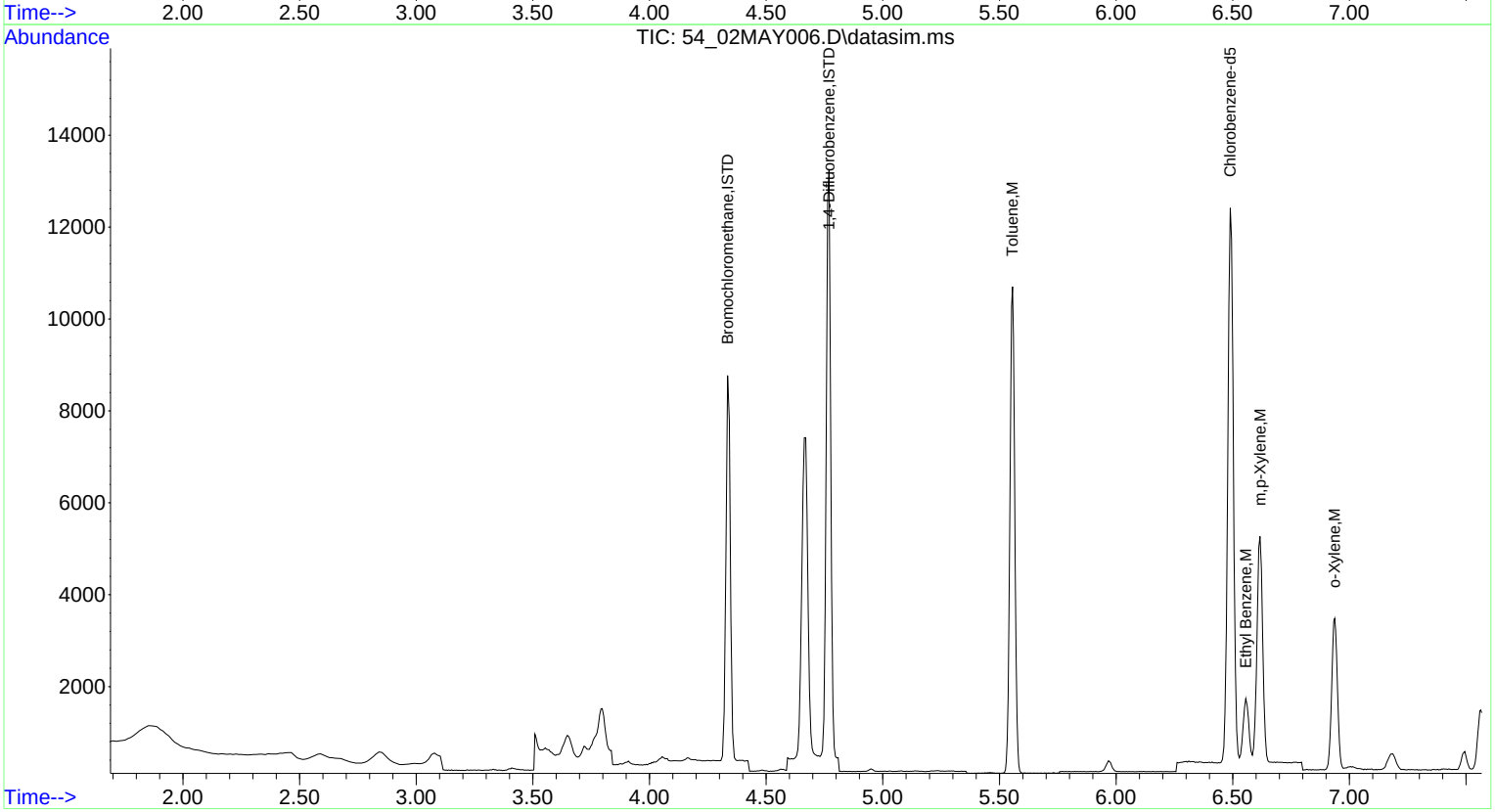
(#) = qualifier out of range (m) = manual integration (+) = signals summed

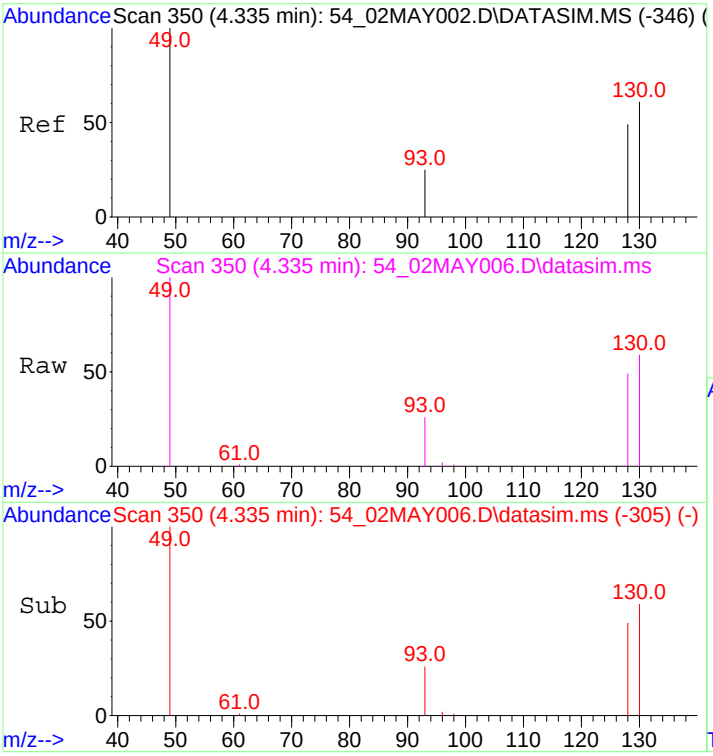
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY006.D
Acq On : 2 May 2014 1:33 pm
Operator : YHL
Sample : 02139 \ SG-29-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 13:53:06 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 07:19:23 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



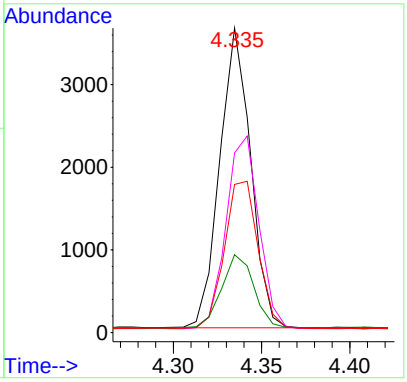


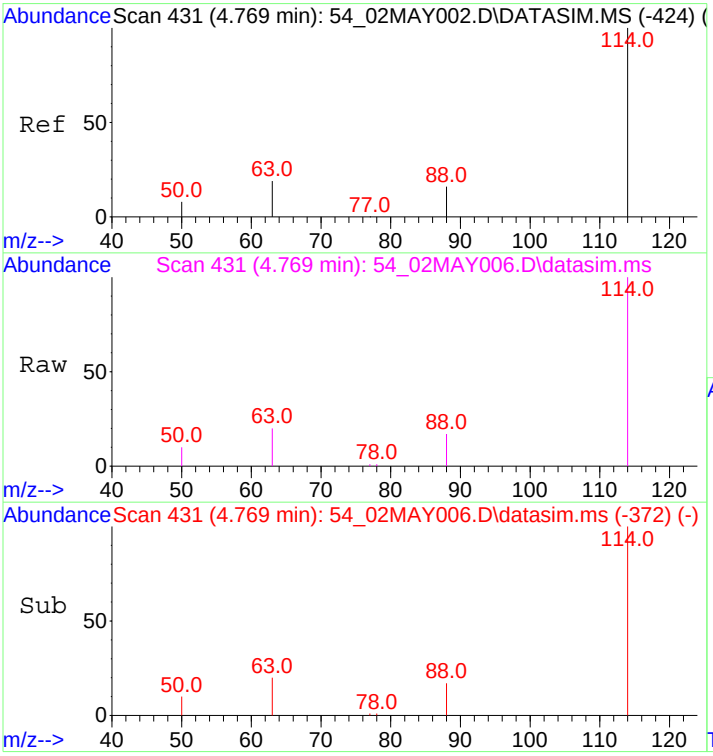


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY006.D
Acq: 2 May 2014 1:33 pm

Tgt Ion: 49 Resp: 4428

Ion	Ratio	Lower	Upper
49	100		
130	68.4	87.2	130.8#
128	53.5	68.0	102.0#
93	25.2	29.3	43.9#

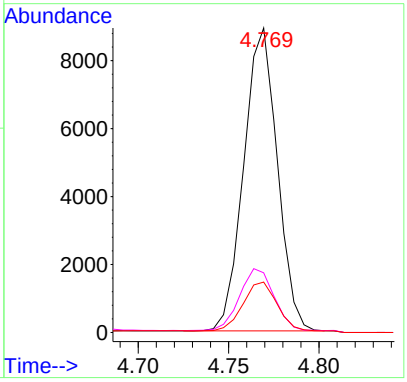


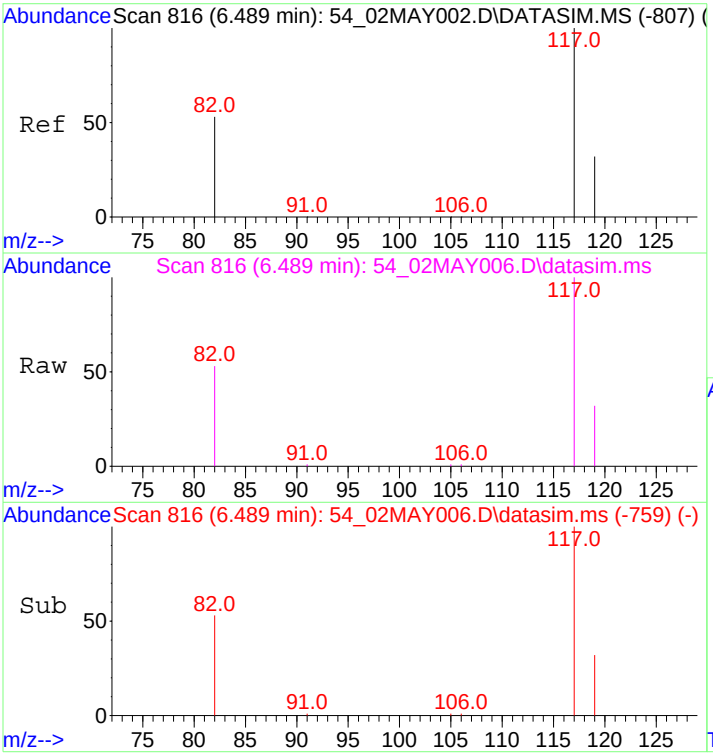


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY006.D
Acq: 2 May 2014 1:33 pm

Tgt Ion:114 Resp: 11521

Ion	Ratio	Lower	Upper
114	100		
63	21.4	12.0	18.0#
88	16.2	11.8	17.8

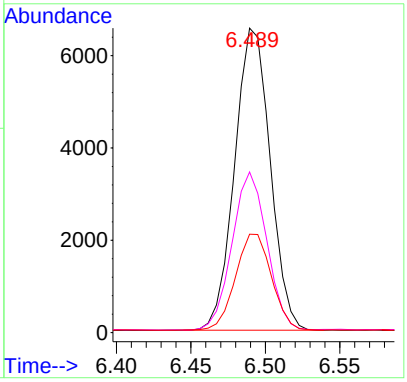


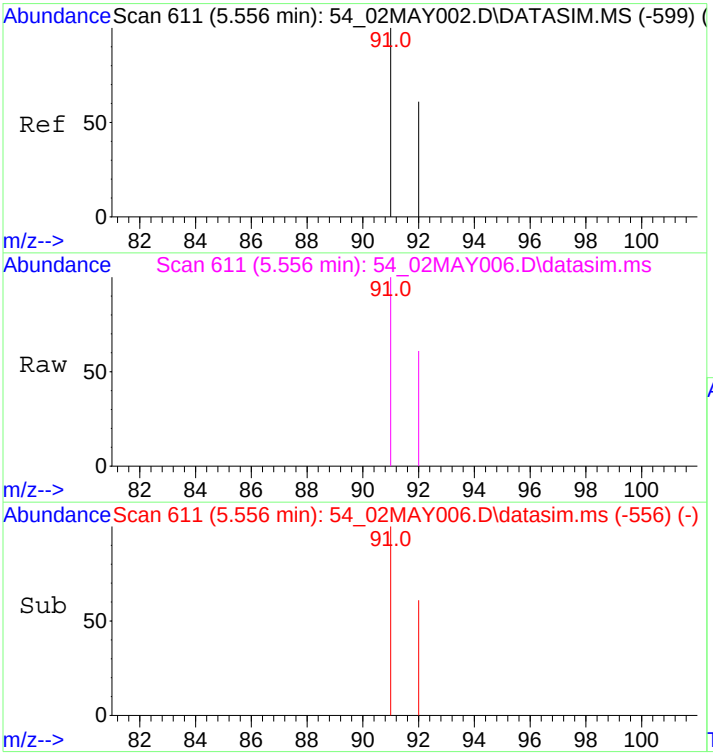


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY006.D
Acq: 2 May 2014 1:33 pm

Tgt Ion:117 Resp: 10874

Ion	Ratio	Lower	Upper
117	100		
82	51.2	38.0	57.0
119	32.4	27.0	40.4

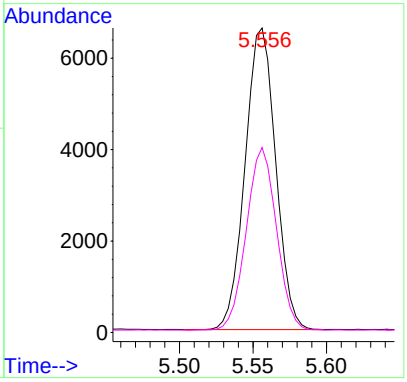


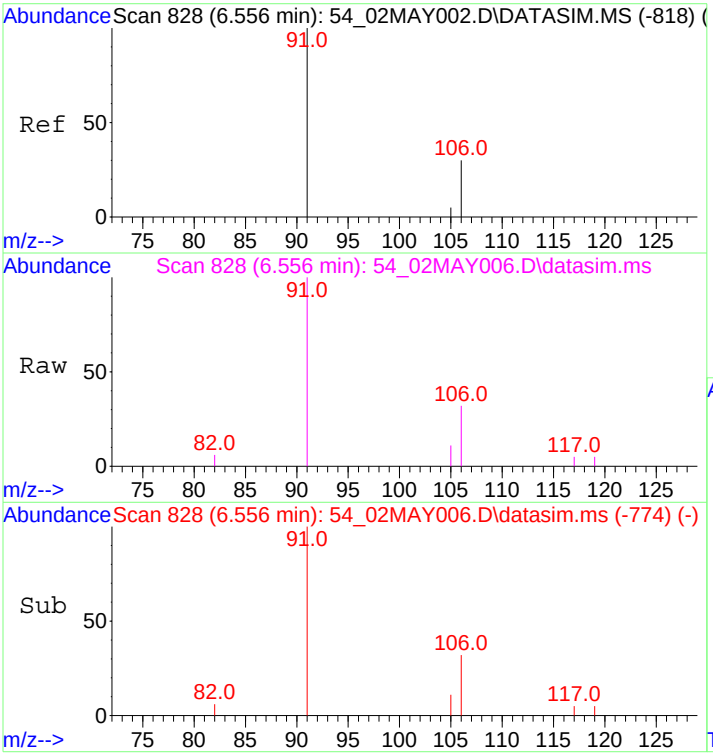


#13
Toluene
Concen: 14.69 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY006.D
Acq: 2 May 2014 1:33 pm

Tgt Ion: 91 Resp: 9574

Ion	Ratio	Lower	Upper
91	100		
92	59.6	47.8	71.8

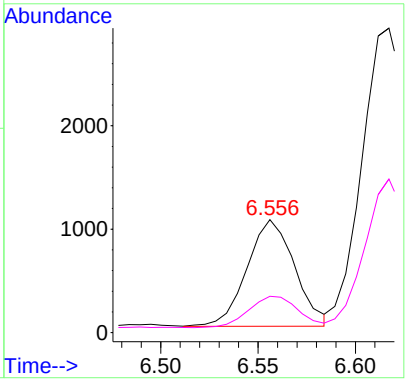


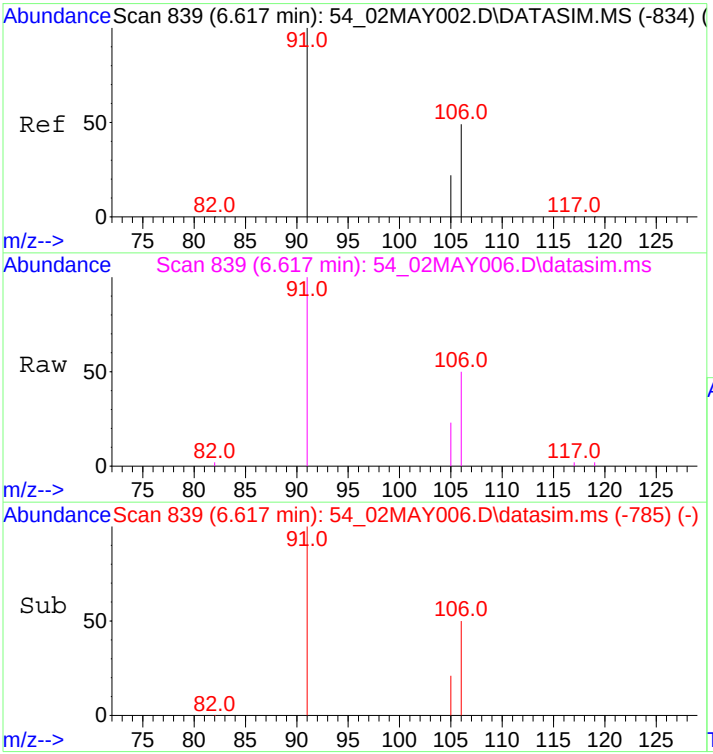


#15
Ethyl Benzene
Concen: 2.12 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 02MAY006.D
Acq: 2 May 2014 1:33 pm

Tgt Ion: 91 Resp: 1756

Ion	Ratio	Lower	Upper
91	100		
106	30.9	26.9	40.3

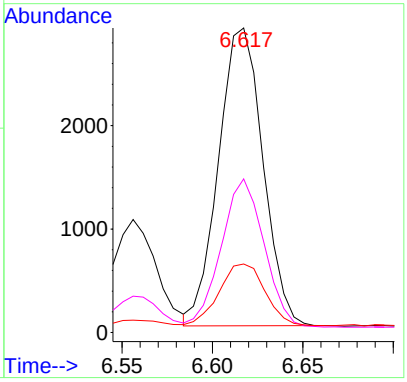


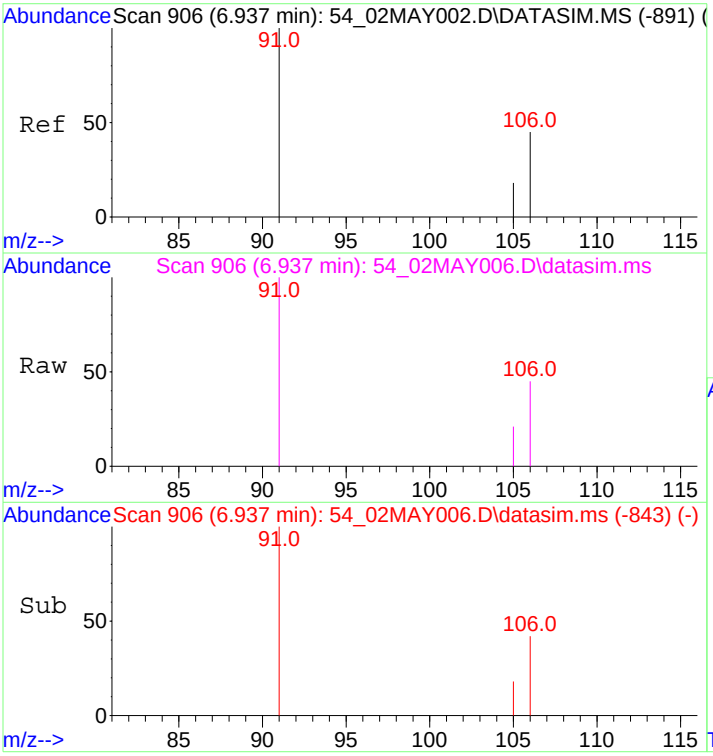


#16
m,p-Xylene
Concen: 7.75 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_02MAY006.D
Acq: 2 May 2014 1:33 pm

Tgt Ion: 91 Resp: 4923

Ion	Ratio	Lower	Upper
91	100		
106	48.2	43.1	64.7
105	21.5	18.3	27.5

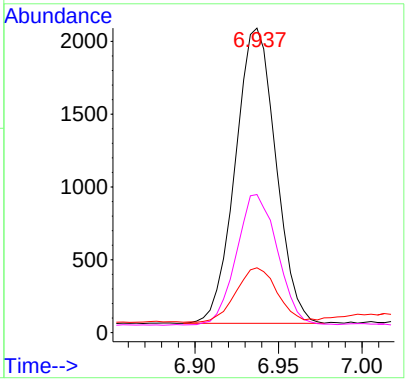




#17
o-Xylene
Concen: 5.31 ppbv
RT: 6.937 min Scan# 906
Delta R.T. 0.000 min
Lab File: 54 02MAY006.D
Acq: 2 May 2014 1:33 pm

Tgt Ion: 91 Resp: 3424

Ion	Ratio	Lower	Upper
91	100		
106	44.8	40.1	60.1
105	18.6	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY007.D
Acq On : 2 May 2014 1:45 pm
Operator : YHL
Sample : 02138 \ SG-29-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 13:59:14 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

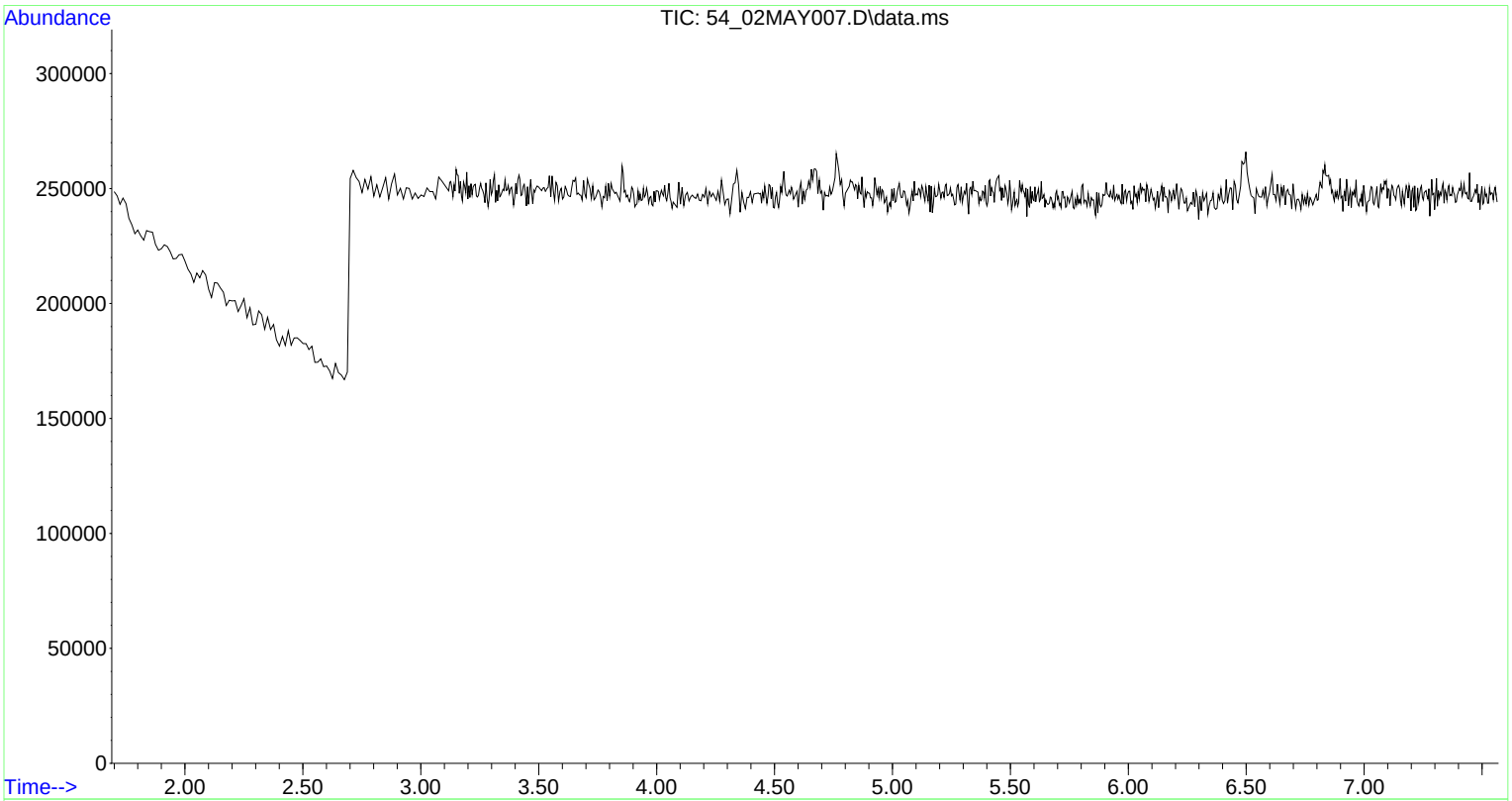
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Bromochloromethane	4.335	49	4316	10.00	ppbv	#	0.00
9) 1,4-Difluorobenzene	4.770	114	11205	10.00	ppbv	#	0.00
12) Chlorobenzene-d5	6.490	117	10555	10.00	ppbv		0.00
System Monitoring Compounds							
Target Compounds							Qvalue
13] Toluene	5.556	91	2275	3.60	ppbv		98
14] Tetrachloroethene	5.967	166	304	0.84	ppbv	#	78
15] Ethyl Benzene	6.556	91	499	0.62	ppbv		100
16] m,p-Xylene	6.617	91	1468	2.38	ppbv		93
17] o-Xylene	6.940	91	1033	1.65	ppbv	#	89

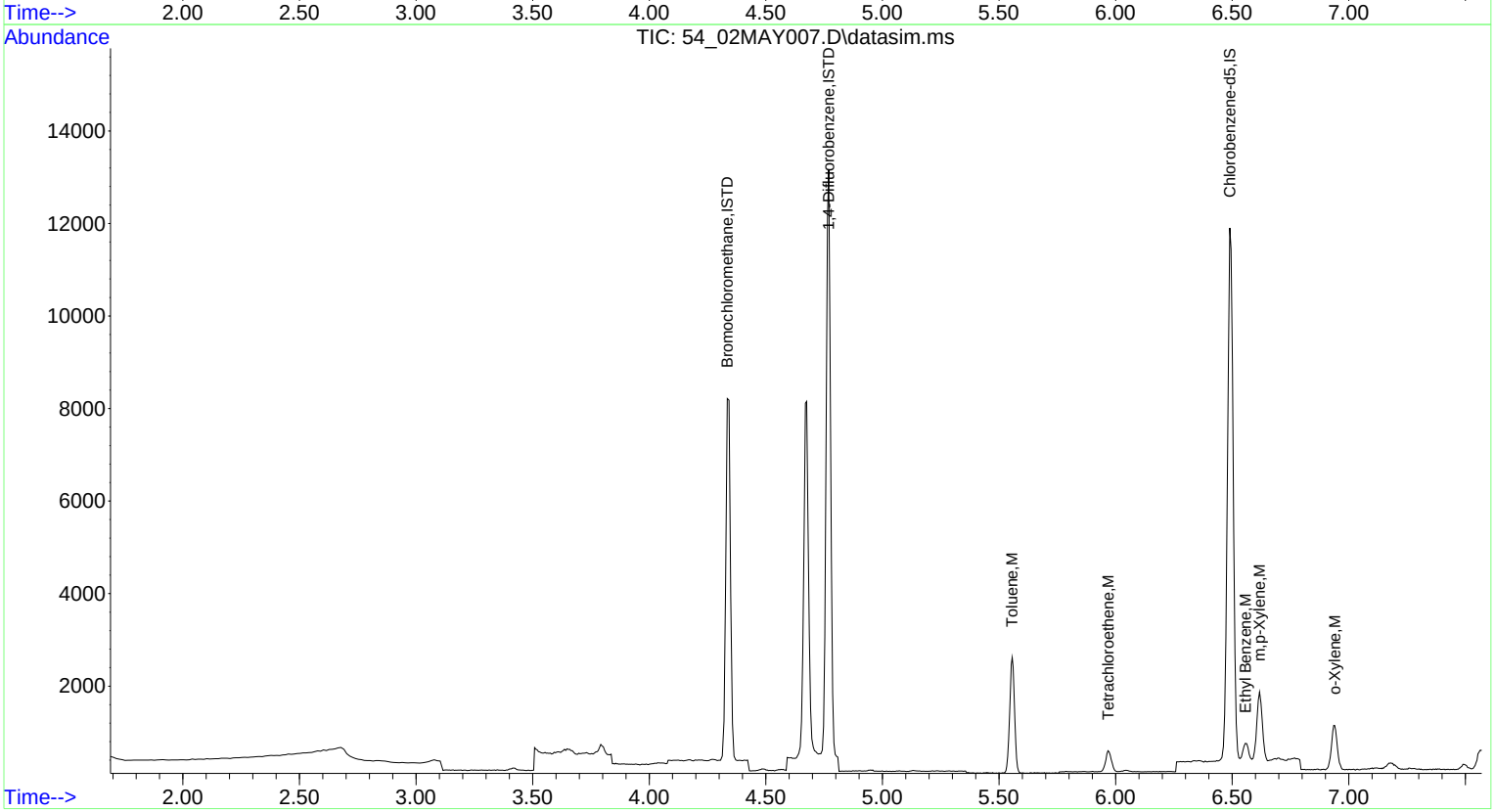
(#) = qualifier out of range (m) = manual integration (+) = signals summed

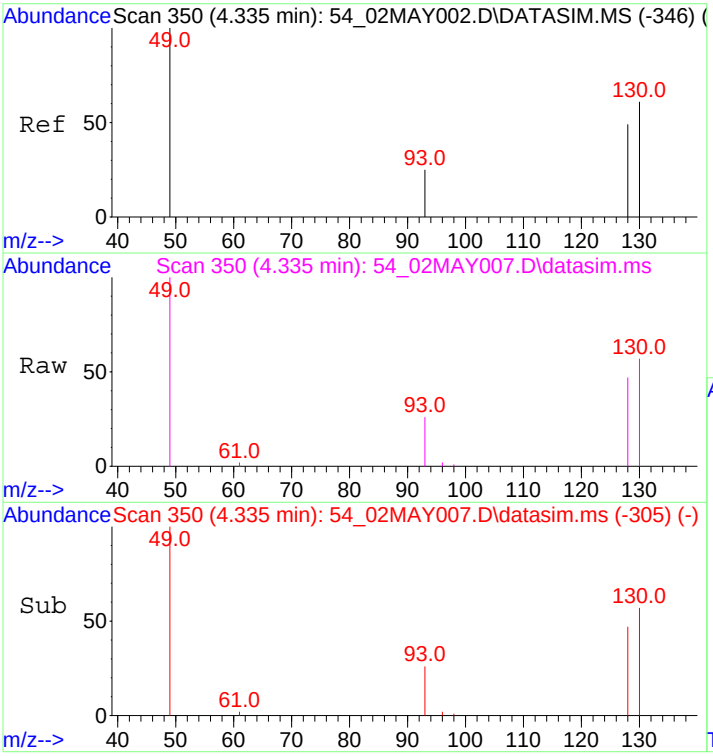
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY007.D
Acq On : 2 May 2014 1:45 pm
Operator : YHL
Sample : 02138 \ SG-29-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 13:59:14 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



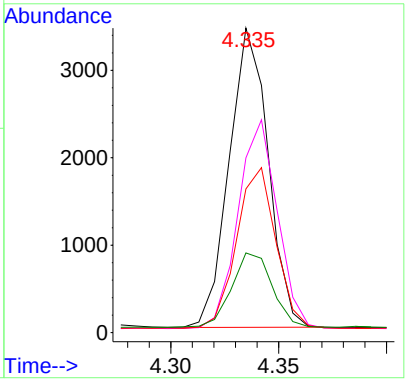


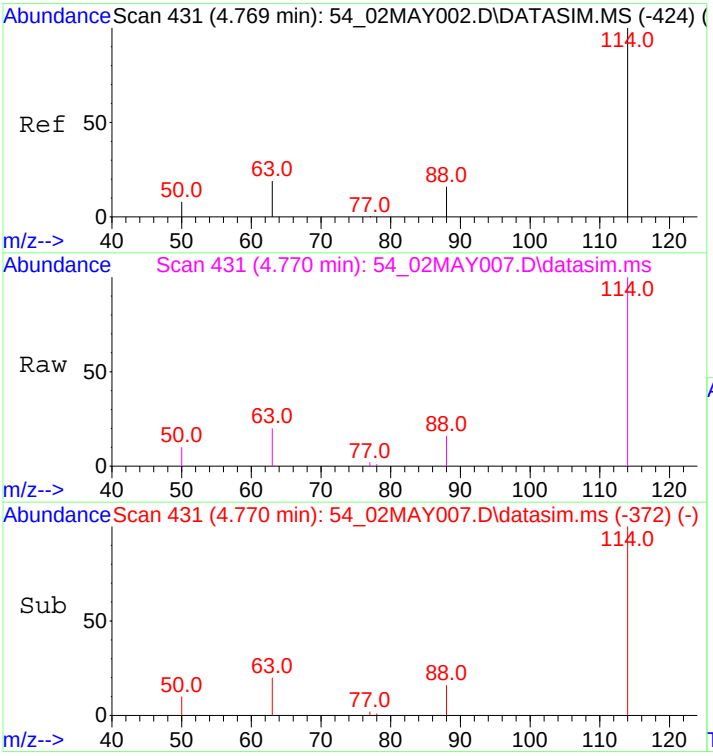


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY007.D
Acq: 2 May 2014 1:45 pm

Tgt Ion: 49 Resp: 4316

Ion	Ratio	Lower	Upper
49	100		
130	69.9	87.2	130.8#
128	54.1	68.0	102.0#
93	25.9	29.3	43.9#

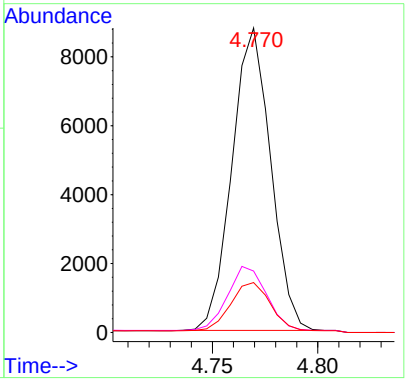


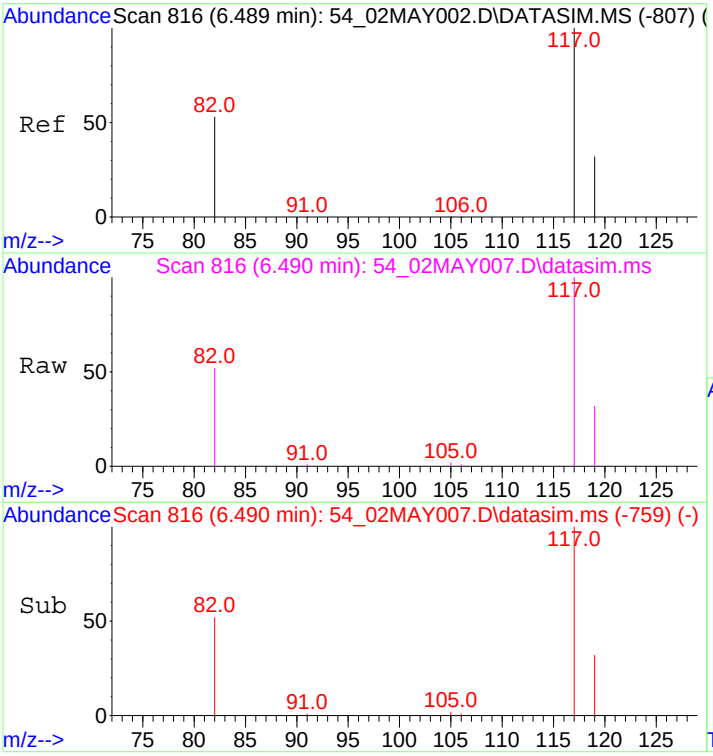


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY007.D
Acq: 2 May 2014 1:45 pm

Tgt Ion:114 Resp: 11205

Ion	Ratio	Lower	Upper
114	100		
63	21.3	12.0	18.0#
88	16.4	11.8	17.8

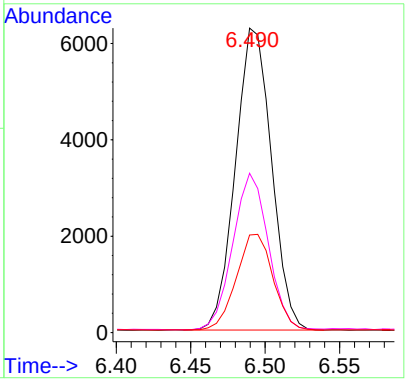


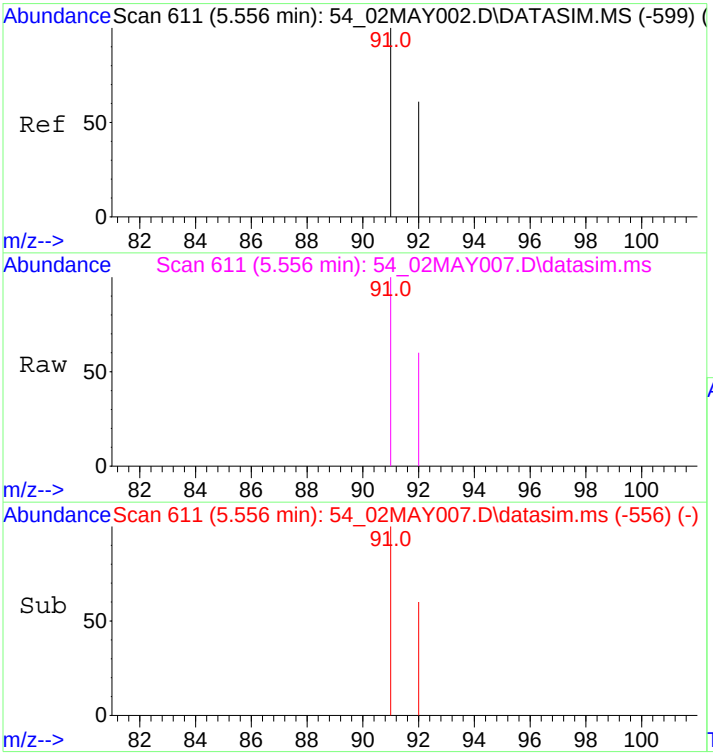


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY007.D
Acq: 2 May 2014 1:45 pm

Tgt Ion:117 Resp: 10555

Ion	Ratio	Lower	Upper
117	100		
82	50.8	38.0	57.0
119	32.2	27.0	40.4

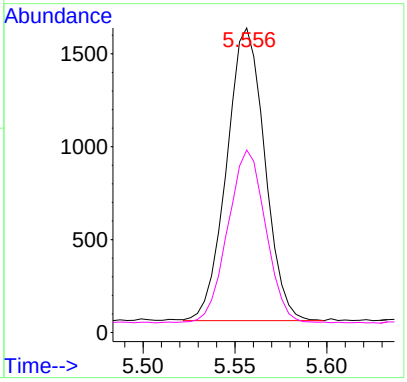


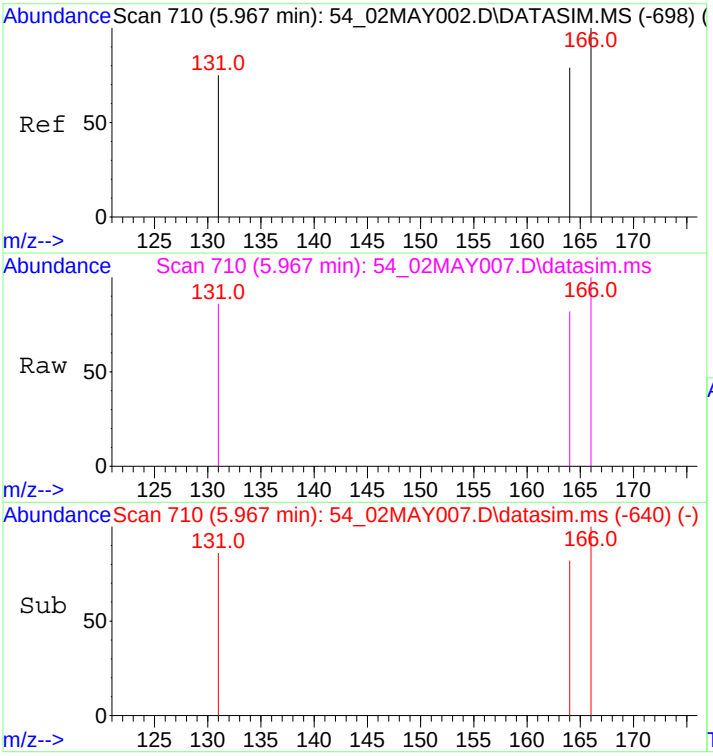


#13
Toluene
Concen: 3.60 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY007.D
Acq: 2 May 2014 1:45 pm

Tgt Ion: 91 Resp: 2275

Ion	Ratio	Lower	Upper
91	100		
92	58.5	47.8	71.8

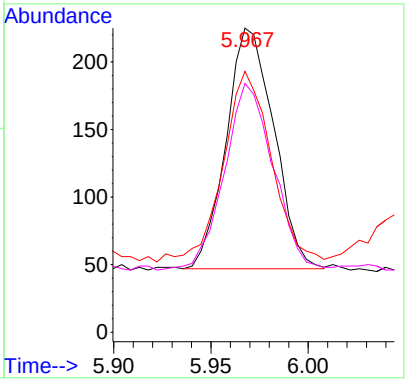


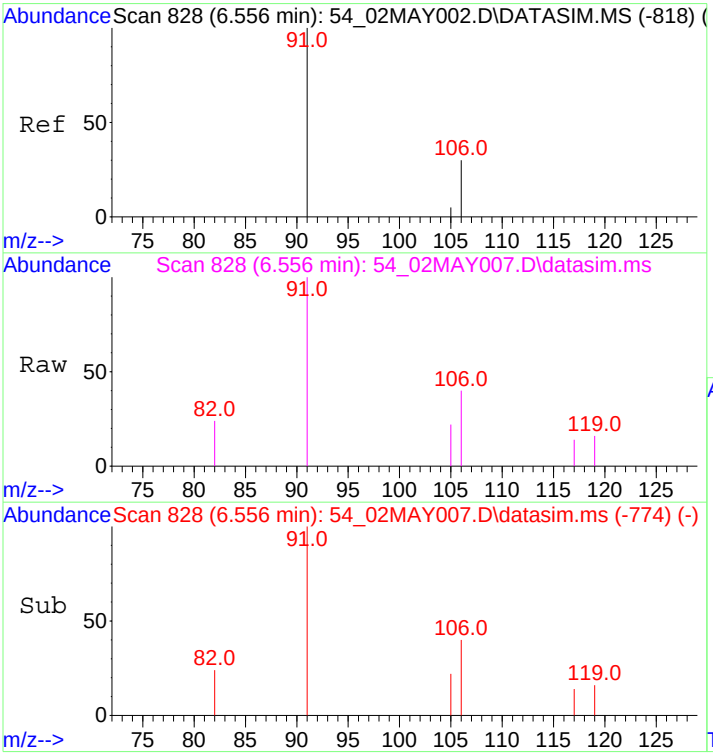


#14
Tetrachloroethene
Concen: 0.84 ppbv
RT: 5.967 min Scan# 710
Delta R.T. 0.000 min
Lab File: 54 02MAY007.D
Acq: 2 May 2014 1:45 pm

Tgt Ion:166 Resp: 304

Ion	Ratio	Lower	Upper
166	100		
164	79.6	62.6	94.0
131	110.2	58.5	87.7#

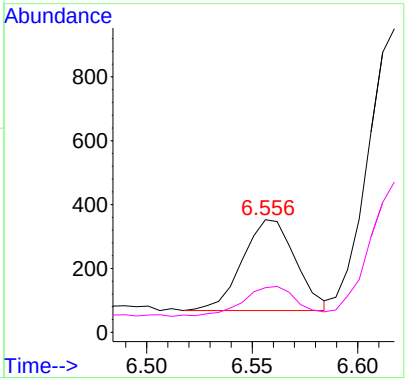


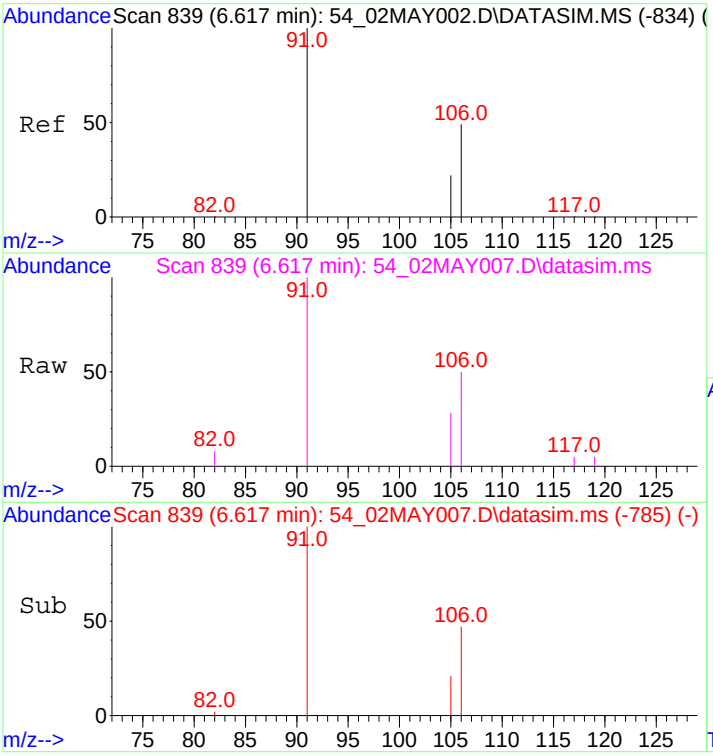


#15
Ethyl Benzene
Concen: 0.62 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54_02MAY007.D
Acq: 2 May 2014 1:45 pm

Tgt Ion: 91 Resp: 499

Ion	Ratio	Lower	Upper
91	100		
106	33.7	26.9	40.3

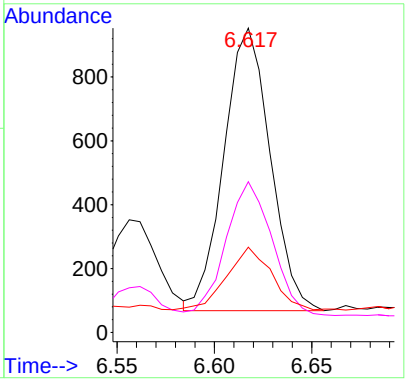


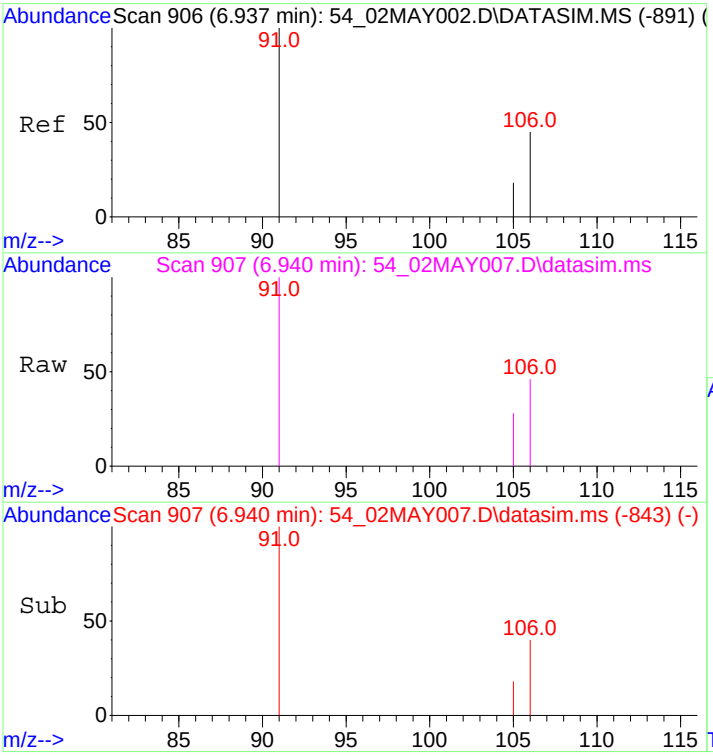


#16
m,p-Xylene
Concen: 2.38 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 02MAY007.D
Acq: 2 May 2014 1:45 pm

Tgt Ion: 91 Resp: 1468

Ion	Ratio	Lower	Upper
91	100		
106	47.4	43.1	64.7
105	21.7	18.3	27.5

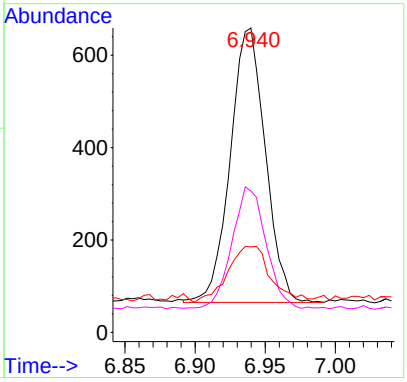




#17
o-Xylene
Concen: 1.65 ppbv
RT: 6.940 min Scan# 907
Delta R.T. 0.003 min
Lab File: 54_02MAY007.D
Acq: 2 May 2014 1:45 pm

Tgt Ion: 91 Resp: 1033

Ion	Ratio	Lower	Upper
91	100		
106	42.6	40.1	60.1
105	25.0	15.8	23.6#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY008.D
Acq On : 2 May 2014 1:57 pm
Operator : YHL
Sample : 02140 \ SG-22-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:04:39 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

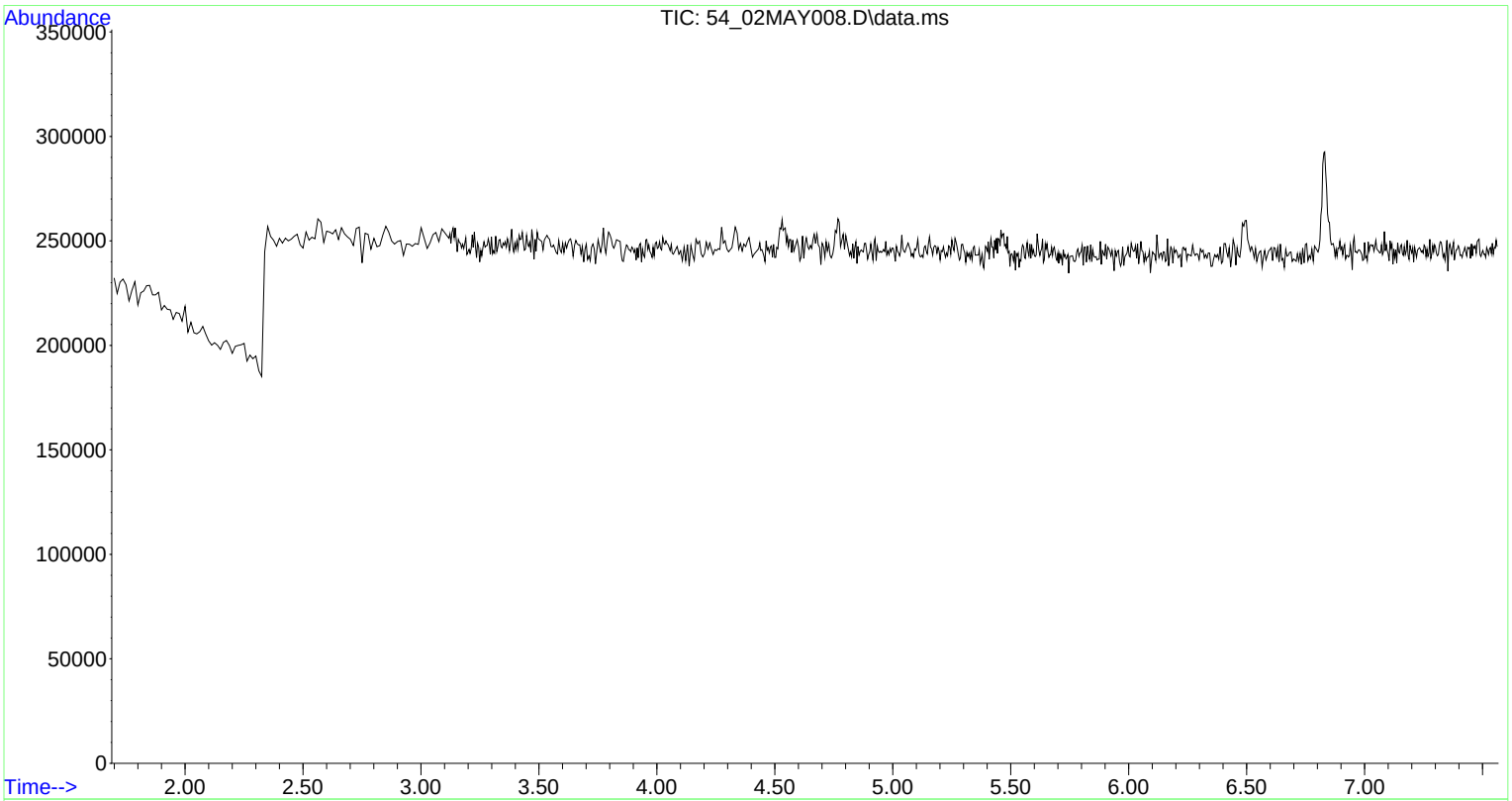
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4473	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11694	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10672	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	3326	5.20	ppbv	99
14] Tetrachloroethene	5.972	166	217	0.59	ppbv #	88
15] Ethyl Benzene	6.556	91	669	0.82	ppbv	98
16] m,p-Xylene	6.617	91	1833	2.94	ppbv	92
17] o-Xylene	6.937	91	776	1.23	ppbv	90

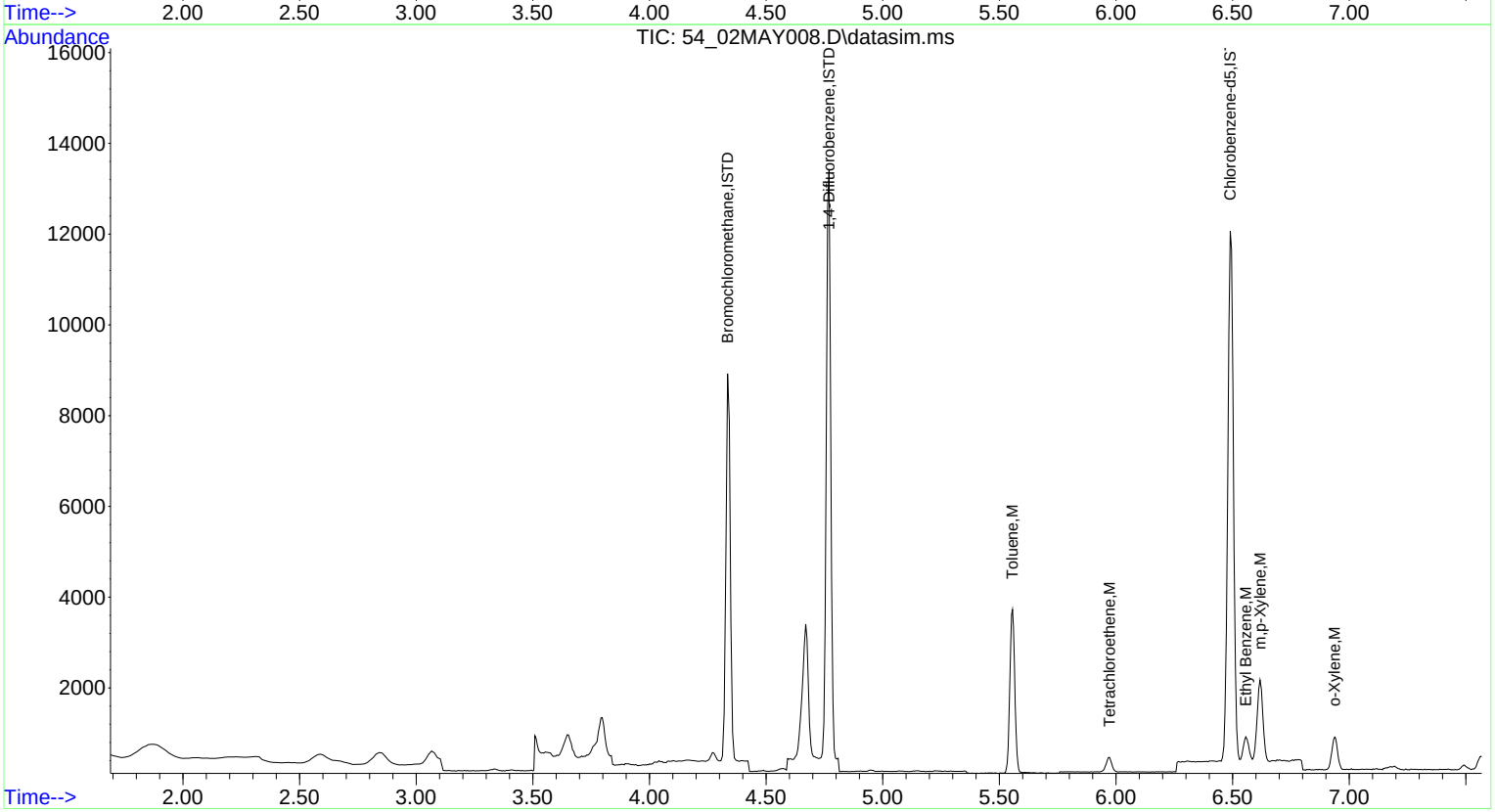
(#) = qualifier out of range (m) = manual integration (+) = signals summed

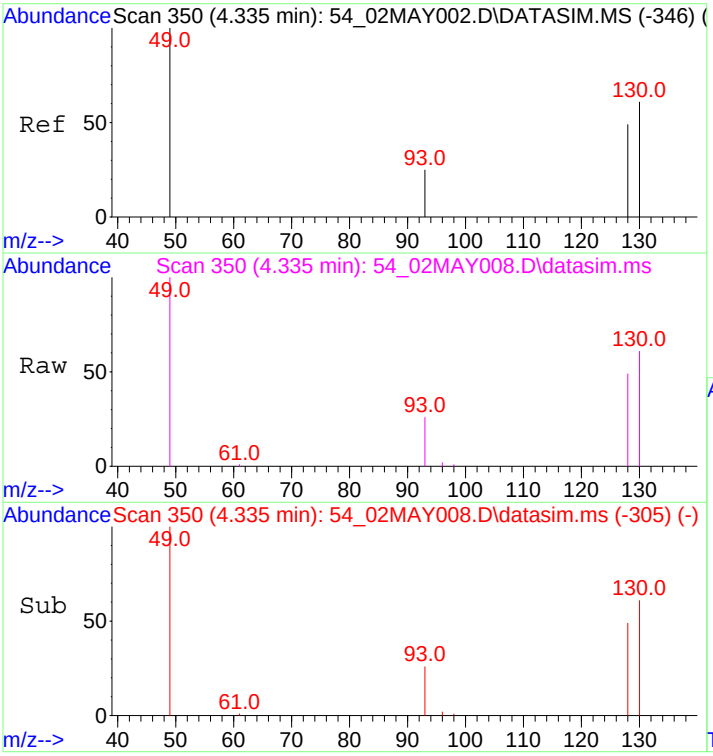
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY008.D
Acq On : 2 May 2014 1:57 pm
Operator : YHL
Sample : 02140 \ SG-22-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:04:39 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



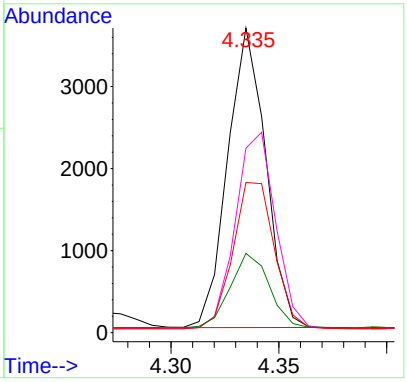


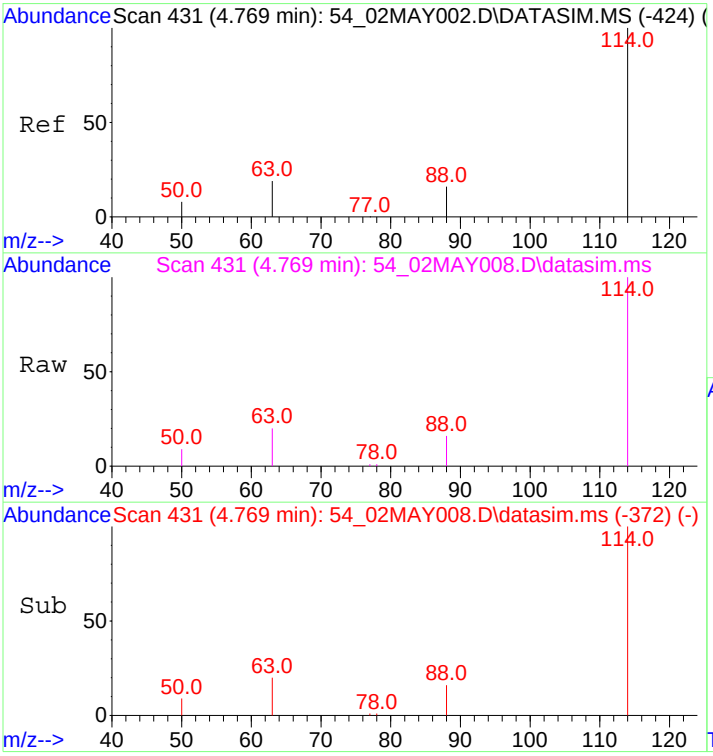


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY008.D
Acq: 2 May 2014 1:57 pm

Tgt Ion: 49 Resp: 4473

Ion	Ratio	Lower	Upper
49	100		
130	69.4	87.2	130.8#
128	53.4	68.0	102.0#
93	25.4	29.3	43.9#

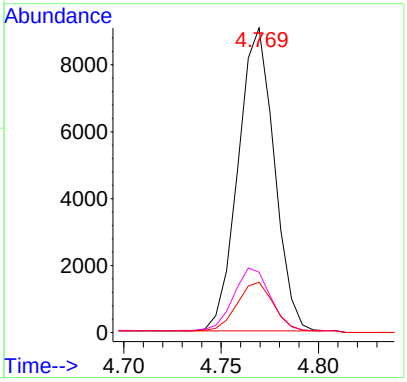


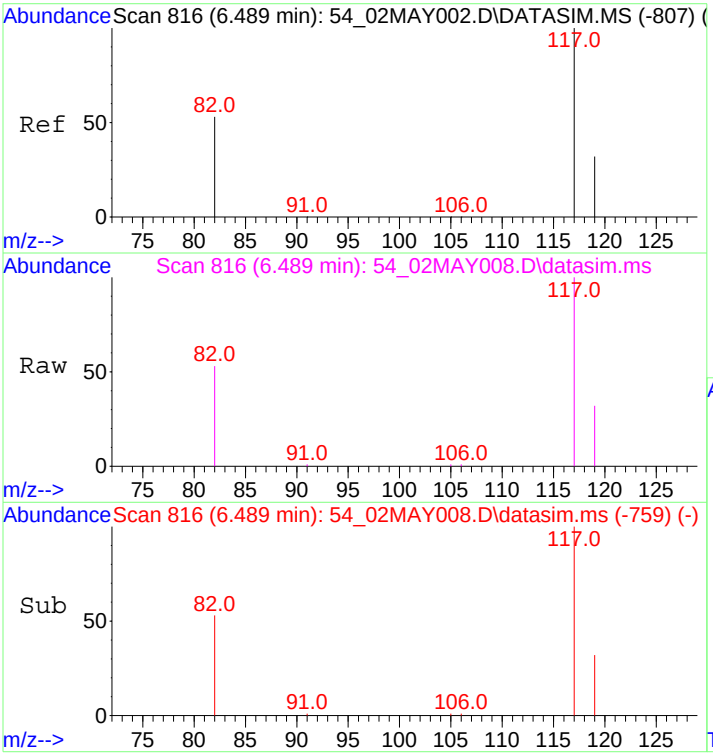


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY008.D
Acq: 2 May 2014 1:57 pm

Tgt Ion:114 Resp: 11694

Ion	Ratio	Lower	Upper
114	100		
63	20.9	12.0	18.0#
88	16.1	11.8	17.8

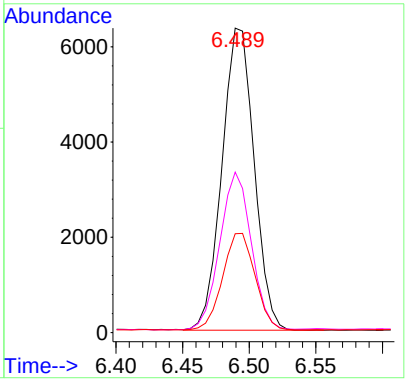


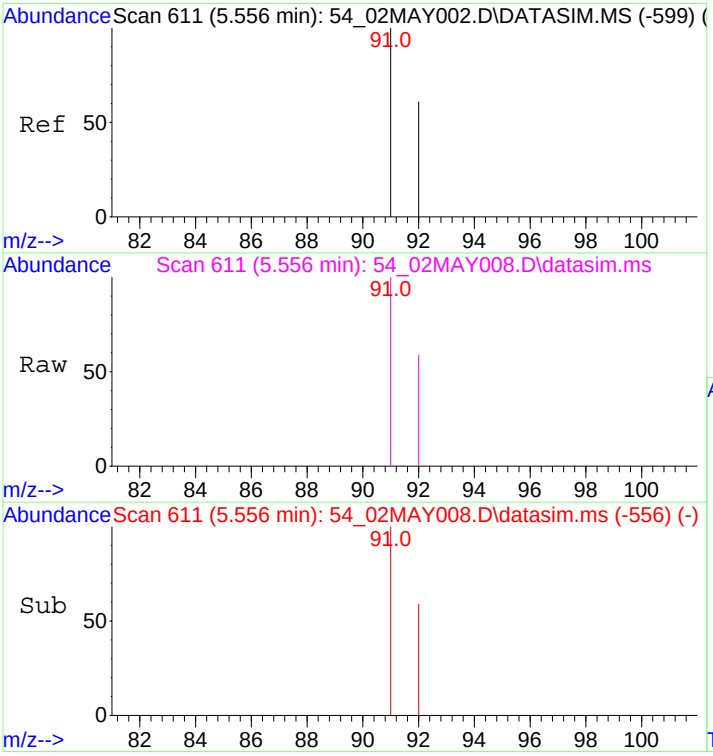


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY008.D
Acq: 2 May 2014 1:57 pm

Tgt Ion:117 Resp: 10672

Ion	Ratio	Lower	Upper
117	100		
82	51.0	38.0	57.0
119	32.2	27.0	40.4

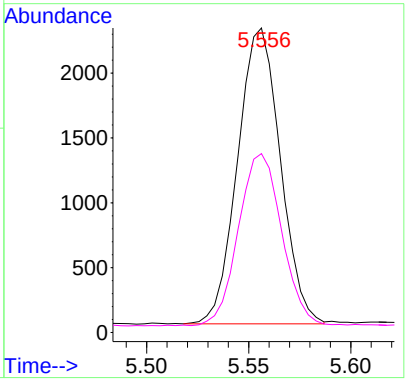


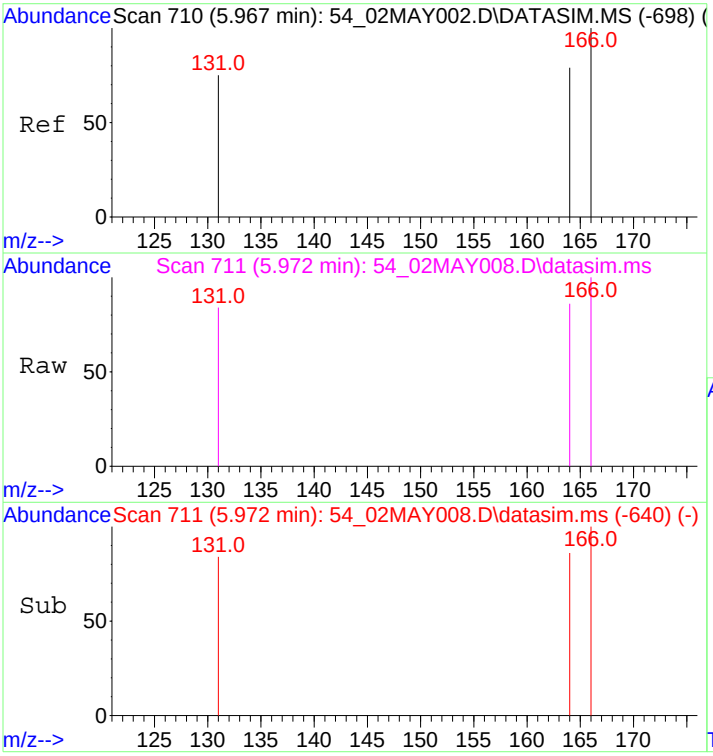


#13
Toluene
Concen: 5.20 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY008.D
Acq: 2 May 2014 1:57 pm

Tgt Ion: 91 Resp: 3326

Ion	Ratio	Lower	Upper
91	100		
92	58.7	47.8	71.8

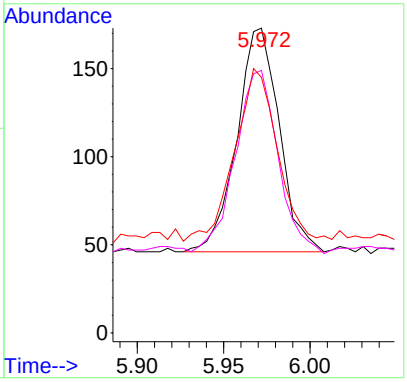


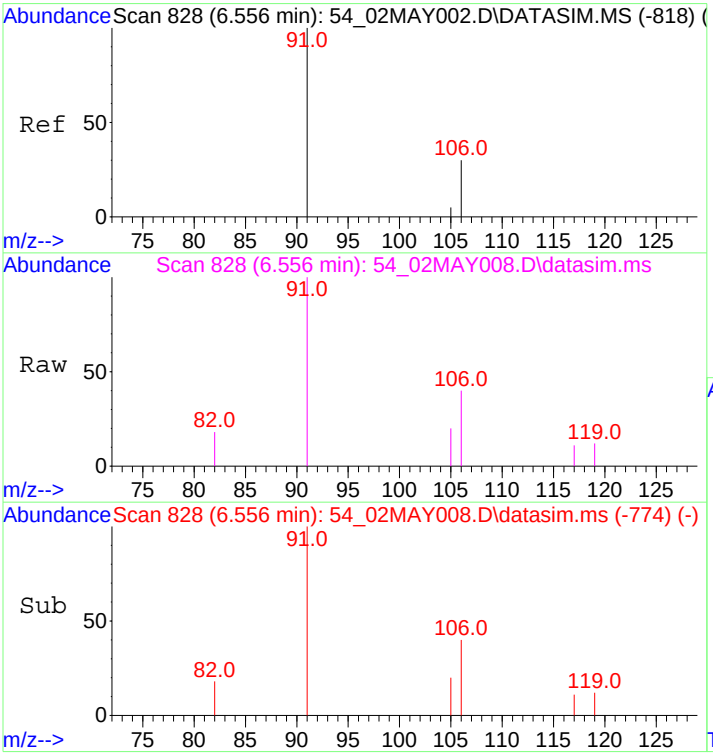


#14
Tetrachloroethene
Concen: 0.59 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.005 min
Lab File: 54 02MAY008.D
Acq: 2 May 2014 1:57 pm

Tgt Ion:166 Resp: 217

Ion	Ratio	Lower	Upper
166	100		
164	82.9	62.6	94.0
131	88.9	58.5	87.7#

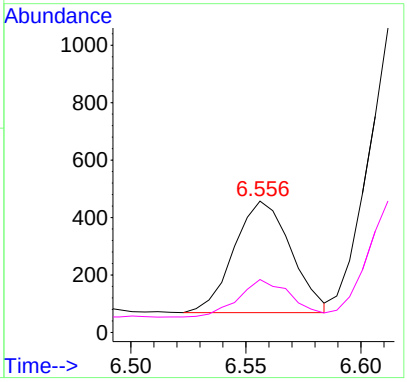


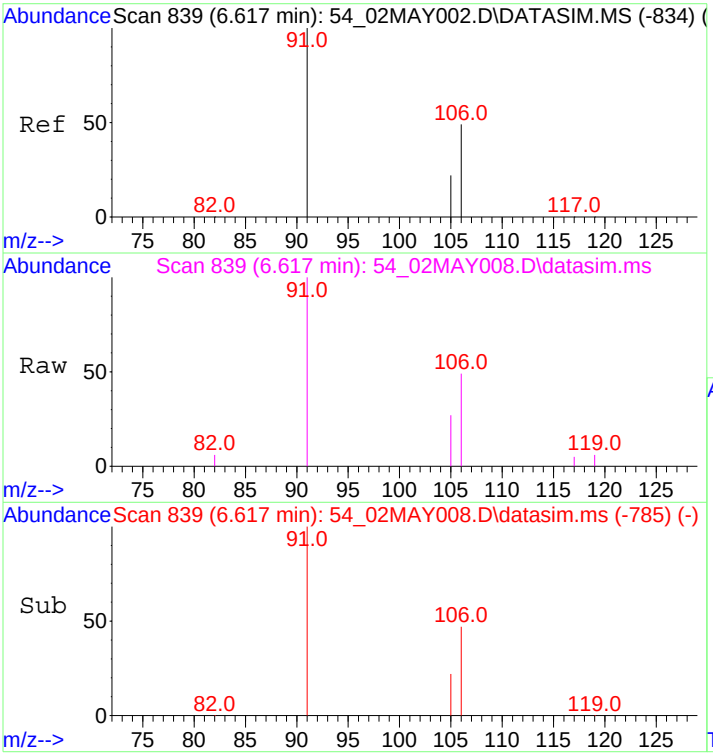


#15
Ethyl Benzene
Concen: 0.82 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54_02MAY008.D
Acq: 2 May 2014 1:57 pm

Tgt Ion: 91 Resp: 669

Ion	Ratio	Lower	Upper
91	100		
106	32.3	26.9	40.3

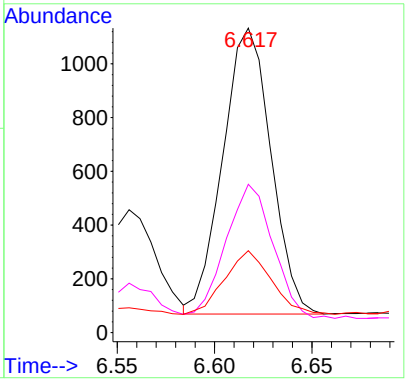


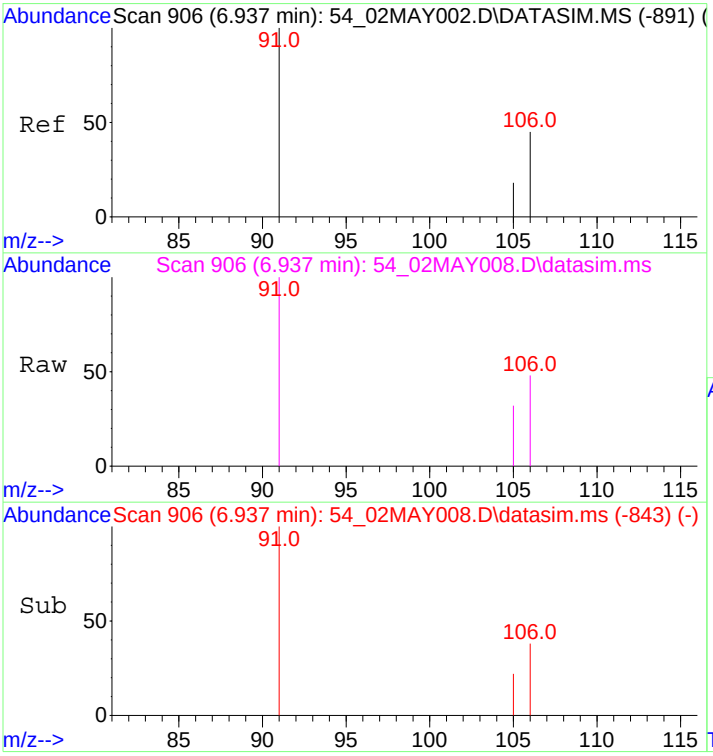


#16
m,p-Xylene
Concen: 2.94 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 02MAY008.D
Acq: 2 May 2014 1:57 pm

Tgt Ion: 91 Resp: 1833

Ion	Ratio	Lower	Upper
91	100		
106	46.3	43.1	64.7
105	21.5	18.3	27.5

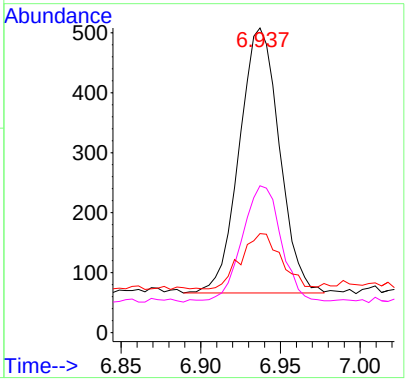




#17
o-Xylene
Concen: 1.23 ppbv
RT: 6.937 min Scan# 906
Delta R.T. 0.000 min
Lab File: 54_02MAY008.D
Acq: 2 May 2014 1:57 pm

Tgt Ion: 91 Resp: 776

Ion	Ratio	Lower	Upper
91	100		
106	41.4	40.1	60.1
105	20.9	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY009.D
Acq On : 2 May 2014 2:08 pm
Operator : YHL
Sample : 02141 \ SG-22-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:15:35 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

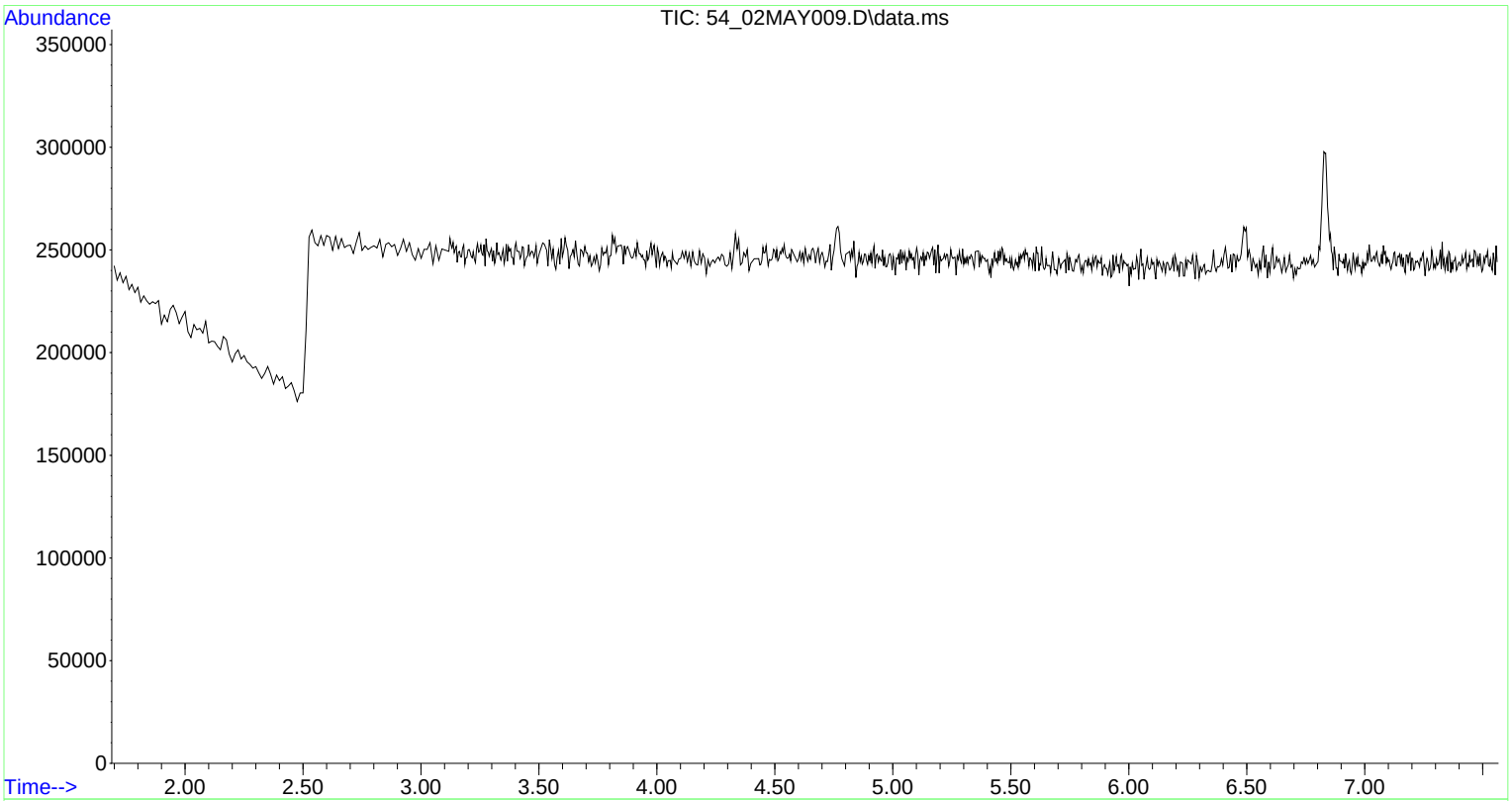
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4274	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10980	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	10230	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	2360	3.85	ppbv	99
14] Tetrachloroethene	5.972	166	321	0.92	ppbv	98
15] Ethyl Benzene	6.562	91	568	0.73	ppbv #	74
16] m,p-Xylene	6.617	91	933	1.56	ppbv	90
17] o-Xylene	6.937	91	741	1.22	ppbv	97

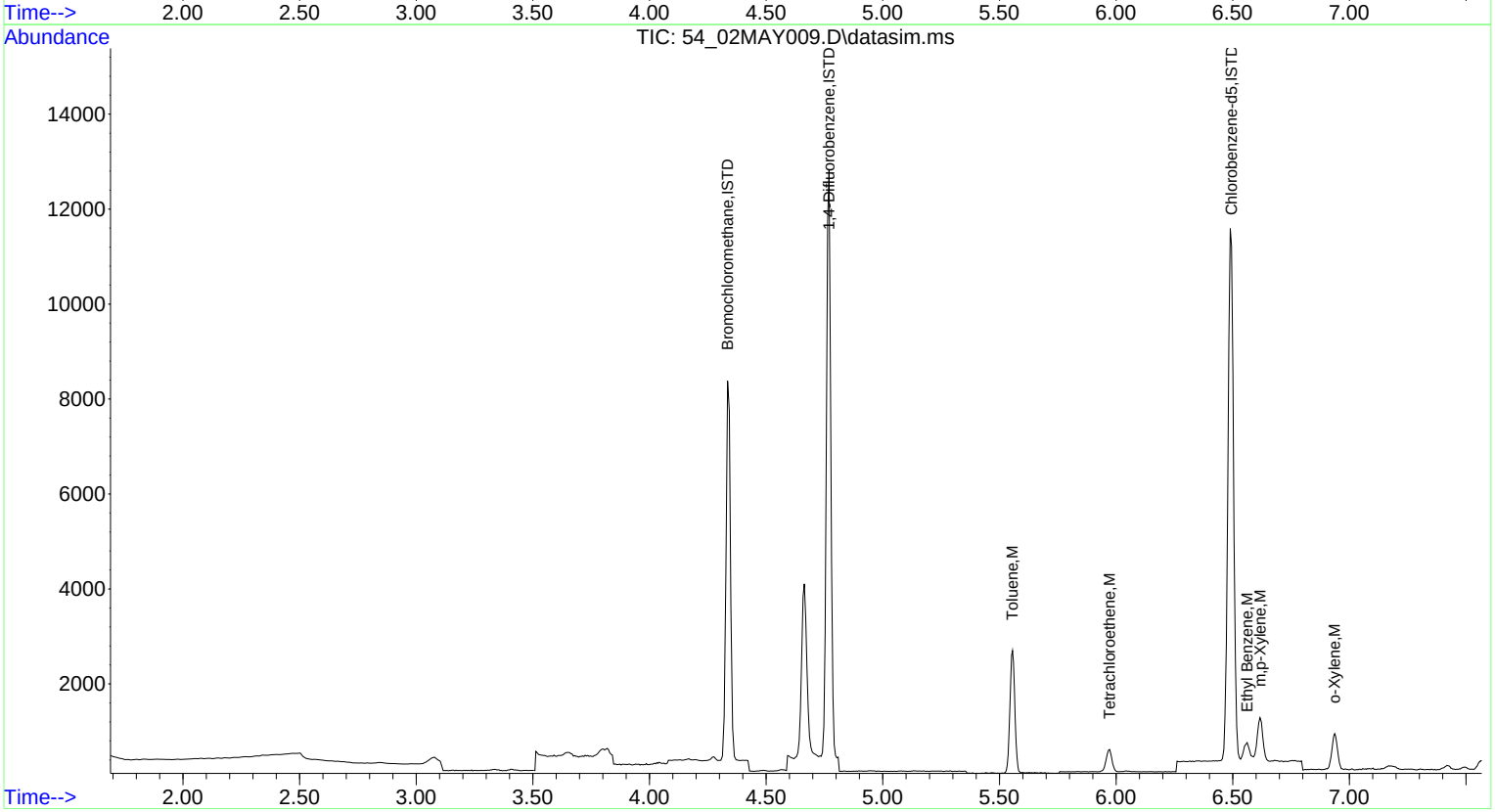
(#) = qualifier out of range (m) = manual integration (+) = signals summed

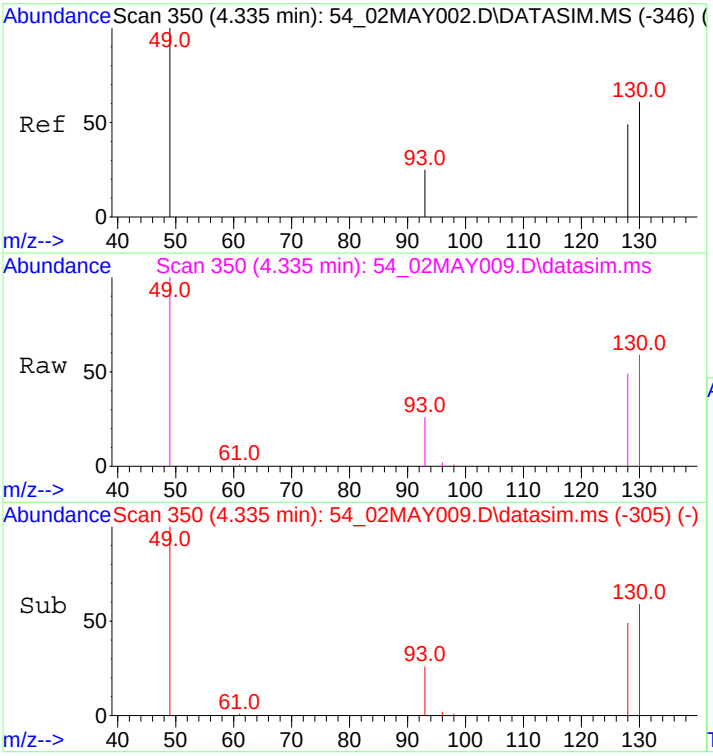
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY009.D
Acq On : 2 May 2014 2:08 pm
Operator : YHL
Sample : 02141 \ SG-22-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:15:35 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



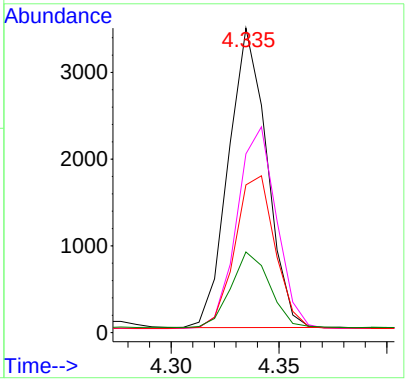


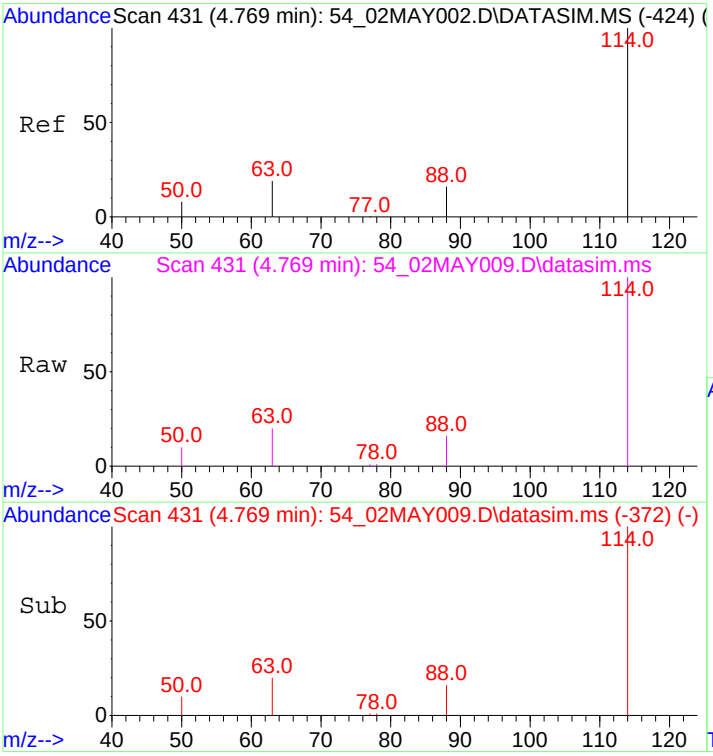


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY009.D
Acq: 2 May 2014 2:08 pm

Tgt Ion: 49 Resp: 4274

Ion	Ratio	Lower	Upper
49	100		
130	69.2	87.2	130.8#
128	52.9	68.0	102.0#
93	25.7	29.3	43.9#

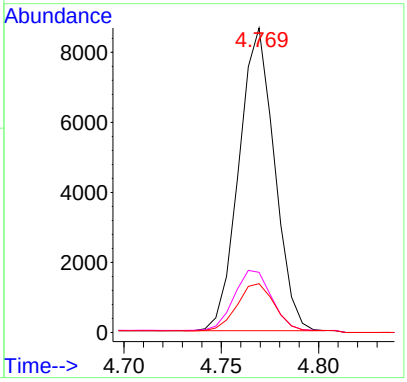


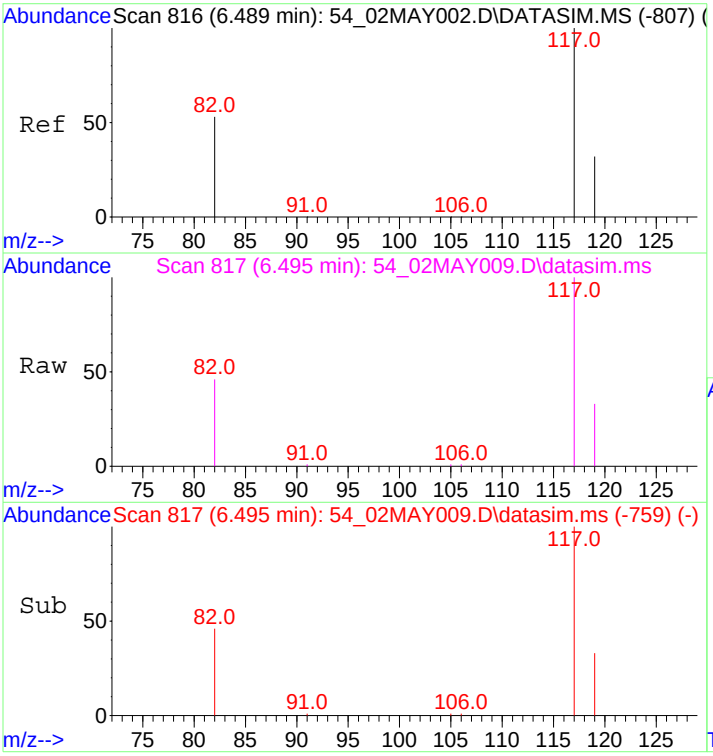


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY009.D
Acq: 2 May 2014 2:08 pm

Tgt Ion:114 Resp: 10980

Ion	Ratio	Lower	Upper
114	100		
63	20.9	12.0	18.0#
88	16.3	11.8	17.8

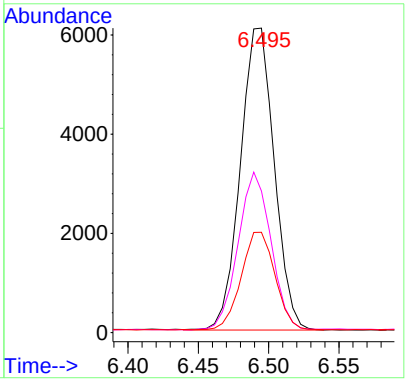


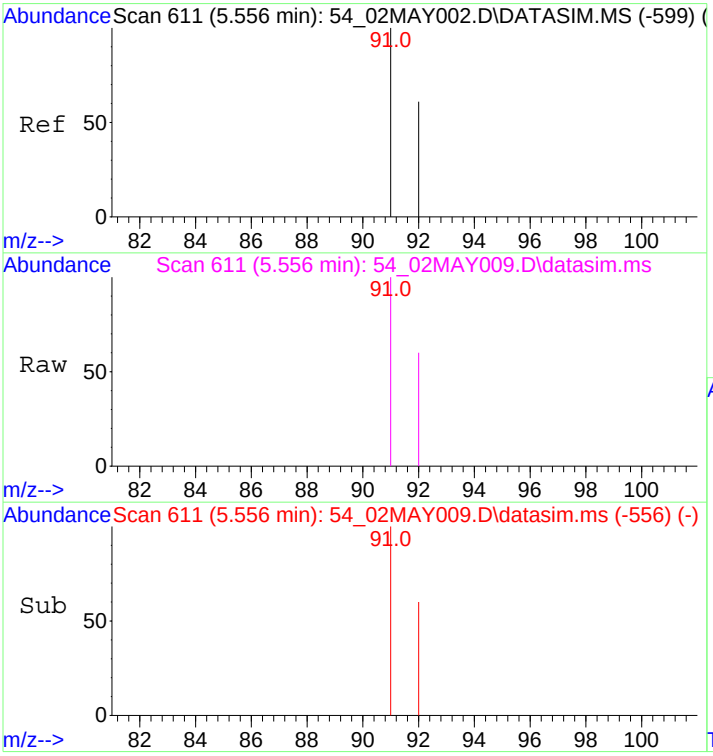


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.006 min
Lab File: 54 02MAY009.D
Acq: 2 May 2014 2:08 pm

Tgt Ion:117 Resp: 10230

Ion	Ratio	Lower	Upper
117	100		
82	50.6	38.0	57.0
119	32.2	27.0	40.4

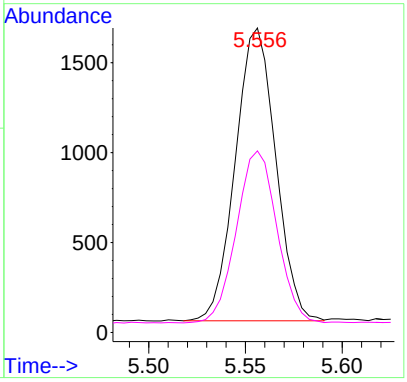


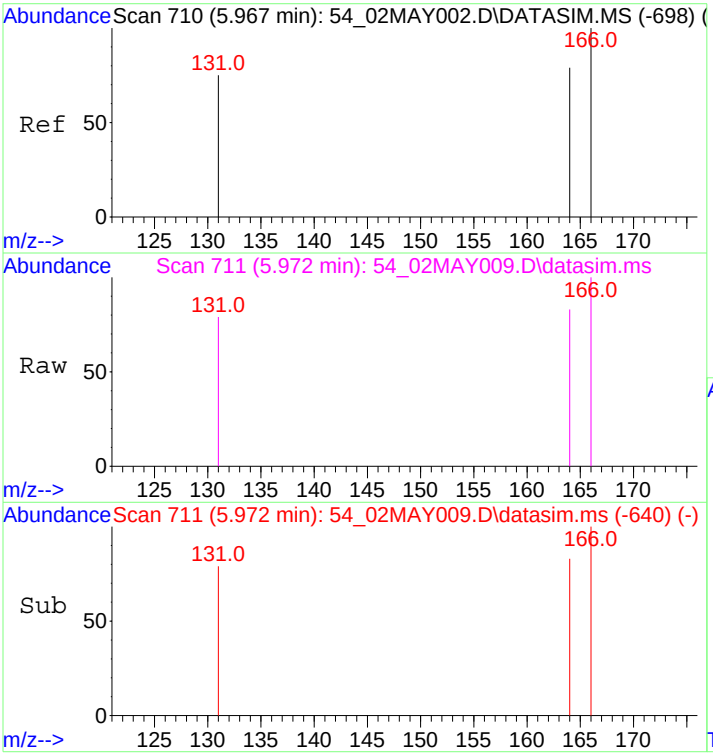


#13
Toluene
Concen: 3.85 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY009.D
Acq: 2 May 2014 2:08 pm

Tgt Ion: 91 Resp: 2360

Ion	Ratio	Lower	Upper
91	100		
92	59.0	47.8	71.8

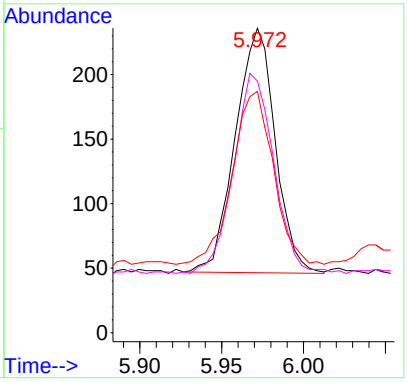


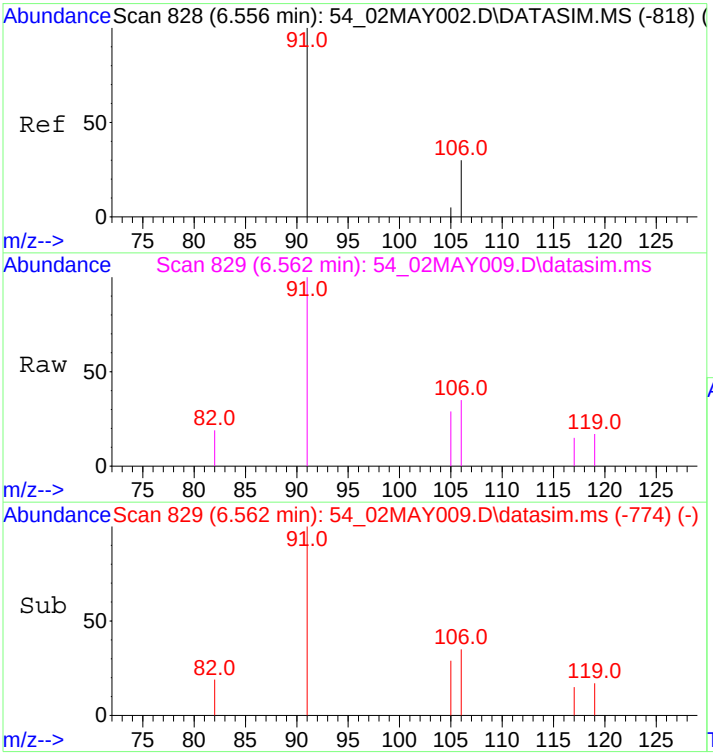


#14
Tetrachloroethene
Concen: 0.92 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.005 min
Lab File: 54 02MAY009.D
Acq: 2 May 2014 2:08 pm

Tgt Ion:166 Resp: 321

Ion	Ratio	Lower	Upper
166	100		
164	81.9	62.6	94.0
131	72.6	58.5	87.7

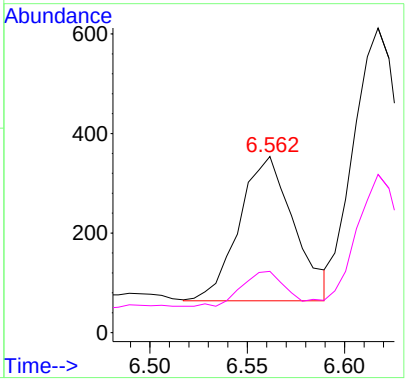


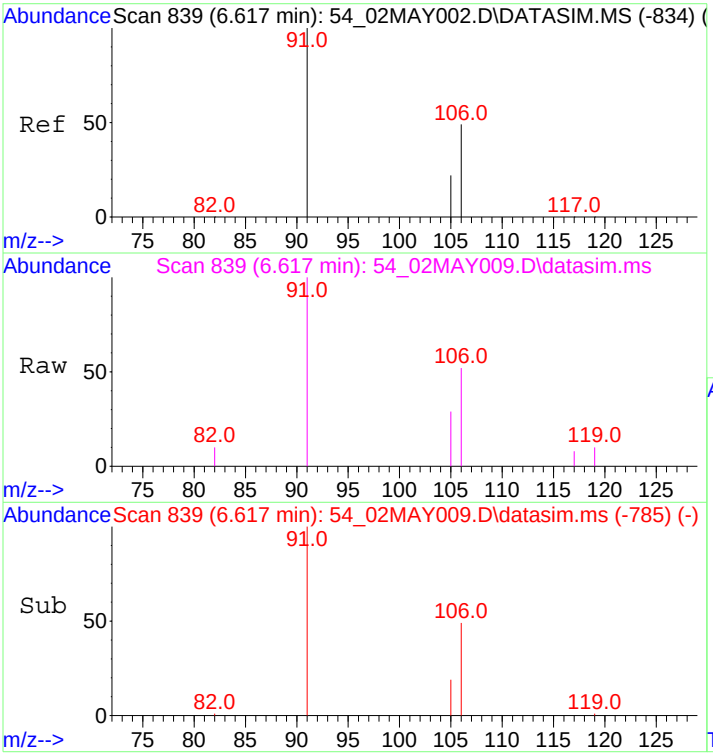


#15
Ethyl Benzene
Concen: 0.73 ppbv
RT: 6.562 min Scan# 829
Delta R.T. 0.006 min
Lab File: 54_02MAY009.D
Acq: 2 May 2014 2:08 pm

Tgt Ion: 91 Resp: 568

Ion	Ratio	Lower	Upper
91	100		
106	18.8	26.9	40.3#

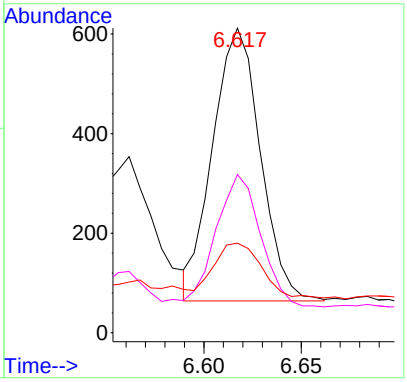


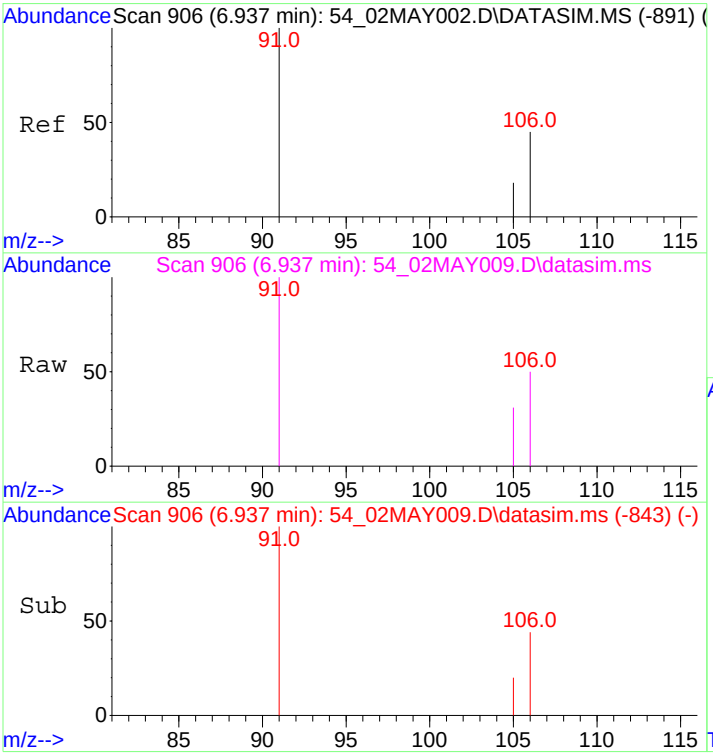


#16
m,p-Xylene
Concen: 1.56 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 02MAY009.D
Acq: 2 May 2014 2:08 pm

Tgt Ion: 91 Resp: 933

Ion	Ratio	Lower	Upper
91	100		
106	46.4	43.1	64.7
105	19.4	18.3	27.5

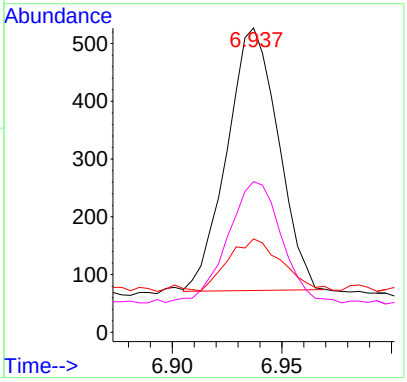




#17
o-Xylene
Concen: 1.22 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.000 min
Lab File: 54_02MAY009.D
Acq: 2 May 2014 2:08 pm

Tgt Ion: 91 Resp: 741

Ion	Ratio	Lower	Upper
91	100		
106	47.6	40.1	60.1
105	20.8	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY010.D
Acq On : 2 May 2014 2:20 pm
Operator : YHL
Sample : 02142 \ SG-23-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:27:25 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

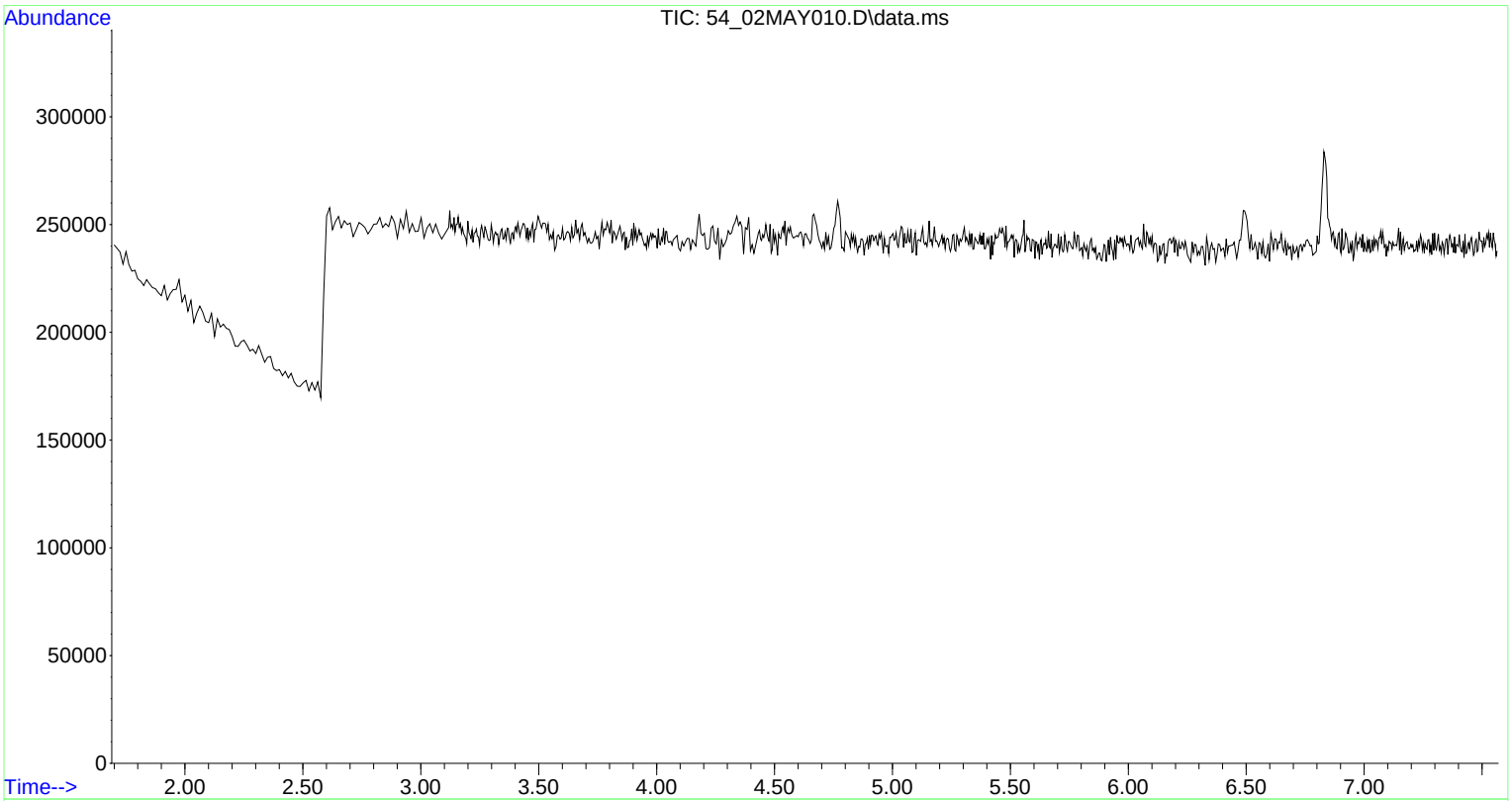
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4408	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11453	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10554	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	1706	2.70	ppbv	99
14] Tetrachloroethene	5.972	166	755	2.09	ppbv	96
15] Ethyl Benzene	6.562	91	468	0.58	ppbv	97
16] m,p-Xylene	6.617	91	1127	1.83	ppbv	93
17] o-Xylene	6.936	91	563	0.90	ppbv	95

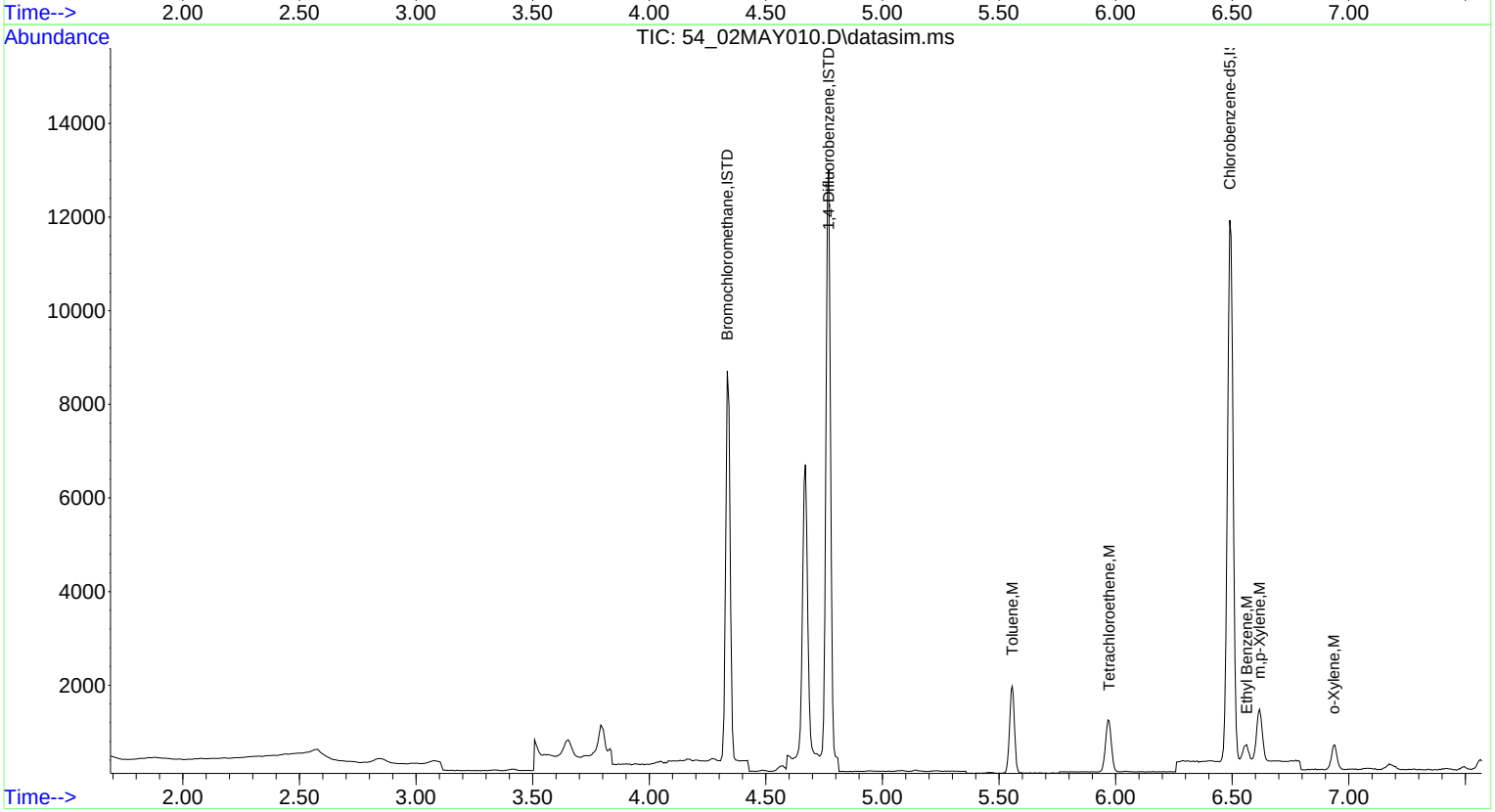
(#) = qualifier out of range (m) = manual integration (+) = signals summed

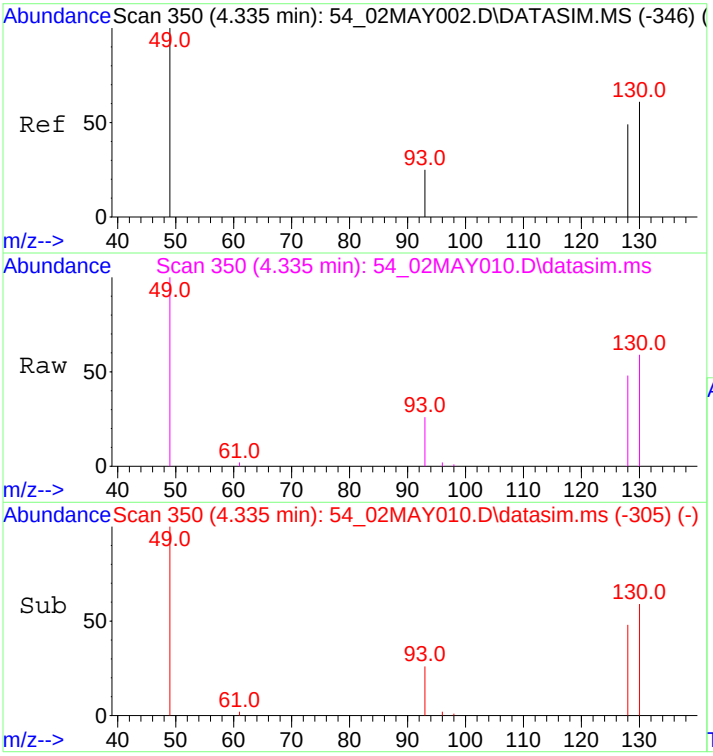
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY010.D
Acq On : 2 May 2014 2:20 pm
Operator : YHL
Sample : 02142 \ SG-23-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:27:25 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



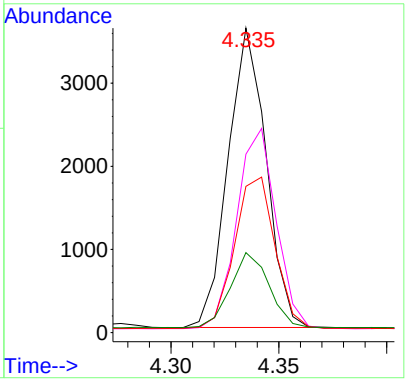


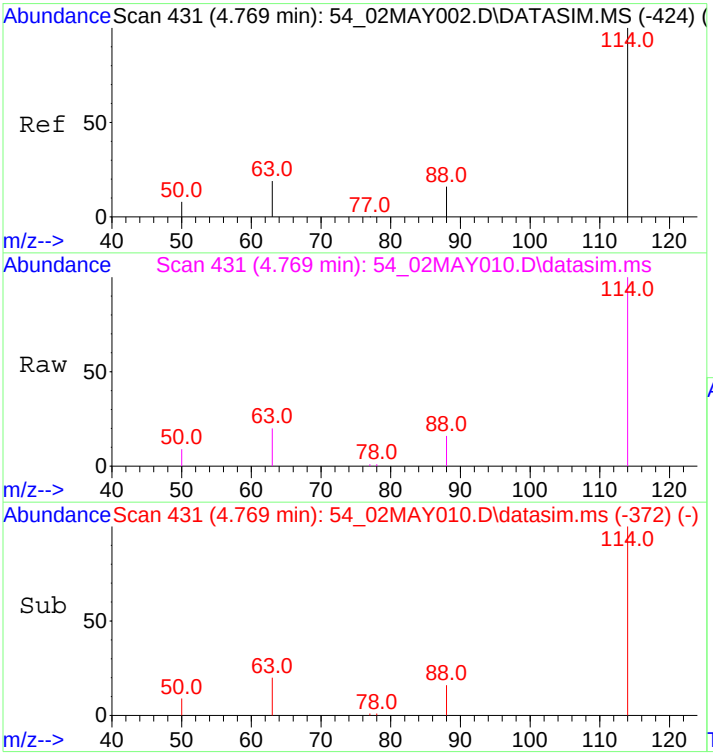


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY010.D
Acq: 2 May 2014 2:20 pm

Tgt Ion: 49 Resp: 4408

Ion	Ratio	Lower	Upper
49	100		
130	69.1	87.2	130.8#
128	53.8	68.0	102.0#
93	25.5	29.3	43.9#

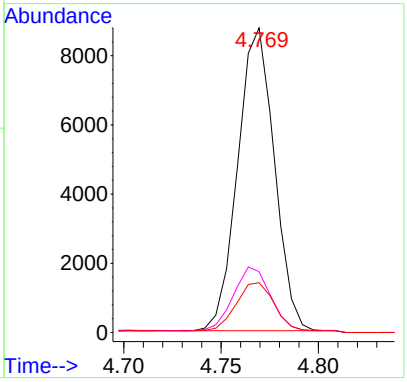


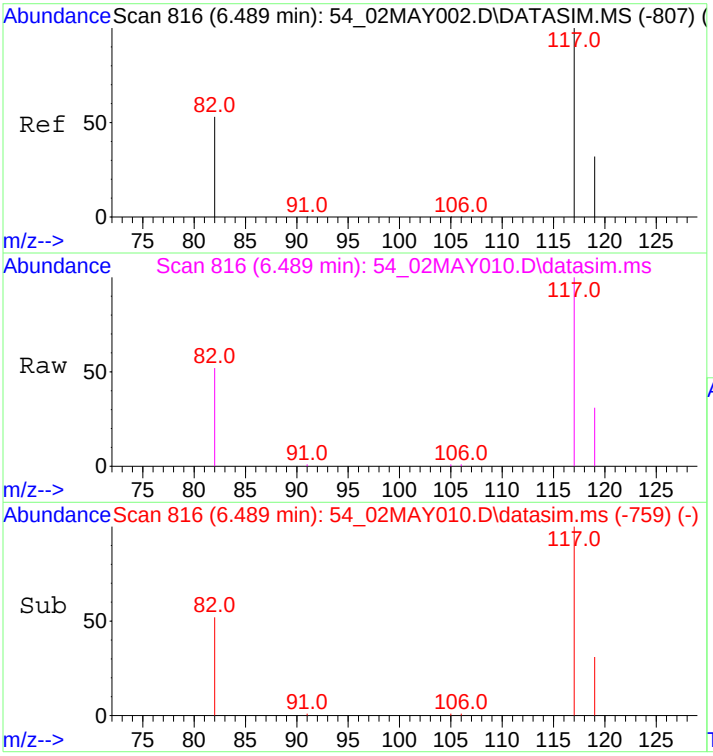


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY010.D
Acq: 2 May 2014 2:20 pm

Tgt Ion:114 Resp: 11453

Ion	Ratio	Lower	Upper
114	100		
63	21.4	12.0	18.0#
88	16.5	11.8	17.8

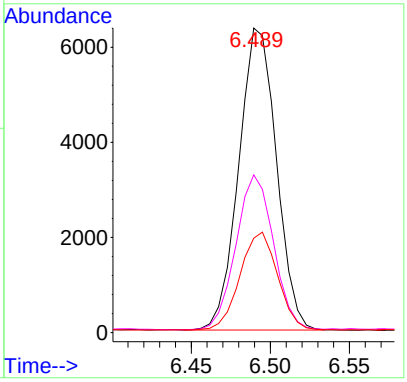


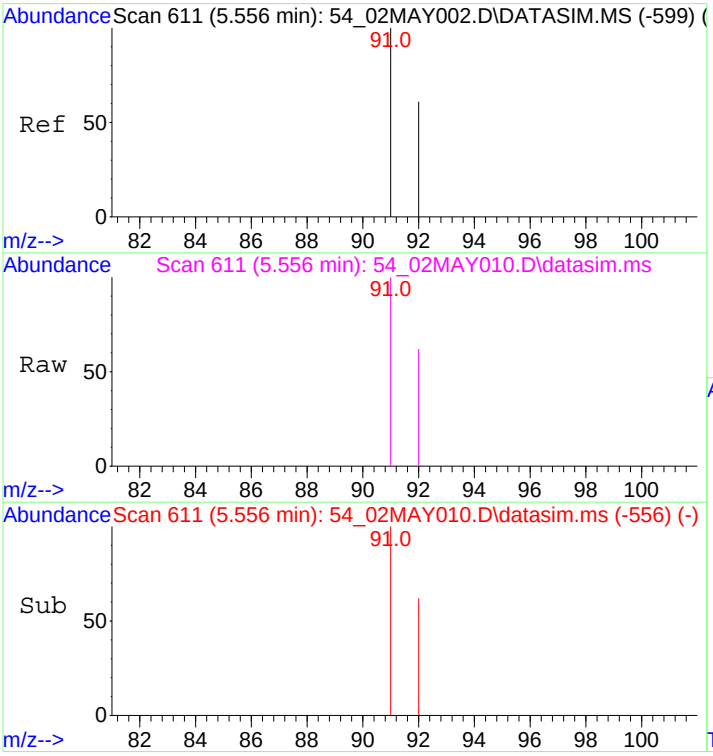


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY010.D
Acq: 2 May 2014 2:20 pm

Tgt Ion:117 Resp: 10554

Ion	Ratio	Lower	Upper
117	100		
82	51.0	38.0	57.0
119	32.3	27.0	40.4

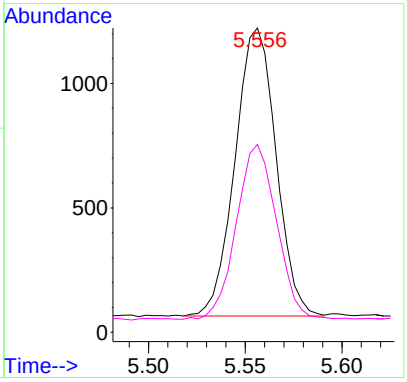


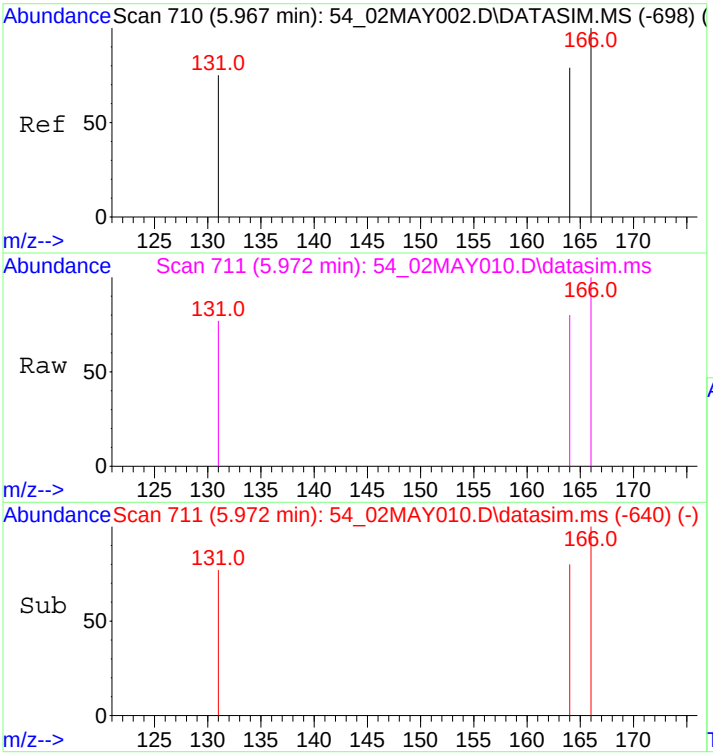


#13
Toluene
Concen: 2.70 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY010.D
Acq: 2 May 2014 2:20 pm

Tgt Ion: 91 Resp: 1706

Ion	Ratio	Lower	Upper
91	100		
92	58.9	47.8	71.8

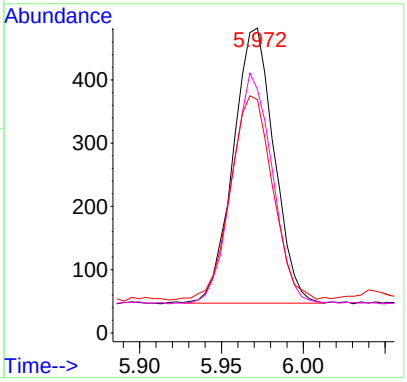


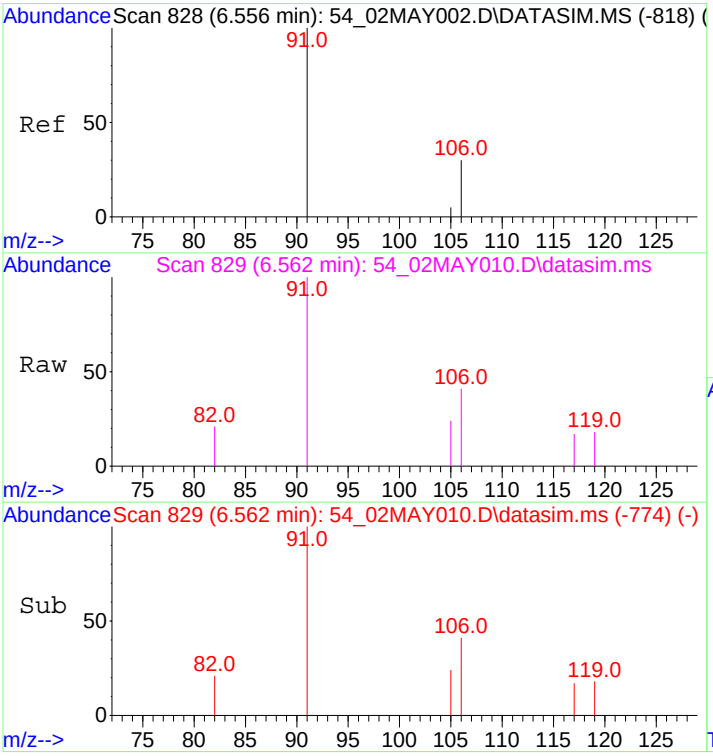


#14
Tetrachloroethene
Concen: 2.09 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.005 min
Lab File: 54 02MAY010.D
Acq: 2 May 2014 2:20 pm

Tgt Ion:166 Resp: 755

Ion	Ratio	Lower	Upper
166	100		
164	82.1	62.6	94.0
131	76.7	58.5	87.7

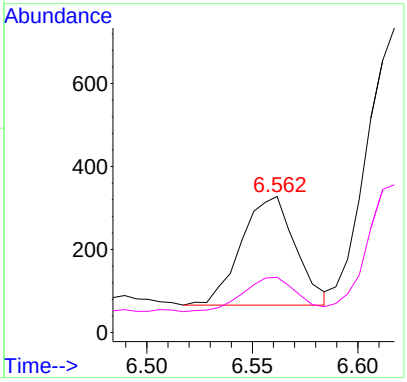


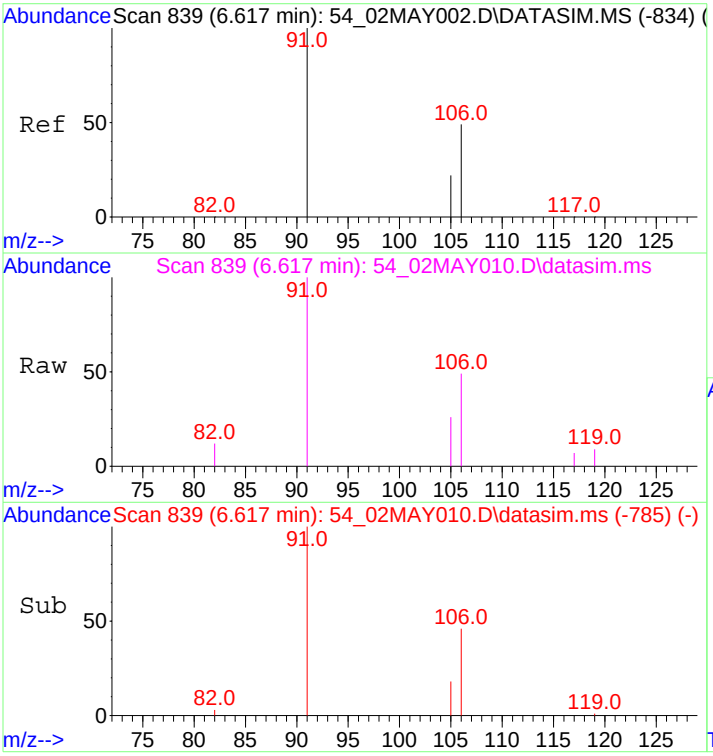


#15
Ethyl Benzene
Concen: 0.58 ppbv
RT: 6.562 min Scan# 829
Delta R.T. 0.006 min
Lab File: 54_02MAY010.D
Acq: 2 May 2014 2:20 pm

Tgt Ion: 91 Resp: 468

Ion	Ratio	Lower	Upper
91	100		
106	31.6	26.9	40.3

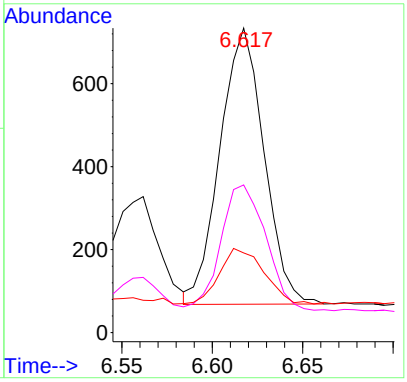


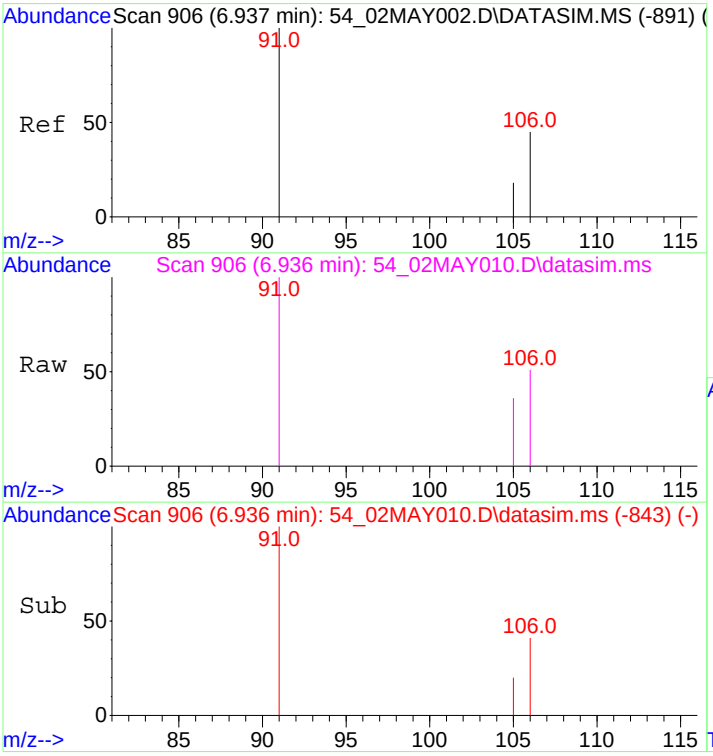


#16
m,p-Xylene
Concen: 1.83 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 02MAY010.D
Acq: 2 May 2014 2:20 pm

Tgt Ion: 91 Resp: 1127

Ion	Ratio	Lower	Upper
91	100		
106	47.1	43.1	64.7
105	21.6	18.3	27.5

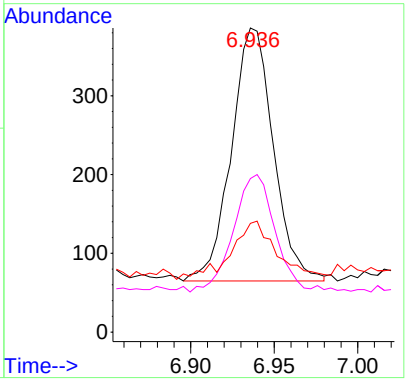




#17
o-Xylene
Concen: 0.90 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54_02MAY010.D
Acq: 2 May 2014 2:20 pm

Tgt Ion: 91 Resp: 563

Ion	Ratio	Lower	Upper
91	100		
106	45.5	40.1	60.1
105	19.4	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY011.D
Acq On : 2 May 2014 2:31 pm
Operator : YHL
Sample : 02143 \ SG-23-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:39:10 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

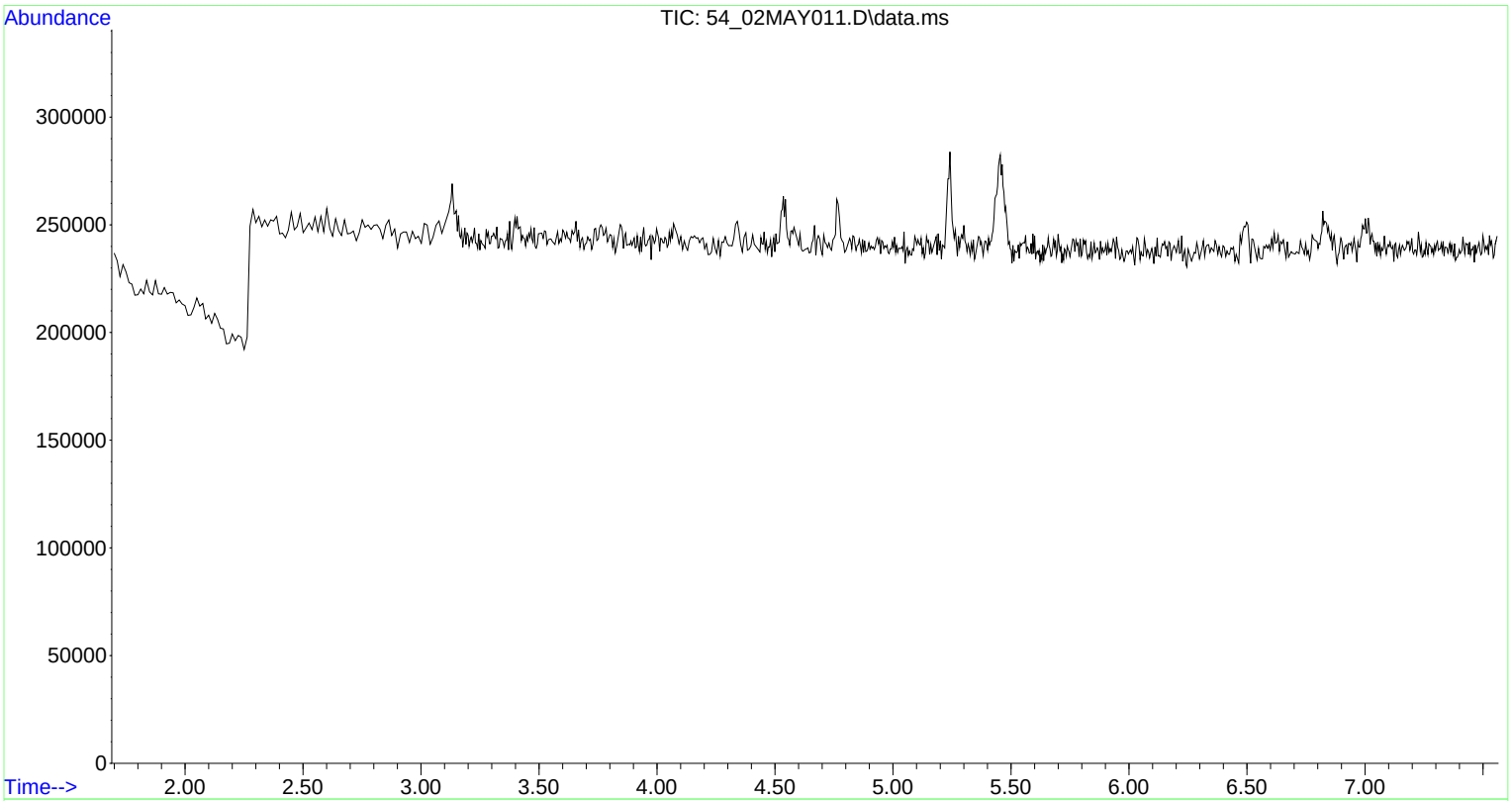
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4349	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11055	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10135	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	2848	4.69	ppbv	100
15] Ethyl Benzene	6.556	91	488	0.63	ppbv	91
16] m,p-Xylene	6.617	91	2648	4.47	ppbv	92
17] o-Xylene	6.936	91	535	0.89	ppbv	92

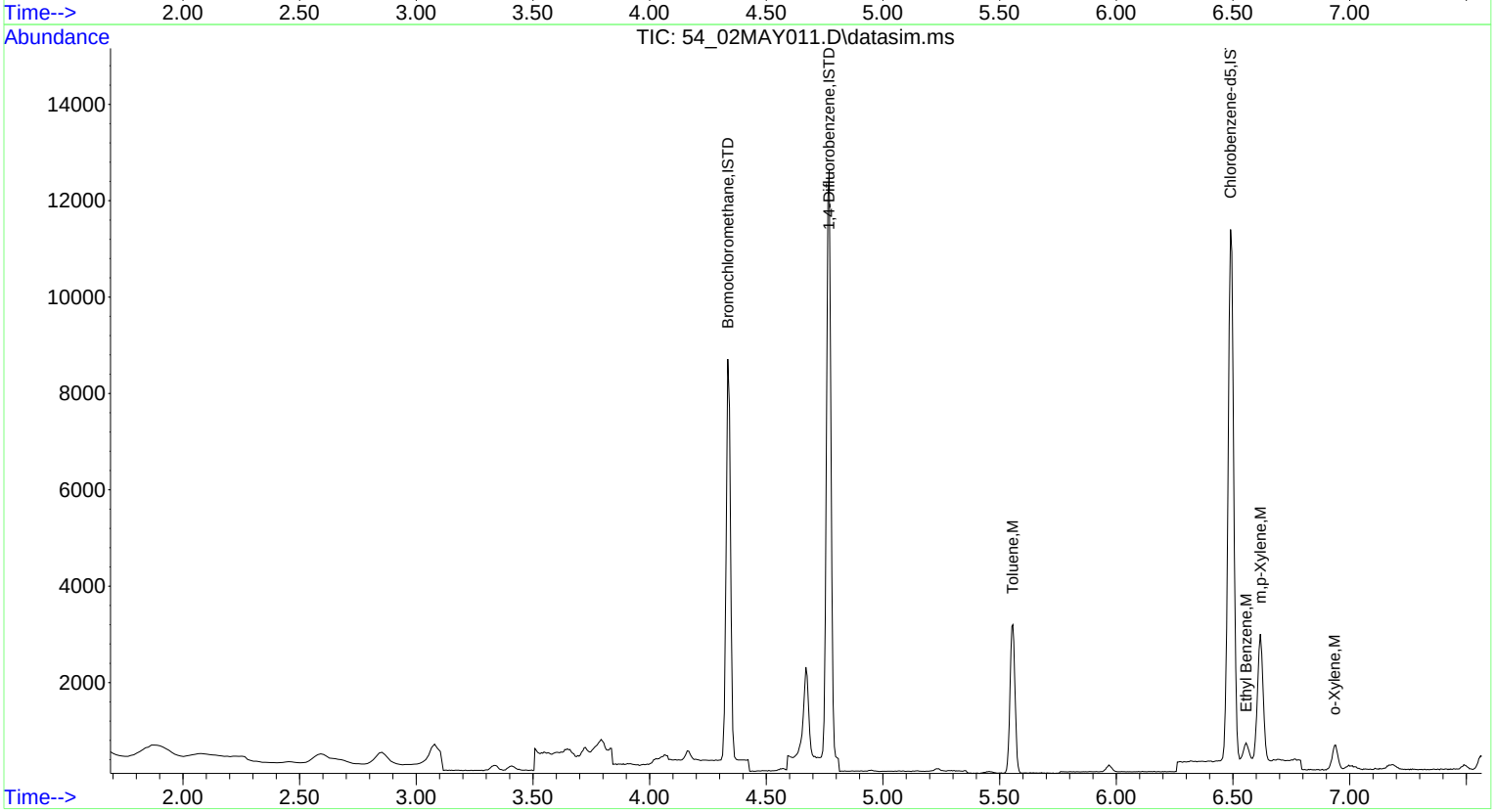
(#) = qualifier out of range (m) = manual integration (+) = signals summed

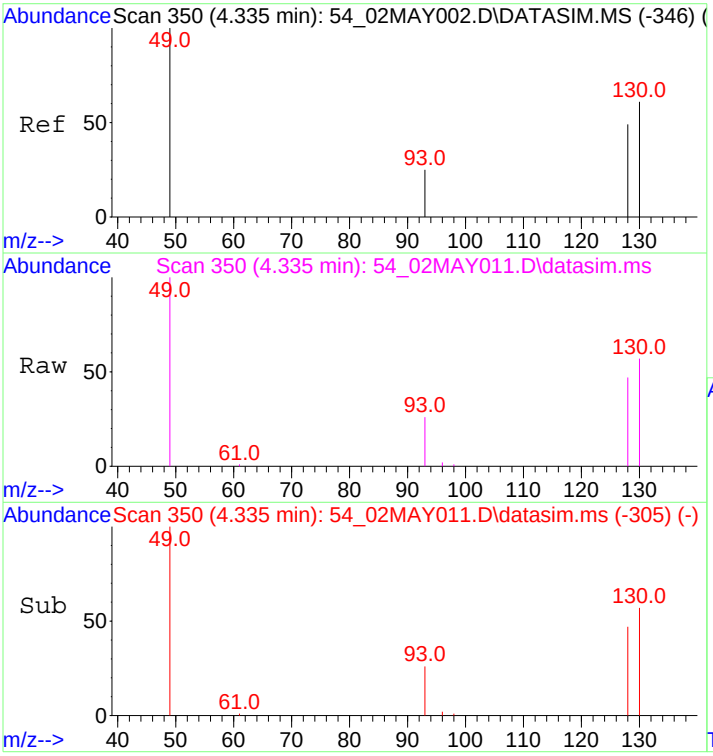
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY011.D
Acq On : 2 May 2014 2:31 pm
Operator : YHL
Sample : 02143 \ SG-23-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:39:10 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



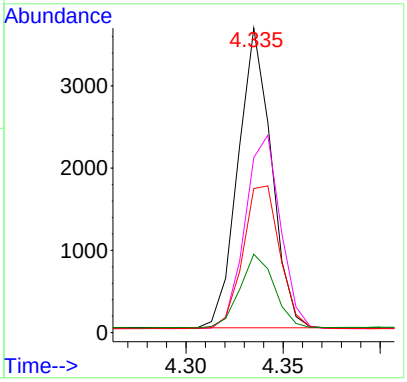


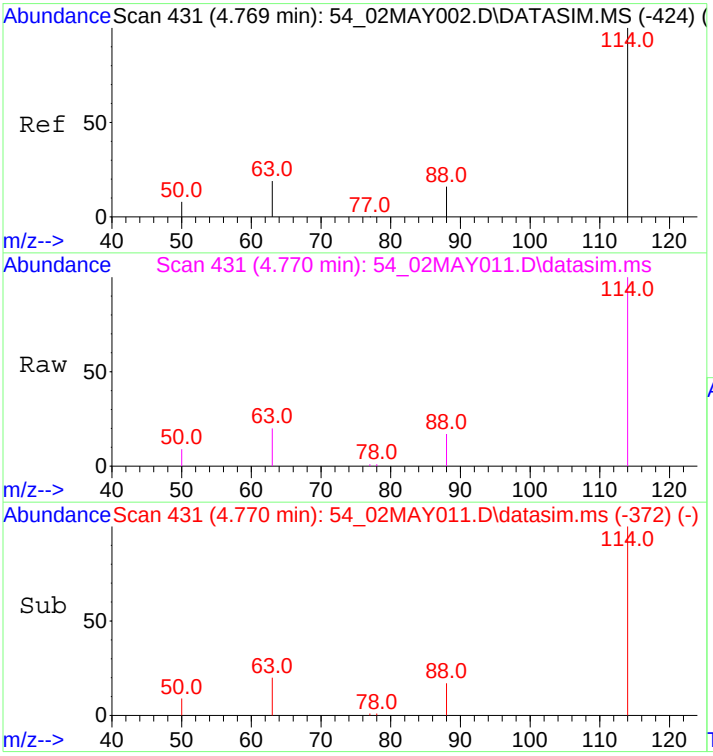


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY011.D
Acq: 2 May 2014 2:31 pm

Tgt Ion: 49 Resp: 4349

Ion	Ratio	Lower	Upper
49	100		
130	68.3	87.2	130.8#
128	52.7	68.0	102.0#
93	25.4	29.3	43.9#

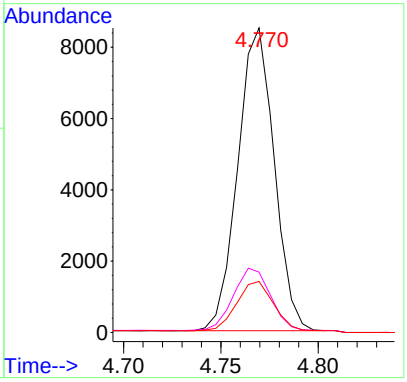


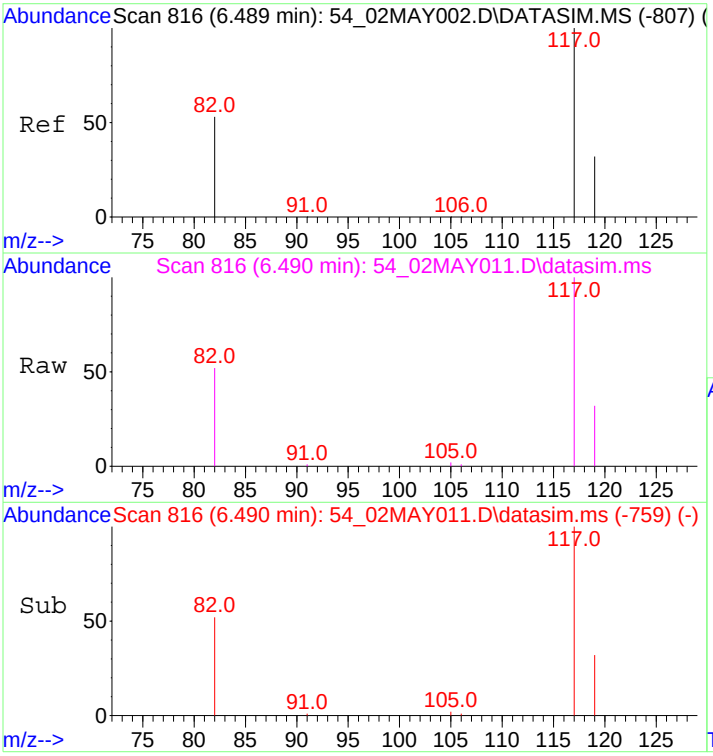


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY011.D
Acq: 2 May 2014 2:31 pm

Tgt Ion:114 Resp: 11055

Ion	Ratio	Lower	Upper
114	100		
63	20.9	12.0	18.0#
88	16.3	11.8	17.8

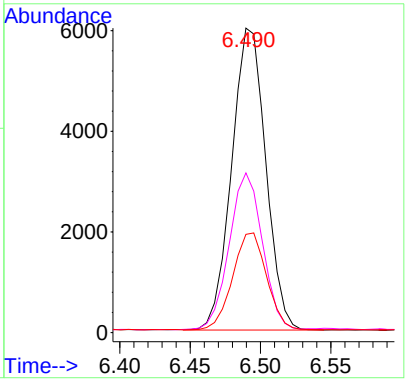


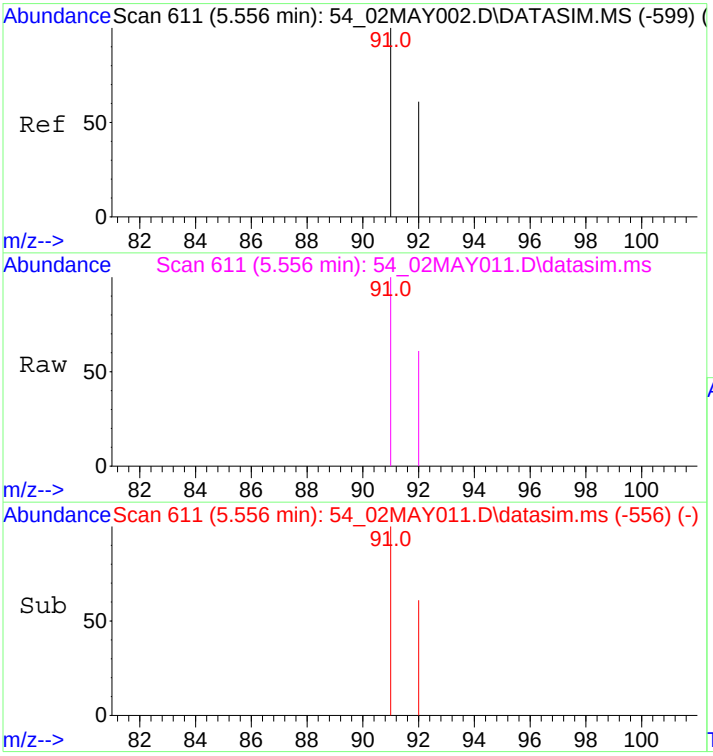


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY011.D
Acq: 2 May 2014 2:31 pm

Tgt Ion:117 Resp: 10135

Ion	Ratio	Lower	Upper
117	100		
82	50.5	38.0	57.0
119	32.0	27.0	40.4

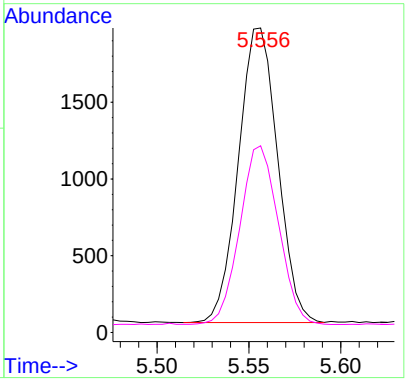


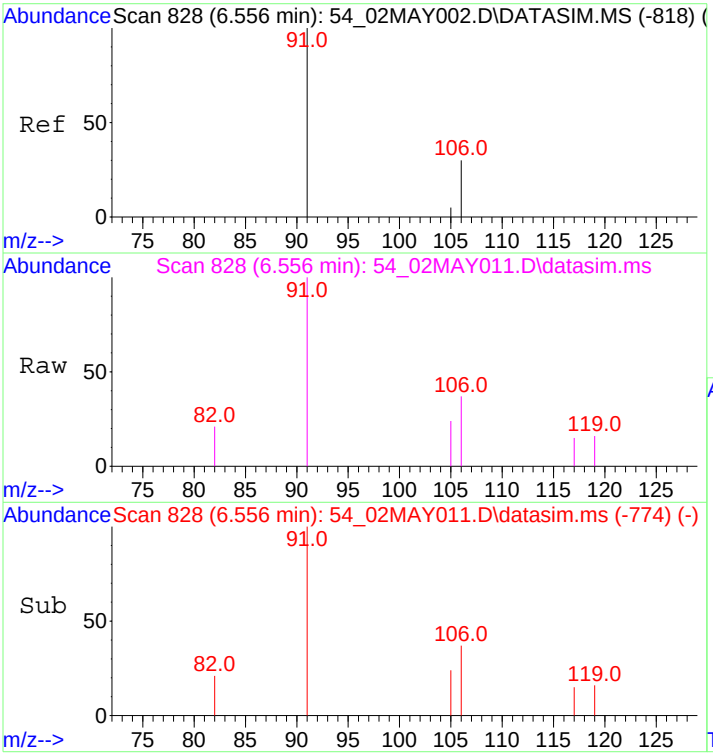


#13
Toluene
Concen: 4.69 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY011.D
Acq: 2 May 2014 2:31 pm

Tgt Ion: 91 Resp: 2848

Ion	Ratio	Lower	Upper
91	100		
92	59.9	47.8	71.8

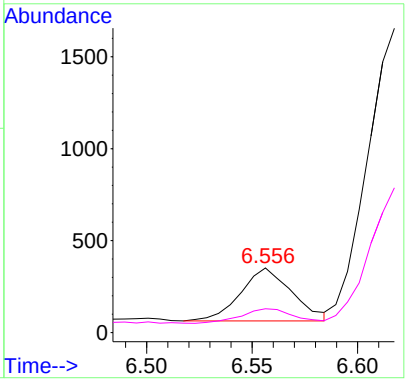


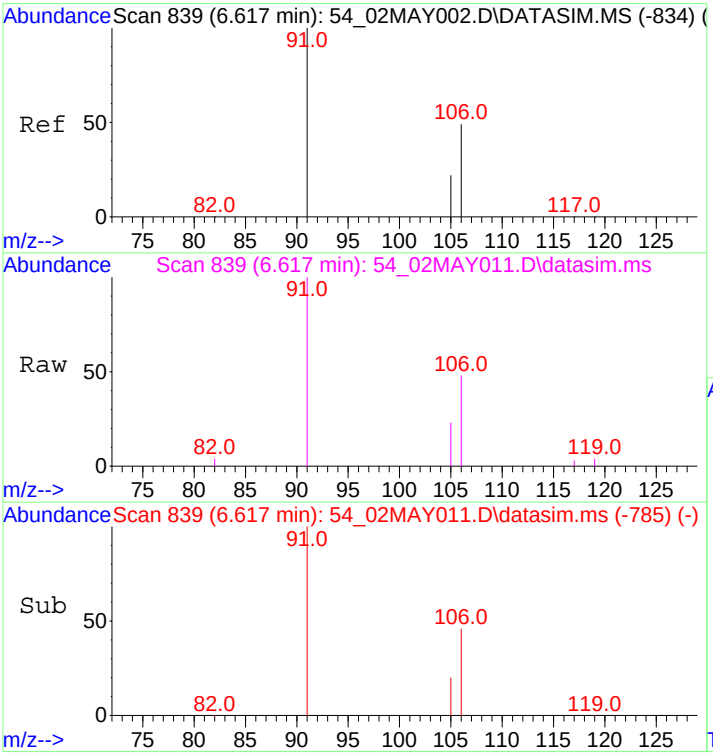


#15
Ethyl Benzene
Concen: 0.63 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 02MAY011.D
Acq: 2 May 2014 2:31 pm

Tgt Ion: 91 Resp: 488

Ion	Ratio	Lower	Upper
91	100		
106	28.5	26.9	40.3

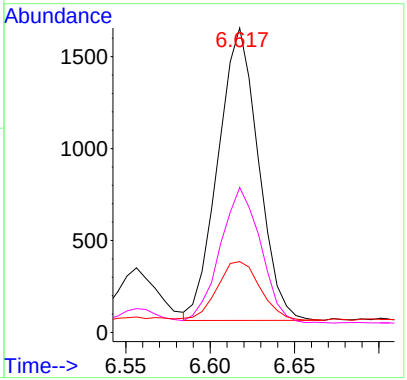


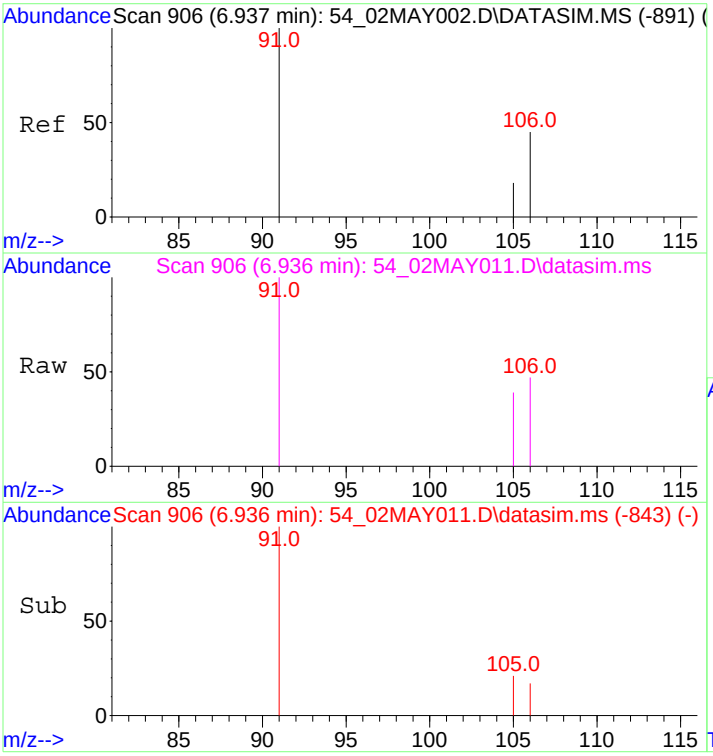


#16
m,p-Xylene
Concen: 4.47 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_02MAY011.D
Acq: 2 May 2014 2:31 pm

Tgt Ion: 91 Resp: 2648

Ion	Ratio	Lower	Upper
91	100		
106	46.3	43.1	64.7
105	21.5	18.3	27.5

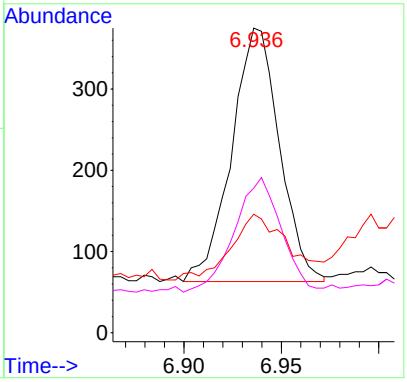




#17
o-Xylene
Concen: 0.89 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54 02MAY011.D
Acq: 2 May 2014 2:31 pm

Tgt Ion: 91 Resp: 535

Ion	Ratio	Lower	Upper
91	100		
106	44.1	40.1	60.1
105	17.2	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY012.D
Acq On : 2 May 2014 2:44 pm
Operator : YHL
Sample : 02145 \ SG-20-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:51:39 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

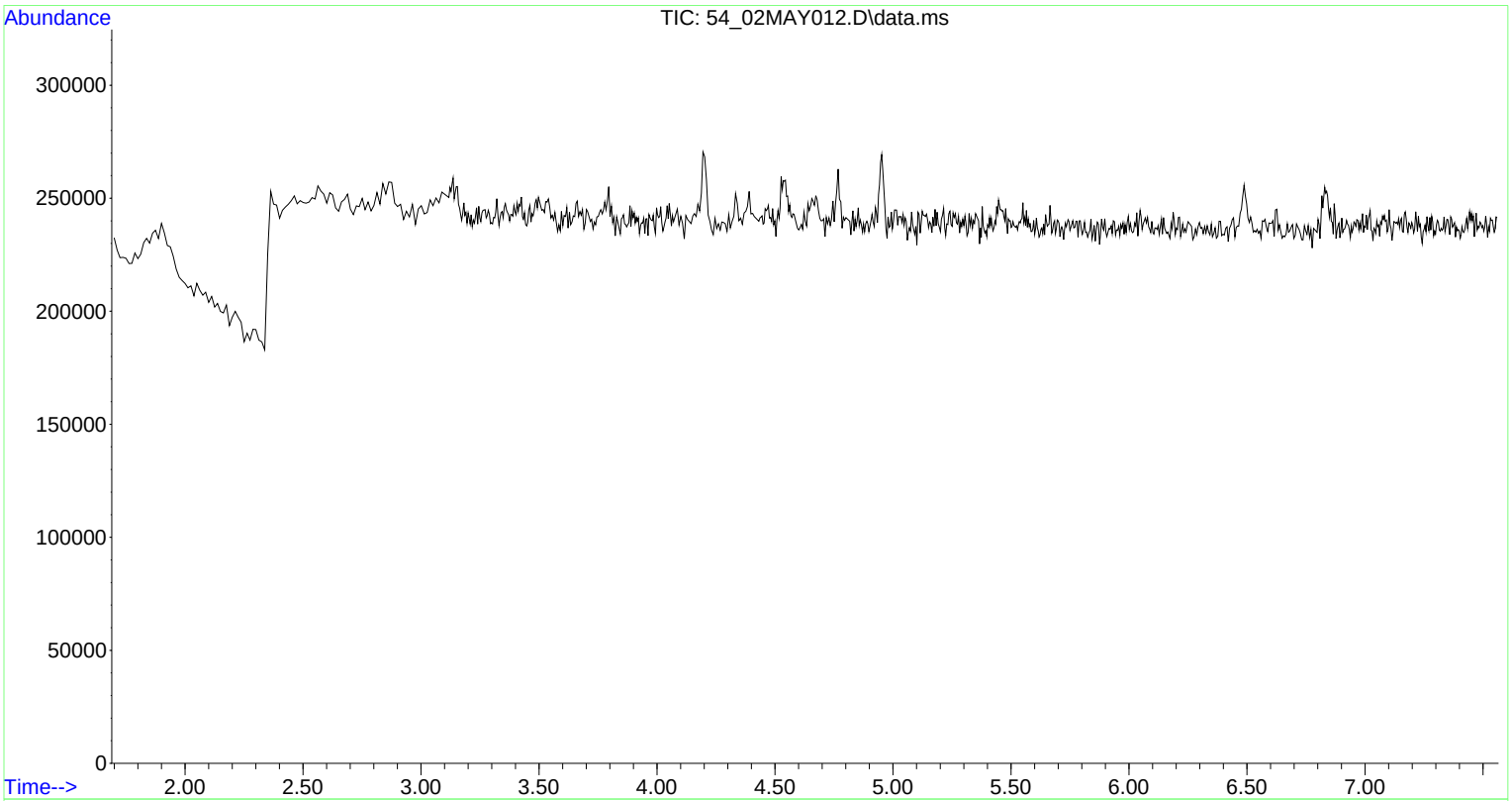
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4398	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11602	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10326	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.256	61	314m	0.92	ppbv	
5] trans-1,2-Dichloroethene	3.709	61	607	2.02	ppbv #	89
6] 1,1-Dichloroethane	3.910	63	196	0.55	ppbv #	83
7] cis-1,2-Dichloroethene	4.197	61	16156	57.63	ppbv #	72
10] Benzene	4.675	78	2767	5.22	ppbv #	59
11] Trichloroethene	4.950	130	7627	26.43	ppbv	100
13] Toluene	5.556	91	3771	6.09	ppbv	99
14] Tetrachloroethene	5.967	166	247	0.70	ppbv #	84
15] Ethyl Benzene	6.556	91	655	0.83	ppbv	95
16] m,p-Xylene	6.617	91	1694	2.81	ppbv	93
17] o-Xylene	6.936	91	640	1.05	ppbv	96

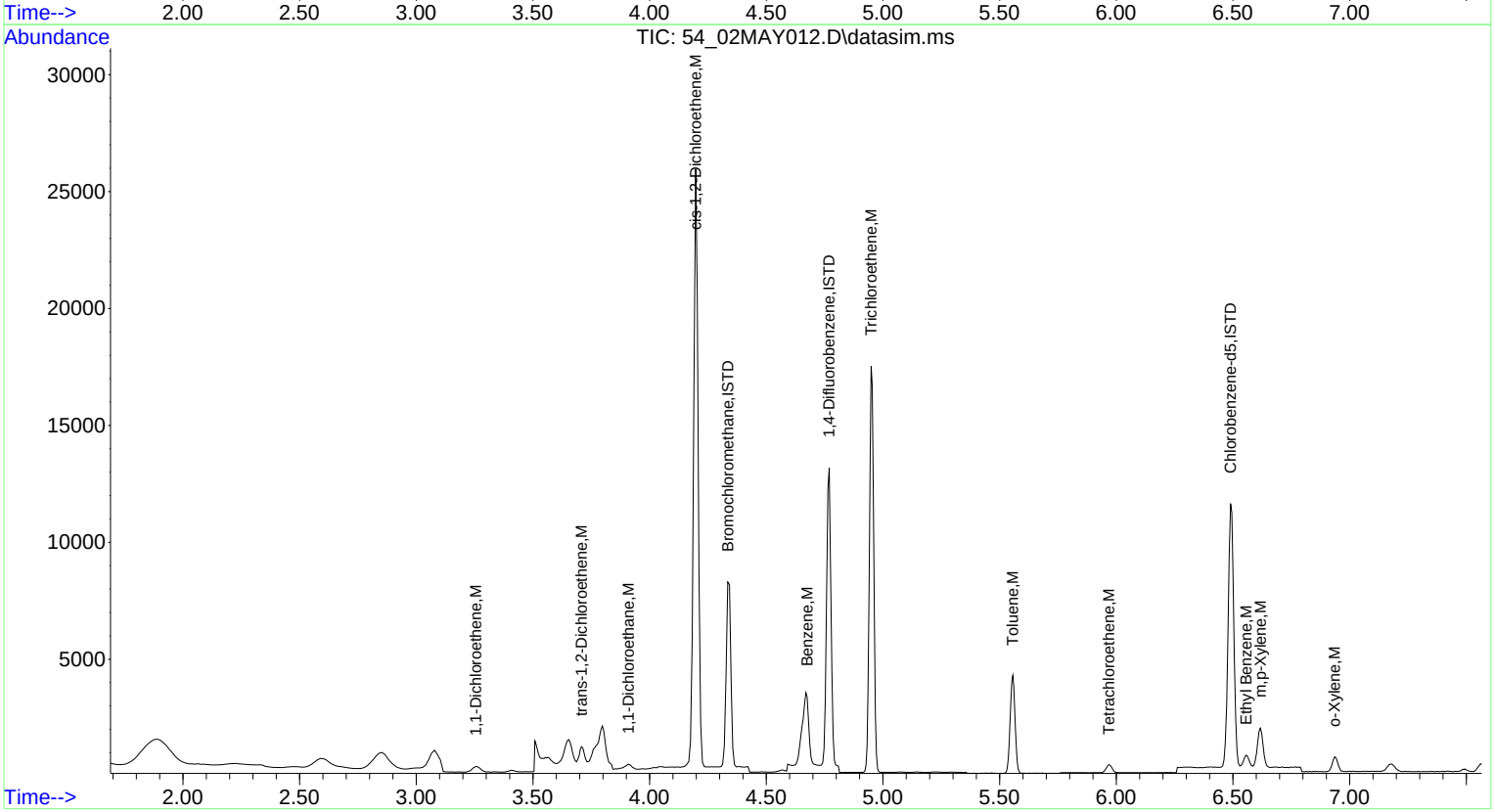
(#) = qualifier out of range (m) = manual integration (+) = signals summed

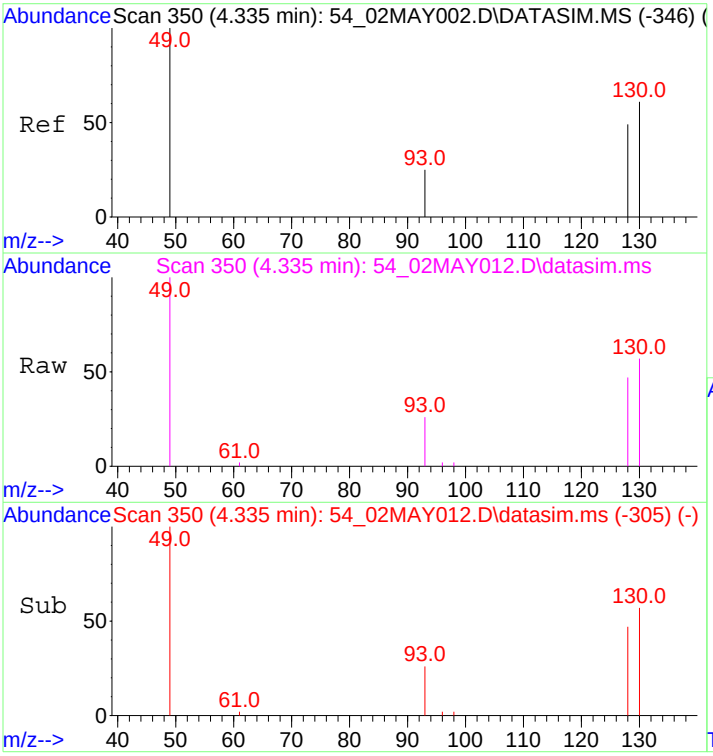
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY012.D
Acq On : 2 May 2014 2:44 pm
Operator : YHL
Sample : 02145 \ SG-20-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:51:39 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



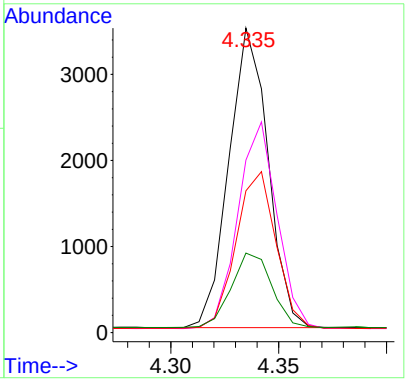


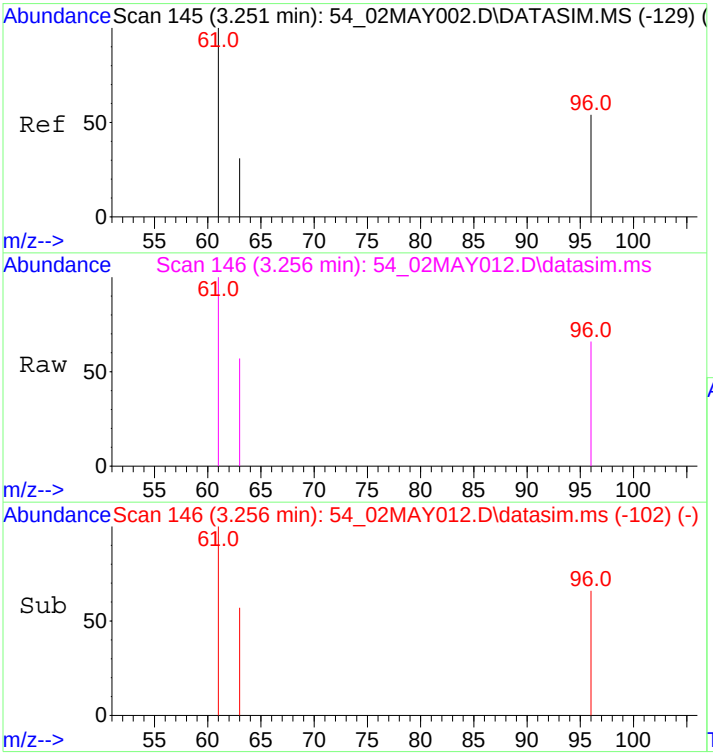


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 49 Resp: 4398

Ion	Ratio	Lower	Upper
49	100		
130	69.1	87.2	130.8#
128	53.5	68.0	102.0#
93	25.8	29.3	43.9#

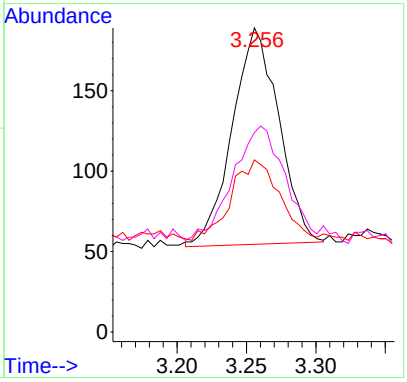




#3
1,1-Dichloroethene
Concen: 0.92 ppbv m
RT: 3.256 min Scan# 146
Delta R.T. 0.005 min
Lab File: 54_02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 61 Resp: 314

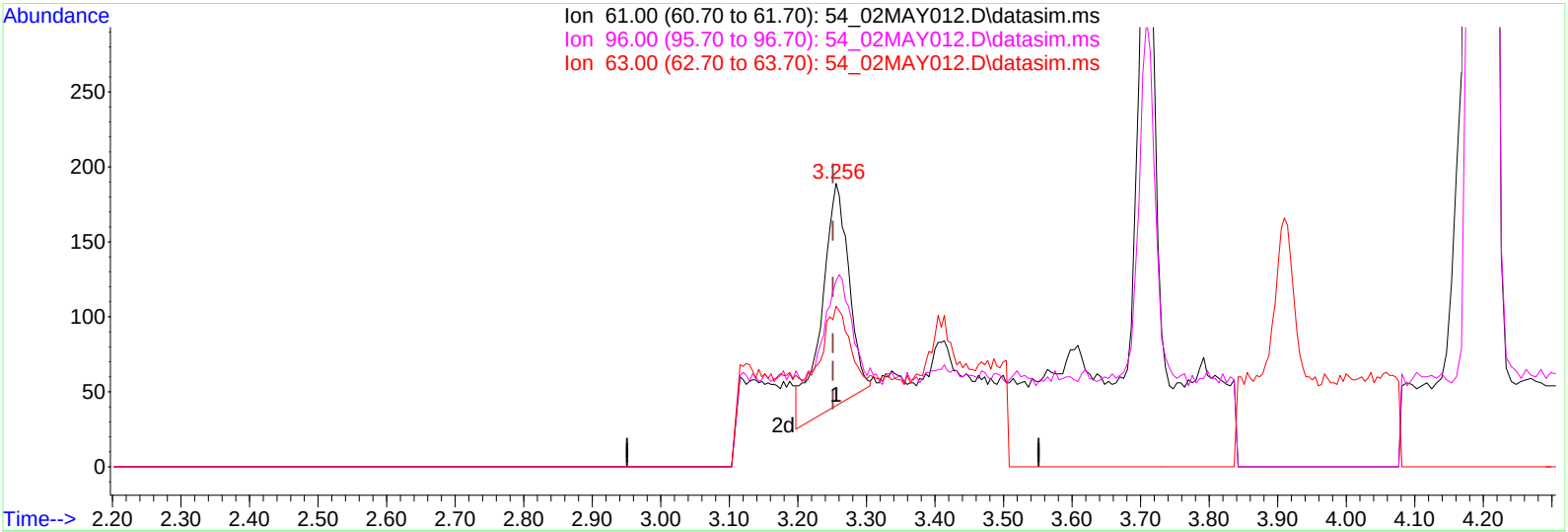
Ion	Ratio	Lower	Upper
61	100		
96	111.5	63.4	95.2#
63	4.1	26.2	39.2#

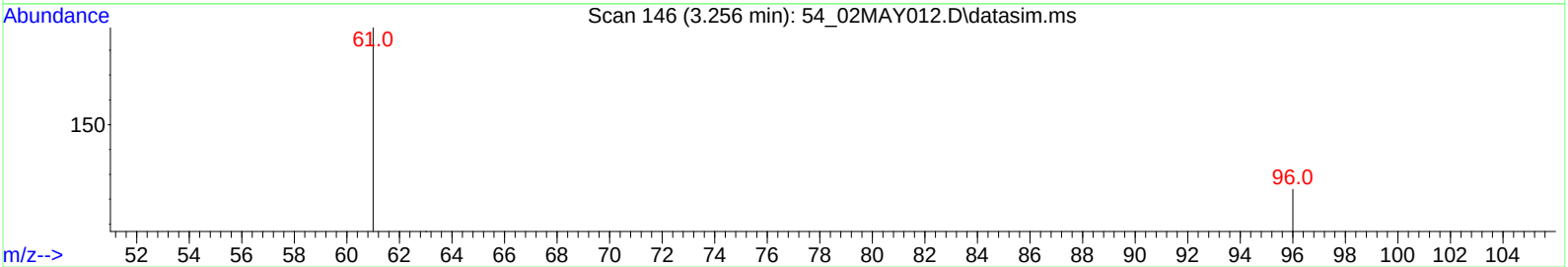


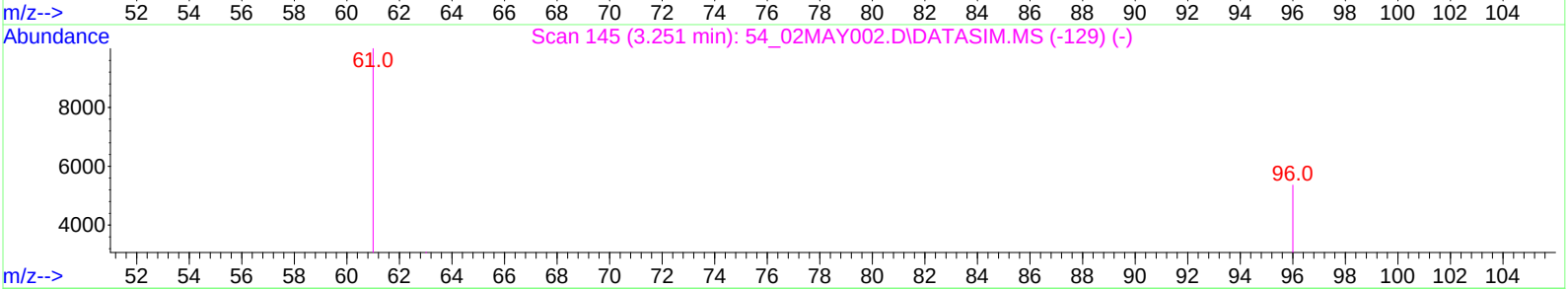
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY012.D
Acq On : 2 May 2014 2:44 pm
Operator : YHL
Sample : 02145 \ SG-20-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:50:47 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration







TIC: 54_02MAY012.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (+0.005) 1.21 ppbv

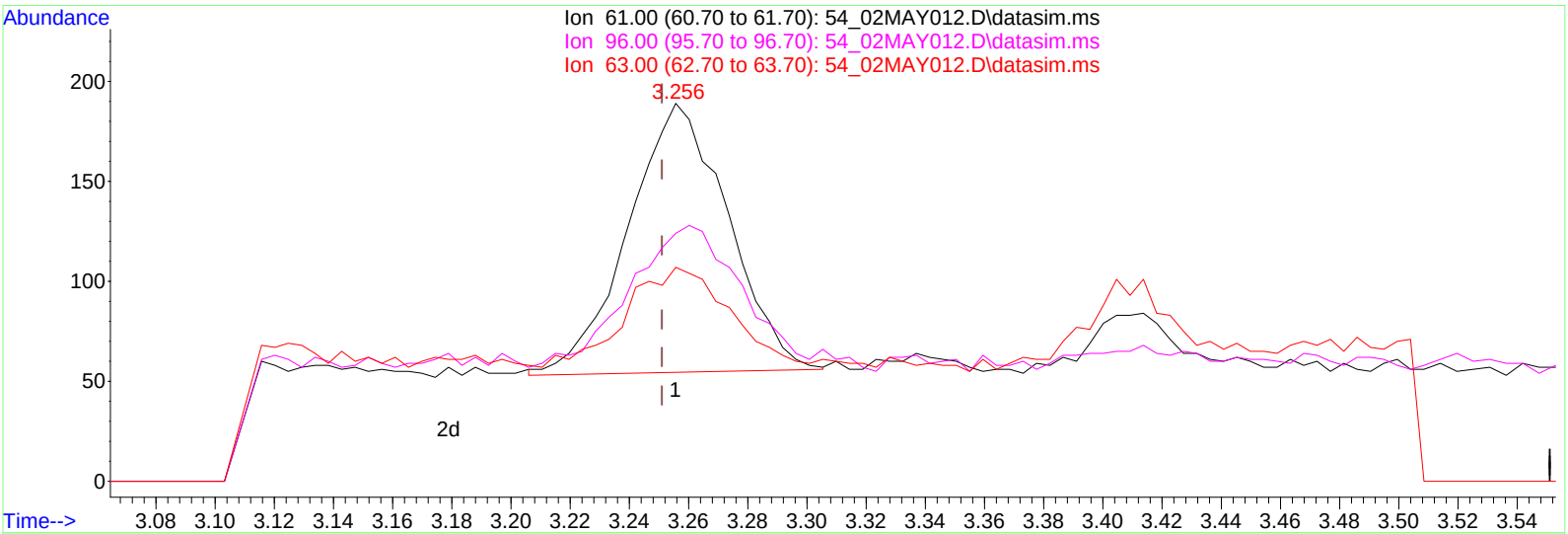
response 412

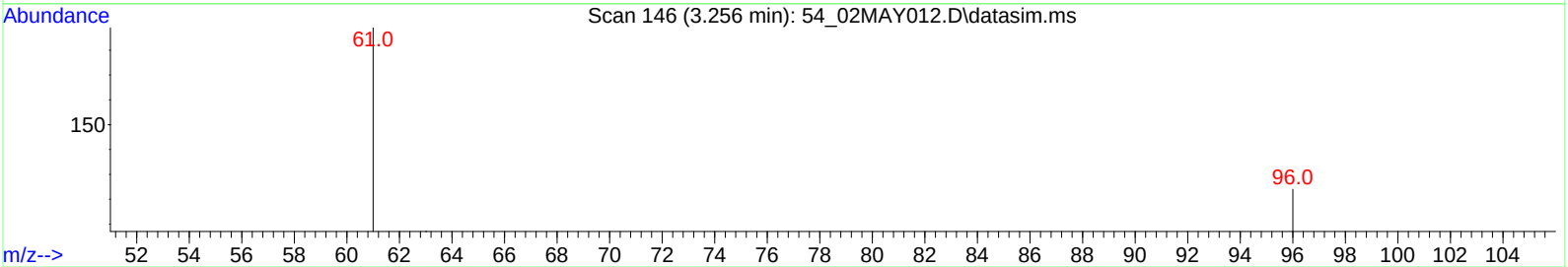
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	84.95
63.00	32.70	3.16#
0.00	0.00	0.00

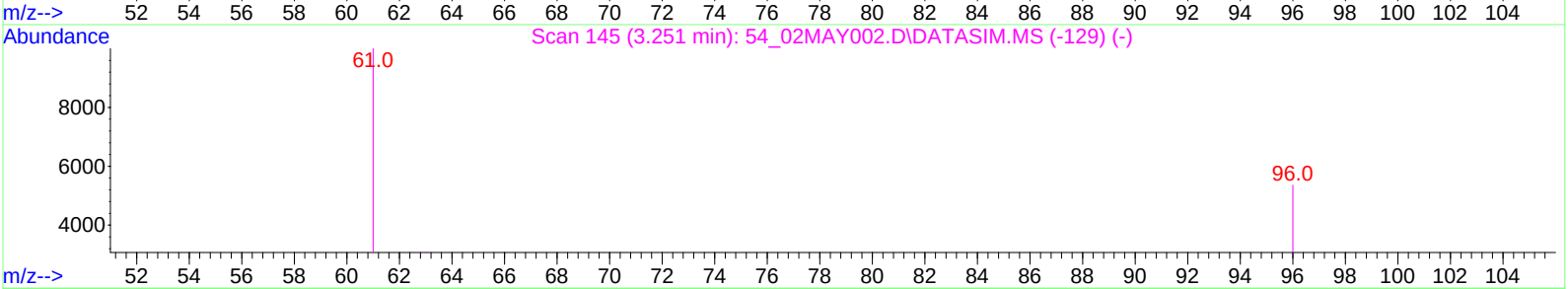
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY012.D
Acq On : 2 May 2014 2:44 pm
Operator : YHL
Sample : 02145 \ SG-20-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 14:50:47 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration







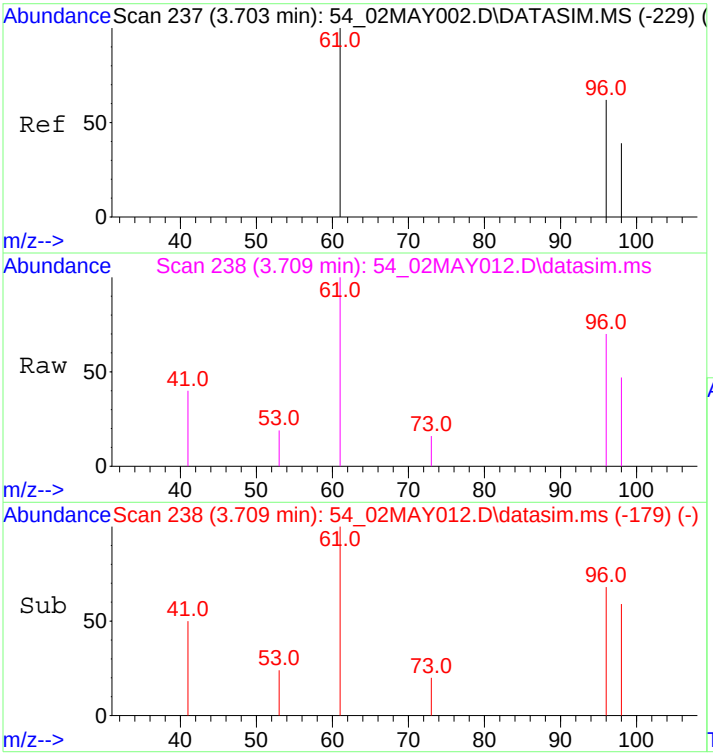
TIC: 54_02MAY012.D\data.ms

(3) 1,1-Dichloroethene (M)

3.256min (+0.005) 0.92 ppbv m

response 314

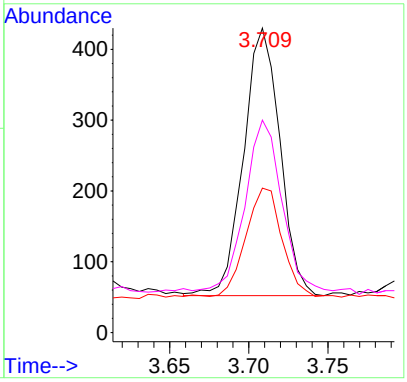
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	111.46#
63.00	32.70	4.14#
0.00	0.00	0.00

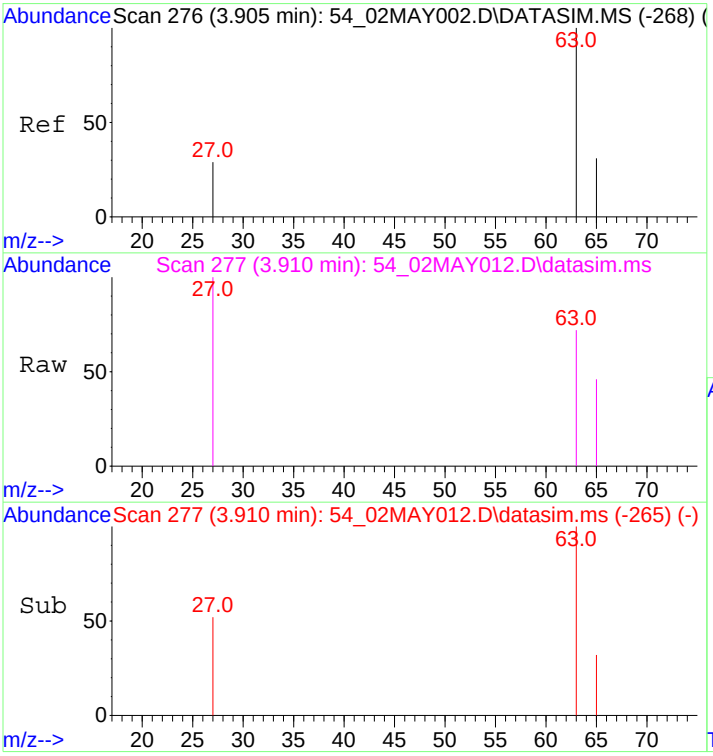


#5
trans-1,2-Dichloroethene
Concen: 2.02 ppbv
RT: 3.709 min Scan# 238
Delta R.T. 0.006 min
Lab File: 54 02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 61 Resp: 607

Ion	Ratio	Lower	Upper
61	100		
96	86.5	71.4	107.0
98	40.5	45.8	68.8#

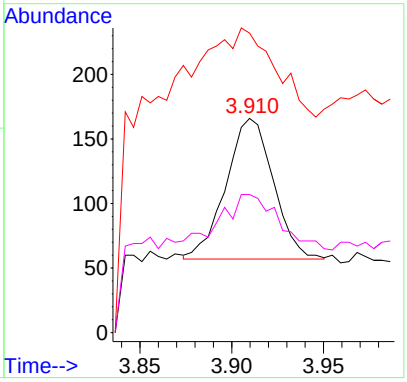


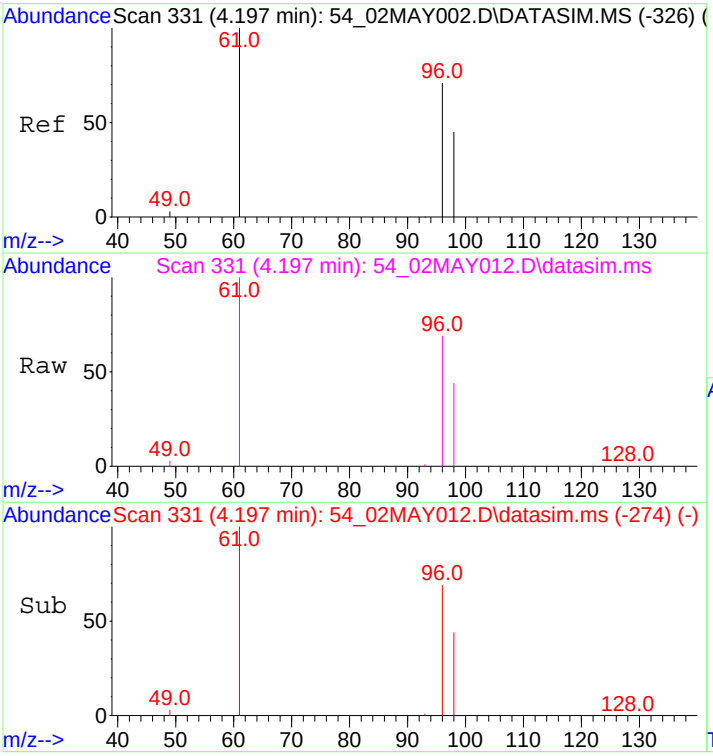


#6
1,1-Dichloroethane
Concen: 0.55 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.005 min
Lab File: 54_02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 63 Resp: 196

Ion	Ratio	Lower	Upper
63	100		
65	24.5	26.1	39.1#
27	21.4	10.2	15.2#

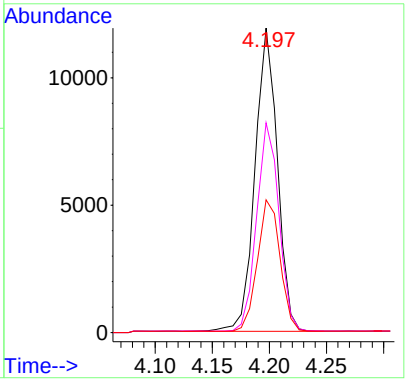


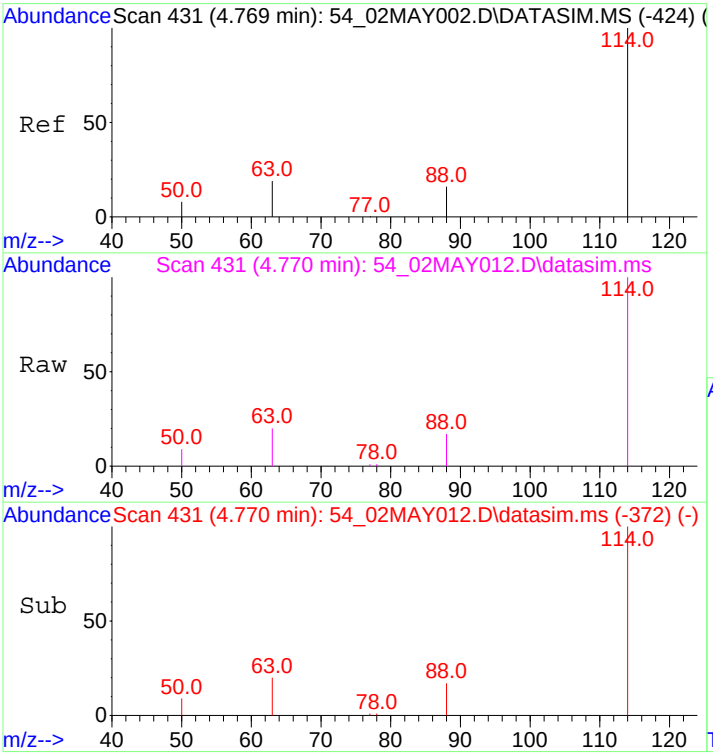


#7
cis-1,2-Dichloroethene
Concen: 57.63 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 61 Resp: 16156

Ion	Ratio	Lower	Upper
61	100		
96	68.3	78.5	117.7#
98	44.0	50.6	76.0#

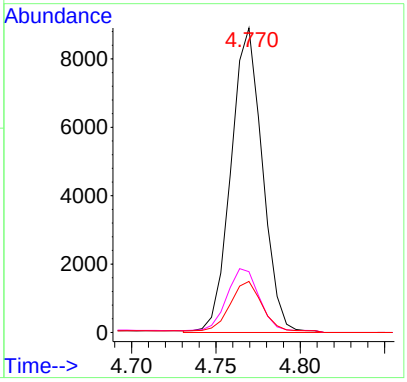


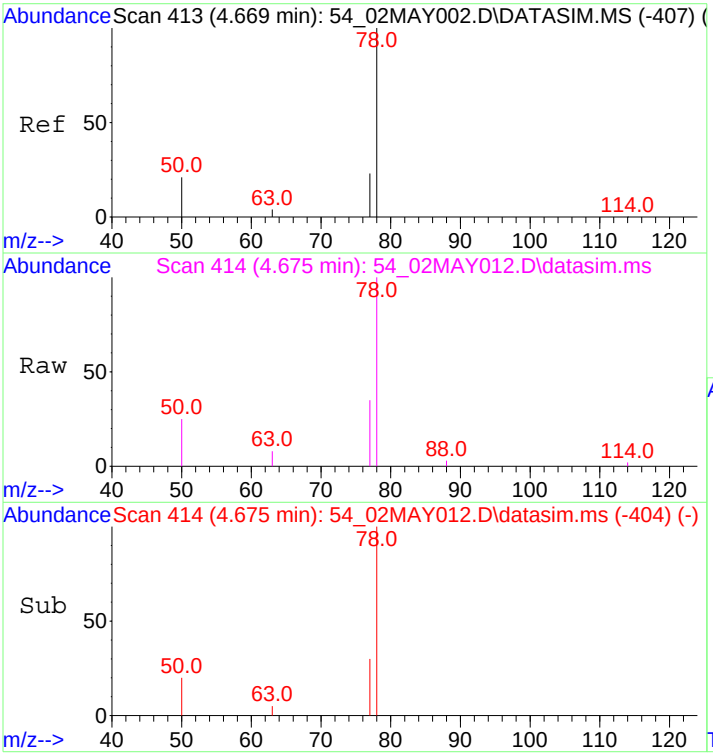


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion:114 Resp: 11602

Ion	Ratio	Lower	Upper
114	100		
63	20.7	12.0	18.0#
88	15.9	11.8	17.8

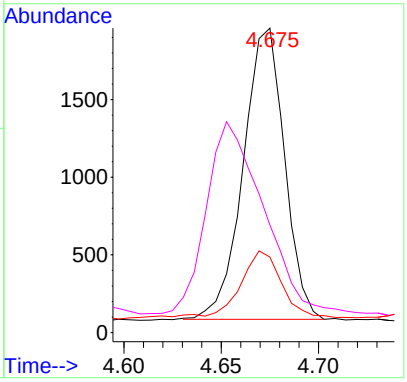


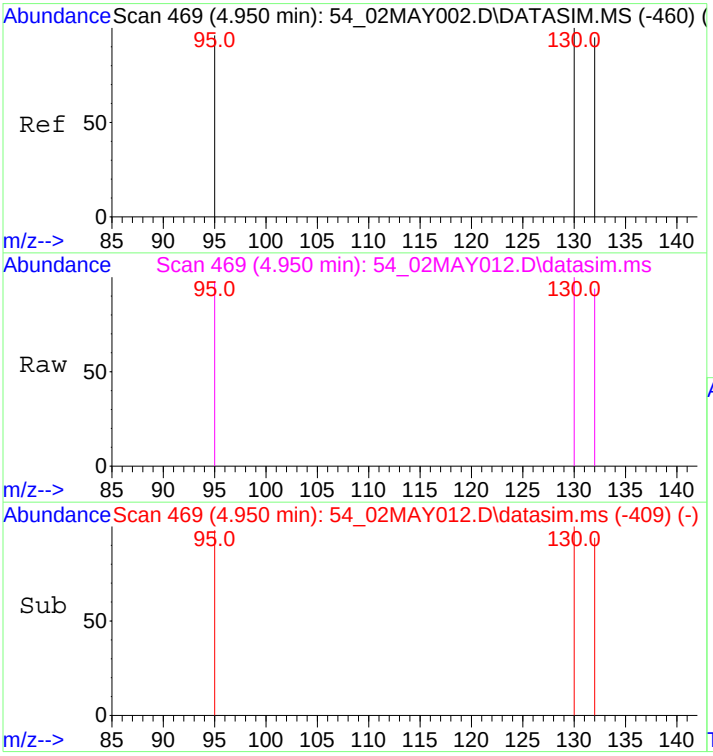


#10
Benzene
Concen: 5.22 ppbv
RT: 4.675 min Scan# 414
Delta R.T. 0.006 min
Lab File: 54 02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 78 Resp: 2767

Ion	Ratio	Lower	Upper
78	100		
77	0.0	18.2	27.2#
50	22.0	8.6	13.0#

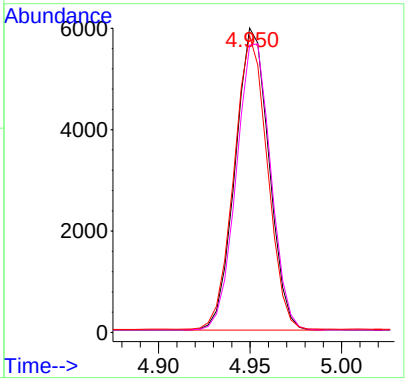


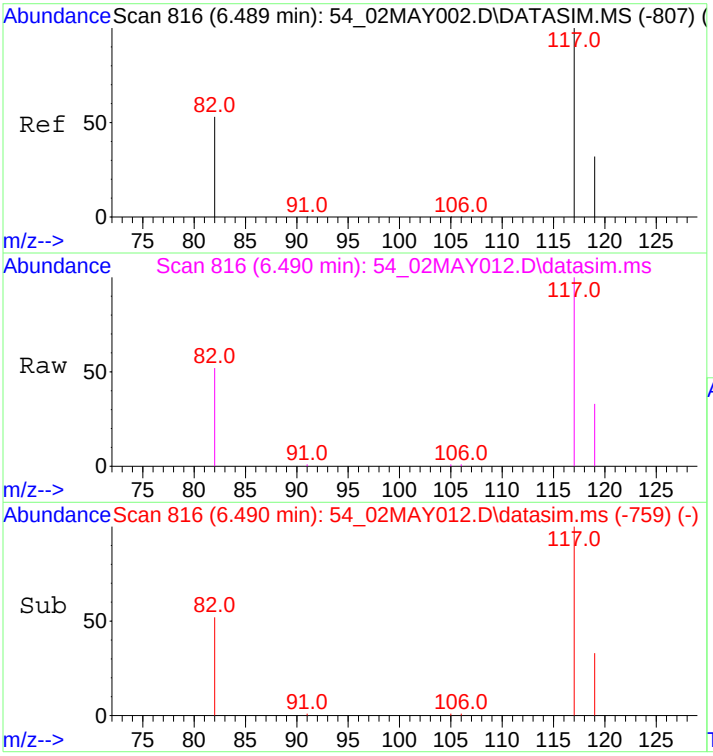


#11
Trichloroethene
Concen: 26.43 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion:130 Resp: 7627

Ion	Ratio	Lower	Upper
130	100		
132	96.6	76.9	115.3
95	95.7	76.5	114.7

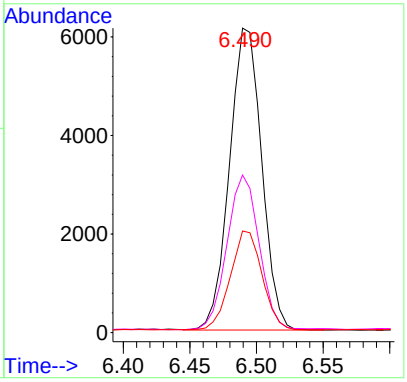


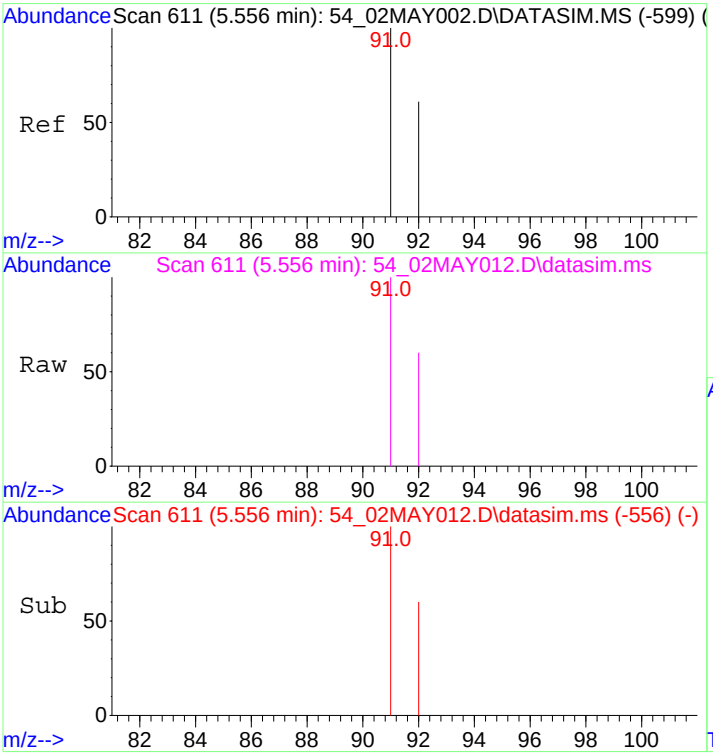


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion:117 Resp: 10326

Ion	Ratio	Lower	Upper
117	100		
82	51.0	38.0	57.0
119	32.2	27.0	40.4

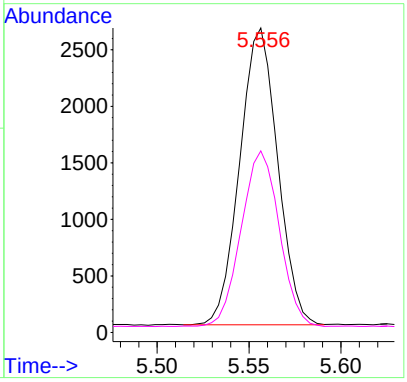


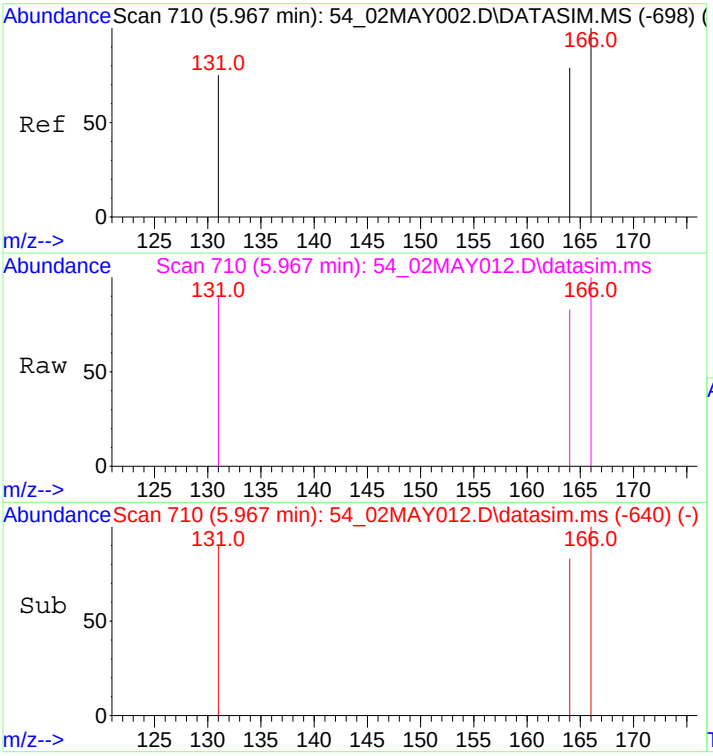


#13
Toluene
Concen: 6.09 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 91 Resp: 3771

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.8	71.8

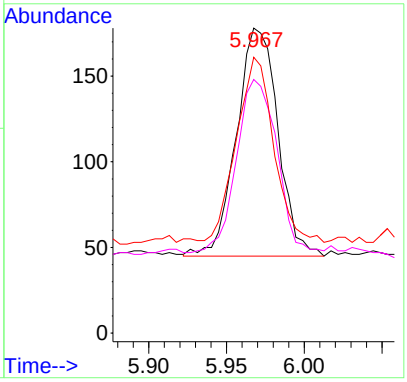


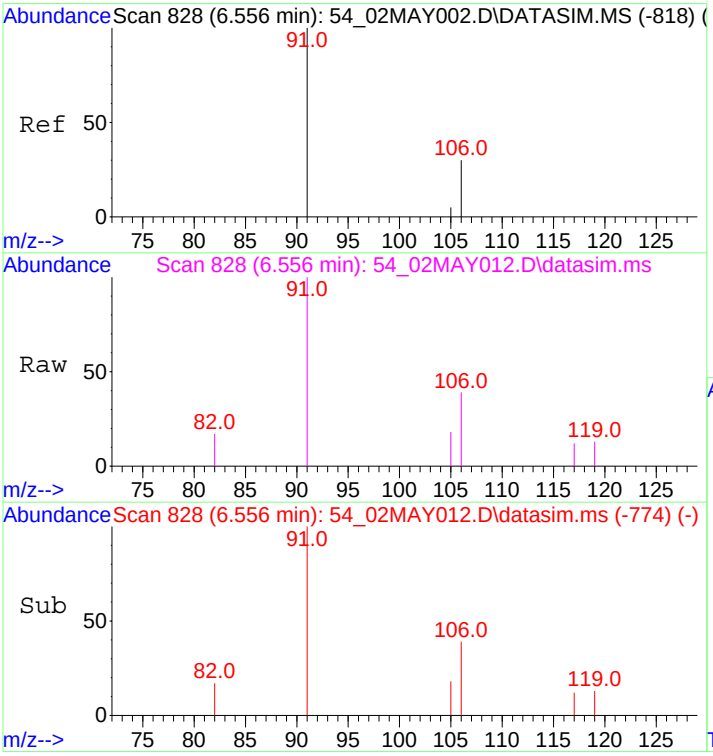


#14
Tetrachloroethene
Concen: 0.70 ppbv
RT: 5.967 min Scan# 710
Delta R.T. 0.000 min
Lab File: 54 02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion:166 Resp: 247

Ion	Ratio	Lower	Upper
166	100		
164	74.9	62.6	94.0
131	97.6	58.5	87.7#

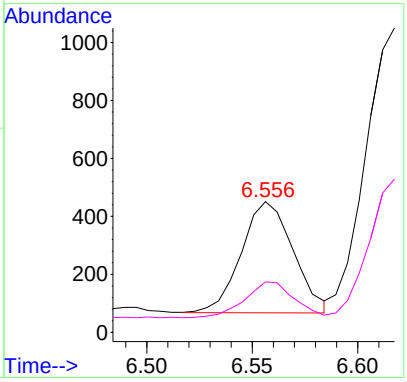


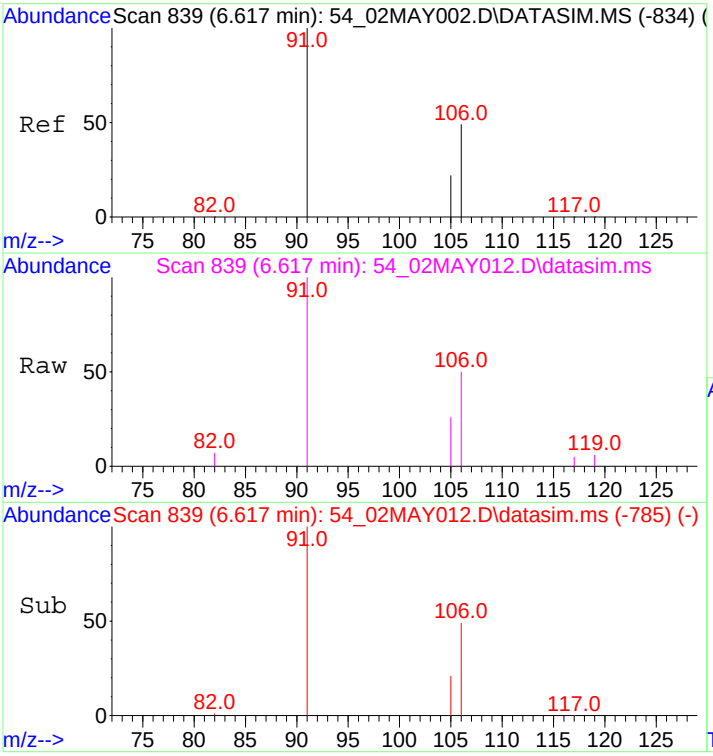


#15
Ethyl Benzene
Concen: 0.83 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54_02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 91 Resp: 655

Ion	Ratio	Lower	Upper
91	100		
106	31.0	26.9	40.3

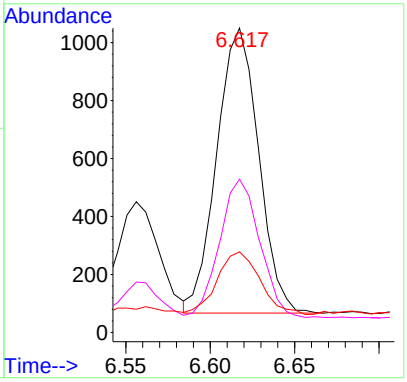


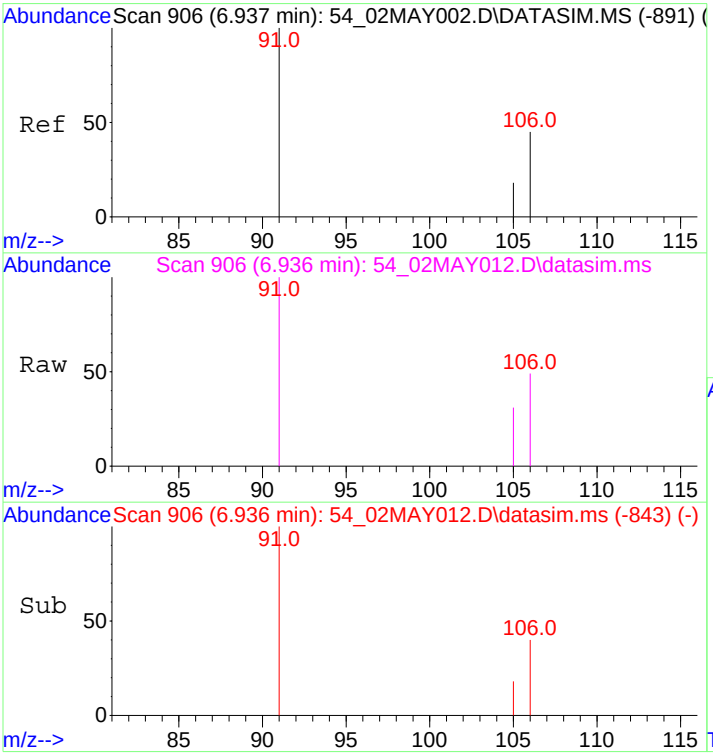


#16
m,p-Xylene
Concen: 2.81 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 91 Resp: 1694

Ion	Ratio	Lower	Upper
91	100		
106	46.6	43.1	64.7
105	22.5	18.3	27.5

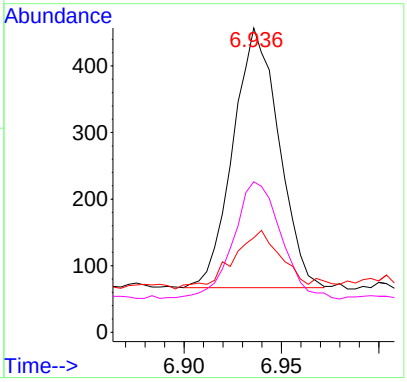




#17
o-Xylene
Concen: 1.05 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54_02MAY012.D
Acq: 2 May 2014 2:44 pm

Tgt Ion: 91 Resp: 640

Ion	Ratio	Lower	Upper
91	100		
106	47.0	40.1	60.1
105	20.5	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY013.D
Acq On : 2 May 2014 2:56 pm
Operator : YHL
Sample : 02148 \ SG-19-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 15:03:08 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

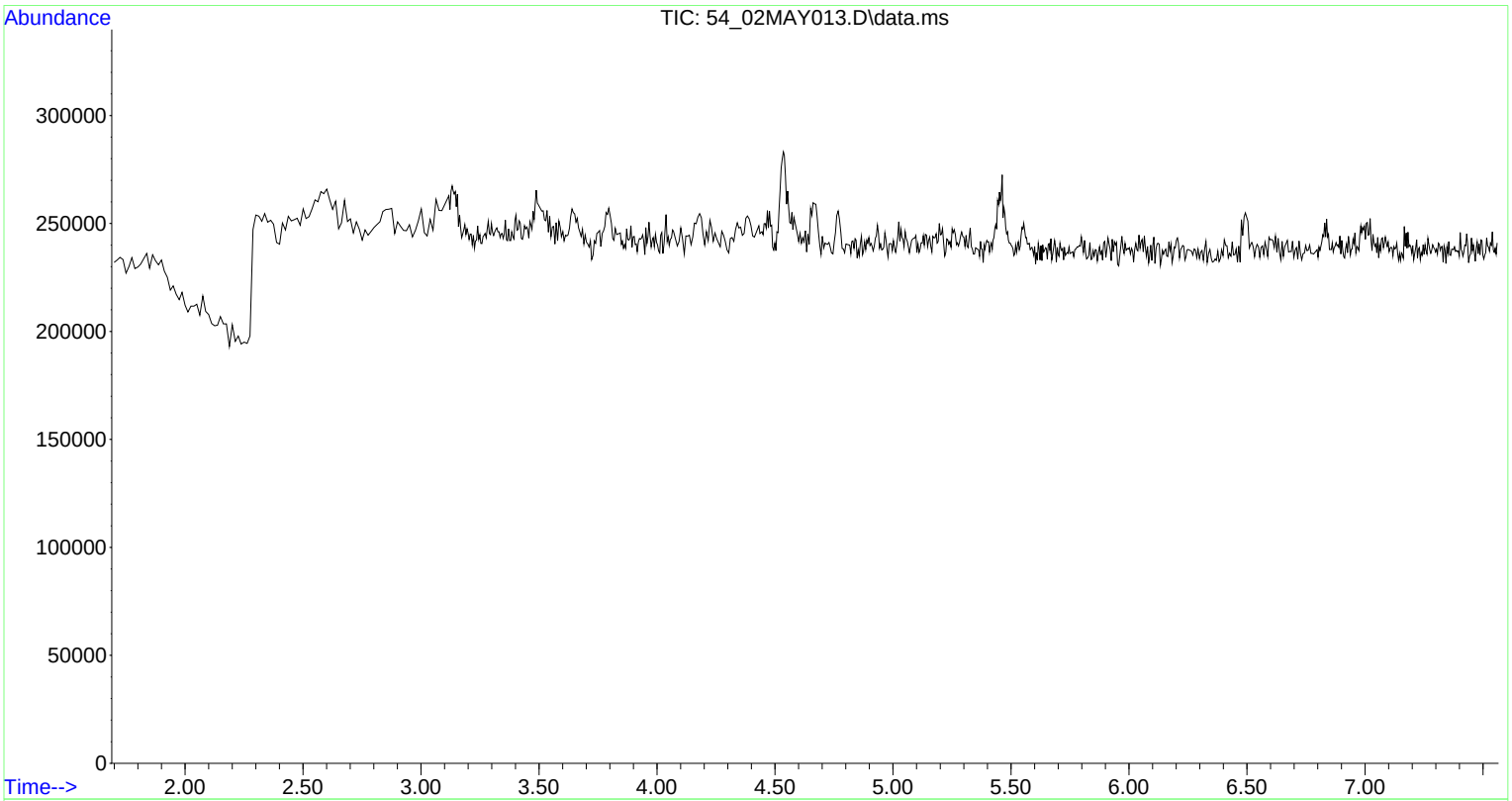
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4546	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11561	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10668	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
6] 1,1-Dichloroethane	3.910	63	274	0.74	ppbv	# 71
10] Benzene	4.669	78	6484	12.28	ppbv	# 68
13] Toluene	5.556	91	6036	9.44	ppbv	100
14] Tetrachloroethene	5.967	166	330	0.90	ppbv	93
15] Ethyl Benzene	6.556	91	844	1.04	ppbv	97
16] m,p-Xylene	6.617	91	1998	3.21	ppbv	93
17] o-Xylene	6.936	91	835	1.32	ppbv	93

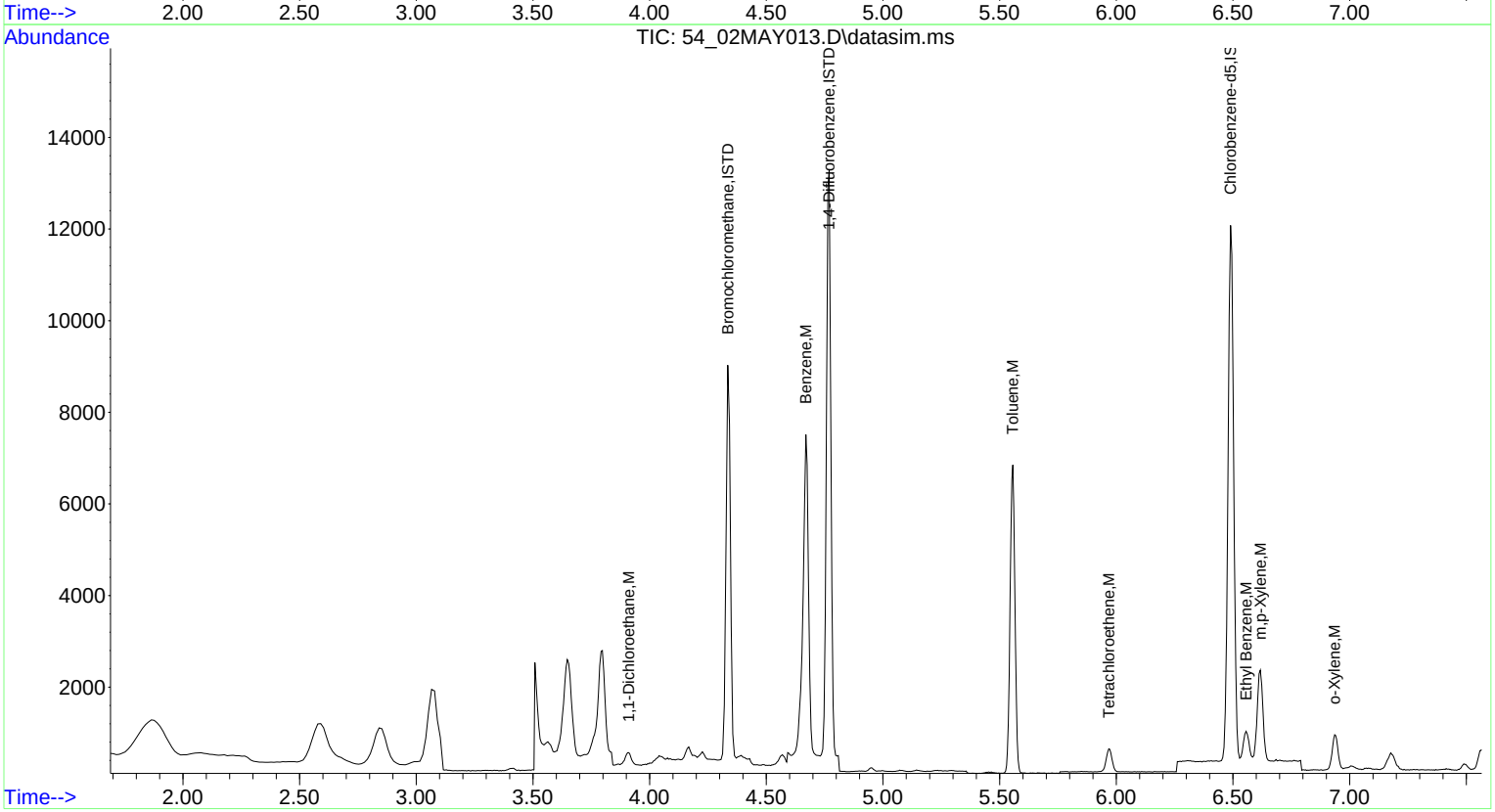
(#) = qualifier out of range (m) = manual integration (+) = signals summed

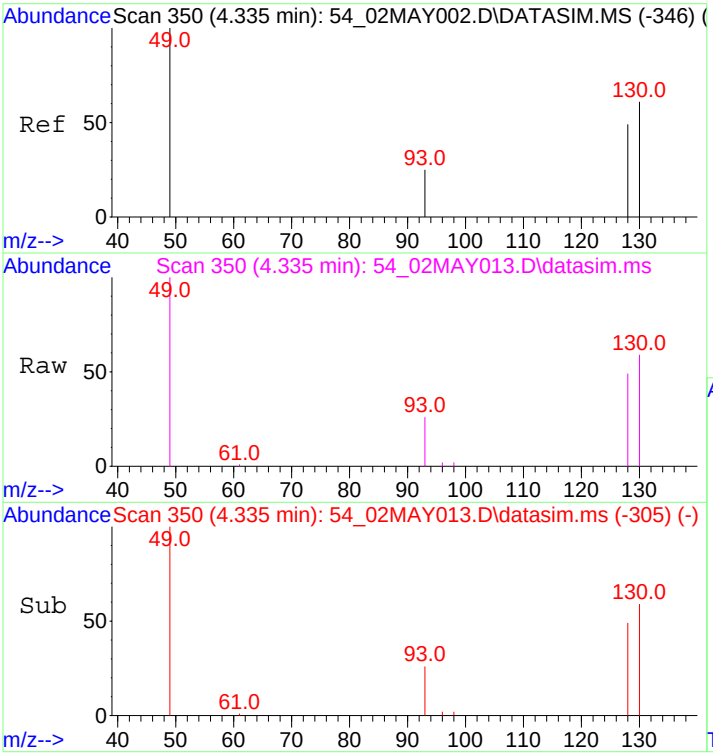
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY013.D
Acq On : 2 May 2014 2:56 pm
Operator : YHL
Sample : 02148 \ SG-19-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 15:03:08 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



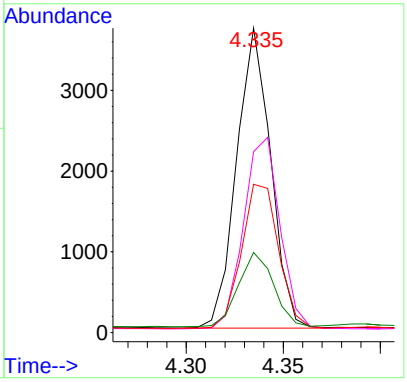


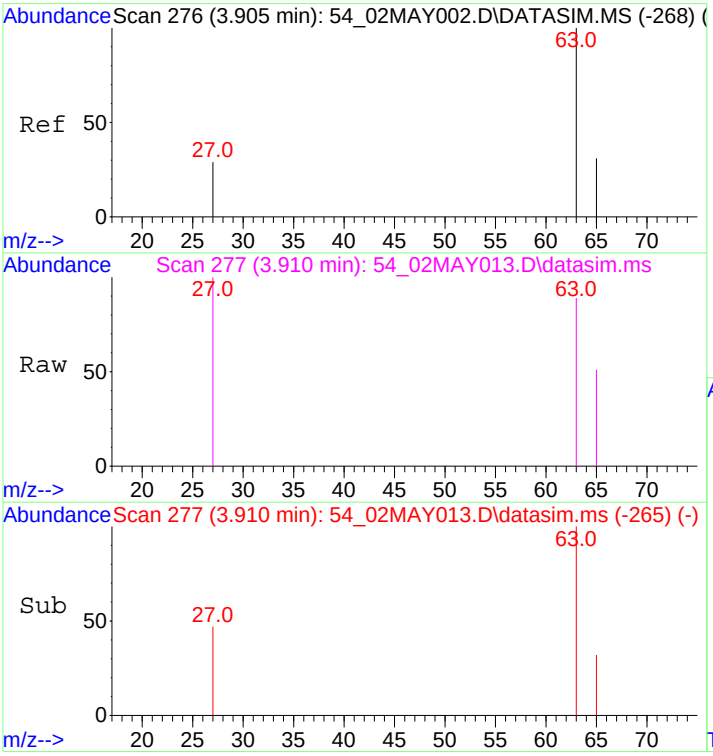


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion: 49 Resp: 4546

Ion	Ratio	Lower	Upper
49	100		
130	67.7	87.2	130.8#
128	52.4	68.0	102.0#
93	25.2	29.3	43.9#

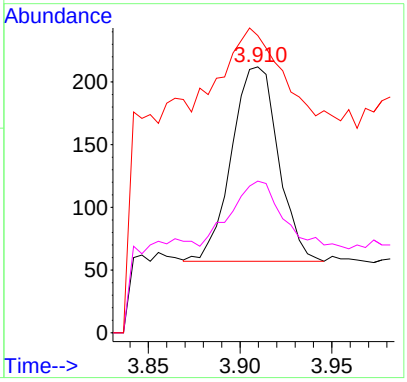


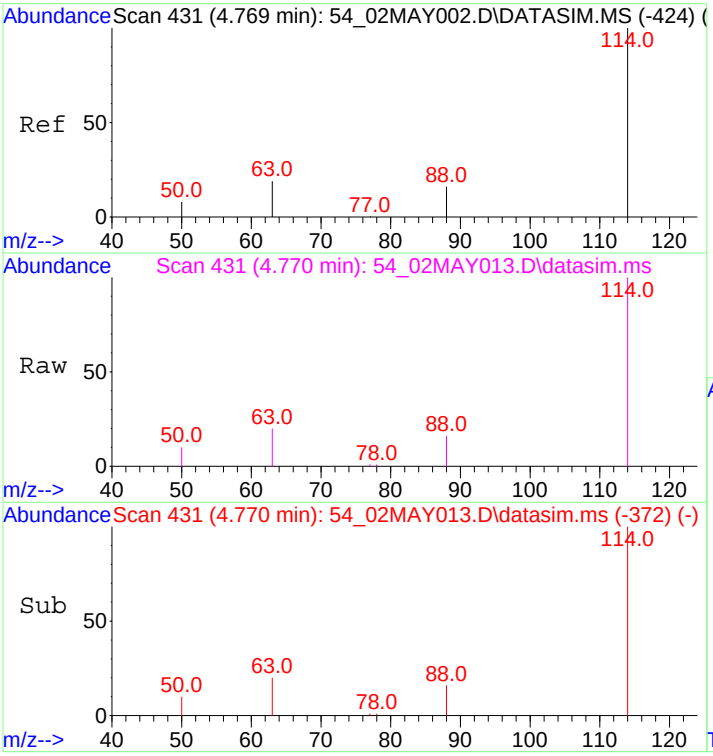


#6
1,1-Dichloroethane
Concen: 0.74 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.005 min
Lab File: 54_02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion: 63 Resp: 274

Ion	Ratio	Lower	Upper
63	100		
65	34.3	26.1	39.1
27	51.1	10.2	15.2#

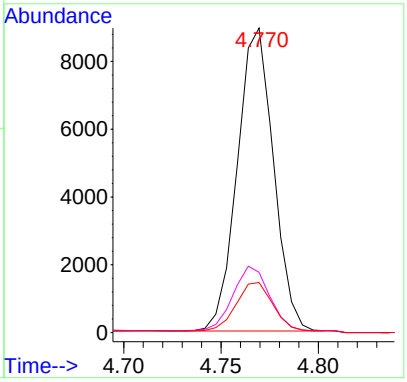


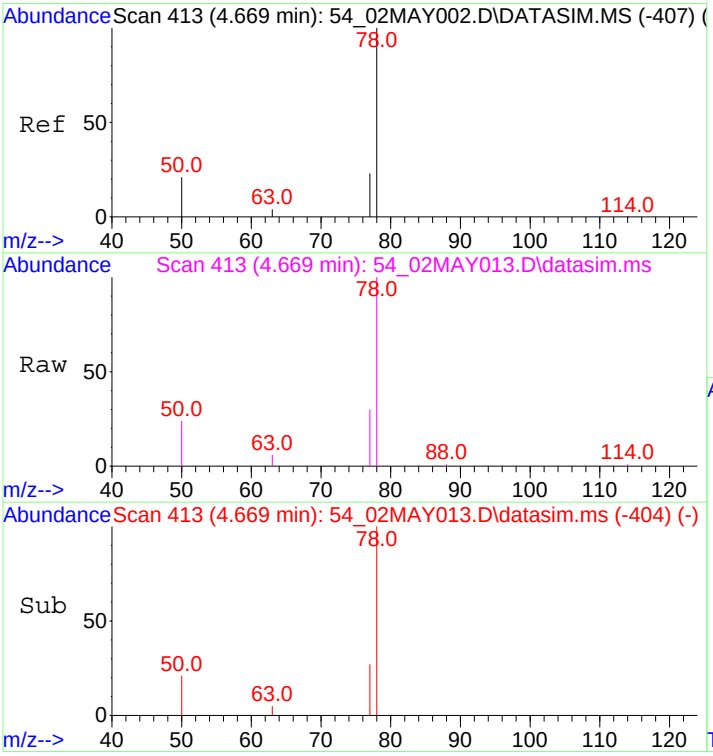


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion:114 Resp: 11561

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.2	11.8	17.8

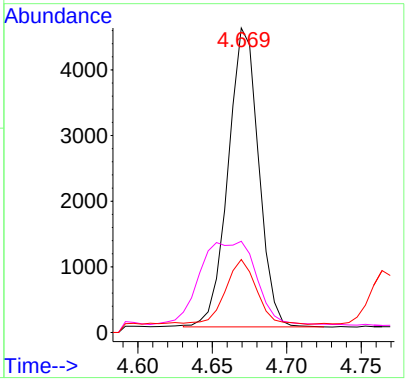


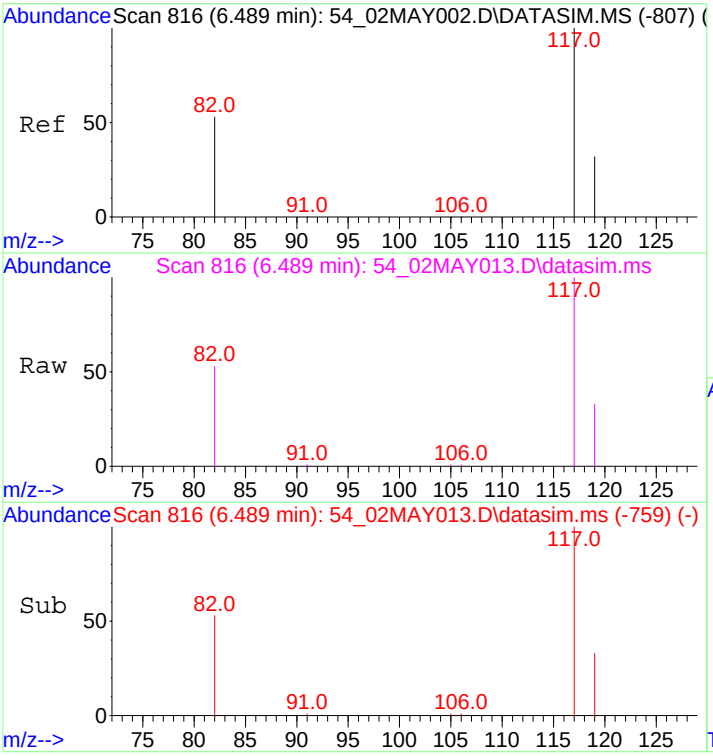


#10
Benzene
Concen: 12.28 ppbv
RT: 4.669 min Scan# 413
Delta R.T. 0.000 min
Lab File: 54_02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion: 78 Resp: 6484

Ion	Ratio	Lower	Upper
78	100		
77	6.7	18.2	27.2#
50	22.0	8.6	13.0#

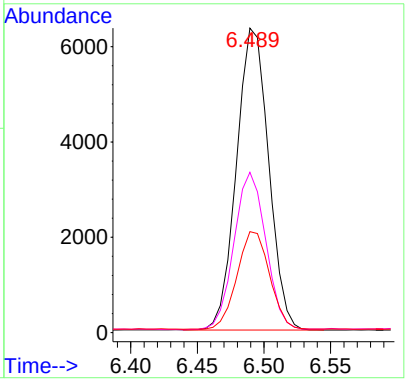


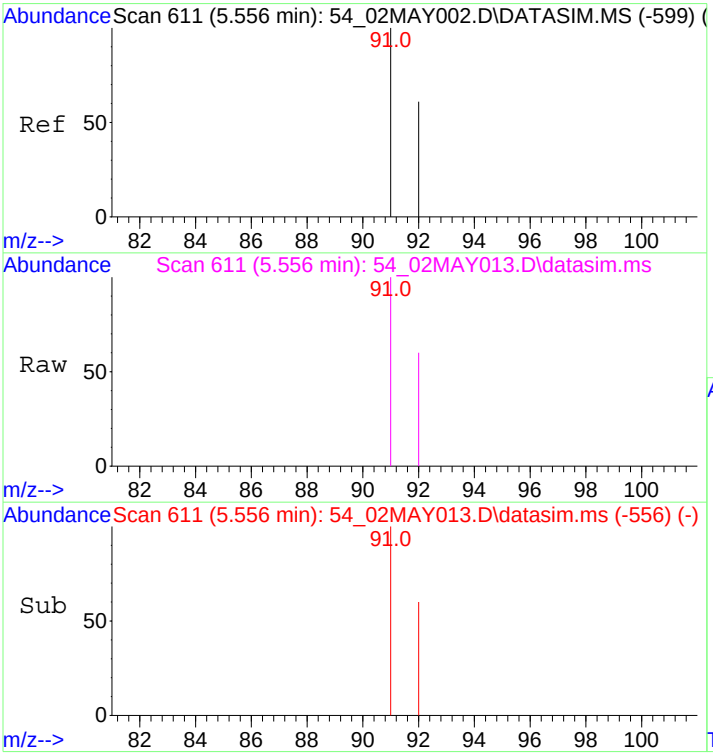


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion:117 Resp: 10668

Ion	Ratio	Lower	Upper
117	100		
82	51.7	38.0	57.0
119	32.7	27.0	40.4

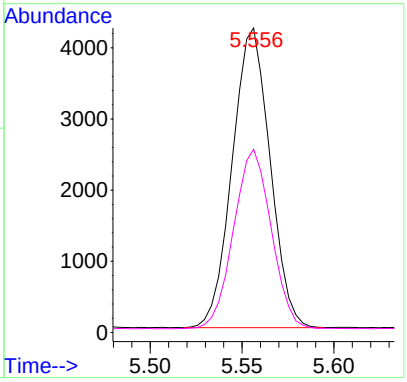


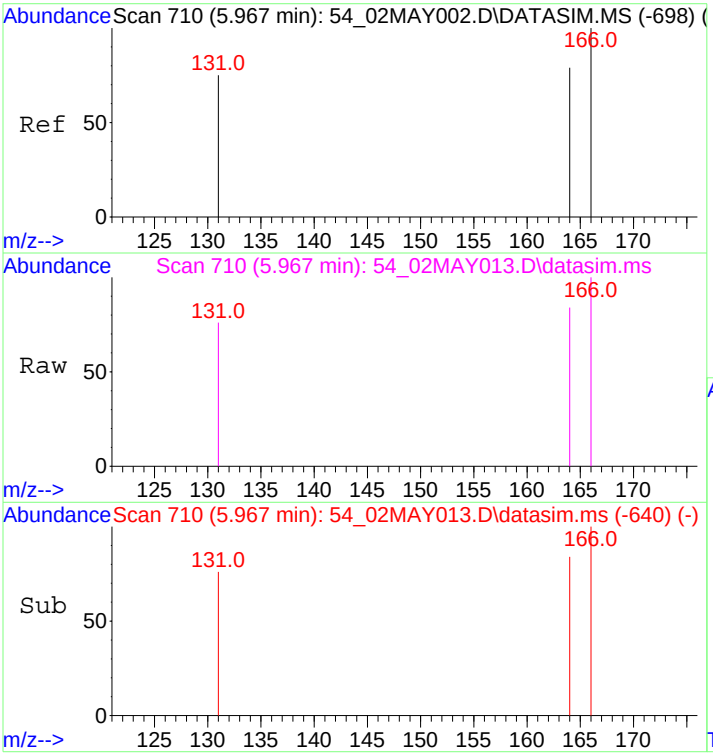


#13
Toluene
Concen: 9.44 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion: 91 Resp: 6036

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8

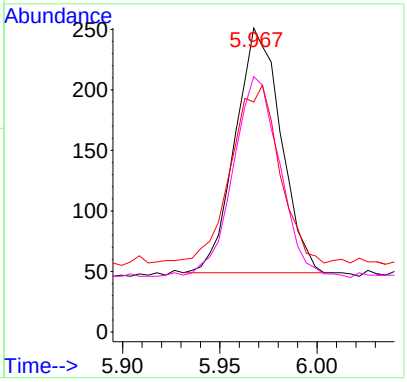


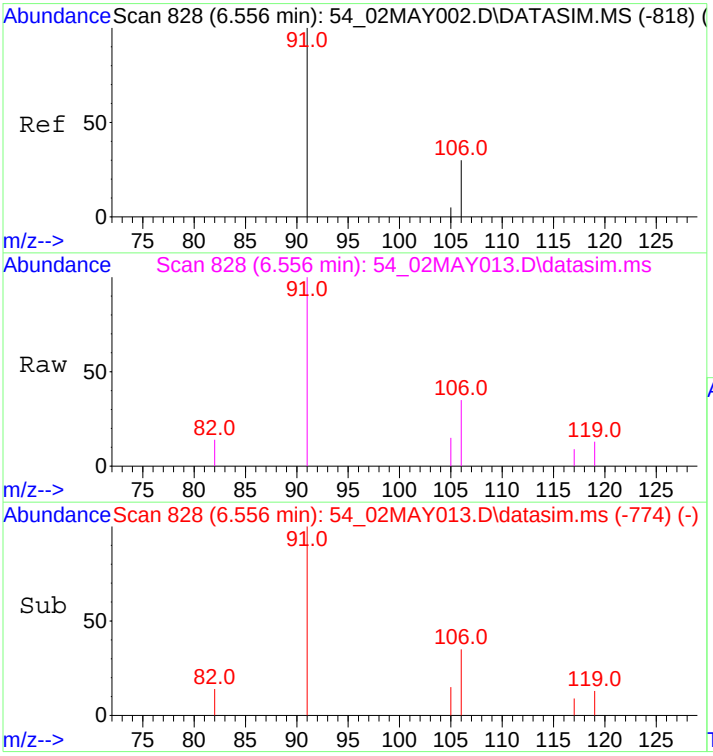


#14
Tetrachloroethene
Concen: 0.90 ppbv
RT: 5.967 min Scan# 710
Delta R.T. 0.000 min
Lab File: 54 02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion:166 Resp: 330

Ion	Ratio	Lower	Upper
166	100		
164	84.2	62.6	94.0
131	78.8	58.5	87.7

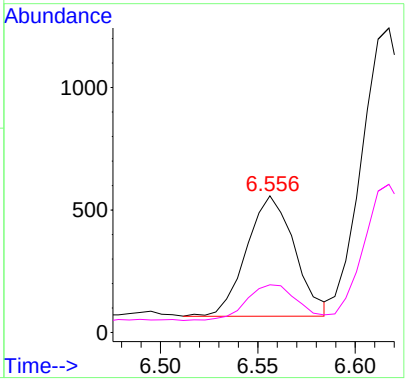


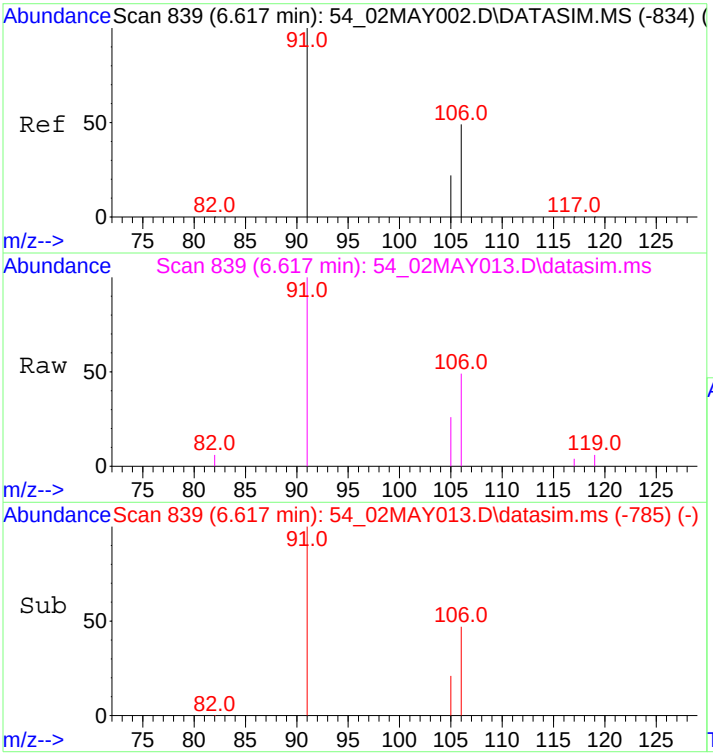


#15
Ethyl Benzene
Concen: 1.04 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54_02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion: 91 Resp: 844

Ion	Ratio	Lower	Upper
91	100		
106	31.8	26.9	40.3

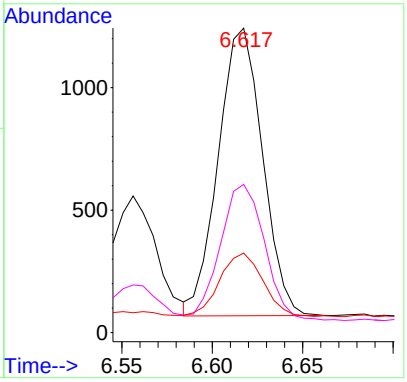


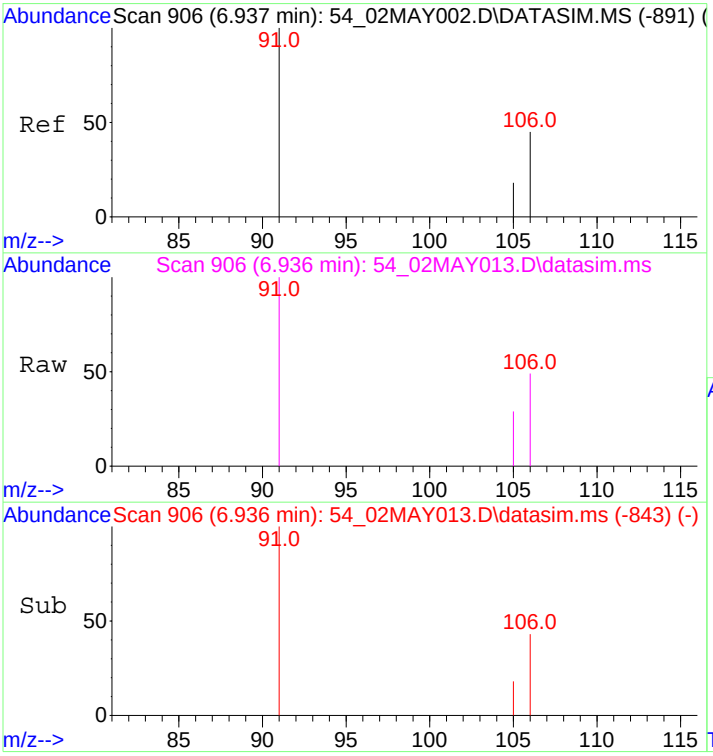


#16
m,p-Xylene
Concen: 3.21 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion: 91 Resp: 1998

Ion	Ratio	Lower	Upper
91	100		
106	47.5	43.1	64.7
105	21.5	18.3	27.5

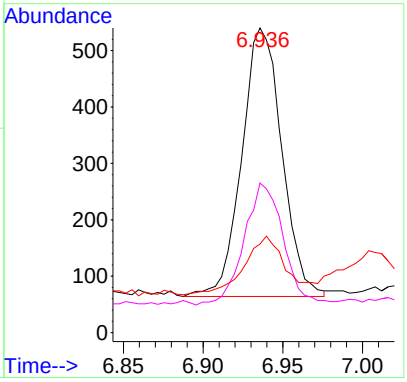




#17
o-Xylene
Concen: 1.32 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54_02MAY013.D
Acq: 2 May 2014 2:56 pm

Tgt Ion: 91 Resp: 835

Ion	Ratio	Lower	Upper
91	100		
106	44.3	40.1	60.1
105	21.1	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY014.D
Acq On : 2 May 2014 3:08 pm
Operator : YHL
Sample : 02144 \ SG-21-7
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 15:15:24 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

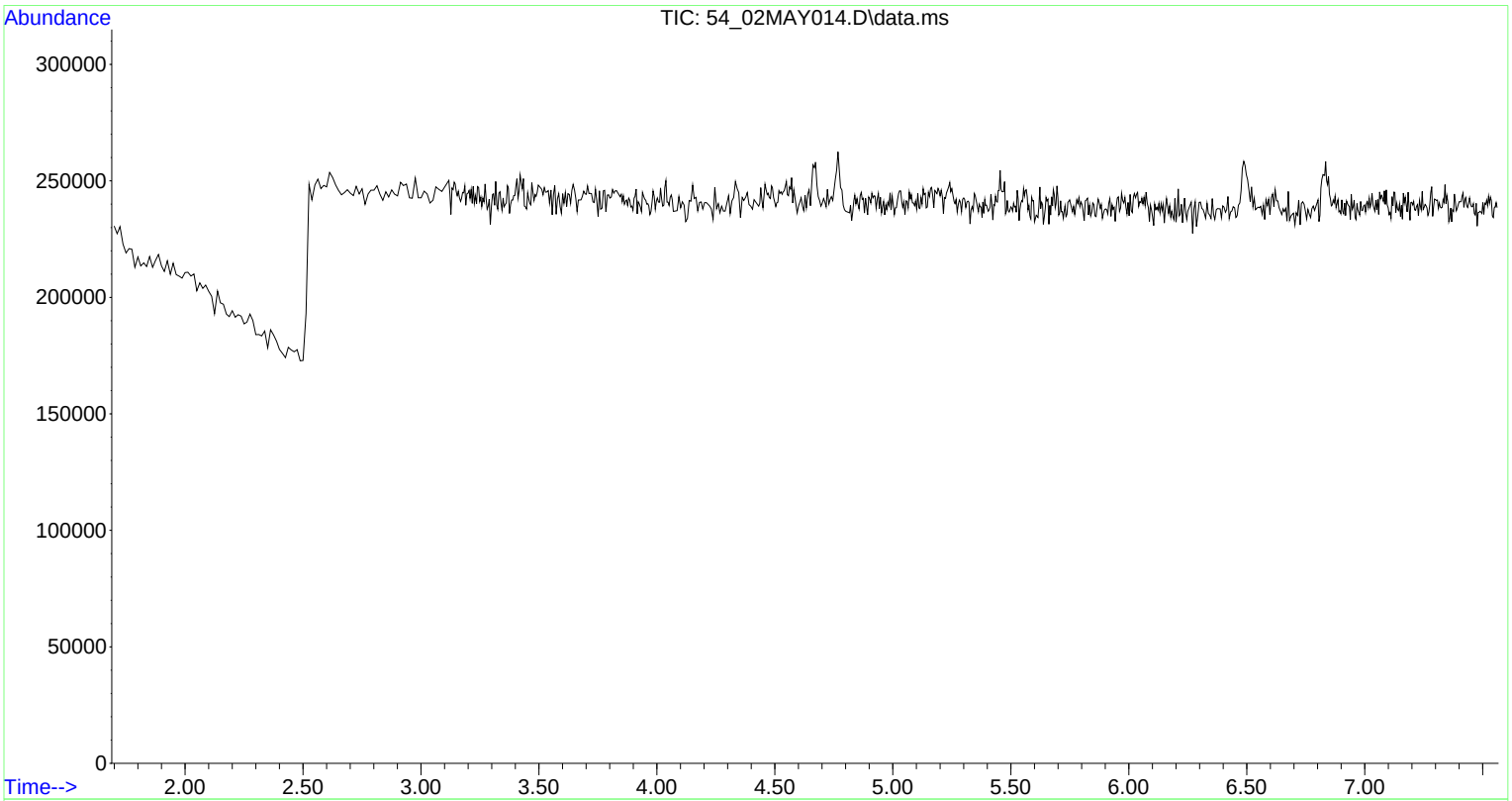
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4771	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	12363	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	11405	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
13] Toluene	5.556	91	3043	4.45 ppbv	100
14] Tetrachloroethene	5.972	166	1174	3.01 ppbv	96
15] Ethyl Benzene	6.556	91	645	0.74 ppbv	93
16] m,p-Xylene	6.617	91	2091	3.14 ppbv	91
17] o-Xylene	6.937	91	682	1.01 ppbv	89

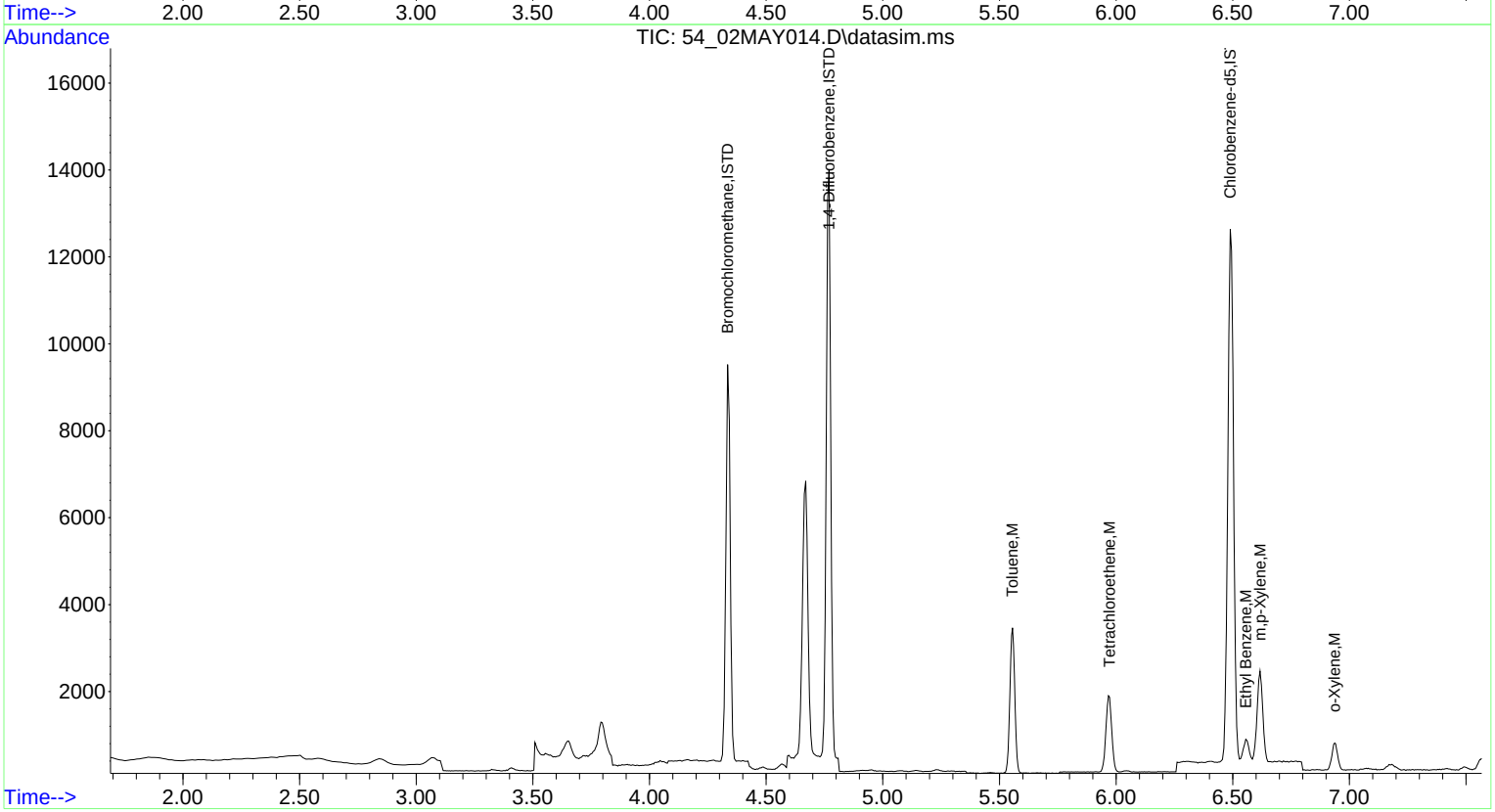
(#) = qualifier out of range (m) = manual integration (+) = signals summed

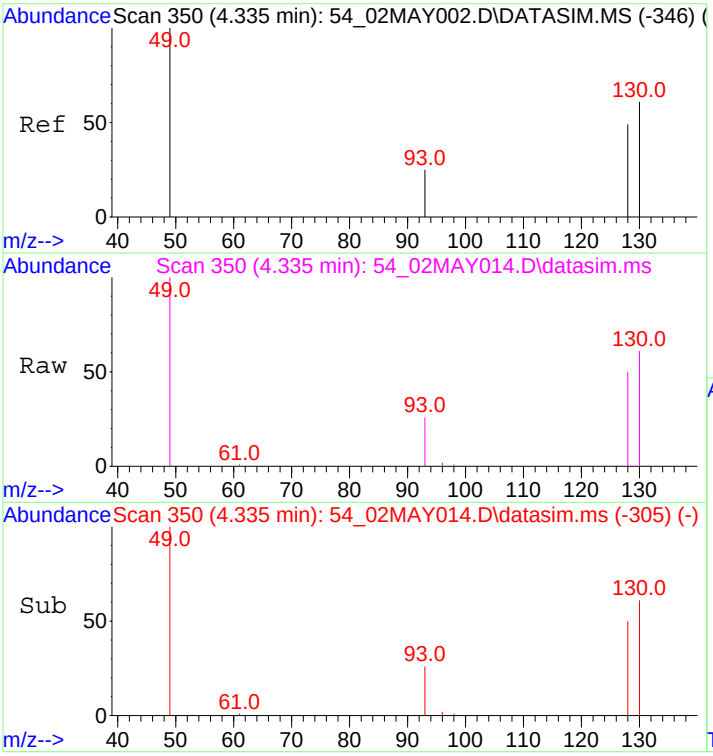
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY014.D
Acq On : 2 May 2014 3:08 pm
Operator : YHL
Sample : 02144 \ SG-21-7
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 15:15:24 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



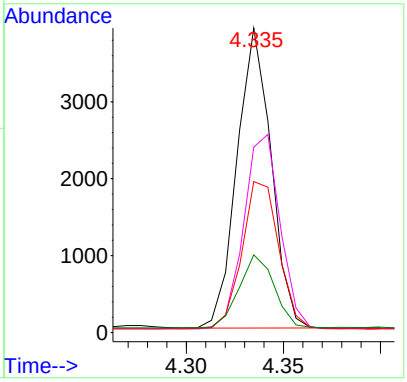


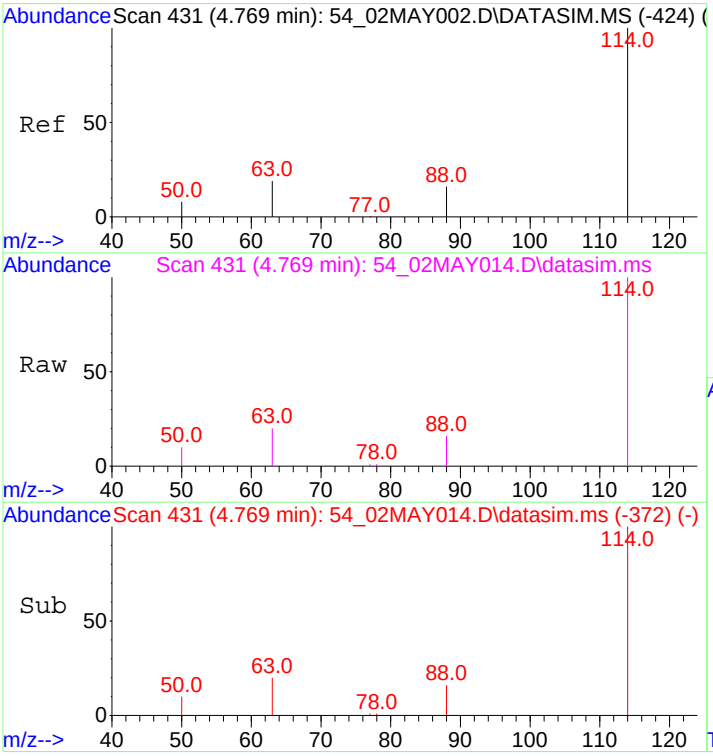


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY014.D
Acq: 2 May 2014 3:08 pm

Tgt Ion: 49 Resp: 4771

Ion	Ratio	Lower	Upper
49	100		
130	69.0	87.2	130.8#
128	52.8	68.0	102.0#
93	25.2	29.3	43.9#

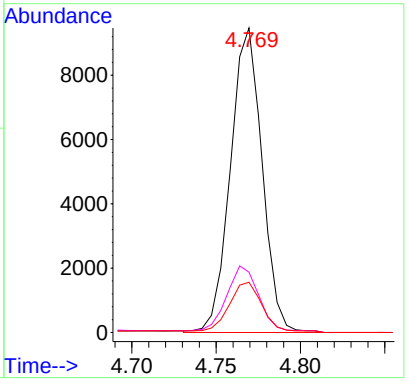


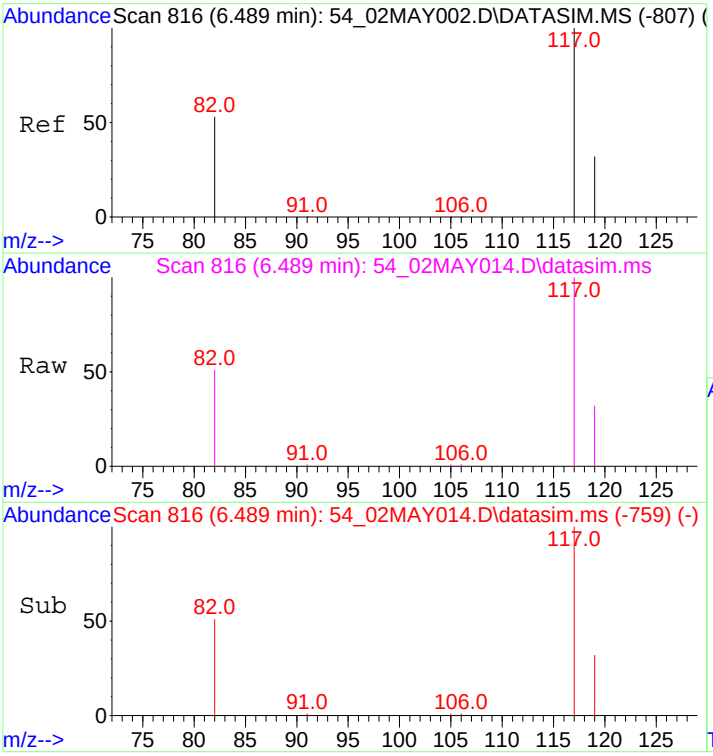


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY014.D
Acq: 2 May 2014 3:08 pm

Tgt Ion:114 Resp: 12363

Ion	Ratio	Lower	Upper
114	100		
63	21.0	12.0	18.0#
88	15.9	11.8	17.8

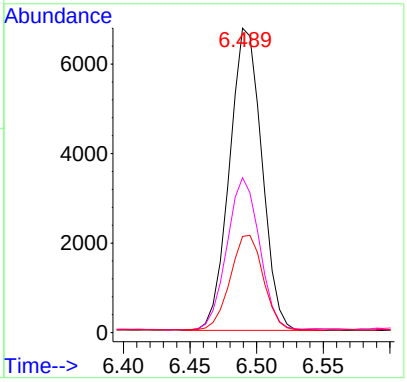


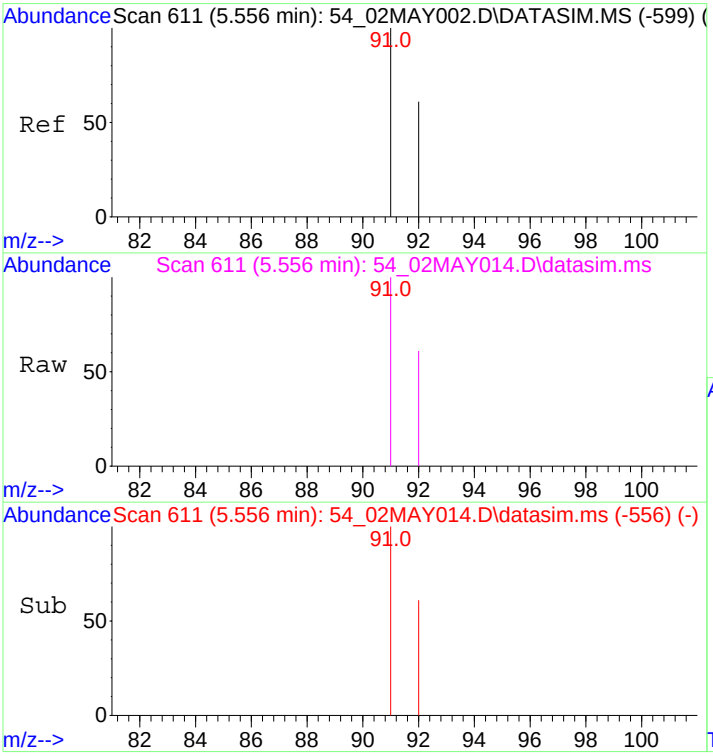


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY014.D
Acq: 2 May 2014 3:08 pm

Tgt Ion:117 Resp: 11405

Ion	Ratio	Lower	Upper
117	100		
82	50.5	38.0	57.0
119	32.0	27.0	40.4

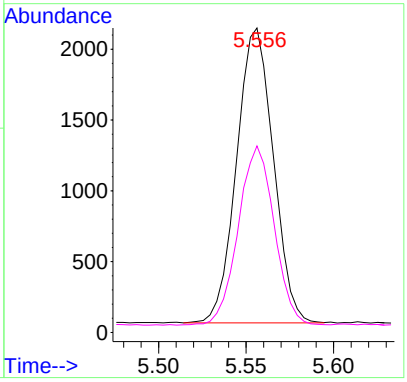


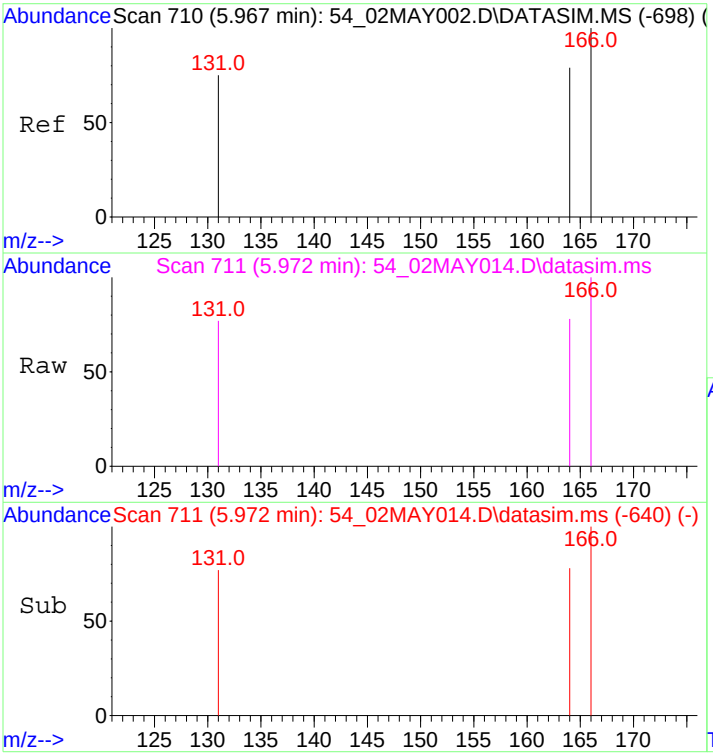


#13
Toluene
Concen: 4.45 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY014.D
Acq: 2 May 2014 3:08 pm

Tgt Ion: 91 Resp: 3043

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

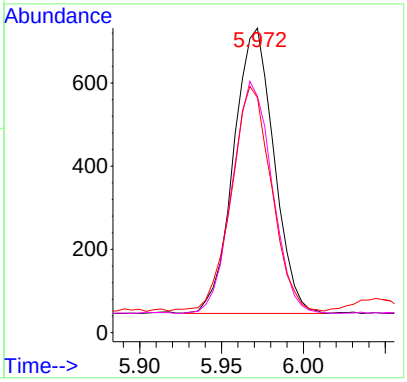


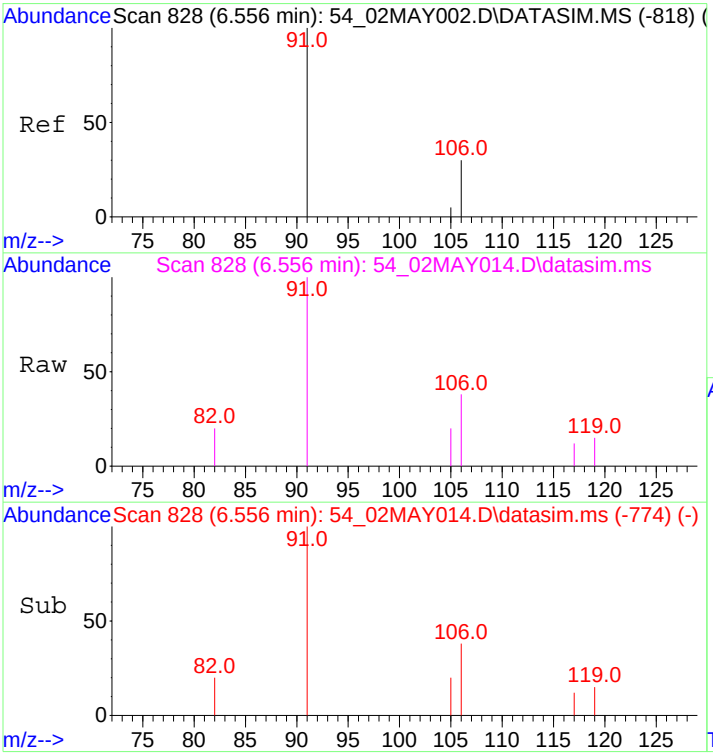


#14
Tetrachloroethene
Concen: 3.01 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.005 min
Lab File: 54 02MAY014.D
Acq: 2 May 2014 3:08 pm

Tgt Ion:166 Resp: 1174

Ion	Ratio	Lower	Upper
166	100		
164	80.5	62.6	94.0
131	77.9	58.5	87.7

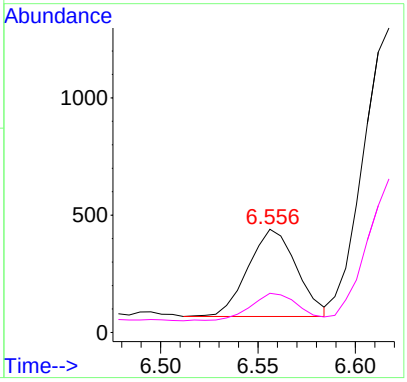


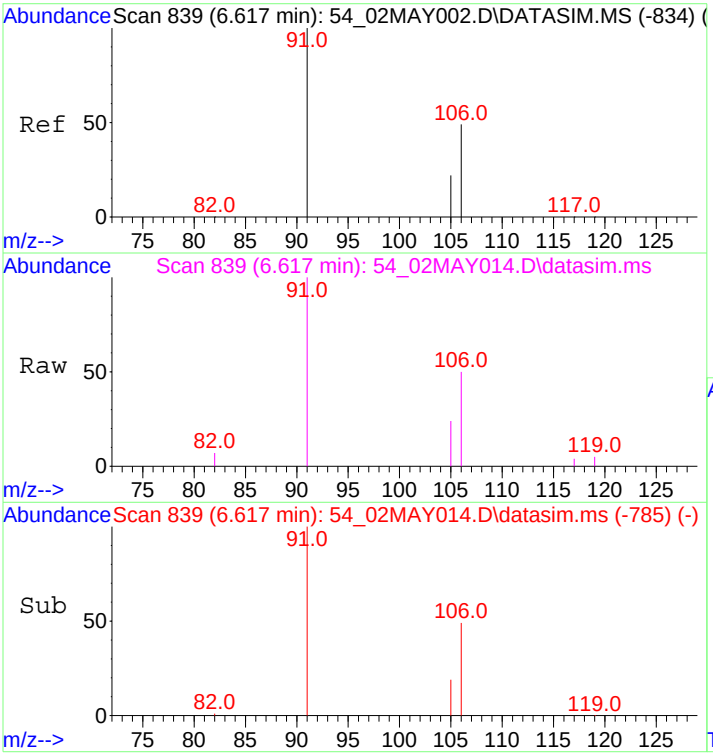


#15
Ethyl Benzene
Concen: 0.74 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54_02MAY014.D
Acq: 2 May 2014 3:08 pm

Tgt Ion: 91 Resp: 645

Ion	Ratio	Lower	Upper
91	100		
106	29.6	26.9	40.3

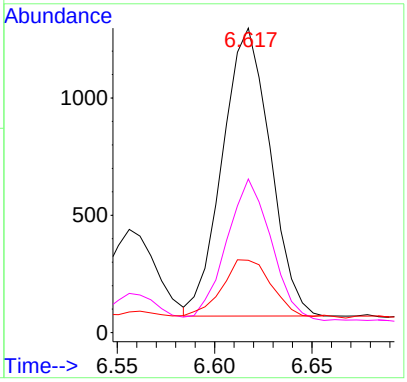


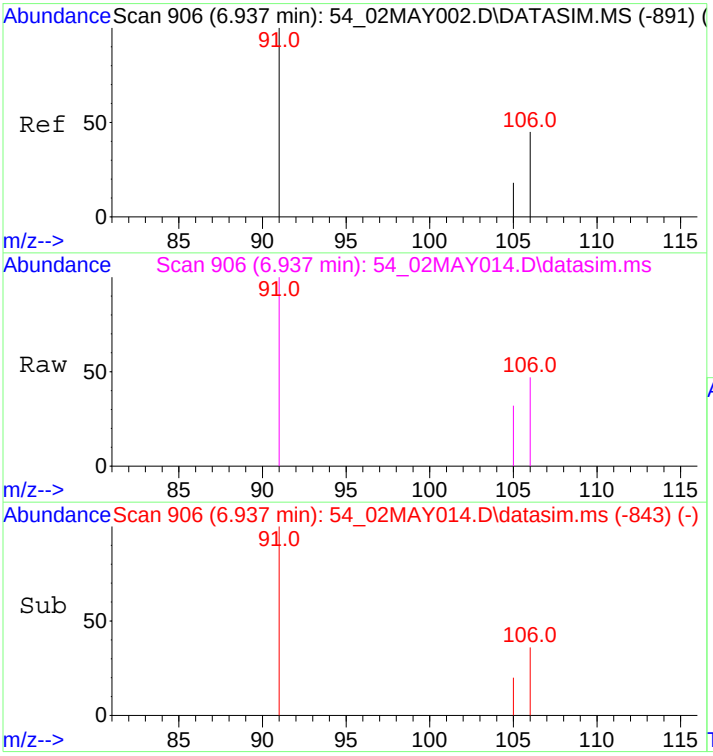


#16
m,p-Xylene
Concen: 3.14 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 02MAY014.D
Acq: 2 May 2014 3:08 pm

Tgt Ion: 91 Resp: 2091

Ion	Ratio	Lower	Upper
91	100		
106	46.2	43.1	64.7
105	20.2	18.3	27.5

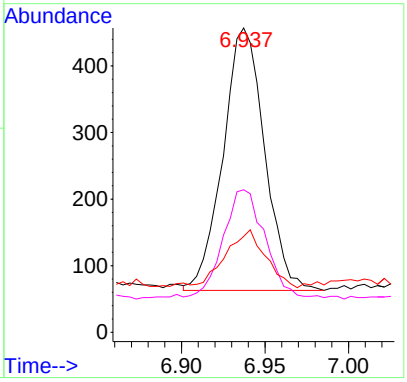




#17
o-Xylene
Concen: 1.01 ppbv
RT: 6.937 min Scan# 906
Delta R.T. 0.000 min
Lab File: 54_02MAY014.D
Acq: 2 May 2014 3:08 pm

Tgt Ion: 91 Resp: 682

Ion	Ratio	Lower	Upper
91	100		
106	40.9	40.1	60.1
105	22.0	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY015.D
Acq On : 2 May 2014 3:20 pm
Operator : YHL
Sample : 02146 \ SG-20-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 15:27:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

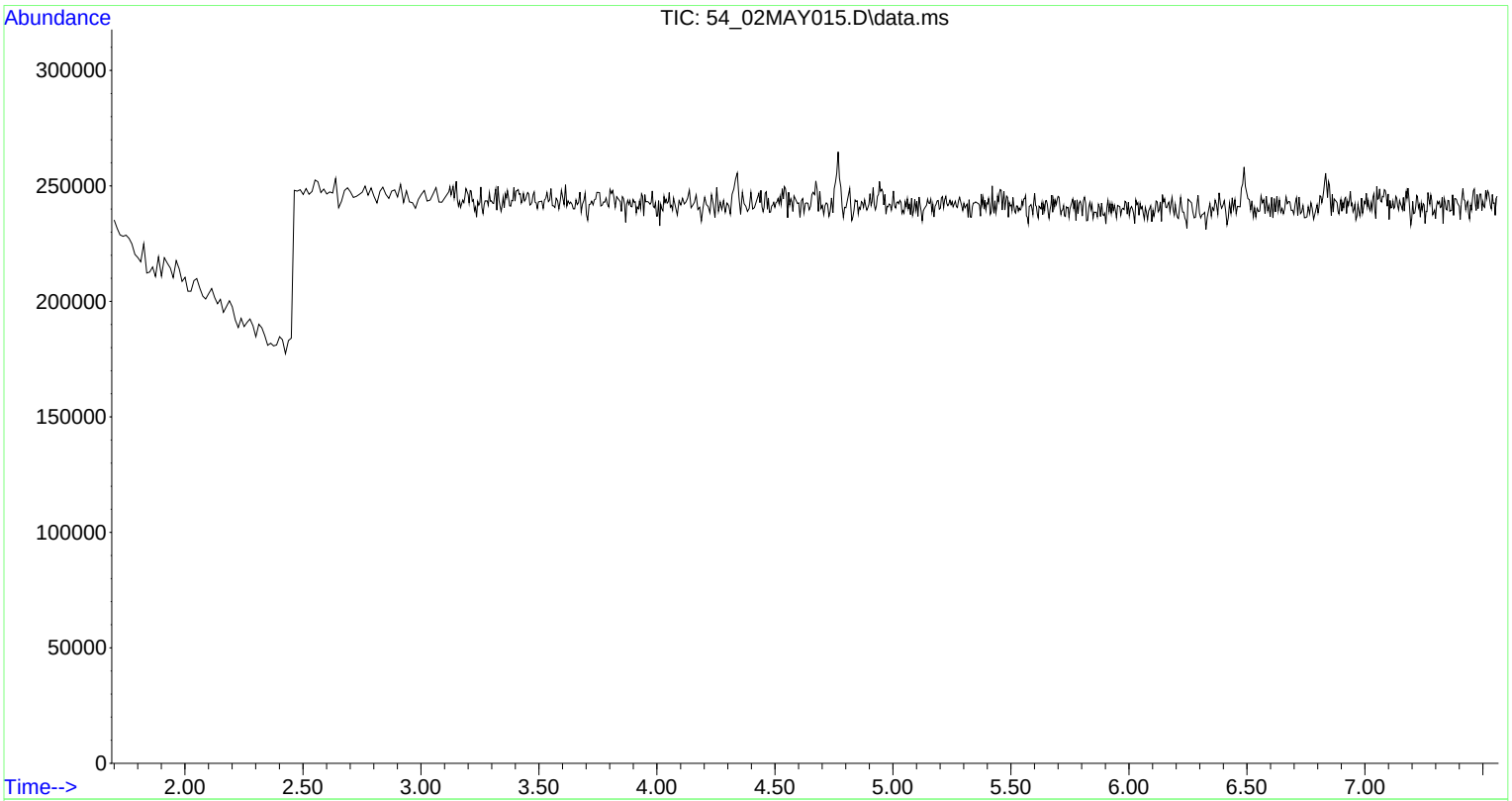
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4442	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11528	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10619	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	1895	6.61	ppbv	99
13] Toluene	5.557	91	1288	2.02	ppbv	97
14] Tetrachloroethene	5.968	166	457	1.26	ppbv	98
16] m,p-Xylene	6.618	91	1147	1.85	ppbv	93
17] o-Xylene	6.936	91	450	0.72	ppbv #	83

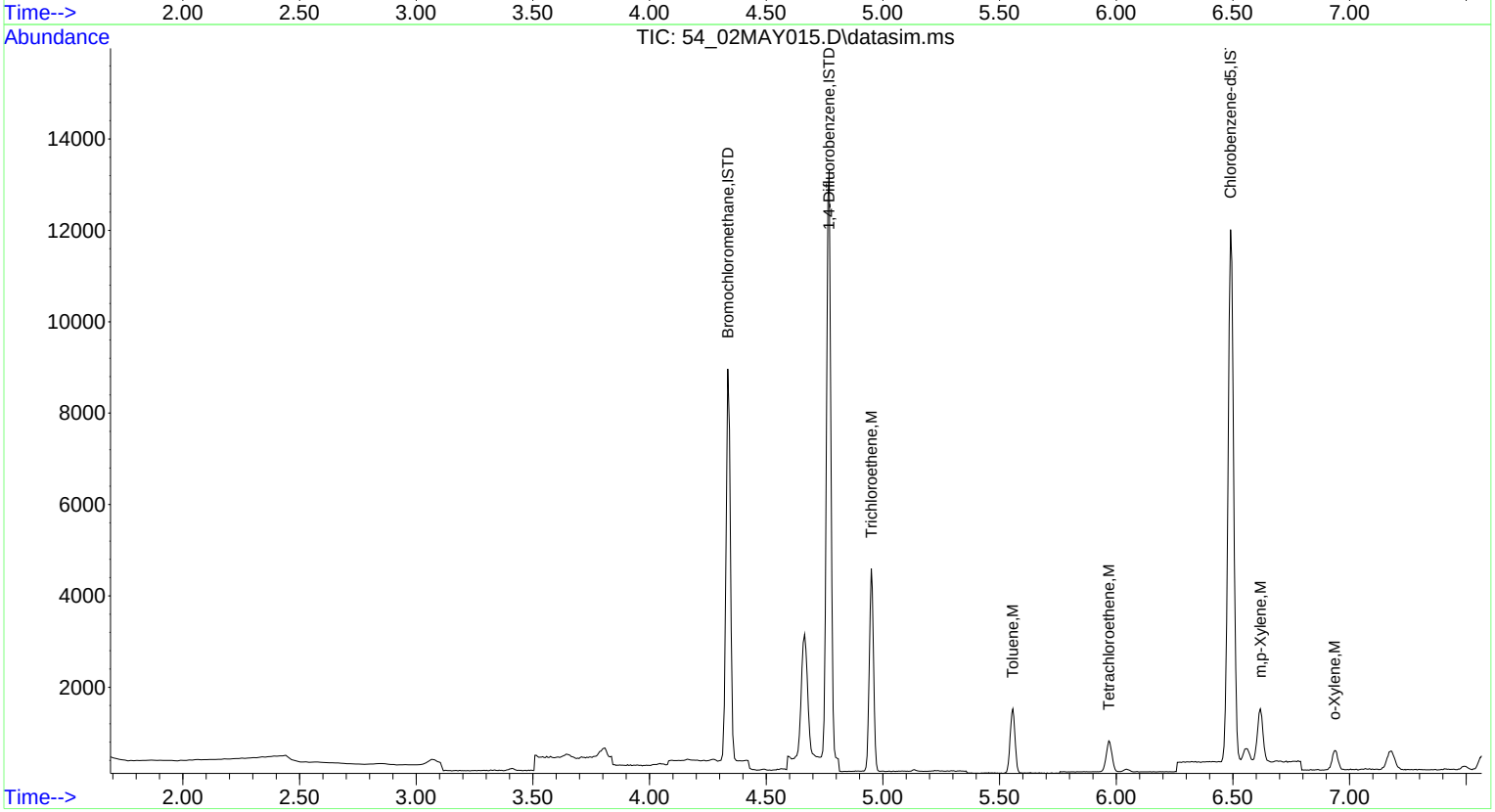
(#) = qualifier out of range (m) = manual integration (+) = signals summed

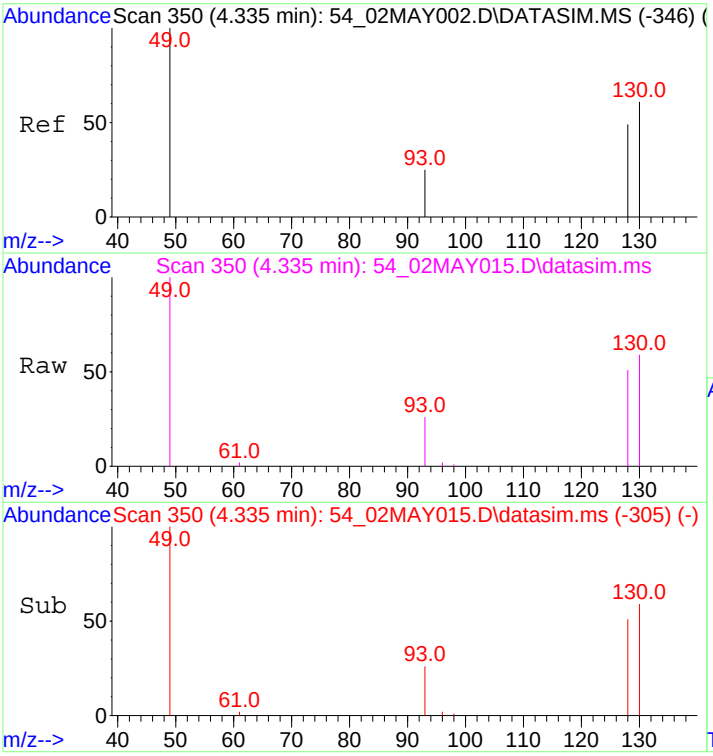
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY015.D
Acq On : 2 May 2014 3:20 pm
Operator : YHL
Sample : 02146 \ SG-20-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 15:27:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



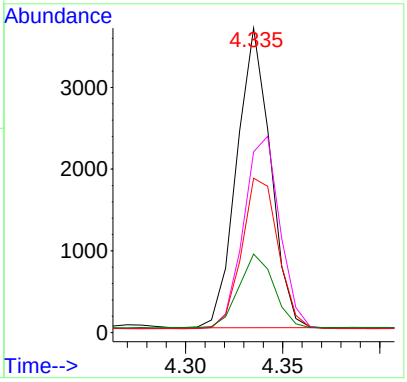


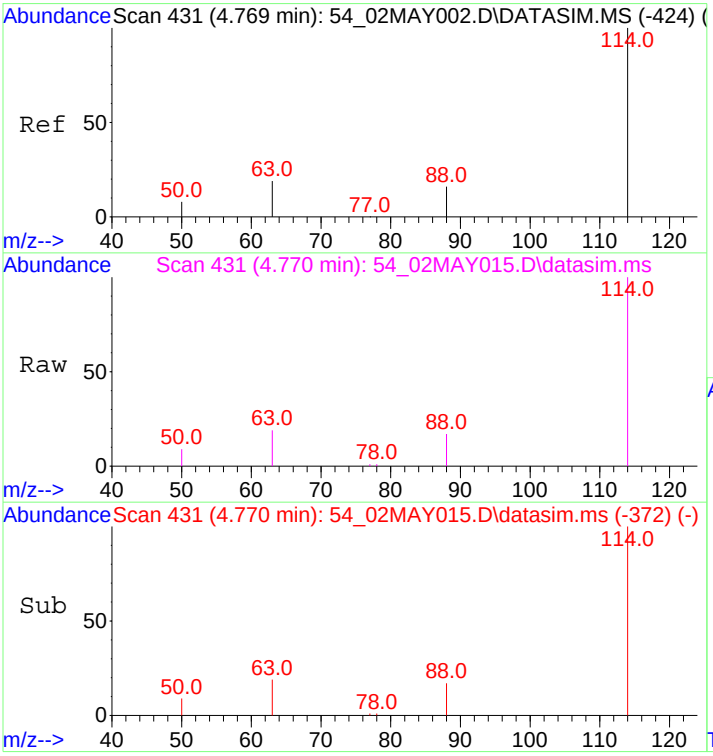


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY015.D
Acq: 2 May 2014 3:20 pm

Tgt Ion: 49 Resp: 4442

Ion	Ratio	Lower	Upper
49	100		
130	68.9	87.2	130.8#
128	54.1	68.0	102.0#
93	25.3	29.3	43.9#

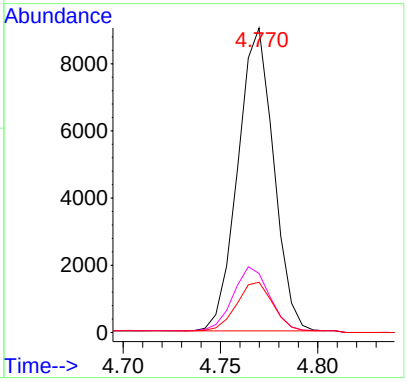


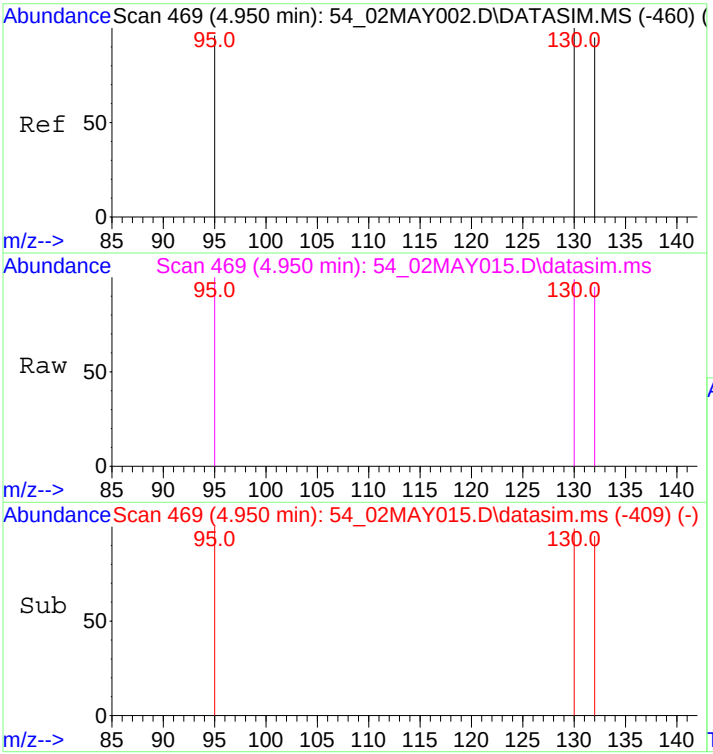


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY015.D
Acq: 2 May 2014 3:20 pm

Tgt Ion:114 Resp: 11528

Ion	Ratio	Lower	Upper
114	100		
63	21.1	12.0	18.0#
88	16.4	11.8	17.8

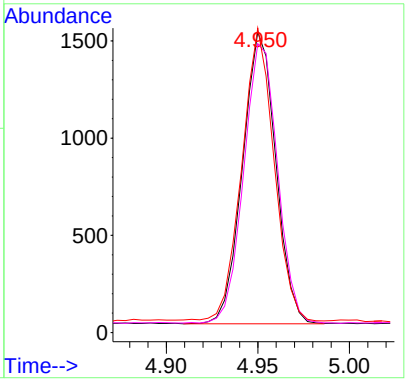


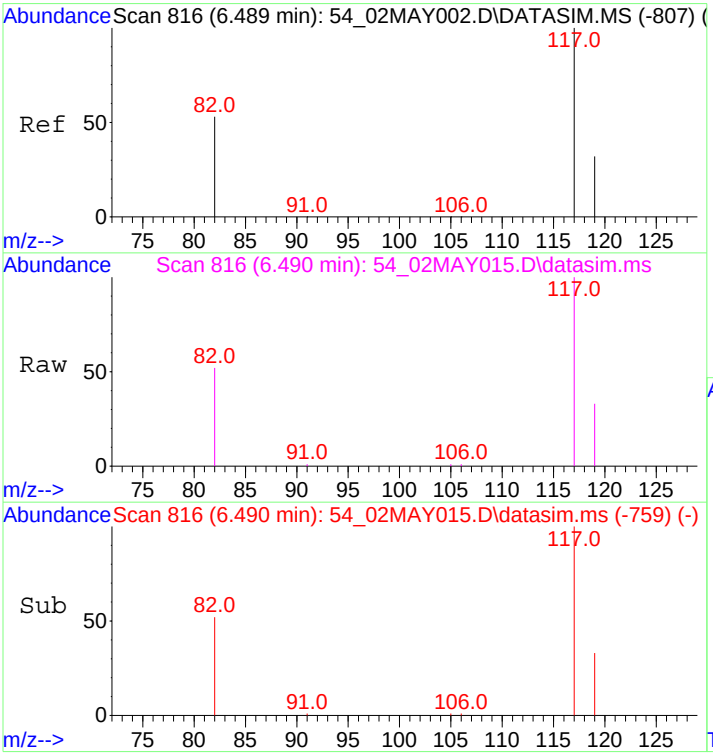


#11
Trichloroethene
Concen: 6.61 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 02MAY015.D
Acq: 2 May 2014 3:20 pm

Tgt Ion:130 Resp: 1895

Ion	Ratio	Lower	Upper
130	100		
132	97.3	76.9	115.3
95	96.7	76.5	114.7

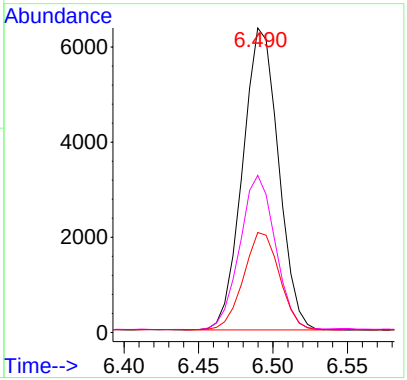


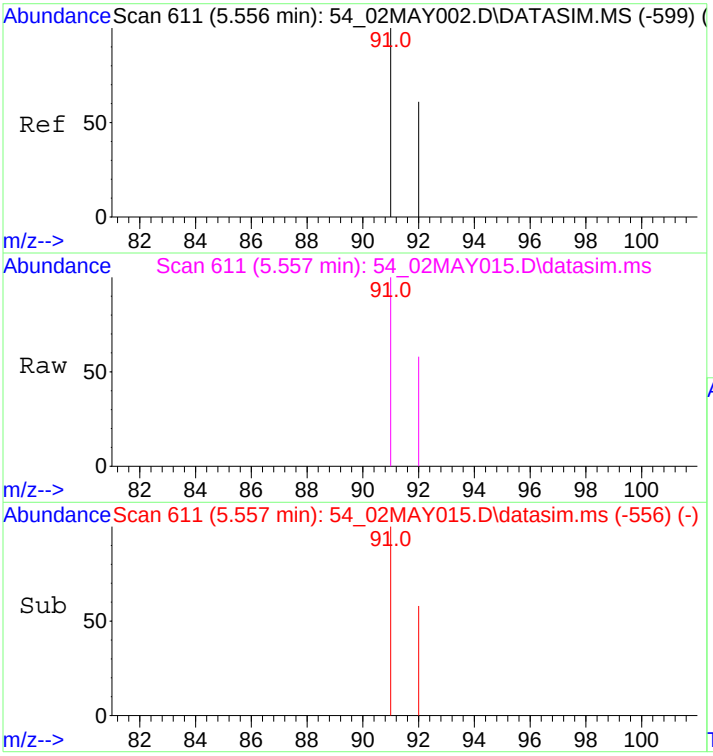


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54_02MAY015.D
Acq: 2 May 2014 3:20 pm

Tgt Ion:117 Resp: 10619

Ion	Ratio	Lower	Upper
117	100		
82	50.7	38.0	57.0
119	32.4	27.0	40.4

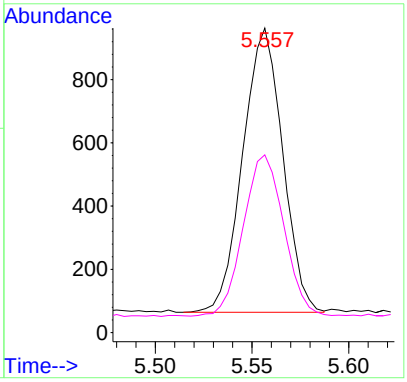


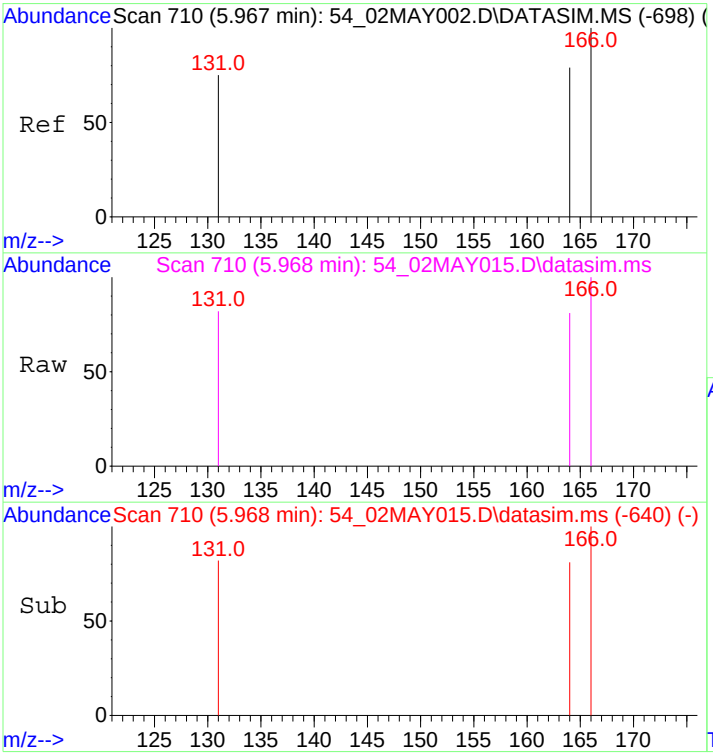


#13
Toluene
Concen: 2.02 ppbv
RT: 5.557 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 02MAY015.D
Acq: 2 May 2014 3:20 pm

Tgt Ion: 91 Resp: 1288

Ion	Ratio	Lower	Upper
91	100		
92	57.6	47.8	71.8

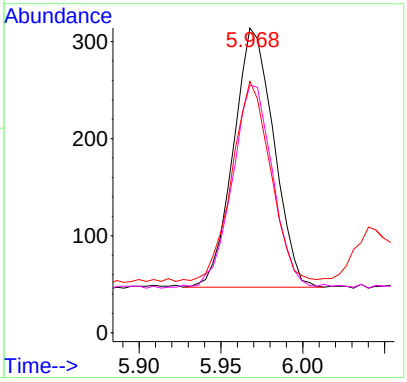


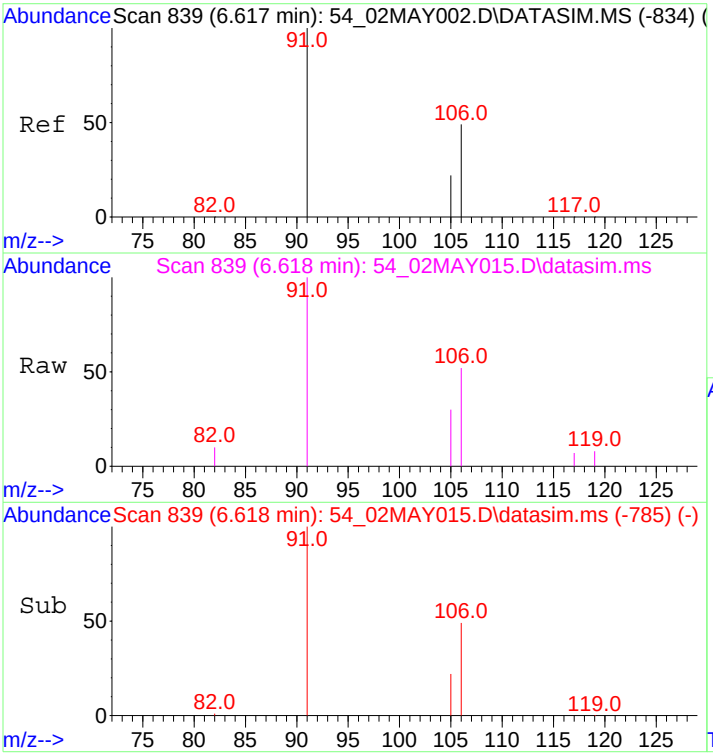


#14
Tetrachloroethene
Concen: 1.26 ppbv
RT: 5.968 min Scan# 710
Delta R.T. 0.000 min
Lab File: 54_02MAY015.D
Acq: 2 May 2014 3:20 pm

Tgt Ion:166 Resp: 457

Ion	Ratio	Lower	Upper
166	100		
164	76.8	62.6	94.0
131	74.6	58.5	87.7

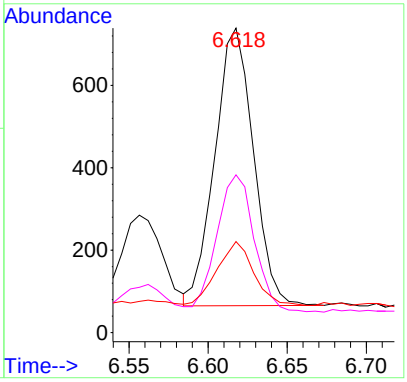


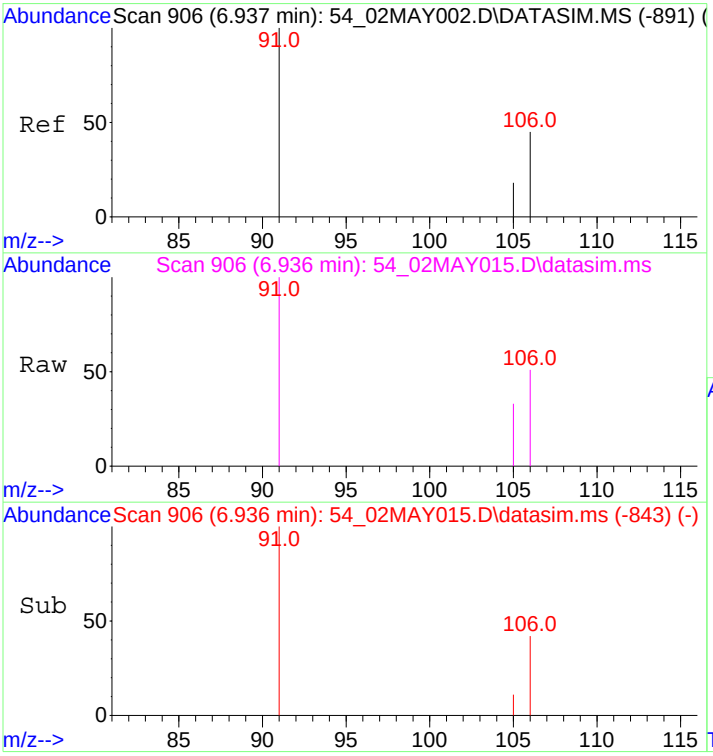


#16
m,p-Xylene
Concen: 1.85 ppbv
RT: 6.618 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 02MAY015.D
Acq: 2 May 2014 3:20 pm

Tgt Ion: 91 Resp: 1147

Ion	Ratio	Lower	Upper
91	100		
106	47.9	43.1	64.7
105	21.9	18.3	27.5

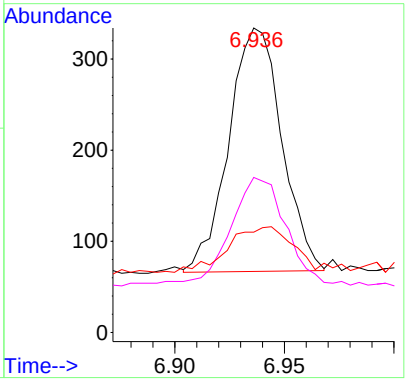




#17
o-Xylene
Concen: 0.72 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54_02MAY015.D
Acq: 2 May 2014 3:20 pm

Tgt Ion: 91 Resp: 450

Ion	Ratio	Lower	Upper
91	100		
106	43.8	40.1	60.1
105	3.1	15.8	23.6#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY016.D
Acq On : 2 May 2014 3:35 pm
Operator : YHL
Sample : 02147 \ SG-19-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 15:44:33 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

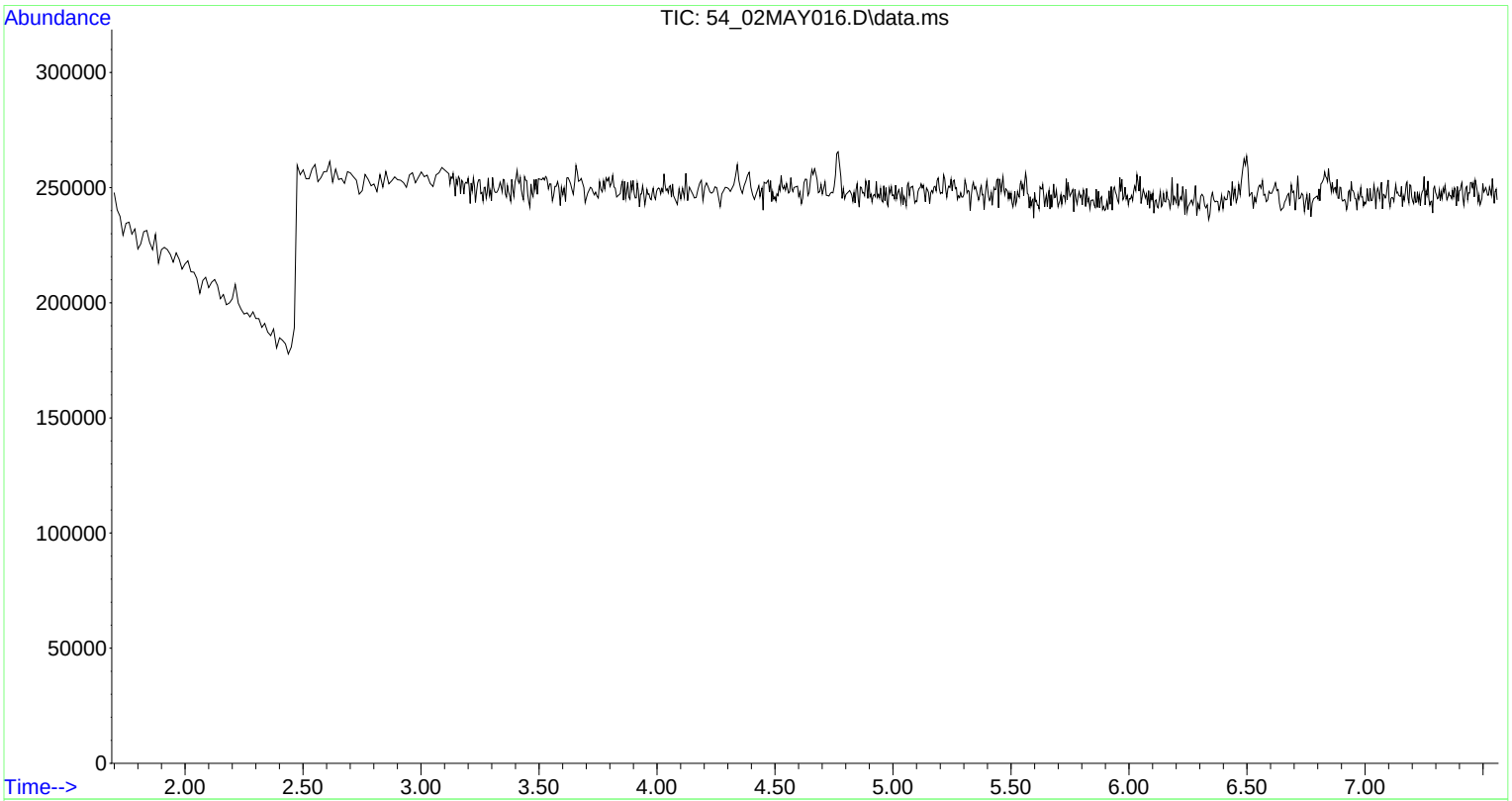
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4573	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11733	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	11031	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	2990	4.52	ppbv	100
14] Tetrachloroethene	5.972	166	1613	4.27	ppbv	98
15] Ethyl Benzene	6.556	91	1058	1.26	ppbv #	84
16] m,p-Xylene	6.617	91	2415	3.75	ppbv	92
17] o-Xylene	6.936	91	946	1.45	ppbv	94

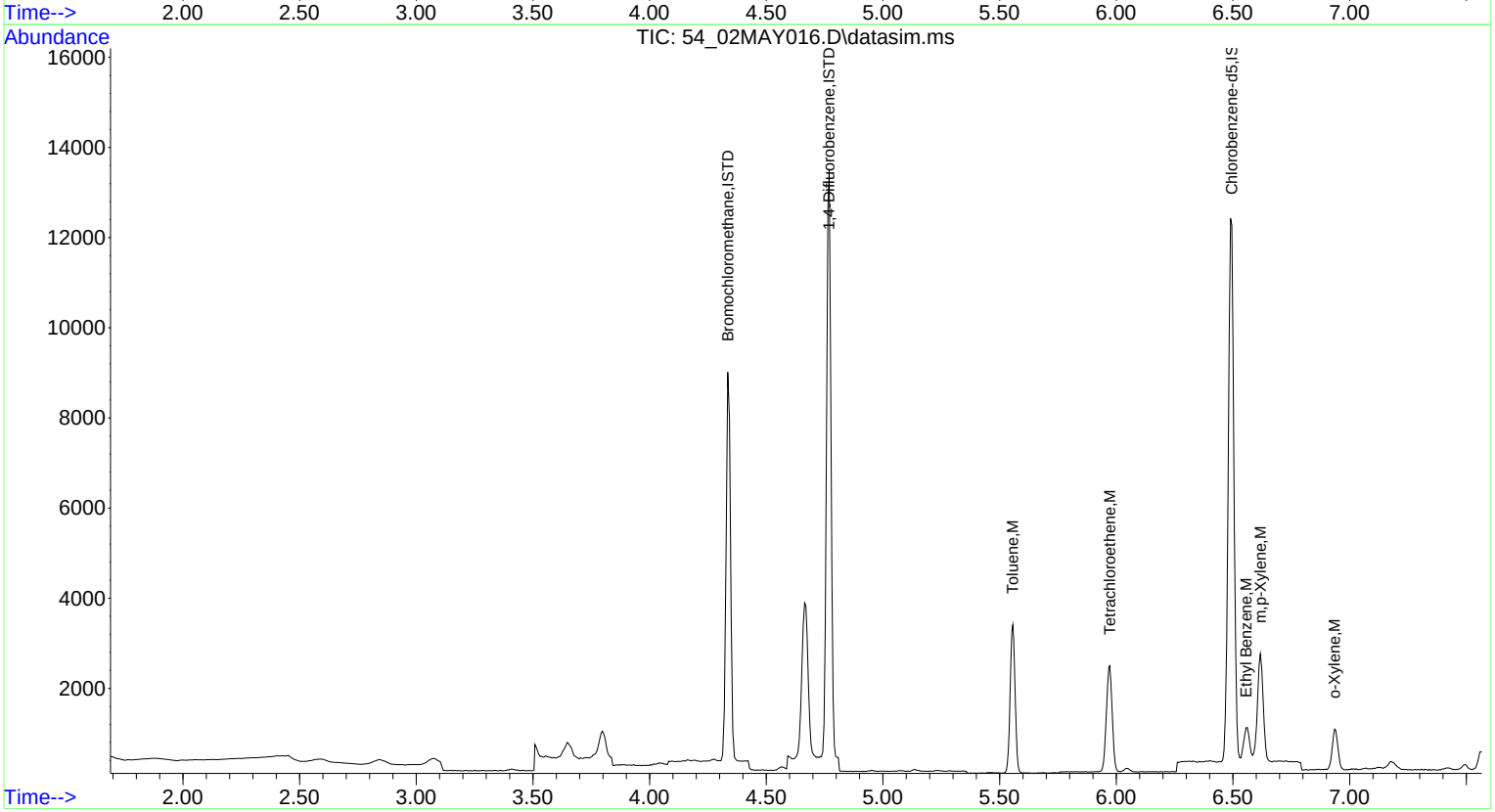
(#) = qualifier out of range (m) = manual integration (+) = signals summed

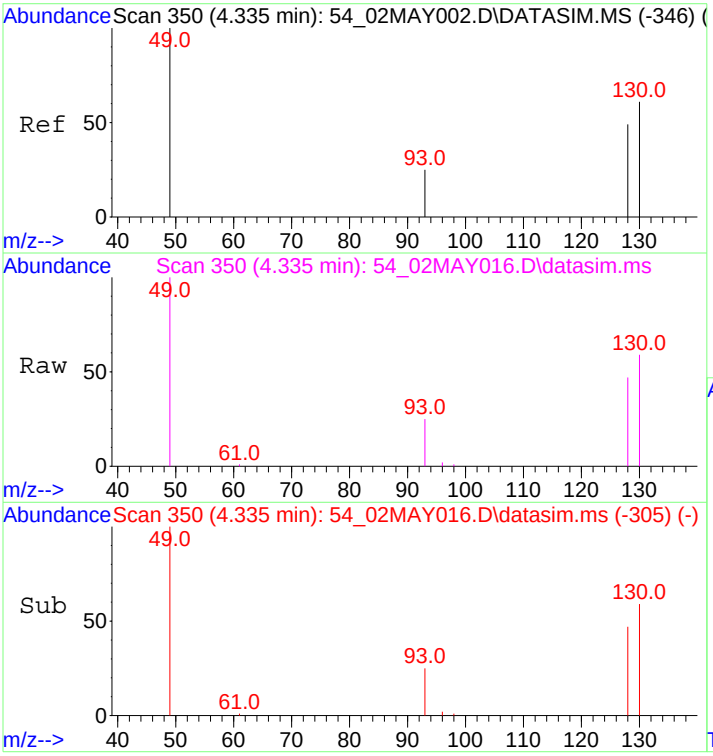
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY016.D
Acq On : 2 May 2014 3:35 pm
Operator : YHL
Sample : 02147 \ SG-19-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 15:44:33 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



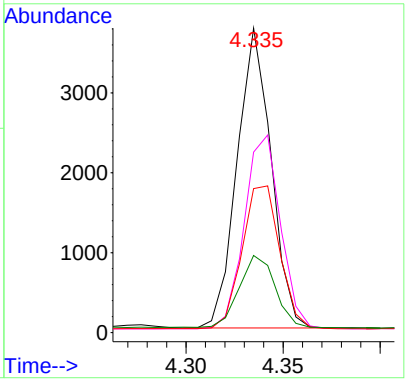


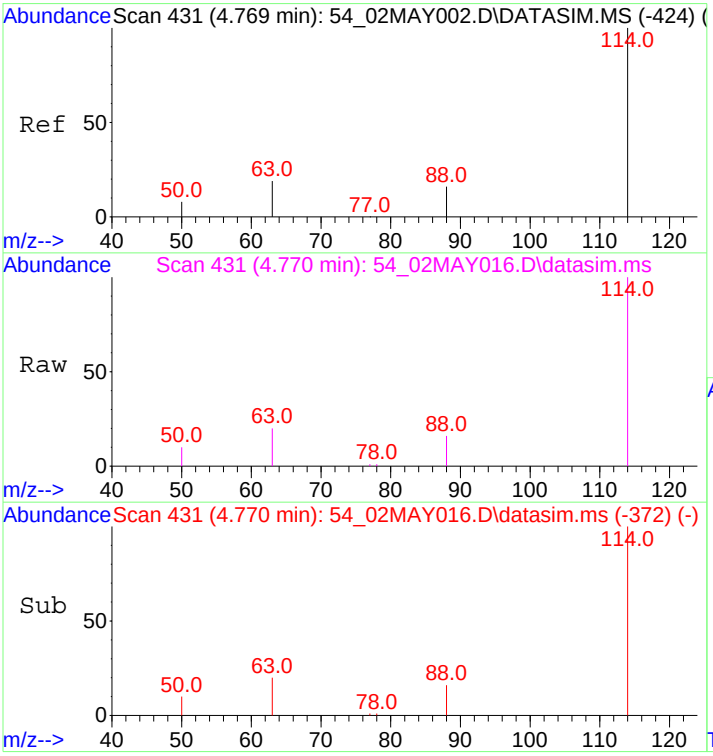


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY016.D
Acq: 2 May 2014 3:35 pm

Tgt Ion: 49 Resp: 4573

Ion	Ratio	Lower	Upper
49	100		
130	68.6	87.2	130.8#
128	52.8	68.0	102.0#
93	25.3	29.3	43.9#

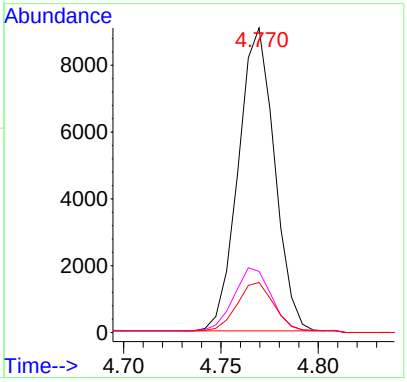


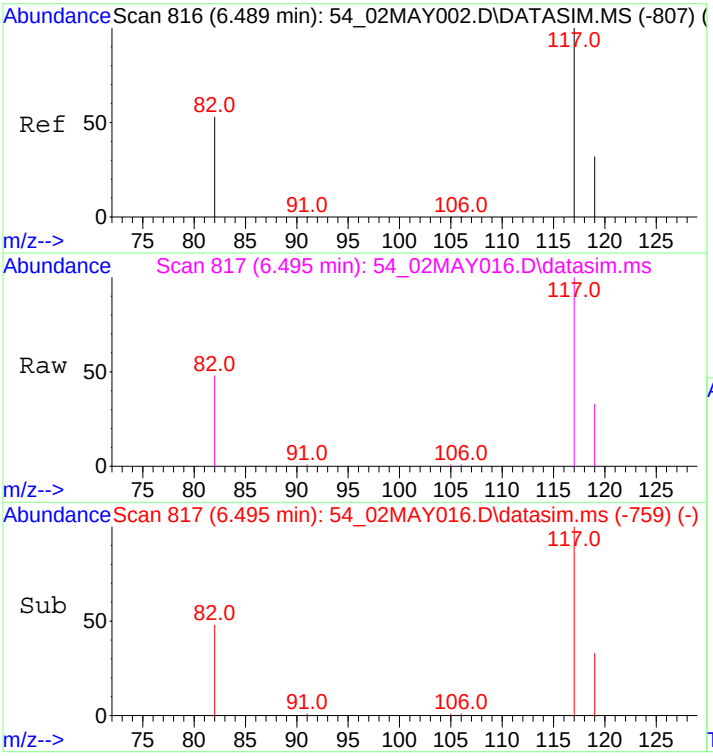


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY016.D
Acq: 2 May 2014 3:35 pm

Tgt Ion:114 Resp: 11733

Ion	Ratio	Lower	Upper
114	100		
63	21.1	12.0	18.0#
88	16.2	11.8	17.8

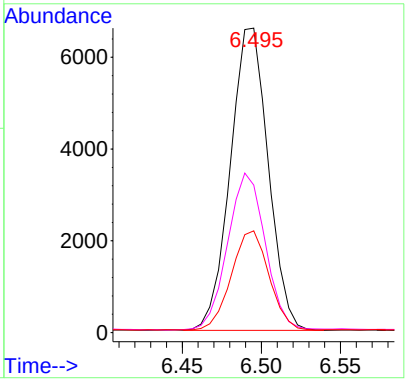


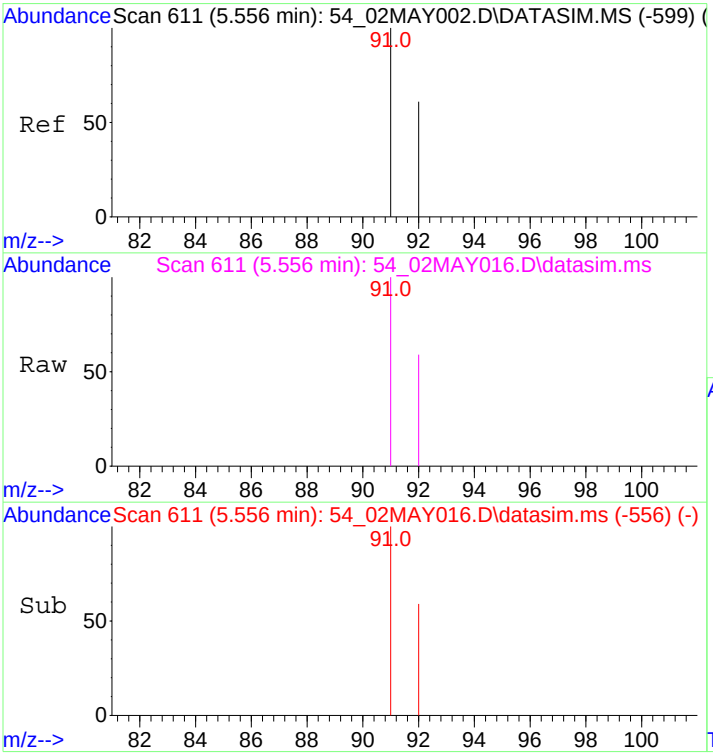


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.006 min
Lab File: 54 02MAY016.D
Acq: 2 May 2014 3:35 pm

Tgt Ion:117 Resp: 11031

Ion	Ratio	Lower	Upper
117	100		
82	51.5	38.0	57.0
119	32.5	27.0	40.4

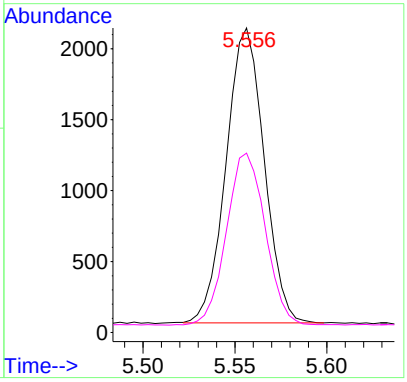


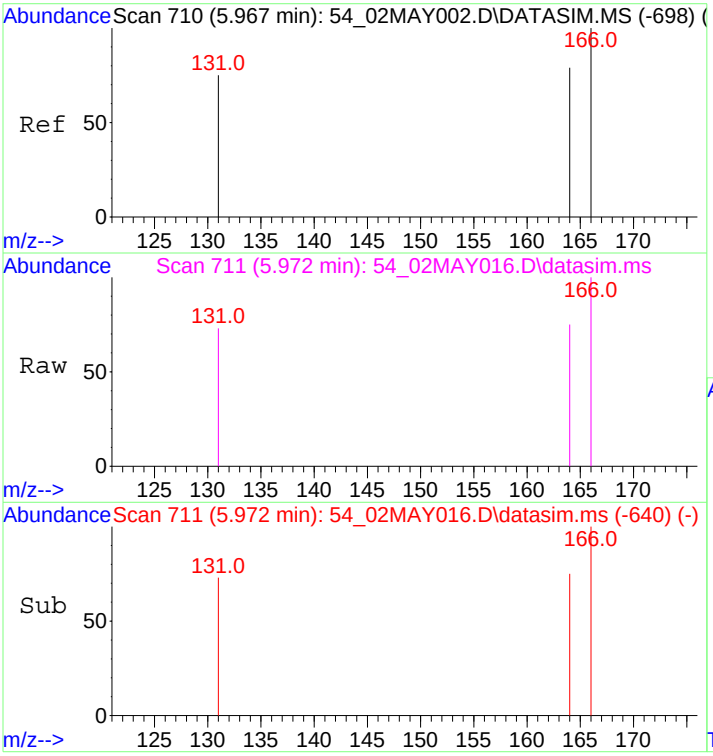


#13
Toluene
Concen: 4.52 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY016.D
Acq: 2 May 2014 3:35 pm

Tgt Ion: 91 Resp: 2990

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

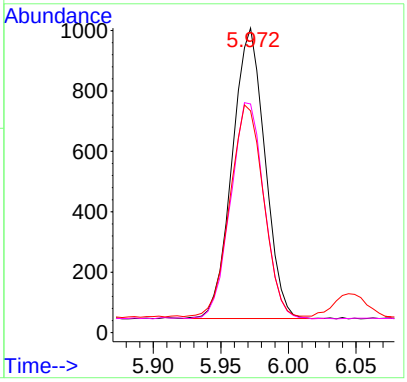


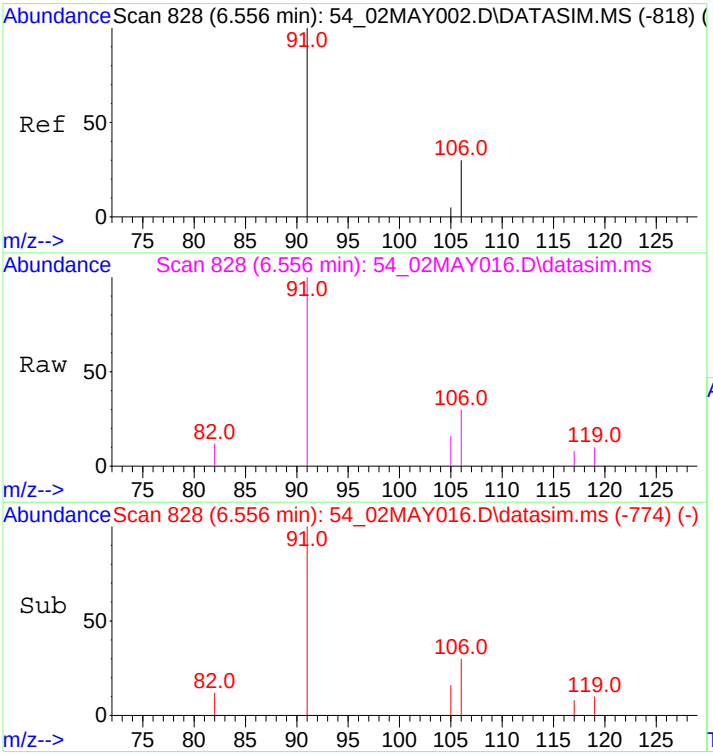


#14
Tetrachloroethene
Concen: 4.27 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.005 min
Lab File: 54 02MAY016.D
Acq: 2 May 2014 3:35 pm

Tgt Ion:166 Resp: 1613

Ion	Ratio	Lower	Upper
166	100		
164	76.3	62.6	94.0
131	75.0	58.5	87.7

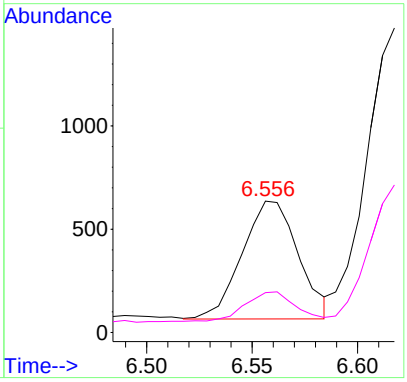


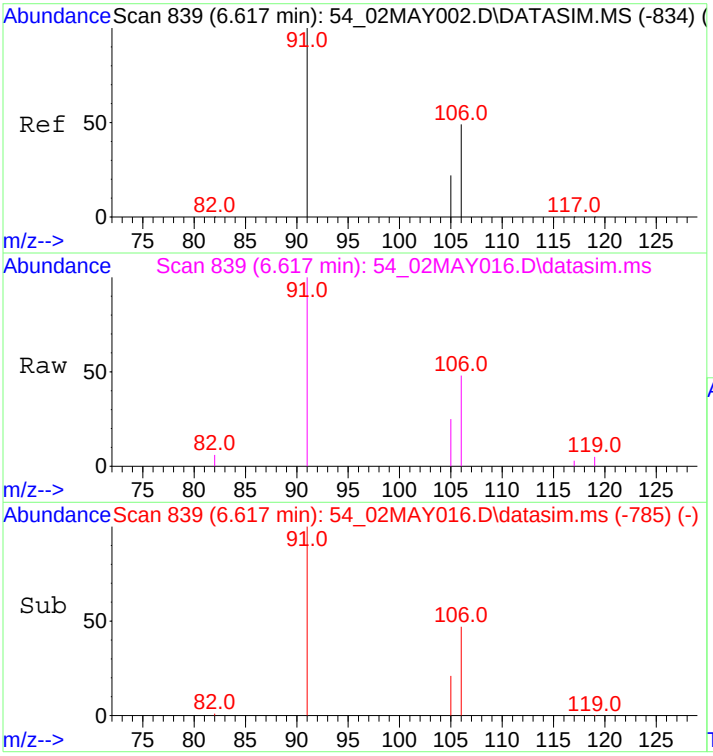


#15
Ethyl Benzene
Concen: 1.26 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54_02MAY016.D
Acq: 2 May 2014 3:35 pm

Tgt Ion: 91 Resp: 1058

Ion	Ratio	Lower	Upper
91	100		
106	24.4	26.9	40.3#

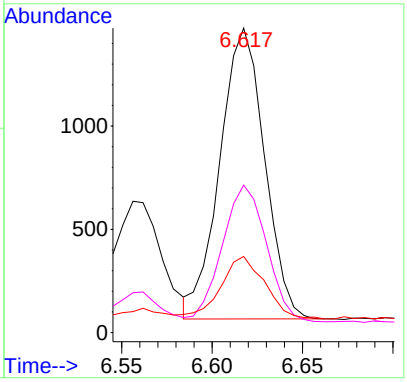


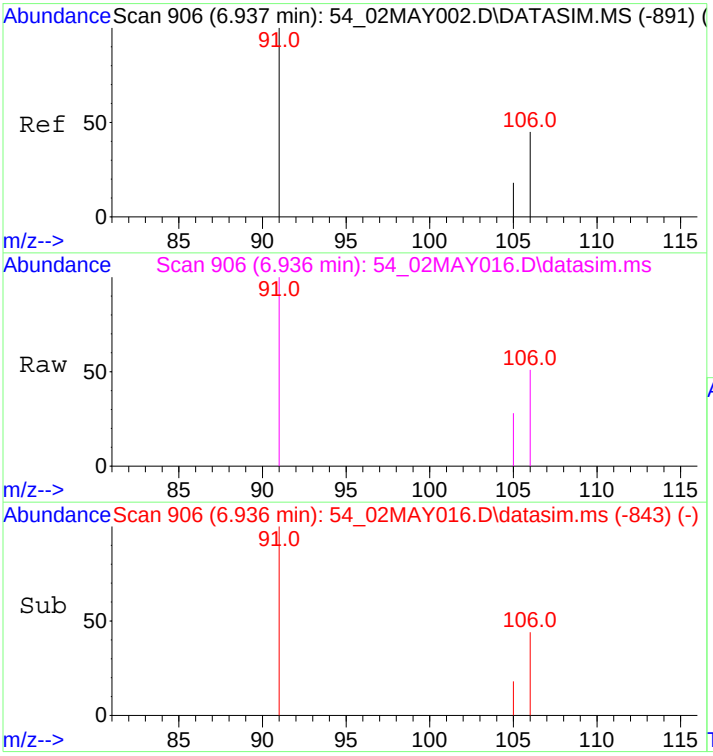


#16
m,p-Xylene
Concen: 3.75 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 02MAY016.D
Acq: 2 May 2014 3:35 pm

Tgt Ion: 91 Resp: 2415

Ion	Ratio	Lower	Upper
91	100		
106	46.6	43.1	64.7
105	21.5	18.3	27.5

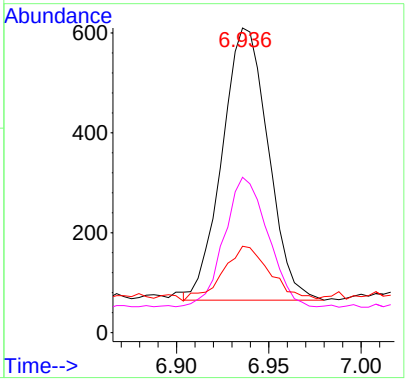




#17
o-Xylene
Concen: 1.45 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54_02MAY016.D
Acq: 2 May 2014 3:35 pm

Tgt Ion: 91 Resp: 946

Ion	Ratio	Lower	Upper
91	100		
106	44.8	40.1	60.1
105	18.4	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140502\
Data File : 54 02MAY017.D
Acq On : 2 May 2014 3:48 pm
Operator : YHL
Sample : 02149 \ SG-18-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 02 14:14:50 2014
Quant Method : C:\Users\ylin\Documents\LOD LOQ20140416\20140416\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:21:03 2014
QLast Update : Mon Jun 02 13:41:20 2014
Response via : Initial Calibration

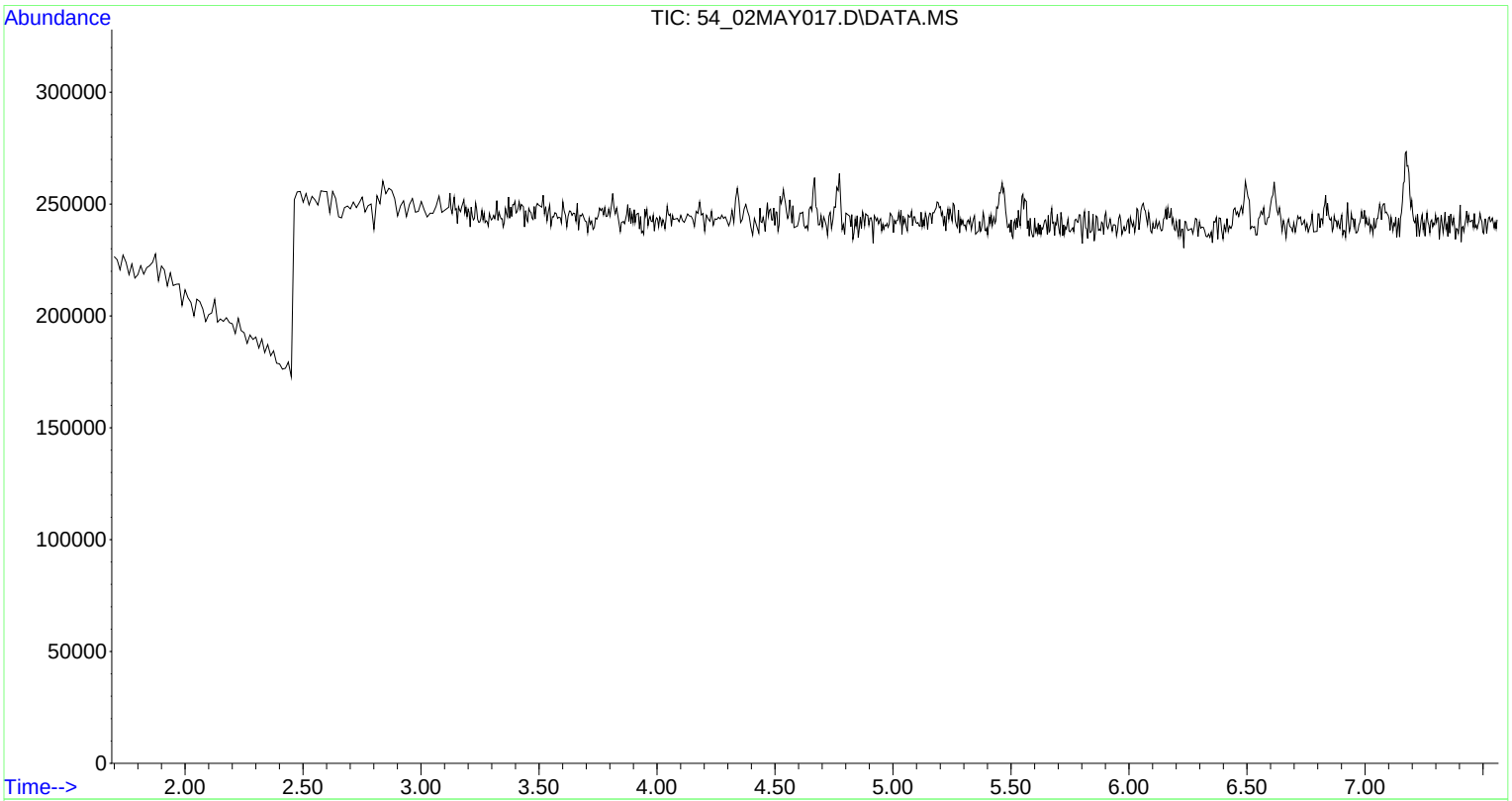
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4461	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11423	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10550	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
6] 1,1-Dichloroethane	3.910	63	317	0.87	ppbv	# 68
8] 1,1,1-Trichloroethane	4.483	97	267	0.58	ppbv	93
13] Toluene	5.556	91	9090	14.37	ppbv	100
15] Ethyl Benzene	6.556	91	2966	3.69	ppbv	94
16] m, p-Xylene	6.617	91	8365	13.57	ppbv	93
17] o-Xylene	6.936	91	2584	4.13	ppbv	93

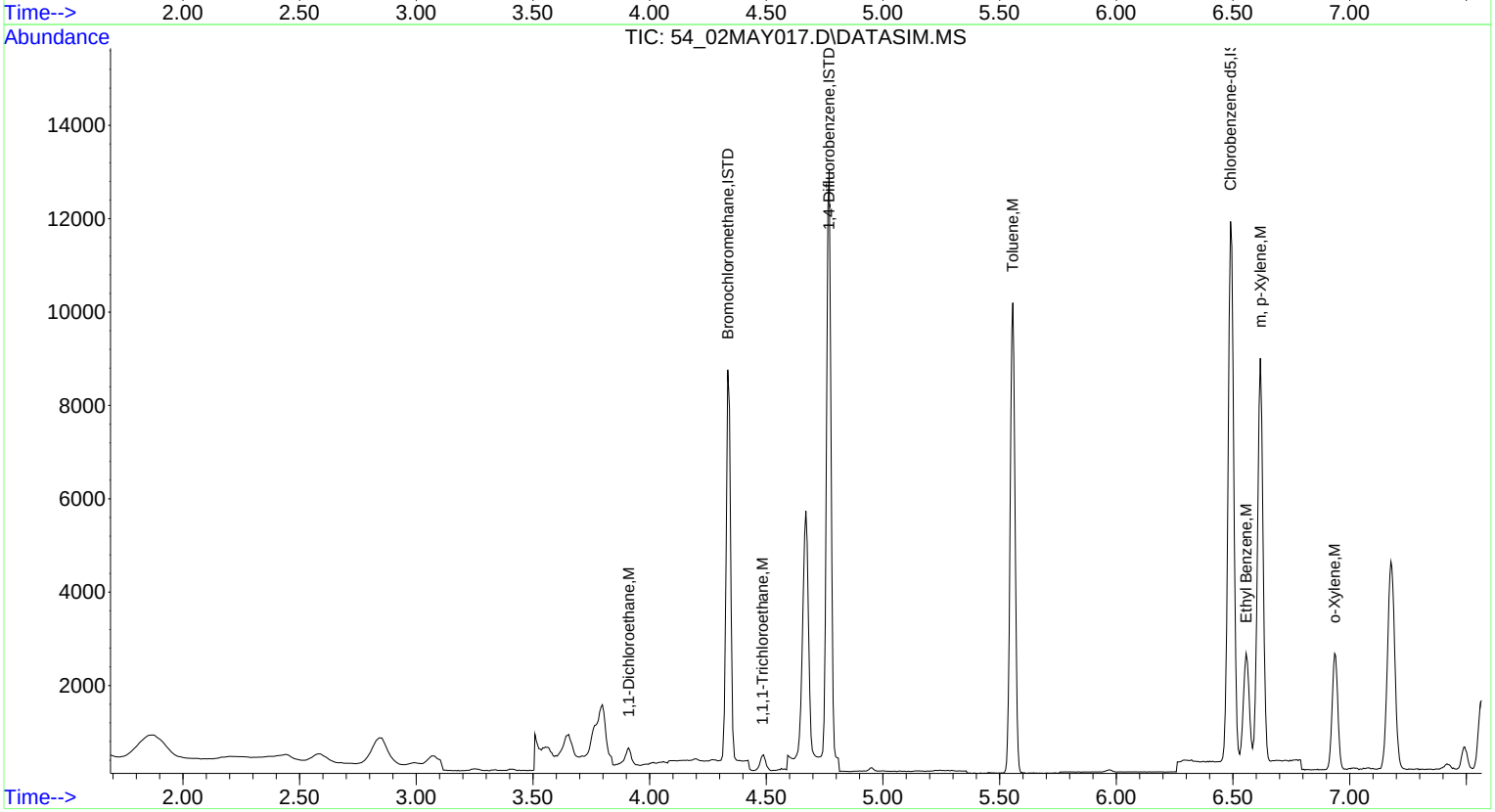
(#) = qualifier out of range (m) = manual integration (+) = signals summed

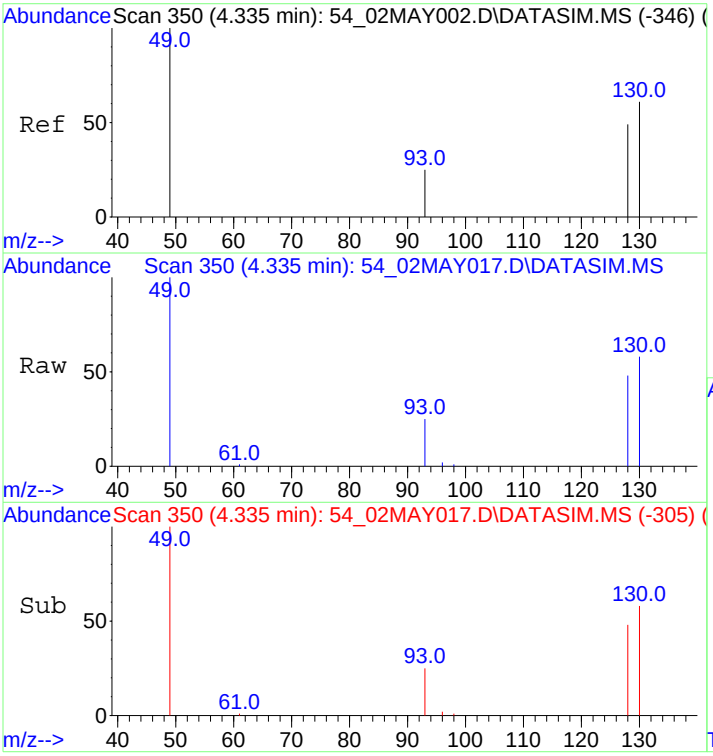
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140502\
Data File : 54 02MAY017.D
Acq On : 2 May 2014 3:48 pm
Operator : YHL
Sample : 02149 \ SG-18-10
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 02 14:14:50 2014
Quant Method : C:\Users\ylin\Documents\LOD LOQ20140416\20140416\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:21:03 2014
QLast Update : Mon Jun 02 13:41:20 2014
Response via : Initial Calibration



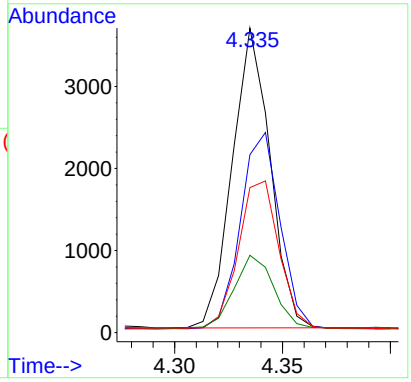


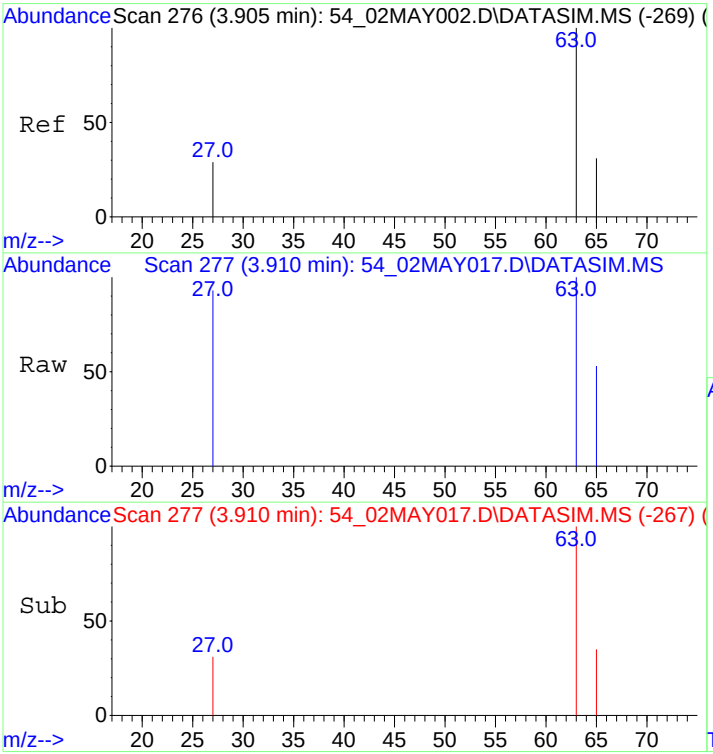


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion: 49 Resp: 4461

Ion	Ratio	Lower	Upper
49	100		
130	68.4	87.2	130.8#
128	52.9	68.0	102.0#
93	25.1	29.3	43.9#

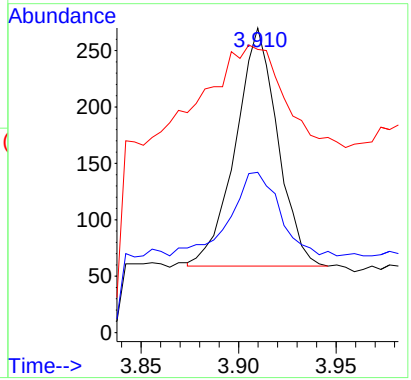


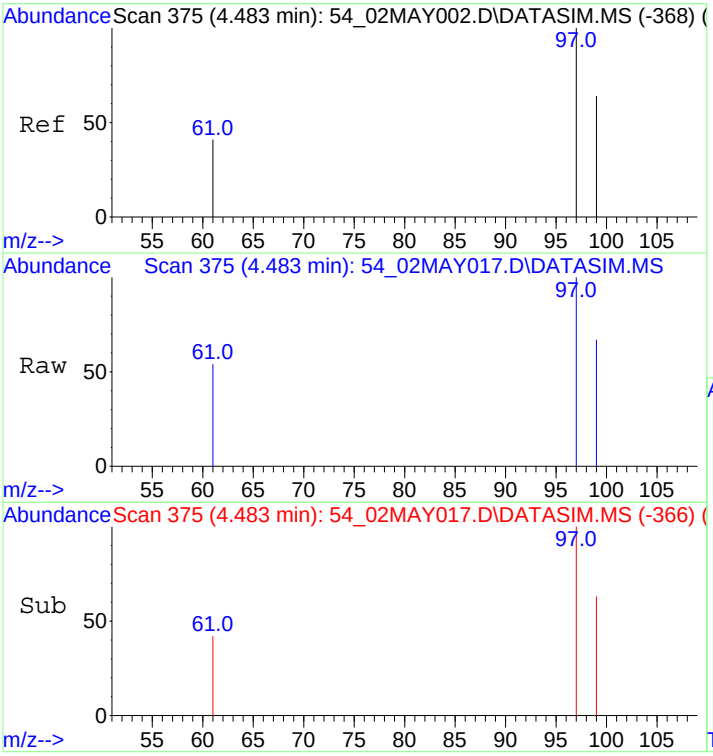


#6
1,1-Dichloroethane
Concen: 0.87 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.005 min
Lab File: 54_02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion: 63 Resp: 317

Ion	Ratio	Lower	Upper
63	100		
65	40.4	26.1	39.1#
27	44.2	10.2	15.2#

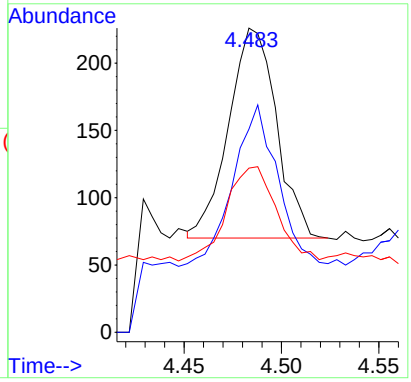


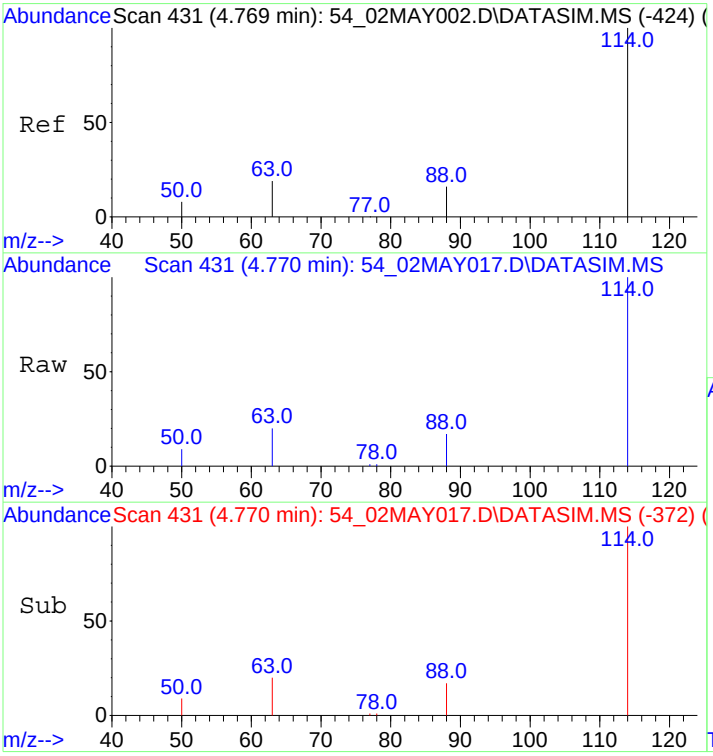


#8
1,1,1-Trichloroethane
Concen: 0.58 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54 02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion: 97 Resp: 267

Ion	Ratio	Lower	Upper
97	100		
99	68.2	52.1	78.1
61	44.9	30.2	45.4

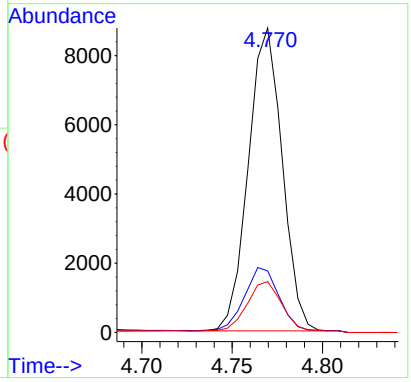


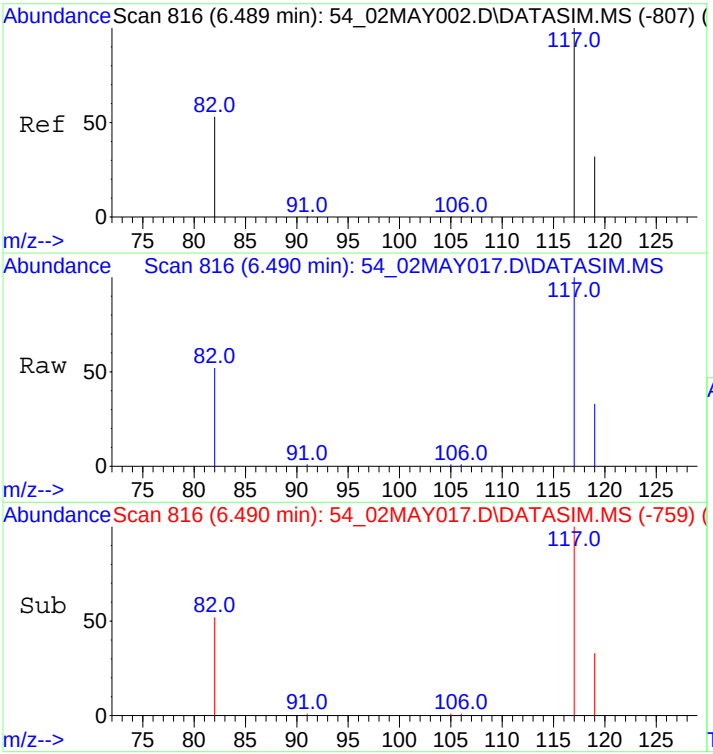


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion:114 Resp: 11423

Ion	Ratio	Lower	Upper
114	100		
63	21.3	12.0	18.0#
88	16.3	11.8	17.8

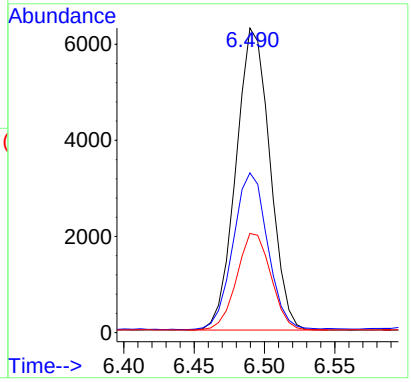


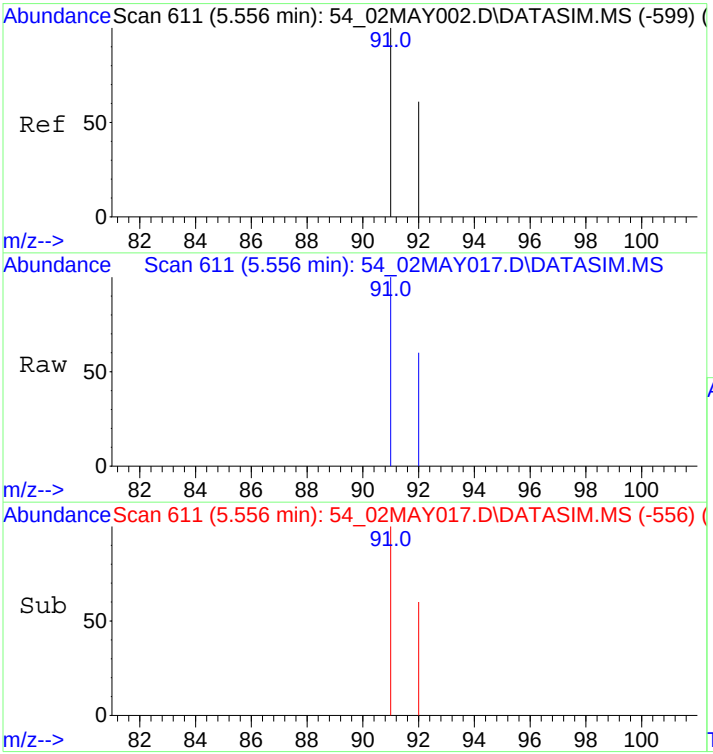


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion:117 Resp: 10550

Ion	Ratio	Lower	Upper
117	100		
82	52.8	38.0	57.0
119	32.3	27.0	40.4

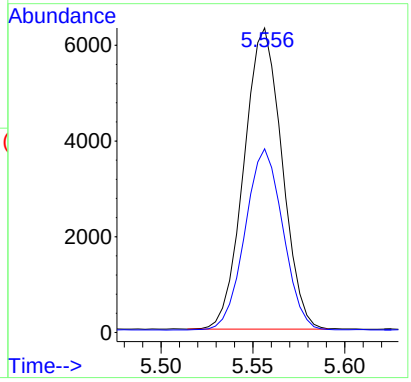


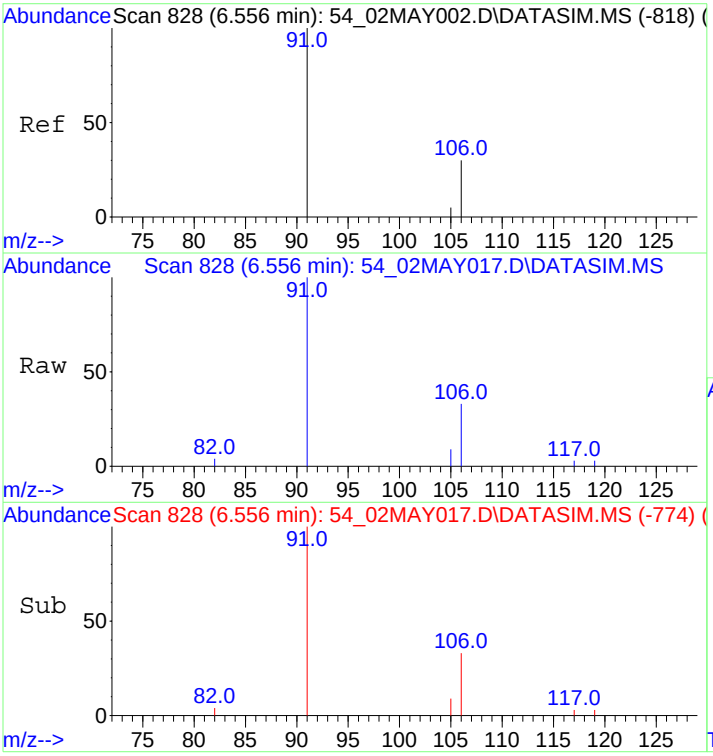


#13
Toluene
Concen: 14.37 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion: 91 Resp: 9090

Ion	Ratio	Lower	Upper
91	100		
92	59.9	47.8	71.8

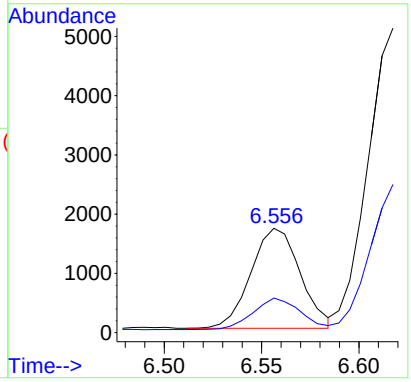


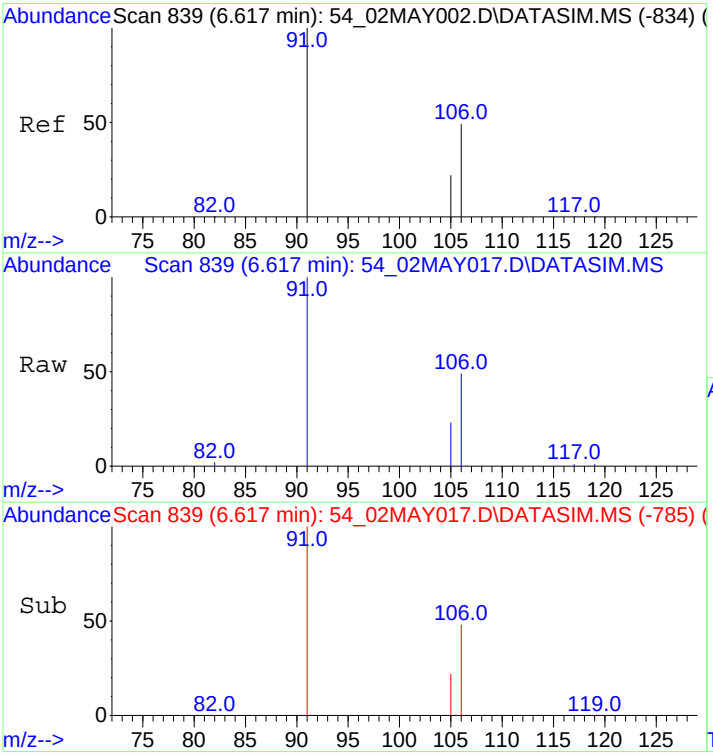


#15
Ethyl Benzene
Concen: 3.69 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion: 91 Resp: 2966

Ion	Ratio	Lower	Upper
91	100		
106	30.2	26.9	40.3

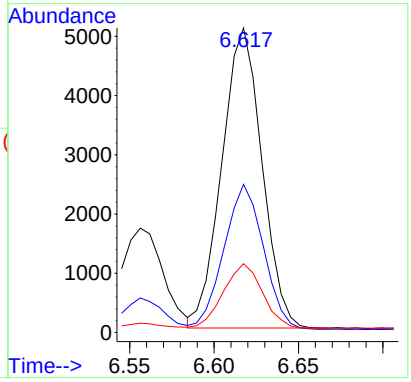


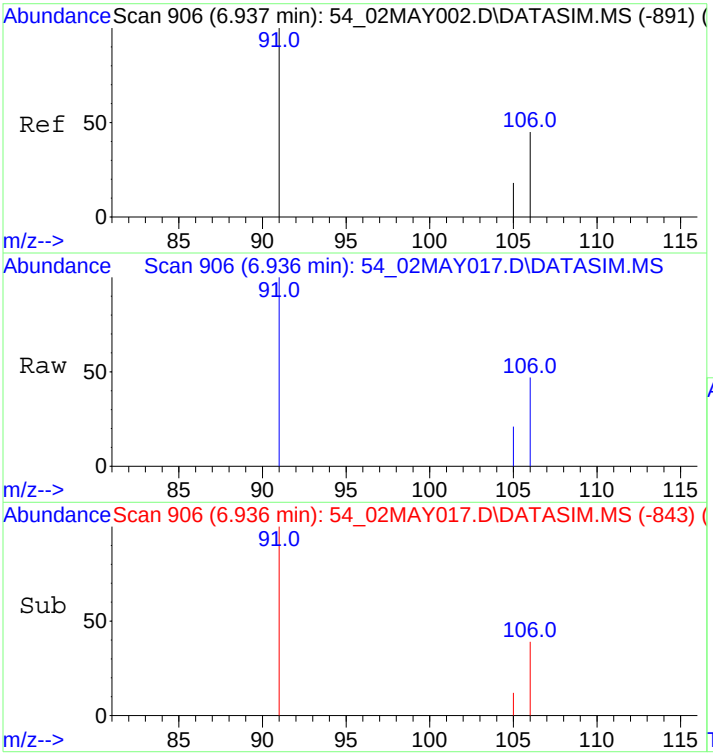


#16
m, p-Xylene
Concen: 13.57 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion: 91 Resp: 8365

Ion	Ratio	Lower	Upper
91	100		
106	47.8	43.1	64.7
105	21.2	18.3	27.5

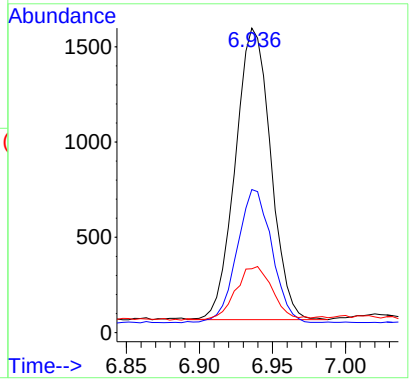




#17
o-Xylene
Concen: 4.13 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.001 min
Lab File: 54 02MAY017.D
Acq: 2 May 2014 3:48 pm

Tgt Ion: 91 Resp: 2584

Ion	Ratio	Lower	Upper
91	100		
106	44.5	40.1	60.1
105	18.2	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140502\
Data File : 54 02MAY018.D
Acq On : 2 May 2014 3:59 pm
Operator : YHL
Sample : 02150 \ SG-18-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 02 13:56:55 2014
Quant Method : C:\Users\ylin\Documents\LOD LOQ20140416\20140416\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:21:03 2014
QLast Update : Mon Jun 02 13:41:20 2014
Response via : Initial Calibration

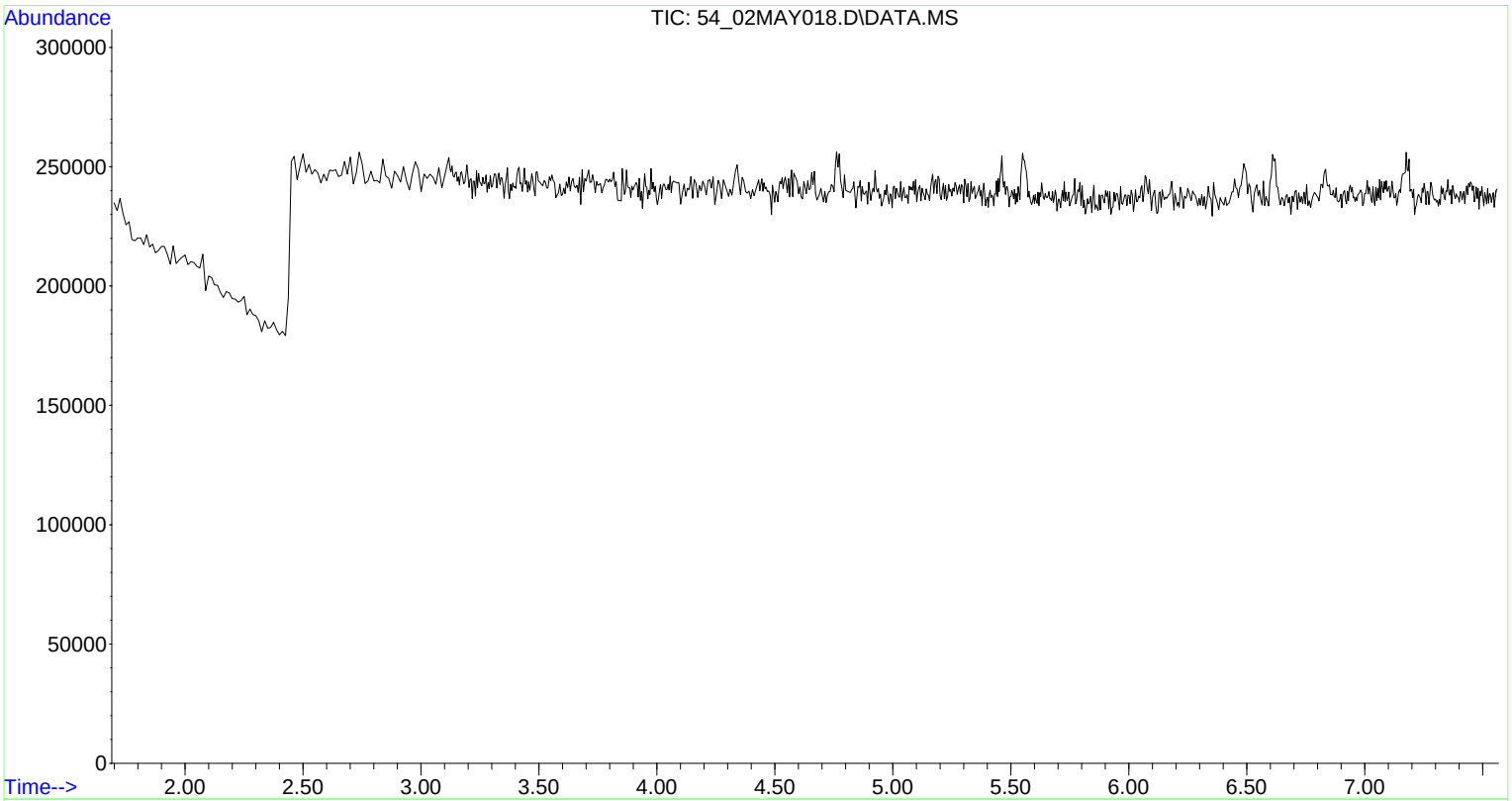
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4318	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11290	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10160	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
8] 1,1,1-Trichloroethane	4.488	97	270	0.60	ppbv	96
13] Toluene	5.556	91	10530	17.29	ppbv	100
15] Ethyl Benzene	6.556	91	3132	4.05	ppbv	93
16] m, p-Xylene	6.617	91	9712	16.36	ppbv	92
17] o-Xylene	6.937	91	3340	5.55	ppbv	93

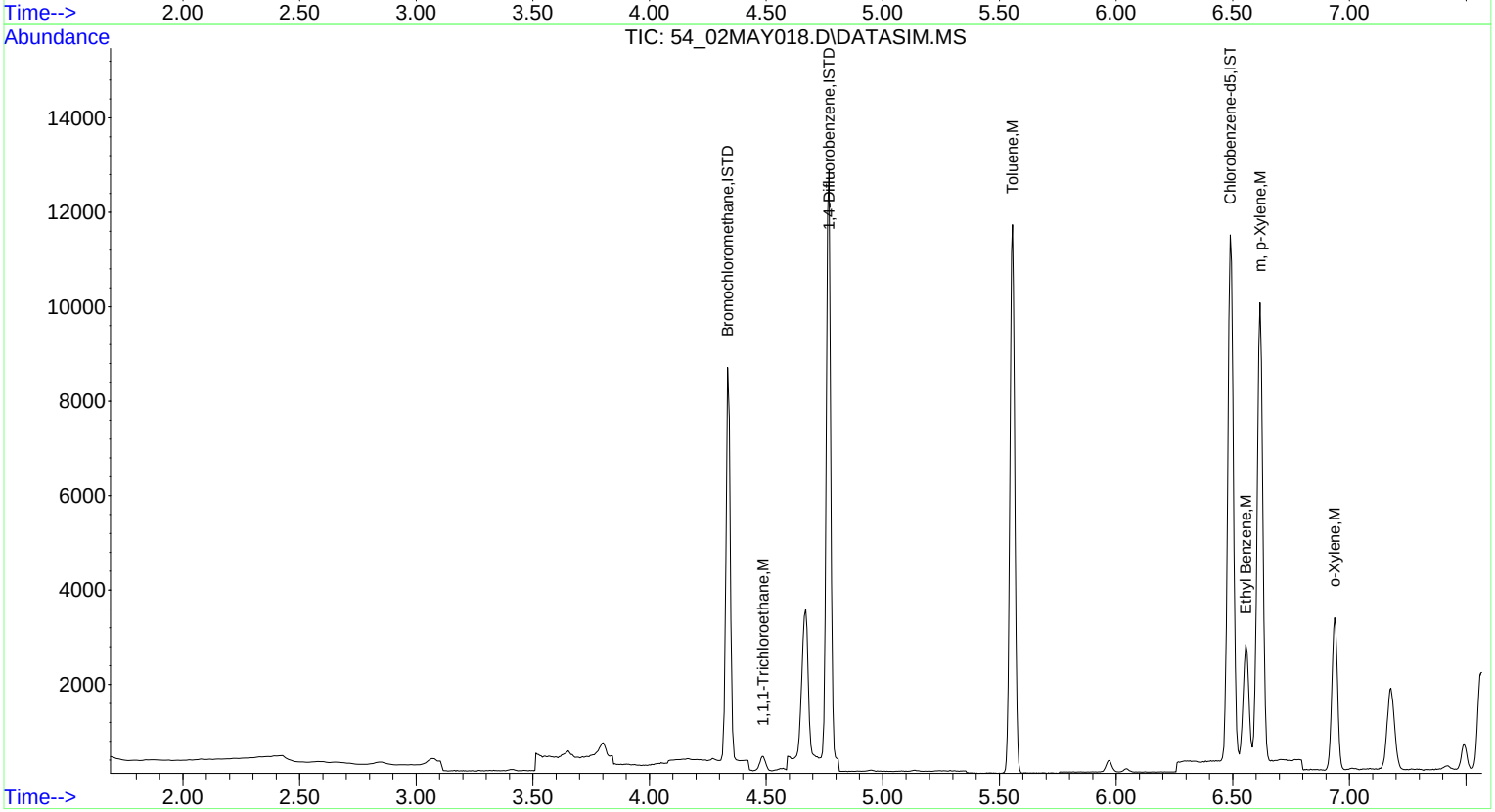
(#) = qualifier out of range (m) = manual integration (+) = signals summed

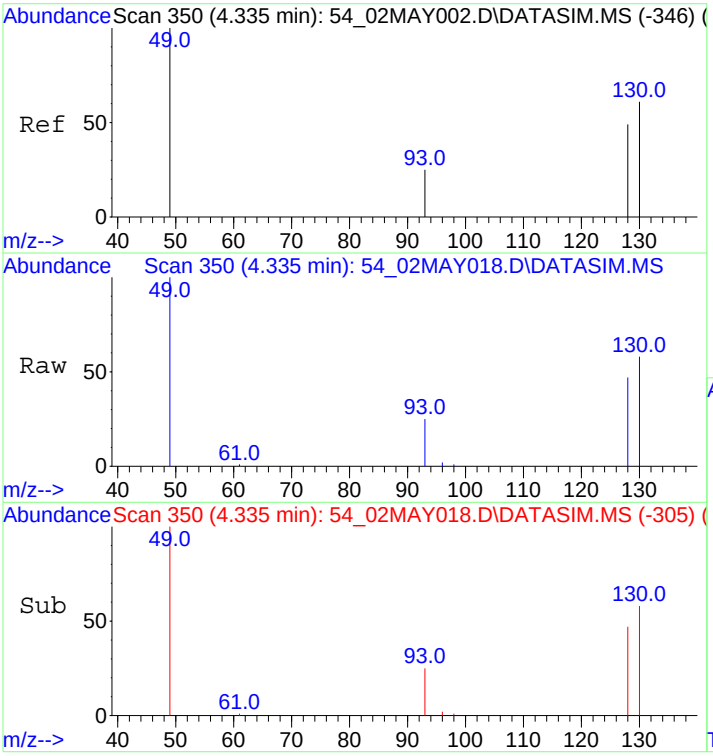
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\20140502\
Data File : 54 02MAY018.D
Acq On : 2 May 2014 3:59 pm
Operator : YHL
Sample : 02150 \ SG-18-5
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 02 13:56:55 2014
Quant Method : C:\Users\ylin\Documents\LOD LOQ20140416\20140416\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed Apr 16 13:21:03 2014
QLast Update : Mon Jun 02 13:41:20 2014
Response via : Initial Calibration



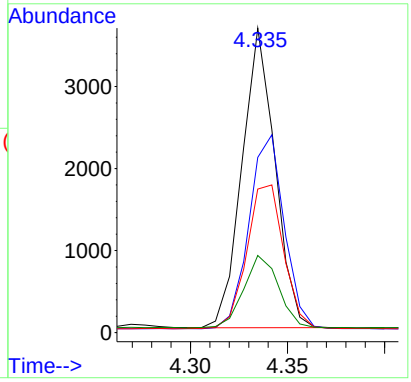


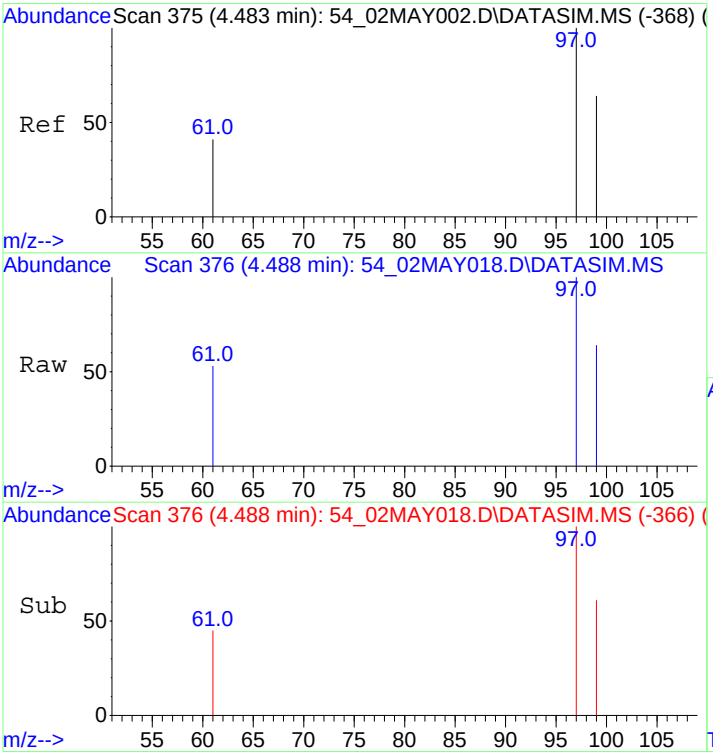


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY018.D
Acq: 2 May 2014 3:59 pm

Tgt Ion: 49 Resp: 4318

Ion	Ratio	Lower	Upper
49	100		
130	69.1	87.2	130.8#
128	53.6	68.0	102.0#
93	25.6	29.3	43.9#

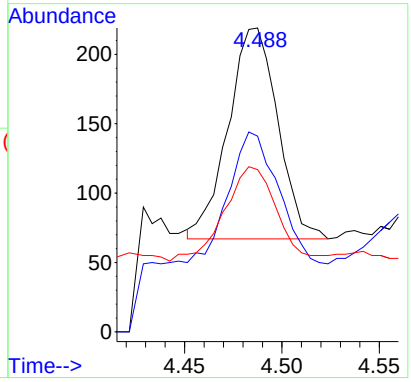


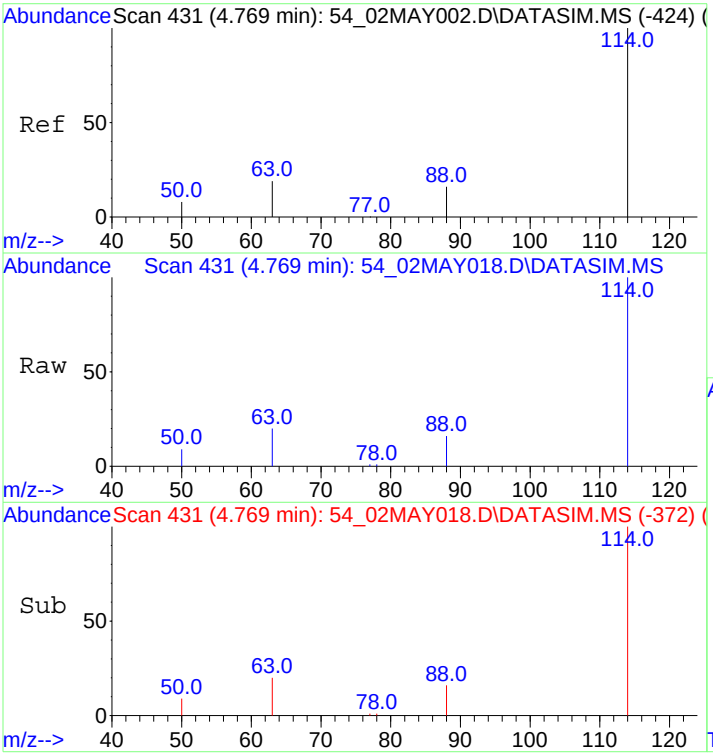


#8
1,1,1-Trichloroethane
Concen: 0.60 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.004 min
Lab File: 54_02MAY018.D
Acq: 2 May 2014 3:59 pm

Tgt Ion: 97 Resp: 270

Ion	Ratio	Lower	Upper
97	100		
99	62.2	52.1	78.1
61	40.0	30.2	45.4

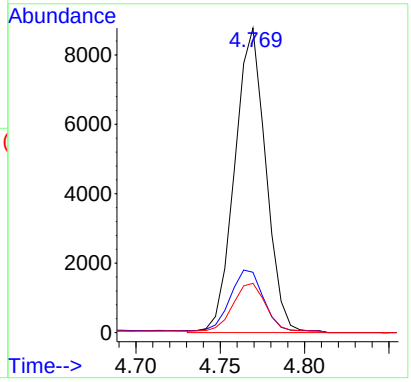


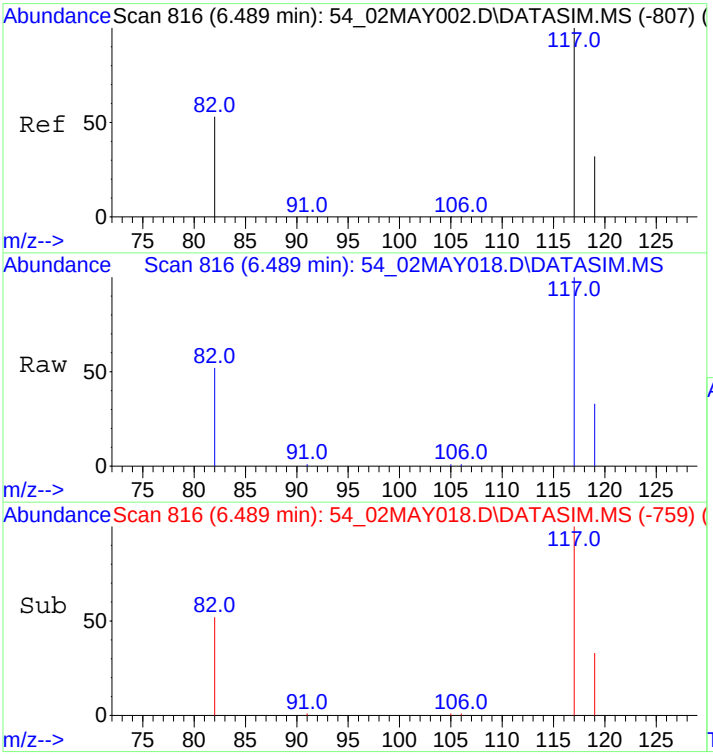


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 02MAY018.D
Acq: 2 May 2014 3:59 pm

Tgt Ion:114 Resp: 11290

Ion	Ratio	Lower	Upper
114	100		
63	20.5	12.0	18.0#
88	16.1	11.8	17.8

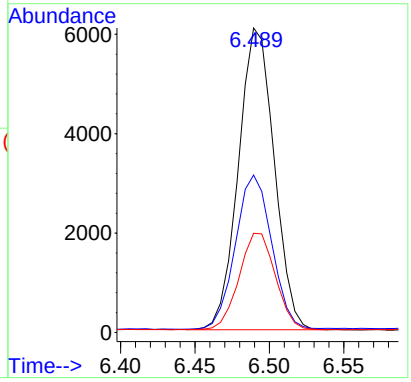


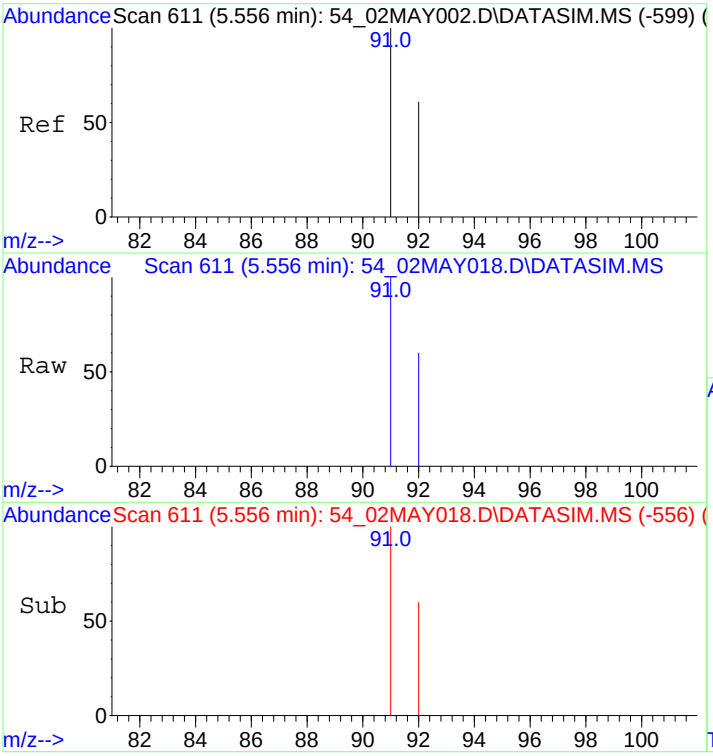


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54_02MAY018.D
Acq: 2 May 2014 3:59 pm

Tgt Ion:117 Resp: 10160

Ion	Ratio	Lower	Upper
117	100		
82	51.7	38.0	57.0
119	32.4	27.0	40.4

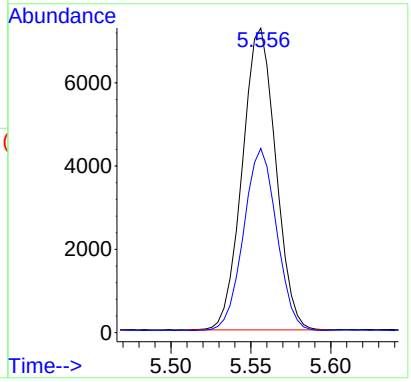


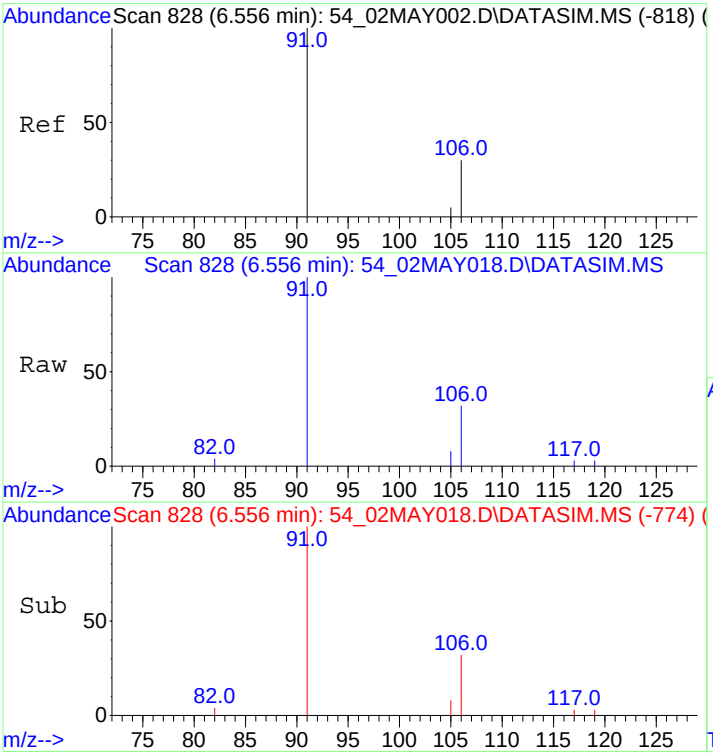


#13
Toluene
Concen: 17.29 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 02MAY018.D
Acq: 2 May 2014 3:59 pm

Tgt Ion: 91 Resp: 10530

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

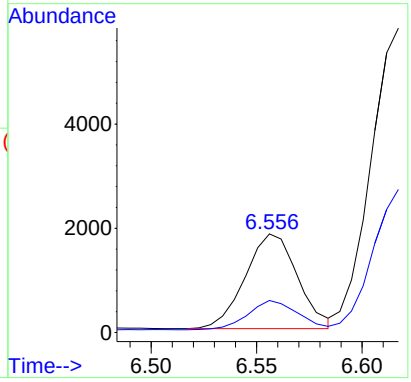


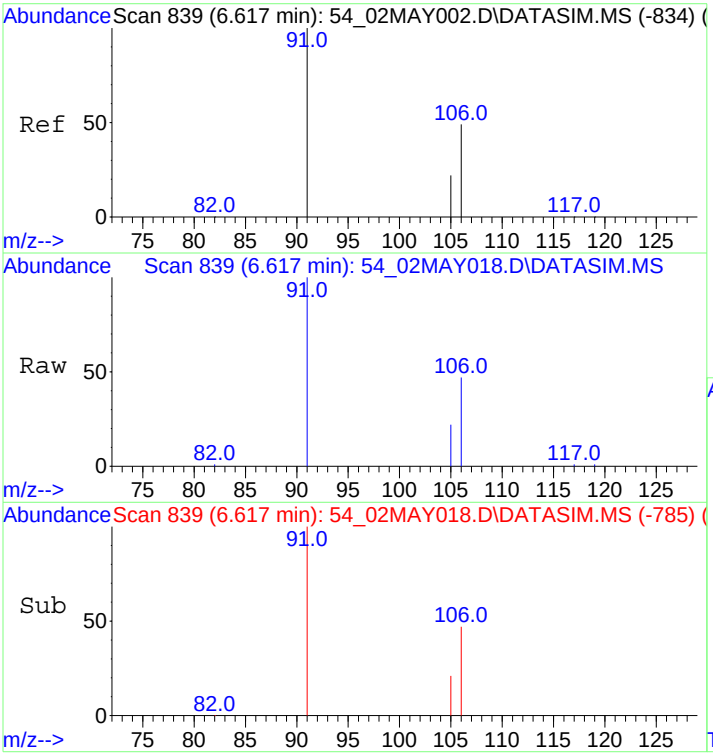


#15
Ethyl Benzene
Concen: 4.05 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54_02MAY018.D
Acq: 2 May 2014 3:59 pm

Tgt Ion: 91 Resp: 3132

Ion	Ratio	Lower	Upper
91	100		
106	29.7	26.9	40.3

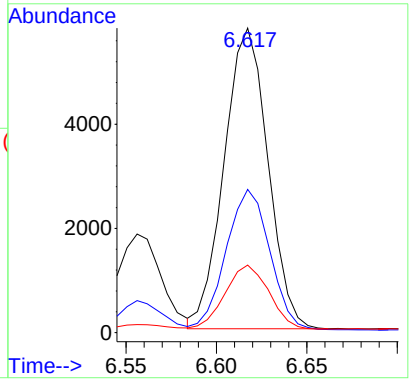


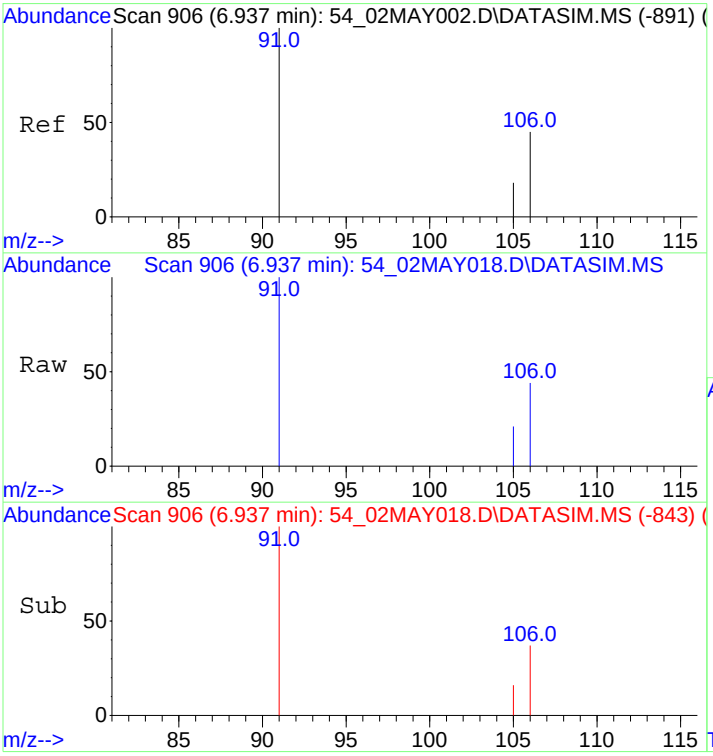


#16
m, p-Xylene
Concen: 16.36 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 02MAY018.D
Acq: 2 May 2014 3:59 pm

Tgt Ion: 91 Resp: 9712

Ion	Ratio	Lower	Upper
91	100		
106	46.8	43.1	64.7
105	21.3	18.3	27.5

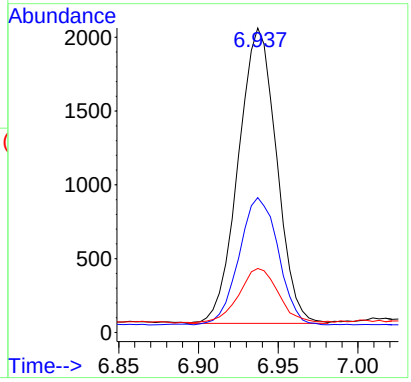




#17
o-Xylene
Concen: 5.55 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.000 min
Lab File: 54_02MAY018.D
Acq: 2 May 2014 3:59 pm

Tgt Ion: 91 Resp: 3340

Ion	Ratio	Lower	Upper
91	100		
106	44.0	40.1	60.1
105	18.9	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY019.D
Acq On : 2 May 2014 4:11 pm
Operator : YHL
Sample : 02151 \ F6-053
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:30:37 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

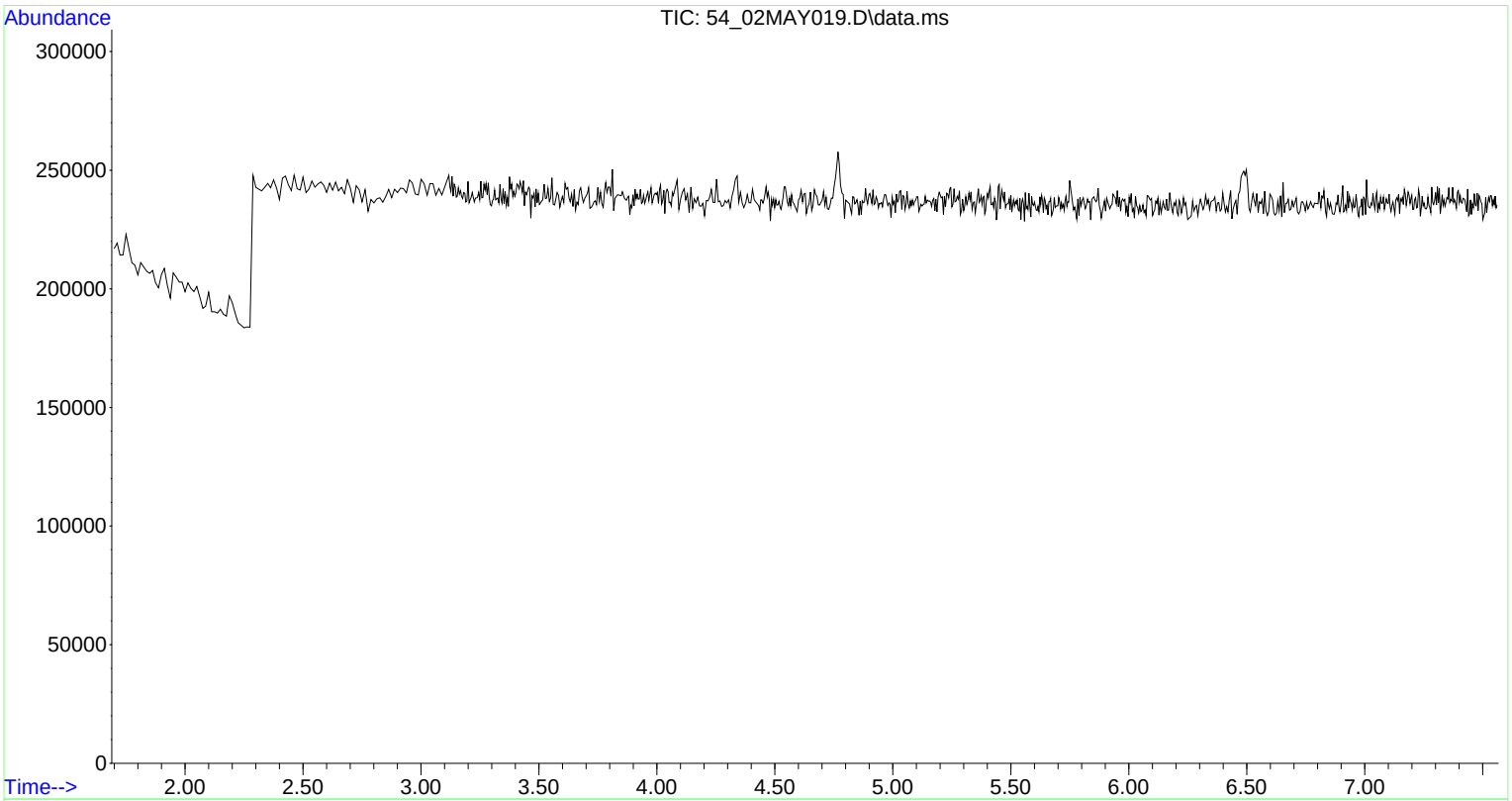
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4527	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11475	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10539	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.552	91	422	0.67	ppbv	99
16] m,p-Xylene	6.617	91	360	0.58	ppbv #	87

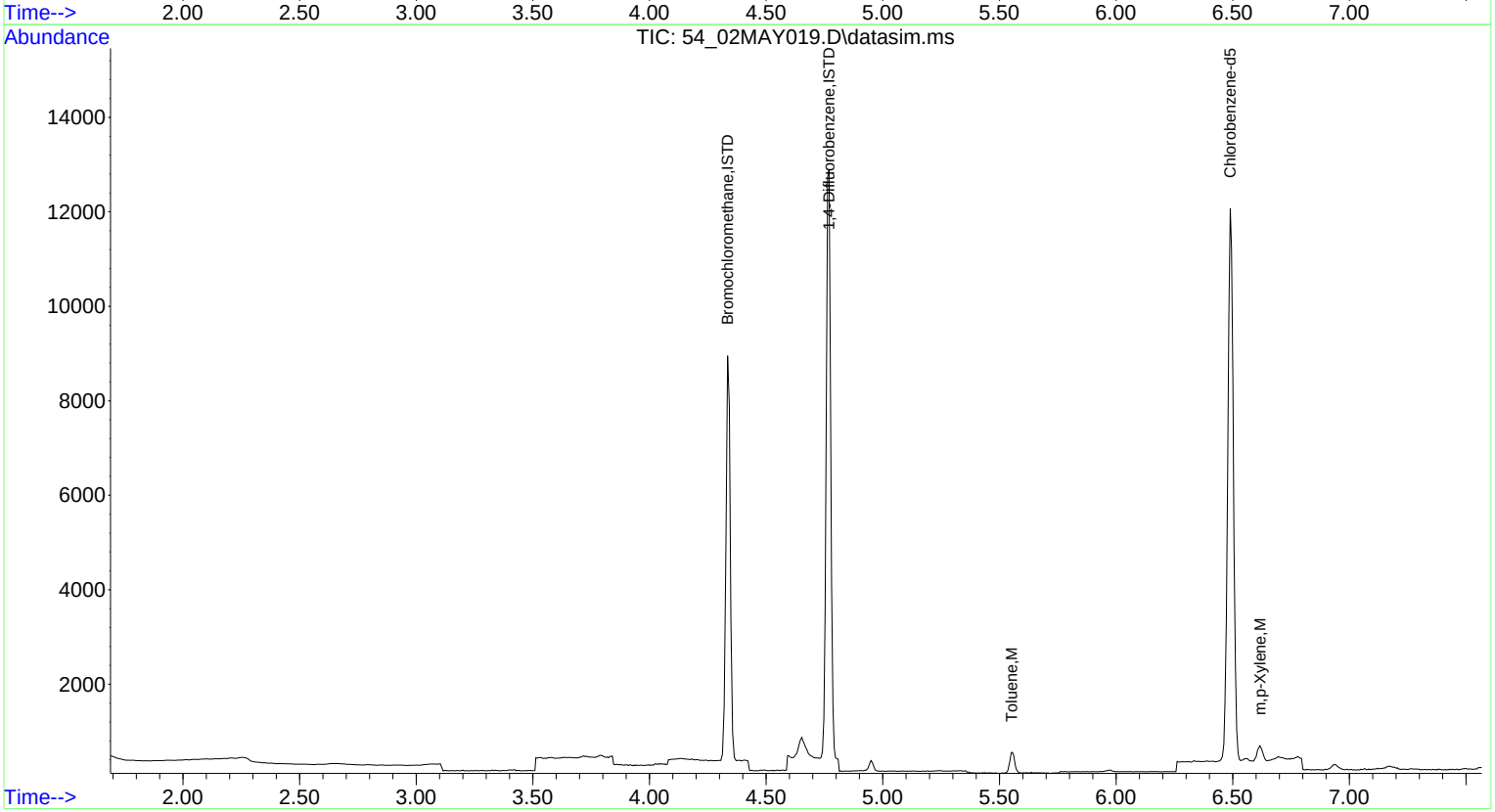
(#) = qualifier out of range (m) = manual integration (+) = signals summed

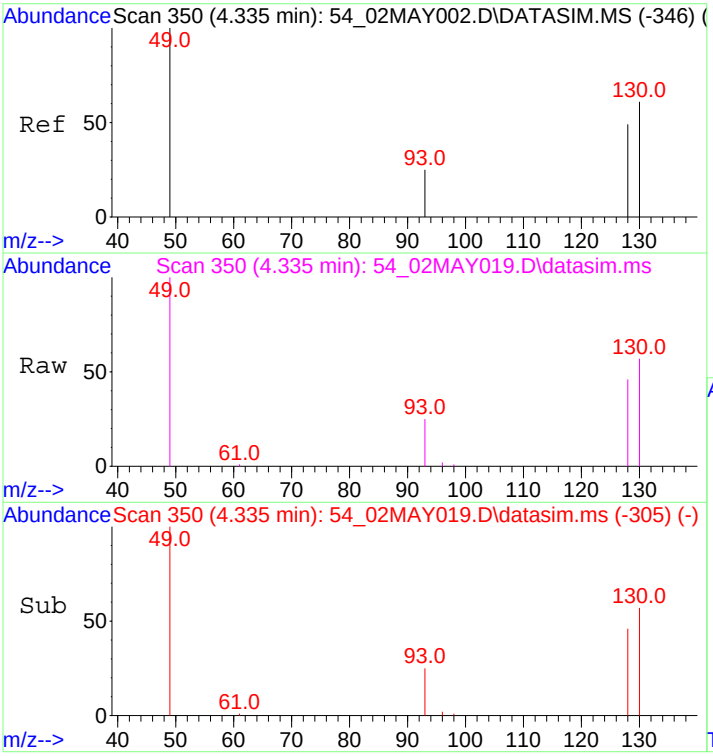
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY019.D
Acq On : 2 May 2014 4:11 pm
Operator : YHL
Sample : 02151 \ F6-053
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:30:37 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



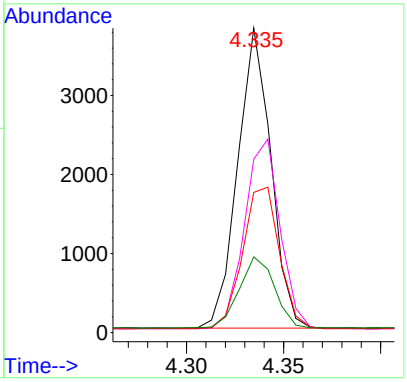


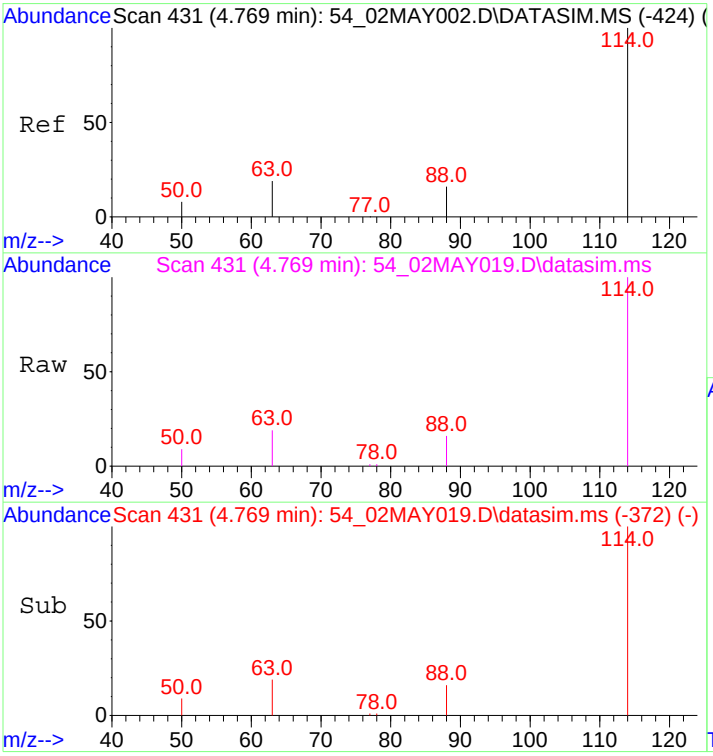


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY019.D
Acq: 2 May 2014 4:11 pm

Tgt Ion: 49 Resp: 4527

Ion	Ratio	Lower	Upper
49	100		
130	67.5	87.2	130.8#
128	52.3	68.0	102.0#
93	24.9	29.3	43.9#

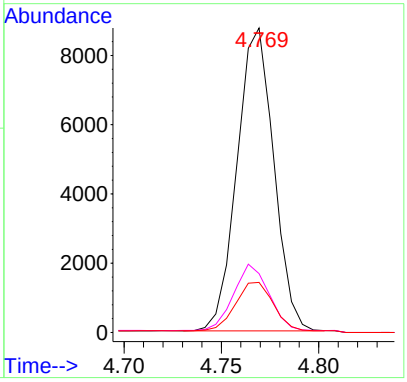


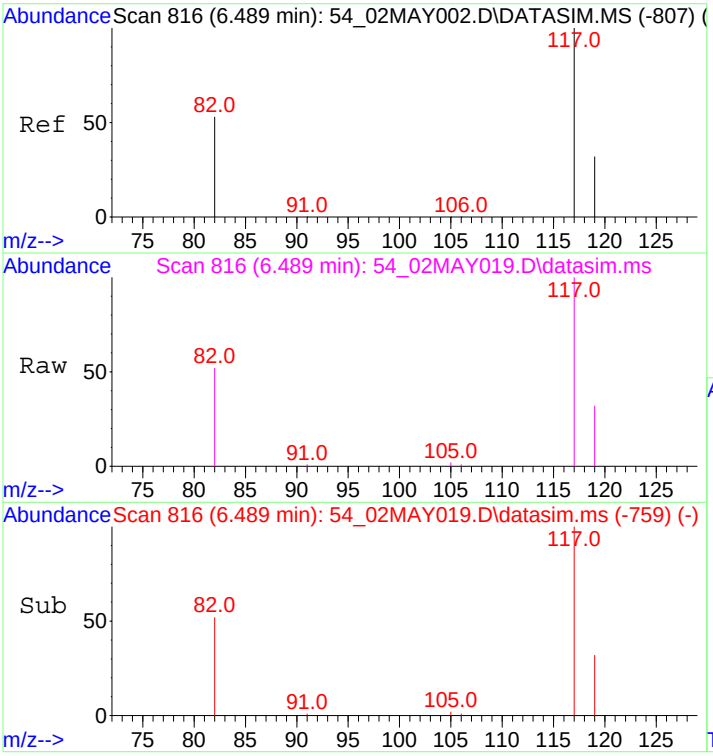


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY019.D
Acq: 2 May 2014 4:11 pm

Tgt Ion:114 Resp: 11475

Ion	Ratio	Lower	Upper
114	100		
63	21.1	12.0	18.0#
88	16.4	11.8	17.8

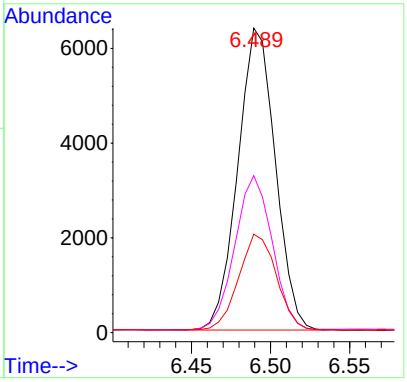


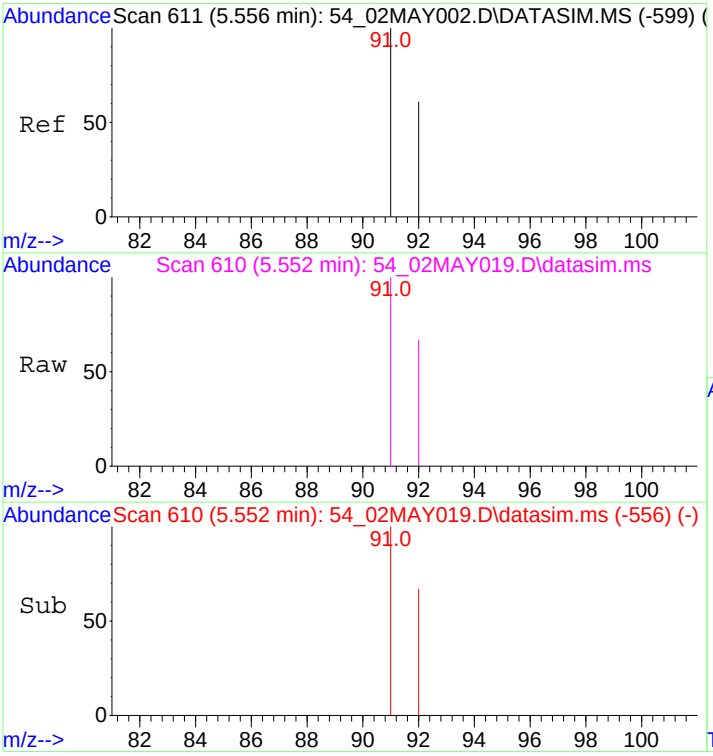


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 02MAY019.D
Acq: 2 May 2014 4:11 pm

Tgt Ion:117 Resp: 10539

Ion	Ratio	Lower	Upper
117	100		
82	50.9	38.0	57.0
119	31.8	27.0	40.4

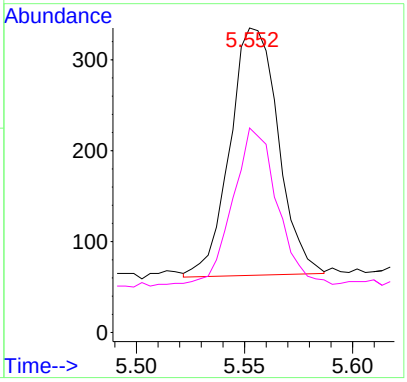


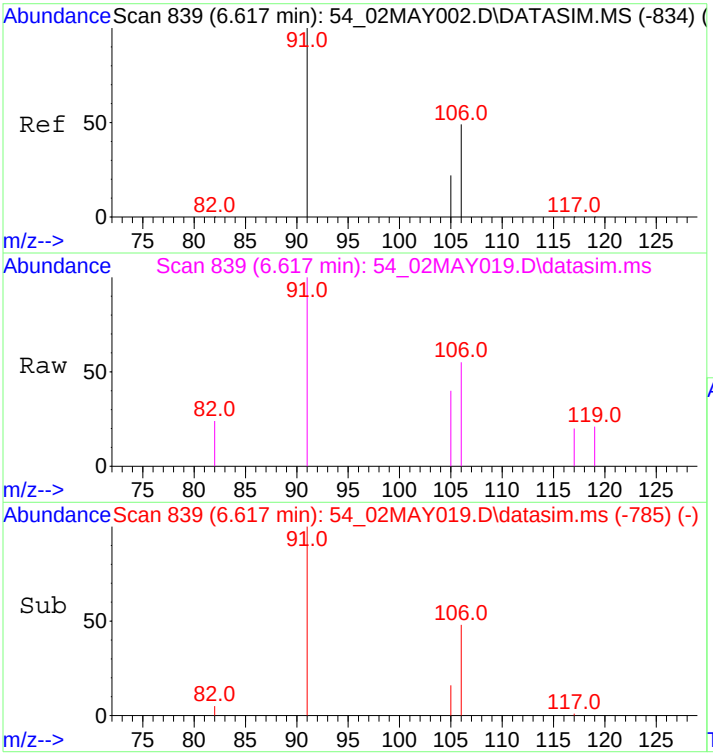


#13
Toluene
Concen: 0.67 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54_02MAY019.D
Acq: 2 May 2014 4:11 pm

Tgt Ion: 91 Resp: 422

Ion	Ratio	Lower	Upper
91	100		
92	60.2	47.8	71.8

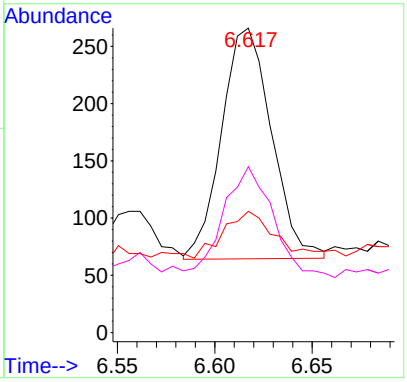




#16
m,p-Xylene
Concen: 0.58 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 02MAY019.D
Acq: 2 May 2014 4:11 pm

Tgt Ion: 91 Resp: 360

Ion	Ratio	Lower	Upper
91	100		
106	42.8	43.1	64.7#
105	19.2	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY020.D
Acq On : 2 May 2014 4:23 pm
Operator : YHL
Sample : 02152 \ F6-069
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:31:55 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

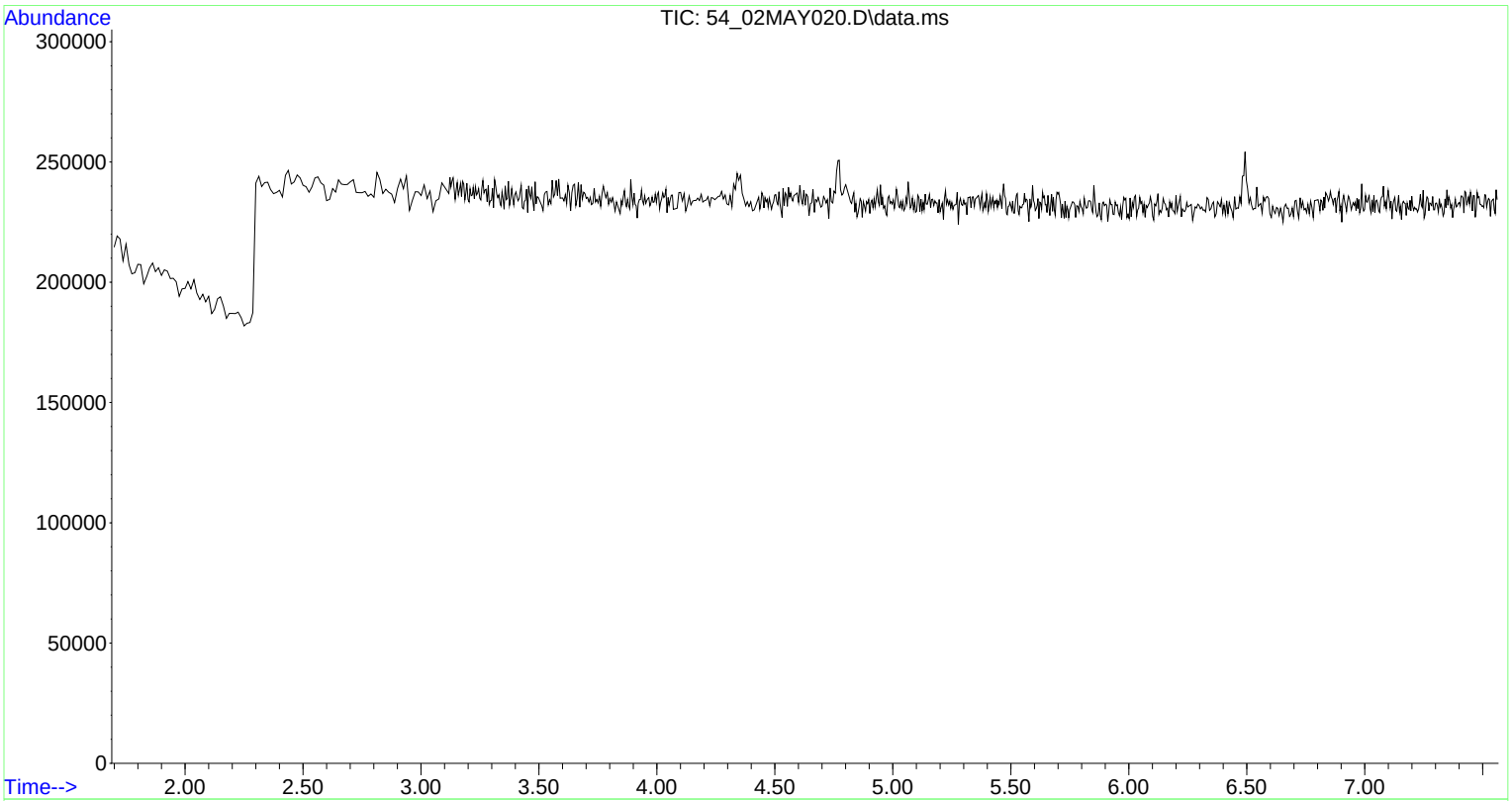
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4428	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11265	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	10297	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
11] Trichloroethene	4.950	130	693	2.47 ppbv	98

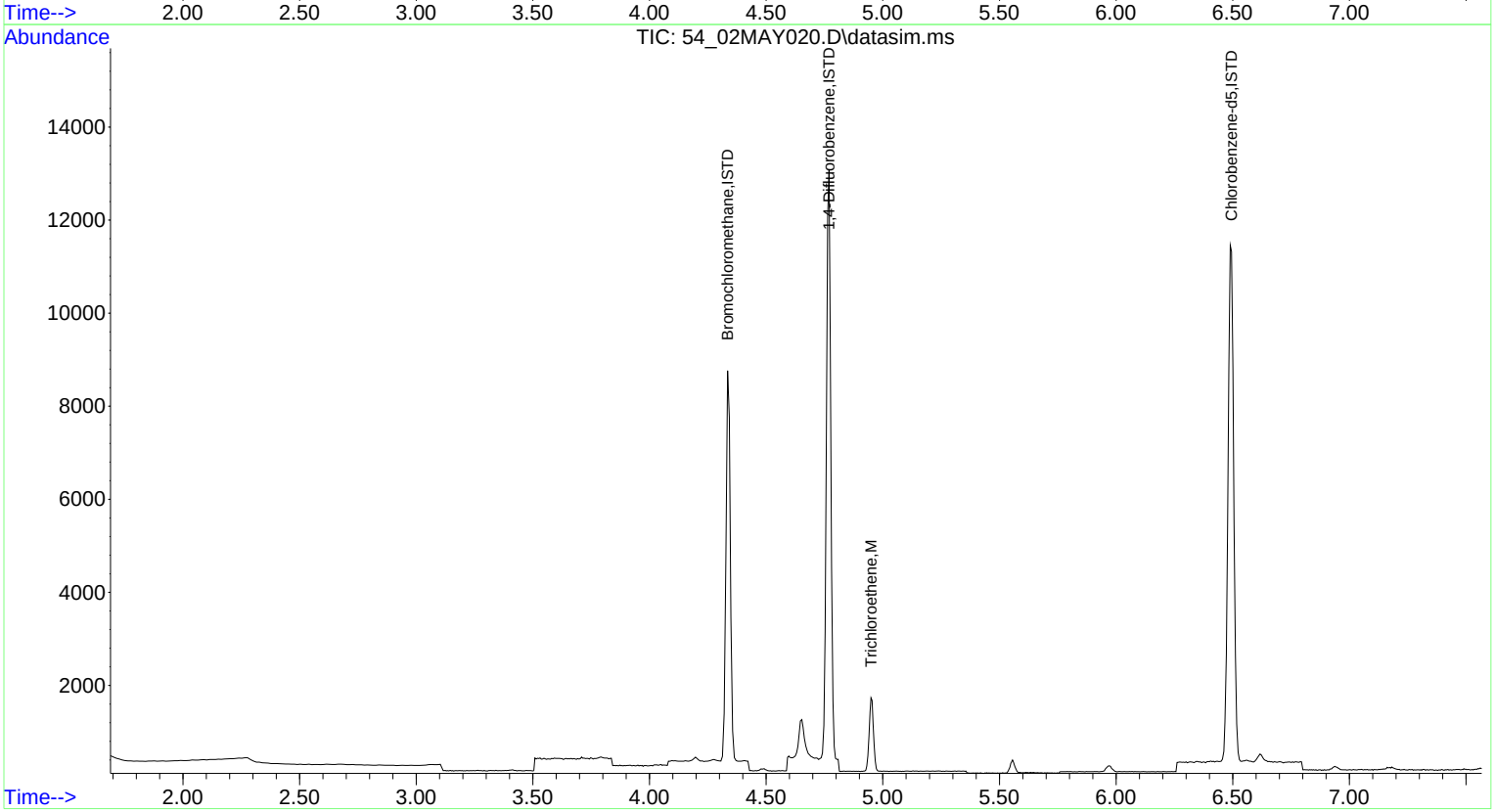
(#) = qualifier out of range (m) = manual integration (+) = signals summed

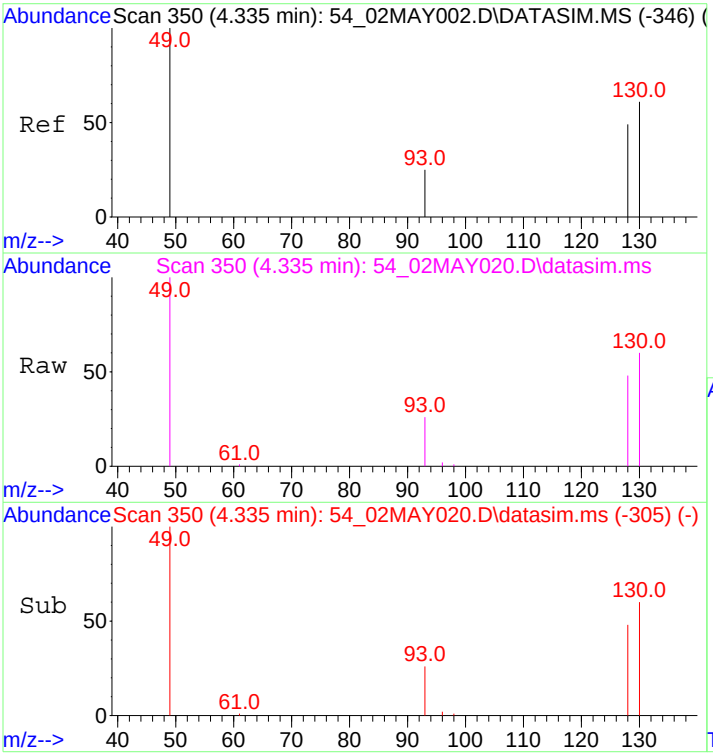
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY020.D
Acq On : 2 May 2014 4:23 pm
Operator : YHL
Sample : 02152 \ F6-069
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:31:55 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



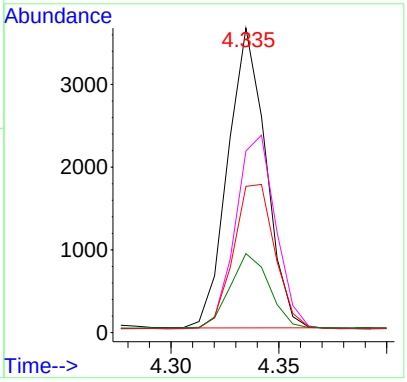


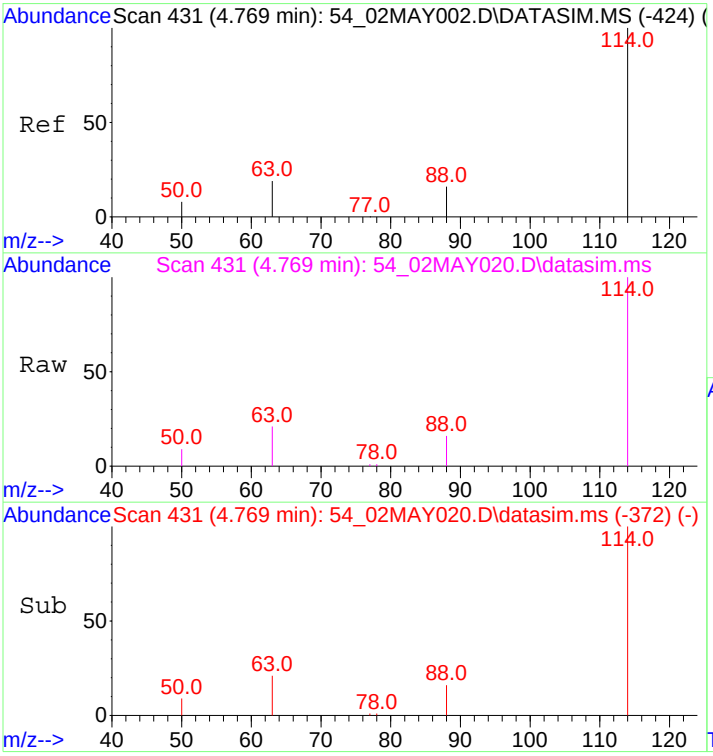


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY020.D
Acq: 2 May 2014 4:23 pm

Tgt Ion: 49 Resp: 4428

Ion	Ratio	Lower	Upper
49	100		
130	68.5	87.2	130.8#
128	52.8	68.0	102.0#
93	25.3	29.3	43.9#

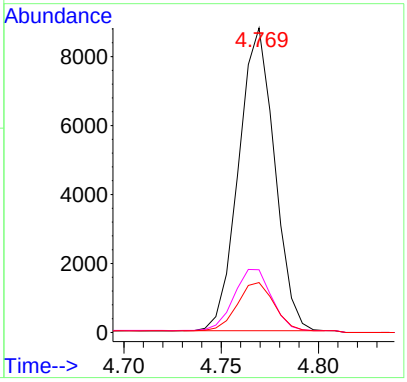


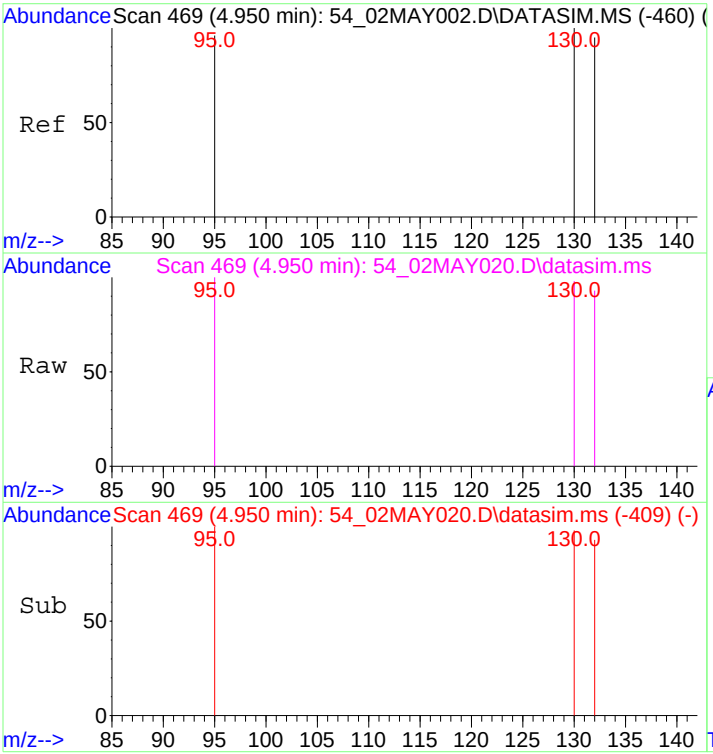


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY020.D
Acq: 2 May 2014 4:23 pm

Tgt Ion:114 Resp: 11265

Ion	Ratio	Lower	Upper
114	100		
63	21.1	12.0	18.0#
88	16.3	11.8	17.8

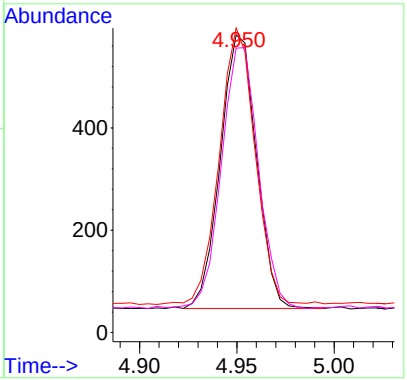


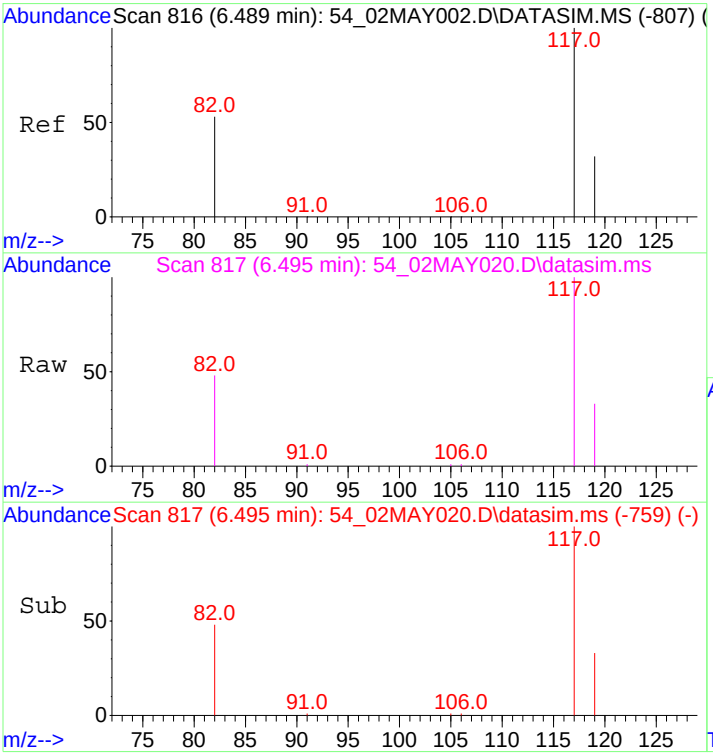


#11
Trichloroethene
Concen: 2.47 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 02MAY020.D
Acq: 2 May 2014 4:23 pm

Tgt Ion:130 Resp: 693

Ion	Ratio	Lower	Upper
130	100		
132	97.8	76.9	115.3
95	98.1	76.5	114.7

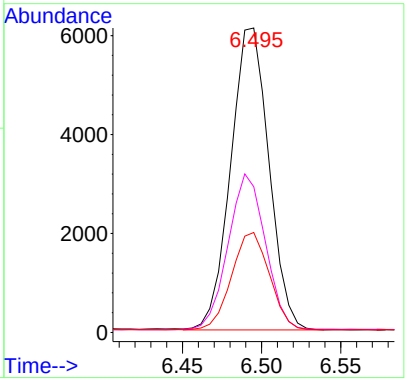




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.006 min
Lab File: 54_02MAY020.D
Acq: 2 May 2014 4:23 pm

Tgt Ion:117 Resp: 10297

Ion	Ratio	Lower	Upper
117	100		
82	50.3	38.0	57.0
119	32.0	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY021.D
Acq On : 2 May 2014 4:36 pm
Operator : YHL
Sample : 02153 \ G6-006
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:43:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

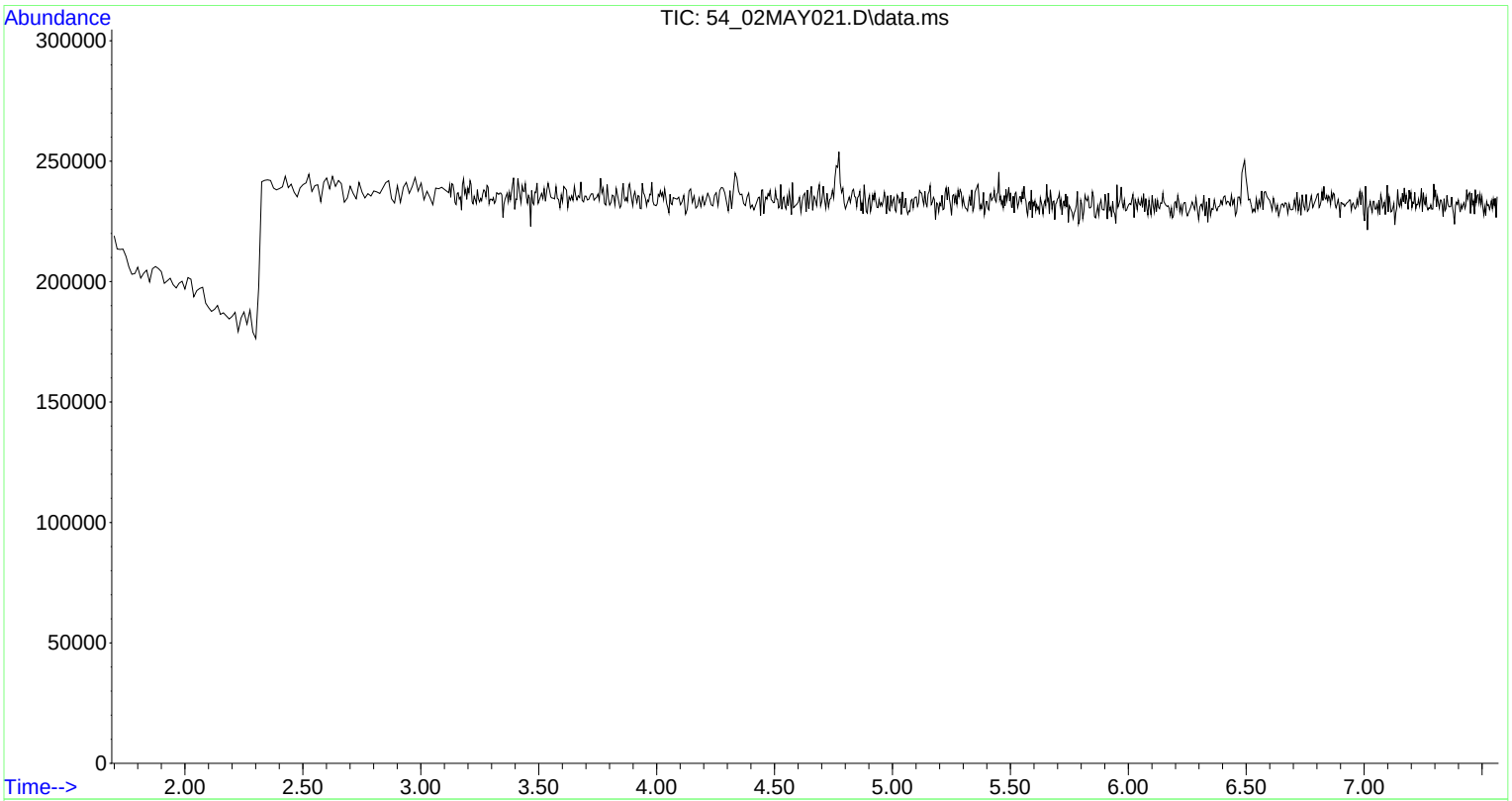
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4594	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11671	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10461	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.954	130	174m	0.60	ppbv	
13] Toluene	5.556	91	923	1.47	ppbv	99

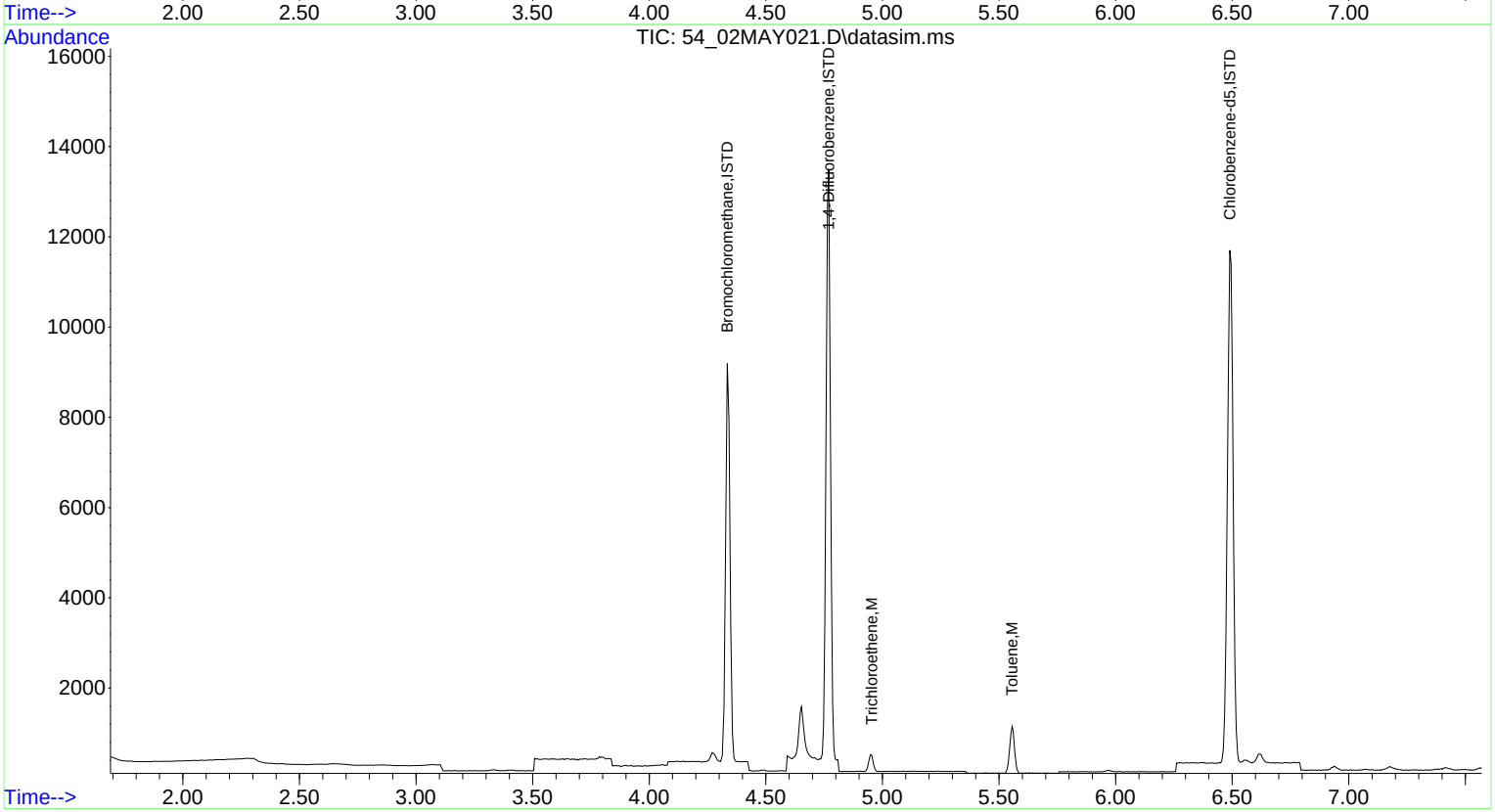
(#) = qualifier out of range (m) = manual integration (+) = signals summed

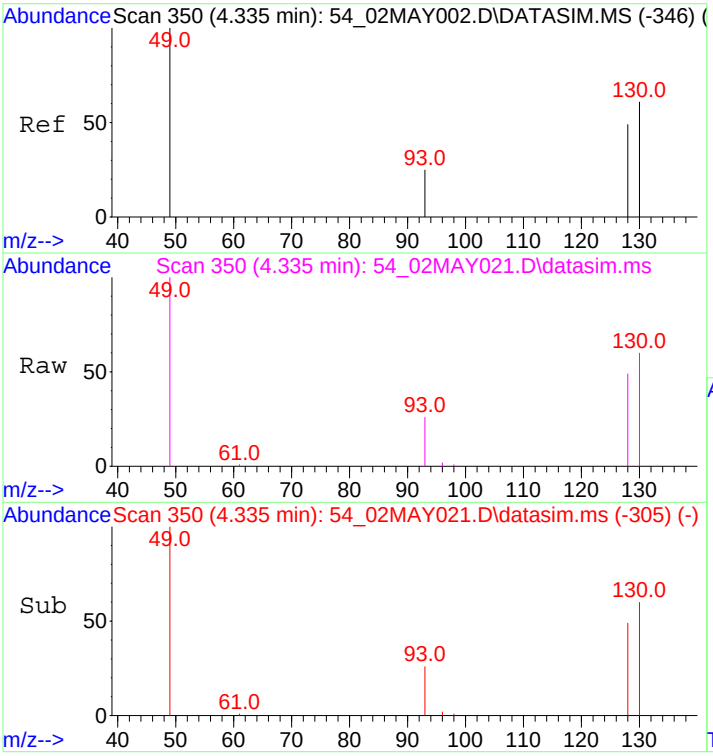
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY021.D
Acq On : 2 May 2014 4:36 pm
Operator : YHL
Sample : 02153 \ G6-006
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:43:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



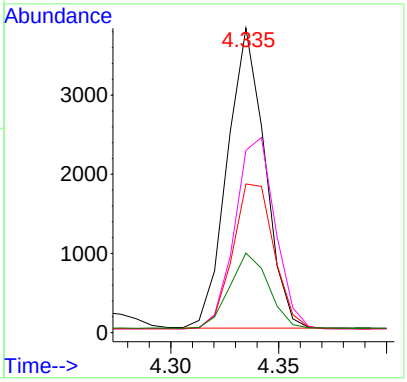


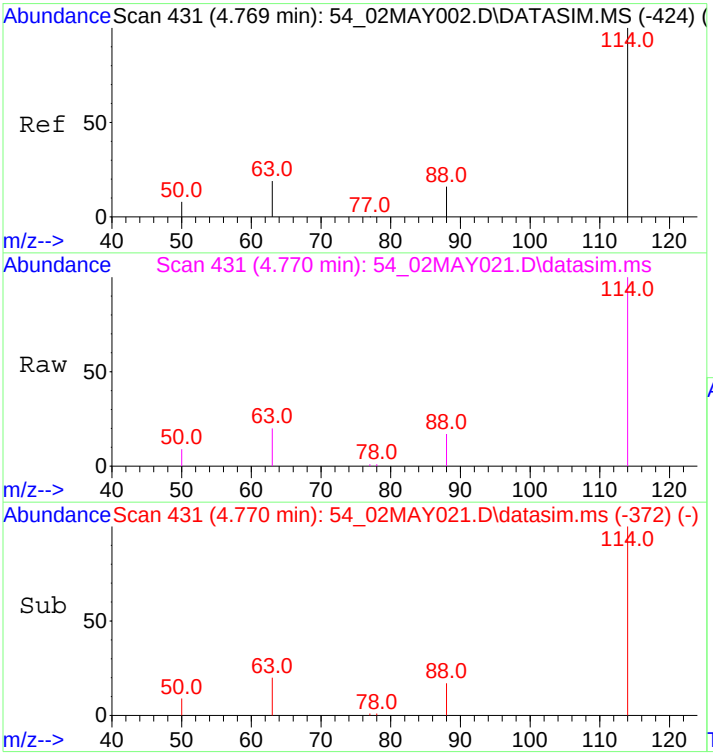


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY021.D
Acq: 2 May 2014 4:36 pm

Tgt Ion: 49 Resp: 4594

Ion	Ratio	Lower	Upper
49	100		
130	68.7	87.2	130.8#
128	53.4	68.0	102.0#
93	25.9	29.3	43.9#

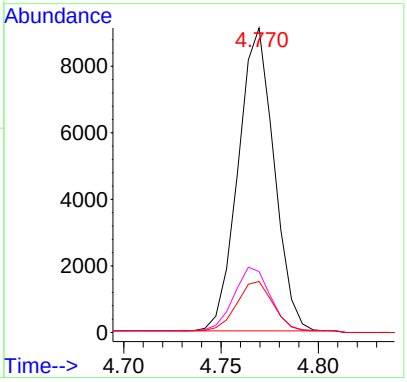


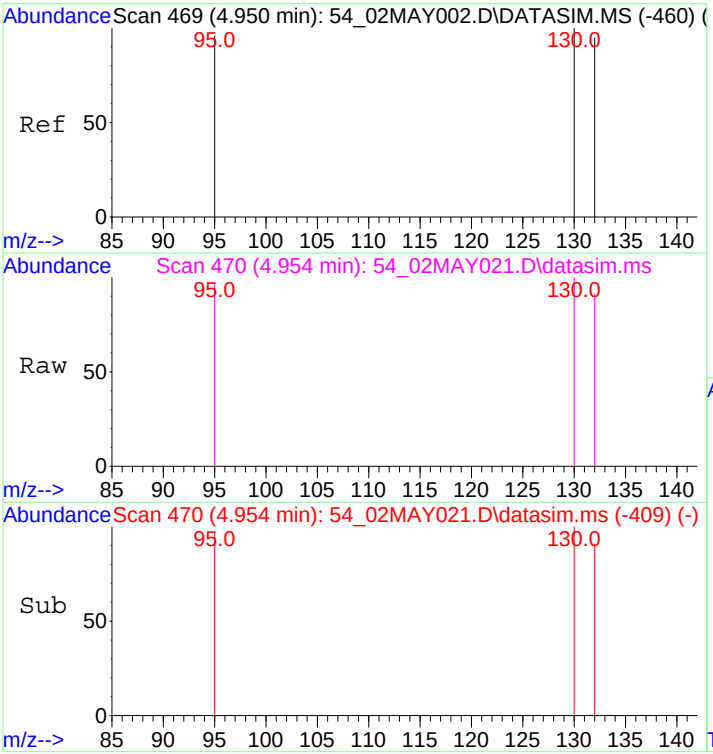


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY021.D
Acq: 2 May 2014 4:36 pm

Tgt Ion:114 Resp: 11671

Ion	Ratio	Lower	Upper
114	100		
63	21.1	12.0	18.0#
88	16.4	11.8	17.8

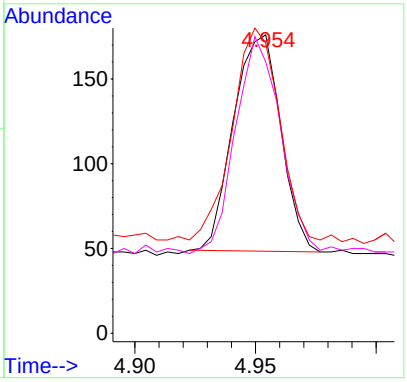


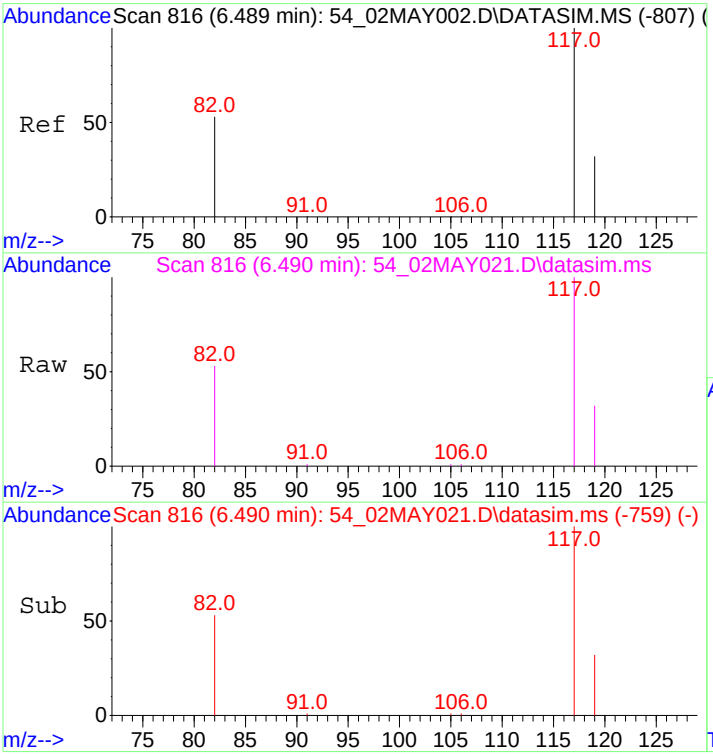


#11
Trichloroethene
Concen: 0.60 ppbv m
RT: 4.954 min Scan# 470
Delta R.T. 0.005 min
Lab File: 54 02MAY021.D
Acq: 2 May 2014 4:36 pm

Tgt Ion:130 Resp: 174

Ion	Ratio	Lower	Upper
130	100		
132	95.4	76.9	115.3
95	97.1	76.5	114.7

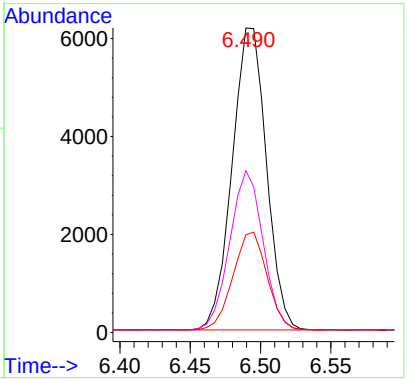




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54_02MAY021.D
Acq: 2 May 2014 4:36 pm

Tgt Ion:117 Resp: 10461

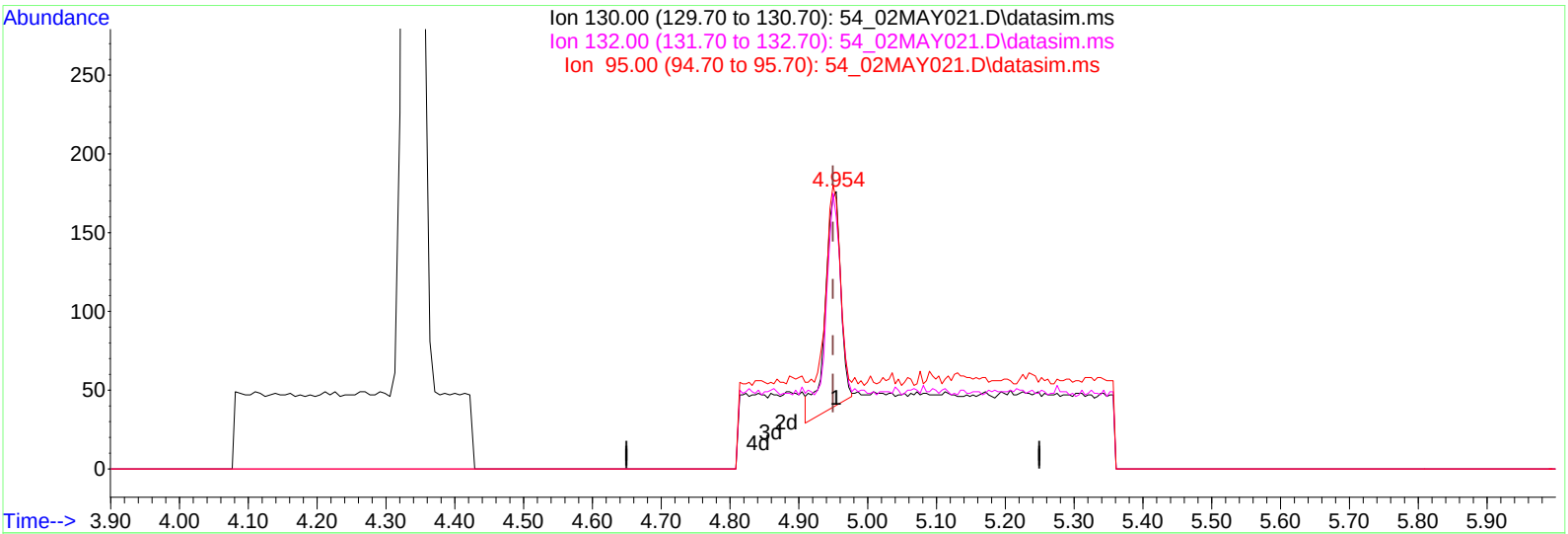
Ion	Ratio	Lower	Upper
117	100		
82	50.8	38.0	57.0
119	32.2	27.0	40.4

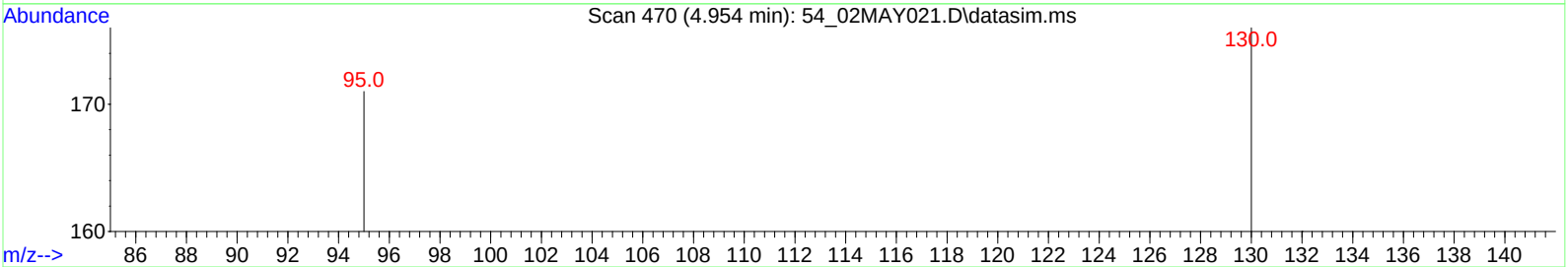


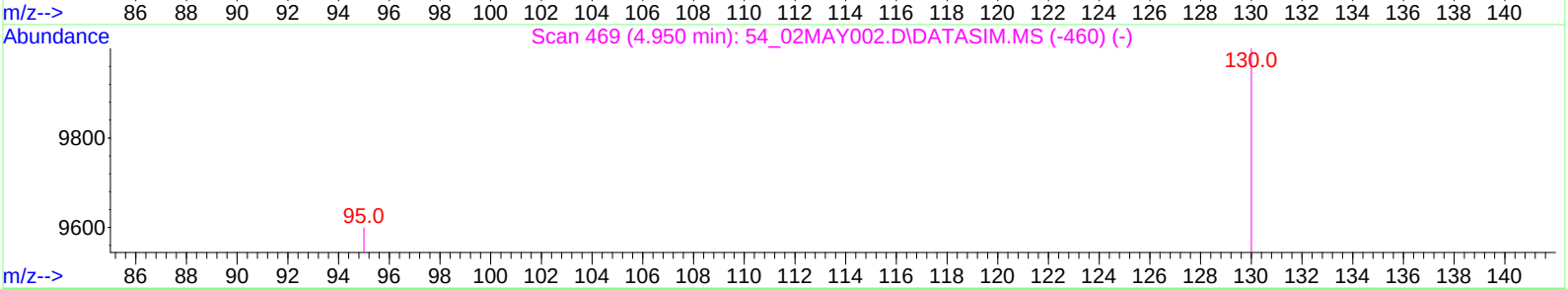
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY021.D
Acq On : 2 May 2014 4:36 pm
Operator : YHL
Sample : 02153 \ G6-006
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:43:02 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration







TIC: 54_02MAY021.D\data.ms

(11) Trichloroethene (M)

4.954min (+0.005) 0.75 ppbv

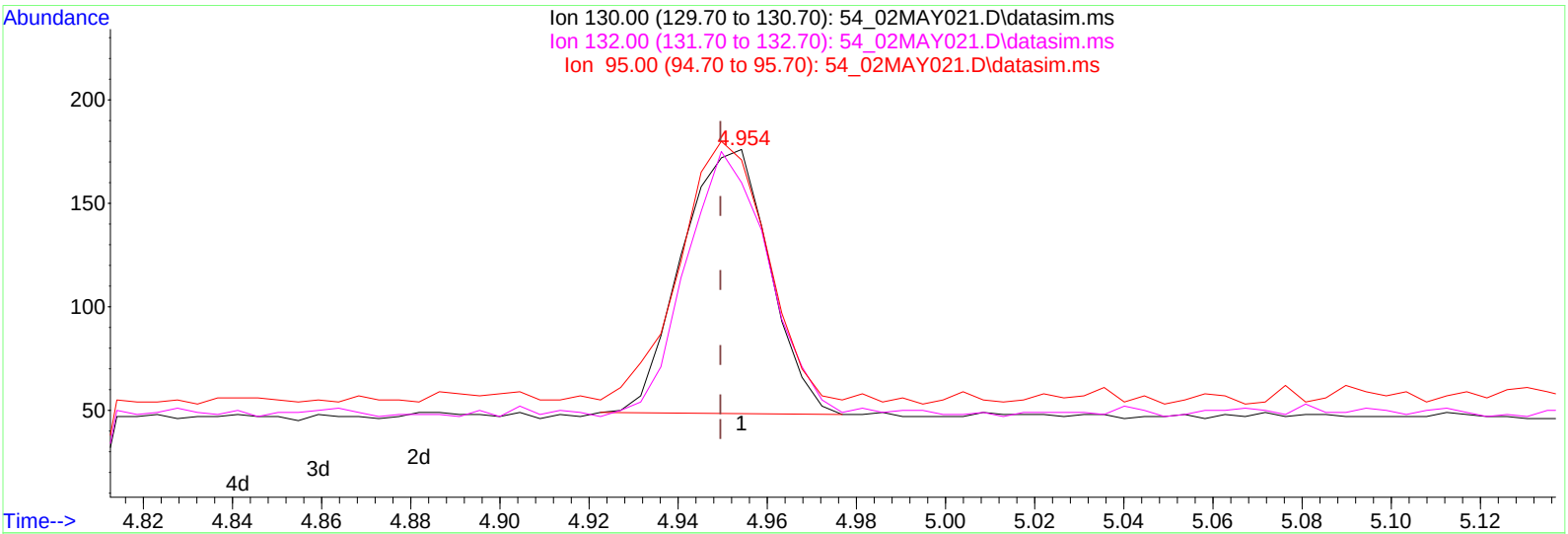
response 218

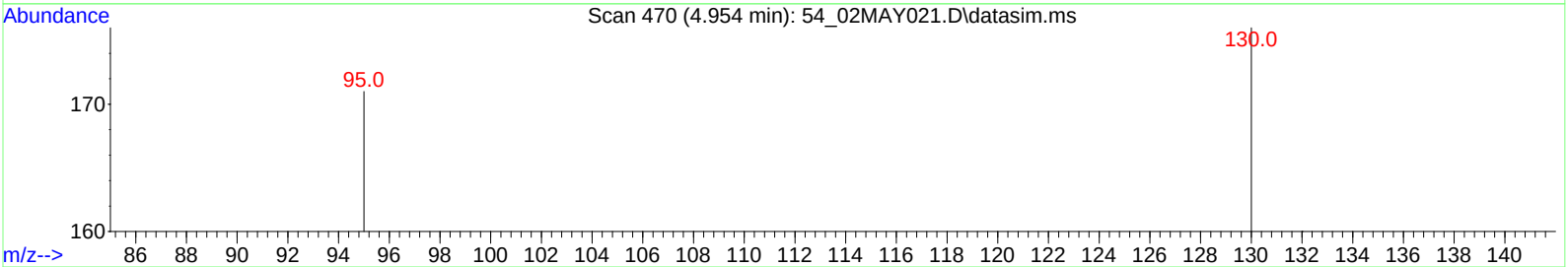
Ion	Exp%	Act%
130.00	100	100
132.00	96.10	76.15#
95.00	95.60	77.52
0.00	0.00	0.00

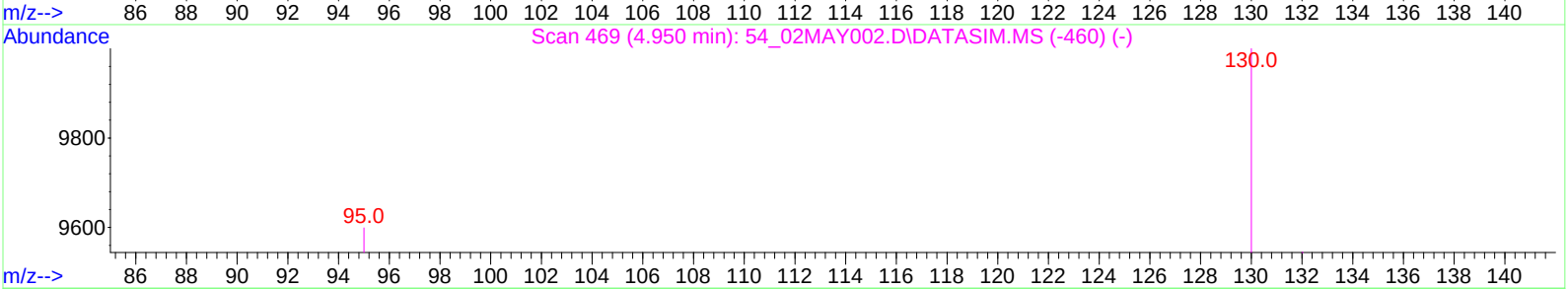
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY021.D
Acq On : 2 May 2014 4:36 pm
Operator : YHL
Sample : 02153 \ G6-006
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:43:02 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration







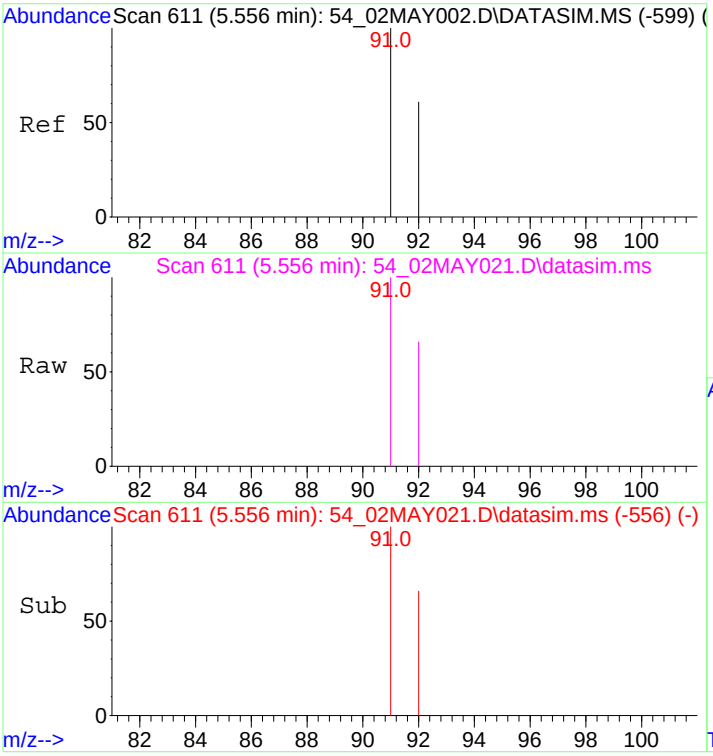
TIC: 54_02MAY021.D\data.ms

(11) Trichloroethene (M)

4.954min (+0.005) 0.60 ppbv m

response 174

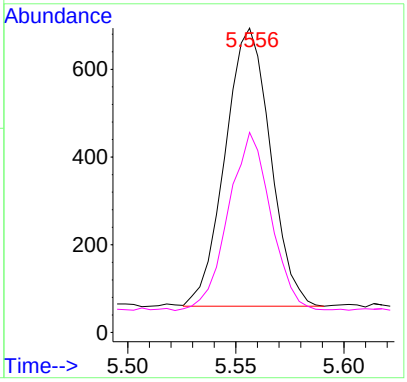
Ion	Exp%	Act%
130.00	100	100
132.00	96.10	95.40
95.00	95.60	97.13
0.00	0.00	0.00



#13
Toluene
Concen: 1.47 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 02MAY021.D
Acq: 2 May 2014 4:36 pm

Tgt Ion: 91 Resp: 923

Ion	Ratio	Lower	Upper
91	100		
92	60.2	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY022.D
Acq On : 2 May 2014 4:47 pm
Operator : YHL
Sample : 02154 \ G6-006
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:54:16 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

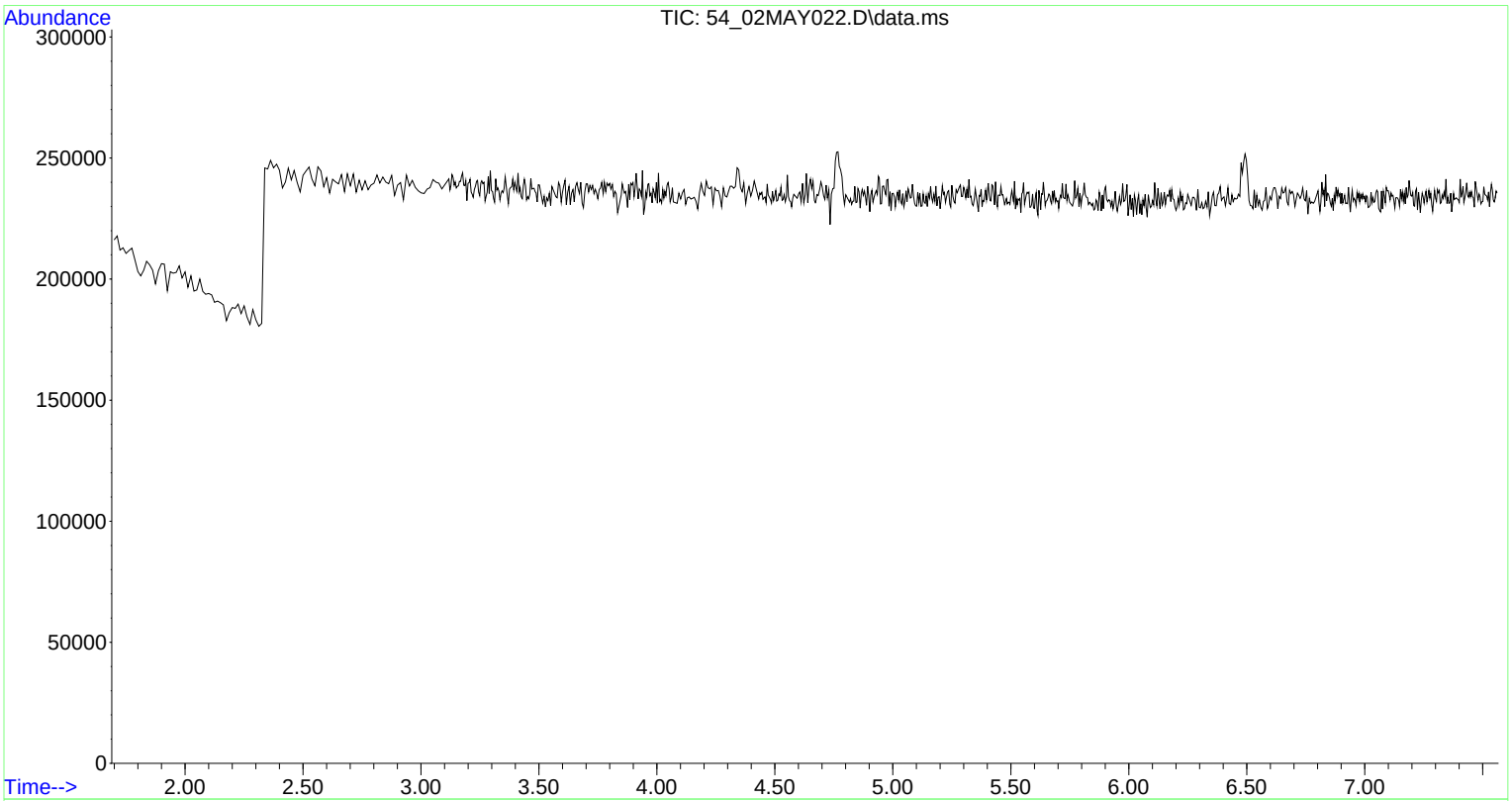
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4442	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11329	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10555	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	732	1.16	ppbv	97

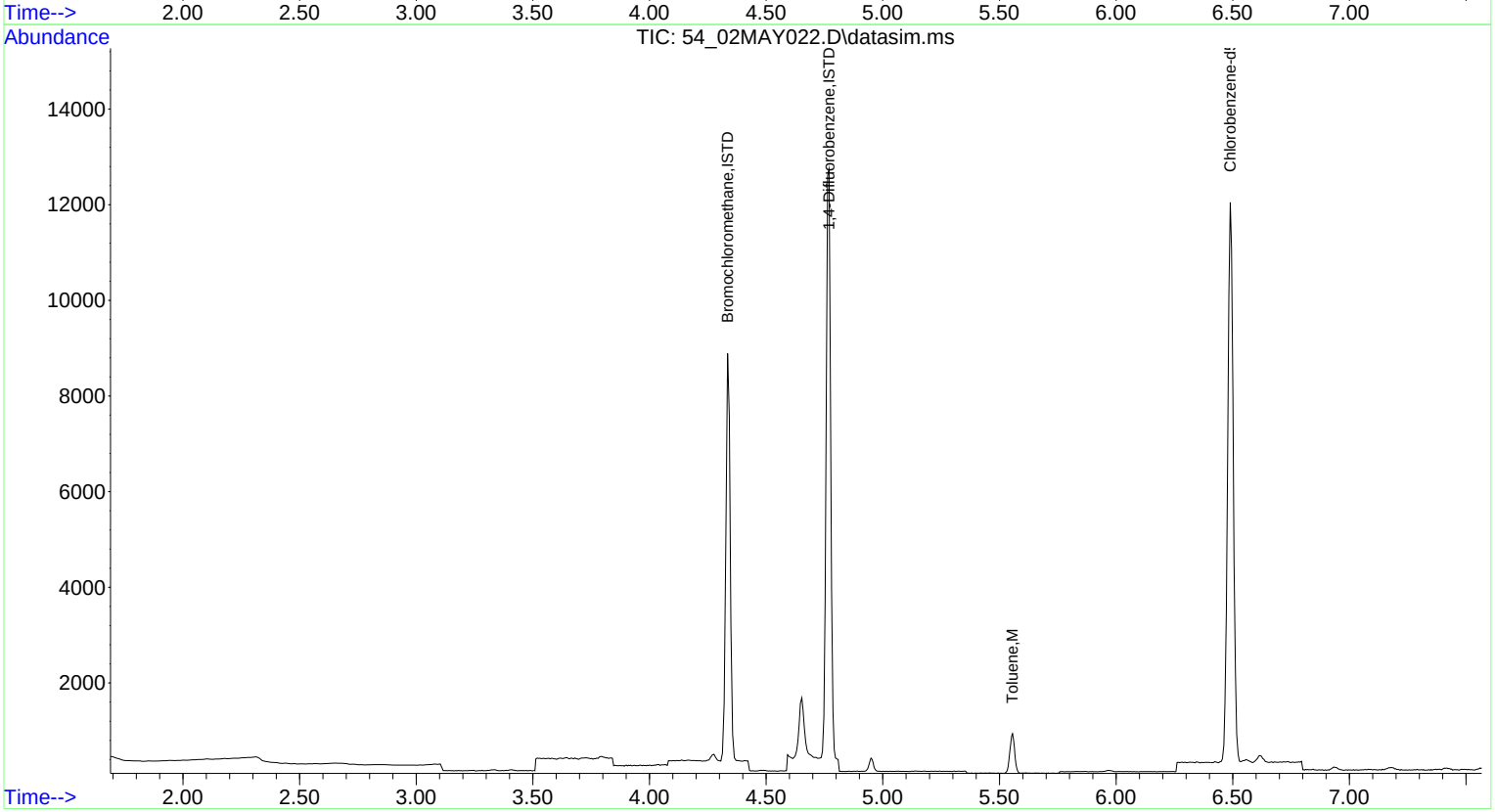
(#) = qualifier out of range (m) = manual integration (+) = signals summed

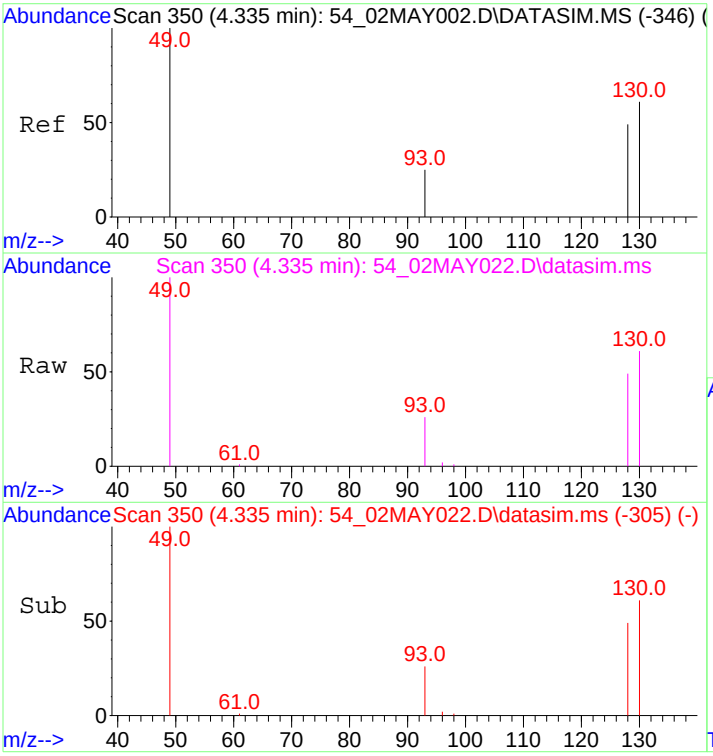
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY022.D
Acq On : 2 May 2014 4:47 pm
Operator : YHL
Sample : 02154 \ G6-006
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 16:54:16 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



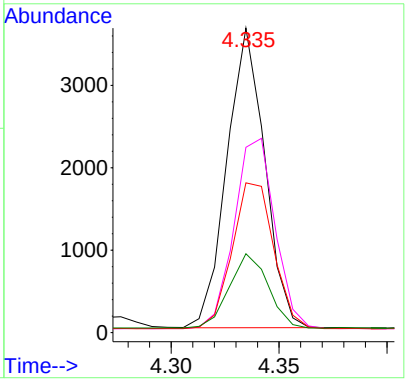


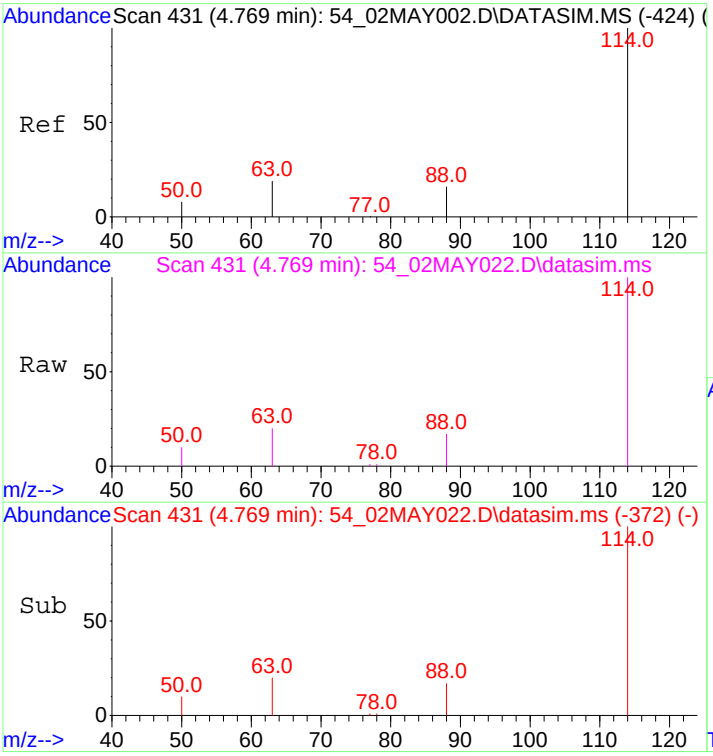


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY022.D
Acq: 2 May 2014 4:47 pm

Tgt Ion: 49 Resp: 4442

Ion	Ratio	Lower	Upper
49	100		
130	68.6	87.2	130.8#
128	53.7	68.0	102.0#
93	25.4	29.3	43.9#

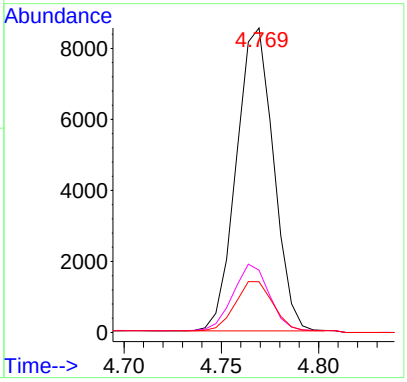


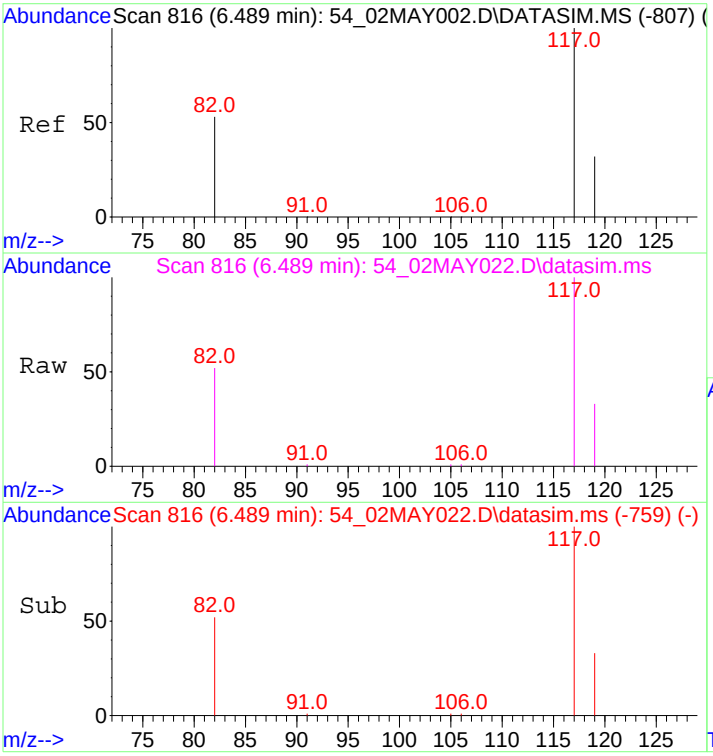


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY022.D
Acq: 2 May 2014 4:47 pm

Tgt Ion:114 Resp: 11329

Ion	Ratio	Lower	Upper
114	100		
63	21.2	12.0	18.0#
88	16.3	11.8	17.8

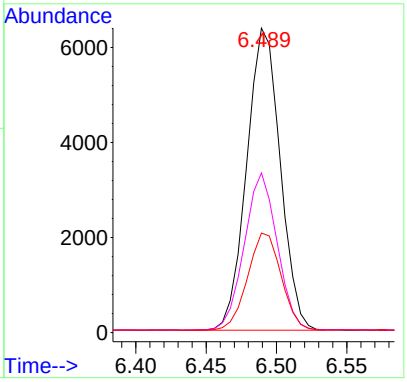


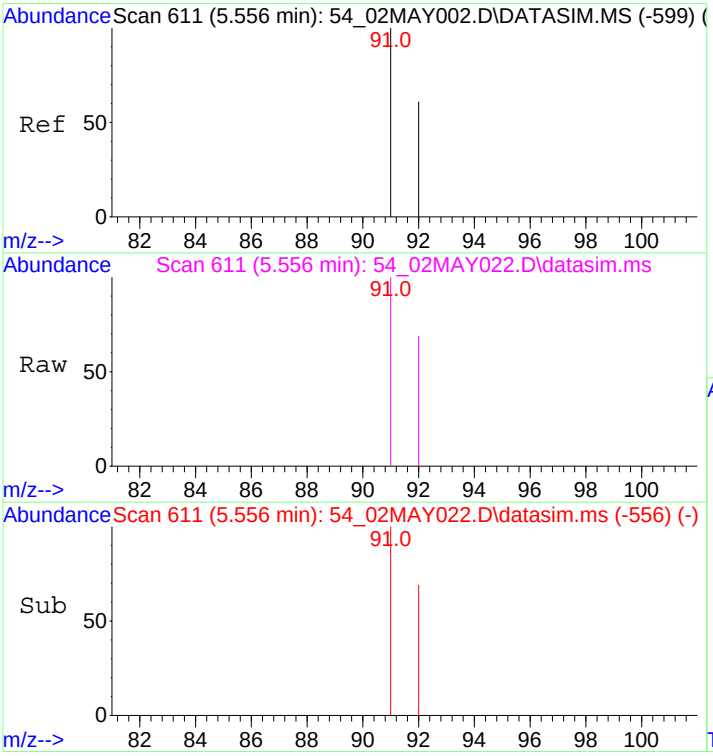


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 02MAY022.D
Acq: 2 May 2014 4:47 pm

Tgt Ion:117 Resp: 10555

Ion	Ratio	Lower	Upper
117	100		
82	50.9	38.0	57.0
119	32.3	27.0	40.4

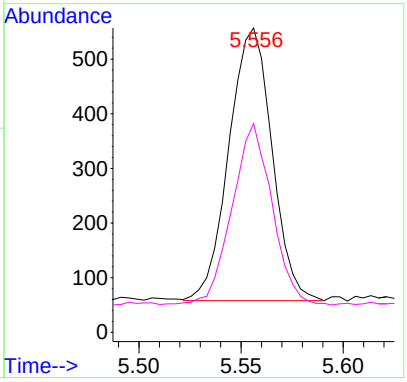




#13
Toluene
Concen: 1.16 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_02MAY022.D
Acq: 2 May 2014 4:47 pm

Tgt Ion: 91 Resp: 732

Ion	Ratio	Lower	Upper
91	100		
92	62.0	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY023.D
Acq On : 2 May 2014 4:58 pm
Operator : YHL
Sample : 02155 \ G6-024
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 17:04:58 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4363	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11021	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10430	10.00 ppbv	0.00

System Monitoring Compounds

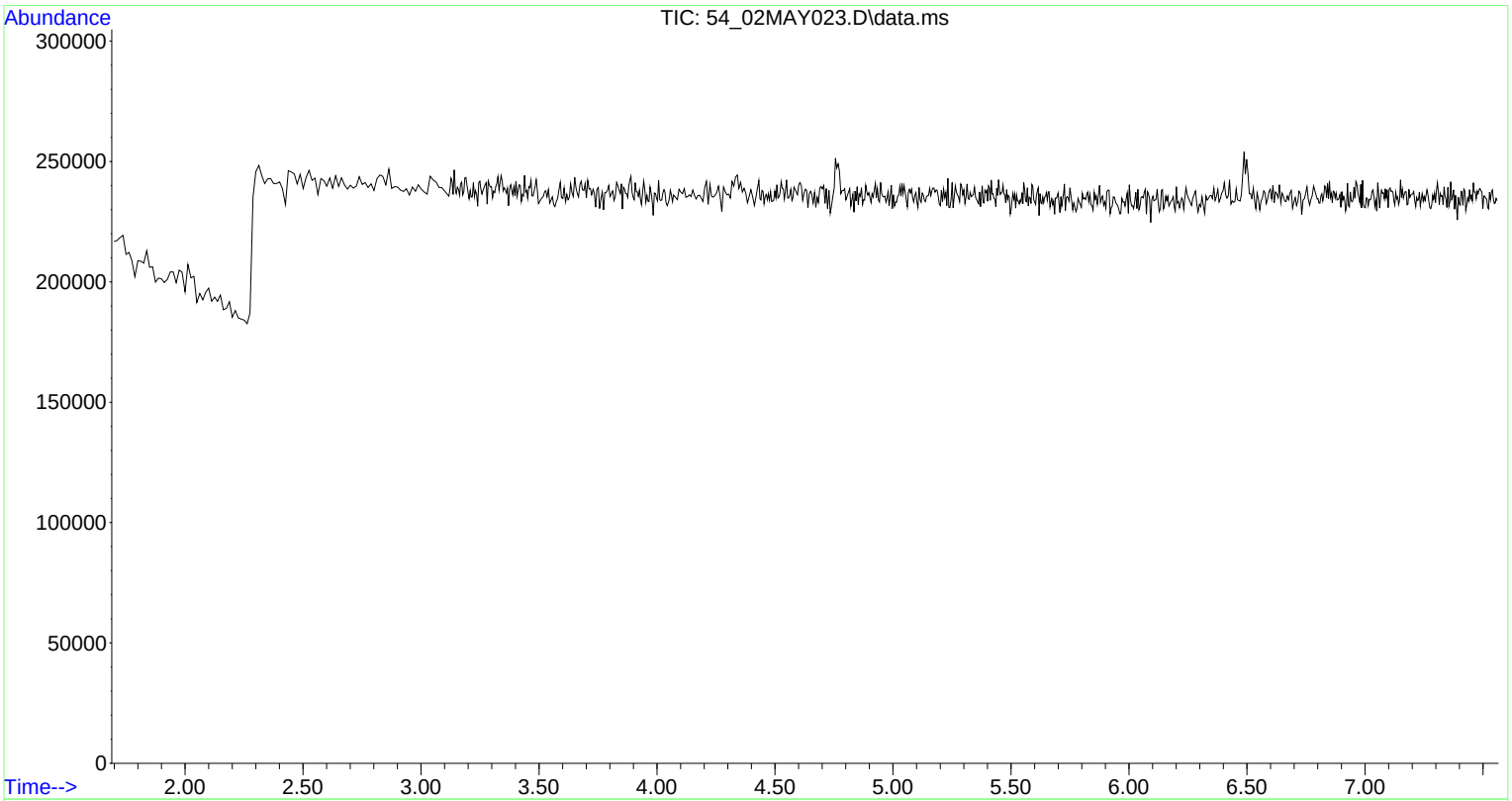
Target Compounds	Qvalue

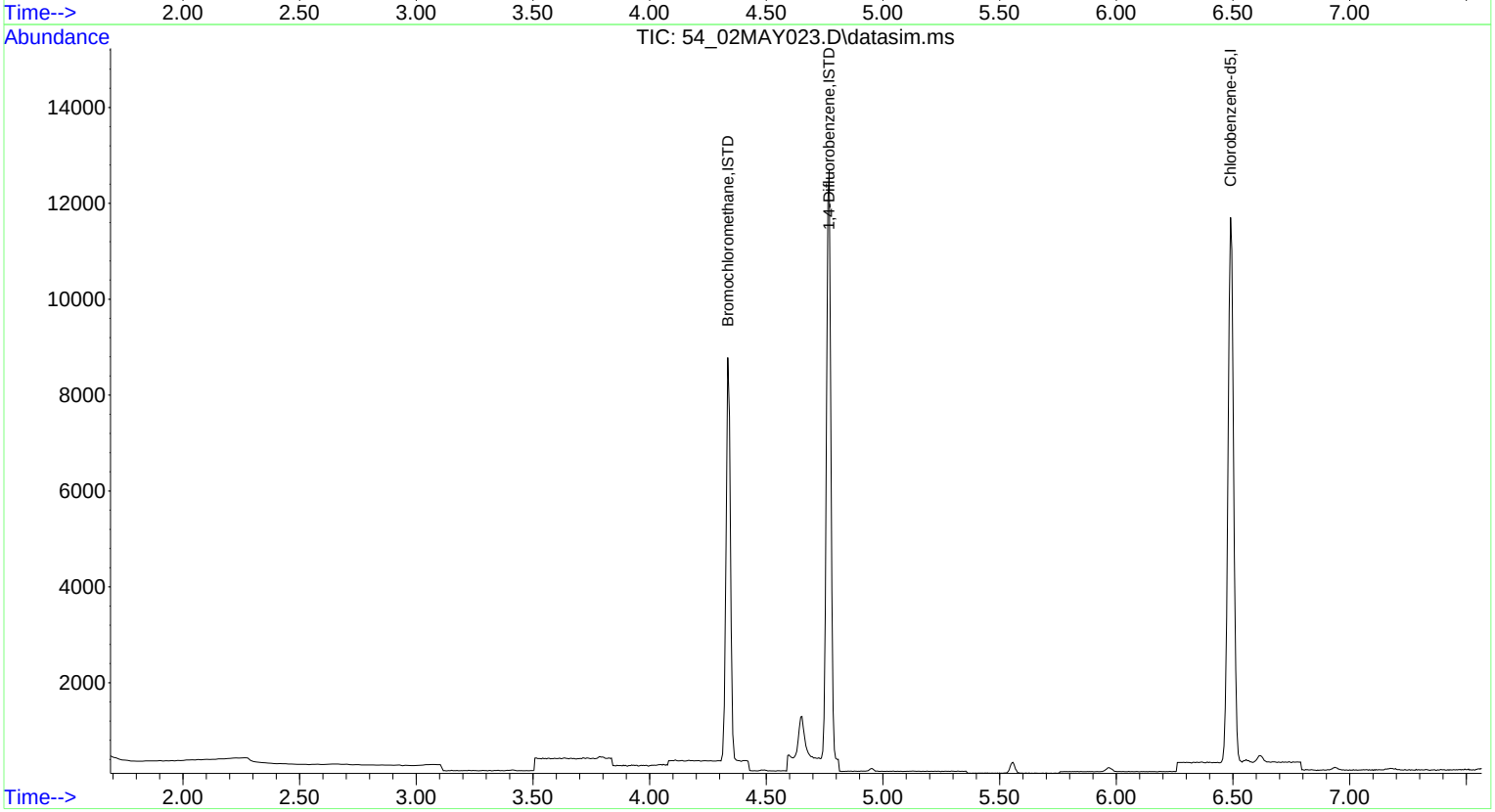
(#) = qualifier out of range (m) = manual integration (+) = signals summed

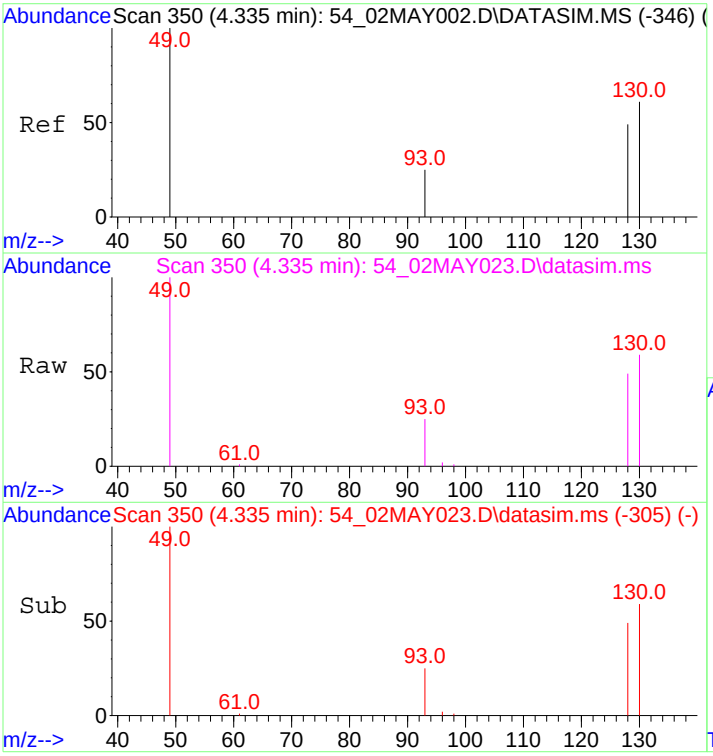
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY023.D
Acq On : 2 May 2014 4:58 pm
Operator : YHL
Sample : 02155 \ G6-024
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 17:04:58 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



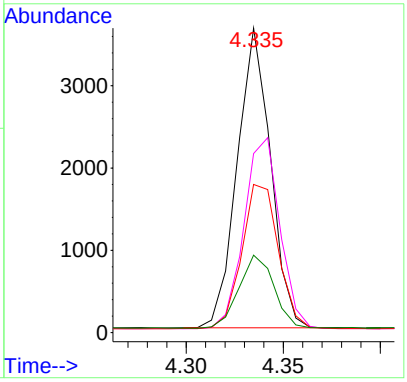


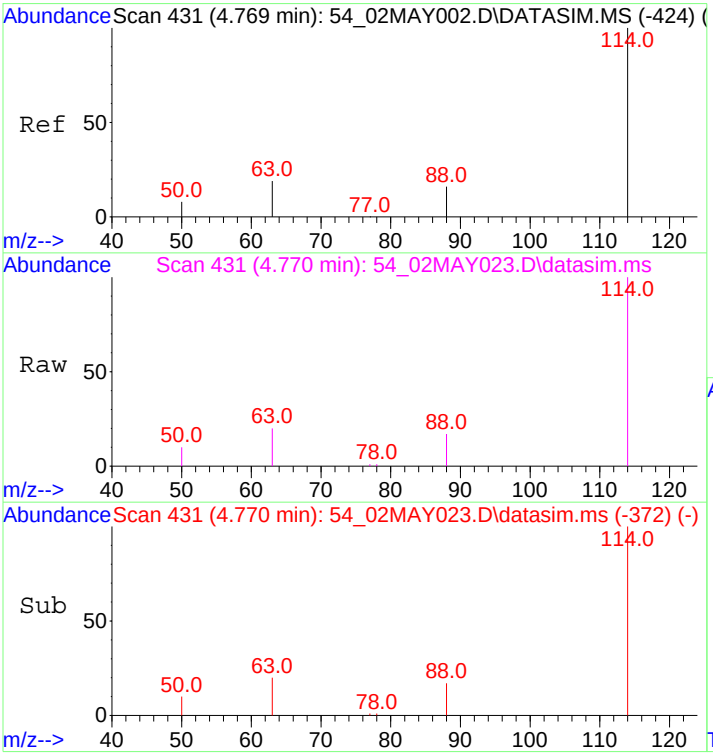


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY023.D
Acq: 2 May 2014 4:58 pm

Tgt Ion: 49 Resp: 4363

Ion	Ratio	Lower	Upper
49	100		
130	68.4	87.2	130.8#
128	52.9	68.0	102.0#
93	25.6	29.3	43.9#

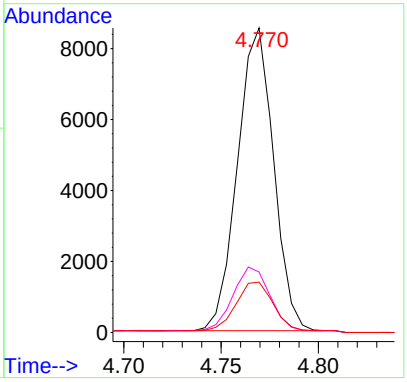


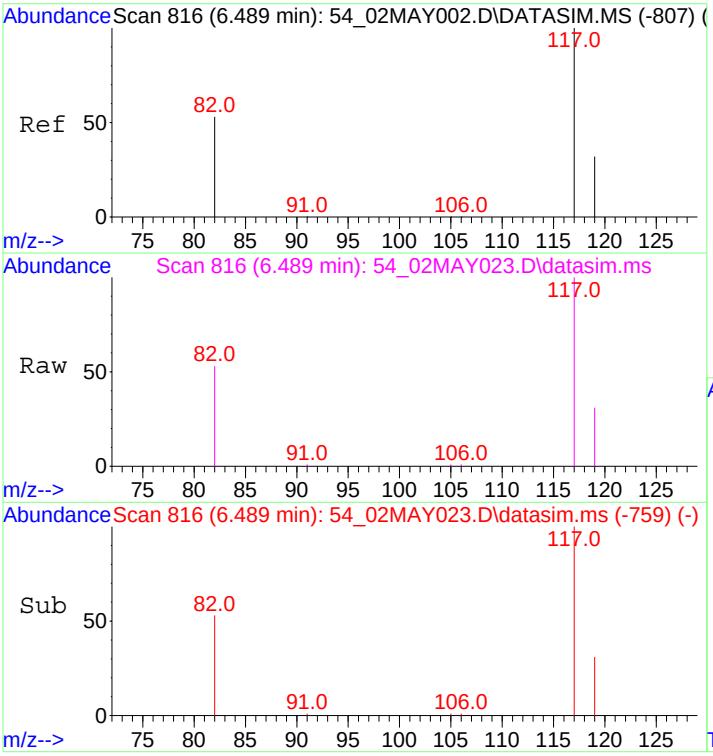


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY023.D
Acq: 2 May 2014 4:58 pm

Tgt Ion:114 Resp: 11021

Ion	Ratio	Lower	Upper
114	100		
63	21.2	12.0	18.0#
88	16.5	11.8	17.8

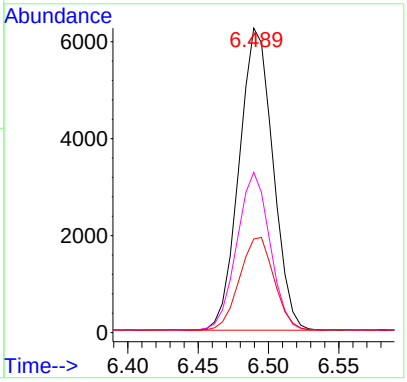




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY023.D
Acq: 2 May 2014 4:58 pm

Tgt Ion:117 Resp: 10430

Ion	Ratio	Lower	Upper
117	100		
82	51.0	38.0	57.0
119	31.3	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY024.D
Acq On : 2 May 2014 5:09 pm
Operator : YHL
Sample : 02156 \ G6-036
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 17:17:46 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4152	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10653	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9562	10.00	ppbv	0.00

System Monitoring Compounds

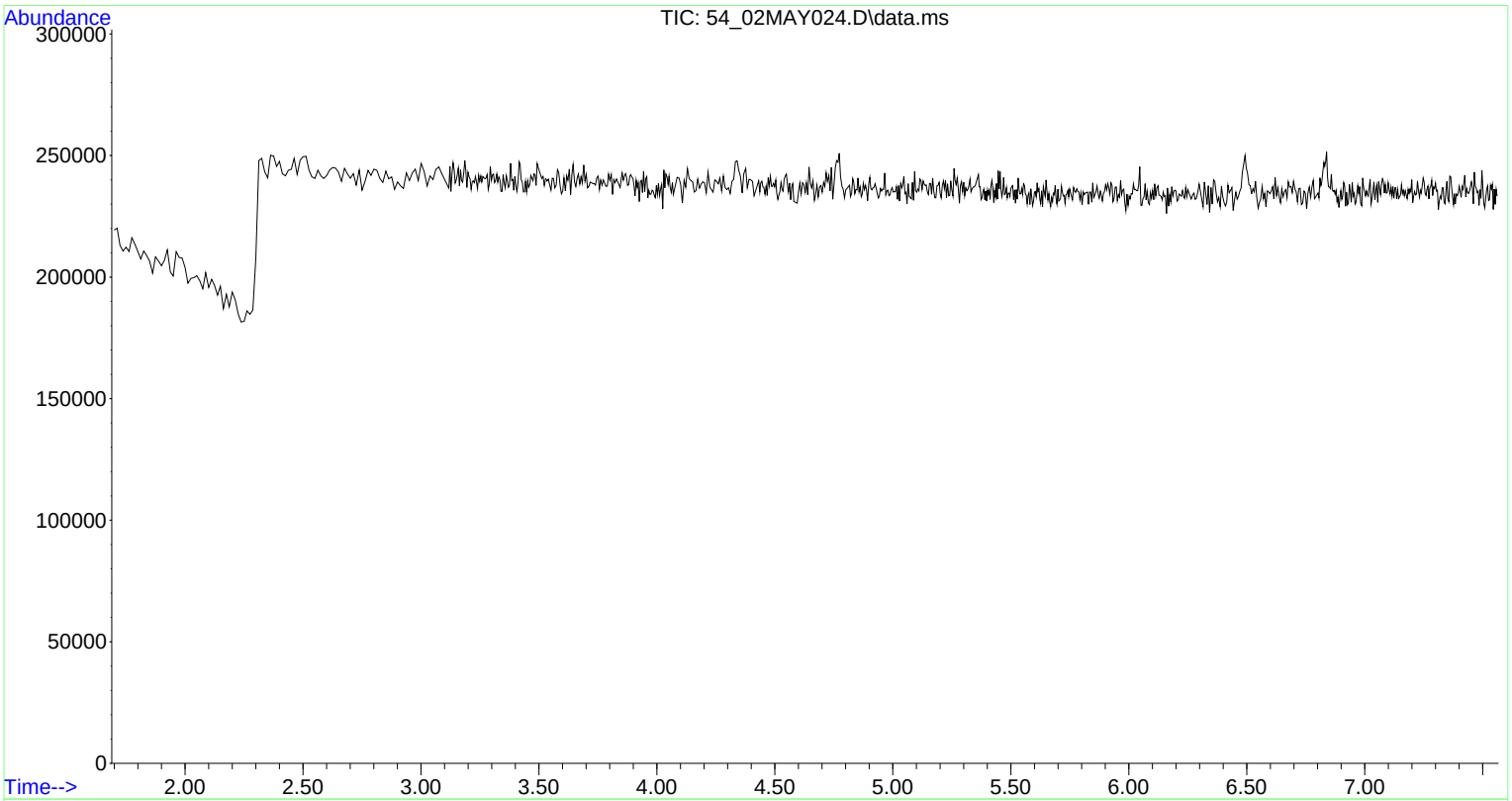
Target Compounds	Qvalue

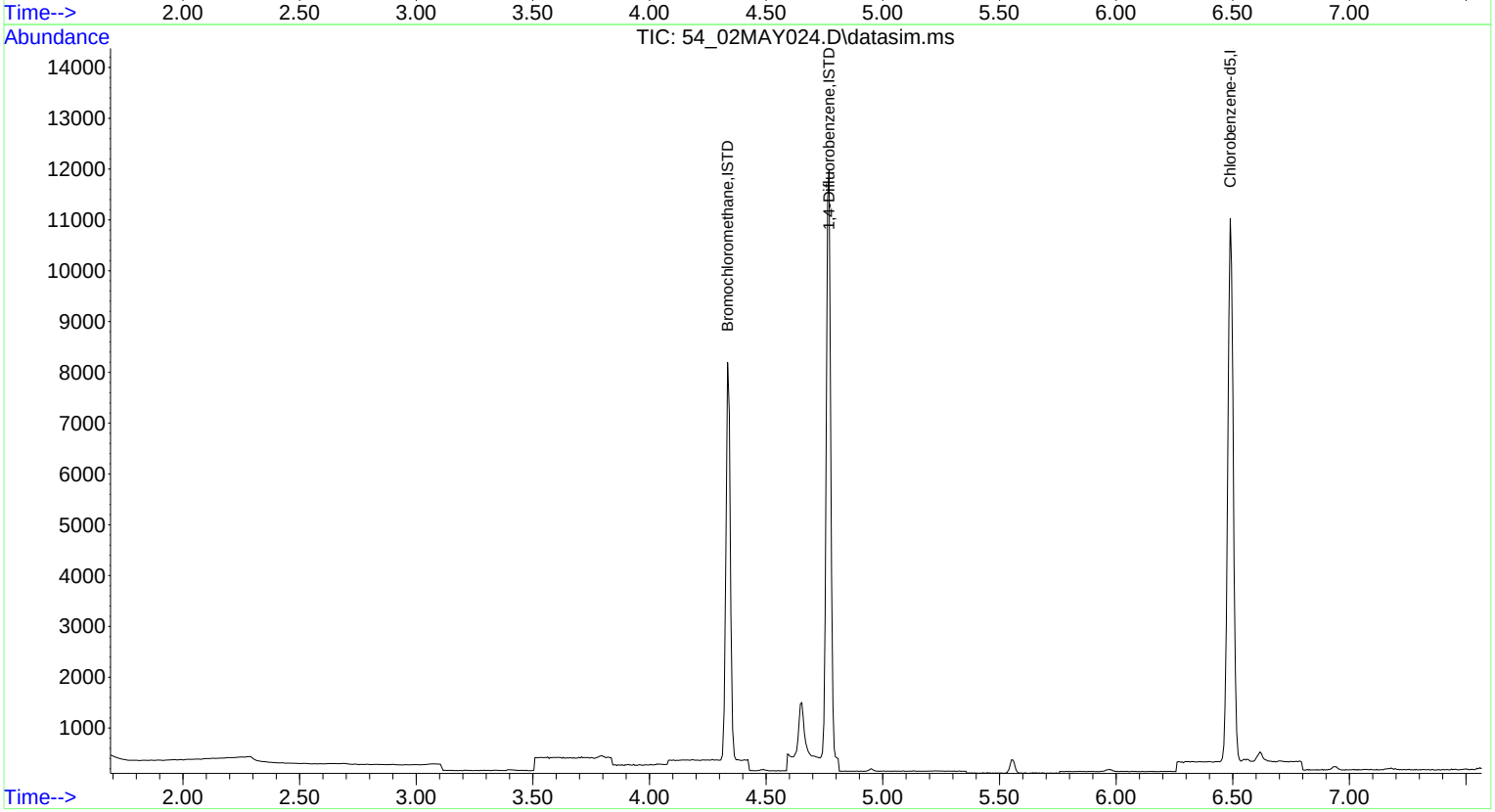
(#) = qualifier out of range (m) = manual integration (+) = signals summed

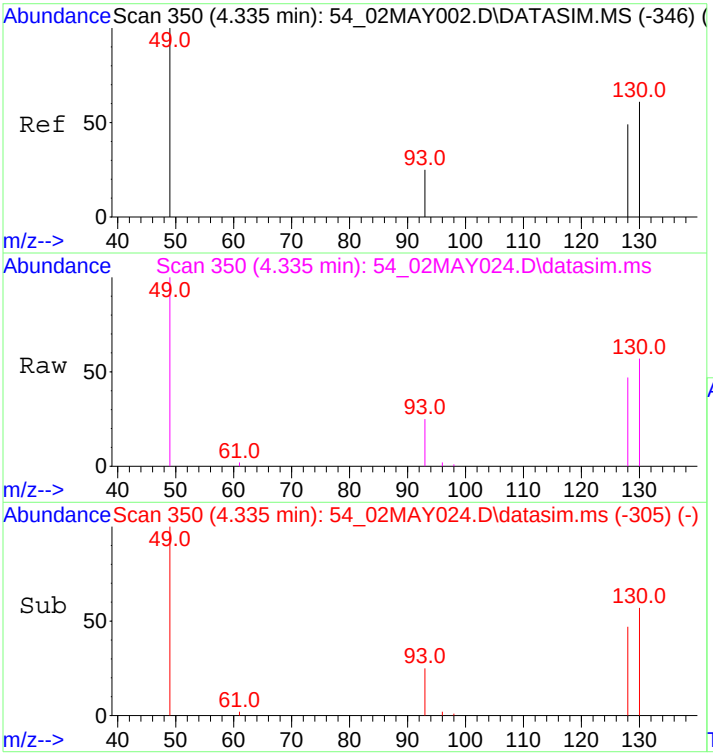
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY024.D
Acq On : 2 May 2014 5:09 pm
Operator : YHL
Sample : 02156 \ G6-036
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 17:17:46 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



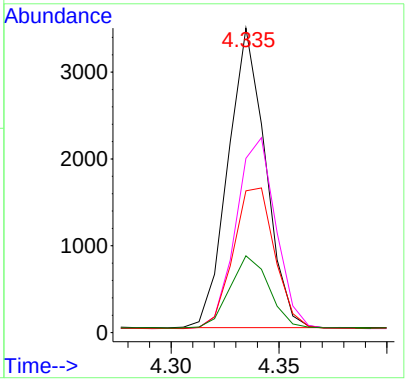


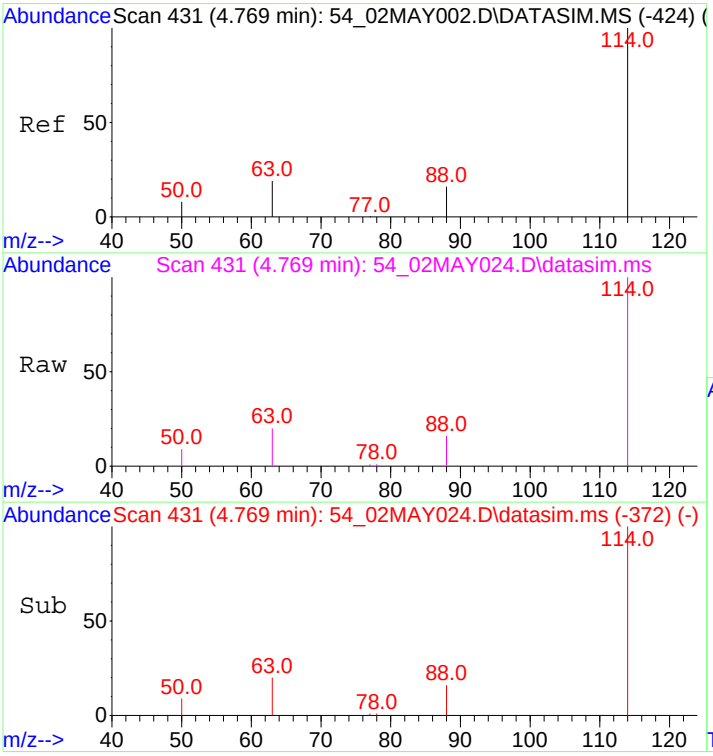


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY024.D
Acq: 2 May 2014 5:09 pm

Tgt Ion: 49 Resp: 4152

Ion	Ratio	Lower	Upper
49	100		
130	68.0	87.2	130.8#
128	52.6	68.0	102.0#
93	25.0	29.3	43.9#

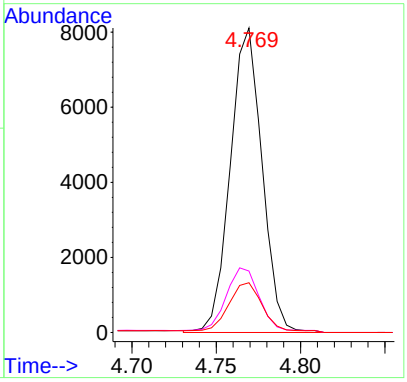


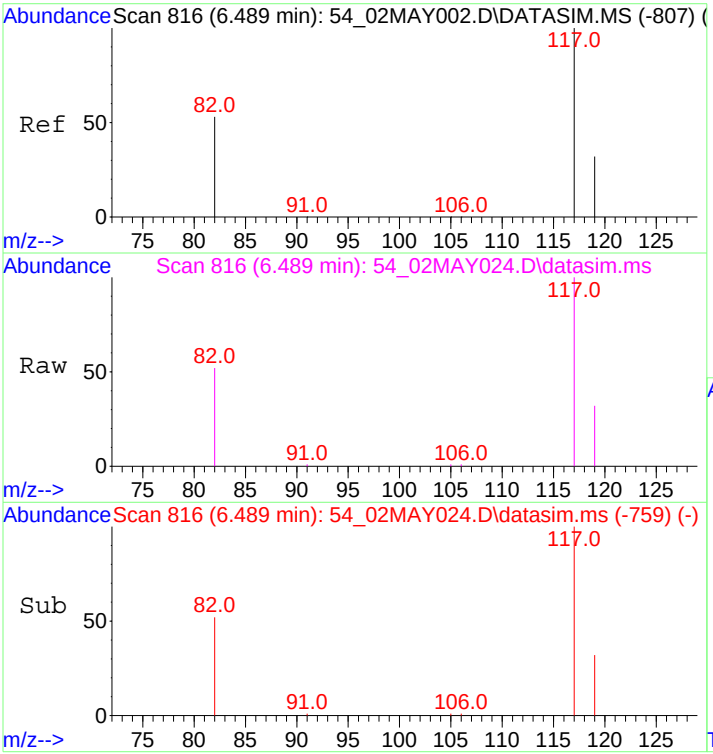


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY024.D
Acq: 2 May 2014 5:09 pm

Tgt Ion:114 Resp: 10653

Ion	Ratio	Lower	Upper
114	100		
63	20.8	12.0	18.0#
88	16.0	11.8	17.8

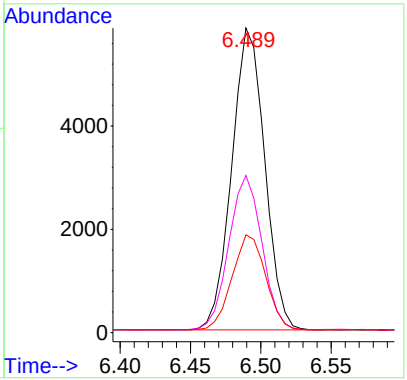




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 02MAY024.D
Acq: 2 May 2014 5:09 pm

Tgt Ion:117 Resp: 9562

Ion	Ratio	Lower	Upper
117	100		
82	51.3	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY025.D
Acq On : 2 May 2014 5:21 pm
Operator : YHL
Sample : 02157 \ G6-034
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 17:28:37 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

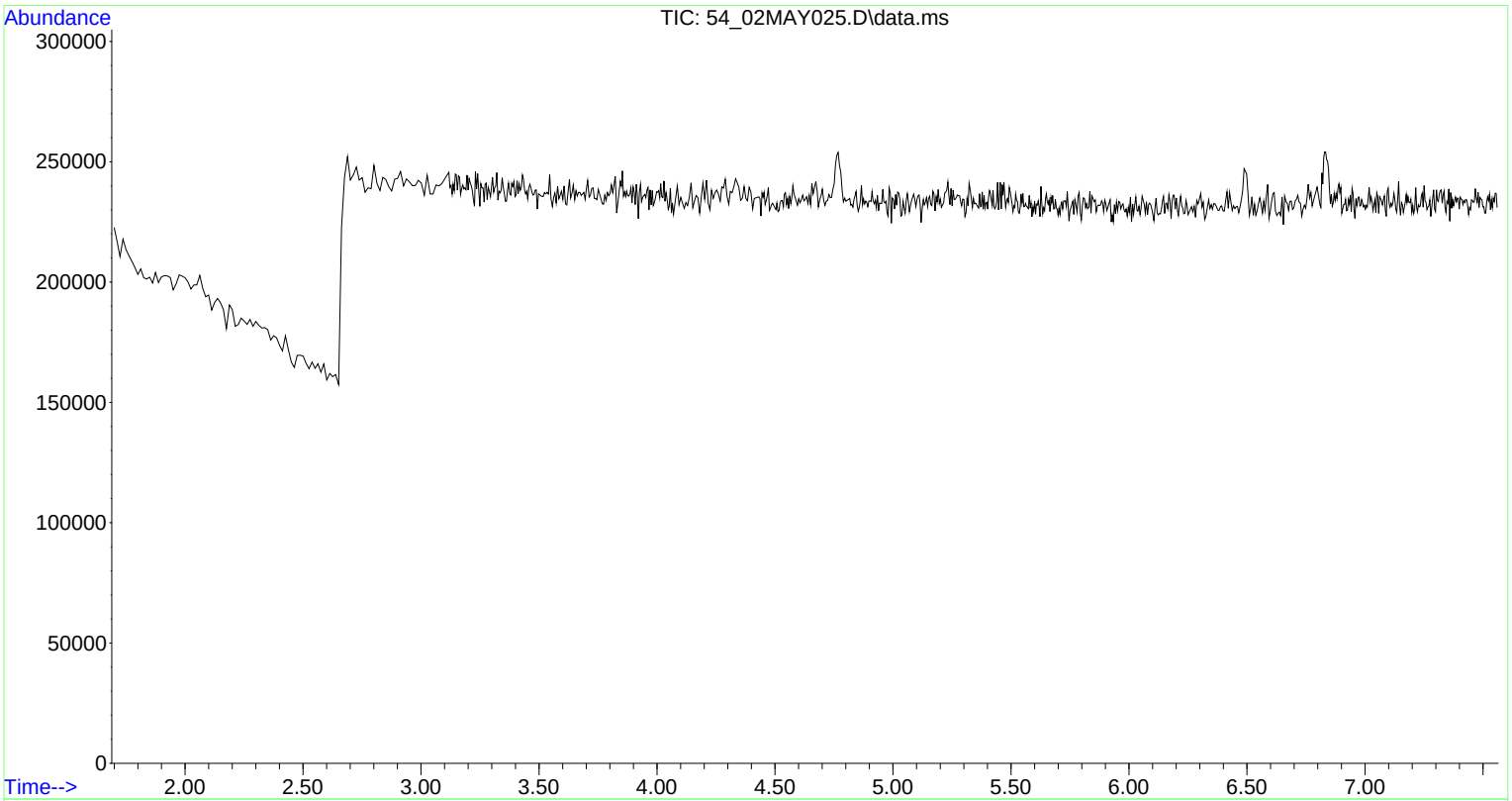
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4724	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11861	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10961	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	549	1.86	ppbv	99

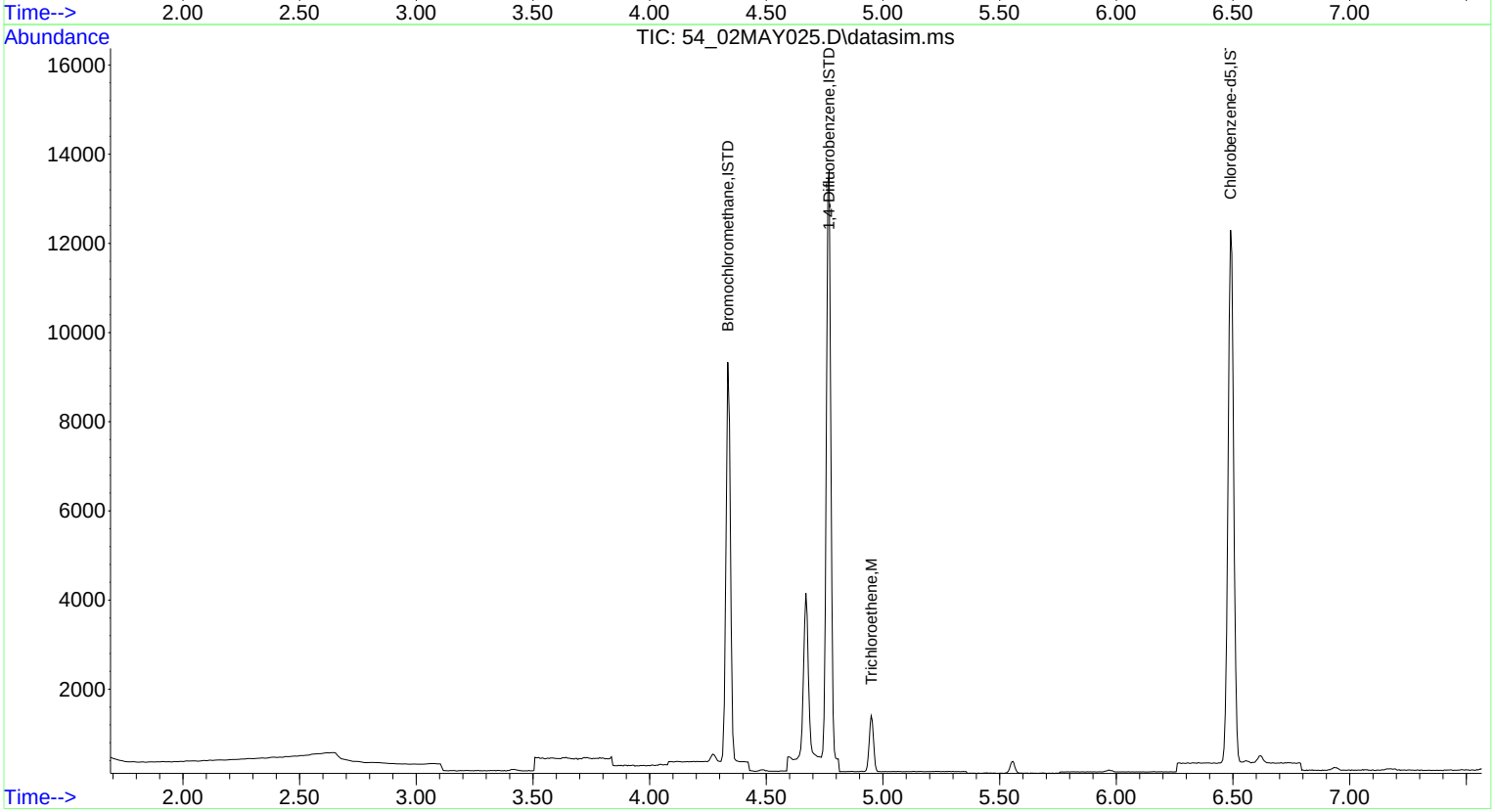
(#) = qualifier out of range (m) = manual integration (+) = signals summed

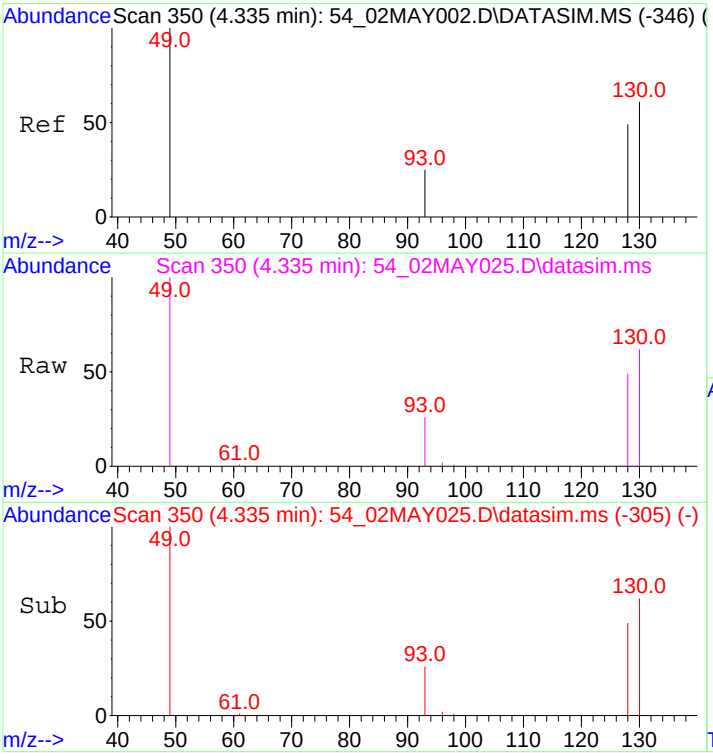
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY025.D
Acq On : 2 May 2014 5:21 pm
Operator : YHL
Sample : 02157 \ G6-034
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 17:28:37 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



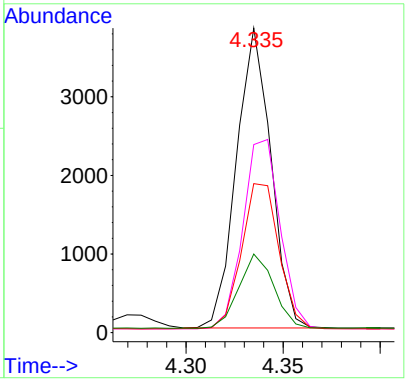


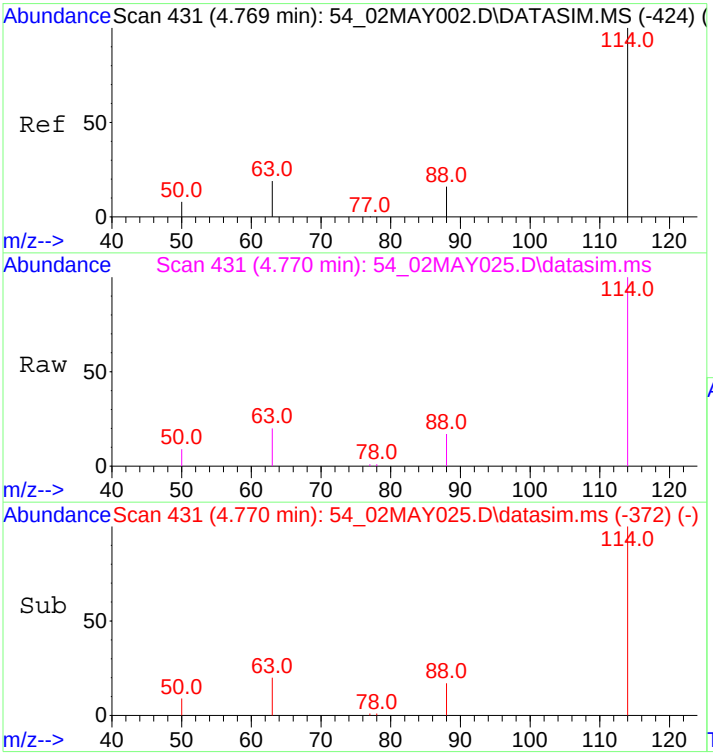


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY025.D
Acq: 2 May 2014 5:21 pm

Tgt Ion: 49 Resp: 4724

Ion	Ratio	Lower	Upper
49	100		
130	68.4	87.2	130.8#
128	52.6	68.0	102.0#
93	25.1	29.3	43.9#

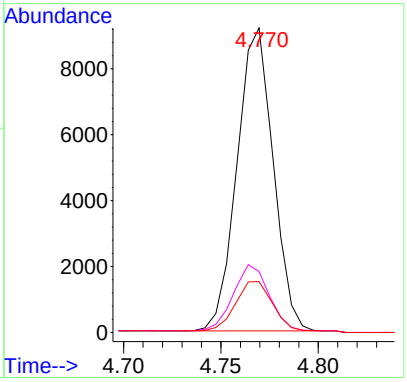


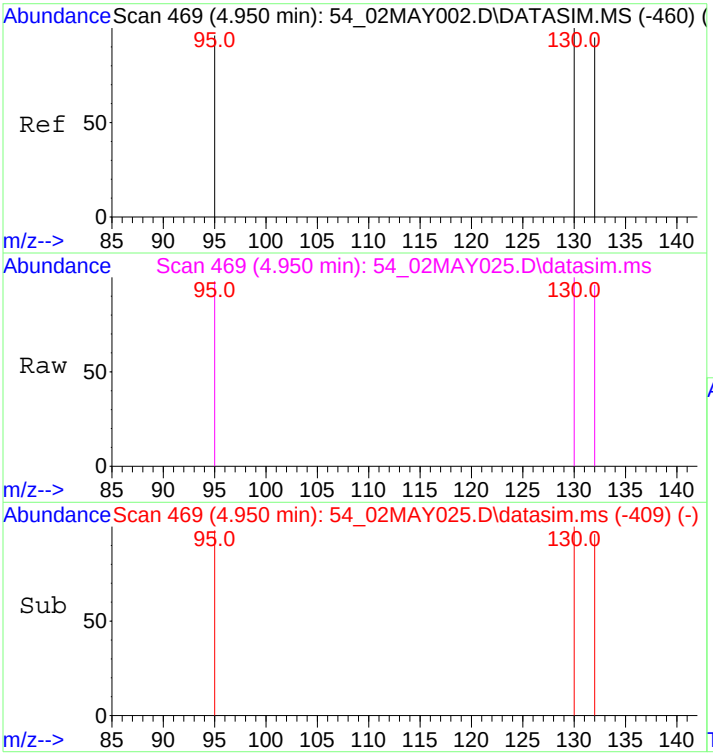


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY025.D
Acq: 2 May 2014 5:21 pm

Tgt Ion:114 Resp: 11861

Ion	Ratio	Lower	Upper
114	100		
63	21.7	12.0	18.0#
88	16.7	11.8	17.8

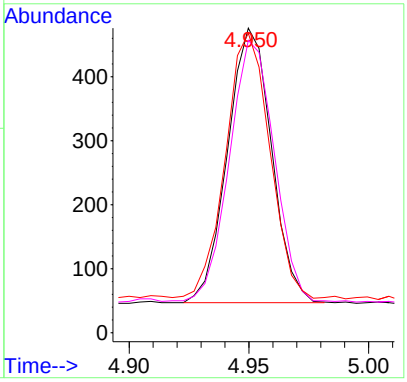


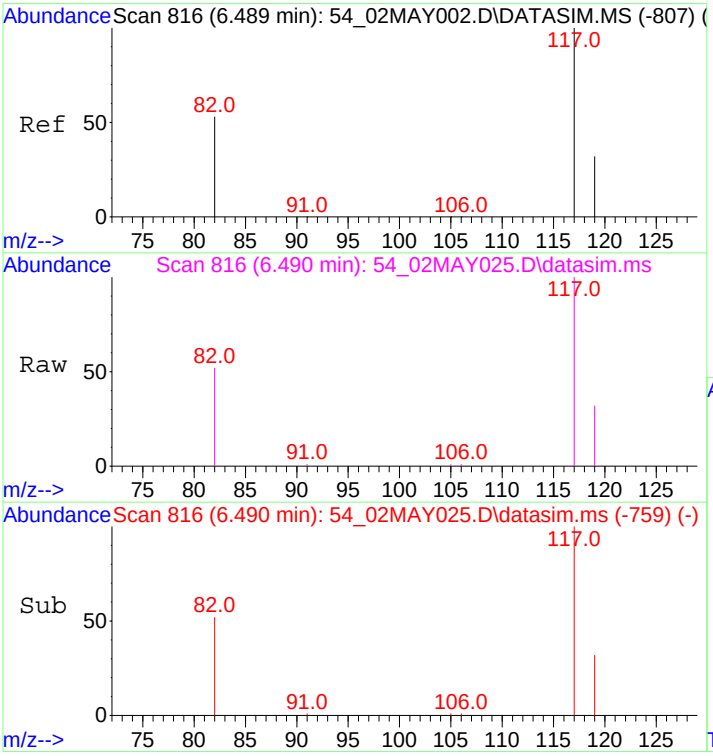


#11
Trichloroethene
Concen: 1.86 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 02MAY025.D
Acq: 2 May 2014 5:21 pm

Tgt Ion:130 Resp: 549

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	96.7	76.5	114.7

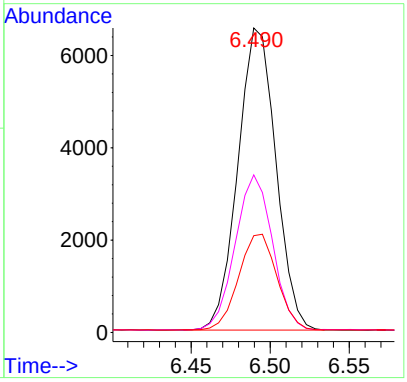




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54_02MAY025.D
Acq: 2 May 2014 5:21 pm

Tgt Ion:117 Resp: 10961

Ion	Ratio	Lower	Upper
117	100		
82	50.3	38.0	57.0
119	31.9	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY026.D
Acq On : 2 May 2014 5:32 pm
Operator : YHL
Sample : 02158 \ G6-038
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 17:39:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

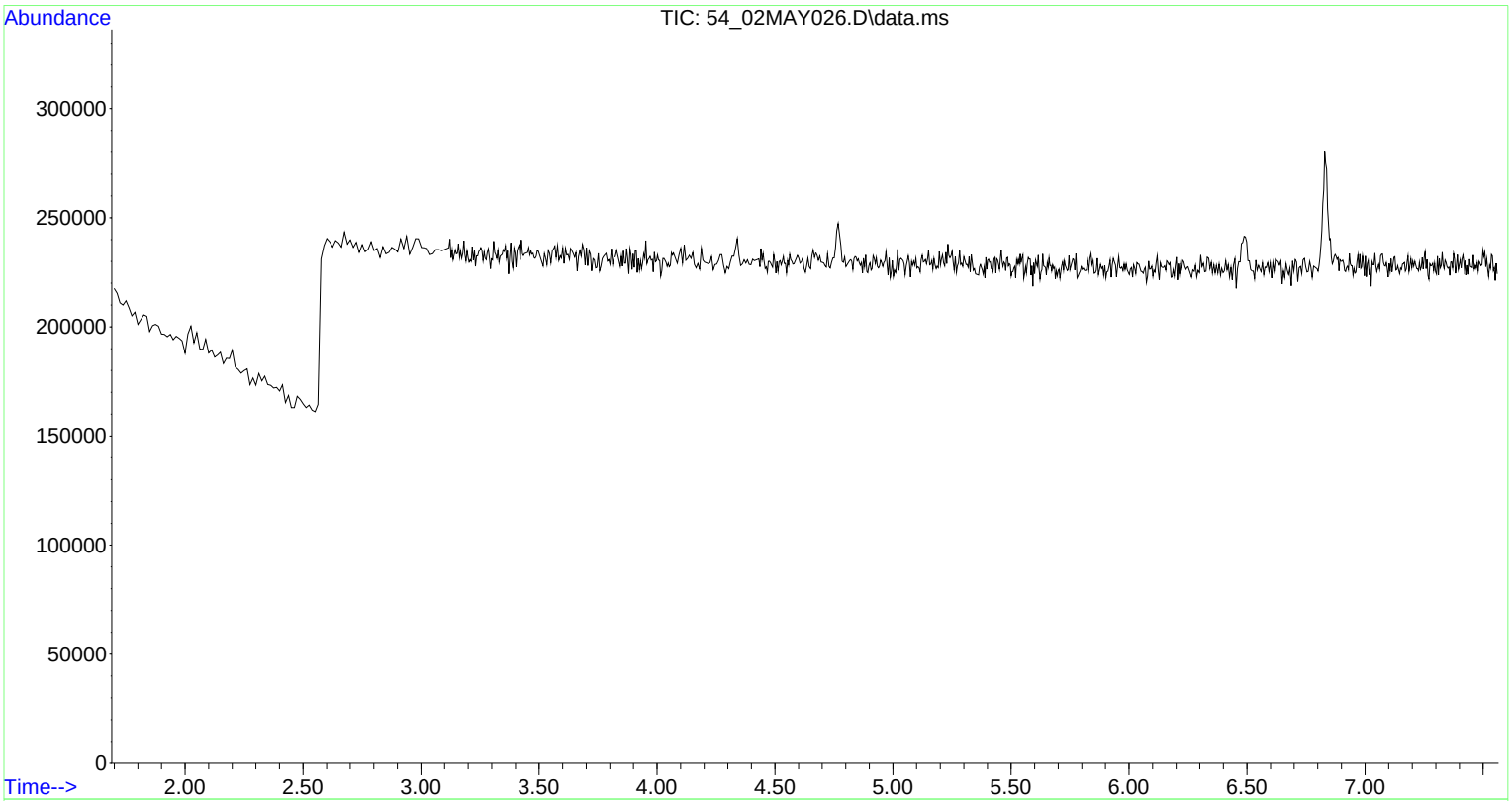
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4448	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11245	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10175	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	434	1.55	ppbv	99

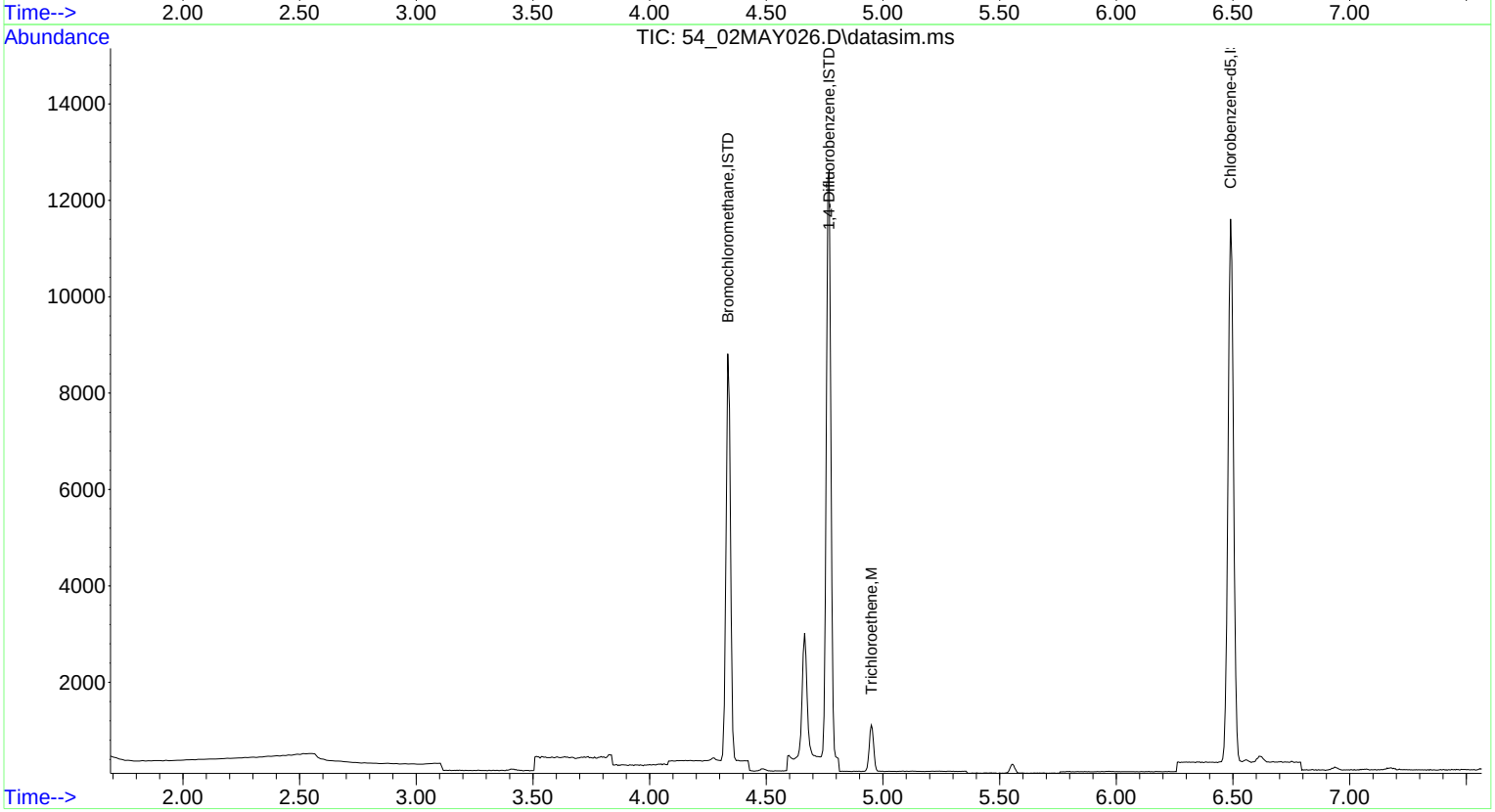
(#) = qualifier out of range (m) = manual integration (+) = signals summed

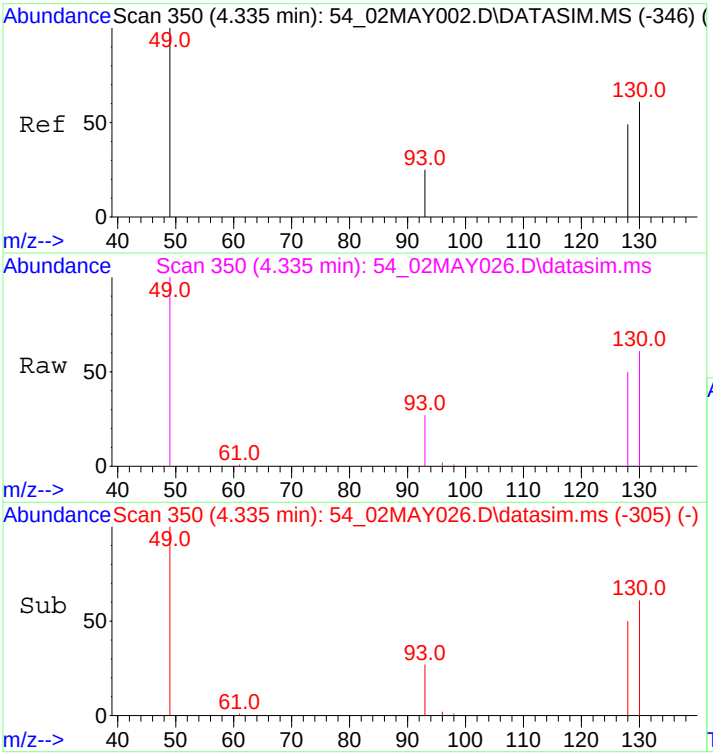
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY026.D
Acq On : 2 May 2014 5:32 pm
Operator : YHL
Sample : 02158 \ G6-038
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 17:39:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjFri May 02 10:59:39 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



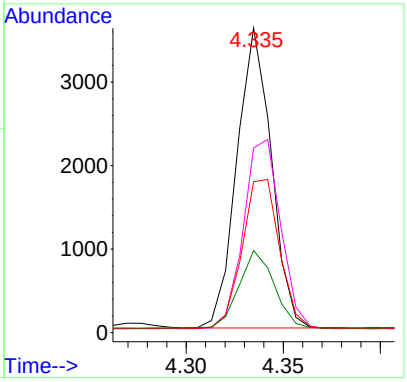


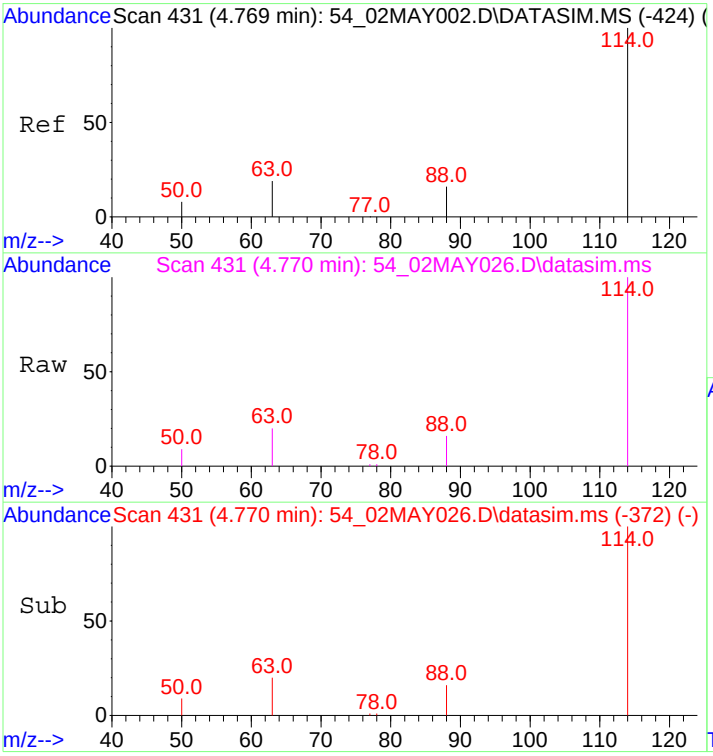


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY026.D
Acq: 2 May 2014 5:32 pm

Tgt Ion: 49 Resp: 4448

Ion	Ratio	Lower	Upper
49	100		
130	67.9	87.2	130.8#
128	54.0	68.0	102.0#
93	26.0	29.3	43.9#

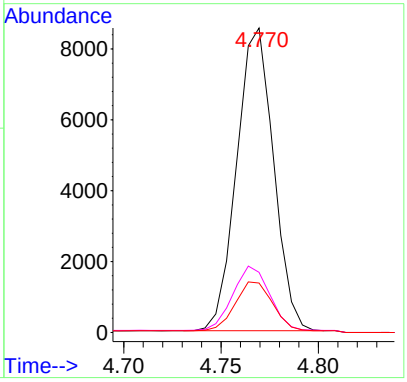


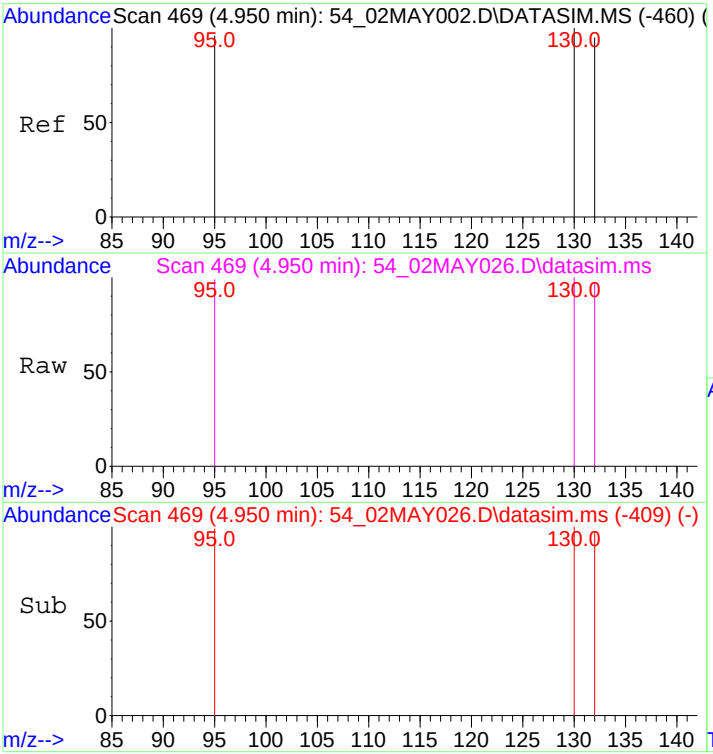


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY026.D
Acq: 2 May 2014 5:32 pm

Tgt Ion:114 Resp: 11245

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.4	11.8	17.8

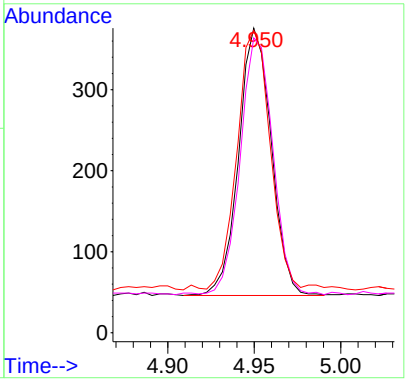


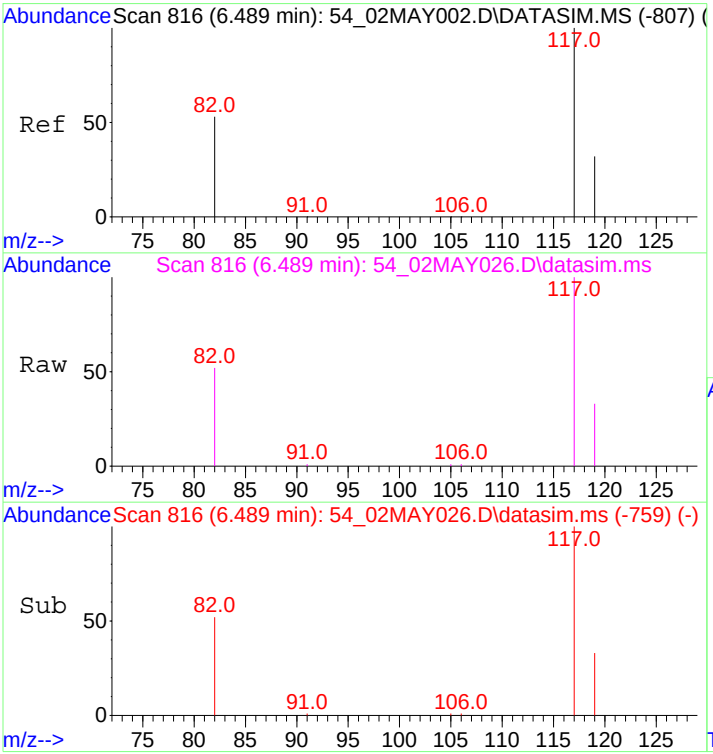


#11
Trichloroethene
Concen: 1.55 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 02MAY026.D
Acq: 2 May 2014 5:32 pm

Tgt Ion:130 Resp: 434

Ion	Ratio	Lower	Upper
130	100		
132	94.9	76.9	115.3
95	97.2	76.5	114.7

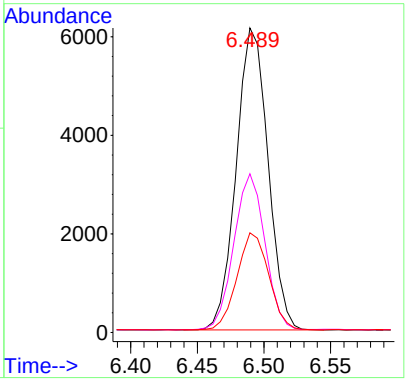




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54_02MAY026.D
Acq: 2 May 2014 5:32 pm

Tgt Ion:117 Resp: 10175

Ion	Ratio	Lower	Upper
117	100		
82	50.6	38.0	57.0
119	32.1	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY027.D
Acq On : 2 May 2014 5:44 pm
Operator : YHL
Sample : 02159 \ G6-017
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:02:08 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

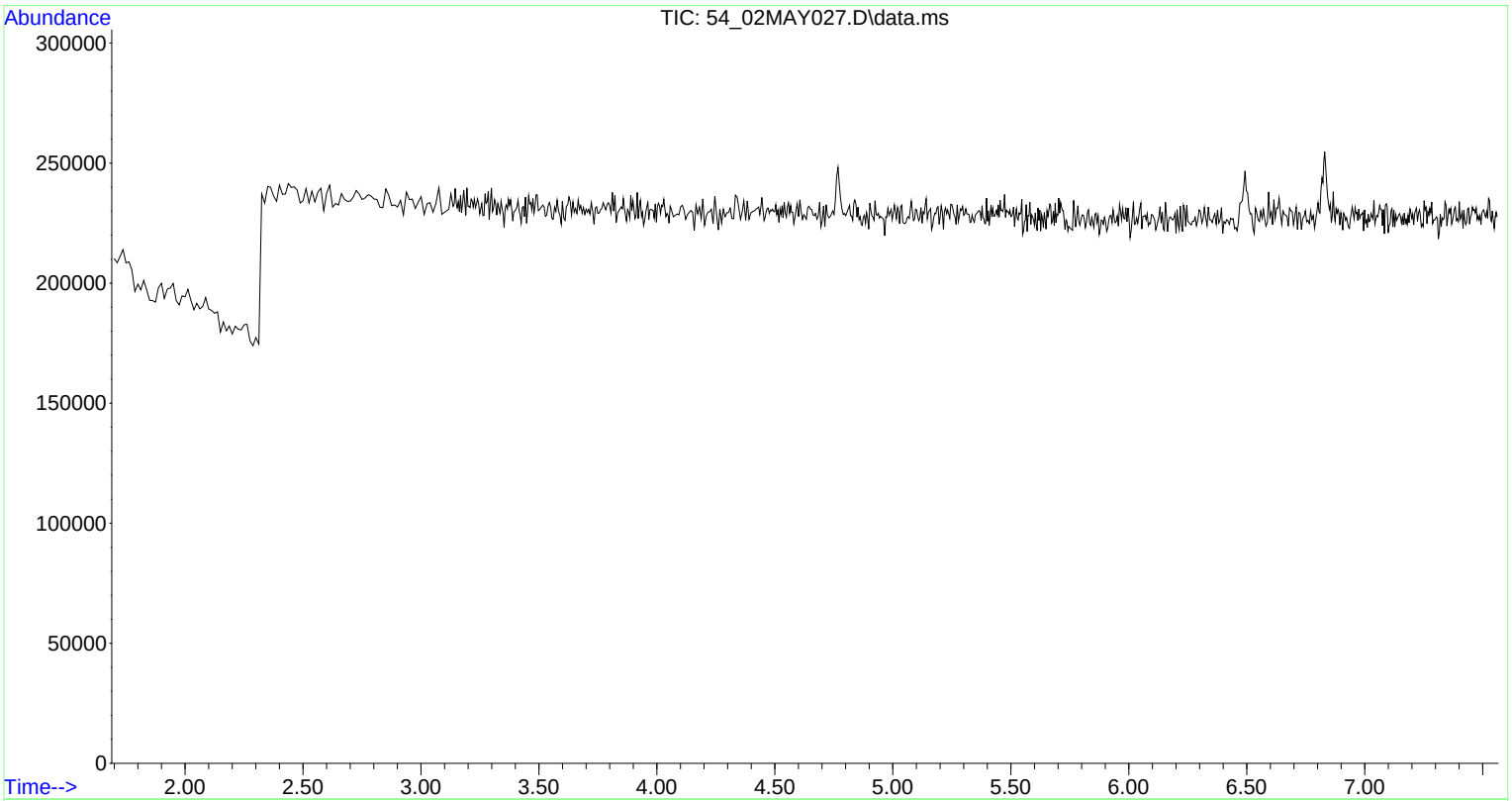
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4716	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11730	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10543	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	400	0.63	ppbv	100

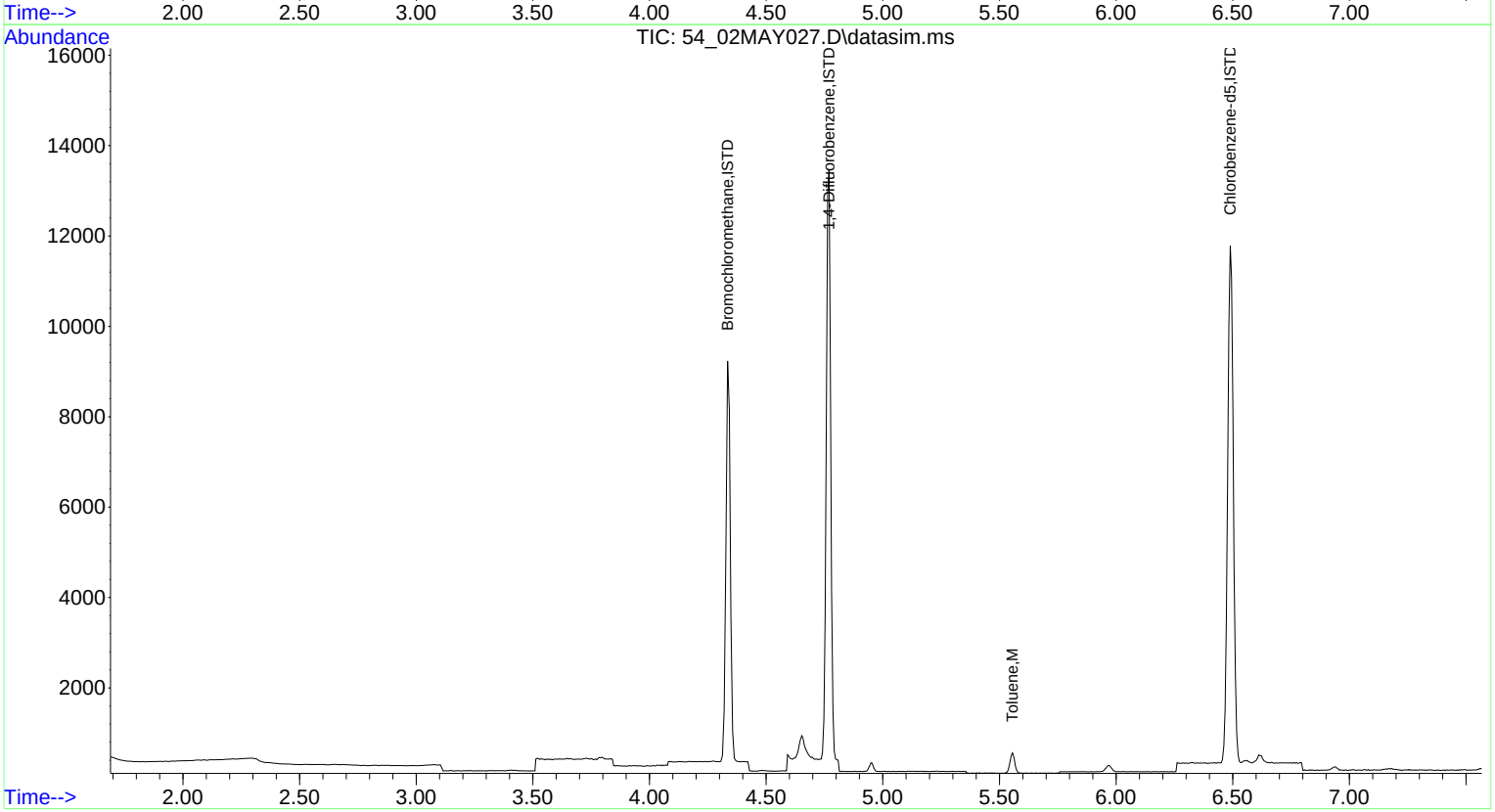
(#) = qualifier out of range (m) = manual integration (+) = signals summed

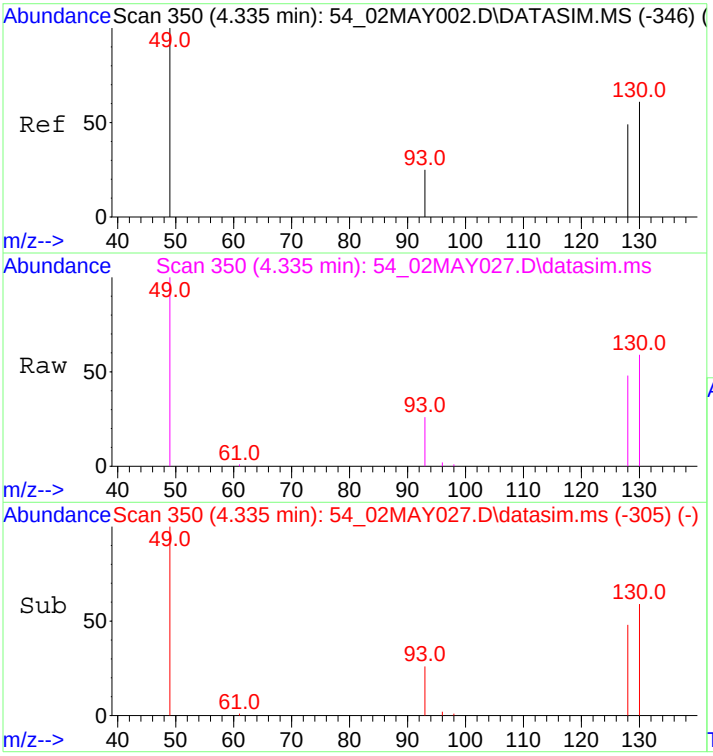
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY027.D
Acq On : 2 May 2014 5:44 pm
Operator : YHL
Sample : 02159 \ G6-017
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:02:08 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



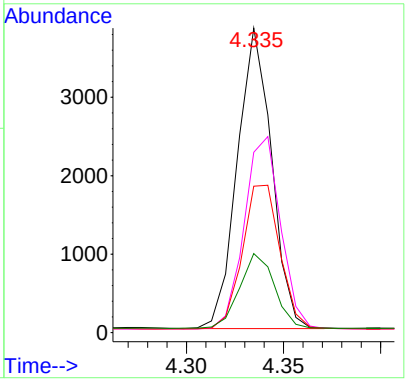


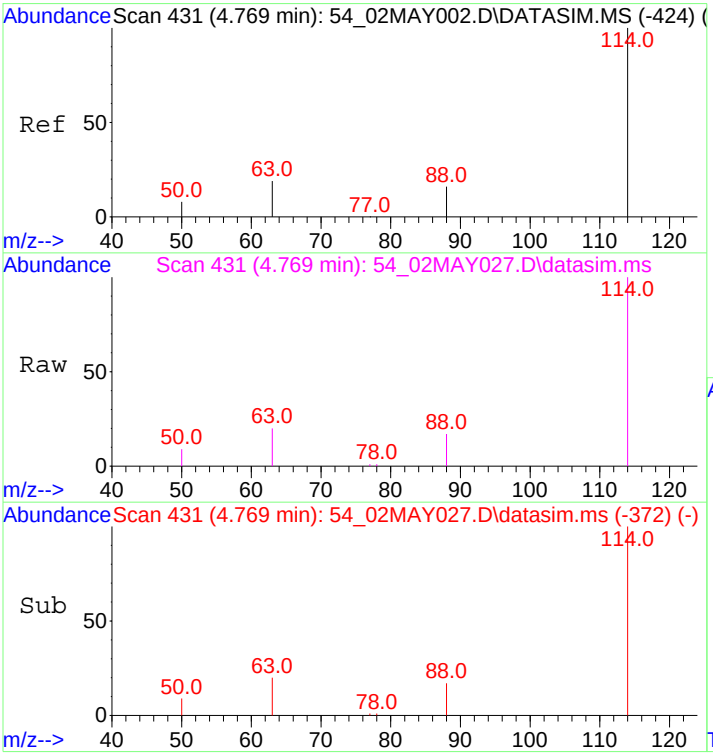


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY027.D
Acq: 2 May 2014 5:44 pm

Tgt Ion: 49 Resp: 4716

Ion	Ratio	Lower	Upper
49	100		
130	67.8	87.2	130.8#
128	52.4	68.0	102.0#
93	25.3	29.3	43.9#

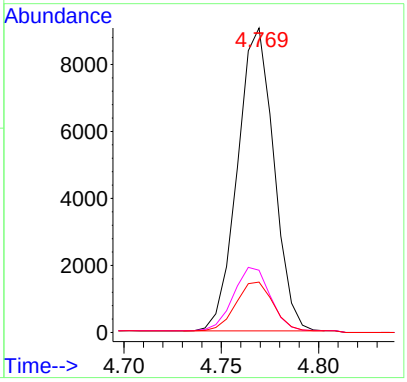


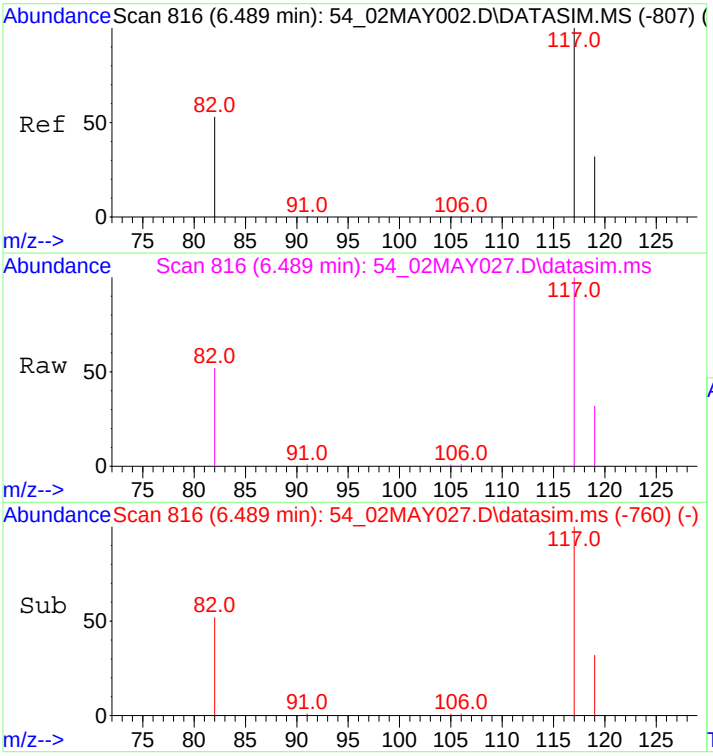


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY027.D
Acq: 2 May 2014 5:44 pm

Tgt Ion:114 Resp: 11730

Ion	Ratio	Lower	Upper
114	100		
63	21.2	12.0	18.0#
88	16.5	11.8	17.8

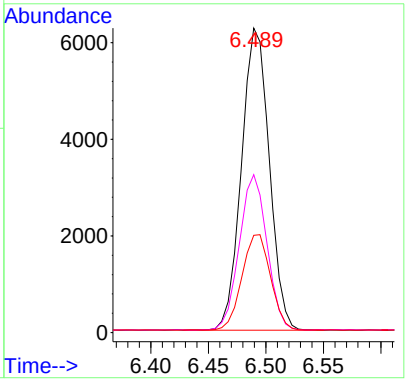


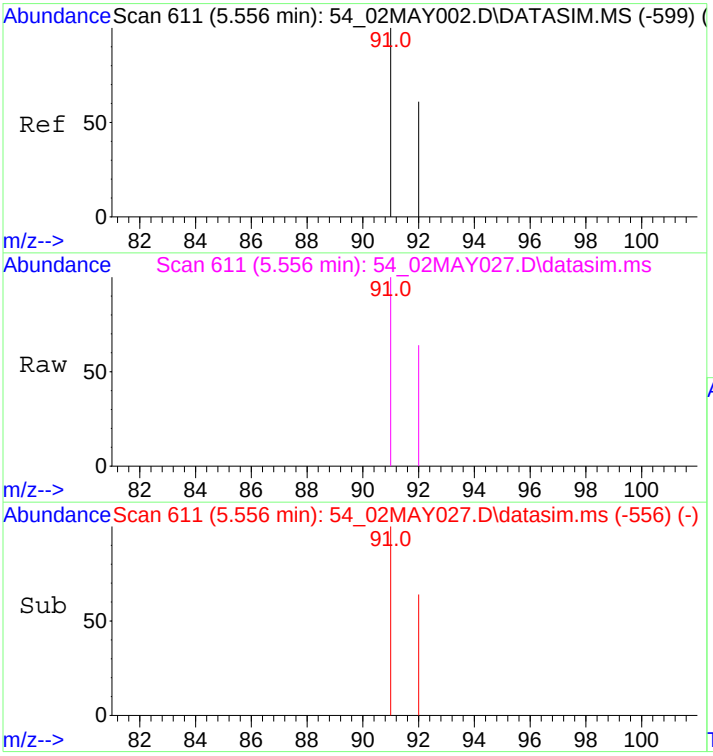


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY027.D
Acq: 2 May 2014 5:44 pm

Tgt Ion:117 Resp: 10543

Ion	Ratio	Lower	Upper
117	100		
82	51.1	38.0	57.0
119	32.4	27.0	40.4

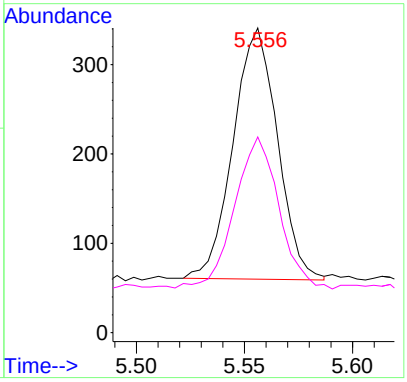




#13
Toluene
Concen: 0.63 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_02MAY027.D
Acq: 2 May 2014 5:44 pm

Tgt Ion: 91 Resp: 400

Ion	Ratio	Lower	Upper
91	100		
92	60.0	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY028.D
Acq On : 2 May 2014 6:01 pm
Operator : yhl
Sample : 02160 \ G6-012
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:08:09 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4172	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10439	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9562	10.00 ppbv	0.00

System Monitoring Compounds

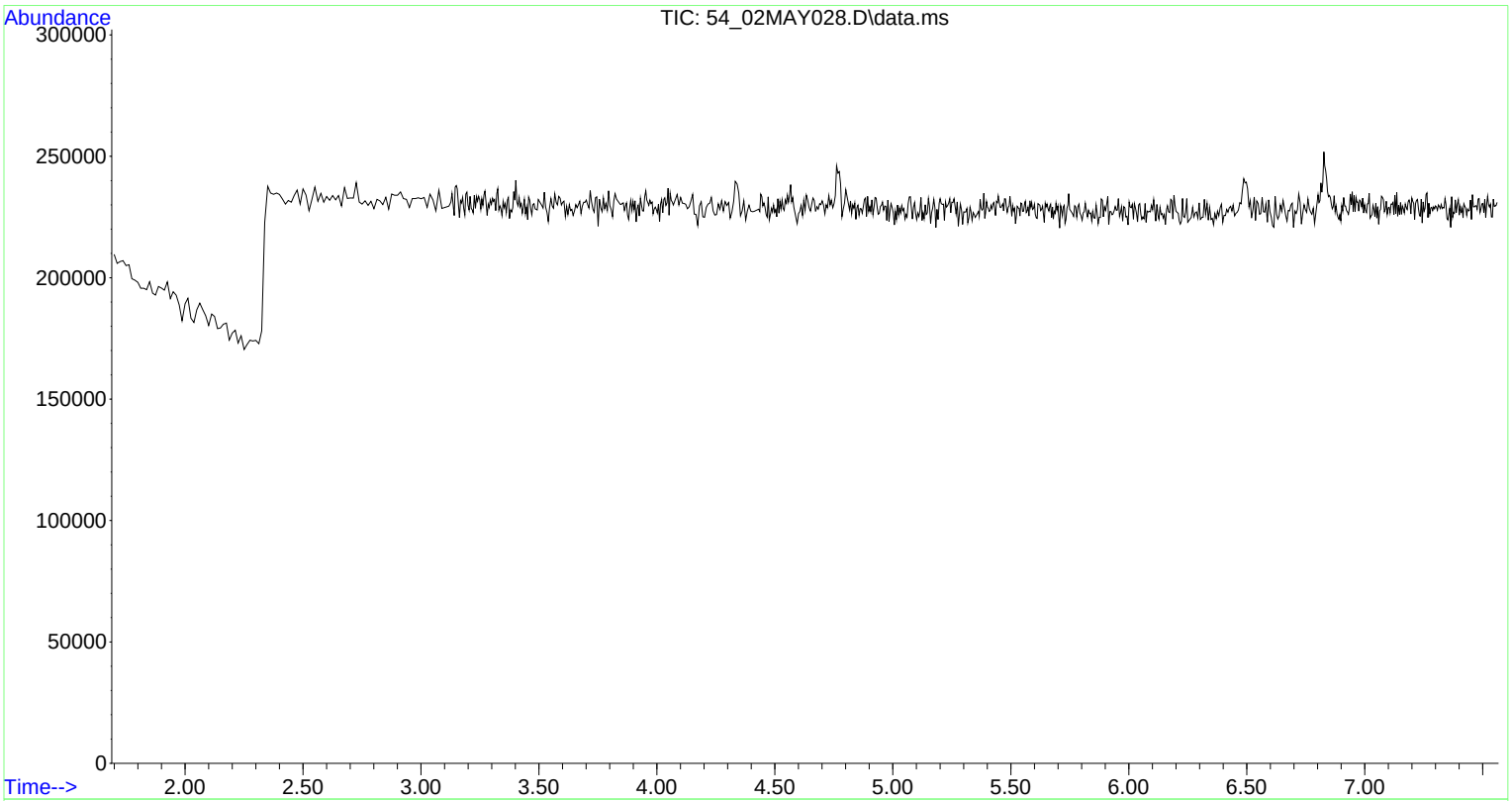
Target Compounds	Qvalue

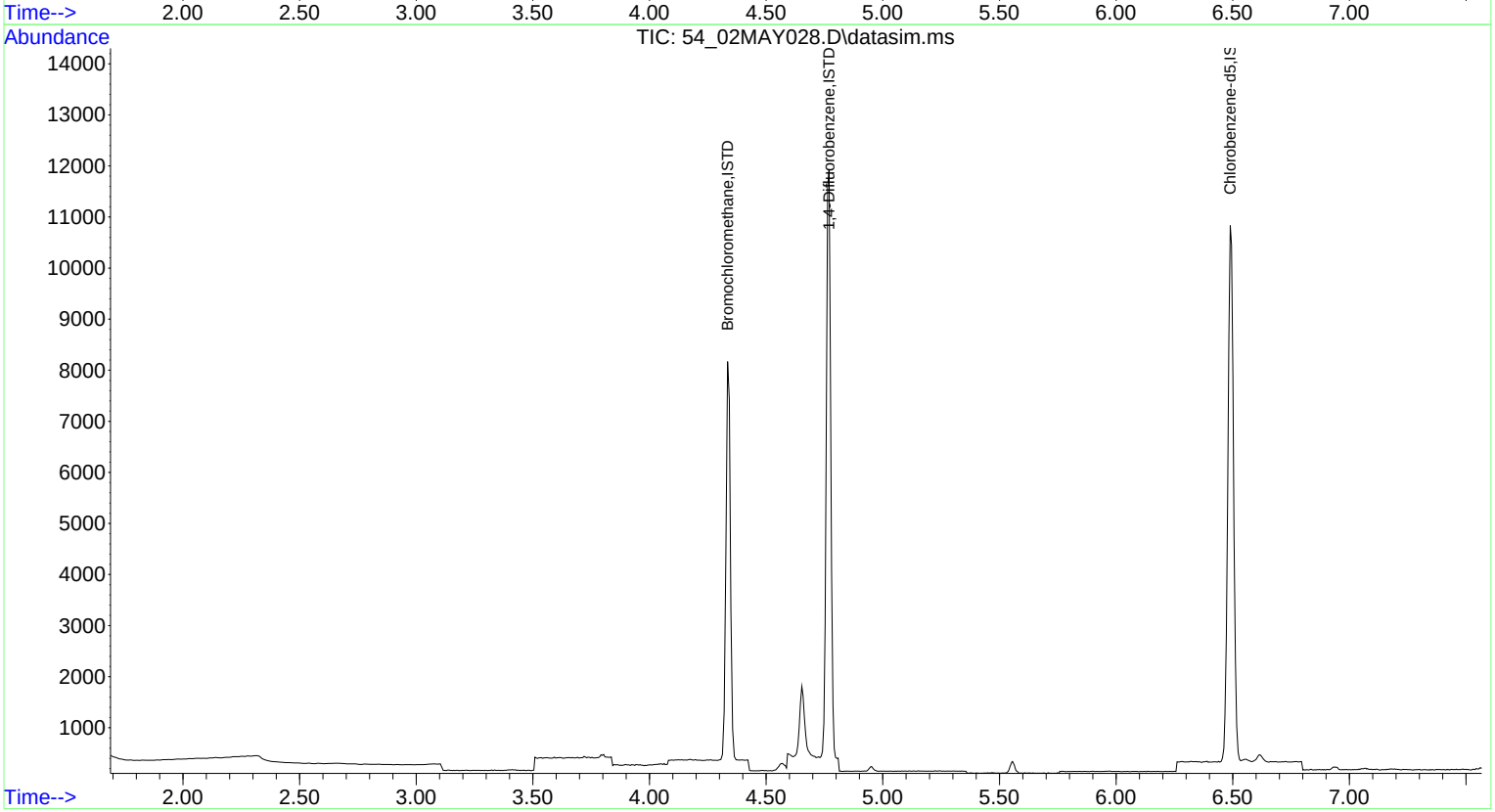
(#) = qualifier out of range (m) = manual integration (+) = signals summed

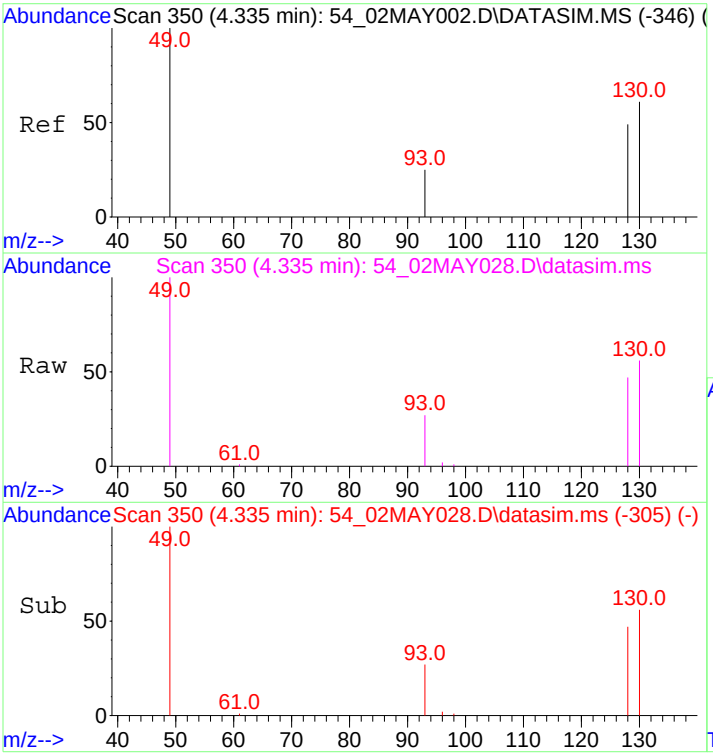
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY028.D
Acq On : 2 May 2014 6:01 pm
Operator : yhl
Sample : 02160 \ G6-012
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:08:09 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



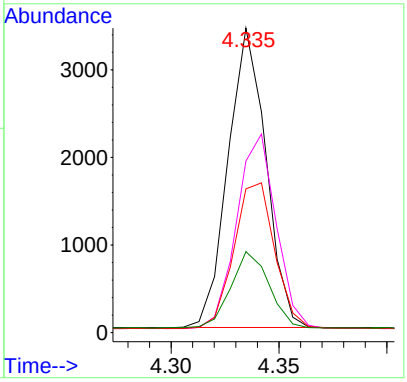


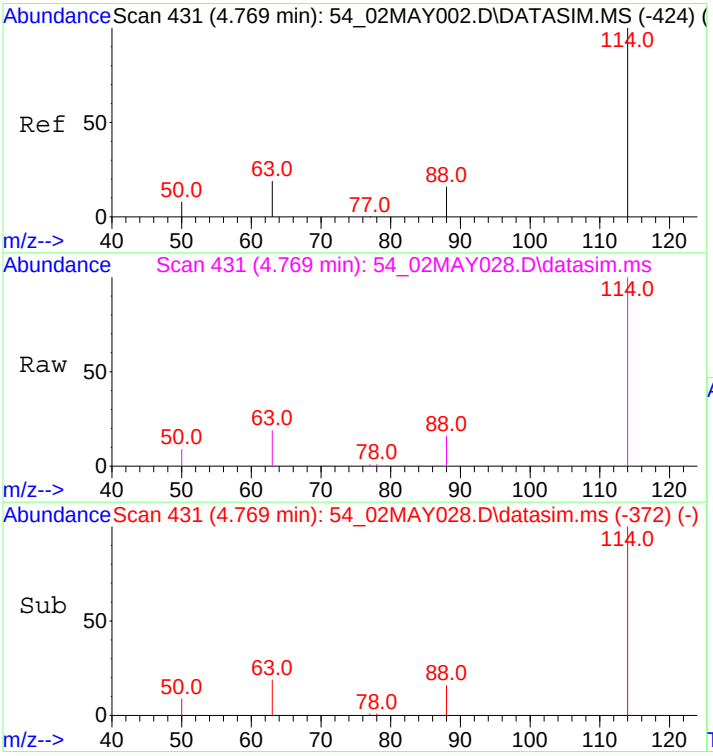


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY028.D
Acq: 2 May 2014 6:01 pm

Tgt Ion: 49 Resp: 4172

Ion	Ratio	Lower	Upper
49	100		
130	67.7	87.2	130.8#
128	52.6	68.0	102.0#
93	26.0	29.3	43.9#

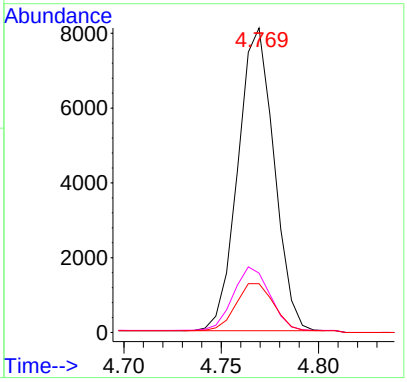


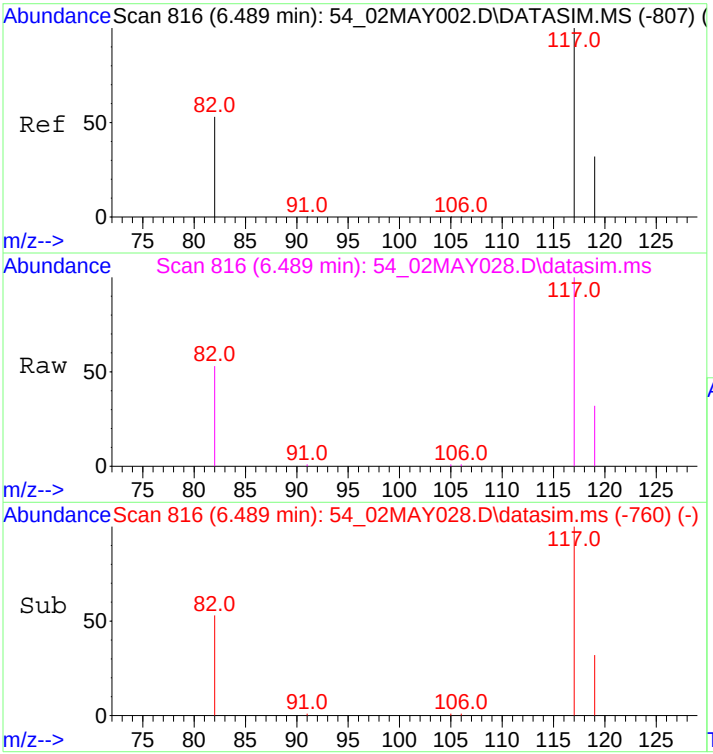


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY028.D
Acq: 2 May 2014 6:01 pm

Tgt Ion:114 Resp: 10439

Ion	Ratio	Lower	Upper
114	100		
63	21.3	12.0	18.0#
88	16.3	11.8	17.8

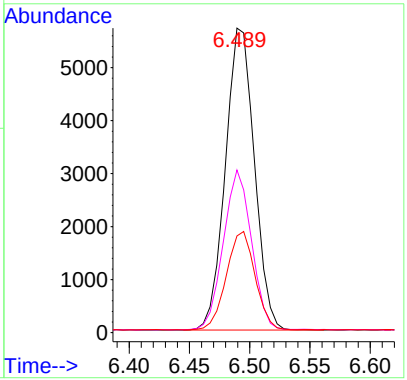




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY028.D
Acq: 2 May 2014 6:01 pm

Tgt Ion:117 Resp: 9562

Ion	Ratio	Lower	Upper
117	100		
82	51.1	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY029.D
Acq On : 2 May 2014 6:15 pm
Operator : yhl
Sample : 02161 \ G6-010
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:23:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

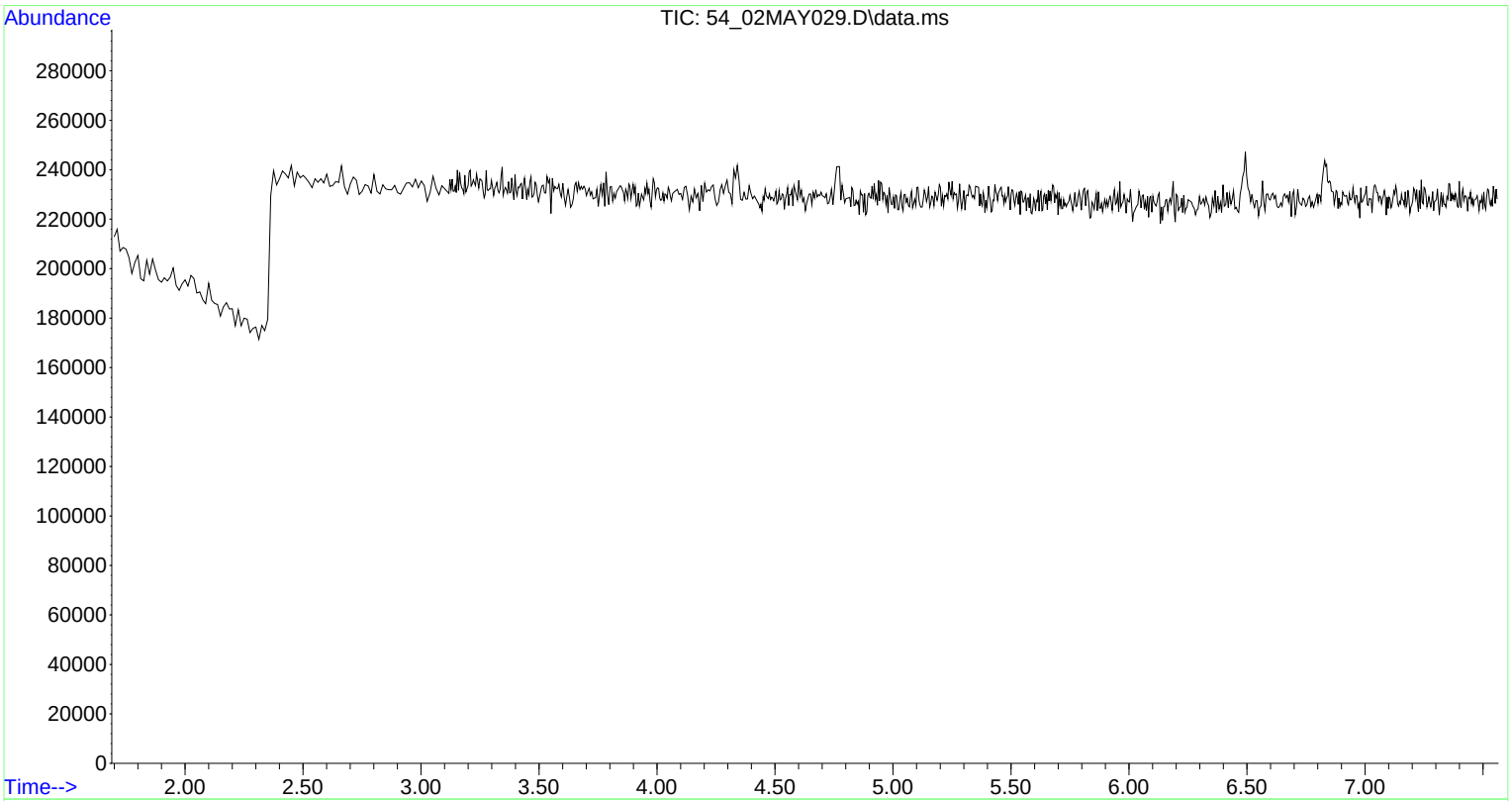
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4435	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11105	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10695	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
8] 1,1,1-Trichloroethane	4.488	97	855	1.87 ppbv	95
11] Trichloroethene	4.950	130	1421	5.14 ppbv	99
13] Toluene	5.556	91	368	0.57 ppbv	100

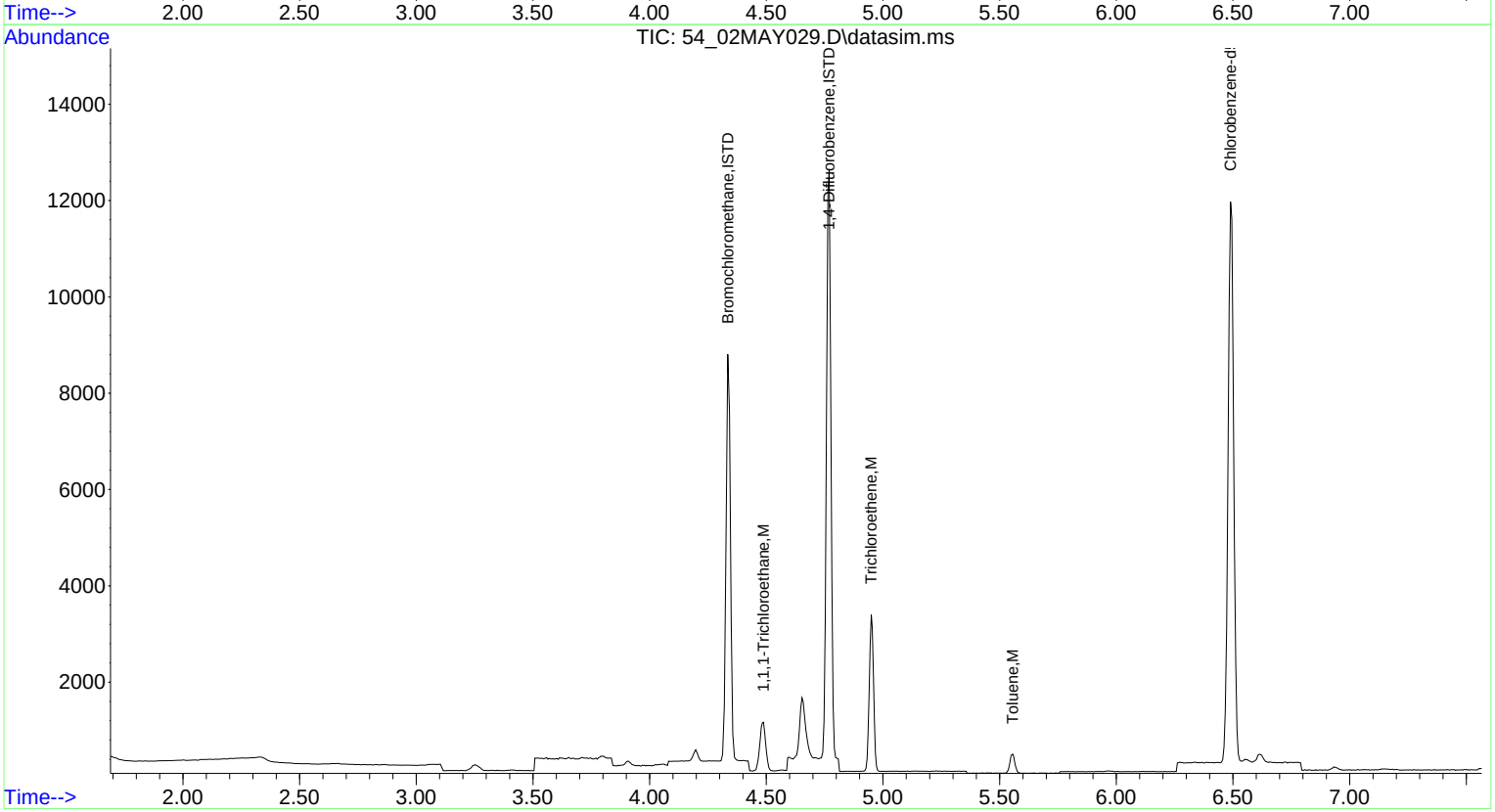
(#) = qualifier out of range (m) = manual integration (+) = signals summed

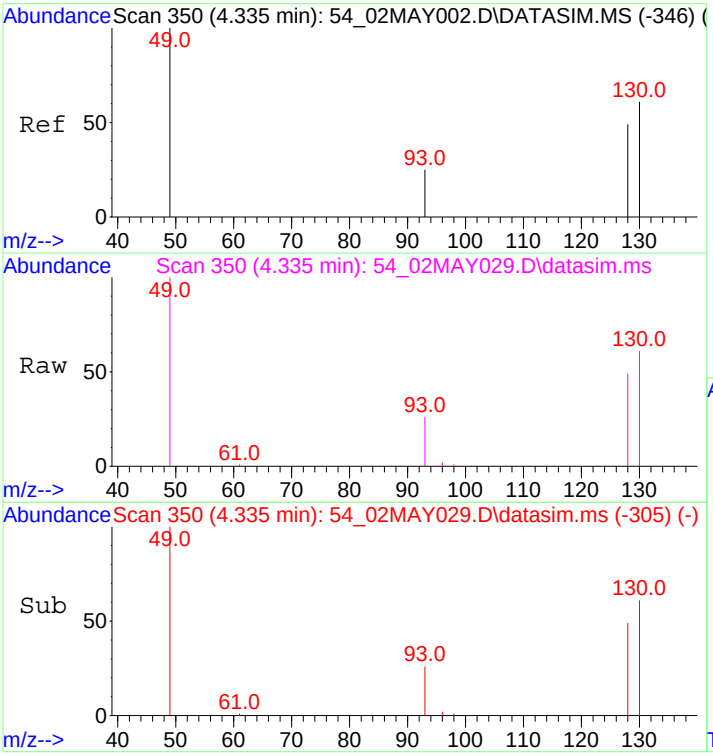
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY029.D
Acq On : 2 May 2014 6:15 pm
Operator : yhl
Sample : 02161 \ G6-010
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:23:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



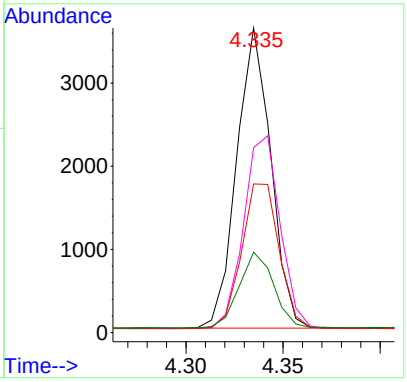


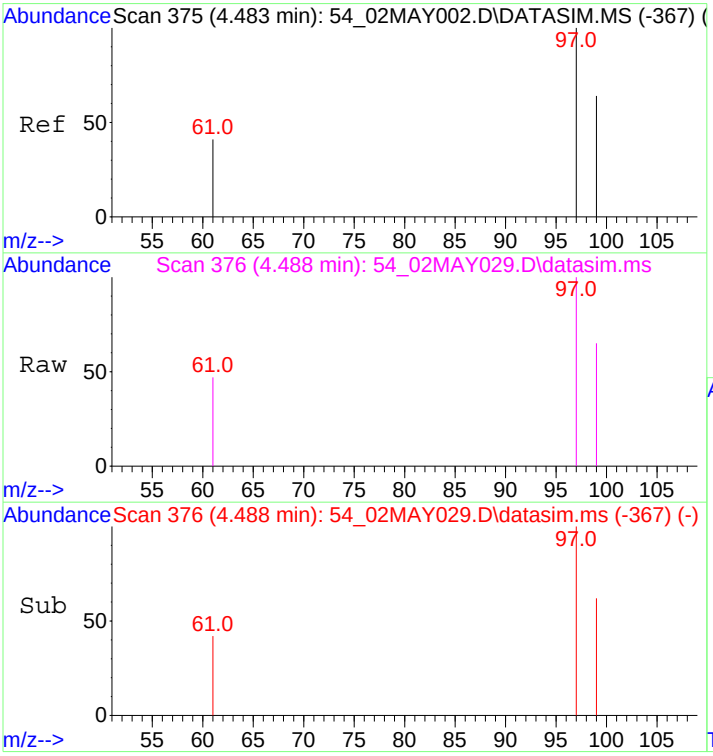


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY029.D
Acq: 2 May 2014 6:15 pm

Tgt Ion: 49 Resp: 4435

Ion	Ratio	Lower	Upper
49	100		
130	68.5	87.2	130.8#
128	52.9	68.0	102.0#
93	25.4	29.3	43.9#

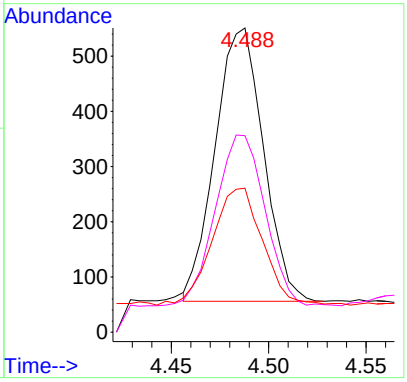


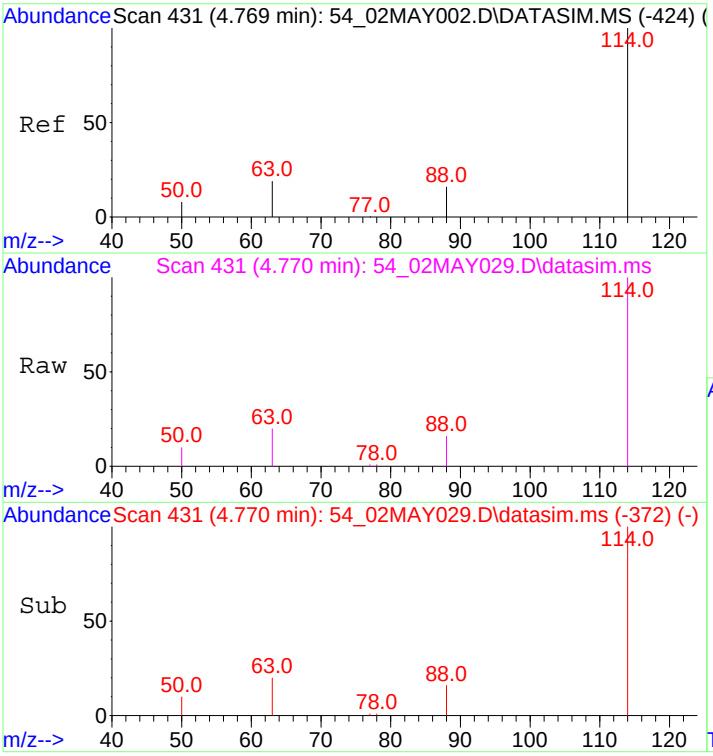


#8
1,1,1-Trichloroethane
Concen: 1.87 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.000 min
Lab File: 54_02MAY029.D
Acq: 2 May 2014 6:15 pm

Tgt Ion: 97 Resp: 855

Ion	Ratio	Lower	Upper
97	100		
99	63.3	52.1	78.1
61	43.0	30.2	45.4

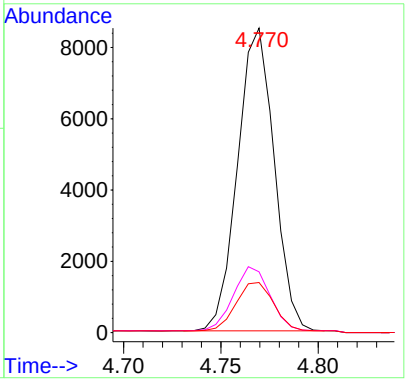


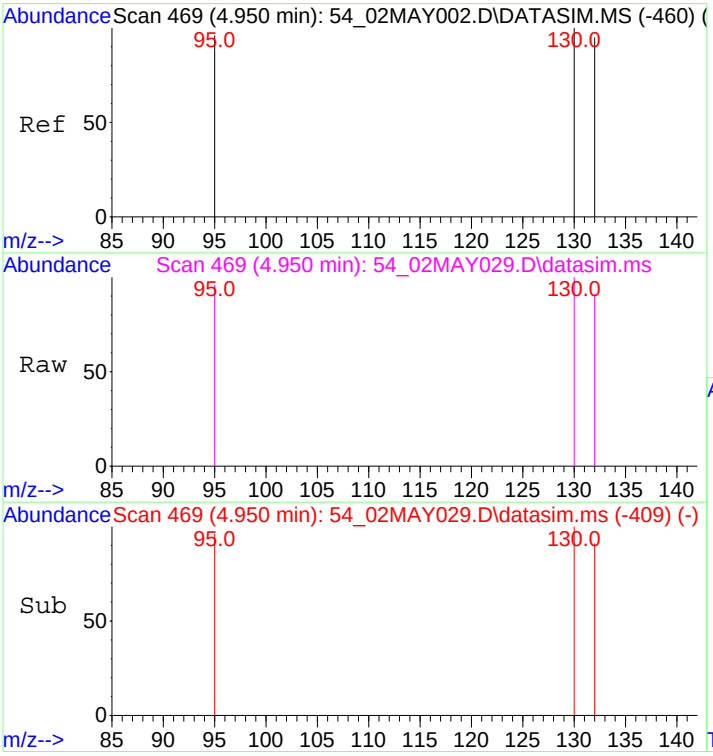


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 02MAY029.D
Acq: 2 May 2014 6:15 pm

Tgt Ion:114 Resp: 11105

Ion	Ratio	Lower	Upper
114	100		
63	21.0	12.0	18.0#
88	16.5	11.8	17.8

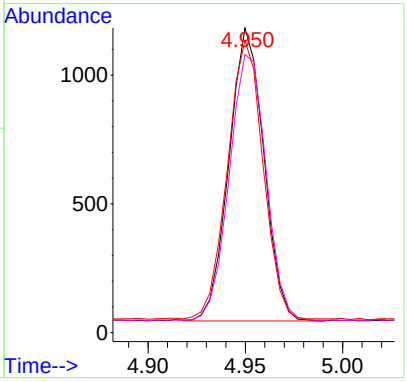


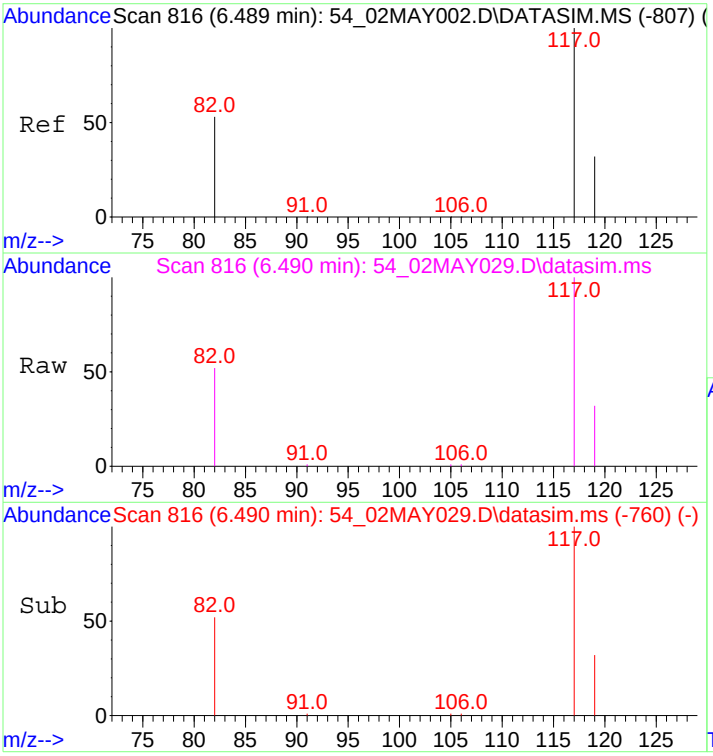


#11
Trichloroethene
Concen: 5.14 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_02MAY029.D
Acq: 2 May 2014 6:15 pm

Tgt Ion:130 Resp: 1421

Ion	Ratio	Lower	Upper
130	100		
132	95.3	76.9	115.3
95	96.6	76.5	114.7

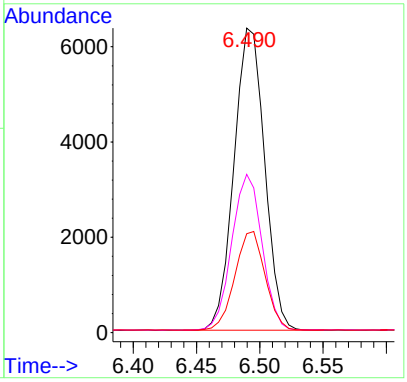


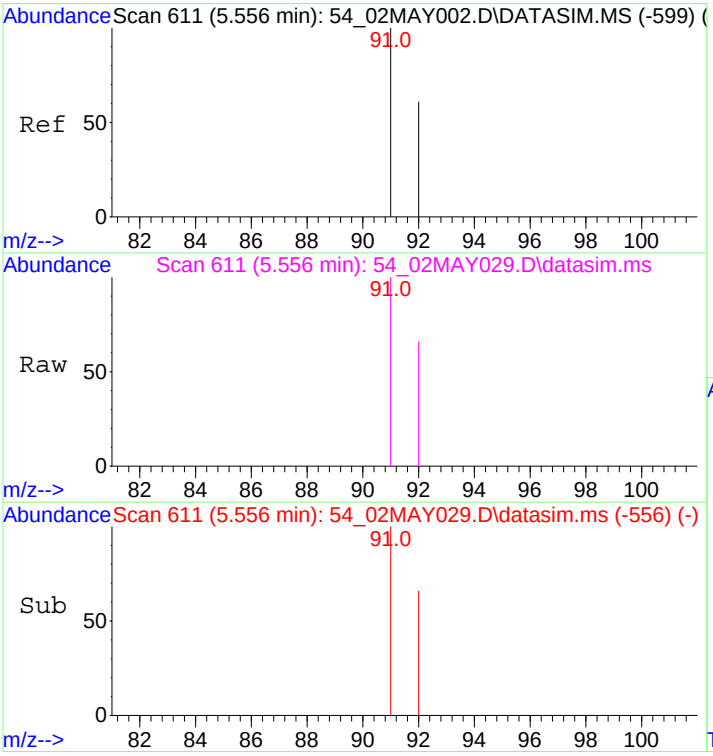


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY029.D
Acq: 2 May 2014 6:15 pm

Tgt Ion:117 Resp: 10695

Ion	Ratio	Lower	Upper
117	100		
82	50.9	38.0	57.0
119	32.2	27.0	40.4

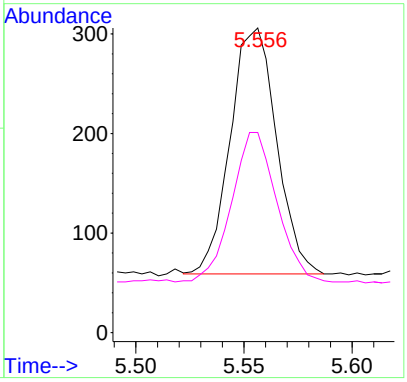




#13
Toluene
Concen: 0.57 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_02MAY029.D
Acq: 2 May 2014 6:15 pm

Tgt Ion: 91 Resp: 368

Ion	Ratio	Lower	Upper
91	100		
92	59.8	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY030.D
Acq On : 2 May 2014 6:26 pm
Operator : yhl
Sample : 02161 \ G6-010 DUP
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:39:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

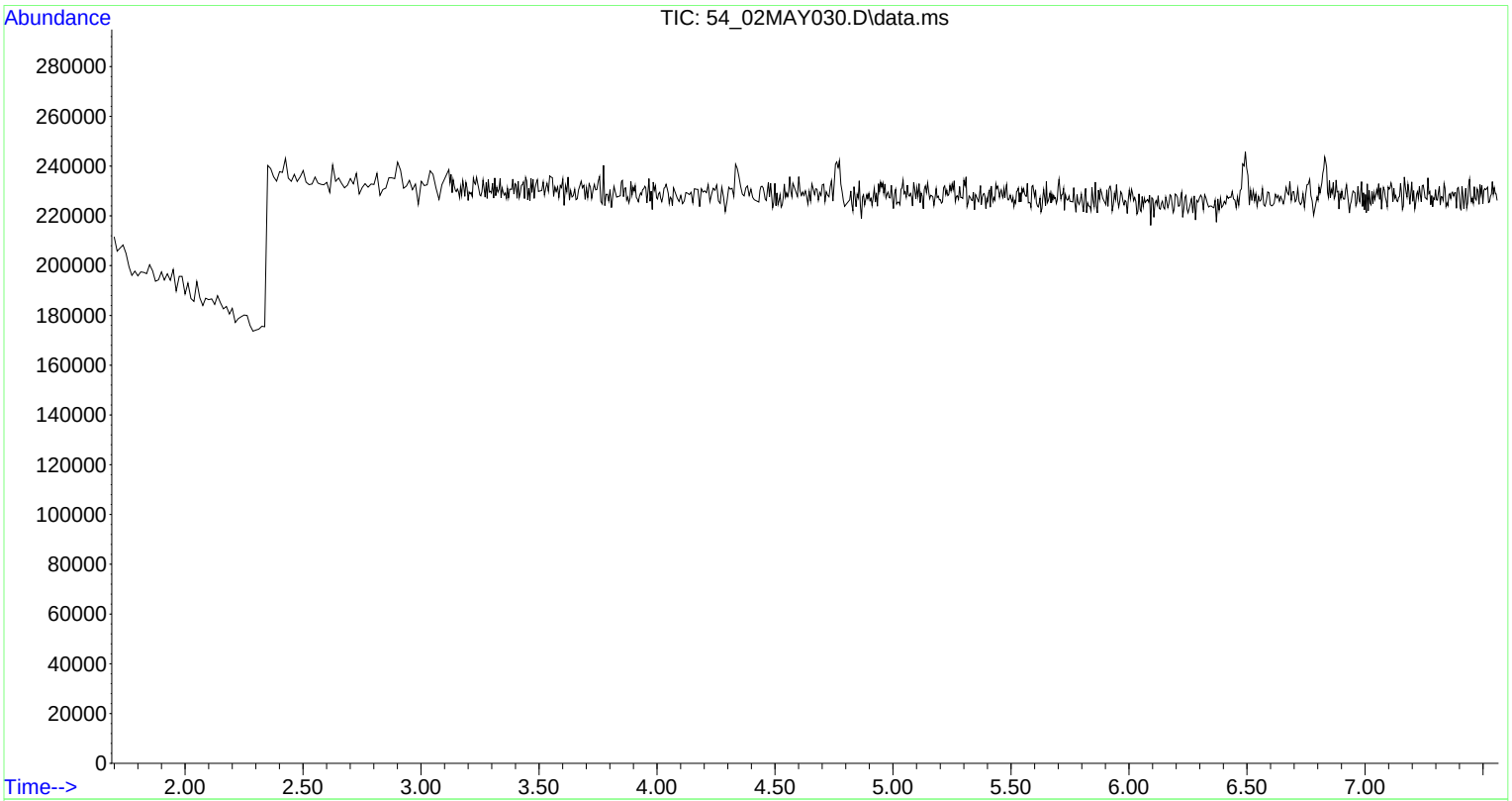
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4358	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10751	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9715	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
8] 1,1,1-Trichloroethane	4.483	97	821	1.82 ppbv	96
11] Trichloroethene	4.950	130	1401	5.24 ppbv	99
13] Toluene	5.552	91	373	0.64 ppbv	97

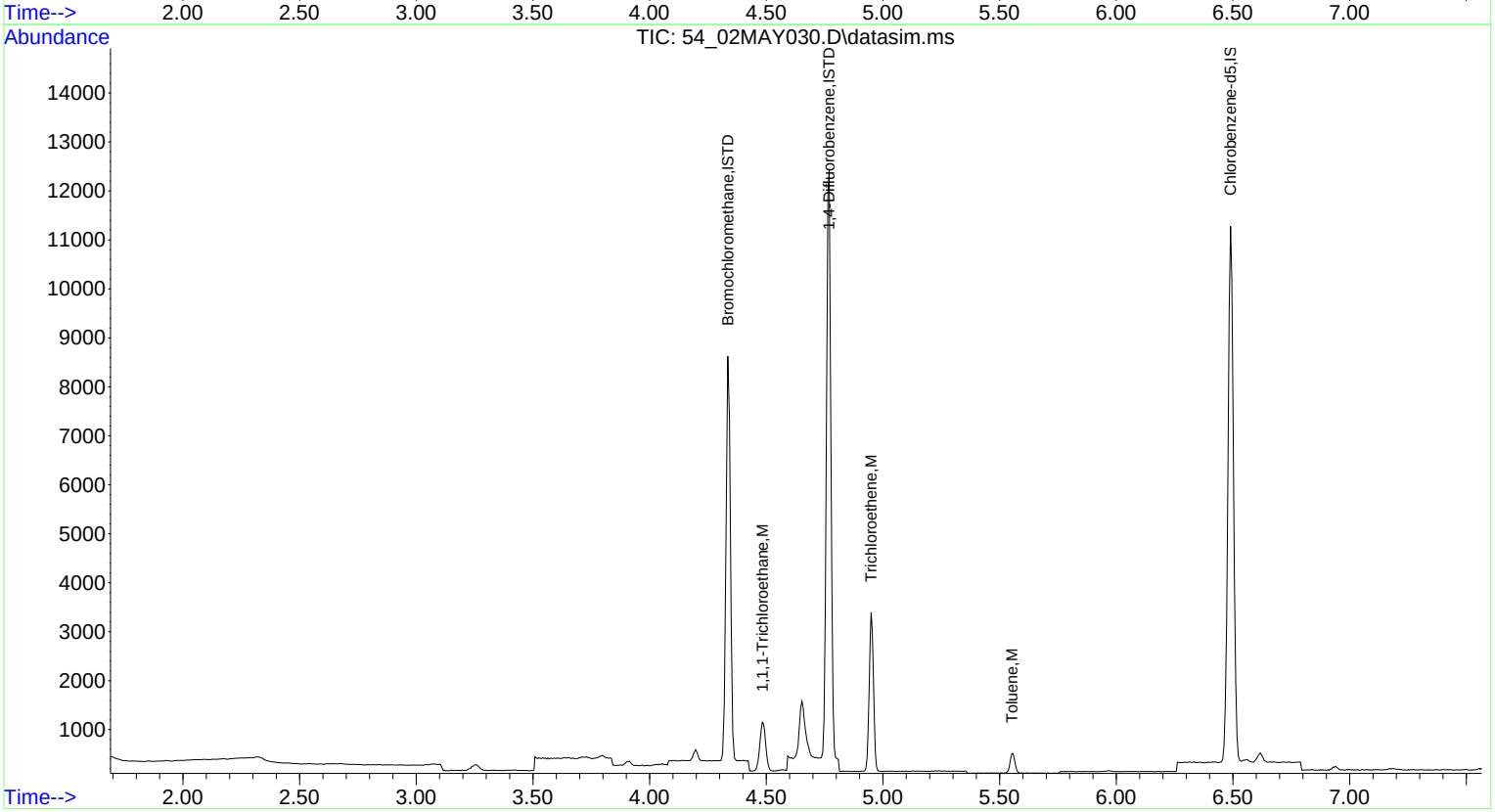
(#) = qualifier out of range (m) = manual integration (+) = signals summed

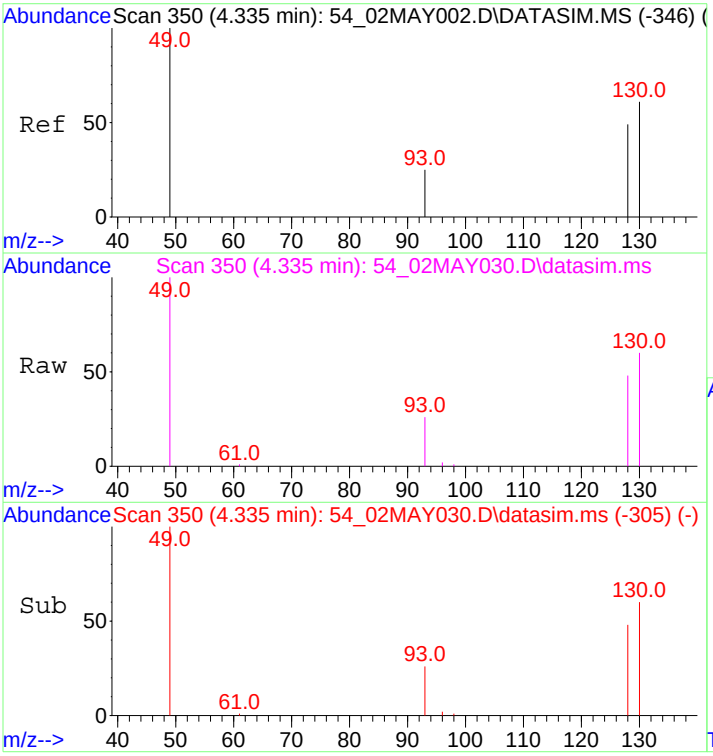
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY030.D
Acq On : 2 May 2014 6:26 pm
Operator : yhl
Sample : 02161 \ G6-010 DUP
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:39:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



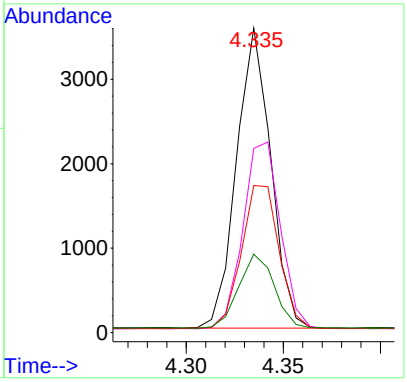


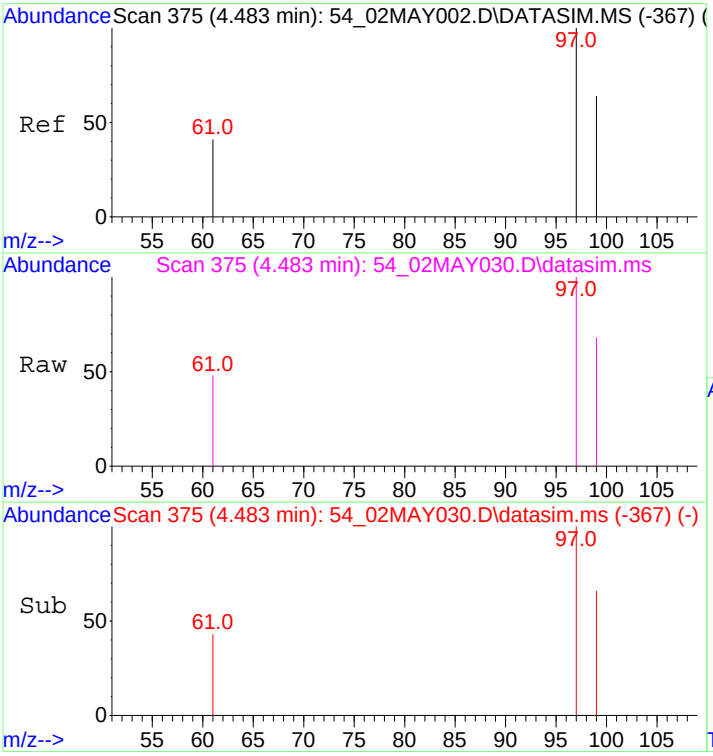


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY030.D
Acq: 2 May 2014 6:26 pm

Tgt Ion: 49 Resp: 4358

Ion	Ratio	Lower	Upper
49	100		
130	68.0	87.2	130.8#
128	52.4	68.0	102.0#
93	25.7	29.3	43.9#

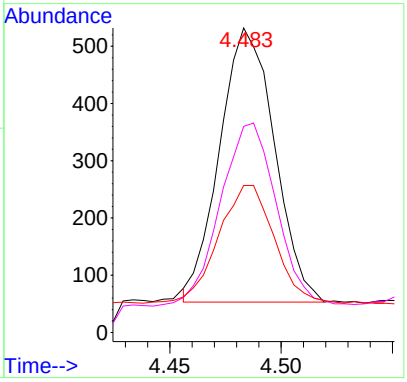


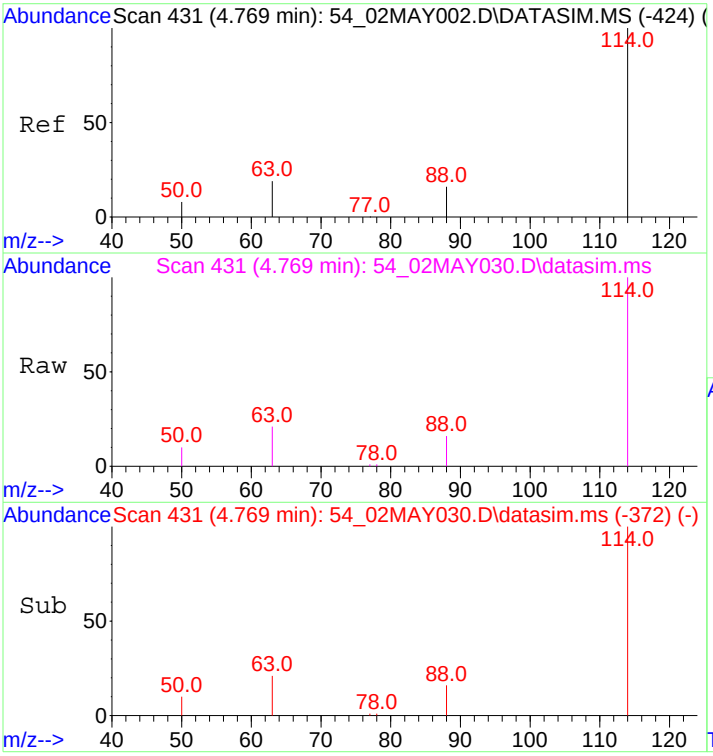


#8
1,1,1-Trichloroethane
Concen: 1.82 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_02MAY030.D
Acq: 2 May 2014 6:26 pm

Tgt Ion: 97 Resp: 821

Ion	Ratio	Lower	Upper
97	100		
99	65.8	52.1	78.1
61	43.2	30.2	45.4

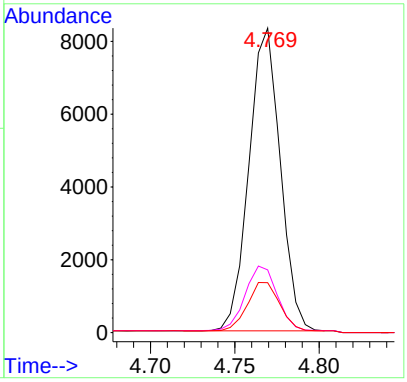


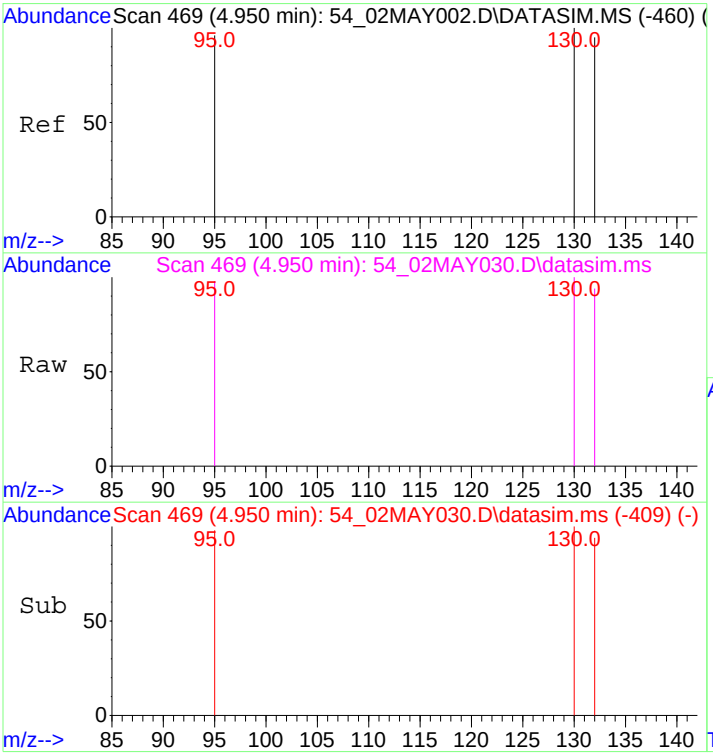


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 02MAY030.D
Acq: 2 May 2014 6:26 pm

Tgt Ion:114 Resp: 10751

Ion	Ratio	Lower	Upper
114	100		
63	21.7	12.0	18.0#
88	16.5	11.8	17.8

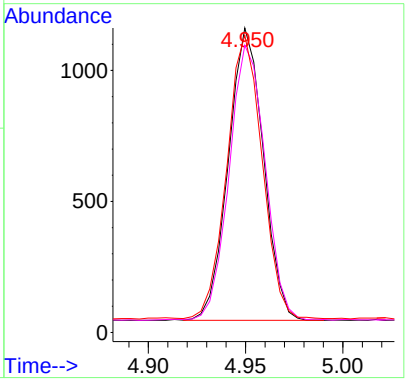


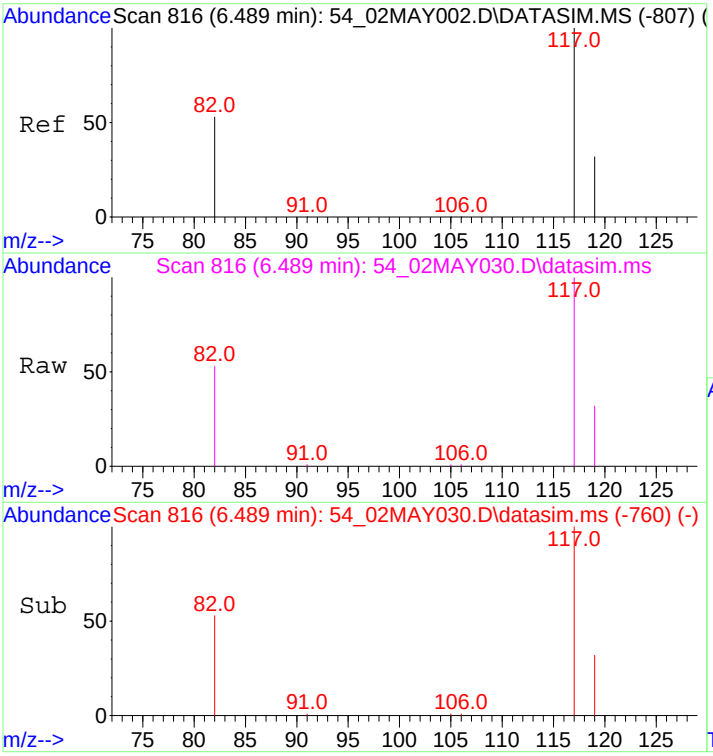


#11
Trichloroethene
Concen: 5.24 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_02MAY030.D
Acq: 2 May 2014 6:26 pm

Tgt Ion:130 Resp: 1401

Ion	Ratio	Lower	Upper
130	100		
132	95.6	76.9	115.3
95	97.1	76.5	114.7

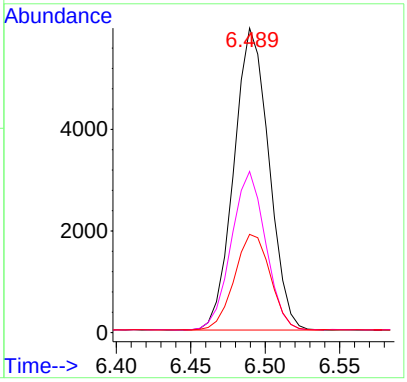


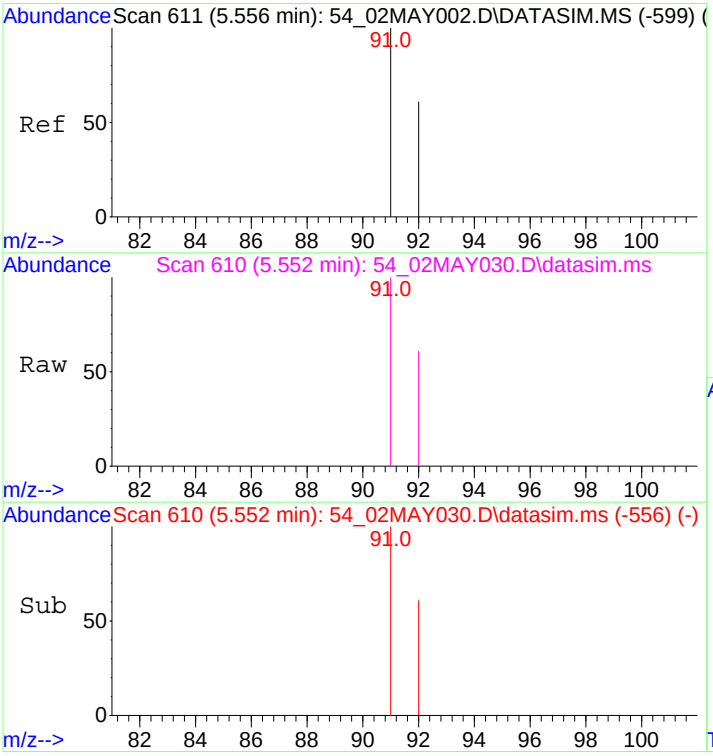


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY030.D
Acq: 2 May 2014 6:26 pm

Tgt Ion:117 Resp: 9715

Ion	Ratio	Lower	Upper
117	100		
82	51.5	38.0	57.0
119	32.5	27.0	40.4

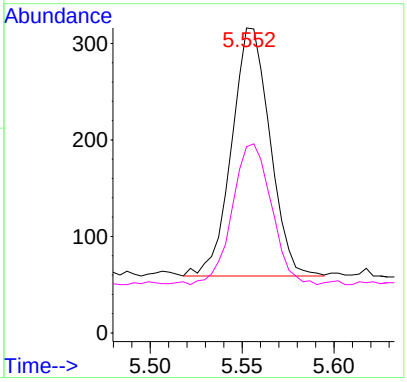




#13
Toluene
Concen: 0.64 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54_02MAY030.D
Acq: 2 May 2014 6:26 pm

Tgt Ion: 91 Resp: 373

Ion	Ratio	Lower	Upper
91	100		
92	57.9	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY031.D
Acq On : 2 May 2014 6:39 pm
Operator : yhl
Sample : 02162 \ F6-057
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:46:40 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

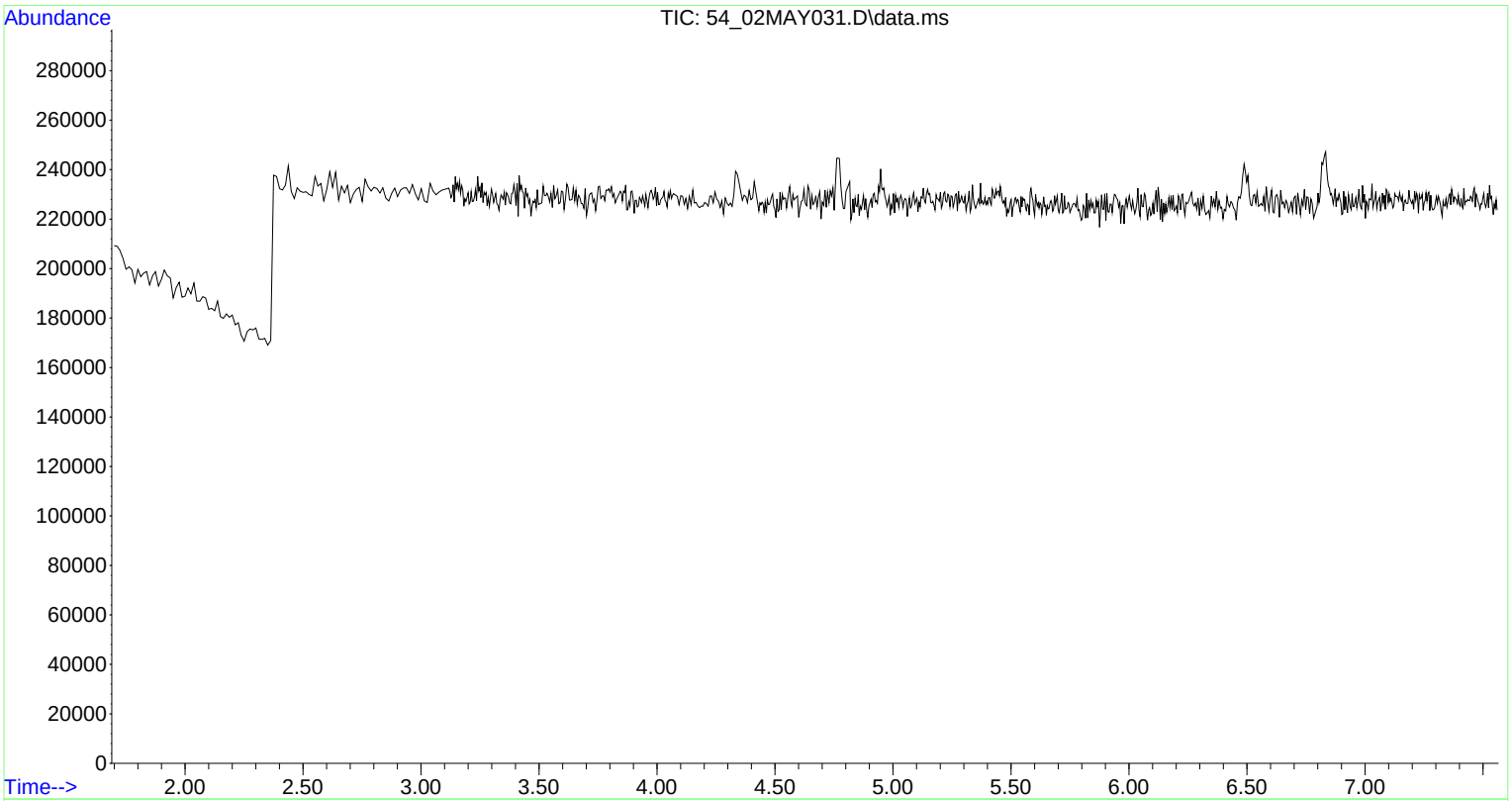
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4466	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11095	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10097	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	2316	8.39	ppbv	97
13] Toluene	5.552	91	450	0.74	ppbv	96

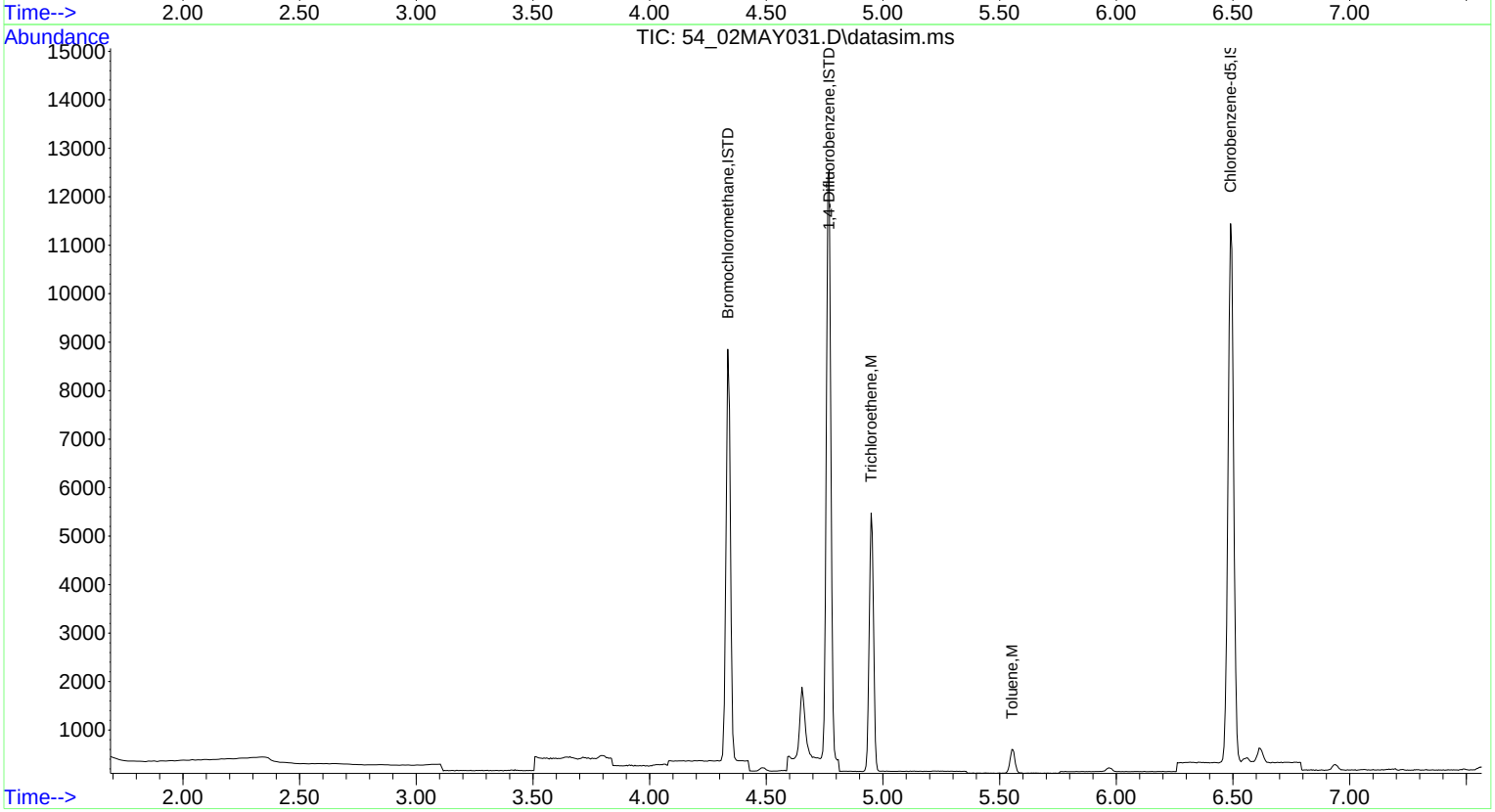
(#) = qualifier out of range (m) = manual integration (+) = signals summed

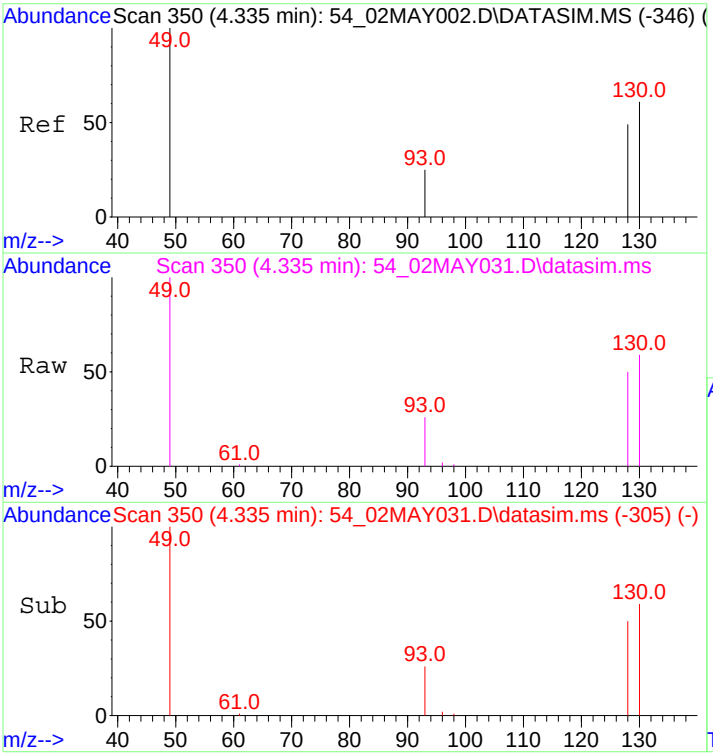
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY031.D
Acq On : 2 May 2014 6:39 pm
Operator : yhl
Sample : 02162 \ F6-057
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:46:40 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



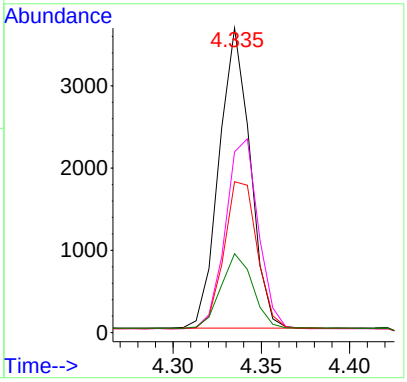


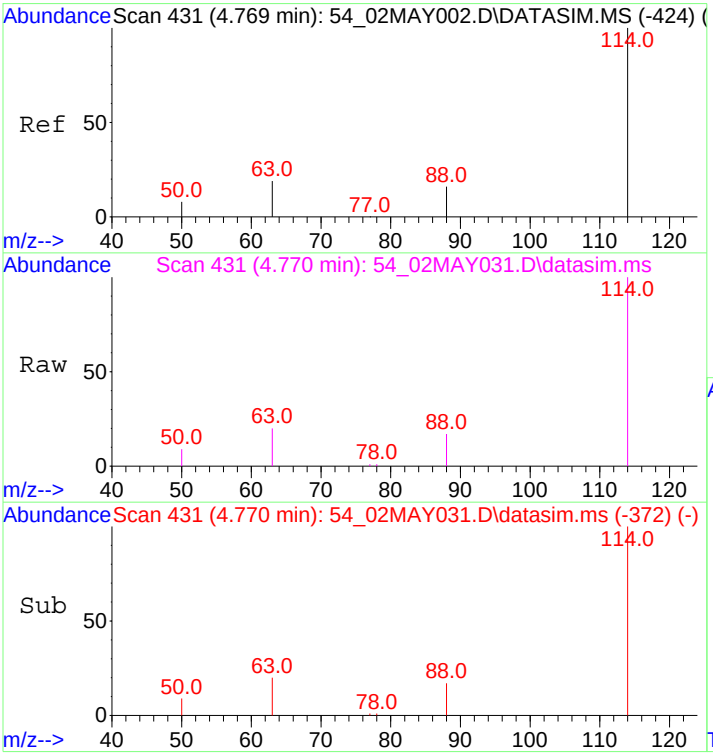


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY031.D
Acq: 2 May 2014 6:39 pm

Tgt Ion: 49 Resp: 4466

Ion	Ratio	Lower	Upper
49	100		
130	67.0	87.2	130.8#
128	52.5	68.0	102.0#
93	25.4	29.3	43.9#

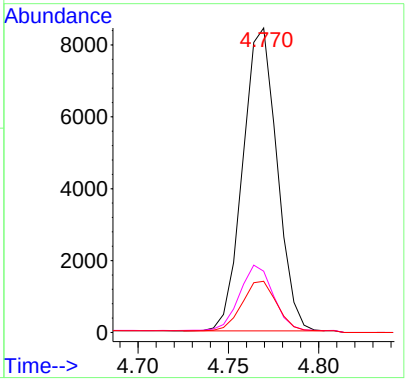


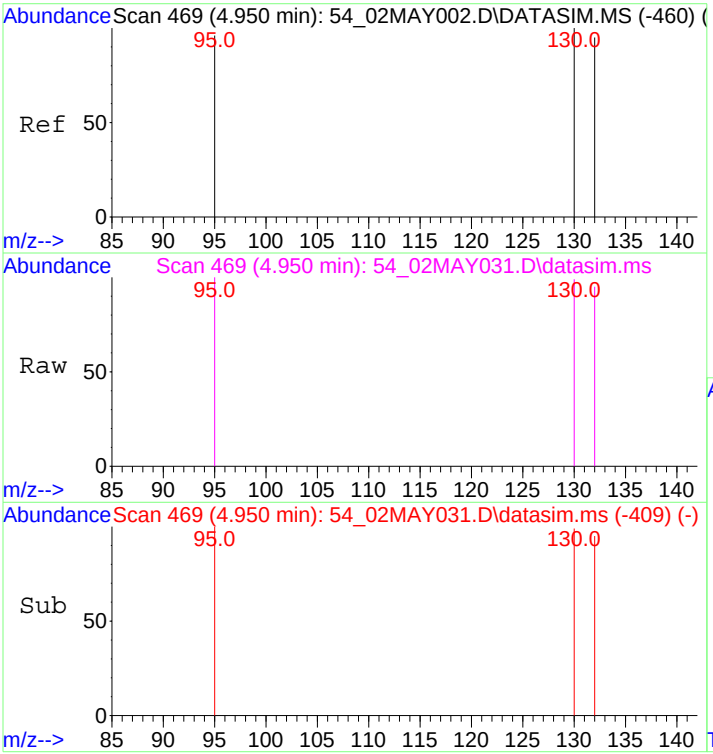


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY031.D
Acq: 2 May 2014 6:39 pm

Tgt Ion:114 Resp: 11095

Ion	Ratio	Lower	Upper
114	100		
63	21.3	12.0	18.0#
88	16.5	11.8	17.8

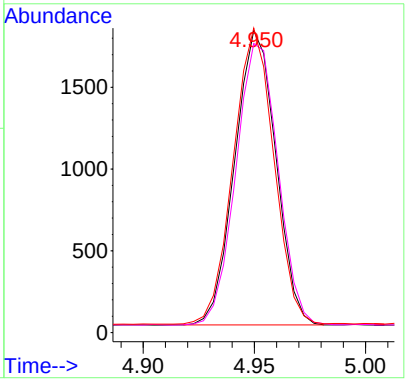


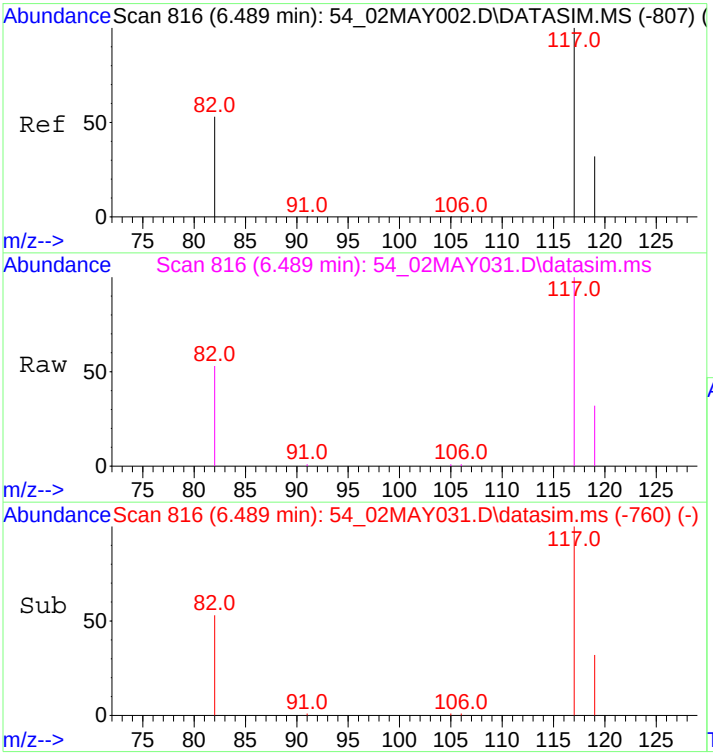


#11
Trichloroethene
Concen: 8.39 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 02MAY031.D
Acq: 2 May 2014 6:39 pm

Tgt Ion:130 Resp: 2316

Ion	Ratio	Lower	Upper
130	100		
132	98.1	76.9	115.3
95	98.9	76.5	114.7

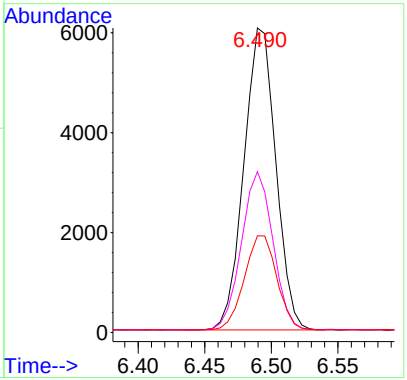


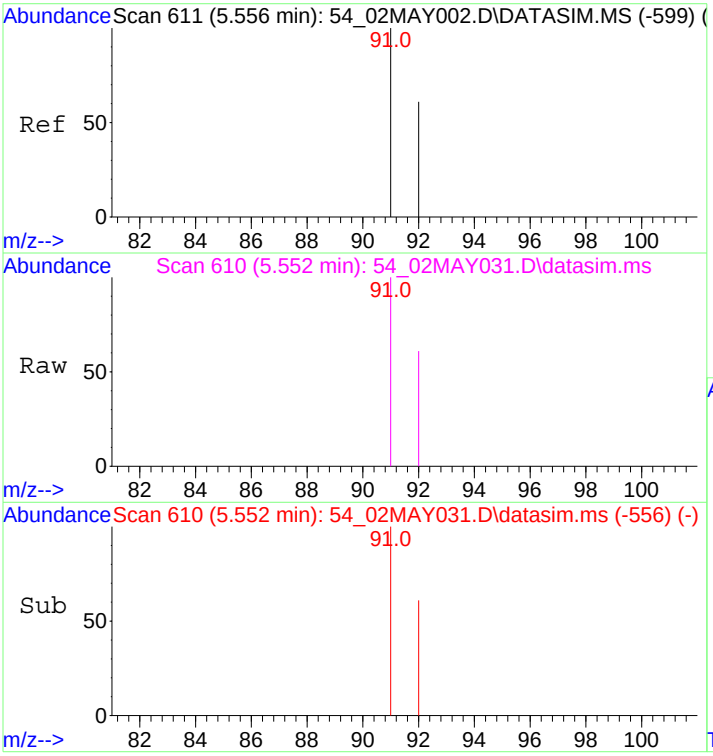


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_02MAY031.D
Acq: 2 May 2014 6:39 pm

Tgt Ion:117 Resp: 10097

Ion	Ratio	Lower	Upper
117	100		
82	51.5	38.0	57.0
119	31.8	27.0	40.4

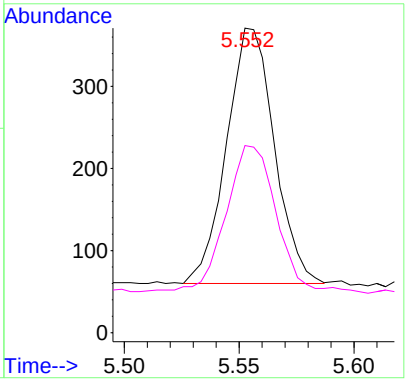




#13
Toluene
Concen: 0.74 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54 02MAY031.D
Acq: 2 May 2014 6:39 pm

Tgt Ion: 91 Resp: 450

Ion	Ratio	Lower	Upper
91	100		
92	57.1	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY032.D
Acq On : 2 May 2014 6:51 pm
Operator : yhl
Sample : 02163 \ F6-055
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:58:02 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

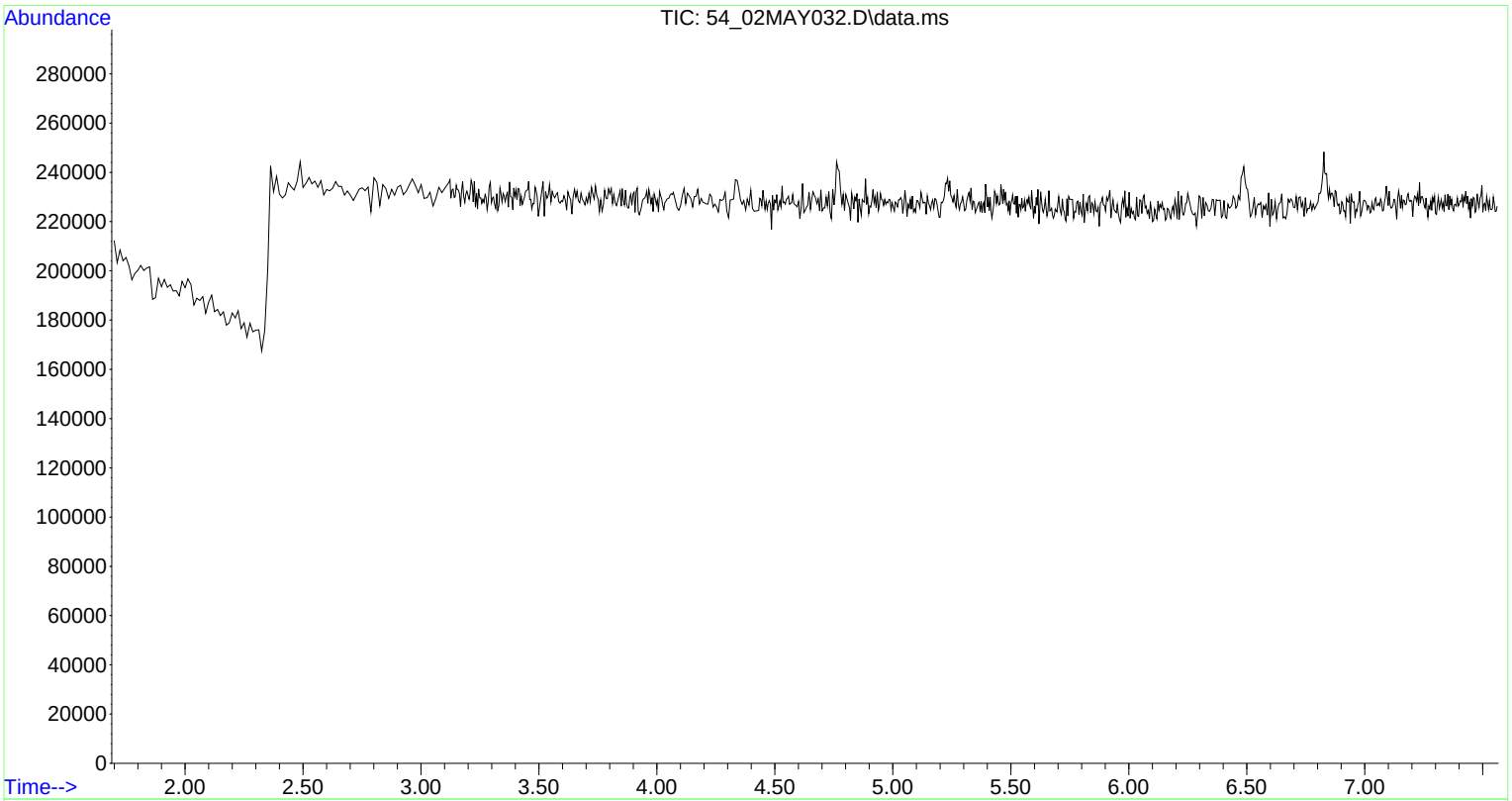
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4600	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11239	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10448	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	266	0.95	ppbv	92

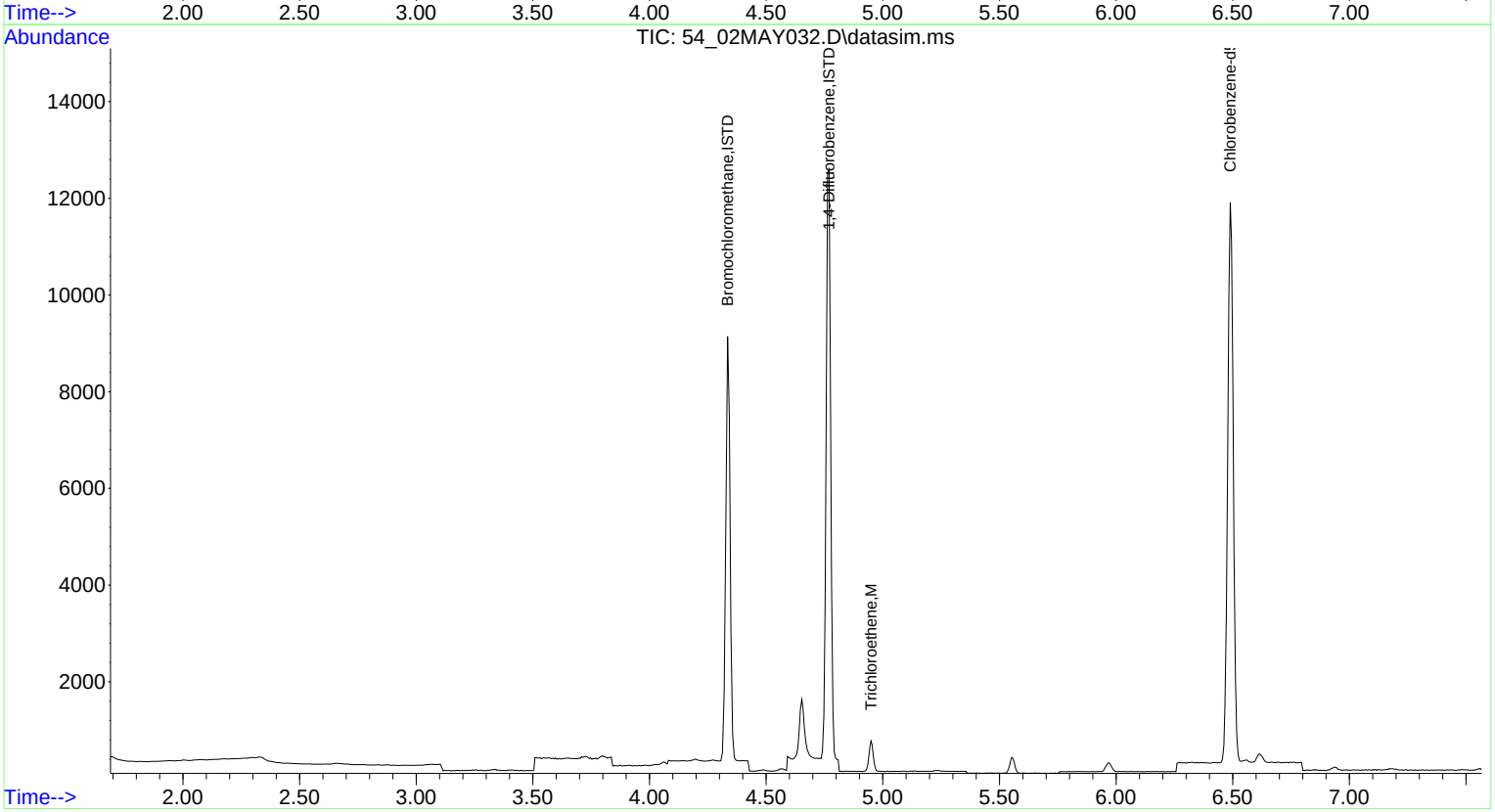
(#) = qualifier out of range (m) = manual integration (+) = signals summed

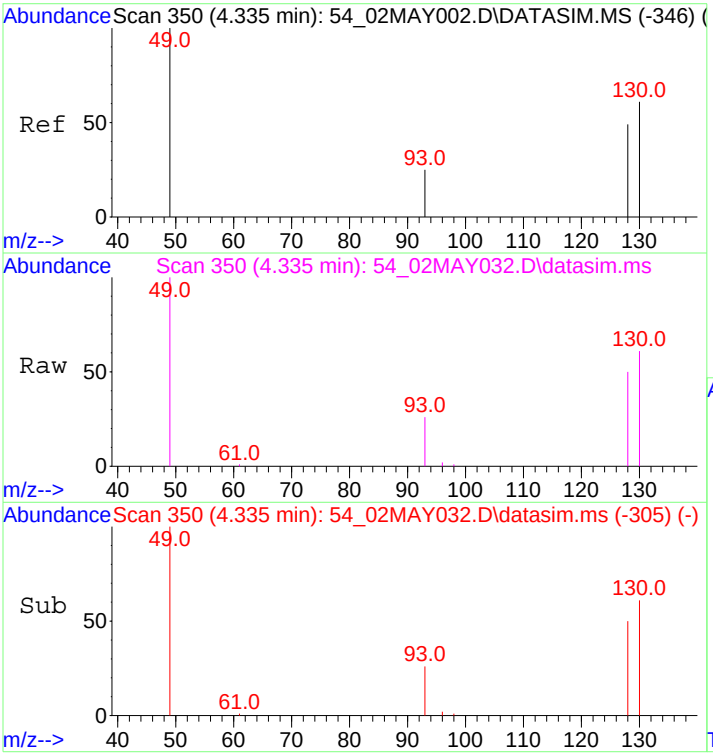
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY032.D
Acq On : 2 May 2014 6:51 pm
Operator : yhl
Sample : 02163 \ F6-055
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 18:58:02 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



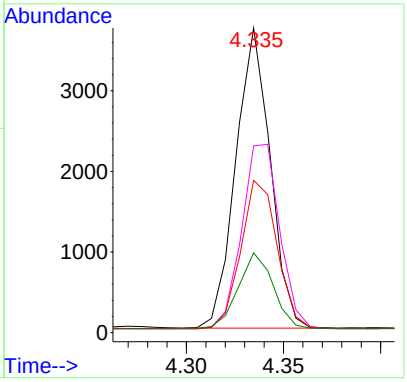


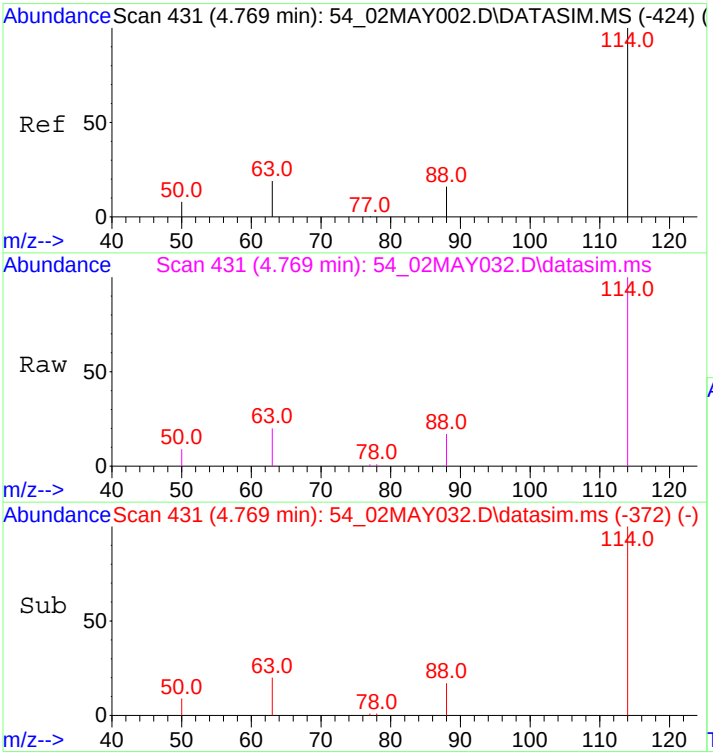


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY032.D
Acq: 2 May 2014 6:51 pm

Tgt Ion: 49 Resp: 4600

Ion	Ratio	Lower	Upper
49	100		
130	67.7	87.2	130.8#
128	52.2	68.0	102.0#
93	25.2	29.3	43.9#

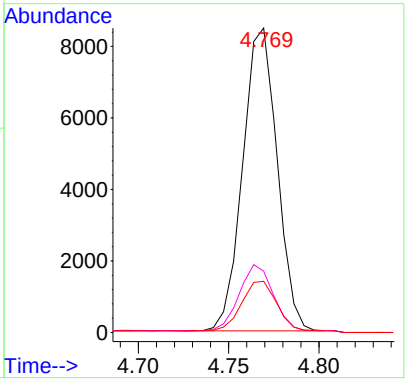


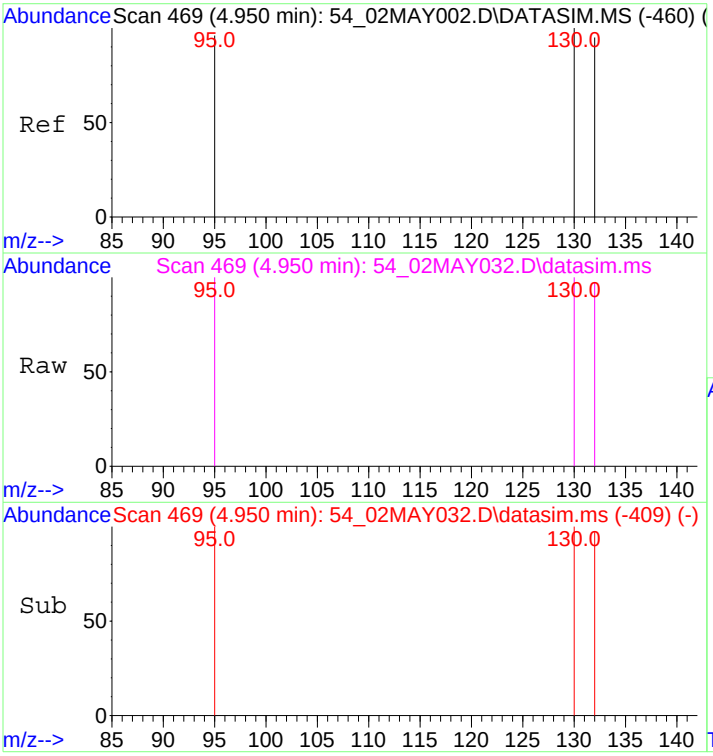


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY032.D
Acq: 2 May 2014 6:51 pm

Tgt Ion:114 Resp: 11239

Ion	Ratio	Lower	Upper
114	100		
63	21.2	12.0	18.0#
88	16.6	11.8	17.8

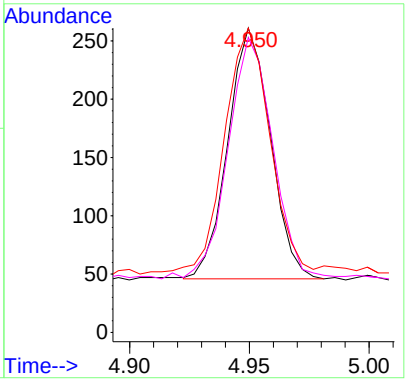


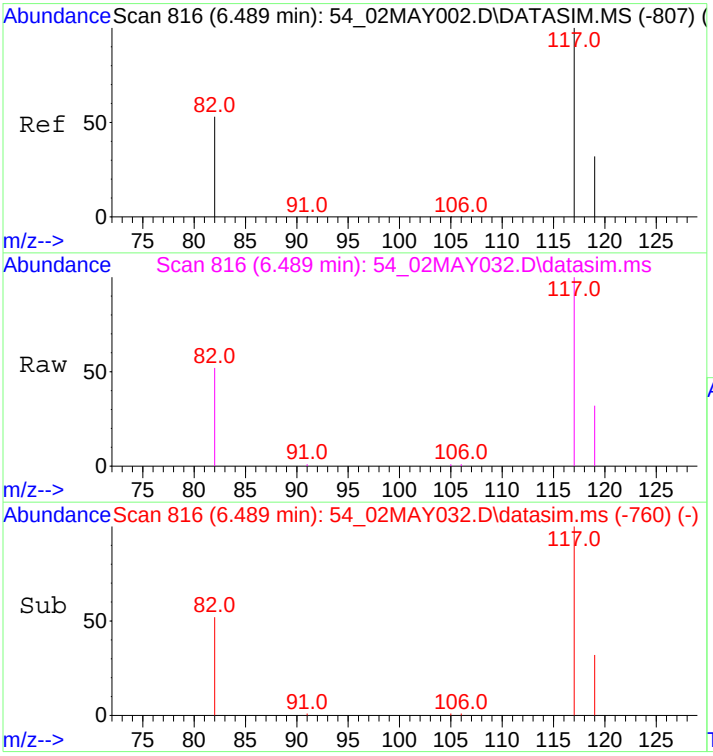


#11
Trichloroethene
Concen: 0.95 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 02MAY032.D
Acq: 2 May 2014 6:51 pm

Tgt Ion:130 Resp: 266

Ion	Ratio	Lower	Upper
130	100		
132	101.1	76.9	115.3
95	105.3	76.5	114.7

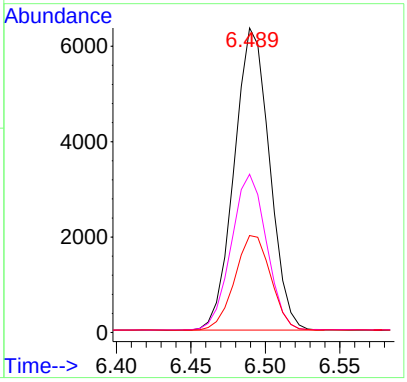




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_02MAY032.D
Acq: 2 May 2014 6:51 pm

Tgt Ion:117 Resp: 10448

Ion	Ratio	Lower	Upper
117	100		
82	51.5	38.0	57.0
119	32.1	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY033.D
Acq On : 2 May 2014 7:02 pm
Operator : yhl
Sample : 02164 \ F6-031
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:21:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

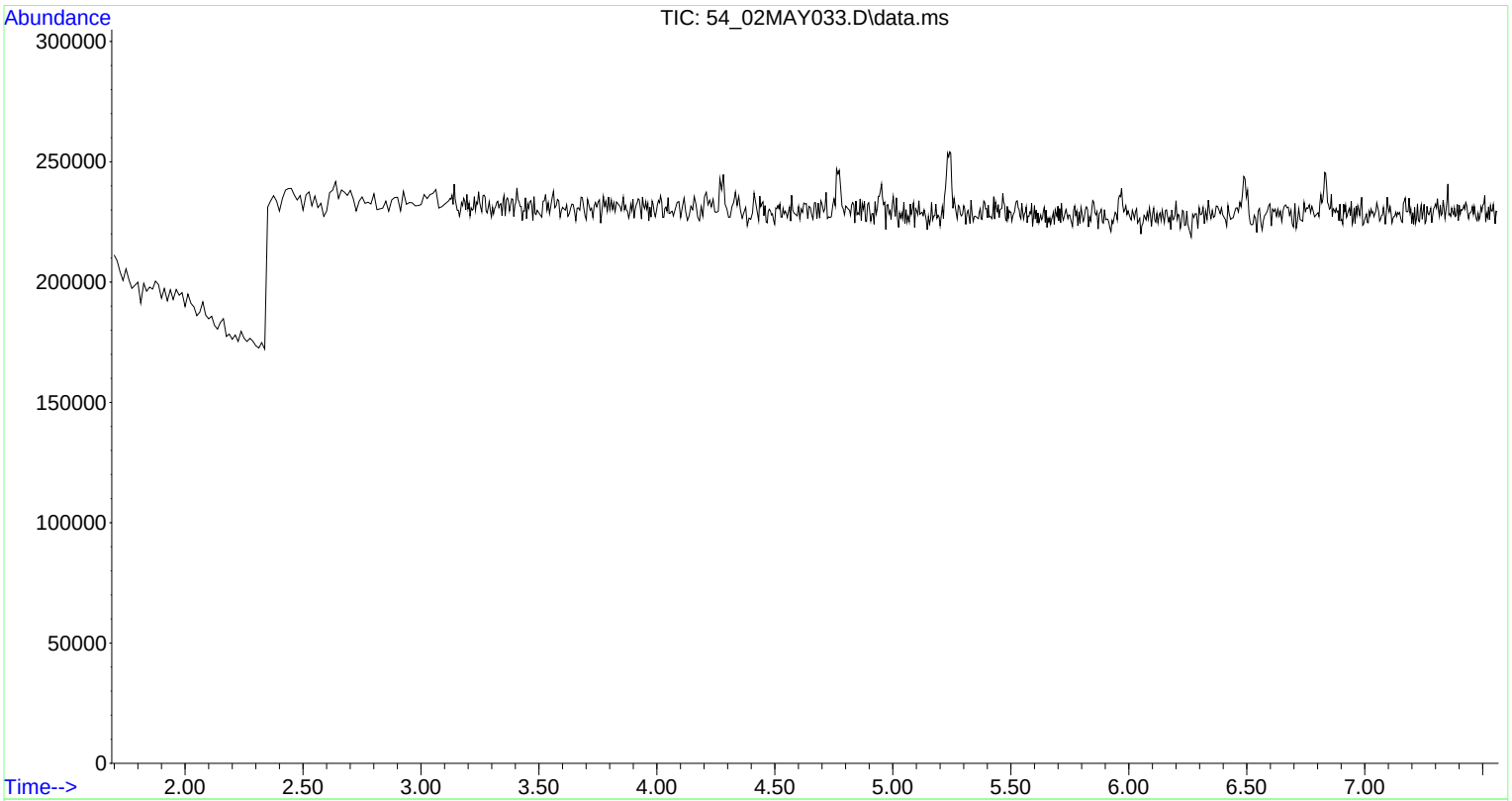
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4250	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10412	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9527	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
7] cis-1,2-Dichloroethene	4.197	61	576m	2.13 ppbv	
8] 1,1,1-Trichloroethane	4.483	97	255	0.58 ppbv	99
11] Trichloroethene	4.950	130	3731	14.41 ppbv	99
13] Toluene	5.556	91	3205	5.61 ppbv	100
14] Tetrachloroethene	5.967	166	2281	6.99 ppbv	98

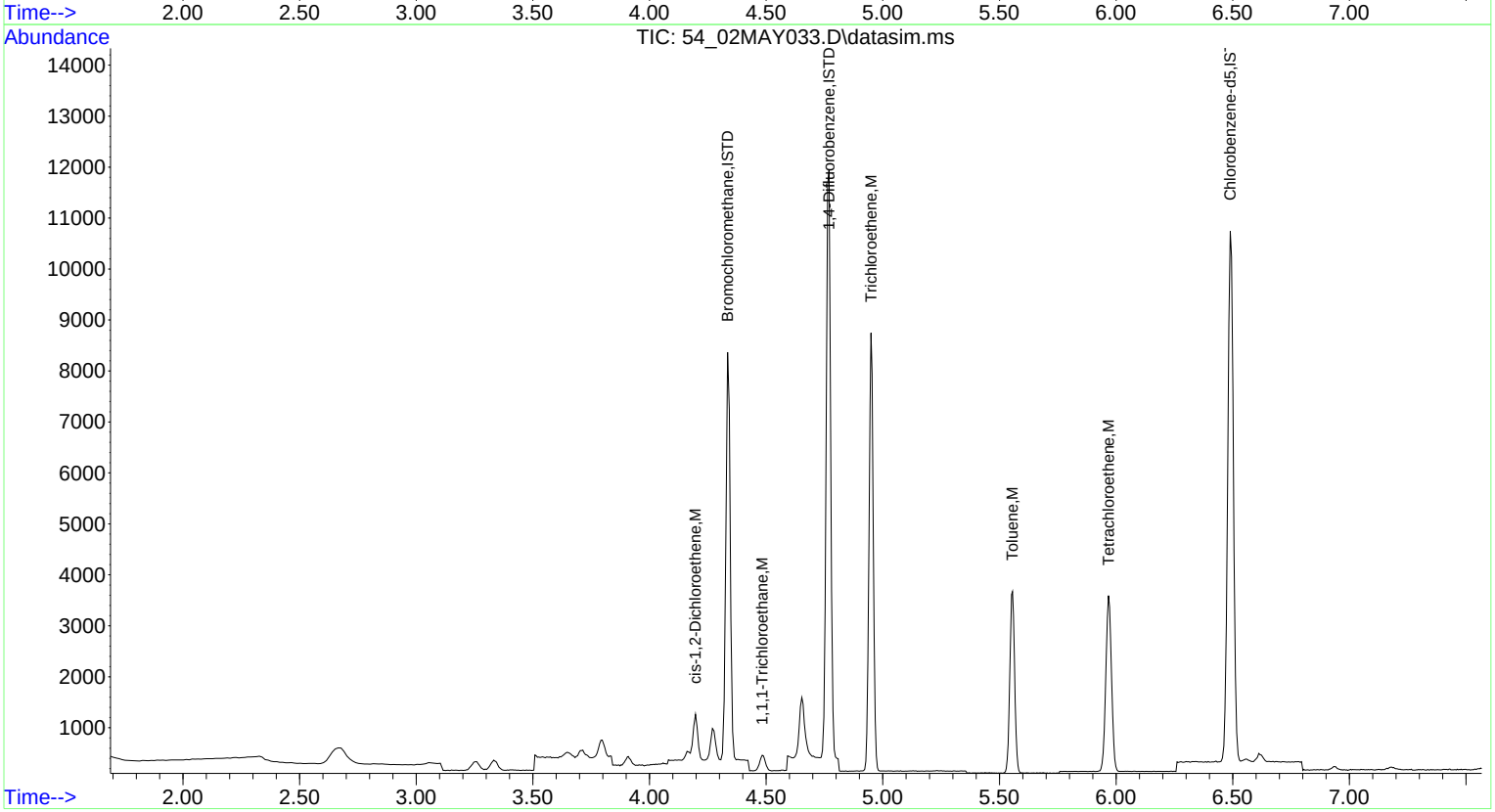
(#) = qualifier out of range (m) = manual integration (+) = signals summed

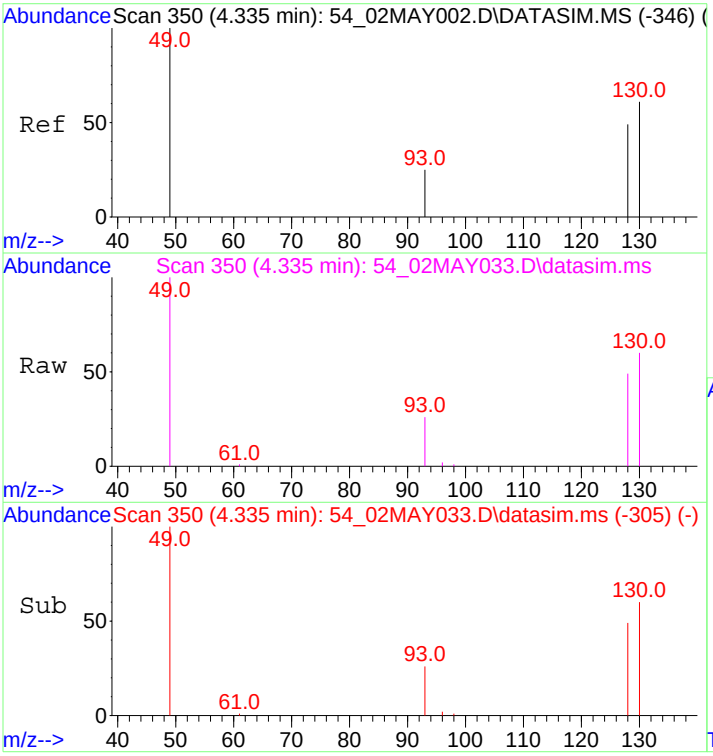
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY033.D
Acq On : 2 May 2014 7:02 pm
Operator : yhl
Sample : 02164 \ F6-031
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:21:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



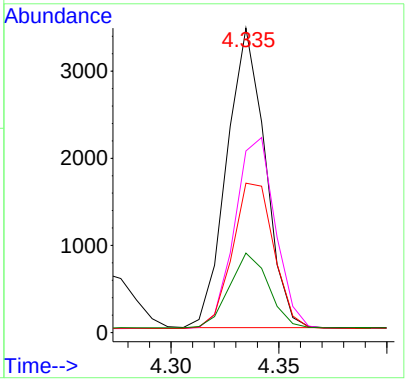


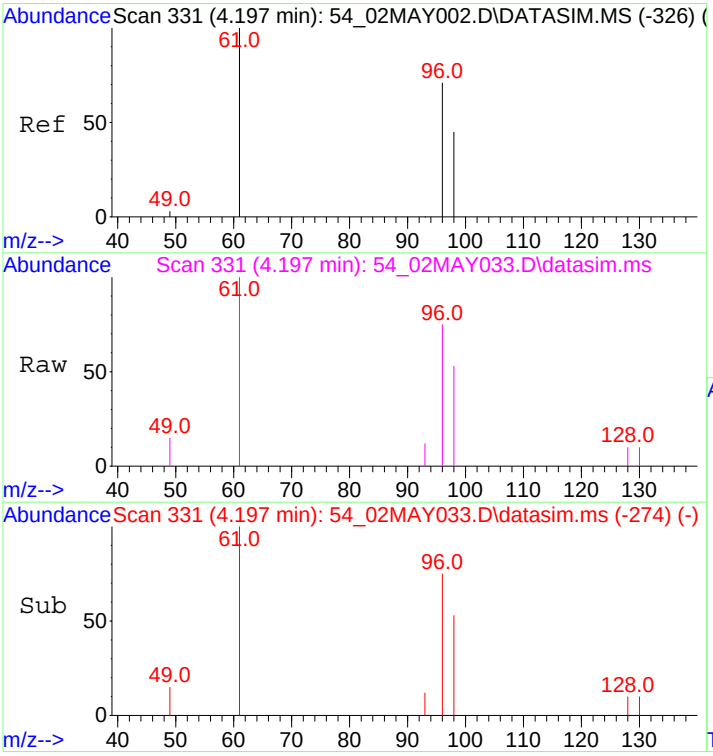


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY033.D
Acq: 2 May 2014 7:02 pm

Tgt Ion: 49 Resp: 4250

Ion	Ratio	Lower	Upper
49	100		
130	67.5	87.2	130.8#
128	52.7	68.0	102.0#
93	25.4	29.3	43.9#

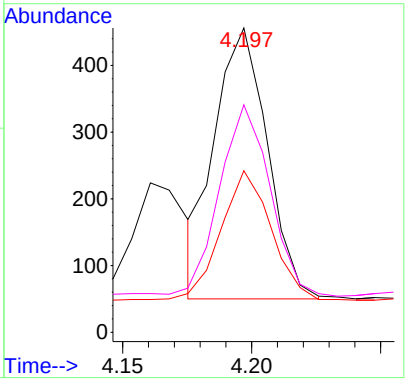




#7
cis-1,2-Dichloroethene
Concen: 2.13 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_02MAY033.D
Acq: 2 May 2014 7:02 pm

Tgt Ion: 61 Resp: 576

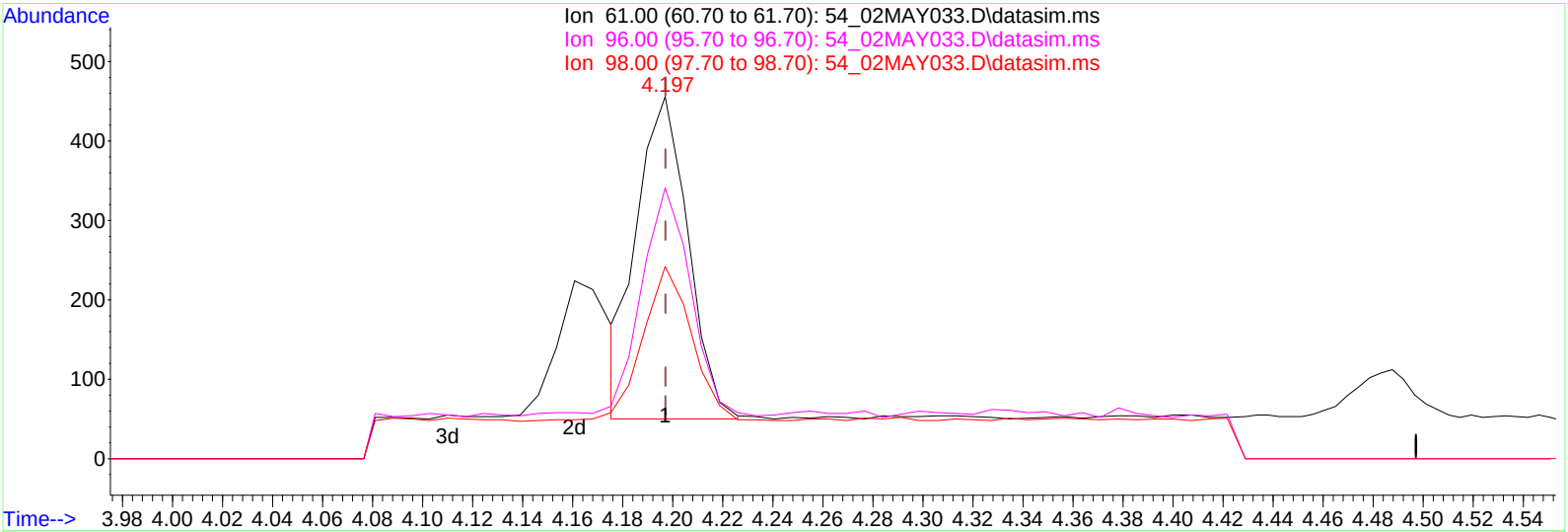
Ion	Ratio	Lower	Upper
61	100		
96	71.5	78.5	117.7#
98	52.1	50.6	76.0

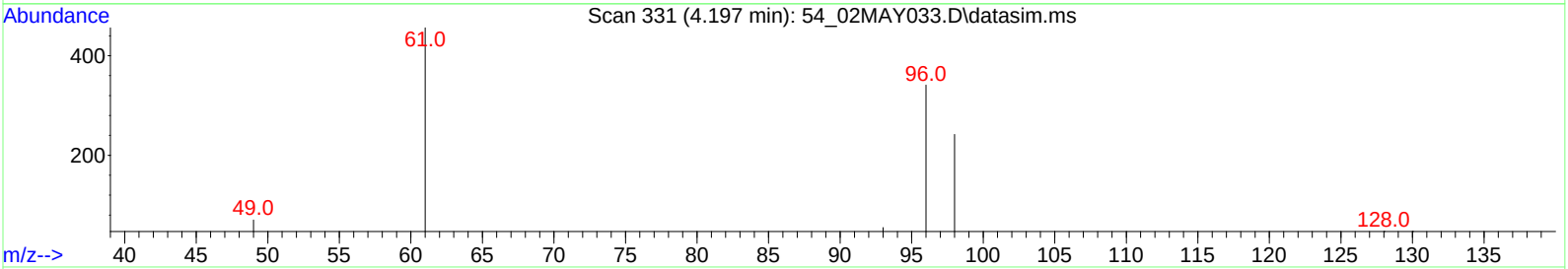


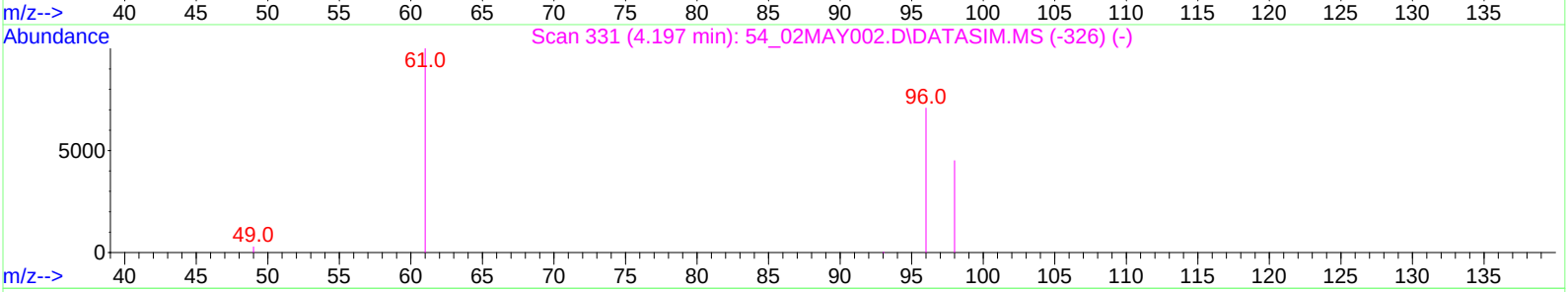
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY033.D
Acq On : 2 May 2014 7:02 pm
Operator : yhl
Sample : 02164 \ F6-031
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:08:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration







TIC: 54_02MAY033.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 2.13 ppbv m

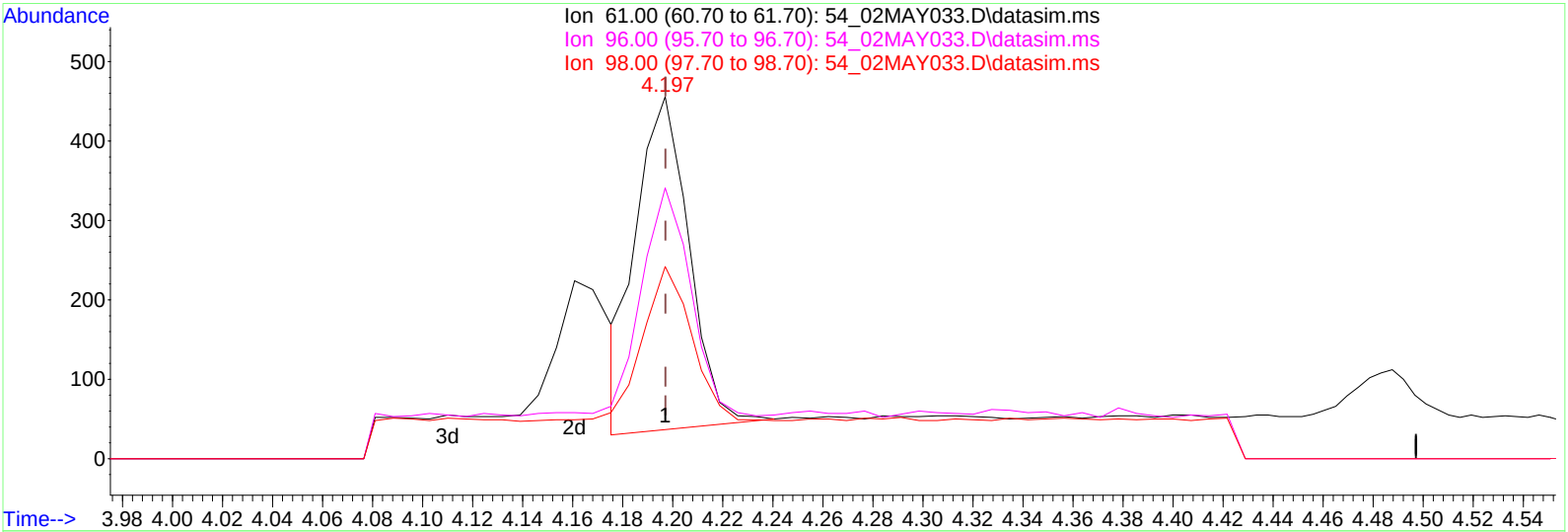
response 576

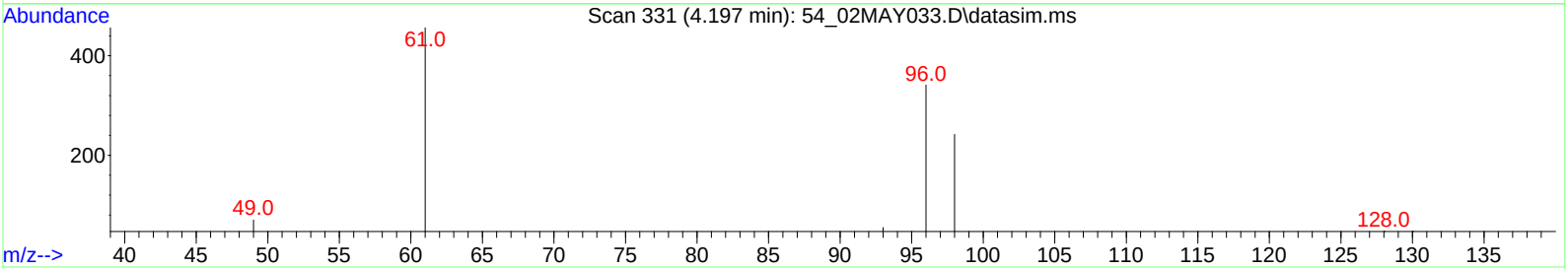
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	71.53#
98.00	63.30	52.08
0.00	0.00	0.00

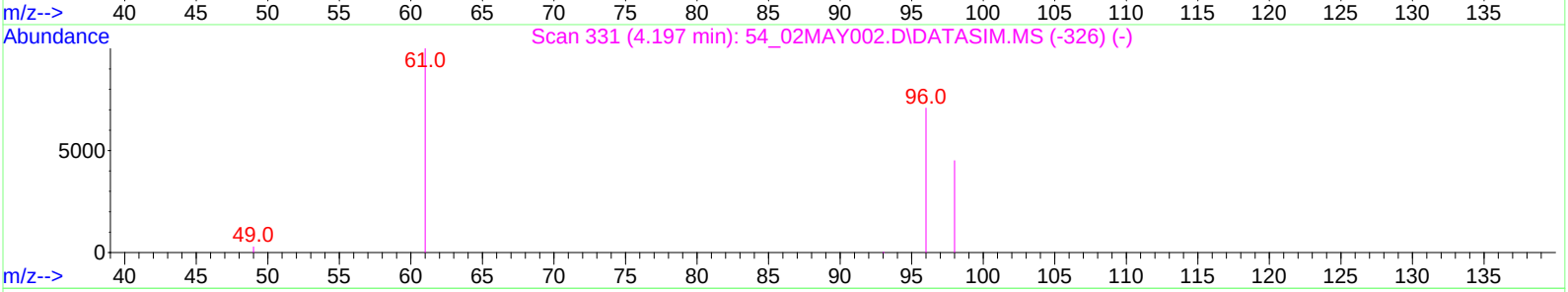
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY033.D
Acq On : 2 May 2014 7:02 pm
Operator : yhl
Sample : 02164 \ F6-031
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:08:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration







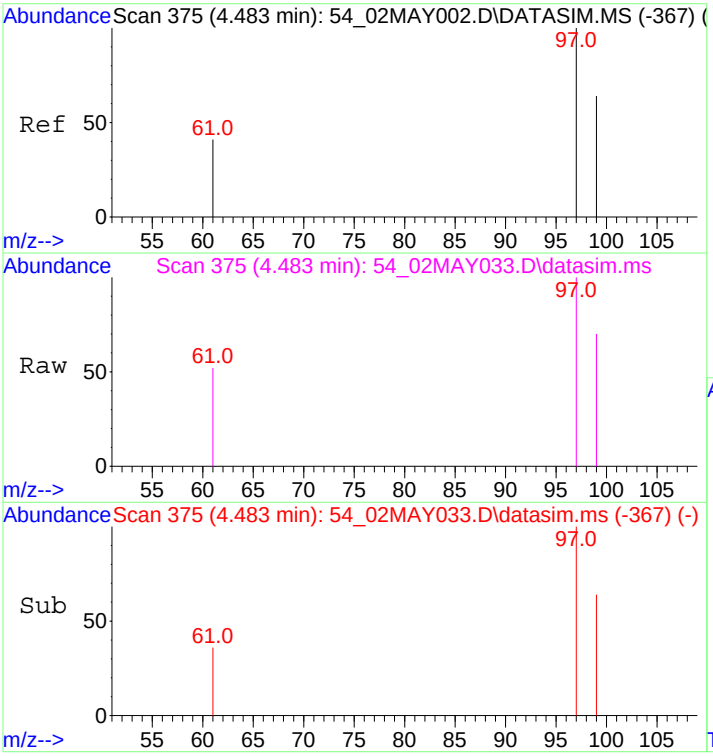
TIC: 54_02MAY033.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 2.27 ppbv

response 616

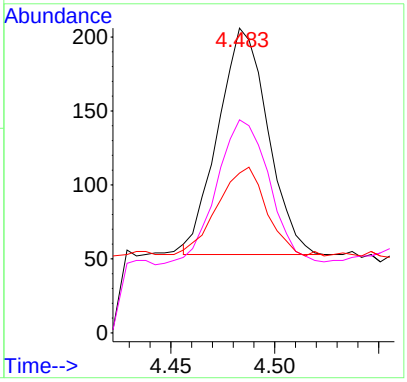
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	66.88#
98.00	63.30	48.70#
0.00	0.00	0.00

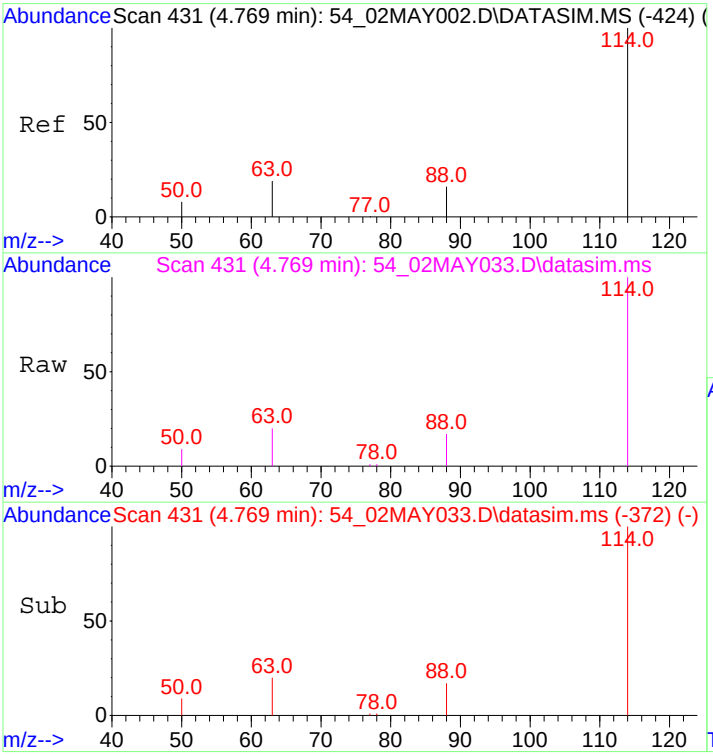


#8
1,1,1-Trichloroethane
Concen: 0.58 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54 02MAY033.D
Acq: 2 May 2014 7:02 pm

Tgt Ion: 97 Resp: 255

Ion	Ratio	Lower	Upper
97	100		
99	64.7	52.1	78.1
61	38.4	30.2	45.4

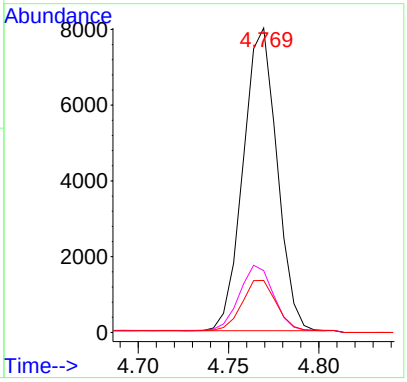


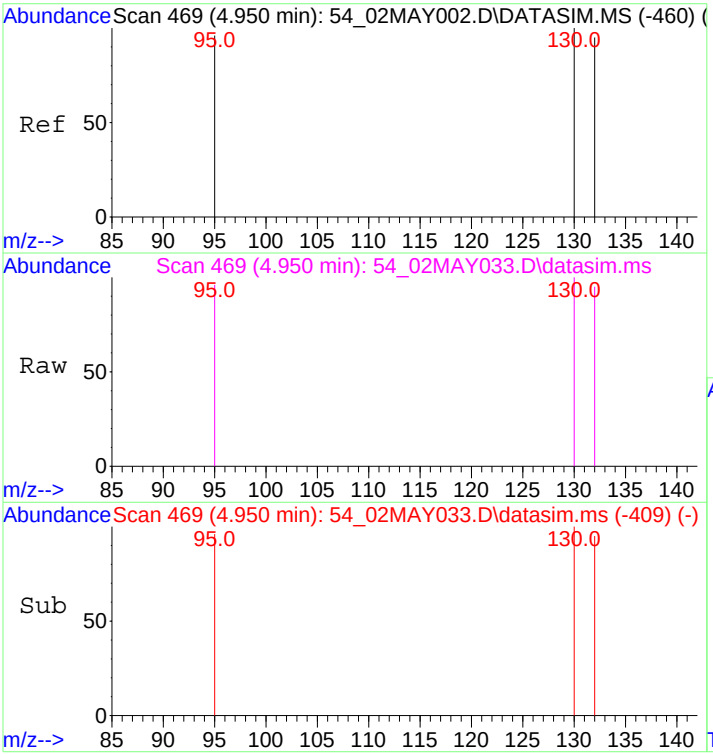


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY033.D
Acq: 2 May 2014 7:02 pm

Tgt Ion:114 Resp: 10412

Ion	Ratio	Lower	Upper
114	100		
63	21.5	12.0	18.0#
88	16.8	11.8	17.8

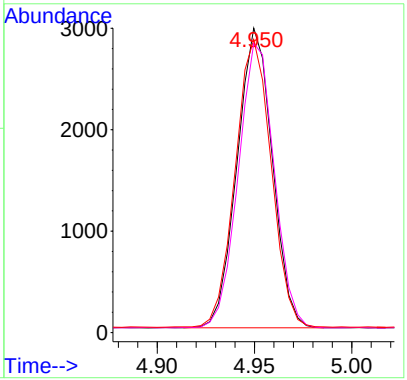


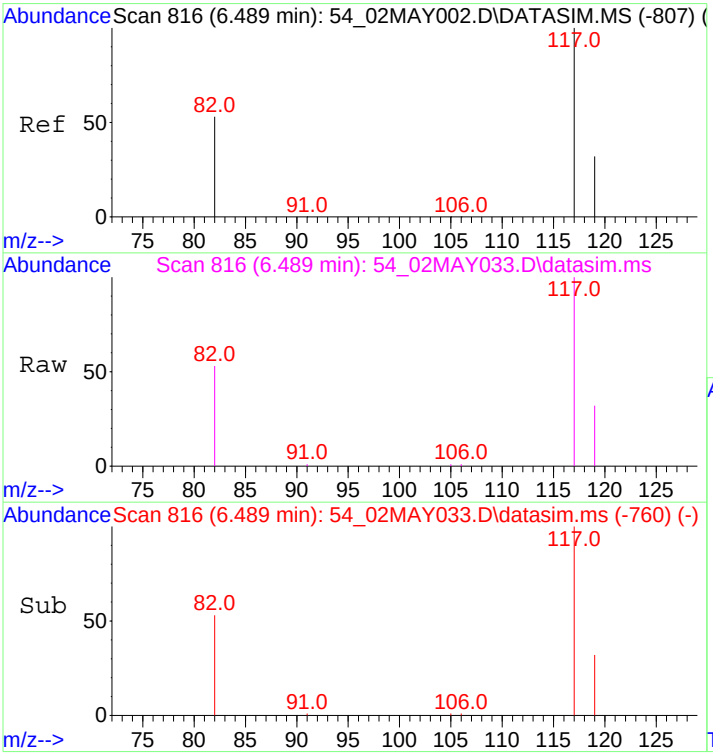


#11
Trichloroethene
Concen: 14.41 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 02MAY033.D
Acq: 2 May 2014 7:02 pm

Tgt Ion:130 Resp: 3731

Ion	Ratio	Lower	Upper
130	100		
132	96.6	76.9	115.3
95	97.6	76.5	114.7

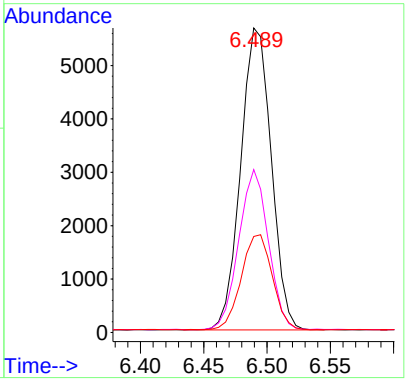


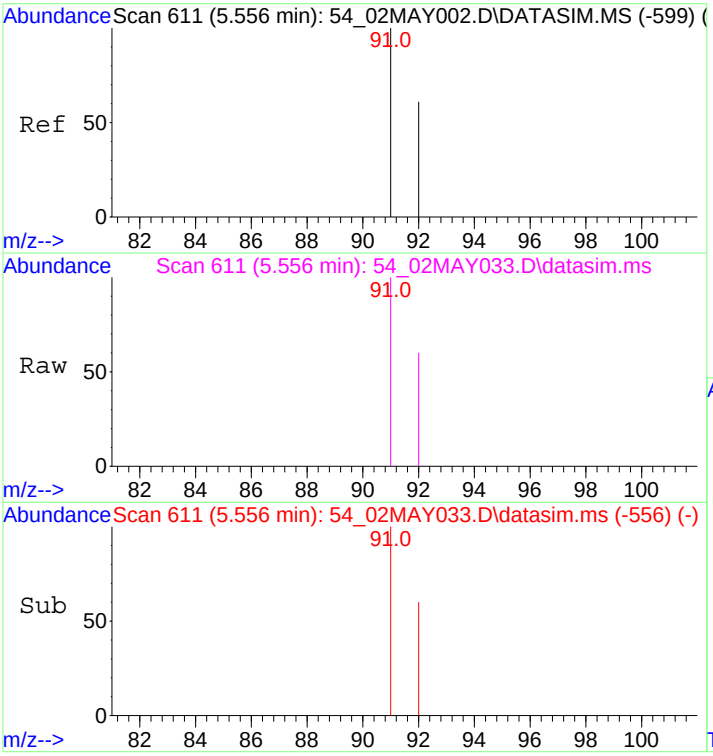


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_02MAY033.D
Acq: 2 May 2014 7:02 pm

Tgt Ion:117 Resp: 9527

Ion	Ratio	Lower	Upper
117	100		
82	51.3	38.0	57.0
119	31.8	27.0	40.4

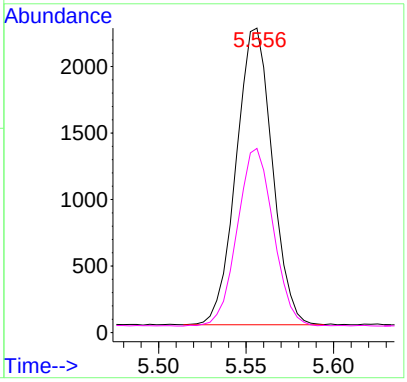


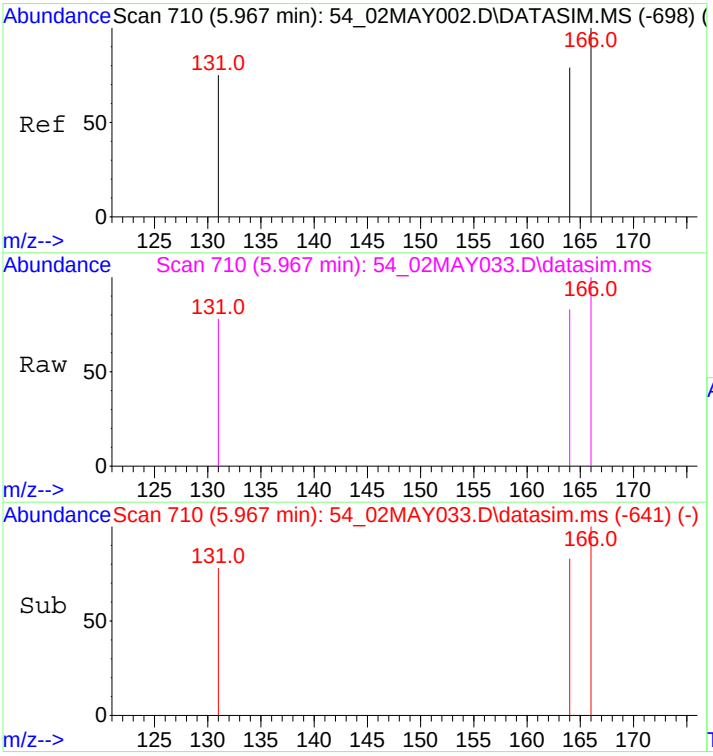


#13
Toluene
Concen: 5.61 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 02MAY033.D
Acq: 2 May 2014 7:02 pm

Tgt Ion: 91 Resp: 3205

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8

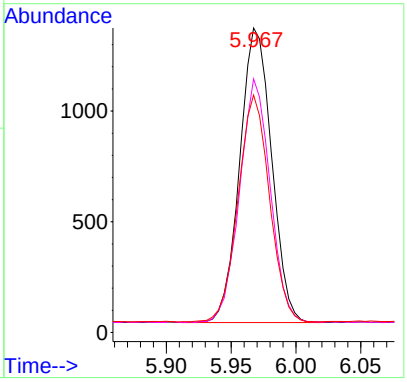




#14
Tetrachloroethene
Concen: 6.99 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_02MAY033.D
Acq: 2 May 2014 7:02 pm

Tgt Ion:166 Resp: 2281

Ion	Ratio	Lower	Upper
166	100		
164	79.5	62.6	94.0
131	75.6	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY034.D
Acq On : 2 May 2014 7:14 pm
Operator : yhl
Sample : 02164 \ F6-031 Dup
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:34:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

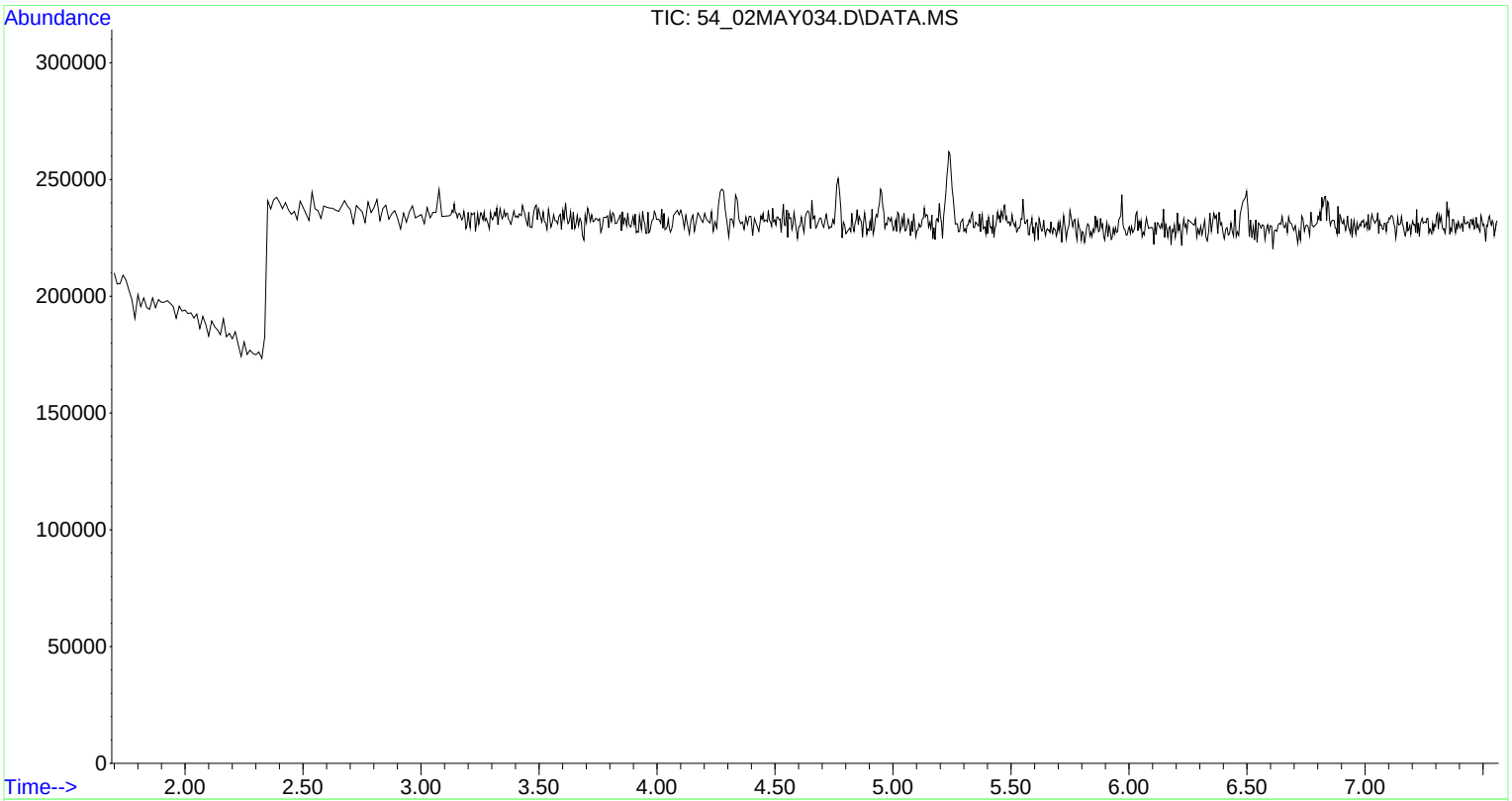
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4336	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10725	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	9817	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
7] cis-1,2-Dichloroethene	4.197	61	571m	2.07 ppbv	
8] 1,1,1-Trichloroethane	4.483	97	248	0.55 ppbv	99
11] Trichloroethene	4.950	130	3763	14.11 ppbv	98
13] Toluene	5.553	91	3215	5.46 ppbv	99
14] Tetrachloroethene	5.968	166	2309	6.87 ppbv	99

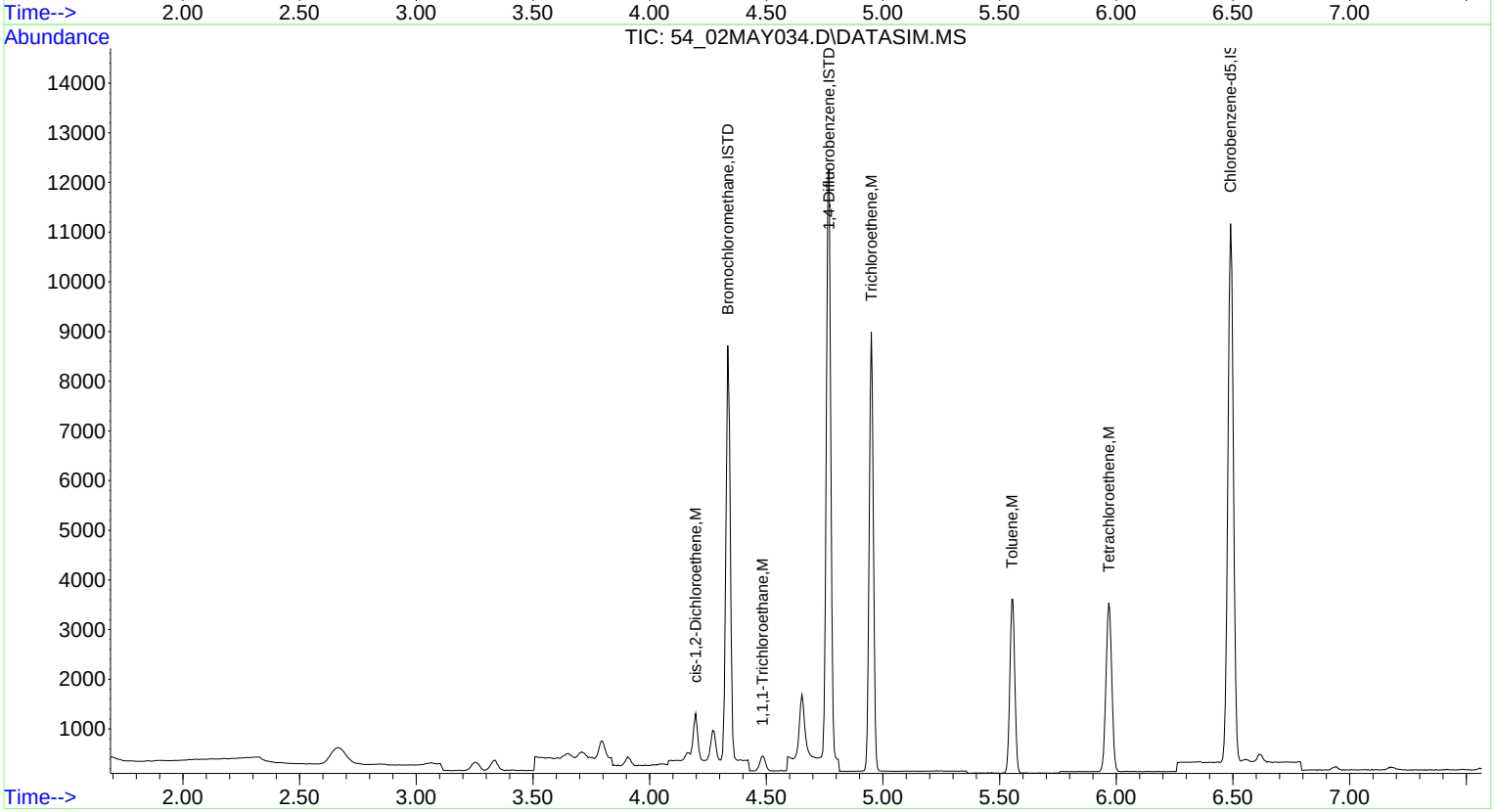
(#) = qualifier out of range (m) = manual integration (+) = signals summed

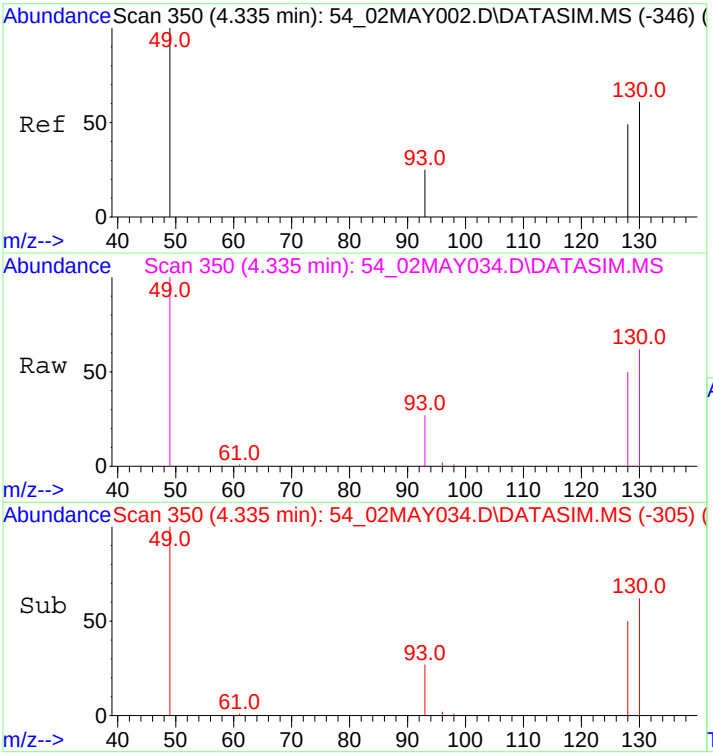
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY034.D
Acq On : 2 May 2014 7:14 pm
Operator : yhl
Sample : 02164 \ F6-031 Dup
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:34:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



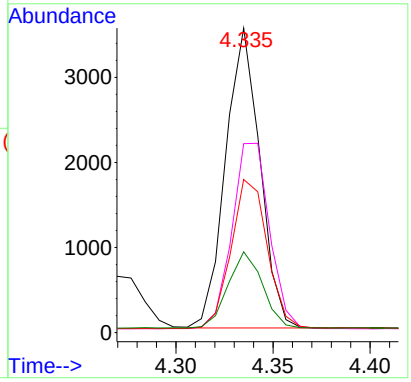


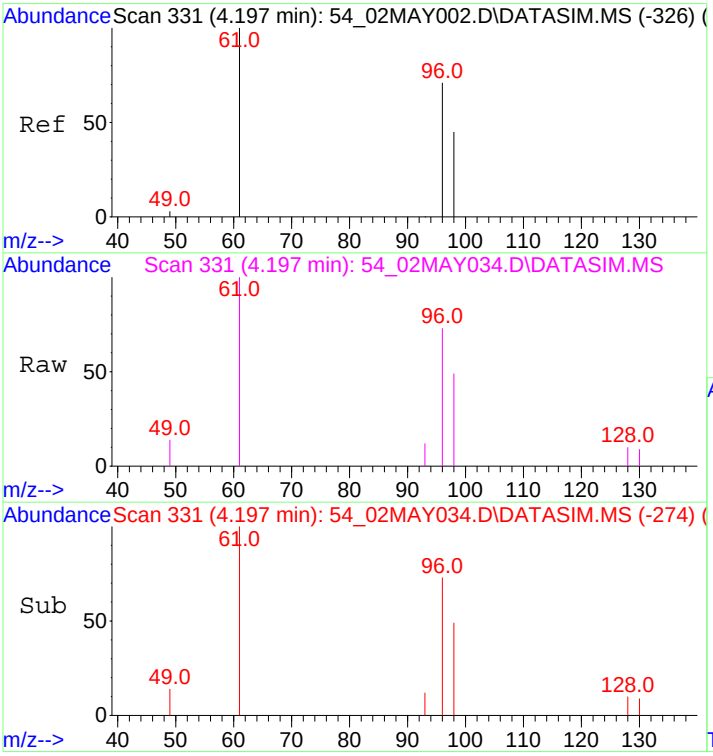


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY034.D
Acq: 2 May 2014 7:14 pm

Tgt Ion: 49 Resp: 4336

Ion	Ratio	Lower	Upper
49	100		
130	67.5	87.2	130.8#
128	52.4	68.0	102.0#
93	25.4	29.3	43.9#

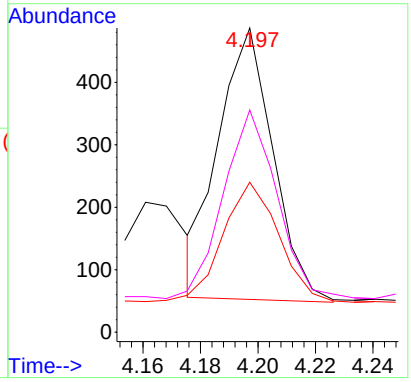




#7
cis-1,2-Dichloroethene
Concen: 2.07 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_02MAY034.D
Acq: 2 May 2014 7:14 pm

Tgt Ion: 61 Resp: 571

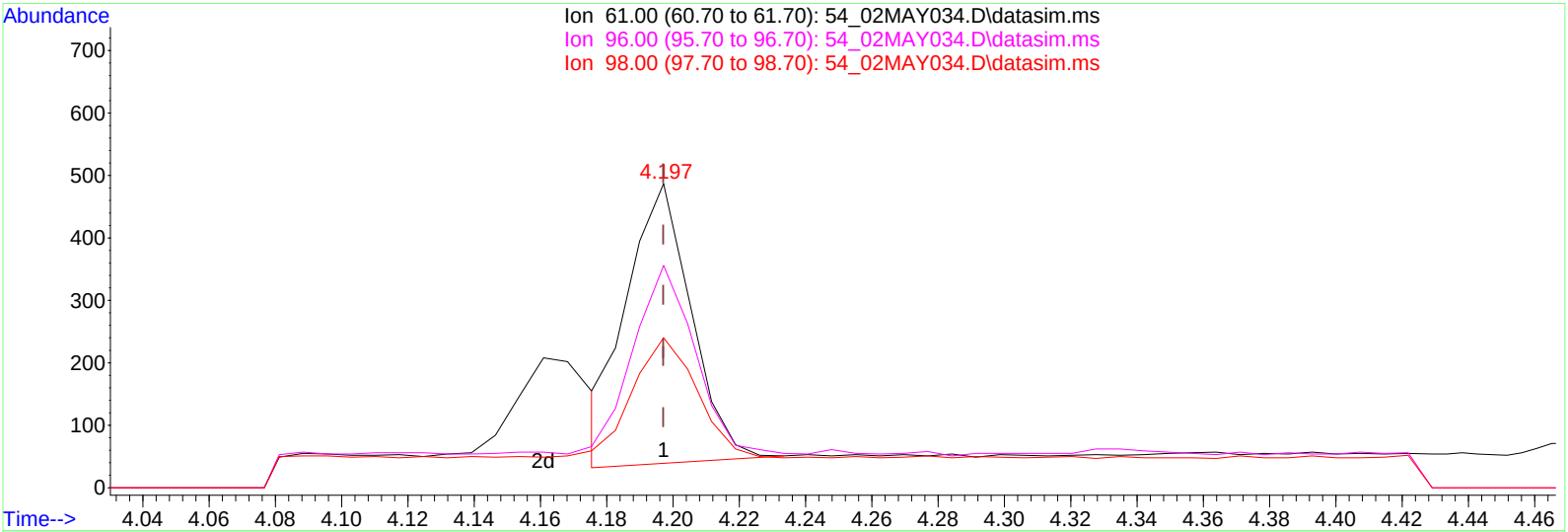
Ion	Ratio	Lower	Upper
61	100		
96	69.4	78.5	117.7#
98	45.7	50.6	76.0#

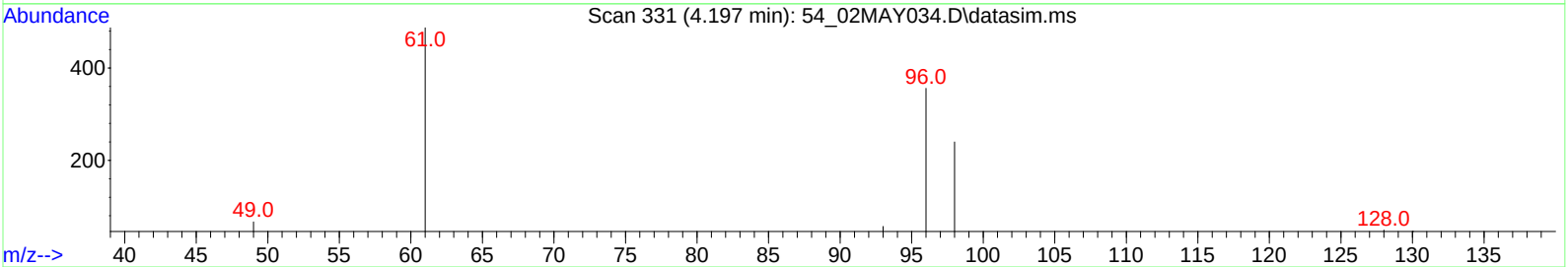


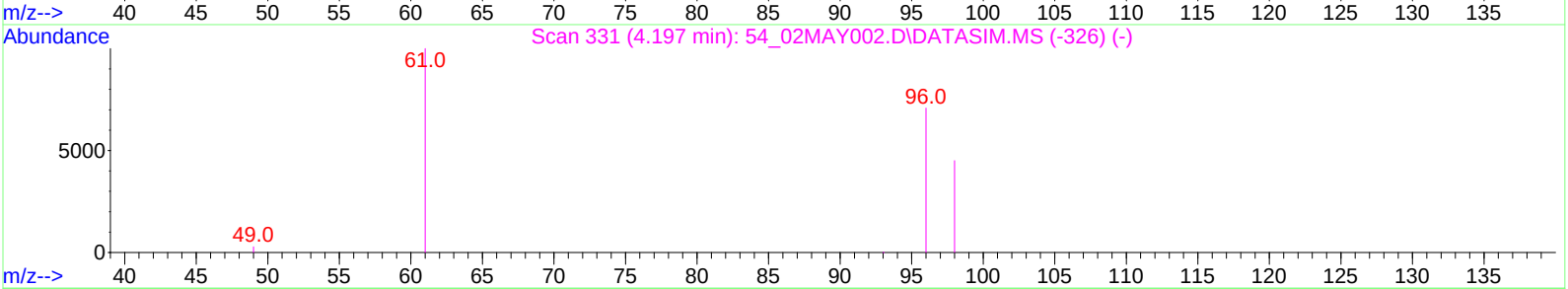
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY034.D
Acq On : 2 May 2014 7:14 pm
Operator : yhl
Sample : 02165 \ F6-017
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:23:01 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration







TIC: 54_02MAY034.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (+0.000) 2.20 ppbv

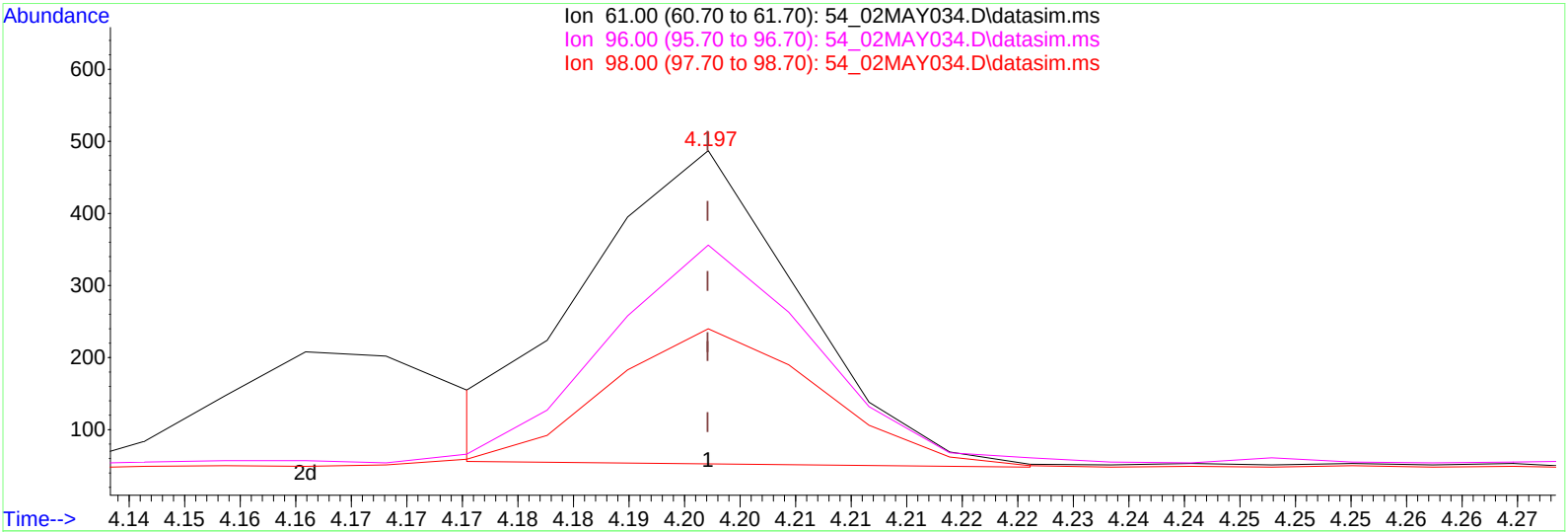
response 607

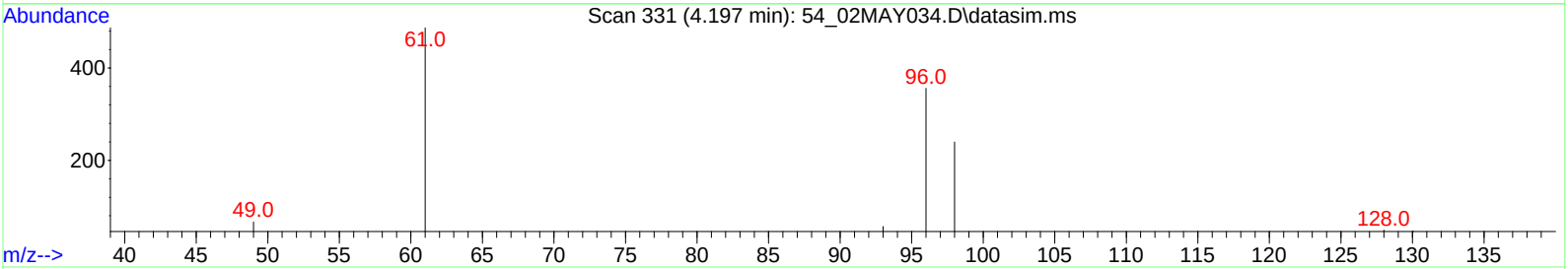
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	65.24#
98.00	63.30	43.00#
0.00	0.00	0.00

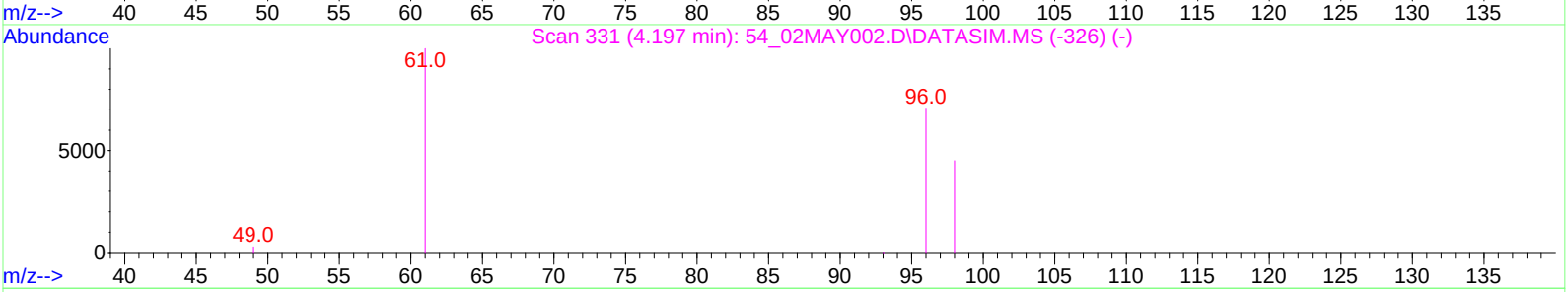
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY034.D
Acq On : 2 May 2014 7:14 pm
Operator : yhl
Sample : 02165 \ F6-017
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:23:01 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration







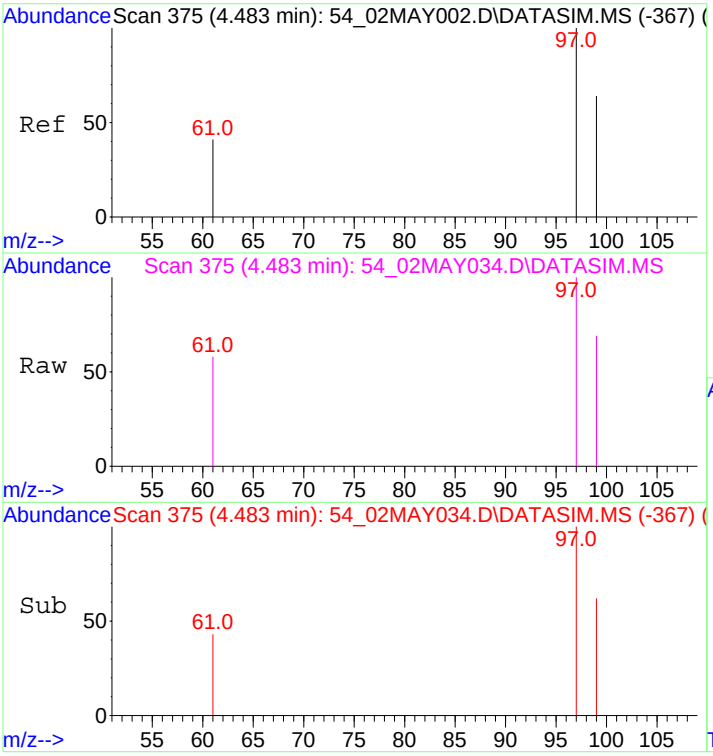
TIC: 54_02MAY034.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (+0.000) 2.07 ppbv m

response 571

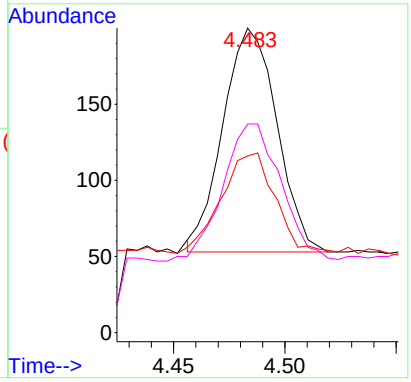
Ion	Exp%	Act%
61.00	100	100
96.00	98.10	69.35#
98.00	63.30	45.71#
0.00	0.00	0.00

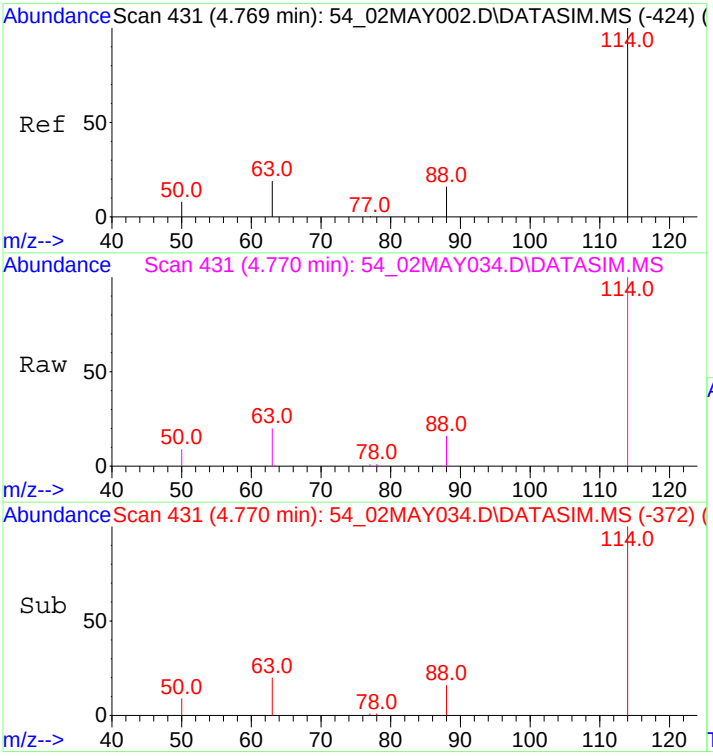


#8
1,1,1-Trichloroethane
Concen: 0.55 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.004 min
Lab File: 54 02MAY034.D
Acq: 2 May 2014 7:14 pm

Tgt Ion: 97 Resp: 248

Ion	Ratio	Lower	Upper
97	100		
99	64.1	52.1	78.1
61	38.7	30.2	45.4

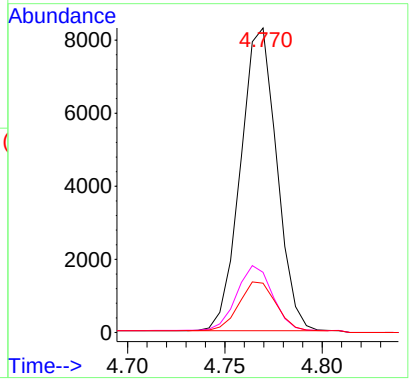


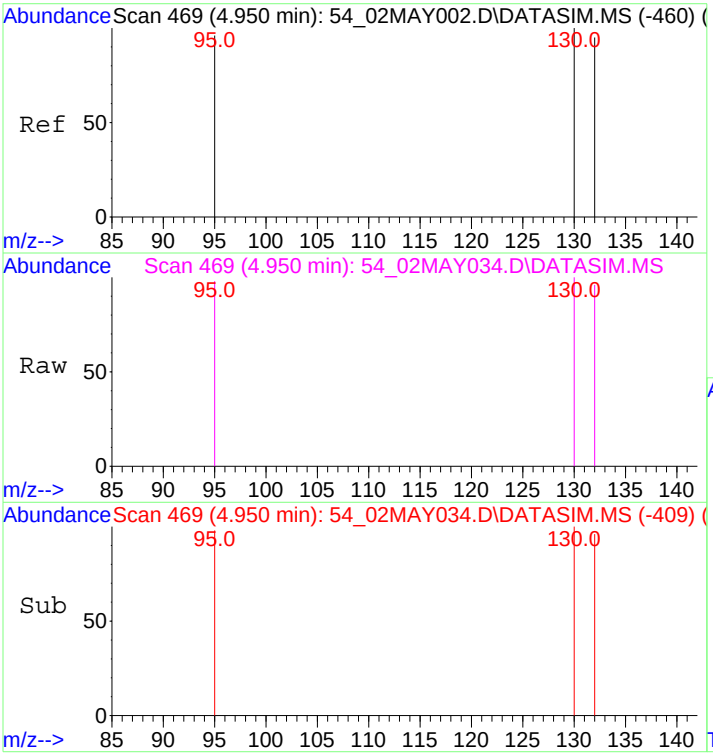


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY034.D
Acq: 2 May 2014 7:14 pm

Tgt Ion:114 Resp: 10725

Ion	Ratio	Lower	Upper
114	100		
63	21.3	12.0	18.0#
88	16.4	11.8	17.8

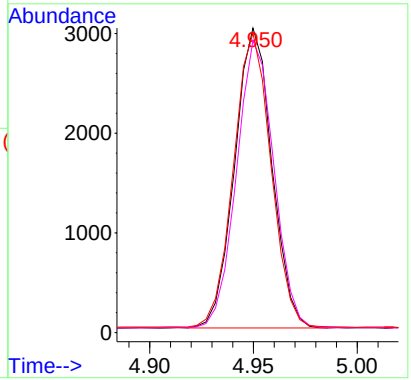


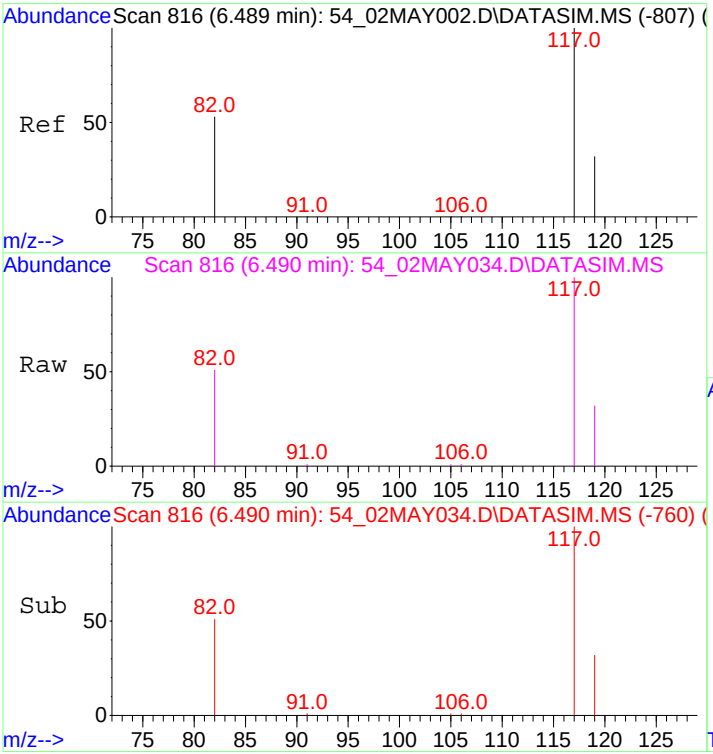


#11
Trichloroethene
Concen: 14.11 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 02MAY034.D
Acq: 2 May 2014 7:14 pm

Tgt Ion:130 Resp: 3763

Ion	Ratio	Lower	Upper
130	100		
132	95.6	76.9	115.3
95	98.2	76.5	114.7

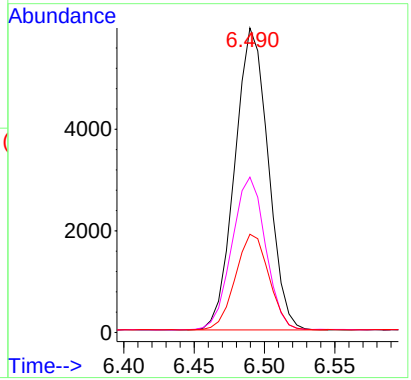


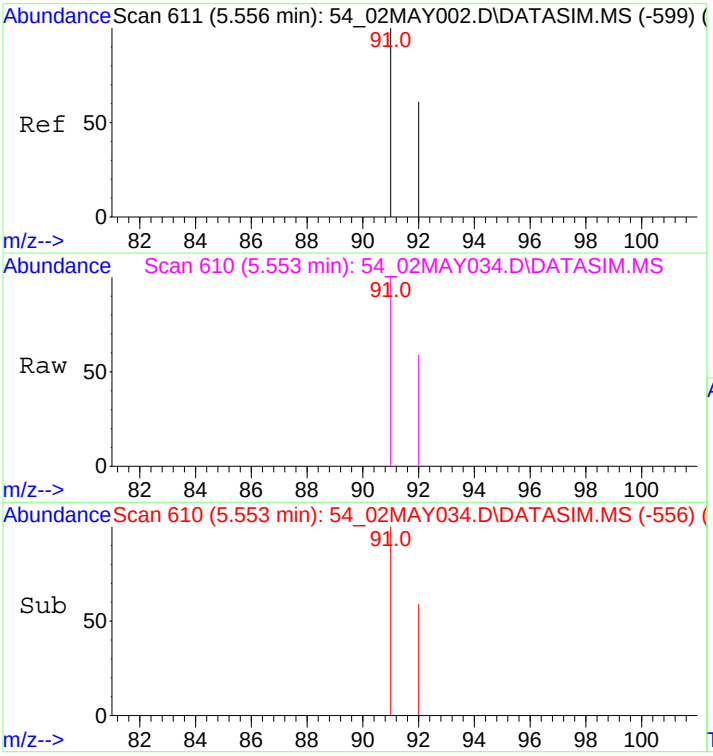


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_02MAY034.D
Acq: 2 May 2014 7:14 pm

Tgt Ion:117 Resp: 9817

Ion	Ratio	Lower	Upper
117	100		
82	51.0	38.0	57.0
119	32.1	27.0	40.4

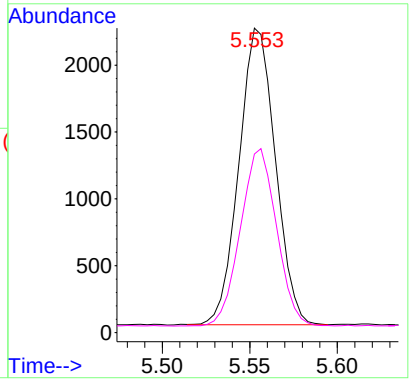


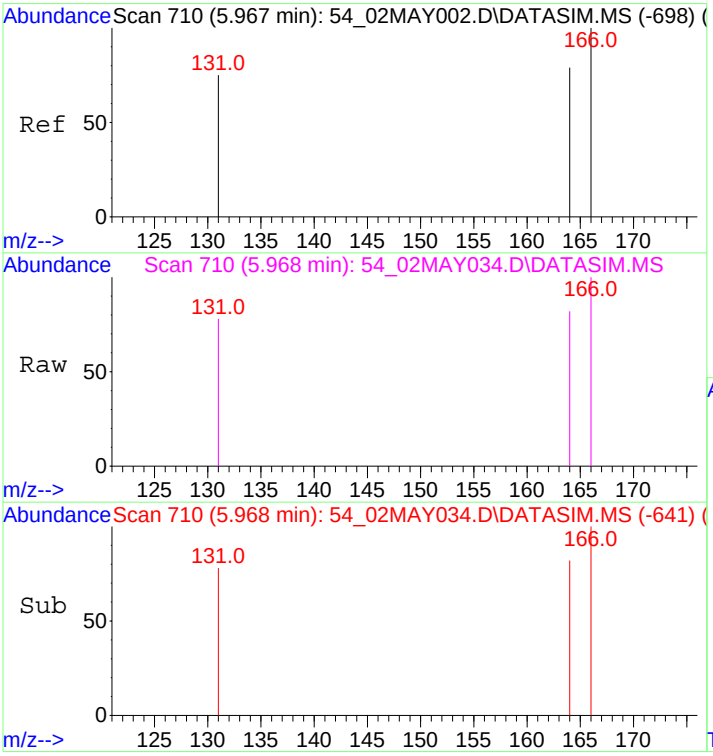


#13
Toluene
Concen: 5.46 ppbv
RT: 5.553 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54 02MAY034.D
Acq: 2 May 2014 7:14 pm

Tgt Ion: 91 Resp: 3215

Ion	Ratio	Lower	Upper
91	100		
92	59.1	47.8	71.8

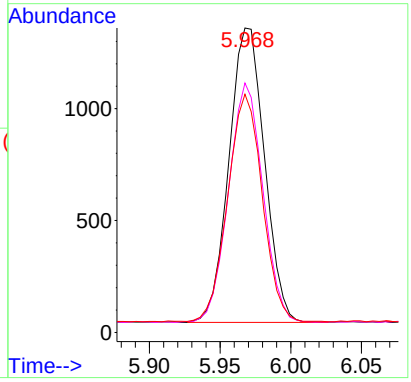




#14
Tetrachloroethene
Concen: 6.87 ppbv
RT: 5.968 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54_02MAY034.D
Acq: 2 May 2014 7:14 pm

Tgt Ion:166 Resp: 2309

Ion	Ratio	Lower	Upper
166	100		
164	78.4	62.6	94.0
131	74.7	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY035.D
Acq On : 2 May 2014 7:26 pm
Operator : yhl
Sample : 02166 \ F6-113
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:39:38 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4375	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10839	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9927	10.00 ppbv	0.00

System Monitoring Compounds

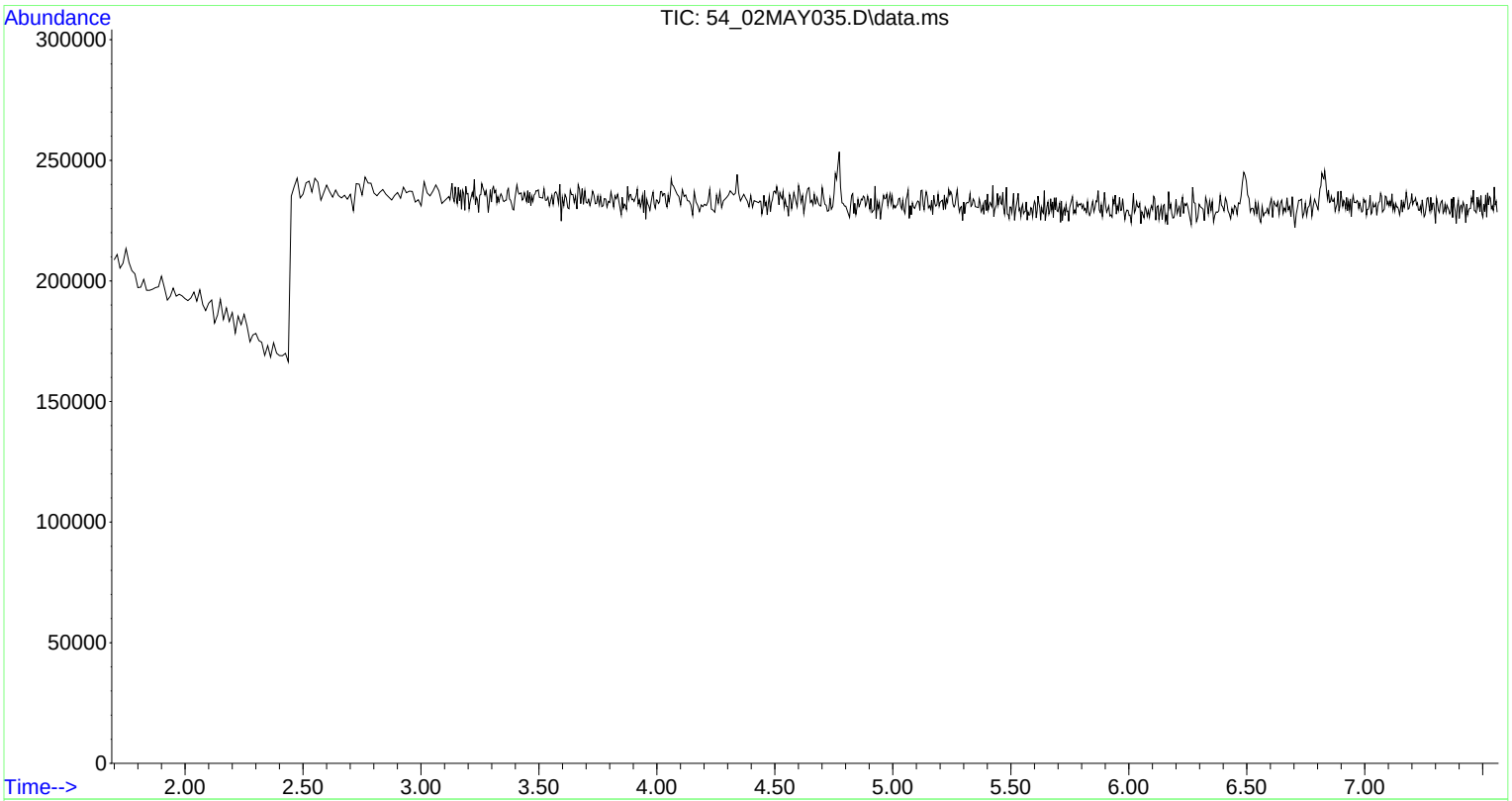
Target Compounds	Qvalue

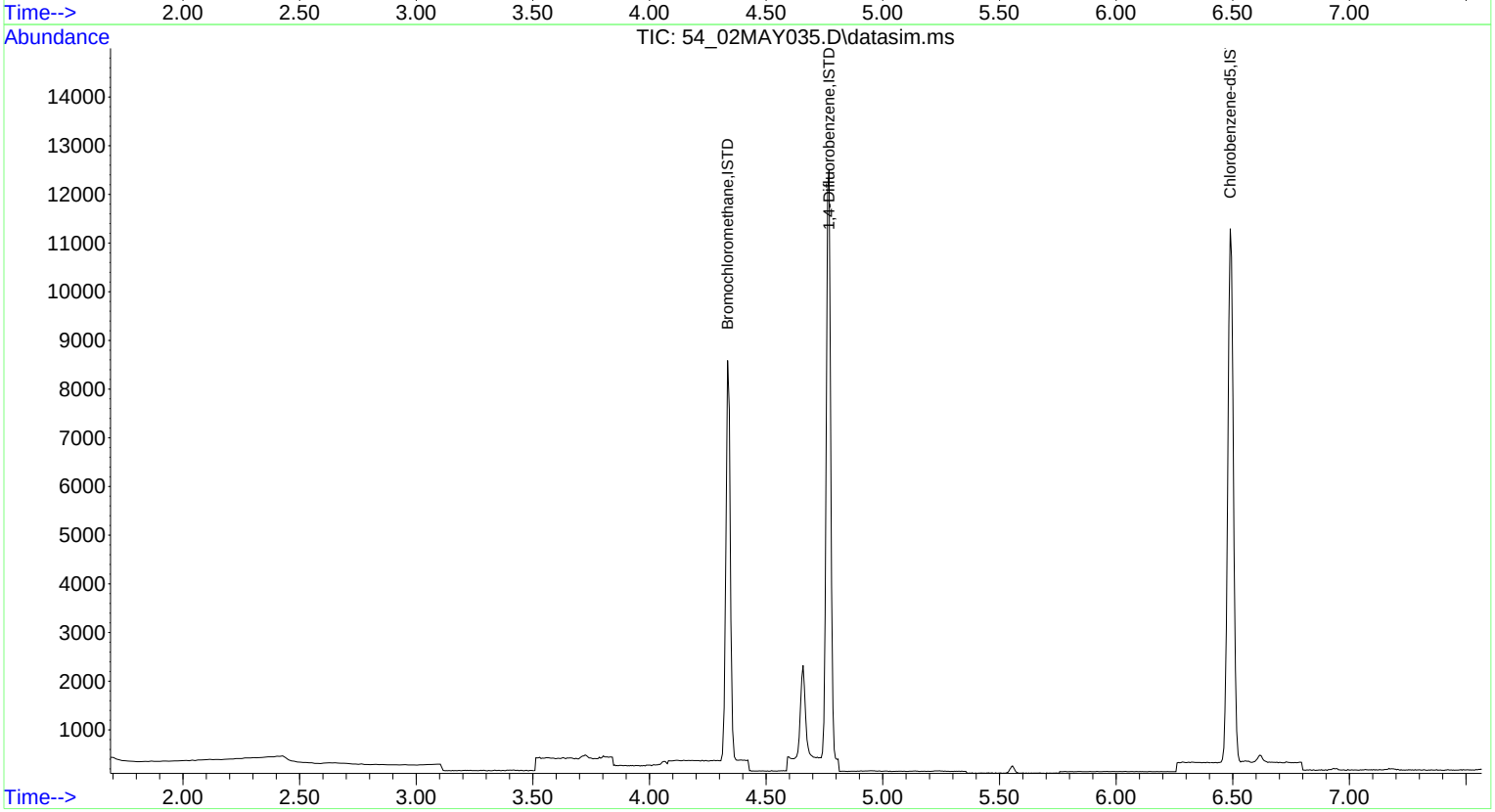
(#) = qualifier out of range (m) = manual integration (+) = signals summed

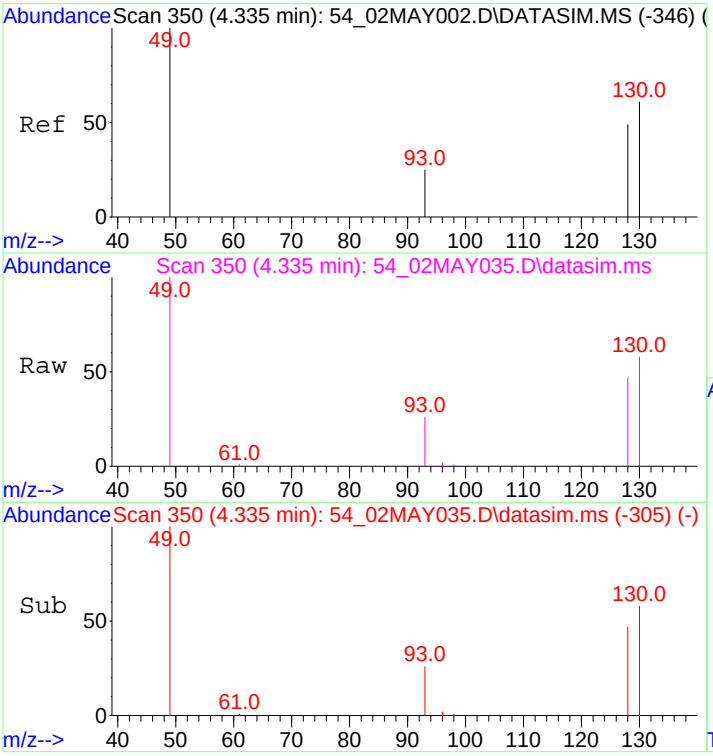
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY035.D
Acq On : 2 May 2014 7:26 pm
Operator : yhl
Sample : 02166 \ F6-113
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:39:38 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



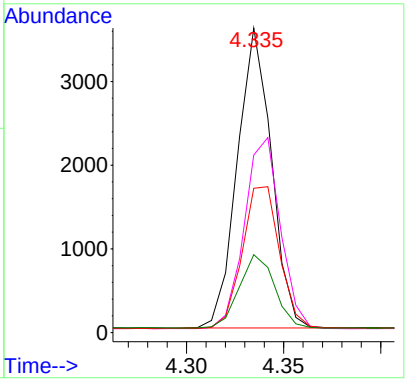


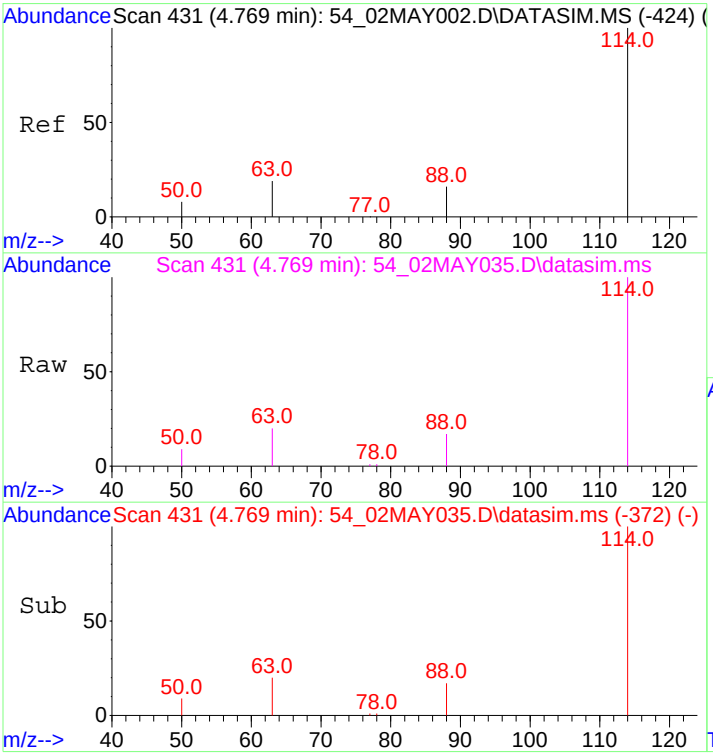


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY035.D
Acq: 2 May 2014 7:26 pm

Tgt Ion: 49 Resp: 4375

Ion	Ratio	Lower	Upper
49	100		
130	67.3	87.2	130.8#
128	52.1	68.0	102.0#
93	25.6	29.3	43.9#

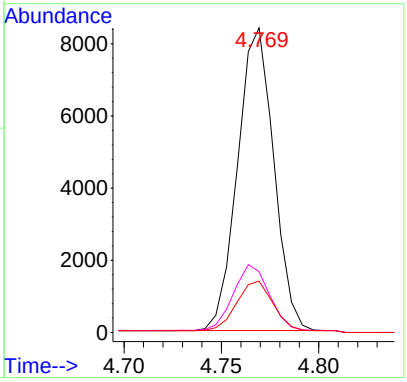


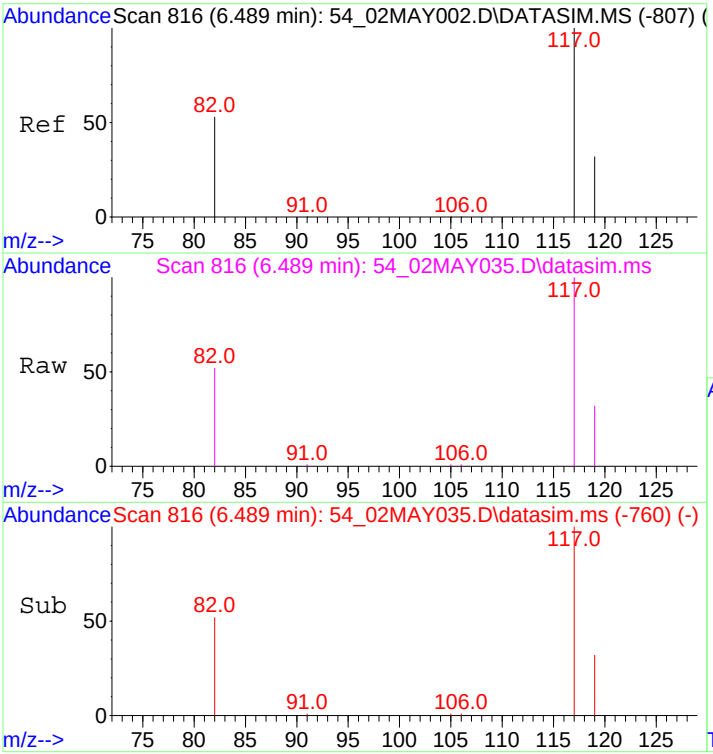


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY035.D
Acq: 2 May 2014 7:26 pm

Tgt Ion:114 Resp: 10839

Ion	Ratio	Lower	Upper
114	100		
63	21.5	12.0	18.0#
88	16.4	11.8	17.8

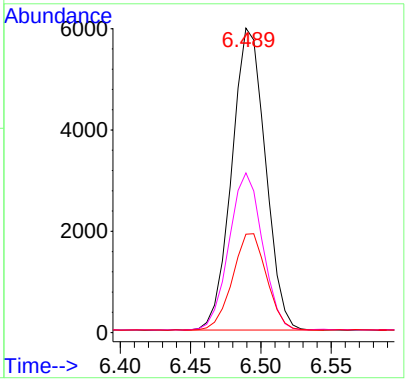




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY035.D
Acq: 2 May 2014 7:26 pm

Tgt Ion:117 Resp: 9927

Ion	Ratio	Lower	Upper
117	100		
82	51.8	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY036.D
Acq On : 2 May 2014 7:37 pm
Operator : yhl
Sample : 02167 \ F6-013
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:44:10 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4547	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11150	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10102	10.00 ppbv	0.00

System Monitoring Compounds

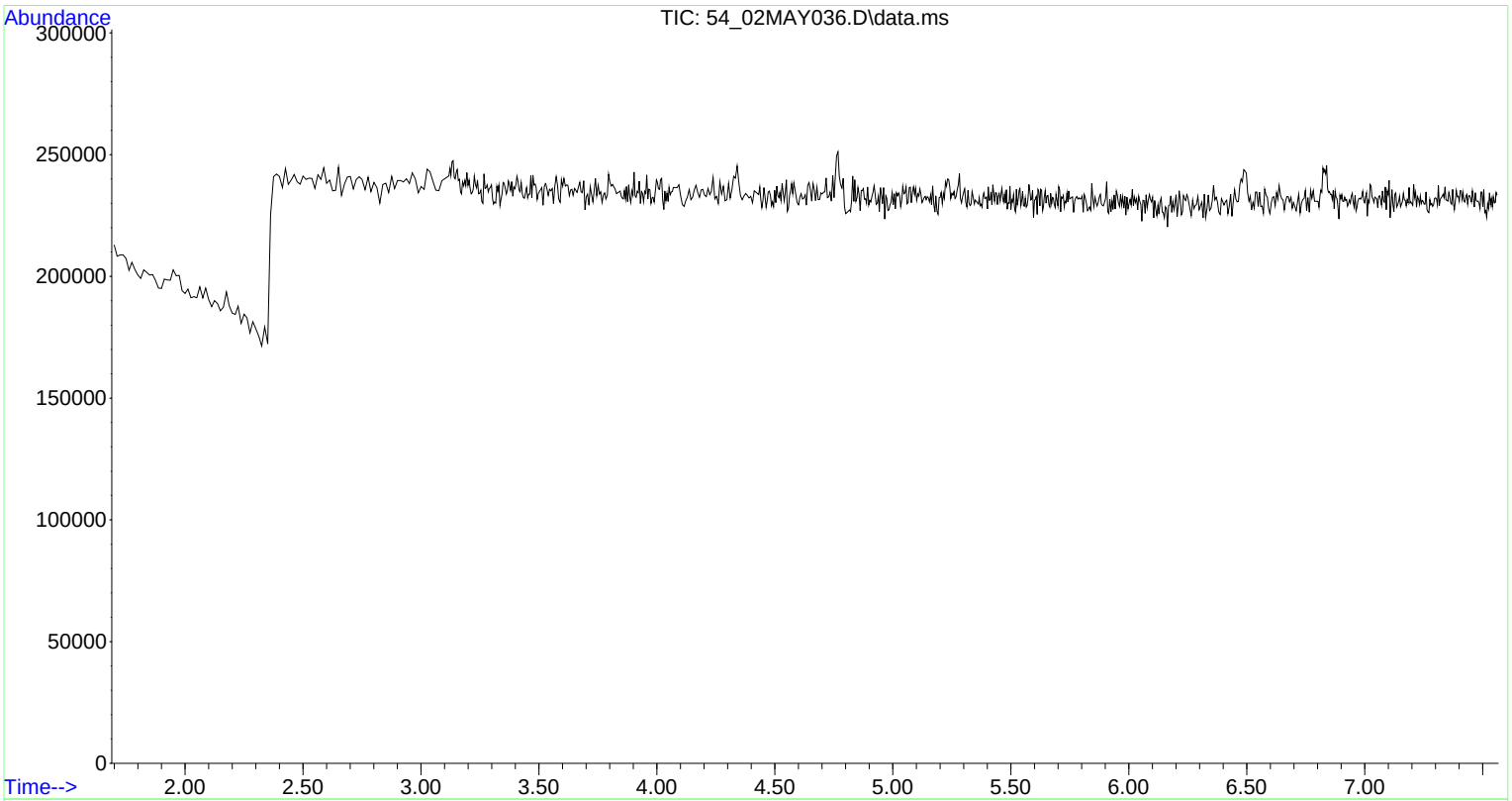
Target Compounds	Qvalue

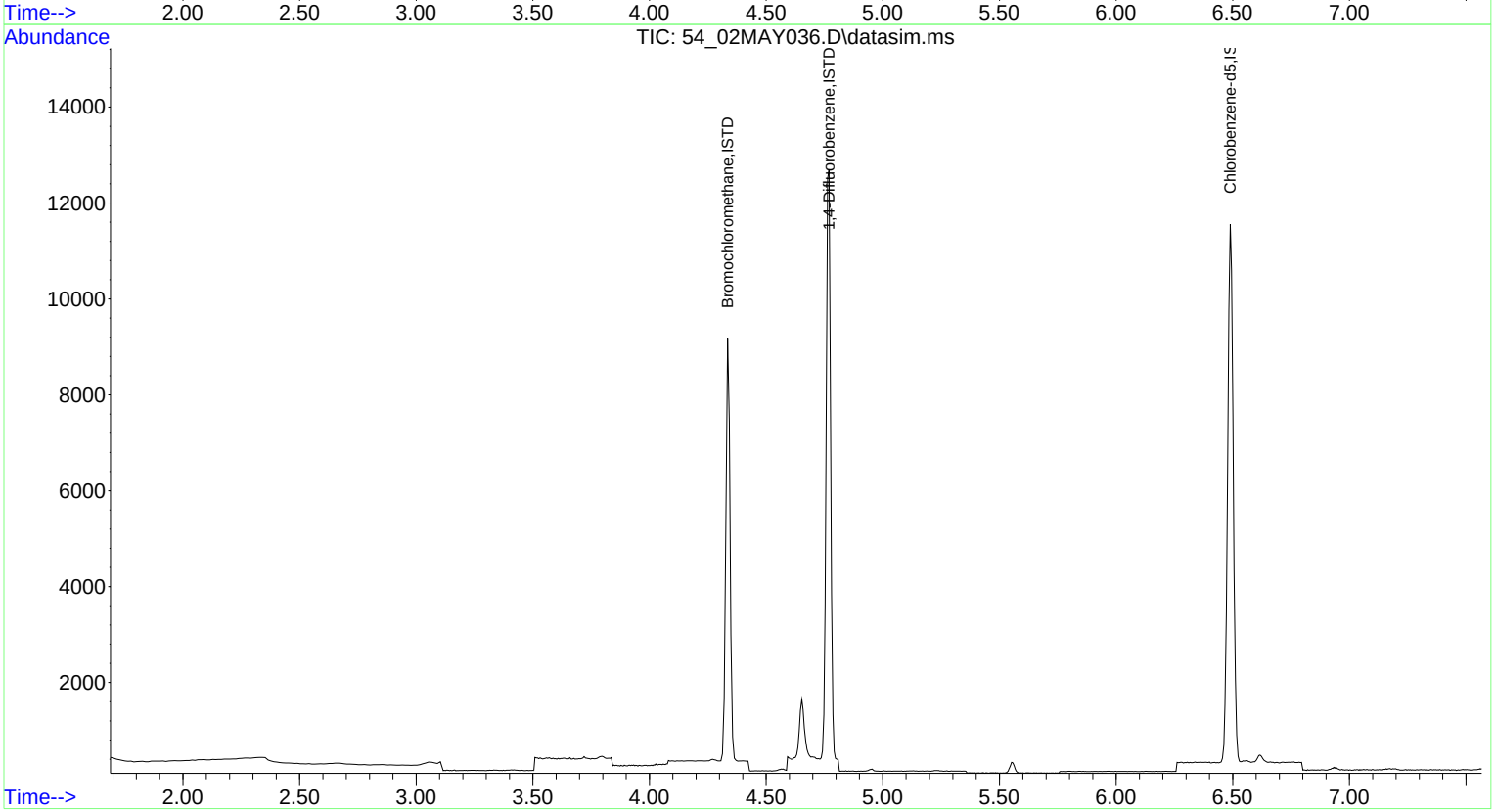
(#) = qualifier out of range (m) = manual integration (+) = signals summed

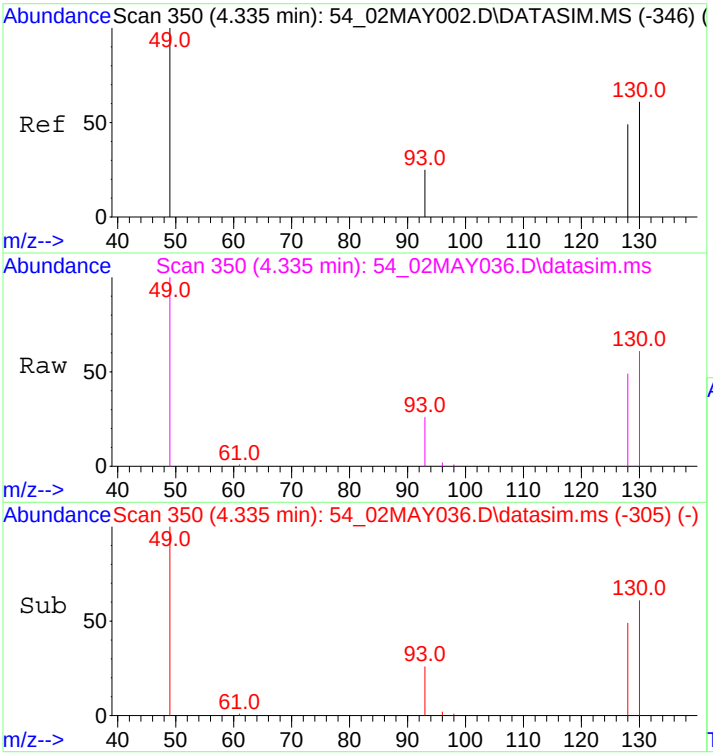
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY036.D
Acq On : 2 May 2014 7:37 pm
Operator : yhl
Sample : 02167 \ F6-013
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:44:10 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



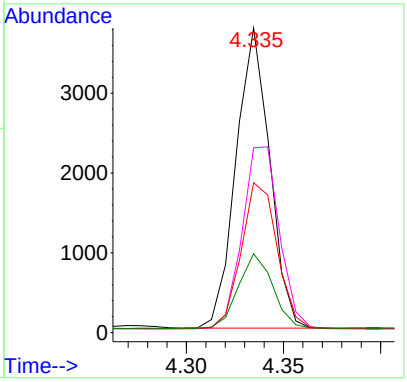


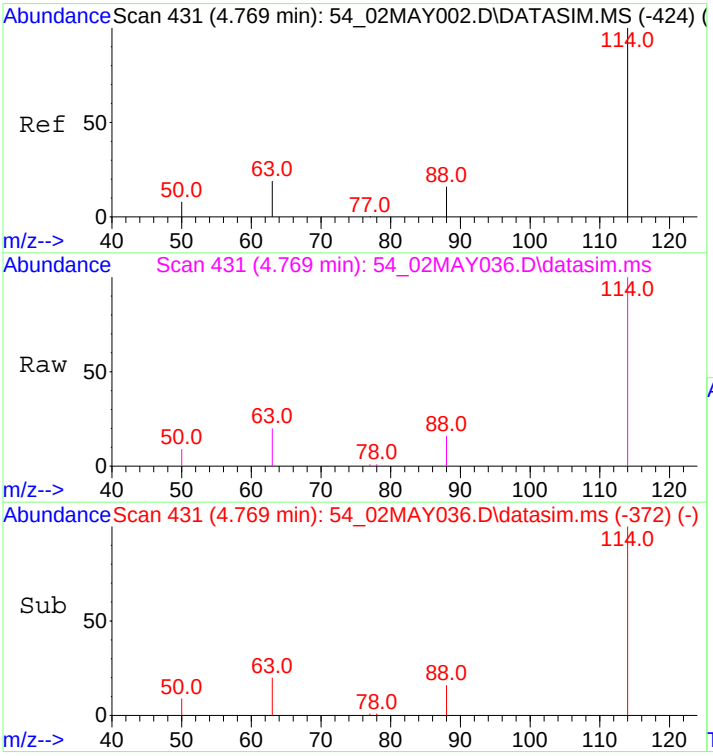


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY036.D
Acq: 2 May 2014 7:37 pm

Tgt Ion: 49 Resp: 4547

Ion	Ratio	Lower	Upper
49	100		
130	66.9	87.2	130.8#
128	51.9	68.0	102.0#
93	25.3	29.3	43.9#

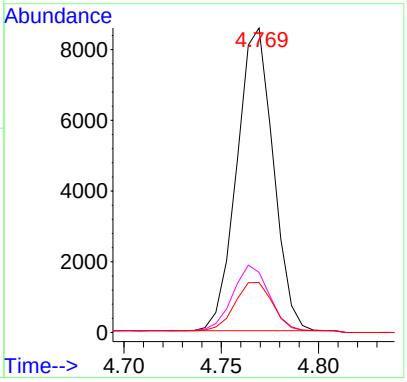


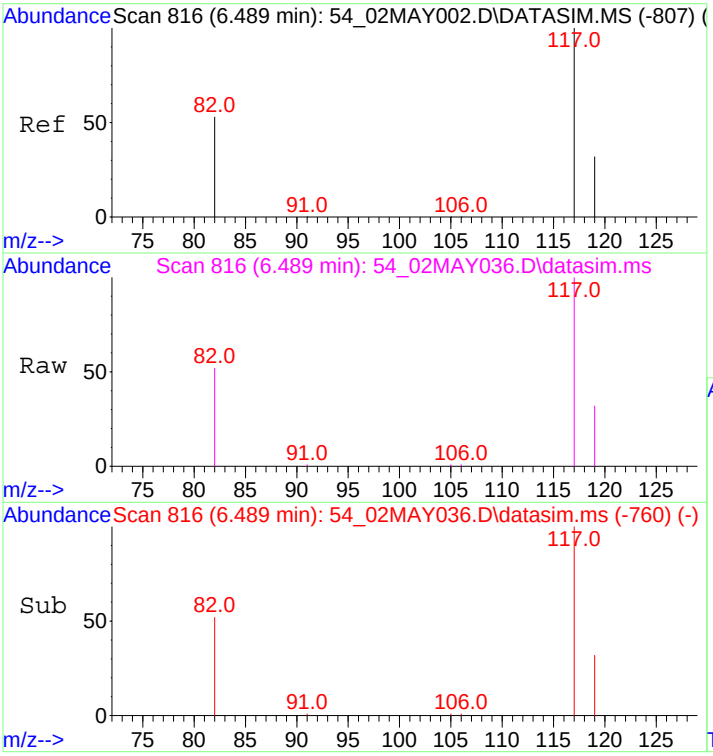


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY036.D
Acq: 2 May 2014 7:37 pm

Tgt Ion:114 Resp: 11150

Ion	Ratio	Lower	Upper
114	100		
63	21.3	12.0	18.0#
88	16.5	11.8	17.8

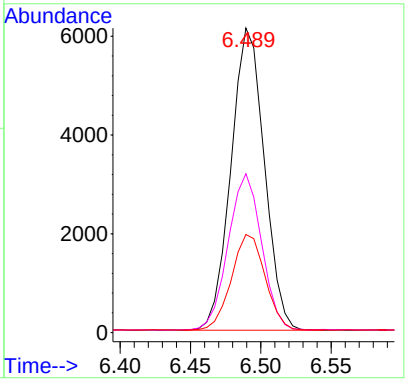




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY036.D
Acq: 2 May 2014 7:37 pm

Tgt Ion:117 Resp: 10102

Ion	Ratio	Lower	Upper
117	100		
82	51.8	38.0	57.0
119	32.1	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY037.D
Acq On : 2 May 2014 7:48 pm
Operator : yhl
Sample : 02168 \ F6-012
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:55:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4551	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11068	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10419	10.00 ppbv	0.00

System Monitoring Compounds

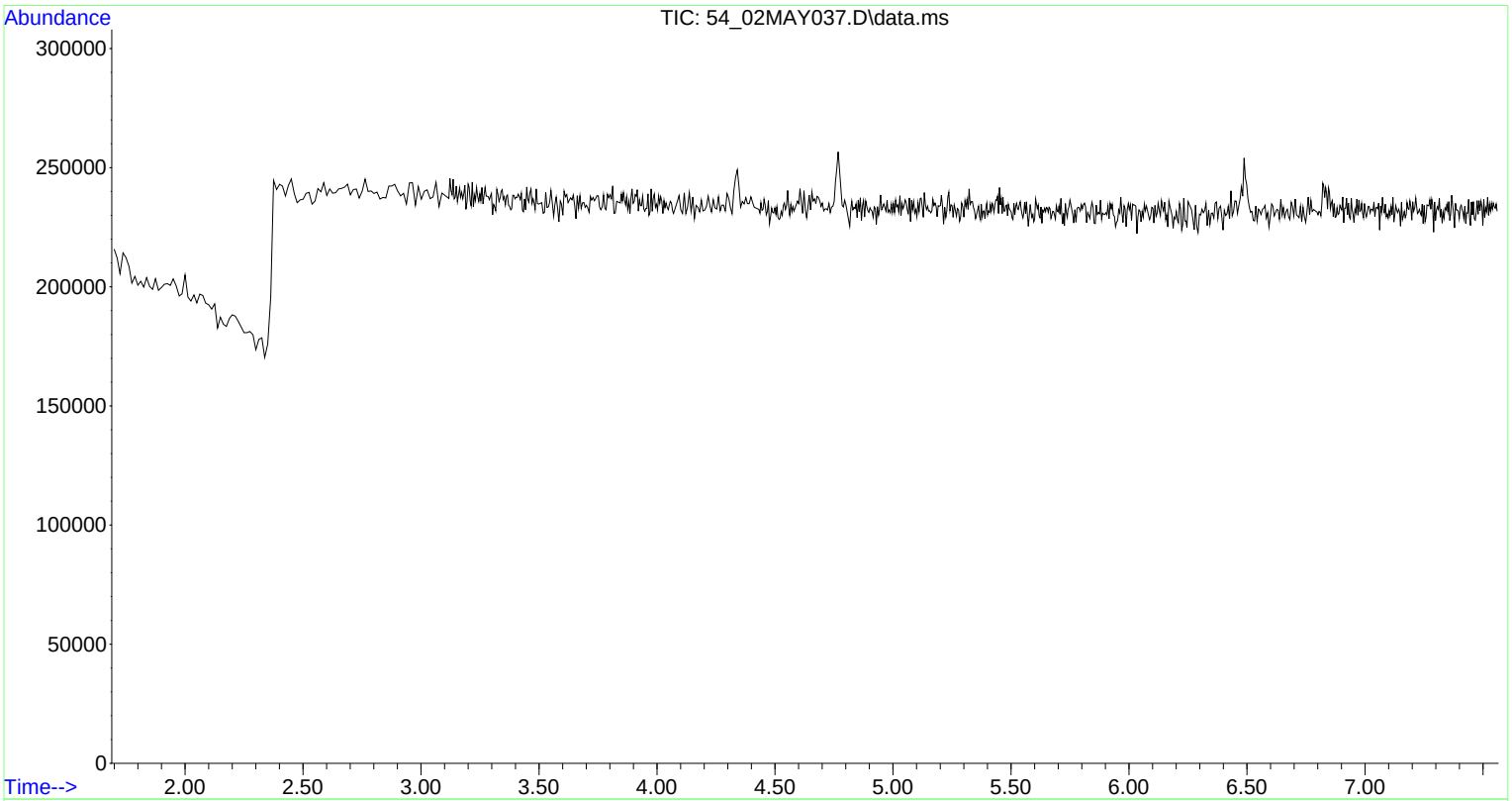
Target Compounds	Qvalue

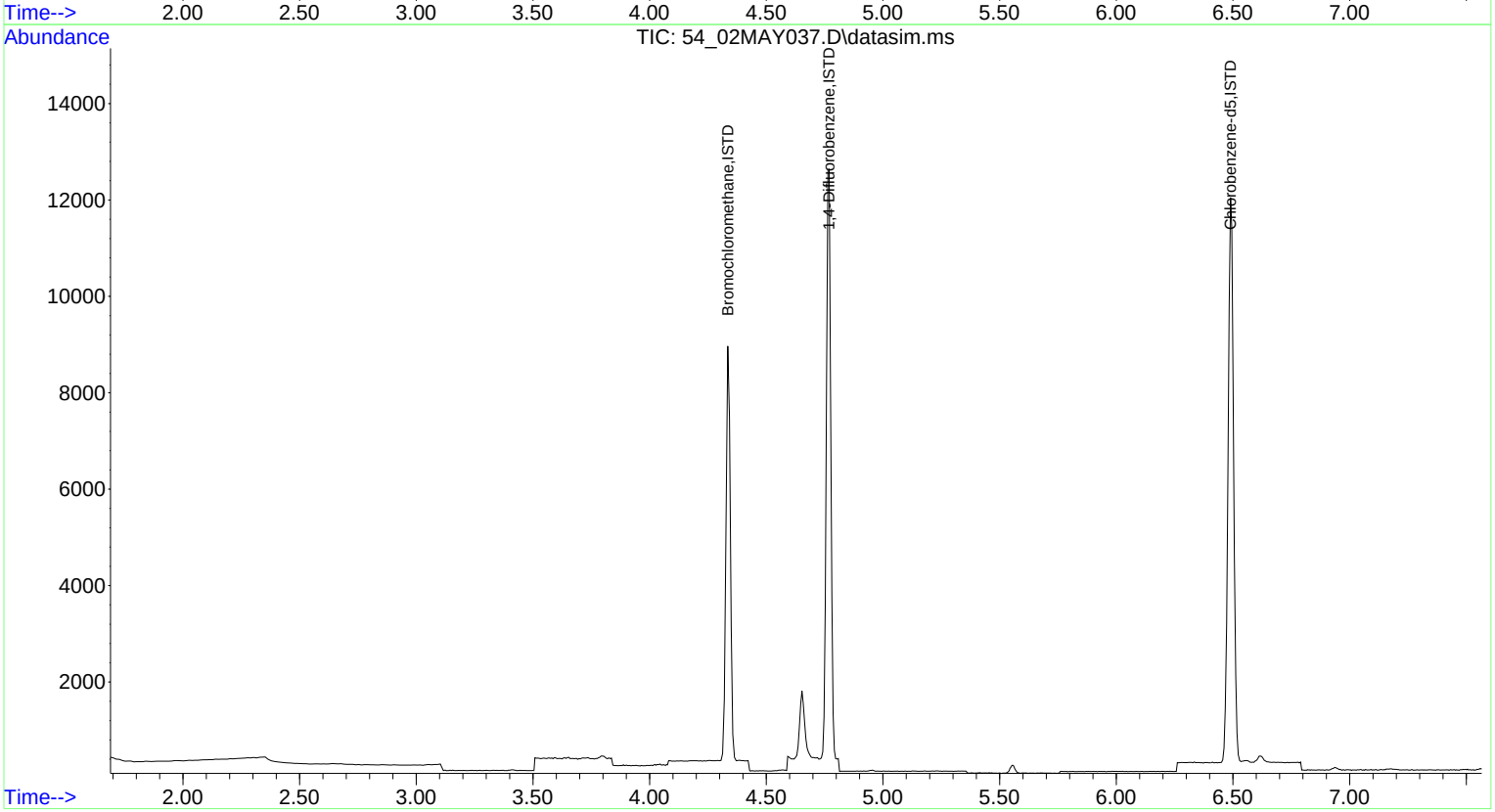
(#) = qualifier out of range (m) = manual integration (+) = signals summed

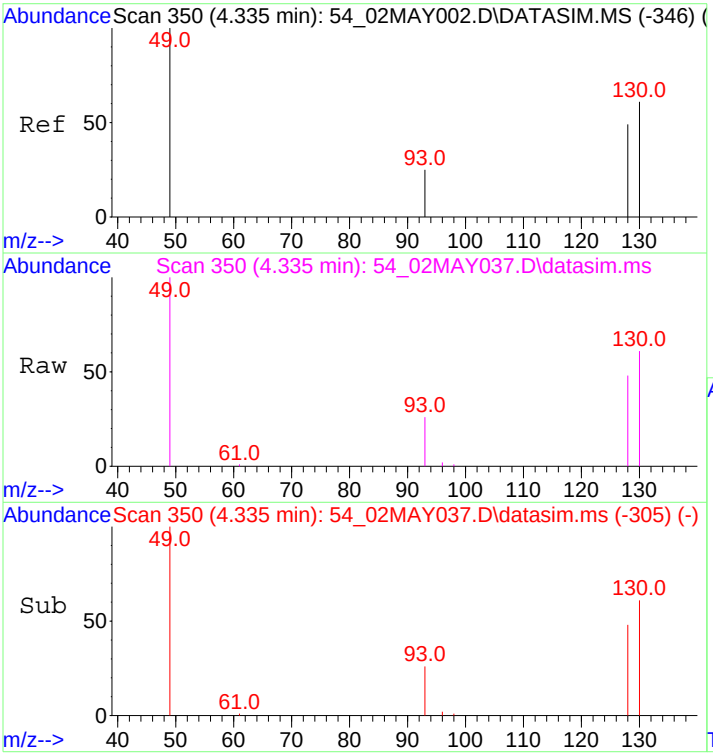
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY037.D
Acq On : 2 May 2014 7:48 pm
Operator : yhl
Sample : 02168 \ F6-012
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 19:55:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



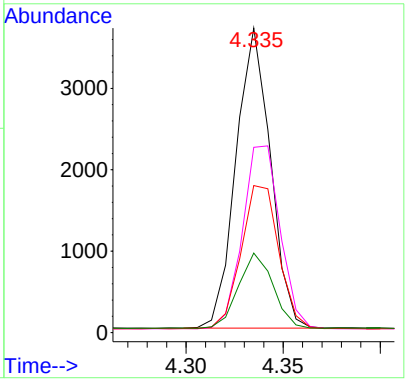


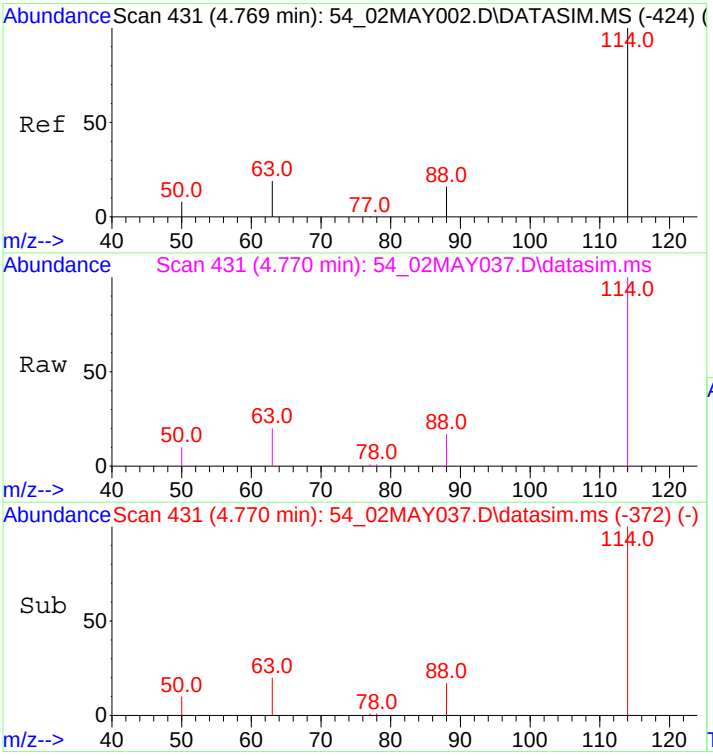


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 02MAY037.D
Acq: 2 May 2014 7:48 pm

Tgt Ion: 49 Resp: 4551

Ion	Ratio	Lower	Upper
49	100		
130	66.6	87.2	130.8#
128	52.0	68.0	102.0#
93	25.0	29.3	43.9#

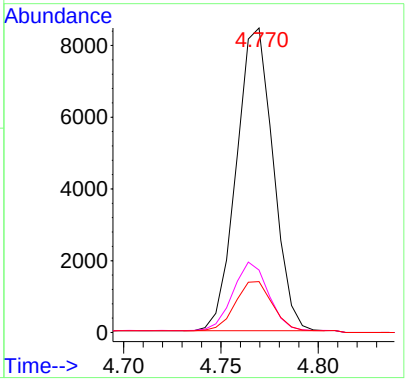


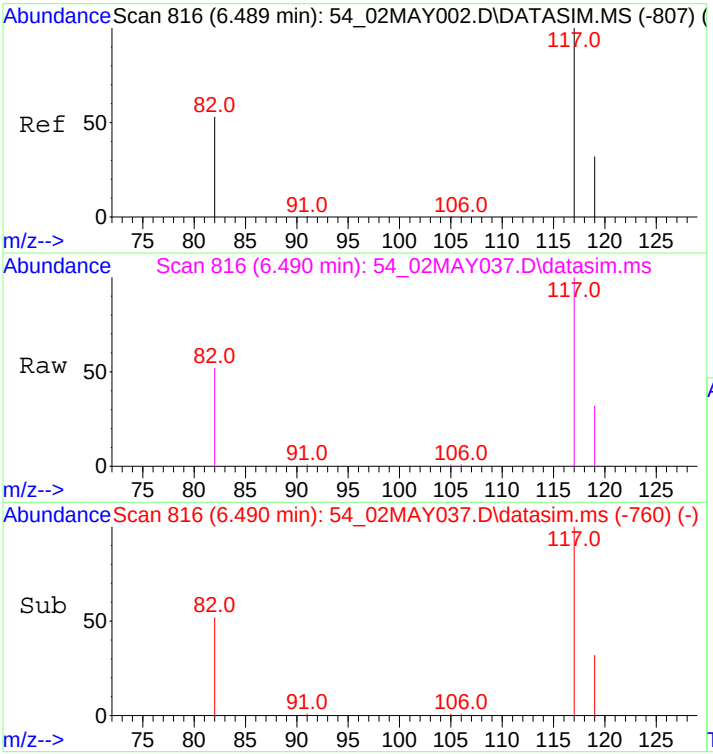


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_02MAY037.D
Acq: 2 May 2014 7:48 pm

Tgt Ion:114 Resp: 11068

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.4	11.8	17.8

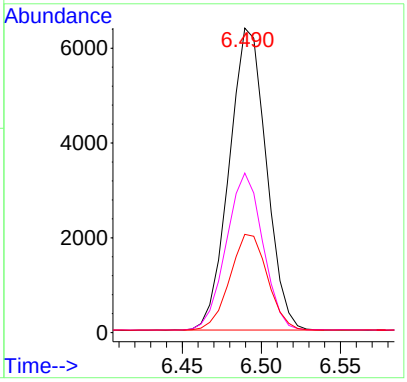




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY037.D
Acq: 2 May 2014 7:48 pm

Tgt Ion:117 Resp: 10419

Ion	Ratio	Lower	Upper
117	100		
82	51.3	38.0	57.0
119	32.1	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY038.D
Acq On : 2 May 2014 7:59 pm
Operator : yhl
Sample : 02169 \ F6-011
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 20:06:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4496	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	11052	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10441	10.00	ppbv	0.00

System Monitoring Compounds

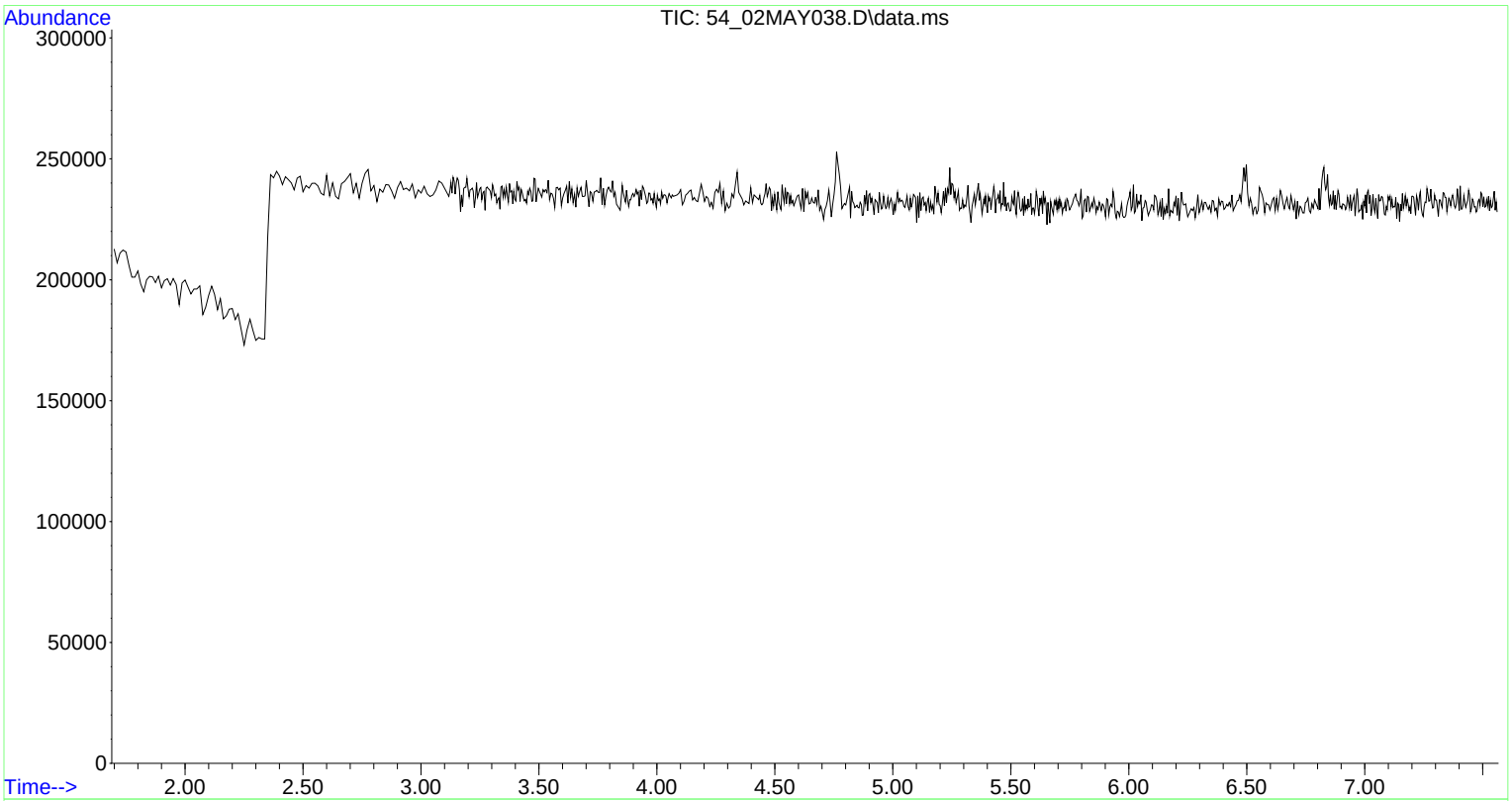
Target Compounds	Qvalue

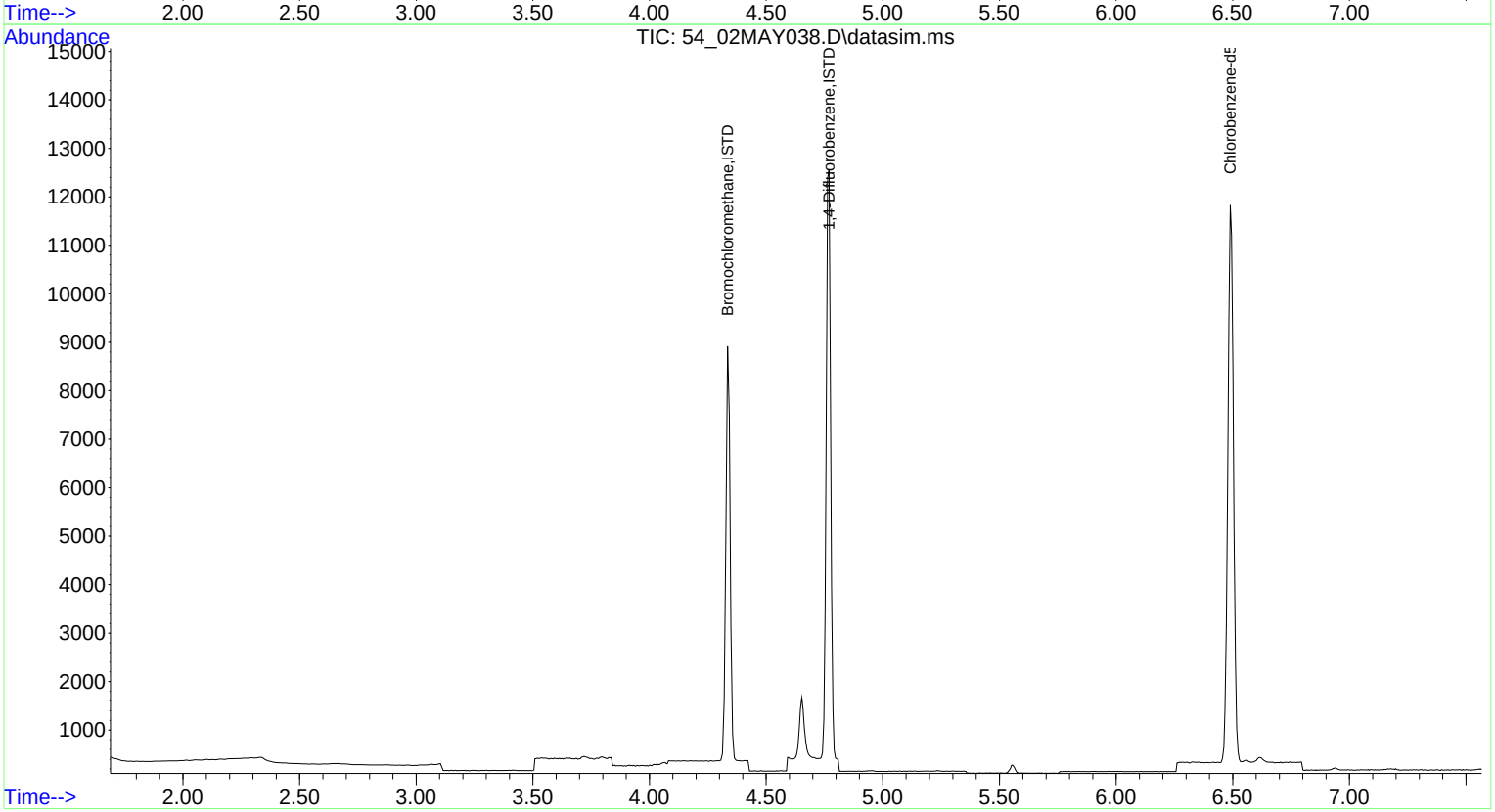
(#) = qualifier out of range (m) = manual integration (+) = signals summed

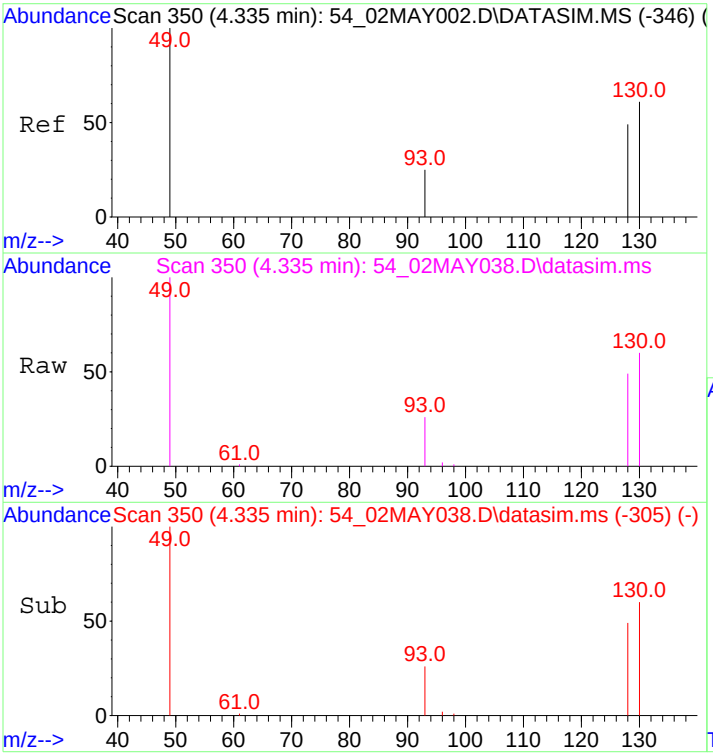
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY038.D
Acq On : 2 May 2014 7:59 pm
Operator : yhl
Sample : 02169 \ F6-011
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 20:06:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



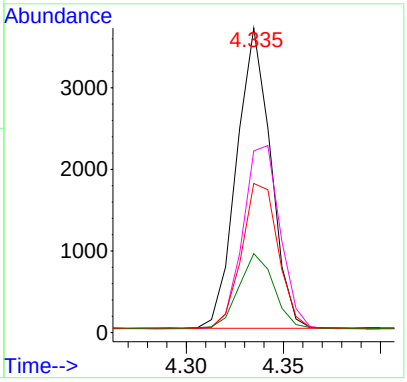


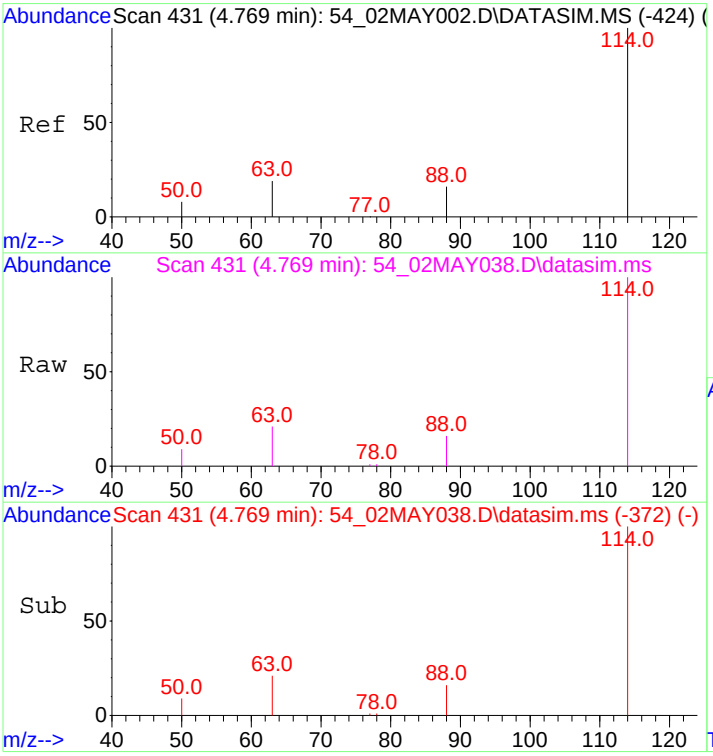


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY038.D
Acq: 2 May 2014 7:59 pm

Tgt Ion: 49 Resp: 4496

Ion	Ratio	Lower	Upper
49	100		
130	66.6	87.2	130.8#
128	51.9	68.0	102.0#
93	25.2	29.3	43.9#

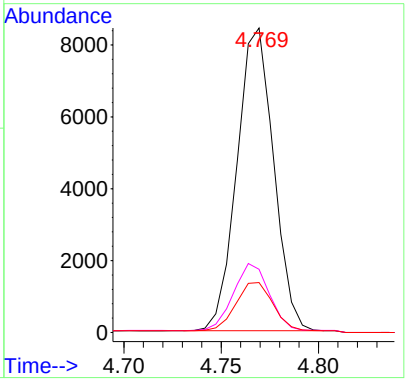


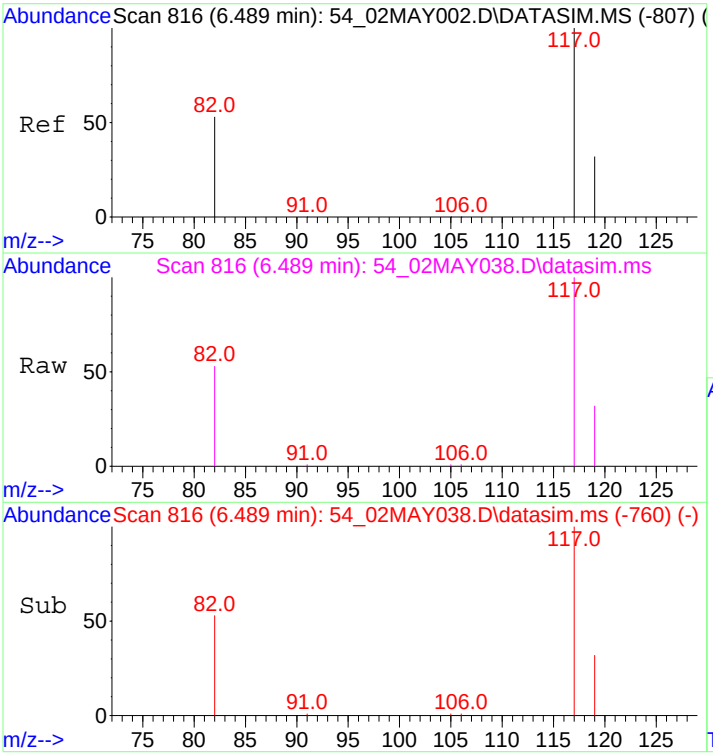


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY038.D
Acq: 2 May 2014 7:59 pm

Tgt Ion:114 Resp: 11052

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.1	11.8	17.8

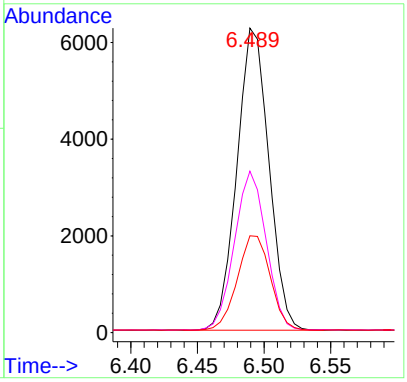




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY038.D
Acq: 2 May 2014 7:59 pm

Tgt Ion:117 Resp: 10441

Ion	Ratio	Lower	Upper
117	100		
82	52.1	38.0	57.0
119	32.3	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY039.D
Acq On : 2 May 2014 8:11 pm
Operator : yhl
Sample : 02165 \ F6-017
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 20:17:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4501	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10991	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10284	10.00 ppbv	0.00

System Monitoring Compounds

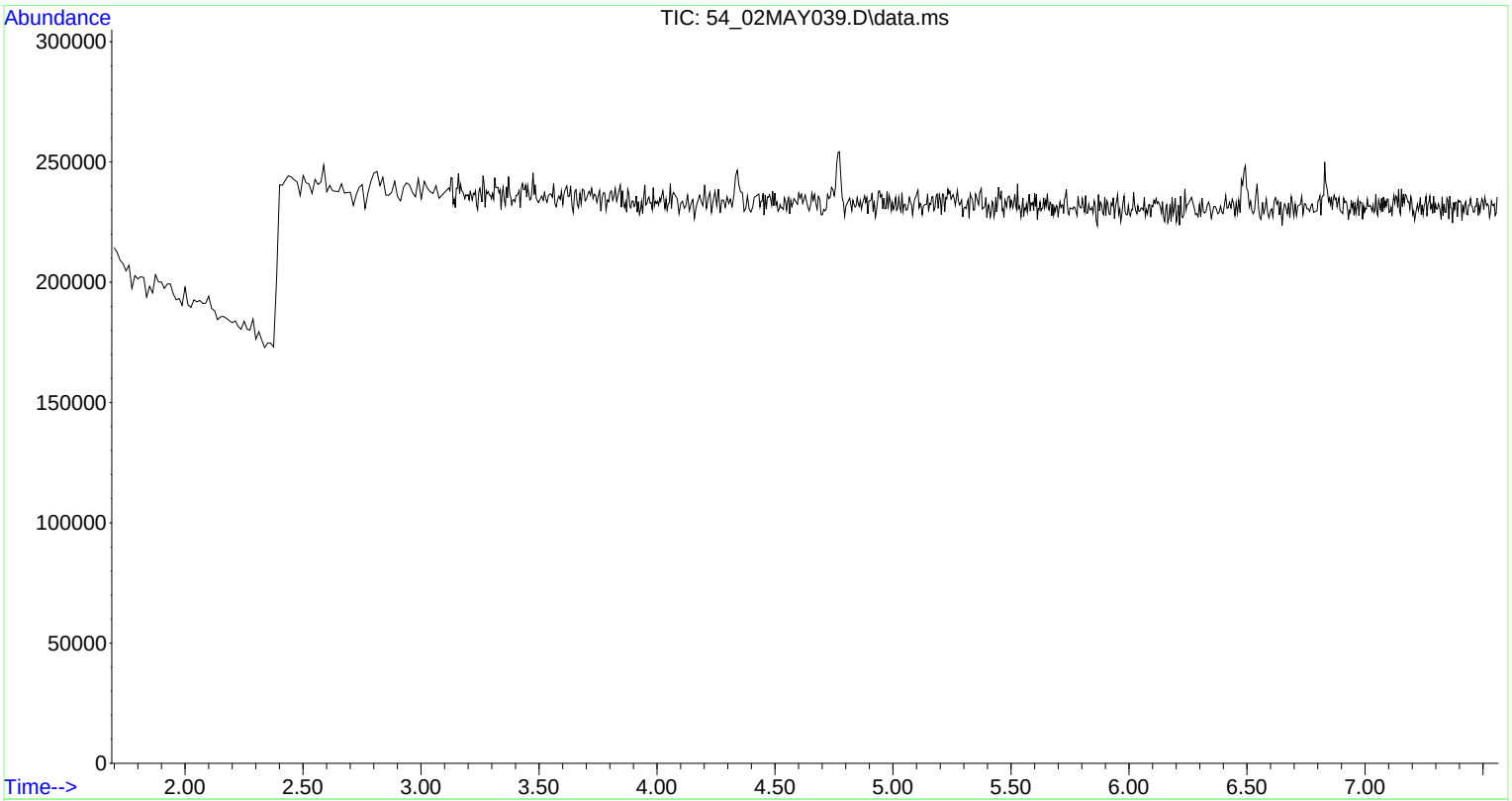
Target Compounds	Qvalue

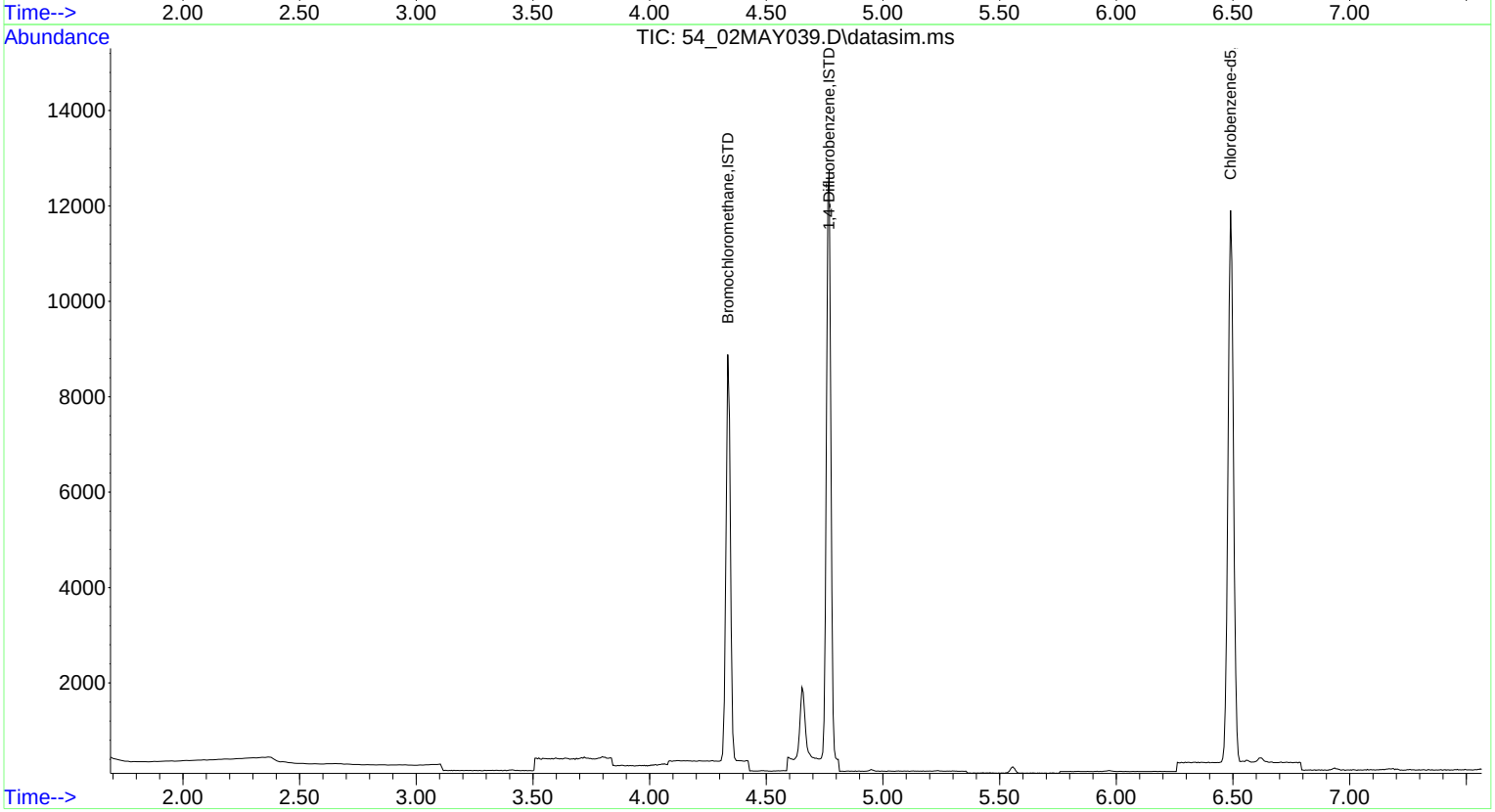
(#) = qualifier out of range (m) = manual integration (+) = signals summed

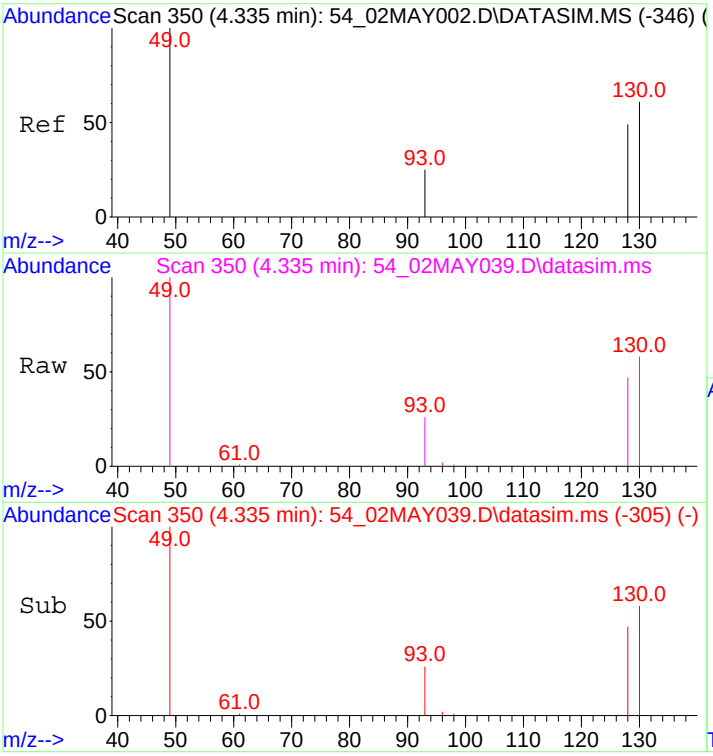
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140502\
Data File : 54 02MAY039.D
Acq On : 2 May 2014 8:11 pm
Operator : yhl
Sample : 02165 \ F6-017
Misc : 5 ml \ 02 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 02 20:17:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 01 07:31:10 2014
QLast Update : Fri May 02 10:59:38 2014
Response via : Initial Calibration



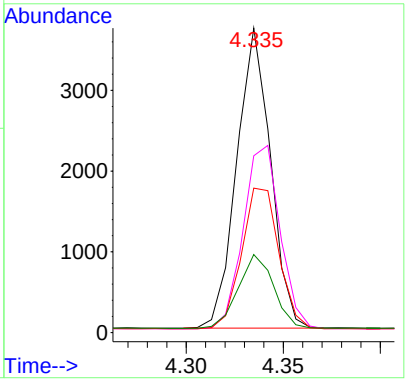


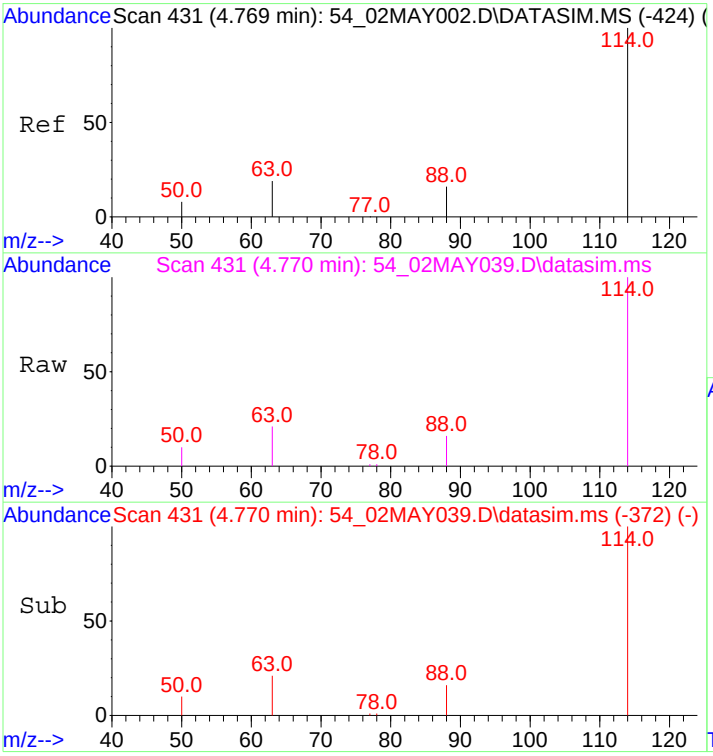


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 02MAY039.D
Acq: 2 May 2014 8:11 pm

Tgt Ion: 49 Resp: 4501

Ion	Ratio	Lower	Upper
49	100		
130	66.8	87.2	130.8#
128	51.9	68.0	102.0#
93	25.9	29.3	43.9#

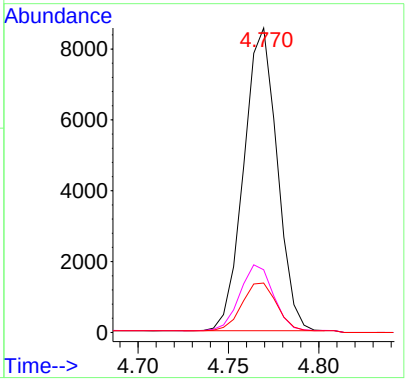


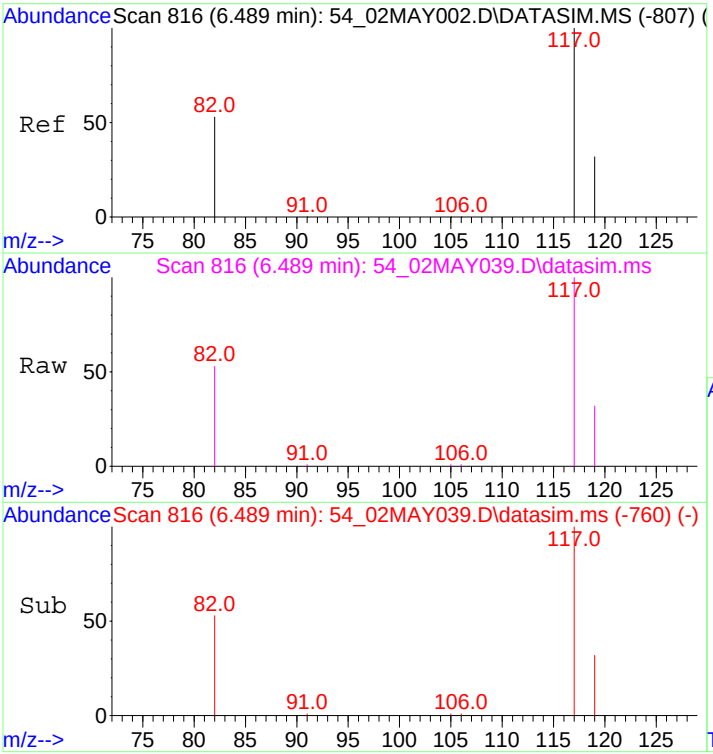


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_02MAY039.D
Acq: 2 May 2014 8:11 pm

Tgt Ion:114 Resp: 10991

Ion	Ratio	Lower	Upper
114	100		
63	21.8	12.0	18.0#
88	16.4	11.8	17.8

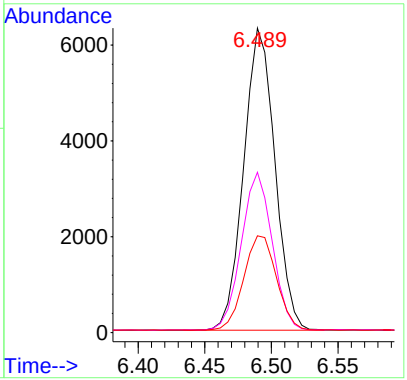




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 02MAY039.D
Acq: 2 May 2014 8:11 pm

Tgt Ion:117 Resp: 10284

Ion	Ratio	Lower	Upper
117	100		
82	51.6	38.0	57.0
119	32.7	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY004.D
Acq On : 5 May 2014 7:52 am
Operator : yhl
Sample : 20140505-MB \ Method Blank
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:58:34 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4393	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10795	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	9986	10.00	ppbv	0.00

System Monitoring Compounds

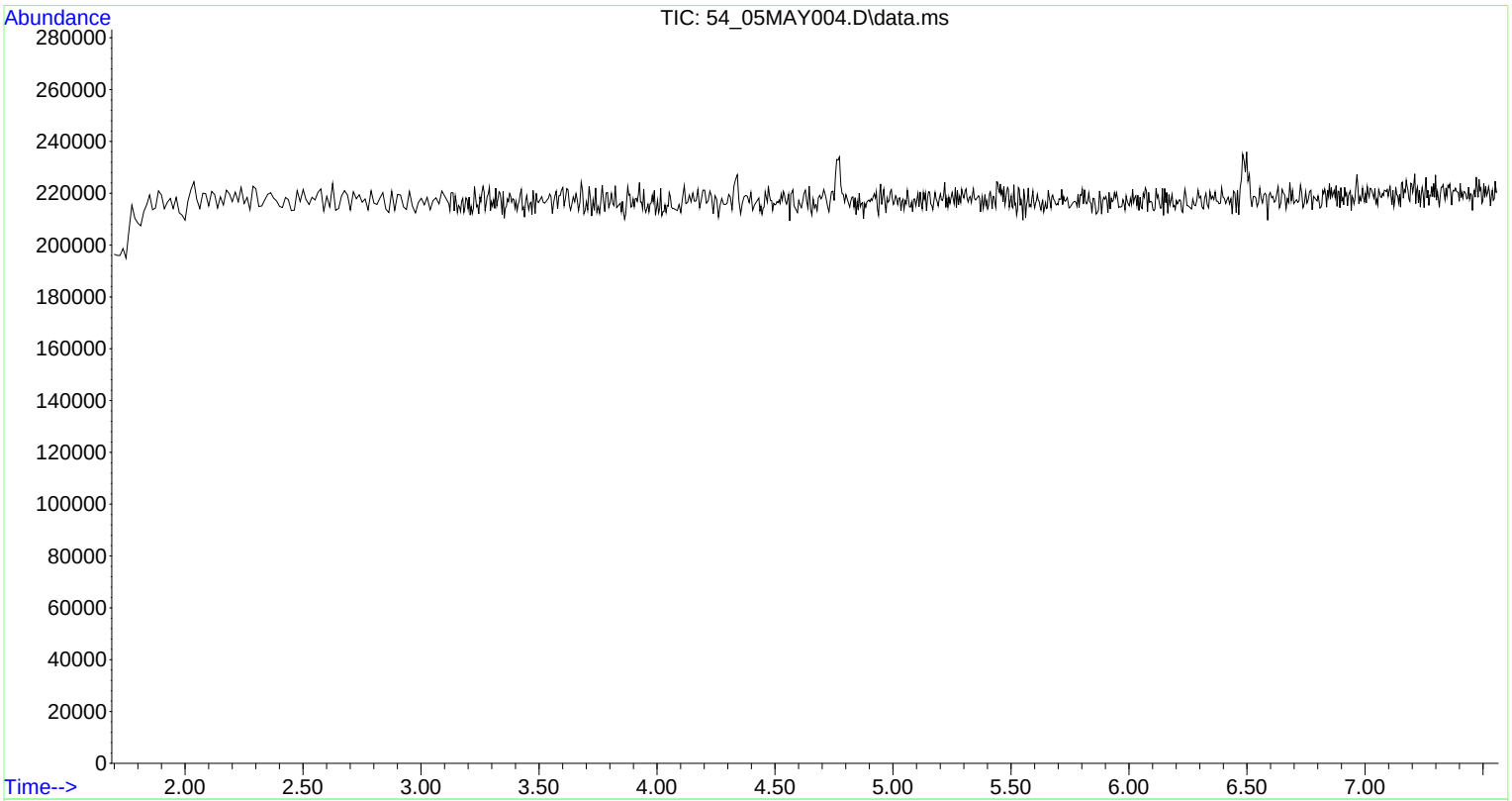
Target Compounds	Qvalue

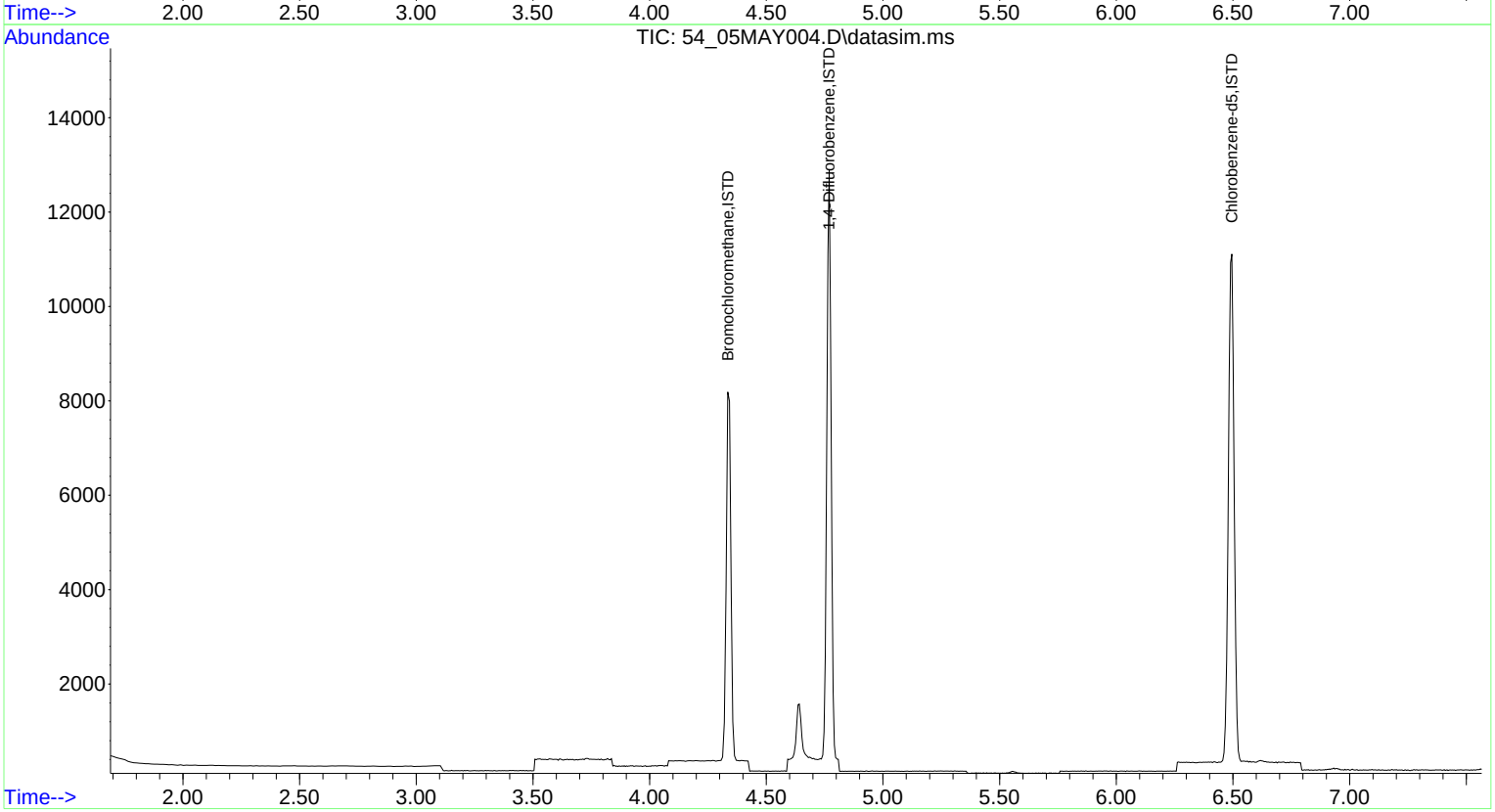
(#) = qualifier out of range (m) = manual integration (+) = signals summed

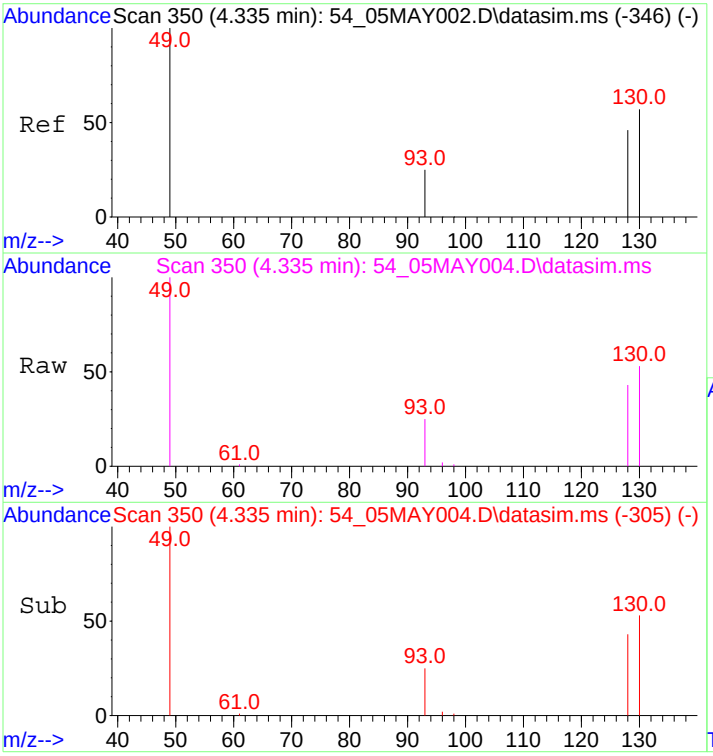
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY004.D
Acq On : 5 May 2014 7:52 am
Operator : yhl
Sample : 20140505-MB \ Method Blank
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 07:58:34 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



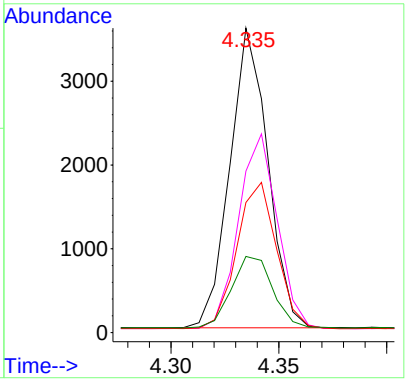


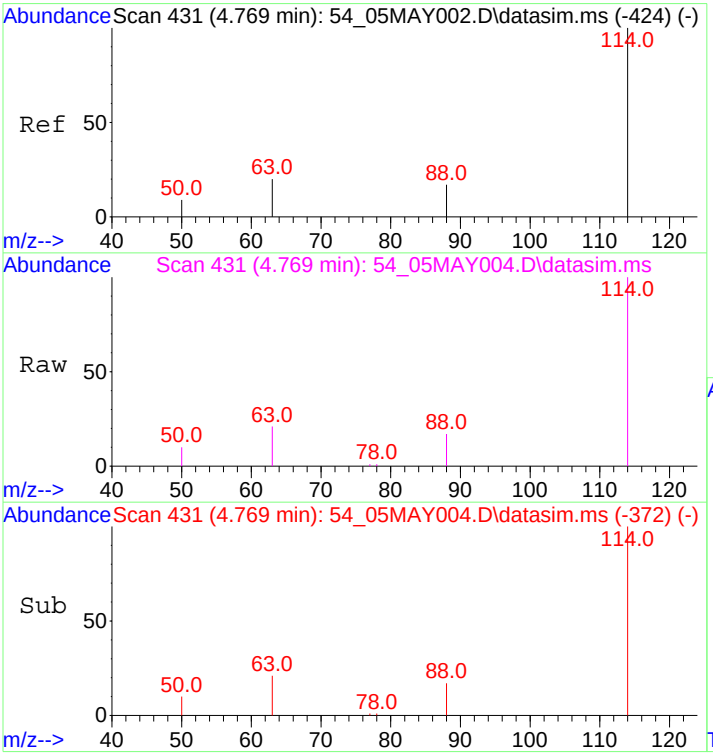


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY004.D
Acq: 5 May 2014 7:52 am

Tgt Ion: 49 Resp: 4393

Ion	Ratio	Lower	Upper
49	100		
130	66.0	87.2	130.8#
128	51.1	68.0	102.0#
93	26.0	29.3	43.9#

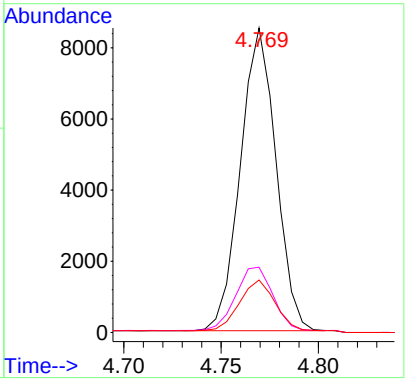


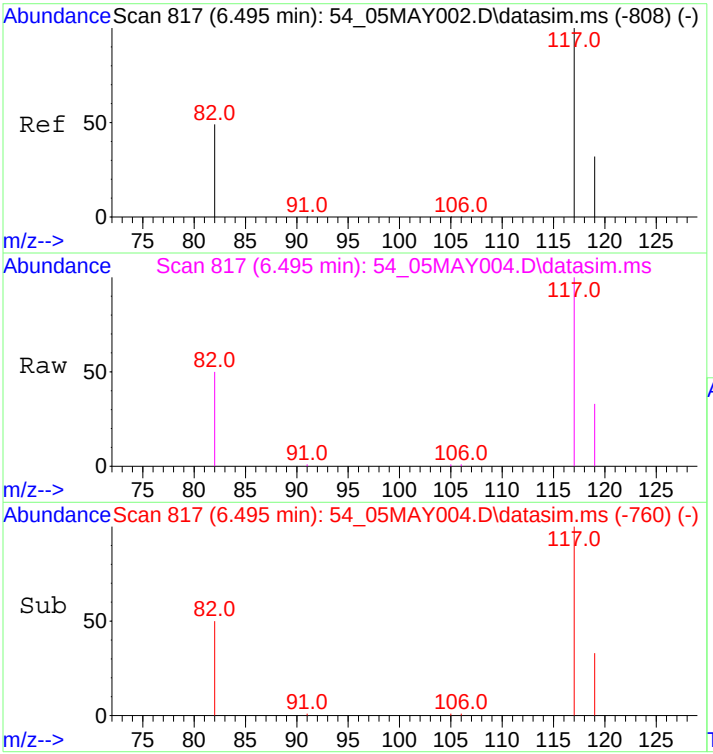


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY004.D
Acq: 5 May 2014 7:52 am

Tgt Ion:114 Resp: 10795

Ion	Ratio	Lower	Upper
114	100		
63	21.8	12.0	18.0#
88	16.7	11.8	17.8

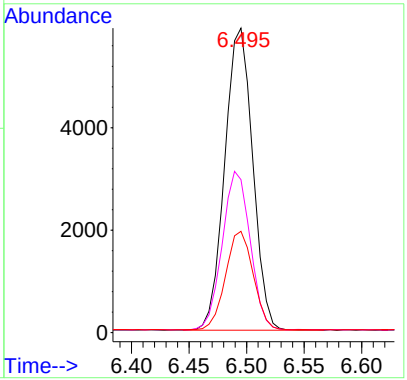




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 05MAY004.D
Acq: 5 May 2014 7:52 am

Tgt Ion:117 Resp: 9986

Ion	Ratio	Lower	Upper
117	100		
82	52.1	38.0	57.0
119	32.3	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY006.D
Acq On : 5 May 2014 9:38 am
Operator : yhl
Sample : 02172 \ SG-20-10
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 09:47:01 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

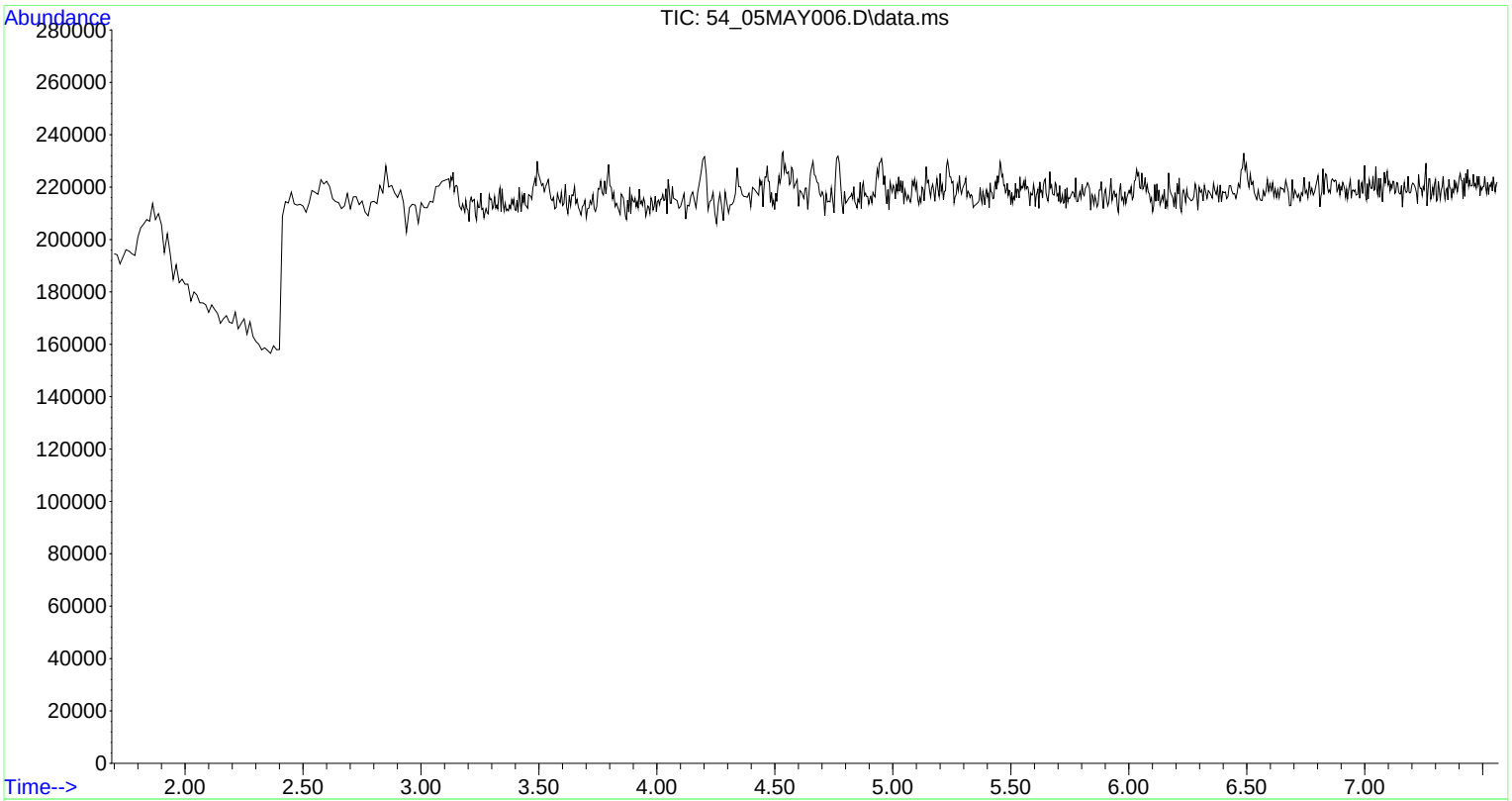
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3918	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9942	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9148	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.246	61	254m	0.84	ppbv	
5] trans-1,2-Dichloroethene	3.703	61	307	1.15	ppbv #	78
7] cis-1,2-Dichloroethene	4.197	61	8708	34.87	ppbv #	70
11] Trichloroethene	4.950	130	3987	16.12	ppbv	99
13] Toluene	5.552	91	2195	4.00	ppbv	98
14] Tetrachloroethene	5.972	166	231	0.74	ppbv	92
15] Ethyl Benzene	6.556	91	490	0.70	ppbv	94
16] m,p-Xylene	6.612	91	1038	1.94	ppbv	90
17] o-Xylene	6.933	91	415	0.77	ppbv	89

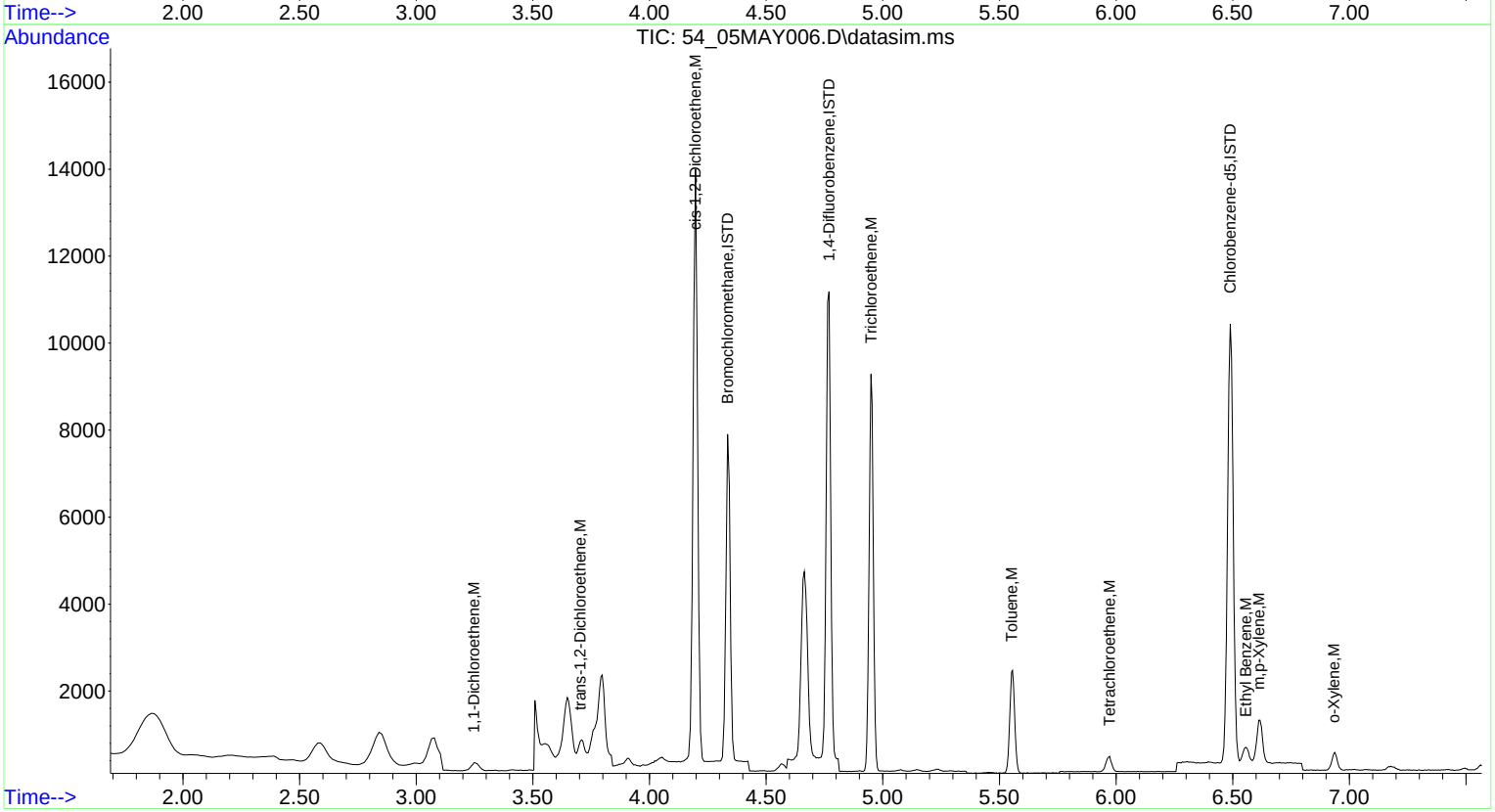
(#) = qualifier out of range (m) = manual integration (+) = signals summed

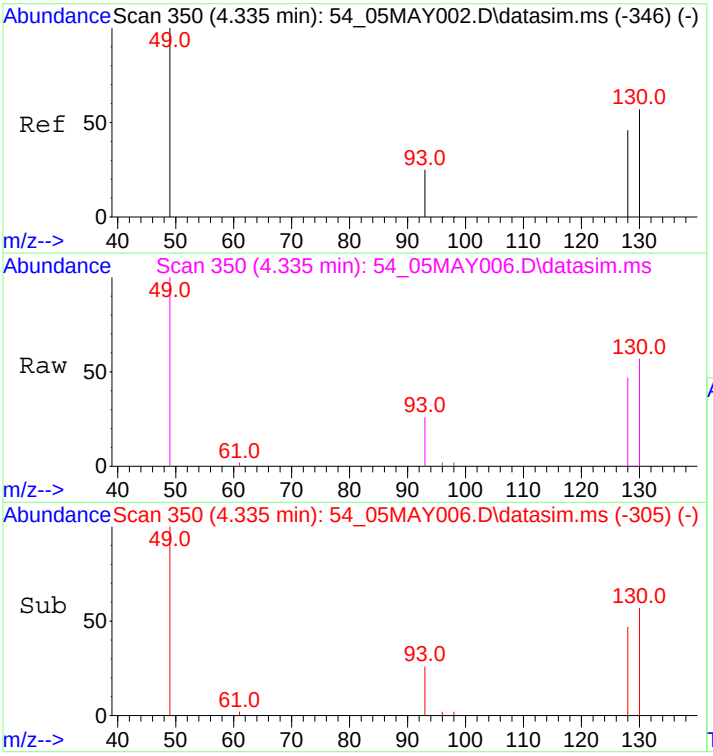
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY006.D
Acq On : 5 May 2014 9:38 am
Operator : yhl
Sample : 02172 \ SG-20-10
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 09:47:01 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



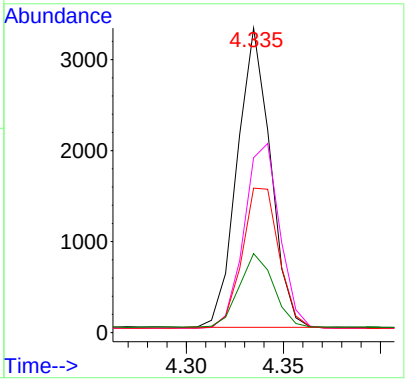


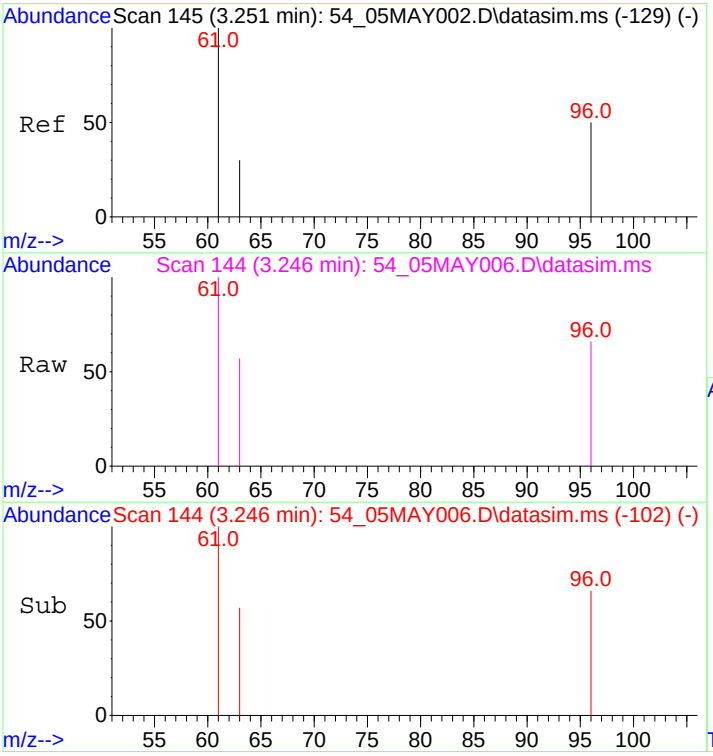


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion: 49 Resp: 3918

Ion	Ratio	Lower	Upper
49	100		
130	66.1	87.2	130.8#
128	52.1	68.0	102.0#
93	25.2	29.3	43.9#

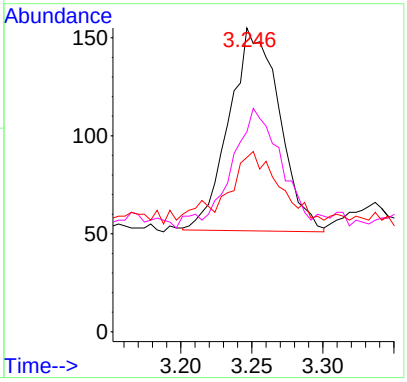




#3
1,1-Dichloroethene
Concen: 0.84 ppbv m
RT: 3.246 min Scan# 144
Delta R.T. -0.005 min
Lab File: 54_05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion: 61 Resp: 254

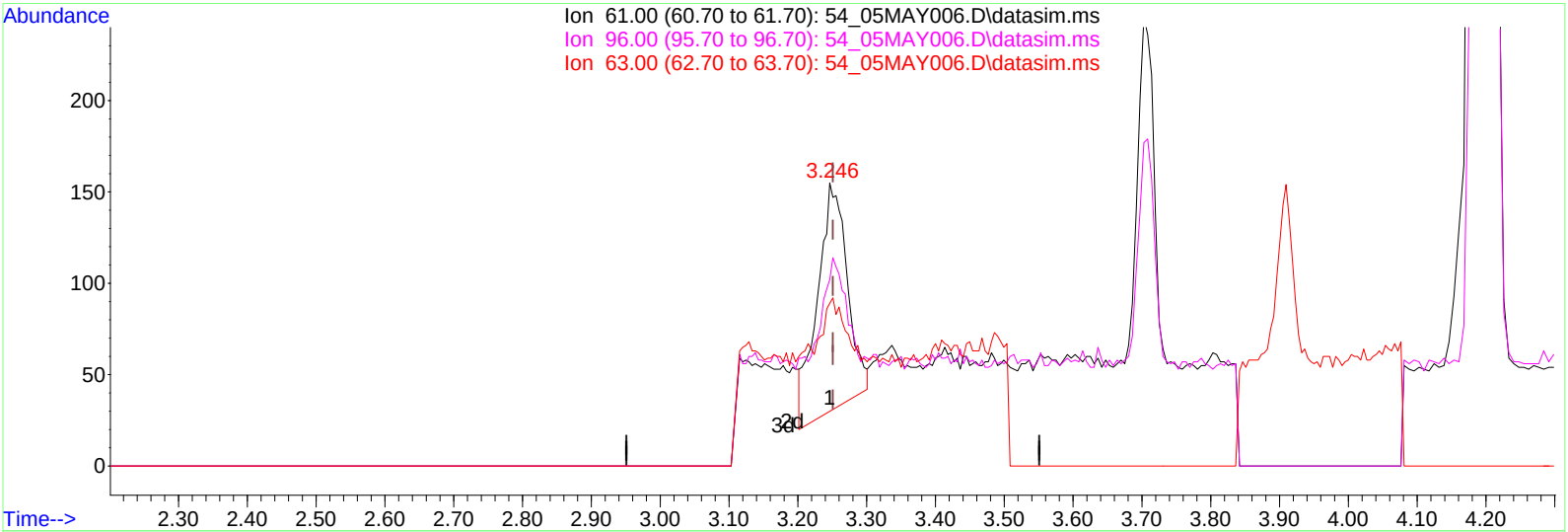
Ion	Ratio	Lower	Upper
61	100		
96	116.1	63.4	95.2#
63	21.3	26.2	39.2#

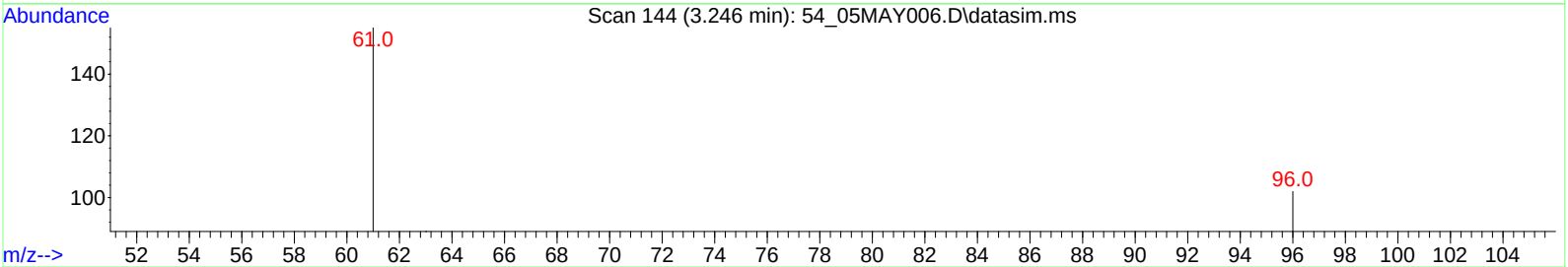


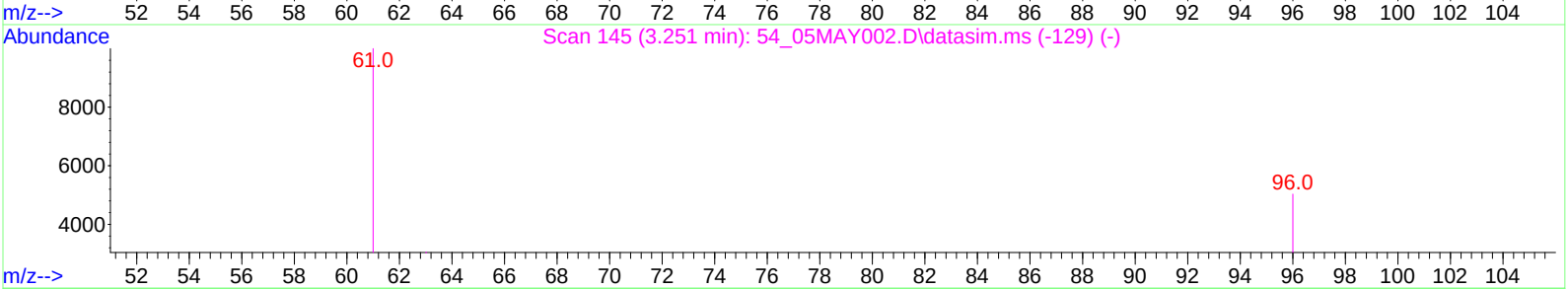
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY006.D
Acq On : 5 May 2014 9:38 am
Operator : yhl
Sample : 02172 \ SG-20-10
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 09:45:03 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY006.D\data.ms

(3) 1,1-Dichloroethene (M)

3.246min (-0.005) 1.24 ppbv

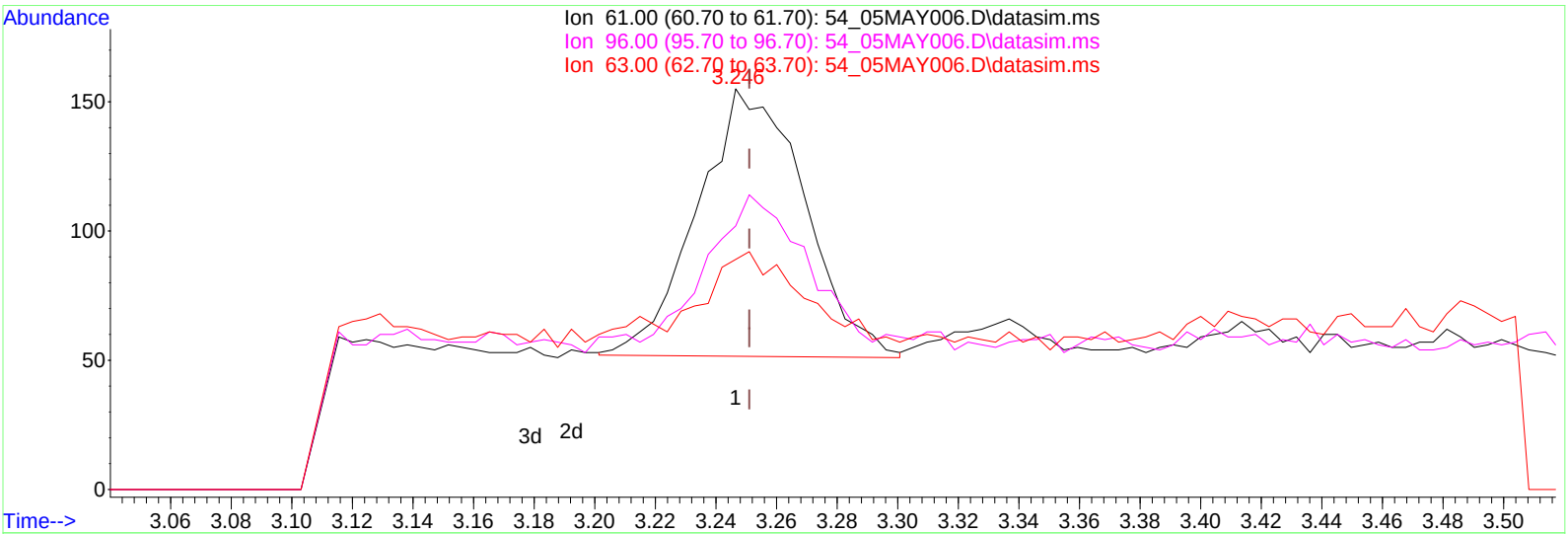
response 376

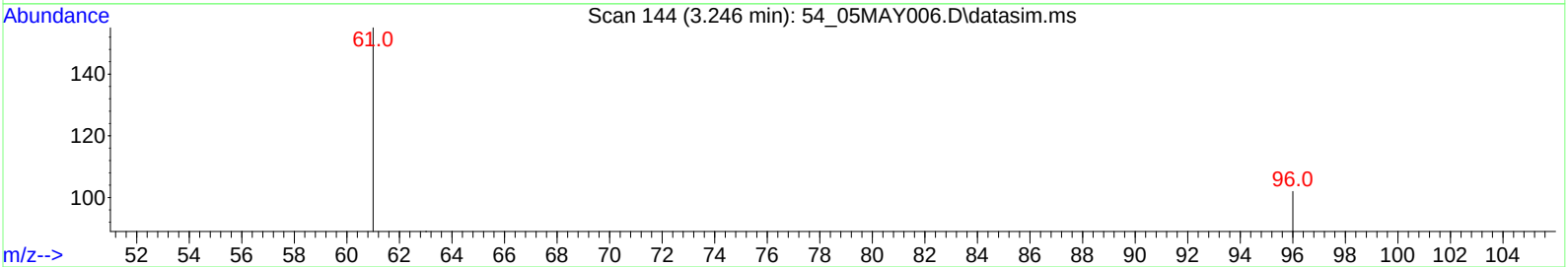
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	78.46
63.00	32.70	14.36#
0.00	0.00	0.00

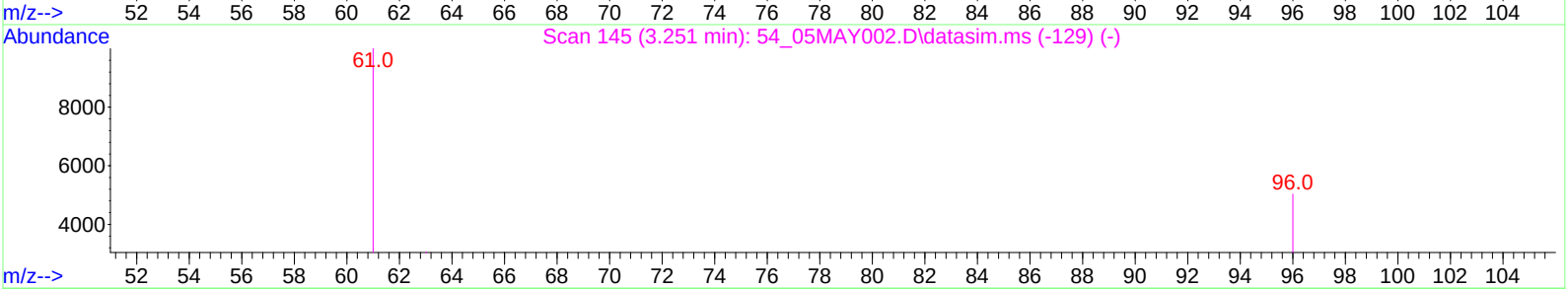
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY006.D
Acq On : 5 May 2014 9:38 am
Operator : yhl
Sample : 02172 \ SG-20-10
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 09:45:03 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







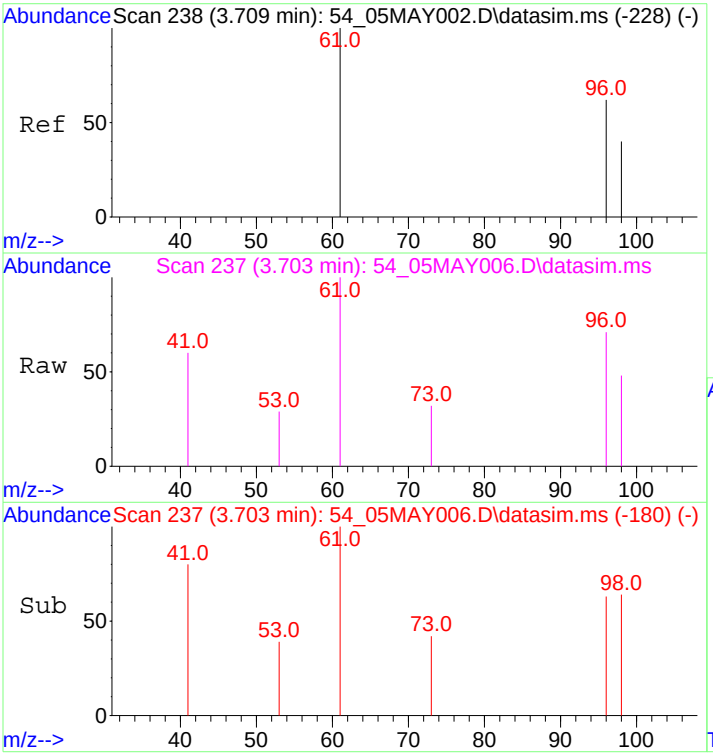
TIC: 54_05MAY006.D\data.ms

(3) 1,1-Dichloroethene (M)

3.246min (-0.005) 0.84 ppbv m

response 254

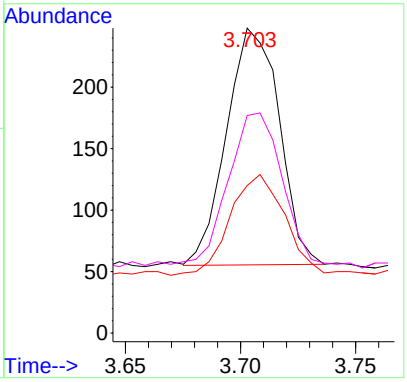
Ion	Exp%	Act%
61.00	100	100
96.00	79.30	116.14#
63.00	32.70	21.26#
0.00	0.00	0.00

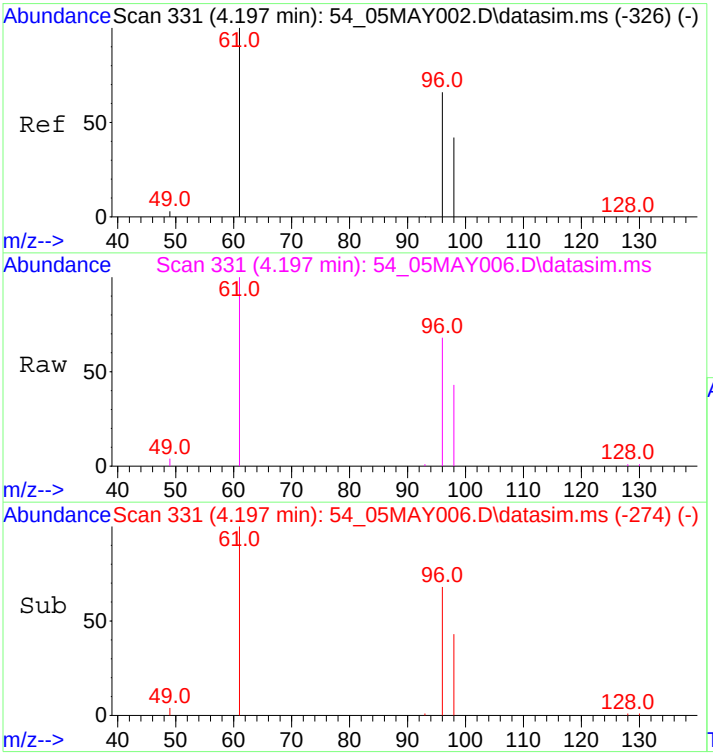


#5
trans-1,2-Dichloroethene
Concen: 1.15 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion: 61 Resp: 307

Ion	Ratio	Lower	Upper
61	100		
96	65.5	71.4	107.0#
98	44.0	45.8	68.8#

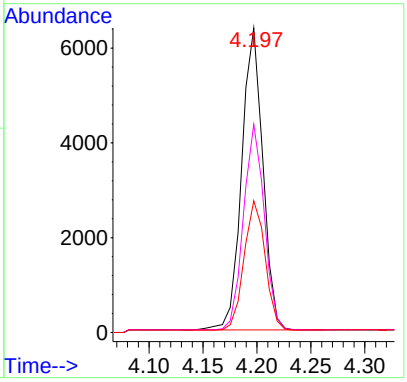


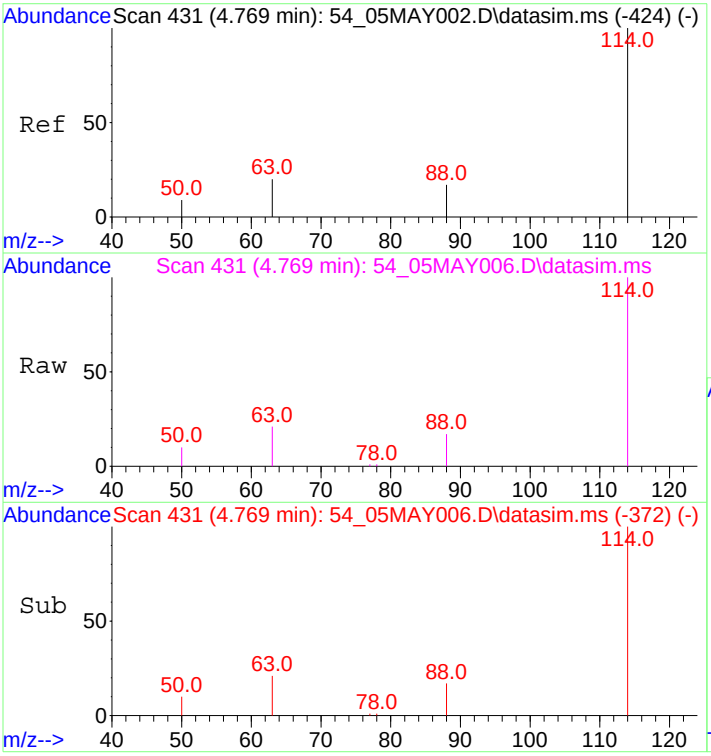


#7
cis-1,2-Dichloroethene
Concen: 34.87 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion: 61 Resp: 8708

Ion	Ratio	Lower	Upper
61	100		
96	66.6	78.5	117.7#
98	42.7	50.6	76.0#

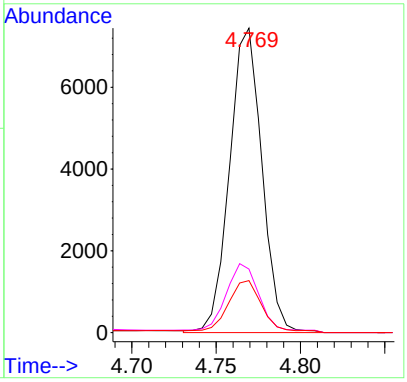


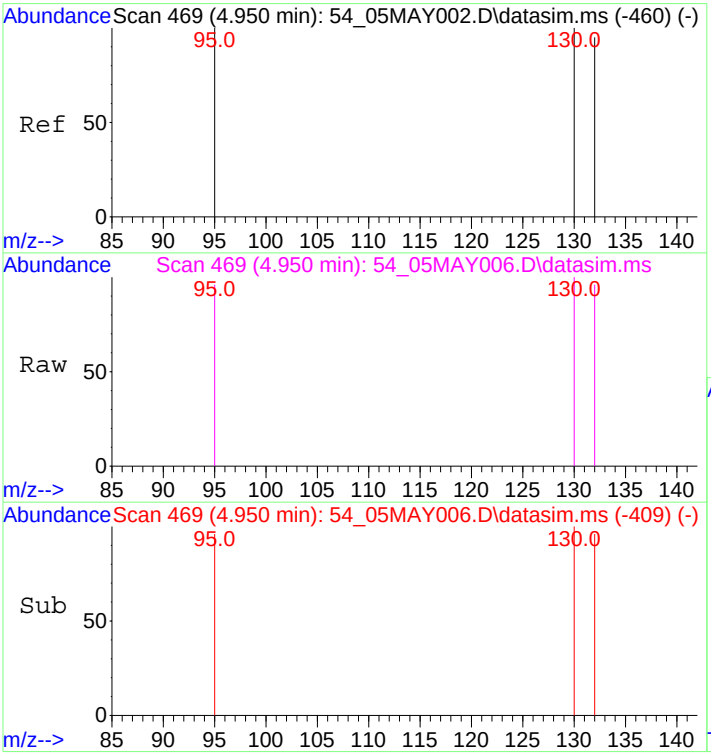


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion:114 Resp: 9942

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.1	11.8	17.8

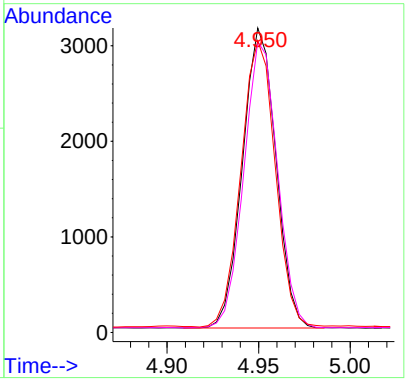


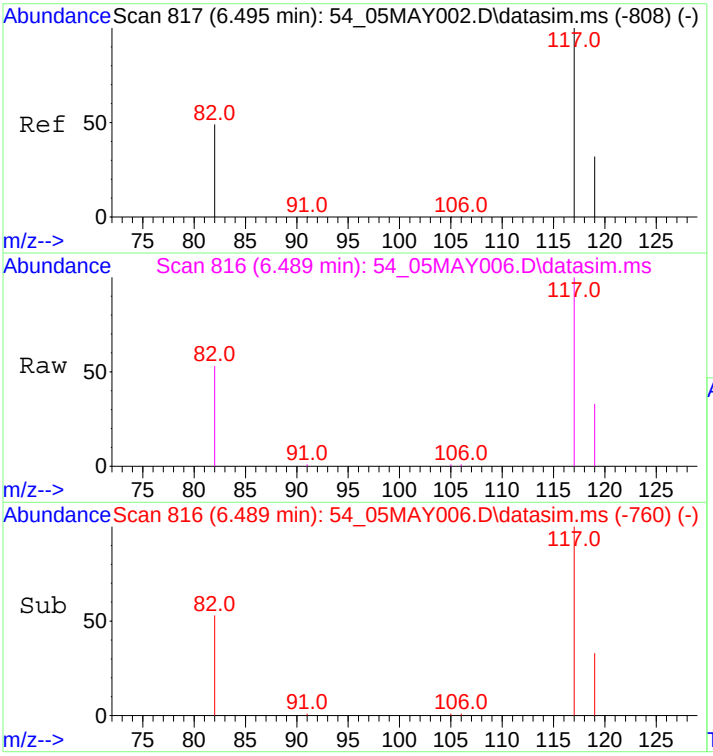


#11
Trichloroethene
Concen: 16.12 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion:130 Resp: 3987

Ion	Ratio	Lower	Upper
130	100		
132	96.0	76.9	115.3
95	97.5	76.5	114.7

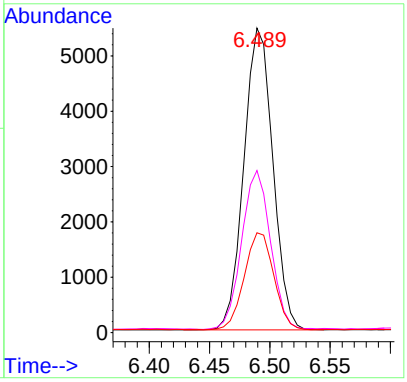


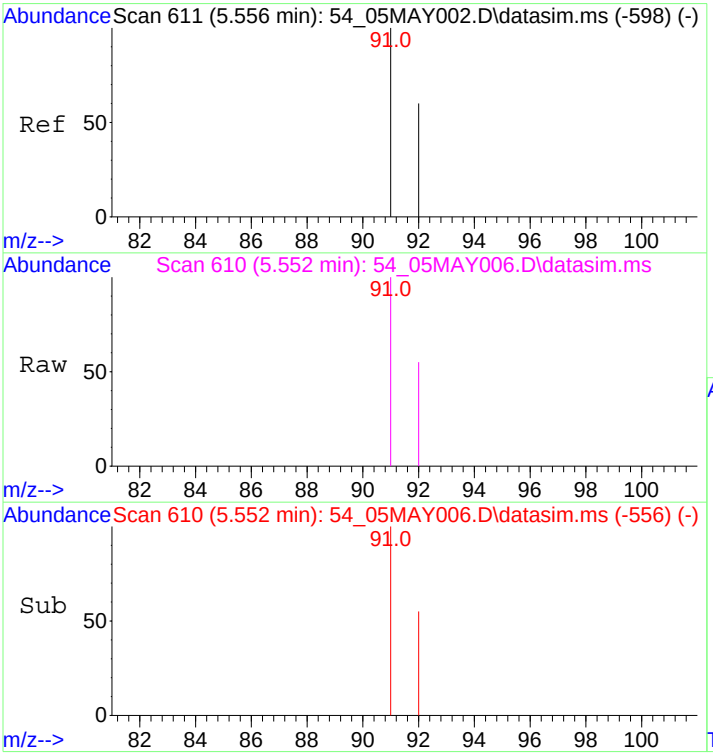


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion:117 Resp: 9148

Ion	Ratio	Lower	Upper
117	100		
82	52.4	38.0	57.0
119	32.7	27.0	40.4

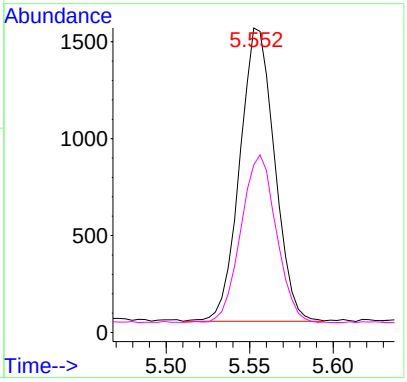


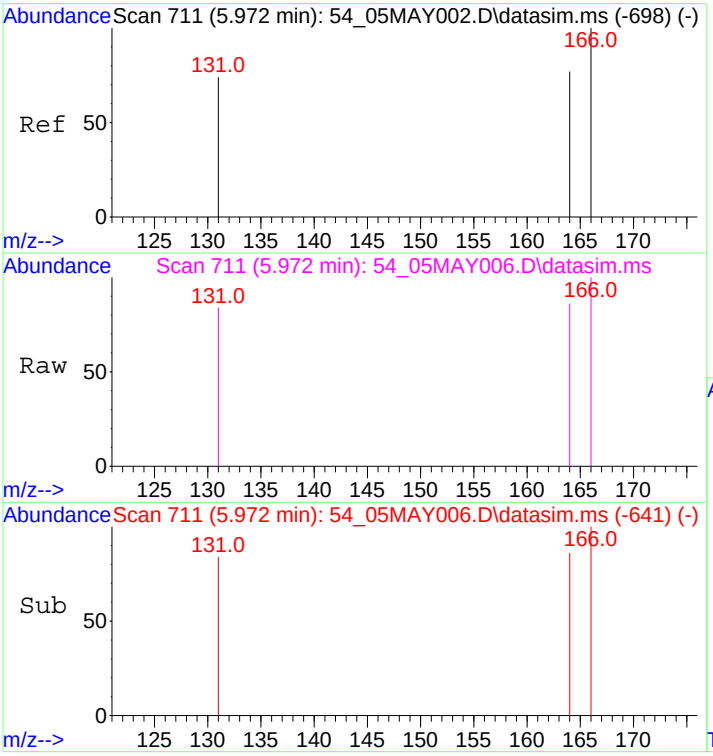


#13
Toluene
Concen: 4.00 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54_05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion: 91 Resp: 2195

Ion	Ratio	Lower	Upper
91	100		
92	57.9	47.8	71.8

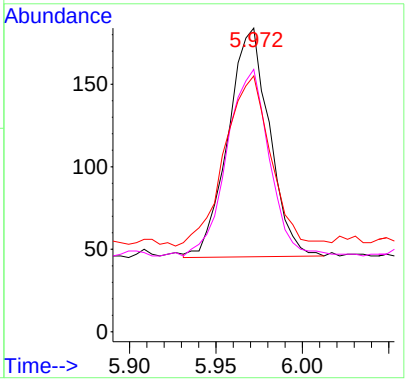


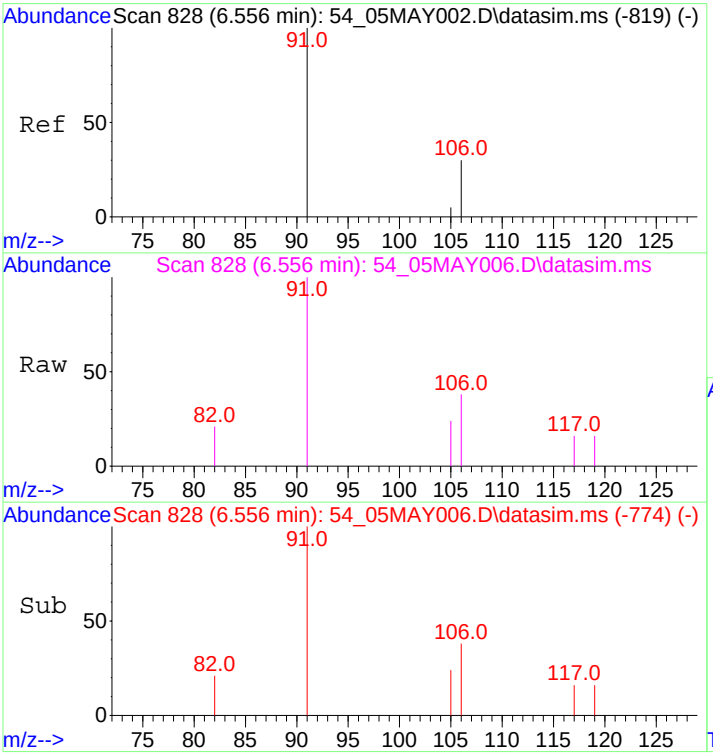


#14
Tetrachloroethene
Concen: 0.74 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion:166 Resp: 231

Ion	Ratio	Lower	Upper
166	100		
164	83.5	62.6	94.0
131	81.8	58.5	87.7

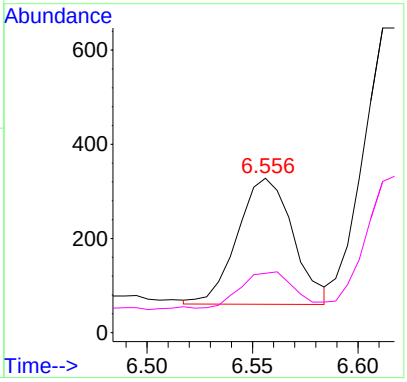


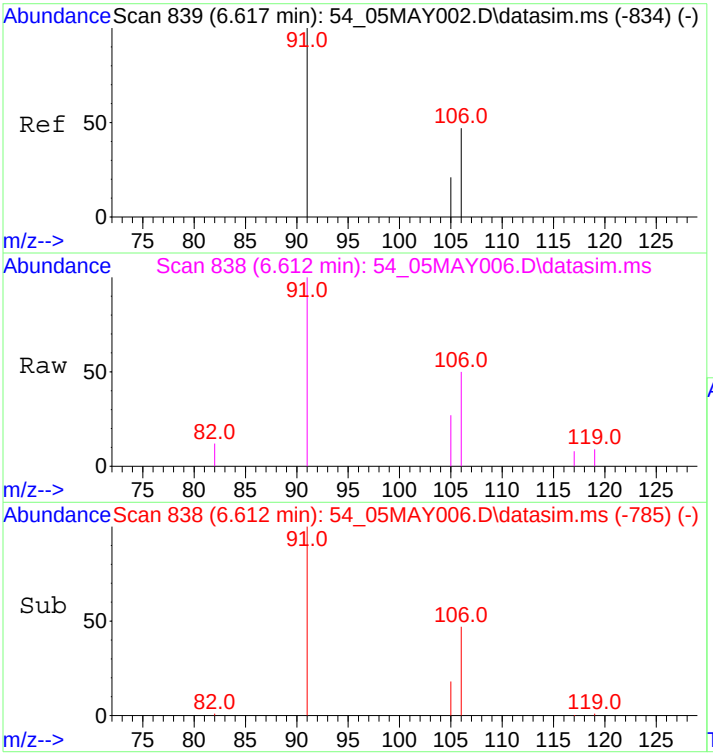


#15
Ethyl Benzene
Concen: 0.70 ppbv
RT: 6.556 min Scan# 828
Delta R.T. -0.000 min
Lab File: 54_05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion: 91 Resp: 490

Ion	Ratio	Lower	Upper
91	100		
106	30.2	26.9	40.3

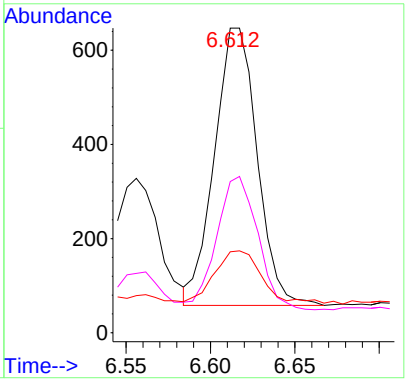


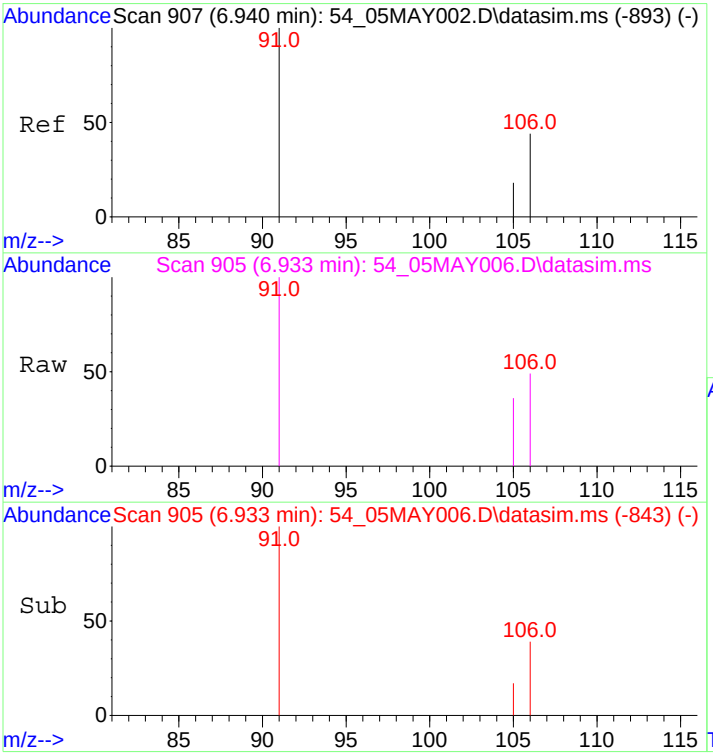


#16
m,p-Xylene
Concen: 1.94 ppbv
RT: 6.612 min Scan# 838
Delta R.T. -0.006 min
Lab File: 54 05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion: 91 Resp: 1038

Ion	Ratio	Lower	Upper
91	100		
106	46.1	43.1	64.7
105	19.0	18.3	27.5

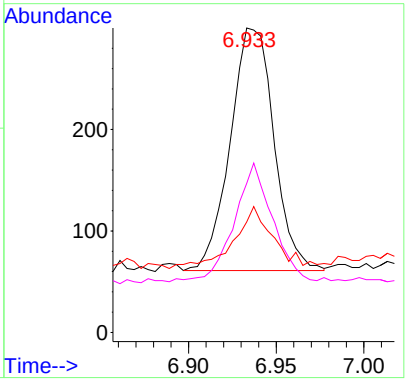




#17
o-Xylene
Concen: 0.77 ppbv
RT: 6.933 min Scan# 905
Delta R.T. -0.007 min
Lab File: 54_05MAY006.D
Acq: 5 May 2014 9:38 am

Tgt Ion: 91 Resp: 415

Ion	Ratio	Lower	Upper
91	100		
106	41.7	40.1	60.1
105	22.7	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY007.D
Acq On : 5 May 2014 9:50 am
Operator : yhl
Sample : 02171 \ SG-20-5
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 09:57:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

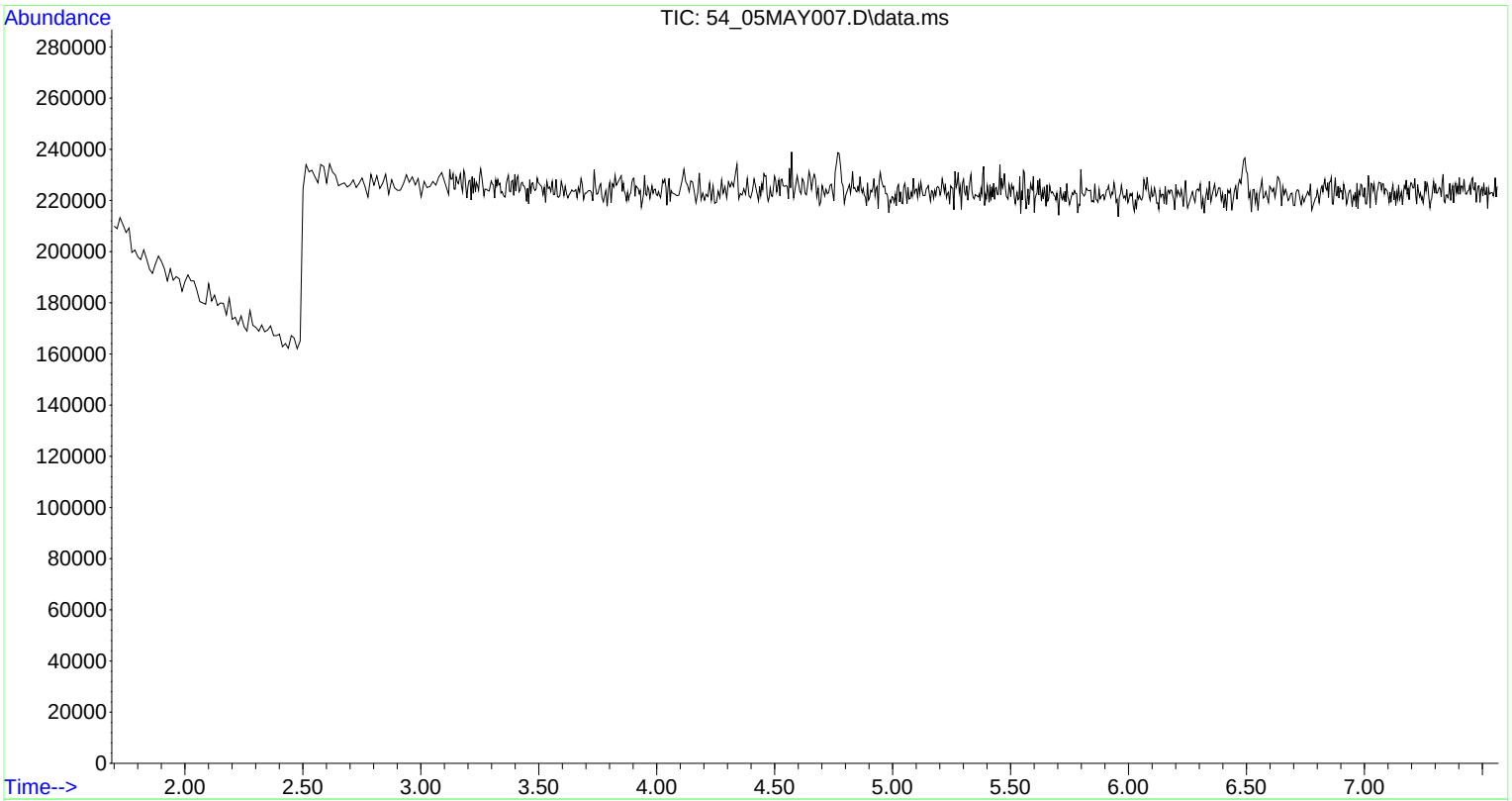
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4014	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9963	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	9256	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	1824	7.36	ppbv	98
13] Toluene	5.557	91	739	1.33	ppbv	98
14] Tetrachloroethene	5.968	166	528	1.67	ppbv	95
16] m,p-Xylene	6.618	91	567	1.05	ppbv #	89

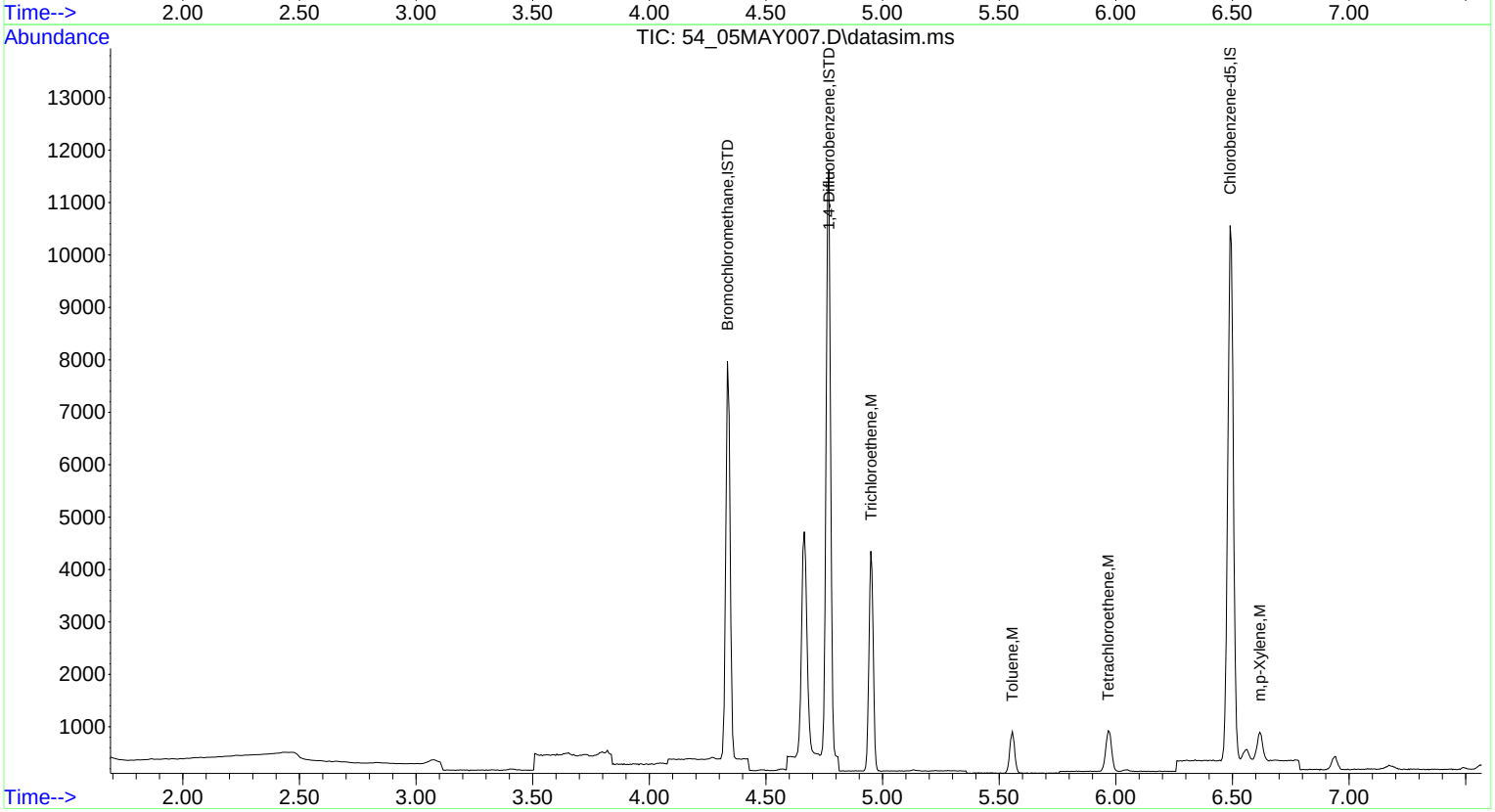
(#) = qualifier out of range (m) = manual integration (+) = signals summed

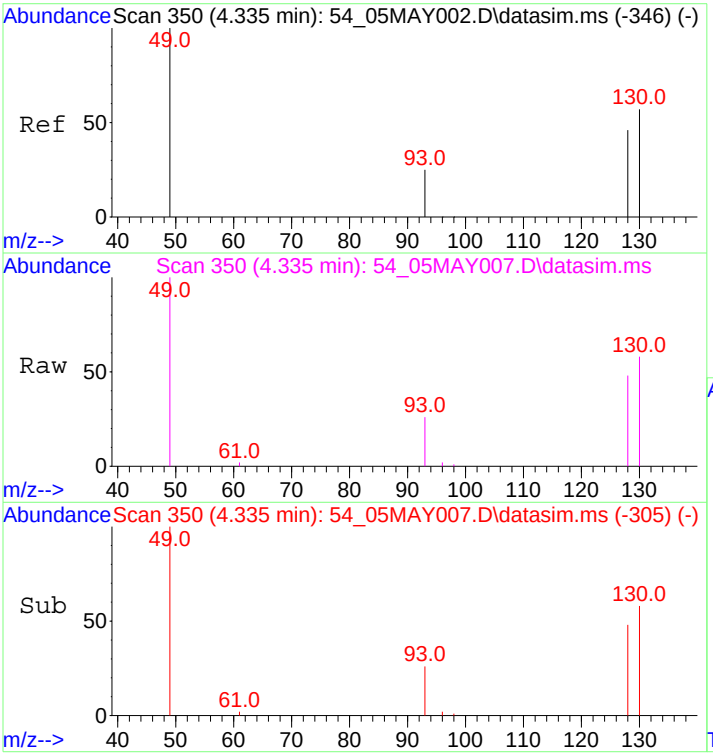
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY007.D
Acq On : 5 May 2014 9:50 am
Operator : yhl
Sample : 02171 \ SG-20-5
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 09:57:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



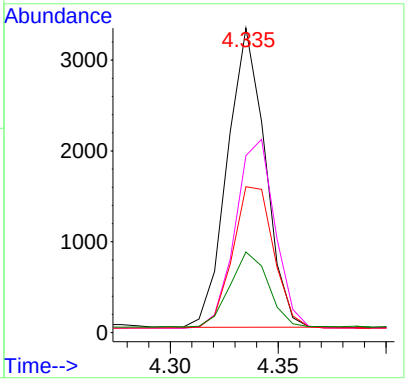


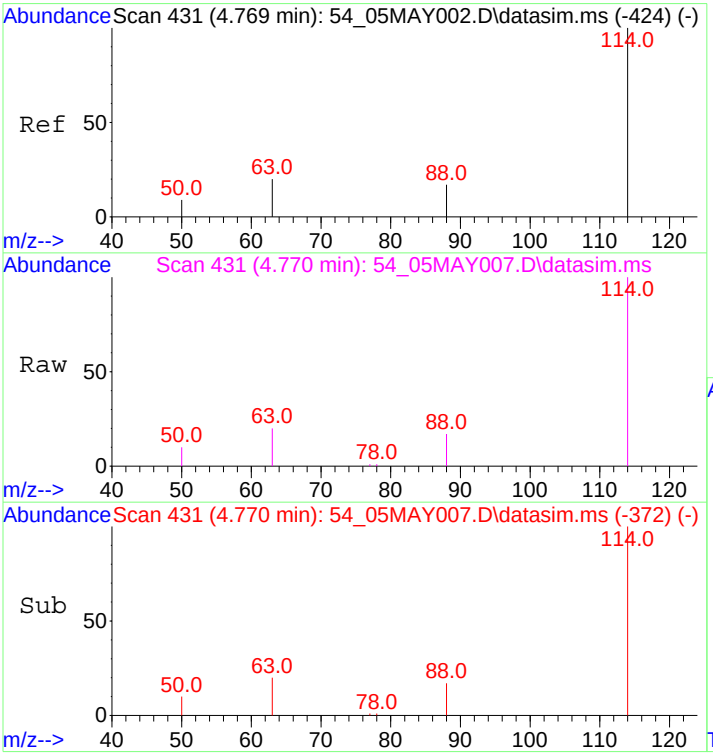


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY007.D
Acq: 5 May 2014 9:50 am

Tgt Ion: 49 Resp: 4014

Ion	Ratio	Lower	Upper
49	100		
130	66.4	87.2	130.8#
128	51.4	68.0	102.0#
93	25.3	29.3	43.9#

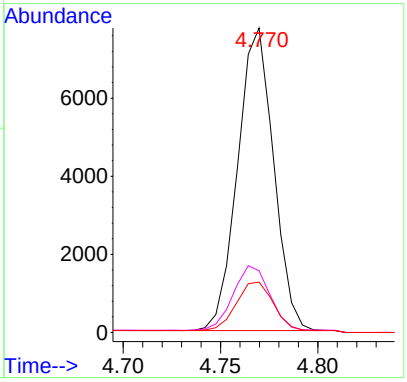


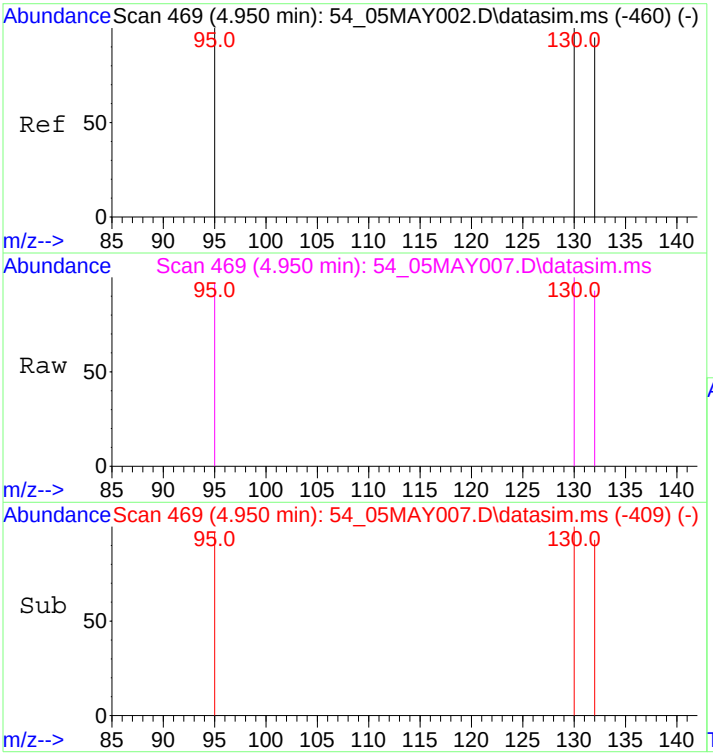


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY007.D
Acq: 5 May 2014 9:50 am

Tgt Ion:114 Resp: 9963

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.4	11.8	17.8

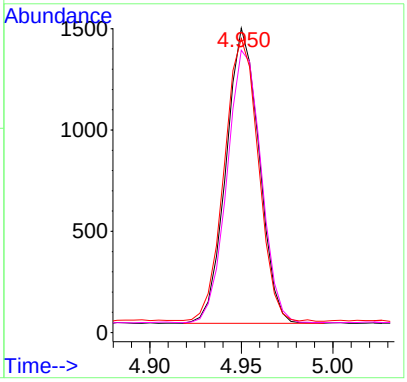


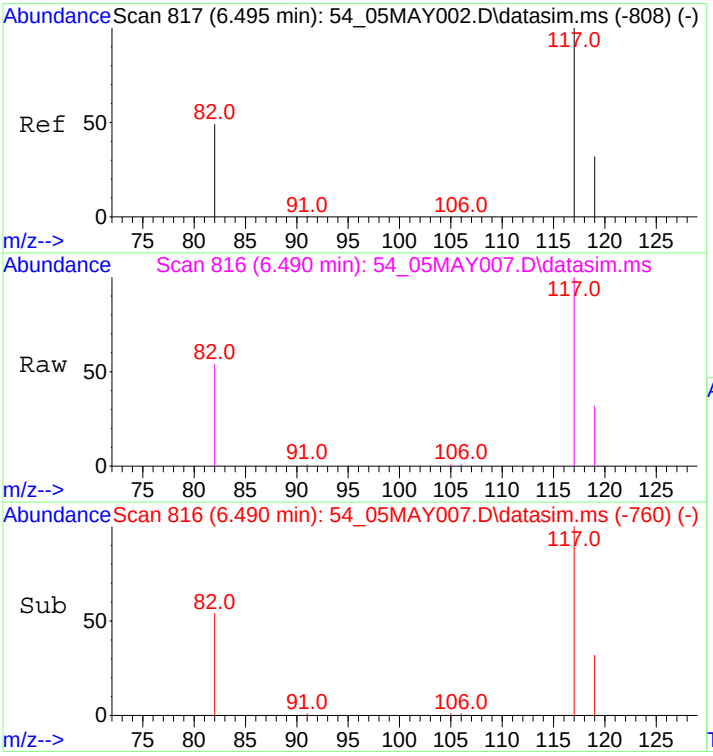


#11
Trichloroethene
Concen: 7.36 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 05MAY007.D
Acq: 5 May 2014 9:50 am

Tgt Ion:130 Resp: 1824

Ion	Ratio	Lower	Upper
130	100		
132	95.0	76.9	115.3
95	98.2	76.5	114.7

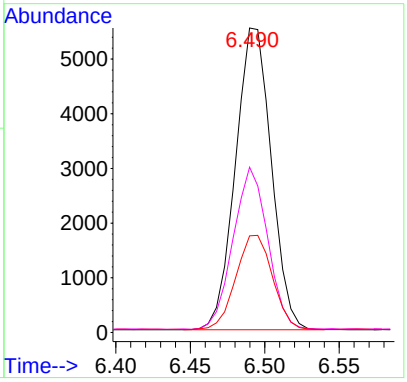


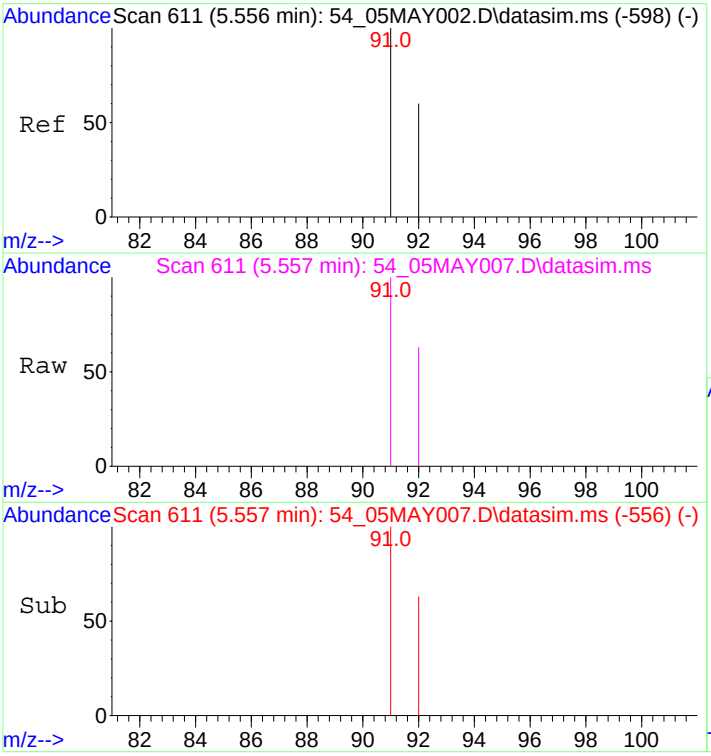


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54_05MAY007.D
Acq: 5 May 2014 9:50 am

Tgt Ion:117 Resp: 9256

Ion	Ratio	Lower	Upper
117	100		
82	51.6	38.0	57.0
119	31.8	27.0	40.4

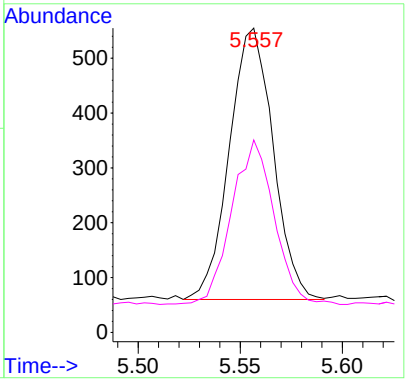


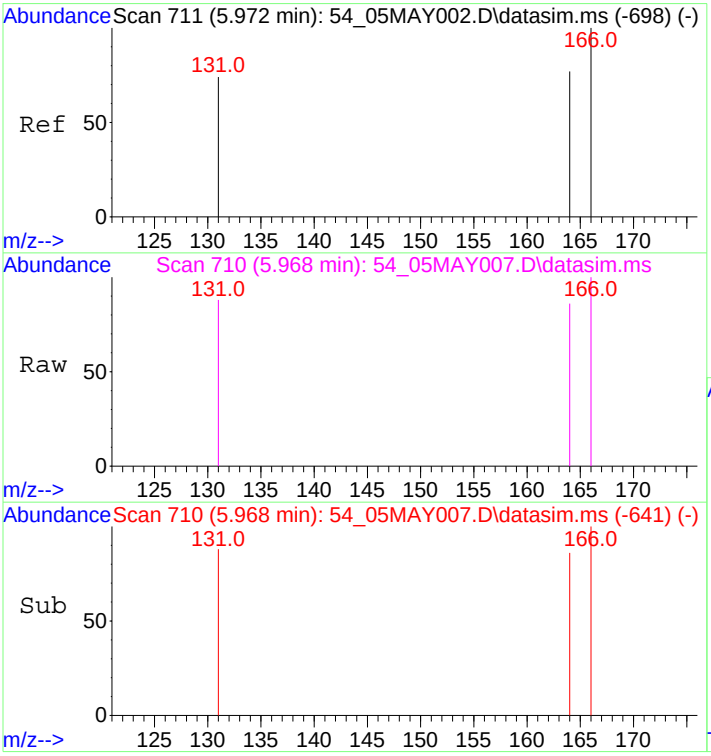


#13
Toluene
Concen: 1.33 ppbv
RT: 5.557 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 05MAY007.D
Acq: 5 May 2014 9:50 am

Tgt Ion: 91 Resp: 739

Ion	Ratio	Lower	Upper
91	100		
92	58.5	47.8	71.8

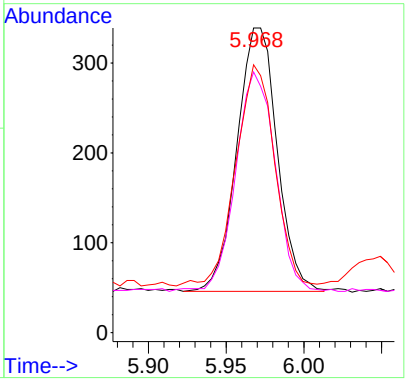


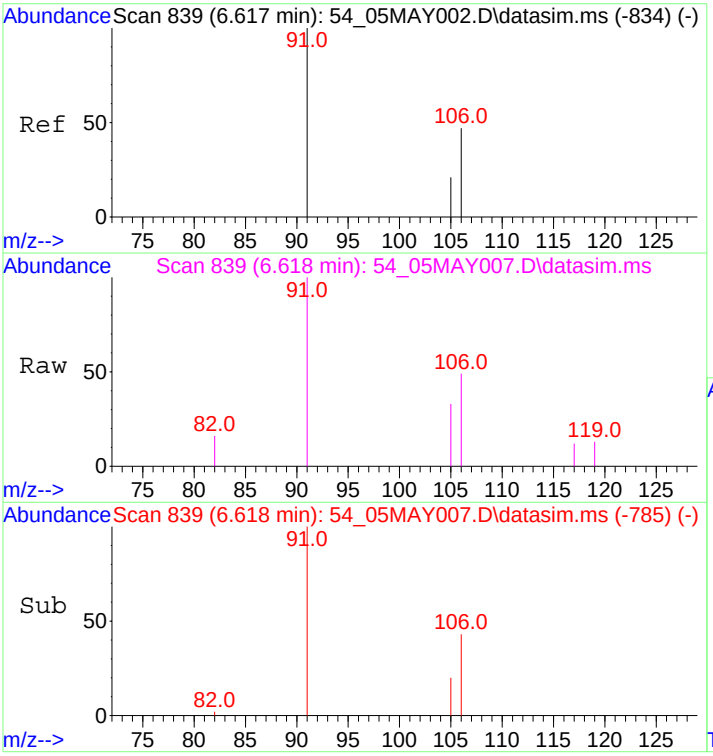


#14
Tetrachloroethene
Concen: 1.67 ppbv
RT: 5.968 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54_05MAY007.D
Acq: 5 May 2014 9:50 am

Tgt Ion:166 Resp: 528

Ion	Ratio	Lower	Upper
166	100		
164	80.3	62.6	94.0
131	80.1	58.5	87.7

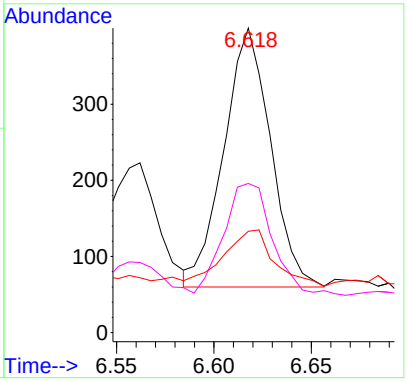




#16
m,p-Xylene
Concen: 1.05 ppbv
RT: 6.618 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 05MAY007.D
Acq: 5 May 2014 9:50 am

Tgt Ion: 91 Resp: 567

Ion	Ratio	Lower	Upper
91	100		
106	42.7	43.1	64.7#
105	23.6	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY008.D
Acq On : 5 May 2014 10:02 am
Operator : yhl
Sample : 02171 \ SG-20-5 Dup
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:09:30 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

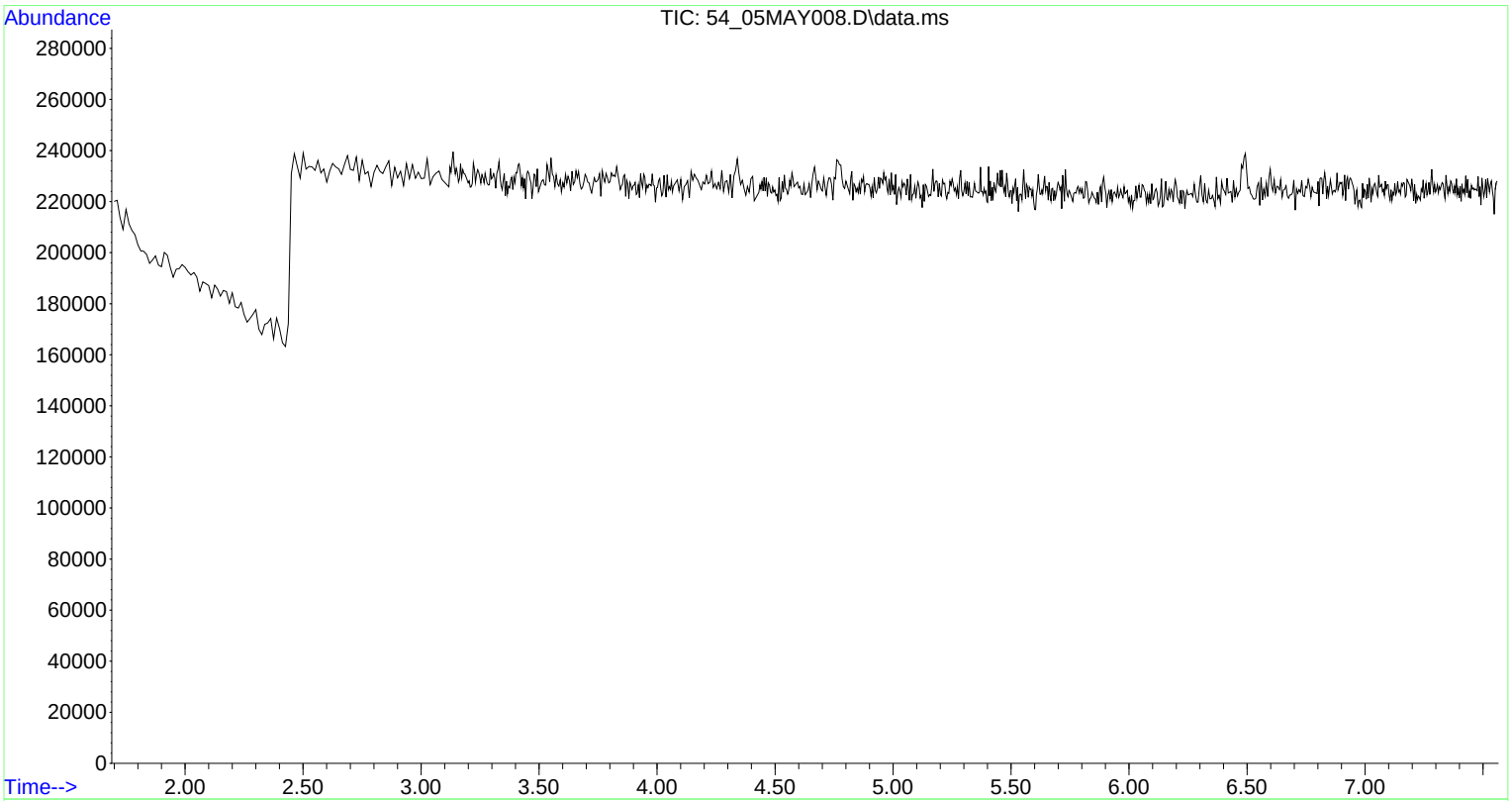
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3812	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9250	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8597	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.949	130	1700	7.39	ppbv	97
13] Toluene	5.556	91	707	1.37	ppbv	98
14] Tetrachloroethene	5.972	166	509	1.73	ppbv	97
16] m,p-Xylene	6.617	91	539	1.07	ppbv	87

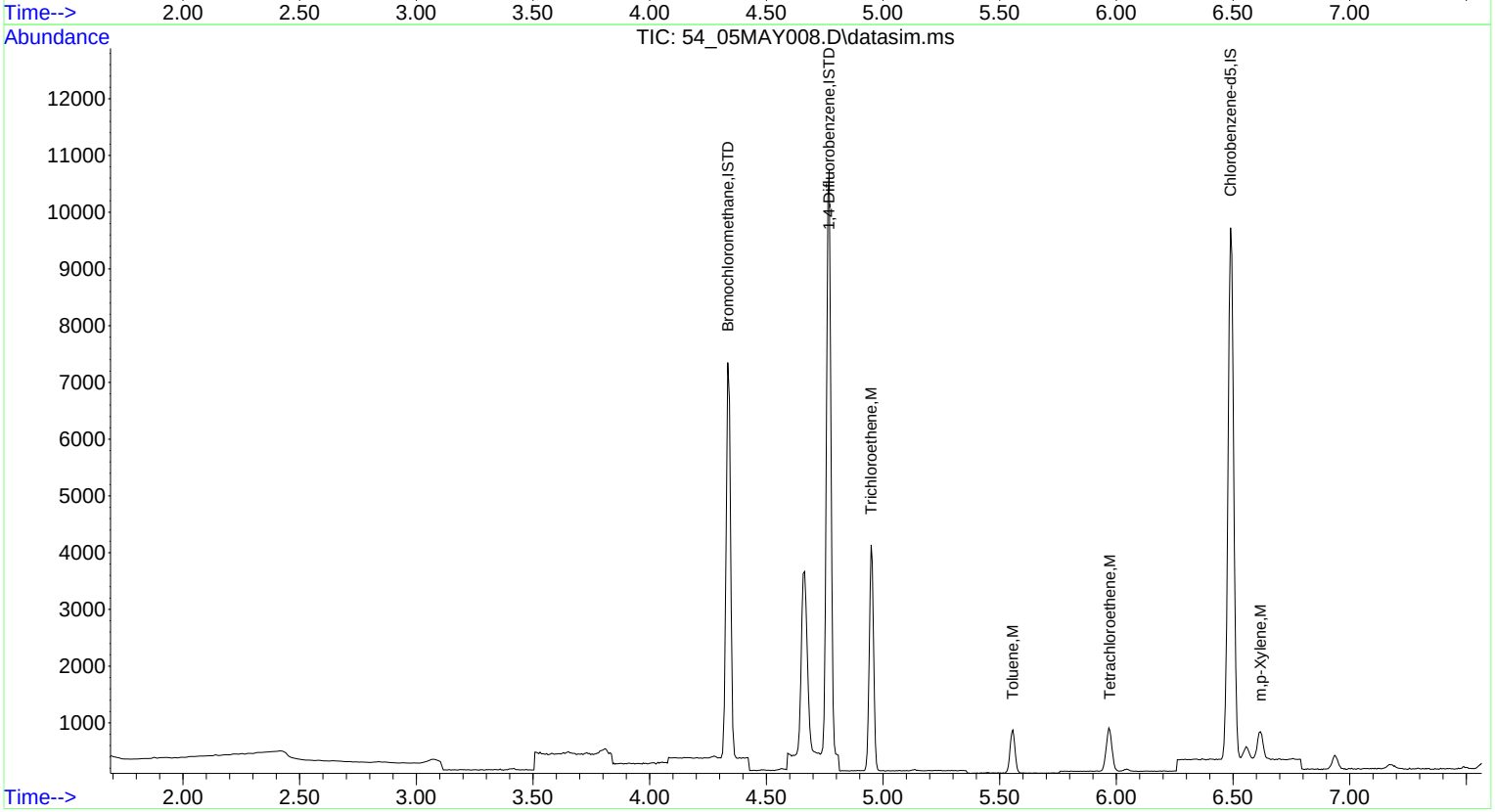
(#) = qualifier out of range (m) = manual integration (+) = signals summed

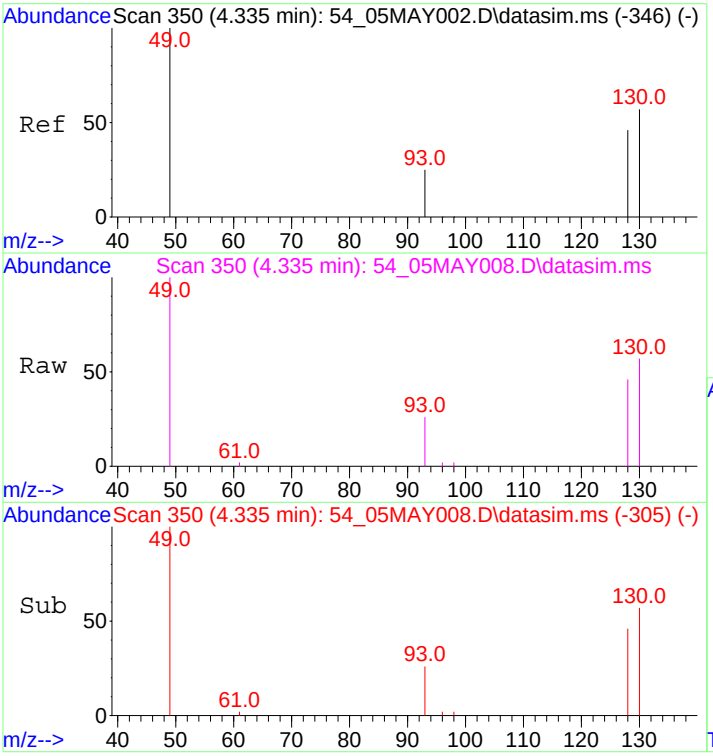
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY008.D
Acq On : 5 May 2014 10:02 am
Operator : yhl
Sample : 02171 \ SG-20-5 Dup
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:09:30 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



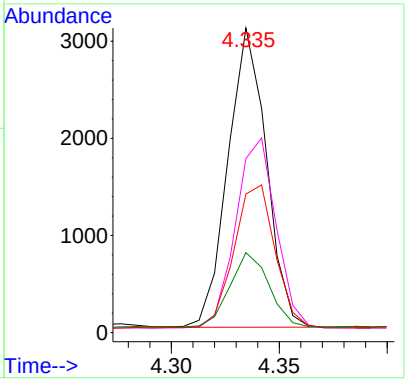


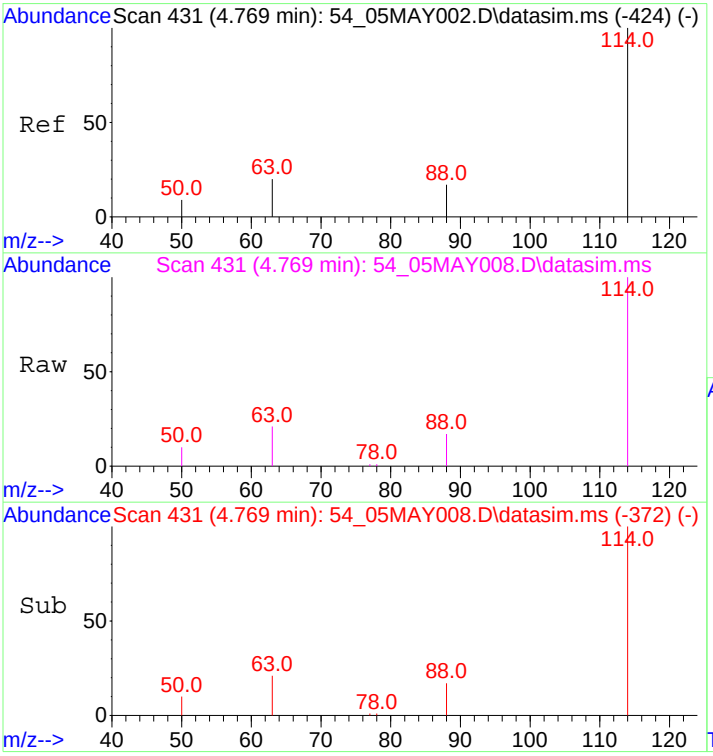


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY008.D
Acq: 5 May 2014 10:02 am

Tgt Ion: 49 Resp: 3812

Ion	Ratio	Lower	Upper
49	100		
130	66.6	87.2	130.8#
128	51.3	68.0	102.0#
93	25.5	29.3	43.9#

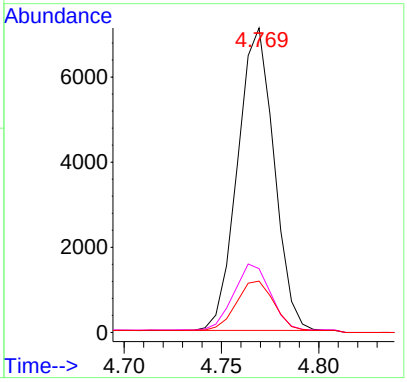


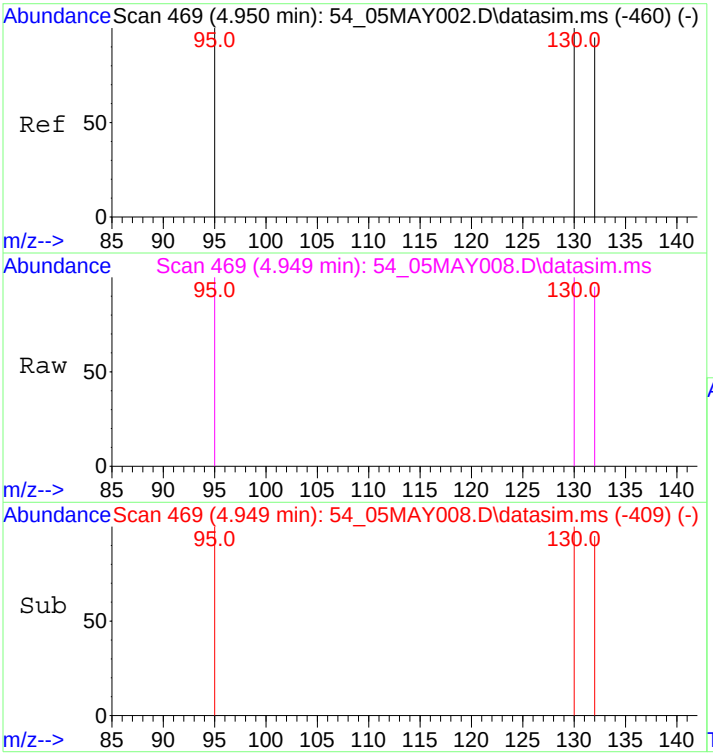


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_05MAY008.D
Acq: 5 May 2014 10:02 am

Tgt Ion:114 Resp: 9250

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.7	11.8	17.8

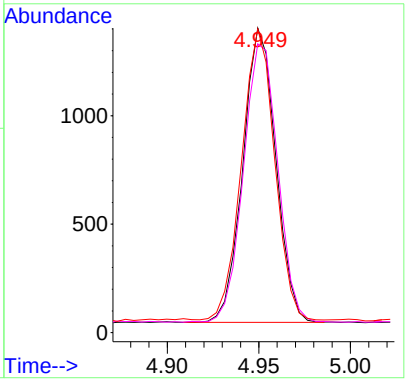


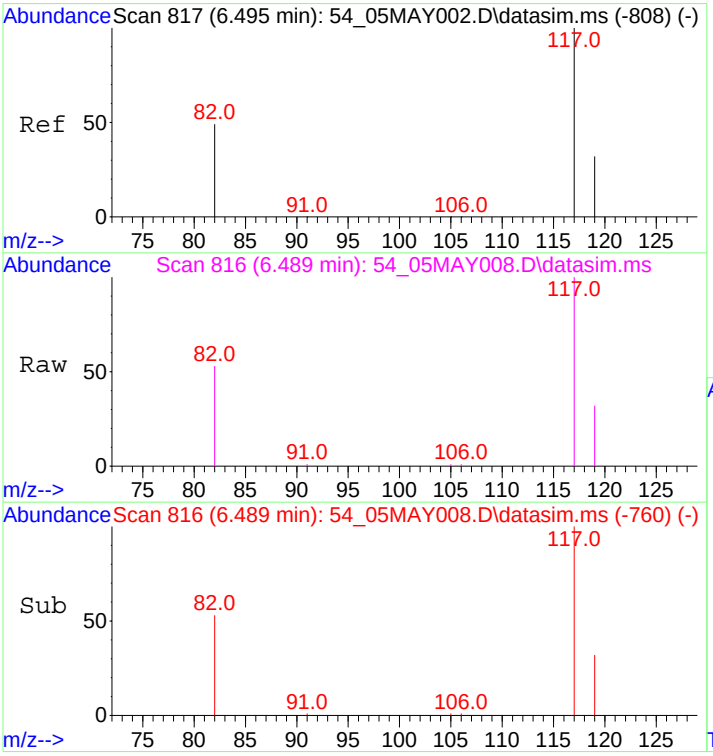


#11
Trichloroethene
Concen: 7.39 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY008.D
Acq: 5 May 2014 10:02 am

Tgt Ion:130 Resp: 1700

Ion	Ratio	Lower	Upper
130	100		
132	98.5	76.9	115.3
95	98.6	76.5	114.7

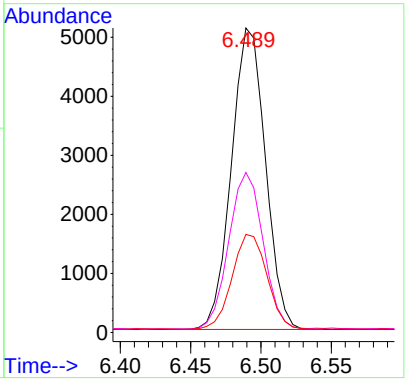


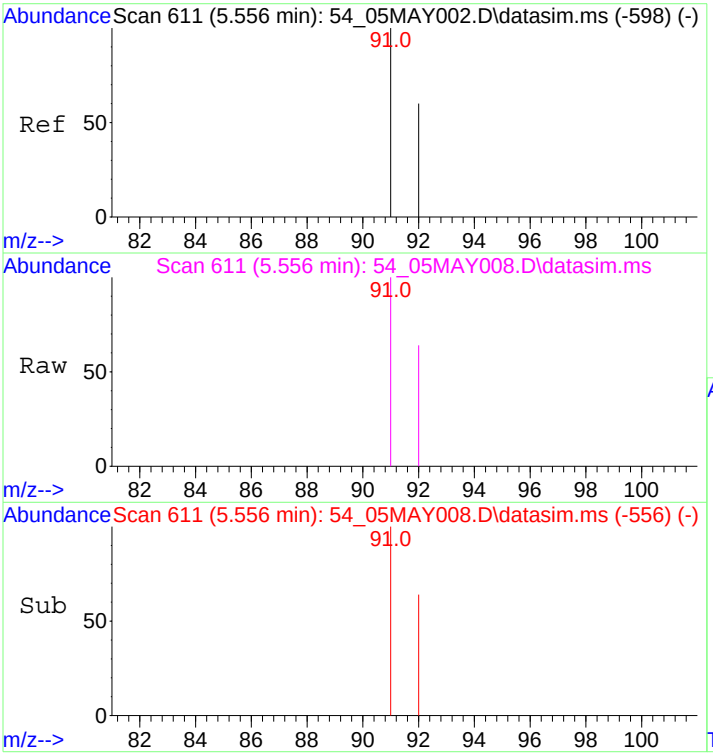


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY008.D
Acq: 5 May 2014 10:02 am

Tgt Ion:117 Resp: 8597

Ion	Ratio	Lower	Upper
117	100		
82	52.3	38.0	57.0
119	32.2	27.0	40.4

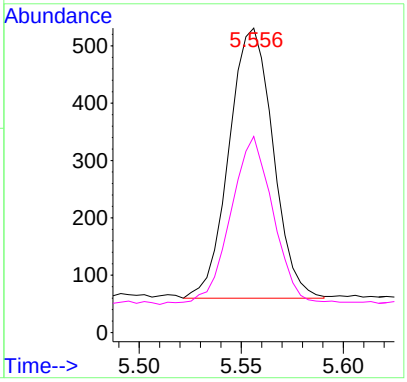


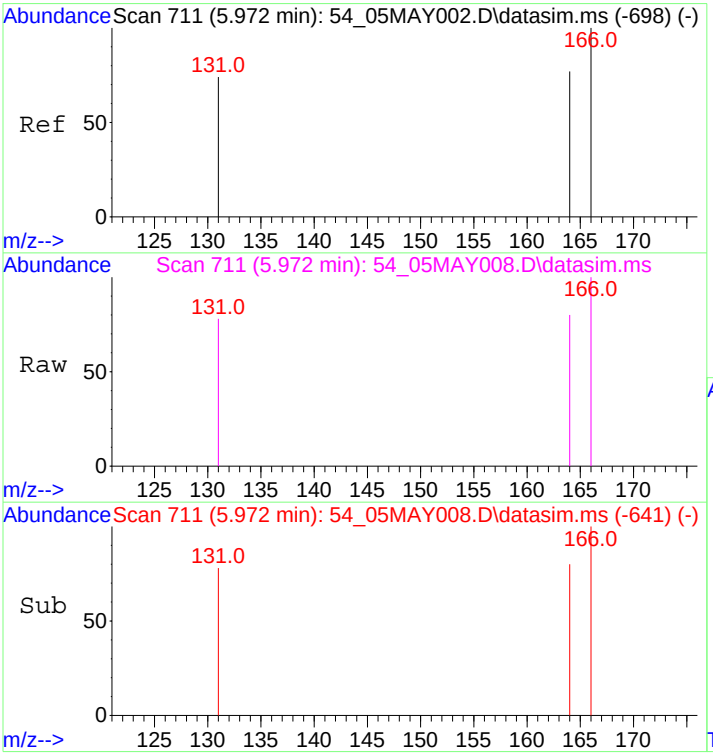


#13
Toluene
Concen: 1.37 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 05MAY008.D
Acq: 5 May 2014 10:02 am

Tgt Ion: 91 Resp: 707

Ion	Ratio	Lower	Upper
91	100		
92	58.1	47.8	71.8

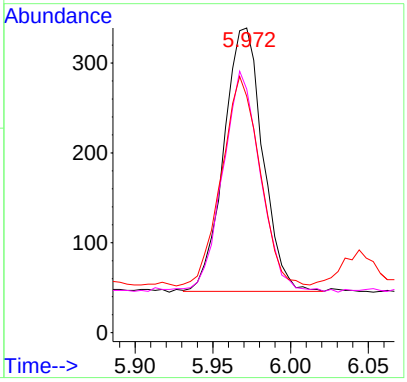


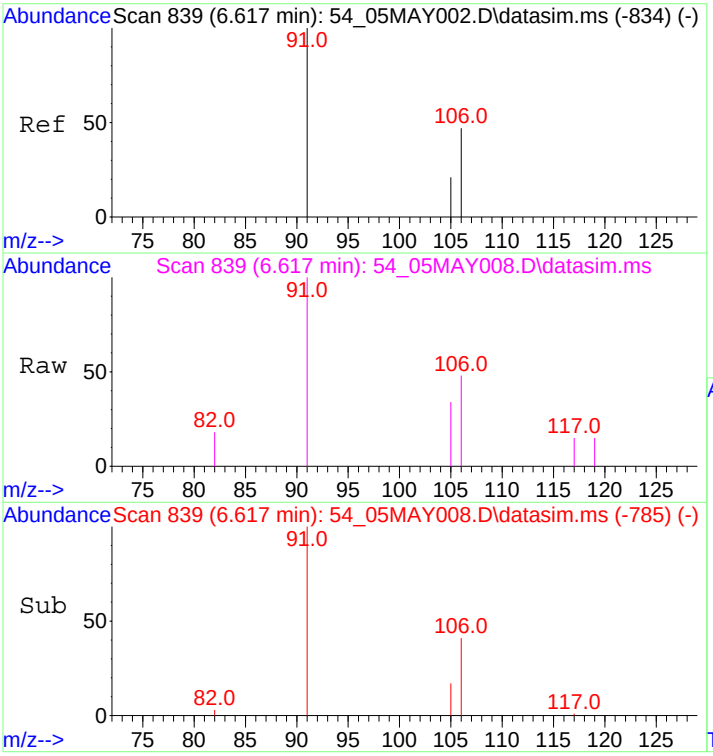


#14
Tetrachloroethene
Concen: 1.73 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_05MAY008.D
Acq: 5 May 2014 10:02 am

Tgt Ion:166 Resp: 509

Ion	Ratio	Lower	Upper
166	100		
164	78.4	62.6	94.0
131	78.4	58.5	87.7

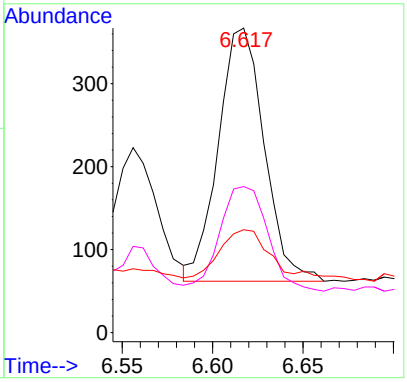




#16
m,p-Xylene
Concen: 1.07 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 05MAY008.D
Acq: 5 May 2014 10:02 am

Tgt Ion: 91 Resp: 539

Ion	Ratio	Lower	Upper
91	100		
106	43.2	43.1	64.7
105	19.3	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY009.D
Acq On : 5 May 2014 10:13 am
Operator : yhl
Sample : 02173 \ F6-009
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:31:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

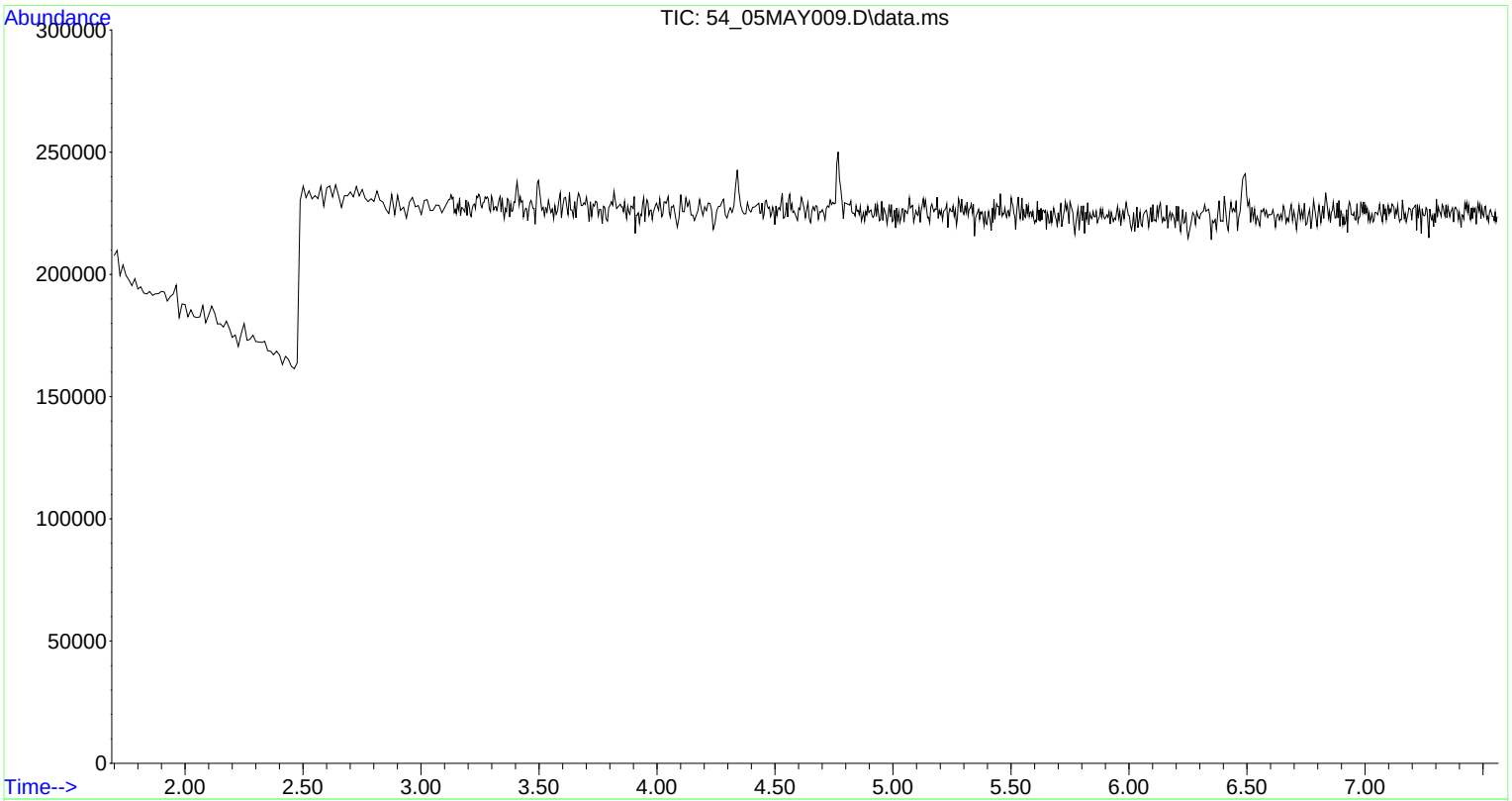
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4533	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11282	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10745	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	564	0.88	ppbv	98
16] m,p-Xylene	6.617	91	562	0.90	ppbv	91

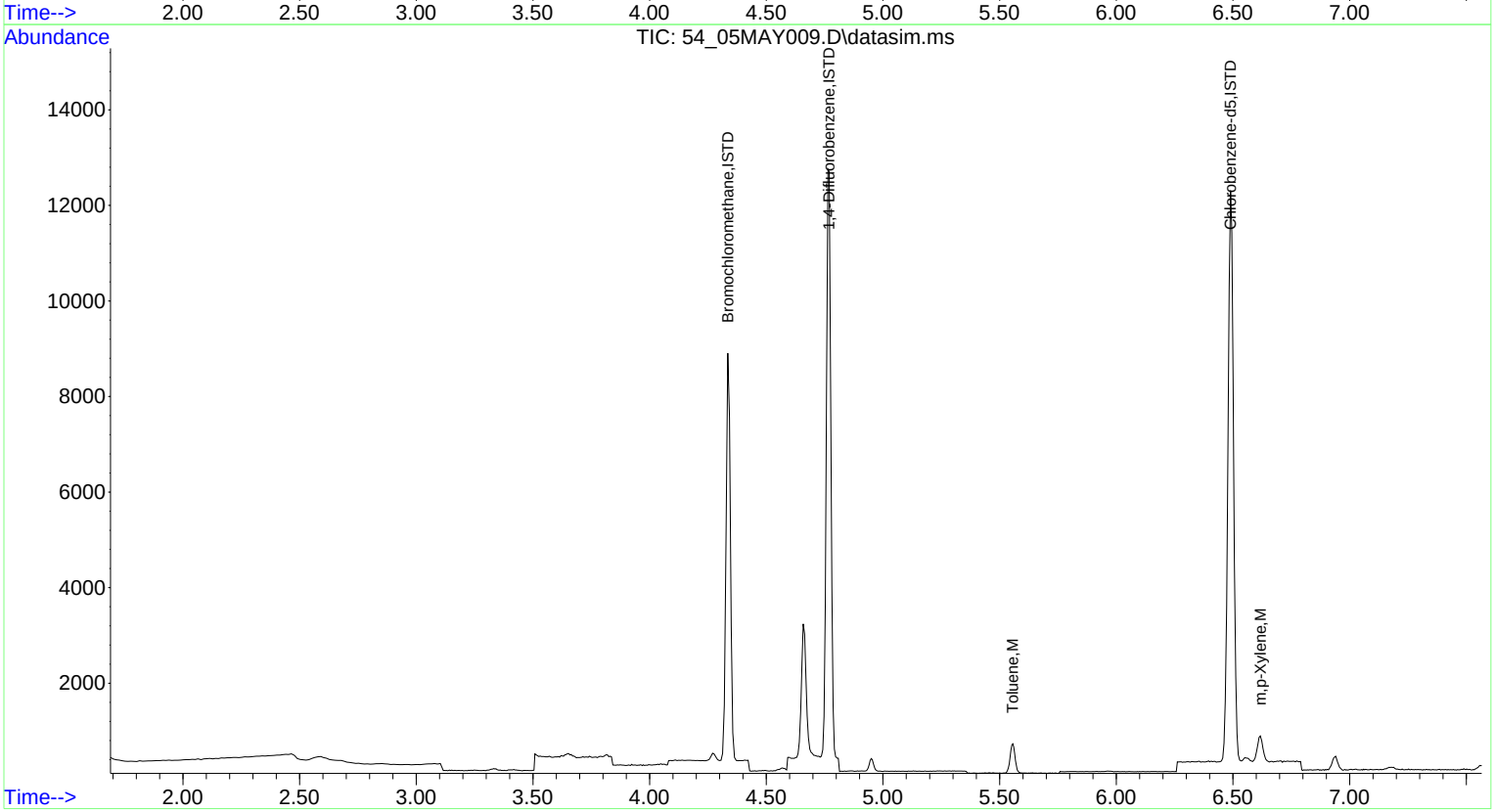
(#) = qualifier out of range (m) = manual integration (+) = signals summed

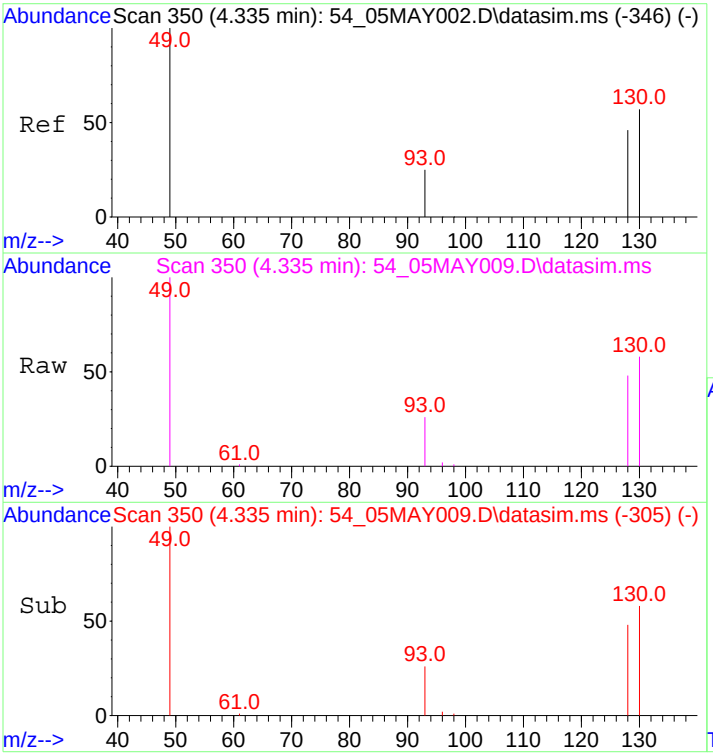
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY009.D
Acq On : 5 May 2014 10:13 am
Operator : yhl
Sample : 02173 \ F6-009
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:31:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



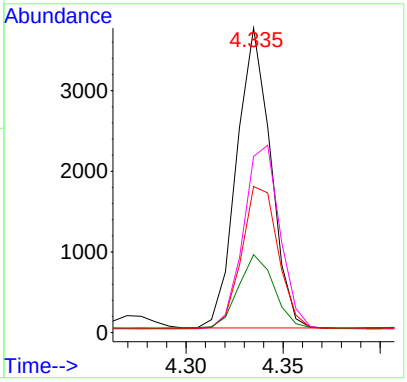


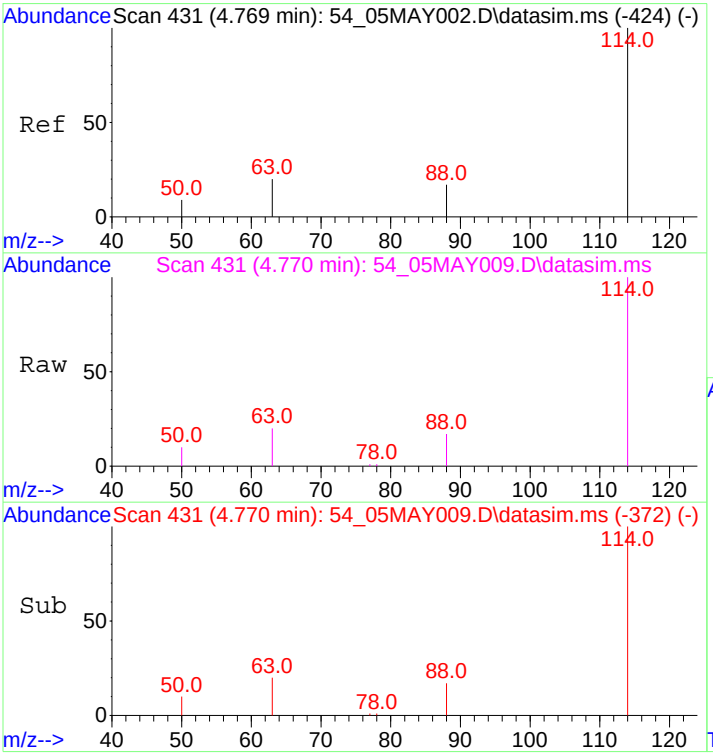


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY009.D
Acq: 5 May 2014 10:13 am

Tgt Ion: 49 Resp: 4533

Ion	Ratio	Lower	Upper
49	100		
130	65.6	87.2	130.8#
128	50.8	68.0	102.0#
93	25.4	29.3	43.9#

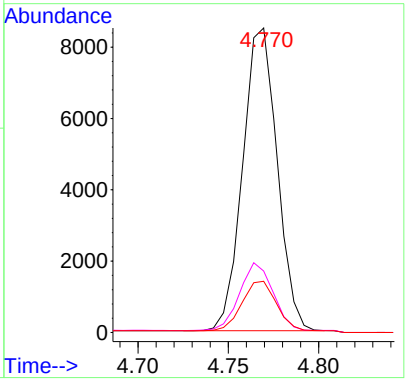


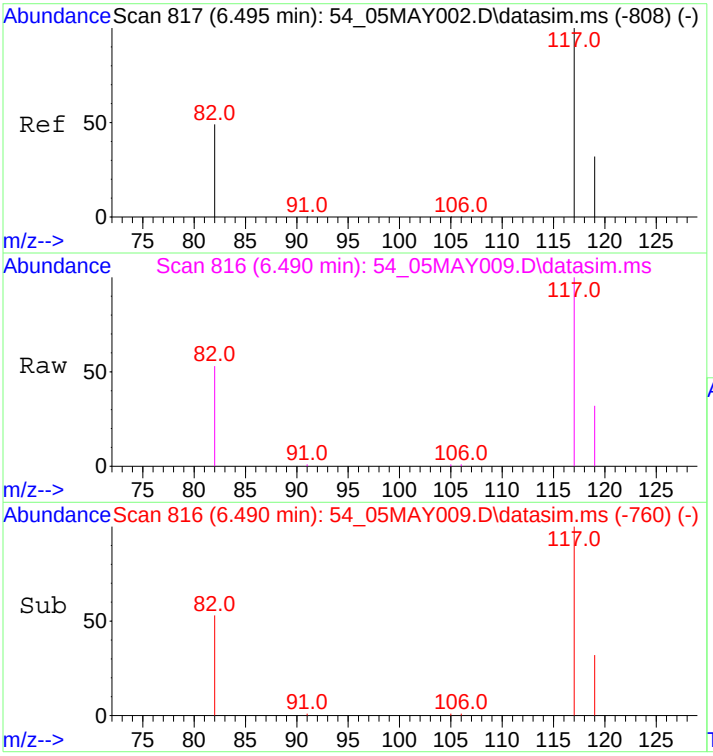


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY009.D
Acq: 5 May 2014 10:13 am

Tgt Ion:114 Resp: 11282

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.3	11.8	17.8

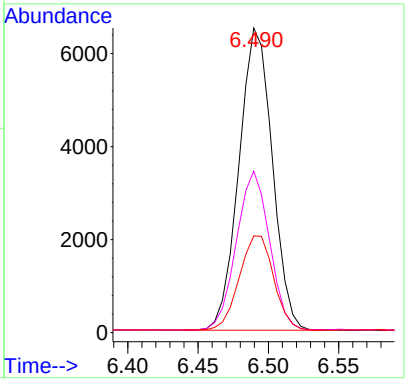


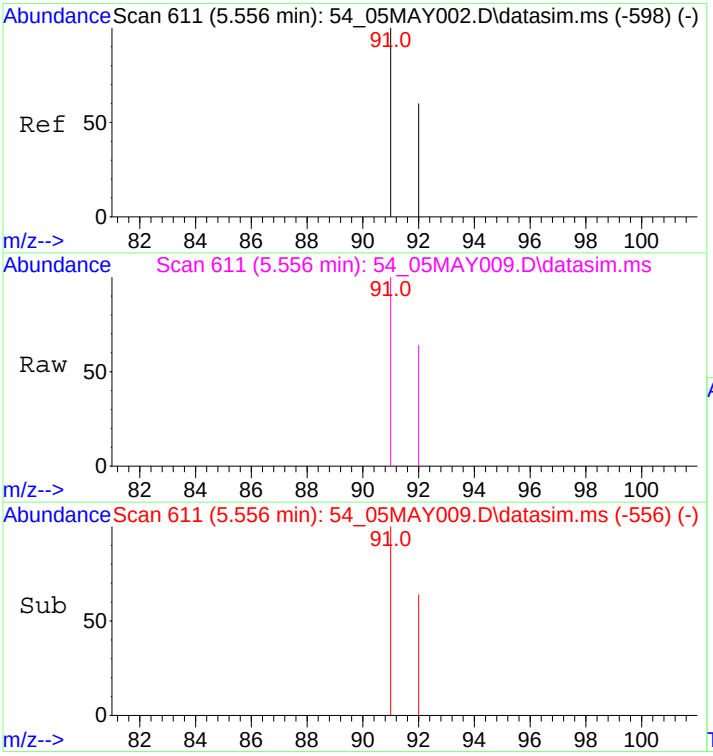


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54 05MAY009.D
Acq: 5 May 2014 10:13 am

Tgt Ion:117 Resp: 10745

Ion	Ratio	Lower	Upper
117	100		
82	52.2	38.0	57.0
119	32.2	27.0	40.4

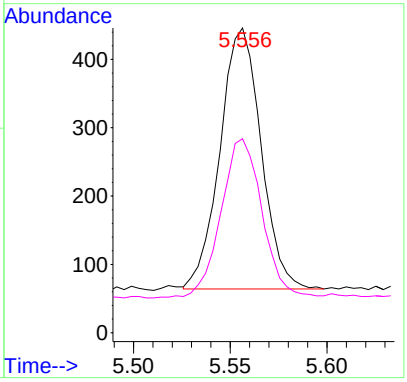


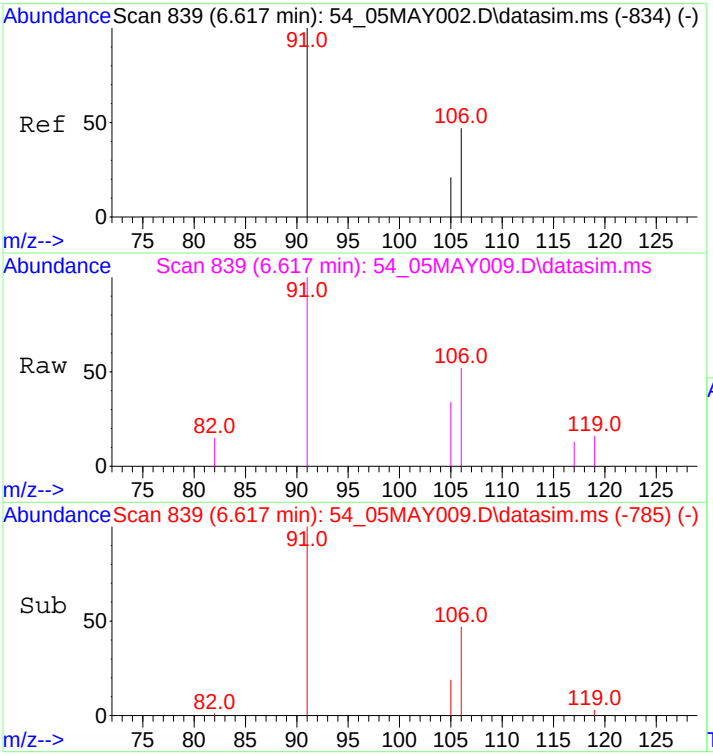


#13
Toluene
Concen: 0.88 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY009.D
Acq: 5 May 2014 10:13 am

Tgt Ion: 91 Resp: 564

Ion	Ratio	Lower	Upper
91	100		
92	61.2	47.8	71.8

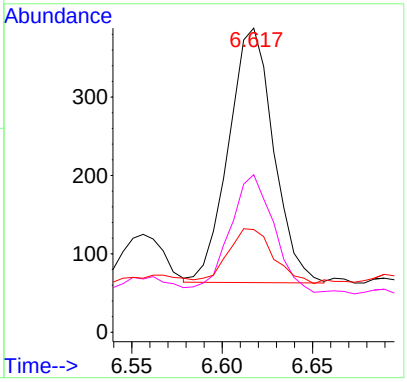




#16
m,p-Xylene
Concen: 0.90 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 05MAY009.D
Acq: 5 May 2014 10:13 am

Tgt Ion: 91 Resp: 562

Ion	Ratio	Lower	Upper
91	100		
106	45.0	43.1	64.7
105	21.9	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY010.D
Acq On : 5 May 2014 10:25 am
Operator : yhl
Sample : 02174 \ F6-007
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:33:06 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4392	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10706	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10108	10.00	ppbv	0.00

System Monitoring Compounds

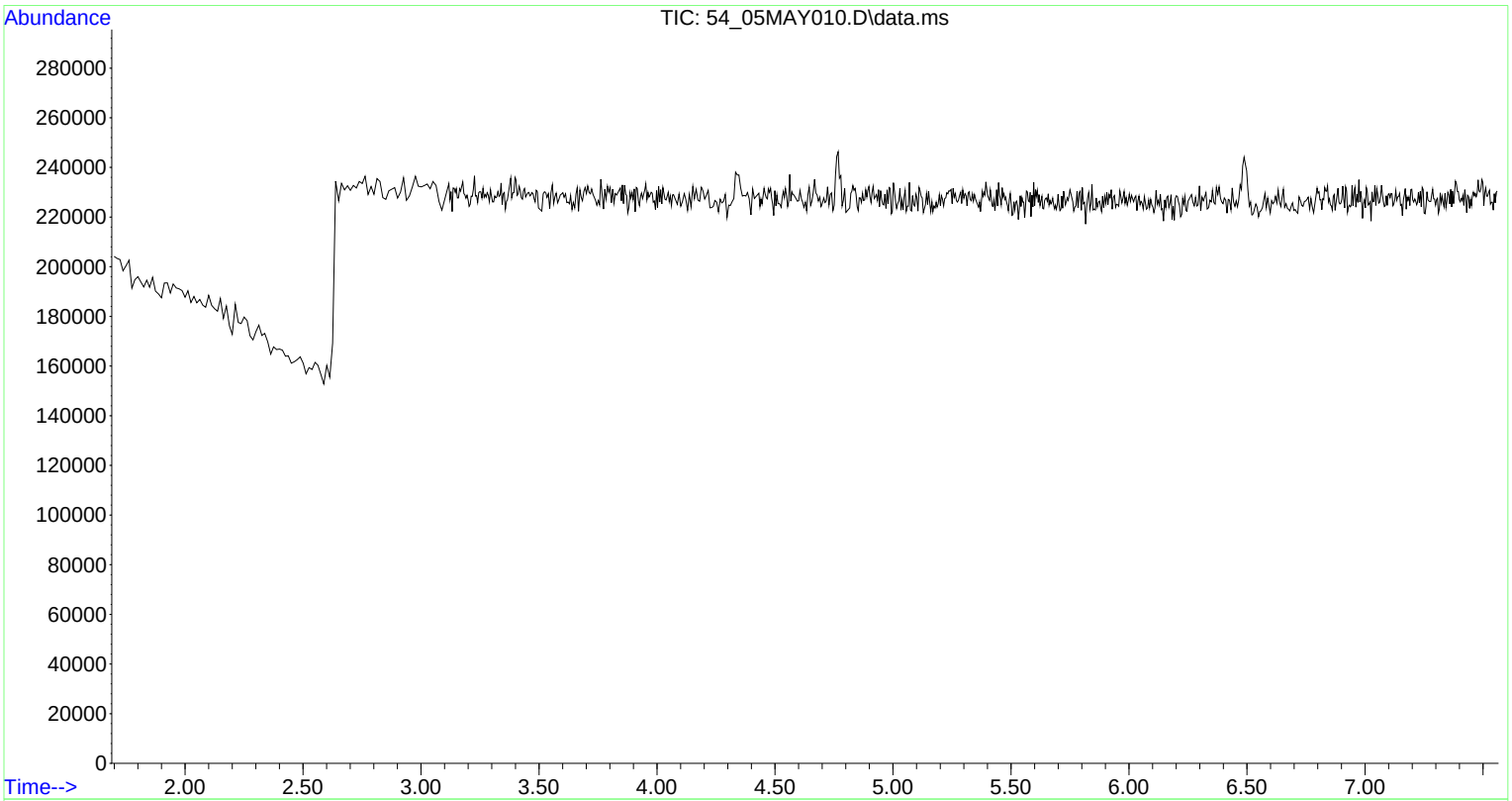
Target Compounds	Qvalue

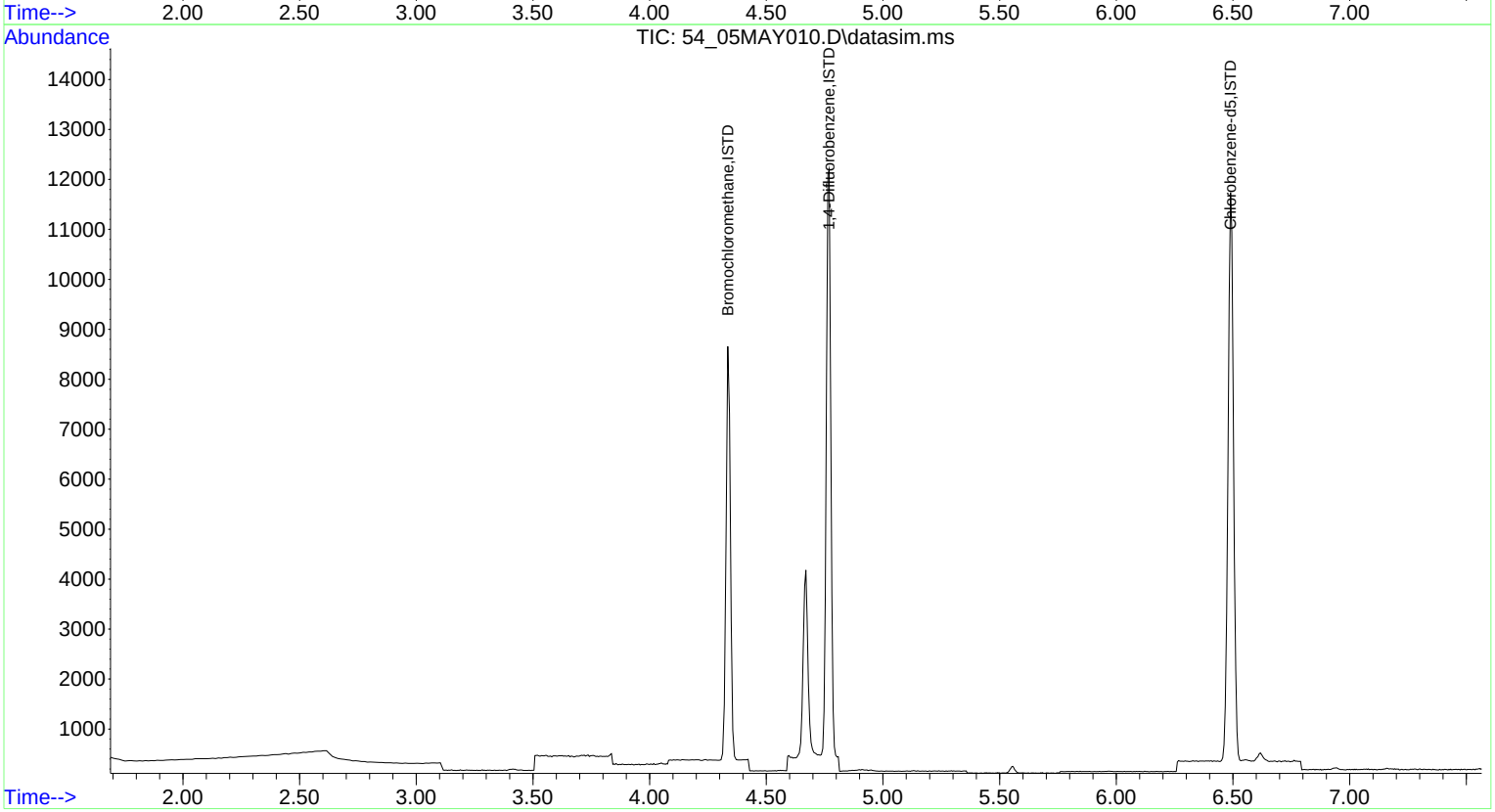
(#) = qualifier out of range (m) = manual integration (+) = signals summed

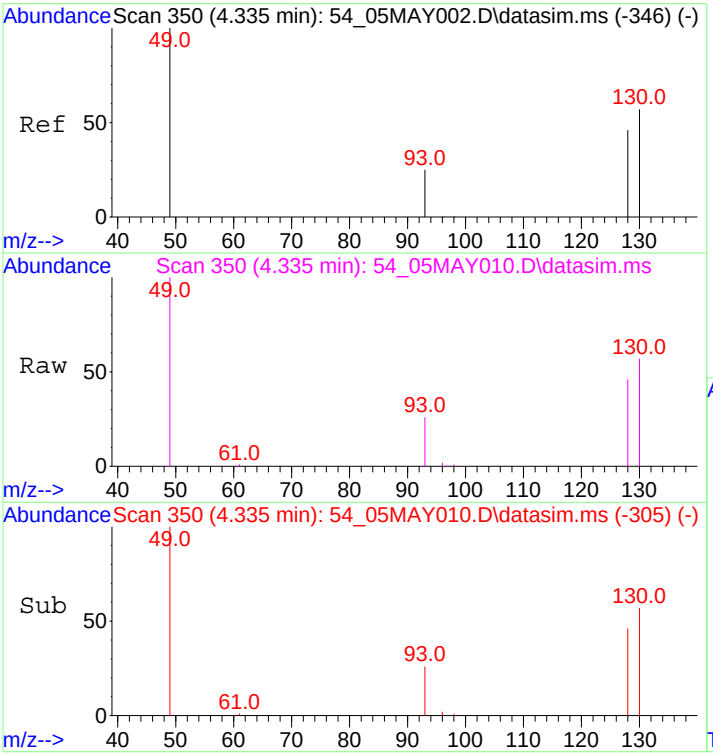
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY010.D
Acq On : 5 May 2014 10:25 am
Operator : yhl
Sample : 02174 \ F6-007
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:33:06 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



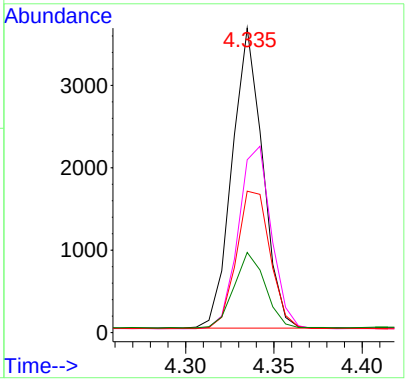


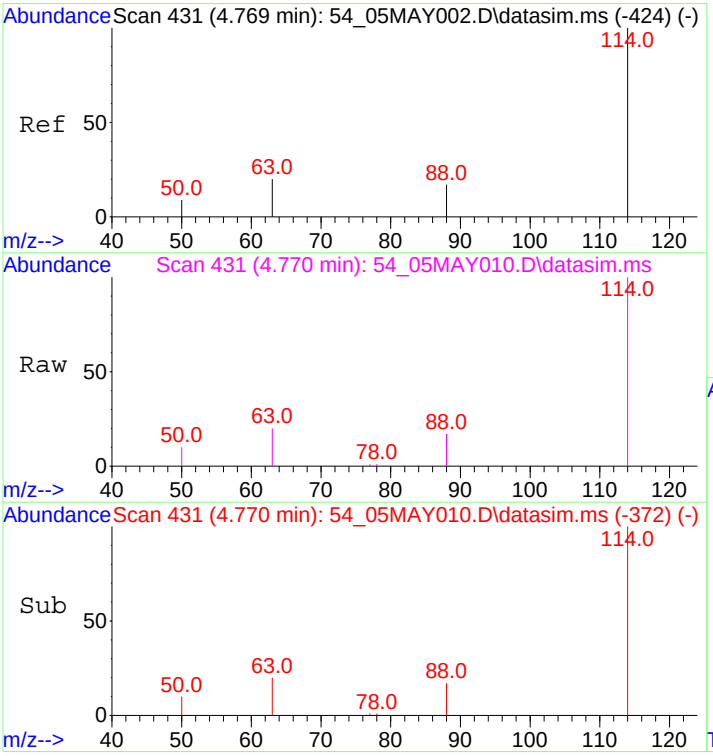


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY010.D
Acq: 5 May 2014 10:25 am

Tgt Ion: 49 Resp: 4392

Ion	Ratio	Lower	Upper
49	100		
130	65.5	87.2	130.8#
128	50.5	68.0	102.0#
93	25.5	29.3	43.9#

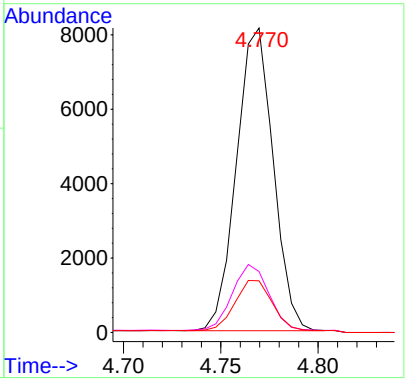


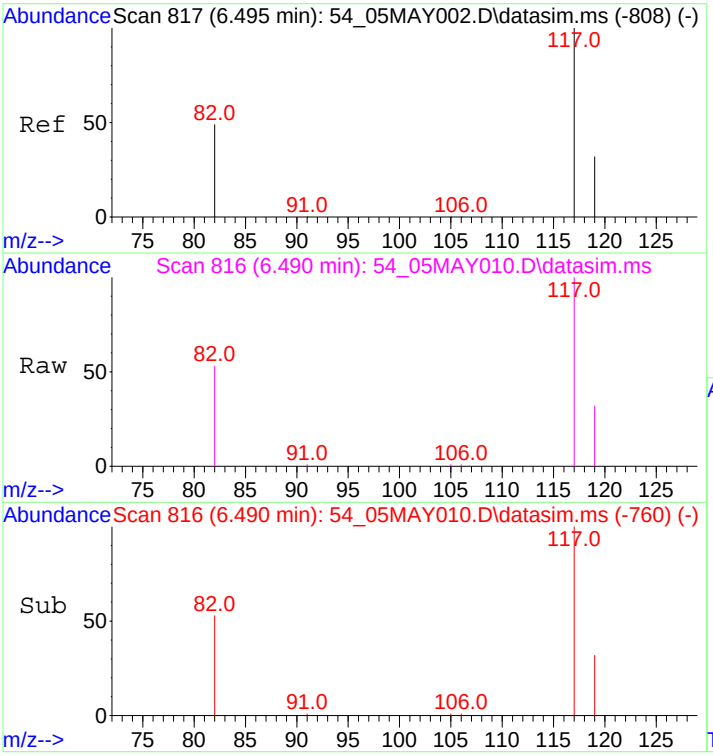


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY010.D
Acq: 5 May 2014 10:25 am

Tgt Ion:114 Resp: 10706

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.8	11.8	17.8

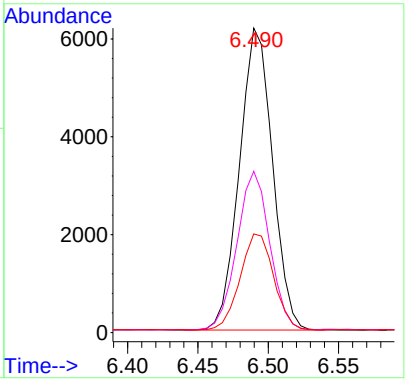




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54 05MAY010.D
Acq: 5 May 2014 10:25 am

Tgt Ion:117 Resp: 10108

Ion	Ratio	Lower	Upper
117	100		
82	52.0	38.0	57.0
119	32.3	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY011.D
Acq On : 5 May 2014 10:36 am
Operator : yhl
Sample : 02175 \ F6-005
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:43:32 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

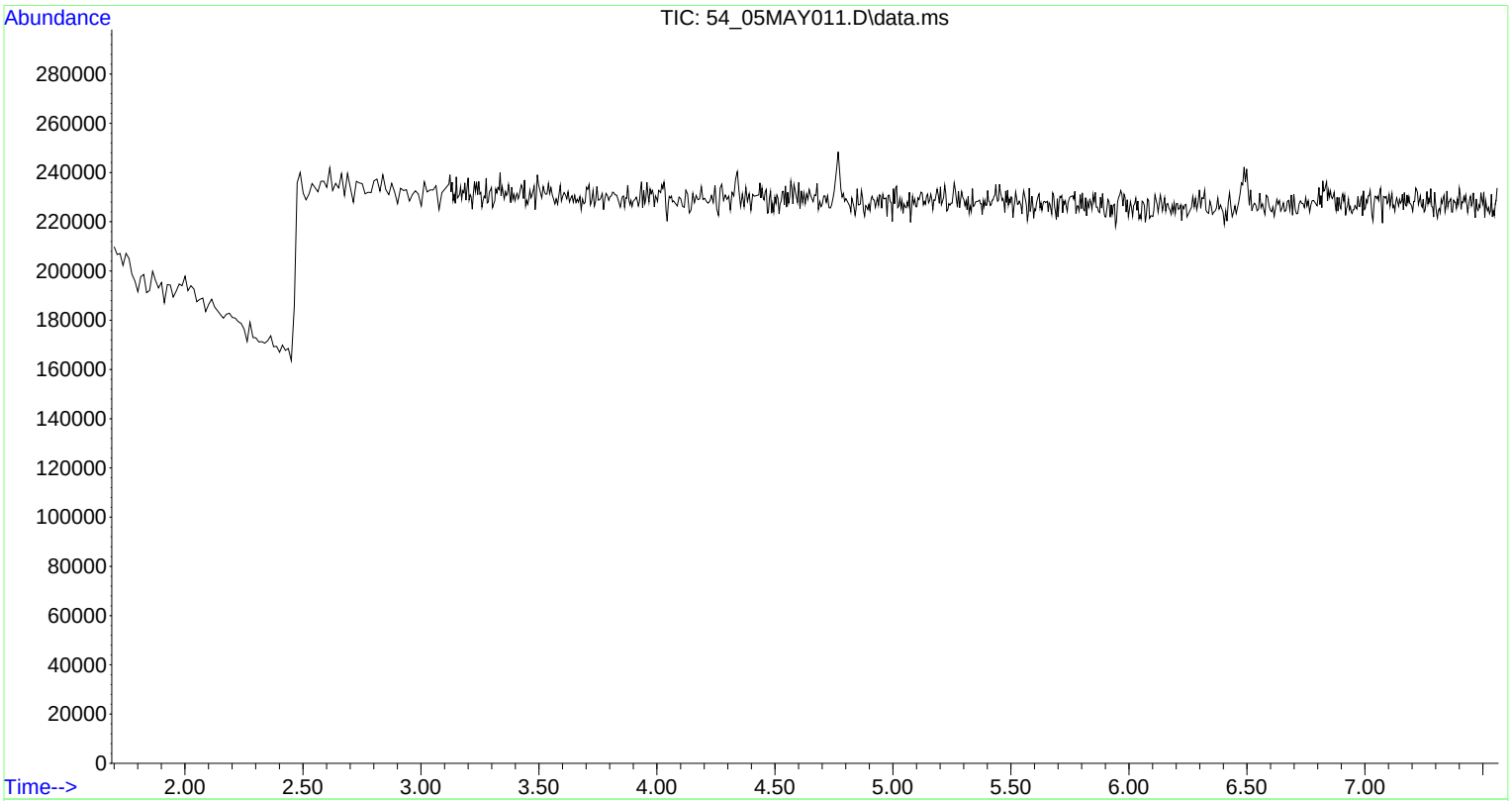
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4395	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10665	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	9949	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.557	91	929	1.56	ppbv	96
16] m,p-Xylene	6.618	91	634	1.09	ppbv	92

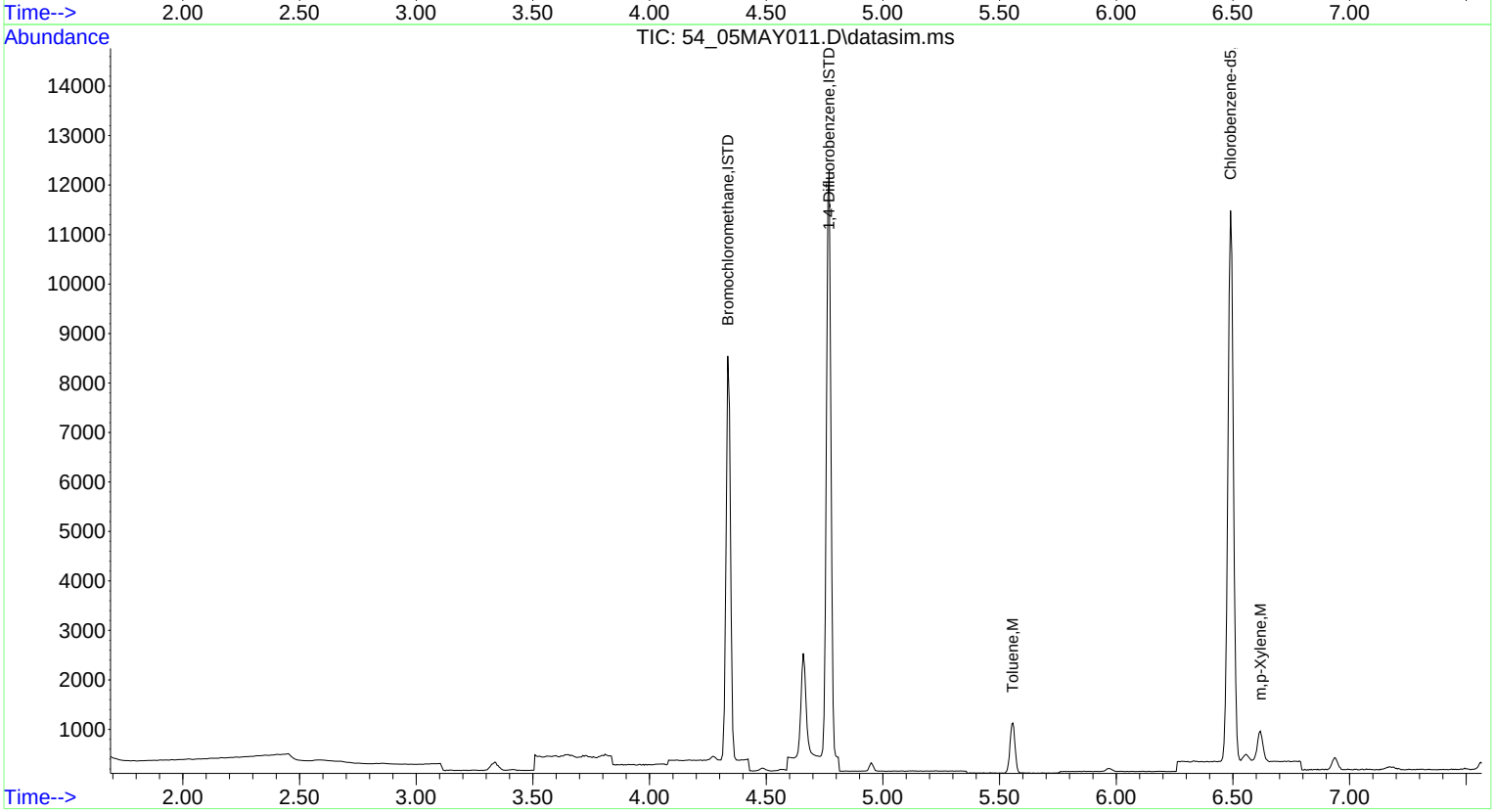
(#) = qualifier out of range (m) = manual integration (+) = signals summed

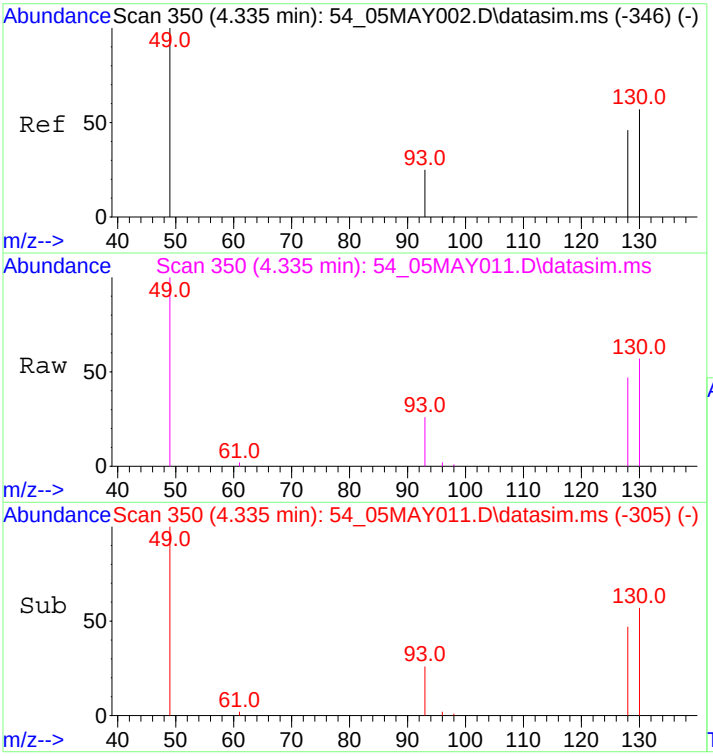
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY011.D
Acq On : 5 May 2014 10:36 am
Operator : yhl
Sample : 02175 \ F6-005
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:43:32 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



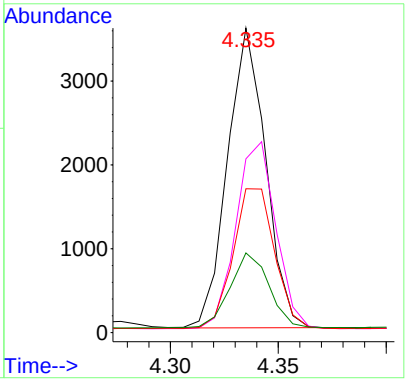


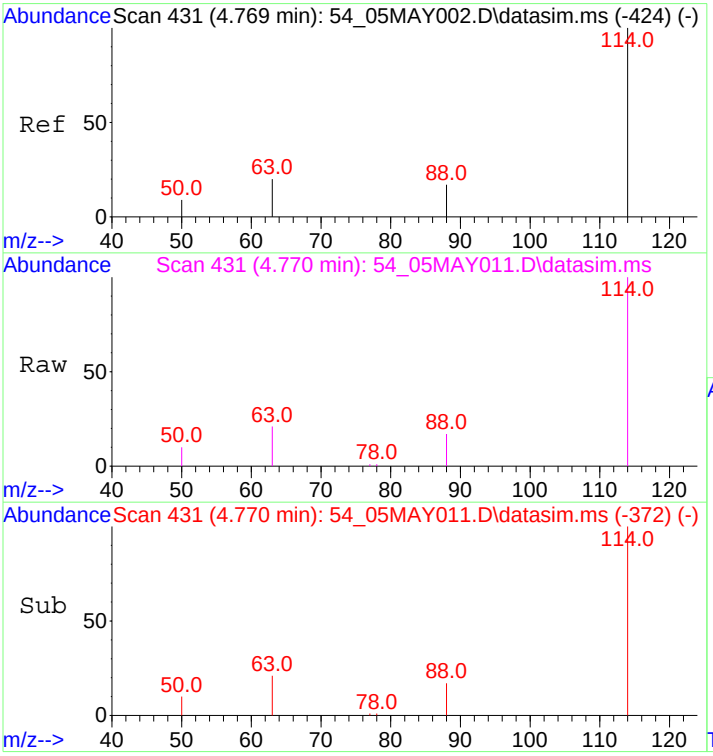


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY011.D
Acq: 5 May 2014 10:36 am

Tgt Ion: 49 Resp: 4395

Ion	Ratio	Lower	Upper
49	100		
130	65.3	87.2	130.8#
128	50.9	68.0	102.0#
93	25.4	29.3	43.9#

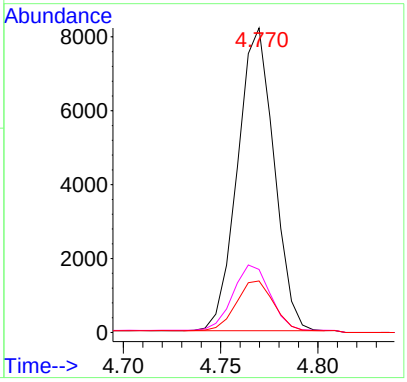


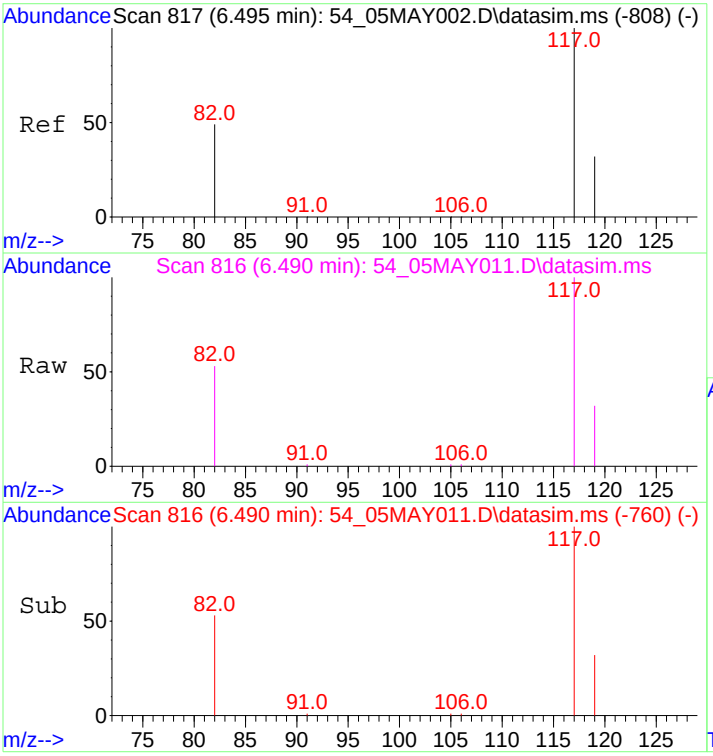


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY011.D
Acq: 5 May 2014 10:36 am

Tgt Ion:114 Resp: 10665

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.8	11.8	17.8

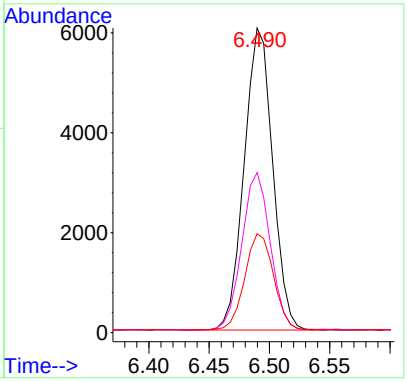


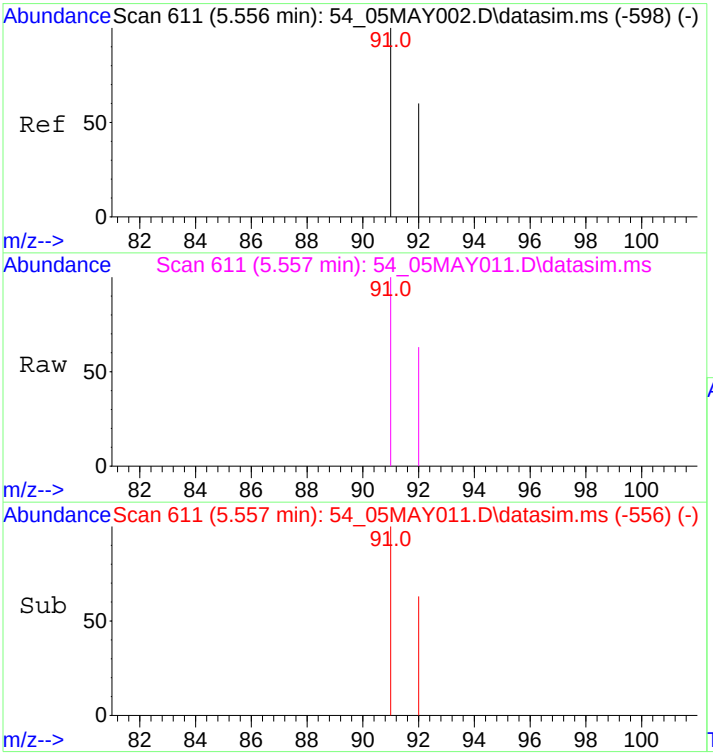


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54 05MAY011.D
Acq: 5 May 2014 10:36 am

Tgt Ion:117 Resp: 9949

Ion	Ratio	Lower	Upper
117	100		
82	51.8	38.0	57.0
119	32.2	27.0	40.4

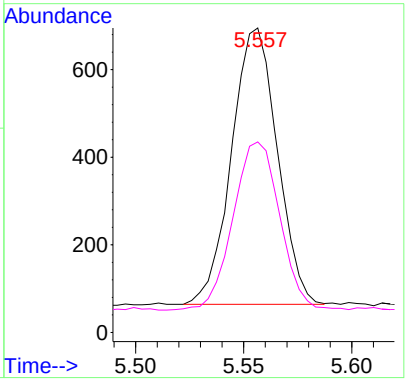


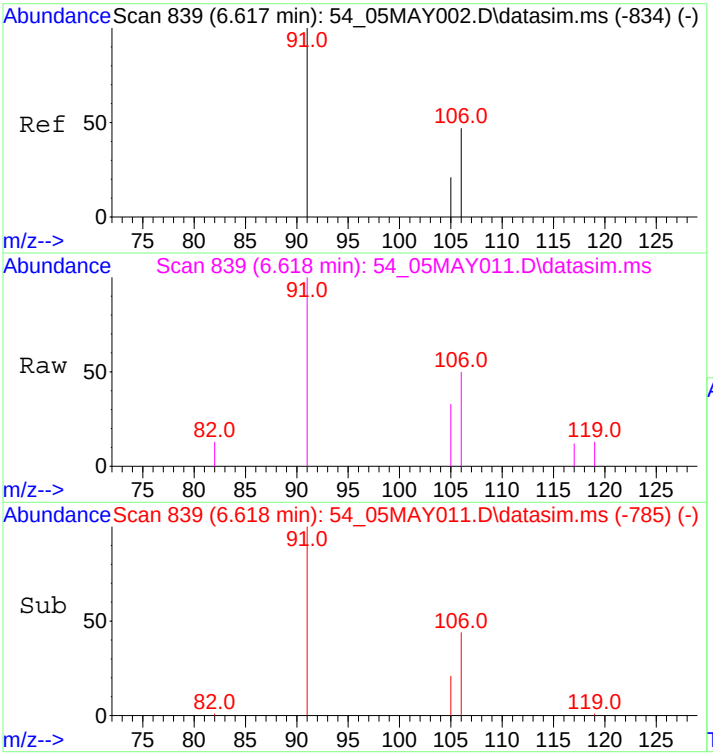


#13
Toluene
Concen: 1.56 ppbv
RT: 5.557 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY011.D
Acq: 5 May 2014 10:36 am

Tgt Ion: 91 Resp: 929

Ion	Ratio	Lower	Upper
91	100		
92	62.5	47.8	71.8

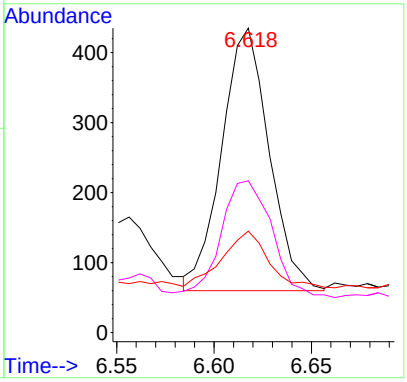




#16
m,p-Xylene
Concen: 1.09 ppbv
RT: 6.618 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 05MAY011.D
Acq: 5 May 2014 10:36 am

Tgt Ion: 91 Resp: 634

Ion	Ratio	Lower	Upper
91	100		
106	48.3	43.1	64.7
105	19.2	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY012.D
Acq On : 5 May 2014 10:48 am
Operator : yhl
Sample : 02176 \ F6-003
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:56:03 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

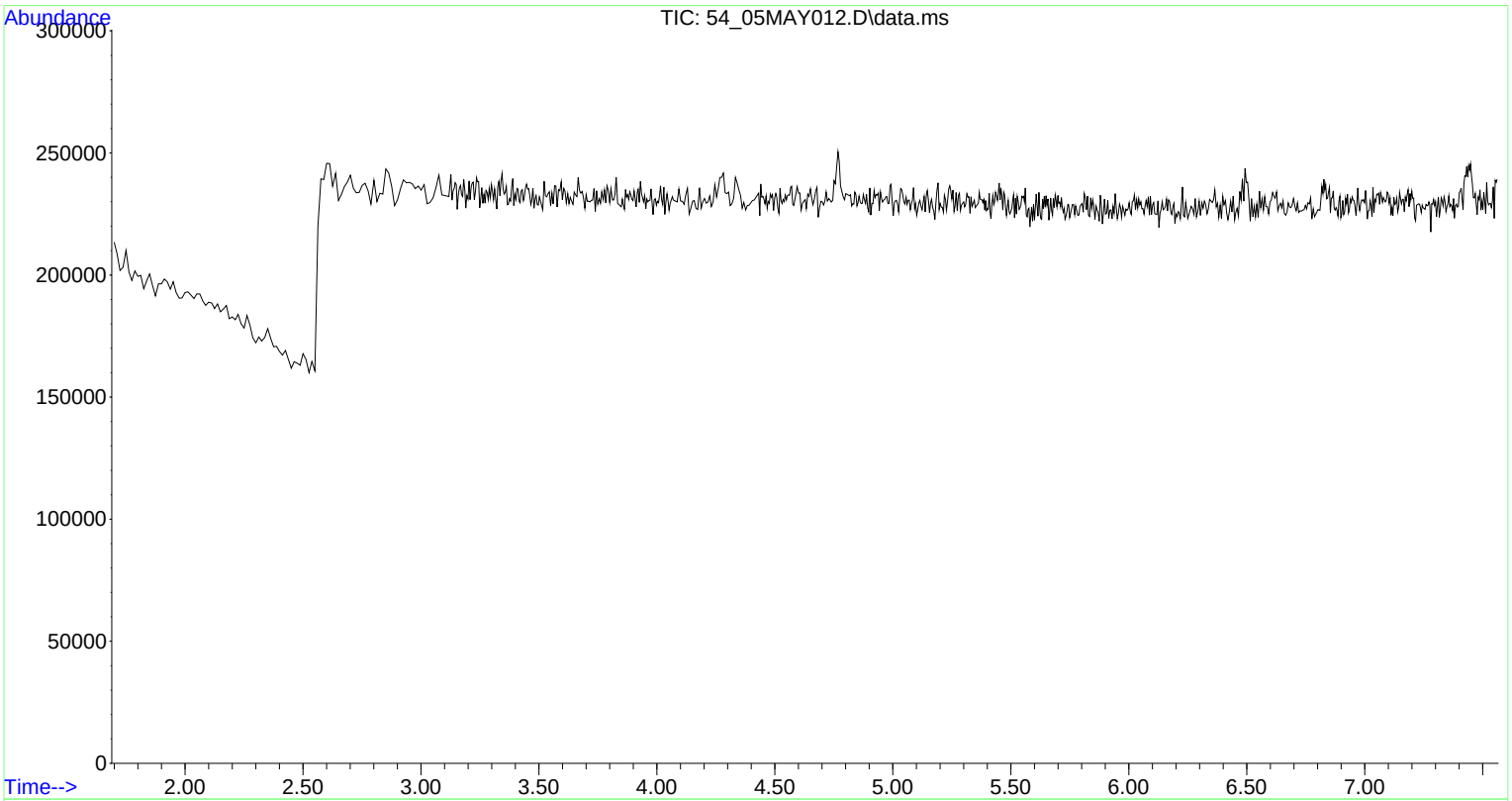
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4272	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10584	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9990	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.949	130	183	0.70	ppbv	# 63
13] Toluene	5.556	91	2986	4.99	ppbv	99
16] m,p-Xylene	6.617	91	1070	1.83	ppbv	89
17] o-Xylene	6.937	91	600	1.01	ppbv	96

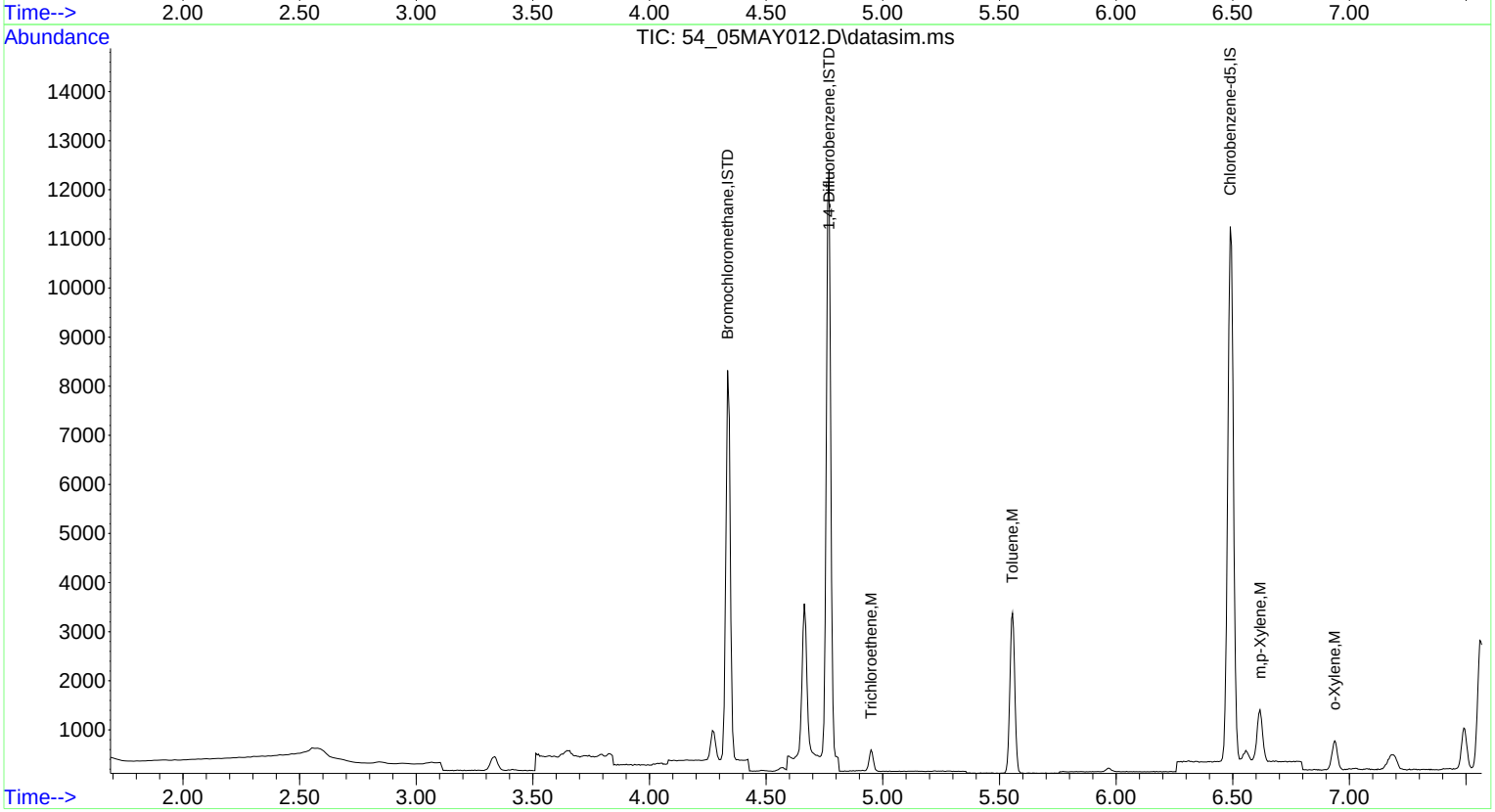
(#) = qualifier out of range (m) = manual integration (+) = signals summed

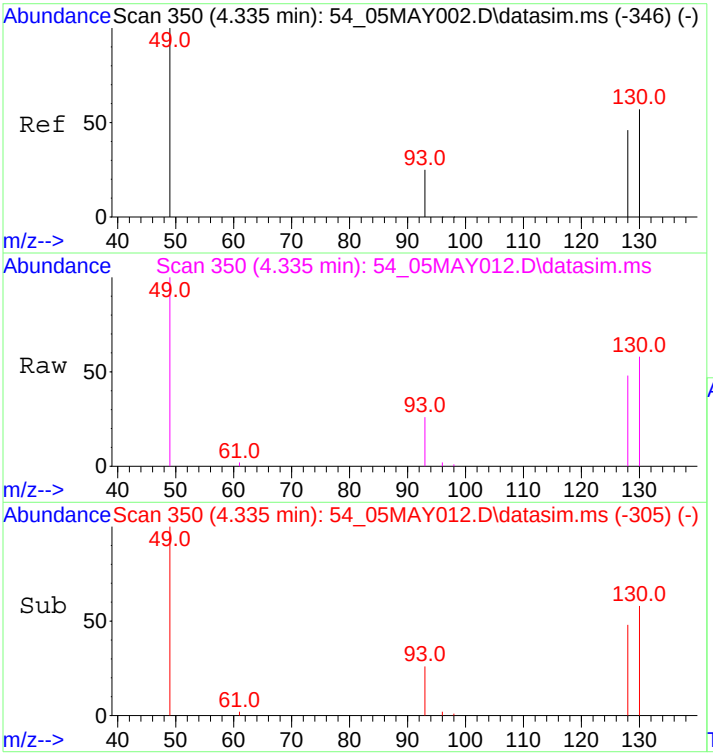
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY012.D
Acq On : 5 May 2014 10:48 am
Operator : yhl
Sample : 02176 \ F6-003
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 10:56:03 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



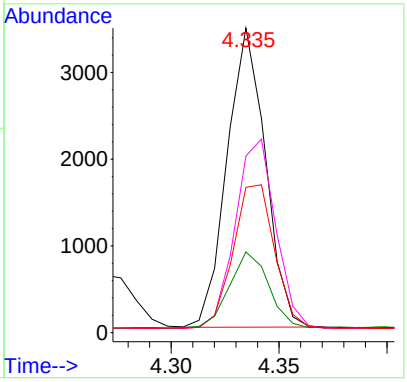


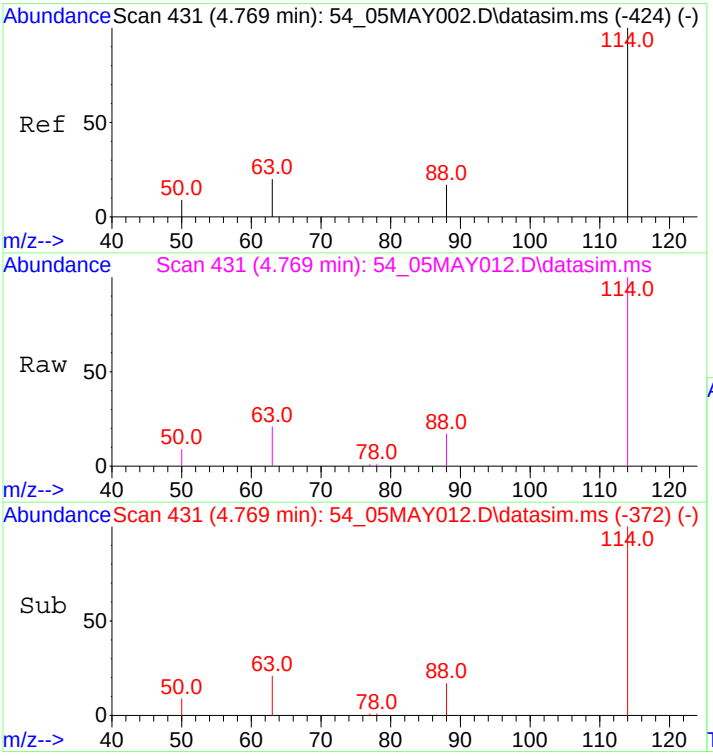


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY012.D
Acq: 5 May 2014 10:48 am

Tgt Ion: 49 Resp: 4272

Ion	Ratio	Lower	Upper
49	100		
130	66.6	87.2	130.8#
128	52.2	68.0	102.0#
93	25.7	29.3	43.9#

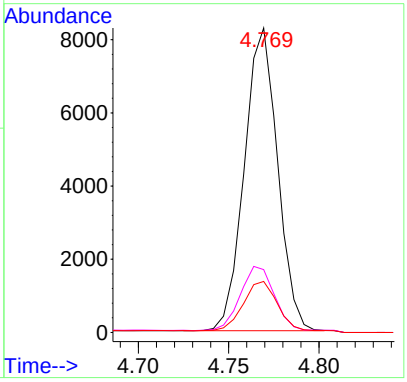


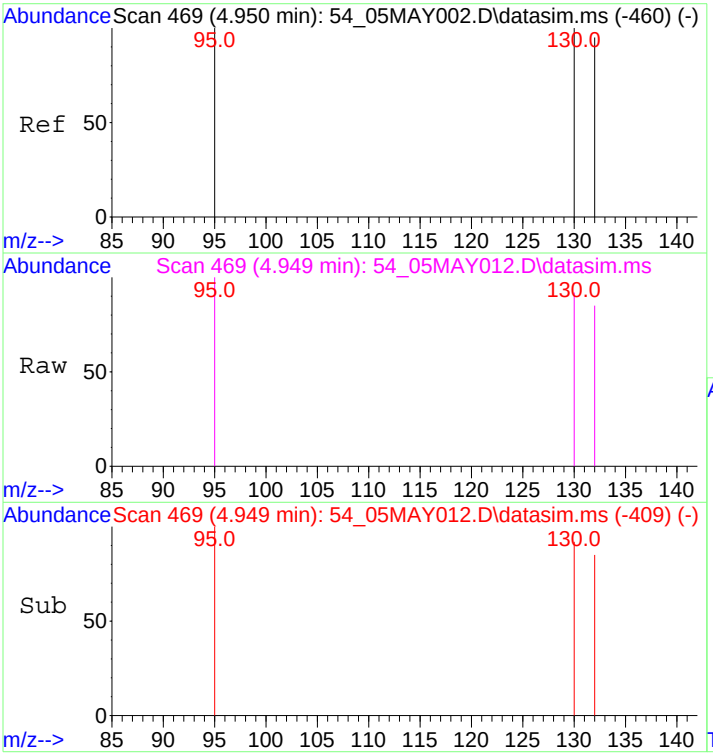


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_05MAY012.D
Acq: 5 May 2014 10:48 am

Tgt Ion:114 Resp: 10584

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.5	11.8	17.8

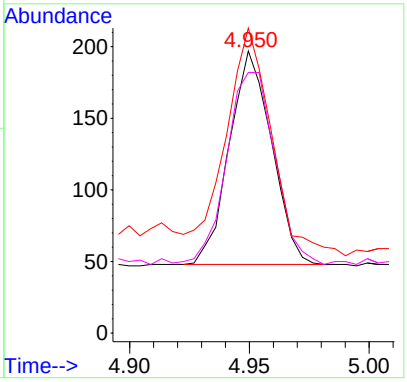


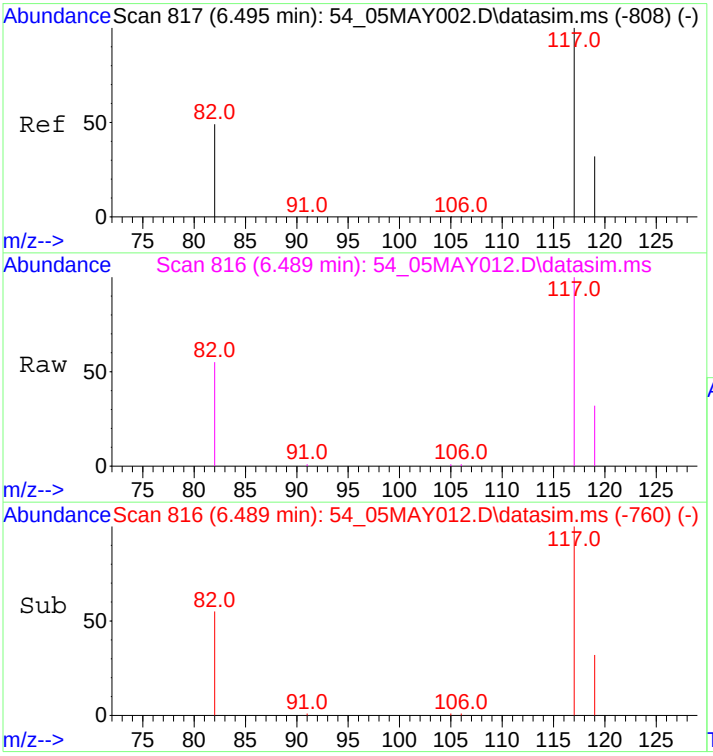


#11
Trichloroethene
Concen: 0.70 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY012.D
Acq: 5 May 2014 10:48 am

Tgt Ion:130 Resp: 183

Ion	Ratio	Lower	Upper
130	100		
132	121.9	76.9	115.3#
95	142.1	76.5	114.7#

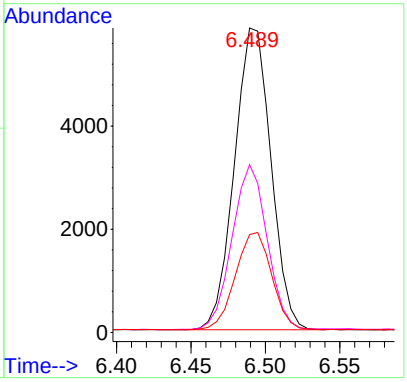


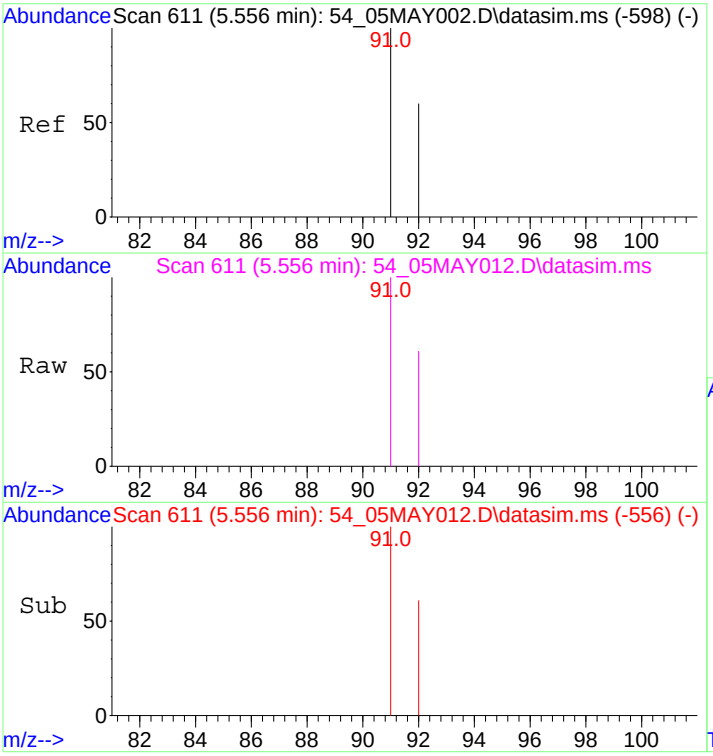


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY012.D
Acq: 5 May 2014 10:48 am

Tgt Ion:117 Resp: 9990

Ion	Ratio	Lower	Upper
117	100		
82	52.0	38.0	57.0
119	32.2	27.0	40.4

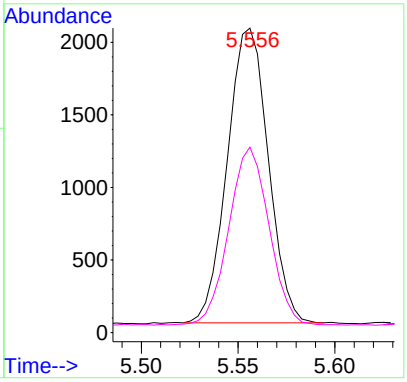


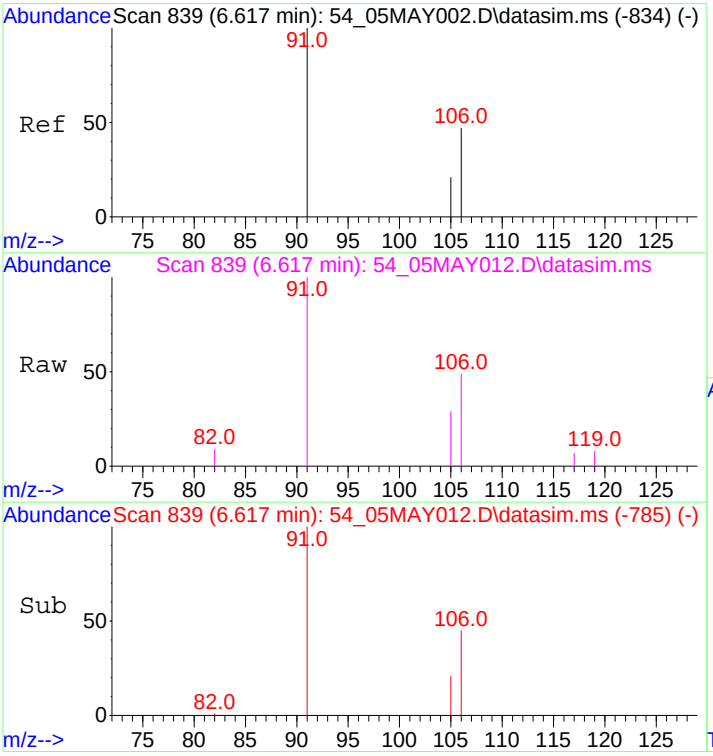


#13
Toluene
Concen: 4.99 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 05MAY012.D
Acq: 5 May 2014 10:48 am

Tgt Ion: 91 Resp: 2986

Ion	Ratio	Lower	Upper
91	100		
92	59.1	47.8	71.8

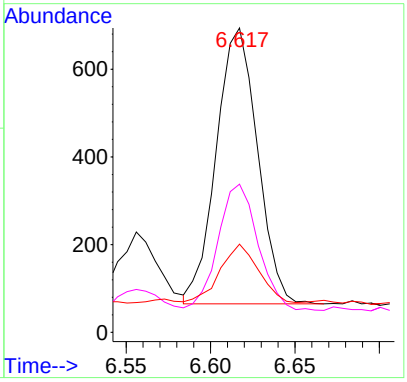


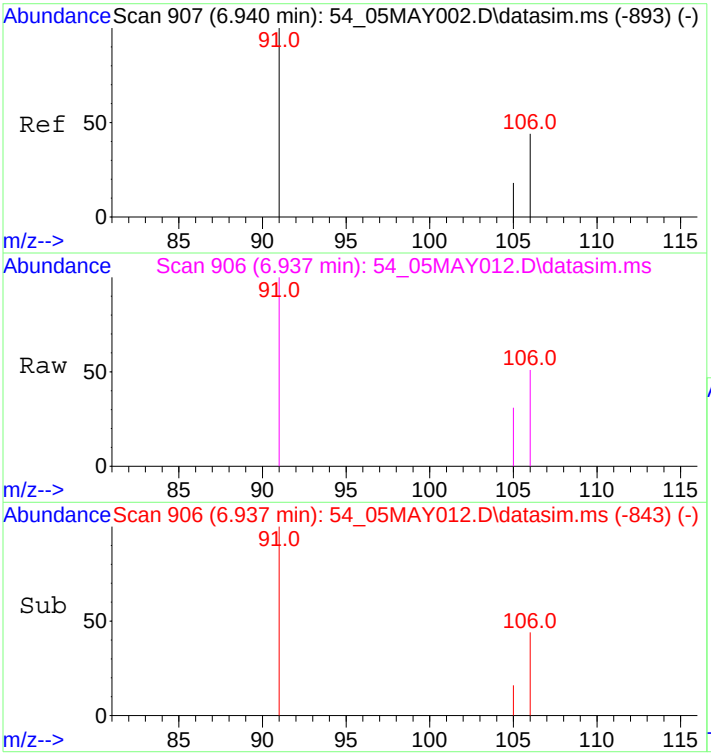


#16
m,p-Xylene
Concen: 1.83 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_05MAY012.D
Acq: 5 May 2014 10:48 am

Tgt Ion: 91 Resp: 1070

Ion	Ratio	Lower	Upper
91	100		
106	44.4	43.1	64.7
105	19.6	18.3	27.5

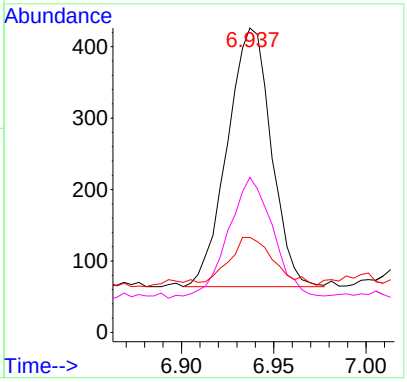




#17
o-Xylene
Concen: 1.01 ppbv
RT: 6.937 min Scan# 906
Delta R.T. -0.003 min
Lab File: 54 05MAY012.D
Acq: 5 May 2014 10:48 am

Tgt Ion: 91 Resp: 600

Ion	Ratio	Lower	Upper
91	100		
106	48.0	40.1	60.1
105	16.0	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY013.D
Acq On : 5 May 2014 10:59 am
Operator : yhl
Sample : 02177 \ F6-001
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:06:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

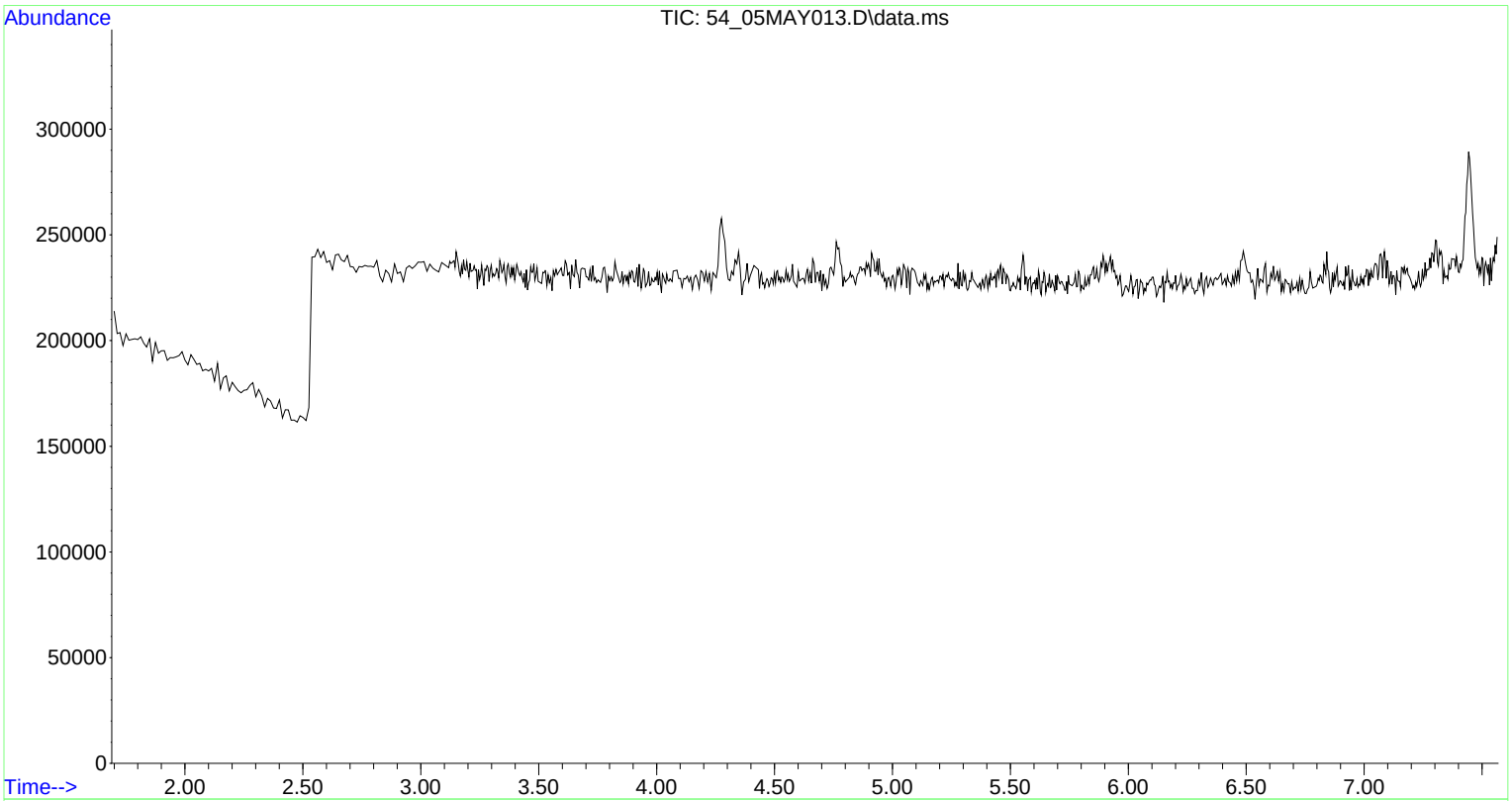
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4223	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10279	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9643	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
13] Toluene	5.556	91	6471	11.19 ppbv	100
15] Ethyl Benzene	6.556	91	622	0.85 ppbv	95
16] m,p-Xylene	6.617	91	1755	3.11 ppbv	88
17] o-Xylene	6.936	91	1056	1.85 ppbv	91

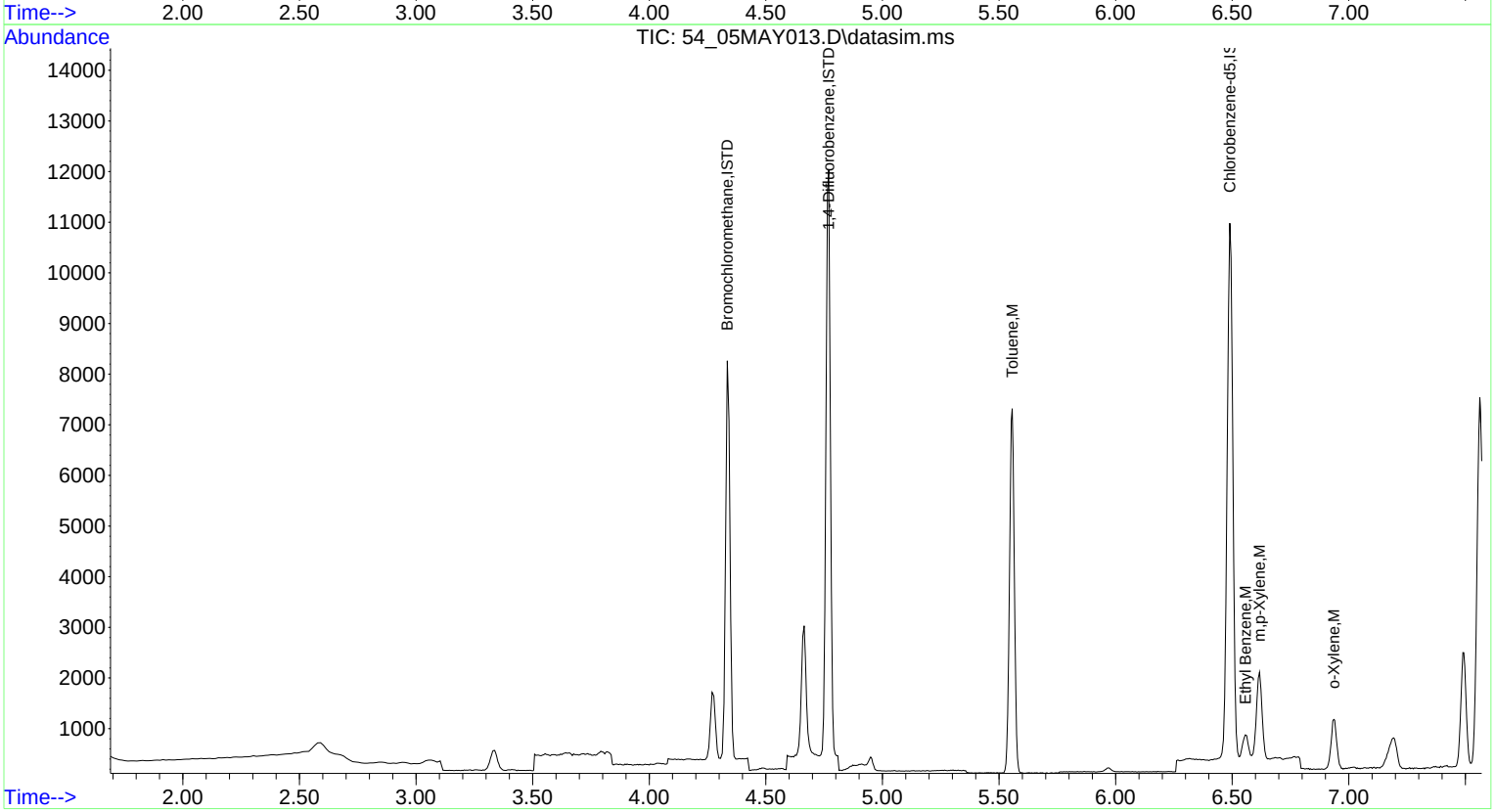
(#) = qualifier out of range (m) = manual integration (+) = signals summed

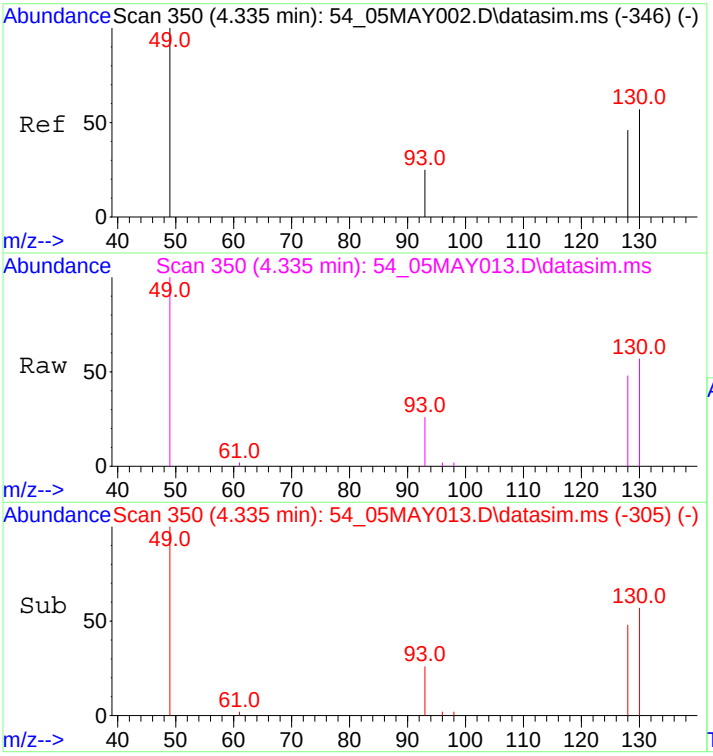
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY013.D
Acq On : 5 May 2014 10:59 am
Operator : yhl
Sample : 02177 \ F6-001
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:06:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



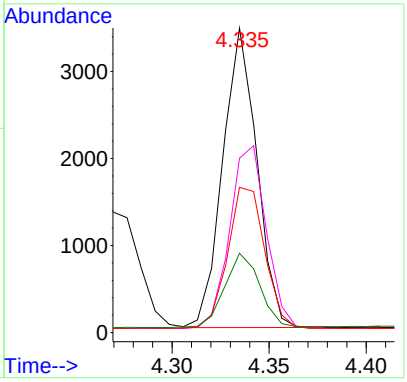


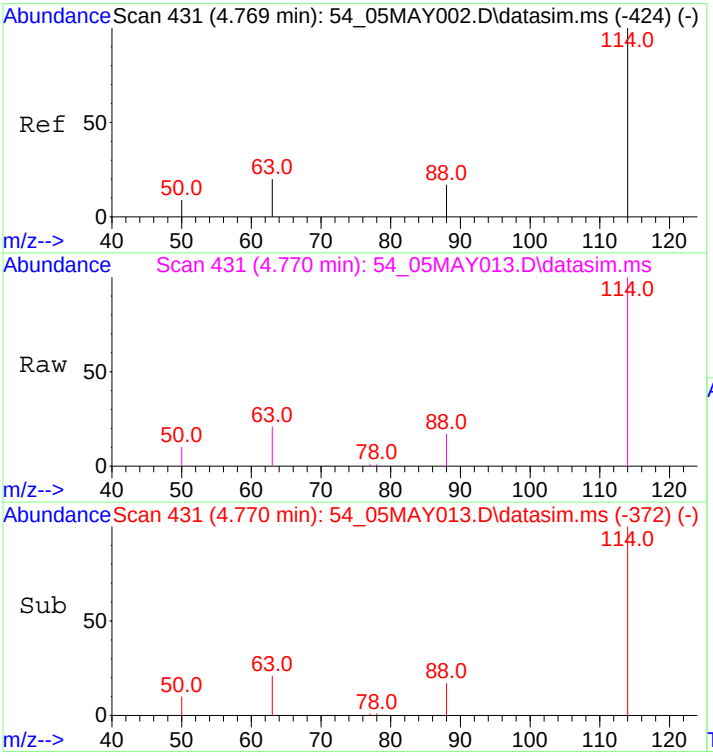


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY013.D
Acq: 5 May 2014 10:59 am

Tgt Ion: 49 Resp: 4223

Ion	Ratio	Lower	Upper
49	100		
130	65.3	87.2	130.8#
128	50.9	68.0	102.0#
93	25.0	29.3	43.9#

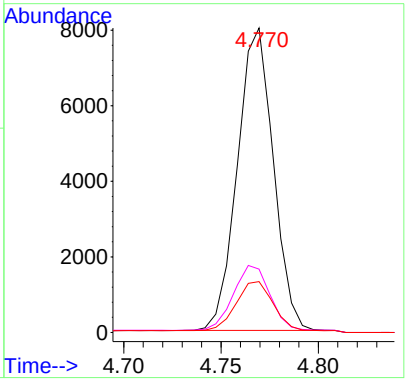


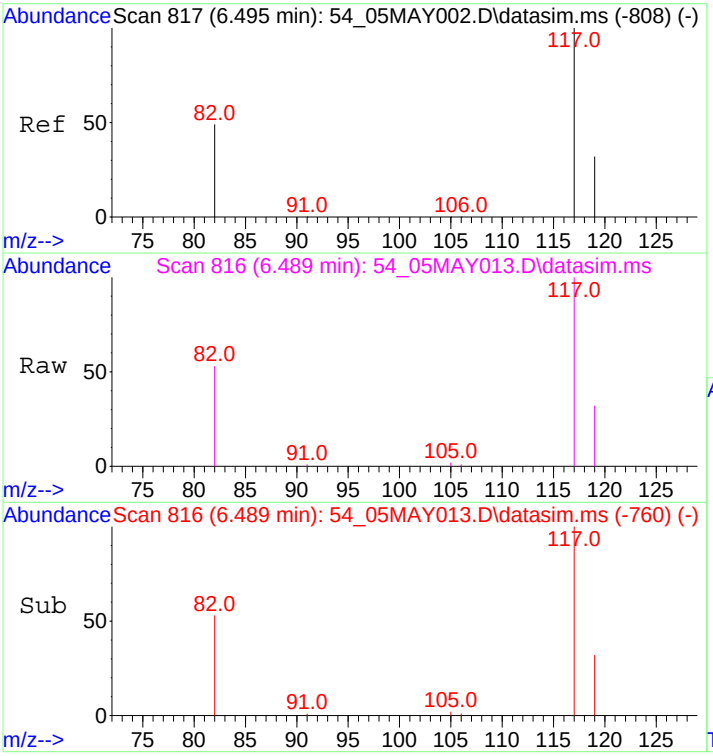


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY013.D
Acq: 5 May 2014 10:59 am

Tgt Ion:114 Resp: 10279

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.6	11.8	17.8

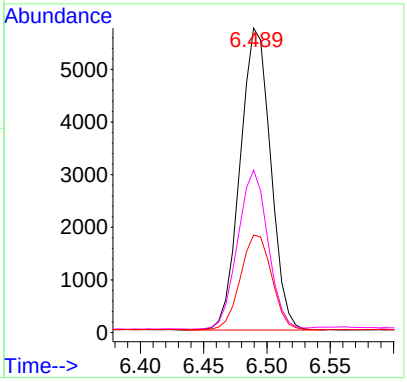


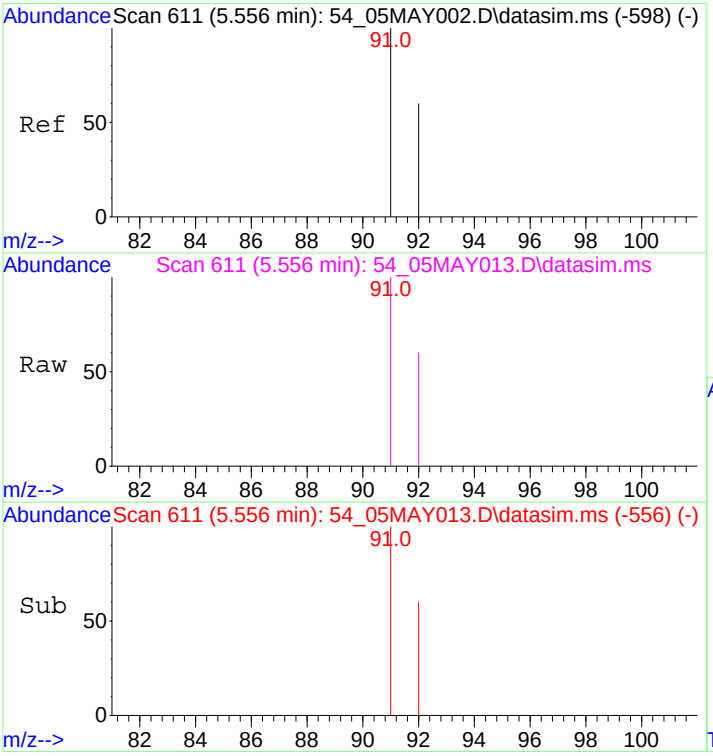


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY013.D
Acq: 5 May 2014 10:59 am

Tgt Ion:117 Resp: 9643

Ion	Ratio	Lower	Upper
117	100		
82	52.4	38.0	57.0
119	32.1	27.0	40.4

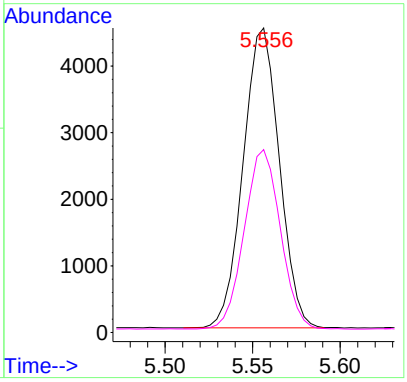


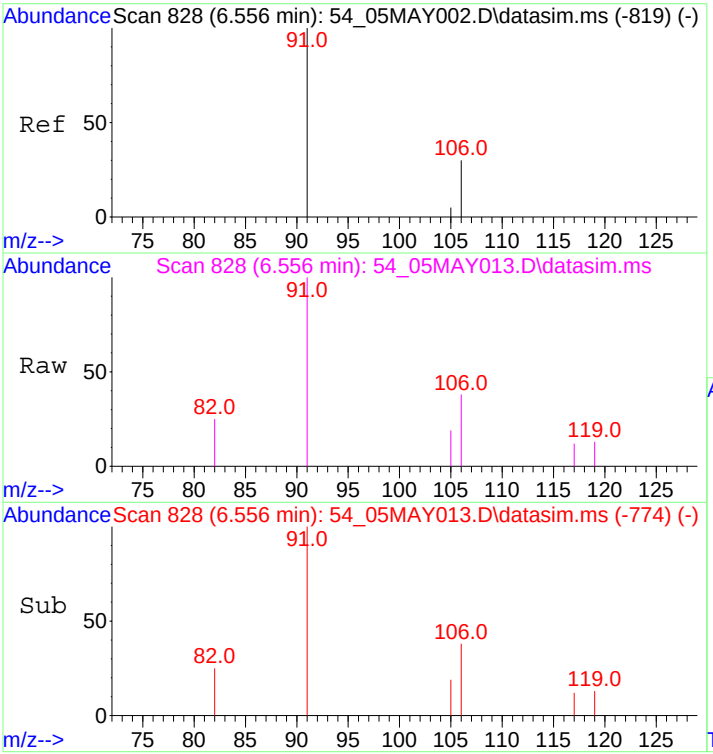


#13
Toluene
Concen: 11.19 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY013.D
Acq: 5 May 2014 10:59 am

Tgt Ion: 91 Resp: 6471

Ion	Ratio	Lower	Upper
91	100		
92	59.9	47.8	71.8

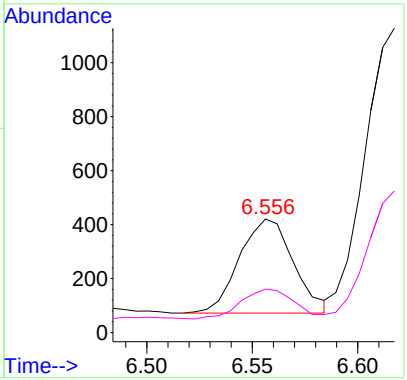


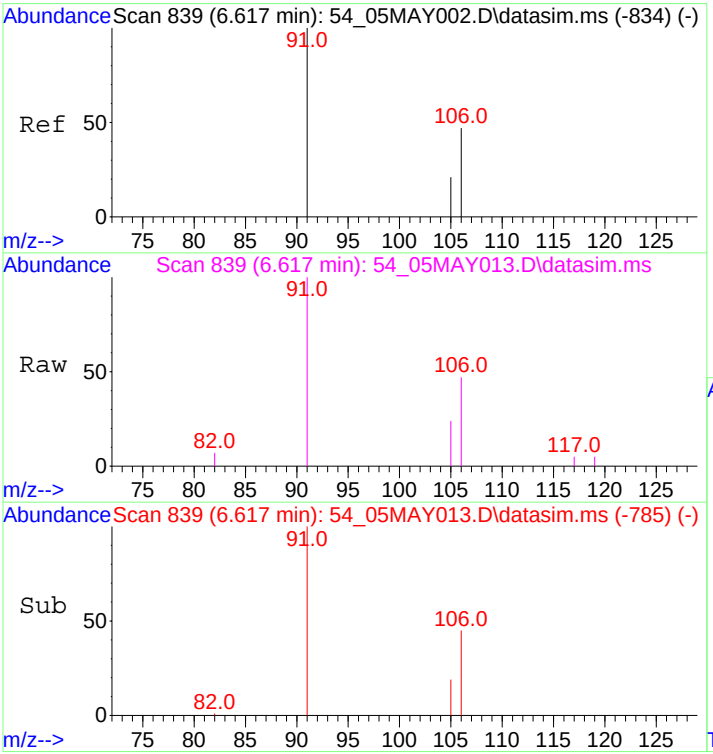


#15
Ethyl Benzene
Concen: 0.85 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 05MAY013.D
Acq: 5 May 2014 10:59 am

Tgt Ion: 91 Resp: 622

Ion	Ratio	Lower	Upper
91	100		
106	30.7	26.9	40.3

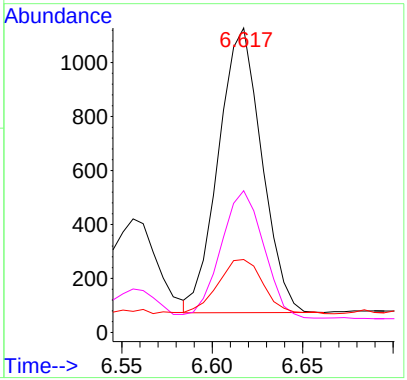


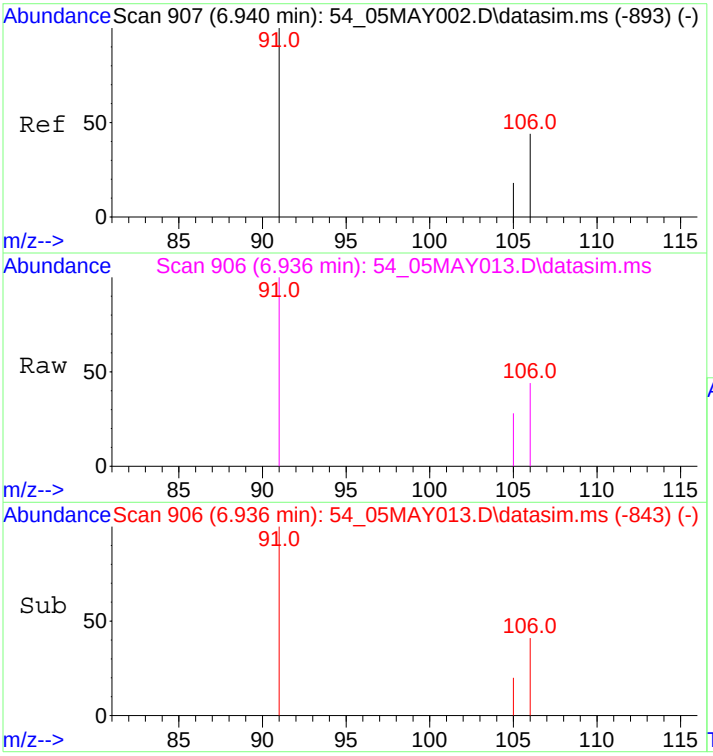


#16
m,p-Xylene
Concen: 3.11 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_05MAY013.D
Acq: 5 May 2014 10:59 am

Tgt Ion: 91 Resp: 1755

Ion	Ratio	Lower	Upper
91	100		
106	44.4	43.1	64.7
105	19.3	18.3	27.5

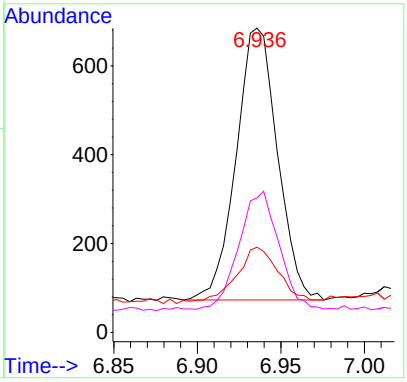




#17
o-Xylene
Concen: 1.85 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 05MAY013.D
Acq: 5 May 2014 10:59 am

Tgt Ion: 91 Resp: 1056

Ion	Ratio	Lower	Upper
91	100		
106	41.7	40.1	60.1
105	20.1	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY014.D
Acq On : 5 May 2014 11:11 am
Operator : yhl
Sample : 02178 \ F5-064
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:19:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

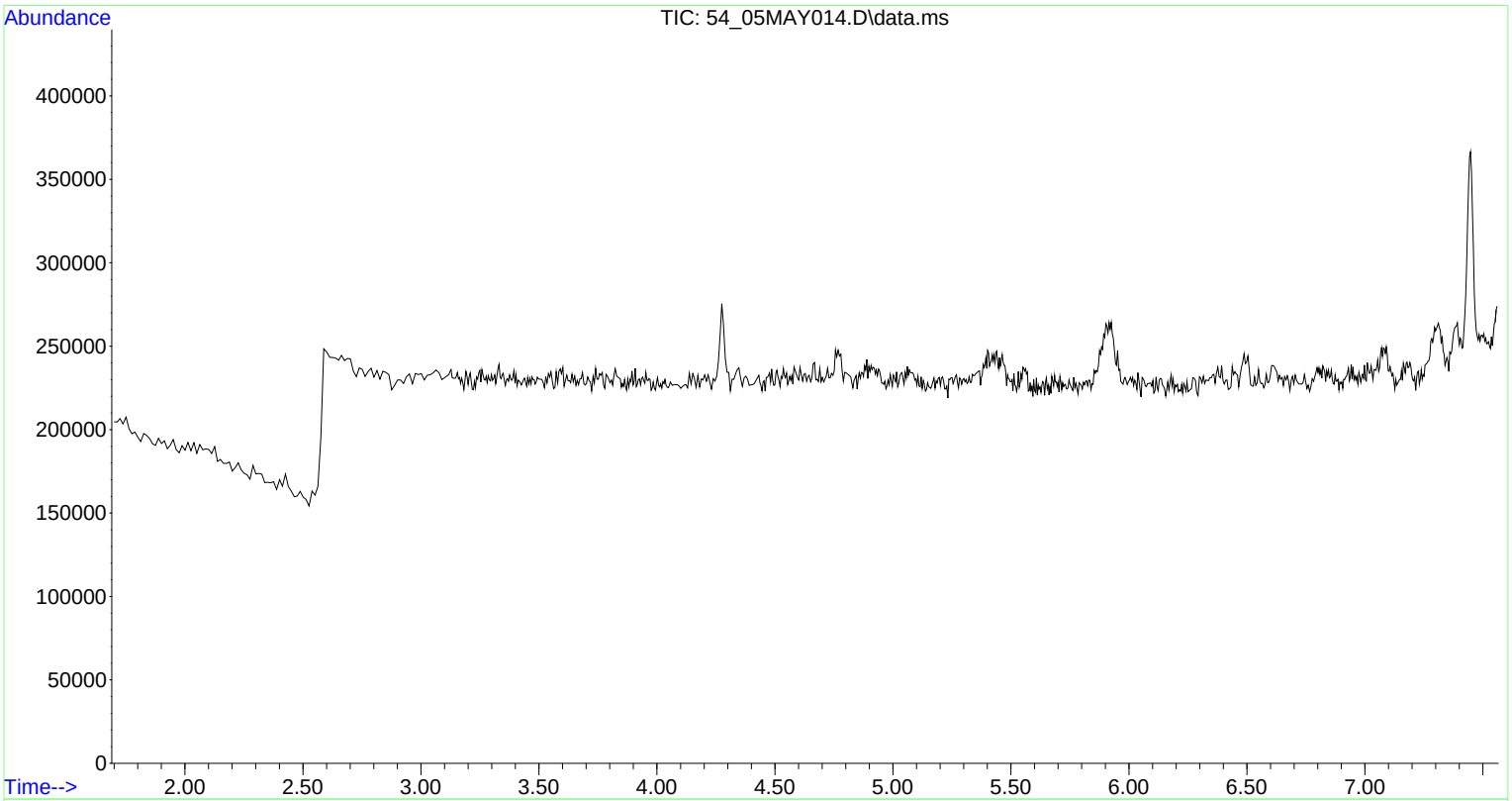
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4382	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10581	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10158	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
13] Toluene	5.557	91	7552	12.40 ppbv	99
15] Ethyl Benzene	6.556	91	889	1.15 ppbv	94
16] m,p-Xylene	6.618	91	2398	4.04 ppbv	89
17] o-Xylene	6.936	91	1541	2.56 ppbv	89

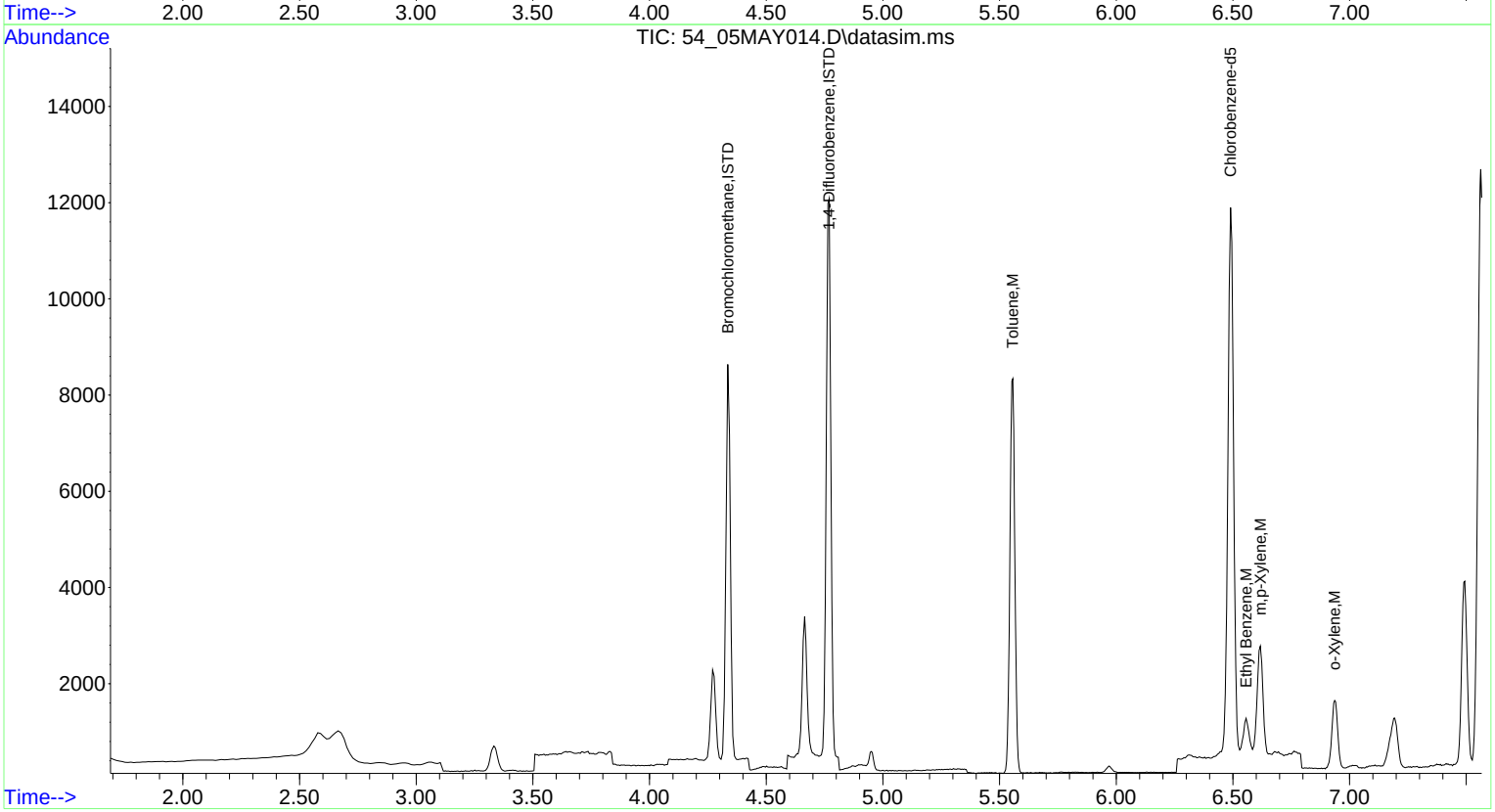
(#) = qualifier out of range (m) = manual integration (+) = signals summed

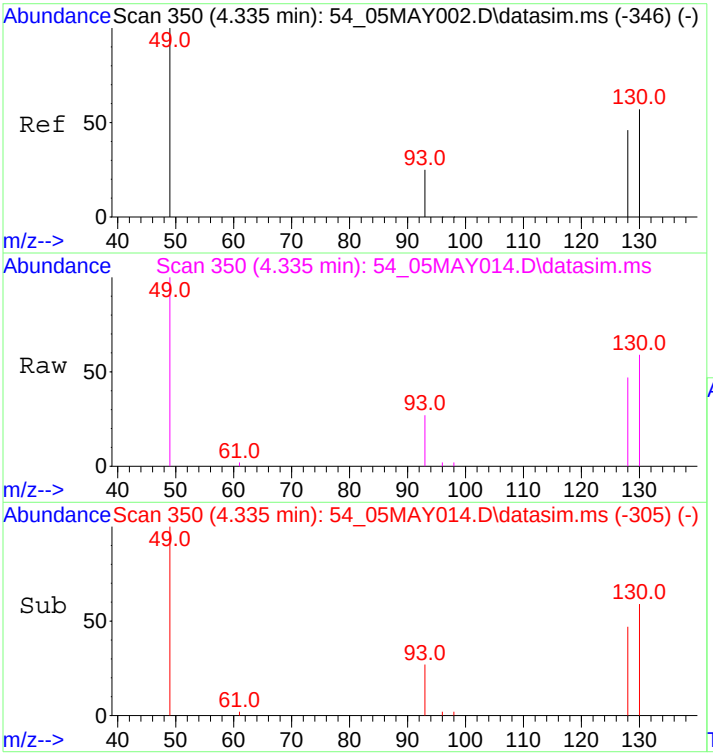
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY014.D
Acq On : 5 May 2014 11:11 am
Operator : yhl
Sample : 02178 \ F5-064
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:19:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



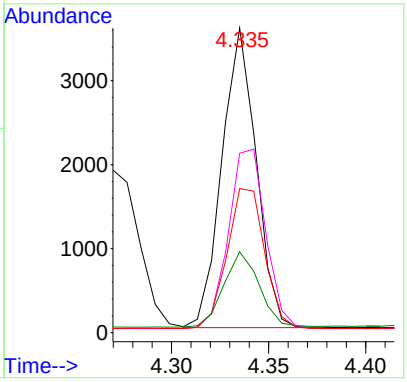


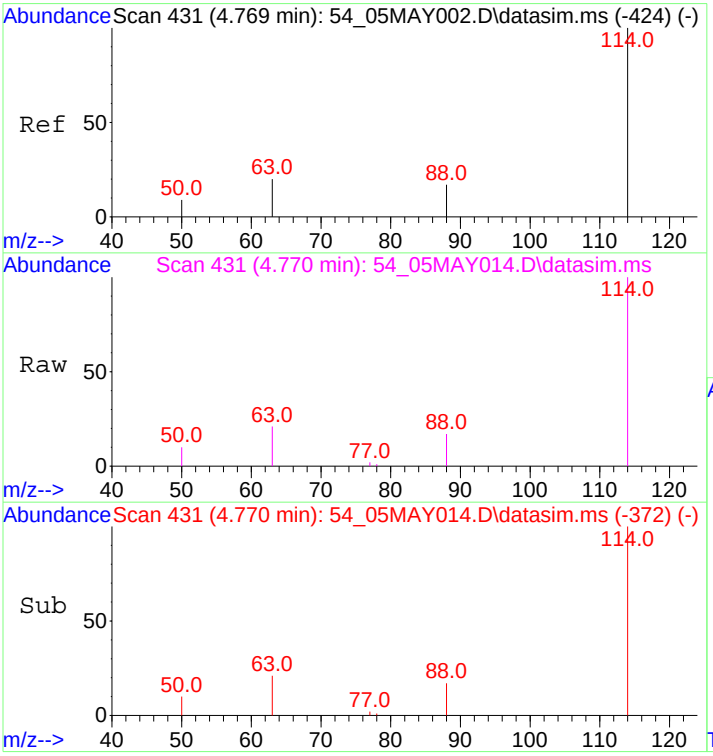


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY014.D
Acq: 5 May 2014 11:11 am

Tgt Ion: 49 Resp: 4382

Ion	Ratio	Lower	Upper
49	100		
130	65.2	87.2	130.8#
128	51.1	68.0	102.0#
93	25.8	29.3	43.9#

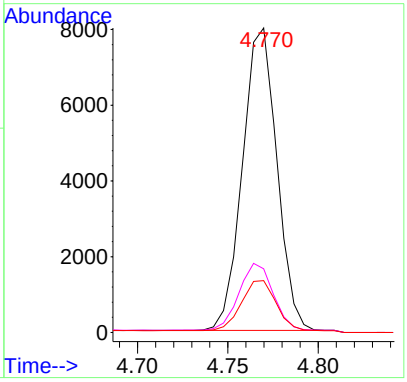


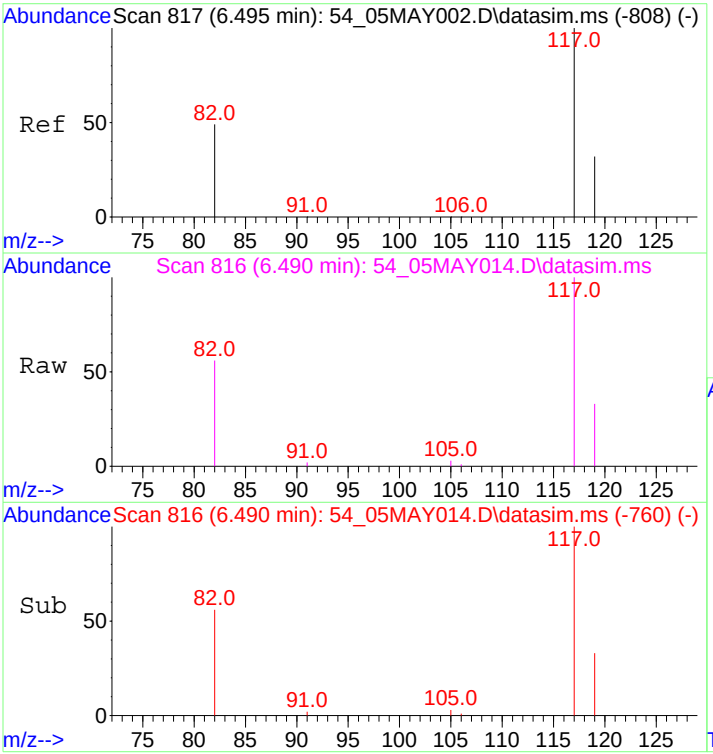


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY014.D
Acq: 5 May 2014 11:11 am

Tgt Ion:114 Resp: 10581

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.7	11.8	17.8

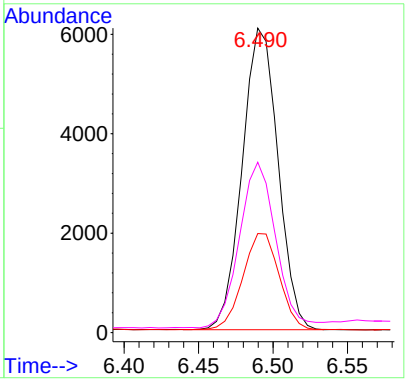


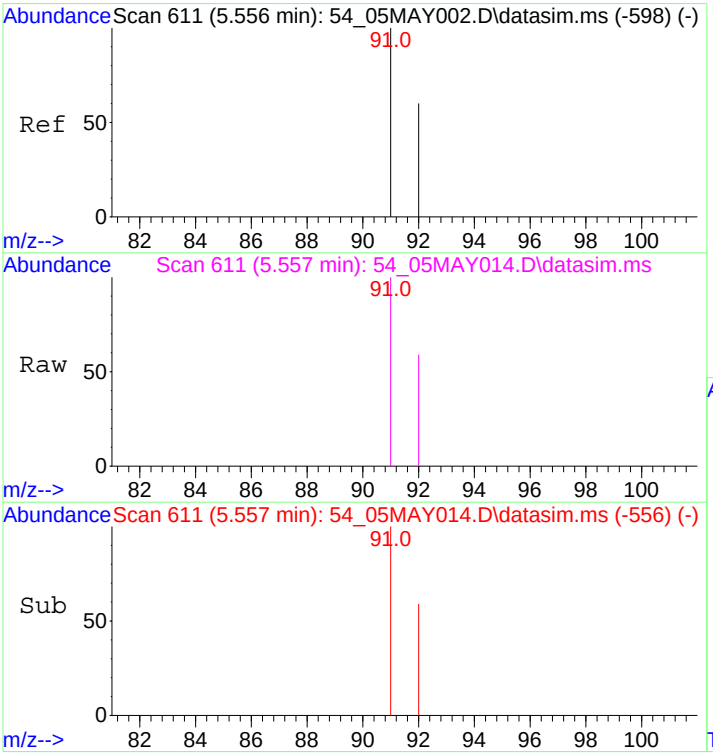


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54 05MAY014.D
Acq: 5 May 2014 11:11 am

Tgt Ion:117 Resp: 10158

Ion	Ratio	Lower	Upper
117	100		
82	55.9	38.0	57.0
119	32.5	27.0	40.4

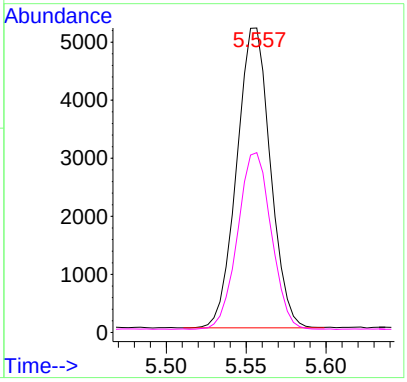


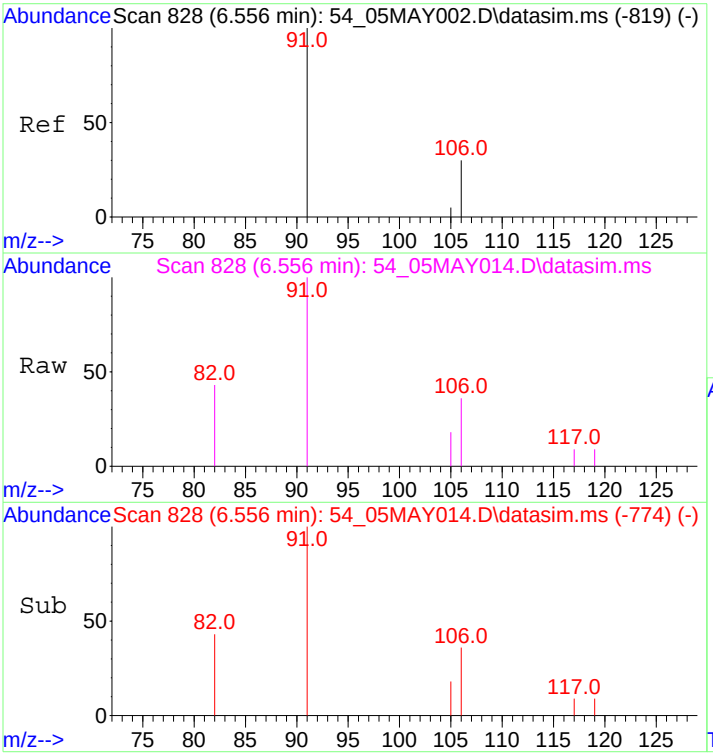


#13
Toluene
Concen: 12.40 ppbv
RT: 5.557 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY014.D
Acq: 5 May 2014 11:11 am

Tgt Ion: 91 Resp: 7552

Ion	Ratio	Lower	Upper
91	100		
92	59.0	47.8	71.8

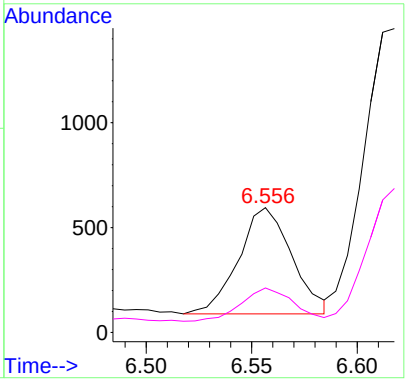


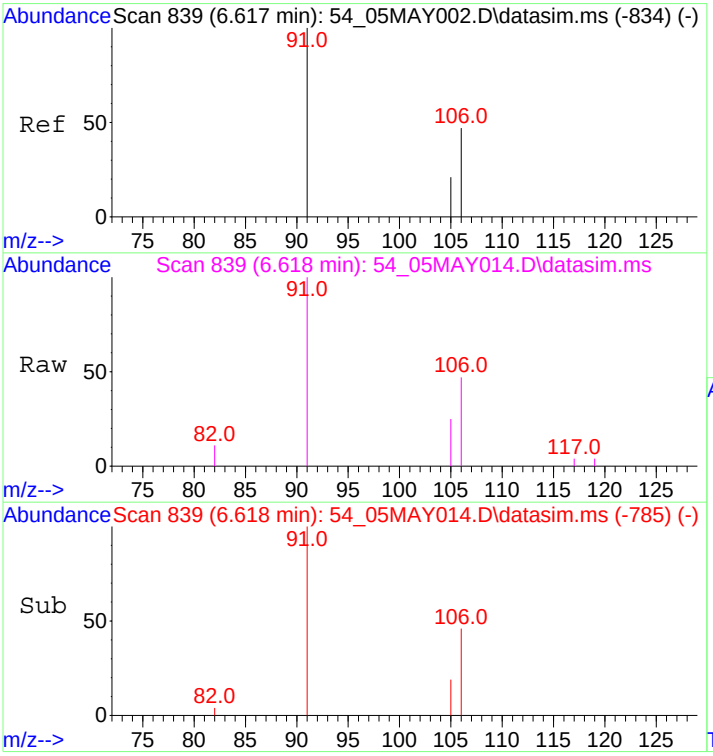


#15
Ethyl Benzene
Concen: 1.15 ppbv
RT: 6.556 min Scan# 828
Delta R.T. 0.000 min
Lab File: 54 05MAY014.D
Acq: 5 May 2014 11:11 am

Tgt Ion: 91 Resp: 889

Ion	Ratio	Lower	Upper
91	100		
106	30.4	26.9	40.3

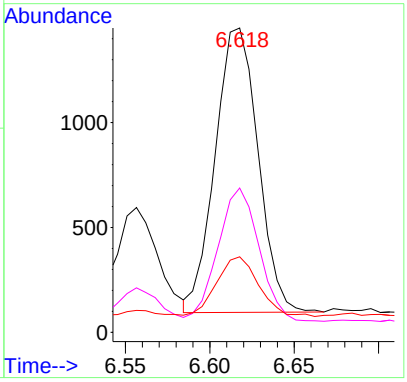


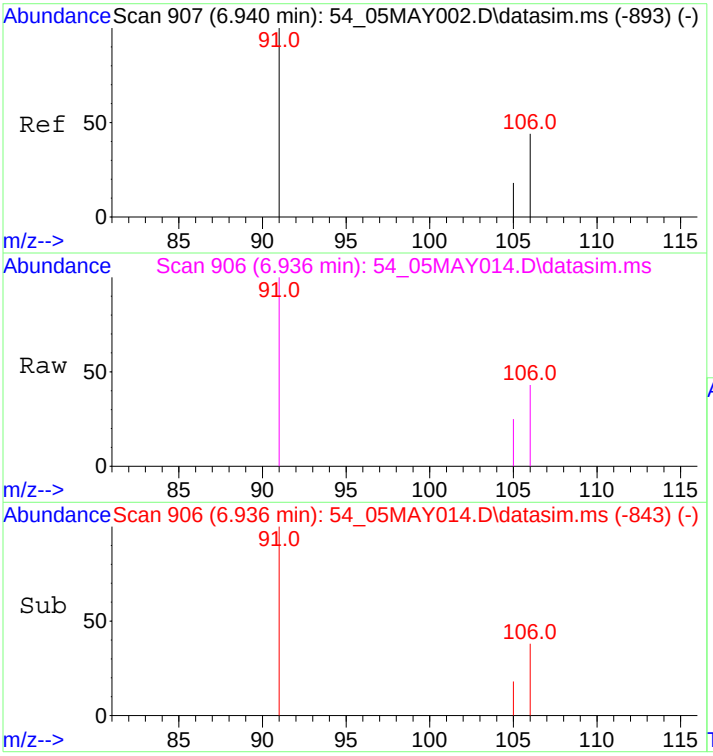


#16
m,p-Xylene
Concen: 4.04 ppbv
RT: 6.618 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_05MAY014.D
Acq: 5 May 2014 11:11 am

Tgt Ion: 91 Resp: 2398

Ion	Ratio	Lower	Upper
91	100		
106	45.0	43.1	64.7
105	19.5	18.3	27.5

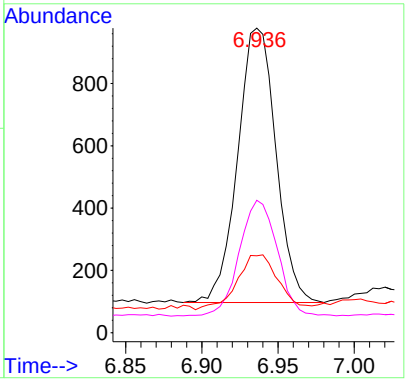




#17
o-Xylene
Concen: 2.56 ppbv
RT: 6.936 min Scan# 906
Delta R.T. -0.004 min
Lab File: 54 05MAY014.D
Acq: 5 May 2014 11:11 am

Tgt Ion: 91 Resp: 1541

Ion	Ratio	Lower	Upper
91	100		
106	40.8	40.1	60.1
105	21.5	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY015.D
Acq On : 5 May 2014 11:22 am
Operator : yhl
Sample : 02179 \ F5-062
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:35:20 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

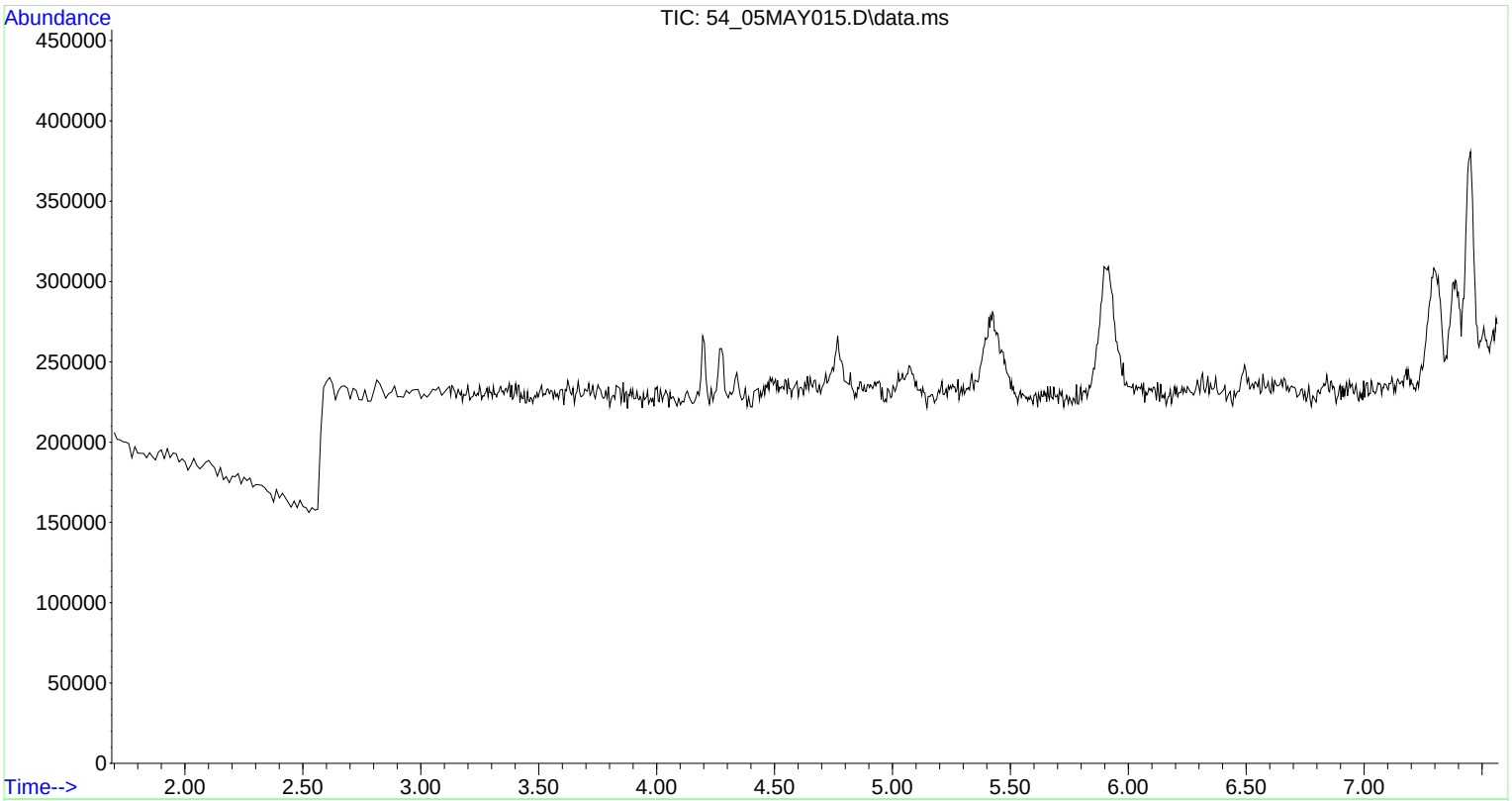
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4177	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10234	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9852	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5] trans-1,2-Dichloroethene	3.703	61	505m	1.77	ppbv	
7] cis-1,2-Dichloroethene	4.197	61	15395	57.82	ppbv #	71
11] Trichloroethene	4.950	130	1017	4.00	ppbv #	73
13] Toluene	5.556	91	3549	6.01	ppbv	99
14] Tetrachloroethene	5.967	166	3088	9.15	ppbv	98
16] m,p-Xylene	6.617	91	378	0.66	ppbv	90
17] o-Xylene	6.932	91	373	0.64	ppbv #	50

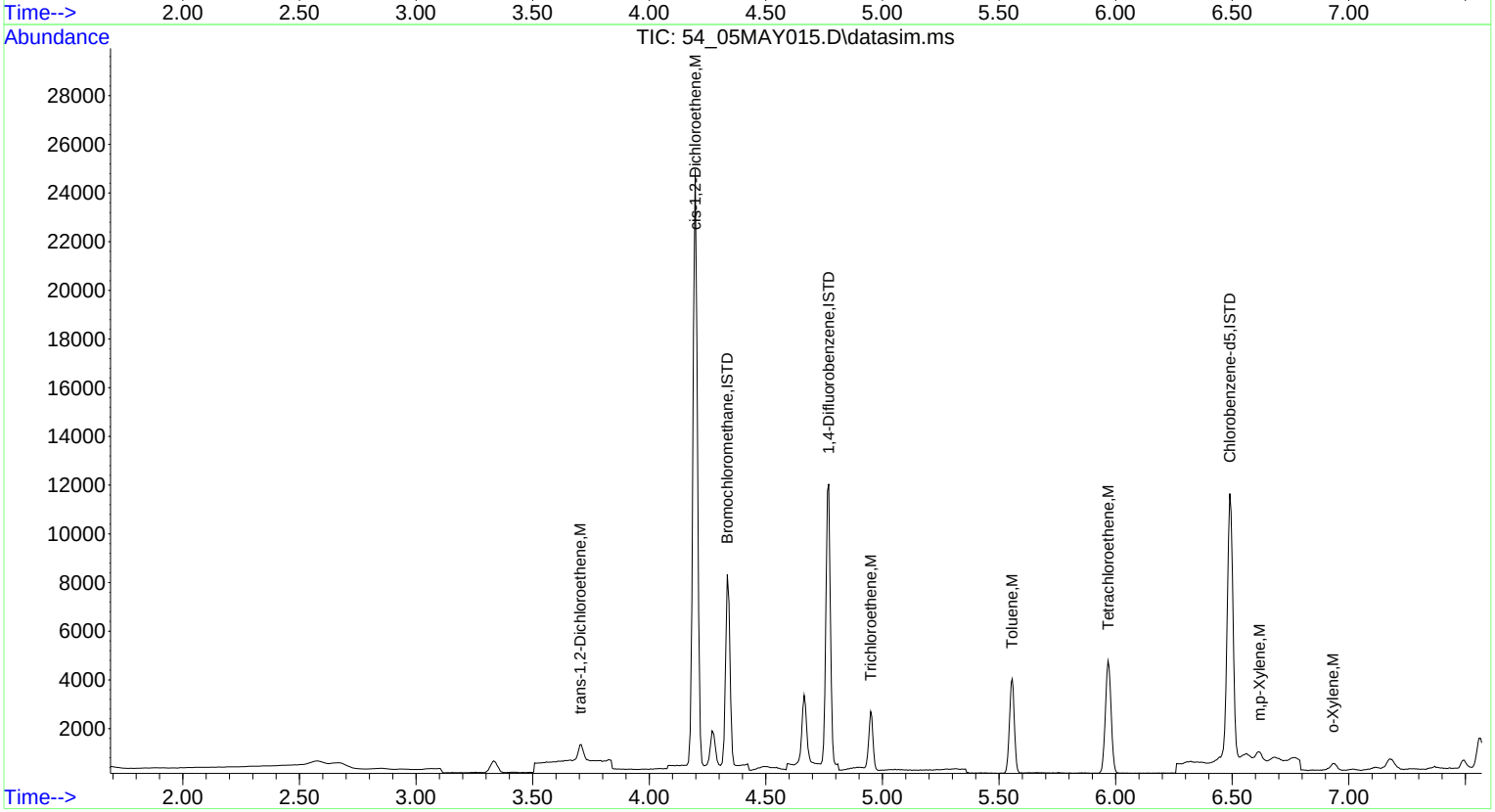
(#) = qualifier out of range (m) = manual integration (+) = signals summed

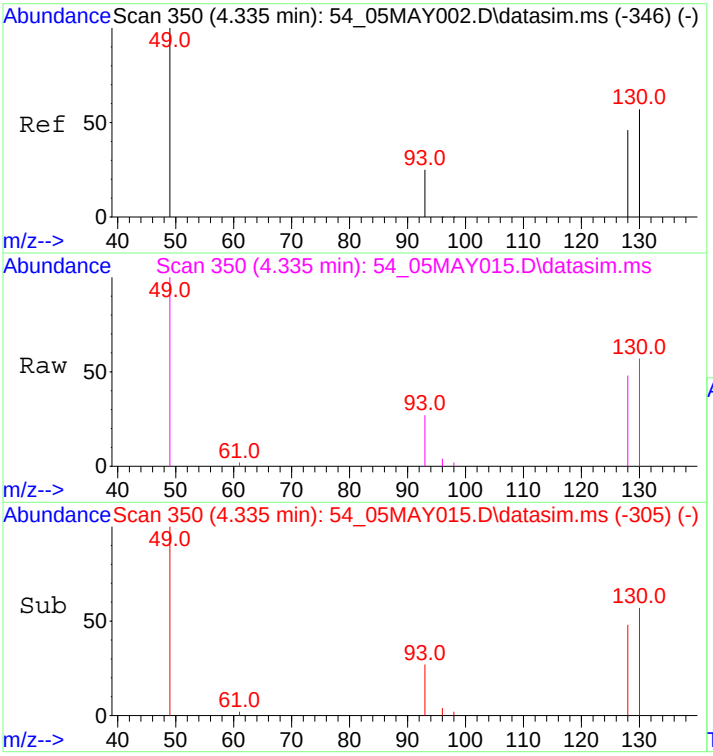
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY015.D
Acq On : 5 May 2014 11:22 am
Operator : yhl
Sample : 02179 \ F5-062
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:35:20 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



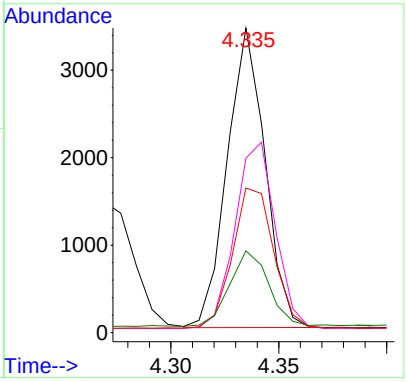


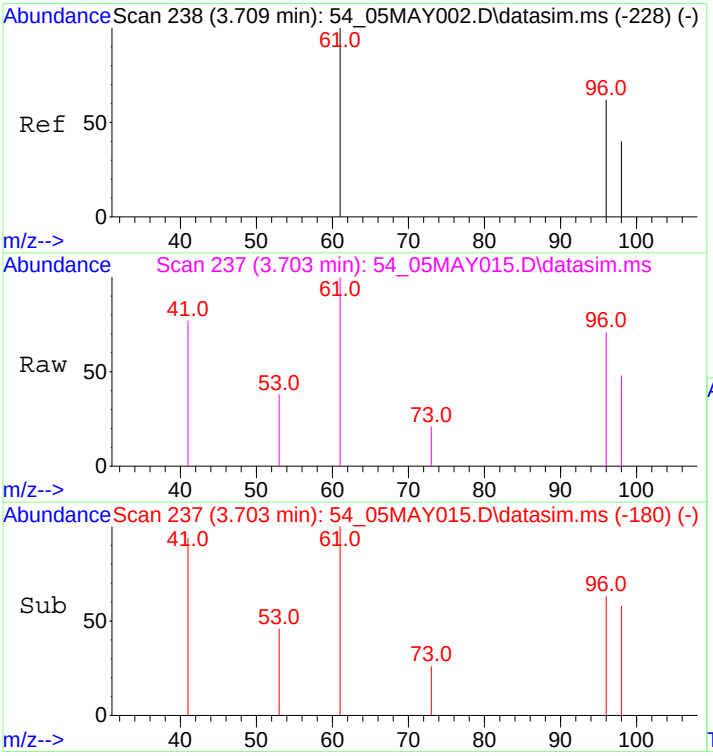


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion: 49 Resp: 4177

Ion	Ratio	Lower	Upper
49	100		
130	66.2	87.2	130.8#
128	51.0	68.0	102.0#
93	26.0	29.3	43.9#

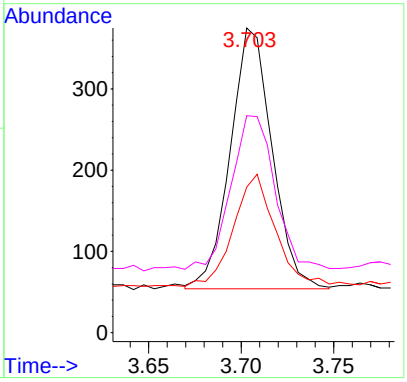




#5
trans-1,2-Dichloroethene
Concen: 1.77 ppbv m
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54_05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion: 61 Resp: 505

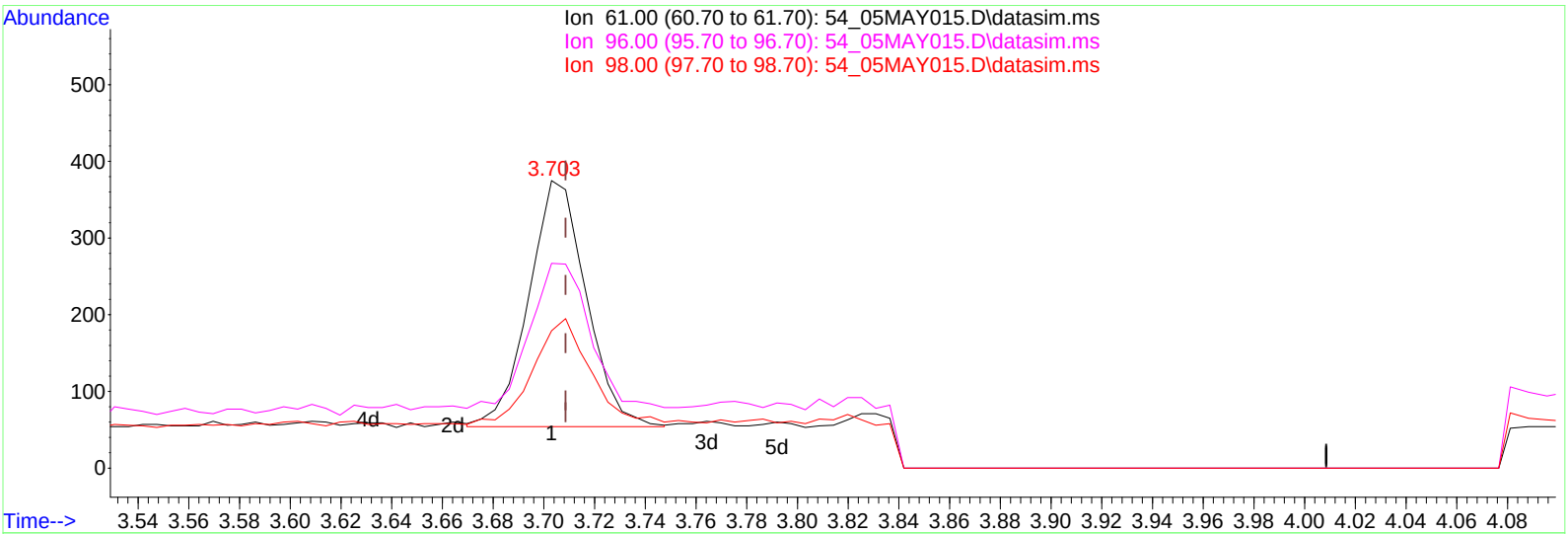
Ion	Ratio	Lower	Upper
61	100		
96	62.0	71.4	107.0#
98	42.6	45.8	68.8#

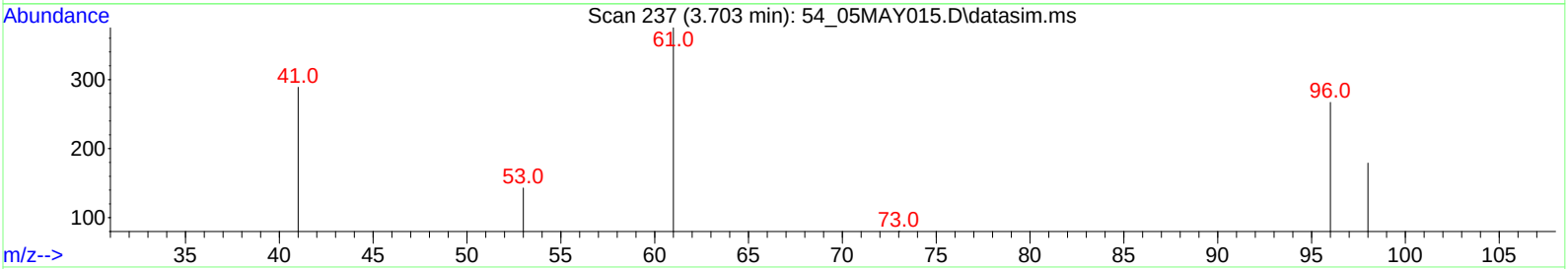


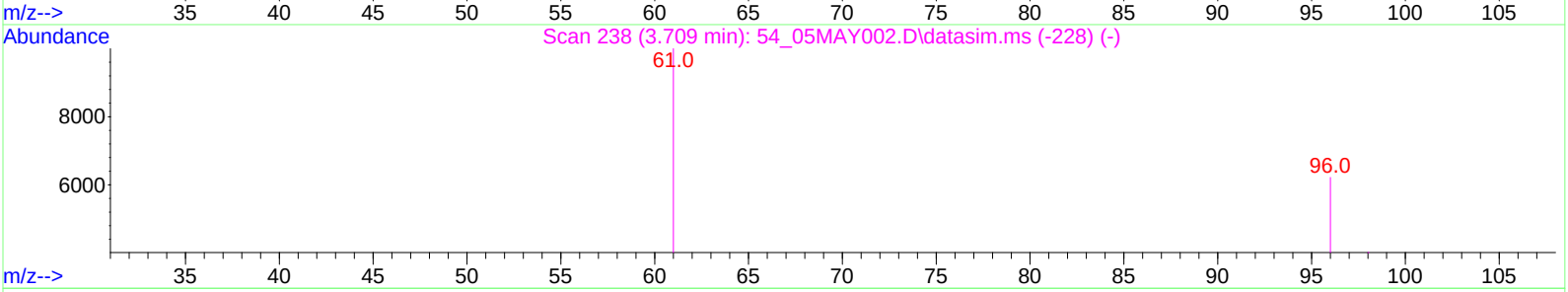
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY015.D
Acq On : 5 May 2014 11:22 am
Operator : yhl
Sample : 02179 \ F5-062
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:33:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY015.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.703min (-0.006) 1.77 ppbv m

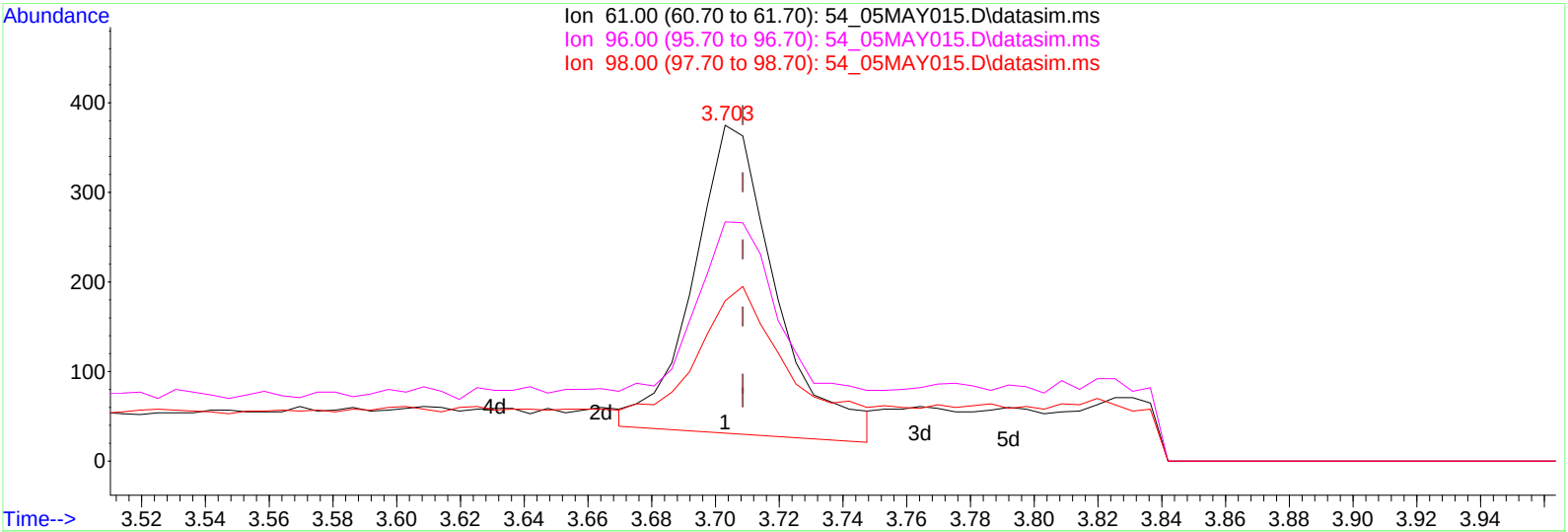
response 505

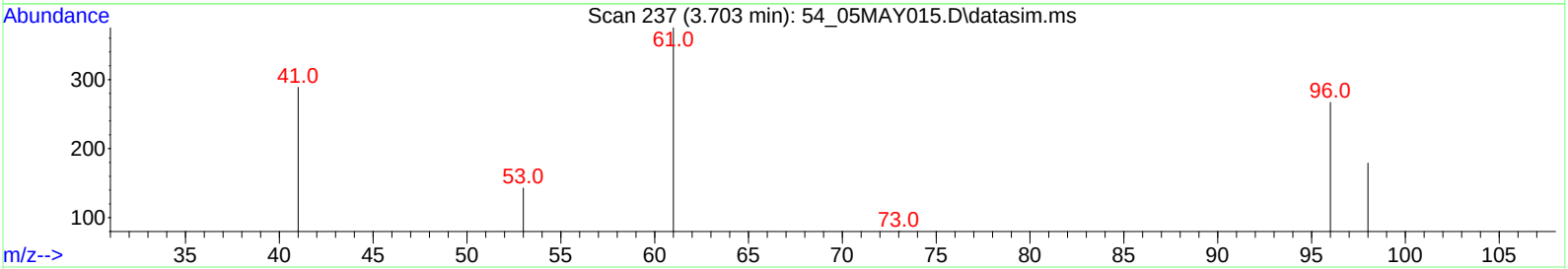
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	61.98#
98.00	57.30	42.57#
0.00	0.00	0.00

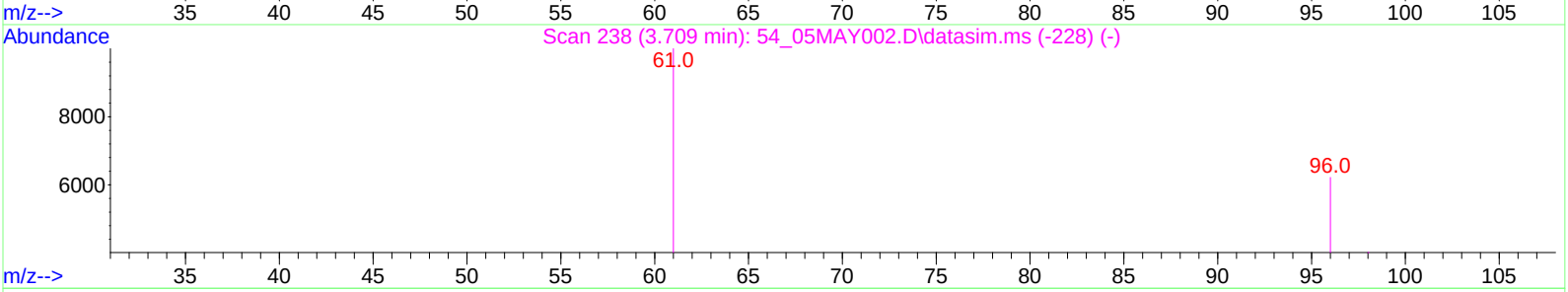
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY015.D
Acq On : 5 May 2014 11:22 am
Operator : yhl
Sample : 02179 \ F5-062
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:29:20 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







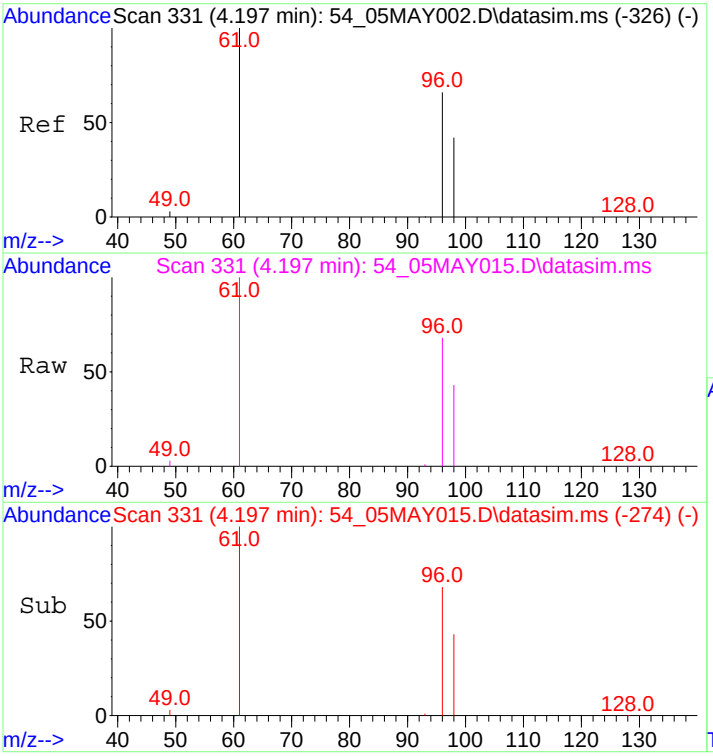
TIC: 54_05MAY015.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.703min (-0.006) 2.16 ppbv

response 617

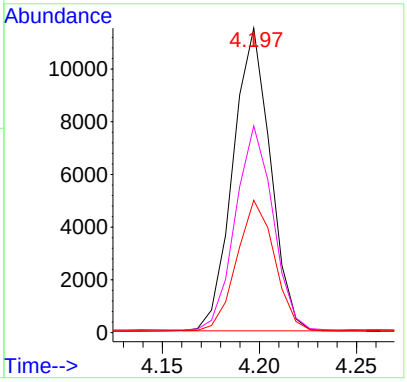
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	50.73#
98.00	57.30	34.85#
0.00	0.00	0.00

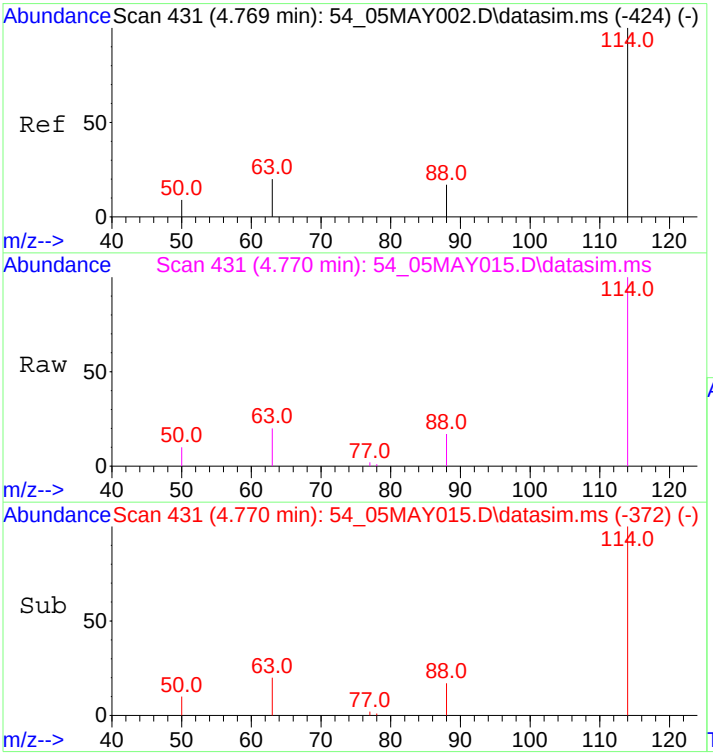


#7
cis-1,2-Dichloroethene
Concen: 57.82 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion: 61 Resp: 15395

Ion	Ratio	Lower	Upper
61	100		
96	67.3	78.5	117.7#
98	43.3	50.6	76.0#

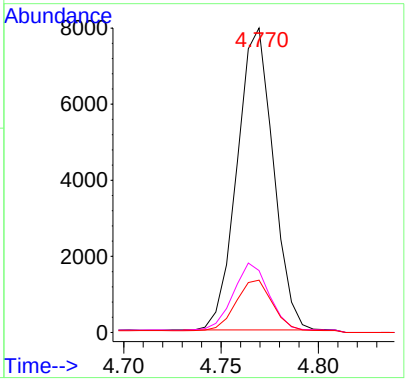


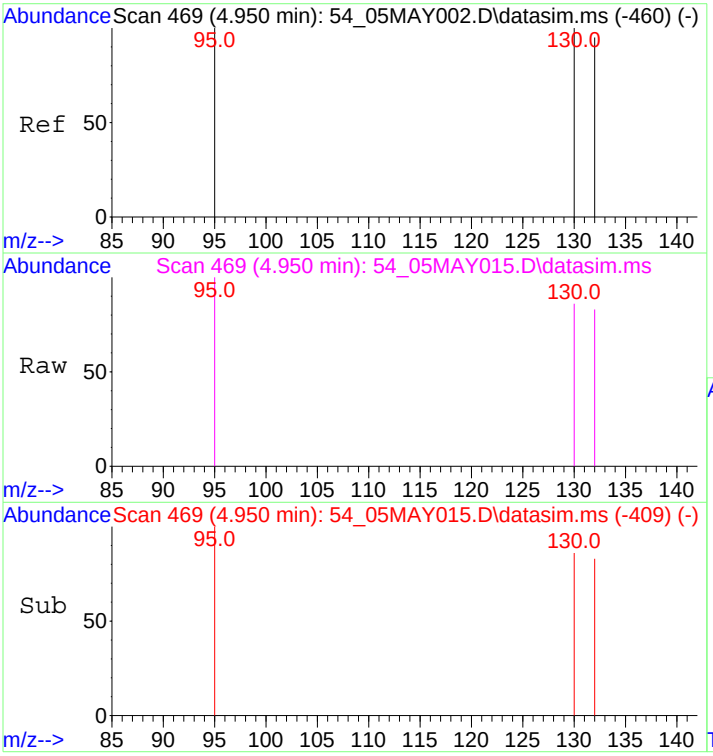


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion:114 Resp: 10234

Ion	Ratio	Lower	Upper
114	100		
63	22.4	12.0	18.0#
88	16.8	11.8	17.8

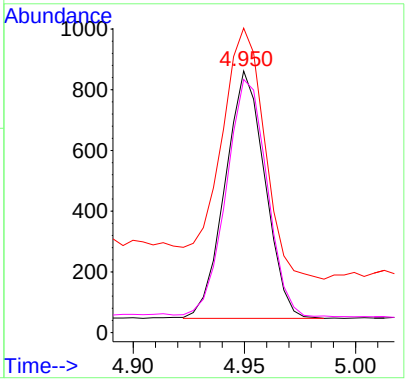


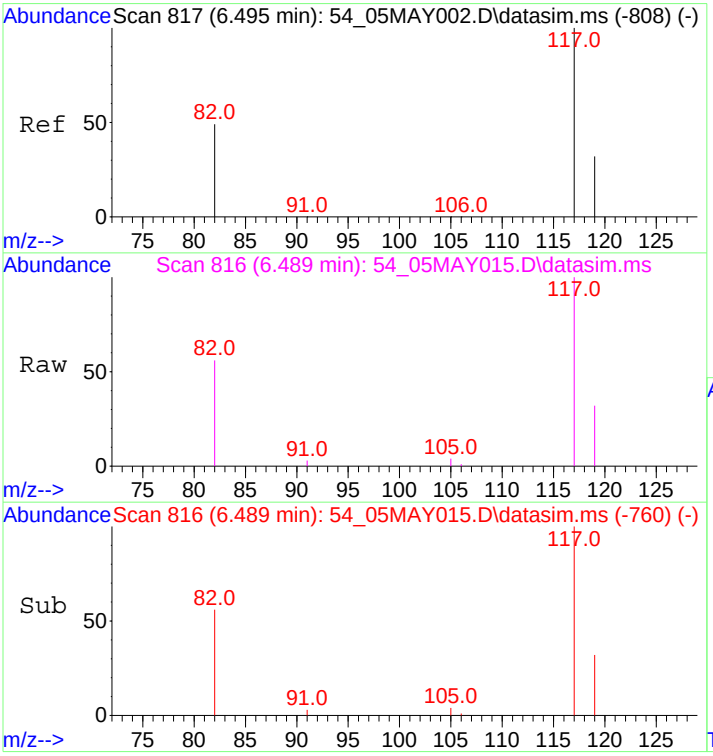


#11
Trichloroethene
Concen: 4.00 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion:130 Resp: 1017

Ion	Ratio	Lower	Upper
130	100		
132	97.5	76.9	115.3
95	147.4	76.5	114.7#

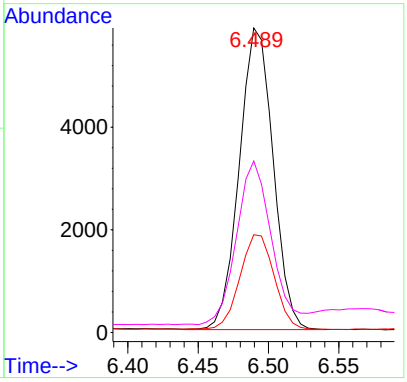


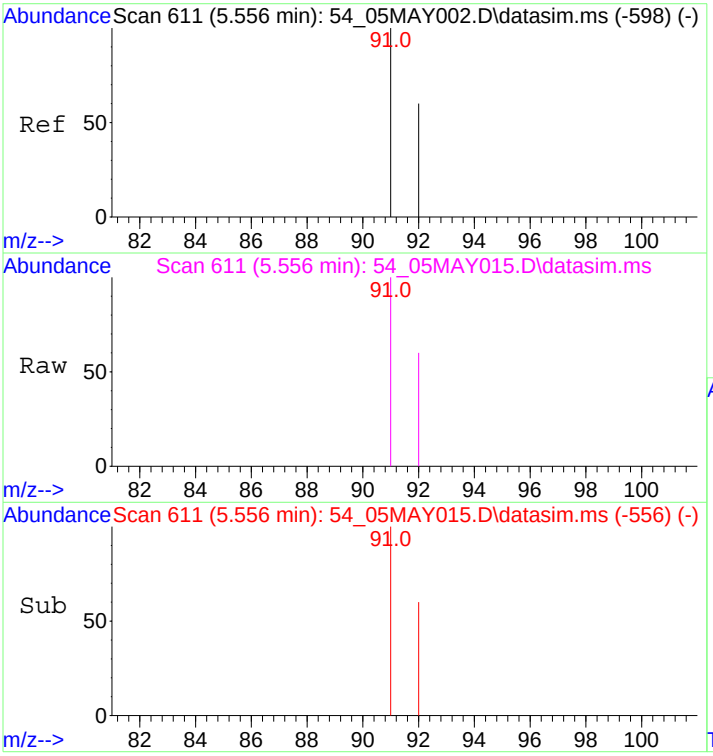


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion:117 Resp: 9852

Ion	Ratio	Lower	Upper
117	100		
82	56.2	38.0	57.0
119	31.9	27.0	40.4

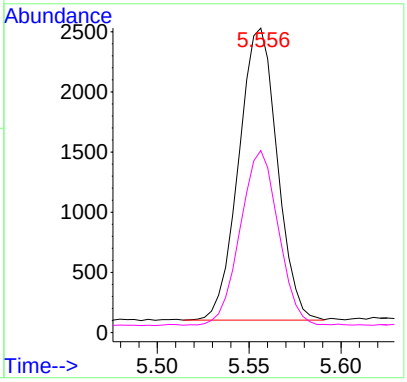


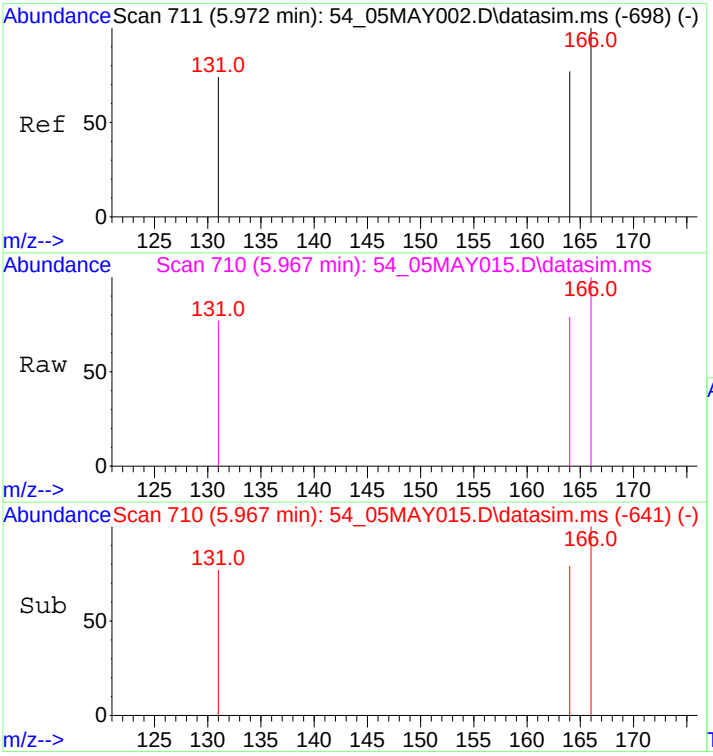


#13
Toluene
Concen: 6.01 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion: 91 Resp: 3549

Ion	Ratio	Lower	Upper
91	100		
92	59.1	47.8	71.8

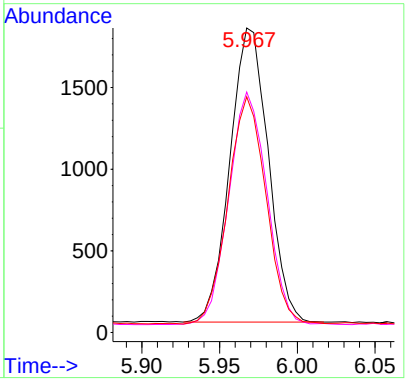


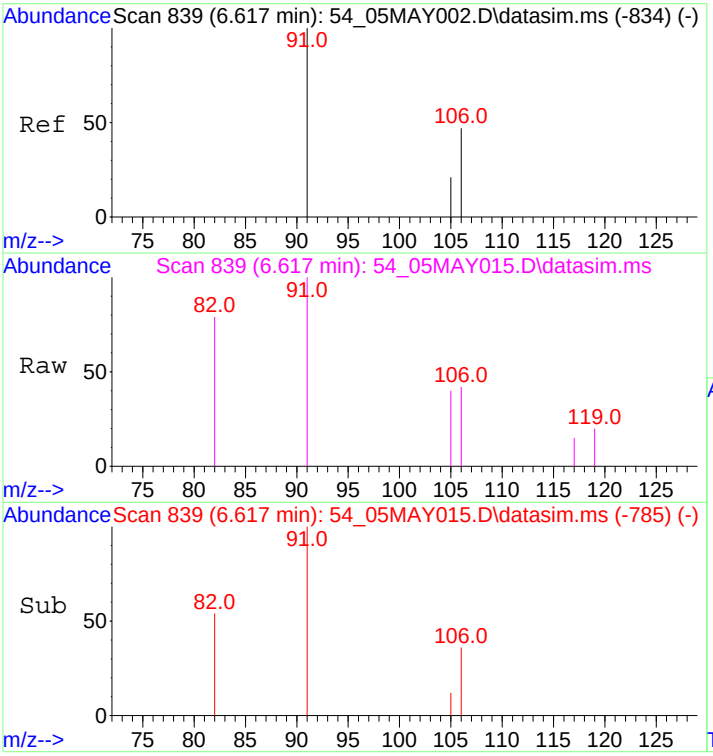


#14
Tetrachloroethene
Concen: 9.15 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54_05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion:166 Resp: 3088

Ion	Ratio	Lower	Upper
166	100		
164	78.5	62.6	94.0
131	76.5	58.5	87.7

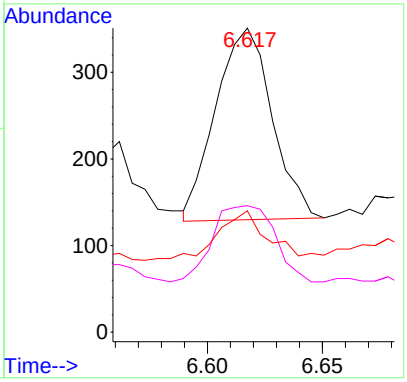


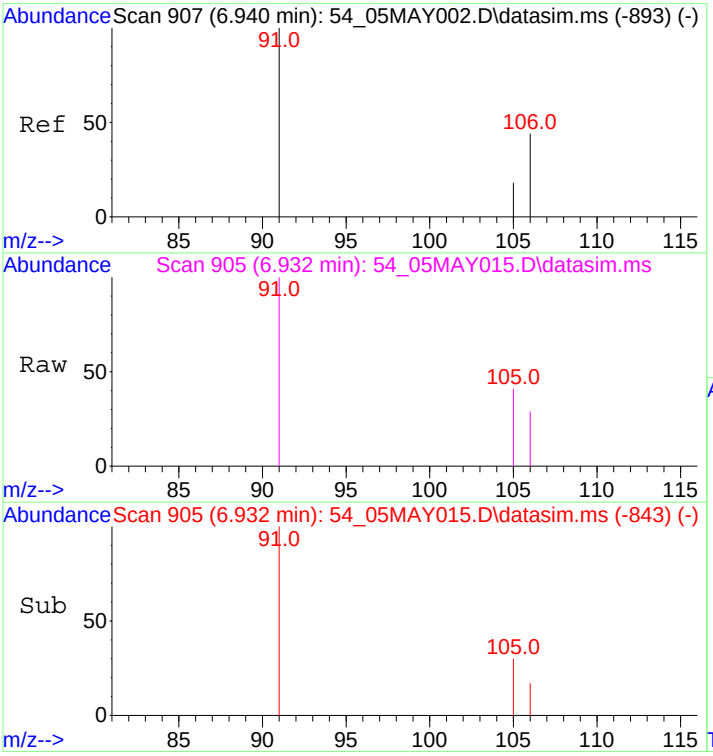


#16
m,p-Xylene
Concen: 0.66 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion: 91 Resp: 378

Ion	Ratio	Lower	Upper
91	100		
106	43.7	43.1	64.7
105	22.5	18.3	27.5

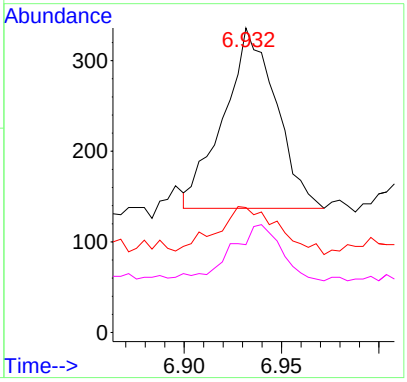




#17
o-Xylene
Concen: 0.64 ppbv
RT: 6.932 min Scan# 905
Delta R.T. -0.008 min
Lab File: 54_05MAY015.D
Acq: 5 May 2014 11:22 am

Tgt Ion: 91 Resp: 373

Ion	Ratio	Lower	Upper
91	100		
106	2.7	40.1	60.1#
105	20.1	15.8	23.6



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY016.D
Acq On : 5 May 2014 11:34 am
Operator : yhl
Sample : 02180 \ F5-060
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:45:02 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

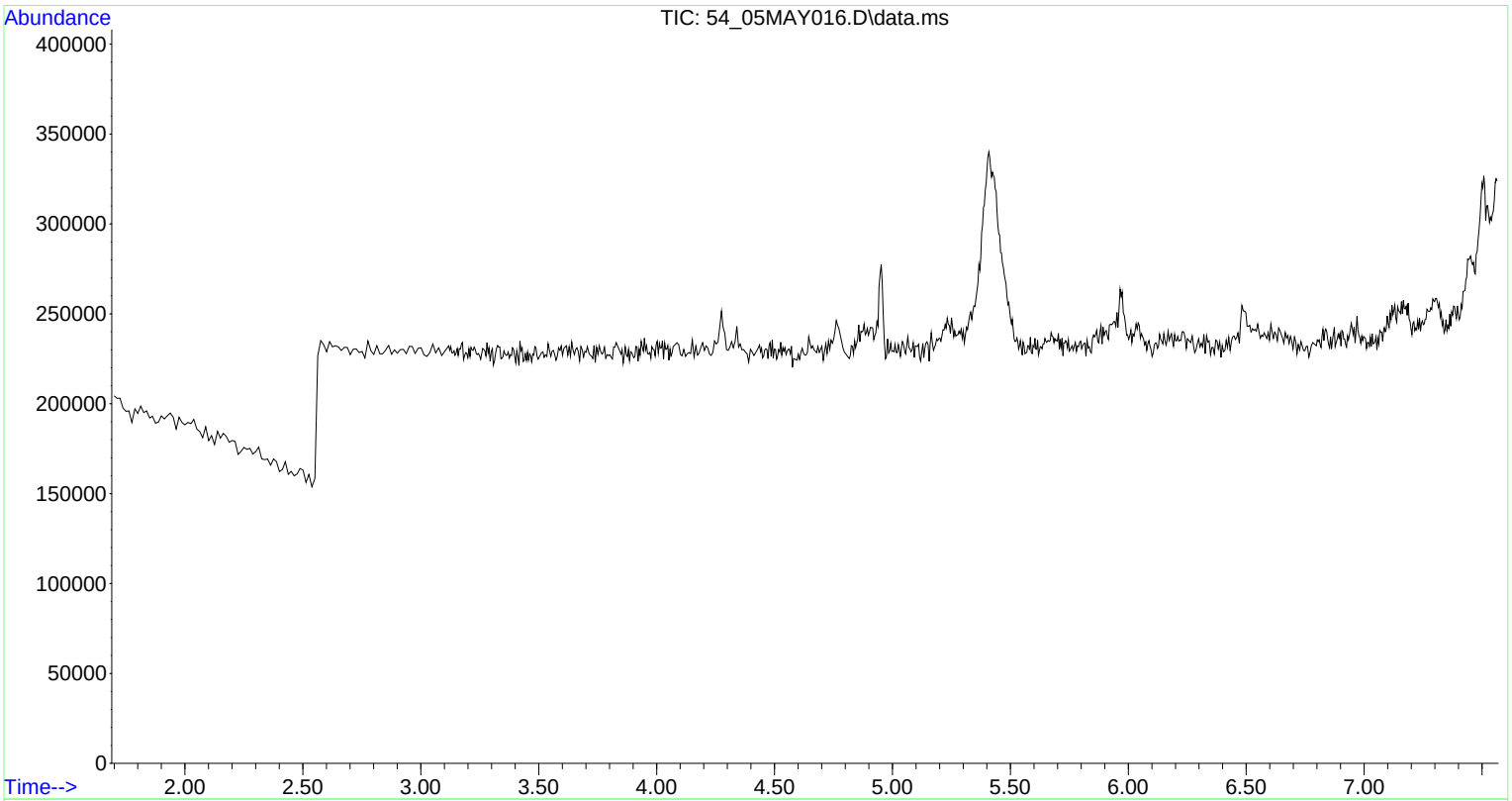
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4338	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10525	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10044	10.00	ppbv	# 0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5] trans-1,2-Dichloroethene	3.709	61	177m	0.60	ppbv	
7] cis-1,2-Dichloroethene	4.197	61	1173	4.24	ppbv	# 86
11] Trichloroethene	4.950	130	12927	49.38	ppbv	98
13] Toluene	5.556	91	1650	2.74	ppbv	99
14] Tetrachloroethene	5.967	166	7143	20.77	ppbv	98

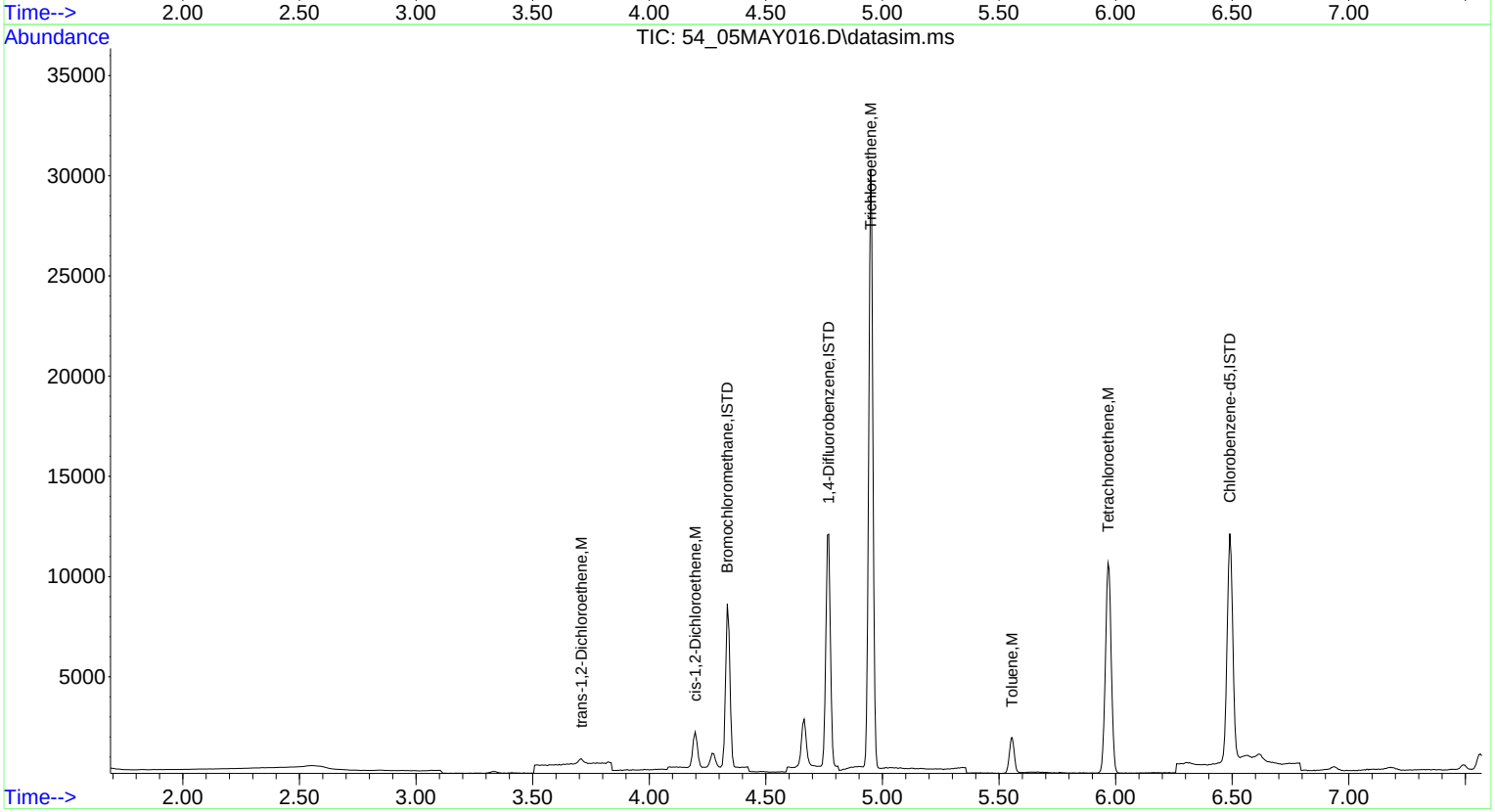
(#) = qualifier out of range (m) = manual integration (+) = signals summed

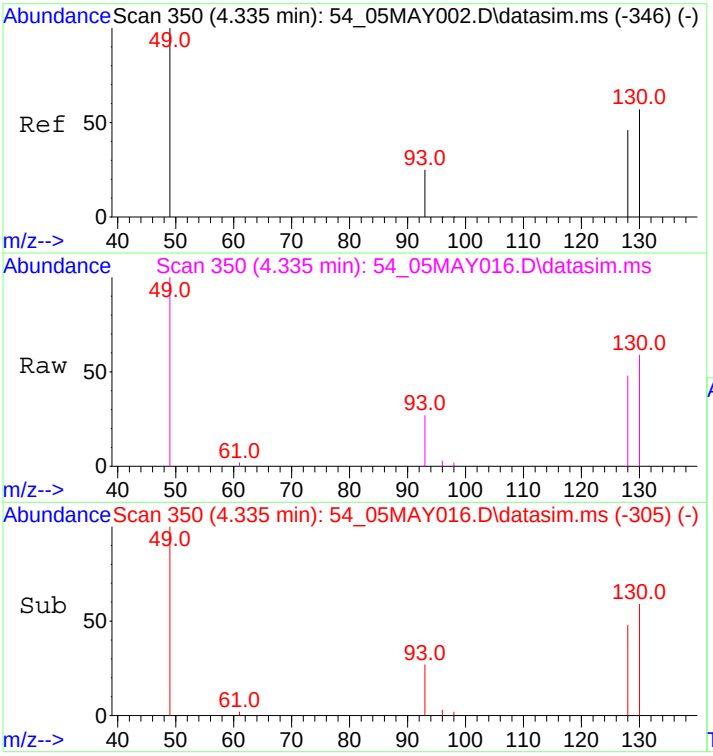
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY016.D
Acq On : 5 May 2014 11:34 am
Operator : yhl
Sample : 02180 \ F5-060
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:45:02 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



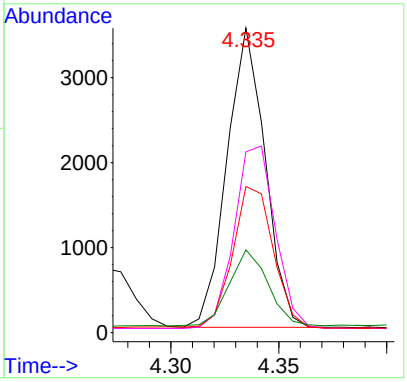


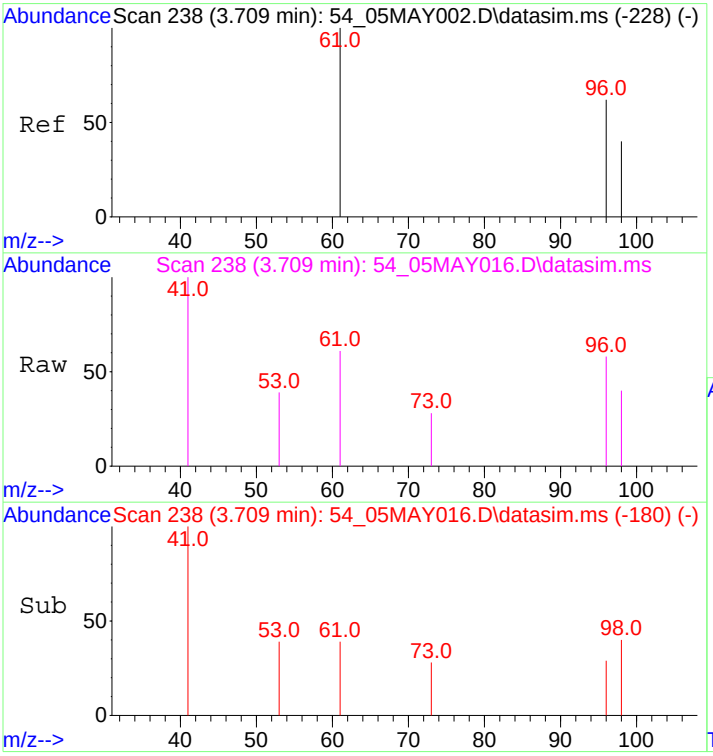


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY016.D
Acq: 5 May 2014 11:34 am

Tgt Ion: 49 Resp: 4338

Ion	Ratio	Lower	Upper
49	100		
130	65.9	87.2	130.8#
128	50.6	68.0	102.0#
93	25.6	29.3	43.9#

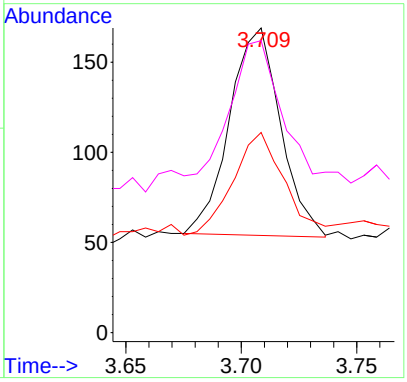




#5
trans-1,2-Dichloroethene
Concen: 0.60 ppbv m
RT: 3.709 min Scan# 238
Delta R.T. 0.000 min
Lab File: 54_05MAY016.D
Acq: 5 May 2014 11:34 am

Tgt Ion: 61 Resp: 177

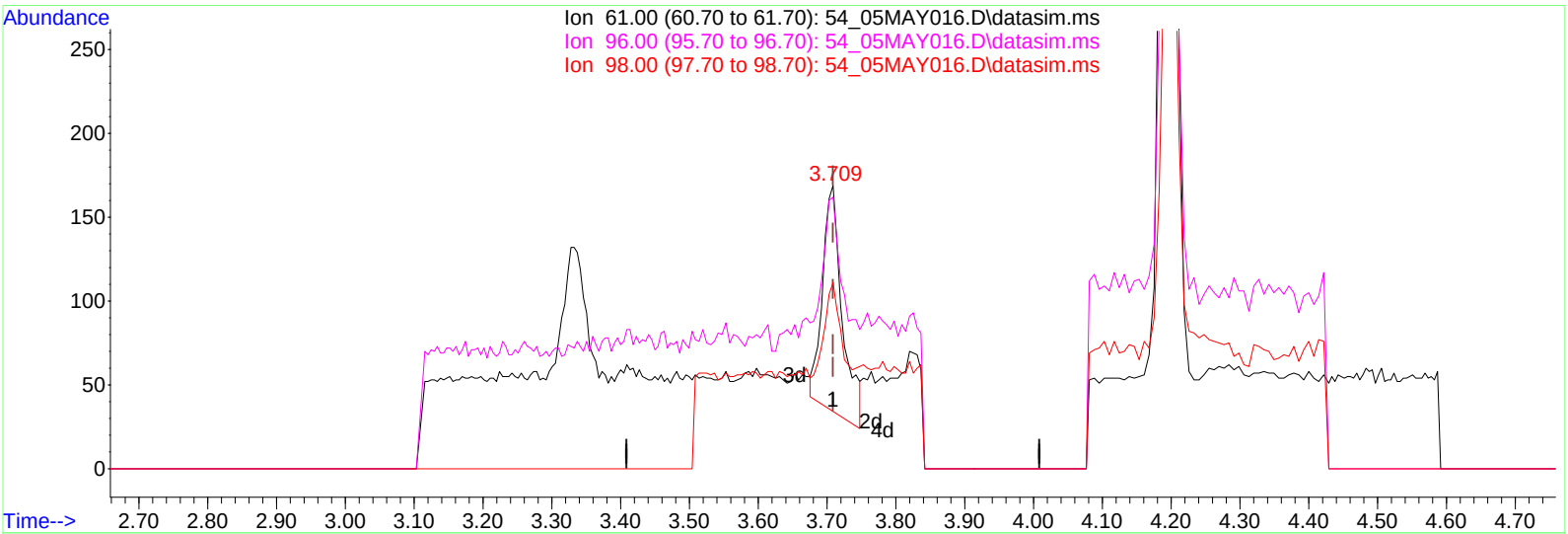
Ion	Ratio	Lower	Upper
61	100		
96	181.4	71.4	107.0#
98	161.6	45.8	68.8#

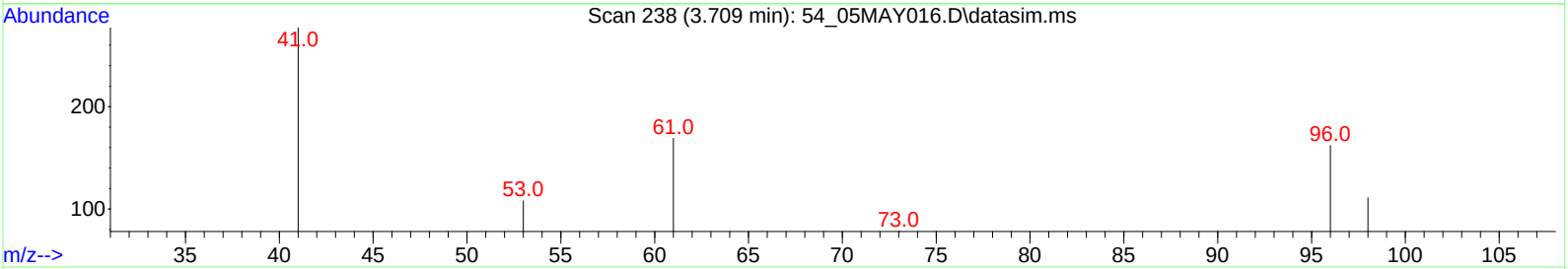


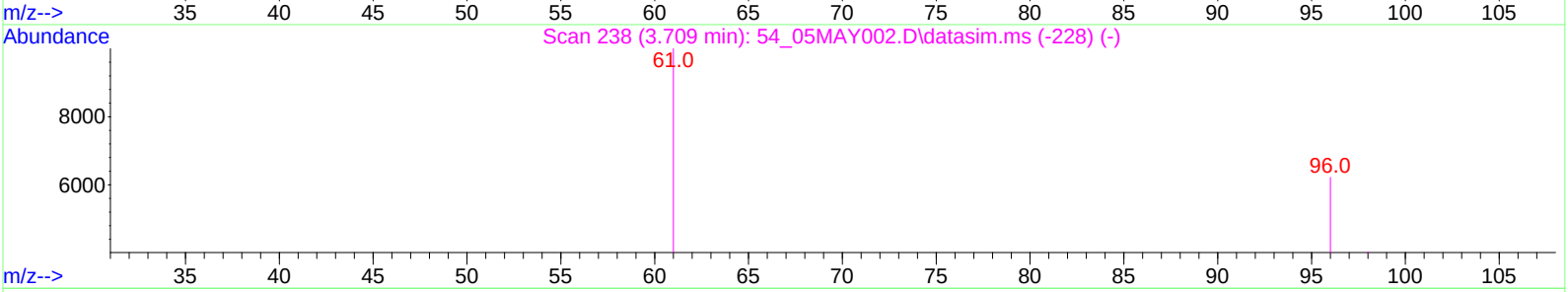
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY016.D
Acq On : 5 May 2014 11:34 am
Operator : yhl
Sample : 02180 \ F5-060
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:41:45 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY016.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.709min (+0.000) 0.90 ppbv

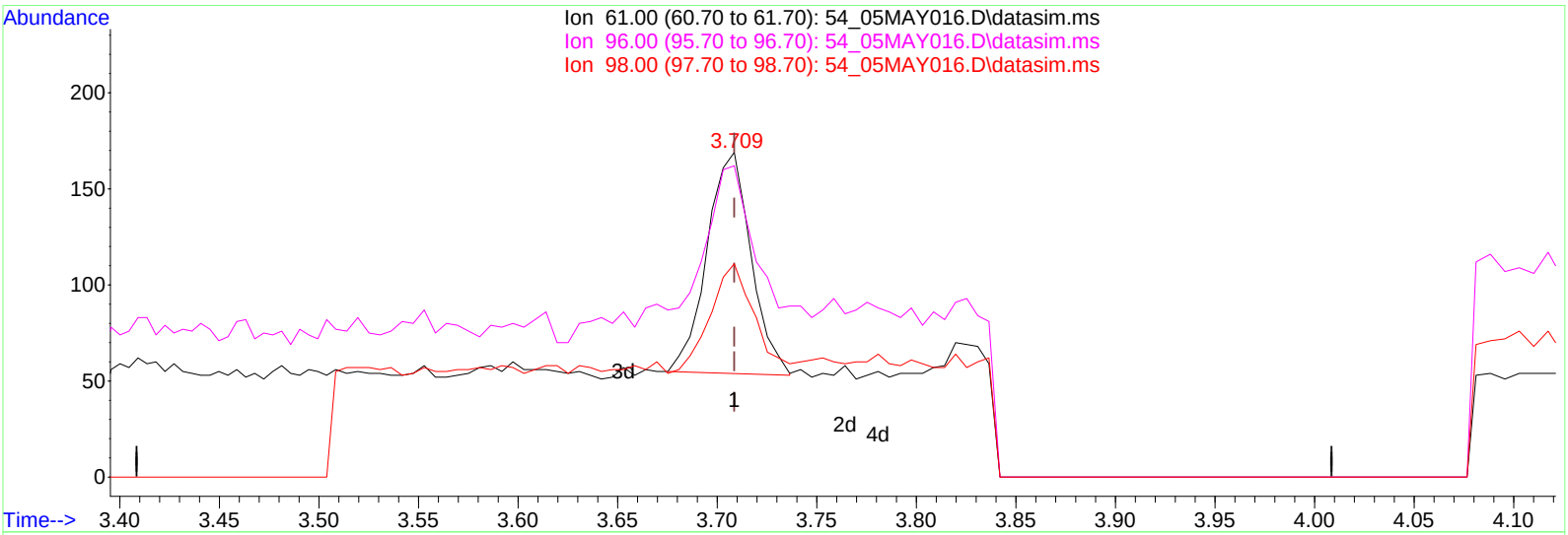
response 266

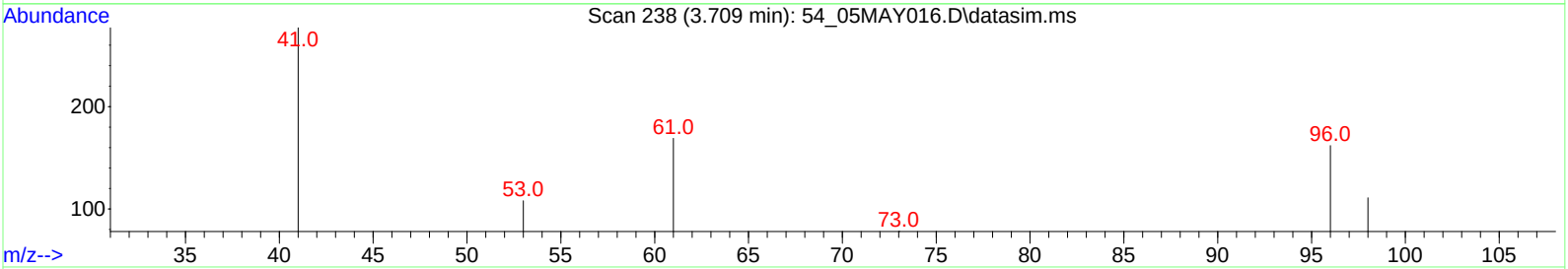
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	120.68#
98.00	57.30	107.52#
0.00	0.00	0.00

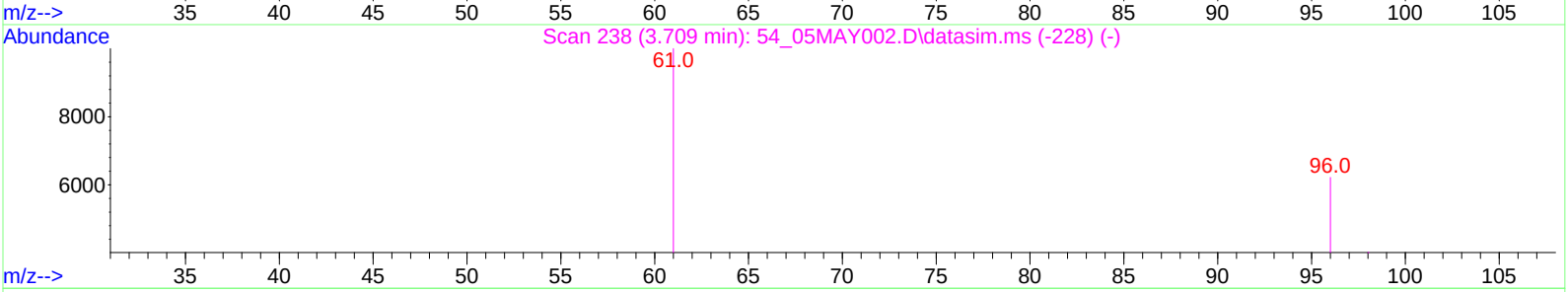
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY016.D
Acq On : 5 May 2014 11:34 am
Operator : yhl
Sample : 02180 \ F5-060
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:41:45 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







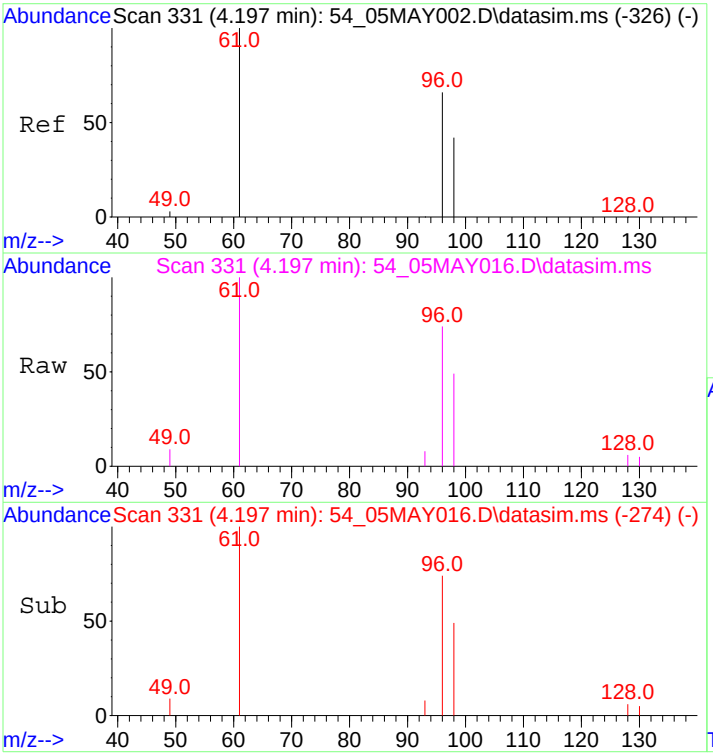
TIC: 54_05MAY016.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.709min (+0.000) 0.60 ppbv m

response 177

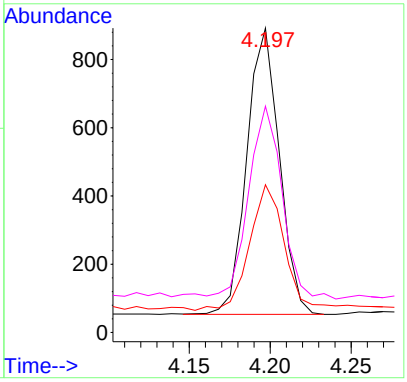
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	181.36#
98.00	57.30	161.58#
0.00	0.00	0.00

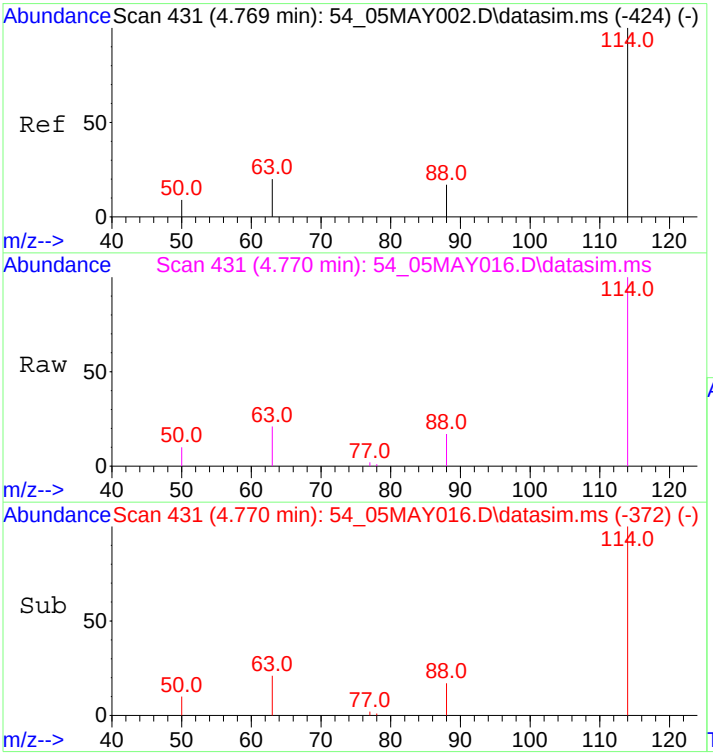


#7
cis-1,2-Dichloroethene
Concen: 4.24 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 05MAY016.D
Acq: 5 May 2014 11:34 am

Tgt Ion: 61 Resp: 1173

Ion	Ratio	Lower	Upper
61	100		
96	109.3	78.5	117.7
98	49.3	50.6	76.0#

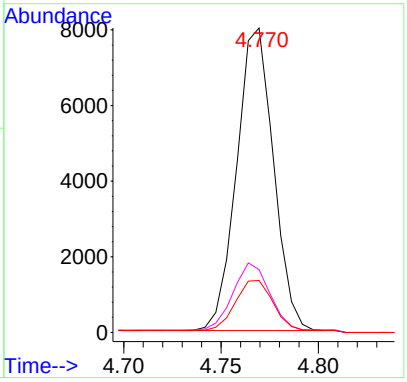


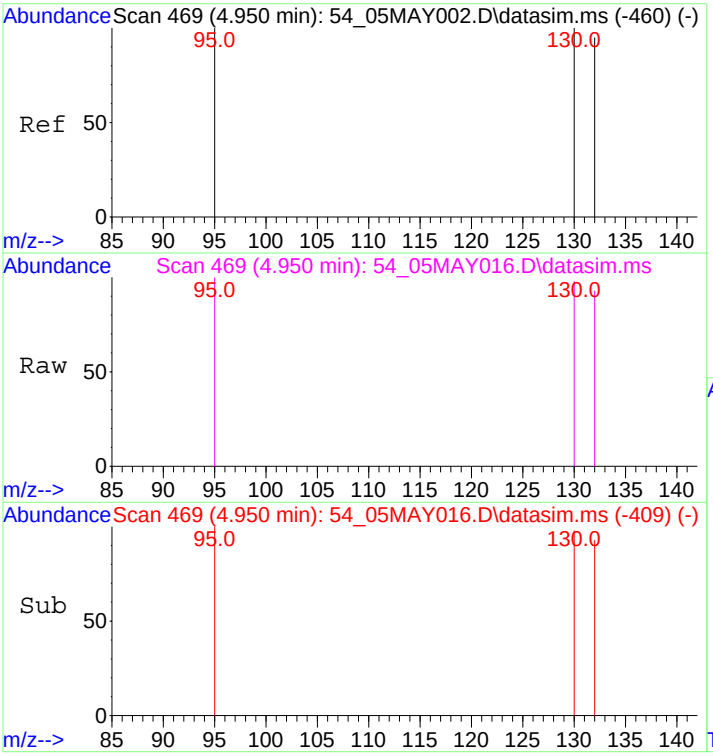


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY016.D
Acq: 5 May 2014 11:34 am

Tgt Ion:114 Resp: 10525

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.9	11.8	17.8

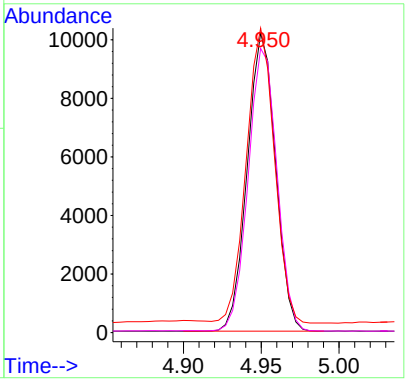


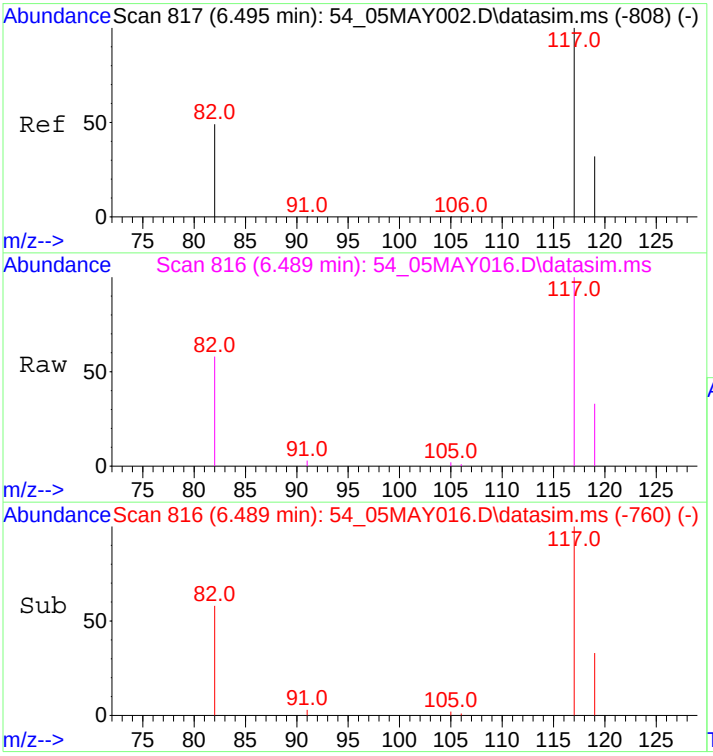


#11
Trichloroethene
Concen: 49.38 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 05MAY016.D
Acq: 5 May 2014 11:34 am

Tgt Ion:130 Resp: 12927

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	98.5	76.5	114.7

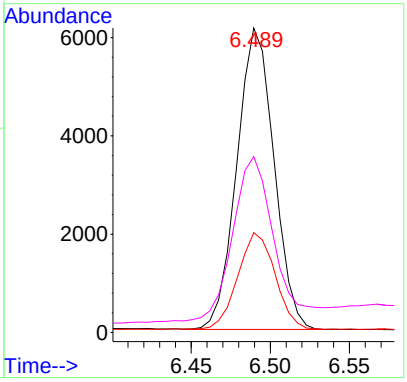


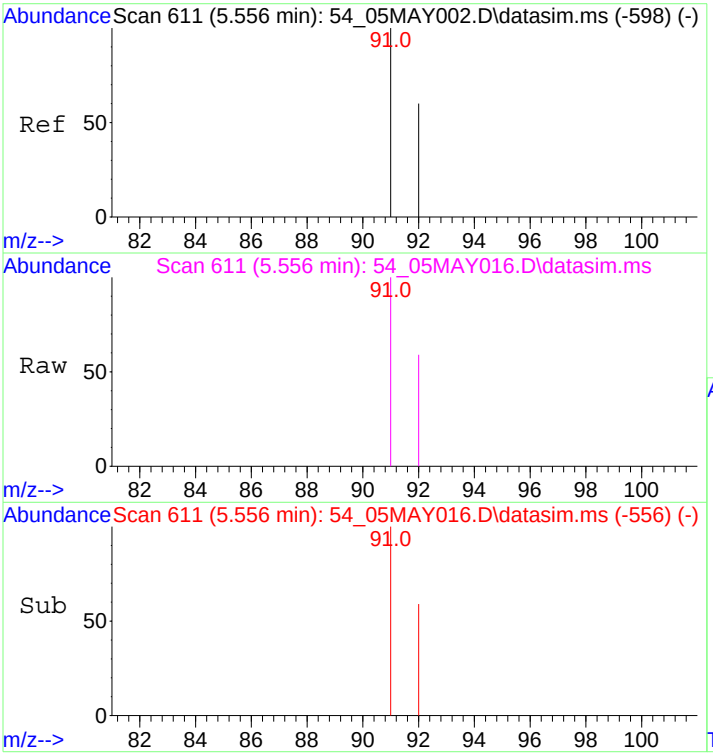


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY016.D
Acq: 5 May 2014 11:34 am

Tgt Ion:117 Resp: 10044

Ion	Ratio	Lower	Upper
117	100		
82	62.1	38.0	57.0#
119	32.3	27.0	40.4

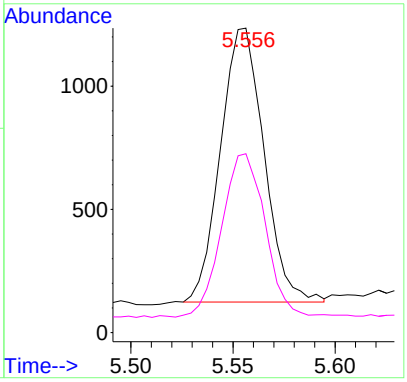


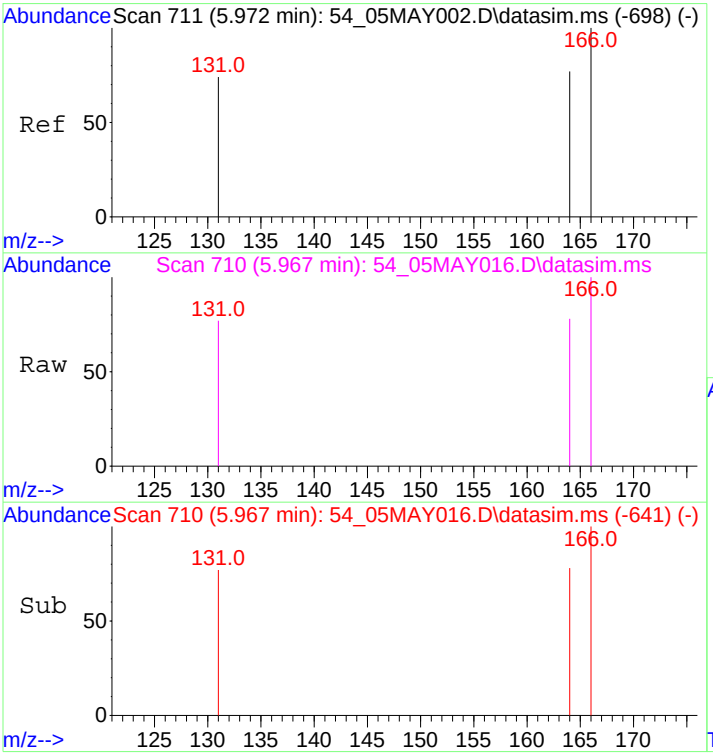


#13
Toluene
Concen: 2.74 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 05MAY016.D
Acq: 5 May 2014 11:34 am

Tgt Ion: 91 Resp: 1650

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.8	71.8

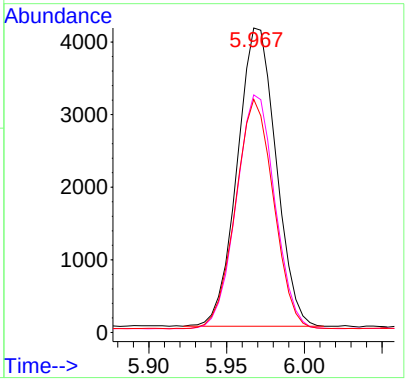




#14
Tetrachloroethene
Concen: 20.77 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54_05MAY016.D
Acq: 5 May 2014 11:34 am

Tgt Ion:166 Resp: 7143

Ion	Ratio	Lower	Upper
166	100		
164	77.8	62.6	94.0
131	75.2	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY017.D
Acq On : 5 May 2014 11:45 am
Operator : yhl
Sample : 02181 \ F5-058
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:56:08 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

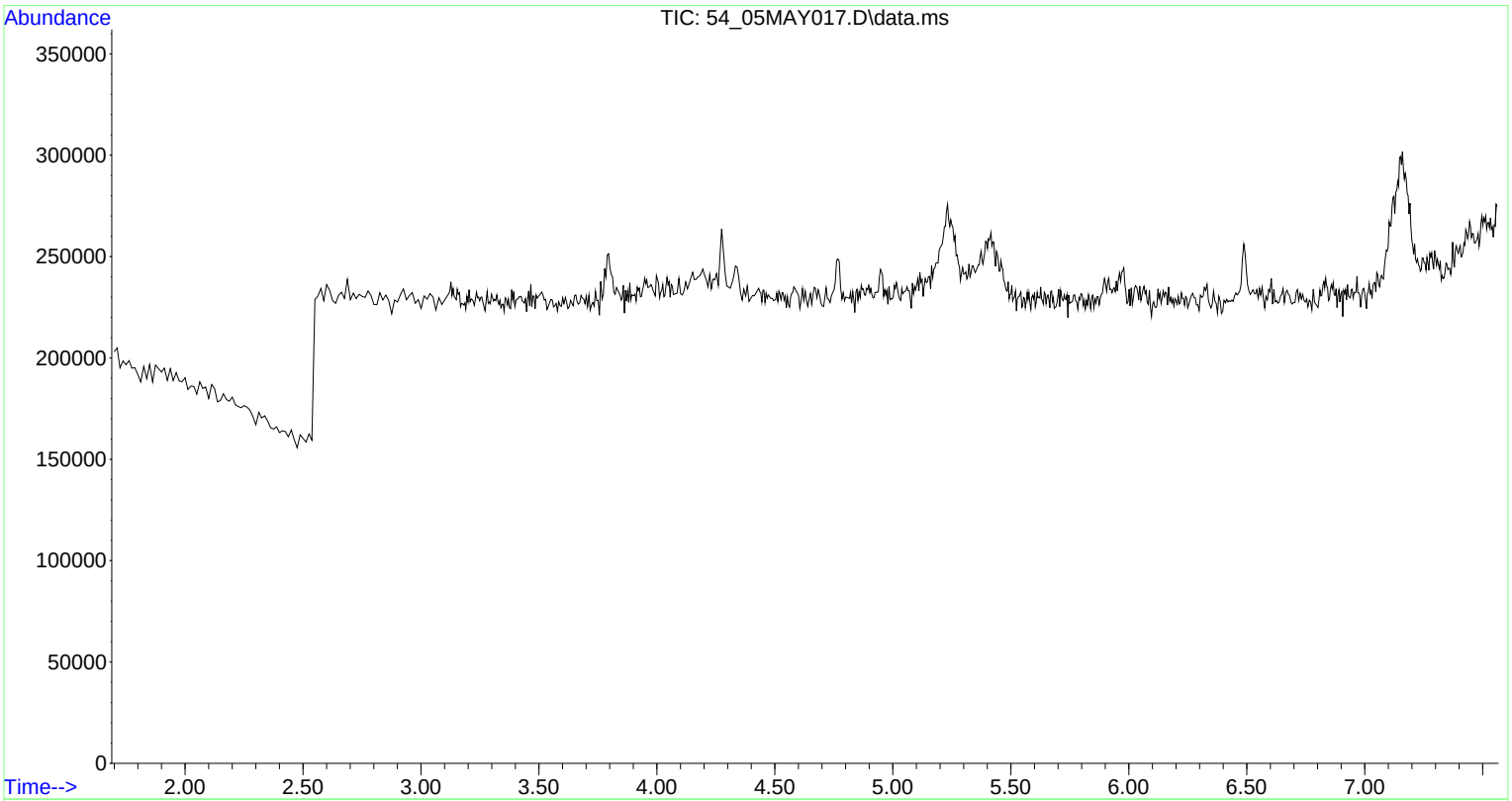
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4403	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10789	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10523	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
7] cis-1,2-Dichloroethene	4.197	61	1520	5.42	ppbv	# 86
11] Trichloroethene	4.950	130	4191	15.62	ppbv	97
13] Toluene	5.556	91	1104	1.75	ppbv	98
14] Tetrachloroethene	5.967	166	4342	12.05	ppbv	99

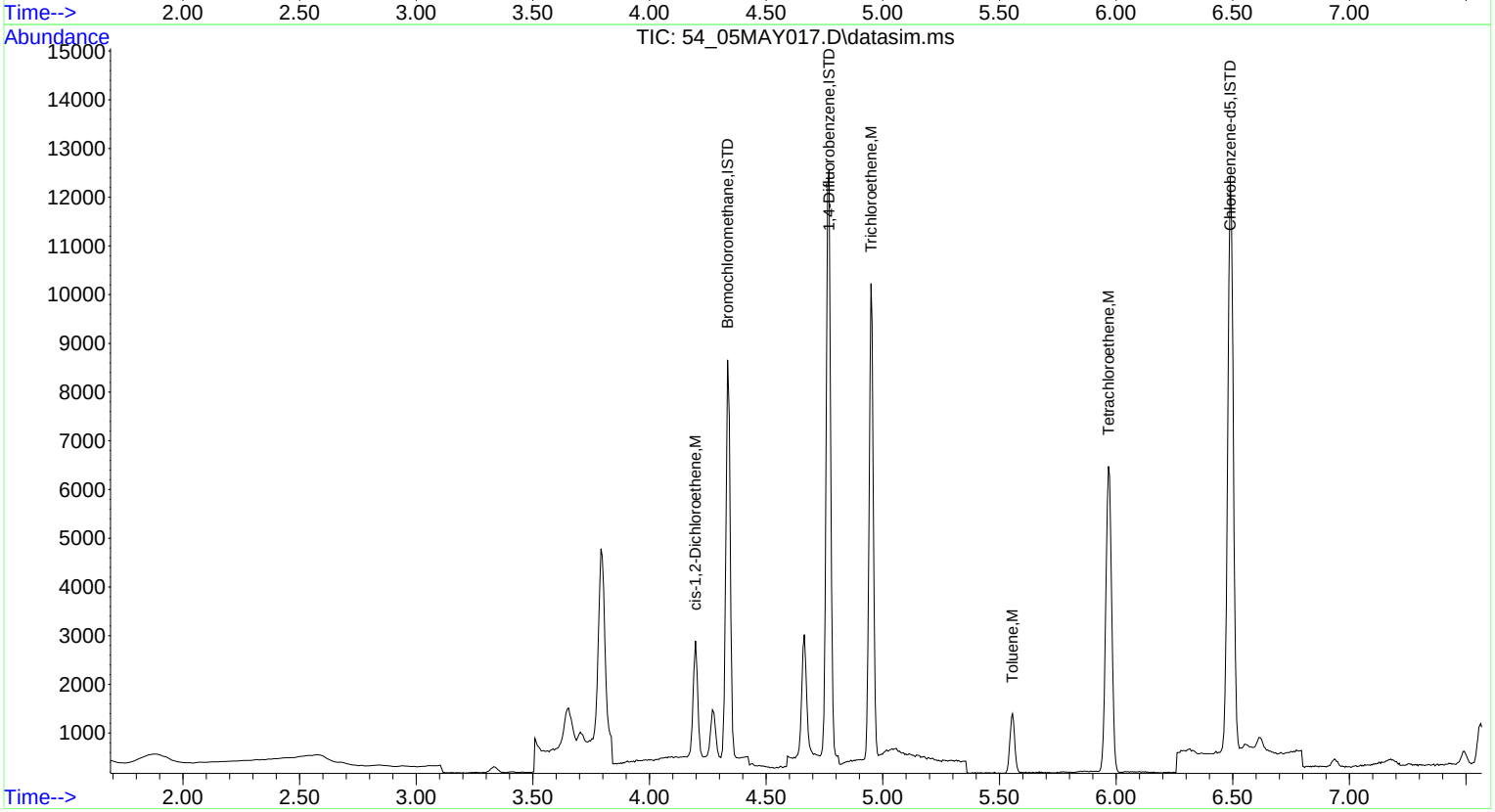
(#) = qualifier out of range (m) = manual integration (+) = signals summed

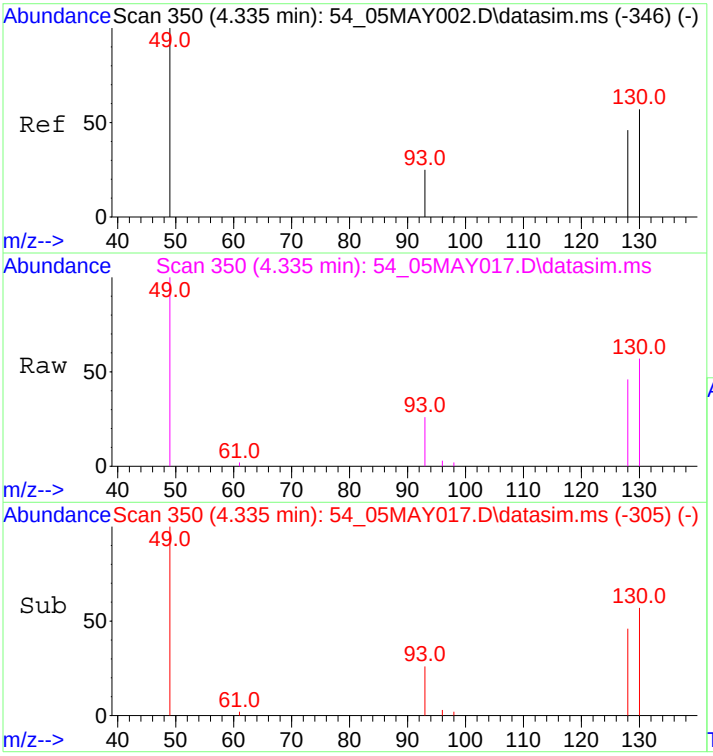
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY017.D
Acq On : 5 May 2014 11:45 am
Operator : yhl
Sample : 02181 \ F5-058
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 11:56:08 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



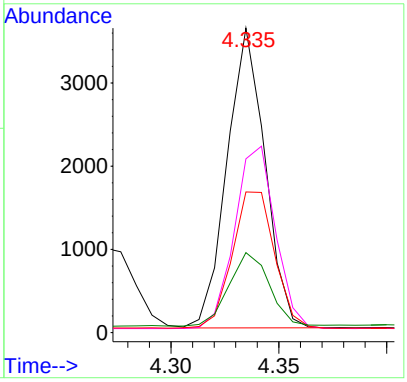


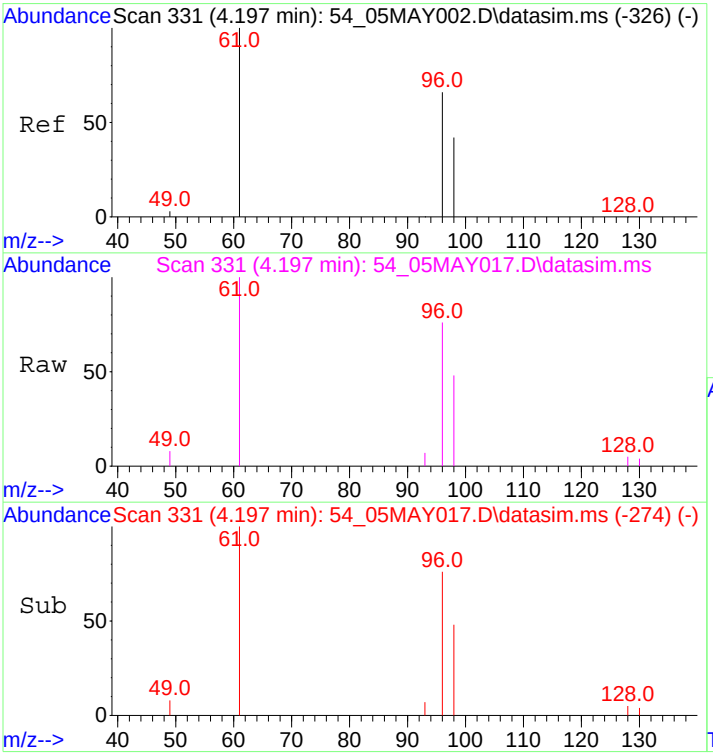


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY017.D
Acq: 5 May 2014 11:45 am

Tgt Ion: 49 Resp: 4403

Ion	Ratio	Lower	Upper
49	100		
130	65.5	87.2	130.8#
128	51.1	68.0	102.0#
93	26.1	29.3	43.9#

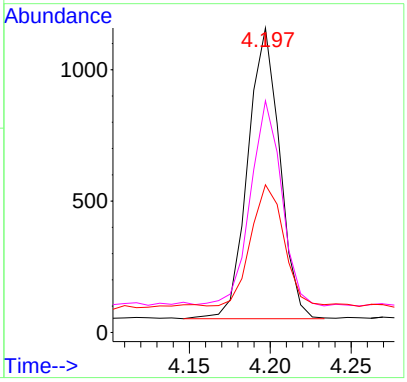


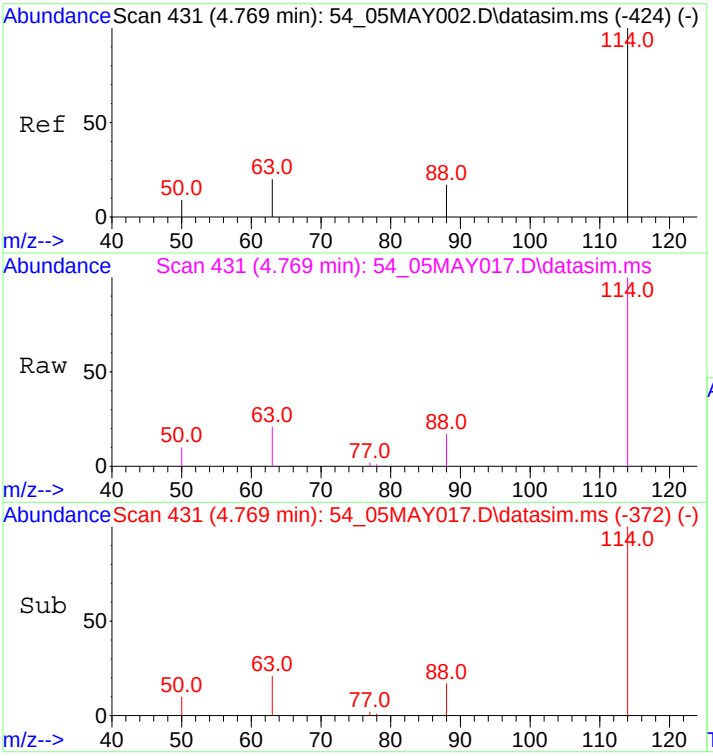


#7
cis-1,2-Dichloroethene
Concen: 5.42 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_05MAY017.D
Acq: 5 May 2014 11:45 am

Tgt Ion: 61 Resp: 1520

Ion	Ratio	Lower	Upper
61	100		
96	76.9	78.5	117.7#
98	61.0	50.6	76.0

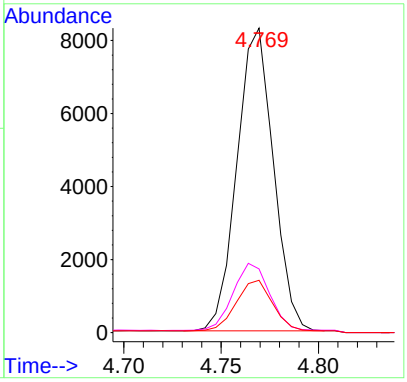


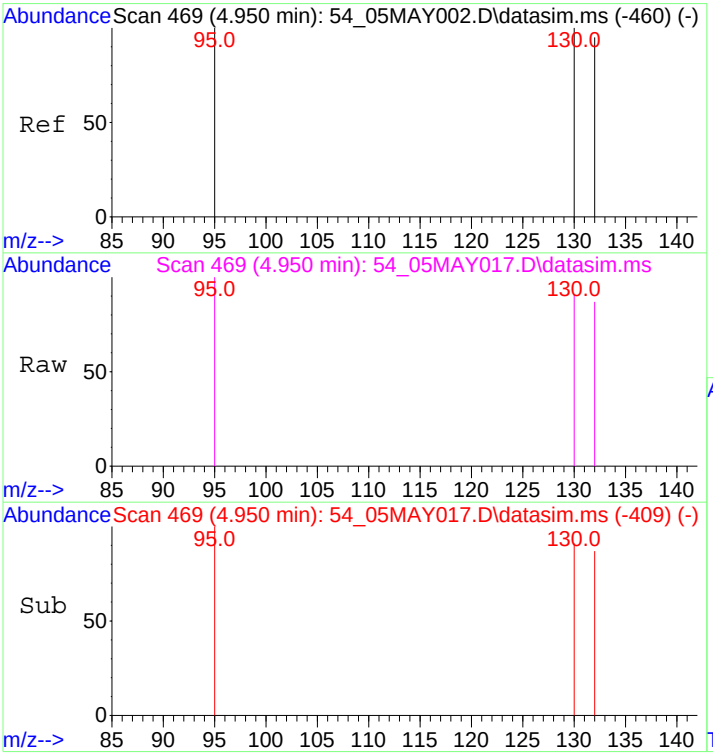


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 05MAY017.D
Acq: 5 May 2014 11:45 am

Tgt Ion:114 Resp: 10789

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.6	11.8	17.8

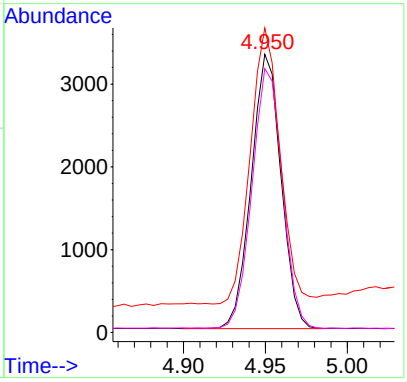


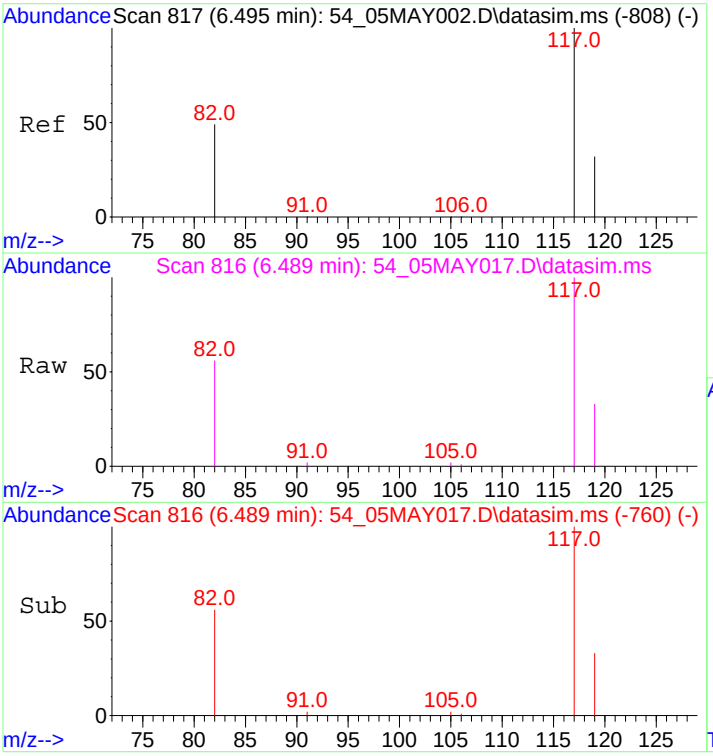


#11
Trichloroethene
Concen: 15.62 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_05MAY017.D
Acq: 5 May 2014 11:45 am

Tgt Ion:130 Resp: 4191

Ion	Ratio	Lower	Upper
130	100		
132	96.6	76.9	115.3
95	100.5	76.5	114.7

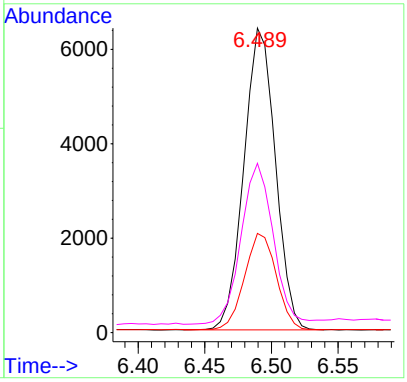


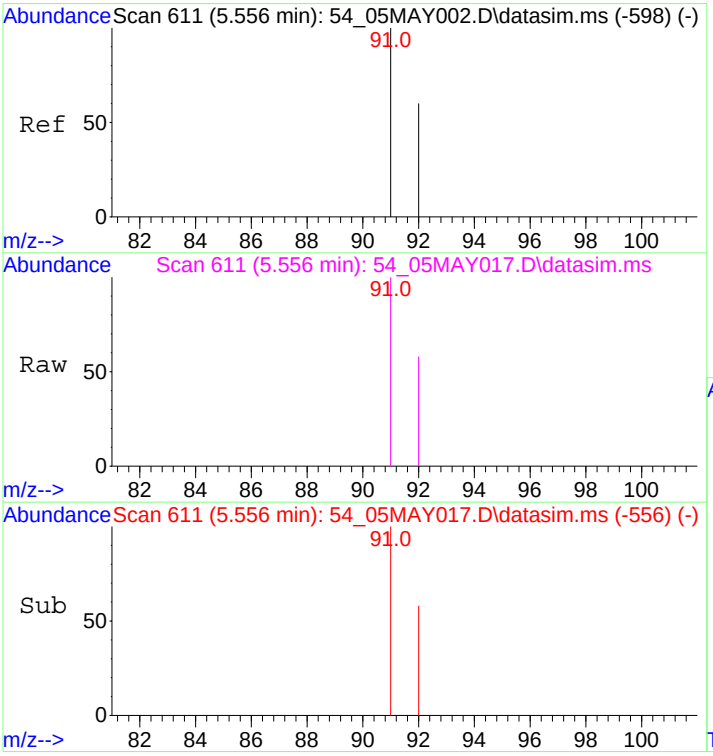


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY017.D
Acq: 5 May 2014 11:45 am

Tgt Ion:117 Resp: 10523

Ion	Ratio	Lower	Upper
117	100		
82	54.3	38.0	57.0
119	32.2	27.0	40.4

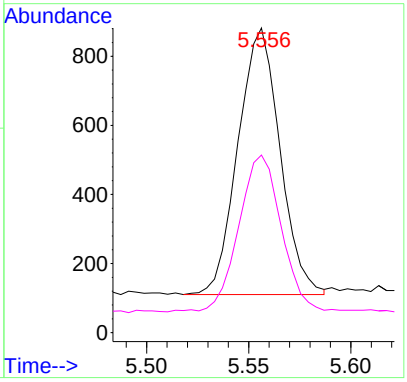


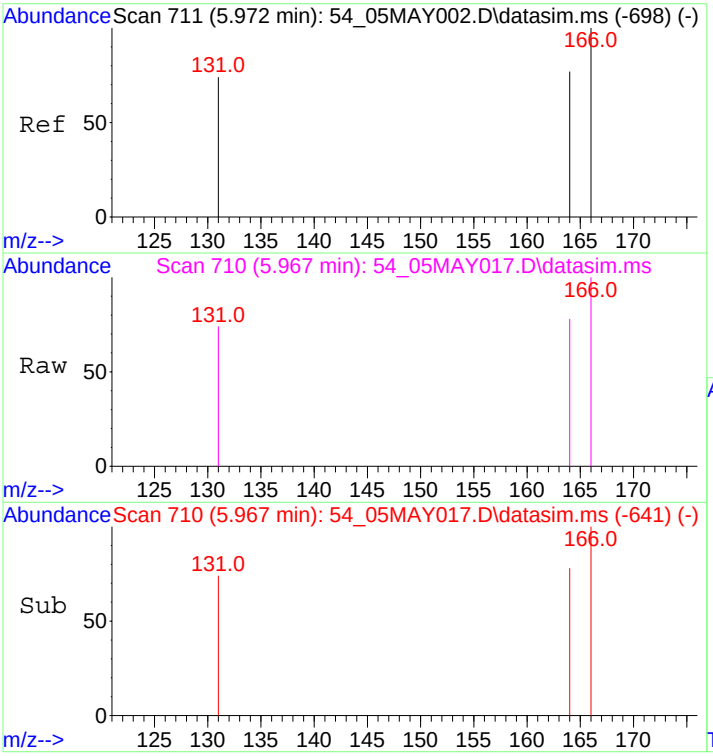


#13
Toluene
Concen: 1.75 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY017.D
Acq: 5 May 2014 11:45 am

Tgt Ion: 91 Resp: 1104

Ion	Ratio	Lower	Upper
91	100		
92	58.2	47.8	71.8

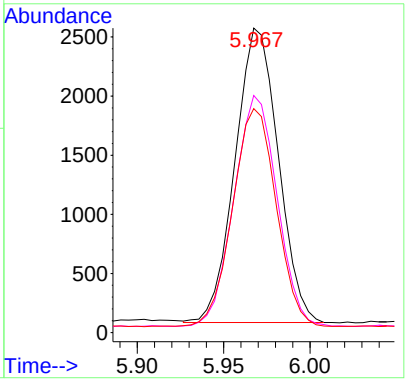




#14
Tetrachloroethene
Concen: 12.05 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 05MAY017.D
Acq: 5 May 2014 11:45 am

Tgt Ion:166 Resp: 4342

Ion	Ratio	Lower	Upper
166	100		
164	78.3	62.6	94.0
131	74.4	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY018.D
Acq On : 5 May 2014 11:57 am
Operator : yhl
Sample : 02182 \ F5-056
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 12:06:32 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

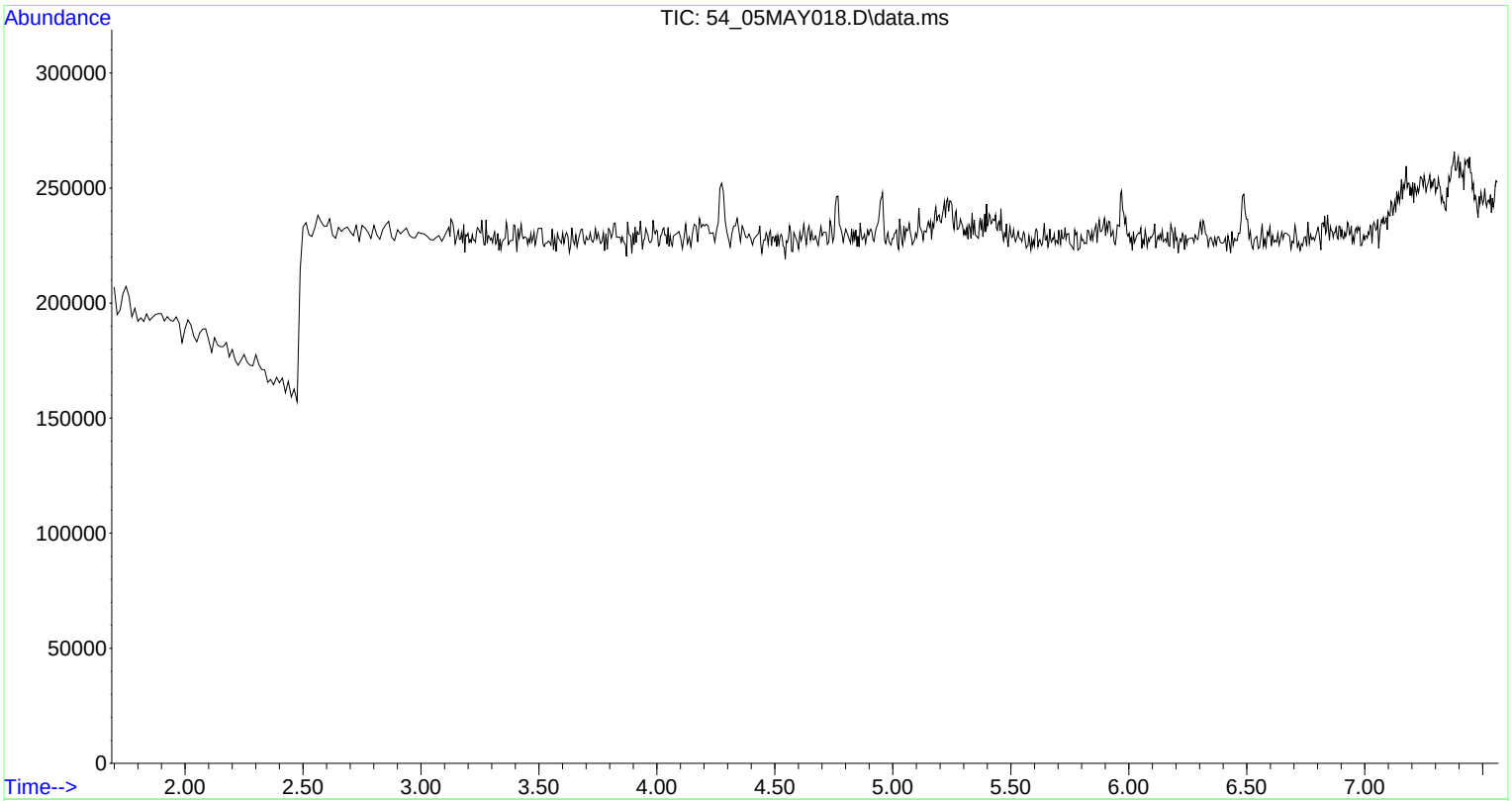
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4048	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9745	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9302	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
7] cis-1,2-Dichloroethene	4.197	61	2820	10.93	ppbv	# 74
11] Trichloroethene	4.950	130	5381	22.20	ppbv	98
13] Toluene	5.552	91	757	1.36	ppbv	99
14] Tetrachloroethene	5.967	166	5384	16.90	ppbv	98

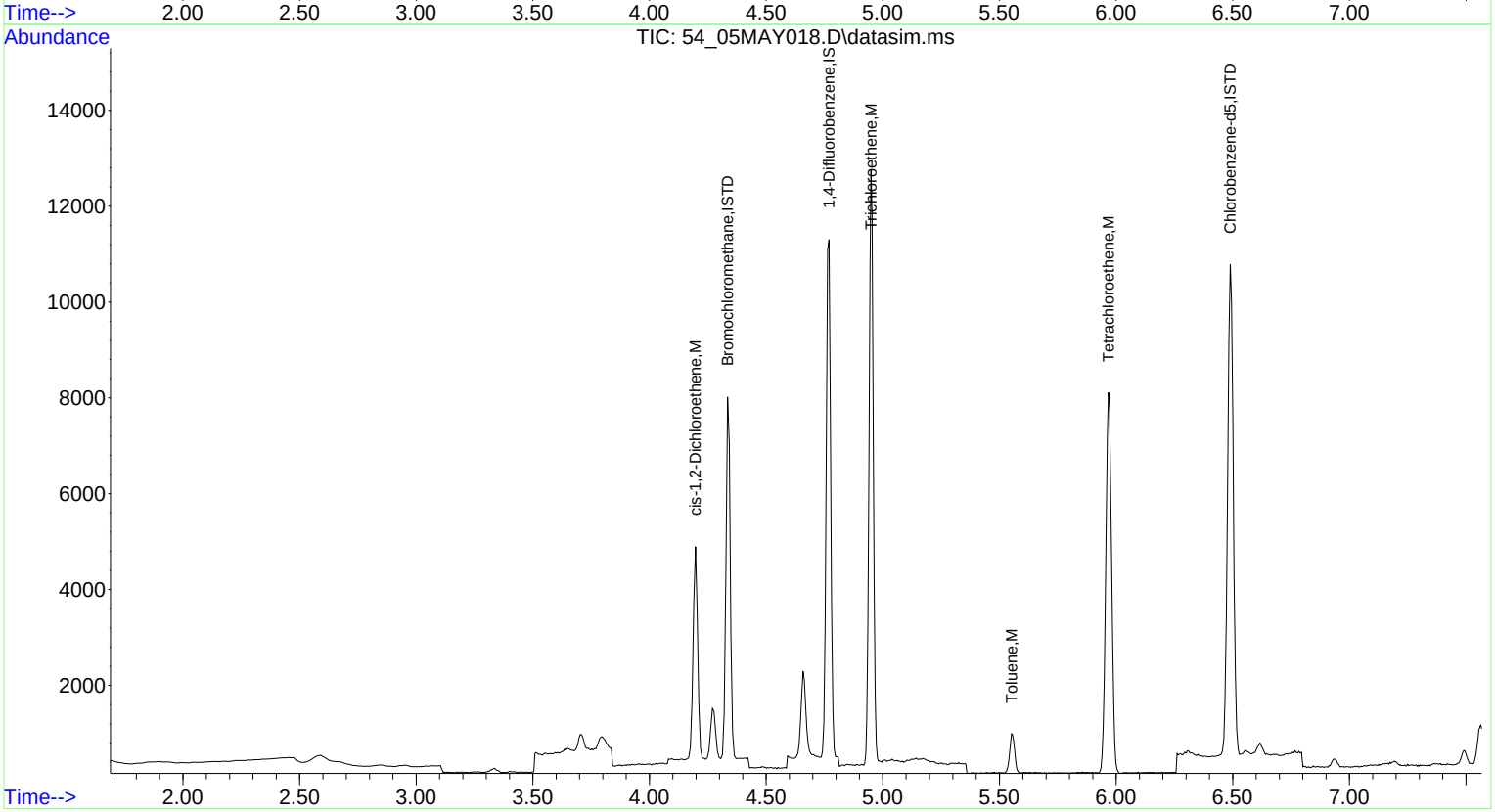
(#) = qualifier out of range (m) = manual integration (+) = signals summed

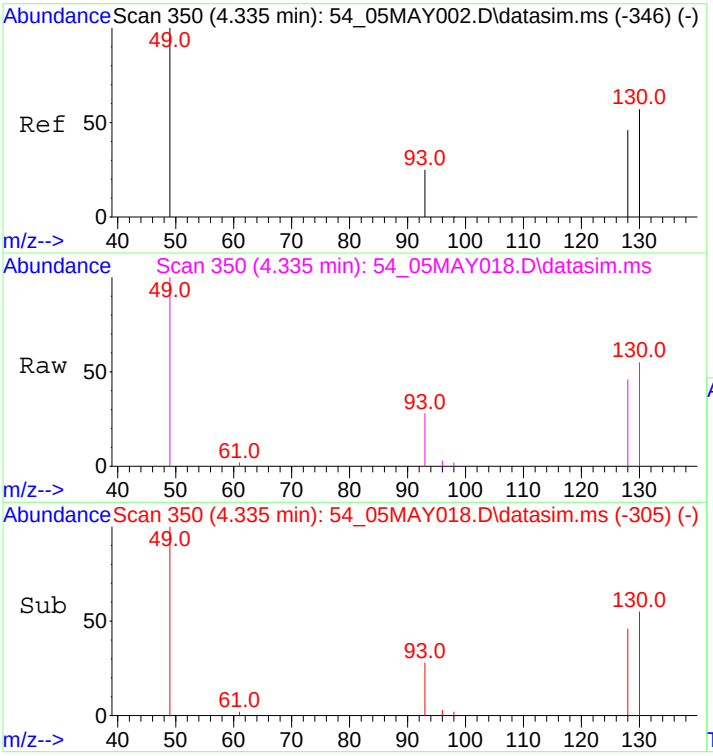
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY018.D
Acq On : 5 May 2014 11:57 am
Operator : yhl
Sample : 02182 \ F5-056
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 12:06:32 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



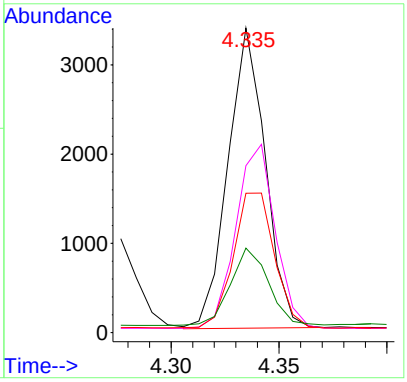


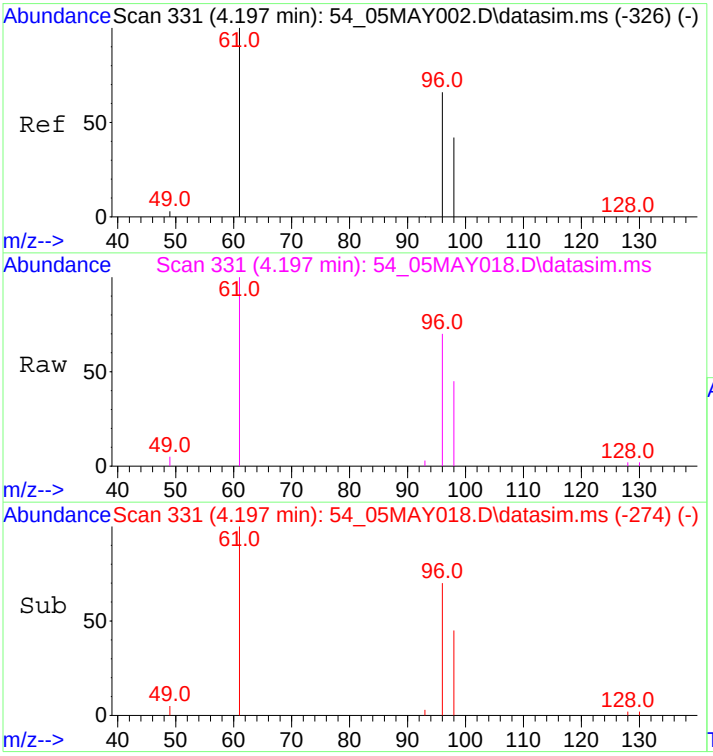


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY018.D
Acq: 5 May 2014 11:57 am

Tgt Ion: 49 Resp: 4048

Ion	Ratio	Lower	Upper
49	100		
130	64.5	87.2	130.8#
128	49.7	68.0	102.0#
93	26.2	29.3	43.9#

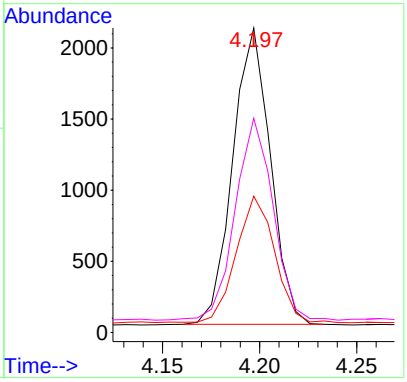


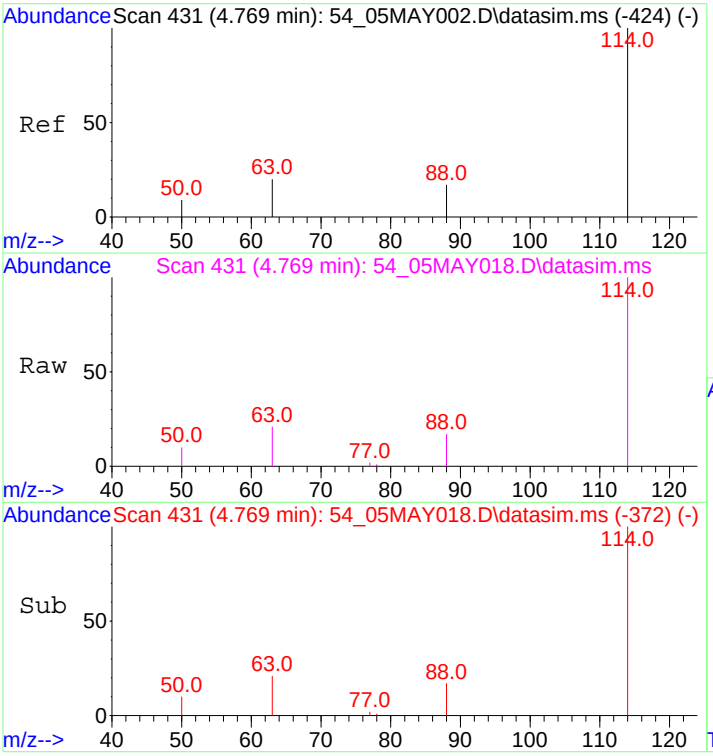


#7
cis-1,2-Dichloroethene
Concen: 10.93 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_05MAY018.D
Acq: 5 May 2014 11:57 am

Tgt Ion: 61 Resp: 2820

Ion	Ratio	Lower	Upper
61	100		
96	73.2	78.5	117.7#
98	42.8	50.6	76.0#

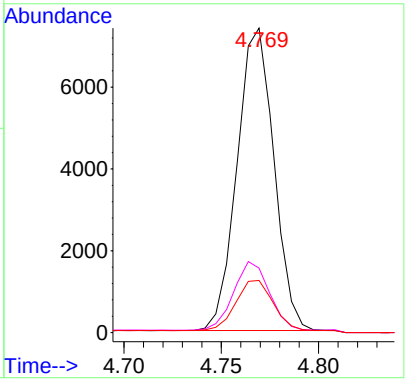


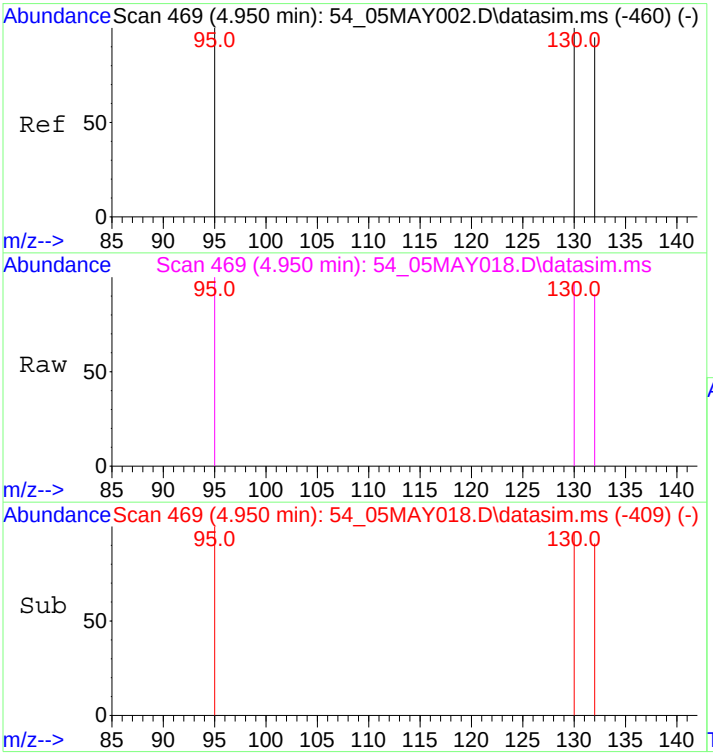


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 05MAY018.D
Acq: 5 May 2014 11:57 am

Tgt Ion:114 Resp: 9745

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.9	11.8	17.8

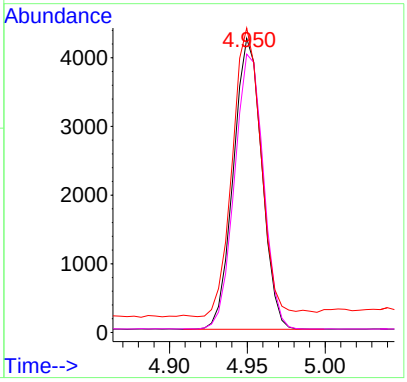


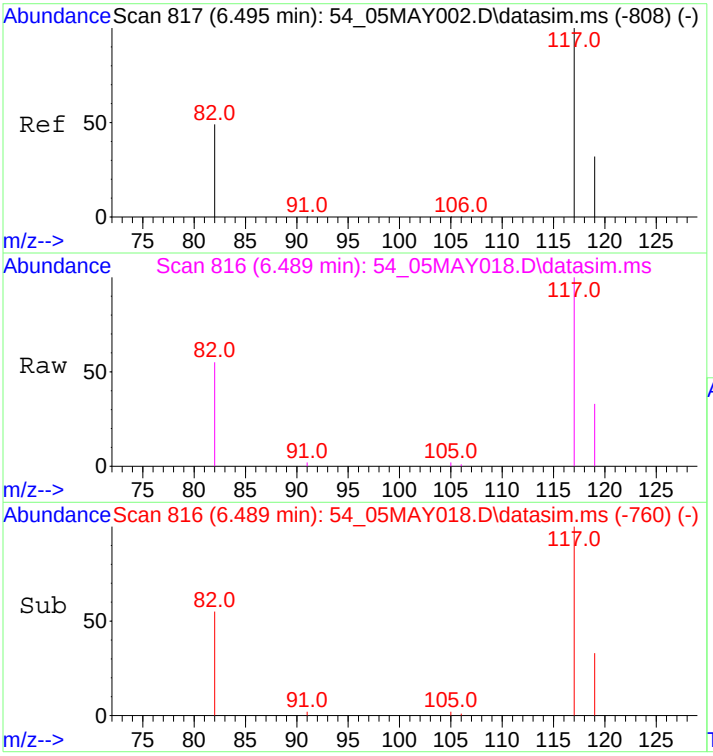


#11
Trichloroethene
Concen: 22.20 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_05MAY018.D
Acq: 5 May 2014 11:57 am

Tgt Ion:130 Resp: 5381

Ion	Ratio	Lower	Upper
130	100		
132	95.9	76.9	115.3
95	100.1	76.5	114.7

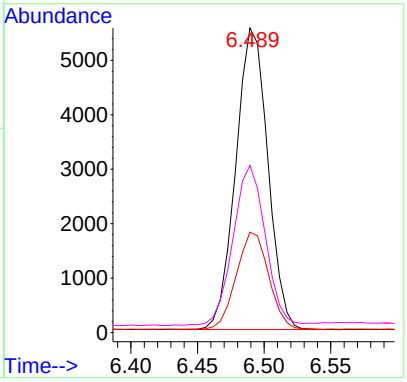


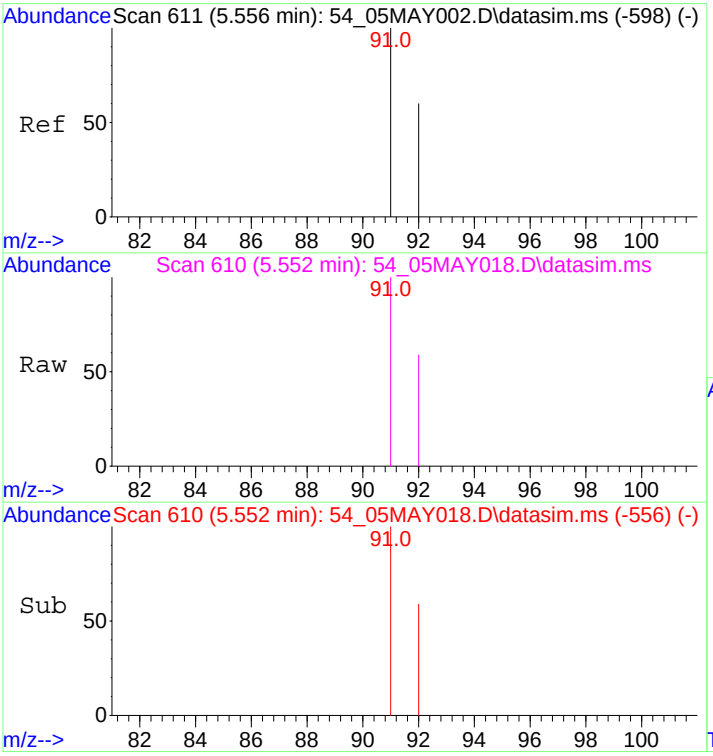


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY018.D
Acq: 5 May 2014 11:57 am

Tgt Ion:117 Resp: 9302

Ion	Ratio	Lower	Upper
117	100		
82	53.3	38.0	57.0
119	32.3	27.0	40.4

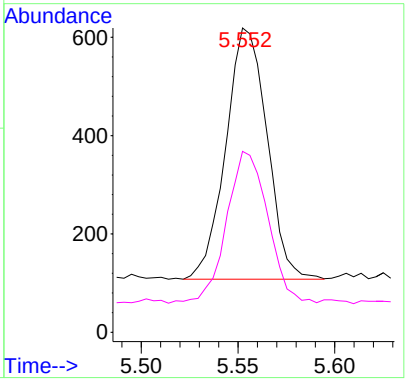


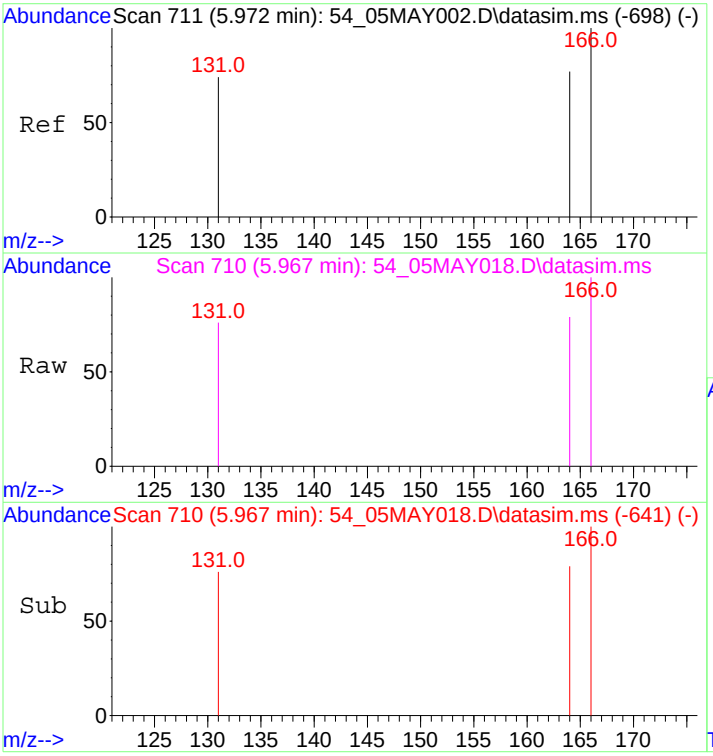


#13
Toluene
Concen: 1.36 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54_05MAY018.D
Acq: 5 May 2014 11:57 am

Tgt Ion: 91 Resp: 757

Ion	Ratio	Lower	Upper
91	100		
92	60.9	47.8	71.8

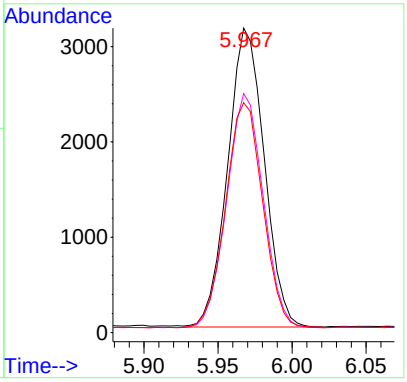




#14
Tetrachloroethene
Concen: 16.90 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 05MAY018.D
Acq: 5 May 2014 11:57 am

Tgt Ion:166 Resp: 5384

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	76.5	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY019.D
Acq On : 5 May 2014 12:25 pm
Operator : yhl
Sample : 02183 \ F5-054
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 12:34:07 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4622	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	11416	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	10636	10.00	ppbv	0.00

System Monitoring Compounds

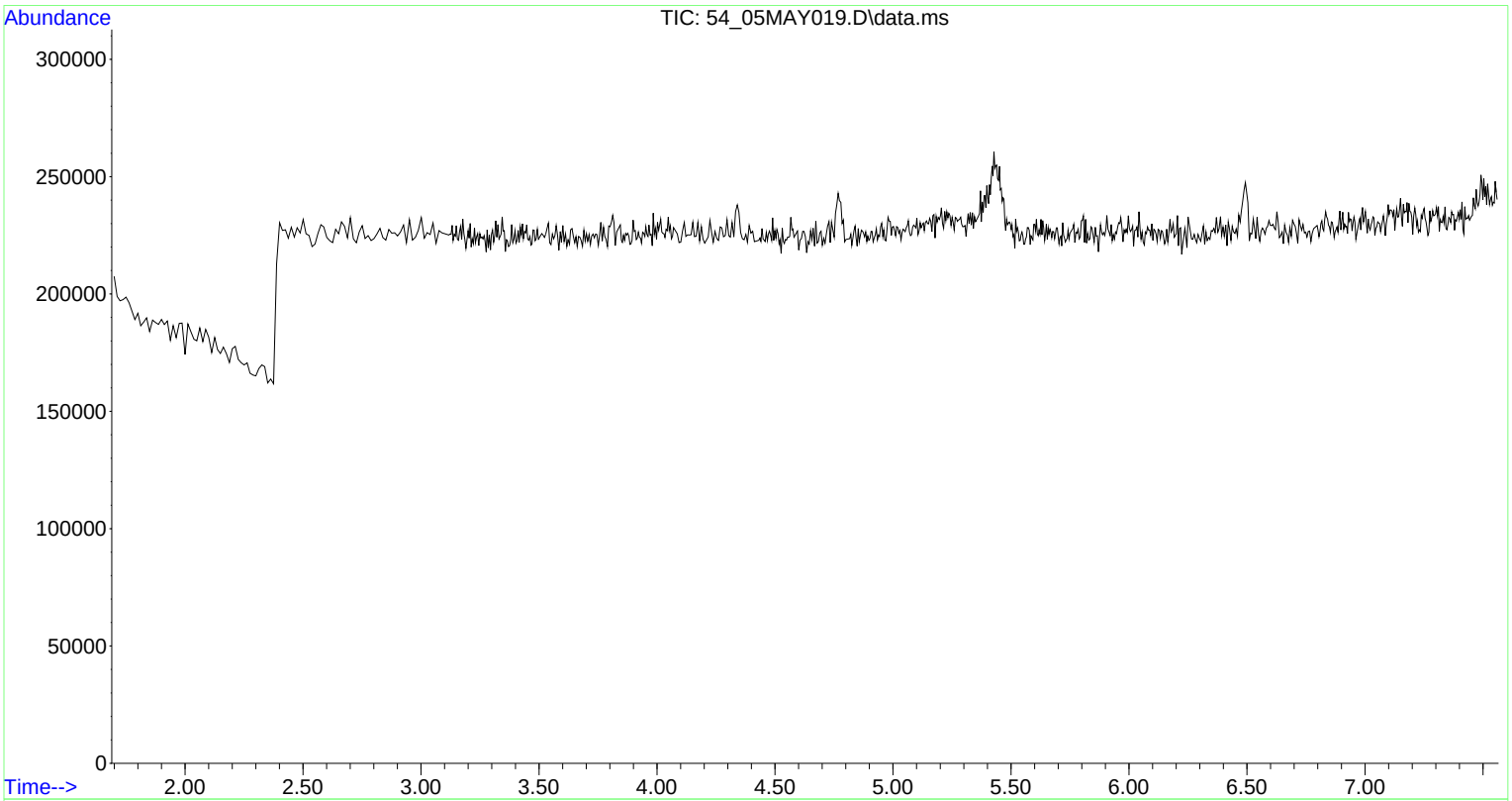
Target Compounds	Qvalue

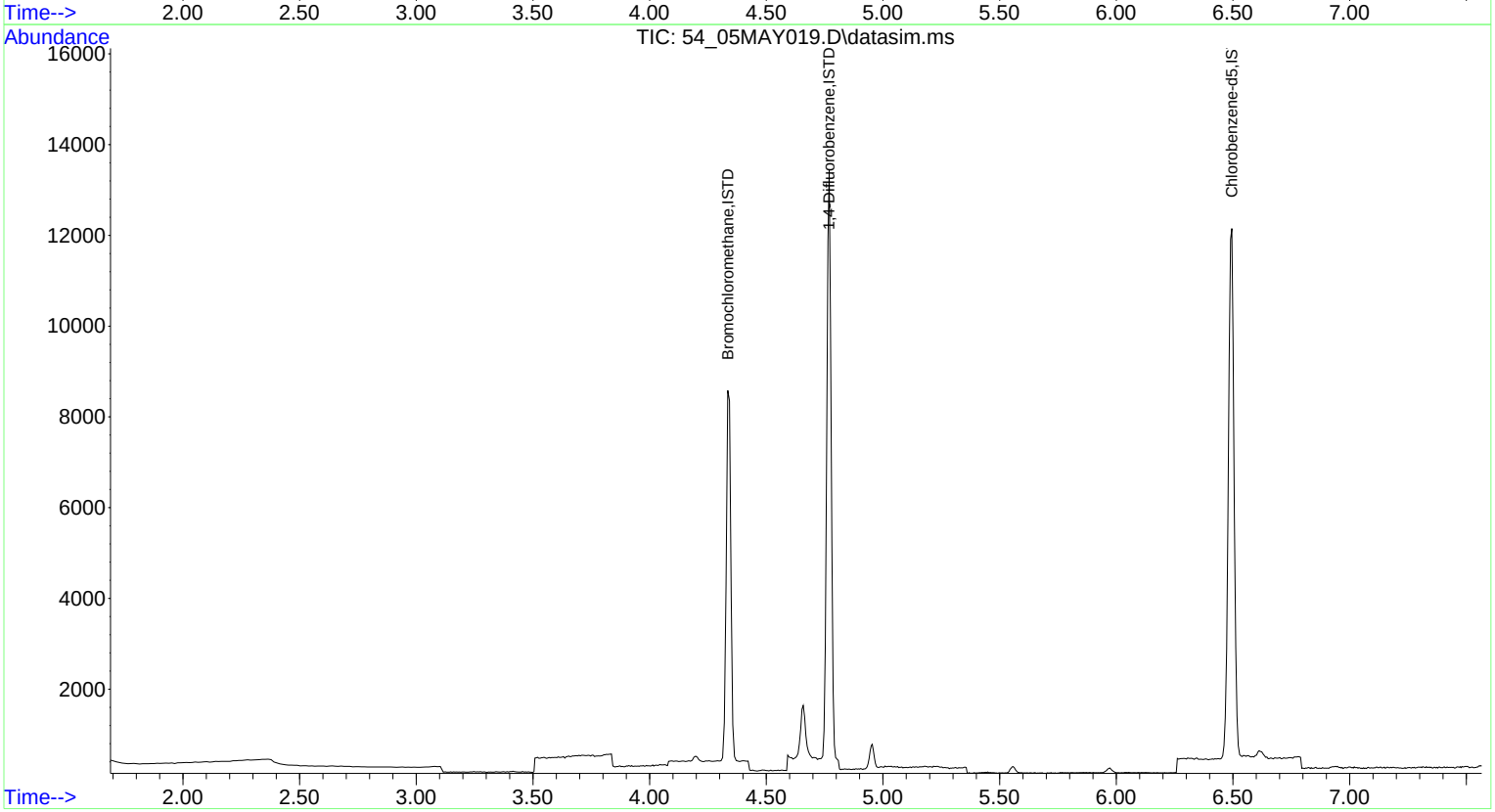
(#) = qualifier out of range (m) = manual integration (+) = signals summed

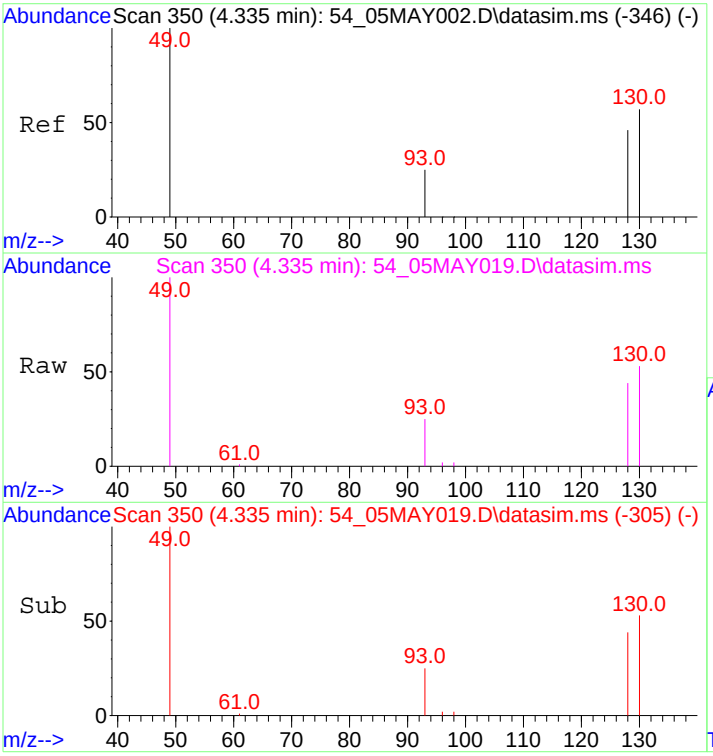
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY019.D
Acq On : 5 May 2014 12:25 pm
Operator : yhl
Sample : 02183 \ F5-054
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 12:34:07 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



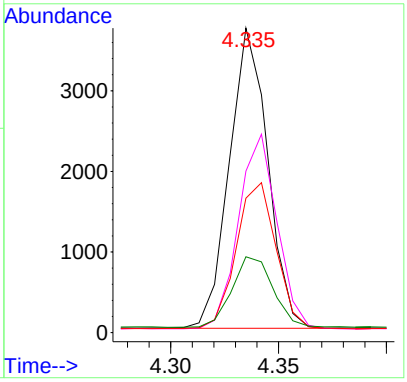


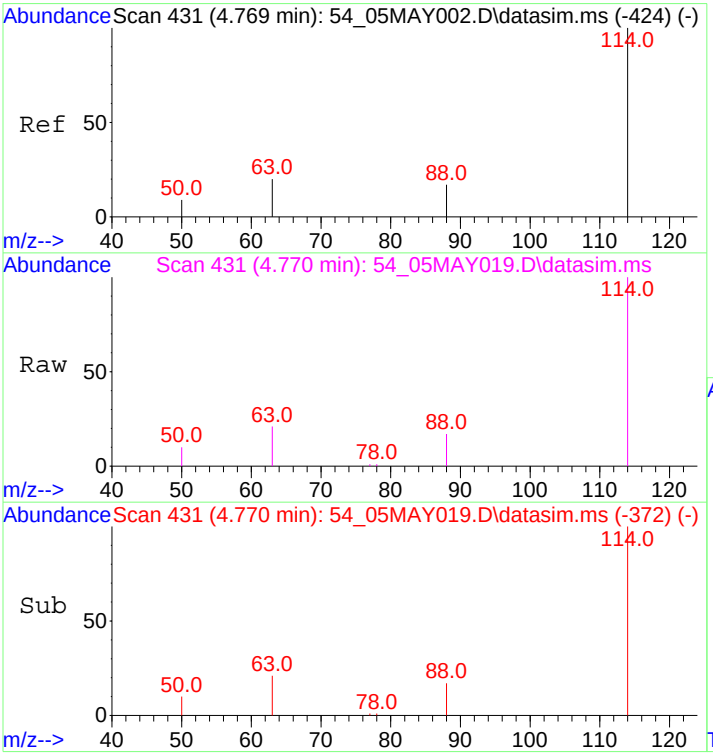


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY019.D
Acq: 5 May 2014 12:25 pm

Tgt Ion: 49 Resp: 4622

Ion	Ratio	Lower	Upper
49	100		
130	64.9	87.2	130.8#
128	50.2	68.0	102.0#
93	25.0	29.3	43.9#

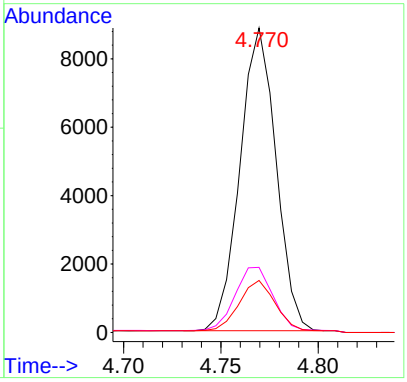


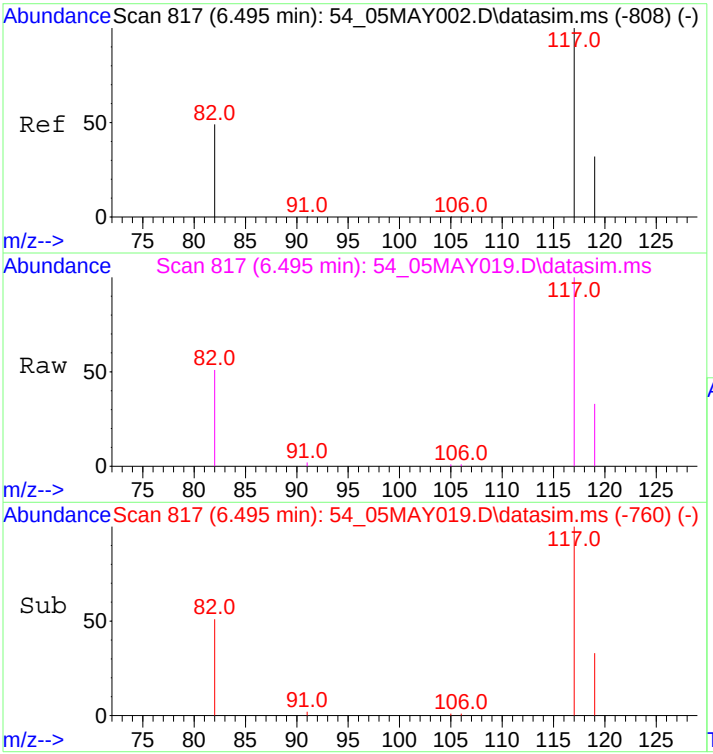


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY019.D
Acq: 5 May 2014 12:25 pm

Tgt Ion:114 Resp: 11416

Ion	Ratio	Lower	Upper
114	100		
63	21.8	12.0	18.0#
88	16.4	11.8	17.8

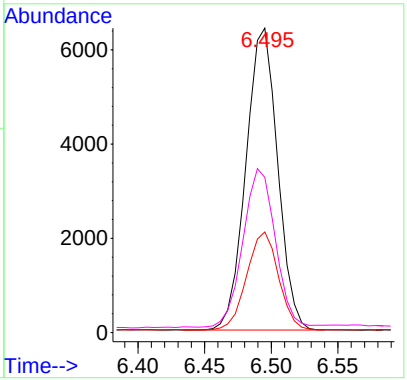




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 05MAY019.D
Acq: 5 May 2014 12:25 pm

Tgt Ion:117 Resp: 10636

Ion	Ratio	Lower	Upper
117	100		
82	53.3	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY020.D
Acq On : 5 May 2014 12:38 pm
Operator : yhl
Sample : 02184 \ F5-011
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 12:44:58 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

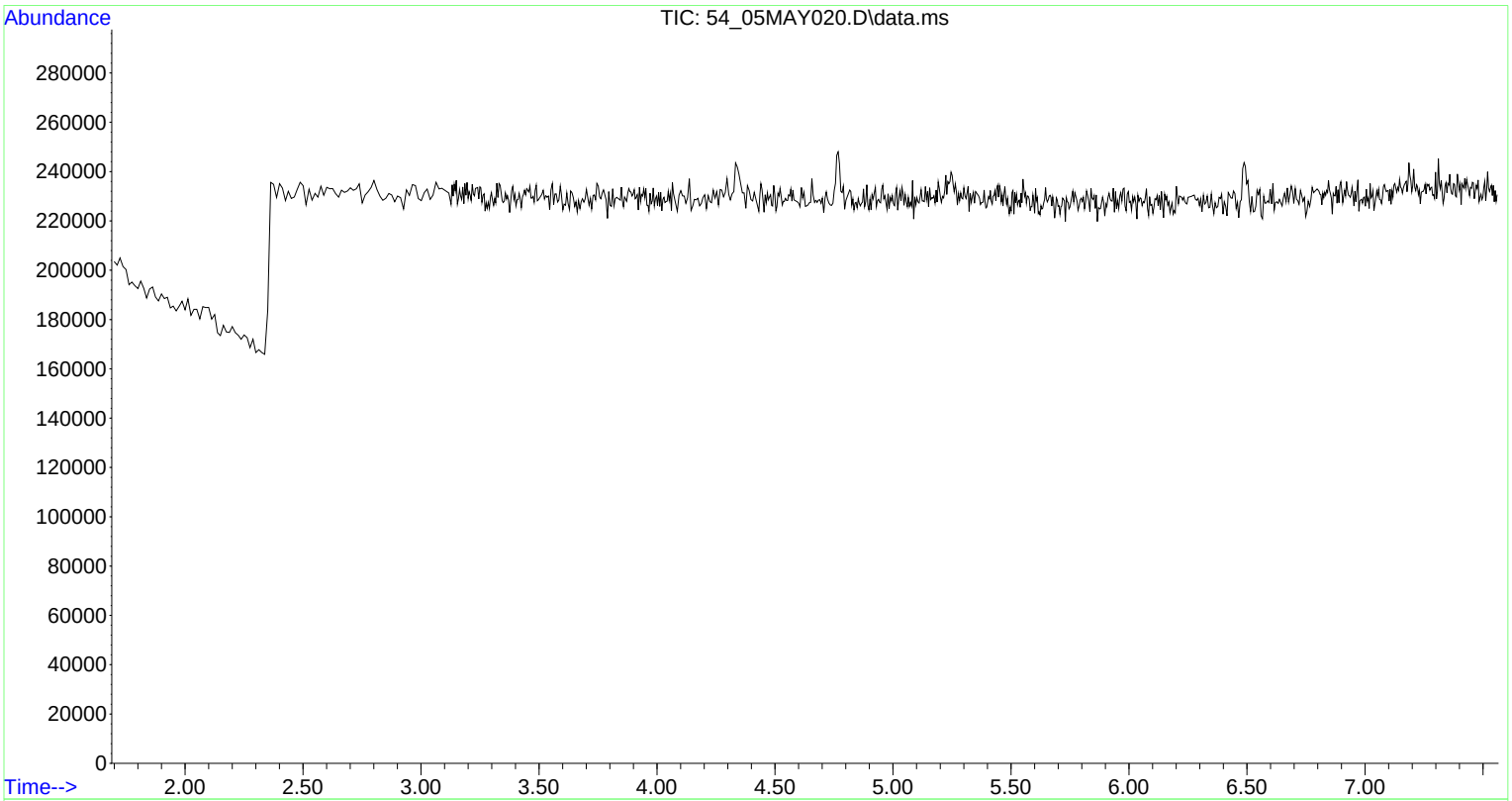
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4322	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10645	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9858	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
7] cis-1,2-Dichloroethene	4.197	61	466	1.69	ppbv	# 70
11] Trichloroethene	4.950	130	752	2.84	ppbv	# 74
13] Toluene	5.556	91	694	1.17	ppbv	99
14] Tetrachloroethene	5.967	166	590	1.75	ppbv	96
16] m,p-Xylene	6.617	91	332	0.58	ppbv	# 86

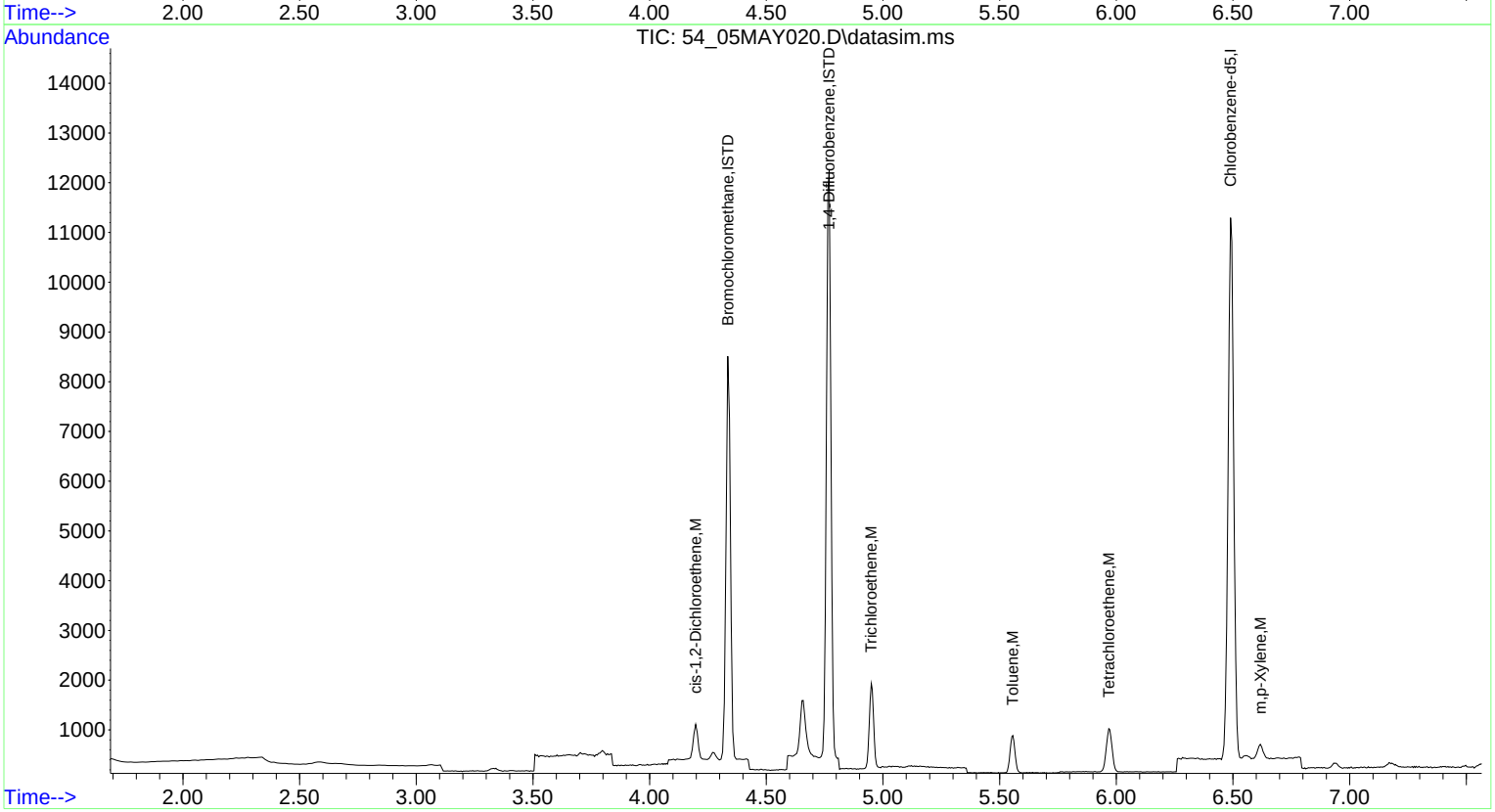
(#) = qualifier out of range (m) = manual integration (+) = signals summed

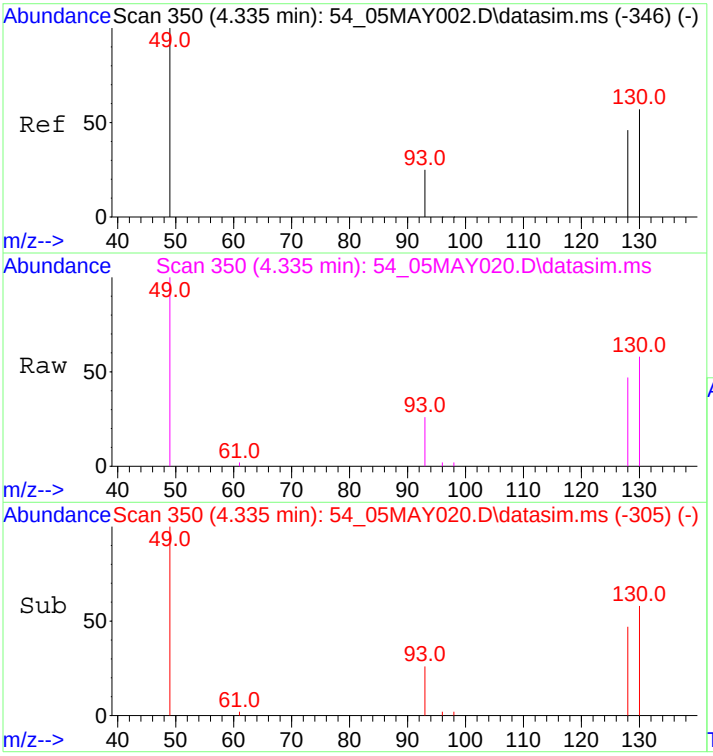
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY020.D
Acq On : 5 May 2014 12:38 pm
Operator : yhl
Sample : 02184 \ F5-011
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 12:44:58 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



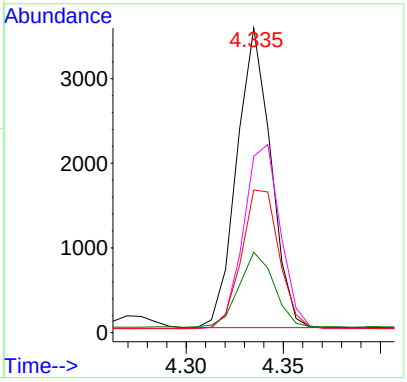


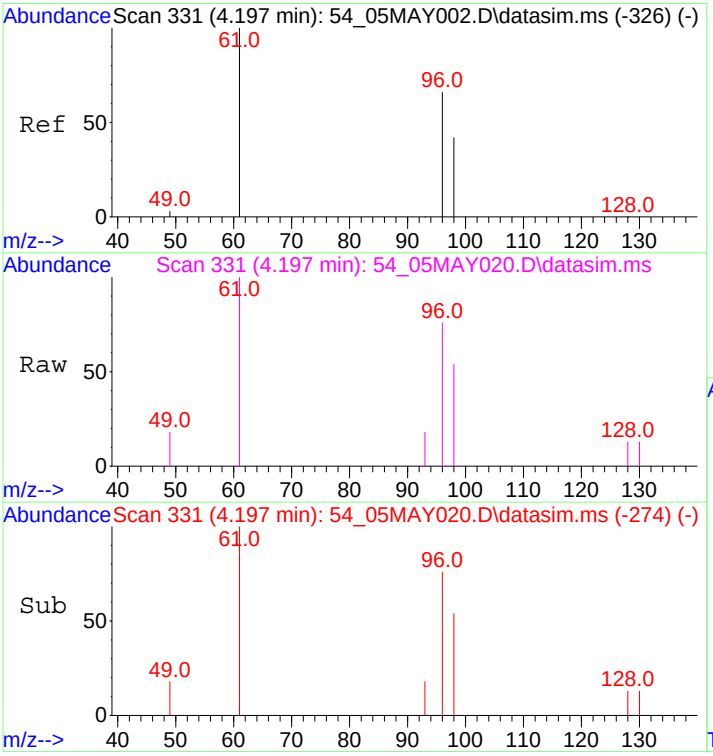


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY020.D
Acq: 5 May 2014 12:38 pm

Tgt Ion: 49 Resp: 4322

Ion	Ratio	Lower	Upper
49	100		
130	66.1	87.2	130.8#
128	51.0	68.0	102.0#
93	26.0	29.3	43.9#

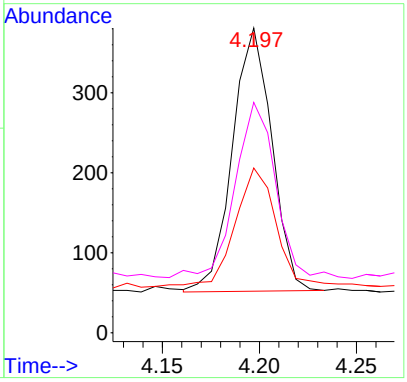


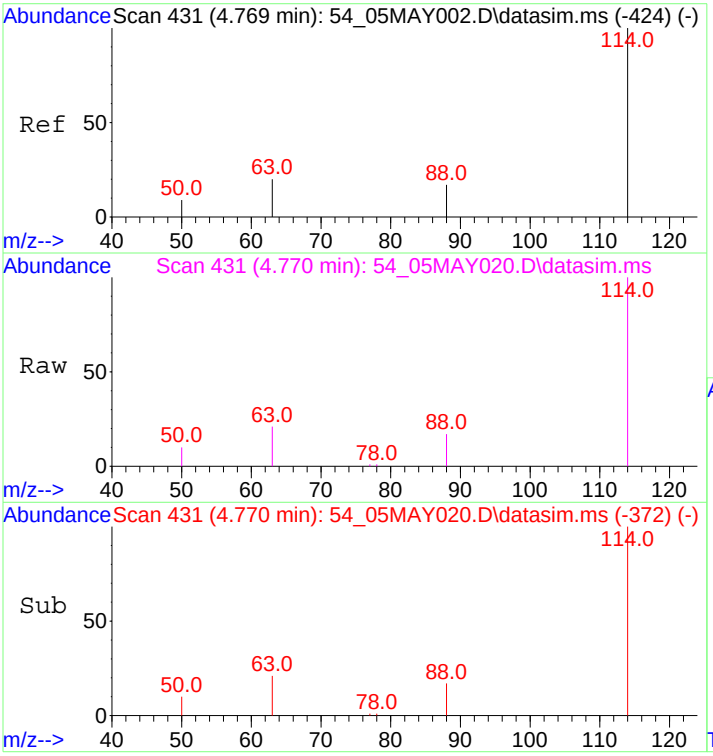


#7
cis-1,2-Dichloroethene
Concen: 1.69 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_05MAY020.D
Acq: 5 May 2014 12:38 pm

Tgt Ion: 61 Resp: 466

Ion	Ratio	Lower	Upper
61	100		
96	92.3	78.5	117.7
98	116.3	50.6	76.0#

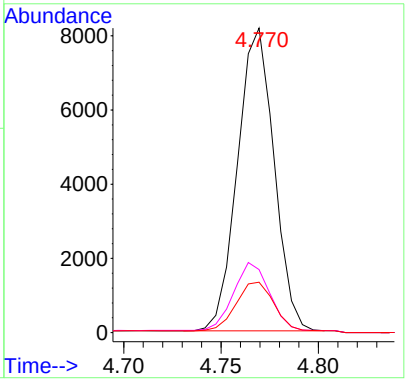


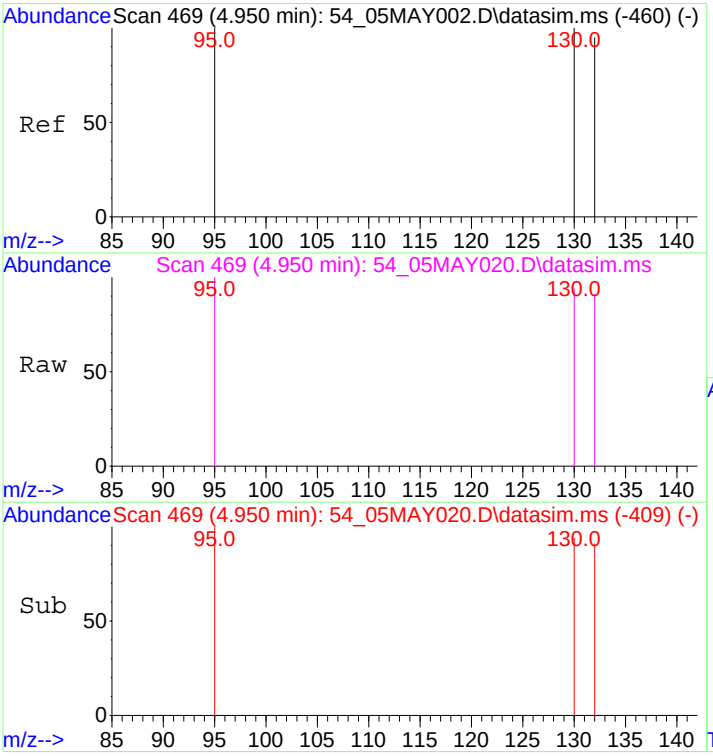


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 05MAY020.D
Acq: 5 May 2014 12:38 pm

Tgt Ion:114 Resp: 10645

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.5	11.8	17.8

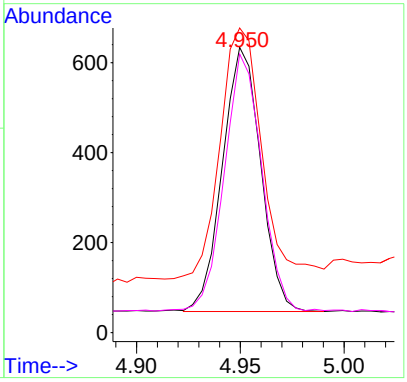


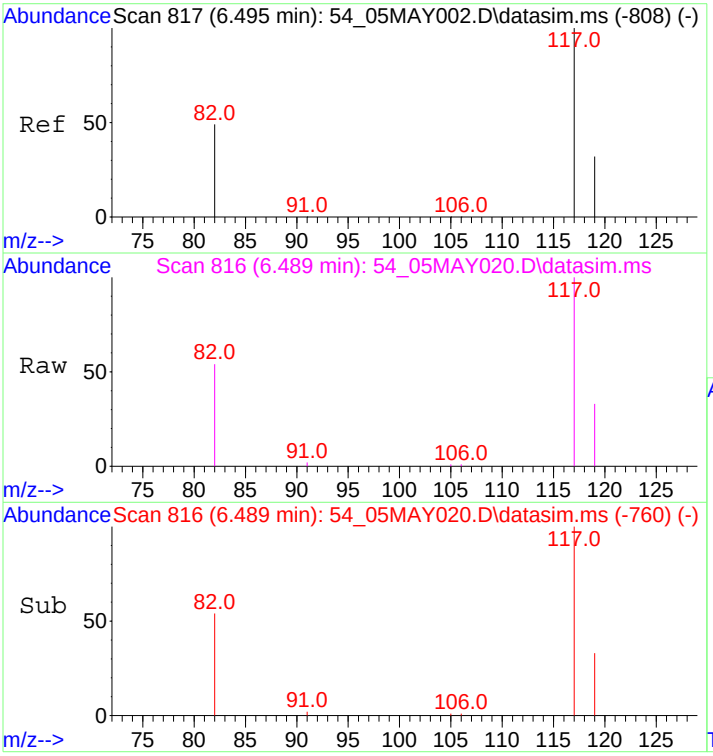


#11
Trichloroethene
Concen: 2.84 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_05MAY020.D
Acq: 5 May 2014 12:38 pm

Tgt Ion:130 Resp: 752

Ion	Ratio	Lower	Upper
130	100		
132	94.9	76.9	115.3
95	144.8	76.5	114.7#

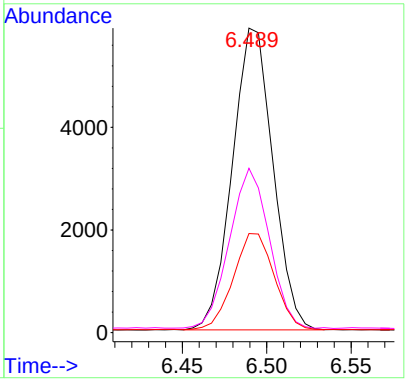


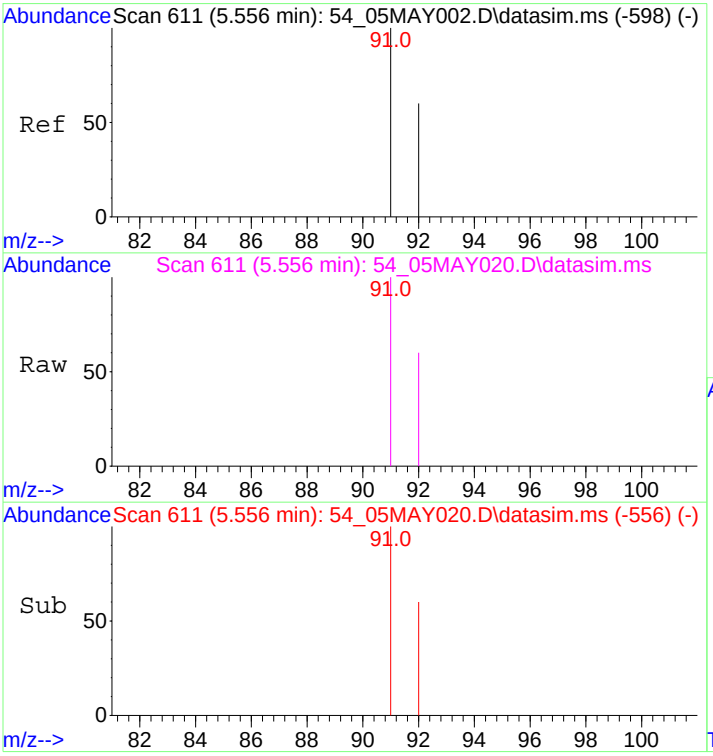


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY020.D
Acq: 5 May 2014 12:38 pm

Tgt Ion:117 Resp: 9858

Ion	Ratio	Lower	Upper
117	100		
82	51.8	38.0	57.0
119	32.0	27.0	40.4

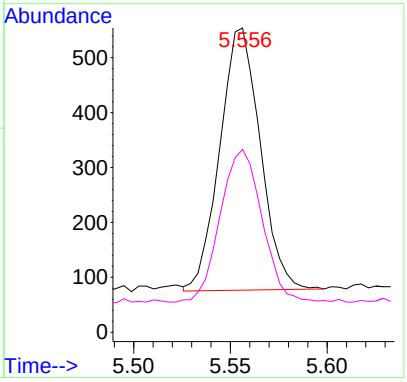


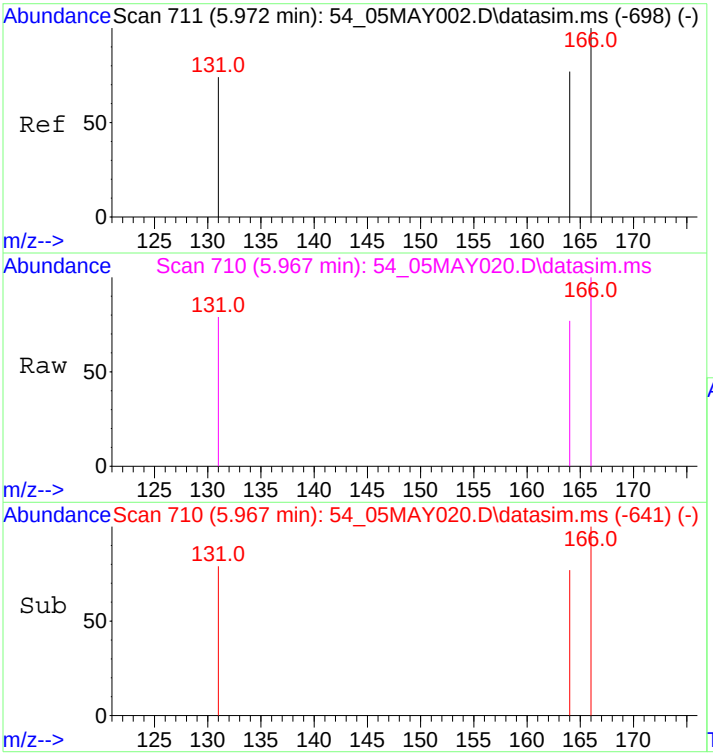


#13
Toluene
Concen: 1.17 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY020.D
Acq: 5 May 2014 12:38 pm

Tgt Ion: 91 Resp: 694

Ion	Ratio	Lower	Upper
91	100		
92	60.2	47.8	71.8

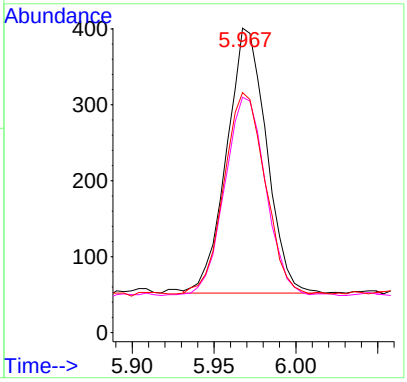


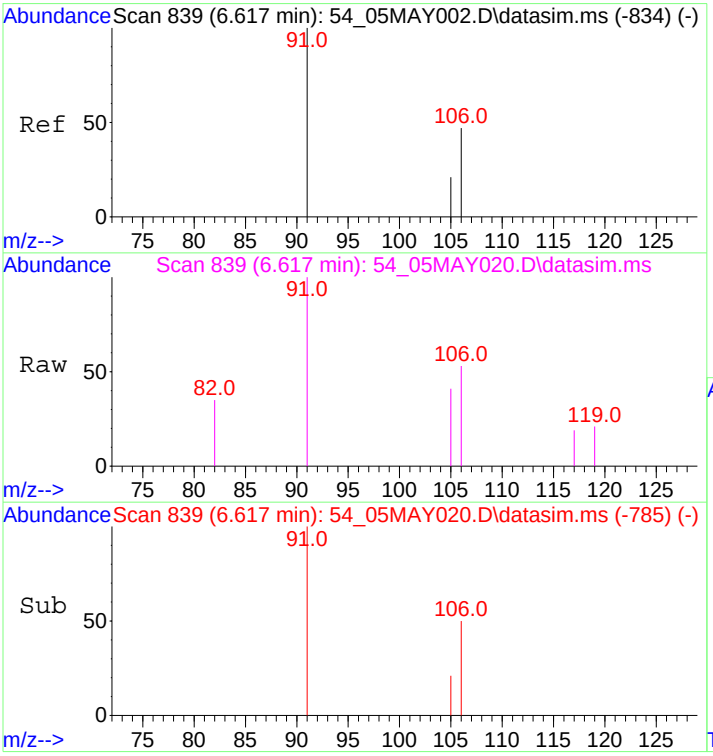


#14
Tetrachloroethene
Concen: 1.75 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54 05MAY020.D
Acq: 5 May 2014 12:38 pm

Tgt Ion:166 Resp: 590

Ion	Ratio	Lower	Upper
166	100		
164	77.1	62.6	94.0
131	79.0	58.5	87.7

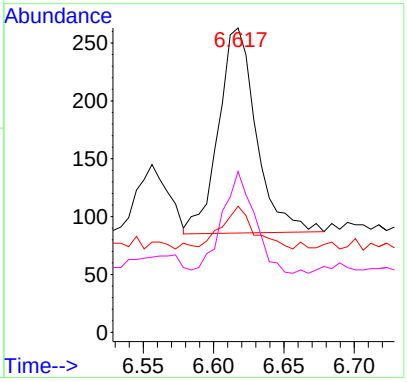




#16
m,p-Xylene
Concen: 0.58 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_05MAY020.D
Acq: 5 May 2014 12:38 pm

Tgt Ion: 91 Resp: 332

Ion	Ratio	Lower	Upper
91	100		
106	42.5	43.1	64.7#
105	18.1	18.3	27.5#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY021.D
Acq On : 5 May 2014 12:50 pm
Operator : yhl
Sample : 02185 \ F5-051
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 12:58:03 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

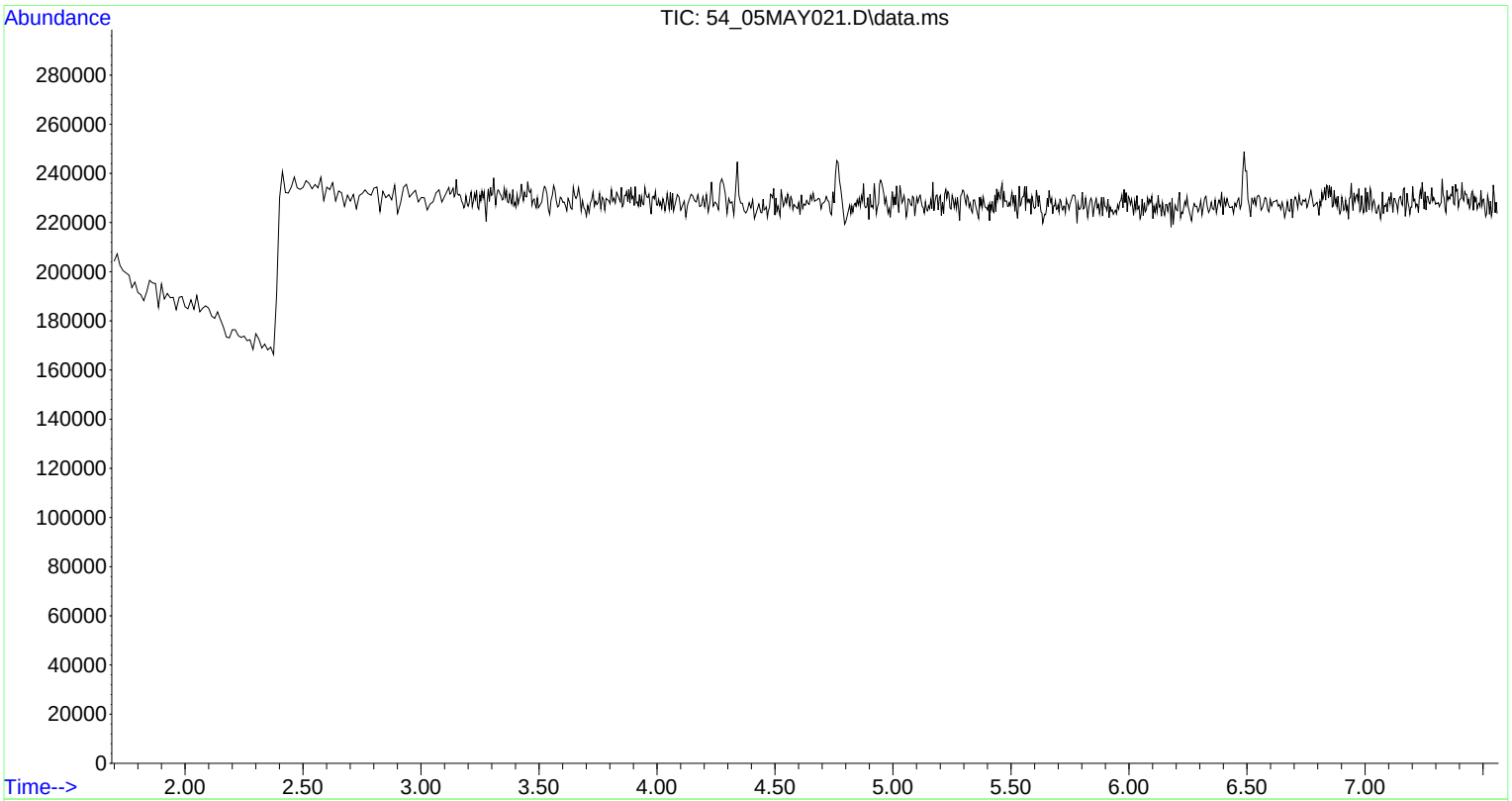
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4353	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10703	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9832	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
7] cis-1,2-Dichloroethene	4.197	61	985	3.55 ppbv	# 77
11] Trichloroethene	4.950	130	1583	5.95 ppbv	94
13] Toluene	5.556	91	1893	3.21 ppbv	98
14] Tetrachloroethene	5.972	166	1129	3.35 ppbv	99

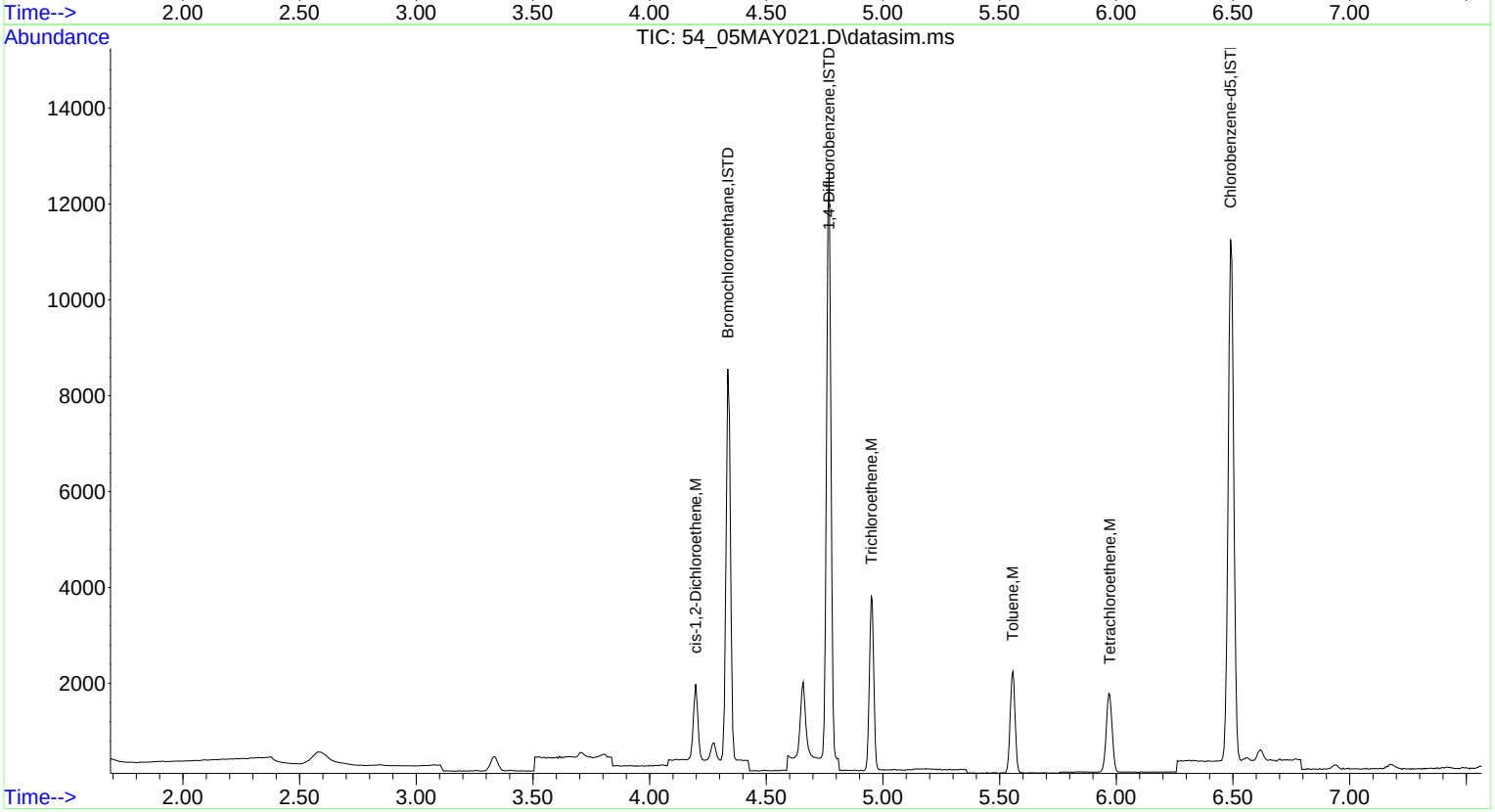
(#) = qualifier out of range (m) = manual integration (+) = signals summed

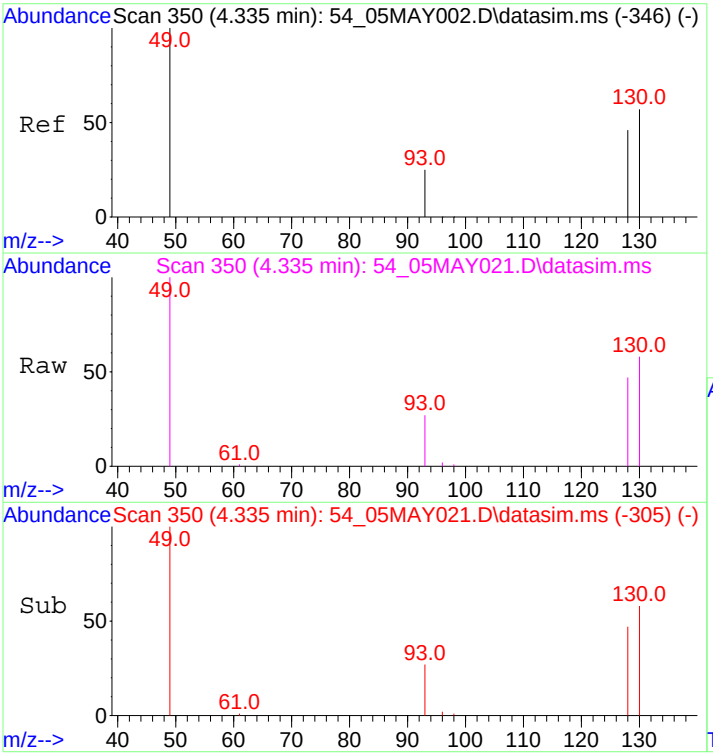
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY021.D
Acq On : 5 May 2014 12:50 pm
Operator : yhl
Sample : 02185 \ F5-051
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 12:58:03 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



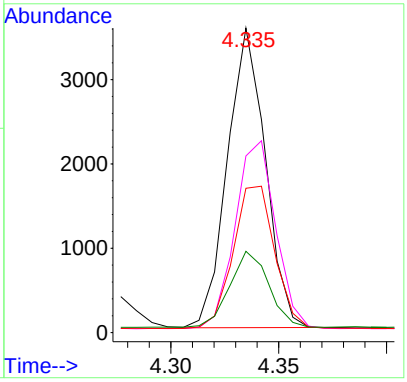


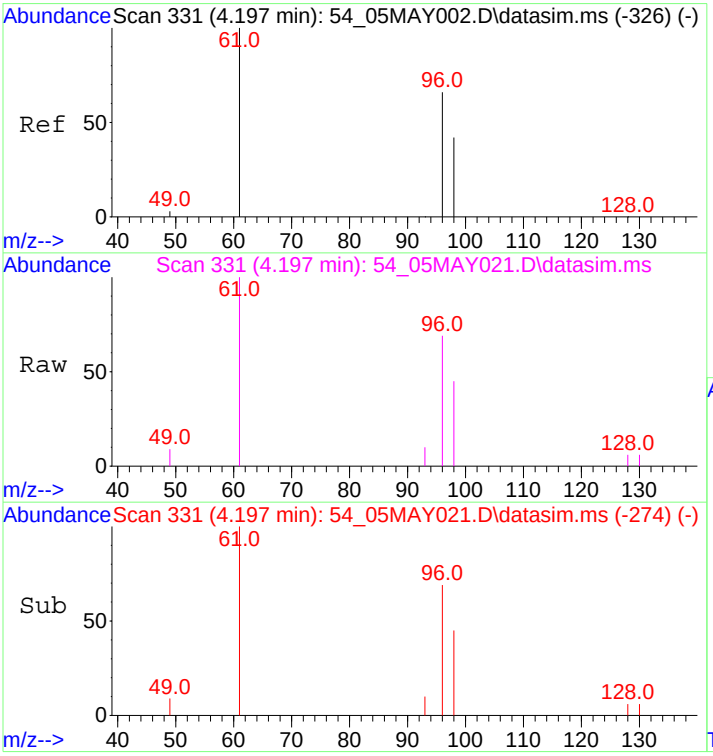


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY021.D
Acq: 5 May 2014 12:50 pm

Tgt Ion: 49 Resp: 4353

Ion	Ratio	Lower	Upper
49	100		
130	66.7	87.2	130.8#
128	52.2	68.0	102.0#
93	26.9	29.3	43.9#

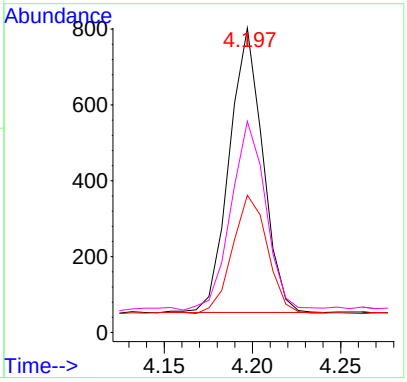


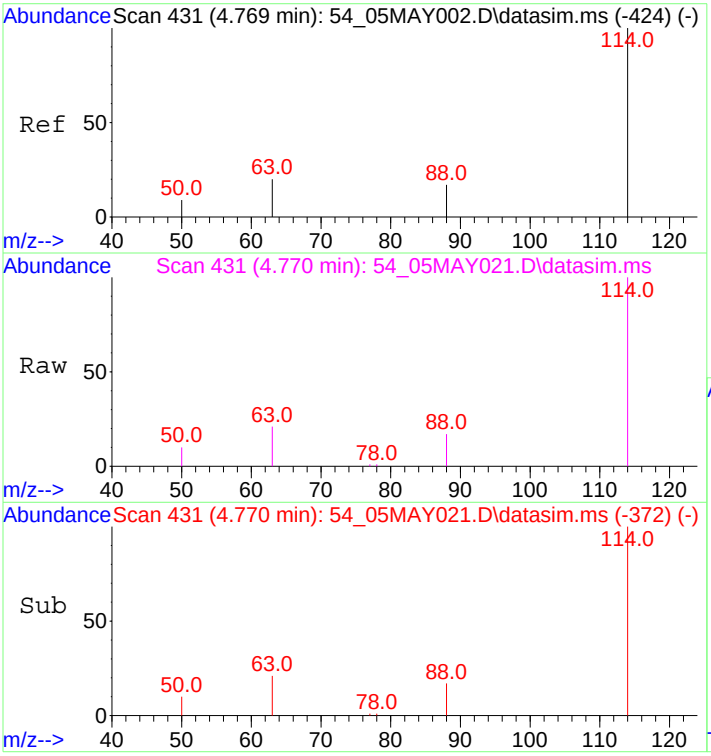


#7
cis-1,2-Dichloroethene
Concen: 3.55 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_05MAY021.D
Acq: 5 May 2014 12:50 pm

Tgt Ion: 61 Resp: 985

Ion	Ratio	Lower	Upper
61	100		
96	74.4	78.5	117.7#
98	47.5	50.6	76.0#

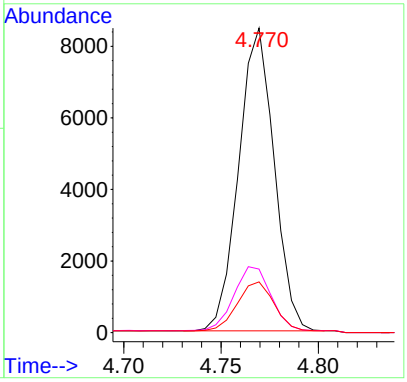


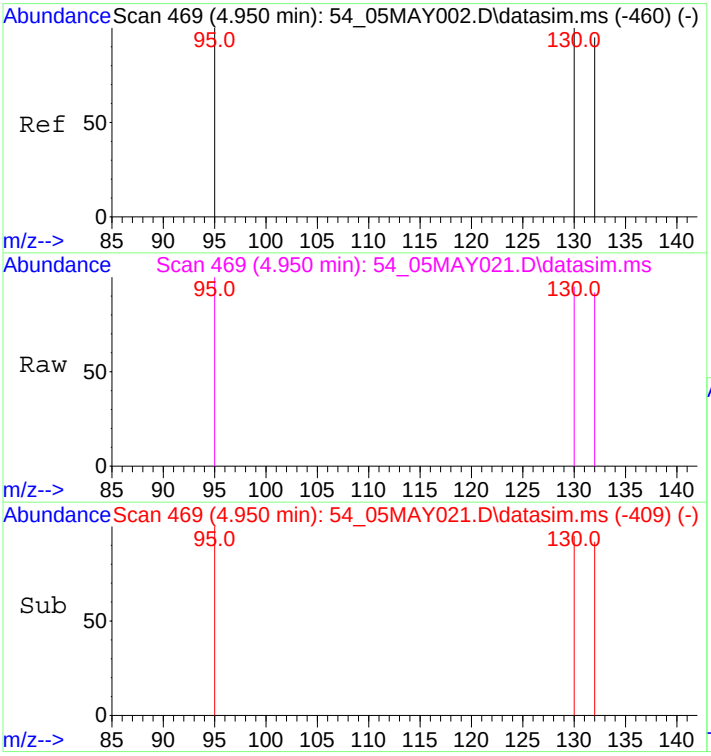


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 05MAY021.D
Acq: 5 May 2014 12:50 pm

Tgt Ion:114 Resp: 10703

Ion	Ratio	Lower	Upper
114	100		
63	22.4	12.0	18.0#
88	16.7	11.8	17.8

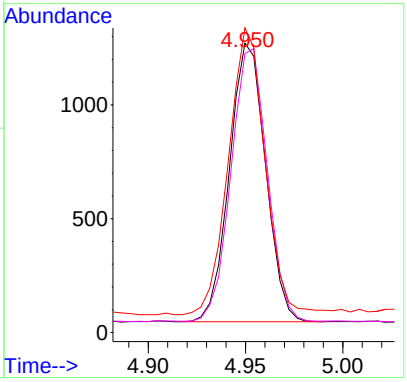


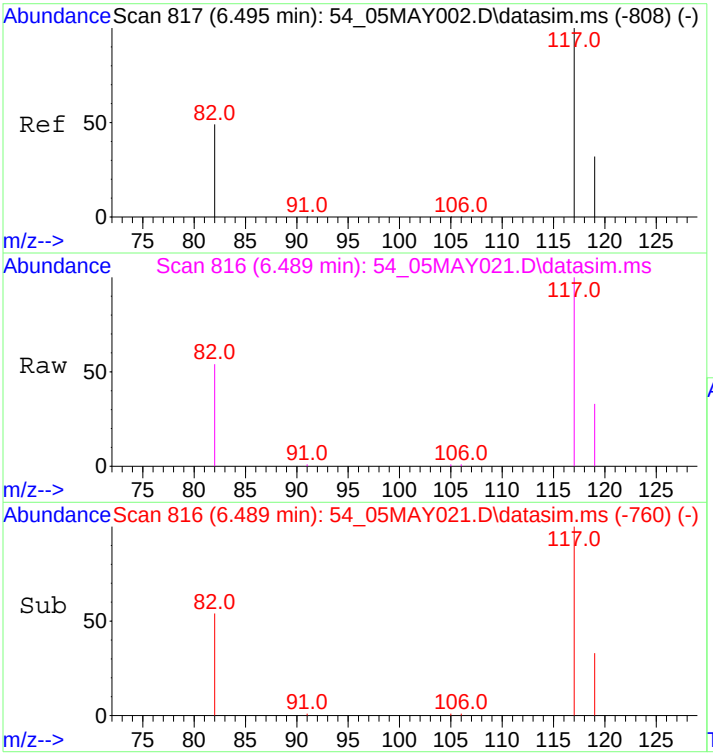


#11
Trichloroethene
Concen: 5.95 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_05MAY021.D
Acq: 5 May 2014 12:50 pm

Tgt Ion:130 Resp: 1583

Ion	Ratio	Lower	Upper
130	100		
132	98.2	76.9	115.3
95	104.5	76.5	114.7

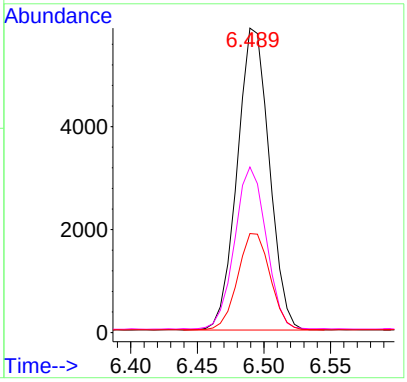


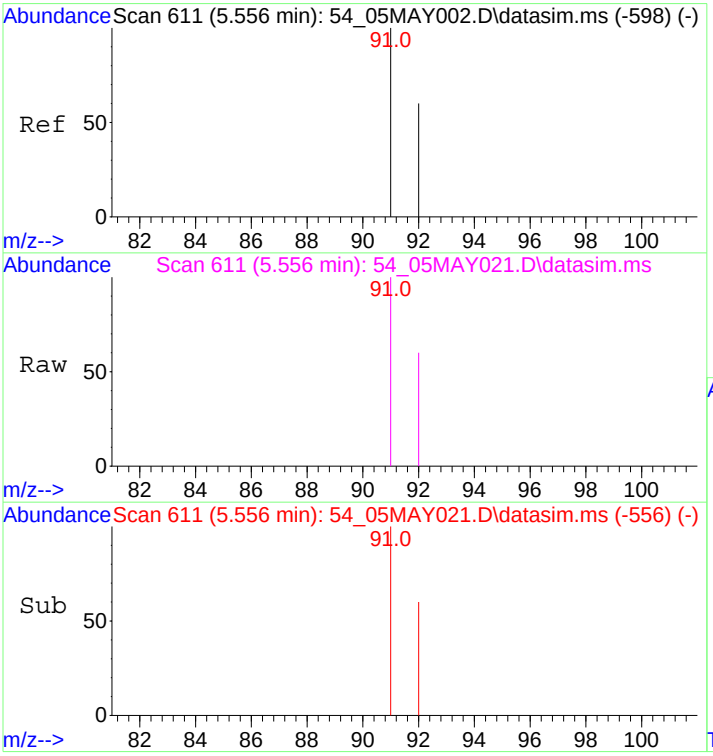


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY021.D
Acq: 5 May 2014 12:50 pm

Tgt Ion:117 Resp: 9832

Ion	Ratio	Lower	Upper
117	100		
82	52.6	38.0	57.0
119	32.2	27.0	40.4

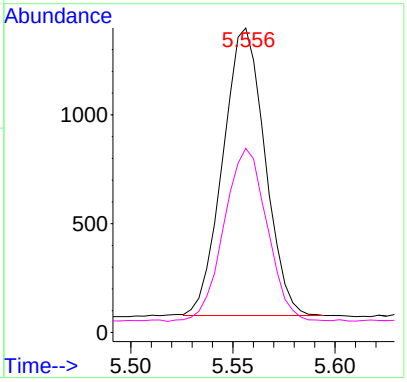


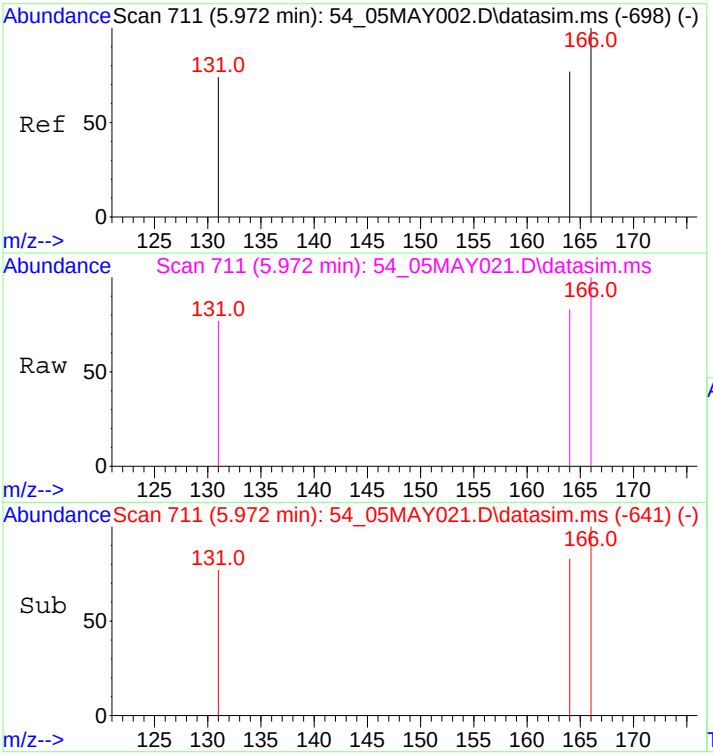


#13
Toluene
Concen: 3.21 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY021.D
Acq: 5 May 2014 12:50 pm

Tgt Ion: 91 Resp: 1893

Ion	Ratio	Lower	Upper
91	100		
92	61.5	47.8	71.8

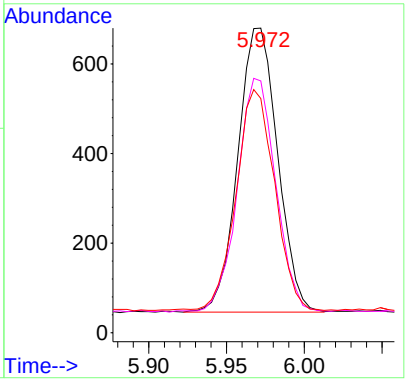




#14
Tetrachloroethene
Concen: 3.35 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54 05MAY021.D
Acq: 5 May 2014 12:50 pm

Tgt Ion:166 Resp: 1129

Ion	Ratio	Lower	Upper
166	100		
164	78.6	62.6	94.0
131	75.3	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY022.D
Acq On : 5 May 2014 1:03 pm
Operator : yhl
Sample : 02186 \ F5-071
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:11:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

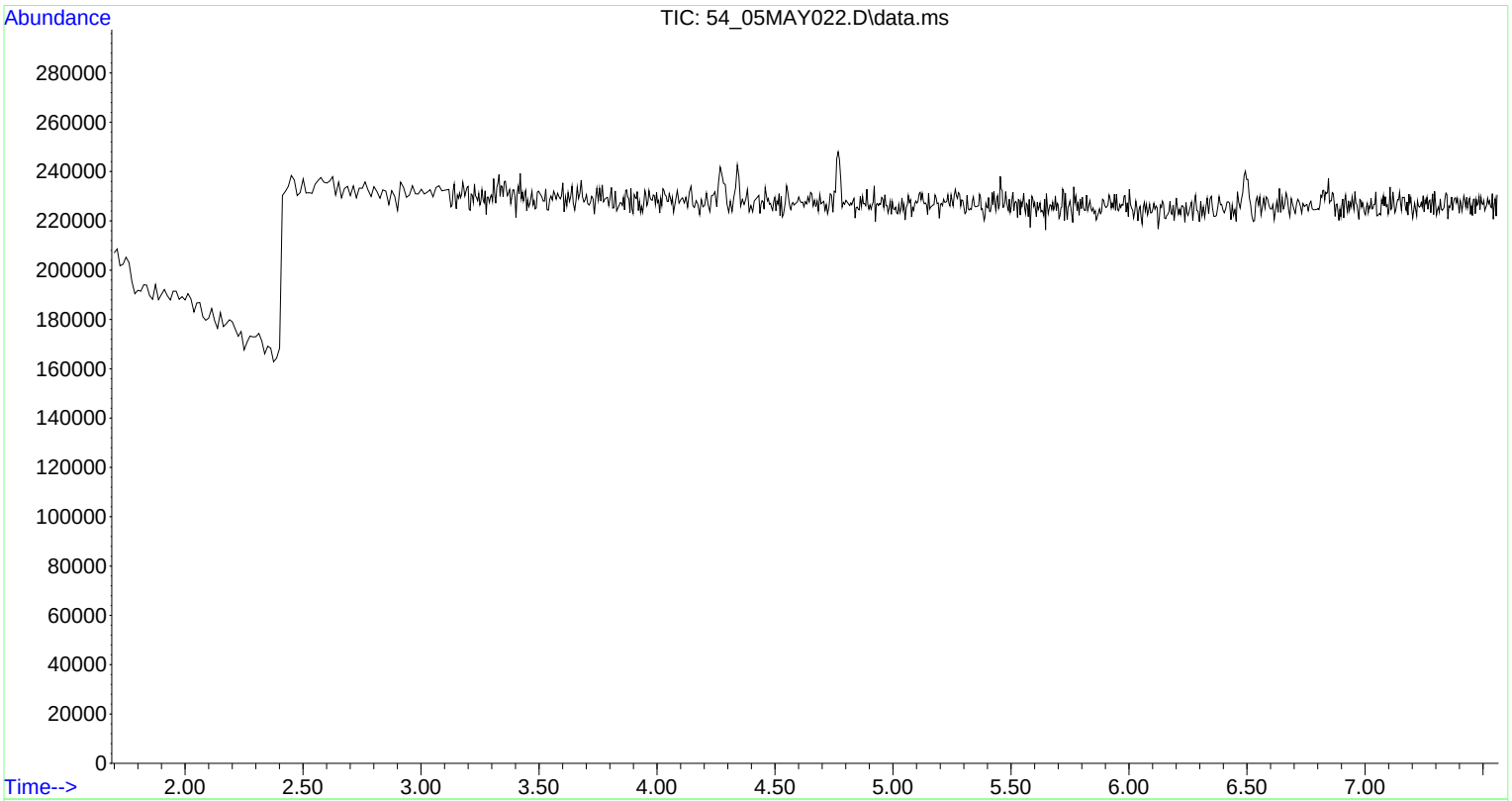
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4171	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10235	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	9407	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
7] cis-1,2-Dichloroethene	4.197	61	649	2.44 ppbv	84
11] Trichloroethene	4.950	130	951	3.74 ppbv	97
13] Toluene	5.556	91	520	0.92 ppbv	95
14] Tetrachloroethene	5.972	166	411	1.28 ppbv	94

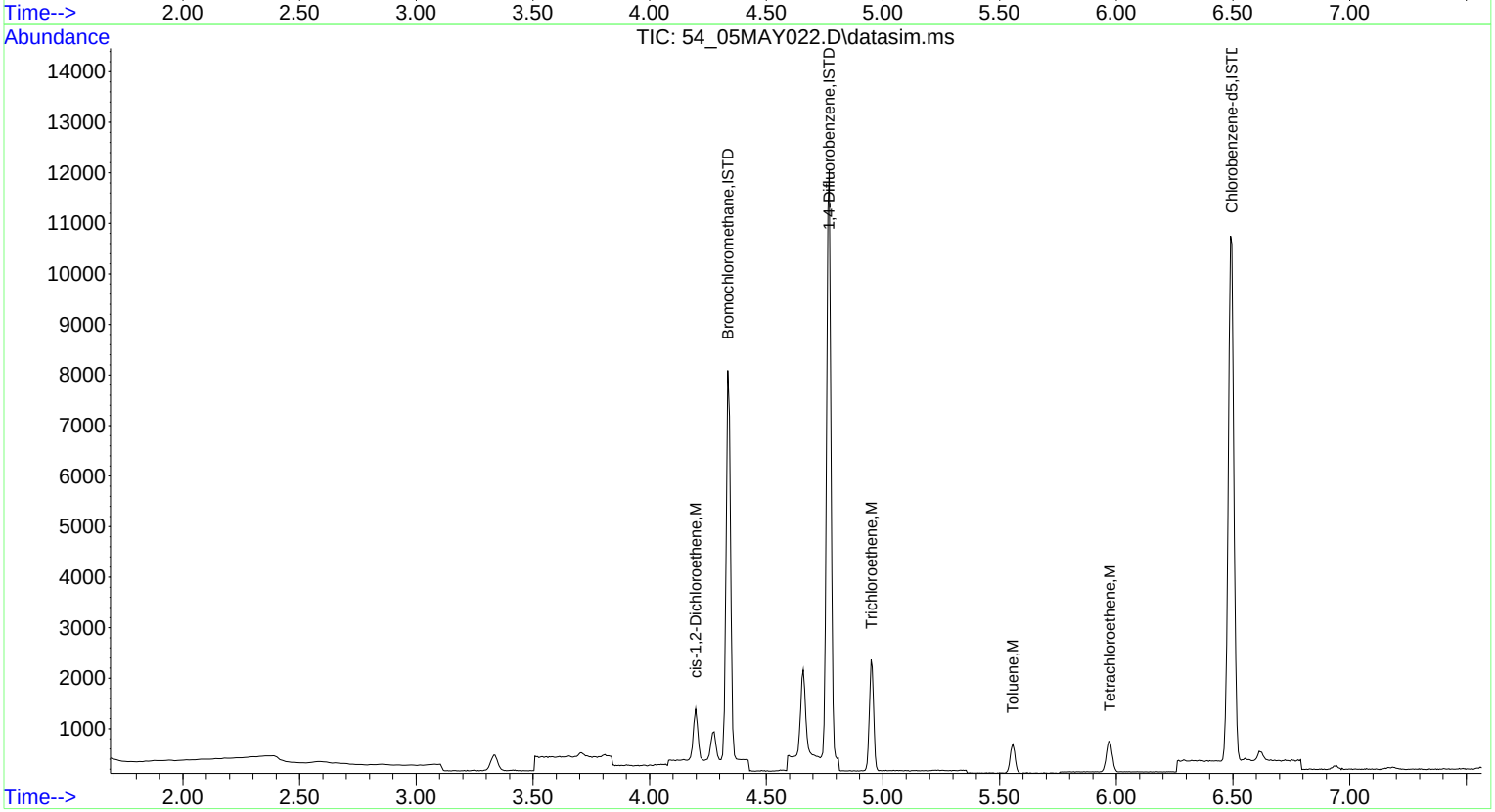
(#) = qualifier out of range (m) = manual integration (+) = signals summed

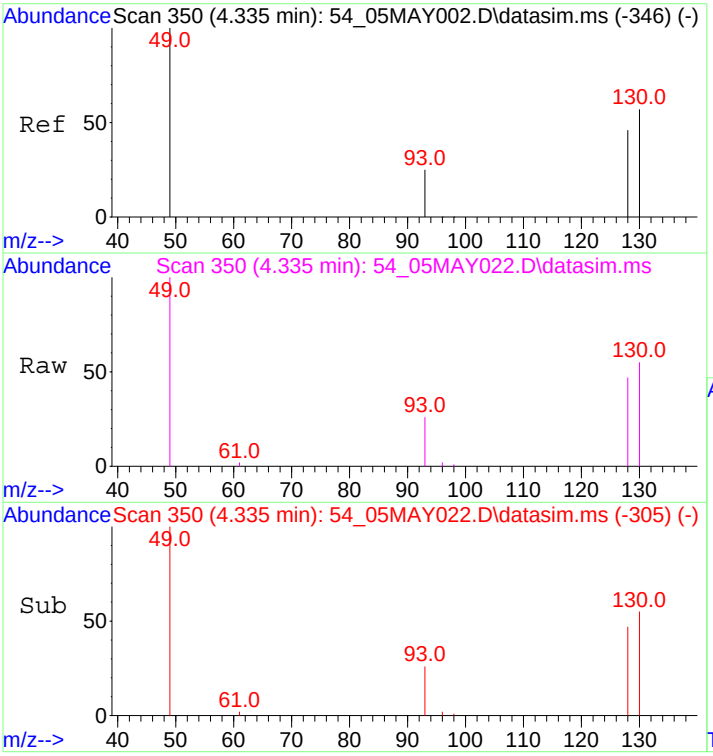
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY022.D
Acq On : 5 May 2014 1:03 pm
Operator : yhl
Sample : 02186 \ F5-071
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:11:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



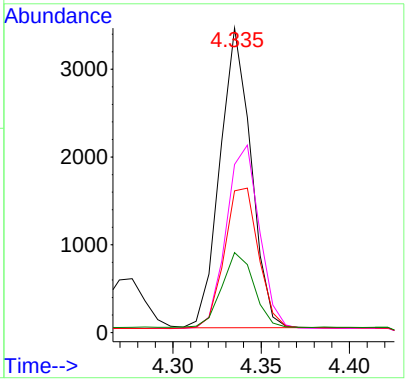


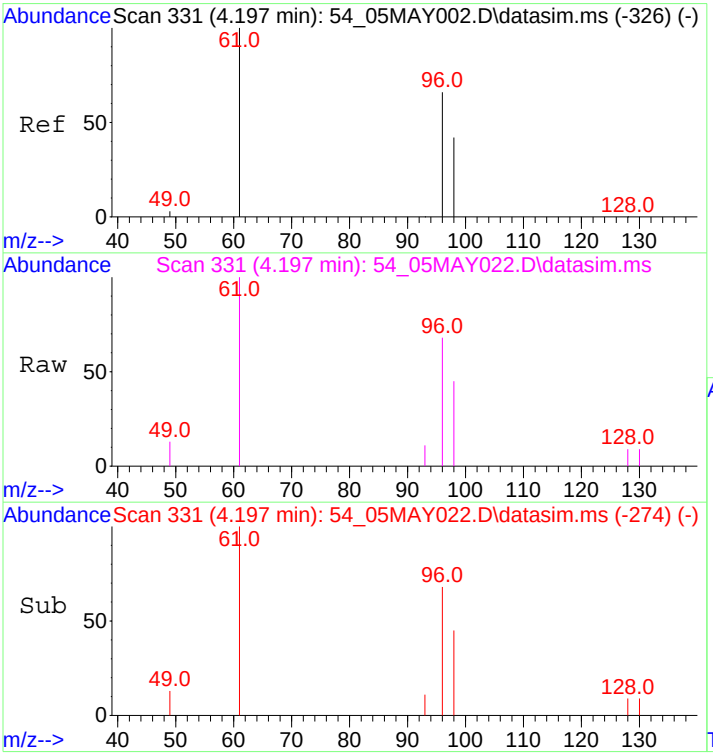


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY022.D
Acq: 5 May 2014 1:03 pm

Tgt Ion: 49 Resp: 4171

Ion	Ratio	Lower	Upper
49	100		
130	65.1	87.2	130.8#
128	51.5	68.0	102.0#
93	25.8	29.3	43.9#

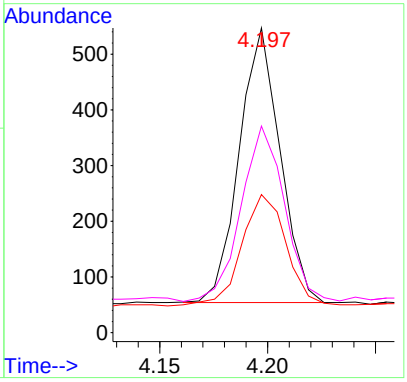


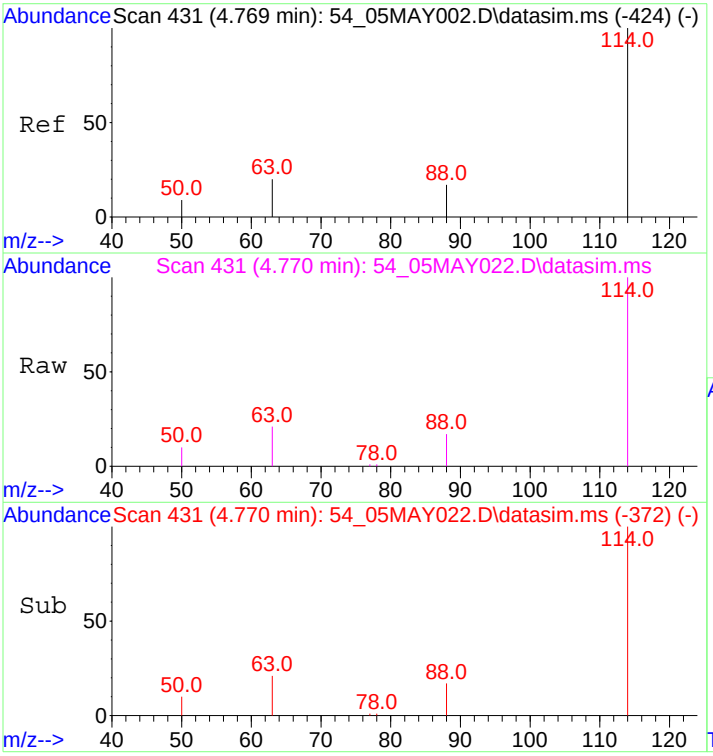


#7
cis-1,2-Dichloroethene
Concen: 2.44 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_05MAY022.D
Acq: 5 May 2014 1:03 pm

Tgt Ion: 61 Resp: 649

Ion	Ratio	Lower	Upper
61	100		
96	80.9	78.5	117.7
98	52.7	50.6	76.0

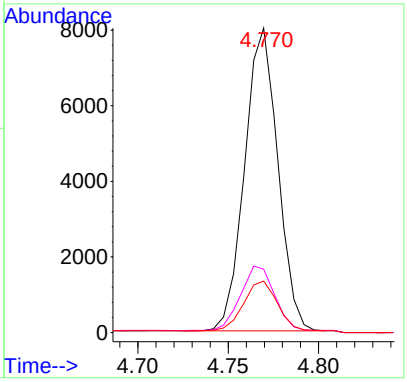


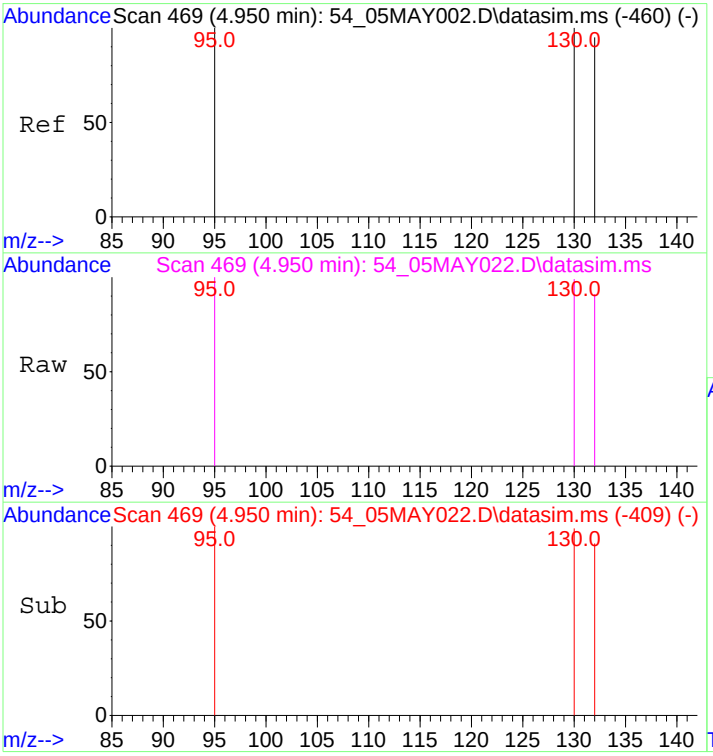


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 05MAY022.D
Acq: 5 May 2014 1:03 pm

Tgt Ion:114 Resp: 10235

Ion	Ratio	Lower	Upper
114	100		
63	21.7	12.0	18.0#
88	16.7	11.8	17.8

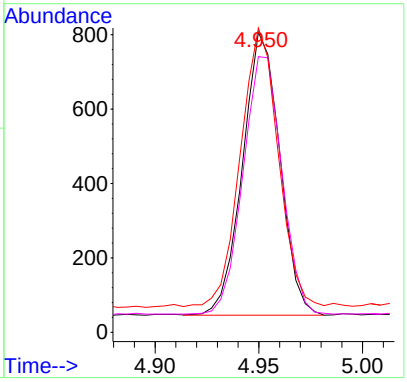


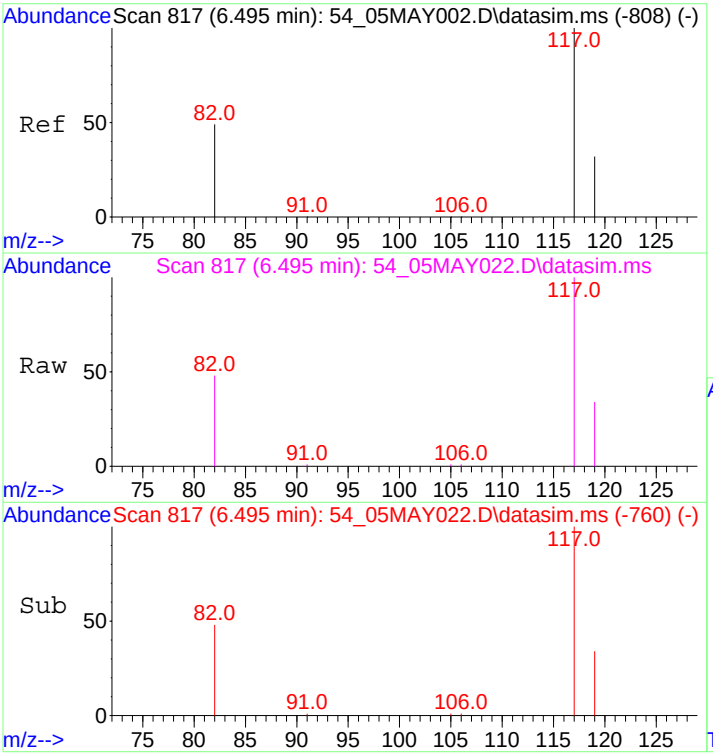


#11
Trichloroethene
Concen: 3.74 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_05MAY022.D
Acq: 5 May 2014 1:03 pm

Tgt Ion:130 Resp: 951

Ion	Ratio	Lower	Upper
130	100		
132	94.4	76.9	115.3
95	99.3	76.5	114.7

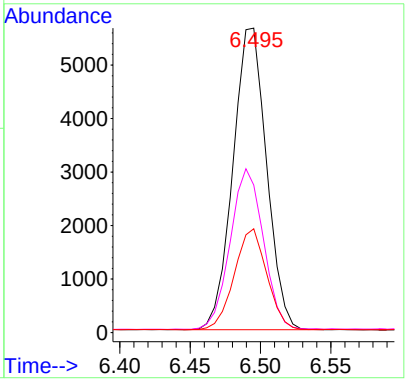


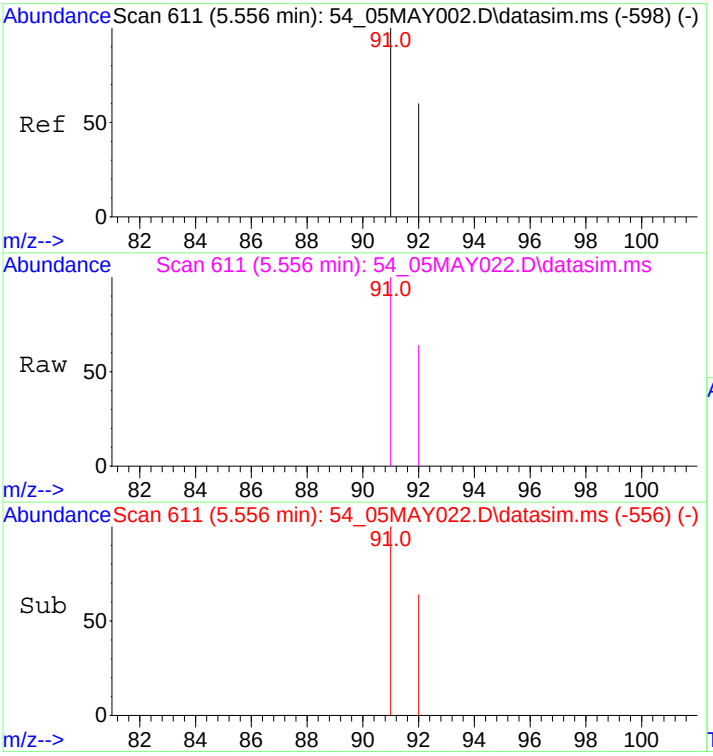


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 05MAY022.D
Acq: 5 May 2014 1:03 pm

Tgt Ion:117 Resp: 9407

Ion	Ratio	Lower	Upper
117	100		
82	52.2	38.0	57.0
119	32.4	27.0	40.4

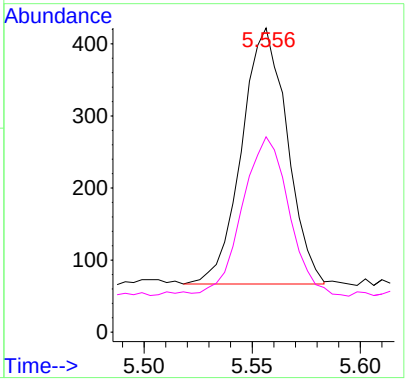


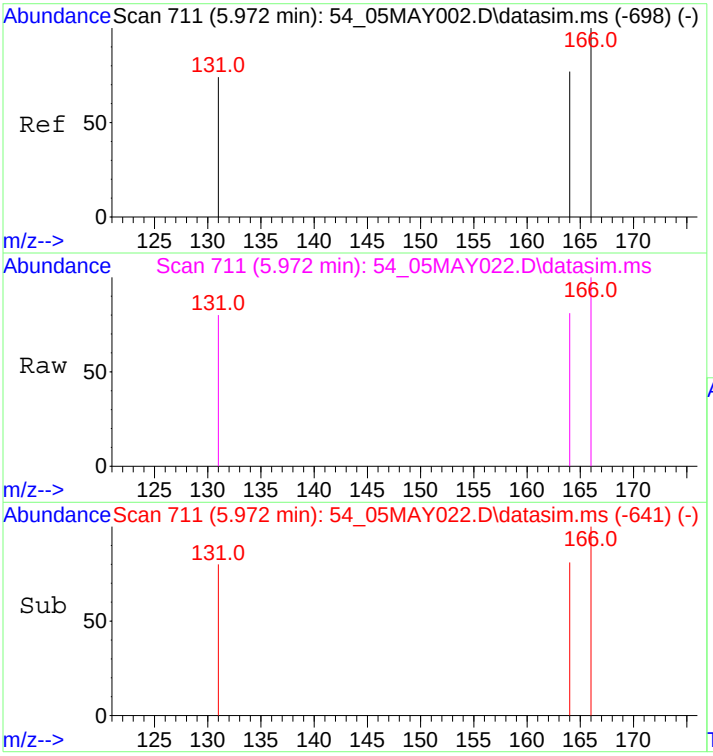


#13
Toluene
Concen: 0.92 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY022.D
Acq: 5 May 2014 1:03 pm

Tgt Ion: 91 Resp: 520

Ion	Ratio	Lower	Upper
91	100		
92	63.8	47.8	71.8

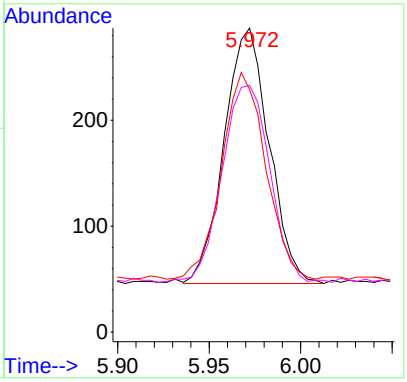




#14
Tetrachloroethene
Concen: 1.28 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54 05MAY022.D
Acq: 5 May 2014 1:03 pm

Tgt Ion:166 Resp: 411

Ion	Ratio	Lower	Upper
166	100		
164	82.2	62.6	94.0
131	80.0	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY023.D
Acq On : 5 May 2014 1:16 pm
Operator : yhl
Sample : 02187 \ F5-069
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:22:31 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

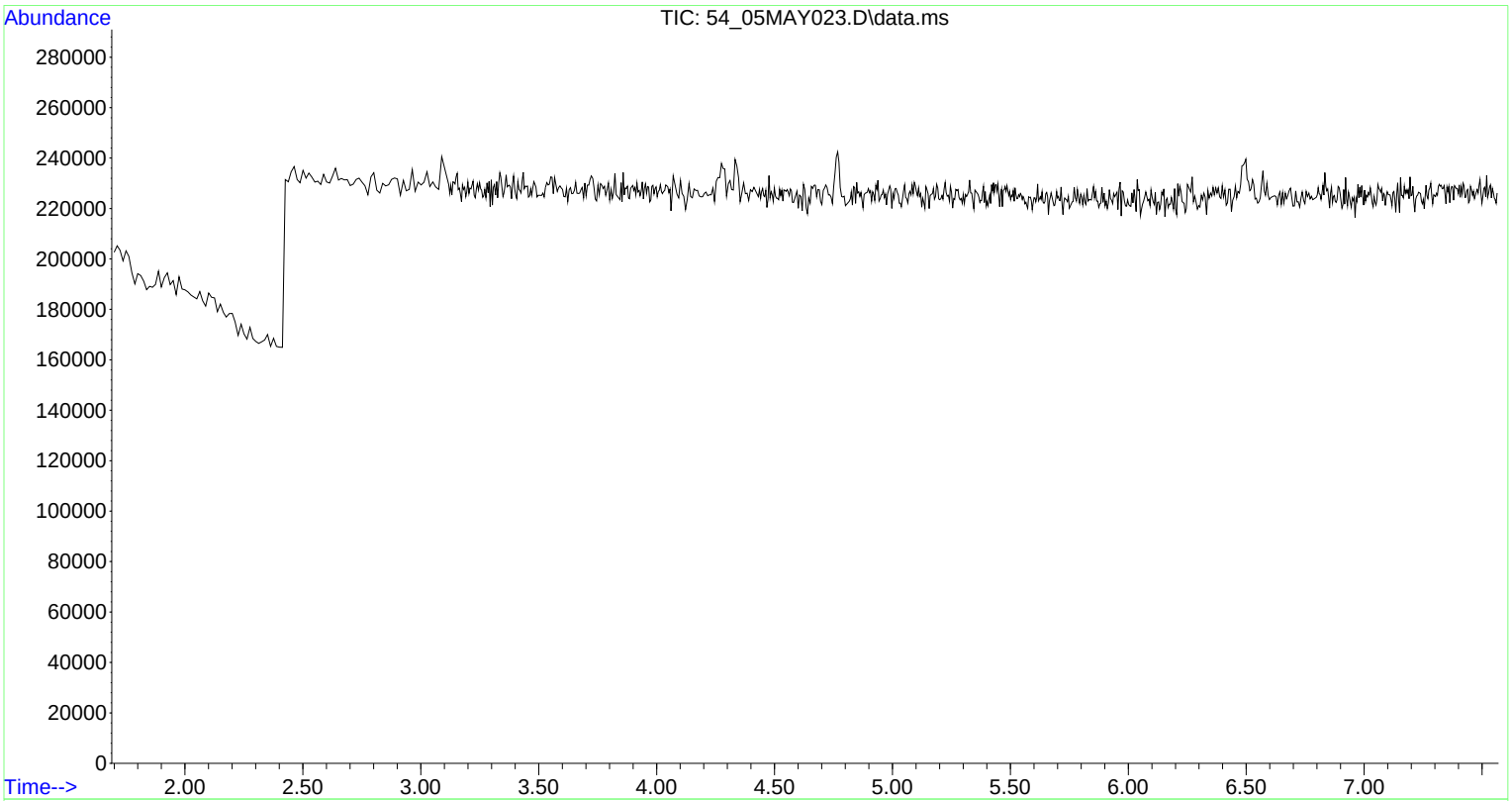
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4410	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10811	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	9879	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
7] cis-1,2-Dichloroethene	4.197	61	302	1.07	ppbv	# 86
11] Trichloroethene	4.950	130	458	1.70	ppbv	97
14] Tetrachloroethene	5.976	166	204	0.60	ppbv	97

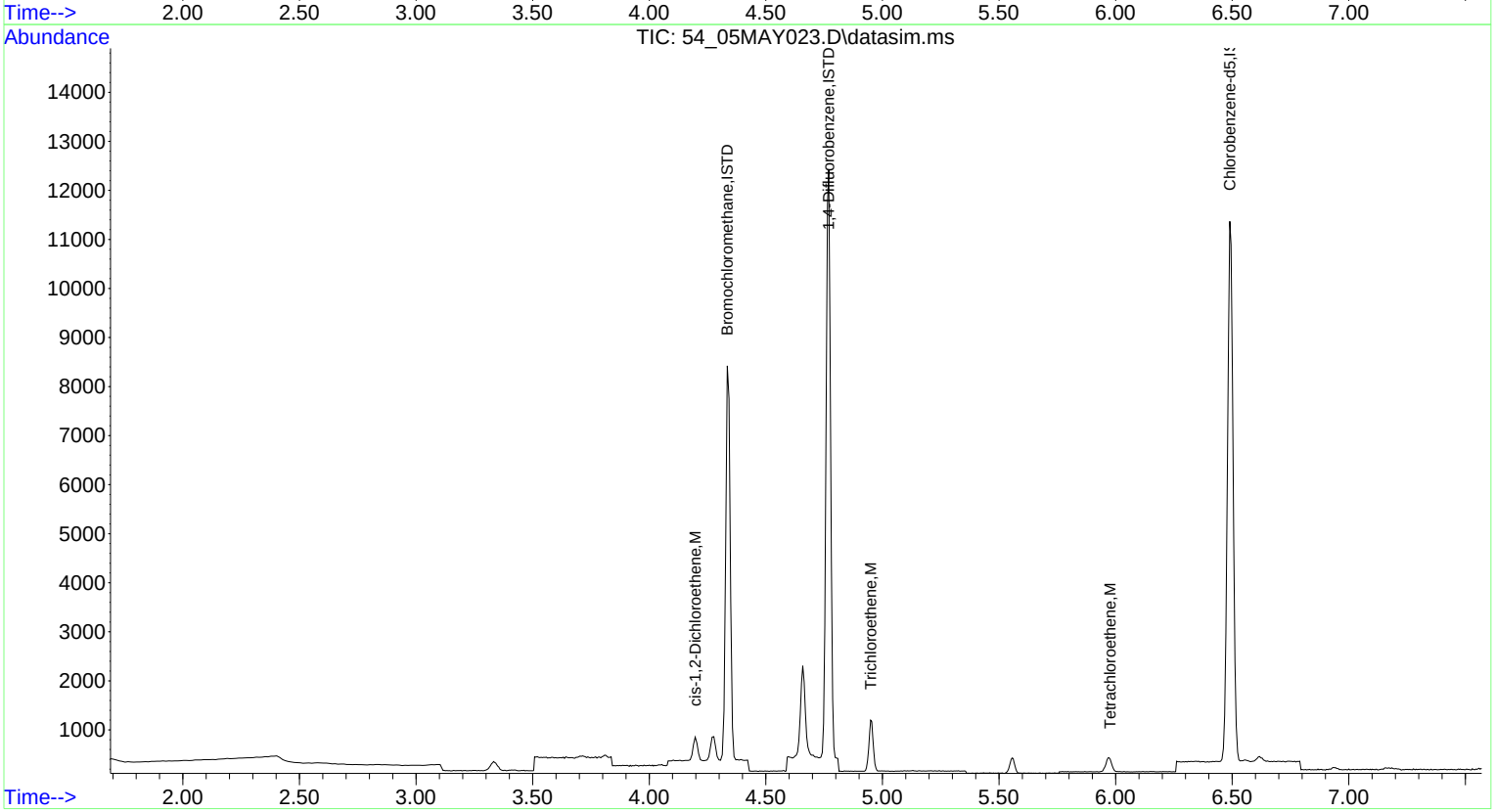
(#) = qualifier out of range (m) = manual integration (+) = signals summed

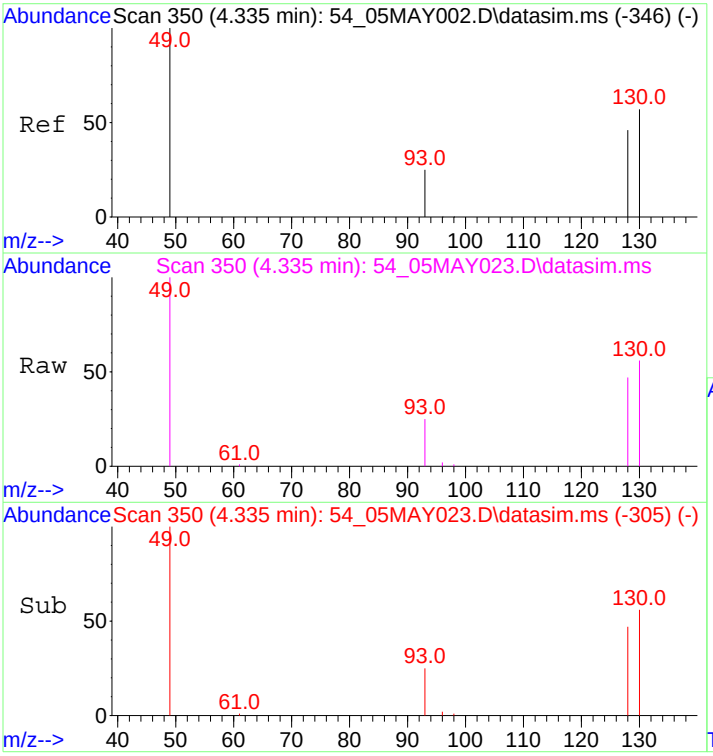
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY023.D
Acq On : 5 May 2014 1:16 pm
Operator : yhl
Sample : 02187 \ F5-069
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:22:31 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



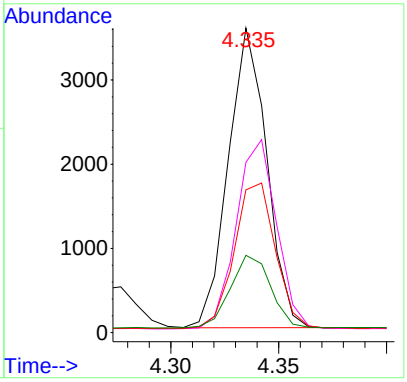


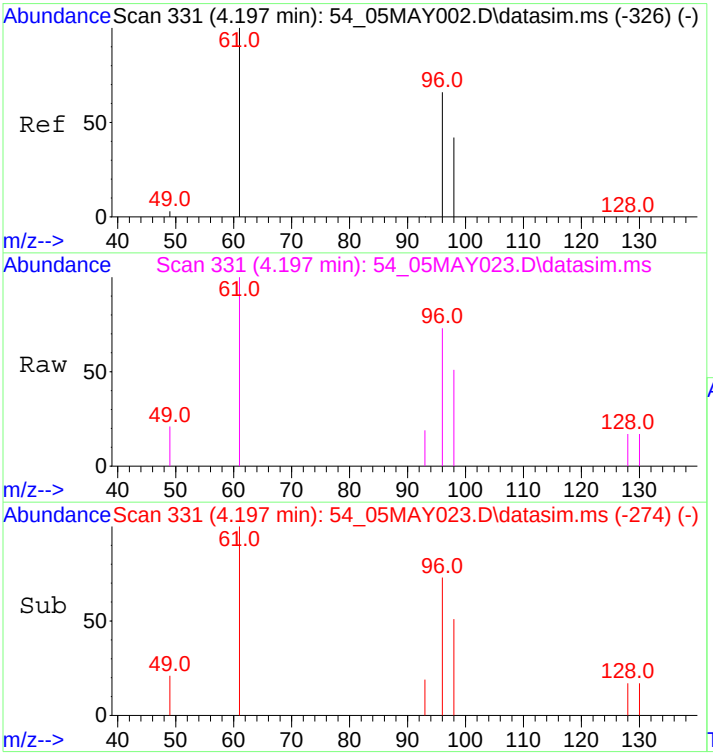


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY023.D
Acq: 5 May 2014 1:16 pm

Tgt Ion: 49 Resp: 4410

Ion	Ratio	Lower	Upper
49	100		
130	66.1	87.2	130.8#
128	52.0	68.0	102.0#
93	25.5	29.3	43.9#

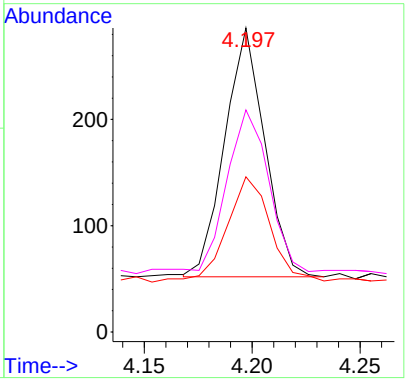


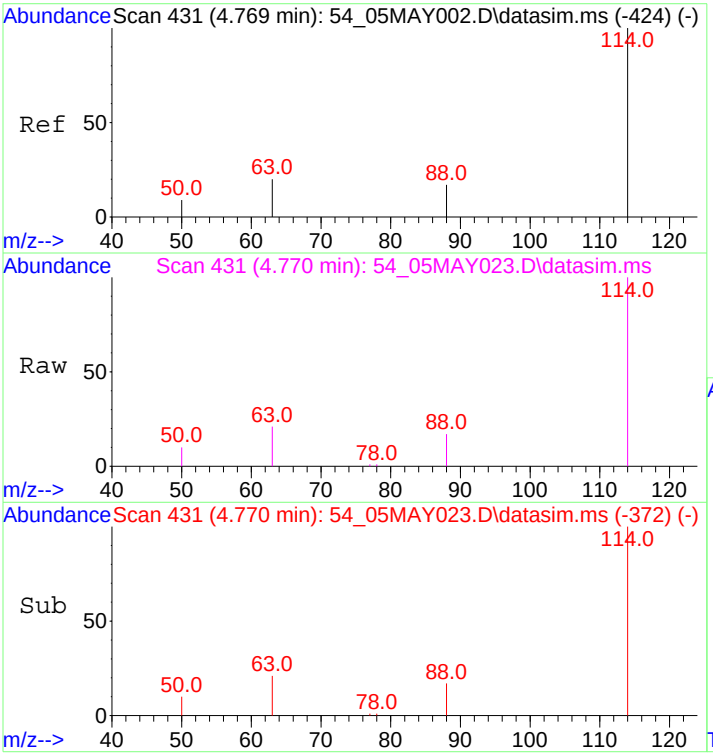


#7
cis-1,2-Dichloroethene
Concen: 1.07 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_05MAY023.D
Acq: 5 May 2014 1:16 pm

Tgt Ion: 61 Resp: 302

Ion	Ratio	Lower	Upper
61	100		
96	76.2	78.5	117.7#
98	64.6	50.6	76.0

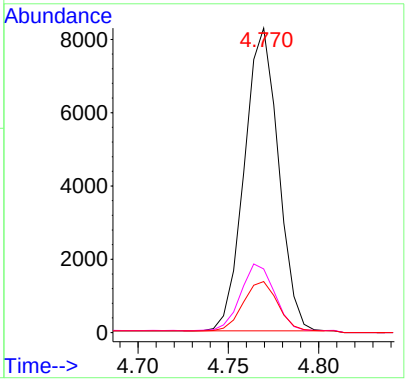


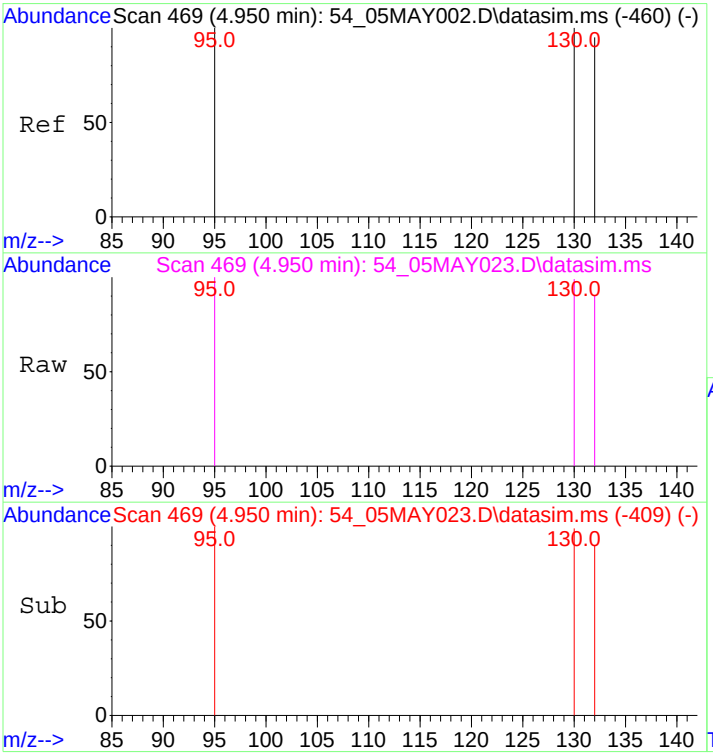


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 05MAY023.D
Acq: 5 May 2014 1:16 pm

Tgt Ion:114 Resp: 10811

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.6	11.8	17.8

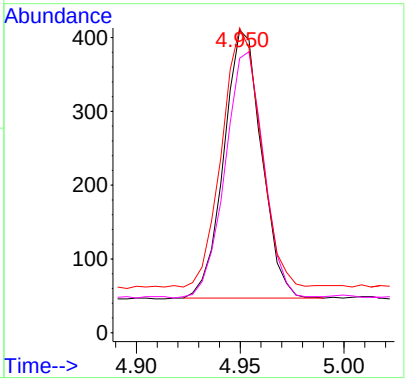


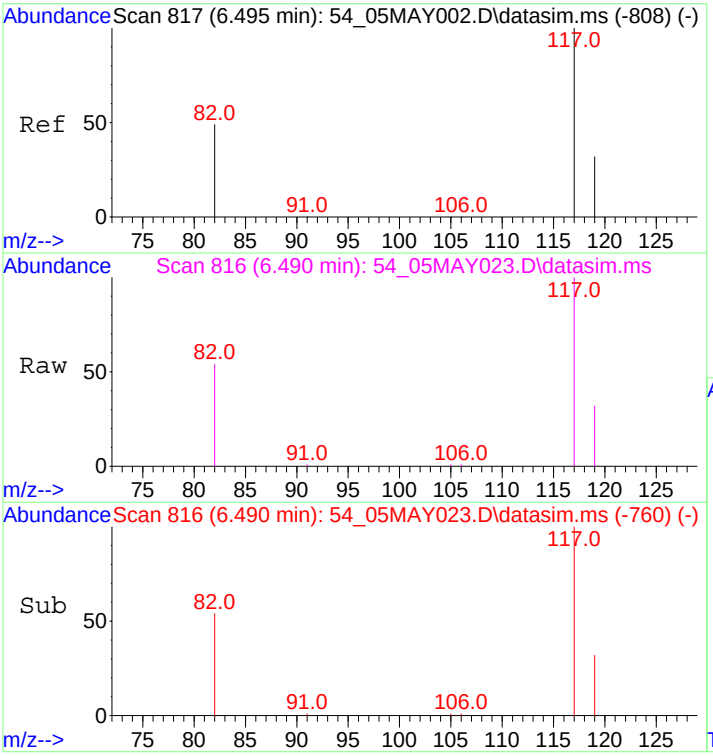


#11
Trichloroethene
Concen: 1.70 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_05MAY023.D
Acq: 5 May 2014 1:16 pm

Tgt Ion:130 Resp: 458

Ion	Ratio	Lower	Upper
130	100		
132	94.3	76.9	115.3
95	99.8	76.5	114.7

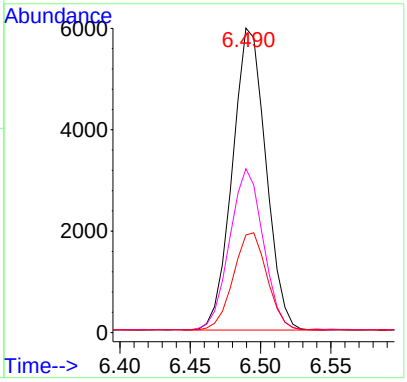


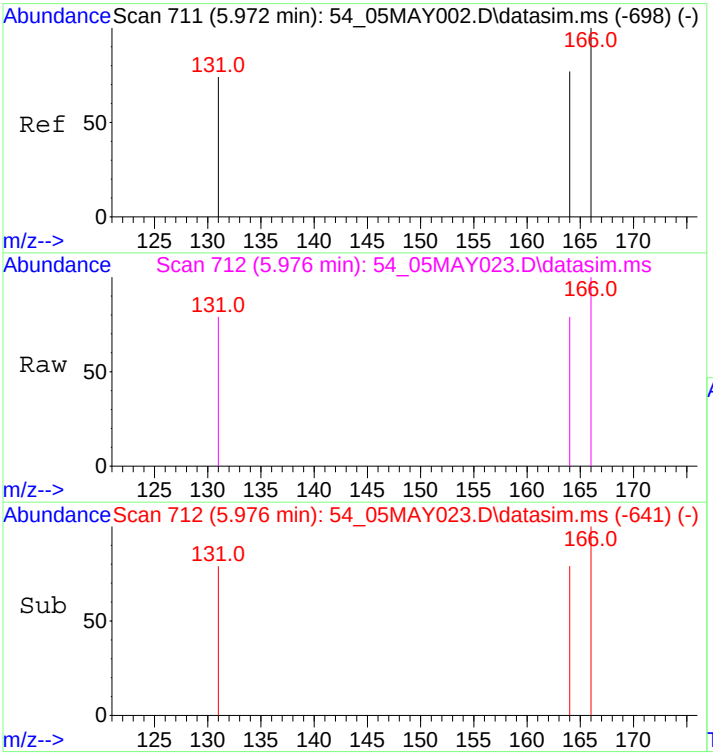


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54 05MAY023.D
Acq: 5 May 2014 1:16 pm

Tgt Ion:117 Resp: 9879

Ion	Ratio	Lower	Upper
117	100		
82	52.9	38.0	57.0
119	32.4	27.0	40.4

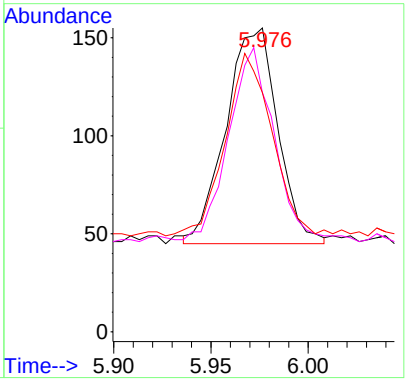




#14
Tetrachloroethene
Concen: 0.60 ppbv
RT: 5.976 min Scan# 712
Delta R.T. 0.005 min
Lab File: 54_05MAY023.D
Acq: 5 May 2014 1:16 pm

Tgt Ion:166 Resp: 204

Ion	Ratio	Lower	Upper
166	100		
164	79.9	62.6	94.0
131	76.5	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY024.D
Acq On : 5 May 2014 1:27 pm
Operator : yhl
Sample : 02188 \ F5-073
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:33:53 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4356	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10931	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9660	10.00	ppbv	0.00

System Monitoring Compounds

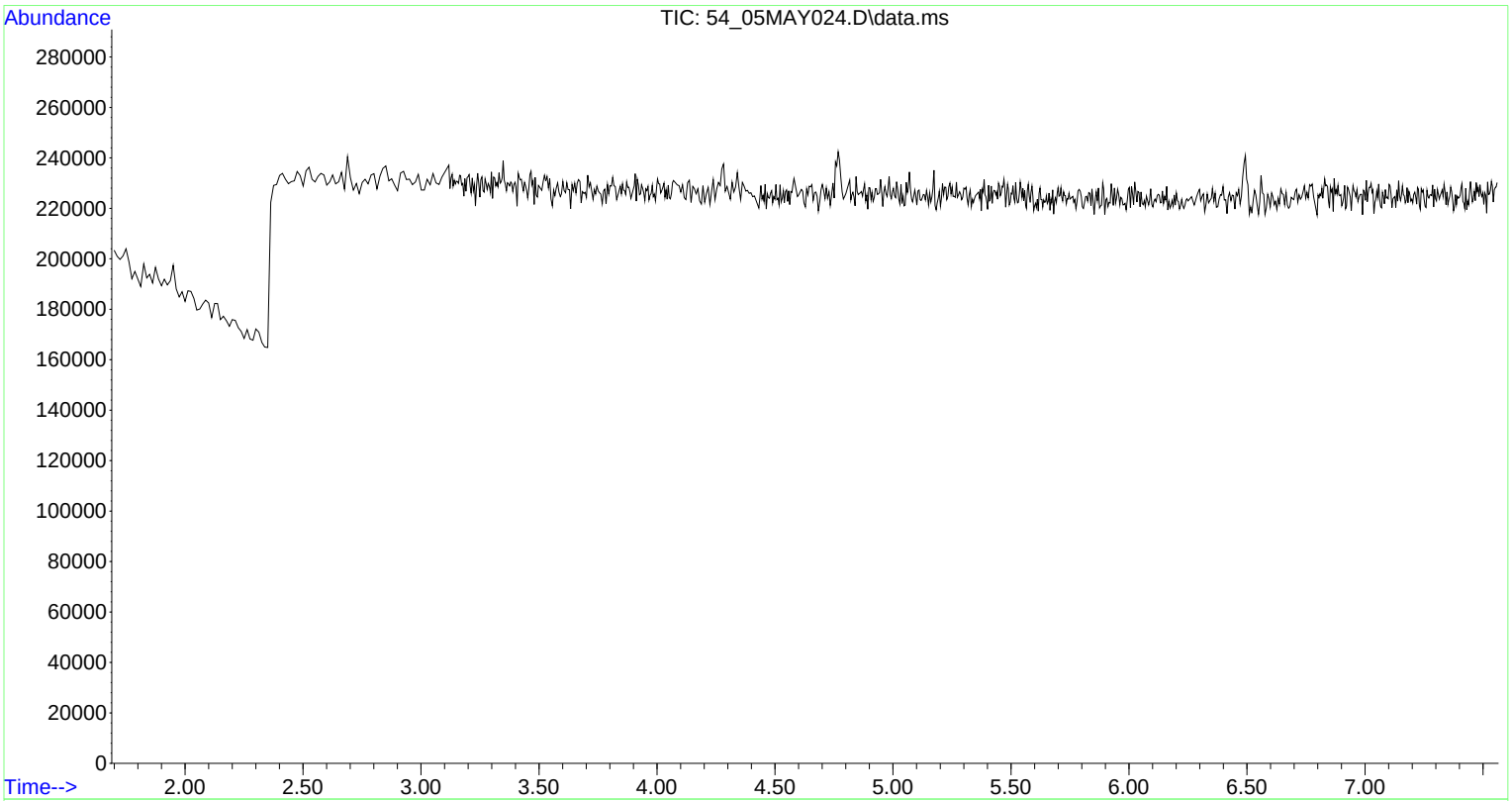
Target Compounds	Qvalue

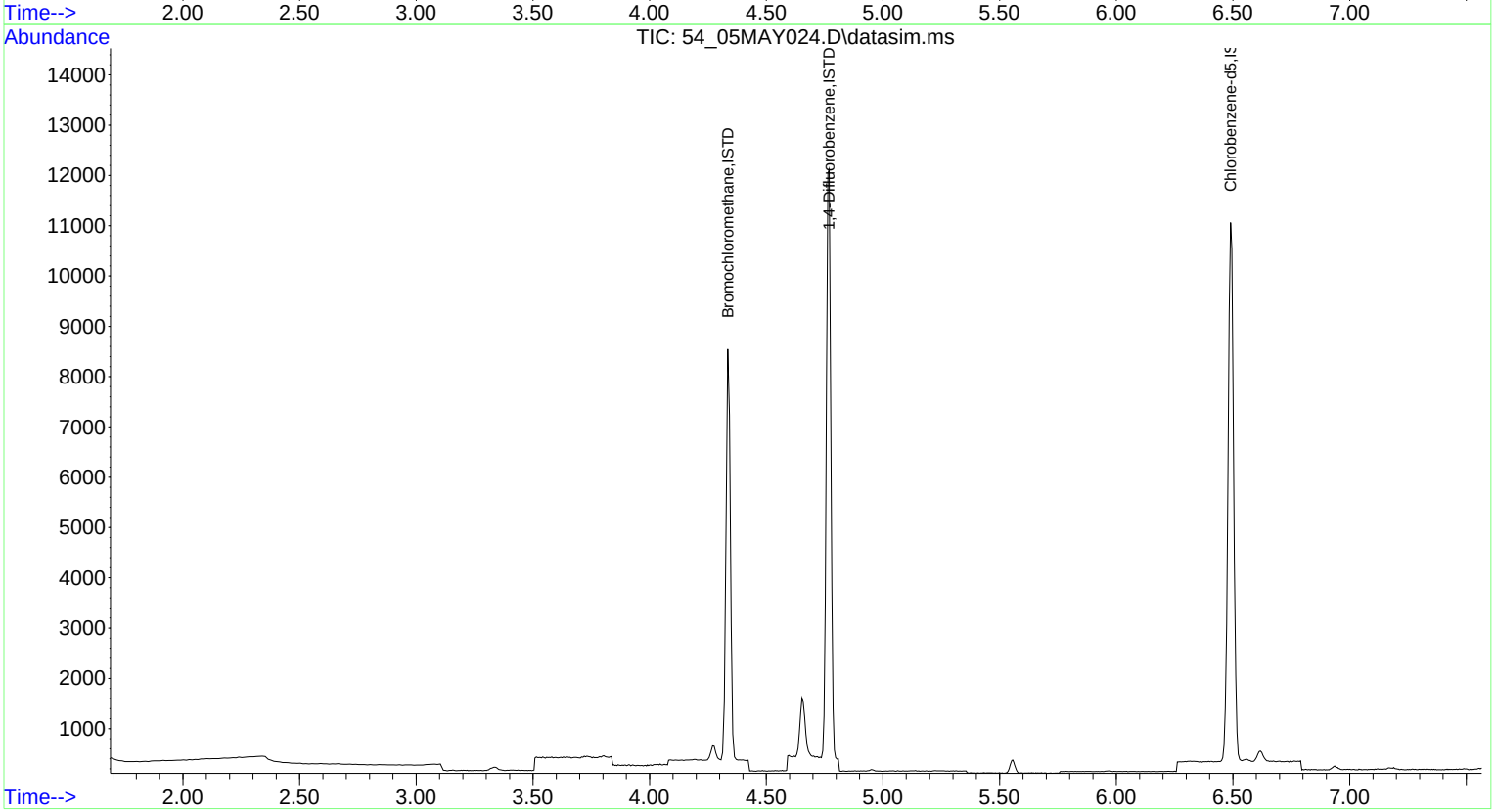
(#) = qualifier out of range (m) = manual integration (+) = signals summed

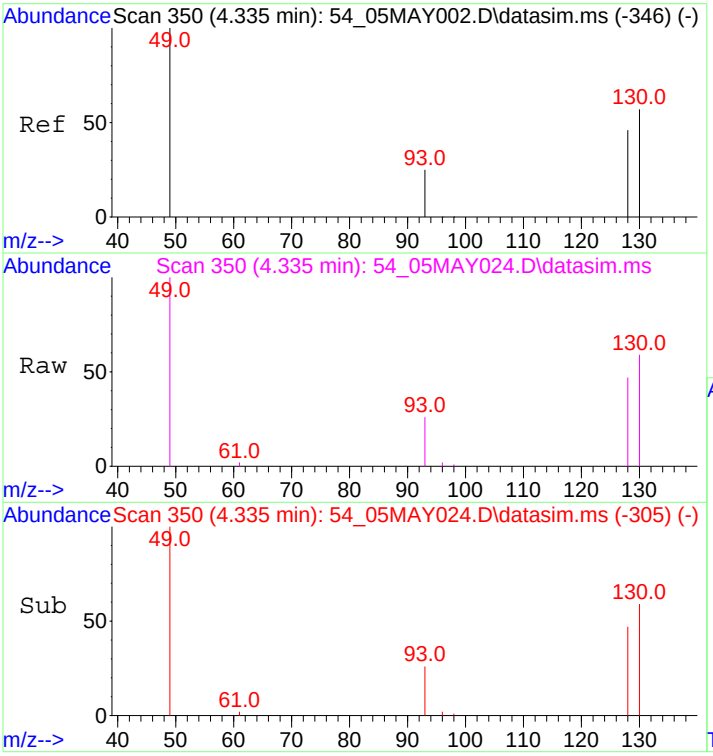
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY024.D
Acq On : 5 May 2014 1:27 pm
Operator : yhl
Sample : 02188 \ F5-073
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:33:53 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



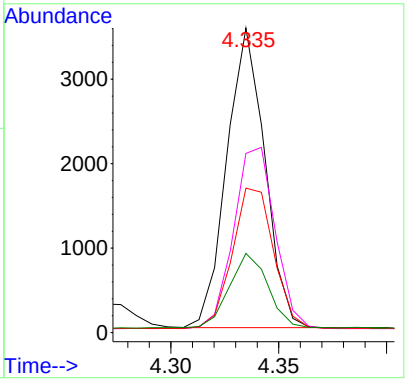


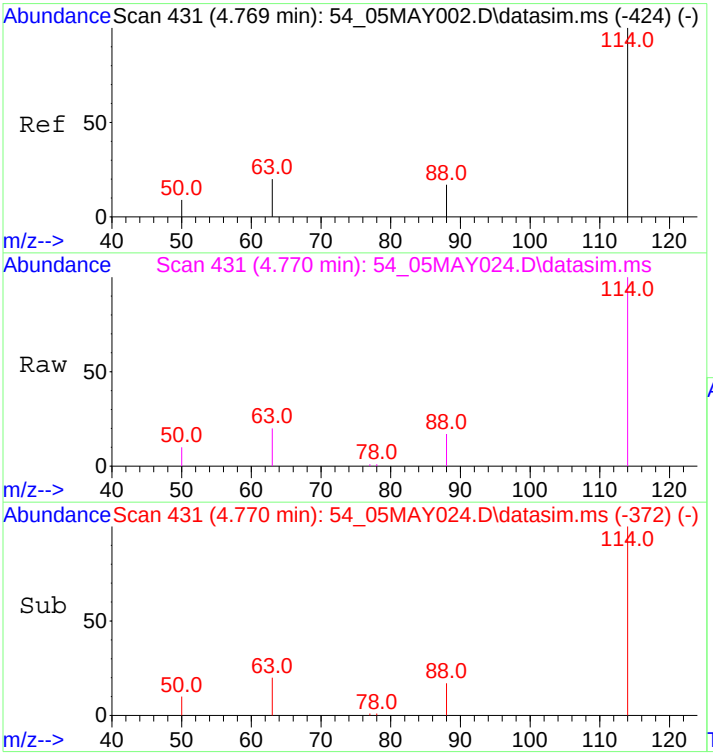


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY024.D
Acq: 5 May 2014 1:27 pm

Tgt Ion: 49 Resp: 4356

Ion	Ratio	Lower	Upper
49	100		
130	65.9	87.2	130.8#
128	51.0	68.0	102.0#
93	25.2	29.3	43.9#

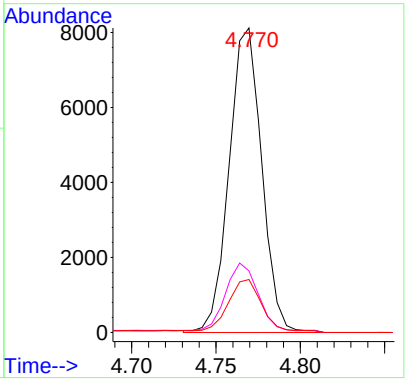


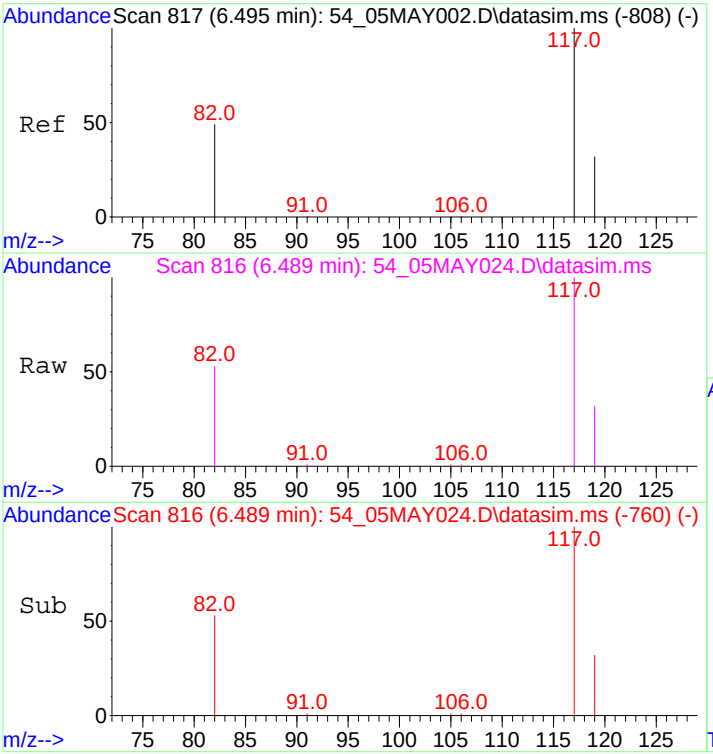


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY024.D
Acq: 5 May 2014 1:27 pm

Tgt Ion:114 Resp: 10931

Ion	Ratio	Lower	Upper
114	100		
63	21.4	12.0	18.0#
88	16.4	11.8	17.8

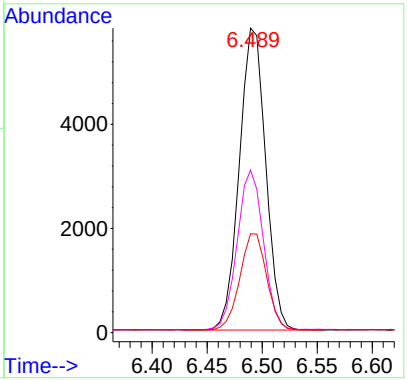




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY024.D
Acq: 5 May 2014 1:27 pm

Tgt Ion:117 Resp: 9660

Ion	Ratio	Lower	Upper
117	100		
82	52.6	38.0	57.0
119	32.3	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY025.D
Acq On : 5 May 2014 1:38 pm
Operator : yhl
Sample : 02189 \ F5-075
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:45:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

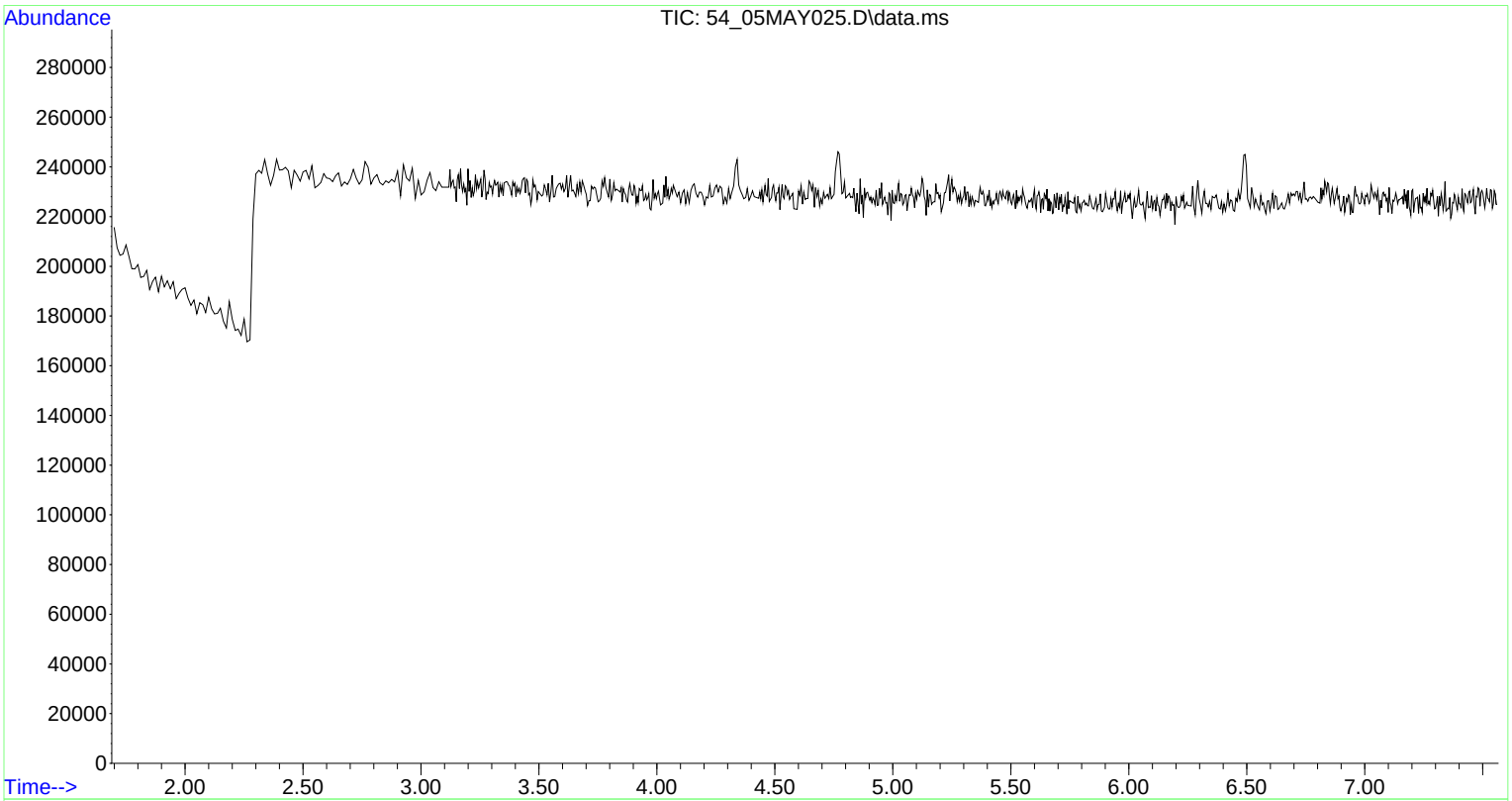
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4439	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10700	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9921	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
16] m,p-Xylene	6.617	91	324	0.56	ppbv	90

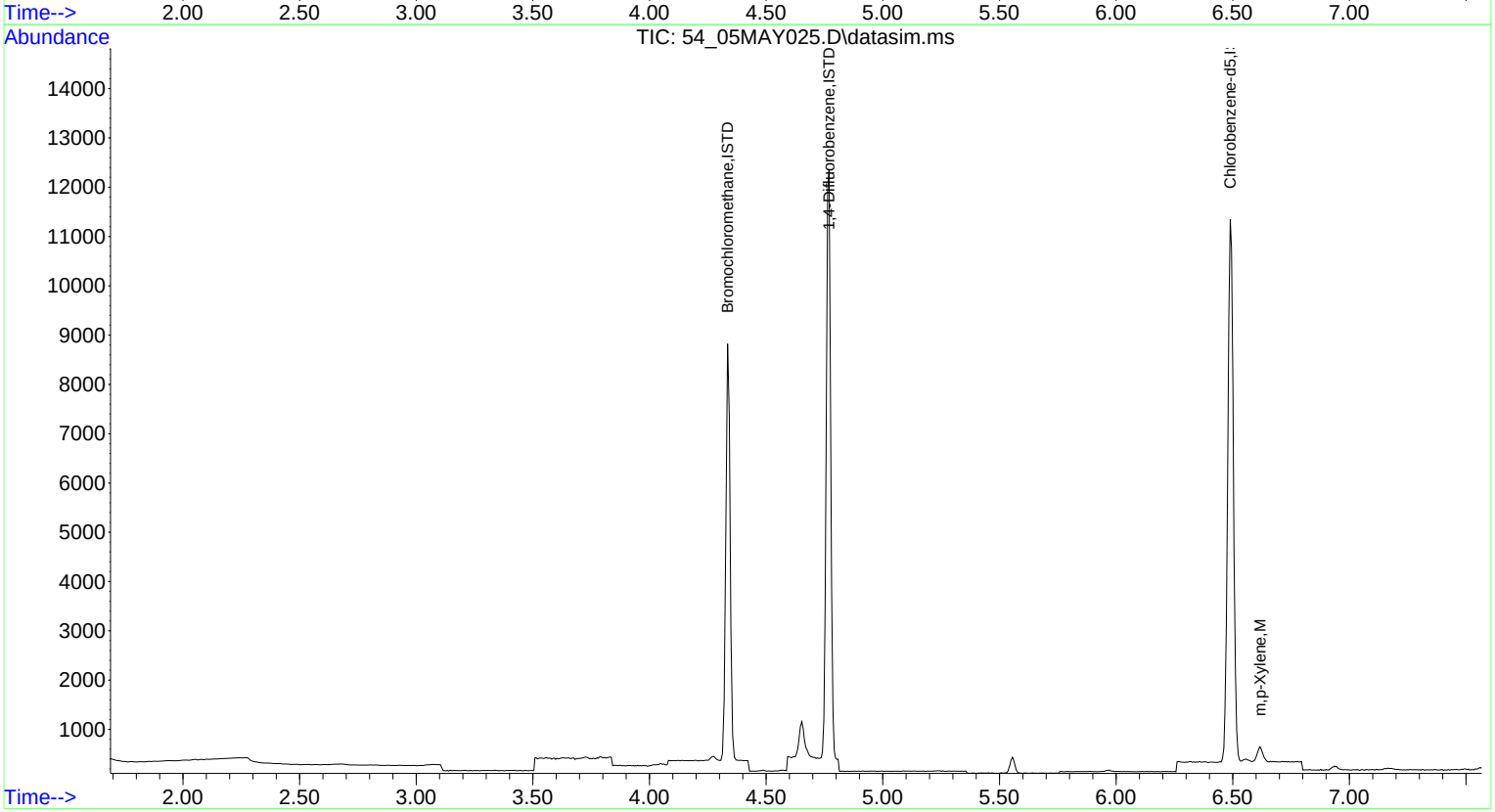
(#) = qualifier out of range (m) = manual integration (+) = signals summed

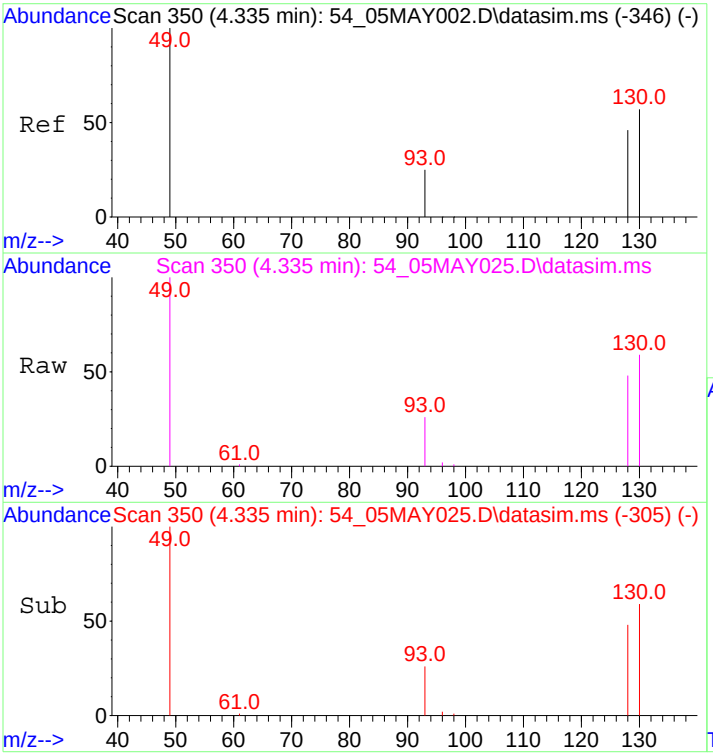
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY025.D
Acq On : 5 May 2014 1:38 pm
Operator : yhl
Sample : 02189 \ F5-075
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:45:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



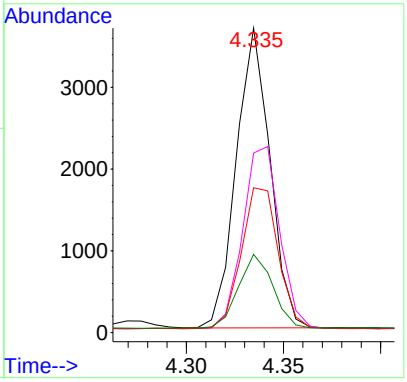


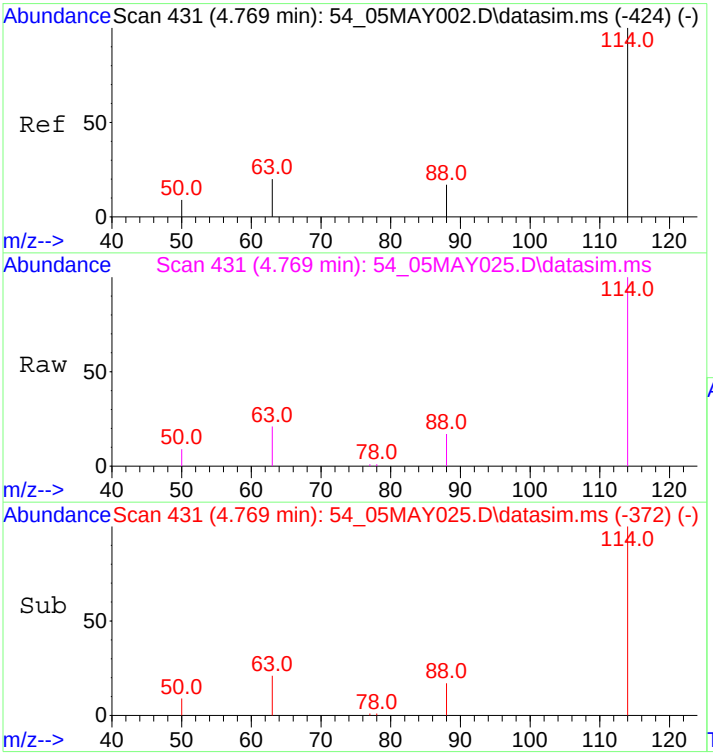


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY025.D
Acq: 5 May 2014 1:38 pm

Tgt Ion: 49 Resp: 4439

Ion	Ratio	Lower	Upper
49	100		
130	66.4	87.2	130.8#
128	51.4	68.0	102.0#
93	25.0	29.3	43.9#

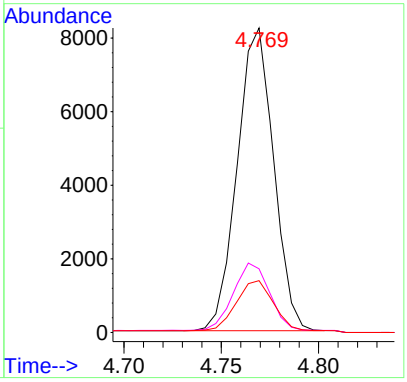


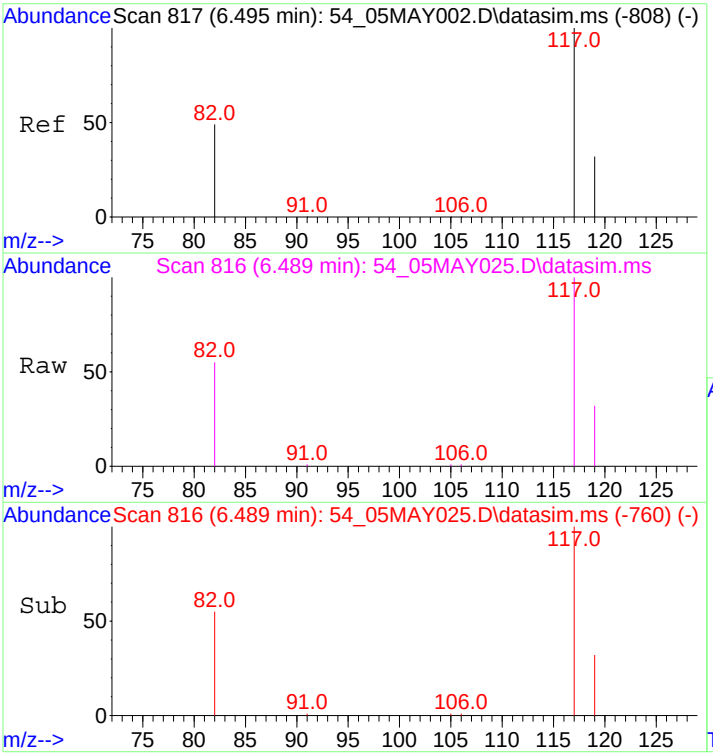


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_05MAY025.D
Acq: 5 May 2014 1:38 pm

Tgt Ion:114 Resp: 10700

Ion	Ratio	Lower	Upper
114	100		
63	22.1	12.0	18.0#
88	16.9	11.8	17.8

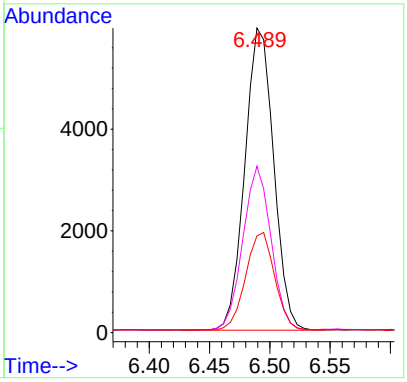


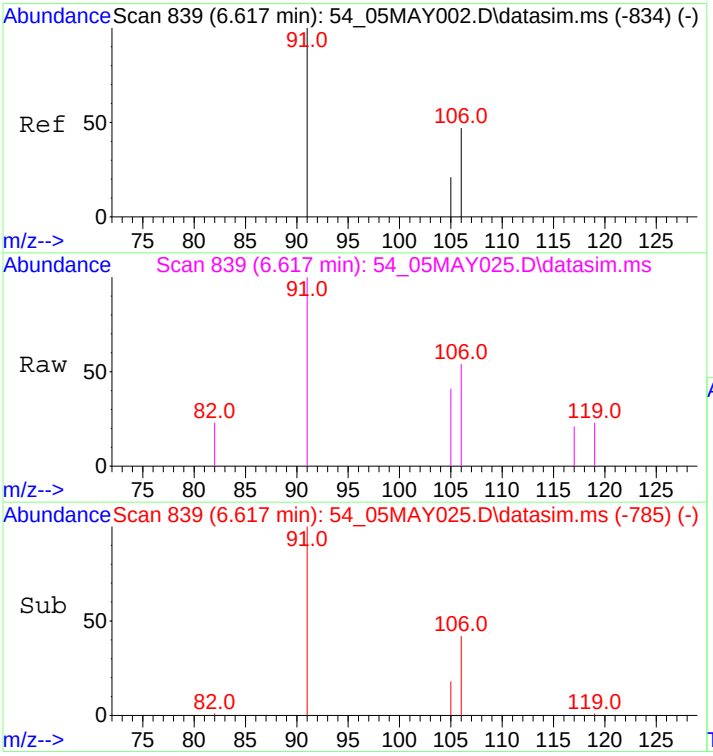


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY025.D
Acq: 5 May 2014 1:38 pm

Tgt Ion:117 Resp: 9921

Ion	Ratio	Lower	Upper
117	100		
82	52.4	38.0	57.0
119	32.2	27.0	40.4

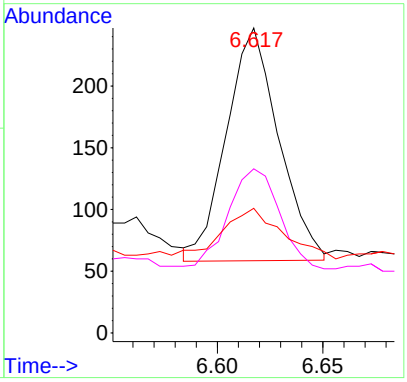




#16
m,p-Xylene
Concen: 0.56 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54_05MAY025.D
Acq: 5 May 2014 1:38 pm

Tgt Ion: 91 Resp: 324

Ion	Ratio	Lower	Upper
91	100		
106	44.4	43.1	64.7
105	24.4	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY026.D
Acq On : 5 May 2014 1:50 pm
Operator : yhl
Sample : 02190 \ F5-067
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:57:53 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

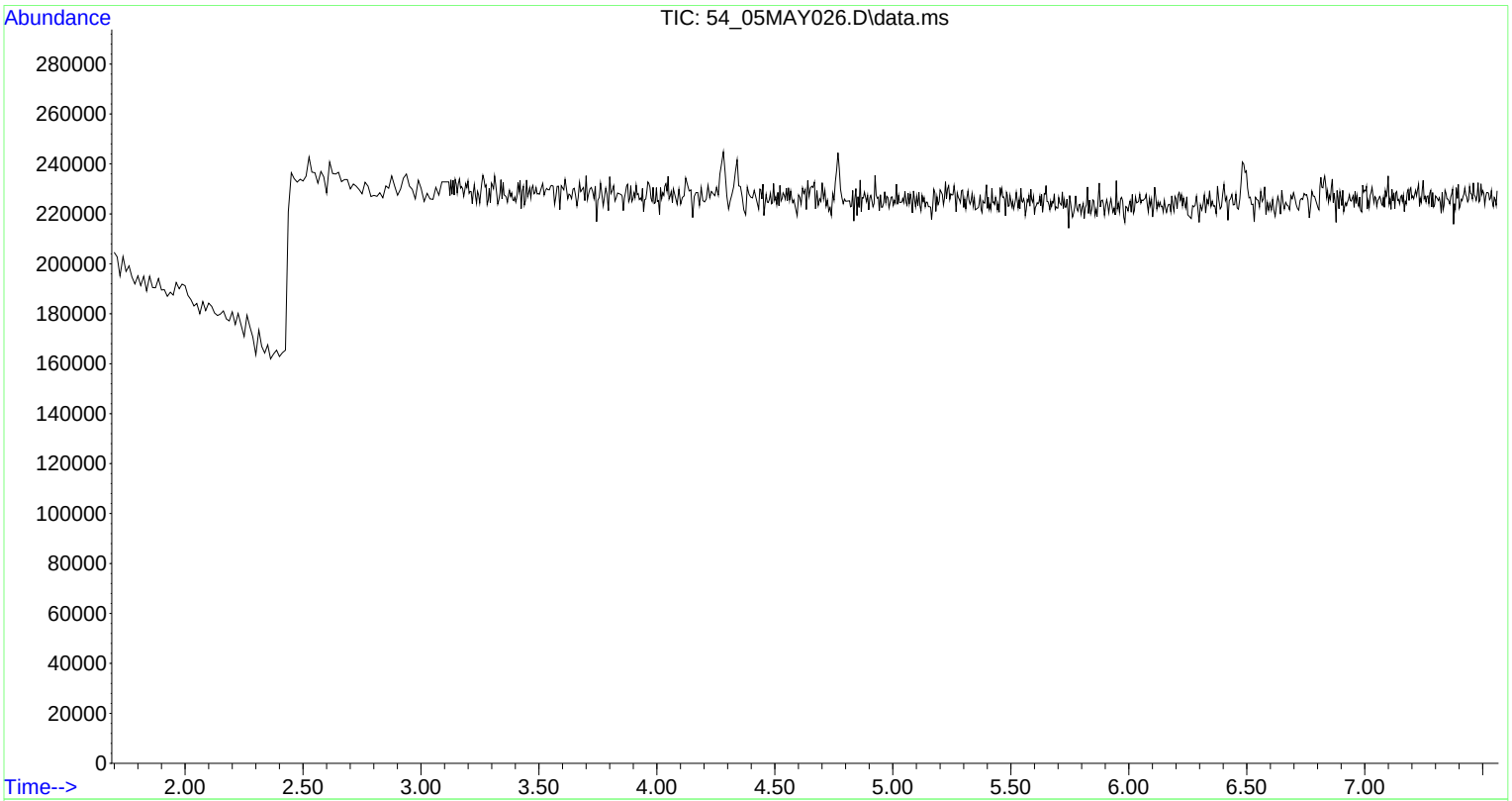
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4432	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10778	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9845	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.949	130	175	0.65	ppbv	# 84

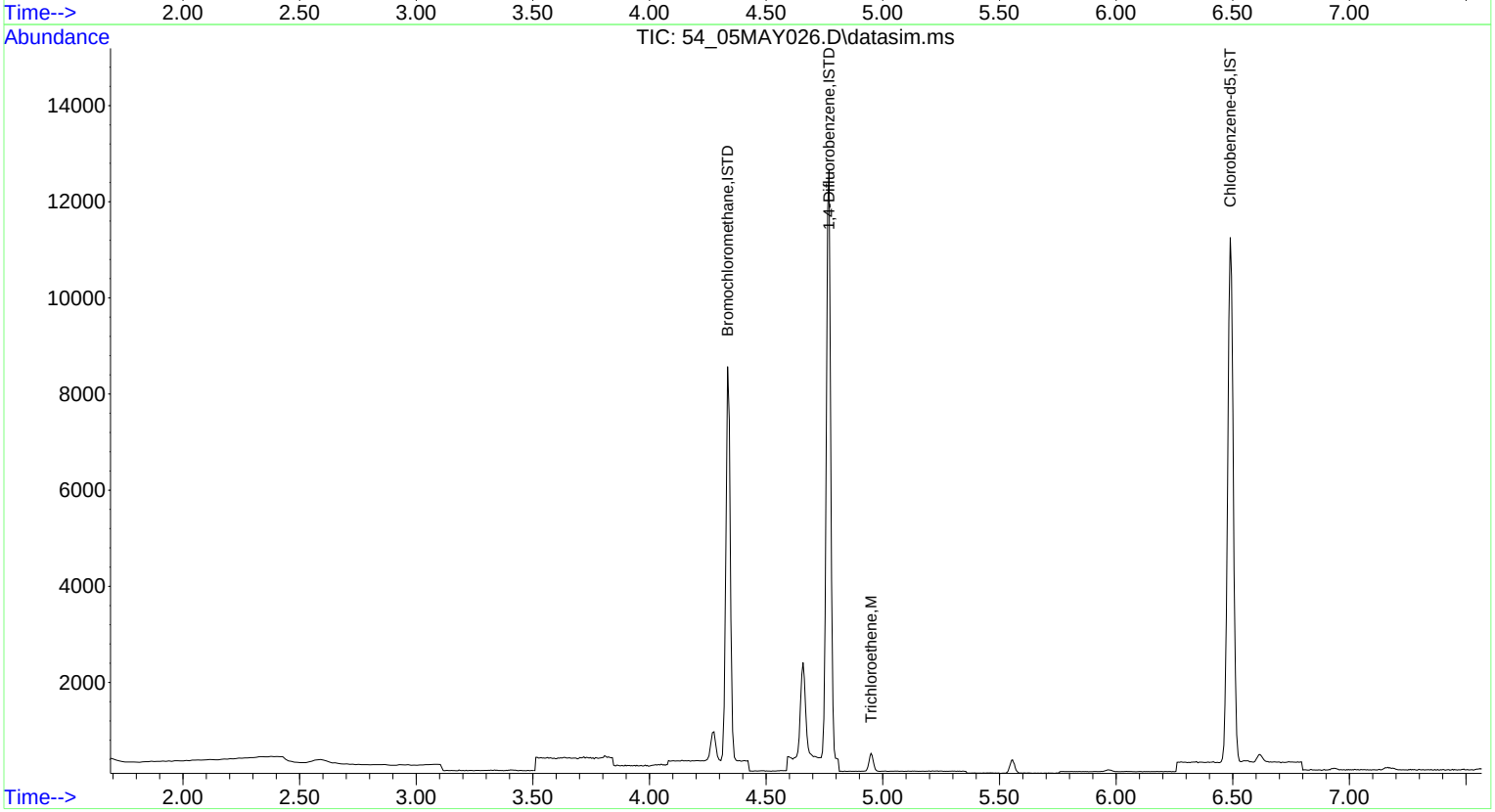
(#) = qualifier out of range (m) = manual integration (+) = signals summed

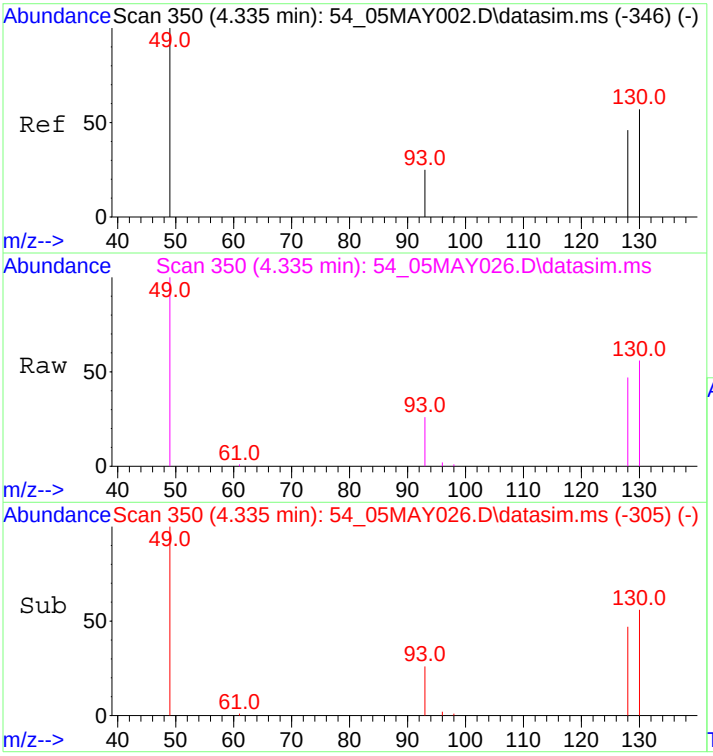
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY026.D
Acq On : 5 May 2014 1:50 pm
Operator : yhl
Sample : 02190 \ F5-067
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 13:57:53 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



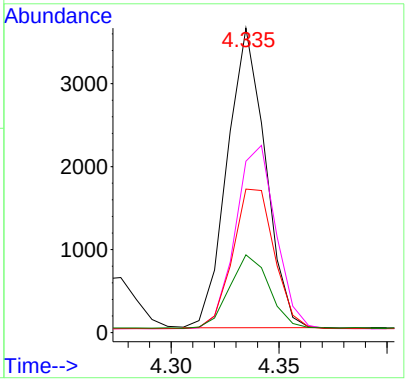


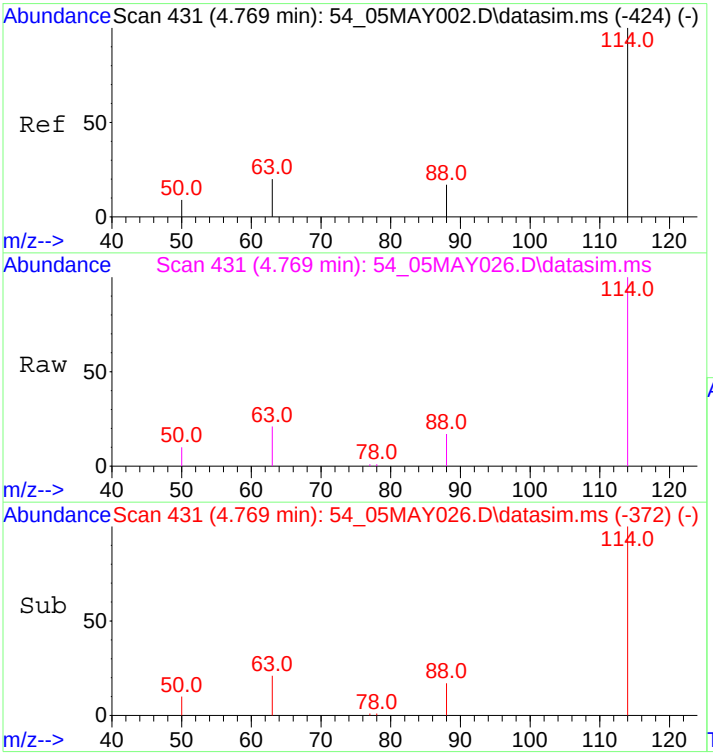


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY026.D
Acq: 5 May 2014 1:50 pm

Tgt Ion: 49 Resp: 4432

Ion	Ratio	Lower	Upper
49	100		
130	64.8	87.2	130.8#
128	50.9	68.0	102.0#
93	25.6	29.3	43.9#

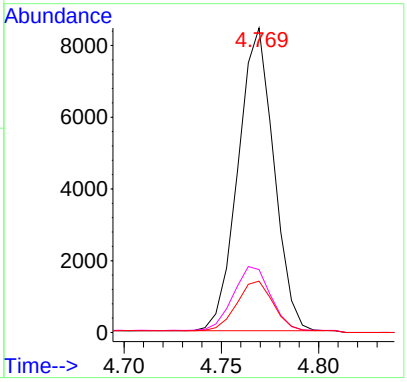


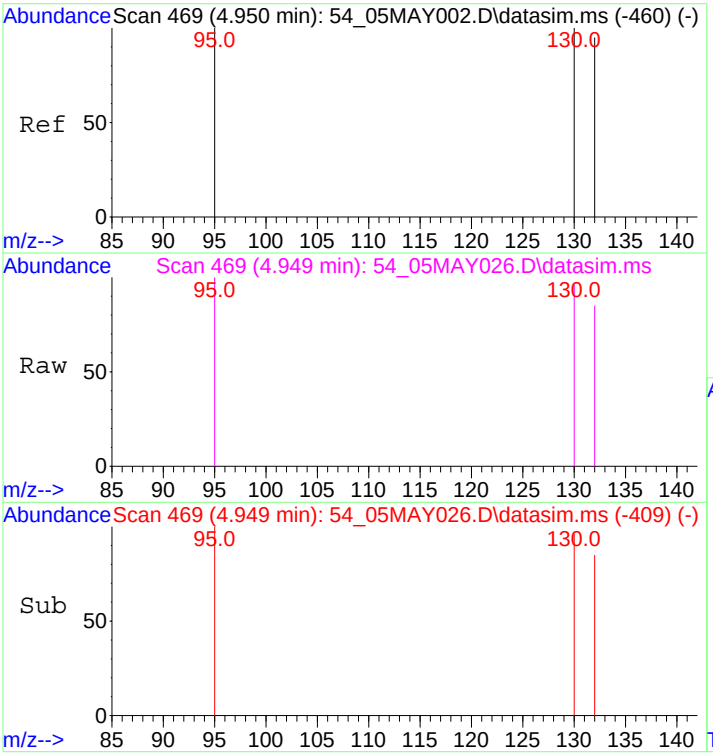


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_05MAY026.D
Acq: 5 May 2014 1:50 pm

Tgt Ion:114 Resp: 10778

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.7	11.8	17.8

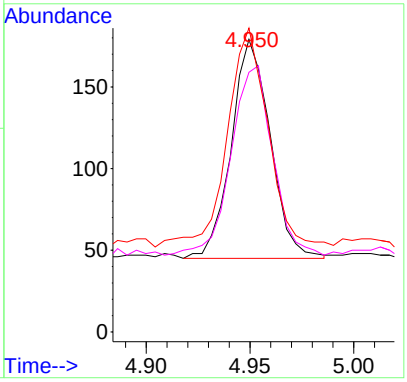


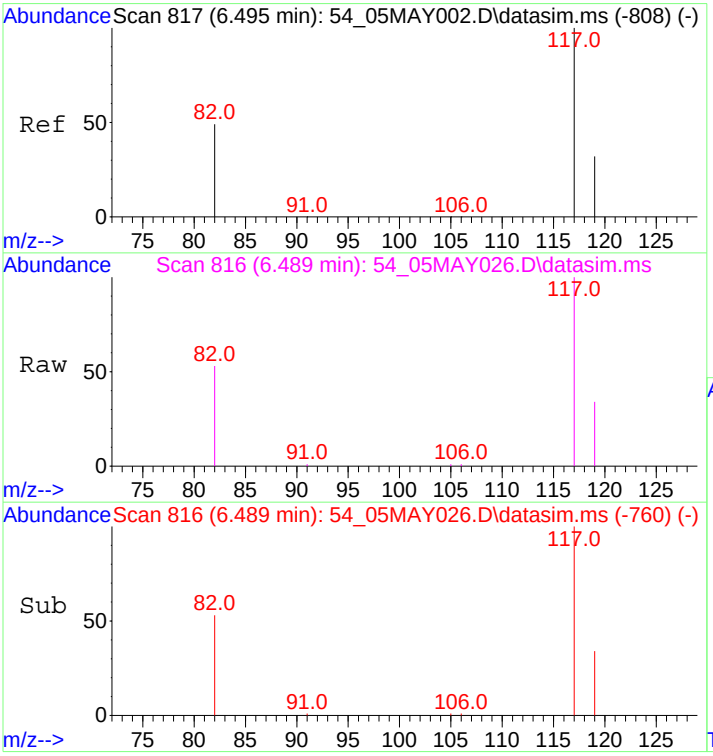


#11
Trichloroethene
Concen: 0.65 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY026.D
Acq: 5 May 2014 1:50 pm

Tgt Ion:130 Resp: 175

Ion	Ratio	Lower	Upper
130	100		
132	118.3	76.9	115.3#
95	104.6	76.5	114.7

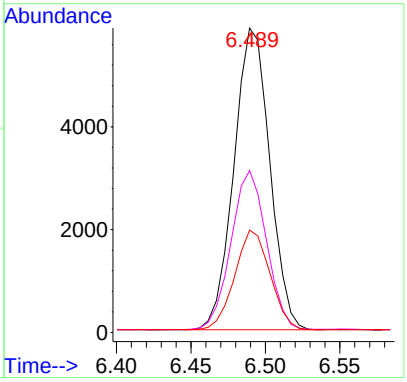




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY026.D
Acq: 5 May 2014 1:50 pm

Tgt Ion:117 Resp: 9845

Ion	Ratio	Lower	Upper
117	100		
82	52.1	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY027.D
Acq On : 5 May 2014 2:01 pm
Operator : yhl
Sample : 02191 \ F5-049
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:07:59 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

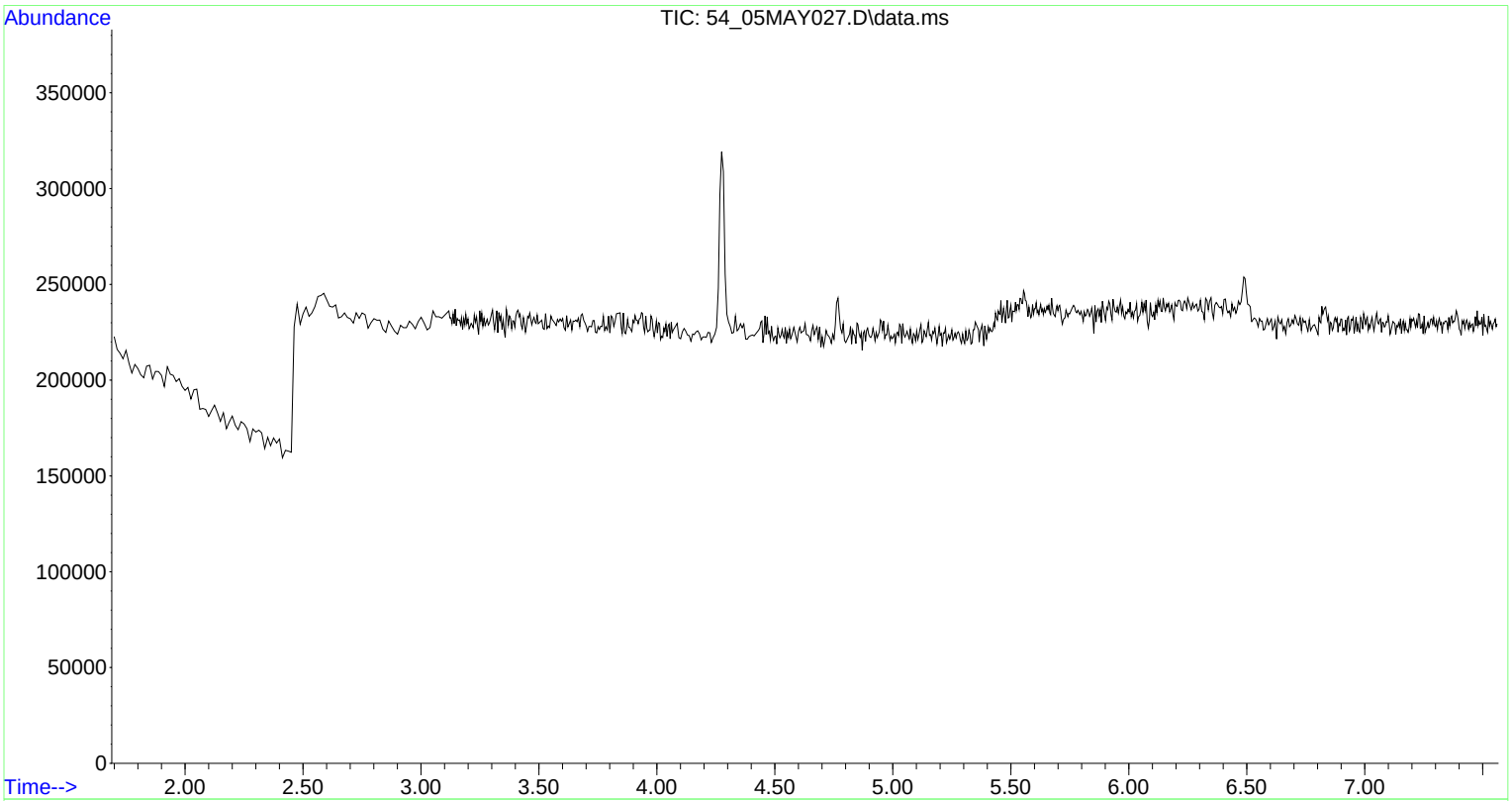
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4429	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10761	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10236	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	891	3.33	ppbv	98
13] Toluene	5.556	91	6042	9.85	ppbv	99

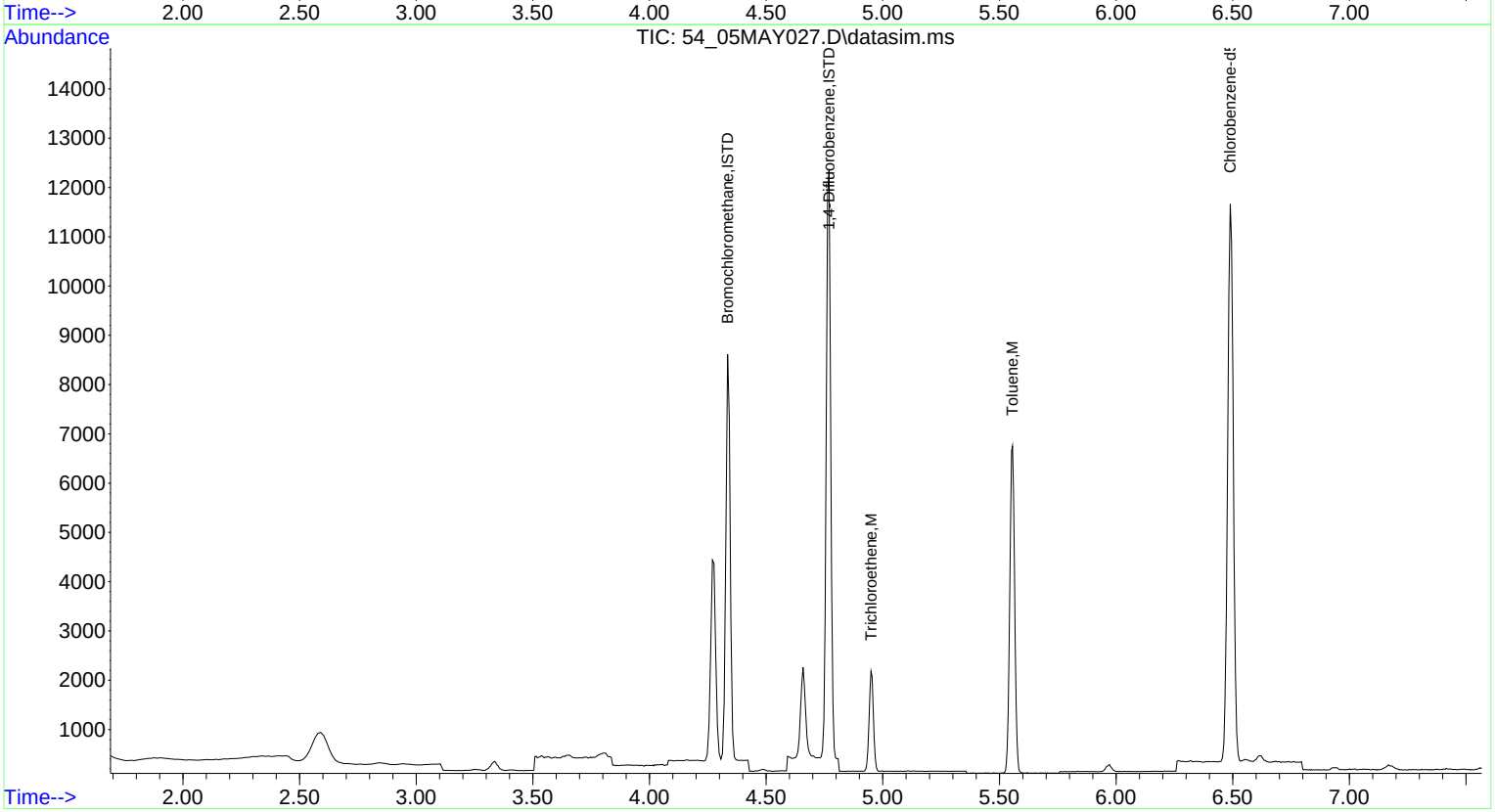
(#) = qualifier out of range (m) = manual integration (+) = signals summed

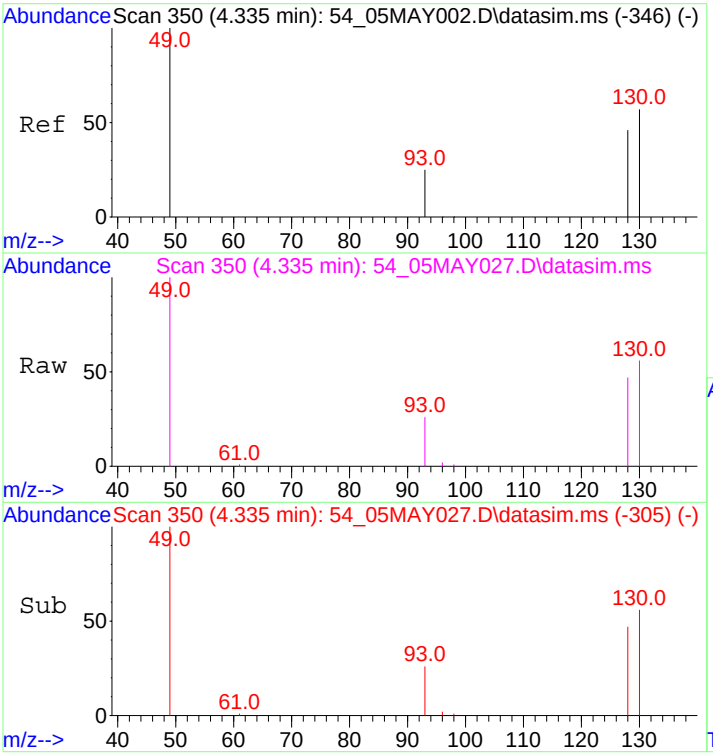
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY027.D
Acq On : 5 May 2014 2:01 pm
Operator : yhl
Sample : 02191 \ F5-049
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:07:59 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



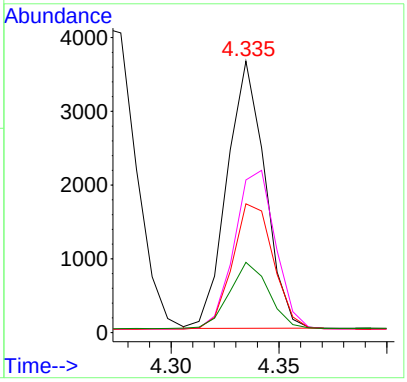


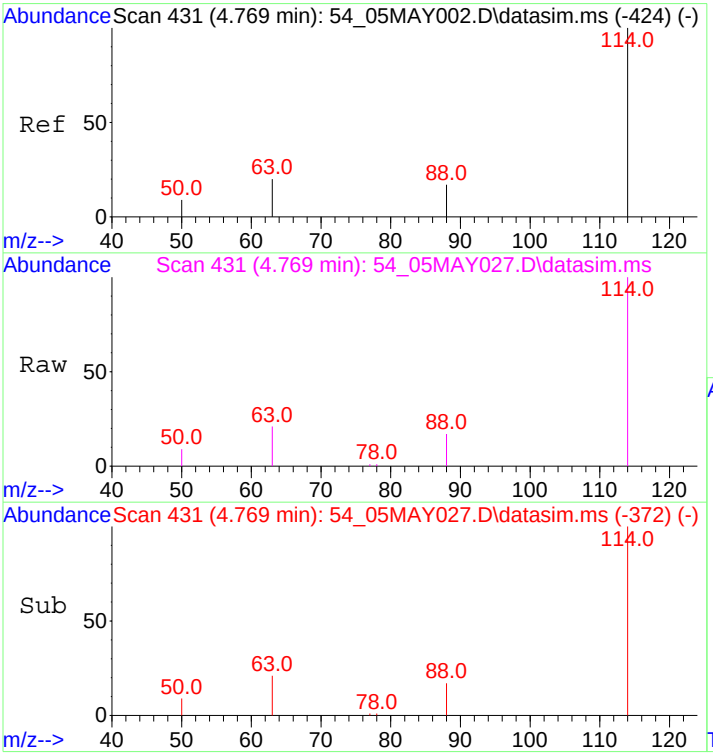


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY027.D
Acq: 5 May 2014 2:01 pm

Tgt Ion: 49 Resp: 4429

Ion	Ratio	Lower	Upper
49	100		
130	64.2	87.2	130.8#
128	50.9	68.0	102.0#
93	25.7	29.3	43.9#

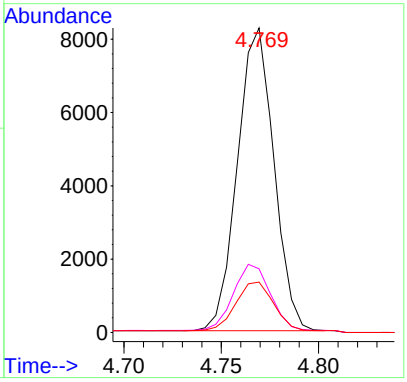


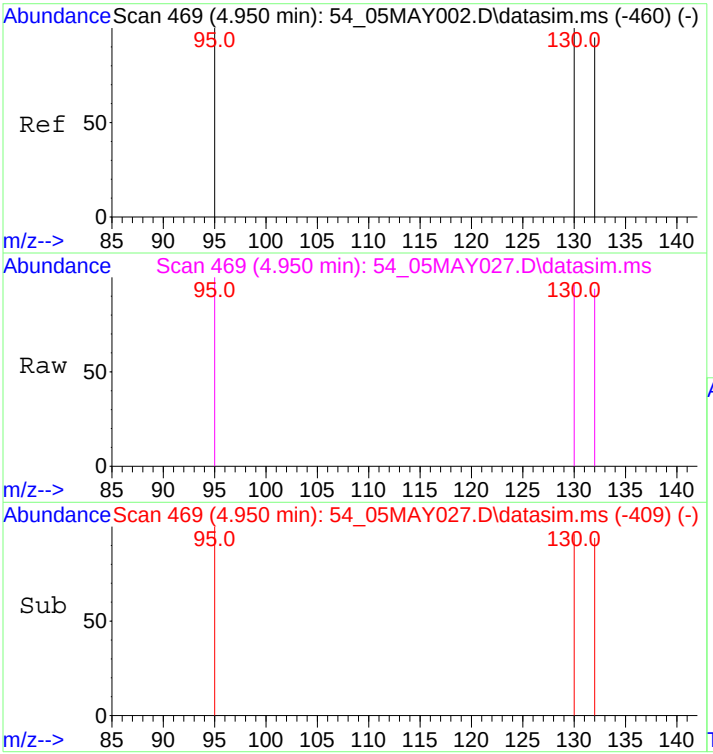


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_05MAY027.D
Acq: 5 May 2014 2:01 pm

Tgt Ion:114 Resp: 10761

Ion	Ratio	Lower	Upper
114	100		
63	22.2	12.0	18.0#
88	16.7	11.8	17.8

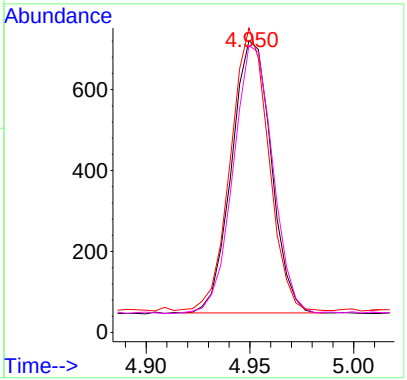


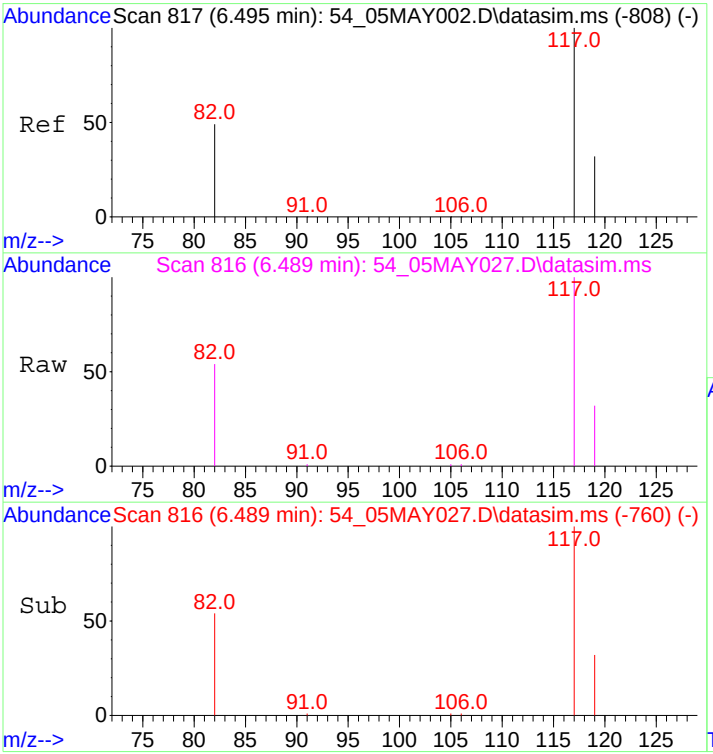


#11
Trichloroethene
Concen: 3.33 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY027.D
Acq: 5 May 2014 2:01 pm

Tgt Ion:130 Resp: 891

Ion	Ratio	Lower	Upper
130	100		
132	97.8	76.9	115.3
95	98.5	76.5	114.7

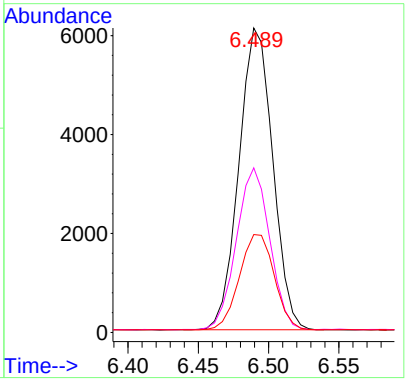


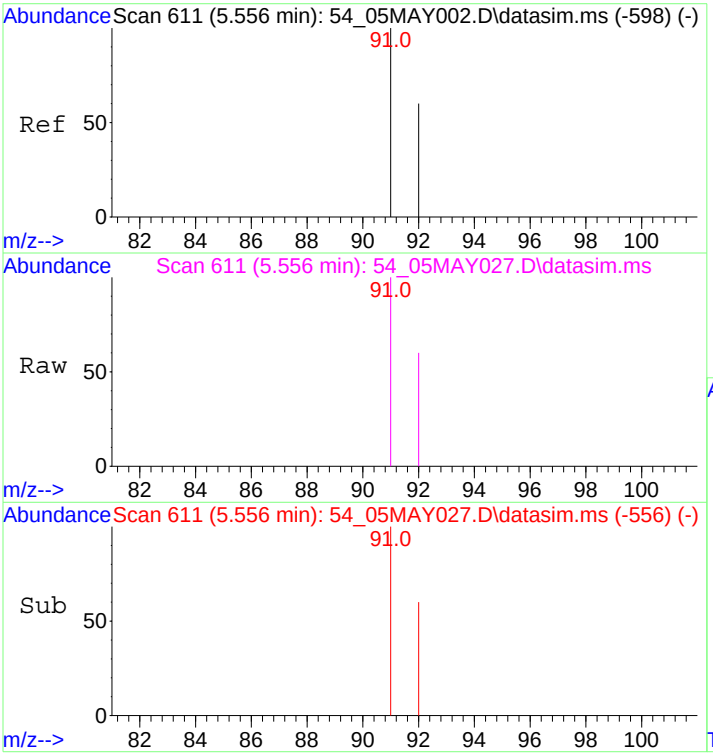


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY027.D
Acq: 5 May 2014 2:01 pm

Tgt Ion:117 Resp: 10236

Ion	Ratio	Lower	Upper
117	100		
82	52.6	38.0	57.0
119	32.5	27.0	40.4

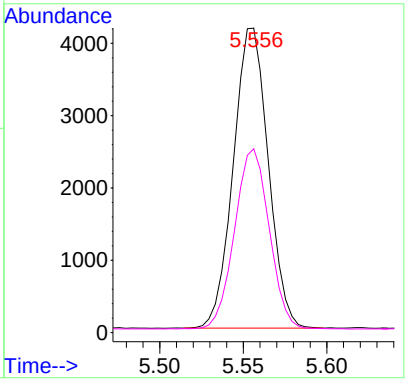




#13
Toluene
Concen: 9.85 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 05MAY027.D
Acq: 5 May 2014 2:01 pm

Tgt Ion: 91 Resp: 6042

Ion	Ratio	Lower	Upper
91	100		
92	59.3	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY028.D
Acq On : 5 May 2014 2:14 pm
Operator : yhl
Sample : 02192 \ F5-047
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:49:39 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

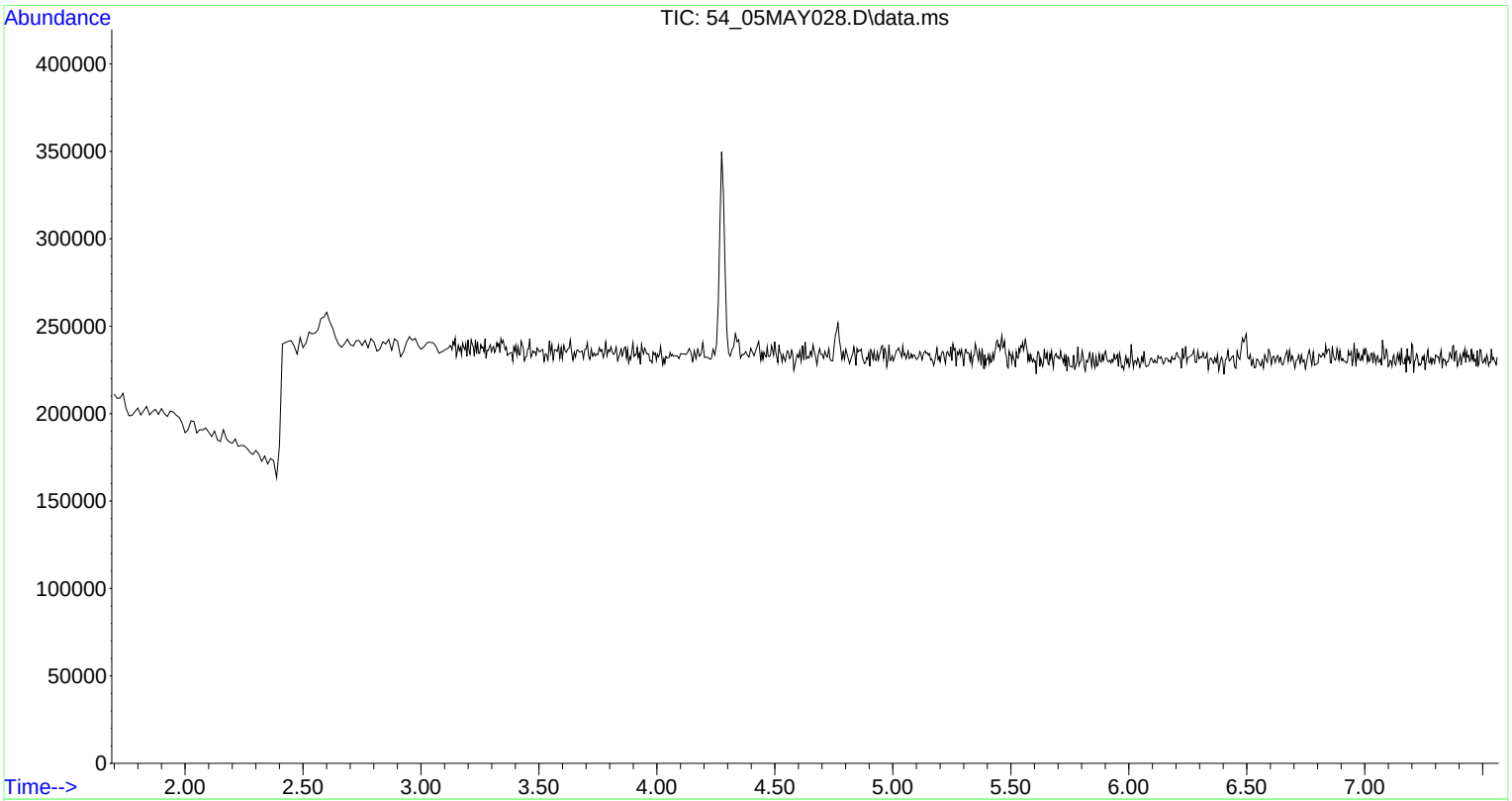
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4323	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10430	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9491	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.949	130	953	3.67	ppbv	97
13] Toluene	5.556	91	7053	12.40	ppbv	99

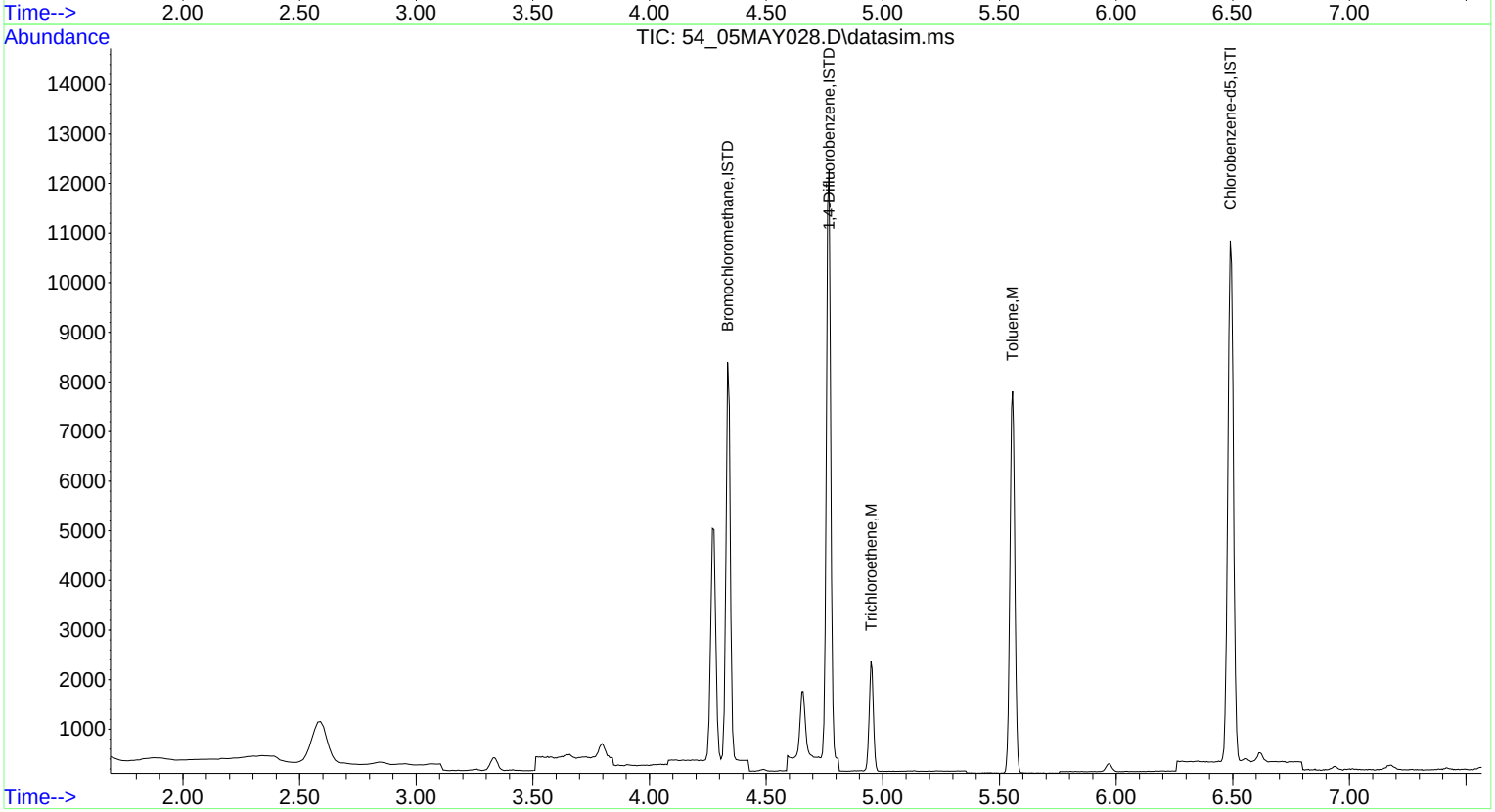
(#) = qualifier out of range (m) = manual integration (+) = signals summed

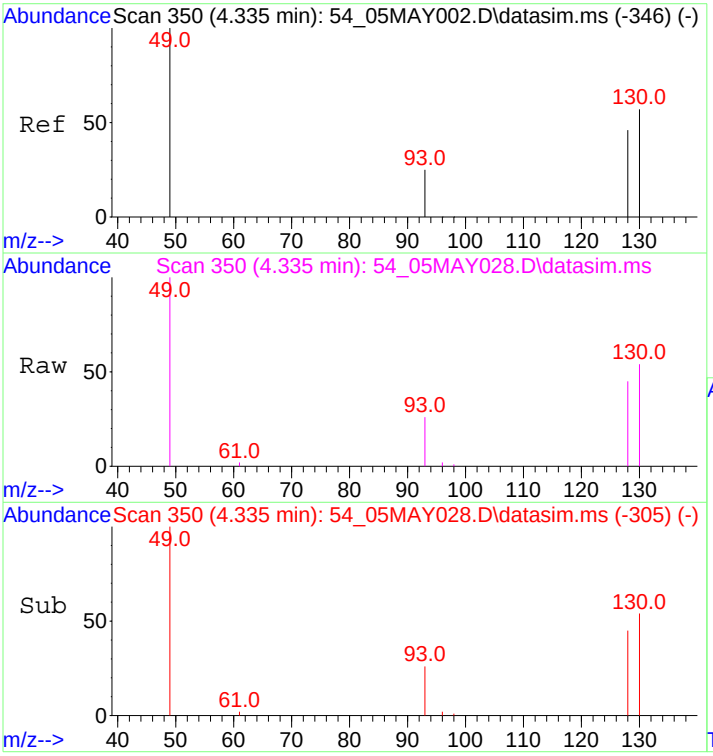
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY028.D
Acq On : 5 May 2014 2:14 pm
Operator : yhl
Sample : 02192 \ F5-047
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:49:39 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



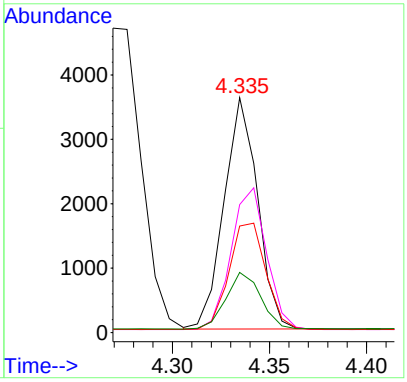


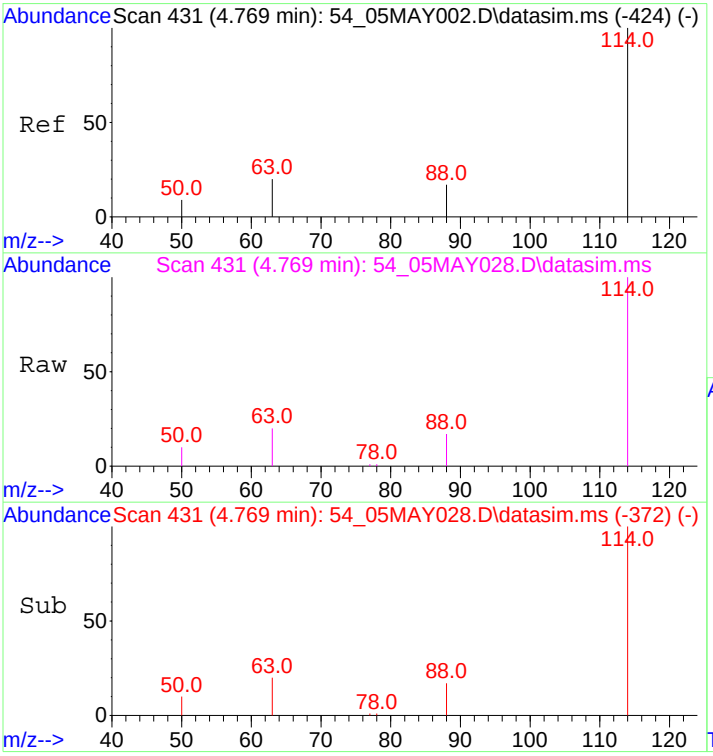


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY028.D
Acq: 5 May 2014 2:14 pm

Tgt Ion: 49 Resp: 4323

Ion	Ratio	Lower	Upper
49	100		
130	64.8	87.2	130.8#
128	50.7	68.0	102.0#
93	25.3	29.3	43.9#

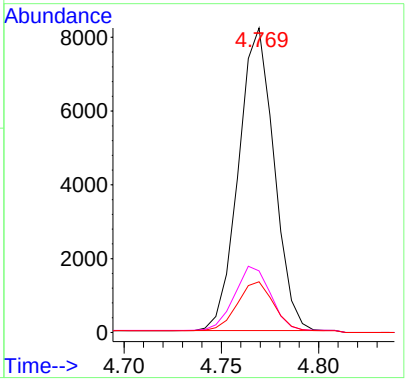


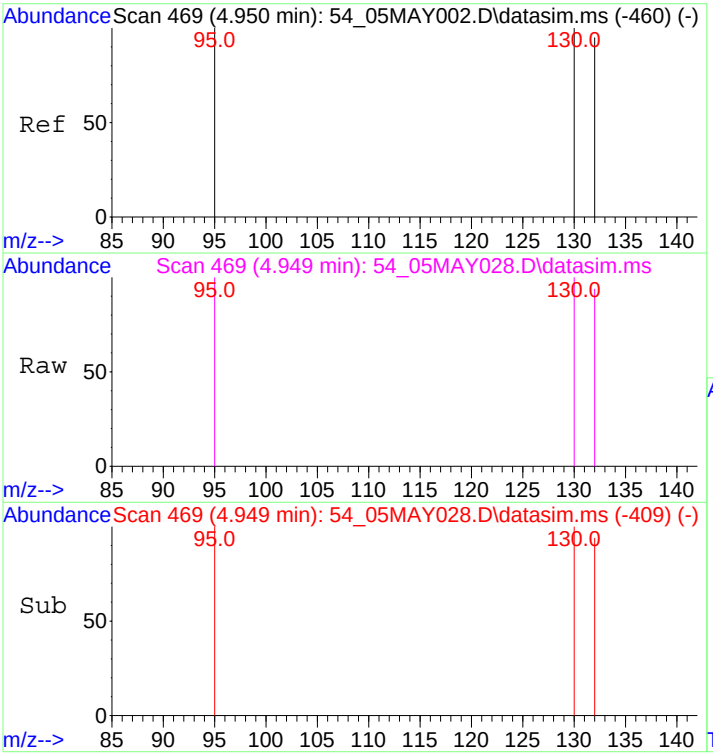


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_05MAY028.D
Acq: 5 May 2014 2:14 pm

Tgt Ion:114 Resp: 10430

Ion	Ratio	Lower	Upper
114	100		
63	21.4	12.0	18.0#
88	16.4	11.8	17.8

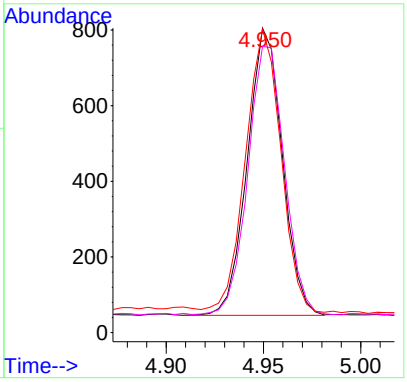


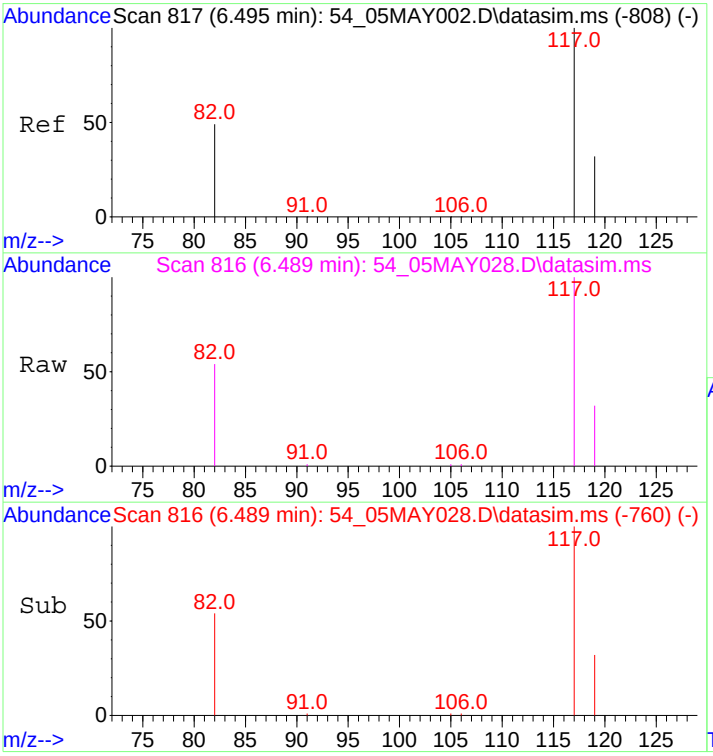


#11
Trichloroethene
Concen: 3.67 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY028.D
Acq: 5 May 2014 2:14 pm

Tgt Ion:130 Resp: 953

Ion	Ratio	Lower	Upper
130	100		
132	97.6	76.9	115.3
95	99.3	76.5	114.7

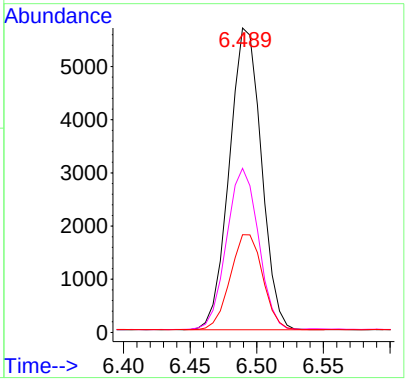


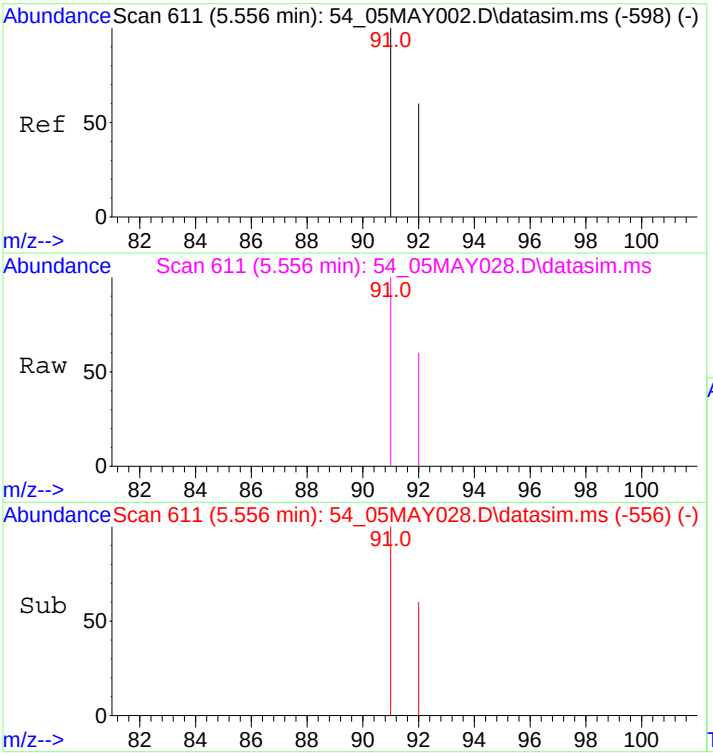


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY028.D
Acq: 5 May 2014 2:14 pm

Tgt Ion:117 Resp: 9491

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	31.9	27.0	40.4

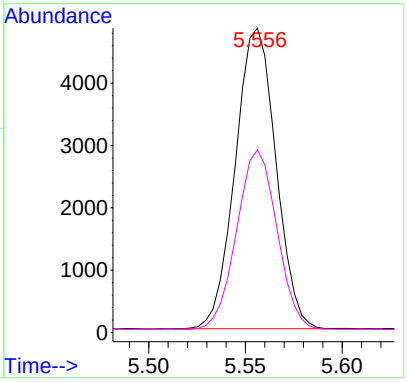




#13
Toluene
Concen: 12.40 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 05MAY028.D
Acq: 5 May 2014 2:14 pm

Tgt Ion: 91 Resp: 7053

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY029.D
Acq On : 5 May 2014 2:25 pm
Operator : yhl
Sample : 02193 \ F5-074
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:44:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

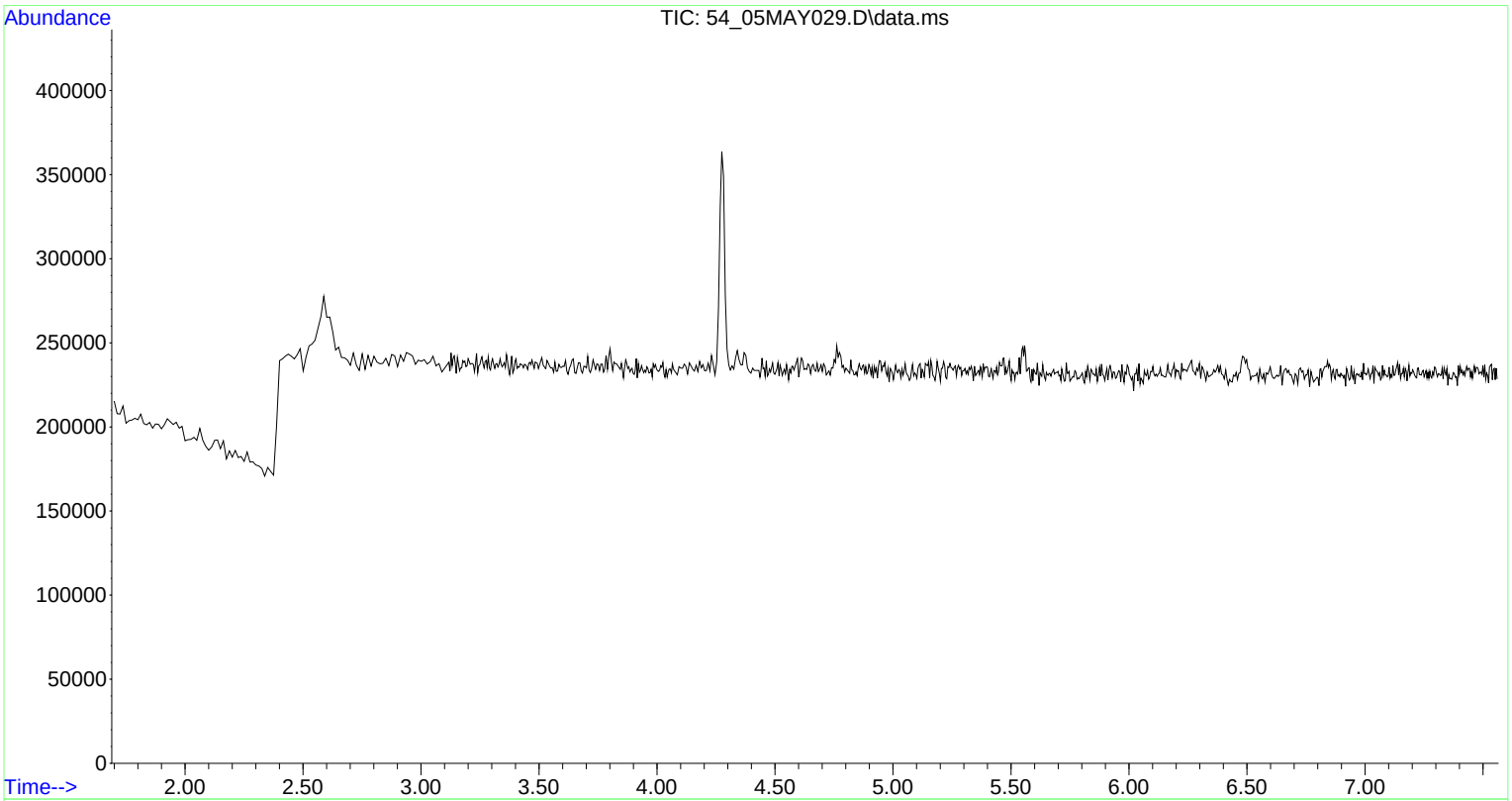
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4323	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10245	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	9524	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
11] Trichloroethene	4.950	130	1297	5.09	ppbv	97
13] Toluene	5.556	91	8154	14.28	ppbv	99
14] Tetrachloroethene	5.967	166	262	0.80	ppbv	97
16] m,p-Xylene	6.617	91	330	0.59	ppbv	89

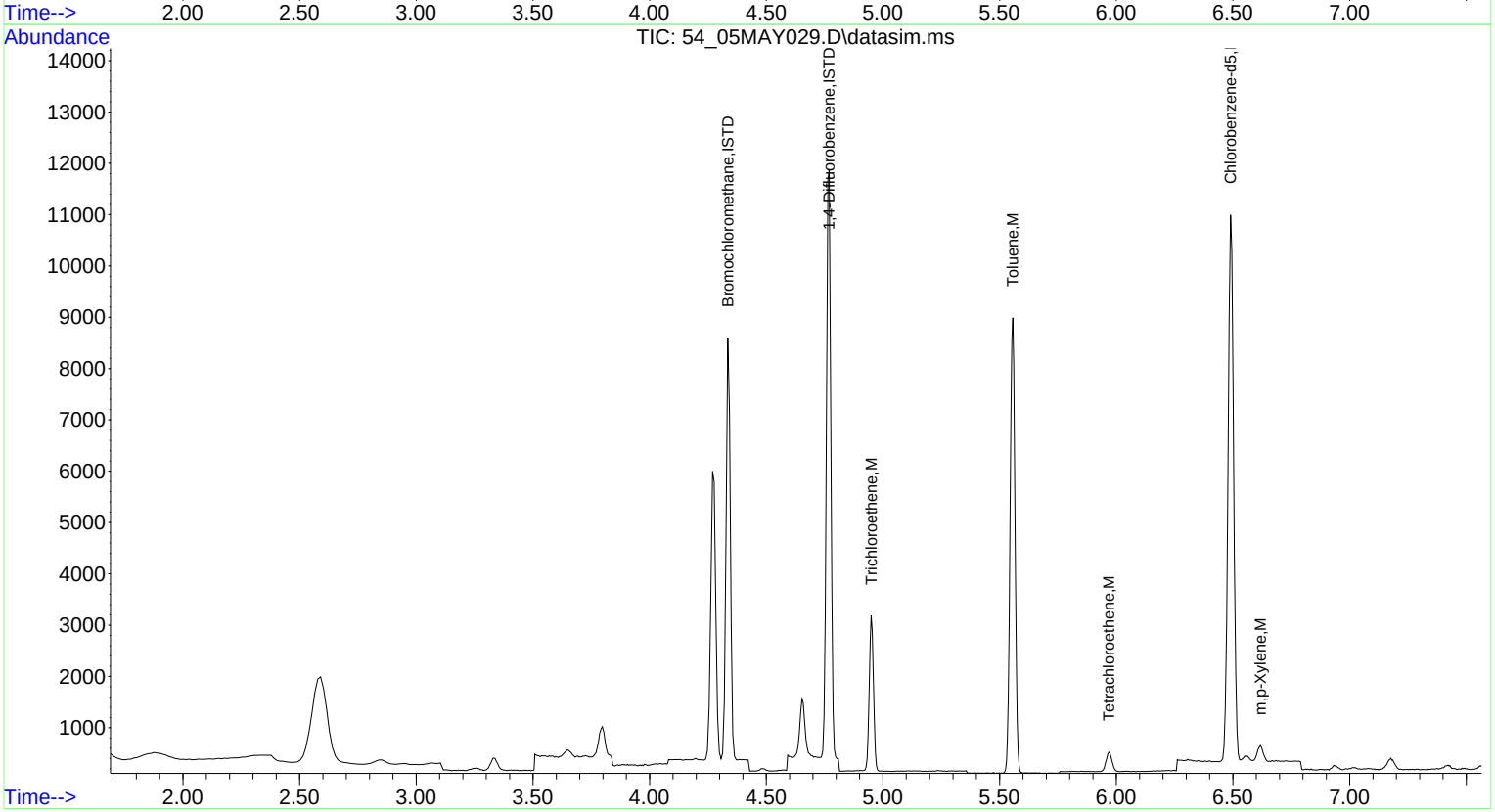
(#) = qualifier out of range (m) = manual integration (+) = signals summed

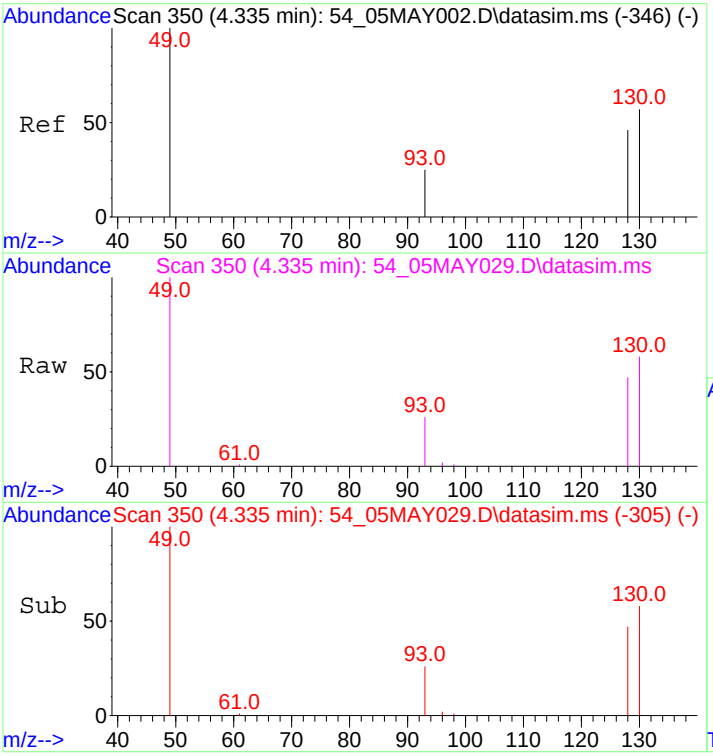
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY029.D
Acq On : 5 May 2014 2:25 pm
Operator : yhl
Sample : 02193 \ F5-074
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:44:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



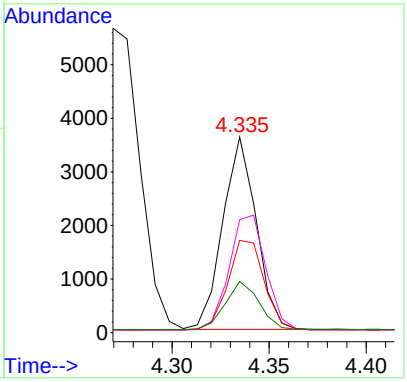


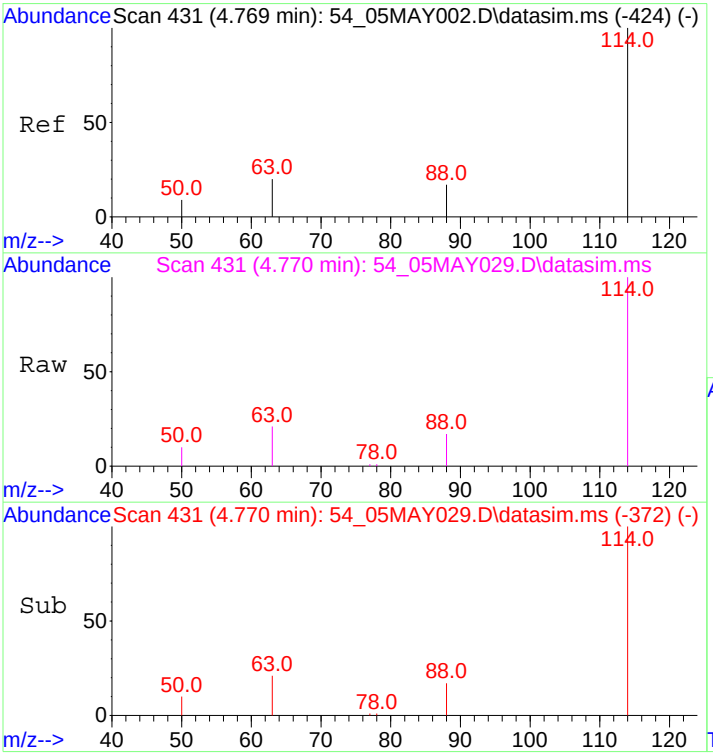


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY029.D
Acq: 5 May 2014 2:25 pm

Tgt Ion: 49 Resp: 4323

Ion	Ratio	Lower	Upper
49	100		
130	65.3	87.2	130.8#
128	50.6	68.0	102.0#
93	25.4	29.3	43.9#

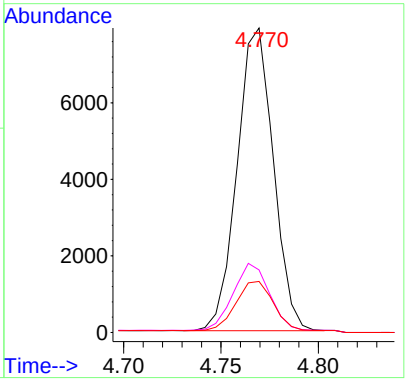


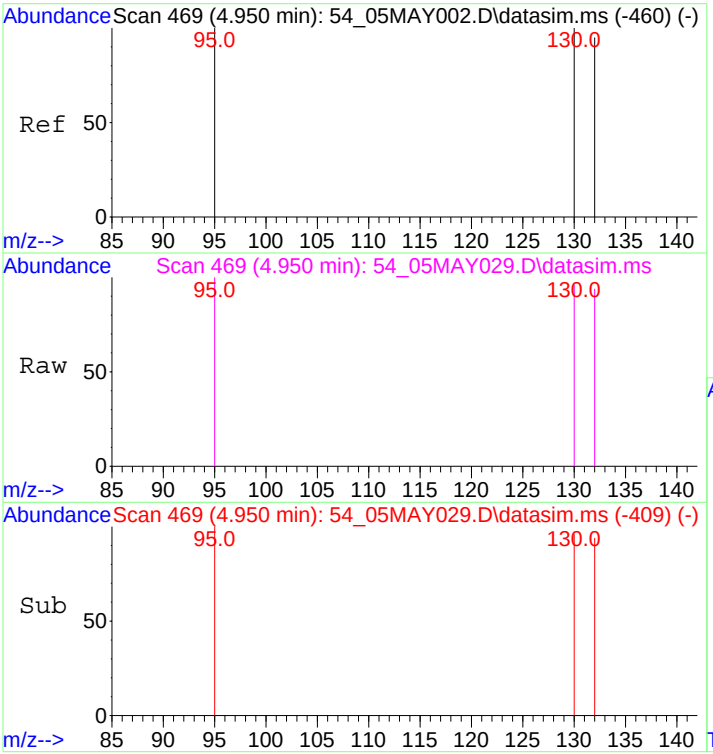


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY029.D
Acq: 5 May 2014 2:25 pm

Tgt Ion:114 Resp: 10245

Ion	Ratio	Lower	Upper
114	100		
63	22.1	12.0	18.0#
88	16.7	11.8	17.8

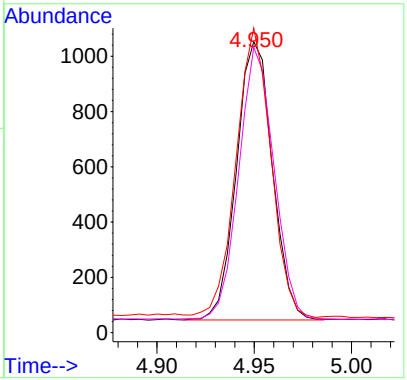


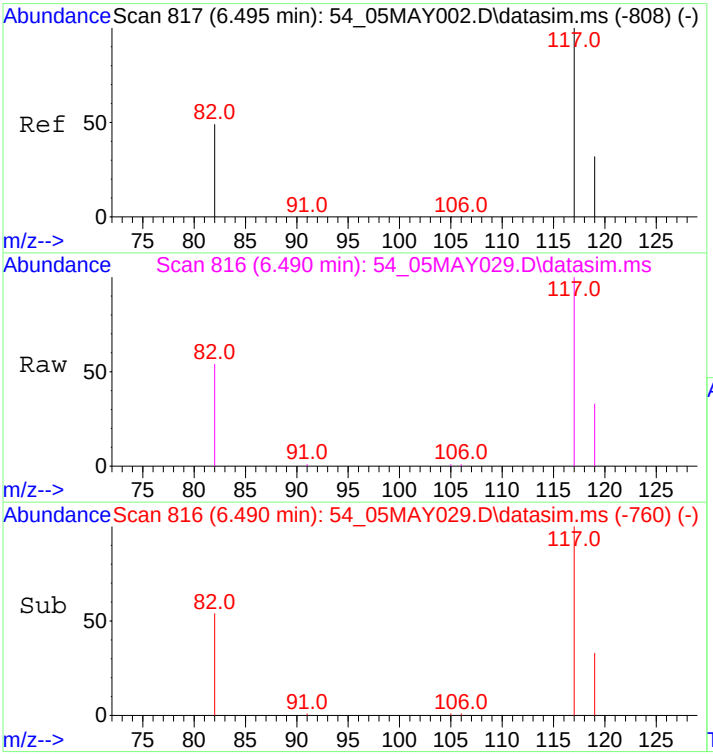


#11
Trichloroethene
Concen: 5.09 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 05MAY029.D
Acq: 5 May 2014 2:25 pm

Tgt Ion:130 Resp: 1297

Ion	Ratio	Lower	Upper
130	100		
132	95.8	76.9	115.3
95	100.8	76.5	114.7

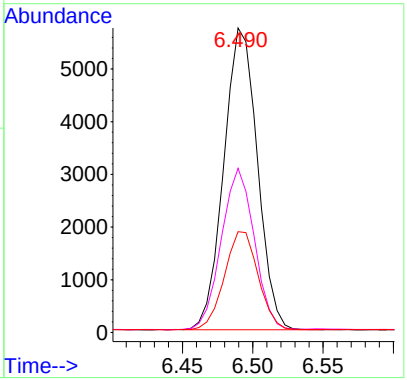


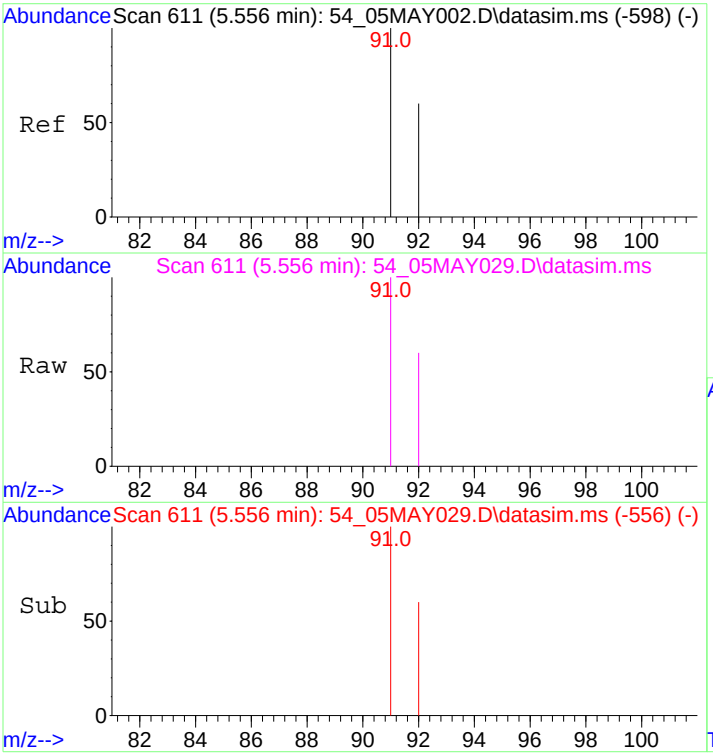


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54_05MAY029.D
Acq: 5 May 2014 2:25 pm

Tgt Ion:117 Resp: 9524

Ion	Ratio	Lower	Upper
117	100		
82	52.4	38.0	57.0
119	32.8	27.0	40.4

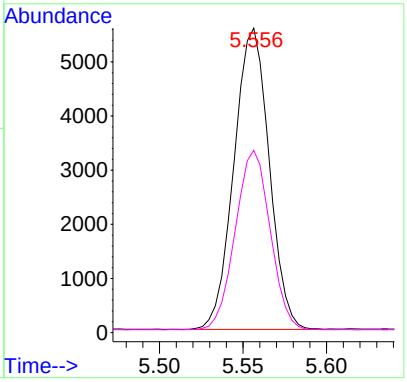


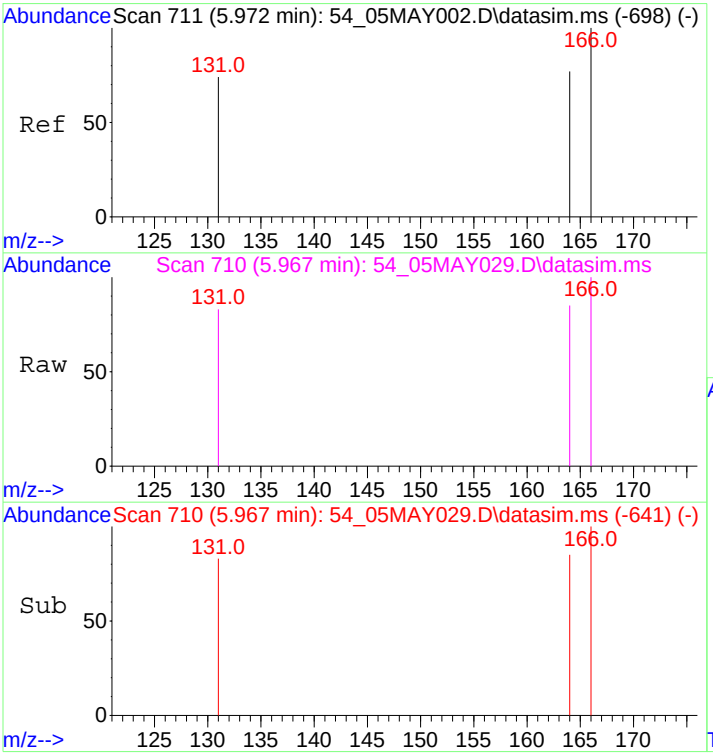


#13
Toluene
Concen: 14.28 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 05MAY029.D
Acq: 5 May 2014 2:25 pm

Tgt Ion: 91 Resp: 8154

Ion	Ratio	Lower	Upper
91	100		
92	59.0	47.8	71.8

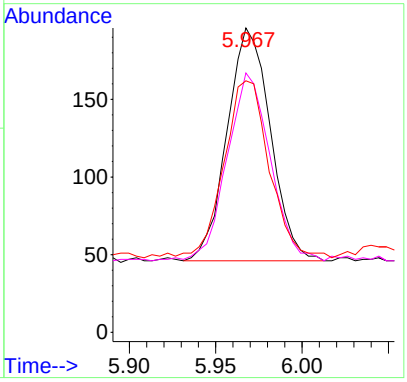


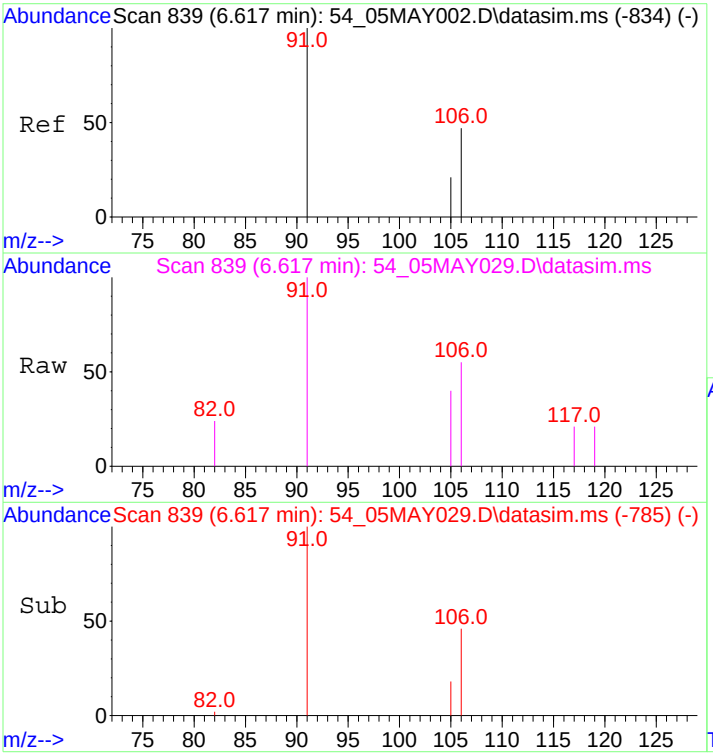


#14
Tetrachloroethene
Concen: 0.80 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.004 min
Lab File: 54_05MAY029.D
Acq: 5 May 2014 2:25 pm

Tgt Ion:166 Resp: 262

Ion	Ratio	Lower	Upper
166	100		
164	79.8	62.6	94.0
131	76.7	58.5	87.7

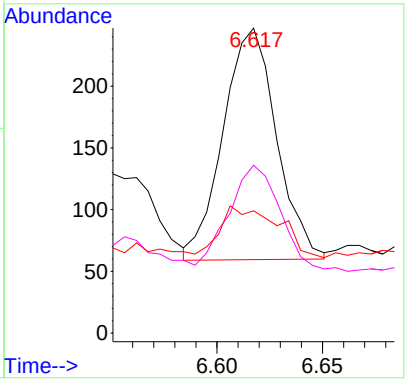




#16
m,p-Xylene
Concen: 0.59 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 05MAY029.D
Acq: 5 May 2014 2:25 pm

Tgt Ion: 91 Resp: 330

Ion	Ratio	Lower	Upper
91	100		
106	44.8	43.1	64.7
105	19.7	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY030.D
Acq On : 5 May 2014 2:37 pm
Operator : yhl
Sample : 02194 \ F5-050
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:46:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

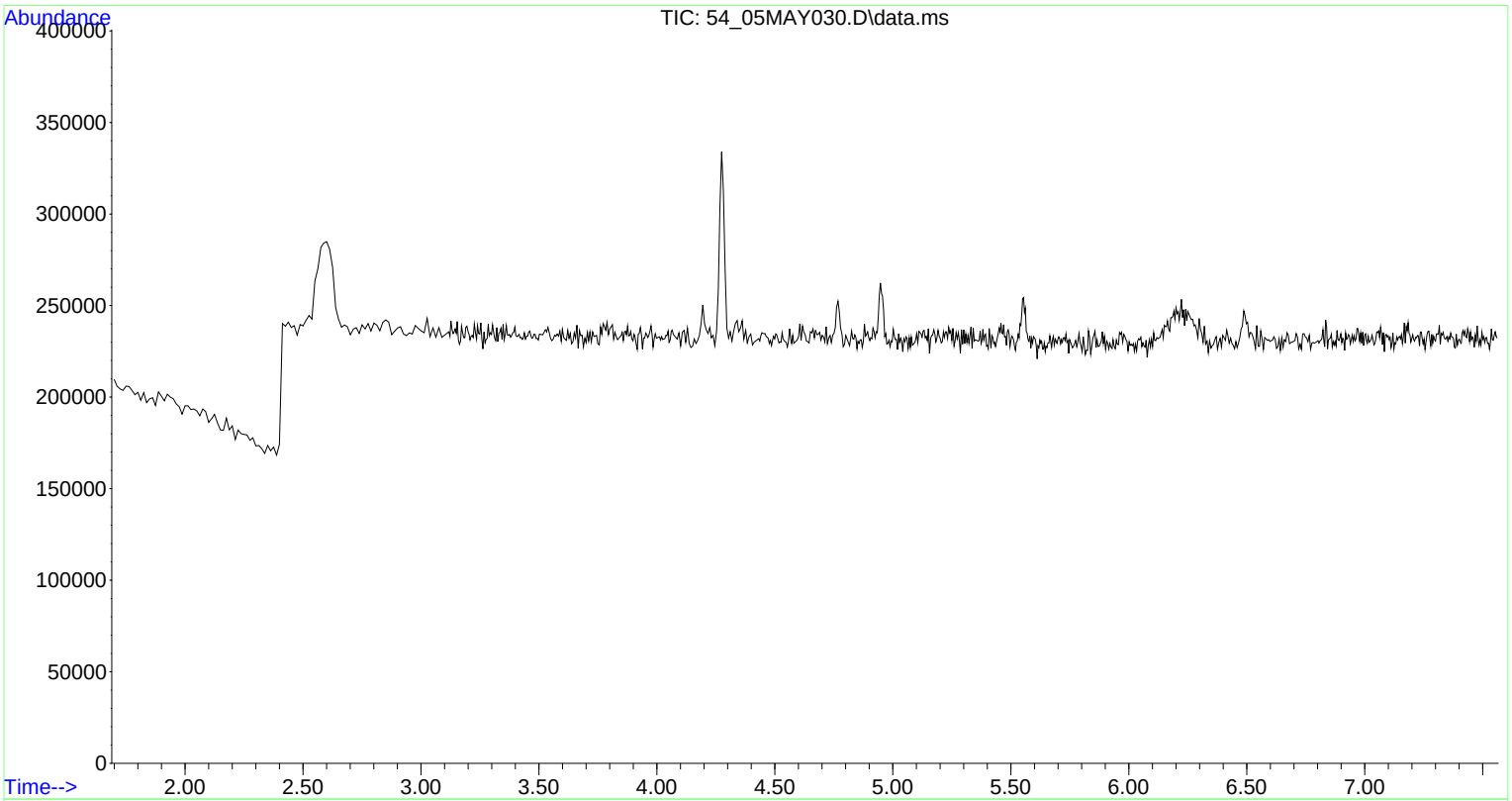
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4351	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10476	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10003	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5] trans-1,2-Dichloroethene	3.707	61	842	2.84	ppbv	# 73
7] cis-1,2-Dichloroethene	4.197	61	5037	18.16	ppbv	# 71
11] Trichloroethene	4.950	130	8618	33.08	ppbv	98
13] Toluene	5.556	91	14979	24.98	ppbv	100
14] Tetrachloroethene	5.967	166	2293	6.70	ppbv	98
16] m,p-Xylene	6.617	91	323	0.55	ppbv	90

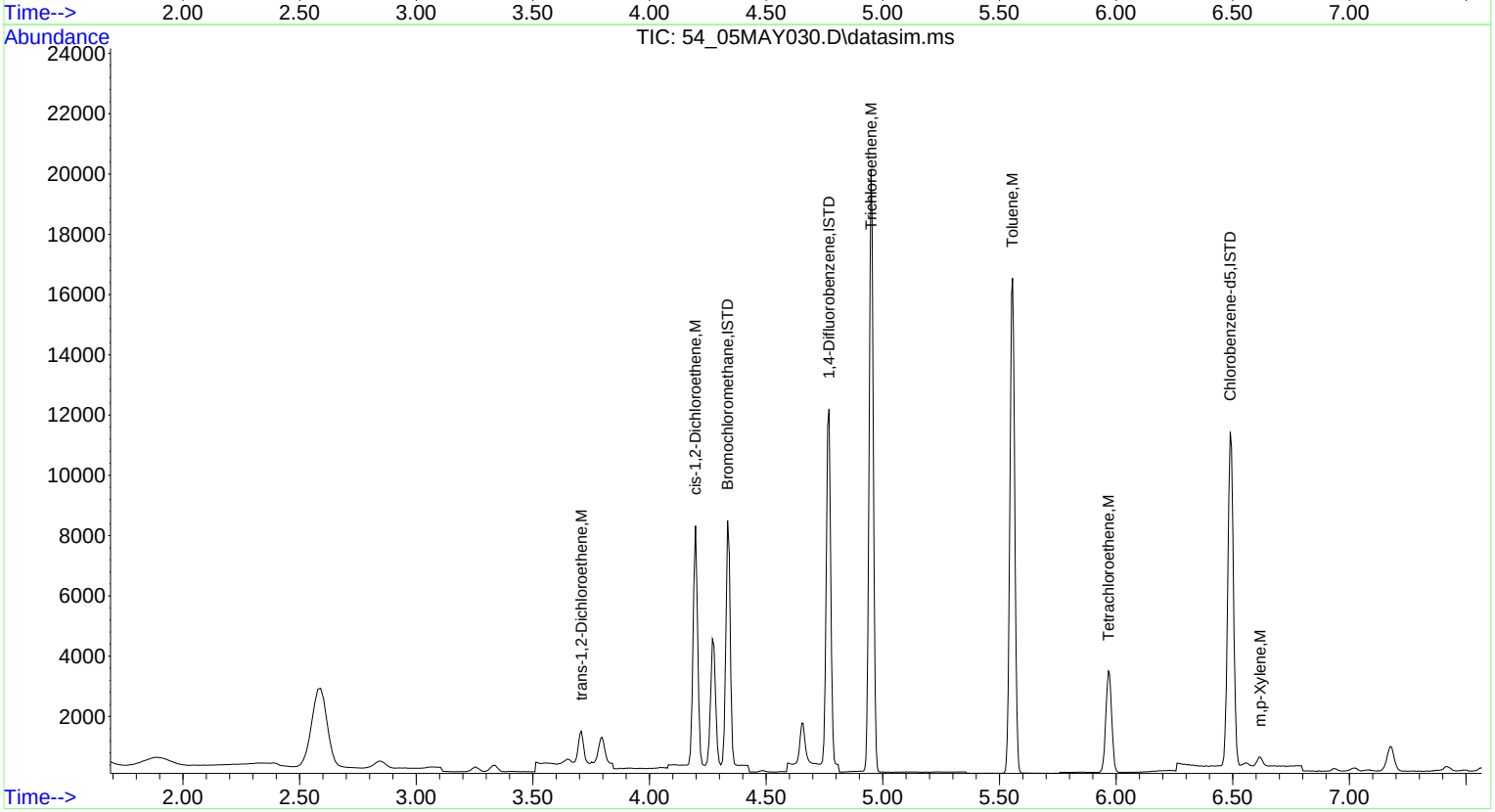
(#) = qualifier out of range (m) = manual integration (+) = signals summed

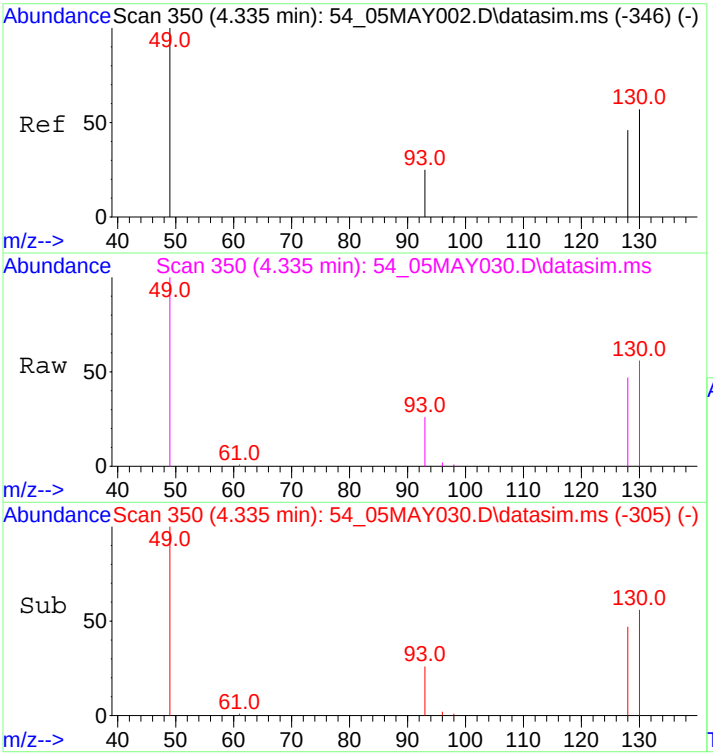
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY030.D
Acq On : 5 May 2014 2:37 pm
Operator : yhl
Sample : 02194 \ F5-050
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:46:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



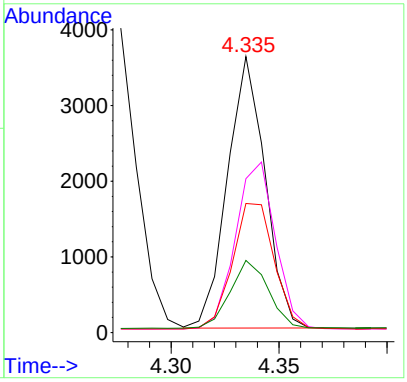


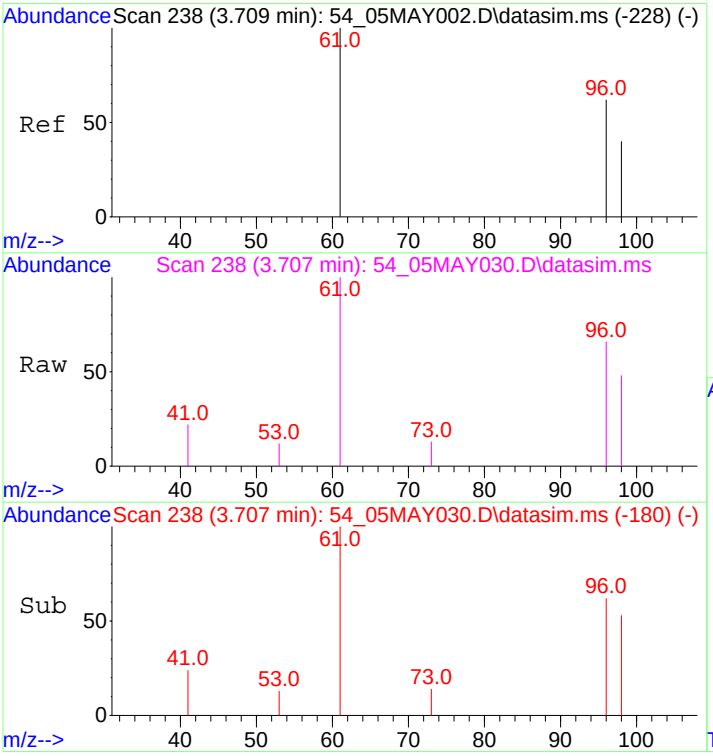


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion: 49 Resp: 4351

Ion	Ratio	Lower	Upper
49	100		
130	65.4	87.2	130.8#
128	51.5	68.0	102.0#
93	25.3	29.3	43.9#

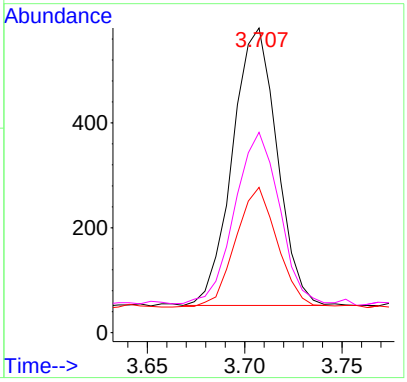


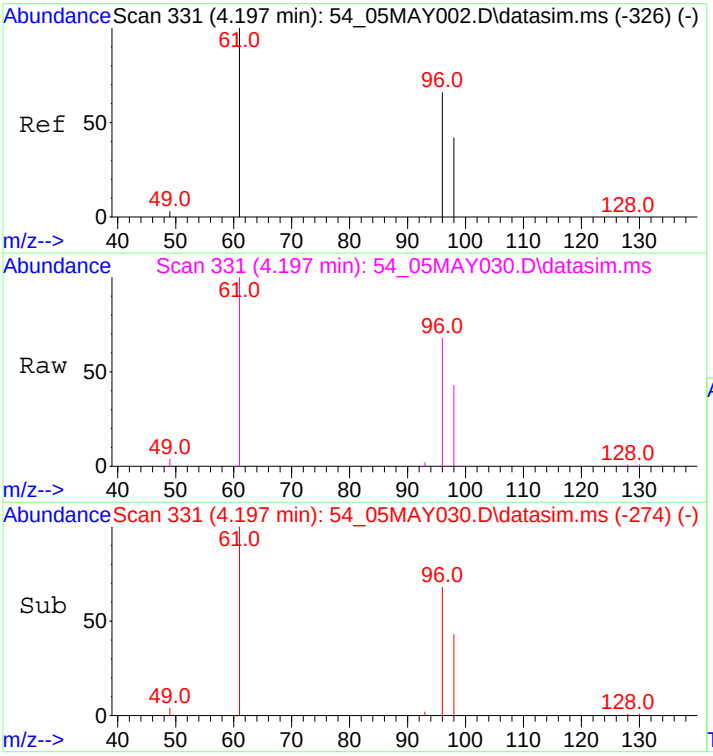


#5
trans-1,2-Dichloroethene
Concen: 2.84 ppbv
RT: 3.707 min Scan# 238
Delta R.T. -0.001 min
Lab File: 54_05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion: 61 Resp: 842

Ion	Ratio	Lower	Upper
61	100		
96	61.6	71.4	107.0#
98	40.6	45.8	68.8#

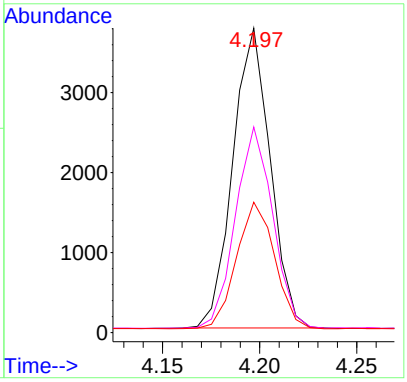


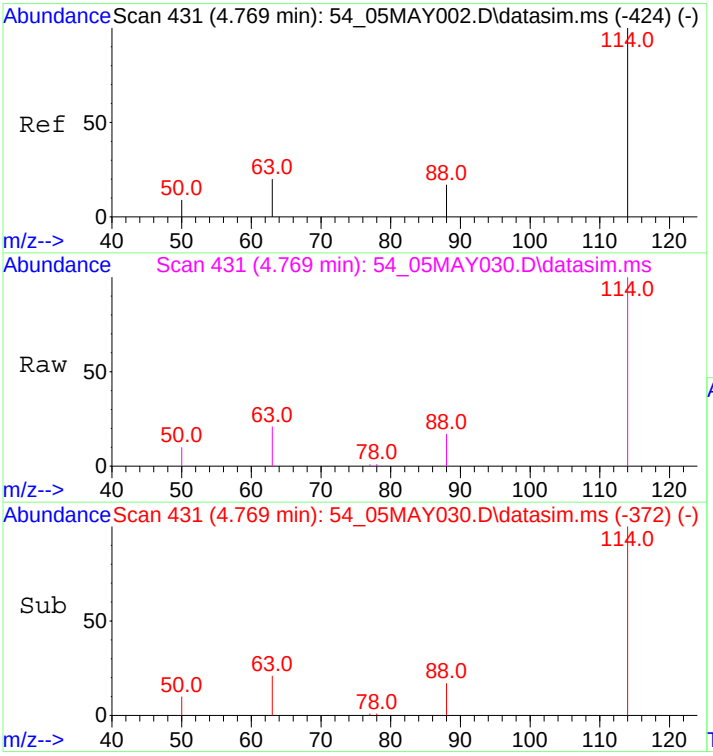


#7
cis-1,2-Dichloroethene
Concen: 18.16 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion: 61 Resp: 5037

Ion	Ratio	Lower	Upper
61	100		
96	66.8	78.5	117.7#
98	43.1	50.6	76.0#

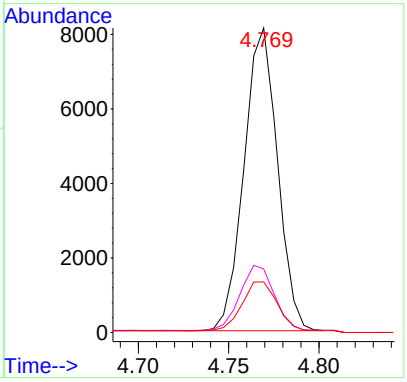


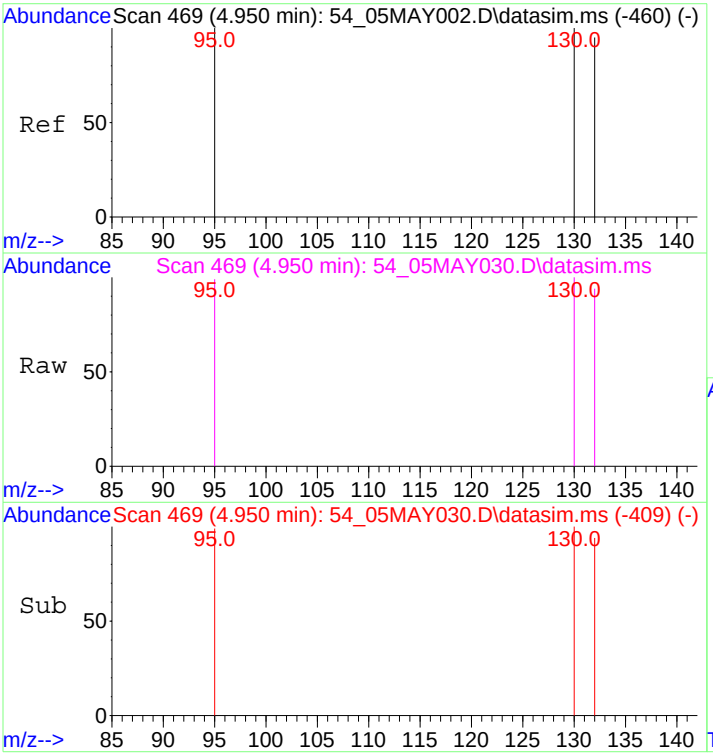


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion:114 Resp: 10476

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.9	11.8	17.8

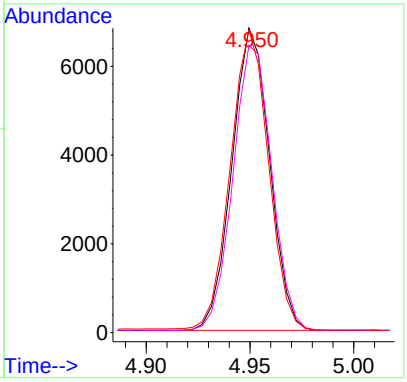


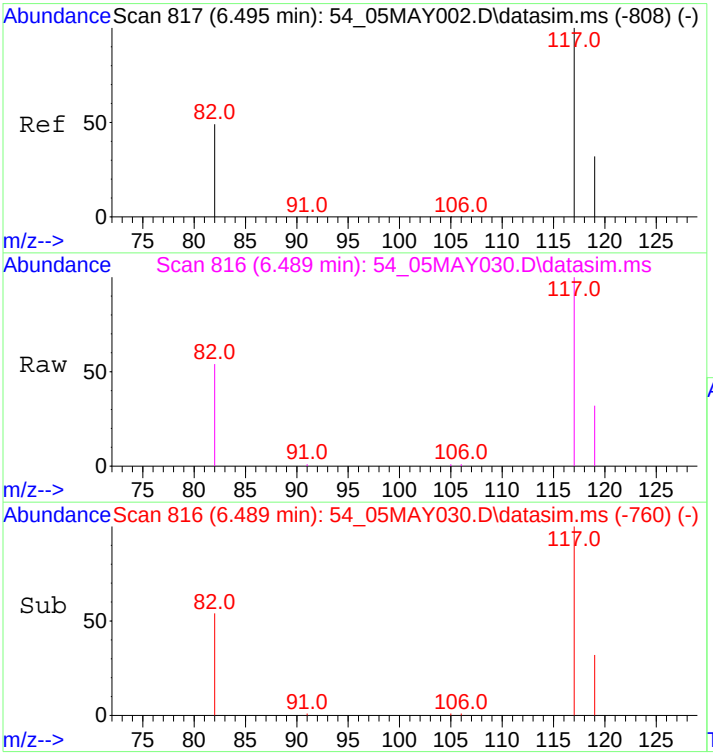


#11
Trichloroethene
Concen: 33.08 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion:130 Resp: 8618

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	100.1	76.5	114.7

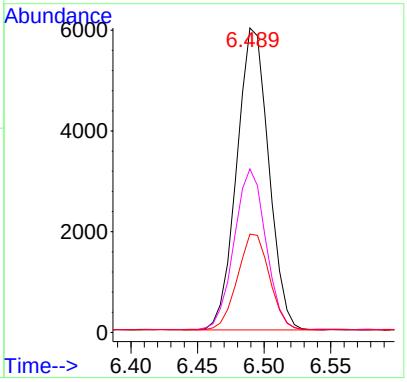


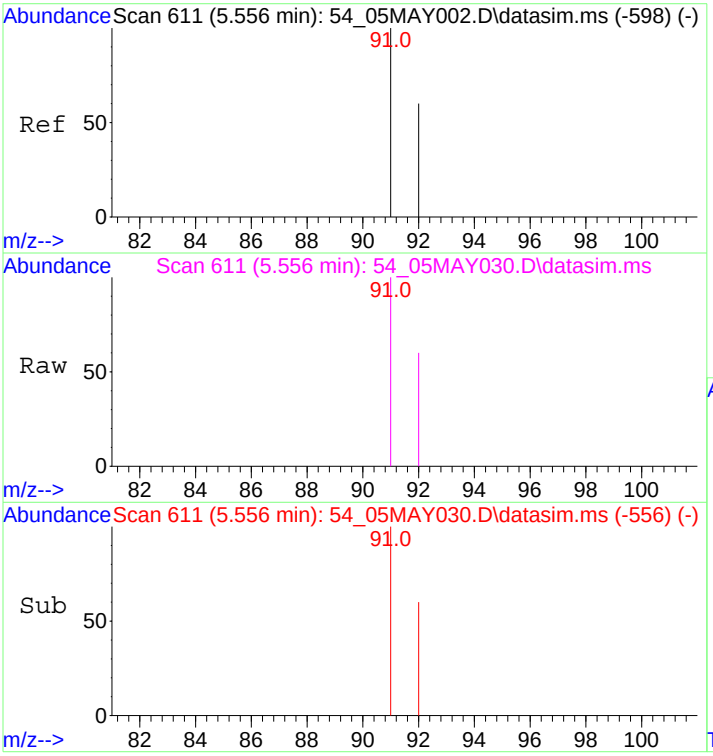


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion:117 Resp: 10003

Ion	Ratio	Lower	Upper
117	100		
82	52.3	38.0	57.0
119	31.8	27.0	40.4

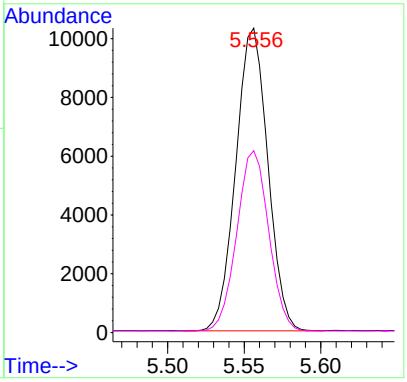


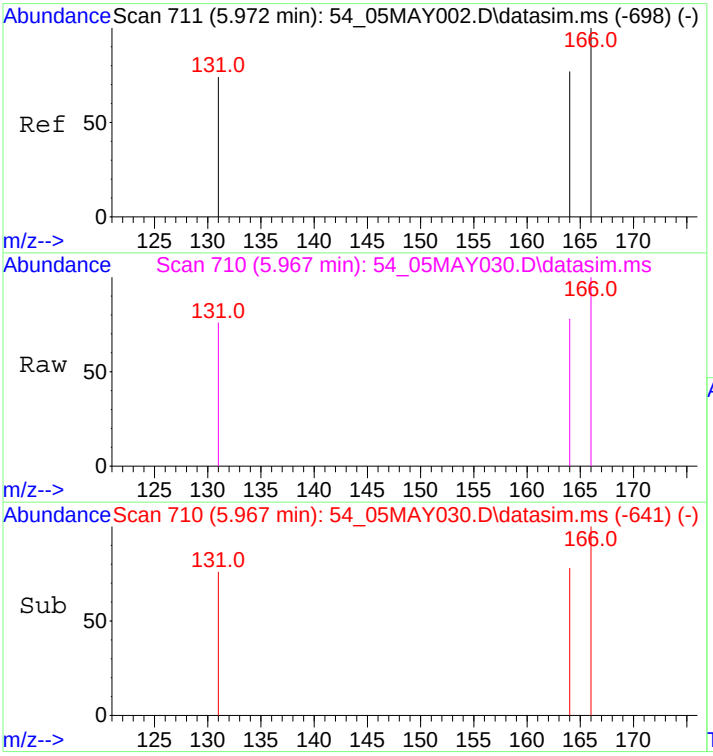


#13
Toluene
Concen: 24.98 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion: 91 Resp: 14979

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

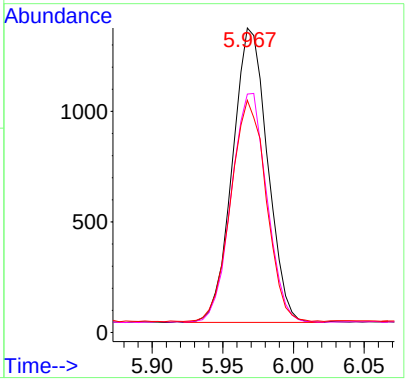


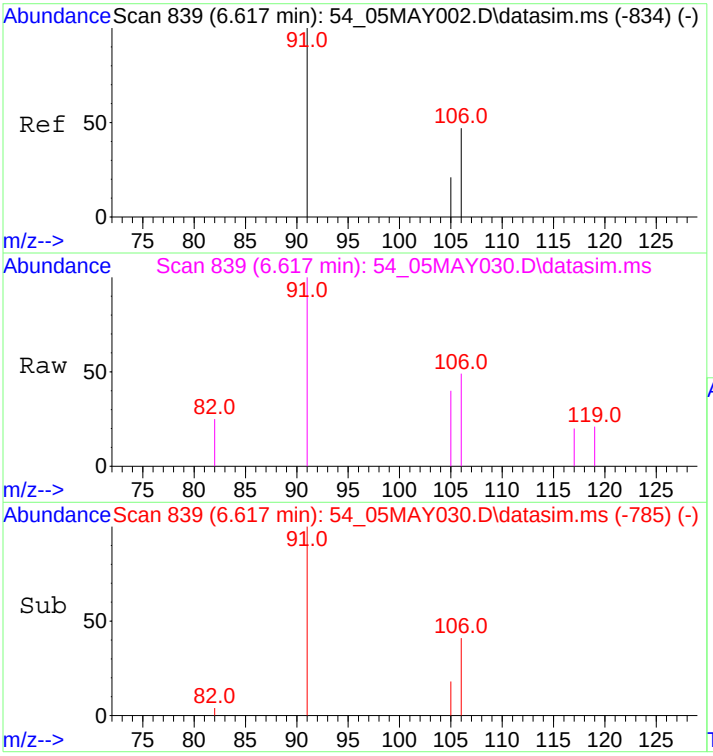


#14
Tetrachloroethene
Concen: 6.70 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion:166 Resp: 2293

Ion	Ratio	Lower	Upper
166	100		
164	78.6	62.6	94.0
131	75.9	58.5	87.7

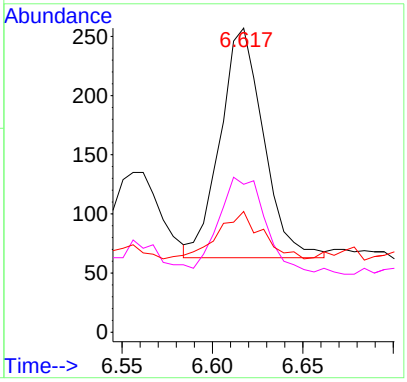




#16
m,p-Xylene
Concen: 0.55 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 05MAY030.D
Acq: 5 May 2014 2:37 pm

Tgt Ion: 91 Resp: 323

Ion	Ratio	Lower	Upper
91	100		
106	45.2	43.1	64.7
105	21.1	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY031.D
Acq On : 5 May 2014 2:50 pm
Operator : yhl
Sample : 02195 \ F5-034
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:58:55 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

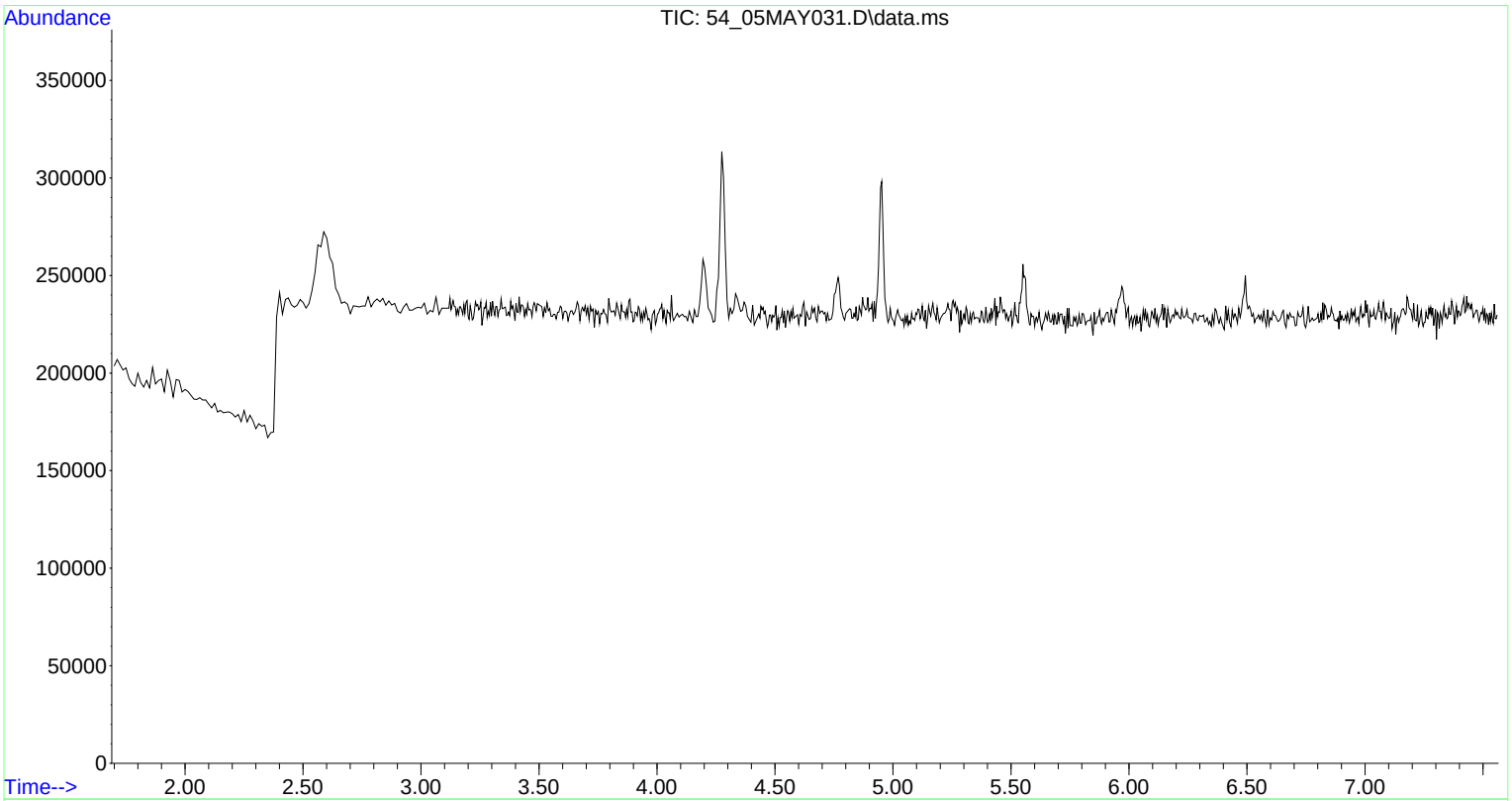
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4447	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10632	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	9849	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5] trans-1,2-Dichloroethene	3.703	61	1825	6.01	ppbv	# 73
7] cis-1,2-Dichloroethene	4.197	61	13784	48.63	ppbv	# 71
11] Trichloroethene	4.950	130	18829	71.21	ppbv	98
13] Toluene	5.556	91	12919	21.88	ppbv	100
14] Tetrachloroethene	5.972	166	4828	14.32	ppbv	99
16] m,p-Xylene	6.617	91	646	1.12	ppbv	89

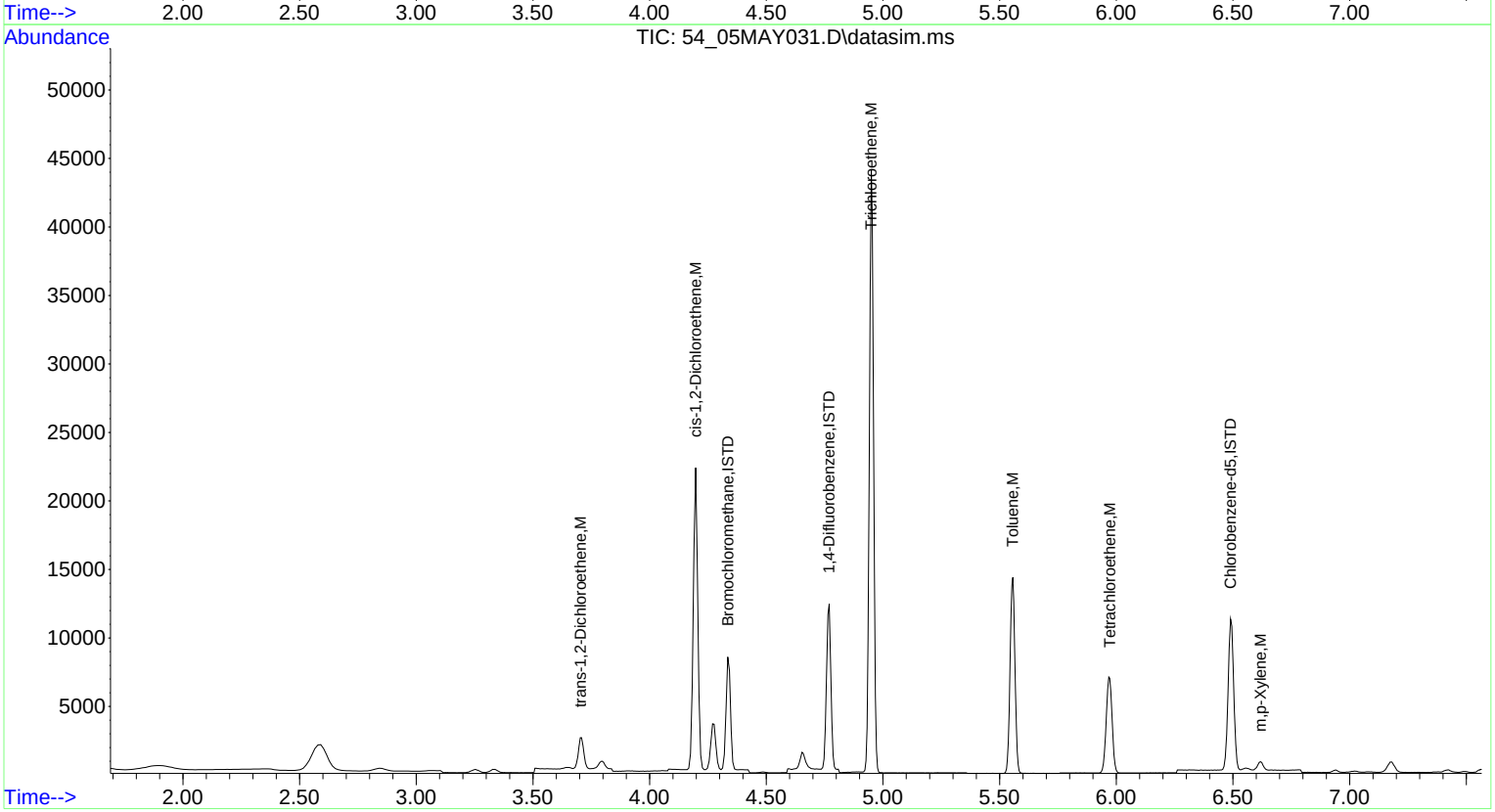
(#) = qualifier out of range (m) = manual integration (+) = signals summed

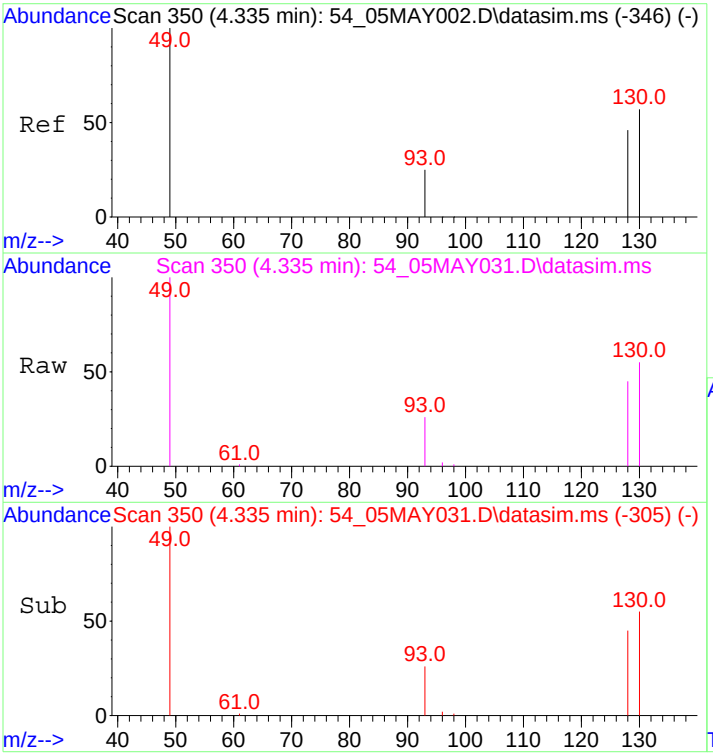
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY031.D
Acq On : 5 May 2014 2:50 pm
Operator : yhl
Sample : 02195 \ F5-034
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 14:58:55 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



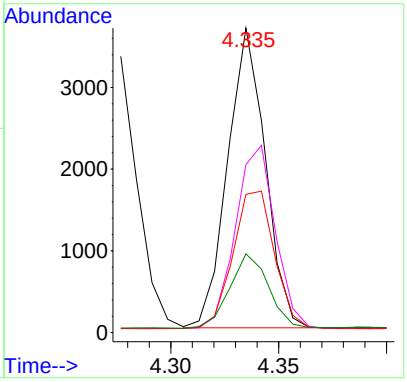


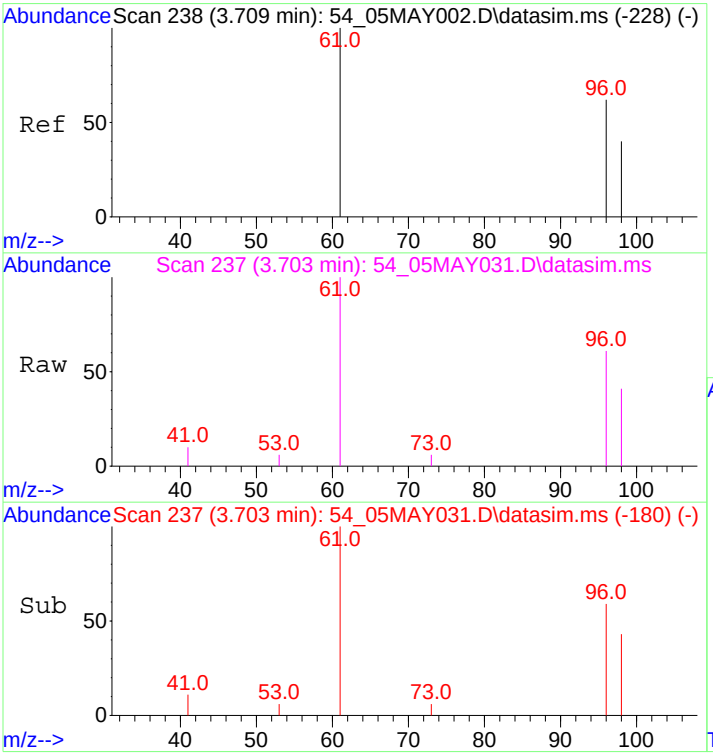


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion: 49 Resp: 4447

Ion	Ratio	Lower	Upper
49	100		
130	64.6	87.2	130.8#
128	50.7	68.0	102.0#
93	25.6	29.3	43.9#

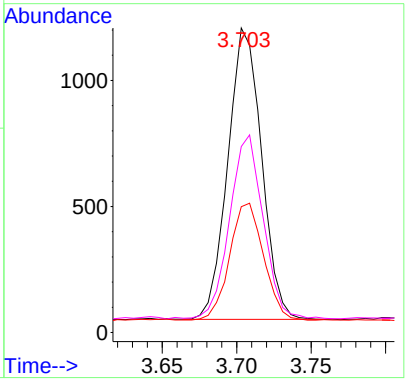


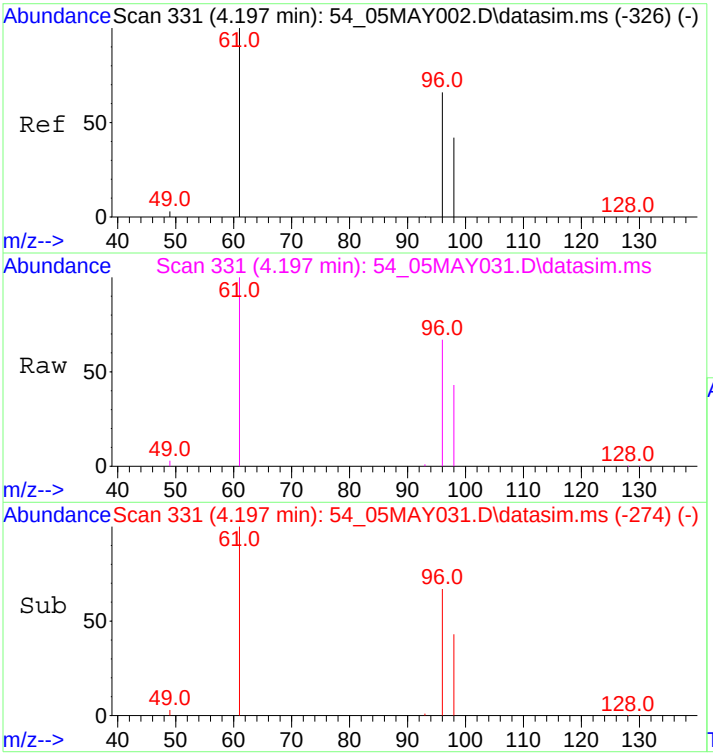


#5
trans-1,2-Dichloroethene
Concen: 6.01 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.005 min
Lab File: 54_05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion: 61 Resp: 1825

Ion	Ratio	Lower	Upper
61	100		
96	62.2	71.4	107.0#
98	40.3	45.8	68.8#

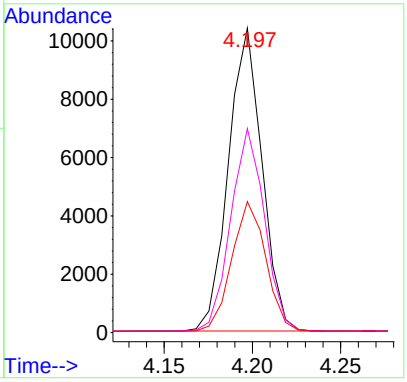


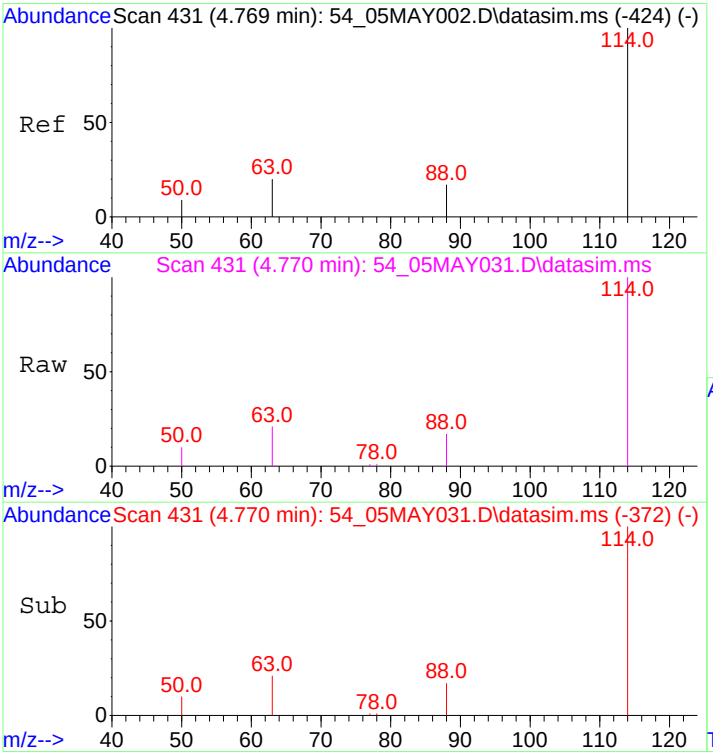


#7
cis-1,2-Dichloroethene
Concen: 48.63 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion: 61 Resp: 13784

Ion	Ratio	Lower	Upper
61	100		
96	66.9	78.5	117.7#
98	43.4	50.6	76.0#

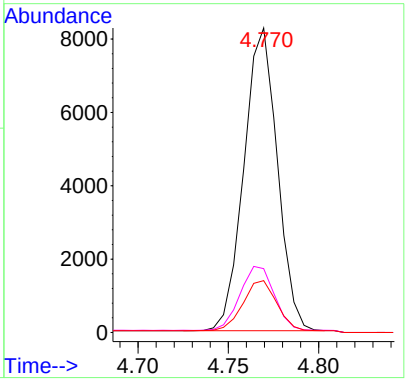


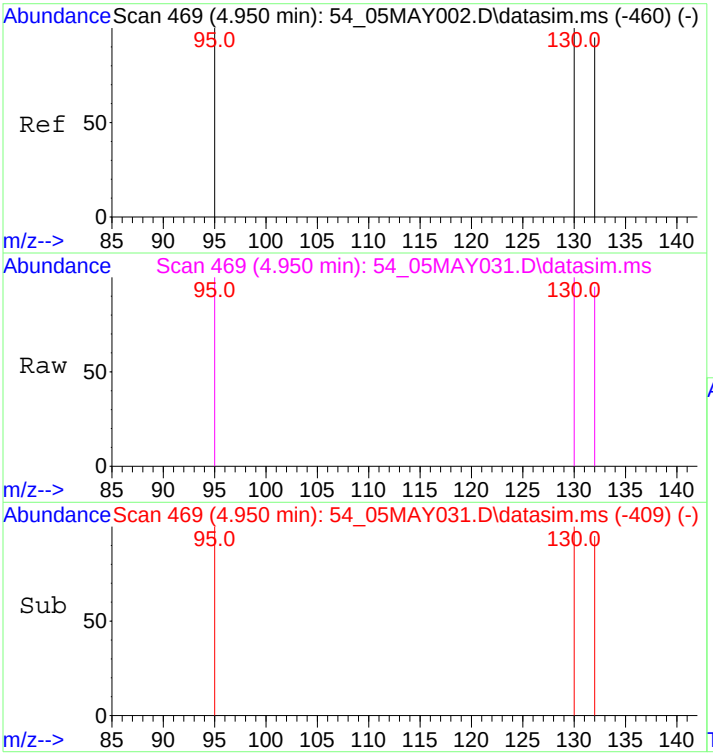


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion:114 Resp: 10632

Ion	Ratio	Lower	Upper
114	100		
63	21.6	12.0	18.0#
88	16.6	11.8	17.8

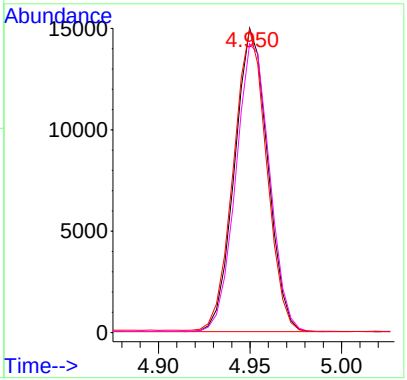


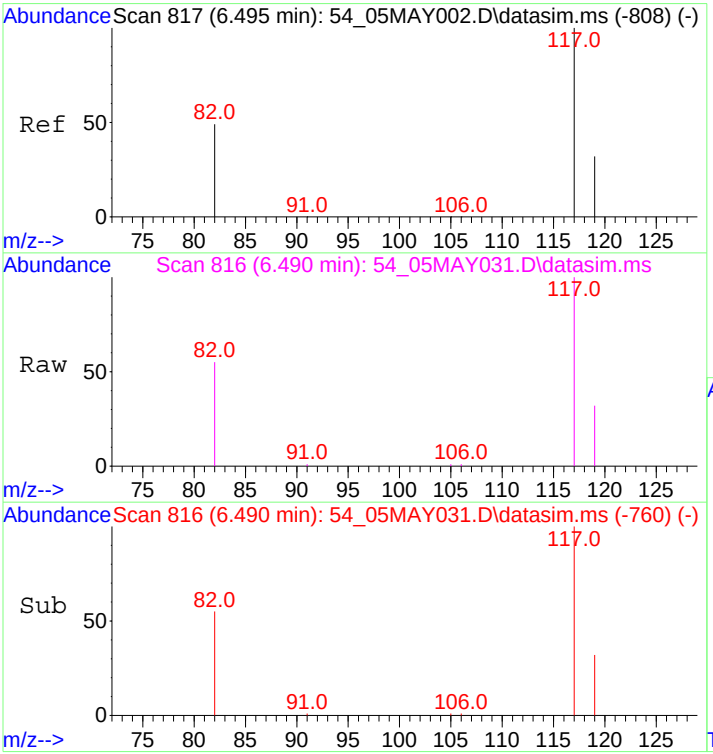


#11
Trichloroethene
Concen: 71.21 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54 05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion:130 Resp: 18829

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	99.4	76.5	114.7

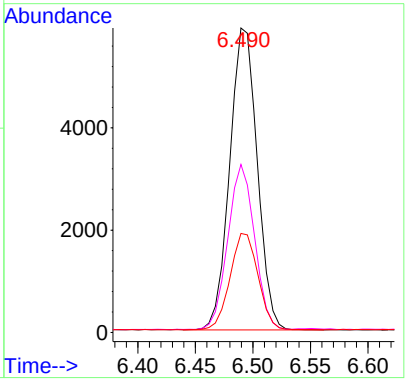


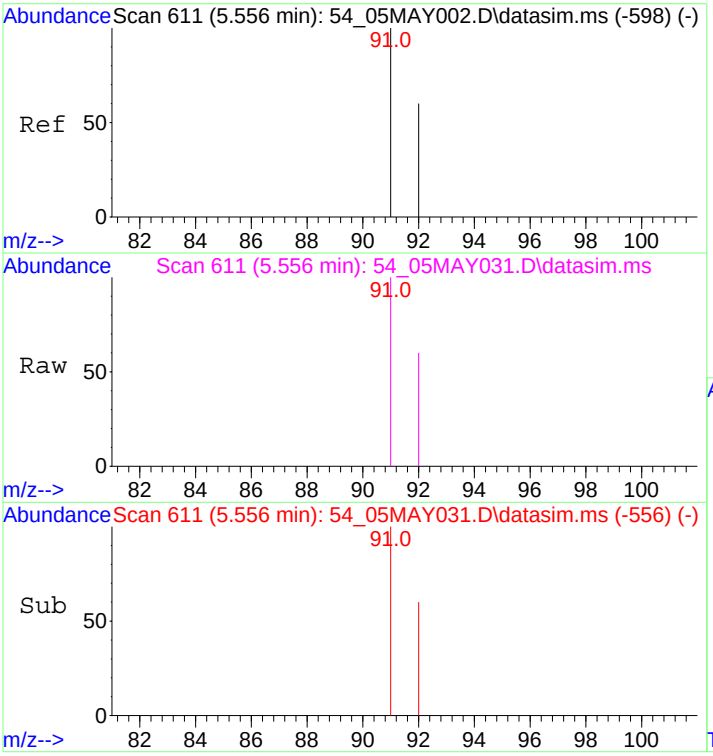


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54_05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion:117 Resp: 9849

Ion	Ratio	Lower	Upper
117	100		
82	52.8	38.0	57.0
119	32.3	27.0	40.4

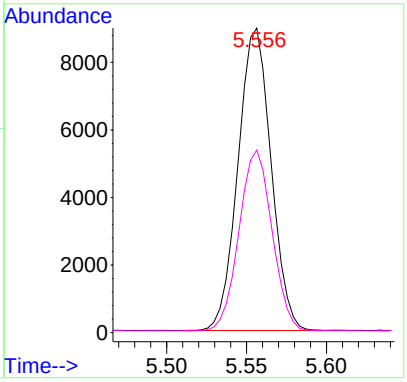


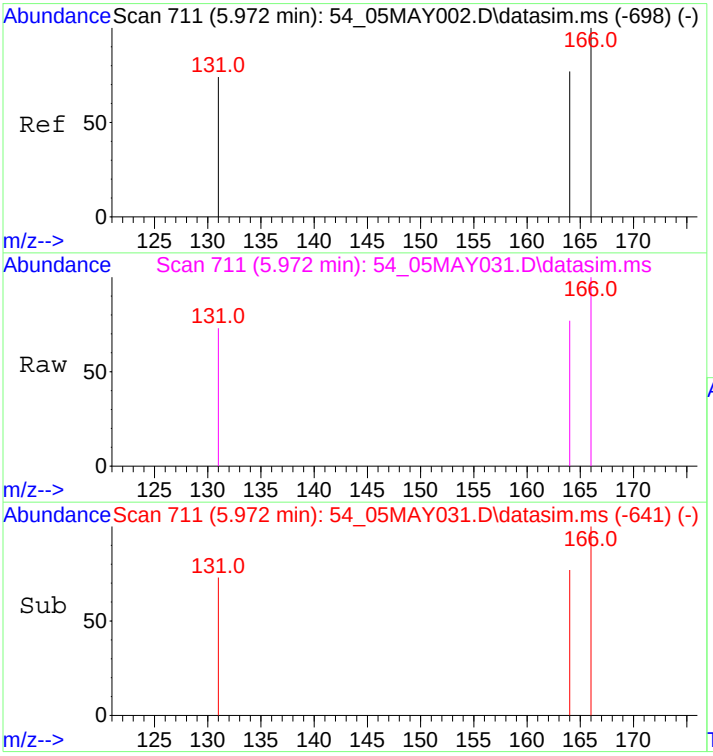


#13
Toluene
Concen: 21.88 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54 05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion: 91 Resp: 12919

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

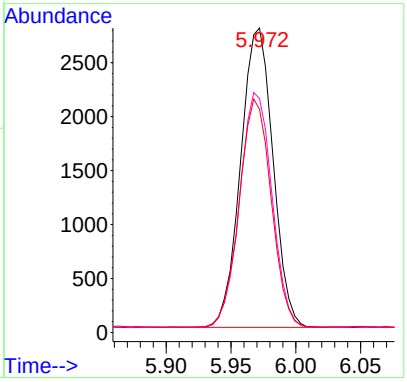


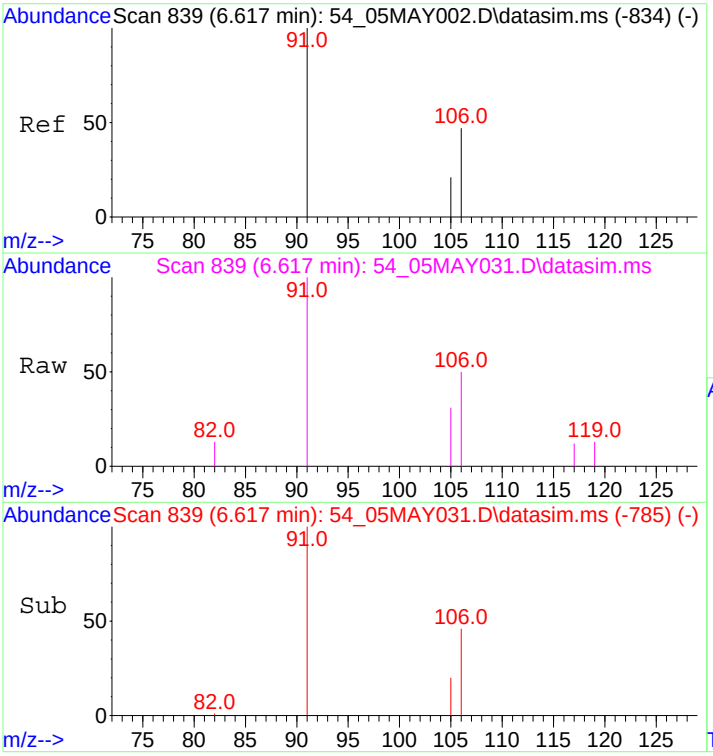


#14
Tetrachloroethene
Concen: 14.32 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion:166 Resp: 4828

Ion	Ratio	Lower	Upper
166	100		
164	78.3	62.6	94.0
131	75.2	58.5	87.7

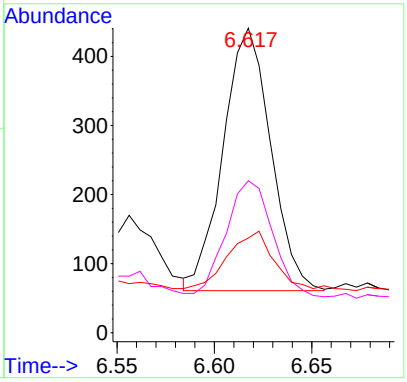




#16
m,p-Xylene
Concen: 1.12 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 05MAY031.D
Acq: 5 May 2014 2:50 pm

Tgt Ion: 91 Resp: 646

Ion	Ratio	Lower	Upper
91	100		
106	43.8	43.1	64.7
105	21.2	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY032.D
Acq On : 5 May 2014 3:02 pm
Operator : yhl
Sample : 02196 \ F5-032
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:10:01 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration

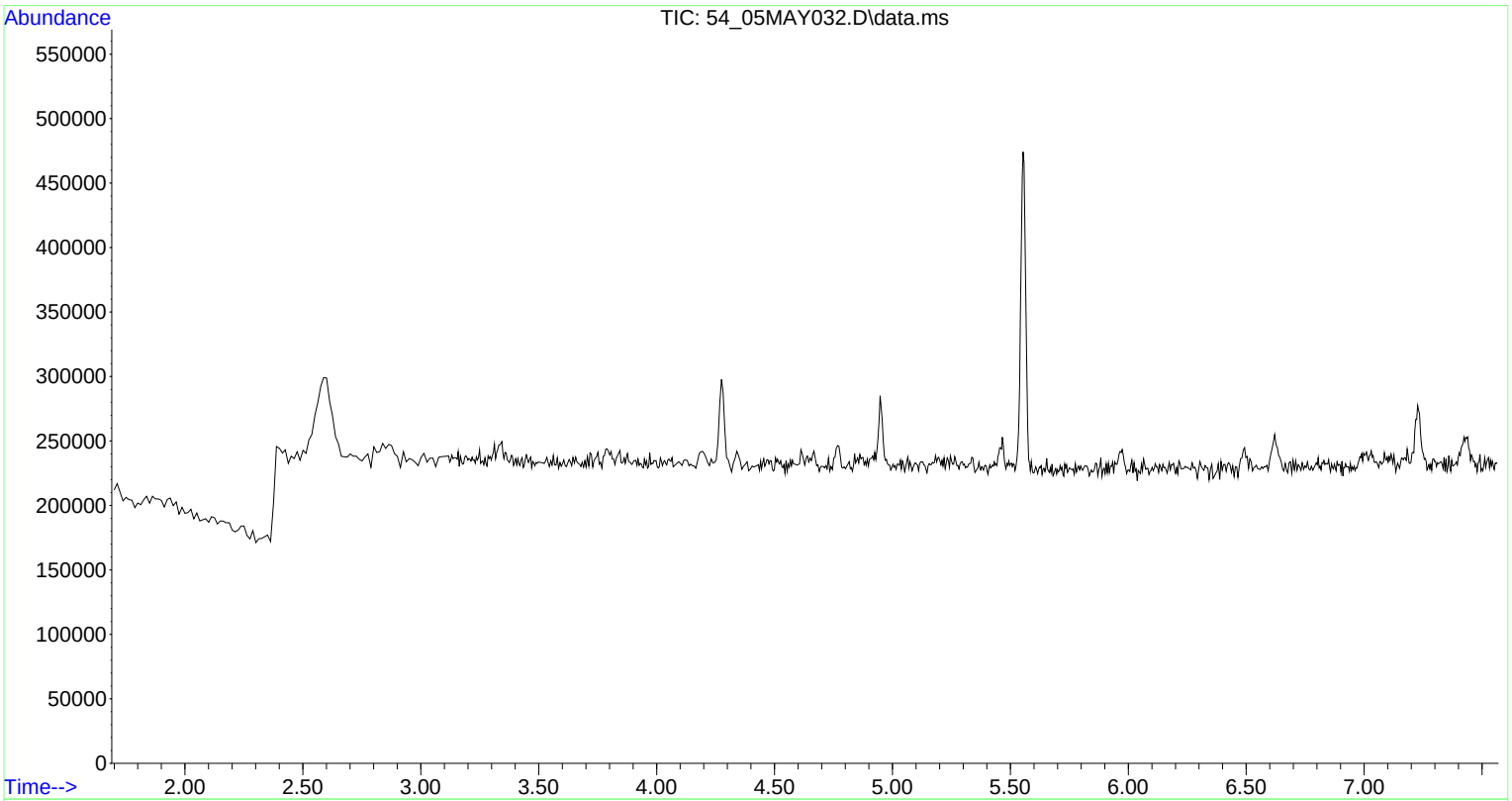
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4299	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10318	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9919	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.256	61	289	0.87	ppbv	# 69
5] trans-1,2-Dichloroethene	3.703	61	1592m	5.43	ppbv	
7] cis-1,2-Dichloroethene	4.197	61	6869	25.07	ppbv	# 70
11] Trichloroethene	4.950	130	14225	55.43	ppbv	98
13] Toluene	5.556	91	160793	270.42	ppbv	100
14] Tetrachloroethene	5.972	166	4825	14.21	ppbv	98
16] m,p-Xylene	6.617	91	439	0.76	ppbv	# 74

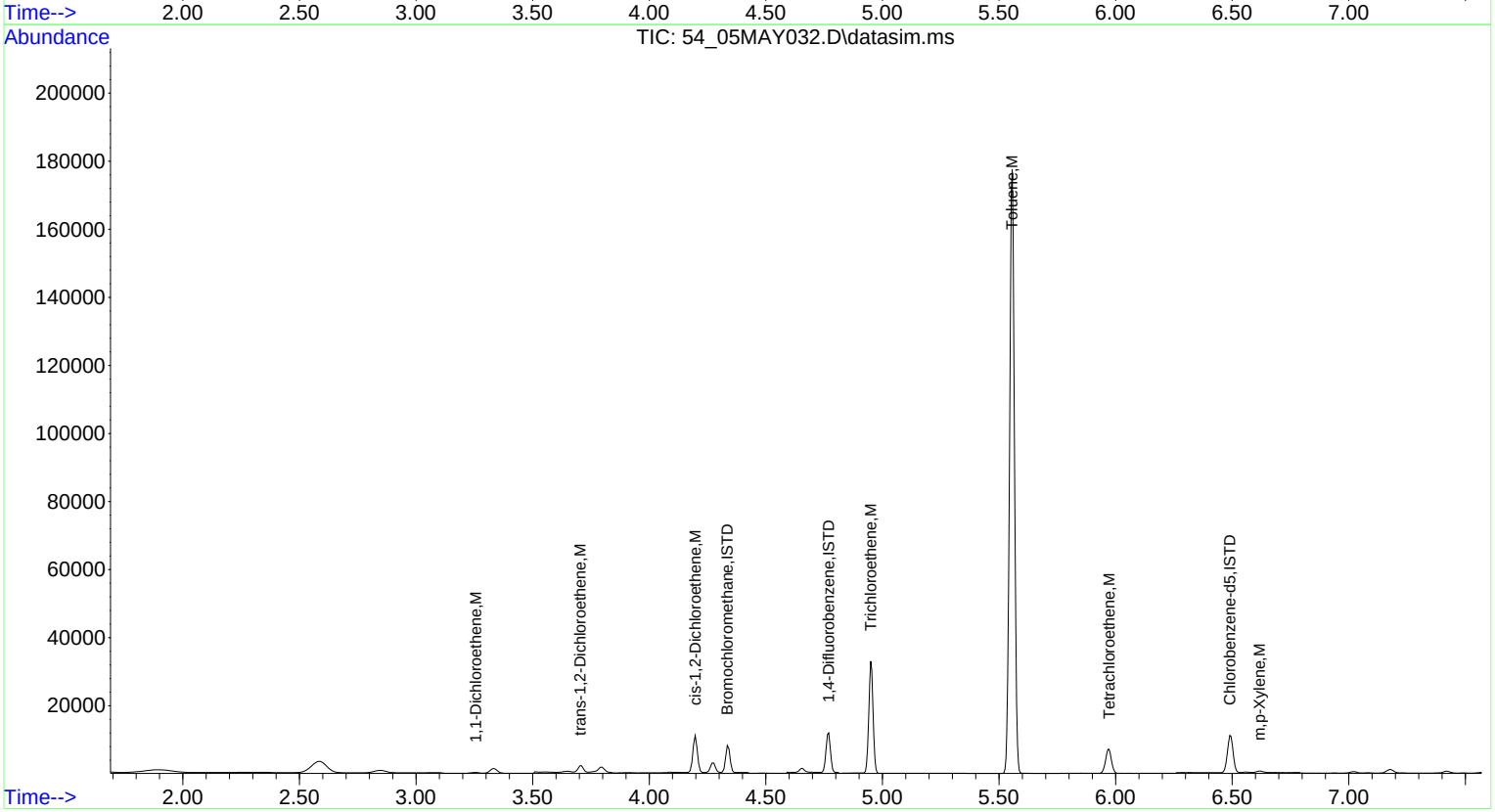
(#) = qualifier out of range (m) = manual integration (+) = signals summed

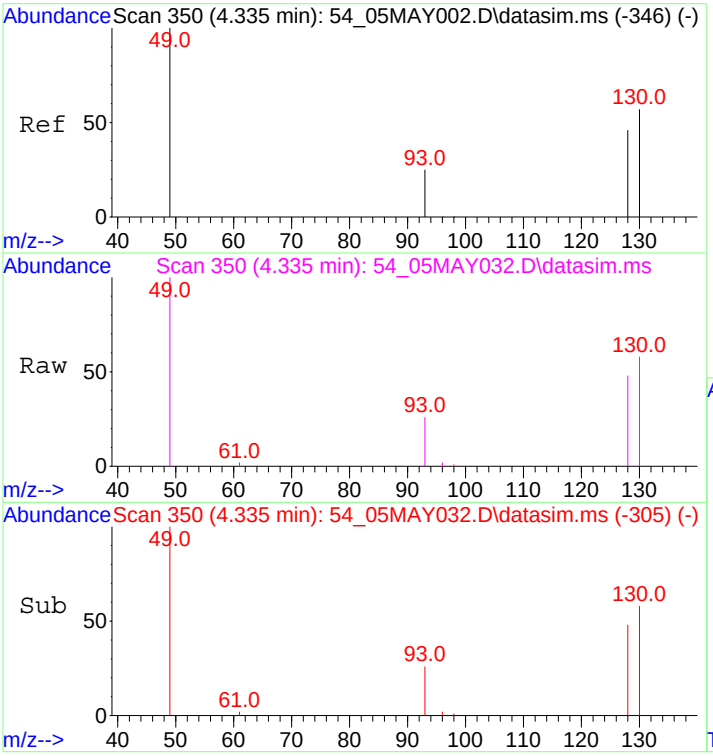
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY032.D
Acq On : 5 May 2014 3:02 pm
Operator : yhl
Sample : 02196 \ F5-032
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:10:01 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration



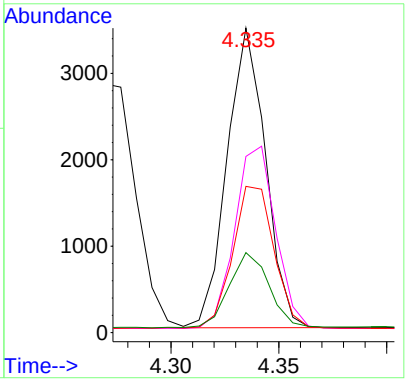


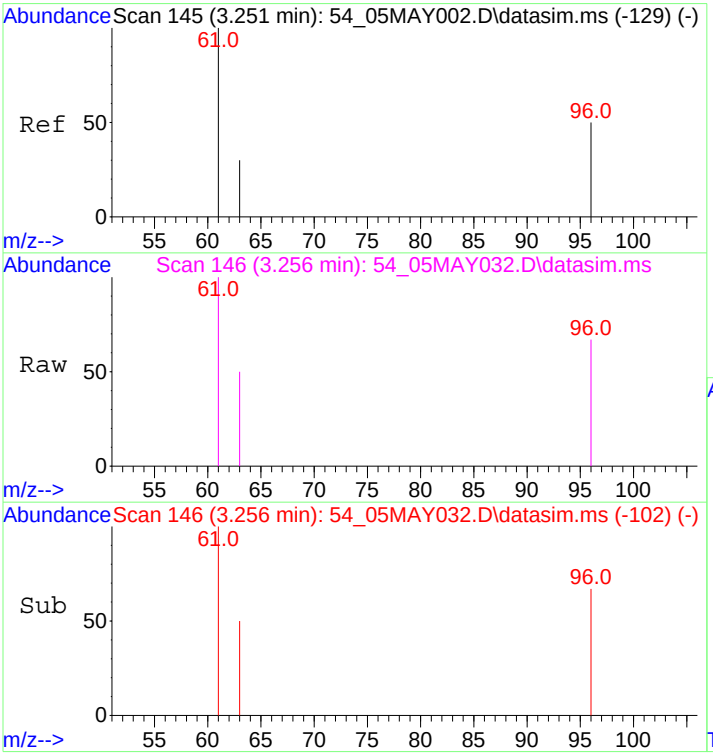


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion: 49 Resp: 4299

Ion	Ratio	Lower	Upper
49	100		
130	64.8	87.2	130.8#
128	50.8	68.0	102.0#
93	25.8	29.3	43.9#

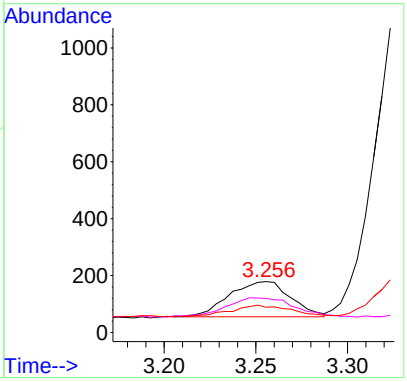


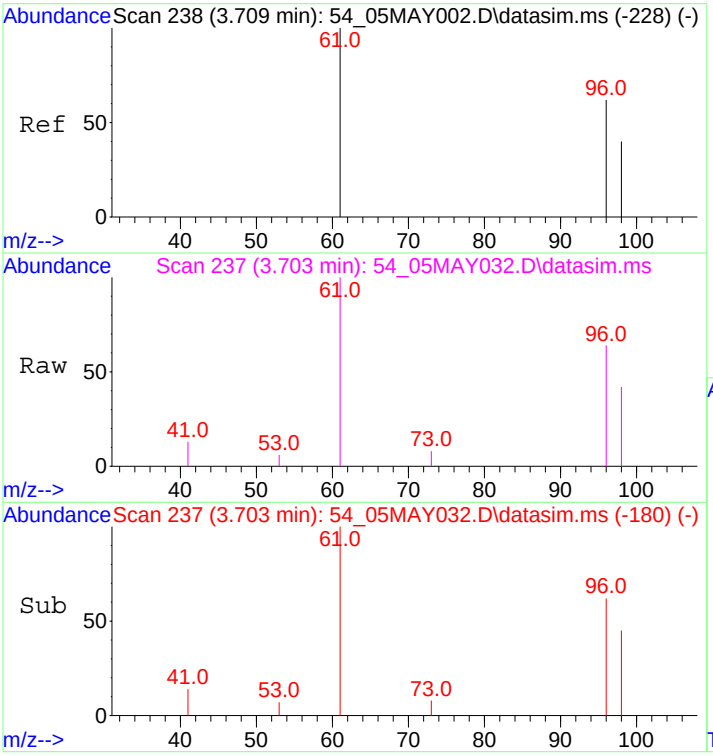


#3
1,1-Dichloroethene
Concen: 0.87 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.005 min
Lab File: 54_05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion: 61 Resp: 289

Ion	Ratio	Lower	Upper
61	100		
96	110.7	63.4	95.2#
63	21.8	26.2	39.2#

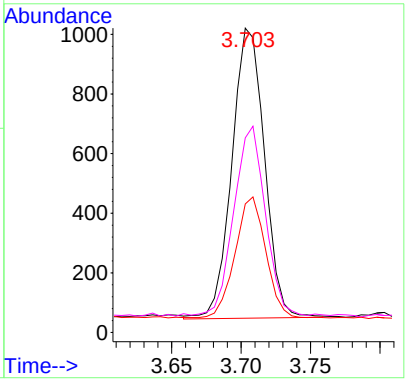


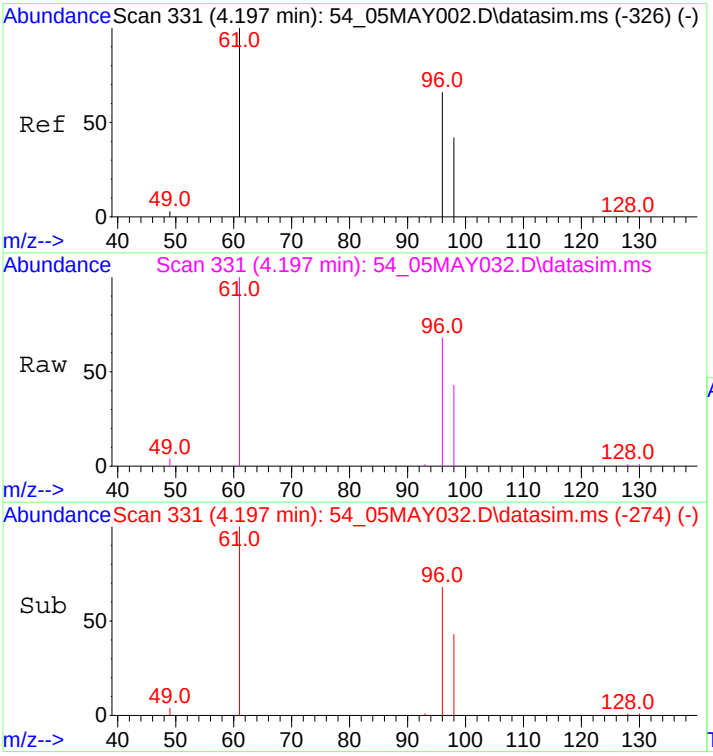


#5
trans-1,2-Dichloroethene
Concen: 5.43 ppbv m
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion: 61 Resp: 1592

Ion	Ratio	Lower	Upper
61	100		
96	62.6	71.4	107.0#
98	38.8	45.8	68.8#

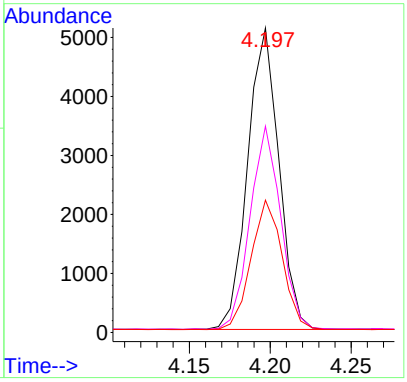




#7
cis-1,2-Dichloroethene
Concen: 25.07 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion: 61 Resp: 6869

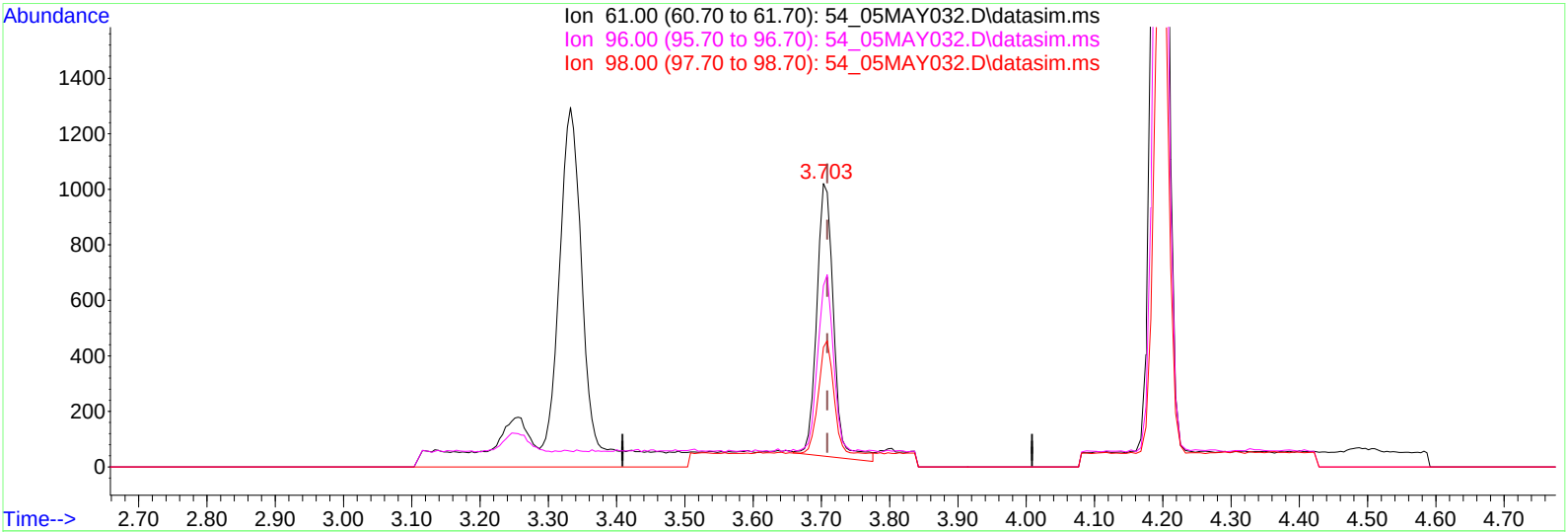
Ion	Ratio	Lower	Upper
61	100		
96	65.9	78.5	117.7#
98	42.8	50.6	76.0#

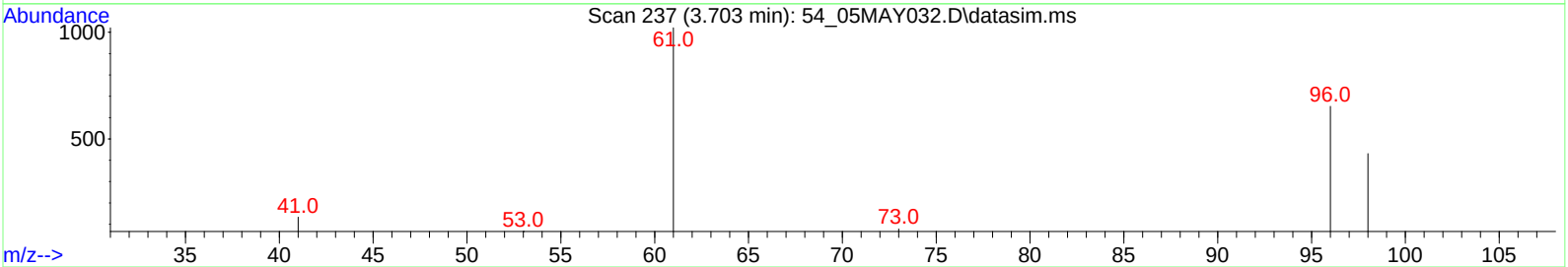


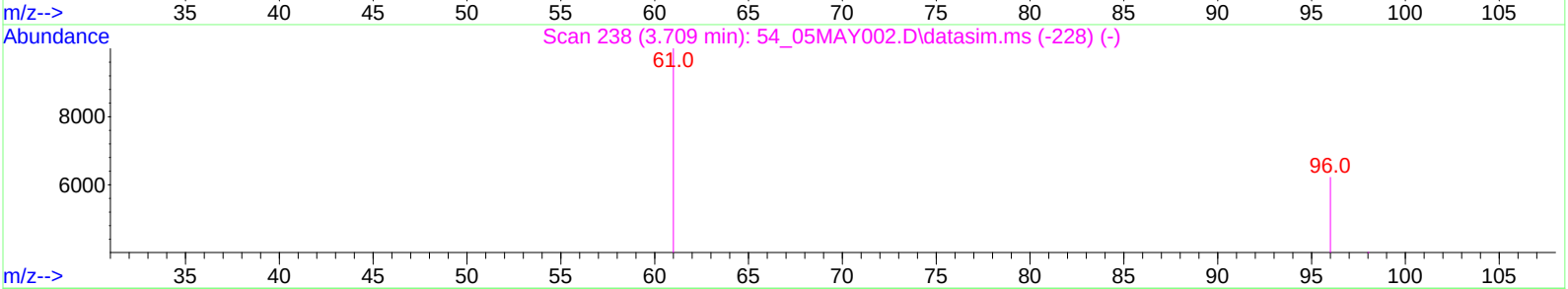
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY032.D
Acq On : 5 May 2014 3:02 pm
Operator : yhl
Sample : 02196 \ F5-032
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:08:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







TIC: 54_05MAY032.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.703min (-0.006) 5.74 ppbv

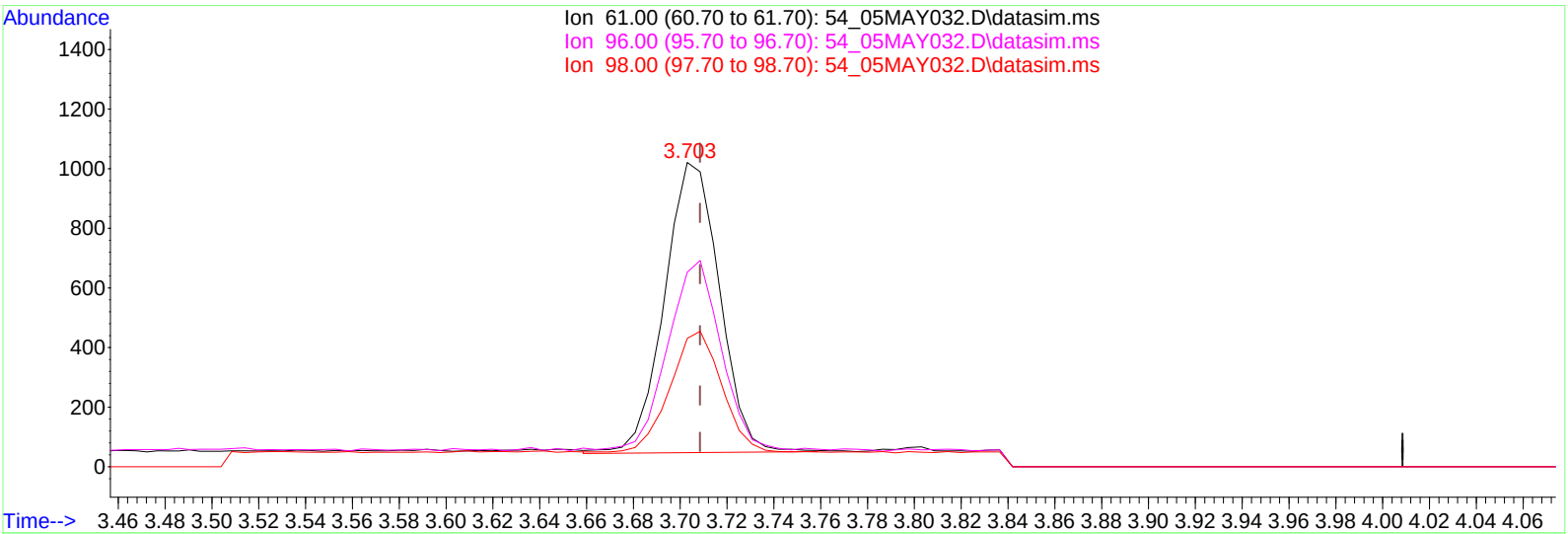
response 1685

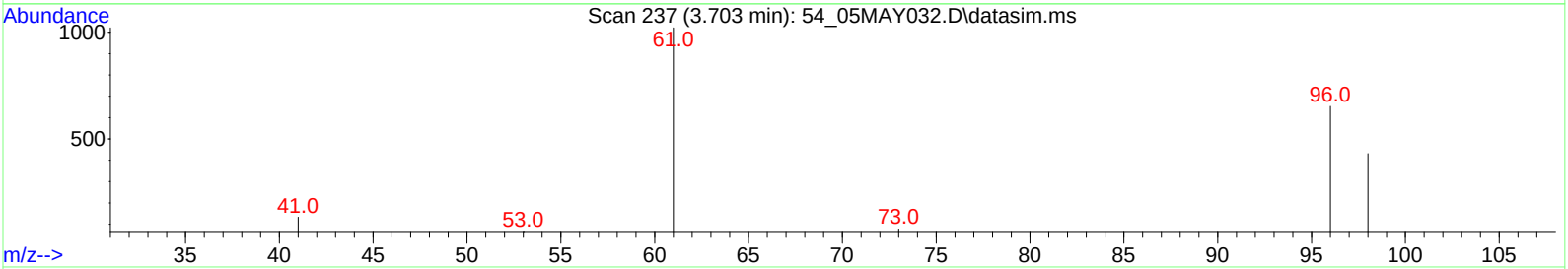
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	59.11#
98.00	57.30	36.68#
0.00	0.00	0.00

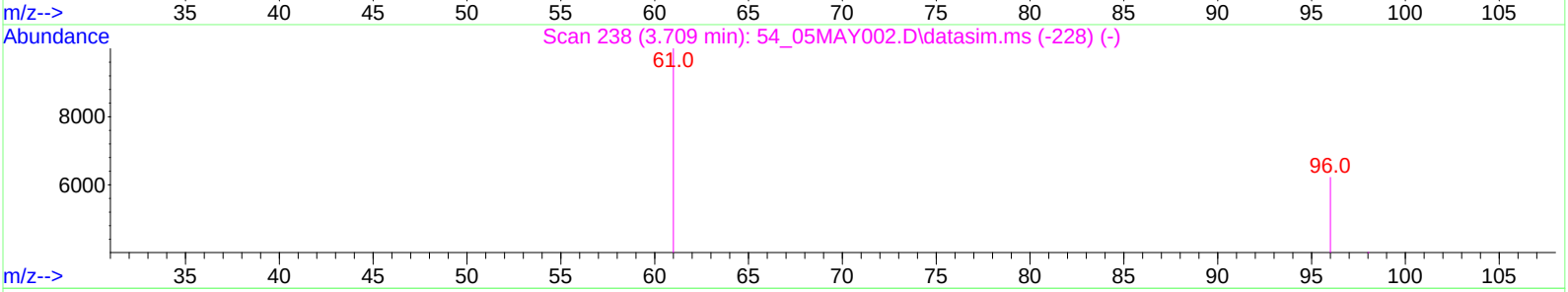
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY032.D
Acq On : 5 May 2014 3:02 pm
Operator : yhl
Sample : 02196 \ F5-032
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:08:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 07:20:29 2014
QLast Update : Mon May 05 07:20:28 2014
Response via : Initial Calibration







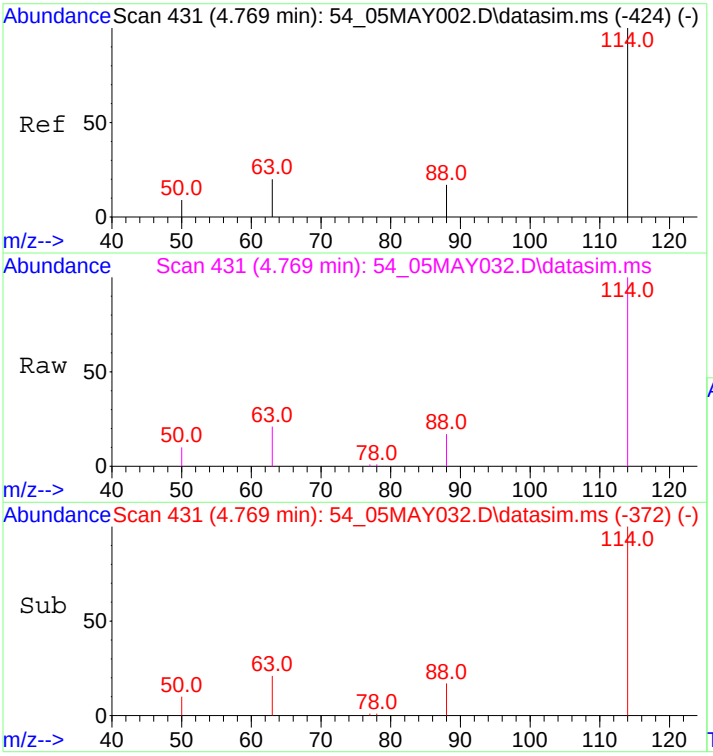
TIC: 54_05MAY032.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.703min (-0.006) 5.43 ppbv m

response 1592

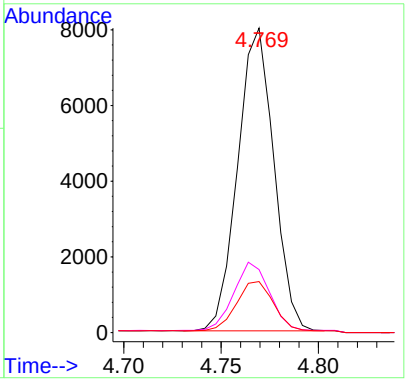
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	62.56#
98.00	57.30	38.82#
0.00	0.00	0.00

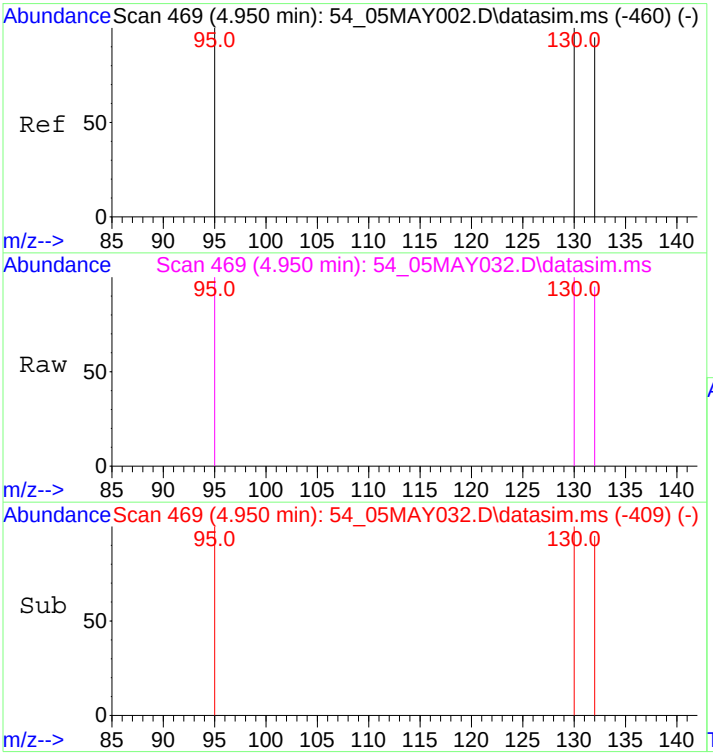


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion:114 Resp: 10318

Ion	Ratio	Lower	Upper
114	100		
63	22.1	12.0	18.0#
88	16.7	11.8	17.8

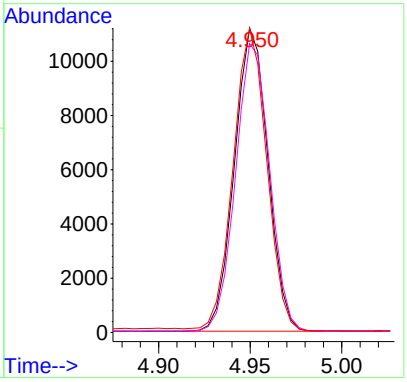


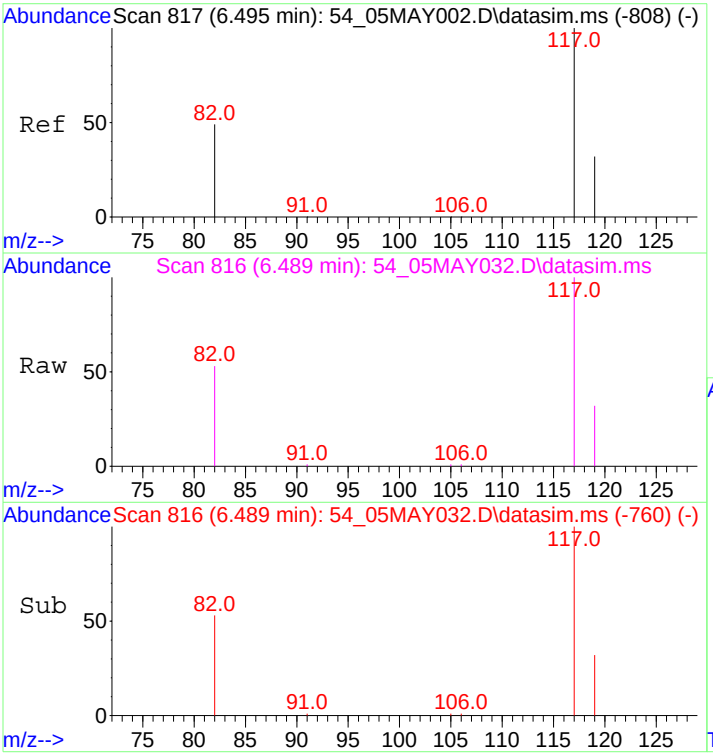


#11
Trichloroethene
Concen: 55.43 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion:130 Resp: 14225

Ion	Ratio	Lower	Upper
130	100		
132	96.3	76.9	115.3
95	99.9	76.5	114.7

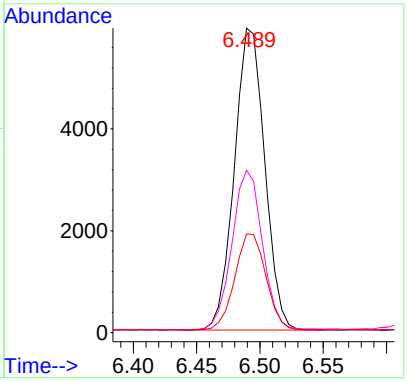


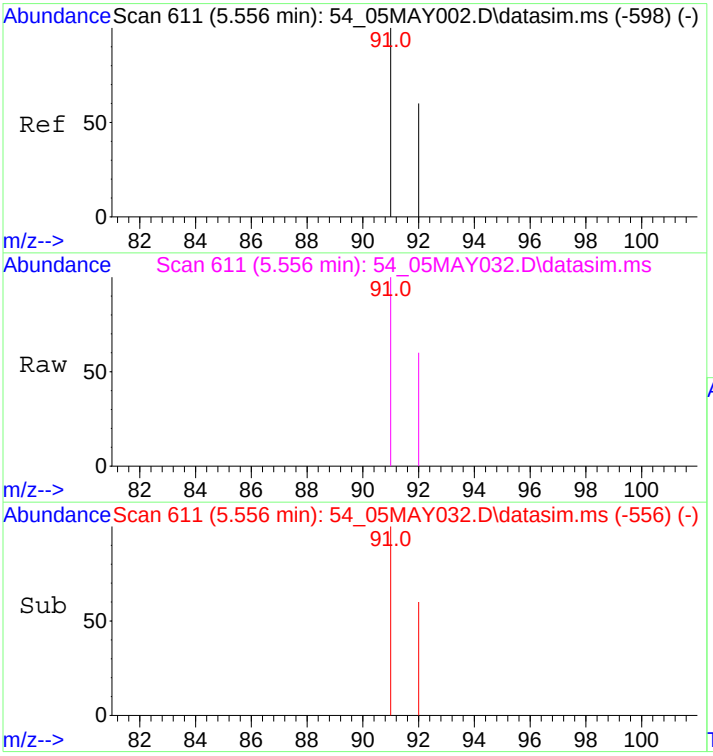


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion:117 Resp: 9919

Ion	Ratio	Lower	Upper
117	100		
82	52.8	38.0	57.0
119	32.5	27.0	40.4

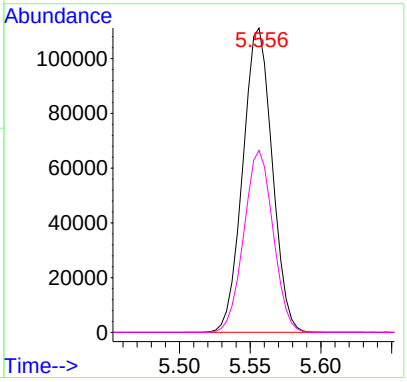


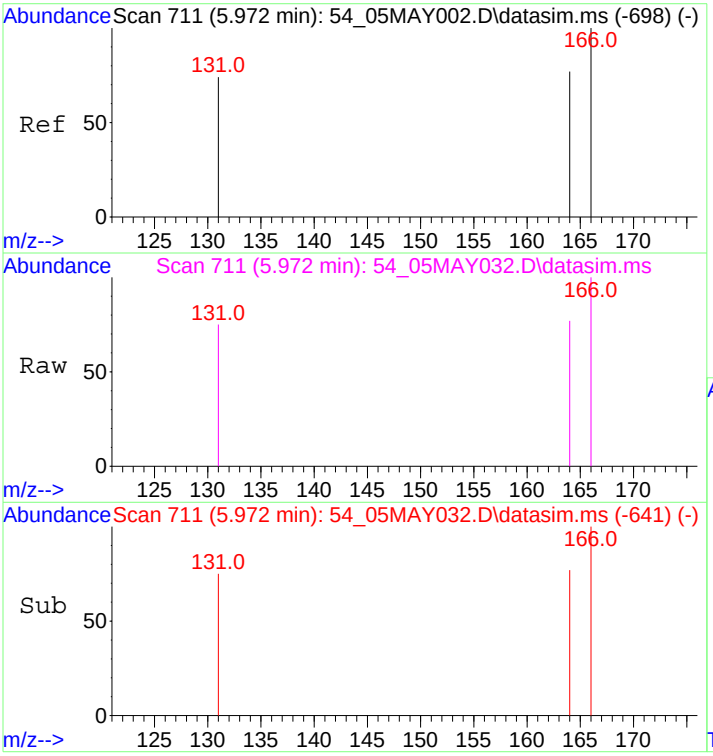


#13
Toluene
Concen: 270.42 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion: 91 Resp: 160793

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

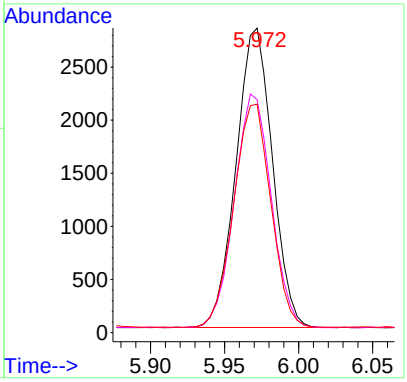


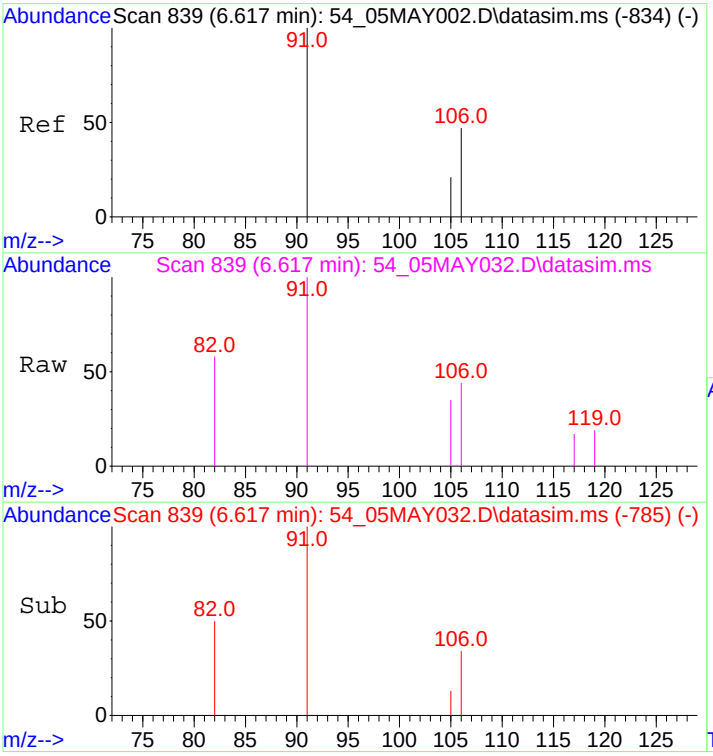


#14
Tetrachloroethene
Concen: 14.21 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54 05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion:166 Resp: 4825

Ion	Ratio	Lower	Upper
166	100		
164	78.9	62.6	94.0
131	76.1	58.5	87.7

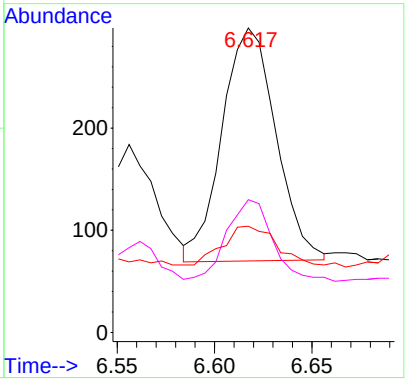




#16
m,p-Xylene
Concen: 0.76 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54_05MAY032.D
Acq: 5 May 2014 3:02 pm

Tgt Ion: 91 Resp: 439

Ion	Ratio	Lower	Upper
91	100		
106	30.1	43.1	64.7#
105	18.5	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY033.D
Acq On : 5 May 2014 3:14 pm
Operator : yhl
Sample : 02197 \ F5-030
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:21:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

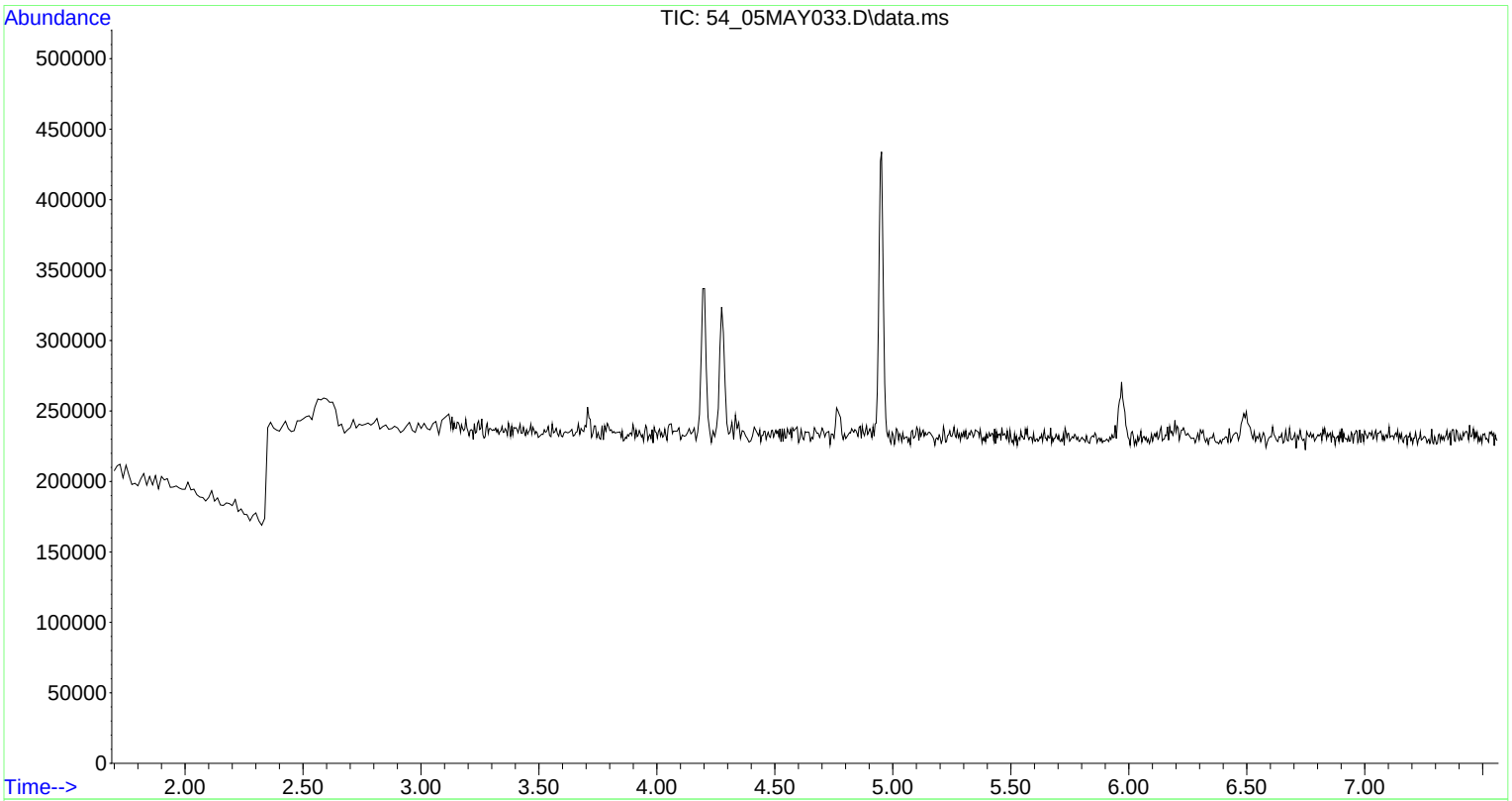
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4477	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10720	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10091	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.256	61	693	2.00	ppbv	# 64
5] trans-1,2-Dichloroethene	3.703	61	5532	18.10	ppbv	# 73
7] cis-1,2-Dichloroethene	4.197	61	54707	191.70	ppbv	# 70
11] Trichloroethene	4.950	130	57176	214.45	ppbv	98
13] Toluene	5.556	91	2021	3.34	ppbv	100
14] Tetrachloroethene	5.967	166	12601	36.47	ppbv	98

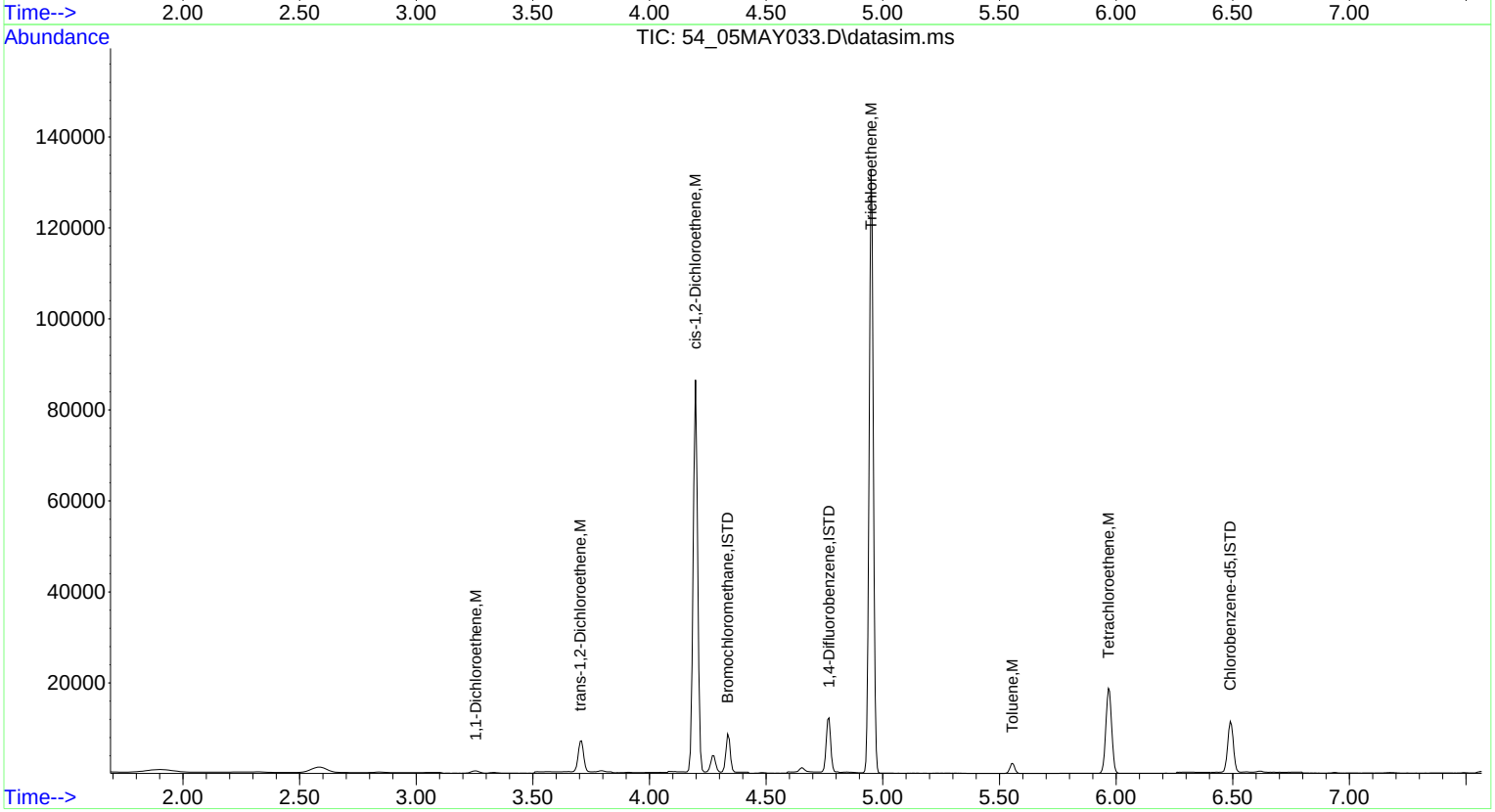
(#) = qualifier out of range (m) = manual integration (+) = signals summed

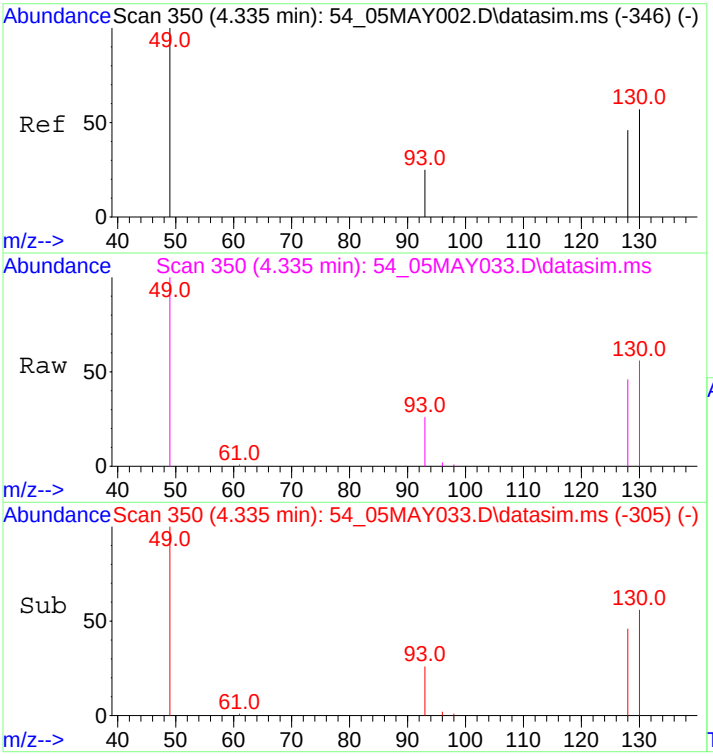
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY033.D
Acq On : 5 May 2014 3:14 pm
Operator : yhl
Sample : 02197 \ F5-030
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:21:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



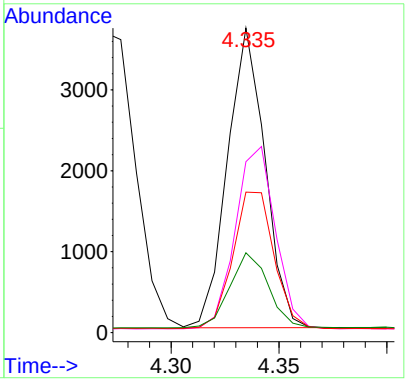


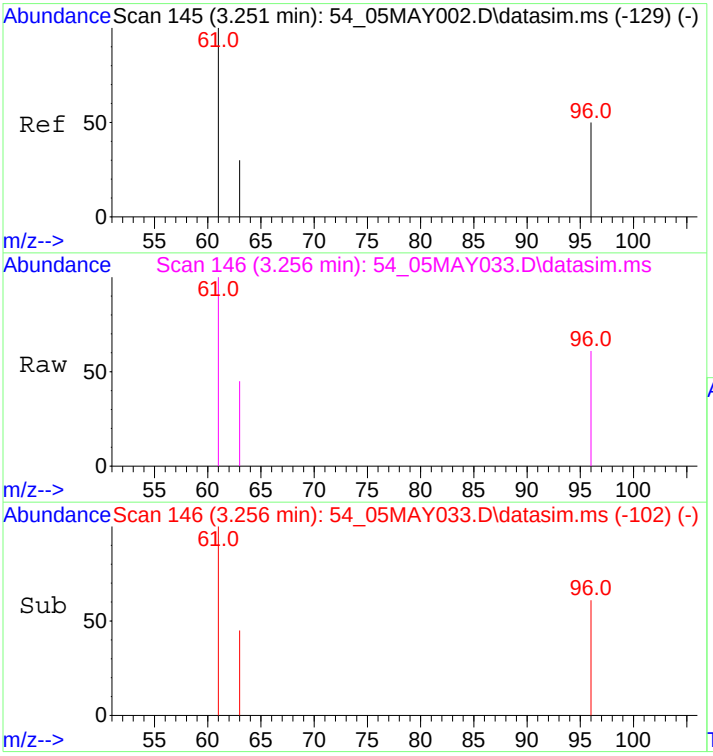


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion: 49 Resp: 4477

Ion	Ratio	Lower	Upper
49	100		
130	65.1	87.2	130.8#
128	50.1	68.0	102.0#
93	25.8	29.3	43.9#

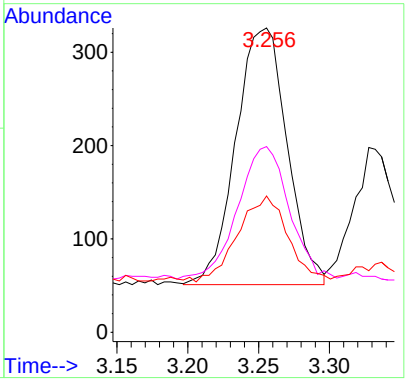


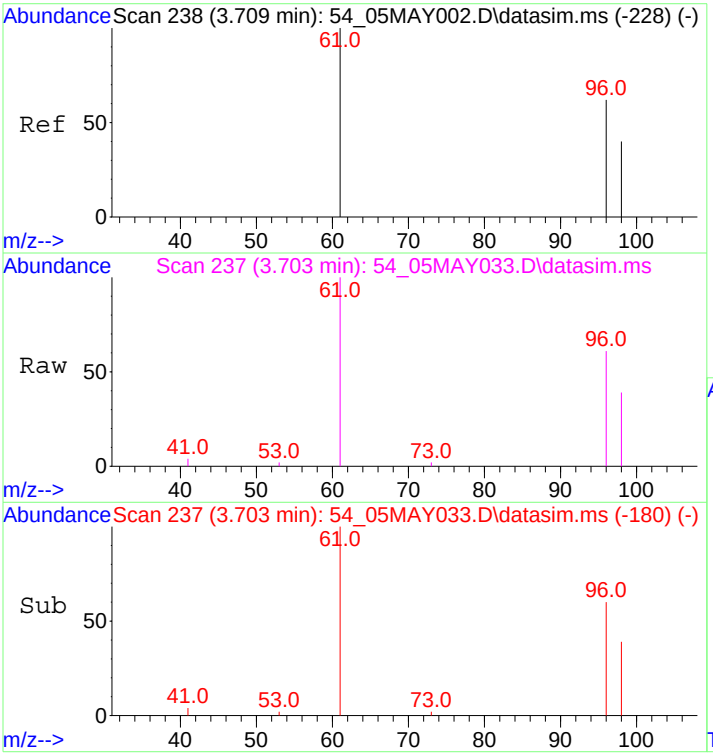


#3
1,1-Dichloroethene
Concen: 2.00 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.004 min
Lab File: 54_05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion: 61 Resp: 693

Ion	Ratio	Lower	Upper
61	100		
96	51.1	63.4	95.2#
63	57.3	26.2	39.2#

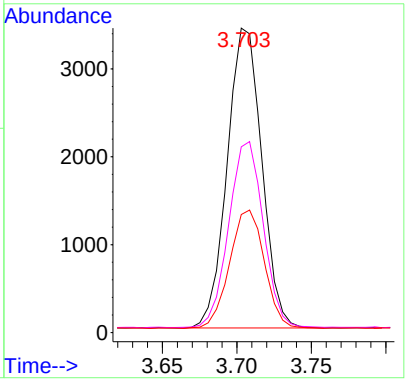


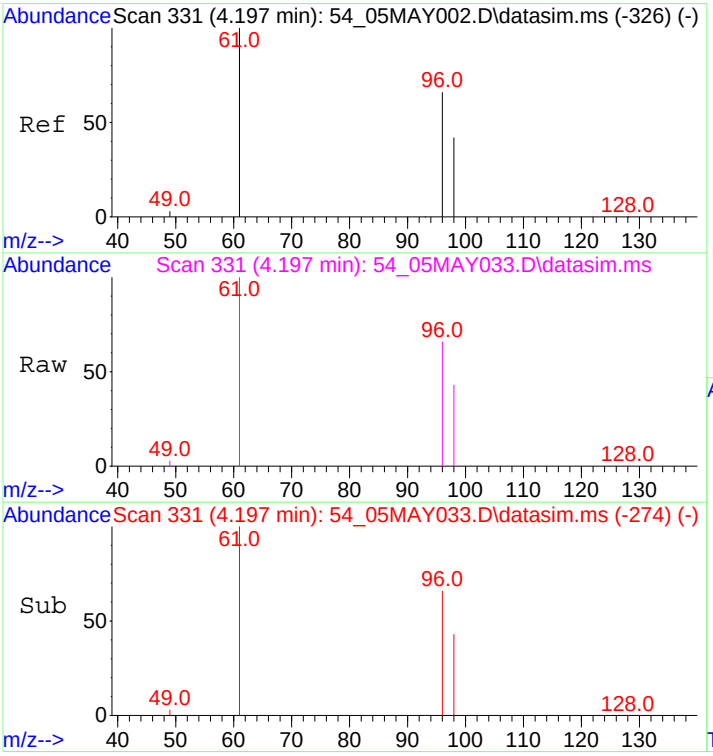


#5
trans-1,2-Dichloroethene
Concen: 18.10 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion: 61 Resp: 5532

Ion	Ratio	Lower	Upper
61	100		
96	61.7	71.4	107.0#
98	39.8	45.8	68.8#

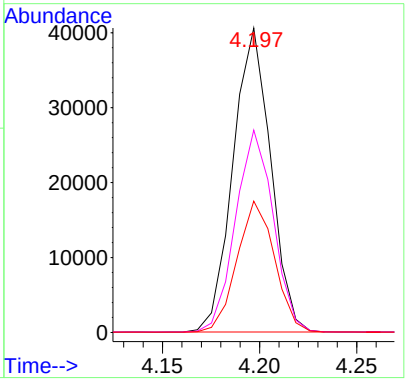


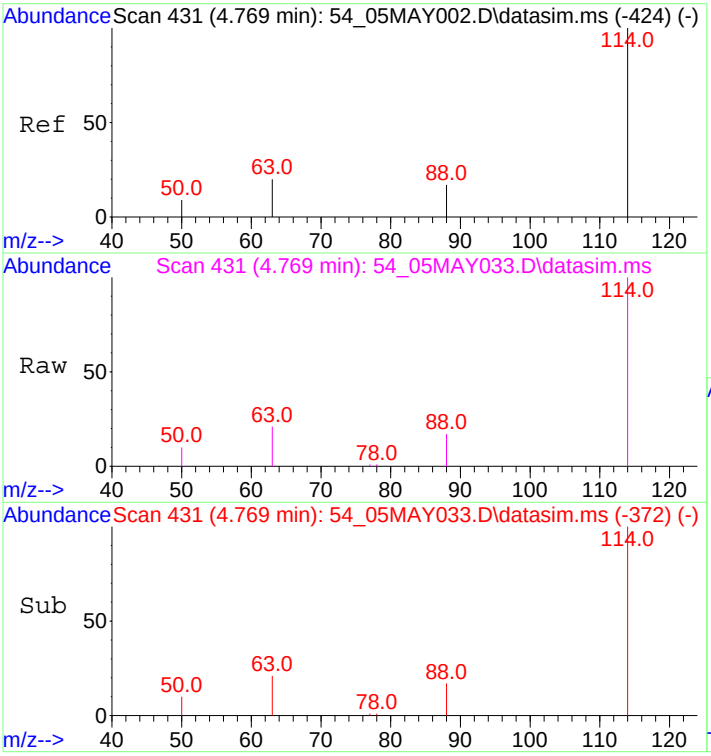


#7
cis-1,2-Dichloroethene
Concen: 191.70 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion: 61 Resp: 54707

Ion	Ratio	Lower	Upper
61	100		
96	66.5	78.5	117.7#
98	43.0	50.6	76.0#

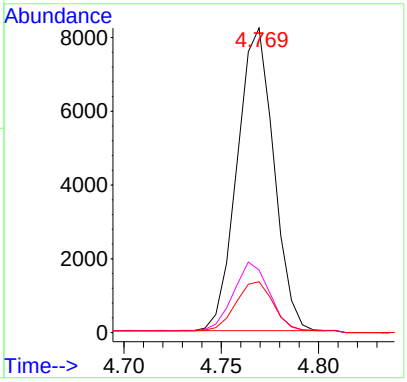


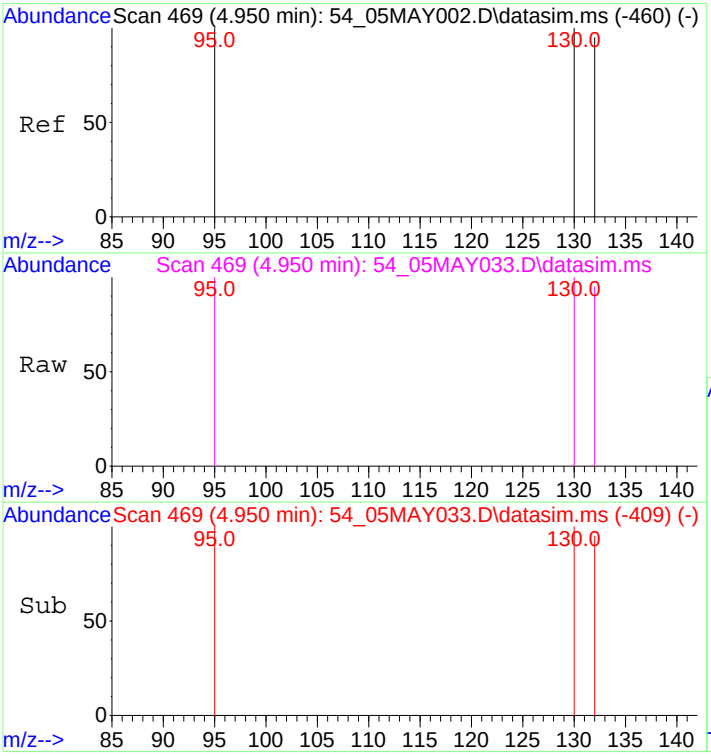


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion:114 Resp: 10720

Ion	Ratio	Lower	Upper
114	100		
63	22.1	12.0	18.0#
88	16.5	11.8	17.8

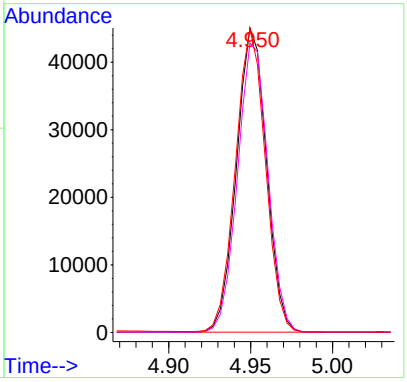


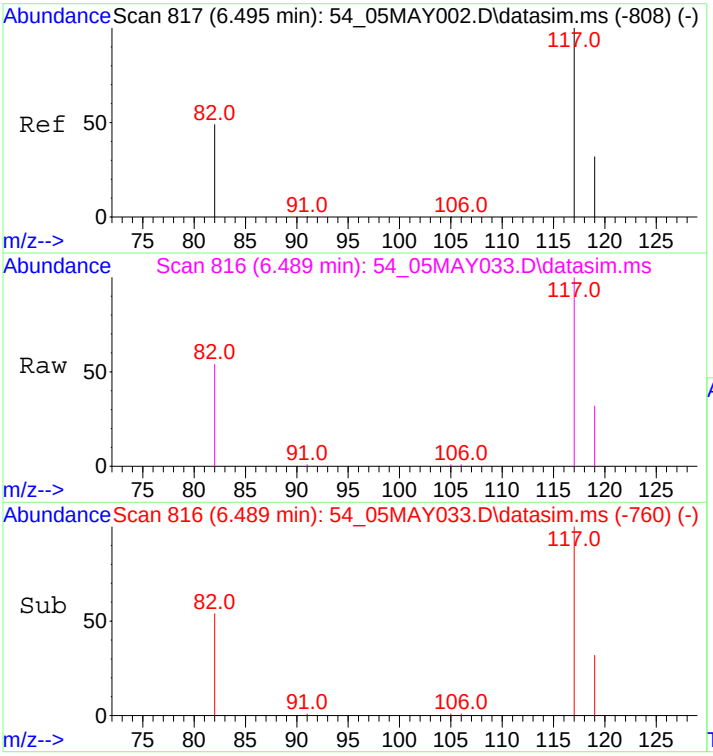


#11
Trichloroethene
Concen: 214.45 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion:130 Resp: 57176

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	99.3	76.5	114.7

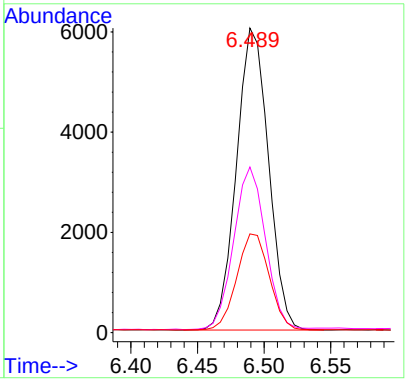


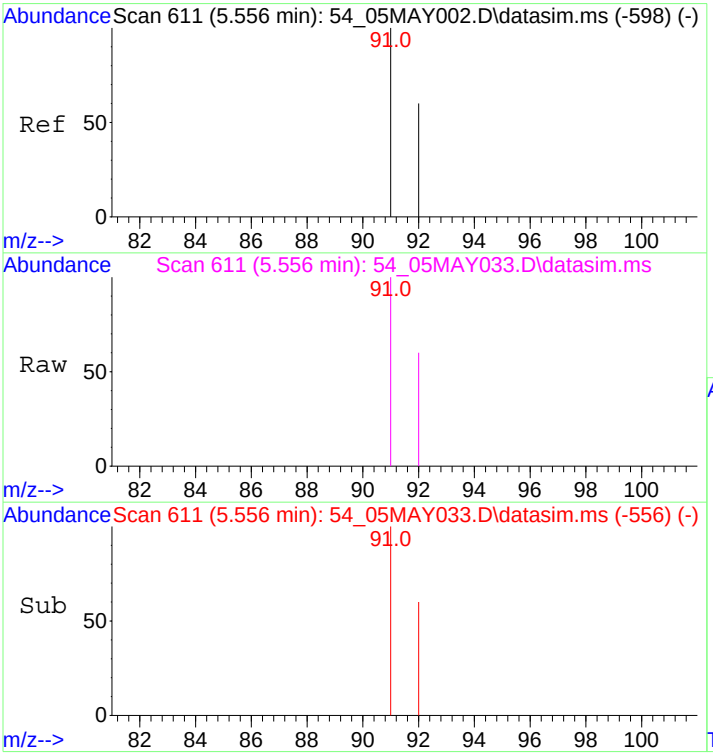


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion:117 Resp: 10091

Ion	Ratio	Lower	Upper
117	100		
82	53.4	38.0	57.0
119	32.1	27.0	40.4

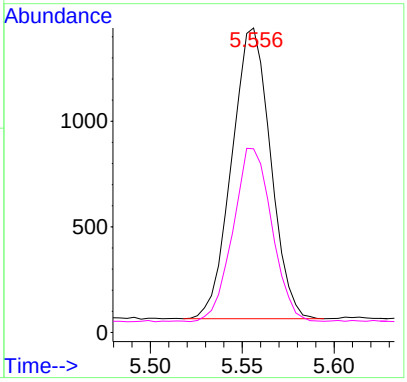


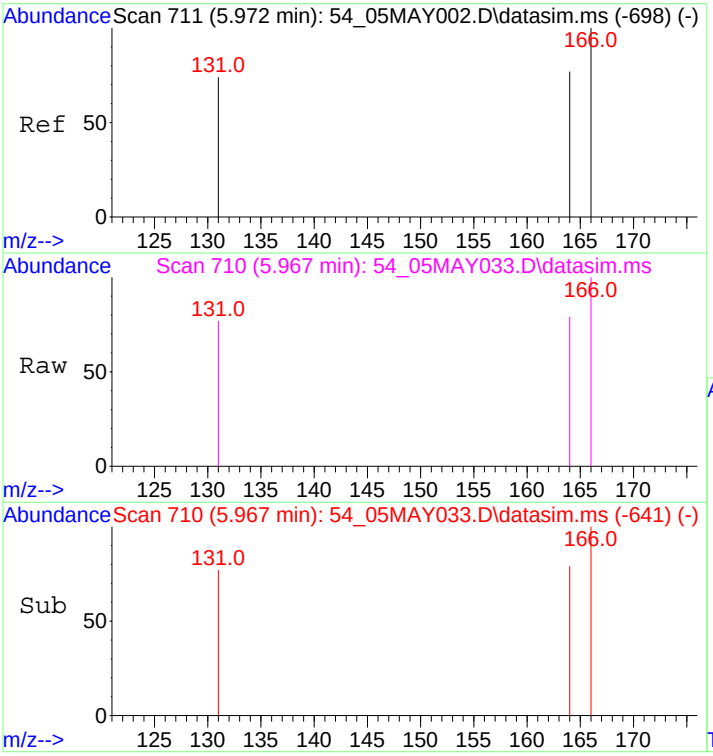


#13
Toluene
Concen: 3.34 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion: 91 Resp: 2021

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8

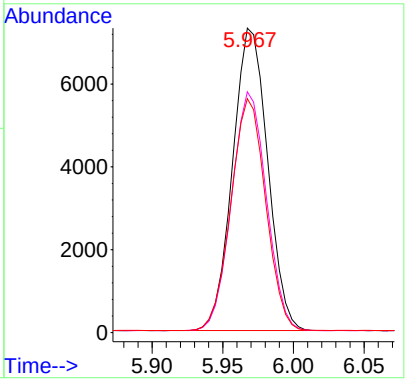




#14
Tetrachloroethene
Concen: 36.47 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 05MAY033.D
Acq: 5 May 2014 3:14 pm

Tgt Ion:166 Resp: 12601

Ion	Ratio	Lower	Upper
166	100		
164	78.4	62.6	94.0
131	76.0	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY034.D
Acq On : 5 May 2014 3:25 pm
Operator : yhl
Sample : 02198 \ F5-052A
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:31:58 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

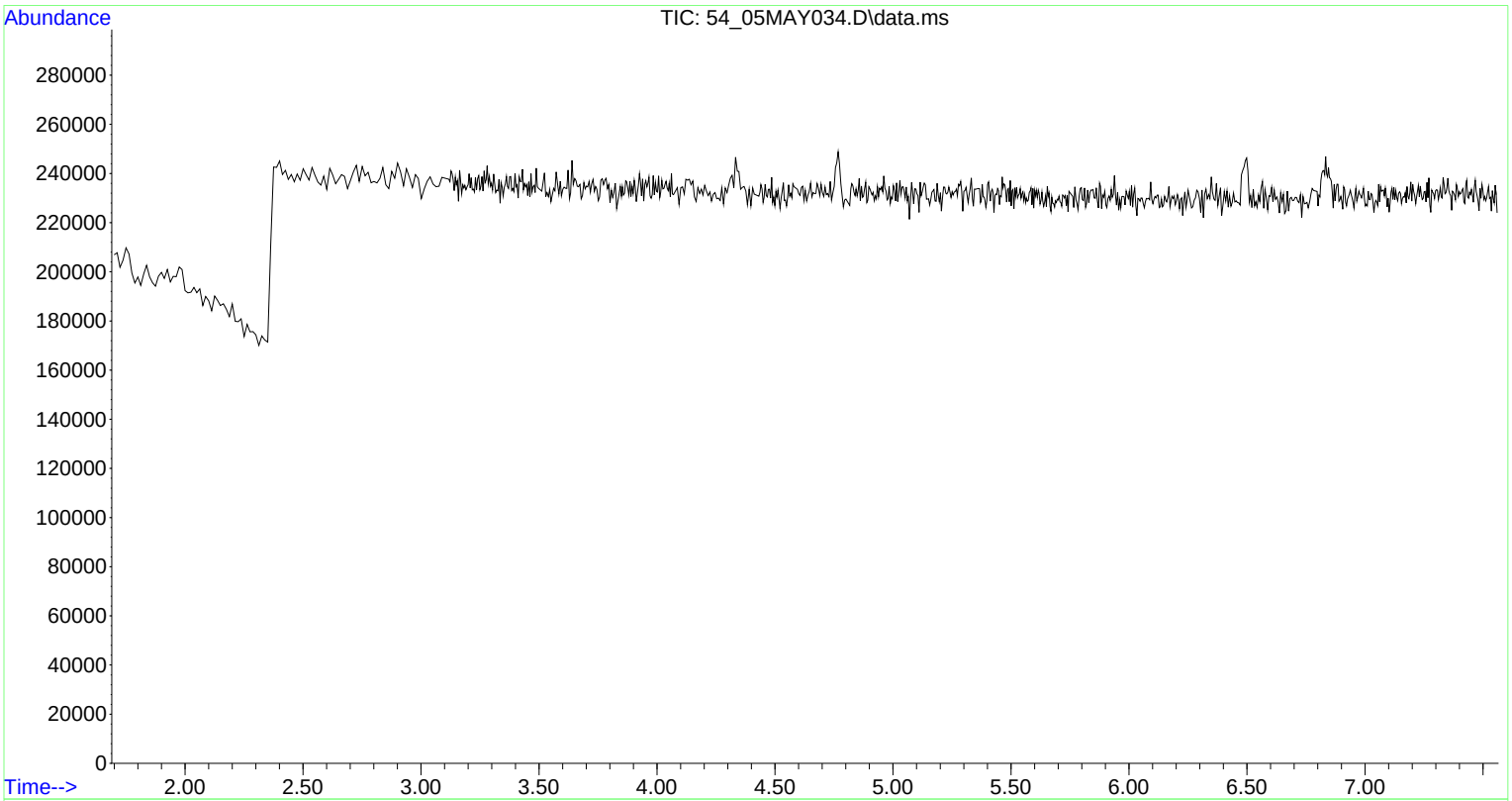
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4539	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	10808	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	10019	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
7] cis-1,2-Dichloroethene	4.197	61	311	1.07	ppbv	# 60
11] Trichloroethene	4.950	130	921	3.43	ppbv	97
14] Tetrachloroethene	5.972	166	188	0.55	ppbv	91

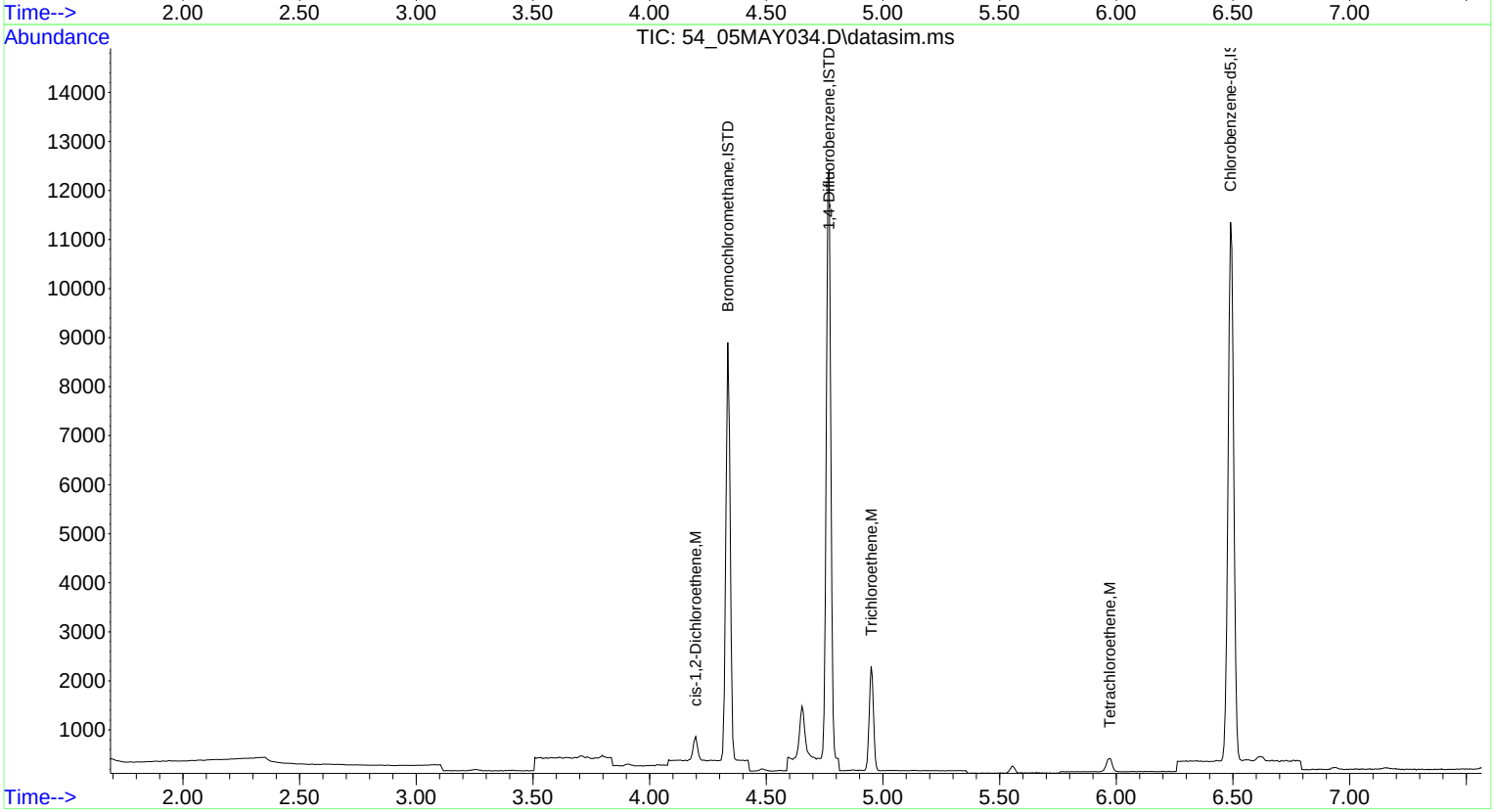
(#) = qualifier out of range (m) = manual integration (+) = signals summed

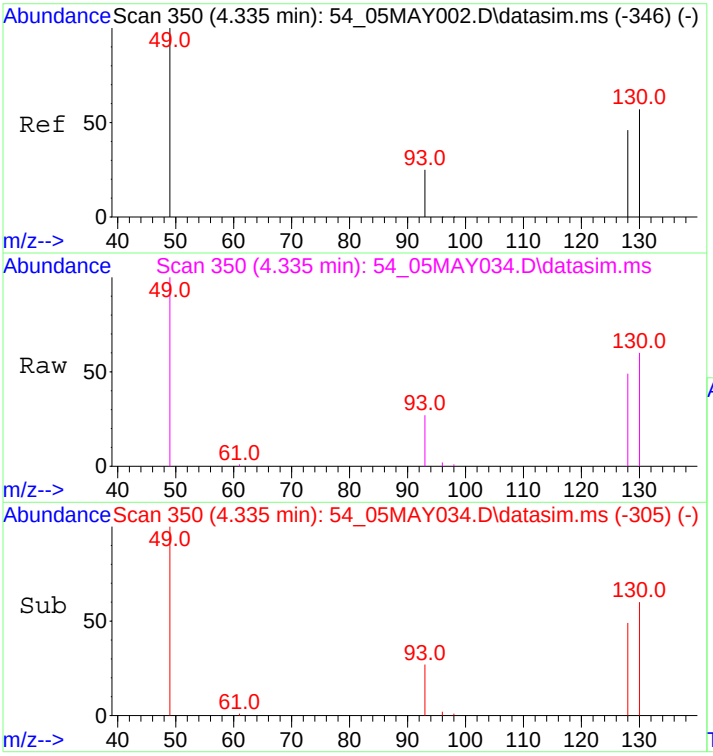
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY034.D
Acq On : 5 May 2014 3:25 pm
Operator : yhl
Sample : 02198 \ F5-052A
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:31:58 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



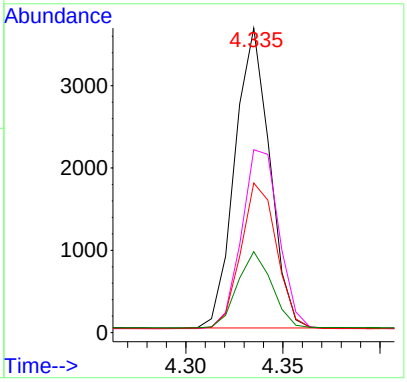


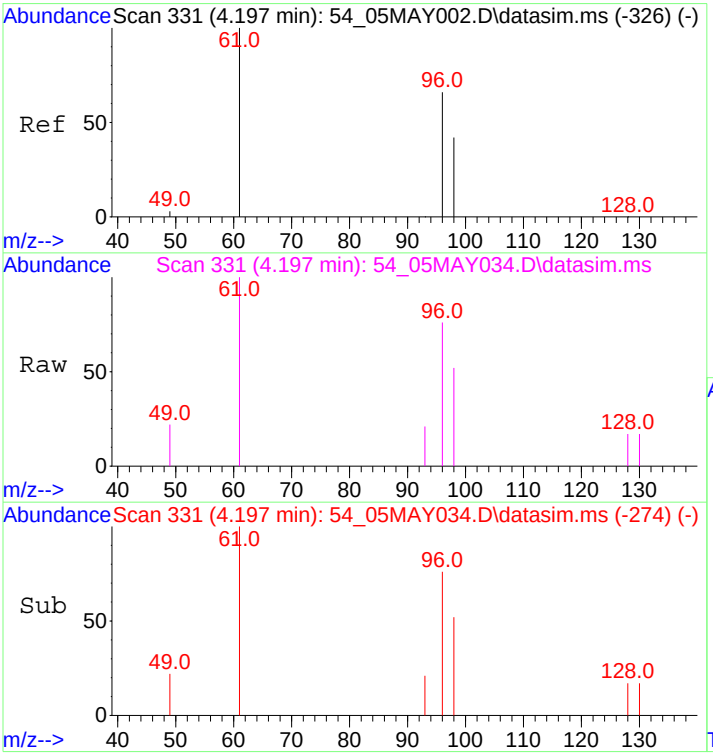


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY034.D
Acq: 5 May 2014 3:25 pm

Tgt Ion: 49 Resp: 4539

Ion	Ratio	Lower	Upper
49	100		
130	64.2	87.2	130.8#
128	49.7	68.0	102.0#
93	24.9	29.3	43.9#

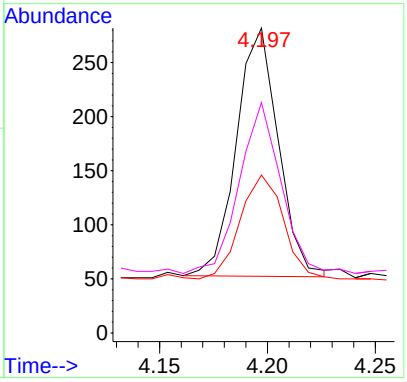


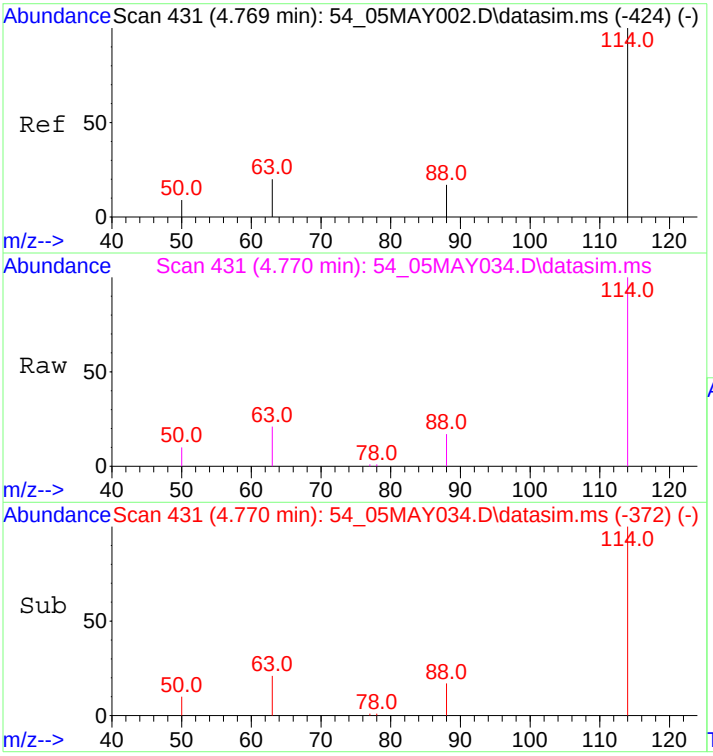


#7
cis-1,2-Dichloroethene
Concen: 1.07 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54_05MAY034.D
Acq: 5 May 2014 3:25 pm

Tgt Ion: 61 Resp: 311

Ion	Ratio	Lower	Upper
61	100		
96	68.2	78.5	117.7#
98	105.8	50.6	76.0#

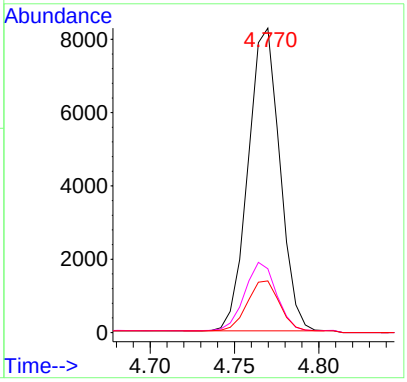


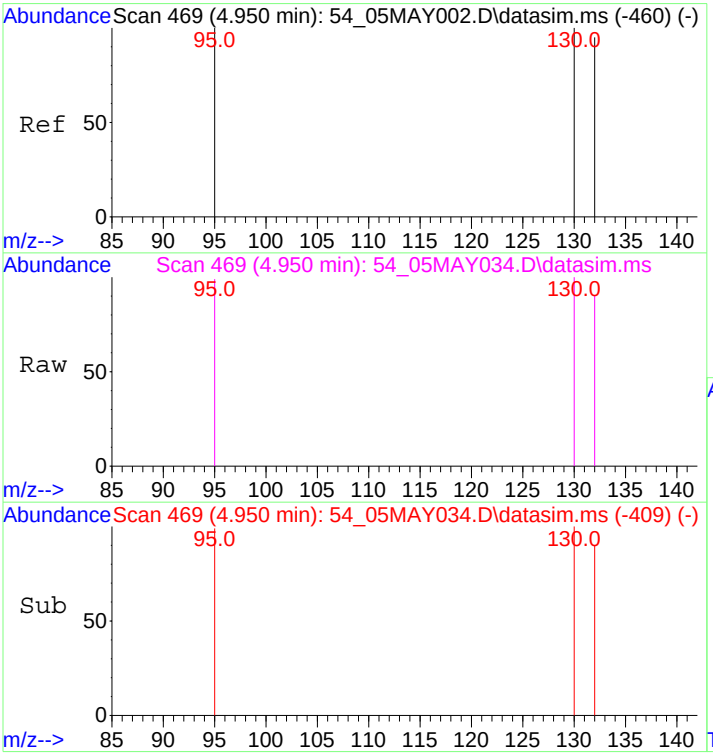


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 05MAY034.D
Acq: 5 May 2014 3:25 pm

Tgt Ion:114 Resp: 10808

Ion	Ratio	Lower	Upper
114	100		
63	22.5	12.0	18.0#
88	16.7	11.8	17.8

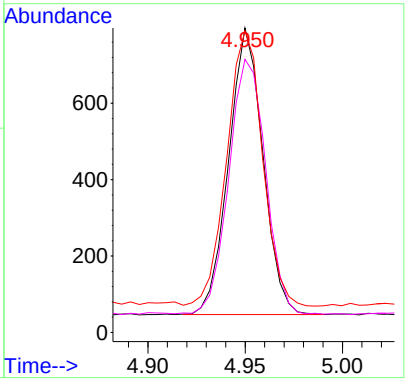


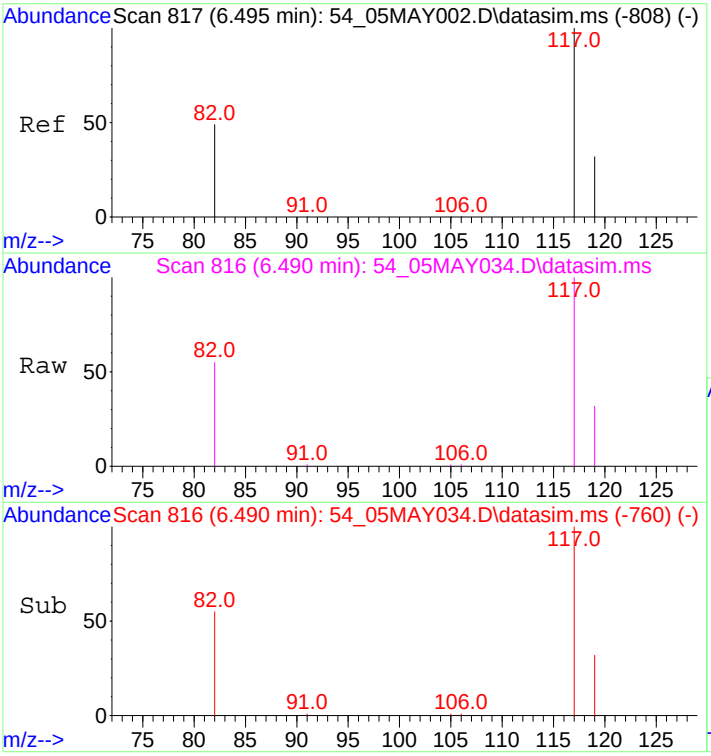


#11
Trichloroethene
Concen: 3.43 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_05MAY034.D
Acq: 5 May 2014 3:25 pm

Tgt Ion:130 Resp: 921

Ion	Ratio	Lower	Upper
130	100		
132	94.9	76.9	115.3
95	100.2	76.5	114.7

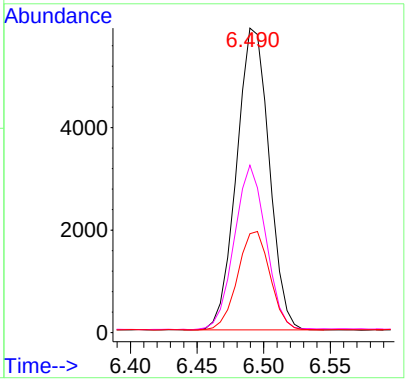


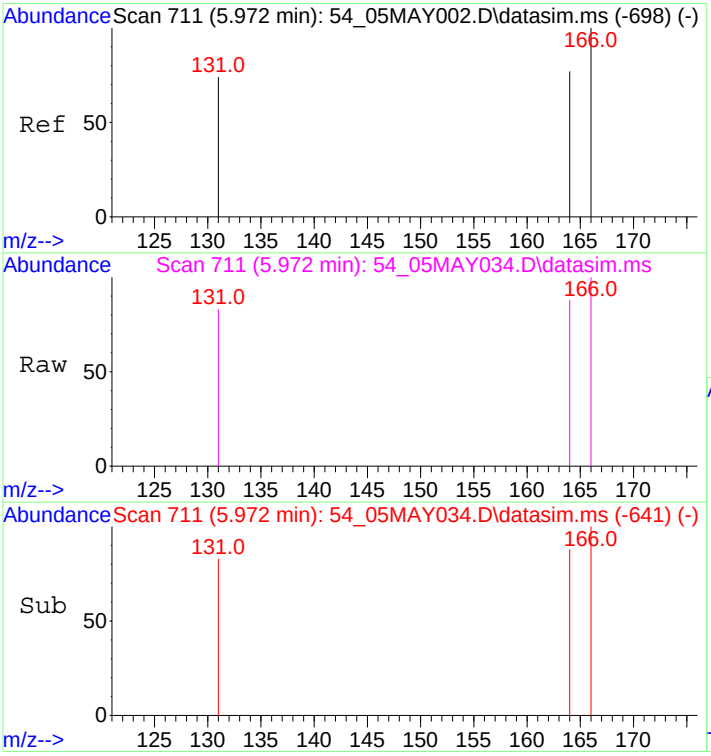


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54 05MAY034.D
Acq: 5 May 2014 3:25 pm

Tgt Ion:117 Resp: 10019

Ion	Ratio	Lower	Upper
117	100		
82	52.8	38.0	57.0
119	32.5	27.0	40.4

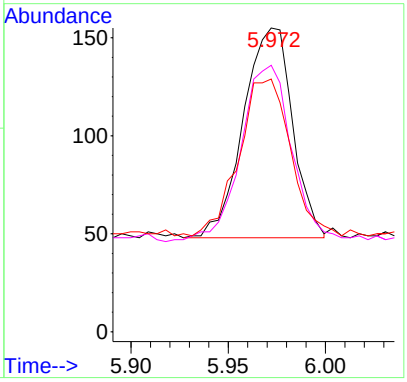




#14
Tetrachloroethene
Concen: 0.55 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54_05MAY034.D
Acq: 5 May 2014 3:25 pm

Tgt Ion:166 Resp: 188

Ion	Ratio	Lower	Upper
166	100		
164	87.8	62.6	94.0
131	78.2	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY035.D
Acq On : 5 May 2014 3:37 pm
Operator : yhl
Sample : 02199 \ F5-052B
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:44:41 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

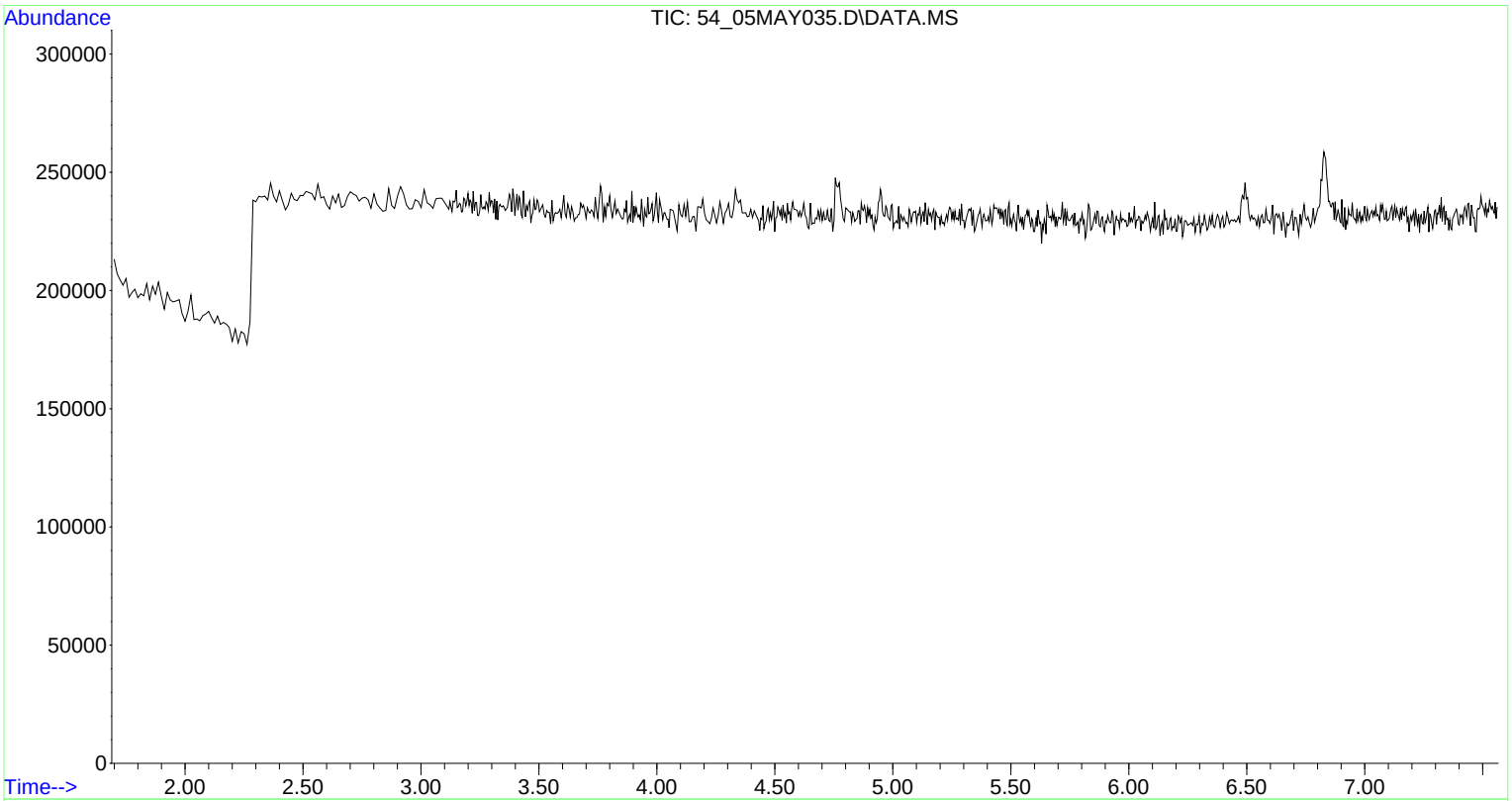
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4357	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.764	114	10488	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9823	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5] trans-1,2-Dichloroethene	3.702	61	257m	0.86	ppbv	
7] cis-1,2-Dichloroethene	4.190	61	2426	8.74	ppbv	# 71
11] Trichloroethene	4.949	130	2464	9.45	ppbv	97
14] Tetrachloroethene	5.967	166	575	1.71	ppbv	97

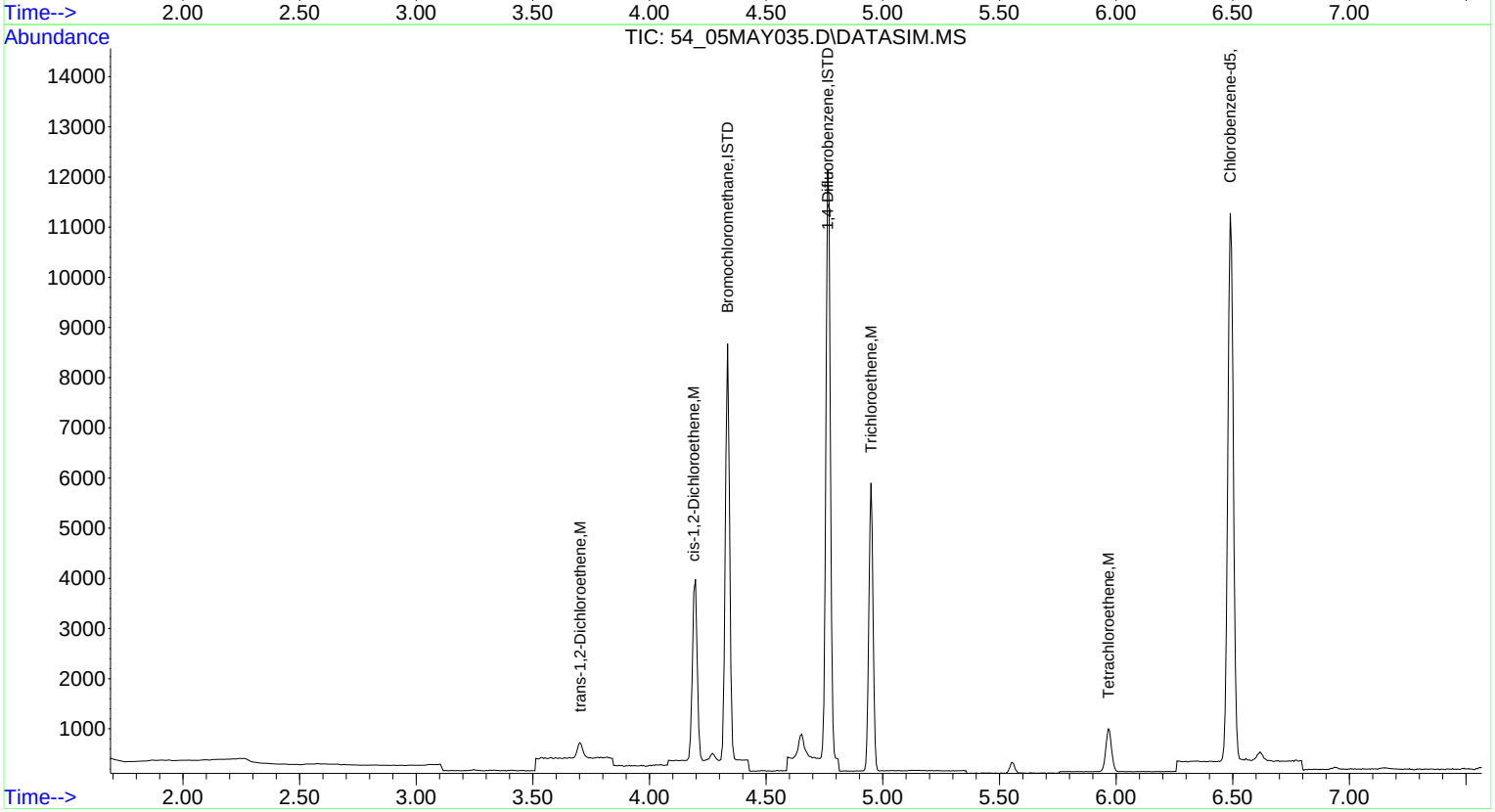
(#) = qualifier out of range (m) = manual integration (+) = signals summed

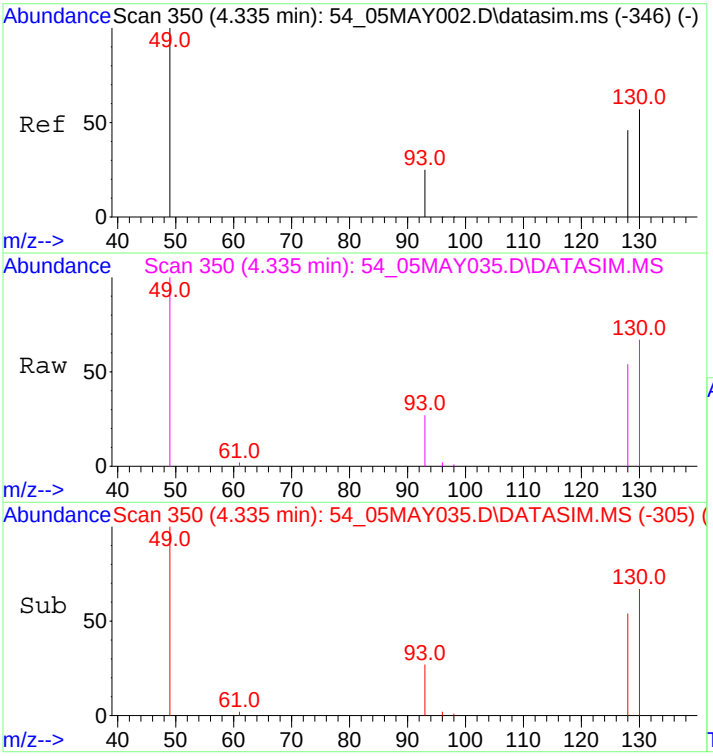
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY035.D
Acq On : 5 May 2014 3:37 pm
Operator : yhl
Sample : 02199 \ F5-052B
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:44:41 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



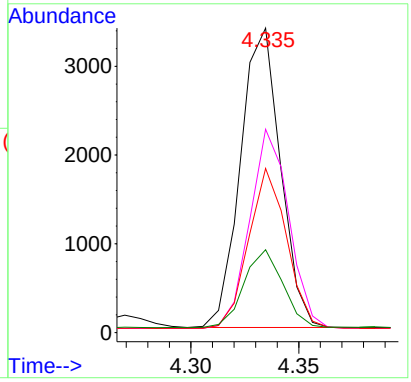


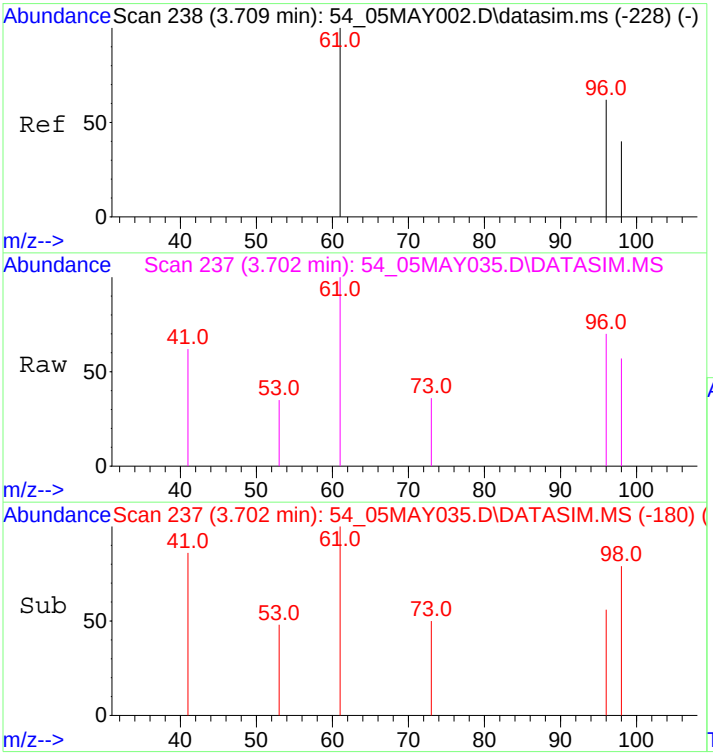


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 05MAY035.D
Acq: 5 May 2014 3:37 pm

Tgt Ion: 49 Resp: 4357

Ion	Ratio	Lower	Upper
49	100		
130	64.6	87.2	130.8#
128	50.9	68.0	102.0#
93	25.3	29.3	43.9#

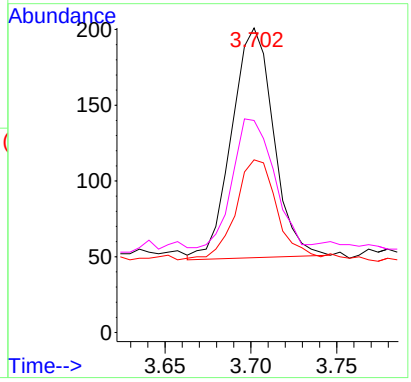




#5
trans-1,2-Dichloroethene
Concen: 0.86 ppbv m
RT: 3.702 min Scan# 237
Delta R.T. -0.007 min
Lab File: 54_05MAY035.D
Acq: 5 May 2014 3:37 pm

Tgt Ion: 61 Resp: 257

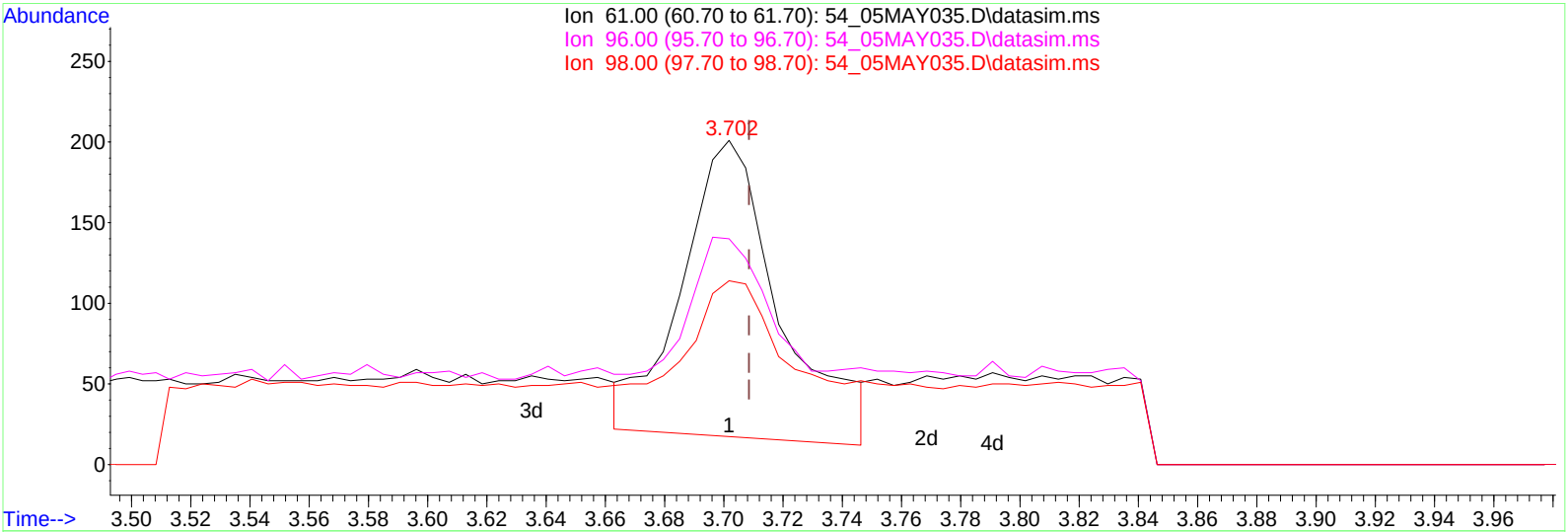
Ion	Ratio	Lower	Upper
61	100		
96	108.2	71.4	107.0#
98	136.6	45.8	68.8#

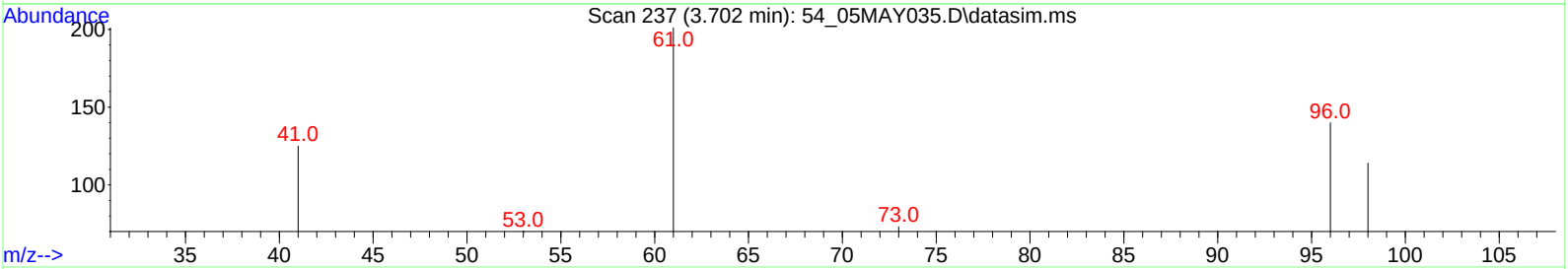


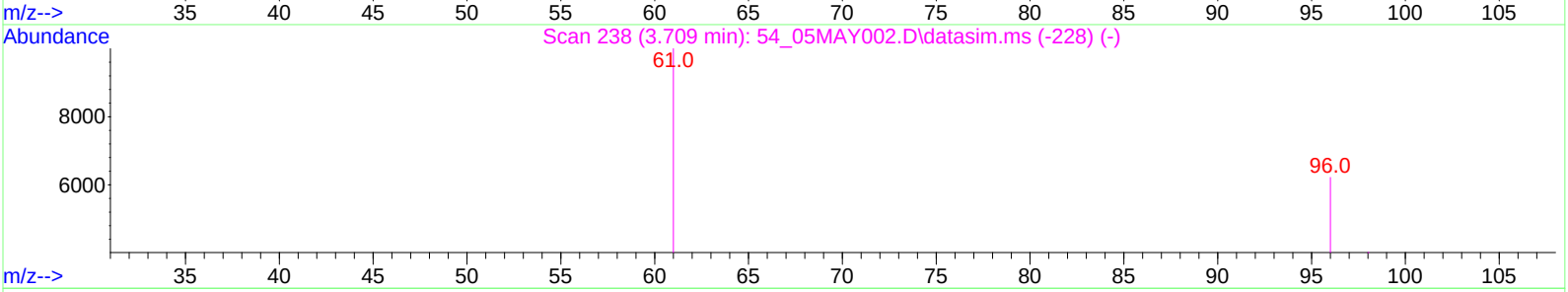
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY035.D
Acq On : 5 May 2014 3:37 pm
Operator : yhl
Sample : 021989 \ F5-052B
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:43:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







TIC: 54_05MAY035.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.702min (-0.007) 1.41 ppbv

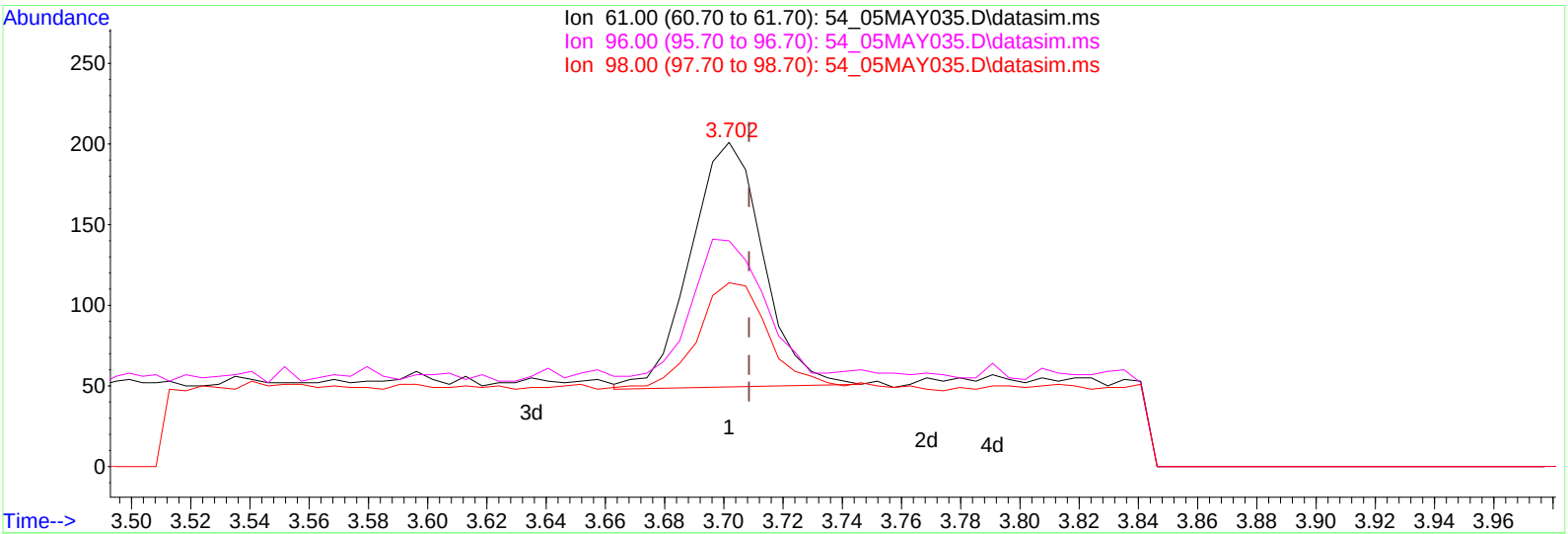
response 420

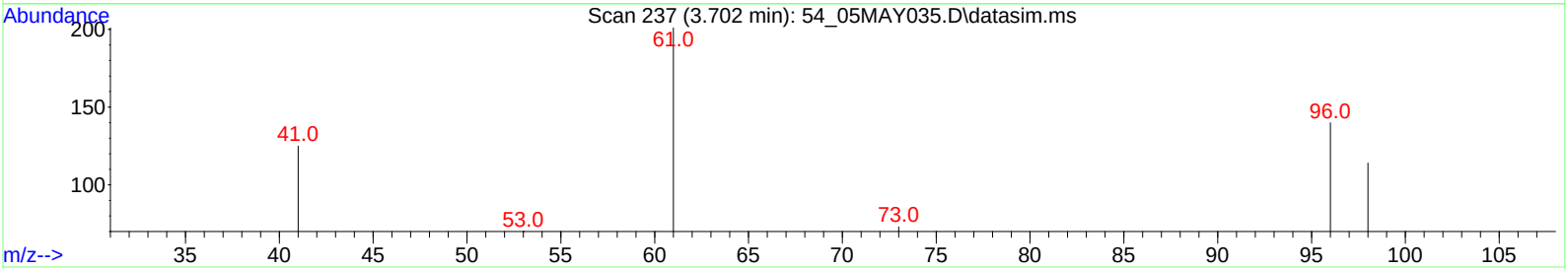
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	66.19#
98.00	57.30	83.57#
0.00	0.00	0.00

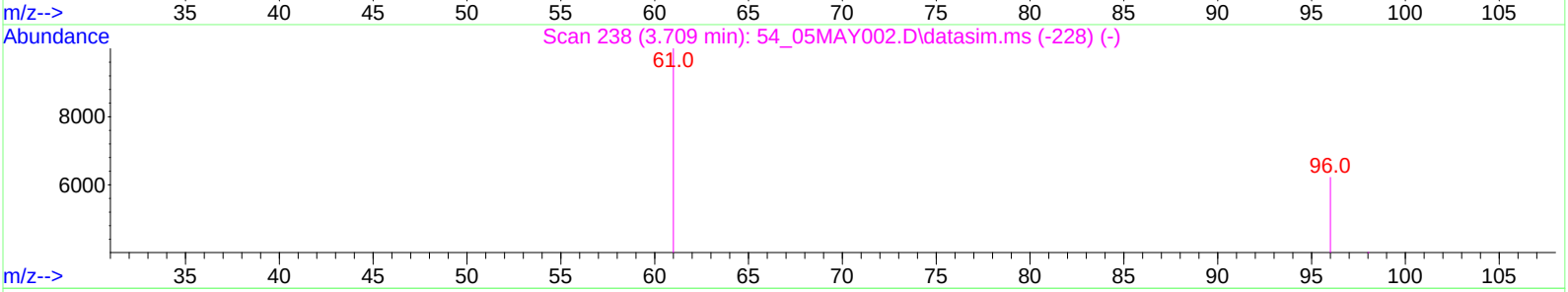
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY035.D
Acq On : 5 May 2014 3:37 pm
Operator : yhl
Sample : 021989 \ F5-052B
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 15:43:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration







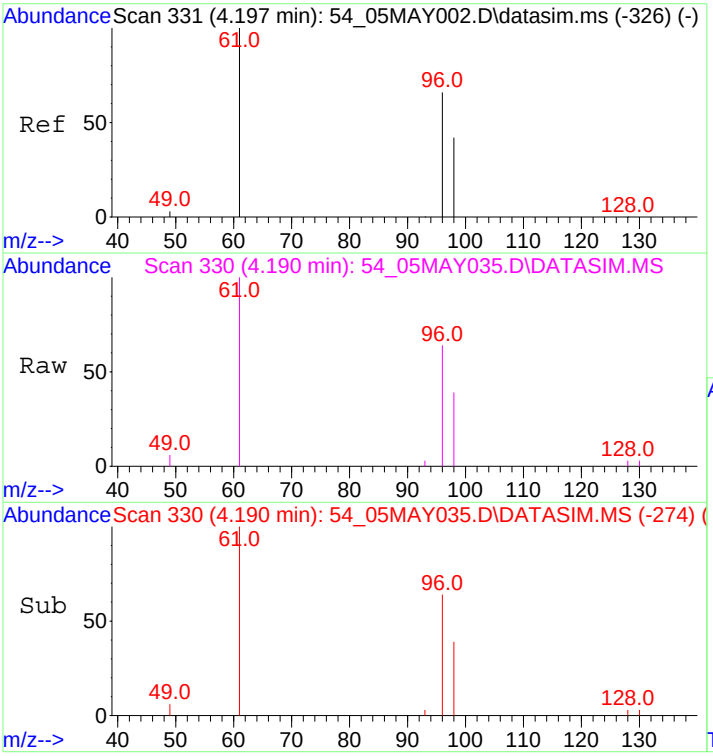
TIC: 54_05MAY035.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.702min (-0.007) 0.86 ppbv m

response 257

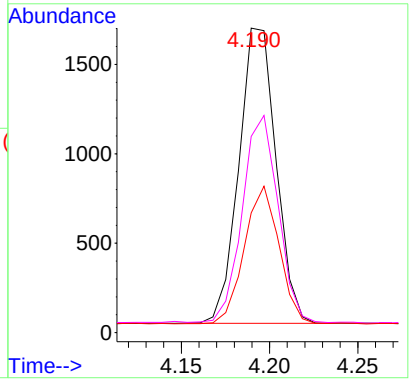
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	108.17#
98.00	57.30	136.58#
0.00	0.00	0.00

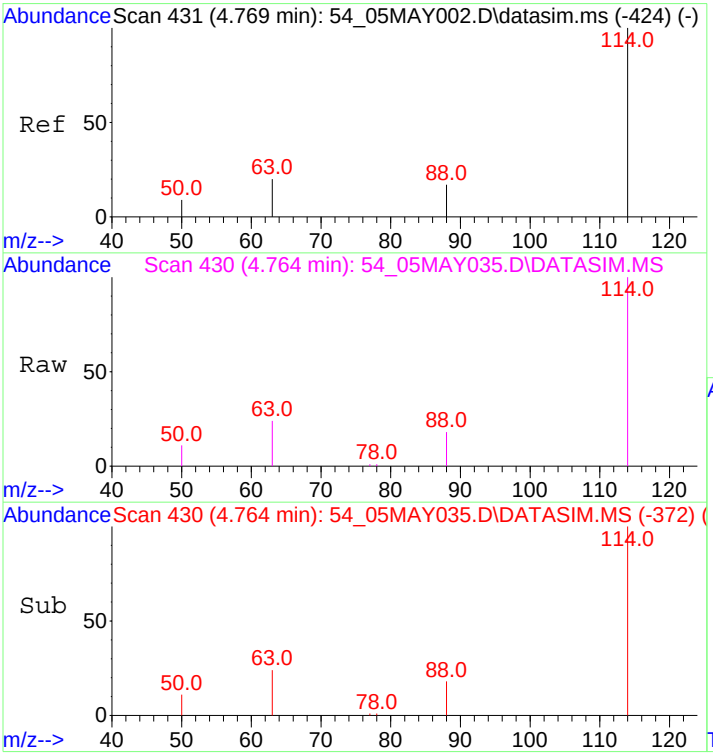


#7
cis-1,2-Dichloroethene
Concen: 8.74 ppbv
RT: 4.190 min Scan# 330
Delta R.T. -0.007 min
Lab File: 54 05MAY035.D
Acq: 5 May 2014 3:37 pm

Tgt Ion: 61 Resp: 2426

Ion	Ratio	Lower	Upper
61	100		
96	67.3	78.5	117.7#
98	43.3	50.6	76.0#

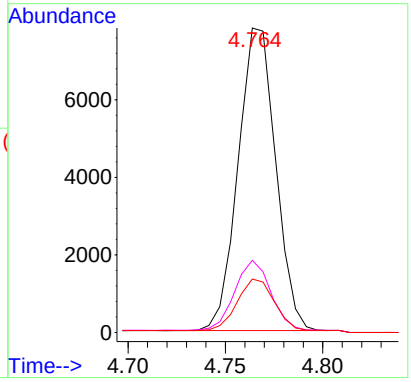


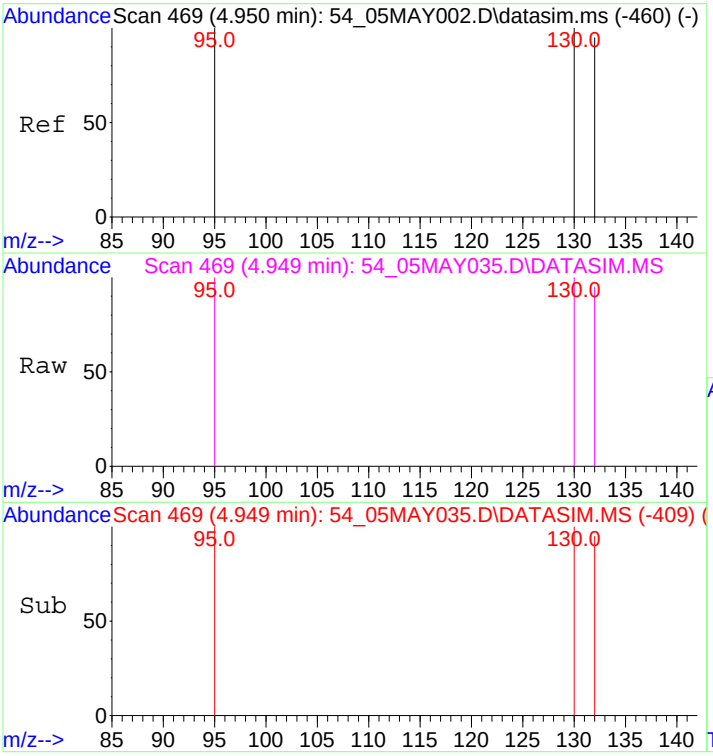


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.764 min Scan# 430
Delta R.T. -0.006 min
Lab File: 54_05MAY035.D
Acq: 5 May 2014 3:37 pm

Tgt Ion:114 Resp: 10488

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.8	11.8	17.8

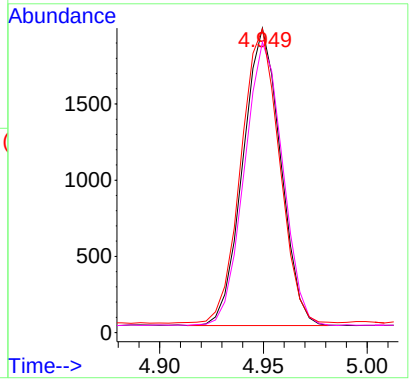


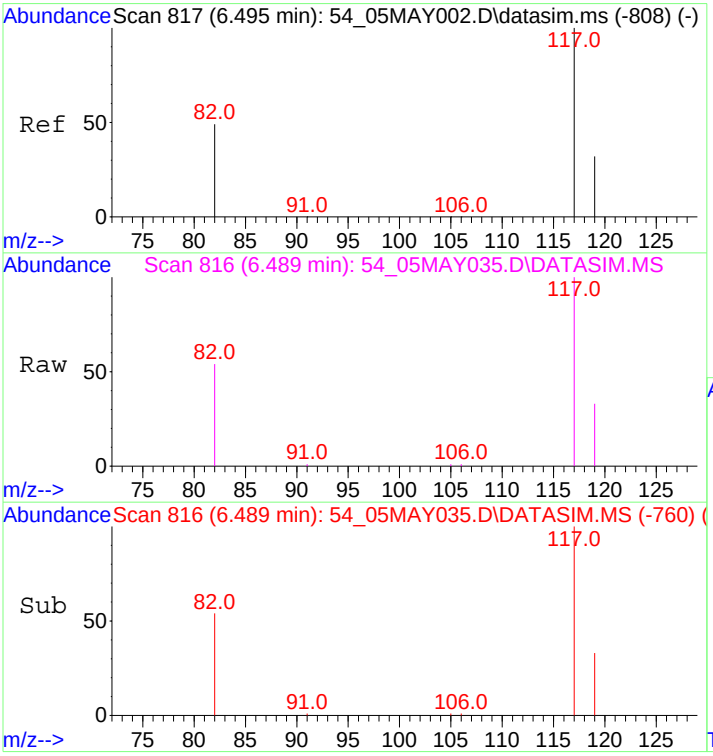


#11
Trichloroethene
Concen: 9.45 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 05MAY035.D
Acq: 5 May 2014 3:37 pm

Tgt Ion:130 Resp: 2464

Ion	Ratio	Lower	Upper
130	100		
132	96.6	76.9	115.3
95	100.3	76.5	114.7

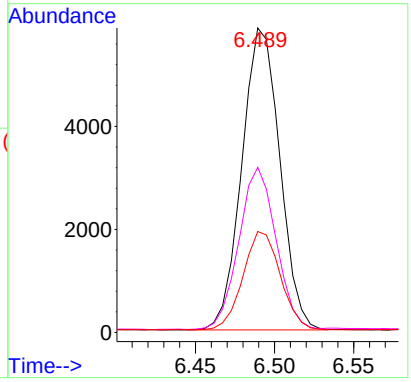


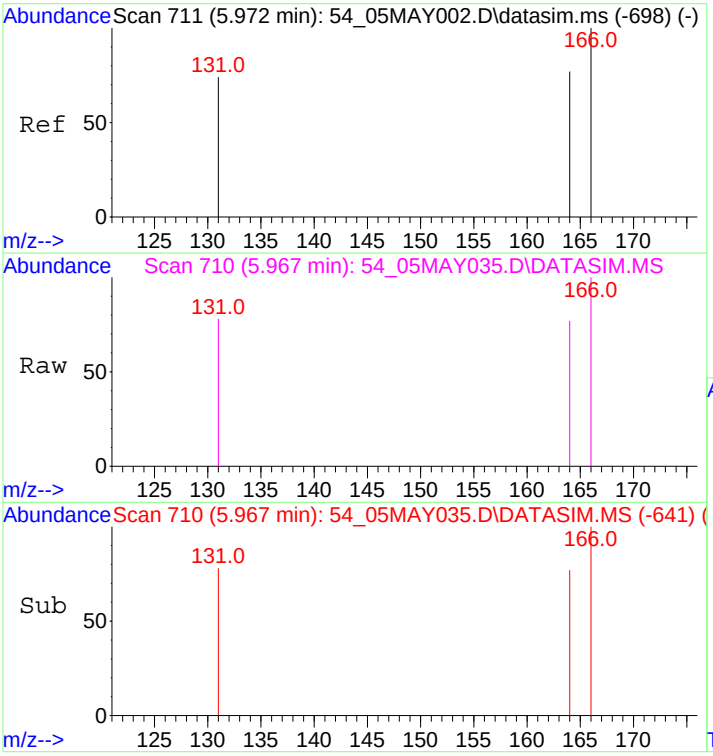


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_05MAY035.D
Acq: 5 May 2014 3:37 pm

Tgt Ion:117 Resp: 9823

Ion	Ratio	Lower	Upper
117	100		
82	52.5	38.0	57.0
119	31.9	27.0	40.4

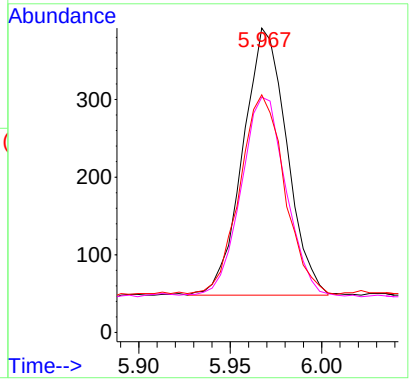




#14
Tetrachloroethene
Concen: 1.71 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 05MAY035.D
Acq: 5 May 2014 3:37 pm

Tgt Ion:166 Resp: 575

Ion	Ratio	Lower	Upper
166	100		
164	76.0	62.6	94.0
131	76.2	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY036.D
Acq On : 5 May 2014 3:54 pm
Operator : yhl
Sample : 02200 \ F5-004
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 16:01:10 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4033	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9644	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	9046	10.00	ppbv	0.00

System Monitoring Compounds

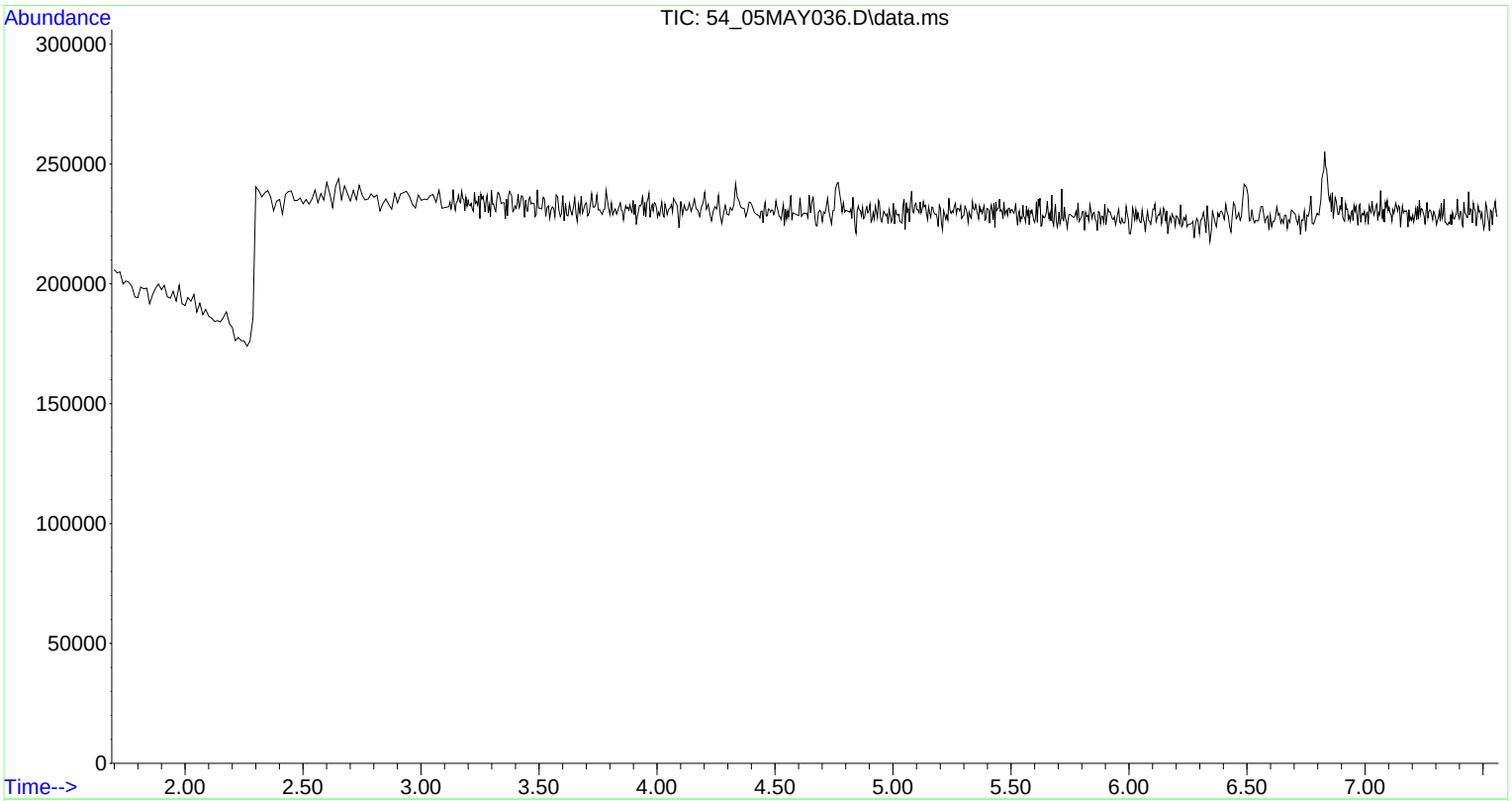
Target Compounds	Qvalue

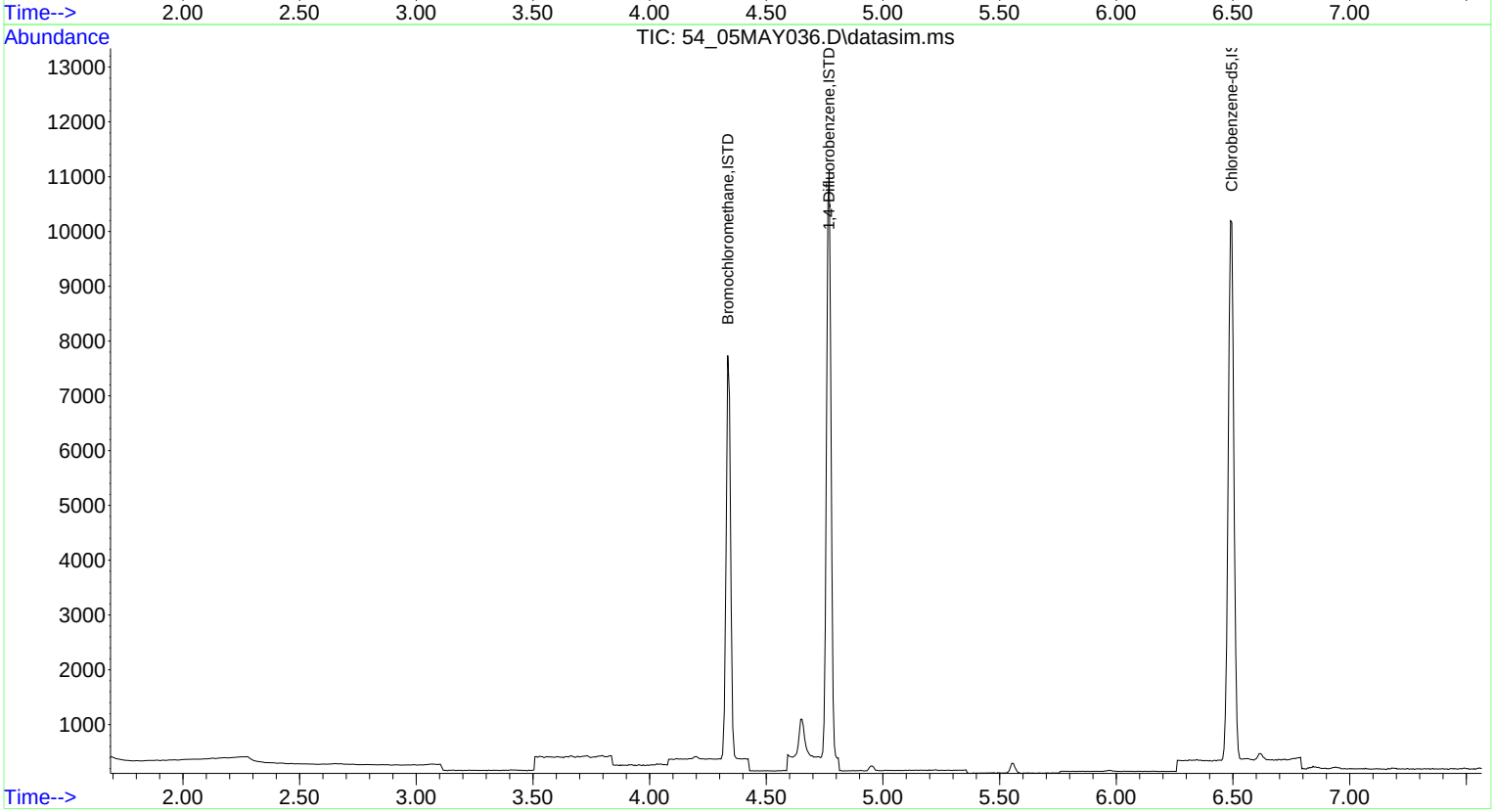
(#) = qualifier out of range (m) = manual integration (+) = signals summed

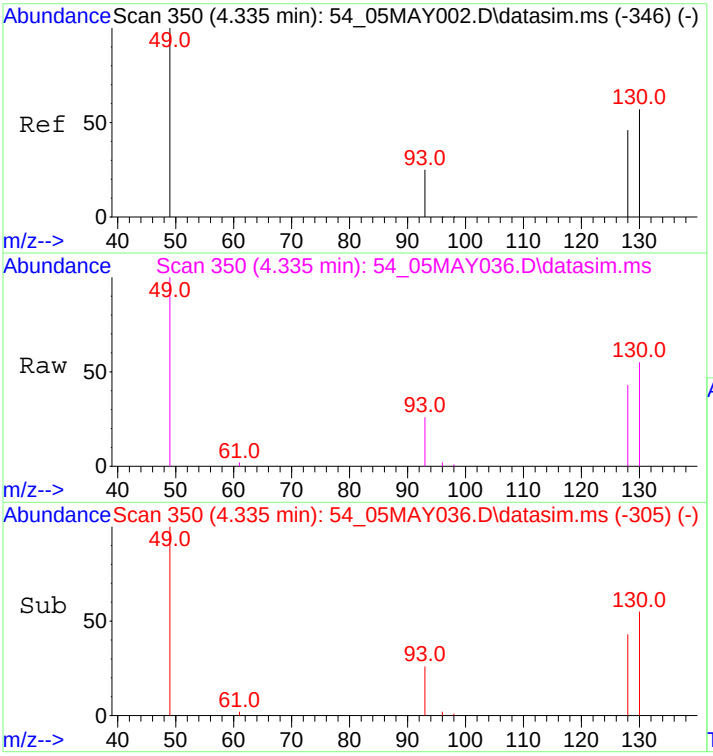
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY036.D
Acq On : 5 May 2014 3:54 pm
Operator : yhl
Sample : 02200 \ F5-004
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 16:01:10 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



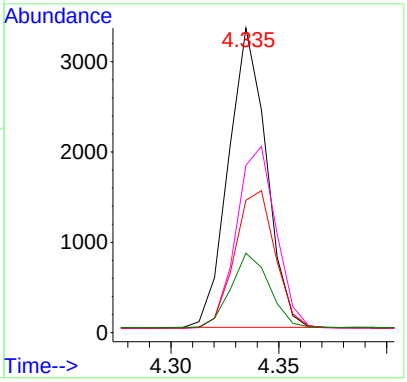


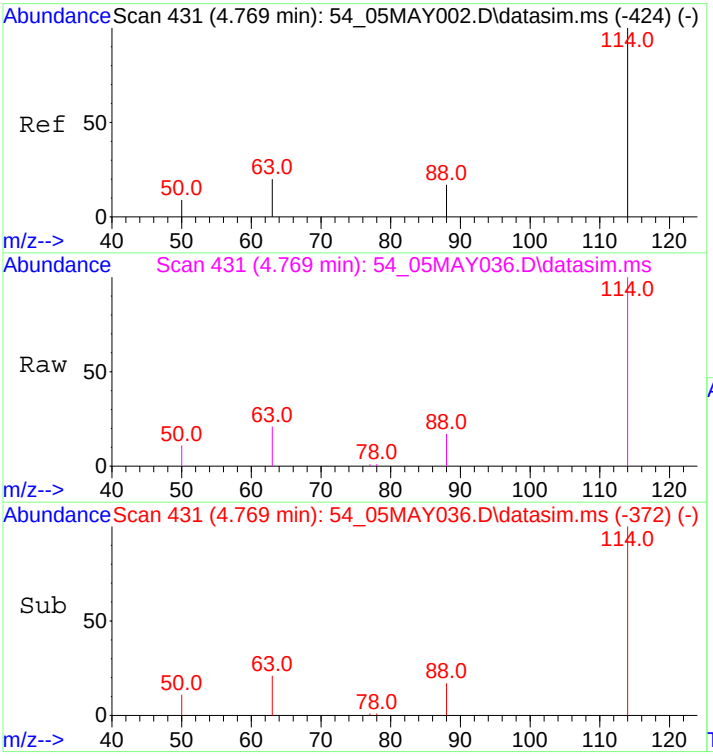


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY036.D
Acq: 5 May 2014 3:54 pm

Tgt Ion: 49 Resp: 4033

Ion	Ratio	Lower	Upper
49	100		
130	63.9	87.2	130.8#
128	49.6	68.0	102.0#
93	25.2	29.3	43.9#

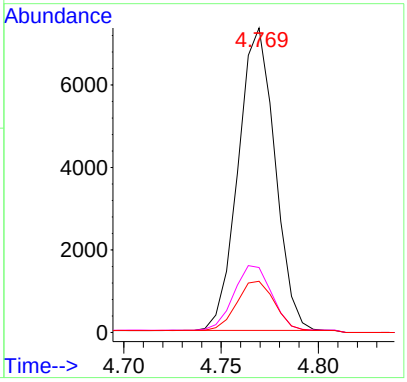


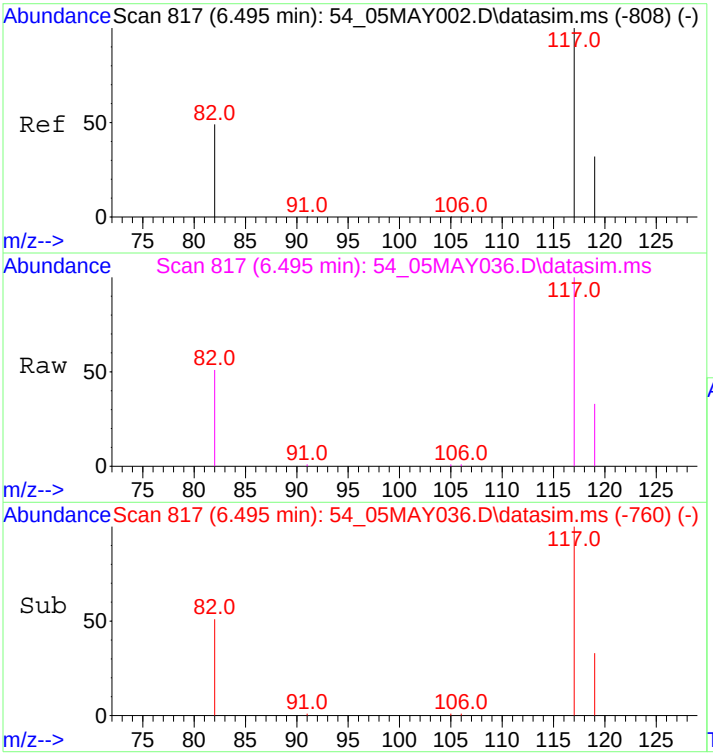


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY036.D
Acq: 5 May 2014 3:54 pm

Tgt Ion:114 Resp: 9644

Ion	Ratio	Lower	Upper
114	100		
63	21.9	12.0	18.0#
88	16.6	11.8	17.8

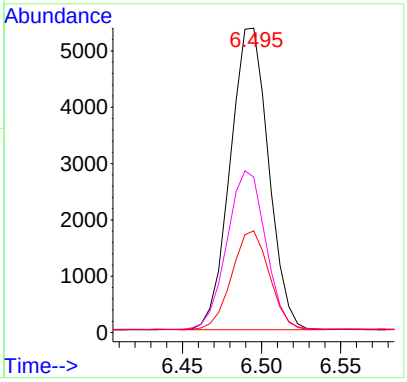




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 05MAY036.D
Acq: 5 May 2014 3:54 pm

Tgt Ion:117 Resp: 9046

Ion	Ratio	Lower	Upper
117	100		
82	52.8	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY037.D
Acq On : 5 May 2014 4:05 pm
Operator : yhl
Sample : 02201 \ F5-006
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 16:12:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3895	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9492	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	8650	10.00 ppbv	0.00

System Monitoring Compounds

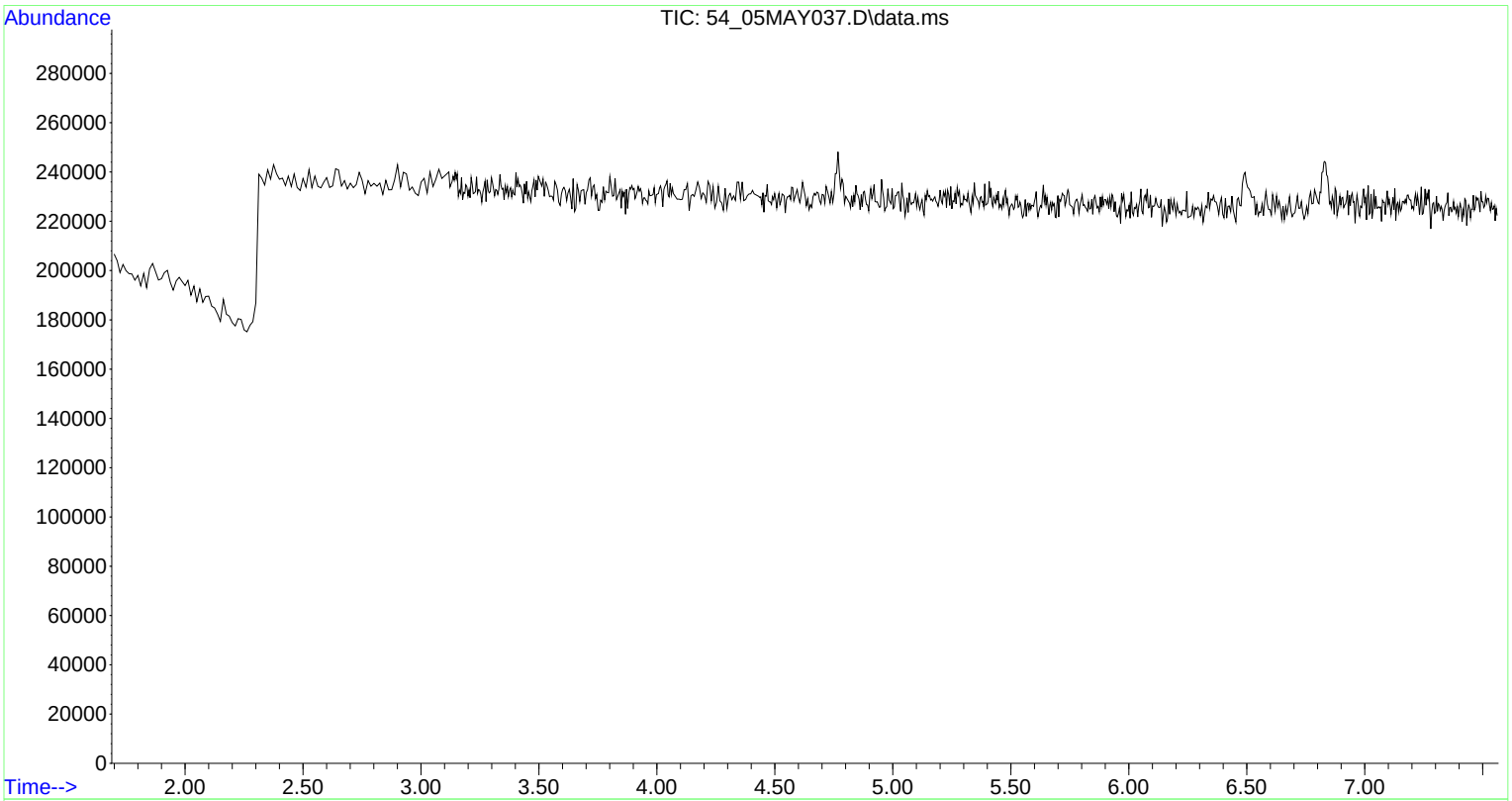
Target Compounds	Qvalue

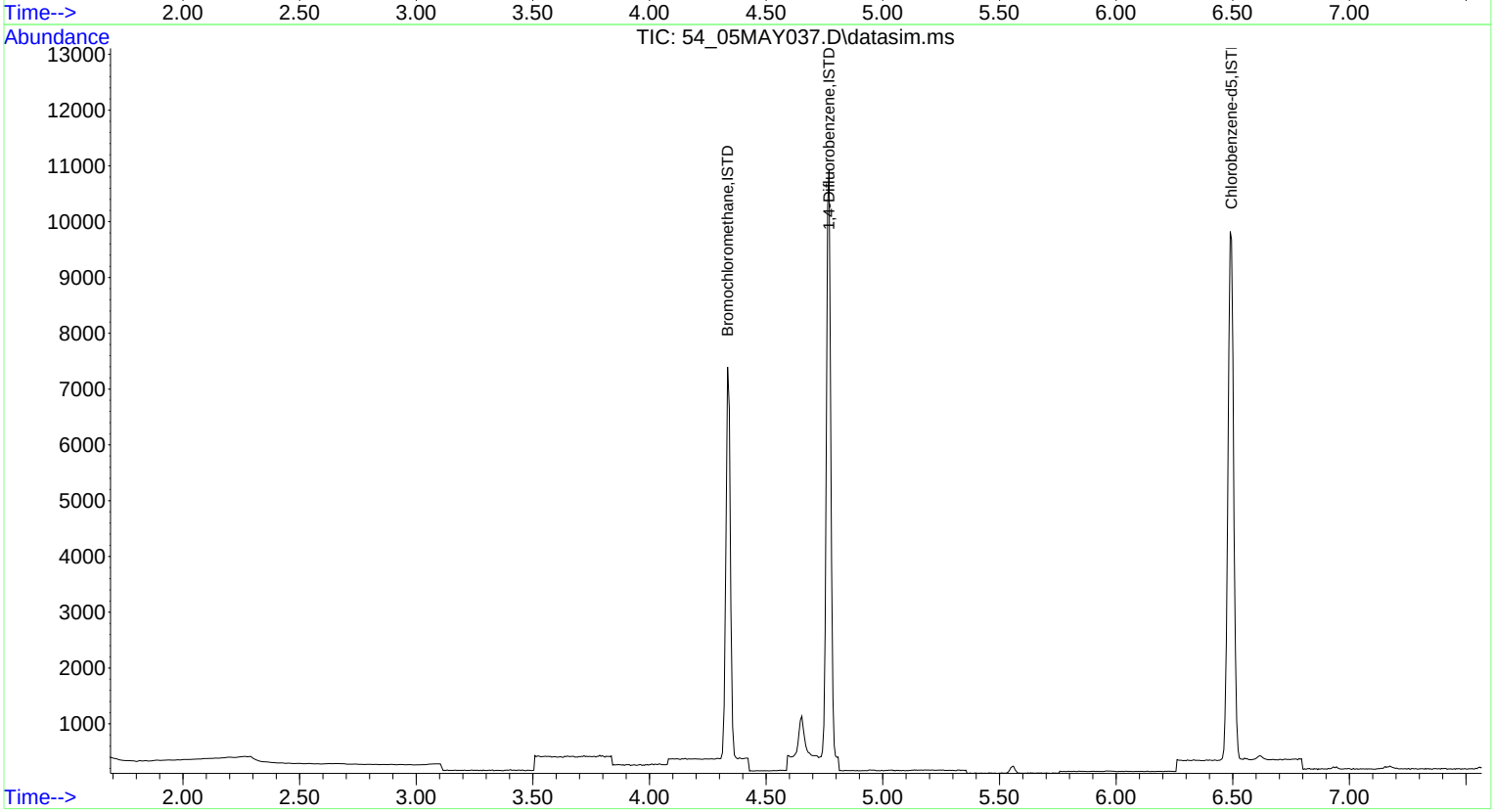
(#) = qualifier out of range (m) = manual integration (+) = signals summed

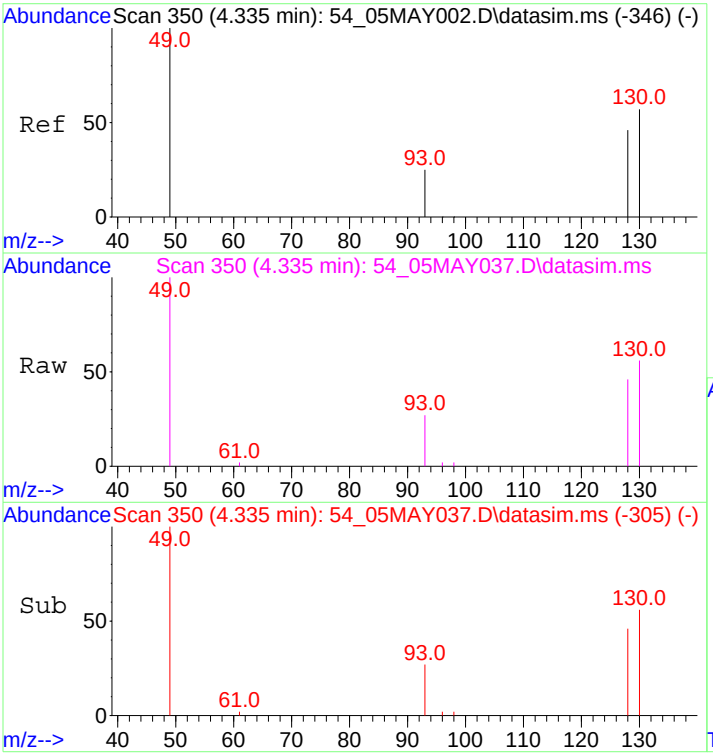
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY037.D
Acq On : 5 May 2014 4:05 pm
Operator : yhl
Sample : 02201 \ F5-006
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 16:12:18 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



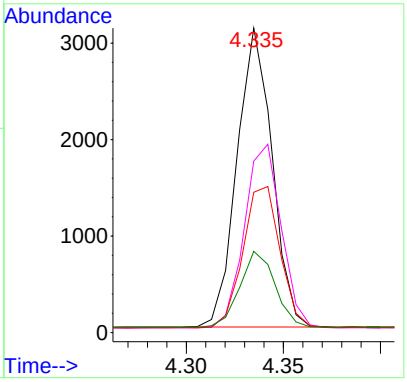


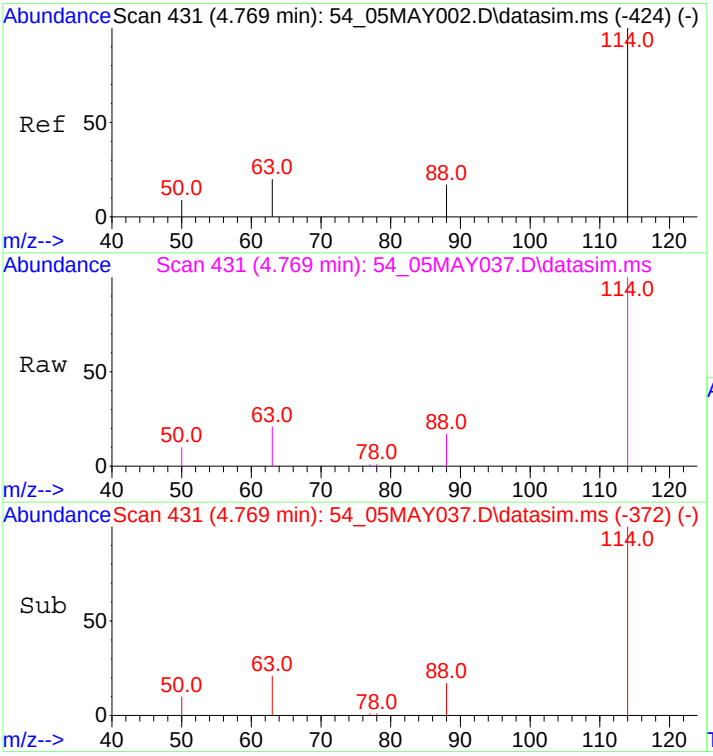


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY037.D
Acq: 5 May 2014 4:05 pm

Tgt Ion: 49 Resp: 3895

Ion	Ratio	Lower	Upper
49	100		
130	64.3	87.2	130.8#
128	50.0	68.0	102.0#
93	25.5	29.3	43.9#

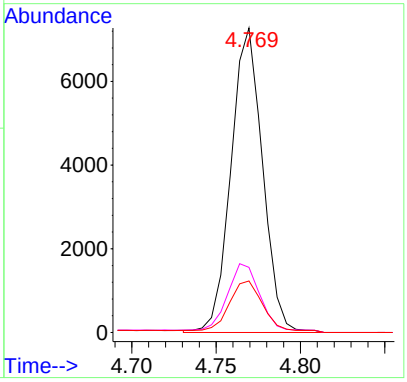


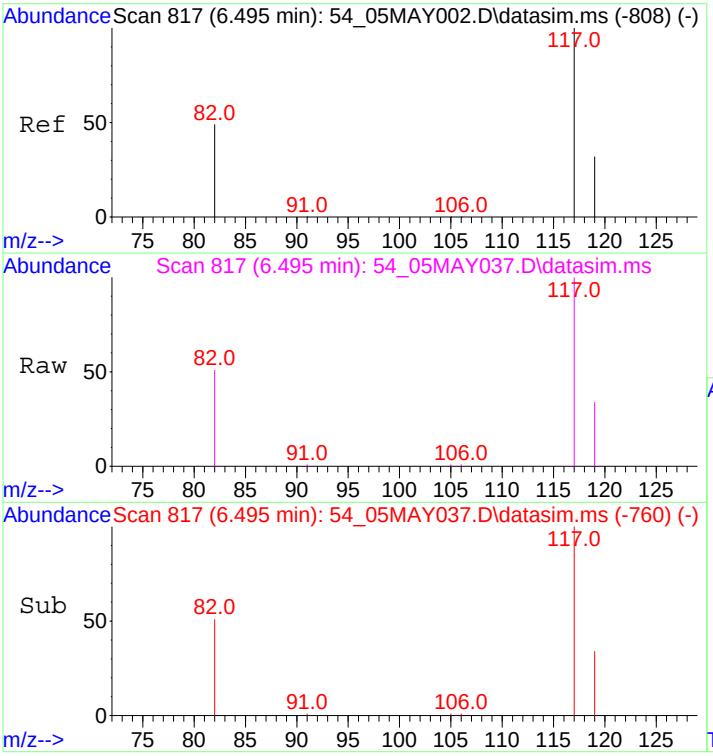


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_05MAY037.D
Acq: 5 May 2014 4:05 pm

Tgt Ion:114 Resp: 9492

Ion	Ratio	Lower	Upper
114	100		
63	21.7	12.0	18.0#
88	16.4	11.8	17.8

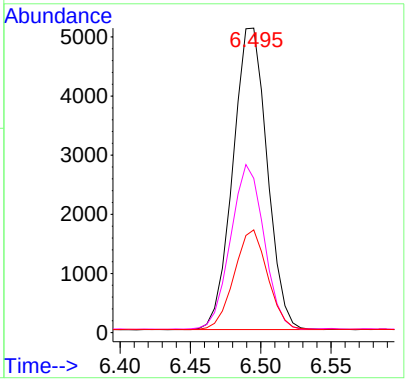




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 05MAY037.D
Acq: 5 May 2014 4:05 pm

Tgt Ion:117 Resp: 8650

Ion	Ratio	Lower	Upper
117	100		
82	52.9	38.0	57.0
119	32.3	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY038.D
Acq On : 5 May 2014 4:16 pm
Operator : yhl
Sample : 02202 \ F5-010
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 16:23:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3900	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9394	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8580	10.00 ppbv	0.00

System Monitoring Compounds

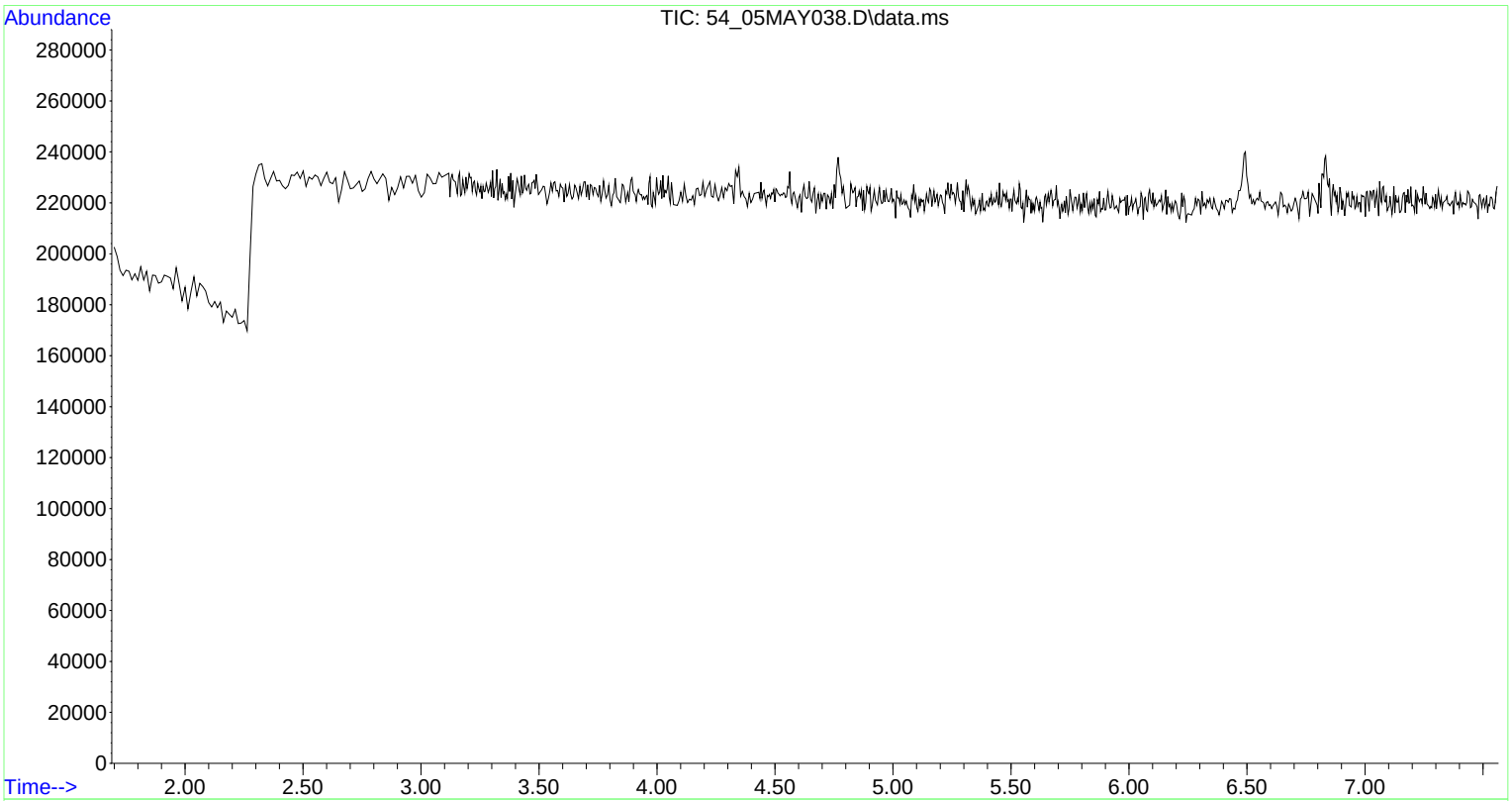
Target Compounds	Qvalue

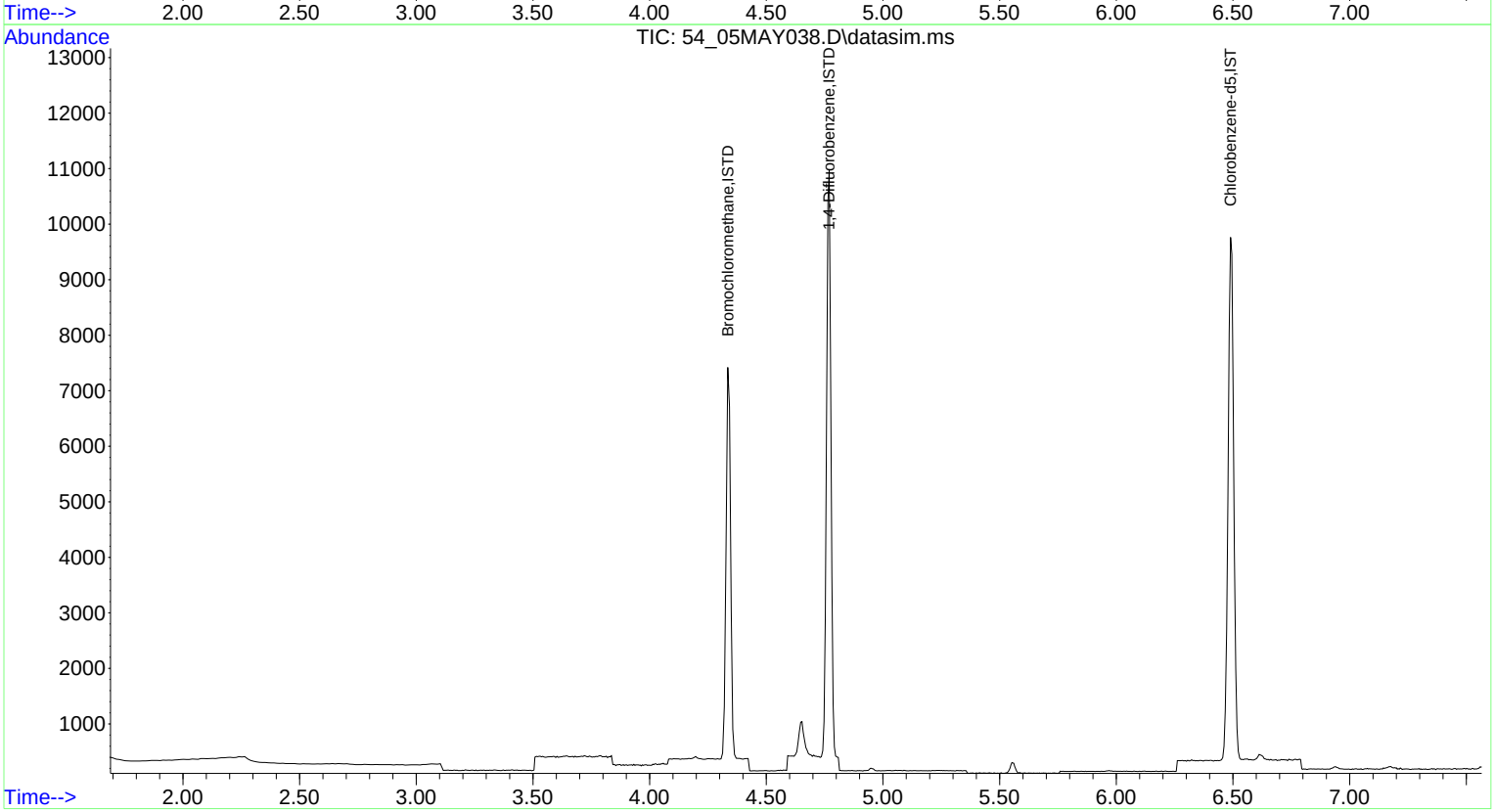
(#) = qualifier out of range (m) = manual integration (+) = signals summed

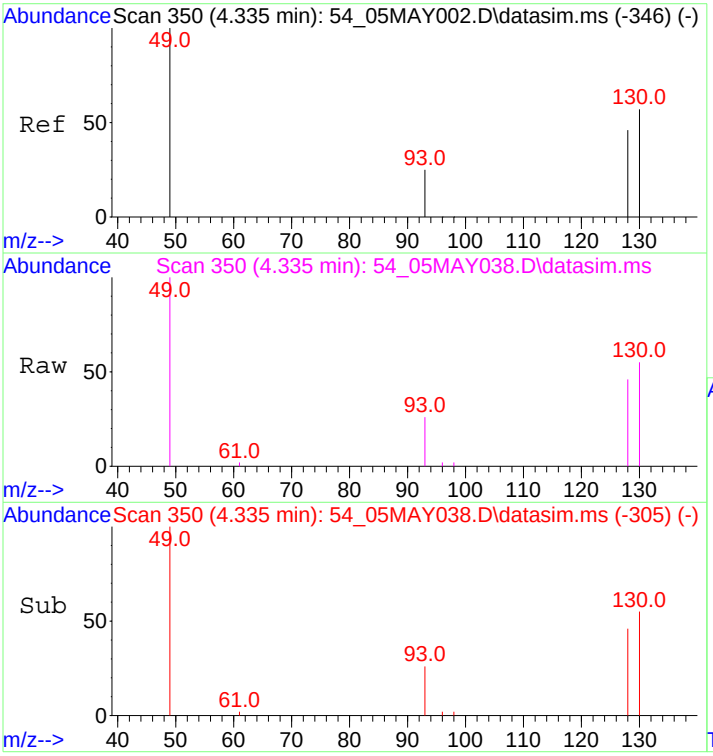
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140505\
Data File : 54 05MAY038.D
Acq On : 5 May 2014 4:16 pm
Operator : yhl
Sample : 02202 \ F5-010
Misc : 5 ml \ 05 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 05 16:23:27 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



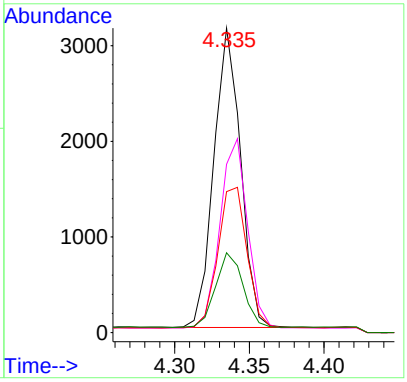


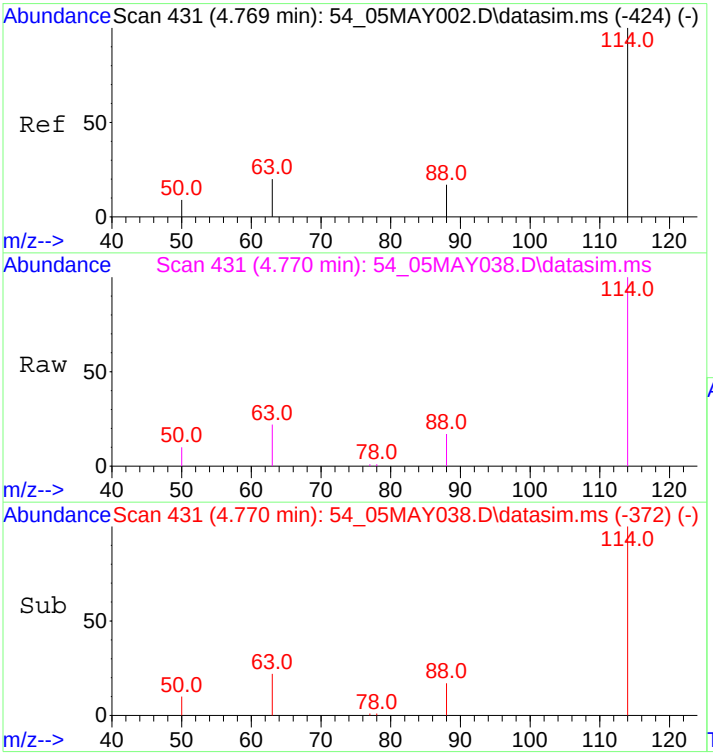


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 05MAY038.D
Acq: 5 May 2014 4:16 pm

Tgt Ion: 49 Resp: 3900

Ion	Ratio	Lower	Upper
49	100		
130	64.8	87.2	130.8#
128	50.9	68.0	102.0#
93	25.6	29.3	43.9#

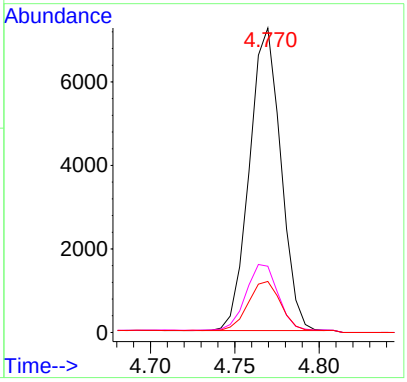


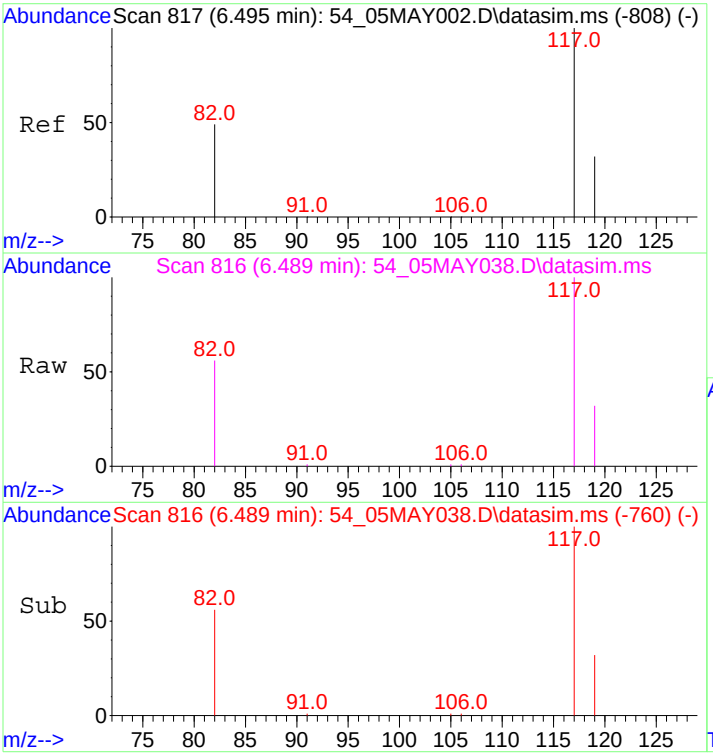


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_05MAY038.D
Acq: 5 May 2014 4:16 pm

Tgt Ion:114 Resp: 9394

Ion	Ratio	Lower	Upper
114	100		
63	22.1	12.0	18.0#
88	16.6	11.8	17.8

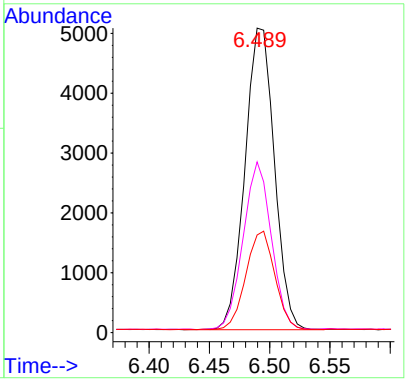




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 05MAY038.D
Acq: 5 May 2014 4:16 pm

Tgt Ion:117 Resp: 8580

Ion	Ratio	Lower	Upper
117	100		
82	53.4	38.0	57.0
119	32.0	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY004.D
Acq On : 6 May 2014 7:34 am
Operator : yhl
Sample : 20140506-MB \ Method Blank
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:41:37 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4135	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10021	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	8884	10.00	ppbv	0.00

System Monitoring Compounds

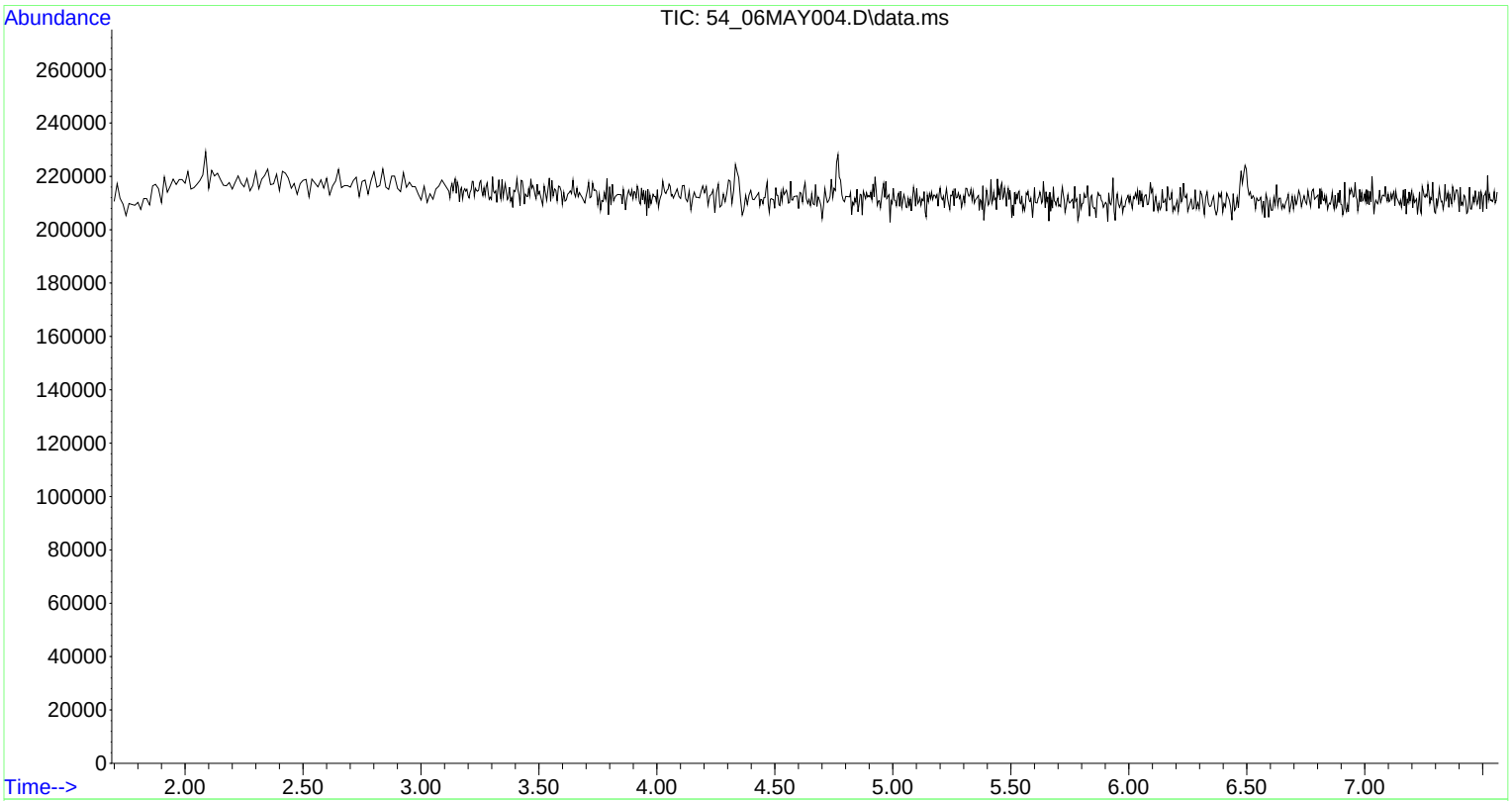
Target Compounds	Qvalue

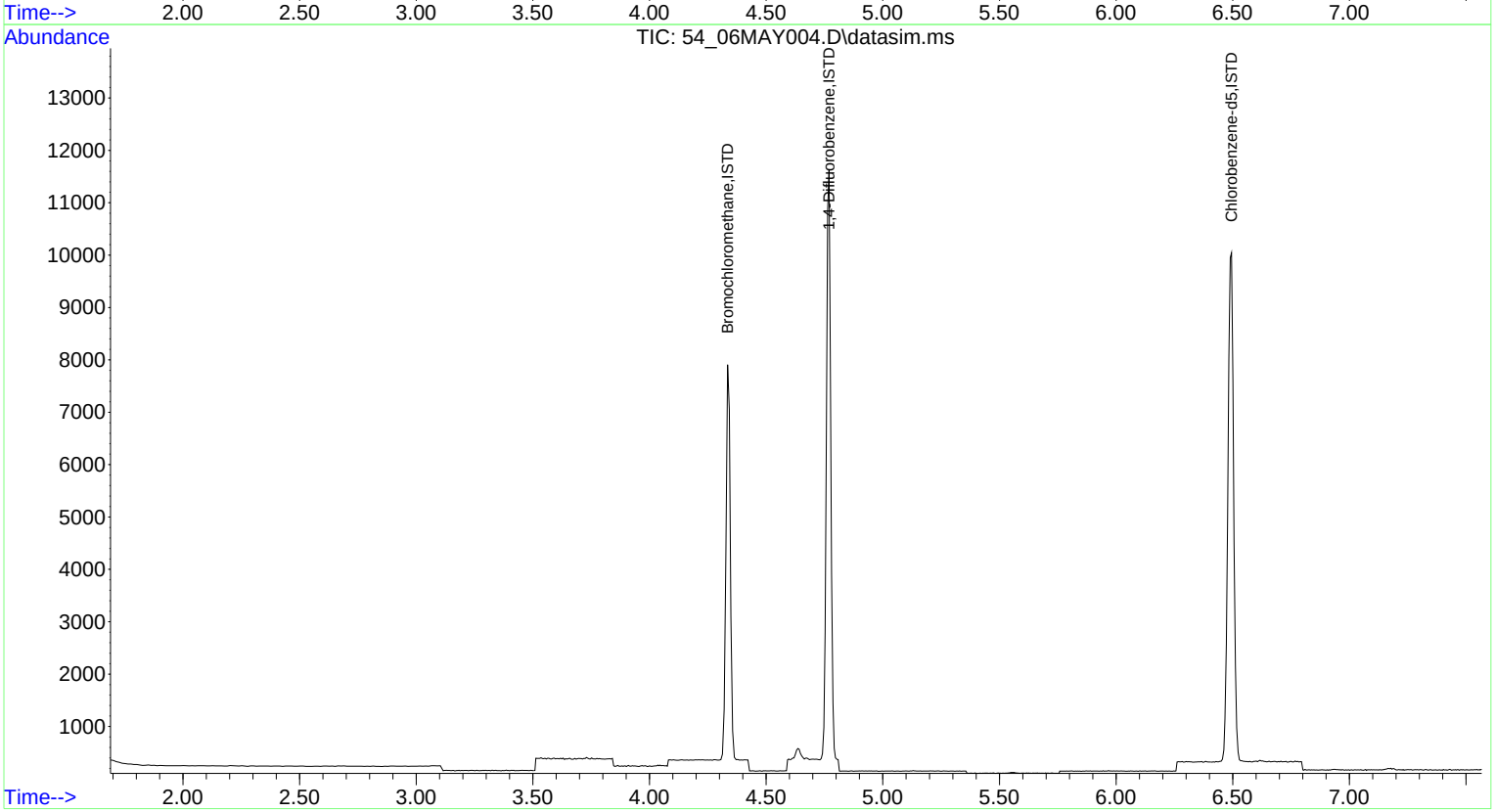
(#) = qualifier out of range (m) = manual integration (+) = signals summed

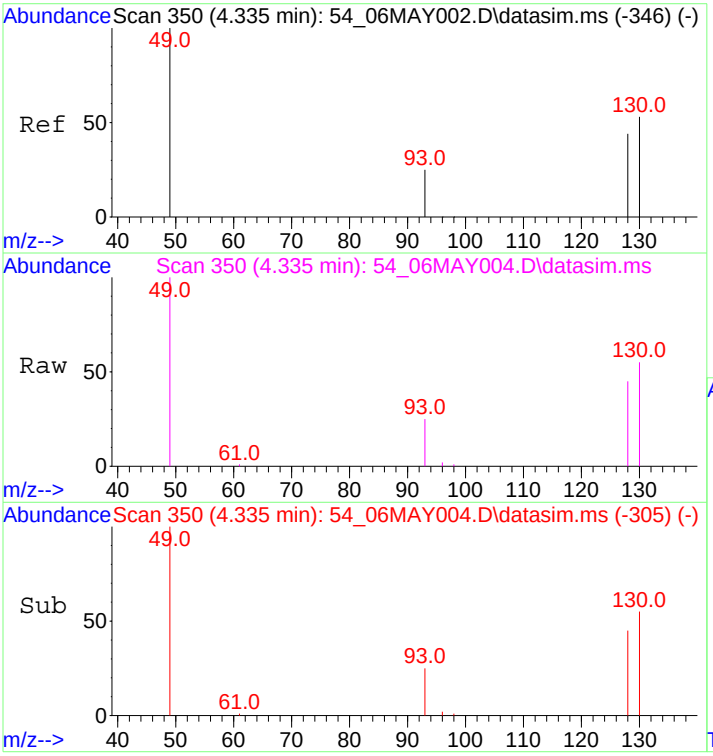
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY004.D
Acq On : 6 May 2014 7:34 am
Operator : yhl
Sample : 20140506-MB \ Method Blank
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 07:41:37 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Mon May 05 15:20:40 2014
Response via : Initial Calibration



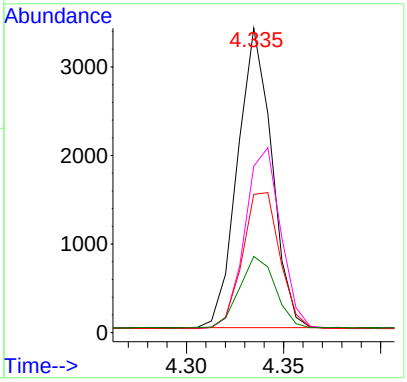


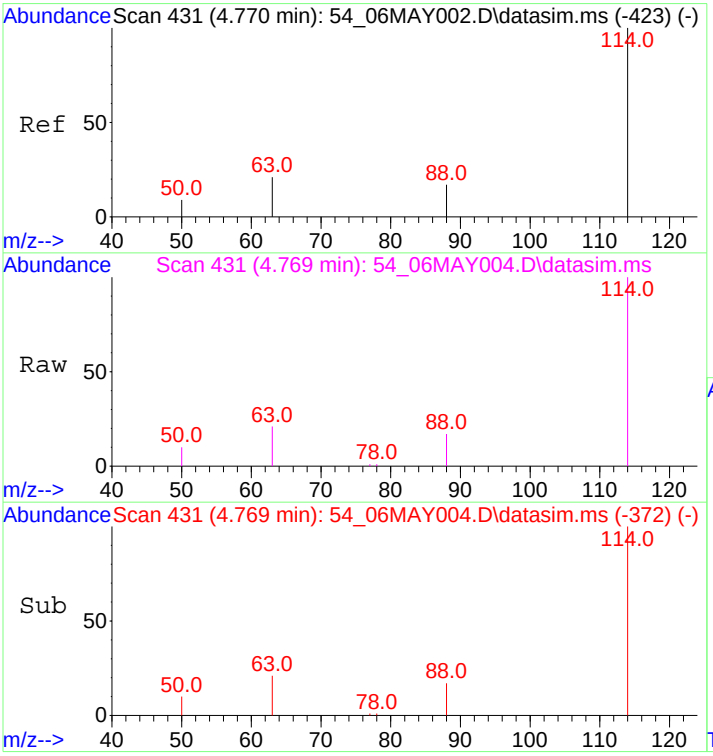


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY004.D
Acq: 6 May 2014 7:34 am

Tgt Ion: 49 Resp: 4135

Ion	Ratio	Lower	Upper
49	100		
130	63.1	87.2	130.8#
128	49.6	68.0	102.0#
93	24.8	29.3	43.9#

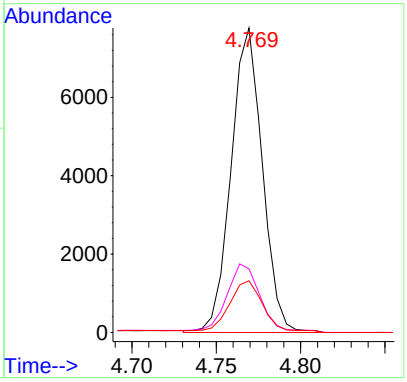


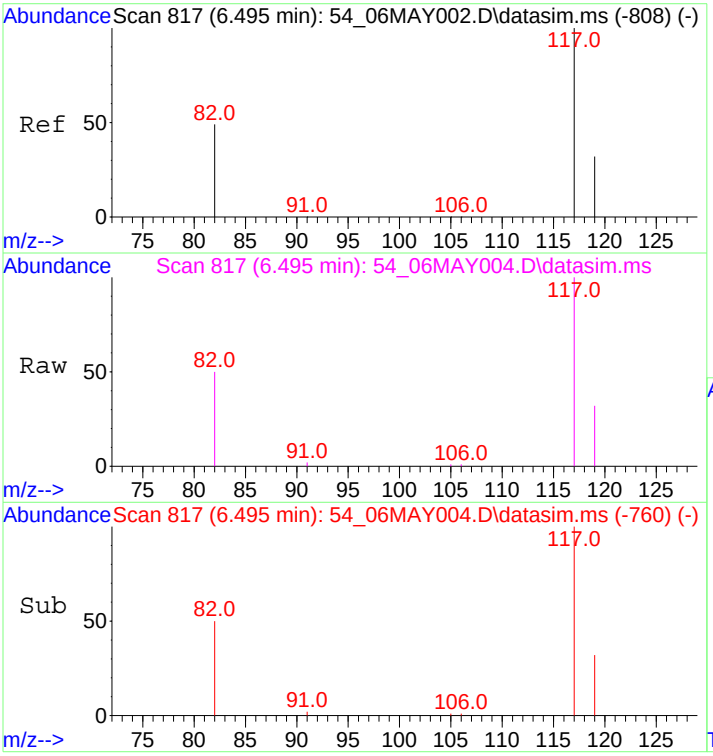


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY004.D
Acq: 6 May 2014 7:34 am

Tgt Ion:114 Resp: 10021

Ion	Ratio	Lower	Upper
114	100		
63	21.8	12.0	18.0#
88	16.6	11.8	17.8

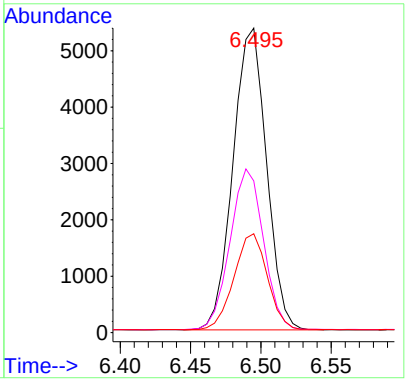




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 06MAY004.D
Acq: 6 May 2014 7:34 am

Tgt Ion:117 Resp: 8884

Ion	Ratio	Lower	Upper
117	100		
82	53.1	38.0	57.0
119	31.7	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY006.D
Acq On : 6 May 2014 9:52 am
Operator : yhl
Sample : 02203 \ F5-024
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:00:19 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

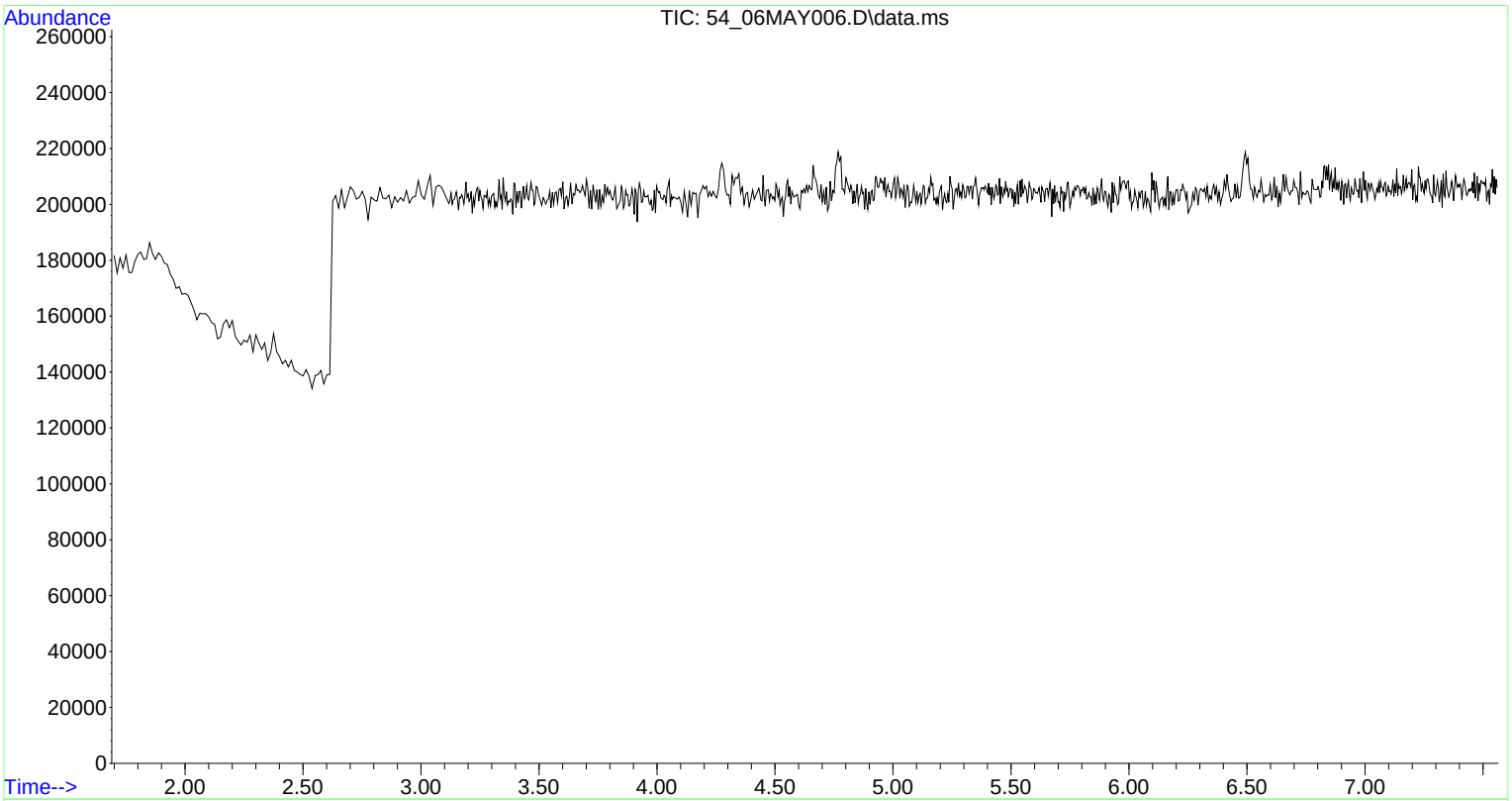
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4064	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9644	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	9083	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
7] cis-1,2-Dichloroethene	4.197	61	1694	6.54	ppbv	# 69
11] Trichloroethene	4.950	130	1628	6.79	ppbv	98
13] Toluene	5.556	91	1197	2.20	ppbv	99
14] Tetrachloroethene	5.972	166	395	1.27	ppbv	97

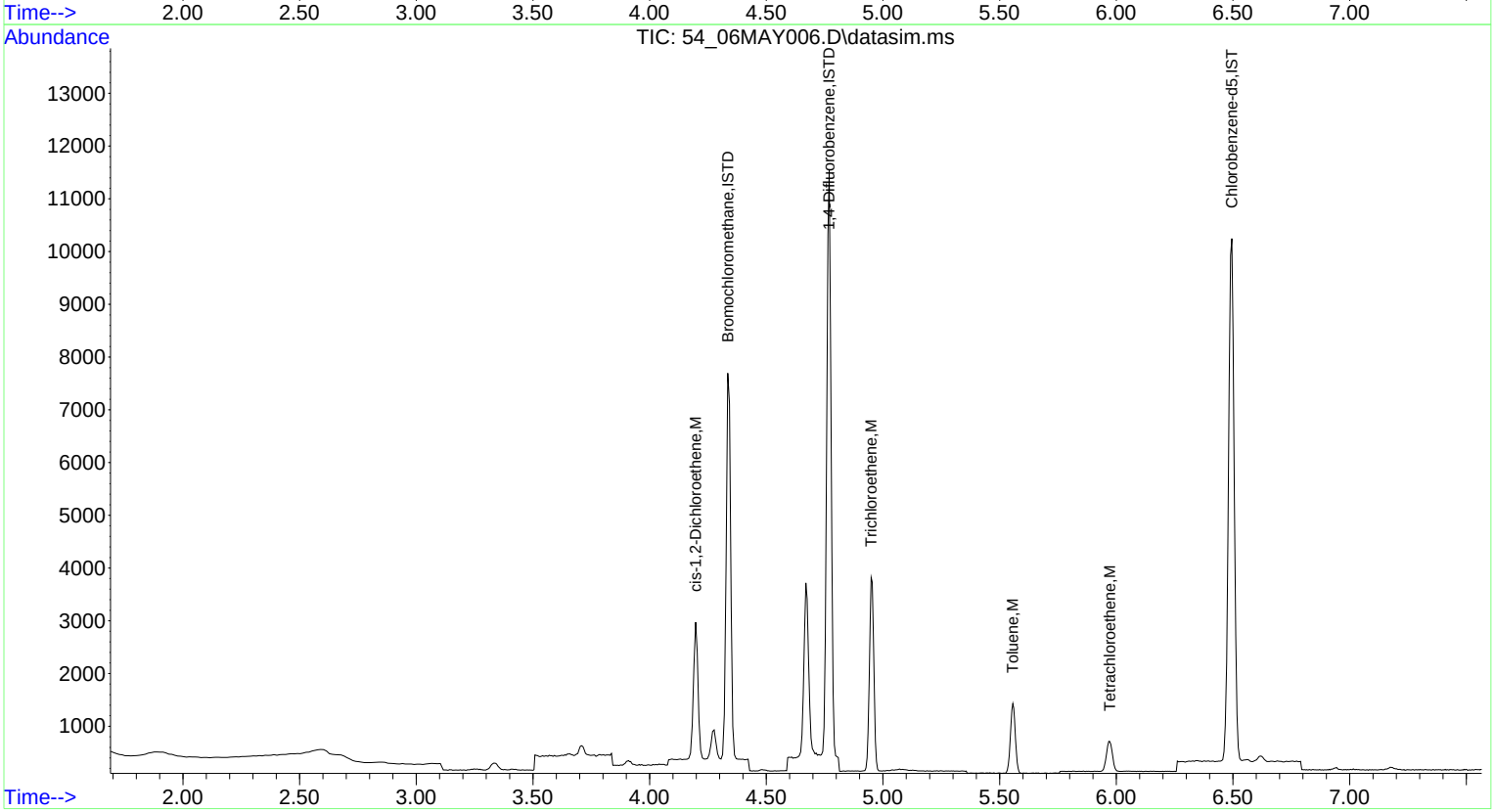
(#) = qualifier out of range (m) = manual integration (+) = signals summed

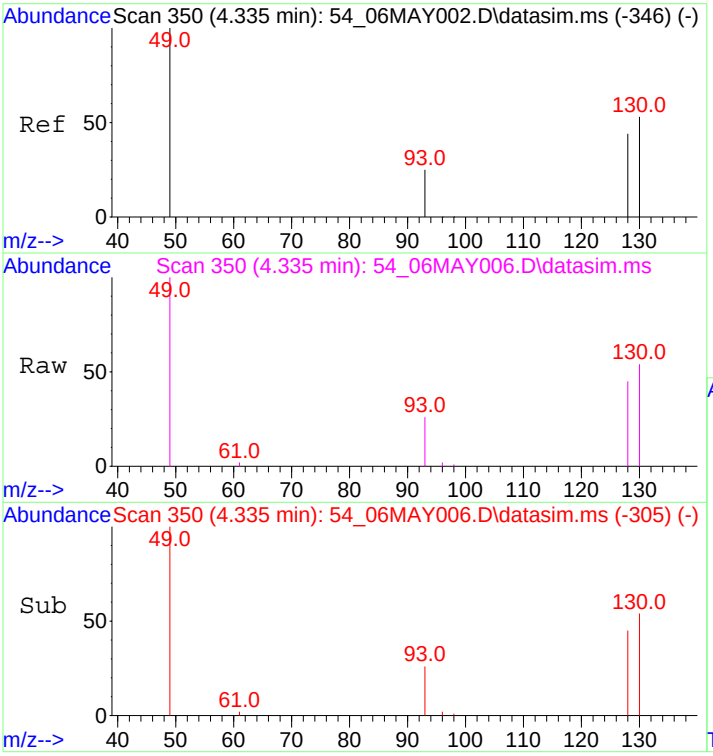
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY006.D
Acq On : 6 May 2014 9:52 am
Operator : yhl
Sample : 02203 \ F5-024
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:00:19 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



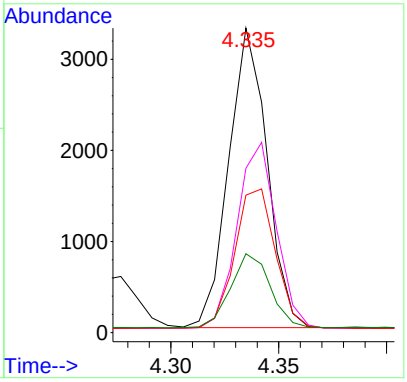


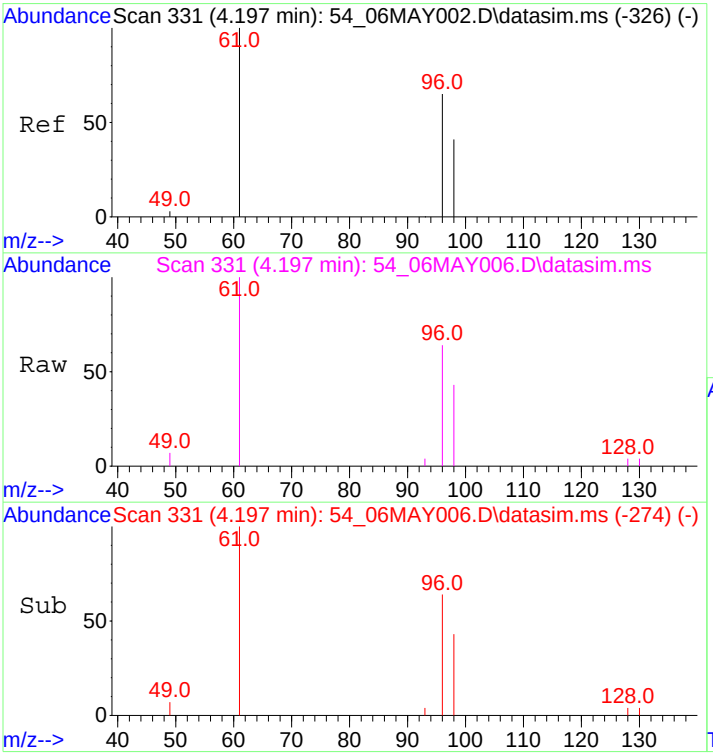


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY006.D
Acq: 6 May 2014 9:52 am

Tgt Ion: 49 Resp: 4064

Ion	Ratio	Lower	Upper
49	100		
130	63.4	87.2	130.8#
128	49.9	68.0	102.0#
93	25.4	29.3	43.9#

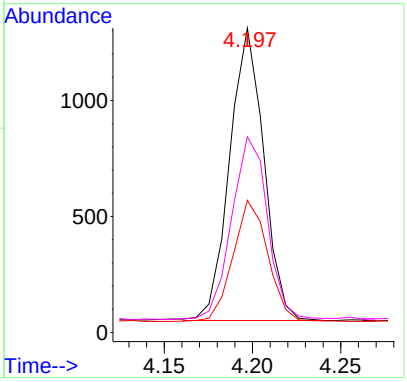


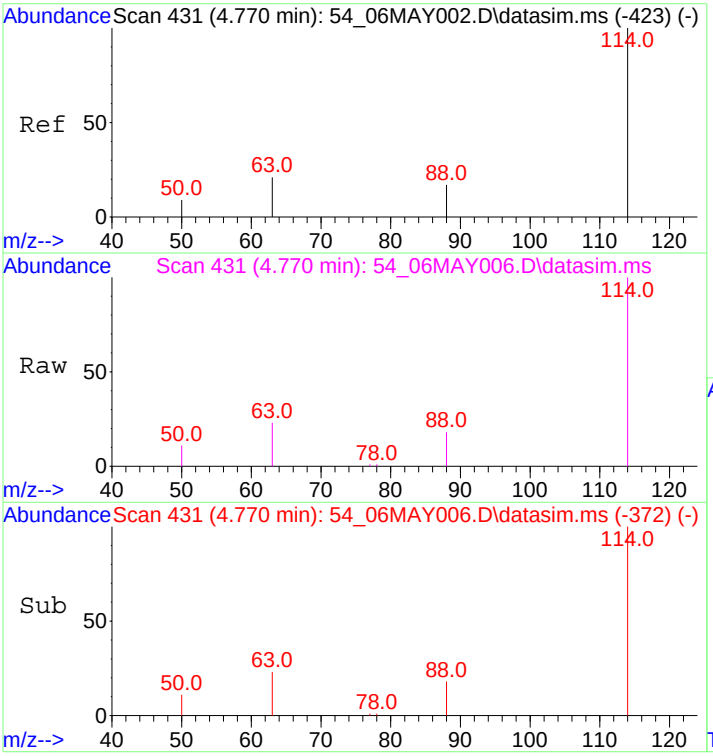


#7
cis-1,2-Dichloroethene
Concen: 6.54 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_06MAY006.D
Acq: 6 May 2014 9:52 am

Tgt Ion: 61 Resp: 1694

Ion	Ratio	Lower	Upper
61	100		
96	65.8	78.5	117.7#
98	41.3	50.6	76.0#

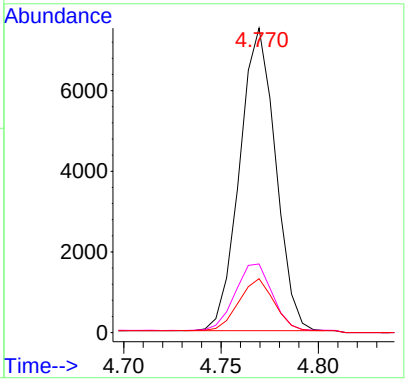


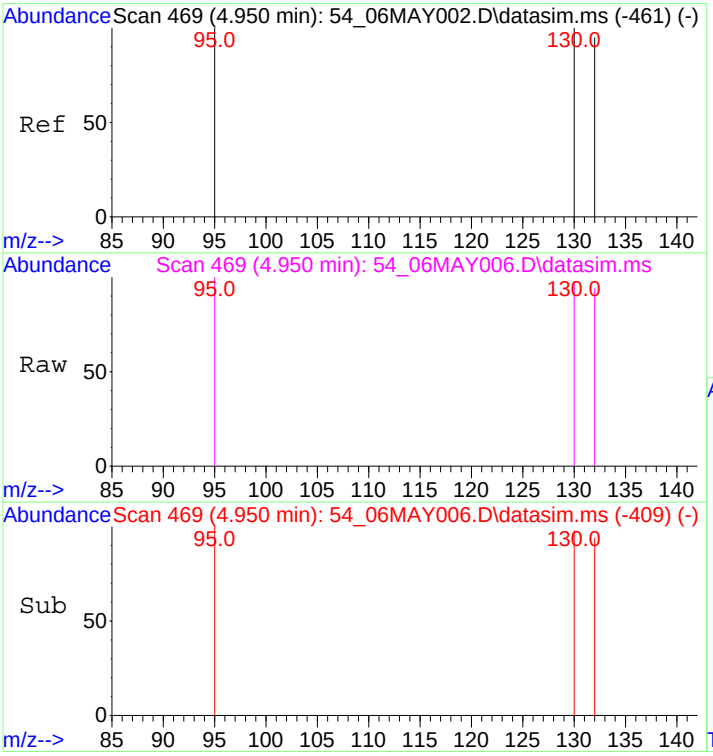


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 06MAY006.D
Acq: 6 May 2014 9:52 am

Tgt Ion:114 Resp: 9644

Ion	Ratio	Lower	Upper
114	100		
63	22.8	12.0	18.0#
88	16.8	11.8	17.8

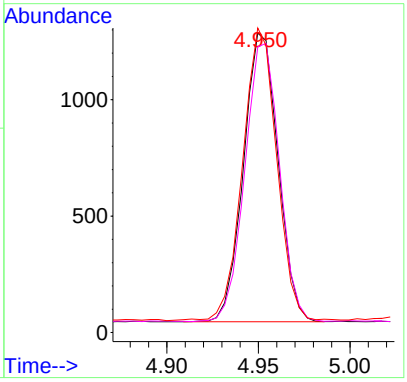


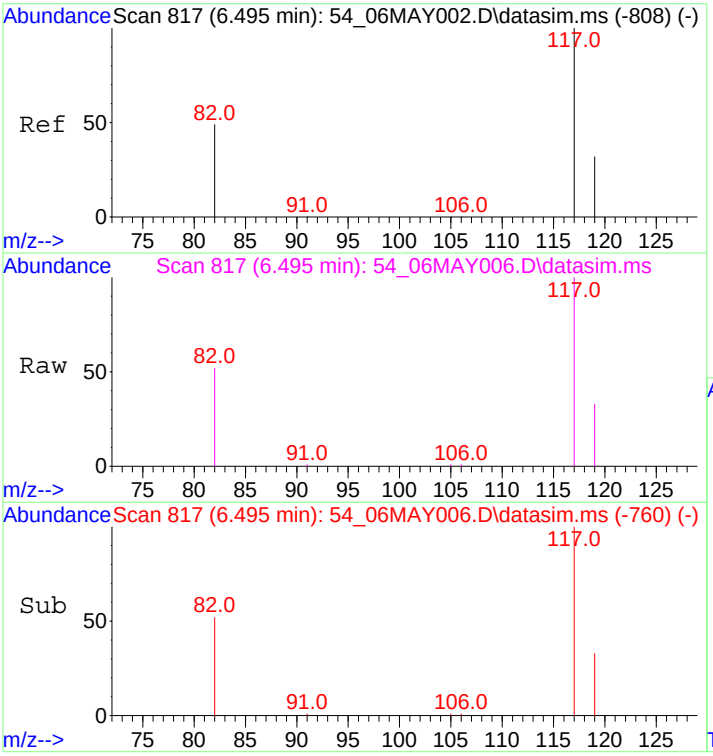


#11
Trichloroethene
Concen: 6.79 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_06MAY006.D
Acq: 6 May 2014 9:52 am

Tgt Ion:130 Resp: 1628

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	98.3	76.5	114.7

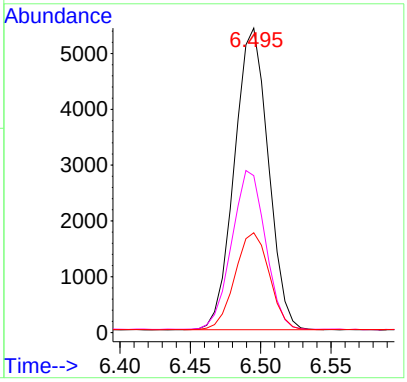


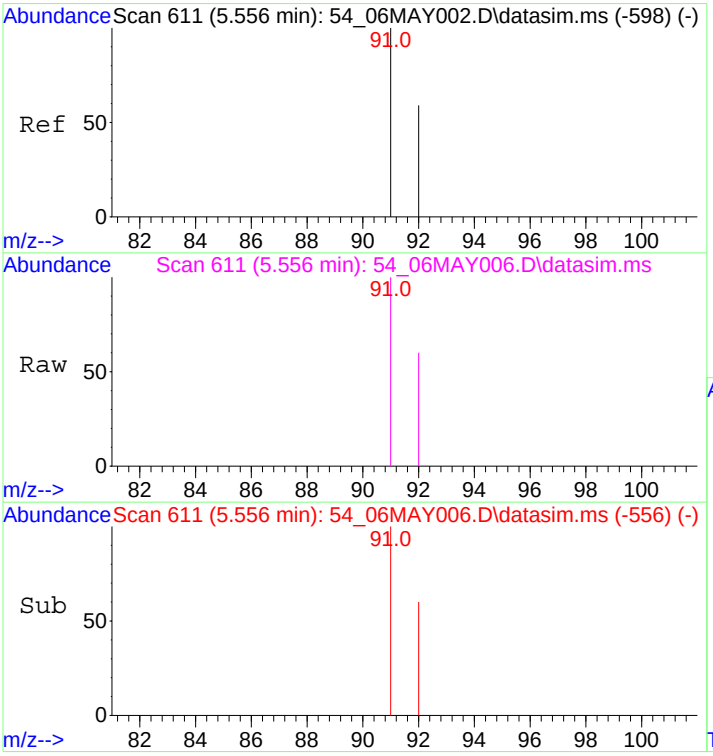


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 06MAY006.D
Acq: 6 May 2014 9:52 am

Tgt Ion:117 Resp: 9083

Ion	Ratio	Lower	Upper
117	100		
82	52.4	38.0	57.0
119	32.5	27.0	40.4

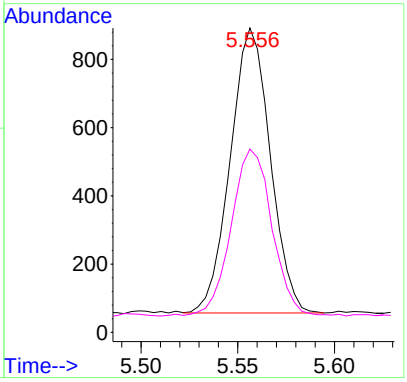


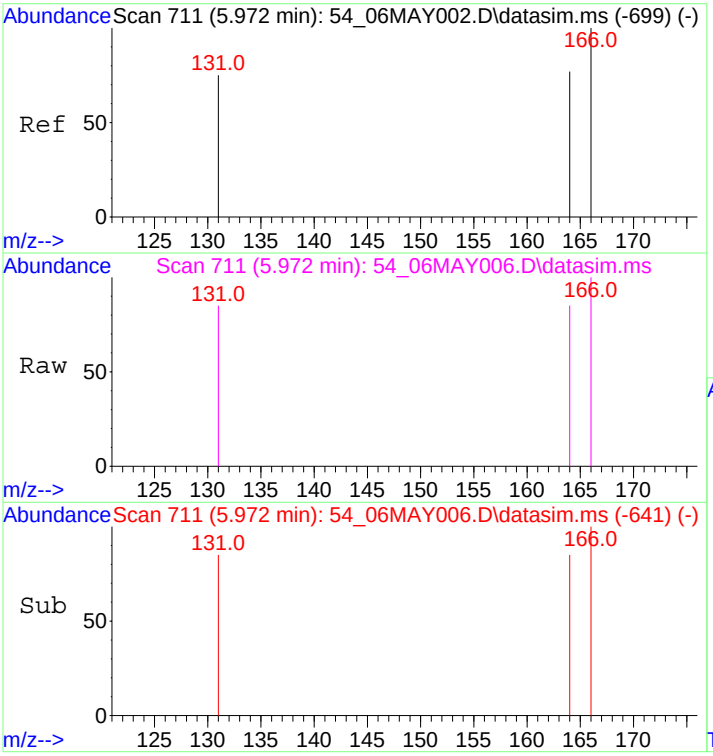


#13
Toluene
Concen: 2.20 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_06MAY006.D
Acq: 6 May 2014 9:52 am

Tgt Ion: 91 Resp: 1197

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.8	71.8

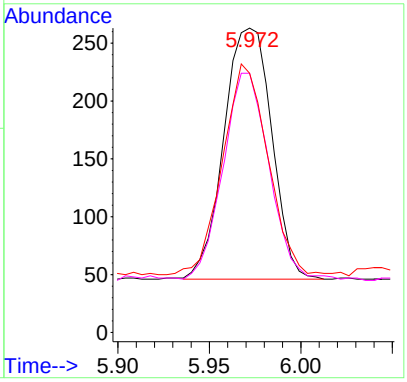




#14
Tetrachloroethene
Concen: 1.27 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 06MAY006.D
Acq: 6 May 2014 9:52 am

Tgt Ion:166 Resp: 395

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	78.7	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY007.D
Acq On : 6 May 2014 10:04 am
Operator : yhl
Sample : 02204 \ F5-026
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:11:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

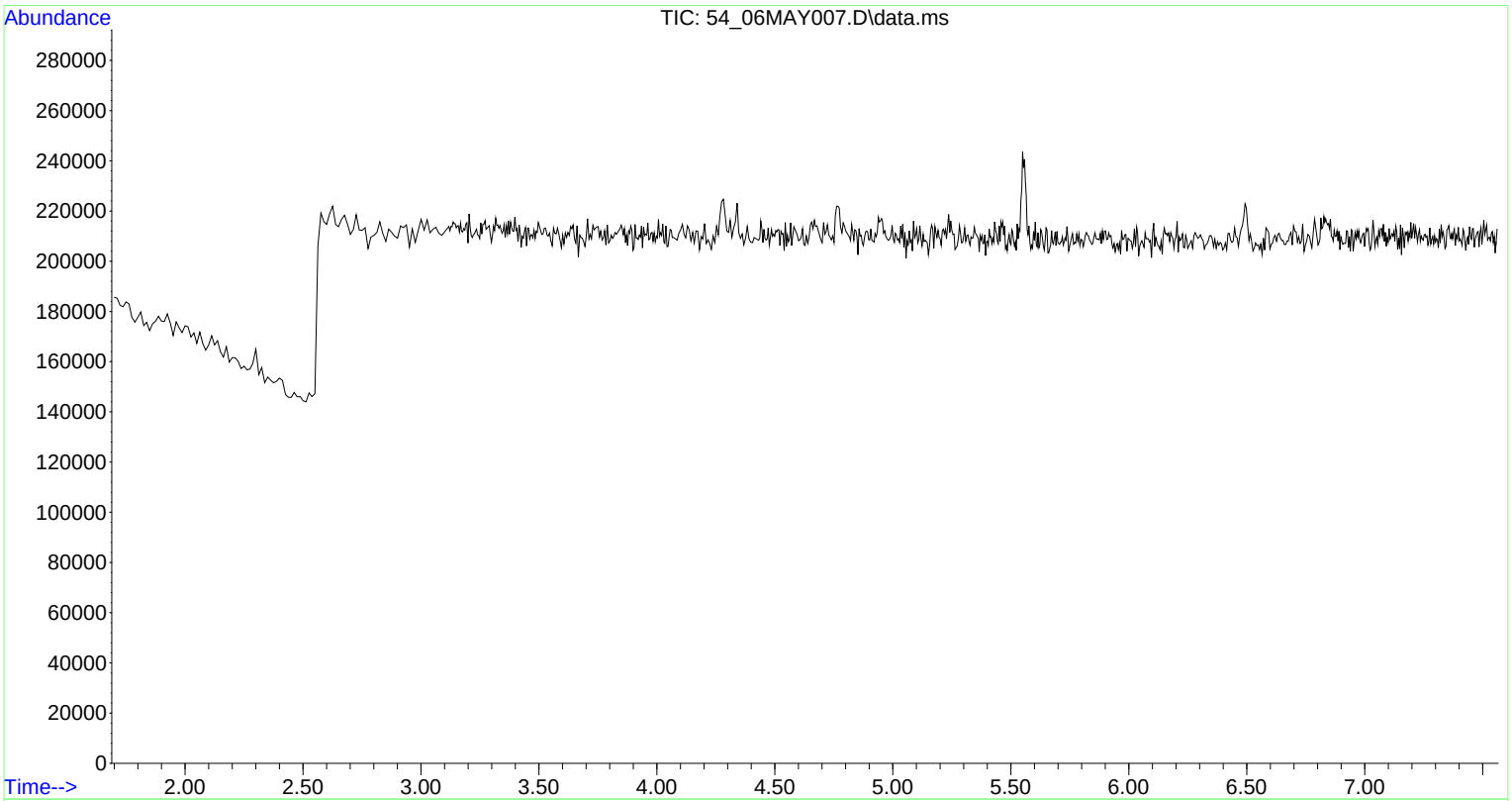
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4191	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9985	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	9311	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5] trans-1,2-Dichloroethene	3.708	61	191	0.67	ppbv	# 58
7] cis-1,2-Dichloroethene	4.197	61	2275	8.52	ppbv	# 70
11] Trichloroethene	4.950	130	1832	7.38	ppbv	95
13] Toluene	5.556	91	20433	36.61	ppbv	100
14] Tetrachloroethene	5.967	166	390	1.22	ppbv	97

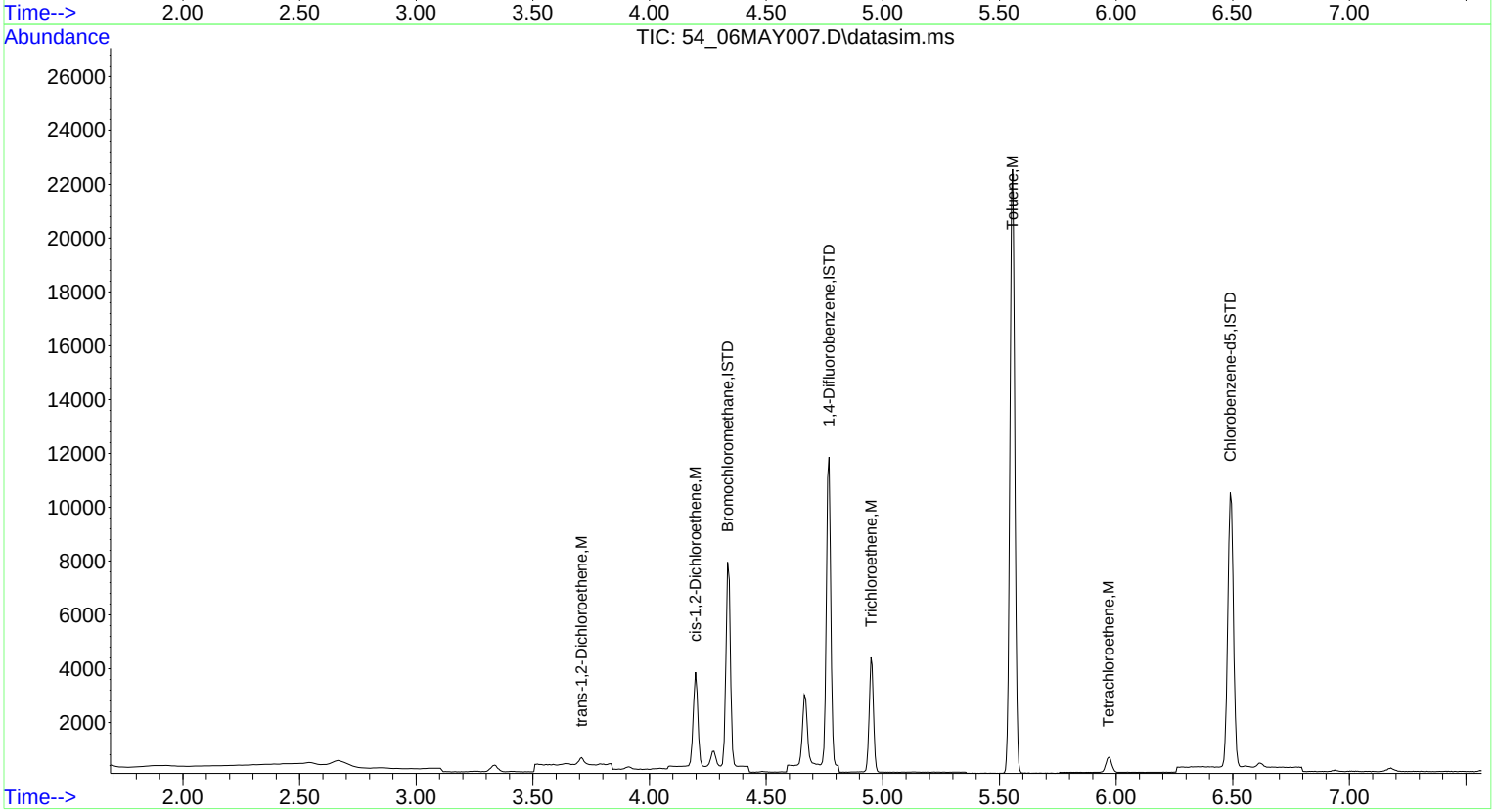
(#) = qualifier out of range (m) = manual integration (+) = signals summed

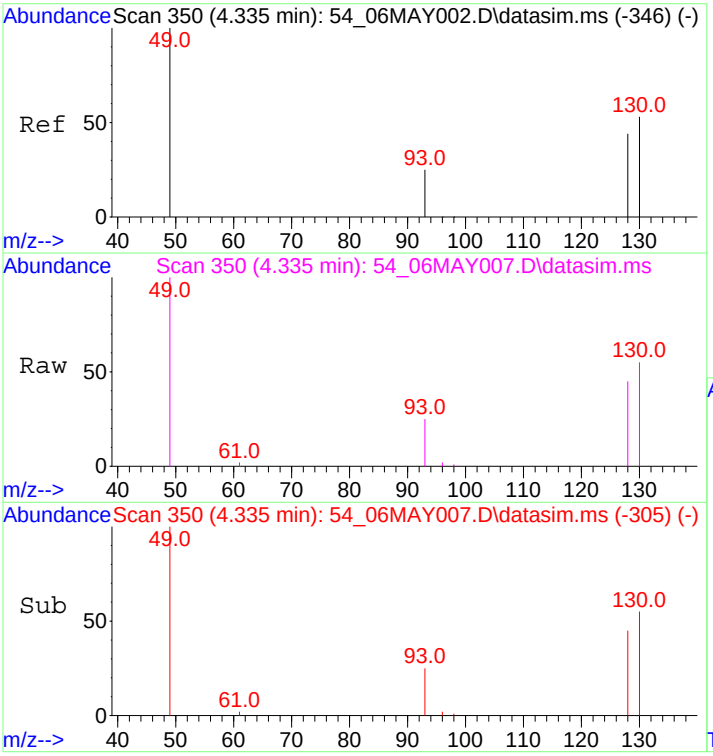
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY007.D
Acq On : 6 May 2014 10:04 am
Operator : yhl
Sample : 02204 \ F5-026
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:11:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



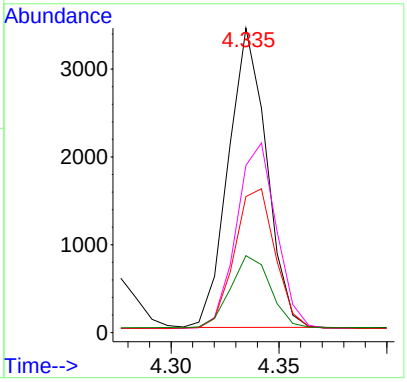


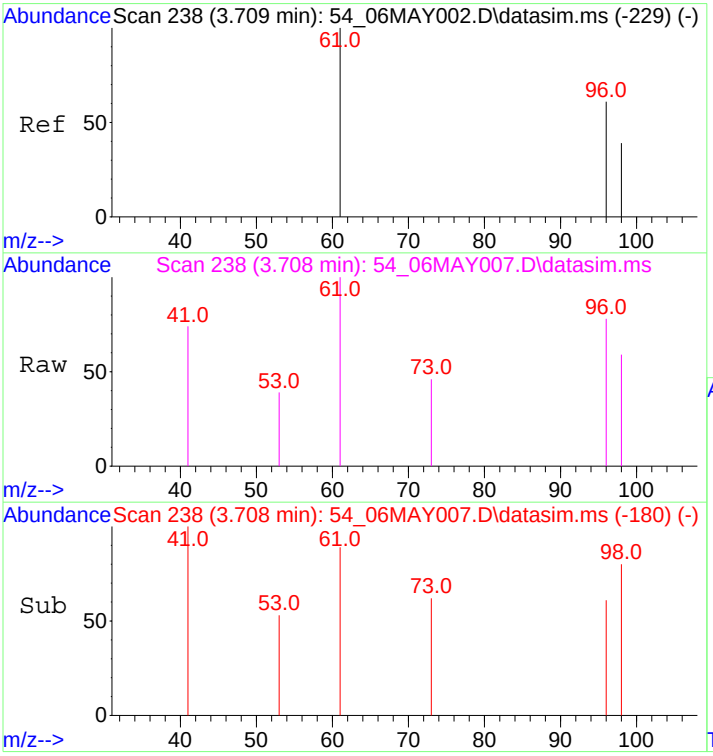


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY007.D
Acq: 6 May 2014 10:04 am

Tgt Ion: 49 Resp: 4191

Ion	Ratio	Lower	Upper
49	100		
130	64.7	87.2	130.8#
128	49.5	68.0	102.0#
93	25.3	29.3	43.9#

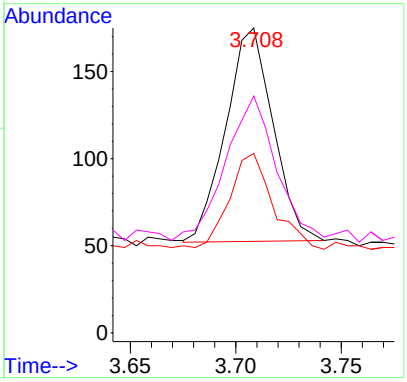


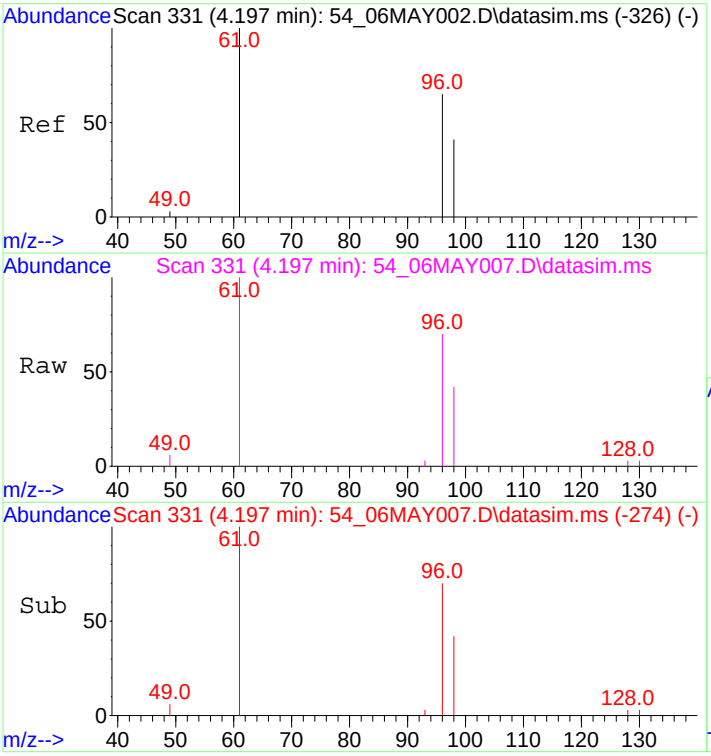


#5
trans-1,2-Dichloroethene
Concen: 0.67 ppbv
RT: 3.708 min Scan# 238
Delta R.T. -0.000 min
Lab File: 54_06MAY007.D
Acq: 6 May 2014 10:04 am

Tgt Ion: 61 Resp: 191

Ion	Ratio	Lower	Upper
61	100		
96	151.8	71.4	107.0#
98	59.7	45.8	68.8

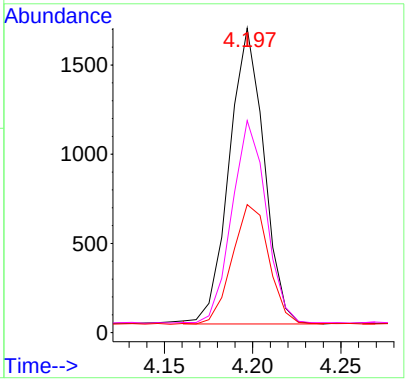


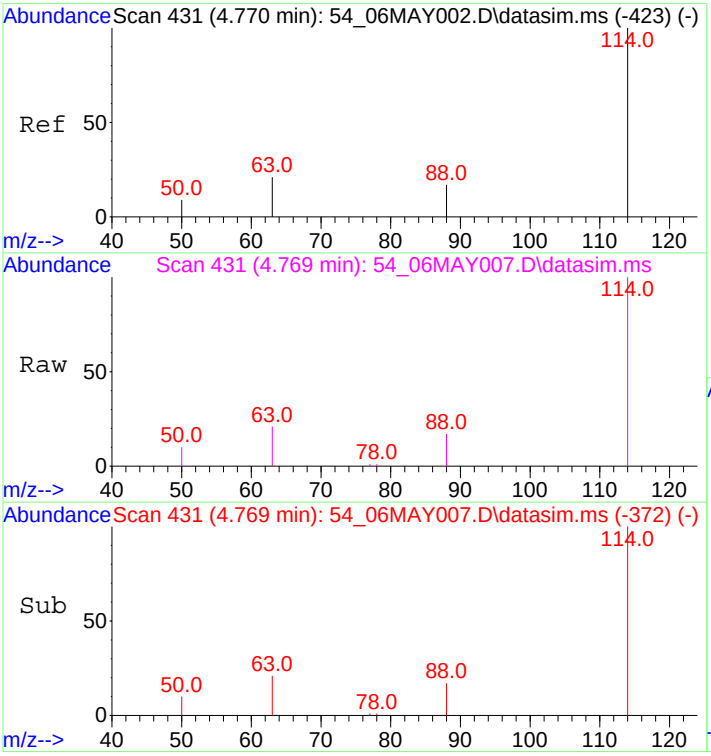


#7
cis-1,2-Dichloroethene
Concen: 8.52 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY007.D
Acq: 6 May 2014 10:04 am

Tgt Ion: 61 Resp: 2275

Ion	Ratio	Lower	Upper
61	100		
96	66.9	78.5	117.7#
98	42.3	50.6	76.0#

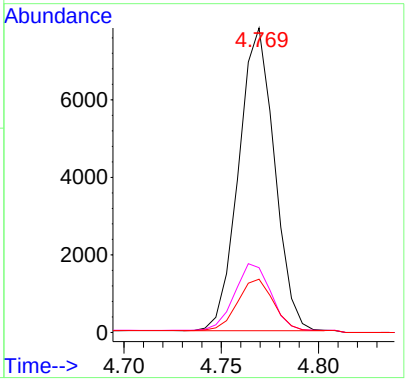


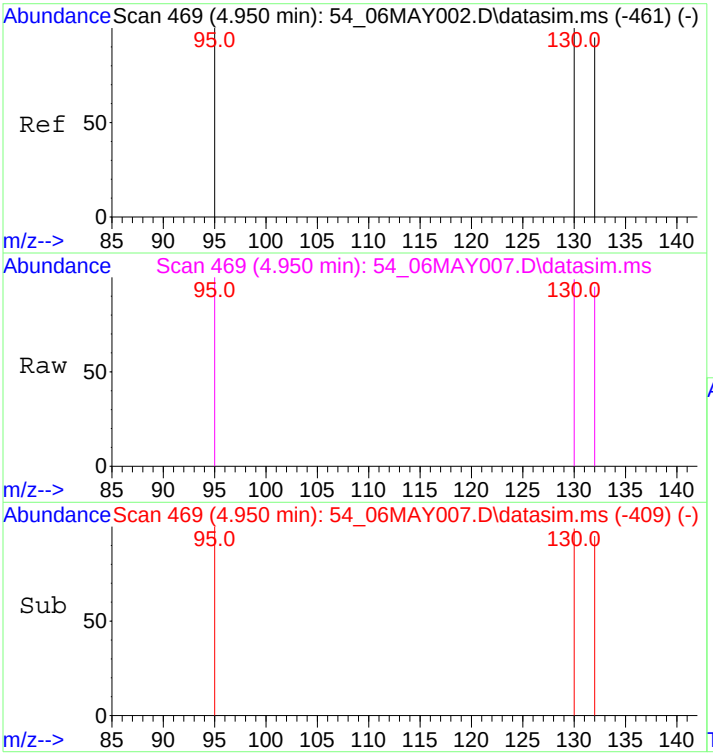


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY007.D
Acq: 6 May 2014 10:04 am

Tgt Ion:114 Resp: 9985

Ion	Ratio	Lower	Upper
114	100		
63	22.3	12.0	18.0#
88	17.0	11.8	17.8

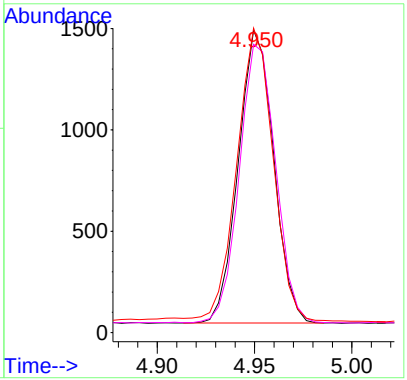


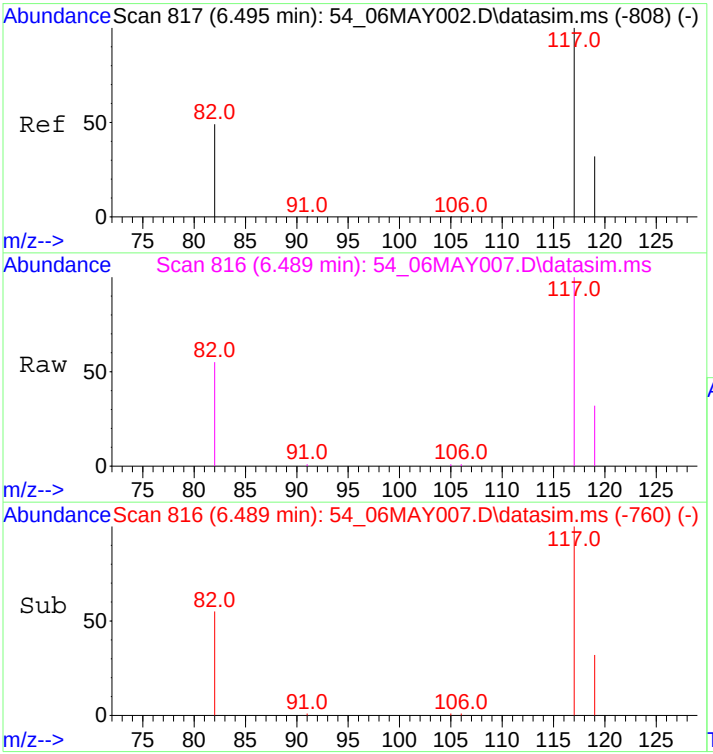


#11
Trichloroethene
Concen: 7.38 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 06MAY007.D
Acq: 6 May 2014 10:04 am

Tgt Ion:130 Resp: 1832

Ion	Ratio	Lower	Upper
130	100		
132	97.9	76.9	115.3
95	103.2	76.5	114.7

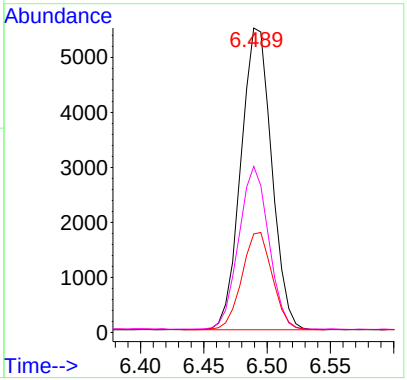


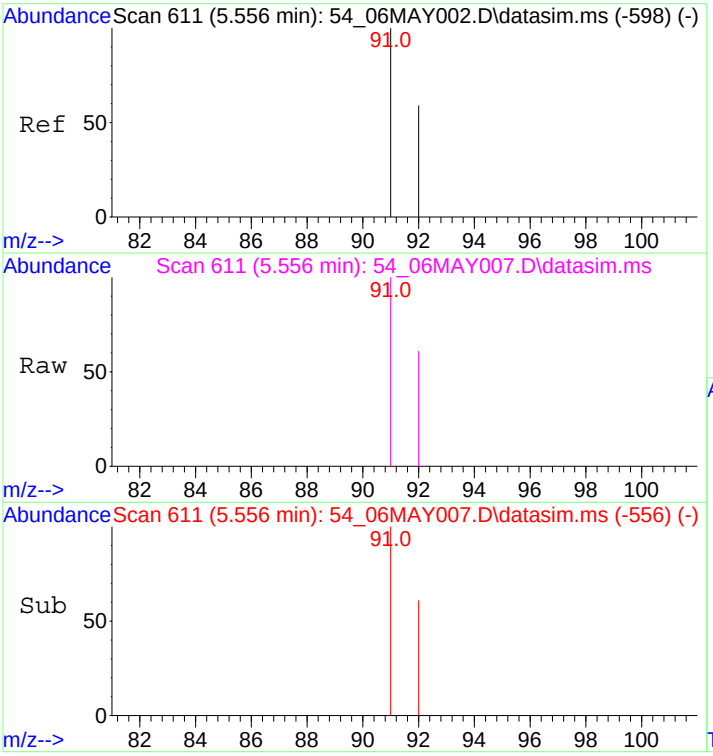


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_06MAY007.D
Acq: 6 May 2014 10:04 am

Tgt Ion:117 Resp: 9311

Ion	Ratio	Lower	Upper
117	100		
82	52.3	38.0	57.0
119	31.9	27.0	40.4

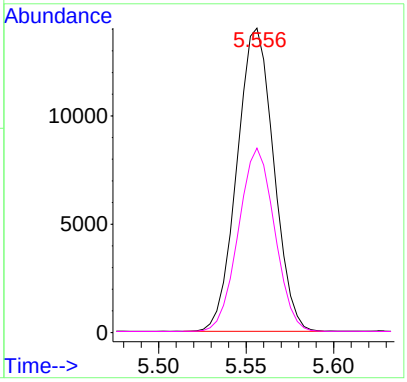


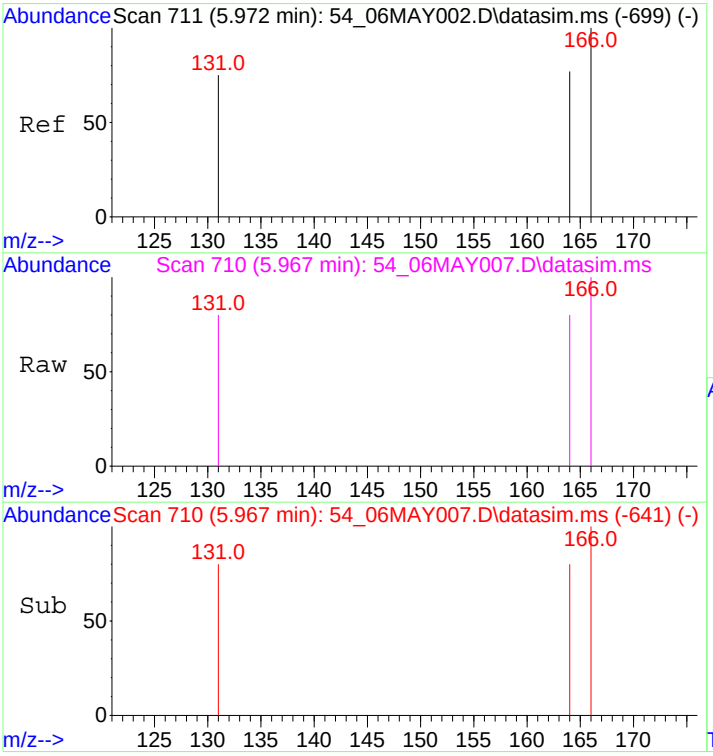


#13
Toluene
Concen: 36.61 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 06MAY007.D
Acq: 6 May 2014 10:04 am

Tgt Ion: 91 Resp: 20433

Ion	Ratio	Lower	Upper
91	100		
92	59.6	47.8	71.8

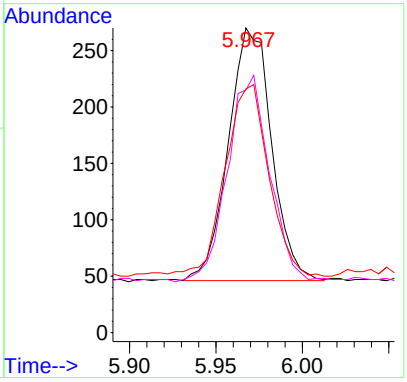




#14
Tetrachloroethene
Concen: 1.22 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_06MAY007.D
Acq: 6 May 2014 10:04 am

Tgt Ion:166 Resp: 390

Ion	Ratio	Lower	Upper
166	100		
164	79.5	62.6	94.0
131	76.7	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY008.D
Acq On : 6 May 2014 10:15 am
Operator : yhl
Sample : 02204 \ F5-026 Dup
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:30:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

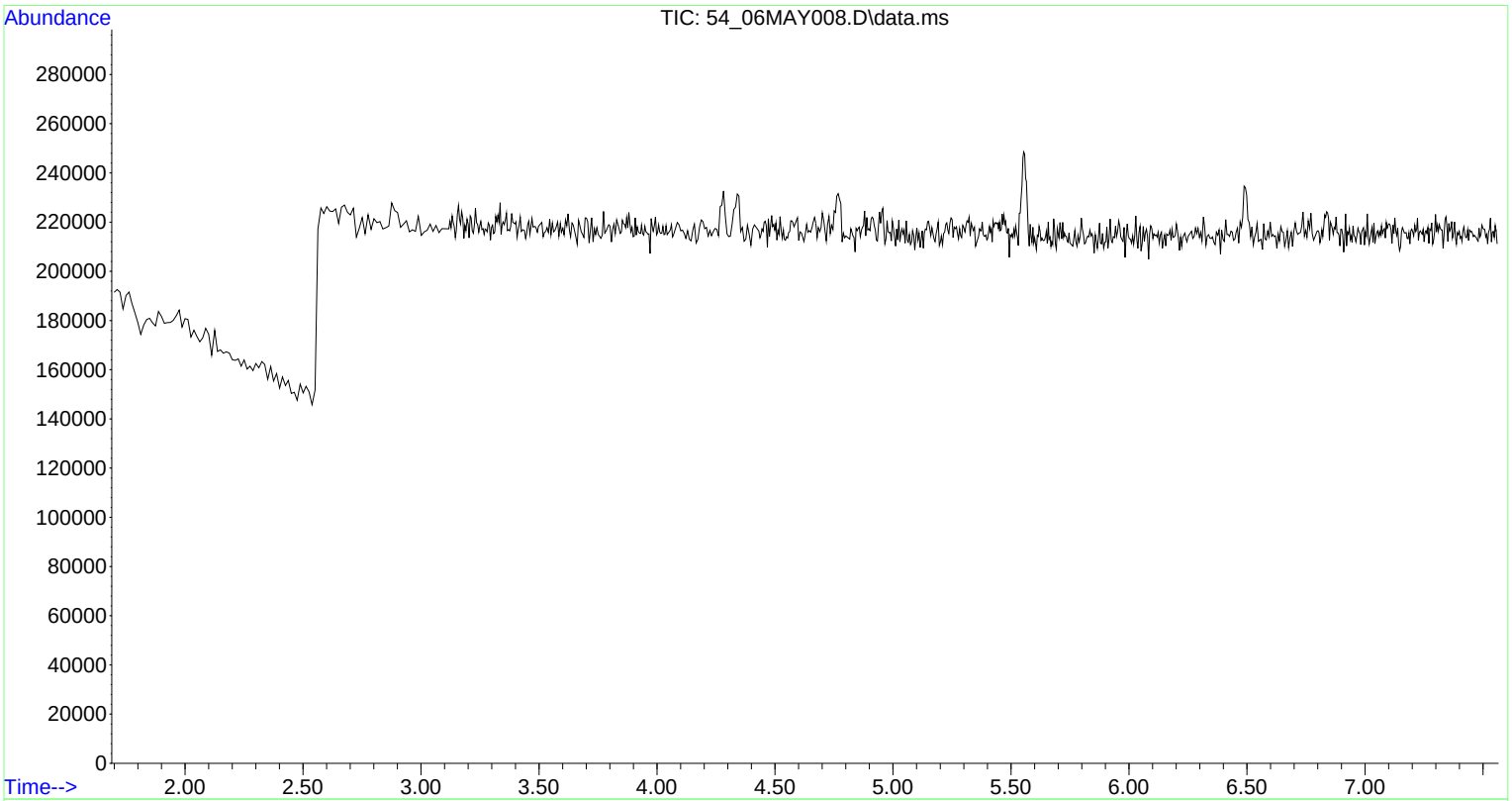
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4528	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	10892	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	10843	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
5] trans-1,2-Dichloroethene	3.709	61	225	0.73	ppbv	# 79
7] cis-1,2-Dichloroethene	4.197	61	2331	8.08	ppbv	# 71
11] Trichloroethene	4.950	130	1886	6.96	ppbv	96
13] Toluene	5.556	91	21386	32.90	ppbv	99
14] Tetrachloroethene	5.967	166	406	1.09	ppbv	96

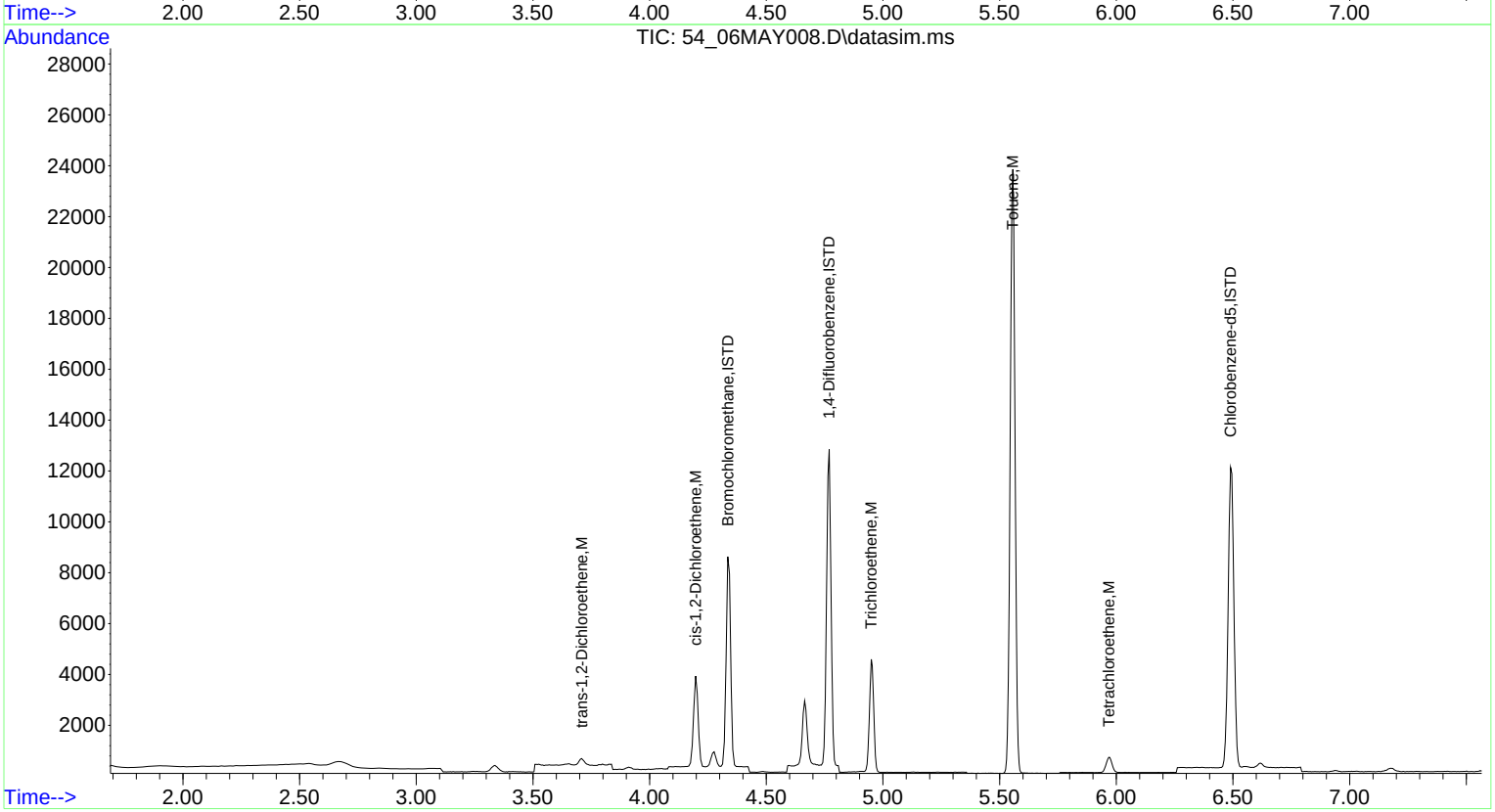
(#) = qualifier out of range (m) = manual integration (+) = signals summed

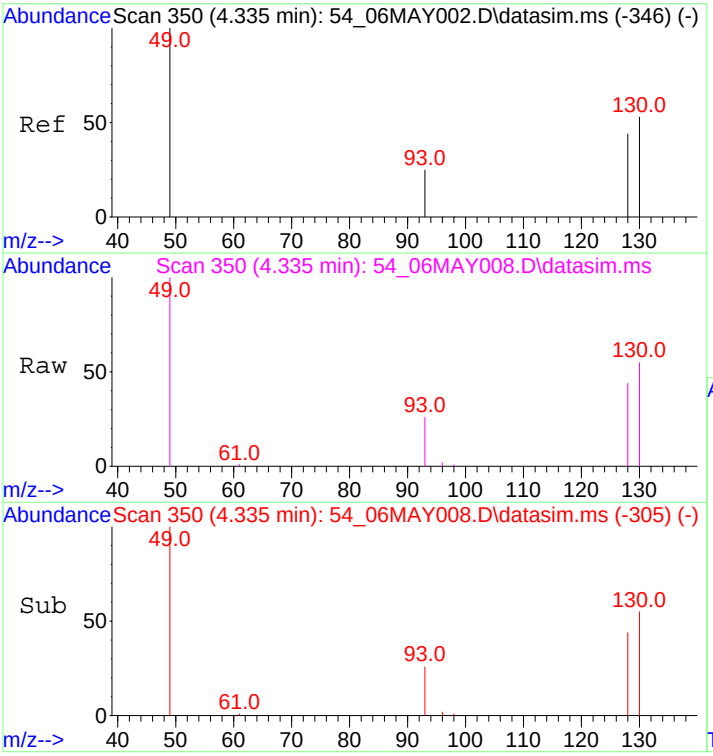
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY008.D
Acq On : 6 May 2014 10:15 am
Operator : yhl
Sample : 02204 \ F5-026 Dup
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:30:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



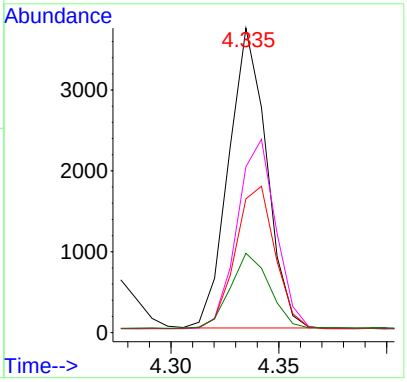


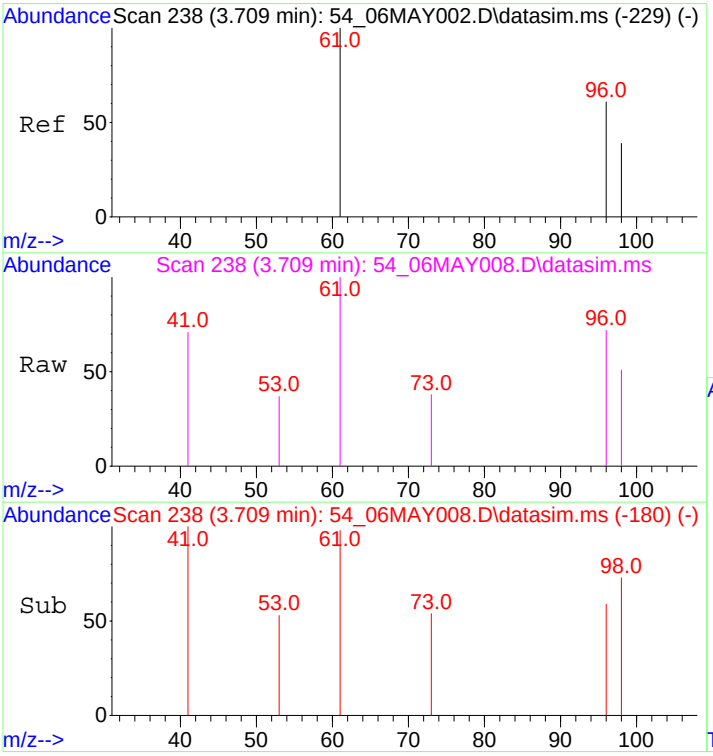


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY008.D
Acq: 6 May 2014 10:15 am

Tgt Ion: 49 Resp: 4528

Ion	Ratio	Lower	Upper
49	100		
130	64.6	87.2	130.8#
128	49.9	68.0	102.0#
93	25.6	29.3	43.9#

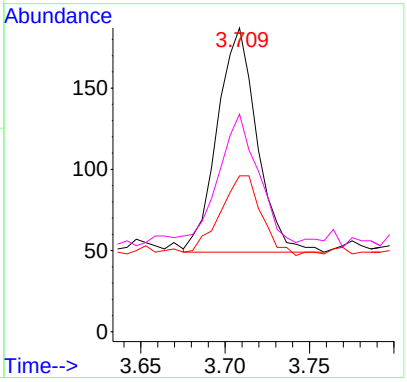


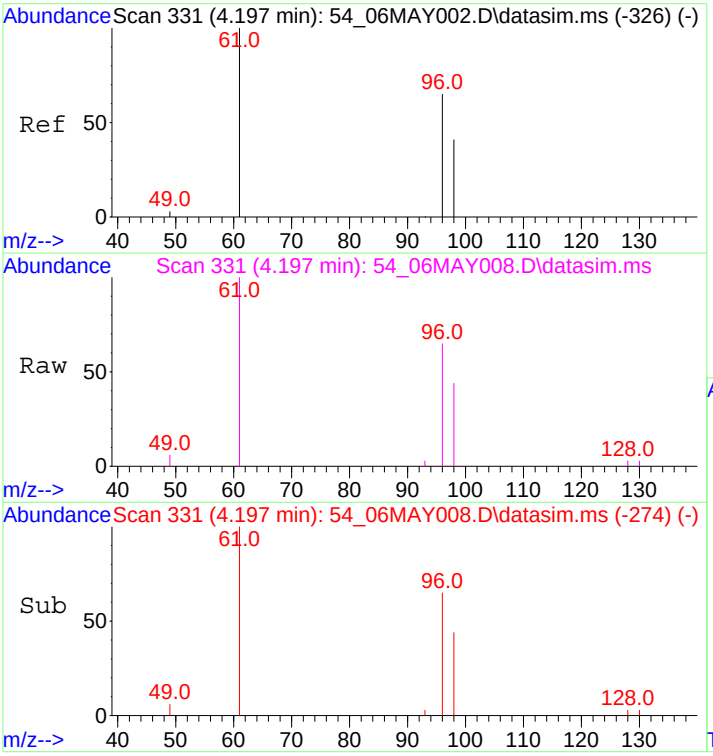


#5
trans-1,2-Dichloroethene
Concen: 0.73 ppbv
RT: 3.709 min Scan# 238
Delta R.T. -0.000 min
Lab File: 54_06MAY008.D
Acq: 6 May 2014 10:15 am

Tgt Ion: 61 Resp: 225

Ion	Ratio	Lower	Upper
61	100		
96	56.4	71.4	107.0#
98	56.9	45.8	68.8

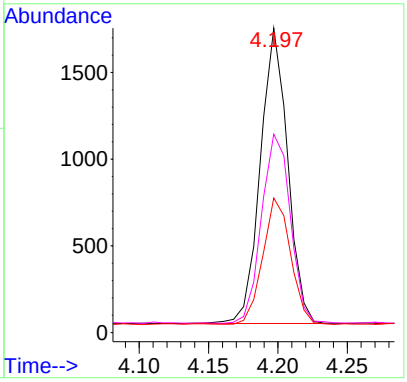


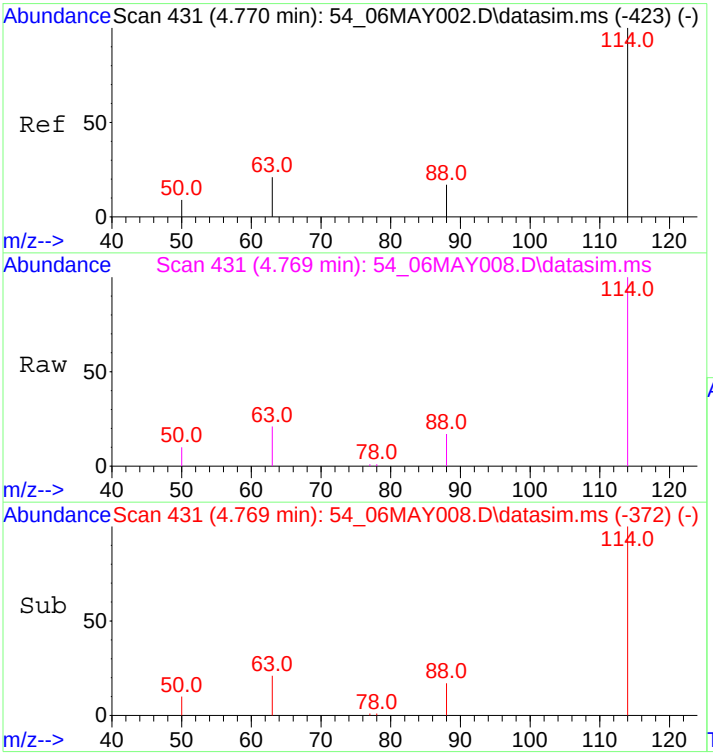


#7
cis-1,2-Dichloroethene
Concen: 8.08 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY008.D
Acq: 6 May 2014 10:15 am

Tgt Ion: 61 Resp: 2331

Ion	Ratio	Lower	Upper
61	100		
96	67.5	78.5	117.7#
98	43.5	50.6	76.0#

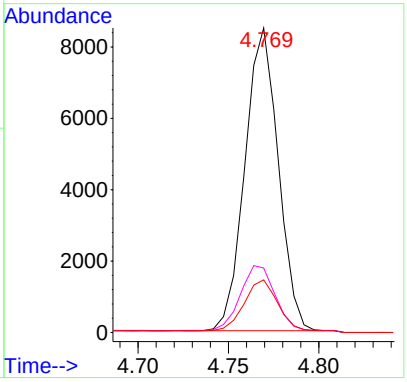


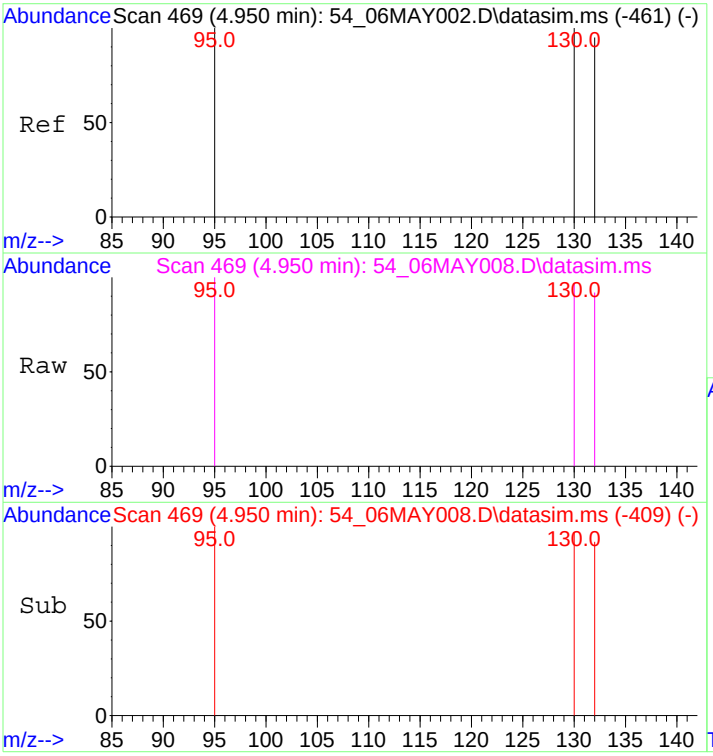


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY008.D
Acq: 6 May 2014 10:15 am

Tgt Ion:114 Resp: 10892

Ion	Ratio	Lower	Upper
114	100		
63	22.2	12.0	18.0#
88	16.7	11.8	17.8

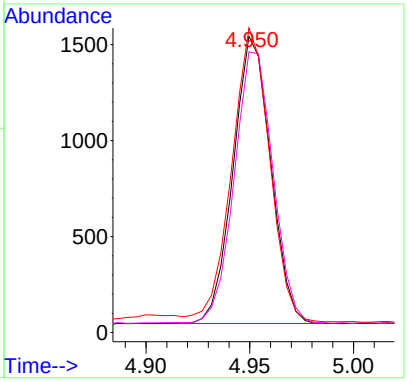


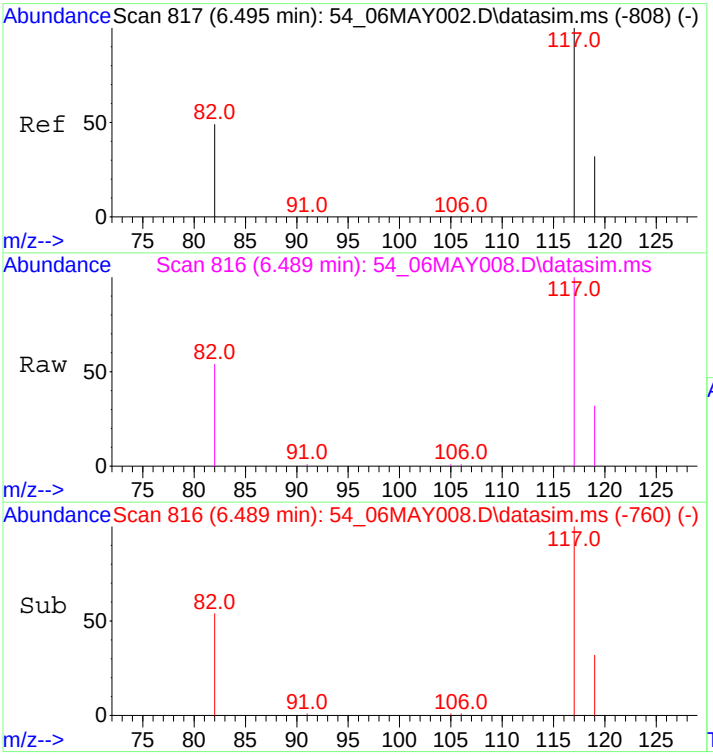


#11
Trichloroethene
Concen: 6.96 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 06MAY008.D
Acq: 6 May 2014 10:15 am

Tgt Ion:130 Resp: 1886

Ion	Ratio	Lower	Upper
130	100		
132	97.6	76.9	115.3
95	102.8	76.5	114.7

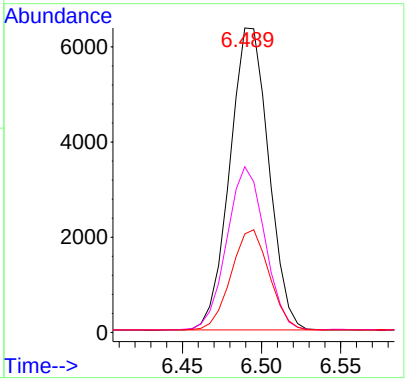


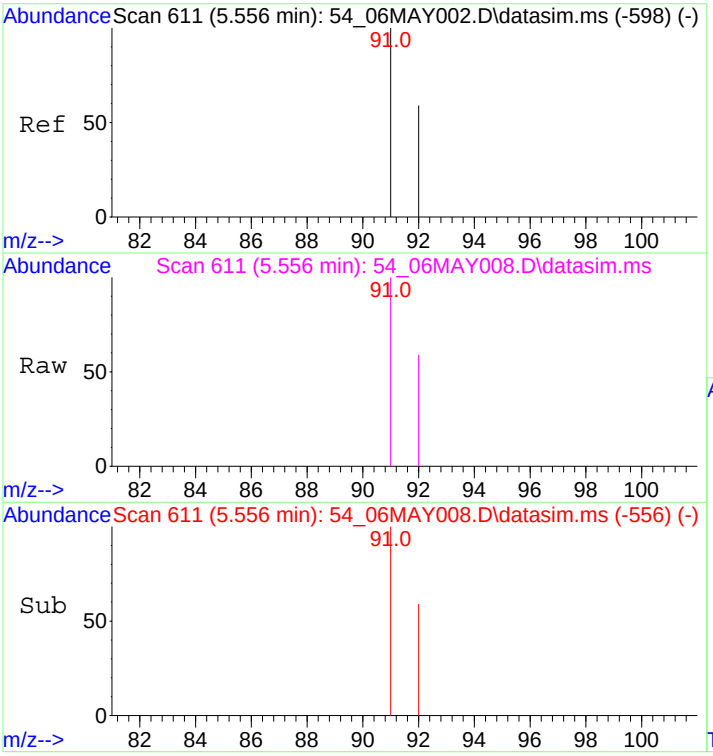


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_06MAY008.D
Acq: 6 May 2014 10:15 am

Tgt Ion:117 Resp: 10843

Ion	Ratio	Lower	Upper
117	100		
82	52.8	38.0	57.0
119	32.8	27.0	40.4

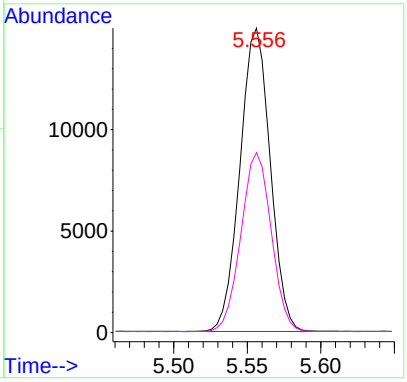


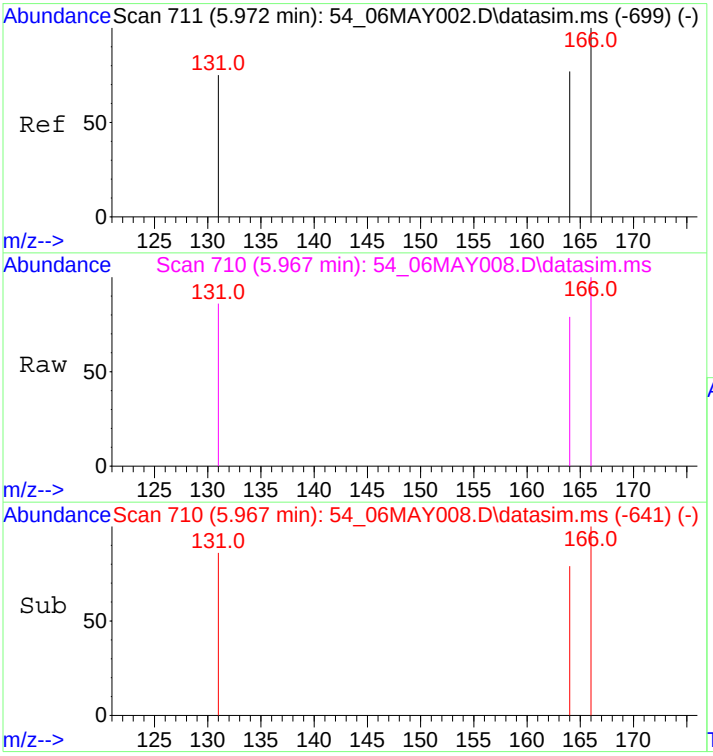


#13
Toluene
Concen: 32.90 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 06MAY008.D
Acq: 6 May 2014 10:15 am

Tgt Ion: 91 Resp: 21386

Ion	Ratio	Lower	Upper
91	100		
92	59.0	47.8	71.8

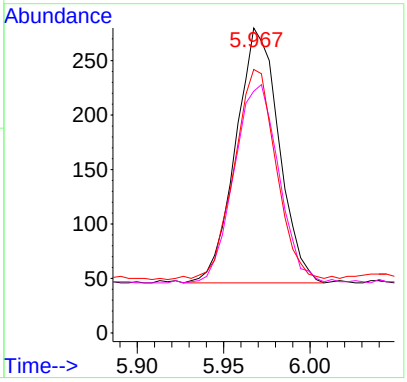




#14
Tetrachloroethene
Concen: 1.09 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_06MAY008.D
Acq: 6 May 2014 10:15 am

Tgt Ion:166 Resp: 406

Ion	Ratio	Lower	Upper
166	100		
164	80.3	62.6	94.0
131	78.6	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY009.D
Acq On : 6 May 2014 10:27 am
Operator : yhl
Sample : 02205 \ F5-028
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:34:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4168	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9887	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8994	10.00	ppbv	0.00

System Monitoring Compounds

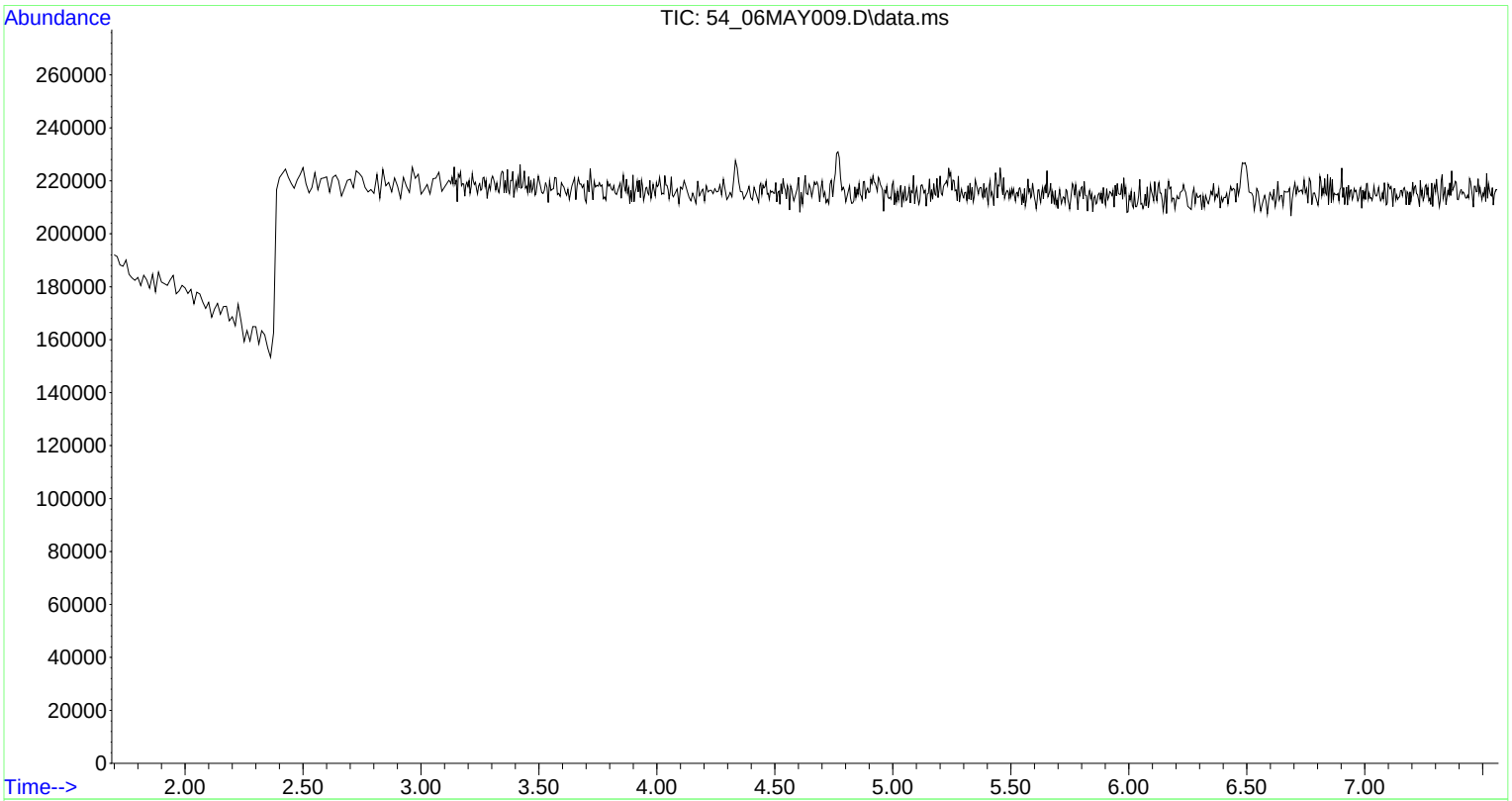
Target Compounds	Qvalue

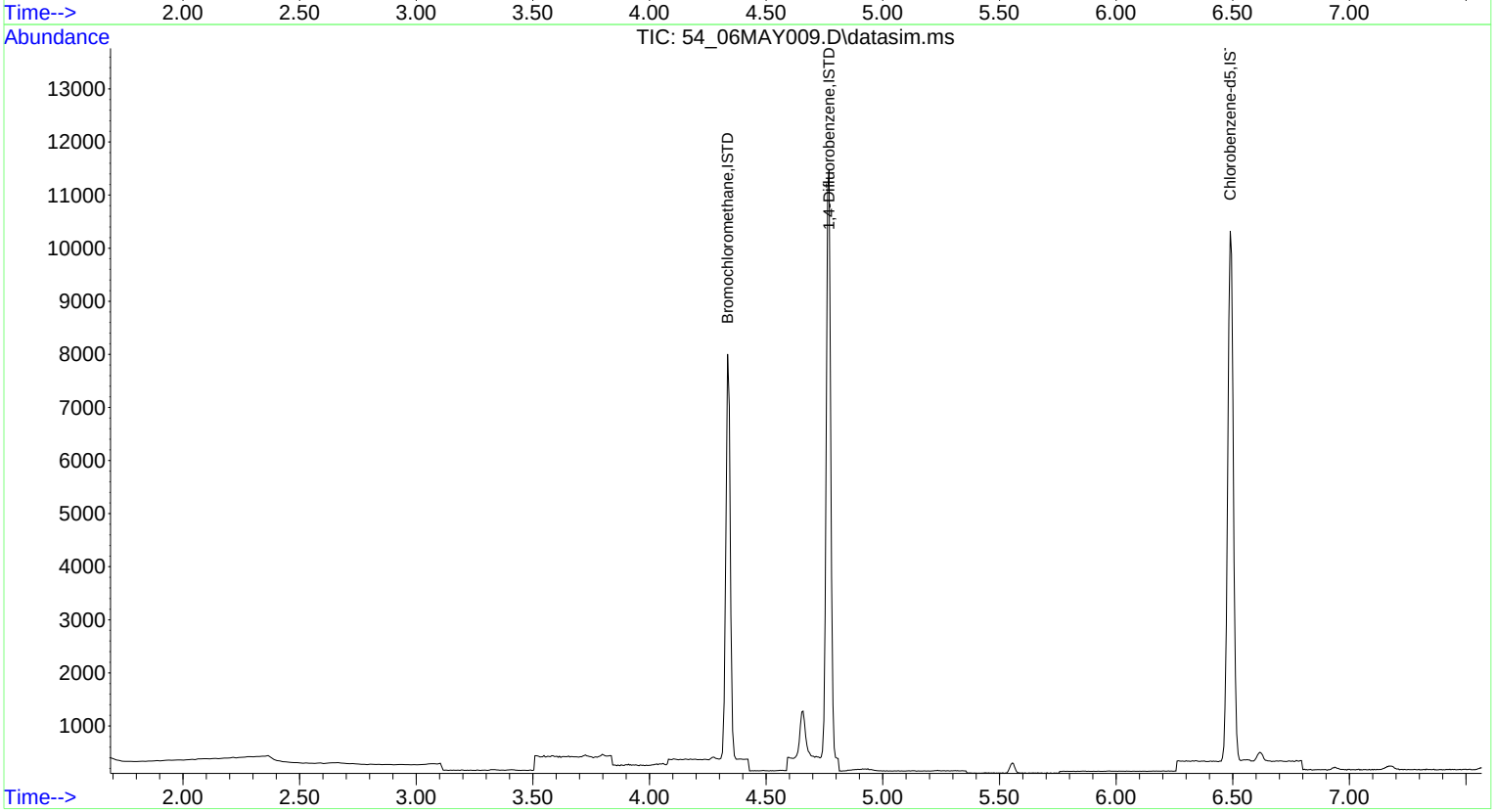
(#) = qualifier out of range (m) = manual integration (+) = signals summed

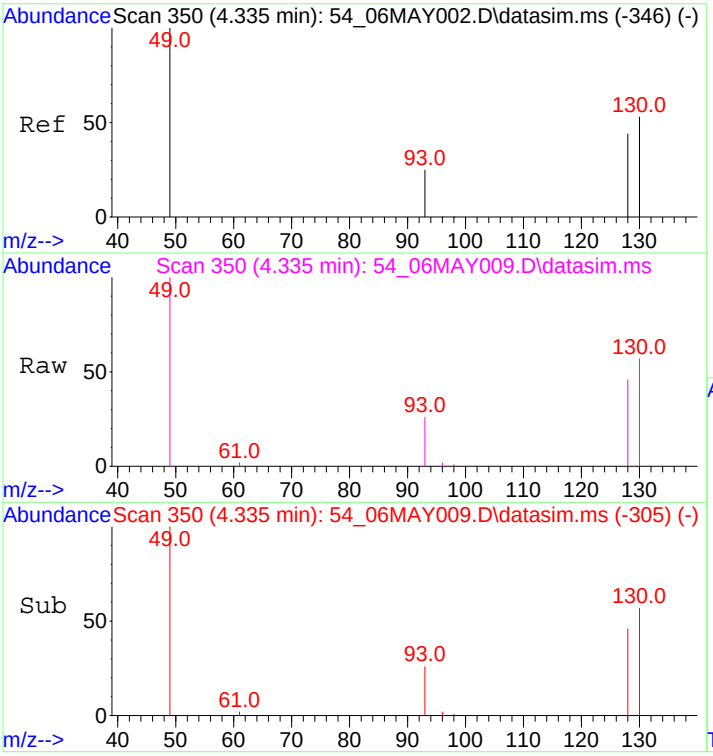
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY009.D
Acq On : 6 May 2014 10:27 am
Operator : yhl
Sample : 02205 \ F5-028
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:34:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



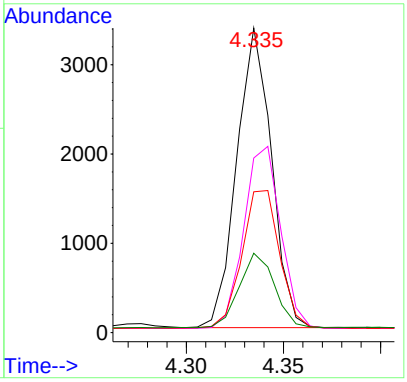


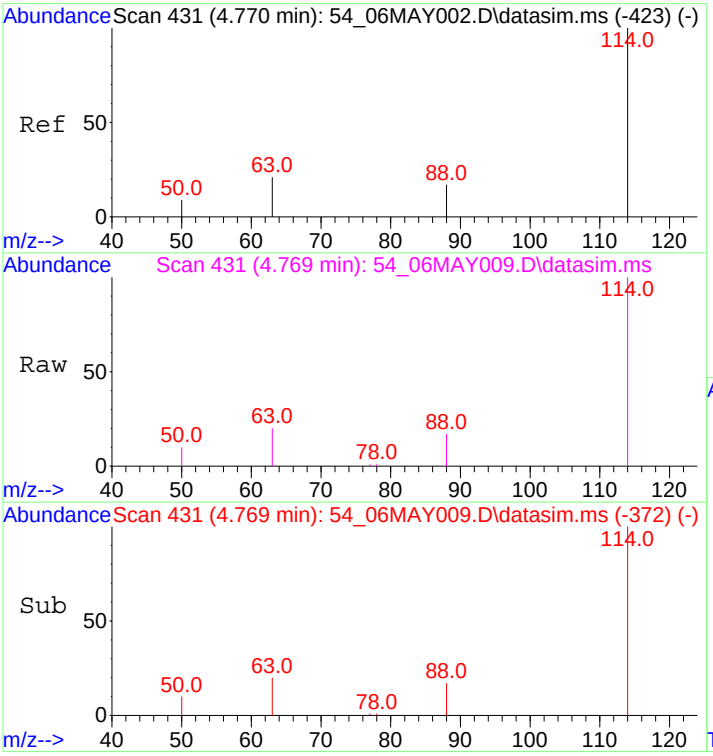


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY009.D
Acq: 6 May 2014 10:27 am

Tgt Ion: 49 Resp: 4168

Ion	Ratio	Lower	Upper
49	100		
130	64.5	87.2	130.8#
128	49.7	68.0	102.0#
93	25.2	29.3	43.9#

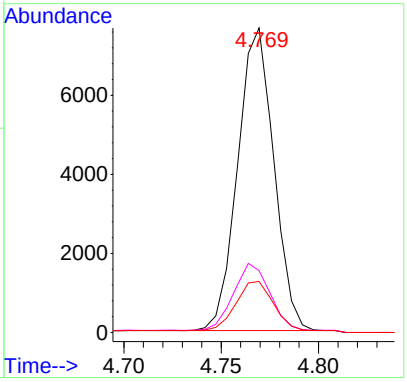


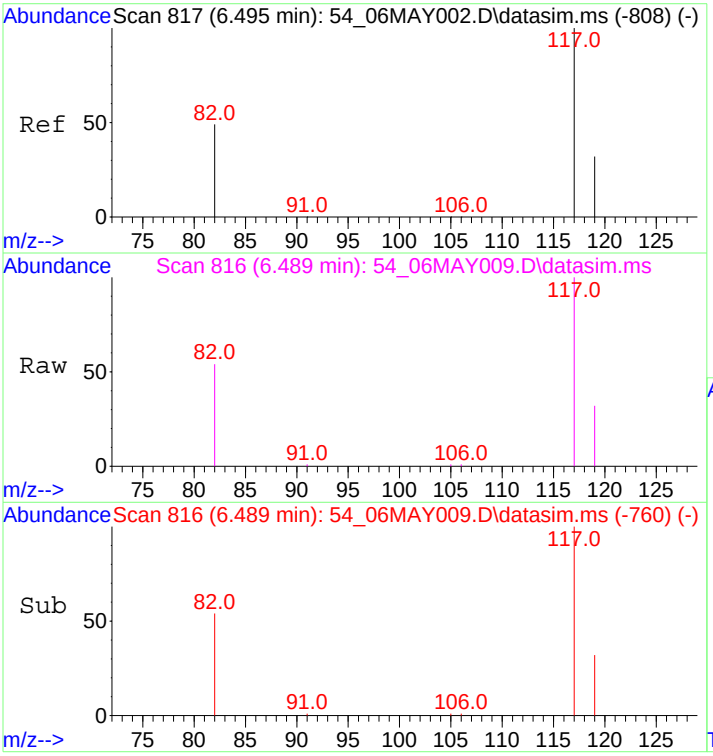


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY009.D
Acq: 6 May 2014 10:27 am

Tgt Ion:114 Resp: 9887

Ion	Ratio	Lower	Upper
114	100		
63	22.2	12.0	18.0#
88	16.8	11.8	17.8

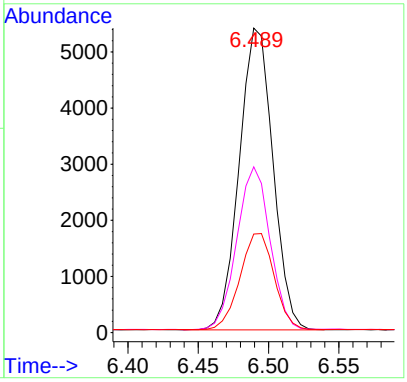




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY009.D
Acq: 6 May 2014 10:27 am

Tgt Ion:117 Resp: 8994

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.1	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY010.D
Acq On : 6 May 2014 10:38 am
Operator : yhl
Sample : 02206 \ F5-022
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:45:24 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3827	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9061	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8239	10.00 ppbv	0.00

System Monitoring Compounds

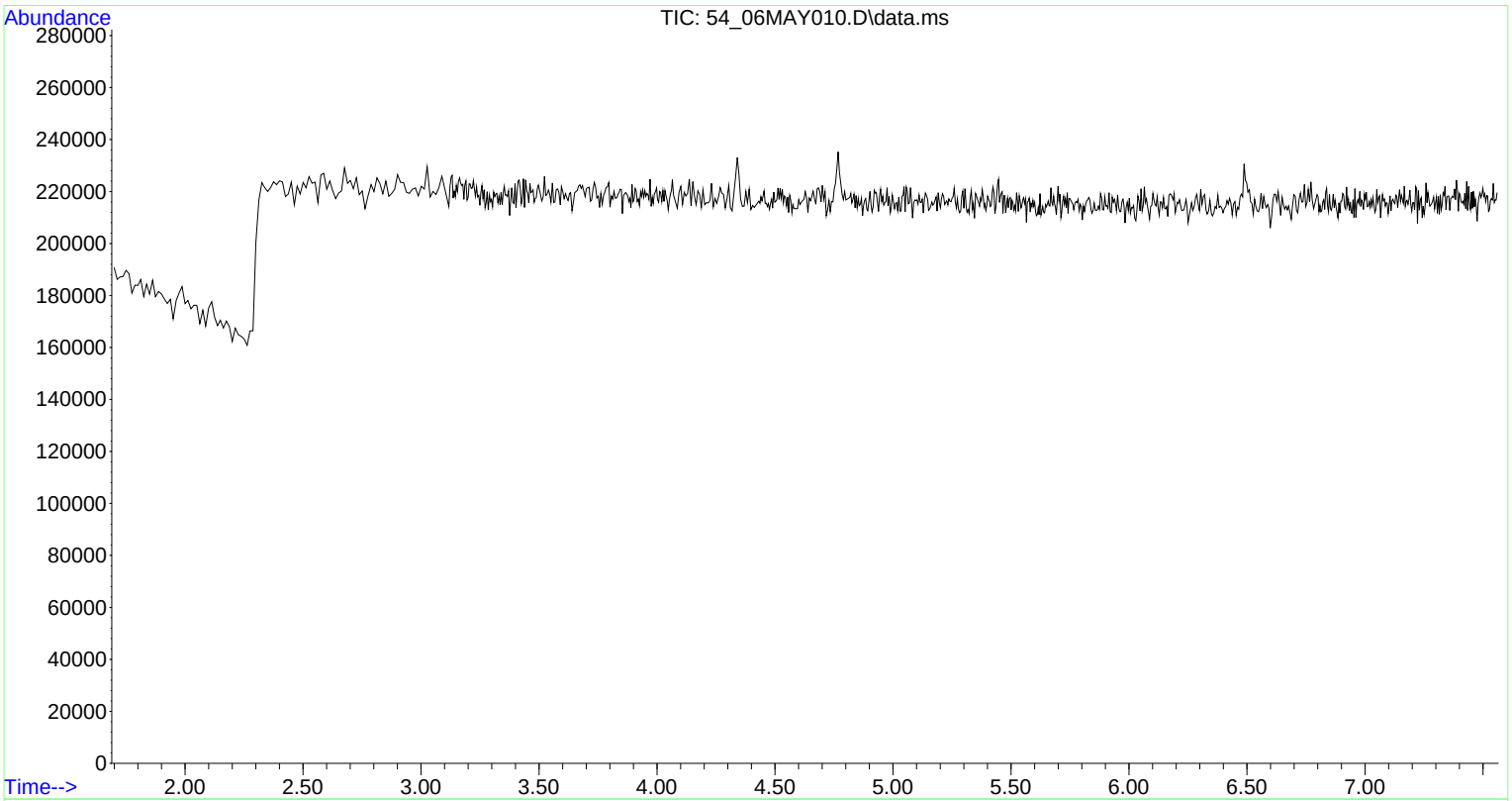
Target Compounds	Qvalue

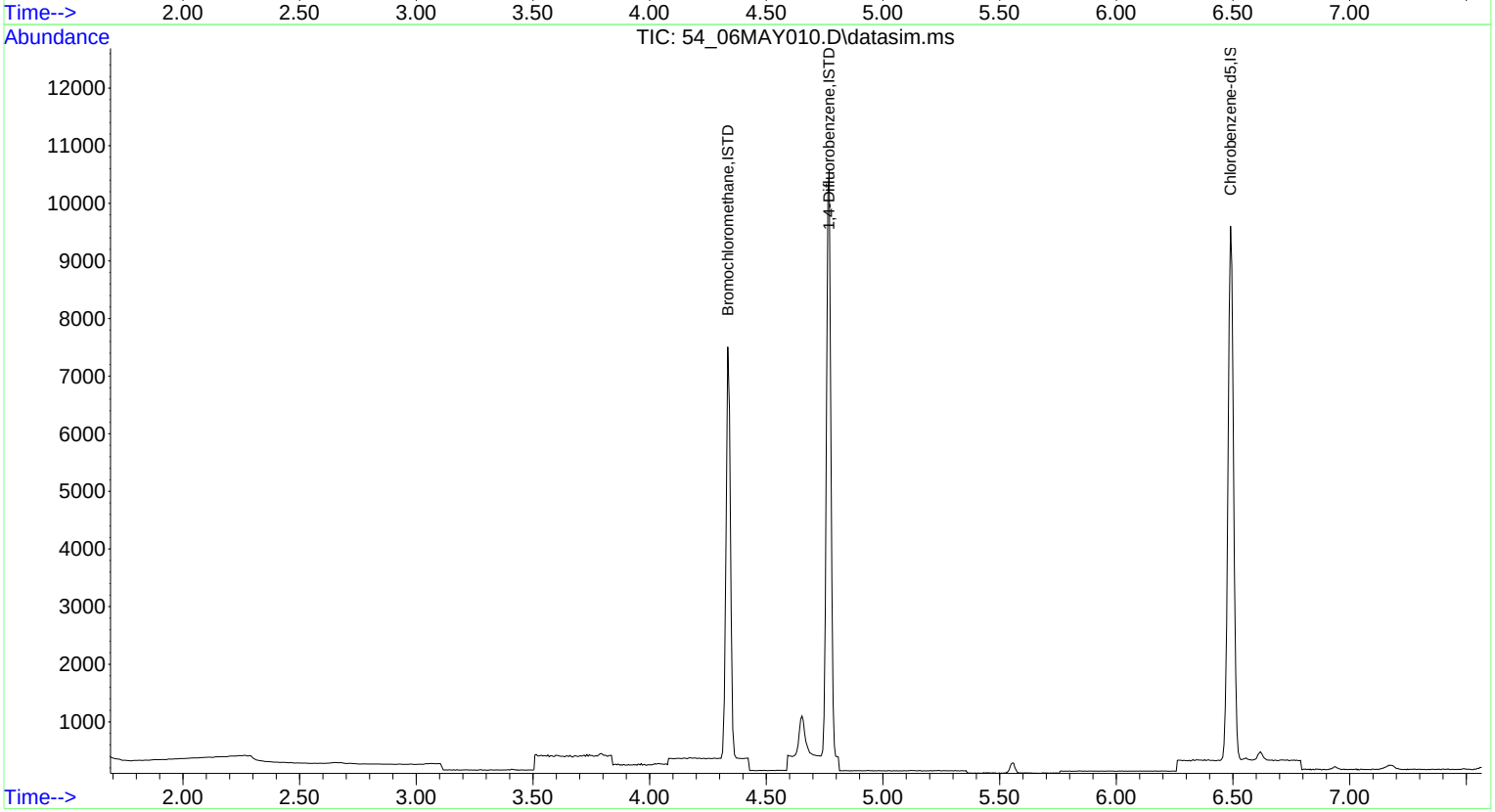
(#) = qualifier out of range (m) = manual integration (+) = signals summed

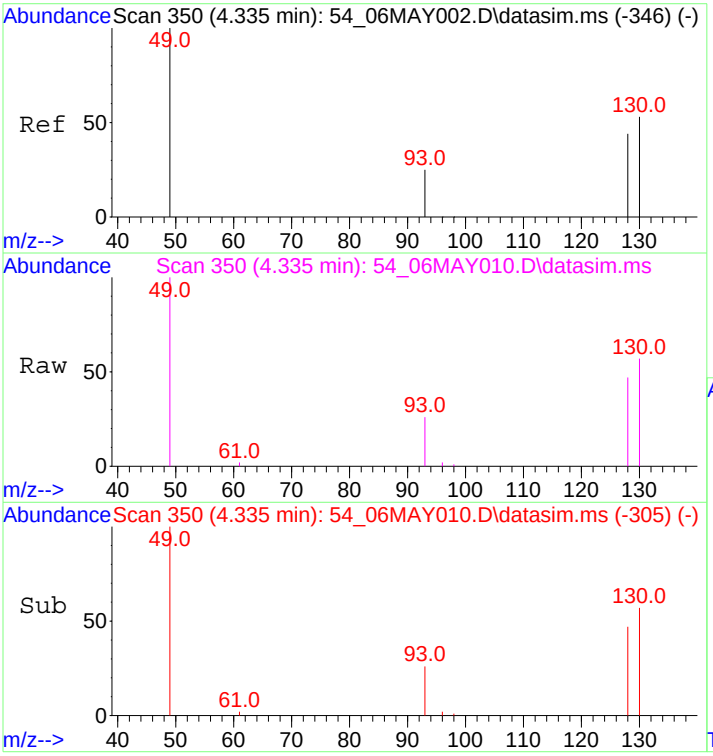
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY010.D
Acq On : 6 May 2014 10:38 am
Operator : yhl
Sample : 02206 \ F5-022
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:45:24 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



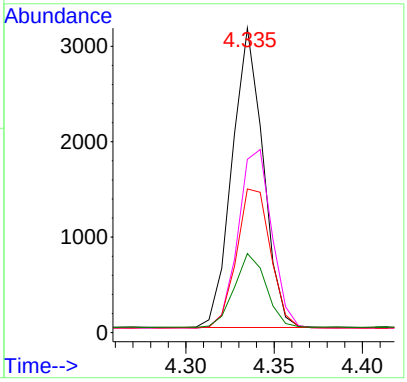


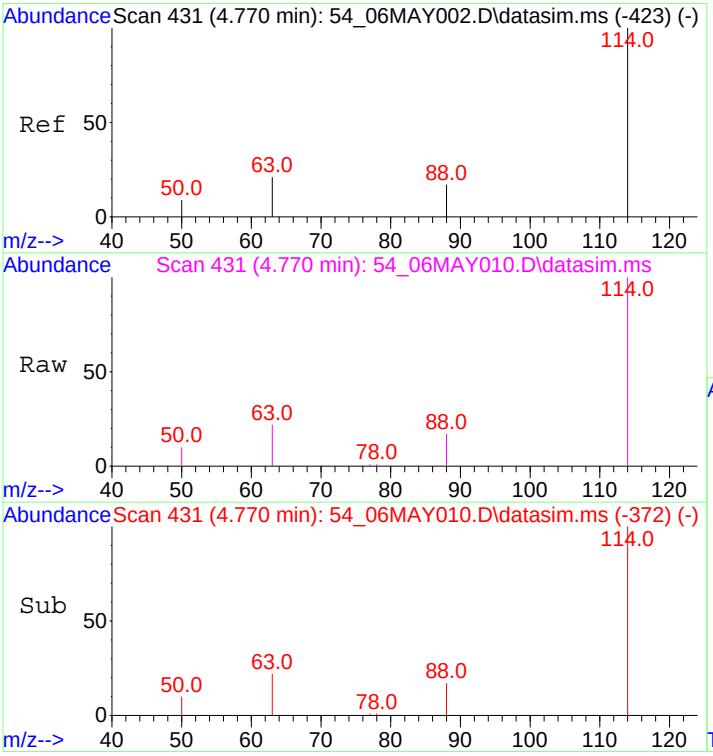


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY010.D
Acq: 6 May 2014 10:38 am

Tgt Ion: 49 Resp: 3827

Ion	Ratio	Lower	Upper
49	100		
130	64.9	87.2	130.8#
128	51.0	68.0	102.0#
93	25.2	29.3	43.9#

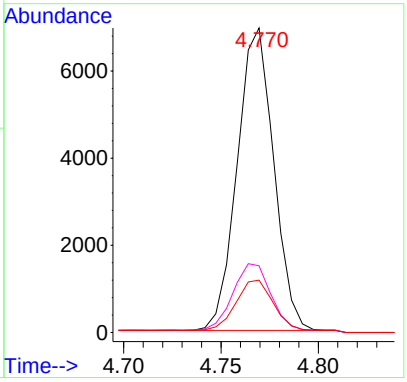


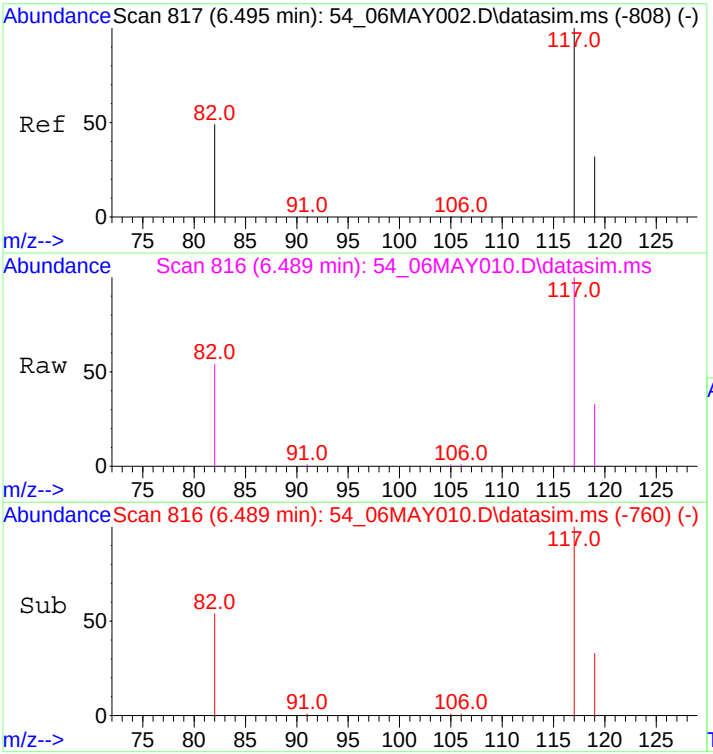


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY010.D
Acq: 6 May 2014 10:38 am

Tgt Ion:114 Resp: 9061

Ion	Ratio	Lower	Upper
114	100		
63	22.5	12.0	18.0#
88	16.8	11.8	17.8

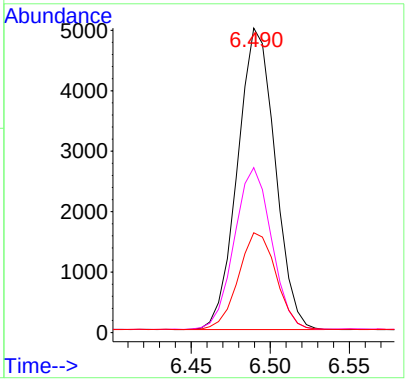




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY010.D
Acq: 6 May 2014 10:38 am

Tgt Ion:117 Resp: 8239

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY011.D
Acq On : 6 May 2014 10:50 am
Operator : yhl
Sample : 02207 \ F5-046
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:56:42 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4076	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9689	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	8857	10.00	ppbv	0.00

System Monitoring Compounds

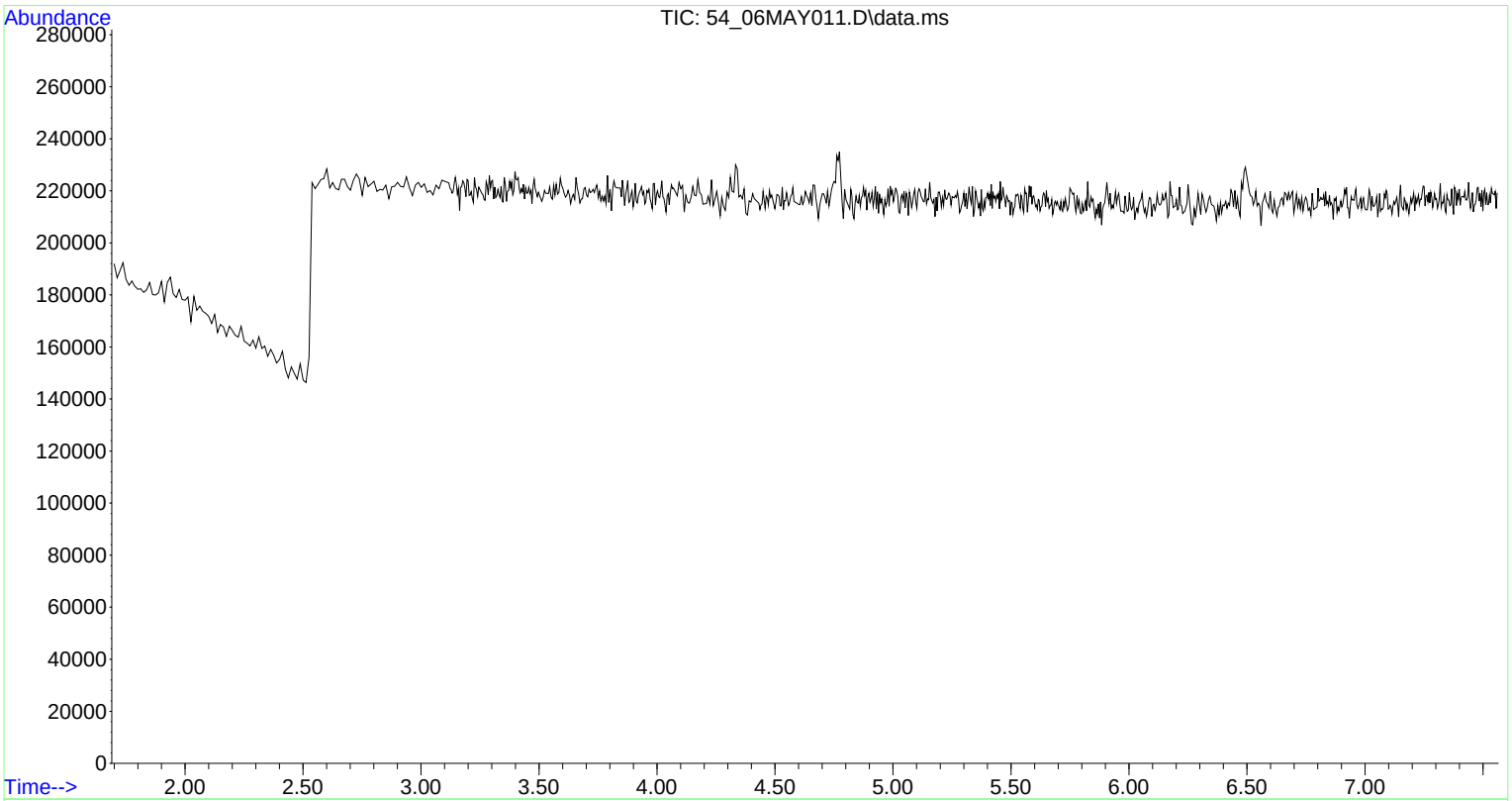
Target Compounds	Qvalue

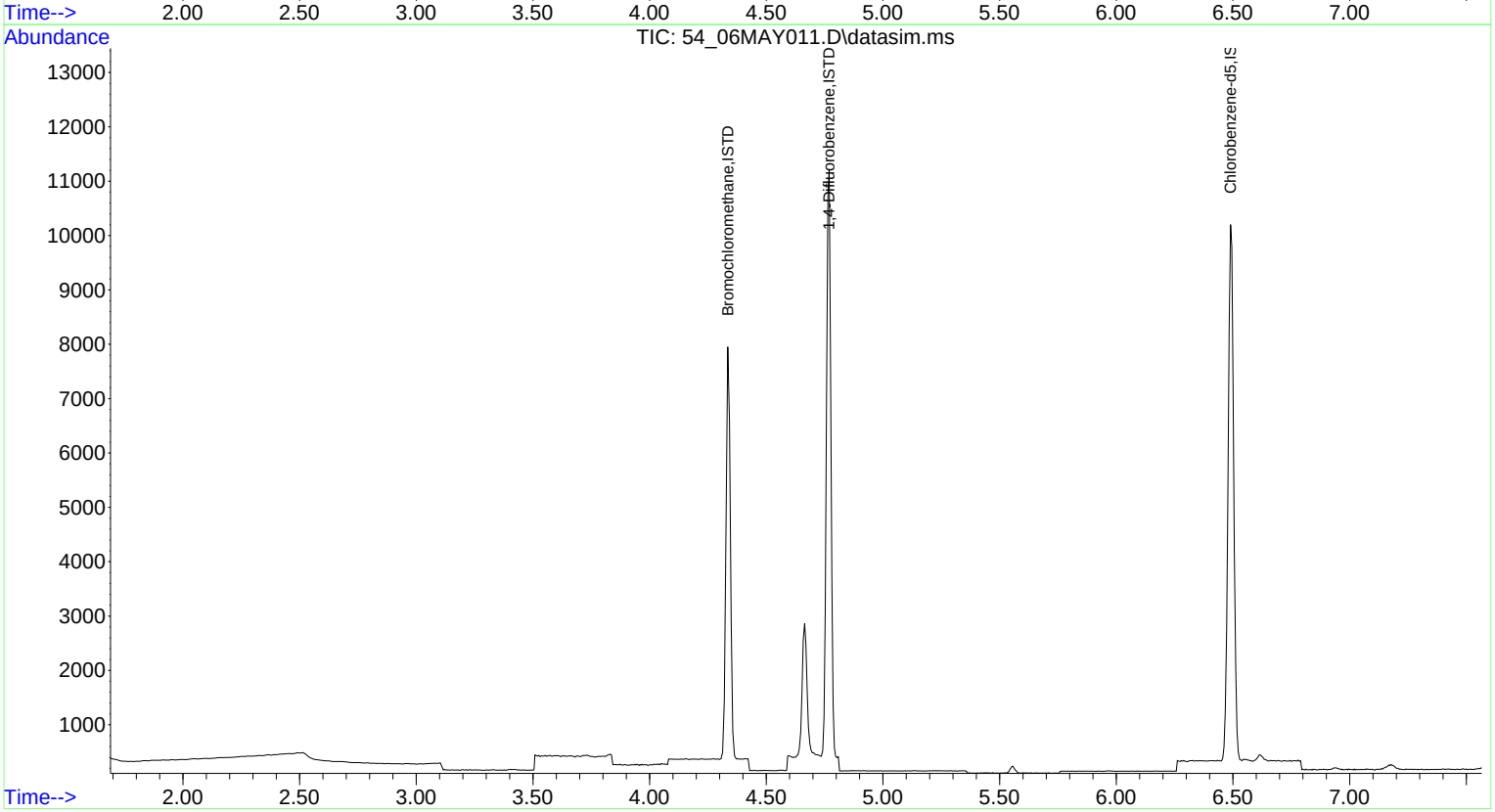
(#) = qualifier out of range (m) = manual integration (+) = signals summed

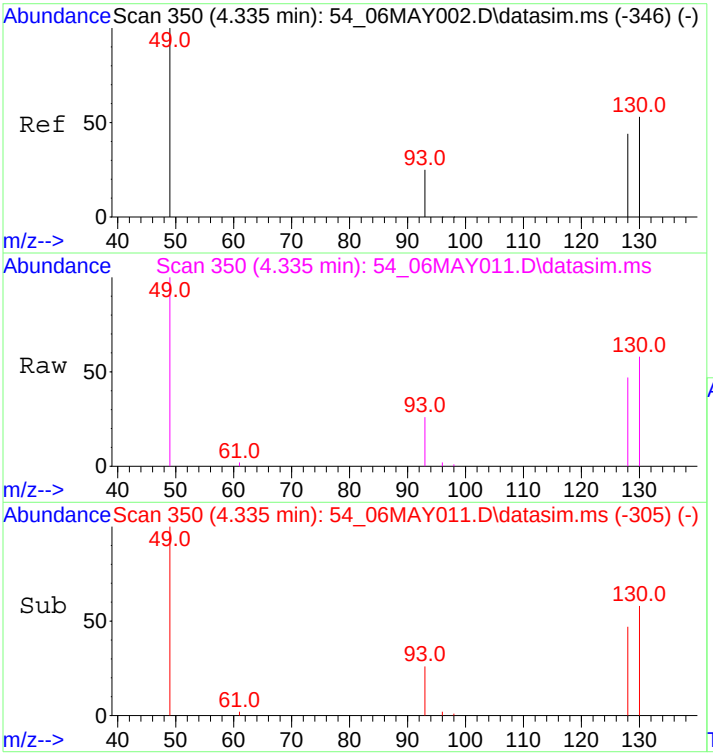
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY011.D
Acq On : 6 May 2014 10:50 am
Operator : yhl
Sample : 02207 \ F5-046
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 10:56:42 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



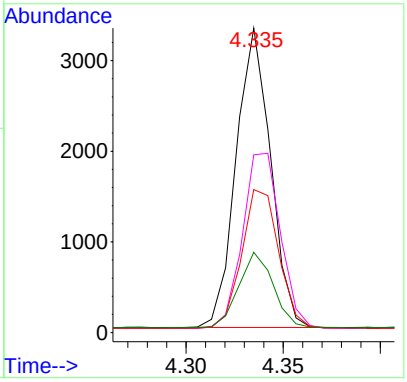


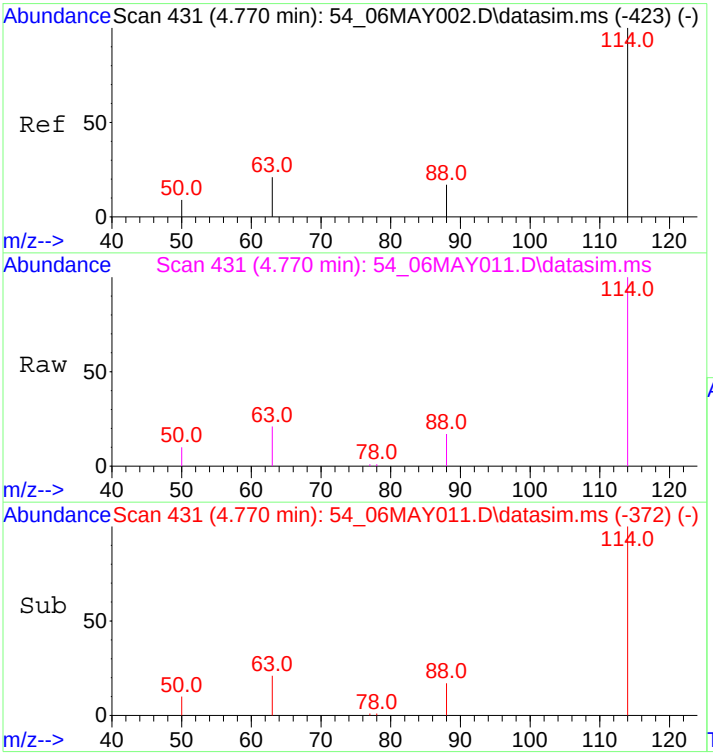


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 06MAY011.D
Acq: 6 May 2014 10:50 am

Tgt Ion: 49 Resp: 4076

Ion	Ratio	Lower	Upper
49	100		
130	64.3	87.2	130.8#
128	49.7	68.0	102.0#
93	24.9	29.3	43.9#

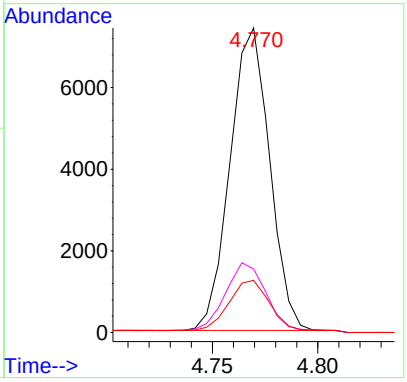


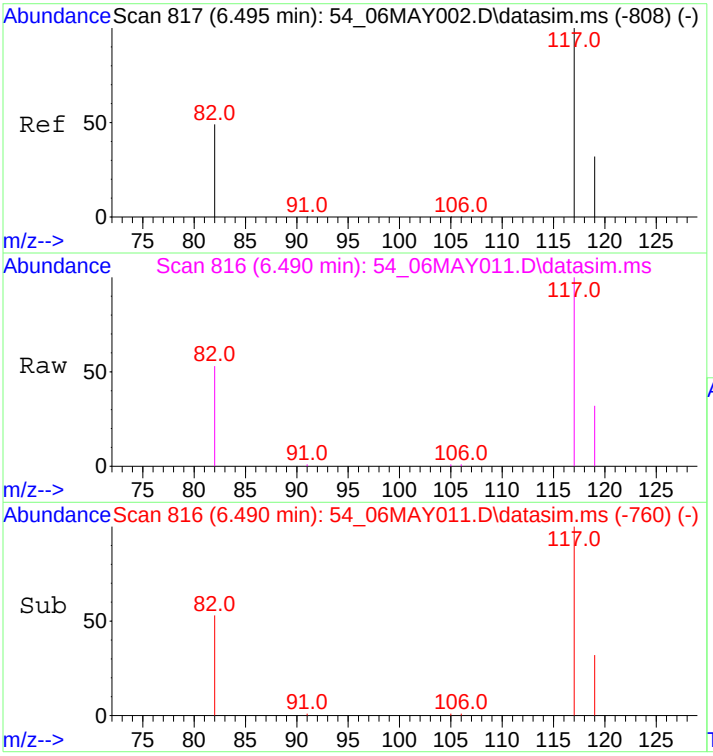


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_06MAY011.D
Acq: 6 May 2014 10:50 am

Tgt Ion:114 Resp: 9689

Ion	Ratio	Lower	Upper
114	100		
63	22.4	12.0	18.0#
88	16.9	11.8	17.8

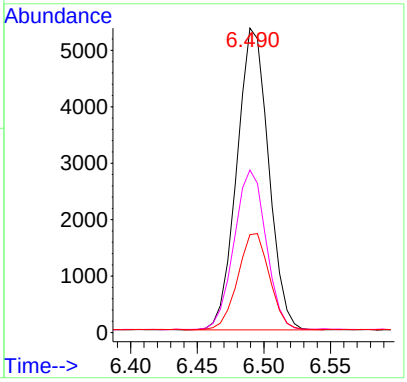




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY011.D
Acq: 6 May 2014 10:50 am

Tgt Ion:117 Resp: 8857

Ion	Ratio	Lower	Upper
117	100		
82	53.1	38.0	57.0
119	31.9	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY012.D
Acq On : 6 May 2014 11:01 am
Operator : yhl
Sample : 02208 \ F5-048
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:07:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4139	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9792	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.490	117	9061	10.00	ppbv	0.00

System Monitoring Compounds

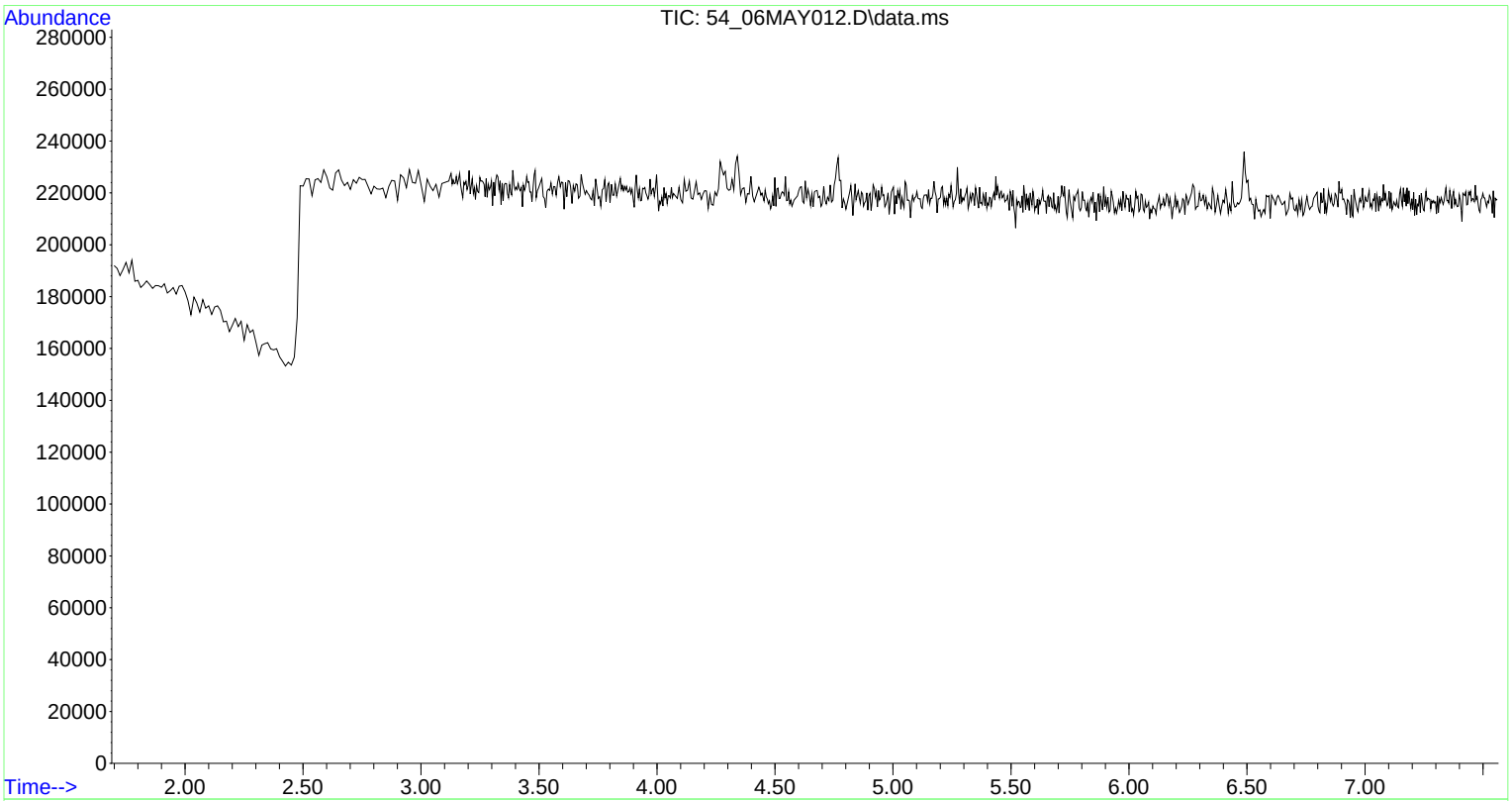
Target Compounds	Qvalue

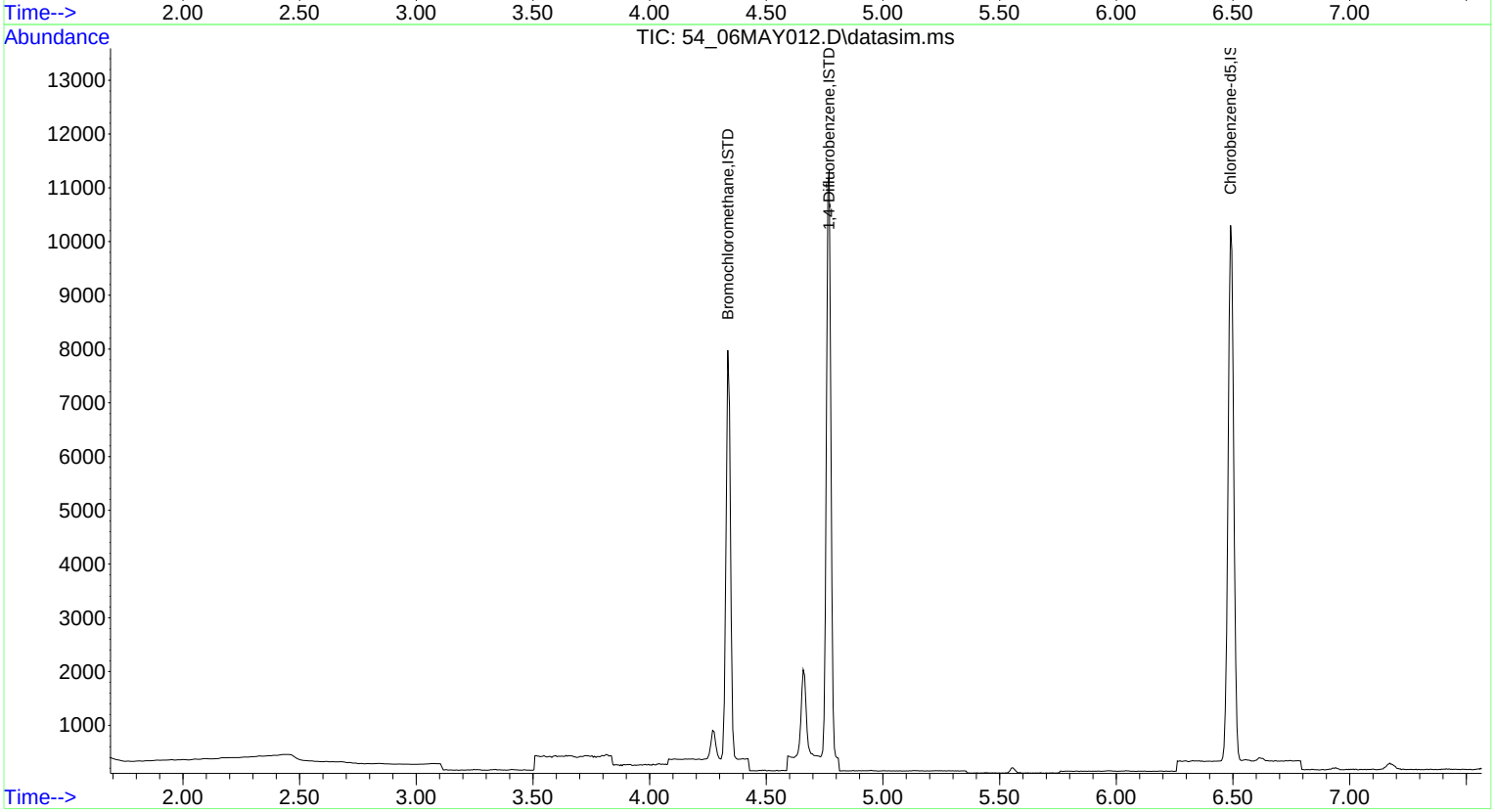
(#) = qualifier out of range (m) = manual integration (+) = signals summed

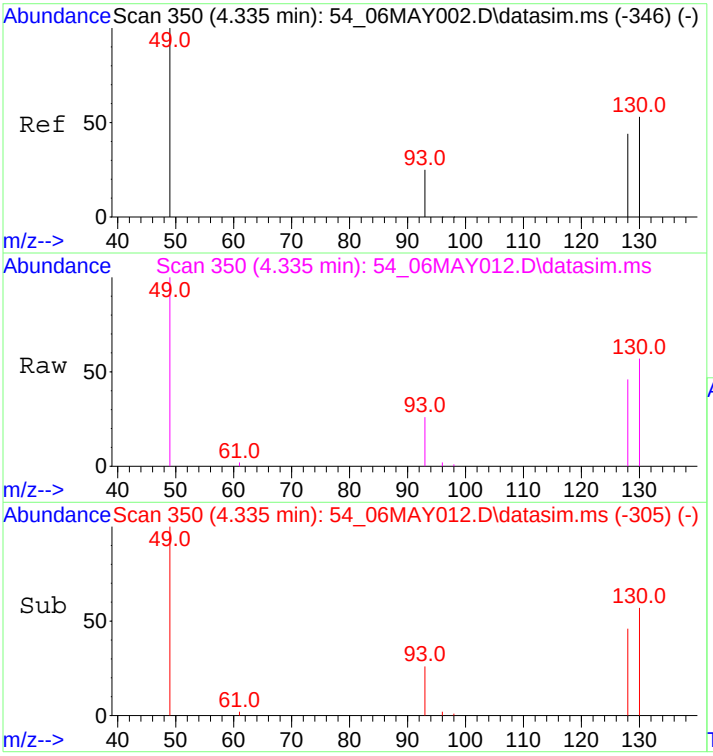
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY012.D
Acq On : 6 May 2014 11:01 am
Operator : yhl
Sample : 02208 \ F5-048
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:07:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



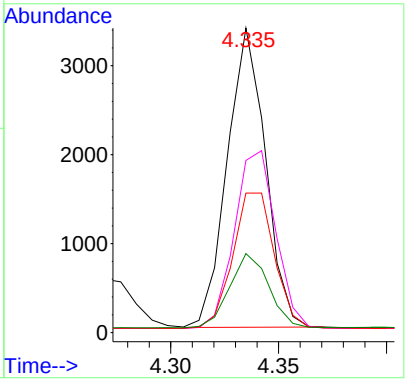


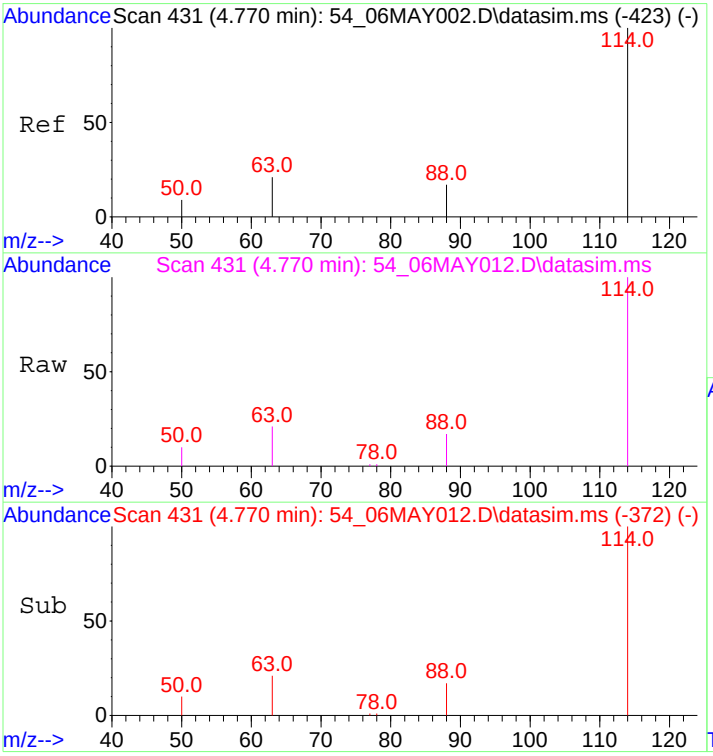


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 06MAY012.D
Acq: 6 May 2014 11:01 am

Tgt Ion: 49 Resp: 4139

Ion	Ratio	Lower	Upper
49	100		
130	64.4	87.2	130.8#
128	49.5	68.0	102.0#
93	25.5	29.3	43.9#

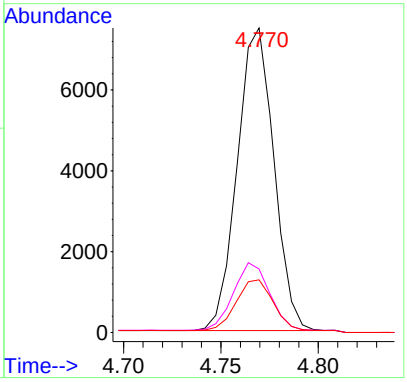


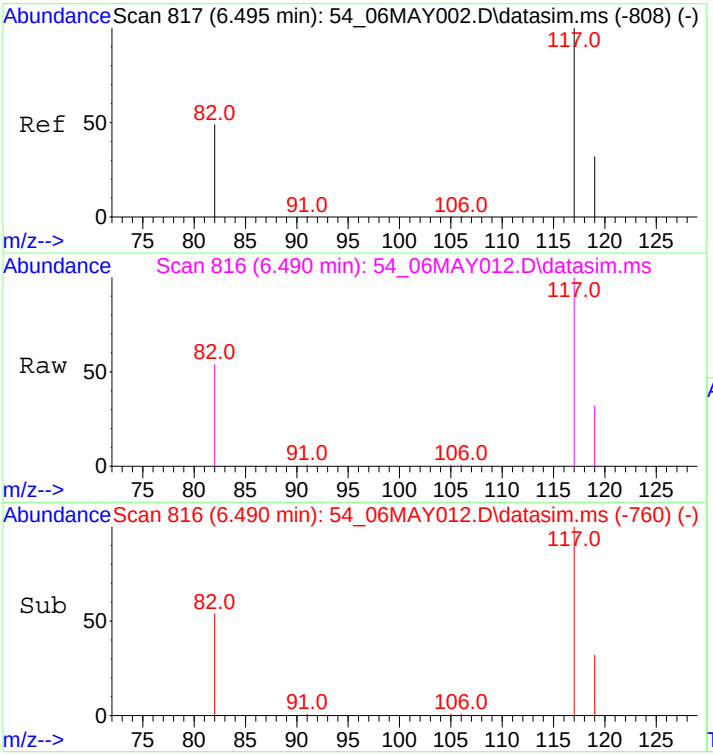


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_06MAY012.D
Acq: 6 May 2014 11:01 am

Tgt Ion:114 Resp: 9792

Ion	Ratio	Lower	Upper
114	100		
63	22.1	12.0	18.0#
88	16.9	11.8	17.8

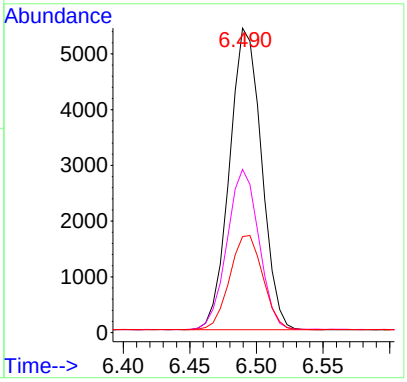




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY012.D
Acq: 6 May 2014 11:01 am

Tgt Ion:117 Resp: 9061

Ion	Ratio	Lower	Upper
117	100		
82	52.9	38.0	57.0
119	32.3	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY013.D
Acq On : 6 May 2014 11:13 am
Operator : yhl
Sample : 02209 \ F5-009
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:20:35 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3987	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9345	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	8482	10.00 ppbv	0.00

System Monitoring Compounds

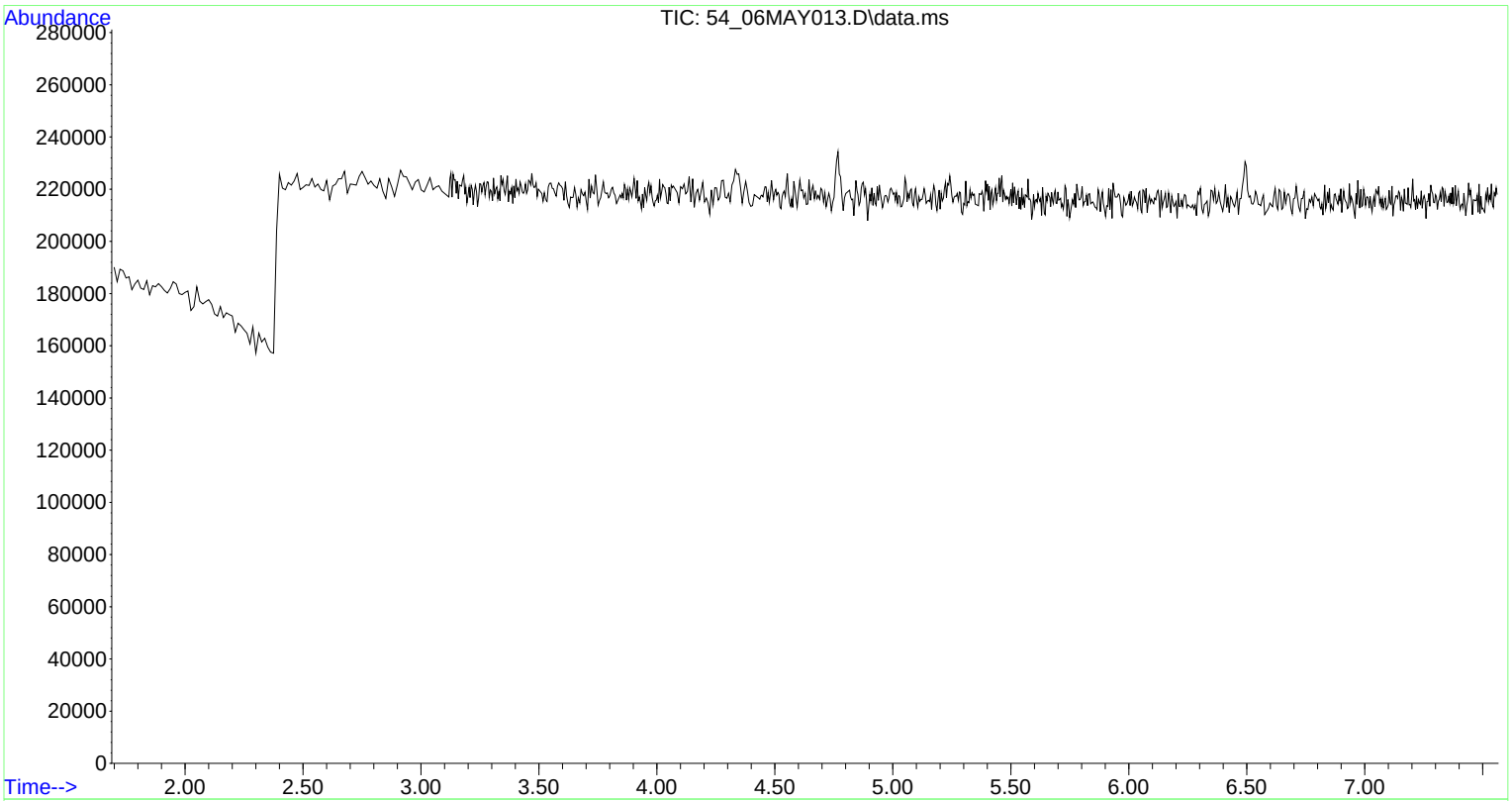
Target Compounds	Qvalue

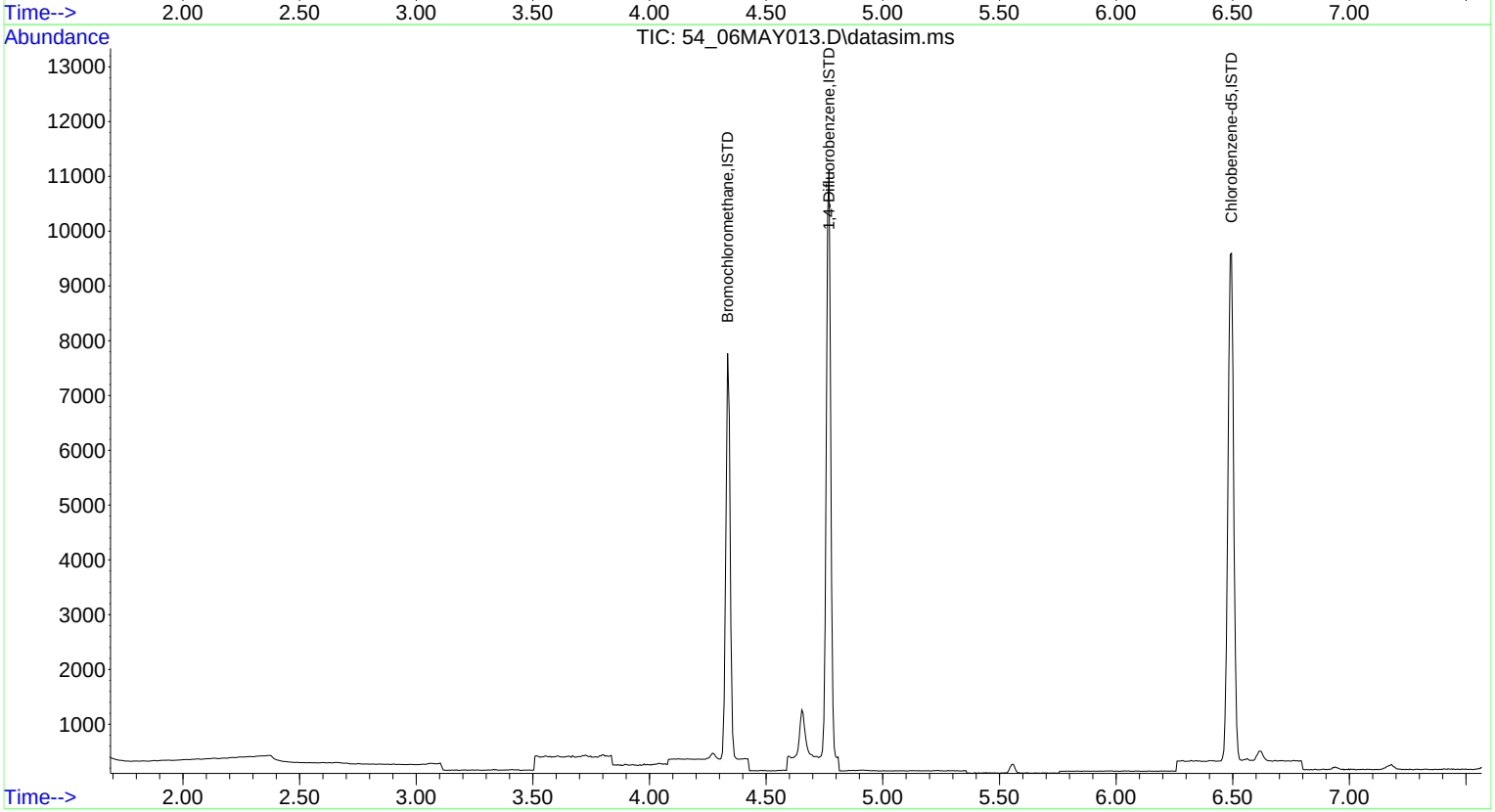
(#) = qualifier out of range (m) = manual integration (+) = signals summed

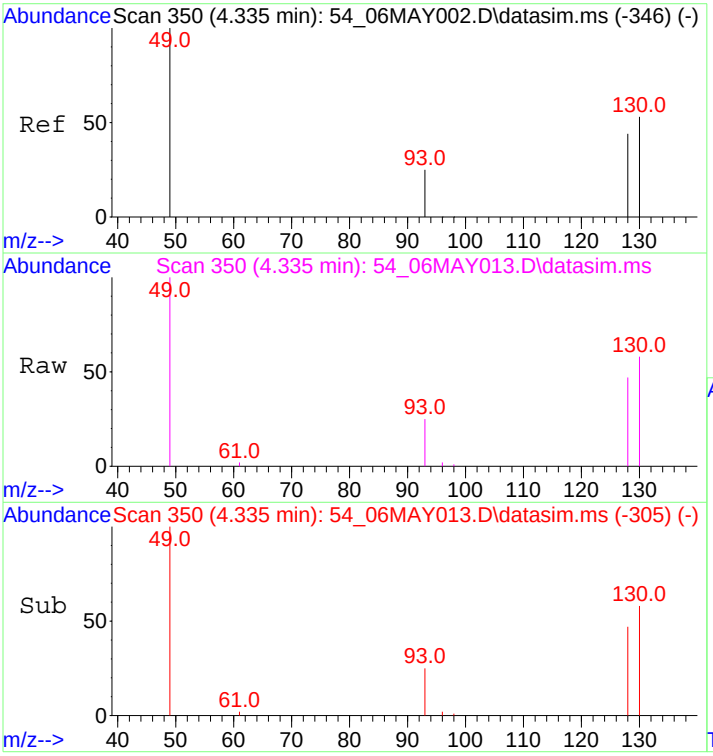
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY013.D
Acq On : 6 May 2014 11:13 am
Operator : yhl
Sample : 02209 \ F5-009
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:20:35 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



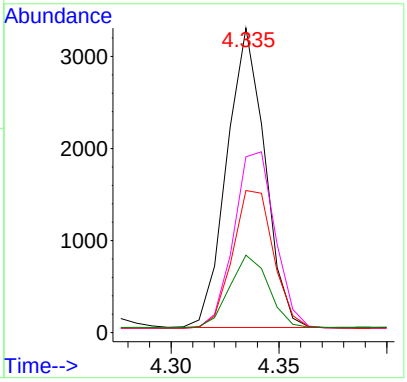


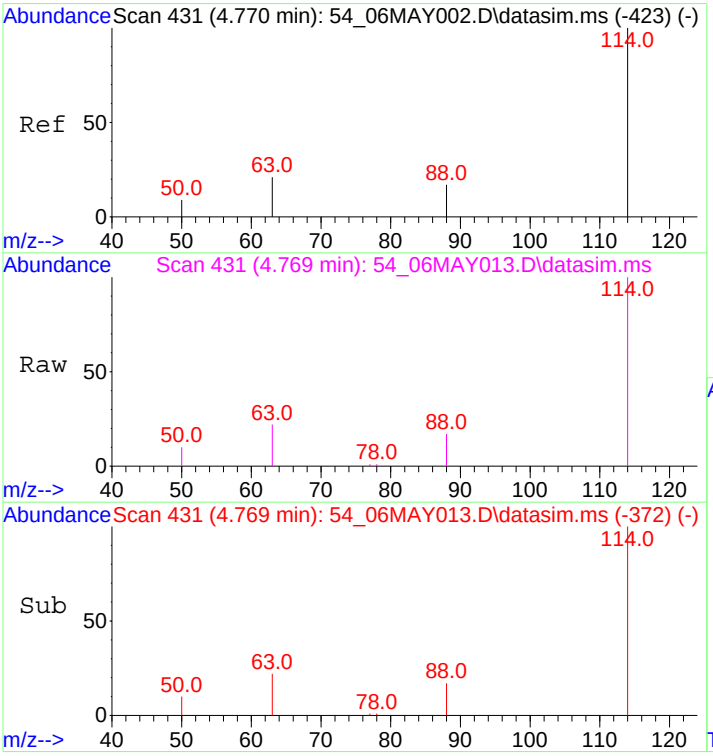


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY013.D
Acq: 6 May 2014 11:13 am

Tgt Ion: 49 Resp: 3987

Ion	Ratio	Lower	Upper
49	100		
130	64.1	87.2	130.8#
128	50.0	68.0	102.0#
93	25.2	29.3	43.9#

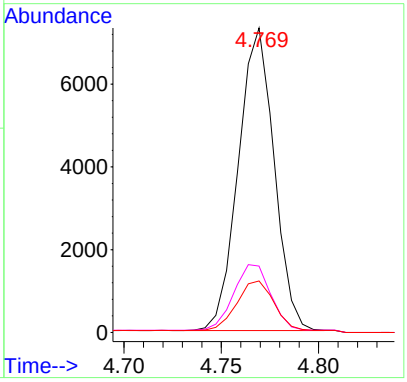


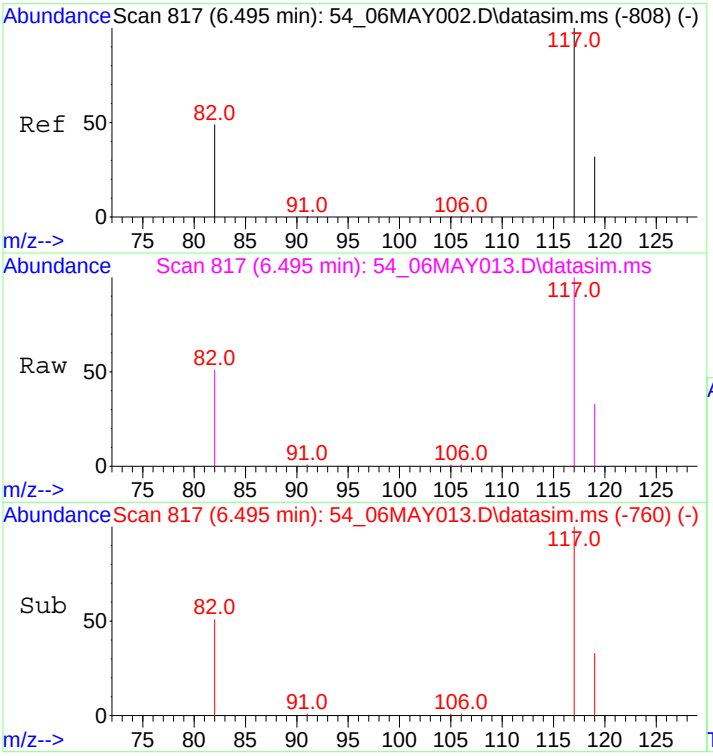


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY013.D
Acq: 6 May 2014 11:13 am

Tgt Ion:114 Resp: 9345

Ion	Ratio	Lower	Upper
114	100		
63	22.7	12.0	18.0#
88	17.0	11.8	17.8

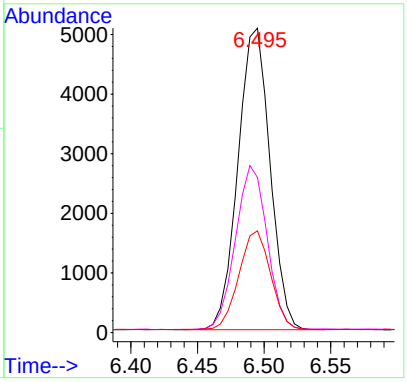




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 06MAY013.D
Acq: 6 May 2014 11:13 am

Tgt Ion:117 Resp: 8482

Ion	Ratio	Lower	Upper
117	100		
82	53.4	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY014.D
Acq On : 6 May 2014 11:28 am
Operator : yhl
Sample : 02210 \ F5-007
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:35:21 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3684	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	8646	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	7958	10.00 ppbv	0.00

System Monitoring Compounds

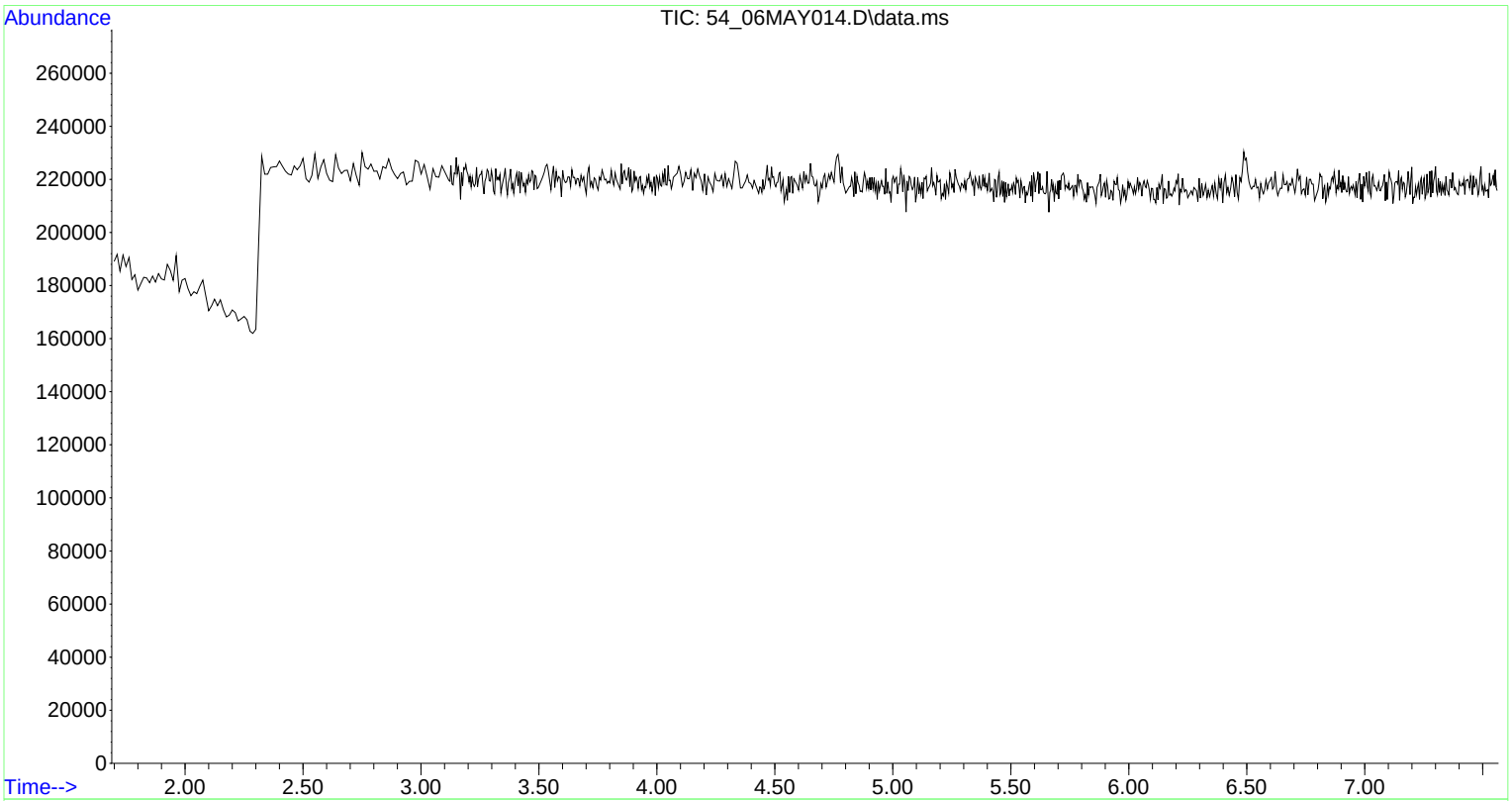
Target Compounds	Qvalue

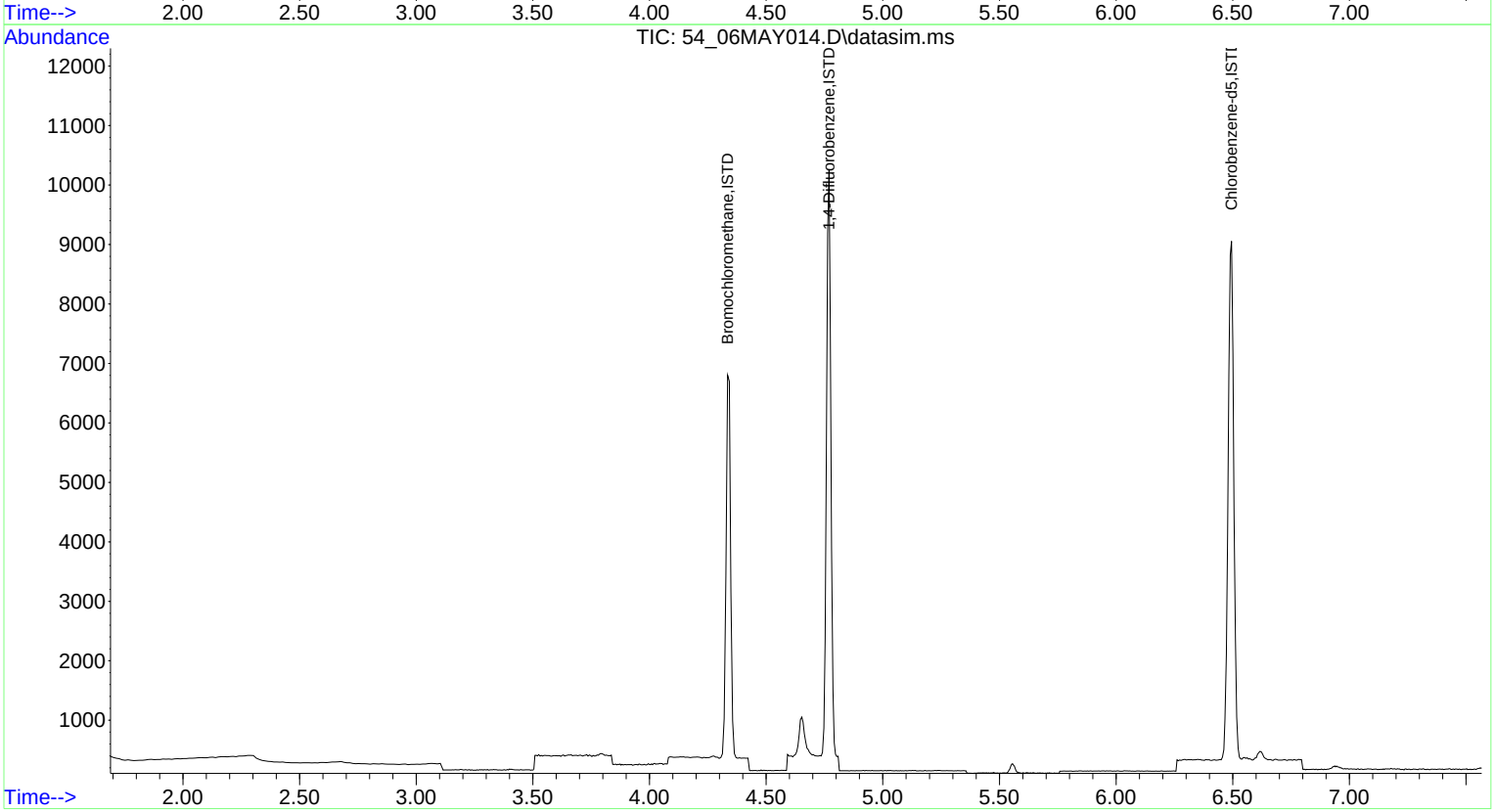
(#) = qualifier out of range (m) = manual integration (+) = signals summed

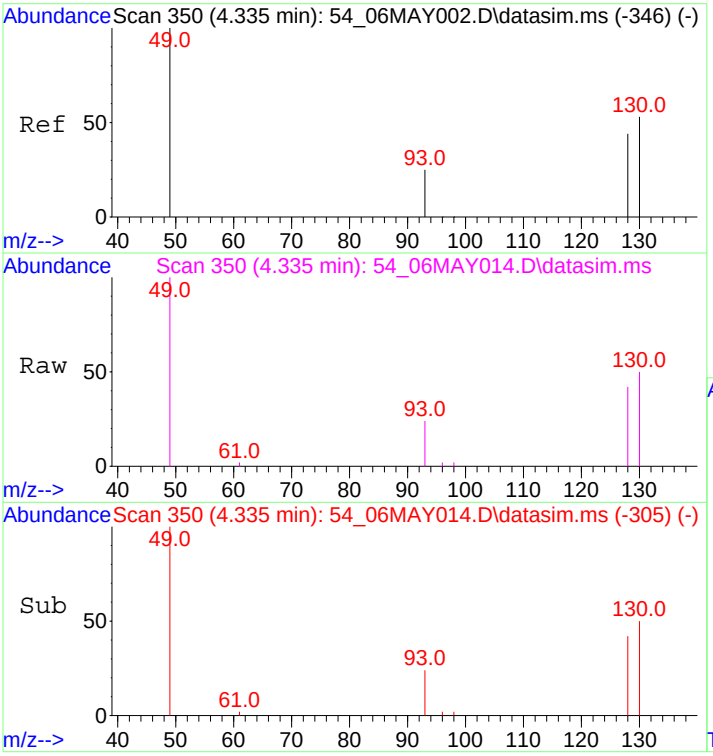
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY014.D
Acq On : 6 May 2014 11:28 am
Operator : yhl
Sample : 02210 \ F5-007
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:35:21 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



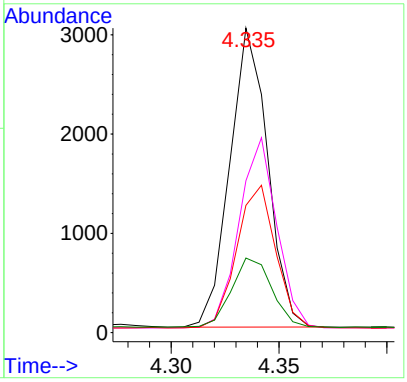


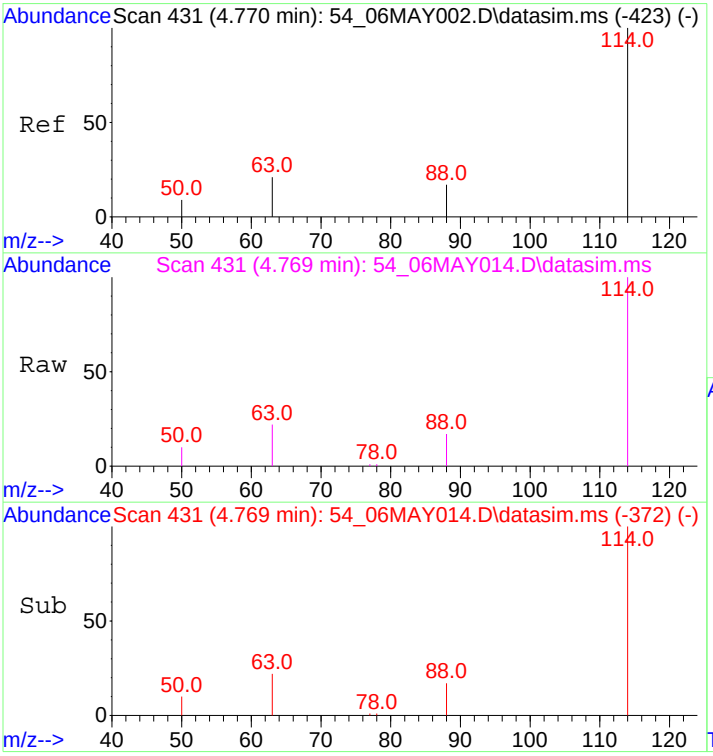


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY014.D
Acq: 6 May 2014 11:28 am

Tgt Ion: 49 Resp: 3684

Ion	Ratio	Lower	Upper
49	100		
130	63.2	87.2	130.8#
128	49.1	68.0	102.0#
93	24.9	29.3	43.9#

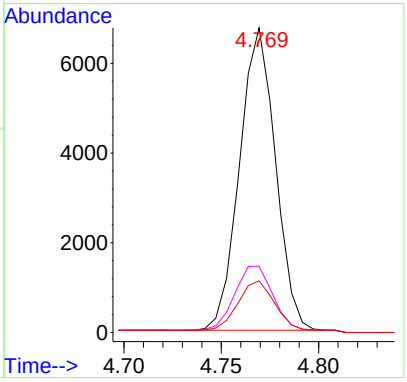


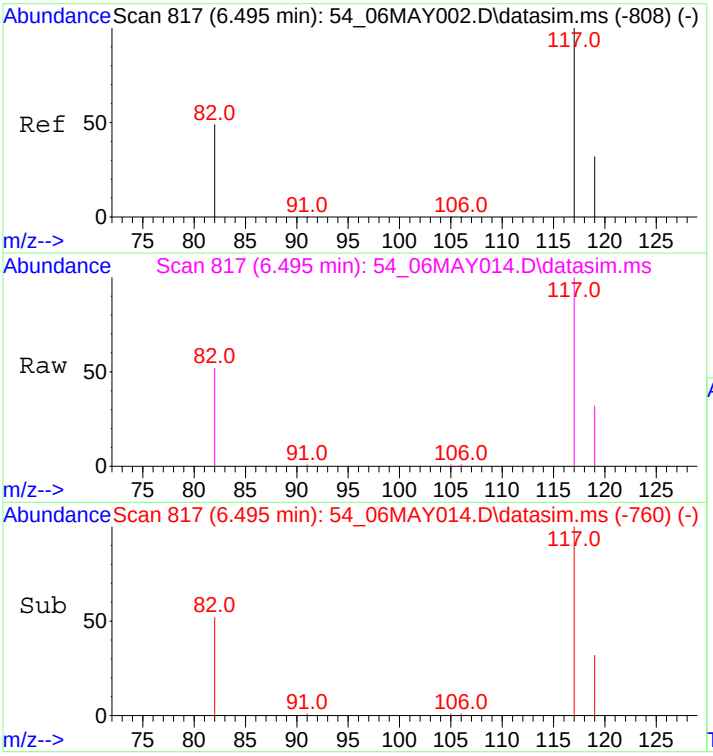


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY014.D
Acq: 6 May 2014 11:28 am

Tgt Ion:114 Resp: 8646

Ion	Ratio	Lower	Upper
114	100		
63	22.3	12.0	18.0#
88	16.7	11.8	17.8

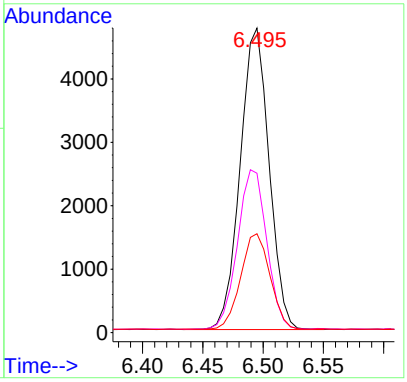




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 06MAY014.D
Acq: 6 May 2014 11:28 am

Tgt Ion:117 Resp: 7958

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.1	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY015.D
Acq On : 6 May 2014 11:40 am
Operator : yhl
Sample : 02211 \ F5-045
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:46:28 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3731	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	8707	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	7874	10.00	ppbv	0.00

System Monitoring Compounds

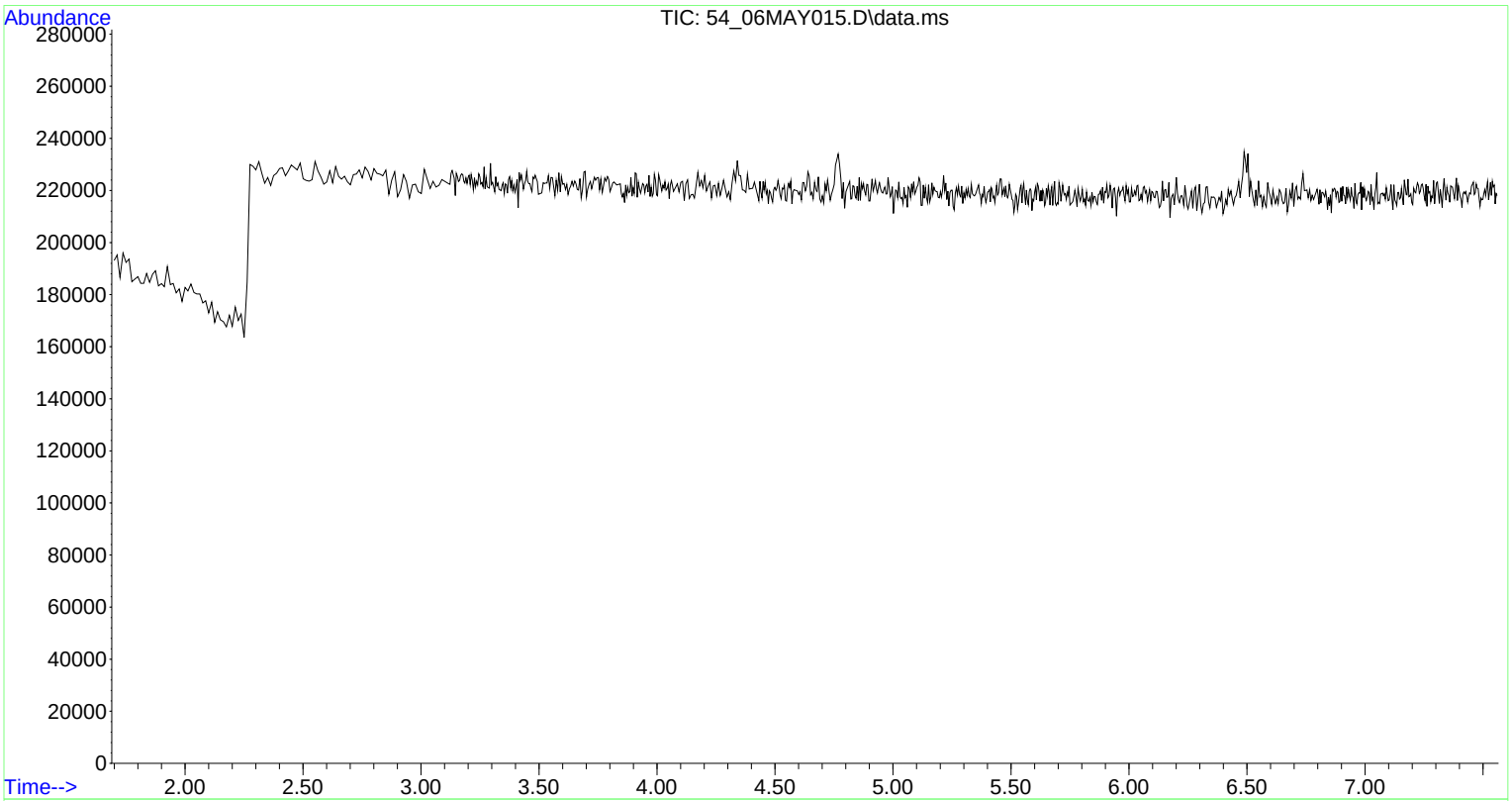
Target Compounds	Qvalue

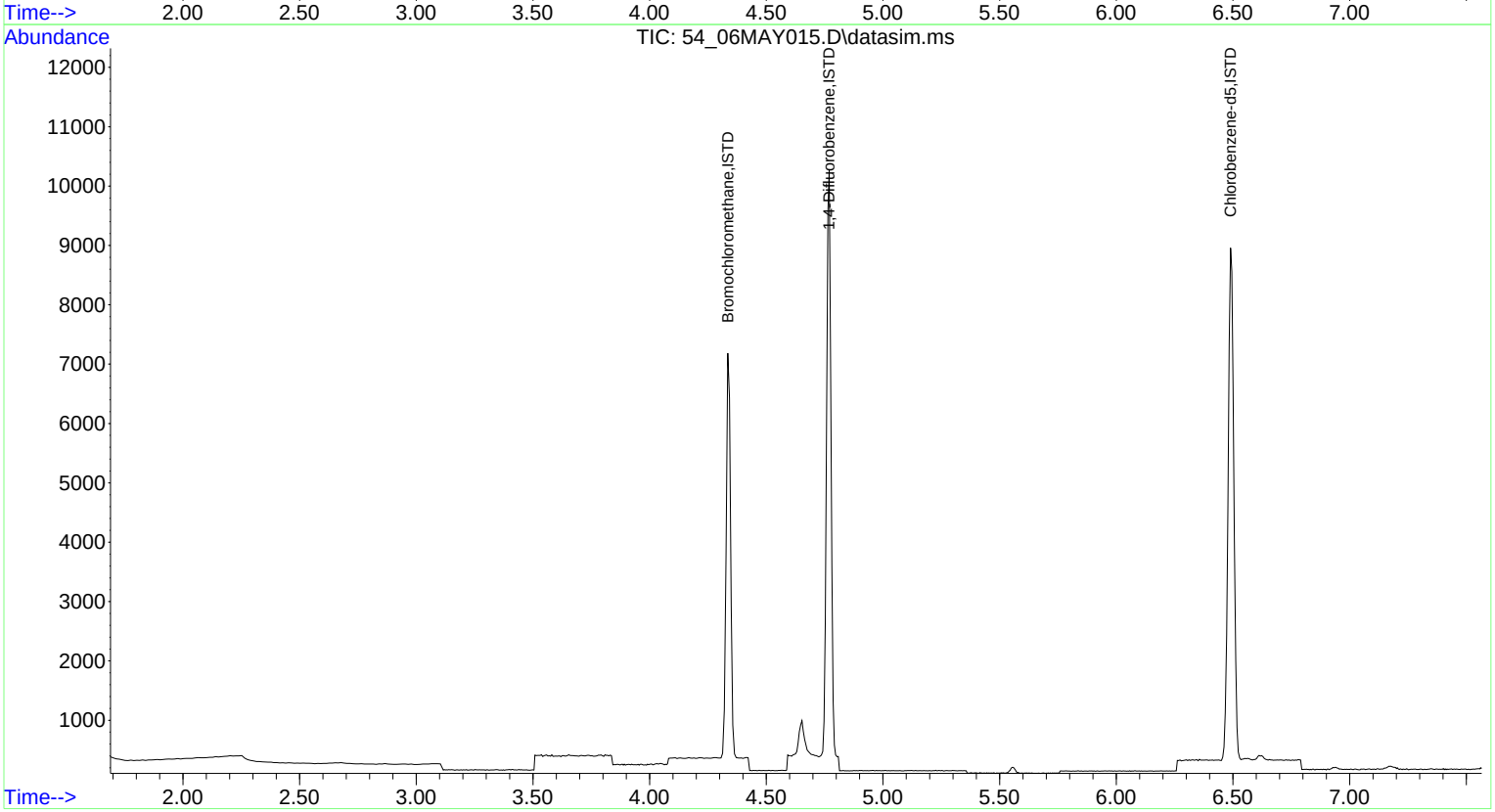
(#) = qualifier out of range (m) = manual integration (+) = signals summed

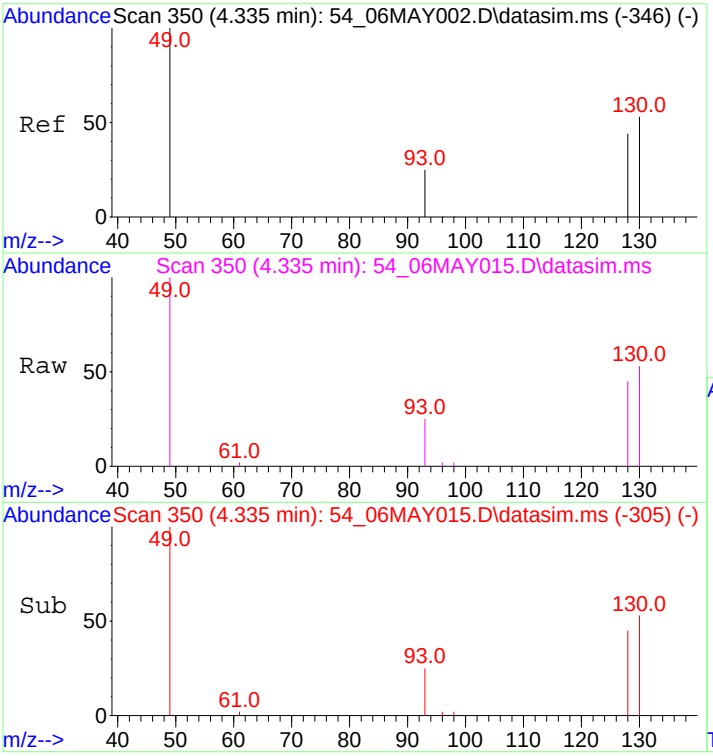
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY015.D
Acq On : 6 May 2014 11:40 am
Operator : yhl
Sample : 02211 \ F5-045
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:46:28 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



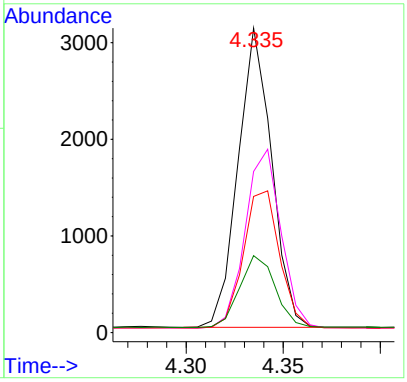


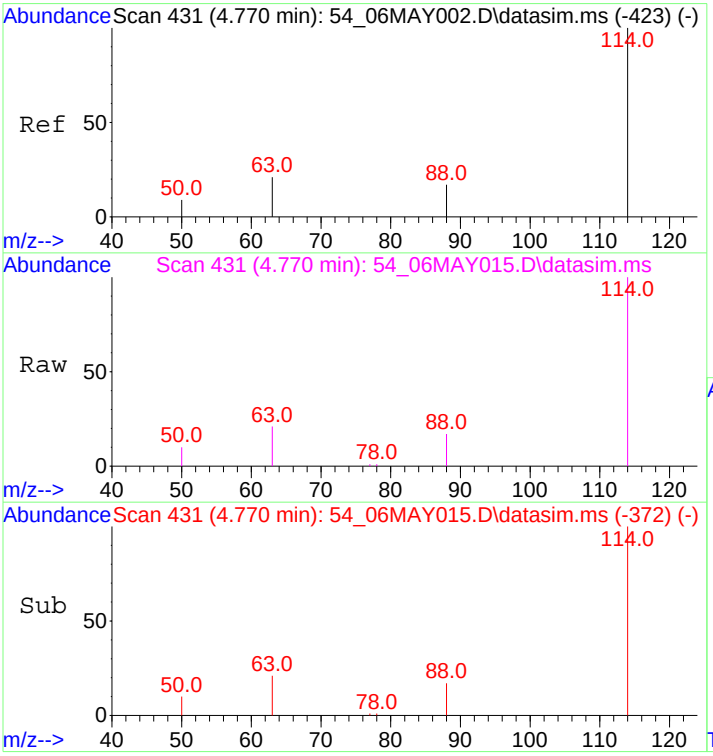


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY015.D
Acq: 6 May 2014 11:40 am

Tgt Ion: 49 Resp: 3731

Ion	Ratio	Lower	Upper
49	100		
130	63.4	87.2	130.8#
128	49.5	68.0	102.0#
93	25.5	29.3	43.9#

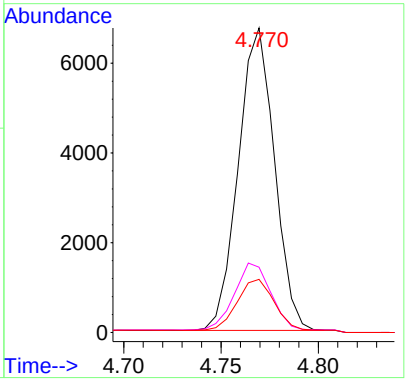


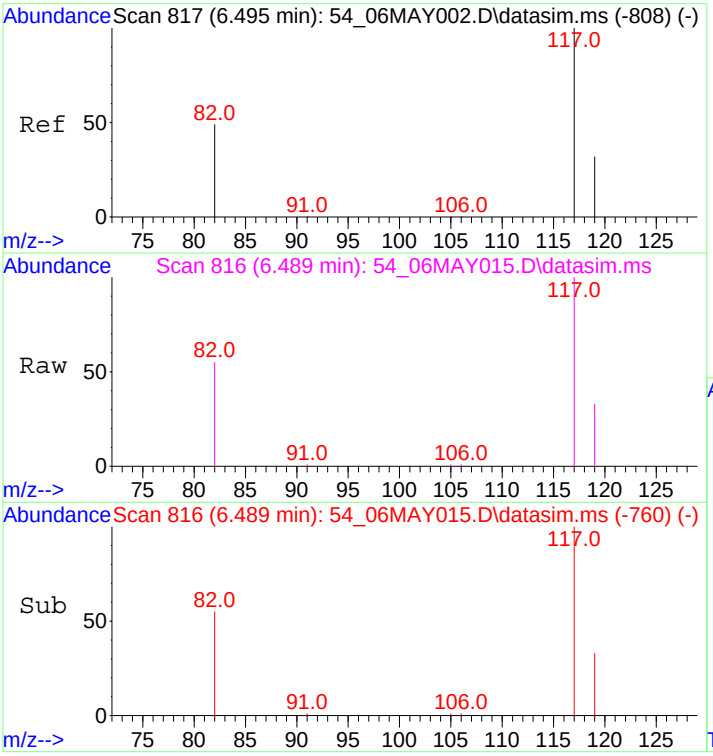


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY015.D
Acq: 6 May 2014 11:40 am

Tgt Ion:114 Resp: 8707

Ion	Ratio	Lower	Upper
114	100		
63	22.2	12.0	18.0#
88	17.2	11.8	17.8

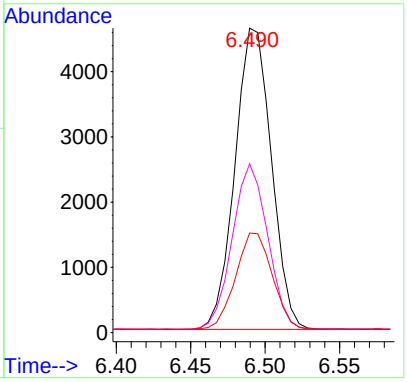




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY015.D
Acq: 6 May 2014 11:40 am

Tgt Ion:117 Resp: 7874

Ion	Ratio	Lower	Upper
117	100		
82	53.0	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY016.D
Acq On : 6 May 2014 11:51 am
Operator : yhl
Sample : 02212 \ F5-041
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:58:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3888	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9377	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8324	10.00 ppbv	0.00

System Monitoring Compounds

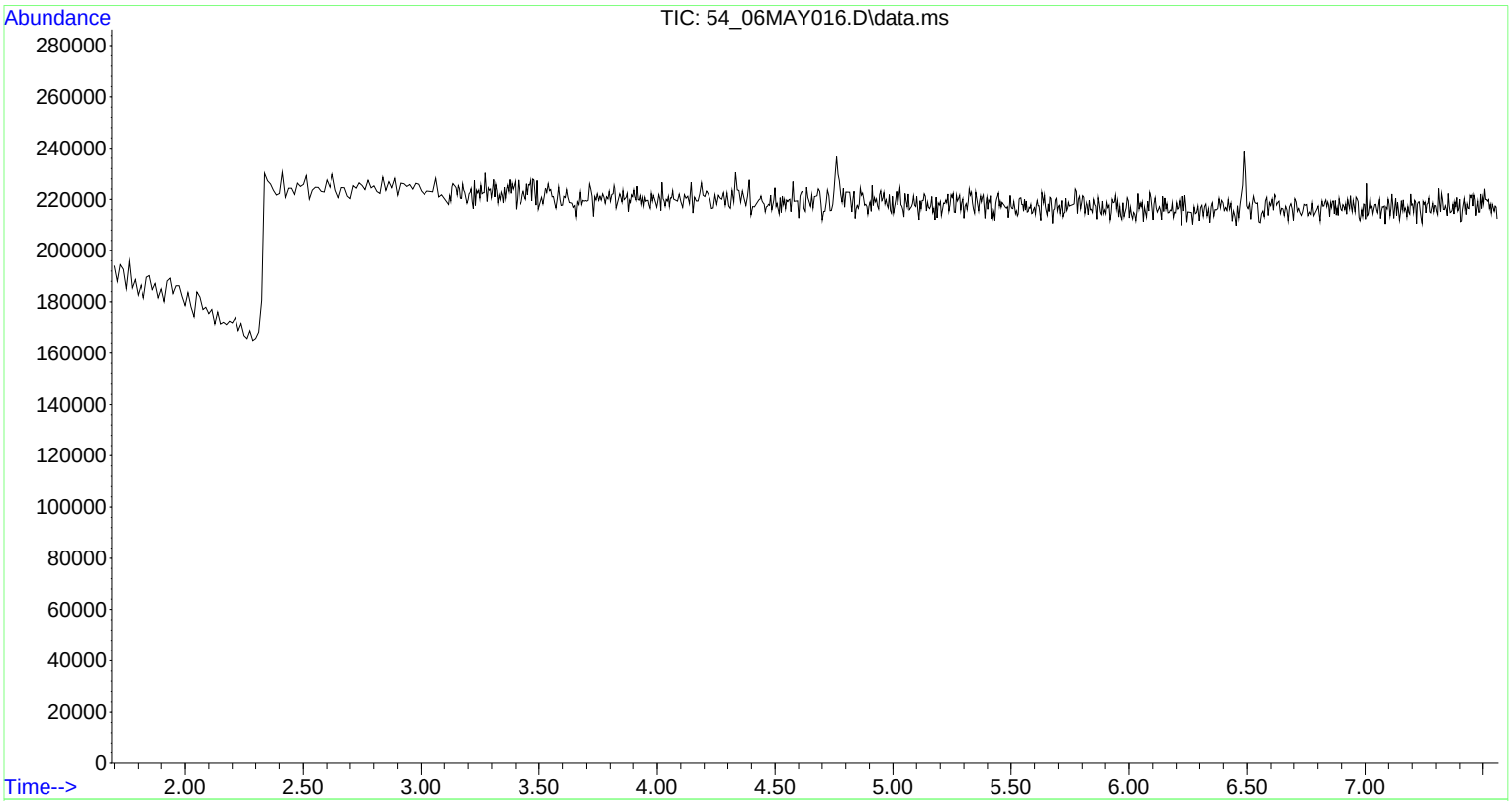
Target Compounds	Qvalue

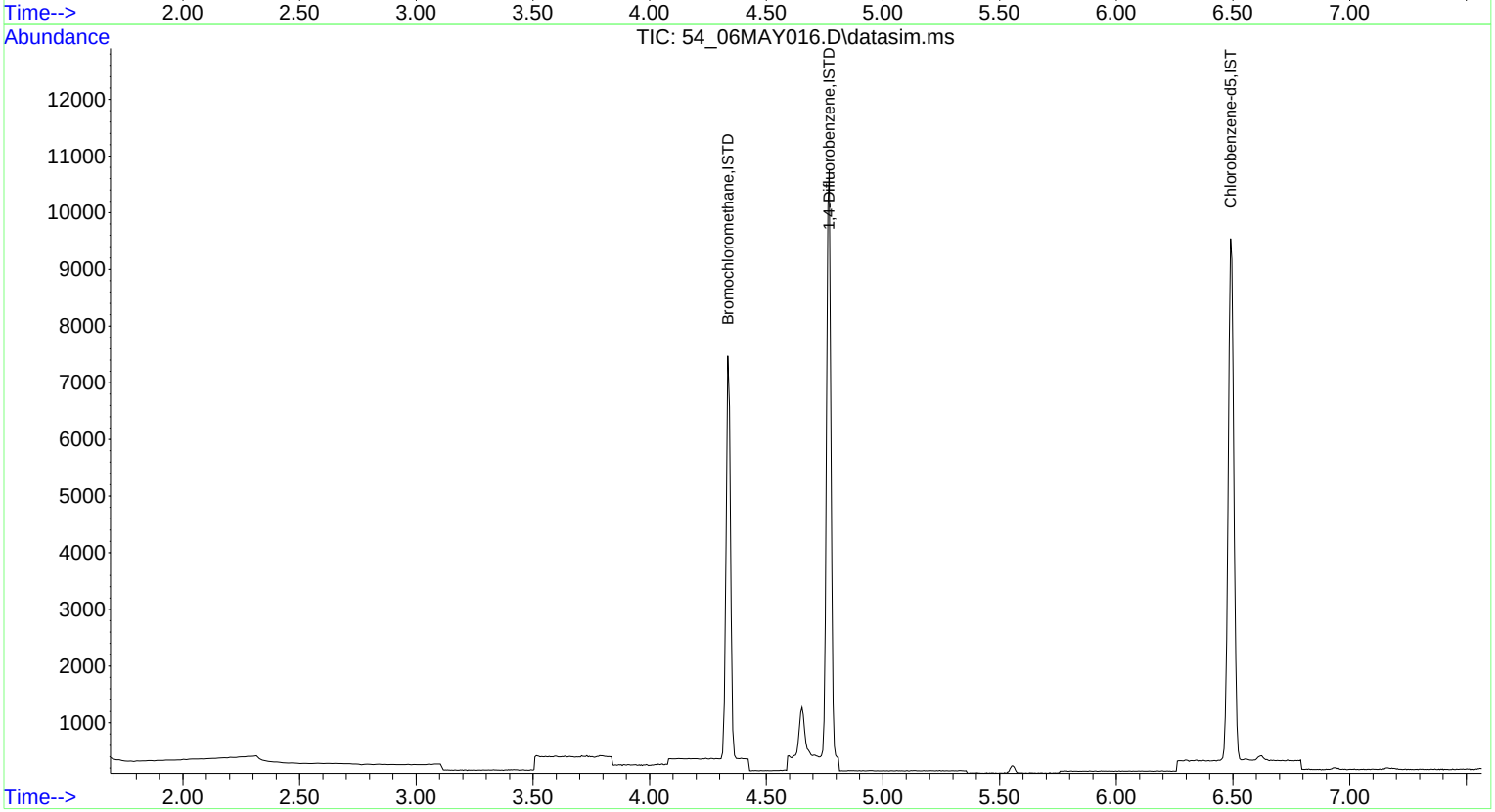
(#) = qualifier out of range (m) = manual integration (+) = signals summed

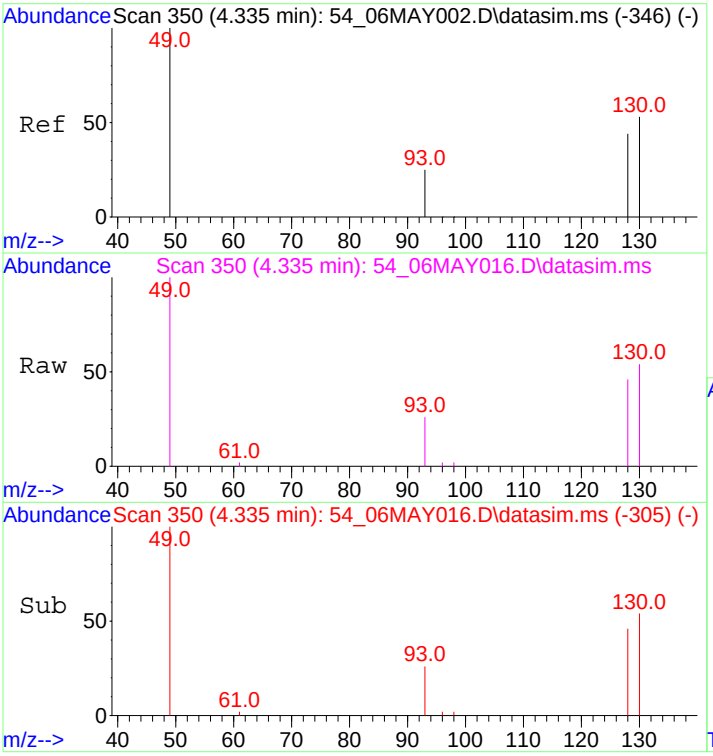
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY016.D
Acq On : 6 May 2014 11:51 am
Operator : yhl
Sample : 02212 \ F5-041
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 11:58:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



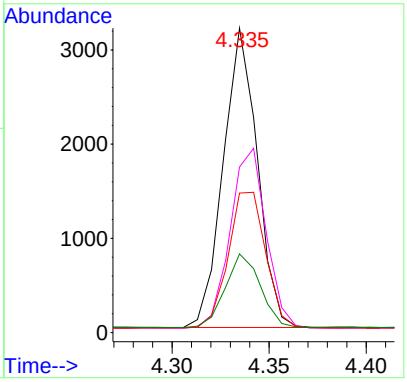


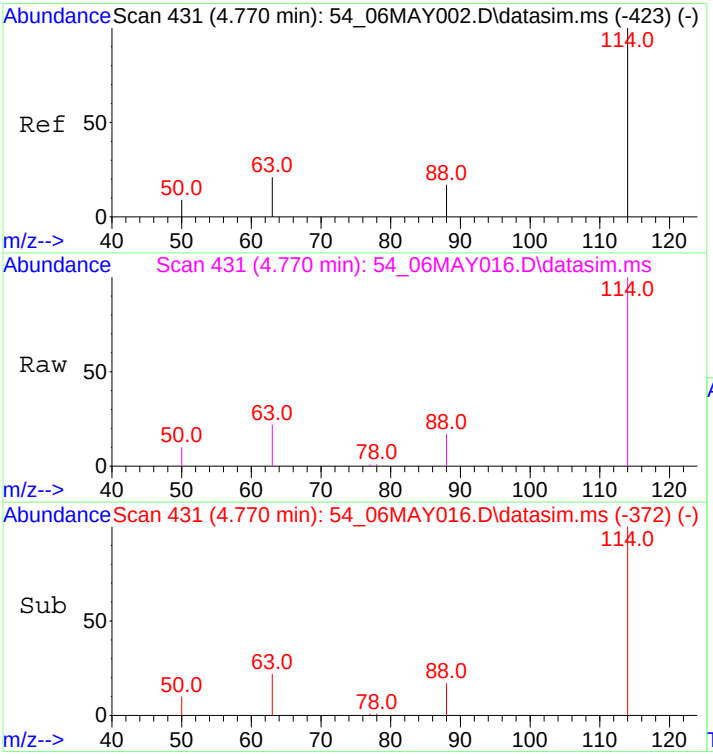


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY016.D
Acq: 6 May 2014 11:51 am

Tgt Ion: 49 Resp: 3888

Ion	Ratio	Lower	Upper
49	100		
130	63.3	87.2	130.8#
128	49.9	68.0	102.0#
93	25.4	29.3	43.9#

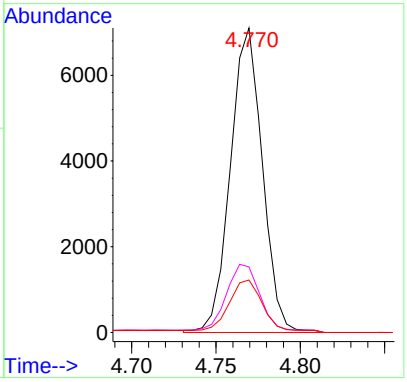


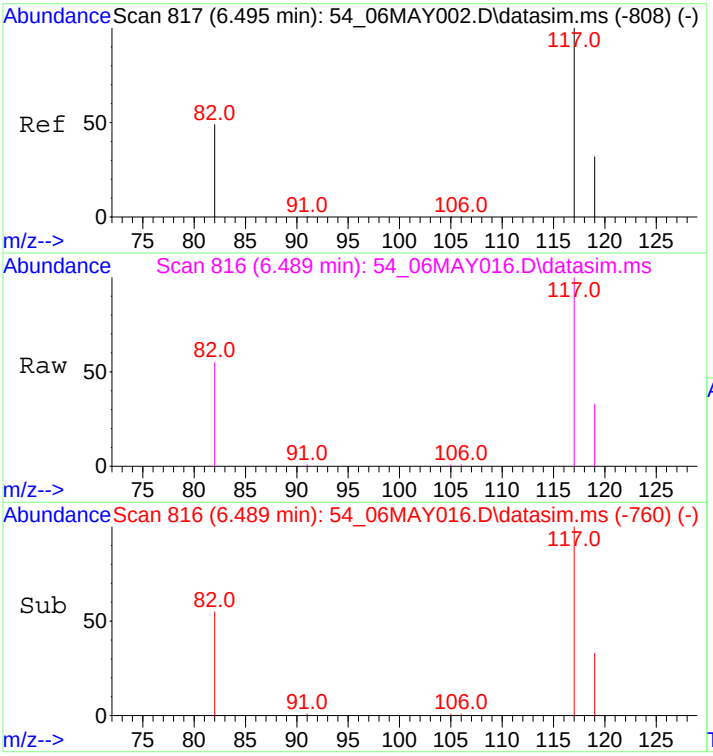


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY016.D
Acq: 6 May 2014 11:51 am

Tgt Ion:114 Resp: 9377

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.4	11.8	17.8

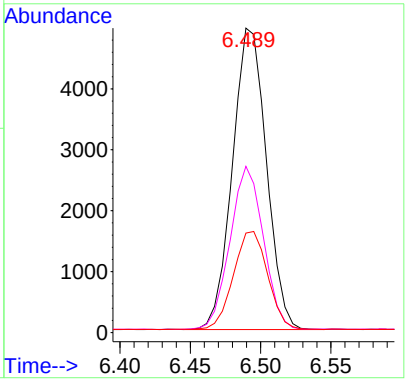




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY016.D
Acq: 6 May 2014 11:51 am

Tgt Ion:117 Resp: 8324

Ion	Ratio	Lower	Upper
117	100		
82	53.1	38.0	57.0
119	32.7	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY017.D
Acq On : 6 May 2014 12:02 pm
Operator : yhl
Sample : 02213 \ F5-043
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:08:54 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4183	10.00 ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9698	10.00 ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	8696	10.00 ppbv	0.00

System Monitoring Compounds

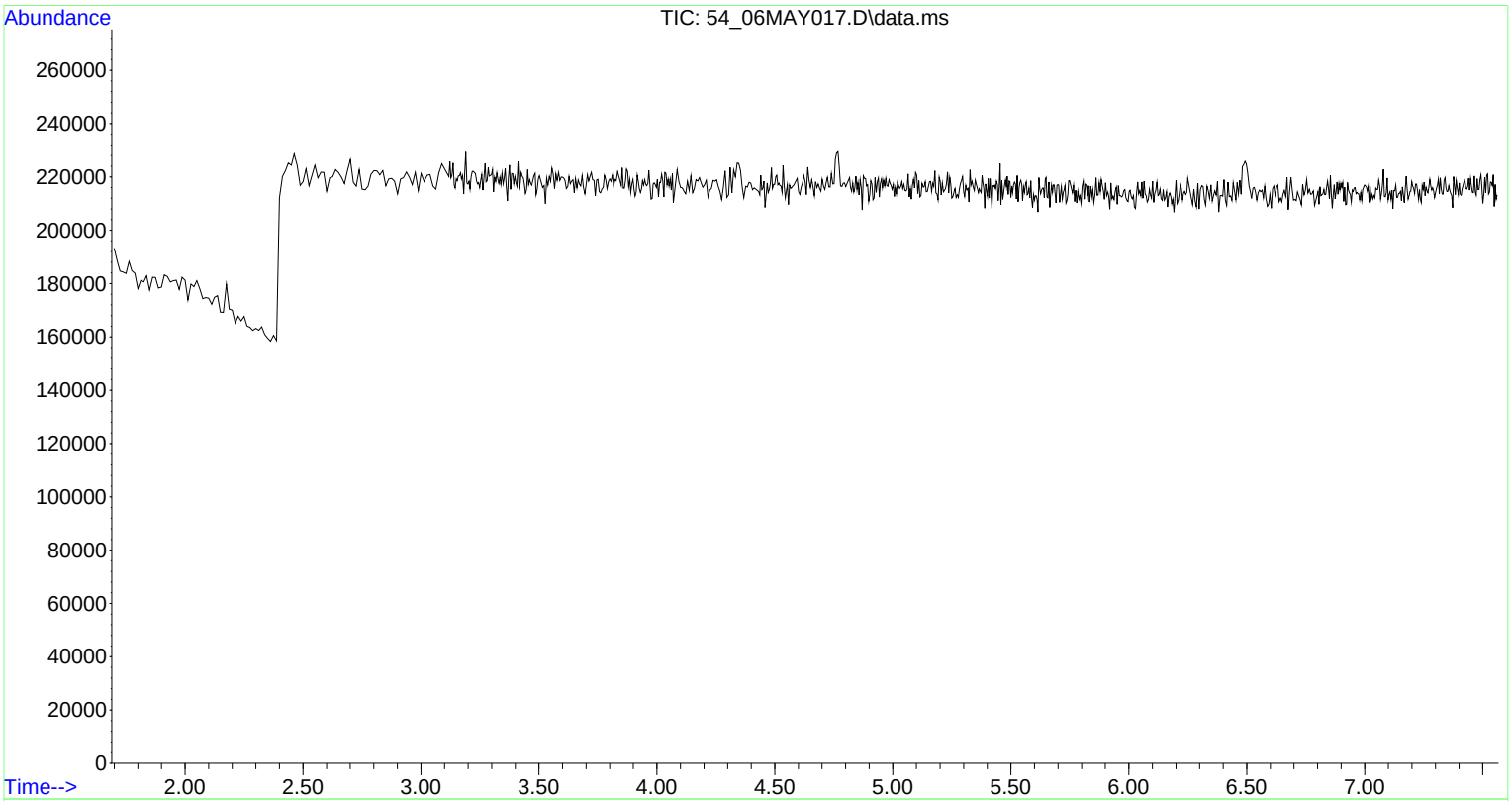
Target Compounds	Qvalue

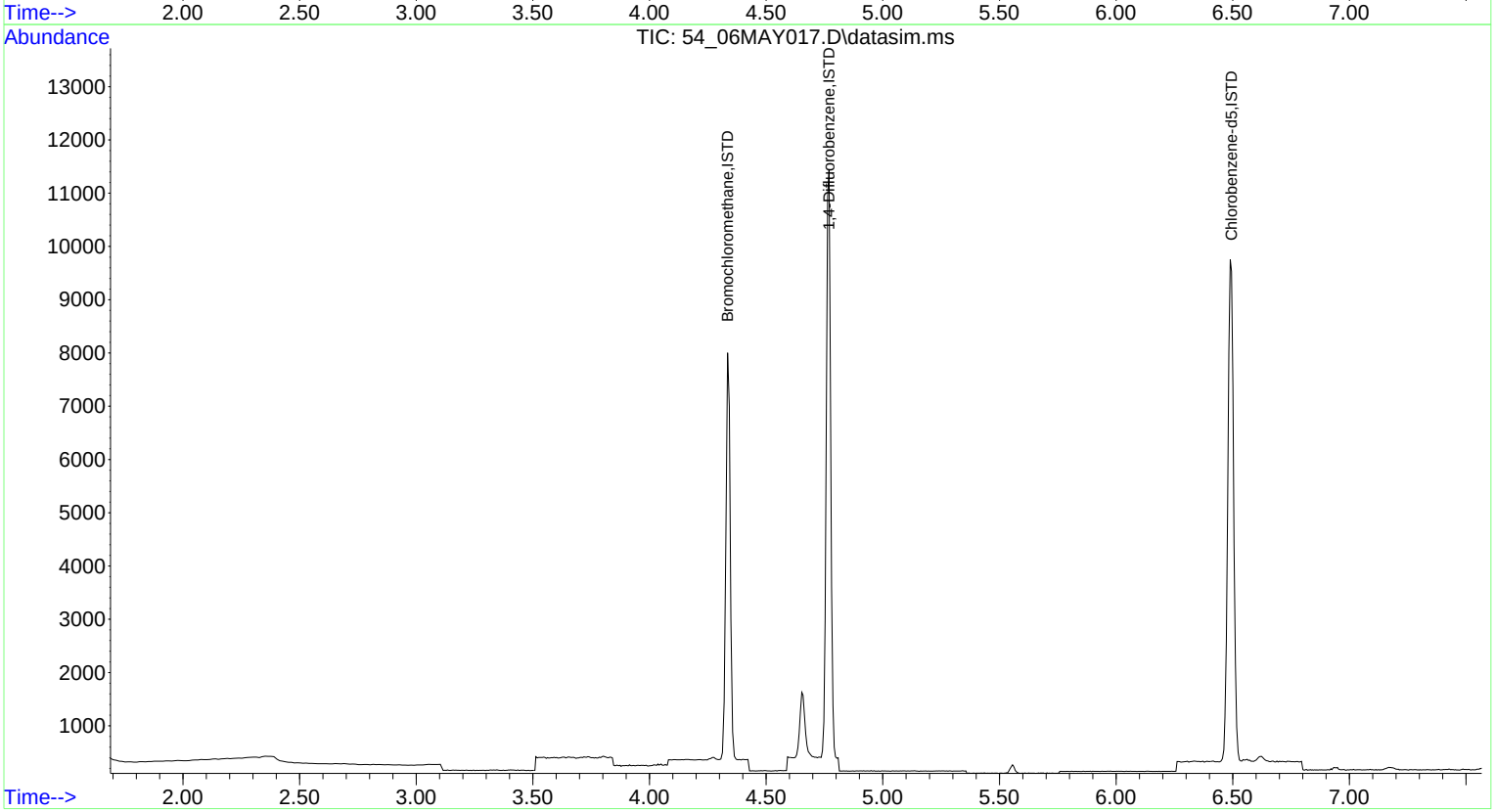
(#) = qualifier out of range (m) = manual integration (+) = signals summed

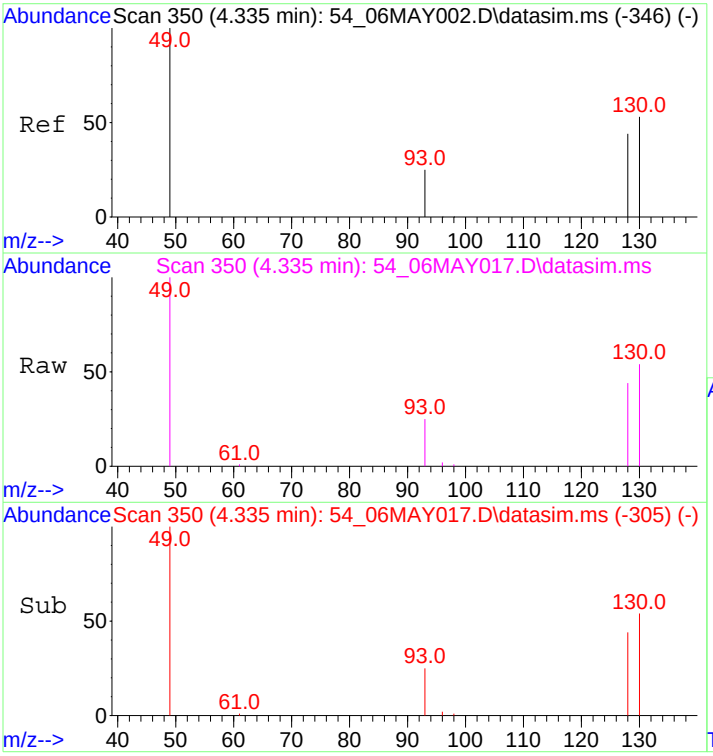
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY017.D
Acq On : 6 May 2014 12:02 pm
Operator : yhl
Sample : 02213 \ F5-043
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:08:54 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



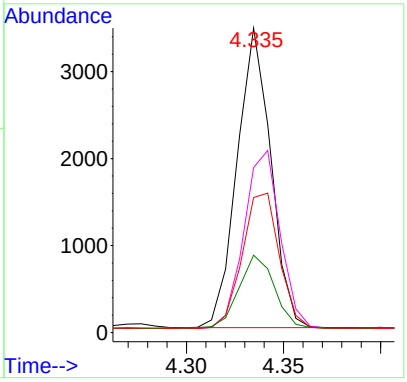


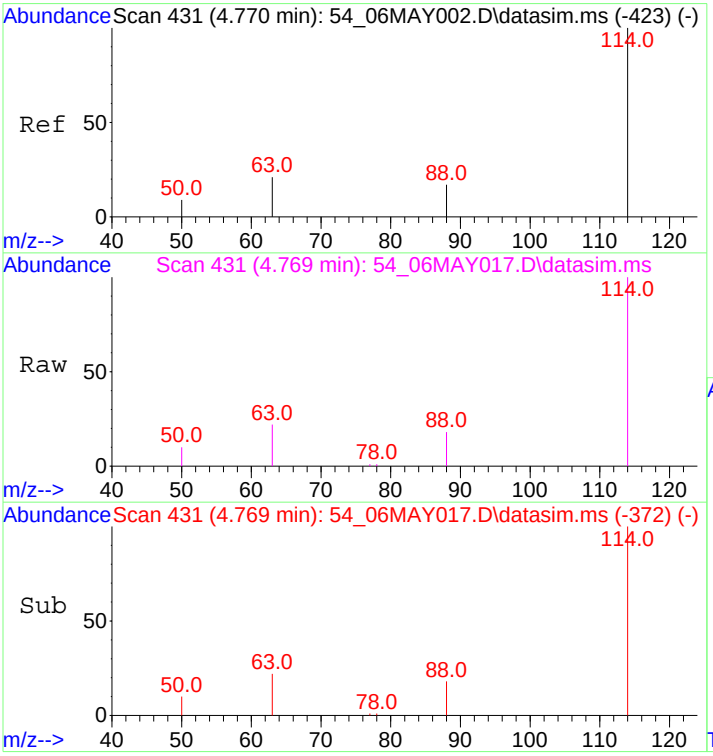


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY017.D
Acq: 6 May 2014 12:02 pm

Tgt Ion: 49 Resp: 4183

Ion	Ratio	Lower	Upper
49	100		
130	63.4	87.2	130.8#
128	49.8	68.0	102.0#
93	25.2	29.3	43.9#

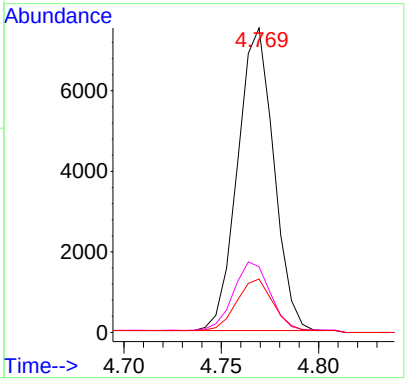


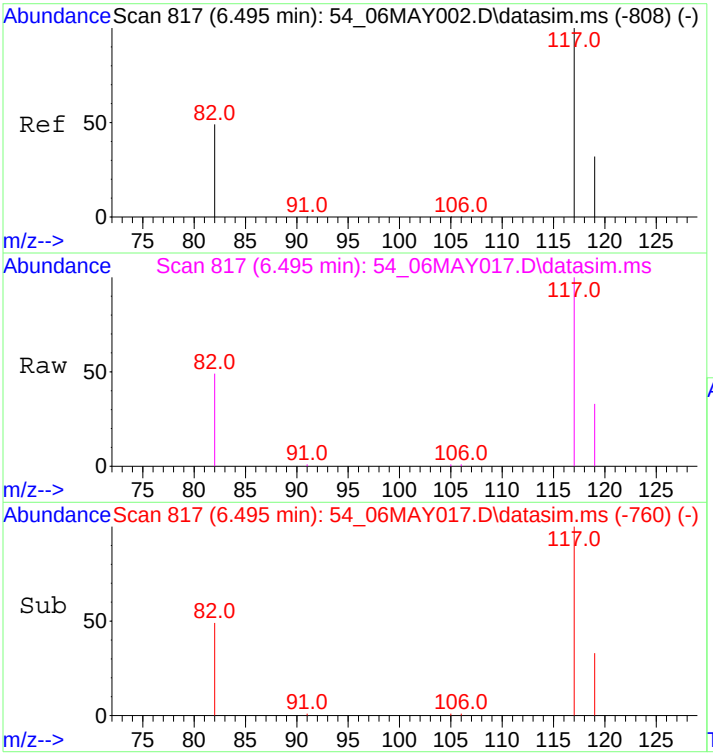


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY017.D
Acq: 6 May 2014 12:02 pm

Tgt Ion:114 Resp: 9698

Ion	Ratio	Lower	Upper
114	100		
63	22.9	12.0	18.0#
88	17.0	11.8	17.8

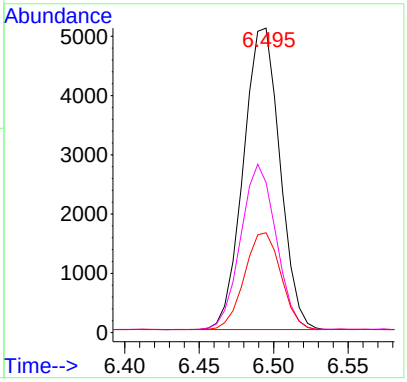




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 06MAY017.D
Acq: 6 May 2014 12:02 pm

Tgt Ion:117 Resp: 8696

Ion	Ratio	Lower	Upper
117	100		
82	53.1	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY018.D
Acq On : 6 May 2014 12:13 pm
Operator : yhl
Sample : 02214 \ D5-016
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:22:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

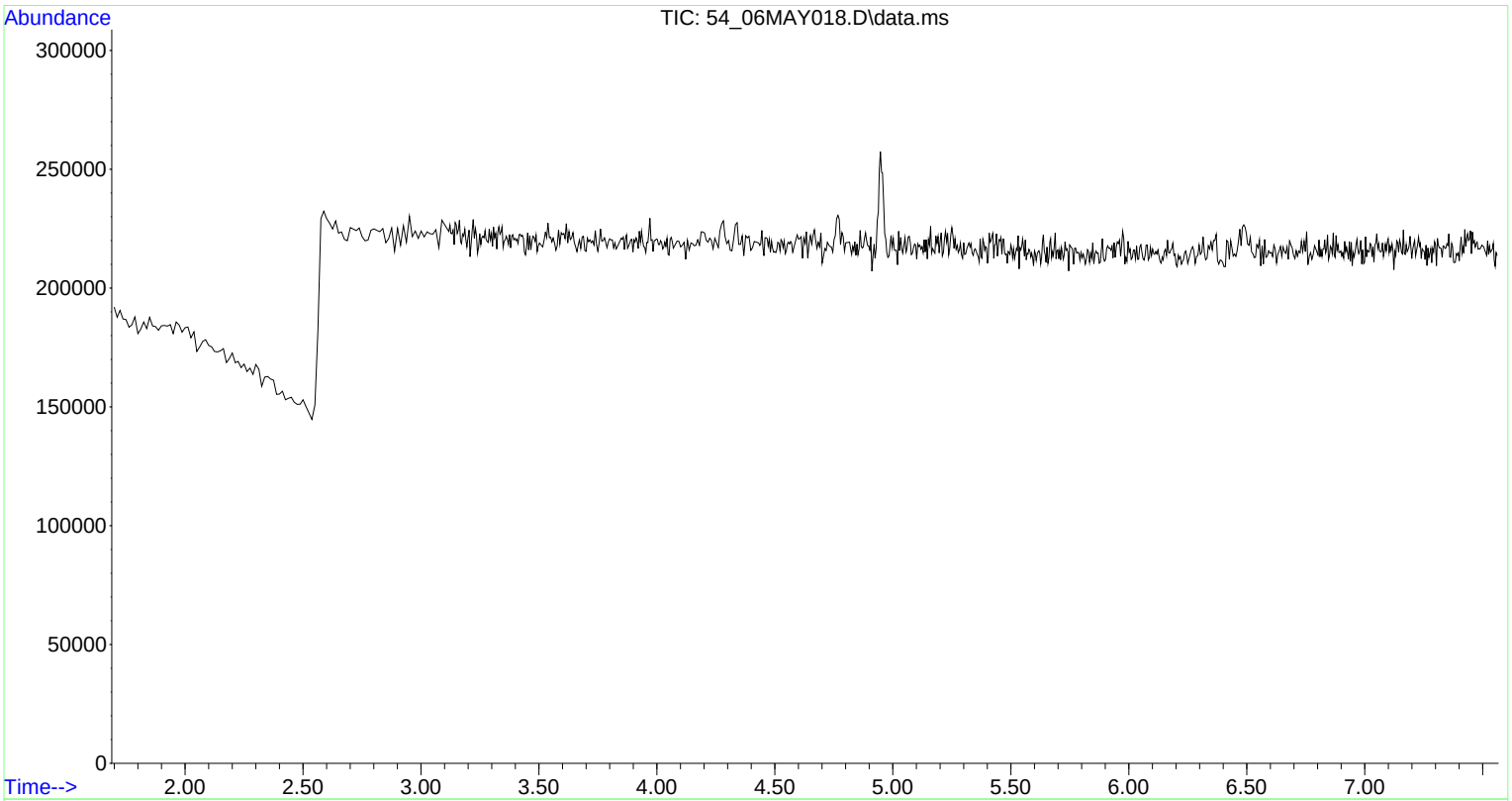
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3856	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	8982	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8287	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.255	61	407	1.36	ppbv	# 56
5] trans-1,2-Dichloroethene	3.702	61	221m	0.84	ppbv	
6] 1,1-Dichloroethane	3.910	63	221	0.70	ppbv	# 73
7] cis-1,2-Dichloroethene	4.197	61	2660	10.82	ppbv	# 68
11] Trichloroethene	4.949	130	11065	49.53	ppbv	98
13] Toluene	5.556	91	1141	2.30	ppbv	100
14] Tetrachloroethene	5.972	166	1081	3.81	ppbv	98

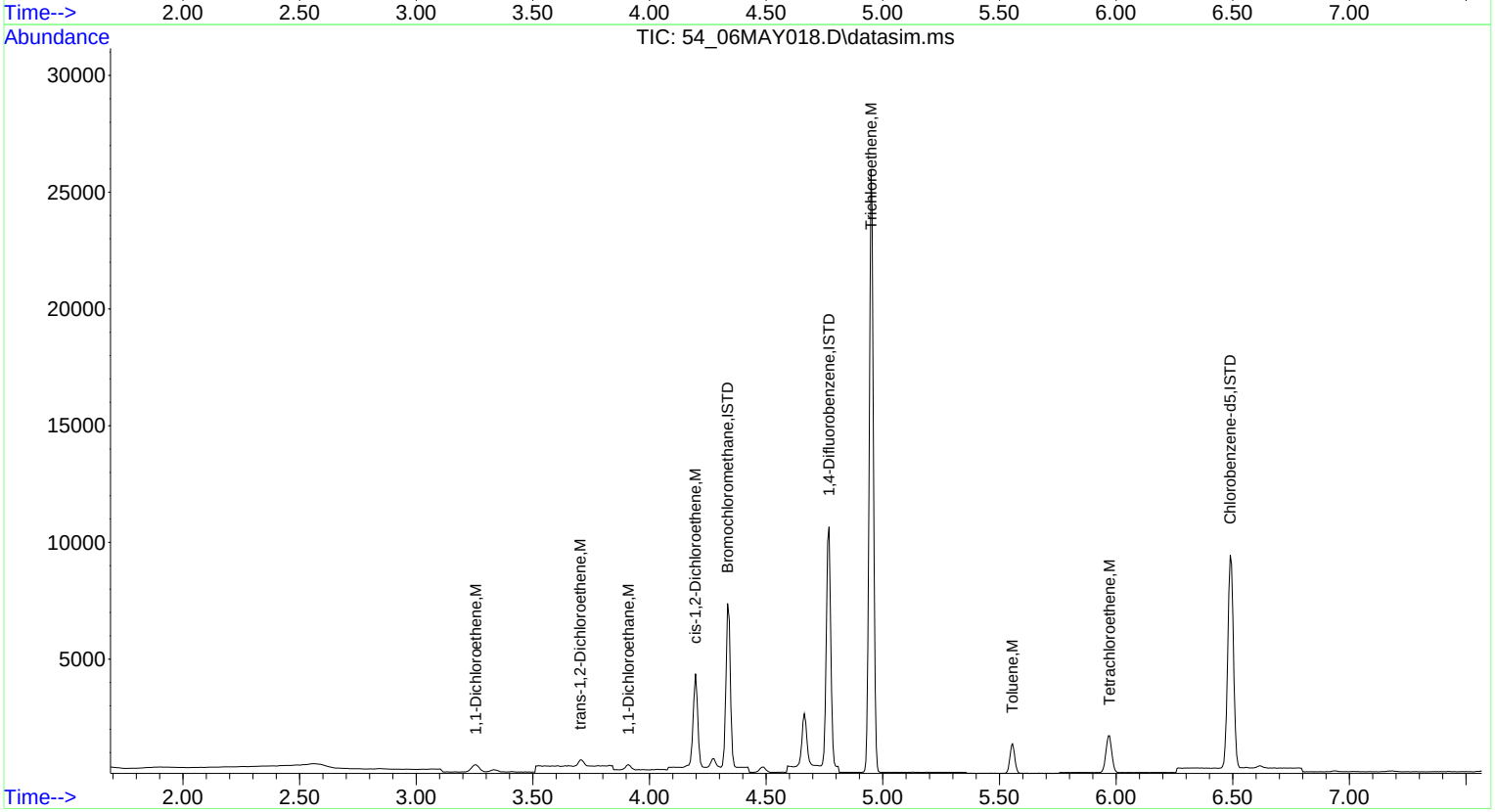
(#) = qualifier out of range (m) = manual integration (+) = signals summed

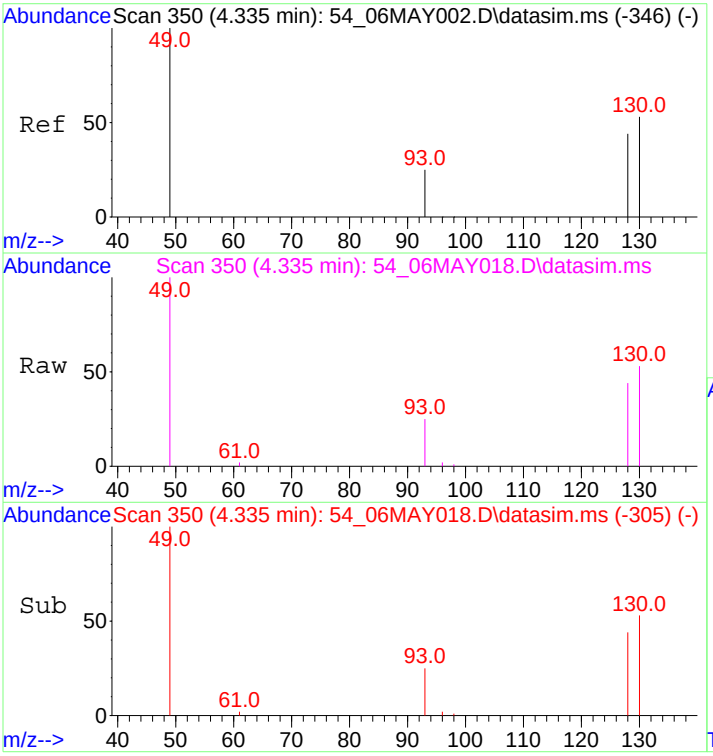
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY018.D
Acq On : 6 May 2014 12:13 pm
Operator : yhl
Sample : 02214 \ D5-016
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:22:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



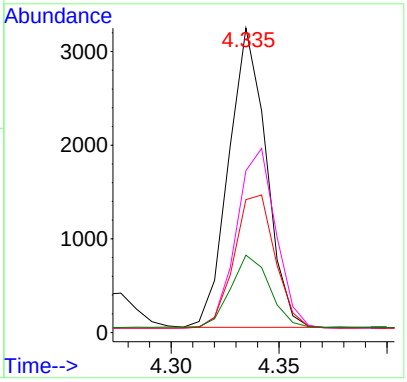


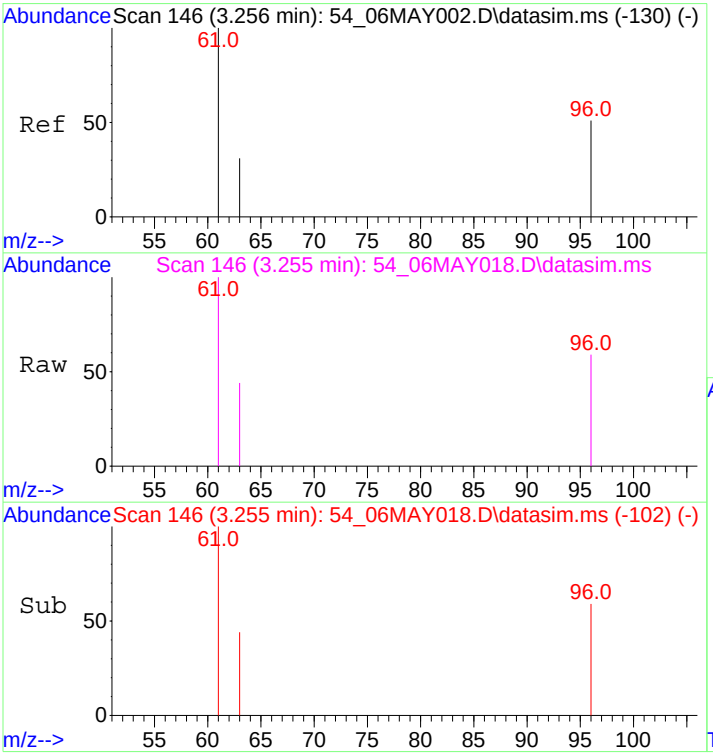


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion: 49 Resp: 3856

Ion	Ratio	Lower	Upper
49	100		
130	63.3	87.2	130.8#
128	48.7	68.0	102.0#
93	25.3	29.3	43.9#

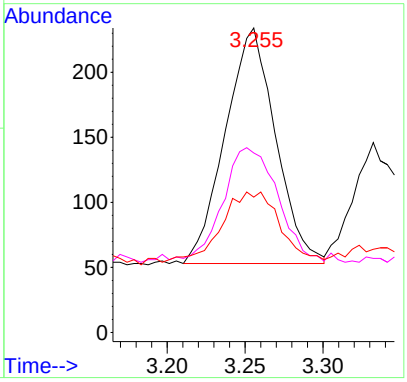


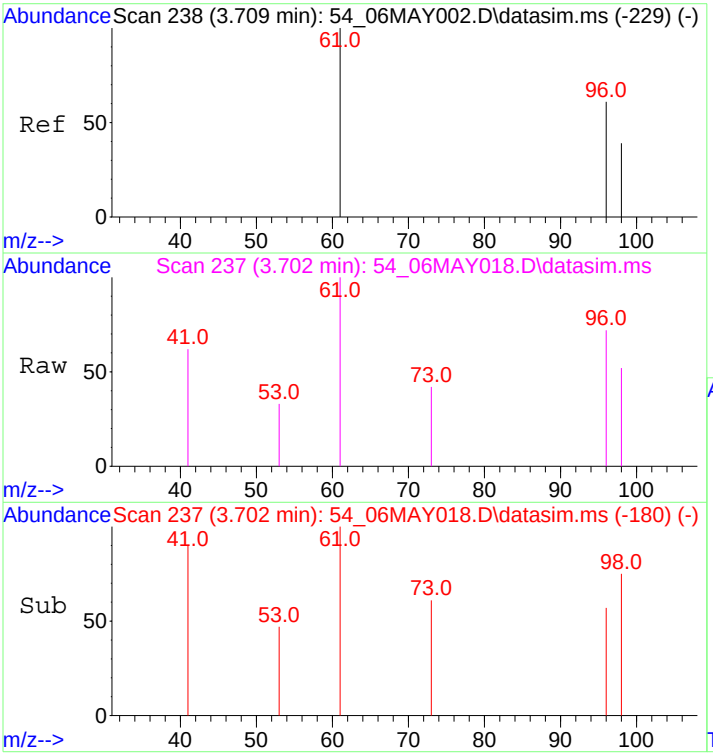


#3
1,1-Dichloroethene
Concen: 1.36 ppbv
RT: 3.255 min Scan# 146
Delta R.T. -0.000 min
Lab File: 54_06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion: 61 Resp: 407

Ion	Ratio	Lower	Upper
61	100		
96	99.3	63.4	95.2#
63	87.0	26.2	39.2#

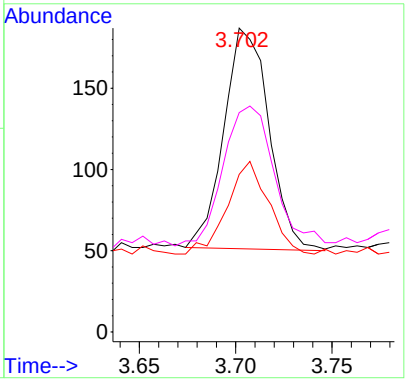


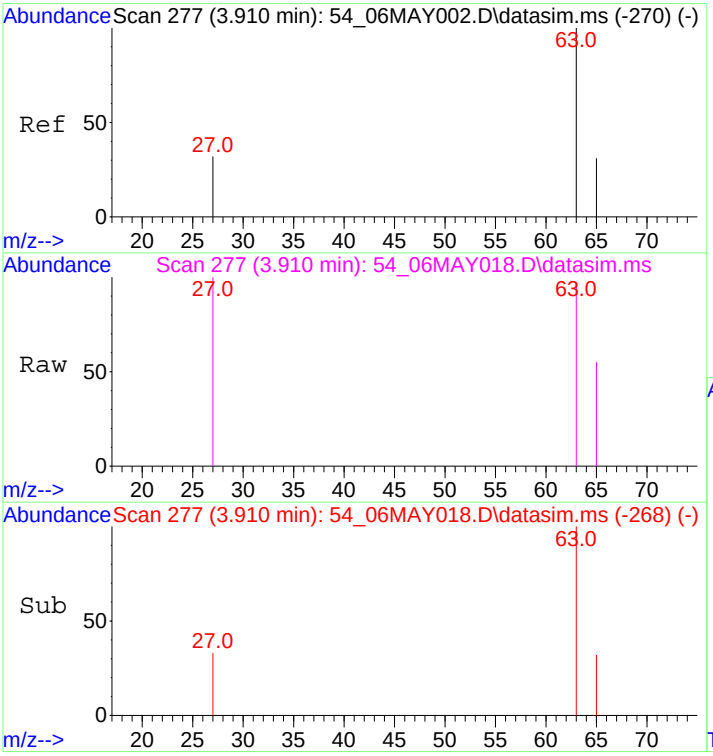


#5
trans-1,2-Dichloroethene
Concen: 0.84 ppbv m
RT: 3.702 min Scan# 237
Delta R.T. -0.007 min
Lab File: 54 06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion: 61 Resp: 221

Ion	Ratio	Lower	Upper
61	100		
96	69.7	71.4	107.0#
98	125.3	45.8	68.8#

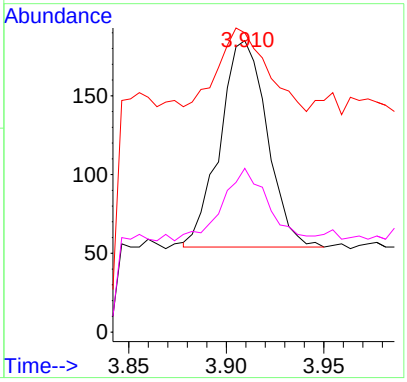




#6
1,1-Dichloroethane
Concen: 0.70 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion: 63 Resp: 221

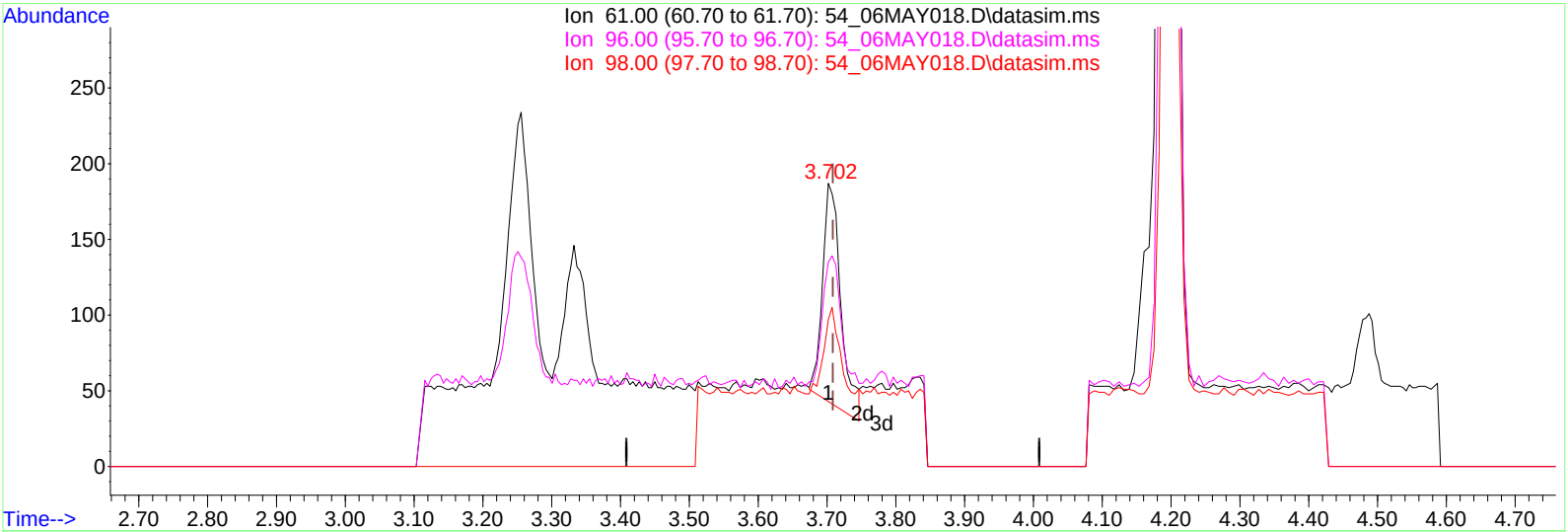
Ion	Ratio	Lower	Upper
63	100		
65	27.1	26.1	39.1
27	41.2	10.2	15.2#

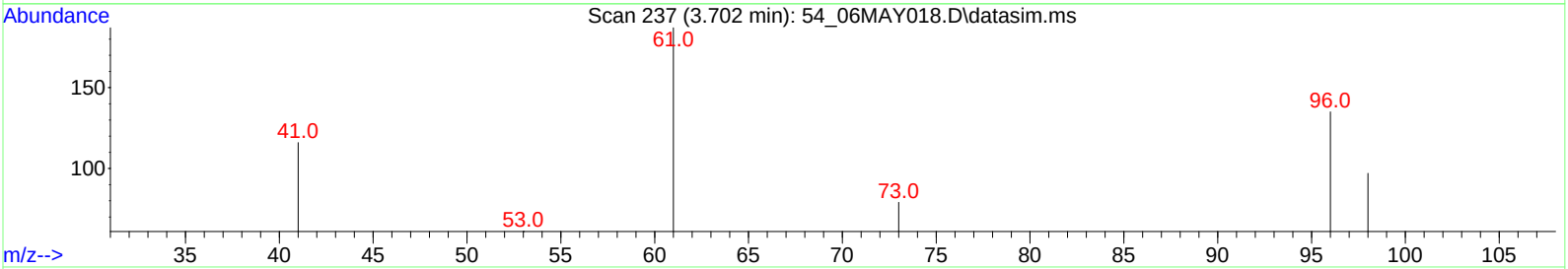


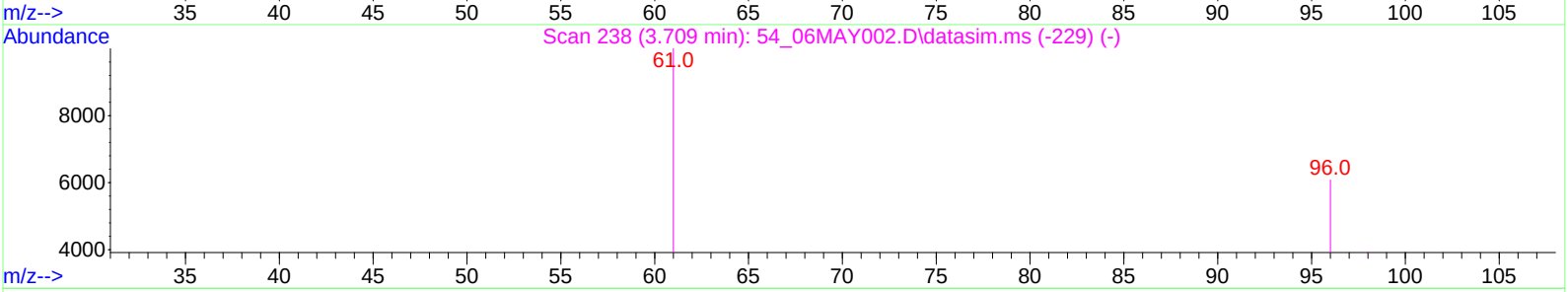
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY018.D
Acq On : 6 May 2014 12:13 pm
Operator : yhl
Sample : 02214 \ D5-016
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:21:11 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration







TIC: 54_06MAY018.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.702min (-0.007) 1.01 ppbv

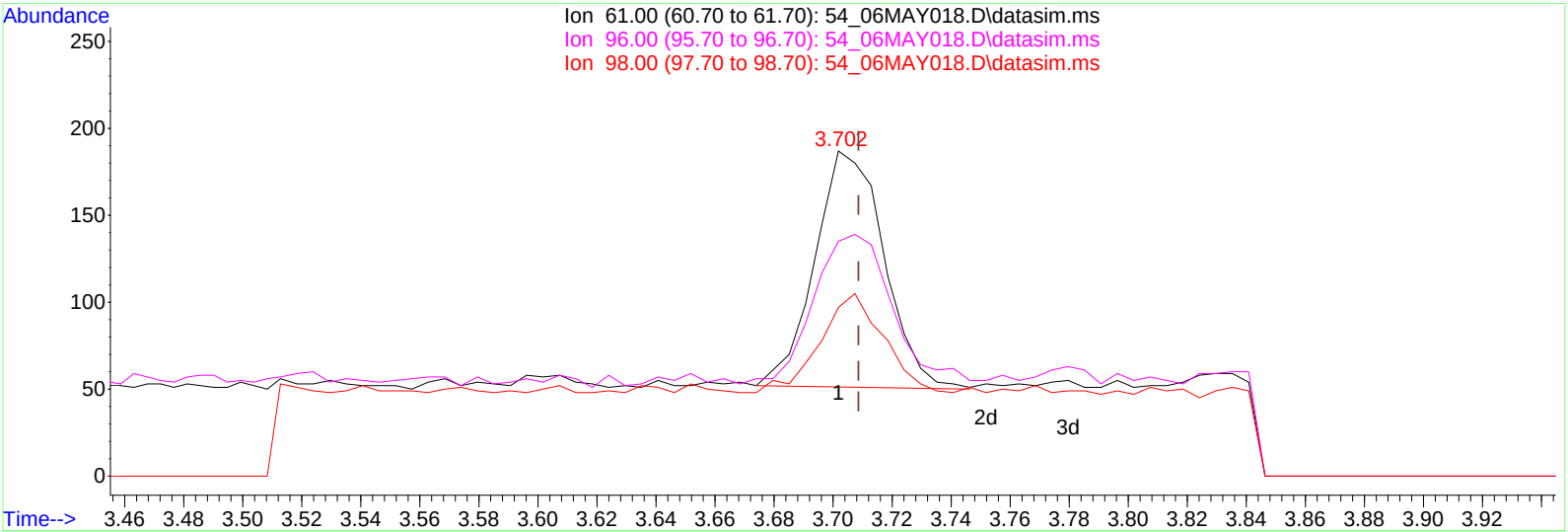
response 267

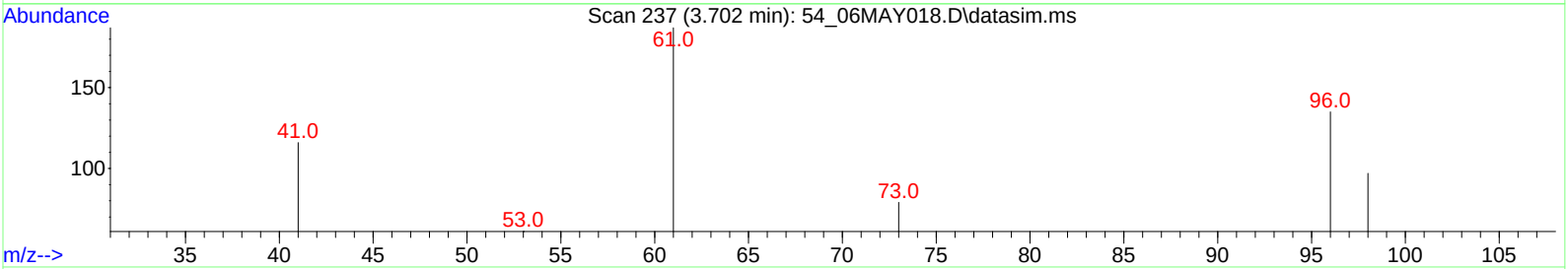
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	57.68#
98.00	57.30	103.75#
0.00	0.00	0.00

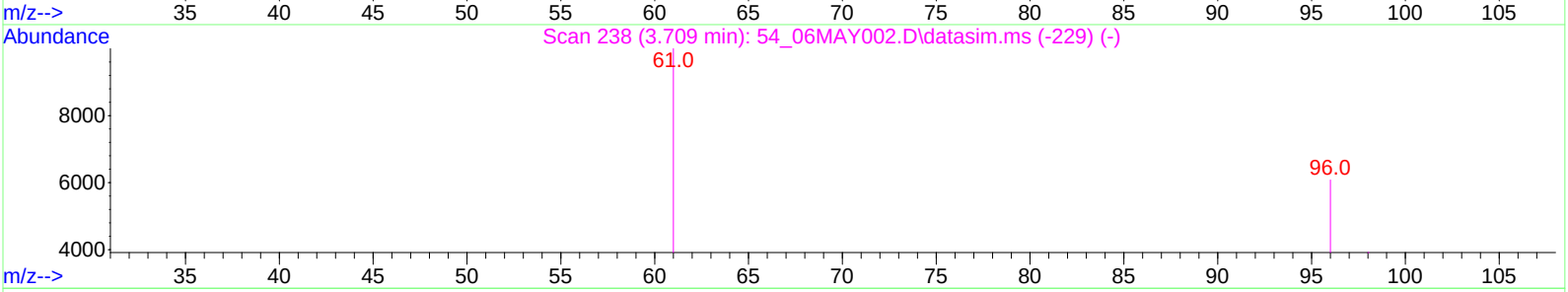
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY018.D
Acq On : 6 May 2014 12:13 pm
Operator : yhl
Sample : 02214 \ D5-016
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:21:11 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration







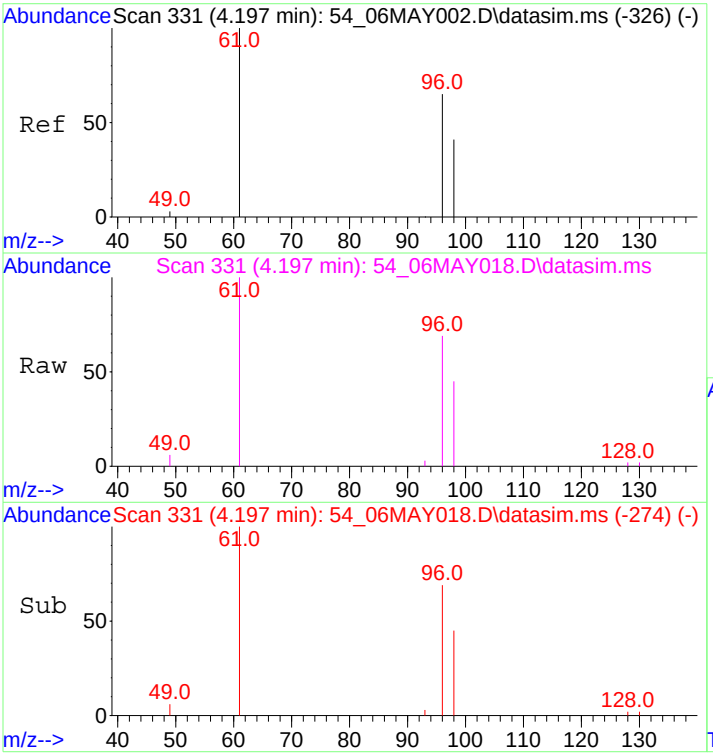
TIC: 54_06MAY018.D\data.ms

(5) trans-1,2-Dichloroethene (M)

3.702min (-0.007) 0.84 ppbv m

response 221

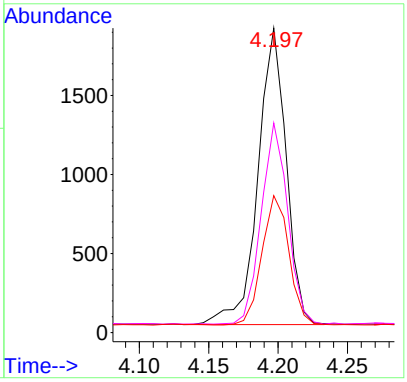
Ion	Exp%	Act%
61.00	100	100
96.00	89.20	69.68#
98.00	57.30	125.34#
0.00	0.00	0.00

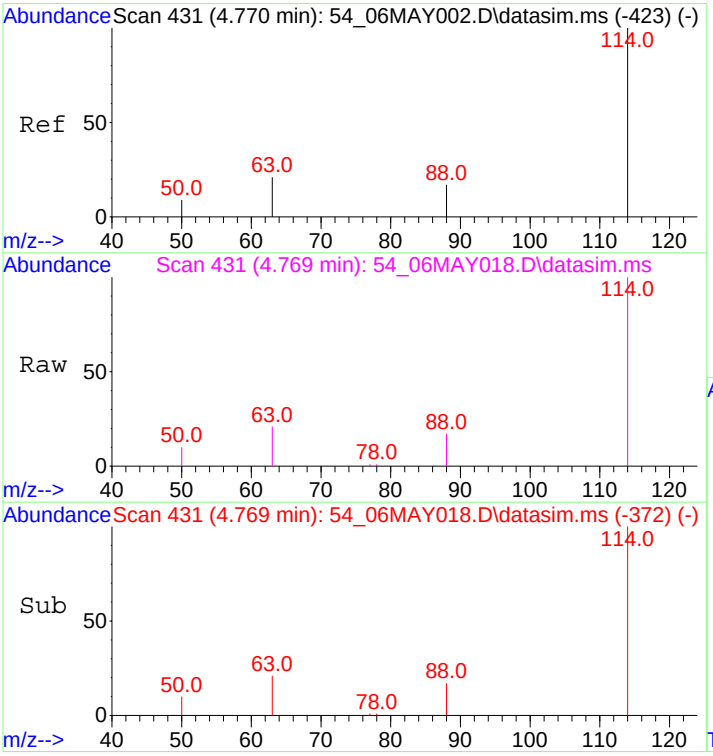


#7
cis-1,2-Dichloroethene
Concen: 10.82 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion: 61 Resp: 2660

Ion	Ratio	Lower	Upper
61	100		
96	63.3	78.5	117.7#
98	41.6	50.6	76.0#

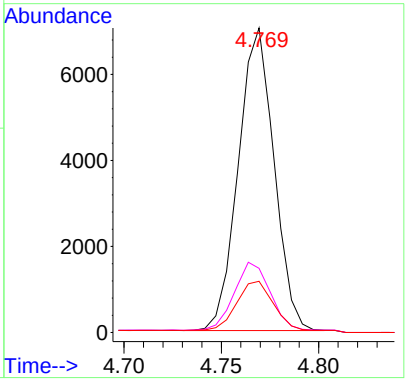


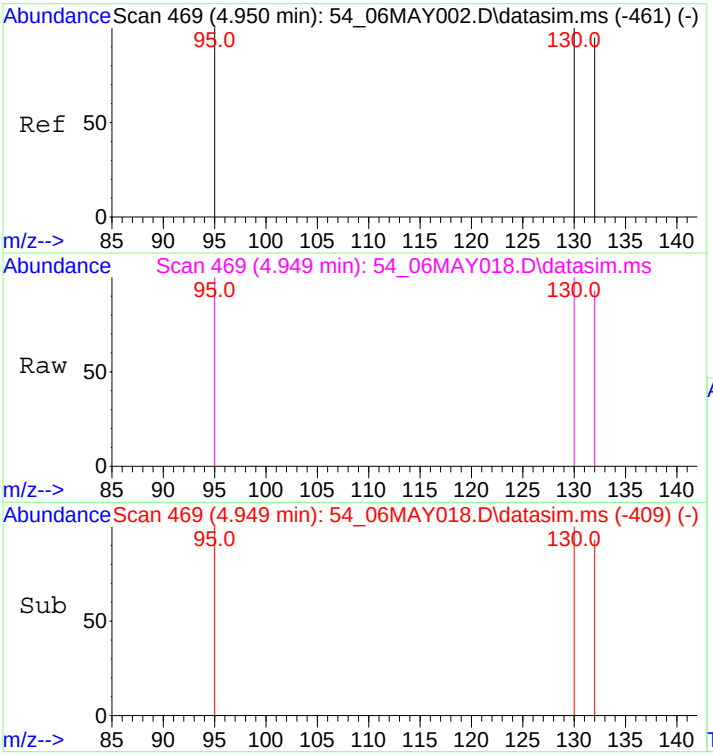


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion:114 Resp: 8982

Ion	Ratio	Lower	Upper
114	100		
63	22.5	12.0	18.0#
88	16.5	11.8	17.8

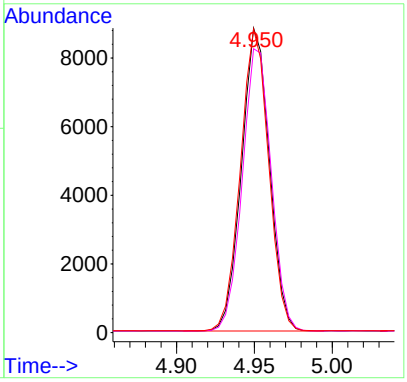


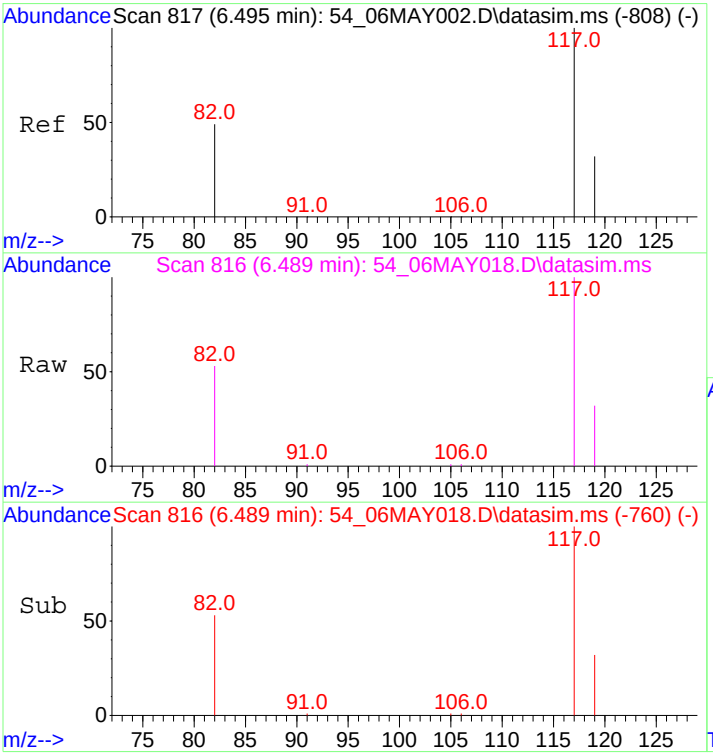


#11
Trichloroethene
Concen: 49.53 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion:130 Resp: 11065

Ion	Ratio	Lower	Upper
130	100		
132	96.3	76.9	115.3
95	100.2	76.5	114.7

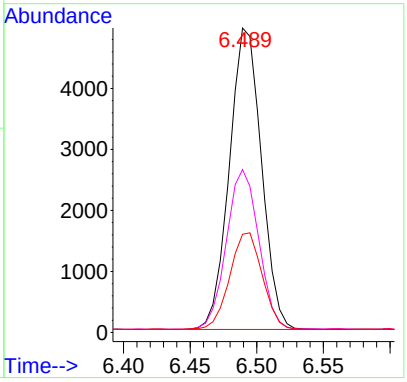


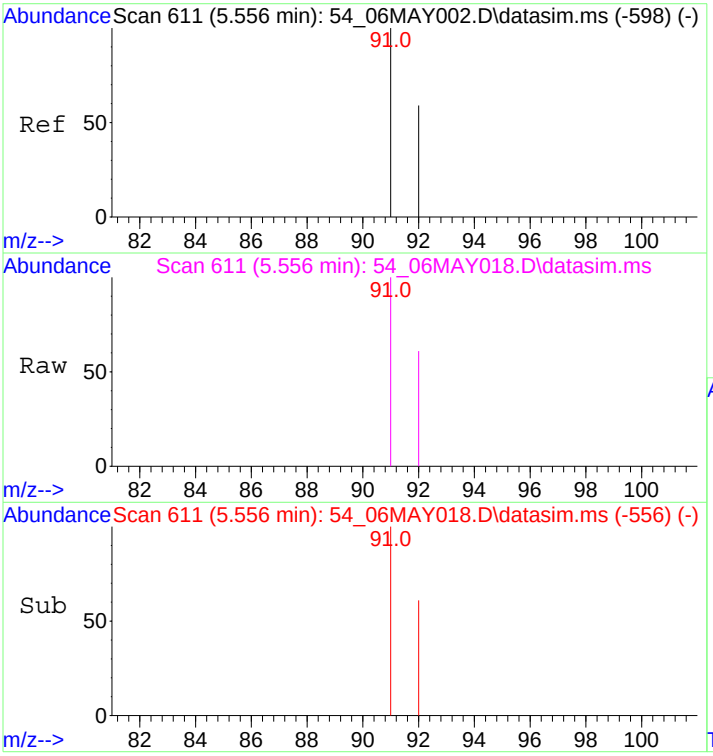


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54_06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion:117 Resp: 8287

Ion	Ratio	Lower	Upper
117	100		
82	53.1	38.0	57.0
119	32.7	27.0	40.4

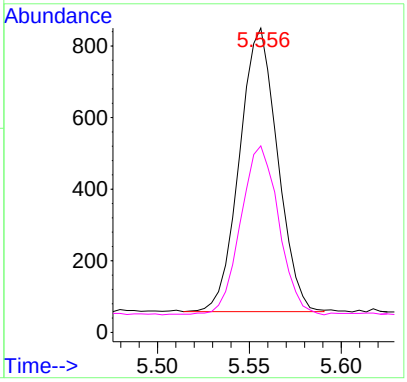


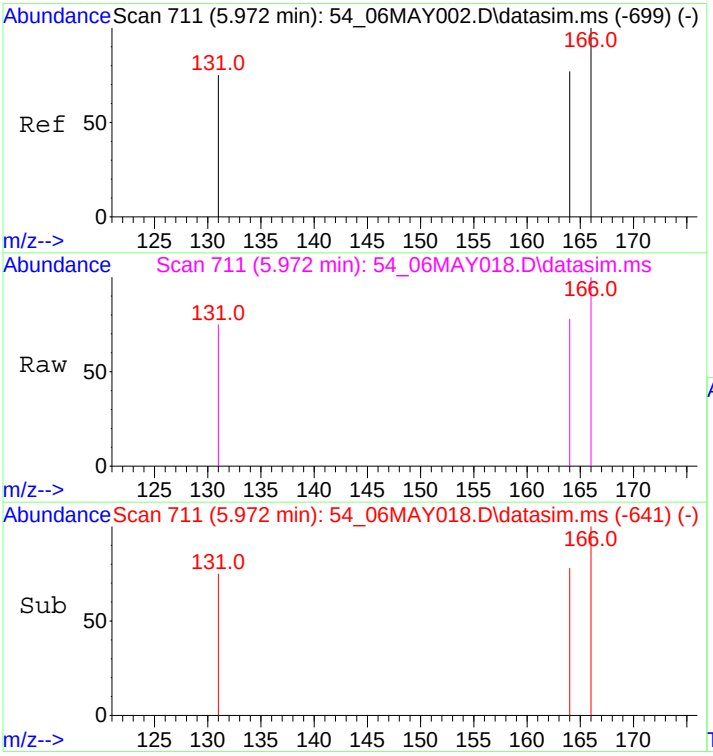


#13
Toluene
Concen: 2.30 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54 06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion: 91 Resp: 1141

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8

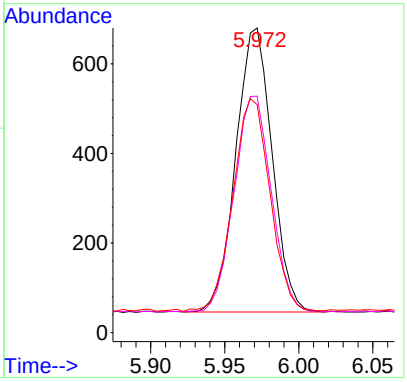




#14
Tetrachloroethene
Concen: 3.81 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_06MAY018.D
Acq: 6 May 2014 12:13 pm

Tgt Ion:166 Resp: 1081

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	76.8	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY019.D
Acq On : 6 May 2014 12:26 pm
Operator : yhl
Sample : 02215 \ D5-029
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:33:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

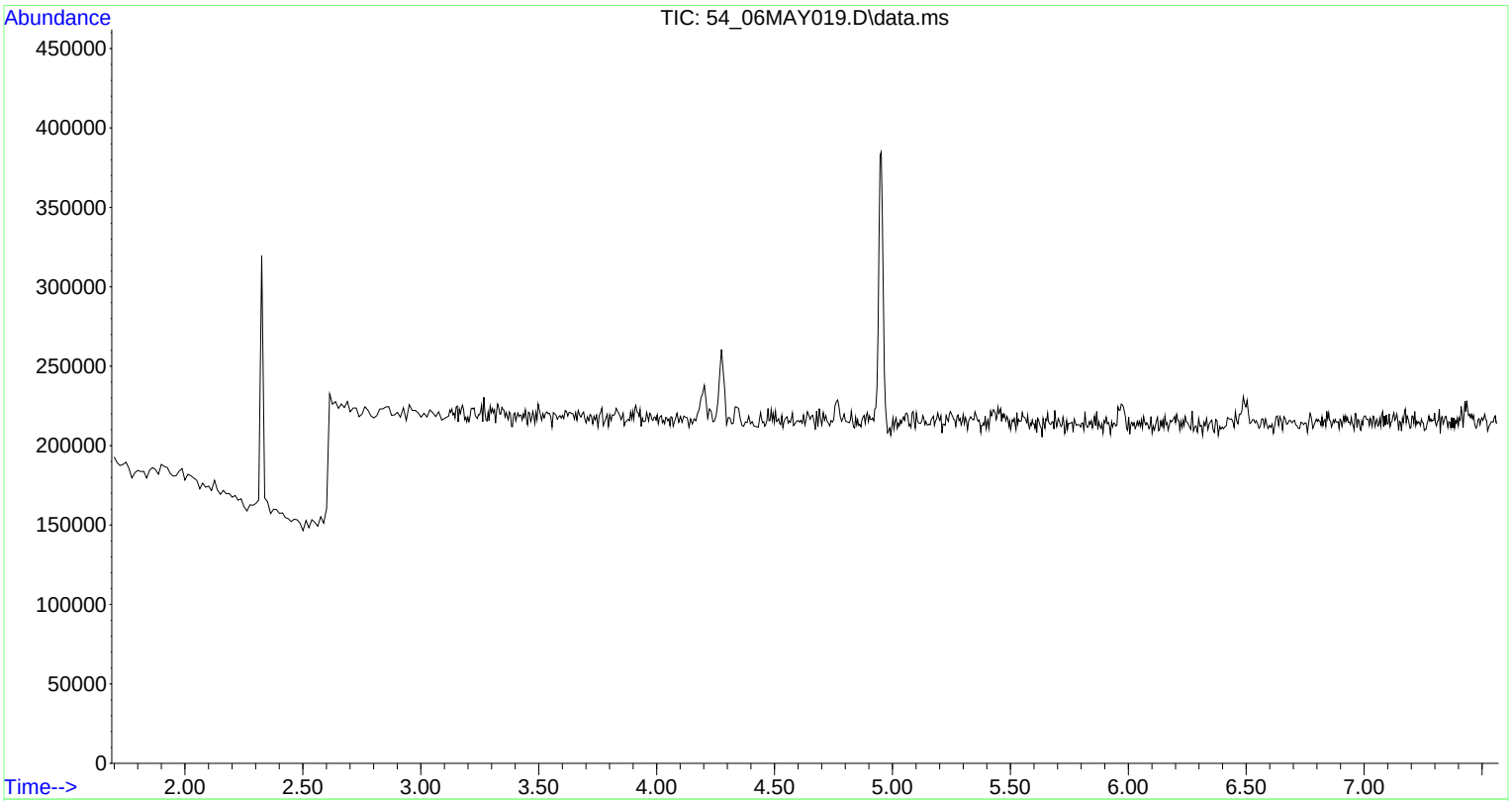
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3977	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9369	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8627	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.256	61	1933	6.28	ppbv	# 76
5] trans-1,2-Dichloroethene	3.709	61	965	3.55	ppbv	# 77
6] 1,1-Dichloroethane	3.910	63	946	2.92	ppbv	# 85
7] cis-1,2-Dichloroethene	4.197	61	11089	43.74	ppbv	# 69
8] 1,1,1-Trichloroethane	4.488	97	885	2.15	ppbv	96
11] Trichloroethene	4.950	130	48175	206.74	ppbv	98
13] Toluene	5.556	91	3153	6.10	ppbv	99
14] Tetrachloroethene	5.967	166	4679	15.84	ppbv	98

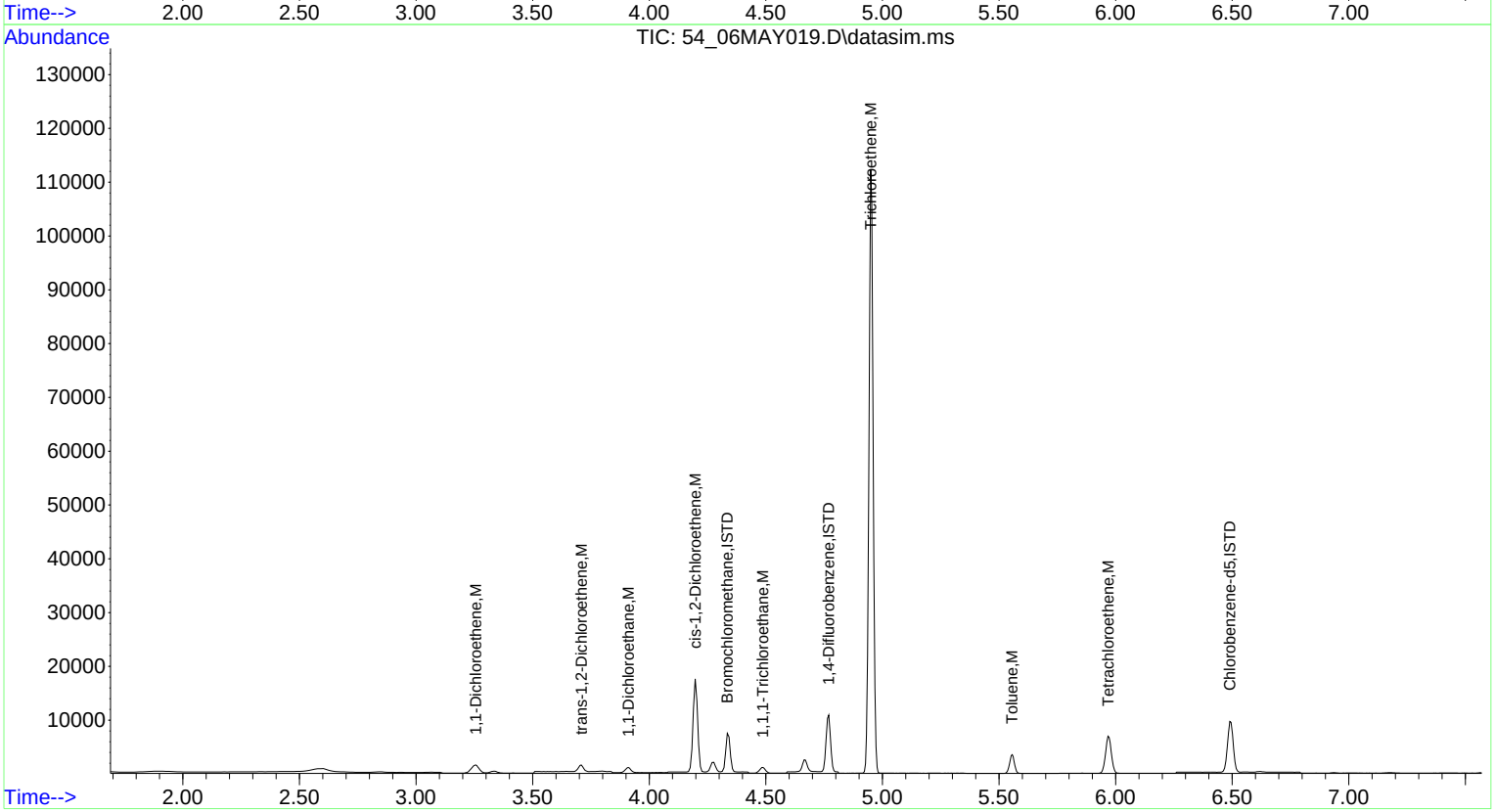
(#) = qualifier out of range (m) = manual integration (+) = signals summed

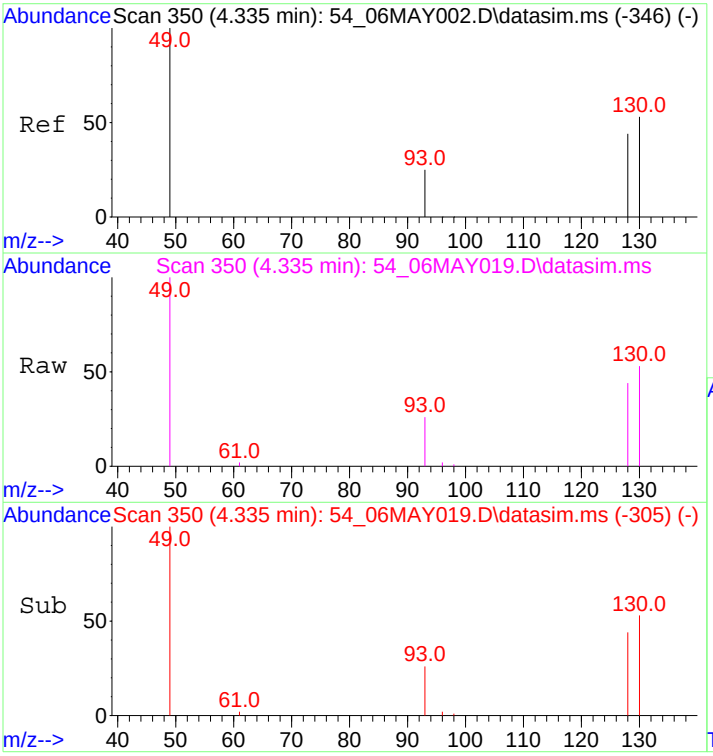
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY019.D
Acq On : 6 May 2014 12:26 pm
Operator : yhl
Sample : 02215 \ D5-029
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:33:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



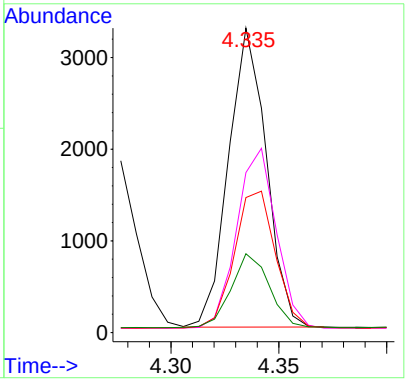


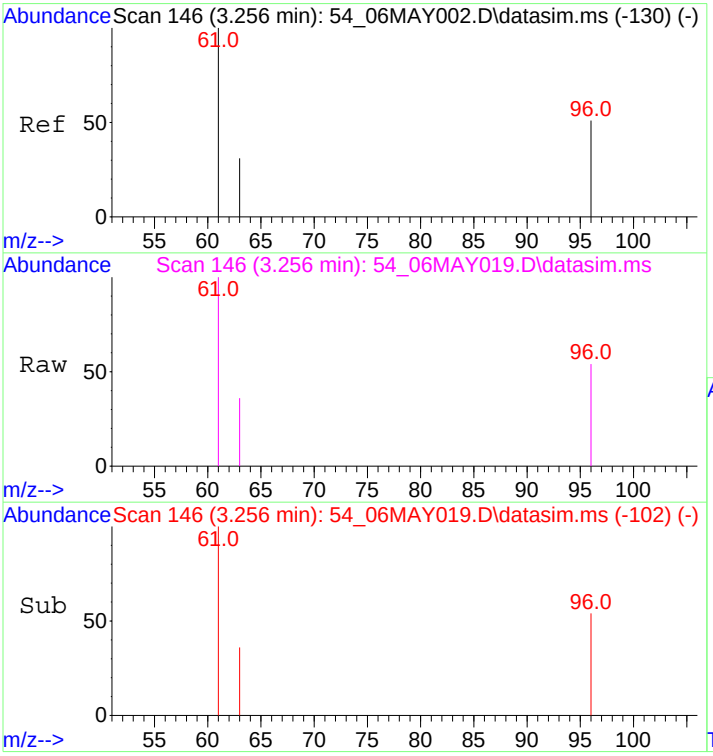


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion: 49 Resp: 3977

Ion	Ratio	Lower	Upper
49	100		
130	62.9	87.2	130.8#
128	49.7	68.0	102.0#
93	25.1	29.3	43.9#

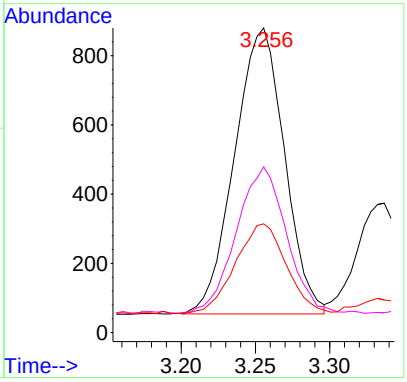


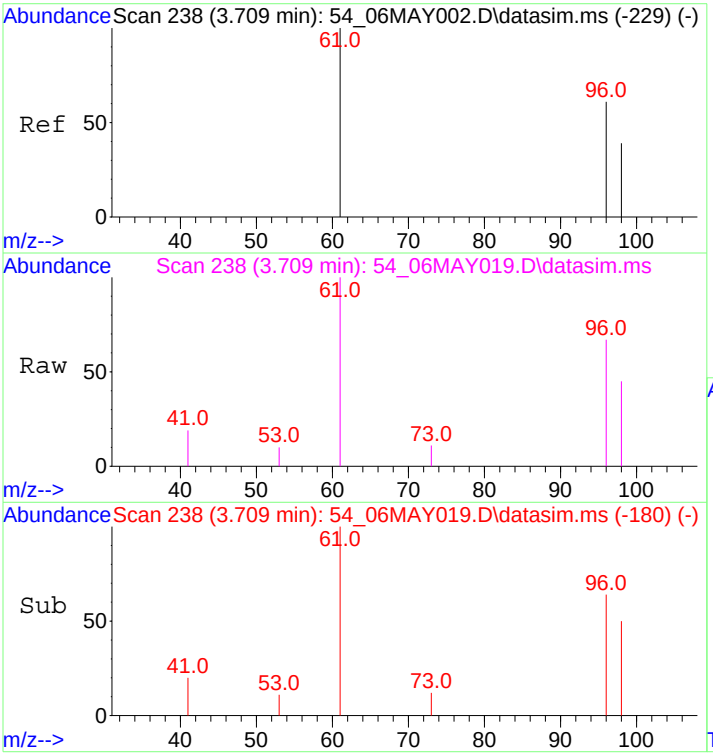


#3
1,1-Dichloroethene
Concen: 6.28 ppbv
RT: 3.256 min Scan# 146
Delta R.T. -0.000 min
Lab File: 54_06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion: 61 Resp: 1933

Ion	Ratio	Lower	Upper
61	100		
96	51.3	63.4	95.2#
63	34.8	26.2	39.2

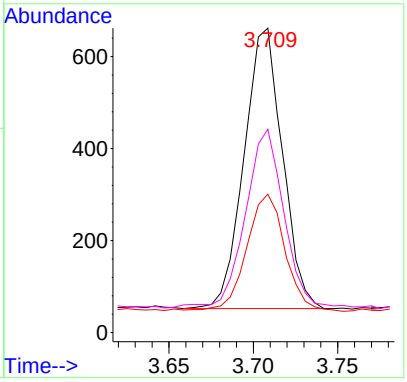


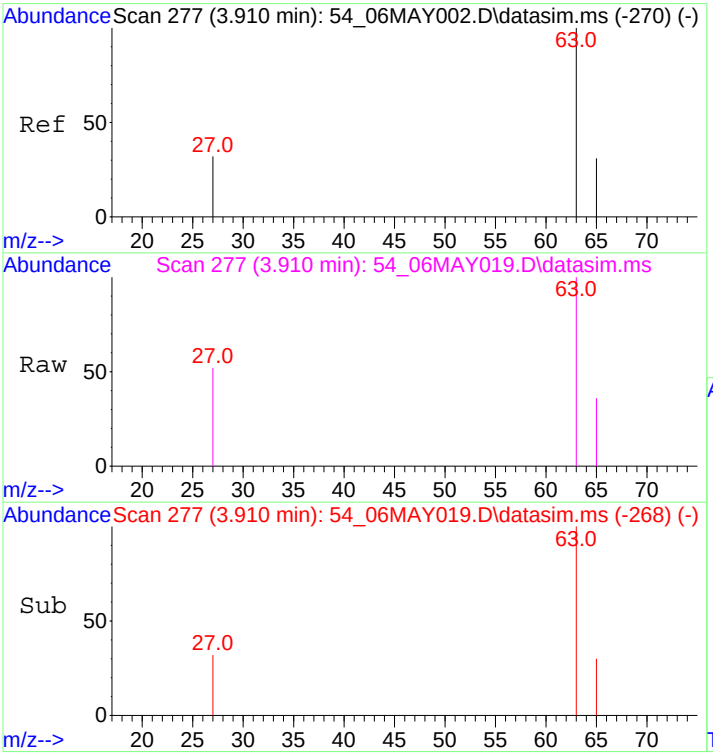


#5
trans-1,2-Dichloroethene
Concen: 3.55 ppbv
RT: 3.709 min Scan# 238
Delta R.T. -0.000 min
Lab File: 54 06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion: 61 Resp: 965

Ion	Ratio	Lower	Upper
61	100		
96	61.6	71.4	107.0#
98	48.4	45.8	68.8

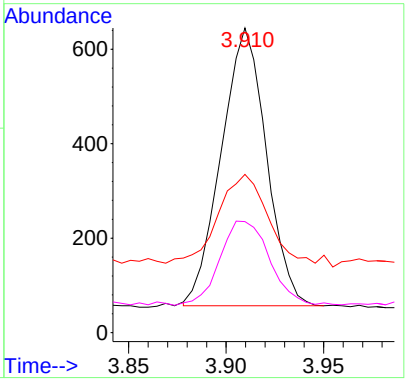


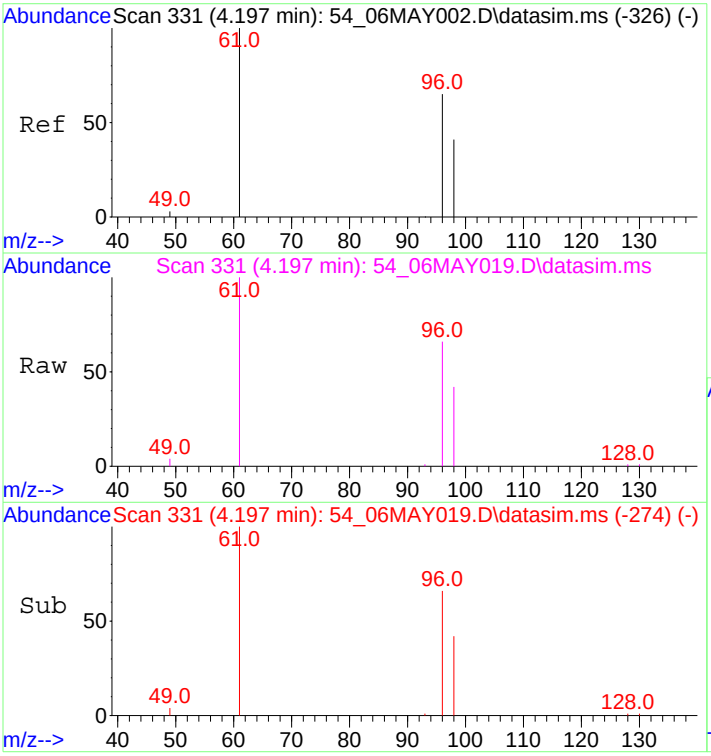


#6
1,1-Dichloroethane
Concen: 2.92 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion: 63 Resp: 946

Ion	Ratio	Lower	Upper
63	100		
65	32.2	26.1	39.1
27	33.8	10.2	15.2#

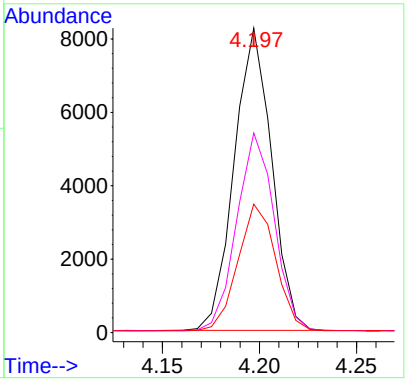


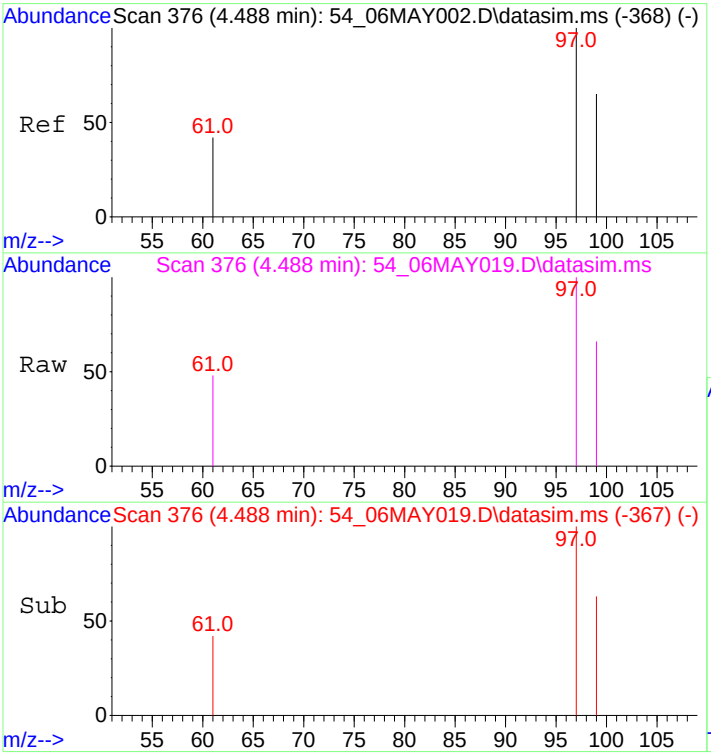


#7
cis-1,2-Dichloroethene
Concen: 43.74 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion: 61 Resp: 11089

Ion	Ratio	Lower	Upper
61	100		
96	65.5	78.5	117.7#
98	42.4	50.6	76.0#

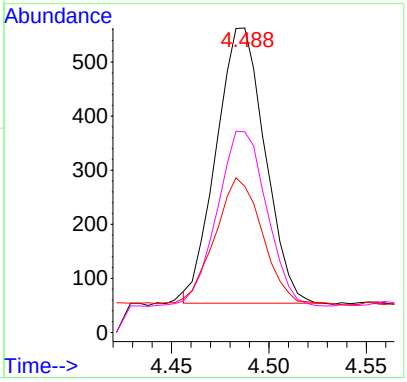


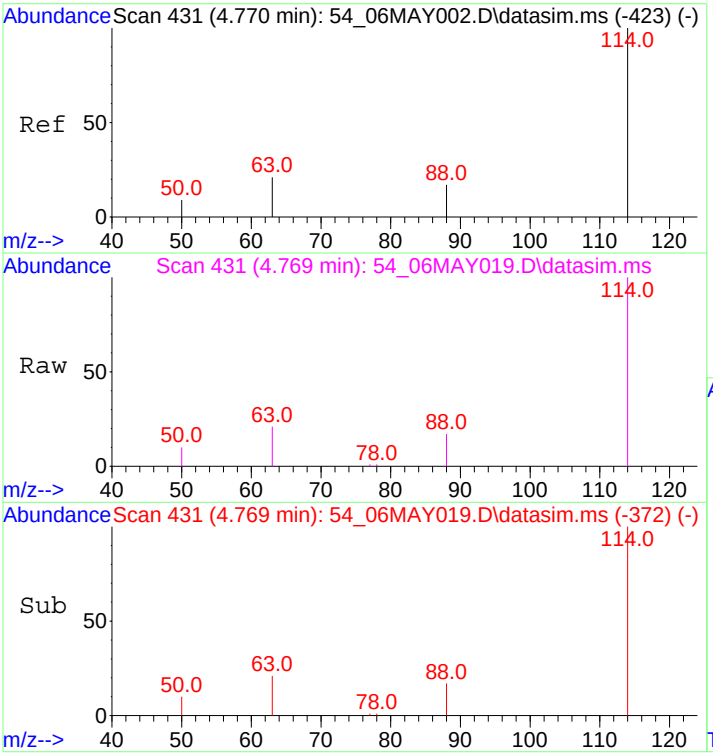


#8
1,1,1-Trichloroethane
Concen: 2.15 ppbv
RT: 4.488 min Scan# 376
Delta R.T. -0.000 min
Lab File: 54_06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion: 97 Resp: 885

Ion	Ratio	Lower	Upper
97	100		
99	64.2	52.1	78.1
61	43.2	30.2	45.4

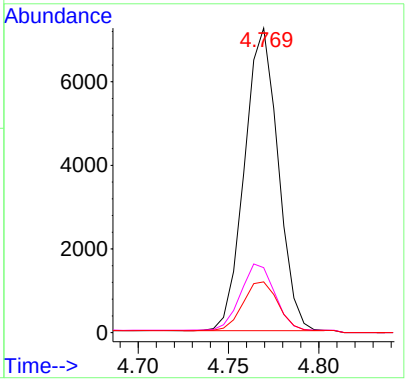


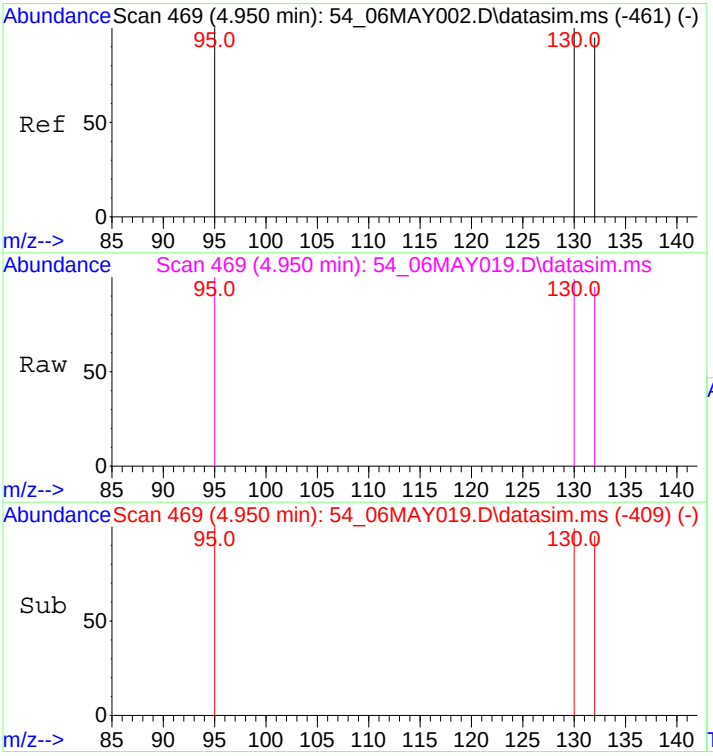


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion:114 Resp: 9369

Ion	Ratio	Lower	Upper
114	100		
63	22.1	12.0	18.0#
88	16.7	11.8	17.8

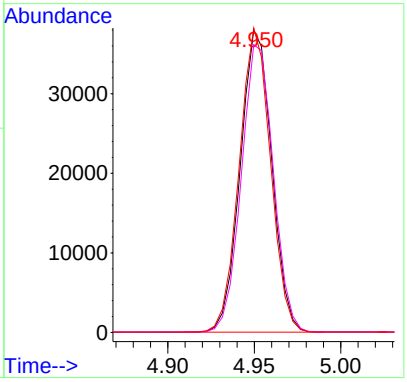


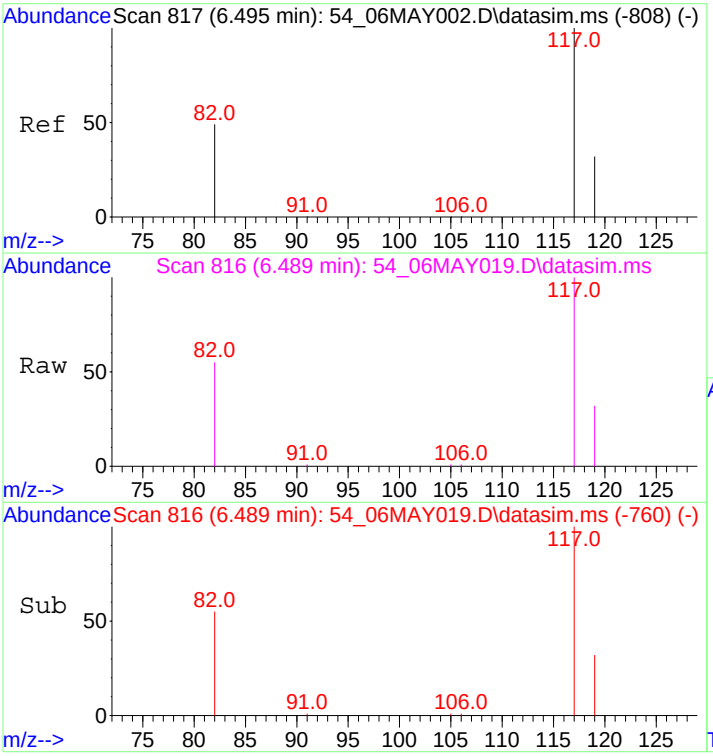


#11
Trichloroethene
Concen: 206.74 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion:130 Resp: 48175

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	99.5	76.5	114.7

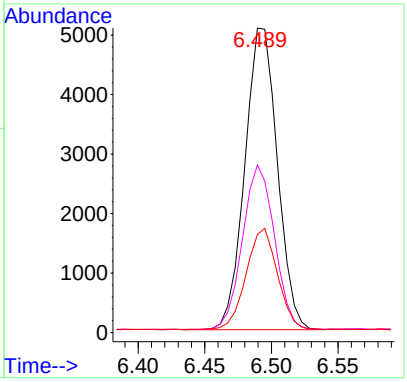


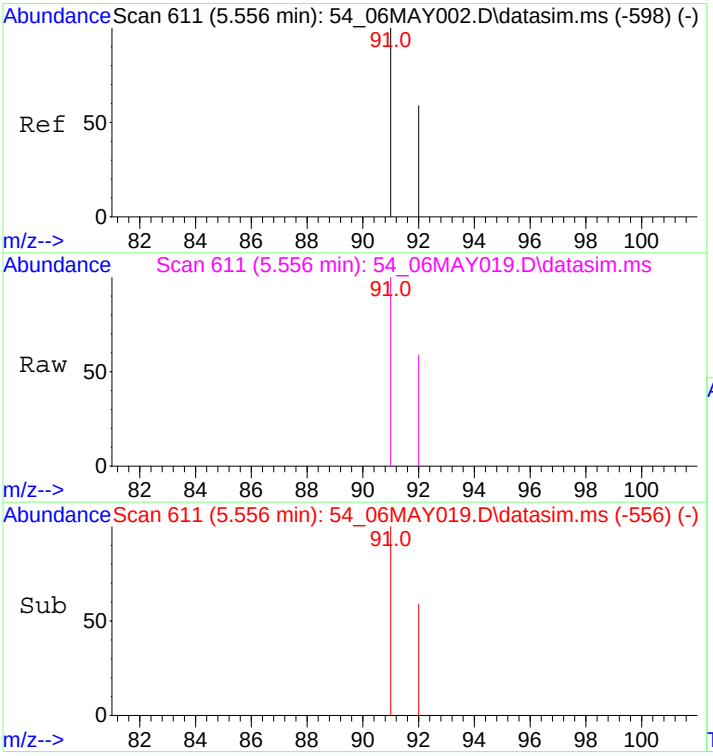


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion:117 Resp: 8627

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.2	27.0	40.4

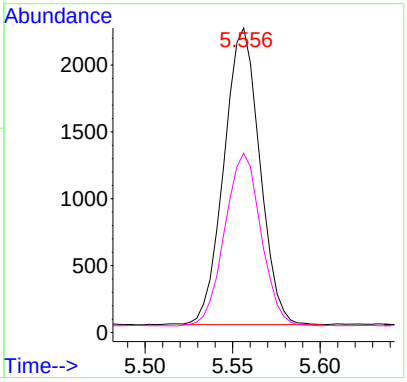


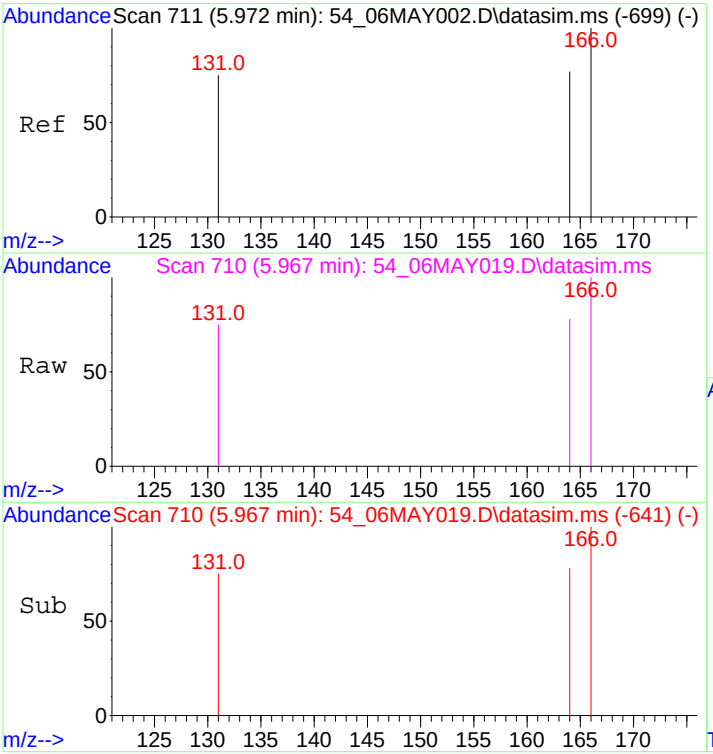


#13
Toluene
Concen: 6.10 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion: 91 Resp: 3153

Ion	Ratio	Lower	Upper
91	100		
92	58.9	47.8	71.8

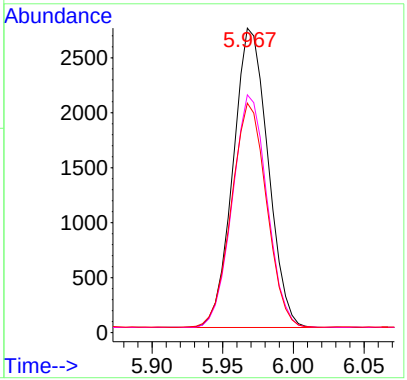




#14
Tetrachloroethene
Concen: 15.84 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 06MAY019.D
Acq: 6 May 2014 12:26 pm

Tgt Ion:166 Resp: 4679

Ion	Ratio	Lower	Upper
166	100		
164	77.3	62.6	94.0
131	75.4	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY020.D
Acq On : 6 May 2014 12:37 pm
Operator : yhl
Sample : 02216 \ D5-025
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:45:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

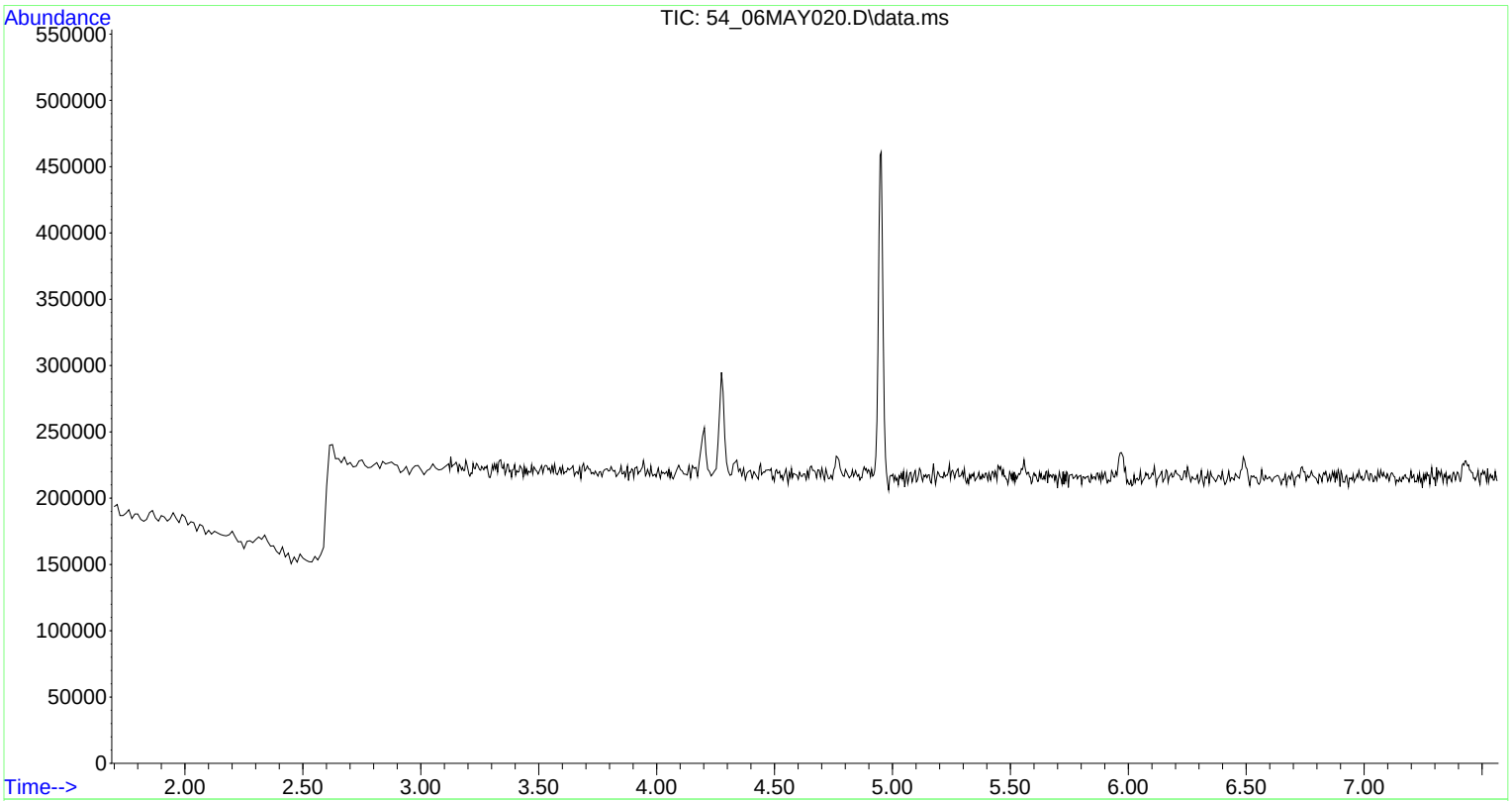
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4038	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9383	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	8762	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.251	61	2788	8.91	ppbv	# 73
5] trans-1,2-Dichloroethene	3.703	61	1497	5.43	ppbv	# 72
6] 1,1-Dichloroethane	3.910	63	1474	4.48	ppbv	# 84
7] cis-1,2-Dichloroethene	4.197	61	17711	68.81	ppbv	# 69
8] 1,1,1-Trichloroethane	4.483	97	1305	3.13	ppbv	96
11] Trichloroethene	4.950	130	71157	304.92	ppbv	98
13] Toluene	5.556	91	6292	11.98	ppbv	100
14] Tetrachloroethene	5.967	166	6866	22.89	ppbv	98

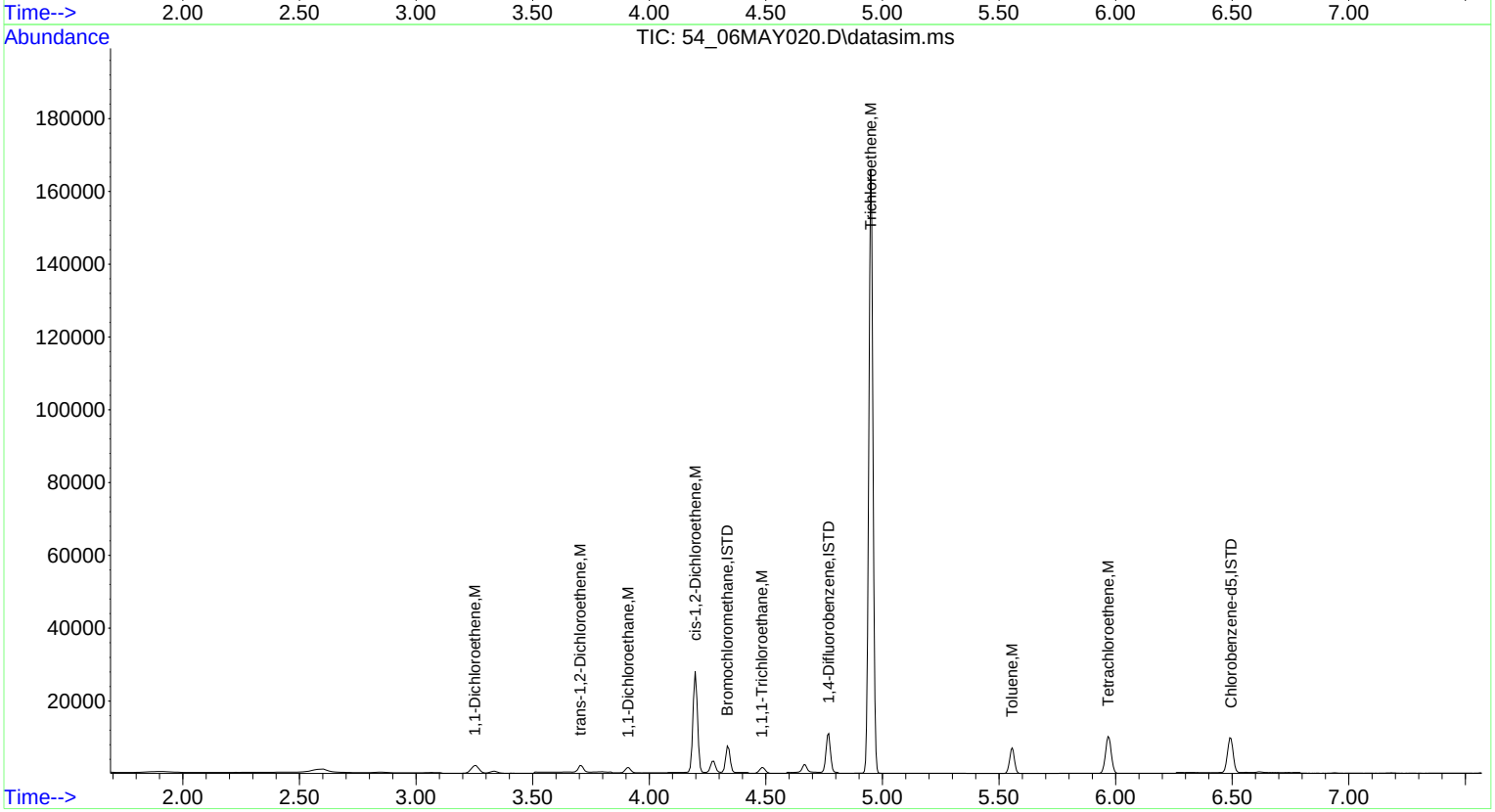
(#) = qualifier out of range (m) = manual integration (+) = signals summed

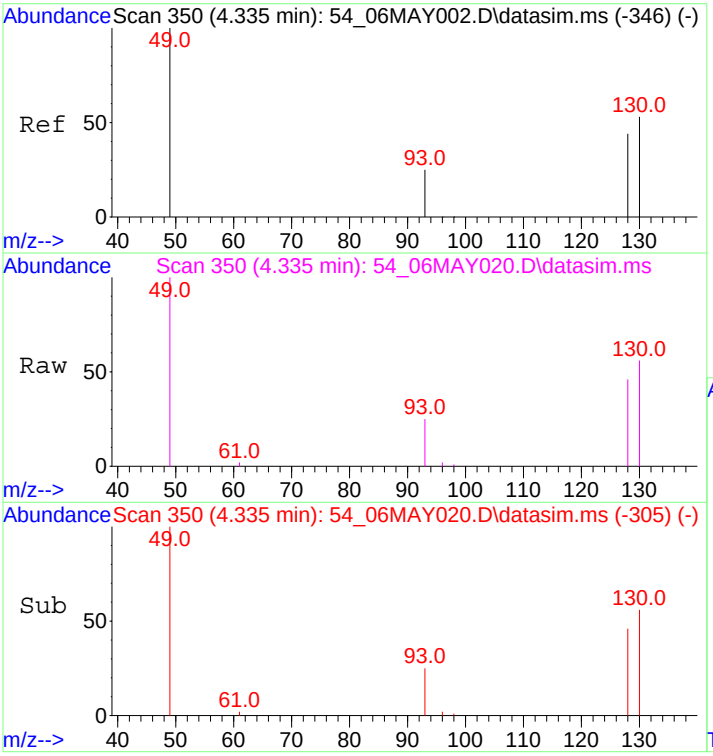
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY020.D
Acq On : 6 May 2014 12:37 pm
Operator : yhl
Sample : 02216 \ D5-025
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 12:45:22 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



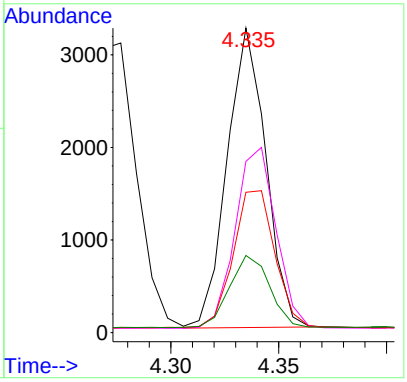


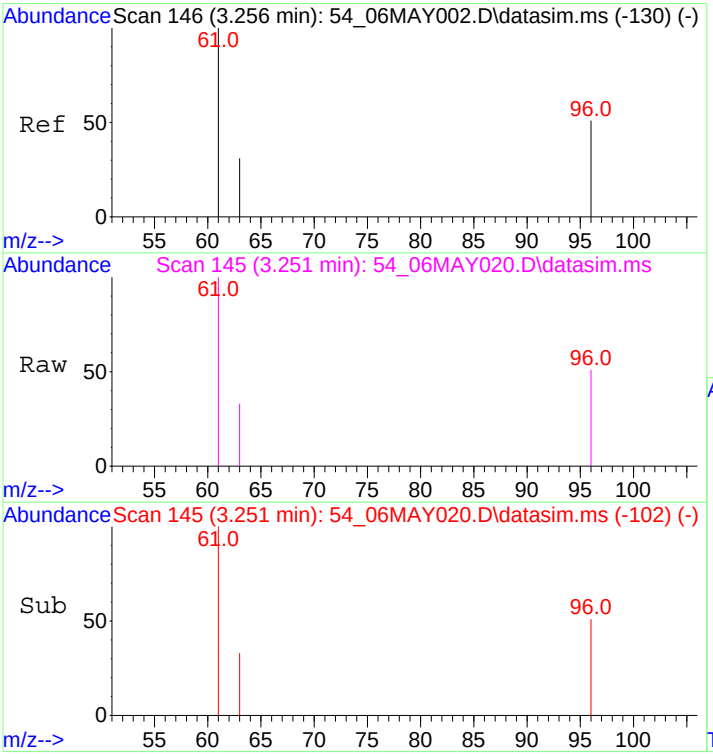


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion: 49 Resp: 4038

Ion	Ratio	Lower	Upper
49	100		
130	63.7	87.2	130.8#
128	49.2	68.0	102.0#
93	24.8	29.3	43.9#

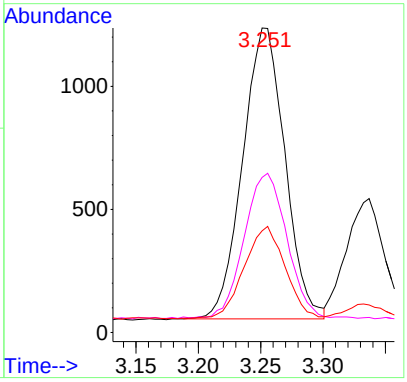


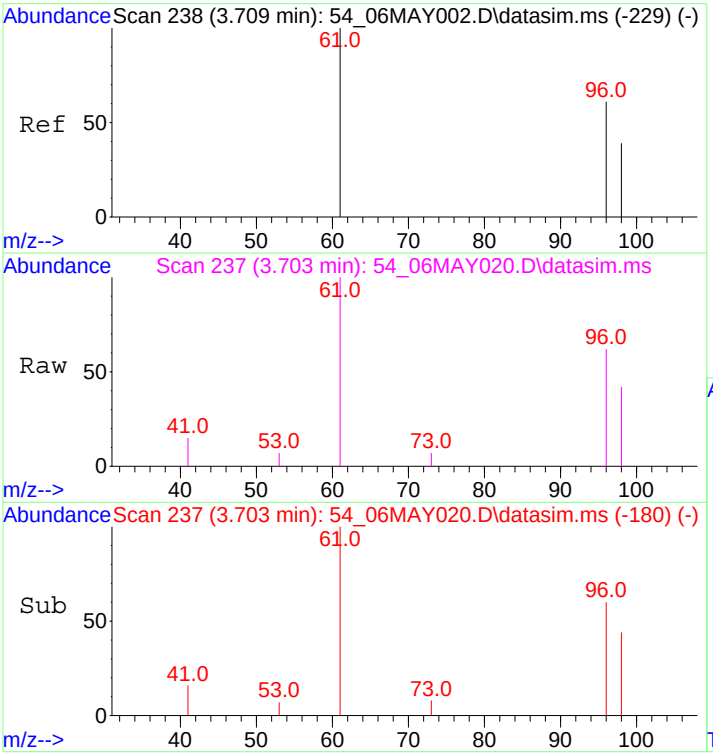


#3
1,1-Dichloroethene
Concen: 8.91 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.005 min
Lab File: 54_06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion: 61 Resp: 2788

Ion	Ratio	Lower	Upper
61	100		
96	49.3	63.4	95.2#
63	37.3	26.2	39.2

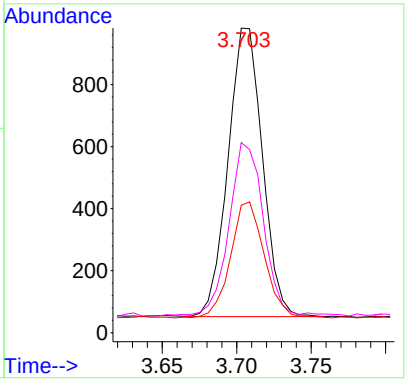


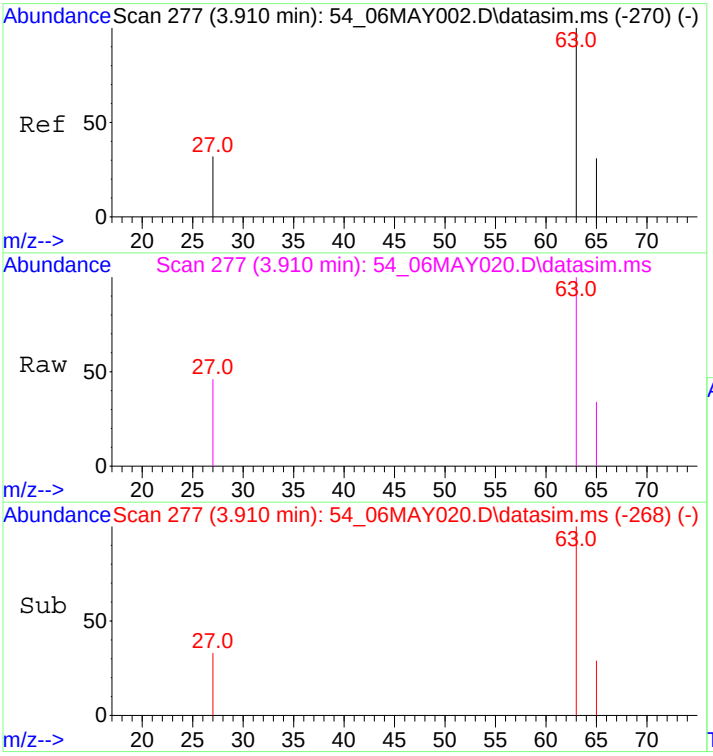


#5
trans-1,2-Dichloroethene
Concen: 5.43 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion: 61 Resp: 1497

Ion	Ratio	Lower	Upper
61	100		
96	60.0	71.4	107.0#
98	39.3	45.8	68.8#

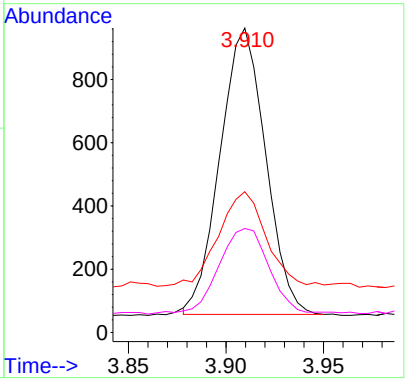


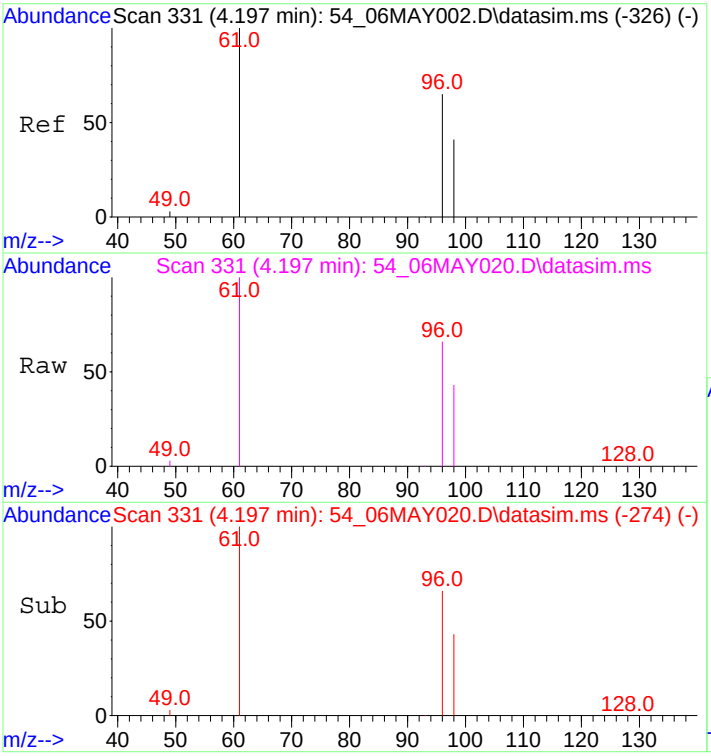


#6
1,1-Dichloroethane
Concen: 4.48 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion: 63 Resp: 1474

Ion	Ratio	Lower	Upper
63	100		
65	30.9	26.1	39.1
27	32.2	10.2	15.2#

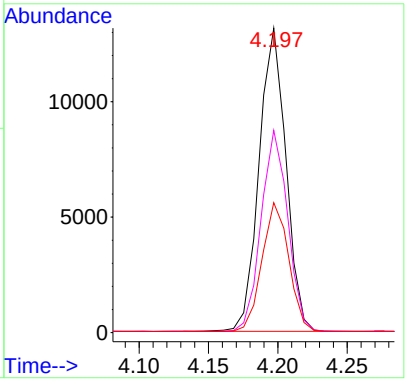


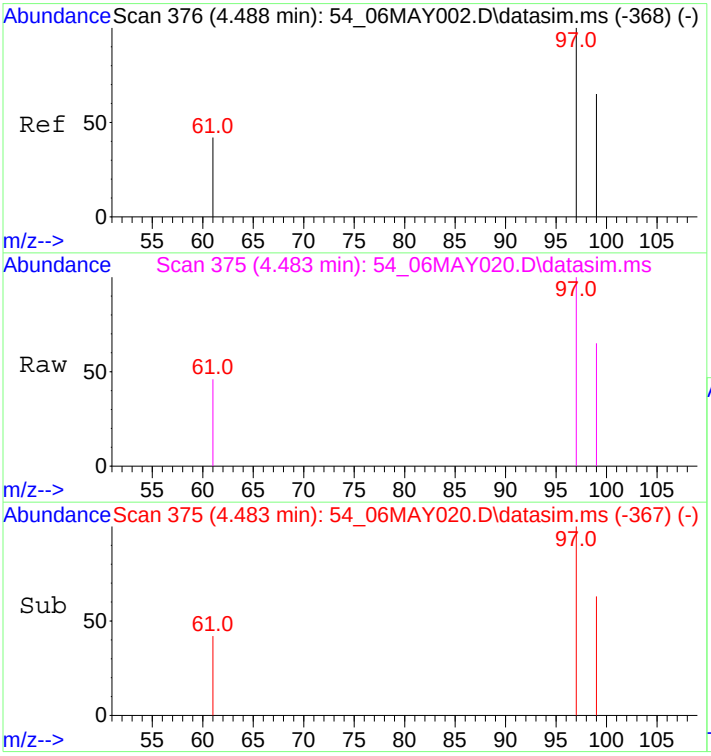


#7
cis-1,2-Dichloroethene
Concen: 68.81 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion: 61 Resp: 17711

Ion	Ratio	Lower	Upper
61	100		
96	65.2	78.5	117.7#
98	42.2	50.6	76.0#

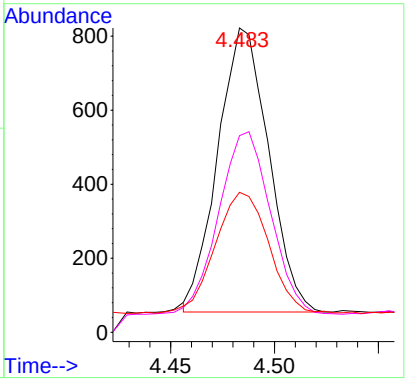


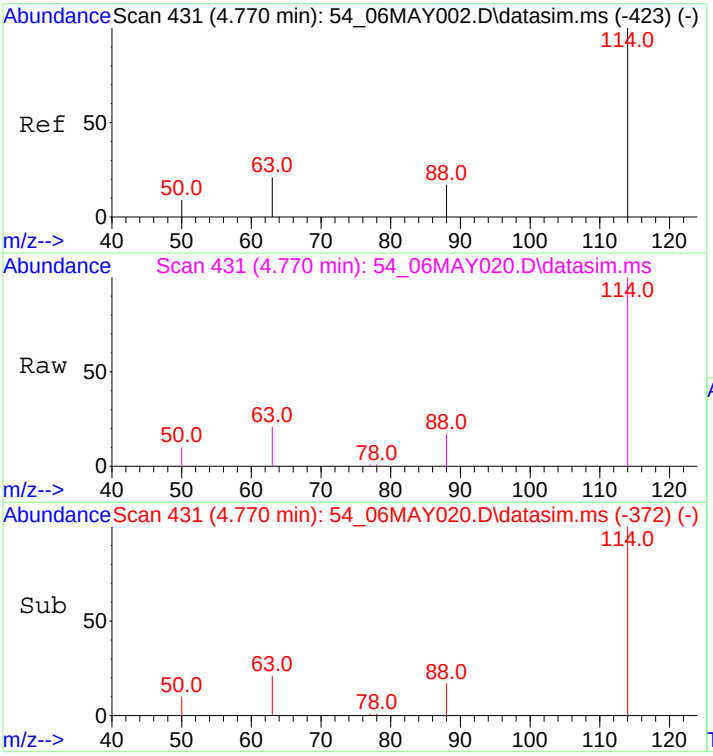


#8
1,1,1-Trichloroethane
Concen: 3.13 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.005 min
Lab File: 54_06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion: 97 Resp: 1305

Ion	Ratio	Lower	Upper
97	100		
99	64.9	52.1	78.1
61	43.8	30.2	45.4

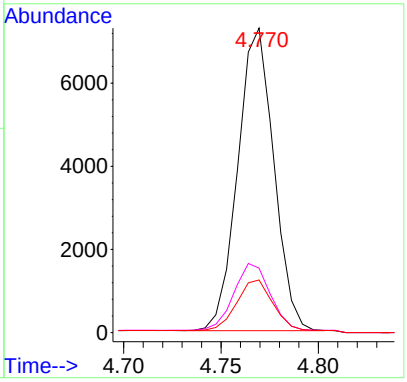


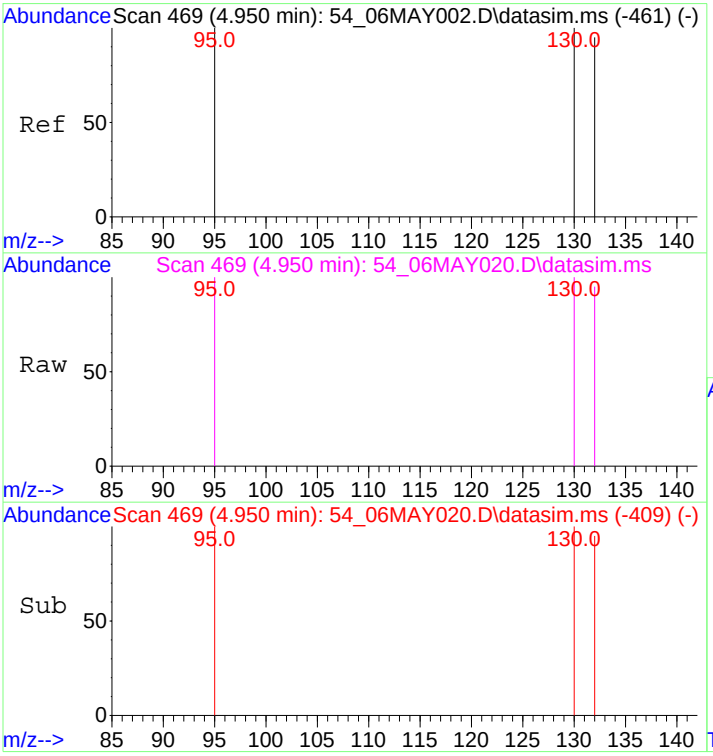


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion:114 Resp: 9383

Ion	Ratio	Lower	Upper
114	100		
63	22.2	12.0	18.0#
88	16.7	11.8	17.8

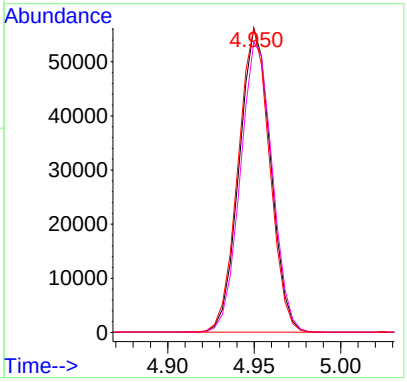


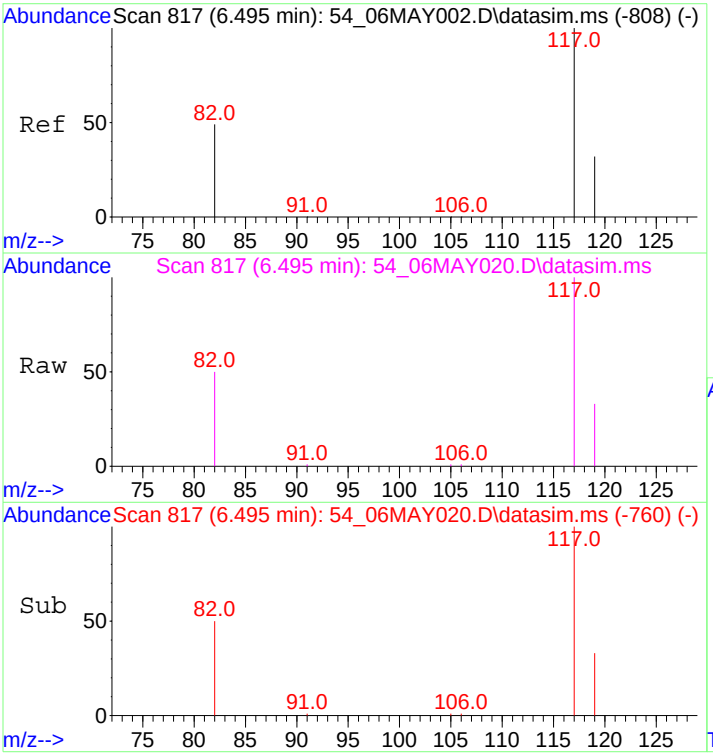


#11
Trichloroethene
Concen: 304.92 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion:130 Resp: 71157

Ion	Ratio	Lower	Upper
130	100		
132	96.6	76.9	115.3
95	99.9	76.5	114.7

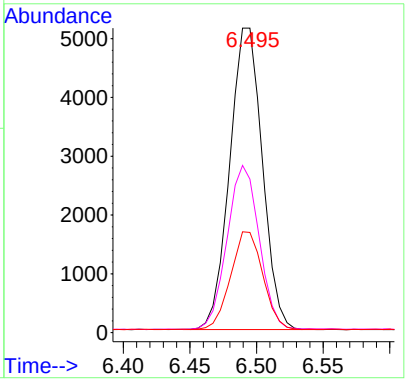


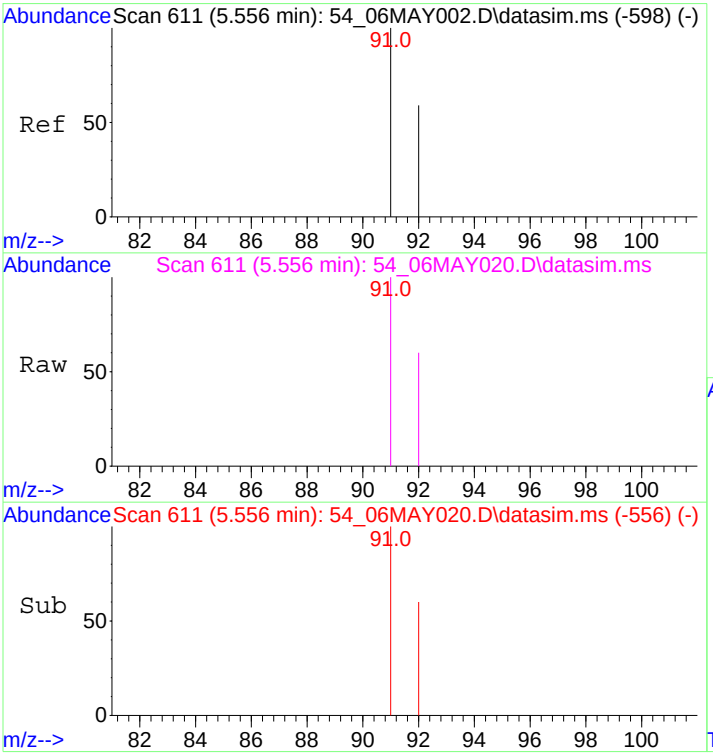


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion:117 Resp: 8762

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.0	27.0	40.4

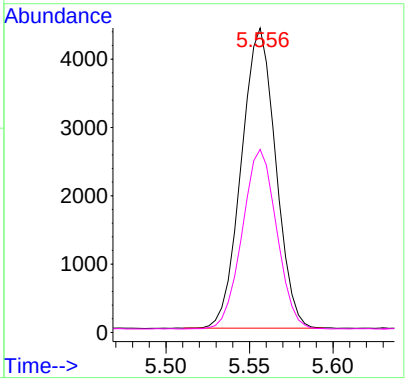


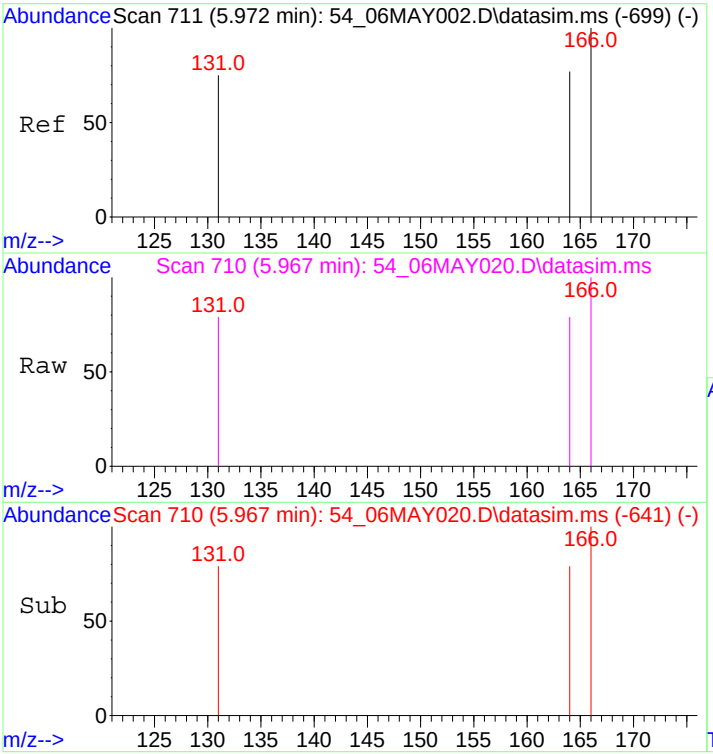


#13
Toluene
Concen: 11.98 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion: 91 Resp: 6292

Ion	Ratio	Lower	Upper
91	100		
92	59.8	47.8	71.8

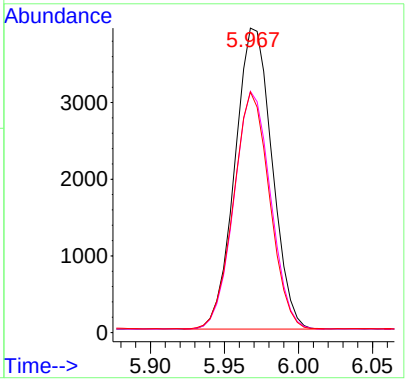




#14
Tetrachloroethene
Concen: 22.89 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 06MAY020.D
Acq: 6 May 2014 12:37 pm

Tgt Ion:166 Resp: 6866

Ion	Ratio	Lower	Upper
166	100		
164	77.6	62.6	94.0
131	76.0	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY021.D
Acq On : 6 May 2014 12:51 pm
Operator : yhl
Sample : 02217 \ D5-027
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 13:05:59 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

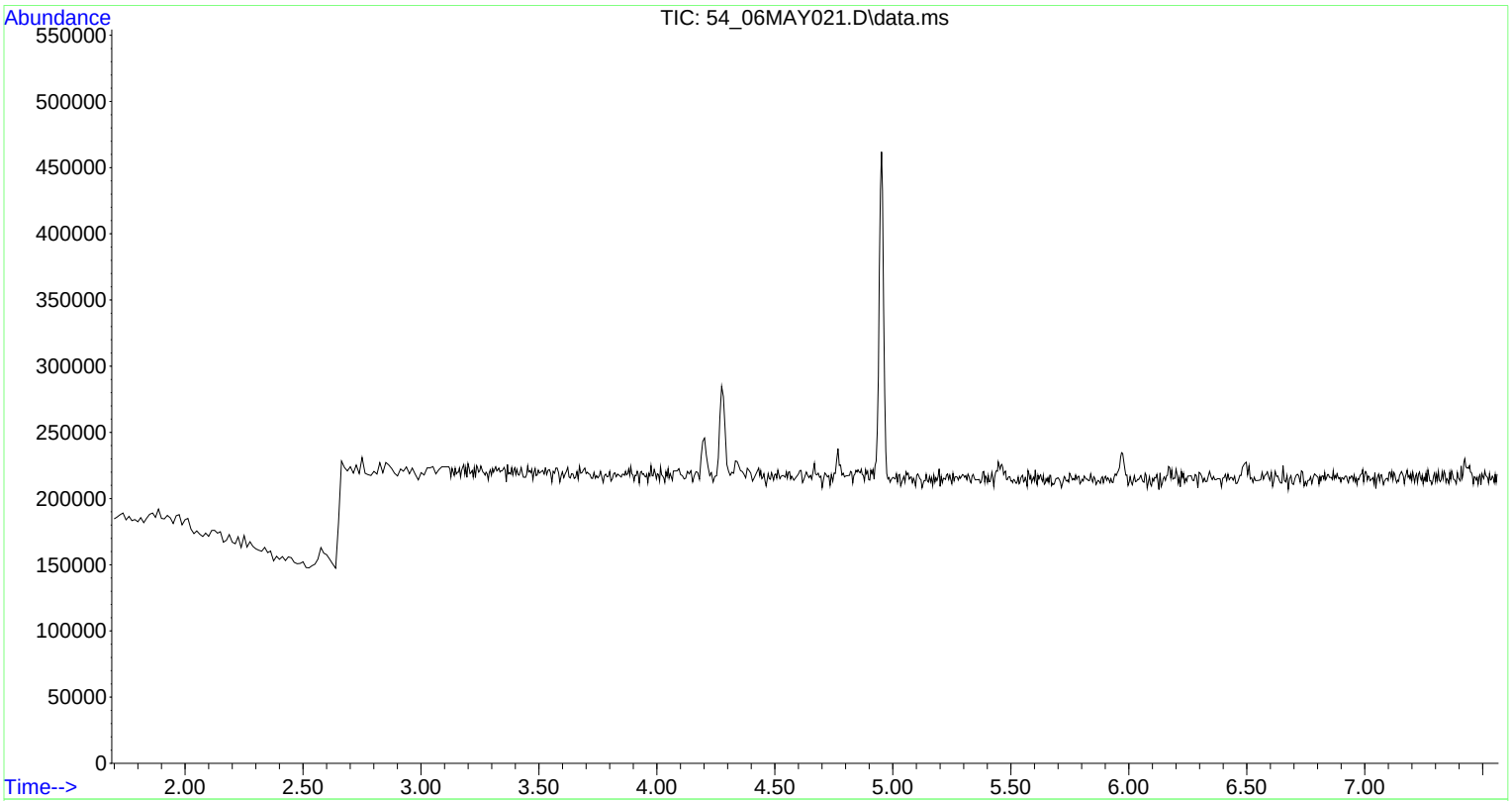
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3972	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9532	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	8556	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.251	61	2717	8.83	ppbv	# 75
5] trans-1,2-Dichloroethene	3.707	61	1417	5.23	ppbv	# 73
6] 1,1-Dichloroethane	3.910	63	1470	4.54	ppbv	# 84
7] cis-1,2-Dichloroethene	4.197	61	16981	67.07	ppbv	# 70
8] 1,1,1-Trichloroethane	4.488	97	1268	3.09	ppbv	96
11] Trichloroethene	4.949	130	69849	294.63	ppbv	98
13] Toluene	5.556	91	1169	2.28	ppbv	97
14] Tetrachloroethene	5.972	166	6801	23.22	ppbv	98

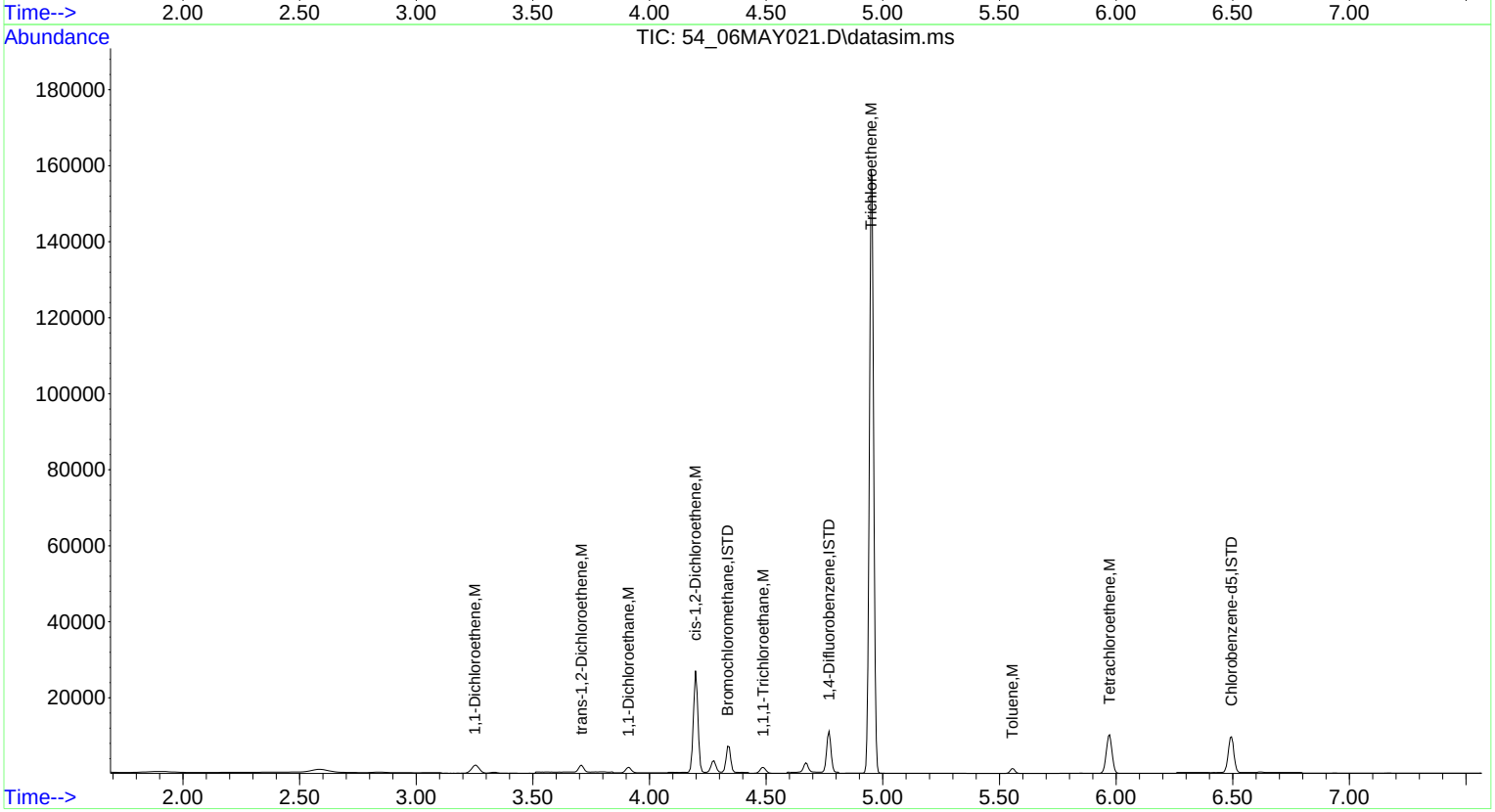
(#) = qualifier out of range (m) = manual integration (+) = signals summed

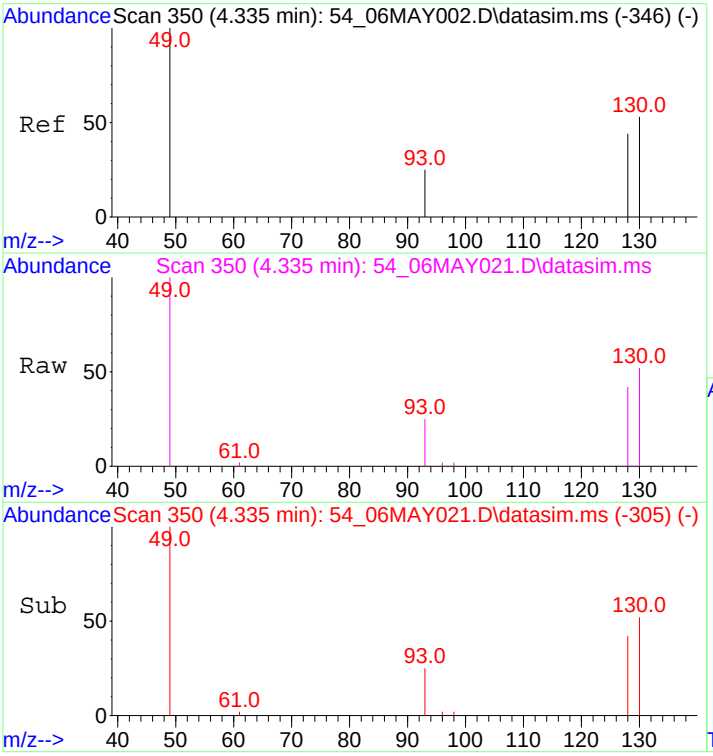
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY021.D
Acq On : 6 May 2014 12:51 pm
Operator : yhl
Sample : 02217 \ D5-027
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 13:05:59 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjTue May 06 07:57:44 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



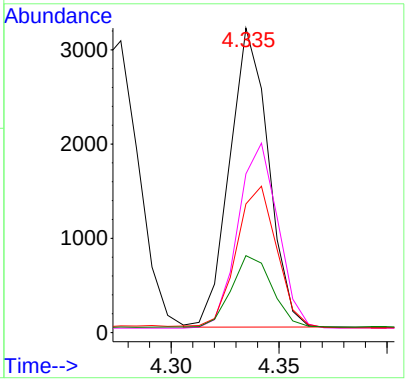


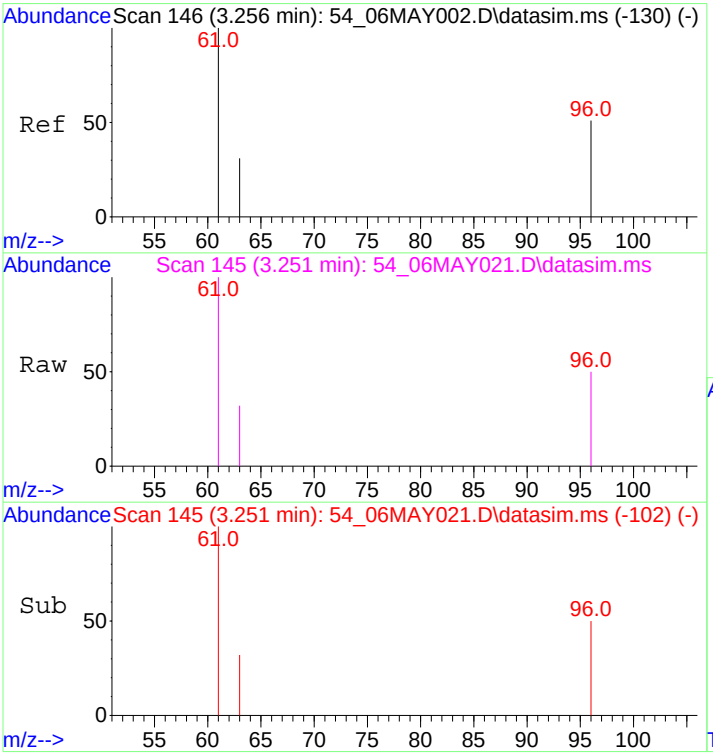


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion: 49 Resp: 3972

Ion	Ratio	Lower	Upper
49	100		
130	63.7	87.2	130.8#
128	49.7	68.0	102.0#
93	25.0	29.3	43.9#

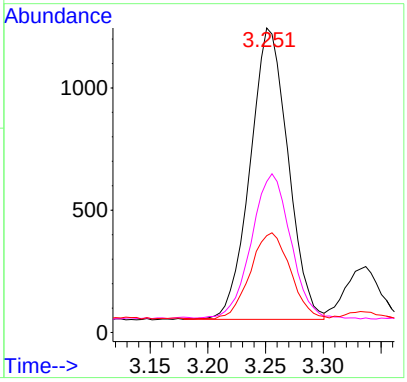


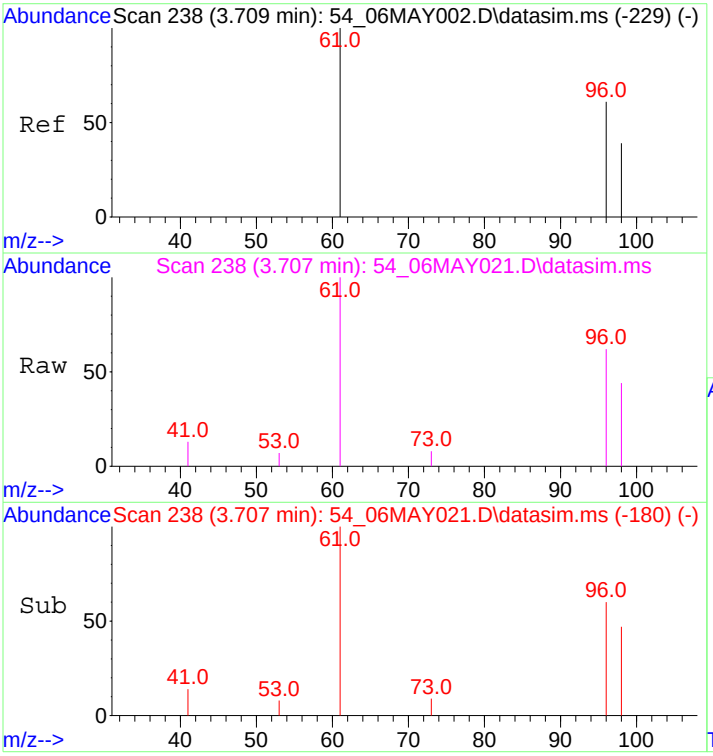


#3
1,1-Dichloroethene
Concen: 8.83 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.005 min
Lab File: 54_06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion: 61 Resp: 2717

Ion	Ratio	Lower	Upper
61	100		
96	51.2	63.4	95.2#
63	37.1	26.2	39.2

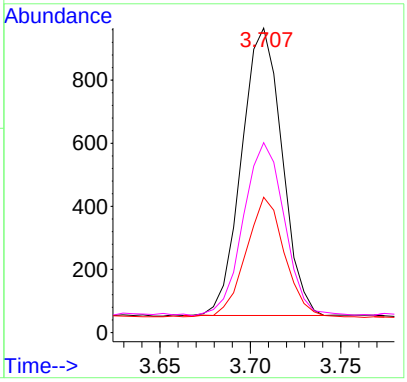


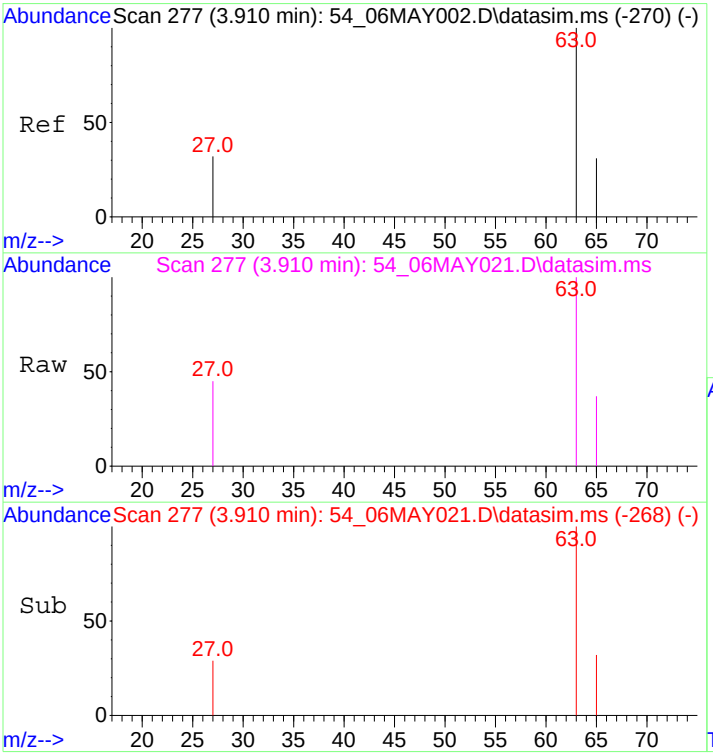


#5
trans-1,2-Dichloroethene
Concen: 5.23 ppbv
RT: 3.707 min Scan# 238
Delta R.T. -0.001 min
Lab File: 54 06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion: 61 Resp: 1417

Ion	Ratio	Lower	Upper
61	100		
96	61.7	71.4	107.0#
98	40.0	45.8	68.8#

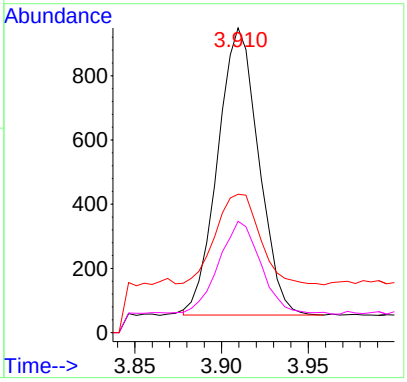


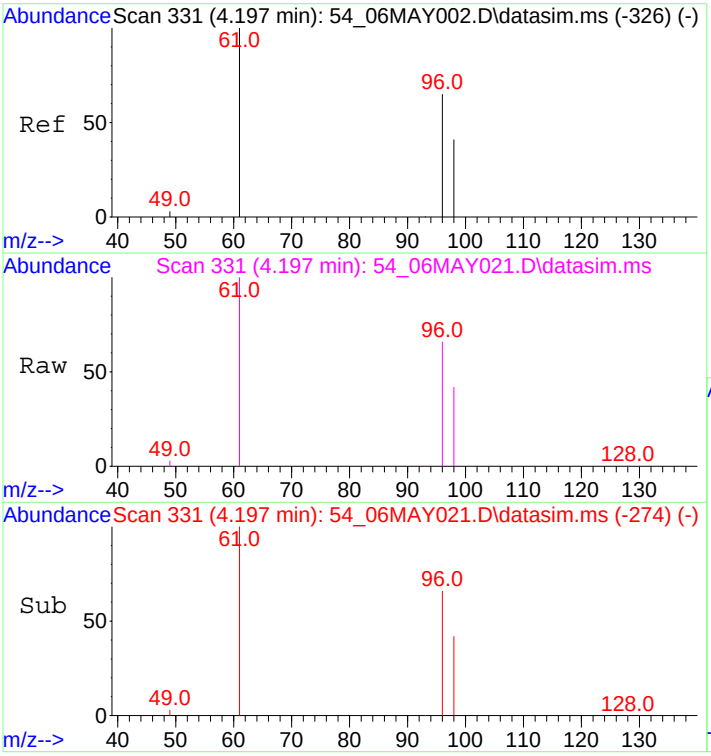


#6
1,1-Dichloroethane
Concen: 4.54 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion: 63 Resp: 1470

Ion	Ratio	Lower	Upper
63	100		
65	31.8	26.1	39.1
27	34.2	10.2	15.2#

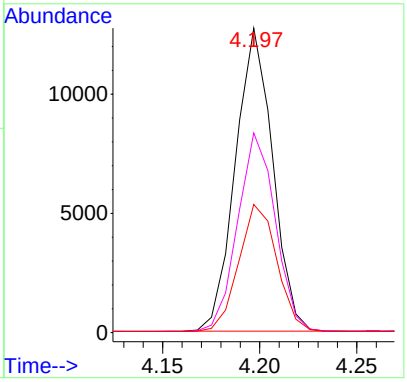


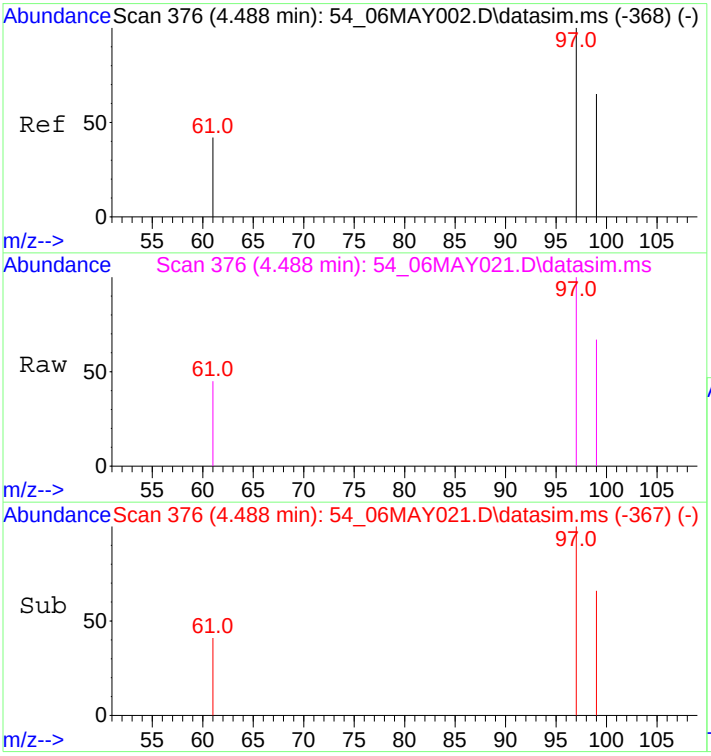


#7
cis-1,2-Dichloroethene
Concen: 67.07 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion: 61 Resp: 16981

Ion	Ratio	Lower	Upper
61	100		
96	66.1	78.5	117.7#
98	42.9	50.6	76.0#

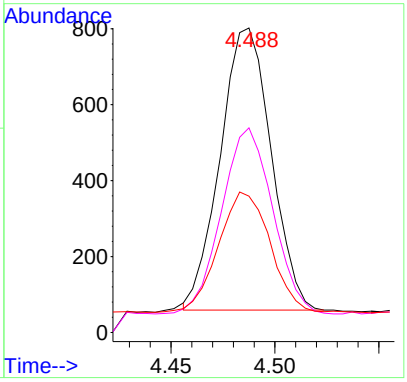


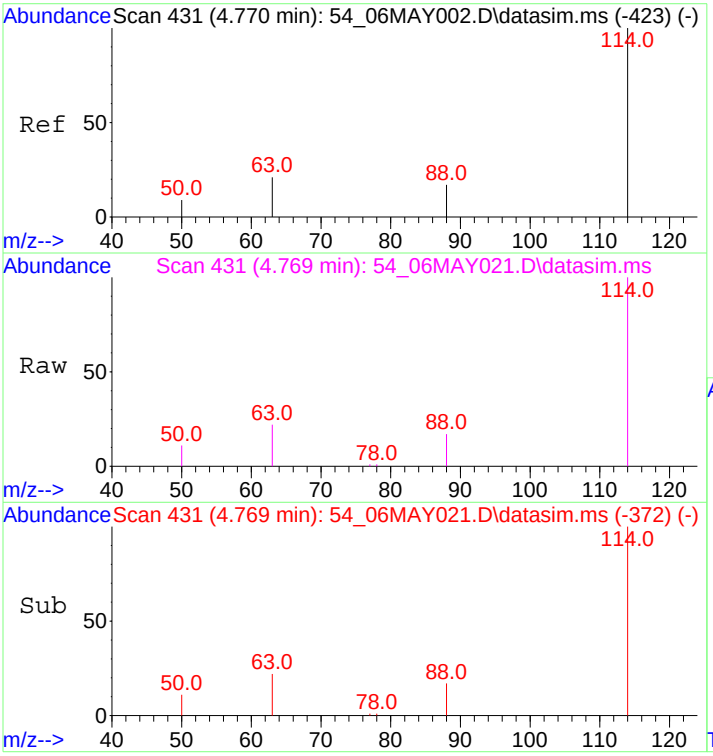


#8
1,1,1-Trichloroethane
Concen: 3.09 ppbv
RT: 4.488 min Scan# 376
Delta R.T. -0.000 min
Lab File: 54_06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion: 97 Resp: 1268

Ion	Ratio	Lower	Upper
97	100		
99	66.1	52.1	78.1
61	42.4	30.2	45.4

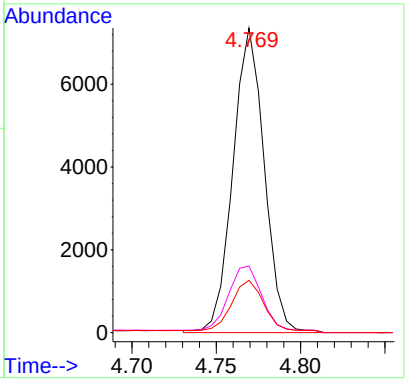


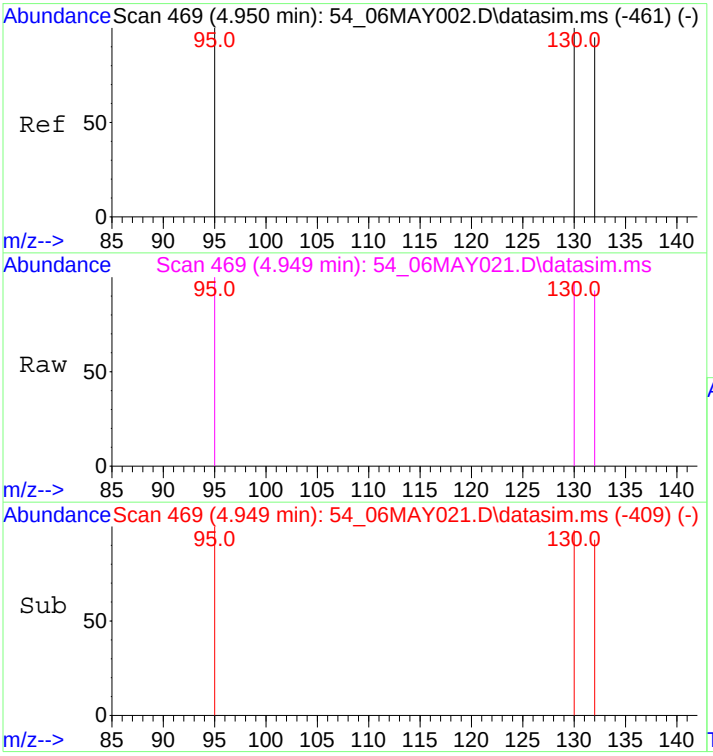


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion:114 Resp: 9532

Ion	Ratio	Lower	Upper
114	100		
63	21.7	12.0	18.0#
88	16.4	11.8	17.8

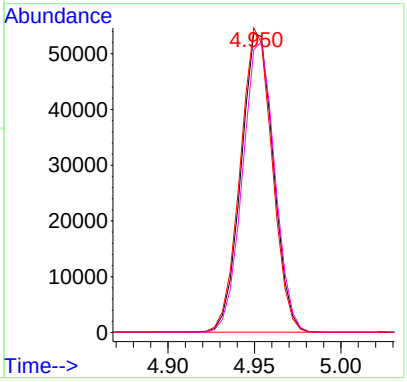


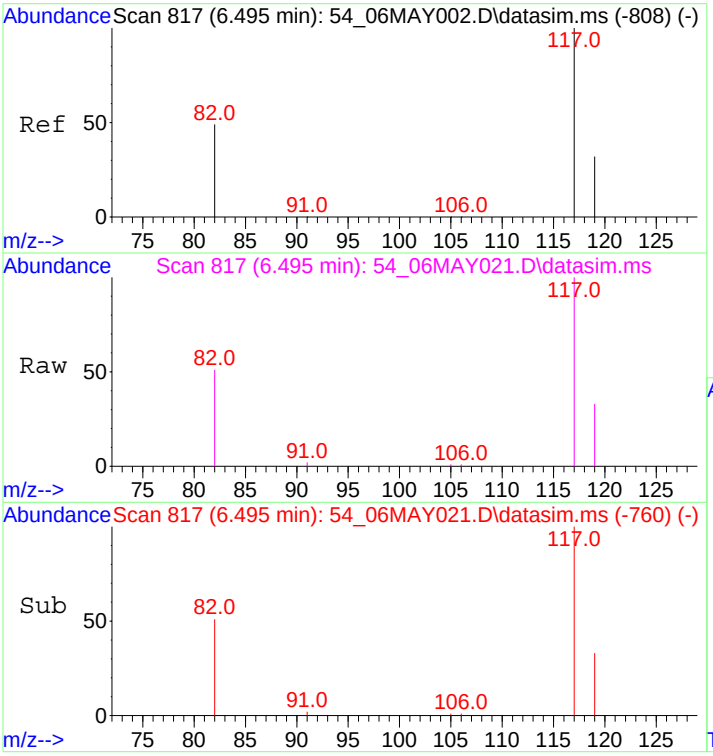


#11
Trichloroethene
Concen: 294.63 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion:130 Resp: 69849

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	100.1	76.5	114.7

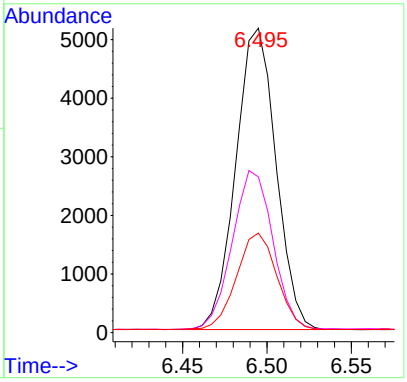


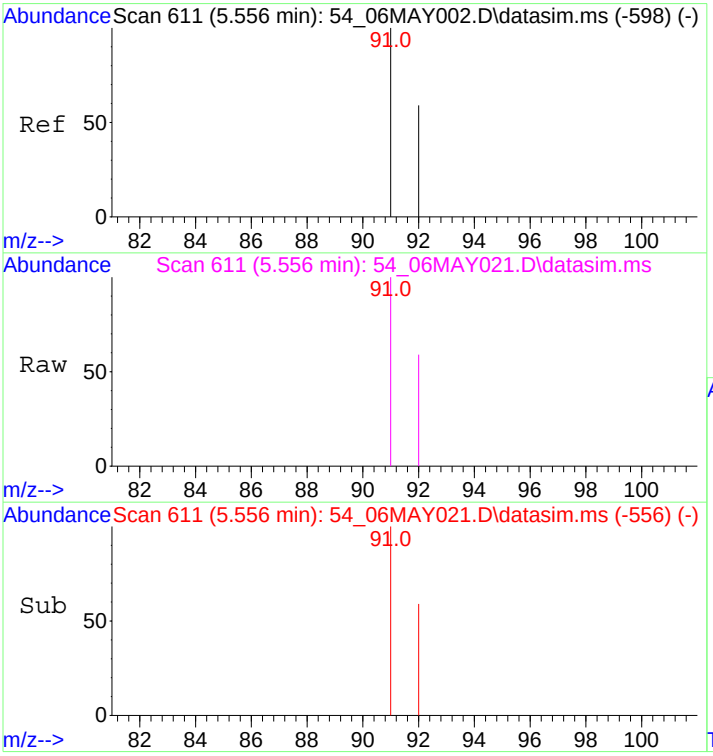


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion:117 Resp: 8556

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.1	27.0	40.4

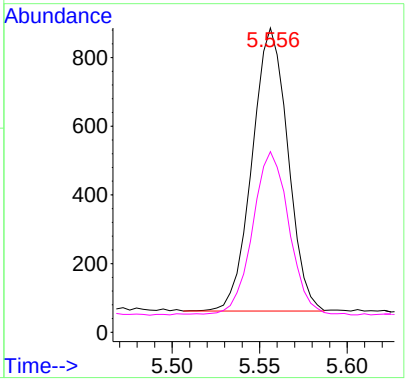


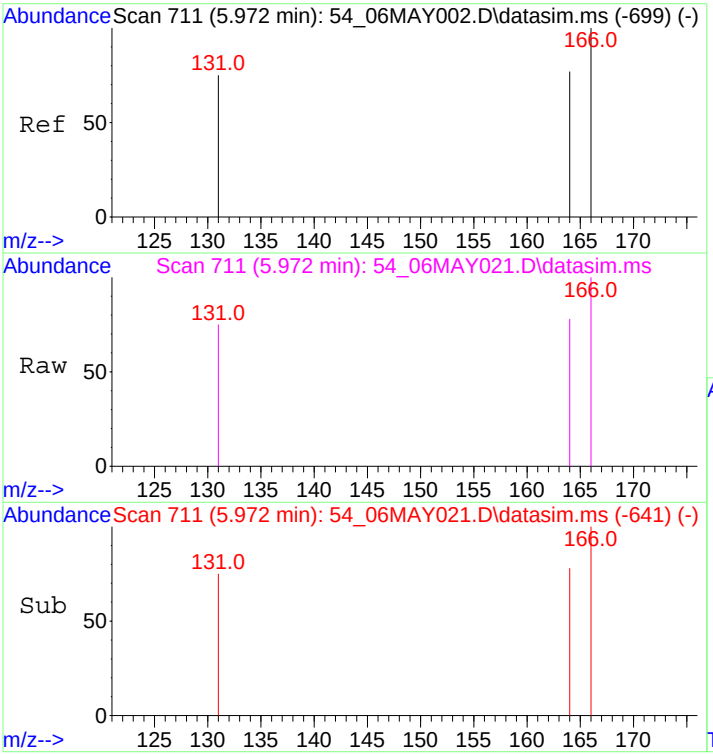


#13
Toluene
Concen: 2.28 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion: 91 Resp: 1169

Ion	Ratio	Lower	Upper
91	100		
92	57.8	47.8	71.8

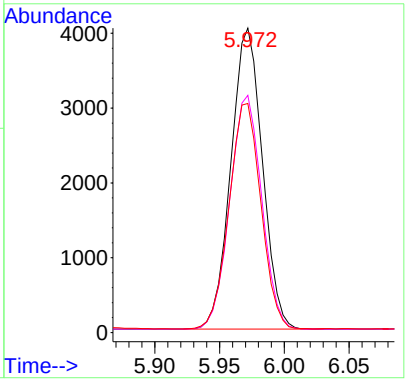




#14
Tetrachloroethene
Concen: 23.22 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 06MAY021.D
Acq: 6 May 2014 12:51 pm

Tgt Ion:166 Resp: 6801

Ion	Ratio	Lower	Upper
166	100		
164	78.5	62.6	94.0
131	75.8	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY022.D
Acq On : 6 May 2014 1:12 pm
Operator : yhl
Sample : 02218 \ E5-014
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 14:23:19 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

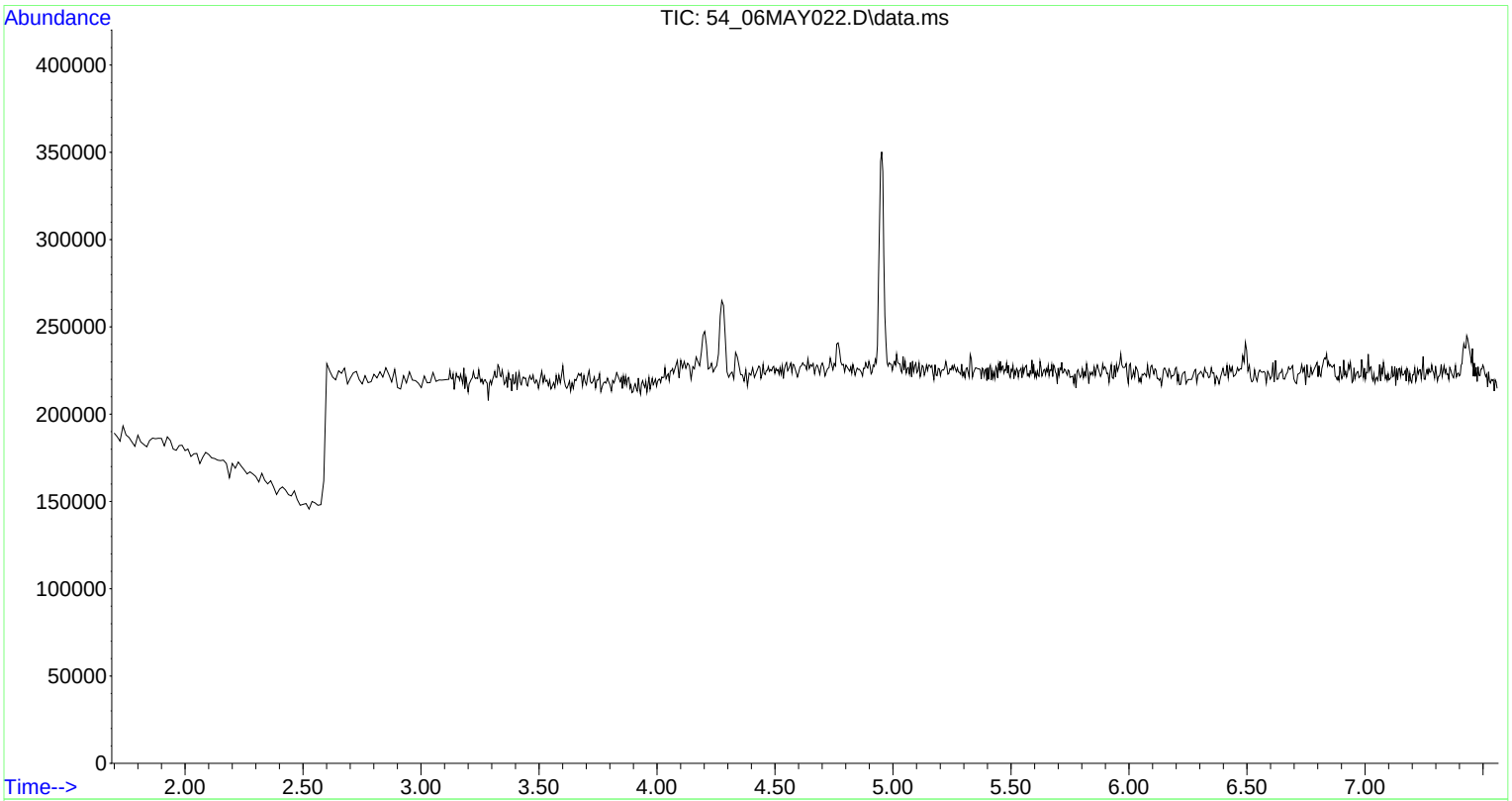
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3856	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.770	114	9323	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	8490	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.251	61	1399	4.68	ppbv	# 84
5] trans-1,2-Dichloroethene	3.703	61	769	2.92	ppbv	# 75
6] 1,1-Dichloroethane	3.910	63	751	2.39	ppbv	# 84
7] cis-1,2-Dichloroethene	4.197	61	9471	38.53	ppbv	# 70
8] 1,1,1-Trichloroethane	4.483	97	660	1.66	ppbv	96
11] Trichloroethene	4.950	130	36799	158.70	ppbv	98
13] Toluene	5.556	91	2422	4.76	ppbv	100
14] Tetrachloroethene	5.972	166	3779	13.00	ppbv	99

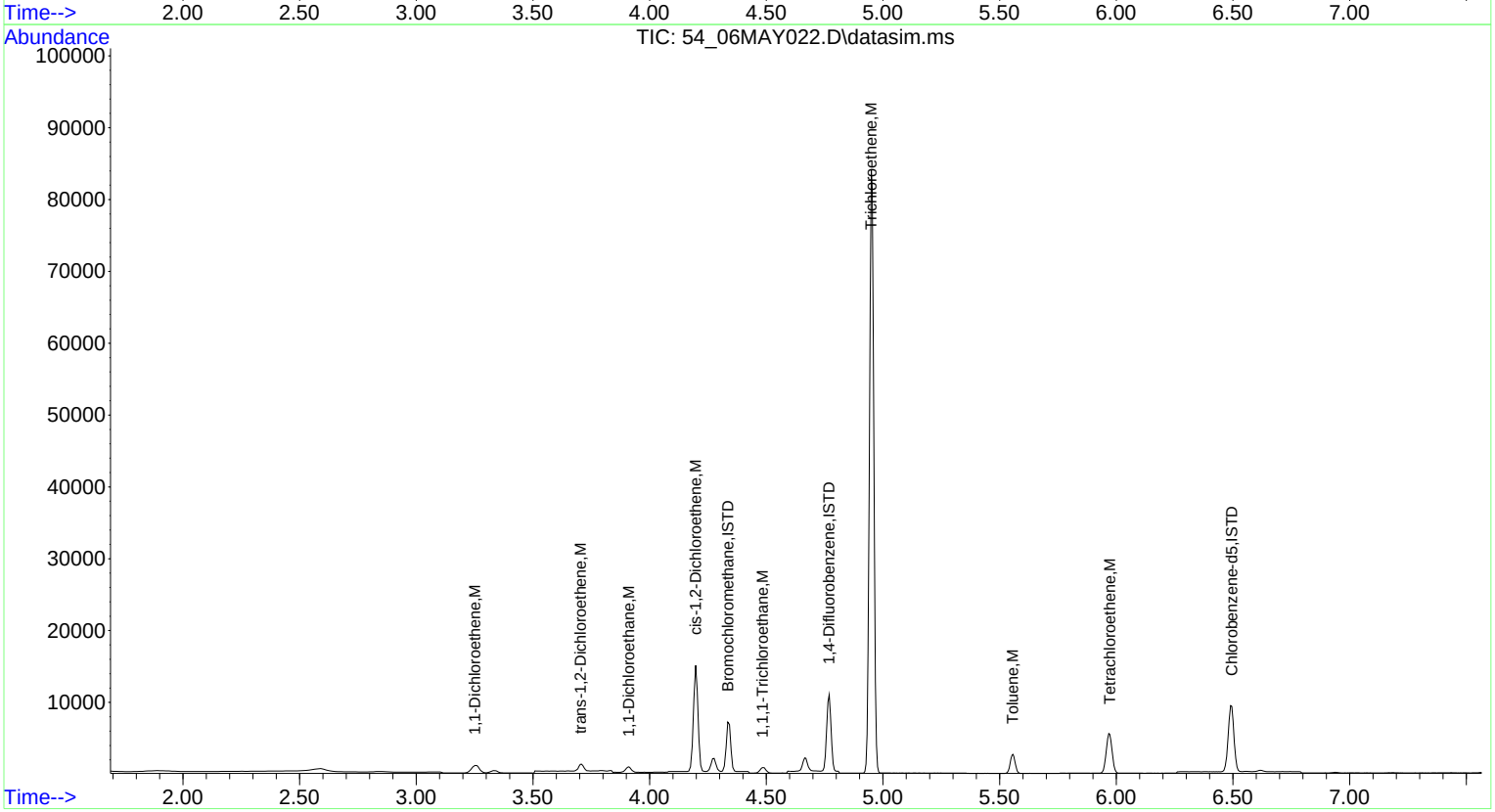
(#) = qualifier out of range (m) = manual integration (+) = signals summed

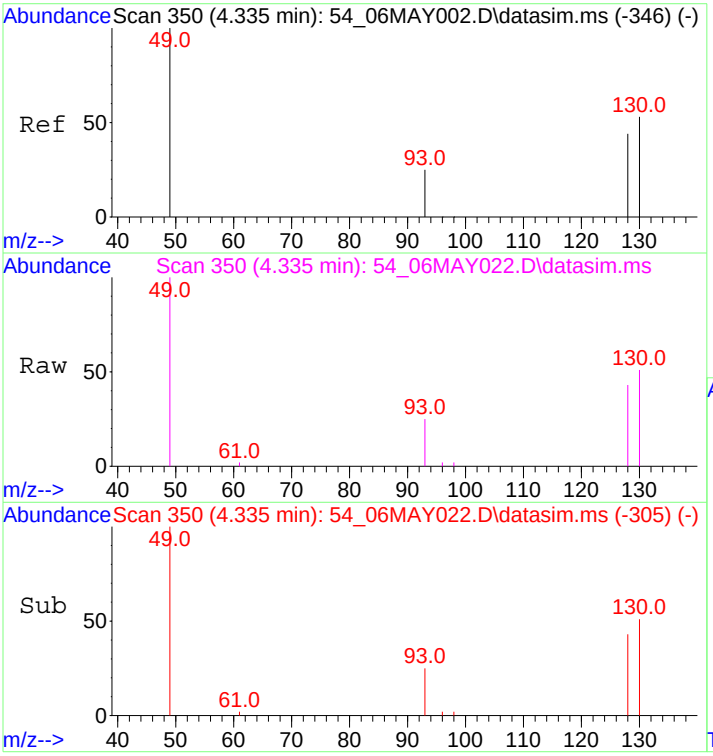
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY022.D
Acq On : 6 May 2014 1:12 pm
Operator : yhl
Sample : 02218 \ E5-014
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 14:23:19 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



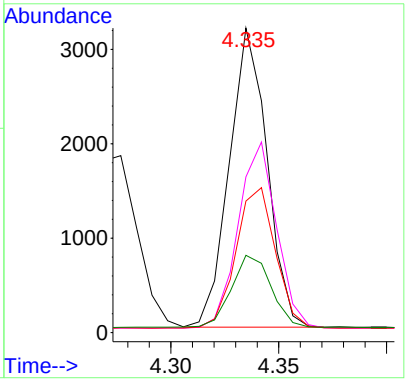


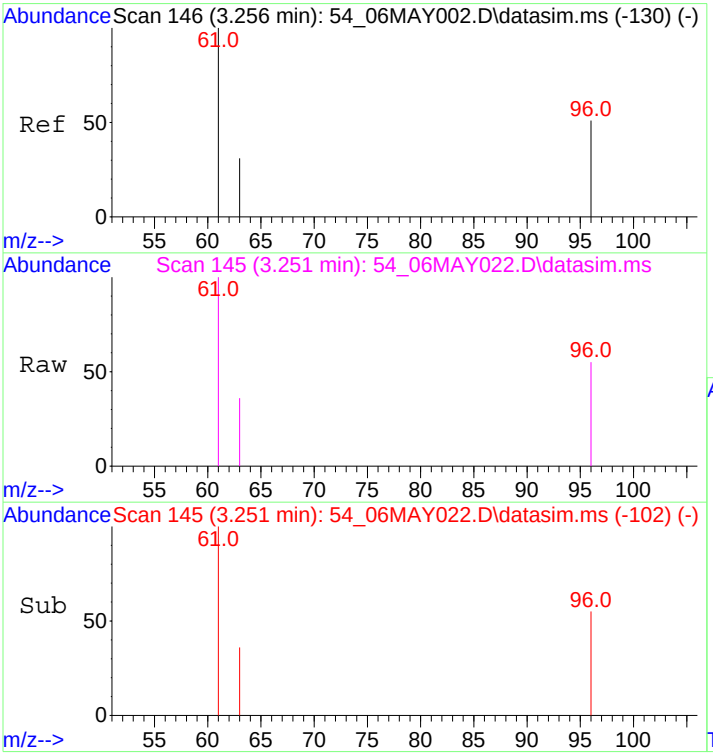


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion: 49 Resp: 3856

Ion	Ratio	Lower	Upper
49	100		
130	63.4	87.2	130.8#
128	49.3	68.0	102.0#
93	25.3	29.3	43.9#

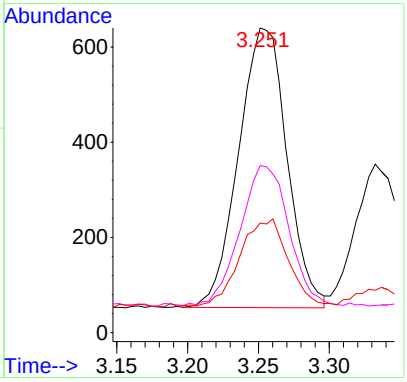


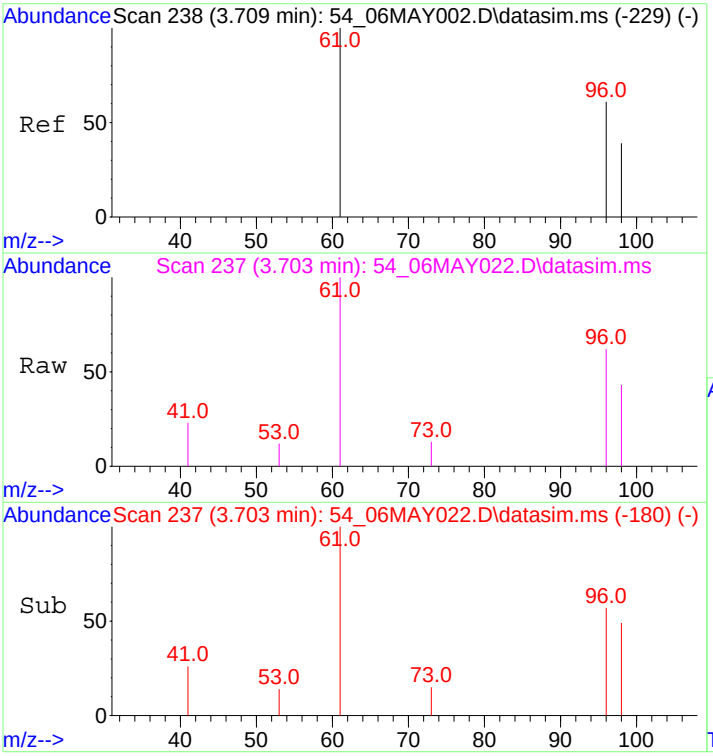


#3
1,1-Dichloroethene
Concen: 4.68 ppbv
RT: 3.251 min Scan# 145
Delta R.T. 0.000 min
Lab File: 54_06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion: 61 Resp: 1399

Ion	Ratio	Lower	Upper
61	100		
96	64.7	63.4	95.2
63	40.7	26.2	39.2#

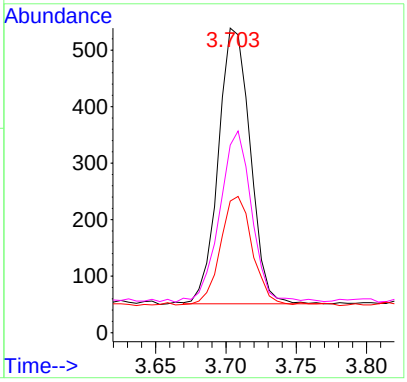


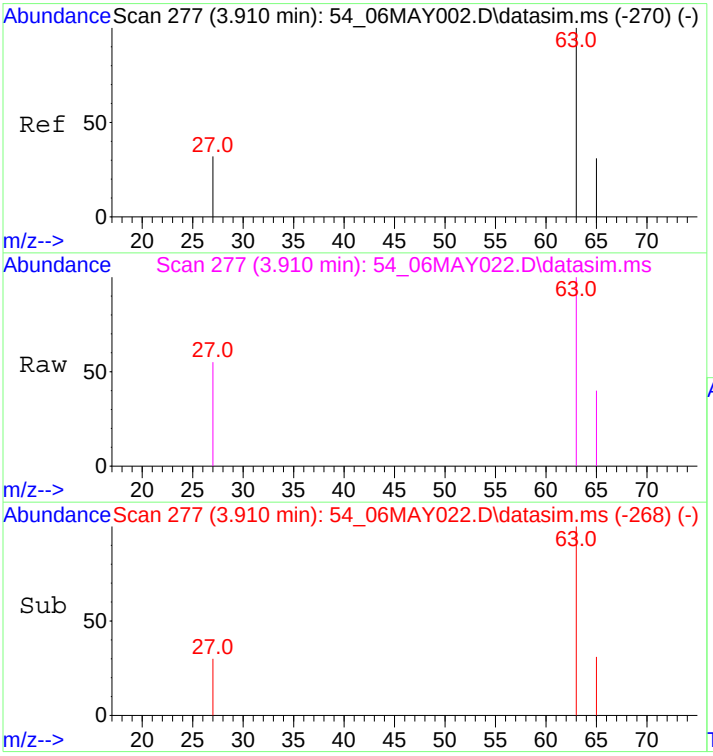


#5
trans-1,2-Dichloroethene
Concen: 2.92 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion: 61 Resp: 769

Ion	Ratio	Lower	Upper
61	100		
96	61.5	71.4	107.0#
98	44.6	45.8	68.8#

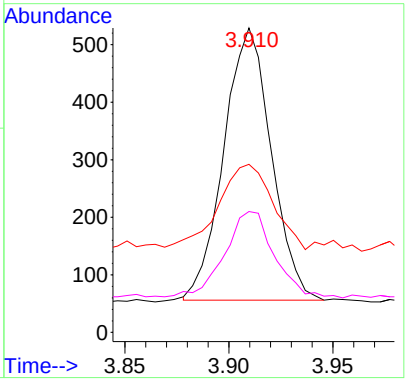


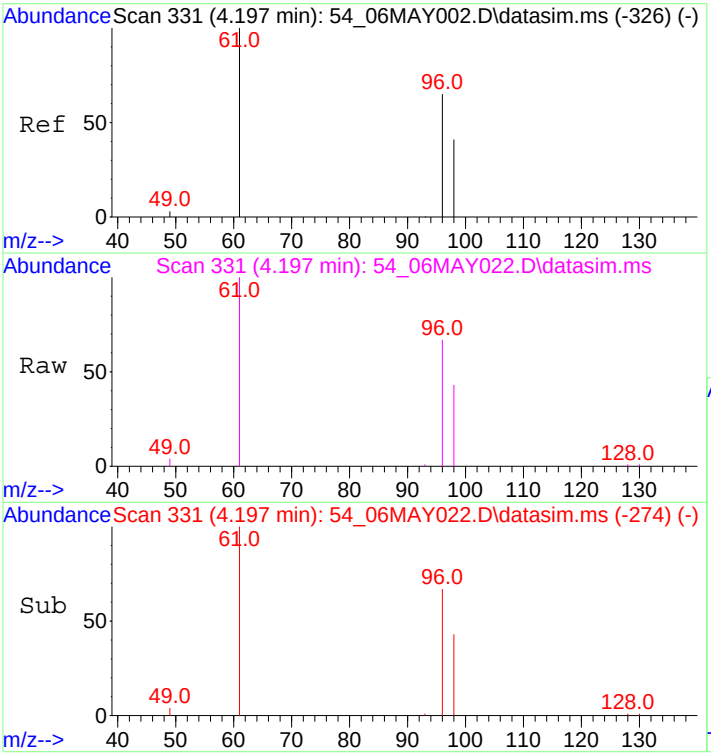


#6
1,1-Dichloroethane
Concen: 2.39 ppbv
RT: 3.910 min Scan# 277
Delta R.T. 0.000 min
Lab File: 54_06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion: 63 Resp: 751

Ion	Ratio	Lower	Upper
63	100		
65	32.5	26.1	39.1
27	34.8	10.2	15.2#

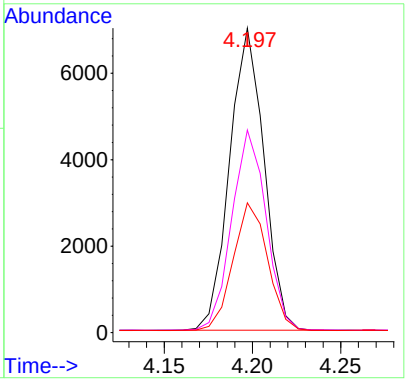


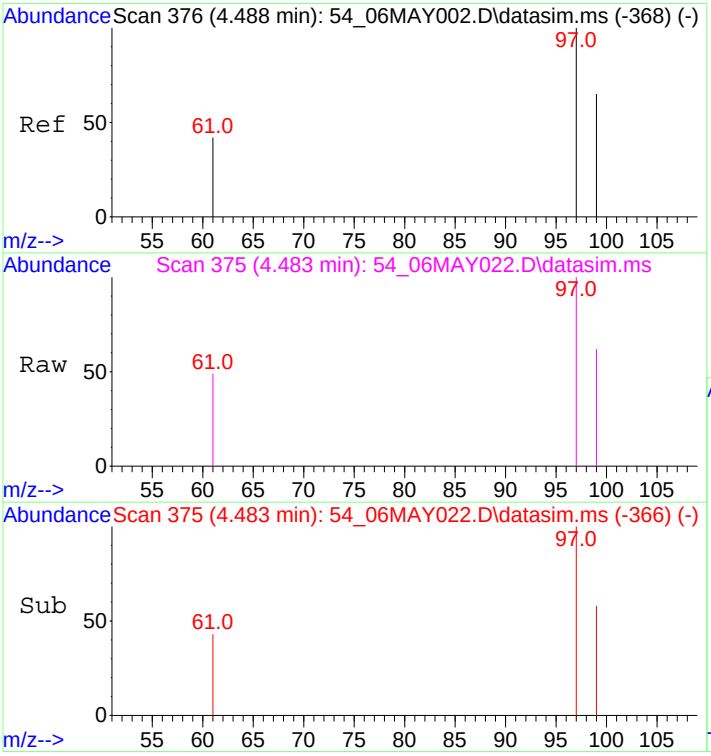


#7
cis-1,2-Dichloroethene
Concen: 38.53 ppbv
RT: 4.197 min Scan# 331
Delta R.T. 0.000 min
Lab File: 54 06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion: 61 Resp: 9471

Ion	Ratio	Lower	Upper
61	100		
96	65.8	78.5	117.7#
98	42.3	50.6	76.0#

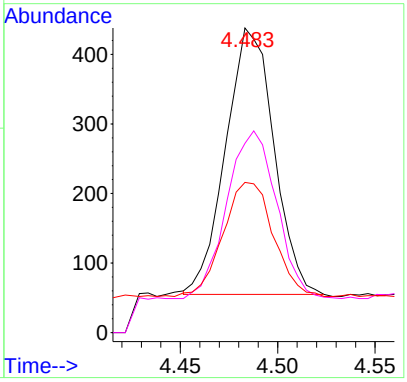


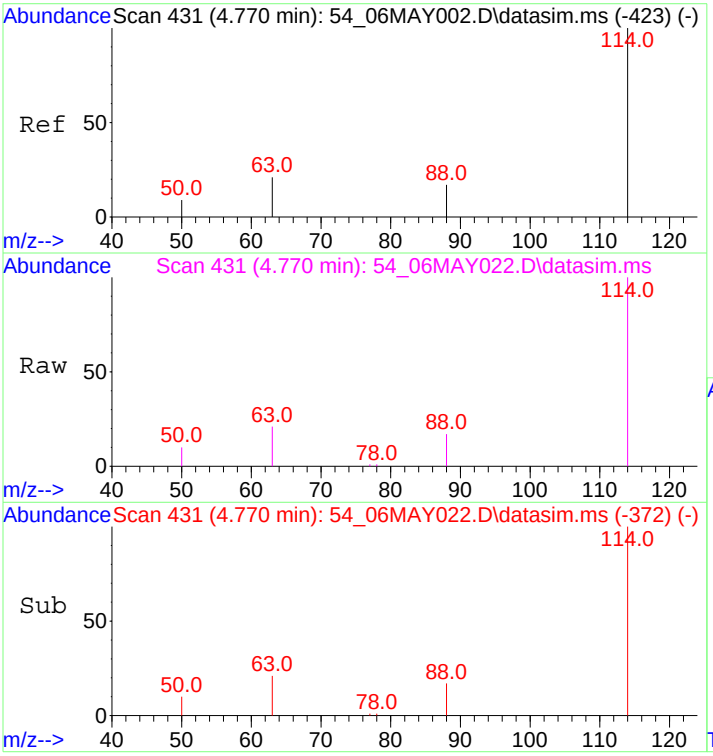


#8
1,1,1-Trichloroethane
Concen: 1.66 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion: 97 Resp: 660

Ion	Ratio	Lower	Upper
97	100		
99	64.8	52.1	78.1
61	44.2	30.2	45.4

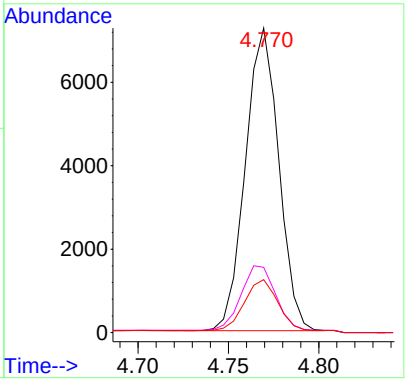


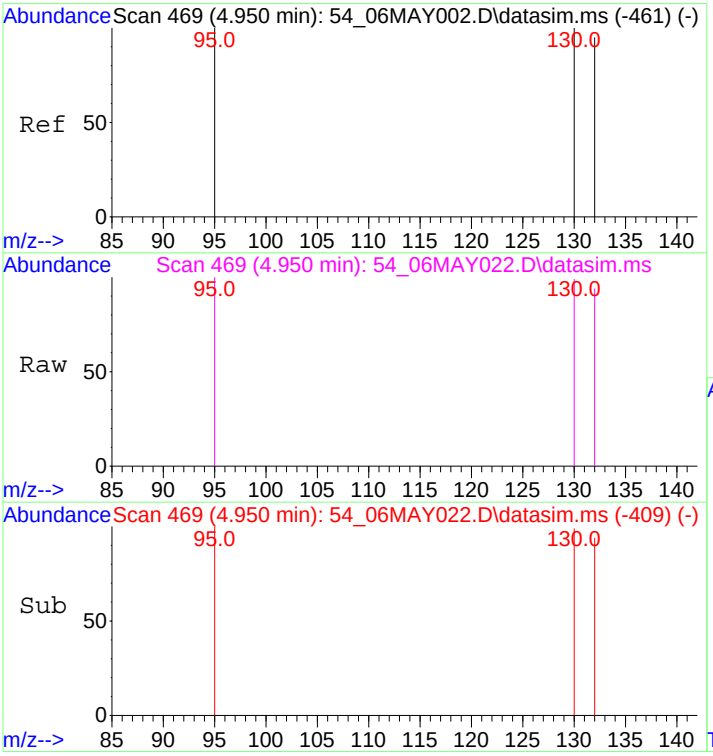


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion:114 Resp: 9323

Ion	Ratio	Lower	Upper
114	100		
63	22.0	12.0	18.0#
88	16.7	11.8	17.8

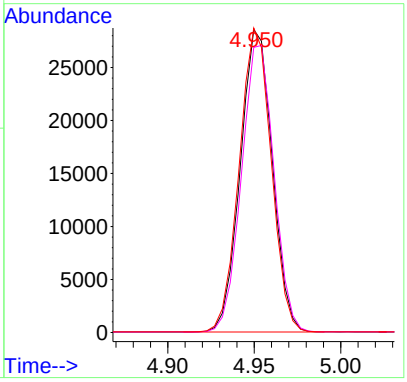


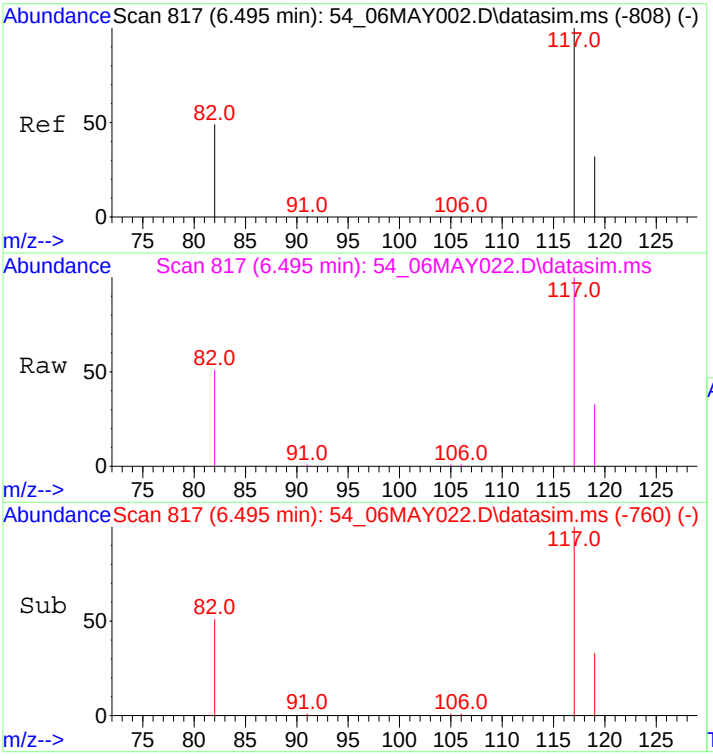


#11
Trichloroethene
Concen: 158.70 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion:130 Resp: 36799

Ion	Ratio	Lower	Upper
130	100		
132	96.2	76.9	115.3
95	100.2	76.5	114.7

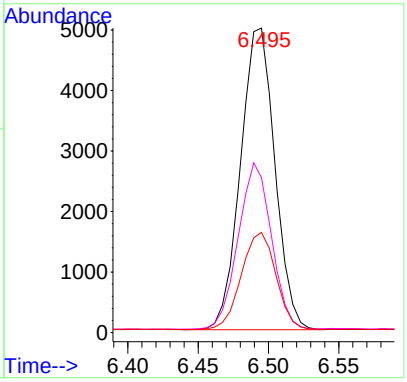


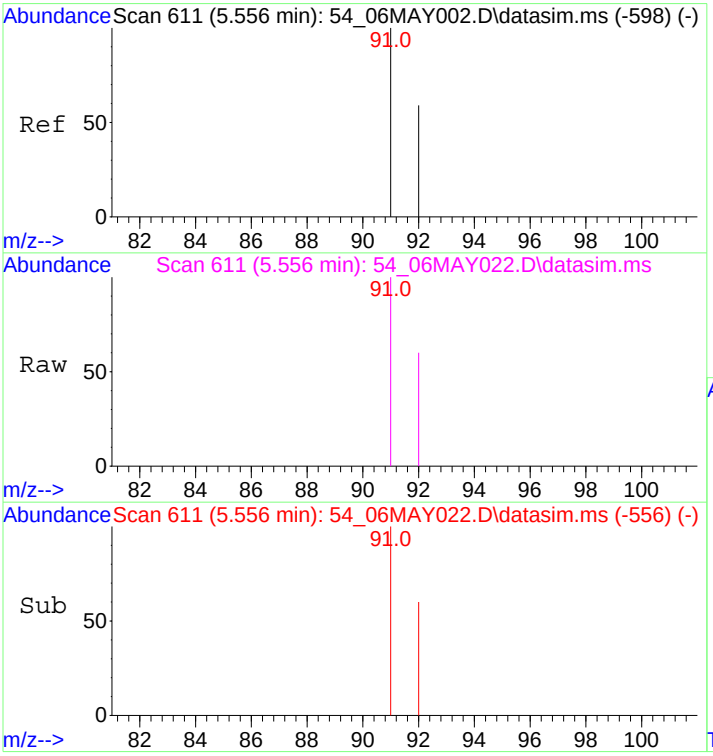


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion:117 Resp: 8490

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.2	27.0	40.4

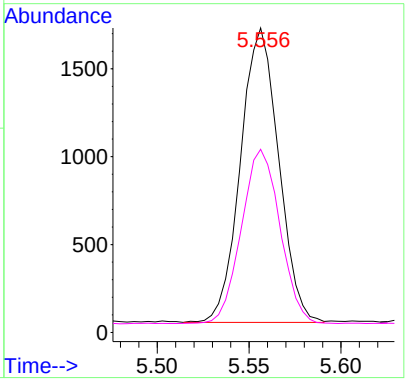


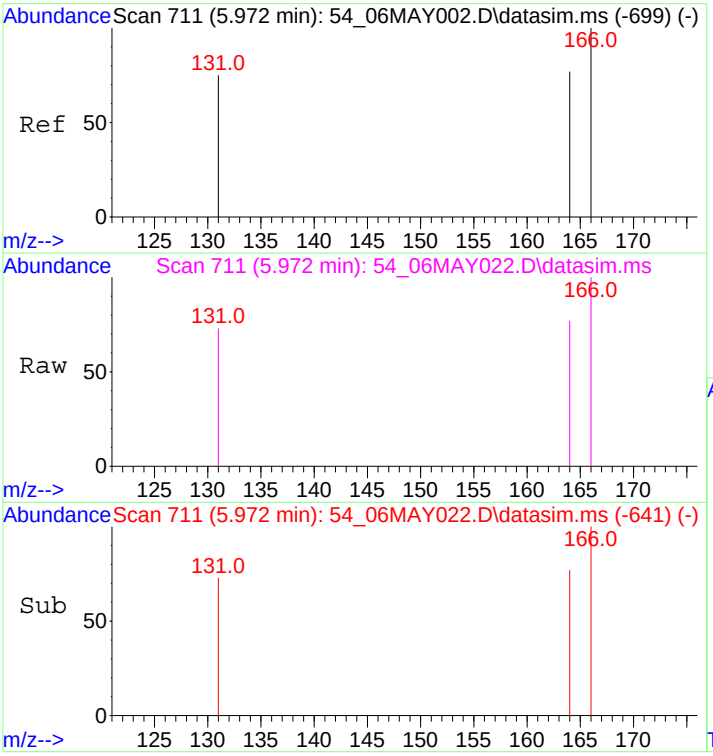


#13
Toluene
Concen: 4.76 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion: 91 Resp: 2422

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8

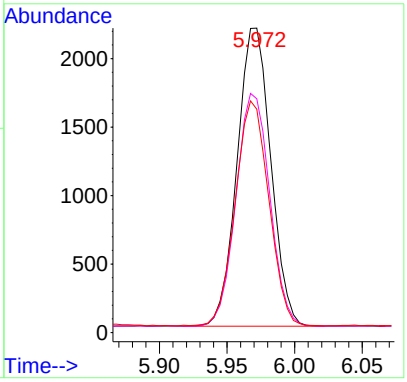




#14
Tetrachloroethene
Concen: 13.00 ppbv
RT: 5.972 min Scan# 711
Delta R.T. 0.000 min
Lab File: 54 06MAY022.D
Acq: 6 May 2014 1:12 pm

Tgt Ion:166 Resp: 3779

Ion	Ratio	Lower	Upper
166	100		
164	78.1	62.6	94.0
131	74.8	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY023.D
Acq On : 6 May 2014 1:24 pm
Operator : yhl
Sample : 02219\ E5-016
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 14:25:29 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

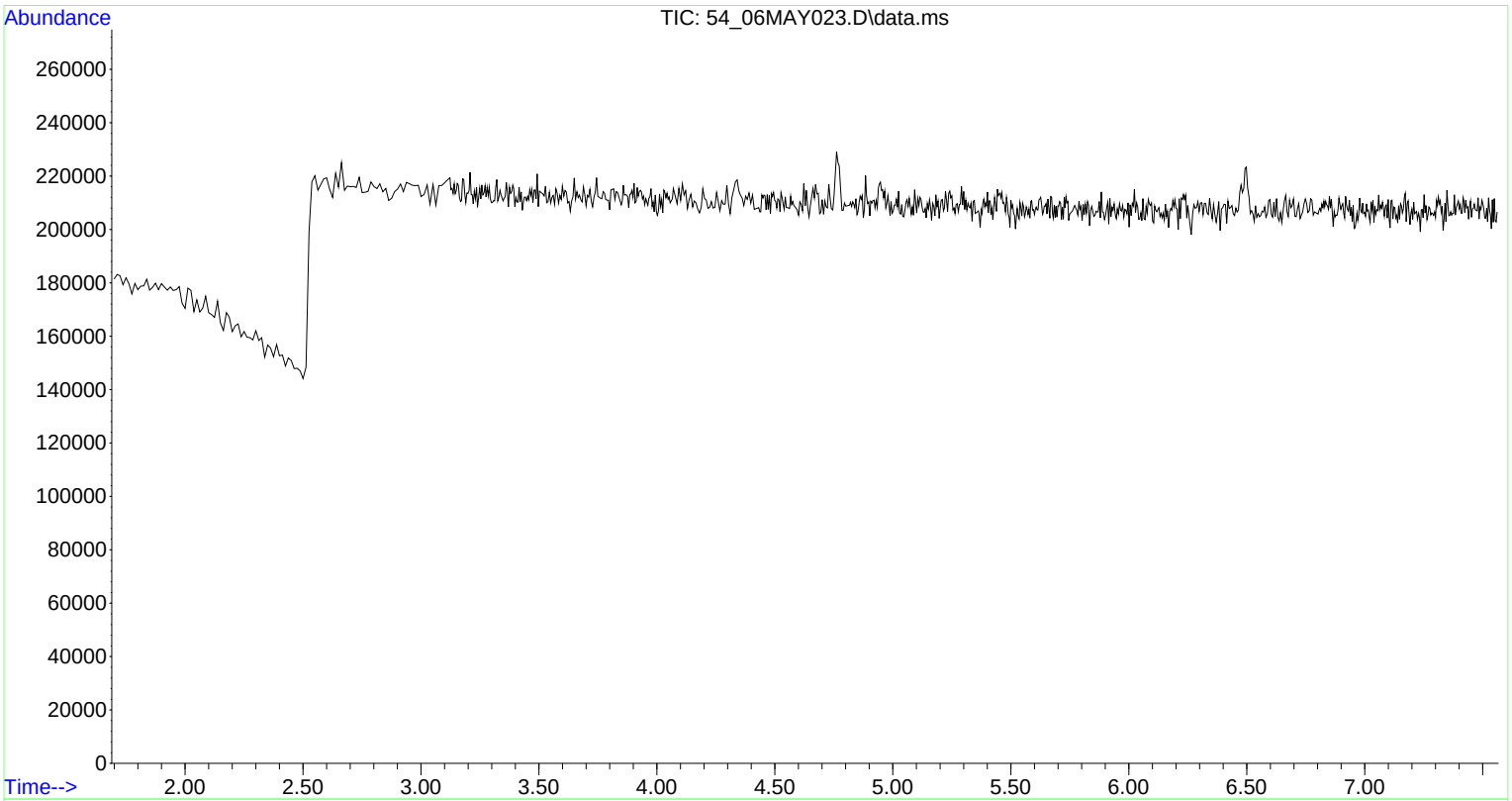
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4078	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9492	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.495	117	8420	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
7] cis-1,2-Dichloroethene	4.197	61	432	1.66	ppbv	# 84
11] Trichloroethene	4.950	130	2669	11.31	ppbv	97
14] Tetrachloroethene	5.967	166	193	0.67	ppbv	# 69

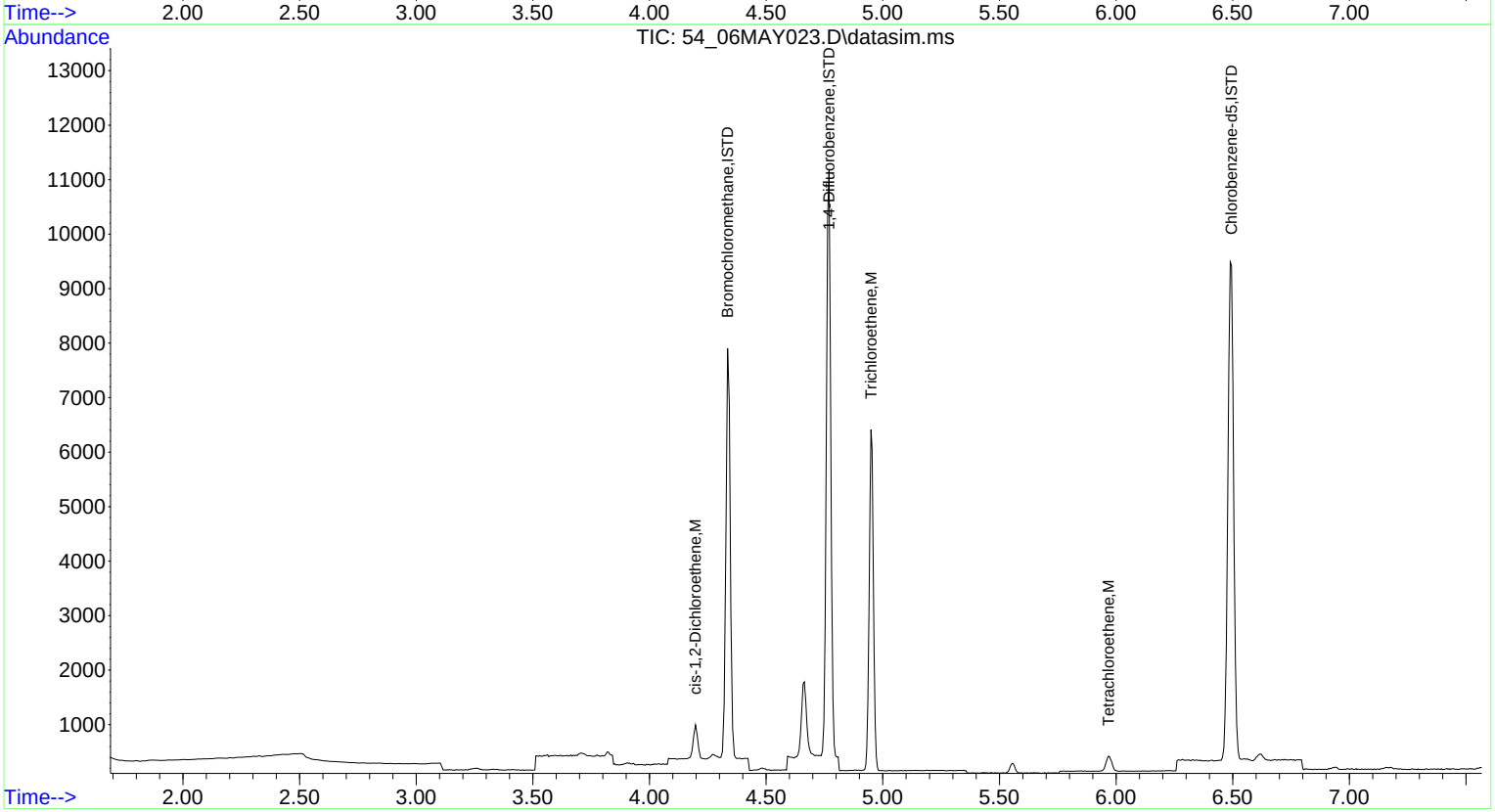
(#) = qualifier out of range (m) = manual integration (+) = signals summed

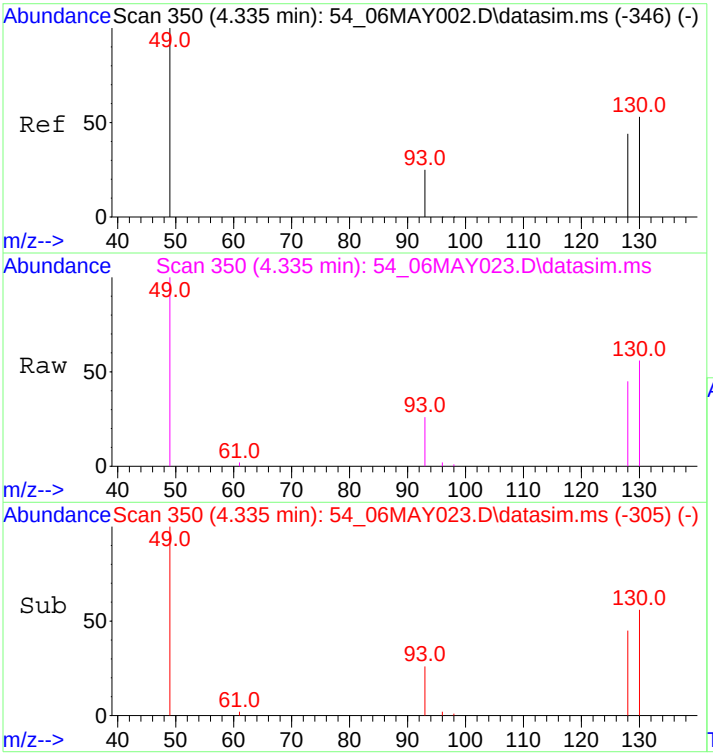
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY023.D
Acq On : 6 May 2014 1:24 pm
Operator : yhl
Sample : 02219\ E5-016
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 14:25:29 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



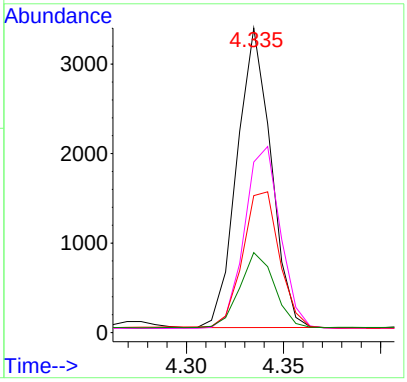


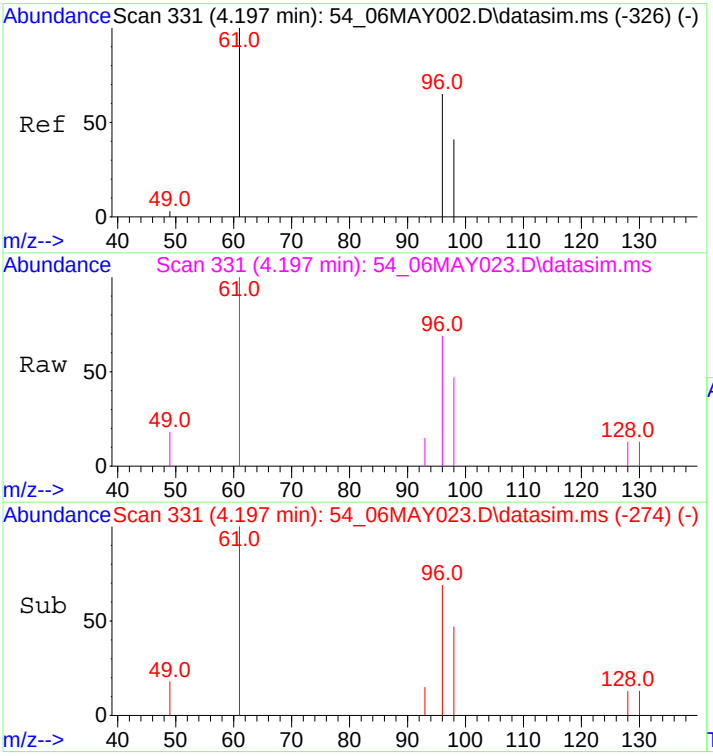


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY023.D
Acq: 6 May 2014 1:24 pm

Tgt Ion: 49 Resp: 4078

Ion	Ratio	Lower	Upper
49	100		
130	64.1	87.2	130.8#
128	49.2	68.0	102.0#
93	25.6	29.3	43.9#

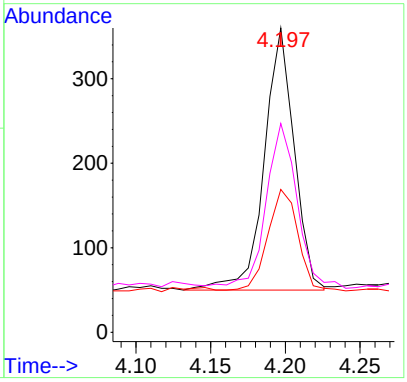


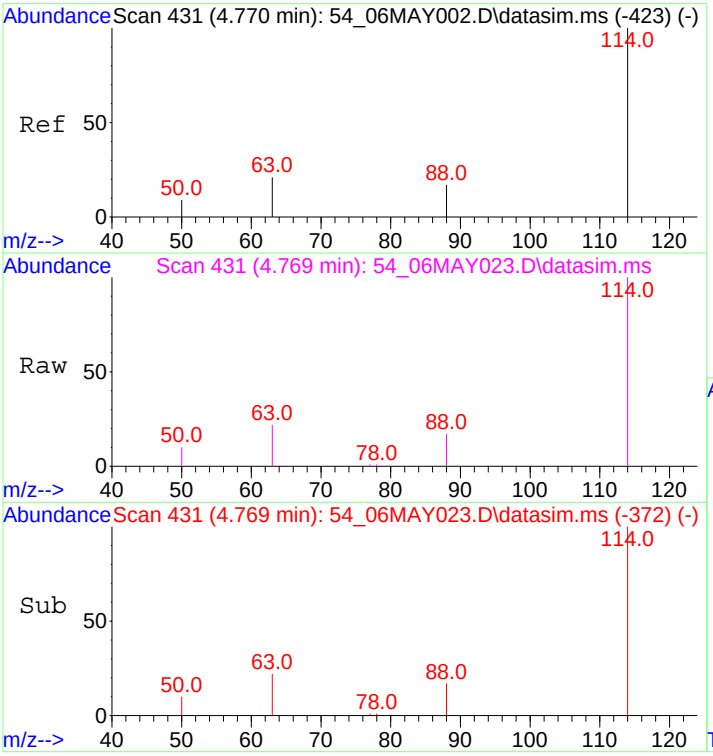


#7
cis-1,2-Dichloroethene
Concen: 1.66 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_06MAY023.D
Acq: 6 May 2014 1:24 pm

Tgt Ion: 61 Resp: 432

Ion	Ratio	Lower	Upper
61	100		
96	107.6	78.5	117.7
98	83.3	50.6	76.0#

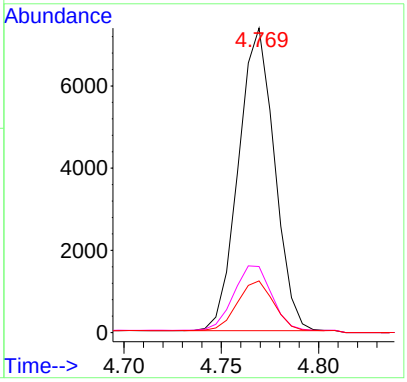


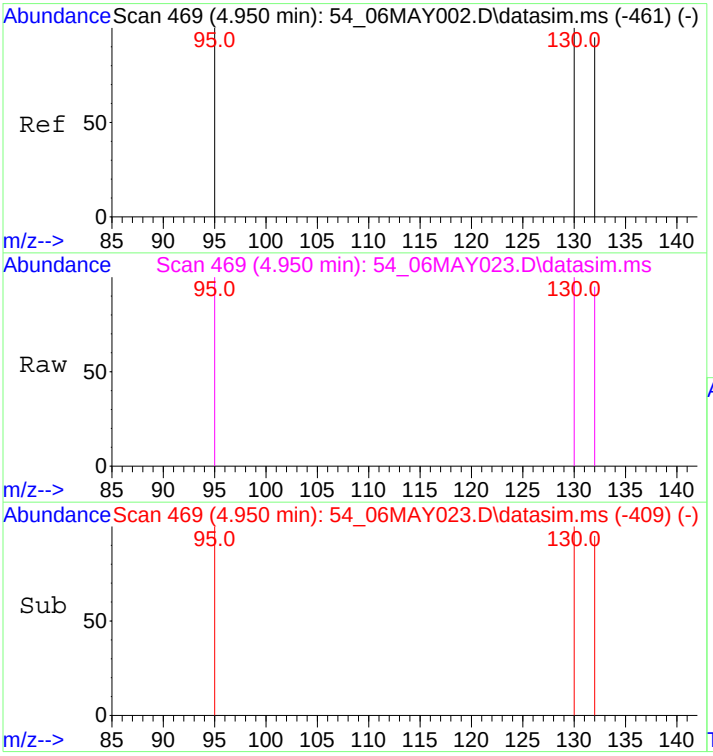


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 06MAY023.D
Acq: 6 May 2014 1:24 pm

Tgt Ion:114 Resp: 9492

Ion	Ratio	Lower	Upper
114	100		
63	22.4	12.0	18.0#
88	16.5	11.8	17.8

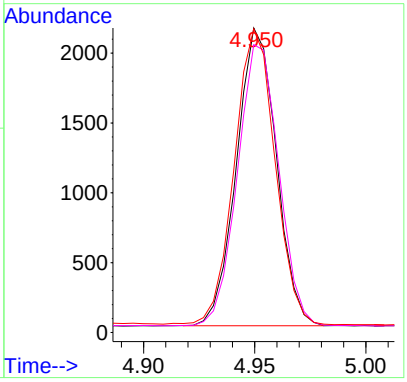


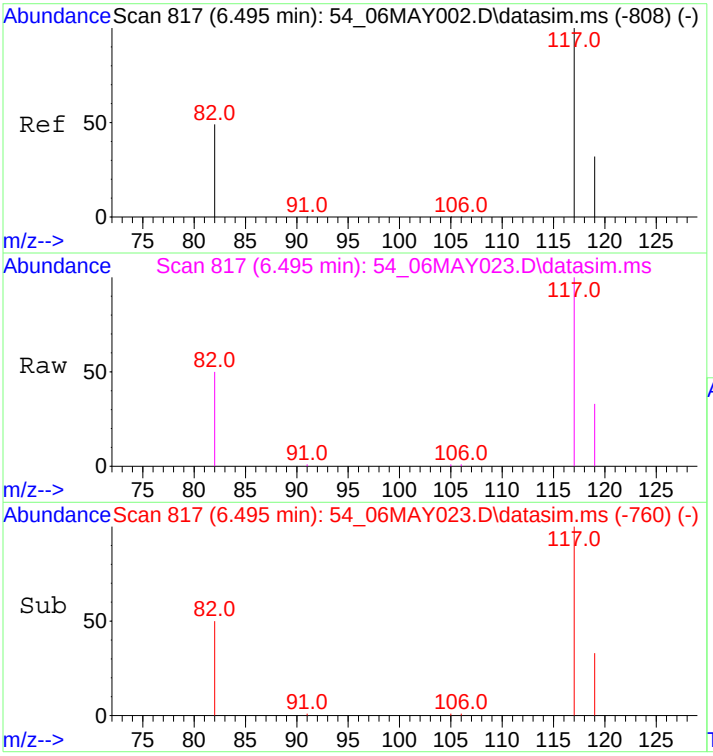


#11
Trichloroethene
Concen: 11.31 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_06MAY023.D
Acq: 6 May 2014 1:24 pm

Tgt Ion:130 Resp: 2669

Ion	Ratio	Lower	Upper
130	100		
132	97.0	76.9	115.3
95	100.8	76.5	114.7

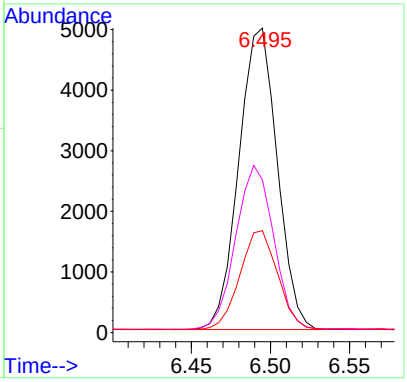


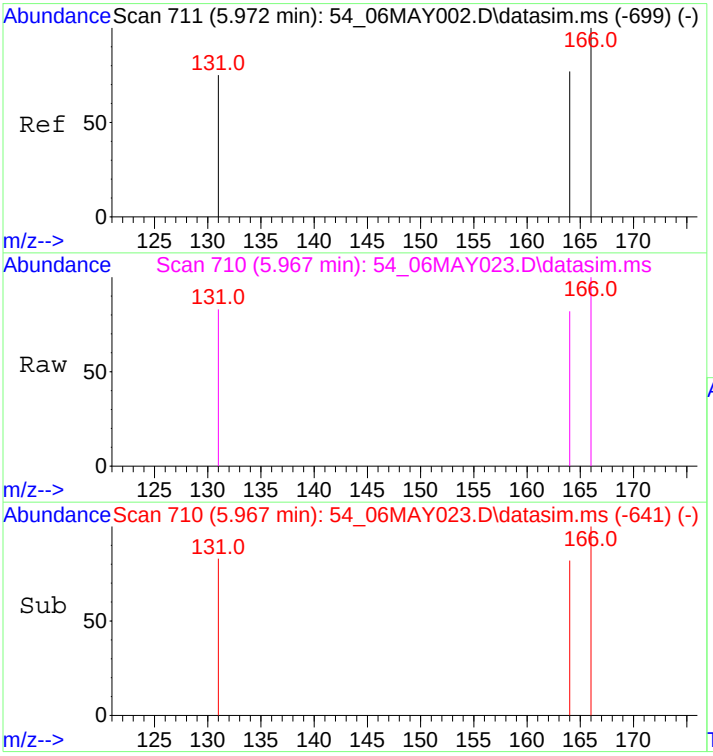


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 06MAY023.D
Acq: 6 May 2014 1:24 pm

Tgt Ion:117 Resp: 8420

Ion	Ratio	Lower	Upper
117	100		
82	53.5	38.0	57.0
119	32.0	27.0	40.4

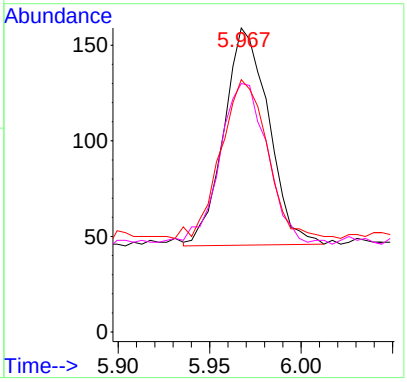




#14
Tetrachloroethene
Concen: 0.67 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_06MAY023.D
Acq: 6 May 2014 1:24 pm

Tgt Ion:166 Resp: 193

Ion	Ratio	Lower	Upper
166	100		
164	76.2	62.6	94.0
131	124.4	58.5	87.7#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY024.D
Acq On : 6 May 2014 1:35 pm
Operator : yhl
Sample : 02220\ E5-003
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 15:46:31 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

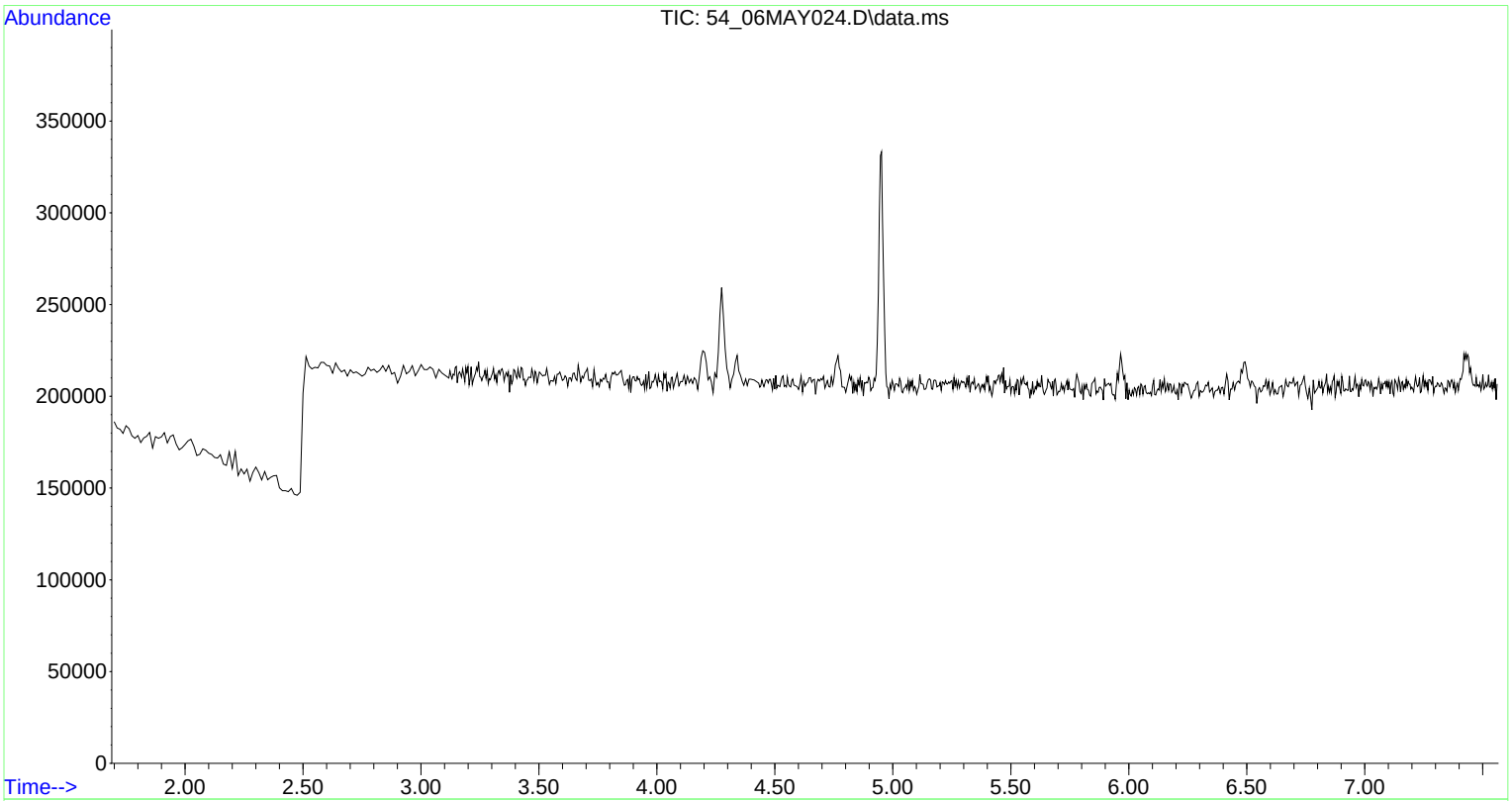
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4190	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9707	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8876	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.255	61	1593	4.91	ppbv	# 76
5] trans-1,2-Dichloroethene	3.702	61	818	2.86	ppbv	# 74
6] 1,1-Dichloroethane	3.905	63	837	2.45	ppbv	# 81
7] cis-1,2-Dichloroethene	4.197	61	9600	35.94	ppbv	# 70
8] 1,1,1-Trichloroethane	4.483	97	731	1.69	ppbv	96
11] Trichloroethene	4.949	130	36806	152.45	ppbv	98
13] Toluene	5.552	91	1463	2.75	ppbv	100
14] Tetrachloroethene	5.967	166	4924	16.20	ppbv	98

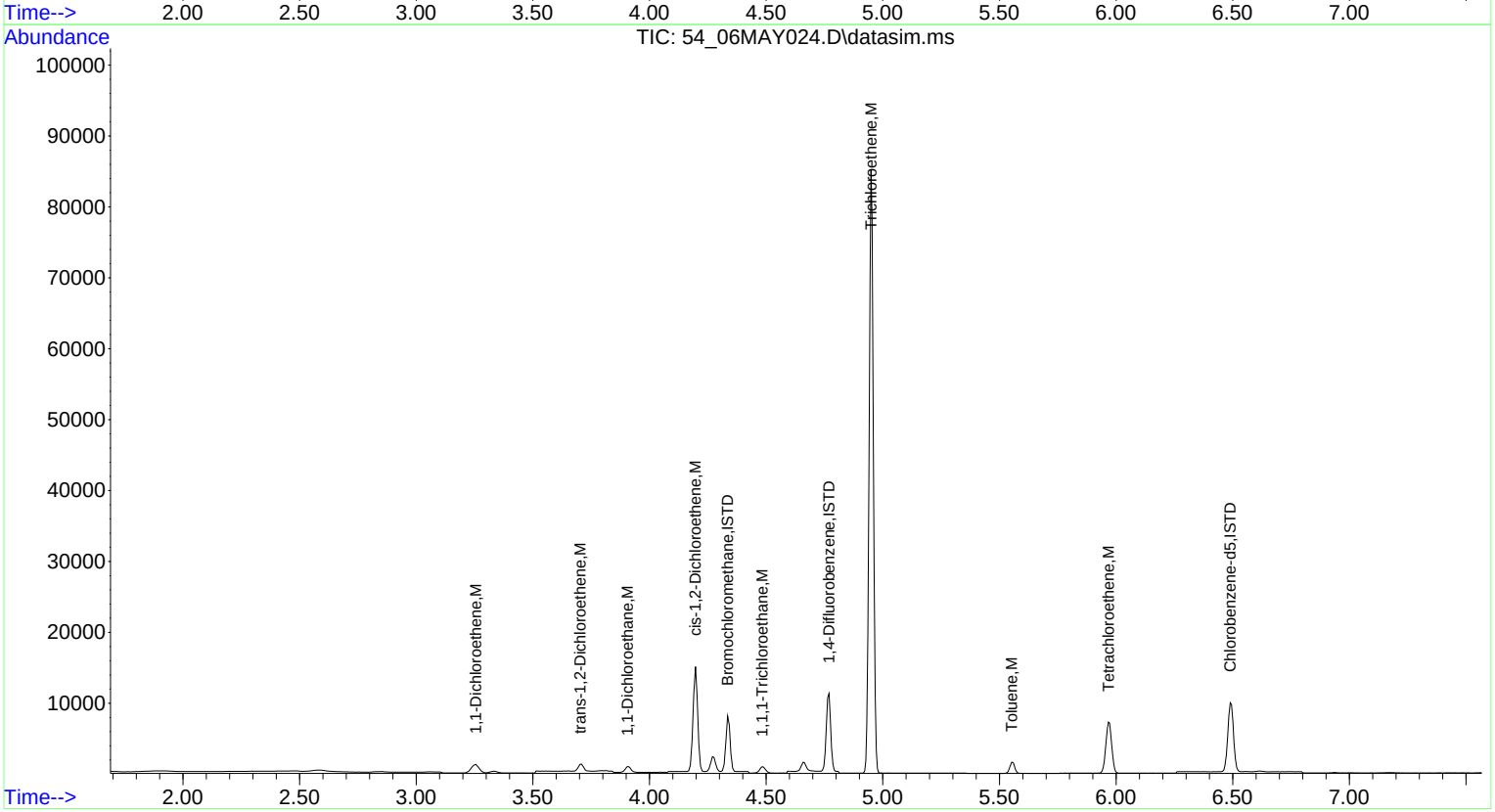
(#) = qualifier out of range (m) = manual integration (+) = signals summed

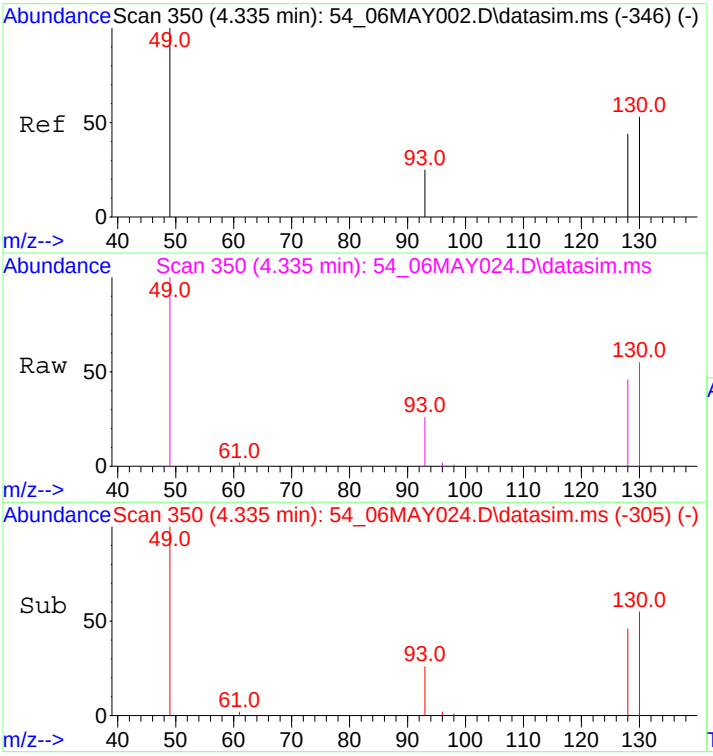
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY024.D
Acq On : 6 May 2014 1:35 pm
Operator : yhl
Sample : 02220\ E5-003
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 15:46:31 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



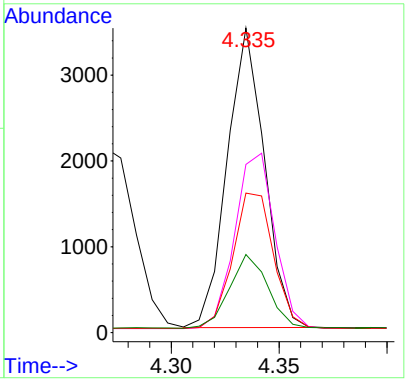


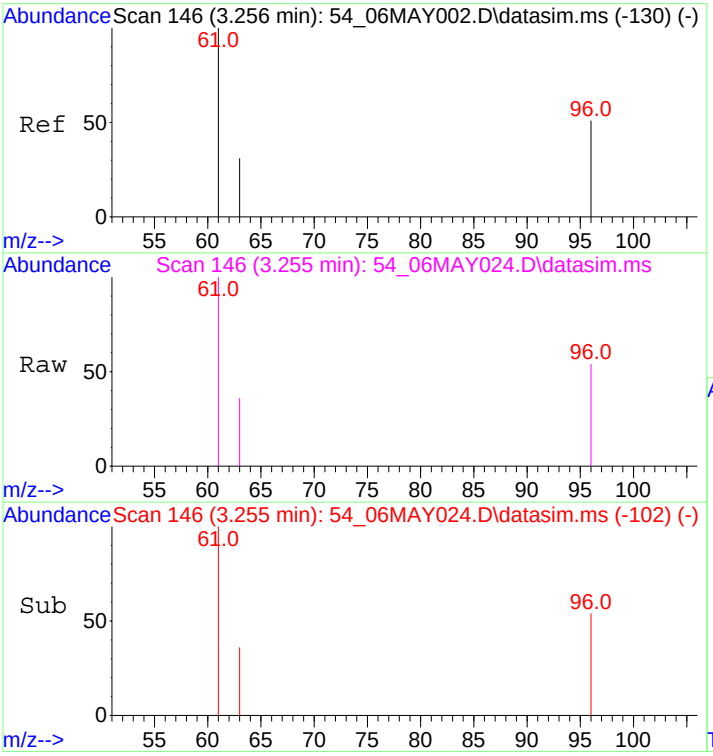


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion: 49 Resp: 4190

Ion	Ratio	Lower	Upper
49	100		
130	63.2	87.2	130.8#
128	49.5	68.0	102.0#
93	25.4	29.3	43.9#

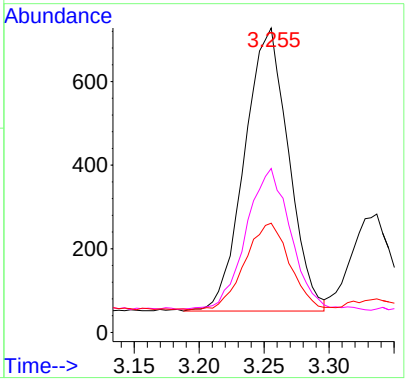


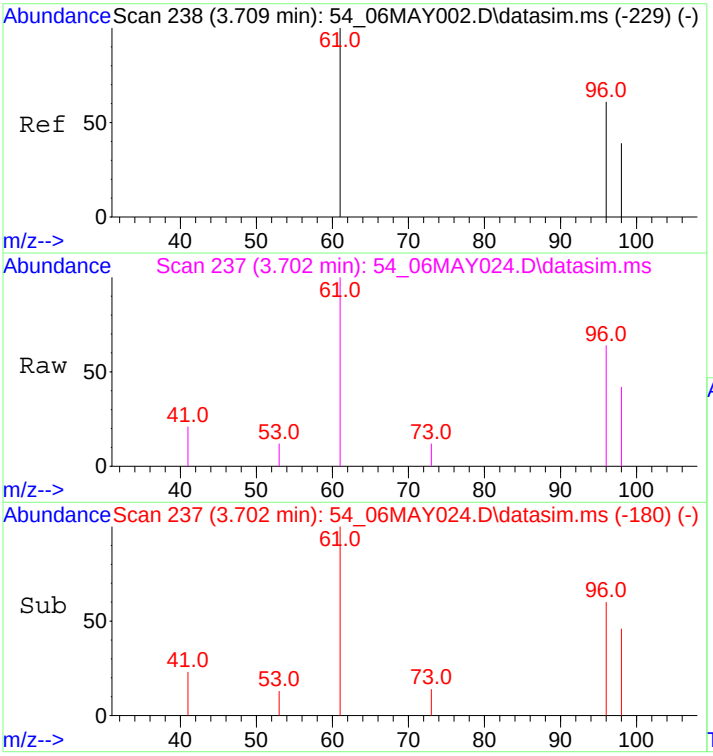


#3
1,1-Dichloroethene
Concen: 4.91 ppbv
RT: 3.255 min Scan# 146
Delta R.T. 0.004 min
Lab File: 54_06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion: 61 Resp: 1593

Ion	Ratio	Lower	Upper
61	100		
96	50.1	63.4	95.2#
63	31.3	26.2	39.2

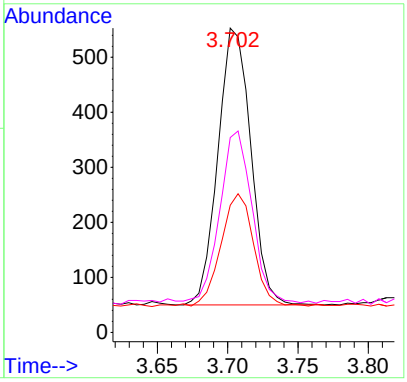


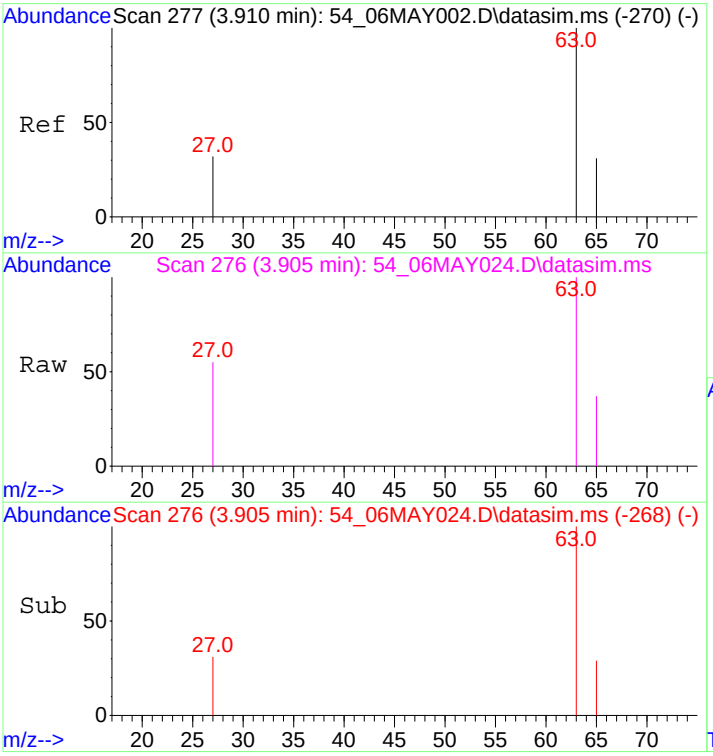


#5
trans-1,2-Dichloroethene
Concen: 2.86 ppbv
RT: 3.702 min Scan# 237
Delta R.T. -0.007 min
Lab File: 54 06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion: 61 Resp: 818

Ion	Ratio	Lower	Upper
61	100		
96	60.5	71.4	107.0#
98	42.8	45.8	68.8#

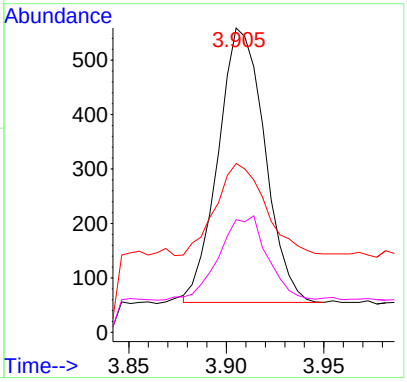


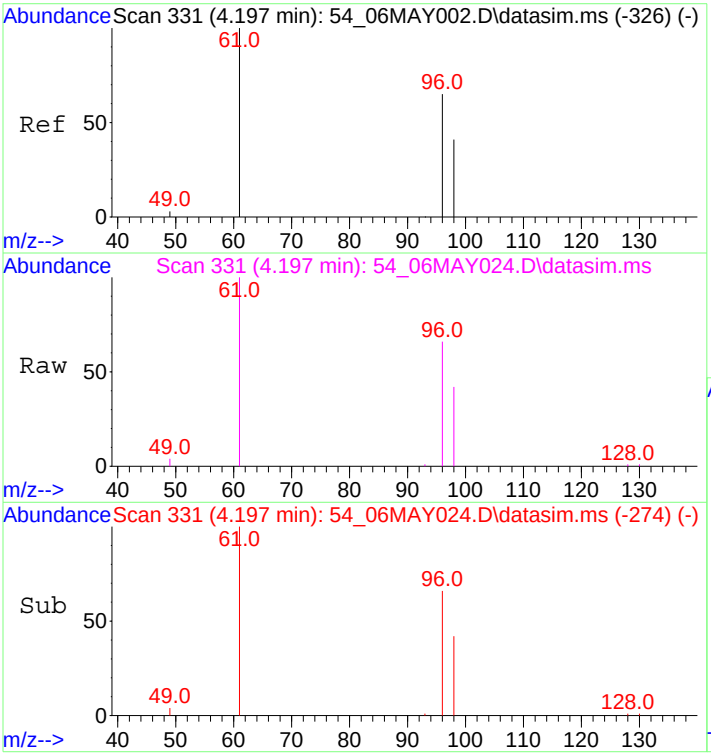


#6
1,1-Dichloroethane
Concen: 2.45 ppbv
RT: 3.905 min Scan# 276
Delta R.T. -0.005 min
Lab File: 54_06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion: 63 Resp: 837

Ion	Ratio	Lower	Upper
63	100		
65	30.5	26.1	39.1
27	35.5	10.2	15.2#

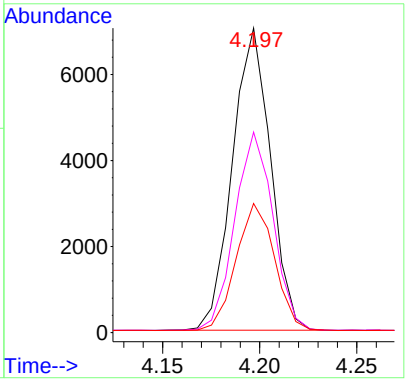


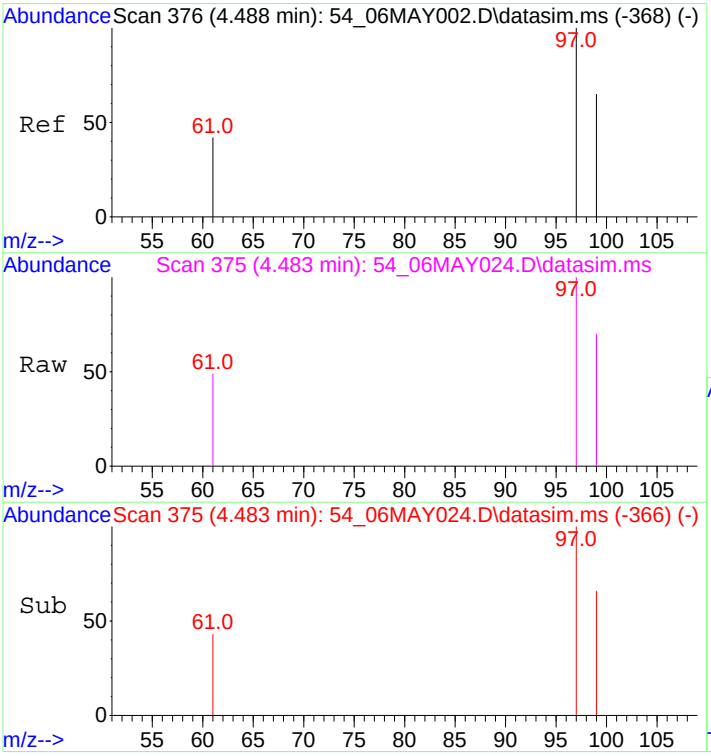


#7
cis-1,2-Dichloroethene
Concen: 35.94 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion: 61 Resp: 9600

Ion	Ratio	Lower	Upper
61	100		
96	65.6	78.5	117.7#
98	42.5	50.6	76.0#

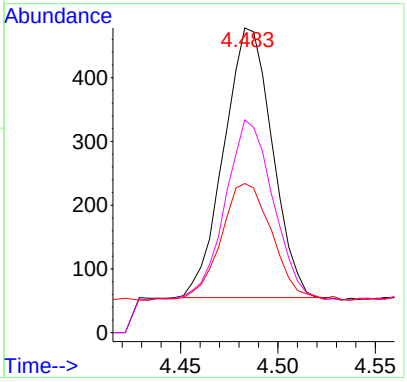


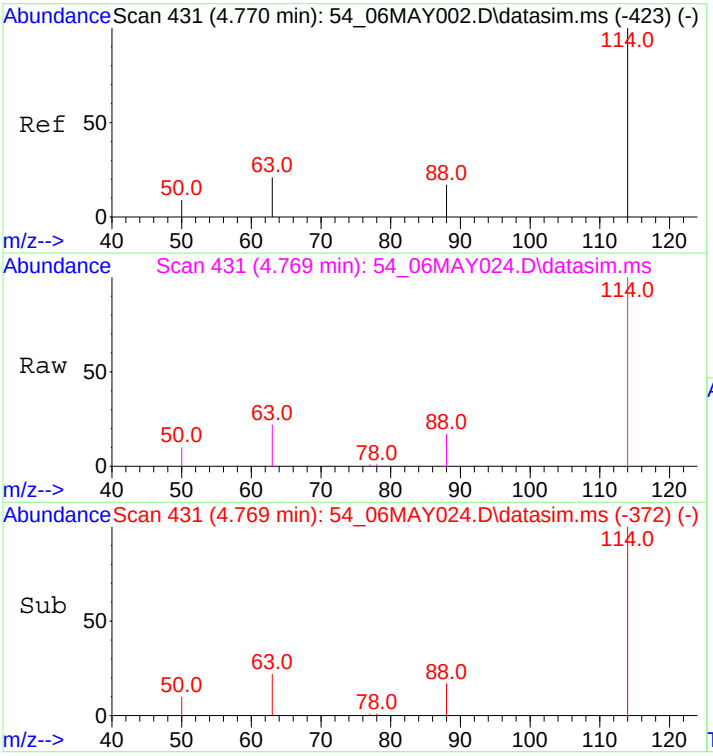


#8
1,1,1-Trichloroethane
Concen: 1.69 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion: 97 Resp: 731

Ion	Ratio	Lower	Upper
97	100		
99	65.7	52.1	78.1
61	44.2	30.2	45.4

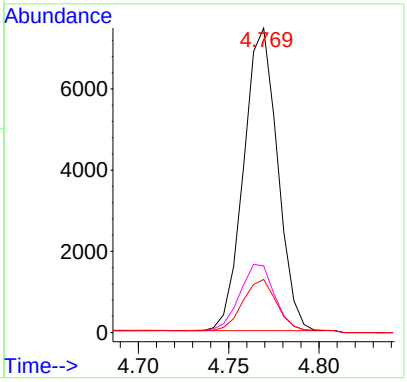


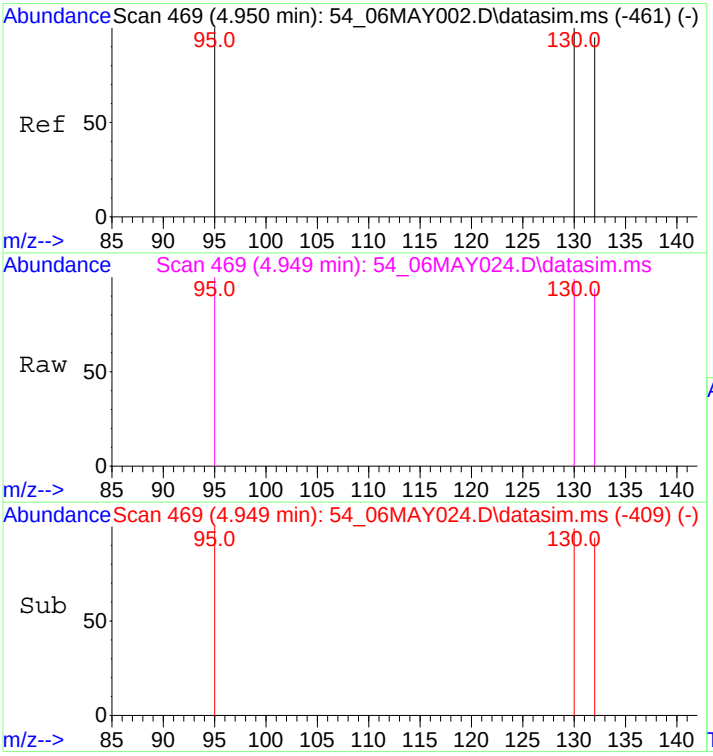


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion:114 Resp: 9707

Ion	Ratio	Lower	Upper
114	100		
63	22.4	12.0	18.0#
88	16.7	11.8	17.8

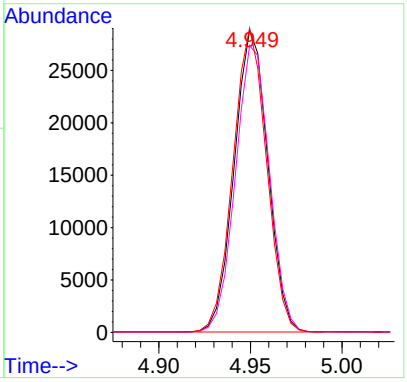


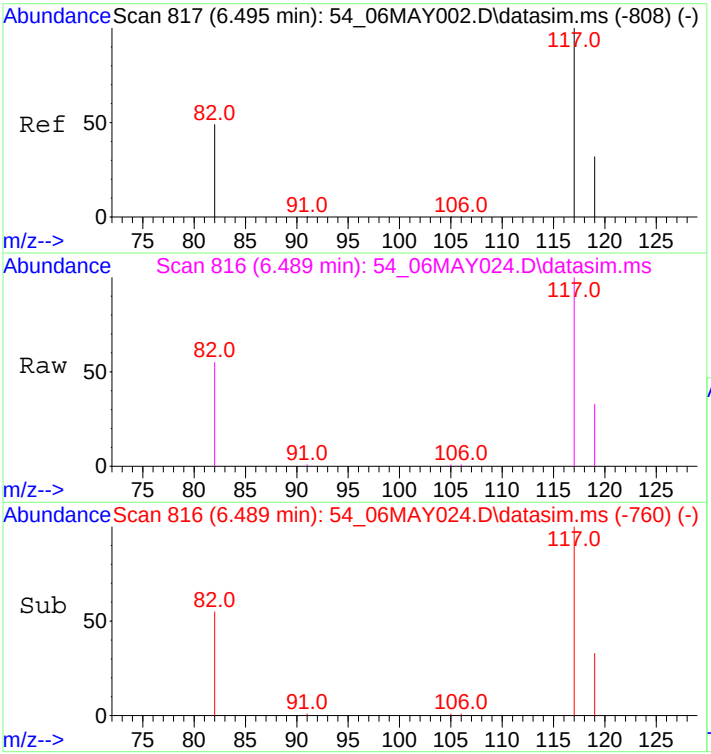


#11
Trichloroethene
Concen: 152.45 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion:130 Resp: 36806

Ion	Ratio	Lower	Upper
130	100		
132	95.8	76.9	115.3
95	99.9	76.5	114.7

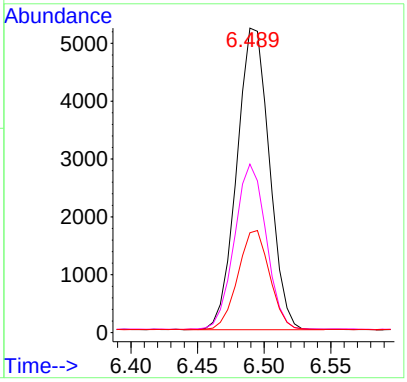


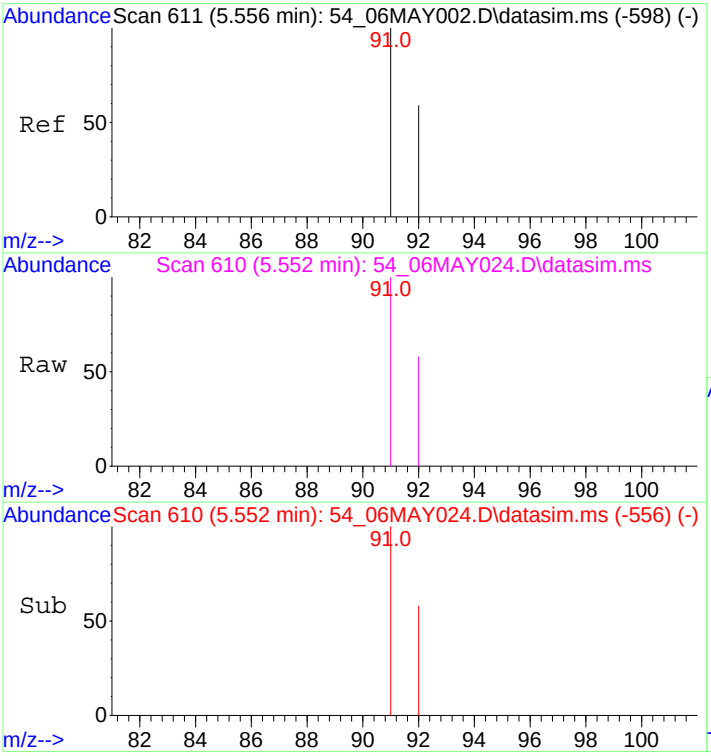


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion:117 Resp: 8876

Ion	Ratio	Lower	Upper
117	100		
82	53.3	38.0	57.0
119	32.0	27.0	40.4

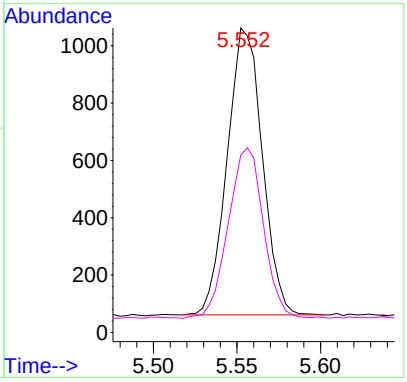


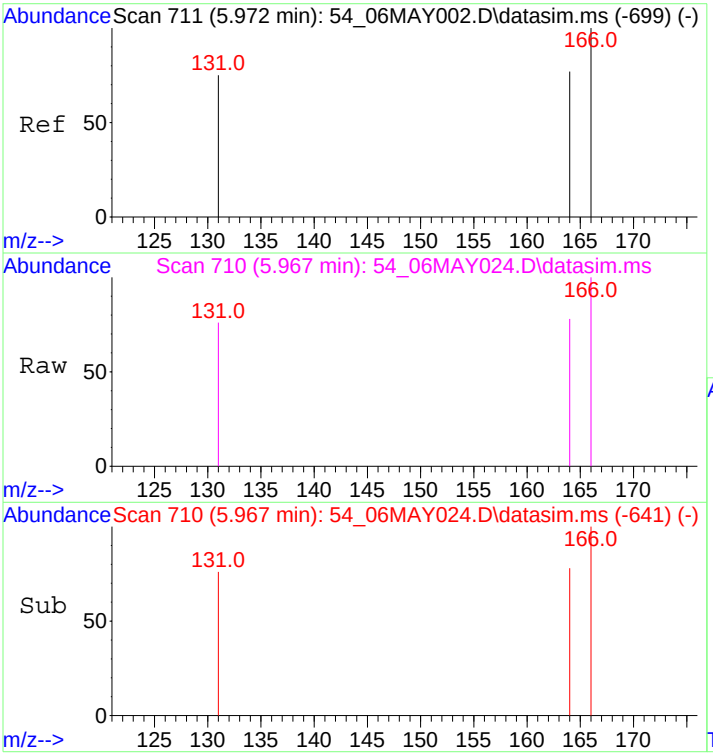


#13
Toluene
Concen: 2.75 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54_06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion: 91 Resp: 1463

Ion	Ratio	Lower	Upper
91	100		
92	59.8	47.8	71.8

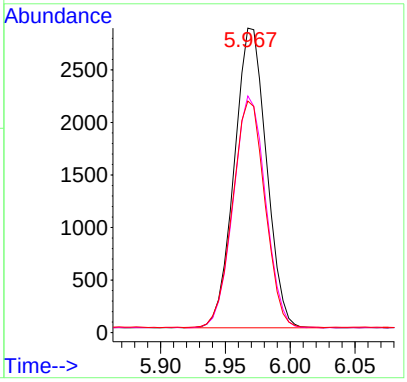




#14
Tetrachloroethene
Concen: 16.20 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 06MAY024.D
Acq: 6 May 2014 1:35 pm

Tgt Ion:166 Resp: 4924

Ion	Ratio	Lower	Upper
166	100		
164	77.4	62.6	94.0
131	76.0	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY025.D
Acq On : 6 May 2014 1:47 pm
Operator : yhl
Sample : 02221\ E5-005
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 16:41:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration

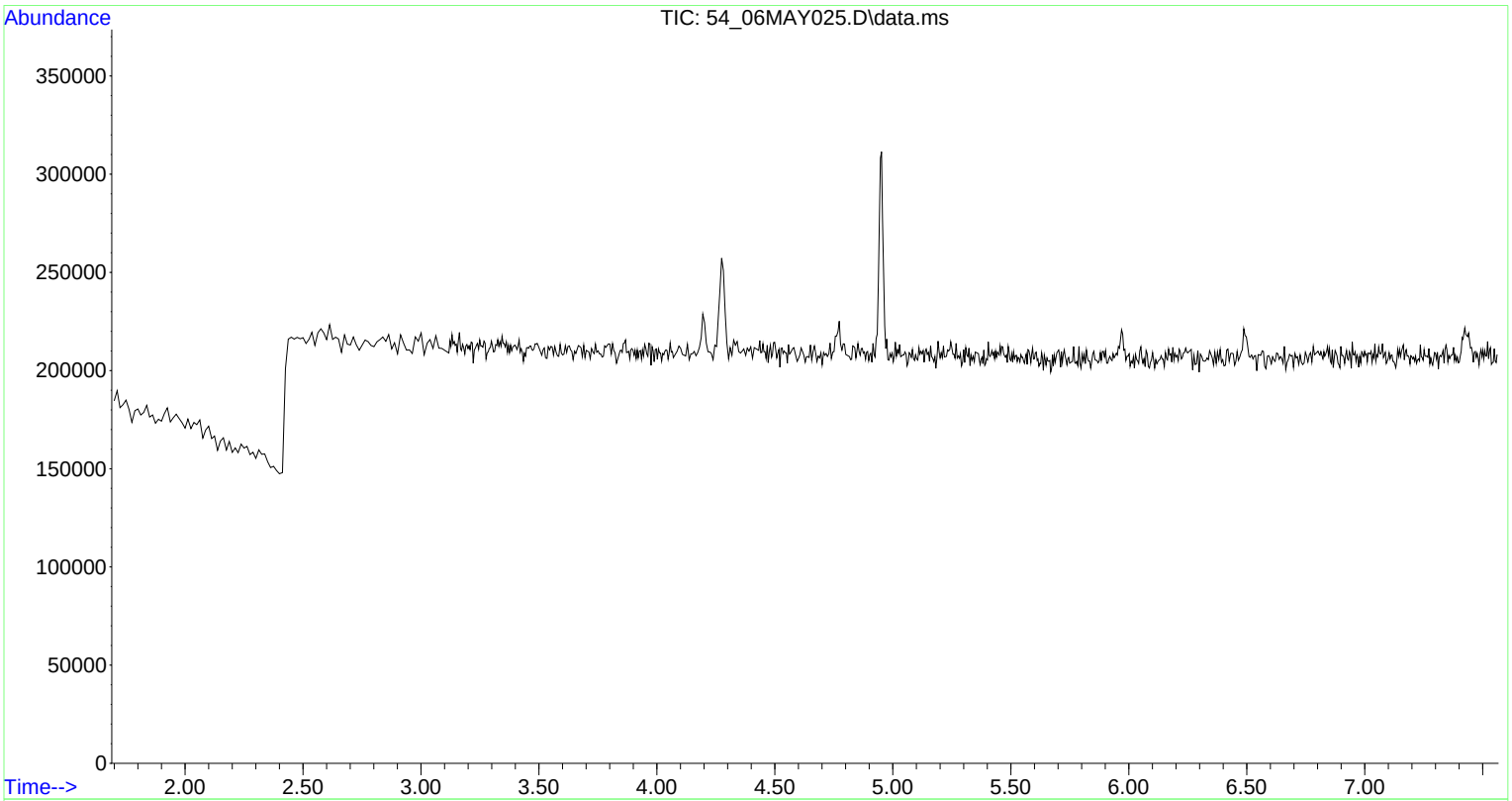
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3924	10.00	ppbv	# 0.00
9) 1,4-Difluorobenzene	4.769	114	9189	10.00	ppbv	# 0.00
12) Chlorobenzene-d5	6.489	117	8596	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
3] 1,1-Dichloroethene	3.256	61	1099	3.62	ppbv	# 77
5] trans-1,2-Dichloroethene	3.703	61	607	2.27	ppbv	# 74
6] 1,1-Dichloroethane	3.910	63	691	2.16	ppbv	# 85
7] cis-1,2-Dichloroethene	4.197	61	8701	34.79	ppbv	# 68
8] 1,1,1-Trichloroethane	4.483	97	528	1.30	ppbv	97
11] Trichloroethene	4.950	130	28059	122.77	ppbv	97
13] Toluene	5.556	91	1936	3.76	ppbv	100
14] Tetrachloroethene	5.967	166	3143	10.68	ppbv	98

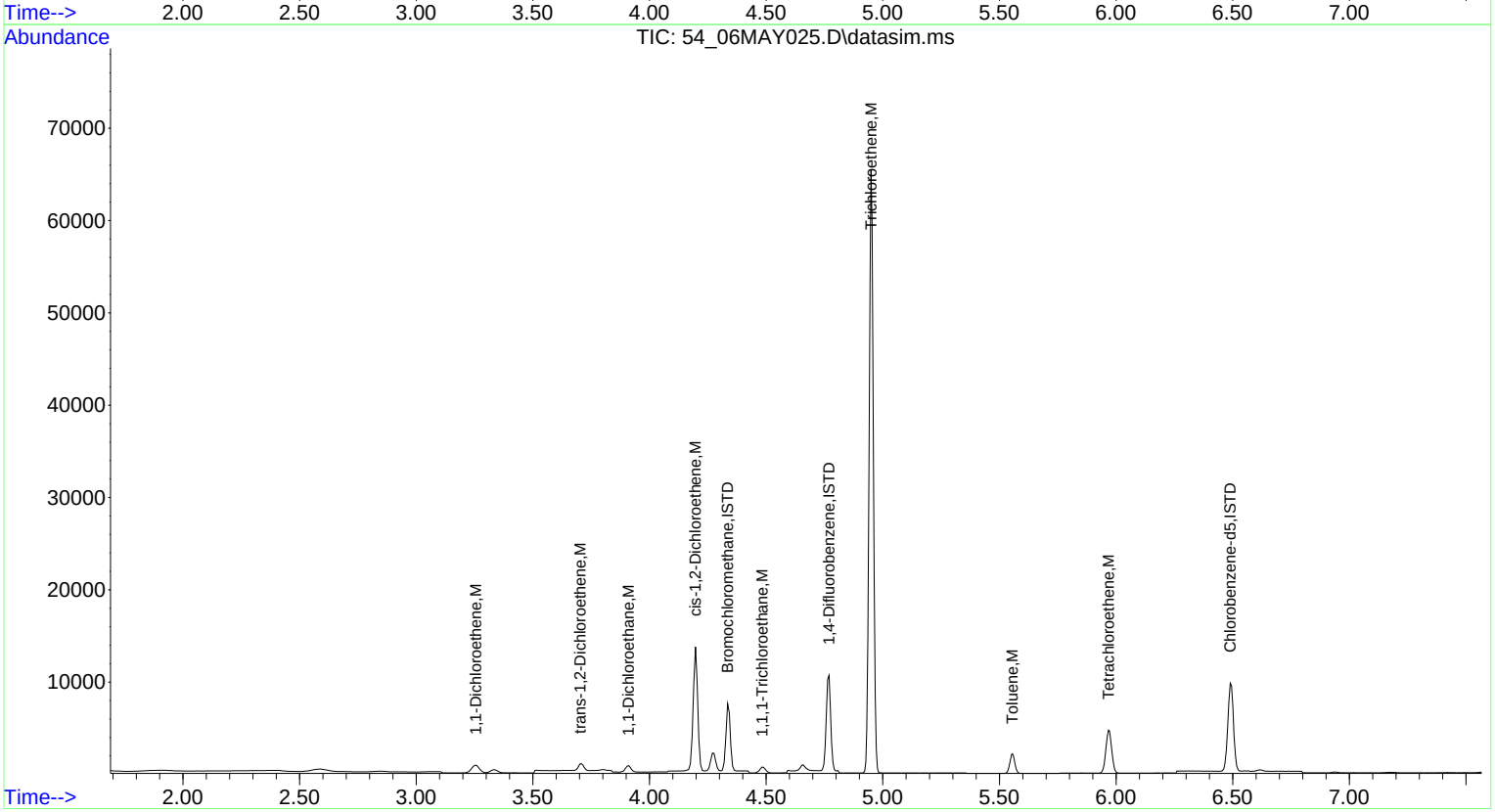
(#) = qualifier out of range (m) = manual integration (+) = signals summed

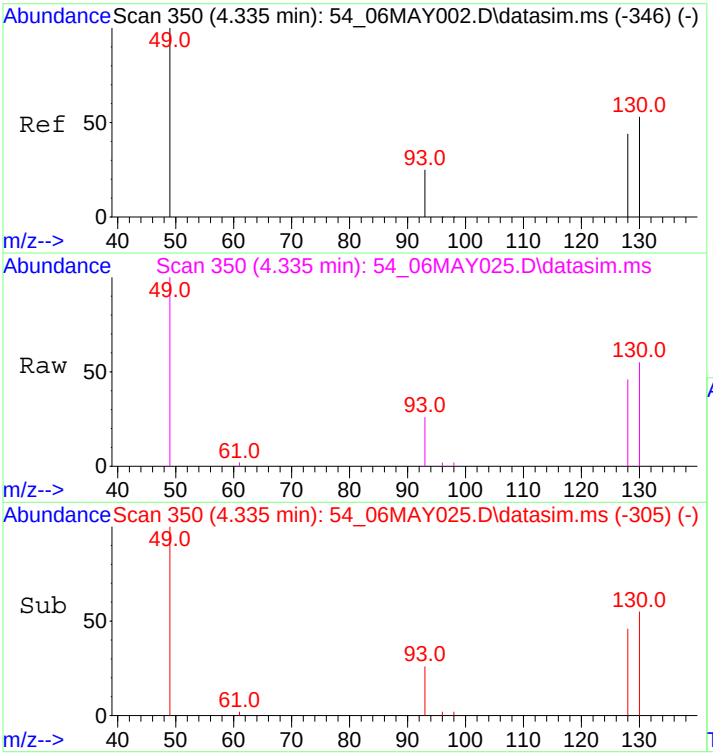
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140506\
Data File : 54 06MAY025.D
Acq On : 6 May 2014 1:47 pm
Operator : yhl
Sample : 02221\ E5-005
Misc : 5 ml \ 06 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 06 16:41:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjMon May 05 15:20:40 2014
QLast Update : Tue May 06 07:57:43 2014
Response via : Initial Calibration



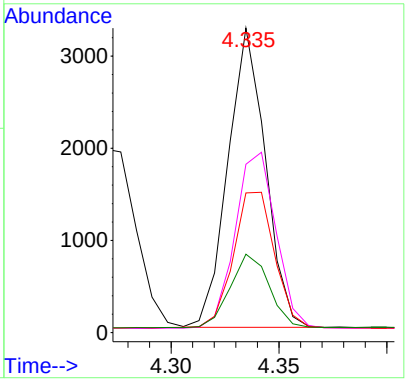


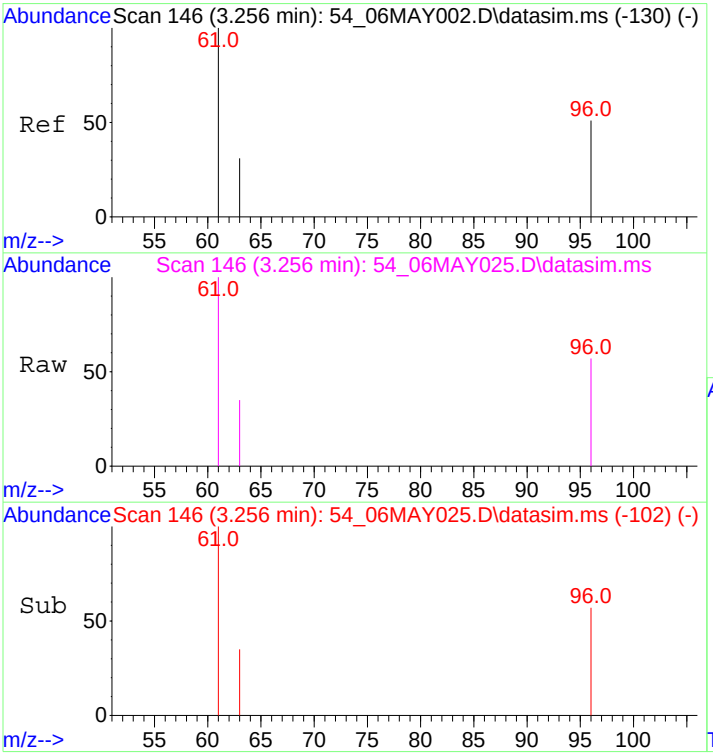


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion: 49 Resp: 3924

Ion	Ratio	Lower	Upper
49	100		
130	64.3	87.2	130.8#
128	49.8	68.0	102.0#
93	25.6	29.3	43.9#

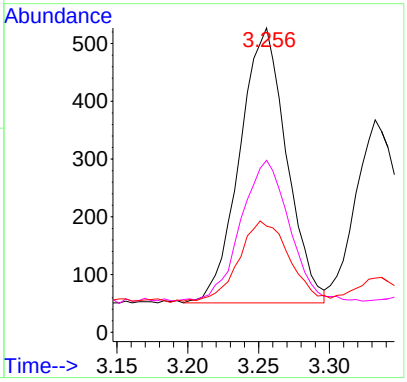


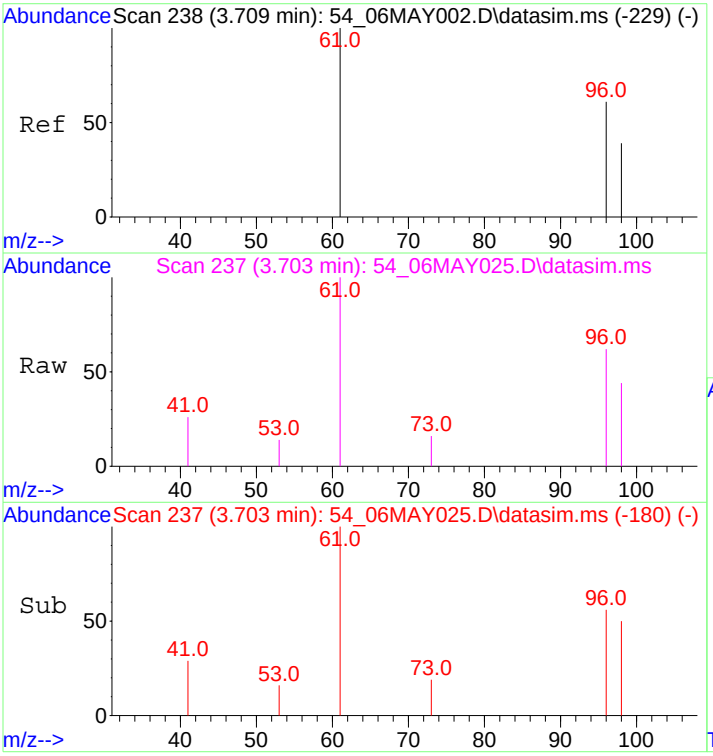


#3
1,1-Dichloroethene
Concen: 3.62 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.004 min
Lab File: 54_06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion: 61 Resp: 1099

Ion	Ratio	Lower	Upper
61	100		
96	51.0	63.4	95.2#
63	32.2	26.2	39.2

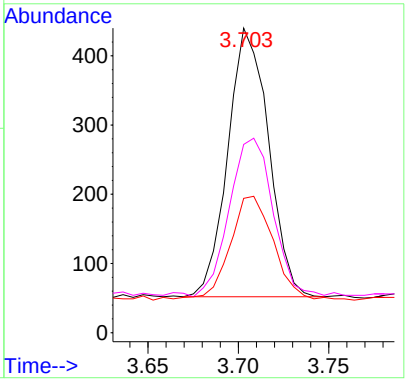


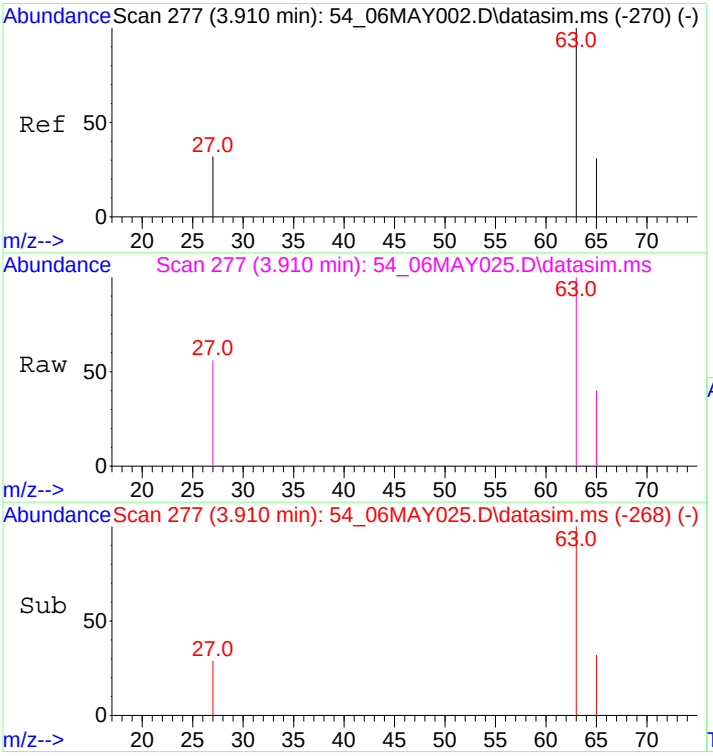


#5
trans-1,2-Dichloroethene
Concen: 2.27 ppbv
RT: 3.703 min Scan# 237
Delta R.T. -0.006 min
Lab File: 54 06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion: 61 Resp: 607

Ion	Ratio	Lower	Upper
61	100		
96	63.4	71.4	107.0#
98	40.5	45.8	68.8#

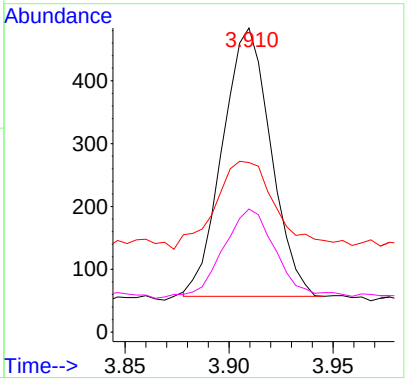


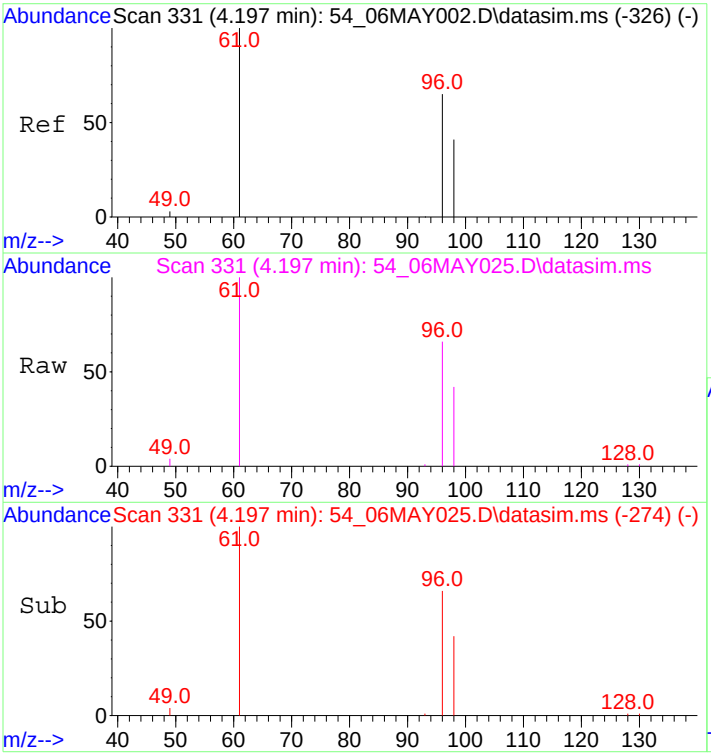


#6
1,1-Dichloroethane
Concen: 2.16 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion: 63 Resp: 691

Ion	Ratio	Lower	Upper
63	100		
65	32.0	26.1	39.1
27	33.0	10.2	15.2#

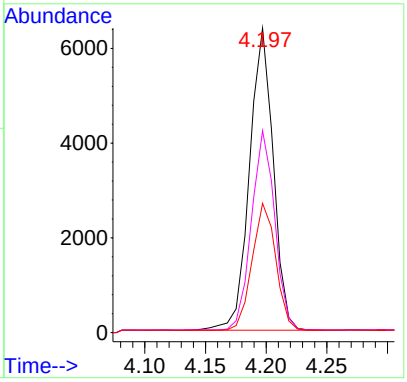


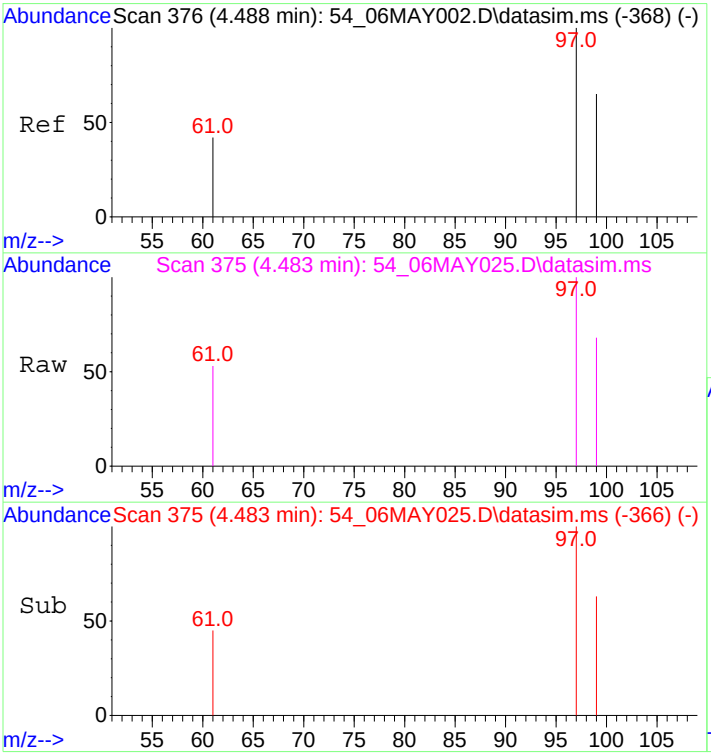


#7
cis-1,2-Dichloroethene
Concen: 34.79 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion: 61 Resp: 8701

Ion	Ratio	Lower	Upper
61	100		
96	64.4	78.5	117.7#
98	41.7	50.6	76.0#

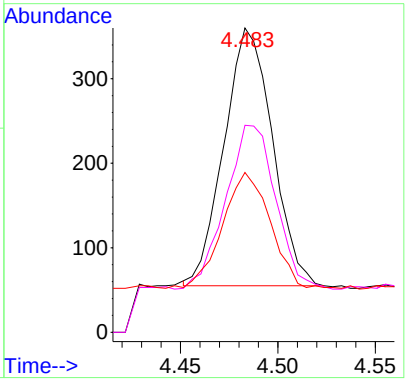


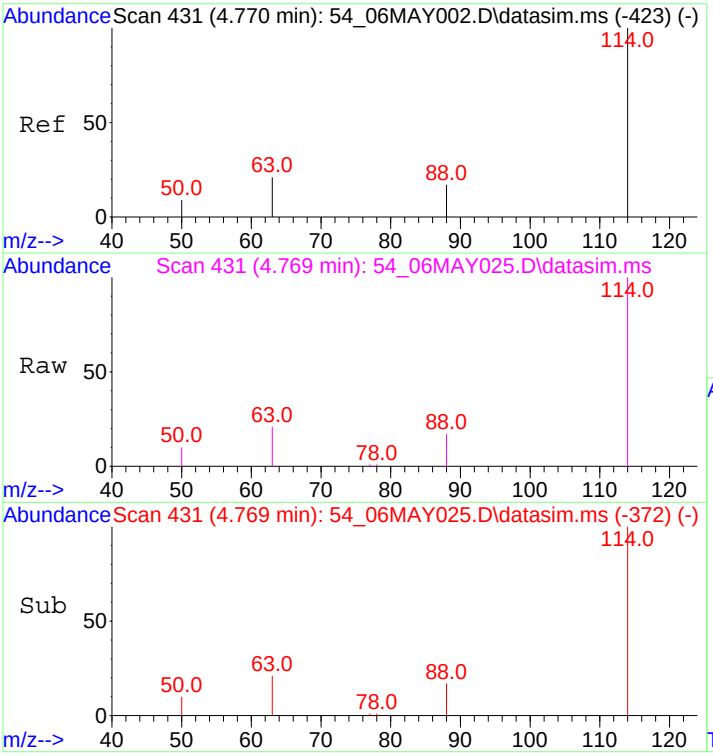


#8
1,1,1-Trichloroethane
Concen: 1.30 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion: 97 Resp: 528

Ion	Ratio	Lower	Upper
97	100		
99	65.0	52.1	78.1
61	43.2	30.2	45.4

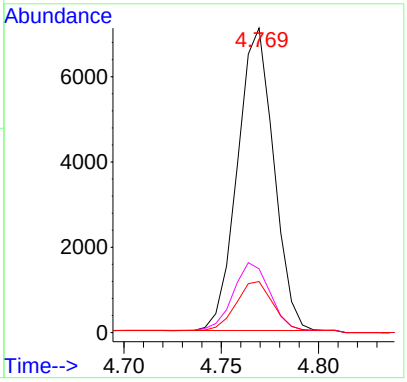


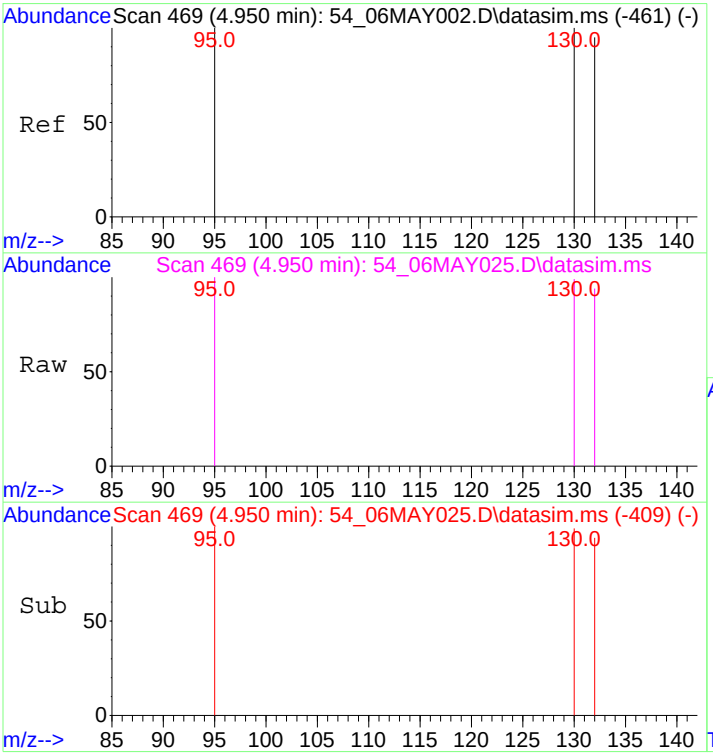


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion:114 Resp: 9189

Ion	Ratio	Lower	Upper
114	100		
63	22.6	12.0	18.0#
88	16.5	11.8	17.8

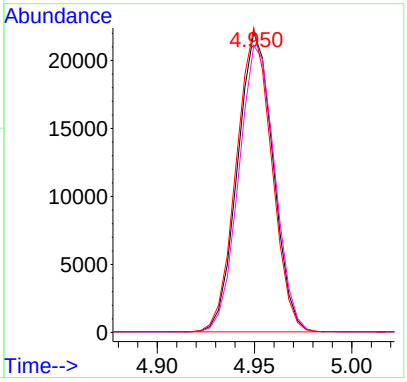


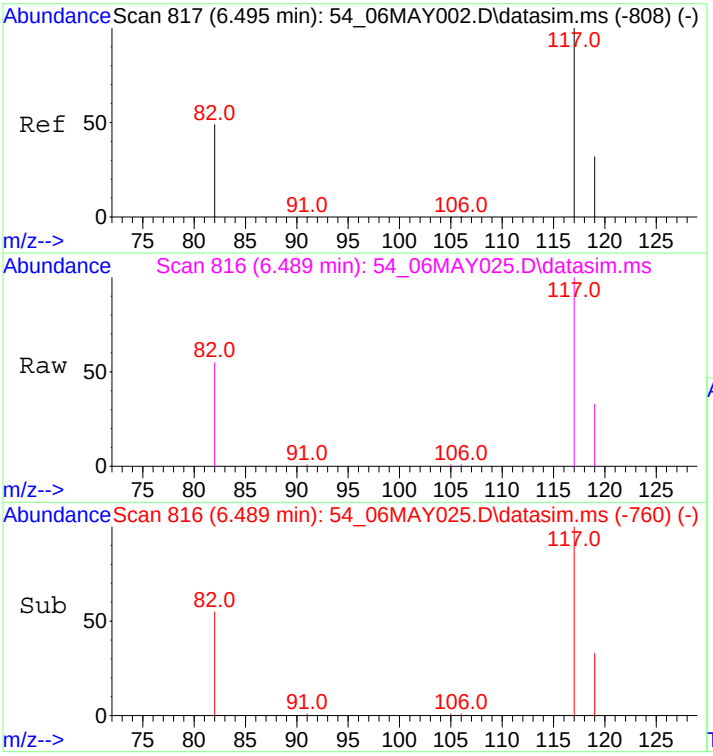


#11
Trichloroethene
Concen: 122.77 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion:130 Resp: 28059

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	100.1	76.5	114.7

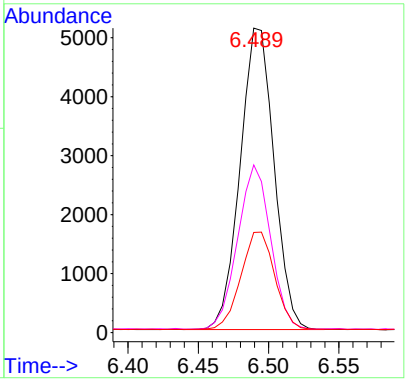


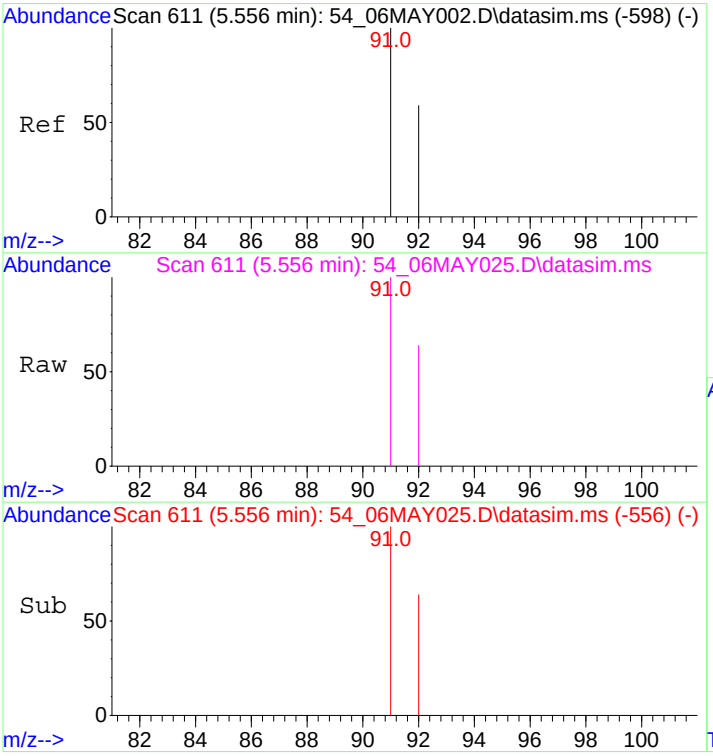


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion:117 Resp: 8596

Ion	Ratio	Lower	Upper
117	100		
82	52.7	38.0	57.0
119	32.2	27.0	40.4

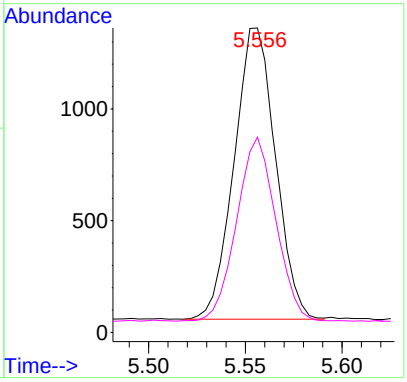


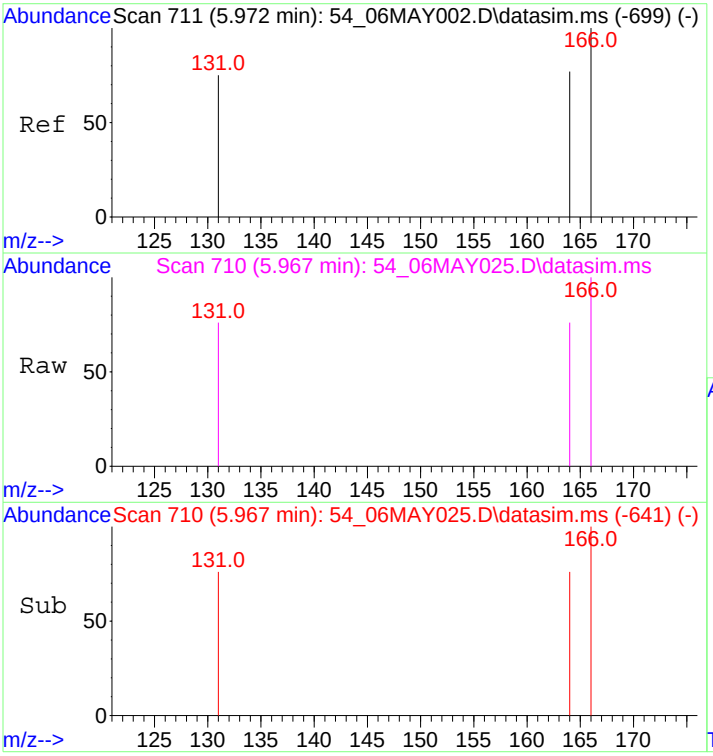


#13
Toluene
Concen: 3.76 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion: 91 Resp: 1936

Ion	Ratio	Lower	Upper
91	100		
92	59.5	47.8	71.8

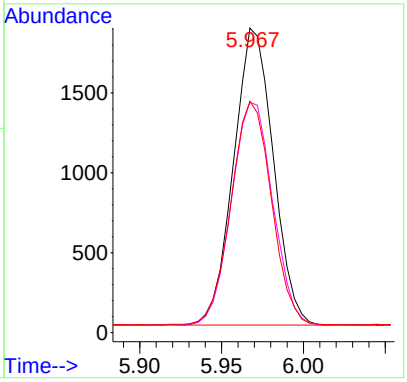




#14
Tetrachloroethene
Concen: 10.68 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 06MAY025.D
Acq: 6 May 2014 1:47 pm

Tgt Ion:166 Resp: 3143

Ion	Ratio	Lower	Upper
166	100		
164	78.0	62.6	94.0
131	76.1	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY005.D
Acq On : 7 May 2014 7:55 am
Operator : yhl
Sample : 20140507-MB \ Method Blank
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:01:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4002	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	9499	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.490	117	8167	10.00	ppbv	0.00

System Monitoring Compounds

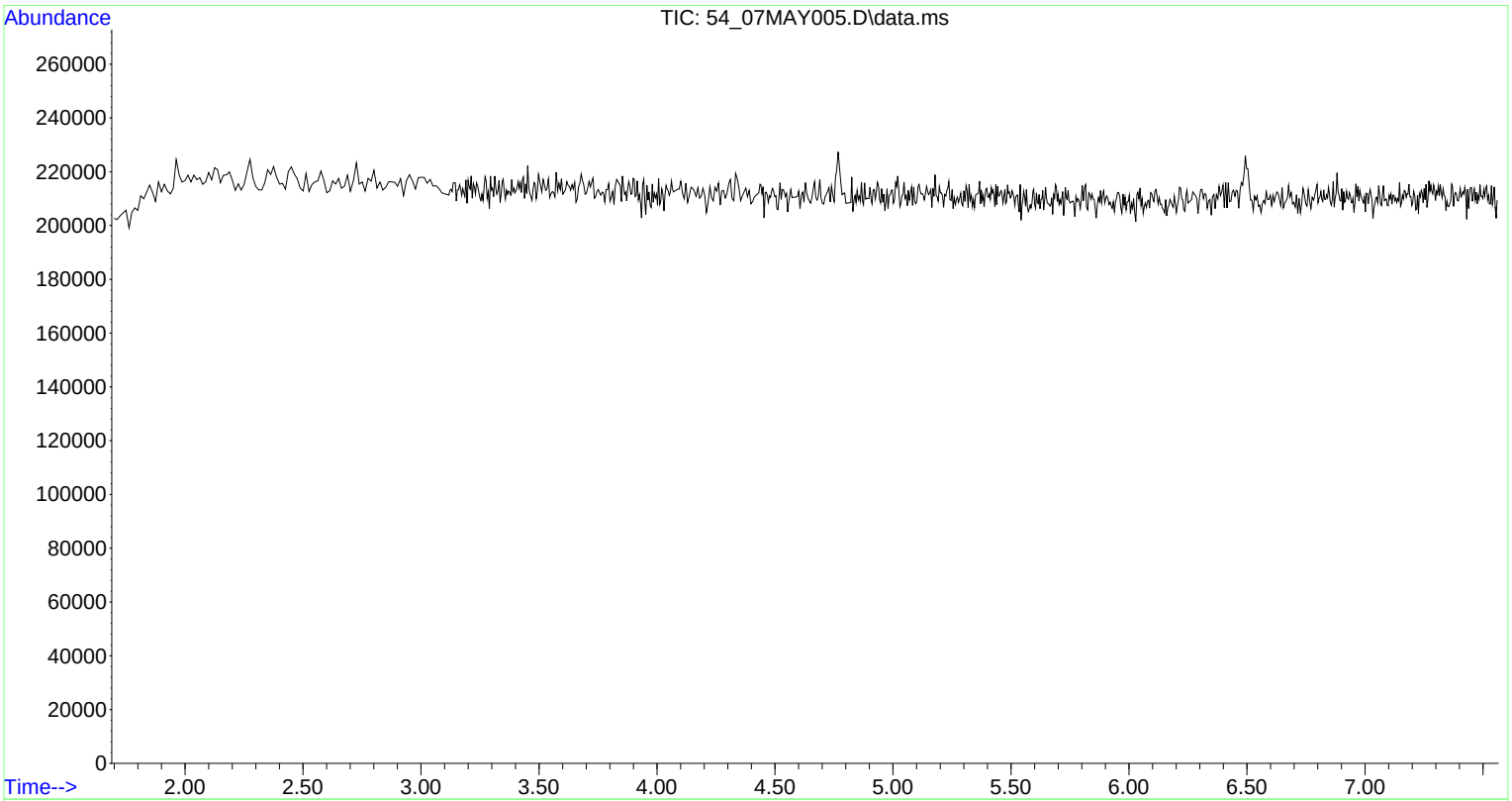
Target Compounds	Qvalue

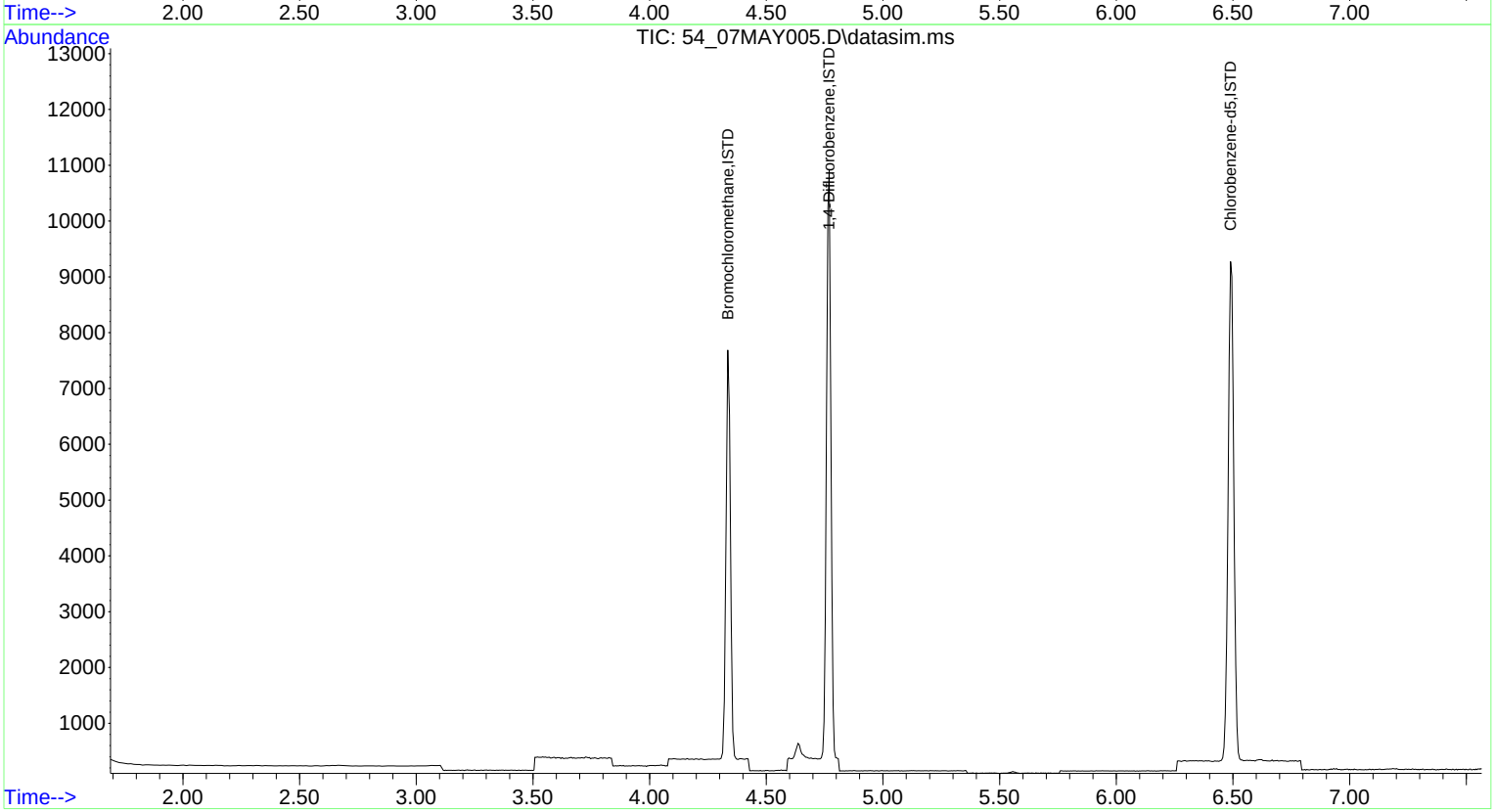
(#) = qualifier out of range (m) = manual integration (+) = signals summed

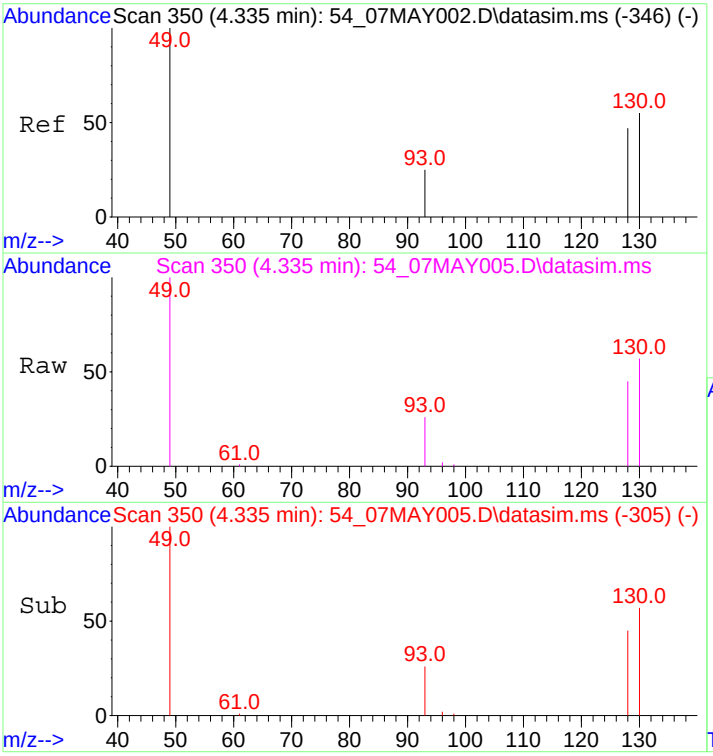
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY005.D
Acq On : 7 May 2014 7:55 am
Operator : yhl
Sample : 20140507-MB \ Method Blank
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 08:01:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 07:16:18 2014
QLast Update : Wed May 07 07:16:16 2014
Response via : Initial Calibration



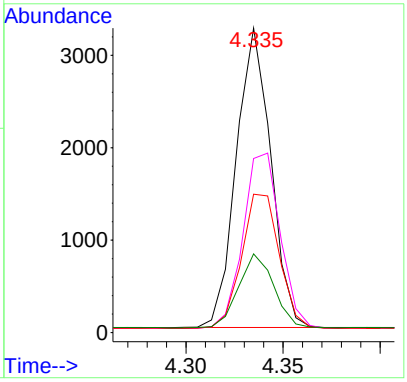


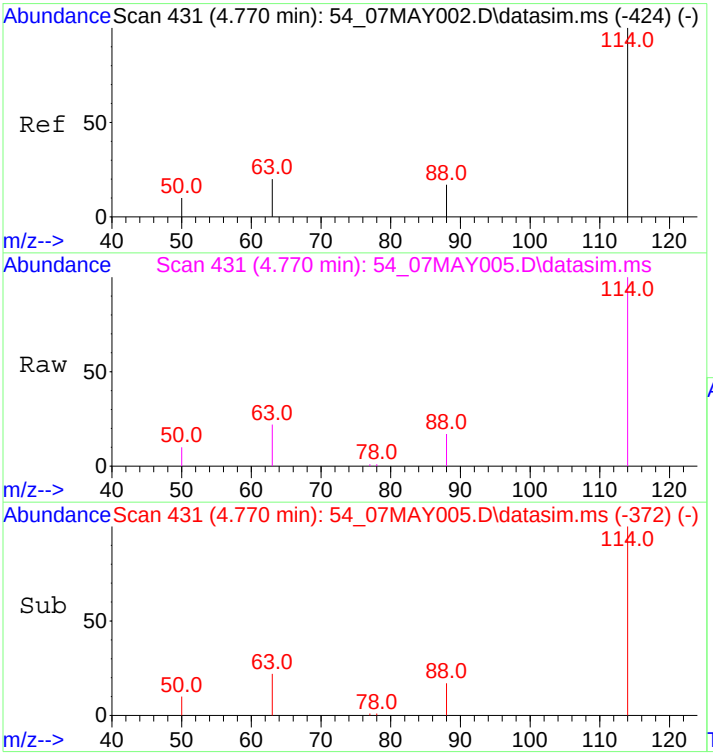


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY005.D
Acq: 7 May 2014 7:55 am

Tgt Ion: 49 Resp: 4002

Ion	Ratio	Lower	Upper
49	100		
130	63.3	56.0	84.0
128	48.8	41.6	62.4
93	25.2	22.4	33.6

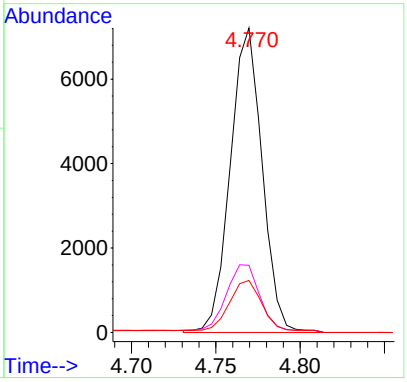


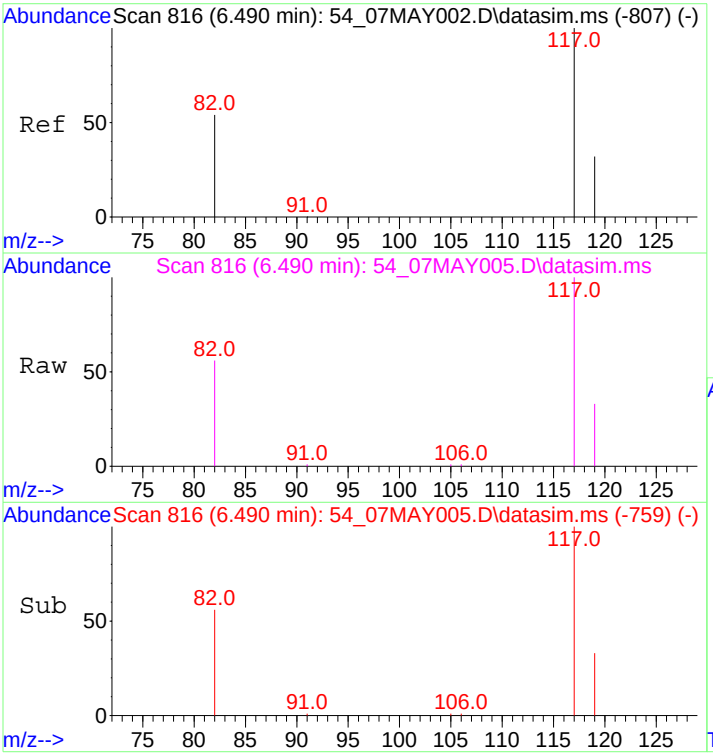


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_07MAY005.D
Acq: 7 May 2014 7:55 am

Tgt Ion:114 Resp: 9499

Ion	Ratio	Lower	Upper
114	100		
63	22.0	17.6	26.4
88	16.3	13.6	20.4

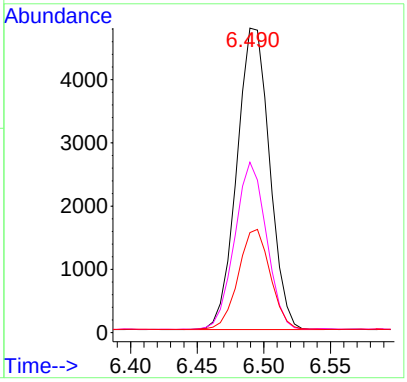




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 07MAY005.D
Acq: 7 May 2014 7:55 am

Tgt Ion:117 Resp: 8167

Ion	Ratio	Lower	Upper
117	100		
82	53.6	38.0	57.0
119	32.5	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY007.D
Acq On : 7 May 2014 11:20 am
Operator : yhl
Sample : 02223 \ B16-04
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 11:27:25 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

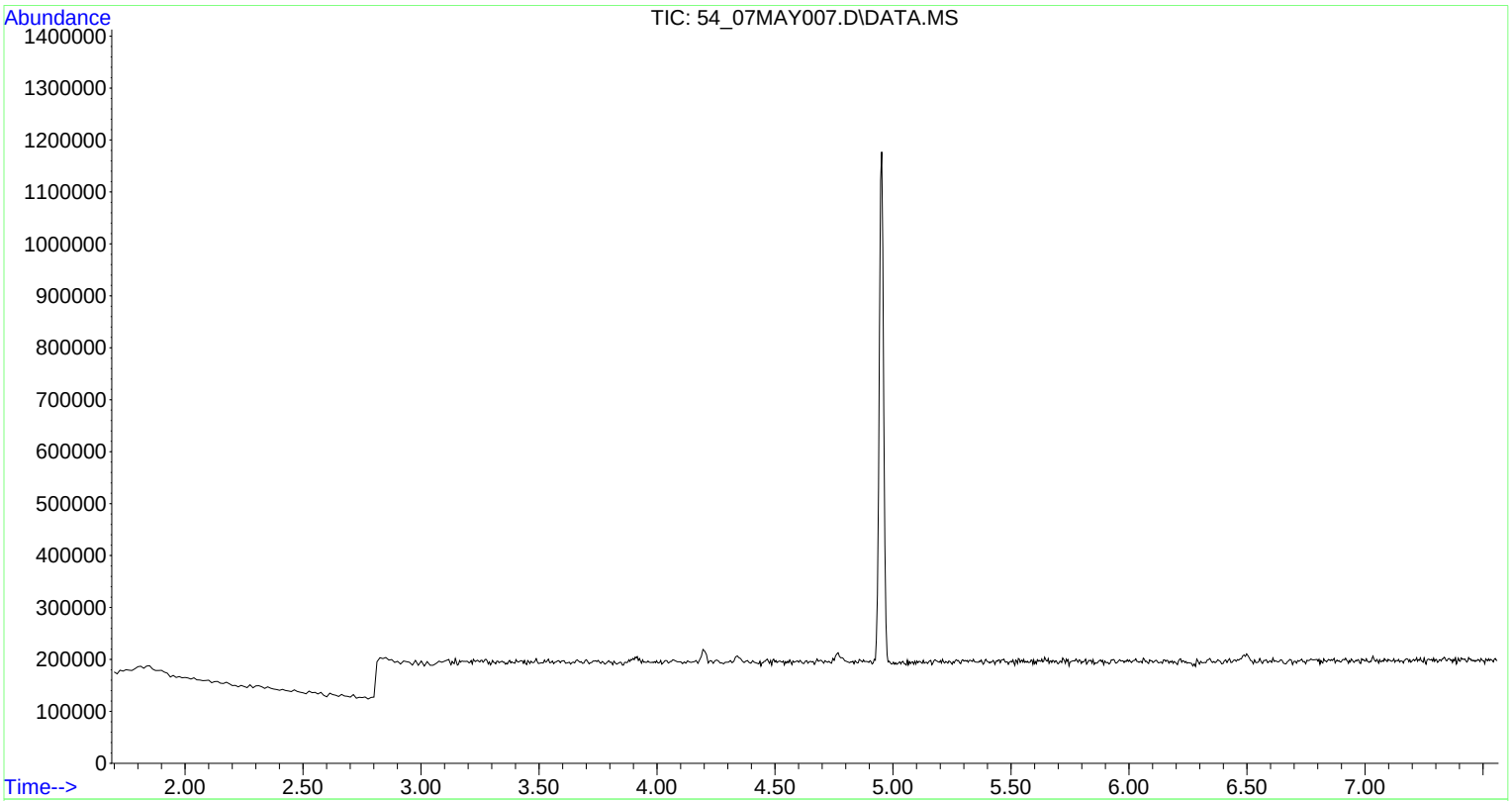
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4180	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	9801	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.495	117	9098	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
3] 1,1-Dichloroethene	3.251	61	4509	13.93 ppbv	98
5] trans-1,2-Dichloroethene	3.703	61	668	2.34 ppbv	96
6] 1,1-Dichloroethane	3.910	63	4955	14.55 ppbv	96
7] cis-1,2-Dichloroethene	4.197	61	11162	41.89 ppbv	100
8] 1,1,1-Trichloroethane	4.488	97	1465	3.39 ppbv	96
11] Trichloroethene	4.950	130	281685	1155.57 ppbv	97
14] Tetrachloroethene	5.972	166	1228	3.94 ppbv	98

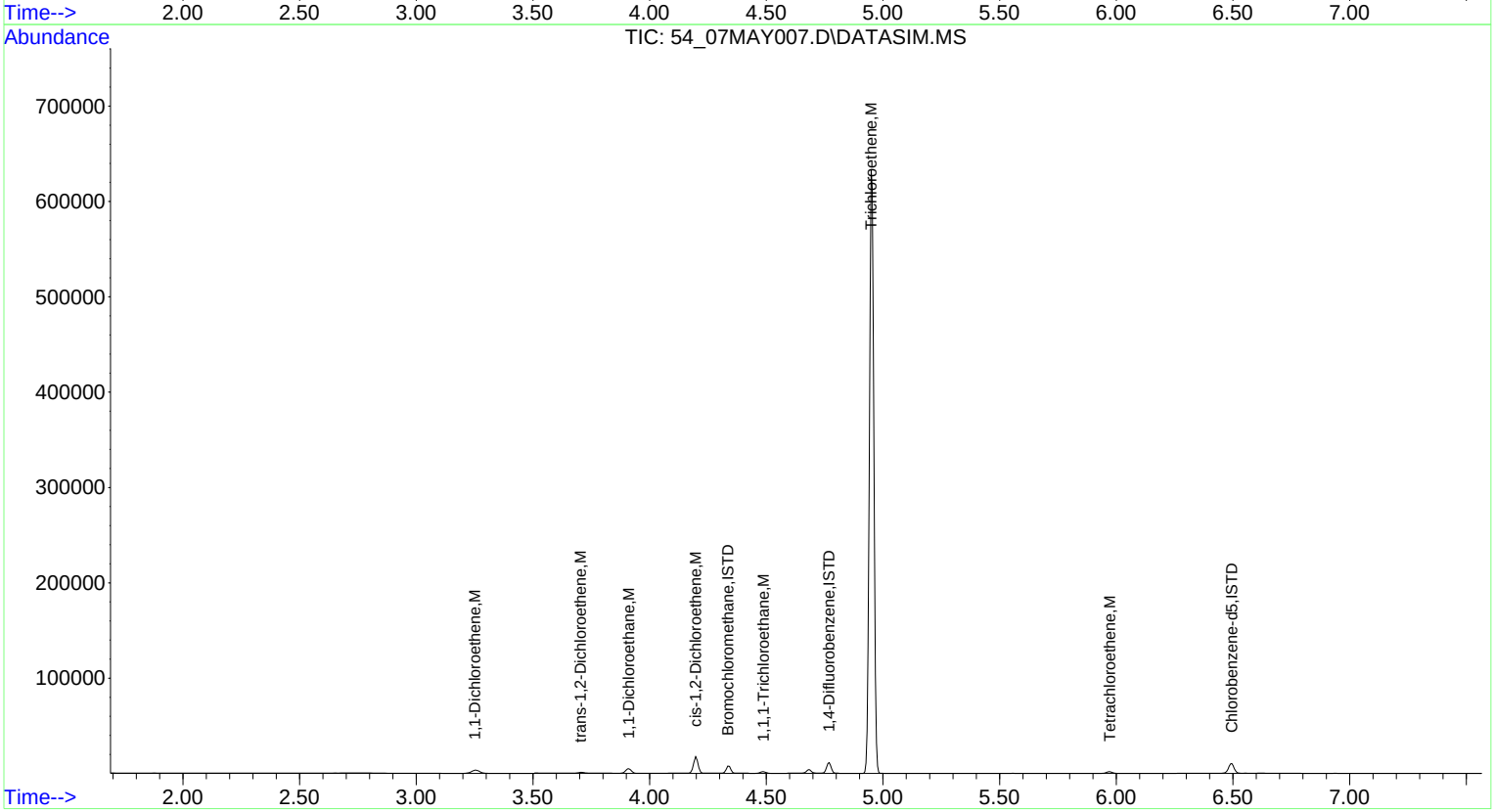
(#) = qualifier out of range (m) = manual integration (+) = signals summed

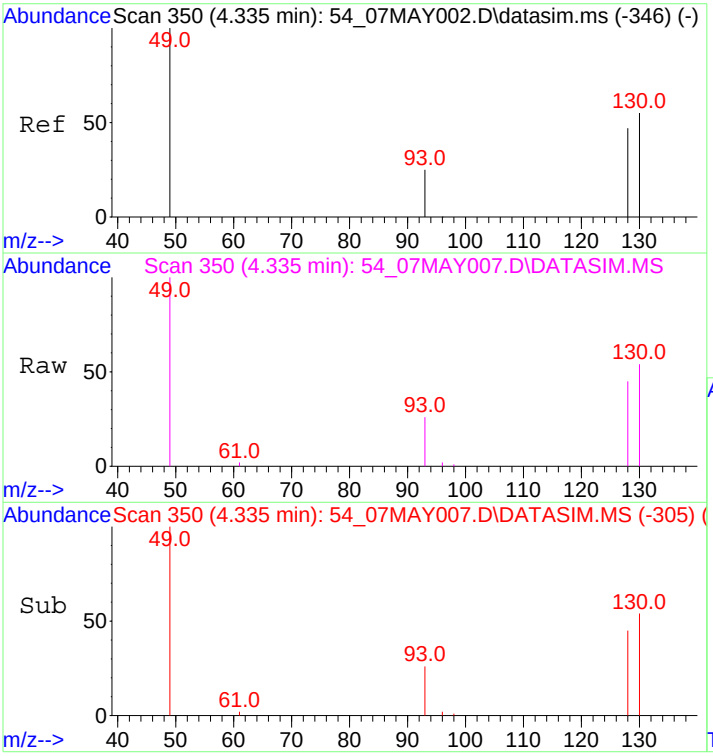
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY007.D
Acq On : 7 May 2014 11:20 am
Operator : yhl
Sample : 02223 \ B16-04
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 11:27:25 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



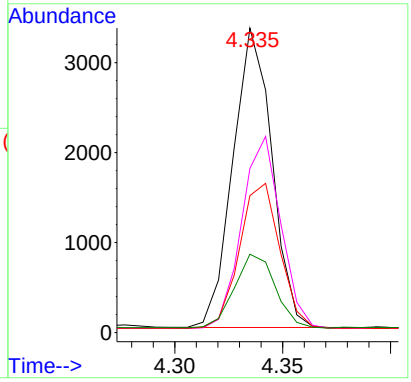


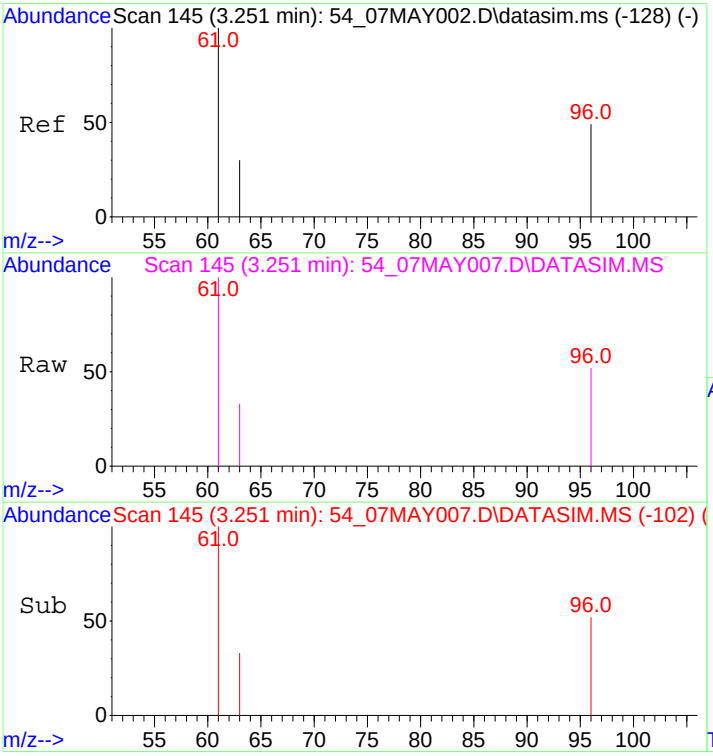


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion: 49 Resp: 4180

Ion	Ratio	Lower	Upper
49	100		
130	64.2	56.0	84.0
128	50.3	41.6	62.4
93	25.9	22.4	33.6

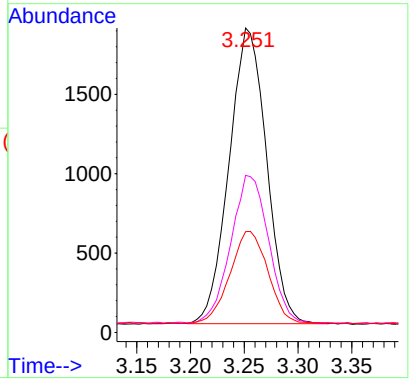


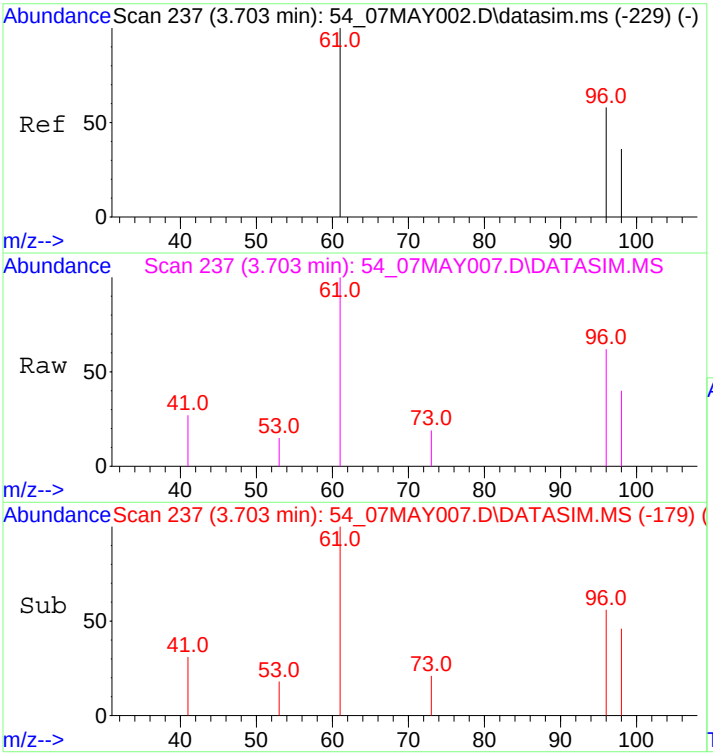


#3
1,1-Dichloroethene
Concen: 13.93 ppbv
RT: 3.251 min Scan# 145
Delta R.T. -0.000 min
Lab File: 54_07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion: 61 Resp: 4509

Ion	Ratio	Lower	Upper
61	100		
96	50.3	41.6	62.4
63	31.6	26.2	39.2

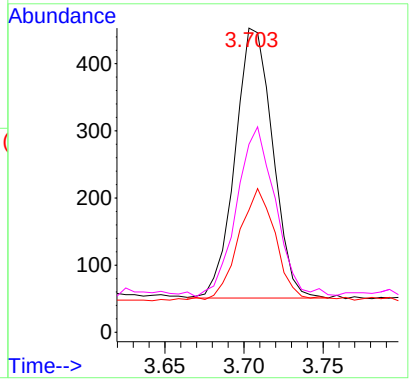


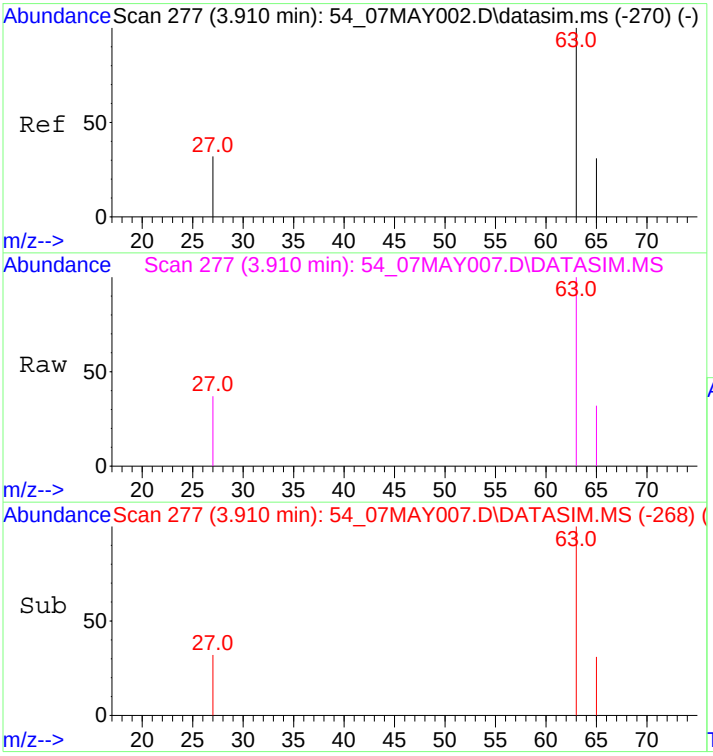


#5
trans-1,2-Dichloroethene
Concen: 2.34 ppbv
RT: 3.703 min Scan# 237
Delta R.T. 0.000 min
Lab File: 54 07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion: 61 Resp: 668

Ion	Ratio	Lower	Upper
61	100		
96	64.2	48.0	72.0
98	39.5	32.0	48.0

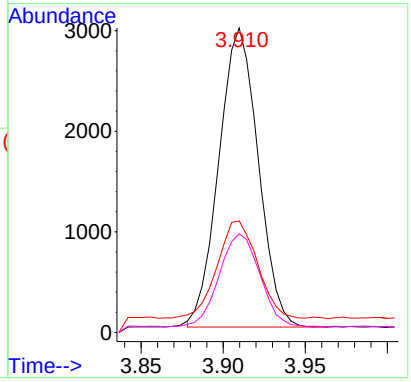


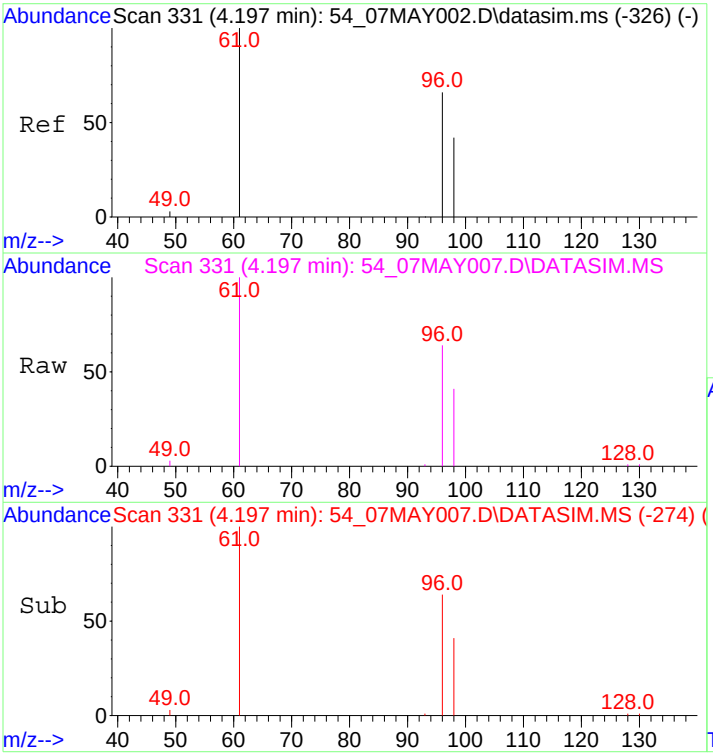


#6
1,1-Dichloroethane
Concen: 14.55 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion: 63 Resp: 4955

Ion	Ratio	Lower	Upper
63	100		
65	31.5	26.1	39.1
27	32.9	24.0	36.0

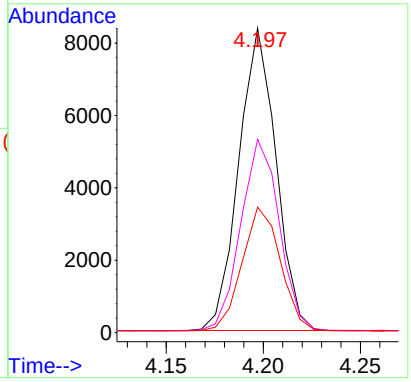


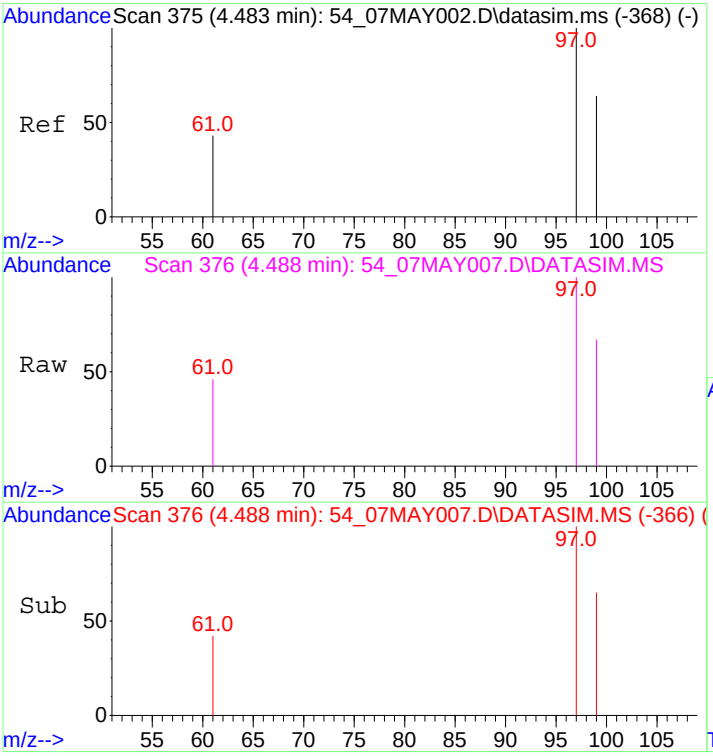


#7
cis-1,2-Dichloroethene
Concen: 41.89 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion: 61 Resp: 11162

Ion	Ratio	Lower	Upper
61	100		
96	64.9	52.0	78.0
98	42.0	33.6	50.4

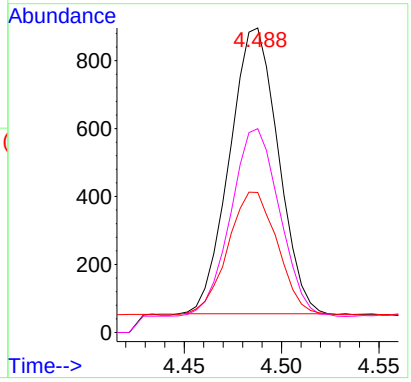


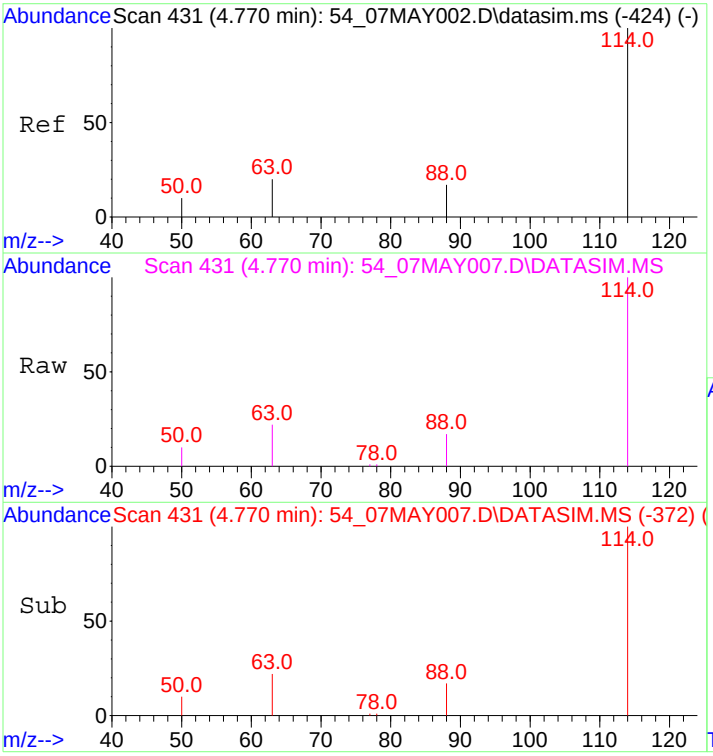


#8
1,1,1-Trichloroethane
Concen: 3.39 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.004 min
Lab File: 54_07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion: 97 Resp: 1465

Ion	Ratio	Lower	Upper
97	100		
99	64.3	52.1	78.1
61	42.8	30.2	45.4

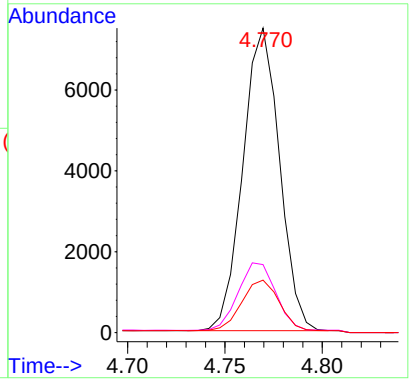


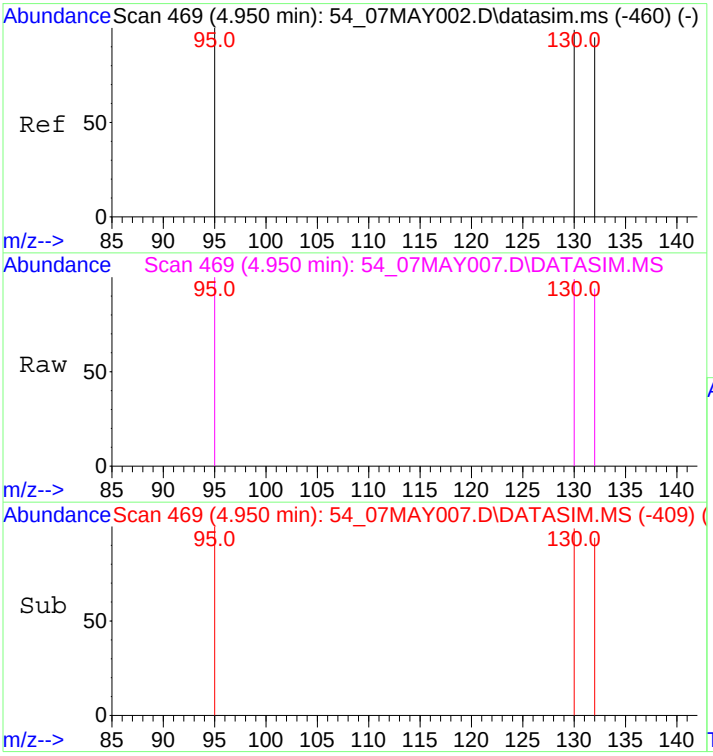


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion:114 Resp: 9801

Ion	Ratio	Lower	Upper
114	100		
63	22.9	17.6	26.4
88	17.0	13.6	20.4

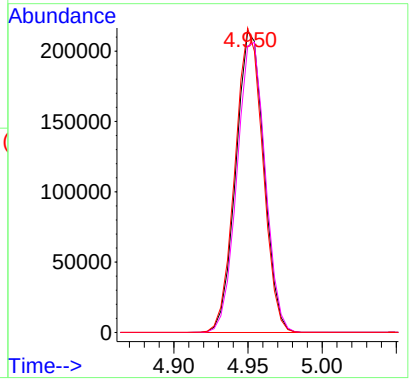


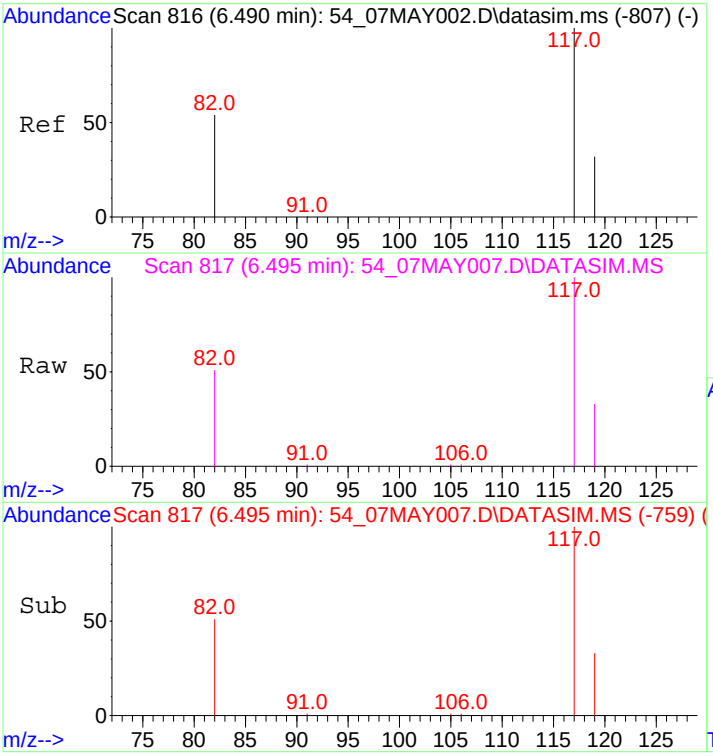


#11
Trichloroethene
Concen: 1155.57 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion:130 Resp: 281685

Ion	Ratio	Lower	Upper
130	100		
132	96.7	76.9	115.3
95	99.9	76.5	114.7

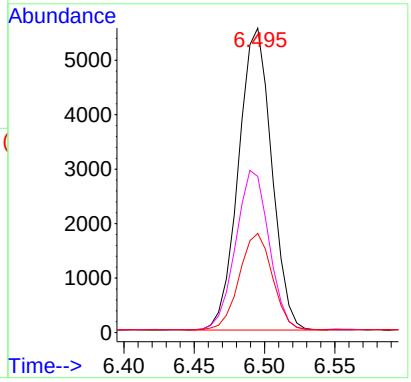


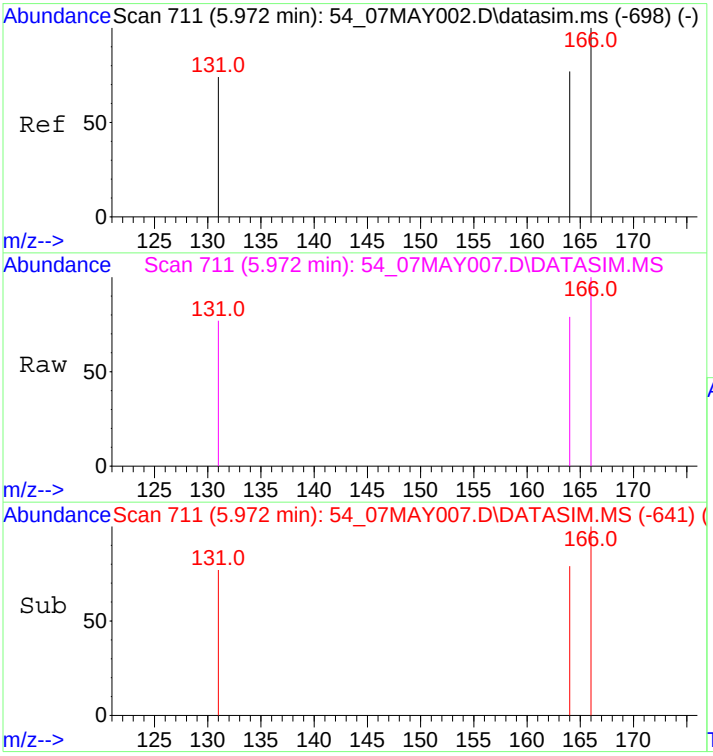


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.006 min
Lab File: 54 07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion:117 Resp: 9098

Ion	Ratio	Lower	Upper
117	100		
82	53.0	38.0	57.0
119	31.7	27.0	40.4

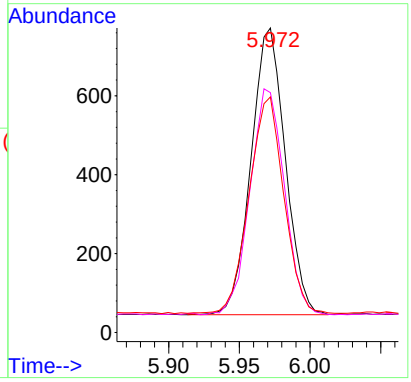




#14
Tetrachloroethene
Concen: 3.94 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54_07MAY007.D
Acq: 7 May 2014 11:20 am

Tgt Ion:166 Resp: 1228

Ion	Ratio	Lower	Upper
166	100		
164	79.2	62.6	94.0
131	76.3	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY008.D
Acq On : 7 May 2014 11:32 am
Operator : yhl
Sample : 02222 \ B16-05
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 11:40:50 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

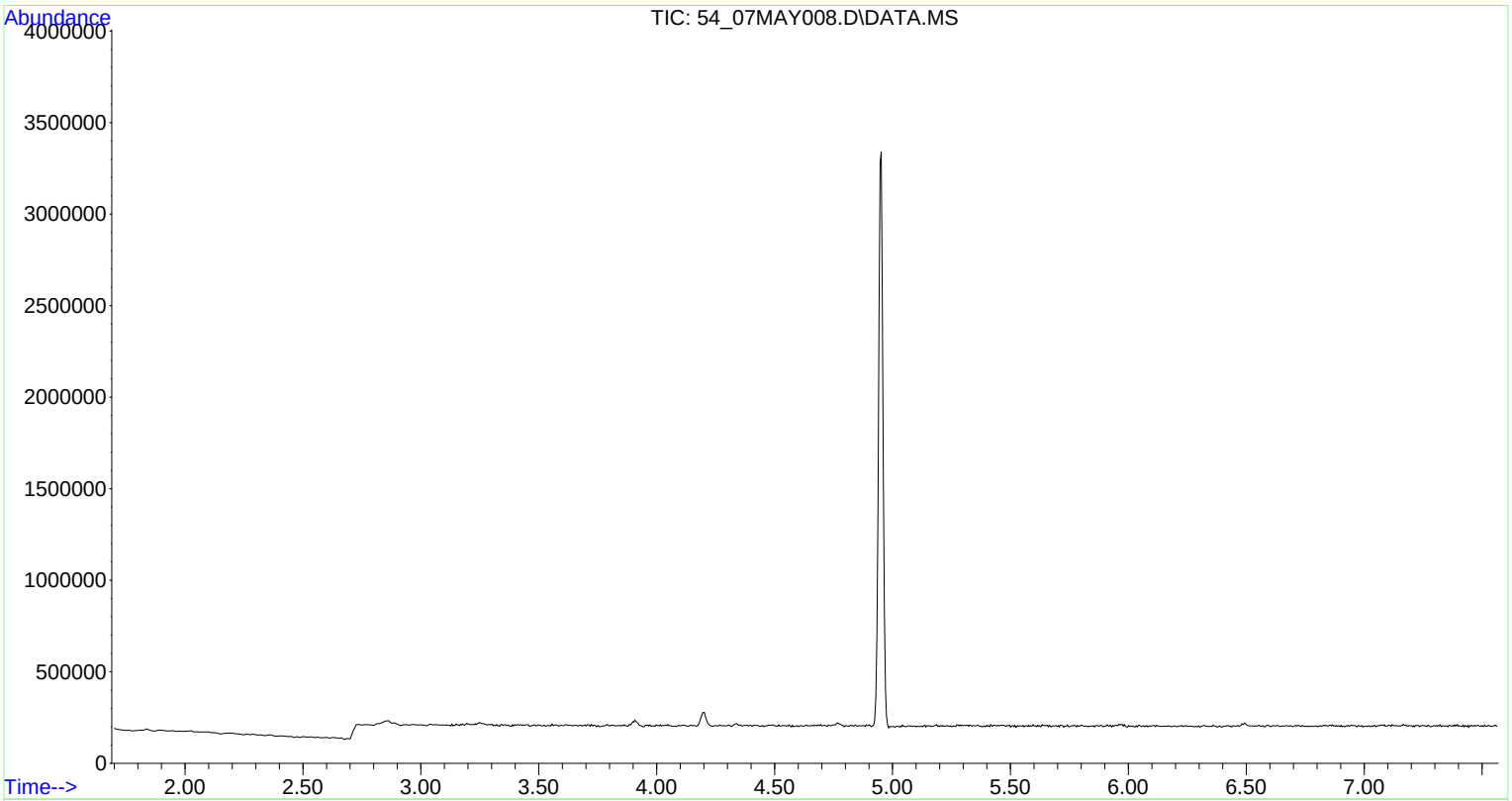
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4219	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9668	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.489	117	8853	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
3] 1,1-Dichloroethene	3.256	61	12638	38.68 ppbv	97
5] trans-1,2-Dichloroethene	3.708	61	2096	7.28 ppbv	99
6] 1,1-Dichloroethane	3.910	63	20210	58.79 ppbv	97
7] cis-1,2-Dichloroethene	4.197	61	41720	155.13 ppbv	100
8] 1,1,1-Trichloroethane	4.483	97	3168	7.26 ppbv	96
11] Trichloroethene	4.950	130	899394	3740.40 ppbv	97
14] Tetrachloroethene	5.967	166	3070	10.13 ppbv	98

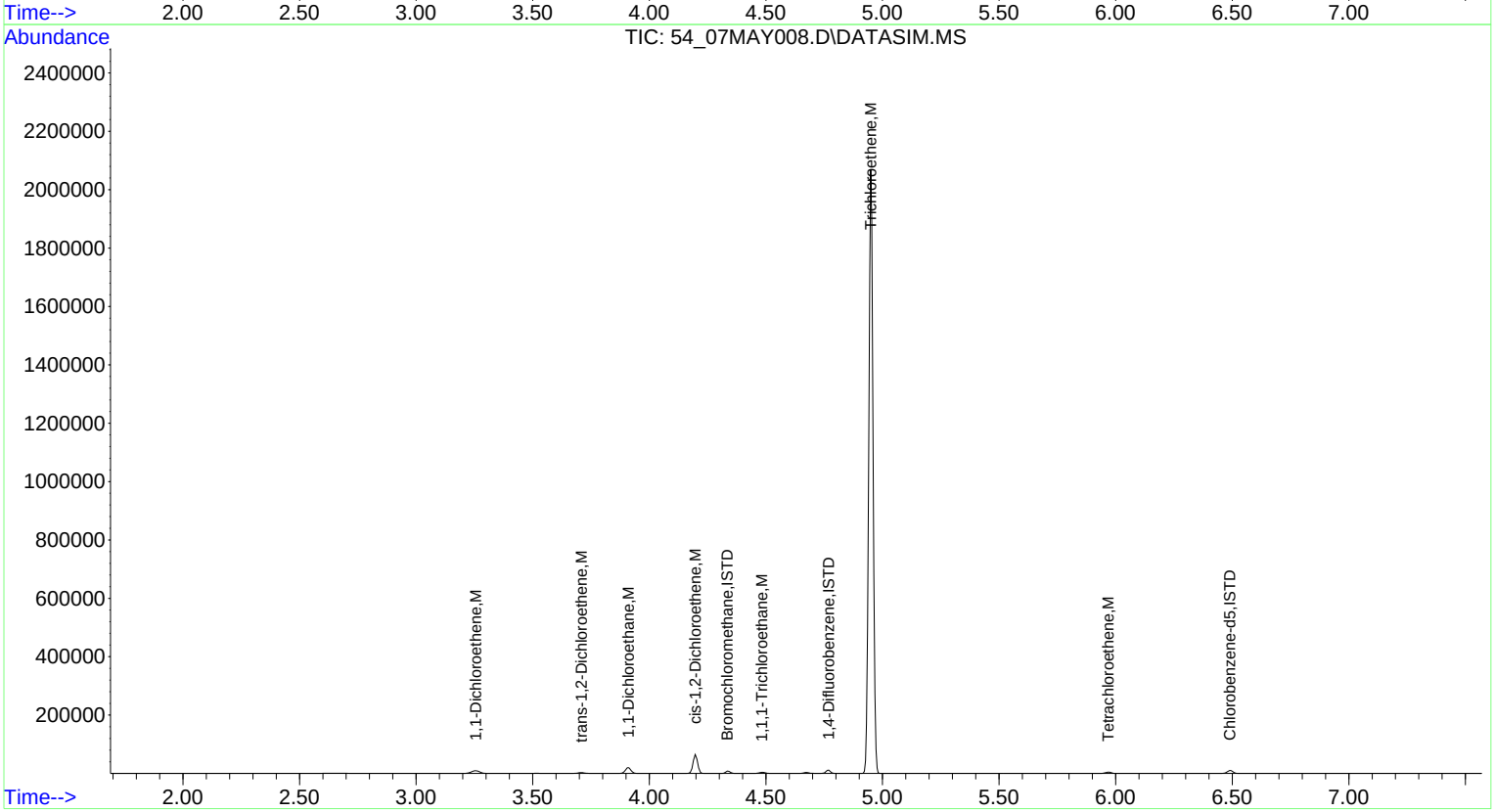
(#) = qualifier out of range (m) = manual integration (+) = signals summed

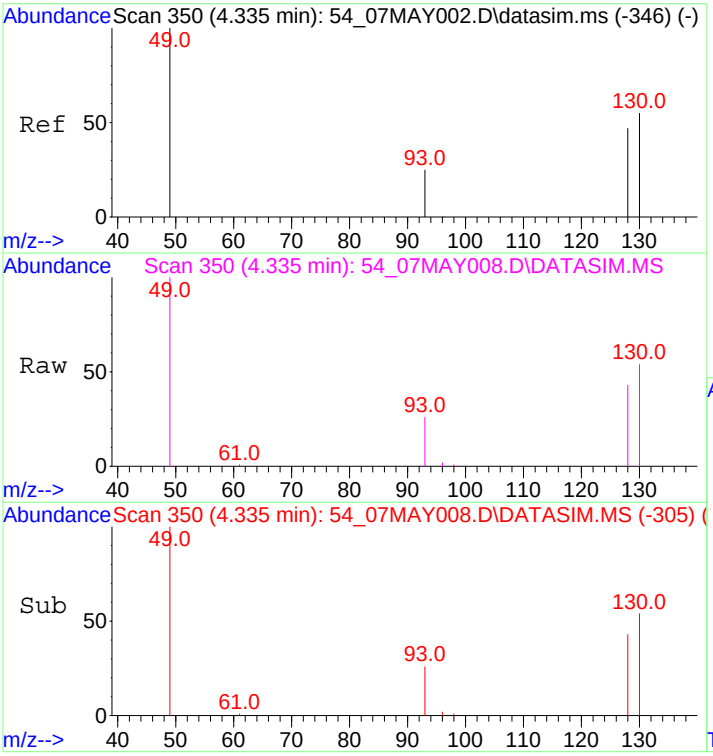
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY008.D
Acq On : 7 May 2014 11:32 am
Operator : yhl
Sample : 02222 \ B16-05
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 11:40:50 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



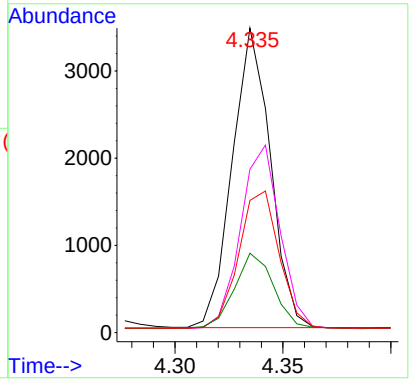


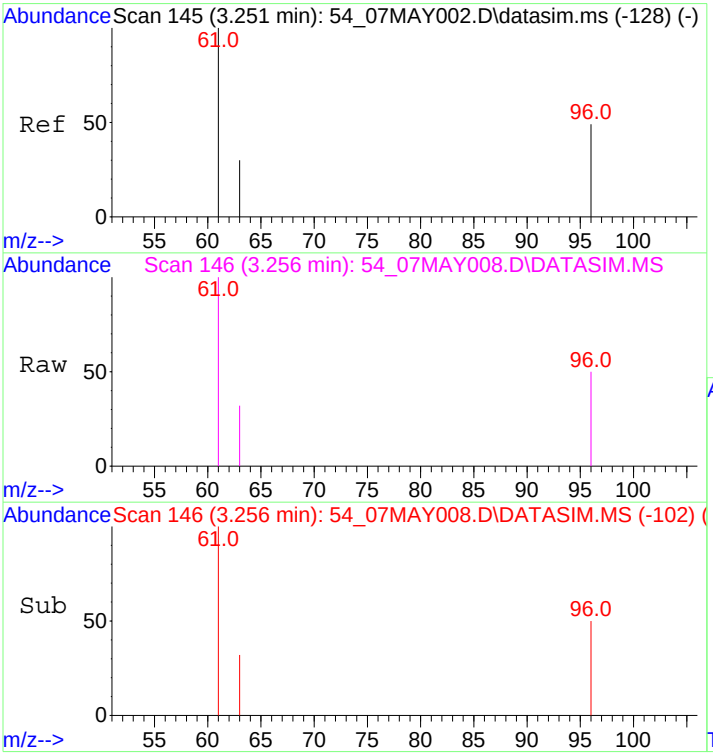


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion: 49 Resp: 4219

Ion	Ratio	Lower	Upper
49	100		
130	63.4	56.0	84.0
128	48.9	41.6	62.4
93	25.3	22.4	33.6

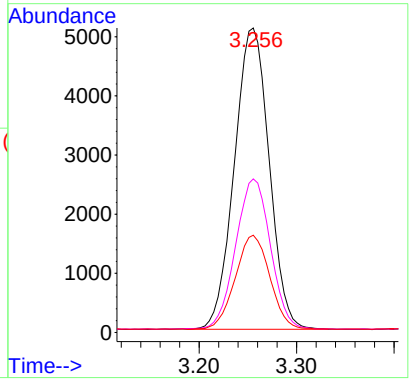


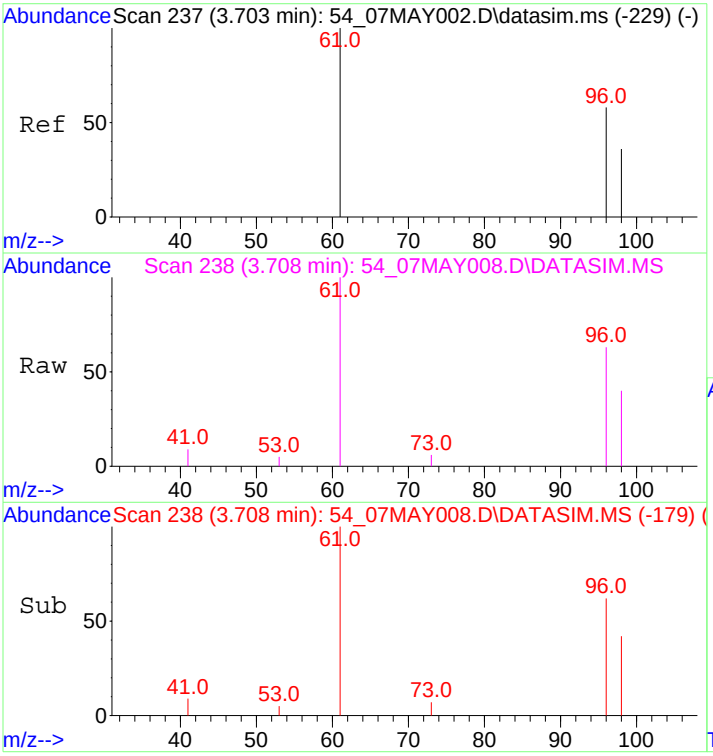


#3
1,1-Dichloroethene
Concen: 38.68 ppbv
RT: 3.256 min Scan# 146
Delta R.T. 0.004 min
Lab File: 54_07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion: 61 Resp: 12638

Ion	Ratio	Lower	Upper
61	100		
96	49.7	41.6	62.4
63	31.0	26.2	39.2

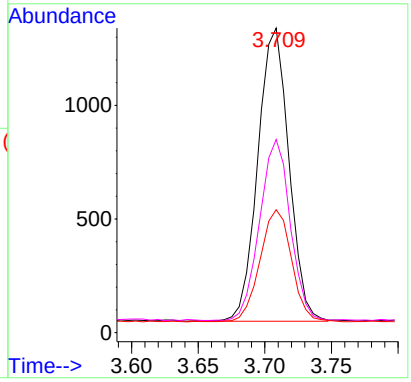


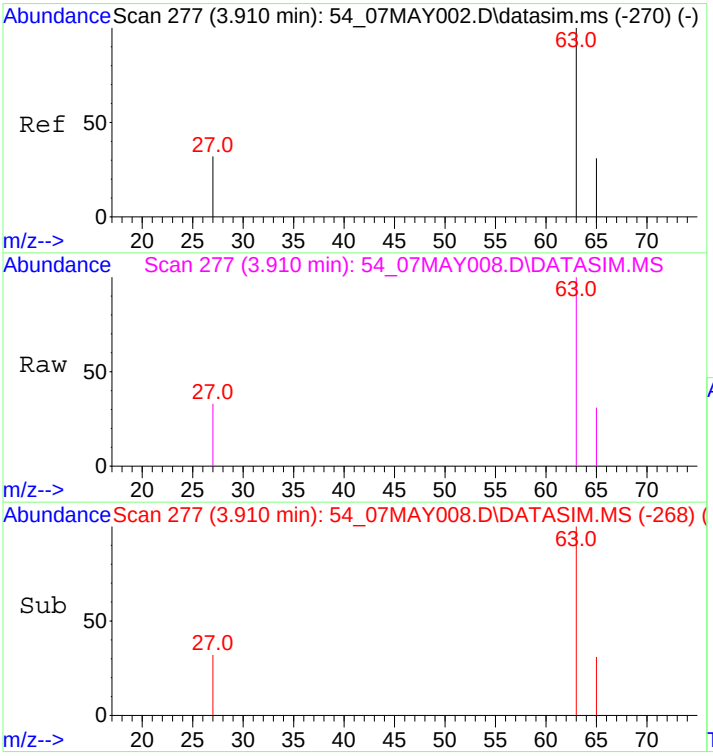


#5
trans-1,2-Dichloroethene
Concen: 7.28 ppbv
RT: 3.708 min Scan# 238
Delta R.T. 0.006 min
Lab File: 54 07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion: 61 Resp: 2096

Ion	Ratio	Lower	Upper
61	100		
96	60.6	48.0	72.0
98	38.8	32.0	48.0

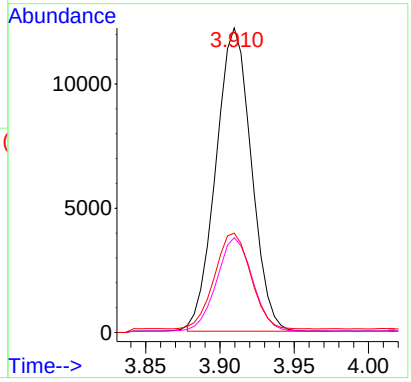


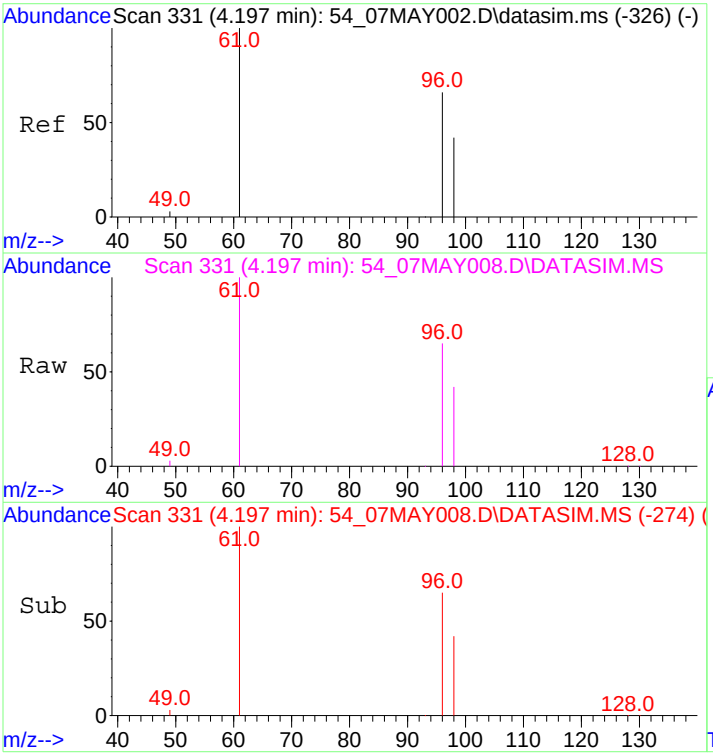


#6
1,1-Dichloroethane
Concen: 58.79 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion: 63 Resp: 20210

Ion	Ratio	Lower	Upper
63	100		
65	30.8	26.1	39.1
27	32.1	24.0	36.0

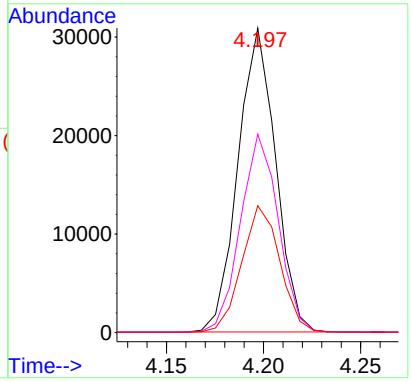


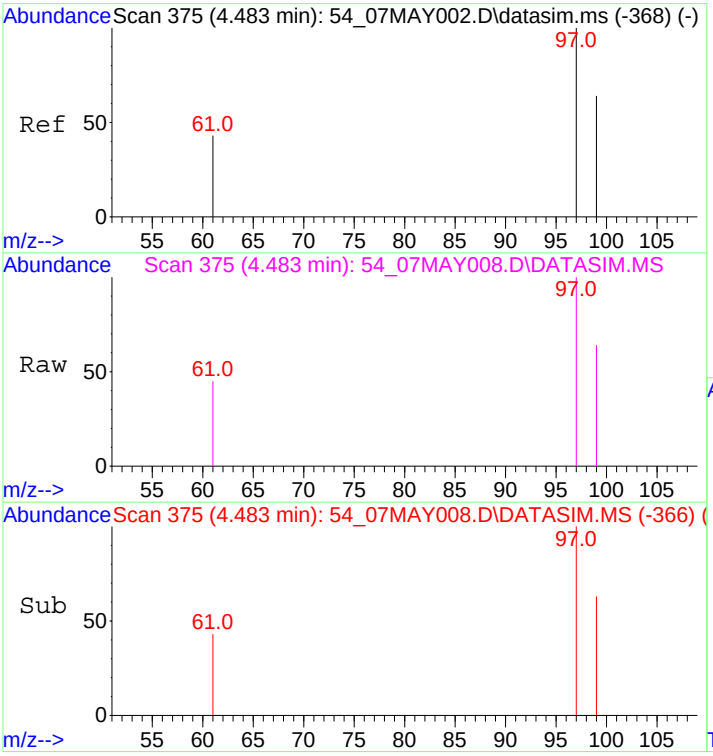


#7
cis-1,2-Dichloroethene
Concen: 155.13 ppbv
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion: 61 Resp: 41720

Ion	Ratio	Lower	Upper
61	100		
96	65.3	52.0	78.0
98	42.0	33.6	50.4

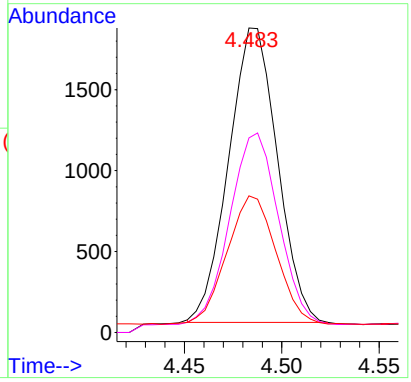


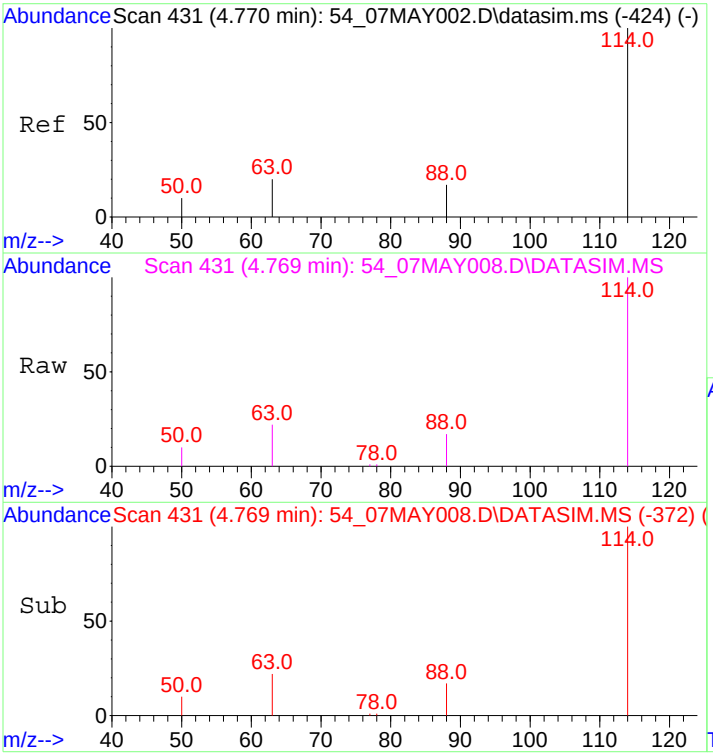


#8
1,1,1-Trichloroethane
Concen: 7.26 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion: 97 Resp: 3168

Ion	Ratio	Lower	Upper
97	100		
99	64.5	52.1	78.1
61	43.8	30.2	45.4

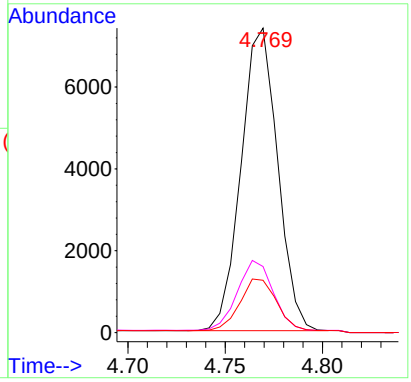


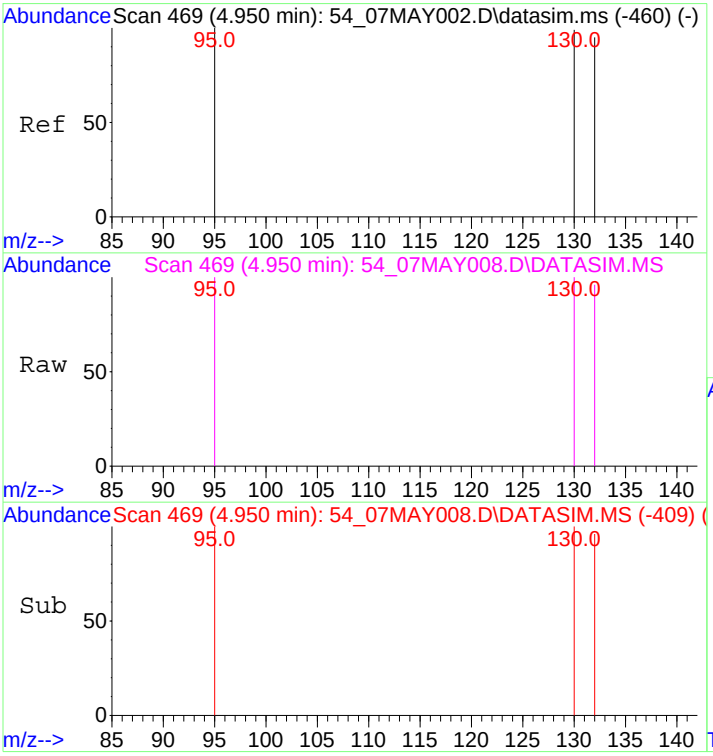


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion:114 Resp: 9668

Ion	Ratio	Lower	Upper
114	100		
63	22.7	17.6	26.4
88	17.0	13.6	20.4

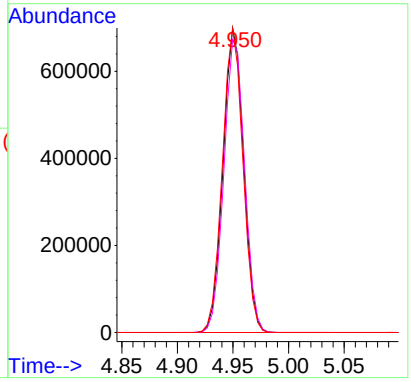


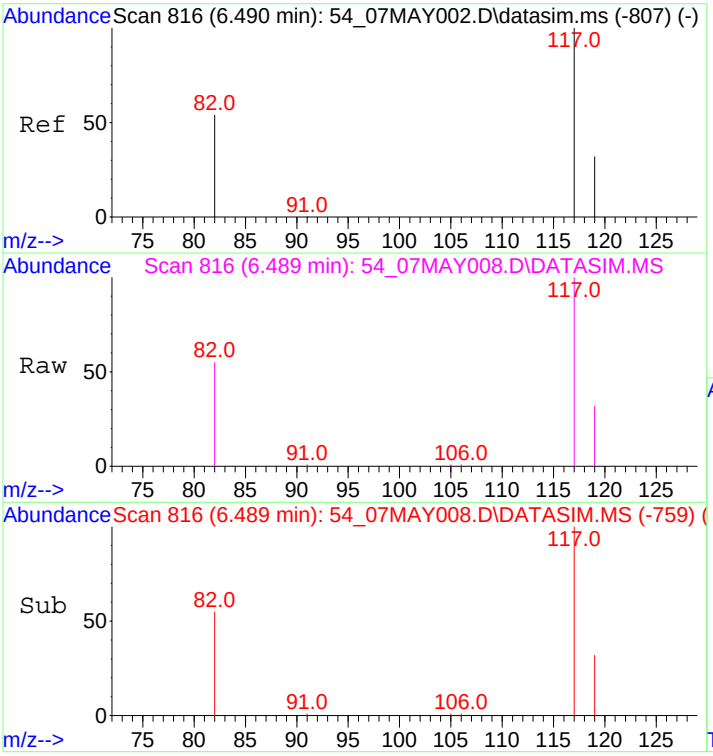


#11
Trichloroethene
Concen: 3740.40 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion:130 Resp: 899394

Ion	Ratio	Lower	Upper
130	100		
132	97.3	76.9	115.3
95	99.6	76.5	114.7

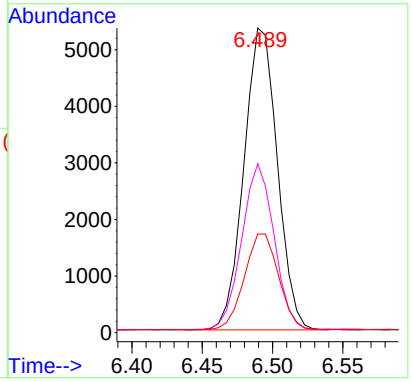


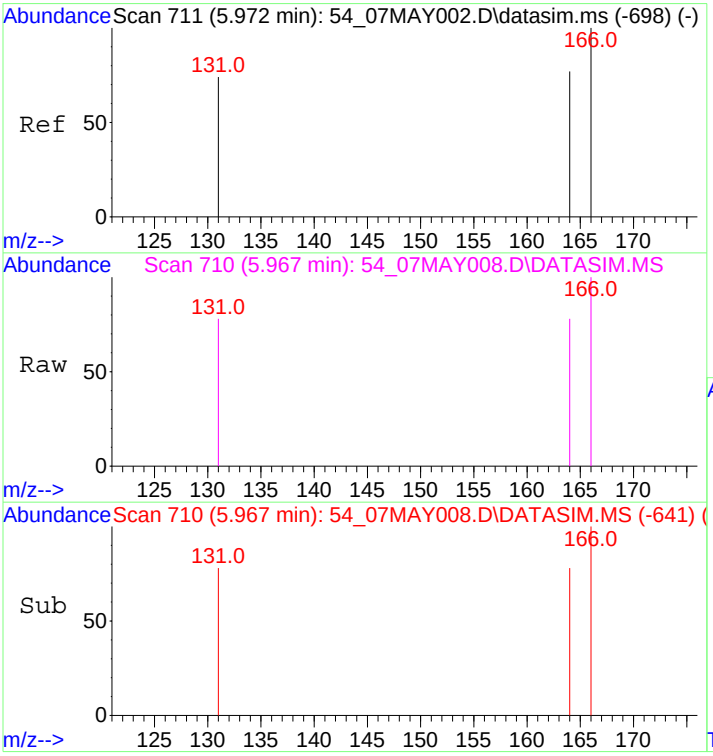


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion:117 Resp: 8853

Ion	Ratio	Lower	Upper
117	100		
82	53.0	38.0	57.0
119	32.4	27.0	40.4

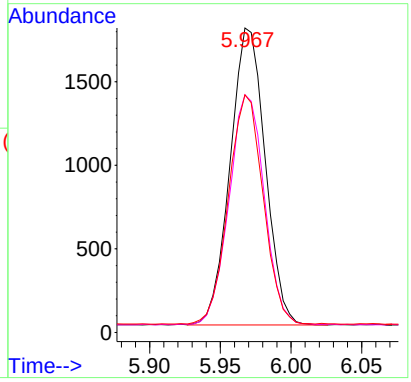




#14
Tetrachloroethene
Concen: 10.13 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_07MAY008.D
Acq: 7 May 2014 11:32 am

Tgt Ion:166 Resp: 3070

Ion	Ratio	Lower	Upper
166	100		
164	77.7	62.6	94.0
131	76.4	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY009.D
Acq On : 7 May 2014 11:43 am
Operator : yhl
Sample : 02224 \ B16-03
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:23:16 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

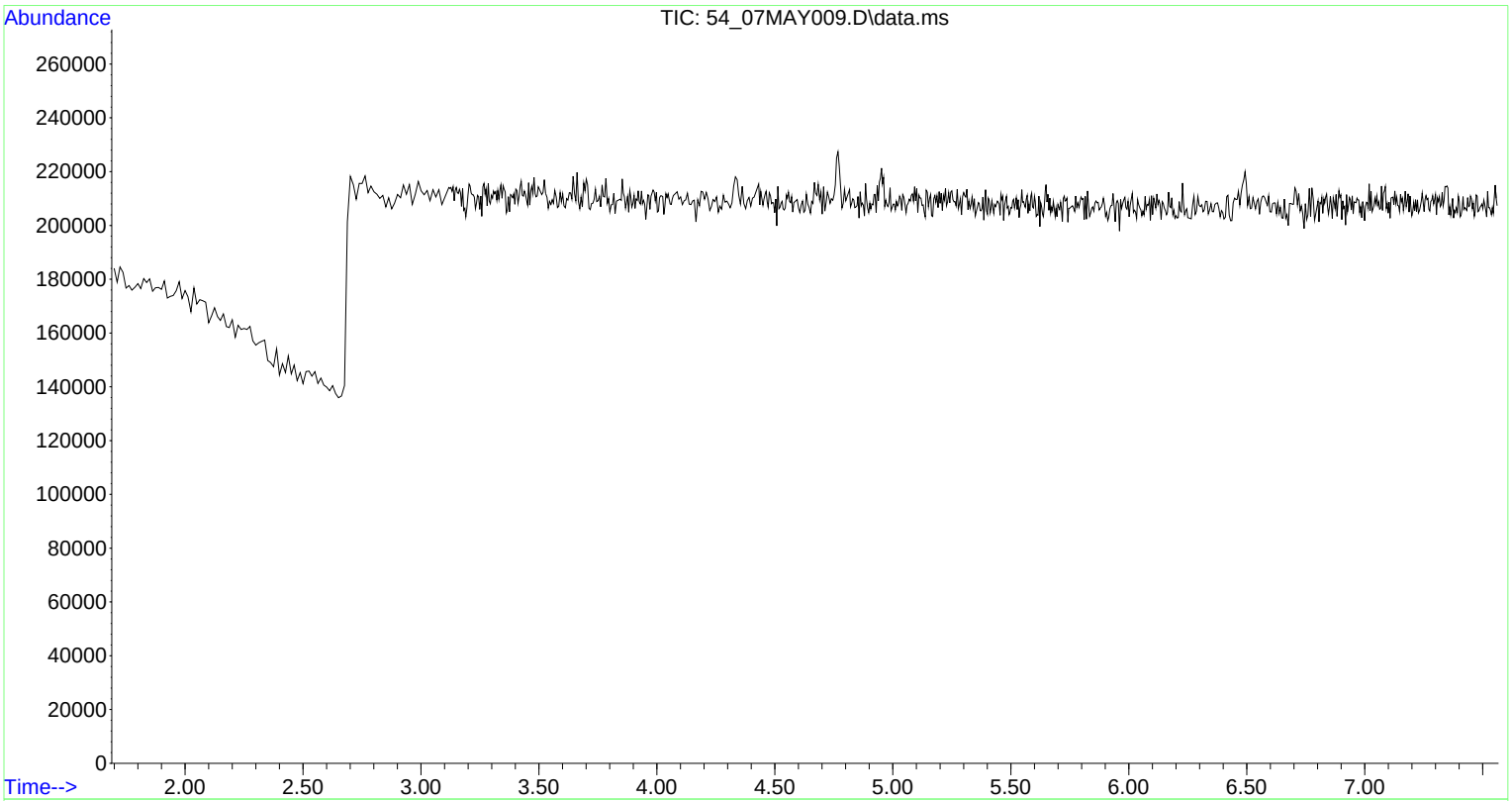
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3763	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	8749	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.489	117	8272	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
6] 1,1-Dichloroethane	3.910	63	290	0.95	ppbv #	87
7] cis-1,2-Dichloroethene	4.197	61	780m	3.25	ppbv	
11] Trichloroethene	4.950	130	3263	15.00	ppbv	98

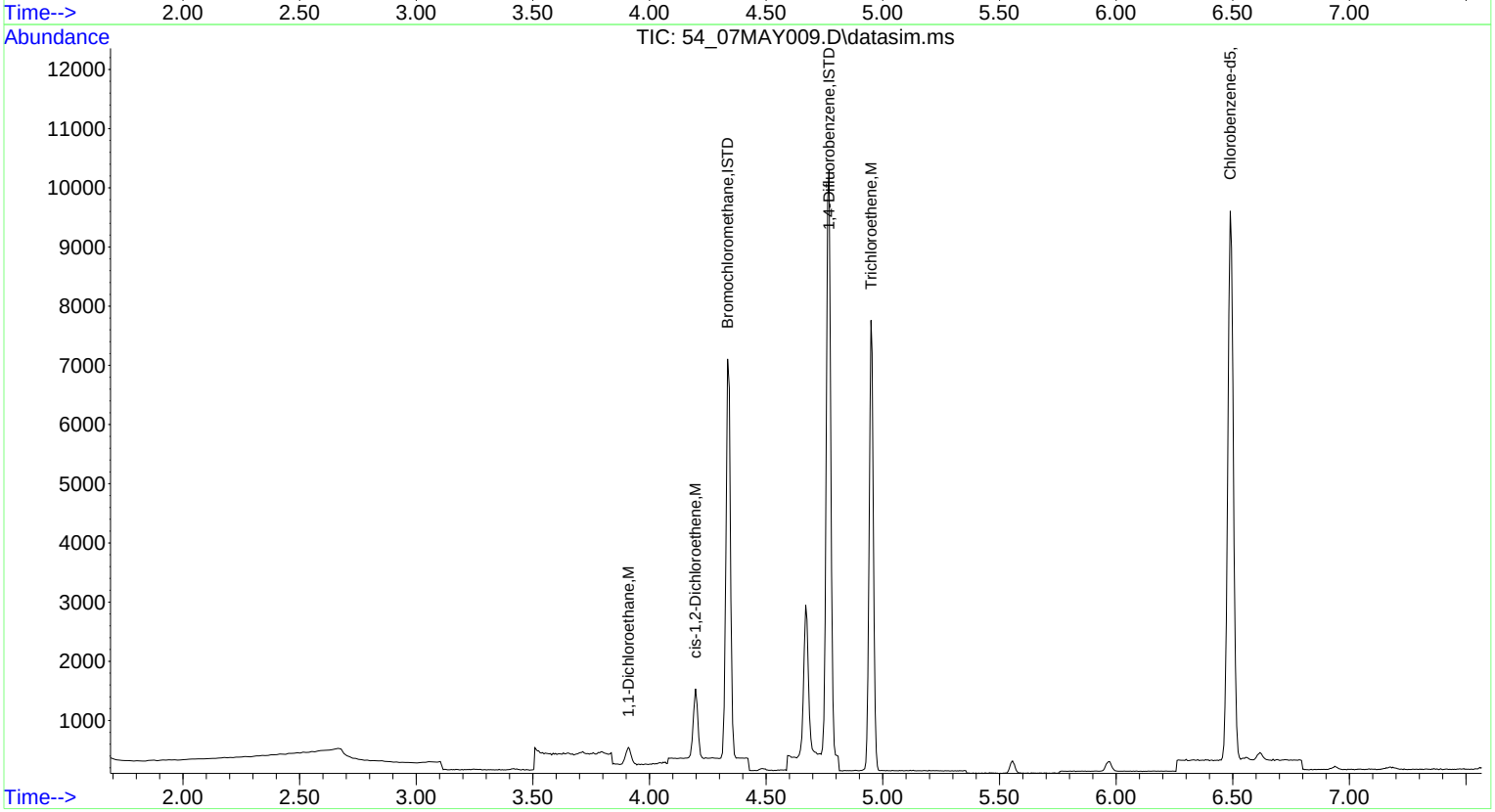
(#) = qualifier out of range (m) = manual integration (+) = signals summed

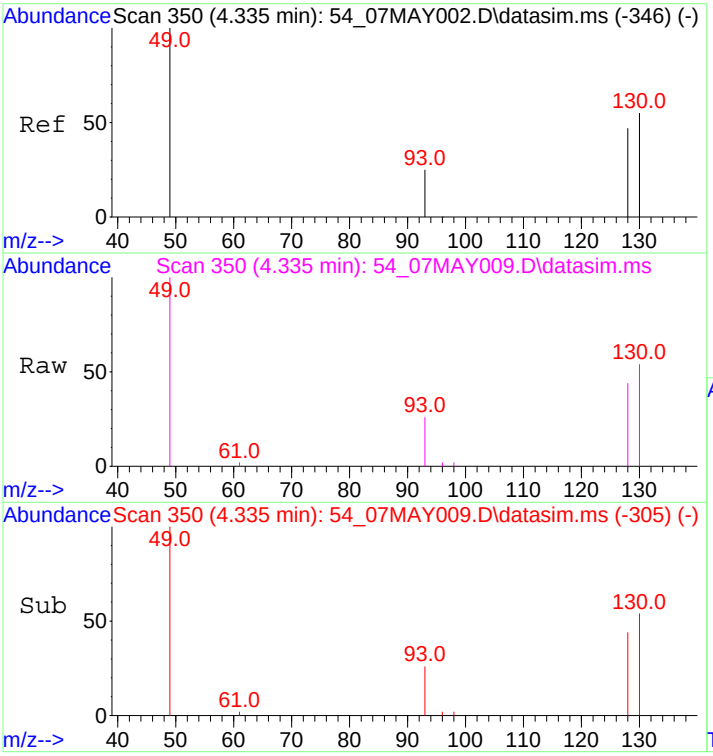
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY009.D
Acq On : 7 May 2014 11:43 am
Operator : yhl
Sample : 02224 \ B16-03
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:23:16 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



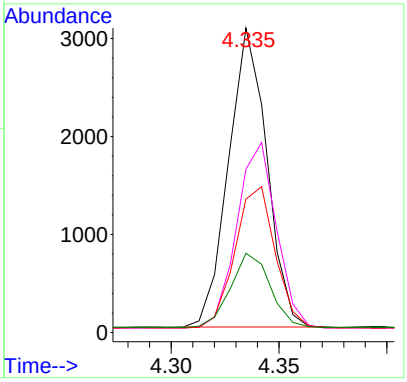


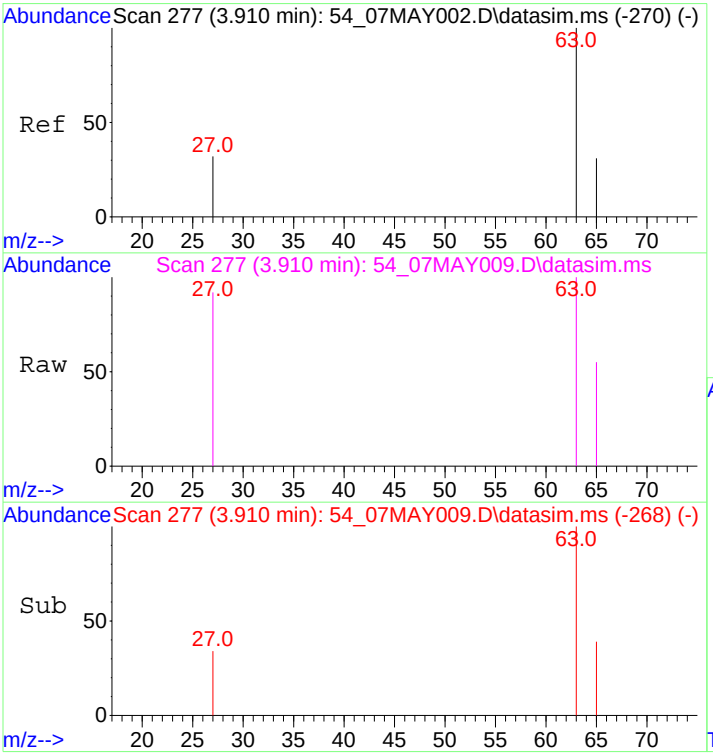


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY009.D
Acq: 7 May 2014 11:43 am

Tgt Ion: 49 Resp: 3763

Ion	Ratio	Lower	Upper
49	100		
130	64.0	56.0	84.0
128	49.8	41.6	62.4
93	25.7	22.4	33.6

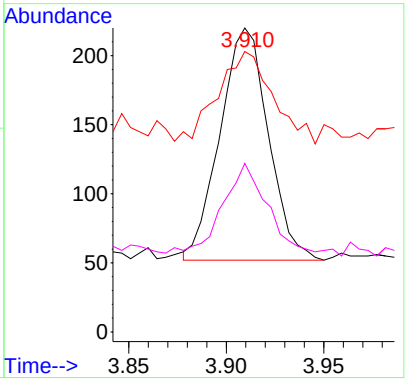


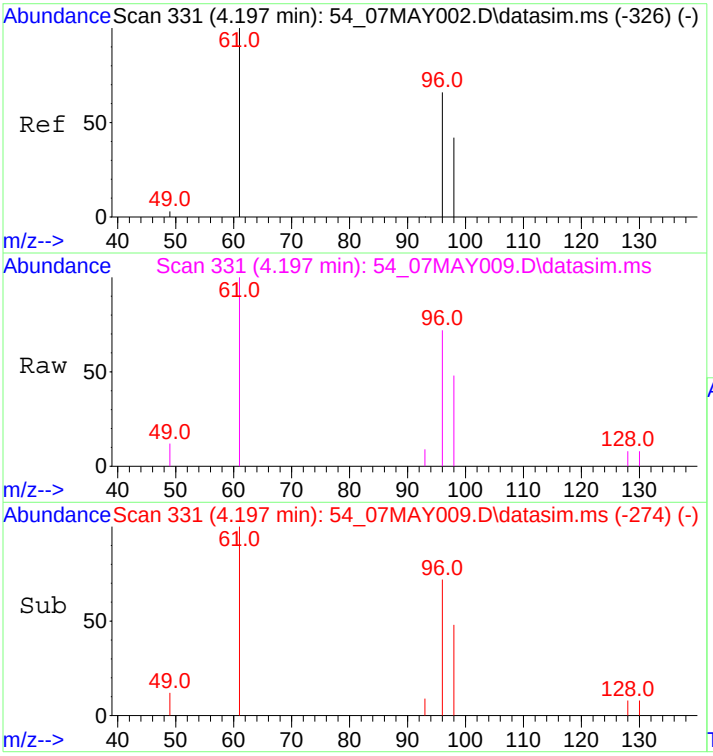


#6
1,1-Dichloroethane
Concen: 0.95 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_07MAY009.D
Acq: 7 May 2014 11:43 am

Tgt Ion: 63 Resp: 290

Ion	Ratio	Lower	Upper
63	100		
65	33.1	26.1	39.1
27	44.5	24.0	36.0#

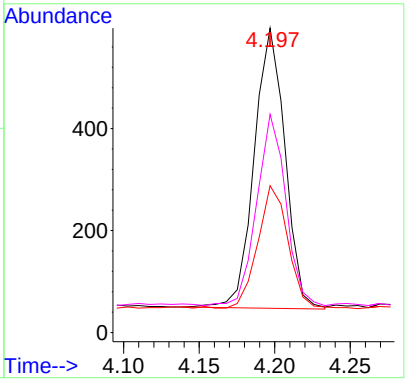


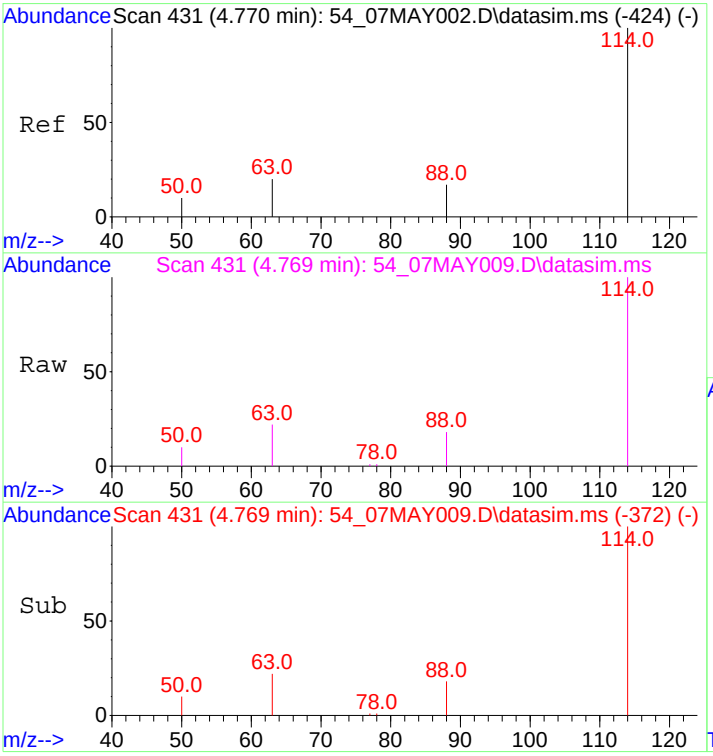


#7
cis-1,2-Dichloroethene
Concen: 3.25 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54 07MAY009.D
Acq: 7 May 2014 11:43 am

Tgt Ion: 61 Resp: 780

Ion	Ratio	Lower	Upper
61	100		
96	63.7	52.0	78.0
98	43.3	33.6	50.4

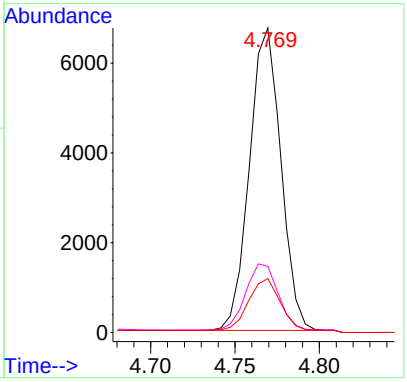




#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_07MAY009.D
Acq: 7 May 2014 11:43 am

Tgt Ion:114 Resp: 8749

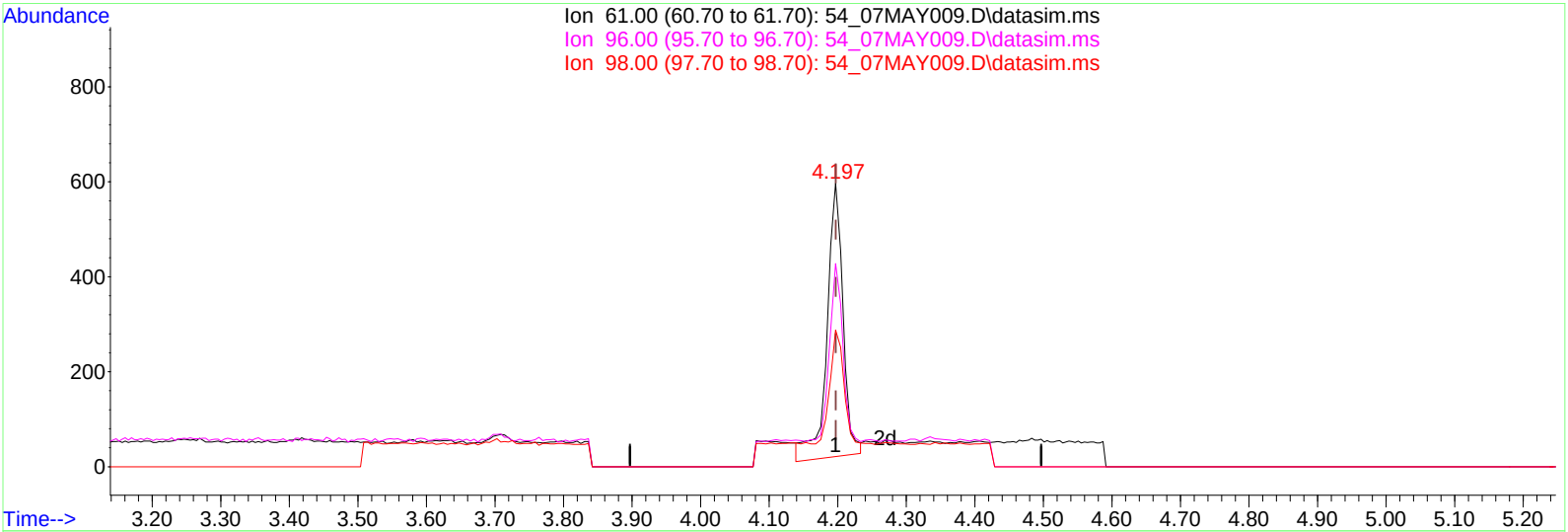
Ion	Ratio	Lower	Upper
114	100		
63	22.5	17.6	26.4
88	17.1	13.6	20.4

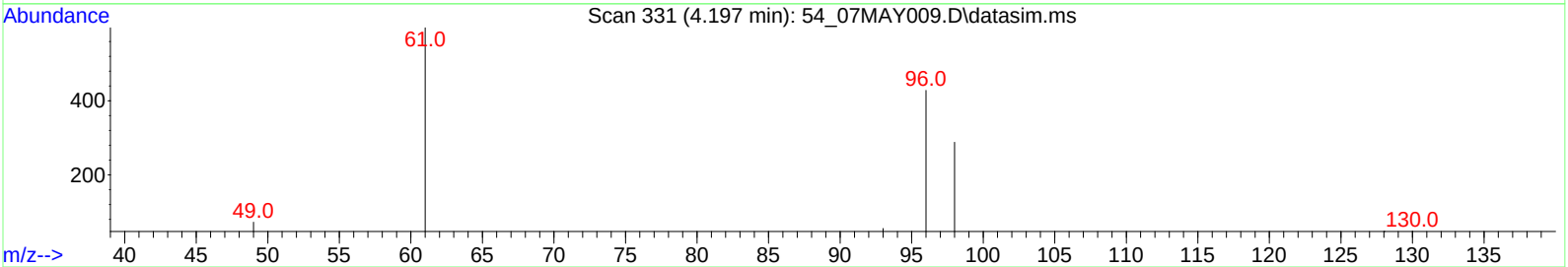


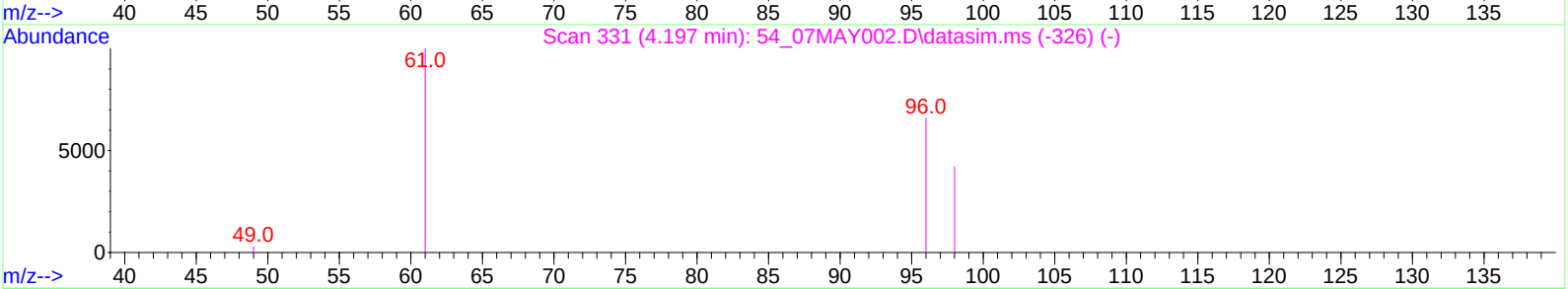
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY009.D
Acq On : 7 May 2014 11:43 am
Operator : yhl
Sample : 02224 \ B16-03
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:20:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_07MAY009.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 3.92 ppbv

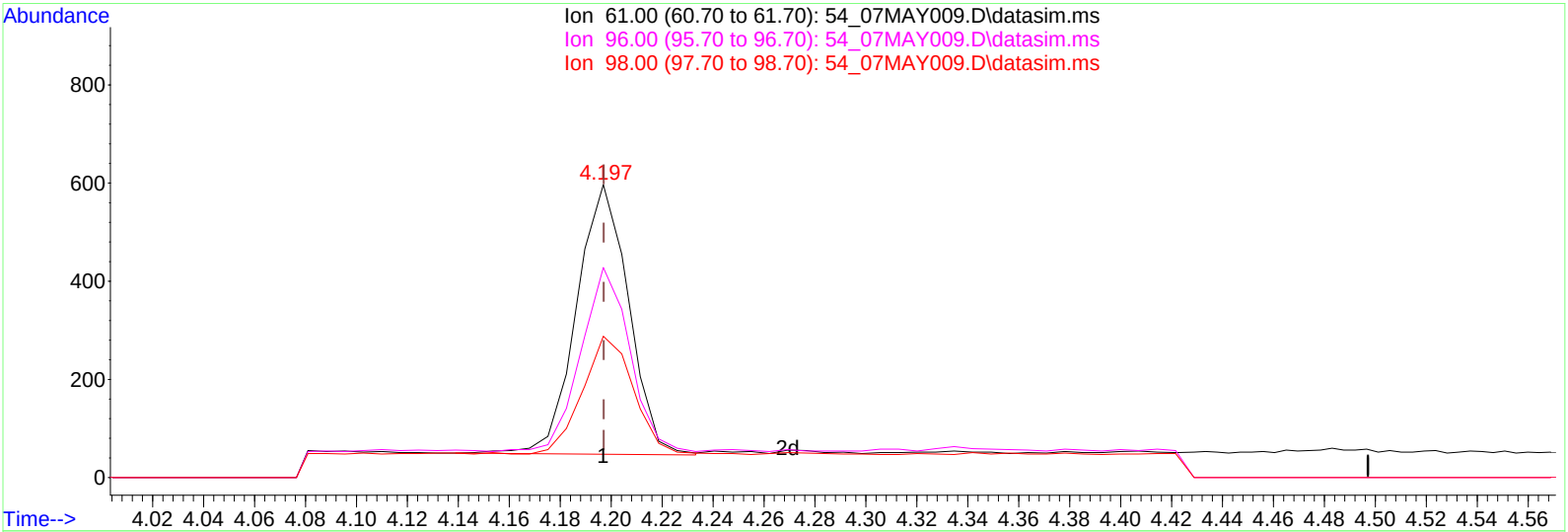
response 941

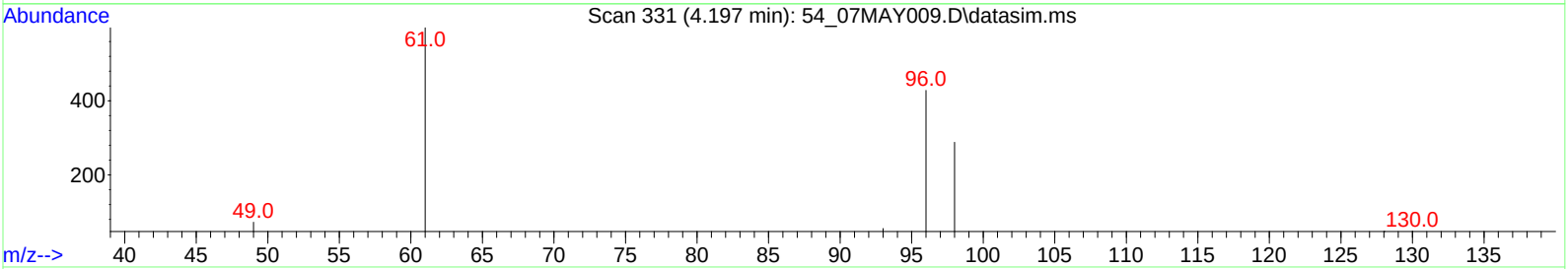
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	52.82
98.00	42.00	35.92
0.00	0.00	0.00

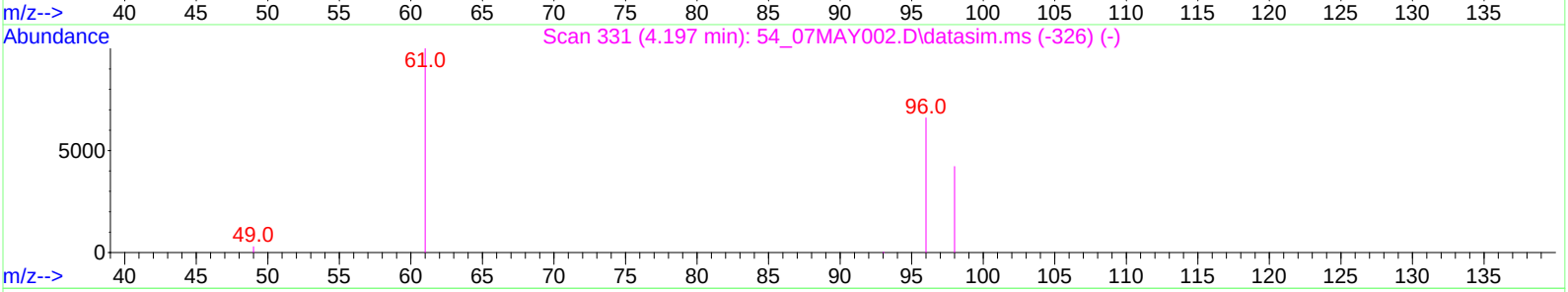
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY009.D
Acq On : 7 May 2014 11:43 am
Operator : yhl
Sample : 02224 \ B16-03
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:20:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







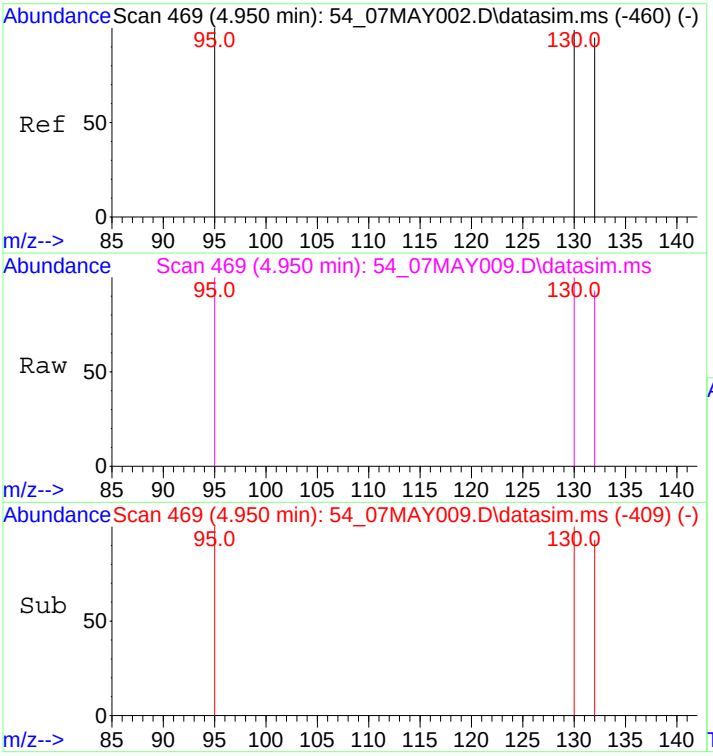
TIC: 54_07MAY009.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 3.25 ppbv m

response 780

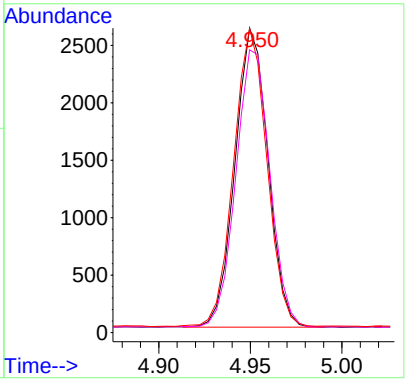
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	63.72
98.00	42.00	43.33
0.00	0.00	0.00

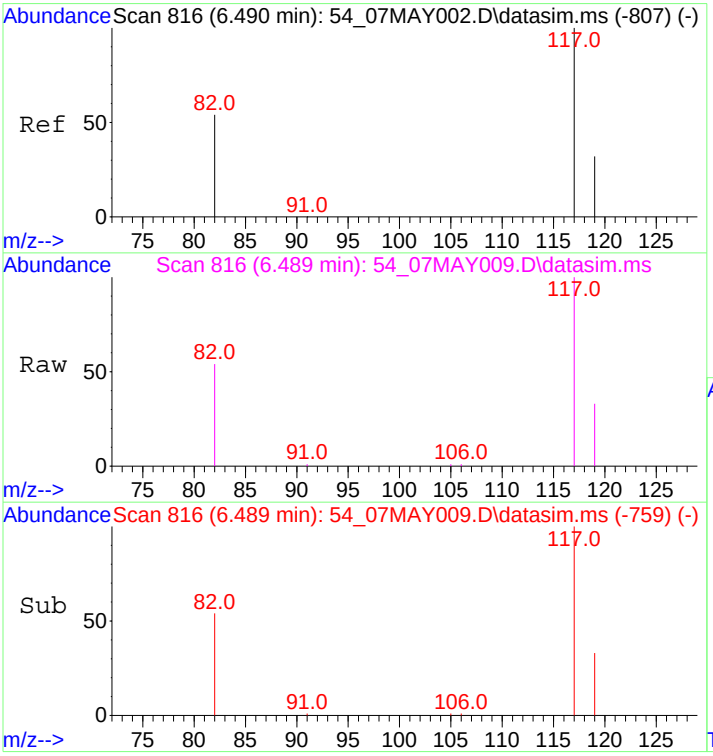


#11
Trichloroethene
Concen: 15.00 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 07MAY009.D
Acq: 7 May 2014 11:43 am

Tgt Ion:130 Resp: 3263

Ion	Ratio	Lower	Upper
130	100		
132	95.6	76.9	115.3
95	99.5	76.5	114.7

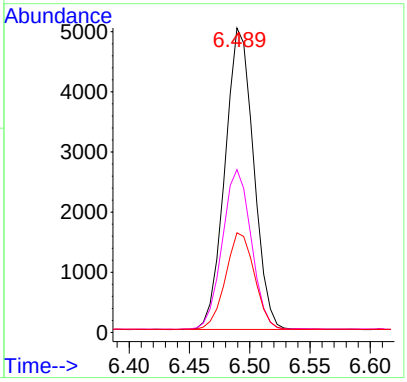




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54_07MAY009.D
Acq: 7 May 2014 11:43 am

Tgt Ion:117 Resp: 8272

Ion	Ratio	Lower	Upper
117	100		
82	53.4	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY010.D
Acq On : 7 May 2014 12:35 pm
Operator : YHL
Sample : 02225 \ B16-02
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:42:59 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

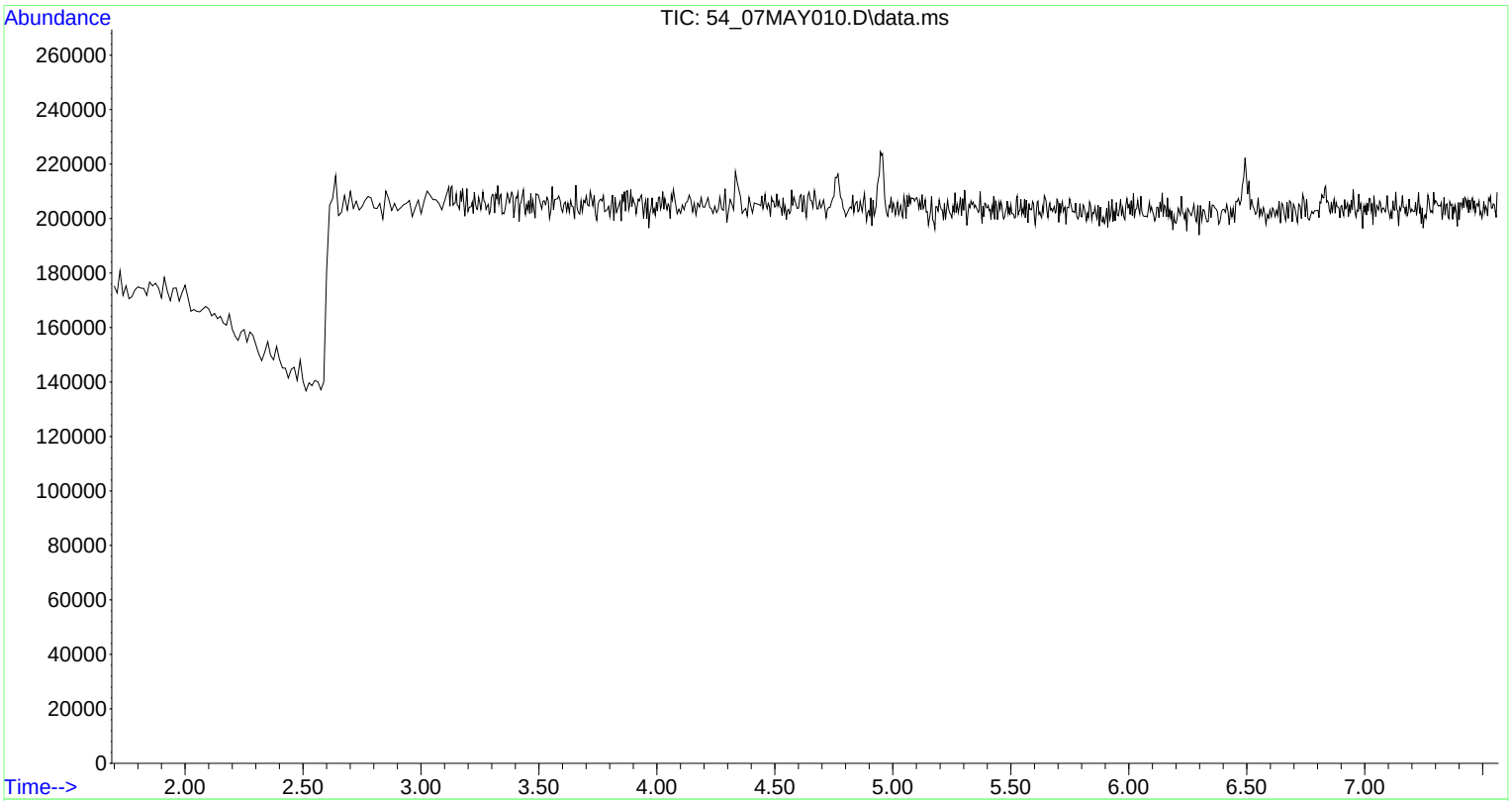
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4256	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9980	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.489	117	9232	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
7] cis-1,2-Dichloroethene	4.197	61	168m	0.62 ppbv	
11] Trichloroethene	4.950	130	6183	24.91 ppbv	97
13] Toluene	5.556	91	338	0.61 ppbv	99
14] Tetrachloroethene	5.972	166	267	0.84 ppbv	95

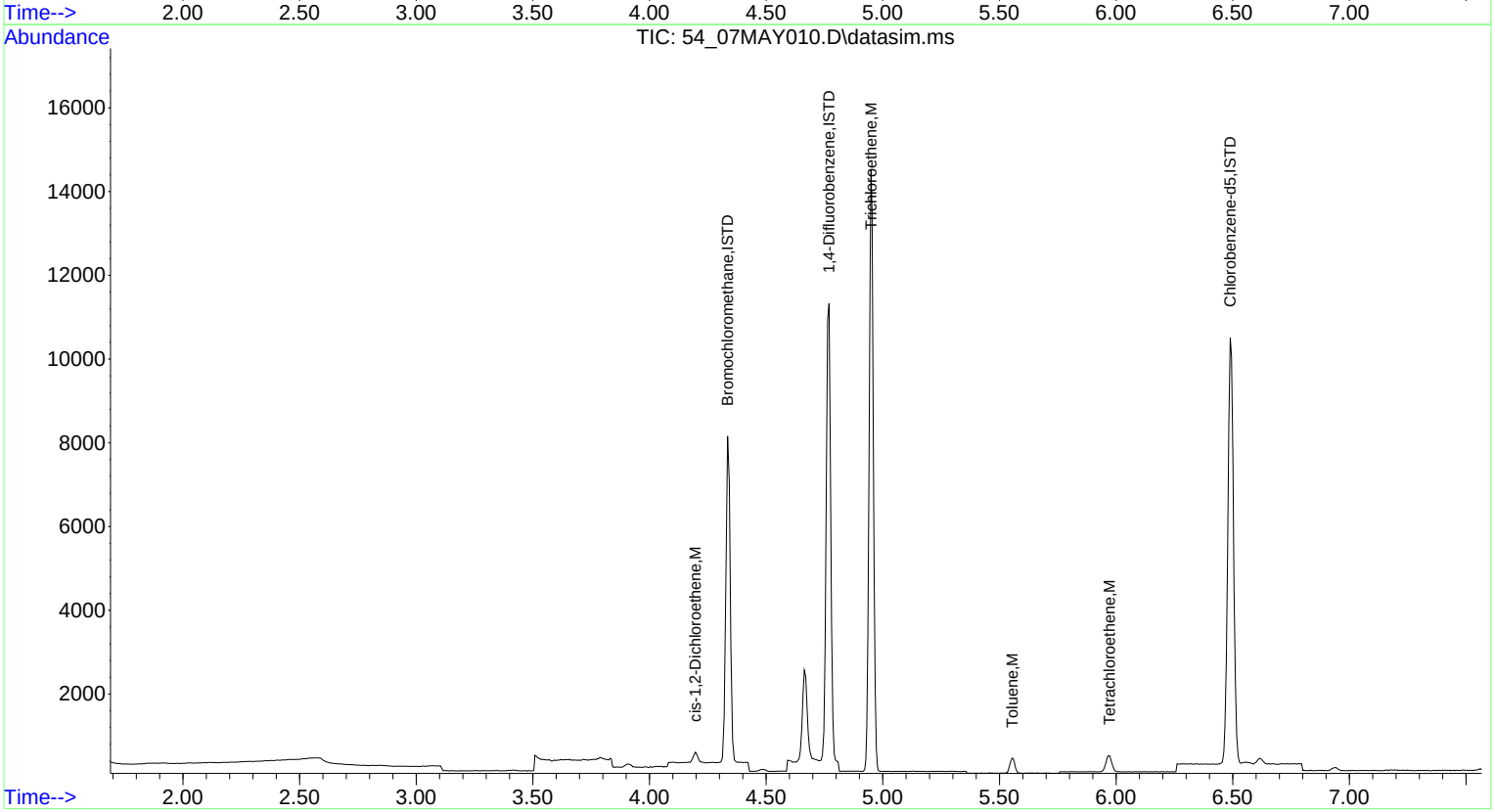
(#) = qualifier out of range (m) = manual integration (+) = signals summed

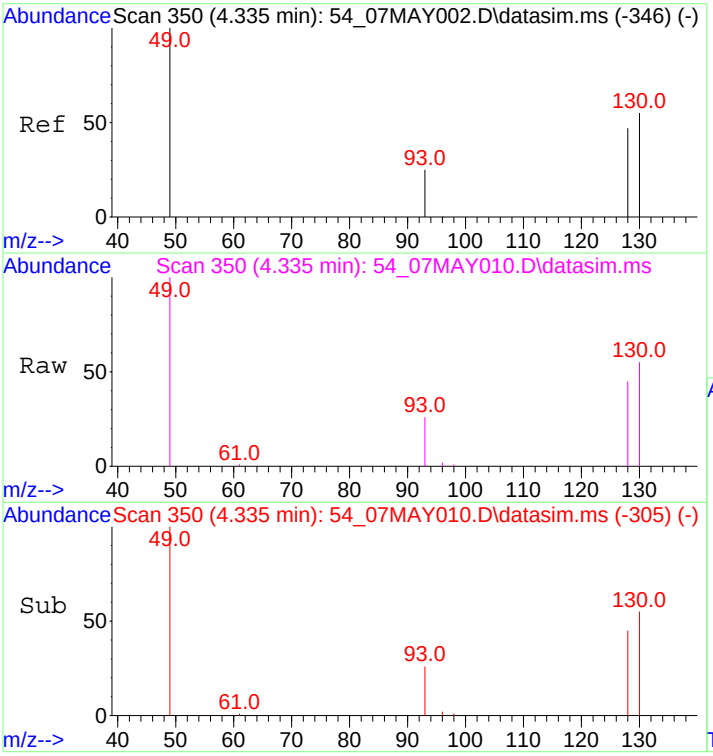
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY010.D
Acq On : 7 May 2014 12:35 pm
Operator : YHL
Sample : 02225 \ B16-02
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:42:59 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



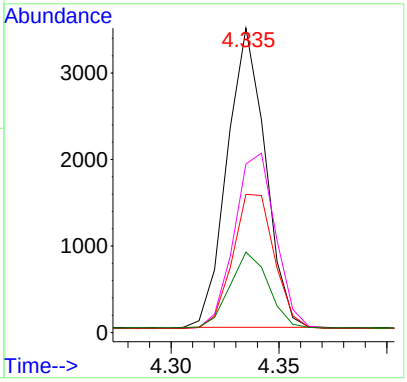


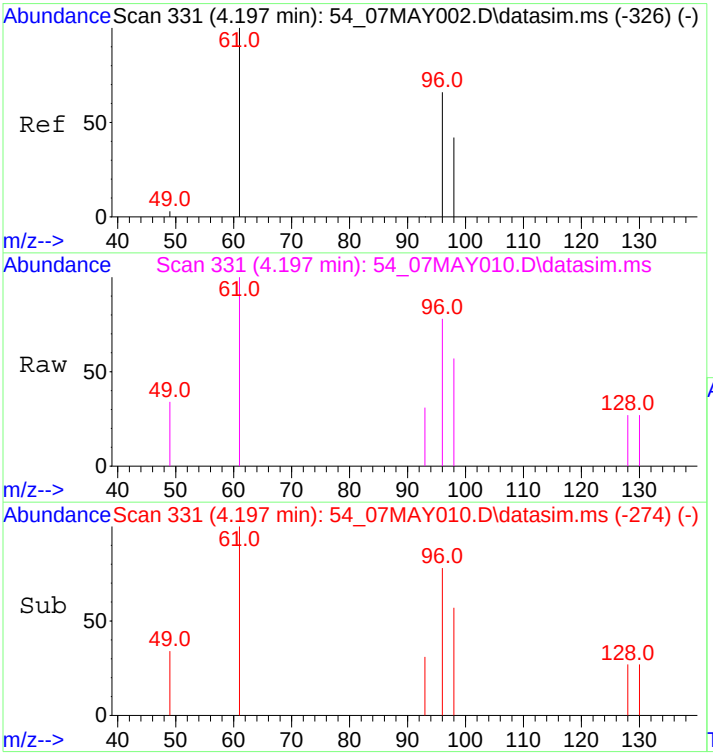


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY010.D
Acq: 7 May 2014 12:35 pm

Tgt Ion: 49 Resp: 4256

Ion	Ratio	Lower	Upper
49	100		
130	63.4	56.0	84.0
128	49.0	41.6	62.4
93	25.7	22.4	33.6

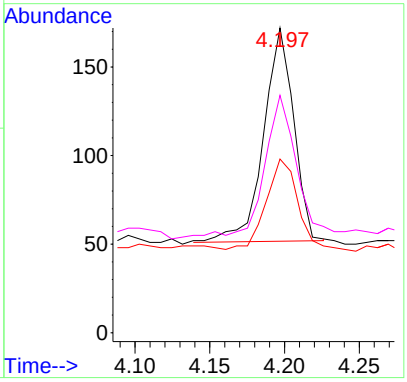




#7
cis-1,2-Dichloroethene
Concen: 0.62 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_07MAY010.D
Acq: 7 May 2014 12:35 pm

Tgt Ion: 61 Resp: 168

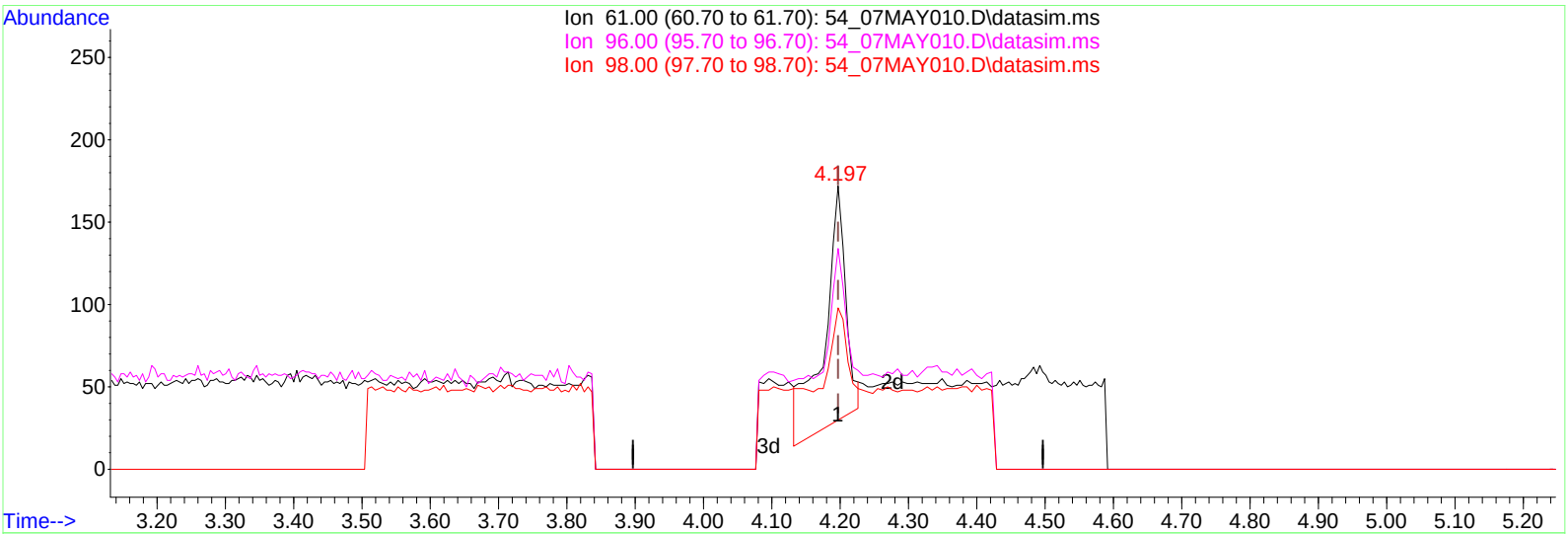
Ion	Ratio	Lower	Upper
61	100		
96	114.9	52.0	78.0#
98	47.0	33.6	50.4

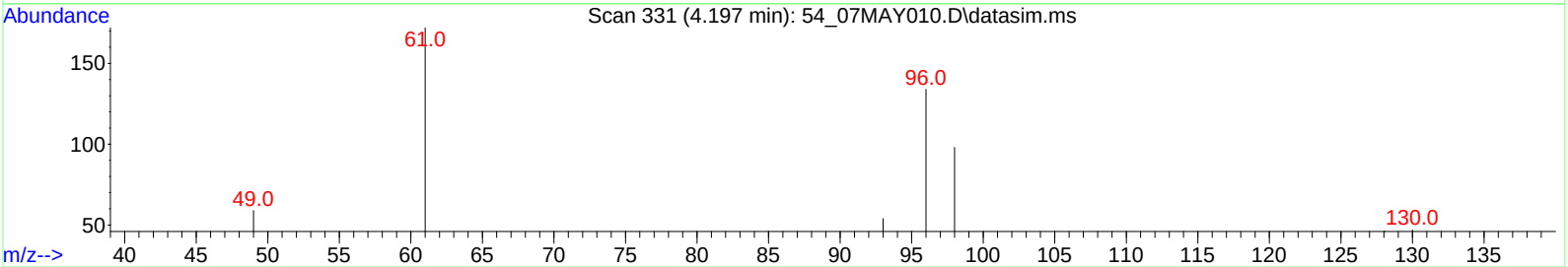


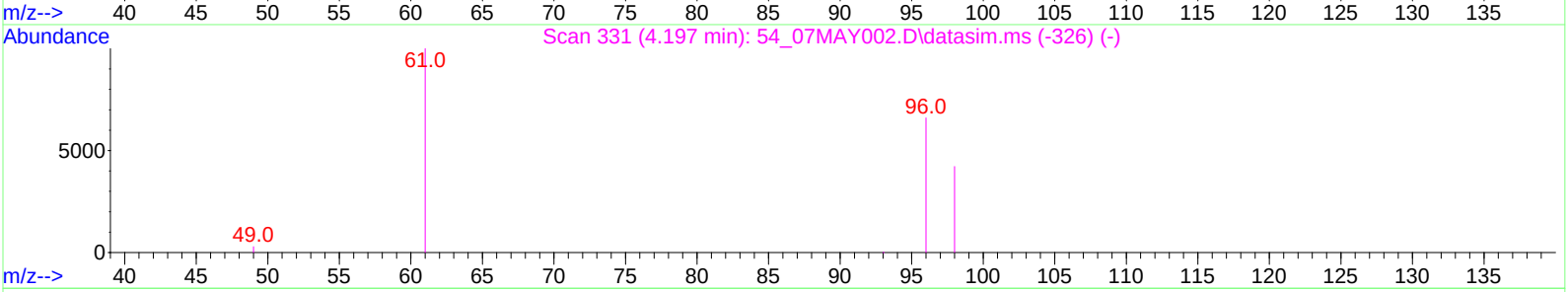
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY010.D
Acq On : 7 May 2014 12:35 pm
Operator : YHL
Sample : 02225 \ B16-02
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:41:58 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_07MAY010.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 1.16 ppbv

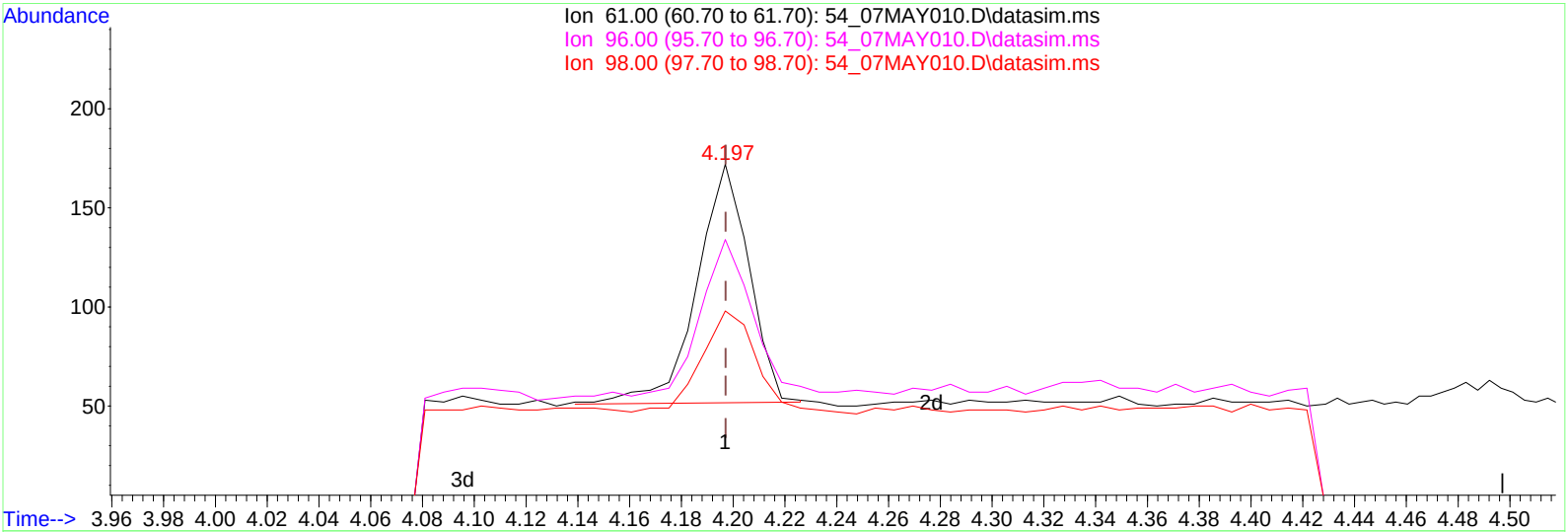
response 315

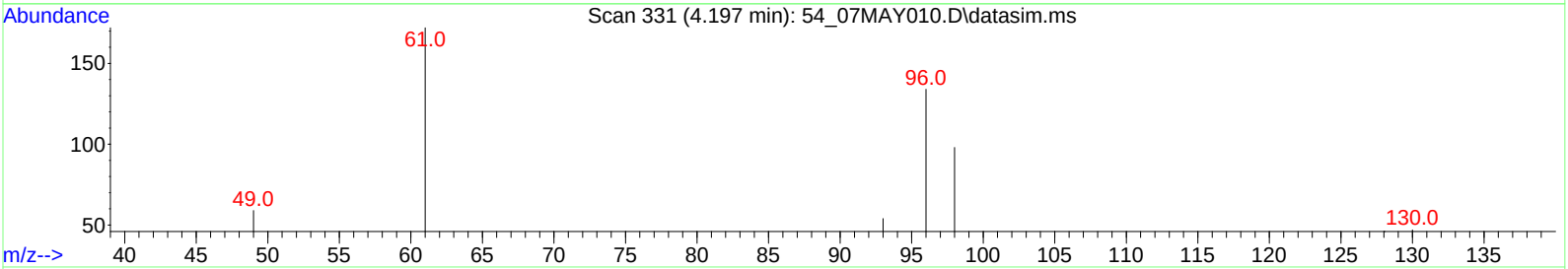
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	61.27
98.00	42.00	25.08#
0.00	0.00	0.00

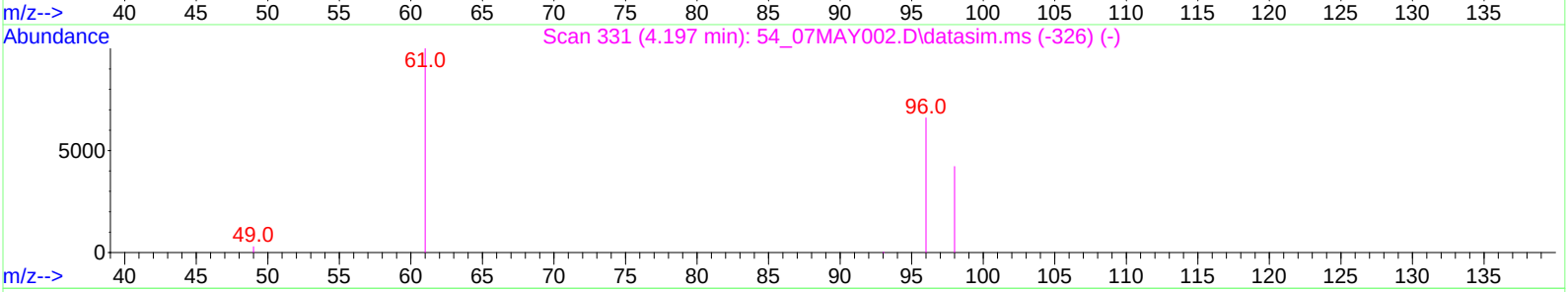
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY010.D
Acq On : 7 May 2014 12:35 pm
Operator : YHL
Sample : 02225 \ B16-02
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:41:58 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







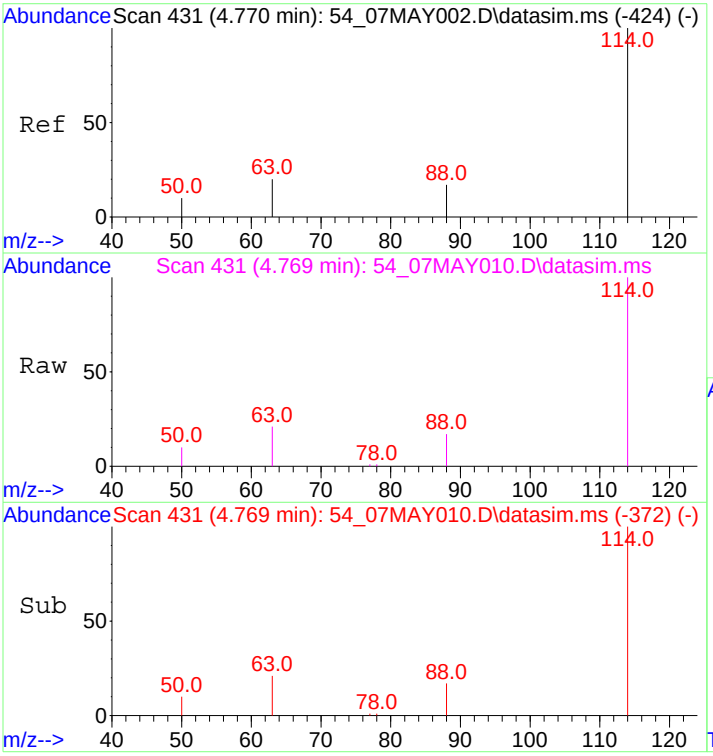
TIC: 54_07MAY010.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 0.62 ppbv m

response 168

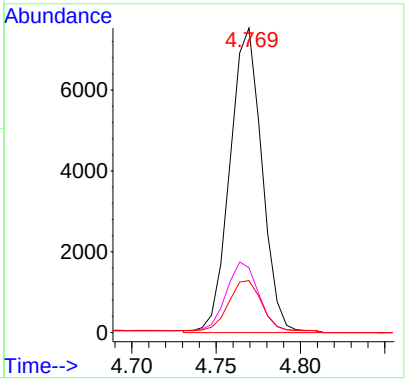
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	114.88#
98.00	42.00	47.02
0.00	0.00	0.00

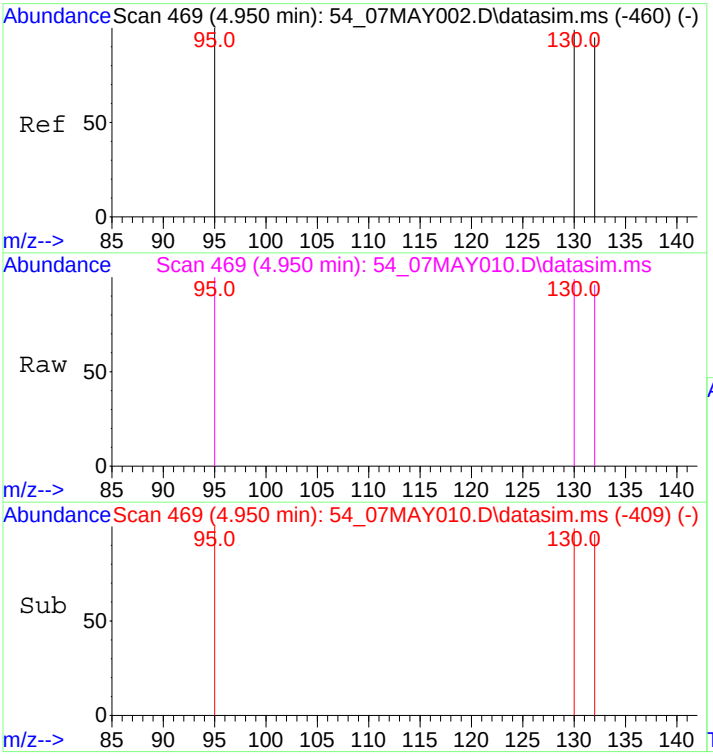


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY010.D
Acq: 7 May 2014 12:35 pm

Tgt Ion:114 Resp: 9980

Ion	Ratio	Lower	Upper
114	100		
63	22.2	17.6	26.4
88	16.7	13.6	20.4

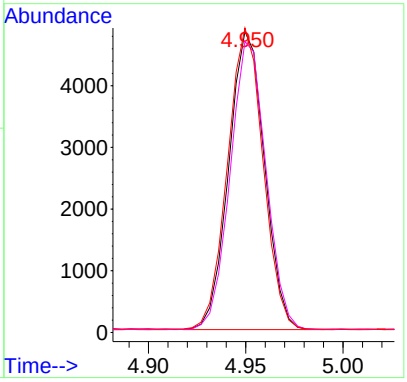


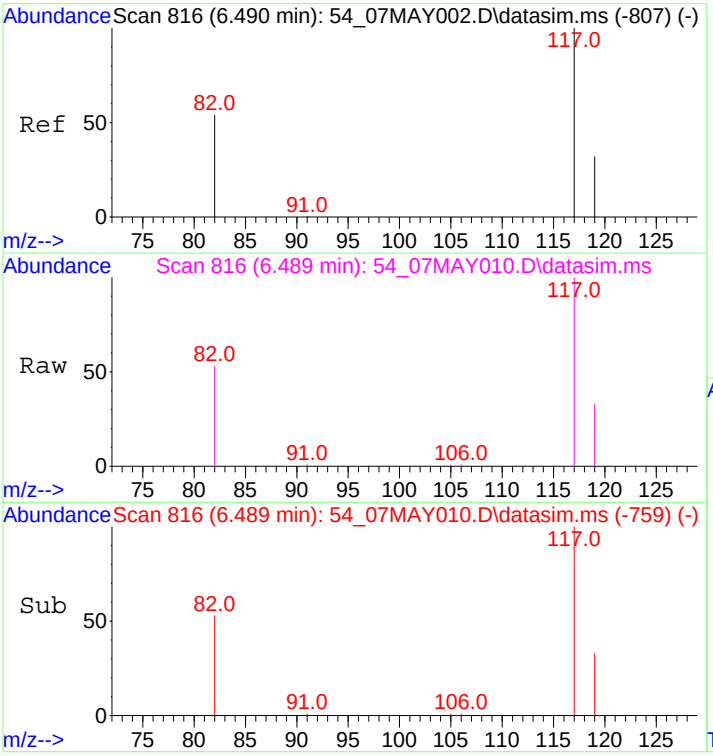


#11
Trichloroethene
Concen: 24.91 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_07MAY010.D
Acq: 7 May 2014 12:35 pm

Tgt Ion:130 Resp: 6183

Ion	Ratio	Lower	Upper
130	100		
132	97.0	76.9	115.3
95	100.1	76.5	114.7

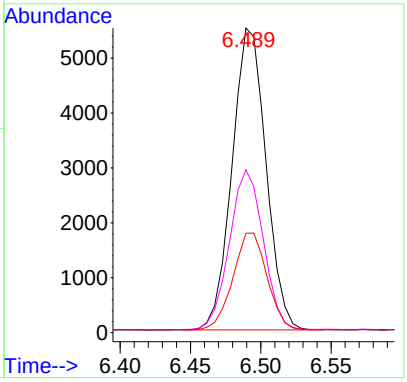


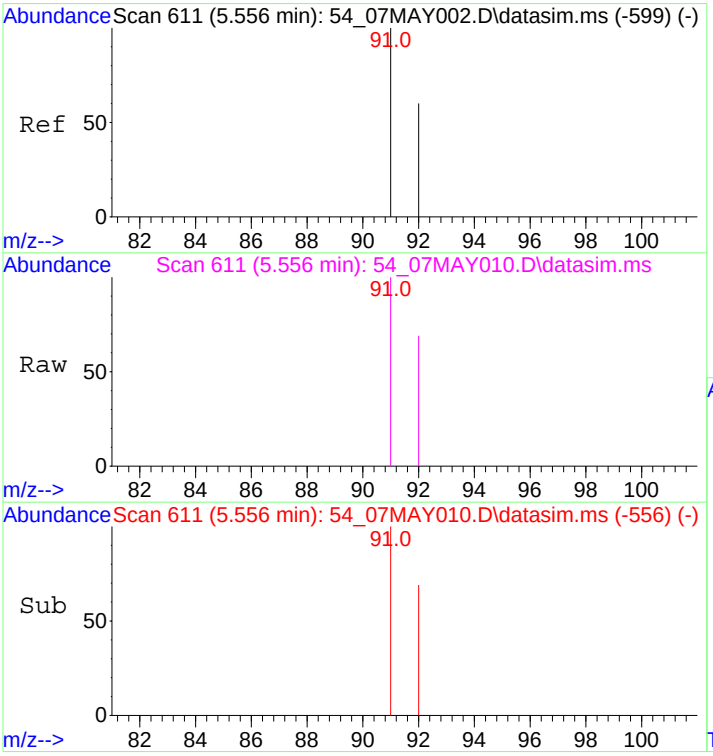


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 07MAY010.D
Acq: 7 May 2014 12:35 pm

Tgt Ion:117 Resp: 9232

Ion	Ratio	Lower	Upper
117	100		
82	52.8	38.0	57.0
119	32.2	27.0	40.4

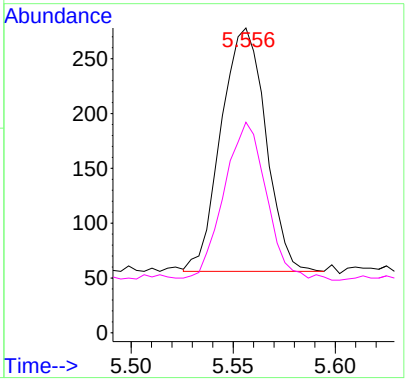


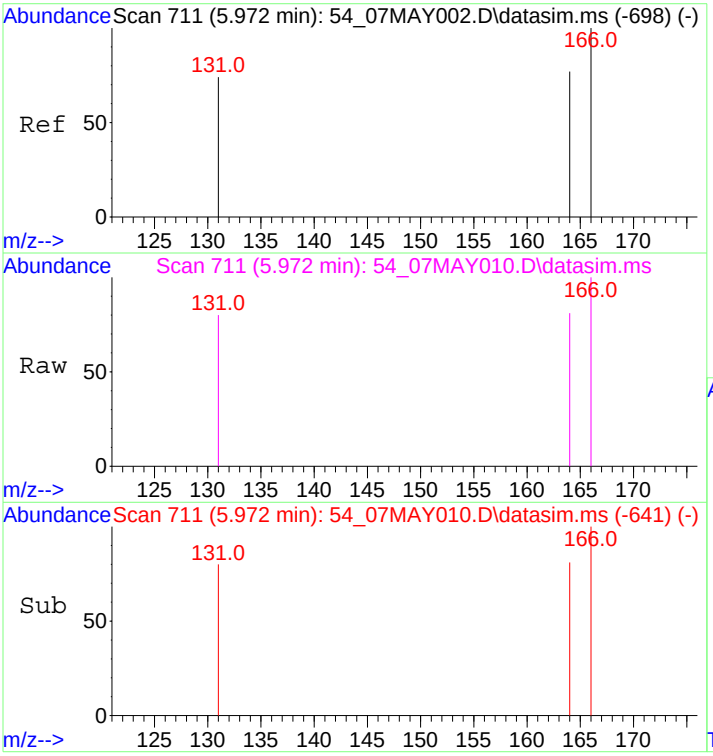


#13
Toluene
Concen: 0.61 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_07MAY010.D
Acq: 7 May 2014 12:35 pm

Tgt Ion: 91 Resp: 338

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.8	71.8

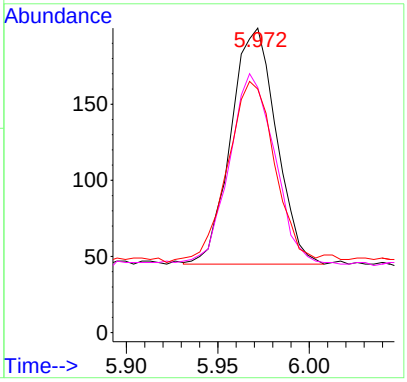




#14
Tetrachloroethene
Concen: 0.84 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 07MAY010.D
Acq: 7 May 2014 12:35 pm

Tgt Ion:166 Resp: 267

Ion	Ratio	Lower	Upper
166	100		
164	80.5	62.6	94.0
131	80.1	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY011.D
Acq On : 7 May 2014 12:48 pm
Operator : YHL
Sample : 02225 \ B16-02 Dup
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:55:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

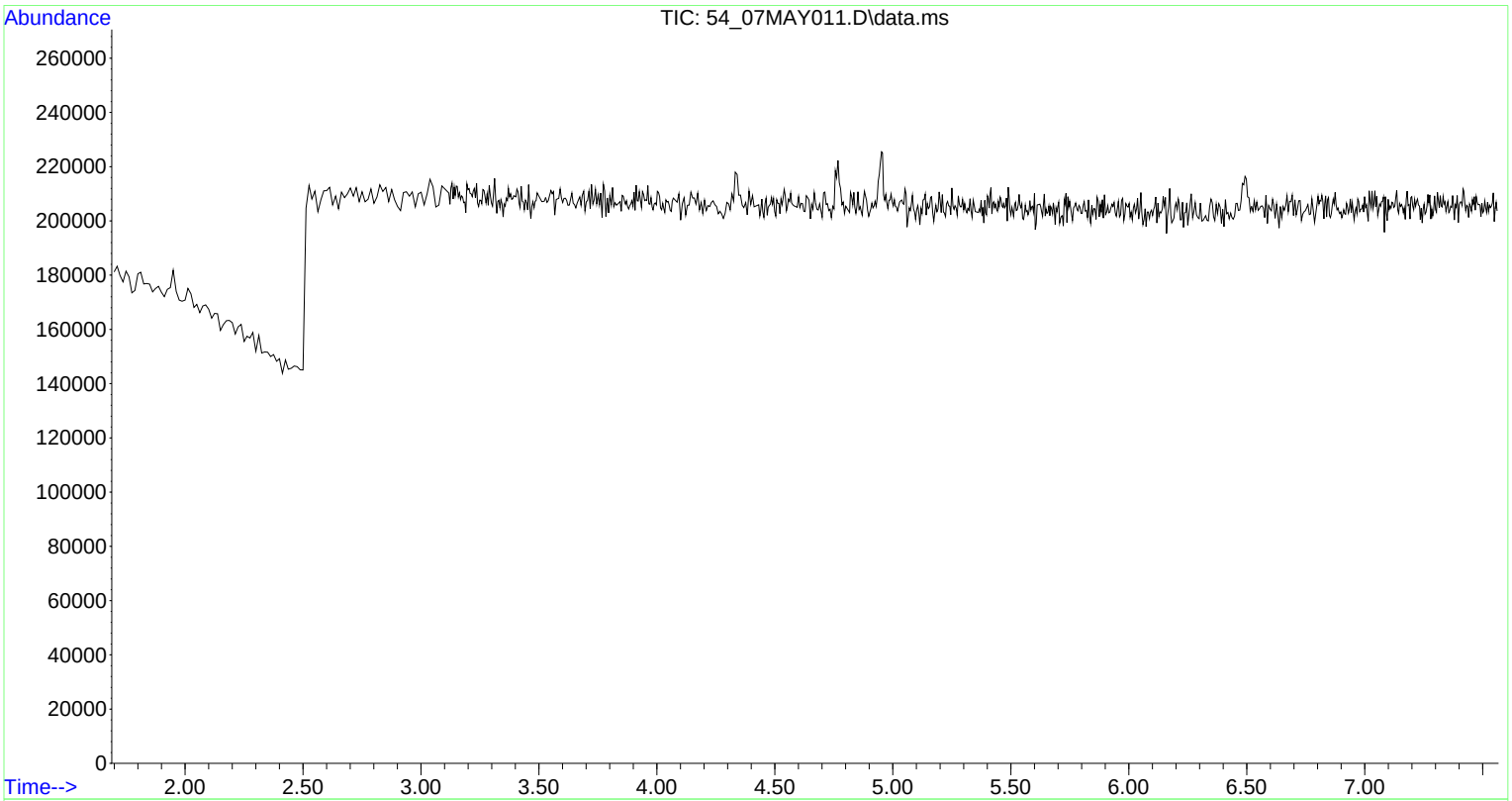
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3721	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	8516	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.489	117	7803	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
7] cis-1,2-Dichloroethene	4.197	61	156m	0.66 ppbv	
11] Trichloroethene	4.950	130	5594	26.41 ppbv	97
13] Toluene	5.556	91	310	0.66 ppbv	98
14] Tetrachloroethene	5.972	166	253	0.95 ppbv	96

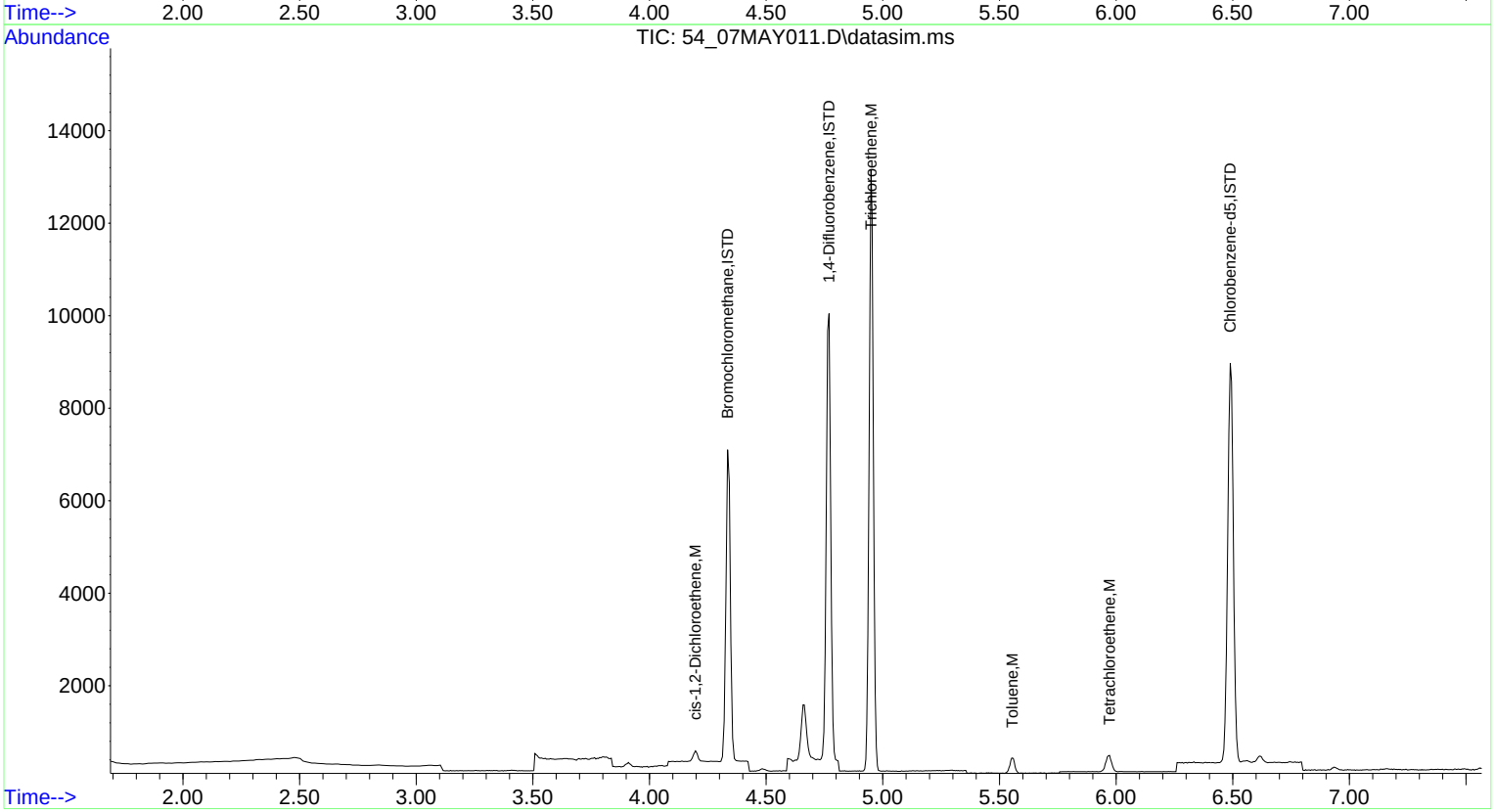
(#) = qualifier out of range (m) = manual integration (+) = signals summed

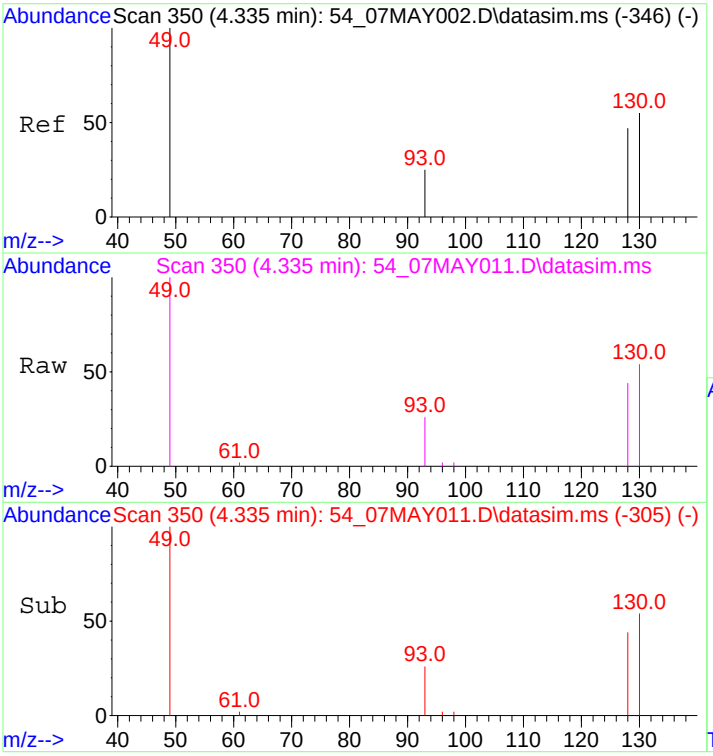
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY011.D
Acq On : 7 May 2014 12:48 pm
Operator : YHL
Sample : 02225 \ B16-02 Dup
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:55:44 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



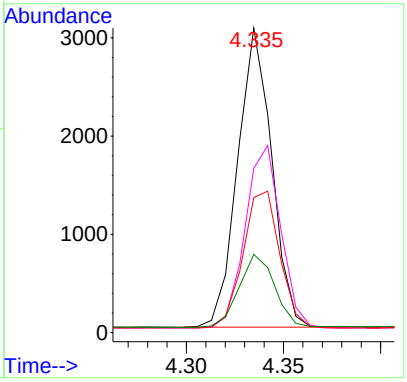


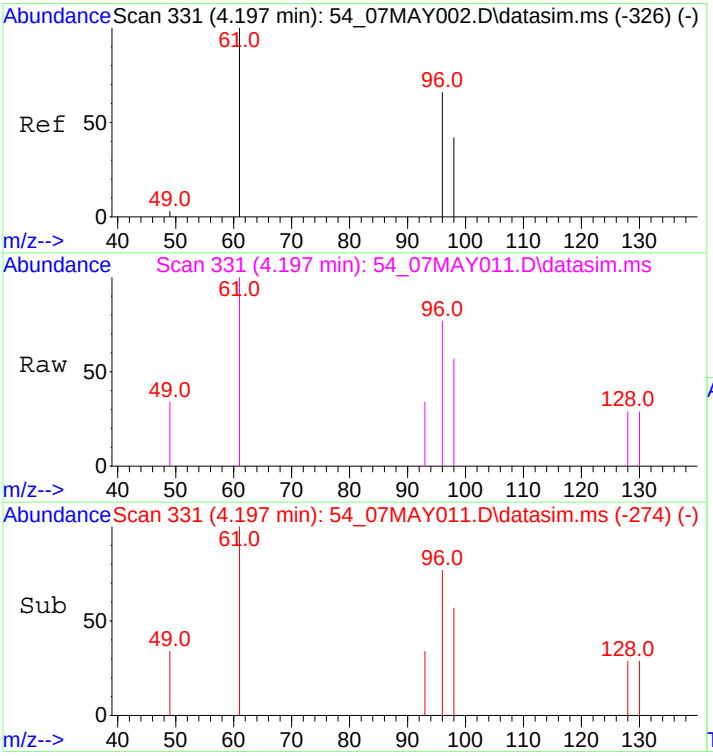


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY011.D
Acq: 7 May 2014 12:48 pm

Tgt Ion: 49 Resp: 3721

Ion	Ratio	Lower	Upper
49	100		
130	63.6	56.0	84.0
128	49.6	41.6	62.4
93	25.8	22.4	33.6

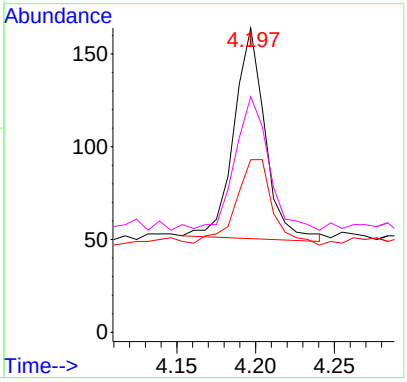




#7
cis-1,2-Dichloroethene
Concen: 0.66 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_07MAY011.D
Acq: 7 May 2014 12:48 pm

Tgt Ion: 61 Resp: 156

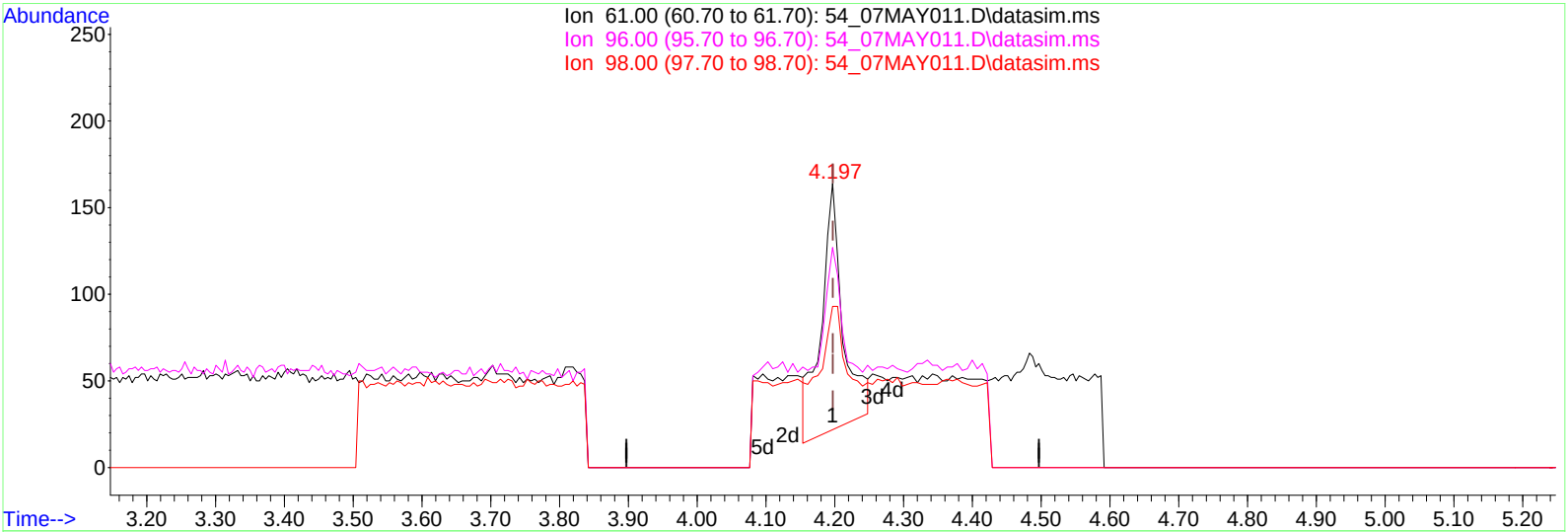
Ion	Ratio	Lower	Upper
61	100		
96	114.7	52.0	78.0#
98	126.3	33.6	50.4#

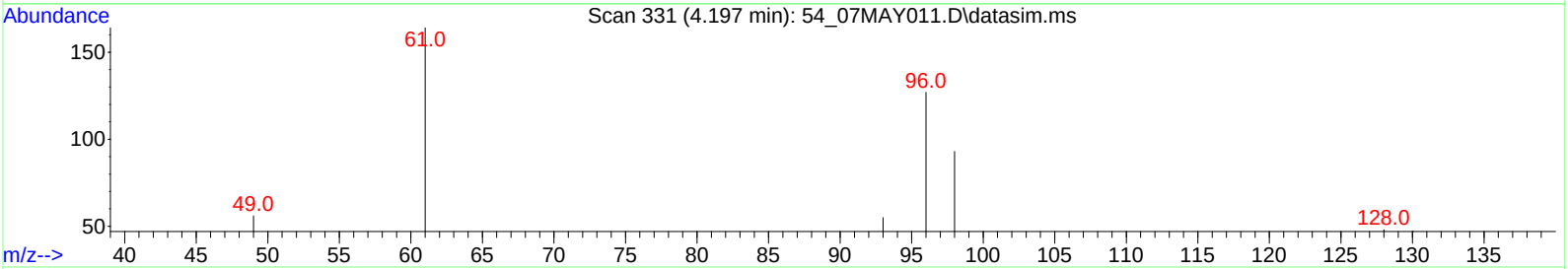


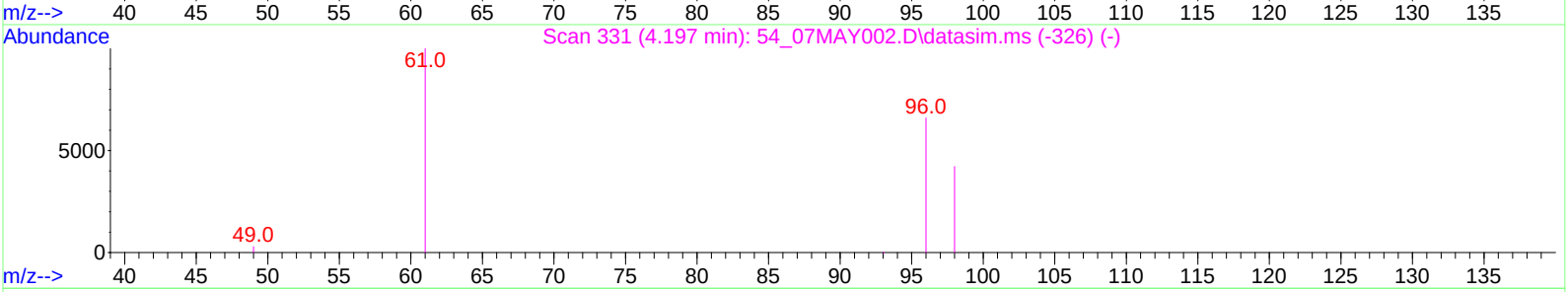
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY011.D
Acq On : 7 May 2014 12:48 pm
Operator : YHL
Sample : 02225 \ B16-02 Dup
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:54:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_07MAY011.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 1.33 ppbv

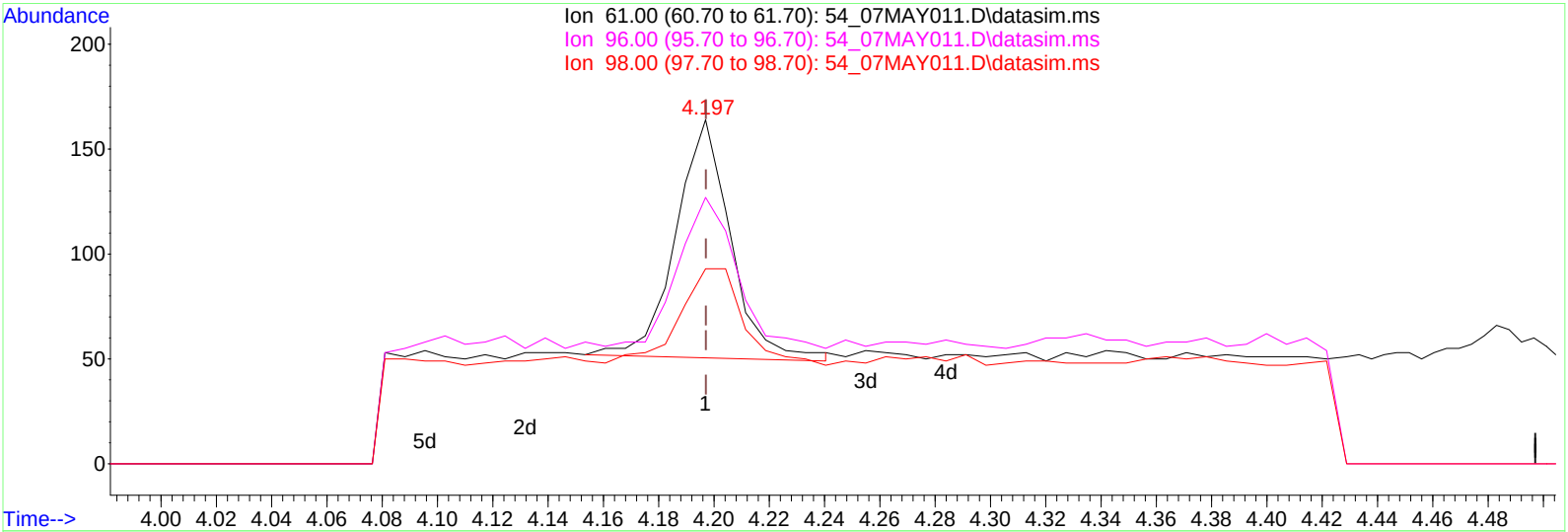
response 315

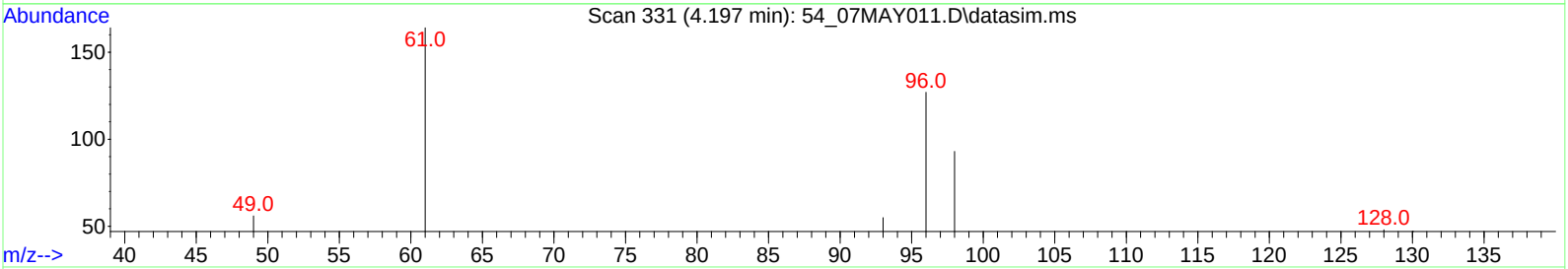
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	56.83
98.00	42.00	62.54#
0.00	0.00	0.00

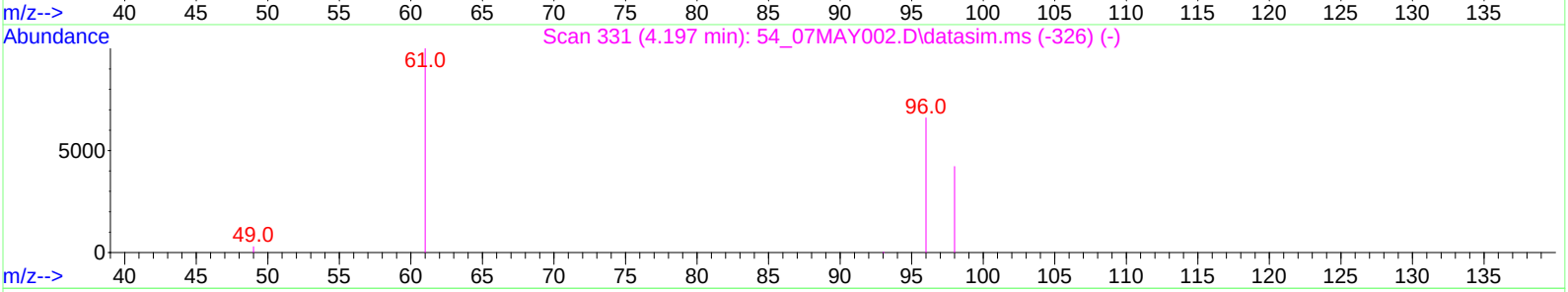
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY011.D
Acq On : 7 May 2014 12:48 pm
Operator : YHL
Sample : 02225 \ B16-02 Dup
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 12:54:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







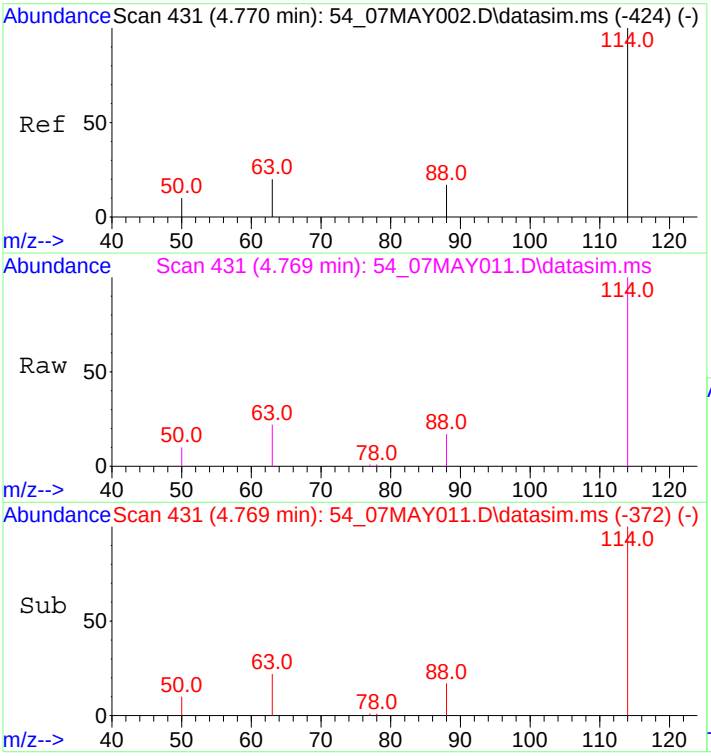
TIC: 54_07MAY011.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 0.66 ppbv m

response 156

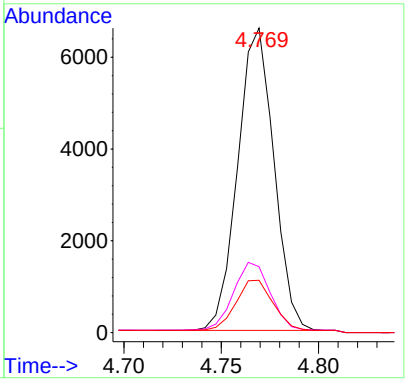
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	114.74#
98.00	42.00	126.28#
0.00	0.00	0.00

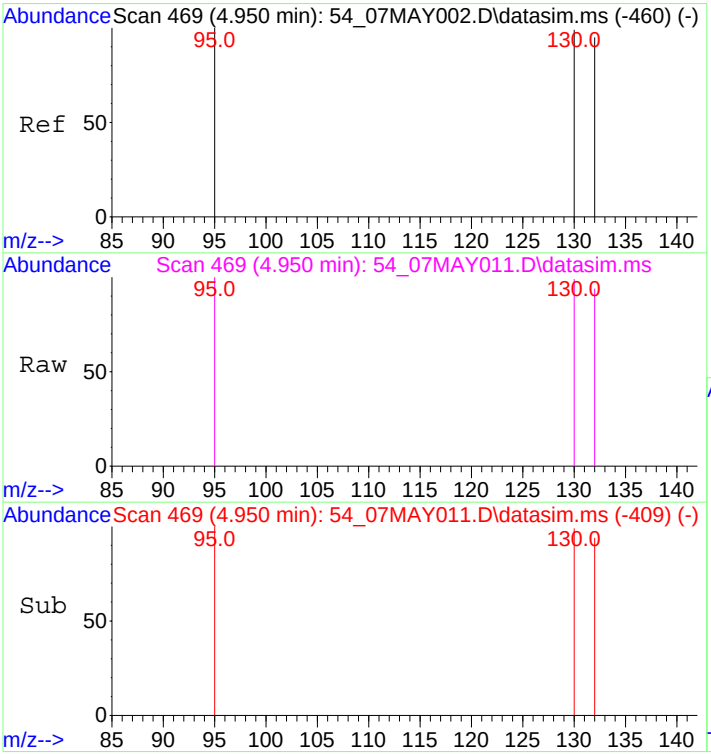


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY011.D
Acq: 7 May 2014 12:48 pm

Tgt Ion:114 Resp: 8516

Ion	Ratio	Lower	Upper
114	100		
63	23.0	17.6	26.4
88	17.1	13.6	20.4

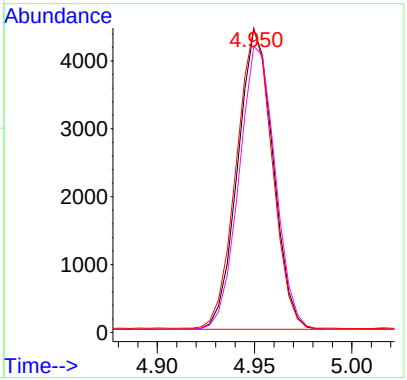


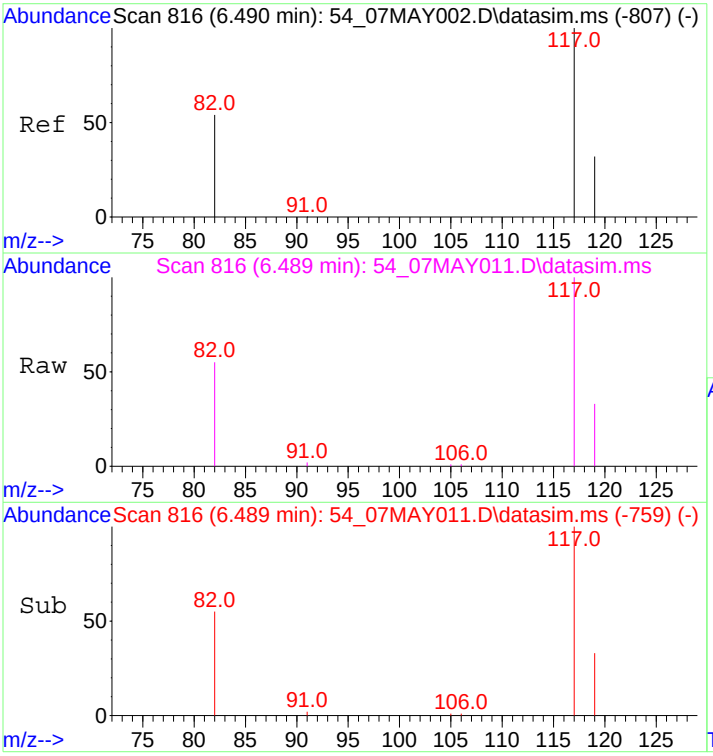


#11
Trichloroethene
Concen: 26.41 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_07MAY011.D
Acq: 7 May 2014 12:48 pm

Tgt Ion:130 Resp: 5594

Ion	Ratio	Lower	Upper
130	100		
132	96.2	76.9	115.3
95	100.8	76.5	114.7

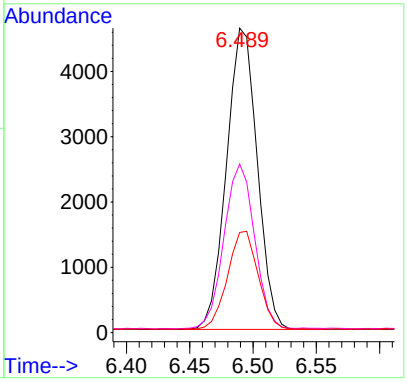


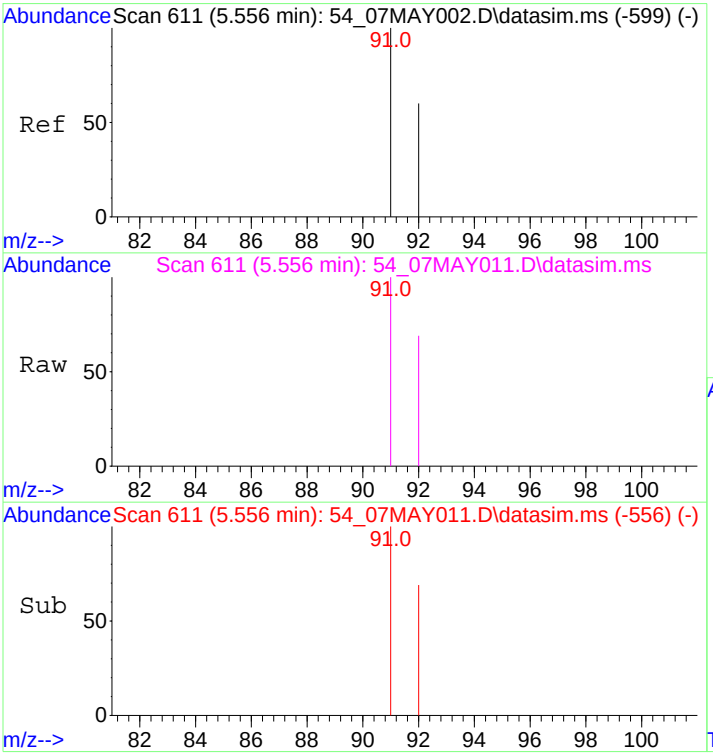


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 07MAY011.D
Acq: 7 May 2014 12:48 pm

Tgt Ion:117 Resp: 7803

Ion	Ratio	Lower	Upper
117	100		
82	54.2	38.0	57.0
119	32.4	27.0	40.4

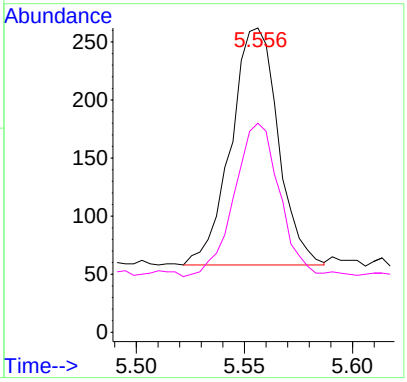


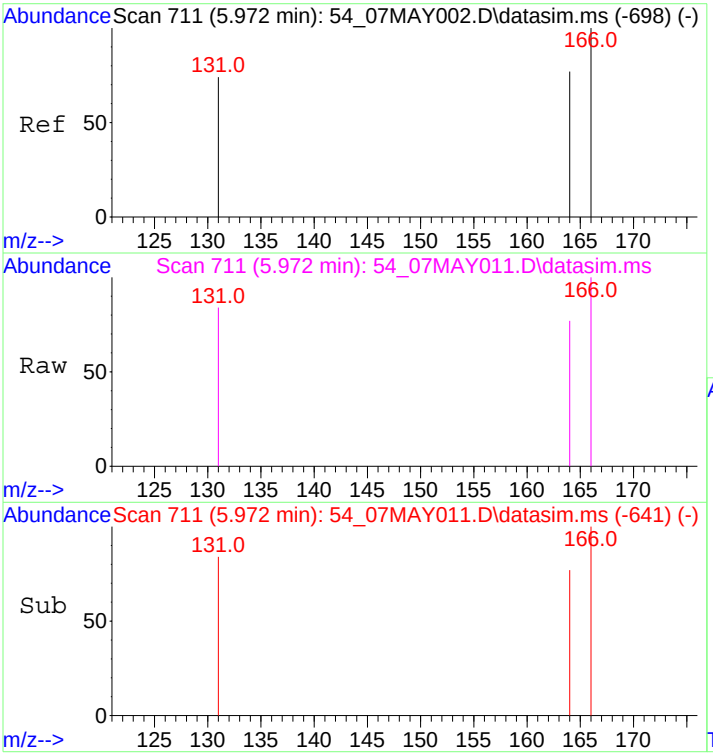


#13
Toluene
Concen: 0.66 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_07MAY011.D
Acq: 7 May 2014 12:48 pm

Tgt Ion: 91 Resp: 310

Ion	Ratio	Lower	Upper
91	100		
92	61.6	47.8	71.8

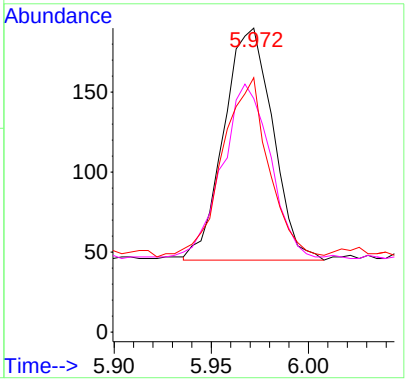




#14
Tetrachloroethene
Concen: 0.95 ppbv
RT: 5.972 min Scan# 711
Delta R.T. -0.000 min
Lab File: 54 07MAY011.D
Acq: 7 May 2014 12:48 pm

Tgt Ion:166 Resp: 253

Ion	Ratio	Lower	Upper
166	100		
164	72.7	62.6	94.0
131	73.5	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY012.D
Acq On : 7 May 2014 1:20 pm
Operator : YHL
Sample : 02227 \ SGW-4
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:29:31 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

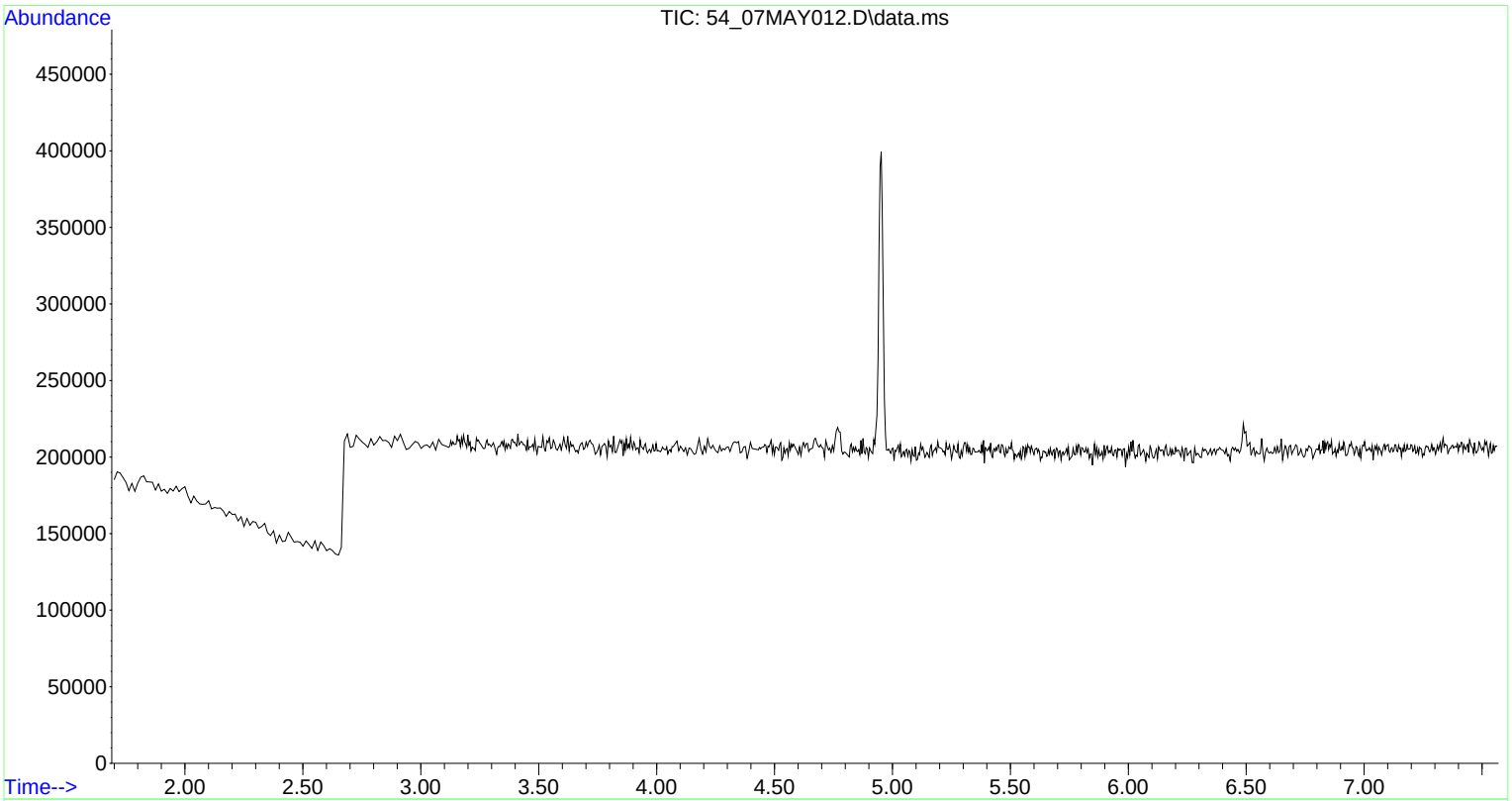
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3550	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	8359	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.495	117	7832	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
7] cis-1,2-Dichloroethene	4.197	61	180m	0.80 ppbv	
8] 1,1,1-Trichloroethane	4.488	97	1223	3.33 ppbv	96
11] Trichloroethene	4.950	130	55260	265.80 ppbv	97
14] Tetrachloroethene	5.967	166	306	1.14 ppbv	96

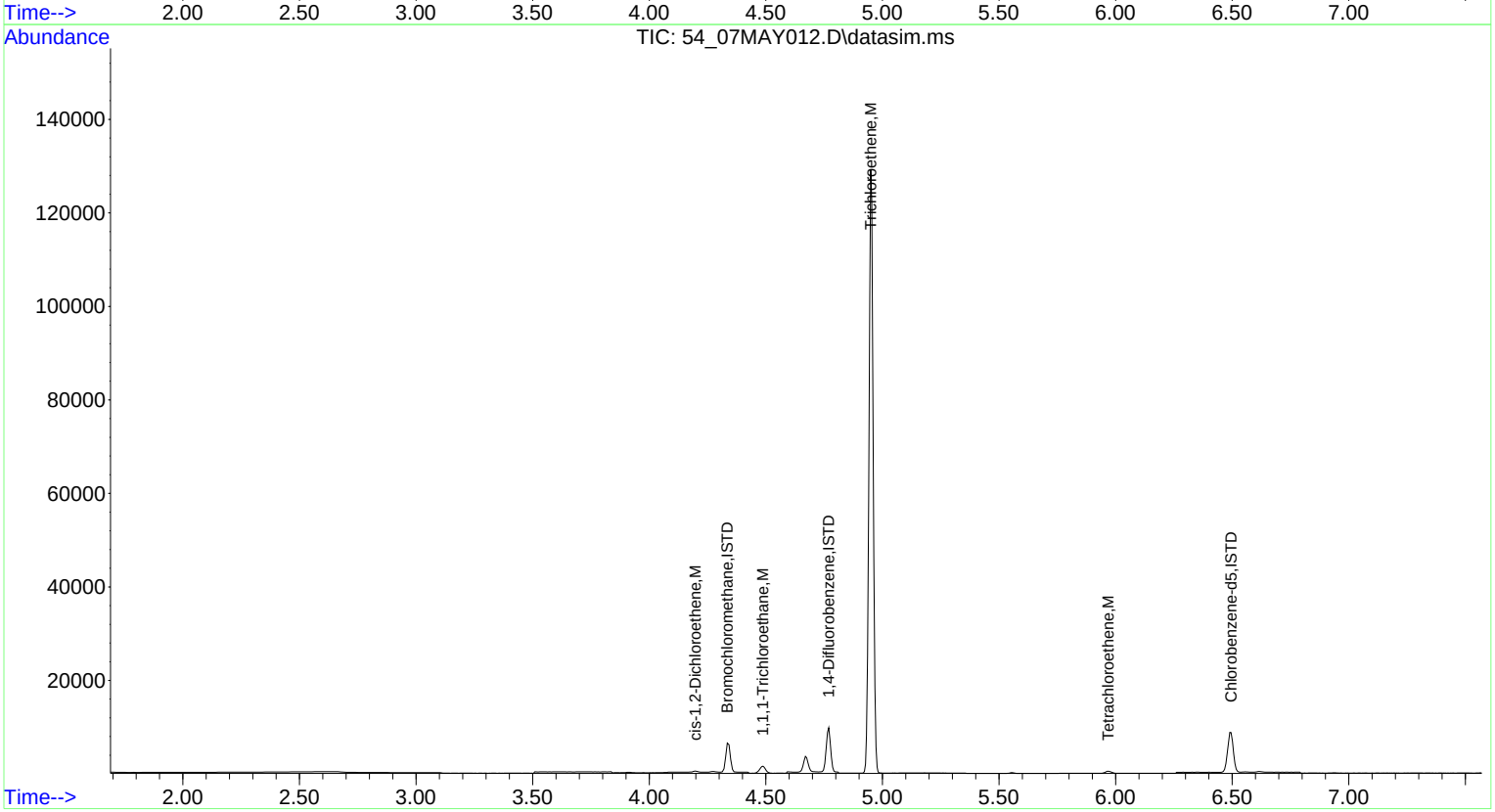
(#) = qualifier out of range (m) = manual integration (+) = signals summed

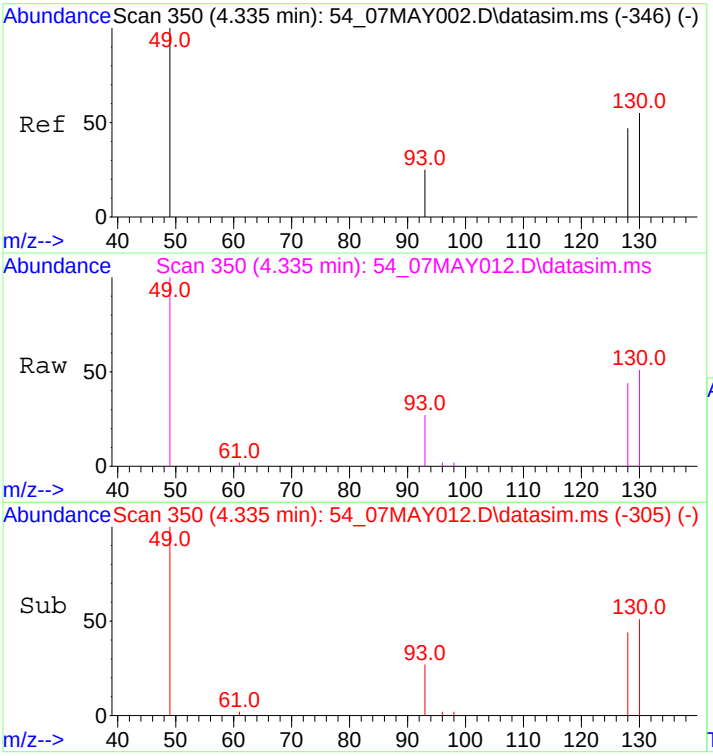
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY012.D
Acq On : 7 May 2014 1:20 pm
Operator : YHL
Sample : 02227 \ SGW-4
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:29:31 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



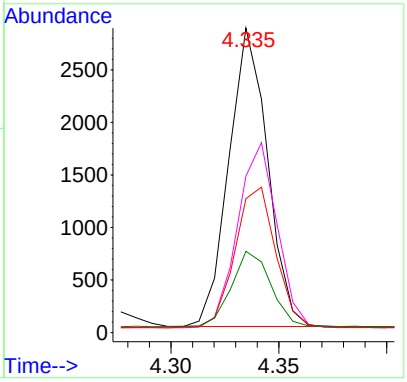


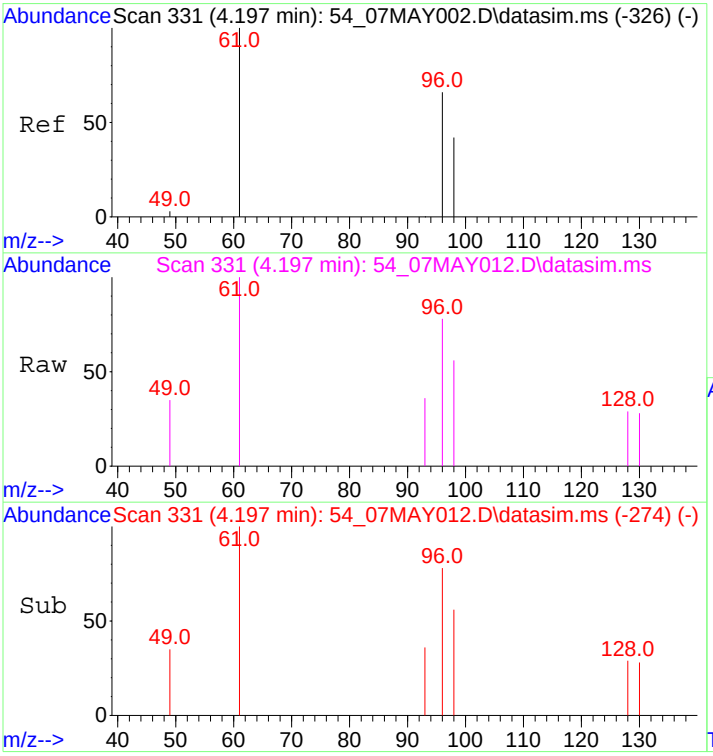


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY012.D
Acq: 7 May 2014 1:20 pm

Tgt Ion: 49 Resp: 3550

Ion	Ratio	Lower	Upper
49	100		
130	63.1	56.0	84.0
128	49.5	41.6	62.4
93	25.4	22.4	33.6

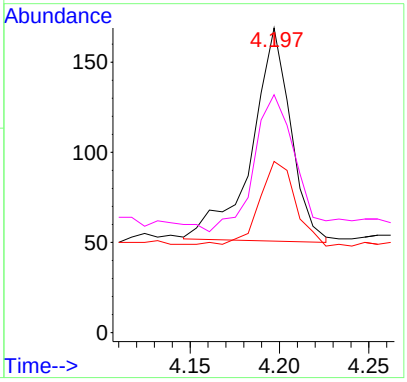




#7
cis-1,2-Dichloroethene
Concen: 0.80 ppbv m
RT: 4.197 min Scan# 331
Delta R.T. -0.000 min
Lab File: 54_07MAY012.D
Acq: 7 May 2014 1:20 pm

Tgt Ion: 61 Resp: 180

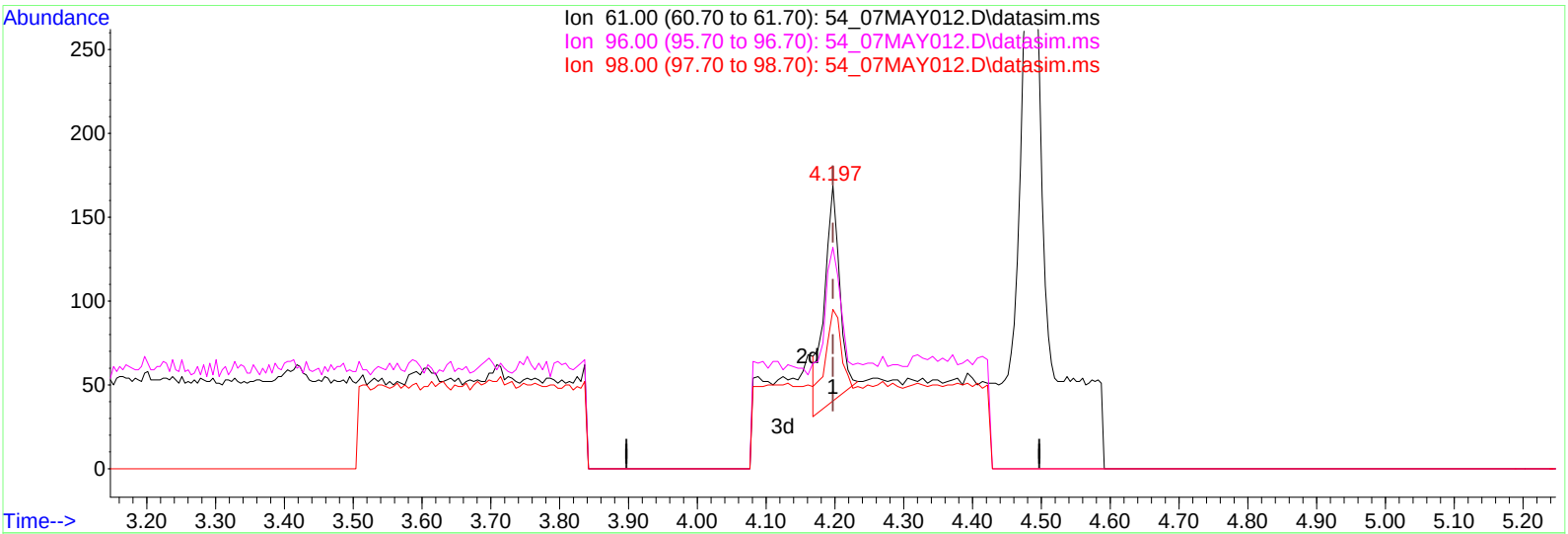
Ion	Ratio	Lower	Upper
61	100		
96	188.9	52.0	78.0#
98	36.7	33.6	50.4

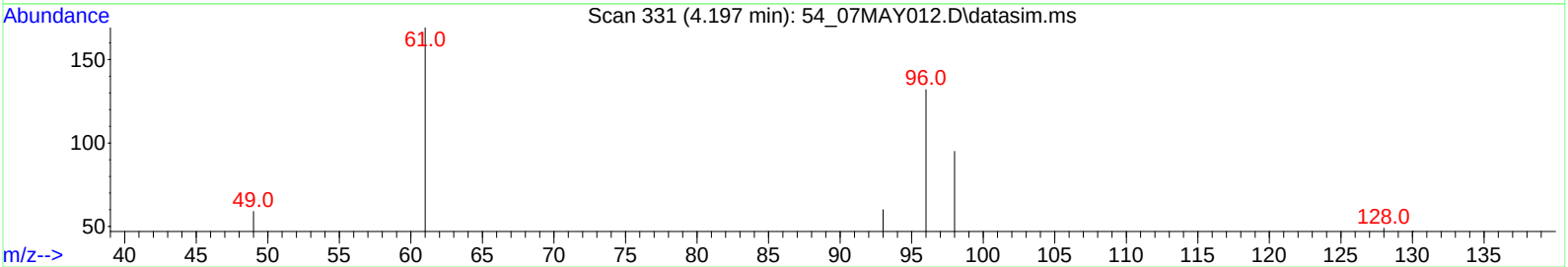


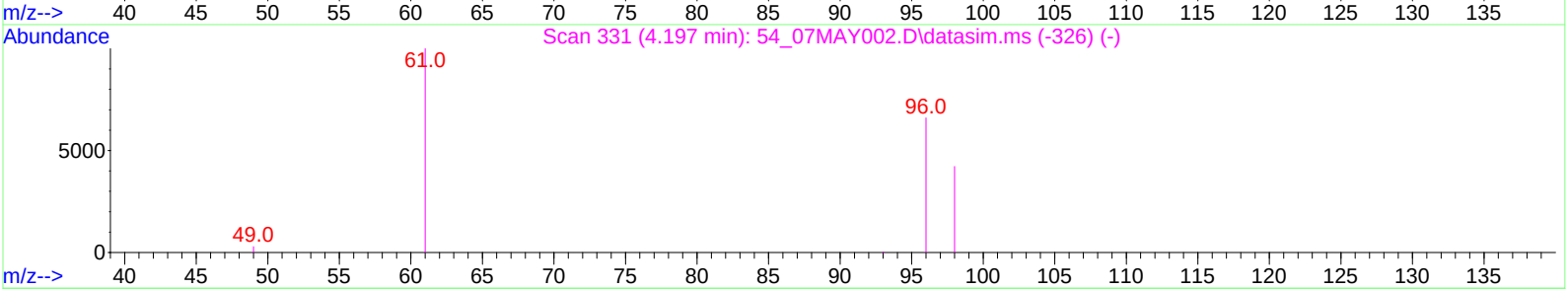
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY012.D
Acq On : 7 May 2014 1:20 pm
Operator : YHL
Sample : 02227 \ SGW-4
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:27:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







TIC: 54_07MAY012.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 0.88 ppbv

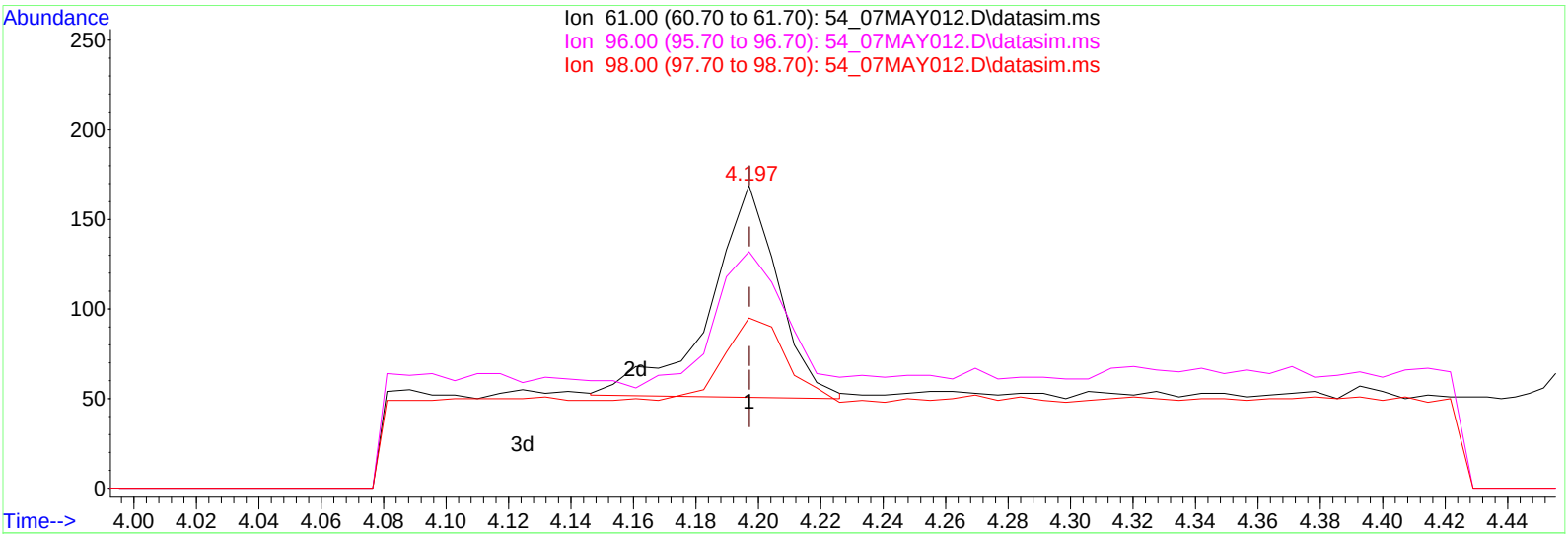
response 200

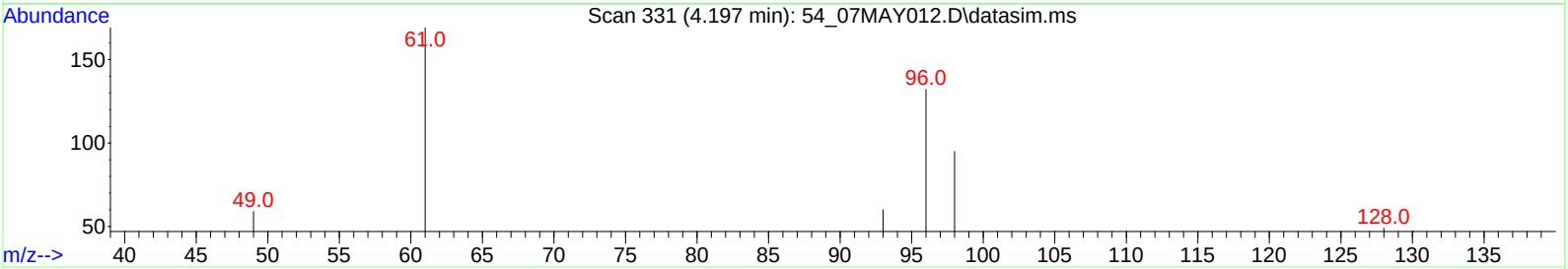
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	170.00#
98.00	42.00	33.00#
0.00	0.00	0.00

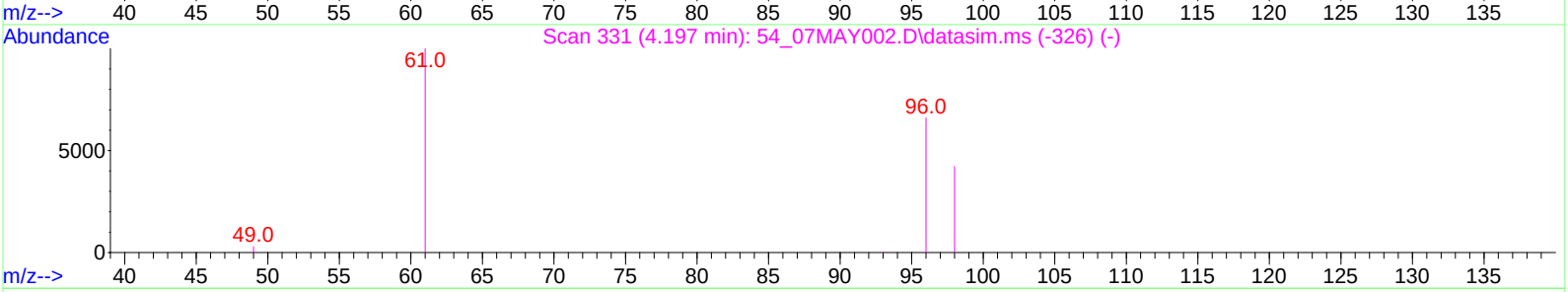
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY012.D
Acq On : 7 May 2014 1:20 pm
Operator : YHL
Sample : 02227 \ SGW-4
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:27:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration







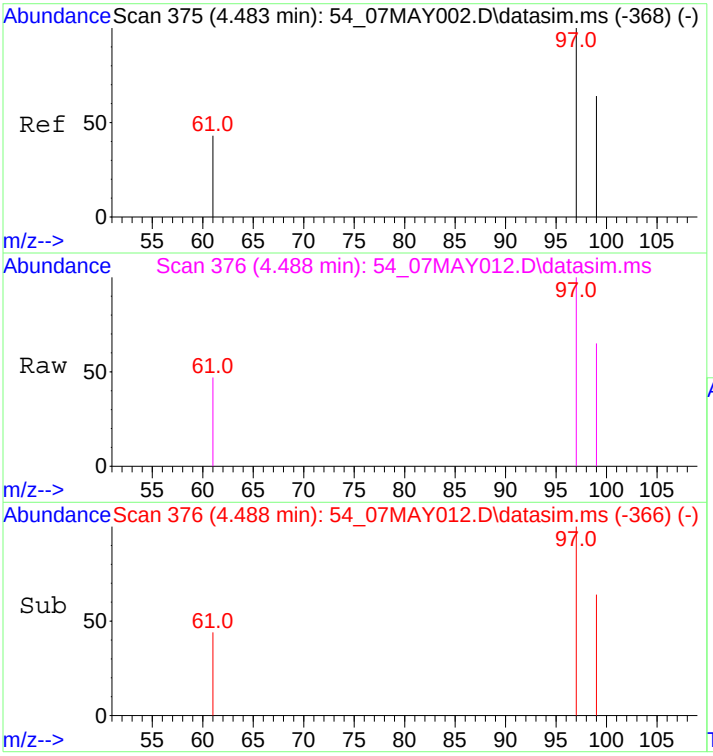
TIC: 54_07MAY012.D\data.ms

(7) cis-1,2-Dichloroethene (M)

4.197min (-0.000) 0.80 ppbv m

response 180

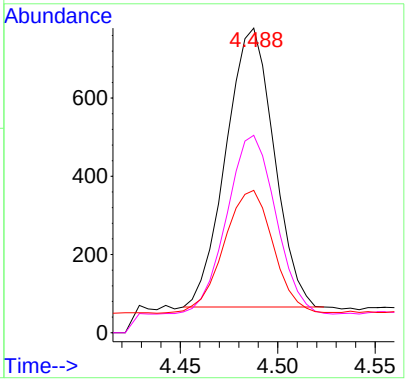
Ion	Exp%	Act%
61.00	100	100
96.00	65.00	188.89#
98.00	42.00	36.67
0.00	0.00	0.00

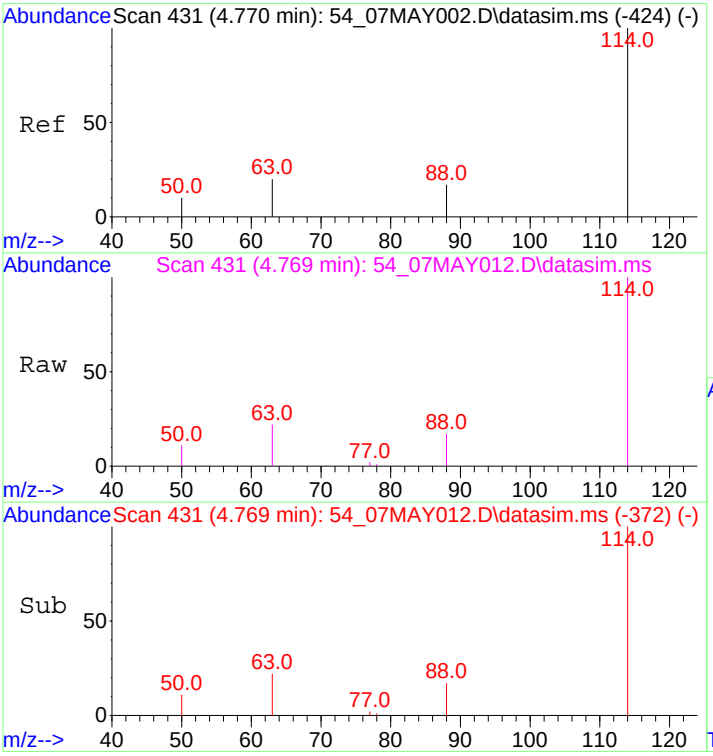


#8
1,1,1-Trichloroethane
Concen: 3.33 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.004 min
Lab File: 54 07MAY012.D
Acq: 7 May 2014 1:20 pm

Tgt Ion: 97 Resp: 1223

Ion	Ratio	Lower	Upper
97	100		
99	64.7	52.1	78.1
61	44.4	30.2	45.4

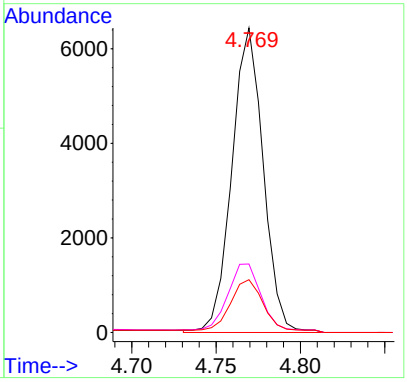


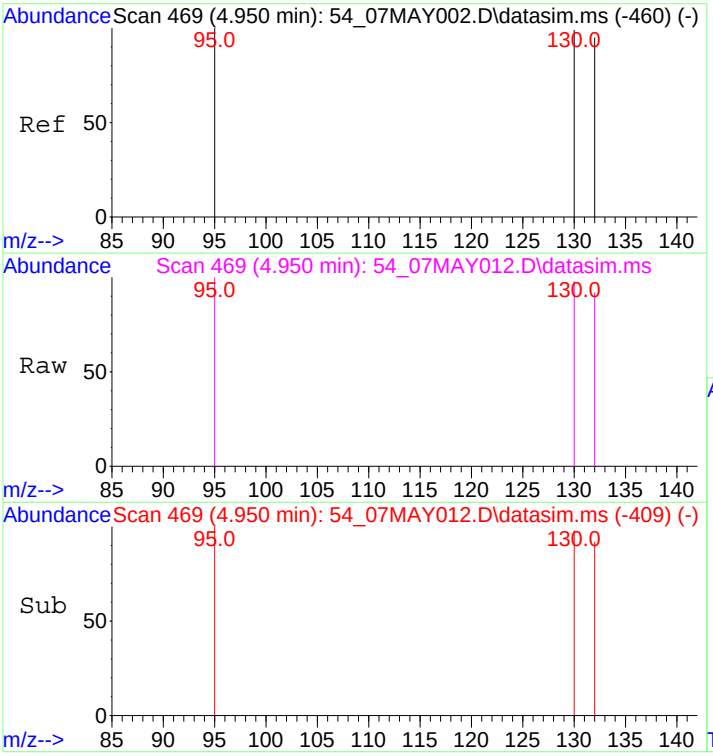


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_07MAY012.D
Acq: 7 May 2014 1:20 pm

Tgt Ion:114 Resp: 8359

Ion	Ratio	Lower	Upper
114	100		
63	22.4	17.6	26.4
88	16.6	13.6	20.4

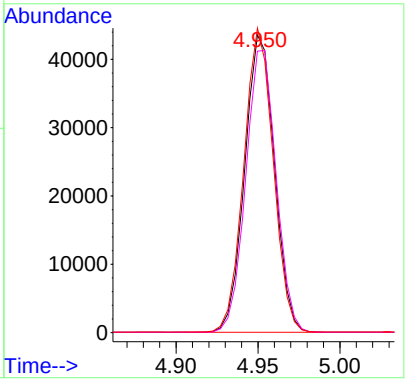


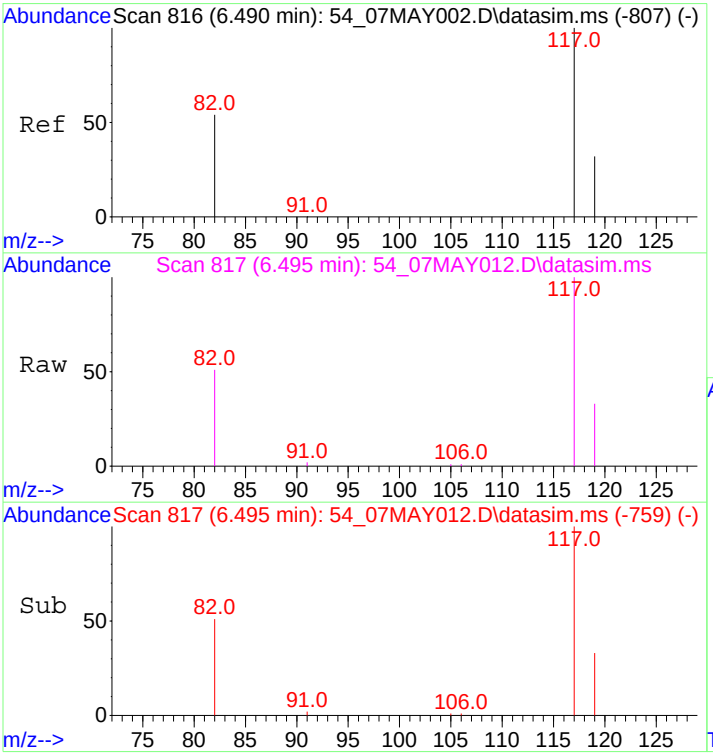


#11
Trichloroethene
Concen: 265.80 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 07MAY012.D
Acq: 7 May 2014 1:20 pm

Tgt Ion:130 Resp: 55260

Ion	Ratio	Lower	Upper
130	100		
132	96.5	76.9	115.3
95	100.5	76.5	114.7

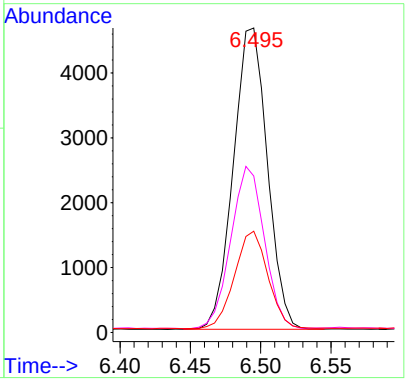


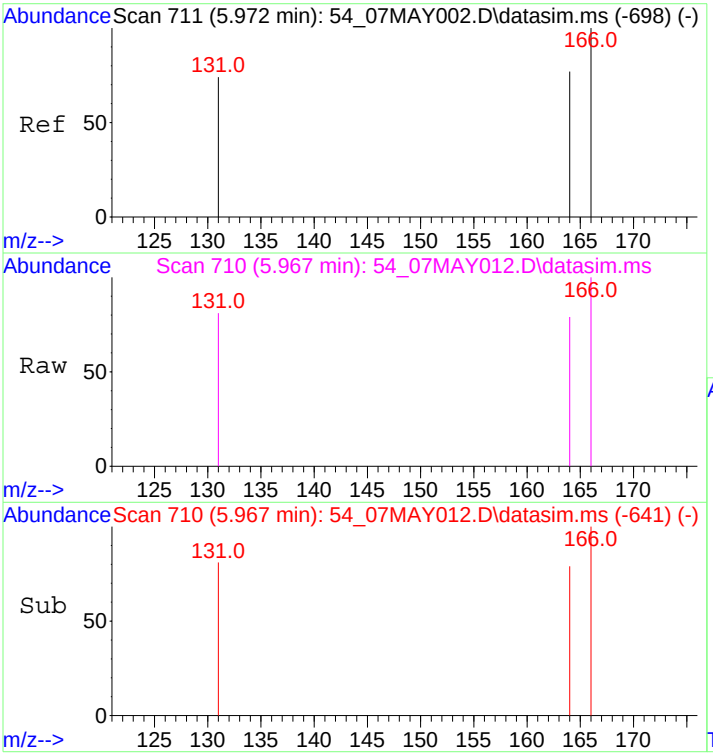


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.005 min
Lab File: 54_07MAY012.D
Acq: 7 May 2014 1:20 pm

Tgt Ion:117 Resp: 7832

Ion	Ratio	Lower	Upper
117	100		
82	52.9	38.0	57.0
119	31.8	27.0	40.4

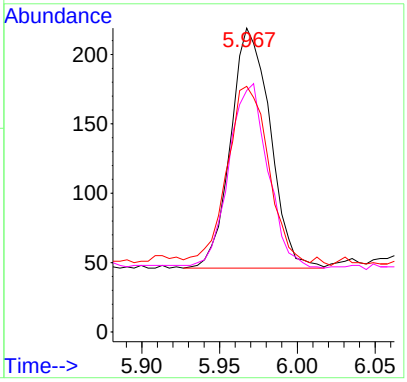




#14
Tetrachloroethene
Concen: 1.14 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54 07MAY012.D
Acq: 7 May 2014 1:20 pm

Tgt Ion:166 Resp: 306

Ion	Ratio	Lower	Upper
166	100		
164	76.1	62.6	94.0
131	77.5	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY013.D
Acq On : 7 May 2014 1:42 pm
Operator : YHL
Sample : 02228 \ SGW-9
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:50:49 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

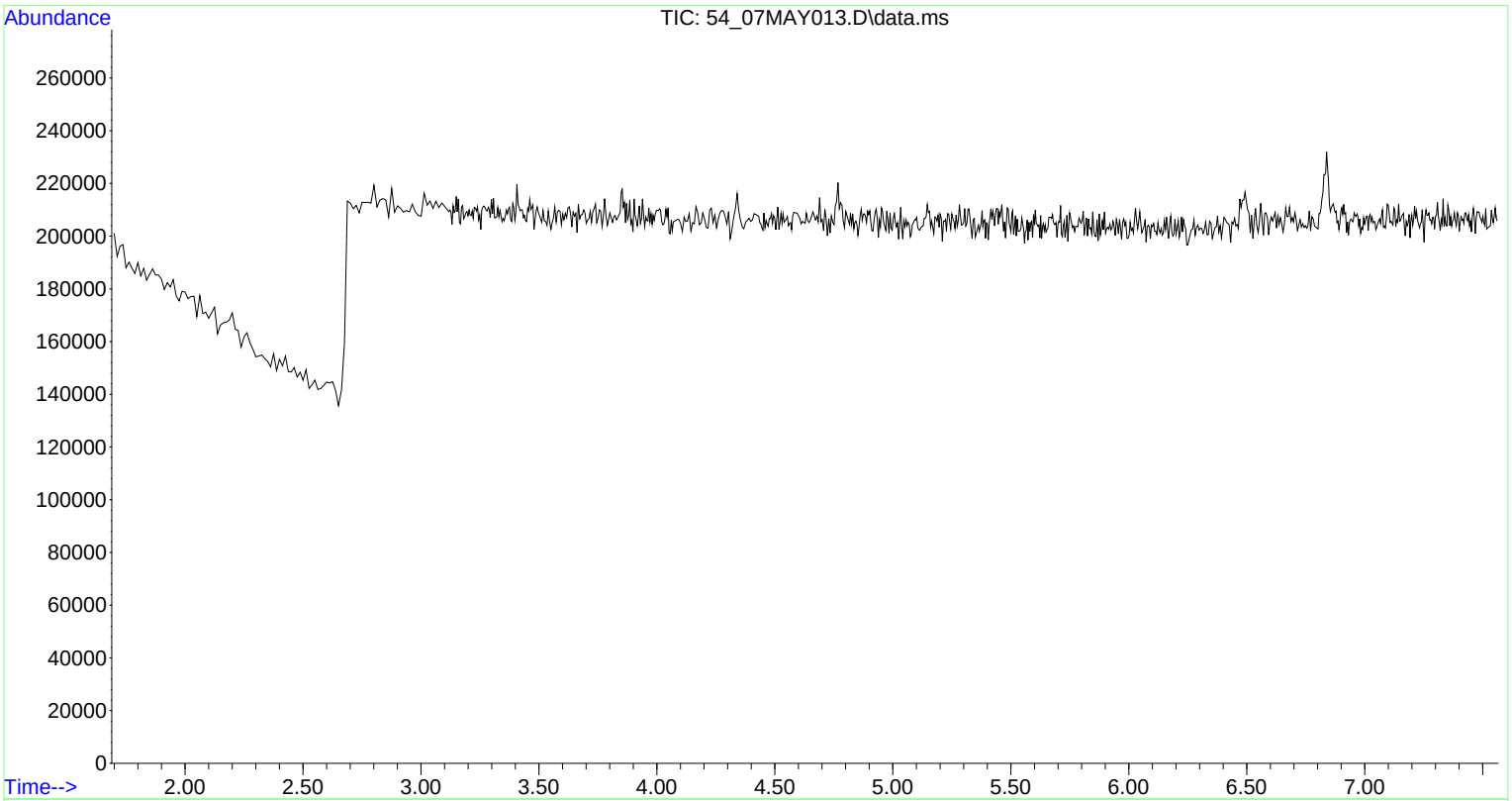
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3900	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9033	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8284	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
8] 1,1,1-Trichloroethane	4.483	97	604	1.50	ppbv	97
11] Trichloroethene	4.950	130	854	3.80	ppbv	97

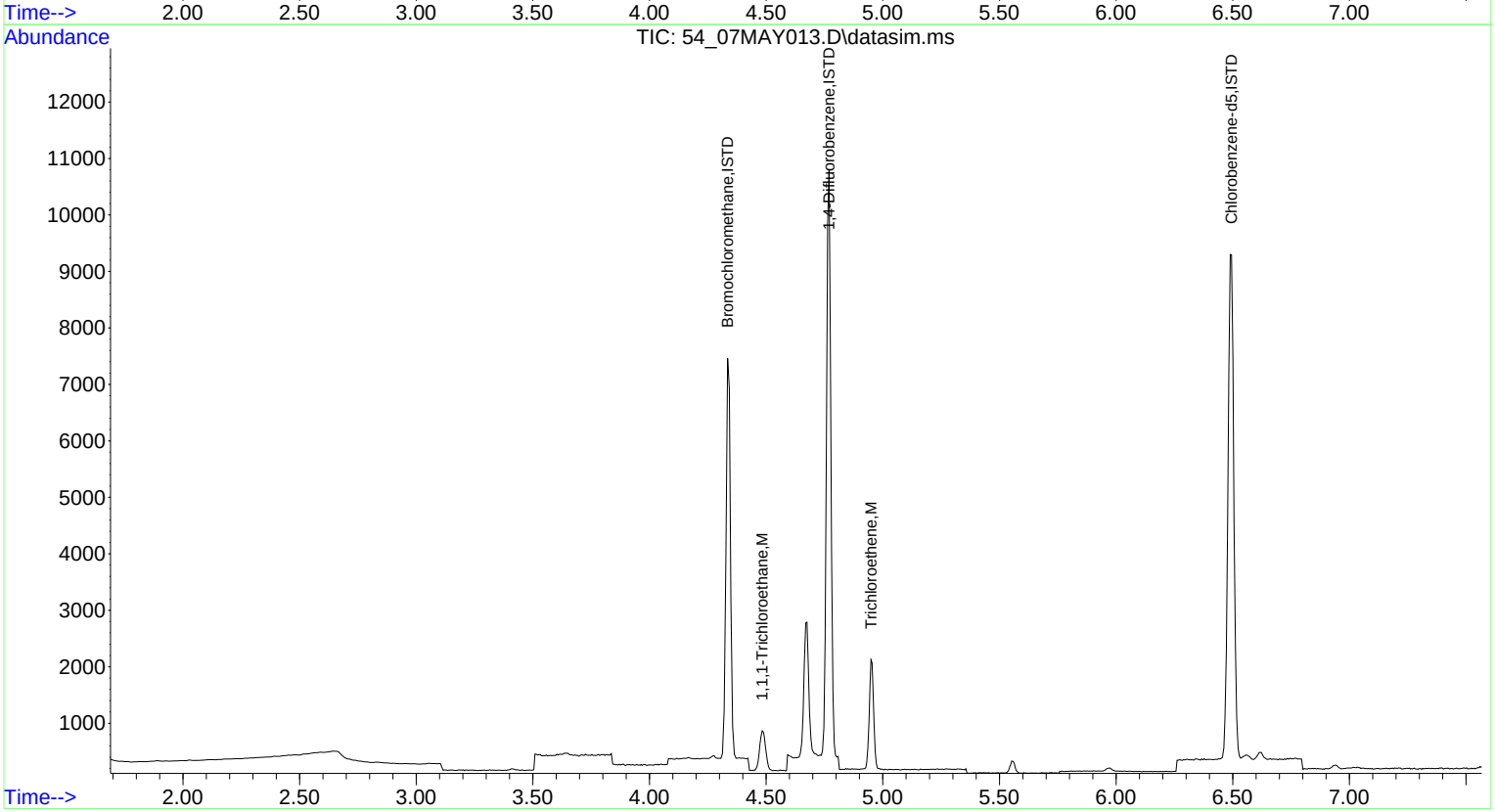
(#) = qualifier out of range (m) = manual integration (+) = signals summed

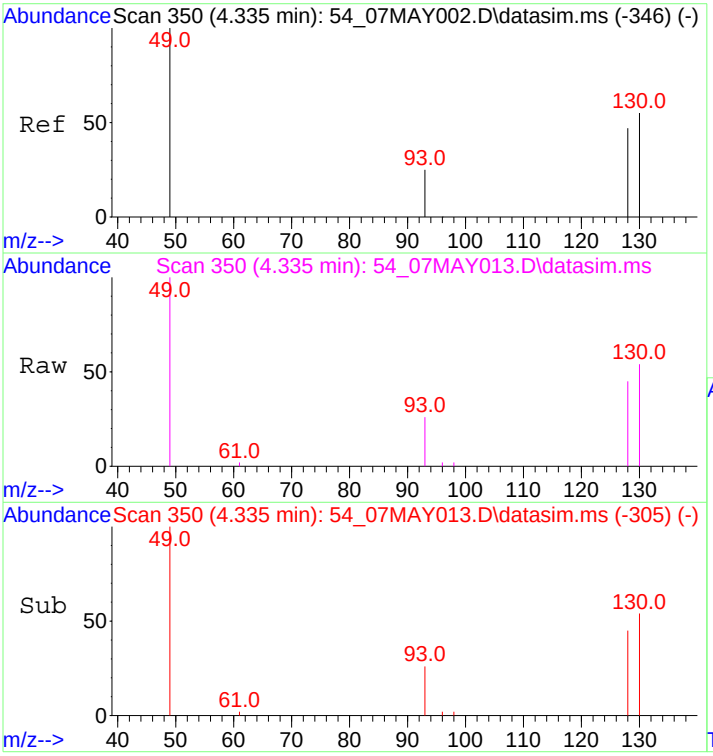
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY013.D
Acq On : 7 May 2014 1:42 pm
Operator : YHL
Sample : 02228 \ SGW-9
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 13:50:49 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



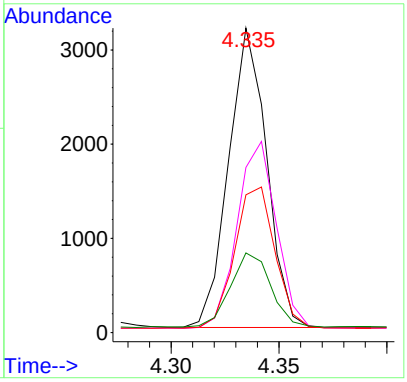


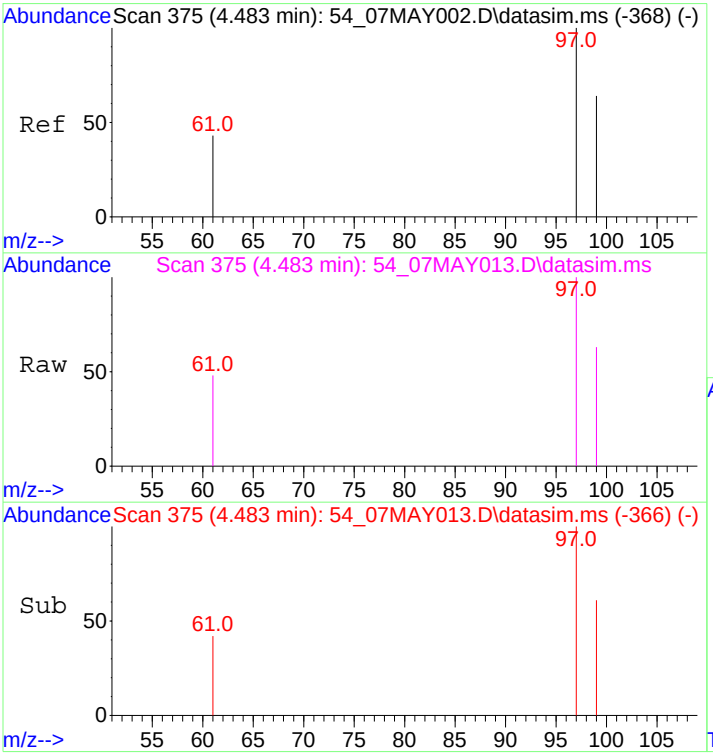


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY013.D
Acq: 7 May 2014 1:42 pm

Tgt Ion: 49 Resp: 3900

Ion	Ratio	Lower	Upper
49	100		
130	64.5	56.0	84.0
128	50.1	41.6	62.4
93	26.2	22.4	33.6

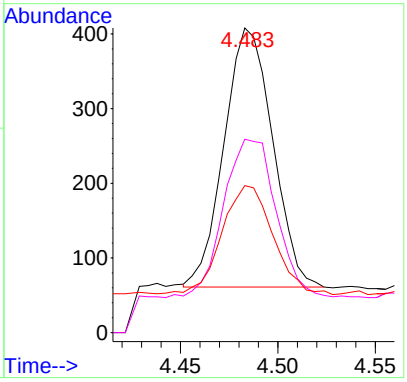


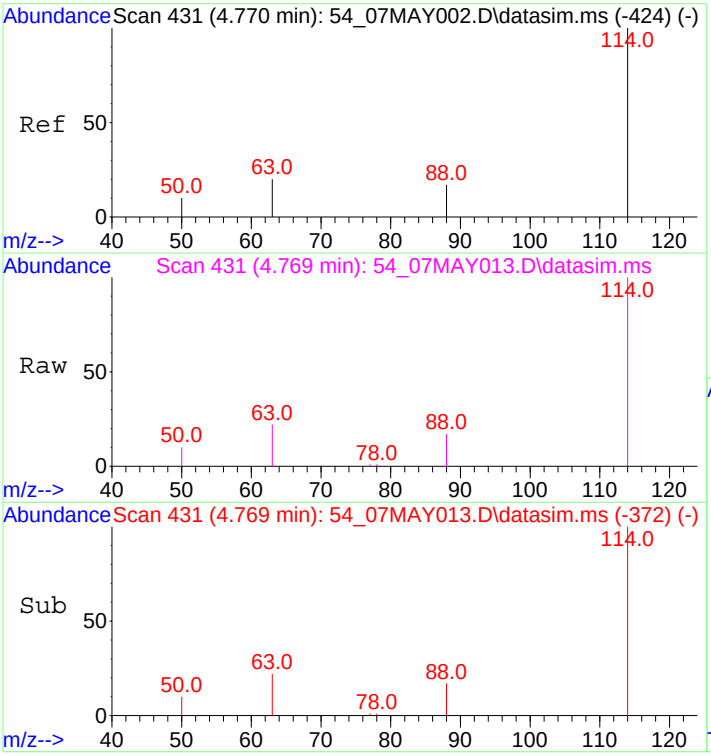


#8
1,1,1-Trichloroethane
Concen: 1.50 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_07MAY013.D
Acq: 7 May 2014 1:42 pm

Tgt Ion: 97 Resp: 604

Ion	Ratio	Lower	Upper
97	100		
99	64.4	52.1	78.1
61	41.7	30.2	45.4

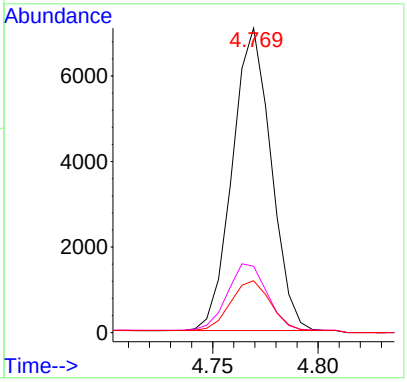


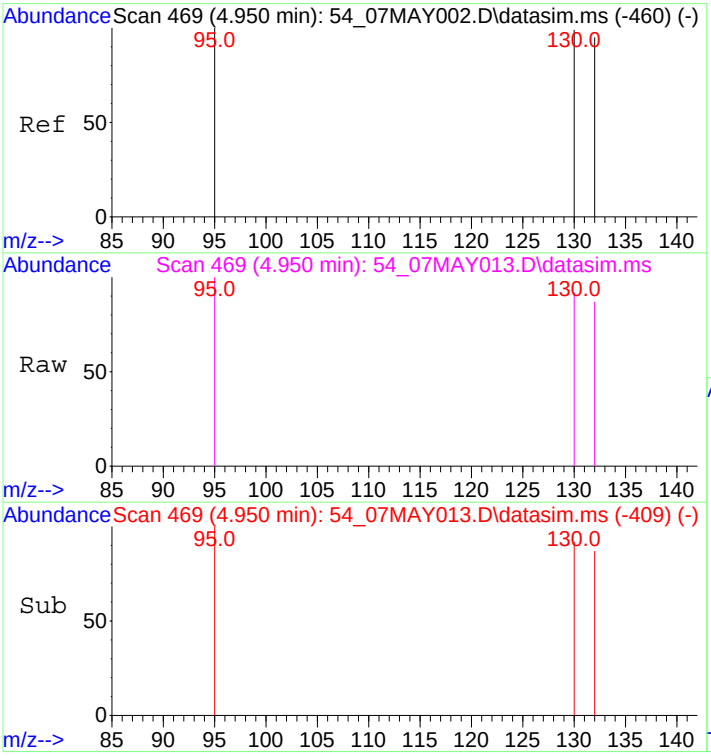


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY013.D
Acq: 7 May 2014 1:42 pm

Tgt Ion:114 Resp: 9033

Ion	Ratio	Lower	Upper
114	100		
63	22.6	17.6	26.4
88	17.0	13.6	20.4

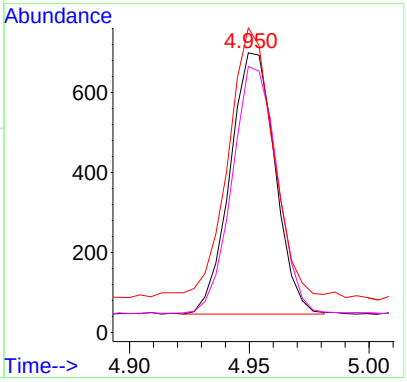


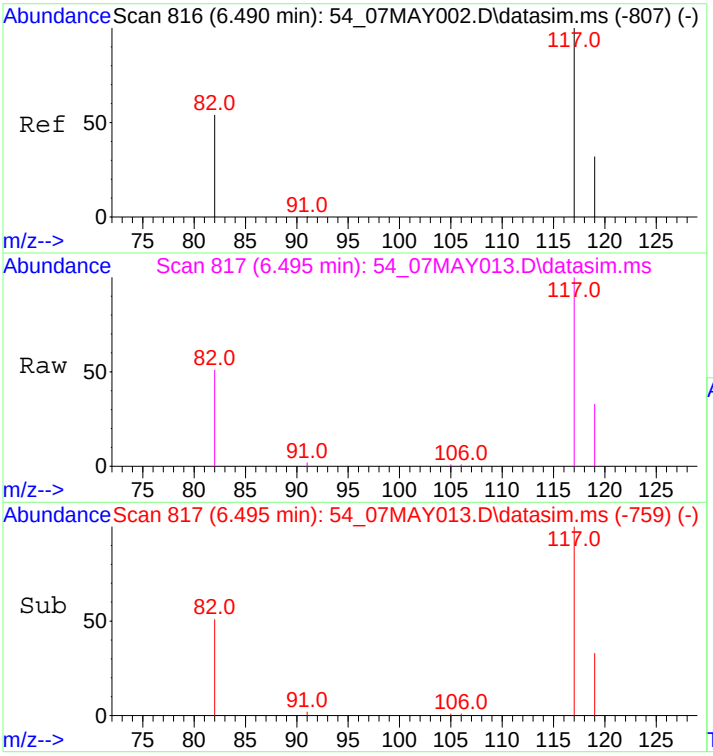


#11
Trichloroethene
Concen: 3.80 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_07MAY013.D
Acq: 7 May 2014 1:42 pm

Tgt Ion:130 Resp: 854

Ion	Ratio	Lower	Upper
130	100		
132	94.6	76.9	115.3
95	99.2	76.5	114.7

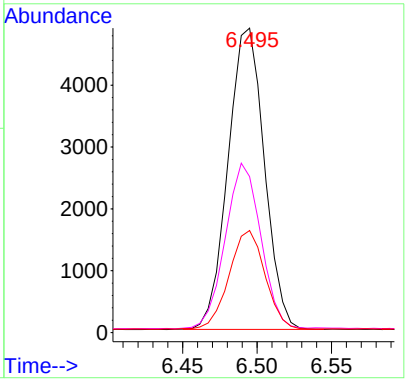




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.005 min
Lab File: 54 07MAY013.D
Acq: 7 May 2014 1:42 pm

Tgt Ion:117 Resp: 8284

Ion	Ratio	Lower	Upper
117	100		
82	53.6	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY014.D
Acq On : 7 May 2014 1:57 pm
Operator : YHL
Sample : 02229 \ SGW-8
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:03:32 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3876	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	8814	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8175	10.00	ppbv	0.00

System Monitoring Compounds

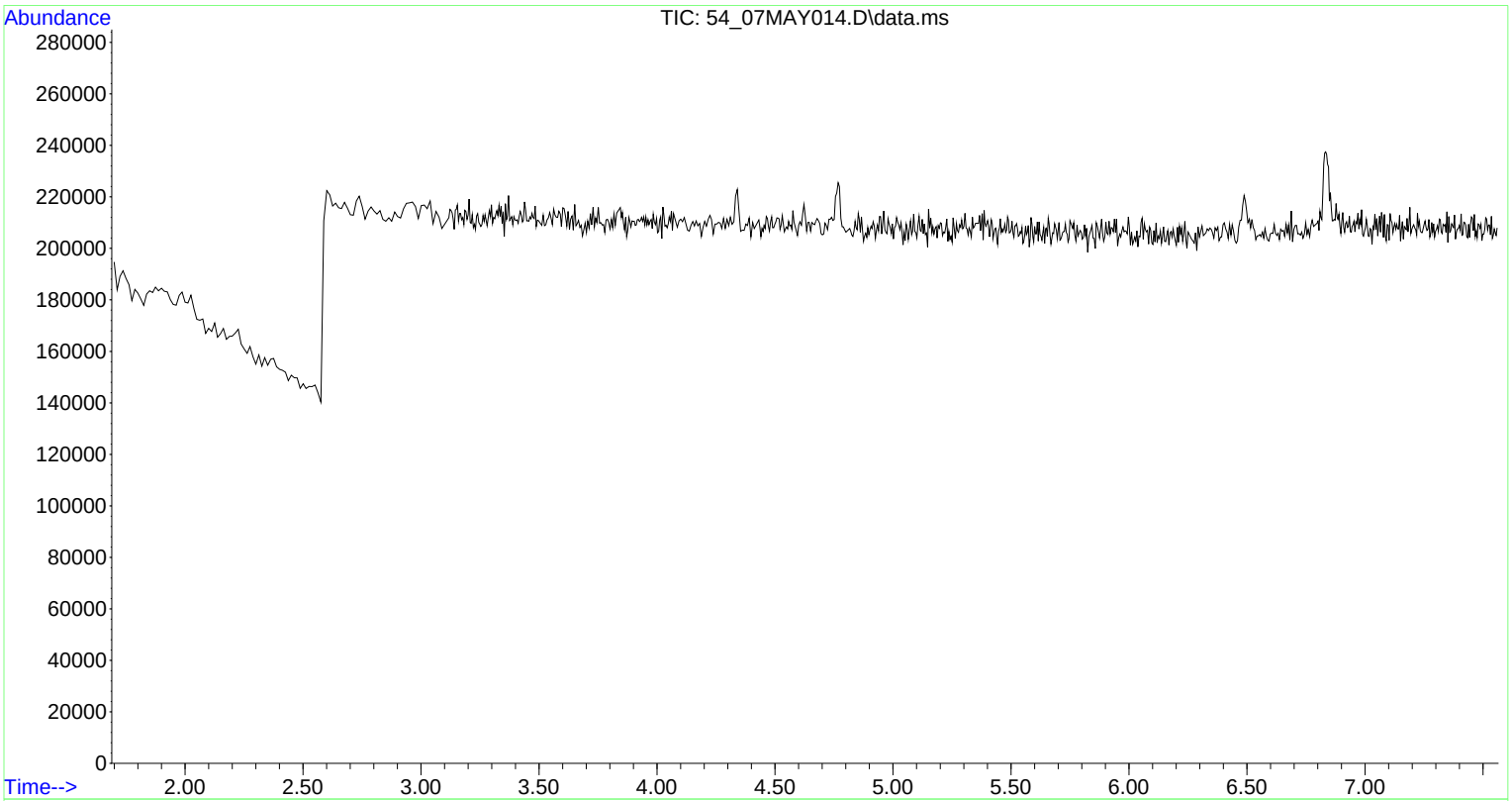
Target Compounds	Qvalue

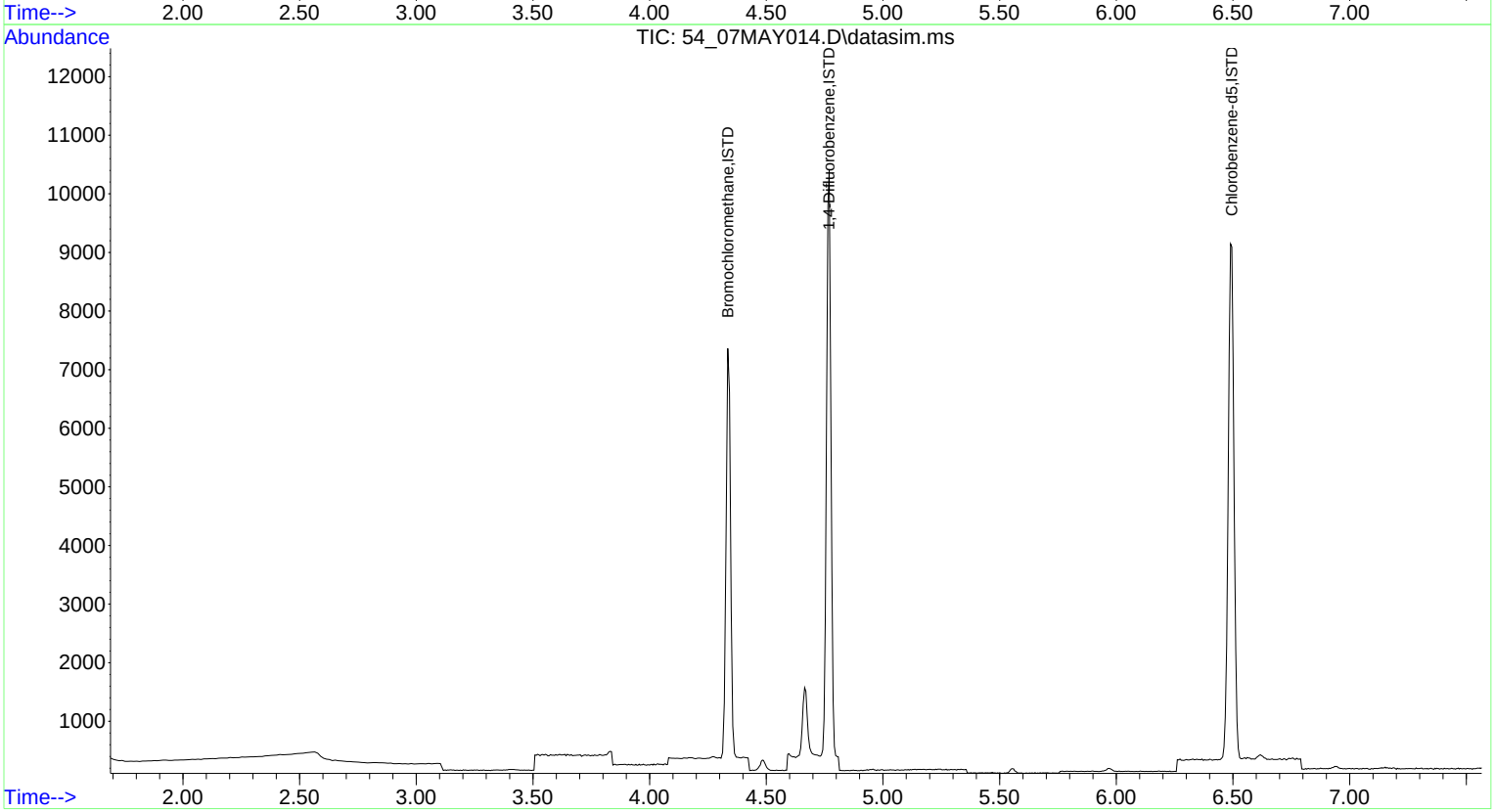
(#) = qualifier out of range (m) = manual integration (+) = signals summed

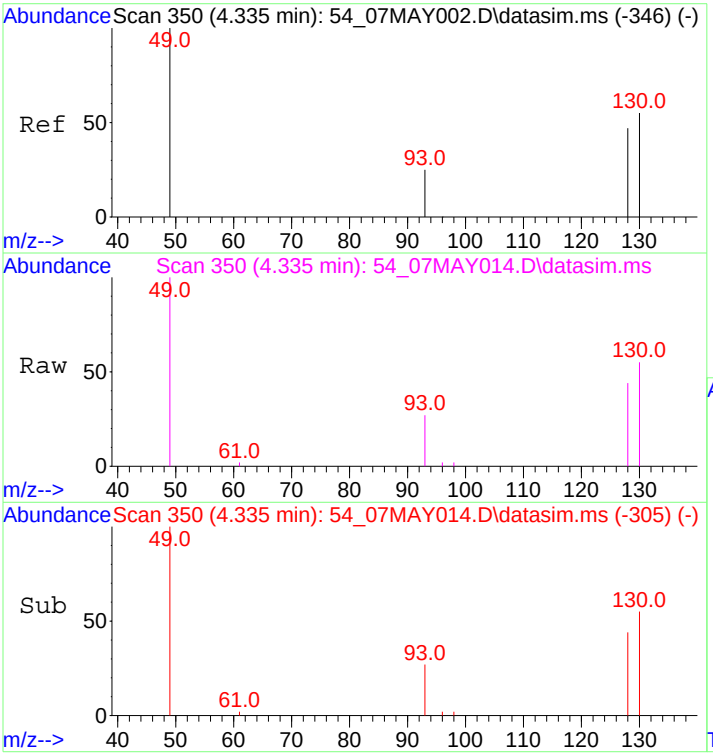
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY014.D
Acq On : 7 May 2014 1:57 pm
Operator : YHL
Sample : 02229 \ SGW-8
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:03:32 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



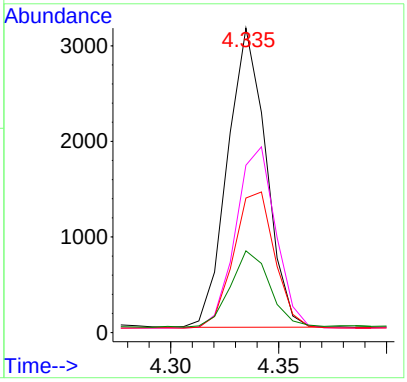


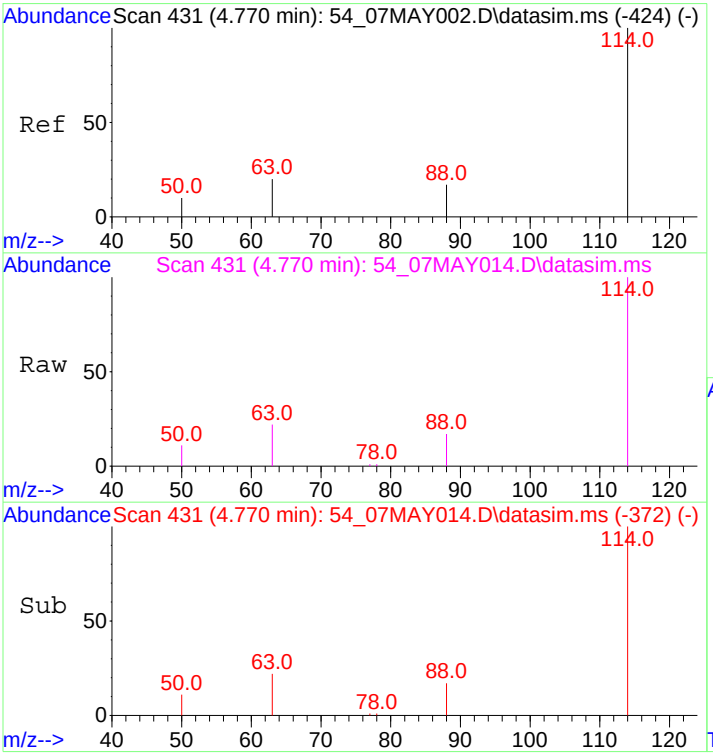


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY014.D
Acq: 7 May 2014 1:57 pm

Tgt Ion: 49 Resp: 3876

Ion	Ratio	Lower	Upper
49	100		
130	63.1	56.0	84.0
128	48.8	41.6	62.4
93	26.2	22.4	33.6

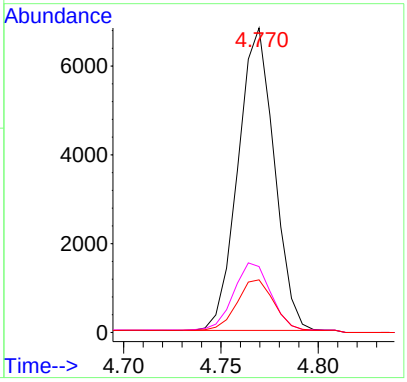


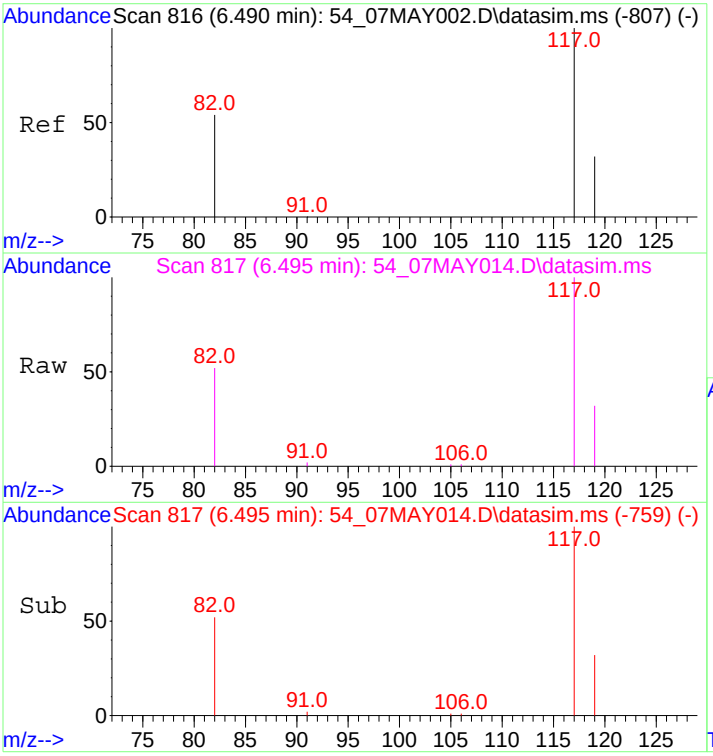


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_07MAY014.D
Acq: 7 May 2014 1:57 pm

Tgt Ion:114 Resp: 8814

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	17.0	13.6	20.4

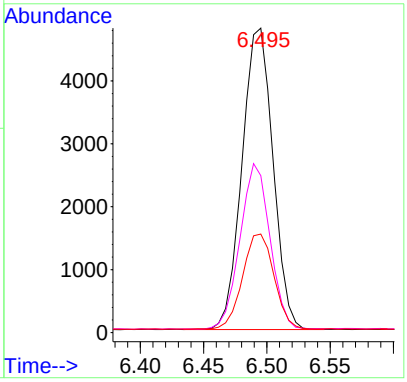




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.006 min
Lab File: 54 07MAY014.D
Acq: 7 May 2014 1:57 pm

Tgt Ion:117 Resp: 8175

Ion	Ratio	Lower	Upper
117	100		
82	53.0	38.0	57.0
119	31.9	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY015.D
Acq On : 7 May 2014 2:09 pm
Operator : YHL
Sample : 02230 \ SGW-7
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:17:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

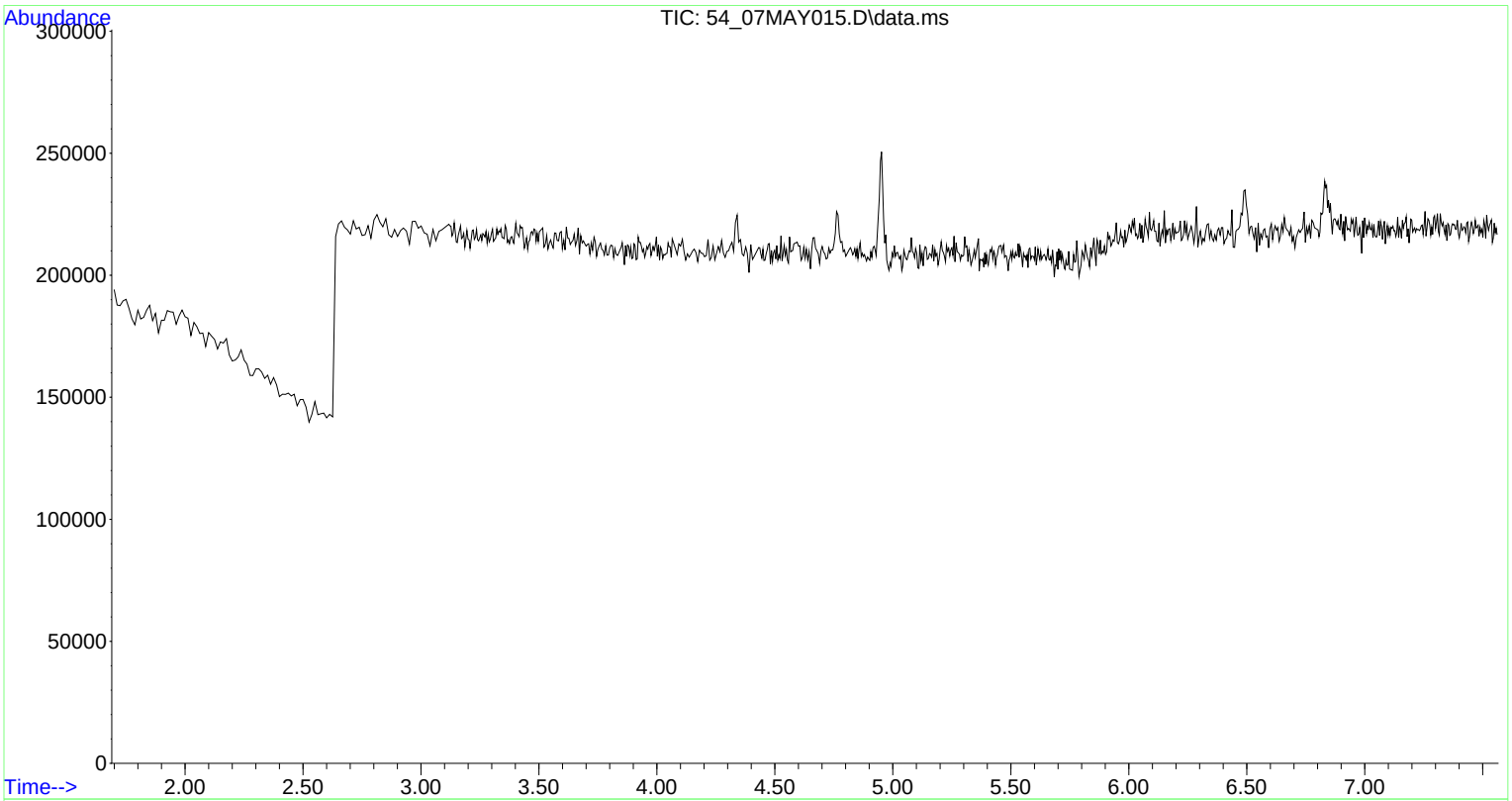
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3928	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9062	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.489	117	8739	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
8] 1,1,1-Trichloroethane	4.483	97	609	1.50 ppbv #	94
11] Trichloroethene	4.949	130	11362	50.41 ppbv	97
14] Tetrachloroethene	5.967	166	180	0.60 ppbv	90

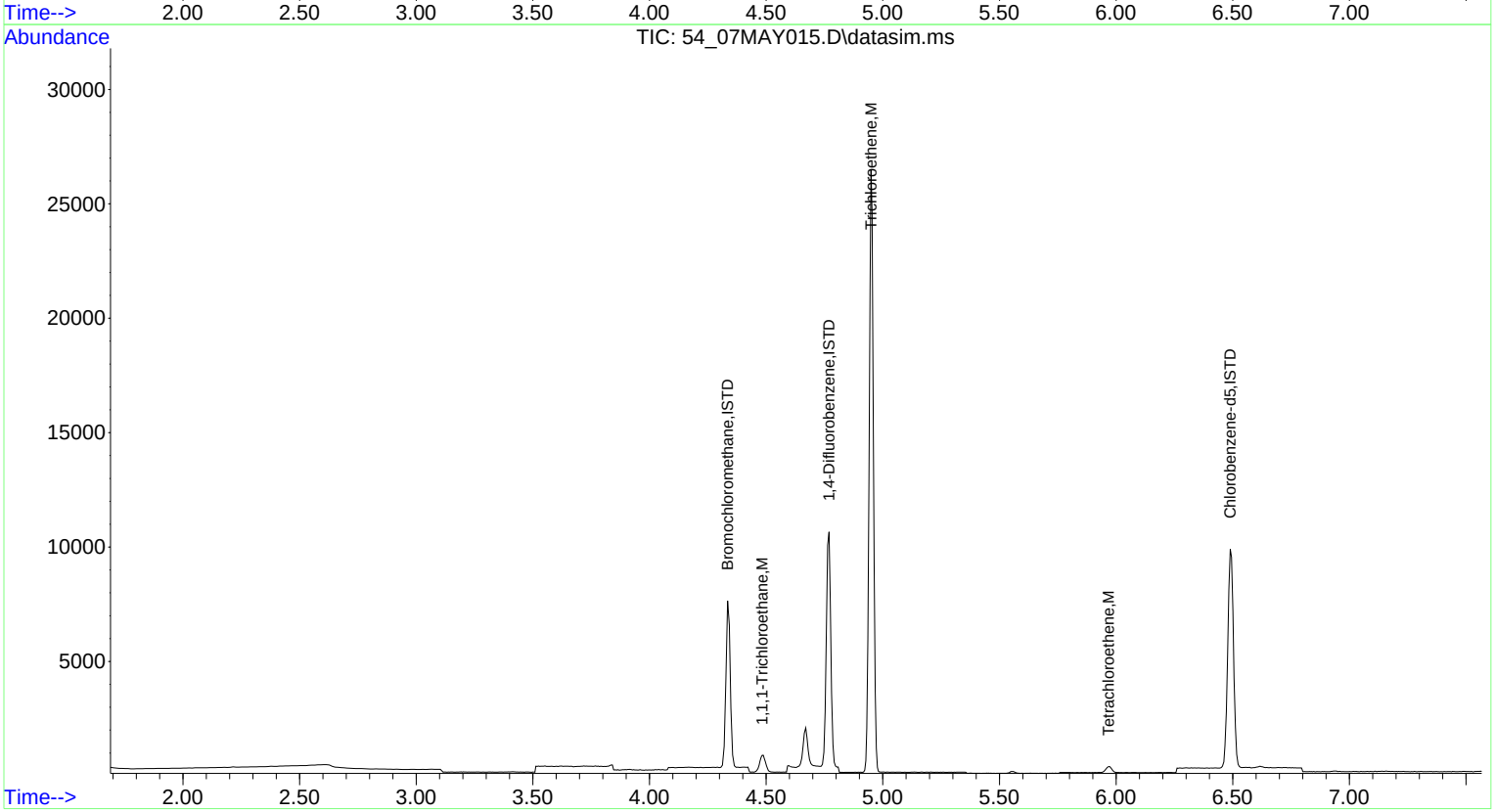
(#) = qualifier out of range (m) = manual integration (+) = signals summed

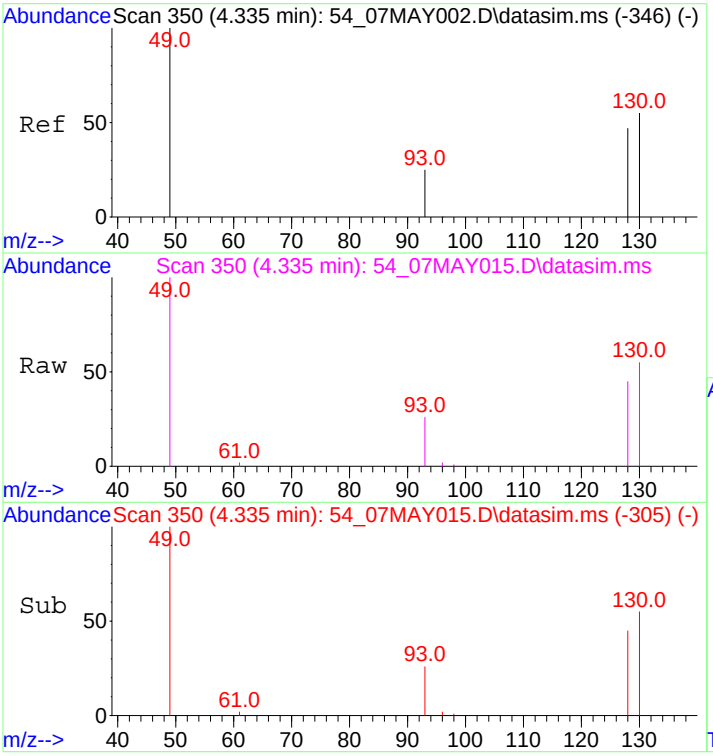
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY015.D
Acq On : 7 May 2014 2:09 pm
Operator : YHL
Sample : 02230 \ SGW-7
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:17:23 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



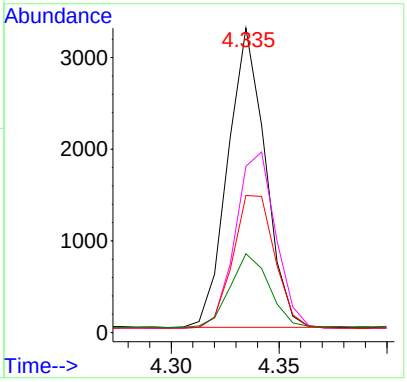


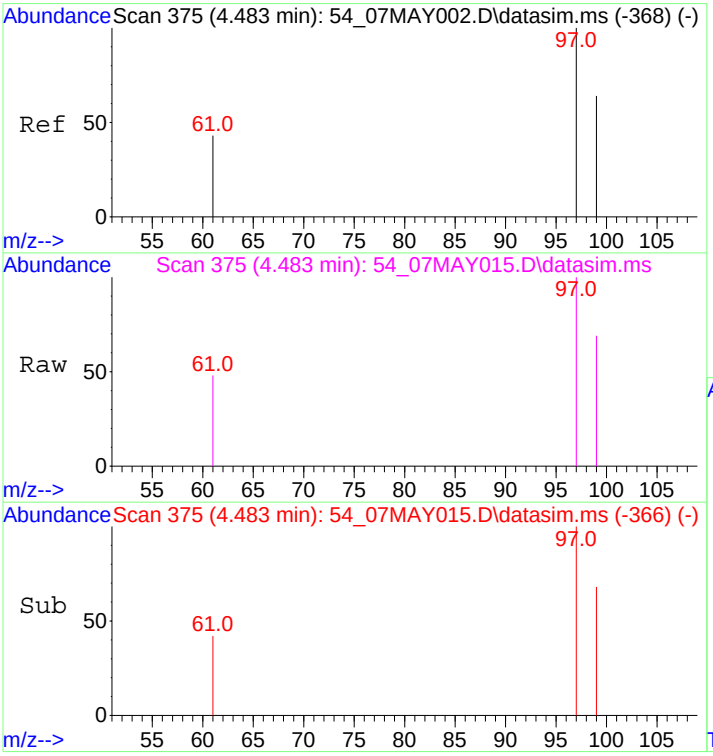


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY015.D
Acq: 7 May 2014 2:09 pm

Tgt Ion: 49 Resp: 3928

Ion	Ratio	Lower	Upper
49	100		
130	63.5	56.0	84.0
128	50.0	41.6	62.4
93	26.1	22.4	33.6

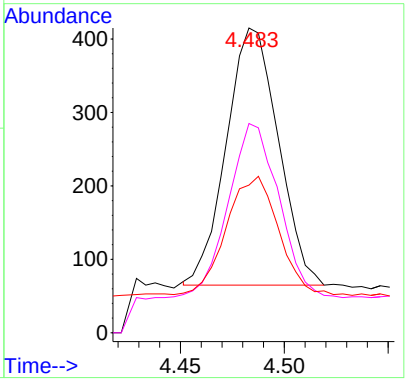


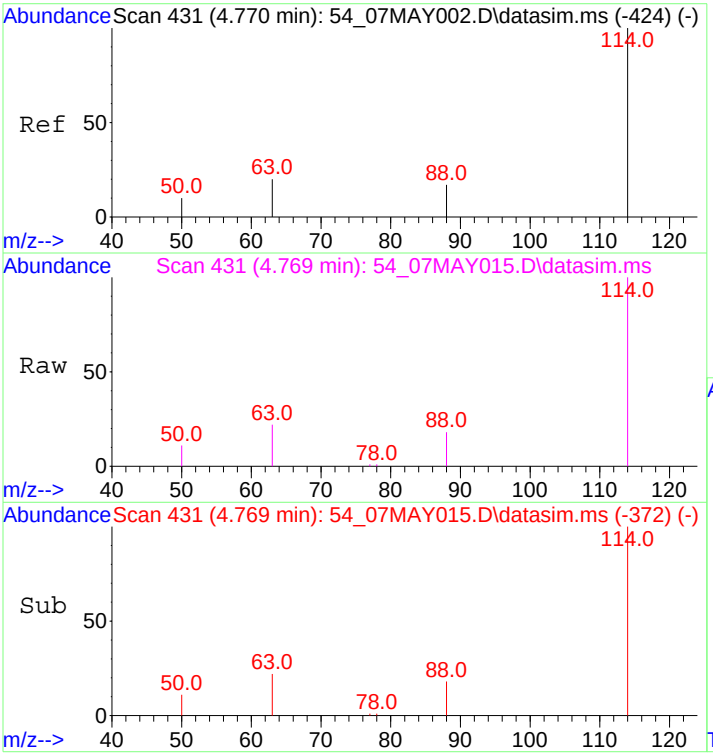


#8
1,1,1-Trichloroethane
Concen: 1.50 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_07MAY015.D
Acq: 7 May 2014 2:09 pm

Tgt Ion: 97 Resp: 609

Ion	Ratio	Lower	Upper
97	100		
99	64.2	52.1	78.1
61	45.6	30.2	45.4#

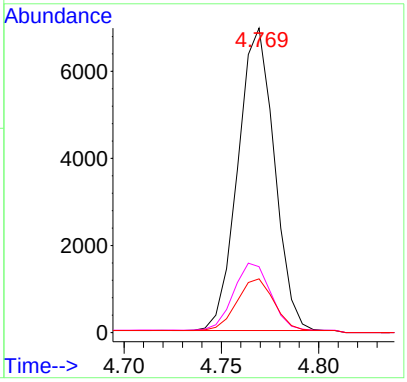


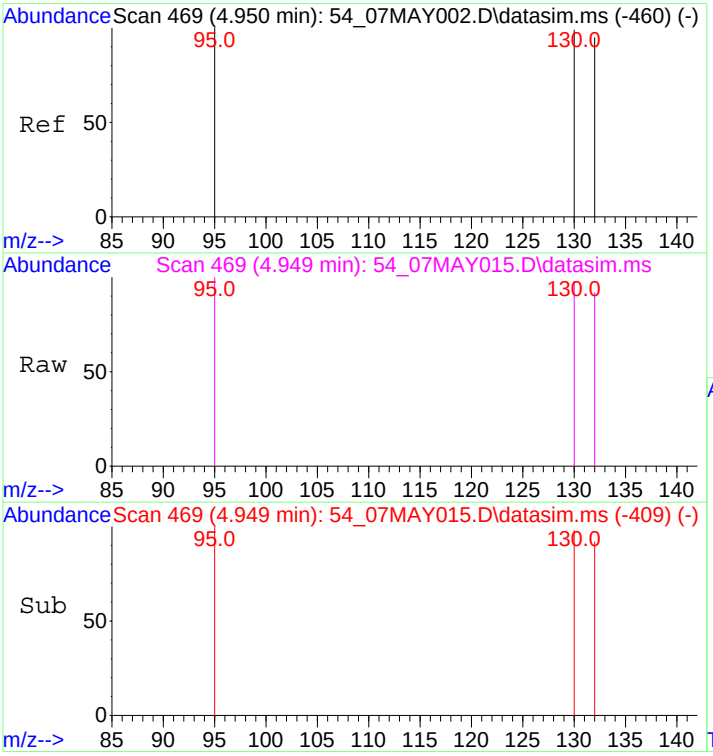


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY015.D
Acq: 7 May 2014 2:09 pm

Tgt Ion:114 Resp: 9062

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	17.3	13.6	20.4

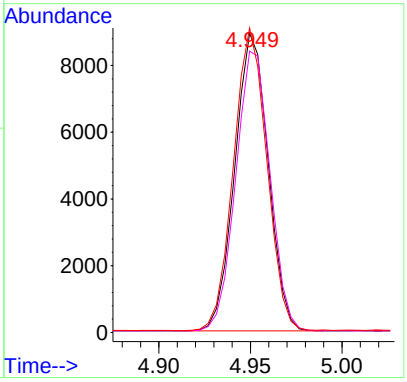


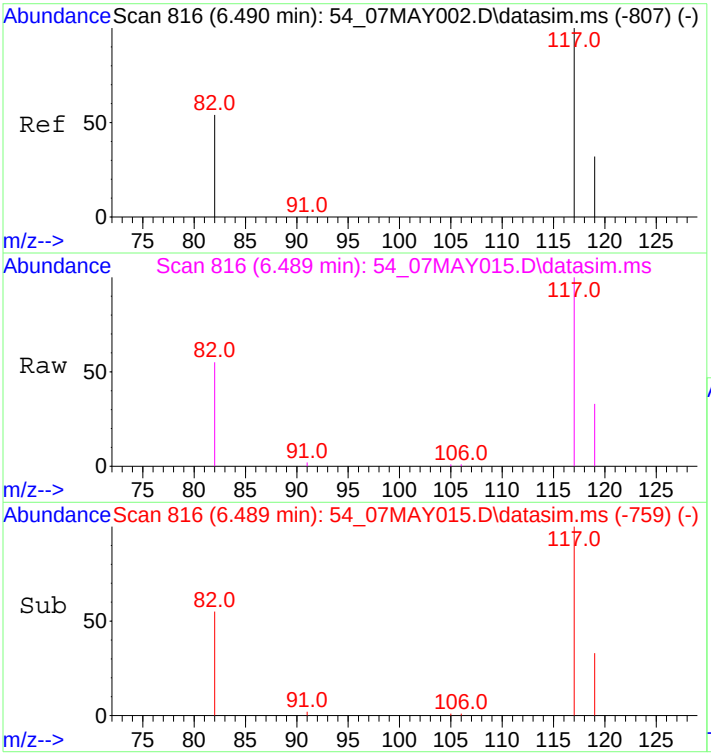


#11
Trichloroethene
Concen: 50.41 ppbv
RT: 4.949 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_07MAY015.D
Acq: 7 May 2014 2:09 pm

Tgt Ion:130 Resp: 11362

Ion	Ratio	Lower	Upper
130	100		
132	96.1	76.9	115.3
95	100.8	76.5	114.7

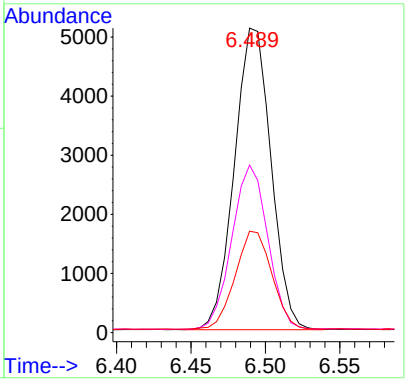


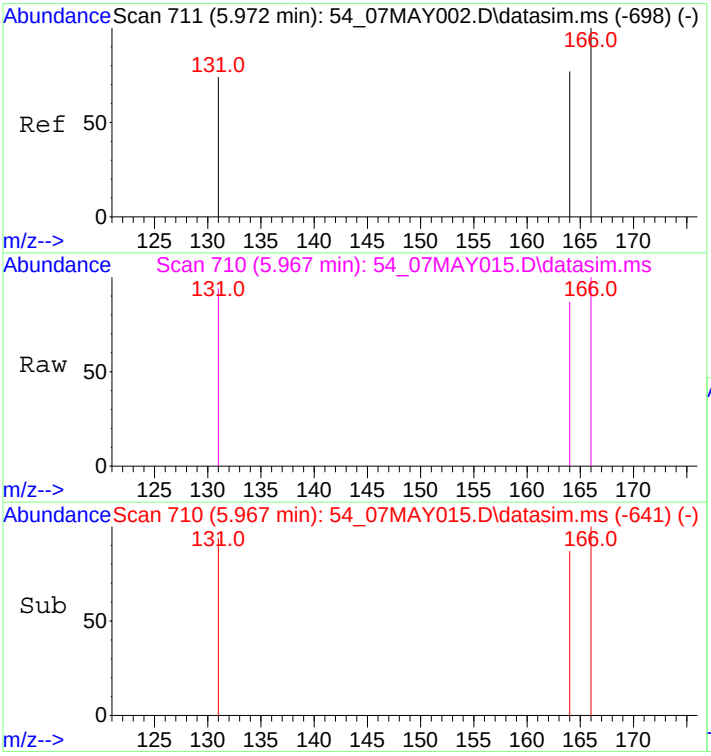


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 07MAY015.D
Acq: 7 May 2014 2:09 pm

Tgt Ion:117 Resp: 8739

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.6	27.0	40.4

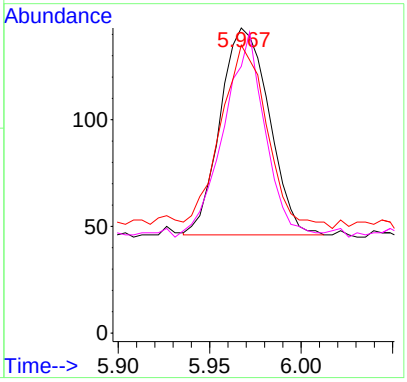




#14
Tetrachloroethene
Concen: 0.60 ppbv
RT: 5.967 min Scan# 710
Delta R.T. -0.005 min
Lab File: 54_07MAY015.D
Acq: 7 May 2014 2:09 pm

Tgt Ion:166 Resp: 180

Ion	Ratio	Lower	Upper
166	100		
164	83.9	62.6	94.0
131	85.0	58.5	87.7



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY016.D
Acq On : 7 May 2014 2:22 pm
Operator : YHL
Sample : 02231 \ SGW-6
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:29:11 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

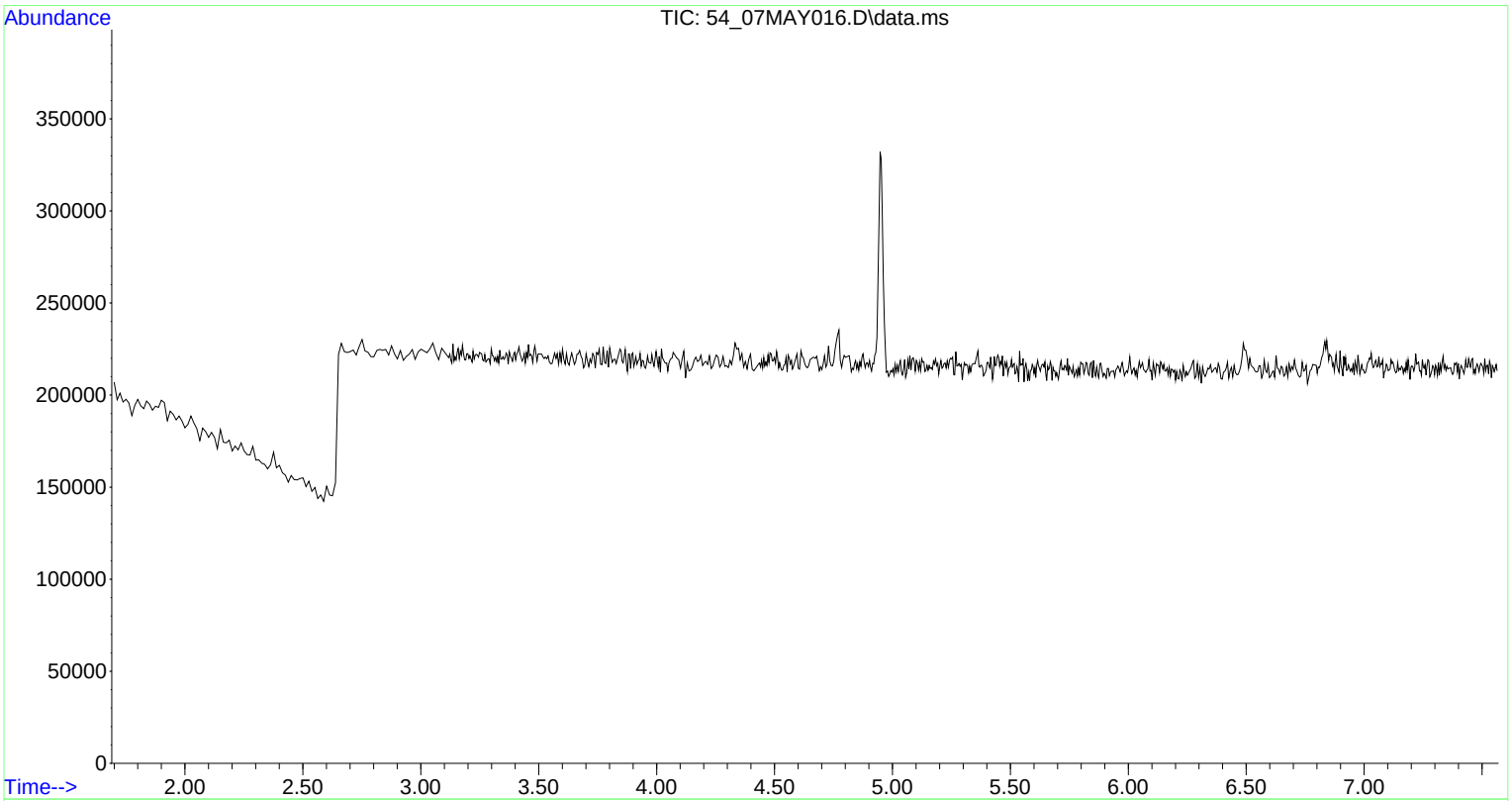
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4044	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	9378	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.490	117	8627	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
8] 1,1,1-Trichloroethane	4.483	97	2046	4.89 ppbv	95
11] Trichloroethene	4.950	130	33005	141.51 ppbv	97

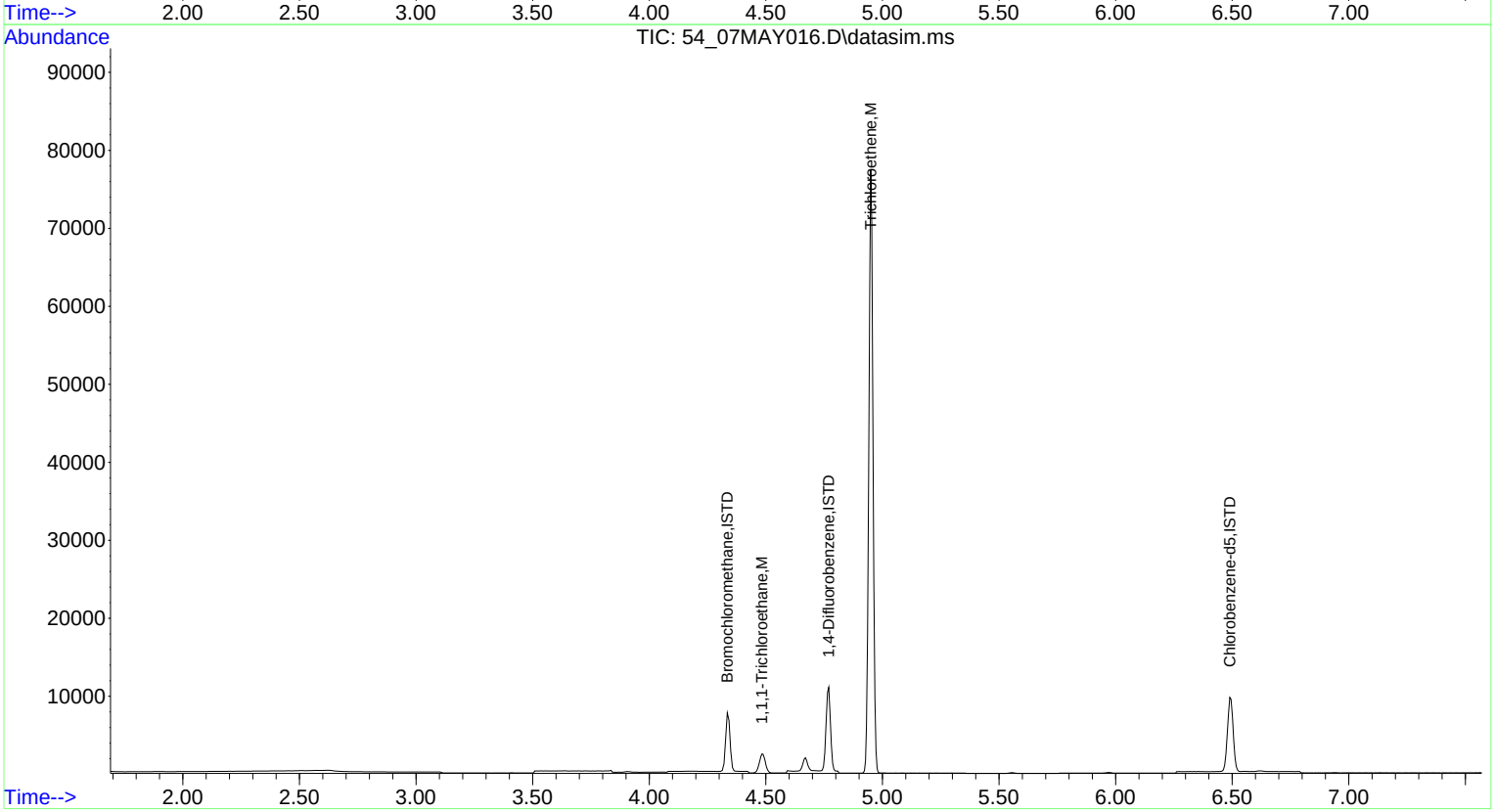
(#) = qualifier out of range (m) = manual integration (+) = signals summed

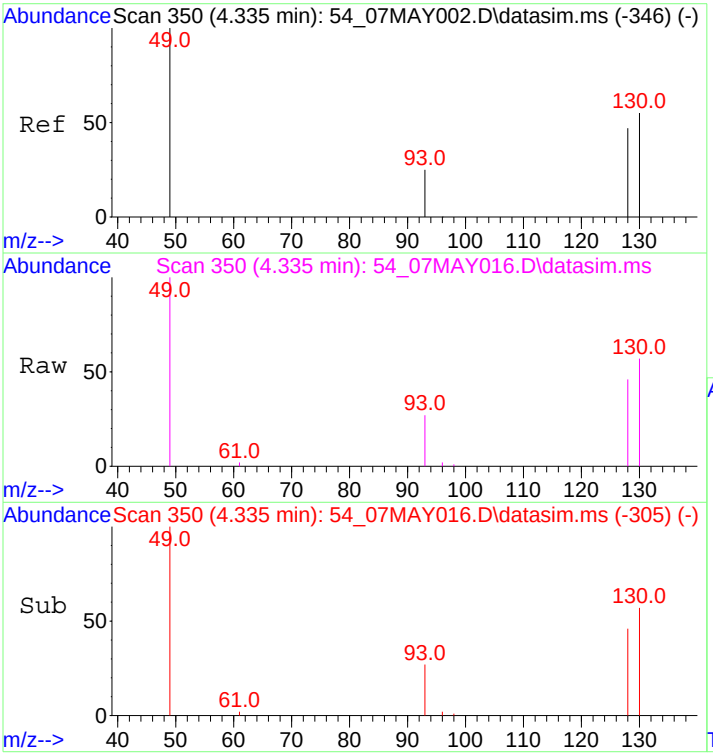
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY016.D
Acq On : 7 May 2014 2:22 pm
Operator : YHL
Sample : 02231 \ SGW-6
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:29:11 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



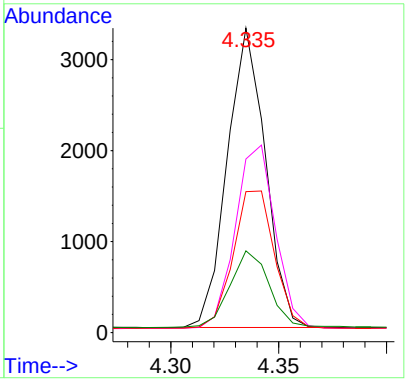


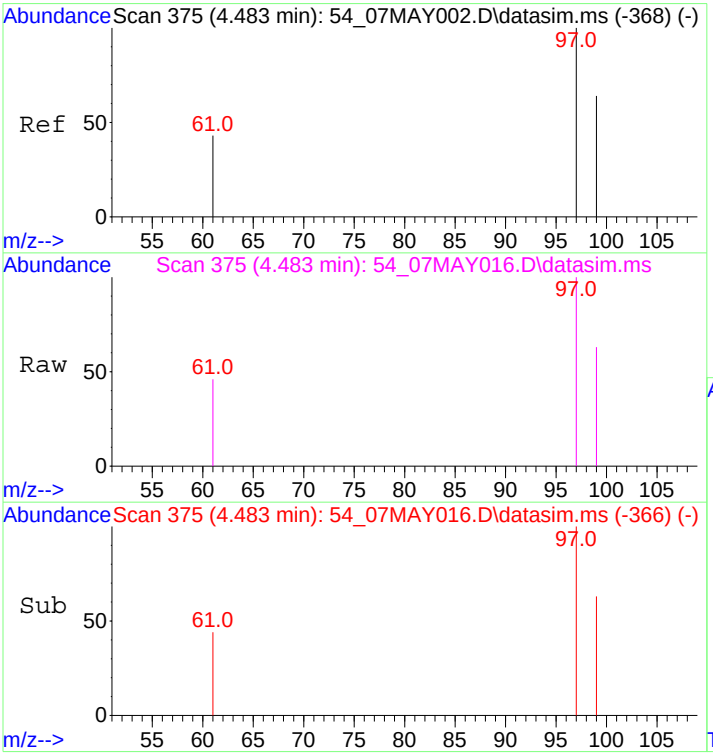


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY016.D
Acq: 7 May 2014 2:22 pm

Tgt Ion: 49 Resp: 4044

Ion	Ratio	Lower	Upper
49	100		
130	64.5	56.0	84.0
128	49.7	41.6	62.4
93	26.7	22.4	33.6

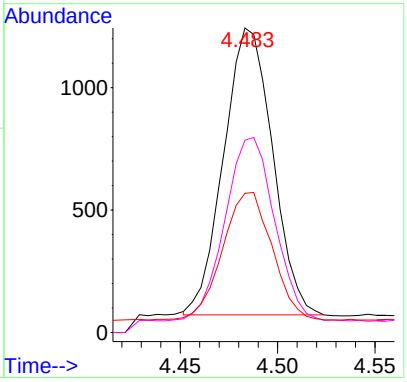


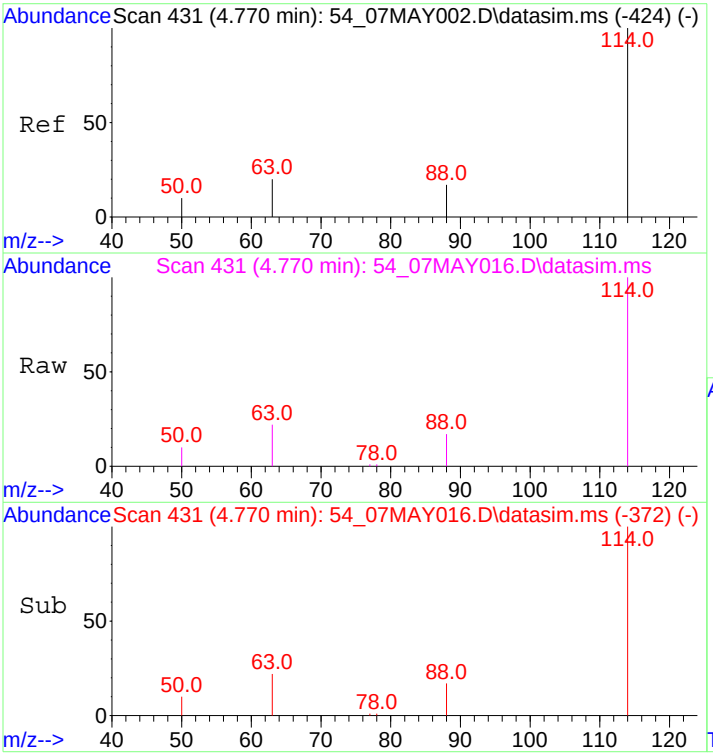


#8
1,1,1-Trichloroethane
Concen: 4.89 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_07MAY016.D
Acq: 7 May 2014 2:22 pm

Tgt Ion: 97 Resp: 2046

Ion	Ratio	Lower	Upper
97	100		
99	64.2	52.1	78.1
61	44.7	30.2	45.4

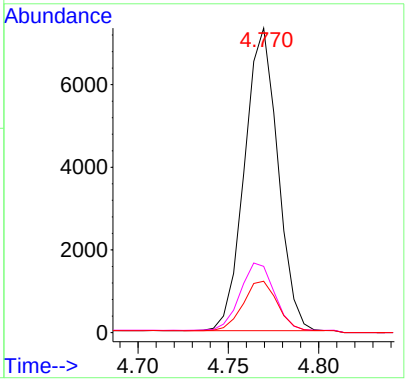


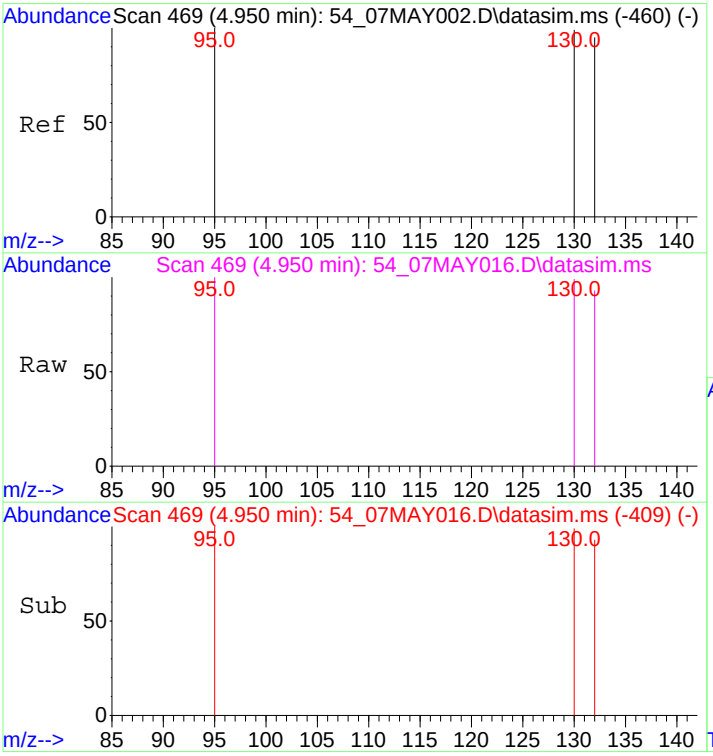


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY016.D
Acq: 7 May 2014 2:22 pm

Tgt Ion:114 Resp: 9378

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	16.9	13.6	20.4

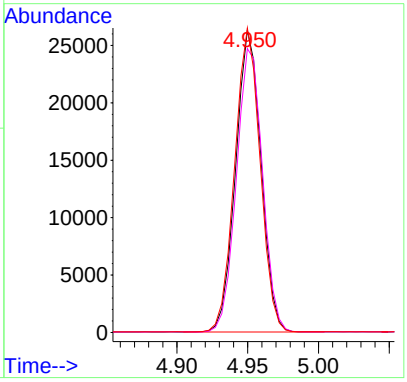


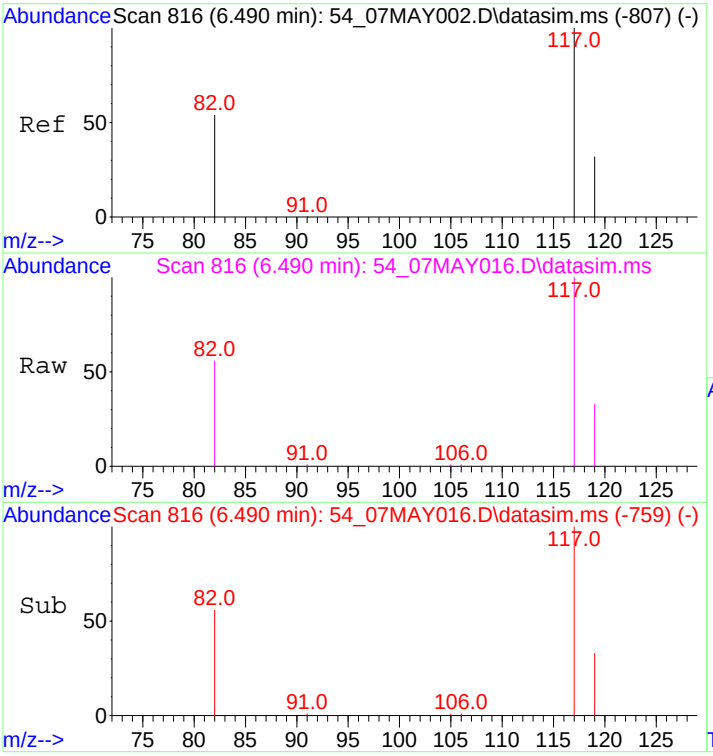


#11
Trichloroethene
Concen: 141.51 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_07MAY016.D
Acq: 7 May 2014 2:22 pm

Tgt Ion:130 Resp: 33005

Ion	Ratio	Lower	Upper
130	100		
132	96.4	76.9	115.3
95	100.5	76.5	114.7

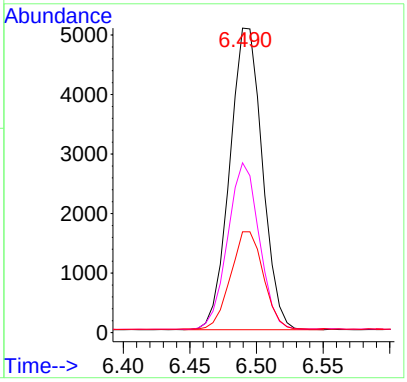




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 07MAY016.D
Acq: 7 May 2014 2:22 pm

Tgt Ion:117 Resp: 8627

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.3	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY017.D
Acq On : 7 May 2014 2:35 pm
Operator : YHL
Sample : 02232 \ SGW-5
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:41:54 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

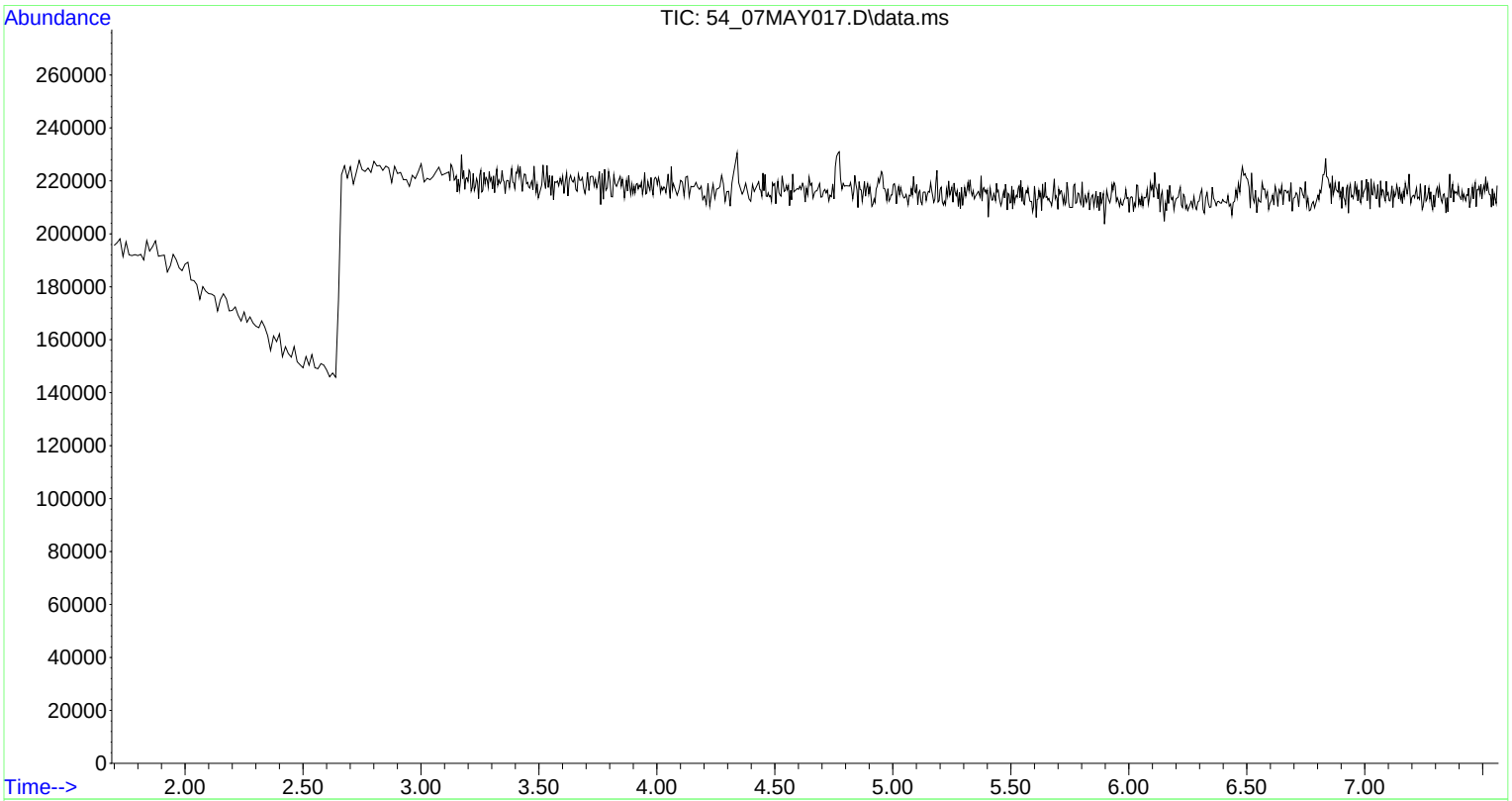
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3422	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	7838	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.489	117	7536	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
6] 1,1-Dichloroethane	3.910	63	159	0.57 ppbv #	61
8] 1,1,1-Trichloroethane	4.483	97	477	1.35 ppbv	96
11] Trichloroethene	4.950	130	2057	10.55 ppbv	98

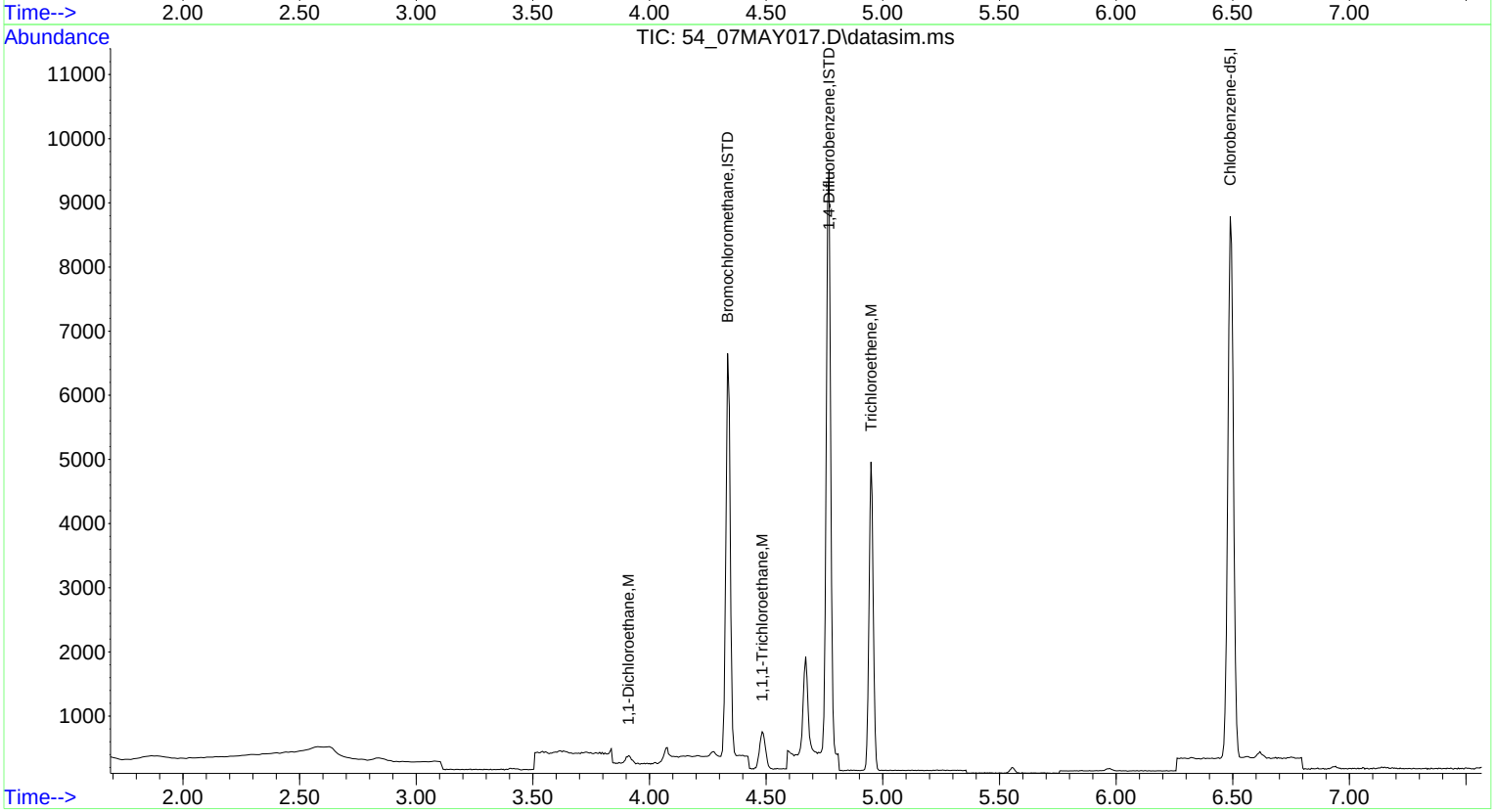
(#) = qualifier out of range (m) = manual integration (+) = signals summed

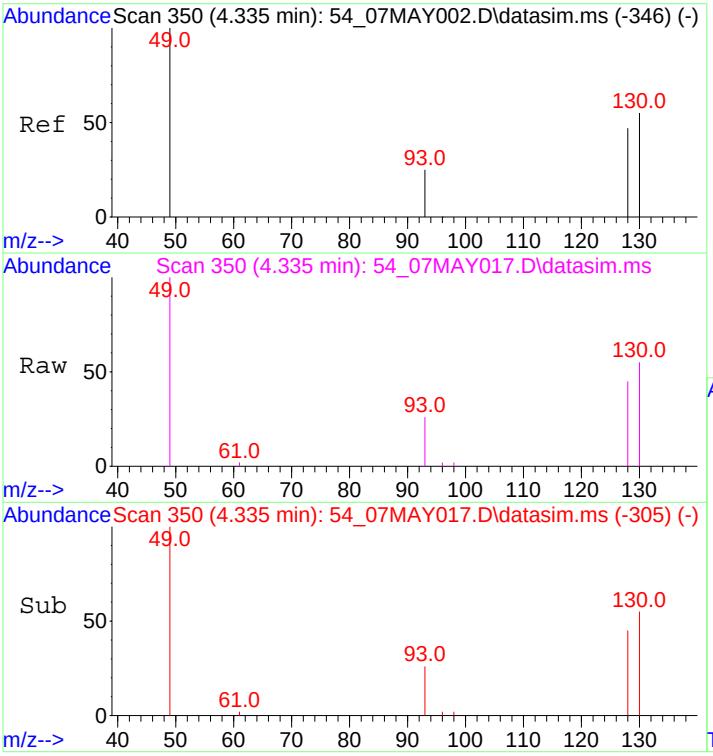
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY017.D
Acq On : 7 May 2014 2:35 pm
Operator : YHL
Sample : 02232 \ SGW-5
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:41:54 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



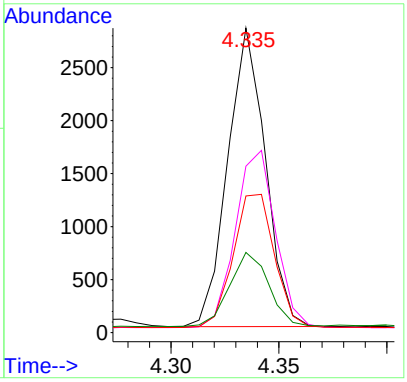


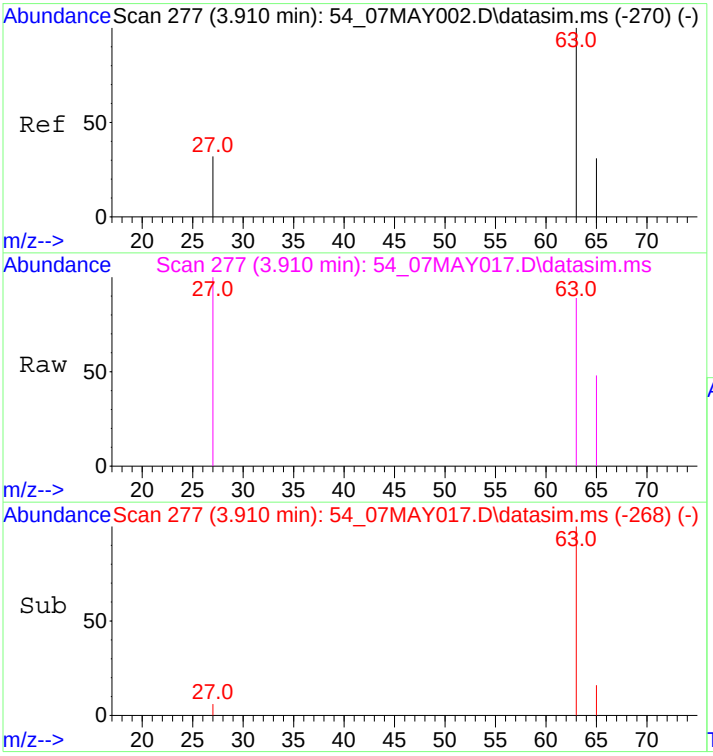


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY017.D
Acq: 7 May 2014 2:35 pm

Tgt Ion: 49 Resp: 3422

Ion	Ratio	Lower	Upper
49	100		
130	63.3	56.0	84.0
128	49.2	41.6	62.4
93	25.9	22.4	33.6

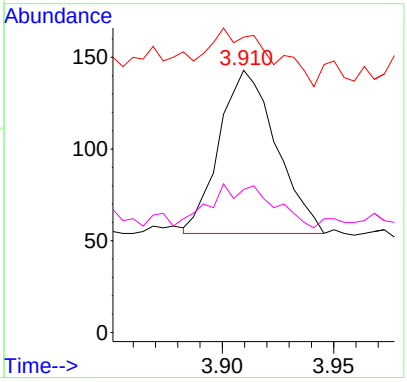


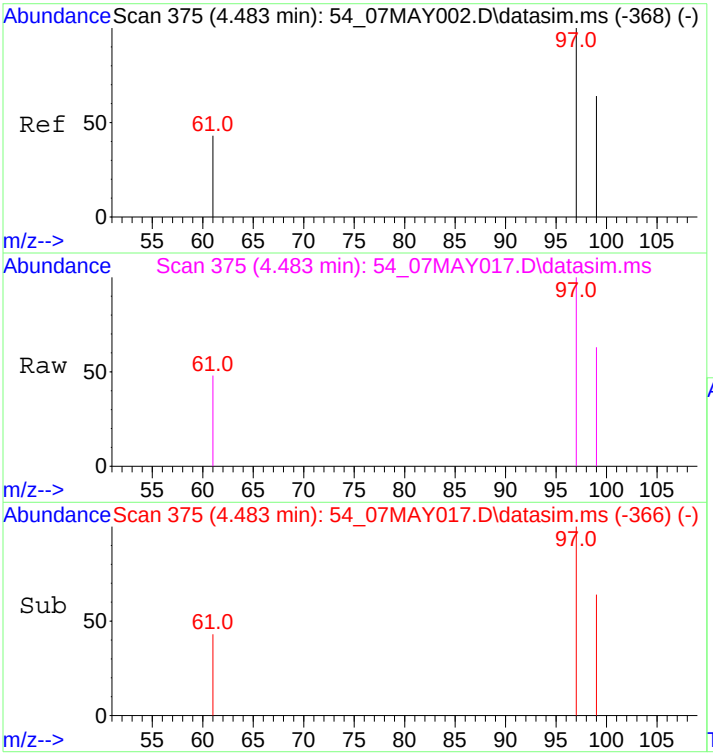


#6
1,1-Dichloroethane
Concen: 0.57 ppbv
RT: 3.910 min Scan# 277
Delta R.T. -0.000 min
Lab File: 54_07MAY017.D
Acq: 7 May 2014 2:35 pm

Tgt Ion: 63 Resp: 159

Ion	Ratio	Lower	Upper
63	100		
65	16.4	26.1	39.1#
27	2.5	24.0	36.0#

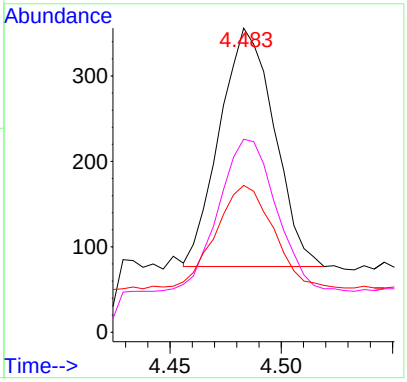


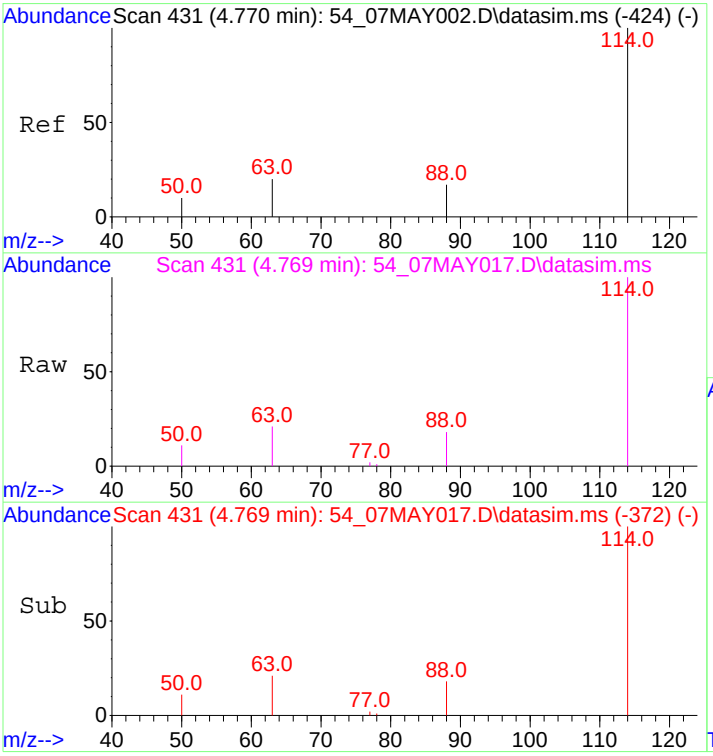


#8
1,1,1-Trichloroethane
Concen: 1.35 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54 07MAY017.D
Acq: 7 May 2014 2:35 pm

Tgt Ion: 97 Resp: 477

Ion	Ratio	Lower	Upper
97	100		
99	64.4	52.1	78.1
61	43.8	30.2	45.4

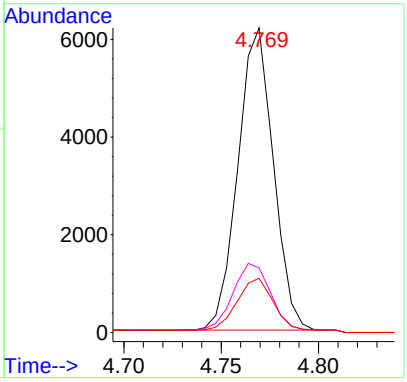


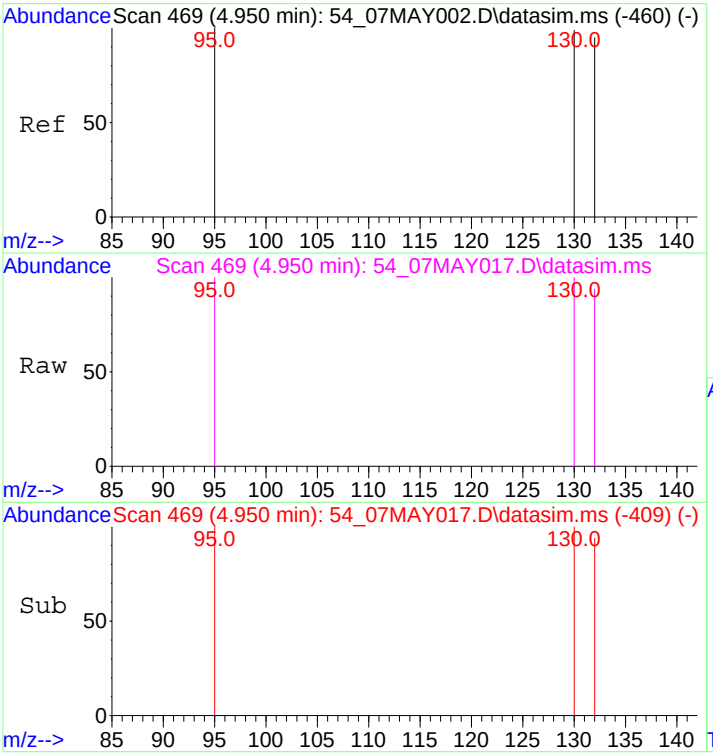


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_07MAY017.D
Acq: 7 May 2014 2:35 pm

Tgt Ion:114 Resp: 7838

Ion	Ratio	Lower	Upper
114	100		
63	23.0	17.6	26.4
88	17.2	13.6	20.4

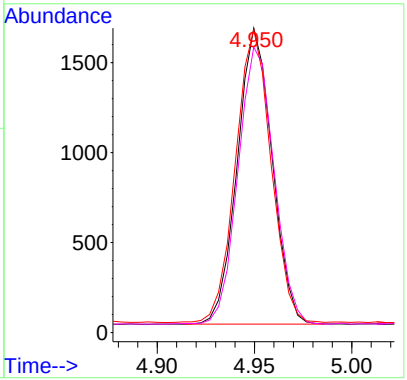


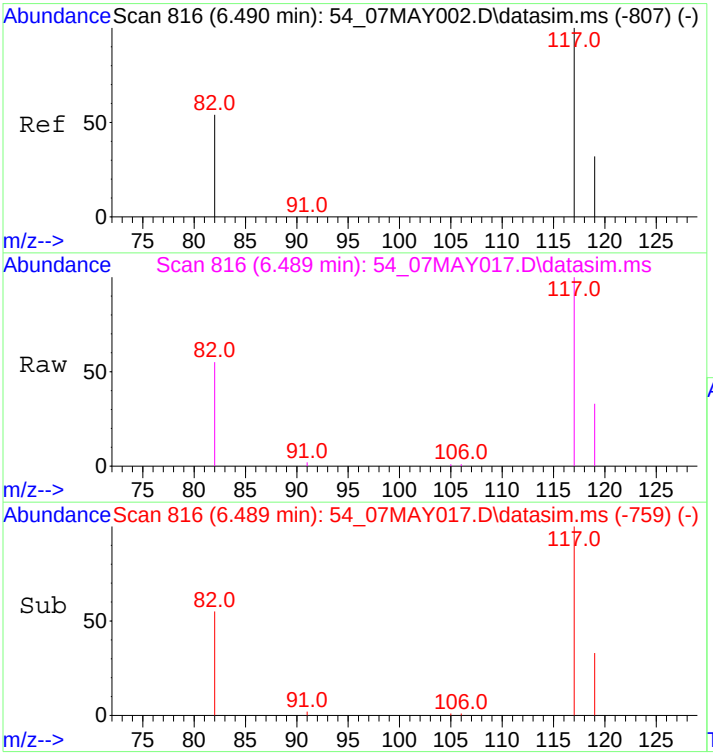


#11
Trichloroethene
Concen: 10.55 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54 07MAY017.D
Acq: 7 May 2014 2:35 pm

Tgt Ion:130 Resp: 2057

Ion	Ratio	Lower	Upper
130	100		
132	96.2	76.9	115.3
95	100.2	76.5	114.7

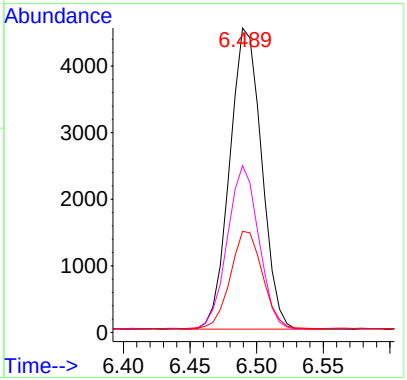




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54_07MAY017.D
Acq: 7 May 2014 2:35 pm

Tgt Ion:117 Resp: 7536

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	32.7	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY018.D
Acq On : 7 May 2014 2:47 pm
Operator : YHL
Sample : 02233 \ SGW-1
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:53:40 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

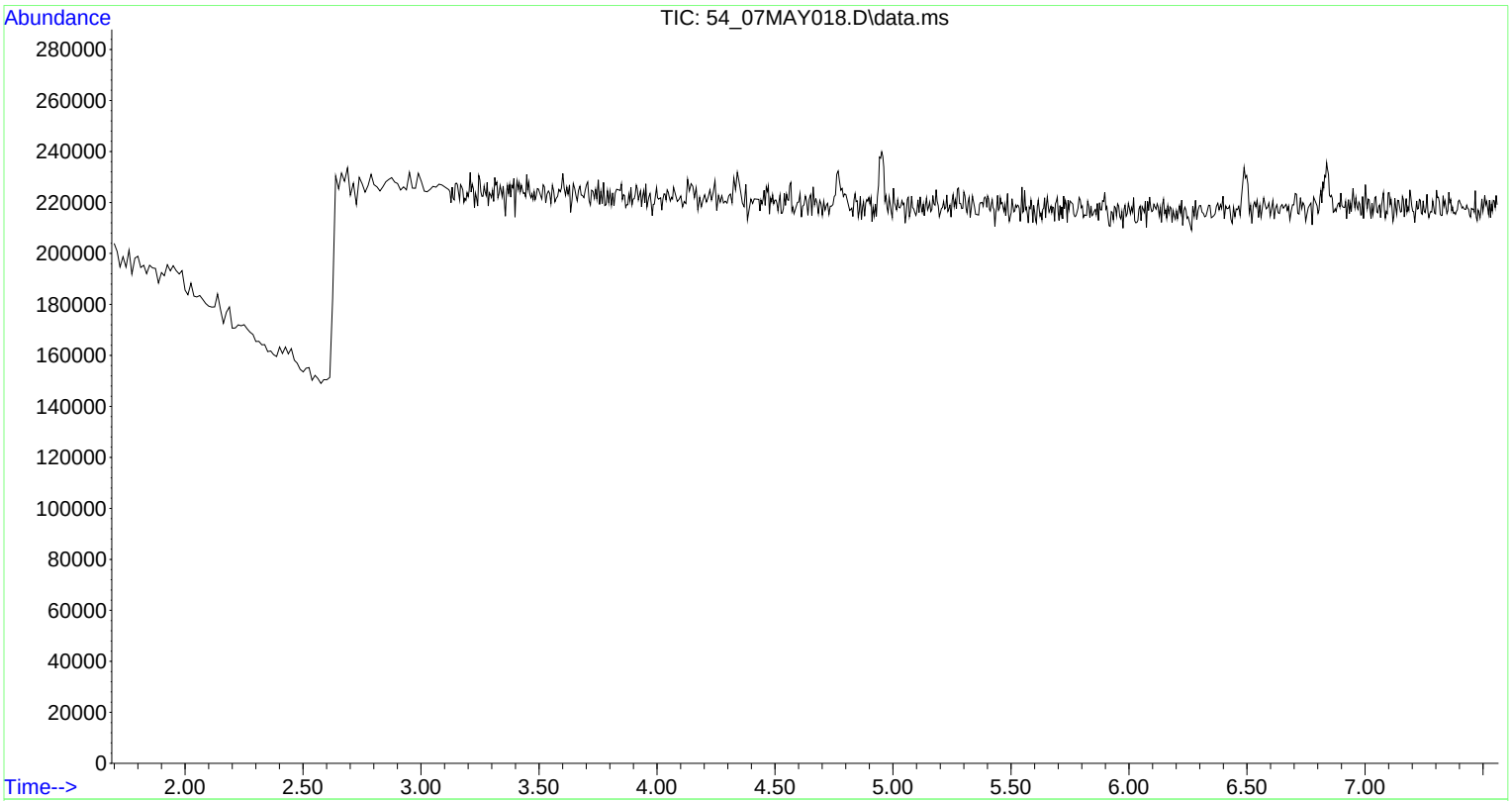
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4118	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	9383	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.490	117	9036	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
8] 1,1,1-Trichloroethane	4.483	97	418	0.98	ppbv	96
11] Trichloroethene	4.950	130	6759	28.96	ppbv	97

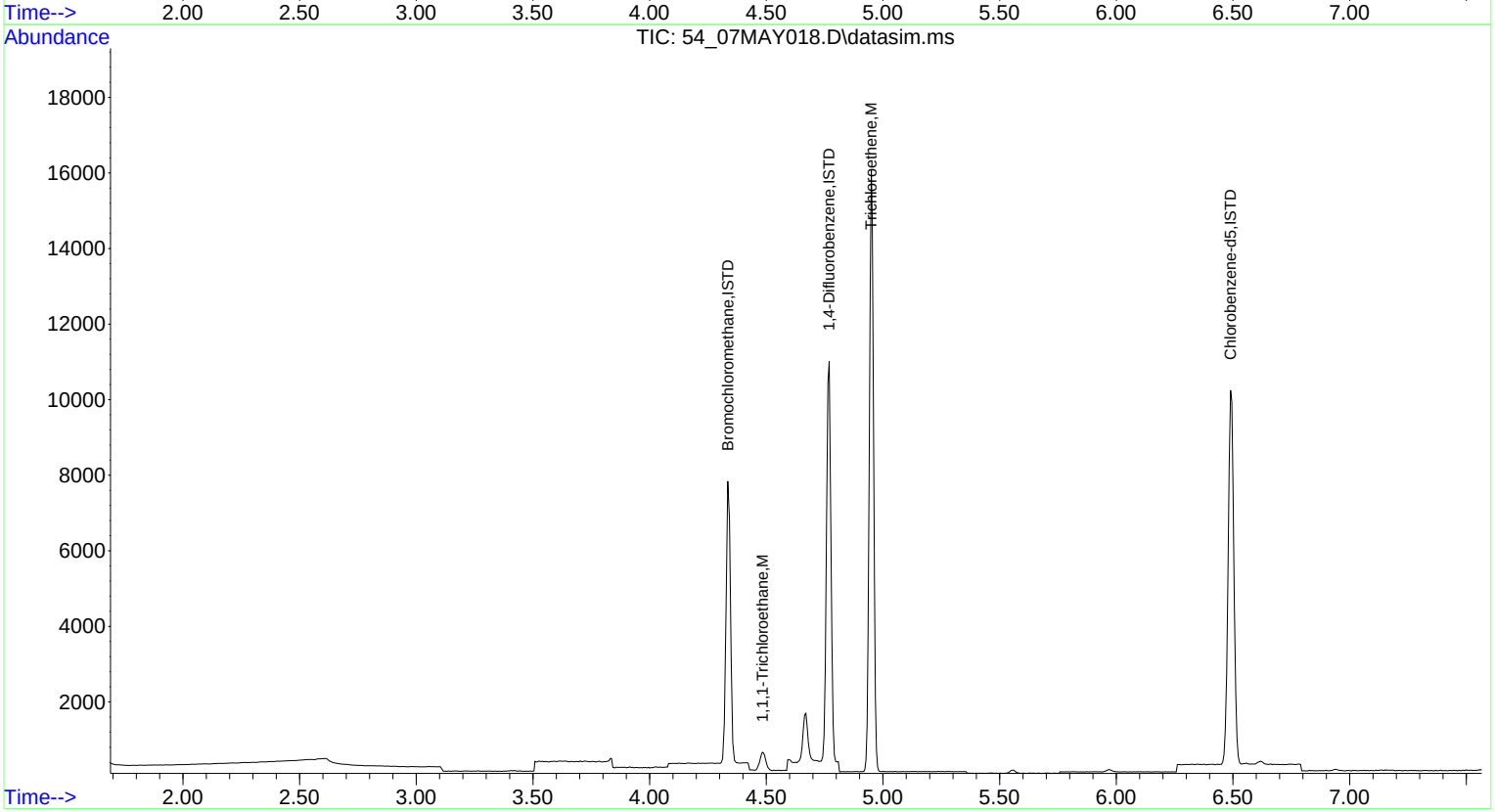
(#) = qualifier out of range (m) = manual integration (+) = signals summed

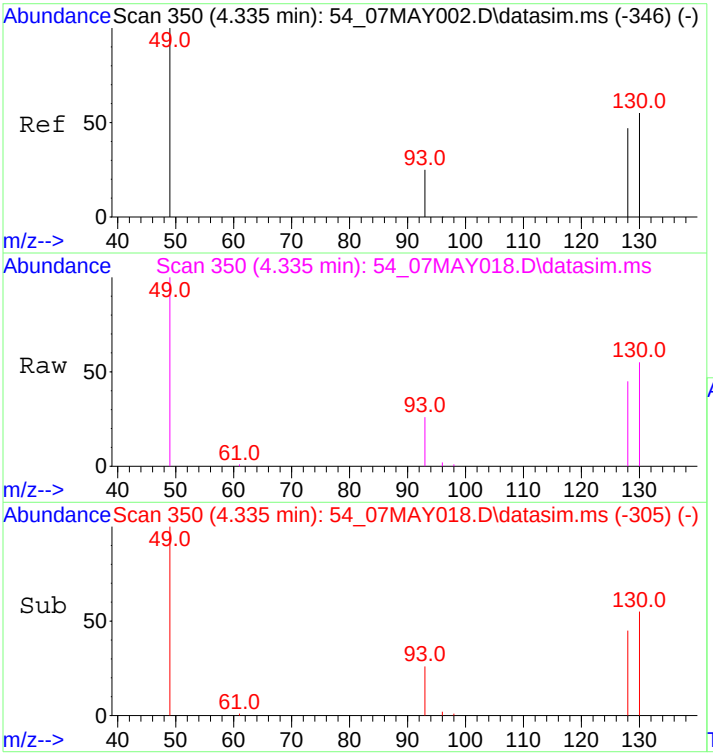
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY018.D
Acq On : 7 May 2014 2:47 pm
Operator : YHL
Sample : 02233 \ SGW-1
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 14:53:40 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



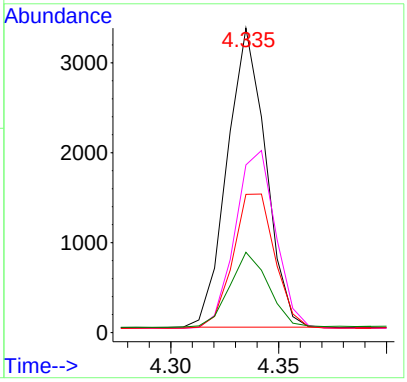


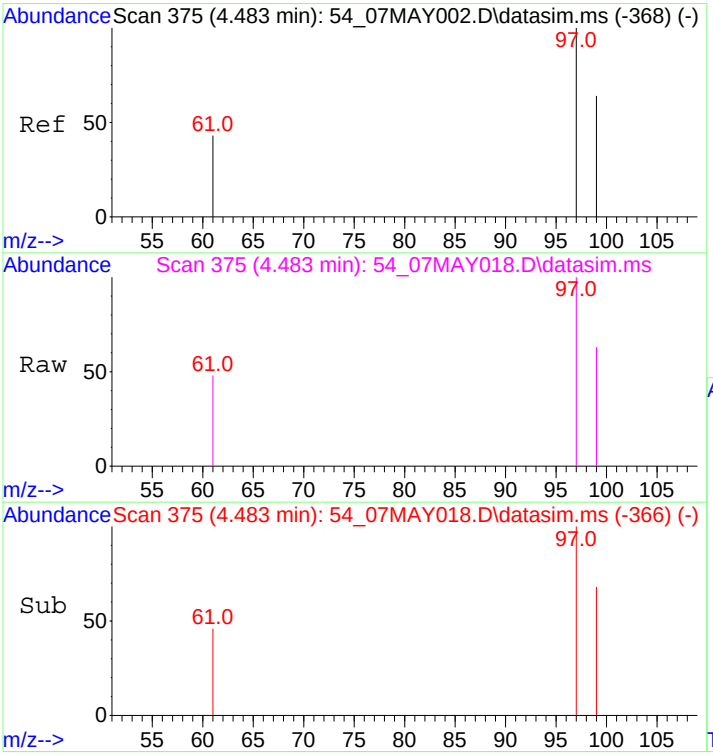


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY018.D
Acq: 7 May 2014 2:47 pm

Tgt Ion: 49 Resp: 4118

Ion	Ratio	Lower	Upper
49	100		
130	62.9	56.0	84.0
128	48.9	41.6	62.4
93	25.4	22.4	33.6

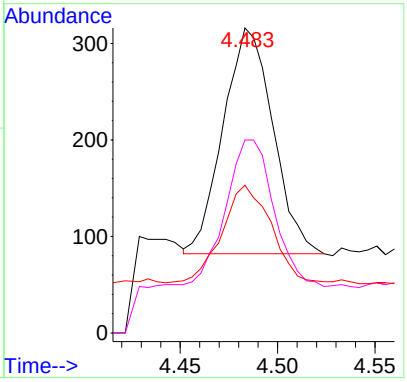


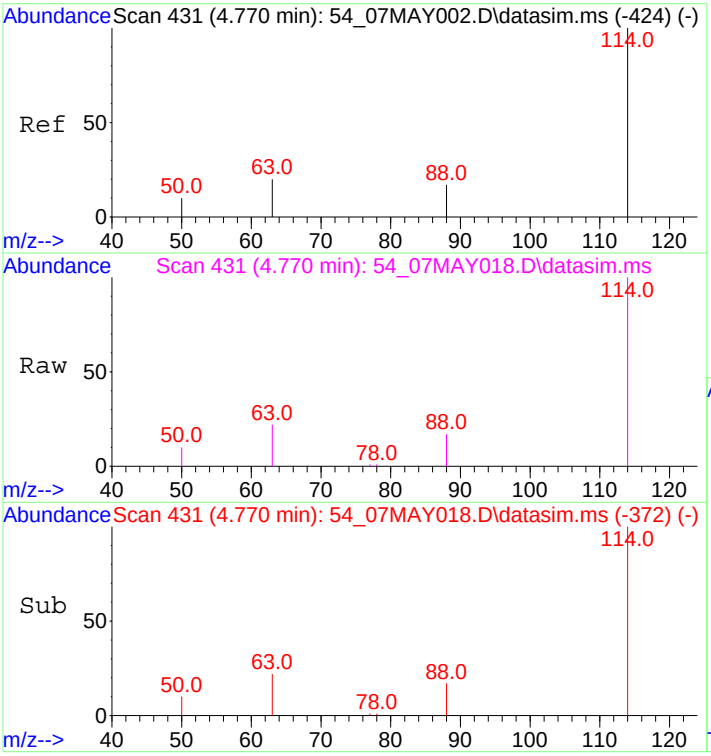


#8
1,1,1-Trichloroethane
Concen: 0.98 ppbv
RT: 4.483 min Scan# 375
Delta R.T. -0.000 min
Lab File: 54_07MAY018.D
Acq: 7 May 2014 2:47 pm

Tgt Ion: 97 Resp: 418

Ion	Ratio	Lower	Upper
97	100		
99	62.7	52.1	78.1
61	41.1	30.2	45.4

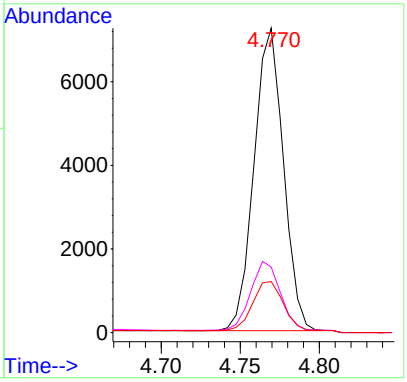


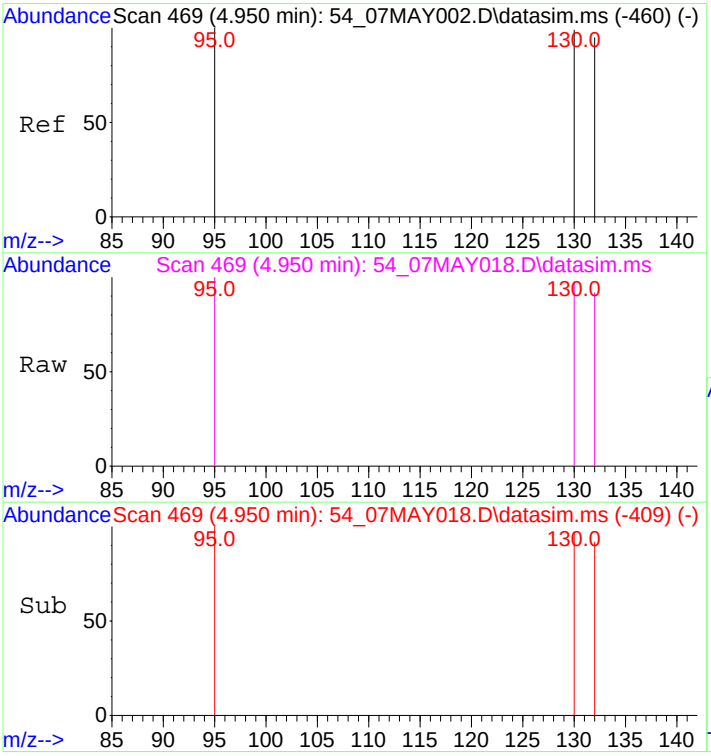


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54 07MAY018.D
Acq: 7 May 2014 2:47 pm

Tgt Ion:114 Resp: 9383

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	16.8	13.6	20.4

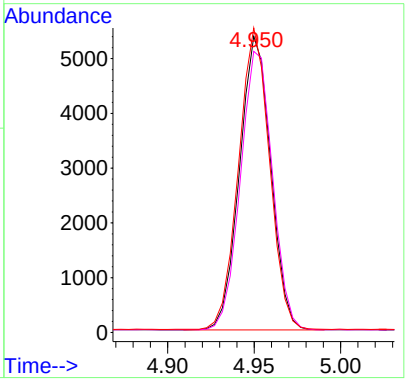


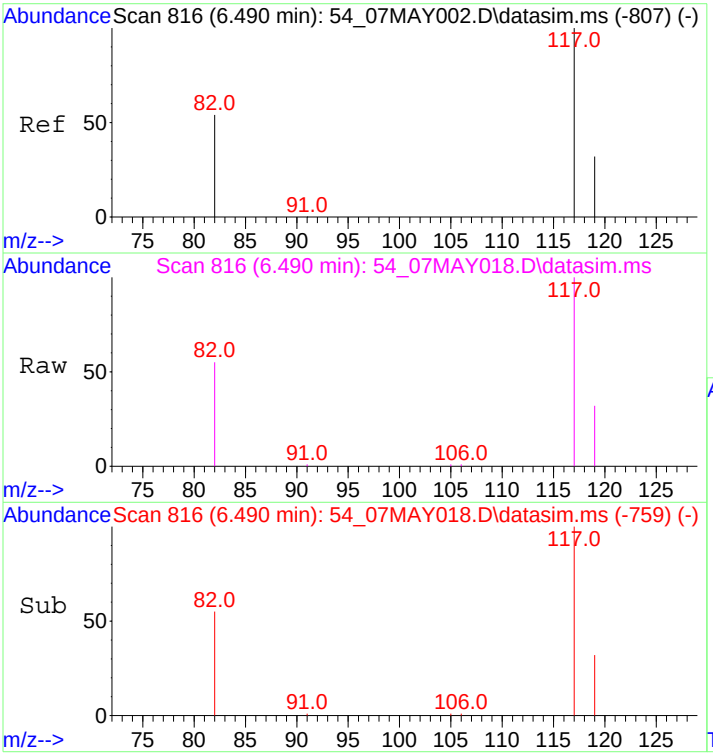


#11
Trichloroethene
Concen: 28.96 ppbv
RT: 4.950 min Scan# 469
Delta R.T. -0.000 min
Lab File: 54_07MAY018.D
Acq: 7 May 2014 2:47 pm

Tgt Ion:130 Resp: 6759

Ion	Ratio	Lower	Upper
130	100		
132	96.9	76.9	115.3
95	101.3	76.5	114.7

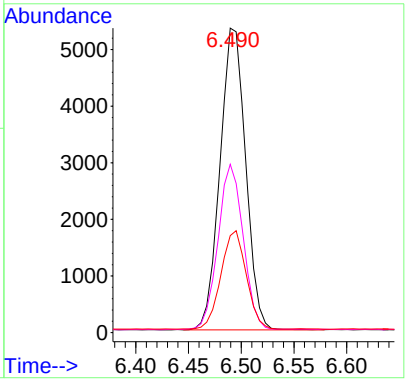




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.000 min
Lab File: 54 07MAY018.D
Acq: 7 May 2014 2:47 pm

Tgt Ion:117 Resp: 9036

Ion	Ratio	Lower	Upper
117	100		
82	53.7	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY019.D
Acq On : 7 May 2014 3:15 pm
Operator : YHL
Sample : 02234 \ SGW-2
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 15:23:16 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration

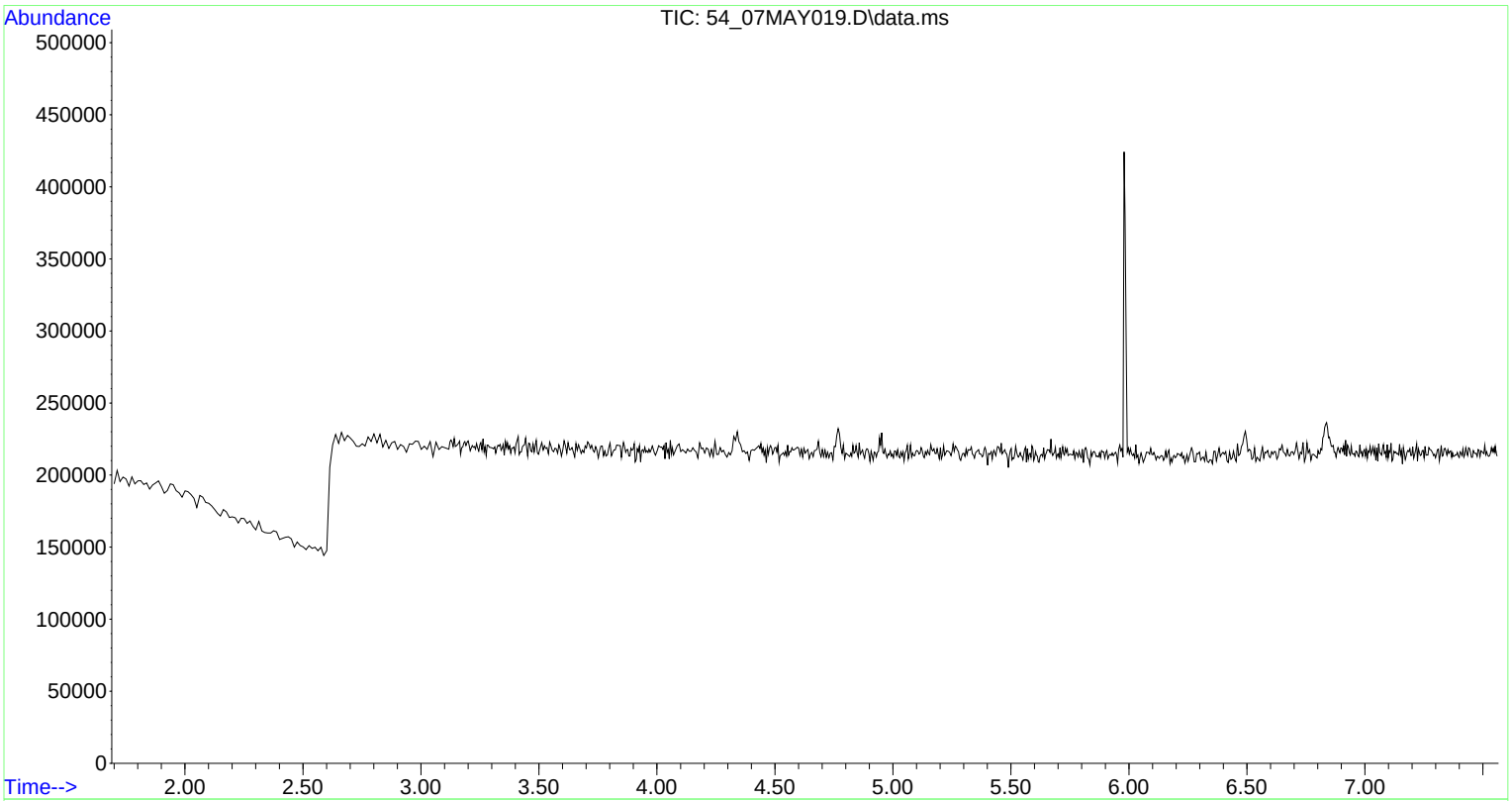
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4131	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	9375	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.490	117	8730	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
8] 1,1,1-Trichloroethane	4.483	97	2216	5.19 ppbv	95
11] Trichloroethene	4.950	130	1836	7.87 ppbv	97

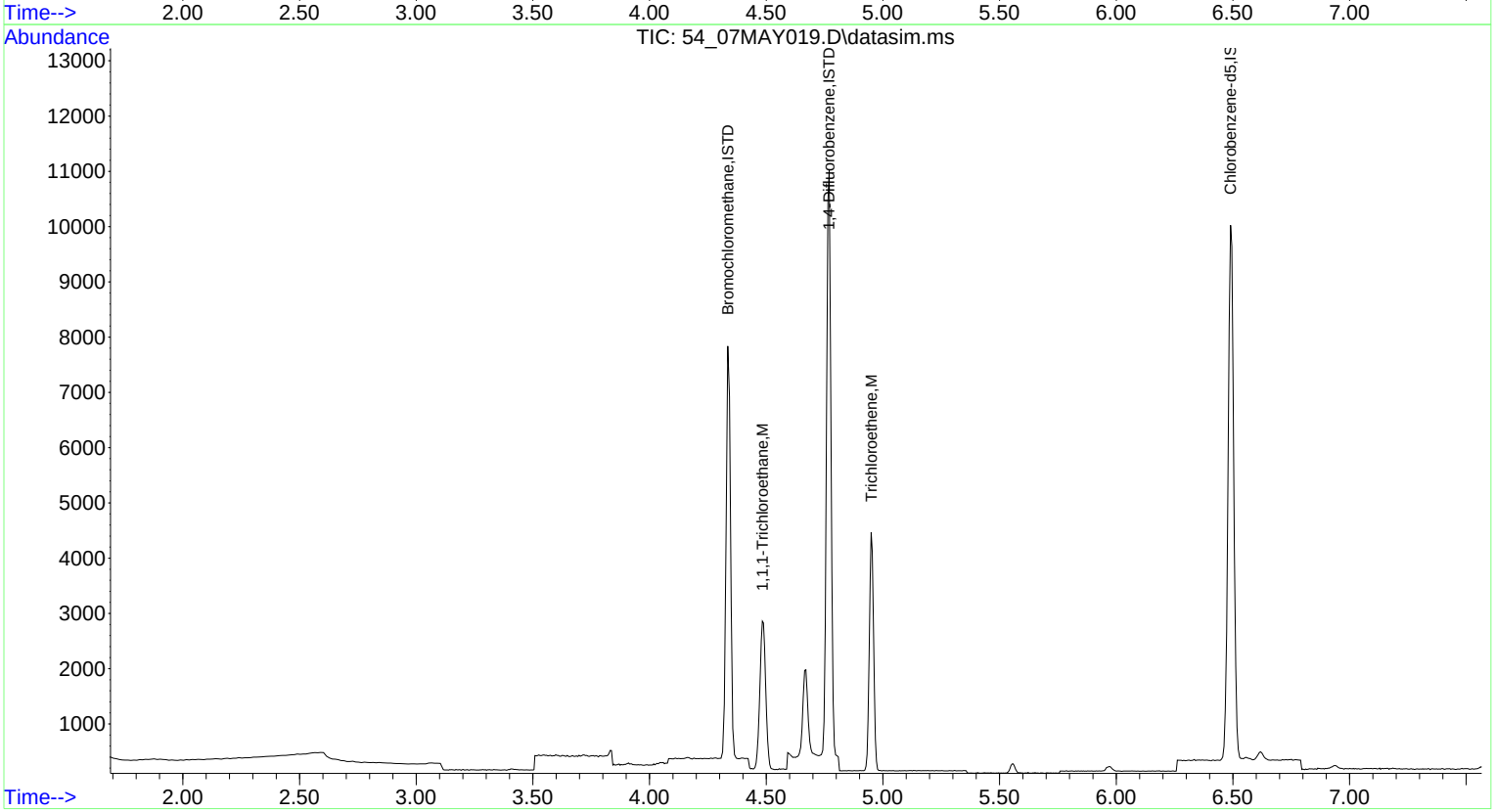
(#) = qualifier out of range (m) = manual integration (+) = signals summed

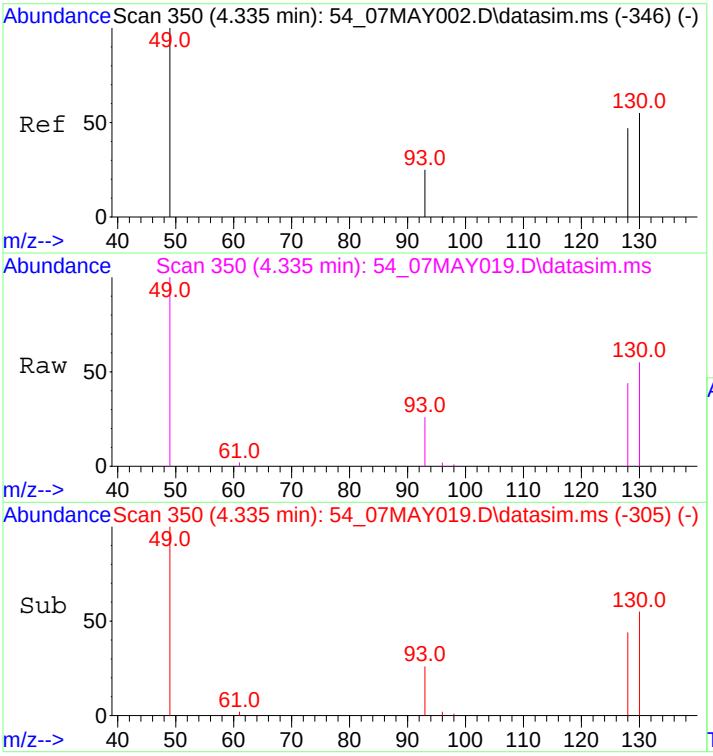
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140507\
Data File : 54 07MAY019.D
Acq On : 7 May 2014 3:15 pm
Operator : YHL
Sample : 02234 \ SGW-2
Misc : 5 ml \ 07 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 07 15:23:16 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Wed May 07 08:13:45 2014
Response via : Initial Calibration



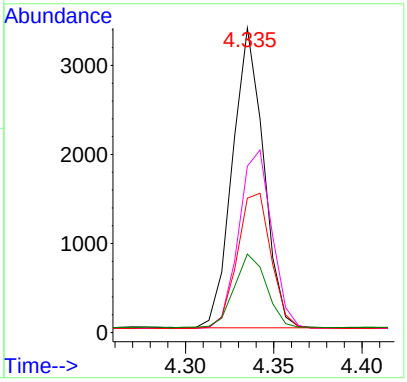


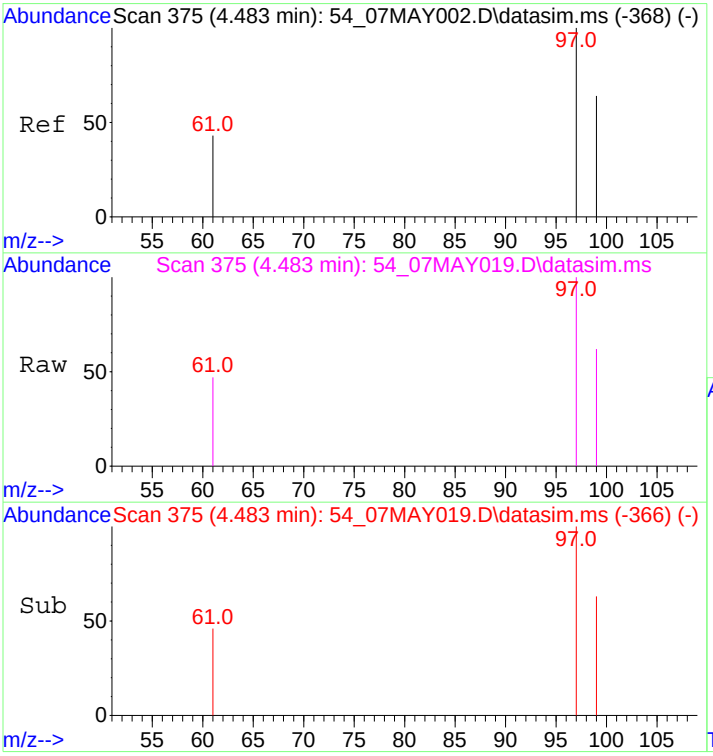


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 07MAY019.D
Acq: 7 May 2014 3:15 pm

Tgt Ion: 49 Resp: 4131

Ion	Ratio	Lower	Upper
49	100		
130	63.2	56.0	84.0
128	49.1	41.6	62.4
93	25.0	22.4	33.6

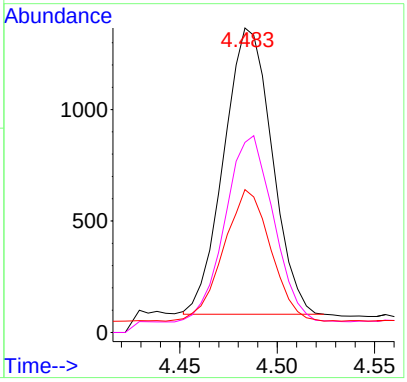


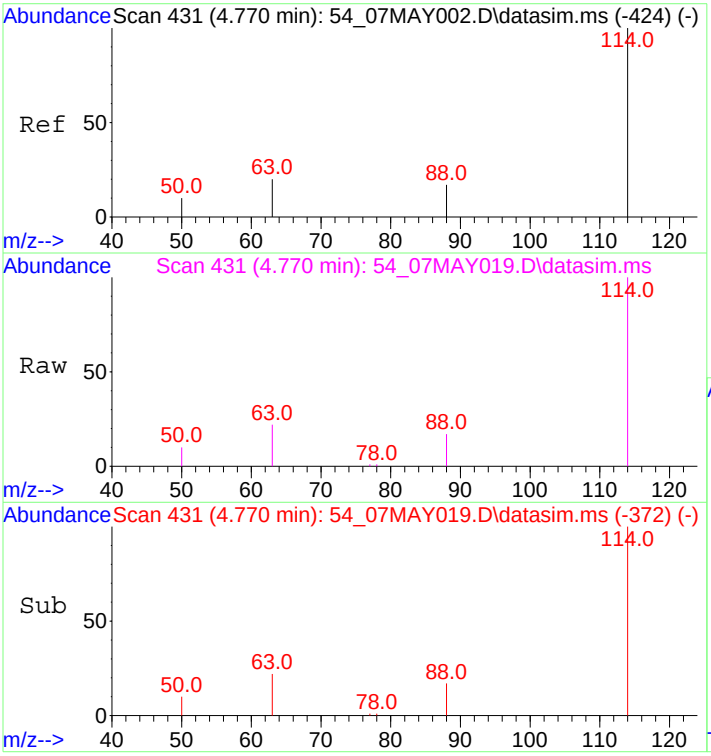


#8
1,1,1-Trichloroethane
Concen: 5.19 ppbv
RT: 4.483 min Scan# 375
Delta R.T. 0.000 min
Lab File: 54_07MAY019.D
Acq: 7 May 2014 3:15 pm

Tgt Ion: 97 Resp: 2216

Ion	Ratio	Lower	Upper
97	100		
99	64.1	52.1	78.1
61	44.7	30.2	45.4

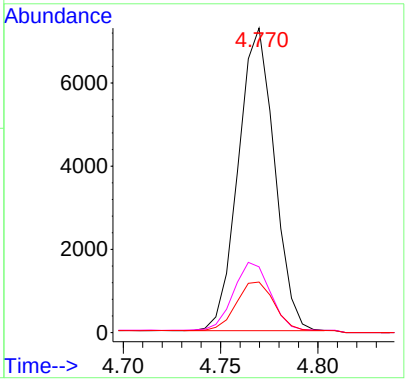


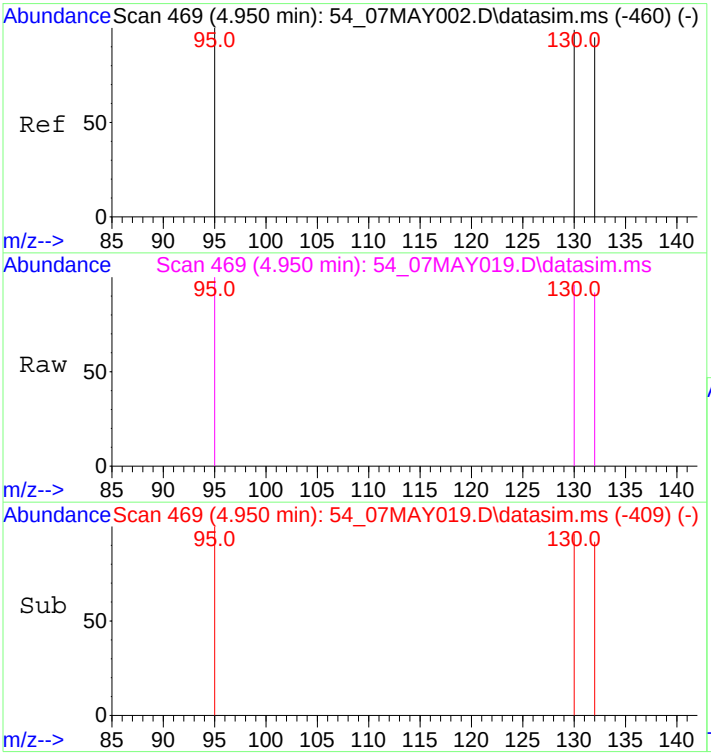


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 07MAY019.D
Acq: 7 May 2014 3:15 pm

Tgt Ion:114 Resp: 9375

Ion	Ratio	Lower	Upper
114	100		
63	23.0	17.6	26.4
88	16.7	13.6	20.4

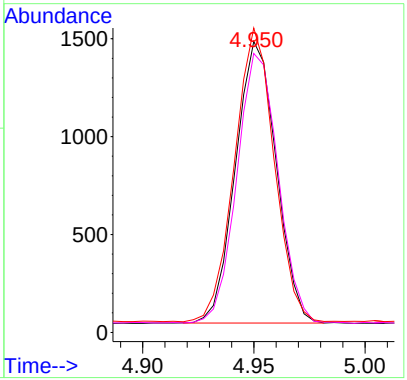


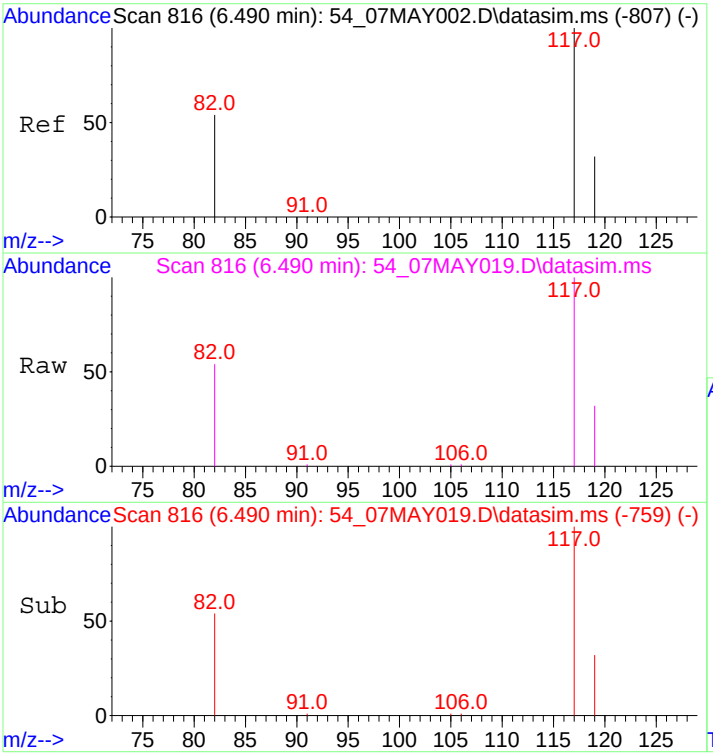


#11
Trichloroethene
Concen: 7.87 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_07MAY019.D
Acq: 7 May 2014 3:15 pm

Tgt Ion:130 Resp: 1836

Ion	Ratio	Lower	Upper
130	100		
132	96.1	76.9	115.3
95	101.6	76.5	114.7

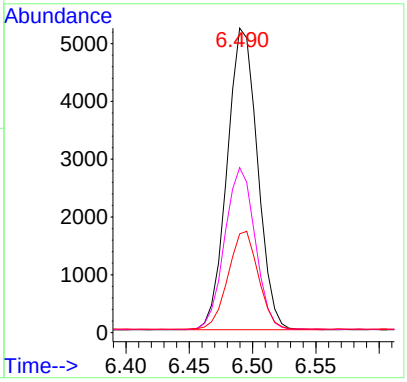




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. 0.000 min
Lab File: 54 07MAY019.D
Acq: 7 May 2014 3:15 pm

Tgt Ion:117 Resp: 8730

Ion	Ratio	Lower	Upper
117	100		
82	53.6	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY004.D
Acq On : 8 May 2014 7:45 am
Operator : YHL
Sample : 20140508-MB \ Method Blank
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:54:09 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3881	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	8897	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.490	117	8111	10.00	ppbv	0.00

System Monitoring Compounds

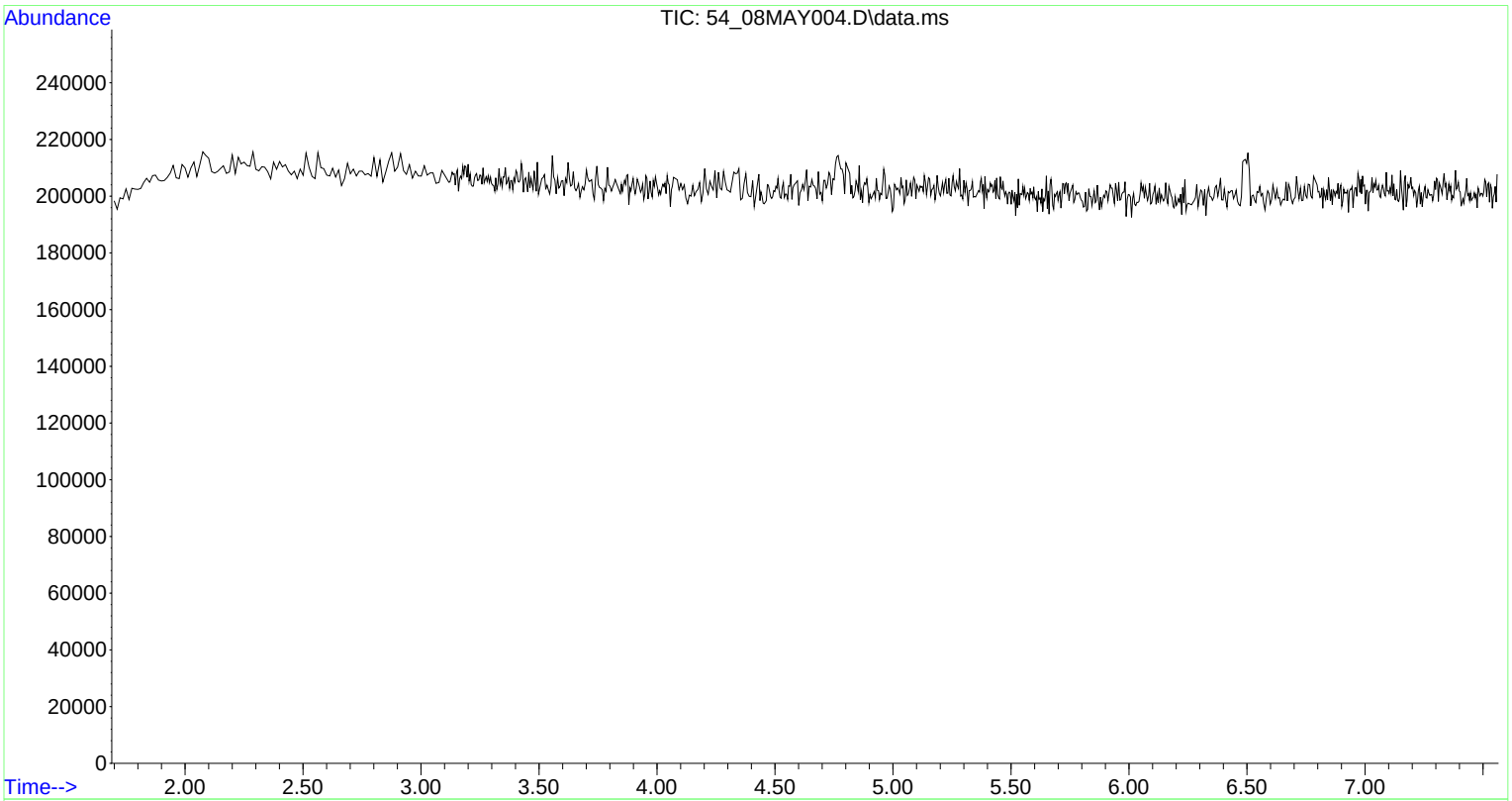
Target Compounds	Qvalue

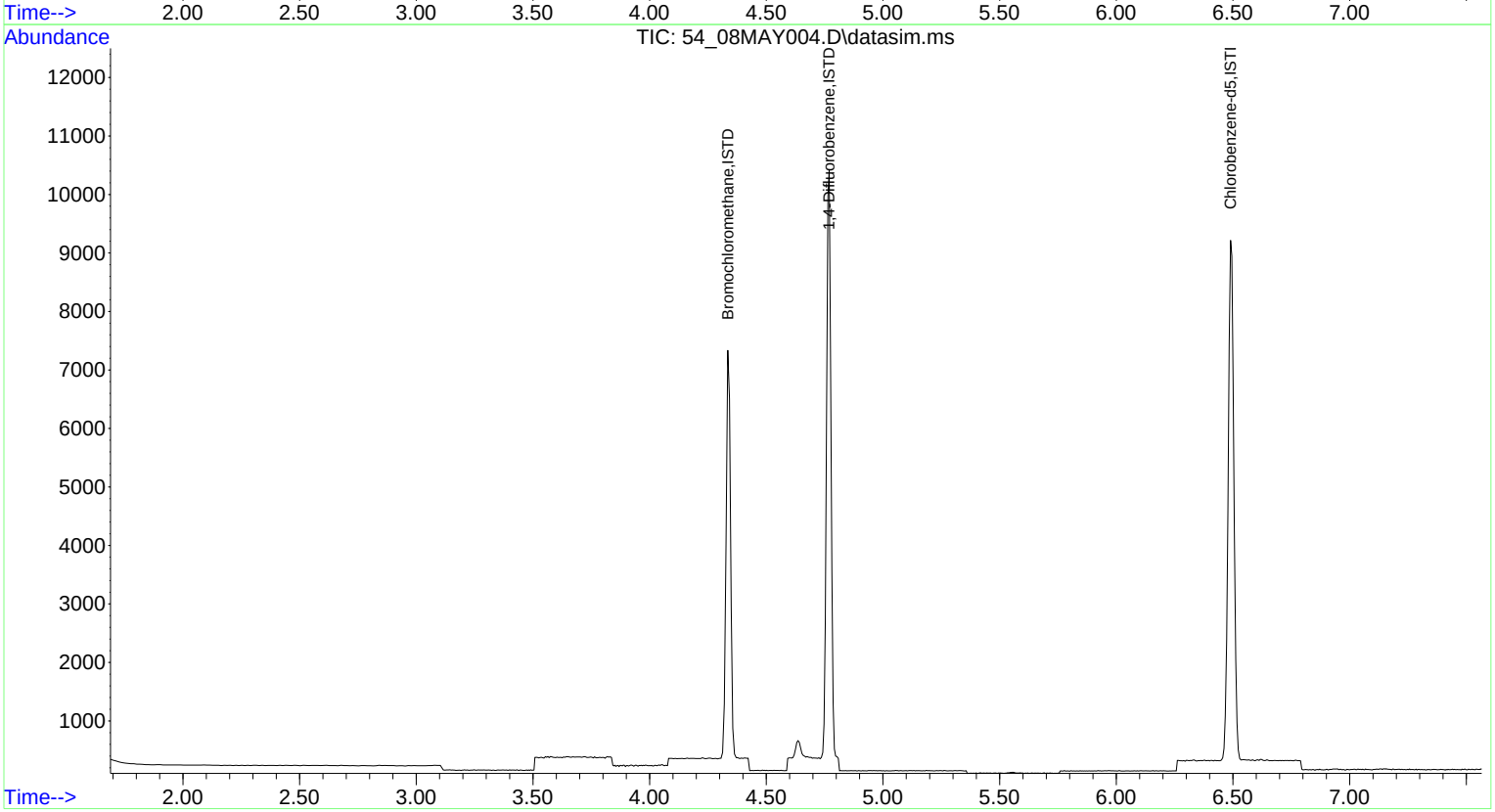
(#) = qualifier out of range (m) = manual integration (+) = signals summed

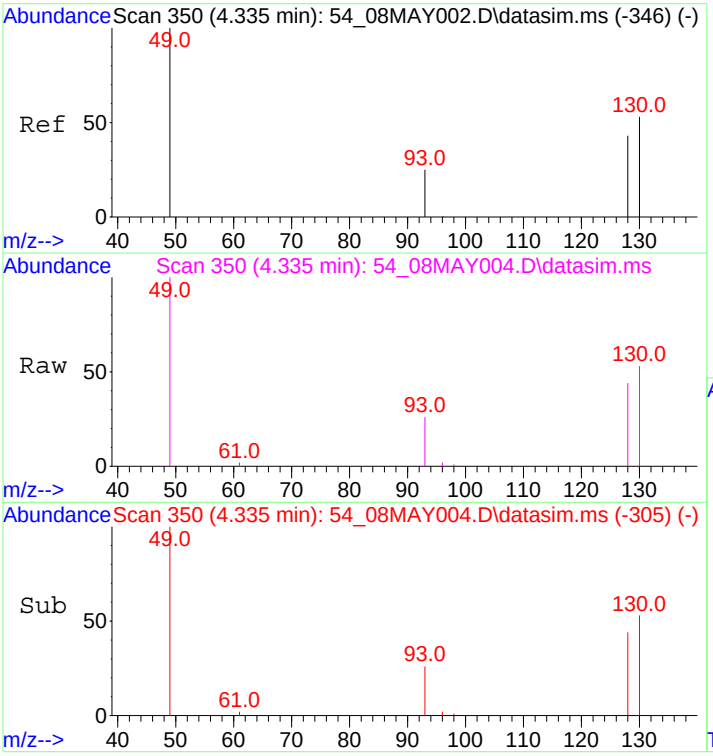
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY004.D
Acq On : 8 May 2014 7:45 am
Operator : YHL
Sample : 20140508-MB \ Method Blank
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 07:54:09 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjWed May 07 08:13:47 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



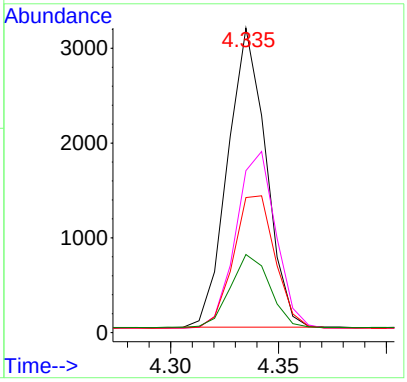


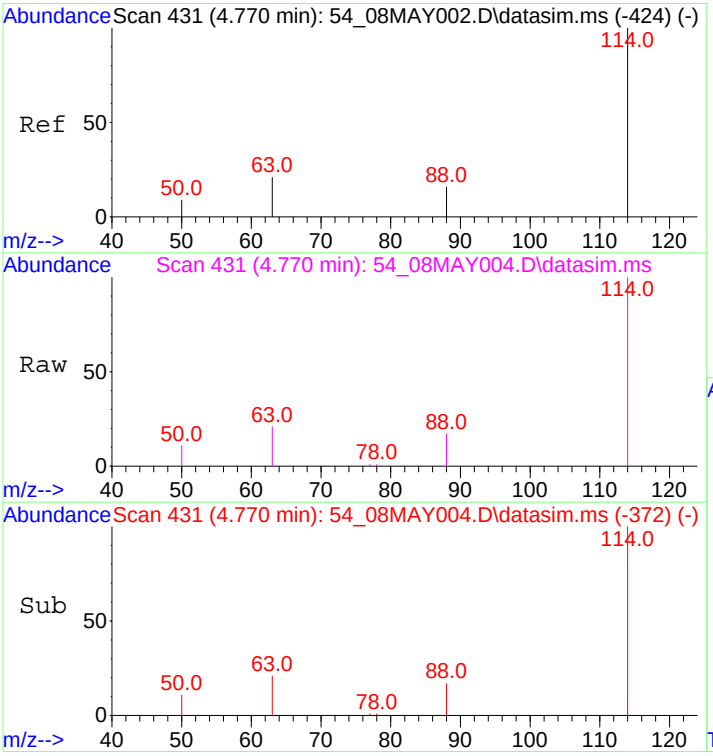


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY004.D
Acq: 8 May 2014 7:45 am

Tgt Ion: 49 Resp: 3881

Ion	Ratio	Lower	Upper
49	100		
130	61.8	56.0	84.0
128	48.3	41.6	62.4
93	25.3	22.4	33.6

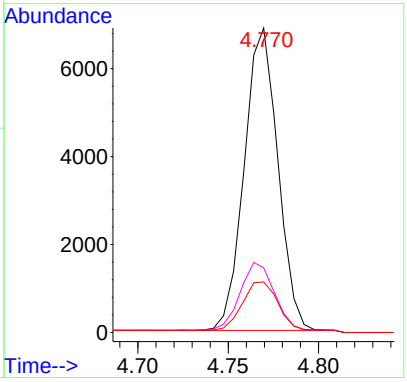


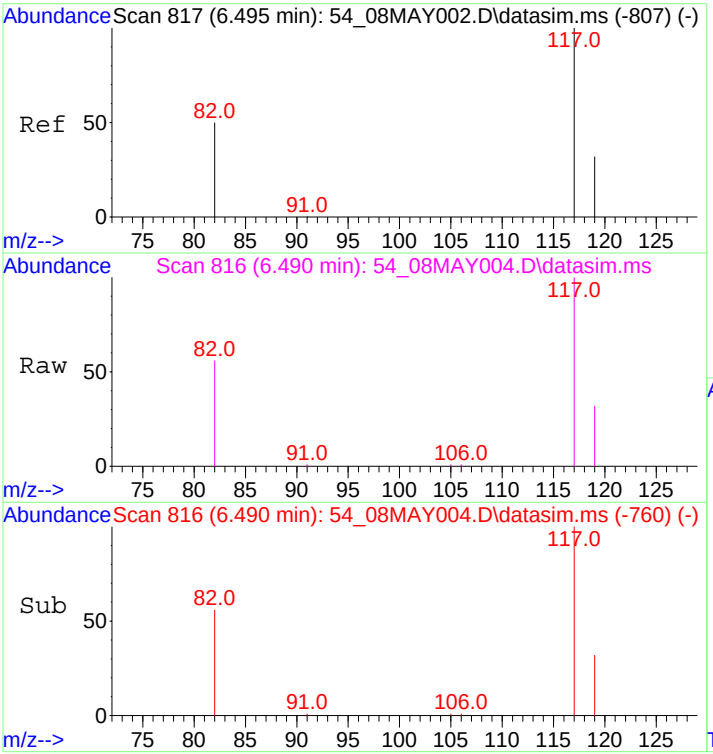


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_08MAY004.D
Acq: 8 May 2014 7:45 am

Tgt Ion:114 Resp: 8897

Ion	Ratio	Lower	Upper
114	100		
63	22.7	17.6	26.4
88	16.8	13.6	20.4

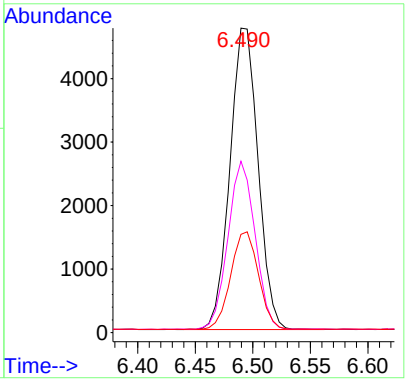




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.005 min
Lab File: 54 08MAY004.D
Acq: 8 May 2014 7:45 am

Tgt Ion:117 Resp: 8111

Ion	Ratio	Lower	Upper
117	100		
82	53.6	38.0	57.0
119	31.8	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY006.D
Acq On : 8 May 2014 10:01 am
Operator : YHL
Sample : 02235 \ F6-067
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:08:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

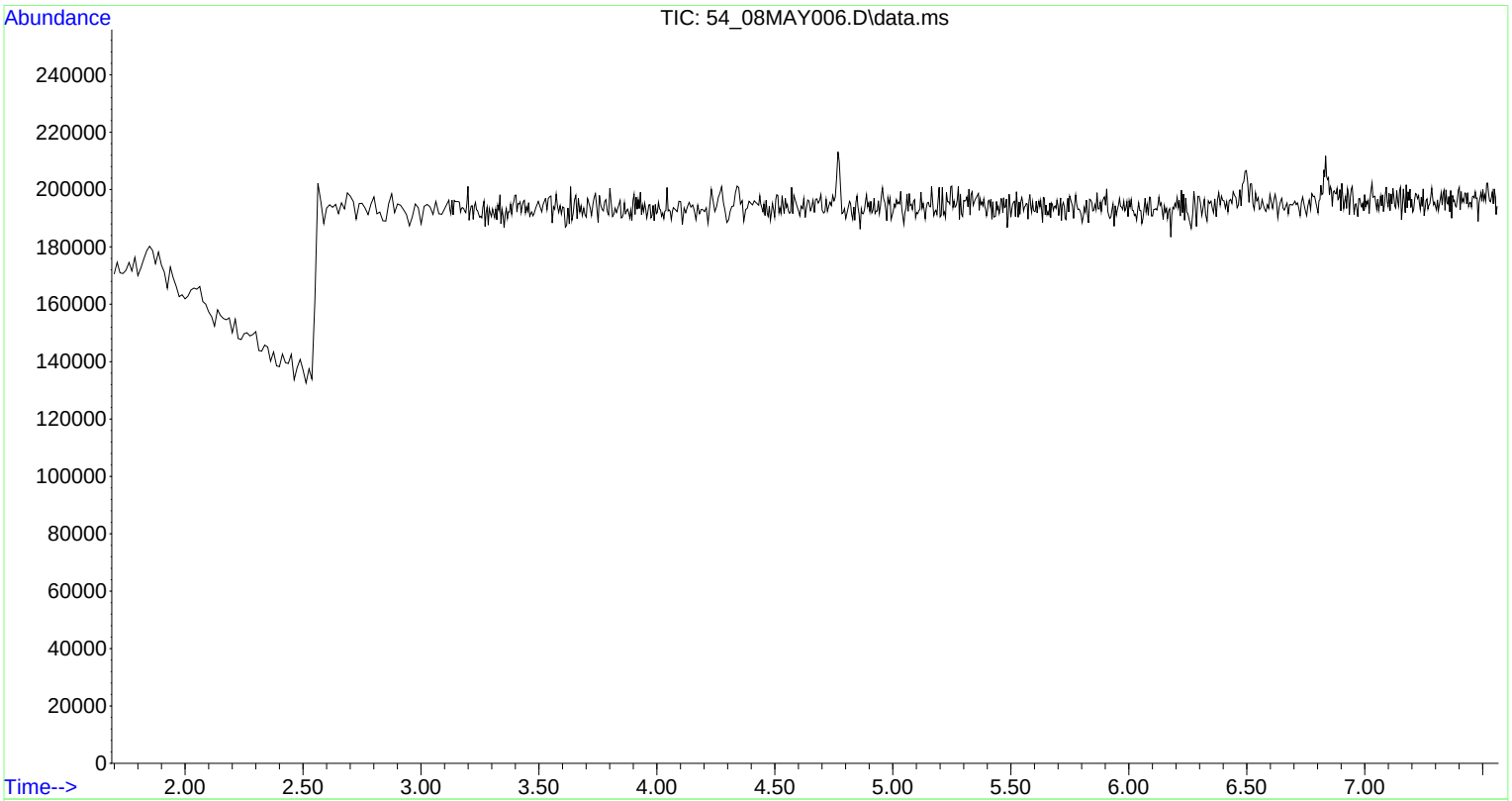
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4038	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9360	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8580	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	280	0.54	ppbv	99

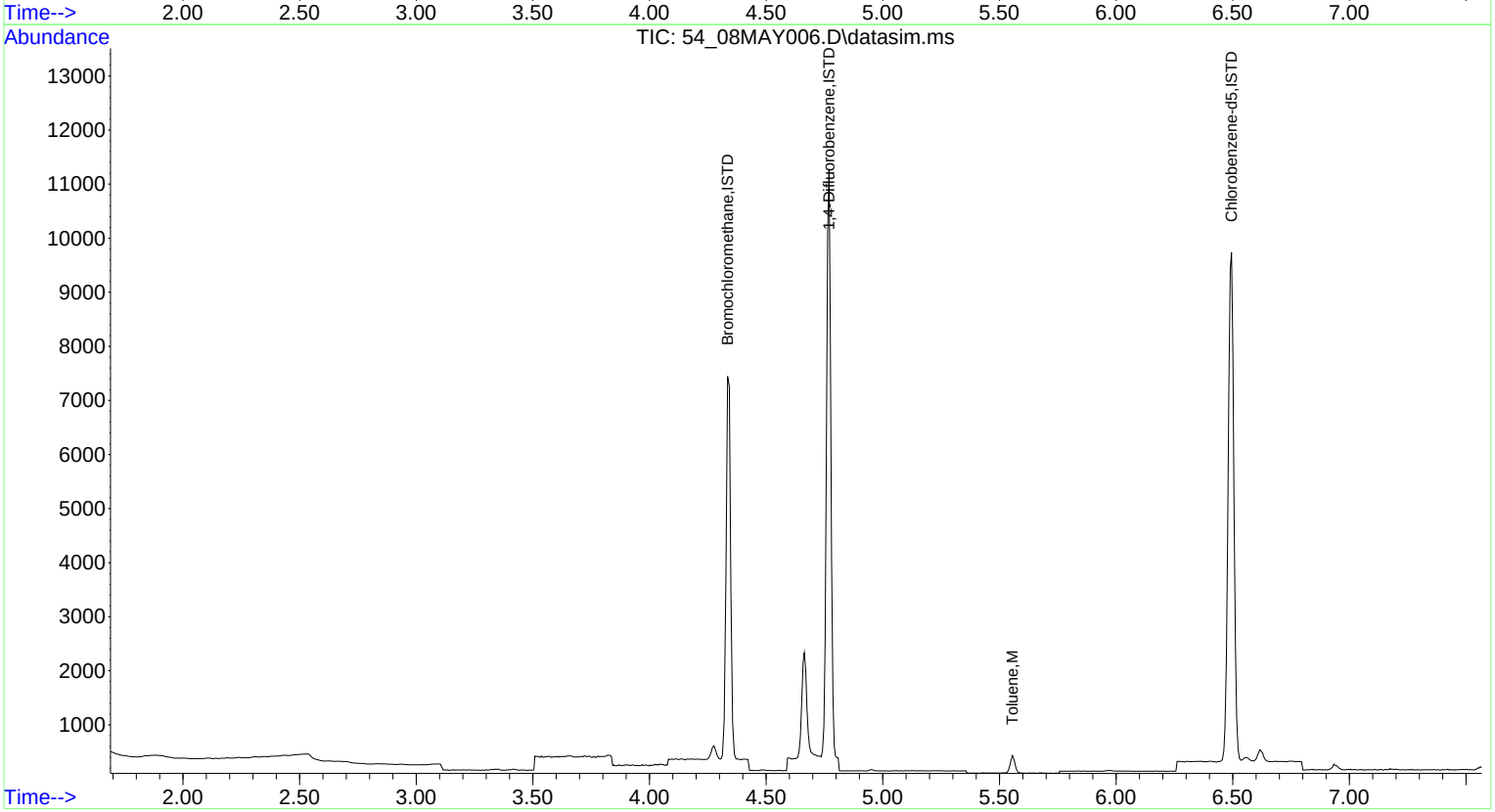
(#) = qualifier out of range (m) = manual integration (+) = signals summed

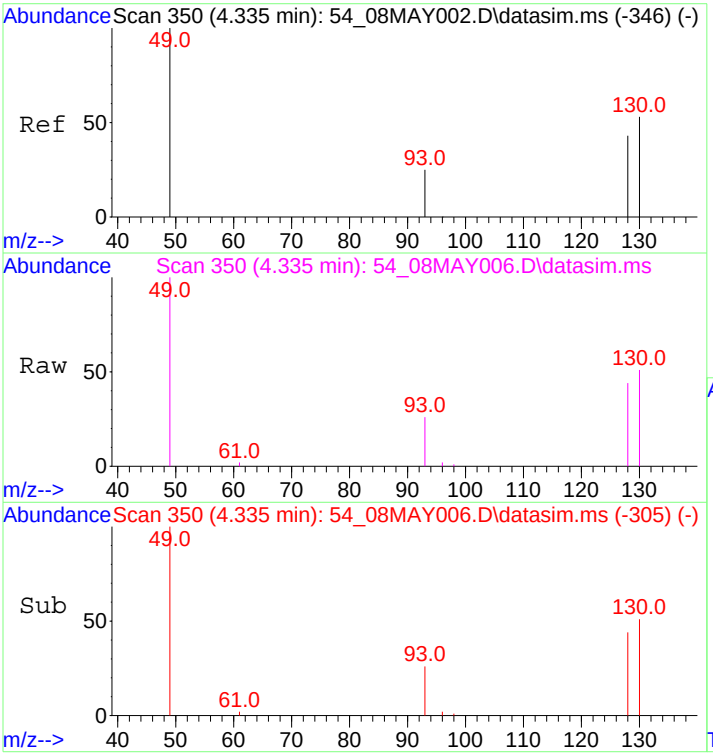
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY006.D
Acq On : 8 May 2014 10:01 am
Operator : YHL
Sample : 02235 \ F6-067
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:08:05 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



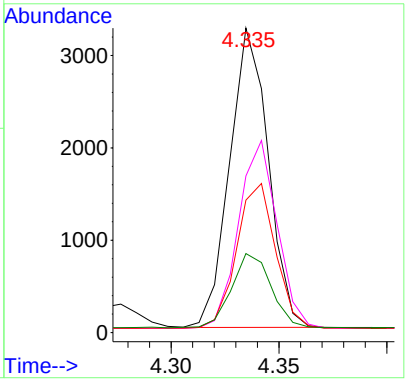


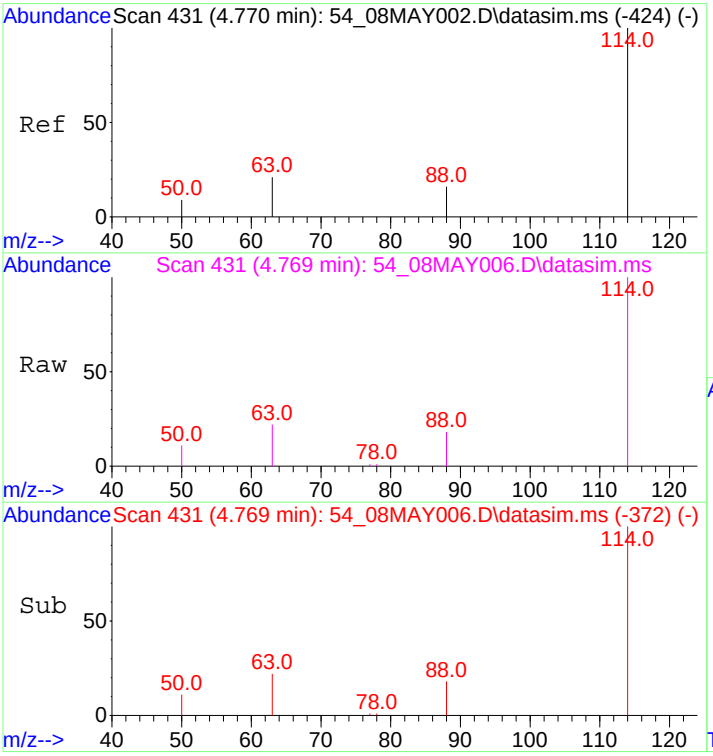


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY006.D
Acq: 8 May 2014 10:01 am

Tgt Ion: 49 Resp: 4038

Ion	Ratio	Lower	Upper
49	100		
130	62.8	56.0	84.0
128	48.7	41.6	62.4
93	25.1	22.4	33.6

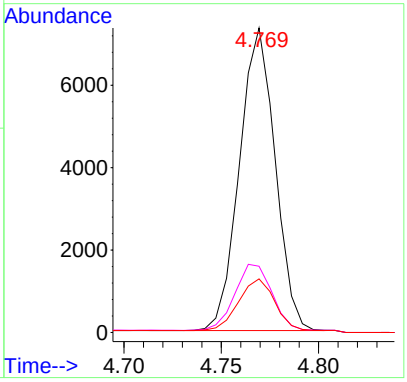


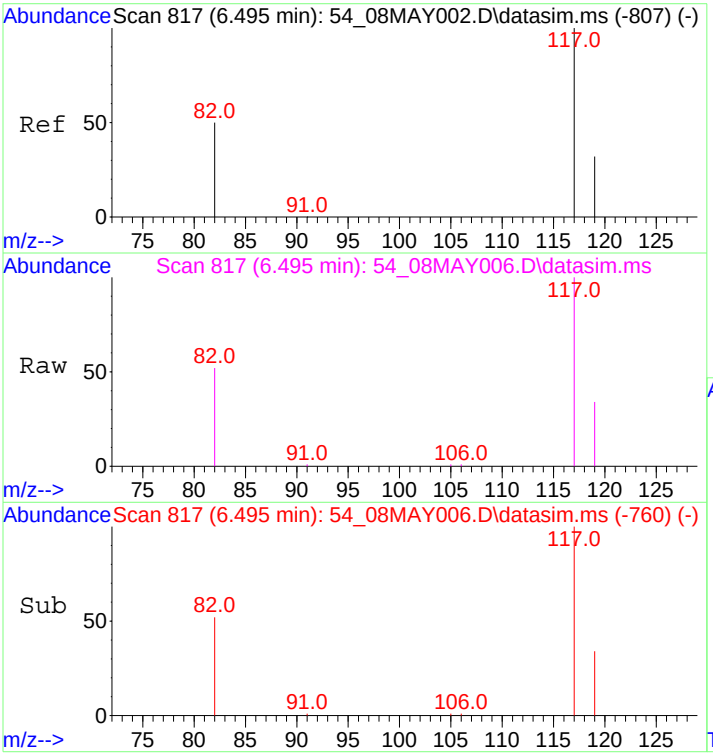


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_08MAY006.D
Acq: 8 May 2014 10:01 am

Tgt Ion:114 Resp: 9360

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	17.2	13.6	20.4

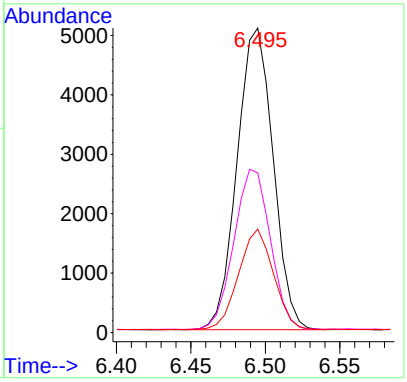


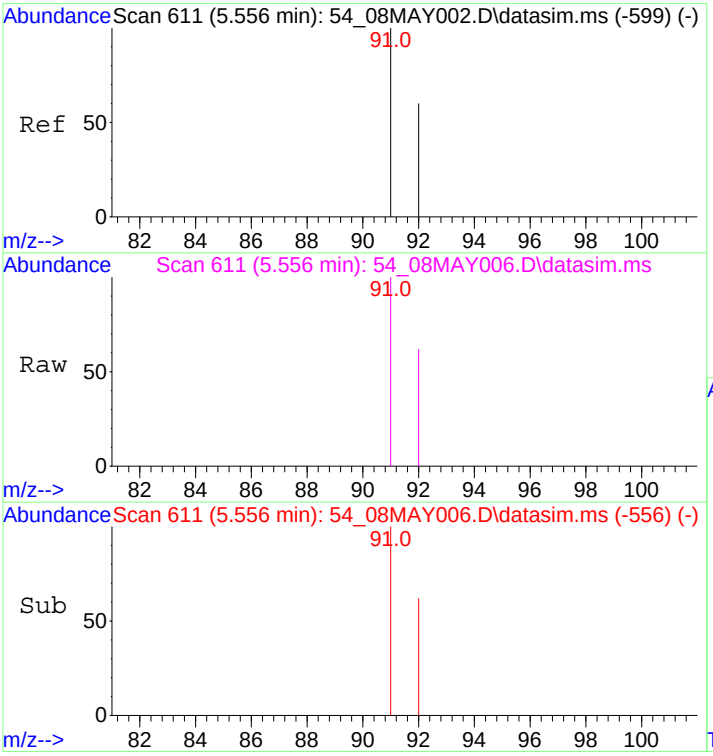


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 08MAY006.D
Acq: 8 May 2014 10:01 am

Tgt Ion:117 Resp: 8580

Ion	Ratio	Lower	Upper
117	100		
82	53.4	38.0	57.0
119	32.2	27.0	40.4

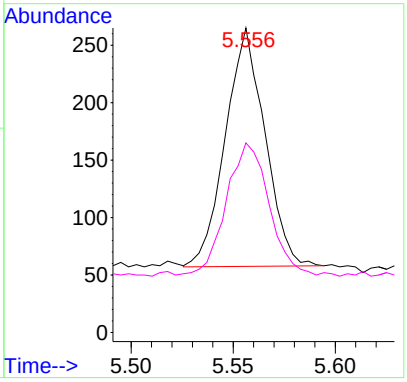




#13
Toluene
Concen: 0.54 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_08MAY006.D
Acq: 8 May 2014 10:01 am

Tgt Ion: 91 Resp: 280

Ion	Ratio	Lower	Upper
91	100		
92	60.7	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY007.D
Acq On : 8 May 2014 10:13 am
Operator : YHL
Sample : 02236 \ F6-065
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:19:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

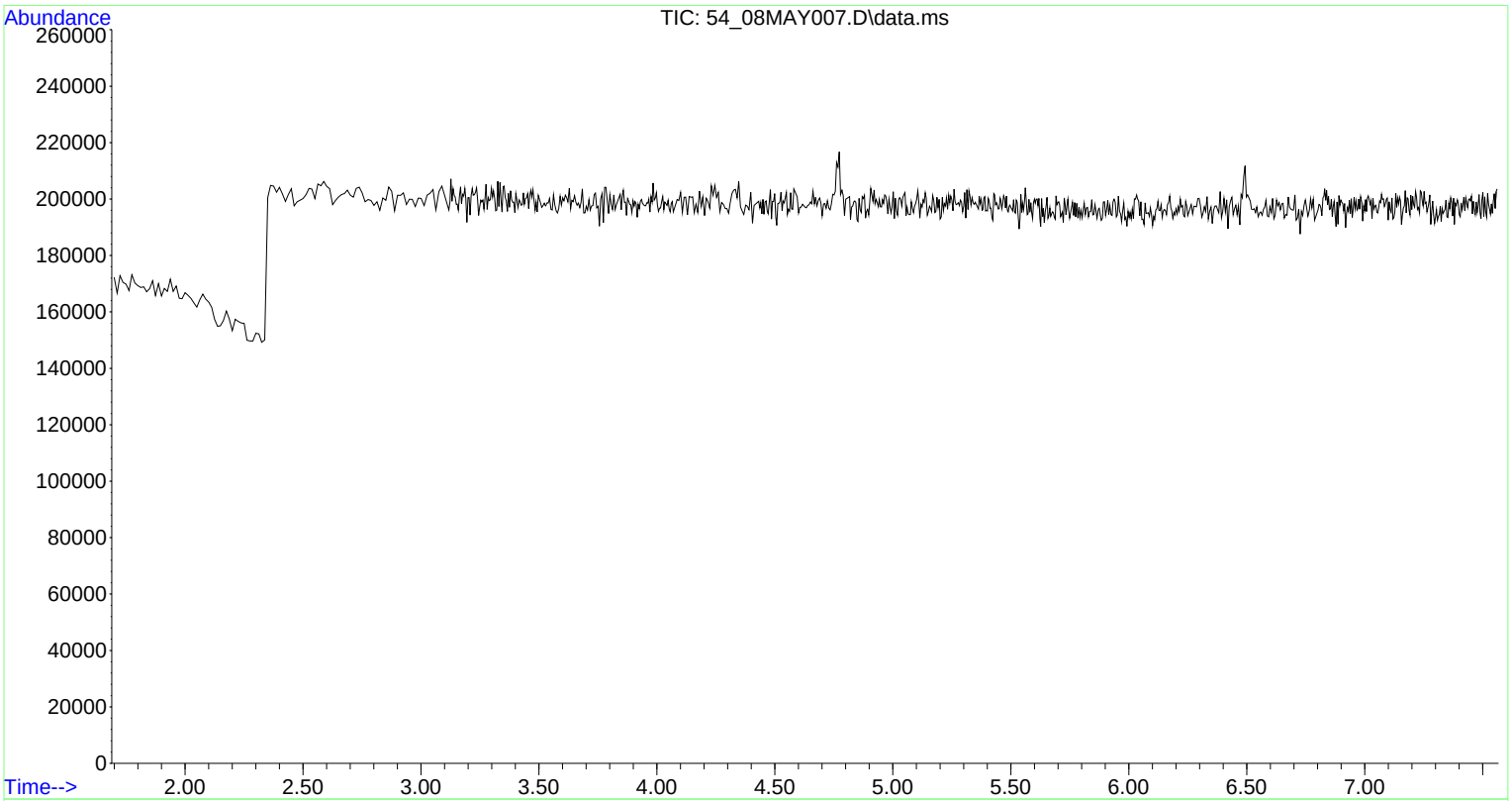
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3737	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	8596	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	7787	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	456	0.98	ppbv	97
16] m,p-Xylene	6.617	91	307	0.67	ppbv	92

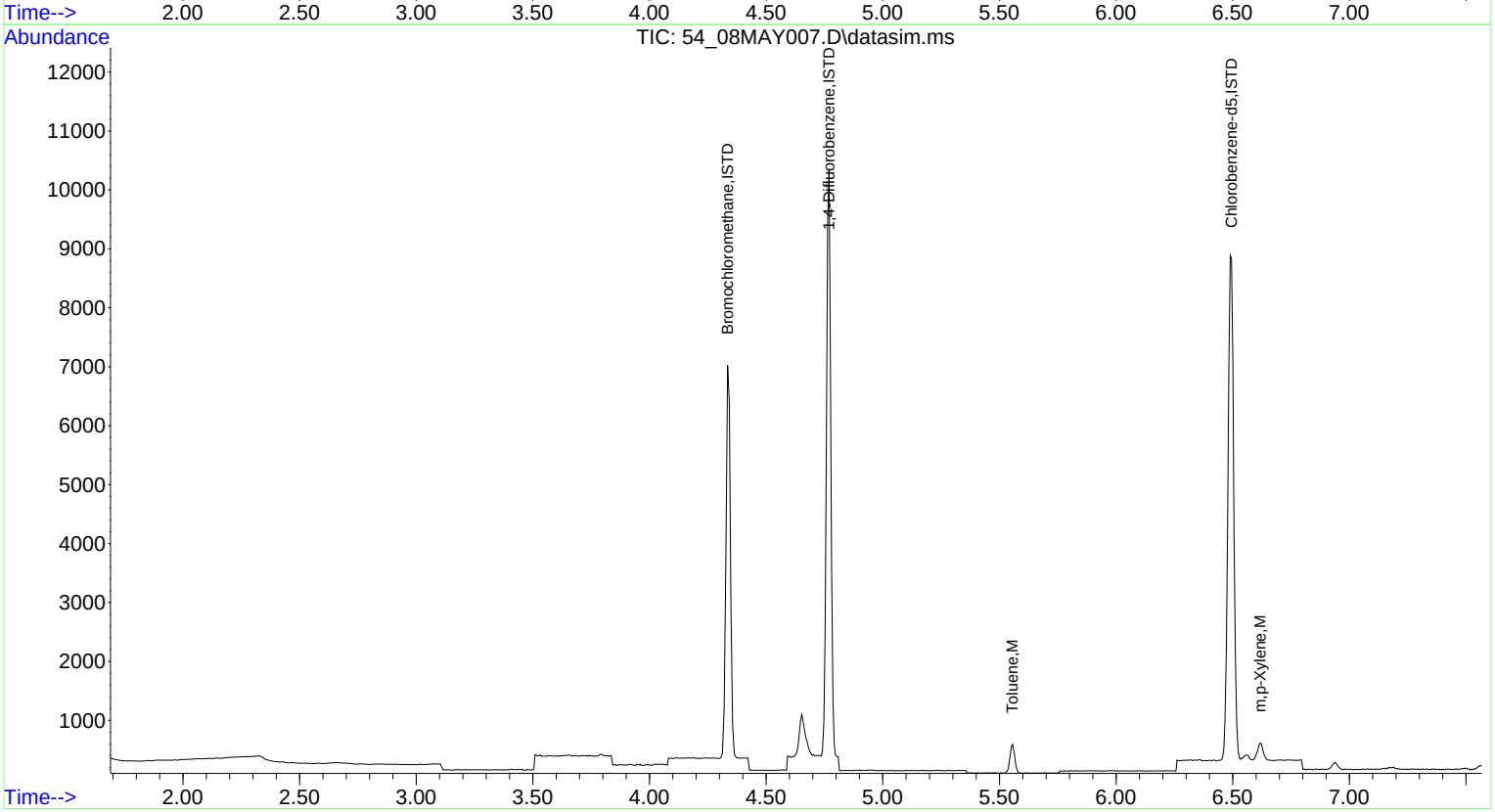
(#) = qualifier out of range (m) = manual integration (+) = signals summed

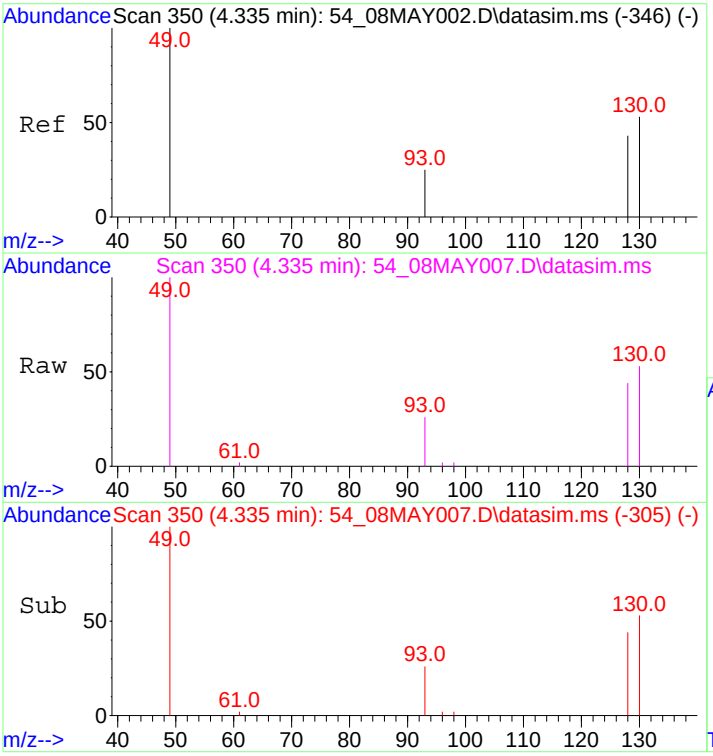
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY007.D
Acq On : 8 May 2014 10:13 am
Operator : YHL
Sample : 02236 \ F6-065
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:19:52 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



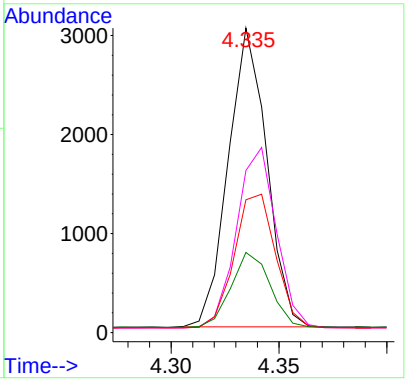


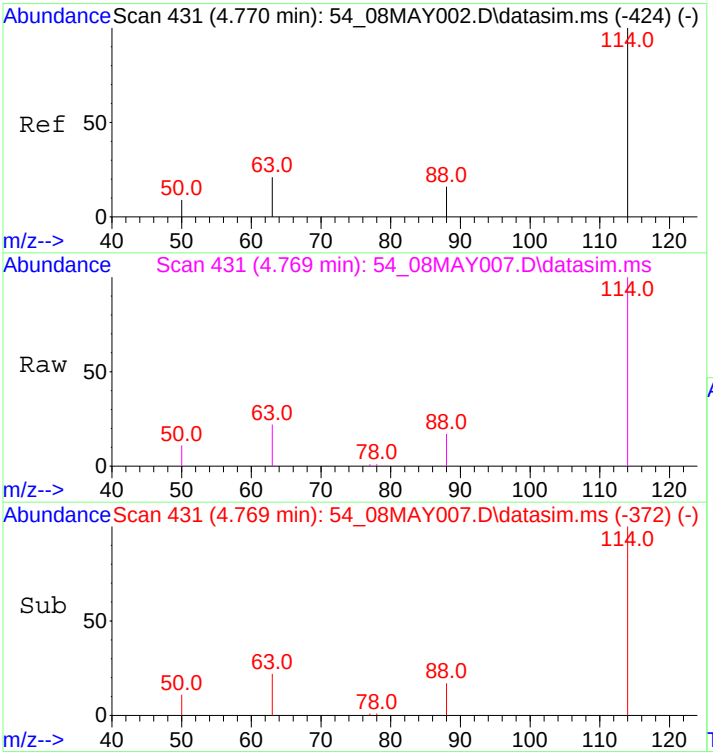


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY007.D
Acq: 8 May 2014 10:13 am

Tgt Ion: 49 Resp: 3737

Ion	Ratio	Lower	Upper
49	100		
130	62.5	56.0	84.0
128	48.3	41.6	62.4
93	25.6	22.4	33.6

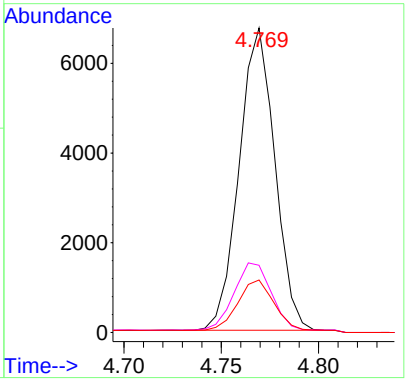


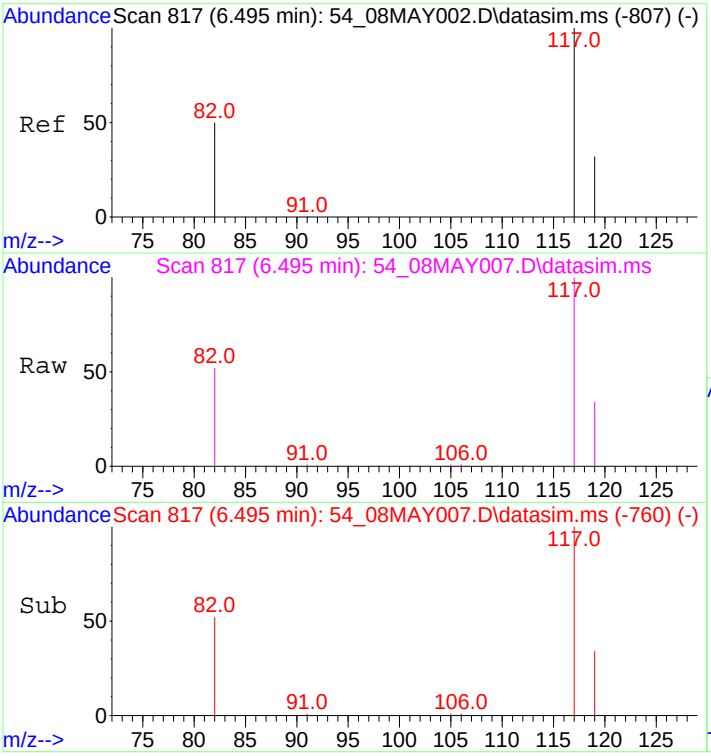


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_08MAY007.D
Acq: 8 May 2014 10:13 am

Tgt Ion:114 Resp: 8596

Ion	Ratio	Lower	Upper
114	100		
63	23.1	17.6	26.4
88	16.7	13.6	20.4

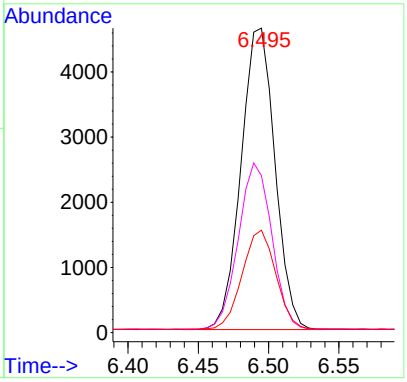


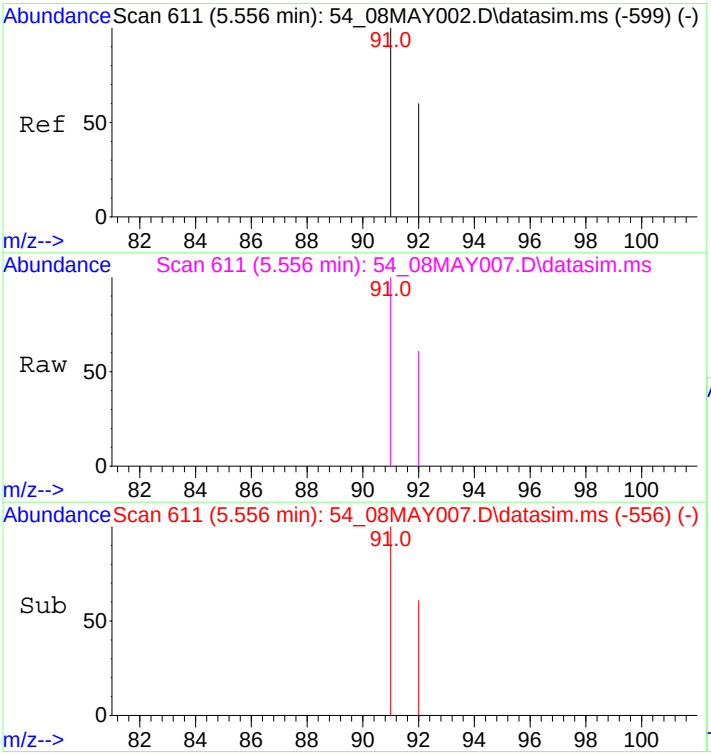


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 08MAY007.D
Acq: 8 May 2014 10:13 am

Tgt Ion:117 Resp: 7787

Ion	Ratio	Lower	Upper
117	100		
82	54.4	38.0	57.0
119	32.7	27.0	40.4

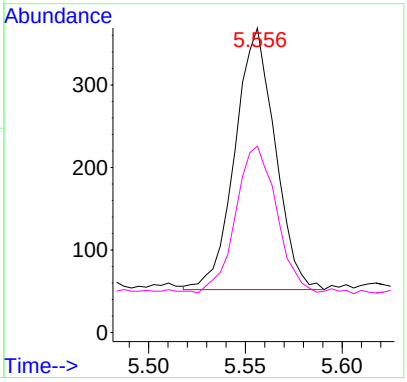


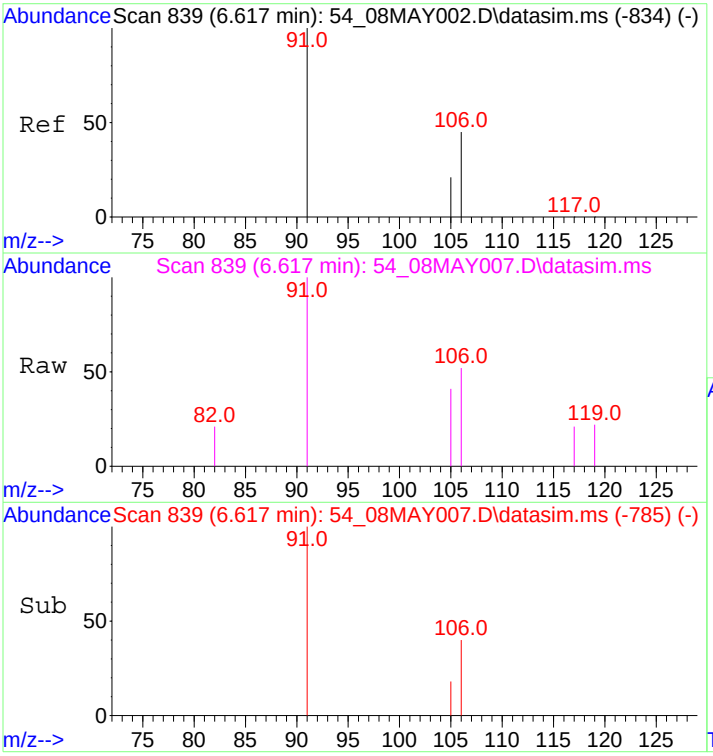


#13
Toluene
Concen: 0.98 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_08MAY007.D
Acq: 8 May 2014 10:13 am

Tgt Ion: 91 Resp: 456

Ion	Ratio	Lower	Upper
91	100		
92	57.5	47.8	71.8

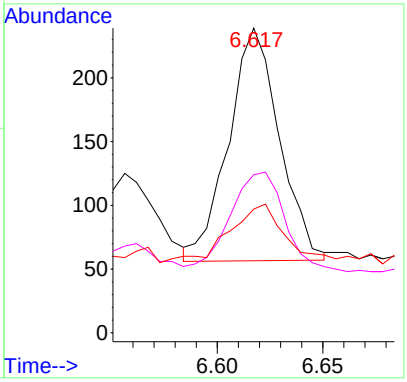




#16
m,p-Xylene
Concen: 0.67 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 08MAY007.D
Acq: 8 May 2014 10:13 am

Tgt Ion: 91 Resp: 307

Ion	Ratio	Lower	Upper
91	100		
106	45.9	43.1	64.7
105	22.1	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY008.D
Acq On : 8 May 2014 10:24 am
Operator : YHL
Sample : 02236 \ F6-065 Dup
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:30:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

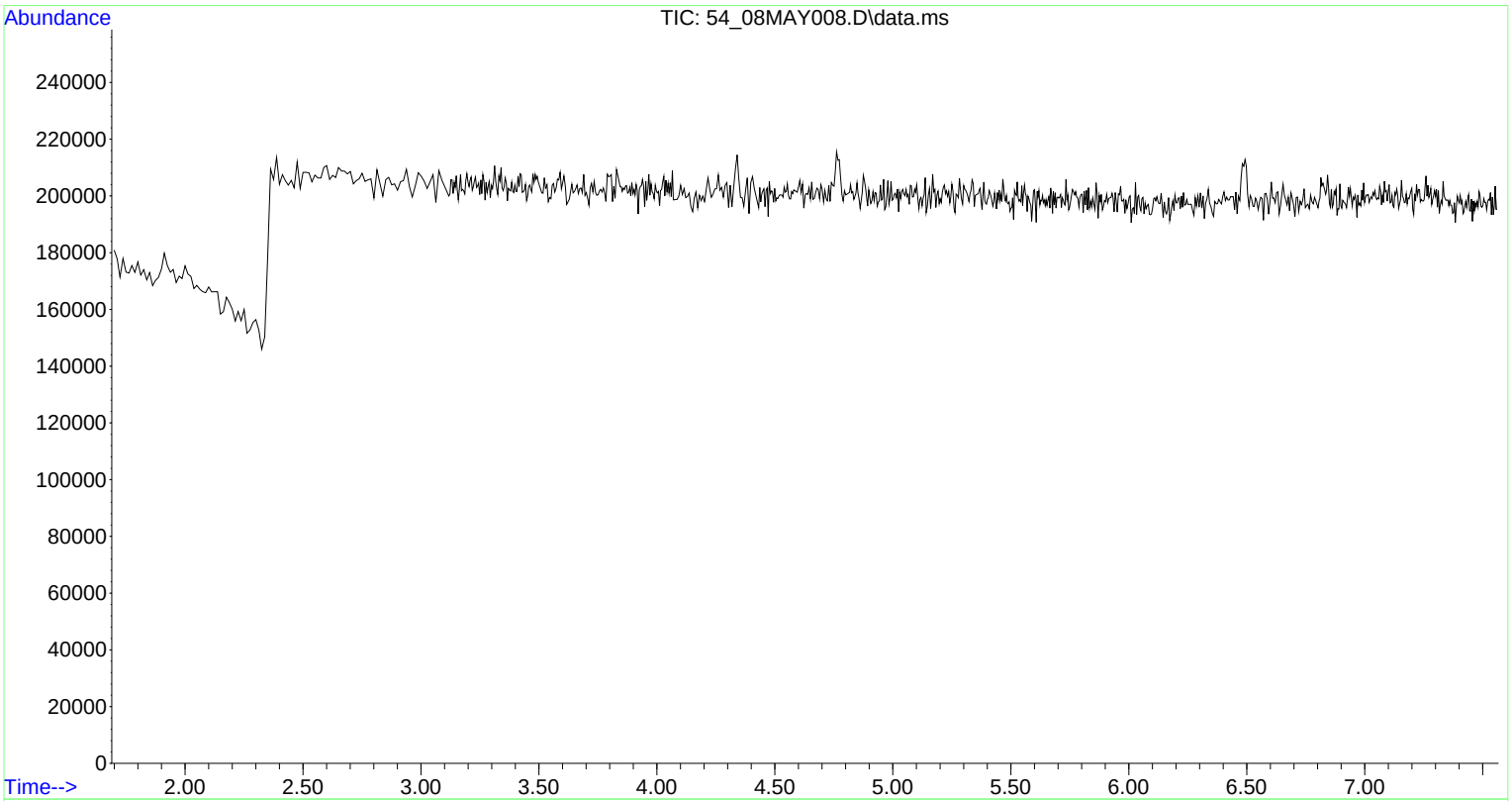
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	4038	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9284	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.489	117	8670	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
13] Toluene	5.552	91	459	0.88 ppbv	99
16] m,p-Xylene	6.612	91	304	0.60 ppbv	91

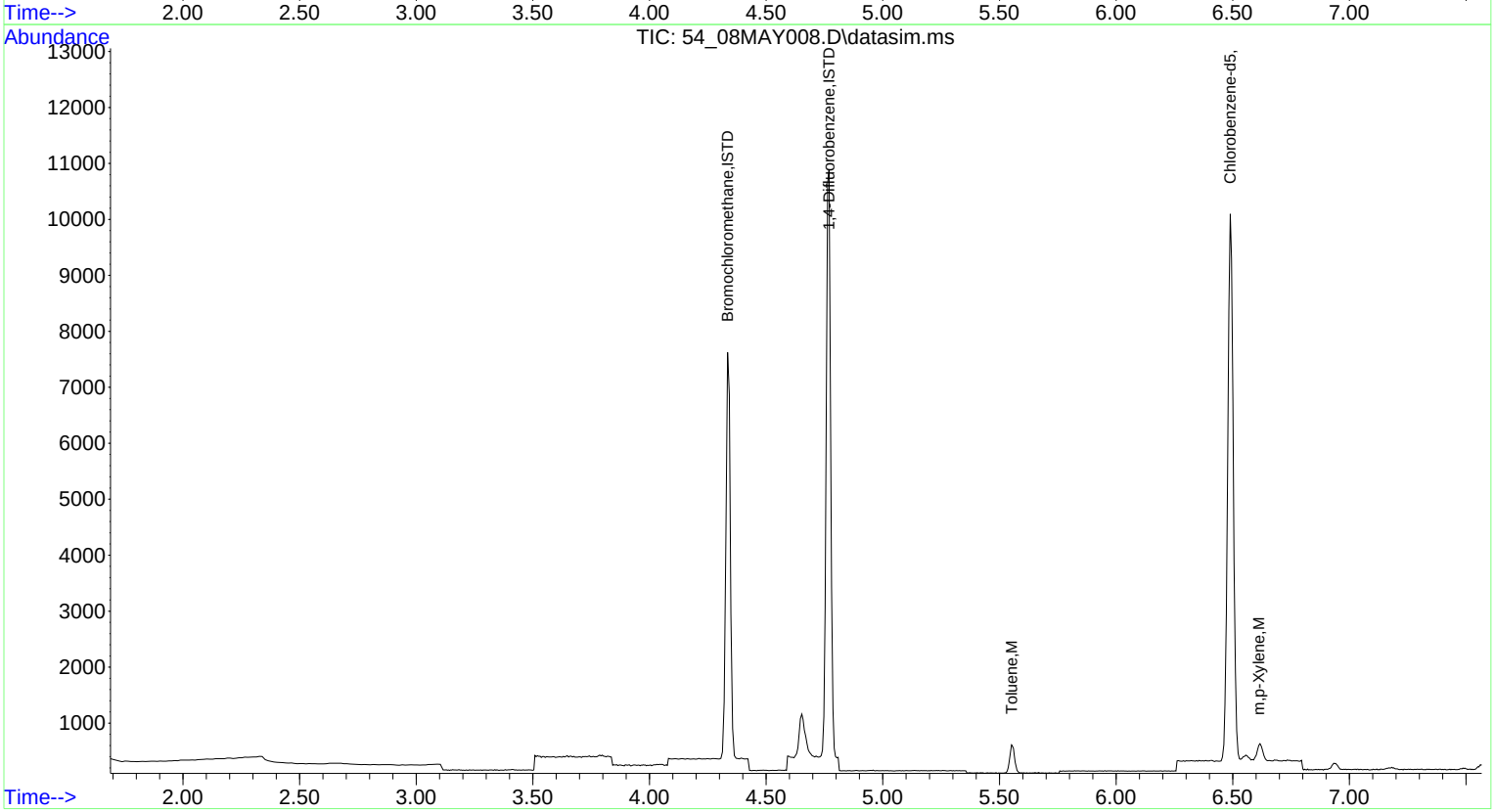
(#) = qualifier out of range (m) = manual integration (+) = signals summed

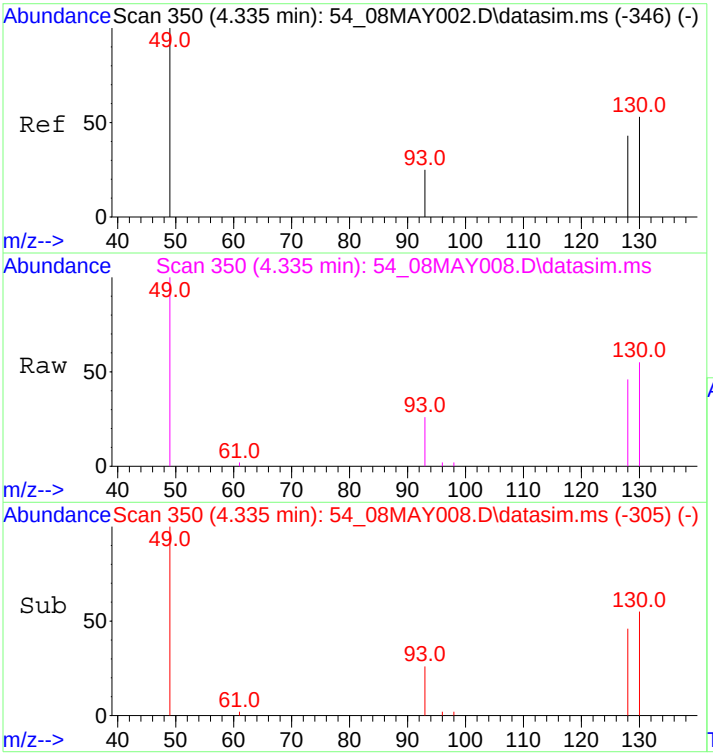
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY008.D
Acq On : 8 May 2014 10:24 am
Operator : YHL
Sample : 02236 \ F6-065 Dup
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:30:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



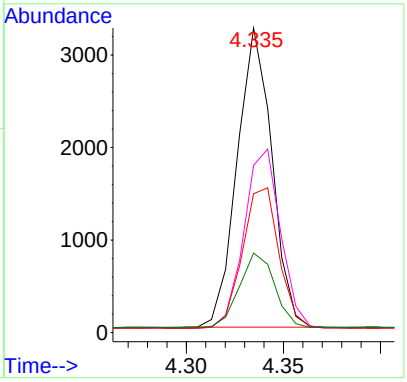


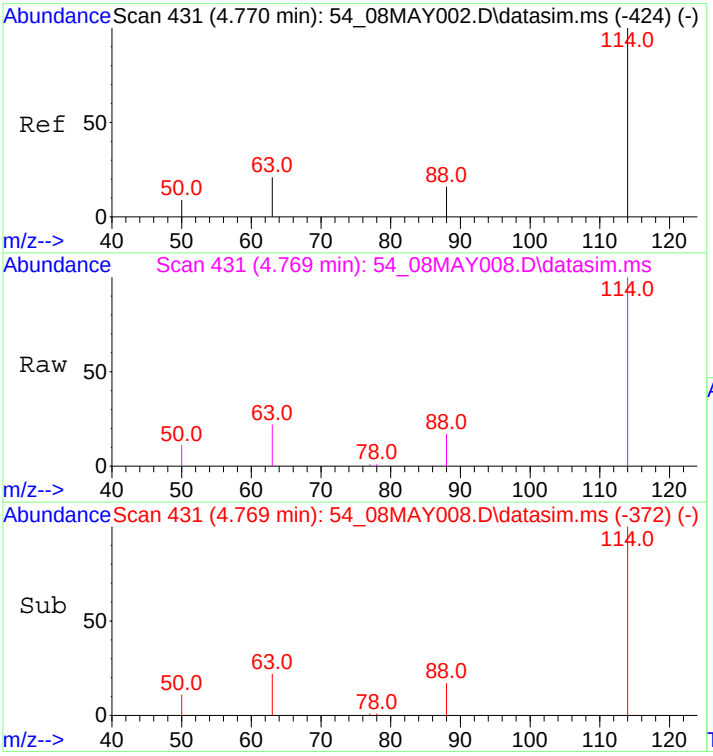


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY008.D
Acq: 8 May 2014 10:24 am

Tgt Ion: 49 Resp: 4038

Ion	Ratio	Lower	Upper
49	100		
130	62.7	56.0	84.0
128	49.4	41.6	62.4
93	25.2	22.4	33.6

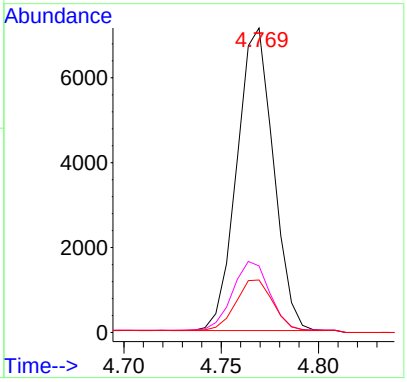


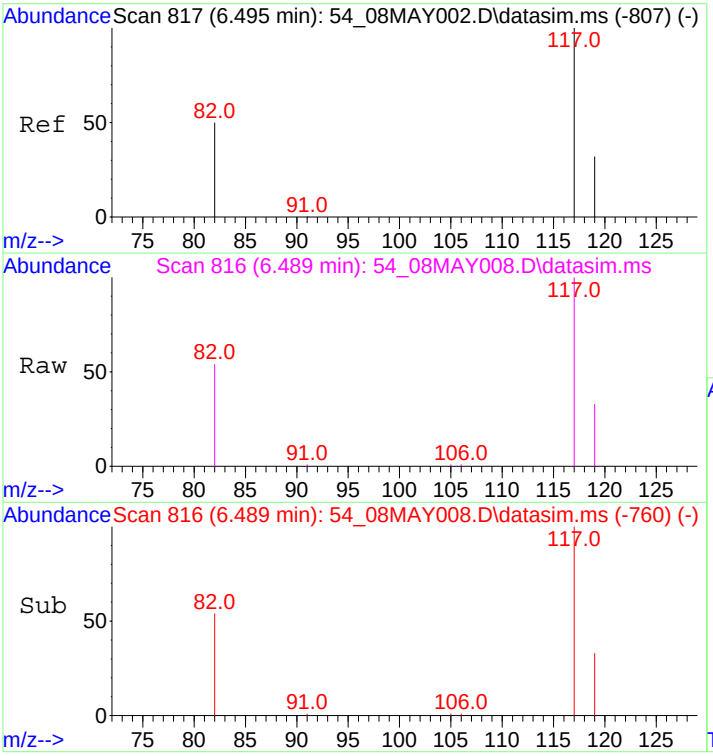


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_08MAY008.D
Acq: 8 May 2014 10:24 am

Tgt Ion:114 Resp: 9284

Ion	Ratio	Lower	Upper
114	100		
63	23.1	17.6	26.4
88	17.0	13.6	20.4

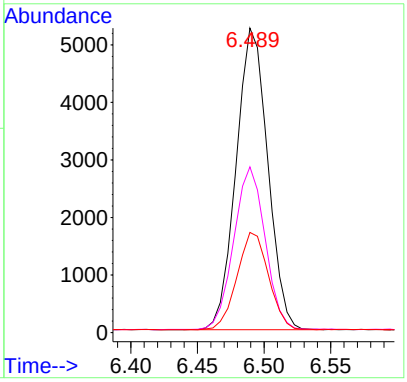


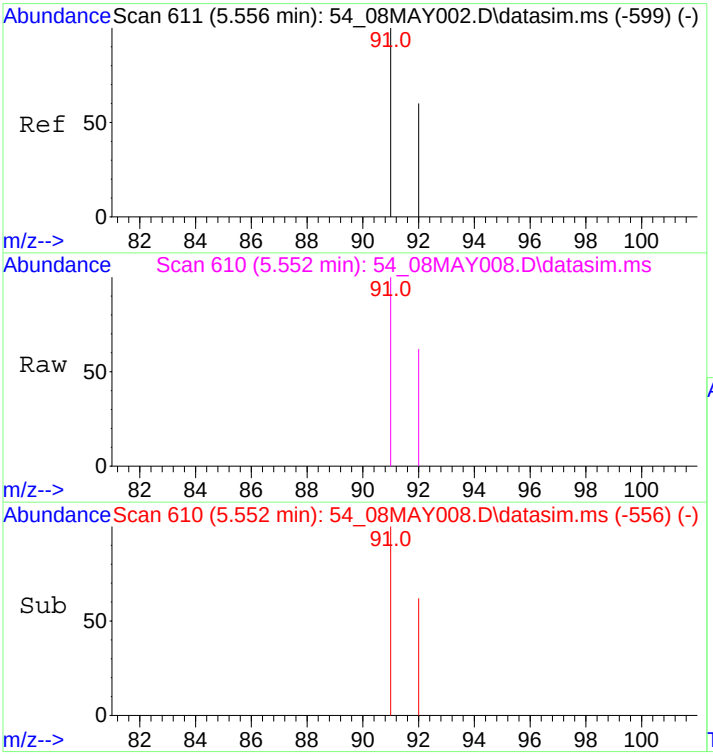


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY008.D
Acq: 8 May 2014 10:24 am

Tgt Ion:117 Resp: 8670

Ion	Ratio	Lower	Upper
117	100		
82	53.3	38.0	57.0
119	32.1	27.0	40.4

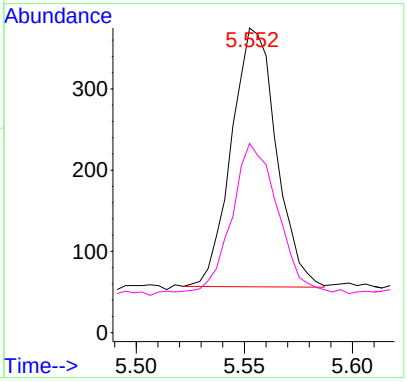


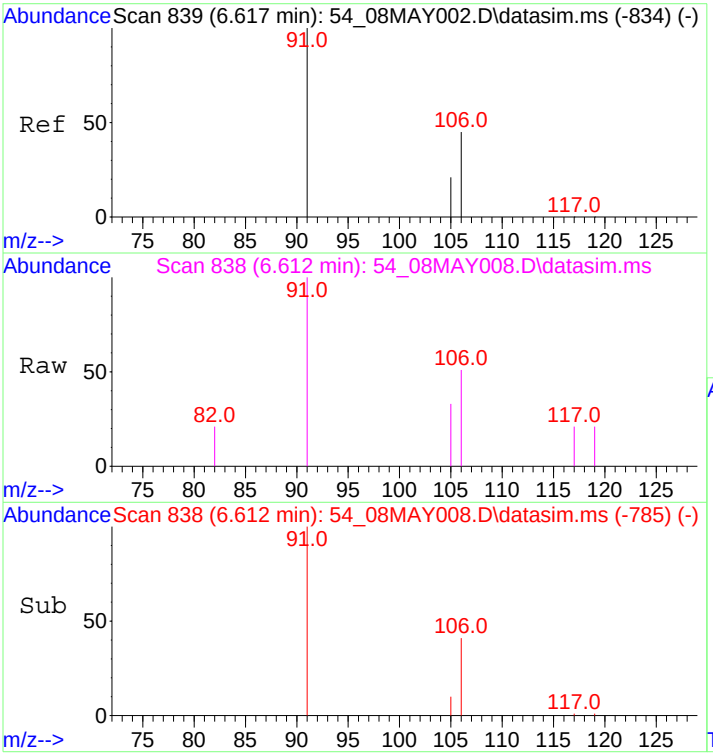


#13
Toluene
Concen: 0.88 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54_08MAY008.D
Acq: 8 May 2014 10:24 am

Tgt Ion: 91 Resp: 459

Ion	Ratio	Lower	Upper
91	100		
92	59.0	47.8	71.8

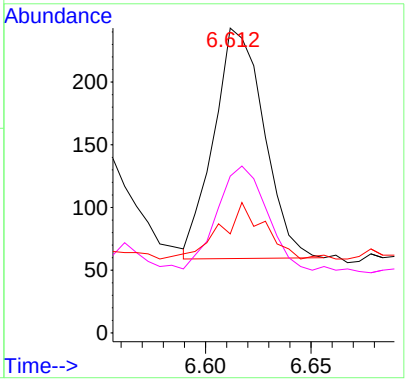




#16
m,p-Xylene
Concen: 0.60 ppbv
RT: 6.612 min Scan# 838
Delta R.T. -0.006 min
Lab File: 54 08MAY008.D
Acq: 8 May 2014 10:24 am

Tgt Ion: 91 Resp: 304

Ion	Ratio	Lower	Upper
91	100		
106	45.7	43.1	64.7
105	21.4	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY009.D
Acq On : 8 May 2014 10:35 am
Operator : YHL
Sample : 02237 \ F6-063
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:42:42 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4102	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	9295	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.489	117	8632	10.00	ppbv	0.00

System Monitoring Compounds

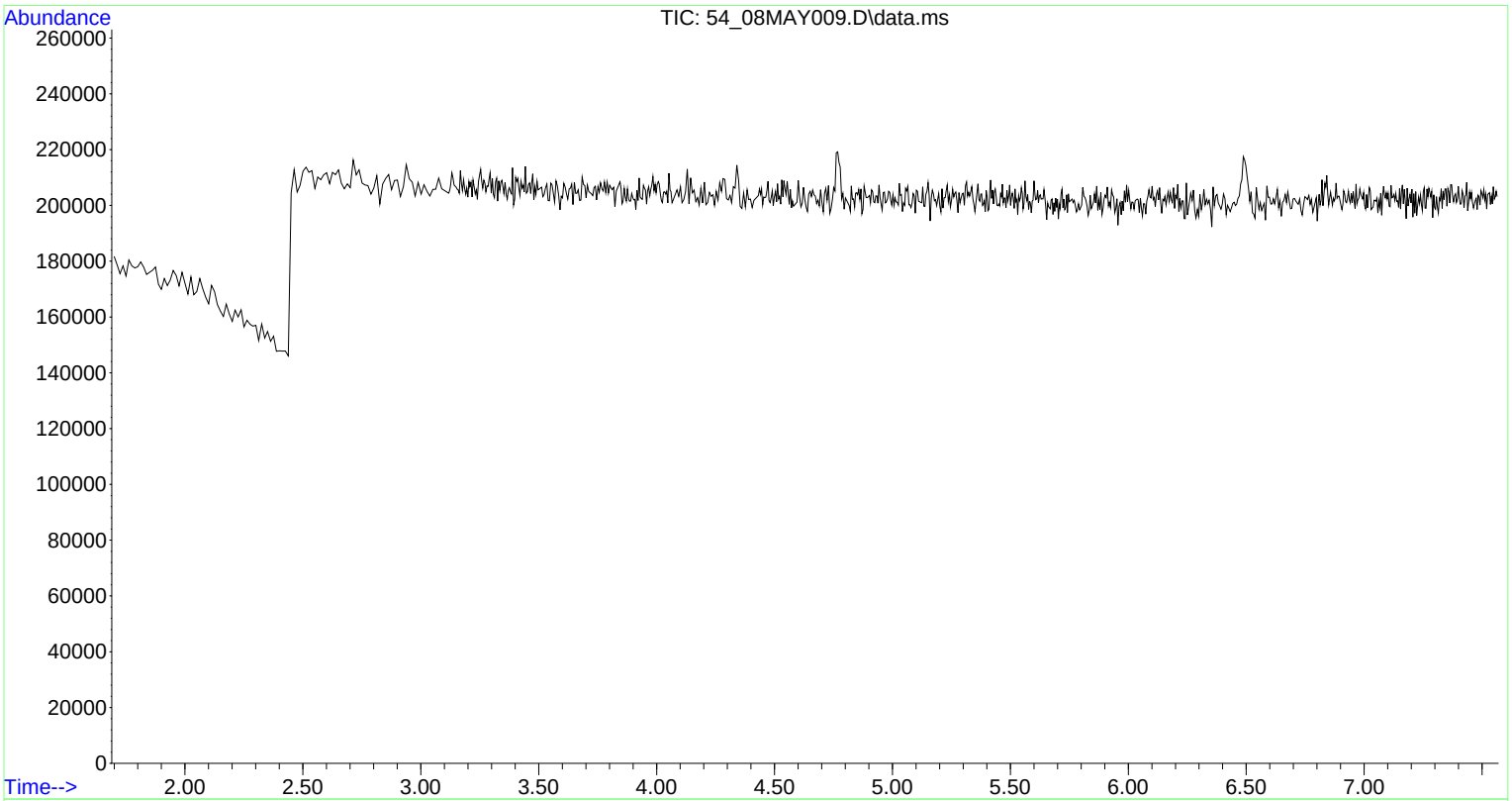
Target Compounds	Qvalue

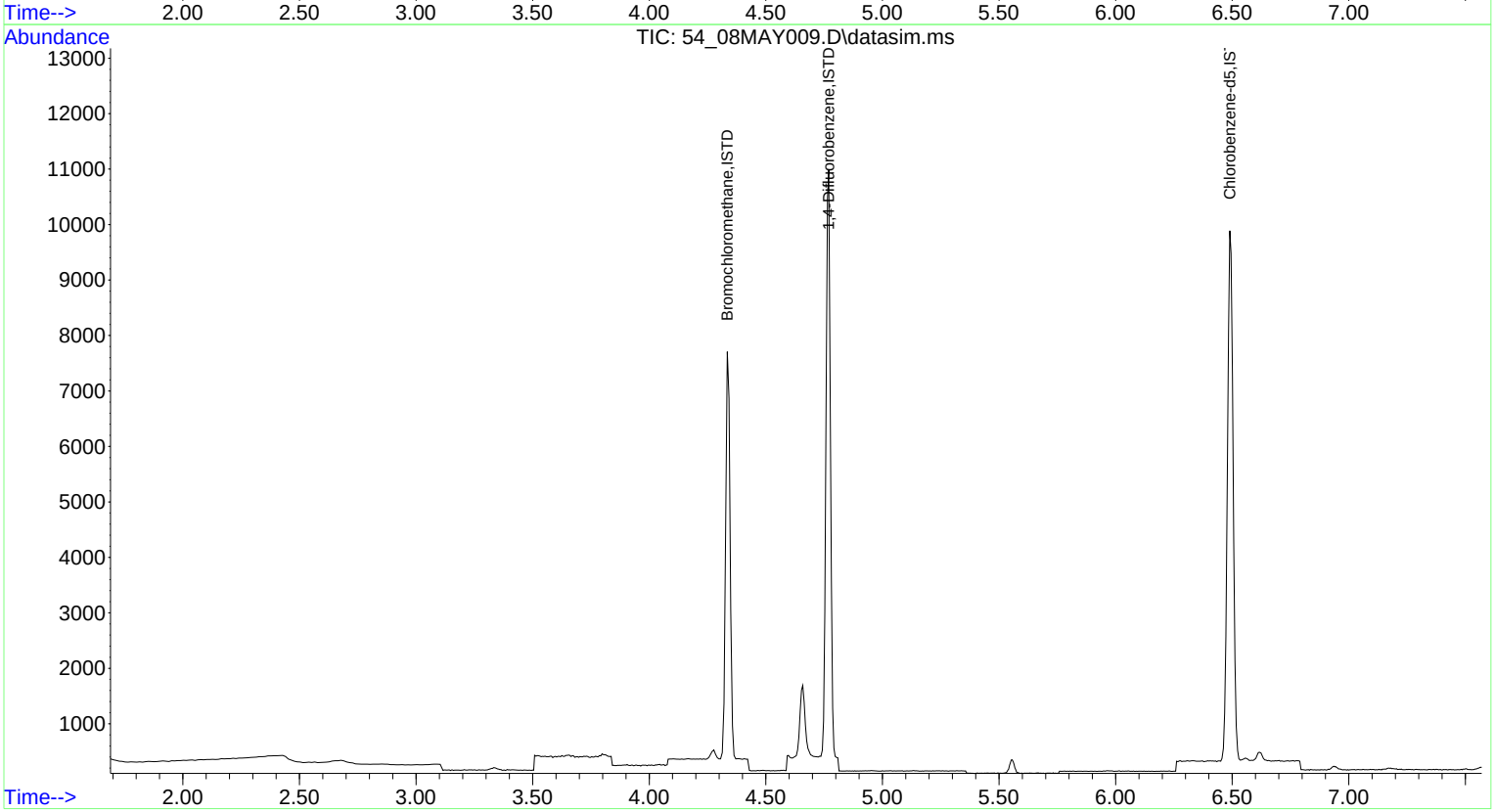
(#) = qualifier out of range (m) = manual integration (+) = signals summed

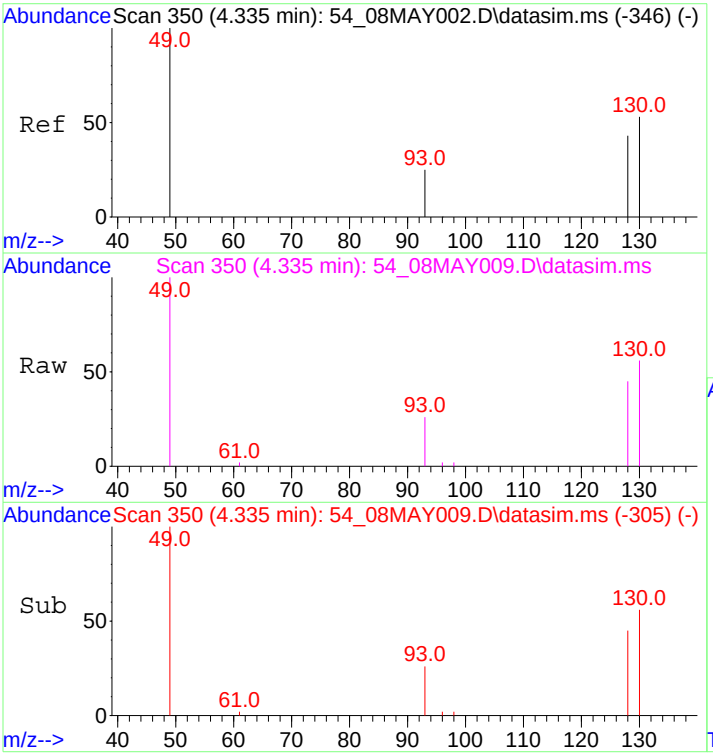
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY009.D
Acq On : 8 May 2014 10:35 am
Operator : YHL
Sample : 02237 \ F6-063
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:42:42 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



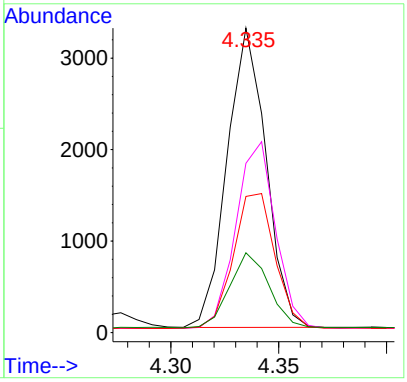


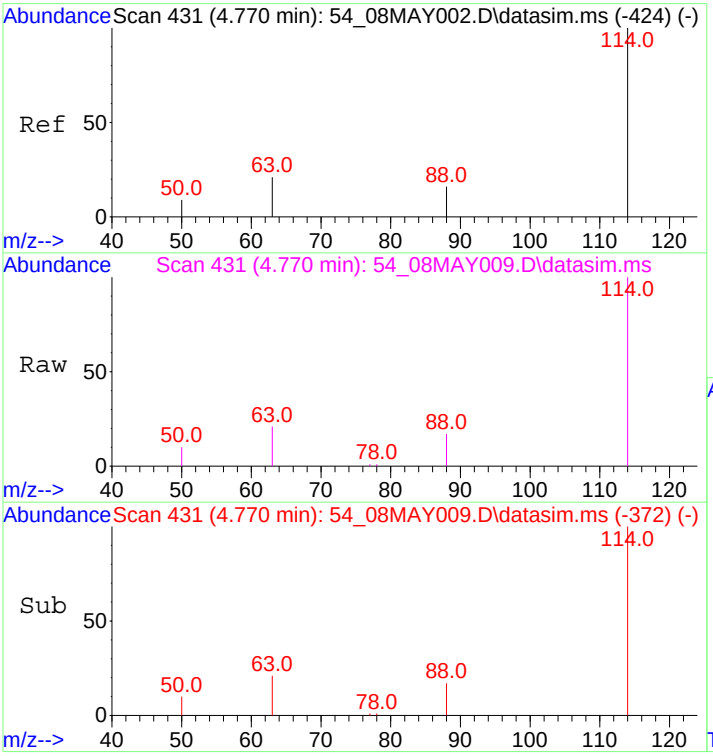


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY009.D
Acq: 8 May 2014 10:35 am

Tgt Ion: 49 Resp: 4102

Ion	Ratio	Lower	Upper
49	100		
130	63.5	56.0	84.0
128	48.3	41.6	62.4
93	25.5	22.4	33.6

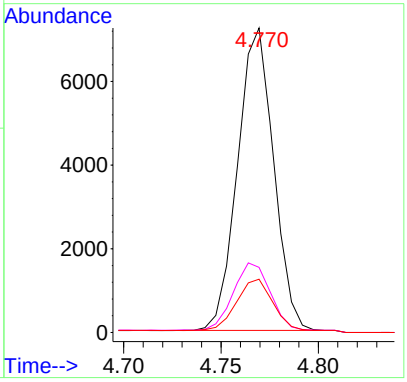


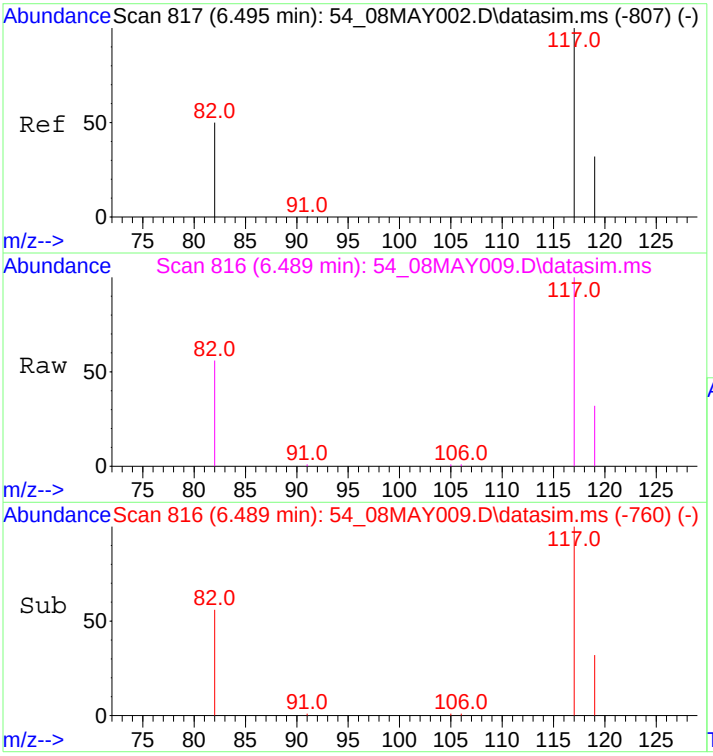


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_08MAY009.D
Acq: 8 May 2014 10:35 am

Tgt Ion:114 Resp: 9295

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	17.0	13.6	20.4

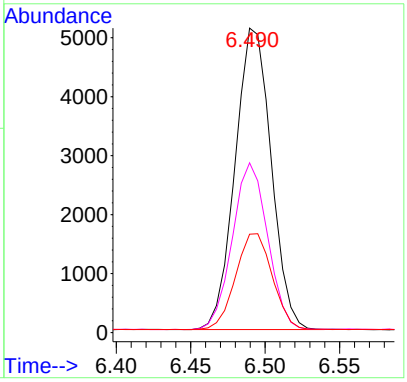




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY009.D
Acq: 8 May 2014 10:35 am

Tgt Ion:117 Resp: 8632

Ion	Ratio	Lower	Upper
117	100		
82	54.0	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY010.D
Acq On : 8 May 2014 10:47 am
Operator : YHL
Sample : 02238 \ F6-077
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:53:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	4061	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	9276	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8699	10.00	ppbv	0.00

System Monitoring Compounds

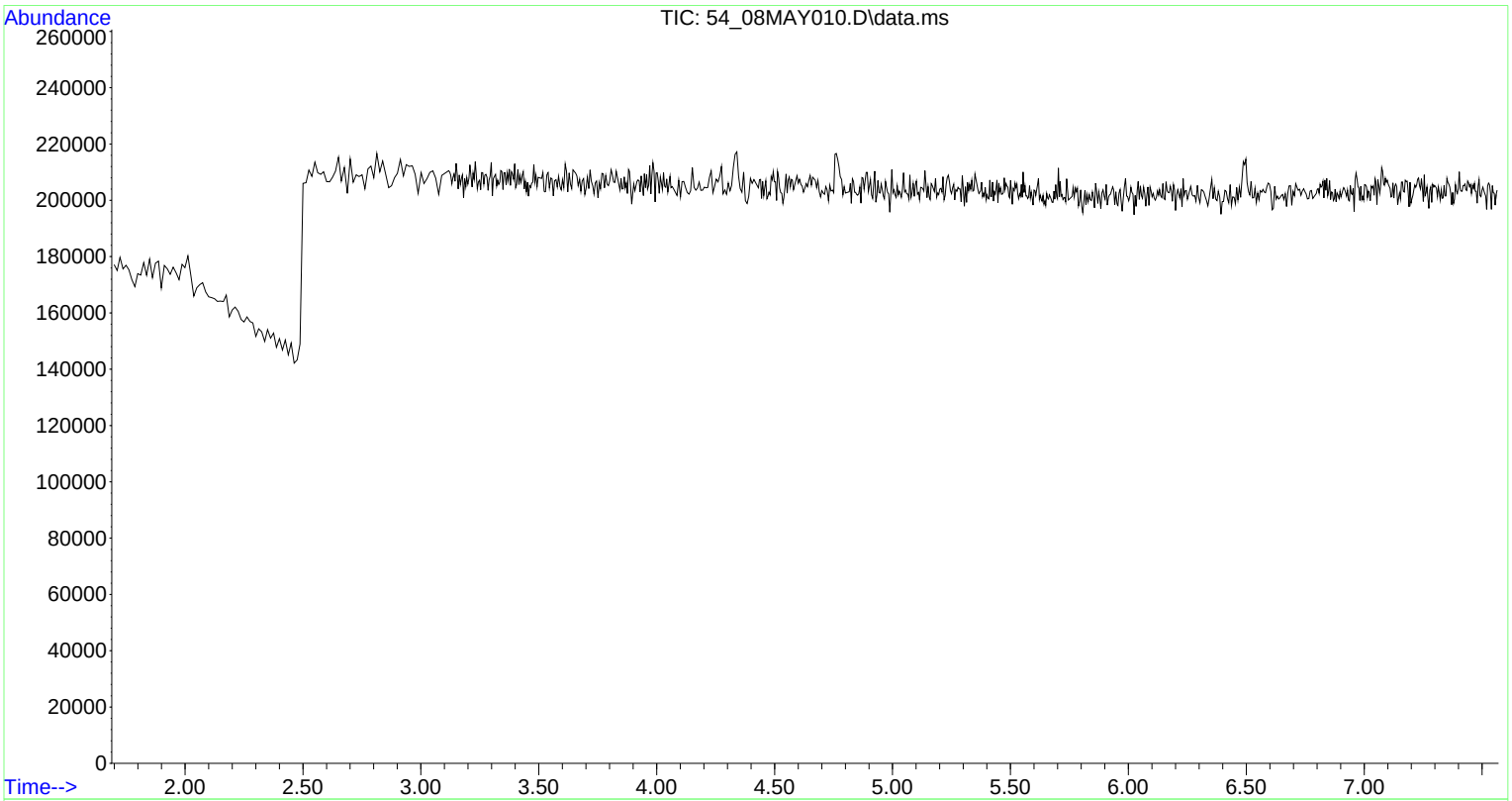
Target Compounds	Qvalue

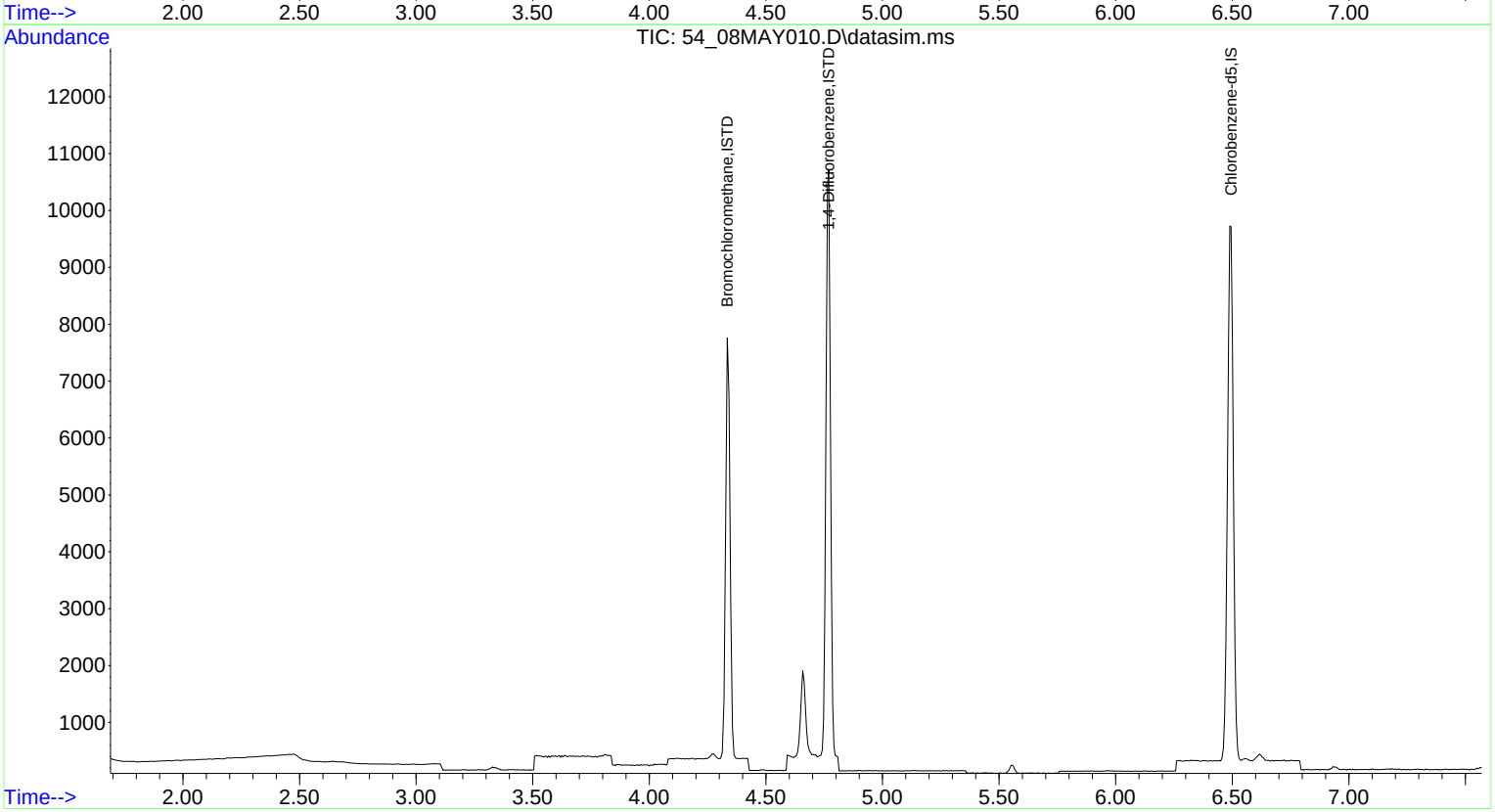
(#) = qualifier out of range (m) = manual integration (+) = signals summed

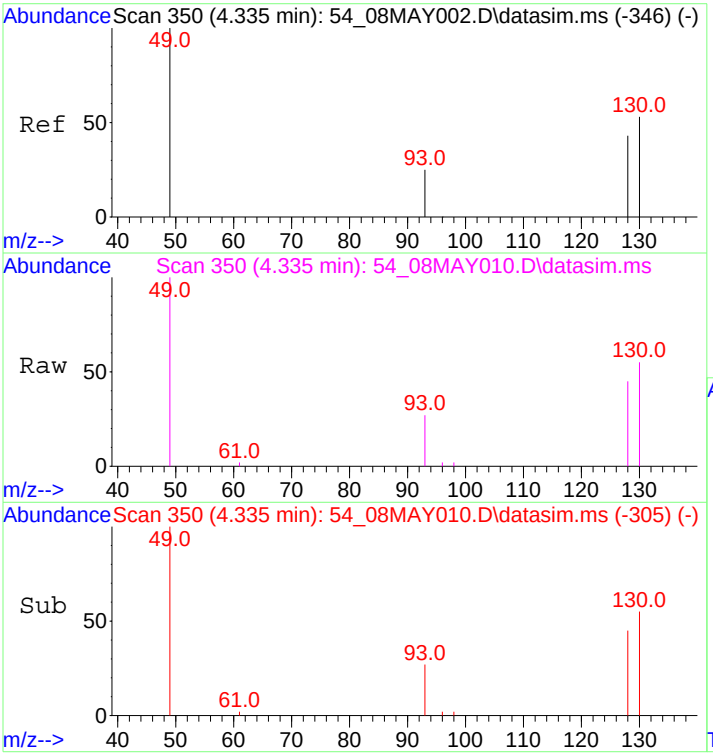
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY010.D
Acq On : 8 May 2014 10:47 am
Operator : YHL
Sample : 02238 \ F6-077
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 10:53:56 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



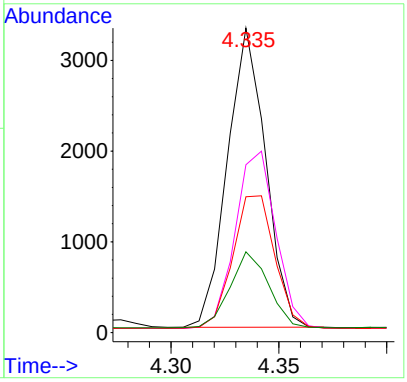


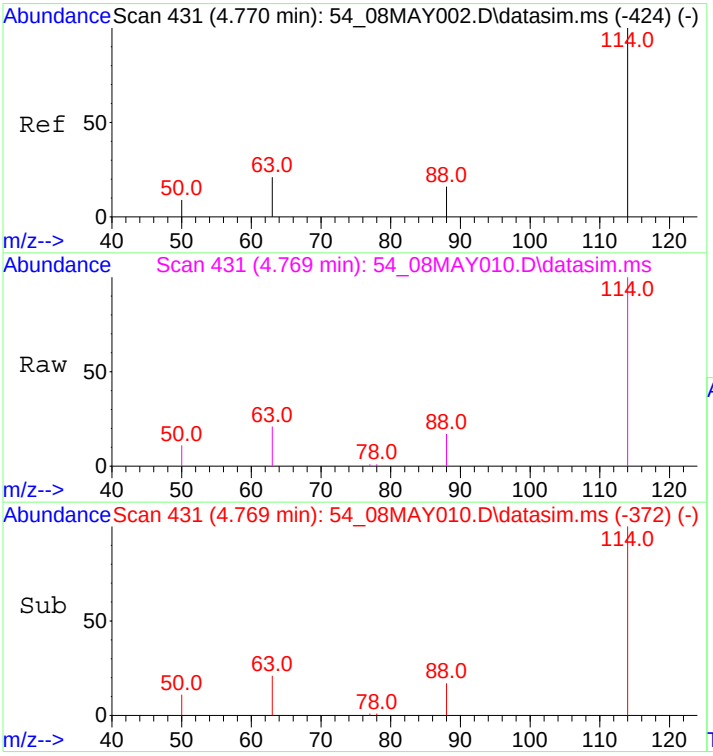


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY010.D
Acq: 8 May 2014 10:47 am

Tgt Ion: 49 Resp: 4061

Ion	Ratio	Lower	Upper
49	100		
130	63.2	56.0	84.0
128	48.9	41.6	62.4
93	25.6	22.4	33.6

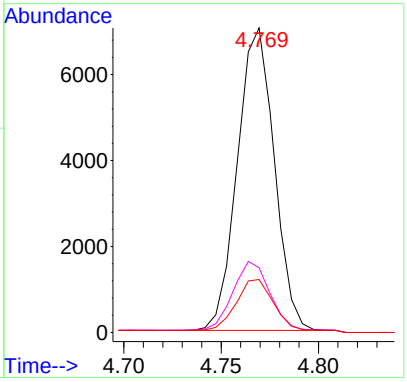


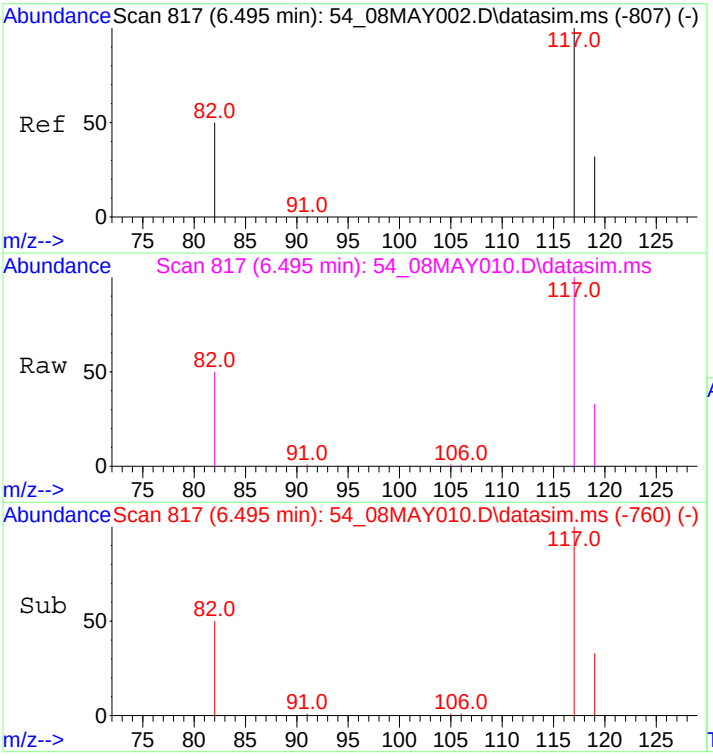


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_08MAY010.D
Acq: 8 May 2014 10:47 am

Tgt Ion:114 Resp: 9276

Ion	Ratio	Lower	Upper
114	100		
63	22.4	17.6	26.4
88	16.8	13.6	20.4

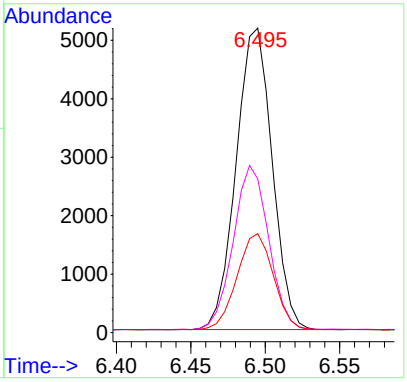




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 08MAY010.D
Acq: 8 May 2014 10:47 am

Tgt Ion:117 Resp: 8699

Ion	Ratio	Lower	Upper
117	100		
82	53.2	38.0	57.0
119	31.9	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY011.D
Acq On : 8 May 2014 10:59 am
Operator : YHL
Sample : 02239 \G6-002
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:06:55 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

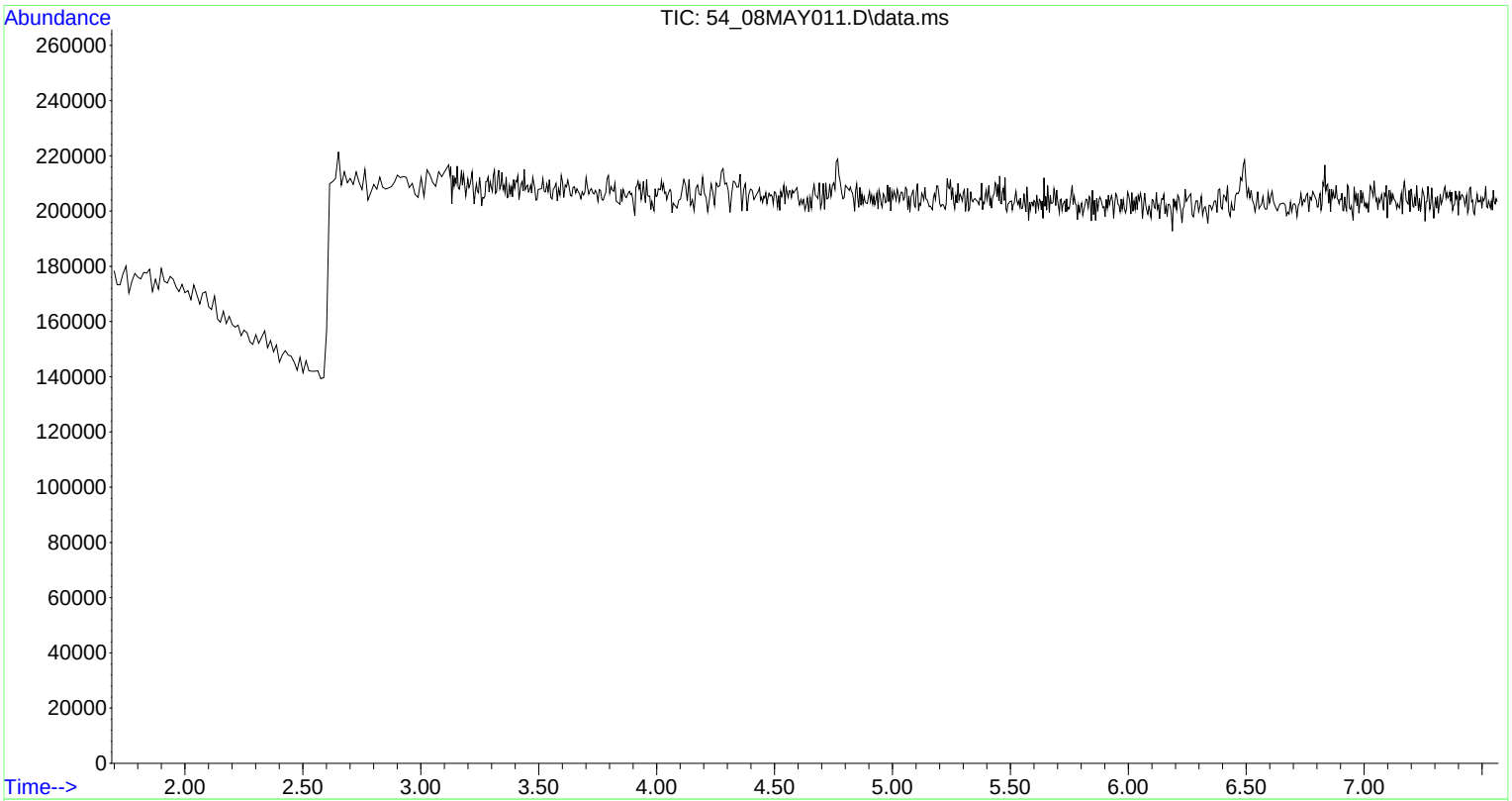
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3939	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	8915	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.489	117	8465	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	324	0.64	ppbv	99
16] m,p-Xylene	6.617	91	288	0.58	ppbv #	87

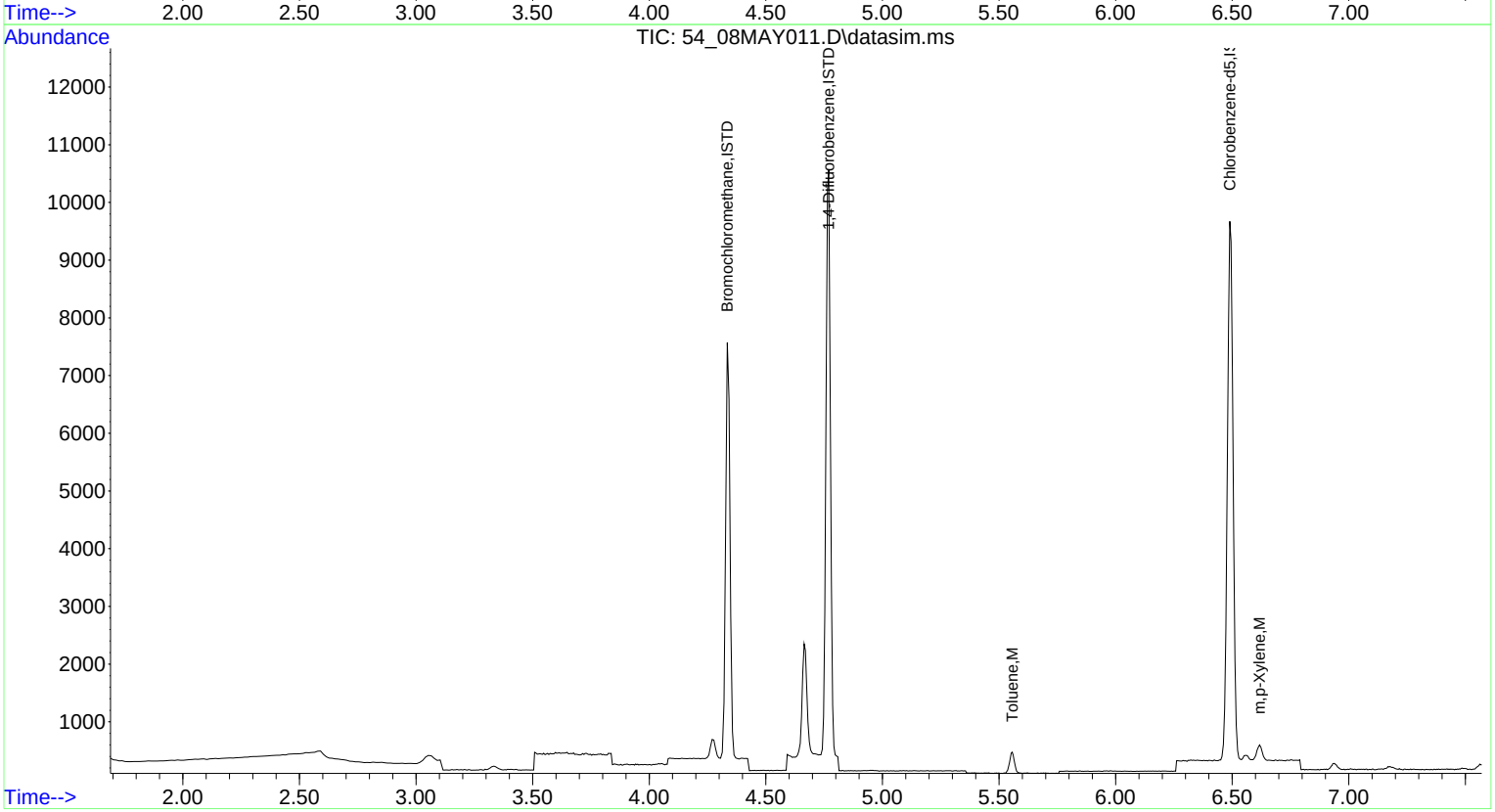
(#) = qualifier out of range (m) = manual integration (+) = signals summed

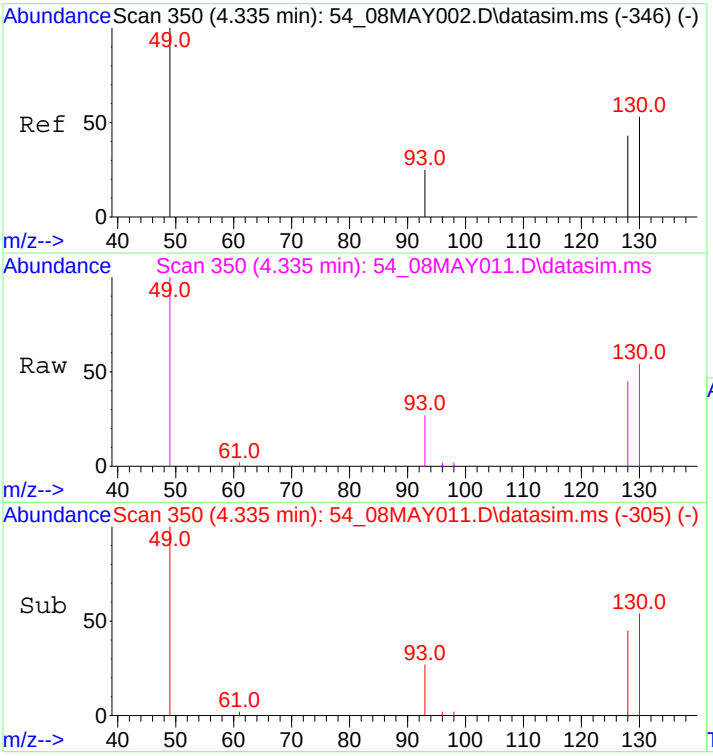
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY011.D
Acq On : 8 May 2014 10:59 am
Operator : YHL
Sample : 02239 \G6-002
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:06:55 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



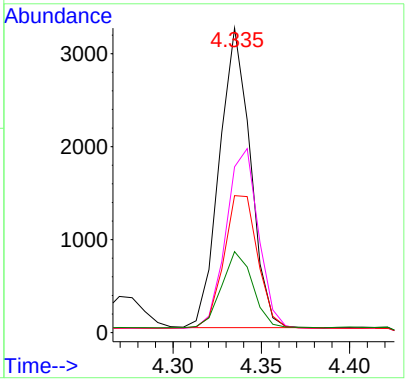


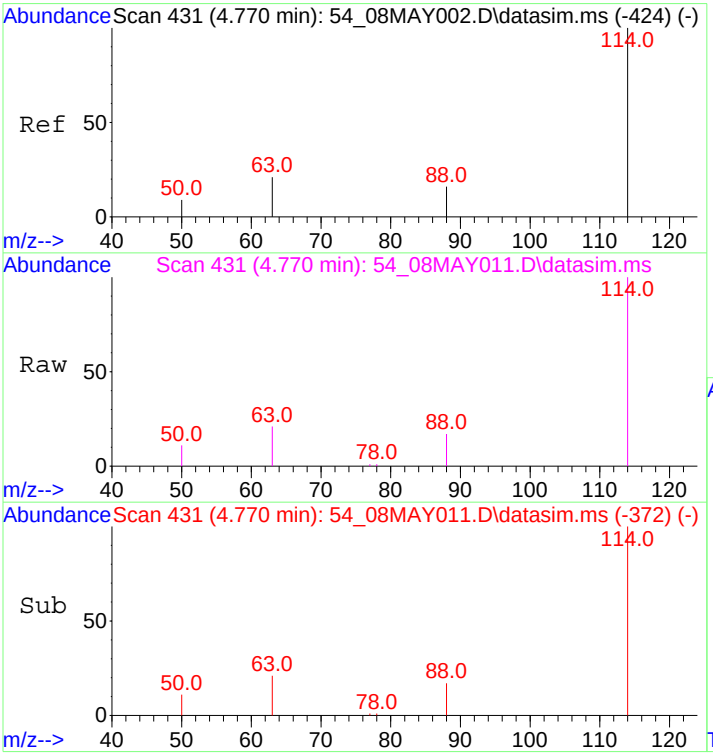


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY011.D
Acq: 8 May 2014 10:59 am

Tgt Ion: 49 Resp: 3939

Ion	Ratio	Lower	Upper
49	100		
130	62.8	56.0	84.0
128	48.6	41.6	62.4
93	25.6	22.4	33.6

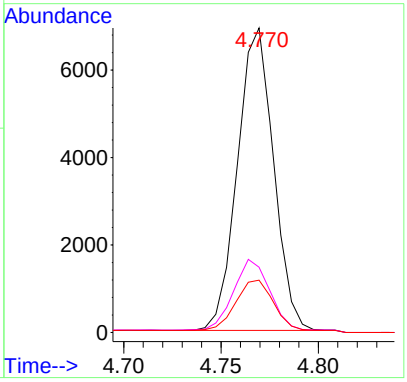


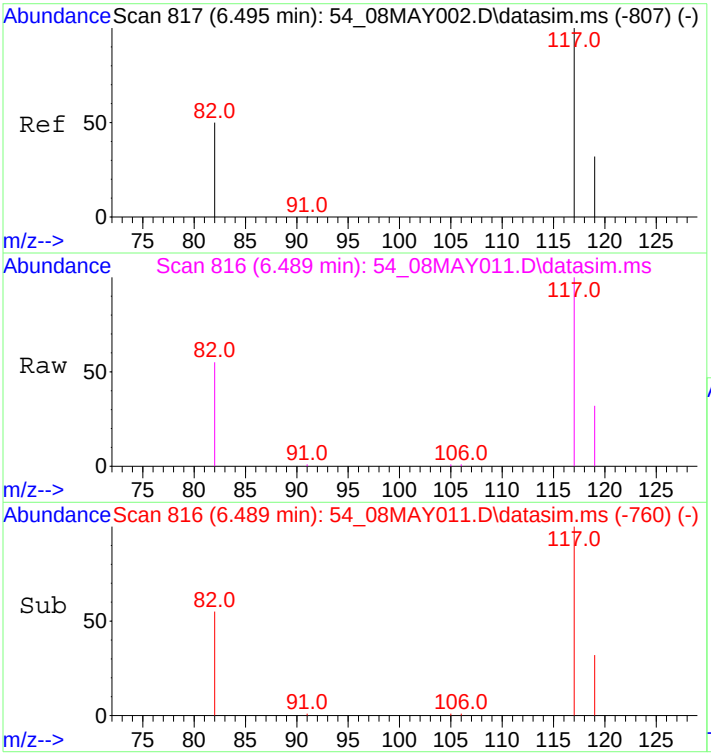


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_08MAY011.D
Acq: 8 May 2014 10:59 am

Tgt Ion:114 Resp: 8915

Ion	Ratio	Lower	Upper
114	100		
63	23.4	17.6	26.4
88	17.2	13.6	20.4

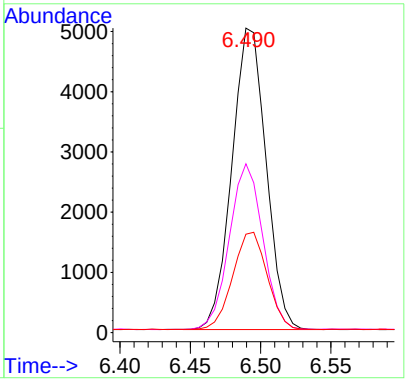


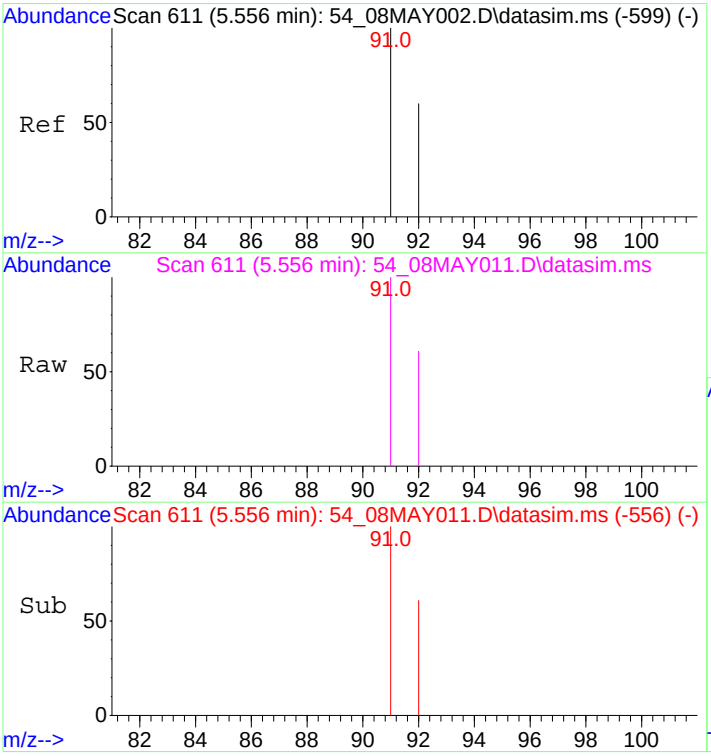


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY011.D
Acq: 8 May 2014 10:59 am

Tgt Ion:117 Resp: 8465

Ion	Ratio	Lower	Upper
117	100		
82	53.8	38.0	57.0
119	32.6	27.0	40.4

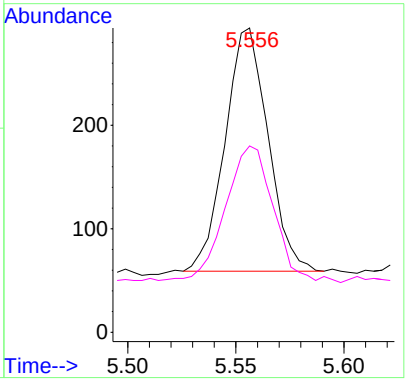


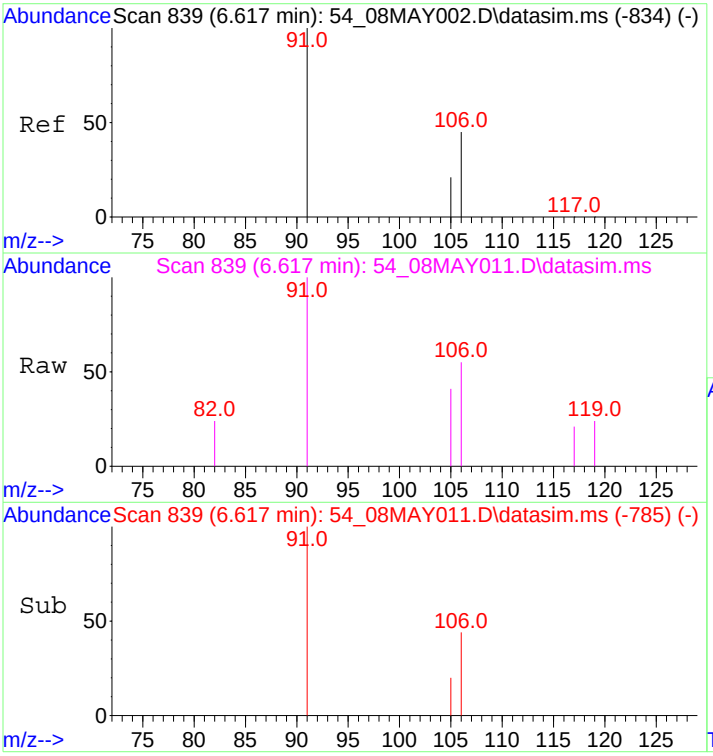


#13
Toluene
Concen: 0.64 ppbv
RT: 5.556 min Scan# 611
Delta R.T. 0.000 min
Lab File: 54_08MAY011.D
Acq: 8 May 2014 10:59 am

Tgt Ion: 91 Resp: 324

Ion	Ratio	Lower	Upper
91	100		
92	60.5	47.8	71.8

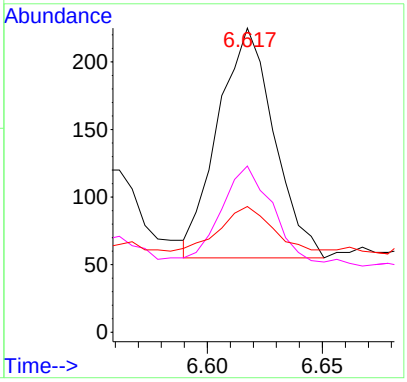




#16
m,p-Xylene
Concen: 0.58 ppbv
RT: 6.617 min Scan# 839
Delta R.T. 0.000 min
Lab File: 54 08MAY011.D
Acq: 8 May 2014 10:59 am

Tgt Ion: 91 Resp: 288

Ion	Ratio	Lower	Upper
91	100		
106	43.8	43.1	64.7
105	17.4	18.3	27.5#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY012.D
Acq On : 8 May 2014 11:10 am
Operator : YHL
Sample : 02240 \G6-004
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:17:29 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

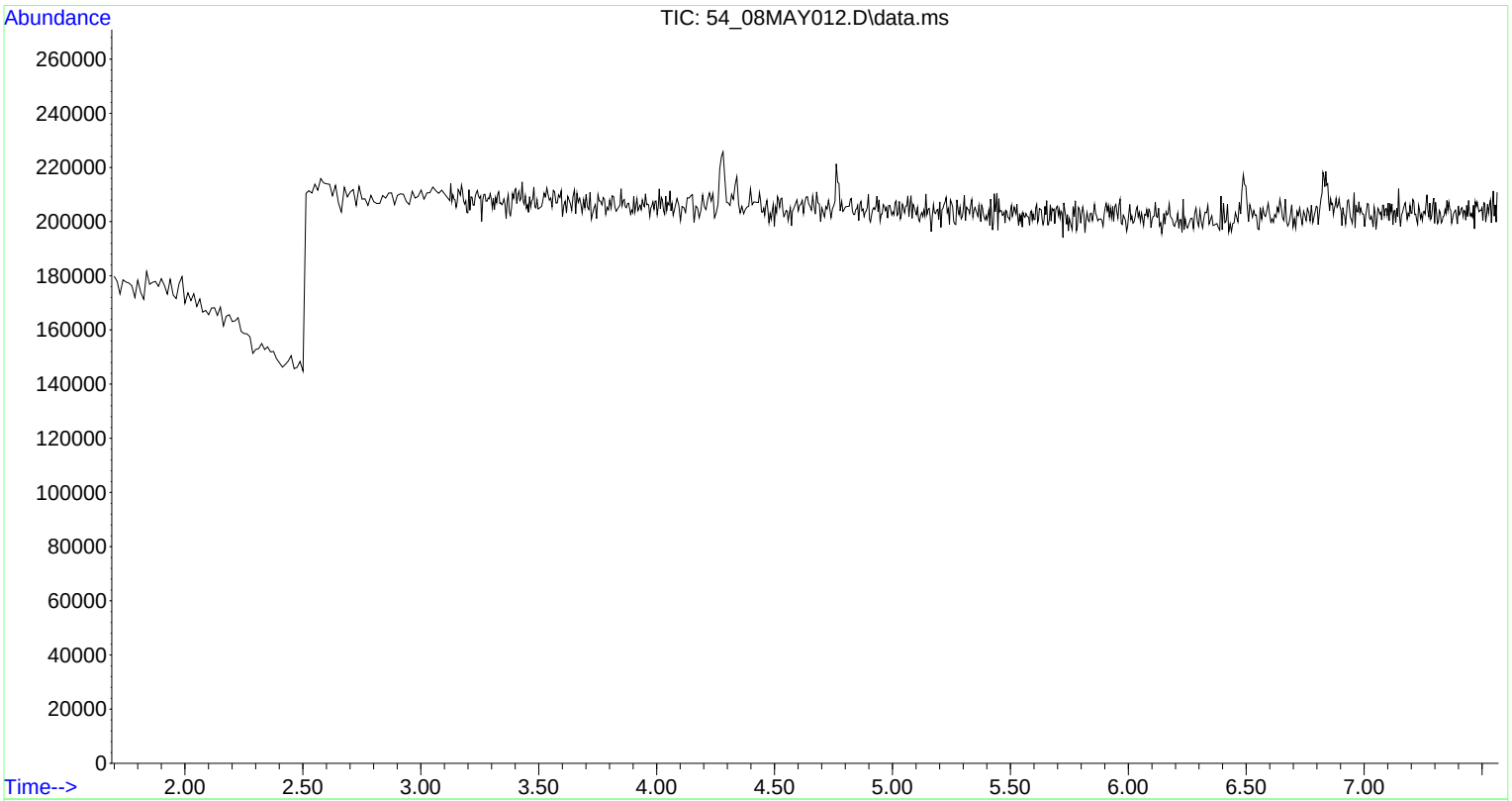
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3540	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	7956	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.489	117	7507	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	608	1.35	ppbv	100

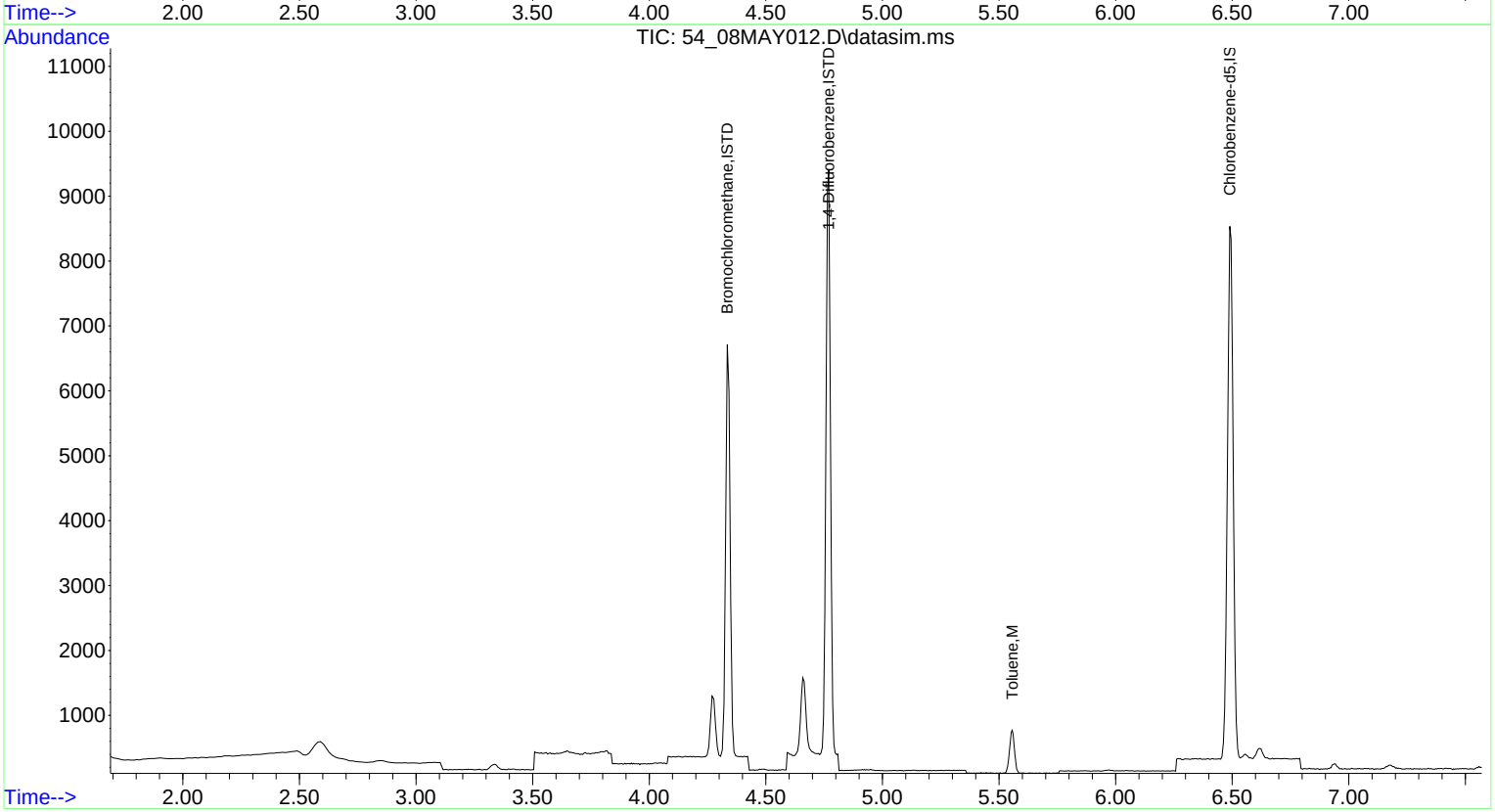
(#) = qualifier out of range (m) = manual integration (+) = signals summed

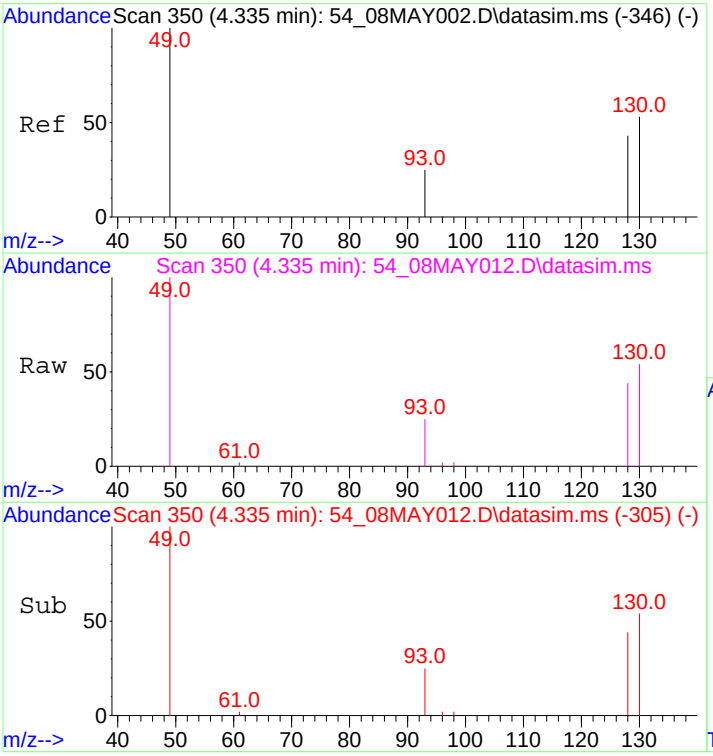
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY012.D
Acq On : 8 May 2014 11:10 am
Operator : YHL
Sample : 02240 \G6-004
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:17:29 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



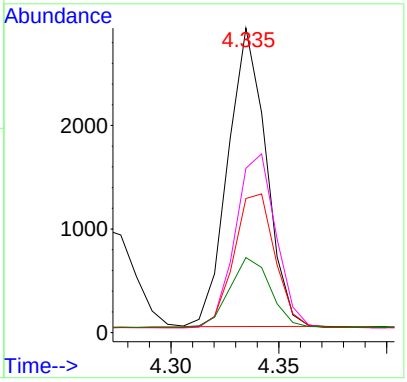


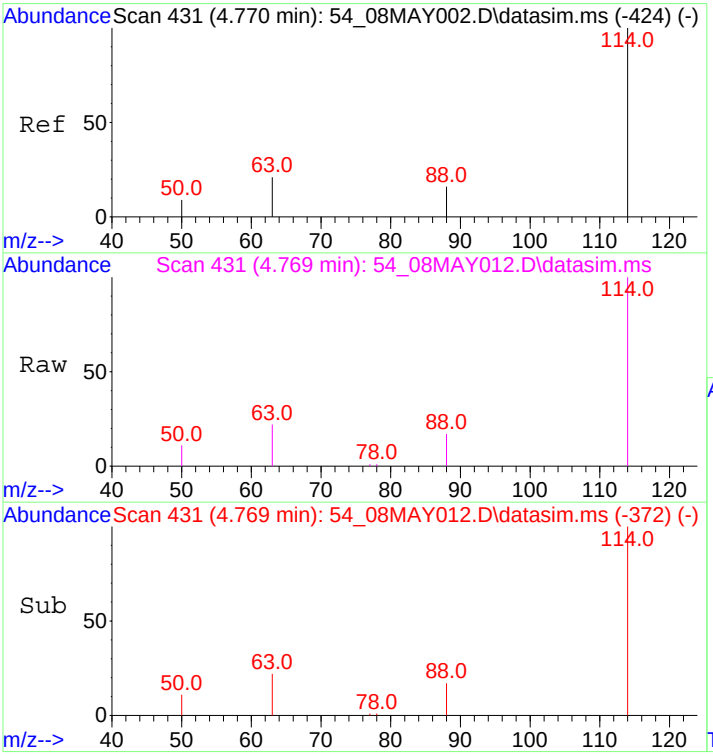


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY012.D
Acq: 8 May 2014 11:10 am

Tgt Ion: 49 Resp: 3540

Ion	Ratio	Lower	Upper
49	100		
130	62.4	56.0	84.0
128	48.5	41.6	62.4
93	24.6	22.4	33.6

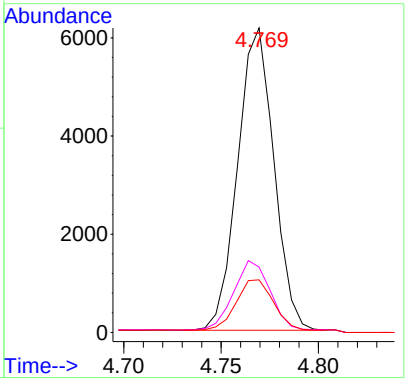


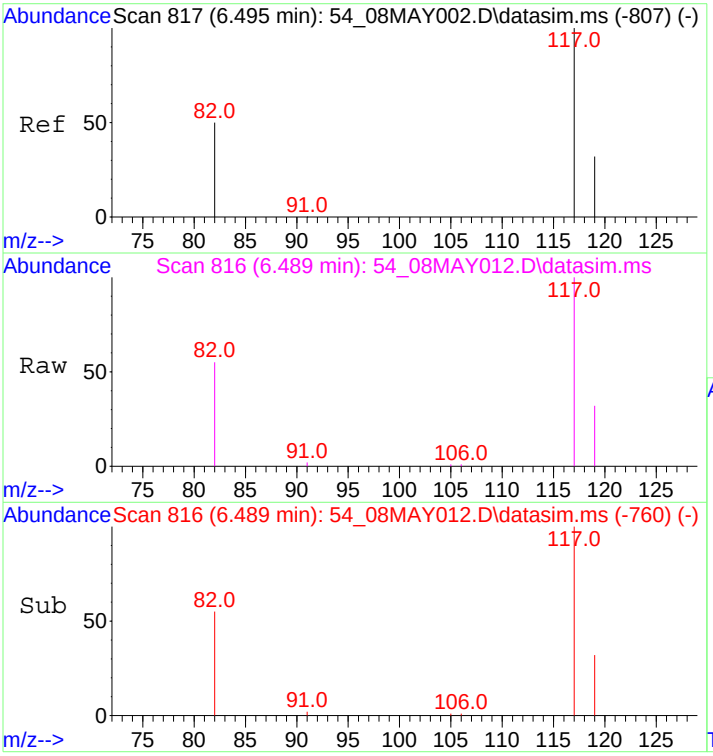


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_08MAY012.D
Acq: 8 May 2014 11:10 am

Tgt Ion:114 Resp: 7956

Ion	Ratio	Lower	Upper
114	100		
63	23.0	17.6	26.4
88	17.1	13.6	20.4

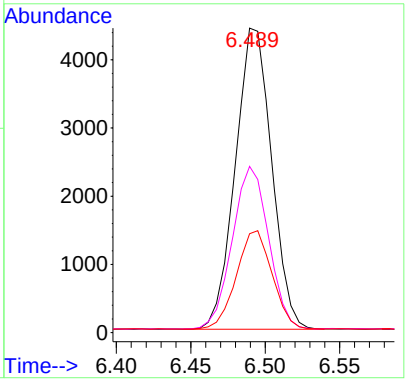


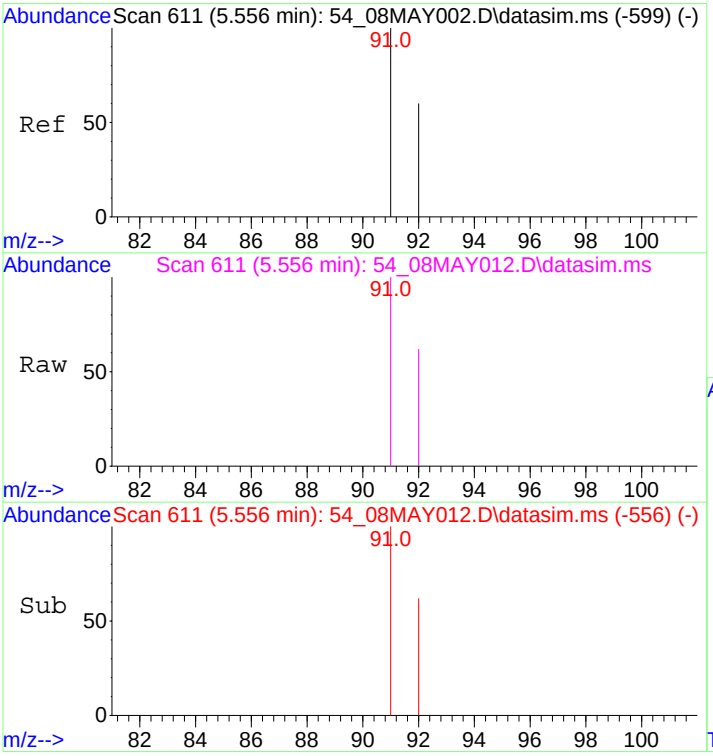


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY012.D
Acq: 8 May 2014 11:10 am

Tgt Ion:117 Resp: 7507

Ion	Ratio	Lower	Upper
117	100		
82	53.7	38.0	57.0
119	32.2	27.0	40.4

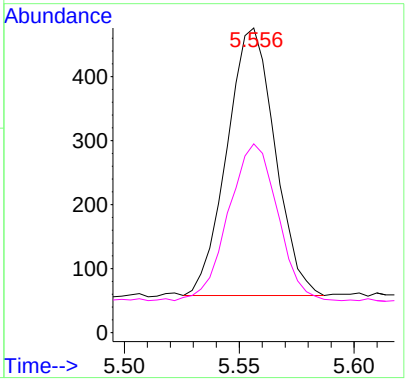




#13
Toluene
Concen: 1.35 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_08MAY012.D
Acq: 8 May 2014 11:10 am

Tgt Ion: 91 Resp: 608

Ion	Ratio	Lower	Upper
91	100		
92	59.7	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY013.D
Acq On : 8 May 2014 11:21 am
Operator : YHL
Sample : 02241 \G6-022
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:28:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

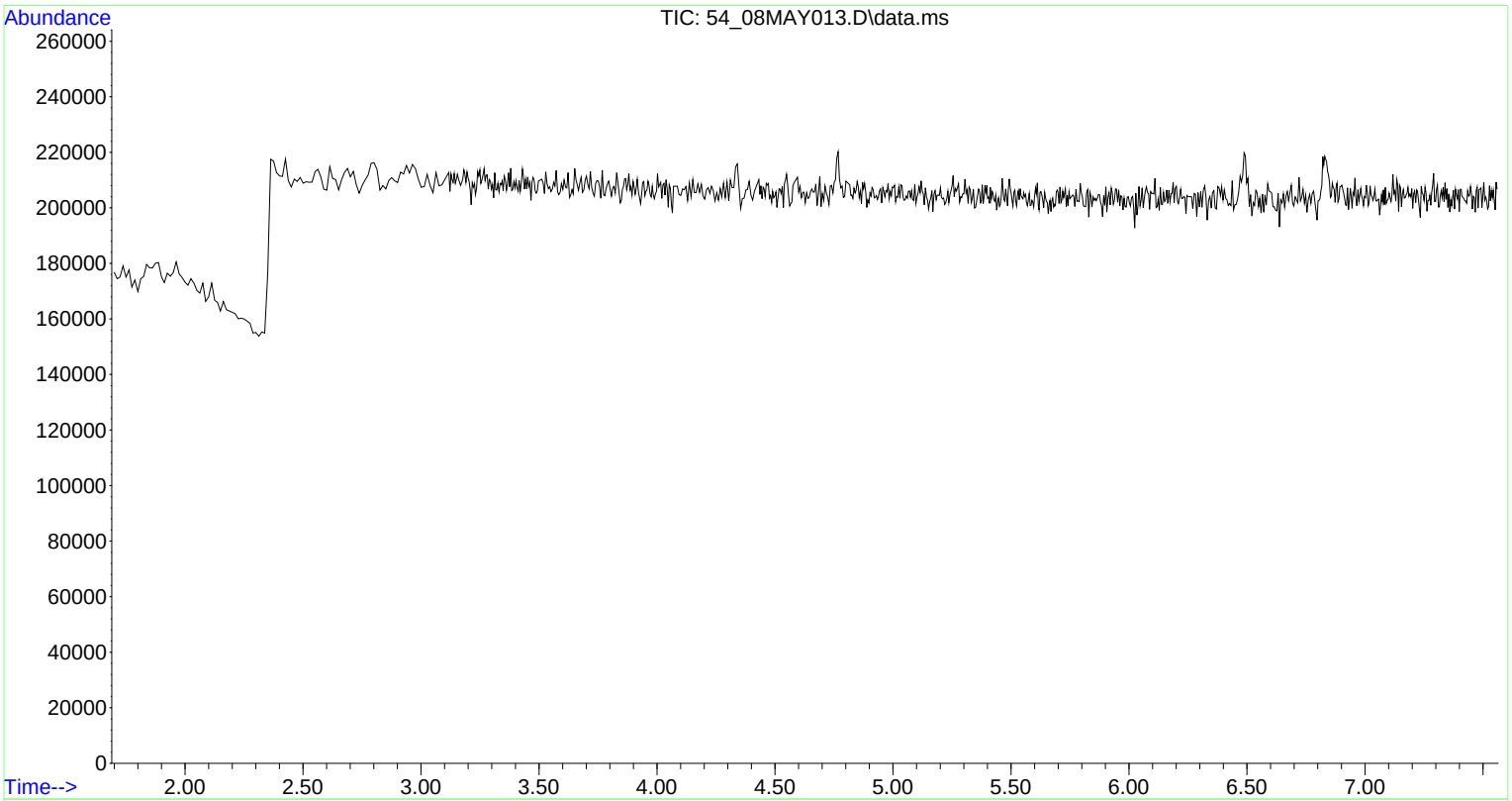
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3765	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	8483	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.489	117	8203	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	373	0.76	ppbv	99
16] m,p-Xylene	6.617	91	257	0.54	ppbv	89

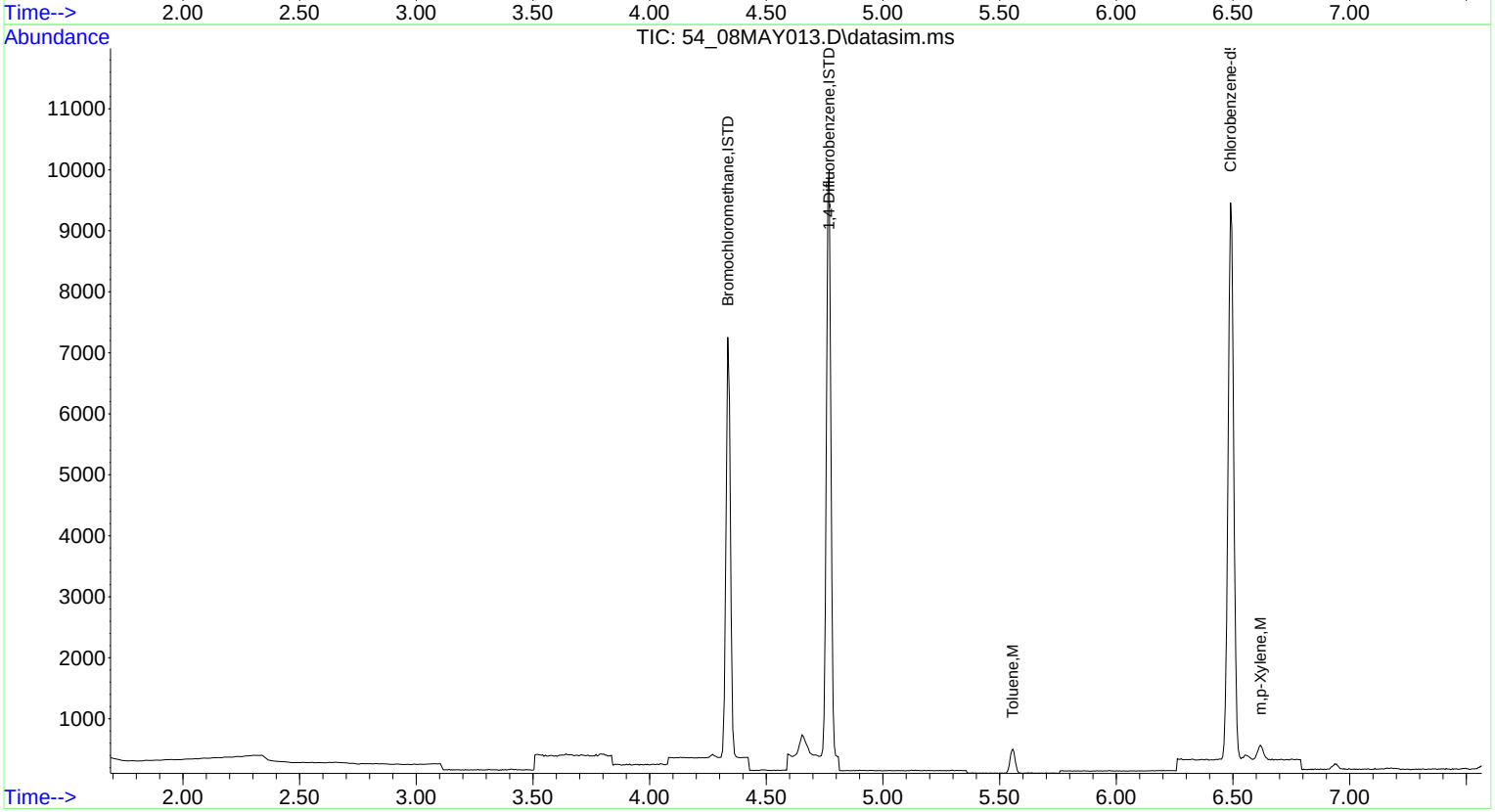
(#) = qualifier out of range (m) = manual integration (+) = signals summed

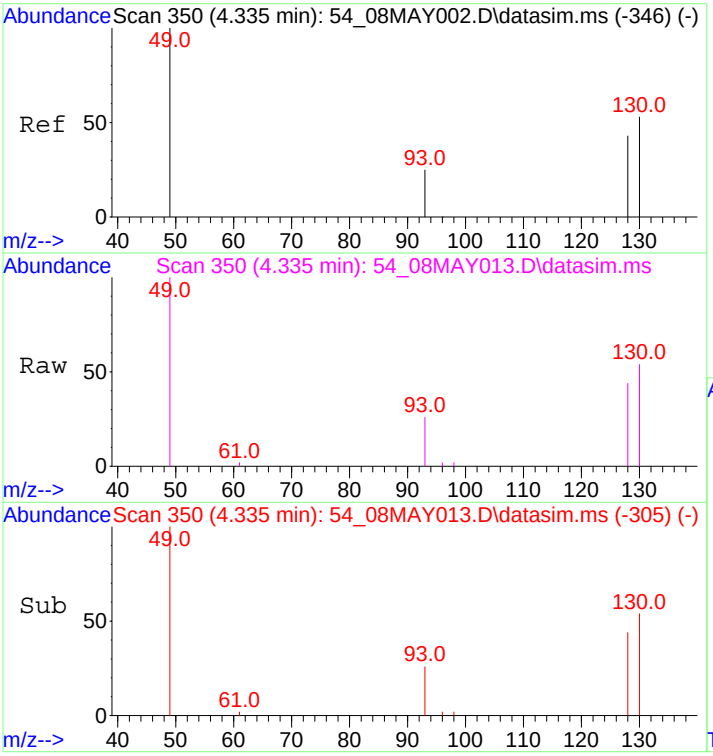
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY013.D
Acq On : 8 May 2014 11:21 am
Operator : YHL
Sample : 02241 \G6-022
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:28:57 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



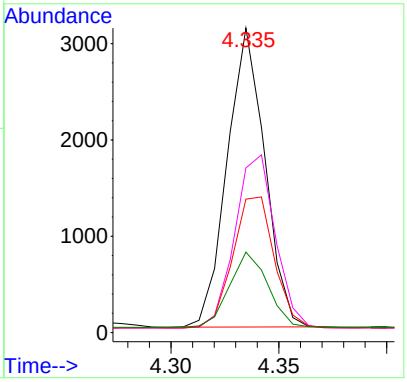


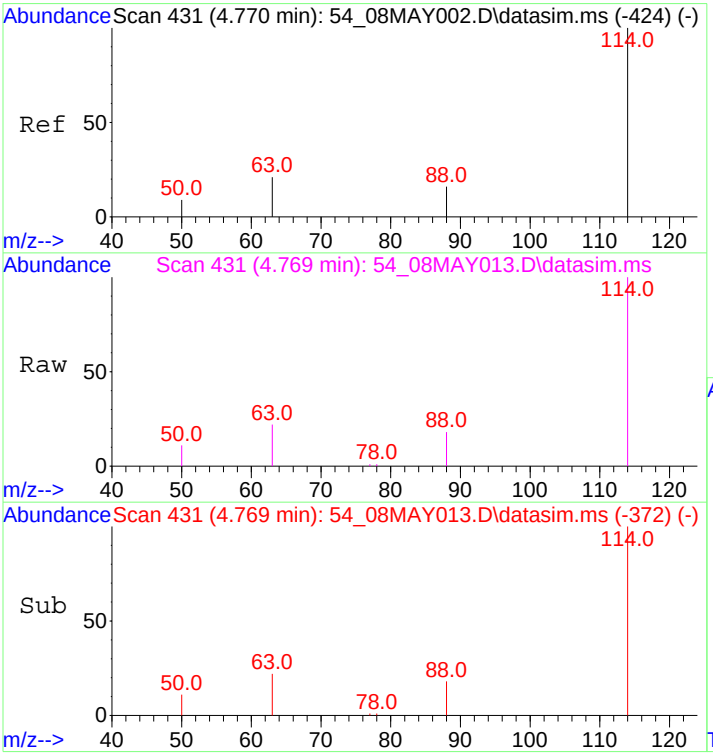


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY013.D
Acq: 8 May 2014 11:21 am

Tgt Ion: 49 Resp: 3765

Ion	Ratio	Lower	Upper
49	100		
130	62.4	56.0	84.0
128	48.6	41.6	62.4
93	25.5	22.4	33.6

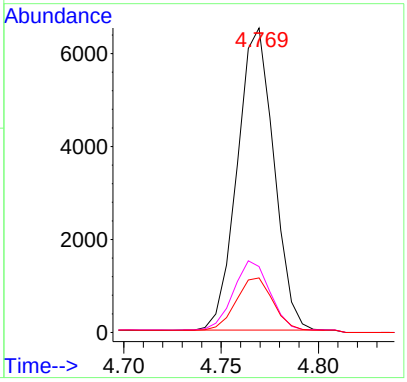


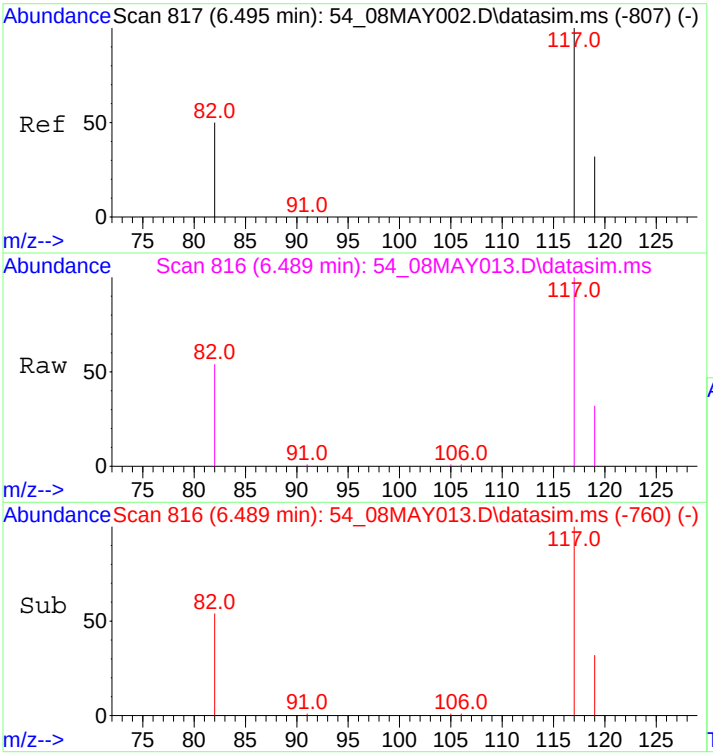


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_08MAY013.D
Acq: 8 May 2014 11:21 am

Tgt Ion:114 Resp: 8483

Ion	Ratio	Lower	Upper
114	100		
63	22.9	17.6	26.4
88	17.4	13.6	20.4

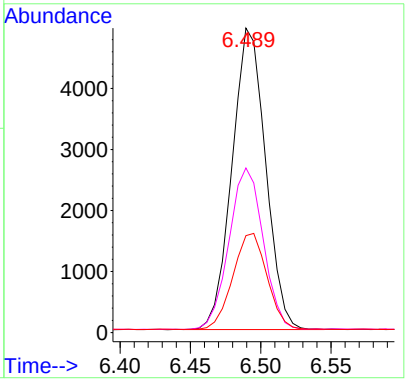


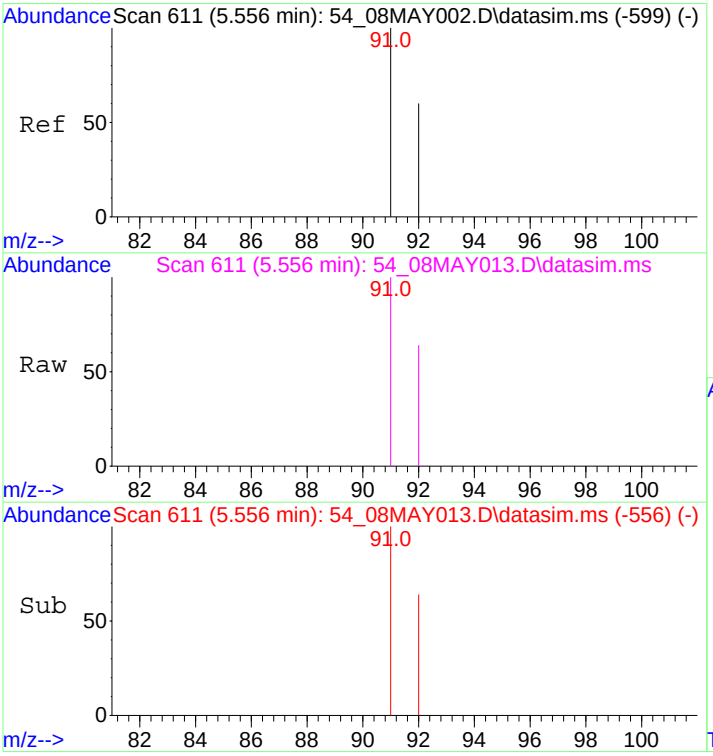


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY013.D
Acq: 8 May 2014 11:21 am

Tgt Ion:117 Resp: 8203

Ion	Ratio	Lower	Upper
117	100		
82	54.5	38.0	57.0
119	32.5	27.0	40.4

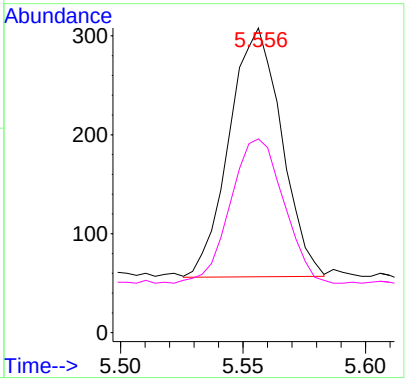


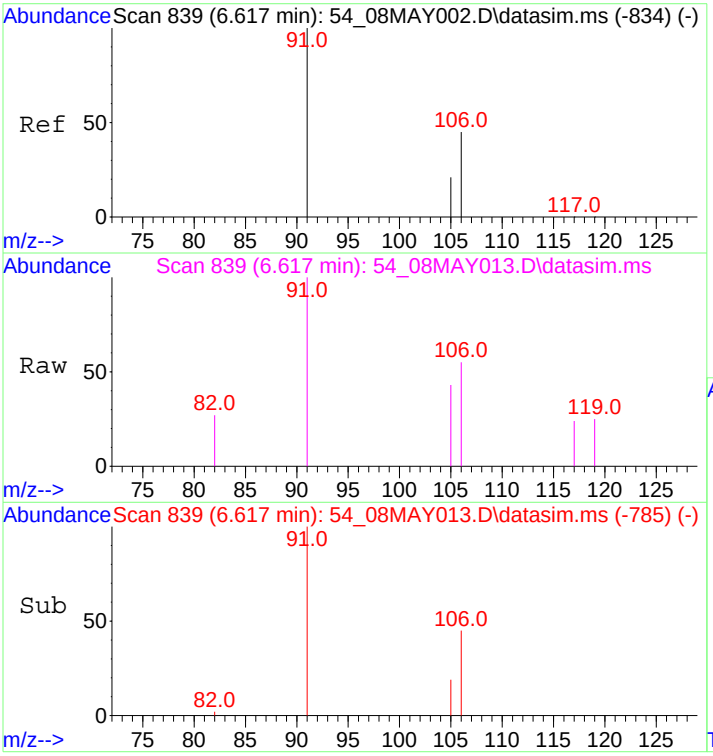


#13
Toluene
Concen: 0.76 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_08MAY013.D
Acq: 8 May 2014 11:21 am

Tgt Ion: 91 Resp: 373

Ion	Ratio	Lower	Upper
91	100		
92	59.0	47.8	71.8

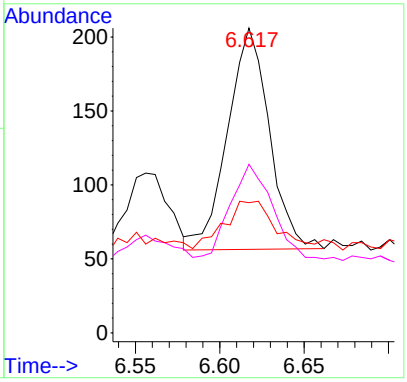




#16
m,p-Xylene
Concen: 0.54 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 08MAY013.D
Acq: 8 May 2014 11:21 am

Tgt Ion: 91 Resp: 257

Ion	Ratio	Lower	Upper
91	100		
106	44.4	43.1	64.7
105	25.7	18.3	27.5



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY014.D
Acq On : 8 May 2014 11:33 am
Operator : YHL
Sample : 02242 \G6-020
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:40:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

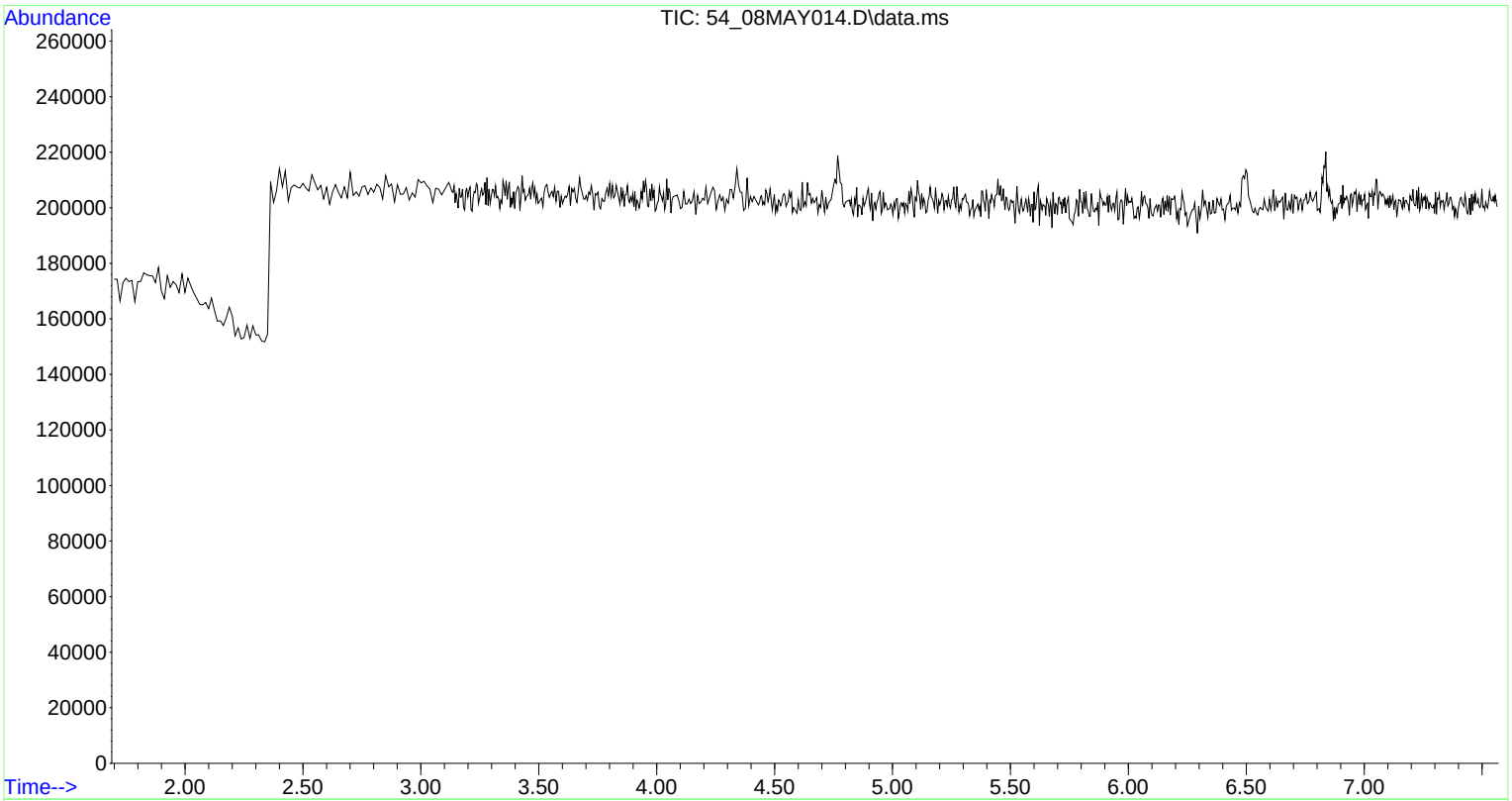
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3727	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	8616	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8132	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.556	91	476	0.98	ppbv	99
16] m,p-Xylene	6.617	91	291	0.61	ppbv #	85

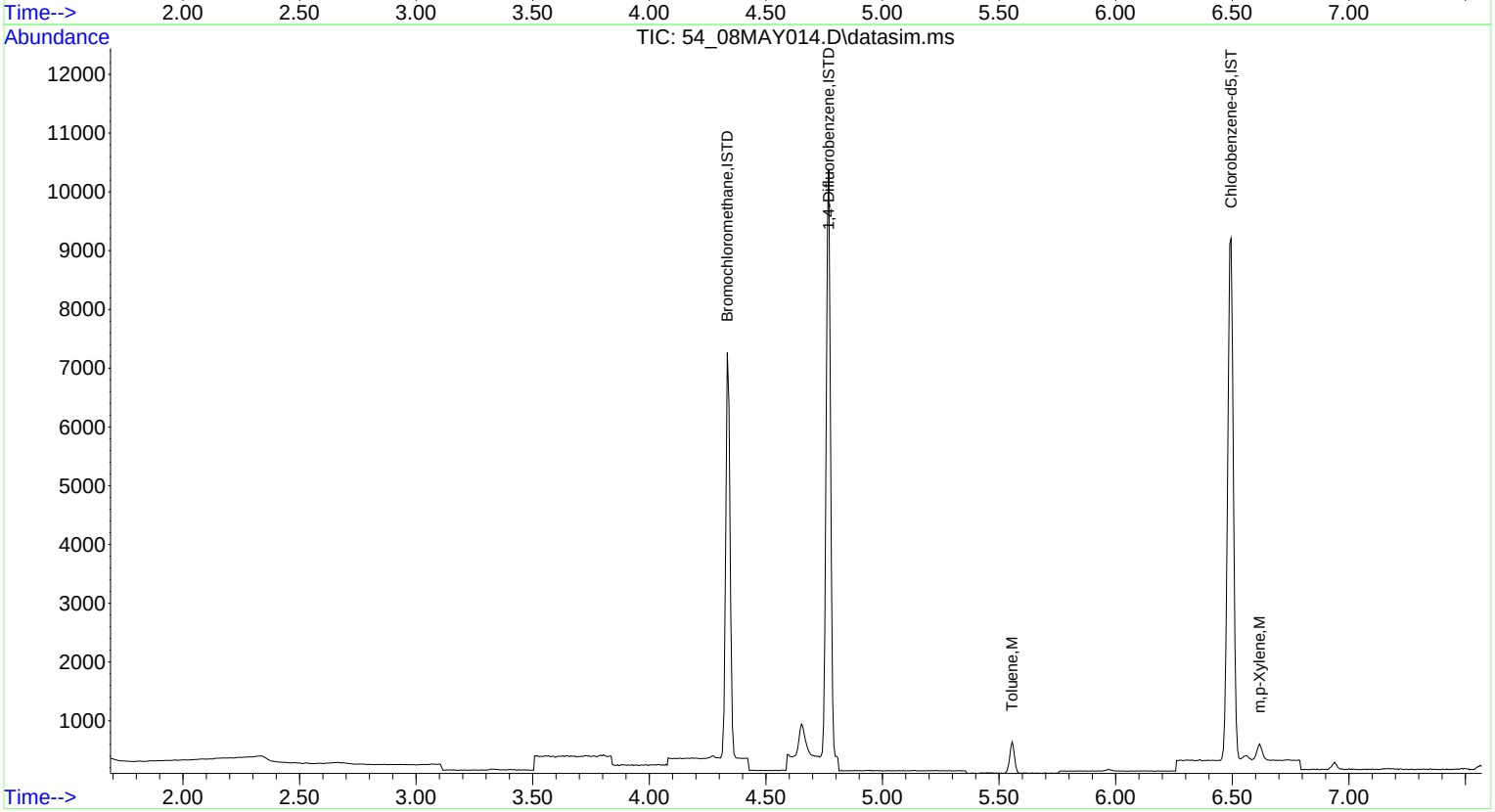
(#) = qualifier out of range (m) = manual integration (+) = signals summed

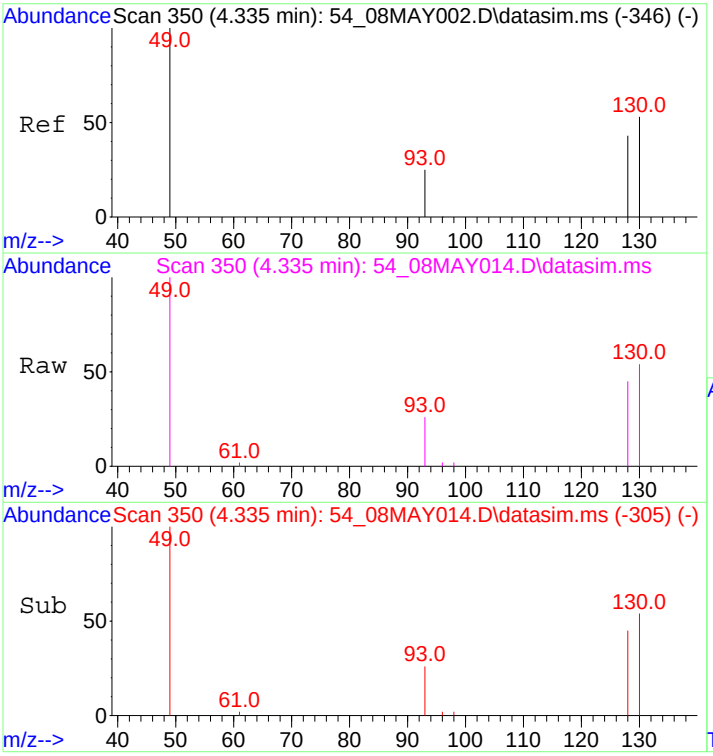
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY014.D
Acq On : 8 May 2014 11:33 am
Operator : YHL
Sample : 02242 \G6-020
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:40:26 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



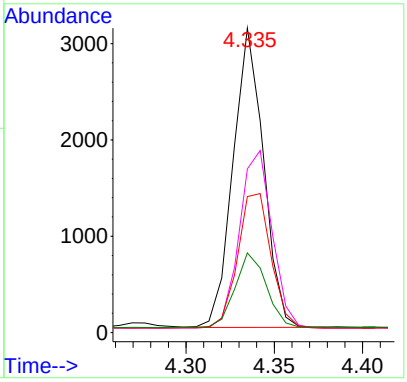


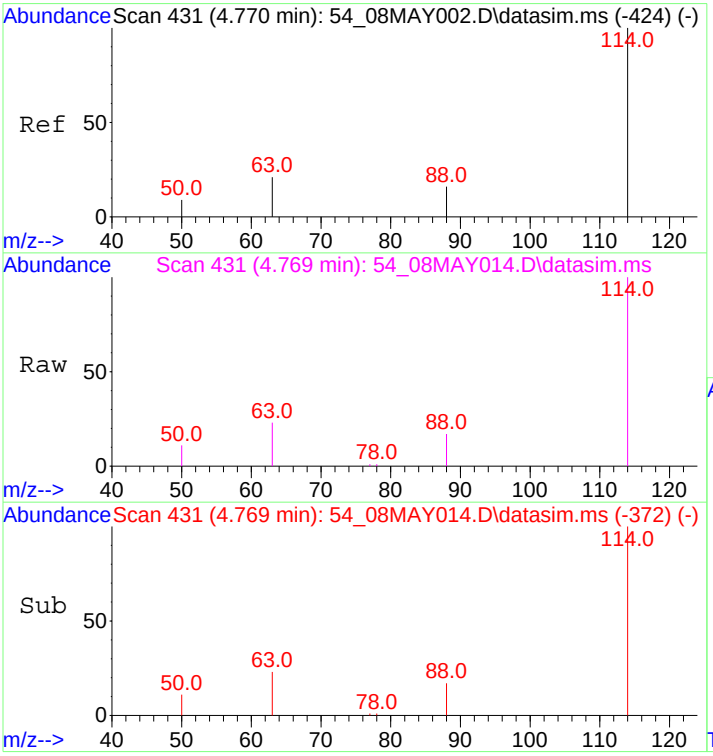


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY014.D
Acq: 8 May 2014 11:33 am

Tgt Ion: 49 Resp: 3727

Ion	Ratio	Lower	Upper
49	100		
130	63.6	56.0	84.0
128	49.4	41.6	62.4
93	25.3	22.4	33.6

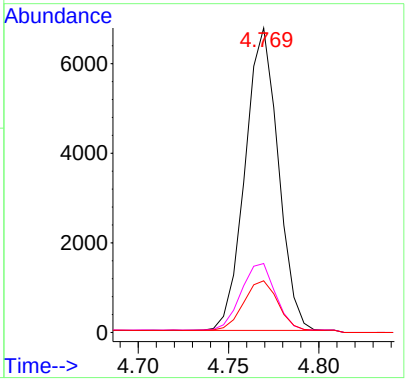


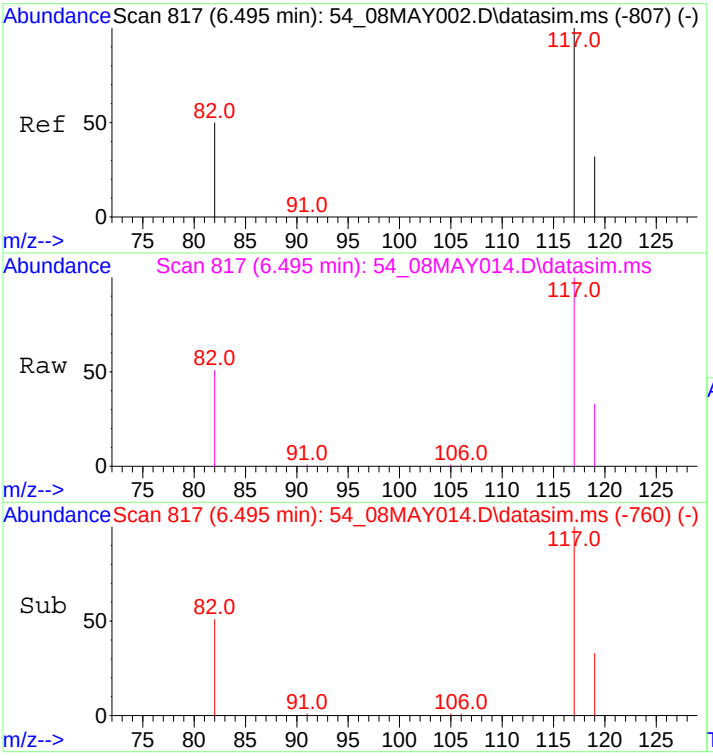


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_08MAY014.D
Acq: 8 May 2014 11:33 am

Tgt Ion:114 Resp: 8616

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	16.9	13.6	20.4

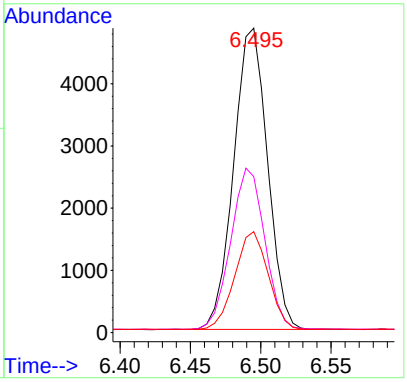


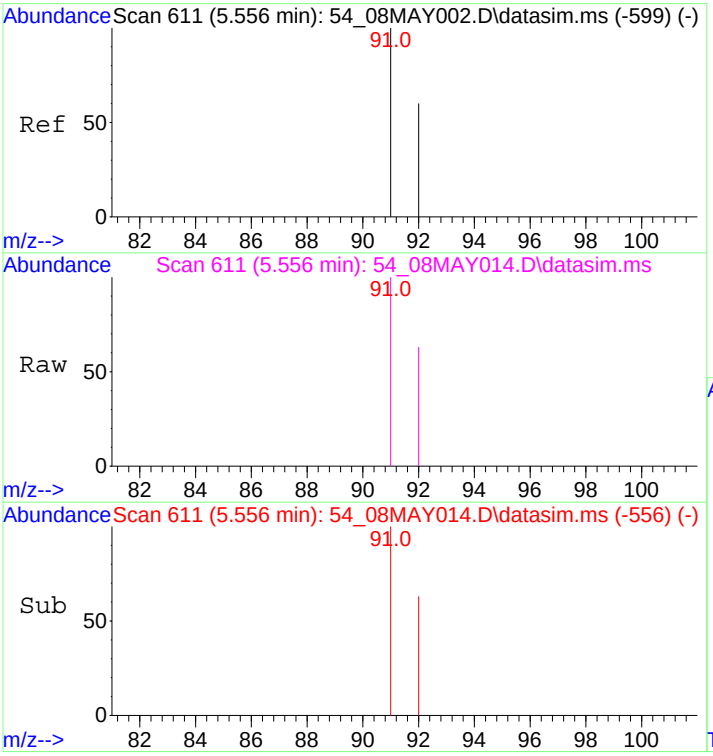


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. -0.000 min
Lab File: 54 08MAY014.D
Acq: 8 May 2014 11:33 am

Tgt Ion:117 Resp: 8132

Ion	Ratio	Lower	Upper
117	100		
82	53.6	38.0	57.0
119	31.9	27.0	40.4

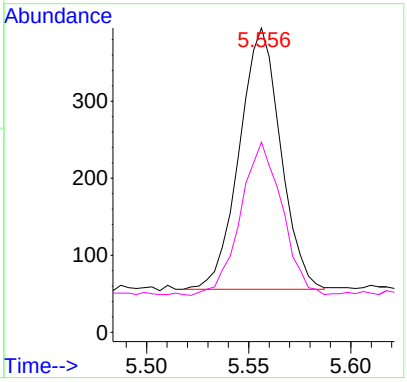


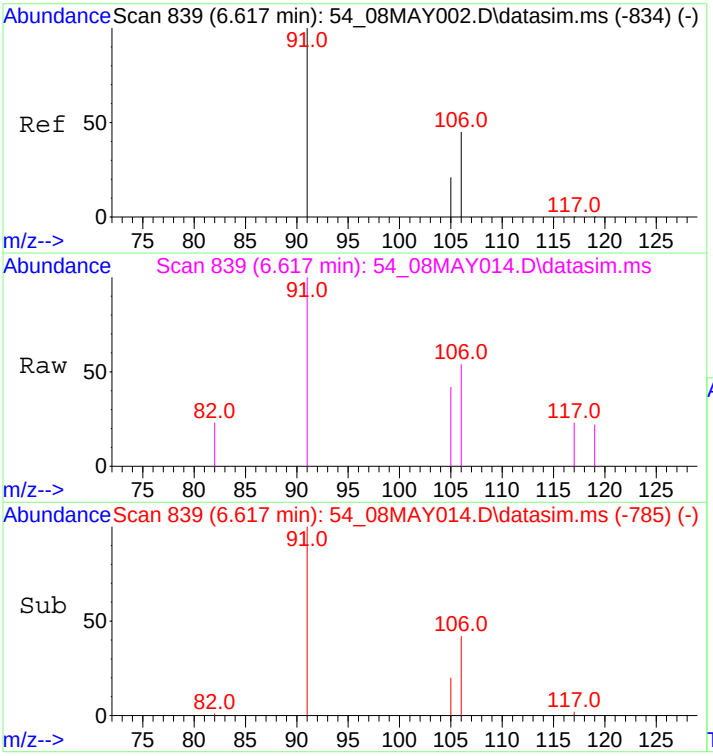


#13
Toluene
Concen: 0.98 ppbv
RT: 5.556 min Scan# 611
Delta R.T. -0.000 min
Lab File: 54_08MAY014.D
Acq: 8 May 2014 11:33 am

Tgt Ion: 91 Resp: 476

Ion	Ratio	Lower	Upper
91	100		
92	59.2	47.8	71.8

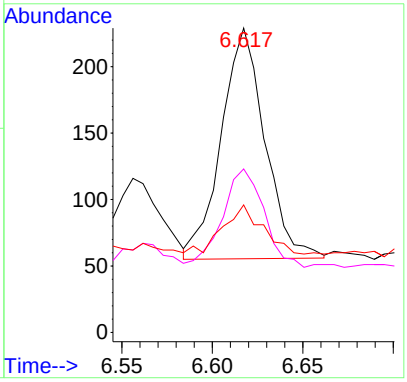




#16
m,p-Xylene
Concen: 0.61 ppbv
RT: 6.617 min Scan# 839
Delta R.T. -0.000 min
Lab File: 54 08MAY014.D
Acq: 8 May 2014 11:33 am

Tgt Ion: 91 Resp: 291

Ion	Ratio	Lower	Upper
91	100		
106	41.9	43.1	64.7#
105	18.2	18.3	27.5#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY015.D
Acq On : 8 May 2014 11:45 am
Operator : YHL
Sample : 02243 \G6-013
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:51:29 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3434	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	7806	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	7147	10.00	ppbv	0.00

System Monitoring Compounds

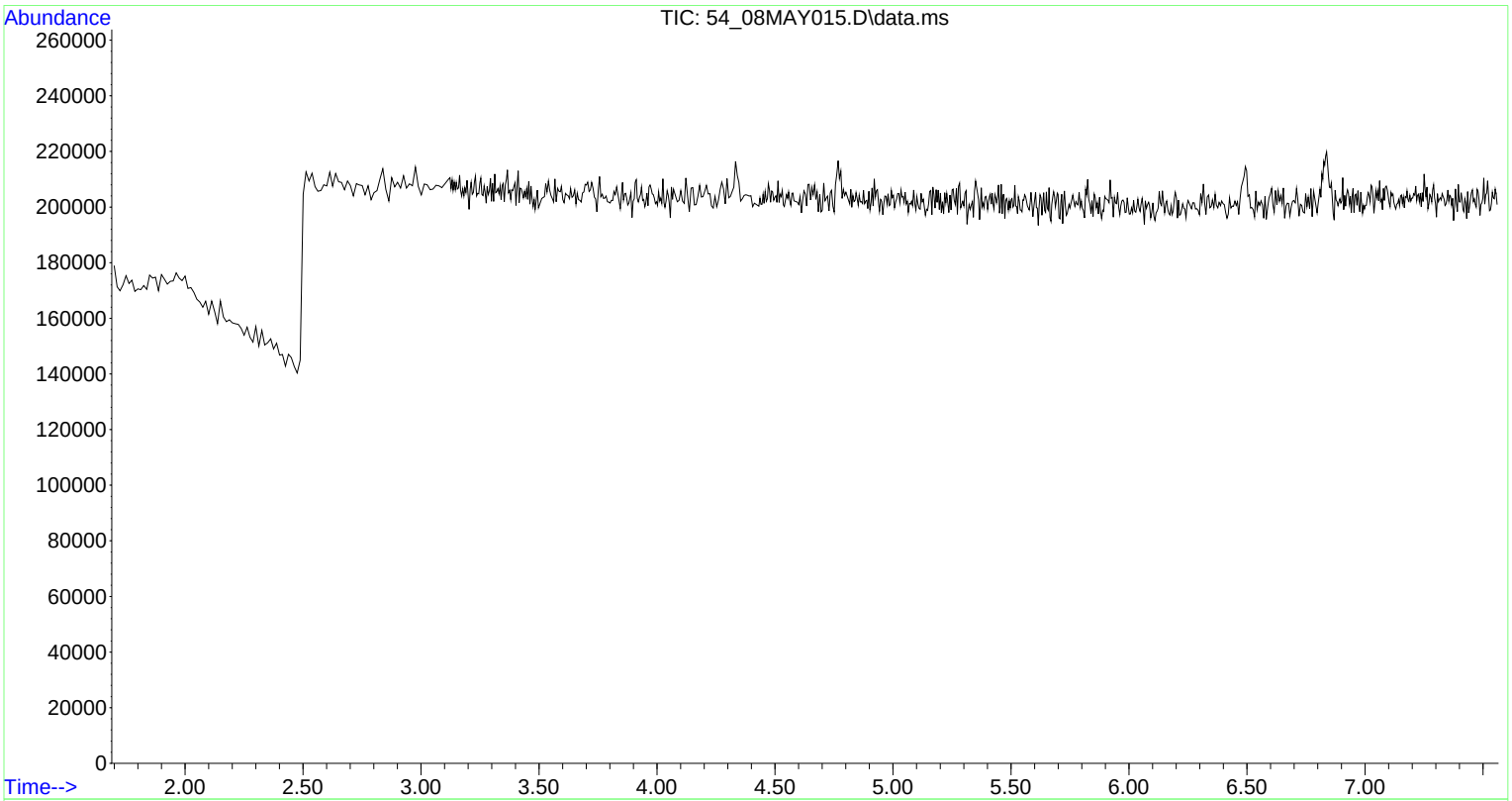
Target Compounds	Qvalue

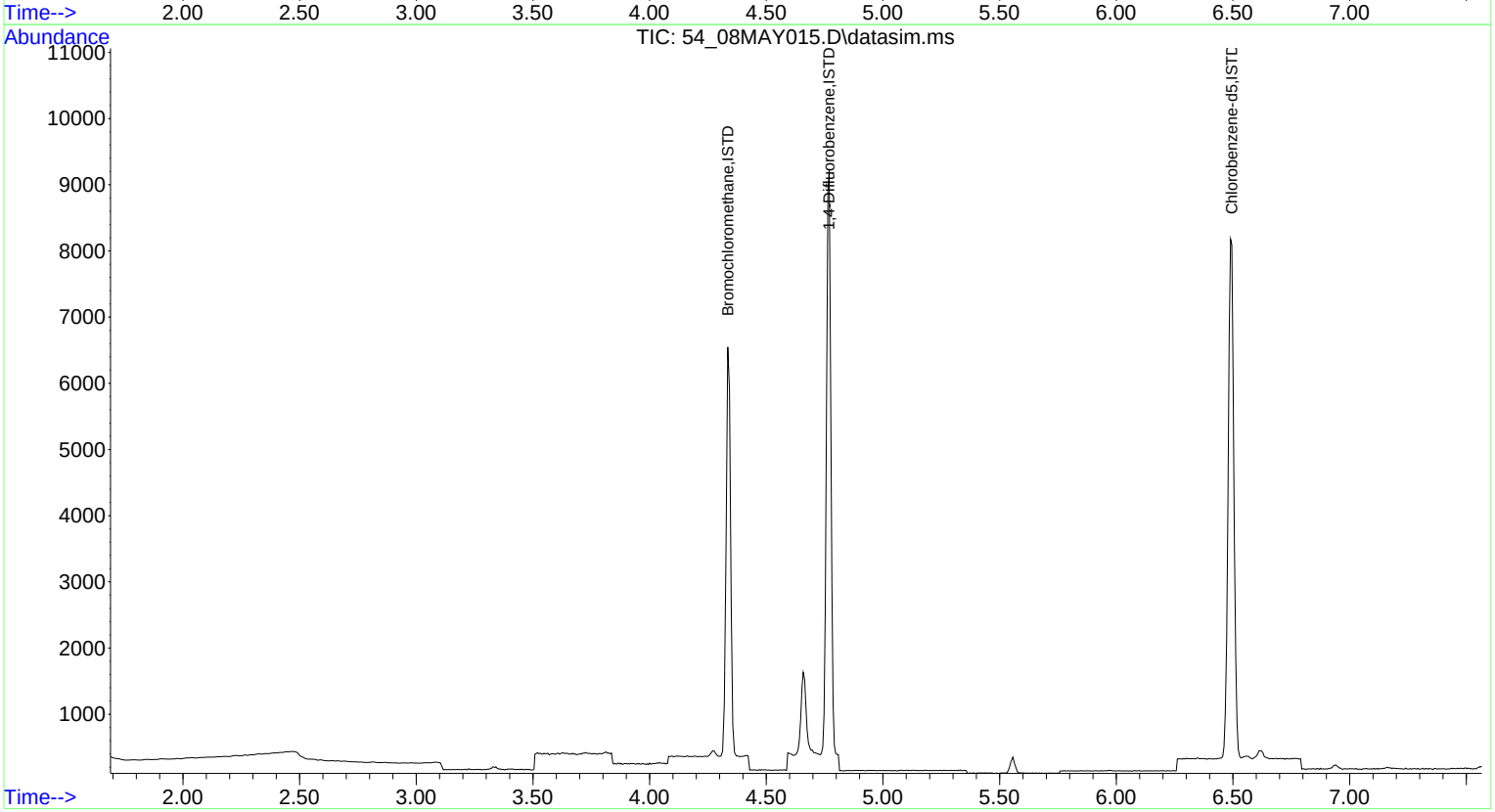
(#) = qualifier out of range (m) = manual integration (+) = signals summed

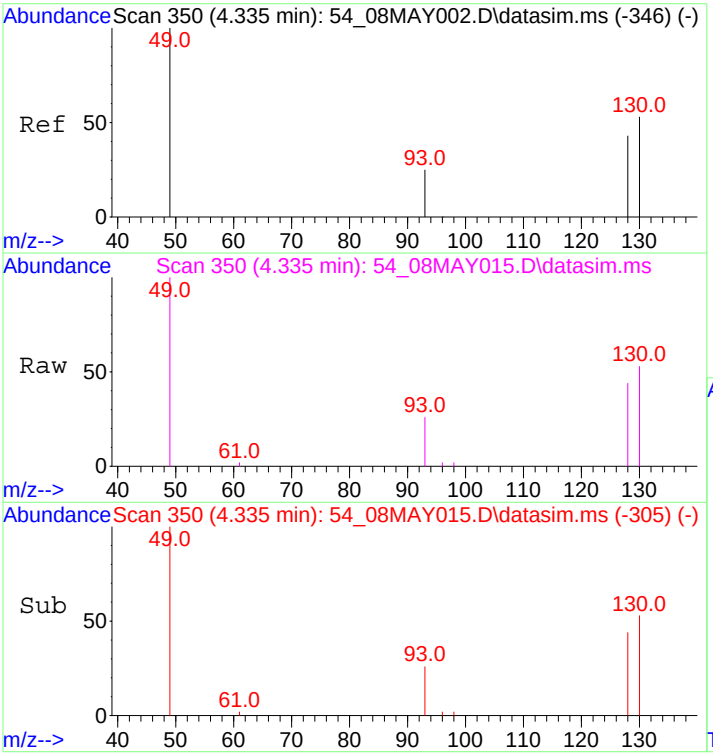
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY015.D
Acq On : 8 May 2014 11:45 am
Operator : YHL
Sample : 02243 \G6-013
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 11:51:29 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



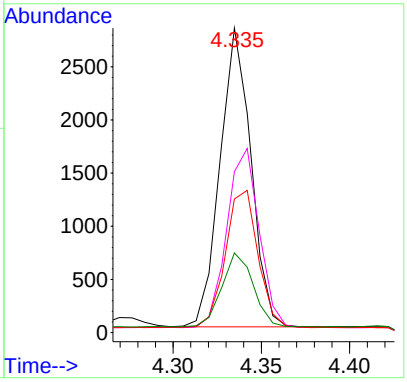


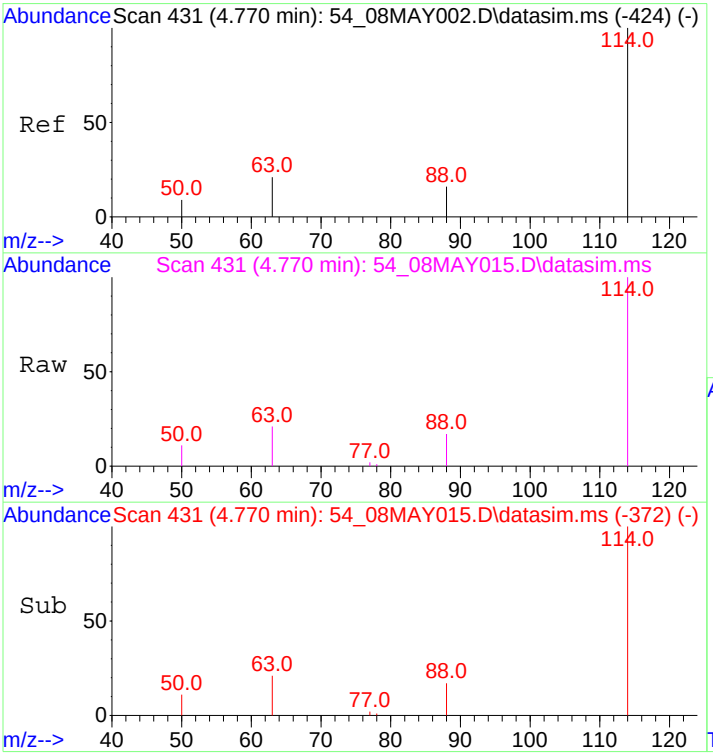


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY015.D
Acq: 8 May 2014 11:45 am

Tgt Ion: 49 Resp: 3434

Ion	Ratio	Lower	Upper
49	100		
130	62.7	56.0	84.0
128	48.4	41.6	62.4
93	24.9	22.4	33.6

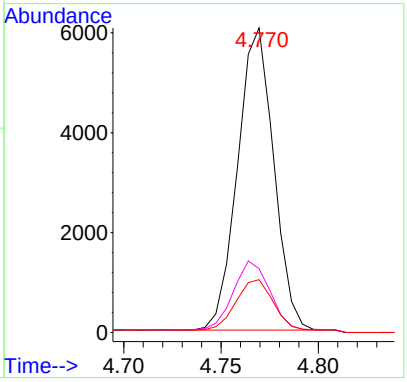


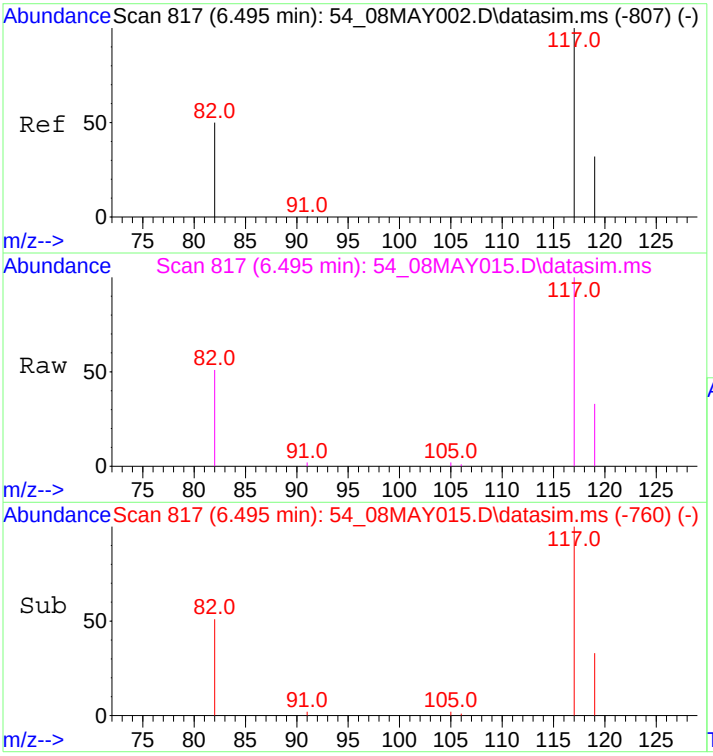


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_08MAY015.D
Acq: 8 May 2014 11:45 am

Tgt Ion:114 Resp: 7806

Ion	Ratio	Lower	Upper
114	100		
63	22.9	17.6	26.4
88	17.1	13.6	20.4

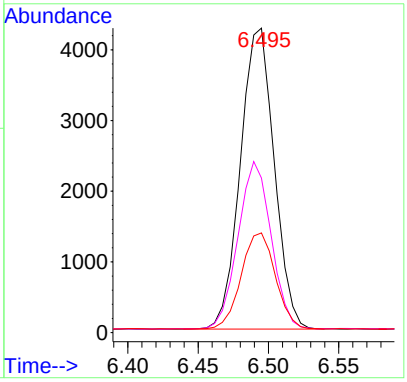




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 08MAY015.D
Acq: 8 May 2014 11:45 am

Tgt Ion:117 Resp: 7147

Ion	Ratio	Lower	Upper
117	100		
82	54.1	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY016.D
Acq On : 8 May 2014 11:56 am
Operator : YHL
Sample : 02244 \G6-044
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:03:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

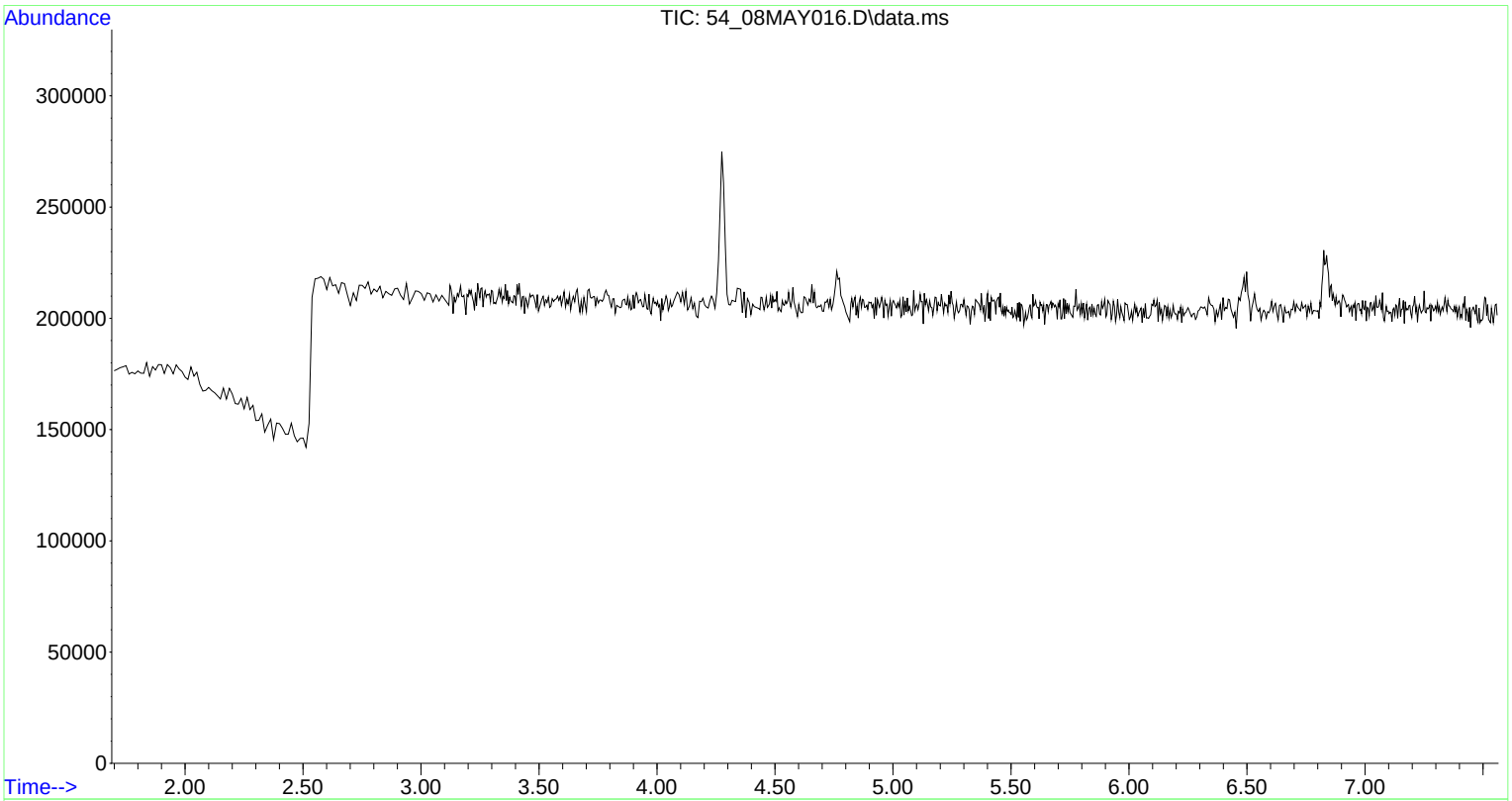
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3832	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	8916	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	8355	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
8] 1,1,1-Trichloroethane	4.488	97	279	0.70	ppbv #	95
11] Trichloroethene	4.950	130	561	2.53	ppbv	97

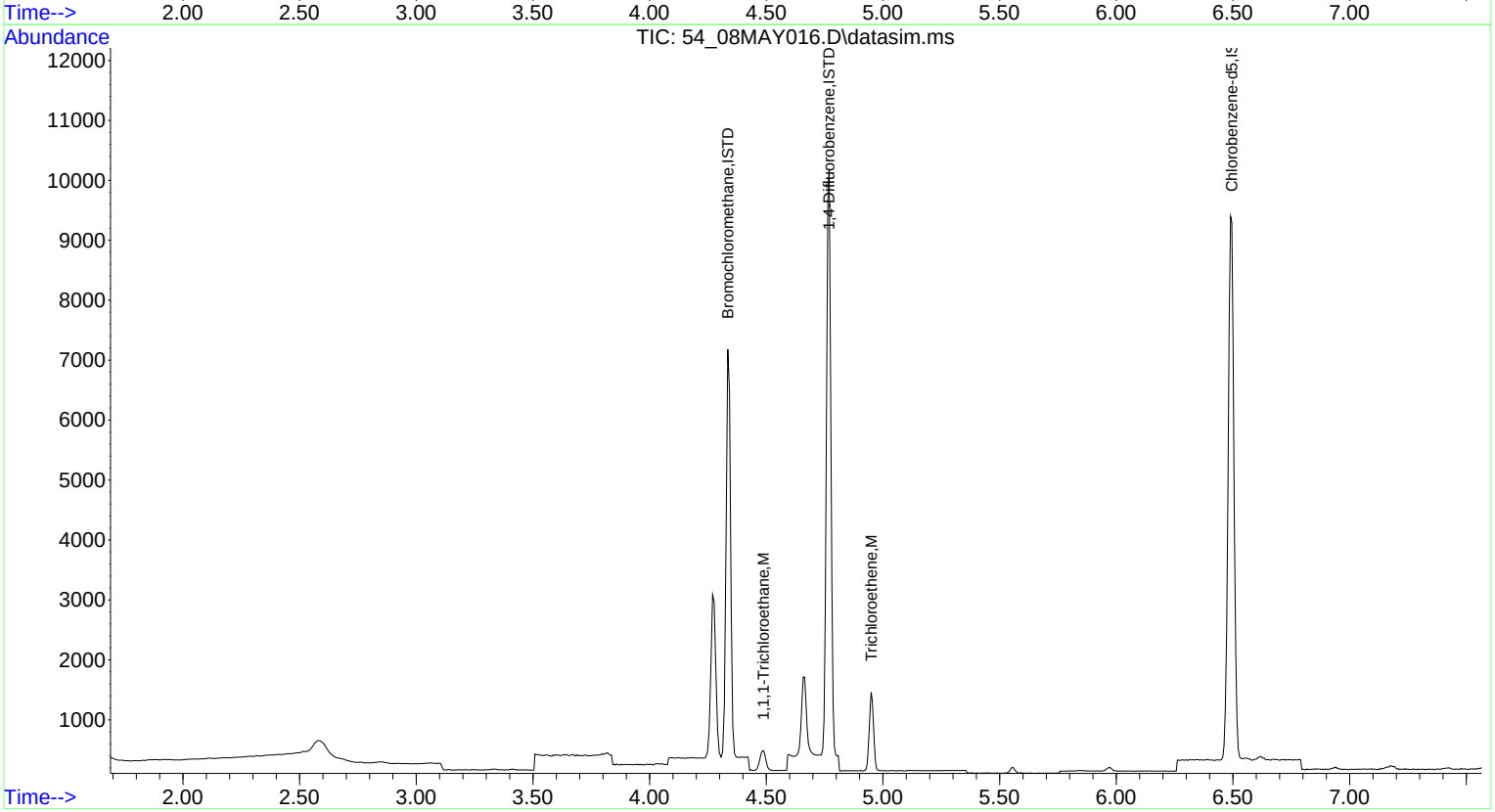
(#) = qualifier out of range (m) = manual integration (+) = signals summed

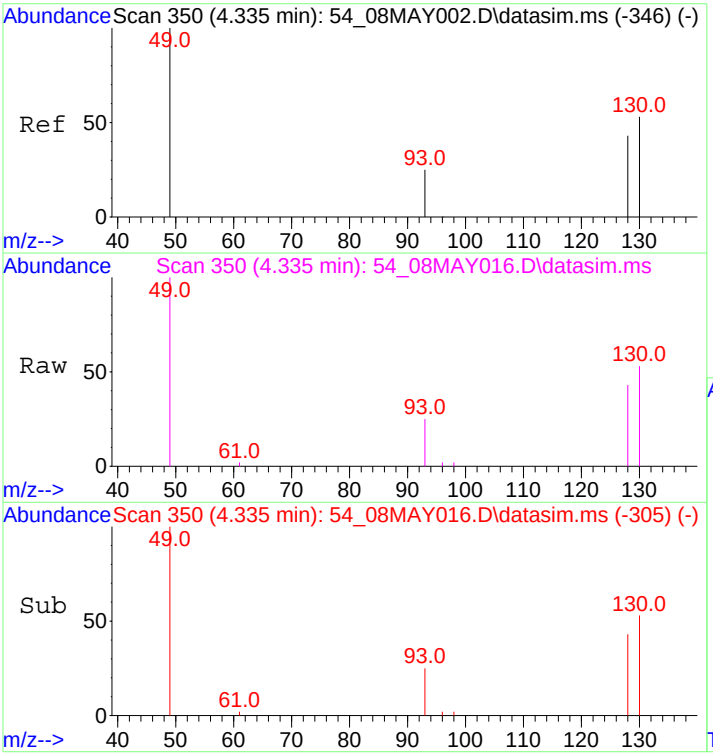
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY016.D
Acq On : 8 May 2014 11:56 am
Operator : YHL
Sample : 02244 \G6-044
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:03:13 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



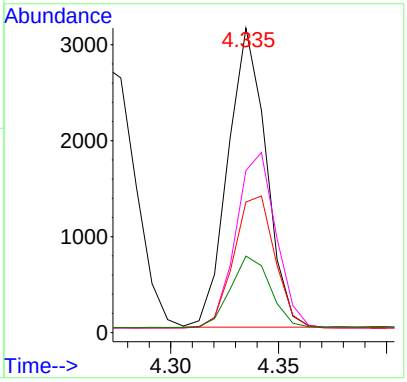


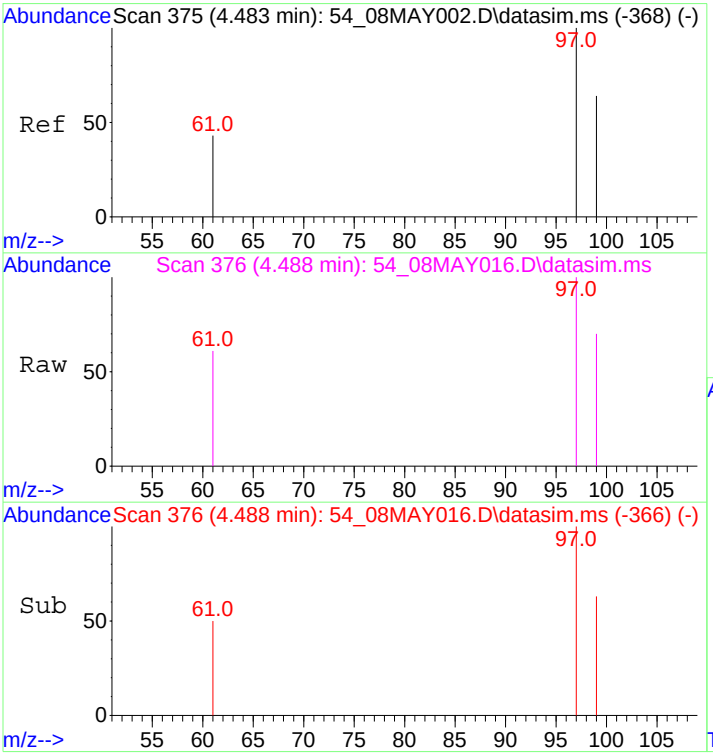


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY016.D
Acq: 8 May 2014 11:56 am

Tgt Ion: 49 Resp: 3832

Ion	Ratio	Lower	Upper
49	100		
130	61.8	56.0	84.0
128	47.8	41.6	62.4
93	24.8	22.4	33.6

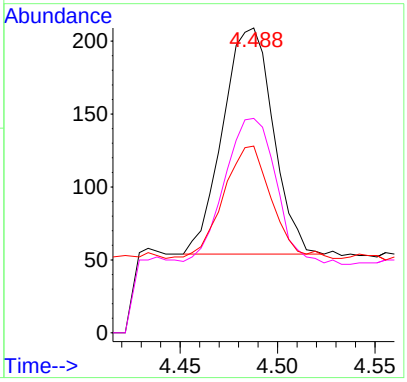


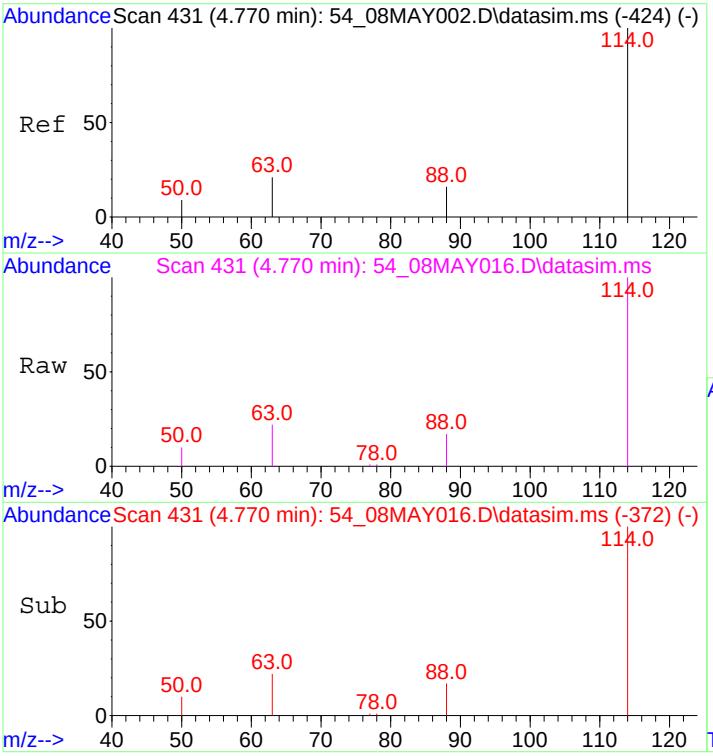


#8
1,1,1-Trichloroethane
Concen: 0.70 ppbv
RT: 4.488 min Scan# 376
Delta R.T. 0.005 min
Lab File: 54_08MAY016.D
Acq: 8 May 2014 11:56 am

Tgt Ion: 97 Resp: 279

Ion	Ratio	Lower	Upper
97	100		
99	64.5	52.1	78.1
61	45.5	30.2	45.4#

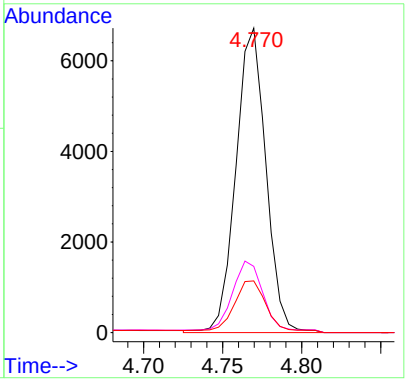


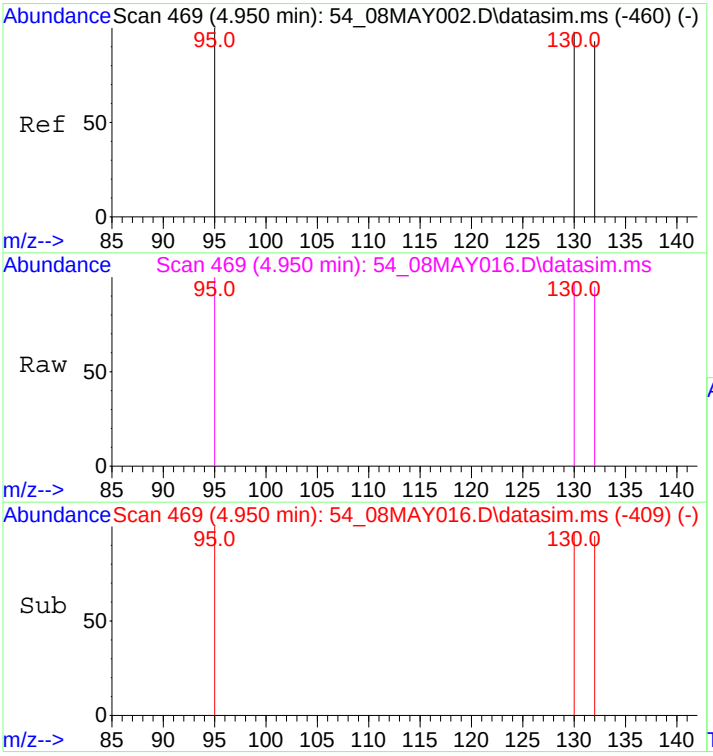


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54 08MAY016.D
Acq: 8 May 2014 11:56 am

Tgt Ion:114 Resp: 8916

Ion	Ratio	Lower	Upper
114	100		
63	22.1	17.6	26.4
88	16.2	13.6	20.4

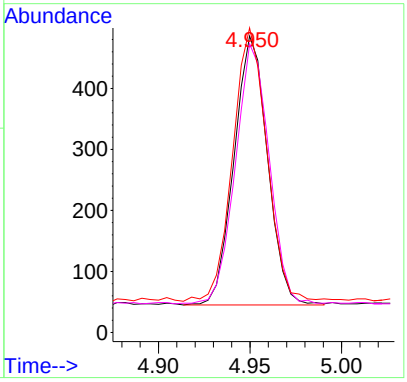


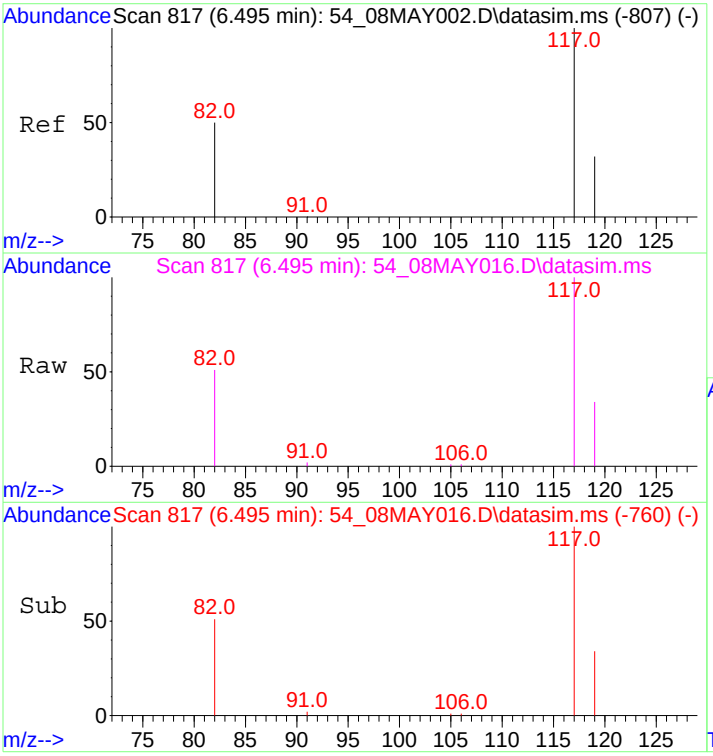


#11
Trichloroethene
Concen: 2.53 ppbv
RT: 4.950 min Scan# 469
Delta R.T. 0.000 min
Lab File: 54_08MAY016.D
Acq: 8 May 2014 11:56 am

Tgt Ion:130 Resp: 561

Ion	Ratio	Lower	Upper
130	100		
132	97.1	76.9	115.3
95	100.4	76.5	114.7

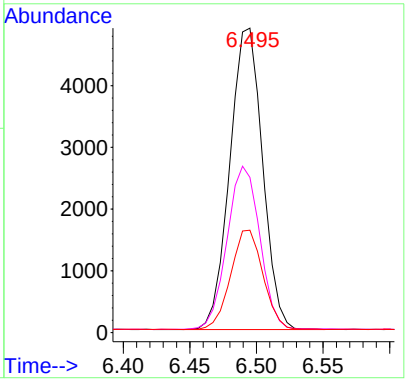




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 08MAY016.D
Acq: 8 May 2014 11:56 am

Tgt Ion:117 Resp: 8355

Ion	Ratio	Lower	Upper
117	100		
82	54.1	38.0	57.0
119	32.4	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY017.D
Acq On : 8 May 2014 12:07 pm
Operator : YHL
Sample : 02245 \G6-032
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:14:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3743	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	8456	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.490	117	7888	10.00	ppbv	0.00

System Monitoring Compounds

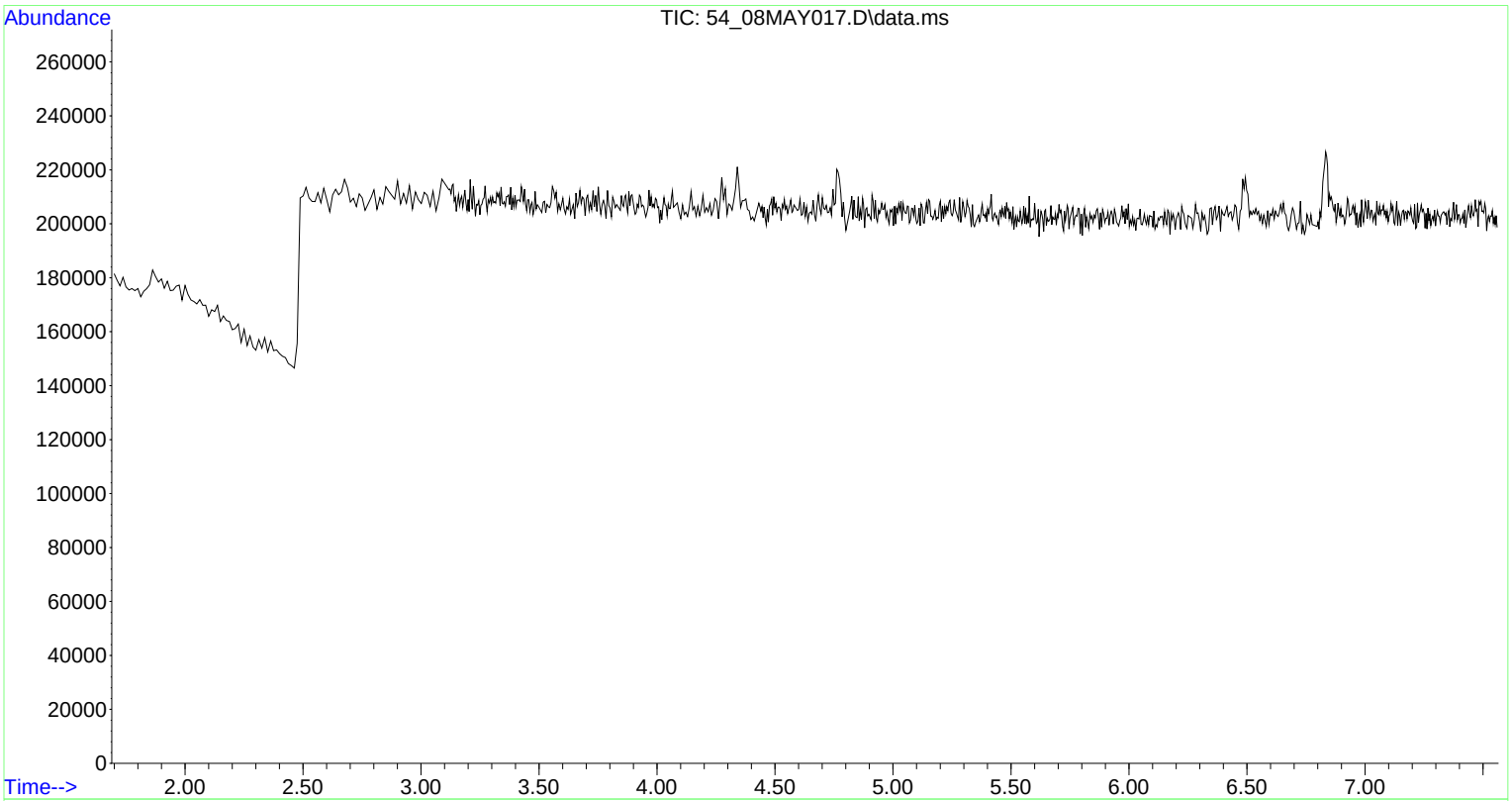
Target Compounds	Qvalue

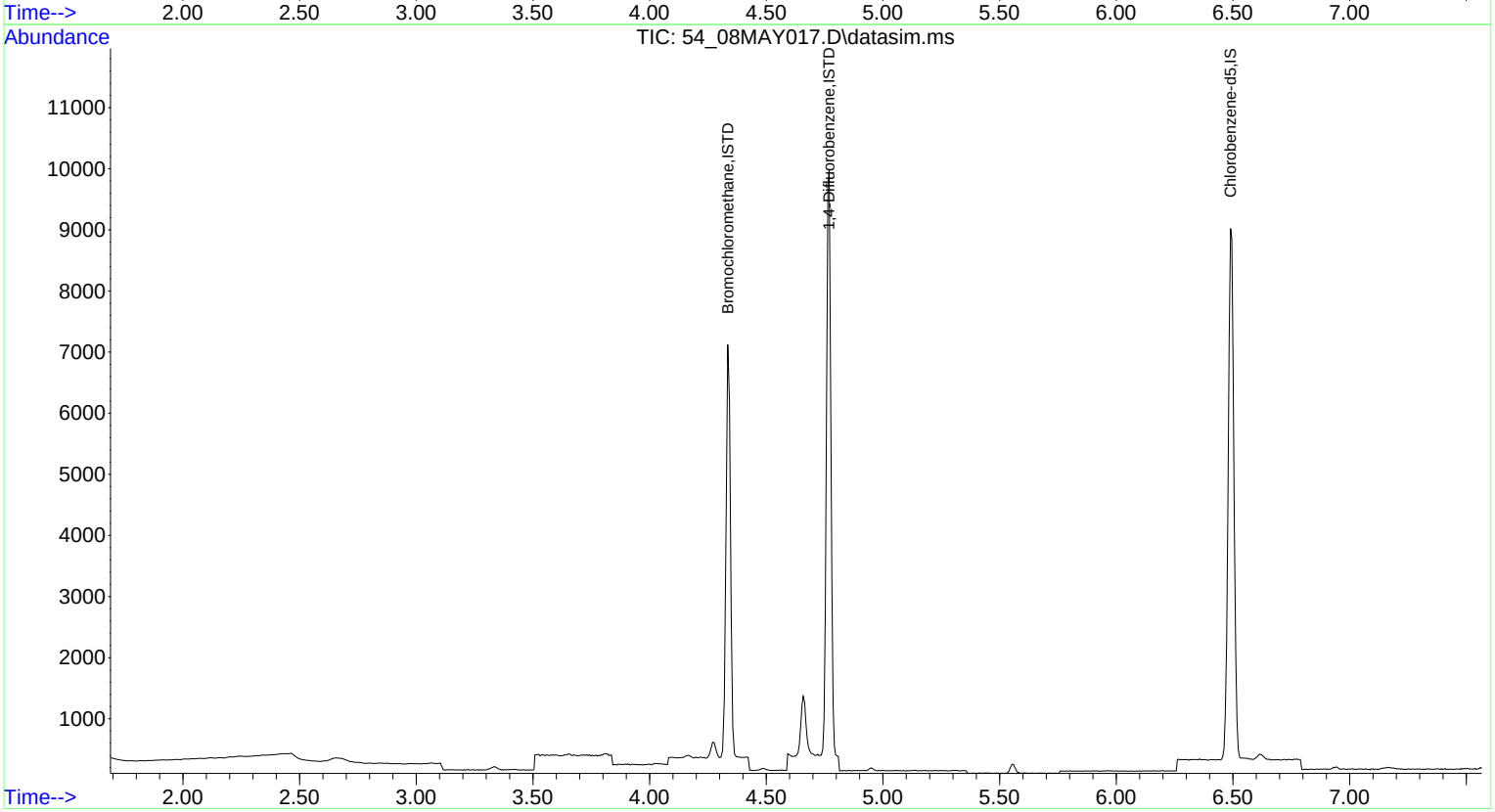
(#) = qualifier out of range (m) = manual integration (+) = signals summed

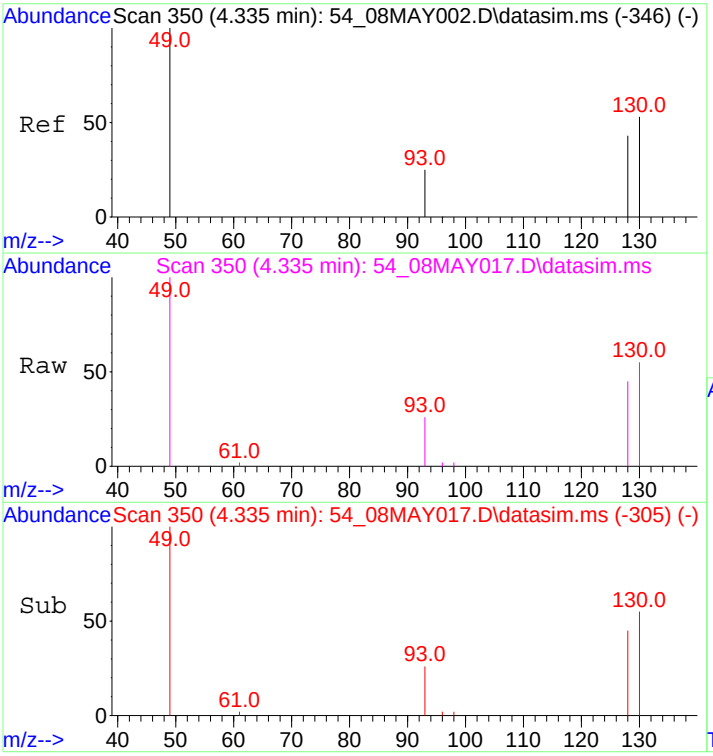
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY017.D
Acq On : 8 May 2014 12:07 pm
Operator : YHL
Sample : 02245 \G6-032
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:14:17 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



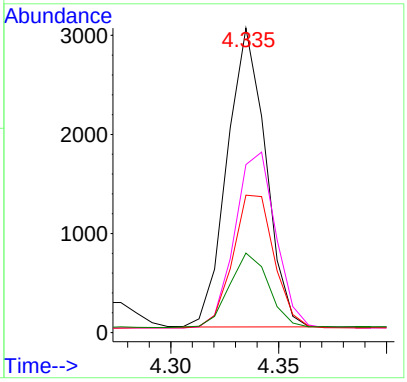


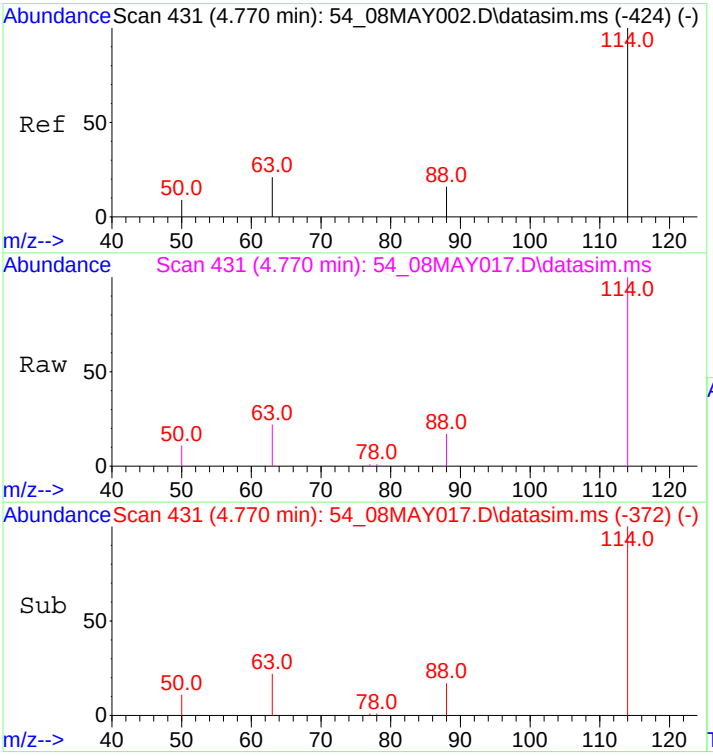


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY017.D
Acq: 8 May 2014 12:07 pm

Tgt Ion: 49 Resp: 3743

Ion	Ratio	Lower	Upper
49	100		
130	62.8	56.0	84.0
128	48.0	41.6	62.4
93	25.0	22.4	33.6

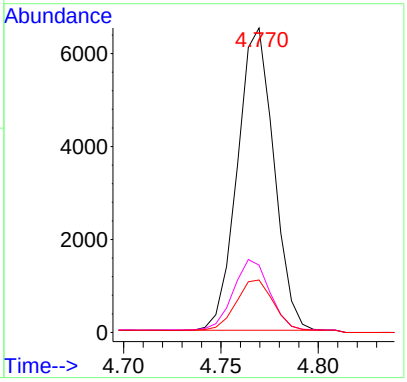


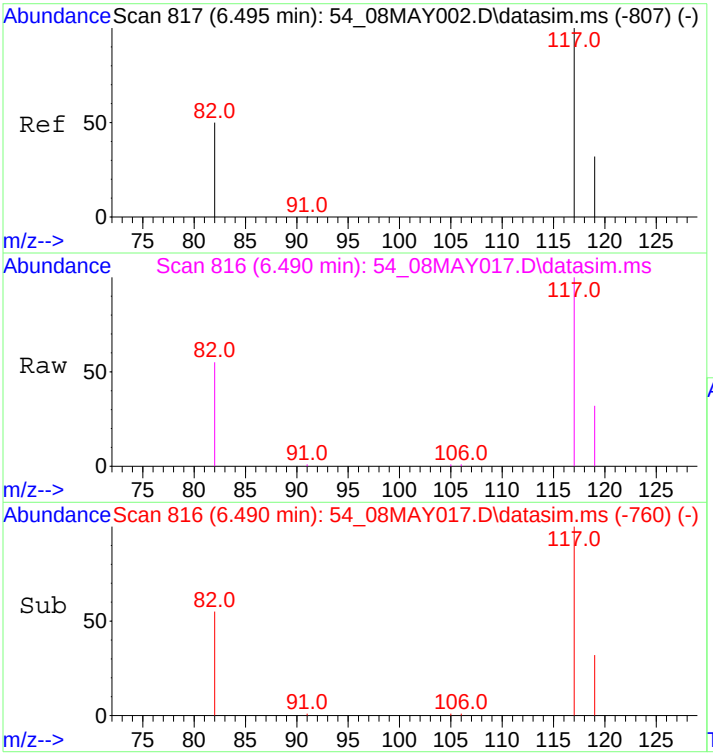


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_08MAY017.D
Acq: 8 May 2014 12:07 pm

Tgt Ion:114 Resp: 8456

Ion	Ratio	Lower	Upper
114	100		
63	23.0	17.6	26.4
88	17.0	13.6	20.4

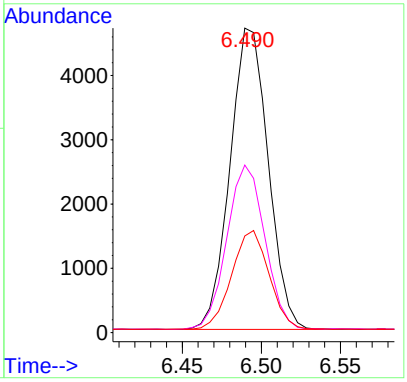




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY017.D
Acq: 8 May 2014 12:07 pm

Tgt Ion:117 Resp: 7888

Ion	Ratio	Lower	Upper
117	100		
82	54.4	38.0	57.0
119	31.8	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY018.D
Acq On : 8 May 2014 12:19 pm
Operator : YHL
Sample : 02246 \G6-030
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:25:38 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3837	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	8548	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.489	117	7901	10.00	ppbv	0.00

System Monitoring Compounds

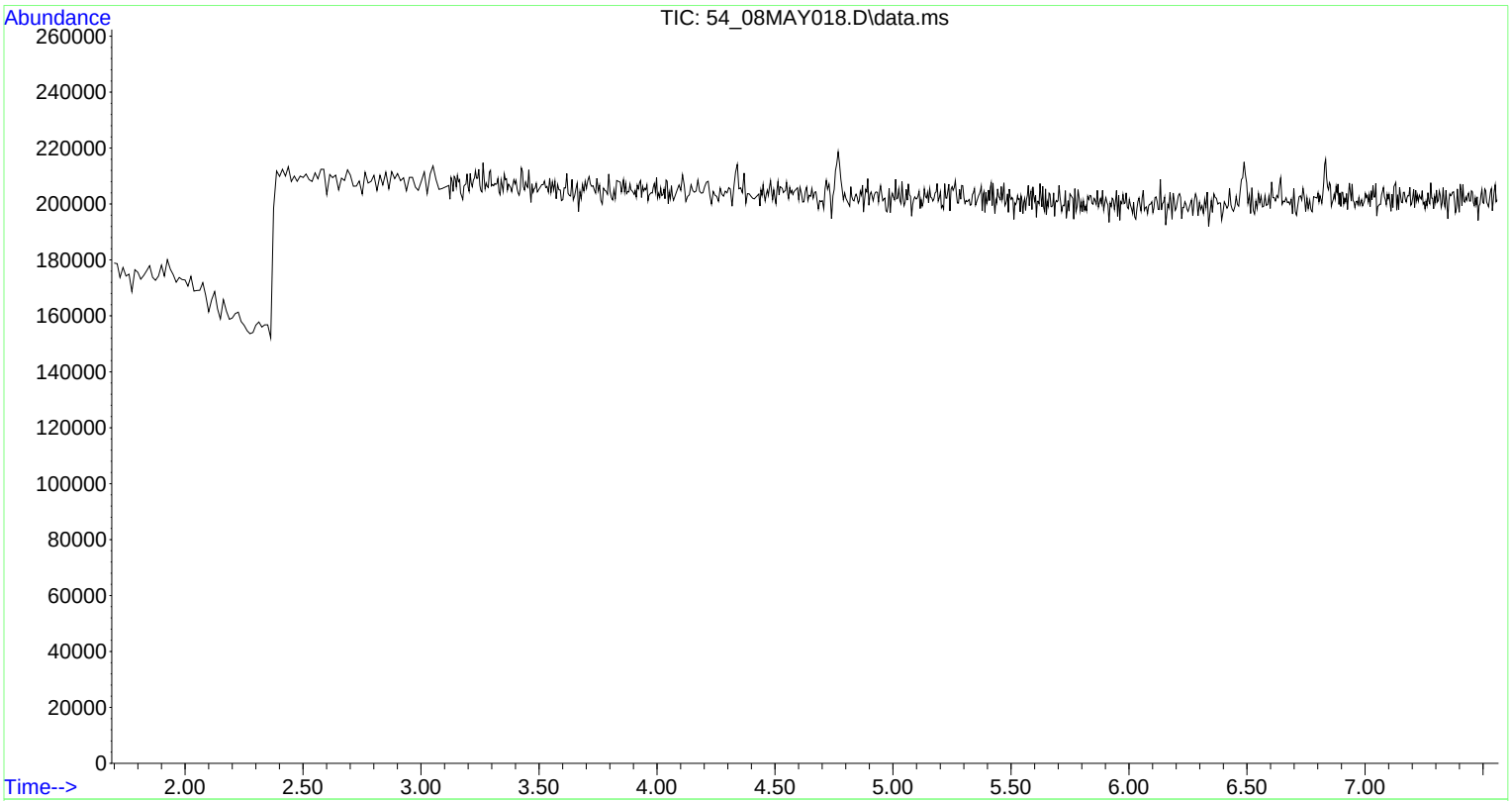
Target Compounds	Qvalue

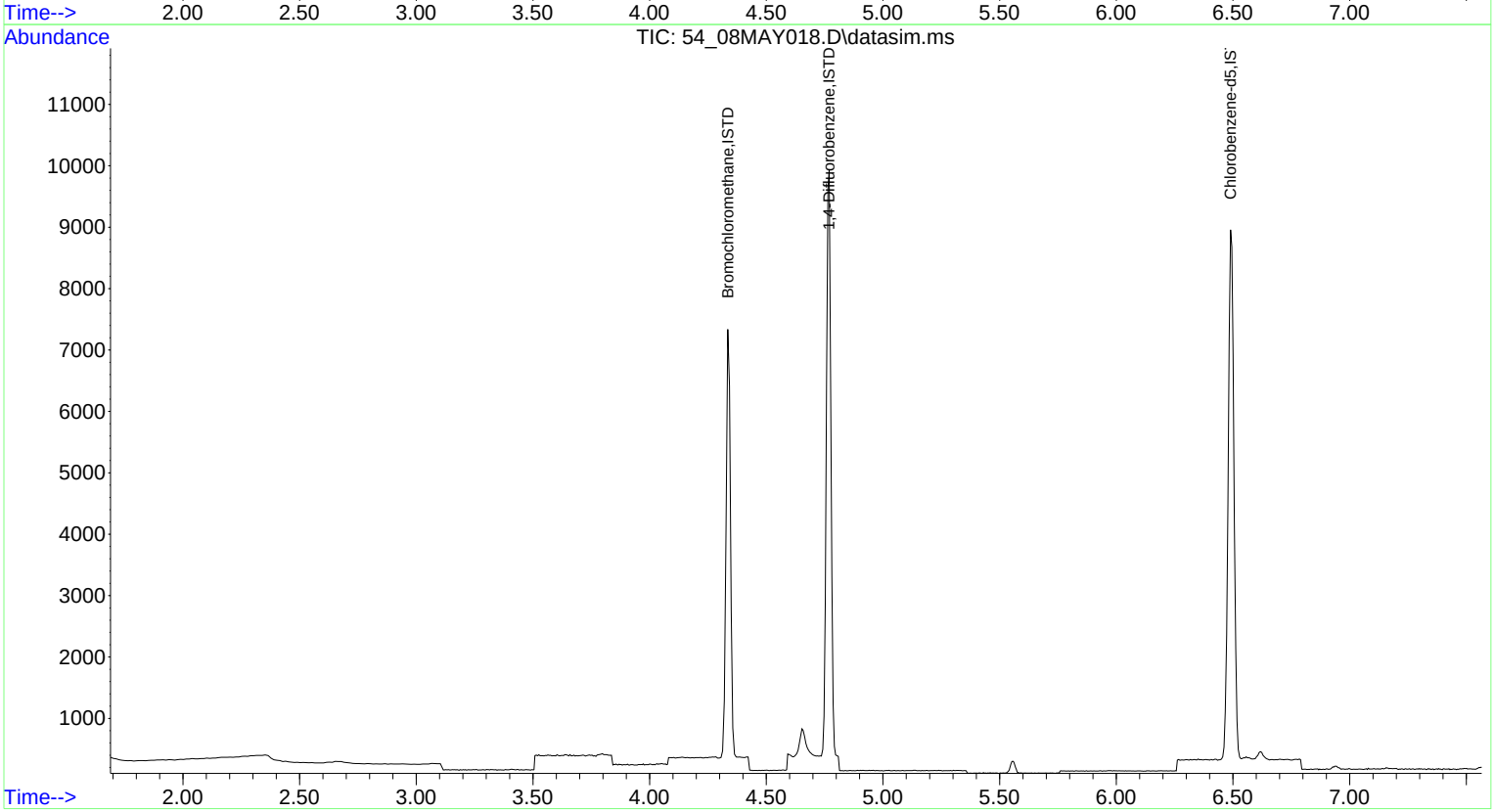
(#) = qualifier out of range (m) = manual integration (+) = signals summed

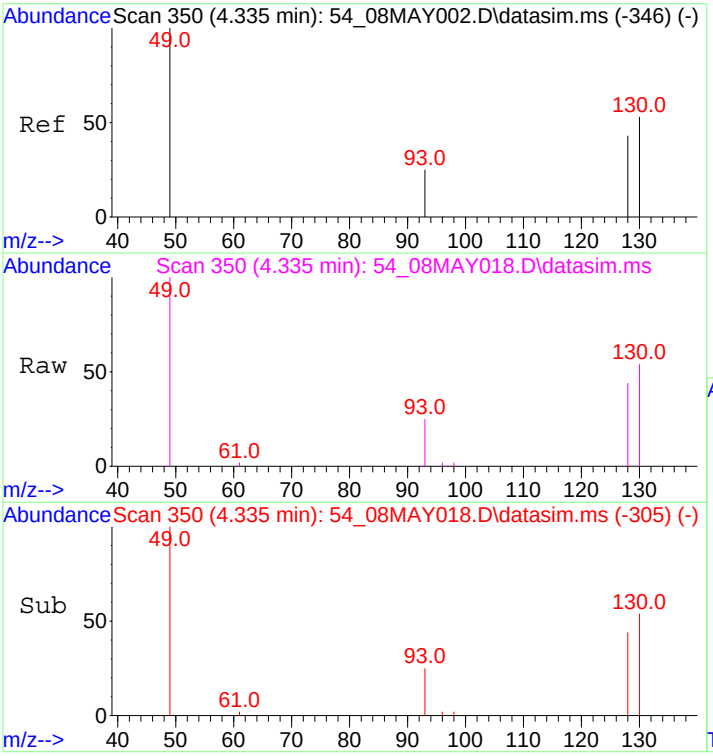
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY018.D
Acq On : 8 May 2014 12:19 pm
Operator : YHL
Sample : 02246 \G6-030
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:25:38 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



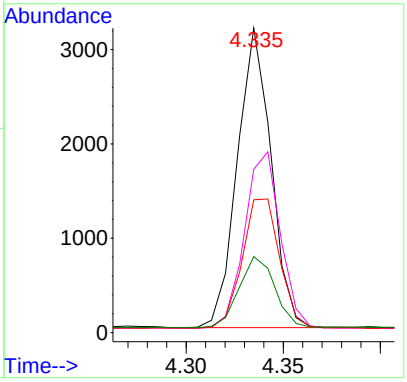


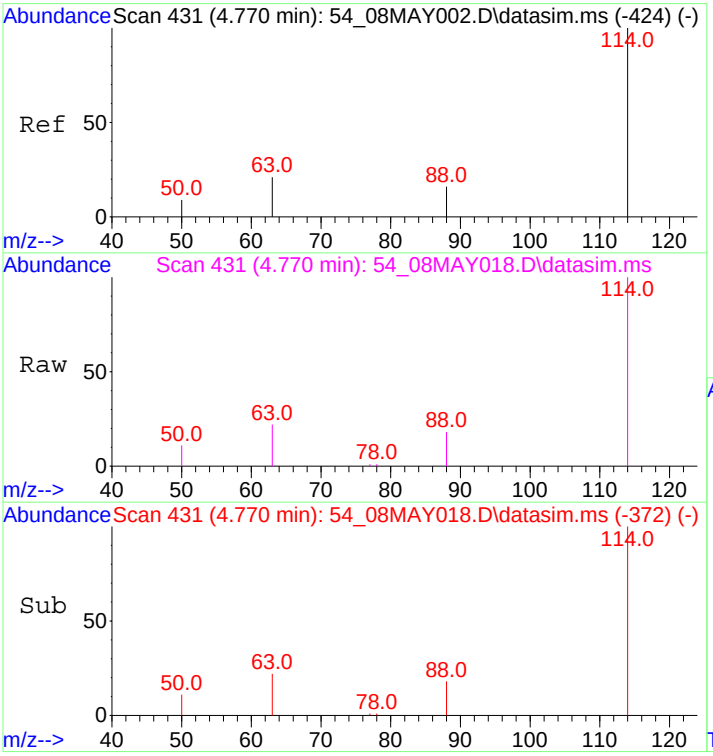


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY018.D
Acq: 8 May 2014 12:19 pm

Tgt Ion: 49 Resp: 3837

Ion	Ratio	Lower	Upper
49	100		
130	62.3	56.0	84.0
128	47.8	41.6	62.4
93	25.3	22.4	33.6

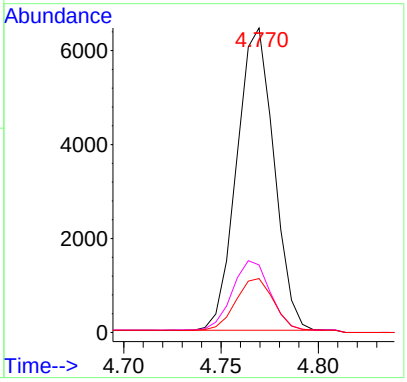


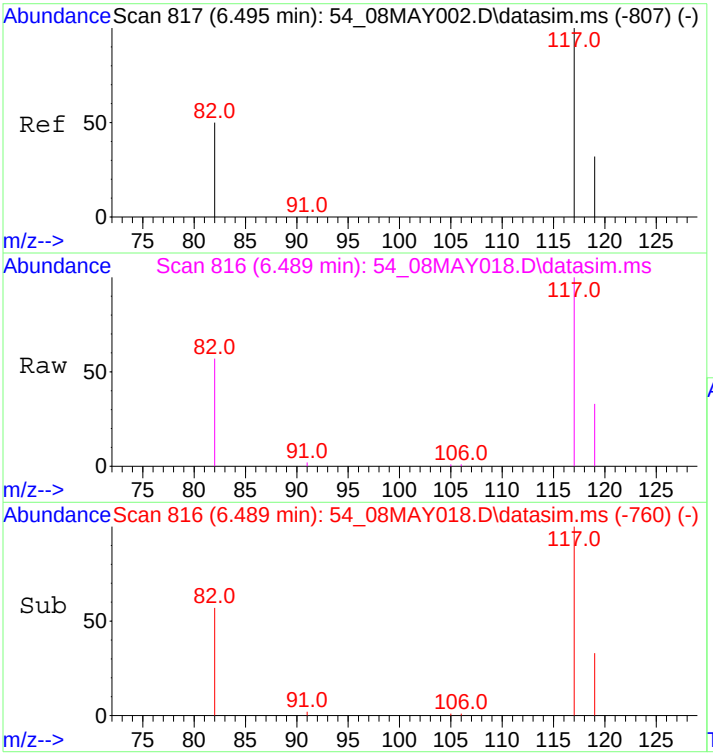


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_08MAY018.D
Acq: 8 May 2014 12:19 pm

Tgt Ion:114 Resp: 8548

Ion	Ratio	Lower	Upper
114	100		
63	23.1	17.6	26.4
88	17.4	13.6	20.4

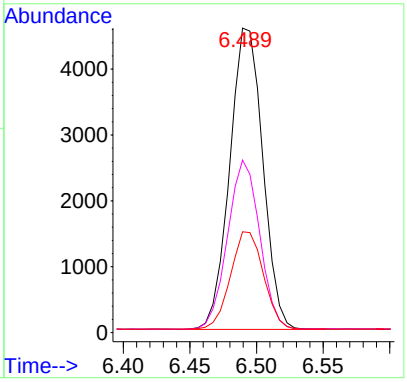




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY018.D
Acq: 8 May 2014 12:19 pm

Tgt Ion:117 Resp: 7901

Ion	Ratio	Lower	Upper
117	100		
82	54.4	38.0	57.0
119	32.2	27.0	40.4



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY019.D
Acq On : 8 May 2014 12:30 pm
Operator : YHL
Sample : 02247 \G6-013
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:37:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

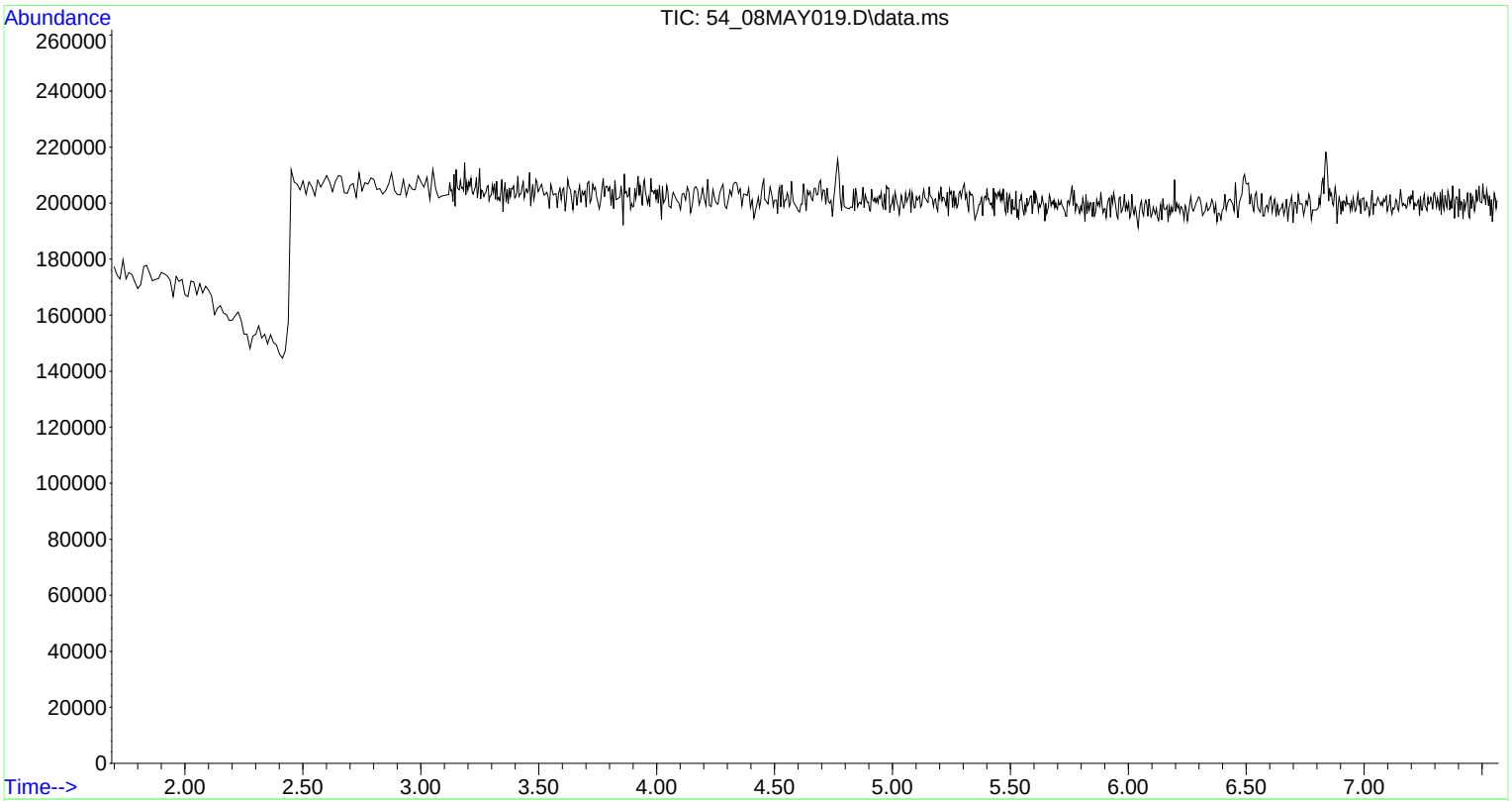
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	4.335	49	3568	10.00 ppbv	0.00
9) 1,4-Difluorobenzene	4.769	114	8256	10.00 ppbv	0.00
12) Chlorobenzene-d5	6.489	117	7429	10.00 ppbv	0.00
System Monitoring Compounds					
Target Compounds					Qvalue
13] Toluene	5.552	91	271	0.61 ppbv	99

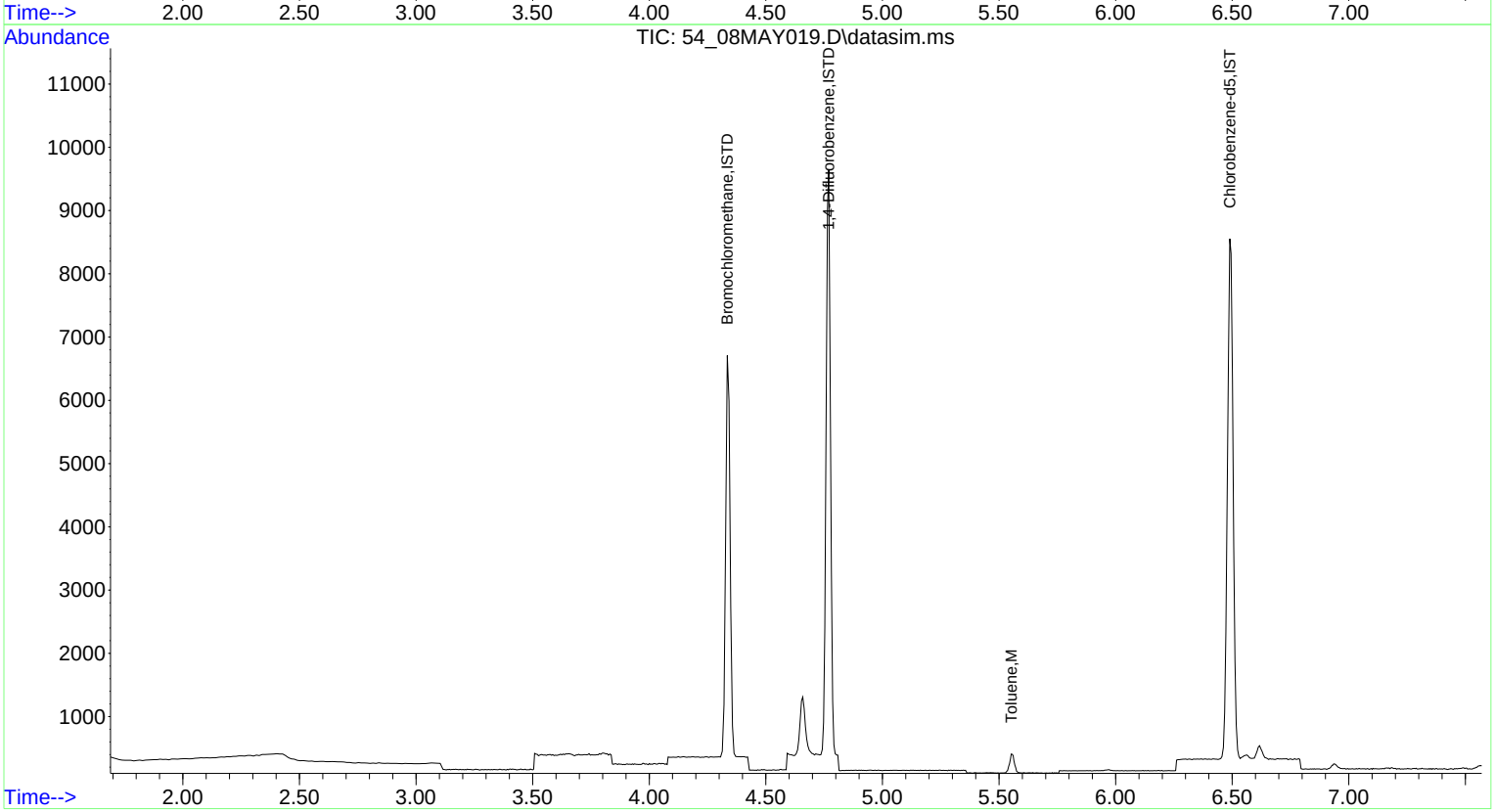
(#) = qualifier out of range (m) = manual integration (+) = signals summed

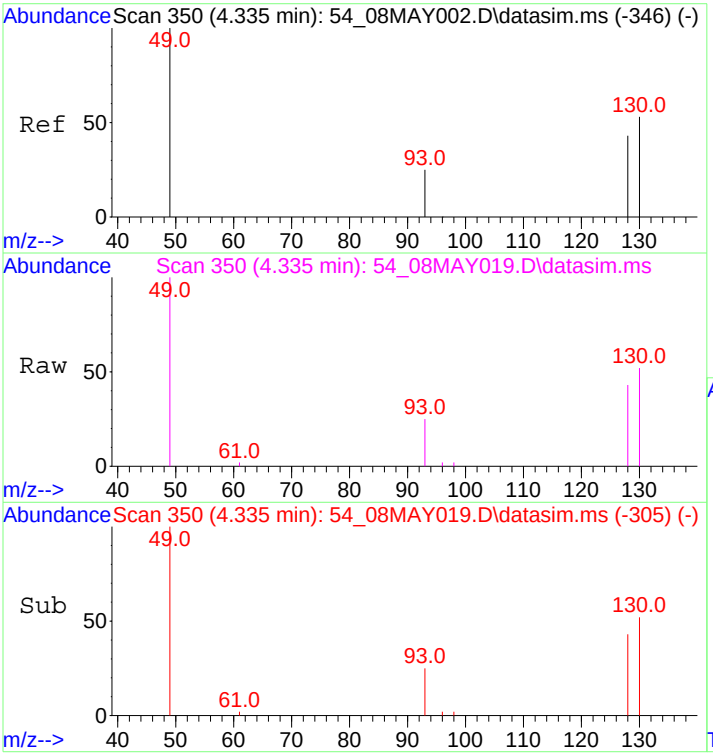
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY019.D
Acq On : 8 May 2014 12:30 pm
Operator : YHL
Sample : 02247 \G6-013
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:37:36 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



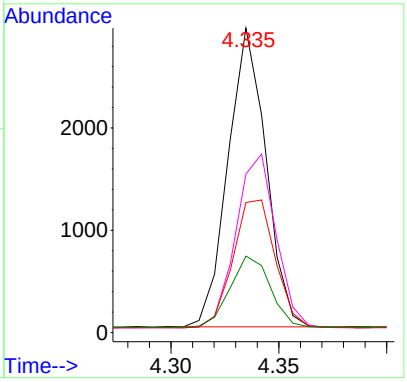


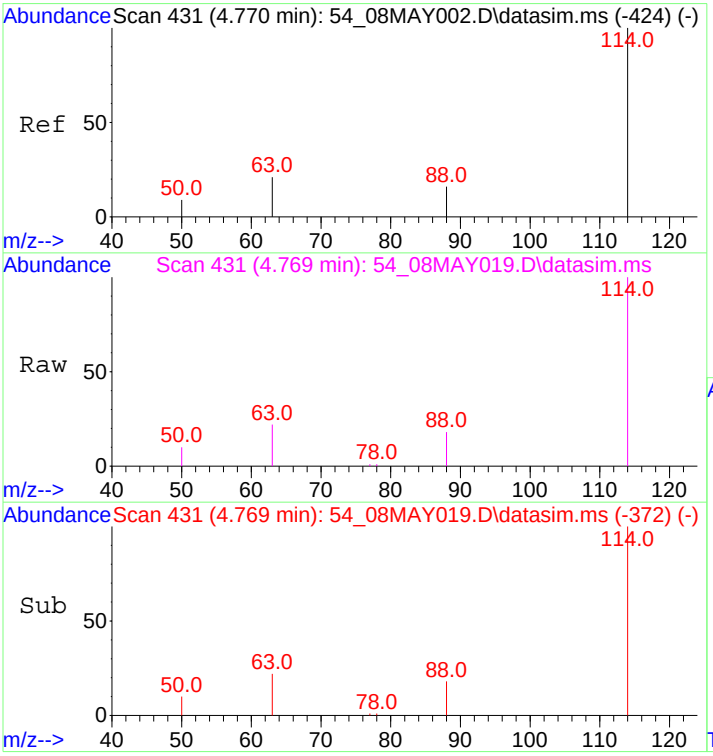


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. -0.000 min
Lab File: 54 08MAY019.D
Acq: 8 May 2014 12:30 pm

Tgt Ion: 49 Resp: 3568

Ion	Ratio	Lower	Upper
49	100		
130	61.4	56.0	84.0
128	47.8	41.6	62.4
93	25.2	22.4	33.6

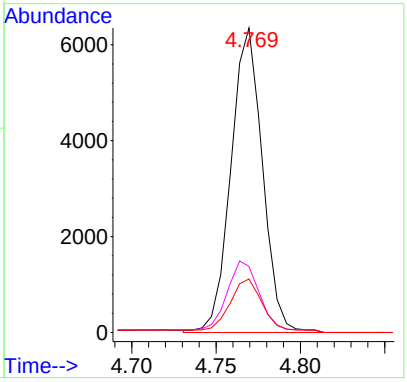


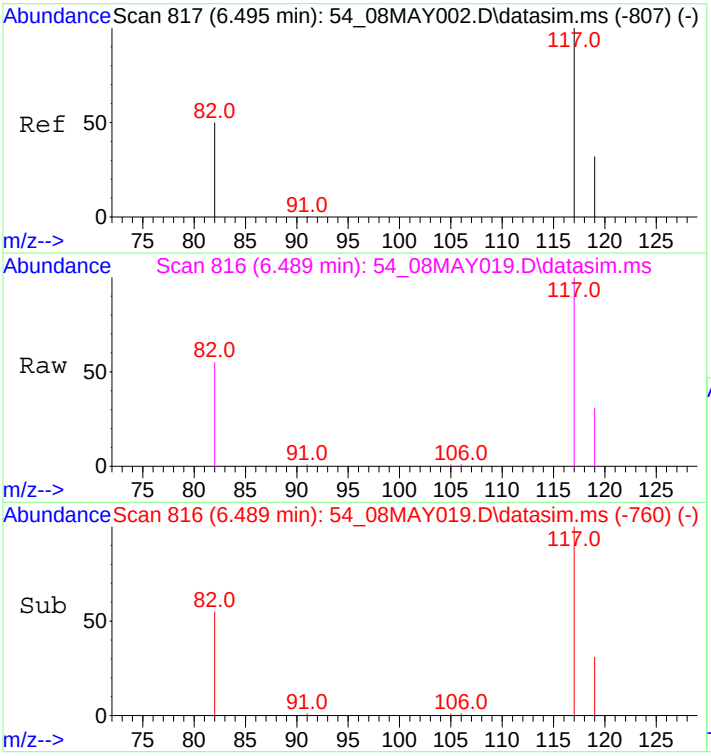


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.769 min Scan# 431
Delta R.T. -0.000 min
Lab File: 54_08MAY019.D
Acq: 8 May 2014 12:30 pm

Tgt Ion:114 Resp: 8256

Ion	Ratio	Lower	Upper
114	100		
63	22.3	17.6	26.4
88	16.4	13.6	20.4

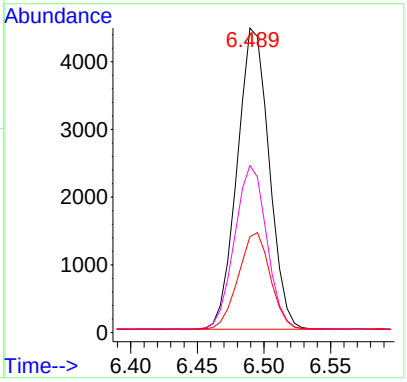


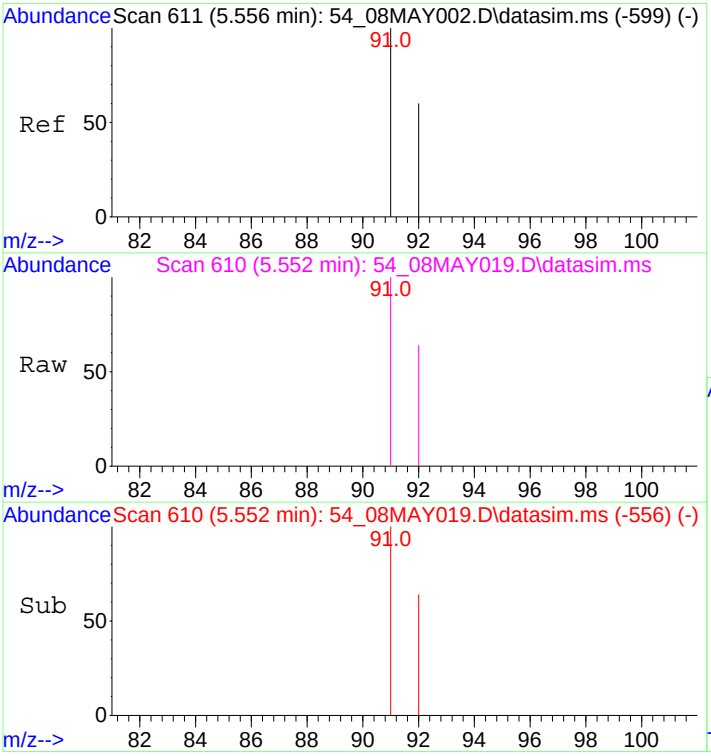


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.489 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY019.D
Acq: 8 May 2014 12:30 pm

Tgt Ion:117 Resp: 7429

Ion	Ratio	Lower	Upper
117	100		
82	54.5	38.0	57.0
119	32.1	27.0	40.4

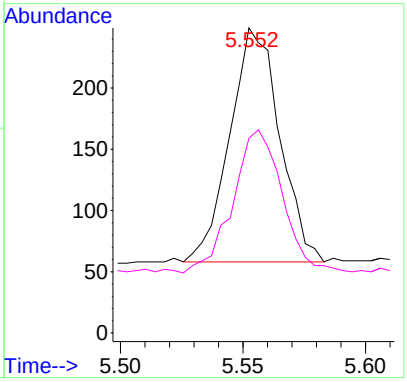




#13
Toluene
Concen: 0.61 ppbv
RT: 5.552 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54_08MAY019.D
Acq: 8 May 2014 12:30 pm

Tgt Ion: 91 Resp: 271

Ion	Ratio	Lower	Upper
91	100		
92	60.9	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY020.D
Acq On : 8 May 2014 12:42 pm
Operator : YHL
Sample : 02248 \G6-011
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:49:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

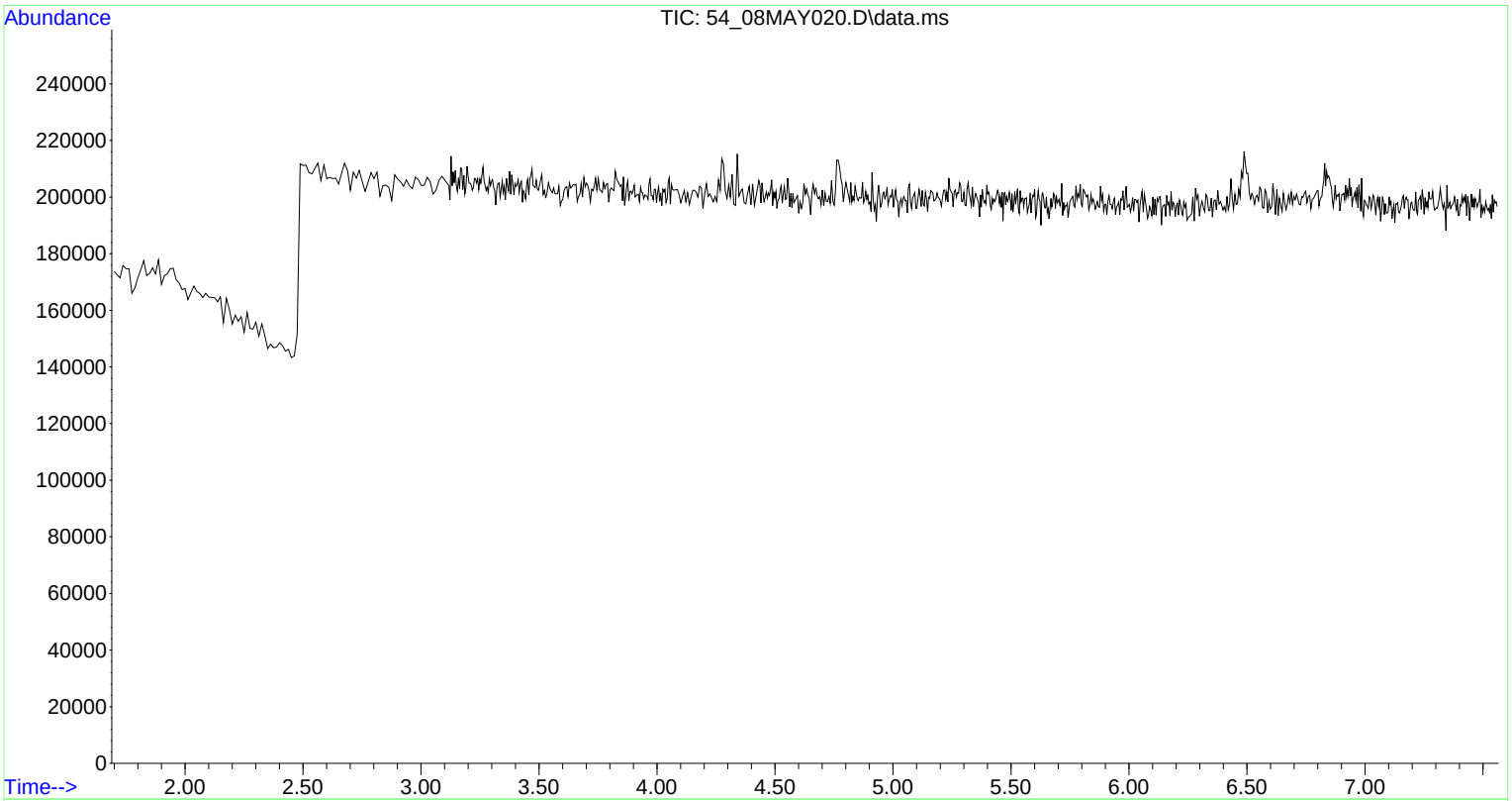
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3734	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	8478	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.490	117	7931	10.00	ppbv	0.00
System Monitoring Compounds						
Target Compounds						Qvalue
13] Toluene	5.553	91	379	0.80	ppbv	99

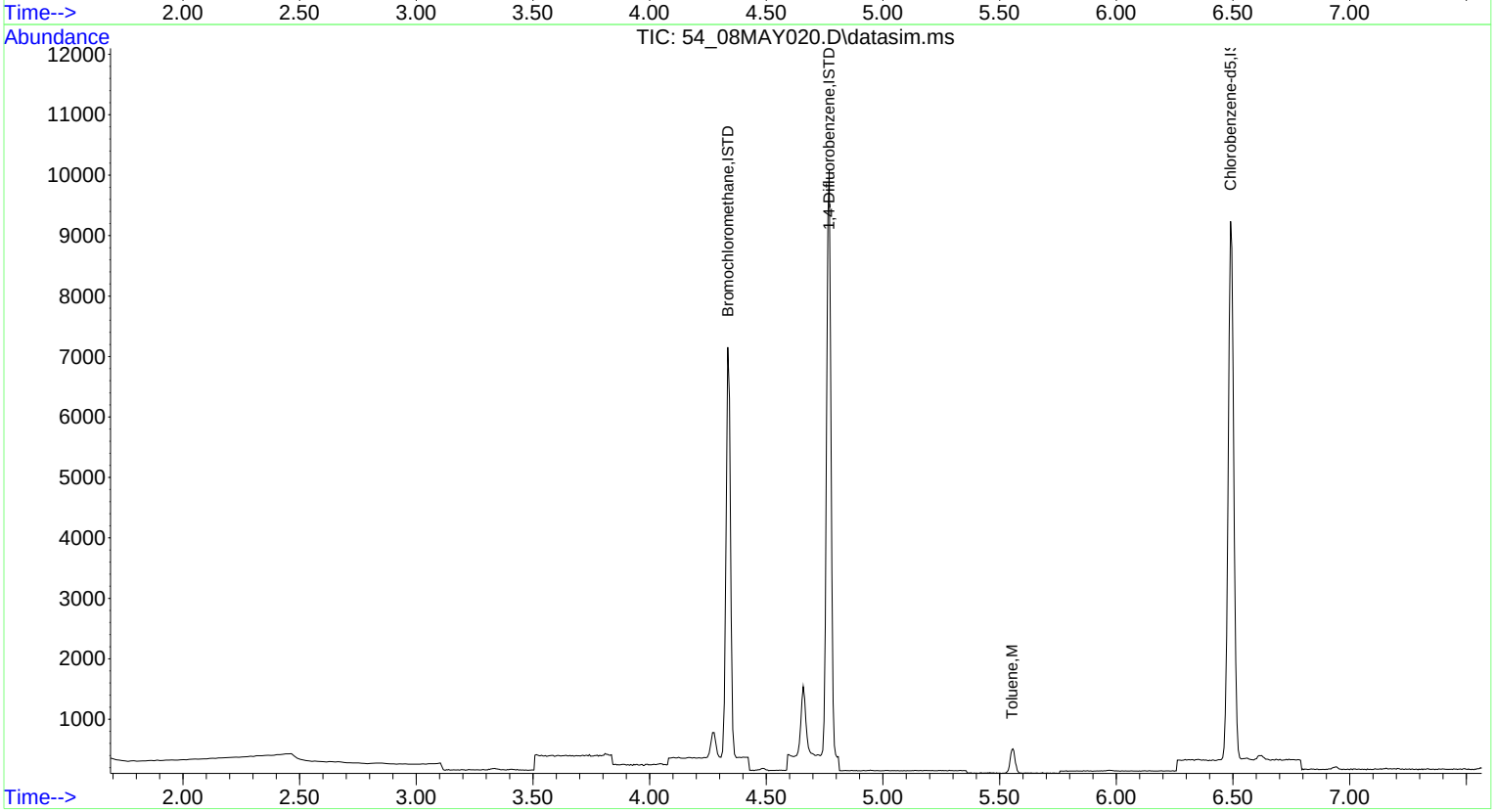
(#) = qualifier out of range (m) = manual integration (+) = signals summed

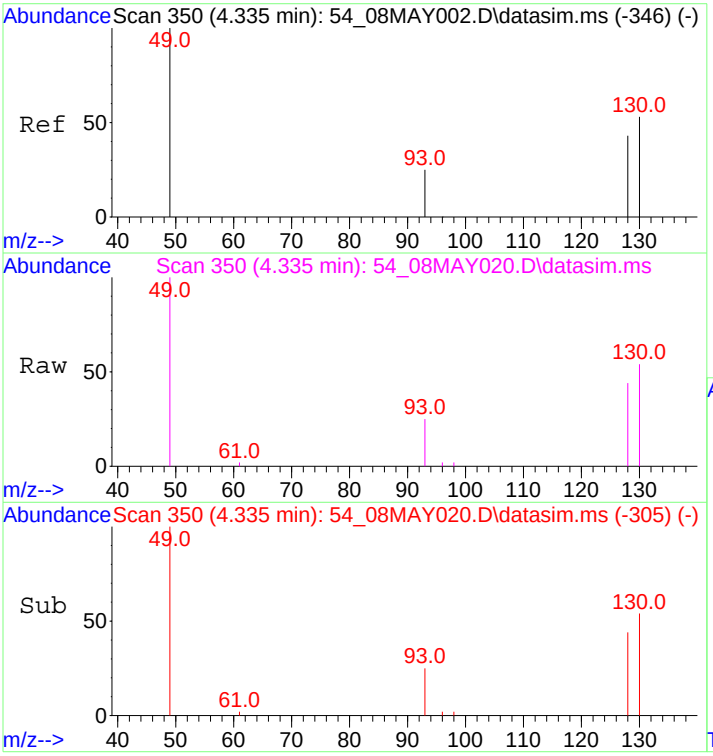
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2014\20140508\
Data File : 54 08MAY020.D
Acq On : 8 May 2014 12:42 pm
Operator : YHL
Sample : 02248 \G6-011
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 08 12:49:12 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



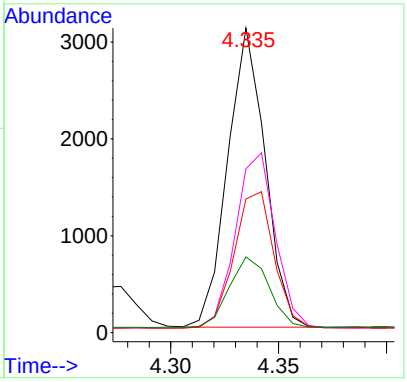


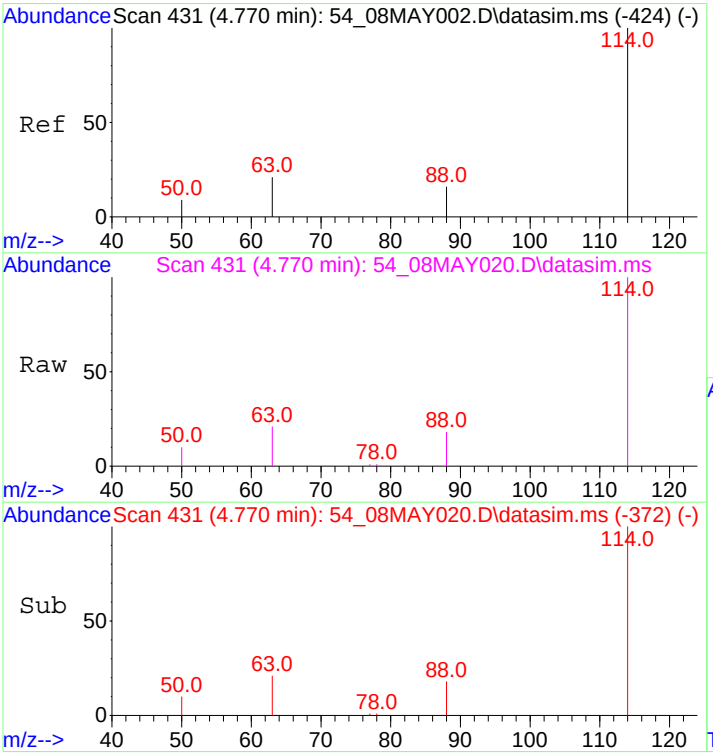


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY020.D
Acq: 8 May 2014 12:42 pm

Tgt Ion: 49 Resp: 3734

Ion	Ratio	Lower	Upper
49	100		
130	62.2	56.0	84.0
128	48.9	41.6	62.4
93	25.3	22.4	33.6

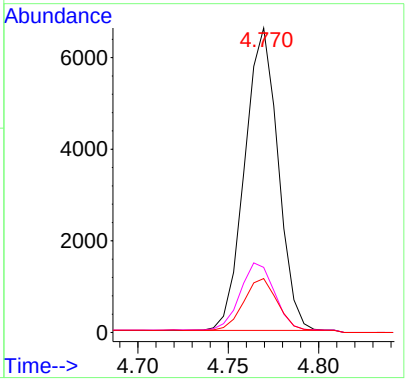


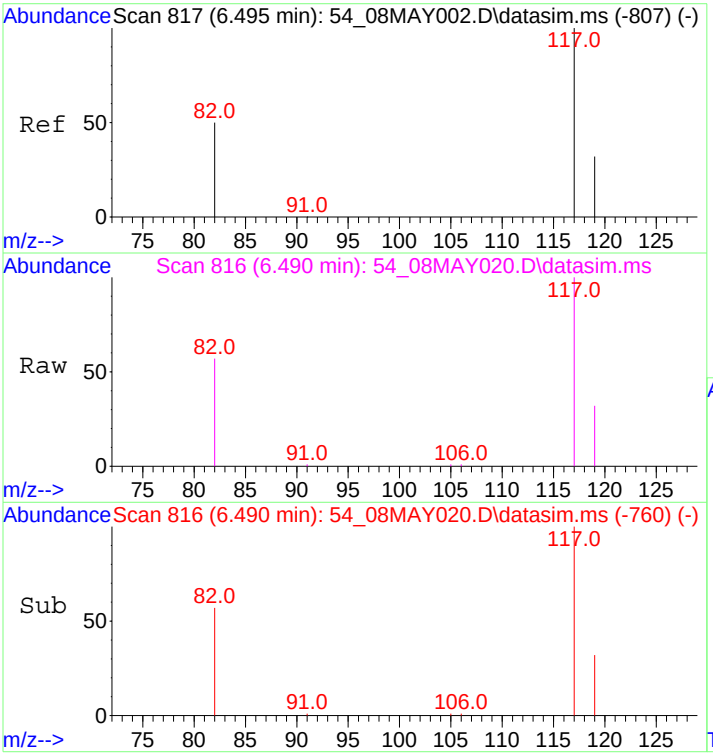


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_08MAY020.D
Acq: 8 May 2014 12:42 pm

Tgt Ion:114 Resp: 8478

Ion	Ratio	Lower	Upper
114	100		
63	22.8	17.6	26.4
88	17.2	13.6	20.4

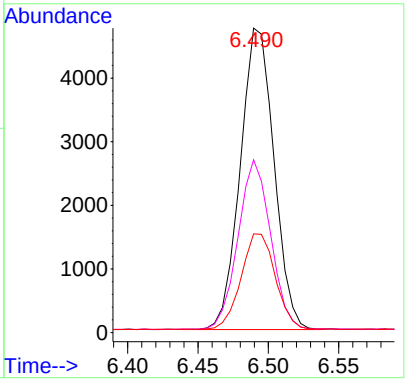


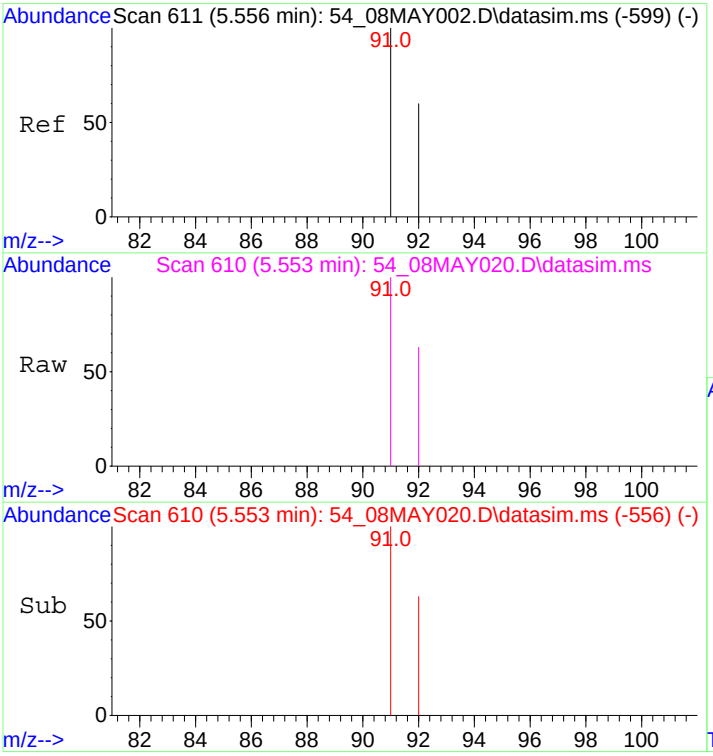


#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.490 min Scan# 816
Delta R.T. -0.006 min
Lab File: 54 08MAY020.D
Acq: 8 May 2014 12:42 pm

Tgt Ion:117 Resp: 7931

Ion	Ratio	Lower	Upper
117	100		
82	54.1	38.0	57.0
119	32.1	27.0	40.4

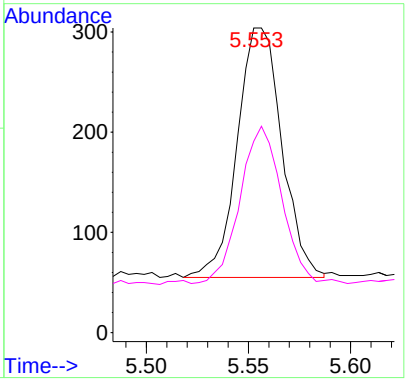




#13
Toluene
Concen: 0.80 ppbv
RT: 5.553 min Scan# 610
Delta R.T. -0.004 min
Lab File: 54_08MAY020.D
Acq: 8 May 2014 12:42 pm

Tgt Ion: 91 Resp: 379

Ion	Ratio	Lower	Upper
91	100		
92	58.8	47.8	71.8



Quantitation Report (QT Reviewed)

Data Path : G:\20140508\
Data File : 54 08MAY021.D
Acq On : 8 May 2014 12:54 pm
Operator : YHL
Sample : 02249 \G6-009
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 17:47:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	4.335	49	3741	10.00	ppbv	0.00
9) 1,4-Difluorobenzene	4.770	114	8353	10.00	ppbv	0.00
12) Chlorobenzene-d5	6.495	117	7825	10.00	ppbv	0.00

System Monitoring Compounds

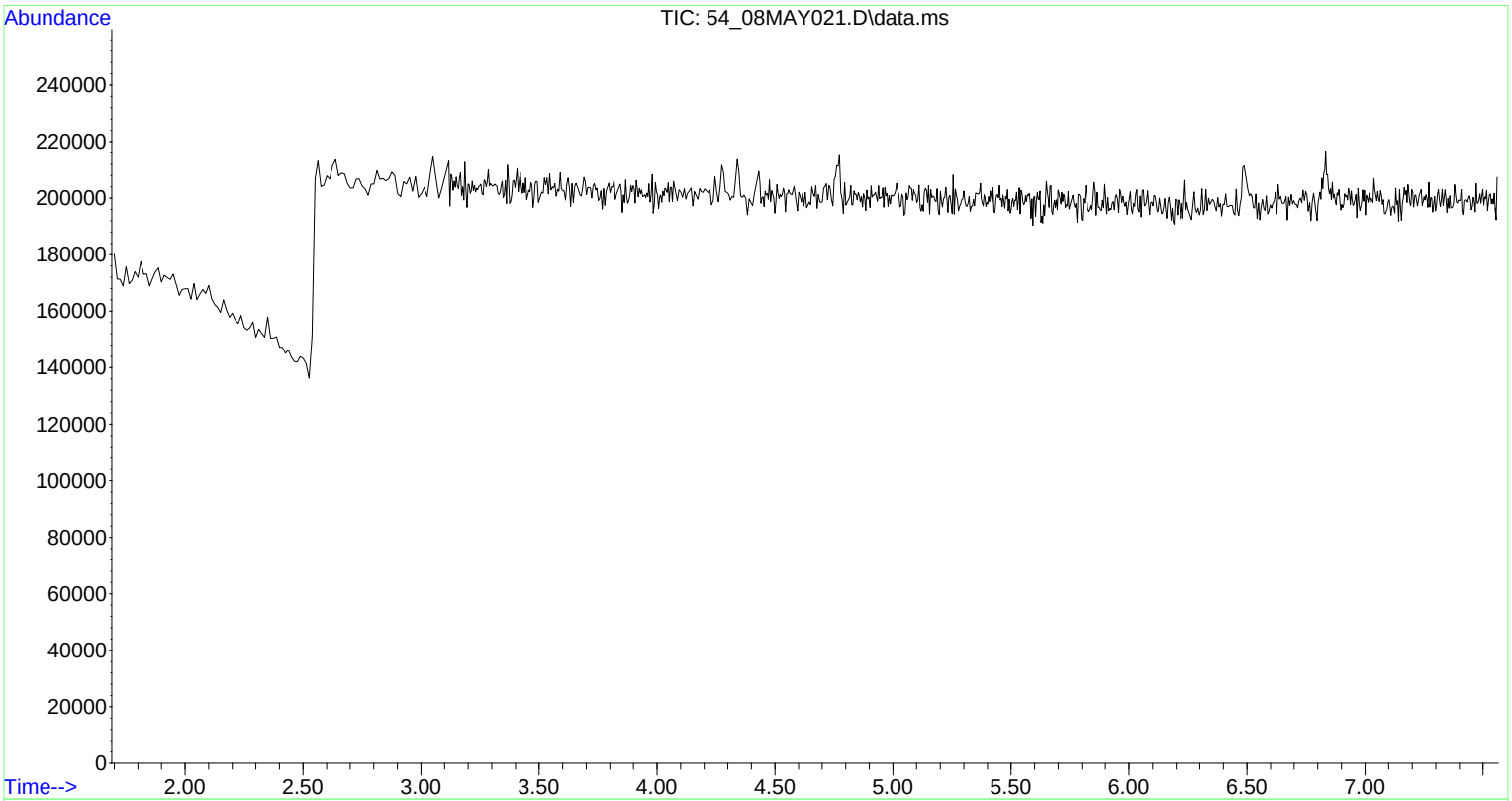
Target Compounds	Qvalue

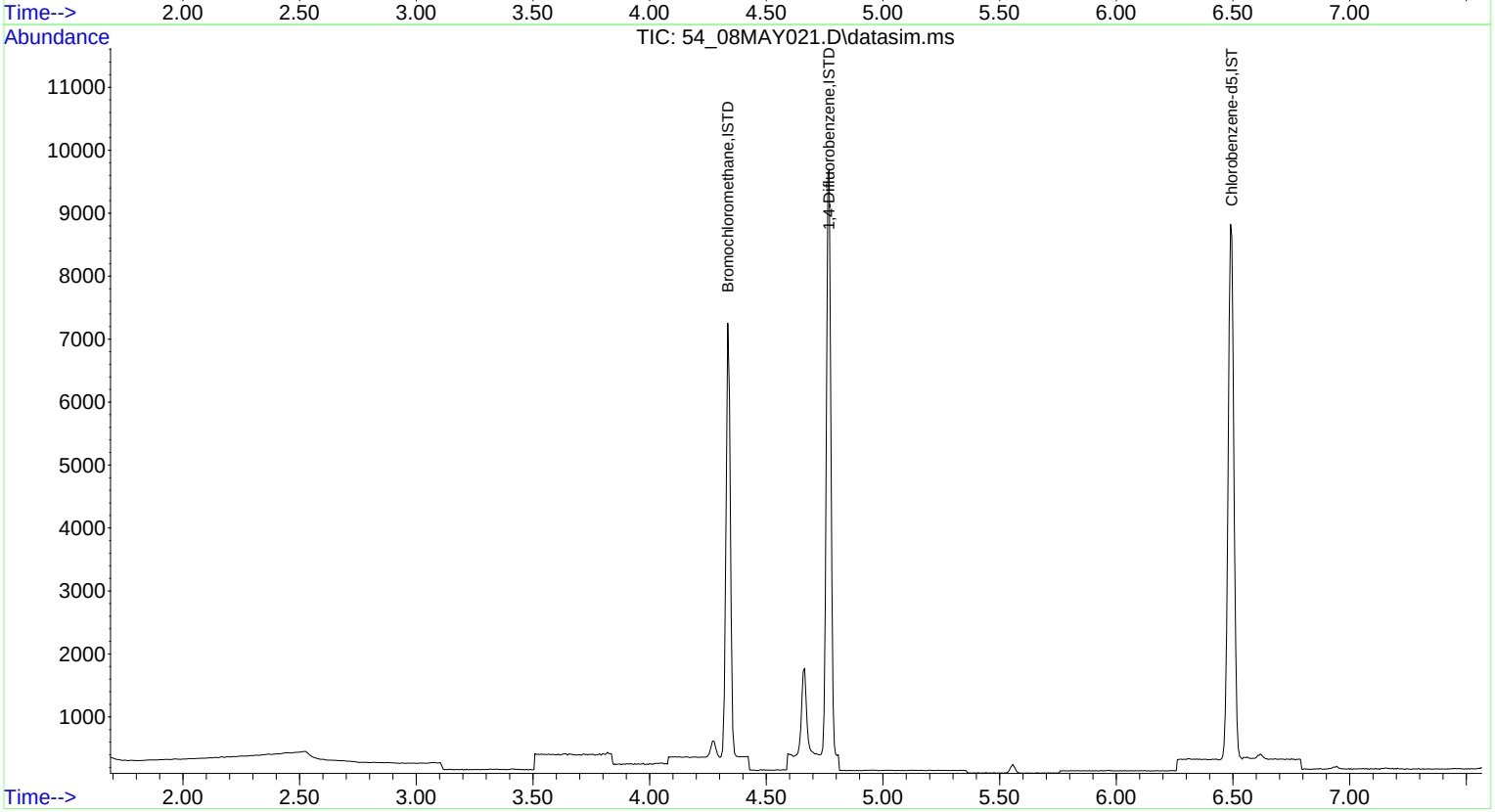
(#) = qualifier out of range (m) = manual integration (+) = signals summed

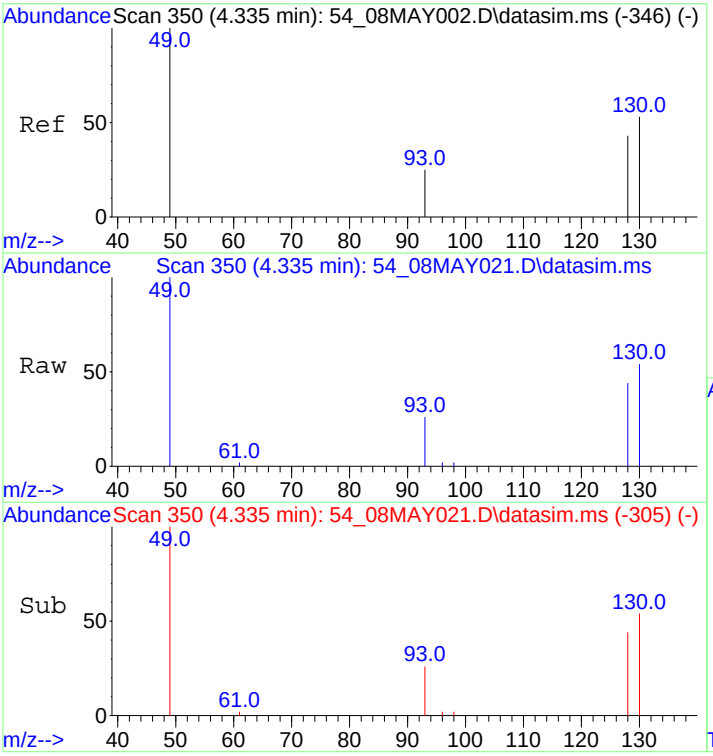
Quantitation Report (QT Reviewed)

Data Path : G:\20140508\
Data File : 54 08MAY021.D
Acq On : 8 May 2014 12:54 pm
Operator : YHL
Sample : 02249 \G6-009
Misc : 5 ml \ 08 May 2014
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 17:47:48 2014
Quant Method : C:\msdchem\1\METHODS\LOOP20140416.M
Quant Title : Modified EPA TO-15, Loop GC/MS Pulse Splitless InjThu May 08 07:42:21 2014
QLast Update : Thu May 08 07:42:20 2014
Response via : Initial Calibration



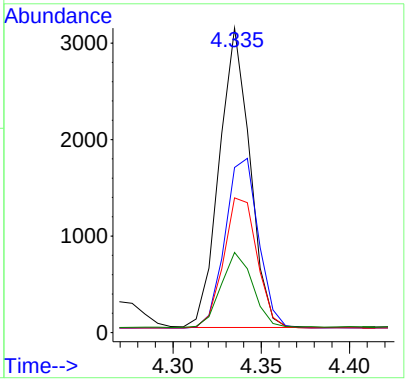


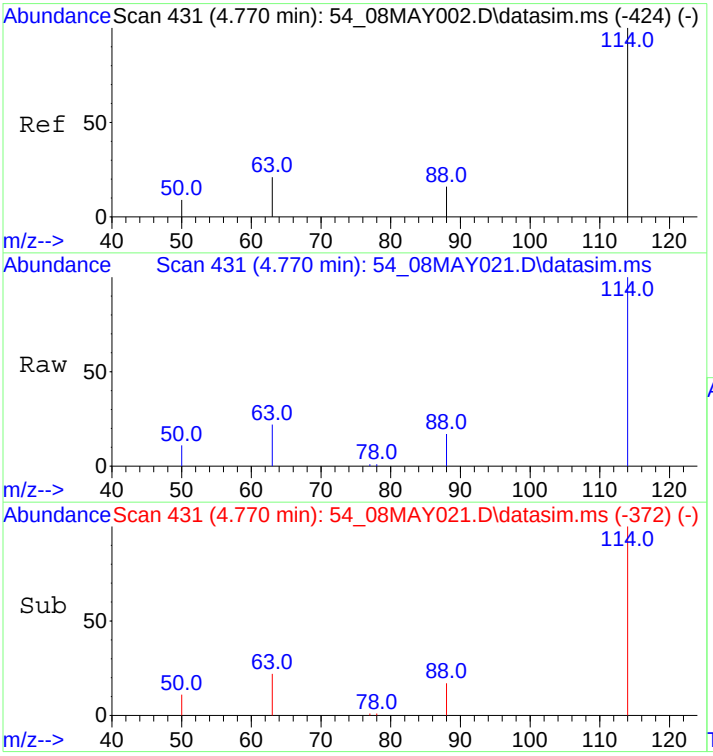


#1
Bromochloromethane
Concen: 10.00 ppbv
RT: 4.335 min Scan# 350
Delta R.T. 0.000 min
Lab File: 54 08MAY021.D
Acq: 8 May 2014 12:54 pm

Tgt Ion: 49 Resp: 3741

Ion	Ratio	Lower	Upper
49	100		
130	62.1	56.0	84.0
128	47.7	41.6	62.4
93	25.7	22.4	33.6

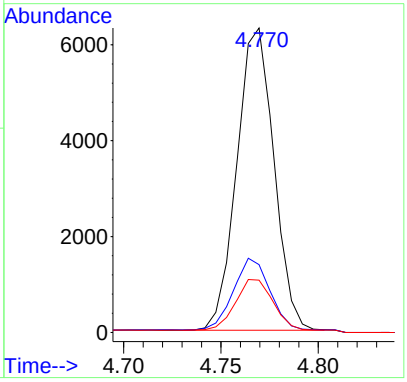


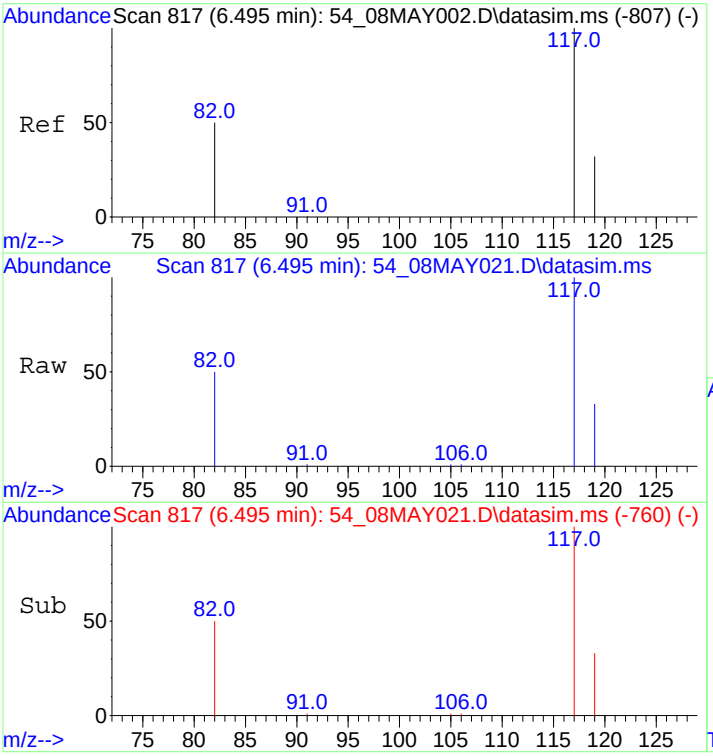


#9
1,4-Difluorobenzene
Concen: 10.00 ppbv
RT: 4.770 min Scan# 431
Delta R.T. 0.000 min
Lab File: 54_08MAY021.D
Acq: 8 May 2014 12:54 pm

Tgt Ion:114 Resp: 8353

Ion	Ratio	Lower	Upper
114	100		
63	23.2	17.6	26.4
88	17.0	13.6	20.4

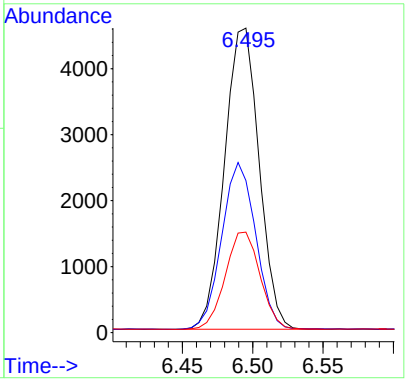




#12
Chlorobenzene-d5
Concen: 10.00 ppbv
RT: 6.495 min Scan# 817
Delta R.T. 0.000 min
Lab File: 54 08MAY021.D
Acq: 8 May 2014 12:54 pm

Tgt Ion:117 Resp: 7825

Ion	Ratio	Lower	Upper
117	100		
82	54.5	38.0	57.0
119	32.6	27.0	40.4



APPENDIX B

Final Analytical TAGA Report

Middlefield-Ellis-Whisman Soil Gas Study

May 2014

FINAL ANALYTICAL TAGA REPORT
MIDDLEFIELD-ELLIS-WHISMAN SOIL GAS STUDY
MOUNTAIN VIEW, CA
MAY 2014

U.S. EPA Work Assignment No.: SERAS-220
LOCKHEED MARTIN Work Order No.: SER00220
U.S. EPA Contract No.: EP-W-09-031

Submitted to
David B. Mickunas
U.S. EPA/ERT

Prepared by:
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Analyzed and prepared by:
Danielle McCall

SERAS-220 -DFA- 052314

TABLE OF CONTENTS

PAGE

LIST OF TABLES v

LIST OF FIGURES vi

1.0 INTRODUCTION. 1

2.0 METHODOLOGY 1

2.1 Mass Spectrometer/Mass Spectrometer General Theory 1
2.2 TAGA Procedure 1
2.2.1 TAGA Mass Calibration 2
2.2.2 TAGA Response Factor Measurements 2
2.2.3 Transport Efficiency 2
2.2.4 TAGA Air Monitoring 3
2.3 Meteorological Monitoring 3

3.0 TAGA AIR MONITORING RESULTS 3

3.1 Unit Surveys 3
3.2 TAGA File Event Summaries 4
3.3 Graphical Presentations 4
3.4 TAGA Target Compound Summaries 4

4.0 DISCUSSION OF RESULTS 4

4.1 Unit BLDs 148, 149, and 150 Survey, 2014LV134 4
4.2 Unit BLDs 150 and 151 Survey, 2014LV135 4
4.3 Unit BLDs 153 and 154 Survey, 2014LV136 5
4.4 Unit BLDs 155 and 156 Survey, 2014LV137 5
4.5 Unit BLD 45 Survey, 2014LV138 5
4.6 Unit BLD 3 Survey One, 2014LV139 5
4.7 Unit BLD 3 Survey Two, 2014LV140 6
4.8 Unit BLD 3 Survey Three, 2014LV141 6
4.9 Unit BLD 16 Survey One, 2014LV148 6
4.10 Unit BLD 16 Survey Two, 2014LV149 6
4.11 Unit BLD 567 Survey, 2014LV150 6
4.12 Unit BLD 126 Survey, 2014LV151 6
4.13 Unit BLD 10 Tunnel Survey, 2014LV153 6
4.14 Unit BLD 10 Survey, 2014LV158 7
4.15 Unit BLD 14 Survey One, 2014LV159 7
4.16 Unit BLD 14 Survey Two, 2014LV161 7
4.17 Unit BLD N-239A Survey One, 2014LV162 7
4.18 Unit BLD N-239A Survey Two, 2014LV163 7
4.19 Unit BLD N-239 Survey One, 2014LV164 7
4.20 Unit BLD N-239 Survey Two, 2014LV166 8
4.21 Unit 54 Survey, 2014LV167 8
4.22 Unit 54 Investigation, 2014LV168 8
4.23 Unit 129 Survey, 2014LV169 8
4.24 Unit 135 Survey, 2014LV170 8
4.25 Unit 89 Survey, 2014LV171 8
4.26 Unit BLD 10 Tunnel to Wall Survey, 2014LV177 8
4.27 Unit BLD 10 Survey, 2014LV178 9

4.28 Unit BLD N-239 Survey, 2014LV179 9
4.29 Unit BLD 3 Survey One, 2014LV184 9
4.30 Unit BLD 3 Survey Two, 2014LV185 9
4.31 Unit 53 Survey, 2014LV194 9
4.32 Unit BLD N-211 Survey One, 2014LV200 9
4.33 Unit BLD N-211 Survey Two, 2014LV201 10
4.34 Unit BLD N-211 Survey Three, 2014LV202 10
4.35 Unit BLD N-144 Survey, 2014LV203 10
4.36 Unit BLD 596 Survey, 2014LV208 10
4.37 Unit 44 Survey, 2014LV212 10

5.0 QUALITY ASSURANCE/QUALITY CONTROL 10

5.1 Intermediate Response Factor for Ion Pairs 11
5.2 Error Bars…… 11
5.3 Ion Pair Detection and Quantitation Limits 12
5.4 Compound Detection and Quantitation Limits 13

APPENDIX A Standard Gas Cylinder Certification
APPENDIX B Compiled Meteorological Data

LIST OF TABLES

TABLE

1 Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014

2 Summary of Meteorological Conditions during Monitoring, 28 April 2014 to 07 May 2014

3 Summary of Response Factors and Error Bars for 28 April 2014 to 07 May 2014

4 Summary of Detection and Quantitation Limit Data for 28 April 2014 to 07 May 2014

LIST OF FIGURES

FIGURE

1a Unit BLDs 148, 149, and 150 Survey Floor Plan, 2014LV134

1b TAGA File Event Summary, File: 2014LV134 Acquired on 28 April 2014 at 10:36:33, Title: Unit BLDs 148, 149, and 150 Survey

1c Unit BLDs 148, 149, and 150 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

2a Unit BLDs 150 and 151 Survey Floor Plan, 2014LV135

2b TAGA File Event Summary, File: 2014LV135 Acquired on 28 April 2014 at 11:15:35, Title: Unit BLDs 150 and 151 Survey

2c Unit BLDs 150 and 151 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

2d TAGA Target Compound Summary for Unit BLDs 150 and 151, File: 2014LV135 Acquired on 28 April 2014 at 11:15:35

3a Unit BLDs 153 and 154 Survey Floor Plan, 2014LV136

3b TAGA File Event Summary, File: 2014LV136 Acquired on 28 April 2014 at 12:10:26, Title: Unit BLDs 153 and 154 Survey

3c Unit BLDs 153 and 154 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

3d TAGA Target Compound Summary for Unit BLDs 153 and 154, File: 2014LV136 Acquired on 28 April 2014 at 12:10:26

4a Unit BLDs 155 and 156 Survey Floor Plan, 2014LV137

4b TAGA File Event Summary, File: 2014LV137 Acquired on 28 April 2014 at 12:44:27, Title: Unit BLDs 155 and 156 Survey

4c Unit BLDs 155 and 156 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

4d TAGA Target Compound Summary for Unit BLDs 155 and 156, File: 2014LV137 Acquired on 28 April 2014 at 12:44:27

5a Unit BLD 45 Survey Floor Plan, 2014LV138

5b TAGA File Event Summary, File: 2014LV138 Acquired on 28 April 2014 at 13:37:23, Title: Unit BLD 45 Survey

5c Unit BLD 45 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

5d TAGA Target Compound Summary for Unit BLD 45, File: 2014LV138 Acquired on 28 April 2014 at 13:37:23

6a Unit BLD 3 Survey One Floor Plan, 2014LV139

6b TAGA File Event Summary, File: 2014LV139 Acquired on 28 April 2014 at 14:32:12 Title: Unit BLD 3 Survey One

6c Unit BLD 3 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

6d TAGA Target Compound Summary for Unit BLD 3 Survey One, File: 2014LV139 Acquired on 28 April 2014 at 14:32:12

7a Unit BLD 3 Survey Two Floor Plan, 2014LV140

7b TAGA File Event Summary, File: 2014LV140 Acquired on 28 April 2014 at 15:42:49, Title: Unit BLD 3 Survey Two

7c Unit BLD 3 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

7d TAGA Target Compound Summary for Unit BLD 3 Survey Two, File: 2014LV140 Acquired on 28 April 2014 at 15:42:49

8a Unit BLD 3 Survey Three Floor Plan, 2014LV141

8b TAGA File Event Summary, File: 2014LV141 Acquired on 28 April 2014 at 16:43:36, Title: Unit BLD 3 Survey Three

8c Unit BLD 3 Survey Three for Dichloroethene, Trichloroethene, and Tetrachloroethene

8d TAGA Target Compound Summary for Unit BLD 3 Survey Three, File: 2014LV141 Acquired on 28 April 2014 at 16:43:36

9a Unit BLD 16 Survey One Floor Plan, 2014LV148

9b TAGA File Event Summary, File: 2014LV148 Acquired on 29 April 2014 at 09:40:37, Title: Unit BLD 16 Survey One

9c Unit BLD 16 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

9d TAGA Target Compound Summary for Unit BLD 16 Survey One, File: 2014LV148 Acquired on 29 April 2014 at 09:40:37

10a Unit BLD 16 Survey Two Floor Plan, 2014LV149

10b TAGA File Event Summary, File: 2014LV149 Acquired on 29 April 2014 at 10:39:12, Title: Unit BLD 16 Survey Two

10c Unit BLD 16 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

10d TAGA Target Compound Summary for Unit BLD 16 Survey Two, File: 2014LV149 Acquired on 29 April 2014 at 10:39:12

11a Unit BLD 567 Survey Floor Plan, 2014LV150

11b TAGA File Event Summary, File: 2014LV150 Acquired on 29 April 2014 at 11:16:38, Title: Unit BLD 567 Survey

11c Unit BLD 567 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

11d TAGA Target Compound Summary for Unit BLD 567, File: 2014LV150 Acquired on 29 April 2014 at 11:16:38

12a Unit BLD 126 Survey Floor Plan, 2014LV151

12b TAGA File Event Summary, File: 2014LV151 Acquired on 29 April 2014 at 11:56:23, Title: Unit BLD 126 Survey

12c Unit BLD 126 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

12d TAGA Target Compound Summary for Unit BLD 126, File: 2014LV151 Acquired on 29 April 2014 at 11:56:23

13a Unit BLD 10 Tunnel Survey Floor Plan, 2014LV153

13b TAGA File Event Summary, File: 2014LV153 Acquired on 29 April 2014 at 16:21:27, Title: Unit BLD 10 Tunnel Survey

13c Unit BLD 10 Tunnel Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

14a Unit BLD 10 Survey Floor Plan, 2014LV158

14b TAGA File Event Summary, File: 2014LV158 Acquired on 30 April 2014 at 08:36:16, Title: Unit BLD 10 Survey

14c Unit BLD 10 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

14d TAGA Target Compound Summary for Unit BLD 10, File: 2014LV158 Acquired on 30 April 2014 at 08:36:16

15a Unit BLD 14 Survey One Floor Plan, 2014LV159

15b TAGA File Event Summary, File: 2014LV159 Acquired on 30 April 2014 at 09:26:31, Title: Unit BLD 14 Survey One

15c Unit BLD 14 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

15d TAGA Target Compound Summary for Unit BLD 14 Survey One, File: 2014LV159 Acquired on 30 April 2014 at 09:26:31

16a Unit BLD 14 Survey Two Floor Plan, 2014LV161

16b TAGA File Event Summary, File: 2014LV161 Acquired on 30 April 2014 at 10:30:17, Title: Unit BLD 14 Survey Two

16c Unit BLD 14 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

16d TAGA Target Compound Summary for Unit BLD 3 Survey Two, File: 2014LV140 Acquired on 30 April 2014 at 10:30:17

17a Unit BLD N-239A Survey One Floor Plan, 2014LV162

17b TAGA File Event Summary, File: 2014LV162 Acquired on 30 April 2014 at 11:19:52, Title: Unit BLD N-239A Survey One

17c Unit BLD N-239A Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

17d TAGA Target Compound Summary for Unit BLD N-239A Survey One, File: 2014LV162 Acquired on 30 April 2014 at 11:19:52

18a Unit BLD N-239A Survey Two Floor Plan, 2014LV163

18b TAGA File Event Summary, File: 2014LV163 Acquired on 30 April 2014 at 12:07:56, Title: Unit BLD N-239A Survey Two

18c Unit BLD N-239A Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

18d TAGA Target Compound Summary for Unit BLD N-239A Survey Two, File: 2014LV163 Acquired on 30 April 2014 at 12:07:56

19a Unit BLD N-239 Survey One Floor Plan, 2014LV164

19b TAGA File Event Summary, File: 2014LV164 Acquired on 30 April 2014 at 13:44:03, Title: Unit BLD N-239 Survey One

19c Unit BLD N-239 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

19d TAGA Target Compound Summary for Unit BLD N-239 Survey One, File: 2014LV164 Acquired on 30 April 2014 at 13:44:03

20a Unit BLD N-239 Survey Two Floor Plan, 2014LV166

20b TAGA File Event Summary, File: 2014LV166 Acquired on 30 April 2014 at 14:49:57, Title: Unit BLD N-239 Survey Two

20c Unit BLD N-239 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

20d TAGA Target Compound Summary for Unit BLD N-239 Survey Two, File: 2014LV166 Acquired on 30 April 2014 at 14:49:57

21a Unit 54 Survey Floor Plan, 2014LV167

21b TAGA File Event Summary, File: 2014LV167 Acquired on 30 April 2014 at 16:10:52, Title: Unit 54 Survey

21c Unit 54 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

21d TAGA Target Compound Summary for Unit 54, File: 2014LV167 Acquired on 30 April 2014 at 16:10:52

22a Unit 54 Investigation Floor Plan, 2014LV168

22b TAGA File Event Summary, File: 2014LV168 Acquired on 30 April 2014 at 16:44:17, Title: Unit 54 Investigation

22c Unit 54 Investigation for Dichloroethene, Trichloroethene, and Tetrachloroethene

23a Unit 129 Survey Floor Plan, 2014LV169

23b TAGA File Event Summary, File: 2014LV169 Acquired on 30 April 2014 at 17:27:06, Title: Unit 129 Survey

23c Unit 129 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

23d TAGA Target Compound Summary for Unit 129, File: 2014LV164 Acquired on 30 April 2014 at 17:27:06

24a Unit 135 Survey Floor Plan, 2014LV170

24b TAGA File Event Summary, File: 2014LV170 Acquired on 30 April 2014 at 17:55:27, Title: Unit 135 Survey

24c Unit 135 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

24d TAGA Target Compound Summary for Unit 135, File: 2014LV140 Acquired on 30 April 2014 at 17:55:27

25a Unit 89 Survey Floor Plan, 2014LV171

25b TAGA File Event Summary, File: 2014LV171 Acquired on 30 April 2014 at 18:28:09, Title: Unit 89 Survey

25c Unit 89 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

25d TAGA Target Compound Summary for Unit 89, File: 2014LV171 Acquired on 30 April 2014 at 18:28:09

26a Unit BLD 10 Tunnel to Wall Survey Floor Plan, 2014LV177

26b TAGA File Event Summary, File: 2014LV177 Acquired on 28 April 2014 at 09:14:57, Title: Unit BLD 10 Tunnel to Wall Survey

26c Unit BLD 10 Tunnel to Wall Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

27a Unit BLD 10 Survey Floor Plan, 2014LV178

27b TAGA File Event Summary, File: 2014LV178 Acquired on 01 May 2014 at 09:58:12, Title: Unit BLD 10 Survey

27c Unit BLD 10 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

27d TAGA Target Compound Summary for Unit BLD 10, File: 2014LV178 Acquired on 01 May 2014 at 09:58:12

28a Unit BLD N-239 Survey Floor Plan, 2014LV179

28b TAGA File Event Summary, File: 2014LV179 Acquired on 01 May 2014 at 10:54:45, Title: Unit BLD N-239 Survey

28c Unit BLD N-239 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

28d TAGA Target Compound Summary for Unit BLD N-239, File: 2014LV179 Acquired on 01 May 2014 at 10:54:45

29a Unit BLD 3 Survey One Floor Plan, 2014LV184

29b TAGA File Event Summary, File: 2014LV184 Acquired on 02 May 2014 at 08:15:06, Title: Unit BLD 3 Survey One

29c Unit BLD 3 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

29d TAGA Target Compound Summary for Unit BLD 3 Survey One, File: 2014LV184Acquired on 02 May 2014 at 08:15:06

30a Unit BLD 3 Survey Two Floor Plan, 2014LV185

30b TAGA File Event Summary, File: 2014LV185 Acquired on 02 May 2014 at 09:13:40, Title: Unit BLD 3 Survey Two

30c Unit BLD 3 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

30d TAGA Target Compound Summary for Unit BLD 3 Survey Two, File: 2014LV185 Acquired on 02 May 2014 at 09:13:40

31a Unit 53 Survey Floor Plan, 2014LV194

31b TAGA File Event Summary, File: 2014LV194 Acquired on 05 May 2014 at 15:14:35, Title: Unit 53 Survey

31c Unit 53 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

31d TAGA Target Compound Summary for Unit 53, File: 2014LV194 Acquired on 05 May 2014 at 15:14:35

32a Unit BLD N-211 Survey One Floor Plan, 2014LV200

32b TAGA File Event Summary, File: 2014LV200 Acquired on 06 May 2014 at 13:54:48, Title: Unit BLD N-211 Survey One

32c Unit BLD N-211 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

32d TAGA Target Compound Summary for Unit BLD N-211 Survey One, File: 2014LV200 Acquired on 06 May 2014 at 13:54:48

33a Unit BLD N-211 Survey Two Floor Plan, 2014LV201

33b TAGA File Event Summary, File: 2014LV201 Acquired on 06 May 2014 at 14:34:50, Title: Unit BLD N-211 Survey Two

33c Unit BLD N-211 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

33d TAGA Target Compound Summary for Unit BLD N-211 Survey Two, File: 2014LV201 Acquired on 06 May 2014 at 14:34:50

34a Unit BLD N-211 Survey Three Floor Plan, 2014LV202

34b TAGA File Event Summary, File: 2014LV202 Acquired on 06 May 2014 at 15:06:54, Title: Unit BLD N-211 Survey Three

34c Unit BLD N-211 Survey Three for Dichloroethene, Trichloroethene, and Tetrachloroethene

34d TAGA Target Compound Summary for Unit BLD N-211 Survey Three, File: 2014LV202 Acquired on 06 May 2014 at 15:06:54

35a Unit BLD N-144 Survey Floor Plan, 2014LV203

35b TAGA File Event Summary, File: 2014LV203 Acquired on 06 May 2014 at 15:52:00, Title: Unit BLD N-144 Survey

35c Unit BLD N-144 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

35d TAGA Target Compound Summary for Unit BLD N-144, File: 2014LV203 Acquired on 06 May 2014 at 15:52:00

36a Unit BLD 596 Survey Floor Plan, 2014LV208

36b TAGA File Event Summary, File: 2014LV208 Acquired on 07 May 2014 at 09:11:40, Title: Unit BLD 596 Survey

36c Unit BLD 596 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

36d TAGA Target Compound Summary for Unit BLD 596, File: 2014LV208 Acquired on 07 May 2014 at 09:11:40

37a Unit 44 Survey Floor Plan, 2014LV212

37b TAGA File Event Summary, File: 2014LV212 Acquired on 07 May 2014 at 14:52:28, Title: Unit 44 Survey

37c Unit 44 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

37d TAGA Target Compound Summary for Unit 44, File: 2014LV212 Acquired on 07 May 2014 at 14:52:28

1.0 INTRODUCTION

The Environmental Protection Agency (EPA)/Environmental Response Team (ERT) issued Work Assignment (WA) Number SERAS-220, Middlefield-Ellis-Whisman Soil Gas Study in Mountain View, California (CA), to Lockheed Martin under the Scientific, Engineering, Response, and Analytical Services (SERAS) contract. As an element of this WA, SERAS personnel were to conduct target compound monitoring using the ECA Trace Atmospheric Gas Analyzer (TAGA) IIe, to assist EPA Region 9 in its investigation of residential indoor air quality.

The TAGA air monitoring events conducted on 28 April 2014 to 07 May 2014 were screening in nature. Air monitoring for trichloroethene (TCE), tetrachloroethene (PCE), and dichloroethene (DCE) was performed in accordance with the SERAS Standard Operating Procedure (SOP) # 1711, *Trace Atmospheric Gas Analyzer (TAGA) IIe Operations*. Real-time monitoring for the target compounds was performed using a selected ion technique.

2.0 METHODOLOGY

2.1 Mass Spectrometer/Mass Spectrometer General Theory

The ECA TAGA IIe is based upon the Perkin-Elmer API 365 mass spectrometer/mass spectrometer (MS/MS) and is a direct air-monitoring instrument capable of detecting, in real time, trace levels of many organic compounds in ambient air. The technique of triple quadrupole MS/MS is used to differentiate and quantitate compounds.

The initial step in the MS/MS process involves simultaneous chemical ionization of the compounds present in a sample of ambient air. The ionization produces both positive and negative ions by donating or removing one or more electrons. The chemical ionization is a "soft" ionization technique, which allows ions to be formed with little or no structural fragmentation. These ions are called parent ions. The parent ions with different mass-to-charge (m/z) ratios are separated by the first quadrupole (the first MS of the MS/MS system). The quadrupole scans selected m/z ratios allowing only the parent ions with these ratios to pass through the quadrupole. Parent ions with m/z ratios different from those selected are discriminated electronically and fail to pass through the quadrupole.

The parent ions selected in the first quadrupole are accelerated through a collision cell containing uncharged nitrogen molecules in the second quadrupole. A portion of the parent ions entering the second quadrupole fragments as they collide with the nitrogen molecules. These fragment ions are called daughter ions. This process, in the second quadrupole, is called collision induced dissociation. The daughter ions are separated according to their m/z ratios by the third quadrupole (the second MS of the MS/MS system). The quadrupole scans selected m/z ratios, allowing only the daughter ions with these ratios to pass through the quadrupole. Daughter ions with m/z ratios different from those selected are discriminated electronically and fail to pass through the quadrupole. Daughter ions with the selected m/z ratios are then counted by an electron multiplier. The resulting signals are measured in ion counts per second (icps) for each parent/daughter ion pair selected. The intensity of the icps for each parent/daughter ion pair is directly proportional to the ambient air concentration of the organic compound that produced the ion pair. All of the ions discussed in this report have a single charge. The m/z ratios of all of the ions discussed are equal to the ion masses in atomic mass units (amu). Therefore, the terms parent and daughter masses are synonymous with parent and daughter ion m/z ratios.

2.2 TAGA Procedure

The TAGA was used to analyze indoor air during stationary monitoring events. Indoor monitoring utilized a 300-foot corrugated Teflon® sampling hose. The proximal end was attached to the TAGA source inlet, while the distal end was taken inside a unit. Air was continuously

drawn through the hose at a set flow rate and transported to the TAGA source during the monitoring event.

2.2.1 TAGA Mass Calibration

At the beginning of the monitoring period, a gas mixture containing benzene, toluene, xylenes, tetrachloroethene, trichloroethene, 1,1-dichloroethene, and vinyl chloride was introduced by a mass flow controller (MFC) into the sample air flow (SAF). The tuning parameters for the first quadrupole at 30, 78, 106, 130, and 166 amu, and the third quadrupole at 30, 78, 105, 129, and 166 amu were optimized for sensitivity and mass assignment. The peak widths were limited between 0.55 amu and 0.85 amu. The mass assignments were set to the correct values within 0.15 amu.

2.2.2 TAGA Response Factor Measurements

The TAGA was calibrated for the target compounds at the beginning and end of each day. The calibration system consisted of a regulated gas cylinder containing a gas standard mixture of the target compounds connected to an in-line MFC. The MFC was calibrated with a National Institute of Standards and Technology (NIST) traceable flow rate meter. The gas standard certification is presented in Appendix A. The gas standard containing a known mixture of target compounds, certified by the supplier, was regulated at preset flow rates, and diluted with ambient air. The dilution of the gas standard resulted in known analyte concentrations. The calibration consisted of a zero point and five known concentrations obtained by setting the MFC to 0, 10, 20, 40, 80, and 90 milliliters per minute (mL/min) with the SAF at 1,374 milliliters per second (mL/sec).

The approximate concentration range of standards introduced into the TAGA was between 2 and 22 parts per billion by volume (ppbv). Utilizing the analytes' concentrations, gas flow rates, air sampling flow rates, and response factors (RFs), in units of ion counts per second per part per billion by volume (icps/ppbv), were calculated for each ion pair by using a least-square-fit algorithm to calculate the slope of its curve. The coefficient of correlation was checked for each ion pair's RF to ensure that it was greater than 0.90. The intermediate response factor (IRF) was calculated between pairs of calibrations and used to quantify target compounds in ambient air.

2.2.3 Transport Efficiency

The transport efficiency and residence time for the target compounds through the 300-foot length of corrugated Teflon® sampling hose was determined prior to and at the conclusion of indoor air monitoring activities each day. The transport efficiency was determined by introducing a known concentration of the target compounds into the proximal end and then into the distal end of the sampling hose. The signal intensity of each ion pair for each compound was measured in icps and the percent (%) transport efficiency calculated using the equation below:

$$\%\ transport\ \ efficiency = \frac{signal\ intensity\ at\ the\ distal\ end\ of\ the\ hose}{signal\ intensity\ at\ the\ proximal\ end\ of\ the\ hose}\ x\ 100$$

A transport efficiency of 85% is considered acceptable and results are summarized in Table 1.

The residence time is the interval, in seconds; it takes the air sample to travel the length of the sampling hose. The residence time, which reflects a time difference between the sampling and the instrument response, is incorporated in the offset. The offset, which is

the total number of sequences acquired during the residence time, is applied to the monitoring files (Figures 1b to 37b and Figures 1c to 37c). Therefore, the observations and instrument responses are temporally coordinated.

2.2.4 TAGA Air Monitoring

TAGA monitoring was performed by continuously drawing air through the Teflon® hose at a flow-rate of approximately 1,374 mL/sec. The air was then passed through a glass splitter where the pressure gradient between the mass spectrometer core and the atmosphere causes a sample flow of approximately 10 mL/min into the ionization source through a heated transfer line. The flow into the TAGA source was controlled so that the ionization source pressure was maintained at an optimum value of approximately 1.6 torr. The remaining airflow was drawn through the air pump and vented from the TAGA bus.

Monitoring was performed in the parent/daughter ion-monitoring mode. As monitoring proceeded, the operator pressed letter keys (flags), alphabetically on a computer keyboard, to denote events or locations during the monitoring event. This information was also recorded on an event log sheet. The intensity of each parent/daughter ion pair monitored by the TAGA was recorded in a permanent file on the computer's hard drive. One set of recorded measurements of all the ion pairs is called a sequence.

At the beginning of each survey or investigation, a one-minute pre-entry ambient data segment was collected. At the operator's signal, the sampler then entered the unit while holding the distal end of the hose at breathing height. The sampler proceeded to each room in the unit where one-minute data segments were collected. After the rooms in the unit were monitored, a one-minute post-exit ambient data segment was collected. Upon completion of the one-minute post-exit ambient data segment, the instrumentation was challenged with the calibration standard, which was introduced at 30 mL/min (approximately 7 ppbv), to verify that the system was functioning properly.

2.3 Meteorological Monitoring

United States Department of Commerce, National Oceanic and Atmospheric Administration, National Climatic Data Center provided the meteorological data for 26 April 2014 to 10 May 2014. Data were collected from Moffett Federal Airfield in Mountain View, CA. The Moffett Federal Airfield is located approximately 5 miles northeast of the Middlefield-Ellis-Whisman Soil Gas Study. Meteorological data, such as wind speed, wind direction, and rainfall, are summarized in Table 2 for the periods during which monitoring occurred. The compiled meteorological data are presented in Appendix B. The reported data for rainfall is an average of the data recorded during the hour preceding the time recorded in the table. The reported meteorological data for wind speed and direction represent a five-minute average collected prior to the time recorded in the table. Because of the distance of the meteorological monitoring location from the study location and the short averaging period, care should be exercised in relating meteorological conditions existing at the Middlefield-Ellis-Whisman Soil Gas Study.

3.0 TAGA AIR MONITORING RESULTS

The TAGA was used to survey indoor air in residential and building units in the vicinity of the Middlefield-Ellis-Whisman Soil Gas Study. The TAGA was also used to monitor not easily accessible tunnels through the use of a robot, the iRobot PackBot 510.

3.1 Unit Surveys

Figures 1a through 37a, present the approximate floor plans of each unit. The monitoring locations marked by letters are the "flags" that the TAGA operator placed into the file. These

"flags" mark events and are carried through the rest of the data presentation.

3.2 TAGA File Event Summaries

Figures 1b through 37b present the TAGA file event summaries. These are the observations made during the file acquisition by the TAGA operator, along with the times from the TAGA file and the letter "flags" used to mark the data, which are recorded by the TAGA computer.

3.3 Graphical Presentations

Figures 1c through 37c are the graphical representations of the TAGA files. A graph of each target compound concentration is presented with ppbv plotted on the vertical axis, and time into the acquisition, in minutes, on the horizontal axis. The target compound concentration was calculated by averaging the concentrations obtained from the ion pairs that were monitored for each target compound. There are two horizontal lines on each graph. The lower line is set at the detection limit (DL) for the compound. The higher line is set at the concentration equal to the quantitation limit (QL) for the target compound. When high concentrations are represented, the lower DL line may not be readily discerned. Transient, momentary spikes above the QL line are occasionally observed. These spikes, electronic in nature, do not affect average concentrations. They may be distinguished from elevated concentrations because the spikes are only present for one sequence and are often only present for one ion pair of the monitored compound.

3.4 TAGA Target Compound Summaries

Figures 2d to 12d, 14d to 21d, 23d to 25d, and 27d to 37d present the TAGA target compound summaries. These figures contain the concentrations of the target compounds averaged over time, at the various locations logged into the TAGA file event summaries.

4.0 DISCUSSION OF RESULTS

The TAGA target compound summaries are represented in Figures 2d to 12d, 14d to 21d, 23d to 25d, and 27d to 37d. During each building or unit survey, a one-minute average is measured in each room, or at various locations within a room. Only the highest average concentrations above the QL are discussed below. During each unit investigation, the inlet end of the TAGA hose is moved slowly through selected portions of the unit, in an attempt to locate sources of contamination. Only the highest instantaneous concentrations above the QL are discussed below.

The surveys monitored in the tunnels consisted of no individual rooms where a one-minute average could be measured. Therefore the data from the tunnel surveys are instantaneous concentrations and only the highest instantaneous concentrations above the QL are discussed below.

During the monitoring period, the Transport Efficiency for tetrachloroethene was lower than the 85% acceptance criteria for the following files: 2014LV157, 2014LV183, 2014LV187, 2014LV196, and 2014LV207. Result for those files ranged from 84.1% to 84.9% (Table 1). Use tetrachloroethene data with caution.

4.1 Unit BLDs 148, 149, and 150 Survey, 2014LV134

Unit BLDs 148, 149, and 150 were surveyed on 28 April 2014 at 10:36:33 and are represented in Figures 1a through 1c. The average wind speed and direction at the airport for the five-minute period ending at 10:56 were 5 miles per hour (mph) from 290 degrees. There was no precipitation during the preceding hour. There were no instantaneous maximum concentrations detected above the QL for any of the compounds.

4.2 Unit BLDs 150 and 151 Survey, 2014LV135

Unit BLDs 150 and 151 were surveyed on 28 April 2014 at 11:15:35 and are represented in Figures 2a through 2d. The average wind speed and direction at the airport for the five-minute period ending at 10:56 were 5 mph from 290 degrees. There was no precipitation during the preceding hour. The highest average concentrations of dichloroethene and trichloroethene were 0.87 ppbv and 0.90 ppbv, respectively, at the sump at tunnel 151, between flags K and L. The average concentration of tetrachloroethene was not detected above its QL at any of the monitoring locations. The highest instantaneous maximum concentration of dichloroethene was 1.3 ppbv at 10.690 minutes at tunnel 150 toward tunnel 151, between flags H and I. The highest instantaneous maximum concentration of trichloroethene was 1.2 ppbv at 12.511 minutes at the sump at tunnel 151, between flags K and L. There was no instantaneous maximum concentration detected above the QL for tetrachloroethene.

4.3 Unit BLDs 153 and 154 Survey, 2014LV136

Unit BLDs 153 and 154 were surveyed on 28 April 2014 at 12:10:26 and are represented in Figures 3a through 3d. The average wind speed and direction at the airport for the five-minute period ending at 11:56 were 7 mph from 350 degrees. There was no precipitation during the preceding hour. The highest average concentrations of dichloroethene and trichloroethene were 1.1 ppbv and 1.2 ppbv, respectively, at the sump at tunnel 153, between flags H and I. The average concentration of tetrachloroethene was not detected above its QL at any of the monitoring locations. The highest instantaneous maximum concentration of dichloroethene was 1.7 ppbv at 6.796 minutes at tunnel 153 toward tunnel 152, between flags F and G. The highest instantaneous maximum concentration of trichloroethene was 1.5 ppbv at 6.698 minutes at tunnel 153 toward tunnel 152, between flags F and G. There was no instantaneous maximum concentration detected above the QL for tetrachloroethene.

4.4 Unit BLDs 155 and 156 Survey, 2014LV137

Unit BLDs 155 and 156 were surveyed on 28 April 2014 at 12:44:27 and are represented in Figures 4a through 4d. The average wind speed and direction at the airport for the five-minute period ending at 12:56 were 10 mph from 360 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 0.71 ppbv at the sump at tunnel 156, between flags H and I. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations. The highest instantaneous maximum concentration of dichloroethene was 1.8 ppbv at 8.491 minutes at tunnel 154 toward tunnel 155, between flags F and G. The highest instantaneous maximum concentration of trichloroethene was 1.5 ppbv at 8.855 minutes at tunnel 154 toward tunnel 155, between flags F and G. There was no instantaneous maximum concentration detected above the QL for tetrachloroethene.

4.5 Unit BLD 45 Survey, 2014LV138

Unit BLD 45 was surveyed on 28 April 2014 at 13:37:23 and is represented in Figures 5a through 5d. The average wind speed and direction at the airport for the five-minute period ending at 12:56 were 10 mph from 360 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 1.3 ppbv at room 102A and the grated area, between flags F and G and flags L and M, respectively. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.6 Unit BLD 3 Survey One, 2014LV139

Unit BLD 3 was surveyed on 28 April 2014 at 14:32:12 and is represented in Figures 6a through 6d. The average wind speed and direction at the airport for the five-minute period ending at 14:56 were 14 mph from 330 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.7 Unit BLD 3 Survey Two, 2014LV140

Unit BLD 3 was surveyed on 28 April 2014 at 15:42:49 and is represented in Figures 7a through 7d. The average wind speed and direction at the airport for the five-minute period ending at 15:56 were 14 mph from 340 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 0.46 ppbv at room 107, between flags X and Y. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.8 Unit BLD 3 Survey Three, 2014LV141

Unit BLD 3 was surveyed on 28 April 2014 at 16:43:36 and is represented in Figures 8a through 8d. The average wind speed and direction at the airport for the five-minute period ending at 16:56 were 11 mph from 330 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 2.1 ppbv at room R101W, between flags H and I. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.9 Unit BLD 16 Survey One, 2014LV148

Unit BLD 16 was surveyed on 29 April 2014 at 09:40:37 and is represented in Figures 9a through 9d. The average wind speed and direction at the airport for the five-minute period ending at 09:56 were 3 mph from 10 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.10 Unit BLD 16 Survey Two, 2014LV149

Unit BLD 16 was surveyed on 29 April 2014 at 10:39:12 and is represented in Figures 10a through 10d. The average wind speed and direction at the airport for the five-minute period ending at 09:56 were 3 mph from 10 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.11 Unit BLD 567 Survey, 2014LV150

Unit BLD 567 was surveyed on 29 April 2014 at 11:16:38 and is represented in Figures 11a through 11d. The average wind speed and direction at the airport for the five-minute period ending at 10:56 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 0.50 ppbv at floor drain in the bathroom, between flags L and M. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.12 Unit BLD 126 Survey, 2014LV151

Unit BLD 126 was surveyed on 29 April 2014 at 11:56:23 and is represented in Figures 12a

through 12d. The average wind speed and direction at the airport for the five-minute period ending at 11:56 were 6 mph from 340 degrees. There was no precipitation during the preceding hour. The highest average concentrations were: dichloroethene, 0.82 ppbv, trichloroethene, 1.5 ppbv, and tetrachloroethene, 3.2 ppbv, at the floor drain in bathroom, between flags J and K.

4.13 Unit BLD 10 Tunnel Survey, 2014LV153

Unit BLD 10 Tunnel was surveyed on 29 April 2014 at 16:21:27 and is represented in Figures 13a through 13c. The average wind speed and direction at the airport for the five-minute period ending at 15:56 were 9 mph from 320 degrees. There was no precipitation during the preceding hour. The highest instantaneous maximum concentration of trichloroethene was 1.2 ppbv at 10.788 minutes after Robot had passed 75 feet, between flags H and I. There was no instantaneous maximum concentration detected above the QL for dichloroethene and tetrachloroethene.

4.14 Unit BLD 10 Survey, 2014LV158

Unit BLD 10 was surveyed on 30 April 2014 at 08:36:16 and is represented in Figures 14a through 14d. The average wind speed and direction at the airport for the five-minute period ending at 08:56 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 1.6 ppbv at the floor drain in room 103, between flags L and M. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.15 Unit BLD 14 Survey One, 2014LV159

Unit BLD 14 was surveyed on 30 April 2014 at 09:26:31 and is represented in Figures 15a through 15d. The average wind speed and direction at the airport for the five-minute period ending at 09:56 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.16 Unit BLD 14 Survey Two, 2014LV161

Unit BLD 14 was surveyed on 30 April 2014 at 10:30:17 and is represented in Figures 16a through 16d. The average wind speed and direction at the airport for the five-minute period ending at 09:56 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 0.83 ppbv at crawl space one, between flags N and O. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.17 Unit BLD N-239A Survey One, 2014LV162

Unit BLD N-239A was surveyed on 30 April 2014 at 11:19:52 and is represented in Figures 17a through 17d. The average wind speed and direction at the airport for the five-minute period ending at 10:56 were 3 mph from 30 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.18 Unit BLD N-239A Survey Two, 2014LV163

Unit BLD N-239A was surveyed on 30 April 2014 at 12:07:56 and is represented in Figures 18a through 18d. The average wind speed and direction at the airport for the five-minute period ending at 11:56 were 7 mph from 360 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were

not detected above their QLs at any of the monitoring locations.

4.19 Unit BLD N-239 Survey One, 2014LV164

Unit BLD N-239 was surveyed on 30 April 2014 at 13:44:03 and is represented in Figures 19a through 19d. The average wind speed and direction at the airport for the five-minute period ending at 13:56 were 9 mph from 340 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.20 Unit BLD N-239 Survey Two, 2014LV166

Unit BLD N-239 was surveyed on 30 April 2014 at 14:49:57 and is represented in Figures 20a through 20d. The average wind speed and direction at the airport for the five-minute period ending at 14:56 were 10 mph from 340 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.21 Unit 54 Survey, 2014LV167

Unit 54 was surveyed on 30 April 2014 at 16:10:52 and is represented in Figures 21a through 21d. The average wind speed and direction at the airport for the five-minute period ending at 15:56 were 9 mph from 340 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.22 Unit 54 Investigation, 2014LV168

Unit 54 was investigated on 30 April 2014 at 16:44:17 and is represented in Figures 22a through 22c. The average wind speed and direction at the airport for the five-minute period ending at 16:56 were 11 mph from 340 degrees. There was no precipitation during the preceding hour. The highest instantaneous maximum concentration of trichloroethene was 6.3 ppbv at 13.071 minutes while sweeping the storage room, between flags F and G. There was no instantaneous maximum concentration detected above the QL for dichloroethene and tetrachloroethene.

4.23 Unit 129 Survey, 2014LV169

Unit 129 was surveyed on 30 April 2014 at 17:27:06 and is represented in Figures 23a through 23d. The average wind speed and direction at the airport for the five-minute period ending at 16:56 were 11 mph from 340 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 0.92 ppbv at the garage, between flags R and S. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.24 Unit 135 Survey, 2014LV170

Unit 135 was surveyed on 30 April 2014 at 17:55:27 and is represented in Figures 24a through 24d. The average wind speed and direction at the airport for the five-minute period ending at 17:56 were 7 mph from 320 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.25 Unit 89 Survey, 2014LV171

Unit 89 was surveyed on 30 April 2014 at 18:28:09 and is represented in Figures 25a through 25d.

The average wind speed and direction at the airport for the five-minute period ending at 17:56 were 7 mph from 320 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.26 Unit BLD 10 Tunnel to Wall Survey, 2014LV177

Unit BLD 10 Tunnel to Wall was surveyed on 01 May 2014 at 09:14:57 and is represented in Figures 26a through 26c. The average wind speed and direction at the airport for the five-minute period ending at 08:56 were 3 mph from 340 degrees. There was no precipitation during the preceding hour. The highest instantaneous maximum concentration of dichloroethene was 2.5 ppbv at 6.572 minutes when robot reached the tunnel floor, between flags D and E. The highest instantaneous maximum concentration of trichloroethene was 17.2 ppbv at 9.415 minutes while holding position at 50 feet into the tunnel, between flags G and H. There was no instantaneous maximum concentration detected above the QL for tetrachloroethene.

4.27 Unit BLD 10 Survey, 2014LV178

Unit BLD 10 was surveyed on 01 May 2014 at 09:58:12 and is represented in Figures 27a through 27d. The average wind speed and direction at the airport for the five-minute period ending at 09:56 were 5 mph from 340 degrees. There was no precipitation during the preceding hour. The highest average concentrations were: dichloroethene, 1.4 ppbv and trichloroethene, 13 ppbv, both at grate four, between flags J and K. The average concentration of tetrachloroethene was not detected above its QL at any of the monitoring locations.

4.28 Unit BLD N-239 Survey, 2014LV179

Unit BLD N-239 was surveyed on 01 May 2014 at 10:54:45 and is represented in Figures 28a through 28d. The average wind speed and direction at the airport for the five-minute period ending at 10:56 were 6 mph from 340 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.29 Unit BLD 3 Survey One, 2014LV184

Unit BLD 3 was surveyed on 02 May 2014 at 08:15:06 and is represented in Figures 29a through 29d. The average wind speed and direction at the airport for the five-minute period ending at 07:56 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 1.1 ppbv at room 129, between flags F and G. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.30 Unit BLD 3 Survey Two, 2014LV185

Unit BLD 3 was surveyed on 02 May 2014 at 09:13:40 and is represented in Figures 30a through 30d. The average wind speed and direction at the airport for the five-minute period ending at 08:56 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The highest average concentrations were: dichloroethene, 0.61 ppbv and trichloroethene, 7.4 ppbv, both at room C110 floor drain five, between flags P and Q. The average concentration of tetrachloroethene was not detected above its QL at any of the monitoring locations.

4.31 Unit 53 Survey, 2014LV194

Unit 53 was surveyed on 05 May 2014 at 15:14:35 and is represented in Figures 31a through 31d. The average wind speed and direction at the airport for the five-minute period ending at 14:56

were 11 mph from 270 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.32 Unit BLD N-211 Survey One, 2014LV200

Unit BLD N-211 was surveyed on 06 May 2014 at 13:54:48 and is represented in Figures 32a through 32d. The average wind speed and direction at the airport for the five-minute period ending at 13:56 were 13 mph from 330 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.33 Unit BLD N-211 Survey Two, 2014LV201

Unit BLD N-211 was surveyed on 06 May 2014 at 14:34:50 and is represented in Figures 33a through 33d. The average wind speed and direction at the airport for the five-minute period ending at 13:56 were 13 mph from 330 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.34 Unit BLD N-211 Survey Three, 2014LV202

Unit BLD N-211 was surveyed on 06 May 2014 at 15:06:54 and is represented in Figures 34a through 34d. The average wind speed and direction at the airport for the five-minute period ending at 14:56 were 17 mph from 320 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.35 Unit BLD N-144 Survey, 2014LV203

Unit BLD N-144 was surveyed on 06 May 2014 at 15:52:00 and is represented in Figures 35a through 35d. The average wind speed and direction at the airport for the five-minute period ending at 15:56 were 9 mph from 290 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.36 Unit BLD 596 Survey, 2014LV208

Unit BLD 596 was surveyed on 07 May 2014 at 09:11:40 and is represented in Figures 36a through 36d. The average wind speed and direction at the airport for the five-minute period ending at 08:56 were 0 mph from 0 degrees. There was no precipitation during the preceding hour. The highest average concentration of trichloroethene was 0.66 ppbv at the floor drain in janitor's closet, between flags H and I. The average concentrations of dichloroethene and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

4.37 Unit 44 Survey, 2014LV212

Unit 44 was surveyed on 07 May 2014 at 14:52:28 and is represented in Figures 37a through 37d. The average wind speed and direction at the airport for the five-minute period ending at 14:56 were 16 mph from 250 degrees. There was no precipitation during the preceding hour. The average concentrations of dichloroethene, trichloroethene, and tetrachloroethene were not detected above their QLs at any of the monitoring locations.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

The compound parent/daughter ion pairs used are listed below.

Compound	Parent Ion Mass	Daughter Ion Mass
Dichloroethene	96	61
Dichloroethene	98	61
Trichloroethene	130	95
Trichloroethene	132	95
Trichloroethene	132	97
Tetrachloroethene	164	129
Tetrachloroethene	166	129
Tetrachloroethene	166	131

Tables 3 and 4 documents the RFs and IRFs generated during the calibration procedure for the individual ion pairs. The IRFs were used to quantitate the ion pair concentrations.

The summaries of detection and quantitation limit data for the monitoring periods (Sections 5.3 and 5.4 and Table 4) document the concentration, in ppbv, required for a compound's ion pair to be considered detectable and quantifiable during the specified monitoring period. The DL is defined as three times the standard deviation (SD) of the concentration for a compound's ion pair measured in an ambient air sample. The QL is defined as 10 times the SD of the concentration for the same conditions. The detection and quantitation limits for a compound result from averaging the appropriate detection and quantitation limits of the compound's ion pairs.

5.1 Intermediate Response Factor for Ion Pairs

Response factors were generated from two calibration events, as described in the procedure (Section 2.2.2.). Table 3 contains the RFs in units of icps/ppbv. The initial and final RFs were used to calculate the IRFs, which were used to calculate the reported concentration results.

The following equation was used to calculate the IRFs found in Tables 3 and 4:

$$\mathrm{IRF} = \frac{2(\mathrm{RF}_1 \times \mathrm{RF}_2)}{(\mathrm{RF}_1 + \mathrm{RF}_2)}$$

where:

IRF = Intermediate response factor (icps/ppbv)
RF_1 = The RF for an ion pair measured during the first calibration event (icps/ppbv)
RF_2 = The RF for the same ion pair measured during the second calibration event (icps/ppbv)

For example, the entry for the 132/95 ion pair of trichloroethene from Table 3 for files 2014LV146 and 2014LV154, 29 April 2014 is:

RF_1 = 281.77 icps/ppbv
RF_2 = 218.94 icps/ppbv

therefore,

$$\text{IRF} = \frac{2(281.77 \times 218.94)}{(281.77 + 218.94)} = \frac{123{,}381.44}{500.71} = 246.41 \text{ icps/ppbv}$$

The result, 246.41 icps/ppbv, is the IRF reported in Table 3 and used in Table 4.

5.2 Error Bars

The potential maximum concentration percent deviations for each target compound are presented in Table 3 and are called "error bars" for simplicity. They represent the potential bias in the concentration due to changes in the sensitivity of the TAGA instrument. Errors bars were calculated using the following equation:

$$\text{error bar} = \frac{|RF_1 - RF_2|}{(RF_1 + RF_2)} \times 100$$

where:

error bar = Maximum concentration percent deviation
RF_1 = The RF for an ion pair measured during the first calibration event (icps/ppbv)
RF_2 = The RF for the same ion pair measured during the second calibration event (icps/ppbv)

For example, the entry for the 132/95 ion pair of trichloroethene from Table 3 for files 2014LV146 and 2014LV154, 29 April 2014 is:

RF_1 = 281.77 icps/ppbv
RF_2 = 218.94 icps/ppbv

$$\text{error bar} = \frac{|281.77 - 218.94|}{(281.77 + 218.94)} \times 100 = 12.5\%$$

The % error bar calculated for the 132/95 ion pair of trichloroethene is 12.5% for files 2014LV146 and 2014LV154, 29 April 2014.

The above calculation was repeated for each ion pair. The error bars for each compound's ions were averaged to give a single value for the compound. This averaged error bar can be applied to the samples analyzed between the two calibrations of the monitoring period.

5.3 Ion Pair Detection and Quantitation Limits

The DLs and QLs were calculated using the SD of the compound's ion pair intensity measured in an ambient air sample and its RF. The SD reflects the variability of the instrument's response to the ambient air sample.

The following equation was used to calculate the DLs found in Table 4:

$$DL = \frac{3 \times SD}{IRF}$$

where:

DL = Detection limit for an ion pair (ppbv)
SD = Standard deviation of the ion intensity measured in an ambient air sample (icps)
IRF = Intermediate response factor for an ion pair (icps/ppbv)

For example, the entry for the 132/95 ion pair of trichloroethene from Table 4 for files 2014LV146 and 2014LV154, 29 April 2014 is:

SD = 10.215 icps
IRF = 246.41 icps/ppbv

$$DL = \frac{3 \times 10.215}{246.41} = 0.124 \text{ ppbv}$$

The following equation was used to calculate the QLs found in Table 4:

$$QL = \frac{10 \times SD}{IRF}$$

where:

QL = Quantitation limit concentration for an ion pair (ppbv)
SD = Standard deviation of the ion intensity measured in an ambient air sample (icps)
IRF = Intermediate response factor for an ion pair (icps/ppbv)

For example, the entry for the 132/95 ion pair of trichloroethene from Table 4 for files 2014LV146 and 2014LV154, 29 April 2014 is:

SD = 10.215 icps
IRF = 246.41 icps/ppbv

$$QL = \frac{10 \times 10.215}{246.41} = 0.415 \text{ ppbv}$$

5.4 Compound Detection and Quantitation Limits

Averaging the respective DLs and QLs of the target compound's ion pairs found in Table 4 generated the DLs and QLs found in Table 4.

The following equation was used to calculate the compound's DL:

$$DL_c = \frac{DL_1 + DL_2 + \ldots + DL_n}{n}$$

where:

DL_c = Detection limit for a compound (ppbv)
DL_1 = Detection limit for the first ion pair (ppbv)
DL_2 = Detection limit for the second ion pair (ppbv)
DL_n = Detection limit for the nth ion pair (ppbv)
n = Number of ion pairs to be averaged

For example, using the entries for the 130/95, 132/95, and 132/97 ion pairs of trichloroethene from Table 4 for files 2014LV146 and 2014LV154, 29 April 2014 is:

$$DL_C = \frac{0.0791 + 0.124 + 0.115}{3} = \frac{0.318}{3} = 0.106\,\text{ppbv}$$

This result, 0.106 ppbv, rounded to 0.11 ppbv is the DL for trichloroethene found in Table 4.

The following equation was used to calculate the compound's QL:

$$QL_c = \frac{QL_1 + QL_2 + \ldots QL_n}{n}$$

where:

QL_c = Quantitation limit for a compound (ppbv)
QL_1 = Quantitation limit for the first ion pair (ppbv)
QL_2 = Quantitation limit for the second ion pair (ppbv)
QL_n = Quantitation limit for the nth ion pair (ppbv)
n = Number of ion pairs to be averaged

For example, using the entries for the 130/95, 132/95, and 132/97 ion pairs of trichloroethene from Table 4 for files 2014LV146 and 2014LV154, 29 April 2014 is:

$$QL_C = \frac{0.264 + 0.415 + 0.384}{3} = \frac{1.063}{3} = 0.354\,\text{ppbv}$$

This result, 0.354 ppbv, rounded to 0.35 ppbv is the QL for dichloroethene found in Table 4.

TABLES

TABLE 1
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 28 April 2014 08:19:56 File: 2014LV133				
	Start Sequence:	353	679	
	End Sequence:	424	754	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	2724.6	2517.4	92.4
Dichloroethene	98/61	986.5	912.1	92.5
		Average Dichloroethene Transport Efficiency:		92.4
Trichloroethene	130/95	5988.8	5394.2	90.1
Trichloroethene	132/95	2141.5	1908.6	89.1
Trichloroethene	132/97	3945.7	3585.1	90.9
		Average Trichloroethene Transport Efficiency:		90.0
Tetrachloroethene	164/129	6451.8	5645.3	87.5
Tetrachloroethene	166/129	2364.7	2093.2	88.5
Tetrachloroethene	166/131	6307.4	5502.0	87.2
		Average Tetrachloroethene Transport Efficiency:		87.7

Transport Efficiency for 28 April 2014 17:44:21 File: 2014LV143				
	Start Sequence:	282	669	
	End Sequence:	354	741	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	3192.7	2986.6	93.5
Dichloroethene	98/61	1134.8	1078.4	95.0
		Average Dichloroethene Transport Efficiency:		94.3
Trichloroethene	130/95	6657.8	6243.6	93.8
Trichloroethene	132/95	2293.6	2104.2	91.7
Trichloroethene	132/97	4273.7	3904.7	91.4
		Average Trichloroethene Transport Efficiency:		92.3
Tetrachloroethene	164/129	5468.1	4989.6	91.2
Tetrachloroethene	166/129	2178.2	2006.0	92.1
Tetrachloroethene	166/131	5921.2	5211.5	88.0
		Average Tetrachloroethene Transport Efficiency:		90.5

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = percent

TABLE 1 continued
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 29 April 2014 09:00:11 File: 2014LV147				
	Start Sequence:	224	591	
	End Sequence:	298	671	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	3306.9	2992.8	90.5
Dichloroethene	98/61	1178.5	1085.1	92.1
		Average Dichloroethene Transport Efficiency:		91.3
Trichloroethene	130/95	6701.1	5867.4	87.6
Trichloroethene	132/95	2331.6	2053.8	88.1
Trichloroethene	132/97	4322.1	3803.8	88.0
		Average Trichloroethene Transport Efficiency:		87.9
Tetrachloroethene	164/129	5937.9	5197.8	87.5
Tetrachloroethene	166/129	2332.8	1965.7	84.3
Tetrachloroethene	166/131	6196.0	5220.4	84.3
		Average Tetrachloroethene Transport Efficiency:		85.4

Transport Efficiency for 29 April 2014 06:42:08 File: 2014LV155				
	Start Sequence:	185	499	
	End Sequence:	258	572	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	2906.2	2634.3	90.6
Dichloroethene	98/61	1060.5	964.1	90.9
		Average Dichloroethene Transport Efficiency:		90.8
Trichloroethene	130/95	5258.0	4777.6	90.9
Trichloroethene	132/95	1731.5	1592.0	91.9
Trichloroethene	132/97	3204.5	2949.2	92.0
		Average Trichloroethene Transport Efficiency:		91.6
Tetrachloroethene	164/129	3714.9	3344.6	90.0
Tetrachloroethene	166/129	1598.5	1455.3	91.0
Tetrachloroethene	166/131	6196.0	5220.4	84.3
		Average Tetrachloroethene Transport Efficiency:		88.4

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = percent

TABLE 1 continued
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 30 April 2014 08:03:53 File: 2014LV157				
	Start Sequence:	119	554	
	End Sequence:	213	625	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	2834.2	2519.4	88.9
Dichloroethene	98/61	1016.0	910.6	89.6
			Average Dichloroethene Transport Efficiency:	89.3
Trichloroethene	130/95	3979.3	3454.3	86.8
Trichloroethene	132/95	1373.9	1165.1	84.8
Trichloroethene	132/97	2574.5	2270.8	88.2
			Average Trichloroethene Transport Efficiency:	86.6
Tetrachloroethene	164/129	3938.5	3297.4	83.7
Tetrachloroethene	166/129	1252.7	1065.6	85.1
Tetrachloroethene	166/131	3638.2	3100.0	85.2
			Average Tetrachloroethene Transport Efficiency:	84.7

Transport Efficiency for 30 April 2014 19:58:55 File: 2014LV173				
	Start Sequence:	301	521	
	End Sequence:	373	593	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	2713.6	2922.2	107.7
Dichloroethene	98/61	948.6	1037.9	109.4
			Average Dichloroethene Transport Efficiency:	108.6
Trichloroethene	130/95	3263.8	3344.1	102.5
Trichloroethene	132/95	1134.8	1156.6	101.9
Trichloroethene	132/97	2161.2	2183.2	101.0
			Average Trichloroethene Transport Efficiency:	101.8
Tetrachloroethene	164/129	2799.0	2737.4	97.8
Tetrachloroethene	166/129	875.6	850.8	97.2
Tetrachloroethene	166/131	2536.6	2456.2	96.8
			Average Tetrachloroethene Transport Efficiency:	97.3

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = percent

TABLE 1 continued
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 01 May 2014 07:52:32 File: 2014LV175				
	Start Sequence:	298	629	
	End Sequence:	368	700	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	3903.0	3548.6	90.9
Dichloroethene	98/61	1327.5	1249.7	94.1
		Average Dichloroethene Transport Efficiency:		92.5
Trichloroethene	130/95	4574.9	4092.8	89.5
Trichloroethene	132/95	1560.7	1415.1	90.7
Trichloroethene	132/97	2955.2	2621.3	88.7
		Average Trichloroethene Transport Efficiency:		89.6
Tetrachloroethene	164/129	3922.3	3382.9	86.2
Tetrachloroethene	166/129	1201.1	1103.6	91.9
Tetrachloroethene	166/131	3587.0	3113.8	86.8
		Average Tetrachloroethene Transport Efficiency:		88.3

Transport Efficiency for 01 May 2014 13:16:59 File: 2014LV181				
	Start Sequence:	296	615	
	End Sequence:	370	687	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	4176.7	3834.7	91.8
Dichloroethene	98/61	1434.5	1321.2	92.1
		Average Dichloroethene Transport Efficiency:		92.0
Trichloroethene	130/95	4651.1	4144.4	89.1
Trichloroethene	132/95	1573.2	1400.5	89.0
Trichloroethene	132/97	2972.8	2656.0	89.3
		Average Trichloroethene Transport Efficiency:		89.2
Tetrachloroethene	164/129	3761.5	3241.5	86.2
Tetrachloroethene	166/129	1220.1	1008.6	82.7
Tetrachloroethene	166/131	3458.9	3009.3	87.0
		Average Tetrachloroethene Transport Efficiency:		85.3

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = percent

TABLE 1 continued
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 02 May 2014 07:49:00 File: 2014LV183				
	Start Sequence:	260	627	
	End Sequence:	335	723	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	3186.4	2742.7	86.1
Dichloroethene	98/61	1115.1	936.5	84.0
		Average Dichloroethene Transport Efficiency:		85.0
Trichloroethene	130/95	3781.3	3283.7	86.8
Trichloroethene	132/95	1295.7	1119.1	86.4
Trichloroethene	132/97	2434.3	2111.6	86.7
		Average Trichloroethene Transport Efficiency:		86.7
Tetrachloroethene	164/129	3618.3	3055.9	84.5
Tetrachloroethene	166/129	1134.1	963.0	84.9
Tetrachloroethene	166/131	3342.1	2827.0	84.6
		Average Tetrachloroethene Transport Efficiency:		84.7

Transport Efficiency for 02 May 2014 10:17:51 File: 2014LV187				
	Start Sequence:	289	642	
	End Sequence:	360	713	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	2236.5	1978.5	88.5
Dichloroethene	98/61	802.2	727.1	90.6
		Average Dichloroethene Transport Efficiency:		89.5
Trichloroethene	130/95	2838.6	2481.0	87.4
Trichloroethene	132/95	962.9	841.1	87.4
Trichloroethene	132/97	1835.6	1596.0	86.9
		Average Trichloroethene Transport Efficiency:		87.2
Tetrachloroethene	164/129	2540.4	2167.9	85.3
Tetrachloroethene	166/129	814.0	695.6	85.4
Tetrachloroethene	166/131	2429.0	2040.7	84.0
		Average Tetrachloroethene Transport Efficiency:		84.9

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = percent

TABLE 1 continued
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 05 May 2014 07:42:54 File: 2014LV190				
	Start Sequence:	138	648	
	End Sequence:	213	724	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	4747.8	4401.4	92.7
Dichloroethene	98/61	1640.7	1495.8	91.2
		Average Dichloroethene Transport Efficiency:		91.9
Trichloroethene	130/95	8082.4	7275.1	90.0
Trichloroethene	132/95	2789.9	2513.4	90.1
Trichloroethene	132/97	5494.3	4995.3	90.9
		Average Trichloroethene Transport Efficiency:		90.3
Tetrachloroethene	164/129	9337.6	8441.9	90.4
Tetrachloroethene	166/129	3086.8	2741.7	88.8
Tetrachloroethene	166/131	8963.3	7946.9	88.7
		Average Tetrachloroethene Transport Efficiency:		89.3

Transport Efficiency for 05 May 2014 17:53:43 File: 2014LV196				
	Start Sequence:	253	712	
	End Sequence:	324	784	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	6591.1	5867.7	89.0
Dichloroethene	98/61	2227.8	1984.7	89.1
		Average Dichloroethene Transport Efficiency:		89.1
Trichloroethene	130/95	10543.9	9054.5	85.9
Trichloroethene	132/95	3684.7	3154.7	85.6
Trichloroethene	132/97	7296.4	6173.2	84.6
		Average Trichloroethene Transport Efficiency:		85.4
Tetrachloroethene	164/129	11105.0	9328.6	84.0
Tetrachloroethene	166/129	3517.5	2983.0	84.8
Tetrachloroethene	166/131	10287.8	8602.6	83.6
		Average Tetrachloroethene Transport Efficiency:		84.1

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = percent

TABLE 1 continued
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 06 May 2014 08:16:49 File: 2014LV198				
	Start Sequence:	289	683	
	End Sequence:	364	754	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	5151.8	4694.2	91.1
Dichloroethene	98/61	1745.5	1630.8	93.4
		Average Dichloroethene Transport Efficiency:		92.3
Trichloroethene	130/95	7786.7	6980.4	89.6
Trichloroethene	132/95	2726.6	2417.4	88.7
Trichloroethene	132/97	5379.9	4717.9	87.7
		Average Trichloroethene Transport Efficiency:		88.7
Tetrachloroethene	164/129	8161.1	7139.4	87.5
Tetrachloroethene	166/129	2632.4	2293.1	87.1
Tetrachloroethene	166/131	7657.1	6601.9	86.2
		Average Tetrachloroethene Transport Efficiency:		86.9

Transport Efficiency for 06 May 2014 17:01:26 File: 2014LV205				
	Start Sequence:	276	622	
	End Sequence:	359	693	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	4435.2	4355.3	98.2
Dichloroethene	98/61	1515.5	1498.3	98.9
		Average Dichloroethene Transport Efficiency:		98.5
Trichloroethene	130/95	6366.5	5998.6	94.2
Trichloroethene	132/95	2200.5	2042.9	92.8
Trichloroethene	132/97	4374.0	4015.7	91.8
		Average Trichloroethene Transport Efficiency:		93.0
Tetrachloroethene	164/129	5801.8	5290.0	91.2
Tetrachloroethene	166/129	1916.2	1720.8	89.8
Tetrachloroethene	166/131	5484.0	5014.2	91.4
		Average Tetrachloroethene Transport Efficiency:		90.8

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = percent

TABLE 1 continued
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 07 May 2014 07:37:28 File: 2014LV207				
	Start Sequence:	318	675	
	End Sequence:	389	753	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	5200.0	4800.8	92.3
Dichloroethene	98/61	1748.5	1630.0	93.2
			Average Dichloroethene Transport Efficiency:	92.8
Trichloroethene	130/95	7792.8	6769.5	86.9
Trichloroethene	132/95	2725.8	2350.5	86.2
Trichloroethene	132/97	5369.4	4622.5	86.1
			Average Trichloroethene Transport Efficiency:	86.4
Tetrachloroethene	164/129	7393.5	6212.9	84.0
Tetrachloroethene	166/129	2381.1	1993.7	83.7
Tetrachloroethene	166/131	6753.2	5729.0	84.8
			Average Tetrachloroethene Transport Efficiency:	84.2

Transport Efficiency for 07 May 2014 10:16:16 File: 2014LV210				
	Start Sequence:	314	659	
	End Sequence:	385	749	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	4706.1	4507.5	95.8
Dichloroethene	98/61	1612.4	1546.3	95.9
			Average Dichloroethene Transport Efficiency:	95.8
Trichloroethene	130/95	6598.9	6027.5	91.3
Trichloroethene	132/95	2266.3	2024.2	89.3
Trichloroethene	132/97	4471.3	4018.5	89.9
			Average Trichloroethene Transport Efficiency:	90.2
Tetrachloroethene	164/129	5550.7	5020.1	90.4
Tetrachloroethene	166/129	1794.7	1630.3	90.8
Tetrachloroethene	166/131	5105.7	4710.3	92.3
			Average Tetrachloroethene Transport Efficiency:	91.2

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = Percent

TABLE 1 continued
Summary of Transport Efficiencies Measured on 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Transport Efficiency for 07 May 2014 16:01:42 File: 2014LV214				
	Start Sequence:	428	706	
	End Sequence:	498	778	
Compound	PM/DM	Proximal Intensity (icps)	Distal Intensity (icps)	Transport Efficiency (%)
Dichloroethene	96/61	4464.4	4227.3	94.7
Dichloroethene	98/61	1516.6	1443.2	95.2
			Average Dichloroethene Transport Efficiency:	94.9
Trichloroethene	130/95	5991.3	5277.4	88.1
Trichloroethene	132/95	2033.0	1858.1	91.4
Trichloroethene	132/97	3932.8	3587.0	91.2
			Average Trichloroethene Transport Efficiency:	90.2
Tetrachloroethene	164/129	4705.9	4257.5	90.5
Tetrachloroethene	166/129	1553.9	1352.3	87.0
Tetrachloroethene	166/131	4423.0	3870.0	87.5
			Average Tetrachloroethene Transport Efficiency:	88.3

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
% = Percent

TABLE 2
Summary of Meteorological Conditions during Monitoring, 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

File	Location	Date	Start Time	Wind Speed (mph)	Wind Direction (degrees)	Rainfall (inches)
2014LV134	Unit BLDs 148, 149, and 150	4/28/2014	10:36:33	5	290	-
2014LV135	Unit BLDs 150 and 151	4/28/2014	11:15:35	5	290	-
2014LV136	Unit BLDs 153 and 154	4/28/2014	12:10:26	7	350	-
2014LV137	Unit BLDs 155 and 156	4/28/2014	12:44:27	10	360	-
2014LV138	Unit BLD 45	4/28/2014	13:37:23	10	360	-
2014LV139	Unit BLD 3	4/28/2014	14:32:12	14	330	-
2014LV140	Unit BLD 3	4/28/2014	15:42:49	14	340	-
2014LV141	Unit BLD 3	4/28/2014	16:43:36	11	330	-
2014LV148	Unit BLD 16	4/29/2014	09:40:37	3	10	-
2014LV149	Unit BLD 16	4/29/2014	10:39:12	3	10	-
2014LV150	Unit BLD 567	4/29/2014	11:16:38	6	0	-
2014LV151	Unit BLD 126	4/29/2014	11:56:23	6	340	-
2014LV153	Unit BLD 10 Tunnel	4/29/2014	16:21:27	9	320	-
2014LV158	Unit BLD 10	4/30/2014	08:36:16	0	0	-
2014LV159	Unit BLD 14	4/30/2014	09:26:31	0	0	-
2014LV161	Unit BLD 14	4/30/2014	10:30:17	0	0	-
2014LV162	Unit BLD N-239A	4/30/2014	11:19:52	3	30	-
2014LV163	Unit BLD N-239A	4/30/2014	12:07:56	7	360	-
2014LV164	Unit BLD N-239	4/30/2014	13:44:03	9	340	-

Wind direction is the direction from which the wind is blowing.
mph = Miles per Hour
- = No precipitation

TABLE 2 continued
Summary of Meteorological Conditions during Monitoring, 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

File	Location	Date	Start Time	Wind Speed (mph)	Wind Direction (degrees)	Rainfall (inches)
2014LV166	Unit BLD N-239	4/30/2014	14:49:57	10	340	-
2014LV167	Unit 54	4/30/2014	16:10:52	9	340	-
2014LV168	Unit 54	4/30/2014	16:44:17	11	340	-
2014LV169	Unit 129	4/30/2014	17:27:06	11	340	-
2014LV170	Unit 135	4/30/2014	17:55:27	7	320	-
2014LV171	Unit 89	4/30/2014	18:28:09	7	320	-
2014LV177	Unit BLD 10 Tunnel	5/1/2014	09:14:57	3	340	-
2014LV178	Unit BLD 10	5/1/2014	09:58:12	5	340	-
2014LV179	Unit BLD N-239	5/1/2014	10:54:45	6	340	-
2014LV184	Unit BLD 3	5/2/2014	08:15:06	0	0	-
2014LV185	Unit BLD 3	5/2/2014	09:13:40	0	0	-
2014LV194	Unit 53	5/5/2014	15:14:35	11	270	-
2014LV200	Unit BLD N-211	5/6/2014	13:54:48	13	330	-
2014LV201	Unit BLD N-211	5/6/2014	14:34:50	13	330	-
2014LV202	Unit BLD N-211	5/6/2014	15:06:54	17	320	-
2014LV203	Unit BLD N-144	5/6/2014	15:52:00	9	290	-
2014LV208	Unit BLD 596	5/7/2014	09:11:40	0	0	-
2014LV212	Unit 44	5/7/2014	14:52:28	16	250	-

Wind direction is the direction from which the wind is blowing.
mph = Miles per Hour
- = No precipitation

TABLE 3
Summary of Response Factors and Error Bars for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV131 and 2014LV142 on 28 April 2014
Used for Survey Files: 2014LV134, 2014LV135, 2014LV136, 2014LV137, 2014LV138, 2014LV139, 2014LV140, and 2014LV141

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	420.26	337.29	374.23	11.0
Dichloroethene	98/61	150.59	121.39	134.42	10.7
				Average:	11.
Trichloroethene	130/95	870.23	741.21	800.56	8.01
Trichloroethene	132/95	312.87	259.32	283.59	9.36
Trichloroethene	132/97	585.87	483.98	530.07	9.52
				Average:	9.0
Tetrachloroethene	164/129	991.03	690.09	813.62	17.9
Tetrachloroethene	166/129	352.86	258.53	298.42	15.4
Tetrachloroethene	166/131	953.84	686.86	798.63	16.3
				Average:	17.

Calibration Files: 2014LV146 and 2014LV154 on 29 April 2014
Used for Survey Files: 2014LV148, 2014LV149, 2014LV150, 2014LV151, and 2014LV153

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	382.92	363.27	372.84	2.63
Dichloroethene	98/61	138.42	133.14	135.73	1.94
				Average:	2.3
Trichloroethene	130/95	796.01	635.81	706.95	11.2
Trichloroethene	132/95	281.77	218.94	246.41	12.5
Trichloroethene	132/97	523.45	405.52	457.00	12.7
				Average:	12.
Tetrachloroethene	164/129	777.91	537.83	635.97	18.2
Tetrachloroethene	166/129	281.26	209.93	240.42	14.5
Tetrachloroethene	166/131	753.99	558.46	641.66	14.9
				Average:	16.

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 continued
Summary of Response Factors and Error Bars for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV156 and 2014LV172 on 30 April 2014
Used for Survey Files: 2014LV158, 2014LV159, 2014LV161, 2014LV162, 2014LV163, 2014LV164, 2014LV166, 2014LV167, 2014LV168, 2014LV169, 2014LV170, and 2014LV171

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	360.50	308.81	332.66	7.72
Dichloroethene	98/61	126.75	109.75	117.64	7.19
				Average:	7.5
Trichloroethene	130/95	500.60	380.84	432.59	13.6
Trichloroethene	132/95	171.53	131.45	148.84	13.2
Trichloroethene	132/97	325.99	250.23	283.13	13.1
				Average:	13.
Tetrachloroethene	164/129	494.14	340.22	402.98	18.4
Tetrachloroethene	166/129	160.15	106.93	128.24	19.9
Tetrachloroethene	166/131	462.27	310.24	371.30	19.7
				Average:	19.

Calibration Files: 2014LV174 and 2014LV180 on 01 May 2014
Used for Survey Files: 2014LV177, 2014LV178, and 2014LV179

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	494.11	465.89	479.58	2.94
Dichloroethene	98/61	173.52	163.94	168.59	2.84
				Average:	2.9
Trichloroethene	130/95	604.13	562.81	582.74	3.54
Trichloroethene	132/95	204.95	194.03	199.34	2.73
Trichloroethene	132/97	391.92	363.18	377.00	3.81
				Average:	3.4
Tetrachloroethene	164/129	524.89	465.92	493.65	5.95
Tetrachloroethene	166/129	165.42	146.27	155.26	6.14
Tetrachloroethene	166/131	486.49	428.61	455.72	6.33
				Average:	6.1

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 continued
Summary of Response Factors and Error Bars for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV182 and 2014LV186 on 02 May 2014
Used for Survey Files: 2014LV184 and 2014LV185

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	598.72	218.19	319.82	46.6
Dichloroethene	98/61	208.32	78.485	114.02	45.3
				Average:	46.
Trichloroethene	130/95	658.83	290.35	403.07	38.8
Trichloroethene	132/95	220.11	98.904	136.48	38.0
Trichloroethene	132/97	425.32	187.28	260.05	38.9
				Average:	39.
Tetrachloroethene	164/129	592.73	256.62	358.17	39.6
Tetrachloroethene	166/129	185.68	81.216	113.00	39.1
Tetrachloroethene	166/131	552.34	238.25	332.90	39.7
				Average:	39.

Calibration Files: 2014LV192 and 2014LV195 on 05 May 2014
Used for Survey File: 2014LV194

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	915.04	886.59	900.59	1.58
Dichloroethene	98/61	311.74	302.74	307.17	1.46
				Average:	1.5
Trichloroethene	130/95	1444.3	1448.8	1446.5	0.157
Trichloroethene	132/95	503.96	499.03	501.48	0.491
Trichloroethene	132/97	989.66	982.73	986.18	0.351
				Average:	0.33
Tetrachloroethene	164/129	1528.4	1461.8	1494.3	2.23
Tetrachloroethene	166/129	489.96	469.29	479.40	2.16
Tetrachloroethene	166/131	1416.9	1360.2	1388.0	2.04
				Average:	2.1

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 continued
Summary of Response Factors and Error Bars for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV199 and 2014LV204 on 06 May 2014
Used for Survey Files: 2014LV200, 2014LV201, 2014LV202 and 2014LV203

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	958.26	528.67	681.41	28.9
Dichloroethene	98/61	322.13	179.05	230.17	28.5
				Average:	29.
Trichloroethene	130/95	1443.2	760.78	996.33	31.0
Trichloroethene	132/95	498.48	264.54	345.65	30.7
Trichloroethene	132/97	978.47	520.47	679.50	30.6
				Average:	31.
Tetrachloroethene	164/129	1303.4	709.45	918.80	29.5
Tetrachloroethene	166/129	417.67	229.54	296.26	29.1
Tetrachloroethene	166/131	1194.9	660.59	850.81	28.8
				Average:	29.

Calibration Files: 2014LV206 and 2014LV209 on 07 May 2014
Used for Survey File: 2014LV208

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	695.94	596.22	642.23	7.72
Dichloroethene	98/61	236.57	200.54	217.07	8.24
				Average:	8.0
Trichloroethene	130/95	1048.7	824.86	923.42	11.9
Trichloroethene	132/95	361.45	284.85	318.61	11.9
Trichloroethene	132/97	713.11	559.35	626.94	12.1
				Average:	12.
Tetrachloroethene	164/129	969.07	708.17	818.33	15.6
Tetrachloroethene	166/129	307.22	228.99	262.40	14.6
Tetrachloroethene	166/131	888.76	656.45	755.15	15.0
				Average:	15.

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 3 continued
Summary of Response Factors and Error Bars for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV211 and 2014LV213 on 07 May 2014
Used for Survey File: 2014LV212

Compound	PM/DM	Initial Response Factor (icps/ppbv)	Final Response Factor (icps/ppbv)	Intermediate Response Factor (icps/ppbv)	Error Bar (%)
Dichloroethene	96/61	685.70	526.69	595.77	13.1
Dichloroethene	98/61	229.38	176.67	199.60	13.0
				Average:	13.
Trichloroethene	130/95	940.65	689.58	795.78	15.4
Trichloroethene	132/95	326.13	235.10	273.23	16.2
Trichloroethene	132/97	634.63	464.27	536.25	15.5
				Average:	16.
Tetrachloroethene	164/129	767.34	577.57	659.07	14.1
Tetrachloroethene	166/129	245.96	185.12	211.25	14.1
Tetrachloroethene	166/131	708.00	539.03	612.07	13.5
				Average:	14.

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume
% = Percent

TABLE 4
Summary of Detection and Quantitation Limit Data for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV131 and 2014LV142 on 28 April 2014 Used for Survey Files: 2014LV134, 2014LV135, 2014LV136, 2014LV137, 2014LV138, 2014LV139, 2014LV140, and 2014LV141					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	374.23	13.974	0.112	0.373
Dichloroethene	98/61	134.42	13.680	0.305	1.02
			Average:	0.21	0.70
Trichloroethene	130/95	800.56	23.804	0.0892	0.297
Trichloroethene	132/95	283.59	20.221	0.214	0.713
Trichloroethene	132/97	530.07	15.280	0.0865	0.288
			Average:	0.13	0.43
Tetrachloroethene	164/129	813.62	28.597	0.105	0.351
Tetrachloroethene	166/129	298.42	17.919	0.180	0.600
Tetrachloroethene	166/131	798.63	26.883	0.101	0.337
			Average:	0.13	0.43

Calibration Files: 2014LV146 and 2014LV154 on 29 April 2014 Used for Survey Files: 2014LV148, 2014LV149, 2014LV150, 2014LV151, and 2014LV153					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	372.84	18.437	0.148	0.494
Dichloroethene	98/61	135.73	14.178	0.313	1.04
			Average:	0.23	0.77
Trichloroethene	130/95	706.95	18.632	0.0791	0.264
Trichloroethene	132/95	246.41	10.215	0.124	0.415
Trichloroethene	132/97	457.00	17.540	0.115	0.384
			Average:	0.11	0.35
Tetrachloroethene	164/129	635.97	21.633	0.102	0.340
Tetrachloroethene	166/129	240.42	17.530	0.219	0.729
Tetrachloroethene	166/131	641.66	21.646	0.101	0.337
			Average:	0.14	0.47

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 4 continued
Summary of Detection and Quantitation Limit Data for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV156 and 2014LV172 on 30 April 2014 Used for Survey Files: 2014LV158, 2014LV159, 2014LV161, 2014LV162, 2014LV163, 2014LV164, 2014LV166, 2014LV167, 2014LV168, 2014LV169, 2014LV170, and 2014LV171					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	332.66	16.141	0.146	0.485
Dichloroethene	98/61	117.64	12.880	0.328	1.09
			Average:	0.24	0.79
Trichloroethene	130/95	432.59	17.920	0.124	0.414
Trichloroethene	132/95	148.84	10.413	0.210	0.700
Trichloroethene	132/97	283.13	14.136	0.150	0.499
			Average:	0.16	0.54
Tetrachloroethene	164/129	402.98	22.448	0.167	0.557
Tetrachloroethene	166/129	128.24	11.382	0.266	0.888
Tetrachloroethene	166/131	371.30	18.984	0.153	0.511
			Average:	0.20	0.65

Calibration Files: 2014LV174 and 2014LV180 on 01 May 2014 Used for Survey Files: 2014LV177, 2014LV178, and 2014LV179					
Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	479.58	11.838	0.0741	0.247
Dichloroethene	98/61	168.59	6.8974	0.123	0.409
			Average:	0.098	0.33
Trichloroethene	130/95	582.74	17.467	0.0899	0.300
Trichloroethene	132/95	199.34	12.237	0.184	0.614
Trichloroethene	132/97	377.00	14.844	0.118	0.394
			Average:	0.13	0.44
Tetrachloroethene	164/129	493.65	21.879	0.133	0.443
Tetrachloroethene	166/129	155.26	12.244	0.237	0.789
Tetrachloroethene	166/131	455.72	26.163	0.172	0.574
			Average:	0.18	0.60

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 4 continued
Summary of Detection and Quantitation Limit Data for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV182 and 2014LV186 on 02 May 2014
Used for Survey Files: 2014LV184 and 2014LV185

Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	319.82	10.139	0.0951	0.317
Dichloroethene	98/61	114.02	6.7135	0.177	0.589
			Average:	0.14	0.45
Trichloroethene	130/95	403.07	19.859	0.148	0.493
Trichloroethene	132/95	136.48	9.8492	0.216	0.722
Trichloroethene	132/97	260.05	14.008	0.162	0.539
			Average:	0.18	0.58
Tetrachloroethene	164/129	358.17	22.569	0.189	0.630
Tetrachloroethene	166/129	113.00	11.584	0.308	1.03
Tetrachloroethene	166/131	332.90	27.213	0.245	0.817
			Average:	0.25	0.82

Calibration Files: 2014LV192 and 2014LV195 on 05 May 2014
Used for Survey File: 2014LV194

Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	900.59	13.319	0.0444	0.148
Dichloroethene	98/61	307.17	8.1253	0.0794	0.265
			Average:	0.062	0.21
Trichloroethene	130/95	1446.5	23.133	0.0480	0.160
Trichloroethene	132/95	501.48	11.745	0.0703	0.234
Trichloroethene	132/97	986.18	14.500	0.0441	0.147
			Average:	0.054	0.18
Tetrachloroethene	164/129	1494.3	27.473	0.0552	0.184
Tetrachloroethene	166/129	479.40	16.030	0.100	0.334
Tetrachloroethene	166/131	1388.0	26.181	0.0566	0.189
			Average:	0.071	0.24

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 4 continued
Summary of Detection and Quantitation Limit Data for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV199 and 2014LV204 on 06 May 2014
Used for Survey Files: 2014LV200, 2014LV201, 2014LV202, and 2014LV203

Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	681.41	16.331	0.0719	0.240
Dichloroethene	98/61	230.17	12.223	0.159	0.531
			Average:	0.12	0.39
Trichloroethene	130/95	996.33	32.641	0.0983	0.328
Trichloroethene	132/95	345.65	24.864	0.216	0.719
Trichloroethene	132/97	679.50	26.828	0.118	0.395
			Average:	0.14	0.48
Tetrachloroethene	164/129	918.80	34.225	0.112	0.372
Tetrachloroethene	166/129	296.26	18.198	0.184	0.614
Tetrachloroethene	166/131	850.81	35.681	0.126	0.419
			Average:	0.14	0.47

Calibration Files: 2014LV206 and 2014LV209 on 07 May 2014
Used for Survey File: 2014LV208

Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	642.23	15.177	0.0709	0.236
Dichloroethene	98/61	217.07	11.307	0.156	0.521
			Average:	0.11	0.38
Trichloroethene	130/95	923.42	25.420	0.0826	0.275
Trichloroethene	132/95	318.61	14.633	0.138	0.459
Trichloroethene	132/97	626.94	18.229	0.0872	0.291
			Average:	0.10	0.34
Tetrachloroethene	164/129	818.33	25.837	0.0947	0.316
Tetrachloroethene	166/129	262.40	15.235	0.174	0.581
Tetrachloroethene	166/131	755.15	25.469	0.101	0.337
			Average:	0.12	0.41

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

TABLE 4 continued
Summary of Detection and Quantitation Limit Data for 28 April 2014 to 07 May 2014
Middlefield-Ellis-Whisman Soil Gas Study
Mountain View, California
May 2014

Calibration Files: 2014LV211 and 2014LV213 on 07 May 2014
Used for Survey File: 2014LV212

Compound	PM/DM	Intermediate Response Factor (icps/ppbv)	Standard Deviation (icps)	Detection Limit (ppbv)	Quantitation Limit (ppbv)
Dichloroethene	96/61	595.77	10.130	0.0510	0.170
Dichloroethene	98/61	199.60	6.9242	0.104	0.347
			Average:	0.078	0.26
Trichloroethene	130/95	795.78	25.981	0.0979	0.326
Trichloroethene	132/95	273.23	18.034	0.198	0.660
Trichloroethene	132/97	536.25	16.933	0.0947	0.316
			Average:	0.13	0.43
Tetrachloroethene	164/129	659.07	24.902	0.113	0.378
Tetrachloroethene	166/129	211.25	16.740	0.238	0.792
Tetrachloroethene	166/131	612.07	26.266	0.129	0.429
			Average:	0.16	0.53

PM/DM = Parent Mass/Daughter Mass
icps = ion counts per second
ppbv = parts per billion by volume

FIGURES

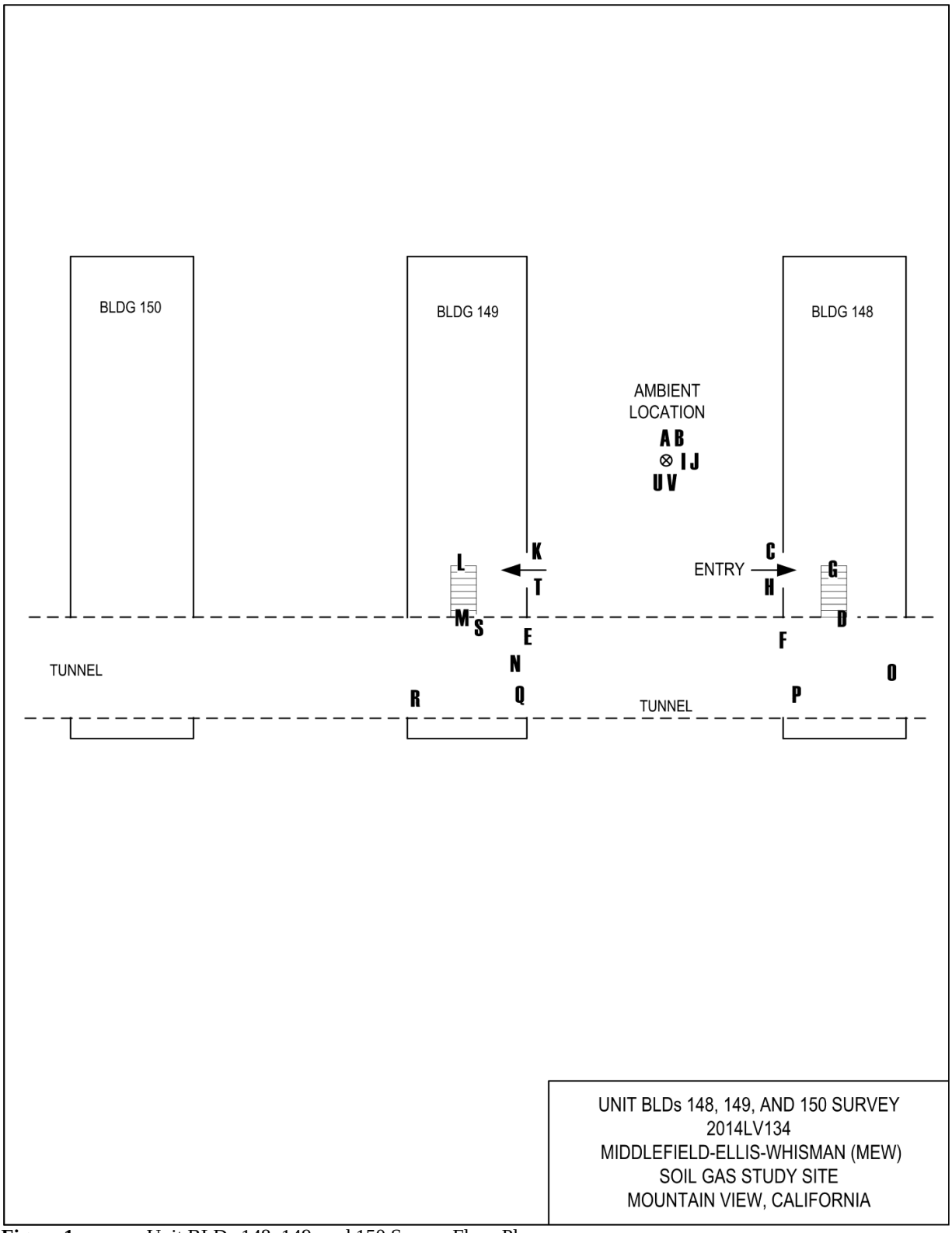

Figure 1a Unit BLDs 148, 149, and 150 Survey Floor Plan

Figure 1b

TAGA File Event Summary
File: 2014LV134 Acquired on 28 April 2014 at 10:36:33
Title: Unit BLDs 148, 149, and 150 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.8	127	Start of the pre-entry ambient
B	2.8	198	End of the pre-entry ambient
C	3.7	262	Entering building 148
D	4.0	285	Entering tunnel 148
E	4.7	335	Entering tunnel 149
F	5.7	408	Entering tunnel 148
G	6.4	458	Entering stairway building 148
H	6.8	483	Exiting building 148
I	7.6	540	Start of pre-entry ambient
J	9.9	709	End of pre-entry ambient
K	11.5	825	Entering building 149
L	14.1	1007	Entering stairwell
M	14.5	1033	End of stairwell
N	15.8	1130	Entering tunnel 149 toward 148
O	18.0	1284	End of tunnel 148
P	18.3	1308	Heading toward tunnel 149
Q	19.1	1362	Entering tunnel 149 toward 150
R	20.0	1432	End of tunnel 149
S	20.6	1468	Exiting tunnel 149
T	21.4	1526	Exiting building 149
U	22.9	1634	Start of the post-exit ambient
V	25.0	1789	End of the post-exit ambient
W	29.2	2082	Start of 30 mL/min spike
X	30.4	2172	End of 30 mL/min spike

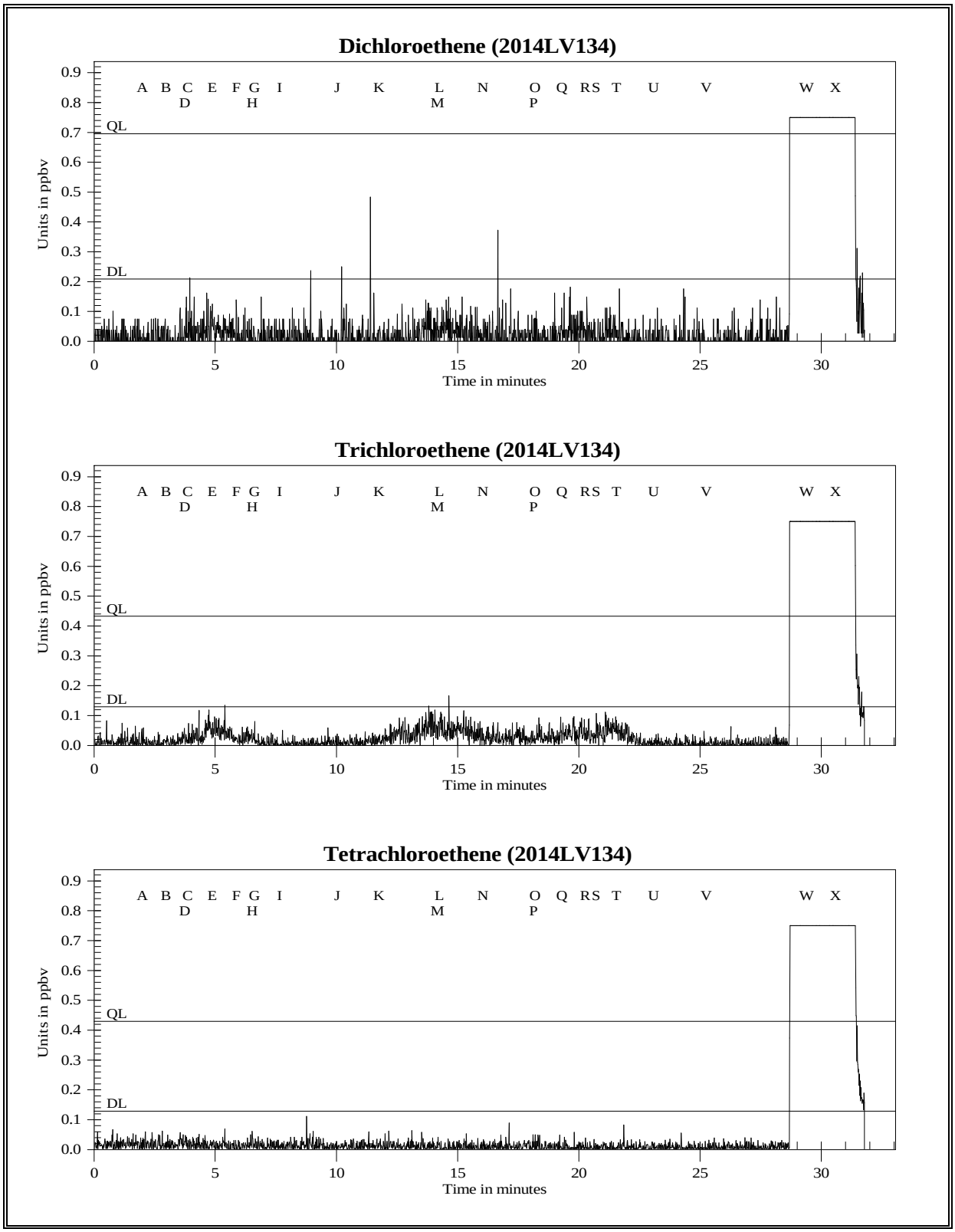

Figure 1c Unit BLDs 148, 149, and 150 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

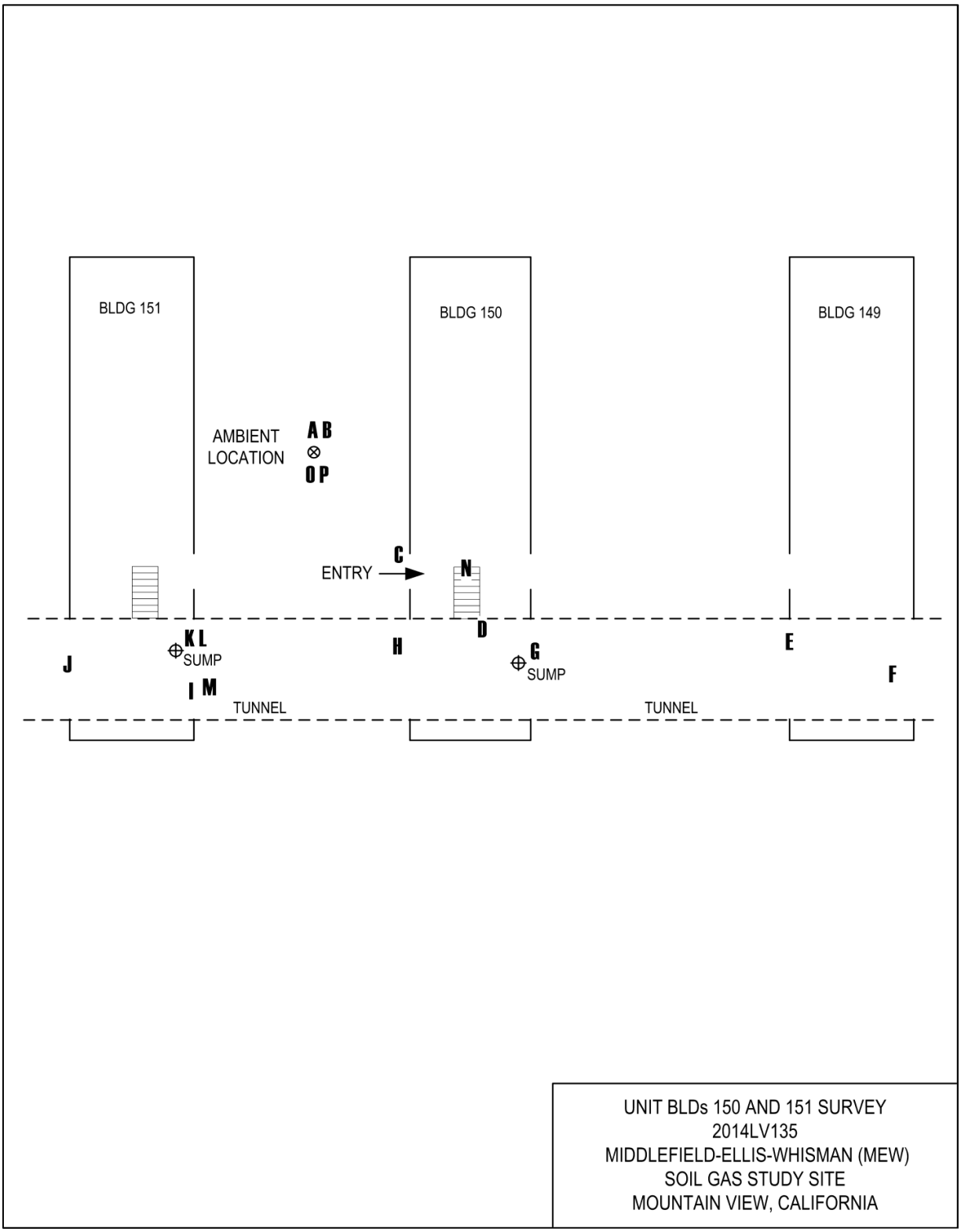

Figure 2a Unit BLDs 150 and 151 Survey Floor Plan

Figure 2b

TAGA File Event Summary
File: 2014LV135 Acquired on 28 April 2014 at 11:15:35
Title: Unit BLDs 150 and 151 Survey

Flag	Offset Time	Offset Sequence	Description
A	2.7	197	Start of the pre-entry ambient
B	3.8	271	End of the pre-entry ambient
C	4.3	306	Entering building 150, descending stairway
D	6.0	431	Entering tunnel 150 toward tunnel 149
E	7.3	521	Entering tunnel 149
F	7.9	565	Tunnel 149 toward tunnel 150
G	9.2	659	Sump at tunnel 150
H	10.5	747	Tunnel 150 toward tunnel 151
I	11.3	807	Entering tunnel 151 toward tunnel 152
J	11.9	851	Returning toward tunnel 151
K	12.4	888	Start of the sump at tunnel 151
L	13.4	961	End of the sump at tunnel 151
M	13.8	987	Tunnel 151 toward tunnel 150
N	14.7	1050	Exiting stairwell at building 150
O	15.6	1116	Start of the post-exit ambient
P	17.2	1232	End of the post-exit ambient
Q	19.1	1362	Start of 30 mL/min spike
R	20.5	1462	End of 30 mL/min spike

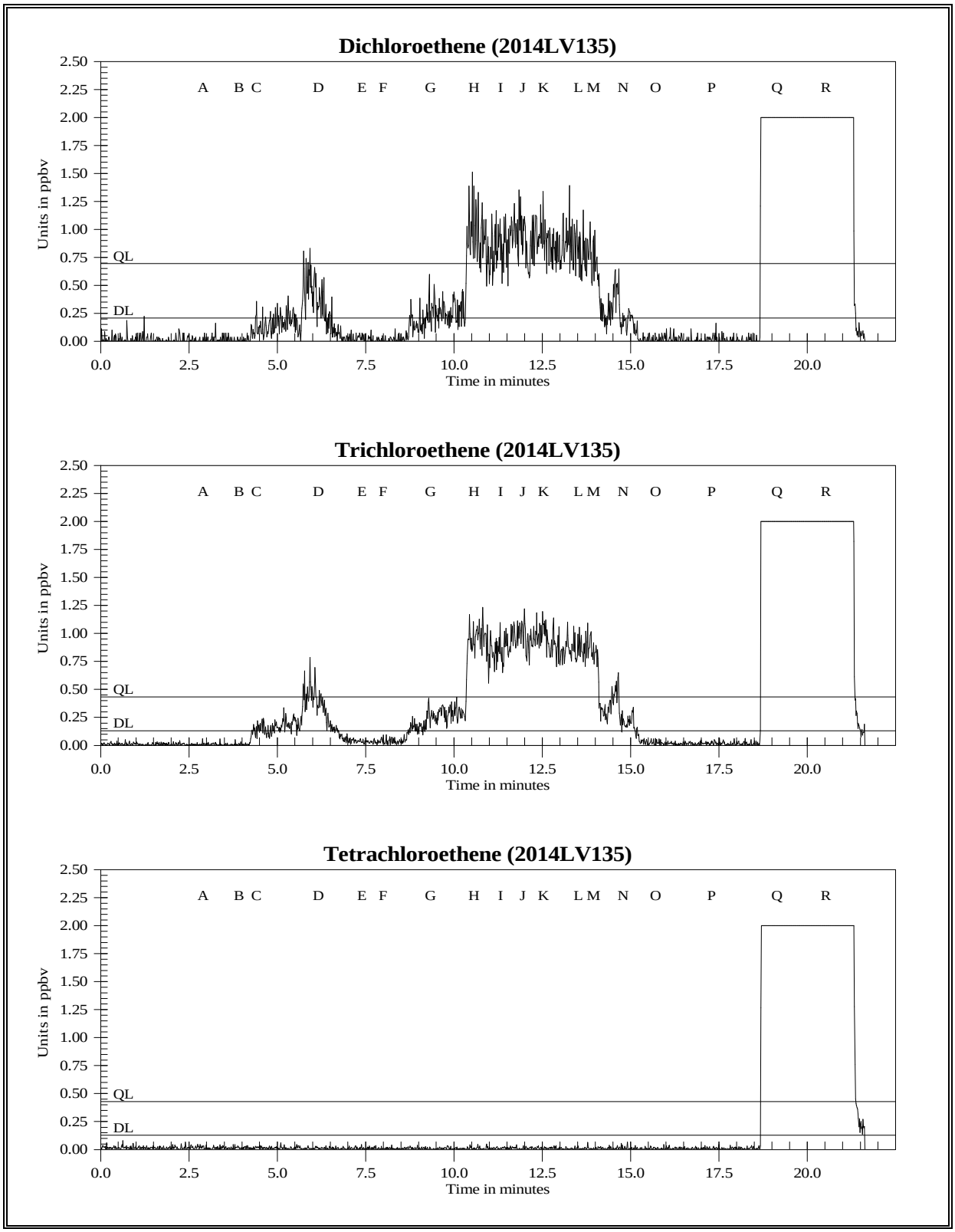

Figure 2c Unit BLDs 150 and 151 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 2d

TAGA Target Compound Summary for Unit BLDs 150 and 151
File: 2014LV135 Acquired on 28 April 2014 at 11:15:35

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
K - L	Sump at tunnel 151	0.87	0.90	DL=0.13
O - P	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
Q - R	30 mL/min spike	5.9	6.0	6.1

Concentrations are given in parts per billion by volume

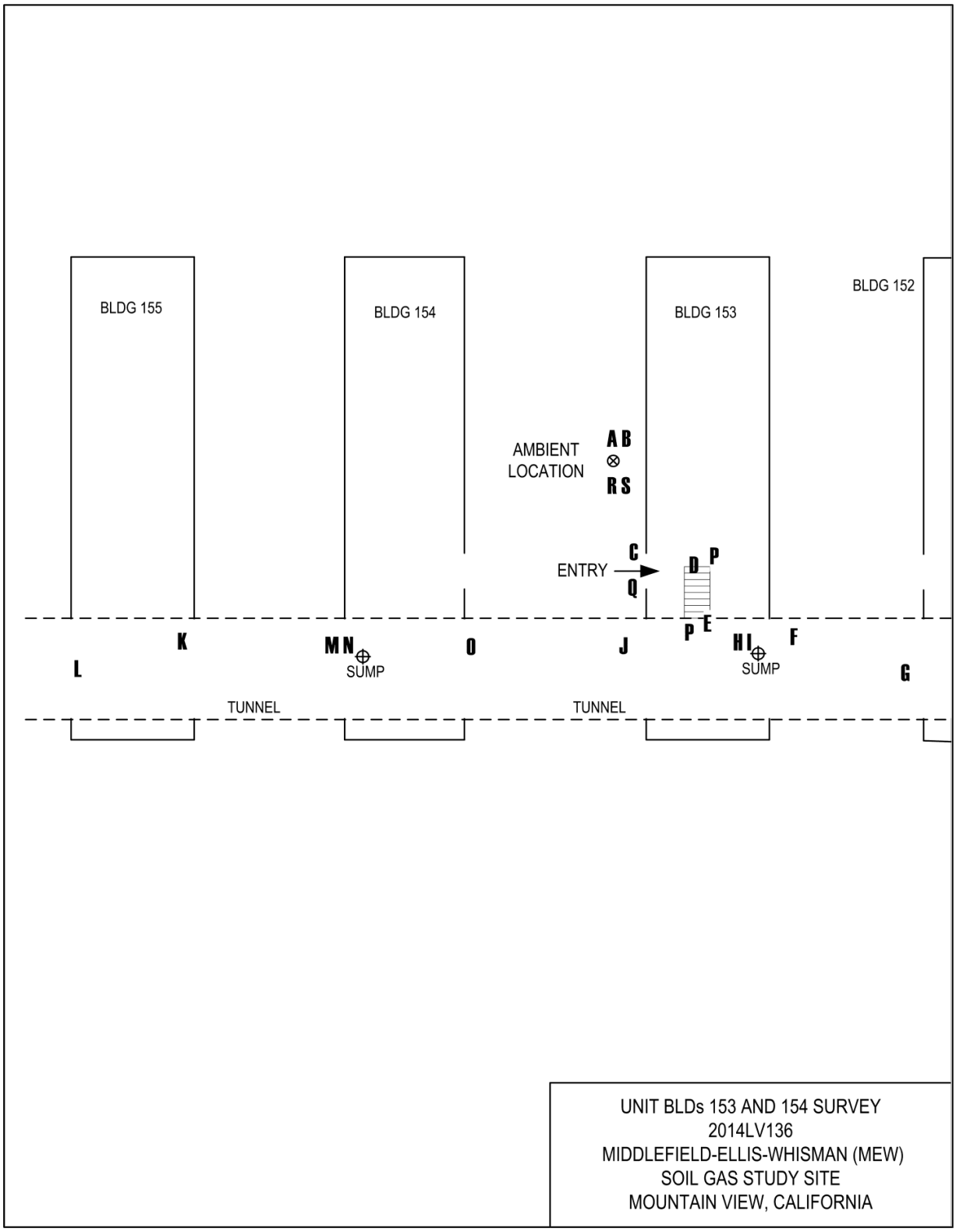

Figure 3a Unit BLDs 153 and 154 Survey Floor Plan

Figure 3b

TAGA File Event Summary
File: 2014LV136 Acquired on 28 April 2014 at 12:10:26
Title: Unit BLDs 153 and 154 Survey

Flag	Offset Time	Offset Sequence	Description
A	2.0	147	Start of the pre-entry ambient
B	3.0	217	End of the pre-entry ambient
C	4.7	337	Entering building 153
D	4.9	350	Descending stairwell
E	5.9	424	Entering tunnel 153
F	6.6	473	Tunnel 153 toward tunnel 152
G	8.3	592	Tunnel 152 toward tunnel 153
H	9.1	654	Start of sump at tunnel 153
I	10.1	725	End of sump at tunnel 153
J	10.8	772	Tunnel 153 toward tunnel 154
K	11.6	832	Entering tunnel 155
L	12.2	874	Returning from tunnel 155 to tunnel 154
M	13.0	928	Start of sump at tunnel 154
N	14.1	1006	End of sump at tunnel 154
O	14.5	1038	Returning from tunnel 154 to tunnel 153
P	15.3	1094	Exiting stairwell
Q	15.6	1117	Exiting building 153
R	16.8	1201	Start of the post-exit ambient
S	17.9	1276	End of the post-exit ambient
T	18.4	1312	Start of 30 mL/min spike
U	19.3	1382	End of 30 mL/min spike

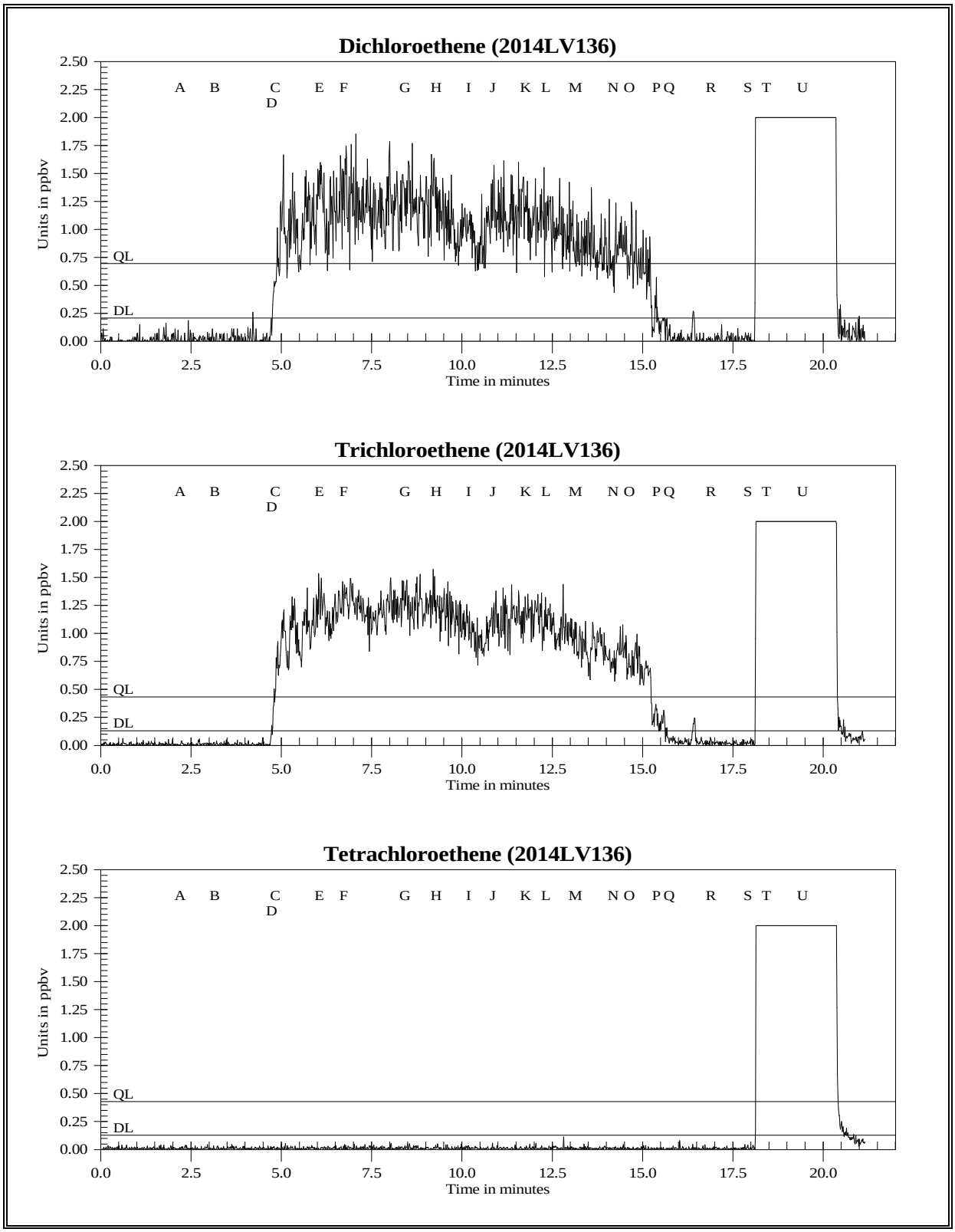

Figure 3c Unit BLDs 153 and 154 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 3d

TAGA Target Compound Summary for Unit BLDs 153 and 154
File: 2014LV136 Acquired on 28 April 2014 at 12:10:26

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
H - I	Sump at tunnel 153	1.1	1.2	DL=0.13
M - N	Sump at tunnel 154	0.85	0.90	DL=0.13
R - S	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
T - U	30 mL/min spike	4.2	4.7	5.1

Concentrations are given in parts per billion by volume

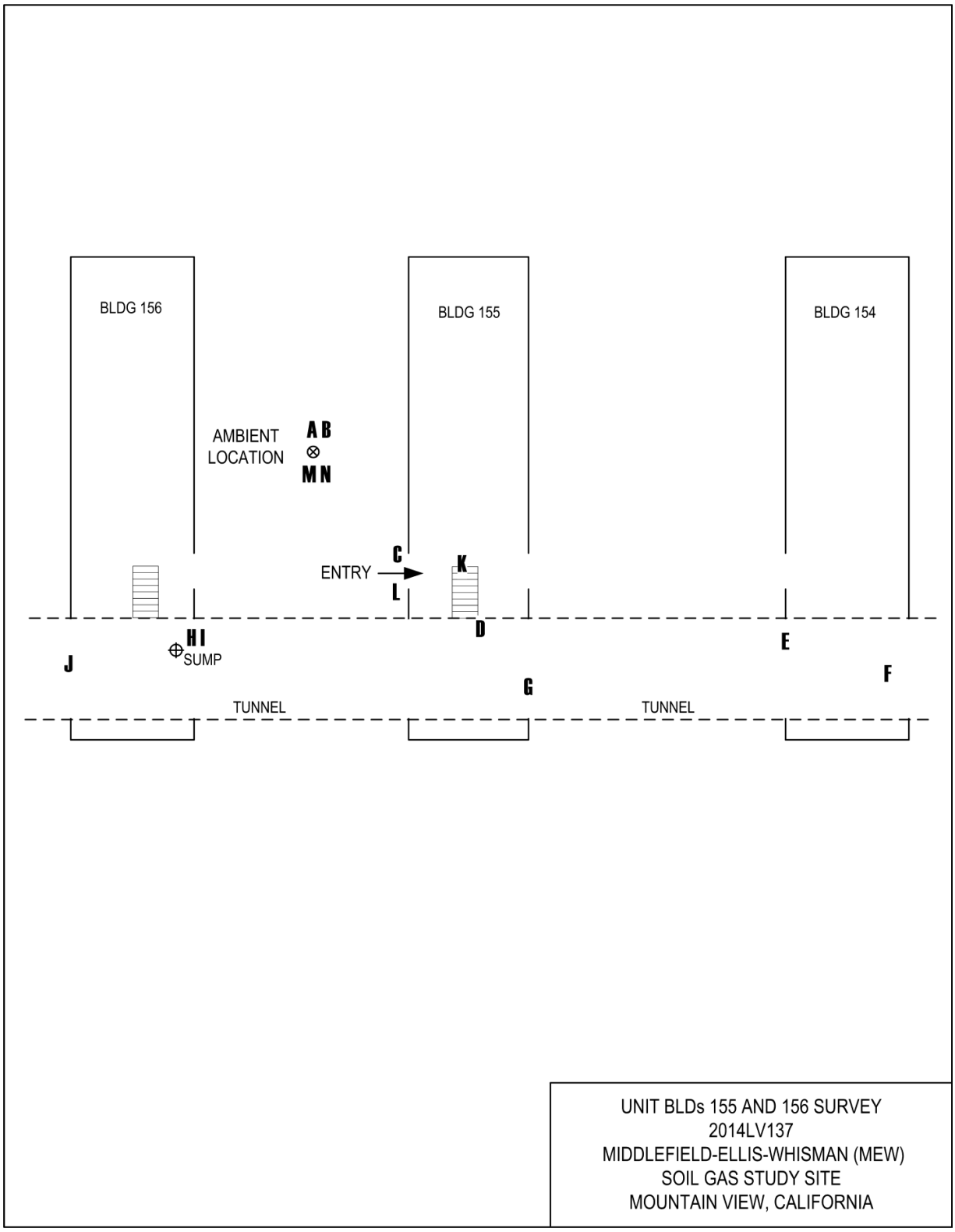

Figure 4a Unit BLDs 155 and 156 Survey Floor Plan

Figure 4b

TAGA File Event Summary
File: 2014LV137 Acquired on 28 April 2014 at 12:44:27
Title: Unit BLDs 155 and 156 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.7	122	Start of the pre-entry ambient
B	2.9	206	End of the pre-entry ambient
C	4.5	323	Entering building 155
D	5.8	413	Entering tunnel 155 toward tunnel 154
E	7.2	516	Tunnel 154 toward tunnel 153
F	8.6	617	Tunnel 154 toward tunnel 155
G	9.7	691	Entering tunnel 155 toward tunnel 156
H	11.0	787	Start of sump at tunnel 156
I	12.4	886	End of sump at tunnel 156
J	12.7	907	Returning from tunnel 156 toward tunnel 155
K	13.8	985	Ascending stairwell
L	14.2	1013	Exiting building 155
M	14.8	1060	Start of the post-exit ambient
N	16.5	1177	End of the post-exit ambient
O	17.2	1227	Start of 30 mL/min spike
P	18.4	1313	End of 30 mL/min spike

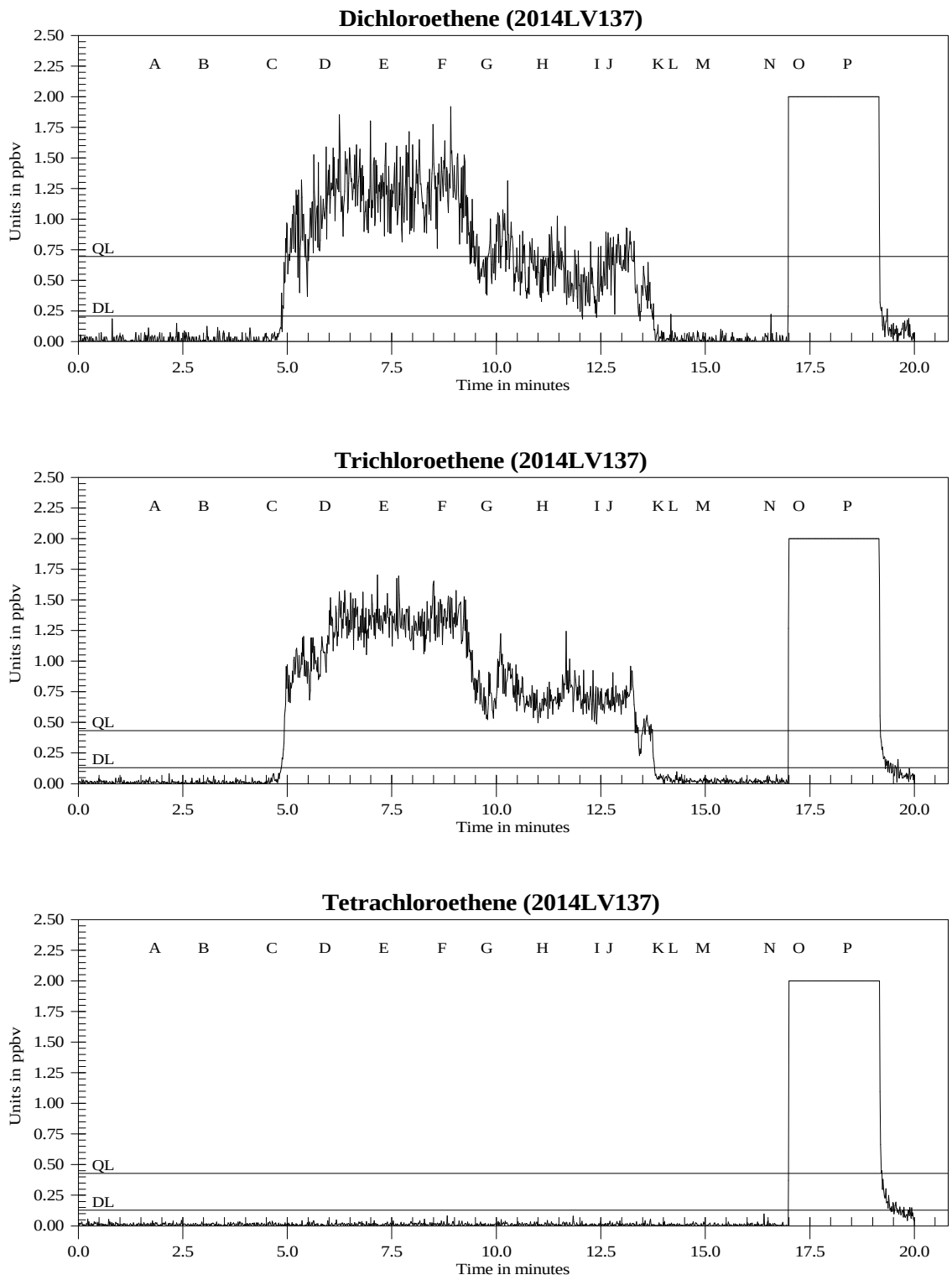

Figure 4c Unit BLDs 155 and 156 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 4d

TAGA Target Compound Summary for Unit BLDs 155 and 156
File: 2014LV137 Acquired on 28 April 2014 at 12:44:27

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
H - I	Sump at tunnel 156	0.53J	0.71	DL=0.13
M - N	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
O - P	30 mL/min spike	6.0	6.0	6.0

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

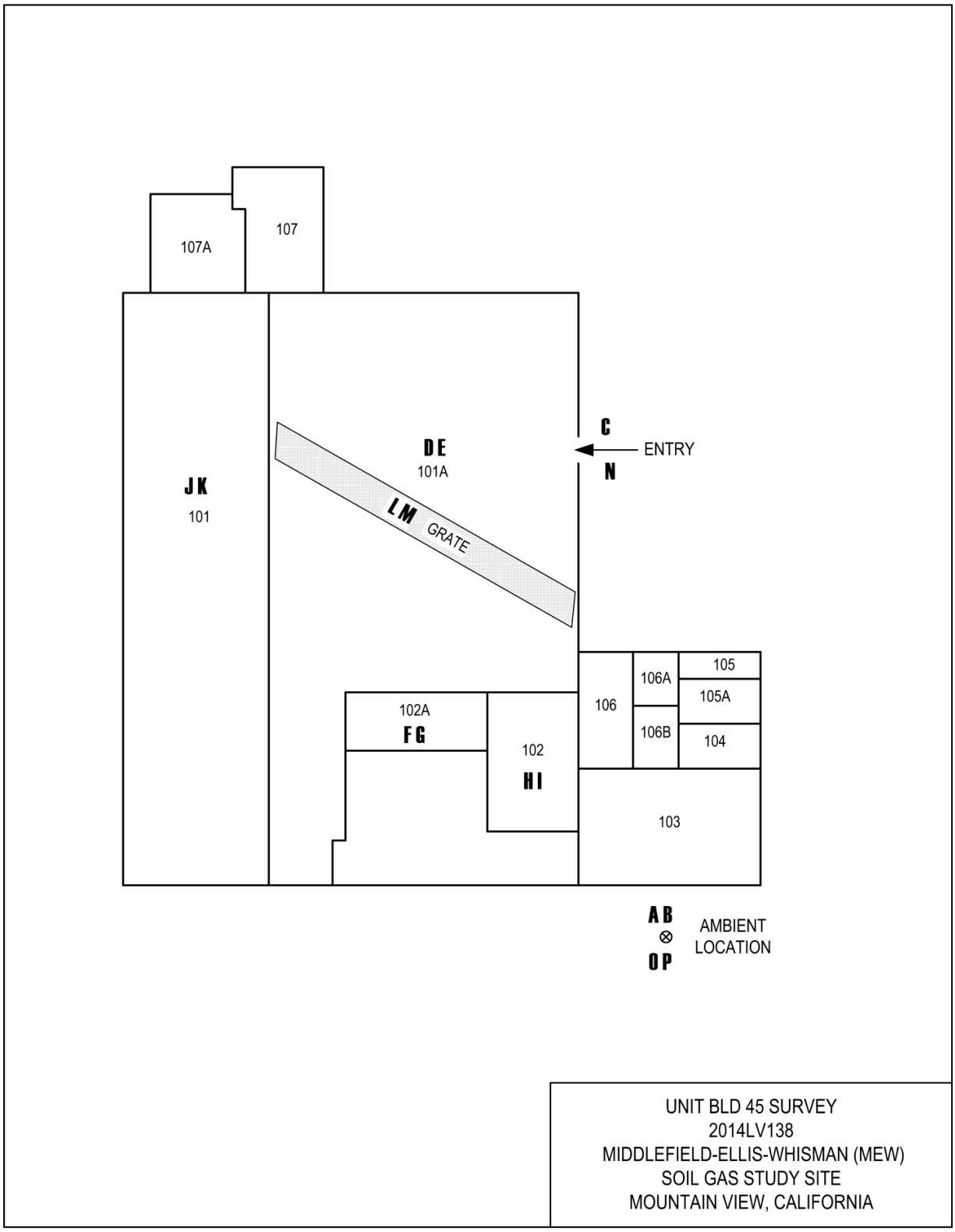

Figure 5a Unit BLD 45 Survey Floor Plan

Figure 5b

TAGA File Event Summary
File: 2014LV138 Acquired on 28 April 2014 at 13:37:23
Title: Unit BLD 45 Survey

Flag	Offset Time	Offset Sequence	Description
A	2.9	211	Start of the pre-entry ambient
B	3.9	281	End of the pre-entry ambient
C	5.2	374	Entering the unit
D	6.0	431	Start of room 101A
E	7.4	528	End of room 101A
F	7.9	562	Start of room 102A
G	11.4	813	End of room 102A
H	11.7	835	Start of room 102
I	12.7	906	End of room 102
J	13.7	981	Start of room 101
K	14.9	1061	End of room 101
L	16.0	1143	Start of the grated area
M	17.3	1233	End of the grated area
N	18.0	1289	Exiting the unit
O	18.9	1351	Start of the post-exit ambient
P	20.0	1432	End of the post-exit ambient
Q	21.3	1524	Start of 30 mL/min spike
R	22.5	1607	End of 30 mL/min spike

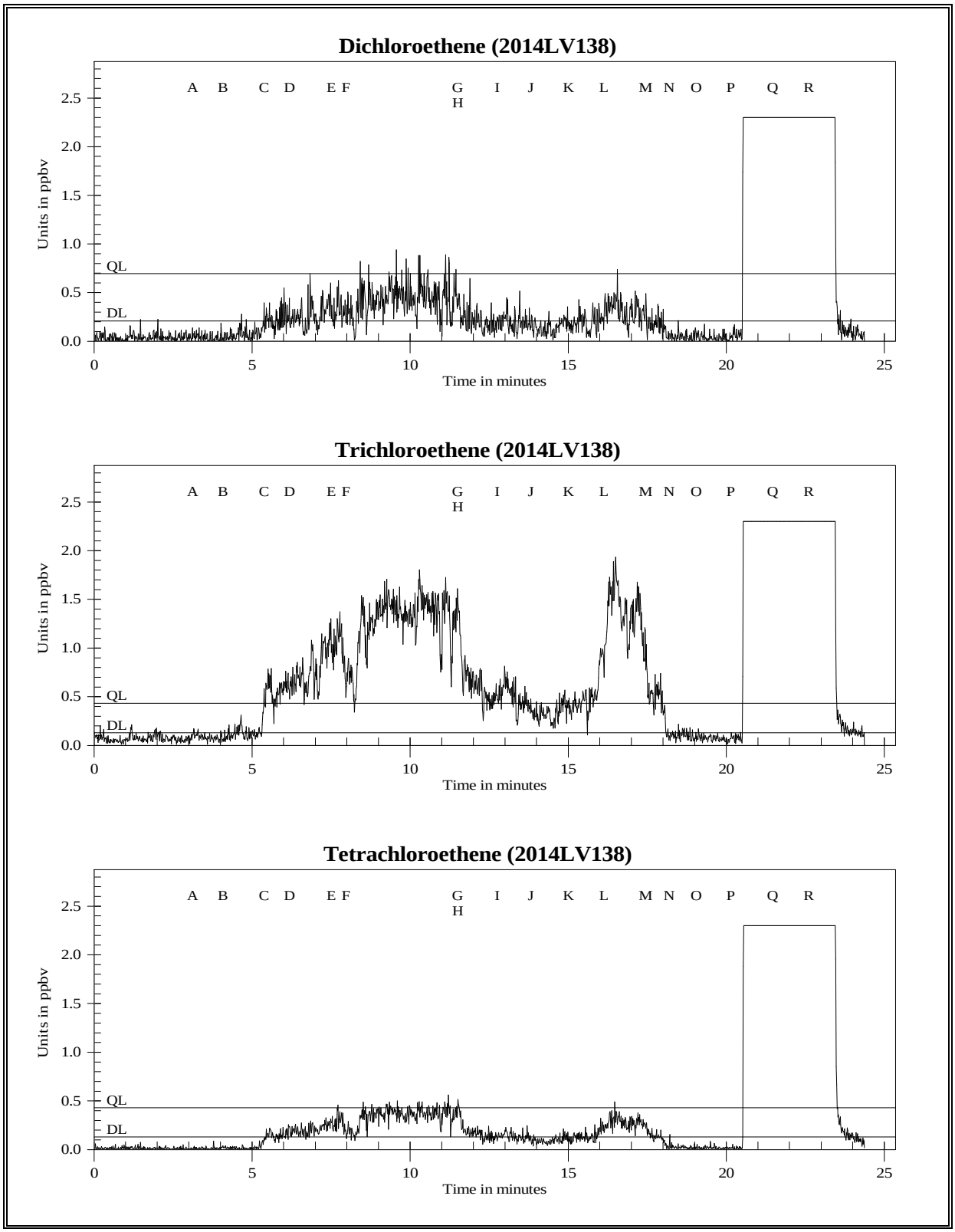

Figure 5c Unit BLD 45 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 5d

TAGA Target Compound Summary for Unit BLD 45
File: 2014LV138 Acquired on 28 April 2014 at 13:37:23

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
D - E	Room 101A	0.26J	0.73	0.20J
F - G	Room 102A	0.42J	1.3	0.34J
H - I	Room 102	DL=0.21	0.59	0.16J
J - K	Room 101	DL=0.21	0.33J	DL=0.13
L - M	Grated area	0.32J	1.3	0.28J
O - P	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
Q - R	30 mL/min spike	6.3	6.4	6.3

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

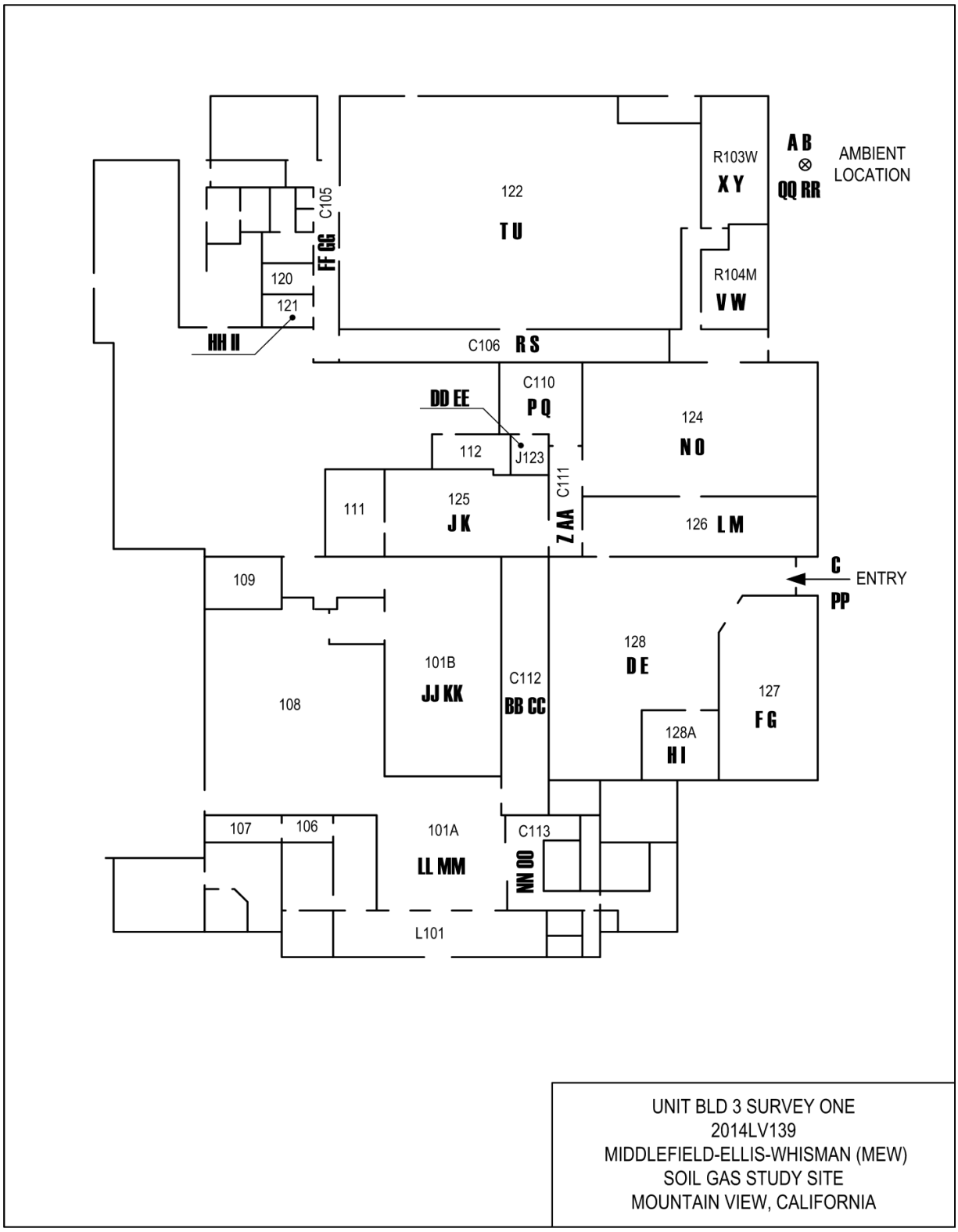

Figure 6a Unit BLD 3 Survey One Floor Plan

Figure 6b

TAGA File Event Summary
File: 2014LV139 Acquired on 28 April 2014 at 14:32:12
Title: Unit BLD 3 Survey One

Flag	Offset Time	Offset Sequence	Description
A	2.9	207	Start of the pre-entry ambient
B	4.0	283	End of the pre-entry ambient
C	6.7	480	Entering the unit
D	7.4	528	Start of room 128
E	8.4	598	End of room 128
F	9.7	692	Start of room 127
G	10.7	766	End of room 127
H	11.6	830	Start of room 128A
I	12.7	904	End of room 128A
J	14.1	1006	Start of room 125
K	15.2	1085	End of room 125
L	16.5	1177	Start of room 126
M	17.6	1256	End of room 126
N	18.6	1327	Start of room 124
O	19.6	1403	End of room 124
P	21.3	1521	Start of room C110
Q	22.3	1595	End of room C110
R	23.0	1646	Start of room C106
S	24.2	1727	End of room C106
T	25.5	1820	Start of room 122
U	26.5	1892	End of room 122
V	28.4	2028	Start of room R104M
W	29.4	2102	End of room R104M
X	30.5	2177	Start of room R103W
Y	31.5	2249	End of room R103W
Z	33.4	2387	Start of room C111
AA	34.4	2459	End of room C111
BB	36.8	2628	Start of room C112
CC	38.9	2775	End of room C112
DD	39.9	2846	Start of room J123

Figure 6b continued

TAGA File Event Summary
File: 2014LV139 Acquired on 28 April 2014 at 14:32:12
Title: Unit BLD 3 Survey One

Flag	Offset Time	Offset Sequence	Description
EE	41.0	2926	End of room J123
FF	42.5	3034	Start of room C105
GG	43.5	3106	End of room C105
HH	44.2	3155	Start of room 121
II	45.2	3226	End of room 121
JJ	47.5	3392	Start of room 101B
KK	48.6	3471	End of room 101B
LL	50.1	3580	Start of room 101A
MM	51.5	3674	End of room 101A
NN	51.9	3709	Start of room C113
OO	53.0	3785	End of room C113
PP	53.8	3844	Exiting the unit
QQ	54.5	3890	Start of the post-exit ambient
RR	55.6	3969	End of the post-exit ambient
SS	56.3	4017	Start of 30 mL/min spike
TT	57.2	4087	End of 30 mL/min spike

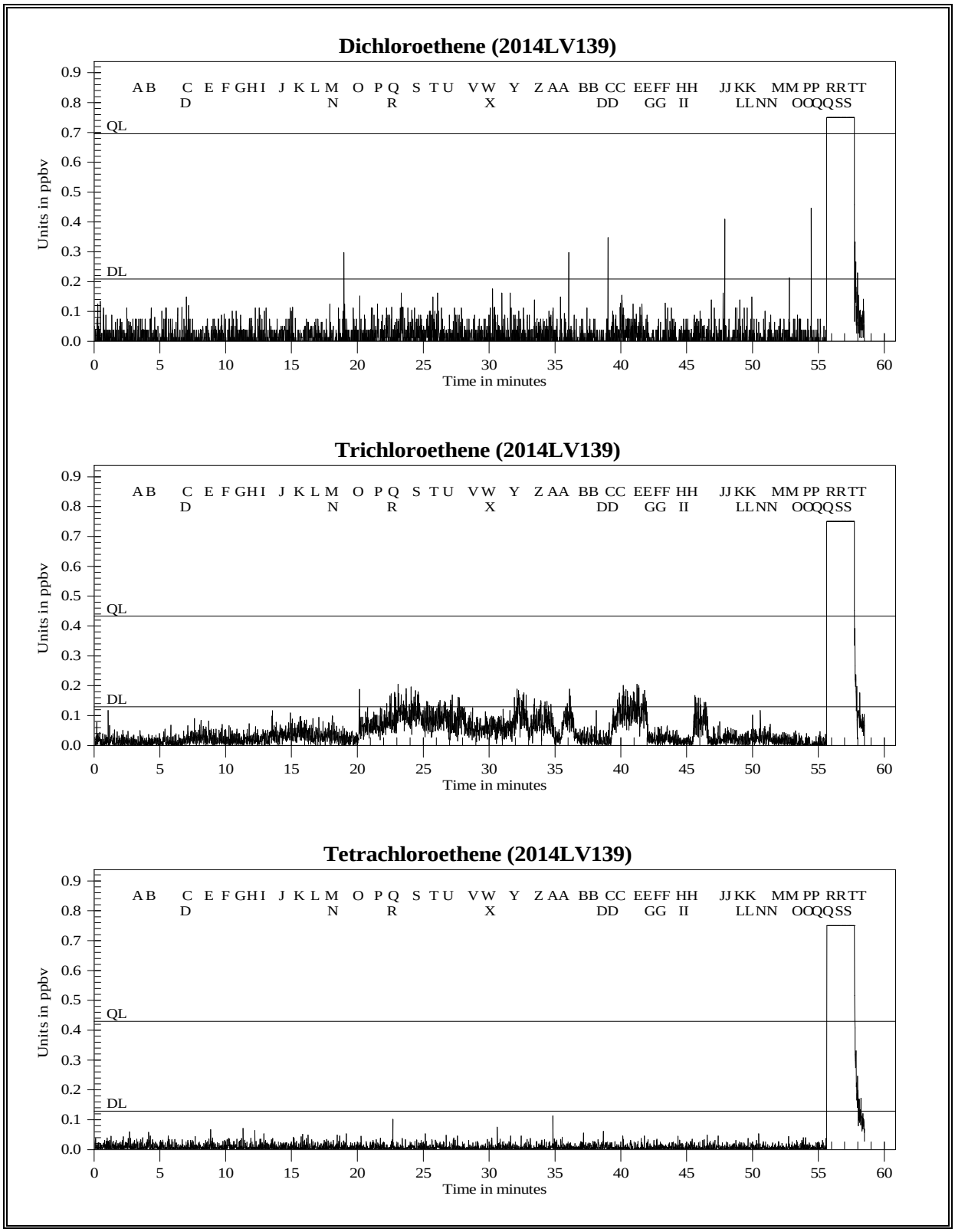

Figure 6c Unit BLD 3 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 6d

TAGA Target Compound Summary for Unit BLD 3 Survey One
File: 2014LV139 Acquired on 28 April 2014 at 14:32:12

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
D - E	Room 128	DL=0.21	DL=0.13	DL=0.13
F - G	Room 127	DL=0.21	DL=0.13	DL=0.13
H - I	Room 128A	DL=0.21	DL=0.13	DL=0.13
J - K	Room 125	DL=0.21	DL=0.13	DL=0.13
L - M	Room 126	DL=0.21	DL=0.13	DL=0.13
N - O	Room 124	DL=0.21	DL=0.13	DL=0.13
P - Q	Room C110	DL=0.21	DL=0.13	DL=0.13
R - S	Room C106	DL=0.21	DL=0.13	DL=0.13
T - U	Room 122	DL=0.21	DL=0.13	DL=0.13
V - W	Room R104M	DL=0.21	DL=0.13	DL=0.13
X - Y	Room R103W	DL=0.21	DL=0.13	DL=0.13
Z - AA	Room C111	DL=0.21	DL=0.13	DL=0.13
BB - CC	Room C112	DL=0.21	DL=0.13	DL=0.13
DD - EE	Room J123	DL=0.21	DL=0.13	DL=0.13
FF - GG	Room C105	DL=0.21	DL=0.13	DL=0.13
HH - II	Room 121	DL=0.21	DL=0.13	DL=0.13
JJ - KK	Room 101B	DL=0.21	DL=0.13	DL=0.13
LL - MM	Room 101A	DL=0.21	DL=0.13	DL=0.13
NN - OO	Room C113	DL=0.21	DL=0.13	DL=0.13
QQ - RR	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
SS - TT	30 mL/min spike	6.7	6.5	6.0

Concentrations are given in parts per billion by volume

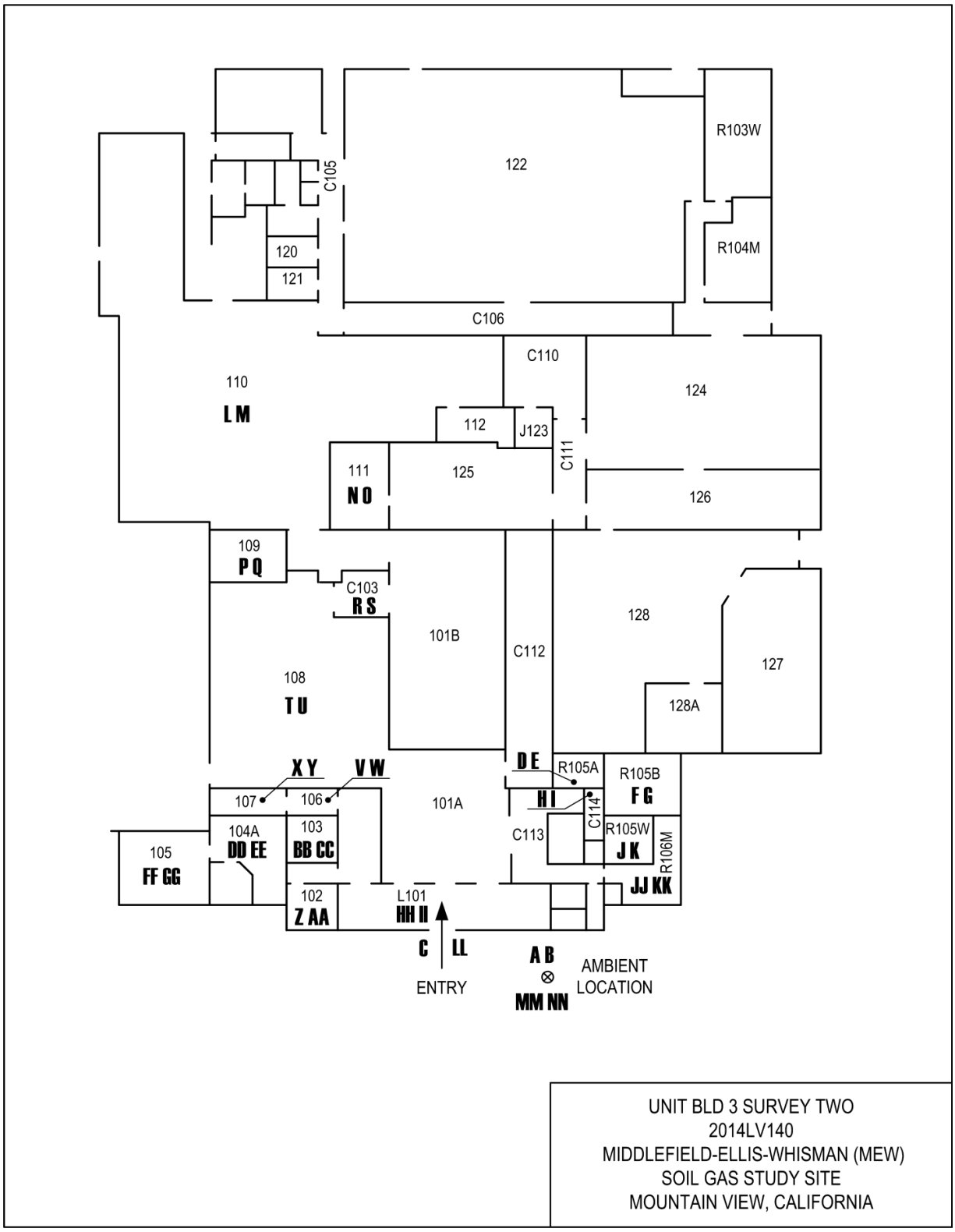

Figure 7a Unit BLD 3 Survey Two Floor Plan

Figure 7b

TAGA File Event Summary
File: 2014LV140 Acquired on 28 April 2014 at 15:42:49
Title: Unit BLD 3 Survey Two

Flag	Offset Time	Offset Sequence	Description
A	2.3	164	Start of the pre-entry ambient
B	4.0	284	End of the pre-entry ambient
C	5.5	394	Entering the unit
D	7.2	516	Start of room R105A
E	8.4	603	End of room R105A
F	9.0	640	Start of room R105B
G	10.1	721	End of room R105B
H	10.6	754	Start of room C114
I	11.5	825	End of room C114
J	12.4	888	Start of room R105W
K	13.4	961	End of room R105W
L	16.9	1207	Start of room 110
M	17.9	1280	End of room 110
N	18.5	1325	Start of room 111
O	19.6	1398	End of room 111
P	20.8	1486	Start of room 109
Q	21.8	1557	End of room 109
R	22.5	1610	Start of room C103
S	23.6	1689	End of room C103
T	24.3	1735	Start of room 108
U	25.7	1834	End of room 108
V	26.8	1913	Start of room 106
W	27.8	1984	End of room 106
X	28.2	2016	Start of room 107
Y	29.2	2085	End of room 107
Z	30.1	2148	Start of room 102
AA	31.1	2221	End of room 102
BB	31.6	2259	Start of room 103
CC	32.6	2330	End of room 103
DD	33.3	2376	Start of room 104A
EE	34.3	2448	End of room 104A

Figure 7b continued

TAGA File Event Summary
File: 2014LV140 Acquired on 28 April 2014 at 15:42:49
Title: Unit BLD 3 Survey Two

Flag	Offset Time	Offset Sequence	Description
FF	34.8	2487	Start of room 105
GG	35.9	2561	End of room 105
HH	36.7	2623	Start of room L101
II	37.8	2699	End of room L101
JJ	38.8	2773	Start of room R106M
KK	40.1	2861	End of room R106M
LL	41.9	2991	Exiting the unit
MM	42.8	3054	Start of the post-exit ambient
NN	43.8	3127	End of the post-exit ambient
OO	44.5	3177	Start of 30 mL/min spike
PP	45.7	3264	End of 30 mL/min spike

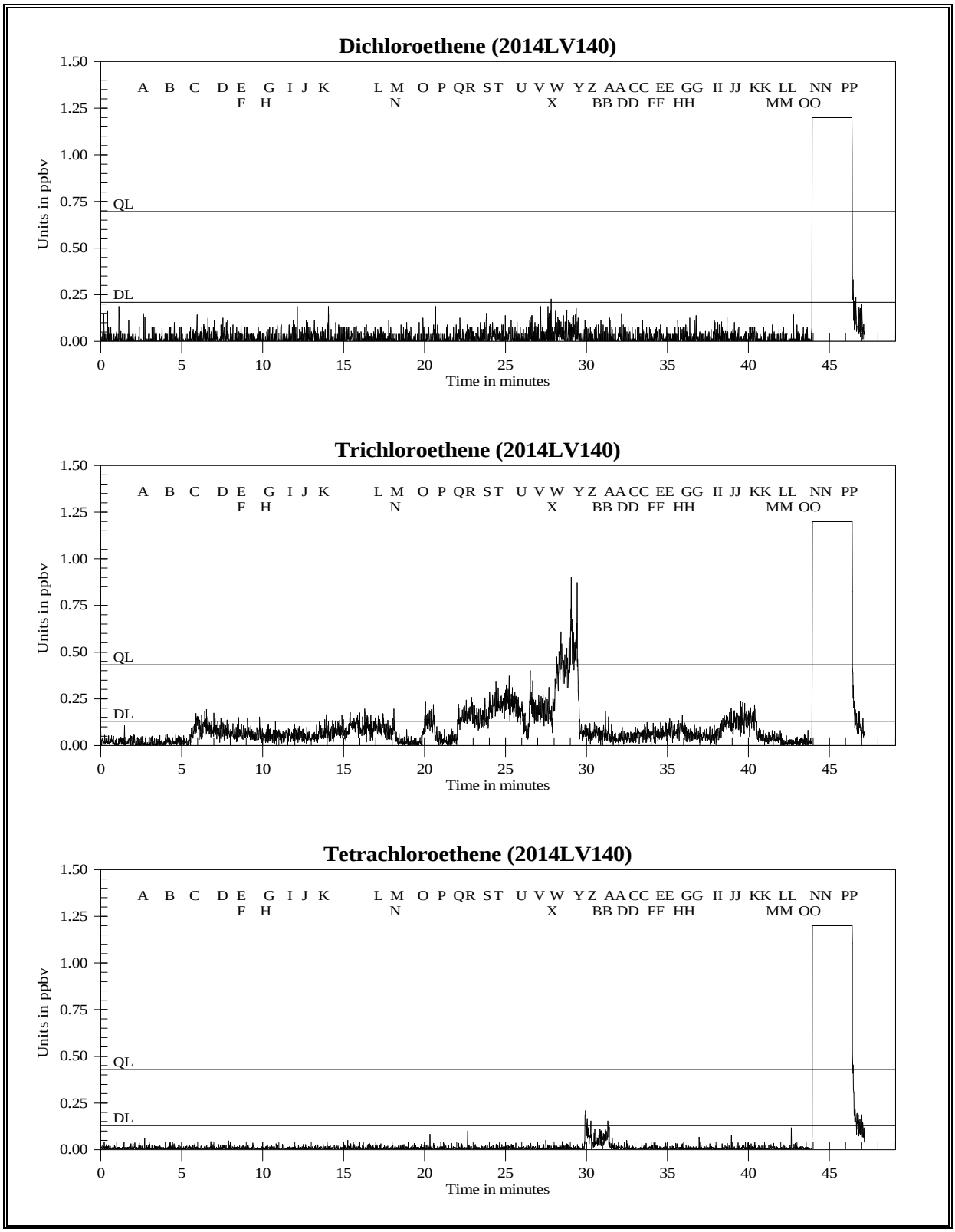

Figure 7c Unit BLD 3 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 7d

TAGA Target Compound Summary for Unit BLD 3 Survey Two
File: 2014LV140 Acquired on 28 April 2014 at 15:42:49

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
D - E	Room R105A	DL=0.21	DL=0.13	DL=0.13
F - G	Room R105B	DL=0.21	DL=0.13	DL=0.13
H - I	Room C114	DL=0.21	DL=0.13	DL=0.13
J - K	Room R105W	DL=0.21	DL=0.13	DL=0.13
L - M	Room 110	DL=0.21	DL=0.13	DL=0.13
N - O	Room 111	DL=0.21	DL=0.13	DL=0.13
P - Q	Room 109	DL=0.21	DL=0.13	DL=0.13
R - S	Room C103	DL=0.21	0.16J	DL=0.13
T - U	Room 108	DL=0.21	0.23J	DL=0.13
V - W	Room 106	DL=0.21	0.19J	DL=0.13
X - Y	Room 107	DL=0.21	0.46	DL=0.13
Z - AA	Room 102	DL=0.21	DL=0.13	DL=0.13
BB - CC	Room 103	DL=0.21	DL=0.13	DL=0.13
DD - EE	Room 104A	DL=0.21	DL=0.13	DL=0.13
FF - GG	Room 105	DL=0.21	DL=0.13	DL=0.13
HH - II	Room L101	DL=0.21	DL=0.13	DL=0.13
JJ - KK	Room R106M	DL=0.21	0.13J	DL=0.13
MM - NN	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
OO - PP	30 mL/min spike	6.5	6.6	6.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

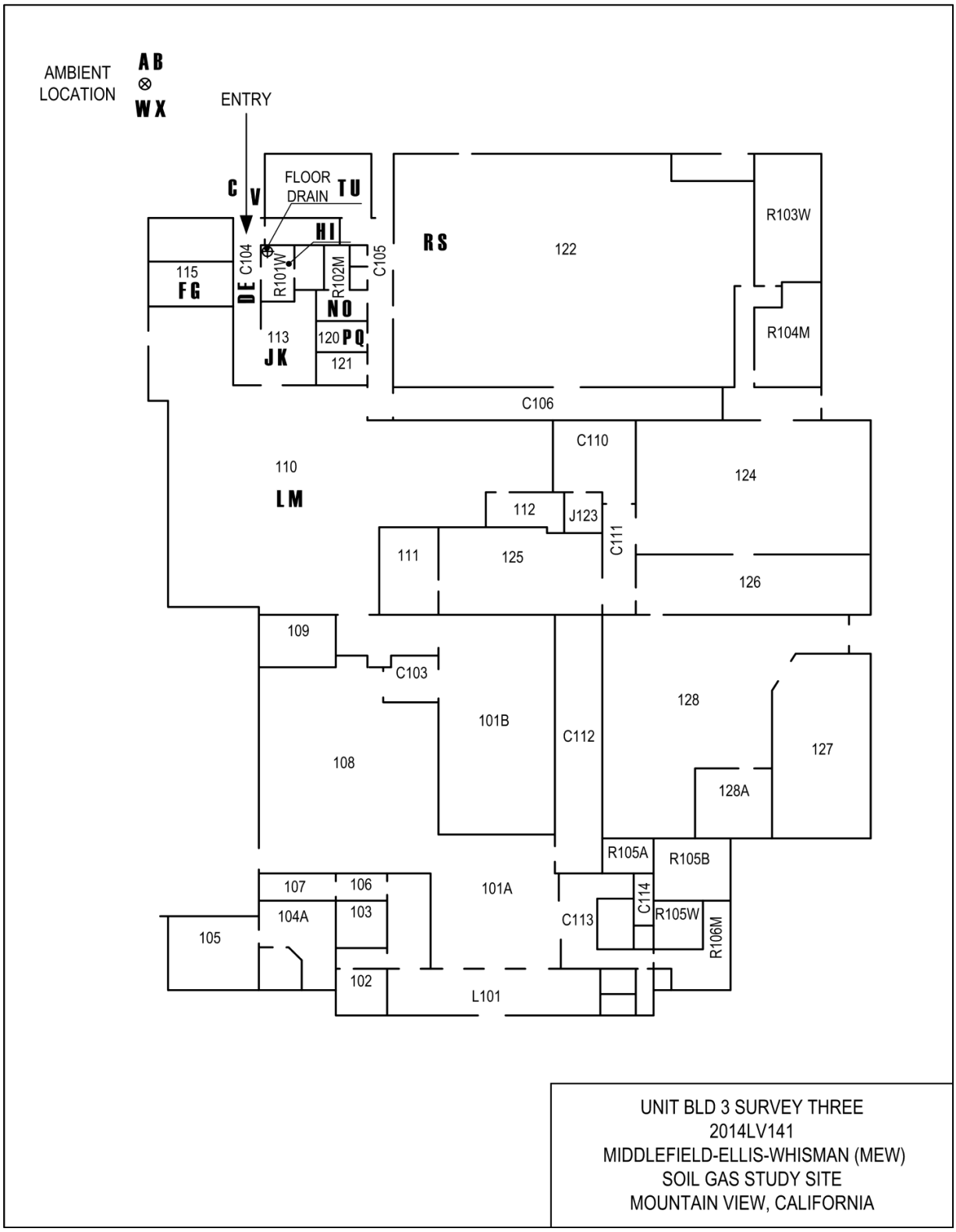

Figure 8a Unit BLD 3 Survey Three Floor Plan

Figure 8b

TAGA File Event Summary
File: 2014LV141 Acquired on 28 April 2014 at 16:43:36
Title: Unit BLD 3 Survey Three

Flag	Offset Time	Offset Sequence	Description
A	2.4	171	Start of the pre-entry ambient
B	3.4	246	End of the pre-entry ambient
C	5.1	365	Entering the unit
D	5.7	405	Start of room C104
E	6.7	477	End of room C104
F	7.2	512	Start of room 115
G	8.2	585	End of room 115
H	8.9	638	Start of room R101W
I	9.9	710	End of room R101W
J	11.2	798	Start of room 113
K	12.2	870	End of room 113
L	13.6	973	Start of room 110
M	14.7	1052	End of room 110
N	15.6	1112	Start of room R102M
O	16.7	1192	End of room R102M
P	17.3	1238	Start of room 120
Q	18.3	1309	End of room 120
R	21.5	1534	Start of room 122
S	22.5	1607	End of room 122
T	24.2	1726	Start of floor drain in room R101W
U	25.2	1801	End of floor drain in room R101W
V	26.2	1872	Exiting the unit
W	26.8	1916	Start of the post-exit ambient
X	28.2	2015	End of the post-exit ambient
Y	29.0	2072	Start of 30 mL/min spike
Z	30.8	2202	End of 30 mL/min spike

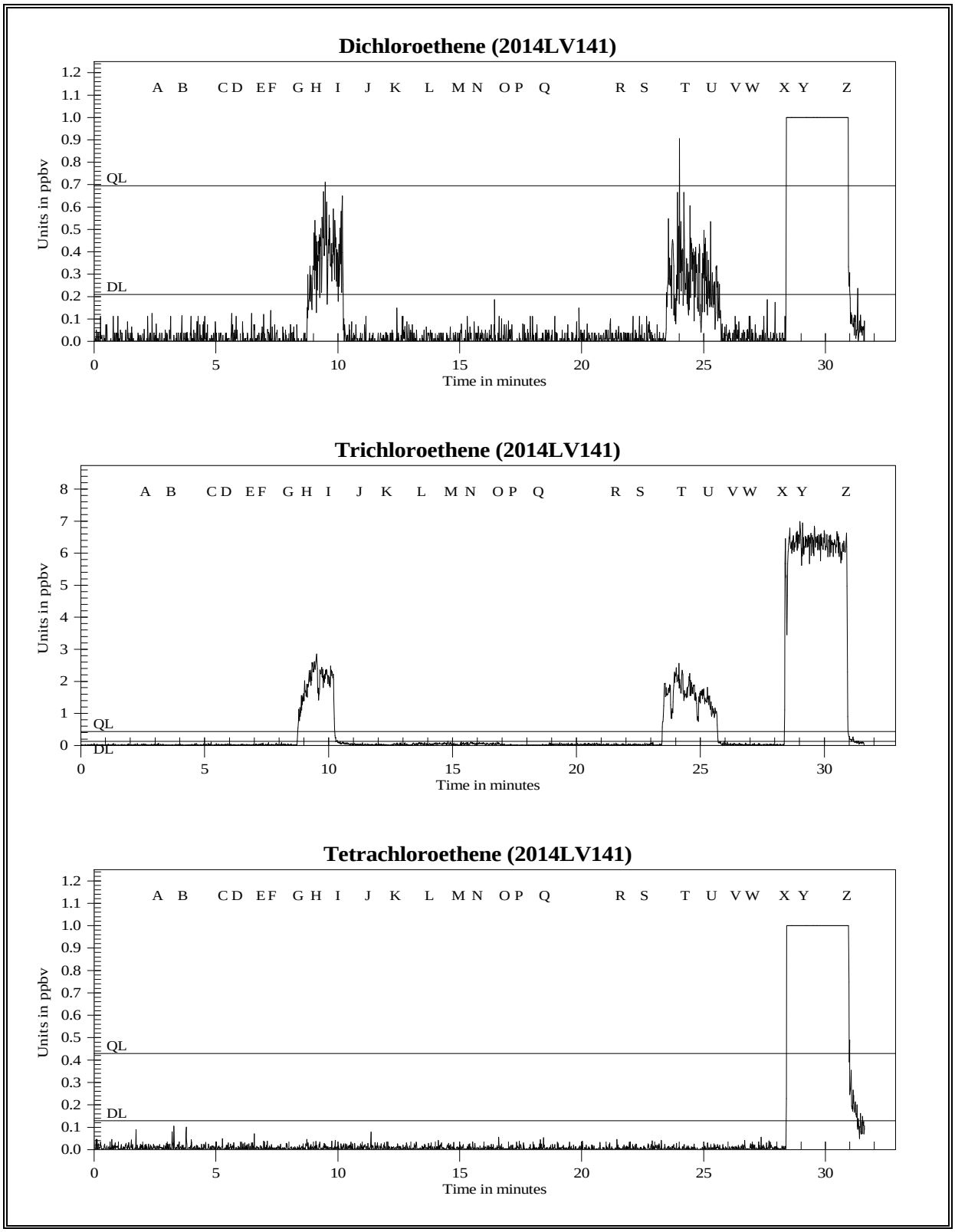

Figure 8c Unit BLD 3 Survey Three for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 8d

TAGA Target Compound Summary for the Unit BLD 3 Survey Three
File: 2014LV141 Acquired on 28 April 2014 at 16:43:36

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.21	0.13	0.13
	Quantitation Limits - QL:	0.70	0.43	0.43
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.21	DL=0.13	DL=0.13
D - E	Room C104	DL=0.21	DL=0.13	DL=0.13
F - G	Room 115	DL=0.21	DL=0.13	DL=0.13
H - I	Room R101W	0.39J	2.1	DL=0.13
J - K	Room 113	DL=0.21	DL=0.13	DL=0.13
L - M	Room 110	DL=0.21	DL=0.13	DL=0.13
N - O	Room R102M	DL=0.21	DL=0.13	DL=0.13
P - Q	Room 120	DL=0.21	DL=0.13	DL=0.13
R - S	Room 122	DL=0.21	DL=0.13	DL=0.13
T - U	Floor drain in room R101W	0.29J	1.6	DL=0.13
W - X	Post-exit ambient	DL=0.21	DL=0.13	DL=0.13
Y - Z	30 mL/min spike	6.2	6.3	5.8

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

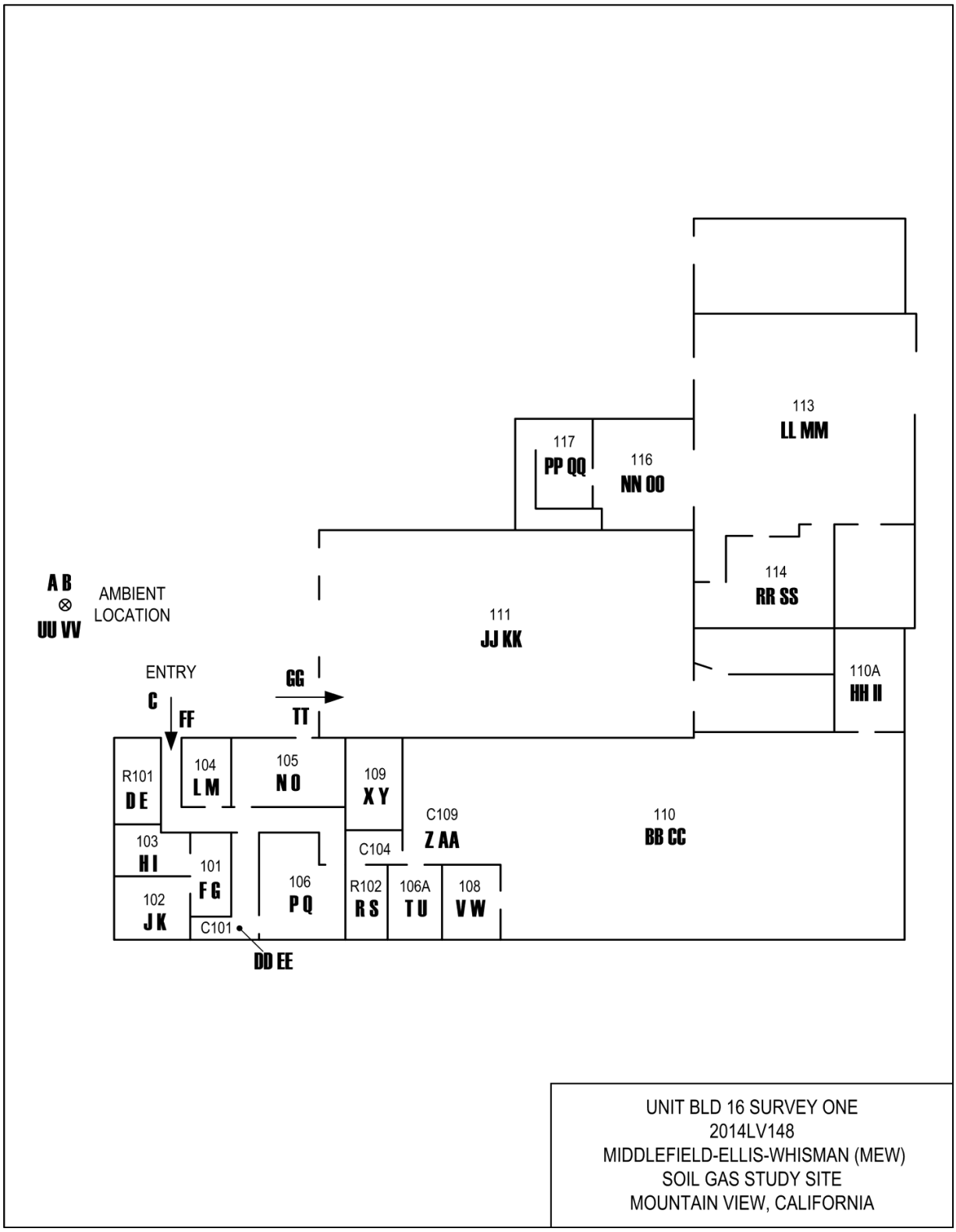

Figure 9a Unit BLD 16 Survey One Floor Plan

Figure 9b

TAGA File Event Summary
File: 2014LV148 Acquired on 29 April 2014 at 09:40:37
Title: Unit BLD 16 Survey One

Flag	Offset Time	Offset Sequence	Description
A	2.0	141	Start of the pre-entry ambient
B	3.2	230	End of the pre-entry ambient
C	6.5	468	Entering the unit
D	7.0	500	Start of room R101
E	8.0	570	End of room R101
F	9.2	655	Start of room 101
G	10.2	729	End of room 101
H	10.7	767	Start of room 103
I	11.7	838	End of room 103
J	12.2	871	Start of room 102
K	13.2	943	End of room 102
L	14.0	998	Start of room 104
M	15.3	1091	End of room 104
N	16.3	1168	Start of room 105
O	17.4	1242	End of room 105
P	18.3	1305	Start of room 106
Q	19.7	1406	End of room 106
R	20.7	1476	Start of room R102
S	21.7	1550	End of room R102
T	22.9	1637	Start of room 106A
U	24.0	1715	End of room 106A
V	24.9	1777	Start of room 108
W	25.9	1850	End of room 108
X	26.7	1910	Start of room 109
Y	27.8	1985	End of room 109
Z	28.5	2032	Start of room C109
AA	29.6	2112	End of room C109
BB	30.6	2183	Start of room 110
CC	31.6	2255	End of room 110
DD	33.8	2416	Start of room C101
EE	34.8	2488	End of room C101

Figure 9b continued

TAGA File Event Summary
File: 2014LV148 Acquired on 29 April 2014 at 09:40:37
Title: Unit BLD 16 Survey One

Flag	Offset Time	Offset Sequence	Description
FF	35.4	2527	Exiting the unit
GG	36.2	2583	Entering the unit
HH	37.3	2665	Start of room 110A
II	38.3	2736	End of room 110A
JJ	39.5	2822	Start of room 111
KK	40.5	2894	End of room 111
LL	43.1	3079	Start of room 113
MM	44.2	3154	End of room 113
NN	45.0	3212	Start of room 116
OO	46.0	3287	End of room 116
PP	46.5	3323	Start of room 117
QQ	47.9	3417	End of room 117
RR	49.2	3516	Start of room 114
SS	50.2	3586	End of room 114
TT	51.4	3671	Exiting the unit
UU	51.9	3709	Start of the post-exit ambient
VV	53.4	3812	End of the post-exit ambient
WW	54.1	3862	Start of 30 mL/min spike
XX	56.0	3997	End of 30 mL/min spike

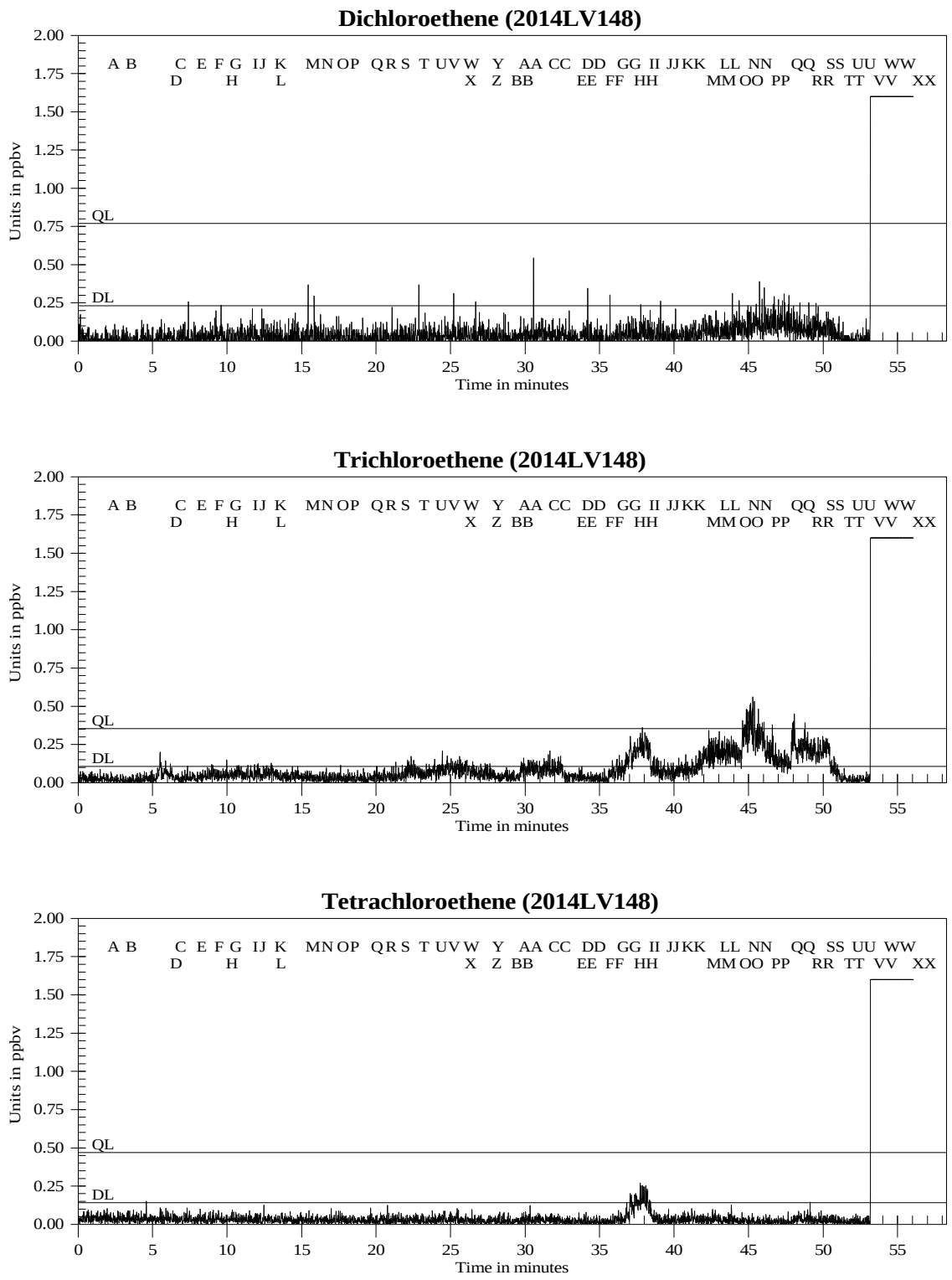

Figure 9c Unit BLD 16 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 9d

TAGA Target Compound Summary for Unit BLD 16 Survey One
File: 2014LV148 Acquired on 29 April 2014 at 09:40:37

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.23	0.11	0.14
	Quantitation Limits - QL:	0.77	0.35	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.23	DL=0.11	DL=0.14
D - E	Room R101	DL=0.23	DL=0.11	DL=0.14
F - G	Room 101	DL=0.23	DL=0.11	DL=0.14
H - I	Room 103	DL=0.23	DL=0.11	DL=0.14
J - K	Room 102	DL=0.23	DL=0.11	DL=0.14
L - M	Room 104	DL=0.23	DL=0.11	DL=0.14
N - O	Room 105	DL=0.23	DL=0.11	DL=0.14
P - Q	Room 106	DL=0.23	DL=0.11	DL=0.14
R - S	Room R102	DL=0.23	DL=0.11	DL=0.14
T - U	Room 106A	DL=0.23	DL=0.11	DL=0.14
V - W	Room 108	DL=0.23	DL=0.11	DL=0.14
X - Y	Room 109	DL=0.23	DL=0.11	DL=0.14
Z - AA	Room C109	DL=0.23	DL=0.11	DL=0.14
BB - CC	Room 110	DL=0.23	DL=0.11	DL=0.14
DD - EE	Room C101	DL=0.23	DL=0.11	DL=0.14
HH - II	Room 110A	DL=0.23	0.23J	0.16J
JJ - KK	Room 111	DL=0.23	DL=0.11	DL=0.14
LL - MM	Room 113	DL=0.23	0.20J	DL=0.14
NN - OO	Room 116	DL=0.23	0.33J	DL=0.14
PP - QQ	Room 117	DL=0.23	0.14J	DL=0.14
RR - SS	Room 114	DL=0.23	0.20J	DL=0.14
UU - VV	Post-exit ambient	0.84	0.88	0.85
WW - XX	30 mL/min spike	6.0	7.0	7.3

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

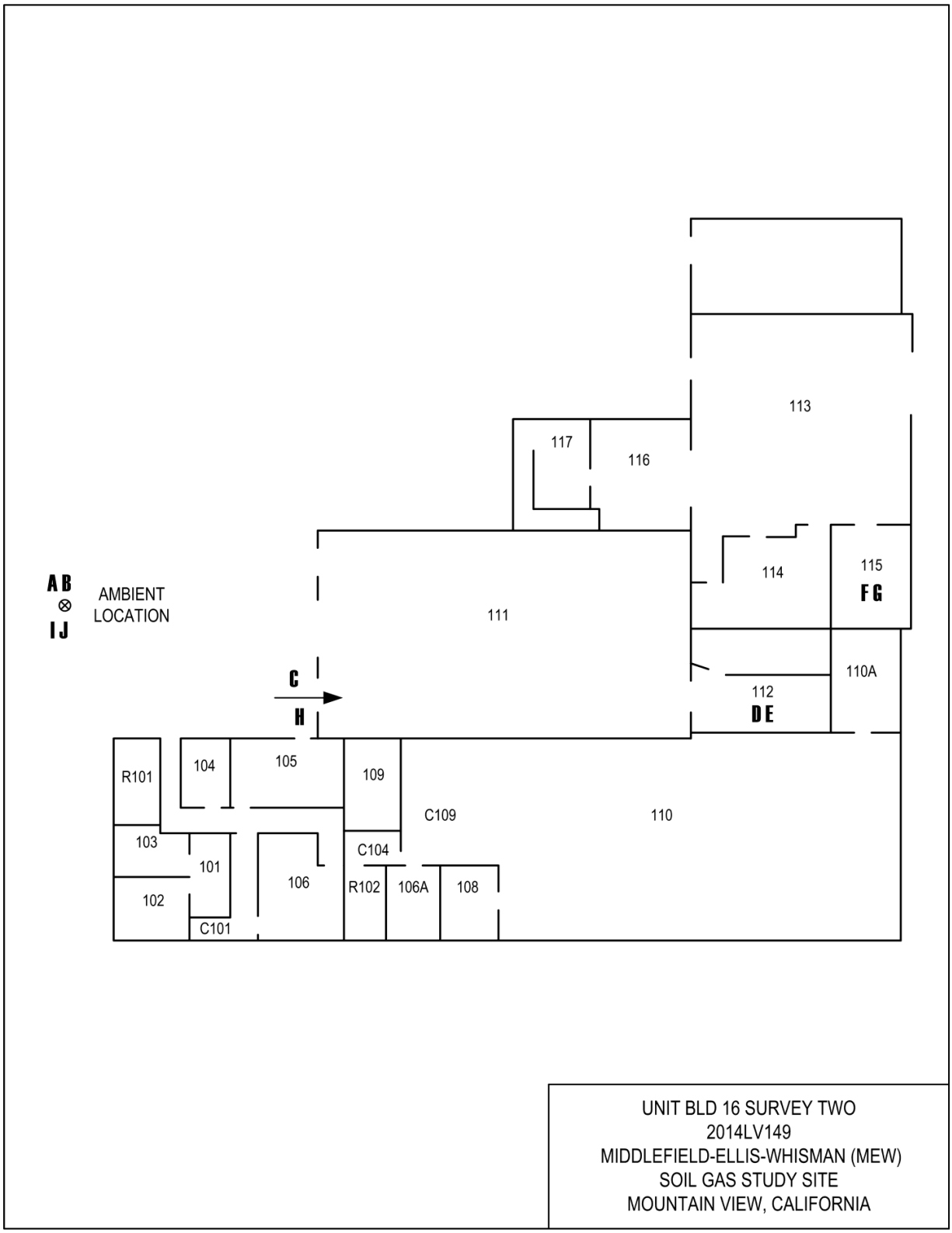

Figure 10a Unit BLD 16 Survey Two Floor Plan

Figure 10b

TAGA File Event Summary
File: 2014LV149 Acquired on 29 April 2014 at 10:39:12
Title: Unit BLD 16 Survey Two

Flag	Offset Time	Offset Sequence	Description
A	2.3	165	Start of the pre-entry ambient
B	3.4	240	End of the pre-entry ambient
C	6.2	441	Entering the unit
D	7.0	504	Start of room 112
E	8.1	577	End of room 112
F	10.2	729	Start of room 115
G	11.2	800	End of room 115
H	12.7	906	Exiting the unit
I	13.5	966	Start of the post-exit ambient
J	15.3	1092	End of the post-exit ambient
K	16.2	1160	Start of 30 mL/min spike
L	17.6	1260	End of 30 mL/min spike

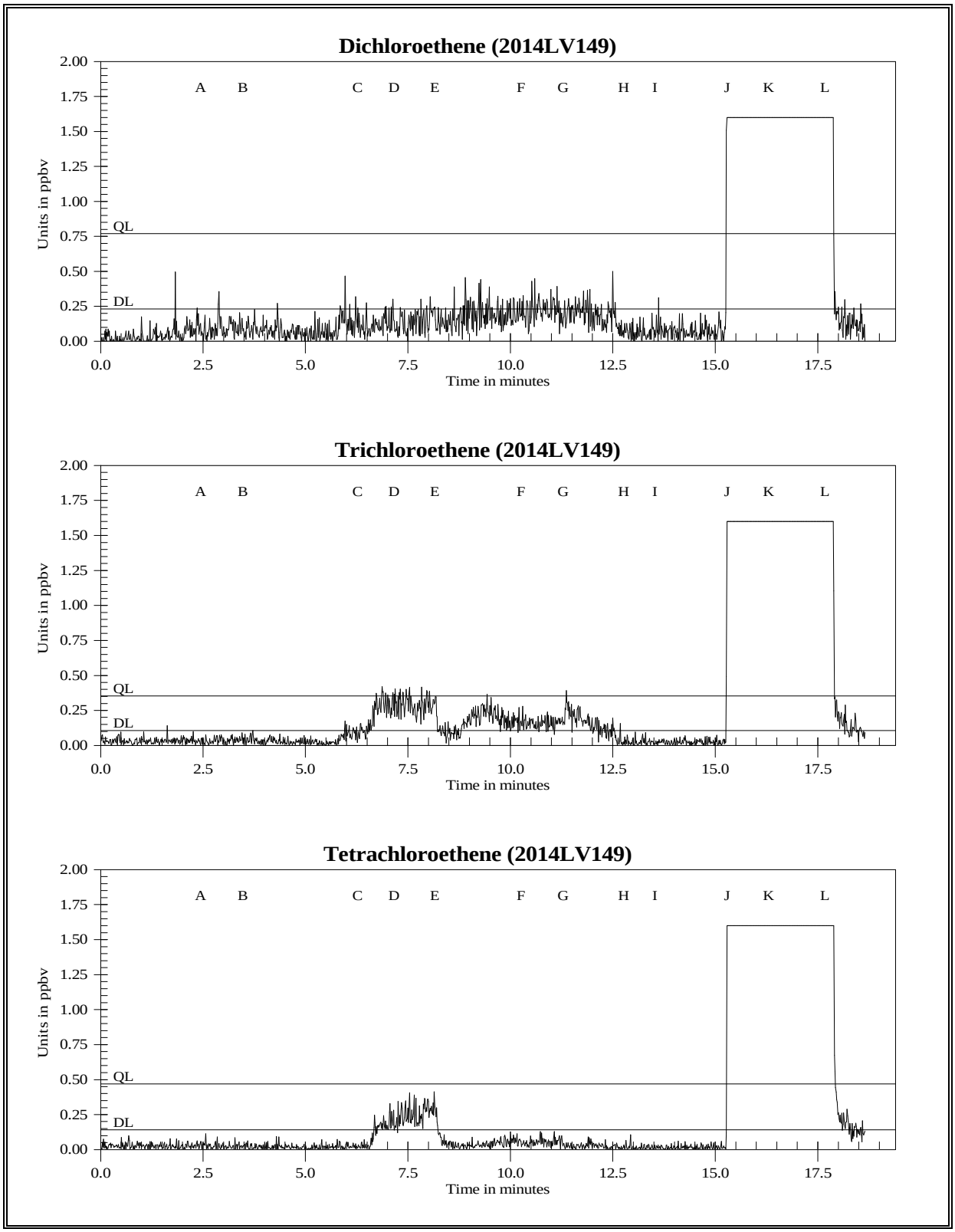

Figure 10c Unit BLD 16 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 10d

TAGA Target Compound Summary for Unit BLD 16 Survey Two
File: 2014LV149 Acquired on 29 April 2014 at 10:39:12

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.23	0.11	0.14
	Quantitation Limits - QL:	0.77	0.35	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.23	DL=0.11	DL=0.14
D - E	Room 112	DL=0.23	0.29J	0.25J
F - G	Room 115	DL=0.23	0.16J	DL=0.14
I - J	Post-exit ambient	DL=0.23	DL=0.11	DL=0.14
K - L	30 mL/min spike	6.6	7.2	7.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

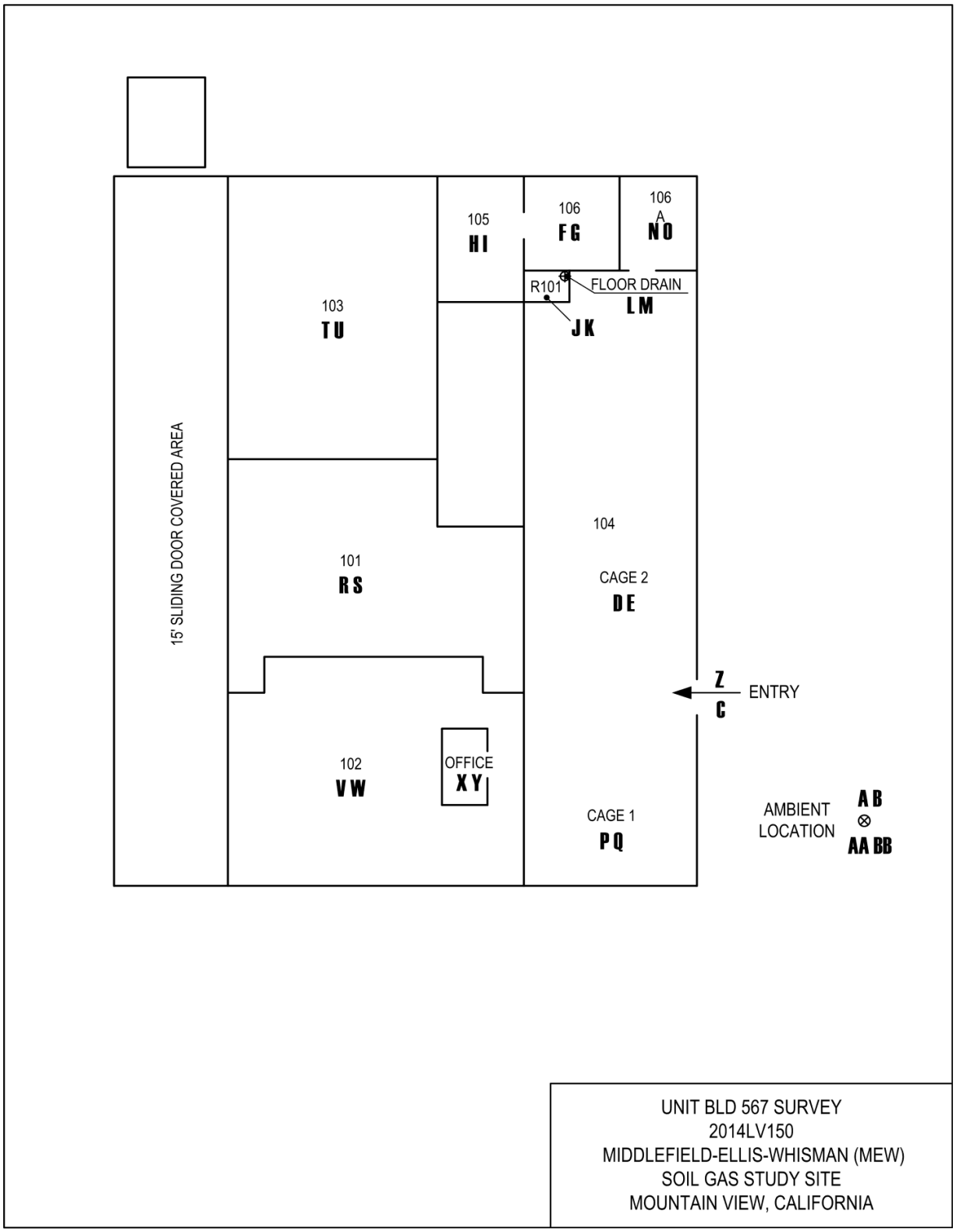

Figure 11a Unit BLD 567 Survey Floor Plan

Figure 11b

TAGA File Event Summary
File: 2014LV150 Acquired on 29 April 2014 at 11:16:38
Title: Unit BLD 567 Survey

Flag	Offset Time	Offset Sequence	Description
A	0.7	52	Start of the pre-entry ambient
B	2.3	167	End of the pre-entry ambient
C	3.6	258	Entering the unit
D	4.1	292	Start of cage two in room 104
E	4.6	329	End of cage two in room 104
F	5.6	402	Start of room 106
G	6.2	442	End of room 106
H	7.2	515	Start of room 105
I	7.5	537	End of room 105
J	8.5	610	Start of room R101
K	9.0	640	End of room R101
L	9.9	711	Start of the floor drain in room R101
M	10.1	724	End of the floor drain in room R101
N	11.2	803	Start of room 106A
O	11.9	848	End of room 106A
P	12.9	919	Start of cage one in room 104
Q	14.0	1000	End of cage one in room 104
R	15.0	1073	Start of room 101
S	16.1	1151	End of room 101
T	17.1	1223	Start of room 103
U	17.7	1264	End of room 103
V	18.7	1336	Start of room 102
W	19.5	1393	End of room 102
X	20.5	1465	Start of the office
Y	21.2	1512	End of the office
Z	22.2	1583	Exiting the unit
AA	23.0	1642	Start of the post-exit ambient
BB	23.8	1700	End of the post-exit ambient
CC	26.9	1922	Start of 30 mL/min spike
DD	28.4	2025	End of 30 mL/min spike

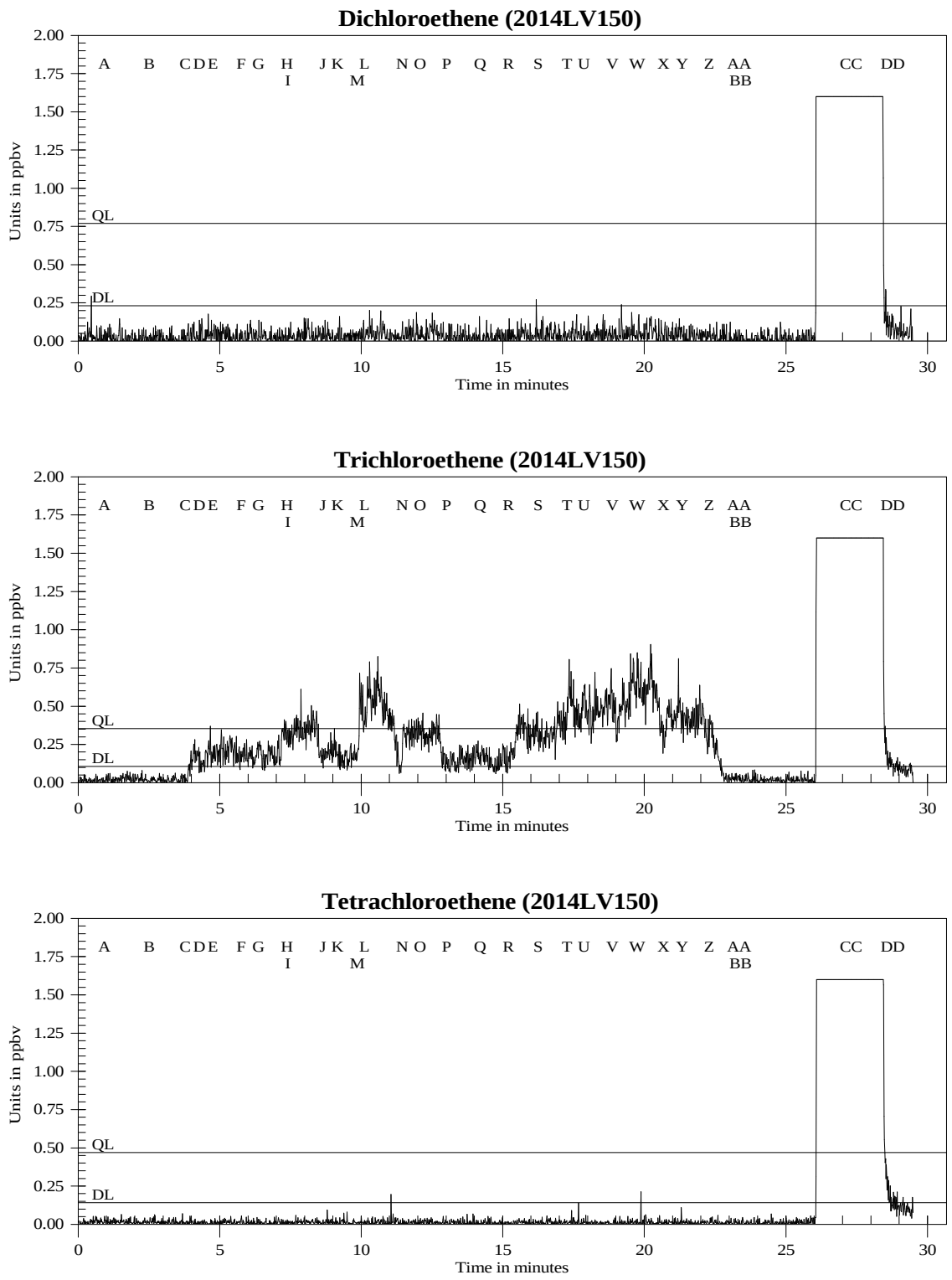

Figure 11c Unit BLD 567 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 11d

TAGA Target Compound Summary for Unit BLD 567
File: 2014LV150 Acquired on 29 April 2014 at 11:16:38

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.23	0.11	0.14
	Quantitation Limits - QL:	0.77	0.35	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.23	DL=0.11	DL=0.14
D - E	Cage 2 in room 104	DL=0.23	0.16J	DL=0.14
F - G	Room 106	DL=0.23	0.18J	DL=0.14
H - I	Room 105	DL=0.23	0.32J	DL=0.14
J - K	Room R101	DL=0.23	0.19J	DL=0.14
L - M	Floor drain in room R101	DL=0.23	0.50	DL=0.14
N - O	Room 106A	DL=0.23	0.26J	DL=0.14
P - Q	Cage 1 in room 104	DL=0.23	0.15J	DL=0.14
R - S	Room 101	DL=0.23	0.28J	DL=0.14
T - U	Room 103	DL=0.23	0.48	DL=0.14
V - W	Room 102	DL=0.23	0.49	DL=0.14
X - Y	Office	DL=0.23	0.40	DL=0.14
AA - BB	Post-exit ambient	DL=0.23	DL=0.11	DL=0.14
CC - DD	30 mL/min spike	7.1	7.3	6.9

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

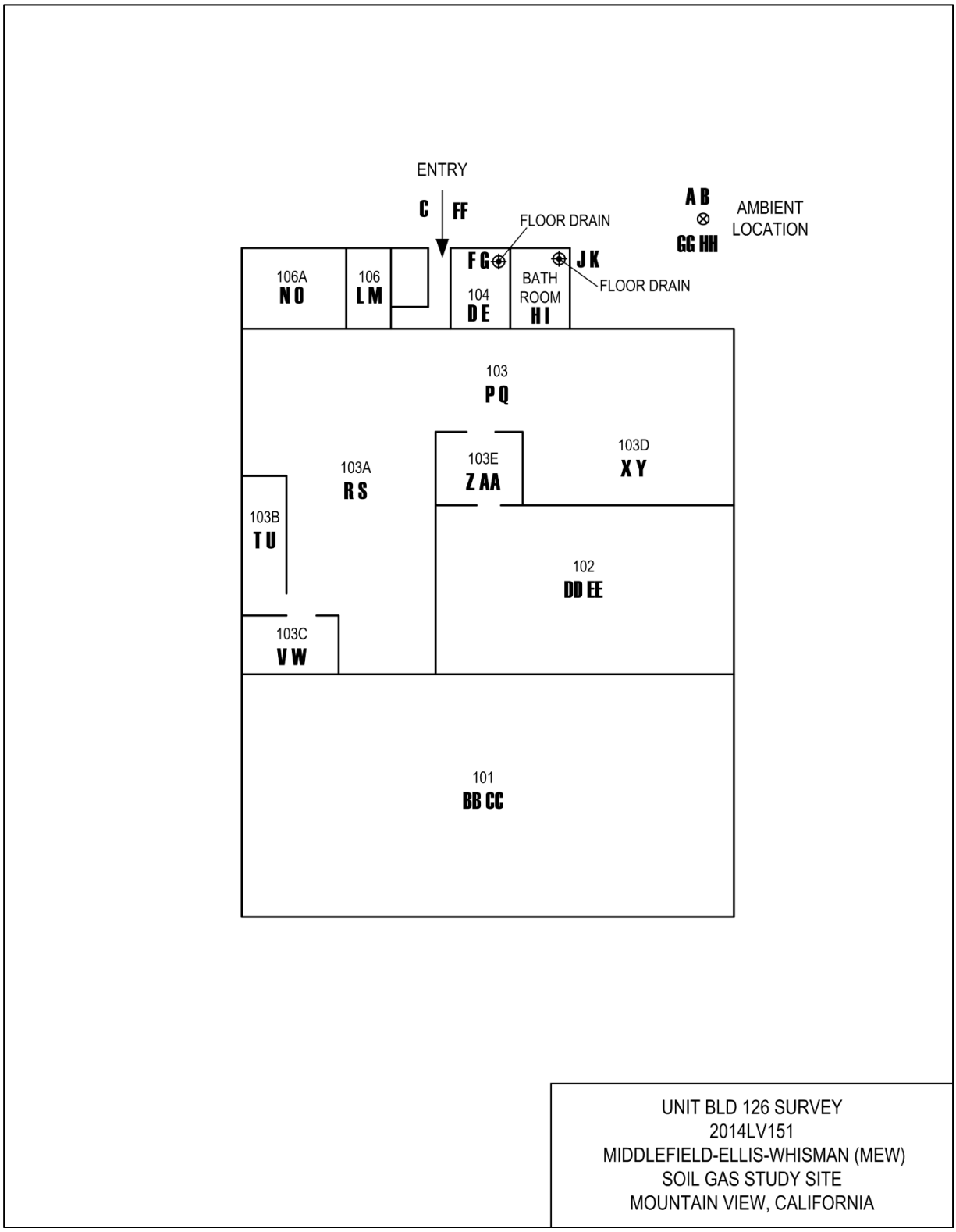

Figure 12a Unit BLD 126 Survey Floor Plan

Figure 12b

TAGA File Event Summary
File: 2014LV151 Acquired on 29 April 2014 at 11:56:23
Title: Unit BLD 126 Survey

Flag	Offset Time	Offset Sequence	Description
A	0.7	52	Start of the pre-entry ambient
B	2.5	177	End of the pre-entry ambient
C	3.5	249	Entering the unit
D	4.1	292	Start of room 104
E	5.1	366	End of room 104
F	6.1	437	Start of floor drain in room 104
G	6.4	459	End of floor drain in room 104
H	7.5	535	Start of the bathroom
I	8.8	631	End of the bathroom
J	9.8	702	Start of the floor drain in bathroom
K	10.1	723	End of the floor drain in bathroom
L	11.2	803	Start of room 106
M	12.4	884	End of room 106
N	13.4	954	Start of room 106A
O	13.9	990	End of room 106A
P	14.9	1061	Start of room 103
Q	15.4	1099	End of room 103
R	16.4	1170	Start of room 103A
S	16.9	1206	End of room 103A
T	17.9	1280	Start of room 103B
U	18.6	1332	End of room 103B
V	19.8	1414	Start of room 103C
W	20.4	1455	End of room 103C
X	21.4	1527	Start of room 103D
Y	22.7	1624	End of room 103D
Z	23.8	1699	Start of room 103E
AA	24.6	1759	End of room 103E
BB	25.6	1831	Start of room 101
CC	26.5	1895	End of room 101
DD	27.6	1969	Start of room 102

Figure 12b continued

TAGA File Event Summary
File: 2014LV151 Acquired on 29 April 2014 at 11:56:23
Title: Unit BLD 126 Survey

Flag	Offset Time	Offset Sequence	Description
EE	28.1	2007	End of room 102
FF	29.1	2077	Exiting the unit
GG	30.6	2185	Start of the post-exit ambient
HH	31.5	2251	End of the post-exit ambient
II	33.8	2415	Start of 30 mL/min spike
JJ	35.4	2530	End of 30 mL/min spike

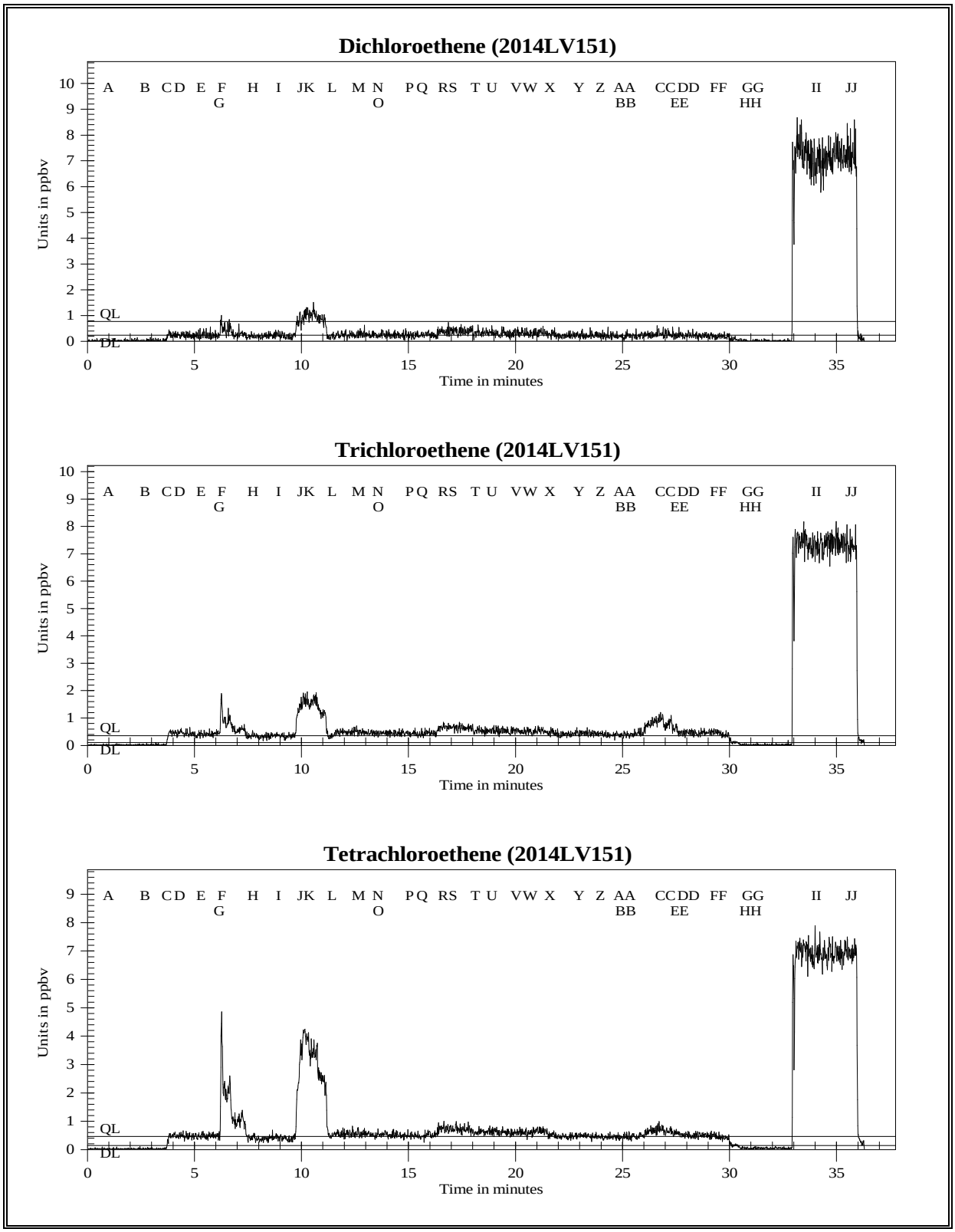

Figure 12c Unit BLD 126 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 12d

TAGA Target Compound Summary for Unit BLD 126
File: 2014LV151 Acquired on 29 April 2014 at 11:56:23

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.23	0.11	0.14
	Quantitation Limits - QL:	0.77	0.35	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.23	DL=0.11	DL=0.14
D - E	Room 104	DL=0.23	0.44	0.48
F - G	Floor drain in room 104	0.48J	0.95	2.1
H - I	Bathroom	DL=0.23	0.34J	0.40J
J - K	Floor drain in bathroom	0.82	1.5	3.2
L - M	Room 106	DL=0.23	0.44	0.54
N - O	Room 106A	0.26J	0.45	0.52
P - Q	Room 103	0.24J	0.44	0.49
R - S	Room 103A	0.38J	0.66	0.75
T - U	Room 103B	0.34J	0.54	0.62
V - W	Room 103C	0.33J	0.53	0.61
X - Y	Room 103D	0.24J	0.43	0.49
Z - AA	Room 103E	DL=0.23	0.40	0.44J
BB - CC	Room 101	0.23J	0.64	0.57
DD - EE	Room 102	0.24J	0.47	0.53
GG - HH	Post-exit ambient	DL=0.23	DL=0.11	DL=0.14
II - JJ	30 mL/min spike	7.1	7.4	6.9

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

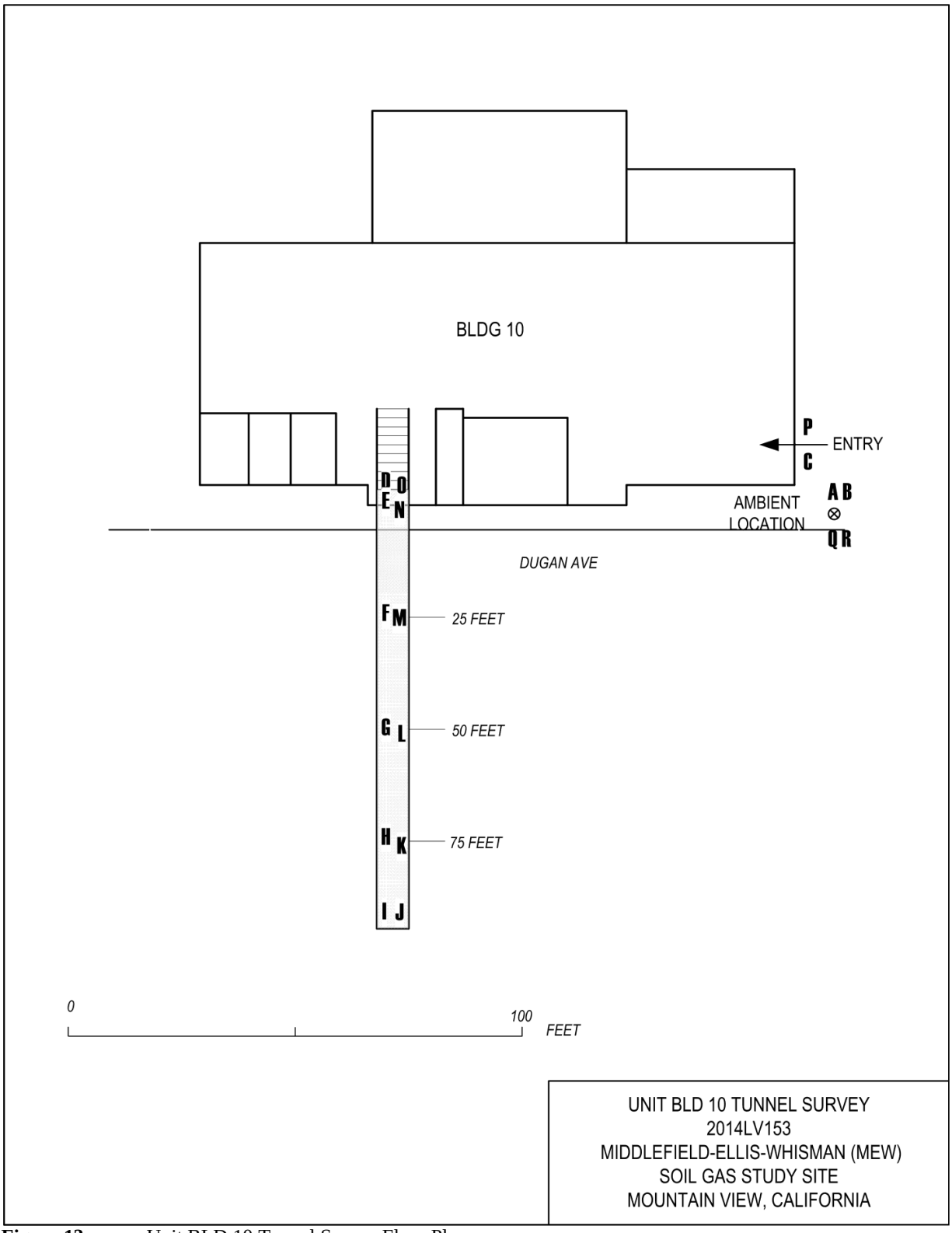

Figure 13a Unit BLD 10 Tunnel Survey Floor Plan

Figure 13b

TAGA File Event Summary
File: 2014LV153 Acquired on 29 April 2014 at 16:21:27
Title: Unit BLD 10 Tunnel Survey

Flag	Offset Time	Offset Sequence	Description
A	0.7	51	Start of the pre-entry ambient
B	2.4	170	End of the pre-entry ambient
C	3.4	243	Entering the unit
D	4.3	310	Robot in the tunnel
E	6.4	456	Robot starts moving
F	8.0	575	Robot at 25 feet
G	9.2	656	Robot at 50 feet
H	10.4	746	Robot at 75 feet
I	11.9	852	End of the tunnel
J	13.4	954	Retrieving robot
K	14.5	1036	Robot at 75 feet
L	15.7	1122	Robot at 50 feet
M	16.5	1179	Robot at 25 feet
N	17.5	1250	Robot stopped at the entrance
O	18.2	1300	Robot exiting the tunnel
P	19.2	1375	Exiting the unit
Q	20.8	1489	Start of the post-exit ambient
R	21.4	1529	End of the post-exit ambient
S	25.3	1810	Start of 30 mL/min spike
T	26.6	1901	End of 30 mL/min spike

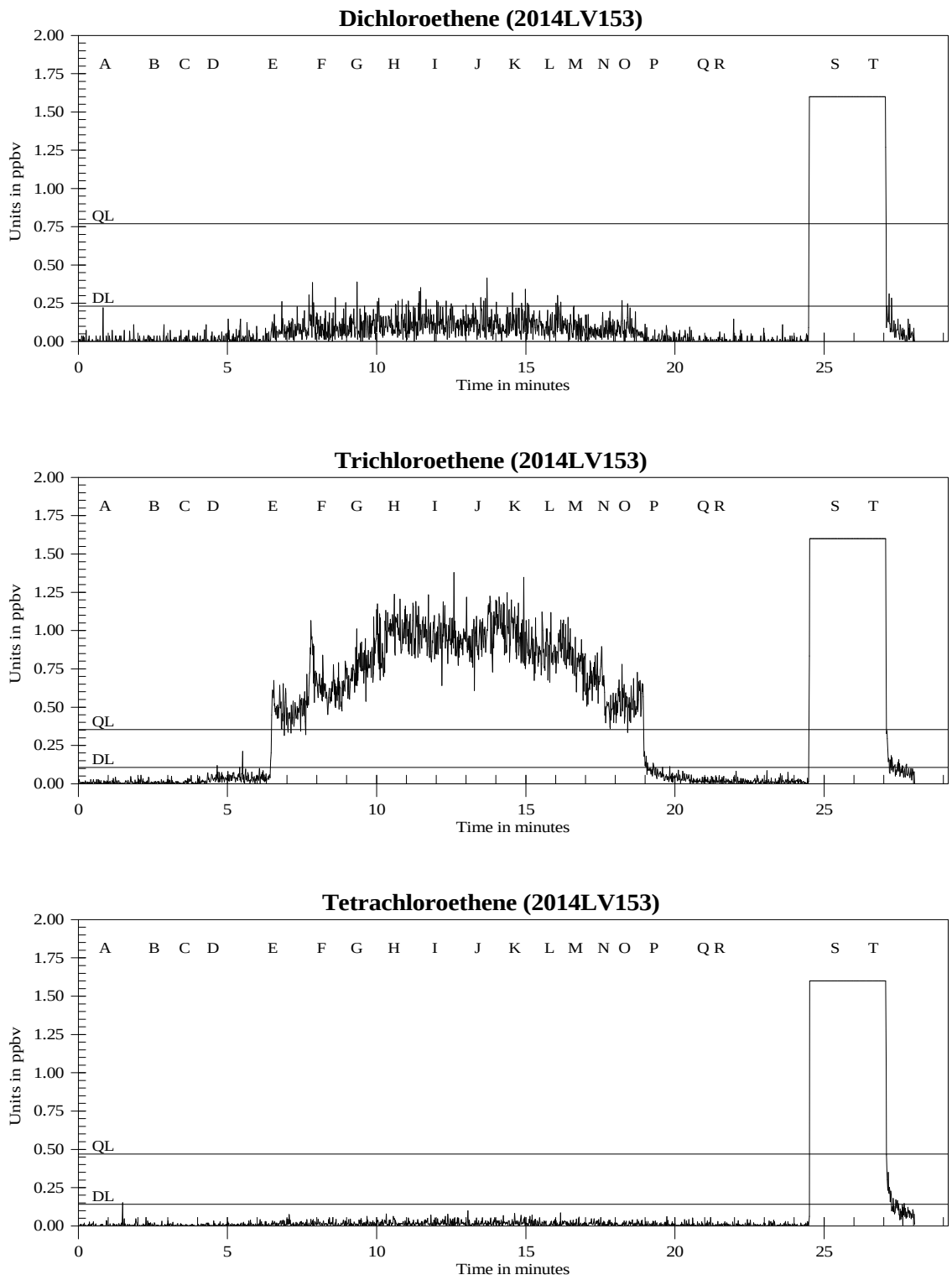

Figure 13c Unit BLD 10 Tunnel Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

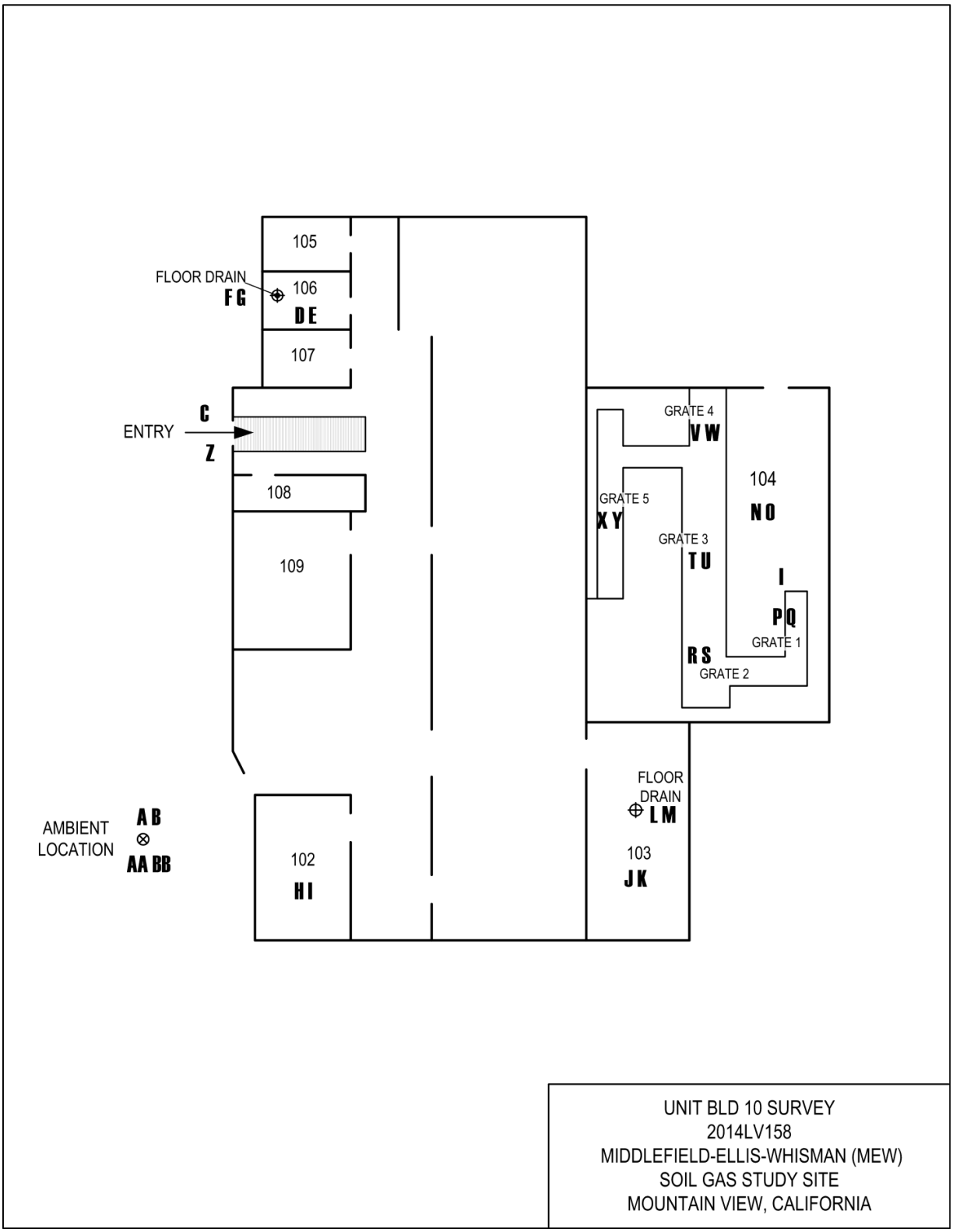

Figure 14a Unit BLD 10 Survey Floor Plan

Figure 14b

TAGA File Event Summary
File: 2014LV158 Acquired on 30 April 2014 at 08:36:16
Title: Unit BLD 10 Survey

Flag	Offset Time	Offset Sequence	Description
A	2.5	179	Start of the pre-entry ambient
B	3.5	250	End of the pre-entry ambient
C	4.4	313	Entering the unit
D	7.3	520	Start of room 106
E	8.3	593	End of room 106
F	8.6	615	Start of floor drain in room 106
G	9.6	685	End of floor drain in room 106
H	10.9	779	Start of room 102
I	11.9	851	End of room 102
J	12.6	900	Start of room 103
K	13.6	971	End of room 103
L	14.0	1002	Start of floor drain in room 103
M	15.1	1076	End of floor drain in room 103
N	16.5	1179	Start of room 104
O	17.5	1252	End of room 104
P	18.1	1293	Start of grate one in room 104
Q	19.1	1365	End of grate one in room 104
R	19.8	1411	Start of grate two in room 104
S	20.8	1483	End of grate two in room 104
T	21.2	1515	Start of grate three in room 104
U	22.3	1591	End of grate three in room 104
V	22.8	1631	Start of grate four in room 104
W	23.8	1702	End of grate four in room 104
X	24.3	1734	Start of grate five in room 104
Y	25.4	1811	End of grate five in room 104
Z	26.8	1916	Exiting the unit
AA	27.1	1932	Start of the post-exit ambient
BB	28.3	2022	End of the post-exit ambient
CC	29.5	2110	Start of 30 mL/min spike
DD	30.9	2210	End of 30 mL/min spike

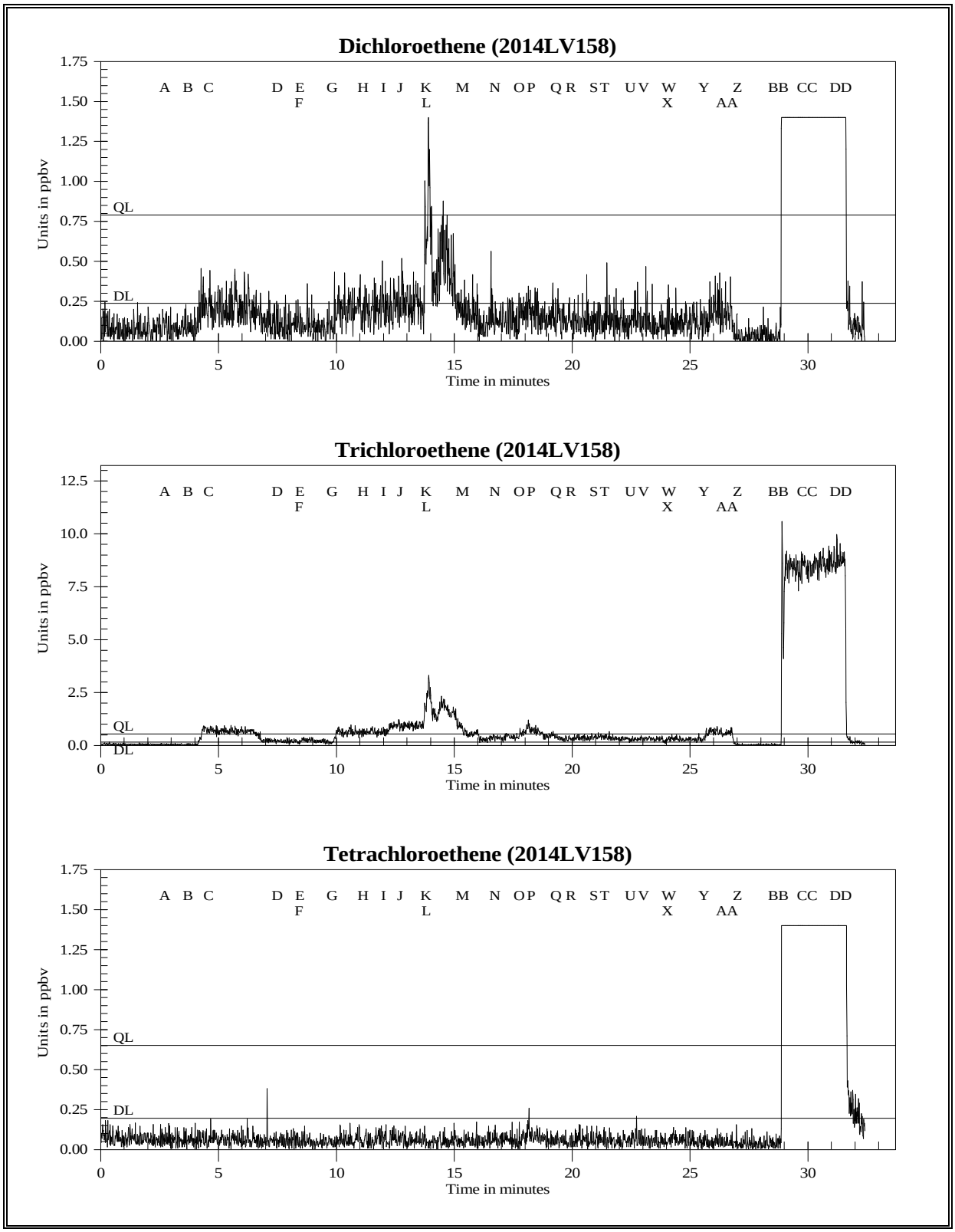

Figure 14c Unit BLD 10 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 14d

TAGA Target Compound Summary for Unit BLD 10
File: 2014LV158 Acquired on 30 April 2014 at 08:36:16

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room 106	DL=0.24	0.20J	DL=0.20
F - G	Floor drain in room 106	DL=0.24	0.22J	DL=0.20
H - I	Room 102	DL=0.24	0.63	DL=0.20
J - K	Room 103	DL=0.24	0.94	DL=0.20
L - M	Floor drain in room 103	0.46J	1.6	DL=0.20
N - O	Room 104	DL=0.24	0.38J	DL=0.20
P - Q	Grate one in room 104	DL=0.24	0.61	DL=0.20
R - S	Grate two in room 104	DL=0.24	0.34J	DL=0.20
T - U	Grate three in room 104	DL=0.24	0.36J	DL=0.20
V - W	Grate four in room 104	DL=0.24	0.31J	DL=0.20
X - Y	Grate five in room 104	DL=0.24	0.29J	DL=0.20
AA - BB	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
CC - DD	30 mL/min spike	7.5	8.5	9.0

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

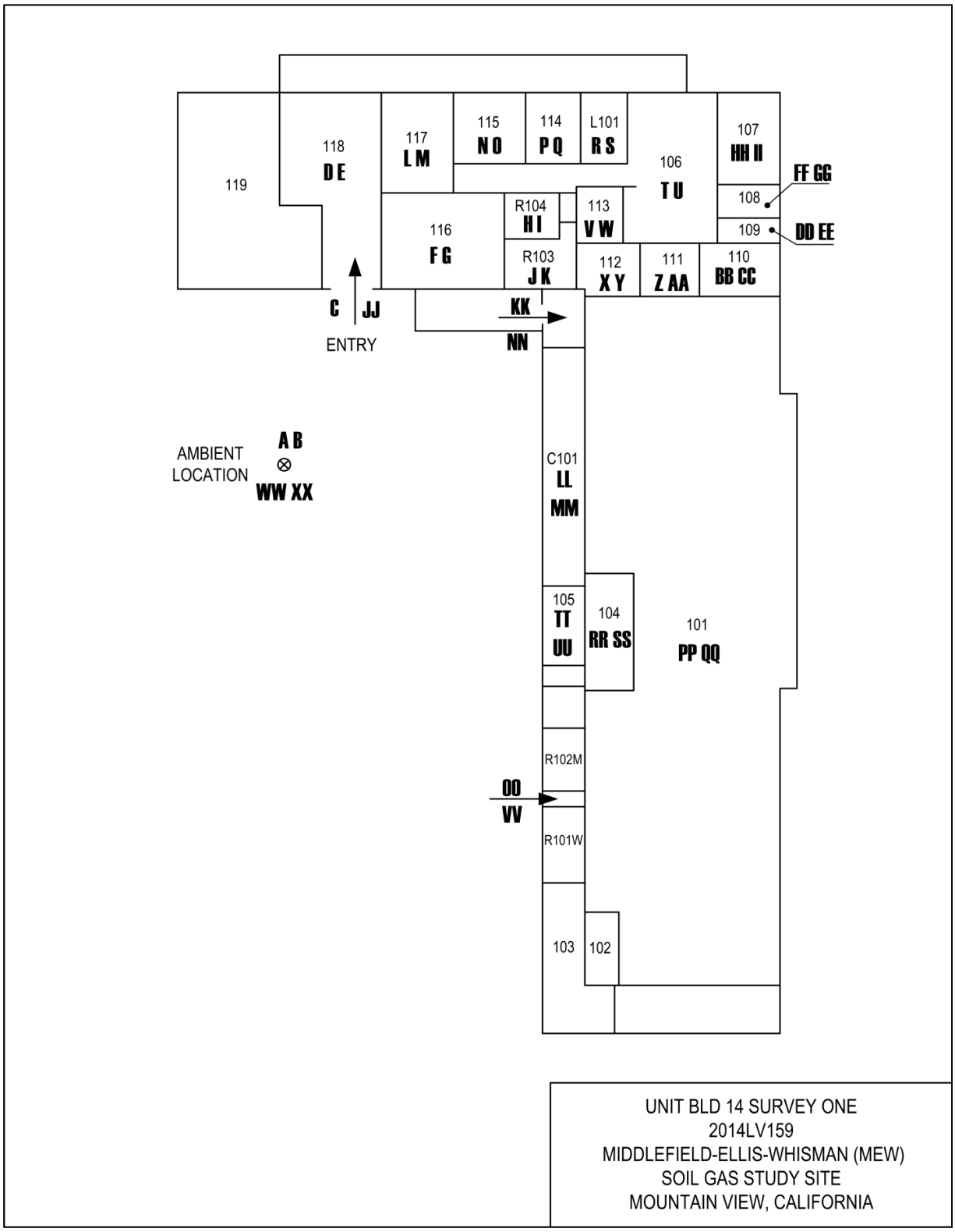

Figure 15a Unit BLD 14 Survey One Floor Plan

Figure 15b

TAGA File Event Summary
File: 2014LV159 Acquired on 30 April 2014 at 09:26:31
Title: Unit BLD 14 Survey One

Flag	Offset Time	Offset Sequence	Description
A	2.0	144	Start of the pre-entry ambient
B	3.0	214	End of the pre-entry ambient
C	9.7	691	Entering the unit
D	10.2	727	Start of room 118
E	11.2	797	End of room 118
F	11.9	853	Start of room 116
G	13.0	926	End of room 116
H	13.6	972	Start of room R104
I	14.6	1042	End of room R104
J	15.2	1086	Start of room R103
K	16.2	1159	End of room R103
L	17.6	1254	Start of room 117
M	18.6	1327	End of room 117
N	19.2	1370	Start of room 115
O	20.2	1442	End of room 115
P	20.7	1479	Start of room 114
Q	21.7	1549	End of room 114
R	22.4	1598	Start of room L101
S	23.4	1668	End of room L101
T	24.0	1711	Start of room 106
U	25.0	1784	End of room 106
V	25.4	1816	Start of room 113
W	26.4	1886	End of room 113
X	26.9	1919	Start of room 112
Y	27.9	1993	End of room 112
Z	28.5	2034	Start of room 111
AA	29.5	2106	End of room 111
BB	30.0	2143	Start of room 110
CC	31.0	2214	End of room 110
DD	31.5	2252	Start of room 109

Figure 15b

TAGA File Event Summary
File: 2014LV159 Acquired on 30 April 2014 at 09:26:31
Title: Unit BLD 14 Survey One

Flag	Offset Time	Offset Sequence	Description
EE	32.6	2325	End of room 109
FF	33.4	2383	Start of room 108
GG	34.5	2463	End of room 108
HH	34.9	2495	Start of room 107
II	36.0	2573	End of room 107
JJ	38.2	2726	Exiting the unit
KK	39.9	2852	Entering the unit
LL	41.1	2938	Start of room C101
MM	42.3	3019	End of room C101
NN	43.7	3120	Exiting the unit
OO	47.1	3366	Entering the unit
PP	47.9	3421	Start of room 101
QQ	48.9	3492	End of room 101
RR	49.6	3545	Start of room 104
SS	50.7	3617	End of room 104
TT	51.2	3658	Start of room 105
UU	52.3	3731	End of room 105
VV	52.9	3777	Exiting the unit
WW	53.5	3822	Start of the post-exit ambient
XX	54.7	3905	End of the post-exit ambient
YY	56.6	4043	Start of 30 mL/min spike
ZZ	57.6	4115	End of 30 mL/min spike

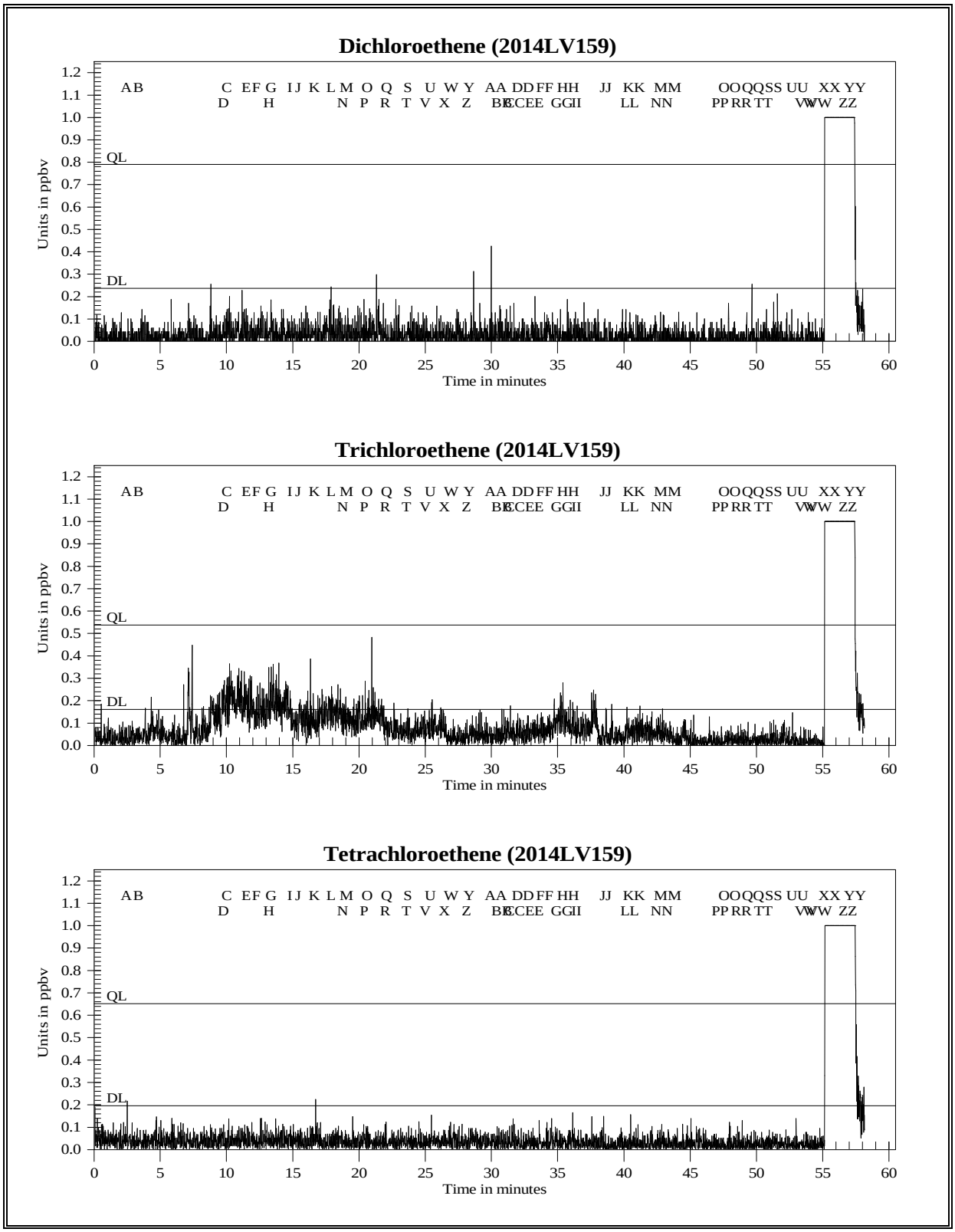

Figure 15c Unit BLD 14 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 15d

TAGA Target Compound Summary for Unit BLD 14 Survey One
File: 2014LV159 Acquired on 30 April 2014 at 09:26:31

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room 118	DL=0.24	0.22J	DL=0.20
F - G	Room 116	DL=0.24	DL=0.16	DL=0.20
H - I	Room R104	DL=0.24	0.19J	DL=0.20
J - K	Room R103	DL=0.24	DL=0.16	DL=0.20
L - M	Room 117	DL=0.24	DL=0.16	DL=0.20
N - O	Room 115	DL=0.24	DL=0.16	DL=0.20
P - Q	Room 114	DL=0.24	DL=0.16	DL=0.20
R - S	Room L101	DL=0.24	DL=0.16	DL=0.20
T - U	Room 106	DL=0.24	DL=0.16	DL=0.20
V - W	Room 113	DL=0.24	DL=0.16	DL=0.20
X - Y	Room 112	DL=0.24	DL=0.16	DL=0.20
Z - AA	Room 111	DL=0.24	DL=0.16	DL=0.20
BB - CC	Room 110	DL=0.24	DL=0.16	DL=0.20
DD - EE	Room 109	DL=0.24	DL=0.16	DL=0.20
FF - GG	Room 108	DL=0.24	DL=0.16	DL=0.20
HH - II	Room 107	DL=0.24	DL=0.16	DL=0.20
LL - MM	Room C101	DL=0.24	DL=0.16	DL=0.20
PP - QQ	Room 101	DL=0.24	DL=0.16	DL=0.20
RR - SS	Room 104	DL=0.24	DL=0.16	DL=0.20
TT - UU	Room 105	DL=0.24	DL=0.16	DL=0.20
WW - XX	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
YY - ZZ	30 mL/min spike	6.9	7.4	7.6

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

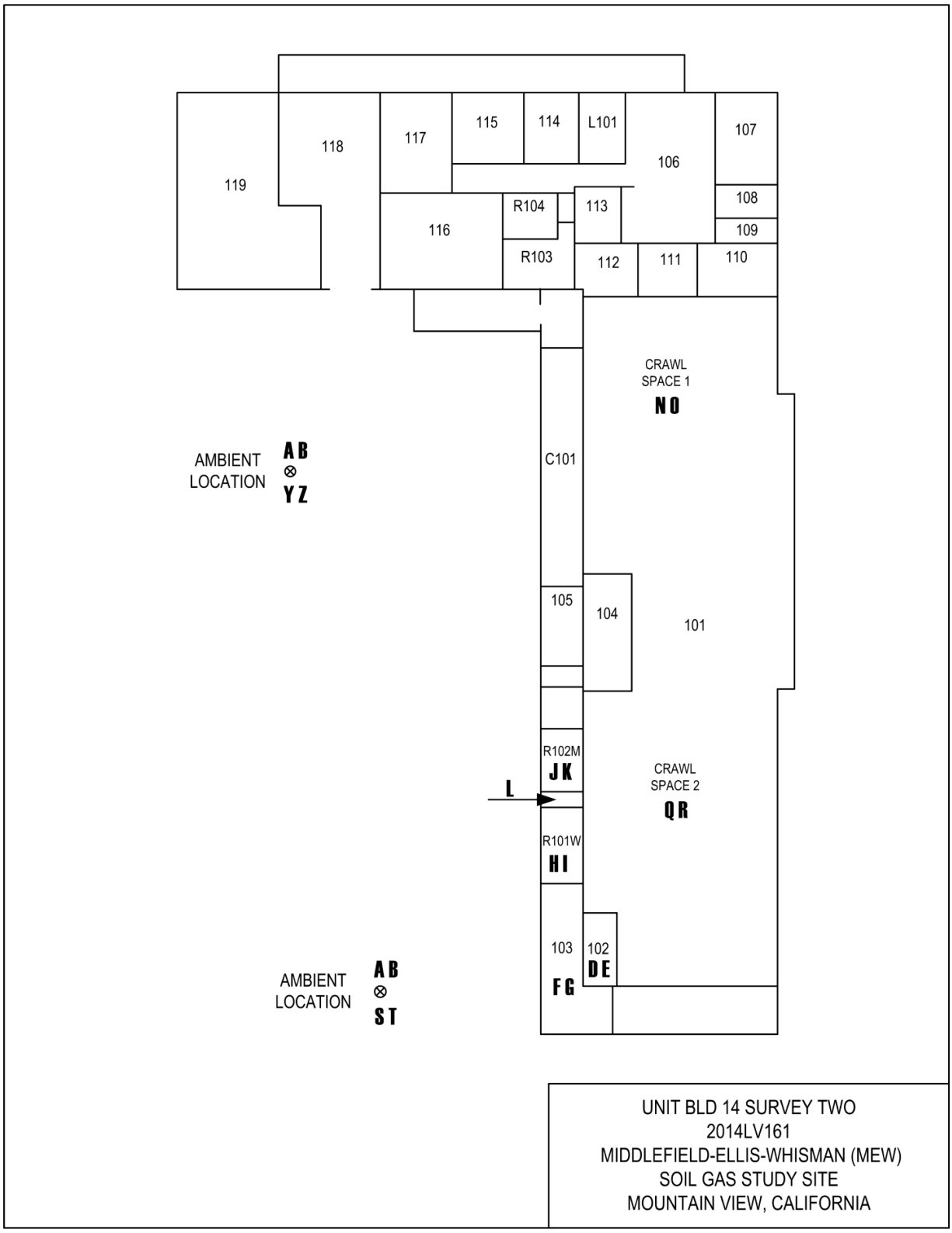

Figure 16a Unit BLD 14 Survey Two Floor Plan

Figure 16b

TAGA File Event Summary
File: 2014LV161 Acquired on 30 April 2014 at 10:30:17
Title: Unit BLD 14 Survey Two

Flag	Offset Time	Offset Sequence	Description
A	1.7	121	Start of the pre-entry ambient
B	2.7	194	End of the pre-entry ambient
C	3.4	243	Entering the unit
D	4.1	293	Start of room 102
E	5.1	364	End of room 102
F	5.4	388	Start of room 103
G	6.4	459	End of room 103
H	6.8	483	Start of room R101W
I	7.7	553	End of room R101W
J	8.3	593	Start of room R102M
K	9.3	666	End of room R102M
L	9.7	691	Exiting the unit
M	11.6	832	Entering crawl space one
N	12.2	873	Start of crawl space one
O	13.2	946	End of crawl space one
P	14.3	1025	Entering crawl space two
Q	14.7	1052	Start of crawl space two
R	15.7	1122	End of crawl space two
S	16.5	1176	Start of the post-exit ambient
T	17.4	1245	End of the post-exit ambient
U	18.4	1316	Start of 30 mL/min spike
V	19.7	1405	End of 30 mL/min spike

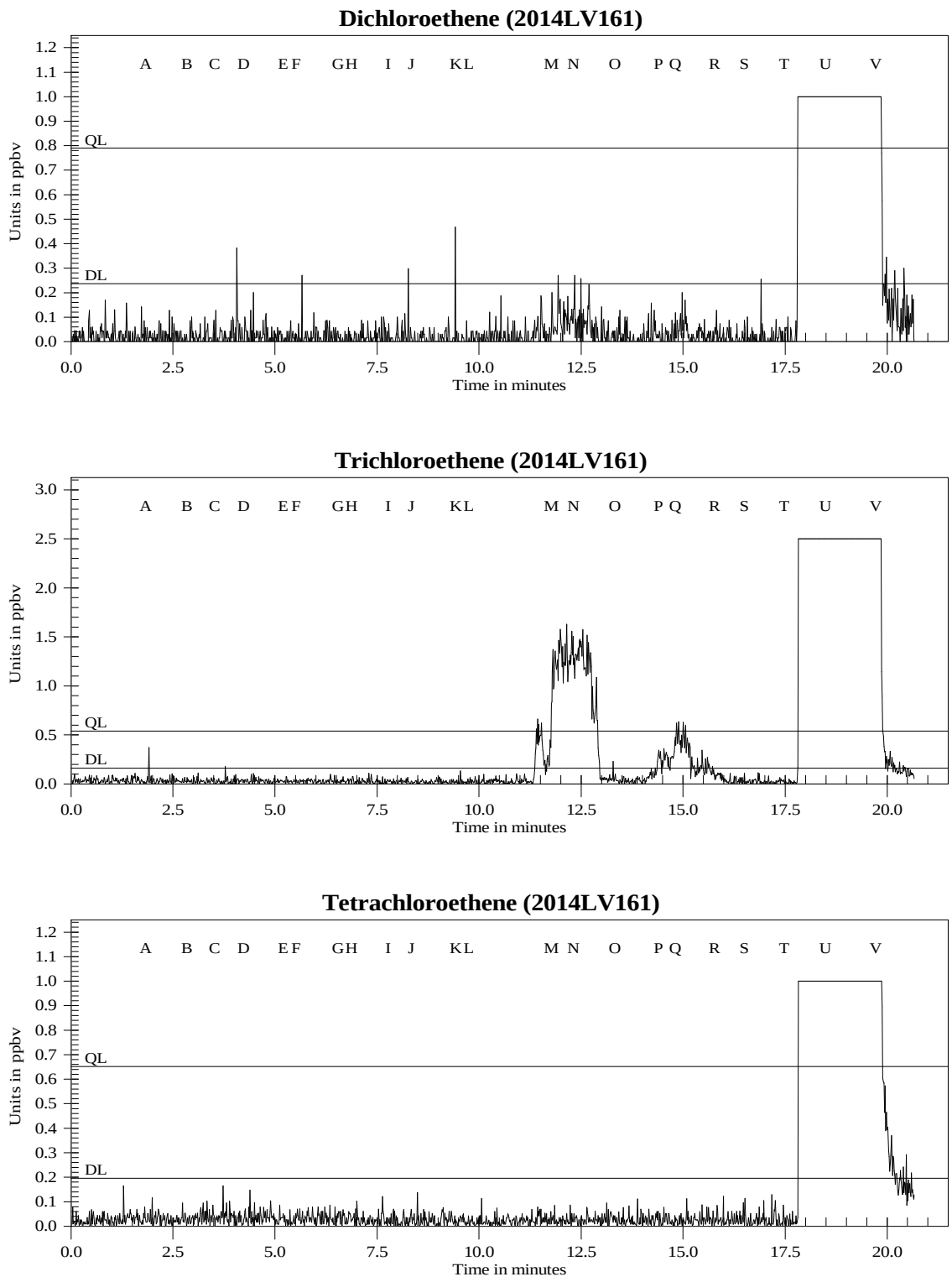

Figure 16c Unit BLD 14 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 16d

TAGA Target Compound Summary for Unit BLD 14 Survey Two
File: 2014LV161 Acquired on 30 April 2014 at 10:30:17

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room 102	DL=0.24	DL=0.16	DL=0.20
F - G	Room 103	DL=0.24	DL=0.16	DL=0.20
H - I	Room R101W	DL=0.24	DL=0.16	DL=0.20
J - K	Room R102M	DL=0.24	DL=0.16	DL=0.20
N - O	Crawl space one	DL=0.24	0.83	DL=0.20
Q - R	Crawl space two	DL=0.24	0.28J	DL=0.20
S - T	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
U - V	30 mL/min spike	9.6	10.	10.

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

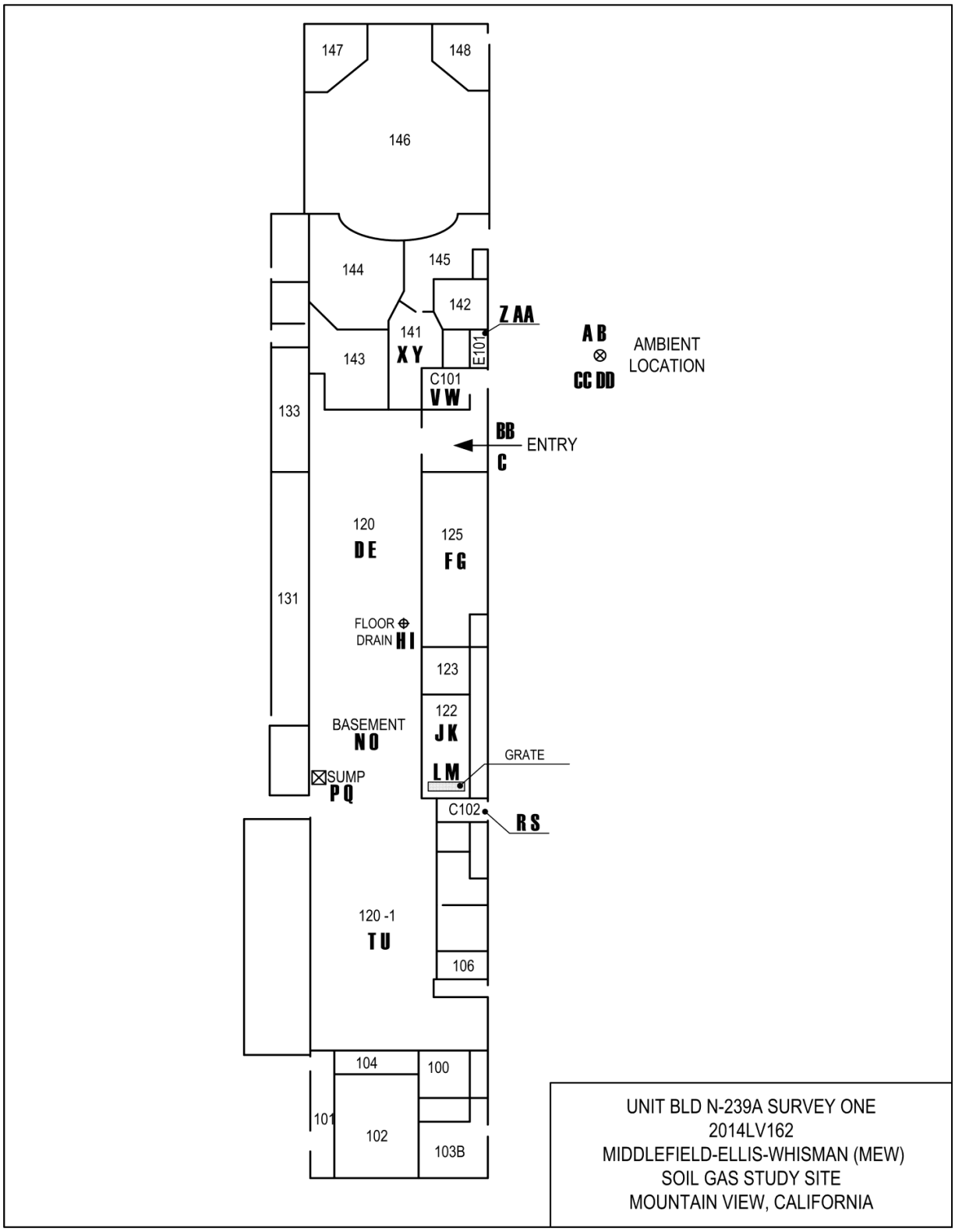

Figure 17a Unit BLD N-239A Survey One

Figure 17b

TAGA File Event Summary
File: 2014LV162 Acquired on 30 April 2014 at 11:19:52
Title: Unit BLD N-239A Survey One

Flag	Offset Time	Offset Sequence	Description
A	1.9	135	Start of the pre-entry ambient
B	2.9	206	End of the pre-entry ambient
C	8.5	610	Entering the unit
D	8.9	634	Start of room 120
E	9.9	710	End of room 120
F	11.4	818	Start of room 125
G	12.4	889	End of room 125
H	13.1	933	Start of floor drain in room 120
I	14.2	1017	End of floor drain in room 120
J	15.4	1098	Start of room 122
K	16.4	1170	End of room 122
L	16.7	1190	Start of grate in room 122
M	17.7	1262	End of grate in room 122
N	18.6	1328	Start of the basement
O	19.7	1406	End of the basement
P	20.4	1456	Start of the sump
Q	21.4	1529	End of the sump
R	23.1	1647	Start of room C102
S	24.0	1717	End of room C102
T	24.8	1769	Start of room 120-1
U	25.8	1840	End of room 120-1
V	27.6	1969	Start of room C101
W	28.6	2042	End of room C101
X	29.5	2108	Start of room 141
Y	30.8	2197	End of room 141
Z	31.6	2258	Start of room E101
AA	32.7	2338	End of room E101
BB	33.5	2389	Exiting the unit
CC	34.1	2433	Start of the post-exit ambient
DD	35.2	2516	End of the post-exit ambient
EE	36.5	2609	Start of 30 mL/min spike
FF	37.9	2708	End of 30 mL/min spike

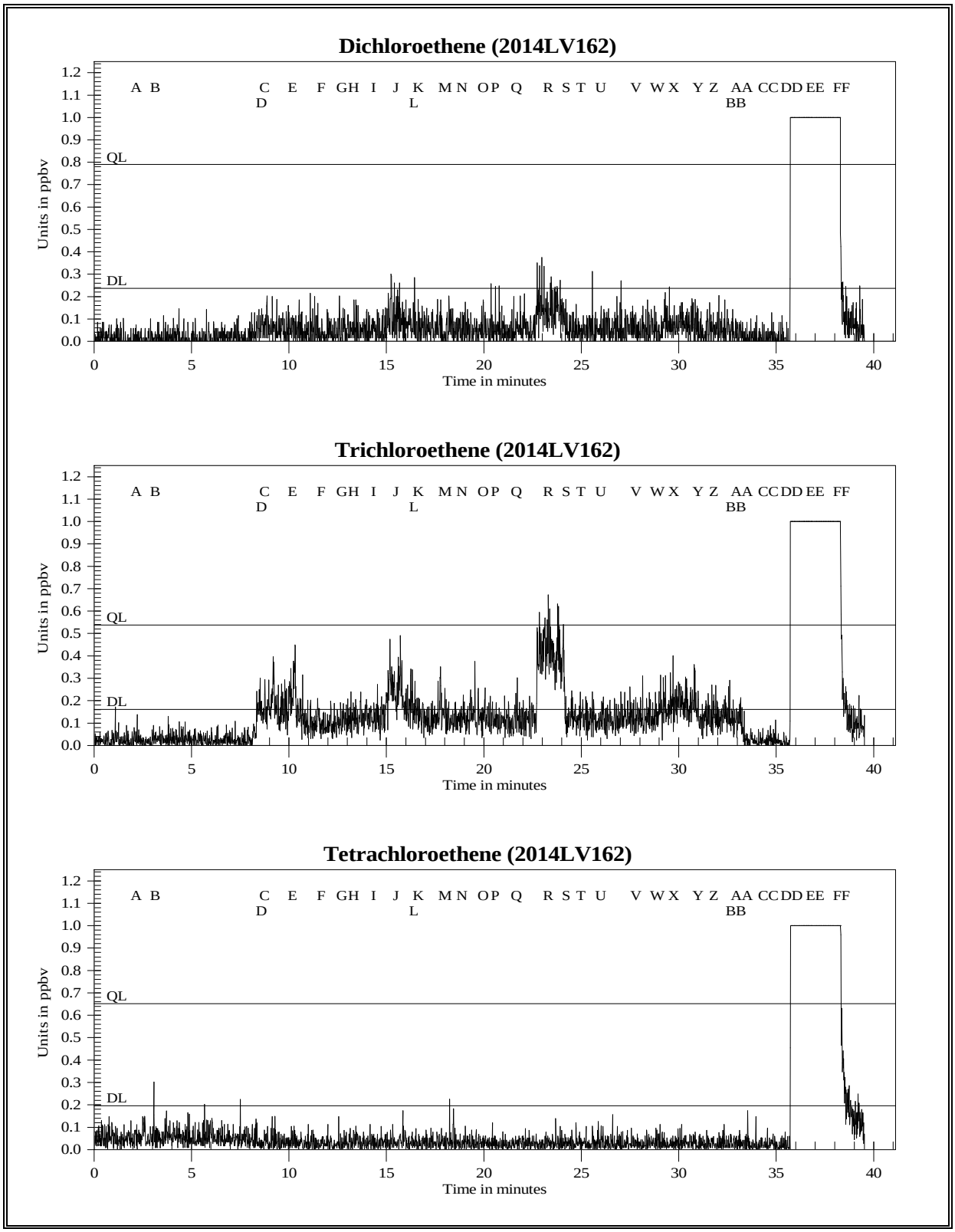

Figure 17c Unit BLD N-239A Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 17d

TAGA Target Compound Summary for Unit BLD N-239A Survey One
File: 2014LV162 Acquired on 30 April 2014 at 11:19:52

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room 120	DL=0.24	0.18J	DL=0.20
F - G	Room 125	DL=0.24	DL=0.16	DL=0.20
H - I	Floor drain in room 120	DL=0.24	DL=0.16	DL=0.20
J - K	Room 122	DL=0.24	0.22J	DL=0.20
L - M	Grate in room 122	DL=0.24	DL=0.16	DL=0.20
N - O	Basement	DL=0.24	DL=0.16	DL=0.20
P - Q	Sump	DL=0.24	DL=0.16	DL=0.20
R - S	Room C102	DL=0.24	0.42J	DL=0.20
T - U	Room 120-1	DL=0.24	DL=0.16	DL=0.20
V - W	Room C101	DL=0.24	DL=0.16	DL=0.20
X - Y	Room 141	DL=0.24	0.19J	DL=0.20
Z - AA	Room E101	DL=0.24	DL=0.16	DL=0.20
CC - DD	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
EE - FF	30 mL/min spike	8.6	9.4	9.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

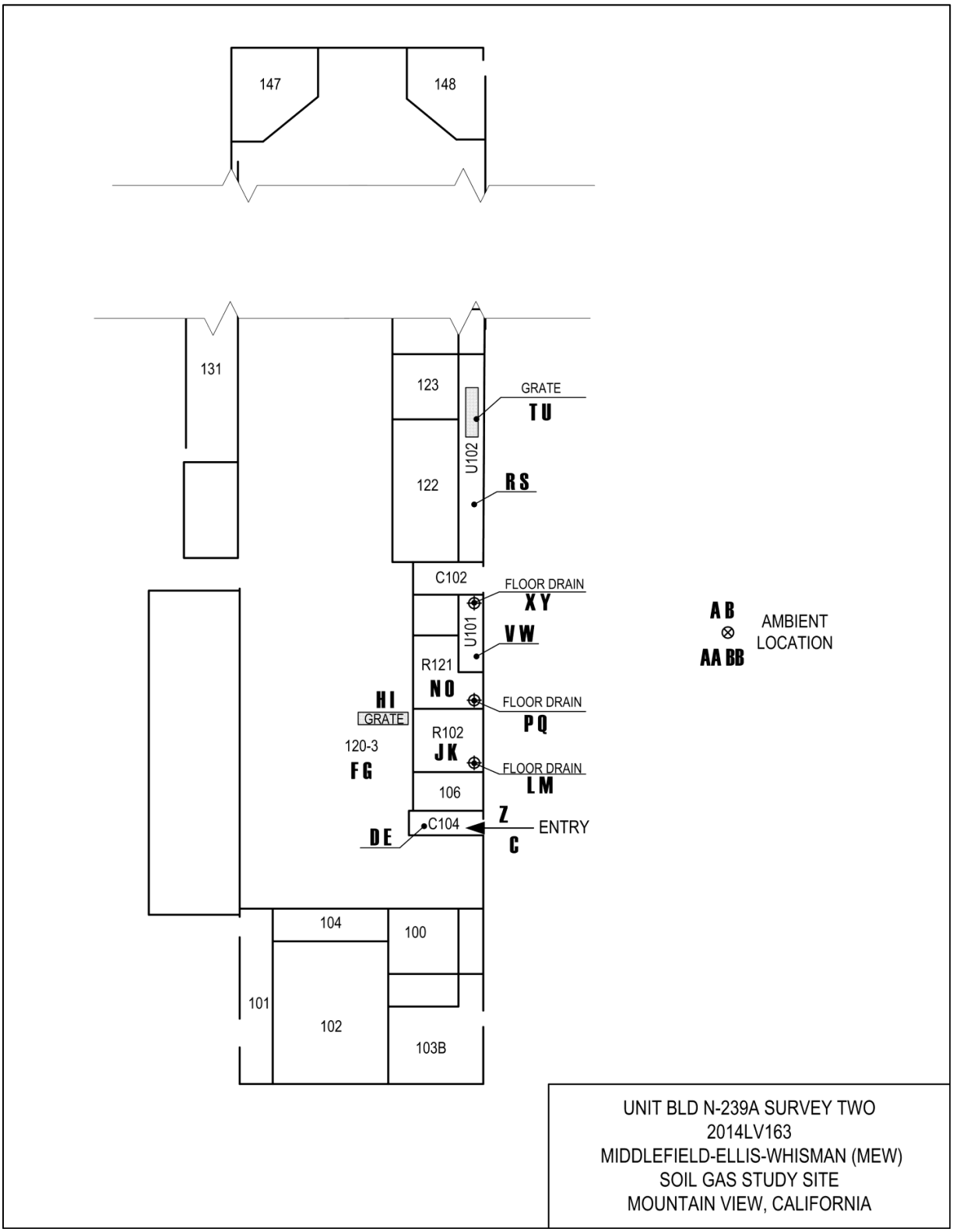

Figure 18a Unit BLD N-239A Survey Two Floor Plan

Figure 18b

TAGA File Event Summary
File: 2014LV163 Acquired on 30 April 2014 at 12:07:56
Title: Unit BLD N-239A Survey Two

Flag	Offset Time	Offset Sequence	Description
A	2.5	179	Start of the pre-entry ambient
B	3.6	255	End of the pre-entry ambient
C	4.5	321	Entering the unit
D	5.6	403	Start of room C104
E	6.6	475	End of room C104
F	7.7	553	Start of room 120-3
G	8.7	624	End of room 120-3
H	9.4	671	Start of grate in room 120-3
I	10.4	741	End of grate in room 120-3
J	11.3	808	Start of room R102
K	12.3	882	End of room R102
L	12.8	915	Start of floor drain in room R102
M	13.8	985	End of floor drain in room R102
N	15.0	1073	Start of room R121
O	16.0	1145	End of room R121
P	16.5	1179	Start of floor drain in room R121
Q	17.5	1252	End of floor drain in room R121
R	18.9	1347	Start of room U102
S	20.4	1454	End of room U102
T	20.9	1490	Start of grate in room U102
U	21.9	1562	End of grate in room U102
V	22.7	1618	Start of room U101
W	23.6	1688	End of room U101
X	24.3	1736	Start of floor drain in room U101
Y	25.5	1818	End of floor drain in room U101
Z	27.1	1932	Exiting the unit
AA	27.5	1965	Start of the post-exit ambient
BB	28.9	2062	End of the post-exit ambient
CC	30.8	2201	Start of 30 mL/min spike
DD	32.1	2291	End of 30 mL/min spike

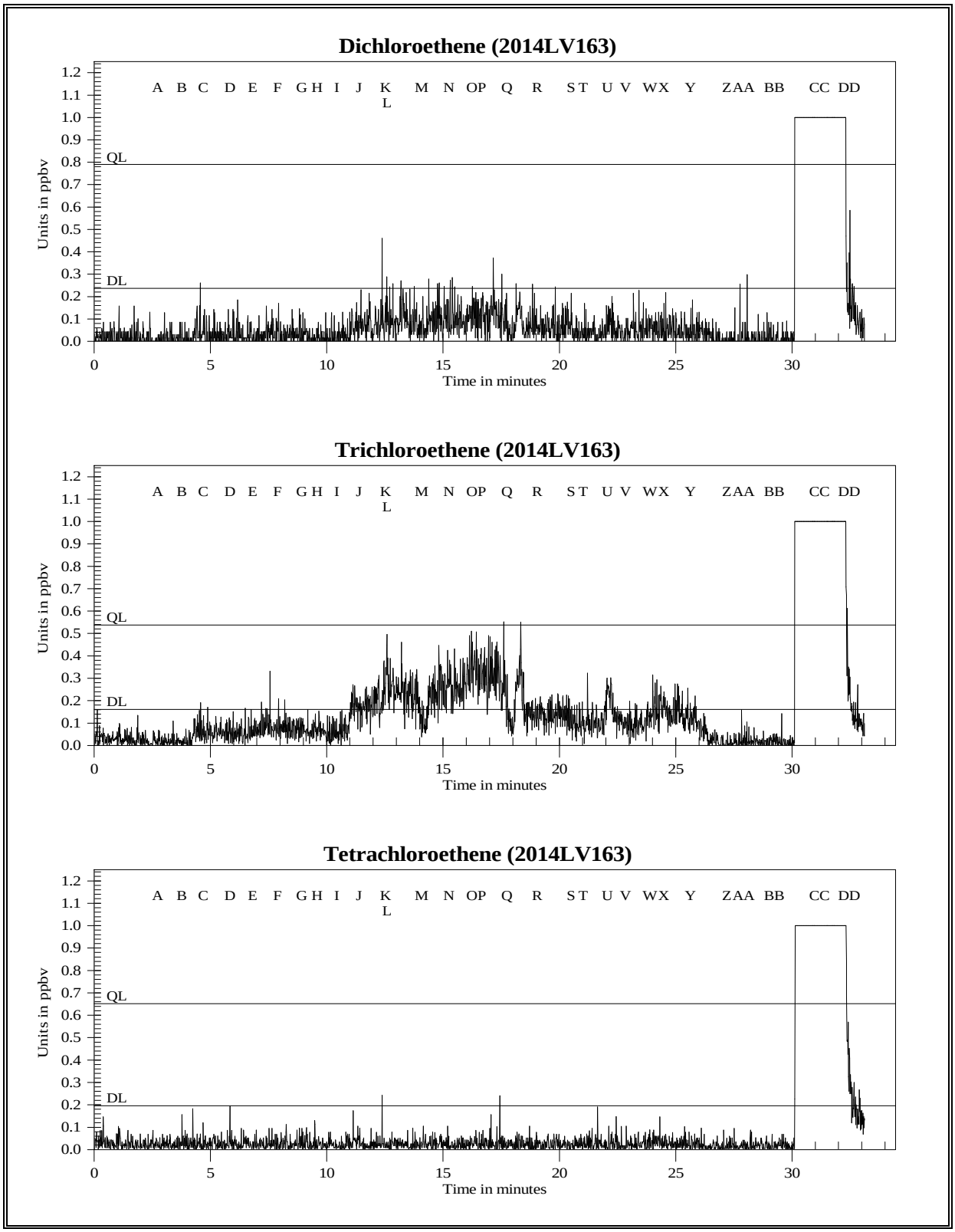

Figure 18c Unit BLD N-239A Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 18d

TAGA Target Compound Summary for Unit BLD N-239A Survey Two
File: 2014LV163 Acquired on 30 April 2014 at 12:07:56

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room C104	DL=0.24	DL=0.16	DL=0.20
F - G	Room 120-3	DL=0.24	DL=0.16	DL=0.20
H - I	Grate in room 120-3	DL=0.24	DL=0.16	DL=0.20
J - K	Room R102	DL=0.24	0.18J	DL=0.20
L - M	Floor drain in room R102	DL=0.24	0.24J	DL=0.20
N - O	Room R121	DL=0.24	0.26J	DL=0.20
P - Q	Floor drain in room R121	DL=0.24	0.31J	DL=0.20
R - S	Room U102	DL=0.24	DL=0.16	DL=0.20
T - U	Grate in room U102	DL=0.24	DL=0.16	DL=0.20
V - W	Room U101	DL=0.24	DL=0.16	DL=0.20
X - Y	Floor drain in room U101	DL=0.24	DL=0.16	DL=0.20
AA - BB	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
CC - DD	30 mL/min spike	9.2	9.4	9.3

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

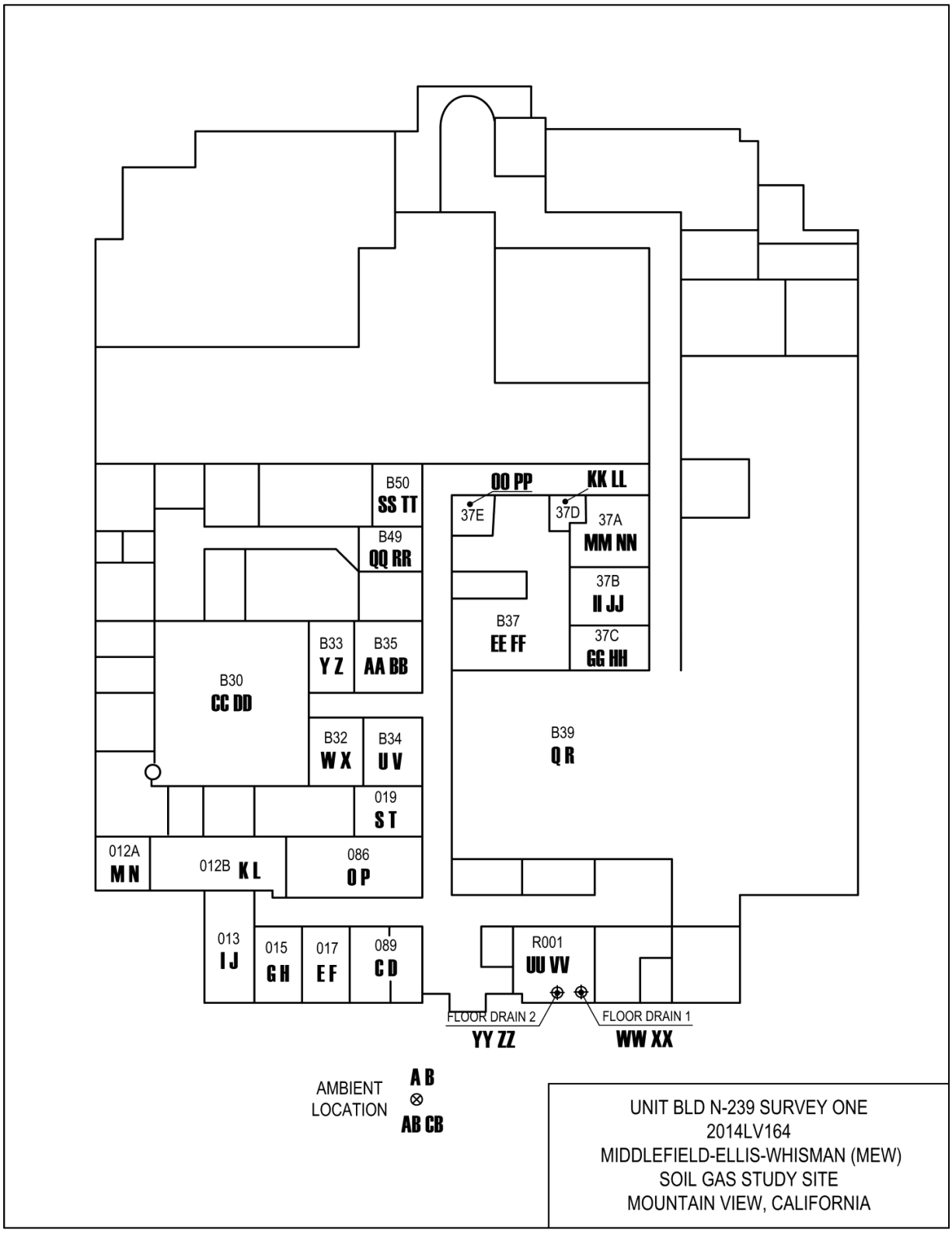

Figure 19a Unit BLD N-239 Survey One Floor Plan

Figure 19b

TAGA File Event Summary
File: 2014LV164 Acquired on 30 April 2014 at 13:44:03
Title: Unit BLD N-239 Survey One

Flag	Offset Time	Offset Sequence	Description
A	2.0	142	Start of the pre-entry ambient
B	3.0	213	End of the pre-entry ambient
C	10.0	713	Start of room 089
D	11.0	783	End of room 089
E	11.7	835	Start of room 017
F	12.7	906	End of room 017
G	13.1	935	Start of room 015
H	14.1	1008	End of room 015
I	14.5	1036	Start of room 013
J	15.5	1108	End of room 013
K	16.0	1146	Start of room 012B
L	17.0	1218	End of room 012B
M	17.6	1258	Start of room 012A
N	18.6	1330	End of room 012A
O	19.5	1391	Start of room 086
P	20.5	1461	End of room 086
Q	21.2	1514	Start of room B39
R	22.2	1584	End of room B39
S	23.0	1643	Start of room 019
T	24.0	1713	End of room 019
U	24.8	1774	Start of room B34
V	25.8	1846	End of room B34
W	27.0	1928	Start of room B32
X	28.0	1999	End of room B32
Y	28.3	2018	Start of room B33
Z	29.3	2089	End of room B33
AA	29.7	2119	Start of room B35
BB	30.7	2189	End of room B35
CC	31.3	2237	Start of room B30
DD	32.8	2344	End of room B30
EE	34.3	2450	Start of room B37

Figure 19b

TAGA File Event Summary
File: 2014LV164 Acquired on 30 April 2014 at 13:44:03
Title: Unit BLD N-239 Survey One

Flag	Offset Time	Offset Sequence	Description
FF	35.3	2519	End of room B37
GG	35.9	2563	Start of room 37C
HH	36.9	2636	End of room 37C
II	37.5	2676	Start of room 37B
JJ	38.5	2747	End of room 37B
KK	39.0	2788	Start of room 37D
LL	40.0	2859	End of room 37D
MM	40.7	2908	Start of room 37A
NN	41.7	2979	End of room 37A
OO	43.9	3135	Start of room 37E
PP	44.9	3207	End of room 37E
QQ	47.7	3408	Start of room B49
RR	48.8	3484	End of room B49
SS	49.4	3529	Start of room B50
TT	50.4	3599	End of room B50
UU	51.7	3692	Start of room R001
VV	52.7	3764	End of room R001
WW	53.2	3797	Start of floor drain one in room R001
XX	54.2	3868	End of floor drain one in room R001
YY	54.6	3897	Start of floor drain two in room R001
ZZ	55.6	3971	End of floor drain two in room R001
AB	56.1	4008	Start of the post-exit ambient
CB	57.1	4079	End of the post-exit ambient
DB	57.8	4129	Start of 30 mL/min spike
EB	58.9	4203	End of 30 mL/min spike

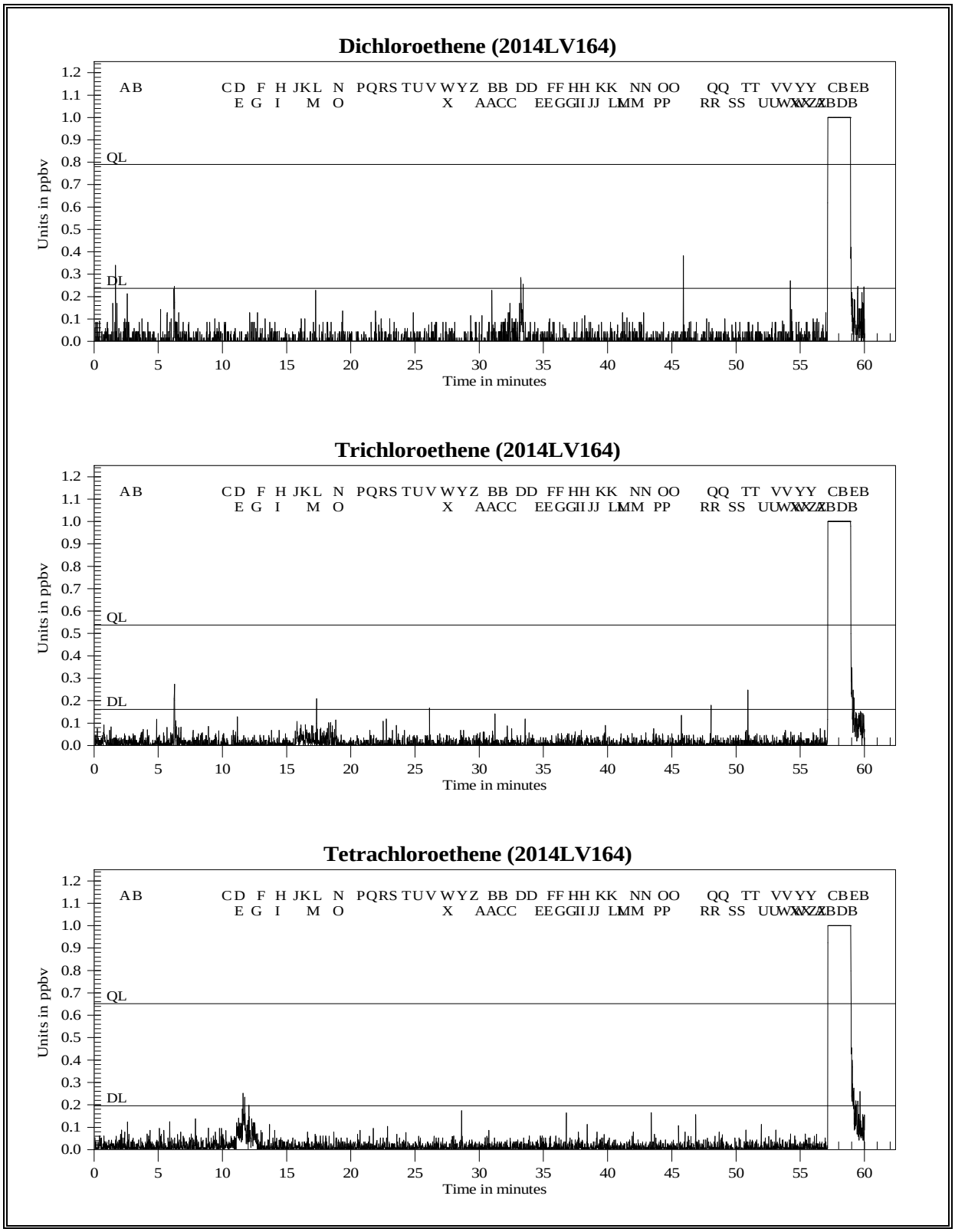

Figure 19c Unit BLD N-239 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 19d

TAGA Target Compound Summary for Unit BLD N-239 Survey One
File: 2014LV164 Acquired on 30 April 2014 at 13:44:03

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
C - D	Room 089	DL=0.24	DL=0.16	DL=0.20
E - F	Room 017	DL=0.24	DL=0.16	DL=0.20
G - H	Room 015	DL=0.24	DL=0.16	DL=0.20
I - J	Room 013	DL=0.24	DL=0.16	DL=0.20
K - L	Room 012B	DL=0.24	DL=0.16	DL=0.20
M - N	Room 012A	DL=0.24	DL=0.16	DL=0.20
O - P	Room 086	DL=0.24	DL=0.16	DL=0.20
Q - R	Room B39	DL=0.24	DL=0.16	DL=0.20
S - T	Room 019	DL=0.24	DL=0.16	DL=0.20
U - V	Room B34	DL=0.24	DL=0.16	DL=0.20
W - X	Room B32	DL=0.24	DL=0.16	DL=0.20
Y - Z	Room B33	DL=0.24	DL=0.16	DL=0.20
AA - BB	Room B35	DL=0.24	DL=0.16	DL=0.20
CC - DD	Room B30	DL=0.24	DL=0.16	DL=0.20
EE - FF	Room B37	DL=0.24	DL=0.16	DL=0.20
GG - HH	Room 37C	DL=0.24	DL=0.16	DL=0.20
II - JJ	Room 37B	DL=0.24	DL=0.16	DL=0.20
KK - LL	Room 37D	DL=0.24	DL=0.16	DL=0.20
MM - NN	Room 37A	DL=0.24	DL=0.16	DL=0.20
OO - PP	Room 37E	DL=0.24	DL=0.16	DL=0.20
QQ - RR	Room B49	DL=0.24	DL=0.16	DL=0.20
SS - TT	Room B50	DL=0.24	DL=0.16	DL=0.20
UU - VV	Room R001	DL=0.24	DL=0.16	DL=0.20
WW - XX	Floor drain one in room R001	DL=0.24	DL=0.16	DL=0.20
YY - ZZ	Floor drain two in room R001	DL=0.24	DL=0.16	DL=0.20
AB - CB	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
DB - EB	30 mL/min spike	7.2	7.4	7.4

Concentrations are given in parts per billion by volume

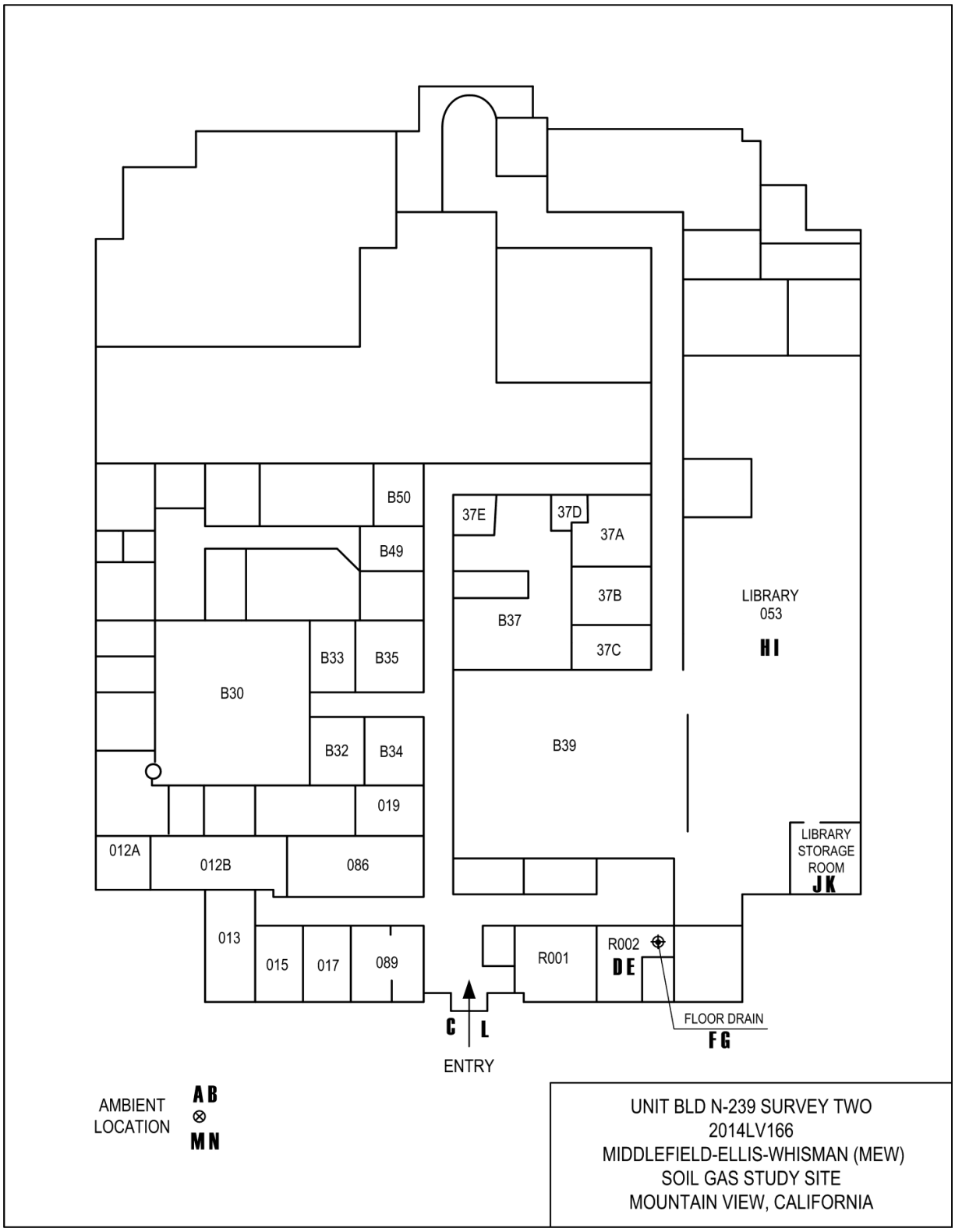

Figure 20a Unit BLD N-239 Survey Two Floor Plan

Figure 20b

TAGA File Event Summary
File: 2014LV166 Acquired on 30 April 2014 at 14:49:57
Title: Unit BLD N-239 Survey Two

Flag	Offset Time	Offset Sequence	Description
A	1.7	124	Start of the pre-entry ambient
B	2.7	194	End of the pre-entry ambient
C	6.4	458	Entering the unit
D	9.5	678	Start of room R002
E	10.5	750	End of room R002
F	10.9	781	Start of floor drain in room R102
G	12.0	856	End of floor drain in room R102
H	13.4	960	Start of library room 053
I	14.4	1032	End of library room 053
J	15.7	1121	Start of the library storage room
K	16.7	1192	End of the library storage room
L	18.5	1320	Exiting the unit
M	18.8	1342	Start of the post-exit ambient
N	19.7	1408	End of the post-exit ambient
O	20.6	1471	Start of 30 mL/min spike
P	22.0	1571	End of 30 mL/min spike

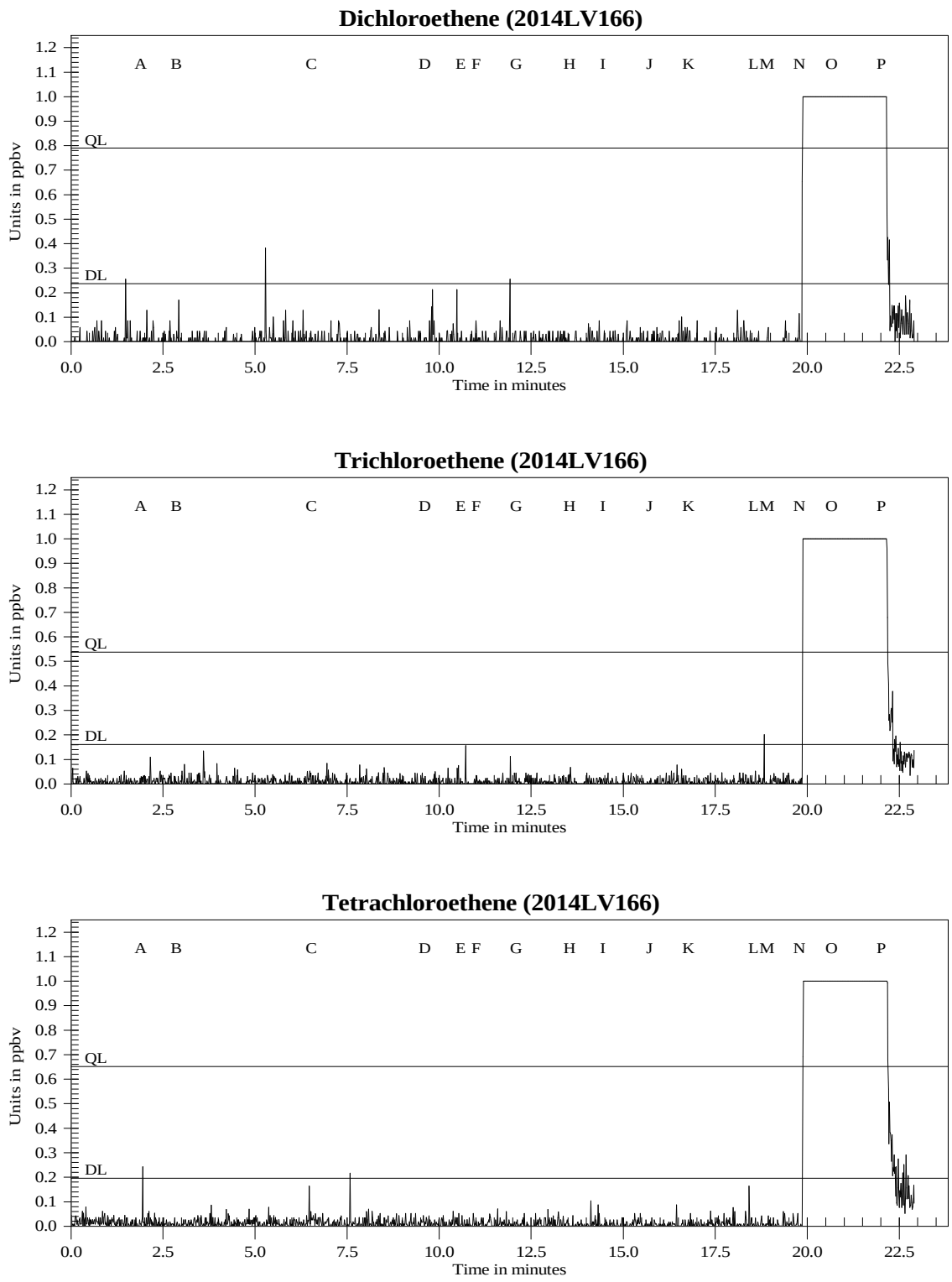

Figure 20c Unit BLD N-239 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 20d

TAGA Target Compound Summary for Unit BLD N-239 Survey Two
File: 2014LV166 Acquired on 30 April 2014 at 14:49:57

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Room R002	DL=0.24	DL=0.16	DL=0.20
F - G	Floor drain in room R102	DL=0.24	DL=0.16	DL=0.20
H - I	Library room 053	DL=0.24	DL=0.16	DL=0.20
J - K	Library storage room	DL=0.24	DL=0.16	DL=0.20
M - N	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
O - P	30 mL/min spike	7.3	7.3	7.3

Concentrations are given in parts per billion by volume

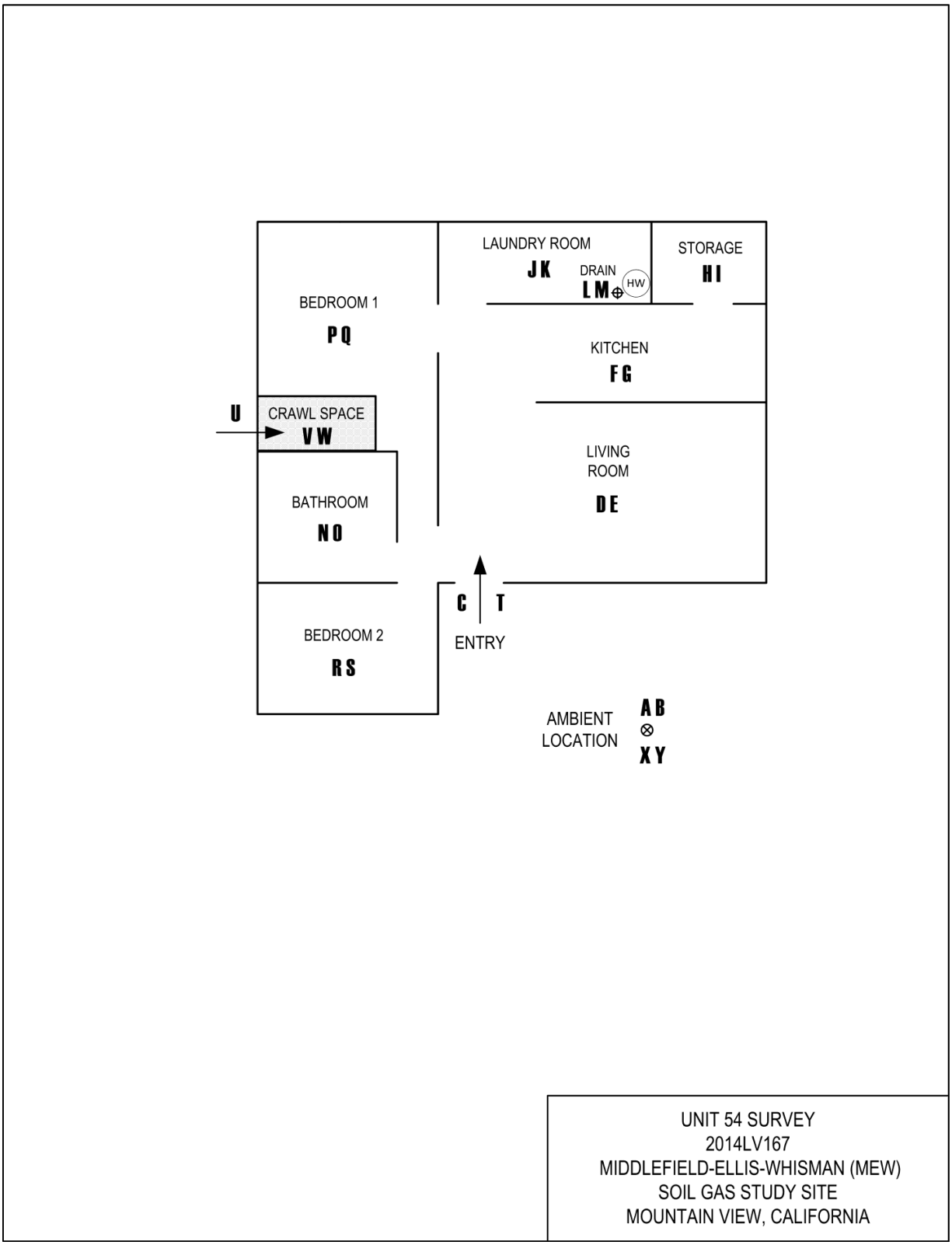

Figure 21a Unit 54 Survey Floor Plan

Figure 21b

TAGA File Event Summary
File: 2014LV167 Acquired on 30 April 2014 at 16:10:52
Title: Unit 54 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.8	129	Start of the pre-entry ambient
B	2.8	200	End of the pre-entry ambient
C	5.0	359	Entering the unit
D	5.3	376	Start of the living room
E	6.3	449	End of the living room
F	6.8	483	Start of the kitchen
G	7.8	556	End of the kitchen
H	8.1	577	Start of the storage
I	9.1	649	End of the storage
J	9.4	675	Start of the laundry room
K	10.4	745	End of the laundry room
L	10.8	770	Start of the water heater drain in laundry room
M	11.8	843	End of the water heater drain in laundry room
N	12.5	892	Start of the bathroom
O	13.6	973	End of the bathroom
P	14.1	1006	Start of bedroom one
Q	15.1	1078	End of bedroom one
R	15.8	1126	Start of bedroom two
S	16.8	1198	End of bedroom two
T	17.2	1229	Exiting the unit
U	19.1	1367	Entering the crawl space
V	19.7	1409	Start of the crawl space
W	20.7	1481	End of the crawl space
X	22.1	1580	Start of the post-exit ambient
Y	23.0	1644	End of the post-exit ambient
Z	24.4	1743	Start of 30 mL/min spike
AA	25.6	1825	End of 30 mL/min spike

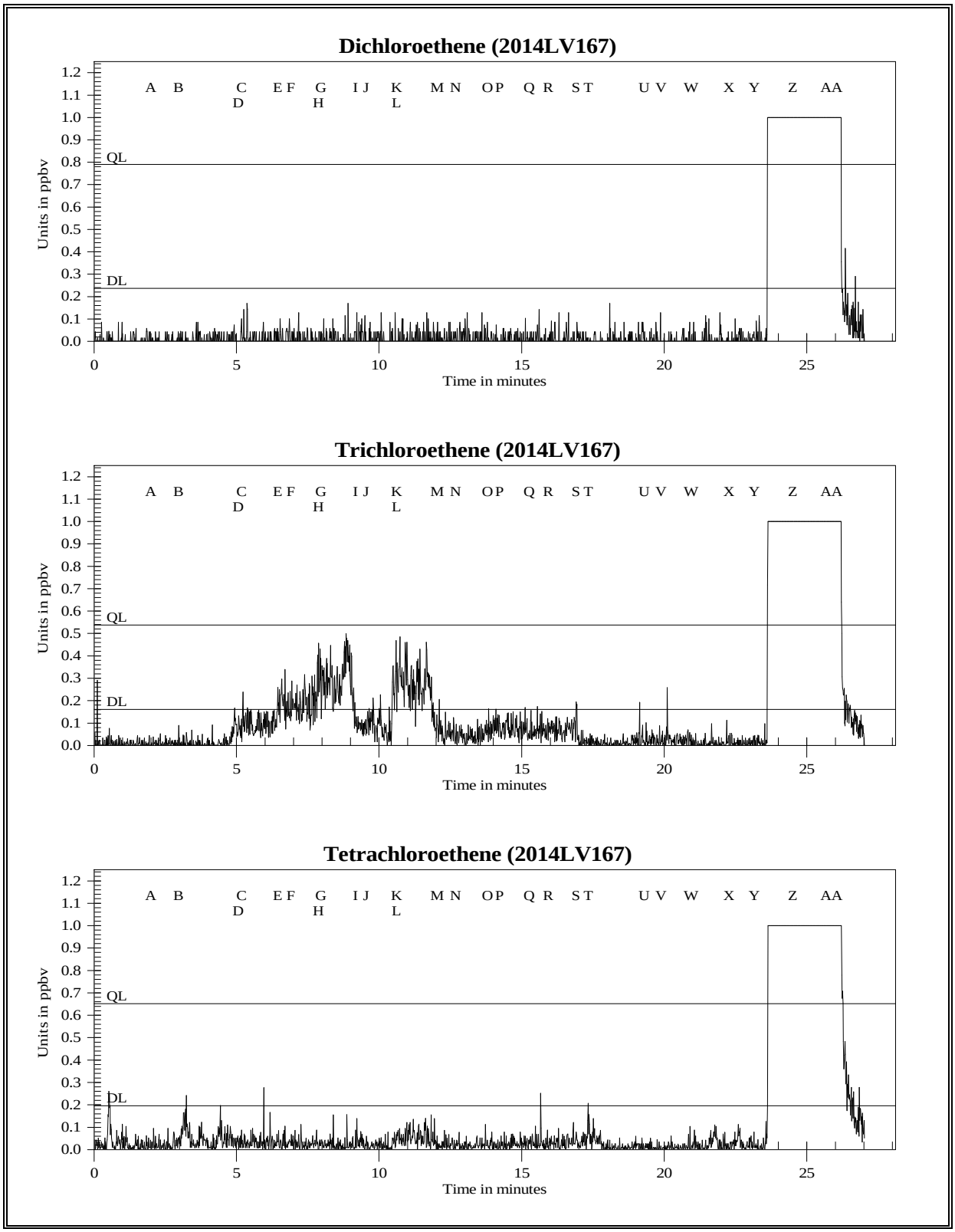

Figure 21c Unit 54 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 21d

TAGA Target Compound Summary for Unit 54
File: 2014LV167 Acquired on 30 April 2014 at 16:10:52

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Living room	DL=0.24	DL=0.16	DL=0.20
F - G	Kitchen	DL=0.24	0.18J	DL=0.20
H - I	Storage	DL=0.24	0.30J	DL=0.20
J - K	Laundry room	DL=0.24	DL=0.16	DL=0.20
L - M	Water heater drain in laundry room	DL=0.24	0.28J	DL=0.20
N - O	Bathroom	DL=0.24	DL=0.16	DL=0.20
P - Q	Bedroom one	DL=0.24	DL=0.16	DL=0.20
R - S	Bedroom two	DL=0.24	DL=0.16	DL=0.20
V - W	Crawl space	DL=0.24	DL=0.16	DL=0.20
X - Y	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
Z - AA	30 mL/min spike	7.7	7.3	7.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

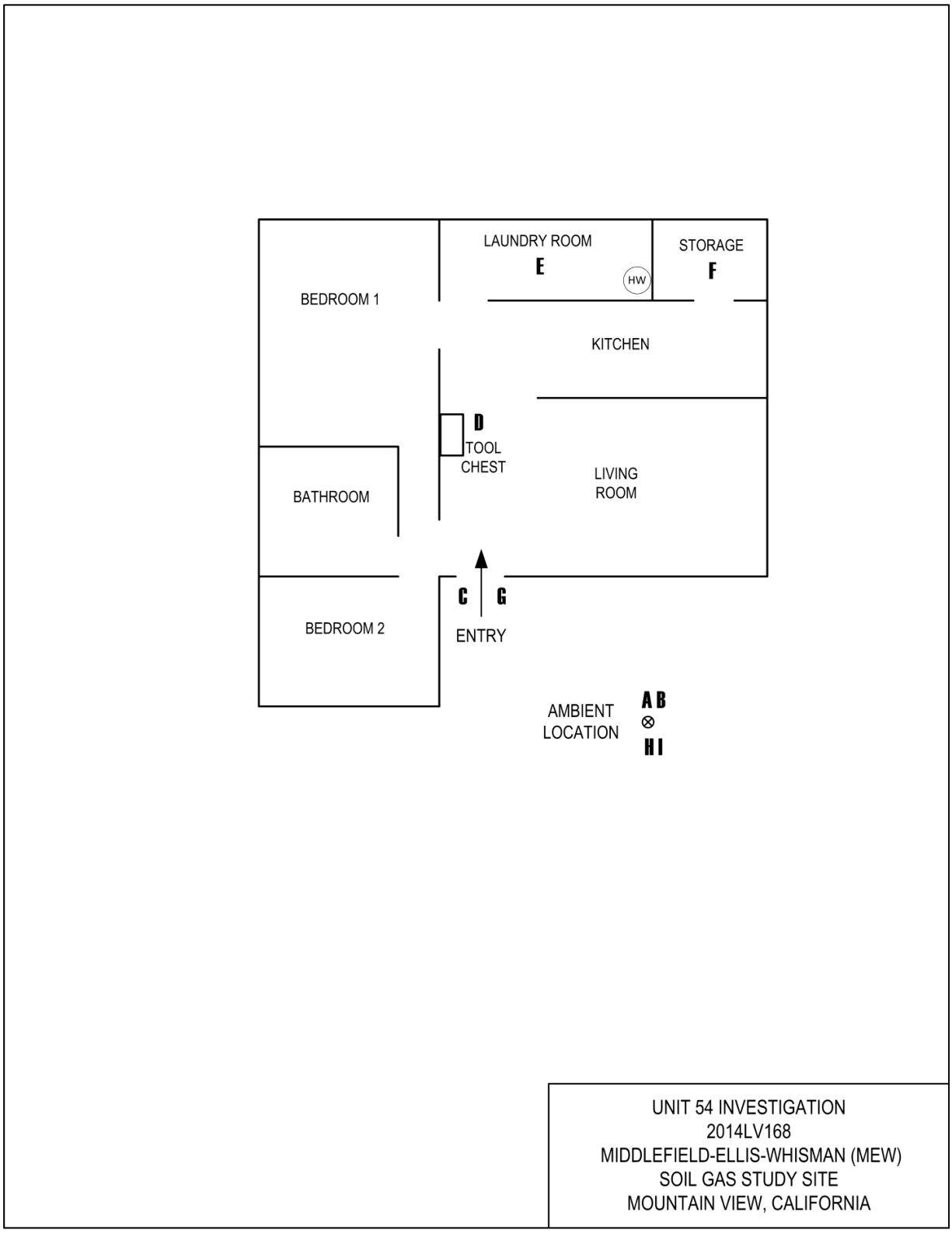

Figure 22a Unit 54 Investigation Floor Plan

Figure 22b

TAGA File Event Summary
File: 2014LV168 Acquired on 30 April 2014 at 16:44:17
Title: Unit 54 Investigation

Flag	Offset Time	Offset Sequence	Description
A	2.2	158	Start of the pre-entry ambient
B	3.7	265	End of the pre-entry ambient
C	6.3	451	Entering the unit
D	6.8	488	Sweeping the tool chest
E	11.5	825	Moving into laundry room
F	12.8	913	Sweeping storage room
G	15.4	1103	Exiting the unit
H	16.1	1151	Start of the post-exit ambient
I	17.2	1231	End of the post-exit ambient
J	18.0	1287	Start of 30 mL/min spike
K	19.1	1362	End of 30 mL/min spike

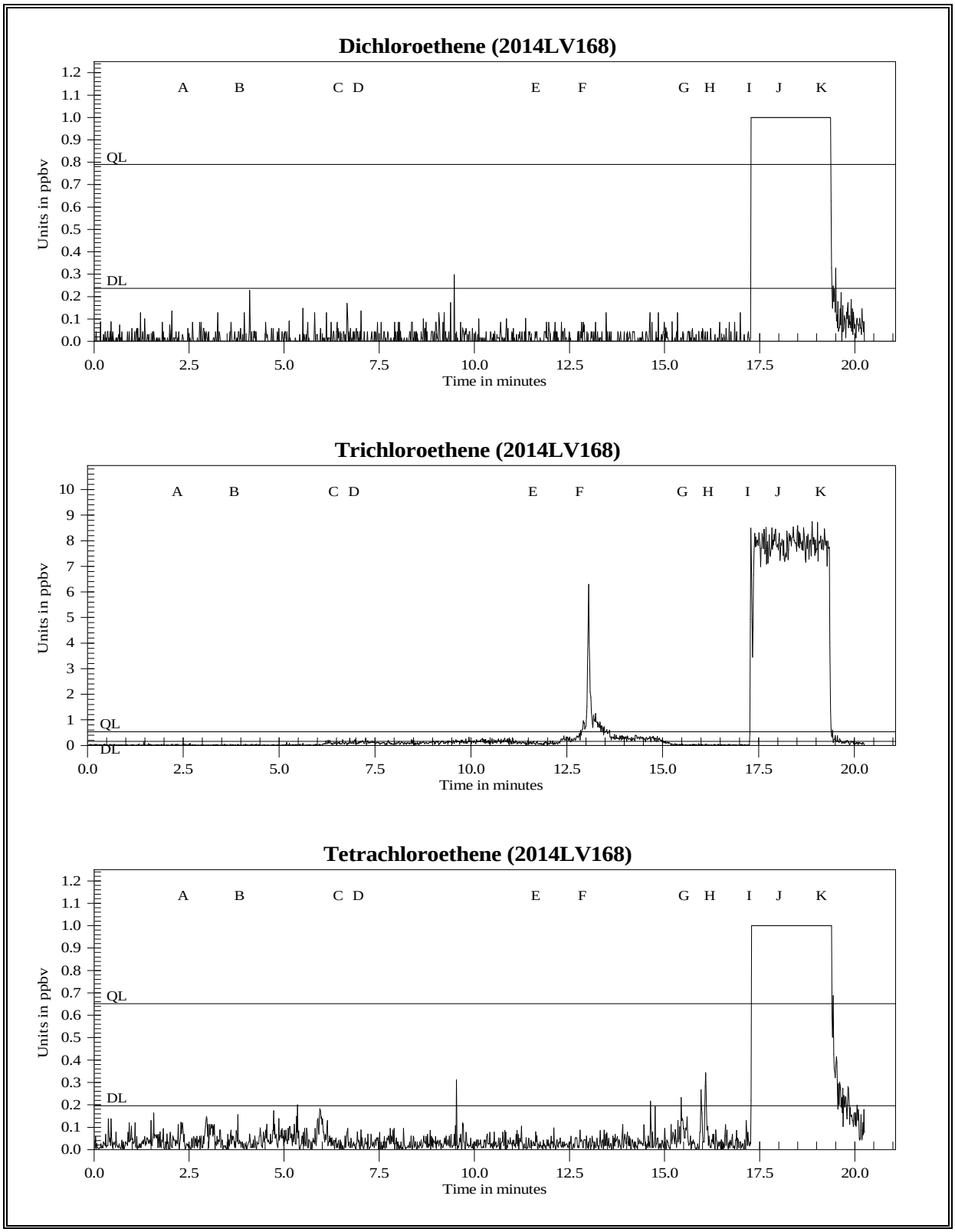

Figure 22c Unit 54 Investigation for Dichloroethene, Trichloroethene, and Tetrachloroethene

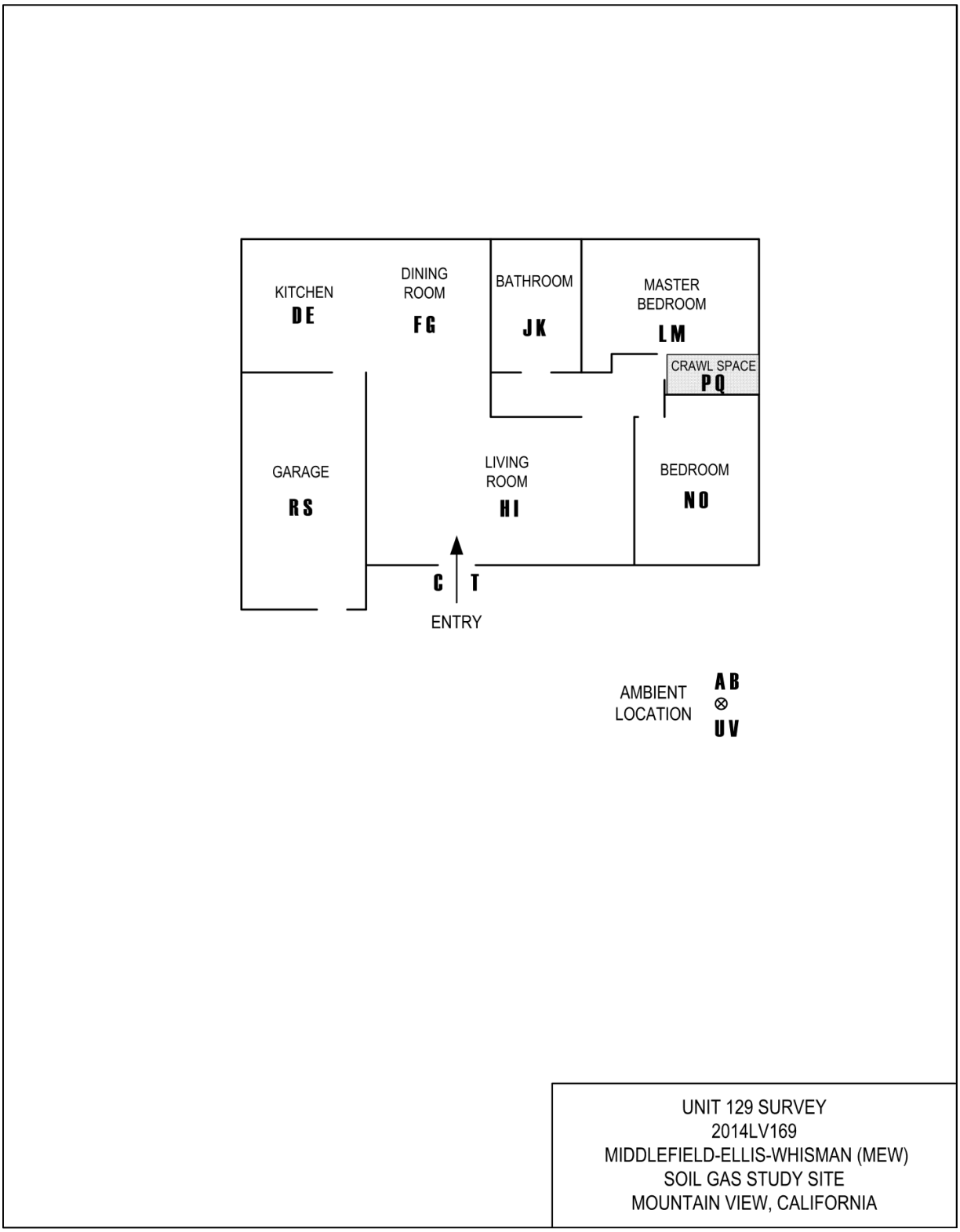

Figure 23a Unit 129 Survey Floor Plan

Figure 23b

TAGA File Event Summary
File: 2014LV169 Acquired on 30 April 2014 at 17:27:06
Title: Unit 129 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.8	130	Start of the pre-entry ambient
B	2.8	200	End of the pre-entry ambient
C	7.8	558	Entering the unit
D	8.1	581	Start of the kitchen
E	9.1	652	End of the kitchen
F	9.5	678	Start of the dining room
G	10.5	748	End of the dining room
H	10.9	779	Start of the living room
I	11.9	852	End of the living room
J	12.5	892	Start of the bathroom
K	13.5	963	End of the bathroom
L	13.9	991	Start of the master bedroom
M	14.9	1063	End of the master bedroom
N	15.3	1092	Start of bedroom
O	16.3	1165	End of bedroom
P	16.8	1198	Start of the crawl space
Q	17.8	1268	End of the crawl space
R	18.5	1320	Start of the garage
S	19.7	1410	End of the garage
T	20.6	1468	Exiting the unit
U	21.9	1566	Start of the post-exit ambient
V	23.0	1642	End of the post-exit ambient
W	24.0	1711	Start of 30 mL/min spike
X	25.0	1786	End of 30 mL/min spike

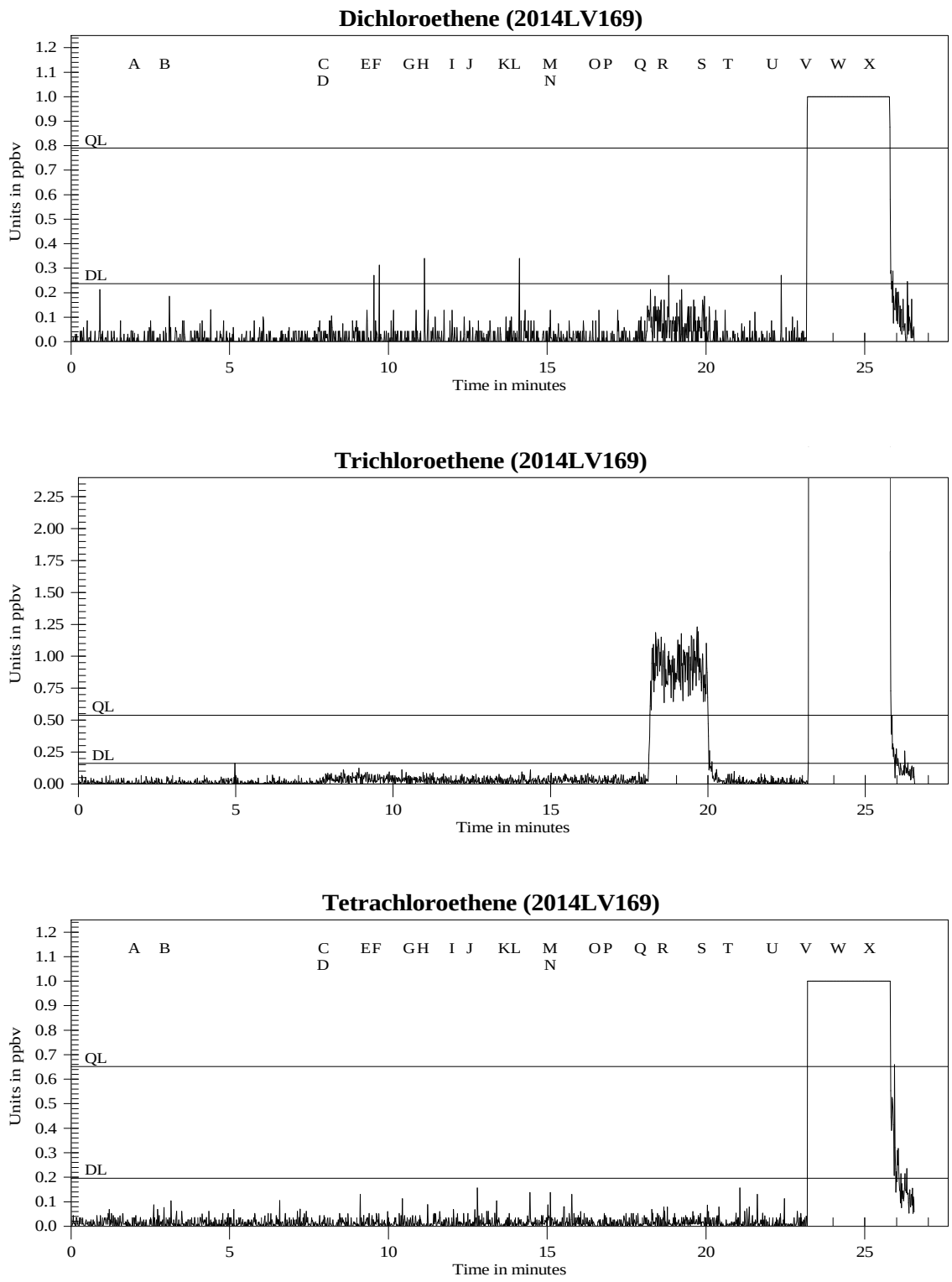

Figure 23c Unit 129 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 23d

TAGA Target Compound Summary for Unit 129
File: 2014LV169 Acquired on 30 April 2014 at 17:27:06

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Kitchen	DL=0.24	DL=0.16	DL=0.20
F - G	Dining room	DL=0.24	DL=0.16	DL=0.20
H - I	Living room	DL=0.24	DL=0.16	DL=0.20
J - K	Bathroom	DL=0.24	DL=0.16	DL=0.20
L - M	Master bedroom	DL=0.24	DL=0.16	DL=0.20
N - O	Bedroom	DL=0.24	DL=0.16	DL=0.20
P - Q	Crawl space	DL=0.24	DL=0.16	DL=0.20
R - S	Garage	DL=0.24	0.92	DL=0.20
U - V	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
W - X	30 mL/min spike	8.2	8.1	7.9

Concentrations are given in parts per billion by volume

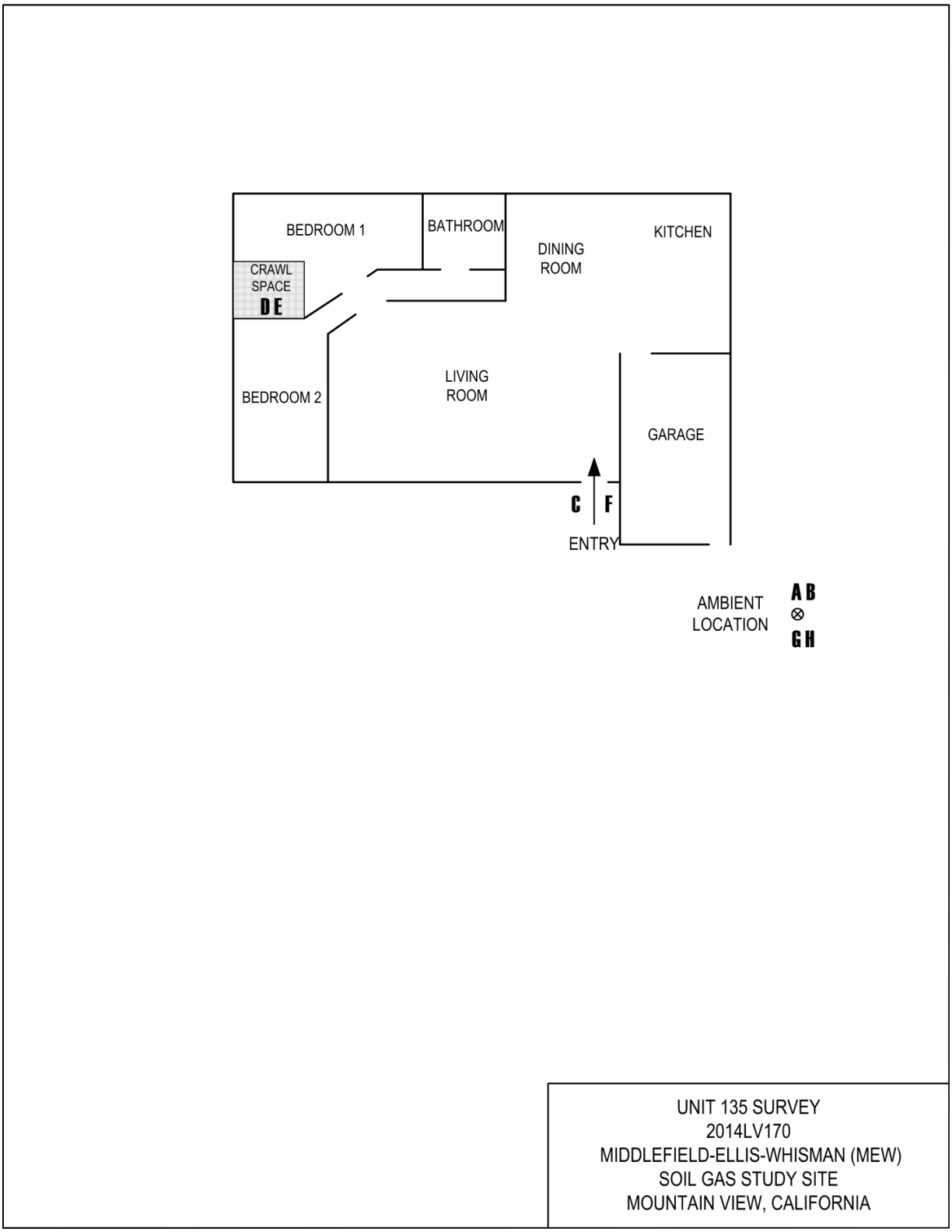

Figure 24a Unit 135 Survey Floor Plan

Figure 24b

TAGA File Event Summary
File: 2014LV170 Acquired on 30 April 2014 at 17:55:27
Title: Unit 135 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.7	120	Start of the pre-entry ambient
B	2.7	192	End of the pre-entry ambient
C	3.7	265	Entering the unit
D	4.8	342	Start of the crawl space
E	5.8	414	End of the crawl space
F	6.2	446	Exiting the unit
G	6.8	487	Start of the post-exit ambient
H	7.8	560	End of the post-exit ambient
I	8.7	621	Start of 30 mL/min spike
J	9.8	701	End of 30 mL/min spike

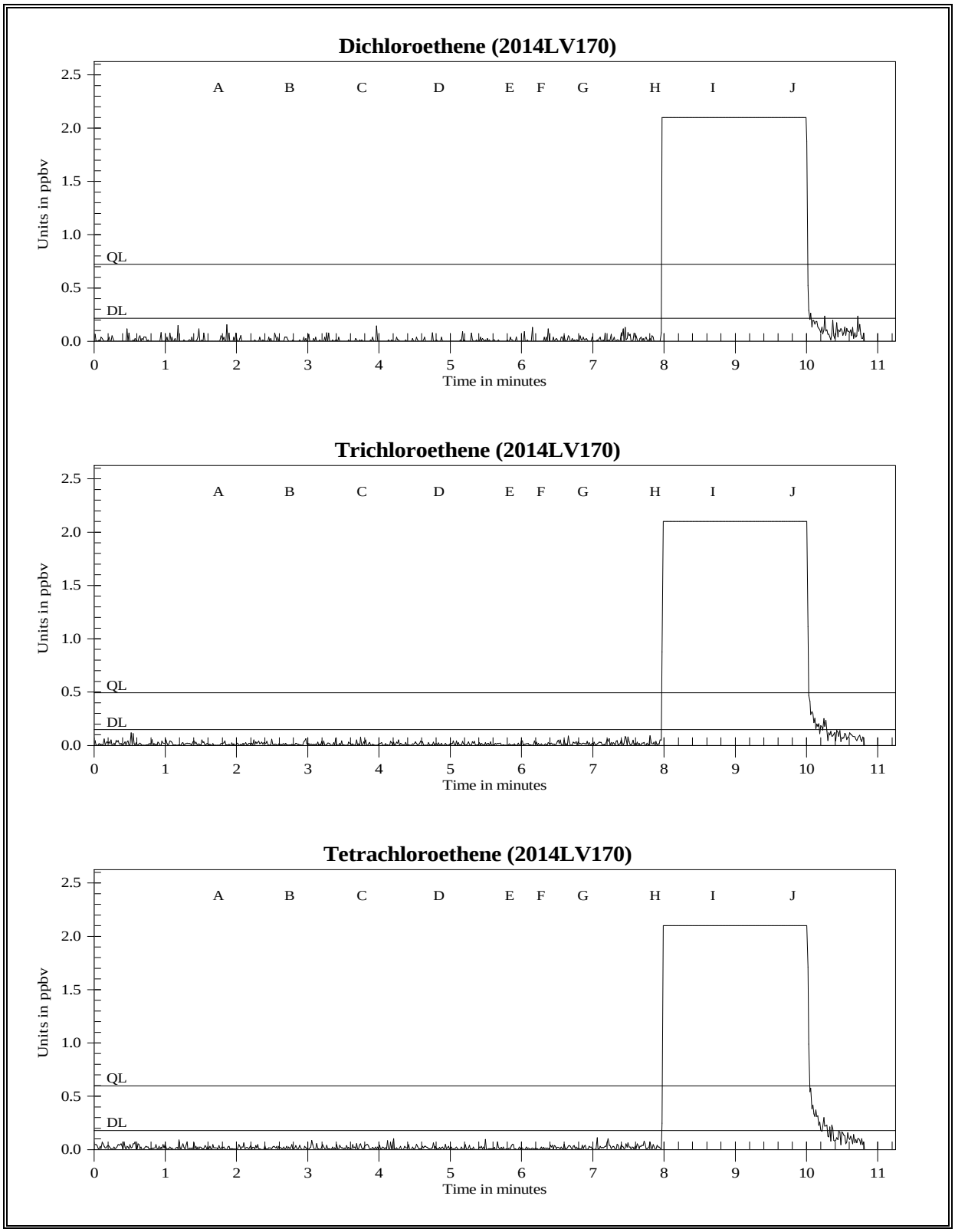

Figure 24c Unit 135 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 24d

TAGA Target Compound Summary for Unit 135
File: 2014LV170 Acquired on 30 April 2014 at 17:55:27

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Crawl space	DL=0.24	DL=0.16	DL=0.20
G - H	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
I - J	30 mL/min spike	8.7	8.2	7.9

Concentrations are given in parts per billion by volume

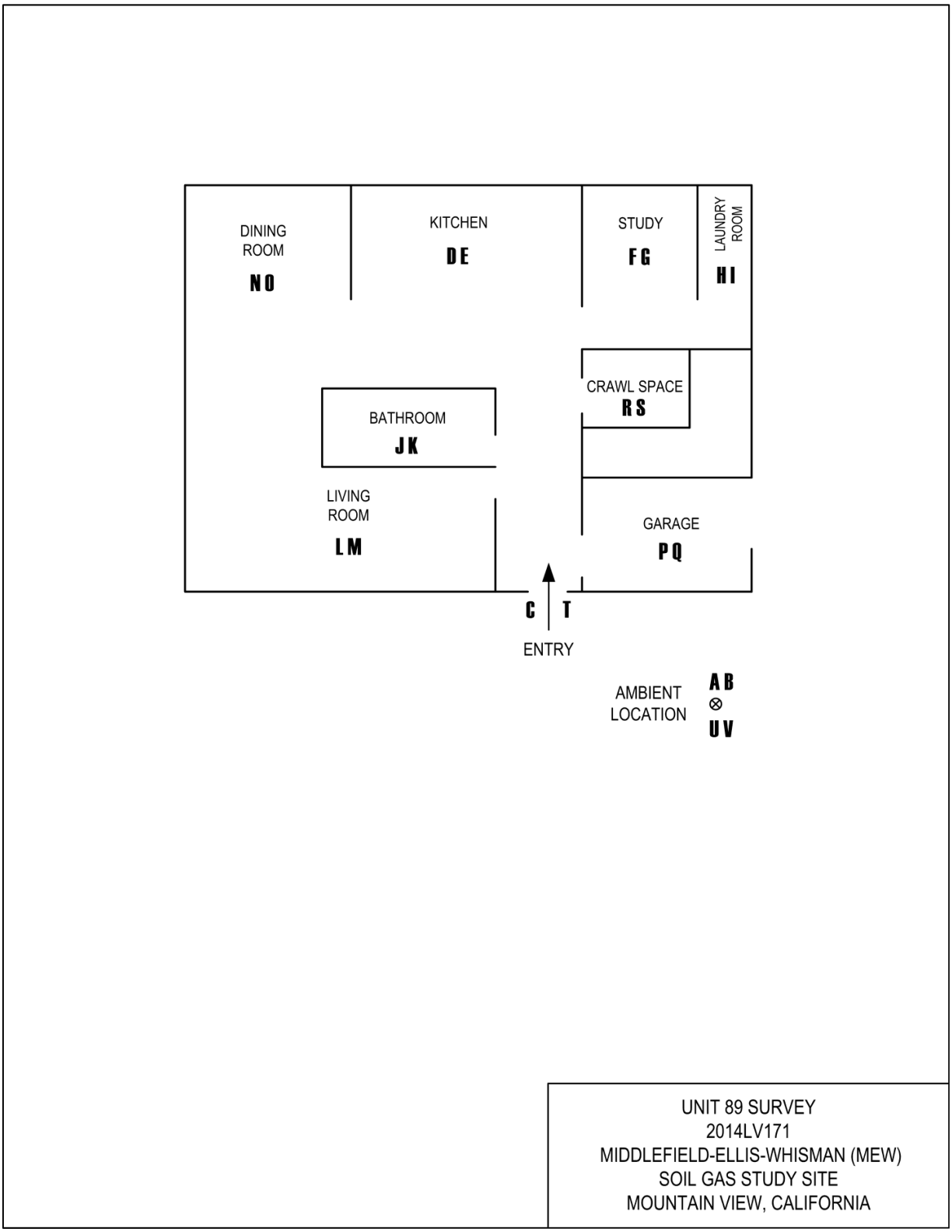

Figure 25a Unit 89 Survey Floor Plan

Figure 25b

TAGA File Event Summary
File: 2014LV171 Acquired on 30 April 2014 at 18:28:09
Title: Unit 89 Survey

Flag	Offset Time	Offset Sequence	Description
A	2.1	150	Start of the pre-entry ambient
B	3.1	225	End of the pre-entry ambient
C	8.2	583	Entering the unit
D	8.7	619	Start of the kitchen
E	9.7	690	End of the kitchen
F	10.0	715	Start of the study
G	11.0	787	End of the study
H	11.4	815	Start of the laundry room
I	12.4	885	End of the laundry room
J	12.9	925	Start of the bathroom
K	13.9	996	End of the bathroom
L	14.4	1026	Start of the living room
M	15.4	1097	End of the living room
N	15.8	1129	Start of the dining room
O	16.8	1202	End of the dining room
P	17.5	1248	Start of the garage
Q	18.5	1320	End of the garage
R	19.7	1409	Start of the crawl space
S	20.7	1481	End of the crawl space
T	21.2	1511	Exiting the unit
U	21.4	1526	Start of the post-exit ambient
V	22.4	1601	End of the post-exit ambient
W	23.4	1671	Start of 30 mL/min spike
X	24.5	1751	End of 30 mL/min spike

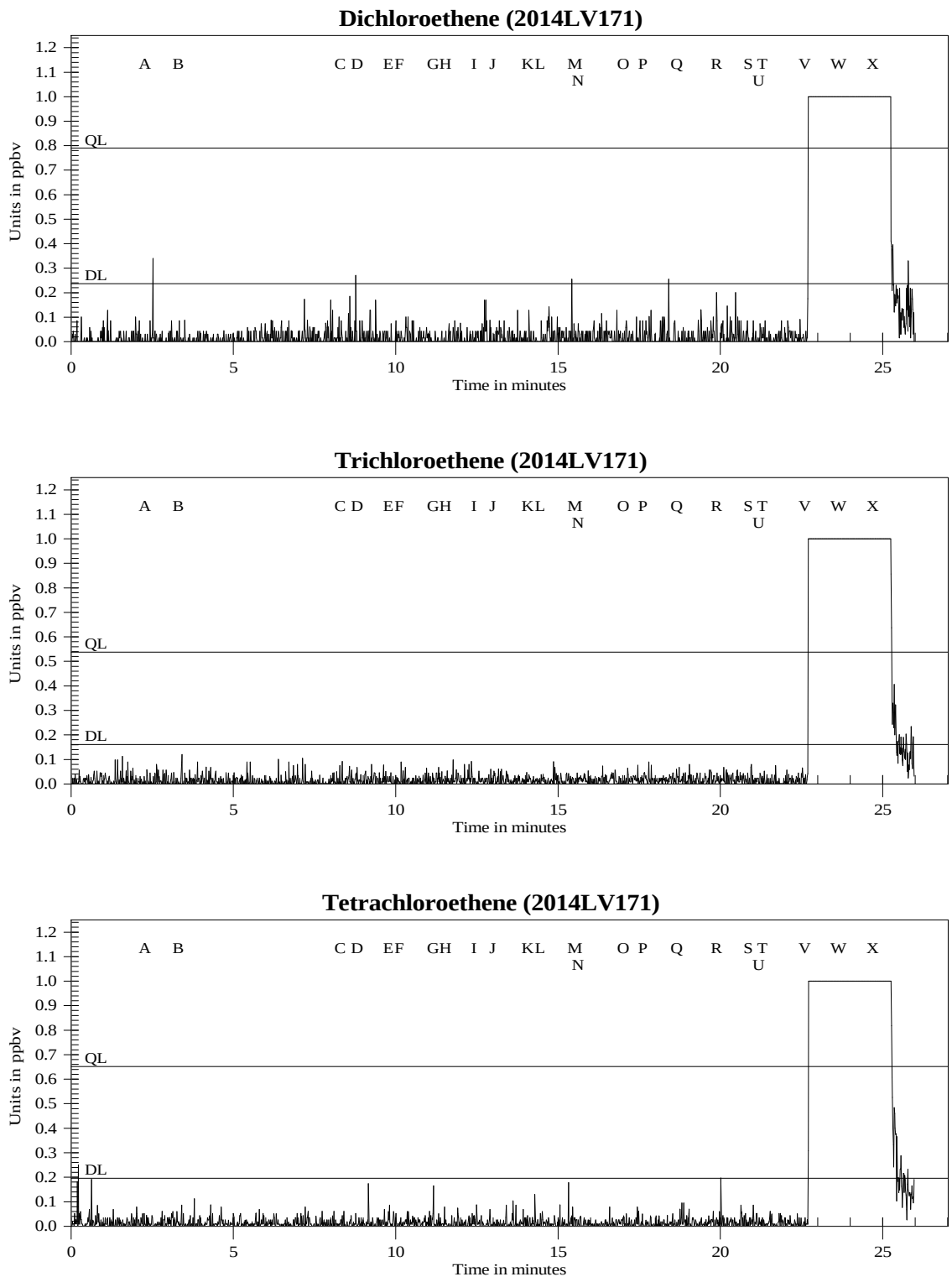

Figure 25c Unit 89 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 25d

TAGA Target Compound Summary for Unit 89
File: 2014LV171 Acquired on 30 April 2014 at 18:28:09

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.24	0.16	0.20
	Quantitation Limits - QL:	0.79	0.54	0.65
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.24	DL=0.16	DL=0.20
D - E	Kitchen	DL=0.24	DL=0.16	DL=0.20
F - G	Study	DL=0.24	DL=0.16	DL=0.20
H - I	Laundry room	DL=0.24	DL=0.16	DL=0.20
J - K	Bathroom	DL=0.24	DL=0.16	DL=0.20
L - M	Living room	DL=0.24	DL=0.16	DL=0.20
N - O	Dining room	DL=0.24	DL=0.16	DL=0.20
P - Q	Garage	DL=0.24	DL=0.16	DL=0.20
R - S	Crawl space	DL=0.24	DL=0.16	DL=0.20
U - V	Post-exit ambient	DL=0.24	DL=0.16	DL=0.20
W - X	30 mL/min spike	8.6	8.0	7.5

Concentrations are given in parts per billion by volume

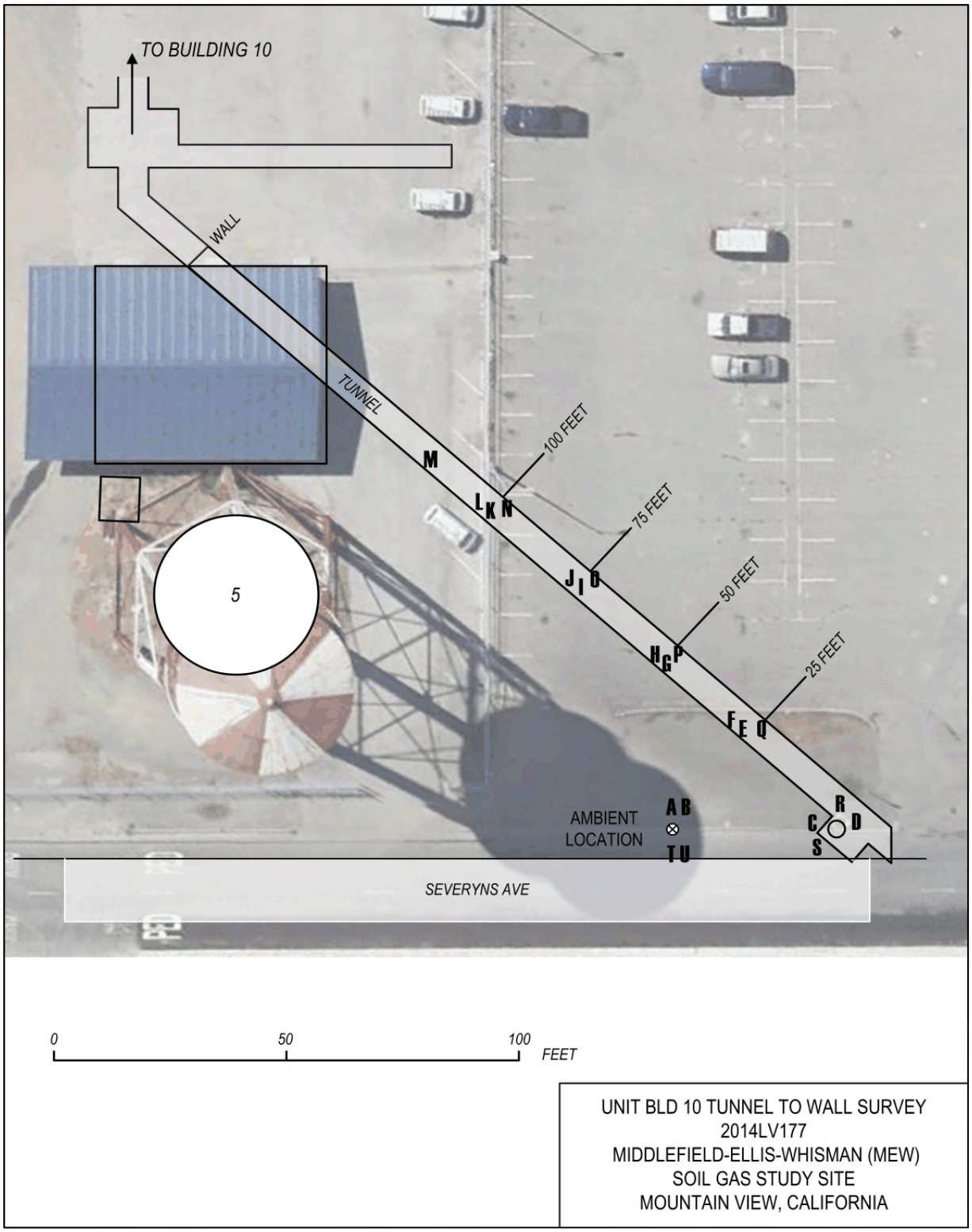

Figure 26a Unit BLD 10 Tunnel to Wall Survey Floor Plan

Figure 26b

TAGA File Event Summary
File: 2014LV177 Acquired on 01 May 2014 at 09:14:57
Title: Unit BLD 10 Tunnel to Wall Survey

Flag	Offset Time	Offset Sequence	Description
A	1.9	134	Start of the pre-entry ambient
B	2.9	207	End of the pre-entry ambient
C	4.9	350	Lowering robot into the tunnel
D	5.3	382	Robot at tunnel floor
E	7.6	546	Holding position at 25 feet into tunnel
F	8.2	584	Continuing into tunnel
G	9.0	642	Holding position at 50 feet into tunnel
H	9.6	683	Continuing into tunnel
I	10.4	745	Holding position at 75 feet into tunnel
J	11.0	788	Continuing into tunnel
K	11.9	853	Holding position at 100 feet into tunnel
L	12.6	898	Continuing into tunnel
M	16.1	1147	Pulling robot back
N	17.0	1211	Robot at 100 feet
O	17.9	1278	Robot at 75 feet
P	18.7	1334	Robot at 50 feet
Q	19.4	1383	Robot at 25 feet
R	21.0	1498	Pulling robot out of the tunnel
S	21.3	1521	Robot is out of the tunnel
T	22.2	1586	Start of the post-exit ambient
U	23.7	1692	End of the post-exit ambient
V	25.3	1805	Start of 30 mL/min spike
W	27.2	1943	End of 30 mL/min spike

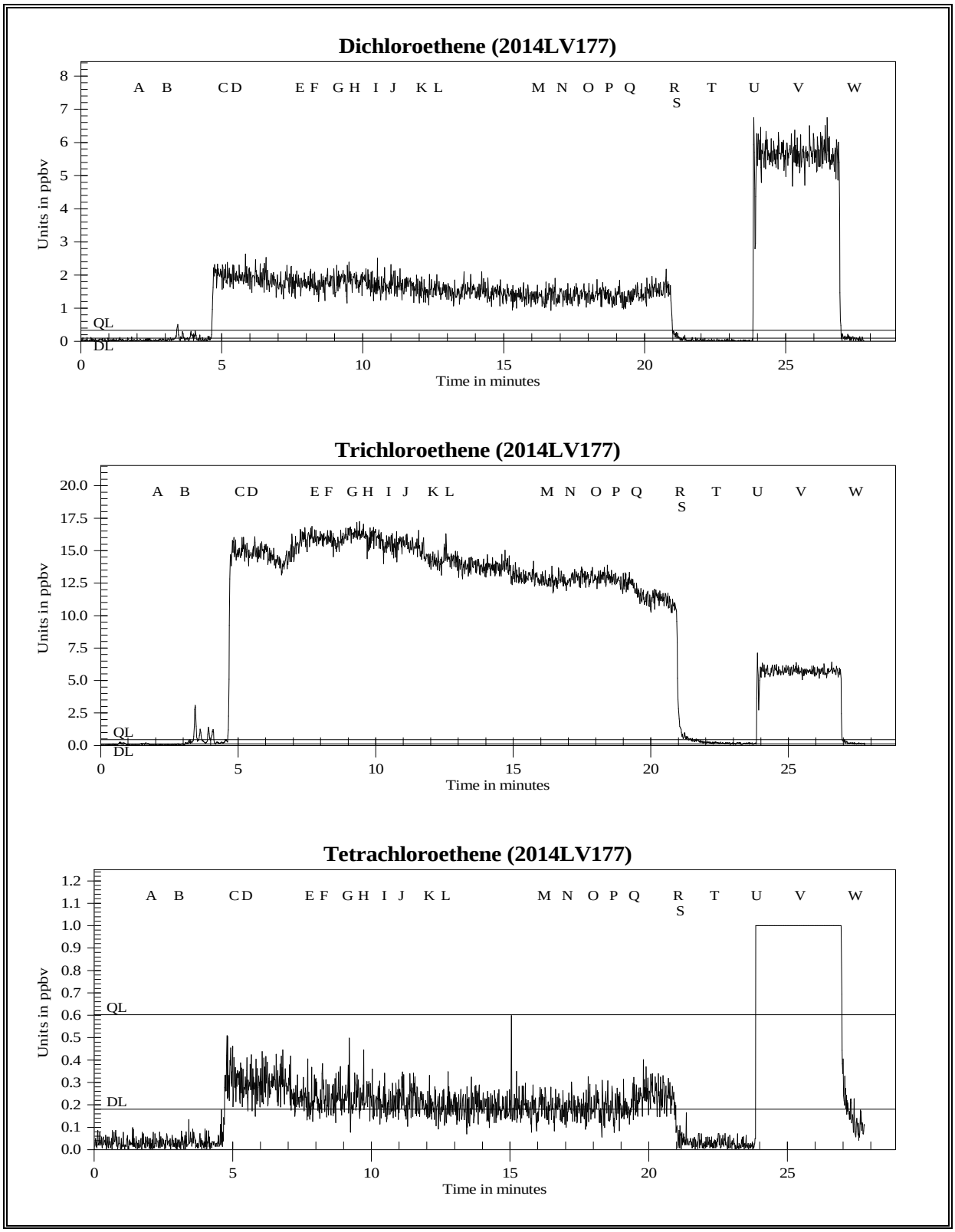

Figure 26c Unit BLD 10 Tunnel to Wall Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

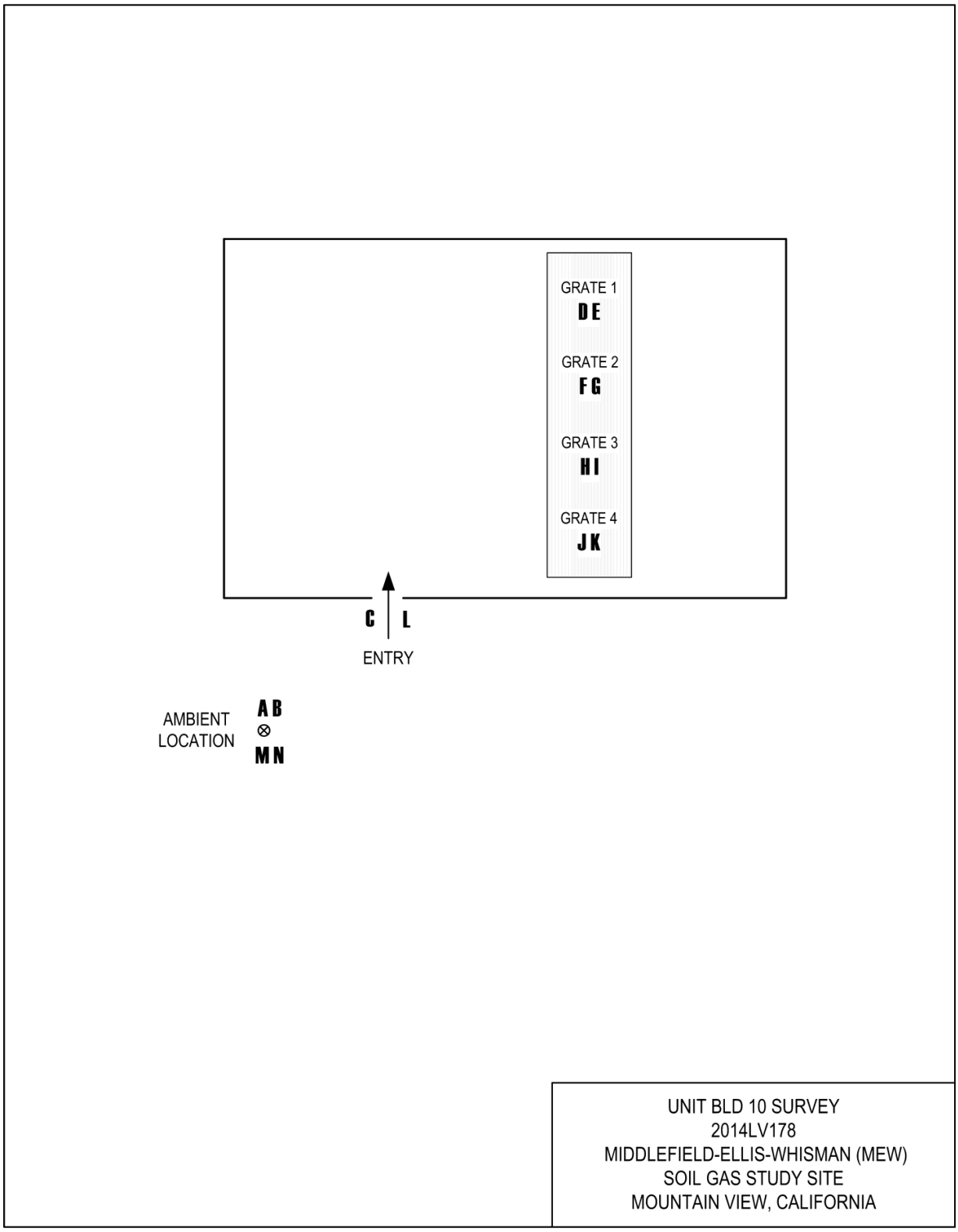

Figure 27a Unit BLD 10 Survey Floor Plan

Figure 27b

TAGA File Event Summary
File: 2014LV178 Acquired on 01 May 2014 at 09:58:12
Title: Unit BLD 10 Survey

Flag	Offset Time	Offset Sequence	Description
A	3.2	227	Start of the pre-entry ambient
B	4.2	301	End of the pre-entry ambient
C	9.4	669	Entering the unit
D	10.2	726	Start of grate one
E	11.2	797	End of grate one
F	11.6	829	Start of grate two
G	12.6	901	End of grate two
H	13.0	928	Start of grate three
I	14.0	1003	End of grate three
J	14.5	1035	Start of grate four
K	16.0	1140	End of grate four
L	16.5	1179	Exiting the unit
M	17.5	1251	Start of the post-exit ambient
N	18.6	1331	End of the post-exit ambient
O	19.6	1402	Start of 30 mL/min spike
P	20.5	1467	End of 30 mL/min spike

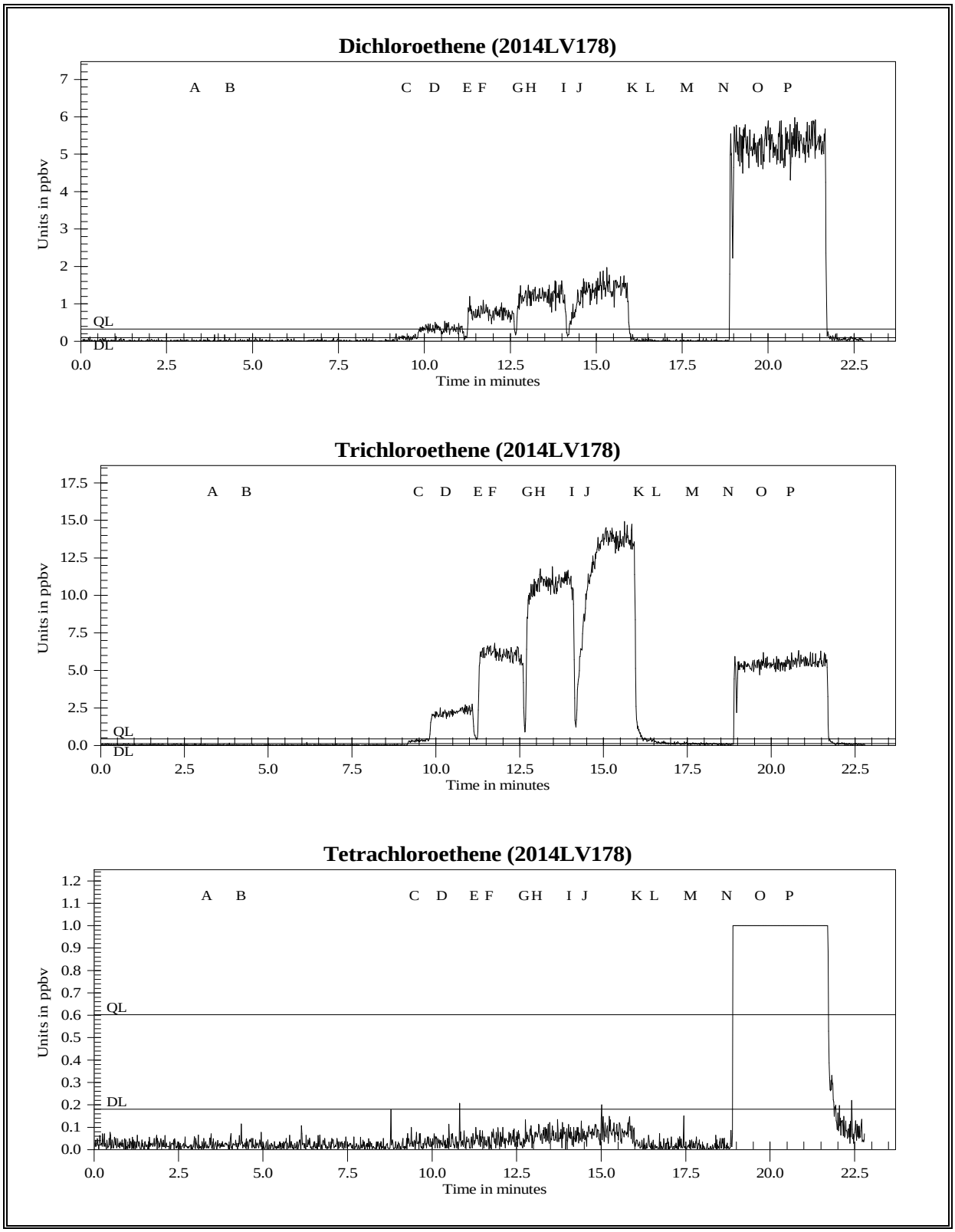

Figure 27c Unit BLD 10 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 27d

TAGA Target Compound Summary for Unit BLD 10
File: 2014LV178 Acquired on 01 May 2014 at 09:58:12

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.098	0.13	0.18
	Quantitation Limits - QL:	0.33	0.44	0.60
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.098	DL=0.13	DL=0.18
D - E	Grate one	0.33	2.2	DL=0.18
F - G	Grate two	0.76	6.0	DL=0.18
H - I	Grate three	1.2	11.	DL=0.18
J - K	Grate four	1.4	13.	DL=0.18
M - N	Post-exit ambient	DL=0.098	DL=0.13	DL=0.18
O - P	30 mL/min spike	5.2	5.4	5.4

Concentrations are given in parts per billion by volume

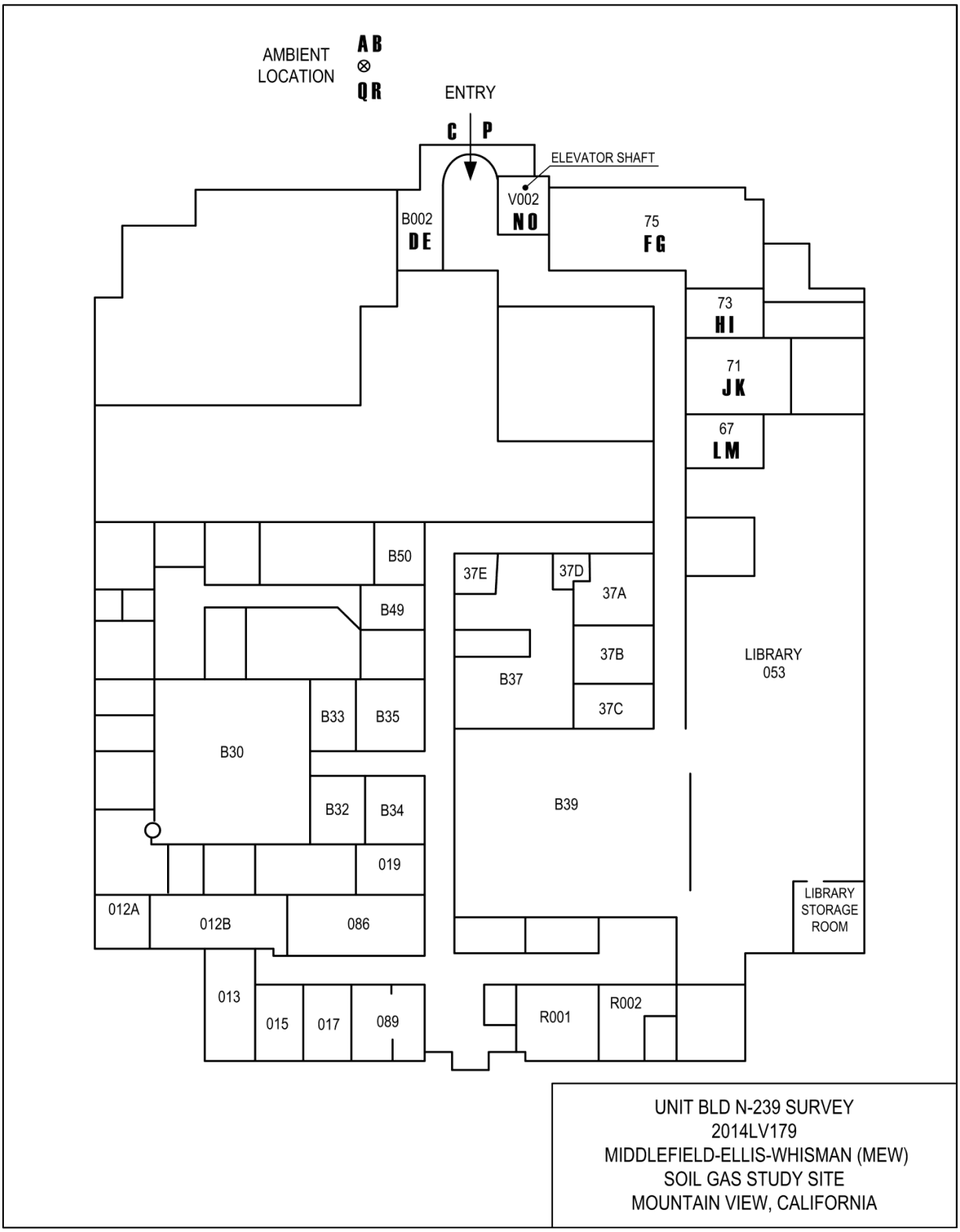

Figure 28a Unit BLD N-239 Survey Floor Plan

Figure 28b

TAGA File Event Summary
File: 2014LV179 Acquired on 01 May 2014 at 10:54:45
Title: Unit BLD N-239 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.8	132	Start of the pre-entry ambient
B	2.9	206	End of the pre-entry ambient
C	3.3	238	Entering the unit
D	7.0	504	Start of room B002
E	8.1	576	End of room B002
F	8.8	632	Start of room 75
G	9.9	704	End of room 75
H	10.8	770	Start of room 73
I	11.8	840	End of room 73
J	12.3	876	Start of room 71
K	13.2	946	End of room 71
L	15.2	1084	Start of room 67
M	16.2	1154	End of room 67
N	19.5	1396	Start of elevator shaft (V002)
O	20.7	1479	End of elevator shaft (V002)
P	22.3	1594	Exiting the unit
Q	22.6	1613	Start of the post-exit ambient
R	23.7	1691	End of the post-exit ambient
S	24.7	1762	Start of 30 mL/min spike
T	25.9	1852	End of 30 mL/min spike

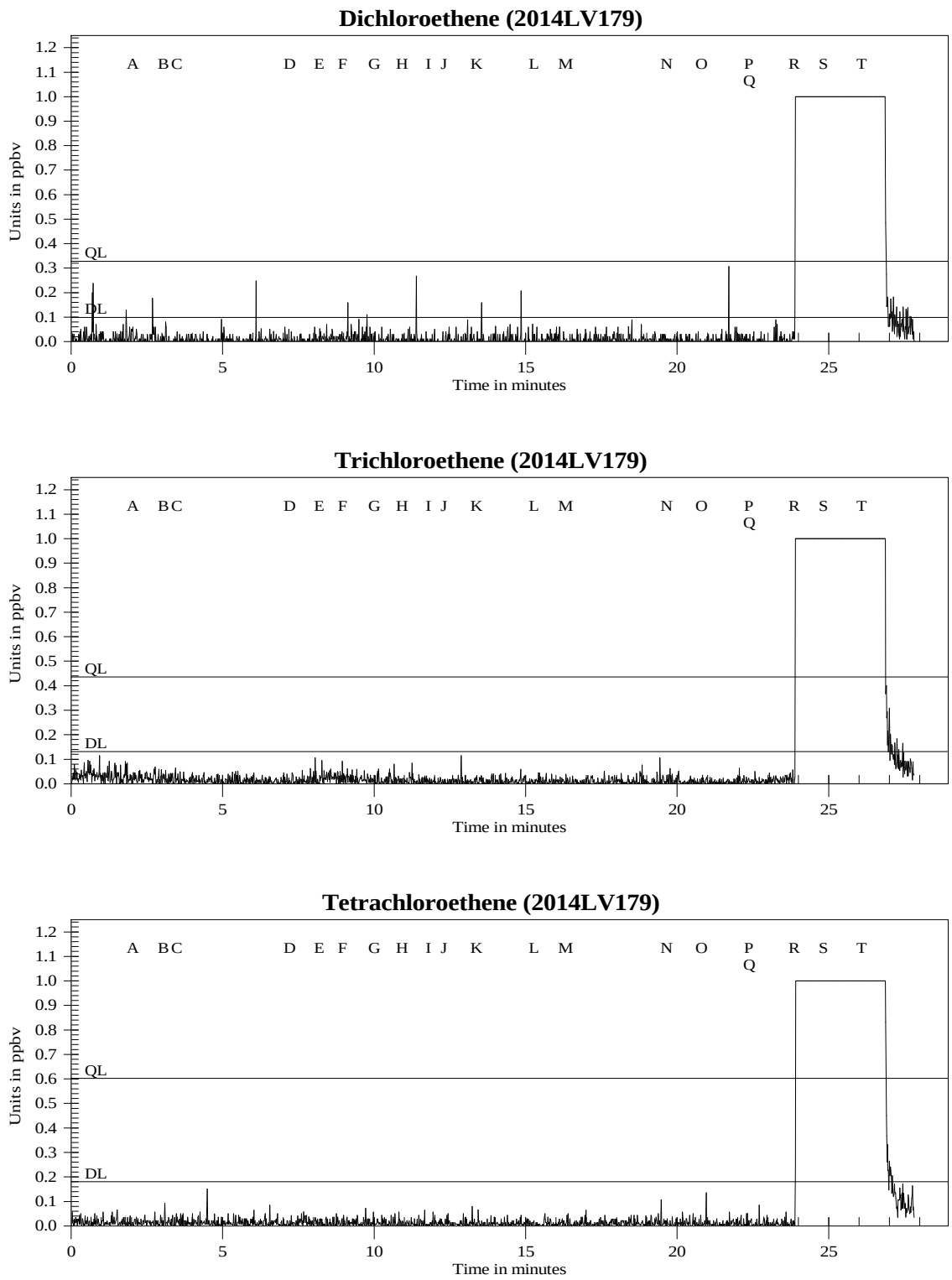

Figure 28c Unit BLD N-239 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 28d

TAGA Target Compound Summary for Unit BLD N-239
File: 2014LV179 Acquired on 01 May 2014 at 10:54:45

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.098	0.13	0.18
	Quantitation Limits - QL:	0.33	0.44	0.60
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.098	DL=0.13	DL=0.18
D - E	Room B002	DL=0.098	DL=0.13	DL=0.18
F - G	Room 75	DL=0.098	DL=0.13	DL=0.18
H - I	Room 73	DL=0.098	DL=0.13	DL=0.18
J - K	Room 71	DL=0.098	DL=0.13	DL=0.18
L - M	Room 67	DL=0.098	DL=0.13	DL=0.18
N - O	Elevator shaft (V002)	DL=0.098	DL=0.13	DL=0.18
Q - R	Post-exit ambient	DL=0.098	DL=0.13	DL=0.18
S - T	30 mL/min spike	6.2	5.9	5.9

Concentrations are given in parts per billion by volume

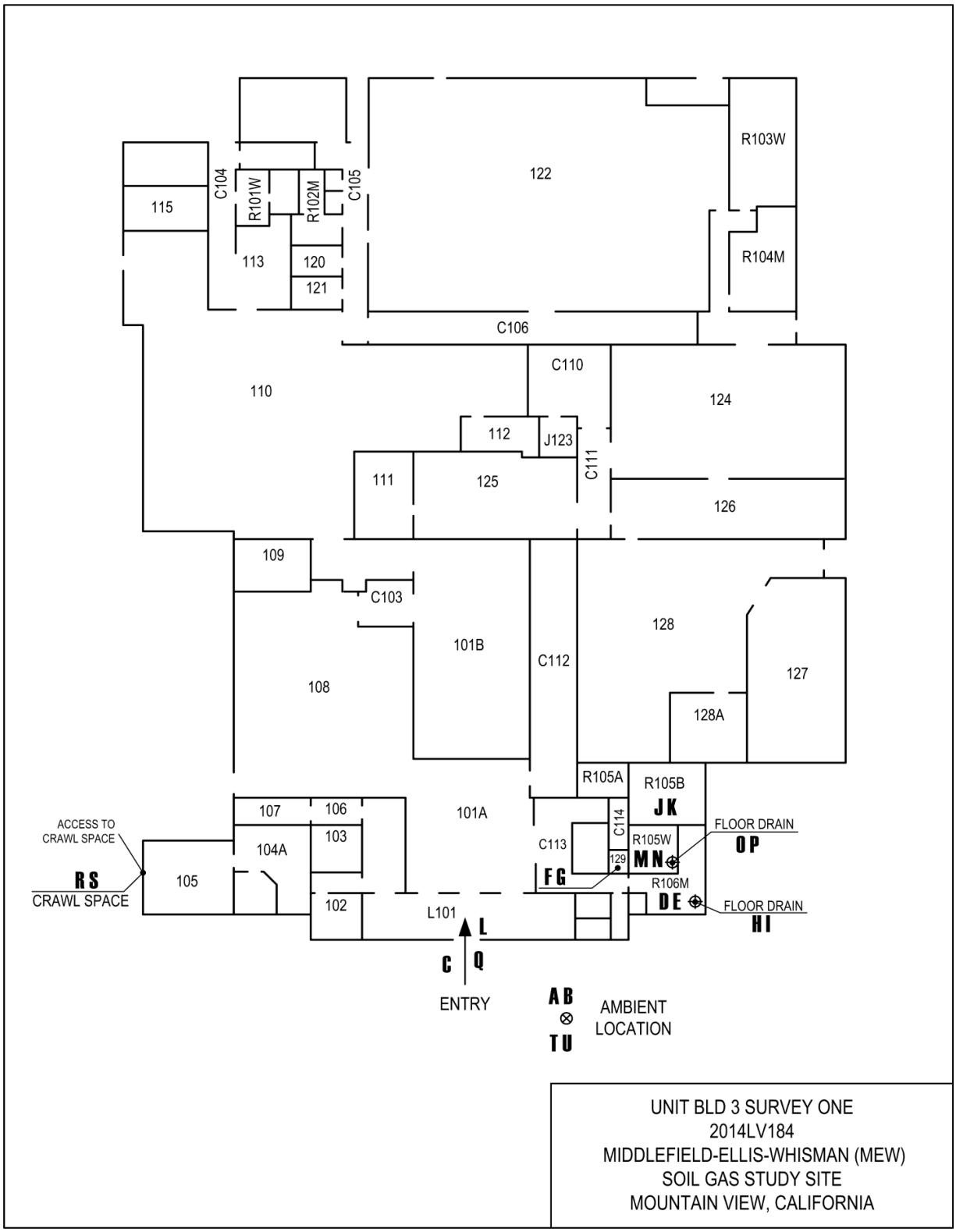

Figure 29a Unit BLD 3 Survey One Floor Plan

Figure 29b

TAGA File Event Summary
File: 2014LV184 Acquired on 02 May 2014 at 08:15:06
Title: Unit BLD 3 Survey One

Flag	Offset Time	Offset Sequence	Description
A	1.8	130	Start of the pre-entry ambient
B	2.9	207	End of the pre-entry ambient
C	4.3	305	Entering the unit
D	5.0	355	Start of room R106M
E	5.9	425	End of room R106M
F	6.6	473	Start of rom 129
G	7.6	545	Start of room 129
H	8.1	576	Start of the floor drain in room R106M
I	9.1	647	End of the floor drain in room R106M
J	10.3	735	Start of room R105B
K	11.7	835	End of room R105B
L	13.3	948	Exiting the unit
M	14.7	1051	Start of room R105W
N	15.8	1130	End of room R105W
O	16.1	1153	Start of the floor drain in room R105W
P	17.1	1224	End of the floor drain in room R105W
Q	18.1	1290	Exiting the unit
R	37.1	2652	Start of the crawl space
S	38.5	2752	End of the crawl space
T	39.6	2830	Start of the post-exit ambient
U	40.8	2910	End of the post-exit ambient
V	41.9	2991	Start of 30 mL/min spike
W	43.1	3075	End of 30 mL/min spike

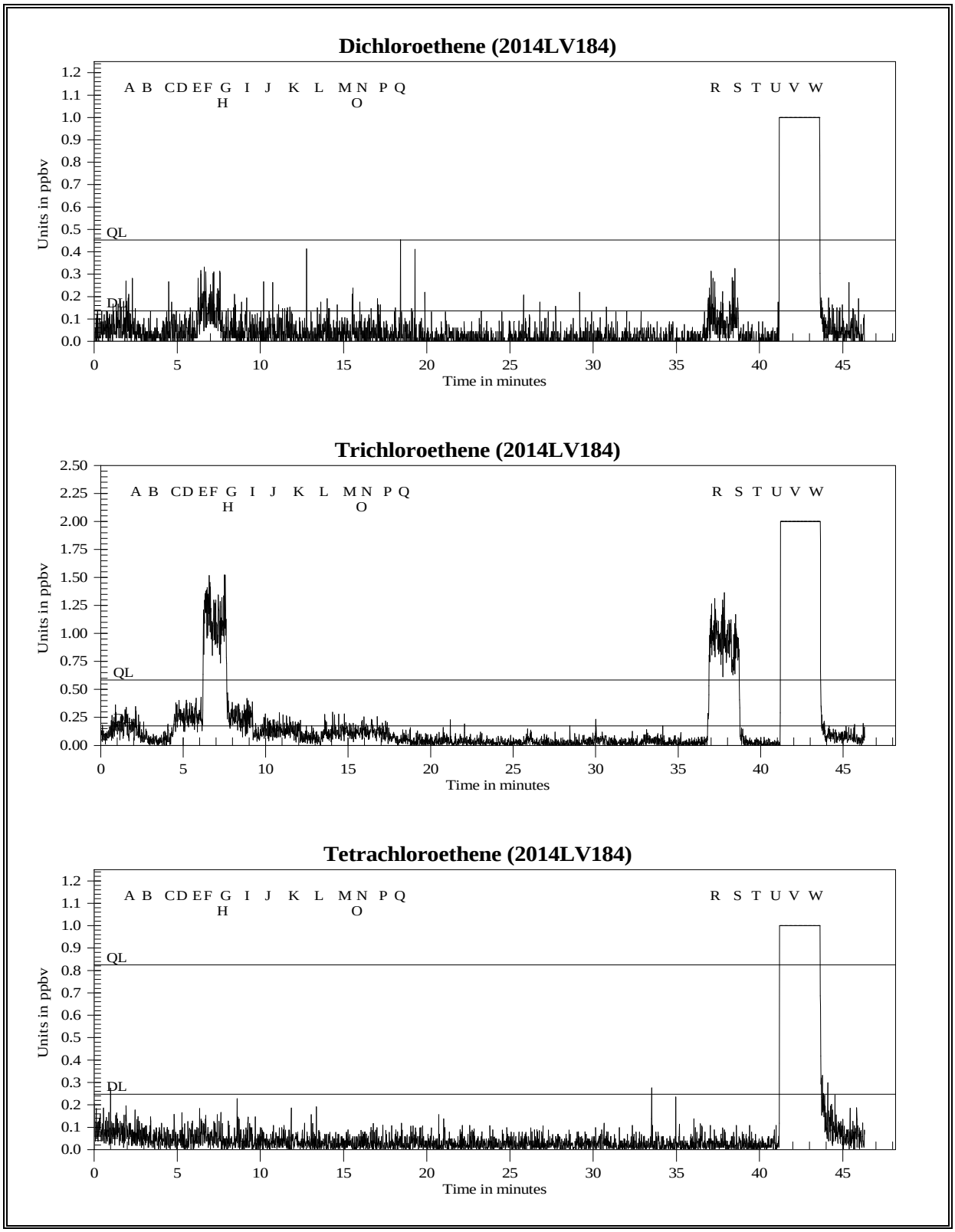

Figure 29c Unit BLD 3 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 29d

TAGA Target Compound Summary for Unit BLD 3 Survey One
File: 2014LV184 Acquired on 02 May 2014 at 08:15:06

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.14	0.18	0.25
	Quantitation Limits - QL:	0.45	0.58	0.82
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.14	DL=0.18	DL=0.25
D - E	Room R106M	DL=0.14	0.26J	DL=0.25
F - G	Room 129	0.15J	1.1	DL=0.25
H - I	Floor drain in room R106M	DL=0.14	0.24J	DL=0.25
J - K	Room R105B	DL=0.14	DL=0.18	DL=0.25
M - N	Room R105W	DL=0.14	DL=0.18	DL=0.25
O - P	Floor drain in room R105W	DL=0.14	DL=0.18	DL=0.25
R - S	Crawl space	DL=0.14	0.94	DL=0.25
T - U	Post-exit ambient	DL=0.14	DL=0.18	DL=0.25
V - W	30 mL/min spike	6.0	6.1	6.2

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

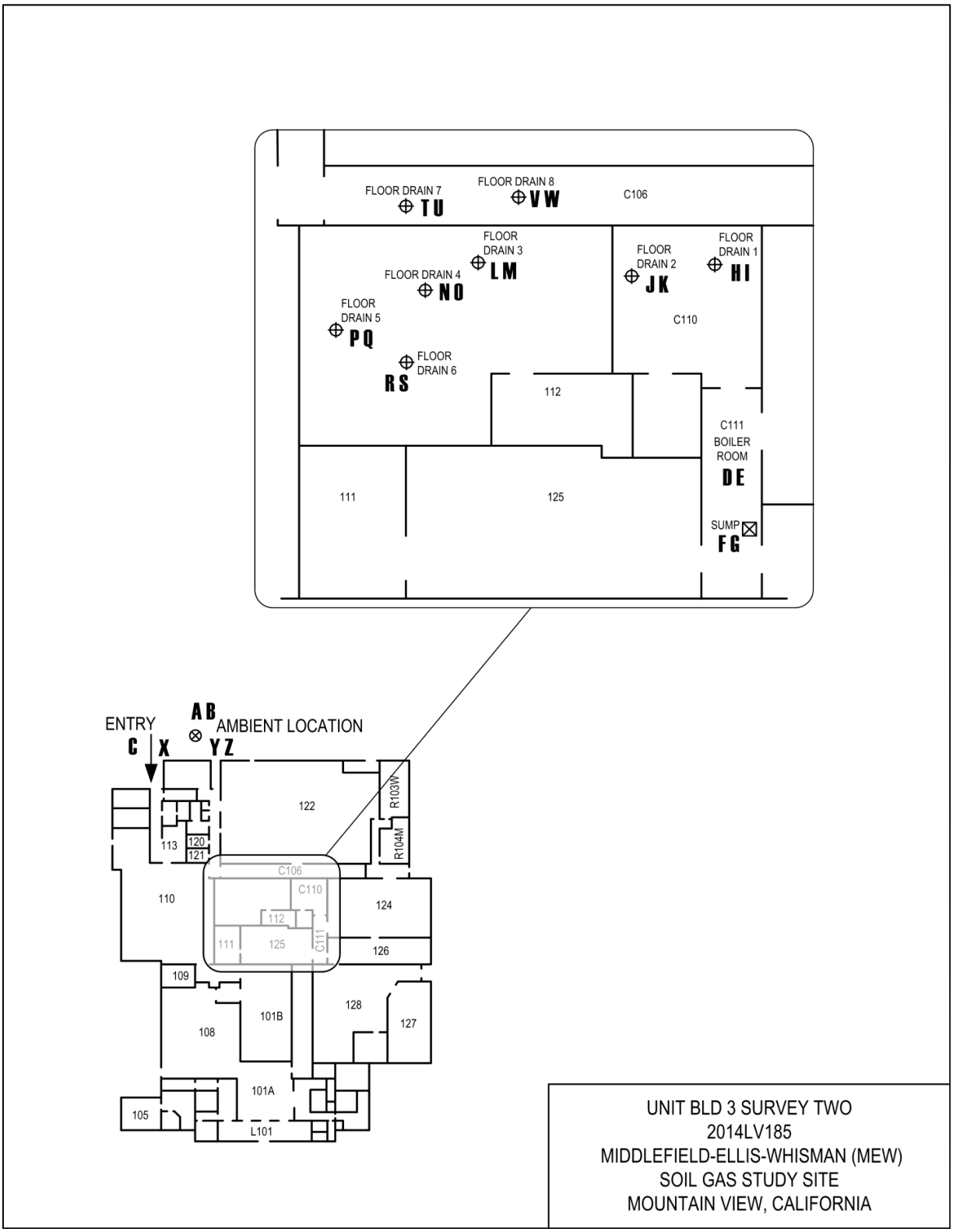

Figure 30a Unit BLD 3 Survey Two Floor Plan

Figure 30b

TAGA File Event Summary
File: 2014LV185 Acquired on 02 May 2014 at 09:13:40
Title: Unit BLD 3 Survey Two

Flag	Offset Time	Offset Sequence	Description
A	1.7	119	Start of the pre-entry ambient
B	2.8	201	End of the pre-entry ambient
C	4.1	292	Entering the unit
D	5.2	375	Start of the boiler room (C111)
E	6.5	462	End of the boiler room (C111)
F	6.9	496	Start of the boiler room sump
G	8.0	574	End of the boiler room sump
H	8.9	639	Start of room C110 floor drain one
I	10.0	716	End of room C110 floor drain one
J	10.7	768	Start of room C110 floor drain two
K	11.8	846	End of room C110 floor drain two
L	12.6	900	Start of room C110 floor drain three
M	13.6	972	End of room C110 floor drain three
N	14.3	1020	Start of room C110 floor drain four
O	15.7	1120	End of room C110 floor drain four
P	16.2	1155	Start of room C110 floor drain five
Q	17.4	1244	End of room C110 floor drain five
R	18.1	1296	Start of room C110 floor drain six
S	19.6	1401	End of room C110 floor drain six
T	21.2	1514	Start of room C106 floor drain seven
U	22.6	1615	End of room C106 floor drain seven
V	23.4	1674	Start of room C106 floor drain eight
W	24.6	1760	End of room C106 floor drain eight
X	26.2	1869	Exiting the unit
Y	26.6	1902	Start of the post-exit ambient
Z	27.8	1982	End of the post-exit ambient
AA	28.8	2056	Start of 30 mL/min spike
BB	30.0	2144	End of 30 mL/min spike

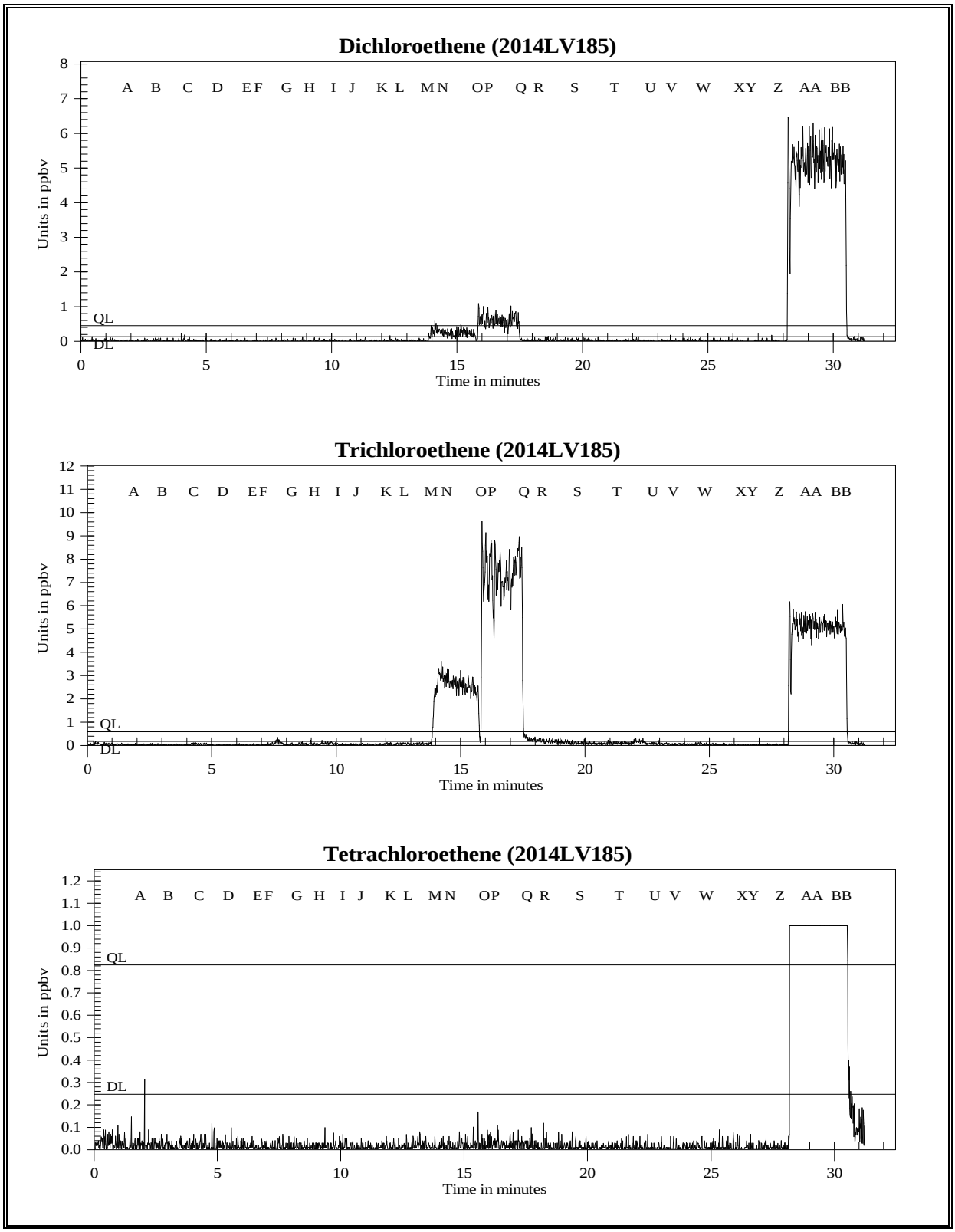

Figure 30c Unit BLD 3 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 30d

TAGA Target Compound Summary for Unit BLD 3 Survey Two
File: 2014LV185 Acquired on 02 May 2014 at 09:13:40

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.14	0.18	0.25
	Quantitation Limits - QL:	0.45	0.58	0.82
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.14	DL=0.18	DL=0.25
D - E	Boiler room	DL=0.14	DL=0.18	DL=0.25
F - G	Boiler room sump	DL=0.14	DL=0.18	DL=0.25
H - I	Room C110 floor drain one	DL=0.14	DL=0.18	DL=0.25
J - K	Room C110 floor drain two	DL=0.14	DL=0.18	DL=0.25
L - M	Room C110 floor drain three	DL=0.14	DL=0.18	DL=0.25
N - O	Room C110 floor drain four	0.24J	2.6	DL=0.25
P - Q	Room C110 floor drain five	0.61	7.4	DL=0.25
R - S	Room C110 floor drain six	DL=0.14	DL=0.18	DL=0.25
T - U	Room C106 floor drain seven	DL=0.14	DL=0.18	DL=0.25
V - W	Room C106 floor drain eight	DL=0.14	DL=0.18	DL=0.25
Y - Z	Post-exit ambient	DL=0.14	DL=0.18	DL=0.25
AA - BB	30 mL/min spike	5.3	5.2	5.1

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

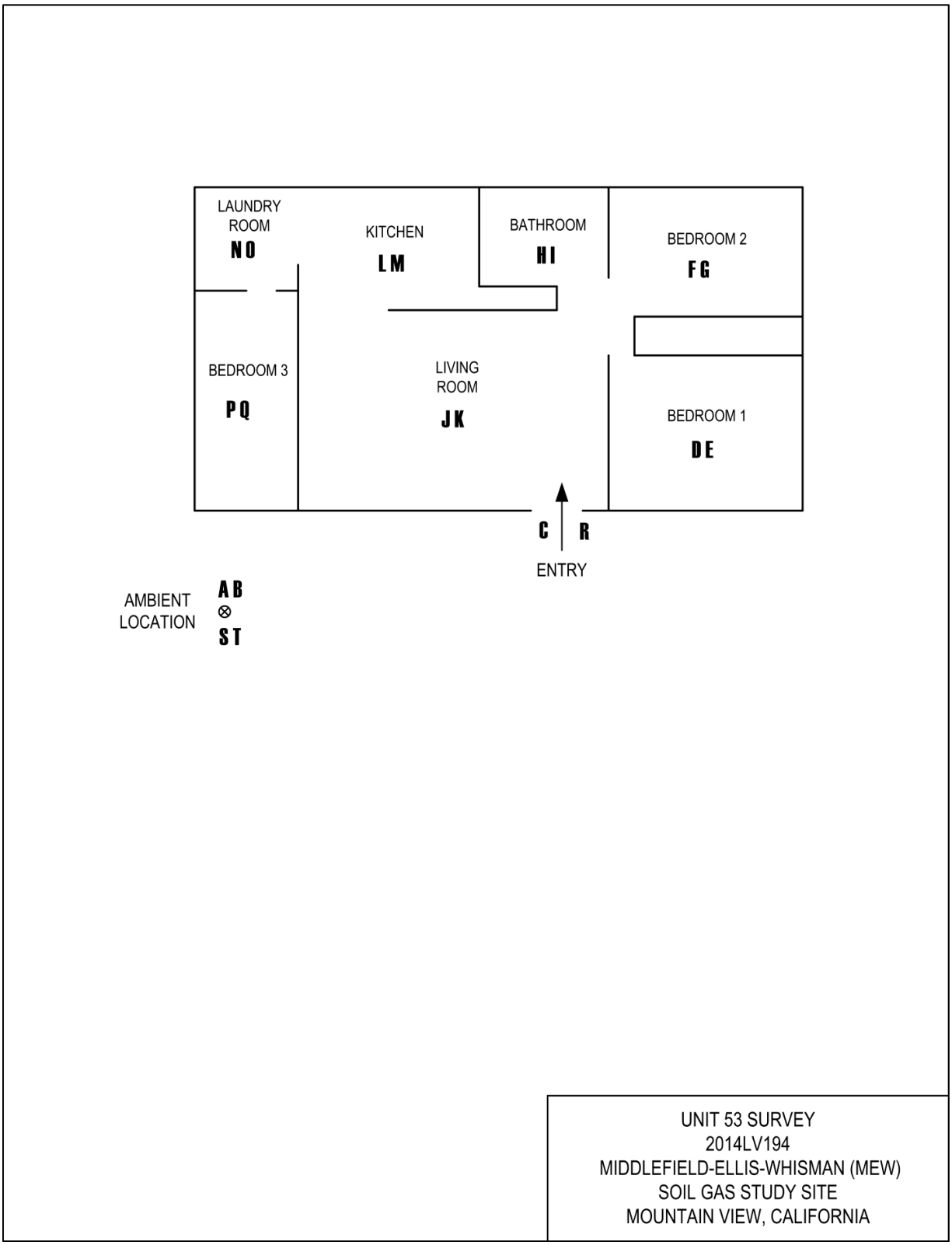

Figure 31a Unit 53 Survey Floor Plan

Figure 31b

TAGA File Event Summary
File: 2014LV194 Acquired on 05 May 2014 at 15:14:35
Title: Unit 53 Survey

Flag	Offset Time	Offset Sequence	Description
A	2.4	171	Start of the pre-entry ambient
B	3.9	276	End of the pre-entry ambient
C	4.2	299	Entering the unit
D	4.8	346	Start of bedroom one
E	5.9	419	End of bedroom one
F	6.2	445	Start of bedroom two
G	7.2	515	End of bedroom two
H	7.5	534	Start of the bathroom
I	8.5	607	End of the bathroom
J	8.7	625	Start of the living room
K	9.7	696	End of the living room
L	9.9	710	Start of the kitchen
M	10.9	780	End of the kitchen
N	11.2	797	Start of the laundry room
O	12.2	869	End of the laundry room
P	12.4	886	Start of bedroom three
Q	13.4	958	End of bedroom three
R	13.7	976	Exiting the unit
S	14.7	1051	Start of the post-exit ambient
T	15.9	1134	End of the post-exit ambient
U	17.2	1232	Start of 30 mL/min spike
V	18.6	1327	End of 30 mL/min spike

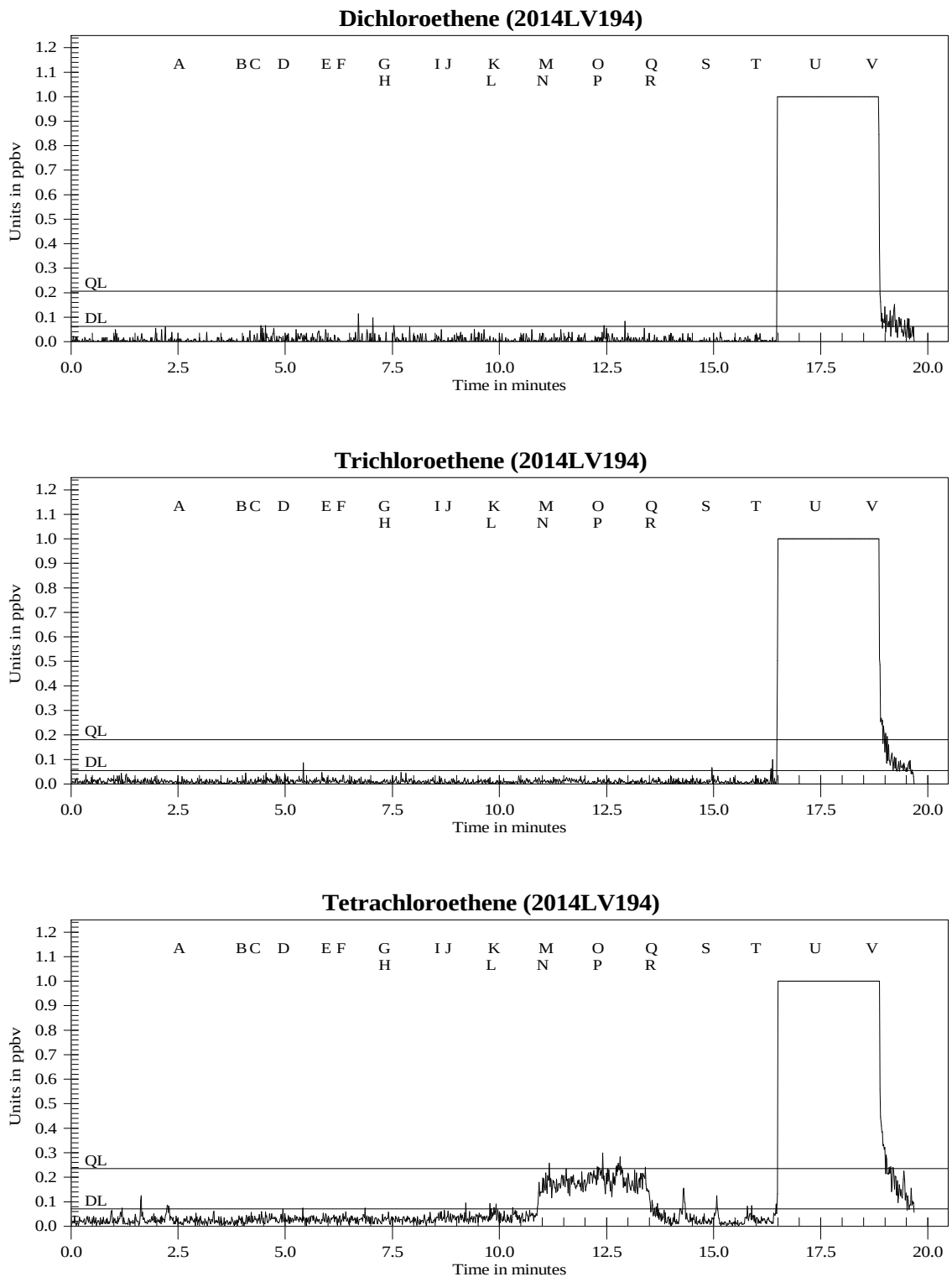

Figure 31c Unit 53 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 31d

TAGA Target Compound Summary for Unit 53
File: 2014LV194 Acquired on 05 May 2014 at 15:14:35

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.062	0.054	0.071
	Quantitation Limits - QL:	0.21	0.18	0.24
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.062	DL=0.054	DL=0.071
D - E	Bedroom one	DL=0.062	DL=0.054	DL=0.071
F - G	Bedroom two	DL=0.062	DL=0.054	DL=0.071
H - I	Bathroom	DL=0.062	DL=0.054	DL=0.071
J - K	Living room	DL=0.062	DL=0.054	DL=0.071
L - M	Kitchen	DL=0.062	DL=0.054	DL=0.071
N - O	Laundry room	DL=0.062	DL=0.054	0.18J
P - Q	Bedroom three	DL=0.062	DL=0.054	0.19J
S - T	Post-exit ambient	DL=0.062	DL=0.054	DL=0.071
U - V	30 mL/min spike	5.8	5.7	6.4

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

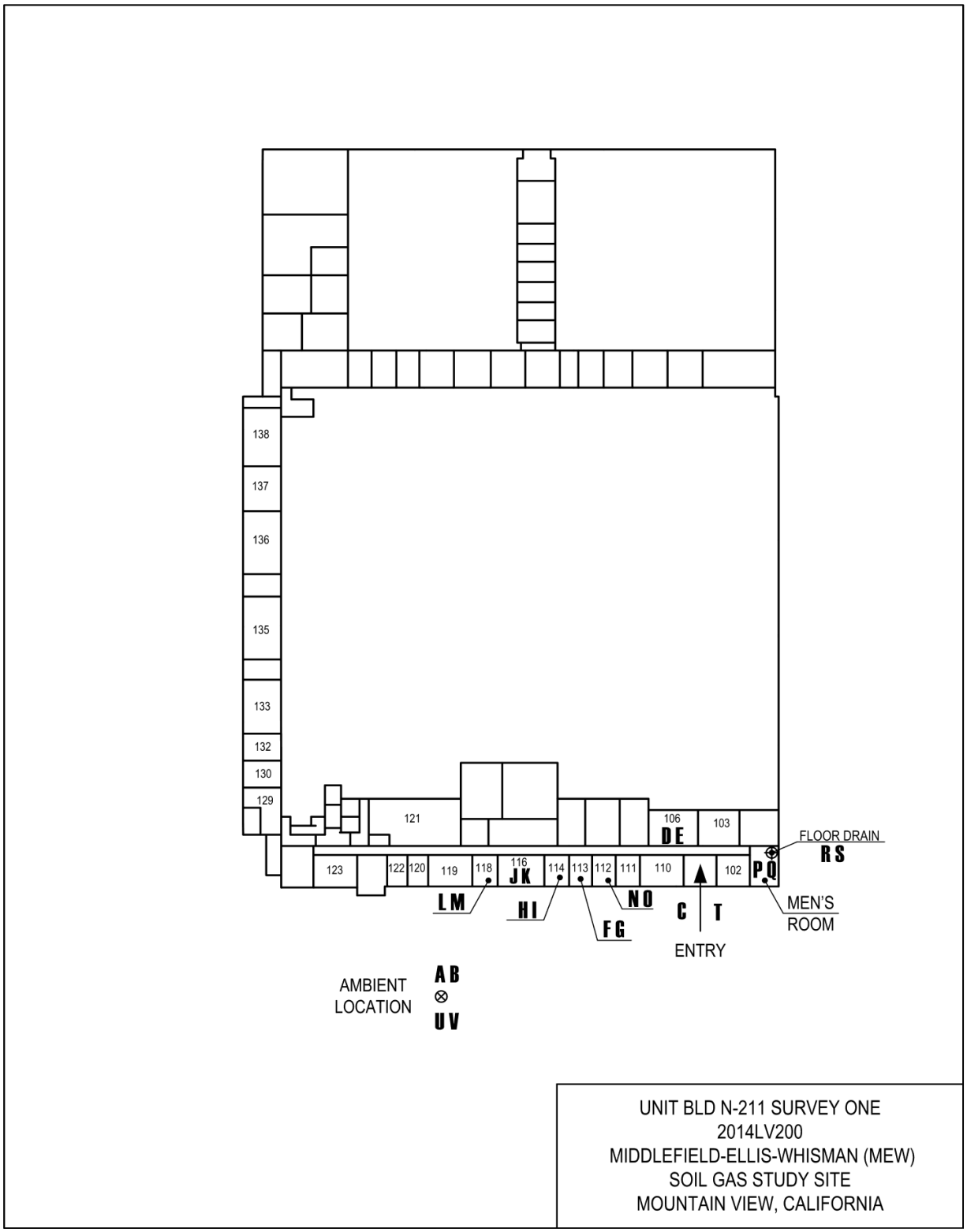

Figure 32a Unit BLD N-211 Survey One Floor Plan

Figure 32b

TAGA File Event Summary
File: 2014LV200 Acquired on 06 May 2014 at 13:54:48
Title: Unit BLD N-211 Survey One

Flag	Offset Time	Offset Sequence	Description
A	2.1	148	Start of the pre-entry ambient
B	3.1	221	End of the pre-entry ambient
C	7.5	533	Entering the unit
D	9.1	649	Start of room 106
E	10.1	720	End of room 106
F	11.6	826	Start of room 113
G	12.6	900	End of room 113
H	13.1	933	Start of room 114
I	14.0	1003	End of room 114
J	14.6	1040	Start of room 116
K	15.5	1110	End of room 116
L	16.2	1155	Start of room 118
M	17.2	1227	End of room 118
N	18.3	1304	Start of room 112
O	19.3	1376	End of room 112
P	20.4	1456	Start of men’s room
Q	21.4	1531	End of men's room
R	22.1	1580	Start of men’s room floor drain
S	23.1	1652	End of men's room floor drain
T	24.6	1759	Exiting the unit
U	25.8	1842	Start of the post-exit ambient
V	26.9	1920	End of the post-exit ambient
W	28.0	2001	Start of 30 mL/min spike
X	28.9	2061	End of 30 mL/min spike

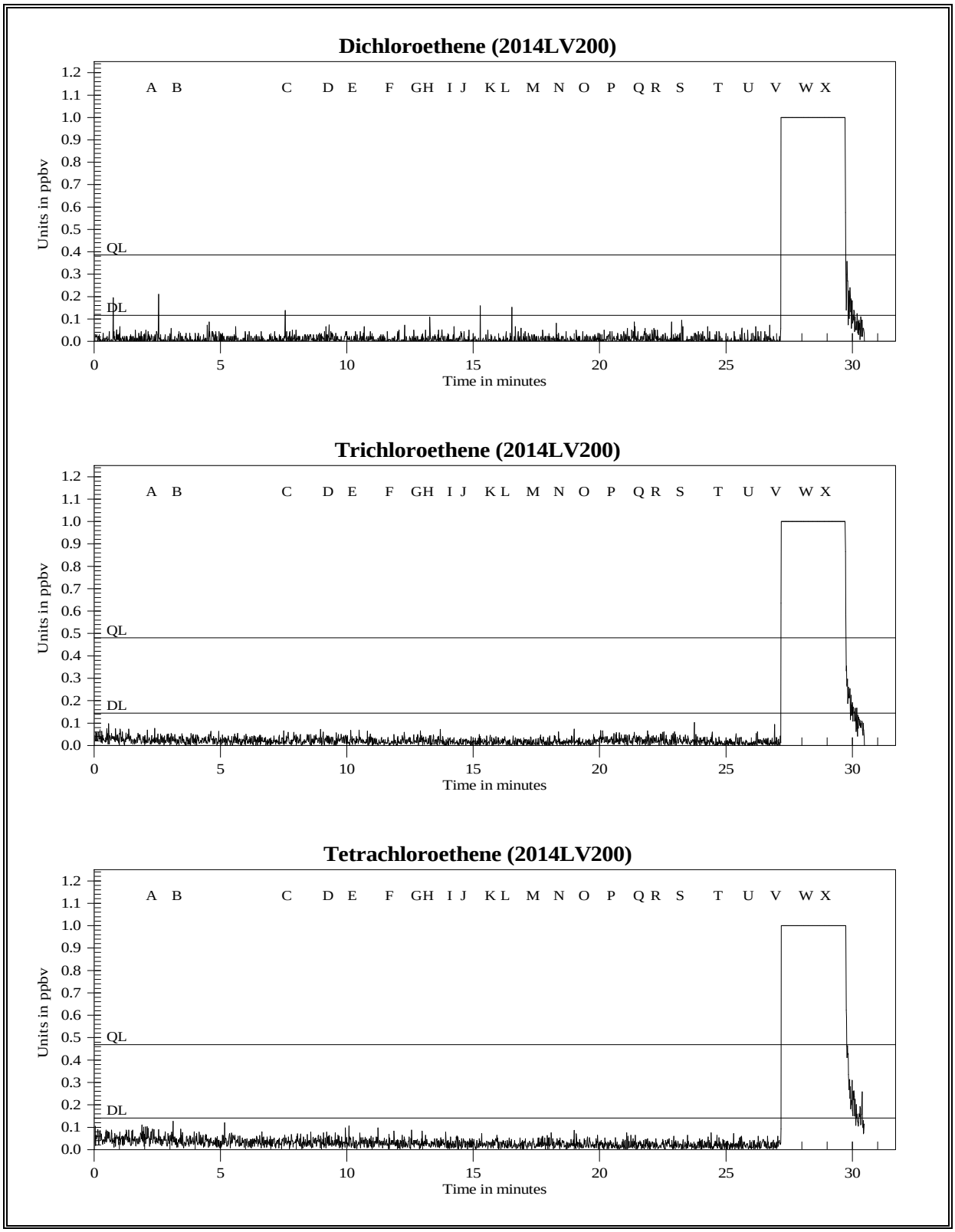

Figure 32c Unit BLD N-211 Survey One for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 32d

TAGA Target Compound Summary for Unit BLD N-211 Survey One
File: 2014LV200 Acquired on 06 May 2014 at 13:54:48

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.12	0.14	0.14
	Quantitation Limits - QL:	0.39	0.48	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.12	DL=0.14	DL=0.14
D - E	Room 106	DL=0.12	DL=0.14	DL=0.14
F - G	Room 113	DL=0.12	DL=0.14	DL=0.14
H - I	Room 114	DL=0.12	DL=0.14	DL=0.14
J - K	Room 116	DL=0.12	DL=0.14	DL=0.14
L - M	Room 118	DL=0.12	DL=0.14	DL=0.14
N - O	Room 112	DL=0.12	DL=0.14	DL=0.14
P - Q	Men's room	DL=0.12	DL=0.14	DL=0.14
R - S	Men's room floor drain	DL=0.12	DL=0.14	DL=0.14
U - V	Post-exit ambient	DL=0.12	DL=0.14	DL=0.14
W - X	30 mL/min spike	8.2	8.0	8.2

Concentrations are given in parts per billion by volume

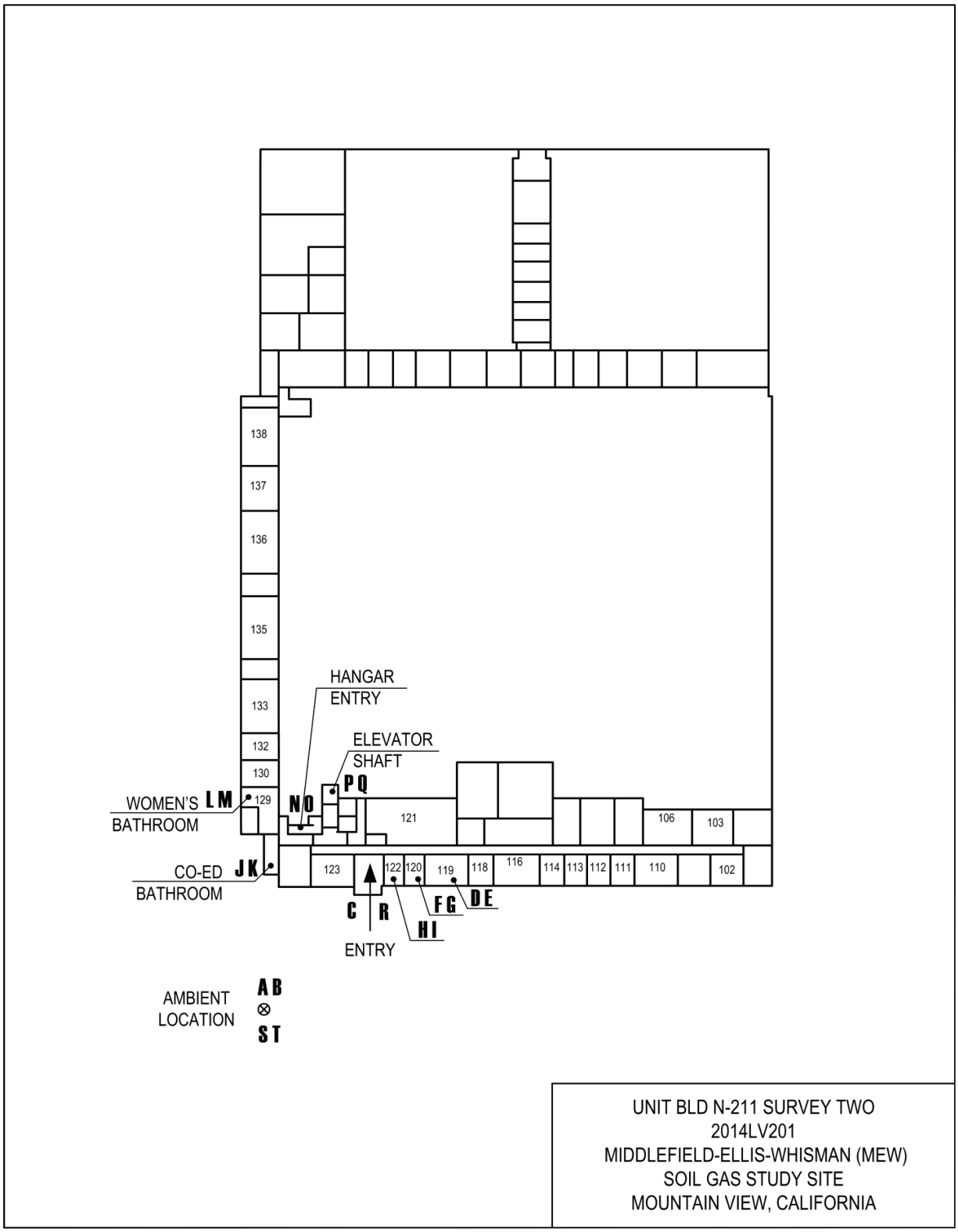

Figure 33a Unit BLD N-211 Survey Two

Figure 33b

TAGA File Event Summary
File: 2014LV201 Acquired on 06 May 2014 at 14:34:50
Title: Unit BLD N-211 Survey Two

Flag	Offset Time	Offset Sequence	Description
A	2.1	149	Start of the pre-entry ambient
B	3.2	232	End of the pre-entry ambient
C	4.0	286	Entering the unit
D	4.5	325	Start of room 119
E	5.5	396	End of room 119
F	6.2	440	Start of room 120
G	7.2	512	End of room 120
H	7.9	562	Start of room 122
I	8.9	633	End of room 122
J	10.0	713	Start of Co-ed bathroom
K	11.0	783	End of Co-ed bathroom
L	11.5	822	Start of Women's bathroom
M	12.7	909	End of Women's bathroom
N	13.6	975	Start of the hangar entry
O	14.7	1047	End of the hangar entry
P	15.7	1125	Start of the elevator shaft
Q	16.7	1196	End of the elevator shaft
R	17.4	1241	Exiting the unit
S	17.8	1271	Start of the post-exit ambient
T	18.9	1351	End of the post-exit ambient
U	20.0	1430	Start of 30 mL/min spike
V	21.2	1516	End of 30 mL/min spike

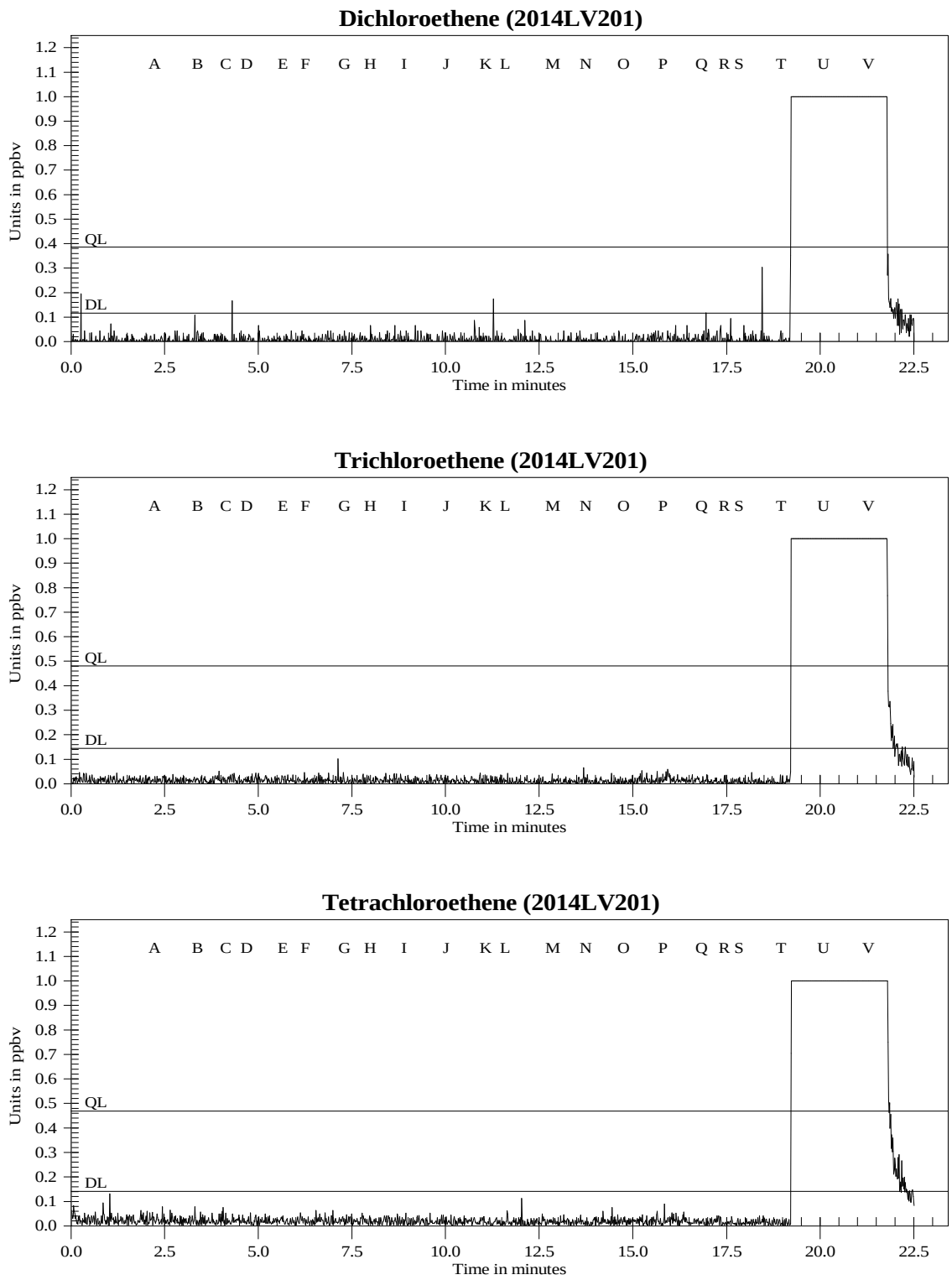

Figure 33c Unit BLD N-211 Survey Two for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 33d

TAGA Target Compound Summary for Unit BLD N-211 Survey Two
File: 2014LV201 Acquired on 06 May 2014 at 14:34:50

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.12	0.14	0.14
	Quantitation Limits - QL:	0.39	0.48	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.12	DL=0.14	DL=0.14
D - E	Room 119	DL=0.12	DL=0.14	DL=0.14
F - G	Room 120	DL=0.12	DL=0.14	DL=0.14
H - I	Room 122	DL=0.12	DL=0.14	DL=0.14
J - K	Co-ed bathroom	DL=0.12	DL=0.14	DL=0.14
L - M	Women's bathroom	DL=0.12	DL=0.14	DL=0.14
N - O	Hangar entry	DL=0.12	DL=0.14	DL=0.14
P - Q	Elevator shaft	DL=0.12	DL=0.14	DL=0.14
S - T	Post-exit ambient	DL=0.12	DL=0.14	DL=0.14
U - V	30 mL/min spike	7.3	7.0	7.1

Concentrations are given in parts per billion by volume

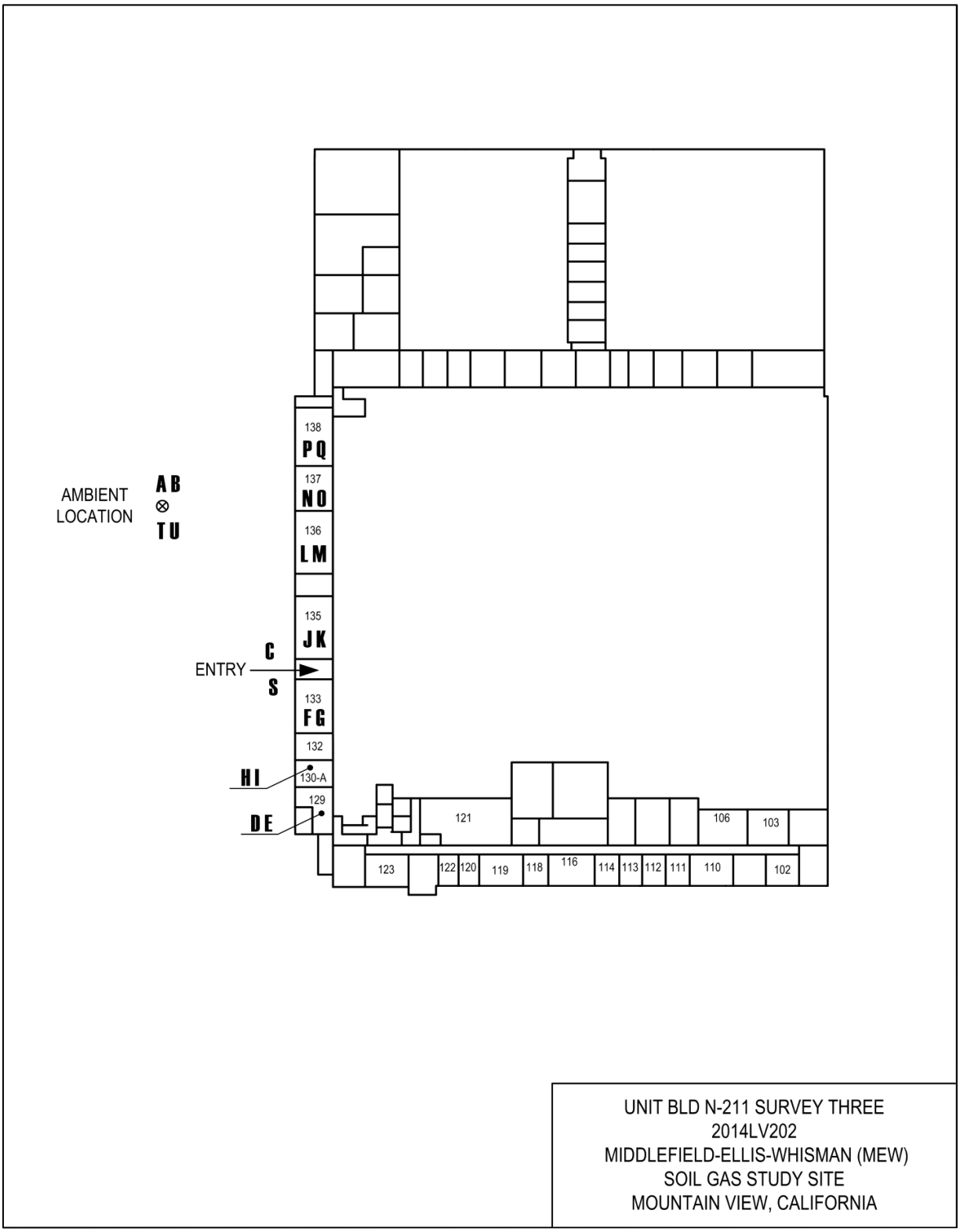

Figure 34a Unit BLD N-211 Survey Three Floor Plan

Figure 34b

TAGA File Event Summary
File: 2014LV202 Acquired on 06 May 2014 at 15:06:54
Title: Unit BLD N-211 Survey Three

Flag	Offset Time	Offset Sequence	Description
A	2.2	160	Start of the pre-entry ambient
B	3.3	236	End of the pre-entry ambient
C	4.1	293	Entering the unit
D	6.3	452	Start of room 129
E	7.3	524	End of room 129
F	7.9	564	Start of room 133
G	8.9	634	End of room 133
H	9.7	690	Start of room 130-A
I	10.7	763	End of room 130-A
J	11.8	846	Start of room 135
K	12.8	917	End of room 135
L	14.3	1022	Start of room 136
M	15.4	1097	End of room 136
N	16.1	1151	Start of room 137
O	17.1	1222	End of room 137
P	17.8	1268	Start of room 138
Q	18.8	1340	End of room 138
S	21.2	1514	Exiting the unit
T	21.9	1561	Start of the post-exit ambient
U	22.9	1639	End of the post-exit ambient
V	24.3	1736	Start of 30 mL/min spike
W	25.5	1821	End of 30 mL/min spike

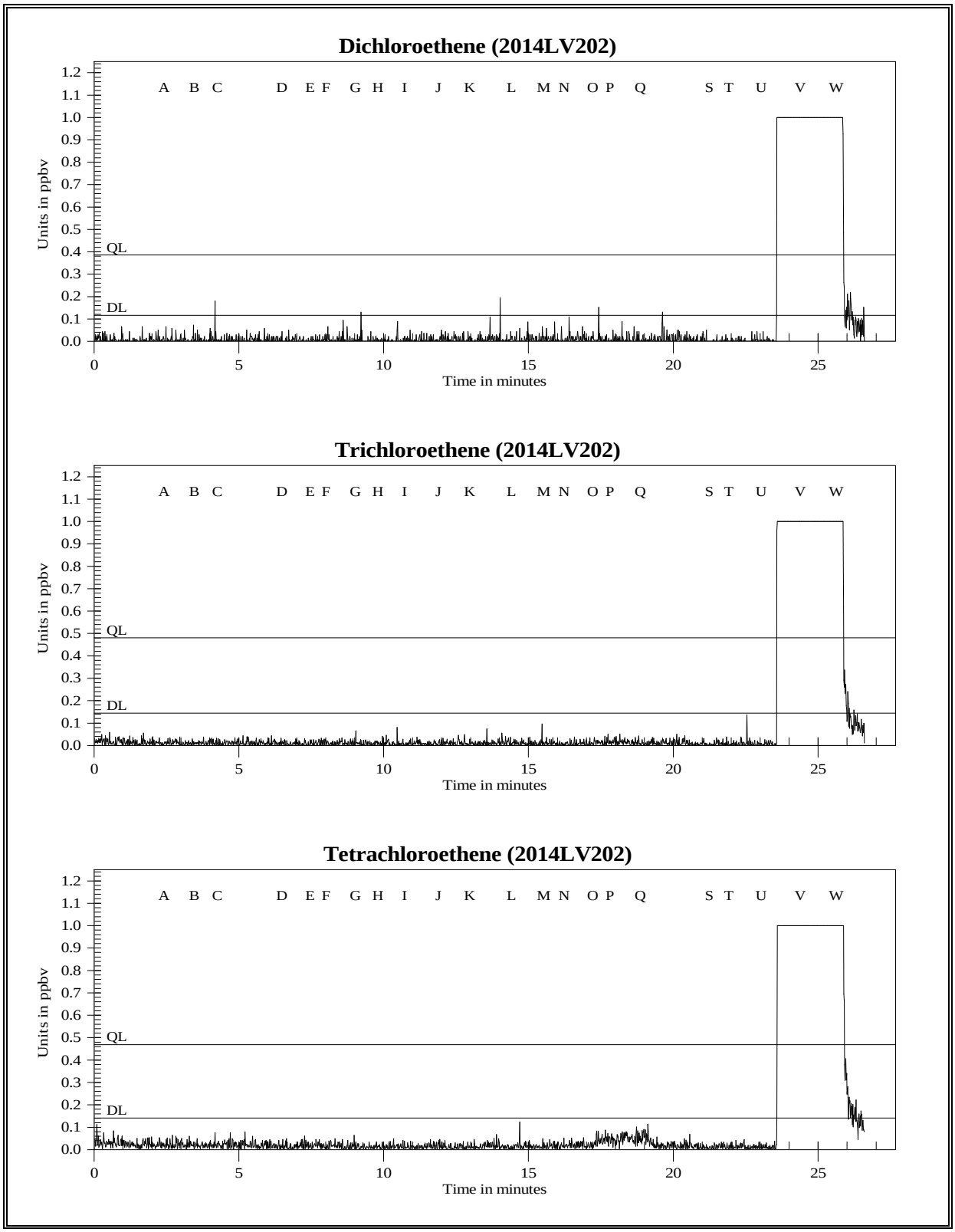

Figure 34c Unit BLD N-211 Survey Three for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 34d

TAGA Target Compound Summary for Unit BLD N-211 Survey Three
File: 2014LV202 Acquired on 06 May 2014 at 15:06:54

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.12	0.14	0.14
	Quantitation Limits - QL:	0.39	0.48	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.12	DL=0.14	DL=0.14
D - E	Room 129	DL=0.12	DL=0.14	DL=0.14
F - G	Room 133	DL=0.12	DL=0.14	DL=0.14
H - I	Room 130-A	DL=0.12	DL=0.14	DL=0.14
J - K	Room 135	DL=0.12	DL=0.14	DL=0.14
L - M	Room 136	DL=0.12	DL=0.14	DL=0.14
N - O	Room 137	DL=0.12	DL=0.14	DL=0.14
P - Q	Room 138	DL=0.12	DL=0.14	DL=0.14
T - U	Post-exit ambient	DL=0.12	DL=0.14	DL=0.14
V - W	30 mL/min spike	7.5	7.2	7.3

Concentrations are given in parts per billion by volume

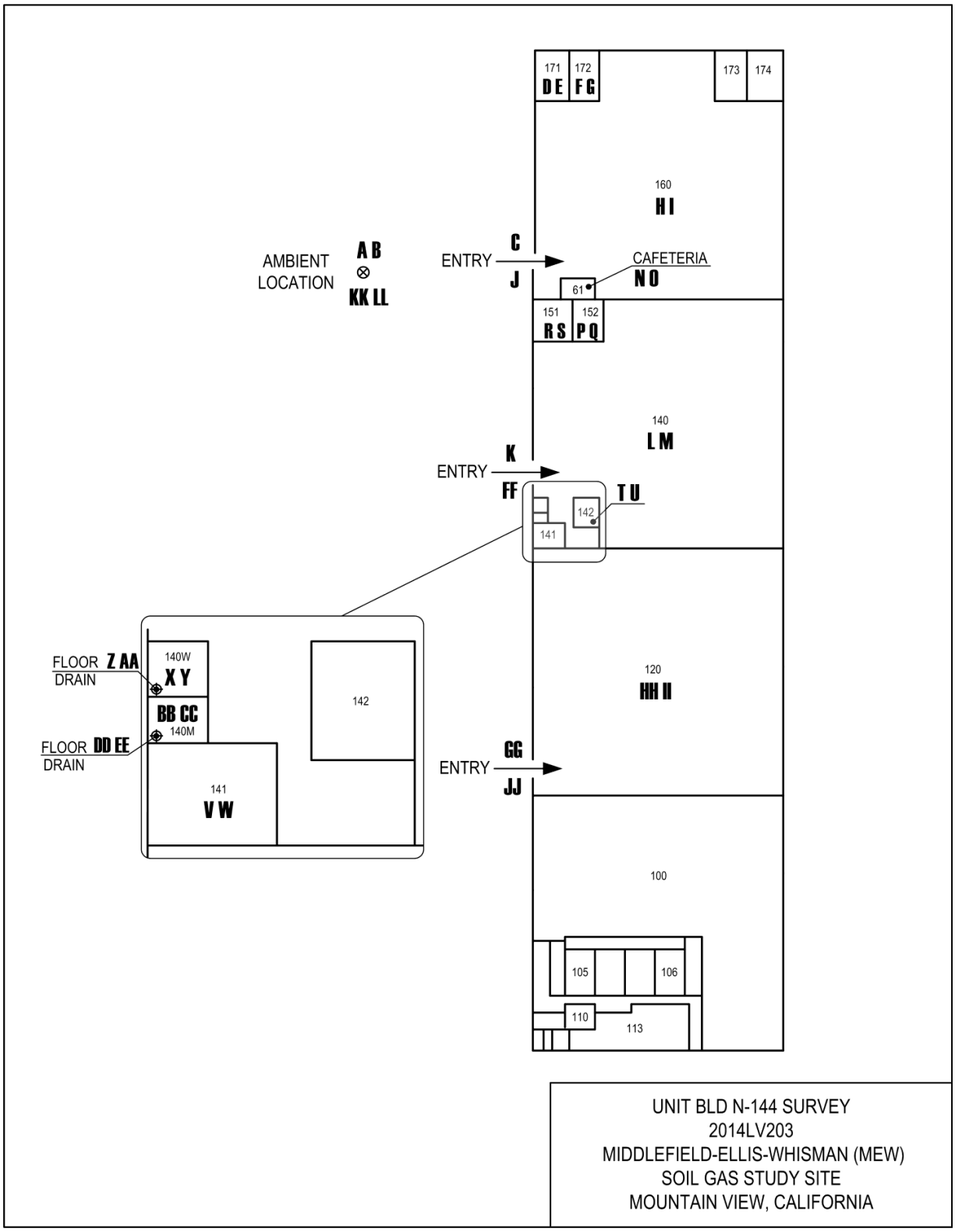

Figure 35a Unit BLD N-144 Survey Floor Plan

Figure 35b

TAGA File Event Summary
File: 2014LV203 Acquired on 06 May 2014 at 15:52:00
Title: Unit BLD N-144 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.7	121	Start of the pre-entry ambient
B	2.7	194	End of the pre-entry ambient
C	3.3	236	Entering the unit
D	4.5	320	Start of room 171
E	5.8	414	End of room 171
F	6.3	450	Start of room 172
G	7.3	522	End of room 172
H	7.8	558	Start of room 160
I	8.8	630	End of room 160
J	9.9	704	Exiting the unit
K	13.6	975	Entering the unit
L	14.1	1009	Start of room 140
M	15.2	1083	End of room 140
N	16.2	1158	Start of room 61 (cafeteria)
O	17.2	1229	End of room 61 (cafeteria)
P	18.1	1295	Start of room 152
Q	19.1	1367	End of room 152
R	19.6	1397	Start of room 151
S	20.6	1468	End of room 151
T	22.0	1573	Start of room 142
U	23.0	1644	End of room 142
V	23.5	1677	Start of room 141
W	24.5	1748	End of room 141
X	25.2	1798	Start of room 140W
Y	26.2	1871	End of room 140W
Z	26.6	1899	Start of the floor drain in room 140W
AA	27.6	1970	End of the floor drain in room 140W
BB	28.1	2010	Start of room 140M
CC	29.3	2091	End of room 140M
DD	29.7	2123	Start of the floor drain in room 140M
EE	30.7	2194	End of the floor drain in room 140M

Figure 35b continued

TAGA File Event Summary
File: 2014LV203 Acquired on 06 May 2014 at 15:52:00
Title: Unit BLD N-144 Survey

Flag	Offset Time	Offset Sequence	Description
FF	31.4	2242	Exiting the unit
GG	33.9	2421	Entering the unit
HH	34.7	2479	Start of room 120
II	35.8	2557	End of room 120
JJ	36.4	2601	Exiting the unit
KK	37.2	2658	Start of the post-exit ambient
LL	38.3	2738	End of the post-exit ambient
MM	39.6	2831	Start of 30 mL/min spike
NN	40.8	2911	End of 30 mL/min spike

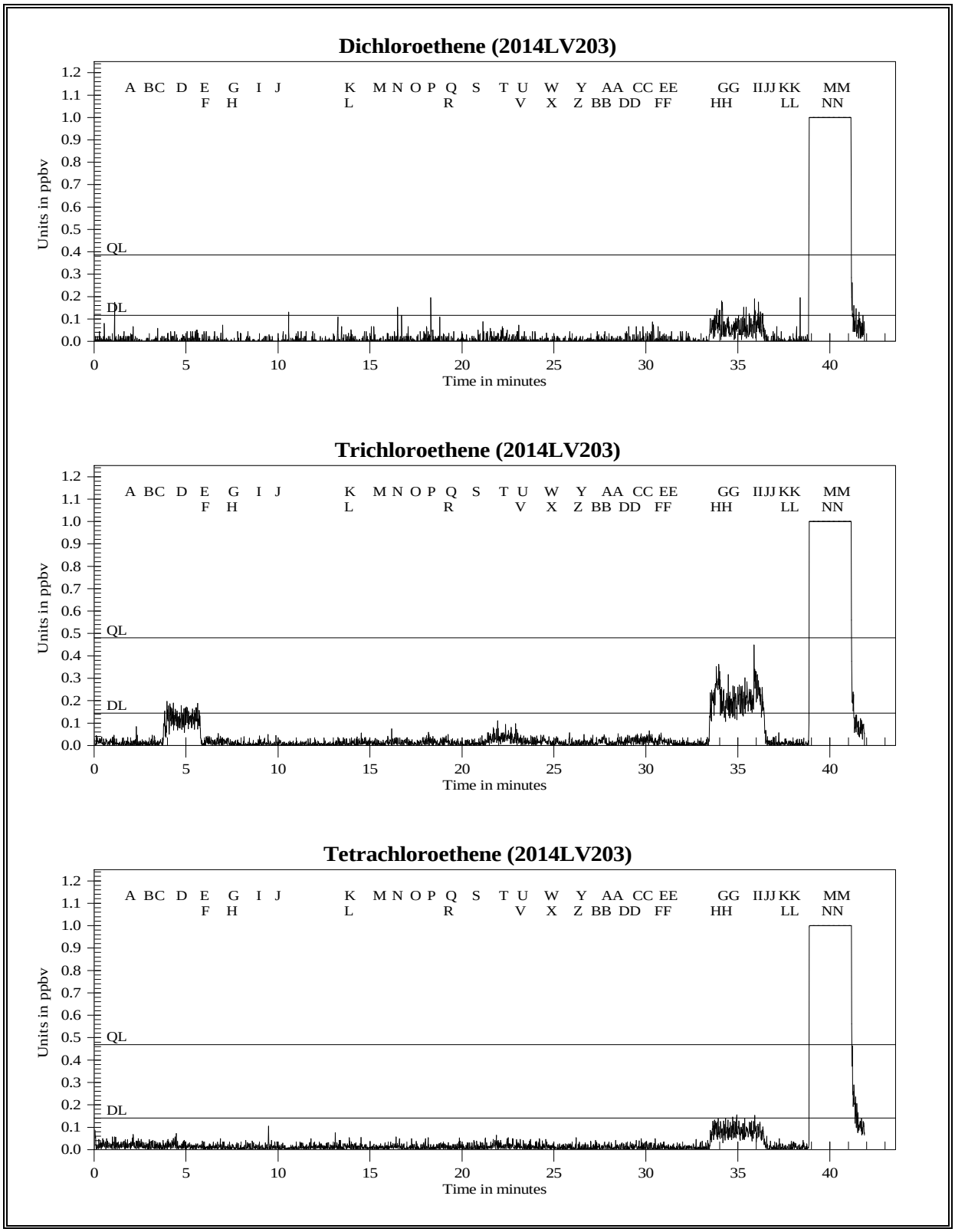

Figure 35c Unit BLD N-144 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 35d

TAGA Target Compound Summary for Unit BLD N-144
File: 2014LV203 Acquired on 06 May 2014 at 15:52:00

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.12	0.14	0.14
	Quantitation Limits - QL:	0.39	0.48	0.47
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.12	DL=0.14	DL=0.14
D - E	Room 171	DL=0.12	DL=0.14	DL=0.14
F - G	Room 172	DL=0.12	DL=0.14	DL=0.14
H - I	Room 160	DL=0.12	DL=0.14	DL=0.14
L - M	Room 140	DL=0.12	DL=0.14	DL=0.14
N - O	Room 61 (cafeteria)	DL=0.12	DL=0.14	DL=0.14
P - Q	Room 152	DL=0.12	DL=0.14	DL=0.14
R - S	Room 151	DL=0.12	DL=0.14	DL=0.14
T - U	Room 142	DL=0.12	DL=0.14	DL=0.14
V - W	Room 141	DL=0.12	DL=0.14	DL=0.14
X - Y	Room 140W	DL=0.12	DL=0.14	DL=0.14
Z - AA	Floor drain in room 140W	DL=0.12	DL=0.14	DL=0.14
BB - CC	Room 104M	DL=0.12	DL=0.14	DL=0.14
DD - EE	Floor drain in room 140M	DL=0.12	DL=0.14	DL=0.14
HH - II	Room 120	DL=0.12	0.20J	DL=0.14
KK - LL	Post-exit ambient	DL=0.12	DL=0.14	DL=0.14
MM - NN	30 mL/min spike	6.1	5.8	5.9

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

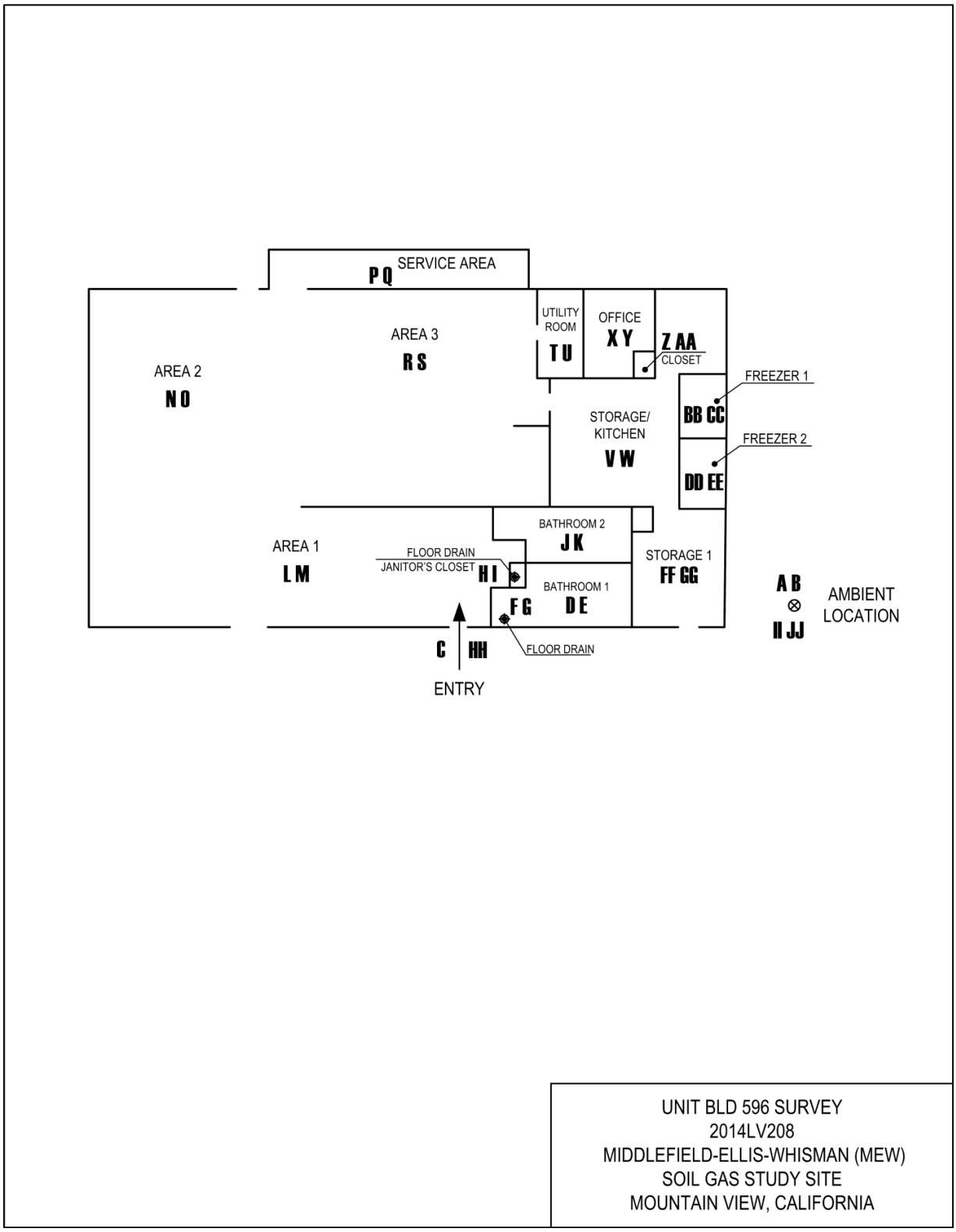

Figure 36a Unit BLD 596 Survey Floor Plan

Figure 36b

TAGA File Event Summary
File: 2014LV208 Acquired on 07 May 2014 at 09:11:40
Title: Unit BLD 596 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.8	131	Start of the pre-entry ambient
B	3.1	224	End of the pre-entry ambient
C	4.5	324	Entering the unit
D	5.1	362	Start of bathroom one
E	6.1	434	End of bathroom one
F	6.4	456	Start of floor drain in bathroom one
G	7.4	528	End of floor drain in bathroom one
H	7.9	562	Start of the floor drain in janitor's closet
I	9.1	647	End of the floor drain in janitor's closet
J	9.4	673	Start of bathroom two
K	10.4	745	End of bathroom two
L	10.8	774	Start of area one
M	11.8	845	End of area one
N	12.5	895	Start of area two
O	13.5	965	End of area two
P	14.2	1017	Start of the service area
Q	15.2	1088	End of the service area
R	15.6	1117	Start of area three
S	16.6	1189	End of area three
T	17.4	1240	Start of the utility room
U	18.4	1312	End of the utility room
V	18.9	1349	Start of the storage/kitchen
W	19.9	1421	End of the storage/kitchen
X	20.3	1450	Start of the office
Y	21.3	1522	End of the office
Z	21.7	1550	Start of the closet in the office
AA	22.7	1620	End of the closet in the office
BB	23.3	1664	Start of freezer one
CC	24.3	1735	End of freezer one
DD	24.7	1761	Start of freezer two

Figure 36b continued

TAGA File Event Summary
File: 2014LV208 Acquired on 07 May 2014 at 09:11:40
Title: BLDG 596 Survey

Flag	Offset Time	Offset Sequence	Description
EE	25.7	1832	End of freezer two
FF	26.0	1858	Start of storage one
GG	27.0	1929	End of storage one
HH	28.4	2030	Exiting the unit
II	29.3	2095	Start of the post-exit ambient
JJ	30.9	2209	End of the post-exit ambient
KK	31.9	2281	Start of 30 mL/min spike
LL	33.2	2368	End of 30 mL/min spike

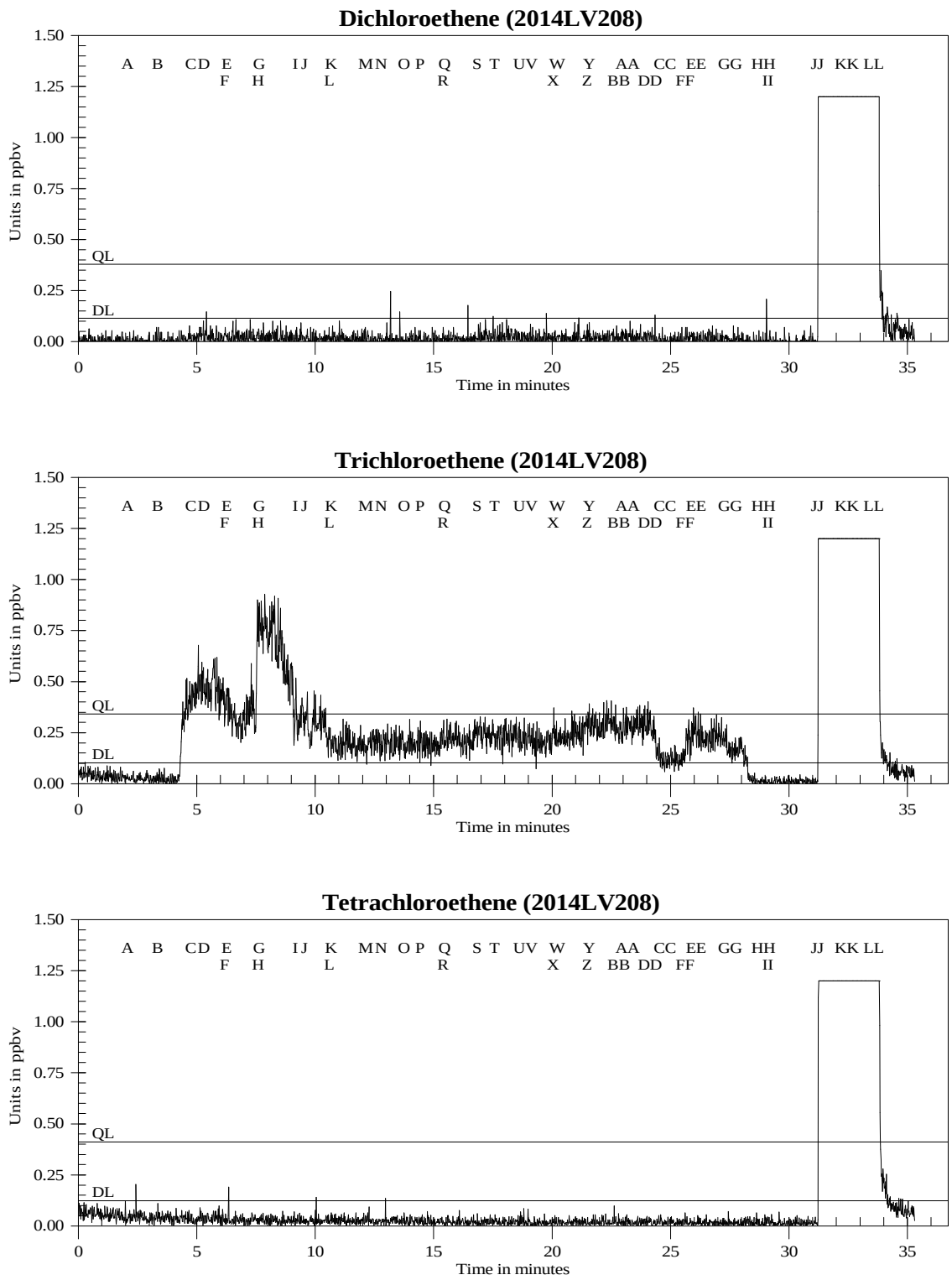

Figure 36c Unit BLD 596 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 36d

TAGA Target Compound Summary for Unit BLD 596
File: 2014LV208 Acquired on 07 May 2014 at 09:11:40

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.11	0.10	0.12
	Quantitation Limits - QL:	0.38	0.34	0.41
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.11	DL=0.10	DL=0.12
D - E	Bathroom one	DL=0.11	0.48	DL=0.12
F - G	Floor drain in bathroom one	DL=0.11	0.33J	DL=0.12
H - I	Floor drain in janitor's closet	DL=0.11	0.66	DL=0.12
J - K	Bathroom two	DL=0.11	0.30J	DL=0.12
L - M	Area one	DL=0.11	0.19J	DL=0.12
N - O	Area two	DL=0.11	0.20J	DL=0.12
P - Q	Service area	DL=0.11	0.19J	DL=0.12
R - S	Area three	DL=0.11	0.21J	DL=0.12
T - U	Utility room	DL=0.11	0.23J	DL=0.12
V - W	Storage/kitchen	DL=0.11	0.21J	DL=0.12
X - Y	Office	DL=0.11	0.24J	DL=0.12
Z - AA	Closet in the office	DL=0.11	0.29J	DL=0.12
BB - CC	Freezer one	DL=0.11	0.29J	DL=0.12
DD - EE	Freezer two	DL=0.11	0.12J	DL=0.12
FF - GG	Storage one	DL=0.11	0.23J	DL=0.12
II - JJ	Post-exit ambient	DL=0.11	DL=0.10	DL=0.12
KK - LL	30 mL/min spike	7.1	6.3	6.0

Concentrations are given in parts per billion by volume
J = Concentration detected below the quantitation limit

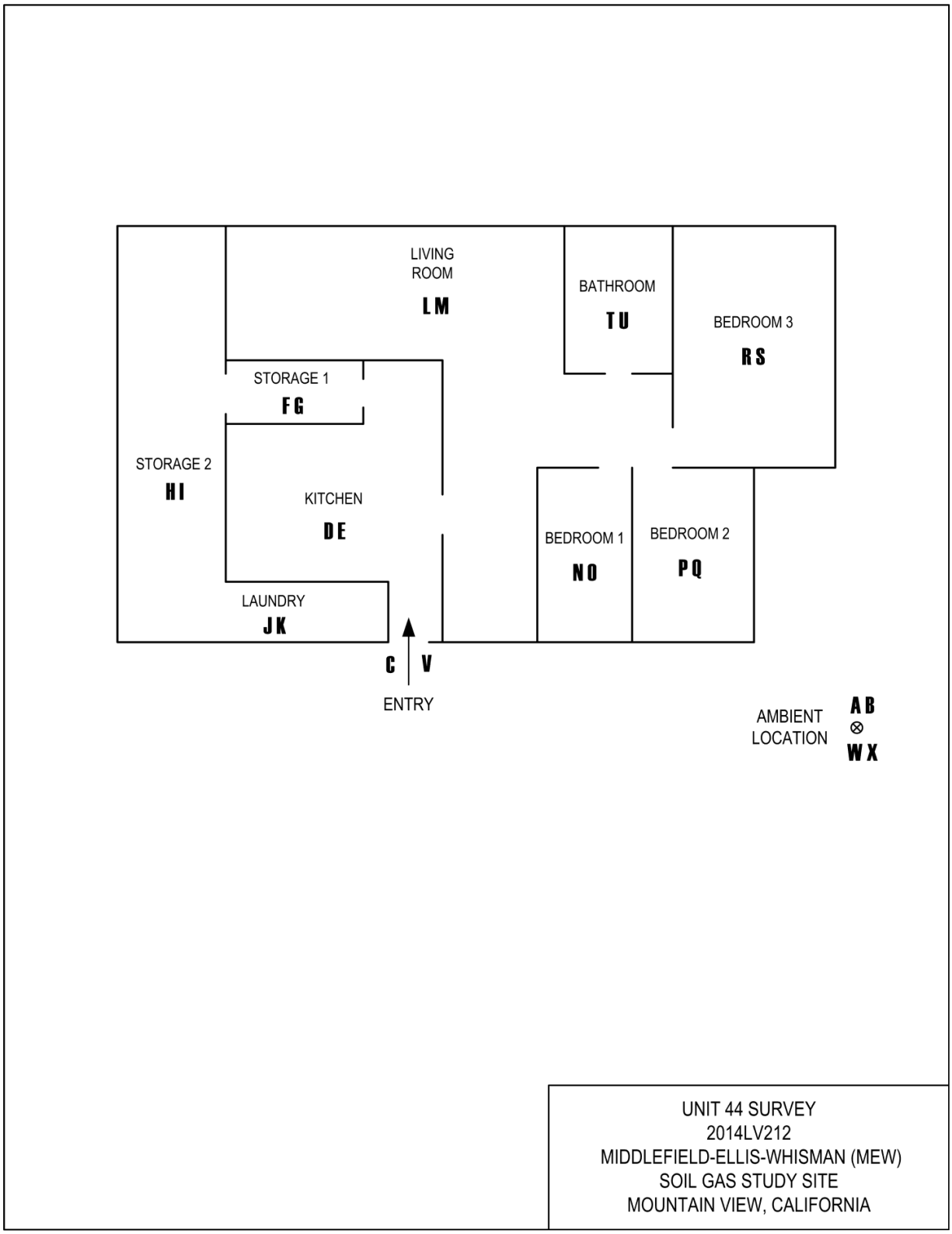

Figure 37a Unit 44 Survey Floor Plan

Figure 37b

TAGA File Event Summary
File: 2014LV212 Acquired on 07 May 2014 at 14:52:28
Title: Unit 44 Survey

Flag	Offset Time	Offset Sequence	Description
A	1.8	130	Start of the pre-entry ambient
B	2.8	204	End of the pre-entry ambient
C	4.7	338	Entering the unit
D	4.9	353	Start of the kitchen
E	5.9	424	End of the kitchen
F	6.3	448	Start of storage one
G	7.3	519	End of storage one
H	7.8	555	Start of storage two
I	8.7	625	End of storage two
J	9.1	650	Start of the laundry
K	10.1	723	End of the laundry
L	10.7	767	Start of the living room
M	11.7	839	End of the living room
N	12.2	869	Start of bedroom one
O	13.2	942	End of bedroom one
P	13.6	975	Start of bedroom two
Q	14.6	1046	End of bedroom two
R	15.0	1074	Start of bedroom three
S	16.0	1145	End of bedroom three
T	16.5	1180	Start of the bathroom
U	17.5	1250	End of the bathroom
V	18.3	1308	Exiting the unit
W	19.6	1400	Start of the post-exit ambient
X	20.6	1470	End of the post-exit ambient
Y	22.2	1584	Start of 30 mL/min spike
Z	23.6	1687	End of 30 mL/min spike

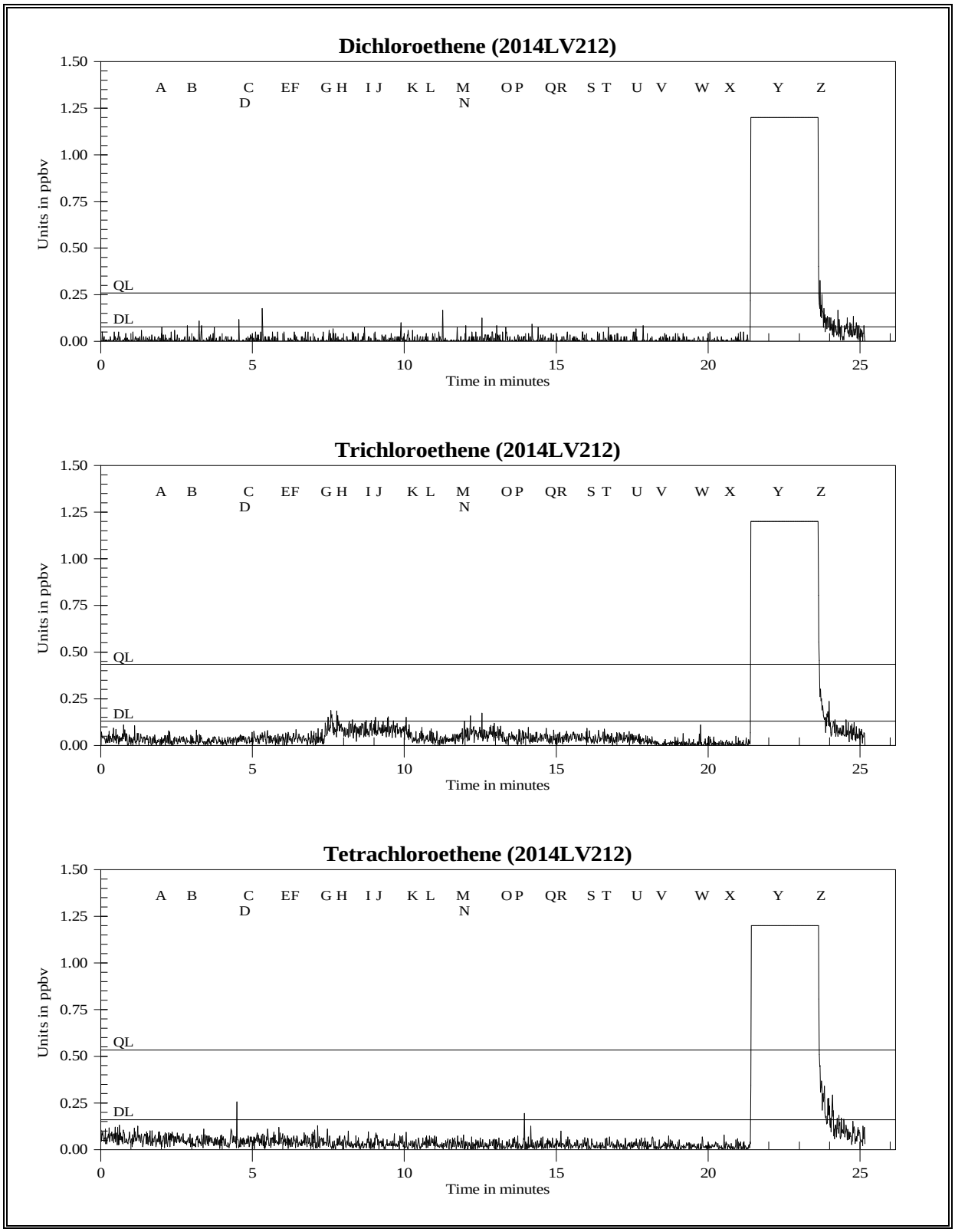

Figure 37c Unit 44 Survey for Dichloroethene, Trichloroethene, and Tetrachloroethene

Figure 37d

TAGA Target Compound Summary for Unit 44
File: 2014LV212 Acquired on 07 May 2014 at 14:52:28

		Dichloroethene	Trichloroethene	Tetrachloroethene
	Detection Limits - DL:	0.078	0.13	0.16
	Quantitation Limits - QL:	0.26	0.43	0.53
Flags	Description	Dichloroethene	Trichloroethene	Tetrachloroethene
A - B	Pre-entry ambient	DL=0.078	DL=0.13	DL=0.16
D - E	Kitchen	DL=0.078	DL=0.13	DL=0.16
F - G	Storage one	DL=0.078	DL=0.13	DL=0.16
H - I	Storage two	DL=0.078	DL=0.13	DL=0.16
J - K	Laundry	DL=0.078	DL=0.13	DL=0.16
L - M	Living room	DL=0.078	DL=0.13	DL=0.16
N - O	Bedroom one	DL=0.078	DL=0.13	DL=0.16
P - Q	Bedroom two	DL=0.078	DL=0.13	DL=0.16
R - S	Bedroom three	DL=0.078	DL=0.13	DL=0.16
T - U	Bathroom	DL=0.078	DL=0.13	DL=0.16
W - X	Post-exit ambient	DL=0.078	DL=0.13	DL=0.16
Y - Z	30 mL/min spike	7.2	6.9	7.0

Concentrations are given in parts per billion by volume

APPENDIX A

Standard Gas Cylinder Certification

Middlefield-Ellis-Whisman Soil Gas Study

Final Analytical TAGA Report

May 2014

ISO 9001:2008 Linde **SPECTRA** Environmental Gases, 80 Industrial Drive, Alpha, NJ 08865

THE LINDE GROUP

SHIPPED TO: Lockheed Martin
4270 S Maryland Pkwy Ste 900
Las Vegas, NV 89119-7503

PAGE: 1 of 1

CERTIFICATE OF ANALYSIS

Sales#:	110300810	**Cylinder Size:**	2A (8" X 47.5")
Production#:	2874810	**Cylinder # :**	CC-118539
Certification Date:	May-13-2013	**Cylinder Pressure:**	1000 psig
P.O.# :	CC- Daniell McCall	**Cylinder Valve:**	CGA 350 / Steel
Blend Type:	CERTIFIED	**Cylinder Volume:**	29.5 Liter
Material#:	14004551	**Cylinder Material:**	Aluminum
Traceability:	NIST by weight	**Gas Volume:**	2000 Liter
Expiration Date:	May-13-2014	**Blend Tolerance:**	5% Relative
Do NOT use under:	150 psig	**Analytical Accuracy:**	2% Relative

COMPONENT	CAS NUMBER	REQUESTED CONC	CERTIFIED CONC
Vinyl Chloride	75-01-4	20.0 ppm	19.9 ppm
1,1-Dichloroethene	75-35-4	20.0 ppm	20.4 ppm
Benzene	71-43-2	20.0 ppm	20.3 ppm
Trichloroethylene	79-01-6	20.0 ppm	20.0 ppm
Toluene	108-88-3	20.0 ppm	20.2 ppm
Tetrachloroethylene	127-18-4	20.0 ppm	20.3 ppm
p-xylene	106-42-3	10.0 ppm	10.1 ppm
m-xylene	108-38-3	10.0 ppm	10.1 ppm
o-xylene	95-47-6	10.0 ppm	10.3 ppm
Nitrogen	7727-37-9	Balance	Balance

ANALYST: Lou Lorenzetti

DATE: May-13-2013

Linde Gas North America LLC

(908) 329-9700 Main (908) 329-9740 Fax
www.Lindeus.com

APPENDIX B

Compiled Meteorological Data

Middlefield-Ellis-Whisman Soil Gas Study

Final Analytical TAGA Report

May 2014

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
26	56	50	44	80	7	300	29.85	
26	156	49	43	80	5	300	29.85	
26	249	48	43	83	7	270	29.85	
26	256	49	43	80	7	270	29.85	
26	356	49	42	77	6	270	29.86	
26	456	49	42	77	8	270	29.88	
26	554	48	39	71	6	260	29.88	
26	556	48	40	74	5	250	29.88	
26	614	48	39	71	7	260	29.88	
26	656	51	40	66	5	300	29.93	
26	729	52	41	66	5	280	29.93	
26	753	52	39	61	5	VR	29.93	
26	756	53	41	64	5	320	29.93	
26	856	56	39	53	7	290	29.94	
26	956	58	37	46	9	280	29.96	
26	1056	61	34	36	9	300	29.96	
26	1156	62	35	37	9	280	29.98	
26	1256	61	37	41	10	310	29.99	
26	1356	61	37	41	11	270	30.01	
26	1456	60	37	43	15	280	30.01	
26	1556	58	36	44	13	300	30.02	
26	1656	58	38	48	11	310	30.02	
26	1756	56	38	51	7	290	30.02	
26	1856	55	39	55	6	300	30.04	
26	1956	54	41	62	7	250	30.06	
26	2056	54	42	64	5	250	30.07	
26	2156	54	43	67	3	250	30.09	
26	2256	54	43	67	0	0	30.06	
26	2356	53	42	66	0	0	30.06	
27	56	53	42	66	0	0	30.06	
27	156	52	42	69	3	140	30.03	
27	256	52	41	66	5	140	30.04	
27	356	52	43	72	6	120	30.03	T
27	456	51	42	71	7	130	30.03	
27	556	52	42	69	10	130	30.02	
27	628	52	43	72	9	130	30.03	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	VR	=	Variable
T	=	Trace			

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
27	656	53	43	69	11	130	30.03	
27	713	54	43	67	7	140	30.04	
27	754	55	45	69	11	120	30.03	
27	756	55	45	69	11	120	30.04	
27	856	58	46	65	9	110	30.06	
27	956	61	47	60	0	0	30.06	
27	1017	61	48	63	3	VR	30.07	
27	1056	62	49	63	11	350	30.07	
27	1156	63	48	58	14	350	30.06	
27	1256	64	48	56	17	350	30.06	
27	1356	66	46	49	16	340	30.06	
27	1456	64	45	50	15	330	30.04	
27	1556	63	43	48	11	300	30.06	
27	1656	62	42	48	9	290	30.06	
27	1756	59	40	50	9	290	30.09	
27	1856	57	43	60	9	290	30.09	
27	1956	55	45	69	0	0	30.11	
27	2056	55	45	69	3	VR	30.11	
27	2156	53	44	72	0	0	30.11	
27	2256	53	44	72	0	0	30.12	
27	2356	53	43	69	0	0	30.14	
28	56	49	43	80	0	0	30.14	
28	156	51	43	74	0	0	30.14	
28	256	50	43	77	0	0	30.12	
28	356	50	42	74	0	0	30.14	
28	456	48	41	77	0	0	30.14	
28	556	49	41	74	0	0	30.16	
28	656	53	43	69	0	0	30.17	
28	756	55	47	75	0	0	30.19	
28	856	59	48	67	6	350	30.19	
28	956	61	46	58	8	330	30.2	
28	1056	64	47	54	5	290	30.19	
28	1156	68	49	51	7	350	30.16	
28	1256	68	50	53	10	360	30.15	
28	1356	71	47	43	11	330	30.15	
28	1456	71	44	38	14	330	30.14	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	VR	=	Variable

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
28	1556	71	47	43	14	340	30.12	
28	1656	70	42	36	11	330	30.12	
28	1756	67	32	27	13	320	30.12	
28	1856	65	32	29	3	VR	30.12	
28	1956	63	32	31	5	310	30.14	
28	2056	63	32	31	3	290	30.15	
28	2156	61	35	38	0	0	30.15	
28	2256	61	37	41	0	0	30.15	
28	2356	59	37	44	0	0	30.16	
29	56	57	39	51	0	0	30.15	
29	156	56	39	53	5	260	30.14	
29	256	55	40	57	0	0	30.14	
29	356	54	40	59	0	0	30.16	
29	456	54	41	62	0	0	30.15	
29	556	54	42	64	0	0	30.16	
29	656	61	44	54	0	0	30.17	
29	756	66	43	43	5	320	30.17	
29	856	72	44	37	6	350	30.16	
29	956	74	46	37	3	10	30.15	
29	1056	77	42	29	0	0	30.14	
29	1156	81	40	23	6	340	30.11	
29	1256	83	41	23	6	310	30.09	
29	1356	85	42	22	9	340	30.07	
29	1456	86	41	20	8	340	30.04	
29	1556	86	41	20	9	320	30.03	
29	1656	85	48	28	8	330	30.01	
29	1756	81	53	38	8	340	30.01	
29	1856	74	55	52	6	360	30.02	
29	1956	70	54	57	0	0	30.02	
29	2056	69	51	53	0	0	30.03	
29	2156	69	52	55	3	140	30.03	
29	2256	68	48	49	0	0	30.02	
29	2356	67	48	51	0	0	30.02	
30	56	64	48	56	0	0	30.02	
30	156	64	48	56	0	0	30.01	
30	256	62	50	65	0	0	30.02	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	VR	=	Variable

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
30	356	60	48	65	0	0	30.02	
30	456	61	48	63	0	0	30.02	
30	556	61	48	63	0	0	30.03	
30	656	65	51	61	0	0	30.06	
30	756	70	53	55	0	0	30.06	
30	856	75	48	39	0	0	30.04	
30	956	80	47	31	0	0	30.03	
30	1056	83	47	28	3	30	30.02	
30	1156	86	47	26	7	360	30.01	
30	1256	89	46	23	7	350	29.99	
30	1356	91	49	24	9	340	29.98	
30	1456	89	48	24	10	340	29.98	
30	1556	88	48	25	9	340	29.96	
30	1656	88	47	24	11	340	29.96	
30	1756	84	48	29	7	320	29.96	
30	1856	81	48	32	8	320	29.96	
30	1956	78	46	32	5	300	29.98	
30	2056	70	51	51	9	360	30.01	
30	2156	71	54	55	0	0	30.01	
30	2256	72	51	48	0	0	30.01	
30	2356	69	50	51	0	0	30.01	
1	56	67	47	49	0	0	30.01	
1	156	66	45	47	0	0	30.01	
1	256	65	43	45	0	0	30.01	
1	356	63	43	48	0	0	29.99	
1	456	63	43	48	0	0	30.01	
1	556	62	44	52	0	0	30.01	
1	656	67	45	45	0	0	30.03	
1	756	72	45	38	0	0	30.04	
1	856	76	50	40	3	340	30.06	
1	956	79	48	34	5	340	30.06	
1	1056	83	51	33	6	340	30.06	
1	1156	88	44	22	8	360	30.04	
1	1256	88	43	21	8	350	30.03	
1	1356	87	47	25	10	330	30.03	
1	1456	84	47	28	9	330	30.01	

Wind direction is the direction from which the wind is blowing

LST = Local standard time
F = Fahrenheit
% = Percent
MPH = Miles per hour
in. Hg = inches of mercury

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
1	1556	81	47	30	14	330	30.01	
1	1656	81	47	30	14	340	30.01	
1	1756	78	46	32	11	320	30.02	
1	1856	76	48	37	8	320	30.03	
1	1956	73	47	40	6	300	30.04	
1	2056	69	53	57	3	10	30.06	
1	2156	66	53	63	0	0	30.06	
1	2256	67	53	61	0	0	30.06	
1	2356	65	54	68	0	0	30.06	
2	56	63	49	60	0	0	30.06	
2	156	61	45	56	0	0	30.04	
2	256	60	45	58	0	0	30.04	
2	356	58	45	62	0	0	30.03	
2	456	57	44	62	0	0	30.03	
2	556	60	43	54	0	0	30.03	
2	656	64	51	63	3	330	30.04	
2	756	68	53	59	0	0	30.06	
2	856	70	54	57	0	0	30.06	
2	956	73	51	46	6	340	30.06	
2	1056	73	49	43	8	350	30.06	
2	1156	75	53	46	7	330	30.04	
2	1256	78	43	29	11	350	30.02	
2	1356	77	45	32	10	340	30.01	
2	1456	74	47	38	14	320	29.99	
2	1556	70	52	53	10	330	29.99	
2	1656	68	53	59	11	340	29.98	
2	1756	69	50	51	9	340	29.98	
2	1856	65	53	65	7	320	29.99	
2	1956	62	51	67	6	330	30.02	
2	2056	60	51	72	3	VR	30.04	
2	2156	62	49	63	7	320	30.04	
2	2256	59	50	72	3	360	30.04	
2	2356	57	52	83	3	30	30.03	
3	56	56	52	87	5	20	30.02	
3	111	57	54	90	3	20	30.02	
3	156	58	53	84	3	20	30.01	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	VR	=	Variable

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
3	256	58	53	84	5	10	30.02	
3	356	57	51	80	3	310	30.02	
3	456	57	51	80	6	360	30.01	
3	556	56	50	80	3	300	30.02	
3	656	57	49	75	5	320	30.02	
3	733	57	50	78	7	360	30.02	
3	754	59	50	72	0	0	30.02	
3	756	59	50	72	3	VR	30.02	
3	856	61	51	70	7	VR	30.02	
3	956	62	51	67	7	30	30.02	
3	1056	64	52	65	14	350	30.02	
3	1156	66	51	59	21	360	30.01	
3	1256	69	48	47	23	350	29.99	
3	1356	69	49	49	22	350	29.98	
3	1456	68	50	53	22	340	29.98	
3	1556	69	46	44	7	310	29.96	
3	1656	67	45	45	10	290	29.98	
3	1756	64	46	52	9	280	29.98	
3	1856	60	47	62	10	290	29.99	
3	1956	59	48	67	8	290	30.01	
3	2056	58	49	72	3	280	30.01	
3	2156	58	48	70	0	0	30.02	
3	2256	57	47	69	0	0	30.01	
3	2356	56	47	72	0	0	30.01	
4	56	56	47	72	0	0	30.01	
4	156	56	47	72	0	0	30.01	
4	256	55	47	75	0	0	30.01	
4	356	55	47	75	0	0	30.01	
4	456	54	47	77	0	0	30.01	
4	556	55	47	75	3	200	30.02	
4	656	58	48	70	0	0	30.03	
4	756	60	50	70	5	310	30.03	
4	833	63	50	63	3	VR	30.03	
4	854	64	52	65	8	20	30.03	
4	856	64	51	63	8	20	30.03	
4	956	66	50	57	10	310	30.03	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	VR	=	Variable

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
4	1056	66	51	59	13	350	30.03	
4	1156	67	50	55	16	350	30.02	
4	1256	70	49	47	20	350	30.01	
4	1356	70	48	46	10	270	30.01	
4	1456	70	48	46	13	310	29.99	
4	1556	69	48	47	9	300	29.98	
4	1656	67	47	49	9	300	29.98	
4	1756	63	48	58	13	310	29.98	
4	1856	61	49	65	8	290	29.99	
4	1956	59	49	70	8	300	30.01	
4	2056	58	49	72	6	310	30.02	
4	2156	57	48	72	6	320	30.03	
4	2256	57	48	72	0	0	30.03	
4	2356	58	48	70	0	0	30.03	
5	56	57	47	69	0	0	30.02	
5	156	57	47	69	0	0	30.01	
5	256	57	47	69	0	0	30.01	
5	356	56	47	72	3	160	30.01	
5	456	55	47	75	0	0	30.01	
5	556	55	46	72	0	0	30.01	
5	656	58	47	67	0	0	30.01	
5	756	60	48	65	7	350	30.02	
5	856	64	47	54	8	340	30.02	
5	956	66	46	49	10	340	30.01	
5	1056	64	47	54	16	340	30.01	
5	1156	64	48	56	14	340	29.99	
5	1256	65	43	45	11	300	29.98	
5	1356	67	42	40	14	260	29.98	
5	1456	67	44	44	11	270	29.96	
5	1556	64	43	47	11	280	29.96	
5	1656	62	43	50	11	280	29.96	
5	1756	60	43	54	14	300	29.96	
5	1856	58	43	58	10	280	29.96	
5	1956	57	43	60	9	290	29.96	
5	2056	56	42	60	10	270	29.96	
5	2156	55	43	64	10	300	29.96	

Wind direction is the direction from which the wind is blowing

LST = Local standard time
F = Fahrenheit
% = Percent
MPH = Miles per hour
in. Hg = inches of mercury

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
5	2256	55	44	67	11	290	29.94	
5	2356	55	45	69	14	290	29.93	
6	56	54	45	72	11	300	29.93	
6	156	54	44	69	5	290	29.91	
6	256	54	43	67	9	280	29.91	
6	356	53	42	66	7	280	29.91	
6	456	53	42	66	5	270	29.91	
6	556	53	42	66	0	0	29.91	
6	656	55	41	59	5	300	29.91	
6	756	58	44	60	0	0	29.91	
6	856	59	45	60	3	310	29.91	
6	956	63	44	50	5	VR	29.91	
6	1056	66	45	47	9	20	29.89	
6	1156	69	39	34	11	310	29.88	
6	1256	70	40	34	14	350	29.88	
6	1356	71	38	30	13	330	29.85	
6	1456	69	41	36	17	320	29.85	
6	1556	67	44	44	9	290	29.86	
6	1656	67	43	42	6	VR	29.86	
6	1756	65	43	45	7	250	29.86	
6	1856	61	42	50	9	270	29.88	
6	1956	59	43	56	0	0	29.88	
6	2056	57	43	60	3	330	29.89	
6	2156	58	42	55	0	0	29.89	
6	2256	57	44	62	9	240	29.91	
6	2356	56	44	64	7	240	29.91	
7	56	54	44	69	6	260	29.91	
7	156	54	44	69	7	250	29.88	
7	256	53	43	69	0	0	29.88	
7	356	53	43	69	0	0	29.89	
7	422	52	43	72	3	260	29.91	
7	456	52	44	74	3	270	29.91	
7	505	52	43	72	3	280	29.91	
7	532	52	45	77	3	260	29.91	
7	556	53	43	69	5	250	29.91	
7	656	55	44	67	9	130	29.91	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	VR	=	Variable

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
7	746	55	45	69	7	170	29.93	
7	756	56	44	64	6	140	29.93	
7	856	59	44	58	0	0	29.94	
7	956	62	45	54	7	130	29.94	
7	1056	65	45	49	3	VR	29.94	
7	1156	67	46	47	0	0	29.93	
7	1256	67	48	51	9	350	29.93	
7	1356	68	43	41	16	270	29.93	
7	1408	66	43	43	18	270	29.94	
7	1456	65	42	43	16	250	29.94	
7	1556	63	44	50	11	260	29.96	
7	1656	61	44	54	11	240	29.96	
7	1756	60	44	56	10	250	29.98	
7	1856	57	44	62	10	240	29.98	
7	1956	56	44	64	6	260	30.01	
7	2056	56	44	64	3	250	29.99	
7	2156	55	44	67	5	280	30.01	
7	2256	56	44	64	3	210	30.01	
7	2356	56	44	64	6	260	30.01	
8	56	55	46	72	0	0	30.01	
8	156	56	46	69	0	0	30.01	
8	256	55	45	69	0	0	30.01	
8	356	55	45	69	0	0	30.01	
8	456	54	45	72	0	0	30.01	
8	556	55	45	69	3	200	30.02	
8	656	57	46	67	6	130	30.03	
8	754	57	45	64	5	120	30.06	
8	756	58	43	58	6	120	30.06	
8	856	61	43	52	3	70	30.06	
8	952	64	45	50	5	VR	30.06	
8	956	64	45	50	3	VR	30.06	
8	1056	65	45	49	5	30	30.06	
8	1156	67	49	53	0	0	30.06	
8	1256	68	52	57	6	330	30.03	
8	1356	69	53	57	7	350	30.03	
8	1456	69	53	57	11	280	30.02	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	VR	=	Variable

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
8	1556	70	53	55	7	270	30.01	
8	1656	70	53	55	9	240	30.01	
8	1756	68	53	59	8	280	30.01	
8	1856	67	53	61	8	250	30.02	
8	1956	66	53	63	5	240	30.03	
8	2056	65	54	68	6	270	30.04	
8	2156	63	54	73	9	290	30.06	
8	2256	62	55	78	6	270	30.07	
8	2327	63	54	73	6	290	30.07	
8	2347	61	55	81	0	0	30.07	
8	2356	61	55	81	5	300	30.07	
9	8	61	55	81	3	310	30.07	
9	53	61	55	81	3	300	30.06	
9	56	61	55	81	3	340	30.06	
9	156	60	54	81	5	330	30.07	
9	256	60	54	81	0	0	30.09	
9	307	61	54	78	3	VR	30.09	
9	326	61	54	78	6	320	30.09	
9	351	59	54	84	6	320	30.09	
9	356	59	53	81	6	VR	30.09	
9	447	59	55	87	7	320	30.09	
9	456	58	54	87	9	320	30.09	T
9	507	57	54	90	6	320	30.1	
9	530	57	54	90	5	VR	30.1	
9	554	57	54	90	3	300	30.1	
9	556	58	53	84	3	290	30.1	
9	656	60	52	75	9	310	30.12	
9	756	61	51	70	8	320	30.14	
9	856	62	49	63	7	300	30.14	
9	956	65	48	54	10	310	30.14	
9	1056	67	45	45	15	330	30.14	
9	1156	68	47	47	15	340	30.12	
9	1256	69	44	41	10	300	30.12	
9	1356	69	41	36	14	310	30.11	
9	1456	70	42	36	10	300	30.09	
9	1556	67	42	40	9	320	30.09	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	VR	=	Variable
T	=	Trace			

Local Climatological Data-Hourly Observations Table
Moffett Federal Airfield Airport, Mountain View, CA
Elevation: 39 ft. above sea level
Latitude: 37.405
Longitude: -122.048
26 April 2014 through 10 May 2014

Date	Time (LST)	Dry Bulb Temperature (F)	Dew point Temperature (F)	Relative Humidity %	Wind Speed (MPH)	Wind Direction	Station Pressure (in. Hg)	Precipitation Total (inches)
9	1656	64	41	43	8	310	30.1	
9	1756	62	42	48	13	320	30.11	
9	1856	59	44	58	8	310	30.12	
9	1956	57	43	60	11	290	30.14	
9	2056	57	42	57	7	290	30.14	
9	2156	57	43	60	8	270	30.14	
9	2256	56	44	64	9	280	30.14	
9	2356	56	42	60	8	280	30.11	
10	56	55	41	59	6	300	30.1	
10	156	54	42	64	0	0	30.09	
10	256	54	43	67	7	270	30.09	
10	356	53	43	69	0	0	30.09	
10	456	53	43	69	6	280	30.09	
10	556	55	41	59	5	280	30.1	
10	656	57	42	57	7	300	30.1	
10	756	59	40	50	11	320	30.11	
10	856	61	43	52	11	340	30.1	
10	956	63	40	43	13	340	30.09	
10	1056	64	39	40	11	350	30.09	
10	1156	67	42	40	14	340	30.06	
10	1256	68	40	36	11	300	30.04	
10	1356	67	40	37	20	320	30.03	
10	1456	66	39	M	17	300	M	
10	1556	66	42	42	15	290	30.02	
10	1656	64	41	43	10	300	30.01	
10	1756	62	43	50	10	280	30.01	
10	1856	60	43	54	8	250	30.01	
10	1956	59	43	56	3	270	30.03	
10	2056	57	44	62	6	290	30.06	

Wind direction is the direction from which the wind is blowing

LST	=	Local standard time	MPH	=	Miles per hour
F	=	Fahrenheit	in. Hg	=	inches of mercury
%	=	Percent	M	=	

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